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# OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

## VOL. 238 - 239

## MAY - JUNE

## 1917

MICRO PHOTO INC.
CLEVELAND, OHIO

# OFFICIAL GAZETTE

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# UNITED STATES PATENT OFFICE.

VOLUME CCXXXVIII.

MAY,

1917.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1917.

10538

# ERRATA.

**1,225,302**, page 465, first claim, line 1, strike out the words "end walls."

**1,225,471**, page 523, claim, line 2, for the word "substance" read *substantially*.

**1,225,680**, page 592, in heading, title of invention, for "Shovels" read *Sanitary Dairy Shovels*.

**1,226,892**, page 1081, first and third claims, lines 2, after the word "substance" insert the words *or substances;* same claims, lines 3, strike out the words "or substances."

**1,228,191**, page 1546, fourth claim, line 2, strike out the word "iron."

**1,228,369**, page 1605, in heading, assignment, State of incorporation, for "Indiana" read *Illinois*.

**14,296**, (Reissue,) page 277, twelfth claim, line 4, for the word "to," first occurrence, read *in*.

**50,768**, (Design,) page 626, strike out all after number—heading, drawing, and claim—and insert the word WITHDRAWN.



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THE

# OFFICIAL GAZETTE

OF THE

## United States Patent Office.

Vol. 238—No. 1. TUESDAY, MAY 1, 1917. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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### Custody of Index of Chemical Literature.

(Order No. 2,320.)

Department of the Interior,
United States Patent Office,
*Washington, D. C., April 23, 1917.*

The Index of Chemical Literature, compiled and heretofore maintained in the Classification Division, is hereby transferred to the custody and jurisdiction of the Librarian, who is hereby authorized to continue, in his discretion, the compilation only of the "formula" portion of the Index, together with selected articles from chemical and other scientific journals chosen to fit the needs of the Examining Corps.

THOMAS EWING,
*Commissioner.*

### Interference Notice.

Department of the Interior,
United States Patent Office,
*Washington, D. C., April 21, 1917.*

*Warren E. Smith, his assigns or legal representatives, take notice:*

An interference having been declared by this Office between the application of Kling Bros. & Co., 411–415 South Fifth avenue, Chicago, Ill., for registration of a trade-mark and trade-mark registered February 28, 1893, No. 22,521, to Warren E. Smith, 49 Lafayette Place, New York, N. Y., and a notice of such declaration sent by registered mail to said Warren E. Smith at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Warren E. Smith, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the Official Gazette for three consecutive weeks.

R. F. WHITEHEAD,
*First Assistant Commissioner.*

Department of the Interior,
United States Patent Office,
*Washington, D. C., April 6, 1917.*

*Anton Kufeke, his assigns or legal representatives, take notice:*

An interference having been declared by this Office between the application of L. G. Spindler, Produce Exchange, New York, N. Y., for registration of a trade-mark and trade-mark registered May 17, 1887, No. 14,409, to Anton Kufeke, Glasgow, Scotland, and a notice of such declaration sent by registered mail to said Anton Kufeke at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Anton Kufeke, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the Official Gazette for three consecutive weeks.

R. F. WHITEHEAD,
*First Assistant Commissioner.*

### Adverse Decisions in Interference.

Patent No. 1,096,048.

On March 30, 1917, a decision was rendered that John Lewis Milton was not the first inventor of the subject-matter covered by claims 1, 2, 3, 4, 5, and 6 of his Patent No. 1,096,048, subject, "Magneto-generators," and no appeal having been taken within the time allowed such decision has become final.

### Examiners' Letters and Amendments.

Examiners are directed to recite in each letter in an application the date of the action by the applicant to which it is a reply, and applicants are requested to indicate in their actions on an application the date of the last Office letter.

### Date of Patent.

Rule 207. The weekly issue closes on Thursday, and the patents of that issue bear date as of the *fourth* Tuesday thereafter. If the final fee in any application is not paid on or before Thursday, the patent will not go to issue until the following week.

# APPLICATIONS UNDER EXAMINATION.

*Condition at Close of Business April 27, 1917.*

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Oldest new case, Oct. 11; oldest amended, July 25.
Total number of applications awaiting action..... 17,765

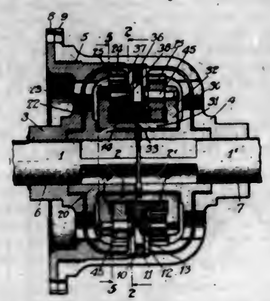
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# PATENTS

## GRANTED MAY 1, 1917.

**1,224,124. DIFFERENTIAL CLUTCH MECHANISM.** BROR A. ADLER, Chicago, Ill., assignor to Peter A. Lorenz, Chicago, Ill. Filed July 30, 1915. Serial No. 42,712. (Cl. 74—7.)



1. In a differential clutch mechanism; a combination of a driven element having an annular rack, a driving element having a member extended into the plane of said rack, and a dog interposed between said rack and said member provided with a transverse off-set engageable with the said member whereby it may be turned by the motion of said member to engage said rack and impel it in the same direction.

2. In a differential clutch mechanism; the combination of a driven element having an annular rack, a driving element having a member extended into the plane of said rack, a revoluble dog support interposed between said elements, and a dog mounted thereon provided with a transverse off-set engageable with the said member whereby it may be turned to engage said rack and impel it in the same direction.

3. In a differential clutch mechanism; the combination with a driven element having an annular rack and a driving element having a sleeve extended in the plane of said rack, of a dog having lateral arms adapted alternately to engage said rack and a transverse arm operatively engageable with said sleeve.

4. In a differential clutch mechanism; the combination of a driven element having an internal annular rack; a driving element having a sleeve extended into the plane of said rack, a revolubly mounted dog support between the said elements, and a dog pivoted on said support and engageable with the said sleeve whereby it may be turned by the motion of said sleeve alternatively to engage said rack and to impel it in the same direction.

5. In a differential clutch mechanism; the combination of a driven element having an internal annular rack, a driving element having a sleeve extended into the plane of said rack, a revolubly mounted dog support between the said elements and a dog pivoted on the said support and having lateral arms adapted alternatively to engage said rack and a transverse arm operatively engageable with the said sleeve.

[Claims 6 to 9 not printed in the Gazette.]

**1,224,125. SIZING SOLUTION AND METHOD OF MAKING THE SAME.** MAURICE N. AISEN, Chicago, Ill. Filed Apr. 28, 1914. Serial No. 834,884. (Cl. 134—23.)

1. As a composition of matter a neutral alcoholic solution of glue.

2. As a composition of matter, a neutral alcoholic solution containing glue hydrolyzed by an acid.

3. As a new article of manufacture, a neutral alcoholic sizing solution containing glue of gelatinic basis, hydrolyzed by an acid.

4. A sizing consisting of a liquid vehicle having nonshrinking tendencies on cellulose material and containing a stiffening substance dissolved in said vehicle.

5. A sizing consisting of a liquid vehicle having nonshrinking tendencies on cellulose material and containing glue dissolved in said vehicle.

[Claims 6 to 11 not printed in the Gazette.]

**1,224,126. CENTRIFUGAL SWITCH.** ANDREW H. BAKKEN, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 24, 1914. Serial No. 814,054. (Cl. 175—310.)



1. The combination with a rotatable shaft, of a composite ring carried thereby, said ring being adapted to increase in diameter with an increase in the speed of rotation of the said shaft and to decrease in diameter with a decrease in its speed, a pair of pivotally mounted switch members, means for biasing the said switch members toward either the open or the closed position, and operating lugs carried by each of said switch members and adapted to be engaged by the inner and the outer surfaces of the said ring to actuate the said switch members in opposite directions.

2. The combination with a rotatable shaft, of a composite ring carried thereby, said ring being adapted to increase in diameter with an increase in the speed of rotation of the said shaft and to decrease in diameter with a decrease in its speed, a pair of pivotally mounted switch members, and operating lugs carried by each of said switch members and adapted to be engaged by the inner and the outer surfaces of the said ring to simultaneously actuate the said switch members in opposite directions at predetermined speeds.

3. The combination with a rotatable element, of a centrifugal operating device carried thereby and comprising a base plate attached thereto, a plurality of pivotally mounted members each of which is provided with a curved flanged portion, and a continuous resilient member engaging the flanged portions of all of said members and tending to draw the said pivotally mounted members inwardly.

4. The combination with a rotatable element, of a centrifugal operating device carried thereby and comprising a base plate attached thereto, a plurality of pivotally mounted members severally terminating in a curved portion provided with substantially concentric flanges, and a circular spring engaging the said flanges and tending to draw the said pivotally mounted members inwardly.

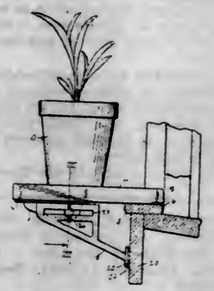
5. The combination with a rotatable element, of a centrifugal operating device carried thereby and comprising a base plate attached thereto, a plurality of members each of which is pivoted at one end to the said base plate

and terminates in a curved portion provided with an opening through which the pivotal support of the adjacent member extends.

[Claim 6 not printed in the Gazette.]

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1,224,127. ADJUSTABLE WINDOW-SHELF. EARLE H. BARTLETT, Kansas City, Mo. Filed Jan. 24, 1916. Serial No. 73,850. (Cl. 20—87.)

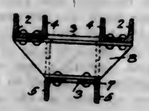


1. A window shelf comprising a horizontal shelf member adapted to be supported with its outer portion resting upon the window stool, a thin strip depending from the outer edge of the shelf member to engage the sash side of the stool and permit the sash to be fully lowered outside the said strip, and a supporting member extending downwardly and outwardly from the shelf member to engage the wall beneath the stool.

2. A window shelf comprising a horizontal shelf member adapted to be supported at its outer portion upon the window stool and having its outer edge beveled for permitting lowering of the window sash below the top surface of the shelf, a hook member secured to said outer portion of the shelf member and depending in position to engage the sash side of the stool, and a supporting member extending downwardly and outwardly from said shelf portion in position to engage the wall beneath said stool.

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1,224,128. TRUCK-BOLSTER. SAMUEL A. BENNER, Pittsburgh, Pa. Filed Aug. 9, 1913. Serial No. 783,882. Renewed Sept. 18, 1916. Serial No. 120,883. (Cl. 105—107.)



1. A truck bolster formed of a rolled section having pressure members formed of parallel upwardly opening channel portions, of a tension member formed of a channel member intermediate said pressure members, said tension member being sheared from and bent downwardly intermediate the ends of said section.

2. A truck bolster formed of a section of rolled metal having pressure members consisting of channel portions extending along each side of the body of the bolster and a tension member formed of a downwardly extending channel member rolled intermediate of said pressure member, said tension member being sheared from the rolled section intermediate of the ends thereof and bent downwardly to form a truss member.

3. A truck bolster formed from a single rolled section comprising upwardly opening channel members extending longitudinally of each side of said section and a downwardly opening channel member extending longitudinally intermediate of said pressure members, said tension member being sheared from the body of the section intermediate the ends thereof and intermediate said pressure members, and bent downwardly to form a truss member.

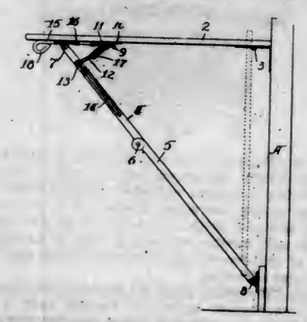
4. A truck bolster formed from a rolled section comprising upwardly disposed channel members extending along the longitudinal sides of said section, and a downwardly disposed channel portion extending longitudinally intermediate of said upwardly disposed channel members, said downwardly disposed channel member being sheared from the body of the section intermediate the ends thereof and bent downwardly to form a tension member.

5. A truck bolster formed of a rolled section having pressure members formed of parallel upwardly extending channel pieces, of a tension member formed of a channel member intermediate said pressure member, said tension member being sheared from and bent downwardly intermediate the ends of said sections and a strengthening member interposed between said pressure and tension members adjacent the center of the bolster body.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,129. TABLE. GEBHARD C. BOHN, St. Paul, Minn. Filed Nov. 26, 1915. Serial No. 63,605. (Cl. 45—51.)



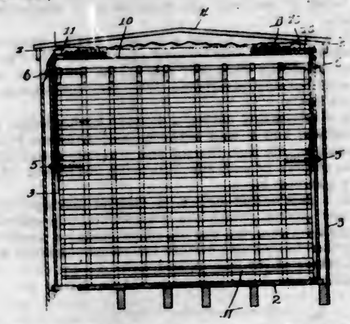
1. In combination with a vertical wall, a table top having hinge support at one edge upon said wall, foldable supporting arms pivotally connecting the free edge of said table top with the wall at a point below said top, means for locking said arms in extended position consisting of a member having fulcrum support underneath the table top and slidable connection with said supporting arms, hand actuatable means supported by the table top and operatively connected with said locking member for turning said locking member upon its fulcrum and sliding the locking end of said member along said arms into a position constituting a locking brace between the table top and arms, holding said arms from folding.

2. In combination with a vertical wall, a table top having hinge support at one edge upon said wall, foldable supporting arms pivotally connecting the free edge of said table top with the wall at a point below the same, means for locking said arms in extended position consisting of a rod having journal support underneath said table top, said rod being formed with offset ends slidably connected at their extremities with said foldable arms and being formed with the central offset portion, and a slidable member engaging with said offset portion for the purpose set forth.

3. In combination with a vertical wall, a table top having hinge support at one edge upon said wall, foldable supporting arms pivotally connecting the free edge of said table top with the wall at a point below the same, means for locking said arms in extended position consisting of a rod having journal support underneath said table top, said rod being formed with offset ends slidably connected at their extremities with said foldable arms and being also formed with a central offset portion, and a bar slidably supported underneath said table and having a downwardly and outwardly projected inner loop end embracing said offset portion for the purpose set forth.



1,224,130. BULKHEAD. GEBHARD C. BOHN, St. Paul, Minn. Filed Nov. 26, 1915. Serial No. 63,606. (Cl. 105—15.)



1. In combination with a refrigerator car including an openwork bulkhead bodily movable both in horizontal and vertical positions in the car, coöperating lifting means for said bulkhead including a pair of springs anchored underneath the car roof, and a cable connection between the ends of said springs and the adjacent sides of the bulkhead.

2. In combination with a refrigerator car including a bulkhead vertically slidable within the car, coöperating lifting means for said bulkhead comprising a pair of springs, the springs being each anchored at one end upon the car body and a cable connection between the free ends of said springs and the adjacent sides of the bulkhead.

3. The combination with a refrigerator car including a bulkhead vertically slidable within the car, pins projecting outwardly from the sides of the bulkhead, coöperating lifting means for said bulkhead including coil springs horizontally positioned underneath the car roof, anchoring means for one end of each spring, and cables connected with the free ends of said springs, the free ends of said cables being connected with said pins.

4. In combination with a refrigerator car including a vertically movable bulkhead, coöperating lifting means for said bulkhead including coil springs positioned under the car roof, anchoring means for one end of said spring, cables connected with the free ends of said springs, horizontally and vertically disposed idlers supported upon each side wall, a cable connected with the free end of each spring, and running over the adjacent horizontal and vertical idlers, the free end of said cable depending downwardly from said vertical idler and being removably secured to the adjacent side of the bulkhead.

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1,224,131. WEATHER-CAP. JOHN C. BOTTON and OTIS H. NICKERSON, Cleveland, Ohio. Filed Apr. 20, 1914. Serial No. 833,039. (Cl. 247—12.)



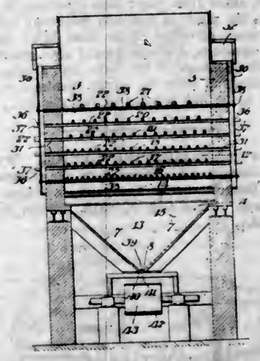
1. A device of the character set forth comprising, in combination, a shell having a curved top and downwardly diverging sides and a transversely curved bottom, portions of the bottom being in planes which are angular with respect to each other, each portion being provided with an opening, a depressed seat in each end of each of the openings, a member which is arranged to occupy one of the openings within the bottom of the shell, said member consisting of a base having a shape corresponding to the shape of the opening and a hollow internally threaded boss which is central and radial with respect to the base, a plate of insulating material for insertion in the other of the said openings, said plate having apertures for wires, the ends of the plate and the ends of the base of the aforesaid member having screw receiving notches, and screws threaded into the bottom of the shell adjacent each end of each of the openings and in a position to occupy the notches in the ends of the aforesaid plate and member, and having heads which overlie and engage the ends of said member and plate.

2. A device of the character set forth comprising, in combination, a shell having a transversely curved bottom that is provided with a plurality of openings, a member which is arranged to extend across each opening and curved to correspond to the transverse curvature of the bottom of the shell, a screw threaded into the bottom of the shell adjacent each end of each of the openings, the screws which are located at the opposite ends of the same opening diverging outwardly with respect to each other and having heads which overlie and engage the ends of the member that extends across their respective opening, wherefore each member may be completely removed from the shell upon a partial withdrawal of its respective screws.

3. A device of the character set forth comprising, in combination, a transversely symmetrical shell having an open bottom, a member adapted to extend across the open bottom of the shell, and a screw threaded into the shell on each side of its open bottom, the screws diverging outwardly with respect to each other and having heads which are adapted to overlie and engage the ends of the aforesaid member, wherefore said member may be completely removed from the shell upon a partial withdrawal of the screws.

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1,224,132. APPARATUS FOR DRYING SAND AND THE LIKE. AMBROSE A. BEATTON, McVeytown, Pa., assignor to Pennsylvania Glass Sand Company, Lewistown, Pa., a Corporation of Pennsylvania. Filed July 16, 1913. Serial No. 779,247. (Cl. 34—34.)



1. In a kiln of the class recited, walls forming a drying chamber, a plurality of horizontally-disposed drying coils of pipe of progressively varying diameter in said chamber and in progressively varying spaced relation between the convolutions of the several coils, means for introducing steam to and exhausting it from said coils, means extending through the interior of said chamber and through the walls thereof adapted to discharge moist air from said chamber, the lowermost set of coils constituting a screen for dried sand, and a receiving and discharging compartment for dried sand below said tubular screen.

2. In a kiln of the class recited, walls forming a drying chamber having a passageway leading from the interior of the chamber to the exterior thereof, a plurality of coils of pipe within the chamber and arranged one above the other, the pipes of each coil being substantially in a horizontal plane, each coil having an inlet opening at one end thereof and an outlet opening at the other end thereof, the pipes of vertically adjacent coils extending in opposite directions to each other from their inlet openings to their outlet opening, a steam supply pipe communicating with the inlet openings of the coils, and a steam exhaust pipe communicating with the outlet openings of the coils.

3. In a kiln of the class recited, walls forming a drying chamber having a passageway leading from the interior of the chamber to the exterior thereof, a plurality of sets of coils arranged one above the other, the pipes of the coils of each set being substantially in a horizontal plane, each coil having an inlet opening at one end thereof and an outlet opening at the other end thereof, the pipes of vertically adjacent coils extending in opposite directions to each other from their inlet openings to their outlet openings, a steam supply pipe communicating with the inlet openings of the coils, and a steam exhaust pipe communicating with the outlet openings of the coils.

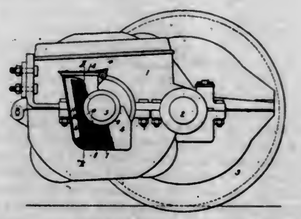
4. In a kiln of the class recited, walls forming a drying chamber having a passageway leading from the interior of the chamber to the exterior thereof, a plurality of sets of coils arranged one above the other, the pipes of the coils of each set being substantially in a horizontal plane, each coil having an inlet opening at one end thereof and an outlet opening at the other end thereof, the pipes of laterally adjacent coils extending in the same direction from their inlet openings to their outlet openings, a steam supply pipe having a separate connection with the inlet opening at each coil, and a steam exhaust pipe communicating with the outlet openings of the coils.

5. In a kiln of the class recited, walls forming a drying chamber having a passageway leading from the interior of the chamber to the exterior thereof, a plurality of sets of coils arranged one above the other, the pipes of the coils of each set being substantially in a horizontal plane, each coil having an inlet opening at one end thereof and an outlet opening at the other end thereof, the pipes of vertically adjacent coils extending in opposite directions to each other from their inlet openings to their outlet openings, the pipes of laterally adjacent coils extending in the same direction from their inlet openings to their outlet openings, a steam supply pipe communicating with the inlet openings of the coils, and a steam exhaust pipe communicating with the outlet openings of the coils.

[Claims 6 to 10 not printed in the Gazette.]

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**1,224,133. LUBRICATING DEVICE.** WILLIAM G. BROOKS, Chicago, Ill., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 9, 1915. Serial No. 54,958. (Cl. 64—24.)



1. In a lubricating device, a member having waste and oil chambers, and a partition between the chambers having a longitudinal slit therein for admitting a waste-removing hook.

2. In a lubricating device, a housing member having oil and waste chambers, and a wall between said chambers having a vertically-extending slit with diverging lower edges to facilitate the insertion of a waste-removing hook.

3. In a lubricating device, a member having waste and oil chambers, and a wall between the chambers having an opening extending from the top to the bottom of said wall, said opening permitting of a free interchange of oil at all levels.

4. In a lubricating device, a member having waste and oil chambers, and a wall between said chambers having an opening at the base thereof and a vertically-extending slit, the corners of said slit wall being chambered where the two openings meet.

5. In a lubricating device, a member having an oil filling and gaging chamber, a waste-containing chamber, and a wall between the two chambers having a longitudinal slit therein and an aperture intercommunicating with said chambers at the base of said wall.

[Claims 6 and 7 not printed in the Gazette.]

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**1,224,134. POTATO-MASHER.** CLARENCE K. BURFORD, Pittsburgh, Pa. Filed Feb. 13, 1917. Serial No. 148,452. (Cl. 146—15.)



1. A device for working or mashing potatoes or the like comprising a cup shaped member of foraminous material having a closure member at the top and open at the bottom and a plunger plate of foraminous material working in the tubular member.

2. A device for working or mashing potatoes or the like comprising an inverted cup member having side and top walls of perforated material and its bottom open, and a plunger plate having perforations and working in the tubular member.

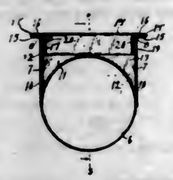
3. A device for working or mashing potatoes or the like comprising an inverted cup of perforated sheet metal, a hollow handle therefor, a second handle working in the hollow handle, and a perforated metal plunger carried by the lower end of the second handle and working through the cup.

4. A device for working or mashing potatoes or the like comprising an inverted cup of sheet metal having its side walls perforated, a hollow handle therefor, a second handle working in the hollow handle, and a perforated metal plunger caried by the lower end of the second handle and working through the cup.

5. A device for working or mashing potatoes or the like comprising an inverted cup of metal having its side walls perforated, a hollow handle therefor, a second handle working in the hollow handle, and a perforated metal plunger carried by the lower end of the second plunger and working through the cup.



**1,224,135. HAND-HOLE SPOUT-TUBE.** LOUIS BURMEISTER, Milwaukee, Wis. Filed June 8, 1914. Serial No. 843,753. (Cl. 137—70.)



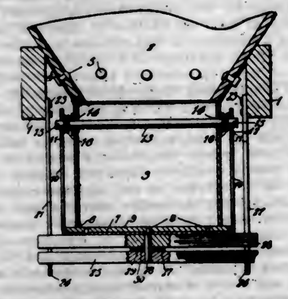
1. As a new article of manufacture a grain conveyer hand hole spout tube formed of sheet metal, comprising a tubular member having integral opposite side walls projecting medially therefrom, and walls connected to the side walls and to the tubular portions of said member to form a rectangular opening, a cover for said opening having a cover portion which projects over and beyond the outer edges of the opening walls and having a rim portion which enters the opening and closely engages the walls bounding the opening, and a sealing means interposed between the cover rim and the opening walls.

2. As a new article of manufacture a grain conveyer hand hole spout tube formed of sheet metal, comprising a tubular member having opposite parallel side walls projecting medially and outwardly therefrom, flanged end walls having curved flanged portions which overlap tubular portions of the tubular member, said overlapped portions being soldered together and forming a rectangular opening, a cover plate for said opening having folded edge portions which project over and beyond the edges of the walls, an angular strip portion extending between said folded portion and depending downwardly therefrom to form a rectangular rim which enters the opening of the tubular portion, said rim having a folded lower edge, and a strip of sealing material extending around the rim and between the folded portions of the rim and the folded portions of the cover plate and engaging the walls of the tubular member to form a dust tight seal between the said walls and the cover.

3. As a new article of manufacture a grain conveyer spout tube hand hole cover, comprising a plate of material having folded edge portions, an angular strip portion extending between said folded portion and projecting outwardly at an angle therefrom to form a rectangular rim, the lower edge portion of said rim being folded, and a strip of dust sealing material extending around the rim and between the folded portions of the cover plate and the rim.

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**1,224,136. SEALING HOPPER-CLOSURE.** FRANK L. CASKEY, Emporium, Pa. Filed Apr. 10, 1916. Serial No. 90,290. (Cl. 193—46.)



1. The combination with a hopper having a mouth thereon, a closure on said mouth, and sealing means associated therewith, of clamping means for said closure, including a plurality of relatively movable sections one of said sections being in clamping engagement with said closure, and a plurality of cam members interposed between said sections, whereby when one of said cam members is moved said sections will separate to seal the closure.

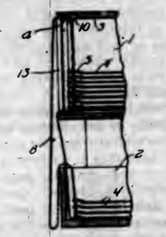
2. The combination with a hopper having a mouth and a sealing closure adapted to be engaged thereunder, of supporting yokes, a pair of relatively movable sections carried by said supporting yokes, cams carried by said sections, a lever associated with one of said cams, whereby to move the same, said movement tending to separate said sections whereby to cause the uppermost sections to engage said closure for clamping the same in the closed position.

3. In a hopper closure of the class described, the hopper having a mouth, an arcuate closure therefor having sealing means associated therewith, said closure being hingedly mounted on said mouth, sealing means adjacent the hinged portion of said hopper, supporting yokes, a plurality of members carried thereby, one of said members being adapted to engage at times, with said closure, cams carried by said members and adapted to co-act, a lever extending from one of said cams, locking means for said lever, whereby when said lever is moved to a position, one of said members is moved for engagement with said closure member, to force the latter into sealing engagement with said mouth.

4. In a hopper closure of the class described, a hopper having a mouth thereon, flanges connected to the sides of said hopper, an arcuate closure therefor, said closure being hingedly connected to said mouth, a lining mounted on said closure means provided with an enlarged portion engaging the marginal edge of one of said flanges providing limiting means therefor, means for opening and closing said arcuate members, and means for forcing said closure into sealing engagement with the said mouth for the purpose specified.

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**1,224,137. TOWEL-HOLDING APPARATUS.** CHARLES H. CHADWICK, Chicago, Ill. Filed Feb. 1, 1913. Serial No. 745,582. (Cl. 45—32.)



1. In combination, a support for towels, a long flexible member adapted to be threaded through loops or eyes in a series of towels arranged on said support, and a lock for securing the ends of said member together to transform it into a closed loop on which the towels are held.

2. In combination, a receptacle for towels having one side arranged to permit the insertion and removal of towels, a long flexible member adapted to pass through said side of the receptacle and be threaded through a series of towels arranged within the receptacle, and a lock for detachably connecting the ends of the flexible member together so as to transform it into a closed loop.

3. In combination, a support for clean towels, a rigid member detachable from said support adapted to pass through suitable registering eyes or loops in a stack of towels resting on said support, a flexible line connected at one end to one end of said rigid member, and a lock for securing the other end of the flexible line to the other end of said rigid member.

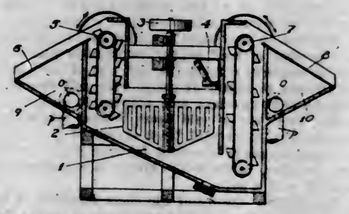
4. In combination, a support, a rigid member detachably mounted on said support and adapted to pass through suitable registering eyes or loops in a stack of towels, a

flexible line connected at one end to one end of said rigid member, and a lock for securing the other end of the flexible line to the other end of said member.

5. In a towel holder or the like, the combination with a supporting member, of an assembling member adapted to secure towels in assemblage upon the supporting member, a flexible retaining member coöperative therewith for the purpose specified, and means for securing both ends of said retaining member to the assembling member.

[Claim 6 not printed in the Gazette.]

1,224,138. COAL-WASHING AND ORE CONCENTRATION. THOMAS M. CHANCE, Philadelphia, Pa. Filed Oct. 2, 1915. Serial No. 53,761. (Cl. 83—85.)



1. A method of separating materials of different specific gravity which consists in maintaining by agitation a uniformly distributed mixture of appreciably coarse granular material and liquid, whereby a fluid mass of relatively high specific gravity and uniform composition is formed; introducing said materials into said fluid mass, permitting said materials to separate in said fluid mass and removing the resultant product of said separation form said fluid mass.

2. A method of separating materials of different specific gravity which consists in maintaining by agitation a uniformly distributed mixture of appreciably coarse granular material and liquid, whereby a fluid mass of relatively high specific gravity and uniform composition is formed; introducing said materials into said fluid mass; permitting the material of relatively low specific gravity to rise to the upper portion of said mass; permitting the material of relatively high specific gravity to sink to the lower portion of said fluid mass; and removing the materials, thus separated, from said fluid mass.

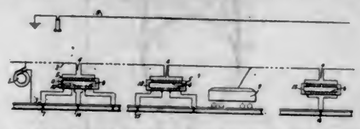
3. A method of separating materials of different specific gravity which consists in introducing said materials into a fluid mass of intermediate specific gravity, maintaining said fluid mass by agitating a uniformly distributed mixture of appreciably coarse granular material, and liquid; permitting the material of higher specific gravity than said fluid mass to sink to the lower portion of said mass; permitting the material of lower specific gravity than said mass to rise to the upper portion of said fluid mass; and removing the materials, thus separated, from said fluid mass.

4. A method of washing coal which consists in feeding said coal into a fluid mass of relatively high specific gravity, maintaining said fluid mass by agitating a uniformly distributed mixture of appreciably coarse granular material and liquid; permitting the coal of relatively low specific gravity to rise to the upper portion of said fluid mass; permitting the impurities of relatively high specific gravity to sink to the lower portion of said mass; and removing the coal and impurities, thus separated, from said fluid mass.

5. A method of washing coal which consists in feeding said coal into an agitated mixture of sand and water, composing a fluid mass of relatively high specific gravity; permitting the coal of relatively low specific gravity to rise to the upper portion of said fluid mass; permitting the impurities of relatively high specific gravity to sink to the lower portion of said fluid mass; and removing the coal and impurities, thus separated, from said fluid mass.

[Claims 6 and 7 not printed in the Gazette.]

1,224,139. DISTRIBUTING SYSTEM. ALEXANDER CHERNYSHOFF, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 1, 1915, Serial No. 18,513. Renewed Sept. 29, 1916. Serial No. 122,931. (Cl. 171—97.)



1. In an electrical system of distribution, the combination with a source of current supply, a conductor connected to one terminal thereof, and a second conductor which comprises a series of insulated conducting sections connected to the other terminal, of a plurality of transformers inserted at spaced intervals to inductively interlink said two conductors, the secondary windings of the transformers adjacent to said source of current supply being composed of a greater number of separate coil sections than those of the transformers more remote from said source of current supply, each secondary coil section being connected to a different pair of insulated conducting sections of said second conductor.

2. In an electrical system of distribution, the combination with a source of current supply, a conductor connected to one terminal thereof, and a second conductor which comprises a series of insulated conducting sections connected to the other terminal, of a plurality of transformers inserted at spaced intervals to inductively interlink said two conductors, the secondary windings of the transformers adjacent to said source of current supply being composed of a plurality of separate coil sections each of which is connected to a different pair of insulated conducting sections of said second conductor, and the secondary windings of those transformers more remote from said source of current supply being composed of single coil sections which are connected to other pairs of insulated conducting sections of said second conductor.

3. In an electrical system of distribution, the combination with a source of current supply, a conductor connected to one terminal thereof, and a second conductor connected to the other terminal, said second conductor comprising a series of insulated conducting sections of unequal lengths, the shorter sections being placed adjacent to the source of current supply, of a plurality of transformers inserted in the circuit at spaced intervals to inductively interlink said two conductors, the secondary windings of those transformers adjacent to said source of current supply comprising a plurality of separate coil sections which are connected to the shorter conducting sections of said second conductor.

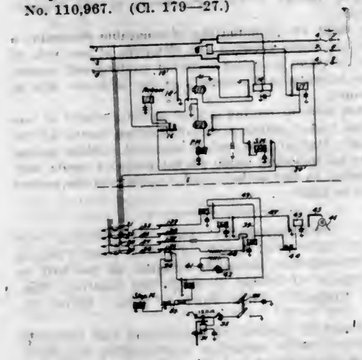
4. A railway system comprising a source of current supply, a trolley conductor connected thereto, a track consisting of a plurality of rail sections comprising a return conductor for the trolley currents, said rail sections being insulated from one another by means of insulating joints, and a plurality of transformers inductively interlinking the trolley conductor and the track, the secondary windings of those transformers adjacent to said source of current supply being composed of a plurality of separate coil sections each of which is connected to a different pair of rail sections in order to limit the potentials impressed across the track insulating joints to safe values.

5. A railway system comprising a source of current supply, a trolley conductor connected thereto, a track consisting of a plurality of rail sections comprising a return conductor for the trolley currents, said rail sections being insulated from one another by means of insulating joints, and a plurality of transformers inductively interlinking the trolley conductor and the track, the secondary windings of those transformers more remote from the source of current supply comprising fewer separate coil sections than the secondary windings of those transformers adjacent to said source of current supply, the coil sections of the secondary windings being connected across the insulating joints in the track in order to limit the potentials impressed thereupon to safe values when currents of high value flow through the primary windings of the transformers.

[Claims 6 and 7 not printed in the Gazette.]



1,224,140. AUTOMATIC TESTING SYSTEM. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed July 24, 1916. Serial No. 110,967. (Cl. 179—27.)



1. An arrangement for determining and recording unstandard conditions in electrical circuits and apparatus, comprising testing means responsive to an electrical condition in the circuits indicating either an unstandard condition or a standard condition, recording means controlled from said testing means, and means responsive only to a standard condition for removing the recording means from the control of the testing means.

2. An arrangement for determining and recording unstandard conditions in electrical circuits and apparatus, comprising testing means responsive to a potential indicating an unstandard condition, a signaling apparatus controlled from such testing means, recording means also controlled from such testing means, and means for preventing the operation of the recording means in case the unstandard condition is eliminated in response to the operation of such signaling apparatus.

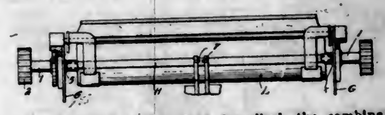
3. An arrangement for determining and recording unstandard conditions in electrical circuits and apparatus, comprising testing means responsive to an electrical condition indicating the existence of an unstandard condition, a signaling apparatus controlled from such testing means, recording means also controlled from such testing means, means for delaying the operation of the recording means until the signaling apparatus has operated for a predetermined time interval, and means for preventing the operation of the recording means in case the unstandard condition is eliminated in response to such signaling means.

4. An arrangement for testing for unstandard operations in automatic apparatus used in establishing a telephonic connection, comprising contacts connected to controlling circuits of such apparatus, testing means responsive to an electrical potential in such control circuits indicating an unstandard operation of such apparatus, automatic means for associating such testing means with such contacts, and means controlled by such testing means to indicate the existence of the unstandard operation.

5. Testing arrangement for determining unstandard conditions in a telephone exchange system, comprising contacts electrically connected to the various points of such telephone system which are to be tested, electroresponsive means responsive to an electrical condition on such contacts indicating an unstandard condition at the point to which the particular contact is connected, and automatic means for successively associating said electroresponsive means with a plurality of such contacts.

[Claims 6 to 14 not printed in the Gazette.]

1,224,141. TYPE-WRITER. JOSEPH J. COHEN, New York, N. Y. Filed May 26, 1916. Serial No. 99,991. (Cl. 197—144.)



1. In a device of the class described, the combination with a typewriter having keys and a platen, of a striking-strip, comprising a piece of stretchable material, means for retaining the striking-strip in position adjacent the platen slightly stretched to receive the blows from the typewriter keys, and means whereby the degree of stretch in the striking-strip is adjustable.

2. A device for enabling the use of a relatively hard surface platen in typewriters, said device comprising a strip of relatively soft material disposed flat upon the face of the relatively hard platen and in close contact with said face in a position to receive the typewriting paper thereover and in position to receive the blows from the typewriter keys impressed upon the paper and being longitudinally bodily movable with the platen, whereby a proper soft surface is provided beneath the paper to insure correct impression from the type keys notwithstanding the presence of the hard surface of the platen.

3. In a device of the class described, the combination in a typewriter comprising the usual swinging type keys a rotary cylindrical platen and frame parts at the opposite ends of said platen, of a strip of stretchable resilient material arranged longitudinally of the platen being stretched and having its opposite ends connected to said frame parts at points substantially in the plane of the surface of said platen so that the intermediate stretched portion of said strip is caused to lie close and flat against the surface of the platen in a position so that the typewriting paper encircling the platen will pass thereover and so as to receive the blows from the typewriter keys, all whereby hard surfaced platens may be employed.

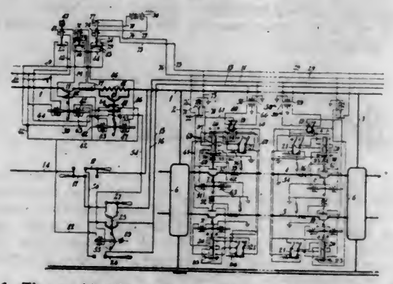
1,224,142. METHOD OF MEASURING THE VICOSITY OF FLUIDS. ARTHUR LEE COLLINS, San Francisco, Cal. Filed Aug. 26, 1914. Serial No. 858,700. (Cl. 73—51.)



1. The method of testing the viscosity of liquids which consists in admitting to the lower end of a tube filled with the liquid a bubble of air or gas and noting the time required for the bubble to rise a determined distance.

2. The method of testing the viscosity of liquids which consists in elevating a tube filled with the liquid and having its upper end closed against the admission of atmospheric pressure and its open lower end immersed in the liquid until an air bubble is admitted to the lower end of the tube, and then noting the time required for the bubble to rise a determined distance.

1,224,143. SYSTEM OF ELECTRICAL DISTRIBUTION. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 8, 1911. Serial No. 659,185. (Cl. 175—294.)



1. The combination with a power-supply circuit, a plurality of work circuits independently supplied with current therefrom, and selective means for connecting and disconnecting the work circuits and the power-supply circuit, of means including a control circuit that is common to all of said work circuits for actuating said selective means and automatically limiting the current flow in the supply circuit when connecting any work circuit thereto.

2. The combination with a supply circuit, a resistor connected in series therewith, means for normally short circuiting said resistor, a plurality of work circuits, and means for selectively connecting or disconnecting said work circuits and the supply circuit, of means for automatically disconnecting said short circuiting means to the resistor when connecting any selected work circuit to the supply circuit.

3. The combination with a power-supply circuit, a plurality of work circuits, and means for independently connecting and disconnecting each of the work circuits and the supply circuit, of means for automatically limiting the current flow in the supply circuit while connecting thereto any selected one of said work circuits.

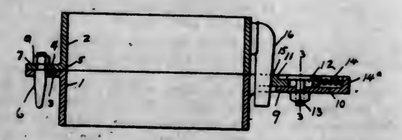
4. The combination with a power-supply circuit, a current-limiting device, a plurality of work circuits, and selective means for connecting and disconnecting said work circuits and the supply circuit, of means associated with said selective means for automatically inserting said current-limiting device in said supply circuit when connecting any one of said work circuits thereto.

5. The combination with a power-supply circuit, a plurality of work circuits, circuit interrupters located at the ends of the work circuit to connect them to the power-supply circuit, and control means for selectively actuating said circuit interrupters, of means associated with said control means for automatically limiting the current flow in the power-supply circuit just prior to connecting any work circuit thereto.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,144. FLASK. HARRY S. COOPER, Erie, Pa., assignor to Griswold Manufacturing Company, Erie, Pa., a Corporation of Pennsylvania. Filed Dec. 22, 1916. Serial No. 138,311. (Cl. 22—110.)



1. In a flask, the combination of separable elements; a fixed guiding means between said elements at one side of said elements; and a spring actuated guiding means between the elements at the opposite side of said elements.

2. In a flask, the combination of separable elements comprising a flask box and a match plate; a fixed guiding means between said elements at one side of said elements; and a spring actuated guiding means between said elements at the opposite side of said elements.

3. In a flask, the combination of separable elements comprising two flask boxes; a fixed guiding means between said boxes at one side thereof; and a spring actuated guiding means between the boxes at the opposite side thereof.

4. In a flask, the combination of separable elements; a fixed guiding means between the elements at one side of said elements; and a spring actuated guiding and centering means between said elements at the opposite side of said elements.

5. A flask element having a fixed guiding means at one side thereof and a spring actuated guiding means at the opposite side thereof, the spring actuated guiding means comprising an inclosing guide pocket plate; a guide slidingly mounted in the pocket; and a spring on the pocket acting on the guide.

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1,224,145. FIREPROOFING AND BLEACHING OF FABRICS AND THE LIKE. THOMAS JOHN IRELAND CRAIG, Manchester, England, assignor of one-half to The Company of Whipp Bros. & Tod Limited, Manchester, England. Filed June 4, 1915. Serial No. 32,060. (Cl. 8—2.)

1. The improved method of fireproofing and bleaching textile fabrics, which comprises impregnating the fabric with an alkali aluminate solution, treating it with carbonic acid and then with a bleaching agent.

2. The method of fireproofing and bleaching textile fabrics which comprises impregnating the fabric with an alkali aluminate solution, treating it with carbonic acid, and then treating it with a solution containing hydrogen peroxid.

3. The method of fireproofing and bleaching textile fabrics which comprises impregnating the fabric with an alkali aluminate solution, treating it with carbonic acid, and then treating it with a solution containing hydrogen peroxid and an alkali bicarbonate.

4. The method of fireproofing and bleaching textile fabrics which comprises treating the fabric with an alkali aluminate solution, drying, subjecting the fabric to carbonic acid gas, then wetting the fabric out with a solution furnishing a supply of carbon dioxid, subjecting the thus wetted fabric to carbonic acid gas, and finally treating the fabric with a bleaching agent.

5. The method of fireproofing and bleaching textile fabrics which comprises treating the fabric with an alkali aluminate solution, drying, subjecting the fabric to carbonic acid gas, then wetting the fabric out with a solution furnishing a supply of carbon dioxid, subjecting the thus wetted fabric to carbonic acid gas, and finally treating the fabric with a solution containing hydrogen peroxid.

[Claim 6 not printed in the Gazette.]

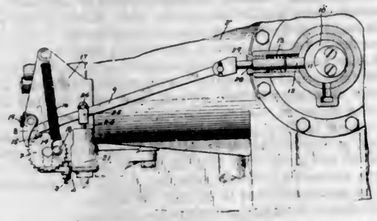
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1,224,146. PUMP-UNLOADING DEVICE. PHILIP L. CRITTENDEN, Edgewood, and LAWRENCE D. SAUNDERS, Wilkinsburg, Pa., assignors to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed July 12, 1915. Serial No. 39,291. (Cl. 230—24.)

1. The combination with a compressor shaft and a compressor suction valve, of means tending to maintain said valve inoperative and a crank for operating said means, and an operative connection between said crank and said compressor shaft.

2. The combination with a compressor shaft and a compressor suction valve, of means tending to maintain said valve inoperative, a crank mechanism for actuating said means to render the suction valve operative, a ratchet mechanism operated by the rotation of the compressor shaft for rotating the crank mechanism, and a spring adapted to be strained by the rotation of the ratchet mechanism through a part of its revolution for effecting the further rotation of said ratchet mechanism to thereby operate said crank mechanism and said means.





3. The combination with a compressor shaft and a compressor suction valve, of means tending to maintain said valve inoperative, a crank shaft adapted to engage said means at a certain point in the revolution thereof and thereby operate said means to render the suction valve operative, a ratchet wheel carried by said crank shaft, a pawl bar operated at each revolution of the compressor shaft for turning the ratchet wheel, a spring adapted to be strained by the turning of the ratchet wheel through a certain arc and adapted upon further movement of the ratchet wheel to exert its power to suddenly rotate the ratchet wheel through an additional arc and thereby cause the crank shaft to actuate said means for rendering the suction valve operative.

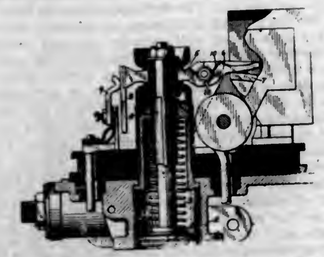
4. The combination with a compressor shaft, of a ratchet wheel, the rotation of which is adapted to control the loading and unloading of the compressor, a spring adapted to be strained by the rotation of the ratchet wheel through one portion of its revolution and adapted to exert its power for rotating the ratchet wheel through another portion of its revolution, an eccentric carried by the compressor shaft, and a pawl bar operated by the eccentric for turning said ratchet wheel through the first mentioned portion of its revolution and adapted to be thrown out of operative engagement with the eccentric by the rotation of the ratchet wheel through the last mentioned portion of its revolution.

5. The combination with a compressor shaft, of a ratchet wheel, the rotation of which is adapted to control the loading and unloading of the compressor, a pawl bar operated by the rotation of the compressor shaft for turning said ratchet wheel, and a piston operated by fluid under pressure when the compressor is cut out for throwing the pawl bar out of operative engagement with the ratchet wheel.

[Claim 6 not printed in the Gazette.]

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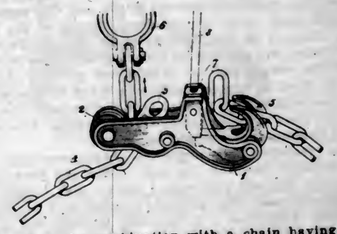
1,224,147. ELECTRIC PUMP-GOVERNOR. PHILIP L. CRITTENDEN, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Aug. 5, 1915. Serial No. 43,801 (Cl. 175—308.)



In an electric pump governor, the combination with a fixed contact member, a movable arm carrying a contact member for making and breaking the pump motor circuit at the fixed contact member, of a second fixed contact member and a sliding contact member carried by said arm and having an extended contact face adapted to constantly engage the second fixed contact member through the movement of the sliding contact.

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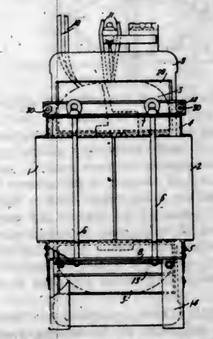
1,224,148. SLING. OLIVER CROSBY, St. Paul, Minn., assignor to American Hoist & Derrick Company, St. Paul, Minn., a Copartnership consisting of Oliver Crosby, Frank J. Johnson, and Will O. Washburn. Filed Nov. 28, 1914. Serial No. 874,558. (Cl. 57—11.)



In a sling, the combination with a chain having links of substantially uniform size, each link normally extending in a plane at an angle to an adjacent link, a clamp slidable on said chain, a bifurcated curved releasing hook pivotally secured in the end of said clamp, said hook being pivoted at a point to one side of the middle point of its curve, the arms of said hook forming said bifurcation being spaced sufficiently far apart to freely receive a link of the chain when laid edgewise therebetween but sufficiently near together to prevent the entrance, of an adjacent transversely laid link, between the arms so as to prevent jamming thereof, the configuration of said hook being such as to hold a link bearing against said hook and lying transversely with respect to the plane of said hook so as to maintain the opening of such link away from the point of said hook, while said chain is positively held by said hook, whereby when the hook is released the likelihood of such link of said chain catching upon the point of said hook is rendered negligible.

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1,224,149. TRANSFORMER. WALTER M. DANN, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 21, 1914. Serial No. 820,203. (Cl. 175—356.)



1. A transformer comprising current-carrying coils, magnetizable core members therefor, top and bottom end frames associated with the core members, said end frames comprising two oppositely-disposed Z-bars and two oppositely-disposed angle irons secured thereto, corresponding flanges of the Z-bars being disposed in the same plane as the flanges of the angle irons in order to effect continuous

engagement with the said core members along their peripheries, and tie rods engaging the other flanges of said Z-bars for interconnecting said end frames.

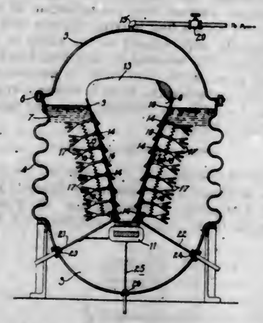
2. An end frame for a transformer core member comprising two oppositely-disposed Z-bars and two oppositely-disposed angle irons that are secured to the inwardly-extending flanges and the upright portions of the Z-bars in order that a continuous flange may be formed for engagement with the periphery of a side of the transformer core member, the outwardly-extending flanges of the Z-bars constituting means for firmly holding the end frame in close contact with said core member.

3. An end frame for a transformer core member comprising two oppositely-disposed Z-bars and two oppositely-disposed angle irons, corresponding flanges of the Z-bars being disposed in the same plane as the flanges of the angle irons, said angle irons being welded to the inwardly-projecting flanges and the upright web potrions of the Z-bars in order to form a continuous flange for engagement with the periphery of a side of the transformer core member, the outwardly-projecting flanges of the Z-bars providing holding means for the end frame.

4. A transformer comprising current-carrying coils, core members therefor, top and bottom end frames, and oppositely disposed coil-bracing means, each composed of a channel member that slidingly engages an outer coil, an exteriorly adjustable bolt threaded through one of said end frames and loosely engaging the upper flange of said channel member to preclude longitudinal displacement thereof, and insulating means interposed between the coils and the channel member.

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1,224,150. ARC-SUPPRESSING DEVICE. DAVID C. DAVIS, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 9, 1914. Serial No. 844,090. (Cl. 175—214.)



1. An arc-disrupting horn comprising a supporting member of insulating material, a plurality of conducting members carried by said supporting member, a conducting stem attached to each of said conducting members, resistance elements connected between adjacent stems, and heat-dissipating means attached to each of the stems.

2. An arc-disrupting horn comprising a wall of insulating material, a plurality of conducting members supported on one face of said wall, a conducting stem attached to each conducting member and projecting through the wall, resistance elements connected between adjacent stems, and heat-dissipating means attached to each of the stems.

3. An arc-disrupting horn comprising a wall of insulating material, a plurality of conducting members supported adjacent one face of said wall, a conducting stem attached to each conducting member and projecting through the wall, a body of cooling fluid on the other side of the wall, resistance elements connected between adjacent stems, and heat-radiating devices attached to each of the stems and submerged in the cooling fluid.

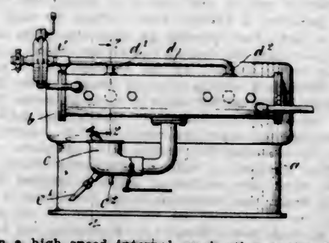
4. An arc-disrupting horn comprising a wall of insulating material, a plurality of conducting members supported on one face of said wall, a conducting stem attached to each conducting member and projecting through the wall, a body of cooling fluid on the other side of the wall, resistance elements connected between adjacent conducting stems and submerged in said cooling fluid, and heat-radiating devices attached to each of the conducting stems and also submerged in the cooling fluid.

5. An arc-disrupting horn comprising a wall of insulating material, a plurality of conducting members supported adjacent one face of said wall, each of said conducting members comprising a highly refractory face member and a backing member therefor of high heat conductivity, a conducting stem attached to each conducting member and projecting through the wall, resistance elements connected between adjacent stems, and heat-dissipating means attached to each of the stems.

[Claims 6 to 22 not printed in the Gazette.]

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1,224,151. OIL-ENGINE. PETER P. DEMPSEY, New York, N. Y. Filed May 19, 1916. Serial No. 98,505. (Cl. 123—30.)



1. In a high speed internal combustion engine having a cylinder and a piston, means for operating the same comprising a source of oil, a carbureting device, an air inlet duct through which a limited quantity of air insufficient to form an explosive mixture is admitted to the carbureting chamber, a heating chamber through which the rich mixture is drawn from the carbureting device, a valve controlled connection from said chamber into the engine cylinder, an independent air inlet duct communicating with said last named connection and an independent positively actuated valve to control said duct to admit a predetermined quantity of air at atmospheric pressure and temperature, at a predetermined point in the piston stroke for the purpose of forming an explosive mixture.

2. In a high speed multi-cylinder internal combustion engine having pistons, means for operating the same comprising a source of oil, a carbureting device, an air inlet duct through which a limited quantity of air insufficient to form an explosive mixture is admitted to the carbureting chamber, a heating chamber through which the rich mixture is drawn from the carbureting device, a valve controlled connection from said chamber into the engine cylinders, and an air distributer operable to admit a predetermined quantity of air to the said connection for the respective cylinders at a predetermined time in each piston stroke for the purpose of forming an explosive mixture.

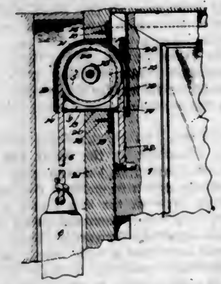
3. In a high speed multi-cylinder internal combustion engine having pistons, means for operating the same comprising a source of oil, a carbureting device, an air inlet duct through which a limited quantity of air insufficient to form an explosive mixture is admitted to the carbureting chamber, a heating chamber through which the rich mixture is drawn from the carbureting device, a valve controlled connection from said chamber into the engine cylinders, an air distributer operable to admit a predetermined quantity of air to the said connection for the respective cylinders at a predetermined time in each piston stroke for the purpose of forming an explosive mixture, and a manually controlled valve to admit air to said distributer in desired quantities to control the speed of the engine.



4. In a high speed multi-cylinder internal combustion engine having pistons, means for operating the same comprising a source of oil, a carbureting device, an air inlet duct through which a limited quantity of air insufficient to form an explosive mixture is admitted to the carbureting chamber, a heating chamber through which the rich mixture is drawn from the carbureting device, a valve controlled connection from said chamber into the engine cylinders, an air distributer carried on the heater and operable to admit a predetermined quantity of air to the said connection and a manually controlled valve to control the admission of air to said distributer.

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1,224,152. PULLEY. JOSEPH J. DILLON, Wilmette, Ill. Filed Dec. 21, 1916. Serial No. 138,213. (Cl. 16—17.)



The combination of a sash cord pulley, and a guide for the sash cord, said guide comprising a casing inclosing the pulley and divided transversely and off its center into two sections, the meeting ends of the sections having outstanding abutting flanges, the flange of one section having a recess in its face in which recess the flange of the other section seats, the ends of the recess being reduced in width and the ends of the last-mentioned flange being shaped to fit in said reduced ends of the recess, and fastening means passing through the flanges of the casing sections, each of said sections comprising a bottom, a top, side walls and an end wall, the larger section supporting the pulley and its bottom having a guide opening for one end of the sash cord, and the bottom of the smaller section being provided with a guide opening for the other end of the sash cord.

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1,224,153. SHOE-FILLING COMPOSITION. OTTO EISENSCHIML, Chicago, Ill., assignor, by mesne assignments, to New Process Filler Co., Chicago, Ill., a Corporation of Illinois. Filed June 16, 1915. Serial No. 34,416. (Cl. 106—3.)

1. A shoe-filler compound, composed of a body of comminuted cork and a binder of mineral asphaltum having a melting point of approximately 120° F.

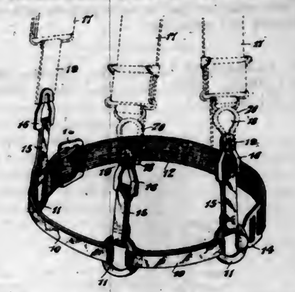
2. A shoe-filler compound having the following composition: one part, by weight, of comminuted cork, and three parts, by weight of a mineral asphaltum having a melting point of approximately 120° F.

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1,224,154. GARTER. HENRY JACOB ESSER, New Orleans, La. Filed Oct. 13, 1916. Serial No. 125,419. (Cl. 241—6.)

1. A garter comprising a leg encircling band composed of a series of inelastic sections, rings arranged between the adjacent ends of said sections and at the ends of the sections, an elastic section connecting the end rings, and tabs mounted on said rings, extending upwardly therefrom and having attaching devices at their upper ends for detachable engagement with the usual supporting straps, said inelastic sections maintaining the tabs at a fixed distance apart under all conditions of service, the tabs and the said inelastic sections having relative sliding movement on the rings.

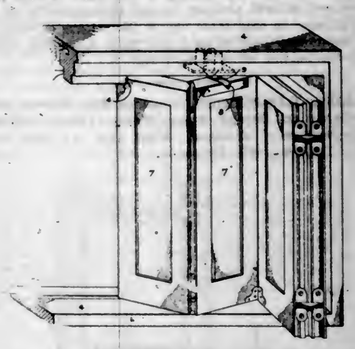
2. A garter comprising a leg encircling band formed of a series of inelastic sections, flat non-metallic rings connecting two of said sections and arranged at the ends thereof, an elastic section connected to one of the end rings and having a hook at its free end engaging with another of the end rings, tabs mounted on each of the



rings and extending upwardly therefrom and having means for detachable engagement with the usual supporting straps, said inelastic sections maintaining the tabs at a fixed distance apart under all conditions of service, the tabs and the said sections having relative sliding movement on the rings.

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1,224,155. FOLDING PARTITION. JOHN T. FAIRHURST, Brooklyn, N. Y., assignor to The Folding Partition Company, a Corporation of New Jersey. Original application filed July 10, 1915, Serial No. 39,061. Divided and this application filed Jan. 27, 1916. Serial No. 74,558. (Cl. 20—20.)



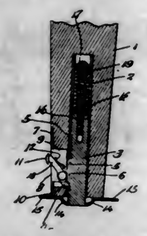
1. In combination with a folding partition, a movable member adjacent the top guide thereof, and a cut away portion in one of the sections of said partition adapted to clear said member whereby said sections may be folded only when said member and said cut away portion are in alinement, said member having oppositely tapered surfaces at two sides and a substantially straight and a tapered surface respectively at the other two opposite sides.

2. The combination with a folding partition comprising sections hinged together in separate pairs, of means for guiding the free ends of said sections along the line into which the partition is designed to be extended, said guiding means including moldings arranged at either side of the line of extension, one of said moldings terminating at a distance from the jamb sufficient to permit the pairs of sections to be folded when moved as near as possible to the jamb, and a depending movable latch arranged in line with the shorter molding and having an abrupt face presented to the longer molding for preventing the folding

of the pairs of sections when moved beyond said shorter molding until after the sections nearer the jamb have been completely folded, one section of each pair having a notch adapted to register with said latch when said pair being the next to be folded is advanced into close proximity to the folded sections, the edges of said latch being inclined to permit the other section of each pair to ride over the same in folding and unfolding.

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1,224,156. TABLE-LEG LEVELER. DANIEL FERRITTO, Cleveland, Ohio. Filed May 26, 1916. Serial No. 99,964. (Cl. 46—13.)

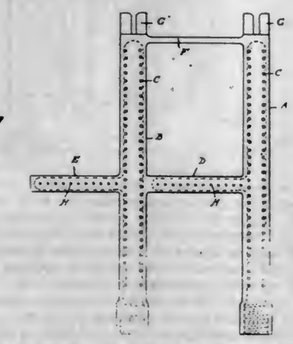


1. A table leveler comprising a table leg having a vertical opening in the lower end thereof, a plunger in said opening, means for holding said plunger at any desired position in said opening, a foot plate secured to the lower end of said plunger and means automatically to raise said plunger in said table leg upon the release of said holding means.

2. A table leveler comprising a table leg having a vertical opening in the lower end thereof, a plunger in said opening, means for holding said plunger at any desired position in said opening, a foot plate secured to the lower end of said plunger, means automatically to raise said plunger in said table leg on the release of said holding means and lugs on said foot plate extending outward from the bottom of said table leg.

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1,224,157. GAS-BURNER. JOHN A. FRY, Detroit, Mich., assignor to Detroit Stove Works, Detroit, Mich., a Corporation of Michigan. Filed Aug. 31, 1916. Serial No. 117,851. (Cl. 158—105.)



1. In a gas burner, two spaced and separately-controlled sections, a connection extending transversely between said sections communicating with one thereof only, and a lighter tube communicating with the other section, said sections, connection, and lighter tube having jet apertures, the jet apertures of the lighter tube coacting with those of the sections with which said tube communicates to transmit a flame to the jet apertures of the other section across said connection.

2. In a gas burner, comprising two internally discontinuous sections, a brace member integrally connecting said sections at corresponding extremities thereof, a branch extending transversely between said sections communicating with one thereof only, and a lighter tube extending forwardly from the other section.

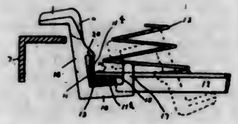
3. In a gas burner, two substantially parallel sections for respectively mounting at the front and back of an oven, a transverse connection between said sections having a passage communicating with the rear section and terminating adjacent the forward section, and a lighter tube alined with said connection communicating with the forward sections and extending forwardly therefrom, said sections, connection and lighter tube being formed with a series of jet apertures.

4. In a gas burner, two substantially parallel sections for respectively mounting at the front and back of an oven, a transverse connection between said sections having a passage communicating with one section and terminating adjacent the other section, and a lighter tube alined with said connection communicating with the forward section and extending forwardly therefrom, said sections, connection and lighter tube being formed with a series of jet apertures.

5. In a gas burner, two substantially parallel sections for respectively mounting at the front and back of an oven, a transverse connection between said sections having a passage obstructed intermediate the burners to cut off communication between the same, and a lighter tube alined with said connection communicating with the forward section and extending forwardly therefrom, said sections, connection, and lighter tube being formed with a series of jet apertures whereby a flame may be transmitted from said lighter tube to the forward burner and to the rear burner across said connection.

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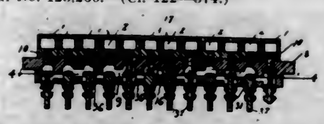
1,224,158. BED-SPRING HANGER. WILLIAM B. FOSTER, Utica, N. Y., assignor to Foster Brothers Manufacturing Company, Utica, N. Y., a Corporation. Filed Aug. 19, 1915. Serial No. 46,353. (Cl. 5—25.)



In a bed, the combination of a bedstead, a bed spring adapted to be hung within the bedstead and having a frame including edge-members, hangers pivotally secured at their lower ends to said frame and provided with shanks extending upwardly beside the said edge-members of the frame and at their upper ends provided with bedstead-engaging hooks and fingers on said shanks extending over the upper edge of said edge-members and adapted to detachably engage the same when the hangers are swung upwardly and hold said hangers in upward position.

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1,224,159. GRATE-BAR. FERDINAND FRÉCHETTE, Notre Dame De Charny, Quebec, Canada. Filed Oct. 2, 1916. Serial No. 123,266. (Cl. 122—374.)



1. In a grate of the character described comprising two sections, grate bars arranged in each section, means of communication between one end of said grate bars, a casting having a channelway therein, an inlet pipe leading to the medial portion of said casting, outlet pipes leading from the opposite ends of said casting, means of communication between said channelway and said grate bars,



valves for controlling the means of communication between said channelway and said grate bars, and said valves also adapted to close said channelway for the purpose set forth.

2. In a grate of the character described comprising two sections, a plurality of grate bars arranged within each section, means of communication between the alining grate bars in each section, U shaped connecting unions between the rear ends of the grate bars in one section, a casting, means for supporting the forward end of the grate bars in one section upon said casting, a channelway arranged within said casting, means of communication between said channelway and the forward ends of the grate bars within one section, valve seats arranged within said casting in the path of communication between said channelway and said grate bars, and vertically movable valves adapted to seat themselves in said valve seats and also adapted to close said channelway for the purpose set forth.

3. In a device of the character described the combination with a plurality of hollow interconnected grate bars, a casting for supporting one end of said grate bars, the said casting having a channelway formed therein and extending throughout its length, detachable means of communication between each of said grate bars and said channelway formed within said casting, inlet and outlet openings communicating with said channelway, valve seats arranged within said casting, a valve adapted to rest within each of said valve seats, each of said valves adapted to close said valve seats for closing the means of communication between said channelway and said grate bars, and each of said valves adapted to close portions of said channelway substantially as and for the purpose specified.

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1,224,160. DIRECT-CURRENT APPARATUS. CHARLES W. GIRVIN, San Francisco, Cal., assignor to Girvin Electrical Development Company, Limited, Honolulu, Hawaii, a Corporation of Hawaii. Filed May 12, 1913. Serial No. 767,060. (Cl. 171—252.)



1. In direct current machines, an armature having a plurality of open-circuit coil-units, brushes forming terminals for said coil units, a rotatable commutator adapted to coöperate with said brushes to place said units constantly in a closed series circuit, said commutator having individual segments connected in pairs with each coil unit adapted to intermittently connect the pairs through contact of its brushes with a segment of each of such pairs, and supporting means for the segments adapted to form assemblage units therewith, the assemblage units being positioned successively in the direction of length of the commutator.

2. In direct current machines, an armature having a plurality of open-circuit coil-units, brushes forming terminals for said coil units, a rotatable commutator adapted to coöperate with said brushes to place said units constantly in a closed series circuit, said commutator having segments connected in pairs and rendered active intermittently by individually contacting with the terminal brushes of a coil unit, said unit forming the connection between the pairs and supporting means for the segments adapted to form assemblage units therewith, the assemblage units being positioned successively in the direction of length of the commutator.

3. In direct current machines, an armature having a plurality of open-circuit coil-units, brushes forming terminals for said coil units, a rotatable commutator adapted to coöperate with said brushes to place said units constantly in a closed series circuit, said commutator having segments connected in pairs and rendered active intermittently by individually contacting with the terminal brushes of a coil unit, said unit forming the connection between the pairs and supporting means for the segments adapted to form assemblage units therewith, the assemblage units being positioned successively in the direction of length of the commutator.

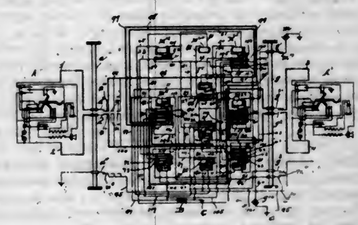
4. In direct current machines, an armature having a plurality of open-circuit coil-units, brushes forming terminals for said coil units, a rotatable commutator adapted to coöperate with said brushes to place said units constantly in a closed series circuit, said commutator having individual segments arranged in circumferential rows, the segments of one row being permanently connected with segments of other rows, the connections providing pairs of segments, a coil unit adapted to intermittently connect segments of different pairs through contact of its brushes therewith and supporting means for the segments adapted to form assemblage units therewith, the assemblage units being positioned successively in the direction of length of the commutator, the segments of a circumferential row being positioned in the same assemblage unit.

5. In direct current machines, an armature having a plurality of open-circuit coil units, brushes forming terminals for said coil units, a rotatable commutator adapted to coöperate with said brushes to place said units constantly in a closed series circuit, said commutator having individual segments arranged in circumferential rows, the segments of one row being permanently connected with segments of other rows, the connections providing pairs of segments, a coil unit adapted to intermittently connect segments of different pairs through contact of its brushes therewith, succeeding segments of the row having similar pair connections and supporting means for the segments adapted to form assemblage units therewith, the assemblage units being positioned successively in the direction of length of the commutator, the segments of a circumferential row being positioned in the same assemblage unit.

[Claims 6 to 20 not printed in the Gazette.]

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1,224,161. TELEPHONE-EXCHANGE SYSTEM. CHARLES LANE GOODRUM, Urbana, Ohio, assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Original application filed Apr. 1, 1905, Serial No. 253,227. Divided and this application filed Dec. 14, 1910. Serial No. 597,355. (Cl. 179—20.)



1. In a telephone exchange system, the combination with a central exchange, of sub-stations connected therewith through telephone lines, a connecting circuit at the central exchange, a source of ringing current at the central exchange normally disconnected from the connecting circuit, a relay controlling the connection of said source with the connecting circuit, a second relay controlling

the circuit for said first relay, an interrupter means in said circuit for periodically causing closure of said circuit to periodically cause action of the first relay to connect the source with the connecting circuit and with a line connected therewith, substantially as described.

2. In a telephone exchange system, a calling and a called subscriber's line, a link circuit having switch terminals for interconnecting them and an automatic connector switch operating in connection with said terminals, a ringing relay actuated when the connector switch has selected the terminals of a called line to connect a ringing generator with said called line only, together with an intermittent circuit closer adapted to close the circuit of said relay and actuate the same at intervals, and means controlled by the called subscriber for disabling said relay when the call is answered, substantially as described.

3. In an automatic telephone system, the combination with a plurality of normally open instrument circuits each provided with signaling devices, a connector switch comprising terminals for said lines and having wipers cooperating therewith which serve to connect one, a calling circuit, with another a called circuit, and mechanism for operating the wipers, of a source of current for signaling purposes comprising a circuit which is normally disconnected from the instrument circuit, a signaling relay which is intermittently operated and controls contacts which open the calling end of the line and connect the signaling circuit to the called end thereof automatically upon the cessation of movement of the switch wipers.

4. In an automatic telephone system, the combination with a plurality of normally open instrument circuits each provided with signaling devices, a connector switch comprising terminals for said lines and having wipers cooperating therewith which serve to connect one, a calling circuit, with another a called circuit and mechanism for operating the wipers, of a source of current for signaling purposes comprising a circuit which is normally disconnected from the instrument circuit, a signaling relay which is intermittently operated and controls contacts which open the calling end of the line and connect the signaling circuits to the called end thereof automatically upon the cessation of movement of the switch wipers and another relay adapted to be operated when the called instrument circuit is closed and while the signaling circuit is disconnected therefrom to render the signaling relay inoperative.

5. In a telephone system a telephone line to be called, a connecting circuit for establishing connection with said line, a bridge across the conversation strands of said connecting circuit, a relay and a battery in said bridge, a ringing generator, a ringing relay adapted when actuated to sever the conversation strands of said connecting circuit and connect said ringing generator with the calling end thereof, a continuously operating interrupter brought into circuit with said ringing relay in response to the connection of said connecting circuit with said line, said bridged relay having contacts controlling the circuit of said ringing relay and interrupter, said bridged relay being energized over the called telephone line when said line is closed at its substation and when said ringing relay is in its normal condition to cause interruption of the circuit of the ringing relay and thus prevent the further actuation of said interrupter from connecting said generator with the called line.

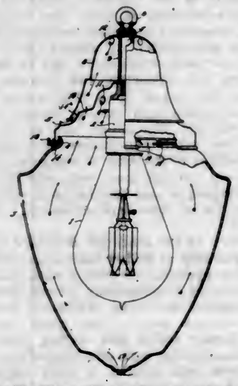
[Claims 6 to 8 not printed in the Gazette.]

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1,224,162. LIGHTING-FIXTURE. LESTER E. GRISWOLD, Pittsburgh, Pa., assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 12, 1914. Serial No. 876,759. (Cl. 240—115.)

1. The combination with a glass shade having a curved neck and a metal holder for such shade, of a spring metal collar in the form of a band with its ends adjacent, lying in said neck so that its upper and lower edges only touch the neck, and screws extending through the holder and engaging the band.

2. The combination with a glass shade having a curved neck and a metal holder for such shade, of a spring metal collar in the form of a band with its ends adjacent, lying in said neck so that its upper and lower edges only touch the neck, a bead on the collar, and screws extending through the holder and engaging the band.

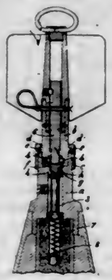


3. The combination with a glass shade having a neck and a metal holder for the shade, of a spring metal collar lying in the neck and engaging the neck at the upper and lower edges of the collar but out of contact with the neck between such edges, and holding screws extending through the holder and engaging the band intermediate its edges.

4. The combination with a glass shade having a neck and a metal holder for the shade, of a collar comprising a metal band of sheet metal bent into annular form with a part of the band intermediate the upper and lower edges thereof out of contact with the glass neck, and screws extending through the holder and engaging the part of the band which is out of contact with the glass.

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1,224,163. EXPLOSIVE SHELL OR SIMILAR BODY. FREDERICK MARTEN HALE, Bromley, England. Filed Dec. 23, 1914. Serial No. 878,829. (Cl. 102—29.)



1. A shell adapted for discharge from air-craft and comprising a body portion, a tail portion adapted for ready disconnection from and connection to said body portion, a fixed firing element located in and secured to said body portion, a detonator adapted to be fired by impact thereof against said fixed firing element, and mechanism carried by said tail portion and removable therewith from said body portion and in connection with said detonator and adapted, when the shell has traveled a predetermined distance through the air, to free said detonator to be moved forward in relation to said body portion and into contact with said fixed firing element by the impact of said shell, said detonator and said mechanism being adapted for ready connection together and the connection of said tail portion to said body portion being adapted to allow of said ready connection of said detonator with said mechanism on the disconnection of said tail portion from said body portion without the disassembling of said mechanism.

2. A shell adapted for discharge from air-craft and comprising a body portion, a tail portion adapted for ready disconnection from and connection to said body portion, a fixed firing element located in and secured to said body portion, a detonator adapted to be fired by impact thereof against said fixed firing element, and mechanism carried by said tail portion and removable therewith from said body portion and including a spindle in connection with said detonator and adapted to be rotated by a vane device and thereby caused, when the shell has traveled a predetermined distance through the air, to free said detonator to be moved forward in relation to said body portion and into contact with said fixed firing element by the impact of said shell, said detonator and said spindle being adapted for ready connection together and the connection of said tail portion to said body portion being adapted to allow of said ready connection of said detonator with said spindle on the disconnection of said tail portion from said body portion without the disassembling of said mechanism.

3. A shell adapted for discharge from air-craft and comprising a body portion, a tail portion adapted for ready disconnection from and connection to said body portion, a fixed firing element located in and secured to said body portion, a detonator holder, a detonator adapted to be fired by impact thereof against said fixed firing element and adapted for ready engagement with said detonator holder, and mechanism carried by and removable with said tail portion and including a spindle engaging said detonator holder and adapted to be rotated by a vane device and thereby caused, when the shell has traveled a predetermined distance through the air, to free said holder to enable said detonator to be moved forward in relation to said body portion and into contact with said fixed firing element by the impact of said shell, the connection of said tail portion to said body portion being adapted to allow of said ready engagement of said detonator with said holder on the disconnection of said tail portion from said body portion without the disassembling of said mechanism.

4. A shell adapted for discharge from air-craft and comprising a body portion, a forward tail portion secured to said body portion, a rear tail portion adapted to be readily disconnected from and connected to said forward tail portion, a detonator located within said forward tail portion, a detonator-holder detachably engaging said detonator, a fixed firing element, and mechanism carried by and removable with said rear tail portion and engaging said detonator-holder and adapted, when the shell has traveled a pre-determined distance through the air, to free said holder to enable said detonator to be moved forward in relation to said body portion and into contact with said fixed firing element by the impact of the shell.

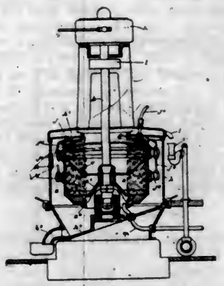
5. A shell adapted for discharge from air-craft and comprising a body portion, a tail portion adapted to be readily disconnected from and connected to said body portion, a movable firing element, a holder detachably engaging said movable firing element, a fixed firing element, and mechanism carried by and removable with said tail portion and engaging said holder and adapted when the shell has traveled a predetermined distance through the air to free said holder to enable said movable firing element to be moved forward in relation to said body portion and into contact with said fixed firing element by the impact of the shell.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,164. SEPARATION OF IMPURITIES FROM LIQUIDS BY CENTRIFUGAL FORCE. JAMES HAMILL, Honolulu, Hawaii. Filed Mar. 13, 1914. Serial No. 824,552. (Cl. 233—21.)

In a centrifugal separator, in combination, a substantially cylindrical rotatable bowl having a central opening at top and bottom and a partition dividing the interior of said bowl into communicating compartments, said partition affording an exit passage for liquid from one compartment at a point differently spaced from the axis of rotation than the exit passage from the other compartment, said partition and bottom of said bowl lying on conical surfaces coaxial with said bowl permitting downflow of the contents of said compartment on cessation of the rotation of said bowl, and means for feeding the bowl at or near the bottom thereof.



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1,224,165. TRACK LEVEL AND GAGE. ALBERT E. HANSEN, deceased, Topeka, Kans., by Ella Hipp, administratrix, Topeka, Kans. Filed May 10, 1916. Serial No. 96,591. (Cl. 33—145.)



1. The combination with a track gage formed for being supported upon the rails, of a casing secured thereon and formed with a chamber, an opening through its top, and a slot through its side wall extending parallel with the line of support, a lever within said casing pivoted below said opening and formed with a portion extending in the same general direction as the slot but having a curved deflection therefrom, a leveling device secured to the lever immediately below said opening, an adjusting element slidably mounted in said slot and engaging said curved portion of said lever, and a clamping element for clamping the adjusting element in adjusted position.

2. The combination with a track gage formed for support upon the rails; of a casing thereon formed with a slot in its wall extending parallel with the line of support and formed also with an opening, a level-supporting element pivotally mounted within said casing and formed with an elongated portion having a deflection from said slot, a level supported on said level-supporting element, and an adjusting device slidably mounted in said slot and engaging said elongated portion, the movement of the adjusting element lengthwise of the slot having the effect of tilting said level-supporting element and the level secured thereon; said casing being formed with an opening through which the level is observable.

3. The combination with a track gage formed for support upon the rails; of a level and a level-supporting element pivotally mounted on said gage, tracks formed on the gage and on the level-supporting element and extending in the same general direction but with a deflection from each other, and an adjusting device engaging said tracks and slidable therealong for tilting said level and level-supporting element.

4. The combination with a track gage formed for support upon the rails; of a level-controlling element pivotally mounted thereon, a level associated with said level-controlling element, tracks formed on the gage and on the level-controlling element and extending in the same gen-

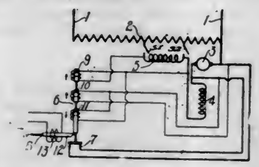
eral direction and deflecting from each other, an adjusting device slidably engaging said tracks and whose movement lengthwise of the tracks tilts the level-controlling element and the level, and means for clamping the adjusting device in adjusted position.

5. The combination with a track gage formed for support upon the rails; of a level-controlling element pivotally mounted thereon so as to oscillate in a vertical plane, a level associated with said level-controlling element, tracks or ways formed on the gage and on the level-controlling element and extending generally in the direction of the line of support but having a deflection from each other, an adjusting device engaging said tracks or ways and movable lengthwise thereof and such movement tilting said level-controlling element and level, and means for clamping said adjusting device in adjusted position.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,166. CONTROL SYSTEM FOR SINGLE-PHASE MOTORS. RUDOLF E. HELLMUND, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 19, 1914. Serial No. 819,738. (Cl. 172—276.)



1. The combination with a supply circuit, and a dynamo-electric machine operated therefrom and having an armature winding and an exciting and an inducing field winding, of electro-responsive means adapted to be differentially acted upon in accordance with the respective voltages of one of said field windings and of the remaining windings, to automatically accelerate the machine and to simultaneously maintain good commutating conditions therein.

2. The combination with a supply circuit and an alternating current motor of the commutator type operated therefrom and having an initially short-circuited armature winding and an exciting and an inducing field winding, of electro-responsive means adapted to be differentially acted upon in accordance with the respective voltages of said exciting field winding and of the combined armature and inducing field windings, during the starting of the motor, to automatically remove the armature short-circuit to further accelerate the motor and to simultaneously maintain good commutating conditions therein.

3. The combination with a supply circuit and a dynamo-electric machine of the commutator type connected thereto and having an armature winding and an exciting and an inducing field winding, of automatic means comprising a coil conductively connected to said exciting field winding and a coil conductively connected to said inducing field winding for varying the commutating flux in the machine in accordance with the relation existing between the exciting field strength and the total armature working voltage.

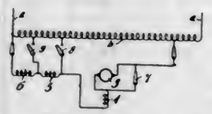
4. The combination with a supply circuit and a dynamo-electric machine of the commutator type connected thereto and having an armature winding and an exciting and an inducing field winding, of automatic switching means for varying circuit connections to vary the commutating flux in the machine, said means being actuated in accordance with the differential relation existing at a predetermined time between the exciting field strength and the total armature working voltage.

5. The combination with a dynamo-electric machine having an armature winding and an exciting and an inducing field winding, of a switching device for making certain circuit connections, and actuating means therefor energized substantially in accordance with the additively combined voltages of the armature and the inducing field winding minus the voltage of the exciting field winding.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,167. CONTROL SYSTEM. RUDOLF E. HELLMUND, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 23, 1914. Serial No. 826,552. (Cl. 172—276.)



1. The method of accelerating an alternating current motor of the commutator type, having an armature winding, an exciting winding and a plurality of compensating windings, from a derived source of energy and simultaneously maintaining proper commutating conditions in the motor, that consists in starting the motor with said exciting and compensating windings in series-circuit relation, subsequently successively applying relatively independent voltages from said source to the compensating windings, as the motor speed increases and finally connecting said compensating windings in series-circuit relation across a portion of said source.

2. The method of accelerating an alternating current motor of the commutator type, having an armature winding, an exciting winding and a distributed and an interpolar compensating winding, from a transformer winding and simultaneously maintaining proper commutating conditions in the motor, that consists in starting the motor with said exciting and compensating windings in series-circuit relation and with the armature short-circuited, successively connecting said interpolar and said distributed compensating windings across predetermined contiguous portions of said transformer winding as the motor speed increases, opening the armature short-circuit substantially simultaneously with said last connection, and opening the motor connection to the point between said contiguous portions of the transformer winding.

3. The method of operating an alternating-current motor of the commutator type having an armature winding, an exciting field winding and a plurality of compensating field windings from a transformer winding that consists in initially connecting said exciting and compensating field windings in series-circuit relation and then directly connecting said compensating windings to said transformer winding, first individually and then collectively.

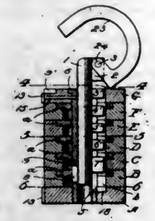
4. The method of operating an alternating-current motor of the commutator type having an armature winding, an exciting field winding and a distributed and an interpolar compensating field winding from a transformer winding that consists in connecting said exciting and said compensating field windings in series-circuit relation to produce a relatively strong compensating flux at starting, connecting first one and then the other of said compensating windings directly to predetermined portions of said transformer and, finally, similarly connecting said compensating windings in series-circuit relation across a portion of the transformer winding, to produce gradually weakening commutating fluxes as the motor speed increases.

5. The method of operating an alternating-current motor of the commutator type having an armature winding, an exciting field winding and a distributed and an interpolar compensating field winding from a transformer winding that consists in the following steps: short-circuiting the armature winding and connecting all said field windings in series-circuit connection therewith at starting, connecting the junction-point of said compensating field windings to a predetermined point of said transformer winding, connecting the innermost terminal of the compensating windings to a second predetermined point of the transformer winding and substantially simultaneously removing the armature short-circuit, and finally disconnecting said junction-point from the transformer winding.



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1,224,168. PERMUTATION-PADLOCK. FRANCIS A. HERMAN, Slatington, Pa. Filed Mar. 2, 1912. Serial No. 681,037. (Cl. 70—113.)



1. The combination in a lock of the class described, of a tubular arbor having a lengthwise extending slot and an outstanding flange at its upper end, a top plate held below said flange, a base plate fixed to the lower end of said arbor having a plurality of seats one of said seats registering with said slot, a plurality of annular tumblers held between said top and base plates, a key disk having a lugway removably secured within each tumbler each key disk being revolubly held upon said arbor whereby said tumblers may be rotated, a slidably held bolt within said arbor having a plurality of key lugs one lug being held within each annular tumbler and below a key disk the lowermost key lug being held within one of said seats, a stud secured to said bolt limiting the outward movement of said bolt, and a bow pivotally secured to said bolt.

2. The combination in a lock of the class described, of a tubular arbor having a lengthwise extending slot and an outstanding flange at its upper end, a top plate held below said flange, a base plate fixed to the lower end of said arbor having a plurality of seats one of said seats registering with said slot, a plurality of annular tumblers held between said top and base plates, a key disk having a lugway removably secured within each tumbler each key disk being revolubly held upon said arbor whereby said tumblers may be rotated, a slidably held bolt within said arbor having a plurality of key lugs one lug being held within each annular tumbler and below a key disk the lowermost key lug being held within one of said seats, a stud secured to said bolt limiting the outward movement of said bolt, a bow pivotally secured to said bolt, and an outstanding foot extending from the said bow arranged to rest in one position on said top plate whereby said bow is held in locked position.

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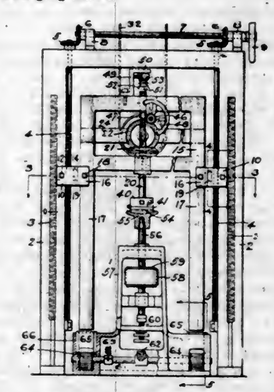
1,224,169. GRINDING APPARATUS. WILLIAM E. HICE, Pittsburgh, Pa. Filed Jan. 29, 1914. Serial No. 815,239. (Cl. 51—3.)

1. In grinding apparatus, the combination with a suitable frame, of adjustable blocks on said frame having segmental recesses therein, a swinging frame, knife edge trunnions on said frame engaging said segmental recesses in said blocks, a rotary lap, and means for swinging said swinging frame.

2. In grinding apparatus, the combination with a suitable frame, of adjustable blocks carried thereby having segmental seats, a swinging frame, adjustable knife edge trunnions on said swinging frame engaging said seats, a rotary lens holder carried by said swinging frame, a rotary lap, and means for swinging said swinging frame.

3. In grinding apparatus, the combination of a suitable frame, simultaneously adjustable blocks on said frame, a swinging frame trunnioned on said blocks, a rotary lens supporting block, a rotary lap and means for swinging said frame.

4. In grinding apparatus, the combination with a suitable frame, of blocks on said frame, rotary screw-shafts, a swinging frame trunnioned on said blocks, a rotary lens supporting block, a rotary lap, and means for swinging said swinging frame.

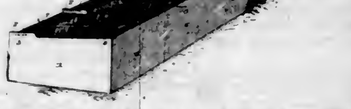


5. In grinding apparatus, the combination with a suitable frame, of a swinging frame supported thereby, means for swinging said frame, a spring actuated shaft in said swinging frame, means for rotating said shaft, a lens supporting block carried by said shaft, and a rotary lap.

[Claims 6 to 12 not printed in the Gazette.]

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1,224,170. NOTE-REGISTER. CROMER HOFFMAN, Mechanicsville, N. Y. Filed May 18, 1916. Serial No. 98,408. (Cl. 129—16.5.)



1. A combined register and tickler for notes and the like, comprising guides representing periods, such as months of the year, and abstract cards or sheets each having month or period identification indicia, day indicia, columns for the entry of particulars concerning notes requiring attention on that date, and successive cross rulings for the columns which are provided with individual identifying indicia, whereby a plurality of notes or like paper requiring attention on a given date may all be abstracted on a card or cards for that date.

2. A combined register and tickler for notes and the like, comprising monthly guides, abstract cards or sheets each having tabs provided with month identifying indicia, a tab bearing day of the month number, columns for the entry of particulars concerning notes requiring attention on that date, and successive cross rulings for the columns which are provided with consecutive individual identifying numbers, whereby a plurality of notes or like paper requiring attention on a given date may all be abstracted on a card or cards for that date.

3. A combined register and tickler for notes and the like, comprising guides each having a tab with the name of the month and a number corresponding to the number of the month, and abstract cards or sheets each having tabs provided with the name of the month and number

of the month, and a tab bearing the date of the month columns for the entry of particulars concerning notes requiring attention on that date, and successive cross rulings for the columns which are provided with consecutive identifying numbers, whereby a plurality of notes or like paper requiring attention on a given date may all be abstracted on a card or cards for that date.

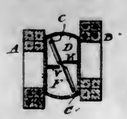
4. A combined register and tickler for notes and the like, comprising guides having tabs provided with the names and numbers of the months, reversible abstract cards or sheets each having on both filing edges two tabs, one bearing the number of the month and the other the name of the month and a third tab bearing the date of the month, columns on both sides of each card or sheet for the entry of particulars concerning notes requiring attention on that date, and successive cross rulings for the columns on both sides of the card or sheet, said rulings being provided with consecutive numbers for purposes of line identification, whereby a plurality of notes or like paper requiring attention on a given date may all be abstracted on a card or cards for that date and each card may be used with either edge exposed.

5. A combined register and tickler for notes and the like, comprising monthly guides and additional guides for "demand" and "long term" notes, abstract cards or sheets representing days of the month, different sets being used for the different months represented by the monthly guides, each abstract card having month identification indicia, day identification indicia, columns for the entry of particulars concerning notes requiring attention on that date, and successive cross rulings for said columns which are provided with individual identifying indicia, corresponding abstract cards arranged under the "Long term" guide, and "demand" abstract cards arranged under the "Demand" guide, the latter cards being numbered consecutively for primary identification under the "Demand" guide and provided with columns for the entry of particulars concerning notes requiring attention, and successive cross rulings for the columns, said cross rulings being provided with individual identifying indicia.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,171. ELECTRODYNAMOMETER INSTRUMENT. JOHN THOMAS IRWIN, London, England. Filed Nov. 26, 1913. Serial No. 803,139. (Cl. 171—95.)




1. In an electrodynamometer instrument, the combination of two substantially circular coils in parallel planes through which currents are adapted to flow in opposite directions to provide opposing fields, a dampening chamber arranged wholly between the parallel field producing coils and having inclosing walls formed of non-magnetic material, a circular dampening vane pivoted within the dampening chamber and adapted to freely oscillate therein, and a third coil of flat shape secured to and movable with the dampening vane and comprising two curved outer portions and a straight axial portion said third coil arranged to oscillate wholly within the dampening chamber and normally in general parallel association with respect to the two circular coils and through which third coil the current flows in one direction axially and in opposite direction in the curved portions of the coil.

2. In an electrodynamometer instrument, the combination of two substantially normally fixed circular coils in parallel planes through which currents are adapted to flow in opposite directions to provide opposing fields, said coils separated a distance less than the diameters of the coils, with a third coil pivoted between the two circular coils and formed of curved outer and straight axial portions in disk form and arranged in the opposing fields and through which coil the current flows in one direction axially and in opposite directions in the curved portions of the coil, a circular vane secured to and moving with the third coil, said vane and coil of a diameter greater than the distance between the fixed coils and a dampening chamber arranged between the two first mentioned circular coils and having inclosing walls surrounding the third coil and its dampener vane, said dampening chamber having its peripheral wall curved in both directions and divided into two chambers by transverse fixed vanes in axial alinement with the axis of the third coil and also in general alinement with the axes of the fixed coils.

3. In an electrodynamometer instrument, relatively fixed coils for producing a suitable uniform circular magnetic field, combined with a pivoted coil arranged in the magnetic field and consisting of a non-magnetic disk having attached thereto electric conductors comprising two curved portions and an intermediate axial portion connected at its opposite ends with the opposite ends of the curved portions whereby all three portions are connected in series and the current flows in opposite directions in the curved portions relatively to each other and to the current flowing in the axial portion, whereby the axial portion is non-effective and the curved portions operate to rotate the coil as a whole and with it the disk, one-half of said curved and axial coil portions arranged upon one side of the disk and the other half upon the other side of the disk.

4. In an electrodynamometer instrument, two fixed coils the fluxes of which are opposed when a current flows in them, said coils arranged in parallel relation at a distance apart, combined with an intermediate movable coil in general parallel relation to the fixed coils and wholly in the space between them and pivoted to rotate under the influence of the magnetic field of the fixed coils, said pivoted coil being composed of three parts arranged in substantially a common plane, one of said parts comprising semi-circular windings at one side of the axis, another of said parts comprising semi-circular windings at the opposite side of the axis, and the third portion comprising a plurality of straight portions axially arranged, and all of said portions connected in series, the construction being such that the axial portions form connecting circuits between the semi-circular portions but are uninfluenced by the magnetic field to produce a torque in the intermediate movable coil as a whole, and a disk of non-magnetic material secured to the movable coil and moving with it and said disk and coil of greater diameter than the distance between the fixed coils.

5. In an electrodynamometer instrument, the combination of two fixed coils in parallel planes for producing a magnetic field between them, with a movable non-magnetic disk pivoted between the fixed coils on an axis parallel thereto and having a diameter greater than the distance between the fixed coils and a movable coil fixed to and movable with the disk and having two portions extending from opposite sides of the axis and upon opposite sides of the disk through which the current flows in opposite directions and an axial portion adjacent to the axis and common to each of the first mentioned coil portions whereby it forms an electric circuit between them but is substantially uninfluenced by the magnetic flux of the fixed coils.

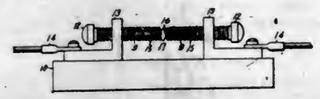
[Claim 6 not printed in the Gazette.]

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1,224,172. PROTECTIVE MEANS FOR AN ELECTRICAL DISTRIBUTING SYSTEM. RAY P. JACKSON, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 14, 1915. Serial No. 39,777. (Cl. 175—276.)

1. A protective device comprising adjustable spaced spark-gap members composed of material of high fusibility and provided with longitudinally extending openings, and bodies of metal of low fusibility disposed in said openings in the spark-gap members.

2. A protective device comprising a pair of similar and spaced spark-gap members composed of material of high fusibility and provided with longitudinally extending openings, and bodies of plastic metal of low fusibility disposed in said openings in order to constitute the arcing surfaces for said spark-gap members.

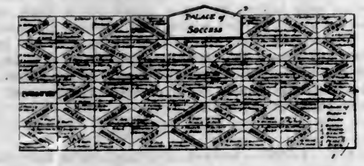


3. A protective device comprising adjustable spaced spark-gap members severally provided with a longitudinal opening that is alined with a corresponding opening in the other member, and bodies of metal of low fusibility disposed in said openings.

4. A protective device comprising adjustable spaced spark-gap members that are recessed at their arcing ends, and bodies of metal of low fusibility disposed in said recessed ends.

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1,224,173. GAME DEVICE. TAMEO KAJIYAMA, New York, N. Y. Filed June 26, 1916. Serial No. 106,003. (Cl. 46—63.)




1. A game device, comprising a playing surface divided into a multiplicity of characterized playing spaces, each of said spaces having future play indicating characters associated therewith, a starting space and a goal included in said playing surface, said starting space having a series of play indicating characters corresponding to some of said playing spaces, and play indicating means also provided with play indicating characters corresponding to both the future play indicating characters in the playing spaces, and the play indicating characters in the starting space.

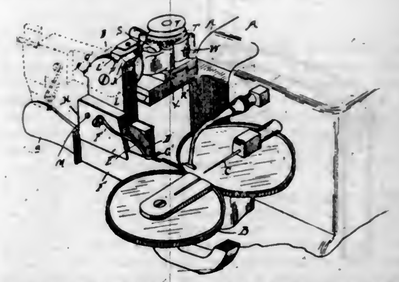
2. A game device, comprising a playing surface divided into a multiplicity of characterized playing spaces, each of said spaces having future play indicating characters associated therewith, a starting space and a goal included in said playing surface, said starting space having a series of play indicating characters corresponding to some of said playing spaces, and play indicating means also provided with play indicating characters corresponding to both the future play indicating characters in the playing spaces, and the play indicating characters in the starting space, said play indicating means adapted to indicate and direct plays from the starting spaces and the characterized playing spaces.

3. A game device comprising a checkered playing surface divided into a multiplicity of chacterized playing spaces, each of said spaces having future play indicating characters associated therewith, a characterized starting space and a characterized goal included in said playing surface, said starting space having a series of play indicating characters corresponding to some of said playing spaces, a movable playing piece, and play indicating means also provided with play indicating characters corresponding to both the future play indicating characters in the playing spaces, and the play indicating characters in the starting space, whereby said movable playing piece may be directed to occupy different characterized spaces in the playing surface.

4. A game device comprising a checkered playing surface divided into a multiplicity of playing spaces, a movable piece adapted to traverse said playing surface and occupy different ones of the playing spaces, a starting space and a goal, means for indicating the different positions of the movable piece with respect to the playing spaces, as well as the starting space and the goal, said playing spaces, starting space and goal being characterized to represent progress and destiny and other allied meanings, whereby the movable piece in occupying the different playing spaces will be confronted with conditions representing advancement and demotion, and thereby enabling it to reach either the goal or be removed from the active playing spaces.

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1,224,174. ATTACHMENT FOR FUR-SEWING MACHINES. EMIL J. KRAHN, Detroit, Mich. Filed Apr. 1, 1915. Serial No. 18,476. (Cl. 112—36.)



1. In a fur sewing machine, a guiding attachment for the material to be sewed, including guide plates, and a rotary disk positioned between the guide plates, said plates converging rearwardly of the disk.

2. In a fur sewing machine, a guiding attachment for the material to be sewed, including guide plates, and a rotary disk positioned between the guide plates, said plates converging rearwardly of the disk and terminating in substantially parallel portions.

3. In a fur sewing machine, a guiding attachment for the material to be sewed, including guide plates, and a rotary disk positioned between the guide plates, said plates having portions in rear of the disk yieldably pressed toward each other, for the purpose described.

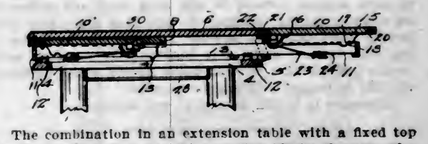
4. In a fur sewing machine, a guiding attachment for the material to be sewed, including guide plates, a partition arranged between the plates, and a rotary disk positioned between the guide plates, said plates converging rearwardly of the disk.

5. In a fur sewing machine, a guiding attachment for the material to be sewed, including guide plates, a partition arranged between the plates, and a rotary disk positioned between the guide plates, said plates having portions substatnially parallel arranged rearwardly of the disk.

[Claims 6 to 18 not printed in the Gazette.]

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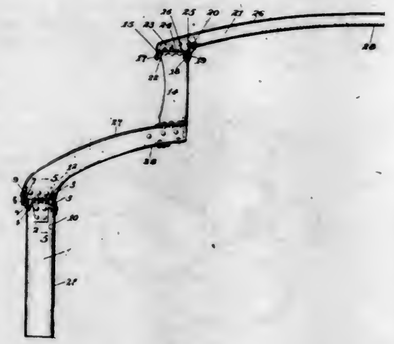
1,224,175. EXTENSION-TABLE. MARTIN KLUEG, Sandusky, Ohio. Filed June 29, 1916. Serial No. 106,595. (Cl. 45—113.)




The combination in an extension table with a fixed top portion, a fixed frame and supporting blocks thereon, of a frame slidable on the blocks and provided with oppositely arranged pairs of pins, a leaf having opposite end plates each provided with an elevating arcuate slot at the inner end and a supporting recess at the outer end to co-act with said pins for elevating and supporting the leaf with relation to the slidable frame, whereby the slidable frame,

when pulled out acts as a cantaliver fulcrumed on said blocks with its inner end engaging under the fixed table top portion.

1,224,176. PASSENGER-CAR CONSTRUCTION. FELIX KOCH, Bellevue, Pa., assignor to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Dec. 29, 1915. Serial No. 69,184. (Cl. 108—5.1.)



1. In a passenger car, the combination with a deck plate, of an eave member secured to said deck plate, an angular member secured to said deck plate and extending above said eave member, a carline, and angular members connecting said carline, eave member and angular member.

2. In a passenger car, the combination with a deck plate, of an eave member secured to said deck plate, a stiffener secured to said deck plate and eave member, an angular member secured to said deck plate and extending above said eave member, a carline, and angular means connecting said carline, angular member and eave member.

3. In a passenger car, the combination with a deck plate, of an eave member secured to the upper edge portion of said deck plate, an angular member secured to said deck plate and extending above said eave member, a carline and angular means connecting said carline and deck plate, said means engaging said angular member.

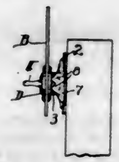
4. In a passenger car, the combination with a deck plate, of an eave member secured to said deck plate, a carline, angular members connecting said carline and eave member, and a member secured to and projecting above the upper edge of said deck plate, said angular members having offset portions adapted to engage with the member secured to said deck plate.

5. In a passenger car, the combination with the side posts, of a side plate secured thereto, members secured to said side plate having portions extending thereabove, a carline having its outer end portion secured to said side plate and to said portions, a deck plate secured to the inner end portion of said carline and extending upwardly therefrom, a stiffener secured to said carline and to said deck plate, an eave member secured to said deck plate and stiffener, an angular member secured to said deck plate and projecting above said eave member, a carline, means connecting said carline, deck plate and angular member, said means comprising a pressed plate having offset portions adapted to engage said angular member.

[Claims 6 to 11 not printed in the Gazette.]

1,224,177. ANTIRATTLING DEVICE FOR AUTOMOBILE-CURTAINS. WILLIAM C. KOCH, St. Paul, Minn. Filed July 17, 1916. Serial No. 109,596. (Cl. 24—202.)

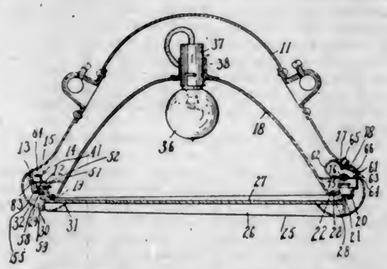
1. The combination with a fastening button for vehicle curtains, said button having a shank and a head, of a washer of resilient material slitted without the removal of material and fitting over the head of the button with the portions between the slits forced apart and bent up alongside the shank of the button, whereby to form a resilient cushion for a curtain eyelet inserted over the head of the button outside the washer.



2. The combination with a fastening button for vehicle curtains, said button having a shank and a head, of a washer of leather slitted without the removal of material with a plurality of slits meeting at an angle, said washer fitting over the head of the button with the portions between the slits forced apart and bent up alongside the shank of the button to form a resilient cushion for a curtain eyelet inserted over the head of the button outside of the washer.

3. The combination with a fastening button for vehicle curtains, said button having a shank and a head, of a washer of leather slitted without the removal of material with intersecting slits, said washer fitting over the head of the button with the portions between the slits forced apart and bent up alongside the shank of the button to form a resilient cushion for a curtain inserted over the button outside of the washer.

1,224,178. LAMP. EUGENE A. KUEN, Cincinnati, Ohio, assignor, by mesne assignments, to The Corcoran-Victor Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Apr. 7, 1916. Serial No. 89,651. (Cl. 240—41.)



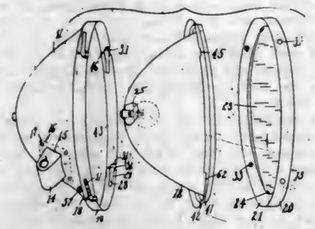
1. In a lamp, the combination of a body, a reflector, a closure, means between said body and closure for causing relative approach between said closure and body parallel to the line of the principal axis of the reflector, and a latch between said body and closure arranged for automatically receding by movement of said closure toward said body and automatically moving into locking relation at the completion of said rotative movement between said closure and body.

2. In a lamp, the combination of a body, a reflector, a closure, means between the body and closure for relative approach between the same by rotative movement of the closure, and a resilient latch and keeper therefor between the body and closure comprising a slanting contact-face slanting relative to the line of approach between said body and closure for automatic withdrawal of said latch by contact thereof, said latch automatically coacting with said keeper on completion of said rotative movement, and manual means for withdrawing said latch.

3. In a lamp, the combination of a body, a reflector and a closure, means between said closure and body for causing relative approach between said closure and body by rotative movement of said closure, and a latch on said body, said closure provided with a recess for said latch, said latch provided with an inclined face contacted by said closure, said recess being out of range of said latch on contact thereof by said closure, and said recess brought into range of said latch by said rotative movement of said closure, said recess and latch having walls between them extending substantially parallel with the radial lines of said reflector at said latch.



1,224,179. LAMP. EUGENE A. KUEN, Cincinnati, Ohio, assignor, by mesne assignments, to The Corcoran-Victor Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Apr. 8, 1916. Serial No. 89,841. (Cl. 240—41.)



1. In a lamp, the combination of a body, a reflector, a closure, means between said closure and body causing relative approach between said closure and body and pressure upon said reflector by relative rotative movement between said closure and body, and means for selective fixing of said closure to said body at various selective points of said relative rotative movement.

2. In a lamp, the combination of a body, a closure, a reflector between said closure and body, means between said closure and body causing pressure upon said reflector by relative movement between said closure and body for clamping said closure, reflector and body together, and means between said closure and body fixing said closure and body together at various selective points of relative rotation between the same.

3. In a lamp, the combination of a body, a reflector, said body and reflector having a seat between them, an annular cushion at the front of said reflector, a closure, means between said closure and body causing relative axial approach between said closure and body by relative rotative movement between the same, and means between said closure and body for selective fixing of said closure to said body at selective points of said relative rotation.

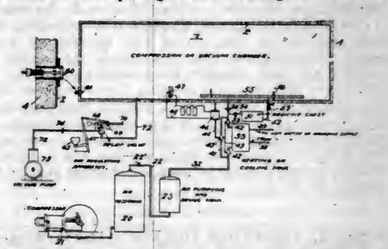
4. In a lamp, the combination of a body, a closure and reflector, constituting lamp-parts, means between said closure and body causing relative approach between said closure and body by relative rotative movement between said closure and body, and means between a pair of said lamp-parts selectively fixing the rotated lamp-part against retractive rotation at various points in its rotation.

5. In a lamp, the combination of a body, a closure and a reflector, constituting lamp-parts, annular cushioning means between the forward portion of said reflector and said closure, annularly arranged locating means between said reflector and body locating said reflector in said body, means between said closure and body causing relative approach between said closure and body by relative rotation between said closure and body, and means between a pair of said lamp-parts selectively fixing the rotated lamp-part against retractive rotation at various points in its rotation.

[Claims 6 to 16 not printed in the Gazette.]

1,224,180. APPARATUS FOR TREATING CERTAIN DISEASES OF THE HUMAN BODY. SIMON LAKE, Milford, Conn. Filed June 6, 1913. Serial No. 772,118. (Cl. 128—13.)

1. Therapeutic apparatus, comprising a substantially air-tight chamber, means for creating a pressure within the chamber at variance with the surrounding atmospheric pressure, a valve controlling communication between the interior of the chamber and the surrounding atmosphere, and mechanism for opening the valve at regular intervals.



2. Therapeutic apparatus, comprising a substantially air-tight chamber, means for creating a pressure within the chamber at variance with the surrounding atmospheric pressure, a valve controlling communication between the interior of the chamber and the surrounding atmosphere, means normally holding the valve seated, and mechanism for intermittently relieving the valve of the action of the seating means to admit of its opening at regular intervals.

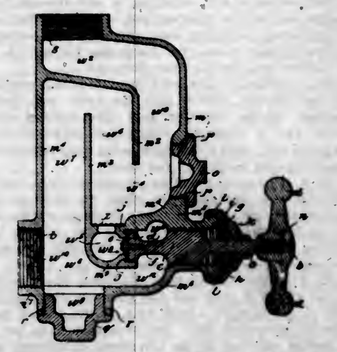
3. Therapeutic apparatus, comprising a substantially air-tight chamber, means for creating a pressure within the chamber at variance with the surrounding atmospheric pressure, a valve controlling communication between the interior of the chamber and the surrounding atmosphere, a pivoted beam engaging the valve, a weight slidable upon the beam and normally tending to hold the valve closed, and means sliding the weight on the beam to admit of the valve opening at regular intervals.

4. Therapeutic apparatus, comprising a substantially air-tight chamber, means associated with the chamber for creating a pressure therein above the normal atmospheric pressure surrounding the chamber, other means for reducing the pressure within the chamber below the normal surrounding atmospheric pressure, valves for maintaining a predetermined pressure within the chamber, a relief valve, and means for intermittently operating the relief valve at regular intervals.

5. Therapeutic apparatus, comprising a substantially air-tight chamber, means for creating a pressure therein above the normal atmospheric pressure surrounding the chamber, and a relief valve automatically operated at regular intervals for establishing communication between the interior of the chamber and the surrounding atmosphere.

[Claims 6 and 7 not printed in the Gazette.]

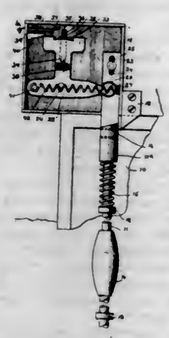
1,224,181. LIQUID-SEAL TRAP. ARTHUR PATRICK LAWLER, Brockville, Ontario, Canada. Filed Jan. 18, 1916. Serial No. 72,849. (Cl. 182—12.)



In a liquid seal trap, the combination of a closed vessel provided with an inlet opening at the top near one side,

and outlet openings at one bottom corner, one opening of which is situated in the same vertical line as the inlet opening, and the other opening situated in the side wall of the trap, a liquid and air tight removable plug at the side opposite the first named side, an inclined wall of metal projecting from the first named side acting as a baffle plate and situated immediately under the inlet opening, a vertical wall extending downward from the inner edge of the baffle plate, a vertical wall dividing the space under the baffle plate into upleg and downleg portions, an upwardly opening chamber at the lower edge of the wall and under the upleg portion, and a valve controlling communication between the chamber and the lower portion of the trap.

1,224,182. DOOR-LOCK FOR ELEVATORS. RICHARD F. LE BROCQ, New York, N. Y., assignor to Le Brocq Company, Brooklyn, N. Y., a Corporation of New York. Continuation of application Serial No. 53,092, filed Sept. 28, 1915. This application filed June 28, 1916. Serial No. 106,323. Renewed Mar. 16, 1917. Serial No. 155,373. (Cl. 187—31.)



1. A system of the kind described comprising an elevator door, a slide bar thereon forming a part of the door lock, an electric circuit, a car controller in said circuit, a switch for making and breaking the circuit, means for operating the switch by the movement of the slide bar of the lock, and a connection between the slide bar and the switch operating by the opening and closing of the door.

2. A system of the kind described comprising an elevator door, a locking slide bar thereon, a switch having a slide bolt, automatically engaging in and disengaging from the slide bar by the opening and closing of the door, an electric circuit including said switch, a car controller in said circuit, and means for operating the switch by the longitudinal movement of the slide bar.

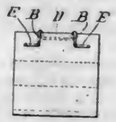
3. In a system of the kind described, the combination with the electric switch and the slide bolt depending therefrom, of the elevator door, the locking slide bar thereon, and a separable connection between the slide bar and its bolt, said connection being made and broken by the opening and closing of the door.

4. In a system of the kind described, the combination of the elevator door and the slide bar thereon forming a part of the lock, said slide bar having a recess therein, of an electric switch adjacent to the door, a slide bolt for operating the switch, and a lug on the slide bolt engaging the recess of the slide bar of the lock.

5. In a system of the kind described, the combination with the elevator door and the slide bar thereon forming a part of the lock, of a slide bolt on the switch having a separable connection with the aforesaid slide bar and a snap switch operated by the movement of the slide bolt.

[Claims 6 to 9 not printed in the Gazette.]

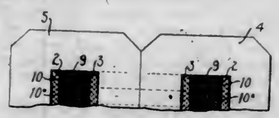
1,224,183. PIN-TICKET. WILLIAM LIVINGSTON, New York, N. Y., assignor to The Noesting Pin Ticket Company, Inc., a Corporation of New York. Filed July 29, 1913. Serial No. 781,727. (Cl. 40—25.)



1. A pin-ticket having a plurality of round-pointed double-shank pins formed of a single piece of wire, the wire between said pins being bent so as to engage with the upper and under sides of said ticket, the free ends of said wire extending along one surface of said ticket and in engagement therewith and passing through openings in the ticket and engaging with the other surface of the ticket.

2. A pin-ticket having a plurality of round-pointed double-shank pins formed of a single piece of wire, the wire between said pins being bent so as to engage with the upper and under sides of said ticket, the free ends of said wire extending along one surface of said ticket and passing through openings in the ticket and engaging with the other surface thereof and so arranged that portions of the free ends are substantially parallel to a line extending from one of said pins to another.

1,224,184. TRANSFORMER INSULATION. WILLIAM M. MCCONAHEY, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 30, 1914. Serial No. 815,330. (Cl. 175—356.)



1. A transformer comprising high tension coils, inner and outer low tension coils coextensive therewith, core members embracing the coils, insulating channel pieces interposed between the adjacent surfaces of said core members and the high tension coils, the outer conductor layers of the high tension coils being inclosed by the channel pieces and the other conductor layers comprising a greater number of convolutions than said outer conductor layers.

2. A transformer comprising concentrically-disposed coils, the high tension coils being interposed between the low tension coils that are co-extensive therewith, a plurality of magnetizable core members embracing the coils, and insulating channel pieces interposed between adjacent surfaces of the high tension coils and the magnetizable core members, said channel pieces receiving a plurality of convolutions of the coil, and other convolutions thereof being superposed by the upturned edges of said channel pieces in order to improve the space factor of the transformer.

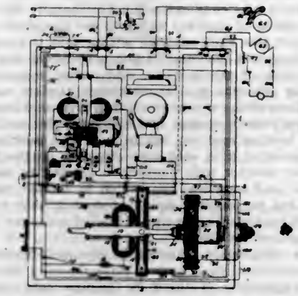
3. A current-carrying coil comprising a plurality of superposed conductor layers having a multiplicity of convolutions, and an insulating channel piece applied to an exposed surface of the coil and receiving some of said conductor layers, the conductor layers not inclosed by said channel piece comprising the greater number of convolutions per layer and extending to the outer surfaces of the upturned edges of said channel piece.

4. A current-carrying coil comprising a plurality of superposed conductor layers having a multiplicity of convolutions, and an insulating channel piece receiving some of said conductor layers, the remaining conductor layers extending to the outer edges of said channel piece in order to form a smooth-surfaced coil side.



5. A current-carrying coil comprising superposed conductor layers having a plurality of convolutions of a uniform conductor, and an insulating channel piece receiving some of said conductor layers, the remaining conductor layers not inclosed by said channel piece comprising convolutions that extend to the outer surfaces of the upturned edges of said channel piece.

1,224,185. TELEPHONE SIGNAL AND RECORDER. FRANCIS J. MCGOWEN and KARL W. THALHAMMER, Los Angeles, Cal., assignors of five-twelfths to said McGowen, one-fourth to said Thalhammer, and one-third to Ida R. Forbes, Los Angeles, Cal. Filed Apr. 22, 1915. Serial No. 23,000. (Cl. 179—6.)



1. In a telephone signal and recorder, the combination with a telephone line and a subscriber's instrument permanently connected thereto, of a branch line connected to the telephone line and including a normally open switch and a relay magnet, a signal transmitting means, independent of the subscriber's instrument and normally disconnected from the telephone line and from said branch line, means controlled by said relay magnet for operating said signal transmitting means for a predetermined time, and means controlled by said relay magnet for putting said signal transmitting means in connection with said telephone line for sending a signal back over said line.

2. In a telephone signal and recorder, the combination with a telephone line and a subscriber's instrument permanently connected thereto, of a branch line connected to said telephone line and including a normally open switch, a condenser and a relay magnet, a signal transmitting means, independent of the subscriber's instrument and normally disconnected from the said telephone line and from said branch line, means controlled by said relay magnet for operating said signal transmitting means for a predetermined time, and means controlled by said relay magnet for putting said signal transmitting means in connection with said branch line for sending signals back over the telephone line.

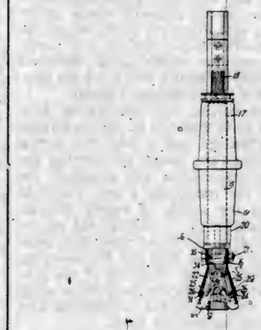
3. In a telephone signal and recorder, the combination with a telephone line and a subscriber's instrument connected thereto, of a branch line connected to said telephone line and including a normally open switch and a relay magnet, a telephone transmitter normally disconnected from the telephone line, means controlled by said relay magnet for putting said transmitter in connection with said telephone line, an electric bell adjacent to said telephone transmitter, an operating circuit therefor including a source of current and a normally open circuit closer and means controlled by said relay magnet for closing said circuit closer for a predetermined time on operation of said relay magnet.

4. In a telephone signal and recorder, the combination with a telephone line and a subscriber's instrument permanently connected thereto, of a branch from said telephone line including a normally open switch and a relay magnet, a telephone receiver and a recorder for recording the messages received by said receiver, means controlled by said relay magnet for operating said recorder and for putting said telephone receiver in connection with said telephone line, a second switch and circuit connections controlled thereby for energizing said recorder operating means and for putting the said telephone receiver in connection with the line, independently of the first named switch, and independently of the operation of said relay magnet.

5. In a telephone signal and recorder, the combination with a telephone line and a subscriber's instrument connected thereto, of a branch connection from said telephone line, including a relay magnet, an armature for said magnet, locking means for holding said armature in operated position, means for restoring said armature to normal position when released from said locking means, a signal transmitting means independent of the subscriber's instrument, means controlled by said armature for operating said signal transmitting means for a predetermined time, releasing means controlled by the operation of said signal operating means, to release said locking means on completion of operation of the signal transmitting means, means controlled by the said armature for putting said signal transmitting means in connection with the telephone line, a phonographic recording device and means controlled by said releasing means to put said phonographic recording device in connection with the telephone line on operation of said releasing means.

[Claims 6 to 8 not printed in the Gazette.]

1,224,186. CIRCUIT-INTERRUPTER. JOSEPH N. MAHONEY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 11, 1913. Serial No. 784,086. (Cl. 175—282.)



1. A contact device for circuit interrupters comprising a resiliently supported contact member and resilient means having bearing points that engage the resilient support on opposite sides under normal conditions.

2. A contact device for circuit interrupters comprising a contact member, a flexible support therefor and means having bearing points for engaging the flexible support on opposite sides under normal conditions.

3. In a contact making device, the combination with a movable member, of a stationary member, contact or bearing parts for said stationary member, means for suspending said contact parts, resilient means disposed at substantially opposite points on each side of the suspending means for alining the contact parts of the stationary member with the said movable member.

4. In a contact making device, the combination with a movable member, of a stationary member, contact fingers for the stationary member, means for suspending the contact fingers, resilient means disposed at substantially opposite points on each side of the suspending means for alining the contact fingers of the stationary member with the movable member and for exerting a tension on the

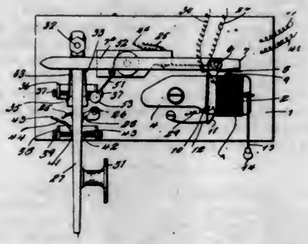
suspending means when the contact fingers and the movable member are separated.

5. In a contact making device, the combination with a movable member, of a stationary member, contact fingers for the stationary member, a flexible conductor and a relatively thin strip of metal for suspending the contact fingers, resilient means disposed at substantially opposite points on each side of the suspending means for alining the contact fingers of the stationary member with the movable member and for exerting a tension on the thin metal strip when the contact fingers and the movable member are separated.

[Claims 6 to 17 not printed in the Gazette.]

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1,224,187. TELEGRAPHIC TRANSMITTER. HENRY J. MAHONY, Green Bay, Wis. Filed Apr. 10, 1915. Serial No. 20,535. (Cl. 178—82.)



1. In a telegraphic transmitter comprising a support, a pendulum balanced upon said support, an armature plate secured to said pendulum, electro-magnetic means pivotally mounted adjacent to said armature plate, means for moving said electro-magnetic means toward and away from said pendulum, means for supplying an electrical current to said electro-magnetic means, and a key for closing the circuit through said electro-magnetic means.

2. In a telegraphic transmitter, the combination with a pendulum, an armature plate therefor, an electro-magnet adapted to engage the armature, and a retractile spring for said pendulum and armature, means for varying the distance between said electro-magnet and armature for controlling the speed of the pendulum, a key, electrical connections leading from the source of supply through said key to said electro-magnet for operating said pendulum in making automatic dots, electrical connection leading to said pendulum and through said key for receiving the automatic dots so made by the vibrating of the pendulum, said second mentioned electrical connection being entirely independent of first mentioned connections and insulated therefrom, for the purpose set forth.

3. In a telegraphic transmitter, the combination with a key comprising a lever and contact plates on the opposite sides thereof, the key lever capable of two movements from its normal position, one of which makes contact with a local circuit and main line circuit, each independent of the other, while the other brings it in contact with the main line only, a pivoted pendulum, an armature therefor, an electro-magnet adapted to engage the armature, retractile spring for said pendulum and armature, electrical connection comprising said local circuit leading from a source of supply to said pendulum and from said pendulum through said key bar to the electro-magnet for operating said pendulum in producing automatic dots, electrical connection independent of first mentioned connection, leading to said pendulum and through said key bar and out to the main line for receiving the automatic dots so made by the vibrating of the pendulum, and electrical connection with said key bar for the transmission of dashes to the main line said connection being entirely independent of first mentioned electrical connection, for the purpose set forth.

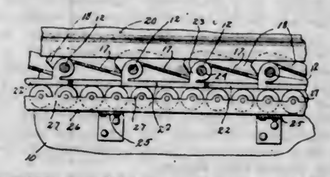
4. In a telegraphic transmitter, the combination with a pivoted pendulum arranged for horizontal vibration, two contact pins and armature plate carried by said pendulum, an electro-magnet adapted to engage said armature, a retractile spring for said pendulum and armature plate, means for varying the distance between the electro-magnet and armature plate for controlling the speed of the pendulum, electrical connection to one of said contact pins carried by the pendulum, said pin adapted to make and break a circuit between the source of supply and the said electro-magnet for operating the pendulum, electrical connection to the other contact pin carried by said pendulum and adapted to make and break a circuit on the main line when the pendulum is vibrating and send dots out on the line, a key bar having contact plates on the opposite sides thereof, said key bar capable of two movements from its neutral position, flat elongated springs on the opposite sides of said key bar having one of their ends secured thereto, their free ends extending horizontally forward, a U plate carried by said key bar, said flat elongated springs having their free ends confined within said U plate, a U-plate secured to a base and having upstanding legs on the opposite sides of the key bar, said second mentioned U-plate being adjacent to first mentioned U-plate and independent therewith, set screws carried by second mentioned U-plate adapted to engage said elongated flat springs for normally holding said key bar in a neutral position, electrical connection with said contact plates on the key bar for making contact with connection leading to said electro-magnet and electrical connection to contact plates on said key bar for sending dots and dashes, said two connections being independent and insulated from one another for the purpose set forth.

5. In a telegraphic transmitter, the combination of a pivoted pendulum, an armature plate therefor, an electro-magnet adjustably mounted to engage said armature plate, means for adjusting said electro-magnet in relation to said armature for the purpose of increasing or decreasing the speed of the pendulum, an automatically adjusting retractile spring for said pendulum and armature plate, two contact pins carried by said pendulum and adapted to make and break a circuit when the pendulum is vibrating, a plurality of supporting blocks, contact plates carried by said supporting blocks, said contact plates having their free ends adapted to make and break a circuit with said contact pins carried by the pendulum, means for limiting the stroke of the pendulum for adjusting for the intensity of the dot, a key comprising a lever and contact plates on the opposite sides thereof, the key lever capable of two movements from its neutral position, one of which makes contact with a local circuit for magnetizing said electro-magnet for operating said pendulum and simultaneously with a circuit making connection with the main line for the transmission of the automatic dots, the other for making contact with the main line circuit only for the sending of dashes, said main line circuit and local circuit being entirely independent of each other, for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,188. GRAIN-PAN FOR THRESHING-MACHINES. JOHN A. MALM, Diamond, S. D. Filed Feb. 2, 1916. Serial No. 75,738. (Cl. 193—2.)

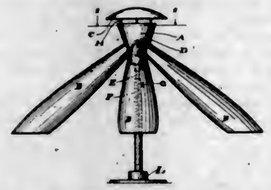


A conveyer comprising spaced endless traveling chains, rods connecting said chains and forming the pivots of the links thereof, a plurality of metal plates having their ends rotatably engaged around adjacent rods, a plurality of rail sections, lateral extensions adjacent respective ends of each rail section rotatably engaged on adjacent rods, a bar supported beneath the upper reach of said chains, and rollers mounted on said bar and engaged by said rail sections.

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1,224,189. LAMP. GEORGE K. MALTBY, New York, N. Y. Filed Feb. 16, 1916. Serial No. 78,584. (Cl. 240—11.)



1. In a device of the kind described, a vertical standard comprising a base and constituting a support, a light chamber mounted thereon and supported in an elevated position thereby, a source of light in said chamber, a plurality of downwardly inclined reflecting tubes opening into said chamber and so disposed as to concentrate and direct the light on a plurality of points around the base of the support.

2. In a device of the kind described, a light chamber, a source of light therein, a plurality of downwardly inclined reflecting tubes opening into said chamber, and means for adjusting the position of said tubes with respect to said light chamber horizontally, for the purpose described.

3. In a device of the kind described, a light chamber, a source of light therein, a plurality of reflector tubes opening into said light chamber and a reflector cover for said chamber adjustable as to height, substantially as described.

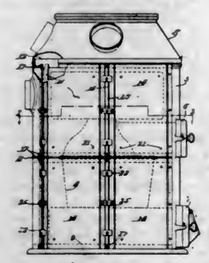
4. In a device of the kind described, a circular light chamber having its side walls formed of a plurality of segments adjustable horizontally with respect to the light chamber and to each other, and a reflector tube mounted on each segment and opening into said chamber, substantially as described.

5. In a device of the kind described, a light chamber, a source of light therein, a support therefor arranged to support the chamber above the work to be illuminated, a plurality of downwardly inclined tubes disposed around and opening into said chamber and arranged to concentrate the light rays therefrom on and to illuminate a plurality of separate pieces of work disposed below said light chamber.

[Claim 6 not printed in the Gazette.]

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1,224,190. FURNACE. ALFRED MARTIN, Rockford, Ill. Filed Oct. 26, 1916. Serial No. 127,933. (Cl. 126—114.)



In a hot-air furnace, the combination of a heater, a casing disposed about the same including a plurality of spaced vertical supports and casing sections interposed between the adjoining supports and overlapping the edges thereof, the supports being provided intermediate their overlapped edges with an outstanding portion equipped with rigid laterally projecting portions, and set screws threaded through said projecting portions so as to clamp the overlapping edges of the casing sections fixedly to the supports and to allow the casing section on one side of the support to be removed without releasing the casing section on the other side thereof.

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1,224,191. MACHINE FOR POLISHING METALLIC BODIES. CHARLES MEDGYES, Budapest, Hungary, assignor to Wenger & Co., Delemont, Switzerland, a Firm. Filed Aug. 4, 1914. Serial No. 855,077. (Cl. 51—14.)



1. In a machine for polishing metallic bodies with small polishing bodies, as small steel balls, a single continuous conveyer belt forming with its U-shaped bight a receptacle adapted to receive the small polishing bodies, means to prevent the escape of these small polishing bodies out of the bight of the belt at the edge thereof, means to drive continually said conveyer belt and an open receptacle receiving the bight of the conveyer belt.

2. In a machine for polishing metallic bodies with small polishing bodies, as small steel balls, a conveyer belt forming with its U-shaped bight a receptacle for the polishing bodies, means to prevent the escape of these small polishing bodies out of the bight of the belt, means to drive continually said conveyer belt and trough with parallel front walls, receiving the bight of the conveyer belt, the breadth of which is equal to the distance of the front walls of said trough.

3. In a machine for polishing metallic bodies with small polishing bodies, as small steel balls, a conveyer belt forming with its U-shaped bight a receptacle for the polishing bodies, means to prevent the escape of these small polishing bodies out of the bight of the belt, means to drive continually said conveyer belt parallel with the auxiliary front walls within said receptacle and means to adjust the auxiliary front walls in accordance with the distance of the edges of the belt.

4. In a machine for polishing metallic bodies with small polishing bodies, as small steel balls, a conveyer belt forming with its U-shaped bight a receptacle for the polishing bodies, means to prevent the escape of these small polishing bodies out of the bight of the belt, means to drive continually said conveyer belt, an open receptacle receiving the bight of the conveyer belt and auxiliary front walls within said receptacle and means to press these auxiliary front walls against the edges of the belt.

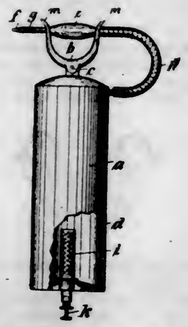
5. In a machine for polishing metallic bodies with small polishing bodies, as small steel balls, a conveyer belt forming with its U-shaped bight a receptacle for the polishing bodies, means to prevent the escape of these small polishing bodies out of the bight of the belt, means to drive continually said conveyer belt, an open receptacle receiving the bight of the conveyer belt and guiding rollers leading the idle part of said belt below the working part of same.

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1,224,192. FIRE-EXTINGUISHER. HANS MIKOREY, Schöneberg, near Berlin, Germany, assignor, by mesne assignments, to Minimax Company, New York, N. Y., a Corporation of New York. Filed Nov. 7, 1910, Serial No. 591,186. Renewed Oct. 8, 1915. Serial No. 54,890. (Cl. 169—7.)

1. In a fire extinguisher, the combination of a container, an outlet tube for discharging the liquid contents of said container, a handle, a tube within the cross bar of this handle, a discharge nozzle connected to said handle tube, an articulated joint connecting the handle to the top of the

said container, a flexible tube connecting said handle tube to the outlet tube of the container, a closed vessel containing and comprising means for the liberation of gas, and a device for opening said vessel and arranged at the bottom of the container, substantially as described and for the purpose specified.



2. In a fire extinguisher, the combination of a container, an outlet tube for discharging the liquid contents of said container, a handle provided with feet, a joint connecting said handle with the top of said container and allowing to be rigidly fixed, a tube within the cross bar of the handle, a discharge nozzle connected to said handle tube, a flexible tube connecting said handle tube to the outlet of the container, and a device for opening said vessel and arranged at the bottom of the container, substantially as described and for the purpose specified.

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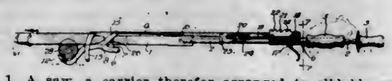
1,224,193. RING. FRANK MILHENING, Chicago, Ill., assignor to J. Milhening, Inc., Chicago, Ill., a Corporation of Illinois. Filed May 18, 1916. Serial No. 98,326. (Cl. 63—15.)



In a device of the class described, a ring of one metal provided with grooves in its edges, an annulus of another metal spun over the outer side of said ring with its edges spaced apart and fitting said grooves whereby the inner side of said ring is left uncovered.

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1,224,194. PRUNING IMPLEMENT. MERWIN B. MILLER, Willard, Utah. Filed Sept. 21, 1914. Serial No. 862,708. (Cl. 30—24.)



1. A saw, a carrier therefor arranged to slidably embrace the back edge of the saw, said carrier extended at one end to form a handle, an operating rod for said saw extending to the handle end of said carrier, means carried by the saw blade for limiting the movement of the saw, and means for maintaining the saw in operative relation with the work to be cut, comprising a V-shaped part having an extended part pivotally secured to the carrier and formed with an extension at one side forming substantially a bell-crank lever, a controlling rod secured to said extension and extending back toward the handle end of said carrier, and adjustably secured thereto.

2. A saw, a carrier therefor arranged to slidably embrace the back edge of the saw, said carrier extended at one end to form a handle, an operating rod for said saw extending to the handle end of said carrier, means on said carrier for engaging a portion of the saw blade and limiting the movement of the saw toward the handle, and means for maintaining the saw in operative relation with the work to be cut, comprising a V-shaped part having an extended part pivotally secured to the carrier and formed with an extension at one side forming substantially a bell-crank lever, a controlling rod secured to said extension and extending back toward the handle end of said carrier, and secured to a trigger arranged thereat.

3. In a device of the kind described and in combination, a suitable saw blade having one end cut at an angle and provided with a lug projecting beyond the face of the saw at said end, a grooved carrier for said saw, said saw arranged in said groove and slidably movable relative the carrier, a yoke carried at the end of said carrier and embracing the saw, a work clamping member pivotally carried by said yoke, said carrier provided with a handle at one end, a saw operating rod secured to the saw and extending to near the said handle, and controlling means for said work clamping member mounted on said handle, and operatively connected with the work clamping member.

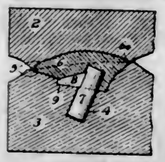
4. The combination in a device of the kind described of a grooved member of suitable material having a handle at one end, a saw blade slidably arranged in said groove, means for maintaining said blade in place, an operating rod on said blade secured thereto and extending to adjacent the handle, a V-shaped member pivotally secured to said grooved member adjacent the saw and movable toward the cutting edge thereof, and means for controlling said V-shaped member as desired.

5. A pruning device of the kind described, comprising the combination of a tubular pole, a reciprocating saw arranged at one end of said pole and carried thereby, an operating rod for reciprocating said saw, said rod secured thereto and extending through said tubular pole to the opposite end thereof, means arranged at the end of said pole adjacent said saw for engaging the work and drawing the saw through the work transversely to its direction of reciprocation and controlling means therefor carried by the pole and extending to the opposite end thereof, said controlling means operable independently to the movement of the pole.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,195. ARTIFICIAL TOOTH AND METHOD OF MAKING SAME. EDWIN MOUNTFORD, York, Pa., assignor to The Dentists' Supply Company, a Corporation of New York. Filed May 18, 1916. Serial No. 98,287. (Cl. 32—9.)



1. An artificial tooth consisting of a porcelain body having its back provided with an inwardly extending recess the same having its axis oblique to the length of the tooth and in a direction toward the incisor edge thereof and said tooth also having a slotted recess opening into the oblique recess and terminating in the face of the tooth surface and in which further, the inner portions of the side walls of the slotted recess are grooved to form undercut portions.

2. An artificial tooth consisting of a porcelain body having its back provided with an inwardly extending recess the same having its axis oblique to the length of the tooth and in a direction toward the incisor edge thereof and said tooth also having a slotted recess opening into the oblique recess and terminating in the face of the tooth surface and said tooth also having lateral recesses formed in its side walls and opening into the oblique recess.

3. An artificial tooth having its back provided with a large recess extending from the back surface into the body of the tooth, and an upright slotted recess of less width extending from said large recess away from the incisor edge of the tooth and of gradually less depth and terminating at a distance from the root end of the tooth.

4. An artificial tooth having its back provided with a large recess extending from the back surface into the body of the tooth, and an upright slotted recess of less width extending from said large recess away from the incisor edge of the tooth and of gradually less depth and terminating at a distance from the root end of the tooth, said slotted recess enlarged at its inner portion to provide undercut side walls.

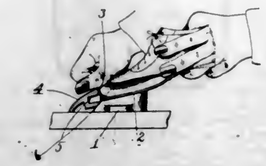
5. The herein described method of forming a porcelain tooth, which consists in first molding the bisque about an oblique stud and a web extending into the tooth space of the mold, drying the molded bisque and removing it from the mold parts to provide a tooth form having an oblique recess and a slotted recess opening therein, then grooving the inner portion of the slotted recess to provide undercut side walls to the slotted grooved portion, and finally burning the tooth to transform it into a vitreous form.

[Claim 6 not printed in the Gazette.]



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1,224,196. TOE-REST FOR TURN-SHOE WORK. DAVID A. MOYER, Birdsboro, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 25, 1916. Serial No. 116,864. (Cl. 12—123.)



1. A toe rest for use in setting uppers forwardly on their lasts comprising a sole bottom support, a last toe abutment and a sustaining member on which said parts are arranged to hold a shoe with its toe pointing away from the workman while the workman seizes the upper and stretches it by a forward thrust.

2. A toe rest for use in setting uppers forwardly on their lasts comprising a sole bottom support, a last toe abutment and a sustaining member on which said parts are arranged to hold a shoe with its toe inclined downwardly away from the workman, the top face of the abutment being beveled downwardly at a greater angle than the sole support to facilitate a downward and forward pull on the upper by the workman's hand.

3. A toe rest for use in setting uppers forwardly on their lasts comprising a sole bottom support, a last toe abutment and a sustaining member on which said parts are carried in relation to one another and to the working position of an operator so that the shoe can be lasted sole face downwardly with its toe pointing away from the operator at a downward inclination and the toe end of the last against the abutment while the operator seizes the upper with his hand and stretches it by a forward and downward thrust.

4. A toe rest for use in setting uppers forwardly on their lasts comprising a sole bottom support, a last toe abutment and a sustaining member on which said parts are arranged to hold a shoe for the upper to be pulled, said rest being formed with a recess under the last toe abutment to receive the projecting toe end of a turn shoe sole.

5. A toe rest for use in setting uppers forwardly on their lasts comprising a sole bottom support, a last toe abutment and a sustaining member on which said parts are arranged to hold a shoe with its toe pointing away from the workman while the workman seizes the upper and stretches it by a forward thrust, said rest having a recess between the sole support and last toe abutment to receive the end of a turn shoe sole, and the top face of the abutment being inclined downwardly and forwardly to facilitate pulling the upper down the instep incline of the last.

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1,224,197. SHOE-SHAPING METHOD. DAVID A. MOYER, Birdsboro, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 25, 1916. Serial No. 116,865. (Cl. 12—146.)



1. That improvement in methods of making shoes which consists in applying the rear part of the upper to a form having a vertically convex face and see-sawing the upper forth and back around the form to shape it so that it will set smoothly against the rear end of its last when applied thereto.

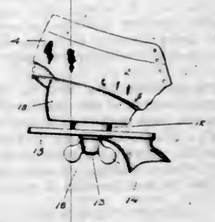
2. That improvement in methods of making shoes which consists in applying the rear part of the upper to a form having a vertically convex face, gaging the vertical relation of the upper to the form so that the portion of the upper which is to constitute the heel seat flange will not be stretched, and see-sawing the upper forth and back around the form until the portion which is to contact with the rear end face of the last is stretched to form a pocket for the rear end of its last.

3. That improvement in methods of making shoes which consists in preliminarily shaping the rear part of the upper to fit its last snugly by stretching that part of the upper over a form and relatively rubbing the upper and the form lengthwise of the upper.

4. That improvement in methods of making shoes which consists in preliminarily shaping the rear part of the upper having a back seam by applying that part of the upper to a form and while holding it snugly to the form producing relative motion of the upper and the form to rub the upper transversely of the length of the back seam.

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1,224,198. SHOE-SHAPING MEANS. DAVID A. MOYER, Birdsboro, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 27, 1916. Serial No. 128,028. (Cl. 12—123.)



1. An upper shaping device comprising a form similar in shape at its rear end to the rear part of a last, and a support on which the form is sustained sole face down-

ward with clearance for permitting unobstructed application of the rear part of a shoe upper to the form from above, said support projecting rearwardly with relation to the lower edge of the form to constitute a gage for the lower margin of an upper applied to the form.

2. An upper shaping device comprising a form similar in shape at its rear end to the rear part of a last, means for sustaining the form sole face downward with clearance for permitting unobstructed application of the rear part of a shoe upper to the form, and a rearward projection located with relation to the lower edge of the form to constitute a gage for the lower margin of an upper applied to the form.

3. An upper shaping device comprising a form similar in shape at its rear end to the rear part of a last and mounted with clearance to permit unobstructed application of the rear part of an upper to the form from above and to permit the upper to be see-sawed forth and back around the form to shape it so that it will set smoothly against the rear end of its last when applied thereto.

4. An upper shaping device comprising a form similar in shape at its rear end to the rear part of a last and mounted with clearance to permit unobstructed application of the rear part of an upper to the form, from above and to permit the upper to be see-sawed forth and back around the form to shape it so that it will set smoothly against the rear end of its last when applied thereto, and gaging means arranged to position the upper vertically with relation to the form.

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1,224,199. COMBINATION POCKET ARTICLE. MANDIUS J. MUNSON, Bairdstown, Cal. Filed Oct. 3, 1913, Serial No. 793,090. Renewed Oct. 24, 1916. Serial No. 127,501. (Cl. 132—3.)



1. A bar the cross-sectional area of which is shaped to provide guides extending longitudinally thereof, a comb maintained in fixed relation to said bar, said comb projecting from one side of said bar and having the bases of its teeth located between and in fixed relation to said guides, and a sheath adapted to protect said comb, said sheath having fastening elements slidable along portions of said guides which are subtended by the teeth of the comb.

2. A bar having a groove along one side thereof, a comb the back of which is fastened in said groove along a portion of the length of said groove, and a sleeve having longitudinally extending out-bent portions also fastened in said groove, said sleeve combining with said bar to form a handle for said comb.

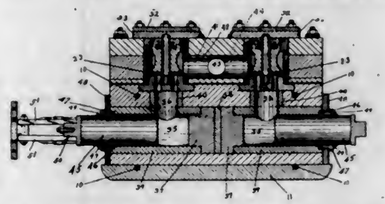
3. A bar triangular in cross section, a comb projecting from one end of the flat sides of said bar, and a tubular sheath adapted to inclose said comb, said sheath having a slot along one side to receive said comb, said sheath having inwardly directed ears one at each side of said slot, said ears being adapted to engage opposite corners of said bar to assist in slidably securing said sheath to said bar.

4. A comb proper having a back or shank extending along the toothed portion of the comb proper, a bar incasing said shank and fixed thereto to form a guiding element therealong, and a sheath telescoping with the comb proper, said sheath having coöperating guiding elements slidable along the first named guiding element, the latter being subtended by the toothed portion of the comb.

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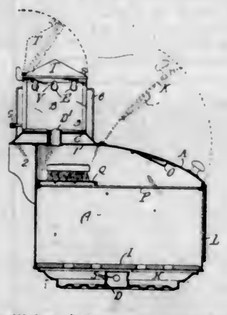
1,224,200. PUMP. ROBERT W. MURRAY, Corning, Ohio. Filed Dec. 5, 1913. Serial No. 804,947. (Cl. 103—77.)

A pump comprising a wooden body portion having opposing cylinders therein, a piston for each cylinder, a wooden plug forming the dividing wall between said cylinders, a layer of non-porous material forming a portion of said plug to prevent seepage of the pumped fluid from one cylinder to the other.



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1,224,201. STERILIZING APPARATUS. CLAYTON A. NENNO, Buffalo, N. Y. Filed July 1, 1914. Serial No. 848,364. (Cl. 167—3.)



1. In a sterilizing cabinet, the combination of a compartment adapted to receive razors to be sterilized and having recesses in the upper edges of the walls thereof, a cover for said compartment having recesses adapted to register with said recesses in the walls of the compartment to form openings through which the razors may be inserted, and inclined tubes secured in the recesses in said compartment and adapted to hold the blades of the razors within the compartment, the razor handles remaining outside of the compartment.

2. In a sterilizing cabinet, the combination of a compartment adapted to receive razors to be sterilized and having slots in the upper edge of a wall thereof, a cover for said compartment which closes the upper ends of said slots leaving openings in the wall of said compartment through which the razor blades extend into the compartment, said cover being movable away from the upper ends of said slots so that the razor blades may be inserted back edge first downwardly into said slots, and razor holders consisting of tubes slotted longitudinally at their upper sides and arranged with their upper ends secured in said slots and inclining downwardly into the compartment for supporting the razor blades in an inclined position therein.

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1,224,202. COUPLING. JOHN NOEL, Chaudière Junction, Quebec, Canada. Filed Aug. 19, 1916. Serial No. 115,796. (Cl. 213—42.)



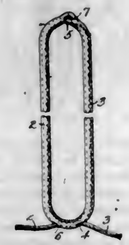
1. In a coupler of the character described comprising two sections the inner ends of each section being enlarged and provided with alining elongated slots, a tapered bolt adapted to extend through said slots, a rod connected to said bolt, and a lever adapted to be connected to said rod for adjusting said bolt for the purpose set forth.

2. In a coupler of the character described comprising two sections, the inner ends of each section having alined elongated slots therein, a tapered bolt adapted to extend through said slots for connecting the sections together, and adjusting blocks adapted to rest within the slot of one section for the purpose set forth.

3. In a coupler of the character described comprising two sections, the inner ends of each section having alined elongated slots therein, an adjusting block adapted to rest within the slot of one section, means for retaining said block within said slot, and a tapered bolt adapted to extend through said slot for connecting the sections together for the purpose specified.

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1,224,203. BELT. FELIX A. PATTEN, Cleveland, Ohio, assignor to The Cleveland Dental Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 30, 1915. Serial No. 25,064. (Cl. 74—66.)



An endless band or belt, comprising a single hollow woven fabric tube each of whose opposite end portions is passed through a lateral opening in the other end portion and spaced from its extreme end a distance equal to substantially one-quarter of the total tube length, said end portions being drawn from said openings through the interior of the tube structure toward each other and meeting or abutting at substantially its middle, the two end portions forming a core filling the middle body portion, and the entire band being of uniform double thickness at all points.

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1,224,204. TREATMENT OF COTTON AND COTTON GOODS AND OTHER COMBUSTIBLE SUBSTANCES TO RENDER THEM PERMANENTLY LESS INFLAMMABLE. WILLIAM HENRY PERKIN, Oxford, and SAMUEL BRADBURY, Ashton-upon-Mersey, England. Filed July 31, 1914. Serial No. 854,354. (Cl. 99—12.)

1. The process of rendering cotton goods and other suitable permeable substances permanently less inflammable, which comprises treating said permeable substances with a solution of an alkali metal salt containing a metal in its acid radical, and subsequently drying the substances thus treated, then treating the dried substances with carbonic acid gas in the presence of moisture, the moisture present being in such quantities as not to disturb the conditions established in the substances by the previous drying, and finally washing the thus treated substances to remove the soluble carbonates and again drying the substances.

2. The process of rendering cotton goods and other suitable permeable substances permanently less inflammable, which comprises treating said permeable substances with a solution of an alkali metal aluminate and subsequently drying the material thus treated, then treating the dried substances with carbonic acid gas in the presence of moisture, the moisture present being in such quantities as not to disturb the conditions established in the substances by the previous drying, and finally washing the thus treated substances to remove the soluble carbonates, and again drying the substances.

3. The process of rendering cotton goods and other suitable permeable substances permanently less inflammable, which comprises treating said permeable substances with a solution of an alkali metal salt containing a metal in its acid radical, and subsequently drying the substances thus treated, then treating the dried substances with carbonic acid gas under pressure in the presence of moisture, the moisture present being in such quantities as not to disturb the conditions established in the substances by the previous drying, and finally washing the thus treated substances to remove the soluble carbonates, and again drying the substances.

4. The process of rendering cotton goods and other suitable permeable substances permanently less inflammable, which comprises treating said permeable substances with a solution of an alkali metal aluminate, and subsequently drying the substances thus treated, then treating the dried substances with carbonic acid gas under pressure in the presence of moisture, the moisture present being in such quantities as not to disturb the conditions established in the substances by the previous drying, and finally washing the thus treated substances to remove the soluble carbonates, and again drying.

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1,224,205. TREATMENT OF COTTON AND COTTON GOODS AND OTHER COMBUSTIBLE SUBSTANCES TO RENDER THEM PERMANENTLY LESS INFLAMMABLE. WILLIAM HENRY PERKIN, Oxford, and SAMUEL BRADBURY, Ashton-upon-Mersey, England. Filed July 31, 1914. Serial No. 854,355. (Cl. 99—12.)

1. The process of rendering cotton goods and other suitable permeable substances permanently less inflammable, which comprises treating said permeable substances with a solution of an alkali metal salt containing a metal in its acid radical, and subsequently drying the substances thus treated, then treating the dried substances with a gas in the presence of moisture which is capable of forming with the alkali metal salt an insoluble compound of the metal which renders the substances less inflammable and a soluble compound which may thereafter be washed away, while confining the amount of moisture present to such quantities as not to disturb the conditions established in the substance by the previous drying, and finally washing the thus treated substances to remove the soluble compound formed in the last reaction, and subsequently drying.

2. The process of rendering cotton goods and other suitable permeable substances permanently less inflammable, which comprises treating said permeable substances with a solution of an alkali metal salt containing a metal in its acid radical, and subsequently drying the substances thus treated, then treating the dried substances with sulfur dioxid gas in the presence of moisture, the moisture present being in such quantities as not to disturb the conditions established in the substances by the previous drying, and finally washing the thus treated substances to remove the soluble sulfites and again drying the substances.

3. The process of rendering cotton goods and other suitable permeable substances permanently less inflammable, which comprises treating said permeable substances with a solution of an alkali metal aluminate and subsequently drying the material thus treated, then treating the dried substances with sulfur dioxid gas in the presence of moisture, the moisture present being in such quantities as not to disturb the conditions established in the substances by the previous drying, and finally washing the thus treated substances to remove the soluble sulfites, and again drying the substances.

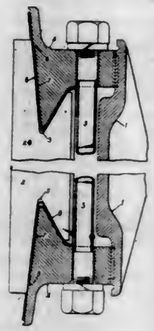
4. The process of rendering cotton goods and other suitable permeable substances permanently less inflammable, which comprises treating said permeable substances with a solution of an alkali metal salt containing a metal in its acid radical, and subsequently drying the substances thus treated, then treating the dried substances with sulfur dioxid gas under pressure in the presence of moisture,

the moisture present being in such quantities as not to disturb the conditions established in the substances by the previous drying, and finally washing the thus treated substances to remove the soluble sulfites, and again drying.

5. The process of rendering cotton goods and other suitable permeable substances permanently less inflammable, which comprises treating said permeable substances with a solution of an alkali metal aluminate, and subsequently drying the substances thus treated, then treating the dried substances with sulfur dioxid gas under pressure in the presence of moisture, the moisture present being in such quantities as not to disturb the conditions established in the substances by the previous drying, and finally washing the thus treated substances to remove the soluble sulfites, and again drying.

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1,224,206. COMMUTATOR-CYLINDER FOR DYNAMO-ELECTRIC MACHINES. WILLIAM S. PYRAH, Old Trafford, England, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 24, 1915. Serial No. 16,801. (Cl. 200—12.)



1. A commutator cylinder for dynamo-electric machines comprising a plurality of assembled conducting and insulating segments, retaining means that are adapted to engage said segments, insulating means interposed between said retaining means and said segments, and further means interposed between said retaining and insulating means for preventing displacement of said conducting segments.

2. A commutator cylinder for dynamo-electric machines comprising a plurality of assembled conducting and insulating segments, a plurality of V-rings that are adapted to retain said segments in position, insulating means interposed between said V-rings and said segments, and further means interposed between said V-rings and said insulating means for preventing displacement of said conducting segments.

3. A commutator cylinder for dynamo-electric machines comprising a plurality of assembled conducting and insulating segments, a plurality of V-rings that are adapted to retain said segments in position, a plurality of layers of built-up insulation between said V-rings and said segments, and means interposed between said V-rings and said built-up insulation for preventing displacement of said conducting segments.

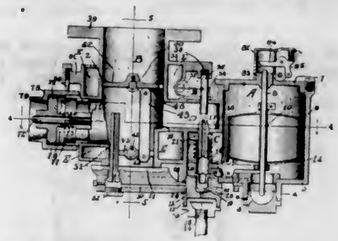
4. A commutator cylinder for dynamo-electric machines comprising a plurality of assembled conducting and insulating segments, a plurality of metal V-rings that are adapted to retain said segments in position, a plurality of layers of built-up insulation interposed between said V-rings and said segments, and a plurality of layers of malleable material interposed between said V-rings and said built-up insulation for preventing displacement of said conducting segments.

5. A commutator cylinder for dynamo-electric machines comprising a plurality of assembled conducting and insulating segments, a plurality of metal V-rings that are adapted to retain said segments in position, a plurality of layers of built-up insulation interposed between said V-rings and said segments and a plurality of layers of soft metal interposed between said V-rings and said built-up insulation for preventing displacement of said conducting segments.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,207. MULTIPLE-JET CARBURETER. CHARLES L. RAYFIELD, Chicago, Ill. Filed Sept. 1, 1911. Serial No. 647,190. (Cl. 261—41.)



1. A carbureter comprising a casing affording a mixing chamber, jet nozzles adapted to direct the hydro-carbon fluid thereinto, a throttle valve, means for regulating the inlet from one of the nozzles simultaneously and correspondingly with adjustment of the throttle valve, ports for admitting air into the mixing chamber across the discharge for the nozzles, an automatically operated normally closed air valve and a second air valve connected to the throttle valve so as to open said second air valve when the throttle is adjusted in excess of normal running position.

2. A carbureter comprising a casing affording a source of hydro-carbon supply and a mixing chamber, nozzles connected with said source of supply and adapted to direct the hydro-carbon fluid into the mixing chamber, a throttle valve, an adjustable cam for regulating the inlet from one of the nozzles simultaneously with the adjustment of the throttle valve, a plurality of ports for admitting air into the mixing chamber, two of the same directing the inlet air across the discharge for the hydro-carbon nozzle, a mechanically operated normally closed air valve, and connections between said air valve and the throttle valve for opening said air valve when the throttle valve is adjusted in excess of normal running position.

3. In a carbureter a float chamber, a mixing chamber, a throttle valve controlling the flow therefrom, a nozzle in open communication with said float chamber for spraying the hydro-carbon thereinto, and projecting into said mixing chamber, a nozzle and needle valve therefor, a passage connecting said last mentioned needle valve to said float chamber, air inlet ports including an automatic valved port, a butterfly valved port, and an open port, and connections between said butterfly valve of one port and said throttle valve for opening the former with opening movement of the latter.

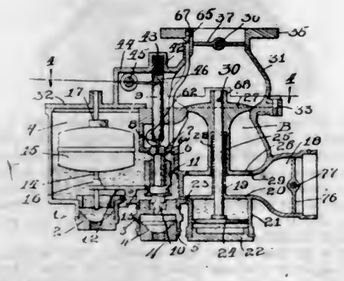
4. In a carbureter of the class described a mixing chamber, means for discharging hydro-carbon fluid thereinto at a plurality of different points at different levels and removed from one another, a float valve controlling the flow of the fluid into the carbureter, a normally open air inlet communicating laterally at one side of said mixing chamber and adjacent one of said hydro-carbon inlet means, another automatically valved inlet communicating laterally in said mixing chamber opposite to said first mentioned inlet, and adjacent another of said hydro-carbon fluid inlet means, a throttle valve in said mixing chamber controlling the flow therefrom, and a butterfly air inlet valve in said mixing chamber connected to said throttle valve and controlling the flow of air into said mixing chamber.

5. In a carbureter the combination with the throttle valve, of a pair of normally closed auxiliary air valves, a cam actuated hydro-carbon needle valve, connections between one of said air valves and the throttle valve and the needle valve to cause said valves to open proportionately with the opening of the throttle, and a second hydro-carbon inlet operating independently of said valves.

[Claims 6 to 17 not printed in the Gazette.]

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1,224,208. CARBURETER. CHARLES L. RAYFIELD, Chicago, Ill. Filed Aug. 23, 1912. Serial No. 716,616. (Cl. 261—41.)



1. A carbureter embracing a source of hydro-carbon supply, a valve controlling the same, a mixing chamber in open communication with the hydro-carbon from said valve, connected valves affording the top and bottom of said chamber, a throttle valve above the same, an air inlet passage below the same, a normally open air port adjacent the needle valve into the manifold beyond the throttle valve, and adjustable means affording an initial opening of the needle valve independently of the opening of the throttle.

2. In a carbureter of the class described, a source of hydro-carbon supply, a needle valve controlling the same, a mixing chamber to receive the supply from the needle valve, a normally open air inlet adjacent the needle valve, a throttle valve controlling the flow of mixture from the carbureter, a by-pass passage leading from near the needle fuel valve into the outlet from the carbureter beyond said throttle valve, a gravity acting valve to control the flow from the mixing chamber toward said throttle valve, operative connections between the same and said needle valve, and regulable means affording a constant opening of said needle valve for operation of the engine at low speed independently of said second mentioned outlet valve.

3. In a carbureter a source of hydro-carbon supply, a needle valve controlling the same, an air port adjacent the needle valve, a mixing chamber, throttle and controlling outlet valves therefor, a dash pot controlling one of said valves, and a passage leading from near the needle valve to the manifold and adapted to deliver a rich mixture into the manifold prior to the opening of said valves.

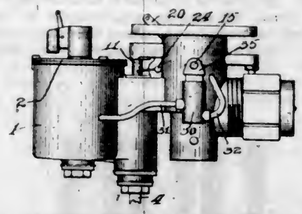
4. A carbureter embracing a source of hydro-carbon supply, a needle valve controlling the same, a mixing chamber, a throttle outlet valve, a controlling outlet valve therein operable independent of the throttle valve, a lever connected with said controlling valve and acting to control the opening of the needle valve, and a passage leading from the needle valve around said controlling valve to deliver a rich mixture into the manifold when said valve is closed.

5. In a device of the class described a mixing chamber comprising the side walls and upper and lower automatic puppet valves affording the top and bottom respectively of said chamber, a dash pot, a piston therein, a stem secured to said piston and connected with said valves, a needle valve controlling the supply to the mixing chamber, and operative connections between the needle valve and one of said valves to regulate the opening of the needle valve in proportion to the opening of said valves.

[Claims 6 to 30 not printed in the Gazette.]

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1,224,209. CARBURETER. CHARLES L. RAYFIELD, Chicago, Ill. Filed Jan. 12, 1914. Serial No. 811,529. (Cl. 261—34.)



1. In a carbureter of the class described a mixing chamber, a float feed chamber, means admitting fuel into said mixing chamber from said float feed chamber, a throttle valve in said mixing chamber, a throttle valve shaft therefor, cams secured thereon, and auxiliary means communicating with said float feed chamber and with said mixing chamber, said cams adapted to simultaneously actuate said fuel admitting means and said auxiliary means to inject independent charges of fuel into the mixing chamber with a sudden opening of the throttle valve.

2. In a carbureter of the class described the combination with a float chamber and mixing chamber thereof, of a throttle valve controlling the flow from the mixing chamber, a shaft on which said throttle valve is mounted, an integral auxiliary fuel cylinder formed on the exterior of the mixing chamber, a pipe for conveying fuel thereto communicating near the upper end thereof and with the float chamber, an outlet pipe communicating with the lower end of said cylinder and leading into said mixing chamber, a piston movable in said cylinder, a spring coiled within said cylinder to resist inward movement of the piston therein, a shaft on said throttle valve shaft for actuating said piston directly, said piston acting to control the inlet of fuel to said cylinder in its downward movement and to force the fuel from said cylinder through said outlet pipe into the mixing chamber as the throttle valve is opened.

3. In a device of the class described a cylinder mounted on a carbureter, a piston slidable therein, a cam rigidly secured to the throttle valve shaft of the carbureter contacting said piston to actuate the same, a fuel inlet in said cylinder, an outlet in the lower end of said cylinder, said piston adapted to close said inlet in its downward movement and eject a charge of fuel under pressure from said cylinder through said outlet into the carbureter.

4. In a priming device attachment for a carbureter the combination with a carbureter casing of a cylinder integrally formed on the exterior thereof, an inlet through said cylinder in the upper end thereof, a pipe communicating between said inlet and the float chamber of the carbureter, an outlet pipe communicating at the lower end of said cylinder communicating into the mixing chamber of the carbureter at a point beneath the throttle valve thereof, a piston movable within said cylinder and acting as a valve to control the inlet to said cylinder and to close the inlet thereto as said piston moves downwardly and to force the charge of fuel through the outlet of said chamber into the mixing chamber, a shaft on which the throttle valve of the carbureter is secured projecting through one side of the casing of the carbureter, and a cam mounted on the end of said shaft directly contacting the upper surface of the upper end of the piston to actuate the same.

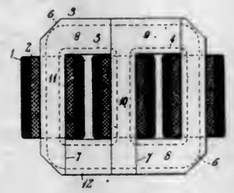
5. In a device of the class described, a carbureter comprising a float feed chamber, a mixing chamber, a throttle valve therein, a shaft on which said throttle valve is mounted, a plurality of cams on said shaft, a needle valve

actuated from one of said cams permitting a flow of fuel from said float feed chamber to said mixing chamber, and means actuatable by the other of said cams for introducing a charge of fuel under pressure by said means from the float feed chamber to the mixing chamber of the carbureter independently of said fuel needle valve.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,210. TRANSFORMER-CORE PUNCHING. EMERSON G. REED, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 26, 1913. Serial No. 808,736. (Cl. 175—356.)

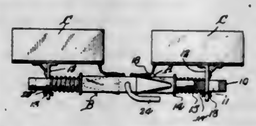


1. A transformer core comprising a plurality of laminated layers each being composed of three L-shaped punchings and a rectangular-shaped punching to form three closed magnetic circuits one of which consists of two of said L-shaped punchings and another of which consists of the third L-shaped punching, said rectangular-shaped punching and the longer leg of one of the aforementioned two L-shaped punchings, said laminated layers being alternately reversed with respect to one another, thereby inserting in the built-up transformer core the same number of air gaps in each of said two magnetic circuits.

2. A lamination-layer for a transformer core member comprising three L-shaped punchings and a rectangular-shaped punching to form a plurality of magnetic circuits, one circuit consisting of two of said L-shaped punchings and another consisting of the third L-shaped punching, said rectangular-shaped punching and the longer leg of one of the aforementioned two L-shaped punchings.

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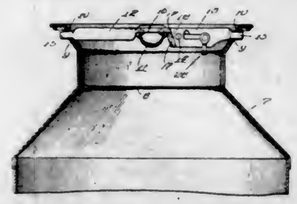
1,224,211. TRAIN-HOSE COUPLING. ADAM REMER and JOHN S. TRIPP, Oklahoma, Okla. Filed May 20, 1916. Serial No. 98,833. (Cl. 188—13.)



A train hose coupling comprising in combination, a bracket depending from the draw bar at the adjacent end of each of two cars, a pair of mating sections, each having a slot through which a bracket is passed, means for securing each section operatively associated with its bracket, each section being formed with a shoulder at a point in its length, a spring encircling each section and interposed between said shoulder and bracket whereby said section is yieldably supported, each section having a substantially conical-shaped extremity, and a semiconical-shaped pocket located at a point rearwardly of said extremity, said conical-shaped extremity of each section being adapted to be fitted within the pockets of the respective sections when the draw bars are coupled, each of said sections having a transverse bore with which one end of its hose section communicates, said bores registering when the sections are coupled, a gasket countersunk in each bore, and one side of each of the conical-shaped extremities of the respective sections being tapered to have a wedge action against the adjacent surface of the opposite mating section to exert a maximum pressure against the meeting faces thereof in axial alinement with the bores to provide a fluid-tight joint between the sections.

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1,224,212. MILK-CAN-LID HOLDER. ELDRIDGE G. REWELL, Council Bluffs, Iowa, assignor of one-half to Oscar F. Orndoff, Harveys, Pa. Filed Aug. 10, 1916. Serial No. 114,087. (Cl. 31—78.)



1. A lid lock of the class described comprising a pair of members pivoted to each other adjacent one end of each of the members and unattached to the lid, said members having a coöperating shoulder and extremity for limiting the pivotal movement of the members in one direction, and each of the members having a reduced outer extremity both of which are advanced and retracted by the pivotal movement of the members.

2. In a lid lock of the class described, the combination with a pair of members pivoted to each other adjacent one end of each member, both members having an extremity which is advanced and retracted by the pivotal movement of the members, and additional means movable with respect to both members for locking the members together when their extremities are in the most extended position.

3. In a lid lock of the class described, a pair of members pivoted together adjacent one extremity of each member, the other extremity of each member being movable by the pivotal movement of the two members, said members being formed with an inclined shoulder and a correspondingly inclined extremity to limit the pivotal movement in one direction, and separate means to lock the members against pivotal movement when the extremity and shoulder are in contact.

4. In a lid lock of the class described, a pair of members pivoted together having parallel portions adjacent the pivot point, means for limiting the pivotal movement of the members in one direction, and a separately operable locking device in connection with the said parallel portions for limiting the pivotal movement in the other direction.

5. In a lid lock of the class described, a pair of members pivoted together having parallel portions with slots therein, and a member movable in the slots of both members for locking the pivoted members in one position.

[Claims 6 to 20 not printed in the Gazette.]

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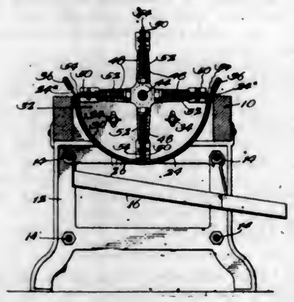
1,224,213. PAINT-STRAINER. EDWARD M. ROSENTHAL, Chicago, Ill., assignor to Bradley & Vrooman Co., Chicago, Ill., a Corporation of Illinois. Filed Aug. 12, 1916. Serial No. 114,496. (Cl. 91—57.)

1. In combination with a suitable support, a strainer member carried thereby, a bar adapted to travel over the surface of said strainer, and reciprocable to and from the strainer, spring means urging the bar toward the strainer, and means for moving said bar over the surface of the strainer.

2. In combination with a suitable support, a strainer member carried thereby, a bar provided with a flexible cushion bearing on the strainer adapted to travel over the surface of said strainer, means rendering the bar reciprocable to and from the strainer, spring means urging the bar toward the strainer, and means for moving said bar over the surface of the strainer.



3. In a device of the class described, the combination with a frame and a suitably arranged conductor below it, a semicylindrical strainer fitting in the top of the frame and supported thereby, a shaft carried by the frame extending longitudinally on the strainer, spokes upon said shaft extending toward the interior surface of the strainer, wiper bars carried by said spokes, reciprocable longitudinally of said spokes, and flexible cushions upon the surfaces of the wiper bars contacting the strainer, all arranged as shown and described for the purposes set forth.



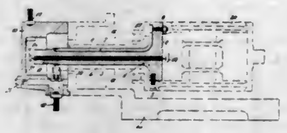
4. In a strainer, the combination of a pair of imperforate end members, a connecting semicylindrical coarsely perforated member, a sheet of finely perforated material inside of said coarsely perforated member, semicylindrical securing members fitted inside of the end member and contacting the finely perforated sheet to hold it in place and means for detachably securing the last mentioned members to the end members.

5. In a strainer, the combination of a pair of imperforate end members, a connecting semicylindrical member, coarsely perforated except as to flanges extending substantially above the upper surfaces of the end members, a sheet of finely perforated material inserted between the ends and in contact with the interior surface of the coarsely perforated member, means engaging the end members for securing the finely perforated sheet in place, and means for securing the outer edges of said finely perforated sheet over the edges of said imperforate flanges of the coarsely perforated member.

[Claims 6 to 11 not printed in the Gazette.]

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1,224,214. CONTACT APPARATUS FOR THE ELECTRICAL CONNECTION OF MAGNETOS. EMILE JEAN JULES SALMSON, Billancourt, France, assignor to Societe Des Moteurs Salmson (Systeme Canton-Unne), Billancourt, France. Filed Mar. 27, 1916. Serial No. 87,140. (Cl. 123—149.)



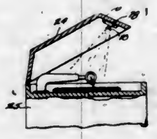
1. A contact apparatus for the electrical connection of magnetos comprising in combination a rigid molded part of insulating substance, a conductor suitably insulated from the body contact in said part, a terminal to which is connected said conductor and the common end of the primary and secondary circuits, a collector ring connected to the said conductor, a contact rubbing against said collector ring and connected to the low-tension terminal, a conducting rod connected at one end of the secondary, and a cover provided with a spring bearing against the other end of the said rod and connected to the high tension terminal, substantially as described and for the purpose set forth.

2. A contact apparatus for the electrical connection of magnetos comprising in combination a rigid molded part of insulating substance formed of a cylindrical head having an elongated extension supported by the side piece of the armature frame, a conductor suitably insulated from the body contact in said part, a terminal to which is connected said conductor and the common end of the primary and secondary circuits, a collector ring connected to the said conductor, a contact rubbing against said collector ring and connected to the low-tension terminal, a conducting rod connected at one end to the end of the secondary, and a cover provided with a spring bearing against the other end of the said rod and connected to the high tension terminal, substantially as described and for the purpose set forth.

3. A contact apparatus for the electrical connection of magnetos comprising in combination a rigid molded part of insulating substance formed of a cylindrical head having an elongated extension, a sheet of conducting substance located in an outer groove of the molded part and insulated from the body contact by a tongue of insulating material, a terminal to which is connected said sheet of conducting substance and the common end of the primary and secondary circuits, a collector ring connected to said sheet of conducting substance, a contact rubbing against said collector ring and connected to the low-tension terminal, a conducting rod extending through a longitudinal hole pierced in the rigid molded part and connected at one end to the end of the secondary, and a spring bearing against the other end of said rod and connected to the high tension terminal, substantially as described and for the purpose set forth.

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1,224,215. FLASH-LIGHT. OSCAR L. SCALBOM, Glenview, Ill. Filed Sept. 8, 1916. Serial No. 118,960. (Cl. 240—2.)



1. A self contained flash light embodying an open casing of box like formation, a closure for the casing, interengaging means on the casing and closure for detachably securing the parts together, one of the parts being adapted to be secured to a support to constitute an anchor for the other part, a lamp socket connected with one of the walls of the casing and opening therethrough, a lamp in the socket, a removable battery in the casing and in circuit with the lamp, and means for controlling the lamp.

2. A self contained flash light embodying an open box like casing, a closure for the casing, interengaging means on the closure and the casing for detachably securing the parts together, one of the parts being adapted to be secured to a support to constitute an anchor for the other part, a lamp socket connected with one of the walls of the casing and opening therethrough, a lamp in the socket, a removable battery in the casing and in circuit with the lamp, an annular shield secured to the casing and encompassing the lamp, and means for controlling the lamp.

3. A self-contained flash light embodying an open casing, a closure for the casing and detachable therefrom, one of the parts being adapted to be secured to a support to constitute an anchor for the other part, said closure and casing being one provided with a lip and the other with an aperture for removably receiving the lip, and a catch device coöperating with the said lip and aperture for detachably securing the closure and casing together, a lamp connected with one of the walls of the casing and visible from the outside of the casing, a battery removably

held in the casing and in circuit with the lamp, and a make and break device included in the lamp circuit and accessible from the outside of the casing.

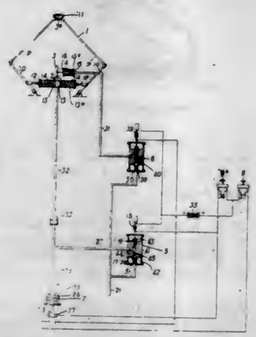
4. A self-contained flash light embodying an open casing, a closure for the casing and detachable therefrom, one of the parts being adapted to be secured to a support to constitute an anchor for the other part, said closure and casing being one provided with a lip and the other with an aperture for removably receiving the lip, and a catch device coöperating with the said lip and aperture for detachably securing the closure and casing together, a lamp connected with one of the walls of the casing and visible from the outside of the casing, an annular imperforate shield connected with the casing and encompassing the lamp, a battery removably held in the casing and in circuit with the lamp, and a make and break device included in the lamp circuit, and accessible from the outside of the casing.

5. A self-contained light of the character described, embodying a box like casing, having one or more apertures adjacent the free edge of one of the casing walls, a closure plate for the casing, one or more ears formed on the plate and adapted to detachably engage the casing through said openings, a catch connected with the plate and adapted to engage the casing for removably securing the parts together, said plate being adapted to be secured to a support to constitute an anchor for the casing, a lamp socket connected with one of the walls of the casing and opening therethrough, a lamp in the socket, a battery within the casing and in circuit with the lamp, and means for controlling the circuit from the exterior of the casing.

[Claim 6 not printed in the Gazette.]

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1,224,216. CONTROL SYSTEM FOR PANTOGRAPH-TROLLEYS. WILLIAM SCHAAKE, Pittsburgh, and ANDREW H. CANDEE, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 10, 1915. Serial No. 50,083. (Cl. 191—65.)



1. The combination with a pantograph trolley, and means for operating the trolley including a main fluid-actuated lowering device, a latch and a pneumatically operated mechanism for tripping said latch, of means for automatically supplying fluid under pressure to the main fluid-actuated device before it is supplied to the pneumatic tripping mechanism.

2. The combination with a pantograph trolley, and means for operating the trolley including a main fluid-actuated lowering device, a latch, and a pneumatically operated mechanism for tripping said latch, of means for preventing the operation of the tripping mechanism until the main fluid-actuated device has been supplied with fluid under pressure.

3. The combination with a pantograph trolley, and means for operating the trolley including a main fluid-actuated lowering device and a mechanical raising means, a latch and a pneumatically operated mechanism for tripping said latch, of means for automatically supplying fluid under pressure to the main fluid-actuated device before it is supplied to the tripping mechanism, and means for permitting the fluid within the main fluid-actuated device to be slowly released and to cause a slow raising of the trolley by the raising means.

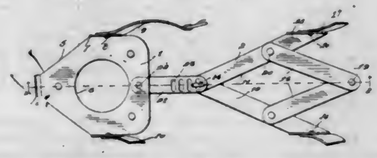
4. The combination with a pantograph trolley, and means for operating the trolley including a main fluid cylinder, means for latching the trolley in its lowered position, and means for unlatching the trolley including a fluid cylinder, of means for supplying fluid automatically to the main fluid cylinder before it is supplied to the unlatching cylinder.

5. The combination with a pantograph trolley, means for operating the trolley including a main fluid cylinder, a latch for the trolley, means for unlatching the trolley including a fluid cylinder, a pneumatically operated relay, an electrically operated valve for controlling the admission of fluid to the unlatching cylinder, and a second electrically operated valve for controlling the admission of fluid to the main operating cylinder and to the relay, of means for preventing the operation of the first valve until the second valve has been operated.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,217. ICE-CREEPER. GUSTAF H. SCHEFSTROM and OLEF A. ANDERSON, Macomb, Ill. Filed Apr. 22, 1916. Serial No. 93,002. (Cl. 36—63.)



1. An ice creeper of the class described, including heel and sole sections, connecting means for said heel and sole sections comprising a link having elongated openings therein, said sole section being composed of a pair of arms pivotally connected at one of their ends to the said connecting means, a pair of links, and a plurality of calk members, one of said calk members pivotally connecting the links at one of their ends, the opposite ends being pivotally connected to the said arms intermediate their ends by means of a pair of said calk members for a purpose specified.

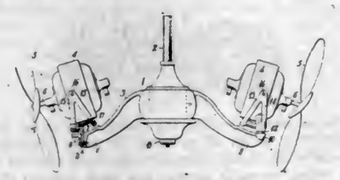
2. An ice creeper of the class described, including heel and sole sections, a link having one end thereof pivotally connected to the said heel section, the opposite end of the link being provided with a plurality of transverse elongated openings, a rivet, a pair of arms pivotally connected adjacent one of their ends by means of the said rivet, said rivet having an enlarged head adapted to engage in the said openings, the free ends of the arms being provided with upstanding tongues, fastening straps attached to the said tongues, a plurality of calks, and a pair of links pivotally connected adjacent one of their ends by one of the said calks, the opposite ends thereof being pivotally connected to the arms intermediate the ends thereof by means of calk members, the said links providing a supporting means for the toe of the shoe.

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1,224,218. MEANS FOR PRODUCING AIR-CURRENTS. HAROLD M. SCHEIBE, Cambridge, Mass., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 19, 1913. Serial No. 807,660. (Cl. 230—1.)

1. The combination with a rotatable supporting member, of a rotatable fan biased at rest to a predetermined position upon said member and adapted to effect rotative movement thereof and means for employing the centrifugal force of revolution and the gyroscopic force of said fan as substantially the sole means for maintaining a predetermined velocity of revolution, irrespective of the velocity of rotation of the fan.





2. The combination with a rotatable supporting member, of a rotatable fan disposed thereon and adapted to impart a rotative movement to said member and means for employing the centrifugal force of revolution and the gyroscopic force of said fan to automatically vary the rotative force on said member and to thereby substantially maintain a predetermined velocity of revolution of the said supporting member.

3. The combination with a rotatable supporting member, of a rotatable fan disposed thereon and adapted to impart a rotative movement to said member and means for employing the centrifugal force of revolution and the gyroscopic force of said fan to automatically move the parts thereof into a position adapted to vary the arm of the rotative thrust on said member about the center of revolution.

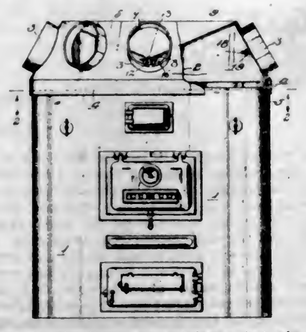
4. The combination with a rotatable support, a rotatable fan and a device for rotating said fan disposed upon said support to impart a rotative movement thereto, of a member of substantially U-shape between the arms of which said device is pivotally supported upon an axis outside its center of gravity, and a pivotal mounting for said member associated with said support and normally located aside from the line from the center of rotation of the support through the center of gravity of said device.

5. The combination with a rotatable support, a rotatable fan and a device for rotating said fan disposed upon said support to impart a rotative movement thereto, of a trunnion between the arms of which said device is pivotally supported upon an axis outside its center of gravity, a pivotal mounting for said trunnion associated with said support and normally located so that the projected axis of rotation of said device will pass between the center of revolution of said support and said pivotal mounting and means for adjusting the position of said device in said trunnion.

[Claims 6 to 10 not printed in the Gazette.]

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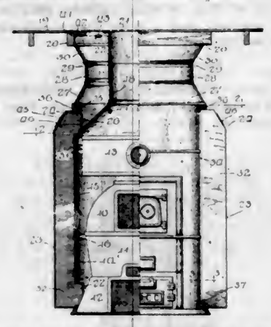
1,224,219. HOT-AIR DISTRIBUTER FOR FURNACES. ALBERT G. SCHERER, Chicago, Ill., assignor to The Excelsior Steel Furnace Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 15, 1913. Serial No. 801,120. (Cl. 126—105.)



A hot air distributer comprising a hot air casing, a heating element within said casing, the top of said casing being provided with apertures for connection with hot air conduits, a reel located centrally with respect to the top of said casing, a series of concentrically and consecutively disposed bars in said reel, plates, means upon the ends of said plates for engaging said vertical bars, and means for securing the outer edges of said plates to the outer walls of the top of said casing, said plates being adapted to divide only that space above the heating element into variable segments of suitable proportion to the apertures opening into such respective segments.

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1,224,220. FURNACE. ALBERT G. SCHERER, Chicago, Ill., assignor to Excelsior Steel Furnace Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 14, 1916. Serial No. 72,029. (Cl. 126—99.)



1. Heating apparatus comprising a heating element, a casing surrounding the same and spaced therefrom, the upper portion of said casing being tapered inwardly and extended upwardly to provide a conduit for the air heated by said heating element, an auxiliary shell surrounding the tapered end upwardly extending portion of said casing and disposed concentrically therewith, a pair of channeled members disposed longitudinally of said casing, and a U-shape conduit member mounted in the channels of said members and establishing communication between the interior of said casing and shell.

2. Heating apparatus comprising a heating element, a casing surrounding the same and spaced therefrom, the upper portion of said casing being tapered inwardly and extended upwardly to provide a conduit for the air heated by said heating element, an auxiliary shell surrounding the tapered and upwardly extending portion of said casing and disposed concentrically therewith, a pair of channeled members disposed longitudinally of said casing, a U-shape conduit member mounted in the channels of said members and establishing communication between the interior of said casing and shell, and a register box formed with inner and outer walls adapted to respectively telescopically engage the upwardly extending portions of said casing and shell.

3. Heating apparatus comprising a heating element, a casing surrounding the same and spaced therefrom, the upper portion of said casing being tapered inwardly and extending upwardly to provide a conduit for the air heated by said heating element, an auxiliary shell surrounding the tapered and upwardly extending portion of said casing and disposed concentrically therewith, a pair of channeled members disposed longitudinally of said casing, a U-shape conduit member mounted in the channels of said members and establishing communication between the interior of said casing and shell, and a register having depending therefrom a register box formed with inner and outer walls adapted to respectively telescopically engage the upwardly extending portions of said casing and shell.

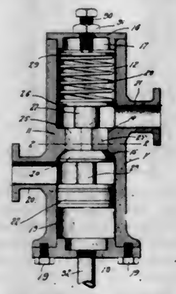
4. Heating apparatus comprising a heating element, a casing surrounding the same and spaced therefrom, the upper portion of said casing being tapered inwardly and extending upwardly to provide a conduit for the air heated

by said heating element, an auxiliary shell surrounding the tapered and upwardly extending portion of said casing and disposed concentrically therewith, a pair of members having longitudinal grooves therein and disposed vertically upon said casing, and a U-shape conduit member the edges whereof are adapted to enter the grooves in said members and form a conduit with said casing for establishing communication between the bottom of said casing and the compartment formed by said casing and shell.

5. A furnace, a shell therefor, a register connecting with said shell, means for supporting said register comprising headers each provided with a rabbet upon its upper inner edge, a hinged strip disposed in each of said rabbets and adapted to swing out of and below the same, said register being normally supported by said strips and adapted to rest on said rabbets with said strips in lowered position, and a cover above said register.

[Claim 6 not printed in the Gazette.]

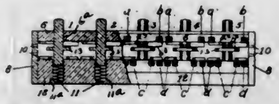
1,224,221. AUTOMATIC ATMOSPHERE-VALVE. HARRY SCHWANEBECK, Baltimore, Md. Filed Mar. 31, 1916. Serial No. 88,073. (Cl. 137—4.)



1. A valve comprising a valve housing, closures for the upper and lower ends of said valve housing, a pipe carried by the lower closure, an adjusting screw carried by the upper closure, a partition in the valve housing intermediate its length and provided with a passage terminating in a valve seat at the lower end of the partition, an inlet nozzle leading from the valve housipg beneath the partition, an outlet nozzle leading from the valve housing above the partition, a piston slidably mounted in the lower portion of the valve housing and provided with a stem terminating in a valve seating against the valve seat when the piston is in a raised position, the valve being provided with flukes extending through the passageway of the partition, a washer in the upper portion of the valve housing provided with a neck engaging the flukes of said valves, a spring engäging said washer, and a washer positioned between said spring and said adjusting screw.

2. A valve comprising a valve housing provided intermediate its length with a partition having a passageway formed therein and provided with a valve seat at its lower end, a piston slidably mounted in the lower portion of said valve casing having an upwardly extending stem terminating in a valve head seating against the valve seat and provided with flukes extending through the passageway, the valve casing being provided with an inlet positioned intermediate the piston and valve head when the piston is in a raised position, a steam supply communicating with the valve casing beneath the piston, a washer slidably mounted in the upper portion of the valve casing and provided with a neck engaging the flukes of said valve head, the valve casing being provided with an outlet positioned intermediate the washer and the partition, and resilient means engaging the washer to move the same toward the partition when steam pressure beneath the piston is reduced.

1,224,222. ELECTRIC SWITCH. LOUIS B. SEARS, Corry, Pa. Filed Nov. 27, 1915. Serial No. 63,746. (Cl. 200—27.)



1. In an electric switch, the combination of an electric conductor; a series of switches for said conductor, at least one of the series being normally open and one of the series being normally closed; and push buttons directly actuating said switches, said circuit being made operative only upon the action of certain buttons and made inoperative with the action of any other button.

2. In an electric switch, the combination of a first electric conductor; a second electric conductor; a series of switches for said first conductor; a series of switches for said second conductor; and a series of operating means greater in number than the switches, certain of which operate the switches in combination to control the circuit through the first conductor, said means operating the switches controlling the circuit through the second conductor when any of said means other than said certain combination is operated.

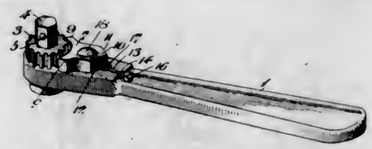
3. In an electric switch, the combination of a first conductor; a second conductor; a series of switches for said conductors; and a single means controlling the switches operating on both conductors, some of said switches being normally closed as to the first conductor and some of said switches being normally open as to the first conductor.

4. In an electric switch, the combination of a first conductor; a second conductor; a series of switches for said conductors; and a single means controlling the switches operating on both conductors, some of said switches being normally closed as to the first conductor and some of said switches being normally open as to the first conductor, said means operating in connection to open the second conductor when the combination for closing the first conductor is operated.

5. In an electric switch, the combination of a first conductor; a second conductor; a series of switches for said conductors; and operating keys for operating said switches in pairs, each key operating a switch on each conductor, a combination of said keys closing the first conductor and the operation of any of the other keys opening said first conductor by the direct action of said keys.

[Claims 6 to 8 not printed in the Gazette.]

1,224,223. RATCHET-WRENCH. REGINALD F. SEDGLEY, Philadelphia, Pa. Filed Jan. 18, 1917. Serial No. 143,009. (Cl. 81—63.)

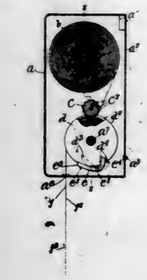


1. In a ratchet wrench, the combination with a handle having a slot opening through its face, of a hub rotatably carried by the handle, a ratchet on said hub, a double pawl on said handle and coöperating with said ratchet to rotate the hub in one direction or the other, said pawl having its tail forming converging abutments, and a spring having one end fixed to said handle and extending upwardly through said slot and having its free end bearing against an abutment, whereby when said pawl is turned to actuate said ratchet in a reverse direction, said spring will be raised and lowered in said slot to effect the removal of foreign material collected in said slot.



2. In a ratchet wrench, the combination with a handle having a longitudinally extending slot opening through its face, of a hub rotatably carried by the handle, a ratchet on said hub, a double pawl on said handle and coöperating with said ratchet to rotate the hub in one direction or the other, said pawl having its tail forming converging abutments, and a spring having one end fixed to said handle and extending through said slot in an upward direction and having its free end deflected to bear against an abutment, whereby when said pawl is turned to actuate said ratchet in a reverse direction, said spring will be raised and lowered in said slot to effect the removal of any foreign material collected in said slot.

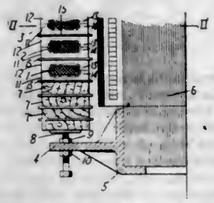
1,224,224. TOWEL-PAPER HOLDER. ROBERT N. SHELLEY, Newark, N. J. Filed Dec. 17, 1915. Serial No. 67,373. (Cl. 211—29.)



1. A holder for towel paper comprising a casing adapted to support a roll of paper and provided with an aperture to permit the passage of said paper therefrom, a drum mounted in the bottom portion of said casing, and a roller mounted parallel with said drum and in coöperative connection therewith and between which and said drum the paper is passed, said drum being provided at an end thereof with spaced stop pins, and a lock device pivotally supported in the casing and operating in connection with said stop pins.

2. A holder for towel paper, comprising a casing adapted to support a roll of paper and provided with an aperture to permit the passage of said paper therefrom, a drum mounted in the bottom portion of said casing, and a roller mounted over said drum and in coöperative connection therewith and between which and said drum the paper is passed, said drum being provided on the opposite ends thereof with spaced stop elements, and pivotally supported lock devices operating in connection with said stop elements.

1,224,225. TRANSFORMER. FERDINAND SIEBER, Vado Ligure, Italy, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 24, 1912. Serial No. 705,496. (Cl. 175—356.)



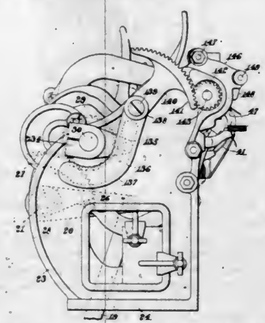
1. A transformer comprising a core member, a plurality of superposed coils therefor, peripherally-spaced columns of recessed blocks supported upon said core member and embracing the coils to relieve them of external pressure, and bracing bolts supported by the core member and abutting against the ends of said columns for preventing said blocks from moving axially.

2. A transformer comprising a core member, end frames therefor, a plurality of superposed coils, blocks interposed between adjacent coils to space them from one another and to embrace portions only of the coils in order to relieve them from pressure, said blocks being arranged in a plurality of peripherally spaced columns, and bracing bolts supported on both end frames and abutting against both ends of said columns for preventing said blocks from moving axially.

3. A transformer comprising a core member, a plurality of superposed coils embracing one leg thereof, and blocks interposed between the adjacent coils, said blocks being recessed and embracing the coils to relieve them of external pressure.

4. A transformer comprising a core member, a plurality of superposed coils embracing one leg thereof, and recessed blocks interposed between adjacent coils and embracing portions only of the coils to relieve them from pressure, said blocks being arranged in a plurality of spaced columns.

1,224,226. SHUTTLE-DRIVING MECHANISM FOR SEWING-MACHINES. PETER SJOSTROM, Maplewood, Mass., assignor to Victor Shoe Machinery Company, Boston, Mass., a Corporation of Massachusetts. Original application filed Feb. 17, 1915, Serial No. 9,465. Divided and this application filed Mar. 27, 1915. Serial No. 17,941. (Cl. 112—20.)



1. In a machine of the class described, the combination of a shuttle; a driving member therefor having a shaft extending laterally therefrom; a pinion secured to the outer end of said shaft; a pivoted lever having a gear segment meshing with said pinion; a rock shaft; and means thereon for imparting an oscillatory movement to said lever and adjustable about the axis of said rock shaft.

2. In a machine of the class described, the combination of a shuttle; a driving member therefor having a shaft extending laterally therefrom; a pinion secured to the outer end of said shaft; a pivoted lever having a gear segment meshing with said pinion and provided with a curved extension having a cam groove therein; a rock shaft; and an arm thereon provided with a projection extending into said groove for imparting an oscillatory movement to said pivoted lever.

3. In a machine of the class described, the combination of a shuttle; a driving member therefor having a shaft extending laterally therefrom; a pinion secured to said shaft; a pivoted lever having a gear segment meshing with said pinion; a rock shaft; and means adjustably mounted thereon engaging said lever and imparting thereto an oscillatory movement, the part of said pivoted lever engaged by said engaging means being so constructed as to provide a standstill of said pivoted lever during the oscillation of said lever engaging means.

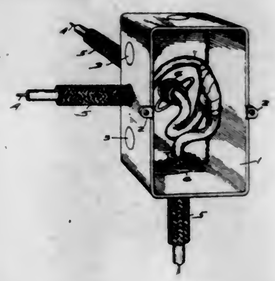
4. In a machine of the class described, the combination of a shuttle; a driving member therefor having a shaft extending laterally therefrom; a pinion secured to the outer end of said shaft; a pivoted lever having a gear segment meshing with said pinion and on the opposite side of its pivot with a cam groove having a straight radial portion and a curved portion; a rock shaft; and an arm thereon provided with a projection engaging said cam groove.

5. In a machine of the class described, the combination of a shuttle; a driving member having a shaft extending laterally therefrom; a pinion secured to the outer end of said shaft; a rock shaft; an arm secured thereto and having a projection at its outer end; and a pivoted lever having at one end a gear segment meshing with said pinion and at its other end an arm having a straight groove to receive said projection and terminating in a curved portion concentric to the axis of said rock shaft when said grooved arm is in its lowest position.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,227. LOOM-FASTENER. EDWARD S. SNOVER, Toledo, Ohio. Filed Sept. 5, 1916. Serial No. 118,518. (Cl. 247—1.)



1. A loom fastener formed of looped wire having points extending over the loop of the wire.

2. A loom fastener formed of wire having a circular looped portion for surrounding the loom, its ends terminating in beveled points located above the looped portion and in position to engage the loom above the looped portion.

3. A loom fastener formed of a looped wire, the ends of the wire located above the looped portion and inclined upward and inward with respect to the looped portion.

4. A loom fastener formed of a circular looped wire, its ends bent to form laterally extending yielding arms and terminating in engaging points located over the interior of the looped portion.

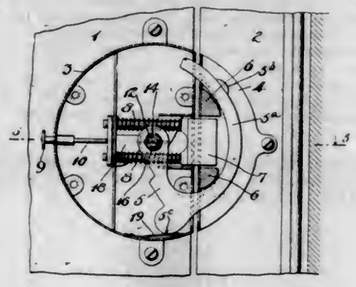
5. A loom fastener formed of a circular looped wire, its ends bent to form laterally extending yielding arms and terminating in upwardly and inwardly inclined ends.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,228. LOCK. PETER SOLAINI, New York, N. Y. Filed Dec. 27, 1916. Serial No. 139,137. (Cl. 70—29.)

1. In a lock of the character described, a casing, a keeper having an abutment, a dead bolt pivotally carried by the casing and having a hooked end adapted to be swung outwardly around said keeper abutment, the extreme end of said dead bolt again entering said casing when in the final locking position, and a spring latch bolt carried by said casing and arranged to engage said keeper, and means for independently operating said dead bolt and latch bolt from the inner side of the lock, and means at the outer side of the lock for opersting both the latch bolt and the dead bolt, said outside operating means being key controlled, with a connection between said key controlled means and one of the operating means at the inner side of the lock, said connection permitting a limited degree of rotary movement of the key without actuating the inside operating means.



2. In a lock of the character described, a casing, a keeper having an abutment, a dead bolt pivotally carried by the casing and having a hooked end adapted to be swung outwardly around the keeper abutment, a spring pressed latch bolt carried by the casing, and a single operating knob for both the hooked dead bolt and the spring pressed latch bolt.

3. In a lock of the character described, a casing, a keeper having an abutment, a dead bolt pivotally carried by the casing and having a hooked end adapted to be swung outwardly around the keeped abutment, a spring pressed latch bolt carried by the casing, an operating knob connected with the hooked dead bolt and a lost-motion connection between the operating knob and the spring pressed latch bolt.

4. In a lock of the character described, a casing, a keeper having an abutment, a dead bolt pivotally carried by the casing and having a hooked end adapted to be swung outwardly around the keeper abutment, a spring pressed latch bolt carried by the casing, an operating knob operatively connected with both the hooked dead bolt and the spring pressed latch bolt and a cylinder lock operatively connected with the hooked dead bolt and spring pressed latch bolt.

5. In a lock of the character described, a casing, an operating knob having a tubular shank journaled in said casing, a dead bolt mounted on the tubular shank of said knob and adapted to be projected by the rotation of said knob, a cam on the tubular shank and a latch bolt operated by said cam.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,229. METHOD OF LASTING BOOTS AND SHOES. MARIUS SÖRENSEN, Copenhagen, Denmark. Filed Apr. 6, 1915. Serial No. 19,511. (Cl. 12—145.)



1. The method of lasting shoes and boots, which consists in sewing a wire to the lower edge of the forepart of the upper, placing the upper with the sewn-on wire on the last, crossing the ends of the wire on the bottom of the last, passing the ends of the wire along the outer sides of the last, between the sides of the last and the upper up to the top of the last, then lasting the upper leather by pulling the ends of the wire, and fastening these at the top of the last after the lasting is accomplished.

2. In a method of lasting schoes and boots, those steps which consist in sewing a wire to the lower edge of the fore part of the upper, placing the upper with the sewn on wire on the last, passing the free ends of said wire in opposite directions over the bottom of the last and up between the sides of the last and the upper, drawing said ends taut over the sides of the last, and holding them in their tightly drawn positions.



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1,224,230. POWER-TRANSMISSION BELT. CLARENCE W. STRICKER, Cincinnati, Ohio, assignor to The Perkins-Campbell Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 15, 1916. Serial No. 78,420. (Cl. 74—63.)



A power transmission belt comprising a series of superimposed straps, each strap having a series of central perforations spaced at comparatively large distances apart, the straps being placed together, so that the perforations in one strap register with the corresponding perforations in another strap, and a leather thong threaded longitudinally through the perforations, so as to make comparatively long stitches and to hold the straps together, but to permit relative movement of one strap to another to afford flexibility in passing over curved surfaces.

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1,224,231. NON-REFILLABLE BOTTLE. SIMUN SUMICH, Roseburg, Oreg. Filed Aug. 22, 1916. Serial No. 116,273. (Cl. 215—78.)



1. The combination in a non-refillable bottle having a neck with an exterior groove forming a breaking line, slots with beveled surfaces within the opening of the neck, opposite seats located below the beveled surfaces, a stopper within the neck located opposite the breaking groove, a frangible plug having ribs with beveled surfaces matching the beveled surfaces of the slots in the neck, and non-accessible spring locking bolts engaging the said opposite seats.

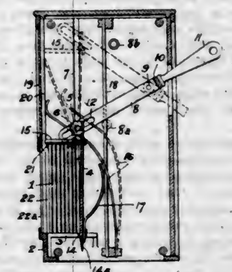
2. The combination in a non-refillable bottle having a neck with an exterior groove forming a breaking line, slots with beveled surfaces within the opening of the neck, opposite seats located below the beveled surfaces, a stopper within the neck located opposite the breaking groove, a frangible plug having ribs with beveled surfaces matching the beveled surfaces of the slots in the neck and also provided with an open dovetailed slot at the bottom, and a locking device comprising two movable overlapping bolts fitting the dovetailed slot and having lugs supporting a spring.

3. The combination with a bottle having a neck with an exterior breaking groove, two interior seats, and two grooves each with a beveled surface, of a plug with longitudinal ribs and provided at the lower end with two reciprocating bolts and a spring, whereby when the plug is seated in the neck opening the bolts are forced toward each other and when the plug is seated the bolts will move apart and engage the said seats.

4. A safety plug for a non-refillable bottle having at its lower end a dovetailed slot open at the bottom, two overlapping reciprocating bolts within said slot each bolt having a lug, and a sprng engaging the lugs and normally forcing the bolts apart.

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1,224,232. ADVERTISING APPARATUS. WILLIAM SUMNER, Liverpool, England, assignor to Universal Engineering Company, Limited, Liverpool, England. Filed Jan. 5, 1915. Serial No. 687. (Cl. 40—79.)



1. In an advertising apparatus, in combination, a bank of panels; a rocking lever adapted to move the panel at one end clear of the bank; a spring for moving the displaced panel across the bank, and a projection on the rocking lever for positioning the panel at the other end of the bank.

2. In an advertising apparatus, in combination; a bank of panels; a rocking lever; an element pivotally hung from the rocking lever and adapted to move the panel at one end clear of the bank; a spring for moving the displaced panel across the bank; and a projection on the rocking lever for positioning the panel at the other end of the bank.

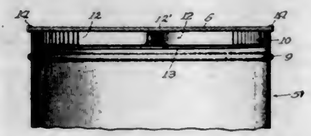
3. In an advertising apparatus, in combination; a bank of panels; a rocking lever; an element pivotally hung from the rocking lever and adapted to move the panel at one end clear of the bank; a spring for moving the displaced panel across the bank; a projection on the rocking lever for positioning the panel at the other end of the bank; and means for guiding the panel into its new position.

4. In an advertising apparatus, in combination; a bank of panels; a rocking lever; an element pivotally hung from the rocking lever and adapted to move the panel at one end clear of the bank; a lip on the pivotal element for engaging the panel; a spring for moving the displaced panel across the bank; a projection on the rocking lever for positioning the panel at the other end of the bank; and means for guiding the panel into its new position.

5. In an advertising apparatus, in combination; a bank of panels; a rocking lever; an element pivotally hung from the rocking lever adapted to move the panel at one end clear of the bank; a lip on the pivotal element for engaging the panel; a spring on the pivotal element for insuring engagement of its lip with the end panel; a spring for moving the displaced panel across the bank; a projection on the rocking lever for positioning the panel at the other end of the bank; and means for guiding the panel into its new position.

[Claim 6 not printed in the Gazette.]

1,224,233. DISPLAY-RECEPTACLE. OSCAR S. SWITZER, Chicago, Ill. Filed Feb. 1, 1916. Serial No. 75,515. (Cl. 217—82.)

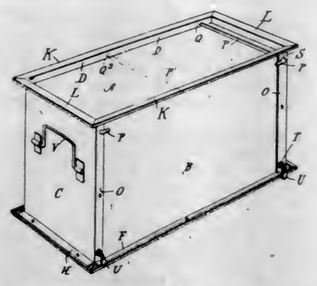


1. The combination with a supply receptacle, of a flat glass cover plate hingedly connected to the receptacle and adapted to rest directly upon the upper edge thereof, a relatively shallow tray underlying said plate within the receptacle, and means for detachably securing the tray to said glass cover plate.

2. The combination with a supply receptacle, of a flat glass cover plate hingedly connected to the receptacle and adapted to rest indirectly upon the upper edge thereof, a relatively shallow tray underlying said glass plate within the receptacle, and a wire rod underlying the bottom of the tray and flattened at its ends to pass outside of the receptacle between the edge thereof and the cover plate, the ends of the wire being hook shaped to engage the periphery of the glass cover plate and secure the tray in position.

3. The combination with a supply receptacle, of a flat glass cover plate hingedly connected to the receptacle and adapted to rest directly upon the upper edge thereof, a relatively shallow tray underlying said plate within the receptacle, means for detachably securing the tray to said glass cover plate, the peripheral wall of said tray being vertically corrugated and a removable partition structure, the outer ends of which are adapted to engage the corrugated wall of the tray and thereby positively position the partition structure with respect to the tray.

1,224,234. COLLAPSIBLE BOX. CHARLES TABER, Phalanx, N. J. Filed Apr. 5, 1916. Serial No. 89,116. (Cl. 220—17.)



1. A collapsible box comprising side members having reinforced top edges, and adapted to be assembled into a box with an opening equal to the full width and length of the box and a top member fitting within the upper portions of said side members and having on its edges outwardly projecting flanges substantially parallel with said side members, and a bottom member, said members being adapted also to be collapsed into a compact arrangement.

2. A collapsible box comprising side members adapted to be assembled into a box with an opening at the top equal to the full width and length of the box, a top member fitting within the upper portions of said side members and having on its edges outwardly projecting flanges substantially parallel with said side members and having additional flanges substantially parallel with said top member and overlying the top of said side members, and a bottom member, said side and top and bottom members being adapted also to be collapsed into a compact arrangement.

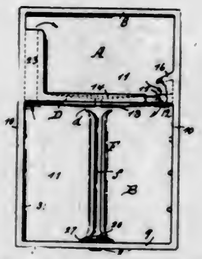
3. A collapsible box comprising a plate with outside flanges on its edges and other plates perpendicular thereto and fitting outside of said flanges in the assembled position, and having flanges substantially parallel with said first plate, said first plate having supplementary flanges parallel to the plate and engaged by the flanges on said other plates, said supplementary flanges having a reinforced outer edge beyond the flanges of said other members.

4. A collapsible box comprising three pairs of flanged members adapted to be assembled to form a box with the members of each pair opposite each other and of identical size to each other so as to form a perfectly rectangular box, said members adapted to be collapsed and nested one within the flanges of another in two bundles, each bundle comprising one of each of said pairs.

5. A collapsible box comprising three pairs of flanged members adapted to be assembled to form a box with the members of each pair opposite each other and of identical size with each other so as to form a perfectly rectangular box, said members adapted to be collapsed and nested one within the flanges of another in two bundles, each bundle comprising one of each said pairs, and means adapted to fasten said members together either in the assembled or the collapsed arrangement.

[Claims 6 to 8 not printed in the Gazette.]

1,224,235. REFRIGERATOR-LINING. CHARLES TETTENBORN, Cincinnati, Ohio; Kate Tettenborn, administratrix of said Charles Tettenborn, deceased, assignor to Frank S. Mitchell, Beaver Falls, Pa. Filed Mar. 28, 1914. Serial No. 828,078. (Cl. 62—89.)



1. A lining for refrigerators comprising a main body consisting of continuous vertical side and back walls and horizontal top and bottom walls and having an open front, an intermediate horizontal partition dividing such body into a food and a superposed ice compartment both accessible through said open front, said lining being provided adjacent to one of said vertical walls with a drain opening, said last mentioned vertical wall being provided with a pair of laterally projecting ribs formed integrally with said wall and affording an open sided drain duct leading downwardly from said opening in the partition, said several walls and partition being formed of glazed earthenware integrally united into a unitary structure.

2. A lining for refrigerators comprising a main body consisting of continuous vertical side and back walls and horizontal top and bottom walls and having an open front, an intermediate horizontal partition dividing such body into a food and a superposed ice compartment both accessible through said open front, said lining being provided adjacent to one of said vertical walls with a drain opening, the top and bottom faces of said partition sloping downwardly toward said opening, said last mentioned vertical wall being provided with a pair of laterally projecting ribs formed integrally with said wall and affording an open sided drain duct leading downwardly from said opening in the partition, said ribs diverging at their upper ends, and said several walls and partition being formed of glazed earthenware integrally united into a unitary structure.

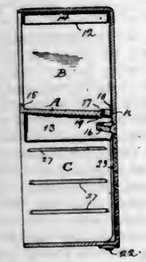


3. A lining for refrigerators comprising a main body consisting of continuous vertical side and back walls and horizontal top and bottom walls and having an open front, an intermediate horizontal partition dividing such body into a food and a superposed ice compartment both accessible through said open front, said horizontal partition and bottom each provided adjacent to one of said vertical walls with a drain opening, said last mentioned vertical wall being provided with a pair of laterally projecting ribs formed integrally with said wall and affording an open sided drain duct between said two openings, said several walls and partition being formed of glazed earthenware integrally united into a unitary structure.

4. A lining for refrigerators comprising a main body consisting of continuous vertical side and back walls and horizontal top and bottom walls and having an open front, an intermediate horizontal partition dividing such body into a food and a superposed ice compartment both accessible through said open front, said partition being provided adjacent to one of said vertical walls with an elongate opening forming a cold air flue and further provided with an integrally formed upwardly extending curb around said opening, and a hood formed integrally with said last mentioned vertical wall above the opening in said partition and extending laterally in all directions beyond the curb surrounding said opening, said several walls, partition and hood being formed of glazed earthenware integrally united into a unitary structure.

5. In a glazed earthenware lining for refrigerators, the combination of an integrally formed body portion consisting of vertical side and back walls, horizontal top and bottom walls, and an intermediate horizontal partition dividing such body into a food and a superposed ice compartment, said partition being provided with an opening forming a cold air flue; a second integrally formed body portion forming a second food compartment and comprising vertical side and back walls and horizontal top and bottom walls, one of the vertical walls of said first named body portion being placed adjacent to but spaced at an interval from one of the vertical walls of said second named body portion, and said adjacent vertical walls being provided with registering openings at the top and bottom portions thereof; and collars connecting said registering openings and forming air circulation flues, the lower collar forming a flue between said food compartments, and the upper collar a flue between the ice and the second named food compartment.

1,224,236. REFRIGERATOR-LINING. CHARLES TETTENBORN, Cincinnati, Ohio; Kate Tettenborn, administratrix of said Charles Tettenborn, deceased, assignor to Frank S. Mitchell, Beaver Falls, Pa. Filed Oct. 28, 1914. Serial No. 869,141. (Cl. 62—89.)



1. A lining for refrigerators comprising a main body consisting of continuous vertical side and back walls and horizontal top and bottom walls and having an open front, an intermediate horizontal partition dividing such body into a food and a superposed ice compartment both accessible through said open front, said partition being provided adjacent to one of said vertical walls with an elongate opening forming a cold air flue and drip discharge passage, the top and bottom faces of said partition sloping downwardly toward said opening, and a supplementary vertical wall adjacent to but spaced at an interval from another of said main body vertical walls and forming with said other wall a warm air flue extending from the top of the food to the top of the ice compartment, said several walls and partition being formed of glazed earthenware integrally united into a unitary structure.

2. A lining for refrigerators comprising a main body consisting of continuous vertical side and back walls and horizontal top and bottom walls and having an open front, an intermediate horizontal partition dividing such body into a food and a superposed ice compartment both accessible through said open front, said partition being provided adjacent to one of said vertical walls with an elongate opening forming a cold air flue and drip discharge passage, the top and bottom faces of said partition sloping downwardly toward said opening, a trough below and of greater width and length than said opening and adapted to receive melt water from the upper side and water of condensation from the lower side of said partition, said trough being provided with a drain opening, and a supplementary vertical wall adjacent to but spaced at an interval from another of said main body vertical walls and forming with said other wall a warm air flue extending from the top of the food to the top of the ice compartment, said several walls, partition and trough being formed of glazed earthenware integrally united into a unitary structure.

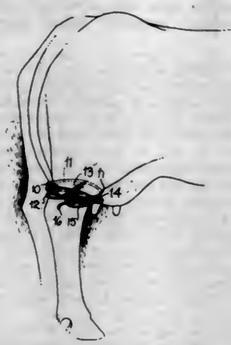
3. A lining for refrigerators comprising a main body consisting of continuous vertical side and back walls and horizontal top and bottom walls and having an open front, an intermediate horizontal partition dividing such body into a food and a superposed ice compartment both accessible through said open front, said partition being provided adjacent to one of said vertical walls with an elongate opening forming a cold air flue and drip discharge passage, the top and bottom faces of said partition sloping downwardly toward said opening, a trough below and of greater width and length than said opening and adapted to receive melt water from the upper side and water of condensation from the lower side of said partition, the lower side of said partition being provided with a depending flange to direct water into said trough, and a supplementary vertical wall adjacent to but spaced at an interval from another of said main body vertical walls and forming with said other wall a warm air flue extending from the top of the food to the bottom of the ice compartment, said several walls, partition and trough being formed of glazed earthenware integrally united into a unitary structure.

4. As an article of manufacture, a structure comprising integrally connected sides meeting at right angles and arranged to permit access to the structure, an integral partition whereby the structure is subdivided to form a provision-chamber and a superposed ice-chamber, said partition being provided with an elongated opening arranged parallel and adjacent the rear side of the structure, an elongated trough below this opening adapted to receive drainage from the ice-chamber and projecting co-extensively with said opening and from the same side of the structure of which it forms an integral part, a ridge on the upper side of this partition arranged around the opening therein and terminating at the ends of the same with spaces between its ends and the rear side of the structure to limit drainage of melt-water to these spaces and a waste-outlet in the trough for this drainage.

5. As an article of manufacture, a structure comprising integrally connected sides meeting at right angles and open at the front, an integral partition whereby this structure is subdivided to form a provision-chamber and a superposed ice-chamber, an elongated opening in this partition to permit melt water to drain through, a trough below this partition, spaced therefrom and projecting integrally from the rear side of the structure so as to extend under said

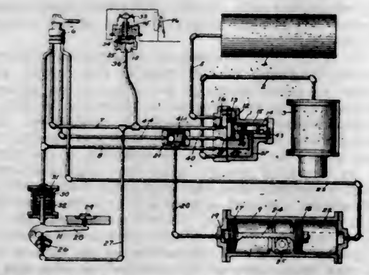
opening to receive the drainage, a drip-nose provided on the lower side of this partition around the opening therein and projecting toward the trough and a waste-outlet from the trough.

1,224,237. COW-TAIL HOLDER. ARTHUR JAMES THOMPSON, Argyle, Mich. Filed Aug. 21, 1916. Serial No. 116,135. (Cl. 119—105.)



A tail holder formed of a single length of wire bent to form a relatively large open engaging loop, the arms of which are slightly convergent toward the open end of the loop, one of the arms being rebent to form an open hook adapted to engage the tail at the base of the wisp, the wire at the other end of the first named open loop being rebent approximately parallel to the adjacent leg of the loop, then twisted around the leg of the loop, then longitudinally extended toward the closed end of the loop, to form a resilient wisp engaging clip, the wire then being bent upon itself and extended toward the open end of the loop parallel to said clip and then being outwardly extended to form a second wisp engaging clip.

1,224,238. BRAKE AND SAFETY CAR CONTROL. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Mar. 23, 1916. Serial No. 86,126. (Cl. 188—1.)



1. In a safety car control apparatus, the combination with a device for effecting an emergency application of the brakes when the operator becomes incapacitated, and means for controlling the brakes in service, of means operating upon a service application of the brakes for preventing the operation of said emergency device.

2. The combination with a device for effecting an emergency application of the brakes upon release by the operator and means for effecting a service application of the brakes, of means operating upon a service application of the brakes for preventing the release of said emergency device.

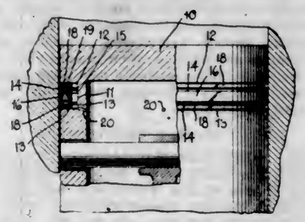
3. In a fluid pressure brake, the combination with an emergency brake pipe, an emergency valve device operated upon a reduction in brake pipe pressure for effecting an application of the brakes, and a valve normally held closed by the operator and adapted upon release to vent fluid from the brake pipe, of a straight air brake pipe and means operated upon supplying fluid to the straight air pipe for holding said valve closed.

4. In a fluid pressure brake, the combination with an emergency brake pipe, an emergency valve device operated upon a reduction in brake pipe pressure for effecting an application of the brakes, and a valve normally held closed by the operator and adapted upon release to vent fluid from the brake pipe, of a straight air brake pipe and a piston device operated by fluid supplied to the straight air pipe for holding said valve closed and thereby preventing an emergency application of the brakes when the operator releases said valve.

5. In a safety car control apparatus, the combination with an emergency brake pipe and a valve device operated upon a reduction in brake pipe pressure for effecting an application of the brakes, of a fluid operated piston device for controlling a car door and means operating upon a reduction in brake pipe pressure for venting fluid from one side and for supplying fluid to the opposite side of said piston device to thereby effect the opening of the car door.

[Claims 6 to 10 not printed in the Gazette.]

1,224,239. PISTON FOR INTERNAL-COMBUSTION ENGINES. CHARLES W. UNDERWOOD, Crowley, La., assignor of six thirty-sixths to J. K. Toler, two thirty sixths to Gus E. Fontenot, two thirty-sixths to J. S. Mauboules, two thirty-sixths to W. E. Gray, one thirty-sixth to T. J. Toler, one thirty-sixth to G. W. Toler, one thirty-sixth to F. M. Fontenot, one thirty-sixth to Claude De Jersey, one thirty-sixth to G. B. Brooks, and one thirty-sixth to Rufus W. Fontenot, Crowley, La. Filed July 7, 1916. Serial No. 107,997. (Cl. 121—108.)



1. A piston having a main piston ring groove and a groove extending parallel to but spaced a relatively slight distance from the main groove to define between them a relatively thin wall, and a piston ring disposed in the main groove and which by expansion under heat will deflect said wall to thereby secure close engagement between the adjacent faces of the wall and ring.

2. A piston having a main piston ring groove and a groove extending parallel to but spaced a relatively slight distance from the main groove to define between them a relatively thin wall, and a piston ring disposed in the main groove which by expansion under heat will deflect the wall and thereby secure close contact between the confronting faces of the wall and ring, said thin wall being undercut to reduce the width of its attachment to the body of the piston to thereby increase its resilience.

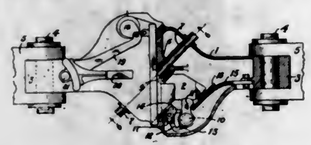
3. A piston having a main piston ring groove and a groove extending parallel to but spaced a relatively slight distance from the main groove to define between them a relatively thin wall, and a piston ring disposed in the main groove and which by expansion under heat will deflect said wall and thereby cause a close contact between the face of the wall and the confronting face of the piston ring, said confronting faces of the ring and wall being ground.

4. A piston having a main piston ring groove, a groove extending parallel to and spaced a relatively slight distance from the main groove to define between them a relatively thin yieldable wall, a main piston ring disposed in the main groove and which by expansion under heat will deflect the wall to thereby secure close contact between the face of the wall and the confronting face of the piston ring, and a secondary piston ring supported in the second named groove and having a width normally less than the width of said groove, said secondary ring acting when expanded as a support for the yieldable wall.

5. A piston having a main piston ring groove and a pair of grooves on each side of the main groove extending parallel thereto but spaced a relatively slight distance therefrom to define between each secondary groove and the main groove a relatively thin yieldable wall, a main piston ring disposed in the main groove and which by expansion under heat will deflect the walls to thereby secure close contact between the side faces of the piston ring and the confronting faces of said yieldable walls, and secondary piston rings disposed in said secondary grooves and less in width than said grooves whereby when said secondary rings expand they will support each its corresponding wall.



1,224,240. CAR AND AIR COUPLING. HERBERT E. VAN DORN, Chicago, Ill., assignor to Van Dorn Coupler Company, Chicago, Ill., a Corporation of Illinois. Filed June 18, 1915. Serial No. 34,787. (Cl. 213—17.)



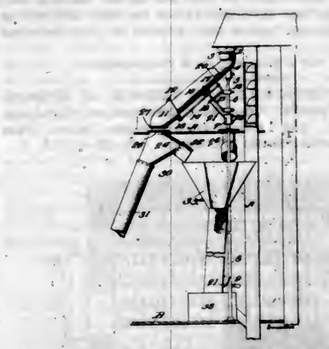
1. In a device of the class described, a hollow drawhead, a knuckle integral therewith and adapted to fit in a complemental recess in an opposing drawhead, a partition wall integrally formed in said drawhead to guide an opposing knuckle, and means for retaining the knuckle in locked position.

2. In a device of the class described, a drawhead, a knuckle therein, locking means within said drawhead adapted to lock a complemental recess therein, a spring within the drawhead for actuating said locking means, a partition wall integrally formed within said drawhead and acting to limit the movement of said spring and to guide said complemental knuckle, means for moving said locking means into release position, and mechanism for retaining said locking means in release position.

1,224,241. DISTRIBUTING-SPOUT AND OVERFLOW-RECEIVER. RALSTON M. VAN NESS, Fairbury, Nebr. Filed Mar. 10, 1914. Serial No. 823,717. (Cl. 193—39.)

1. The combination with a discharge spout, of a receiver below and into which the spout discharges, said receiver being provided in its upper end with an inlet opening forming a seat for and fitting around the entire circumference of the end of the spout and being further provided with a main discharge opening and an overflow opening, the latter opening being above the main discharge opening and at one side of the inlet opening and the wall of the receiver between the overflow and main discharge openings being inclined downwardly toward the main discharge opening to direct all matter falling thereon from the inlet opening into the main discharge opening.

2. The combination of a distributing floor, a discharge spout arranged above the distributing floor, and a receiver secured in said floor and provided with an inlet opening disposed in the plane of the floor and into which the spout discharges, said receiver being provided below the distributing floor with a main discharge opening and with an overflow opening spaced laterally from the main discharge opening and from the inlet opening.



3. The combination with a discharge spout, of a receiver below and into which said discharge spout discharges, said receiver having an inlet in its upper end and provided in its lower end with a main discharge opening and in one side with an overflow opening, said overflow opening being above the main discharge opening and entirely independent of the same and the inlet, the wall of the receiver between the overflow and the main discharge openings being inclined downwardly toward the last-named opening to direct all matter falling thereon into the same, and the axes of the inlet, the main discharge opening and the overflow opening being out of alinement and intersecting.

4. The combination with a discharge spout, of a receiver below said spout provided in its top with an inlet opening constituting a seat for the discharge spout and into which the spout discharges and provided with a positively defined main discharge opening in its lower end and with an overflow opening above the main discharge opening, the walls of the receiver at one side thereof and below the inlet opening being extended laterally and converging to the overflow opening, the lower wall of the receiver being inclined downwardly toward the main discharge opening to direct all matter falling thereon from the inlet opening into the main discharge opening, and said overflow opening and said main discharge opening being at opposite sides of the axis of the inlet opening.

5. In a distributing system, a hopper, an elbow extending therefrom and swiveled thereto, a tubular rotatable standard upon which the elbow is supported, a spout extending downward from the elbow, a nozzle hingedly mounted upon the lower end of the spout for oscillation in a vertical plane, means for manually rotating the standard, the elbow and the spout, a bell crank lever pivotally mounted upon the standard and disposed between the spout and the standard, a link connection below the spout between one arm of the bell crank lever and the nozzle, and a flexible connection extending from the other end of the bell crank lever into the tubular standard and down therethrough.

[Claims 6 and 7 not printed in the Gazette.]

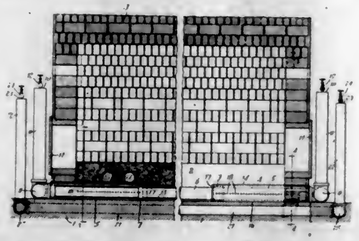
1,224,242. PROCESS FOR PRODUCING HOMOGENEOUS ARTICLES OF ANY DESIRED FORM OUT OF PURE TUNGSTEN. OTTO VOIGTLÄNDER, Essen-on-the-Ruhr, Germany. Filed Mar. 22, 1913. Serial No. 756,214. (Cl. 75—17.)

1. The process of producing metallic tungsten in homogeneous form, which comprises reacting on an oxid of tungsten with metallic aluminium in the presence of heat sufficient to reduce the oxid to compact metal and melt the metal, said heat being in addition to the heat of reaction.

4. The process of producing solid tungsten metal, which comprises reacting on an oxid of tungsten with metallic aluminium in a non-oxidizing atmosphere while supplying a high degree of heat during the reaction, and in addition to that developed by the reaction, sufficient to melt the tungsten into a solid regulus of pure tungsten metal.

[Claims 2 and 3 not printed in the Gazette.]

1,224,243. BRICK-KILN AND METHOD OF OPERATING THE SAME. CHARLES E. VREDENBURG, Mechanicsville, N. Y., and THOMAS LACEY, Quincy, Mass. Filed Feb. 19, 1915. Serial No. 9,224. (Cl. 25—150.)



1. That method of brick burning which comprises supplying a forced draft current directly positively and with certainty into the fuel in that zone of the kiln which is between the heads thereof, and independently supplying a forced draft current or currents beneath the head or heads of the kiln directly and with certainty into the fuel at such zone or zones without forcing air by said independent supply into said zone that is between the heads.

2. That method of brick burning which comprises supplying a forced draft current directly positively and with certainty and in one direction into the fuel in that zone of the kiln which is between the heads thereof and independently supplying a forced draft current or currents in another direction beneath the head or heads of the kiln directly and with certainty into the fuel at such zone or zones without forcing air by said independent supply into said zone that is between the heads.

3. That method of brick burning which comprises supplying a forced draft current downwardly directly positively and with certainty into the fuel in that zone of the kiln which is between the heads thereof and independently and laterally supplying a forced draft current or currents beneath the head or heads of the kiln directly and with certainty into the fuel at such zone or zones without forcing air by said independent supply into said zone that is between the heads.

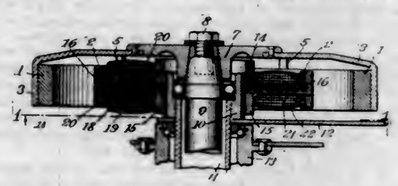
4. That method of brick burning which comprises supplying a forced draft current directly and positively into the fuel in that zone of the kiln which is between the heads thereof independently supplying a forced draft current or currents beneath the head or heads of the kiln directly and with certainty into the fuel at such zone or zones and precluding the discharge of the respective currents except into their respective zones.

5. A brick kiln having, in combination, means to supply a forced draft current directly positively and with certainty into the fuel in that zone of the kiln which is between the heads thereof, and means for independently supplying forced draft current or currents directly and with certainty beneath the head or heads of the kiln into the fuel at such zone or zones without forcing air by said independent supply into said zone that is between the heads.

[Claims 6 to 21 not printed in the Gazette.]

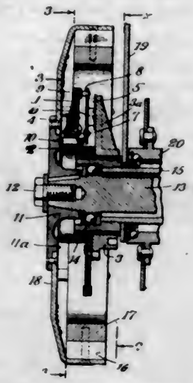
1,224,244. MAGNETO. GEORGE W. WACKER, Rutherford, N. J., assignor to Auto-Ped Company of America, a Corporation of Delaware. Filed Dec. 23, 1915. Serial No. 68,443. (Cl. 171—209.)

A magneto armature-core, primary and secondary coils disposed thereon in inductive relation to each other, a reinforcing coil on the core, a circuit-breaker, a common connection conductively uniting one terminal of the circuit-breaker and one terminal of each of said coils, ground



leads for the opposite terminals of said coils and circuit-breaker, and a spark gap in said ground lead for the secondary coil.

1,224,245. MAGNETO. GEORGE W. WACKER, Rutherford, N. J., assignor to Auto-Ped Company of America, a Corporation of Delaware. Filed Dec. 23, 1915. Serial No. 68,444. (Cl. 123—149.)

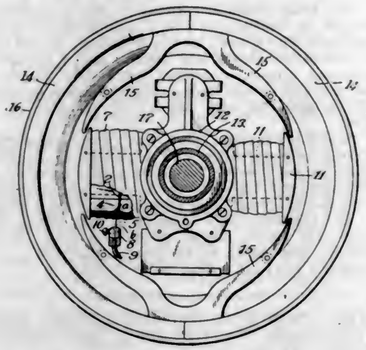


1. A magneto having, in combination, a circuit-closing spring having double reversely arranged outwardly turned flattened loops, a lever bar firmly secured to and supported by the spring transversely across the middle of the spring, an armature frame upon which the spring is supported at a point substantially opposite to the transverse lever bar, a movable contact terminal on the lever bar, a fixed contact terminal insulated from and coöperative with the movable contact terminal, the armature frame having therein a guiding slot for a cam roller, a cam roller of insulating material contained loosely in the guiding slot for engagement with one end of the transverse lever bar, the other end of the transverse lever bar being fulcrumed, and a field magnet support provided with a cam engageable with the loosely mounted insulative cam roller for breaking the circuit, the field magnet support and the armature frame being relatively rotative.

2. A magneto having, in combination, a field magnet support, an armature frame, the field magnet support and the armature frame being mounted for relative rotation, a sheet metal circuit-closing spring having its ends reversely turned toward each other and secured to the armature frame to provide battened outwardly bowed loops, each loop being split into two parts and the middle portion of the spring between the loops being in the form of separated spaced middle continuations of the split loops, a lever bar extending transversely across the separated middle portions of the spring and projecting therefrom at one of its ends, a stud forming a movable contact terminal firmly securing the transverse lever bar adjacent to its projecting end to one of the middle portions of the spring, a fulcrum stud firmly securing the transverse lever bar at its other end to the other middle portion of the spring, a connector piece rigidly mounted upon and insulated from the armature frame, a fulcrum stud bearing of insulating material on the insulated connector piece, a fixed contact terminal carried by the insulated connector piece and coöperative with the movable contact terminal, a guiding slot for a cam roller being provided between the insulated connector piece and the armature frame, a cam roller of insulating material loosely contained in the roller-guiding slot for circuit-breaking engagement with the projecting end of the transverse lever bar, and a cam on the field magnet support engageable with the loosely mounted insulative cam roller for breaking the circuit.



1,224,246. HIGH-TENSION COIL. GEORGE W. WACKER, Rutherford, N. J., assignor to Auto-Ped Company of America, a Corporation of Delaware. Filed Dec. 23, 1915. Serial No. 68,445. (Cl. 175—359.)



1. A high tension coil having, in combination, a high tension winding, an inner covering of insulation outward from such winding, a connecting member resting on the said inner insulating covering and to which the high tension winding is electrically connected through a slack end of said winding, and an outer covering of insulation outside of the inner insulating covering and holding the said connecting member in place and through which the said connecting member is exposed to provide for making an electrical connection with the winding of the high tension coil.

2. A high tension coil having, in combination, a high tension winding, an inner covering of insulation outward from such winding, a connecting member having a base resting on the said inner covering of insulation and having an outwardly projecting connection-making prong, the end of the high tension winding being electrically connected to said connecting member with a reverse loop in said end of the winding to provide slack and avoid strain, and an outer covering of insulation outside of the inner covering and outside of and holding in place the base of the said connecting member and through which the connection-making prong of the said connecting member projects and is exposed for effecting an electrical connection with the winding of the high tension coil.

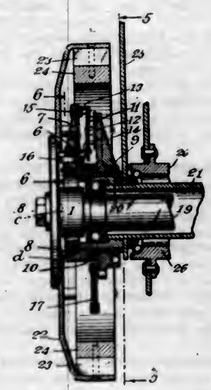
3. A high tension coil having, in combination, a high tension winding of fine wire or the like, an inner covering of insulation outward from such winding, an outer covering of insulation outward from the inner insulating covering, and a sheet metal connecting member having an enlarged base held in place between the two said layers of insulation and with which the end of the winding is in electrical connection and to which it is attached with the provision of slack in the winding adjacent to the connecting member, and the connecting member having a flat tongue projecting to the outside of the outer covering of insulation for effecting an electrical connection by means of the connecting member with the high tension winding.

4. A high tension coil having, in combination, a high tension winding, an insulating covering for such winding, a sheet metal connecting member to which the end of such winding is connected, such connecting member having a flange-like base held in place by the said insulating covering and having a flat connection-making tongue projecting to the outside of the said insulating covering, and a split screw-clamp for attaching a conductor to the said tongue of the connecting member.

5. A high tension coil having, in combination, a high tension winding, an insulating covering for such winding and a connecting member to which the end of such winding is connected, such connecting member having a supporting base held in place by the said insulating covering and having a connection-making flat prong projecting to the outside of the said insulating covering.

[Claims 6 and 7 not printed in the Gazette.]

1,224,247. MAGNETO. GEORGE W. WACKER, Rutherford, N. J., assignor to Auto-Ped Company of America, a Corporation of Delaware. Filed Dec. 23, 1915. Serial No. 68,446. (Cl. 123—149.)



1. A magneto having, in combination, a short circuited primary coil, a secondary spark coil in inductive relation with the primary coil, means for producing alternating current in the short circuit of the primary coil, and means for breaking such short circuit at a non-sparking time in relation to the current therein and also for subsequently breaking such short circuit at a spark-producing time in relation to such current.

2. A magneto having, in combination, an armature including a short circuited primary coil and a secondary coil, a field magnet, the field magnet and the armature being mounted for relative rotation, and means operated by the relative rotation of the field and armature for successively breaking such short circuit at non-sparking and at spark-producing points in such rotation.

3. A magneto having, in combination, two relatively rotary parts, a short circuited primary coil, a secondary spark coil in inductive relation with the primary coil, and means operated by such relative rotation for successively breaking such short circuit at a non-sparking and at a spark-producing point in such rotation.

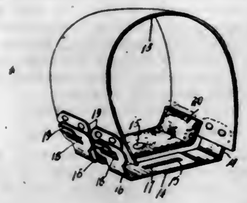
4. A magneto, having, in combination, two relatively rotary parts, a short circuited primary coil, a secondary spark coil in inductive relation with the primary coil, and means operated by such relative rotation for successively breaking such short circuit at a non-sparking point preceding a spark-producing point and again at the next succeeding spark-producing point.

5. A magneto having, in combination, two relatively rotary parts, a short circuited primary coil, a secondary spark coil in inductive relation with the primary coil, and means operated by such relative rotation for breaking such short circuit successively substantially at points of minimum and of maximum current flow.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,248. TIRE-PATCH. WILLIAM L. WAYRYNEN, Lake Norden, S. D. Filed Feb. 7, 1916. Serial No. 76,683. (Cl. 152—24.)



1. A protective device for tires comprising a tire encircling shoe including a flexible, non-elastic tread embracing web, and expansible means connecting the ends of the web to spread upon inflation of the tire and seat snugly within a wheel rim.

2. A protective device for tires comprising a tire encircling shoe including a web portion, and relatively movable members connecting the ends of the web and expansible upon inflation of the tire to seat therewith snugly in a wheel rim.

3. A protective device for pneumatic tires comprising a tread portion, means connecting the ends of said tread portion and expansible to seat snugly within a wheel rim, and a protective flap carried by said expansible means and insertible within a tire between it and the inner tube.

4. A protective device for pneumatic tires comprising a tread portion, overlapping plates carried by one end of the tread portions and detachably engaged with the other end thereof, means connecting said plates for movement with respect to each other, and a protective flap carried by said means for insertion within a tire between it and the inner tube.

5. A tire patch comprising a tire embracing web, a hook member carried by one end of the web, angle members for engagement under the tire and adapted to fit snugly within a wheel rim, said angle members being slidably connected together and immovably connected to the other end of the web, and an eye portion carried by one of the angle members for detachably receiving said hook member.

[Claim 6 not printed in the Gazette.]

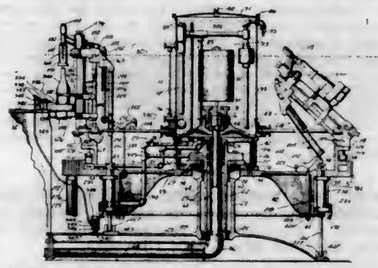
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1,224,249. FILLING-MACHINE. GEORG WEISS, Chicago, Ill. Filed Apr. 13, 1914. Serial No. 831,481. (Cl. 226—15.)

1. In a filling machine, horizontally rotary supporting apparatus, in combination with a multiplicity of receptacle fillers mounted on said supporting apparatus so as to be reclinable; piston-rods arranged to place said fillers alternately into reclined and erect position, and to rotate said supporting apparatus; and means for reciprocating said piston rods; substantially as described.

2. In a filling machine, horizontally rotary supporting apparatus, in combination with a multiplicity of reclinable receptacle holders mounted thereon; piston rods arranged to alternately recline and right said receptacle holders and to rotate said supporting apparatus by engaging inclined surfaces; and means for reciprocating said piston rods; substantially as described.

3. In a filling machine, horizontally rotary supporting apparatus, in combination with a multiplicity of filling nozzles mounted thereon; receptacle holders on said supporting apparatus below said nozzles; and means for lifting said holders, comprising a sliding way, an adjustable buffer mounted on said sliding way, and means for reciprocating said buffer; for the purpose described.



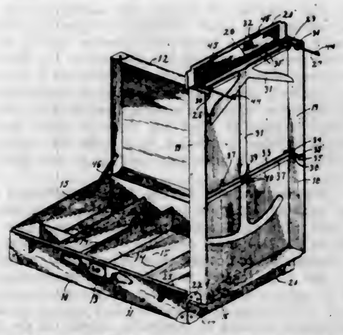
4. In a filling machine, horizontally rotary supporting apparatus, in combination with a multiplicity of filling nozzles mounted thereon; receptacle holders on said supporting apparatus below said nozzles; means for lifting said holders, comprising parallel sliding ways, adjustable buffers mounted on said sliding ways, and means for alternately reciprocating said buffers; for the purpose described.

5. In a filling machine, horizontally rotary supporting apparatus, in combination with a multiplicity of filling nozzles mounted thereon; receptacle holders on said supporting apparatus below said nozzles; and means for moving said holders toward said nozzles, comprising a sliding way, an adjustable buffer mounted on said sliding way and provided with a cushion spring, and means for reciprocating said buffer; for the purpose described.

[Claims 6 to 14 not printed in the Gazette.]

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1,224,250. WARDROBE-SUITCASE. GEORGE HENRY WHEARY, Racine, Wis. Filed Apr. 20, 1914. Serial No. 833,065. (Cl. 190—41.)



1. A wardrobe valise or suit-case, comprising a casing formed of a body portion having a cover hinged thereto, a wardrobe section having one of its end portions hinged to one of the end portions of the body and adapted to be swung to an upright position, said wardrobe section having an open end provided with a hinged end cover, a pair of garment hanger tracks mounted in the wardrobe section adjacent to the wardrobe section cover, garment hangers removably mounted on said tracks, and a pad interposed between the wardrobe section end cover and the hangers and into which the hangers embed.

2. A wardrobe valise or suit-case, comprising a casing formed of a body portion having a cover hinged thereto, a wardrobe section having one of its end portions hinged to one of the end portions of the body and adapted to be swung to an upright position outside of the casing, said wardrobe section having an open end provided with a hinged end cover, means for holding the wardrobe section in upright position, a pair of fixed garment hanger tracks mounted within the wardrobe section, extensible tracks hinged to swing out of the wardrobe section and to aline with the fixed tracks, garment hangers slidably mounted on the tracks, a retainer bar adjustably mounted within the wardrobe section and adapted to engage garments supported on the hangers, and a pad interposed between the hangers and the wardrobe section end cover and into which the hangers embed.



3. A wardrobe valise or suit-case, comprising a casing formed of a body portion having a cover hinged thereto, a wardrobe section having one of its end portions hinged to one of the end portions of the body and adapted to be swung to an upright position outside of the casing, said wardrobe section having an open end provided with a hinged end cover, means for holding the wardrobe section in upright position, a pair of fixed garment hanger tracks mounted within the wardrobe section, extensible tracks hinged to swing out of the wardrobe section and to aline with the fixed tracks, garment hangers slidably mounted on the tracks, a retainer bar adjustably mounted within the wardrobe section and adapted to engage garments supported on the hangers, and a pad interposed between the hangers and the wardrobe section end cover and into which the hangers embed.

4. A wardrobe valise or suit-case, comprising a casing formed of a body portion having a cover hinged thereto, a wardrobe section having one of its end portions hinged to one of the end portions of the body and adapted to be swung to an upright position outside of the body portion to permit the cover being swung to closed position while the wardrobe section is in upright position, said wardrobe section having an open end, a hinged end cover for said end, a pair of fixed hanger tracks mounted within the wardrobe section adjacent to the open end, extensible tracks hinged to the outer ends of the fixed tracks and adapted to swing outwardly and to aline with the fixed tracks, garment hangers slidably mounted on the tracks, a retainer bar adjustably mounted within the wardrobe section, means for holding the wardrobe section in upright position, and a pad positioned within the wardrobe section and interposed between the wardrobe section end cover and the garment hangers and into which the garment hangers embed.

5. A wardrobe valise or suit-case, comprising a casing formed of a body portion having a cover hinged thereto, the body portion being provided with a plurality of partitions and with a hinged end panel adapted to swing outwardly, the partitions approximately corresponding in height to the height of the end wall to which the panel is connected, a wardrobe section having one of its end portions connected to the panel and said section adapted to swing with said panel and when within the casing to rest upon the partitions, stop means for limiting the movement of the wardrobe section to a vertical position, means for locking the wardrobe section in vertical position, the free end portion of said wardrobe section being open and having an end cover hinged to the bottom or rear wall of the said section, fixed tracks mounted within the wardrobe section, extensible tracks hinged to the outer ends of the fixed rails and adapted to be swung horizontally outwardly to aline with the fixed tracks and to be swung inwardly to lock the top cover in closed position, and garment hangers mounted on said tracks.

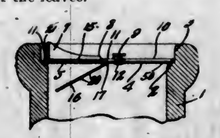
[Claims 6 to 11 not printed in the Gazette.]

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1,224,251. MILK-BOTTLE TOP. GEORGE WIEBER, Washington, D. C. Filed Mar. 8, 1916. Serial No. 82,959. (Cl. 215—34.)

1. In a device of the class described, a lid having an opening; and a closure for the opening pivotally assembled with the lid, the closure comprising angularly disposed inner and outer leaves, the inner leaf being perforated to form a strainer.

2. In a device of the class described, a lid having an opening; a U-shaped spout upstanding from the lid about the opening; and a closure for the opening, the closure comprising angularly disposed inner and outer leaves and a neck connecting the leaves, the neck being located in the rear end of said opening, the inner leaf being larger than said opening, the outer leaf lying within the spout and embodying lateral fingers which, under the weight of the lower leaf, coact with the rear ends of the spout to press the neck against the lid at the rear end of said opening, thereby limiting the downward swinging movement of both of the leaves.



3. In a device of the class described, a lid; an arched spring comprising outwardly expansible arms; and means for pivotally connecting the spring with the lid intermediate the ends of the spring to permit a bodily swinging movement of the spring parallel to the lid, and to permit adjustment of the arms with respect to the periphery of the lid, independently of the resiliency of the arms.

4. In a device of the class described, a lid having an opening; a spout upstanding from the opening; and an arched spring secured to the lid, the arched spring being flexed inwardly across the spout, to define a relatively stiff holding end in the spring.

5. In a device of the class described, a lid having an opening; a spout upstanding from the opening; and an arched spring attached to the lid intermediate the ends of the spring, the spring comprising arms, one of which is flexed across the spout to form a relatively stiff holding end in the said arm.

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1,224,252. BUCKLE. CLIFFORD WILCOX, Belden, Nebr. Filed July 21, 1916. Serial No. 110,516. (Cl. 24—168.)



A buckle comprising a rectangular frame having spaced openings therethrough, and a resilient flexible plate having its extremities inserted through respective openings, the sides of said opening being so spaced and located as to require the plate to be flexed for insertion of its ends in the frame.

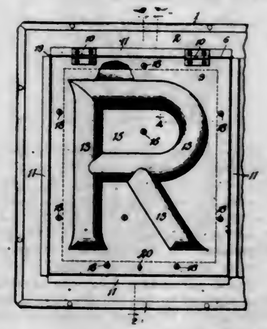
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1,224,253. ILLUMINATED SIGN. ROY R. WILEY and WALLACE K. WILEY, Buffalo, N. Y., and WILLIAM S. HOUGH, Jr., St. Catharines, Ontario, Canada. Continuation of application Serial No. 861,082, filed Sept. 10, 1914. This application filed Jan. 22, 1916. Serial No. 73,697. (Cl. 40—132.)

1. A double-face sign having sign characters on opposite sides each formed of a plate of light transmitting material with character strokes thereon in relief and the inner surface of each plate constituting a reflector for light, and illuminating units within the sign and located back of and in angular relation to portions of certain of the plates other than those portions of said plates constituting the character strokes, whereby light rays emitted by the illuminating units and reflected from the reflecting portions of the plates pass out through character strokes on the opposite side of the sign and thereby sensibly reinforce the direct illumination of such character strokes.

2. A double face sign comprising a casing, sign characters on opposite sides thereof each comprising a sheet of light-transmitting material with sign character strokes in relief on one face thereof, the casing having side portions of opaque material with openings therethrough corresponding to the outlines of the sign characters and each plate of light-transmitting material having its inner face of a character to reflect light, and illuminating means

within the sign located with respect to the sign characters and the inner faces of the plates to cause light from the illuminating means to traverse the character strokes and to be reflected by the inner reflecting faces of the plates to and through the character strokes on the opposite side of the casing from the reflecting faces, whereby the illumination of the sign character strokes is reinforced by such reflected light.



3. A double face sign having sign characters on opposite sides each formed of a plate with character strokes thereon in relief, said plate being of material translucent to and diffusive of light and having the inner face constituting a reflector of light, the outer face of each plate except where provided with character strokes having a covering of opaque material, and illuminating units within the sign located with respect to the character strokes and the inner reflecting surfaces of the plates to direct light through the character strokes and to the reflecting surfaces for reflection from said surfaces across the interior of the sign to and through the character strokes on the opposite side of the sign from the reflecting surfaces, whereby the reflected light reinforces the illumination of the character strokes due to direct light.

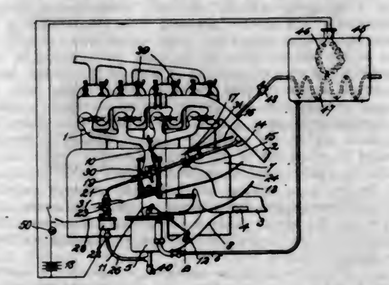
4. A double face sign comprising a casing, sign characters on opposite sides thereof, and illuminating units within the casing, each sign character comprising a plate having character strokes in relief from one face thereof and with the other face constituting a reflector of light, and said plate being of a material translucent to and diffusive of transmitted light and of a density to prevent concentration of the light from a light unit viewed directly through a character stroke, said plates each having an exterior covering of opaque material about the character strokes, and the light units being located with respect to the character strokes to direct light therethrough and to cause light from the light units to be reflected from the reflecting surfaces across the interior of the sign to and through the character strokes on the opposite side thereof, whereby the direct illumination of the character strokes is reinforced by the light so reflected.

5. A double face sign comprising a casing having light giving units therein between the sides of the casing with the casing otherwise free from obstruction to the passage of light from one side of the casing to the other, and sign characters on opposite sides of the casing each formed of a plate of light transmitting material with the sign character in relief from the outer face thereof and with the inner face constituting a reflector of light and the exterior of the plate having a covering of opaque material bordering the character strokes, and supports within the casing for each plate engaging the edge portions only thereof and leaving the remainder of the plate exposed whereby light emitted from the light giving units is transmitted through the character strokes and other portions of the light are reflected from the reflecting surfaces of the plates across the interior of the casing to and through the character strokes on the opposite sides thereof, so that the direct illumination of the character strokes is reinforced by the reflected light coming from the reflecting surfaces of said plates.

[Claims 6 to 11 not printed in the Gazette.]

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1,224,254. INTERNAL-COMBUSTION ENGINE. FRANCIS ALAN WILKINSON, Hatfield, England. Filed Aug. 9, 1916. Serial No. 113,916. (Cl. 123—119.)



1. The combination with an internal combustion engine having a carbureter, a float chamber for supplying fuel thereto, an induction pipe leading to the inlets of the cylinders, and an exhaust pipe leading away from the outlets of the cylinders, of a fitting communicating with the induction pipe between the carbureter and the inlets of the cylinders, a by-pass pipe leading from the exhaust pipe to such fitting, and means for conveying fuel from said float chamber to said fitting, and means for controlling such flow.

2. The combination with an internal combustion engine having a carbureter, a float chamber for supplying fuel thereto, an induction pipe leading to the inlets of the cylinders, and an exhaust pipe leading away from the outlets of the cylinders, of a fitting communicating with the induction pipe between the carbureter and the inlets of the cylinders, a by-pass pipe leading from the exhaust pipe to such fitting, means for conveying fuel from said float chamber to said fitting, and means for heating the fuel before it reaches the said fitting.

3. The combination with an internal combustion engine having a carbureter, a float chamber for supplying fuel thereto, an induction pipe leading to the inlets of the cylinders, and an exhaust pipe leading away from the outlets of the cylinders, of a fitting communicating with the induction pipe between the carbureter and the inlets of the cylinders, a by-pass pipe leading from the exhaust pipe to such fitting, a pipe leading from the float chamber, a vessel with which said pipe communicates, an electric heating coil in said vessel, a pipe leading out from said vessel to said fitting, and means for controlling the flow of the fuel through said pipe to the fitting.

4. A fitting applicable to internal combustion engines for facilitating the use of heavy fuels therein, said fitting comprising a cross-piece one branch of which is adapted to be attached to the induction pipe of the engine, a pipe and a valve therein communicating with a second branch of the cross-piece, said pipe being adapted to communicate with the exhaust pipe of an engine, another pipe communicating with a third branch of the cross-piece, a chamber in said pipe, means for supplying fuel thereto, means for heating the same, and a valve for controlling the flow of fuel therethrough.

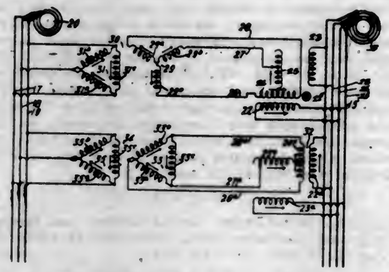
5. A fitting applicable to internal combustion engines for facilitating the use of heavy fuels therein, said fitting comprising a cross-piece one branch of which is adapted to be attached to the induction pipe of the engine, a pipe and a valve therein communicating with a second branch of the cross-piece, said pipe being adapted to communicate with the exhaust pipe of an engine, another pipe communicating with a third branch of the cross-piece, a chamber in said pipe, means for supplying fuel thereto, means for heating the same, and a valve for controlling the flow of fuel therethrough, and an air inlet and valve communicating with the fourth branch of said cross-piece, all substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]



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1,224,255. TRANSFORMING SYSTEM. VERN E. ALDEN, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 30, 1915. Serial No. 18,005. (Cl. 172—238.)



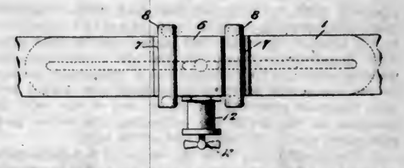
1. A phase-transforming system having two-phase mains, three-phase mains and a plurality of interconnections therebetween for the interchange of energy, one of said interconnections comprising one pair of primary windings, the first winding being connected across one phase of said two-phase system and the second winding being connected across the other phase of said two-phase system, one pair of secondary windings being connected in T relationship and in inductive relation with the aforementioned primary windings, Y-connected windings connected in parallel relationship with said T connection, and a group of delta-connected windings in inductive relationship with the said Y-connected windings and connected to said three-phase mains, and another of said interconnections comprising a second pair of primary windings which are connected to said two-phase system in reverse order of the corresponding primary windings of said first interconnection, a second pair of secondary windings connected in T relationship and in inductive relationship with the aforementioned primary windings, delta-connected windings connected in parallel relationship with said second pair of T-connected windings, and a second group of delta-connected windings in inductive relationship with the aforementioned delta-connected windings and connected to said three-phase mains.

2. A phase-transforming system having two-phase mains, three-phase mains and a plurality of interconnections therebetween for the interchange of energy, one of said interconnections comprising a pair of windings that are connected in T relationship, one of the T-connected windings being excited by one phase of said two-phase system, and the other one of the T-connected windings being excited by the other phase of said two-phase system, Y-connected windings connected in parallel relationship with said T connection, and a group of delta-connected windings in inductive relation with said Y-connected windings and connected to said three-phase mains, and another of said interconnections comprising a second pair of windings that are connected in T relationship and excited from said two-phase system in reverse order of the corresponding T-connected windings of said first interconnection, delta-connected windings connected in parallel relationship with said second pair of T-connected windings, and a second group of delta-connected windings in inductive relation with the aforementioned delta-connected windings and connected to said three-phase mains.

3. A phase-transforming system having two-phase mains, three-phase mains and a plurality of interconnections therebetween for the interchange of energy, one of said interconnections comprising a pair of windings that are connected in T relationship to generate three-phase voltages, one of the T-connected windings being excited by one phase of said two-phase system, and the other one of the T-connected windings being excited by the other phase of said two-phase system, Y-connected windings connected in parallel relationship with said T connection, and a group of delta-connected windings in inductive relation with said Y-connected windings and connected to said three-phase mains, and another of said interconnections comprising a second pair of windings that are connected in T relationship to generate three-phase voltages and excited from said two-phase system in reverse order of the corresponding T-connected windings of said first interconnection, delta-connected windings connected in parallel relationship with said second pair of T-connected windings, and a second group of delta-connected windings in inductive relation with the aforementioned delta-connected windings and connected to said three-phase mains.

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1,224,256. LUBRICATOR FOR VEHICLE-SPRINGS. JOHN E. ANDERSON, Chicago, Ill., assignor of one-half to Wendelin P. Seng, Chicago, Ill. Filed Dec. 2, 1915. Serial No. 64,631. Renewed Jan. 27, 1917. Serial No. 144,997. (Cl. 267—33.)



1. The combination with the leaves of a vehicle-spring, having lubricating conductors between the rubbing surfaces thereof, a transverse conductor leading to said lubricating conductors, and a clip-saddle having an internal lubricant receiving reservoir formed therein and mounted on the spring, said reservoir communicating with said transverse conductor.

2. The combination with the leaves of a vehicle-spring, having a transverse lubricating duct through the same, of a clip-saddle mounted on the spring and having a reservoir therein communicating with said duct.

3. The combination with the leaves of a vehicle-spring, having a transverse lubricating duct through the same and lubricating conductors leading therefrom to the rubbing-surfaces of the leaves, of a clip-saddle provided with a lubricating reservoir or chamber communicating with said transverse lubricating duct.

4. The combination with the leaves of a vehicle-spring, having a transverse lubricating duct formed therein and each leaf on its upper side having a lubricating groove communicating with the transverse duct, of a clip-saddle provided with a lubricating chamber in its underside communicating with said transverse duct.

5. The combination with a vehicle-spring transversely perforated to form a lubricating duct, of a clip-saddle mounted over the perforation and having clip-receiving grooves and in its underside a lubricant receiving chamber or reservoir communicating with the said lubricating duct, clips mounted in the grooves and adapted to be received by the vehicle axle, and nuts on the ends of the clips.

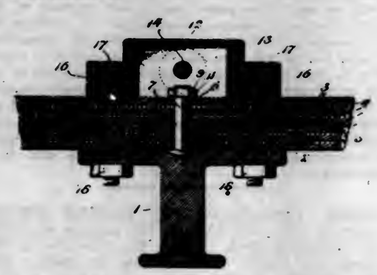
[Claims 6 to 8 not printed in the Gazette.]

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1,224,257. LUBRICATOR FOR VEHICLE-SPRINGS. JOHN EMIL ANDERSON, Chicago, Ill., assignor of one-half to Wendelin P. Seng, Chicago, Ill. Filed Mar. 30, 1916. Serial No. 87,837. (Cl. 267—33.)

1. The combination with the leaves of a vehicle-spring, provided with alining transverse holes, and intermediate lubricant-conductors for the leaves, of a transverse bolt

located in the holes of the leaves for connecting the latter, said bolt being at variance in cross-section with said holes and combining with the walls of the same to form transverse lubricating-ducts leading to the intermediate lubricant-conductors, a clip-saddle mounted on the leaves and having its underside formed with a lubricant-reservoir receiving the upper end of the bolt and communicating with the lubricating-ducts thereof, and inverted U-shaped clips mounted on the saddle and embracing said leaves.

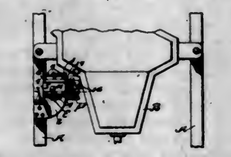


2. The combination with the leaves of a vehicle-spring, provided with a transverse hole and with longitudinal lubricating grooves in their upper faces, of a bolt located in the holes of the leaves and at variance in cross-section with the holes, whereby to provide lubricating ducts communicating with the grooves, a clip-saddle mounted on the leaves and provided in its underside with a lubricant reservoir receiving the upper end of the bolt, clips mounted on the saddle and embracing the leaves, and a perforated nut on the upper end of the bolt.

3. The combination with the leaves of a vehicle-spring, provided with a transverse hole and with longitudinal lubricating grooves in their upper faces, of a bolt located in the holes of the leaves and at variance in cross-section with the holes, whereby to provide lubricating ducts communicating with the grooves, a clip-saddle mounted on the leaves and provided in its underside with a lubricant reservoir receiving the upper end of the bolt, clips mounted on the saddle and embracing the leaves and a nut mounted on the upper end of the bolt within the reservoir and provided with orifices leading to the ducts.

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1,224,258. LOCK FOR AUTOMOBILES. JOHN P. BECKER, St. Louis, Mo. Filed June 26, 1916. Serial No. 105,923. (Cl. 70—90.)



1. In a device of the kind described; an inclosing housing, a lock including a latch movable wholly within said housing and a portion projecting exteriorly of said housing, said portion being adapted only to receive a key to actuate said latch, fixed rods disposed longitudinally wholly within said housing, a bolt slidable within the housing and having a bifurcated portion adapted, when the bolt is in projected position relatively to the housing, to engage with a pivoted lever to lock the same against movement, said latch being adapted to engage with said bolt to releasably lock the same in projected position, extensions on said bolt slidably fitting on said rods, and coiled springs disposed on said rods within the housing and engaging said bolt-extensions, said springs being adapted to yieldingly retract said bolt from projected position on the disengagement of said latch from the bolt.

2. The combination with an automobile, including its frame and clutch-lever, of a bracket-arm fixed to said frame, a plate-member on said arm disposed in operative position relatively to said lever, a housing-member fixed to said plate-member, a lock including a latch movable wholly within said housing-member and a portion projecting exteriorly of said housing member, said portion being adapted only to receive a key to actuate said latch, rods disposed longitudinally wholly within said housing-member with their ends fixed in opposite walls thereof, a bolt slidable upon said plate-member and within the housing-member and having a bifurcated portion adapted, when the bolt is in projected position relatively to the housing-member, to engage with said lever to lock the same against movement, said latch being adapted to engage with said bolt to releasably lock the same in projected position, perforated extensions on said bolt slidably fitting on said rods, coiled springs interposed on said rods between said extensions and a wall of said housing-member, said springs being adapted to yieldingly retract said bolt from projected position on the disengagement of said latch from the bolt, and projections on the bifurcated portion of said bolt for actuating the same to projected position.

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1,224,259. INSULATOR. FRANK BEMENT and EDWARD A. LOGAN, Shrewsbury, Mass. Filed Nov. 15, 1915. Serial No. 61,507. (Cl. 173—314.)

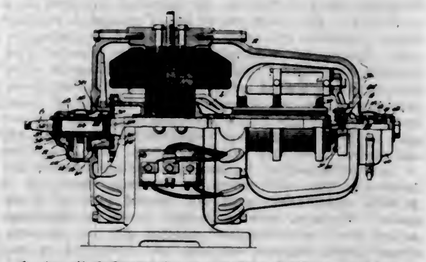


1. An insulator of the class described, comprising a hollow casing made up of two members adapted to rock away from each other about an axis along one side, a pair of insulating members located at each end of the said casing, said insulating members being movable with the two members of the casing and being provided with passages for the reception of an insulated wire, and springs for holding said casing closed.

2. An insulator of the class described, comprising a tubular main portion composed of two semi-cylindrical hollow members, insulating members extending into the ends thereof and each composed of two semi-cylindrical porcelain pieces having a central passage for a wire, and a pair of springs arranged about the tubular members to hold the two parts together, said tubular members having notches at their adjacent edges for the purpose of permitting them to be engaged at that point and separated.

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1,224,260. OIL-DEFLECTOR. CARL O. BERGSTROM, Boston, Mass., assignor to B. F. Sturtevant Company, Boston, Mass., a Corporation of Massachusetts. Original application filed Aug. 12, 1912, Serial No. 714,618. Divided and this application filed June 24, 1915. Serial No. 36,113. (Cl. 64—22.)



1. An oil deflector for a rotating shaft, comprising an annular rib on the shaft, and a deflector ring fitted over the shaft and having a groove in the inner surface surrounding the rib on the shaft to catch oil thrown outward from the rib and having passages to allow the oil thus caught to pass outwardly through the ring, substantially as described.

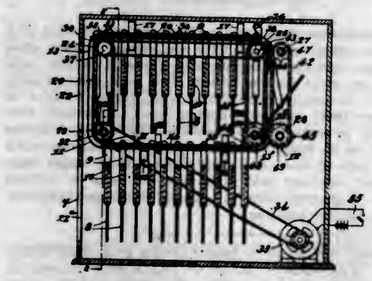
2. An oil deflector for a machine having a rotating shaft and shaft bearing, comprising a deflector ring fitted over the shaft to rotate therewith, a flange on the bearing extending from the edge of the deflector ring nearest the bearing to intercept oil thrown out from this side of the ring, and an annular rib on the shaft, said deflector ring having a groove in the inner surface surrounding the rib to catch the oil which passes from the bearing along the shaft between the ring and shaft and which is thrown outwardly from the rib and having passages extending from the groove to the outside of the ring to allow the oil caught in the groove to pass through the ring, substantially as described.

3. An oil deflector for a machine having a rotating shaft and shaft bearing, comprising a deflector ring fitted over the shaft to rotate therewith, a flange on the bearing extending over the edge of the deflector ring nearest the bearing to intercept the oil thrown out along this side of the ring, and an annular rib on the shaft, said deflector ring having a groove in the inner surface surrounding the rib to catch the oil which passes from the bearing along the shaft between the ring and shaft and which is thrown outwardly from the rib, and passages extending from the grooves to the outside of the ring to allow the oil caught in the grooves to pass through the ring, and having a sharp edge formed around the outside of the deflector ring between the passages and the side of the ring farthest from the bearing to prevent oil from passing over the outer surface of the ring, substantially as described.

4. An oil deflector for a machine having a rotating shaft and shaft bearing, comprising an annular rib on the shaft, a deflector ring fitted over the shaft and having a groove in the inner surface surrounding the rib on the shaft to receive oil thrown outwardly from said rib, and passages to allow the oil thus caught to pass outwardly through the ring, and having a sharp edge formed around the outside of the ring between the passages and the side of the ring farthest from the bearing to prevent oil from passing over the outer surface of the ring, substantially as described.

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1,224,261. ADVERTISING DEVICE. WILLIAM G. BILLERMAN, Cleveland, Ohio. Filed Apr. 16, 1915, Serial No. 21,882. Renewed Sept. 23, 1916. Serial No. 121,903. (Cl. 40—36.)



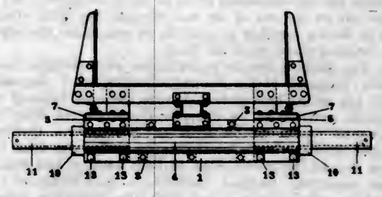
1. An advertisement device comprising a series of intermittently movable and reversible advertising cards, tracks adapted to movably mount the cards, means located adjacent to the tracks and adapted to reverse the cards when they are moved, and shiftable weights mounted in the cards and adapted to coöperate with the means to reverse the cards after the cards have engaged the means.

2. In an advertising device the combination of a series of advertising cards, a frame, tracks mounted on the frame, carriers mounted on the tracks and adapted to pivotally mount the cards, a transversely extending bar located in the path of travel of the lower edge of the cards and adapted to be engaged by the cards in their movement, whereby movement of the lower edges of the cards will be arrested to permit their upper edges and the carriers to swing relatively to one another and to the tracks, whereby the cards will be reversed, and mechanism adapted to intermittently move the carriers.

3. In combination in an advertising device a series of advertising cards adapted to contain advertisements on each side of their sides, a frame, tracks mounted on the frame, carriers mounted on the tracks and adapted to pivotally mount the cards, a transversely extending bar located in the path of travel of the lower edge of the cards and adapted to be engaged by the cards in their movement, whereby movement of the lower edge of the cards will be arrested to permit their upper edges and the carriers to swing relatively to one another and to the track, shiftable weights mounted in passages formed in the vertical edges of the cards, and adapted to shift from one transverse edge to the opposite transverse edge of each card when the cards are swung by the transversely extending bar, whereby the cards will be reversed and supported in their reversed positions, and mechanism adapted to intermittently move the carriers.

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1,224,262. AXLE FOR VEHICLES. WILLIAM F. BIRD, Davenport, Iowa, assignor to Davenport Wagon Company of Illinois, Davenport, Iowa, a Corporation of Illinois. Filed Aug. 25, 1913, Serial No. 786,595. Renewed June 30, 1916. Serial No. 106,958. (Cl. 21—5.)

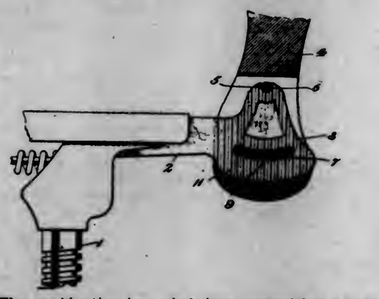


1. An axle for vehicles, comprising longitudinally disposed plates opposed and secured together, the longitudinal central portion of said plates being curved to form the sides of a tube, spindle holding members between the plates at each end thereof and forming a tube within the tubular portion of the axle and having their lower portions split, a spindle in each member, and means to draw the split portion of said members together to hold the spindles in position.

2. An axle for vehicles comprising longitudinally disposed plates opposed and secured together at the edges thereof, the longitudinal central portion of said plates being curved to form the sides of a tube, spacing blocks secured between the edges of said plates to form openings diametrically through said axle, spindle holding members secured between the plates at each end thereof and forming a tube within the tubular portion of the axle and having their lower portions split, a spindle in each member, and bolts passing through said plates and split portion of the spindle holding members to draw said split portion together.

3. An axle for vehicles comprising longitudinally disposed plates, spacing blocks secured between the edges of said plates to form openings diametrically through said axle, the longitudinal central portion of said plates being curved to form the sides of a tube, spindle holding members between the plates, and secured thereto, and forming a tube within the tubular portion of the axle, the upper part of said members being laterally extended to form supports, the lower portion of said members being split, a spindle in each member, and bolts passing through said plates and split portions to draw them together to hold the spindles in position.

**1,224,263. ADJUSTING MEANS FOR THE BACKS OF TYPE-WRITER CHAIRS.** HARRY W. BOLENS, Port Washington, Wis. Filed Sept. 21, 1915. Serial No. 51,784. (Cl. 155—27.)



1. The combination in a chair-iron, comprising a rearwardly disposed rocker-arm terminating in a flattened head, the latter having a notch in its upper end and near its lower end a segmental slot concentric with the notch and tapered from its top and front edges toward its opposite edges to form opposite inclined surfaces, a back-standard recessed at its lower end to form parallel bifurcations adapted to embrace the head, a fulcrum-pin passed through the bifurcations and resting in the notch of the head, a bolt passed through the segmental slot and through the corresponding holes in the bifurcations, and a wheel-nut on the end of the bolt whereby the bifurcations may be drawn together to conform to and clamp the opposite inclined surfaces of the head.

2. The combination, in a chair-iron, comprising a rearwardly disposed rocker-arm terminating in a flattened head, the latter having its opposite surfaces grooved or serrated, notched at its upper end and slotted near its lower end concentrically with the notch, and, further, tapered from its front toward its rear edge and from its upper toward its bottom edge, to form vertical and transverse oppositely inclined surfaces, a back-standard recessed to substantially agree with the widest or upper edge of the head and to form opposite parallel bifurcations adapted to embrace the same, a fulcrum-pintle passed through the bifurcations and resting in the notch of the head, a bolt passed through the bifurcations and through the segmental slot of the head, and a nut threaded on the bolt at one side of the standard, whereby the bifurcations may be drawn together to conform to and clamp the opposite inclined surfaces of the head.

3. The combination, in a chair-iron, comprising a rearwardly disposed rocker-arm terminating in a flattened widened head having at one side a vertically and a horizontally inclined surface, at its upper end a notch and near its lower end a curved slot concentric with the notch, a back-standard pivoted in said notch and extending below its pivot to bear against said surface of the head, a clamping-bolt extending through the slot and the back-standard, and a binding-nut threaded on the bolt and adapted to draw the standard snugly and clamp the standard against said inclined surfaces.

**1,224,264. METHOD OF PREPARING NATURAL CORK FOR INDUSTRIAL USE.** SAMUEL C. BOND, Hollyoak, Del., assignor to Bond Bottle Sealing Company, Wilmington, Del., a Corporation of Delaware. Filed Nov. 7, 1916. Serial No. 130,105. (Cl. 154—40.)

1. The herein described method of fabricating cork which consists in cutting natural cork to disks, separating the imperfect from the industrially perfect disks, building and uniting with cement the imperfect disks into a coherent rod, and cutting such rod again to disks.

2. The herein described method of preparing for industrial use disks of natural cork which consists of building up and uniting with a coagulable cementing material the disks into a coherent rod, coagulating such cementing material, and cutting such rod again to disks.

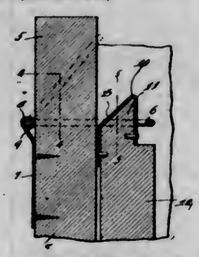


3. The herein described method of preparing for industrial use disks of natural cork which consists in removing from the disks hard particles contained in them, building up and uniting with cement the so treated disks into a coherent rod, and cutting such rod again to disks.

4. The herein described method of preparing for industrial use disks of natural cork which consists in tumbling the disks in a tumbling barrel, treating them with cementing material, building them into a coherent rod, and cutting the rod again to disks.

5. The herein described method of preparing natural cork for industrial use which consists in slicing the natural cork into layers, subjecting the layers to crushing strain, removing the material loosened by crushing and uniting the layers so treated.

**1,224,265. GATE-LATCH.** HYRUM BRAMSTED, Mount Pleasant, Utah. Filed June 8, 1916. Serial No. 102,561. (Cl. 70—28.)

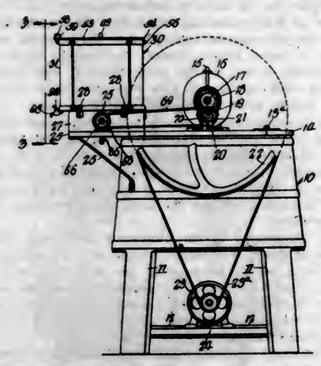


In a device of the class described, the combination of a V-shaped frame provided with an integral clamp upon its upper end, a link pivotally mounted within said clamp, the pivot portion of said link being substantially elliptical shaped in cross-section, said clamp adapted to fit snugly about said pivot portion so as to normally hold said link in a horizontal position, said V-shaped frame adapted to be mounted upon a post, said post provided with a reduced neck, said neck adapted to be longer than said link, whereby said link may not gain a vertical position so that the same will always return automatically to a horizontal position.

**1,224,266. OPERATING MECHANISM FOR CENTRIFUGAL WRINGERS.** HUGO G. BRAUNLICH, Davenport, Iowa. Filed Sept. 28, 1914. Serial No. 863,848. (Cl. 74—46.)

1. In combination with a support, a horizontal drive shaft, an upright operating shaft having a load member, adapted for continuous rotation in one direction, a counter shaft, means connecting said drive and said counter shafts to drive said counter shaft at an increased speed, an intermediate shaft in line with said counter shaft and operatively engaged to drive said upright shaft, a friction disk fixed to that end of said counter shaft adjacent the intermediate shaft, a second friction disk fixed to the end of said intermediate shaft and adapted for engagement with the first named friction disk, said second disk being rotative with said intermediate shaft but capable of endwise movement thereon and means for moving said second mentioned disk into and out of engagement with the like disk on said counter shaft.

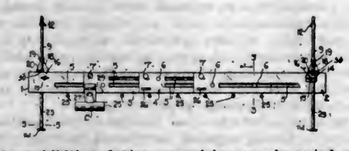




2. In combination with a support, a horizontal drive shaft, an upright operating shaft having a load member, a counter shaft driven by said drive shaft but at a higher speed, an intermediate shaft in line with said counter shaft and adapted to drive said upright shaft, bearing members for said shafts fixed to said supports, one of said bearing members having a frictional braking surface, a friction disk fixed to that end of the counter shaft adjacent the intermediate shaft, a second friction disk rotatively fixed to said intermediate shaft but capable of endwise movement thereon, between the friction disk on said counter shaft and the braking surface on said bearing and means for operatively engaging said friction disk on said intermediate shaft with the like disk on the counter shaft and with the braking surface on said bearing.

3. In combination with a support, a horizontal drive shaft, an upright operating shaft adapted for continuous rotation in one direction, a second operating shaft having a load carrying member attached thereto, said second operating shaft being adapted for removable attachment to the said first mentioned operating shaft, a counter shaft driven by said drive shaft, an intermediate shaft in line with said counter shaft and operatively engaged to drive said first mentioned operating shaft, all of said shafts being carried by said support, and an overload slip clutch for operatively connecting said counter shaft with said intermediate shaft, acting to accelerate the speed of said intermediate shaft until said shaft attains the speed of said counter shaft.

**1,224,267. EXHIBITING DEVICE.** JOHN H. BREWER, Louisville, Ky. Filed Nov. 22, 1916. Serial No. 132,855. (Cl. 248—19.)



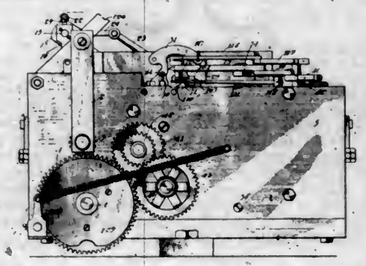
1. An exhibiting device comprising an elongated member, supporting means carried thereby at longitudinally spaced points, each of said supporting means comprising an elongated rod, and means for detachably engaging the rod with the member, one end of said rod being of a hook-like formation.

2. An exhibiting device comprising an elongated member, supporting means carried thereby at longitudinally spaced points, each of said supporting means comprising an elongated rod, and means for detachably engaging the rod with the member, one end of said rod being of a hook-like formation, the opposite end of said rod being provided with engaging means.

3. An exhibiting device comprising an elongated member, supporting means carried thereby at longitudinally spaced points, each of said supporting means comprising an elongated rod, means for detachably engaging the rod with the member, one end of said rod being of a hook-like formation, and a clamping arm slidably engaged with the rod intermediate the hook-like portion thereof and the member.

4. An exhibiting device comprising an elongated member, supporting means carried thereby at longitudinally spaced points, each of said supporting means comprising an elongated rod, means for detachably engaging the rod with the member, one end portion of said rod being of hook-like formation, said rod at a predetermined point intermediate its length being provided with an annular reduced portion, and a clamping arm provided with an opening through which the rod is adapted to be disposed, said arm also having an open slot in communication with the opening of the arm and of a width less than the diameter of said opening and through which the annular reduced portion of the rod is adapted to pass.

**1,224,268. MACHINE FOR MAKING BOWS.** JOHN BRICKEN, Chicago, Ill., assignor, by mesne assignments, to Chicago Braid Bow Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 11, 1914. Serial No. 861,225. (Cl. 223—52.)



1. In a machine for forming ribbon into bows, the combination of means for folding the ribbon upon itself to form one loop of a bow, means for folding the ribbon back upon itself parallel to said formed loop to provide a temporary loop, means for cutting a suitable length from said ribbon for said bow, means for carrying the remaining portion of said length about said first mentioned loop of the bow, and means for drawing said remaining portion through said temporary loop and then pulling the latter into a knot.

2. In a machine for forming ribbon into bows, the combination of means for folding the ribbon upon itself to form one loop of a bow, means for folding the ribbon back upon itself parallel to said formed loop to provide a temporary loop, means for cutting a suitable length from said ribbon for said bow, means for carrying the remaining portion of said length about said first mentioned loop of the bow, and means for grasping said remaining portion, drawing it, folded back upon itself to form the other loop of the bow, through the temporary loop and tightening the latter into a knot.

3. In a machine for forming ribbon into bows, the combination of means for holding the end of the ribbon, means for extending the ribbon, means for holding the ribbon at a point which will provide a bow-loop of suitable length, said holding means then releasing said end of the ribbon, means for then folding the released end upon itself to form said bow-loop, means for folding the other portion of the ribbon back upon said bow-loop to form a temporary loop, means for cutting a suitable length

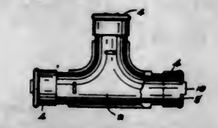
from said ribbon for said bow, means for carrying the remaining portion of said length about said bow-loop, and means for grasping said remaining portion and drawing it, folded upon itself to form the other bow-loop, through the temporary loop, thereby tightening the latter into a knot.

4. In a machine for forming ribbon into bows, means for rotatably supporting a spool of ribbon, means for cutting the ribbon into lengths suitable for bows, means for partially tying a bow-knot by folding said ribbon into flat sections before the length from which the bow is formed is cut, and means for holding the cut end of the supply ribbon during the completion of the bow tying operation.

5. In a machine for forming ribbon into bows, means for rotatably supporting a spool of ribbon, means for cutting the ribbon into lengths suitable for bows, means for partially tying a bow-knot by folding said ribbon into flat sections before the length from which the bow is formed is cut, means for holding the cut end of the supply ribbon during the completion of the knot-tying operation, and means for taking up the slack between said spool and the end of said ribbon.

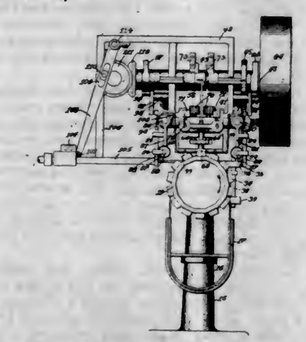
[Claims 6 to 36 not printed in the Gazette.]

1,224,269. FITTING FOR ELECTRICAL-CONDUIT SYSTEMS. DAVID LESLIE JAMES BROADBENT, Southport, England. Filed June 11, 1914. Serial No. 844,517. (Cl. 247—10.)



In a fitting for a metallic conduit system of electric wiring, in combination; a branch on the fitting for engaging the conduit, projections on the branch, a detachable ring fitting rotatively over the branch, a turned in edge on the ring, recesses in the turned in edge for engaging the projections, curved cam faces formed in the turned in edge, adapted on the rotation of the ring to compress the projections on to the conduit, and shoulders on the turned in edge adapted to engage the projections on the branch and limit the rotation of the ring in one direction.

1,224,270. FABRIC-MAKING MACHINE. HARVEY E. BROWN, St. Louis, Mo., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Nov. 19, 1915. Serial No. 62,321. (Cl. 140—7.)



1. A fabric making machine comprising a rotatable drum for supporting a previously completed fabric portion, mechanism for forming successive lengths of wire and engaging the same with the end of the previously completed fabric portion, means for effecting step-by-step rotary movements of said drum, to enable successive fabric units to be connected to said fabric, side by side, means for severing said lengths of wire successively from the end of a continuous wire supply, and means for feeding said wire in a direction lying in a plane substantially at right angles to the axis of the drum.

2. In a fabric making machine, the combination of means for successively supplying to the machine sections of wire of equal length, means for bending each section and forming loops on the ends thereof, and means for inserting each section of wire into the loops of another section before said first-named section is bent.

3. In a machine of the character described, the combination of means for forming loops on the ends of a section of wire, means for bending the wire to form a fabric member, means for feeding a succession of similar sections of wire to the looping and bending means, each section being fed through the loops of a previously formed fabric member.

4. In a machine of the character described, the combination of means for forming loops on the ends of a section of wire, means for bending the wire to form a fabric member, means for feeding a succession of similar sections of wire to the looping and bending means, each section being fed through the loops of a plurality of previously formed fabric members.

5. In a machine of the charatcer described, means for forming loops on the ends of a section of wire, means for bending the wire to form a fabric member, means for holding the loops in alinement, means for passing a succeeding section of wire similar to the first through the loops, and for positioning the same in operative relation to the bending and loop forming means.

[Claims 6 to 40 not printed in the Gazette.]

1,224,271. COFFEE SUBSTITUTE. WILLIAM A. BROWN, Montgomery, Ala. Filed Aug. 5, 1916. Serial No. 113,371. (Cl. 99—11.)

1. A substitute for coffee consisting of sweet potatoes and velvet beans, dried, roasted and powdered, and mixed together in the proportions of approximately 95% of sweet potato powder and 5% of velvet bean powder.

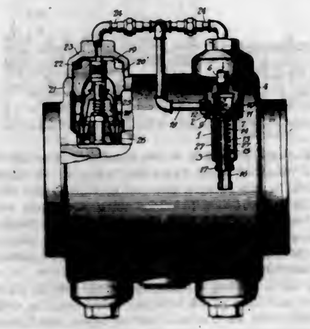
2. The herein described process for the manufacture of a coffee substitute which consists in comminuting sweet potatoes, drying, roasting and pulverizing the comminuted product, next scalding and peeling velvet beans, drying and pulverizing them and finally mixing together the potato and velvet bean powders in proportions of ninety-five per cent. of sweet potato powder, and five per cent. of velvet bean powder.

1,224,272. UNLOADER FOR AIR-COMPRESSORS. WILLIAM H. CALLAN and GEORGE J. MACFADDEN, Franklin, Pa., assignors to Chicago Pneumatic Tool Company, Chicago, Ill., a Corporation of New Jersey. Filed Mar. 8, 1915. Serial No. 12,928. (Cl. 230—24.)

1. A controlling device for air compressors comprising a casing adapted to communicate respectively with a supply of air under pressure and with a fluid pressure operated unloader mechanism, said casing also having an outlet to atmosphere, two opposed seats in said casing, one of which communicates with said supply and the other with said outlet, a valve influenced constantly by a predetermined pressure and operating between said seats and adapted to be seated upon one seat or the other, and means beyond the valve seat communicating with the air supply for throttling the passage from said seat.

2. In a device of the class described, the combination of a casing having opposed valve seats therein, a valve movable between and adapted to engage said seats, a connection from one of said seats to an air receiver, connections from the other said seat to exhaust, a connection from said casing to a fluid pressure actuated unloader mechanism and means beyond said valve seat for throttling the air coming from the receiver.

3. A controlling device for air compressors comprising a casing, a connection from said casing to a receiver, a valve seat controlling said connection, an outlet opening from the casing to the atmosphere, a valve seat controlling said outlet, a connection from said casing to a fluid pressure operated unloader mechanism, a valve coöperating with said valve seats to alternately close the connection from the receiver and the outlet respectively to said fluid operated unloader mechanism and means coöperating with the valve and the first said valve seat to throttle the flow of air from the receiver to the interior of the casing.



4. A controlling device for air compressors comprising a casing having a tubular portion communicating with a receiver and formed at one end with a valve seat, a connection from said casing to a fluid pressure operated unloader mechanism, said casing also having an outlet to the atmosphere, a second valve seat opposite the first said seat, a valve arranged between said seats and adapted to coöperate with the same alternately, means for exerting a predetermined pressure upon the valve to normally hold it upon the first said seat, said valve having a sliding engagement with said tubular portion of the casing whereby the air passing from the receiver through the first said valve seat is throttled.

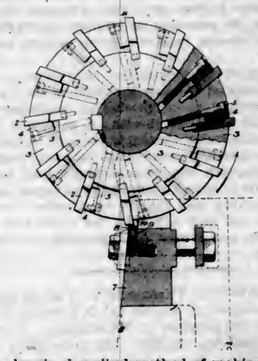
5. A controlling device for air compressors comprising a casing having a connection for a fluid pressure unloader mechanism, a connection from said casing to a receiver, a valve seat controlling the latter connection, the casing also having an outlet to the atmosphere and a valve seat controlling said outlet, the two valve seats being in opposed positions, a valve coöperating with the valve seats to alternately close the same, a flange on the valve having sliding connection with the first said valve seat and openings in the flange of smaller total capacity than the opening in the valve seat whereby the flow of air through the seat is throttled.

[Claims 6 to 12 not printed in the Gazette.]

1,224,273. METHOD AND APPARATUS FOR FORMING CUTTING-TOOLS. WILLIAM P. CANNING, Pittsburgh, Pa., assignor to United Engineering and Foundry Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 1, 1916. Serial No. 107,168. (Cl. 76—101.)

1. The herein described method of making a rotary cutter, which consists in holding a blank with its longitudinal axis oblique to the direction of such axis in a finished tool when in a cutting position, and subjecting the blank while so held to the action of a forming tool and then securing the cutting tool thus formed in a rotary cutter carrier with the longitudinal axis of the cutting tool at a different angle from that of the blank during the forming operation, substantially as described.

2. The herein described method of making a rotary cutter, which consists in holding a blank having substantially parallel front and rear side edges in a holder in a position in which both its parallel side edges are in non-radial relation to the axis of said holder, subjecting the blank while so held to the action of a forming tool, and then securing the tool so formed in a cutter holder in a position in which one of said parallel edges is in radial relation to the axis of said holder, substantially as described.



3. The herein described method of making cutting tools, which consists in setting a suitable blank in a carrier or support in non-radial relation to the axis of the carrier or support, and in operative relation to a cutting tool which is set at a correspondingly oblique but reverse angle, and then rotating the carrier or support and blank to the action of said forming tool, substantially as described.

4. The herein described method of making cutting tools, which consists in inserting a plurality of cutter forming blanks in a rotatable carrier in non-radial relation to the axis of said carrier, and in operative relation to a shaping tool held in a reverse oblique position, and then rotating the carrier to bring the several blanks to the action of said shaping tool, substantially as described.

5. Apparatus for forming cutting tools, comprising a rotatable carrier having means for holding a tool blank in non-radial relation to the center thereof, and a tool holder having means for holding a shaping tool in a reverse oblique position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,224,274. VESSEL-PROPELLING MECHANISM. JOHN A. CASHEL, Worthington, Minn. Filed Aug. 19, 1915. Serial No. 46,304. (Cl. 115—38.)



1. Vessel propelling mechanism, comprising a power shaft, a reciprocating device, a paddle secured to the latter having pivoted shutters, and friction driving mechanism actuated by said power-shaft and having oppositely rotating parts adapted to alternately move said device in opposite directions.

2. Vessel propelling mechanism, comprising a power shaft, a reciprocating device, a paddle secured to the latter having pivoted shutters, means for controlling the direction in which said shutters may swing, and friction driving mechanism actuated by said power-shaft and having oppositely rotating parts adapted to alternately move said device in opposite directions.

3. Vessel propelling mechanism, comprising a power shaft, a casing, a piston operable therein, a paddle secured to said piston, a piston-rod secured to said piston and having a friction surface, friction driving mechanism having oppositely rotating parts actuated by said shaft,

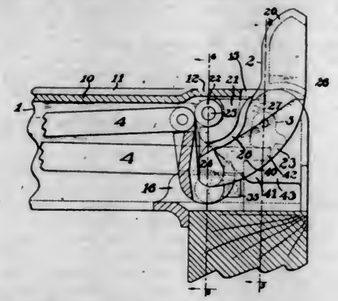
and means for alternately engaging said rotating parts with said friction surface to thereby impart a reciprocating motion thereto.

4. Vessel propelling mechanism, comprising a reciprocating device adapted to carry a paddle or oar, friction clutch mechanism having oppositely rotatable clutch rollers, and means for engaging said rollers alternately with said device to thereby impart a reciprocating motion to said paddle.

5. Vessel propelling mechanism, comprising a reciprocating device adapted to carry a paddle or oar-blade, friction clutch mechanism comprising a stationary frame, rollers pivotally mounted therein, a swinging bar suspended from said frame by toggle links at opposite ends thereof, rollers pivotally mounted in said bar, each adapted to coöperate with one of said first-named rollers to constitute a pair of clutch members, and means for alternately straightening said toggles to thereby clutch said device between one pair and then the other pair of said clutch members, and means for oppositely rotating said pairs of rollers.

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1,224,275. LOG-BUNK. FREDERICK W. CHRISWELL, Seattle, Wash., assignor to Seattle Car & Foundry Co., Seattle, Wash., a Corporation of Washington. Filed Sept. 22, 1916. Serial No. 121,555. (Cl. 105—173.)



1. The combination with a log bunk, a stake pivoted thereon, a lock brace pivoted on the bunk to swing into position to engage its side with the stake to hold the stake raised, and a bar controlling said lock brace and extending to the other end of the bunk.

2. The combination with a bunk, a stake pivoted between its ends upon the bunk, a lock brace adapted to engage by its side with the lower end of the stake and a controlling and locking bar pivotally secured to the lock brace and extending to the opposite end of the bunk.

3. The combination with a hollow bunk having stake-receiving recesses in its ends, stakes in said recesses having inwardly extending arms and pivoted to the bunk by the inner ends of said arms and locking arms extending downwardly from their pivots, lock braces pivoted to the bunk and adapted when swung up to engage their sides with the stakes to hold the stakes raised, bars controlling said lock braces and extending within the bunk to its opposite end, and means for securing said bars.

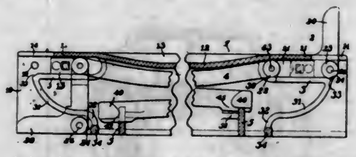
4. The combination with a bunk, a stake having a pivot arm extending inwardly and pivotally mounted on the bunk, and a stake controlling means comprising a compound lever having one member pivoted by one end upon the bunk and adapted to engage by its side with the stake to hold it raised and means located at the opposite end of the bunk for restrainingly engaging the other member.

5. The combination with a hollow bunk having closed top and stake receiving recesses in its ends, stakes having inwardly projecting arms pivoted to the bunk within said recesses, a compound lever having one part thereof pivotally supported from the bunk and adapted to restrainingly engage one side thereof with the stake, and the other part extending within the bunk to its opposite end, and means located at said opposite end for restrainingly engaging said other part of the lever.

[Claims 6 to 19 not printed in the Gazette.]

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1,224,276. LOG-BUNK. FREDERICK W. CHRISWELL, Seattle, Wash., assignor to Seattle Car & Foundry Co., Seattle, Wash., a Corporation of Washington. Filed Sept. 22, 1916. Serial No. 121,556. (Cl. 105—173.)



1. A log bunk having a stake receiving opening in its end, and a longitudinally extending channel at each side said opening facing toward the center line of the bunk, a stake having a pivot arm provided with outwardly extending pivot bosses entering said channel and like projecting bosses normally supported by the outer end of said channel, a controlling bar pivoted to the stake and means for releasably holding said controlling bar.

2. A log bunk having a stake-receiving slot in its outer end, a stake having a pivot arm and a log holding arm and fitting within said slot, means for pivoting the inner end of the pivot arm of the stake upon the bunk to permit a limited movement lengthwise the bunk, the angle part of the stake having lateral projections and the bunk complemental supporting projections engaging to hold the stake raised when the stake is in inward position and means for controlling the position of the stake lengthwise the bunk from the opposite end of the bunk.

3. A log bunk having a stake-receiving slot in its outer end, a stake having a pivot arm and a log-holding arm and fitting within said slot, means for pivoting the inner end of the pivot arm of the stake upon the bunk to permit a limited movement lengthwise the bunk, the angle part of the stake having lateral projections and the bunk complemental supporting projections engaging to hold the stake raised when the stake is in inward position, said supporting surfaces being inclined to cause an outwardly moving effect upon the stake.

4. A log bunk having a stake-receiving slot in its end and longitudinally extending channels in the inner face of its side walls at the sides of said slot and terminating a short distance inward from its outer end, a stake having a pivot arm and a log-holding arm, the inner end of the pivot arm having lateral pivot projections fitting said channel, the stake having lateral supporting projections adapted to enter the outer end of said channels, and means for controlling the position of the stake lengthwise the bunk from the opposite end of the bunk.

5. A log bunk having side walls and a top web provided with a stake-receiving notch at its end, and ledges projecting inwardly from its side walls beneath said top web, an L-shaped stake having a pivot arm provided with laterally projecting pivot lugs at its inner end and laterally projecting supporting lugs at its outer end, said lugs fitting between said ledges and the top web, and a controlling bar pivotally connected with the stake and extending to the opposite end of the bunk.

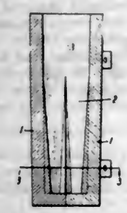
[Claims 6 to 12 not printed in the Gazette.]

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1,224,277. INGOT-MOLD AND INGOT PRODUCED THEREBY. ALEXANDER FIELDER CLARKE, Pittsburgh, Pa. Filed Feb. 21, 1913. Serial No. 749,994. (Cl. 22—139.)

1. An ingot mold having a chamber or cavity provided with opposite side walls extending in straight lines from end to end thereof, said walls being in substantially parallel planes and all the walls being of substantially the same width, the cross sectional area of said chamber or cavity being materially greater at one end of said mold than at the other.





2. An ingot mold having a chamber or cavity provided with opposite side walls extending in straight lines from end to end thereof, said walls being in substantially parallel planes and all of said walls being of substantially the same width, the cross sectional area of said chamber or cavity decreasing gradually toward one end of the mold and being materially less at one end than at the other.

3. An ingot mold having a chamber or cavity provided with opposite side walls in substantially parallel planes and extending from end to end of said mold, said mold walls being provided with portions projecting inwardly into said chamber, said projecting portions being of gradually increasing cross sectional area from one end to the other.

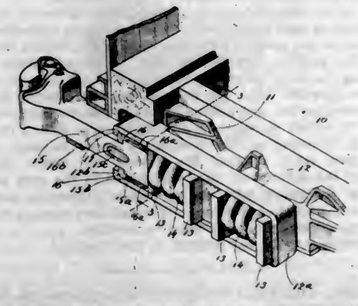
4. An ingot mold having a chamber or cavity therein provided with opposite side walls in substantially parallel planes and extending from end to end of said mold, said walls between the mold corners being provided with inwardly projecting ribs, said ribs being of materially greater cross sectional area at one end than at the other and thereby varying the cross sectional area of the chamber or cavity in said mold.

5. An ingot mold having a chamber or cavity provided with opposite side walls in substantially parallel planes and extending from end to end of said mold, said walls between the mold corners being provided with inwardly projecting ribs extending from a point near one end of said mold to the other end thereof, said ribs being of materially greater cross sectional area at one end than at the other and thereby varying the cross sectional area of the mold chamber or cavity.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,278. YOKE. BOY J. COOK, Chicago, Ill., assignor of one-half to George C. Murray, Chicago, Ill. Filed Mar. 13, 1914. Serial No. 824,504. (Cl. 213—42.)

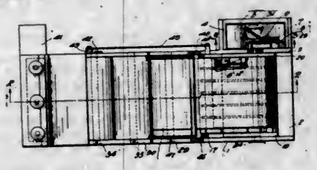


1. In combination, a yoke having inwardly directed lug portions, a coupler having a shouldered butt, the butt of said coupler being of such size as to permit the insertion thereof between said lug portions, key block members located between the shoulders of said coupler butt and said lug portion, and means to normally prevent displacement of said key block members, said means being arranged to prevent spreading of the arms of said yoke adjacent said lug portions, said last named means comprising wings integrally formed with and extending between the arms of said yoke.

2. In combination, a yoke having inwardly directed lug portions, a coupler having a shouldered butt, the butt of said coupler being of such size as to permit the insertion thereof between said lug portions, key block members located between the shoulders of said coupler butt and said lug portion, means to normally prevent displacement of said key block members, said means being arranged to prevent spreading of the arms of said yoke adjacent said lug portions, said last named means comprising wings integrally formed with and extending between the arms of said yoke, and means coacting with said coupler butt and said wings to substantially prevent rearward movement of the former relative to the latter.

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1,224,279. NUMBERING-MACHINE FOR PRINTING-PRESSES. MINDER A. COURTNEY, Birmingham, Ala., assignor of one-half to Charles R. Patterson, Birmingham, Ala. Filed Sept. 29, 1916. Serial No. 122,921. (Cl. 101—89.)



1. In an apparatus of the character described, a plunger adapted to be fully depressed only by the printing element of a press, numeral type dials, mechanism controlled by the reciprocatory movements of the plunger to prevent the inking of the type dials by the press inking mechanism when the plunger is raised and to present the dials for coöperation with the printing element of the press when the plunger is lowered, and mechanism for inking the dials.

2. In a two-color printing numbering machine for presses, the combination of a plunger depressible by the printing element of a press, numeral dials which are relatively adjusted by said plunger and which set normally below the type high level, mechanism controlled by the depression of the plunger for raising the dials to type high level, and a separate inking means for the dials, substantially as described.

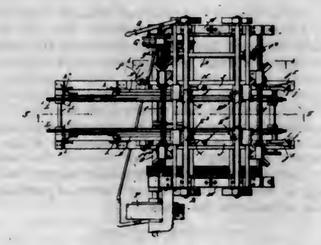
3. An automatic numbering machine attachment for printing presses, comprising a frame carrying a depressible plunger element, numeral type dials mounted for bodily movement in the frame, mechanism for relatively adjusting the dials by the plunger movements, mechanism controlled by the depression of the plunger to raise to type high level the dials which are normally below such level, and means to ink the type on the dials.

4. In an automatic numbering machine attachment for printing presses, the combination of a main frame, a spring supported depressible plunger therein, a floating frame, type dials journaled in the floating frame, means controlled by the movements of the floating frame to relatively adjust the dials, means controlled by the depression of the plunger to elevate the floating frame and present the dials in printing position, and means for inking the dials, substantially as described.

5. In an automatic numbering machine attachment for printing presses, a main frame carrying a depressible spring supported plunger, a floating frame having journaled therein a series of type dials, means controlled by the plunger for moving the dials into printing position, automatic mechanism for relatively advancing the dials to serially change the numbers to be printed, an inking ribbon movable over the dials, and mechanism for inking the ribbon, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,224,280. FASTENER-DRIVING MACHINE. EDWARD CRAIG, St. Joseph, Mich. Filed Jan. 20, 1911. Serial No. 603,631. (Cl. 1—14.)



1. In a machine for driving fastening devices, a hopper for holding the stock in a plurality of assembled sets, one set on top of another, a device for lifting the stock at one side of the hopper, a feeding apparatus coöperating therewith, said device being so arranged as to be actuated by the stock being fed from the other side of the hopper, and means for driving fastening devices to secure the stock together.

2. In a machine for driving fastening devices, a hopper for holding the stock, a pivoted device for lifting the stock at one side of the hopper, means reaching down into the hopper to support said pivoted device, a feeding apparatus coöperating therewith, the said device being so arranged as to be actuated by the stock being fed from the other side of the hopper, and means for driving fastening devices to secure the stock together.

3. In a machine for driving fastening devices, a pair of stock guides, hooks on said guides to catch and hold the stock, a pair of movable bars having cams for controlling said hooks, means for actuating said bars, means for feeding the stock along said guides, and means for driving fastening devices to secure the stock together.

4. In a machine for driving fastening devices, a hopper, a chain carrier for feeding the stock from the said hopper, in successive sets, a friction drive for said chain carrier, means for engaging the stock to interrupt the feeding motion of said carrier, and means operating on each set a plurality of times, at successive points in the path of travel thereof, for inserting fastening devices to secure the stock together.

5. In a machine for driving fastening devices, a hopper mechanism for holding the stock in a plurality of assembled sets, means for feeding the sets in assembled form, and a plurality of corrugated sheet metal fastener drivers operating on each set a plurality of times at successive points in the path of travel thereof for inserting corrugated fasteners across the joints of the corners of each set.

[Claims 6 to 59 not printed in the Gazette.]

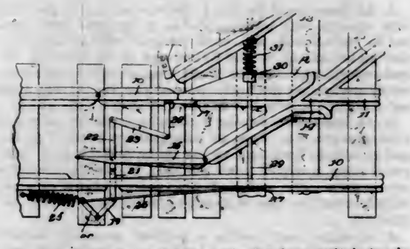
1,224,281. RIFFLE-BOX. ARTHUR E. CUSTER, Salt Lake City, Utah. Filed June 1, 1915. Serial No. 31,608. (Cl. 83—88.)



1. In a device of the class described, the combination of a riffle box; a plurality of detachable riffle boards transversely placed as a secondary bottom in said box, and each having rows of longitudinal recesses cut in the face thereof, each of said recesses having a portion of its bottom inclined upwardly toward the front end and the other portion curved upwardly and having its rear end at right angles to the inclined portion of the bottom, to form a right-angled pocket, each of said recesses having an overhanging lip at its head end; and means to impart a longitudinal reciprocatory movement to said box and boards.

2. In a device of the class described the combination of a riffle box; a plurality of detachable riffle boards each having rows of longitudinally disposed recesses cut in the face thereof, each of said recesses having a portion of its bottom inclined upwardly toward the front end and the other portion curved upwardly, and having its rear end vertically at right angles to the inclined portion of the bottom; and means to impart a slow forward movement and a quick return movement to said box and riffle boards.

1,224,282. AUTOMATIC MINE-TRACK SWITCH. WILL E. DAWKINS and ARTHUR W. LIPSCOMB, Breese, Ill. Filed July 24, 1916. Serial No. 111,013. (Cl. 104—24.)



1. In switch mechanism, a main track, a switch track, pivoted switch throwing means normally projecting upwardly from the main track and engageable by a car passing thereon for rocking the said means to open the switch, means operable to project above said switch throwing means for locking the switch in the open position thereof, and means operable by a car passing over the switch track for releasing the said locking means.

2. In switch mechanism, a main track, a switch track, coacting switch points, pivoted switch throwing means engageable by a car passing over the main track for rocking the said means and shifting the switch points in opposite directions to open the switch, and means arranged for engagement with the said switch throwing means for locking the switch in open position.

3. In switch mechanism, a main track, a switch track, coacting switch points, pivoted switch throwing means engageable by a car passing over the main track for rocking the said means and shifting the said switch points to open the switch, and means mounted upon the rails of the main track and shiftable transversely with respect thereto for engagement with the said switch throwing means for locking the switch in open position.

4. In switch mechanism, a main track, a switch lever mounted to rock at one side of the main track and engageable by a car passing over the main track, means urged into the path of rocking movement of the said lever for locking the lever in the open position of the switch, and means operable by a car passing over the switch track for releasing the said locking means to free the said lever.

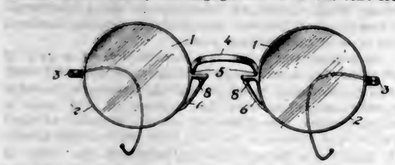
5. In switch mechanism, a main track, a switch track, switch throwing means operable by a car passing over the main track to open the switch, and means urged to lock the said switch throwing means in the open position of the switch with the said switch throwing means normally providing a stop for the said locking means to hold the locking means in inactive position.

[Claims 6 to 12 not printed in the Gazette.]

1,224,283. OPHTHALMIC MOUNTING. GEORGE H. DAY, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Dec. 27, 1915. Serial No. 68,782. (Cl. 88—41.)

1. A center for an ophthalmic mounting, comprising a central arched member terminating in depending portions, bearing members curving upwardly and inwardly from the lower portions of the depending members and posts carried by the upper portions of the bearing members and extending outwardly for engagement with the lens frame.



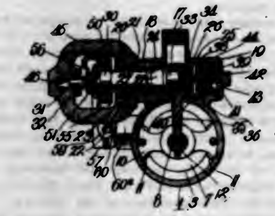


2. In an ophthalmic mounting, the combination with a pair of lens frames, a one-piece connecting member therefor comprising posts extending inwardly from the frames, thence rearwardly and downwardly in nose engaging portions, upwardly behind the nose engaging portions and post, and a common transversely extending portion connecting said upwardly extending portions.

3. A center for an ophthalmic mounting, comprising a central arched member having its maximum width in a plane parallel to that of the lenses, said member terminating in depending portions, bearing members curving upwardly and inwardly from the lower portions of the depending portions, and posts carried by the upper portions of the bearing members and extending outwardly for engagement with the lens frames.

4. In a spectacle mounting, the combination with a pair of lenses and means located at the outer edges of the lenses for retaining the mounting in position on the face of the wearer, of an adjustable center for connecting the lenses, said center comprising a central forwardly curving bridge member terminating in downwardly and outwardly curving portions disposed behind the edge of the lens and out of engagement with the face of the wearer, said depending portions terminating in rearwardly and upwardly inclined widened bearing portions adapted for engagement with the sides of the nose of the wearer, the upper ends of said bearing portion being curved forwardly and outwardly around the depending portions of the bridge member, and having their outer ends connected to the lenses, substantially as and for the purpose described.

1,224,284. GAS-SHUT-OFF VALVE. JOSEPH W. DEARING, Kansas City, Mo., assignor to Eureka Automatic Gas Valve Mfg. Co., Kansas City, Mo., a Corporation of Arizona. Filed Aug. 20, 1914. Serial No. 857,687. (Cl. 137—92.)



1. In a valve, a casing having a communicating chambered portion provided with alined oppositely-projecting tubular hubs, one of said hubs having its bore enlarged to form a tapered seat or bearing facing the chambered portion, and the other hub having an internal bearing and screw threads, a shaft extending transversely through the chambered portion and journaled and endwise-movable in the last-named bearing and provided with a conical enlargement engaging the said tapered seat or bearing, a split nut engaging the threaded portion of said hub, an expanding plug engaging and expanding said split nut to secure the same against accidental movement, and a clamping screw adjustably mounted in the expanding plug and engaging the adjacent end of the shaft to hold the conical portion thereof firmly upon the tapered seat or bearing.

2. In a valve, a casing having a communicating chambered portion provided with alined oppositely-projecting tubular hubs, one of said hubs having its bore enlarged to form a seat or bearing facing the chambered portion and the other hub having an internal bearing and screw threads, a shaft extending transversely through the chambered portion and journaled and endwise-movable in the last-named bearing and provided with an enlargement engaging the said seat or bearing facing the chambered portion, an adjustable device secured within the threaded hub, a plug threaded into said adjustable device, a clamping screw extending through said plug and engaging the adjacent end of said shaft, a lock nut mounted upon said screw and bearing against said plug, and a hollow nut screwed into said hub and inclosing the outer end of said clamping screw.

3. In a gas shut-off valve, a casing having an offset chambered portion provided with alined oppositely-projecting hubs, one hub having a cylindrical internal seat and the other a tapering seat, a sectional shaft extending transversely through said chambered portion and composed of members interlocked together as regards rotative movement, one member of the shaft having an enlarged cylindrical portion engaging the said cylindrical seat and the other member an enlarged tapered portion engaging said tapered seat, a valve within the casing, a crank arm mounted upon the shaft to turn therewith and connected to seat and unseat said valve, means to rock said shaft, means within the hub containing the cylindrical seat, for applying unyielding endwise pressure on the adjacent end of one member of said shaft to hold the tapered portion of the other member pressed against the said tapered seat, and means closing the outer end of the hub containing the pressure-applying means.

4. In a gas shut-off valve, a casing having an offset chambered portion provided with alined oppositely-projecting hubs, one hub having an inwardly-facing seat or bearing, a sectional shaft extending transversely through said chambered portion and composed of members interlocked together as regards rotative movement, one member of the shaft having an enlarged portion engaging said inwardly facing seat or bearing, an expansible device adjustably secured in the hub at the opposite side of the chambered portion from the hub provided with inwardly-facing seat or bearing, a tapered expanding plug engaging and clamping said expansible device at the desired point of adjustment thereof in said hub, an adjustable device secured to and extending through said plug and engaging the adjacent end of the sectional shaft and clamping the enlarged portion thereof against said inwardly-facing seat or bearing, means mounted on said adjustable device and engaging said plug to prevent accidental movement of said adjustable device, and means for sealing the outer end of the hub containing said expansible device.

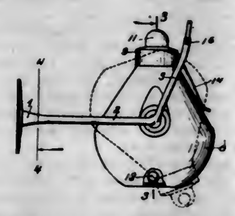
5. In a gas cut off valve, a casing having an offset chambered portion provided with alined oppositely-projecting hubs, one hub having an inwardly-facing seat or bearing, a sectional shaft extending transversely through said chambered portion and composed of members interlocked together as regards rotative movement, one member of the shaft having an enlarged portion engaging said inwardly-facing seat or bearing, means within one of said hubs for applying unyielding endwise pressure on one member of the shaft to hold said enlarged portion of the other member pressed against said seat or bearing, a yoke rigid on the casing, provided with a socket axially alined with and outward of the hub having the inwardly-facing seat or bearing and forming a bearing for the outer end of the shaft member having the enlarged portion, a crank arm mounted on the shaft within said chambered portion and projecting into the casing, a valve within the casing to be seated and unseated by said crank arm, a lever extending through the yoke and mounted on the shaft section journaled in the yoke, means engaging the lever for holding

the valve normally open, and means for tripping said holding means and then operating the lever to positively close the valve.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,285. SOAP-DISPENSER. JOSEPH P. DILLON, Kansas City, Mo., assignor, by direct and mesne assignments, to Roger A. Boushor, Kansas City, Mo. Filed Sept. 30, 1915. Serial No. 53,290. (Cl. 221—94.)



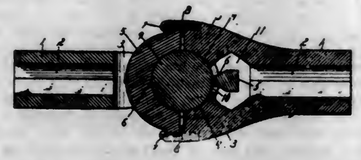
1. In a soap dispenser, a bracket adapted to be attached to a wall and provided with two forwardly extending arms, and having an upwardly extending arch, the ends of which are connected respectively with said arms, and a container pivotally supported between and by said arms, and adapted to be tilted to an inverted position for the discharge of its contents, and in the tilted position engaging said arch, whereby the tilting movement to the discharge position of the container is limited by said arch.

2. In a soap dispenser, a bracket adapted to be attached to a wall and having two forwardly extending arms and an arch extending upwardly from and forming a continuation of said arms, and a container pivotally mounted between and supported by said arms and adapted to be swung to an inverted discharge position, the arch being engaged by and limiting said movement of the container to a position in which the container when released will return by gravity to the upright position.

3. In a soap dispenser, a support having two forwardly extending arms and an arch extending upwardly from and forming an extension of said arms, and a container pivoted between and supported by said arms and tiltable to an inverted discharge position and having at its upper end a closure having a discharge opening, the arch engaging and serving to limit the tilting movement of the container and disposed forward of said closure opening, when the container is in the upright position, so that the upper end of the container must pass under the arch when the container is tilted to the discharge position.

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1,224,286. UNIVERSAL JOINT. EMANUEL C. DONTJE, BENJAMIN DONTJE, and CORNELIUS I. DONTJE, Kalamazoo, Mich. Filed Sept. 15, 1916. Serial No. 120,399. (Cl. 74—19.)

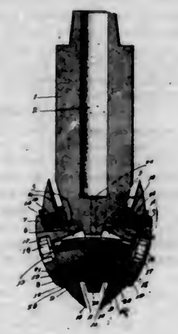


1. In a universal joint, the combination of a pair of shaft members each having bearing arms provided with segmental bearings the combined arcs of which do not exceed a half circle, yoke-like bearing members provided with segmental bearings complemental to the bearings of said arms, there being a space between the bearing arms of each shaft member for the bearing member of the other shaft member, a spherical coupling member having peripheral bearing grooves disposed at right angles to each other and coacting with the bearings of said shaft member arms and bearing members, the sides of said bearing grooves being diverged outwardly and the sides of said bearings being converged inwardly to coact therewith, and means for adjustably securing said bearing members to the ends of said bearing arms.

2. In a universal joint, the combination of a pair of shaft members, each having bearing arms provided with segmental bearings, yoke-like bearing members provided with bearings alined with the bearings of said arms, a coupling member having bearing grooves disposed at right angles to each other and coacting with the bearings of said shaft member arms and bearing members, the sides of said bearing grooves being diverged outwardly and the sides of said bearings being converged inwardly to coact therewith, and means for adjustably securing said bearing members to the ends of said bearing arms.

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1,224,287. ROTARY BIT. EDWARD DOUBLE, Los Angeles, Cal. Filed June 8, 1914. Serial No. 843,708. (Cl. 255—71.)



1. In a rotary bit, a body having a tapered end, a pair of studs screwed into opposite faces of said end, rotary cutters mounted on said studs and a bolt, the end portions of which are in substantial alinement with the longitudinal axes of the studs, said bolt passing longitudinally through said studs and securing the same to the body, each of said cutters having a tapered bore to allow the passage of the bolt irrespective of the angular rotative position of the stud.

2. In a rotary bit, a body having a tapered end, a plurality of studs screwed in opposite faces of said end, each of said studs having a head, a bushing on each stud, a rotary cutter mounted on each bushing and retained by the head of the stud, said studs being hollow, and a bolt passing longitudinally through both of said studs and through the body to positively retain the studs on the body, a washer between each cutter and the tapered end portion, and a washer between each cutter and the adjacent head of the stud, each of said bushings having a lubricant chamber with lubricant ducts leading from said chamber to the bearing surface of the bushing.

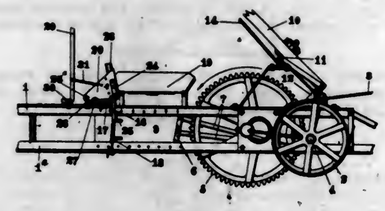
3. In a rotary bit, a body having a tapered end, a plurality of studs screwed in opposite faces of said end, each of said studs having a head, a bushing on each stud, a rotary cutter mounted on each bushing and retained by the head of the stud, said studs being hollow, and a bolt passing longitudinally through both of said studs and through the body to positively retain the studs on the body, a washer between each cutter and the tapered end portion, and a washer between each cutter and the adjacent head of the stud, each of said bushings having a lubricant chamber with lubricant ducts leading from said chamber to the bearing surface of the bushing, each of said bushings being provided with a filling passage leading to the lubricant chamber.



4. In a rotary bit, a body, a pair of headed studs having bores formed longitudinally therethrough secured upon opposite sides of the body near the lower end thereof, rotary cutters mounted on said studs and held in place by the heads thereof, and a bolt inserted through the studs and body and having its ends located within the bores in said studs, said studs being located in outwardly and downwardly inclined planes relatively to the longitudinal axis of the body and having their bores uniformly enlarged at their inner ends to allow the passage of the bolt therethrough irrespective of the angular rotative positions of the studs.

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1,224,288. HAY-PRESS. WAYNE G. DUFFIELD, Moline, Ill., assignor to The Dain Manufacturing Company of Iowa, Ottumwa, Iowa, a Corporation of Iowa. Filed June 22, 1914. Serial No. 846,661. (Cl. 100—23.)



1. In a hay press the combination of a bale chamber, a block dropper having a block holder slidably supported at its front end, of a link connection between its rear end and the bale chamber, a lever pivotally moutned upon the bale chamber and means connecting the lever with the block holder.

2. In a hay press the combination of a bale chamber, a block holder, the front portion of the sides of the block holder slidably supported, a lever connected with the block holder to actuate the latter, link means connecting the rear portion of the block holder sides with the bale chamber to move the top of the block holder more rapidly than the bottom as the lever is operated.

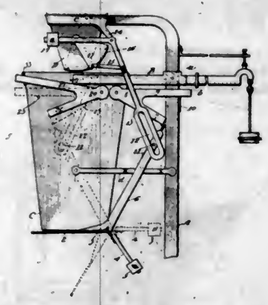
3. In a hay press the combination of a bale chamber, a feed opening, a normally inclined block holder having a receptacle adapted to receive a block, means to support the forward portion of the block holder, link means connecting the rear portion of the block holder to the bale chamber, a lever mounted on the bale chamber and connected to the block holder to actuate the latter and rock the link means to move the block receptacle from normal inclined position above the bale chamber to a substantially vertical position above the feed opening.

4. In a hay press having a bale chamber, a feed opening, a horizontally reciprocating plunger, and a substantially vertical reciprocating feeder having a bracket thereon, the combination of a normally inclined block holder, a division block carried thereby, means for supporting the forward portion of the block holder, a link connection between the rear portion of the block holder and the bale chamber, a lever, a connection between the lever and block holder to shift the latter when the lever is operated and to rock the link connection to move the block holder from inclined to a substantially vertical position to place the block in the path of the bracket on the feeder.

5. In a press for baling hay or the like the combination of a bale chamber, a block holder slidably supported thereby, a link pivoted to the block holder and pivotally supported on the bale chamber, said link lying normally substantially parallel with the top of the bale chamber, a horizontally reciprocating plunger in the bale case, a feeder operating in timed relation with the plunger and adapted to reciprocate into and out of the path traversed by the plunger, and means supported on the bale chamber and connected with the block holder to move the latter toward thep ath traversed by the feeder.

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1,224,289. WEIGHING-MACHINE. PETRONELLA EDTBAUER, Chicago, Ill. Filed Nov. 29, 1915. Serial No. 64,009. (Cl. 73—177.)



1. In a weighing machine, a suitable scale including a balance-beam, a single bin supported by and movable with said beam, said bin having a discharge opening, a counterbalanced hinged plate adapted to close the discharge opening of said bin, and a rock-shaft from which said plate projects, in combination with a stationary superposed hopper, a plate adapted to close the discharge opening thereof, and means for imparting the motion of said rock-shaft to said plate and open the hopper when the bin is closed, and vice versa, said means including engaging members that extend from the plate which closes the bin and hopper respectively.

2. In a weighing machine, a suitable scale including a balance-beam, a single bin supported by and movable with said beam, said bin having a discharge opening, a counterbalanced hinged plate adapted to close the discharge opening of said bin, and a rock-shaft from which said plate projects, in combination with a stationary superposed hopper, a swinging plate adapted to close the discharge opening thereof, and means for imparting the motion of said rock-shaft to said plate and open the hopper when the bin is closed, and vice versa, said means including engaging members that extend from the swinging plate and the plate which closes said bin.

3. In a weighing machine, a suitable scale including a balance-beam, said bin having a discharge opening, a single bin supported by and movable with said beam, a counterbalanced hinged plate adapted to close the discharge opening of said bin, a rock-shaft from which it projects, and an arm projecting upward from said shaft, in combination with a stationary superposed hopper, a plate adapted to close the discharge opening thereof, a suitable trip engaging said arm when the bin is closed, and means engaged by said arm when said bin is discharging and causing said plate to close the discharge opening in the hopper.

4. In a weighing machine, a suitable scale including a balance-beam, a single bin supported by and movable with said beam and provided with a discharge opening in said bin, a counterbalanced hinged plate adapted to close the discharge opening of said bin, a rock-shaft from which said plate projects, and an arm projecting upward from said shaft, in combination with a stationary superposed hopper, a closure for the discharge opening of said hopper consisting of a swinging plate, a plurality of trips adapted to engage the upper end of said arm at the end of its movement in either direction, and means engaged by said arm that causes said closure to open the hopper when the bin is closed, and vice versa.

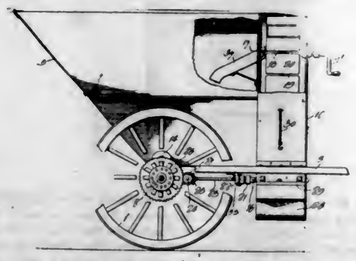
5. In a weighing machine, a suitable scale including a balance-beam, a single bin supported by and movable with said beam, said bin having a discharge opening, a counterbalanced hinged plate adapted to close the discharge opening of the same, a rock-shaft from which said plate projects, and an arm projecting upward from said plate at an obtuse angle, in combination with a superposed hopper a swinging plate adapted to close the discharge open-

ing thereof, an arm suitably connected to said swinging plate and depending downward and engaging the arm projecting up from the rock-shaft, and a suitable trip engaging said last-mentioned arm when the bin is closed.

[Claims 6 to 14 not printed in the Gazette.]

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1,224,290. ASH-CART. WILLIAM EIERMANN, Brooklyn, N. Y. Filed Sept. 1, 1916. Serial No. 118,060. (Cl. 214—1.)



A collecting machine of the class described comprising a portable truck, a vertical conveyer casing rising rigidly from said truck and having in one side a discharge opening, said casing also having an inlet, a tilting receiver mounted on said truck and having one side disposed adjacent said side of the conveyer casing and formed with an opening registering with said discharge opening, a receiving chute carried rigidly by said receiver and projecting through the opening thereof and through said discharge opening into the conveyer casing when said receiver is in operative position, said discharge opening being of a size to permit the chute to leave the same when the receiver is tilted to discharge its load, and a conveyer in said casing for lifting material deposited therein and discharging it into said chute.

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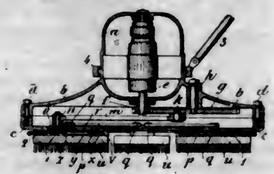
1,224,291. REMOVING CATALYZER FROM OIL. CARLETON ELLIS, Montclair, N. J. Filed Feb. 5, 1916. Serial No. 76,380. (Cl. 87—12.)

1. A process of treating oily material containing catalyzer in a high state of subdivision, which comprises passing an oily material containing such a catalyzer through a filtering material comprising silicic acid precipitated on a finely divided solid material.

2. A process of treating oily material containing catalyzer in a high state of subdivision, which comprises passing an oily material containing such a catalyzer through a filtering material comprising silicic acid precipitated on fullers' earth.

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1,224,292. MACHINE FOR CLEANING, GRINDING, FINISHING, AND POLISHING OF PARQUETTED FLOORS AND SIMILAR SURFACES. PEDER ANDERSEN FISKER, Frederiksberg, near Copenhagen, Denmark. Filed Oct. 28, 1914. Serial No. 869,059. (Cl. 15—14.)



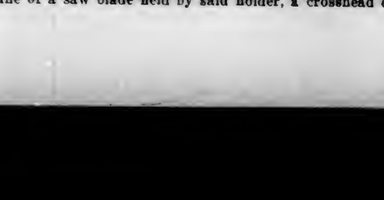
1. A machine for cleaning, grinding, polishing or finishing of parquetted floors and similar surfaces comprising a motor, tools adapted to work the said surfaces, said tools being arranged in pairs and a transmission adapted to move two opposite tools toward the center of the machine and contemporaneously two other tools away from the same.

2. A machine for cleaning, grinding, polishing or finishing of parquetted floors and similar surfaces, comprising a motor, oppositely arranged slides adapted to accommodate tools for working of the said surfaces, each slide having an oblique bent edge, means enabling the said motor to reciprocate the said slides in pairs contemporaneously toward and away from the center of the machine, a fastening piece for the tools having an oblique edge and means for securing the said fastening piece to the said slides.

3. A machine for cleaning, grinding, polishing or finishing of parquetted floors and similar surfaces comprising a motor, tools for working of the said surfaces, means enabling the said motor to reciprocate the said tools in pairs contemporaneously toward and away from the center of the machine, a rotatable member concentric with the axis of the motor and a handle fixed to the said rotatable member and adapted to be shifted about the axis of the motor.

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1,224,293. SAW-FILING MACHINE. HUGH B. FOLEY, Minneapolis, Minn. Filed Oct. 16, 1916. Serial No. 125,813. (Cl. 76—35.)



1. In a saw filing machine, a crosshead support having front vertical guides, a primary crosshead movable vertically in the guides of said support, a secondary crosshead mounted for straight line horizontal movements on said primary crosshead, and provided with a file holder, and a compound crank operative directly on said primary and secondary crossheads to alternately impart the respective straight line movements thereto.

2. In a saw filing machine, a saw blade holder, of a crosshead support having an angular movement in respect to the plane of the saw blade held by said holder, a crosshead device mounted on said crosshead support and provided with a file holder, and a power device mounted on and adjustable with said crosshead support and having connections to said crosshead for imparting thereto, and to the file holder, saw filing movements.

3. In a saw filing machine, the combination with a saw blade holder, of a crosshead support pivotally connected thereto by a pivot, the axis of which is in the extended plane of a saw blade held by said holder, a crosshead device mounted on said crosshead support and provided with a file holder arranged to hold a file for engagement with the saw blade at a point where the projected axis of the above noted pivot of said crosshead support intersects the saw blade, and means for imparting saw filing movements to said crosshead.

4. In a saw filing machine, a saw blade holder, a crosshead support having an angular movement in respect to the plane of the saw blade held by said holder, a primary crosshead mounted for vertical movements on said crosshead support, a secondary crosshead mounted for horizontal movements on said primary crosshead, and provided with a file holder, and a power device mounted on and adjustable with said crosshead support and having connections for imparting the respective movements to said primary and secondary crossheads.

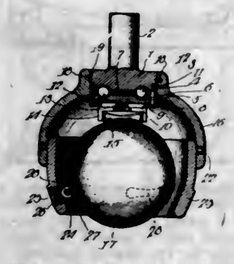
5. In a saw filing machine, the combination with a saw blade holder, of a crosshead support pivotally connected thereto by a pivot, the axis of which is in the extended plane of a saw blade held by said holder, a crosshead device mounted on said crosshead support and provided with a file holder arranged to hold a file for engagement with the saw blade at a point where the projected axis of the above noted pivot of said crosshead support intersects the saw blade, and a power device mounted on and adjustable with said crosshead support and having connections for imparting the saw filing movements to said crosshead.

[Claims 6 to 11 not printed in the Gazette.]



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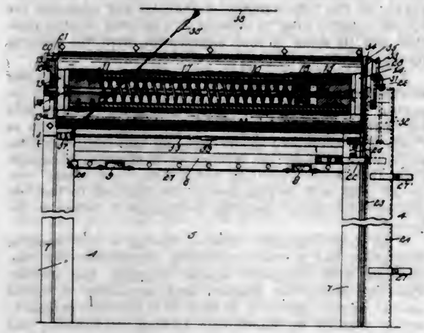
1,224,294. FURNITURE-CASTER. ERNST FRANZEN, Chicago, Ill. Filed Jan. 12, 1916. Serial No. 71,656. (Cl. 16—151.)



A furniture caster comprising an inverted substantially semi-spherical cup equipped with a turn-table rotatable on the vertical axis of said cup, a roller rotatable on a transverse axis carried by said turn-table, a sphere disposed within the cup upon which said roller is adapted to rest, an extension member for the mouth of the cup adapted to be detachably secured to the latter and through which the contained sphere is adapted to project, a plurality of turn-tables mounted in said extension member rotatable on axes substantially radial of said sphere, and a roller carried by each turn-table rotatable on an axis transverse to the axis of its turn-table and bearing upon the sphere, all of the last-named rollers coacting to maintain said sphere centered with relation to the first-named turn-table.

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1,224,295. FIRE-DOOR. WAINWRIGHT B. GERVAIS, Chicago, Ill., assignor to Variety Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 6, 1912. Serial No. 735,208. (Cl. 189—58.)



The combination of a drum having counterbalancing mechanism therein and a shutter to be wound upon said drum, a cylindrical guideway disposed adjacent one side of the shutter and having a slot therein, an arm carried by the lower end of the shutter and projecting into the guideway through the slot, a weight disposed wholly within the guideway, a trigger above the upper end of the guideway to suspend said weight above the arm, and a fusible cable connected to said trigger to restrain the same until a predetermined temperature is reached.



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1,224,296. IGNITION DEVICE. LESTER H. GIBSON, Brookline, Mass., assignor to Gibson-Hollister Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 24, 1915. Serial No. 23,585. (Cl. 123—169.)



1. A spark plug comprising a metal shell having a depending annular skirt, the bottom of which is thickened to form a conical inclosed chamber having the side walls converging to a single substantially circular restricted orifice at its bottom, the inner face of which orifice forms one of the sparking points of the spark gap, an insulating bushing secured in the shell, and an electrode extending through the bushing and having a sparking point located in the orifice, the restricted orifice compelling the ignited gas in the chamber to pass and clean the sparking points, and the lower face of the shell forming a substantially flat annular surface around the orifice and being provided with a slot cut therein and intersecting the orifice near the sparking points to permit free access of combustible gas to the sparking points.

2. A spark plug comprising a metal shell having a depending annular skirt forming an inclosed chamber with a single restricted orifice at its bottom, the inner face of which forms one of the sparking points, an insulating bushing secured in the shell, and an electrode extending through the bushing and having a sparking point located in the orifice, the passage of the ignited gas past the sparking points tending to clean them, and the lower face of the shell being provided with a slot cut therein and intersecting the orifice near the sparking points to permit free access of combustible gas to the sparking points.

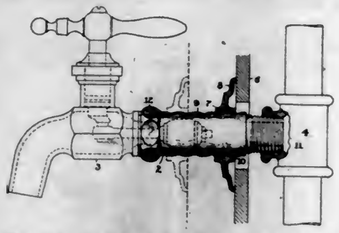
3. A spark plug comprising a metal shell having a depending annular skirt, the bottom of which is thickened to form an inclosed chamber with a single restricted orifice at its bottom, the skirt forming a substantially flat annular bottom surface for the plug around the orifice, an insulating bushing secured in the shell, an electrode extending through the bushing and having a sparking point located in the orifice, and a noncorroding ring inserted around the mouth of the orifice and flush with the bottom surface of the plug to form the other sparking point, the inclosed chamber compelling the ignited gas to pass and clean the sparking points, and the lower face of the shell being provided with a transverse slot cut therein and partially through the ring to intersect the orifice near the sparking points and permit the free access of combustible gas to the sparking points.

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1,224,297. LAVATORY-FITTING. JOSEPH H. GLAUBER, Cleveland, Ohio; The Citizens Savings & Trust Company executor of estate of Joseph H. Glauber, deceased. Filed Oct. 28, 1914. Serial No. 868,947. (Cl. 137—111.)

The combination of a wall or back and a pipe fitting, with a shank having a threaded end engaged with said fitting and a flanged screw collar engaged with said wall, or back, said shank and collar having complementary

screw threads of relatively small depth and rounded at the top on a radius prominently greater than the depth of said thread and the screw threads on the collar being larger and having loose longitudinal play relatively to the



screw threads on the shank to afford quick and easy rotation and prevent marring of the shank surface in adjustments and to provide a wedging effect between the parts in clamping operations.

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1,224,298. AUTOMOBILE-JACK. MARTIN J. HAUG, Madelia, Minn. Filed Oct. 9, 1916. Serial No. 124,714. (Cl. 254—89.)



An automobile jack comprising a base, axle engaging and lifting blocks movably mounted on opposite ends of the base, a movably mounted trip member mounted adjacent one set of said lifting blocks, connecting means between the blocks of said set, said trip member being arranged to be moved by one of the axles of an automobile into engagement with said connecting means to swing said blocks on their pivots as the said axle engages with said blocks, and connecting means between the trip member and the other set of blocks whereby said last-named blocks will be raised into position to be engaged by the other axle of the automobile upon the engagement of the first axle with the first blocks.

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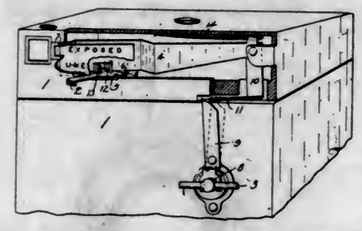
1,224,299. IGNITION DEVICE. GEORGE S. HOLLISTER, Boston, Mass., assignor to Gibson-Hollister Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 24, 1915. Serial No. 23,628. (Cl. 123—169.)



A spark plug comprising a metal shell, an insulating bushing secured in the shell, a high tension electrode supported in the bushing, an annular ring secured to the bushing and surrounding the lower portion of the high tension electrode, and a plurality of low tension electrodes secured to the shell and having upwardly bent portions arranged to receive the spark from the annular ring.

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1,224,300. CAMERA EXPOSURE-INDICATOR AND SHUTTER-LOCK. CLARENCE A. HOYT, Tacoma, Wash. Filed Mar. 29, 1915, Serial No. 17,648. Renewed Jan. 29, 1917. Serial No. 145,313. (Cl. 95—31.)




1. In a photographic camera, having a film-changing mechanism and a shutter-operating mechanism; the combination of a spring actuated stop; means engaging said spring-actuated stop to hold it in inoperative position; means formed on the shutter-operating mechanism and adapted to engage said stop to release it from said holding means when said shutter-operating mechanism is actuated, whereby the stop engages and locks the shutter-operating mechanism from further motion when it has completed the exposure; and means actuated by the film-changing mechanism and engaging the spring-actuated stop to remove it from said locking position and to bring it into engagement with said holding means.

2. In a photographic camera, having a film-changing mechanism and a shutter-operating mechanism; the combination of a spring-actuated stop; means engaging said spring-actuated stop to hold it in inoperative position; means formed on the shutter-operating mechanism and adapted to engage said stop to release it from said holding means when said shutter-operating mechanism is actuated, whereby the stop engages and locks the shutter-operating mechanism; means controlled by the shutter-operating mechanism and engaging the locking means whereby the locking action thereof is delayed until the motion of the shutter-operating mechanism is completed; and means actuated by the film-changing mechanism and engaging the spring-actuated stop to remove it from said locking position and to bring it into engagement with the holding means.

3. In a photographic camera, having a shutter-operating mechanism; the combination with automatic means engaging the shutter-operating mechanism whereby said mechanism is locked against further operation as soon as it has been actuated; means engaging said shutter-locking mechanism whereby the locking mechanism is disengaged from the shutter-operating mechanism; and means connected with said locking means and adapted to indicate whether the shutter-operating mechanism is locked or unlocked.

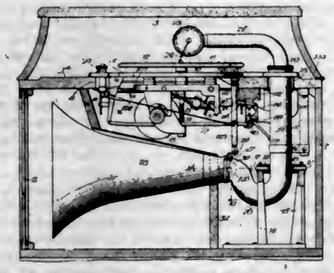
4. In a photographic camera, having a film-changing mechanism and a shutter-operating mechanism, the combination with automatic means engaging the shutter-operating mechanism whereby said mechanism is locked against further operation as soon as it has been actuated; means adapted to unlock said locking mechanism; and flexible means actuated by the film-changing mechanism and actuating said unlocking means.

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1,224,301. MOTOR-CONTROLLING MECHANISM FOR TALKING-MACHINES. ALBERT A. HUSEBY, Chicago, Ill. Filed July 26, 1915. Serial No. 41,821. (Cl. 74—46.)

1. In a motor-controlling mechanism for talking machines, the combination of a motor, a brake for said motor, a spring normally tending to apply said brake, a latch mechanism for holding said brake retracted disposed across the path of a movable element of the machine and adapted to be automatically unlatched by said movable element, a depressible pin, and lever and link connections from said pin to said latch mechanism whereby the latter may be unlatched to permit the application of the brake at any desired time.





2. In a motor-controlling mechanism for talking machines, the combination of a motor, a brake for said motor, a spring normally tending to apply said brake, a latch mechanism for holding said brake retracted disposed across the path of a movable element of the machine and adapted to be automatically unlatched by said movable element, a depressible pin, lever and link connections from said pin to said latch mechanism whereby the latter may be unlatched to permit the application of the brake at any desired time, a second depressible pin, and lever and link connections from said second pin to said latch mechanism whereby the latter may be latched to effect the retraction of the brake.

3. In a motor controlling mechanism for talking machines, the combination of a motor, a brake for said motor, a spring normally tending to apply said brake, a pivoted catch hook, a pivoted latch bar connected to said brake, manually operable means for swinging said latch bar into engagement with said catch hook to hold said brake retracted, and manually operable means for swinging said catch hook to release said latch bar.

4. In a motor controlling mechanism for talking machines, the combination of a motor, a brake for said motor, a spring normally tending to apply said brake, a slideway, a slide block on said slideway carrying a pivoted catch hook located in the patch of movement of a movable element of the machine, and a pivoted latch bar slidable laterally with said slide block and serving, when engaged with said catch hook to hold said brake retracted.

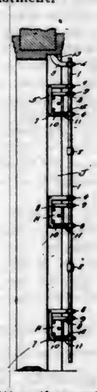
5. In a motor controlling mechanism for talking machines, the combination of a motor, a brake for said motor, a spring normally tending to apply said brake, a slideway, a slide block on said slideway carrying a pivoted catch hook located in the path of movement of a movable element of the machine, a pivoted latch bar slidable, laterally with said slide block and serving when engaged with said catch hook to hold said brake retracted, manually operable means for engaging said latch bar with said catch hook, and manually operable means for shifting said slide block to set said catch hook at any predetermined position in said path of movement.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,302. DOOR-HINGE FITTER. JOHN JOHNSON, Stoughton, Wis. Filed Apr. 27, 1916. Serial No. 93,911. (Cl. 33—197.)

1. A door hinge fitter, comprising a rod composed of a plurality of sections, means at the end of each section for coupling it with the adjoining section, a member slidably mounted and movable longitudinally of said rod, a second member slidably supported on said first mentioned member and movable laterally of said rod and adapted to indicate the width of a hinge, a third member supported on and slidable longitudinally of said rod and adapted to indicate the length of a hinge, and means to secure the members in their position of adjustment.

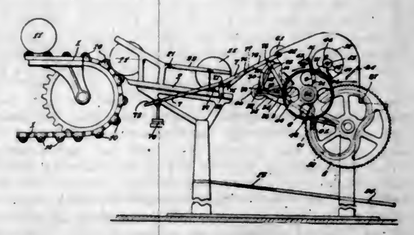


2. In a door hinge fitter, the combination of one or more rod sections, an upwardly curved arm mounted on the upper end of the uppermost section and longitudinally adjustable thereon, an approximately U-shaped member slidably mounted and movable longitudinally of the rod on which it is mounted and having a slot in one of its parallel arms, and a second member slidably supported on the first mentioned member in its slotted portion and movable laterally of the rod to indicate the width of a hinge.

3. In a door hinge fitter, the combination of a rod composed of releasably connected sections, a gaging arm slidably mounted on the end of the upper section and longitudinally adjustable thereon, approximately U-shaped members slidably mounted and movable longitudinally of said rod and each having a slotted portion, a second member mounted in the slotted portion of each and slidably supported on said first mentioned member and movable laterally of said rod and adapted to indicate the width of a hinge, and means to secure the members in any desired adjustable position for fitting hinges.

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1,224,303. CAN-LABELING MACHINE. HIYOZO KAWATE, Seattle, Wash., assignor of forty one-hundredths to Otozo Shintani, Seattle, Wash. Filed Oct. 25, 1915. Serial No. 57,896. (Cl. 216—46.)



1. In a can labeling machine, in combination, a can receiving cell closely embracing the periphery of the can, rollers projecting within said cell to form carrying supports for the can, means for turning the can through said rollers and means for passing a label within said cell to be wrapped about the can.

2. A labeling device for cans having a fixed paste reservoir with a perforated wall at one side, means for supporting a bunch of labels with their inner face at one end bearing against said perforated wall, and means for

withdrawing the label which contacts said perforated wall and applying it to a can.

3. A labeling device for cans having an adhesive receptacle provided with a perforated side wall, means for supporting a bunch of labels with one end in vertical position with a side face of the bunch against said perforated side, means for holding the upper end of the bunch in curved position with the label which contacts with the perforated wall at the concave side of the curve and means for engaging said inner label to withdraw it from the pile and to apply it to a can.

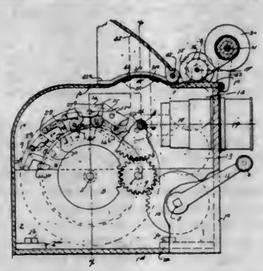
4. In a can labeling machine, a can receiving cell adapted to closely embrace, without gripping, the periphery of the can, means for turning the can within said cell, and means for feeding a label between the can and the walls of the casing cell.

5. In a can labeling machine, a can receiving cell adapted to closely embrace the can, the walls of said cell being in sections movable to receive and discharge cans, means for rotating the can in its cell, means for feeding a label between the can and the walls of its cell, and means for applying an adhesive to the following end of the label.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,304. MOTION-PICTURE MACHINE. WILLIAM A. KING, La Conner, Wash., assignor of one-half to William Clemons, Skagit county, Wash. Filed Aug. 24, 1914. Serial No. 858,234. (Cl. 88—16.8.)



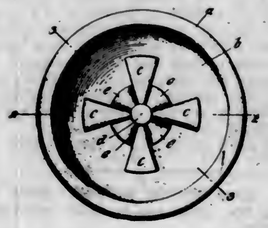
1. In a motion picture projector comprising an outer casing, the usual picture films and mechanism for continuously actuating the films, and a lens tube, the combination of means for producing a continuous projection upon the usual picture screen, the said means including independent cam tracks and an endless belt or carriage upon which mirrors are mounted, means for moving the same around upon the cam track, and a reflector which reflects the light through the pictures on the film and successively upon the moving mirrors, the cams in the cam tracks being so shaped as to independently and automatically cant the ends of one mirror with respect to its adjacent mirror at a predetermined angle at or about the time it reaches the point of concentration of light from the reflector, whereby the rays of light from the reflectors which pass through the forward end of one of the said pictures and certain rays from the said reflector which pass through the rear end of the following picture are reflected from the mirrors into the lens tube and the remaining rays which pass through the said pictures, strike the inclined mirrors at an angle which in the case of the forward picture is too obtuse to reflect the said rays into the lens tube and in the case of the following picture is too acute to reflect the rays into the lens tube, whereby a complete picture is projected at all times, shutters for trimming the pictures, means for causing the said shutters to continuously revolve about a common center, and synchronously with the mirrors and means for causing the said shutters to each in turn rotate axially when they are centrally within the path of the rays of light which have passed through the rear end of the forward picture and the forward end of the following picture and which are deflected away from the lens tube.

2. The combination in a motion picture projector comprising an outer casing, lens tube, film feed rolls and means for continuously actuating the films of a reflector which is adapted to continuously reflect the light through the moving film, wheeled mirror carriages connected in endless belt form and which travels in a vertical plane, and mirrors thereon, a three-way circular cam-track, upon which the said carriages ride, the cam-track being so arranged that the outer tracks of the three-way cam-track control the movement of the forward ends of the carriages and the central track controls the movement of the rear ends thereof and each mirror is automatically tilted at a predetermined angle at or about the time it reaches the point of concentration of light from the reflector, whereby the rays of light from the reflector which pass through the forward end of one of the pictures upon said films and certain rays from the said reflectors which pass through the rear end of the following picture, are reflected from the mirrors into the lens tube and the remaining rays which pass through the said pictures strike the inclined mirrors at an angle which in the case of the forward picture is too obtuse to reflect the rays into the lens tube and in the case of the following picture is too acute to reflect the rays into the lens tube, and a complete picture is projected at all times; shutters for trimming the pictures, means for causing the said shutters to continuously revolve about a common center, and sychronously with the wheeled mirror carriages; and means for causing said shutters to each in turn rotate axially when they are centrally within the path of the rays of light which have passed through the rear end of the forward picture and the forward end of the following picture and which are deflected away from the lens tube.

3. The combination in a motion picture projector, comprising an outer casing, lens tube, a reflector, film feed rolls and means for continuously actuating the films, of a plurality of mirrors mounted upon an endless belt, means for moving said belt in a vertical plane, the said mirrors being adapted to receive the light from the reflector, a cam-track which tilts the mirrors at a predetermined point, trimming shutters, shutter revolving means which revolves said shutters about a common center and synchronously with the said mirrors, the said shutters intermittently obstructing certain of the light rays, shutter rotating means which include cam and coacting projections for causing the shutters to also rotate axially when they are centrally within the path of the rays of light which have passed through the rear end of the forward picture and the forward end of the following picture and which are deflected away from the lens tube.

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1,224,305. BIRD-BATH. JULIUS C. KRAUS, New York, N. Y. Filed May 6, 1916. Serial No. 95,928. (Cl. 119—18.)



1. A bird bath comprising a vessel adapted to contain water, a projection extending upwardly from a point central of the inner surface of the said vessel, a plurality of radially disposed projections extending from the said central projection toward the rim of the vessel in an inclined plane and terminating above the water line of said vessel.

2. A basin adapted for use as a bird bath comprising a vessel adapted to contain water, a plurality of projections sloping upwardly from the center of the inner surface of the basin, the apex of such projections being approximately in line with the horizontal plane of the rim of said basin.

3. A bird bath comprising a circular vessel adapted to contain water and a plurality of projections integrally formed upon the inner surface of the vessel, said projections radiating from the center toward the rim of said vessel in an inclined plane.

4. A bird bath comprising a circular vessel adapted to contain water, a plurality of sloping projections formed upon the inner surface of said vessel, said projections terminating in substantially the same horizontal plane and approximately in line with the horizontal plane of the rim of the vessel.

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1,224,306. LAVATORY-FIXTURE. MICKAEL LEMP, WILLIAM F. ALBRECHT, and JOSEPH SHEROL, Syracuse, N. Y., assignors to Notowl Manufacturing Company, Syracuse, N. Y., a Corporation of New York. Filed July 15, 1915. Serial No. 40,037. (Cl. 34—26.)



1. In a lavatory fixture, the combination with a housing having an air inlet and an opening, a blower, a motor therefor and a heater, all located within the housing, said blower comprising a fan and an inclosing case therefor adjustable about the axis of the fan and provided with an air inlet and a delivery nozzle extending outwardly through said opening in the housing.

2. In a lavatory fixture, the combination with a housing having an air inlet and an opening, a blower, a co-axial motor therefor, both journaled in the housing, the blower comprising a rotary fan and an inclosing case therefor adjustable about said axis and provided with a delivery nozzle extending outwardly through said opening in the housing, and an electric heater within the blower case in the path of travel of the air therethrough.

3. In a lavatory fixture, a blower having an impeller and a case therefor adjustable about the axis of the impeller and provided with a delivery nozzle, and pedal-operated means for holding the blower case in its adjusted position.

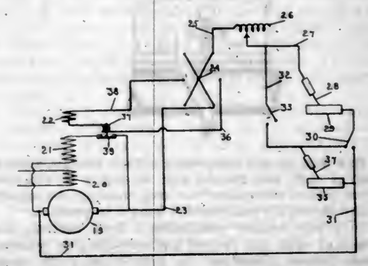
4. In a lavatory fixture, a blower having a delivery nozzle adjustable about a horizontal axis to direct the current of air to different heights and weighted to automatically assume a predetermined normal position, and means operable at will for retaining the nozzle in its adjusted position and including a detent and a spring support therefor placed under increased tension by said means.

5. In a lavatory fixture, the combination of a blower having an impeller and a case therefor having an air inlet and a delivery nozzle, said case being adjustable rotarily about the axis of the impeller, means operable at will for holding the case in its adjusted position, an electric heater wholly within the adjustable blower case in the path of travel of the air therethrough, an electric switch in circuit with the heater, and connections between the switch and said means for closing the switch simultaneously with the operation of the holding means.

[Claims 6 to 12 not printed in the Gazette.]

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1,224,307. ARC-WELDING APPARATUS. JAMES F. LINCOLN, Cleveland, Ohio. Filed Dec. 23, 1915. Serial No. 68,302. (Cl. 171—223.)



1. The combination of a generator and a work circuit including a solenoid, a series field winding for the generator, and additional field winding means opposing said series field winding and including a field winding circuit having a switch controlled by said solenoid, said switch operable as the work circuit load increases to increase the field winding strength opposing the series field winding.

2. The combination of a generator and a work circuit including a solenoid, a series field winding for the generator, shunt field winding means for the generator opposing the series field winding means for varying the strength of the shunt field winding means including a switch operable by said solenoid as the series field increases for increasing the shunt field winding means.

3. The combination of a generator and a work circuit including a solenoid, a series field winding for the generator, a shunt field winding for the generator opposing the series field winding, and means for varying the strength of the shunt field winding including a switch operable by said solenoid as the work circuit load increases for increasing the shunt field winding strength.

4. The combination of a generator and a work circuit including a series solenoid and a reactance coöperating with said solenoid for dampening the solenoid action, a series field winding for the generator, a shunt field winding for the generator opposing the series field winding and a switch controlled by said solenoid for automatically and arbitrarily stepping up the load voltage range of the generator in a determined range over the no load voltage of said generator.

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1,224,308. PLATE-LIFTER. ARTHUR W. LOSEY, Dover, N. J. Filed Dec. 9, 1916. Serial No. 136,056. (Cl. 65—32.)

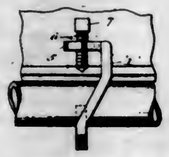


A plate lifter comprising an elongated member of flat material and having one end portion returned, the free extremity of said returned portion being provided with oppositely directed arms, the inner edges of the arms and the adjacent end of the member being in continuity, and a handle slidably mounted upon the elongated member and provided with an angular extension, the free portion of said extension being also provided with oppositely di-

rected arms, the inner edges of said last named arms and the adjacent end of the extension being also in continuity, said handle member adjacent its end remote from the first named extension being provided with a second extension disposed in the same general direction as the first named extension, said handle member comprising a sleeve having its upper face split longitudinally.

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1,224,309. PIPE-HANGER. PAUL LÜPKE, Jr., Trenton, N. J. Filed Sept. 30, 1916. Serial No. 122,958. (Cl. 248—32.)



1. In a pipe hanger comprising a body portion, arms arranged at each end thereof and extending in relatively different lateral directions one arm crossing the opposite arm, and means for securing the hanger in position.

2. In a pipe hanger comprising a body portion, arms arranged at each end thereof and extending in relatively different lateral directions one arm crossing the medial point of the opposite arm and means for securing the hanger in position.

3. In a pipe hanger comprising a body portion, arms arranged at each end thereof and extending in relatively different lateral directions one arm crossing the medial point of the opposite arm and means associated with one arm for securing the hanger in position.

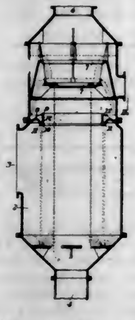
4. In a pipe hanger comprising a body portion, arms arranged at each end thereof and extending in relatively different lateral directions one arm crossing the medial point of the opposite arm and means associated with one arm in alinement with the medial point of said crossed arm for securing the hanger in position.

5. In a pipe hanger comprising a body portion, arms arranged at each end thereof and extending in relatively different lateral directions one arm crossing the medial point of the opposite arm and a set screw associated with one arm in alinement with the medial point of said crossed arm for securing the hanger in position.

[Claims 6 to 11 not printed in the Gazette.]

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1,224,310. BAROMETRIC CONDENSER. CHARLES J. MESTA and CHARLES L. W. TRINKS, Pittsburgh, Pa., assignors to Mesta Machine Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 15, 1916. Serial No. 97,497. (Cl. 261—114.)



1. A water deflector or weir, consisting of a ring or annulus having a convex upper surface and having a cylindrical wall inside of the ring and separated therefrom by a relatively narrow opening, substantially as described.

2. A water deflector or weir, comprising a ring having inner and outer substantially parallel flow-guiding vertical walls separated from each other by a flow opening, substantially as described.

3. A water deflector or weir, consisting of an inner cylindrical wall and a surrounding ring separated from the wall by a relatively narrow slot or opening, said ring having a convex upper surface and terminating in a downwardly extending lip or flange, substantially as described.

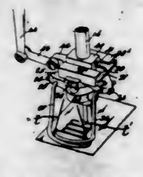
4. A circular weir having a substantially circular flow opening between inner and outer walls, substantially as described.

5. A circular weir having a substantially circular flow opening between inner and outer walls having substantially vertical guide portions, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,311. SEWING-MACHINE. GEORGE E. MOLYNEUX, Bayonne, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed July 19, 1915. Serial No. 40,565. (Cl. 112—7.)



1. In a sewing machine, the combination with stitch-forming mechanism, of a rock-shaft, a cylindrical supporting bar and a thread-carrier journaled thereon for oscillatory movement, an actuator surrounding and slidingly mounted upon said supporting bar and operatively connected with the thread-carrier, and connections between the rock-shaft and said actuator for imparting operative movements to the latter.

2. In a sewing machine, the combination with stitch-forming mechanism including a needle or needles, of means for laying a thread in front of the needle or needles comprising a cylindrical supporting bar, a thread-carrier journaled upon said bar for oscillatory movement, a slidably mounted reciprocatory actuator carried by said bar, a sliding connection between the actuator and the said thread-carrier, and means for imparting operative movements to the said actuator.

3. In a sewing machine, the combination with stitch-forming mechanism including a needle or needles, of means for laying a thread or threads in front of the needle or needles, comprising a supporting bar, a disk mounted to oscillate upon said bar, a thread-carrier movable with the said disk, a reciprocatory actuator mounted upon the supporting bar and formed with a guideway, a stud carried by the disk and fitted within the said guideway, and means for reciprocating the actuator to impart oscillatory movements to the disk and operative movements to the thread-carrier.

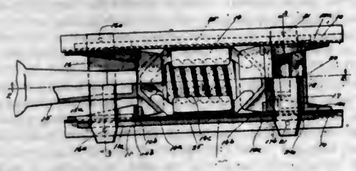
4. In a sewing machine the combination with stitch-forming mechanism including a needle or needles, means for laying a thread in front of the needle or needles, comprising a supporting bar, a disk mounted to oscillate upon the said bar, a thread-carrier mounted upon said disk, a reciprocatory actuator mounted upon said supporting-bar and provided with a guide-way, a stud carried by the disk and fitted within the said guide-way of the actuator, a second disk movable upon the first disk and provided with a block fitted within the said guide-way, and a thread-carrier mounted upon the second disk.

5. In a sewing machine, the combination with stitch-forming mechanism and a plurality of thread-carriers, of a supporting-bar, superposed disks mounted to oscillate upon said bar, and each supporting a thread-carrier, an actuator mounted to reciprocate upon said bar and having a sliding connection with each of the said disks, and means for reciprocating said actuator.



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1,224,312. DRAFT-GEAR ATTACHMENT. GEORGE C. MURRAY, Chicago, Ill. Filed Aug. 23, 1915. Serial No. 46,879. (Cl. 213—64.)



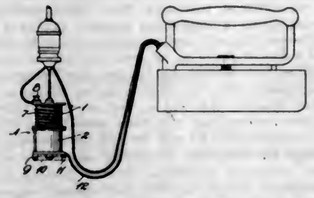
1. In combination, draft sills, draft rigging located therebetween, a key extending through said sills at the rear of said rigging, and a follower member between said rigging and said key, said follower member being cross-apertured, said key extending through said aperture, a tie member extending betwen said draft sills and secured thereto, said member being provided with a seat, said follower member seating in said seat when in rest position.

2. In combination, draft sills, slotted draft lugs secured to said draft sills, a key extending through the slots in said lugs and said sills, a coupler abutting said key being carried thereby, a cross-member extending between and secured to said sills, a second key extending through said sills adjacent said cross-member, draft rigging located between said sills and said lugs and cross-member, said rigging comprising a follower normally abutting against said draft lugs, a second follower normally abutting against said cross-member, and links located outwardly of said draft sills and extending between said keys.

3. In combination, draft sills, slotted draft lugs secured to said draft sills, a key extending through the slots in said lugs and said sills, a coupler abutting said key being carried thereby, a cross-member extending between and secured to said sills, a second key extending through said sills adjacent said cross-member, draft rigging located between said sills and said lugs and cross-member, said rigging comprising a follower normally abutting against said draft lugs, a second follower normally abutting against said cross-member, and links located outwardly of said draft sills and extending between said keys, said second follower being apertured, said second key extending through and being seated in said aperture.

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1,224,313. THERMOSTATIC REGULATOR. JOHN NATHAN, Los Angeles, Cal. Filed Feb. 8, 1915. Serial No. 6,924. (Cl. 175—275.)



1. A device for regulating the heat produced by an electric current, comprising a two part cylinder, a heat insulating material interposed between the conducting surfaces of said parts, a diaphragm between said parts, a liquid in one part of said cylinder acting upon one face of said diaphragm, spaced contacts secured to said cylinder, a switch blade coöperating therewith, a stem connecting said diaphragm to said blade, a coil spring encircling said stem to return said diaphragm to normal position, and means included in the circuit for heating said liquid.

2. Means for regulating the heat produced by an electric current consisting of a chamber containing a liquid, a coil in the heat producing circuit for heating the liquid, a circuit control, means acted on by the liquid to maintain a steady temperature of the liquid and the heat produced by the current, and means to regulate the temperature at which the liquid is to be maintained to thereby control the heat produced by the current.

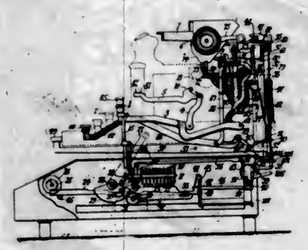
3. A device for regulating the heat produced by an electric current consisting of a chamber for a liquid, a yielding means on said chamber, a heating coil in the circuit to heat the liquid in the chamber, contacts on said chamber, a circuit control coöperating therewith, means actuable by said yielding means under the movement of the liquid automatically to operate said circuit control and thereby regulate the heat of the liquid and the heat produced by the electric current, and means to regulate the resistance of said yielding means to the movement of the liquid.

4. A device for regulating the heat produced by an electric current, comprising a receptacle for an expansible fluid, a means arranged to yield under the expansion and contraction of the liquid in said chamber, a resistance coil in the circuit to heat the liquid in said chamber, a circuit controlling means operable by the movement of said yielding means to maintain a definite temperature of the liquid and heat produced by the electric current, and adjustable means to predetermine the heat.

5. A device for regulating the heat produced by an electric current, comprising a chamber for an expansible liquid, a resistance coil in the circuit to heat the liquid in said chamber, a circuit control, a means on said chamber acted on by the expansion of the liquid to operate said circuit control and break the circuit and to make the circuit when the liquid contracts thereby to govern the heat produced by the electric current, and means manually operable to regulate the resistance of the means on said chamber to the expansive force of the liquid to control the temperature of the heat produced by the electric current.

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1,224,314. COMBINED TYPE-WRITING AND COMPUTING MACHINE. OSMOND W. OLMSTED, Hartford, Conn., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Apr. 19, 1912. Serial No. 691,828. (Cl. 235—60.)



1. The combination of a letter-feeding carriage, a set of computation wheels, a system of settable pins arrayed in rows, one row for each wheel, a set of pin setters, each pin-setter universal to all the rows of pins, keys for operating the pin-setters, all the pins normally escaping the pin-setters, and means operable by said carriage for moving each row of pins in a direction longitudinal of the row to advance the said row to a position where the pins are engageable by all the pin-setters.

2. The combination of a carriage, a set of computation wheels, a set of bars to operate said wheels, rows of pins mounted on said bars, key operated setters for the pins, and means enabling said carriage to positively displace the bars endwise successively, to bring all the pins on each bar into position to be operated by any pin-setter.

3. The combination of a carriage, a set of computation wheels, a set of bars to operate said wheels, indexing pins mounted on said bars, key-operated setters for the indexing devices, said bars extending forwardly and rearwardly of the machine, a set of arms mounted upon the machine to swing forwardly and rearwardly, said bars engageable by said arms, and means enabling said carriage to swing said arms one after another as the carriage travels in letter-feeding direction, to displace the bars and the indexing devices thereon to settable positions.

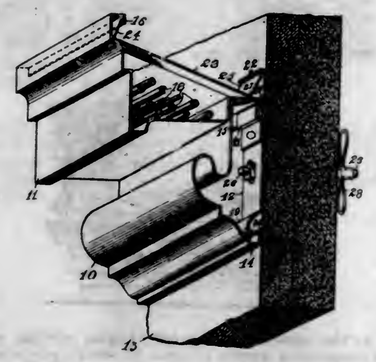
4. The combination of a carriage, a set of computation wheels, a set of bars to operate said wheels, indexing pins mounted on said bars, key-operated setters for the indexing devices, said bars extending forwardly and rearwardly of the machine, a set of arms mounted upon the machine to swing forwardly and rearwardly, said bars engageable by said arms, means enabling said carriage to swing said arms one after another as the carriage travels in letter-feeding direction, to displace the bars and the indexing devices thereon to settable positions, and springs for returning the bars to normal positions after their displacement.

5. The combination of a carriage, a set of computation wheels, a set of bars to operate said wheels, indexing pins mounted on said bars, key-operated setters for the indexing devices, said bars extending forwardly and rearwardly of the machine, a set of arms mounted upon the machine to swing forwardly and rearwardly, said bars engageable by said arms, means operable by said carriage for swinging said arms one after another as the carriage travels in letter-feeding direction, to displace or advance the bars and the indexing devices thereon to settable positions, a general operator, and bar returning springs mounted to yield to permit the bars to be advanced by the general operator; the bars having dead edges or surfaces upon which the springs may ride during the advance and return of the bars by the general operator.

[Claims 6 to 65 not printed in the Gazette.]

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1,224,315. WIRE-TRENCH AND PICTURE-MOLDING. OTHO M. OTTE, Jamestown, N. Y. Filed Mar. 20, 1916. Serial No. 85,422. (Cl. 189—89.)



1. A sheet metal wire trench, a picture molding comprising a molding having angular oppositely lengthwise inturned edges, said wire trench having a lengthwise downwardly turned flanged edge to fit over the upper edge of said picture molding adjacent the wall, a stay brace to support the outer portion of said wire trench, and a three-point clip attached to the wall to support said picture molding, wire trench, and stay brace.

2. A molding including a base element, a head element, means borne by the head element to interengage with the top of the base element, means to hold the base element in position, and combined means to hold said interengaging means in position and to brace and support the front of the head element.

3. In a molding, a clip, a base having upper and lower inturned flanges, means on the lower end of the clip to engage and support the lower flange of the base, means on the clip between the ends thereof to engage and hold said upper flange of the base, a head, means to support the head from said second means of the clip, means to hold the head against upward movement engaging on top of said head supporting means, and means on the clip extending above said head supporting means to lock the means which holds the head against upward movement in position.

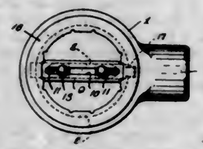
4. In a molding, a base, a clip having means to engage the base and hold same in position, a head interengaged with the base, said clip having a part extending above the points of interengagement of the base and head, and a brace engaged with said part of the clip and with the head to hold the latter in its said interengaged position and also engaged with the front of the head to brace and support the latter.

5. In a molding, a base, a head interengaging with the base, a stay-brace formed to bear on the head adjacent its point of interengagement with the base to maintain such interengagement, said head having means to engage one end of the stay-brace, and means to engage the other end of the stay-brace.

[Claim 6 not printed in the Gazette.]

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1,224,316. MEANS FOR ATTACHING ELECTRICAL APPLIANCES TO CONDUIT OUTLET-BOXES. JOHN E. PARKER and DANIEL B. WINTER, Syracuse, N. Y., assignors to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed July 27, 1911, Serial No. 640,747. Renewed Sept. 26, 1916. Serial No. 122,318. (Cl. 247—5.)



1. Means for attaching to conduit outlet boxes having openings, electrical appliances having fastening members located at different distances from their centers, said means comprising a supporting member having a slot, and a nut in the slot, the nut having surfaces slidably engaging the side walls of the slot, whereby the nut is held from turning, substantially as and for the purpose described.

2. Means for attaching to conduit outlet boxes having openings, electrical appliances having fastening members located at different distances from their centers, said means comprising a supporting member having a slot, a nut in the slot, the nut having surfaces slidably engaging the side walls of the slot, whereby the nut is held from turning, the nut having means associated therewith extending through the slot and engaging the side of the supporting member opposite to that on which the nut is located for holding the nut from detachment from the support, substantially as and for the purpose specified.

3. Means for attaching to conduit outlet boxes having openings, electrical appliances having fastening screws spaced different distances apart, said means comprising a pair of nuts adjustable rectilinearly, and means for supporting the nuts and for holding the nuts from turning movement, the nuts being slidable rectilinearly along the supporting means, substantially as and for the purpose specified.

4. The combination with an electric conduit outlet box having an opening in one side thereof; of means adapted to attach to the box electrical appliances having fastening members located different distances from their centers, said means being arranged in the opening and being formed with a guide groove in one side thereof, and a slot opening through the bottom of the groove, and a nut adjustable in the groove and having a threaded opening alined with the slot, substantially as and for the purpose described.

5. Means for attaching to conduit outlet boxes having openings, electrical appliances having fastening members located different distances from their centers, said means comprising a supporting member adapted to extend crosswise of the opening of the box, and a part slidable rectilinearly along the supporting member for coacting with the fastening member of an electrical appliance, the supporting member being formed with a lengthwise slot through which the fastening member projects, and means coacting with said slidable part and the fastening member for holding said part in its adjusted position, the last-mentioned means extending through the slot, substantially as and for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]



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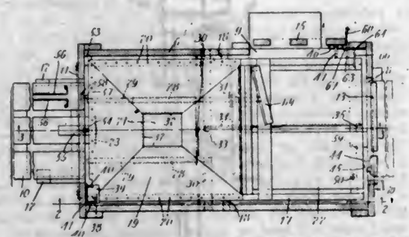
1,224,317. CONDUCTOR'S-CHECK HOLDER. GEORGE A. PARKHURST, Minneapolis, Minn. Filed Mar. 27, 1916. Serial No. 86,836. (Cl. 40—11.)



A check or ticket holder comprising a face plate, and a spring metal disk rigidly and permanently secured thereto at its axis, said disk having a continuous unbroken resilient clamping rim, the extreme outer edge of which is slightly turned outward to permit the checks or tickets to be inserted between the same and the said face plate, the said disk having an outwardly bulged annular portion between its axial and rim portions.

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1,224,318. TRAP-NEST. RUDOLF PAULSON, Wakefield, Mass., assignor of one-half to Carl B. Forell, Foxboro, Mass. Filed Aug. 31, 1916. Serial No. 117,949. (Cl. 119—47.)



1. A trap nest comprising a casing, an entrance gate therefor, an exit gate, a frame pivotally arranged within said casing, means operated by the rocking of said frame in one direction to close said entrance gate, and means operated by the movement of said frame in the opposite direction to open said exit.

2. A trap nest comprising a casing, a normally open entrance gate therefor, a normally closed exit gate for said casing, a substantially horizontal frame pivoted within said casing adapted to be moved downwardly by the weight of a fowl entering said nest and upwardly when said fowl has left said nest, means operated by the movement of said frame downward from the horizontal position thereof to close said entrance gate, and means operated by the movement of said frame upwardly from the horizontal position thereof to partially open said exit gate.

3. A trap nest comprising a casing, a normally open entrance gate therefor, a normally closed exit gate for said casing, a substantially horizontal frame pivoted within said casing, a nest arranged at one end of said frame adapted to be depressed by the weight of a fowl on said nest, means operated by the depression of said nest adapted to close said entrance gate, a platform arranged adjacent to the opposite end of said frame adapted to be depressed by the weight of a fowl thereon, and means operated by the depression of said platform adapted to partially open said exit gate.

4. A trap nest comprising a casing, a normally open entrance gate therefor, a normally closed exit gate for said casing, a substantially horizontal frame pivoted within said casing, a nest arranged at one end of said frame adapted to be depressed by the weight of the fowl on said nest, means operated by the depression of said nest adapted to close said entrance gate, a platform arranged adjacent to the opposite end of said frame adapted to be depressed by the weight of a fowl thereon, means operated by the depression of said platform adapted to partially open said exit gate, means also operated by the depression of said platform adapted to partially open said entrance gate, means adapted to hold said entrance gate partially open while said platform remains depressed, means adapted to return said platform to its normal position, a weight disposed above the nest end of said frame adapted to be lifted when said platform is depressed by the weight of a fowl thereon, said weight being arranged to return said frame to its normal position when the weight of the fowl is removed from said platform, and means to limit the downward movement of said weight substantially beyond the normal position of said frame.

5. A trap nest comprising a casing, a normally open entrance gate therefor, a normally closed exit gate for said casing, a substantially horizontal frame pivoted within said casing, a nest arranged at one end of said frame adapted to be depressed by the weight of the fowl on said nest, means operated by the depression of said nest adapted to close said entrance gate, a platform arranged adjacent to the opposite end of said frame adapted to be depressed by the weight of a fowl thereon, means operated by the depression of said platform adapted to partially open said exit gate, means also operated by the depression of said platform adapted to partially open said entrance gate, means adapted to hold said entrance gate partially open while said platform remains depressed, and a weight adapted to return said platform to its normal position.

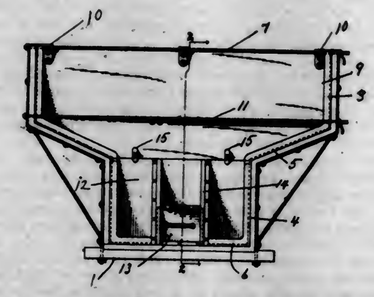
[Claims 6 to 15 not printed in the Gazette.]

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1,224,319. END-GATE FOR GRAIN TANK-WAGONS. PETER PETERSON, near Stavely, Alberta, Canada, assignor of one-half to William Muckenhirr, Stavely, Alberta, Canada. Filed May 9, 1916. Serial No. 96,457. (Cl. 21—21.)

1. In combination with the body of a vehicle for holding grain and other comminuted material, a pair of guide and stop irons fitted thereto, each iron comprising an upper part which is L-shaped in cross-section and a lower part which is U-shaped in cross-section, an upper gate section pivotally attached to said body but held by the L-shaped parts of said irons against turning outwardly from the position of closure, and a lower gate section which is guided vertically by the U-shaped parts of said irons and removable by raising it above the same.

2. In combination with the body of a vehicle, a pair of guide and stop irons attached to said body, each of said irons consisting of an upper part which is L-shaped in cross-section and a lower part which is U-shaped in cross-section and extended inwardly along a part of the bottom of the vehicle besides being arranged vertically along the proximate portion of its side, a vertically slidable gate section fitting into the U-shaped parts of the irons, both in the vertical and horizontal portions, an upper pivoted gate section turning outward against the L-shaped parts of said irons, by which it is stopped from turning farther outward, though free to turn inwardly.

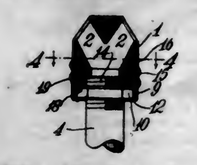


3. In combination with guides at the sides of an opening, an upper grain-gate section movable independently to open and close the upper part of said opening, a lower grain-gate section normally closing the lower part of said opening but movable vertically in said guides and provided with an opening, and vertical guides at the sides thereof and a door vertically movable in the latter guides, the above mentioned devices permitting, as preferred, the opening of the entire gate, or of the upper section only, or of the small door only, or of the latter and the upper section, while leaving the greater part of the lower section closed.

4. An end gate comprising, a lower gate section provided with an opening through its lower edge, a door slidably mounted on said lower section and adapted to close the opening therethrough, means for maintaining said lower section in vertical position, an upper section, means for pivotally suspending the same, means for limiting the rearward swing of said upper section, and turn buttons carried by the rear of the upper section and adapted to engage the rear of the lower section to secure the upper section in closed position and prevent its forward swing.

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1,224,320. TERMINAL FITTING FOR ELECTRIC CONDUITS. JAMES C. PHELPS, Springfield, Mass. Filed Oct. 2, 1914. Serial No. 864,626. (Cl. 247—12.)



1. In a device of the character described, the combination with the threaded end of a conduit, of a terminal cap fitting, a threaded sleeve secured to said cap and below the external surface thereof and terminating at the lower end of the cap, a nut on the threaded end of the conduit, and a second threaded sleeve engaging the nut and the threaded sleeve on the cap to secure the cap to the conduit.

2. The combination with the threaded end of an electric conduit, a cap, a threaded sleeve permanently secured to the cap, the cap having an annular recessed portion to receive the end of the conduit, a nut on the threaded end of the conduit engaging the lower end of the cap, and a second threaded sleeve having an apertured flange portion through which the end of the conduit passes, said flange engaging the lower side of the nut, whereby when the second threaded sleeve is screwed onto the threaded sleeve on the cap said cap and conduit will be secured together.

3. An insulating cap for closing the open end of an electrical conduit having threads on its outer end, the cap having a recessed end for receiving the end of the conduit, a threaded sleeve, said sleeve having an apertured inturned flange to receive the threaded end of the conduit and being spaced away from the lower end of the cap, a nut on the threaded portion of the conduit and engaging the lower end of the cap, said flange engaging the lower side of the nut, whereby when the sleeve is rotated the recessed portion of the cap will be drawn into contact with the end of the conduit, the cap being provided with a plurality of inclined openings to receive the electric wires, as described.

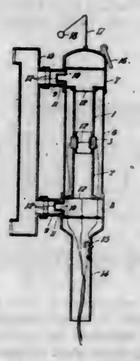
4. The combination with the threaded end of an electric conduit, a cap composed of insulating material for closing the outlet end of said conduit, and provided with threads on its outer surface and extending to its lower end portion, the roots of said threads being below the external surface of the cap, the cap having an annular recessed portion for receiving the end of the conduit and openings therethrough for receiving the electric wires, a nut on the threaded end of the conduit, a threaded sleeve engaging the threads on the cap, and formed with an apertured flange through which the upper threaded end of the conduit loosely passes, said flange engaging the lower side of the nut, whereby when the sleeve is threaded onto the threads of the cap the cap will be drawn toward the end of the conduit and secured thereto, as described.

5. The combination with a threaded end of an electric conduit, a nut thereon serving as a shoulder and connected thereto, said nut being located below the end of the conduit, a cap having threads on its lower external surface and formed with divergent openings therethrough to receive the electric wires, a threaded sleeve formed with an opening through its flanged portion to receive the conduit and engage the lower side of the nut, the threads of the sleeve engaging the threads of the cap, whereby when the sleeve is threaded on to the cap the cap is drawn into engagement with the upper side of the nut, as described.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,321. DETECTOR OF COMBUSTIBLE GASES. ARNOLD PHILIP and LOUIS J. STEELE, Portsmouth, England. Filed Nov. 26, 1912. Serial No. 733,719. (Cl. 73—51.)



1. In a catalytic detector, the combination of two active and two inactive wires, connections between the active and inactive wires forming them into a Wheatstone bridge in which the active and inactive wires alternate, and an indicating apparatus and source of supply joined to said bridge.

2. In a catalytic detector, the combination of two active and two inactive wires, connections between the active and inactive wires forming them into a Wheatstone bridge in which the active and inactive wires alternate, an indicating apparatus and source of supply joined to said bridge, and means for varying the current supplied to the bridge.

3. In a catalytic detector, the combination of two active and two inactive wires, connections between the active and inactive wires forming them into a Wheatstone bridge in which the active and inactive wires alternate, an indicating apparatus and source of electrical supply joined to said bridge, means for varying the E. M. F. applied to the bridge, and means independent of the bridge for indicating when a particular value of E. M. F. is obtained.

4. In a catalytic detector, the combination of two active and two inactive wires, connections between the active and inactive wires forming them into a Wheatstone bridge in which the active and inactive wires alternate, an indicating apparatus and source of electrical supply joined to said bridge, means for varying the current supplied to the bridge, a circuit independent of said bridge of equivalent resistance and means for connecting said bridge to the source of supply and the indicating apparatus.

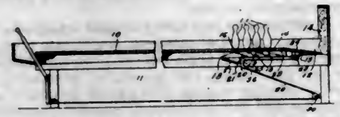
5. In a catalytic detector, the combination of active and inactive wires adjusted in properties and dimensions so that the function, connecting current and resistance is the same for each over a small range of voltage, connections between said wires forming them into a Wheatstone bridge, an indicating apparatus and a source of electrical supply joined to said bridge.

[Claims 6 to 13 not printed in the Gazette.]



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1,224,322. BOWLING APPARATUS. WILLIAM J. POWELL, Ocean City, N. J. Filed July 25, 1916. Serial No. 111,174. (Cl. 46—54.)



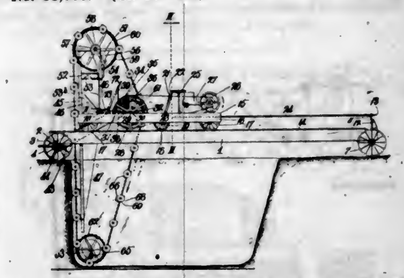
1. A device of the character described comprising a deck having pin spots and passages therethrough centrally of the spots, cords attached centrally to the bottom of the pins, a swinging vane beneath the deck rearwardly of said spots, said cords being connected to the vane at points spaced correspondingly to the spots, yieldable means to hold the vane at the upper limit of its movement, and means to move the vane to the opposite limit of its movement at will.

2. A device of the character described, comprising a deck having pin spots therein and vertical apertures therethrough centrally of the spots, respective pins, cords attached centrally to the bottoms of the pins extended slidably through said passages, a vane pivoted beneath the deck rearwardly of said spots having a width corresponding to the distance between the outermost lateral spots and having a dimension longitudinally of the deck corresponding to the distance between the rearmost and foremost spots, said cords being attached thereto in a spaced relation on the vane corresponding to the spaced relation of the spots on the deck, said cords being of a length to lie taut when the vane is at the lower limit of its movement, resilient means to hold the vane yieldably at the upper limit of its movement, and manually operated means to move the vane to the lower limit of its movement at will.

3. A device of the character described, comprising a deck having pin spots therein, and vertical apertures therethrough centrally of the spots, respective pins, cords attached centrally to the bottoms of the pins extended slidably through said passages, a vane pivoted beneath the deck rearwardly of said spots having a width corresponding to the distance between the outermost lateral spots and having a dimension longitudinally of the deck corresponding to the distance between the rearmost and foremost spots, said cords being attached thereto in a spaced relation on the vane corresponding to the spaced relation of the spots on the deck, said cords being of a length to lie taut when the vane is at the lower limit of its movement, resilient means to hold the vane yieldably at the upper limit of its movement, and manually operated means to move the vane to the lower limit of its movement at will, said connections of the cords of the vane including a resilient element next to the vane.

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1,224,323. EXCAVATING-MACHINE. GEORGE M. RICE, Lincoln, Nebr., assignor of one-half to Malcolm MacKay, Kansas City, Mo. Filed June 14, 1915. Serial No. 33,900. (Cl. 37—24.)



1. In an excavating machine, a bed frame provided with supporting wheels and longitudinal parallel tracks, a wheeled truck mounted on the tracks of the bed frame, an engine mounted on the wheeled truck, a shaft geared to the engine, demountable driving connections between said shaft and the rear wheels of the bed frame, and demountable steering connections between the wheeled truck and the front wheels of the bed frame.

2. In an excavating machine, a bed frame provided with supporting wheels and longitudinal parallel tracks, a wheeled truck mounted on the tracks of the bed frame, an engine mounted on the wheeled truck, a shaft geared to the engine, demountable driving connections between said shaft and the rear wheels of the bed frame, means for reversing the action of said driving connections, and demountable steering connections between the wheeled truck and the front wheels of the bed frame.

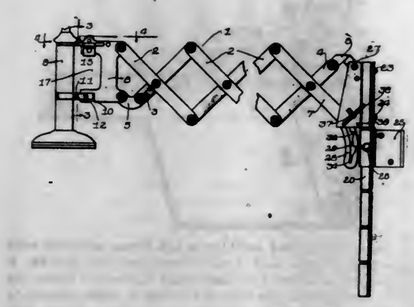
3. In an excavating machine, a bed frame provided with supporting wheels and longitudinal parallel tracks, a wheeled truck mounted on the tracks of the bed frame, an engine mounted on the wheeled truck, a driving shaft mounted on the truck and geared to the engine, vertically adjustable guides carried by the truck, sprocket wheels suitably supported at the upper ends of said guides, sprocket wheels mounted on said driven shaft, parallel sprocket chains engaging the sprocket wheels carried by said guides and the sprocket wheels mounted on said shaft, weighted sprocket wheels engaging the chains below the truck and holding them taut with the portions of the chains extending directly from the last-named sprocket wheels to the first-named sprocket wheels, substantially vertical and at the rear sides of said guide bars, and excavating devices carried by and located between said chains and adapted to perform their excavating functions as they travel under said weighted sprockets and upwardly of said gude bars.

4. In an excavating machine, a bed frame provided with supporting wheels and longitudinal parallel tracks, a wheeled truck mounted on the tracks of the bed frame, an engine mounted on the wheeled truck, a driving shaft mounted on the truck and geared to the engine, vertically

adjustable guides carried by the truck, sprocket wheels suitably supported at the upper ends of said guides, sprocket wheels mounted on said driven shaft, parallel sprocket chains engaging the sprocket wheels carried by said guides and the sprocket wheels mounted on said shaft, weighted sprocket wheels engaging the chains below the truck and holding them taut with the portions of the chains extending directly from the last-named sprocket wheels to the first-named sprocket wheels, substantially vertical and at the rear sides of said guide bars, excavating devices carried by and located between said chains and adapted to perform their excavating functions as they travel forwardly under said weighted sprockets, a reel journaled upon the truck, a cable connecting the reel with the lower part of the guide bars, means for operating the reel to raise the guide bars and the parts supported therefrom, and means to prevent back rotation of the reel.

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1,224,324. TELEPHONE-BRACKET. HARRY B. ROBERTS, Highland Park, Ill. Filed May 11, 1916. Serial No. 96,758. (Cl. 248—1.)



1. In a device of the class described, a stationary supporting member, a movable engaging member for engaging an object to be supported, an extensible lazy tongs mechanism connected to said engaging member, and to said stationary supporting member, and a full stroke mechanism governing the movement of said lazy tongs and thereby controlling the position of said movable engaging member with respect to said stationary supporting member.

2. In combination a stationary supporting member, an extensible lazy tongs mechanism having one arm pivoted to said supporting member, means for supporting a telephone or the like on the opposite end of said lazy tongs member and full stroke mechanism connected with said other arm of said lazy tongs member and governing the elevation of said lazy tongs member.

3. In combination a vertical pin, a plate secured to said pin, a lazy tongs member having one arm pivoted to said plate, means on the opposite end of said lazy tongs for supporting a telephone or the like, said plate and said lazy tongs mechanism having coöperating pawl and ratchet mechanism constituting a full stroke mechanism for governing the movement of said lazy tongs mechanism.

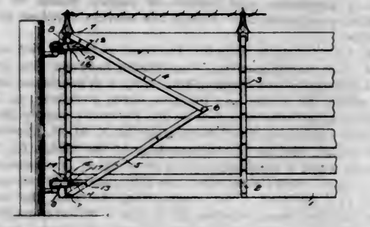
4. In combination a lazy tongs mechanism, a plate, one arm of said lazy tongs being pivoted to said plate, another arm of said lazy tongs mechanism being curved and having a slot in said curved portion, a pin secured to said plate and passing through said slot, said pin having means for holding said curved arm in a predetermined position.

5. In combination a bearing pin having a plurality of grooves cut in the surface of the same, a plate bent about the upper end of said pin and forming a support for a telephone bracket, said plate being secured to said pin, a second plate bent about the lower end of said bearing pin and forming a bearing for said pin and connected parts, and a set screw secured or fastened to said second plate, said set screw being adapted to engage in the grooves in said pin to hold the pin in different elevated positions with respect to said second plate.

[Claims 6 to 13 not printed in the Gazette.]

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1,224,325. GATE. ALVIN V. ROWE, Galesburg, Ill. Filed Aug. 15, 1912. Serial No. 715,292. (Cl. 39—87.)



1. In combination with a gate including longitudinal members and cross pieces or members connecting said longitudinal members in spaced relation, an end cross piece or member formed of angle iron and having its outstanding flange cut away to provide recesses, hinge members secured to said longitudinal members and to said end cross piece and resting in said recesses.

2. In combination in a gate including longitudinal members and cross pieces or members, one of said cross pieces or members being adjacent the hinge end of the gate, a brace or truss for said gate including diagonally extending members secured together to one of said longitudinal members and having their ends secured to the end portions of said cross piece or member, hinge members for said gate having portions extending under and secured to said diagonal brace or truss members, said hinge members also being secured over said end cross piece or member, whereby a major triangular truss is formed and also a plurality of minor triangular trusses.

3. In combination in a gate including longitudinal members and cross pieces or members, one of said cross pieces or members being of angle iron and located adjacent the hinge end of the gate, and having its outstanding flange cut out to provide recesses with abrupt shoulders, a brace or truss for said gate including diagonally extending members secured together to one of said longitudinal members and having their ends secured to the flat side of the end portions of said angle iron cross piece or member, separate hinge members for said gate having portions extending under and secured to said diagonal brace or truss members, said hinge members also being secured over said end cross piece or member and passing through said recesses, whereby a major triangular truss is formed and also a plurality of minor triangular trusses.

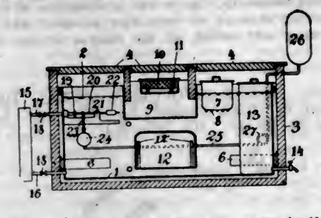
4. A gate including in combination, longitudinal members in spaced relation, cross pieces or members extending transversely to said longitudinal members and one being positioned at the hinge end of the gate, brace members secured to the ends of said end cross piece or member and extending diagonally to an intermediate longitudinal member, being secured together, hinge members having extensions secured to said end cross piece or member and also secured to said diagonal brace members, whereby minor triangular trusses are formed within the angles of the major triangular truss formed by said diagonal brace members and said end cross piece or member, said hinge extensions being positioned on top of said cross piece or member and extending under said diagonal brace members.

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1,224,326. APPARATUS FOR HOUSEHOLD COOKING. ANDREAS SAXEGAARD, Stavanger, Norway. Filed May 7, 1914. Serial No. 837,050. (Cl. 219—35.)

A domestic cooker comprising an insulated main tank forming a water reservoir, means for electrically heating the water therein, an auxiliary water receptacle mounted in the reservoir adapted to be heated by the water in the latter, means for drawing the water from the receptacle,

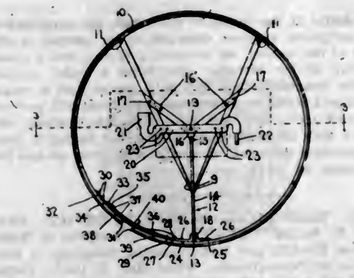




an oven surrounded and heated by the water in the reservoir, and electrical means for independently heating the oven above the temperature of the water, and operating as an auxiliary means for heating the latter.

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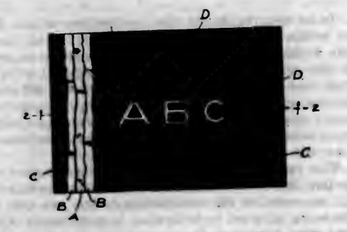
1,224,327. TIRE-CARRIER. JOHN A. SCHMITZ, Merricourt, N. D. Filed Mar. 7, 1916. Serial No. 82,534. (Cl. 224—29.)



A tire carrier comprising a tire securing band split laterally, a main bracket having its outer terminals secured at remote points on the inner periphery of said tire securing band, a supplemental bracket contacting with said tire securing band, a yoke rigidly securing the intermediate portion of said supplemental bracket to said tire securing band, a lamp bracket centrally secured to said supplemental bracket and terminating in oppositely disposed lamp engaging members, and means rigidly binding the terminals of said supplemental bracket to said main bracket.

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1,224,328. MECHANICALLY-PRODUCED NEGATIVE AND METHOD OF MAKING SAME. GEORGE W. SCRITSMIER, Chicago, Ill. Filed Aug. 16, 1912. Serial No. 715,360. (Cl. 41—46.)




1. A translucent backing provided with a waxy opaque coating, said coating having mechanically formed light passages impressed therethrough.

2. An article of the class described consisting of a translucent backing provided with a plastic coating, said coating having an opaque coating, said two coatings having characters impressed therethrough to the translucent backing to provide light passages.

3. An article of the class described comprising a flexible sheet of celluloid-like material provided with an adherent waxy coating, and an opaque coating overlying said waxy coating, said coatings having typewritten characters impressed therein and extending therethrough to the backing to provide light passages, substantially as and for the purpose described.

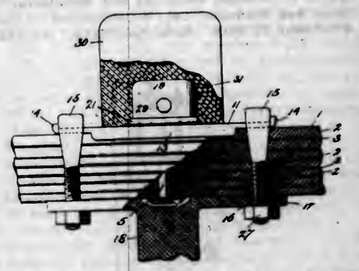
4. A prepared sheet for the production of negatives of the character described, consisting of a flexible translucent backing having a plastic coating which in turn has an opaque coating thereover and partially amalgamated therewith, said coatings adapted to have light passages impressed therethrough to said backing.

5. A negative of the character described consisting of a flexible translucent backing provided with a plastic coating which is treated with an overlying coating of an opaque material of a composition to enter into and amalgamate with said plastic coating, said coatings having light passages impressed therethrough to said backing.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,329. LUBRICATOR FOR THE SPRINGS OF VEHICLES. WENDELIN P. SENG, Chicago, Ill. Filed July 8, 1916. Serial No. 108,236. (Cl. 267—33.)



1. The combination with the leaves of a vehicle-spring, the same having a transverse lubricating-duct communicating with the rubbing-surfaces between the leaves, a clip-saddle mounted on the spring and provided with an opening, a lubricant-reservoir extending upwardly through the opening and at its lower open end interlocking with the edge thereof, and spring-clips adapted to extend through the usual clip-plates and having nuts at their lower ends.

2. The combination with the leaves of a vehicle-spring, the same having a transverse lubricating-duct communicating with the rubbing-surfaces between the leaves, a clip-saddle mounted on the spring and provided with an opening, a lubricant-reservoir extending upwardly through the opening and at its lower end interlocking with the edge thereof, a packing-washer interposed between the lower end of the lubricant-reservoir and the spring, and spring-clips adapted to extend through the usual clip-plates and having nuts at their lower ends.

3. The combination with the leaves of a vehicle-spring, the same having a transverse lubricating-duct communicating with the rubbing-surfaces between the leaves, a clip-saddle mounted on the spring and provided with an opening having an upwardly disposed surrounding flange, a lubricant-reservoir extending upwardly through the opening and at its lower end having an annular shoulder engaging the flange of the clip-plate, a packing interposed between the bottom of the reservoir and the saddle, and spring-clips adapted to extend through the usual clip-plates and having nuts at their lower ends.

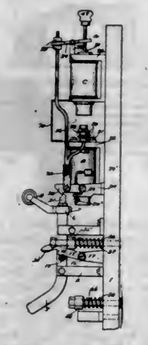
4. The combination with the leaves of a vehicle-spring, the same having a transverse lubricating-duct communicating with the rubbing-surfaces between the leaves, a clip-saddle mounted on the spring and provided with an

opening, a lubricant-reservoir extending upwardly through the opening and provided at its lower end with an annular external shoulder engaging the edge of the same and below the shoulder provided with an inclined face combining with the edge of the opening to form an annular space, a washer located in said space, and spring-clips embracing the saddle and the springs and at their lower ends adapted to extend through the usual clip-plate and provided with nuts.

5. The combination with the leaves of a vehicle-spring, the same having a transverse lubricating-duct communicating with the rubbing-surfaces between the leaves, a clip-saddle provided at its center with an upwardly disposed lubricant-reservoir communicating with said duct and having an opening in its wall, a closure for the opening extending laterally from the reservoir, spring-clips mounted on the saddle and at their lower ends adapted to extend through the usual clip-plates and provided with nuts, and a rubber-bumper having its underside recessed or chambered to fit the lubricant-reservoir and mounted upon the same and provided with a laterally disposed orifice transversely elongated to receive the closure of the reservoir and at its inner end communicating with the recess or chamber.

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1,224,330. SAFETY DEVICE FOR ELECTRICAL SYSTEMS. LESTER SIEBENHAUER, San Francisco, Cal., assignor to Drendell Electrical and Manufacturing Company, San Francisco, Cal., a Corporation of California. Filed Sept. 27, 1915. Serial No. 52,848. (Cl. 172—179.)

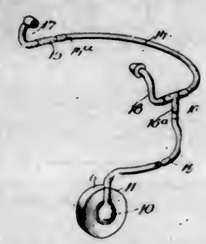


1. A safety device for controlling the distribution of power from a feed wire comprising a controlling means, a circuit from said feed wire through said controlling means to the distributing point, another circuit direct from said feed wire to said distributing point, a knife switch having a plurality of curved blades pivotally supported within their length, one portion of said blades adapted when the switch is in one position to close said last mentioned circuit, the same portion of said blades adapted when the switch is in another position to break said last mentioned circuit and another portion of said blades adapted to close the circuit through said controlling means, means for controlling the cycle of operation of said switch in closing said circuits, means for locking said switch when closing the circuit through said controlling means, means actuated on the interruption of current flowing through said controlling means for releasing said locking means, and means for opening said switch on the release of said locking means.

2. A safety device of the class described, comprising a switch for controlling the distribution of power from a plurality of wires, means for normally locking the switch in closed position, a solenoid in circuit with each feed wire, an armature coöperating with each solenoid and maintained in suspension relative thereto by the current flowing through said solenoid associated therewith, a lever associated with each armature and coöperating with said locking means, said levers adapted to be operated to release said locking means on the movement of the armature associated therewith, due to the interruption of the current flowing through its respective solenoid, and means for opening said switch on the release of said locking means.

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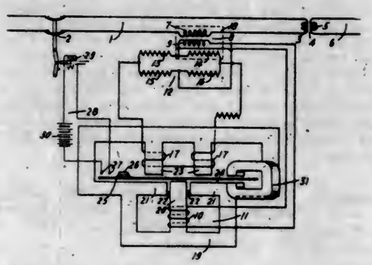
1,224,331. SOUND-CONDUCTING AURAL DEVICE. RUPERT B. SMART, Chicago, Ill. Filed Apr. 7, 1916. Serial No. 89,530. (Cl. 181—.5.)



In a device of the character described, the combination of an audiphone receiver designed to be carried in the clothing of the wearer, ear projecting means, and a sound conducting device therefor comprising a rigid tubular neck-piece communicating with said means, and a single flexible tube adapted to extend upwardly from said receiver to said neck piece, said neck-piece shaped to conform substantially with the neck of the wearer and having a trunnion connection with said means, substantially as and for the purposes set forth.

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1,224,332. ELECTRICAL PROTECTIVE DEVICE. BENJAMIN H. SMITH, Turtle Creek, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 7, 1916. Serial No. 82,641. (Cl. 175—294.)



1. In an electric circuit, the combination with a Wheatstone bridge operatively connected to the circuit, one arm of the bridge being adapted to be heated in accordance with the current that traverses the circuit, of a relay having two windings thereon of relatively different inductances, one of the said windings being connected across normally equal-potential points on the bridge and the other winding being adapted to be energized in accordance with the current traversing the circuit.

2. The combination with a translating device and a protective device therefor, of a Wheatstone bridge operatively connected to the translating device, one arm of the bridge being adapted to be heated in accordance with the current that traverses the translating device, and a controlling relay for the protective device having one of its windings operatively connected to the bridge and its other winding adapted to be supplied with current in accordance with the current traversing the translating device.



3. The combination with a translating device and a protective device therefor, of a Wheatstone bridge operatively connected to the translating device, one arm of the bridge being adapted to be heated in accordance with the current that traverses the translating device, and a controlling induction relay for the protective device having one of its windings connected across normally equal-potential points of the bridge and its other winding connected to the translating device.

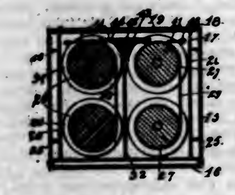
4. The combination with a translating device, of a normally balanced Wheatstone bridge operatively connected thereto, one arm of the bridge being adapted to be heated in accordance with the current traversing the translating device, and a relay having one of its windings responsive to the current traversing the translating device and its other winding responsive to the unbalancing of the bridge.

5. The combination with a translating device, of a relay having two windings of different inductances, one of said windings being supplied with current proportional to the current traversing the translating device and the other winding being supplied with current in accordance with the temperature of the translating device.

[Claims 6 to 14 not printed in the Gazette.]

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1,224,333. CALCULATING-MACHINE. CHESTER J. SMITH, Jamestown, N. Y. Filed Nov. 12, 1915. Serial No. 61,143. (Cl. 235—86.)



1. In a calculating machine, a casing, a roller journaled therein, a calculating sheet wound on the roller, a rate strip arranged in the casing adjacent the roller and adapted for movement as the diameter of the roller is varied by the rolling and unrolling of the sheet thereon, a laterally movable pointer extending over the strip and carried by the latter to move therewith, and means mounting the pointer whereby the indicating end of the latter is engageable with the strip.

2. In a calculating machine, a support, a roller journaled thereon, a character bearing sheet wound on the roller, and a spring rate strip mounted on the support and having a resilient edge in constant contacting relation with the sheet on the roller to yield as the diameter of the latter increases on the winding of the sheet thereon.

3. In a calculating machine, a casing with a transparent top to show the parts, a frame in said casing having revoluble rollers in spaced relation therein and calculating indicia on said rollers, pointer operating means revolubly mounted in said frame between said spaced rollers, a balanced pointer supported on said means to be moved in either direction by the turning of said means, rate strips one each side of said means adjustable to said rollers and to said balanced pointer and support to support the latter.

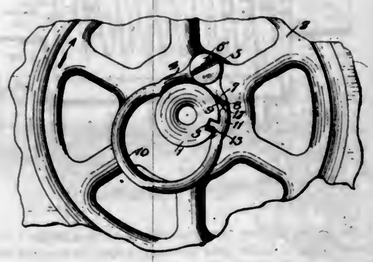
4. In a calculating machine, spaced rollers, a sheet on each windable thereon, spaced spring strips interposed between the rollers in contacting relation with the respective sheets thereon, said strips yielding as the diameters of the rollers are increased by the winding of the sheets thereon, and a pointer operable between and guided by the spaced strips, said pointer moving to permit of proper yielding of the strips.

5. In a calculating machine, a frame, a roller revolubly mounted in said frame, a sheet wound around said roller, and a spring rate strip supported at each end in suitable openings in said frame which permit a limited rotative movement automatically as the diameter of the top roller increases and decreases as the sheet is wound thereon.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,334. AUTOMATIC KEY FOR FEED-SHAFTS. IRA L. SMITH, Pine Bluff, Ark. Filed June 29, 1916. Serial No. 106,614. (Cl. 74—8.)



1. In the combination with a wheel, a shaft, said shaft being provided with a key way, a key member including a spring body portion, said key member being rigidly mounted on the wheel, the free end of the key element having means for engagement with the said key way, said key having means formed integrally therewith for engagement with the said free end for automatically disengaging the key from the key-way upon relative movement of the shaft and wheel.

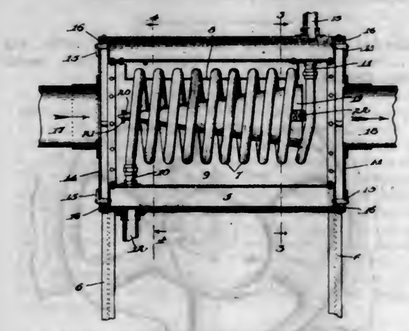
2. The combination with a shaft having a key-way, and a driving element mounted on said shaft, of an automatic key including a curved body portion, said key having an apertured enlargement engaged rigidly with the driving element, said body being also formed with a bow spring portion, the free end of the bow spring portion having a lug for engagement with the key-way and a lip, the body member having a tongue extending therefrom for engagement with said lip to disengage said lug from said key-way.

3. The combination with a shaft, and a driving element mounted thereon, said shaft having a key-way, of an automatic key formed of spring metal, one end of said key being rigidly anchored to the driving element, the free end of the key having a lug for engagement in said key-way, and the anchored end of said key having means for engagement with the free end thereof.

4. The combination with a shaft and a driving element mounted thereon, of an automatic key formed of spring metal, one end of said key being anchored to said driving element, said shaft having a key-way, the free end of said key-way being formed with a lug for engagement in the key-way, the key having a tongue formed adjacent the anchored end thereof for engagement with the free end of said key to raise said lug out of said key-way upon relative movement of the shaft and driving element.

5. The combination with a shaft, and a driving element mounted thereon, said shaft having a key-way therein, of an automatic key including a curved body portion, said body portion being provided with an apertured enlargement, said enlargement being rigidly anchored to the driving element, the anchored end of said body portion having a tongue formed thereon, the said body member having a spring portion formed in continuation thereof, the free end of said spring element being offset to form a lip provided with a beveled face, the lip having a lug formed thereon for engagement in said key-way, and said lip being engageable, at times, with said tongue upon the stoppage of the shaft and the continued rotation of the driving element.

1,224,335. WATER-HEATER. IRVIN G. SMITH, Elgin, Ill., assignor of one-fourth to Russell A. Wheelock, Elgin, Ill. Filed Mar. 25, 1916. Serial No. 86,749. (Cl. 257—235.)



1. A water heater comprising an annular boiler; a coil inclosed by said boiler and having its ends connected therewith; means for introducing and withdrawing water to and from said boiler; removable end plates for said boiler having central openings; and pipes connected with said end plates to conduct smoke through said boiler, substantially as described.

2. A water heater comprising an annular boiler; a coil inclosed by said boiler and having its ends connected therewith; means for introducing and withdrawing water to and from said boiler; removable end plates for said boiler having central openings; and pipes connected with said end plates to conduct smoke through said boiler, substantially as described.

3. A water heater comprising an annular boiler; a coil inclosed by said boiler and having its ends connected therewith, said coil being smaller than the space inclosed by said boiler and located in the upper portion of said space; means for introducing and withdrawing water to and from said boiler; and means for passing smoke from a heating plant through said boiler; substantially as described.

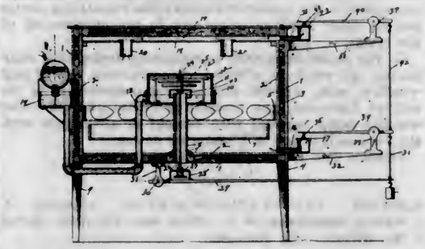
4. A water heater comprising an annular boiler; a coil inclosed by said boiler and having its ends connected therewith, said coil being smaller than the space inclosed by said boiler and located in the upper portion of said space; means for introducing and withdrawing water to and from said boiler; removable end plates for said boiler having central opening; and pipes connected with said end plates to conduct smoke through said boiler, substantially as described.

5. A water heater comprising an annular boiler; a water supply pipe leading into the lower portion of said boiler adjacent one end thereof; a water withdrawing pipe leading from the upper portion of said boiler adjacent the other end thereof; a coil inclosed by said boiler and having its ends connected therewith opposite said supply and withdrawing pipes, said coil being smaller than the space inclosed by said boiler and located in the upper portion of said space; removable end plates for said boiler having central openings and peripheral notches; buttons pivotally mounted on the ends of said boiler and adapted to engage through said notches; and pipes connected with said end plates to conduct smoke through said boiler, substantially as described.

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1,224,336. AUTOMATIC MOISTURE AND VENTILATION REGULATOR FOR INCUBATORS. WILLIAM W. SMITH, Hawthorne, Cal. Filed May 1, 1916. Serial No. 94,723. (Cl. 119—35.)

1. In a device of the class described, the combination with an incubator of air inlet and outlet passages, dampers controlling said passages, a cylinder carried by and extending through the bottom of said incubator, a pan carried by the upper end of said cylinder, a pipe connecting said pan with a water supply, a wire frame supported in said pan, a fabric covering for said wire frame, a thermostat supporting frame carried by said pan, a thermostat having one part thereof connected to said supporting frame, the other part of said thermostat being connected to a rod, extending downwardly through said cylinder, a suitably fulcrumed lever, a bracket carried thereby, a screw plug adjustable in said bracket to which the lower end of said rod is connected and connections between said lever and said dampers whereby said dampers are actuated by the movement of said lever.



2. In a device of the class described, the combination of an incubator provided with air inlet and outlet passages, dampers controlling said passages, a cylinder carried by and extending through the bottom of said incubator, a pan carried by the upper end of said cylinder, means for supplying water to said pan, a frame supported in said pan, a fabric covering on said frame, a theremostat having its upper part fixedly supported between the said covering and said pan, a rod extending downwardly through said cylinder and connected at its upper end to the lower part of said thermostat, a suitably fulcrumed lever, a plug carried by said lever and adjustable with reference thereto, the lower end of said rod being connected to said plug, and connections between said lever and said dampers whereby said dampers are actuated by the movement of said lever.

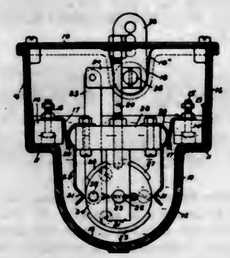
3. In a device of the class described, the combination of an incubator provided with air inlet and outlet passages, dampers controlling said passages, a pan supported within said incubator, means for supplying water to said pan, a frame supported in said pan, a fabric covering for said frame having a portion extending into the water in said pan, a thermostat disposed between said fabric covering and said pan, a rod connected to the movable part of said theremostat, a suitably fulcrumed lever, the lower end of said rod being adjustably connected to said lever, and connections between said lever and said dampers whereby said dampers are actuated by the movement of said lever.

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1,224,337. SWITCH. HALFDAN A. STEEN, Norwood, Ohio, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Mar. 23, 1912. Serial No. 685,716. (Cl. 175—282.)

1. In combination, a receptacle provided with a cover, stationary contacts mounted in said receptacle, switch mechanism removable as a unit from said receptacle, said switch mechanism including a drum having contacts and operating means therefor and intermediate contacts engageable by said drum contacts and said stationary contacts, and means for supporting said drum and said intermediate contacts, said drum operating means being supported independently of said drum supporting means.

2. In combination, a receptacle adapted to contain insulating fluid and provided with a cover, said receptacle having its lower portion of smaller horizontal cross-sectional area than its upper portion, stationary terminal contacts mounted in said receptacle in the portion of greater cross-sectional area, and switch mechanism including fixed contacts, movable contacts engageable with a portion of said fixed contacts, and supporting means for said contacts, a portion of said fixed contacts being engageable with said stationary terminal contacts, and said switch mechanism being suspended from said cover with said movable contacts and the portion of said fixed contacts engageable thereby occupying the portion of said receptacle of reduced cross-sectional area when in operative position therein and being removable as a unit with said cover on removal thereof from said receptacle.



3. In combination, a tank adapted to contain insulating fluid, stationary terminal contacts disposed within said tank, a removable cover for said tank having a depending bearing portion, switch mechanism comprising fixed and movable contacts and a support therefor suspended from said cover and removable from said receptacle with said cover, said fixed contacts being operatively engageable with said terminal contacts and engageable by said movable contacts, and means mounted in and supported by the bearing portion of said cover for actuating the movable element of said switch, said actuating means comprising an operating element extending through a side wall of said receptacle when said switch mechanism is in operative position therein.

4. In a switch, the combination of a tank, stationary contacts therein, a removable cover for said tank, a drum switch, rods suspended from said cover and being provided with loops to form bearings for said drum switch, and contact fingers supported through said rods and being adapted to engage said stationary contacts and drum switch, said cover, rods, drum switch, and contact fingers being removable as a unit from said tank.

5. In a switch, the combination of a tank containing insulating fluid, stationary contacts supported in the sides of said tank, a removable cover for said tank, a switch drum, rods suspended from said removable cover and being provided with loops to form bearings for said switch drum, a contact finger support mounted on said rods, flexible intermediate contacts mounted on said contact finger support, said intermediate contacts being adapted to engage said stationary contacts and said drum switch, and means for actuating said drum switch, said cover, rods, drum switch, intermediate contact fingers, and actuating means being removable as a unit from said tank.

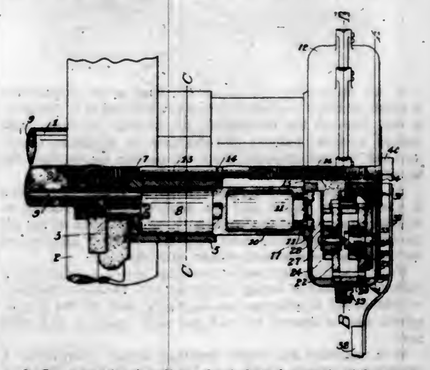
[Claims 6 to 12 not printed in the Gazette.]

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1,224,338. CRANK-PIN OILER. CHARLES A. STICKNEY, Chicago, Ill. Filed Nov. 12, 1915, Serial No. 61,174. Renewed Mar. 14, 1917. Serial No. 154,875. (Cl. 184—37.)

1. In a crank pin oiler adapted to be used with an engine having a crank shaft, a crank pin in said crank shaft and an opening in said crank shaft leading to said crank pin, the combination of an oil cylinder communicating with said opening in said crank shaft and adapted to carry a supply of oil, a piston slidable in said oil cylinder, and means actuated by the rotation of said crank shaft for sliding said piston into said oil cylinder, said means being controlled by an inertia member coacting therewith.

2. In a crank pin oiler adapted to be used with an engine having a crank shaft, a crank pin having a bearing surface in said crank shaft, said crank shaft having an opening leading to the bearing surface of said crank pin, the combination of an oil cylinder communicating with said opening in said crank shaft and adapted to carry a supply of oil, a piston slidable in said oil cylinder, and means actuated by the rotation of said crank shaft for sliding said piston into said oil cylinder, said means being carried by said crank shaft without outside support.



3. In a crank pin oiler adapted to be used with an engine having a crank shaft and a crank pin, the combination of an oil reservoir, and means carried by and supported wholly by said crank shaft for feeding oil to said crank pin, an inertia member associated therewith, said means being controlled by said inertia member.

4. In a crank pin oiler, the combination of an oil cylinder, means whereby oil forced from said cylinder may be led therefrom, a piston slidable in said oil cylinder, a rotatable member adapted to slide said piston into said cylinder when rotated, said rotatable member being supported wholly by the crank, and an inertia member controlling the actuation of said piston by said rotatable member.

5. In a crank pin oiler adapted to be used with an engine having a crank shaft, and a crank pin in said crank shaft, the combination of a cylinder adapted to contain oil, an oil conducting means leading from said cylinder to said crank pin, a piston slidable in said cylinder, rotatable means carried by said crank shaft for sliding said piston into said cylinder when actuated, and frictional means serving as a drag on said rotatable means for actuating said rotatable means.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,339. VAPOR TREATMENT OF METALS. WILLIAM A. DARRAH and SAMUEL TROOD, Wilkinsburg, Pa., assignors to Industrial Development Company, a Corporation of Pennsylvania. Filed Apr. 4, 1914. Serial No. 829,662. (Cl. 91—70.1.)

1. The process of forming a compound in a metal by heating the metal under reduced pressure in the presence of the vapor of the compound forming material.

2. The process of forming an alloy of a metal by heating the metal under reduced pressure in the presence of the vapor of the alloy forming metal.

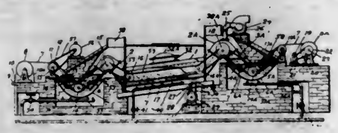
3. The process of forming an iron alloy by heating the iron under reduced pressure in the presence of the vapor of the alloy forming material.

4. The process of condensing a vapor within a metal by surrounding the metal while heated, by the desired vapor at a pressure below atmospheric pressure.

5. The process of forming a coating of zinc upon iron by heating the said iron in the presence of zinc vapor under reduced pressure in a chamber from which other gases and vapors have been substantially exhausted.

[Claims 6 to 8 not printed in the Gazette.]

**1,224,340. MACHINE FOR CONTINUOUS TREATMENT OF METALS.** SAMUEL TROOD, New Castle, Pa., assignor to Industrial Development Company, a Corporation of Pennsylvania. Filed June 16, 1914. Serial No. 845,418. (Cl. 91—12.2.)



1. An apparatus for vapor treating metal comprising a metal treating chamber, means for heating said chamber, a seal member for controlling the passage of gases with regard to said chamber and designed to maintain a substantial vacuum therein, and means for controlling the pressure within said chamber.

2. An apparatus for vapor treating metal comprising a chamber, a liquid seal for said chamber designed to withstand a pressure substantially equal to that of the atmosphere, a source of heat for said chamber and means for varying the pressure within said chamber.

3. A machine for vapor treating metal comprising a chamber, a seal of heavy liquid for said chamber designed to withstand a pressure substantially that of the atmosphere, and a source of heat for said chamber and said seal.

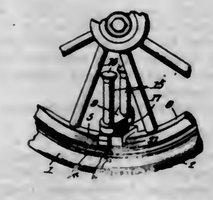
4. A machine for vapor treating metals comprising a chamber, a liquid metal seal for said chamber designed to withstand a pressure approximately that of the atmosphere, and a source of heat for said chamber and said seal.

5. A machine for vapor treating metals comprising a metal treating chamber, a heated liquid bath serving as a seal for said chamber, a trap for preventing a loss of material from said chamber, and means of controlling the pressure within said chamber.

[Claims 6 to 21 not printed in the Gazette.]

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**1,224,341. TIRE-PROTECTOR.** JORGE BORGES VELIS, Habana, Cuba, assignor of one-half to Alejandro Angulo Pinzon, Habana, Cuba. Filed Nov. 24, 1916. Serial No. 133,256. (Cl. 152—33.)



1. A protector for tires, comprising a casing, rods secured at one end to said casing, cushioning means operatively engaging the opposite ends of said rods, a cross piece upon which said cushioning means rest, a spanner member adapted to engage a wheel felly, and means for detachably securing said cross piece to said spanner member.

2. A protector for tires, comprising a casing, rods secured at one end to said casing, cushioning means operatively engaging the opposite ends of said rods, a cross piece upon which said cushioning means rest, a spanner member, and a sliding connection between said spanner member and said cross piece.

3. A protector for tires, comprising a casing, rods secured at one end to said casing, cushioning means operatively engaging the opposite ends of said rods, a cross piece, upon which said cushioning means rest, a U-shaped spanner member, and a dove-tailed joint for detachably securing said cross piece to said spanner member.

4. A device for securing a tire protector in position, comprising a cross piece, cylindrical members thereon, cushioning means within said members, rods connecting the projector to the cushioning means, a spanner member adapted to engage a wheel felly, and means for securing said cross piece to said spanner member.

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**1,224,342. MULTIPLEX TELEGRAPHY.** FREDERICK K. VREELAND, Montclair, N. J., assignor to Vreeland Apparatus Company, Inc., New York, N. Y., a Corporation of New York. Filed May 20, 1909. Serial No. 497,194. (Cl. 178—51.)



1. In a system of multiplex signaling, the combination of means for generating a plurality of alternating currents of different frequencies, means for producing signal impulses by these currents, a plurality of tuned sifting circuits connected in parallel to a common line and having a large unbalanced reactance for small frequency differences relative to the equivalent line impedance, means for impressing the signal impulses upon the line through said sifting circuits, and means for selectively observing at a distance the signal impulses of different frequencies.

2. In a system of multiplex signaling, the combination of a plurality of undamped oscillators, generating alternating currents of pure sine wave form and of different automatically-regulated frequencies, means for producing signal impulses by these currents, a plurality of tuned sifting circuits connected in parallel to a common line and having a large unbalanced reactance for small frequency differences relative to the equivalent line impedance, means for impressing the signal impulses upon the line through said sifting circuits, and means for selectively observing at a distance the signal impulses of different frequencies.

3. In a system of multiplex signaling, the combination with a line of means for impressing thereon alternating current signal impulses of different frequencies, a plurality of tuned sifting circuits connected in parallel to said line and having a large unbalanced reactance for small frequency differences relative to the equivalent line impedance, and selective receivers associated with said sifting circuits.

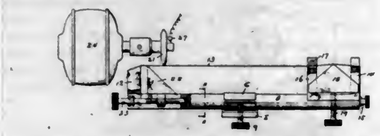
4. In a system of multiplex signaling by alternating currents of different frequencies, the combination with a line, of a plurality of tuned sifting circuits at each end of the line, connected in parallel therewith and having a large unbalanced reactance for small frequency differences relative to the equivalent line impedance, means for impressing on the line at each end alternating current signal impulses of different frequencies, and selective receivers associated with said sifting circuits, whereby interference of strong signal impulses from a near station with feeble signal impulses from a distant station is prevented and simultaneous working in opposite directions is thereby permitted.

5. In a system of multiplex signaling by alternating currents of different frequencies, the combination with a line, of a plurality of tuned sifting circuits at each end of the line, connected in parallel therewith and having a large unbalanced reactance for small frequency differences relative to the equivalent line impedance, a plurality of undamped oscillators, generating alternating currents of pure sine wave form and of different automatically-regulated frequencies, means for impressing on the line at each end signal impulses of different frequencies from such undamped oscillators, and selective receivers associated with said sifting circuits.

[Claims 6 to 11 not printed in the Gazette.]



**1,224,343. WIRELESS TELEGRAPHY.** JAMES O. WATKINS, San Francisco, Cal., assignor to Federal Telegraph Company, San Francisco, Cal., a Corporation of California. Filed July 28, 1915. Serial No. 42,301. (Cl. 175—346.)



1. In an apparatus of the character described, an electric circuit, a stretched wire mounted to vibrate and a smooth edged rotatable disk in contact with said wire said wire and said disk being connected in series in said circuit.

2. In an apparatus of the character described, an electric circuit, a wire mounted to vibrate and a smooth edged rotatable disk in contact with said wire at an antinode said wire and said disk being connected in series in said circuit.

3. In an apparatus of the character described, an electric circuit, a stretched wire mounted to vibrate and a smooth edged rotatable disk in light contact with said wire at an antinode adjacent the end of the wire said wire and said disk being connected in series in said circuit.

4. In an apparatus of the character described, an electric circuit, a stretched wire mounted to vibrate, a smooth edged rotatable disk in contact with said wire and means for varying the tension of said wire said wire and said disk being connected in series in said circuit.

5. In an apparatus of the character described, an electric circuit, a stretched wire mounted to vibrate, a smooth faced rotatable disk in contact with said wire at an antinode and means for varying the tension of said wire said wire and said disk being connected in series in said circuit.

[Claims 6 to 14 not printed in the Gazette.]

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**1,224,344. FREIGHT-CAR END.** WILLIAM E. WINE, Toledo, Ohio. Filed Apr. 3, 1916. Serial No. 88,621. (Cl. 105—192.)



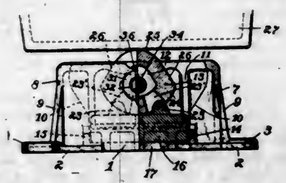
1. In a box car, the ends of which comprise end sills, flanged end posts, transversely extending end members, and vertical sheet metal plates, said transversely extending end members comprising angular metal sections provided with vertical flanges on their inner edges and wood framing members resting thereon and outside of said vertical flanges, said vertical sheet metal plates having their lower edges secured to said end sills, their vertical edges flanged and secured to the webs of said end posts and their upper edges flanged and secured to the webs of said transversely extending end members.

2. In a box car, the ends of which comprise end sills, corner posts, Z bar end posts, and transversely extending Z bar end members and vertical sheet metal plates, said vertical sheet metal plates having their lower edges secured to said end sills, their inner vertical edges flanged and secured to the webs of said Z bar end posts, their outer vertical edges flanged and secured to said corner posts and their upper edges flanged and secured to the webs of said Z bar end members.

3. In a box car, the ends of which comprise end sills, Z bar end posts, corner posts, transversely extending Z bar end members, outside vertical sheet metal plates and central sheet metal plates, said outside vertical sheet metal plates having their inner edges flanged and secured to the webs of said Z bar end posts, their outer edges flanged and secured to said corner posts, their lower edges secured to said end sills and their upper edges flanged and secured to the webs of said Z bar end members, said central sheet metal plates being flanged at their vertical edges and secured to the webs of said Z bar end posts.

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**1,224,345. SIDE BEARING.** WILLIAM E. WINE, Toledo, Ohio. Filed Oct. 27, 1916. Serial No. 128,064. (Cl. 64—65.)



1. A side bearing comprising a base member having side and end walls forming a box like structure, a plate loosely fitting within said box like structure and supported by the bottom wall of said box like structure and capable of rocking along its longitudinal axis, a roller supported by said plate and means independent of the supporting plate for preventing the roller from escaping from the box like structure.

2. A side bearing comprising a box like structure and a plate capable of rocking throughout its longitudinal axis supported wholly by said bottom wall and a self-centering bearing supported wholly by said plate and co-operating means between the said plate and said roller for correctly aligning said roller and means independent of supporting said roller for retaining the roller in its box like structure.

3. A side-bearing for railway cars comprising a base member having side and end walls forming a box-like structure, ribs in said box-like structure parallel with the said end walls, said base member having a fixed depressed central portion extending between said ribs, a bearing plate fitting within said box-like structure and between the said mentioned ribs and having a rounded under portion extending centrally thereof, said bearing plate capable of a rocking movement transverse of said base member, projections on the upper surface of said bearing plate and a roller provided with recesses in its lower surface to coöperate with the teeth on said bearing member and means for retaining the roller in the base member.

4. A side-bearing for railway cars, comprising in part, a base member having four outwardly extending arms, end and side walls forming a box-like structure, ribs extending from said walls to said outwardly extending arms strengthening ribs extending from said end walls inwardly, further ribs parallel with said end walls and a depressed lower bearing surface.

5. A side-bearing for railway cars, comprising in part, a base member formed of a base plate with end and side walls thereon, vertical and horizontally connecting ribs on the upper inner surface of said side walls, inwardly extending ribs from said end walls, other ribs parallel with said end walls and connecting with said last mentioned inwardly extending ribs, the bottom of said base member being depressed between the ribs that are parallel to the end walls and a plurality of pockets formed along the depressed central bottom portion.

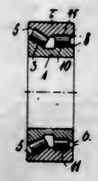
[Claim 6 not printed in the Gazette.]

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**1,224,346. ROLLER-BEARING.** SVEN GUSTAF WINGQUIST, Gottenborg, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden, a Corporation of Sweden. Filed Nov. 18, 1915. Serial No. 62,088. (Cl. 64—39.)

1. A self-contained radial and thrust bearing comprising an integral outer ring having a conical race, an integral

inner ring having a conical race the top angle of which is smaller than that of the outer race, conical rollers placed between the said rings, in contact with the said races, one of said rings having, outside its race, a shoulder formed integral with the ring to keep the rollers in position, said shoulder having a filling opening for the rollers, substantially as described.



2. A self-contained radial and thrust bearing comprising an integral outer ring having a conical race, an integral inner ring having a conical race the apex of which coincides with the apex of the outer race and the top angle of which is smaller than that of the outer race, conical rollers placed between the said rings in contact with the said races, one of said rings having, outside its race, a shoulder formed integral with the ring to keep the rollers in position, said shoulder having a filling opening for the rollers, substantially as described.

3. A self-contained radial and double thrust bearing comprising an integral outer ring having conical races, an integral inner ring having conical races each of which forms together with an outer race a conical passage, the top angle of each of said inner races being smaller than that of the corresponding outer race, conical rollers placed between the said rings in contact with an outer and an inner race, one of said rings having, outside its races, shoulders formed integral with the ring to keep the rollers in position, each shoulder having a filling opening for the rollers, substantially as described.

4. A self-contained radial and double thrust bearing comprising an integral outer ring having conical races, an integral ring having conical races each forming together with an outer race a conical passage, the apex of each of said inner races coinciding with the apex of the corresponding outer race and the top angle of said inner races being smaller than that of the corresponding outer race, conical rollers placed between the said rings in contact with an outer and an inner race, one of said rings having, outside its races, shoulders formed integral with the ring to keep the rollers in position, each shoulder having a filling opening for the rollers, substantially as described.

5. A self-contained radial and thrust bearing comprising an integral outer ring having a conical race, an integral inner ring having a conical race the top angle of which is smaller than that of the outer race, conical rollers placed between the said rings, in contact with the said races, each ring having, outside its race, a shoulder formed integral with the ring to keep the rollers in position, each shoulder having a filling opening for the rollers, substantially as described.

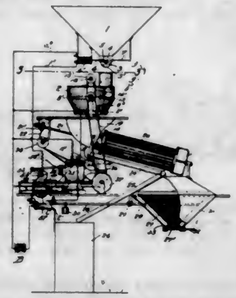
[Claims 6 and 7 not printed in the Gazette.]

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1,224,347. CORN-POPPING MACHINE. IRA T. WOLFE, Seattle, Wash. Filed Dec. 21, 1914. Serial No. 878,273. (Cl. 53—4.)

1. In a machine of the class described, corn-popping devices, an electric circuit controlling said devices, a receptacle for popped corn, and means operatively connected with said receptacle for closing said circuit in response to a decrease below a predetermined amount of the corn in said receptacle and for opening said circuit in response to the increase above a predetermined amount of the corn in said receptacle.

2. In a machine of the class described, normally inoperative corn-popping devices, means for operating said devices, a receptacle for popped corn, and means actuated by a variation in the weight of corn in said receptacle for controlling said operating means.



3. In a machine of the class described, the combination with a vessel in which corn is popped, of a hopper for supplying corn to said vessel, a receptacle for popped corn, an instrument normally inoperative for controlling the discharge of said hopper, a motor, means actuated by a variation in the weight of corn in said receptacle for governing said motor, and means for continuing the operation of said motor for a predetermined period of action after said governing means has been actuated by an overweight of corn in said receptacle to stop said motor.

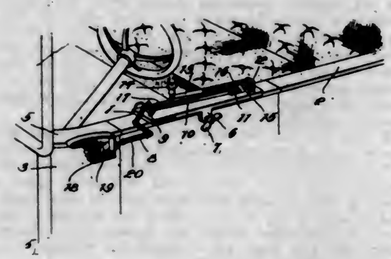
4. In a corn-popping machine, a hopper, a shutter for said hopper, an electric circuit, an electro-magnet included in said circuit, a movable element adapted to be attracted by said magnet and operatively connected with said shutter, means for opening and closing said circuit, and mechanical means for controlling the aforesaid means whereby the hopper-shutter is caused to be successively moved into open position between relatively extended periods of rest.

5. In a machine of the class described, a tiltable vessel, an electric heater therefor, a hopper arranged to discharge into said vessel, means to open and close the discharge opening of the hopper, a circuit for said heater, a switch for the circuit, mechanical means to periodically effect the tilting of said vessel and also influencing the first-named means whereby the same is actuated for the discharge of corn from the hopper only between certain tilting movements of the vessel, and is rendered idle between other like movements thereof.

[Claims 6 to 14 not printed in the Gazette.]

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1,224,348. TURNING-SIGNAL FOR AUTOMOBILES. JESSE M. WYMAN, Canton, Ohio. Filed Mar. 23, 1916. Serial No. 86,188. (Cl. 116—31.)



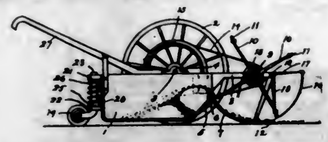
1. A turning signal for automobiles comprising a horizontally swinging arm to be pivotally mounted on the upper edge of one side of an automobile body, said arm being adapted to normally lie longitudinally of the vehicle and being bent between its ends to form an upright crank pin, and an operating link connected to and extending from said pin.

2. A turning signal for automobiles comprising a horizontally swinging arm to be pivotally mounted on the upper edge of one side of an automobile body, said arm being bent to position its front portion substantially parallel with and spaced outwardly from said edge of the vehicle body, said arm being bent between its ends to form an upright crank pin, and an operating link connected to and extending from said pin.



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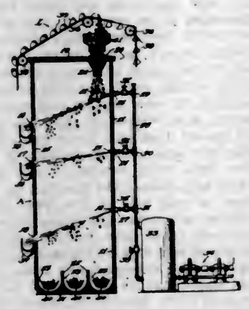
1,224,349. STREET-CLEANING DEVICE. HARMAN YESSNE, Duluth, Minn. Filed Sept. 25, 1916. Serial No. 121,970. (Cl. 37—6.)



In combination, a substantially rectangular shaped receptacle, mounted upon wheels, and having an upwardly and forwardly extending inclined portion in the bottom thereof, terminating in a forwardly extending downwardly curved receiving apron, forwardly projecting extensions of the upper side walls of the receptacle, a revoluble shaft mounted within said extensions, blades carried upon the shaft and designed to engage the apron but not to engage the surface being cleaned, an adjustable curved wind shield extending from a point parallel with the center of the blade carrying shaft to within close proximity of the surface being cleaned, means for maintaining the forward edge of the apron normally in contact with the surface being cleaned, and means for operating the device.

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1,224,350. NON-ATTRITION PROCESS OF AND APPARATUS FOR WASHING AND SORTING COAL. HENRY ADAMS, New London, Conn., assignor to The Adams Mining Machinery Corporation, New London, Conn., a Corporation of New York. Filed May 11, 1916. Serial No. 96,774. (Cl. 83—84.)



1. A process of treating minerals, ores, coal and the like consisting in conveying the same to an apparatus, permitting such elements to be freely gravitationally dropped down through the apparatus; discharging free, individual jets of water under pressure against the falling material during its gravitational passage through the apparatus, so that the elements will be deflected and dropped into different troughs at the bottom of such apparatus according to their weight, permitting the discharge of such jets out of the apparatus at different levels into other troughs spaced from one another, so that the dust and finer elements of the mixture that may be carried with such jets will be deposited in said other troughs according to their weights.

2. An apparatus for treating coal and the like having a frame, there being a plurality of elongated inlet openings spaced from one another at different levels, a plurality of elongated outlet openings also spaced from one another at different levels one for each of said inlet openings, means for discharging jets of water from said inlet openings across the apparatus to said outlet openings and out through the same, a plurality of troughs in the bottom of said apparatus spaced from the inlet openings in a graduated manner, there being a mouth at the top of said apparatus, and means for conveying coal to such mouth to permit the same to drop therefrom, to be actuated upon by the several jets of water so that the elements according to their weight may be permitted to drop in different troughs at the bottom of said apparatus and the lighter elements be carried with the jets of water and out through several outlet openings according to their weight.

3. An apparatus for treating coal and the like having a frame, there being a plurality of elongated inlet openings spaced from one another at different levels, a plurality of elongated outlet openings also spaced from one another at different levels one for each of said inlet openings, means for discharging jets of water from said inlet openings across the apparatus to said outlet openings and out through the same, a plurality of troughs in the bottom of said apparatus spaced from the inlet openings in a graduated manner, there being a mouth at the top of said apparatus, means for conveying coal to such mouth to permit the same to drop therefrom, to be actuated upon by the several jets of water so that the elements according to their weight may be permitted to drop in different troughs at the bottom of said apparatus and the lighter elements be carried with the jets of water and out through several outlet openings according to their weight, and other troughs being secured to said apparatus adjacent to the outlet openings to receive the water discharged therethrough and the finer elements of coal carried therethrough.

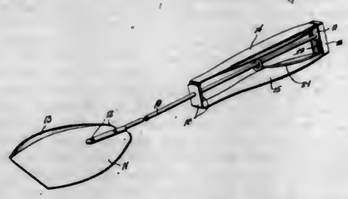
4. An apparatus for treating coal and the like having a frame, there being a plurality of elongated inlet openings spaced from one another at different levels, a plurality of elongated outlet openings also spaced from one another at different levels one for each of said inlet openings, means for discharging jets of water from said inlet openings across the apparatus to said outlet openings and out through the same, a plurality of troughs in the bottom of said apparatus spaced from the inlet openings in a graduated manner, there being a mouth at the top of said apparatus, means for conveying coal to such mouth to permit the same to drop therefrom, to be actuated upon by the several jets of water so that the elements according to their weight may be permitted to drop in different troughs at the bottom of said apparatus and the lighter elements to be carried with the jets of water and out through several outlet openings according to their weight, and other troughs being secured to said apparatus adjacent to the outlet openings to receive the water discharged therethrough and the finer elements of coal carried therethrough, the troughs being inclined to the horizontal to permit the drainage of the water while the finer elements will settle in said troughs.

5. A process of treating minerals, ores, coal and the like consisting in conveying the same to a washing and grading apparatus; permitting such elements to be dropped down into the apparatus; discharging a plurality of superposed jets of water against the stream of such elements during their passage through the apparatus at such pressure that the more valuable commercial elements will be deflected and deposited into different grades at the bottom of such apparatus according to their respective weights and fineness; the discharge of such jets through the apparatus being at different levels spaced from one another, at an angle to the line of passage of the material or elements being washed and graded, so as to deposit the finer less valuable elements into different grades; so that the dust and finer

elements of the mixture that may be carried with such jets will be deposited according to their respective weights and fineness.

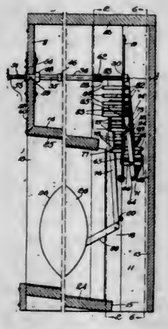
[Claims 6 to 8 not printed in the Gazette.]

1,224,351. CAKE-TURNER. JOSIAH ADDISON, Broughton, Ill. Filed Sept. 7, 1915. Serial No. 49,351. (Cl. 65—3.)



A cake turner including a shaft, a handle loosely mounted upon said shaft and having upper and lower leaves, a housing at the outer end of one leaf having a rear wall, an upper wall and side walls extending beyond and upon opposite sides of the upper wall, a tongue extending from the second leaf between the side walls and in front of the upper wall and provided with an opening through which the shaft extends, a rack in the housing beneath the upper wall and a gear carried by the shaft and engaging said rack.

1,224,352. DISK-RECORD CABINET. NICKLAS A. APOSTOLOPOULOS, Providence, R. I. Filed Feb. 11, 1916. Serial No. 77,586. (Cl. 211—16.)



1. In a disk record cabinet, the combination of receptacles for records, a series of vibratory members for forcibly and positively dislodging the records, a single actuator for said members, and means for selectively directing the actuator to contact with a single member.

2. In a disk record cabinet, the combination of receptacles for records, a series of vibratory members for forcibly and positively dislodging the records, a single actuator for said members, and manually controlled means for adjusting the actuator to contact with a single member.

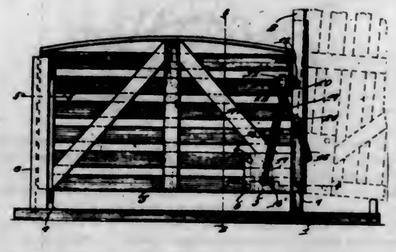
3. In a disk record cabinet, the combination of a plurality of receptacles for records, a plurality of vibratory members for forcibly dislodging the records, a single actuator for all said members, a push rod supporting the actuator, and manually controlled means on the rod engaging the actuator for adjusting the actuator to contact with a single member.

4. In a disk record cabinet, the combination of a plurality of receptacles for records, a plurality of vibratory members for dislodging the records, a push-rod mounted in the cabinet movable toward and away from the members, and an actuator axially movable on the rod adapted to contact with a single member when the rod is moved.

5. In a disk record cabinet, the combination of a plurality of receptacles for records, a plurality of members for dislodging the records, a push rod movable toward and from the members, a single actuator for all of the records comprising a section on the rod, and an arm disposed at an angle to the rod and adapted to contact with a single member when the rod is advanced, and a second section on the rod adapted to interlock with the first section when the rod retreats.

[Claims 6 to 12 not printed in the Gazette.]

1,224,353. FARM-GATE. FREDERICK WILLIAM BACHO, Biloxi, Miss. Filed July 10, 1916. Serial No. 108,394. (Cl. 39—60.)



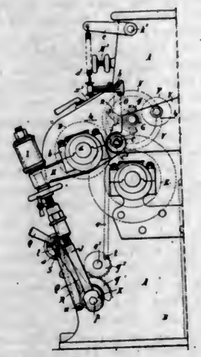
1. In a gate of the class described, the combination of a plurality of spaced standards, a gate pivotally mounted upon said standards and being adapted to be swung in a vertical plane, plates carried by said standards and extending outwardly therefrom, levers pivotally mounted upon said plates, eyes carried by said levers upon each side of the pivot points thereof, one-piece links secured to said eyes, springs secured to said links, said gate being provided with eyes and with a bolt, links connecting said springs to said eyes and said bolt, whereby said levers are swung said gate may be moved to an open or closed position.

2. In a gate of the class described, the combination of a plurality of base standards, said standards having enlarged notches adjacent their lower ends, a gate pivotally mounted upon said standards and being adapted to be swung therebetween, plates carried by said standards and extending outwardly therefrom, levers pivotally mounted upon said plates, an eye carried by each lever adjacent the inner end thereof, each lever also provided with an eye adjacent its central portion, a bolt passing through said gate adjacent its lower portion and spaced from the rear end thereof, eyes carried by said gate adjacent its rear end and spaced from the lower ends thereof, said eyes extending into said notched portions of said standards, one-piece links being secured to said bolt, springs being secured to said links, links securing the upper ends of said springs to said eyes at the inner ends of said levers, whereby as said levers are swung downwardly the gate will be moved to an open position, links being secured to said eyes of said gate within said notches, springs being secured to said last-mentioned links, links being secured to said last-mentioned springs, said last-mentioned links being secured to the eyes of said levers adjacent their central portion, whereby as the upper ends of said levers are swung upwardly said gate will be swung to a closed position.

3. In a device of the class described, the combination of a standard, a gate pivotally mounted upon said standard and being adapted to be swung in a vertical plane, a lever pivotally mounted upon said standard, links carried by said lever upon each side of the pivot thereof, links connected to the rear and lower portions of said gate, springs connecting said first-mentioned links with said last-mentioned links, whereby when said lever is swung said gate will be swung to either an open or closed position.



1,224,354. GRINDING-MILL. LOUIS BOUTARD, La Ferté-sous-Jouarre, France, assignor to Société Générale Meuliere, La Ferté-sous-Jouarre, France, a Corporation of France. Filed Aug. 21, 1913. Serial No. 785,852. (Cl. 83—12.)



1. In a mill having upper and lower cylinders, the lower cylinder turning in fixed bearings and the upper cylinder in movable bearings, springs acting downwardly upon the bearings of the upper cylinder, and means for lifting the upper cylinder comprising an oscillating shaft and rods transmitting motion therefrom to the said movable bearings.

2. In a mill having upper and lower cylinders, the lower cylinder turning in fixed bearings and the upper cylinder in movable bearings, springs acting downwardly upon the bearings of the upper cylinder, and means for lifting the upper cylinder comprising an oscillating shaft having cranks, an operating arm on said shaft, and rods engaging said cranks and communicating movement to the bearings of the upper cylinder.

3. In a mill having upper and lower cylinders, the lower one turning in fixed bearings and the upper one in movable bearings, springs acting downwardly against said movable bearings, and means for separating the cylinders comprising an oscillating shaft, rods operated thereby and communicating with the said movable bearings, an operating handle for turning said shaft, and a counter lever having a slot-and-pin connection with said handle for stopping it in its extreme positions.

4. In a mill having upper and lower cylinders, the lower one turning in fixed bearings and the upper one in movable bearings, springs acting downwardly against said movable bearings, and means for separating the cylinders comprising an oscillating shaft having an operating arm with connections from said shaft to said movable bearings, and means for clamping said arm in position after adjustment.

5. In a mill having cylinders one of which is movable, levers carrying the bearings of said movable cylinder, and adjustable pivots for said levers comprising conical pivot pins, a support having conical sockets therefor, and a screw adjustment for drawing said pins into said sockets.

[Claims 6 and 7 not printed in the Gazette.]

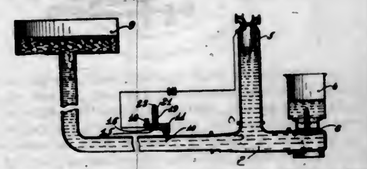
1,224,355. LIQUID MEASURING AND DISPENSING APPARATUS. CHARLES F. BROWN, New York, N. Y., assignor to Universal Liquid Register Company, New York, N. Y., a Corporation of New York. Filed Feb. 19, 1915. Serial No. 9,341. (Cl. 221—102.)

In combination a cylinder, a movable piston therein, heads provided with inlet and outlet passages connected to the ends of said cylinder, a valve for closing each inlet passage, a three-way valve, a pipe connecting the outlet of one head with one port of the three-way valve, a pipe connecting the outlet of the other head with another port of the three-way valve, a double armed lever on the three-way valve stem, operative connections be-



tween one arm of said lever and one of the inlet valves, and operative connections between the other arm of said lever and the other inlet valve, substantially as described.

1,224,356. IGNITION CONTROL. WILLIAM C. BROWN, Syracuse, N. Y., assignor to Humphrey Gas Pump Company, a Corporation of New York. Filed Dec. 21, 1911. Serial No. 667,190. (Cl. 123—143.)



1. The method which consists in reciprocating a column of liquid of sufficient bulk and path of travel to acquire useful momentum, said column adapted to move with varying force, projecting into the path of travel of said liquid column a movable element, subjecting said movable element to the influence of a substantially constant force, so that said constant force will sometime coöperate with the force of the moving column and sometimes oppose it, and the said movable element will be controlled by the stronger of said two opposing forces.

2. Means for effecting the electrical ignition of a combustible charge, comprising an electric circuit, fixed and movable contacts therein, a vane projecting transverse the path of travel of a liquid, and supporting means for the movable contact having operative relation with the vane.

3. Means for effecting the electrical ignition of a combustible charge, comprising an electric circuit, fixed and movable contacts therein, a vane pivotally mounted and projecting transverse the path of travel of the liquid, and supporting means for the movable contact having operative relation with the vane.

4. Means for effecting the electrical ignition of a combustible charge comprising an electric circuit, fixed and movable contacts therein, a vane projecting transverse the path of travel of liquid, and spring controlled supporting means for the movable contact having operative relation with the vane.

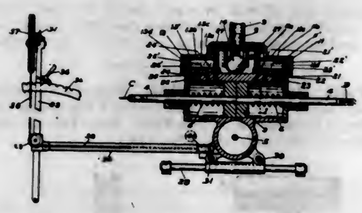
5. Means for effecting the electrical ignition of a combustible charge, comprising an electric circuit, fixed and movable contacts therein, a vane projecting transverse the path of travel of liquid, adjustable spring controlled supporting means for the movable contact having operative relation with the vane.

[Claims 6 to 17 not printed in the Gazette.]

1,224,357. MECHANISM FOR CONTROLLING AEROPLANES. FRANK A. BULLINGTON, Portland, Oreg. Filed May 1, 1912. Serial No. 694,414. (Cl. 244—29.)

1. A controlling mechanism for flying machines comprising a cylinder with piston working therein, a source of operating fluid under pressure with valve-controlled connections to said cylinder, a round weight mounted to roll freely upon a supporting surface, and connecting means having direct connection with said round weight and with said valve, whereby any movement of said weight in either direction simultaneously moves said valve.

2. A controlling mechanism for flying machines comprising in combination therewith, a cylinder, a piston working therein, operating connections from said piston to a movable part of said flying machine, a source of operating fluid under pressure, means providing communicating passageways to said cylinder, valves for gradually opening and closing said passageways to said cylinder, a round weight mounted to roll freely upon a supporting surface and operating connecting members extending from said weight to said valves, whereby to positively move said valves with any movement of said weight.



3. In combination with an aeroplane having movable ailerons, elevating planes, and the like, of one or more cylinders with pistons, operating connections between said pistons and said movable parts, a source of operating fluid under pressure, a receiving chamber with communicating connections to said cylinders, controlling devices for said communicating connections, a ball weight mounted to roll freely upon a plane surface, and having direct positive connection with said controlling devices for automatically actuating the same.

4. A controlling mechanism for aeroplanes, comprising a cylinder and piston movably mounted in said aeroplane, operating connections between said cylinder and piston and a movable part of said aeroplane, a source of operating fluid under pressure with communicating connections to said cylinder, a controlling device for said communicating connections, a gravity-actuated element mounted to move freely for automatically actuating said controlling device, and means for manually moving said cylinder and piston bodily in a straight line at will, for the purpose indicated.

5. In combination with an aeroplane having movable ailerons, elevating planes and the like, of movably mounted operating cylinders with pistons, operating connections between said cylinders and pistons and said movable parts, a source of operating fluid under pressure with communicating connections to said cylinders, controlling devices for said communicating connections, a gravity-actuated element movable freely for automatically actuating said controlling devices, and means for manually moving said cylinders and pistons bodily in a straight line, whereby to manually manipulate the movable parts of said aeroplane at will.

[Claims 6 to 21 not printed in the Gazette.]

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1,224,358. CAN-COVER-SEAMING MACHINE. FRANK W. BURPEE, South Bellingham, Wash. Filed Oct. 11, 1915. Serial No. 55,296. (Cl. 113—14.)



1. In a machine of the class described wherein the seaming of the covers on the cans is performed in two operations under separate seaming heads, the combination with a suitable frame supporting the seaming head spindles, of a first motion shaft through which power is applied to the machine, an intermediate vertical shaft driven from the first motion shaft, means for simultaneously driving the vertical seaming head spindles from the intermediate shaft at a greater speed of rotation than that of the intermediate shaft, a cam shaft parallel and adjacent to each seaming head spindle to coöperate with the same, means for simultaneously driving the two parallel and adjacent cam shafts from the intermediate shaft at a less speed of rotation than that of the intermediate shaft, means for raising and lowering the seaming heads, means for transferring the can bodies from the line of feed to beneath the seaming heads and for restoring them to the same line of feed, and means for lifting the can bodies from the plane of feed to bring their covers to the plane of seaming and for lowering them therefrom.

2. In a machine of the class described wherein the seaming of the covers to the cans is performed in successive operations under separate seaming heads, the combination with a suitable frame for supporting the seaming head spindles and the several mechanisms of the machine, a horizontally disposed first motion shaft through which power is applied to the machine, means for operating the can feed from the first motion shaft, an intermediate shaft driven by said first motion shaft parallel and adjacent the seaming head spindles, means for rotating the seaming head spindles from the intermediate shaft at a higher speed of rotation than that of the intermediate shaft, a cam shaft parallel and adjacent each seaming head spindle, means for driving said cam shafts from the intermediate shaft at a lower speed of rotation than that of the intermediate shaft, means on each cam shaft for raising and lowering its adjacent seaming spindles, means on each cam shaft for lifting a can body up to each seaming head, means on one cam shaft for operating the means for transferring a can body from the line of feed to a position under each seaming head, and for returning the can body after seaming to the original line of feed and means on the other cam shaft for operating the can body spacing mechanism.

3. In a machine of the class described, having a hollow spindle which is rotatably mounted in a suitable frame and susceptible of vertical movement in relation thereto, said spindle carrying a seaming head at its lower end, a central stem secured at the upper end to the frame of the machine and passing axially through the spindle, said stem having a die head secured at its lower end adapted to fit within the cover of the can, seaming rollers rotatably mounted on stems which are slidable in outwardly angled slideways on opposite sides of the seaming head, means for preventing rotational movement of the seaming roller stems, means for raising and lowering the hollow spindle and its seaming head, and means connected to the central stem for preventing rise and fall of the seaming roller stems while permitting their radial movement to and from the axis of rotation of the seaming head spindle.

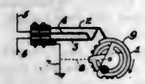
4. In a machine of the class described for seaming covers on cans, the combination with a suitable frame, of a seaming head having a hollow spindle rotatably mounted in the frame and susceptible of vertical movement in relation thereto, a stem passing axially through the spindle and secured against endwise or rotational movement in relation to the frame, stems slidably mounted on opposite sides of the seaming head in slideways which are angled outward and downward from the axis of the spindle, each stem having a seaming roller rotatably mounted at its lower end on a substantially vertical axis, means rotatable with the head and on the central stem for preventing vertical movement of the stems which carry the seaming rollers.

5. In a machine of the class described, the combination with a seaming head the spindle of which is rotatably mounted in a suitable frame, stems mounted in the seaming head in slideways which are angled outward from the axis of the seaming head, each stem having a seaming roller rotatably mounted on its lower end on an axis which is substantially parallel to the axis of the seaming head, means for endwise moving the stems of the seaming rollers in their slideways, and means preventing rotation of the stems in the same.

[Claims 6 to 10 not printed in the Gazette.]



1,224,359. CONTACT ARRANGEMENT FOR CALL-BOXES AND OTHER TRANSMITTERS. ALLISON A. CLOKEY, Jersey City, N. J., assignor to The Western Union Telegraph Company, New York, N. Y., a Corporation of New York. Filed Dec. 6, 1916. Serial No. 135,507. (Cl. 177—378.)



1. A transmitter comprising a toothed grounded break wheel, two contact pens adapted to make and break contact with each other, and adapted for connection to two sides of a main circuit, and a third pen, coacting with and adapted to contact with the teeth and other raised portions of the break wheel, and arranged, when it drops into a notch of the break wheel, to contact with one of the first mentioned contact pens, and to separate the said first mentioned contact pens one from the other.

2. A transmitter comprising a toothed grounded break wheel having an initial raised portion of a height greater than that of its teeth, two contact pens adapted to make and break contact with each other and adapted for connection to two sides of a main circuit, and a third pen coacting with and adapted to contact with the teeth and other raised portions of the break wheel, and arranged, when it drops into a notch of the break wheel, to contact with one of the first mentioned contact pens and in so doing to separate the said first mentioned contact pens one from the other, the height of the teeth of said wheel being such that when such third pen rises and passes over one of said teeth all three pens are in electrical connection, but when the said third pen is in contact with the initial raised portion of the wheel only the two first mentioned contact pens are in electrical connection with one another.

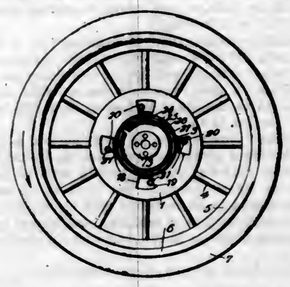
3. A signaling system comprising in combination a line circuit and a transmitter therefor comprising a toothed break wheel, a ground connection for said wheel, two contact pens adapted to make and break contact with each other, and connected respectively to the two sides of the line circuit, and a third pen, coacting with and adapted to contact with the teeth and other raised portions of the break wheel, and arranged, when it drops into a notch of the break wheel, to contact with one of the first mentioned contact pens, and to separate the said first mentioned contact pens one from the other.

4. A signaling system comprising in combination a line circuit and transmitter therefor comprising a toothed break wheel having an initial raised portion of a height greater than that of its teeth, a ground connection for said wheel, two contact pens adapted to make and break contact with each other, and connected respectively to the two sides of the line circuit, and a third pen, coacting with and adapted to contact with the teeth and other raised portions of the break wheel, and arranged, when it drops into a notch of the break wheel to contact with one of the first mentioned contact pens and in so doing to separate the said first mentioned contact pens one from the other, the height of the teeth of said wheel being such that when such third pen rises and passes over one of said teeth all three pens are in electrical connection, but when the said third pen is in contact with the initial raised portion of the wheel only the two first mentioned contact pens are in electrical connection with one another.

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1,224,360. RESILIENT WHEEL. ADOLPH CLOSZ, Webster City, Iowa. Filed June 8, 1916. Serial No. 102,541. (Cl. 152—45.)

1. A hub of the class described, including a main body provided with a centrally located circular opening, a pair of plates arranged on opposite sides of said body and in snug engagement therewith, said plates being provided with interior annular flanges in relative alinement and in alinement with said opening, a circumferentially arranged spring element having the free ends thereof overlapping and peripherally engaging simultaneously said opening and said flanges, and a plurality of circumferentially arranged flat spring elements within first said spring elements, the free ends of second said spring elements being adapted to abut, at times, to limit the distortion of the hub, under shock.



2. In a resilient hub, the combination of a body having a centrally located circular opening, plates on either side of said body provided with annular interior flanges in alinement circumferentially with said opening, a circular spring element arranged within said opening and having the marginal edges thereof in engagement with said flanges, movement limiting members within said spring element, said body being provided with a plurality of apertures the side walls of which are formed on lines radiating from the axis of the plates, and a plurality of members carried by said plates extending through said apertures and adapted, at times, to engage said radial walls.

3. In a resilient hub, the combination of a body to be attached to a wheel rim and spokes, plates carried by an axle and engaged on opposite sides of said body, said plates being snugly engaged with the body and having packing carried thereby, said plates having annular flanges on their inner faces, said body having an opening in alinement with said flanges forming a chamber, to receive a lubricant, circumferential spring elements arranged each within said chamber and engaging simultaneously with the wall of said opening and said flanges, said plates having a plurality of openings therein the side walls of which are formed on lines extending radially from the axle, bolt members extending through said openings to transmit motion from said plates to said body, and a second set of spring elements arranged within first said set and having their free ends in spaced relation adapted to abut upon eccentric movement of the plates relative to the body, whereby to limit such movement.

4. In a shock absorbing hub, the combination of a body having a concentric circular opening, plates arranged on either side of said body and closing said opening, a circular spring element arranged circumferentially within said opening and having the free ends thereof in overlapping relation, and a plurality of flat circular spring elements within first said spring element, second said spring elements having their free ends in spaced relation adapted to abut when the plates and body are relatively moved for limiting such movement.

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1,224,361. EYEGLASS CONSTRUCTION. STEPHEN J. CLULEE, Attleboro, Mass. Filed May 3, 1915. Serial No. 25,479. (Cl. 88—47.)



1. In eyeglass construction, in combination, a lens, a lens clamp formed to present a glazed surface for en-

gagement with said lens, and means cementing said glazed surface to said lens.

2. In eyeglass construction, in combination, a lens clamp having a vitreous material fused against its inner surface in position to engage the lens.

3. In eyeglass construction, in combination, a lens, a lens clamp having a refractory non-metallic material fused against its inner surface, and means cementing said non-metallic surface to said lens.

4. In eyeglass construction, in combination, a lens, a lens clamp having a refractory non-metallic material fused against its inner surface, and means cementing said non-metallic surface to said lens, said non-metallic material being positioned on the inner surface of each side ing and of the strap portion of the clamp.

5. In eyeglass construction, in combination, a lens, a lens clamp having a plurality of recesses in its inner surface, a vitreous material secured within each of said recesses to form inserts therein, the surfaces of said inserts being adapted to fit smoothly and closely the outer surface of an edge portion of said lens, and means cementing said vitreous material to the engaging surfaces of said lens.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,362. ALUMINUM-CALCIUM ALLOY AND PROCESS OF MAKING THE SAME. HUGH S. COOPER, Cleveland, Ohio, assignor to The Cooper Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 29, 1916. Serial No. 122,932. (Cl. 75—1.)

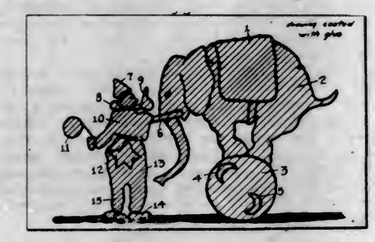
1. A ductile alloy of relatively low specific gravity for casting uses, consisting of a preponderating amount of aluminum and eight per cent. or less of calcium mixed together in their elementary form and uniform in structure and possessed of good machining properties without brittleness.

2. A ductile alloy of light weight for casting uses, consisting of aluminum and calcium mixed in metallic form in the proportion of approximately eight per cent. calcium and a preponderating amount of aluminum.

3. A ductile alloy of lighter weight than aluminum for casting uses, consisting of the metals calcium and aluminum mixed in elemental form in the proportion of substantially eight per cent. calcium and approximately ninety-two per cent. of aluminum.

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1,224,363. TOY OR EDUCATIONAL DEVICE. JAMES IRVING CRUMP, East Orange, N. J. Filed Aug. 2, 1916. Serial No. 112,637. (Cl. 46—37.)



1. A toy or educational device comprising a page or sheet bearing an outline drawing the areas of which are coated with a film of dry glue to be developed by the child by selectively moistening the areas and applying thereto sand of different colors.

2. A toy or educational device comprising a sheet of paper or the like or a collection of sheets bearing pictures coated with a film of dry glue adapted to be colored by moistening and the application of colored sand thereto.

3. In a toy or educational device, the combination of a sheet of paper or the like or a collection of sheets bearing outline drawings divided into areas and coated with a film of dry glue, and supplies of sand of different colors adapted to be selectively strewn over the areas, the latter being moistened in succession.

4. A toy or educational set comprising one or more sheets of paper or the like bearing drawings divided into different areas and adapted to receive adhesive, and a plurality of supplies of differently colored sand, whereby the child is enabled to produce multi-colored sand pictures by selectively rendering the areas sticky and strewing the different colored sands thereover.

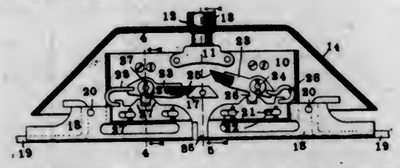
5. A toy or educational set comprising one or more sheets of paper or the like bearing drawings divided into different areas, means for selectively rendering said areas adhesive, and a plurality of supplies of differently colored sand adapted to be strewn over the sticky areas.

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1,224,364. [WITHDRAWN.]

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1,224,365. COMBINED SUPPORT AND CIRCUIT-BREAKER FOR CONDUCTORS. JOSEPH P. DERANEK, East St. Louis, Ill. Filed Sept. 28, 1914. Serial No. 863,840. (Cl. 175—280.)



1. The combination with a member, of a conductor carried by said member and having movement relative thereto, a source of current supply for said conductor, a switch for controlling the flow of current from said source of supply to said conductor, said switch being controlled by the movement of said conductor relative to said member, and means for locking said switch in its open position.

2. The combination with a supporting member, of a conductor carried thereby and having sliding movement relative thereto, a source of current supply for the conductor, a switch controlling the source of supply, said switch being actuated by the movement of said conductor relative to said supporting member, and means for automatically locking said switch in its open position.

3. The combination with a supporting member, of a conductor carried by said member and having sliding movement relative thereto, a source of current supply for said conductor, a member pivoted to said supporting member and controlled by the movement of said conductor, an arm carried by said latter named member and forming a switch for automatically cutting off the supply from said conductor, and means for locking said arm in position to break the current.

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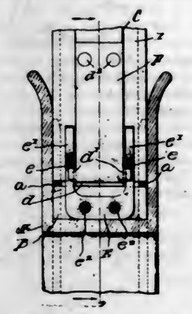
1,224,366. APPARATUS FOR FEEDING CARTRIDGES TO MACHINE-GUNS. LOUIS L. DRIGGS, New York, N. Y. Filed July 15, 1916. Serial No. 109,590. (Cl. 89—34.)

1. A cartridge clip comprising a body portion made of a single strip of sheet metal having an outwardly projecting trough along the central longitudinal axis thereof, the said trough being rectangular in cross section so that its sides may form stiffening ribs for the clip, and its hollow portion may mask the primer of the cartridge, the said body portion being also provided with guide grooves at each side thereof, said guide grooves being also rectangular in cross section whereby additional stiffening ribs are provided for the sides of said clip, and leaf springs secured to the exterior of said rectangular trough, said springs having lips projecting inward in the path of the rims of the cartridge cases, substantially as described.

2. A cartridge clip comprising a body portion made of a single strip of sheet metal having an outwardly projecting trough along the central longitudinal axis thereof,



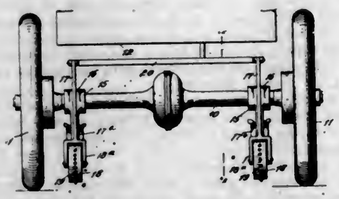
the said trough being rectangular in cross section so that its sides may form stiffening ribs for the clip, and its hollow portion may mask the primer of the cartridge, the said body portion being also provided with guide grooves at each side thereof, said guide grooves being also rectangular in cross section whereby additional stiffening ribs are provided for the sides of said clip, said guide grooves being of sufficient depth to receive the overlapping rims of adjacent cartridge cases held in said clip, and leaf springs secured to the exterior of said rectangular trough, said springs having lips projecting inward in the path of the rims of the cartridge cases, substantially as described.



3. Apparatus for feeding cartridges to guns comprising a hopper provided with guide grooves for the rims of the cartridge cases, a cartridge clip having grooved sides adapted to register with the guide grooves in the hopper, said clip also having a channeled bottom adapted to mask the primers of the cartridge cases, leaf springs secured to the channeled bottom of said clip and having lips projecting in front of said grooves in the clip, said springs being provided with laterally projecting ears, and a U-shaped cam piece mounted in said hopper and having wedged faces adapted to engage the ears of one of said springs and to withdraw said spring, thus opening that end of the clip, substantially as described.

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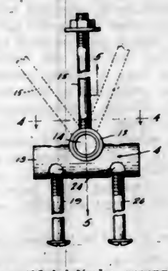
1,224,367. NON-SKID ATTACHMENT. DANIEL P. DUFFIE, West New Brighton, N. Y. Filed Apr. 18, 1915, Serial No. 20,998. Renewed Dec. 21, 1916. Serial No. 138,287. (Cl. 21—90.)



A non-skid attachment for automobiles comprising two gripping wheels adapted to engage the roadway respectively adjacent to the rear wheels of the automobile, levers mounted on the rear axle of the automobile and revolubly carrying the wheels so that by swinging the levers the wheels may be moved in and out of engagement with the roadway, said levers being forked to straddle the gripping wheels and to carry the axle thereof, means for operating said levers to actuate the gripping wheels, and a guiding device for the levers, the same being rigidly attached to the rear axle and having a forked portion movably receiving parts of the levers for the purpose specified.

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1,224,368. ARTIFICIAL LIMB. PETER FELTES, Cleveland, Ohio. Filed Jan. 12, 1917. Serial No. 141,919. (Cl. 3—6.)



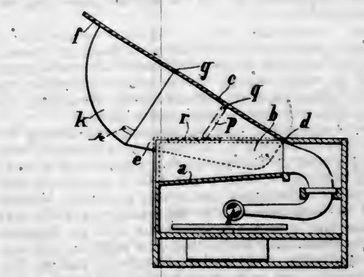
1. A joint for artificial limbs, comprising a casing having two tubular members at an angle to each other, each of said members having a slot on one side thereof and a hole on the opposite side, a block mounted to turn in each member, and a bolt extending through the slot and each block and adapted to be shifted into the hole to lock the block.

2. A joint for artificial limbs or the like, comprising a casing having two tubular parts at an angle to each other, a block mounted to turn in each tubular part, and a connection secured to each block adapted for attachment to a limb member, and means to lock each block to the casing.

3. A joint for artificial limbs, comprising a casing having tubular parts at an angle to each other, a block mounted to turn in one of said parts, and a pair of blocks mounted to turn in opposite ends of the other of said parts, each of said blocks having a projecting device for connection to a member of the limb.

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1,224,369. PORTABLE CABINET-GRAMOPHONE. ALEX FISCHER, Kensington, London, England. Filed July 31, 1914. Serial No. 854,309. (Cl. 274—2.)



1. In a talking machine, an amplifier comprising an outwardly flaring board provided with side walls, and another outwardly flaring board hinged with respect to the first-mentioned board and having side walls which lap the side walls of the board first mentioned and have a sliding relation thereto.

2. In a talking machine, an amplifier comprising an outwardly flaring bottom board provided with upwardly extending side walls and another outwardly flaring board arranged above the bottom board and hinged with respect thereto, said upper board being provided with side walls which lap the side walls of the bottom board and have a sliding relation thereto.

3. In a talking machine, an amplifier comprising an outwardly flaring board provided with side walls, another outwardly flaring board hinged with respect to the first-mentioned board and having side walls which lap the side walls of the board first mentioned and have a sliding

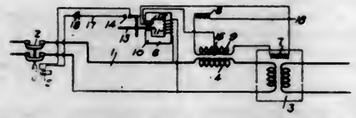
relation thereto, and a flap hinged to the outer end of said hinged board.

4. In a talking machine, an amplifier comprising an outwardly flaring bottom board provided with upwardly extending side walls, another outwardly flaring board above said bottom board hinged with respect thereto and having side walls which lap the side walls of the board first mentioned and have a sliding relation thereto and a flap hinged to the outer end of said hinged board and provided with flaps having a parallel relation with the walls of said hinged board.

5. In a talking machine, a cabinet having vertically arranged slots and an amplifier comprising an outwardly flaring board provided with side walls and another outwardly flaring board hinged with respect to the first-mentioned board and having side walls which enter the slots in the cabinet.

[Claims 6 to 8 not printed in the Gazette.]

1,224,370. ELECTRICAL PROTECTIVE DEVICE. CHARLES LE G. FORTESCUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 3, 1916. Serial No. 95,075. (Cl. 175—294.)



1. The combination with an electrical translating device, of a relay having a potential winding operatively connected across the terminals of the translating device and a current winding adapted to receive energy only when the temperature and the current traversing the translating device reach predetermined values.

2. The combination with an electrical translating device, of a relay having a potential winding operatively connected across the terminals of the translating device and a current winding adapted to receive energy in accordance with the temperature of, and the current traversing, the translating device.

3. The combination with an electric circuit and a translating device, of a relay having a potential winding operatively connected to the circuit and a current winding adapted to receive energy in the proper direction only when the temperature of, and the current traversing, the translating device reach predetermined values.

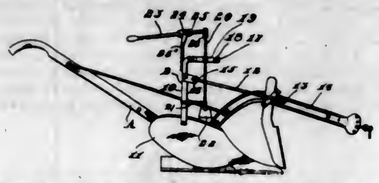
4. The combination with an electrical translating device, of means adapted to be heated in accordance with the temperature of the translating device, and a relay having a potential winding adapted to be operatively connected to the translating device and a current winding adapted to be so connected to the translating device and the means that is heated in accordance with the temperature of the translating device that it is supplied with current in accordance with the temperature of, and the current traversing, the translatnig device.

5. The combination with an electrical translating device, of an exploring resistor adapted to be heated in accordance with the temperature of the translating device, and a relay having a potential winding adapted to be connected to the terminals of the translating device and a current winding adapted to be so connected to the exploring resistor and the translating device that it is supplied with current in accordance with the temperature of, and the current traversing, the translating device.

[Claims 6 to 11 not printed in the Gazette.]

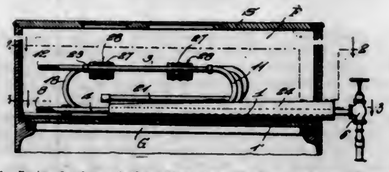
1,224,371. PLOW. AMBROISE GARDON, Meacham, Saskatchewan, Canada. Filed Nov. 27, 1916. Serial No. 133,775. (Cl. 97—3.

1. The combination with a plow and with the moldboard thereof, of a standard of substantially angle shape provided with a slot in the horizontal arm thereof having recesses at the ends and intermediate of the length, a link slidably mounted in one of the said orifices, a cleaning knife rigidly mounted in the lower end of the link, and a lever operatively supported from the standard and connected to the upper ends of the link.



2. The combination with a plow and with the moldboard thereof, of a standard operatively secured to the moldboard, a bracket mounted on the standard and provided with an upper bifurcated end, a lever pivotally mounted in the bifurcated end of the bracket, a link pivotally mounted at its upper end to the lever, a cleaning knife rigidly mounted in the lower end of the link, and an adjustable brace operatively connecting the standard to the beam of the plow.

1,224,372. FUEL-OIL BURNER. JAMES S. GIPSON, Fort Stockton, Tex. Filed Aug. 14, 1916. Serial No. 114,884. (Cl. 158—63.)



1. In a device of the class described, a heater adapted to be disposed in the fire box of a stove, comprising a burner section and a vaporizing section, the first section having a plurality of sets of burner openings, a plurality of sliding deflectors movable on the vaporizing section and adapted to be disposed over said openings, each of said deflectors consisting of a heat resisting sleeve surrounding said vaporizing section, and metallic bands surrounding said sleeves.

2. The combination with the fire-box of a stove, of a two-part heater therein, each part of said heater having burner openings, a supply pipe for each of said parts, tapered cylindrical air inlet pipes extending through one wall of said fire-box, one of said pipes surrounding each of said supply pipes, and fingers projecting inwardly from said inlet pipes into engagement with said supply pipes to space the former therefrom.

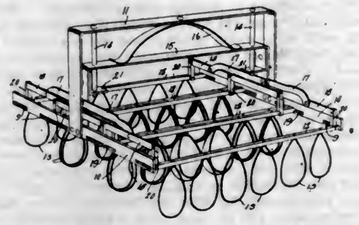
3. A device of the class described comprising a burner formed from a single piece of tubing, one end being connected to the source of supply, the opposite end portion being bent upon itself to form a loop, the arms thereof being substantially parallel and in the same horizontal plane, the free end portion being bent upwardly, then continued laterally in a plane parallel to the first mentioned plane and bent upon itself to provide an additional loop, the free end thereof being bent downwardly and laterally and disposed between the arms of the first mentioned loop, said last mentioned end having burner openings, and an air inlet pipe for supplying air to said burner openings.

4. A device of the class described comprising a burner formed from a single piece of tubing, one end being connected to the source of supply, the opposite end portion being bent upon itself to form a loop, the arms thereof being substantially parallel and in the same horizontal plane, the free end portion being bent upwardly, then continued laterally in a plane parallel to the first mentioned plane and bent upon itself to provide an additional loop, the free end thereof being bent downwardly and laterally and disposed between the arms of the first mentioned loop, said last mentioned end having burner openings, and an air inlet pipe, a second burner formed from a single tube having one end connected to a source of supply, the other end portion being disposed between the last mentioned loop and over said burner openings, and deflectors on the last named portion of the second burner.

5. A device of the class described comprising a two-part burner, one part being formed from a single piece of tubing, one end being connected to the source of supply, the opposite end portion being bent upon itself to form a loop, the arms thereof being substantially parallel and in the same horizontal plane, the free end portion being bent upwardly, then continued laterally in a plane parallel to the first mentioned plane and bent upon itself to provide an additional loop, the free end thereof being bent downwardly and laterally and disposed between the arms of the first mentioned loop, said last mentioned end having burner openings, and a second part formed from a single piece of tubing having one end connected to the source of supply, the opposite end portion being bent into the form of a loop, one arm thereof being adjacent one arm of the first mentioned loop of the other part, the other arm being disposed between the arms of the other loop of the first mentioned part, the free end of said loop being then bent between the arms thereof and having burner openings therein.



1,224,373. EGG-CARRIER. MASON O. GOBLE, Beatrice, Nebr. Filed June 3, 1916. Serial No. 101,539. (Cl. 99—6.)

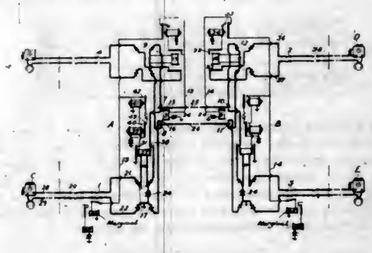


1. An egg candling carrier having a main frame, jaw carrying frames movably mounted upon said main frame, and means for moving said jaw carrying frames from and toward each other in pairs, the jaws consisting of yielding pear-shaped loops disposed with their reduced extremities adjacent to the carrying frames.

2. An egg candling carrier having a main frame embodying parallel side bars and a connecting bail or handle provided with a transverse grip portion, jaw carrying frames slidably mounted upon the main frame for simultaneous movement in opposite directions in pairs, the complementary elements of said frames being provided with complementary egg engaging jaws, connections between the corresponding jaw carrying frames, an operating bar slidably mounted upon the main frame for movement toward and from the grip portion of said bail or handle, links connecting the operating bar with said jaw carrying frames and an actuating spring inclosed between said operating bar and the grip portion of the bail or handle.

3. An egg candling carrier having a main frame embodying parallel side bars, and a connecting bail or handle, jaw carrying frames having bars terminally mounted in slots in the said bars of the main frame and carrying depending jaws, said jaw carrying frames also having uprights and connecting bars, guide rods depending within the handle, an operating bar terminally mounted to slide upon said guide rods, a spring interposed between said operating bar and the grip portion of the handle, and links connecting the terminals of said operating bar with said jaw carrying frames.

1,224,374. TWO-WAY, TWO-WIRE TRUNK FOR MULTI-OFFICE AUTOMATIC EXCHANGE SYSTEMS. CHARLES L. GOODRUM, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Dec. 5, 1914, Serial No. 875,579. Renewed Mar. 3, 1917. Serial No. 152,434. (Cl. 179—18.)



1. In an automatic telephone exchange system, a two-wire trunk extending between two central offices, an outgoing and an incoming selector for said trunk at each of said offices, and automatically operated means for completing in either direction a battery connection to said trunk at one office and a connection free of battery to the incoming selector at the other office.

2. In an automatic telephone exchange system, a trunk extending between two central offices, selecting apparatus and a battery for said trunk at each of said offices, and means operating automatically in setting up a connection through said trunk in either direction for closing the trunk to battery at one end, and for maintaining it as a closed loop free from external connections with battery at the other end.

3. In an automatic telephone exchange system, a trunk extending between two central offices, selecting apparatus and a battery for said trunk at each of said offices, and means operating automatically in setting up a connection in either direction through said trunk for closing it to battery at the outgoing end, and for maintaining it as a closed loop free from external connections with battery at the incoming end.

4. In an automatic telephone exchange system, a repeating trunk extending between two central offices, selecting apparatus and a battery for said trunk at each of said offices, said trunk being normally maintained at each end as a closed loop free from connections with battery, means operating automatically in setting up a connection to said trunk at either office for closing the trunk to battery at one end and for maintaining the normal condition thereof at the other end, and means for interrupting the trunk at the outgoing end to repeat calling impulses to control the selecting apparatus at the incoming end of the trunk.

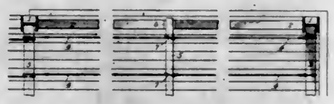
5. In an automatic telephone exchange system, a two-wire trunk between two central offices, an outgoing and an incoming selector for said trunk at each of said offices, a local circuit at each office including multiple bank contacts of an outgoing selector and battery, a second local circuit at each office including brushes of an incoming selector, two connecting circuits at each office inductively connected, respectively, to said local circuits, and automatically operated means at each office for controlling the connection of the trunk line to one or the other of said connecting circuits at the respective offices.

[Claim 6 not printed in the Gazette.]

1,224,375. FORMING REINFORCED-CONCRETE FLOORS. GEORGE M. GRAHAM, Jr., Fargo, N. D. Filed Mar. 4, 1914. Serial No. 822,255. (Cl. 72—71.)

In means for forming reinforced concrete floors, the combination with the longitudinal and transverse beams of the building structure and the series of longitudinal

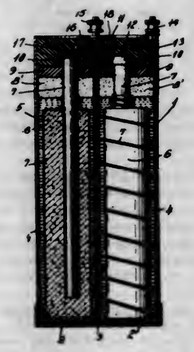
reinforcing anchor bars or rods carried by the same, of an elevated supporting bar disposed intermediate of two of the adjacent transverse beams aforesaid and supported at its ends upon the longitudinal beams aforesaid in a plane above said beams by end blocks, the said elevated supporting bar being arranged in transverse relation to the reinforcing bars aforesaid, and a series of suspension



ties disposed intermediate the length of and connecting said bar with the series of anchor bars or rods, the said elevated supporting bar being removable and disposed in a plain sufficiently elevated to permit of the free handling of the concrete mass as the same is applied to the reinforcing anchor bars and their accessories in the formation of the floor, substantially as set forth.

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1,224,376. BATTERY. CARL HAMBUECHEN, Belleville, Ill., assignor to American Carbon & Battery Company, East St. Louis, Ill., a Corporation of Illinois. Filed Jan. 22, 1917. Serial No. 143,600. (Cl. 204—38.)



1. In a battery, the combination of a cylindrical pasteboard carton, a partition therein somewhat shorter than the carton and dividing it longitudinally into two substantially equal compartments, a dry cell in each of said compartments, said dry cells having zinc containers of substantially semi-cylindrical shape and insulated from one another by said partition, a cross-connecting conductor between the zinc container of one cell and the carbon terminal of its companion cell, sealing means about said carbon terminals and closing the top end of said carton, a metal cap embedded in and supported by said sealing means, and a conductor connecting said cap with a carbon terminal; substantially as described.

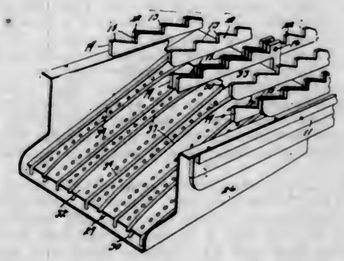
2. In a battery, the combination of a cylindrical pasteboard carton, a partition in said carton dividing it longitudinally into two equal compartments, a dry cell in each of said compartments, said dry cells having zinc containers of semi-cylindrical shape and insulated from one another by said partition, one of said containers having attached thereto a binding post serving as a battery terminal, a carbon terminal for each of said dry cells, sealing material about each carbon terminal and independently sealing the contents of its zinc container, a central binding post positioned substantially axially of said carton to serve as the other battery terminal, a cap on which said binding post is mounted, conductors connecting said cells in series to said binding post, and a wax seal closing the top end of said carton and supporting said central binding post and enveloping said conductors; substantially as described.

3. In a battery, the combination of a cylindrical carton, a partition somewhat shorter than said carton and dividing it longitudinally into two substantially equal compartments, a dry cell in each of said compartments, said dry cells having zinc containers of substantially semi-cylindrical shape and insulated from one another by said partition, one of said containers having a binding post serving as a battery terminal and connected with said container through an upright metal strip located adjacent the wall of said carton, a carbon terminal for each of said dry cells, a pitch seal about each carbon terminal and independently sealing the contents of its zinc container, a central binding post positioned above said partition to serve as the other battery terminal, a metal cap on which said binding post is mounted, a conductor secured to said cap and to the carbon terminal of one of said cells, a cross-connecting conductor secured to the zinc container of said last-named cell and to the carbon electrode of the other cell, said conductors thereby connecting said cells in series to give approximately three volts at said battery terminals, and sealing material closing the top end of said carton and supporting said central terminal cap and enveloping said conductors; substantially as described.

4. In a battery, the combination of a cylindrical pasteboard carton closed at the bottom with a pasteboard cap, a pasteboard partition somewhat shorter than said carton and dividing it longitudinally into two equal compartments, a dry cell in each of said compartments, said dry cells having zinc containers of semi-cylindrical shape and insulated from one another by said partition, one of said containers having a binding post serving as a battery terminal and connected with said container through an upright metal strip which is offset and thereby spaced from the adjacent side of the carton, a carbon terminal for each of said dry cells, a pitch seal about each carbon terminal and independently sealing the contents of its zinc container, a central binding post positioned above said pasteboard partition to serve as the other battery terminal, a perforate metal cap on which said binding post is mounted, a conductor secured to said cap and to the carbon terminal of one of said cells, a cross-connecting conductor secured to the zinc container of said last-named cell and to the carbon electrode of the other cell, said conductors thereby connecting said cells in series to give approximately three volts at said battery terminals, and sealing wax closing the top end of said carton and supporting said central terminal cap and enveloping said conductors and said offset metal strip; substantially as described.

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1,224,377. SEPARATOR OR SCREEN FOR THRESHING-MACHINES. JAMES HILGER, Scottville, Mich. Filed July 3, 1916. Serial No. 107,866. (Cl. 130—25.)



1. In a separator of the character described, a table, provided with longitudinal shaker bars having ratchet teeth, a discharge chute connected with the outlet end of the table, an apertured false bottom arranged within the discharge chute, and a pivoted tail gate disposed above and near the apertured false bottom and comprising spaced rods.

2. In a separator of the character described, a table provided with longitudinal shaker bars having ratchet teeth, a discharge chute connected with the outlet end of the table and having a forwardly inclined grain outlet, an apertured false bottom arranged within the discharge chute, a pivoted tail gate disposed above and near the apertured false bottom and comprising spaced rods, and means to swing the pivoted tail gate upon its pivot.

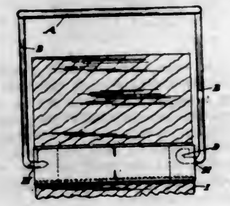
3. In a separator of the character described, a table, longitudinal shaker bars secured to the table and provided with teeth, pivoted shaker bar extensions disposed near the longitudinal shaker bars and provide with teeth, means to angularly adjust the shaker bar extensions, a discharge chute connected with the outlet end of the table, an apertured false bottom arranged within the discharge chute, and a pivoted tail-gate disposed above and near the apertured false bottom and comprising spaced rods.

4. In a separator of the character described, a table, longitudinal shaker bars secured to the table and provided with teeth, shaker bar extensions pivoted to the longitudinal shaker bars and provided with teeth, means to swing the shaker bar extensions upon their pivots, a discharge chute connected with the outlet end of the table and having a forwardly inclined grain outlet, an apertured false bottom arranged within the discharge chute, a pivoted tail-gate disposed above and near the apertured false bottom and comprising spaced rods, and means to swing the pivoted tail-gate upon its pivot.

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1,224,378. PAPER-TOWEL AND TOILET-PAPER FIXTURE. NEWTON S. HILLYARD, St. Joseph, Mo. Filed June 24, 1916. Serial No. 105,674. (Cl. 211—31.)

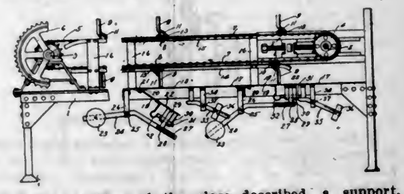


1. In a device of the kind described the combination of a frame consisting of a single strand of spring metal the central part bent vertically upward and horizontally across forming an upright back, duplicate arms projecting horizontally forward and turned inwardly at right angles toward each other, a pointed end on one of said inwardly turned arms and a shoulder spaced outward therefrom, the inwardly-turned end of the opposite arm curled outward, a carrier having four right angle corners and provided with an opening in each end spaced close to one side of the carrier to prevent the same from traveling beyond a fixed position, a spring lock in the end of said carrier, said shoulder and spring lock engaging each other, the curled end of said opposite arm engaging with the opposite end of said carrier through said end opening serving as a retainer for the carrier and as an adjuster to prevent the carrier traveling beyond an abnormal position when a sheet of paper is being detached, and a stop at the stationary end of said carrier to prevent the paper on the carrier traveling beyond its proper position while the paper is being replenished thereon.

2. The combination with a paper towel and toilet paper fixture, a spring metal supporting frame and arms extending horizontally forward therefrom, of a metal carrier having four right angle corners with an opening in each to permit the engagement of said arms, a pointed end on one of said arms turned inwardly, a shoulder on said arm, an opposite arm turned inwardly its extreme end curled outwardly to limit the rotation of the carrier and serving as an adjuster in the detachment of paper, a stop at the stationary end of the carrier to prevent paper passing beyond its proper position when replenishing the carrier and a spring lock to engage a shoulder.

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1,224,379. WEIGHT GRADING-MACHINE. WILLIAM D. HONOHAN, Chicago, Ill. Filed Aug. 13, 1915. Serial No. 45,305. (Cl. 83—92.)



1. In a machine of the class described, a support, means for conveying articles placed on said support along the same, said support being provided with a plurality of openings therein, trap doors pivotally mounted on said support and normally closing said openings, counterweights arranged to urge said trap doors into closed position, trip devices for retaining said trap doors in a closed position, and adjustable means for causing said trip devices to release said trap doors when carrying different desired predetermined weights.

2. In a machine of the class described, a support, means for conveying articles placed on said support along the same, said support being provided with a plurality of openings therein, trap doors pivotally mounted on said support and normally closing said openings, counterweights arranged to urge said trap doors into closed position, trip devices for retaining said trap doors in a closed position, and counterweights adjustably mounted on said trips for causing said trip devices to release said trap doors when carrying different desired predetermined weights.

3. A machine of the class described, comprising a supporting structure having a surface or way for the passage of articles to be graded, an opening in said surface, a trap door normally closing said opening, a latch for retaining said door in closed position, and adjustable means for causing said latch to release the door on the application of a predetermined weight on said door.

4. A machine of the class described, comprising a supporting structure having a surface or way for the passage of articles to be graded, an opening in said surface, a trap door for closing said opening, means normally urging said door to closed position, a latch for retaining said door in closed position, and adjustable means for causing said latch to release the door on the application of a predetermined weight on said door.

5. In a device of the class described, a support, a trap door hinged to said support, means normally urging said door to closed position, and a latch for retaining said door in closed position, said latch being arranged to release the door on the application of a predetermined pressure on said door.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,380. METHOD FOR RAISING OR FORCING LIQUID. HERBERT ALFRED HUMPHREY, London, England, assignor to Humphrey Gas Pump Company, a Corporation of New York. Filed Apr. 10, 1912. Serial No. 689,734. (Cl. 160—1.)

1. The method which consists in reciprocating a liquid, the first movement of reciprocation being due to the expansive force of an ignited compressed combustible charge, the return or instroke being due to the energy stored by the outstroke, utilizing the instroke to store energy in an elastic cushion and also to deliver fluid under pressure.

2. The method which consists in reciprocating a liquid, the first movement of reciprocation being due to the ex-

pansive force of an ignited compressed combustible charge, the return or instroke being due to the energy stored by the outstroke, utilizing the instroke to store energy in an elastic cushion and also to deliver liquid, utilizing the movement of the outstroke to compress a second combustible charge, expanding this charge to cause an instroke and utilizing the movement of the instroke to compress an elastic cushion and to deliver fluid.



3. The method which consists in reciprocating a liquid, the first movement of reciprocation being due to the expansive force of an ignited compressed combustible charge, the return or instroke being due to the energy stored by the outstroke, utilizing the instroke to store energy in an elastic cushion and also to deliver liquid, utilizing the movement of the outstroke to compress a second combustible charge, expanding this charge to cause an instroke and utilizing the movement of the instroke to compress an elastic cushion and to deliver fluid under pressure.

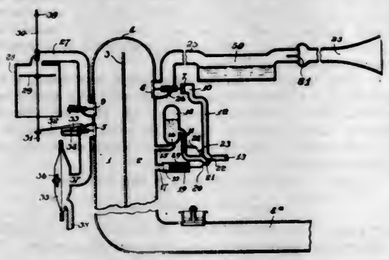
4. The method which consists in reciprocating a liquid, the first movement of reciprocation being due to the expansive force of an ignited compressed combustible charge, the return or instroke being due to the energy stored by the outstroke, utilizing the instroke to store energy in an elastic cushion and also to deliver liquid, and utilizing the movement of the outstroke to compress a fresh combustible charge and to deliver liquid.

5. The method which consists in reciprocating a liquid, the first movement of reciprocation being due to the expansive force of an ignited compressed combustible charge, the return or instroke being due to the energy stored by the outstroke, utilizing the instroke to store energy in an elastic cushion and also to deliver liquid, and guiding the elastic fluids so as to obtain stratification of the fluids and to hinder intermixing.

[Claims 6 to 13 not printed in the Gazette.]

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1,224,381. PUMP AND COMPRESSOR. HERBERT ALFRED HUMPHREY, London, and WILLIAM JOSEPH RUSDELL, Dudley, Worcester, England, assignors to Humphrey Gas Pump Company, a Corporation of New York. Filed Oct. 16, 1912. Serial No. 725,990. (Cl. 160—1.)



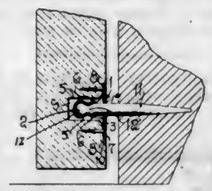
1. In combination with a play pipe for the reciprocation of a liquid column, an expansion chamber for a primary medium, having an intake valve and an exhaust valve suitably positioned, a suitably proportioned exhaust conduit leading from the exhaust valve and means for operating the exhaust valve while the expanding medium is under sufficient pressure to cause the same to escape through said valve and conduit under such conditions of velocity and momentum, whereby fresh elastic fluid is caused to enter the expansion chamber.

2. In combination with a play pipe for the reciprocation of a liquid column, an expansion chamber for a primary medium connected therewith having an intake valve and an exhaust valve suitably positioned with respect to the intake valve, a suitably proportioned conduit leading from the exhaust valve, means for operating the exhaust valve while the expanding charge is under pressure, and means connected with the exhaust conduit for cooling the exhaust gases externally to the expansion chamber to diminish the pressure therein, whereby fresh elastic fluid is caused to enter the expansion chamber.

3. In combination with a play pipe for the reciprocation of a liquid column, an expansion chamber for a primary medium, having an intake valve and an exhaust valve suitably positioned with respect to the intake valve, a suitably proportioned exhaust conduit leading from the exhaust valve and means controlled by the pressure in the expansion chamber for operating the exhaust valve while the expanding medium is under sufficient pressure to cause the same to escape through said valve and conduit under such conditions of velocity and momentum, whereby fresh elastic fluid is caused to enter the expansion chamber.

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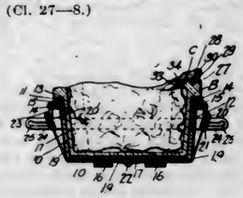
1,224,382. DOOR-CATCH. CARL ISAKSON, Dunseith, N. D. Filed Nov. 13, 1916. Serial No. 131,145. (Cl. 16—78.)



A catch of the character described comprising an integral structure embodying a plate provided with an entrance opening, a socket member in spaced relation relative to the plate, the entrance end of the socket facing the plate and in alinement with the entrance opening of the plate, diametrically opposed webs connecting the plate and the socket member, the marginal portions of the socket between the webs being provided with inwardly bowed lips capable of relative movement.

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1,224,383. COFFIN. MARSHALL N. JONES, Denver, Colo., assignor to National Glass Casket Company, a Corporation of Colorado. Filed Nov. 7, 1916. Serial No. 129,946. (Cl. 27—8.)



1. A coffin comprising a base and a cover, said base being composed of a glass structure having embedded therein a metallic reinforcing structure comprising a horizontally circumferential strap member the outer face of which is exposed, a finishing band secured to said circumferential strap member, a longitudinally extending rod at each side of said base and supported by said finishing band, and a plurality of supporting bands extending under said base and connected at their opposite ends to said rods.

2. A coffin comprising a base and a cover, said base being composed of a glass structure having embedded therein a metallic reinforcing structure comprising a horizontally circumferential strap member the outer face of which is exposed, a finishing band secured to said circumferential strap member, a longitudinally extending rod at each side of said base and pivotally connected to said finishing band, and a plurality of supporting bands extending under said base and connected at their opposite ends to said rods by elongated loops.

3. A coffin comprising a base and a cover, said base being composed of a glass structure having a finishing band therearound, longitudinally extending rods at each side of said base and pivotally connected to said finishing band, a plurality of centrally divided supporting bands extending under said base and connected at their opposite ends to said rods by elongated loops, and removable means for connecting the sections of said supporting bands at the point of division.

4. A coffin comprising a base and a cover, said base being composed of a glass structure having a finishing band therearound, a longitudinally extending rod at each side of said base and connected by pivoted arms to said finishing band, a plurality of supporting bands extending under said base and connected at their opposite ends to said rods by elongated loops, and a slotted link adapted to retain said rods in extended or retracted position.

5. A coffin comprising a base and a cover, said base having a finishing band therearound, a plurality of arms pivoted to said band at each side of said base, a longitudinally extending rod slidably mounted in said arms at each side of said base, threaded knobs retaining said rods in position, and a plurality of supporting bands extending under said base and connected at their opposite ends to said rods by slotted links.

[Claim 6 not printed in the Gazette.]

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1,224,384. PORTABLE CONVEYER. HERMAN KAUKAINE, Virginia, Minn. Filed Nov. 4, 1915. Serial No. 59,608. (Cl. 193—2.)



1. In a conveyer comprising conveyer-bed-sections, blocks adapted to carry the ends of said conveyer-bed-sections, legs for said blocks, transverse shafts arranged opposite the ends of said conveyer-bed-sections, cogs carried by said shafts, conveyer chains arranged to travel over said cogs and over said conveyer-bed-sections, and driving means for said cogs.

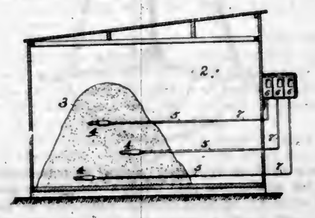
2. In a conveyer comprising conveyer-bed-sections, blocks adapted to telescopically carry the ends of said conveyer-bed-sections, vertically adjustable legs for said blocks, transverse shafts arranged opposite the ends of said conveyer-bed, cogs carried by said shafts, conveyer chains arranged to travel over said cogs and over said conveyer-bed-sections, and driving means for said cogs.

3. In a conveyer comprising conveyer-bed-sections, longitudinally grooved blocks adapted to adjustably carry the ends of said conveyer-bed-sections, vertically adjustable legs for said blocks, transverse shafts arranged opposite the ends of the conveyer bed formed by said conveyer-bed-sections, cogs carried by said shafts, conveyer chains arranged to travel over said cogs and over said conveyer-bed-sections, automatic chain tightening means carried by said blocks for engagement with said conveyer chains, and driving means for said cogs.

4. In a conveyer comprising conveyer-bed-sections, parallel blocks arranged in series and adapted to telescopically carry the ends of said conveyer-bed-sections, vertically adjustable legs for said blocks, transverse shafts arranged opposite the ends of said conveyer-bed, cogs carried by said shafts in alinement with the said parallel blocks, conveyer chains arranged to travel interchangeably over said cogs and over said conveyer-bed-sections, and driving means for said cogs.

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1,224,385. MEANS FOR INDICATING ABNORMAL TEMPERATURES IN VEGETABLE MATTER. ALFRED D. KENNEDY, Greenville, S. C., assignor of one-half to American Machine & Manufacturing Company, a Corporation of North Carolina. Filed May 22, 1915. Serial No. 29,771. (Cl. 177—355.)



1. In an apparatus of the character stated, a thermostat having a long handle by which it may be thrust into a pile of loose material whose temperature is to be indicated, combined with suitable temperature indicating devices separate from the thermostat, a source of electric energy, and flexible electric circuits including the source of energy and indicating devices extending along the handle to the thermostat and controlled thereby.

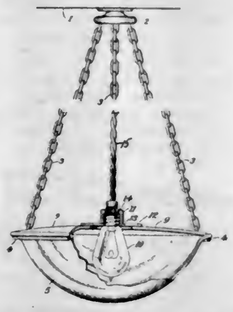
2. In an apparatus of the character stated, a thermostat having a long handle by which it may be thrust into a pile of loose material whose temperature is to be indicated, combined with a source of electric energy, flexible circuits connecting the source of energy with the thermostat, and alarm devices under the control of the theremostat for indicating when the temperature of the material in the pile rises to a predetermined maximum allowable amount.

3. In an apparatus of the character stated, a thermostat having a long handle by which it may be thrust into a pile of loose material whose temperature is to be indicated, combined with a source of electric energy, flexible circuits connecting the source of energy with the thermostat, and a recording device arranged in the circuit for recording variations in temperature of the pile as evidenced by the thermostat.

4. In an apparatus of the character stated, a plurality of independent thermostats each having a long handle by which it may be thrust deeply into a pile of loose material whose temperature is to be indicated, and whereby said thermostats may be thrust into different portions of the same pile, separate electrically operated indicating devices arranged normally at a distance from the thermostats when in operation, separate electrical circuits leading from each of the thermostats and respectively including an indicator device, and a source of energy arranged in the circuits and common to all of the thermostats and all of the electrically operated indicating devices.

5. In an apparatus of the character stated, a portable thermostat having a thermostatic element, a plurality of circuit closing devices adapted to be successively closed by the action of the thermostatic element, an inclosing case therefor, an indicator of a recording type for indicating the condition of the thermostatic member and its relation to the circuit closing devices, a source of electric energy, circuits including the source of energy, the indicator and the circuit closing devices of the thermostat, and means for introducing variable resistances into the circuit leading to the recorder and controlled by the operation of the plurality of circuit closing devices, whereby the indicator is made to indicate and record the variable temperature conditions of the thermostat and the material in which it is arranged.

1,224,386. LIGHTING APPLIANCE. LAWRENCE LANGNER, New York, N. Y. Filed Feb. 3, 1915. Serial No. 5,910. (Cl. 240—78.)



1. In a lighting appliance, a bowl of translucent glass, means for suspending said bowl, a detachable glass plate formed with an opening therein supported by the upper part of said bowl, a lamp extending through said opening, a socket for said lamp, and a member interposed between said lamp and socket bearing on said glass plate and closing the opening therein.

2. In a lighting appliance, a bowl of translucent glass, means for suspending said bowl, a glass plate formed with an opening therein supported by the upper part of said bowl and a lamp extending through said opening and supported by said plate.

3. In a semi-indirect lighting appliance, an open bowl of translucent glass, a plurality of flexible means connected with the periphery of said bowl to suspend said bowl, a detachable light-transmitting means overlying said bowl, supported at the periphery of said bowl, and adapted to be removed from said bowl by passing it between said flexible means, a lamp within said bowl and beneath said light transmitting means, and a flexible conductor connected to said lamp.

4. In a lighting appliance, a bowl of translucent glass, means engaging with the periphery thereof for suspending said bowl, and a readily detachable glass plate having a relatively large opening therein resting on and supported by the upper part of said bowl, said bowl and plate inclosing a space, and a lamp in said space supported from said plate.

5. In a semi-indirect lighting appliance, an open bowl of translucent glass, means for suspending said bowl from the periphery thereof, transparent light transmitting and dust excluding means located at the upper portion of said bowl supported in position entirely at the periphery of said bowl, and having an opening therein, said bowl and last mentioned means together inclosing a space, a lamp in said space and means between the lamp and light transmitting means covering the opening in the latter.

[Claims 6 to 12 not printed in the Gazette.]

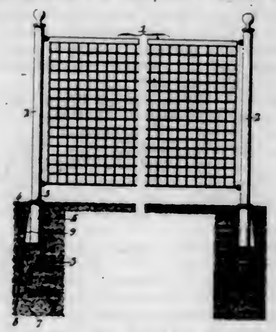
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1,224,387. SOCKET FOR TENNIS-POSTS AND THE LIKE. GEORGE LANE, Haverford, Ill. Filed Apr. 27, 1916. Serial No. 93,838. (Cl. 46—24.)

1. A socket of the class described including a tubular portion and an expanded anchor plate integrally united therewith and extending downwardly at an acute angle thereto.

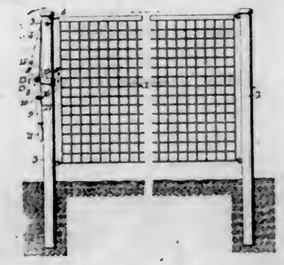
2. A socket of the class described including a tubular portion, a flat surface portion extending at right angles thereto and an expanded anchor plate extending downwardly from the flat portion and forming an acute angle with the tubular portion.

3. A socket of the class described including a tubular portion, a flat surface portion extending at right angles thereto and an anchor plate extending downwardly from the flat portion and forming an acute angle with the tubular portion, being united therewith by a web portion, said anchor being formed of a tapered portion and a tongue portion having parallel sides.



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1,224,388. APPARATUS FOR SUPPORTING LAWN-TENNIS NETS AND THE LIKE. GEORGE LANE, Haverford, Pa. Filed Apr. 27, 1916. Serial No. 93,839. (Cl. 46—24.)



1. In an apparatus for supporting lawn tennis nets and the like, the combination of a supporting post, means adapted to bind on said post slidably mounted thereon; a lever pivoted to said means, said lever being so connected to the tennis net that the strain of the net when taut causes the lever to coöperate with said means to prevent it from sliding on said post.

2. In an apparatus for supporting lawn tennis nets and the like, the combination of a supporting post, a ring slidably mounted on said post, a lever pivoted to said ring and attached to the net, adapted to tighten the net and also to cause the ring to bind on the post so as to prevent it from sliding.

3. In an apparatus for supporting lawn tennis nets and the like, the combination of a supporting post; a ring slidably mounted on said post; a lever pivoted to said ring having the net attached to it between the handle and the pivot, so that in its lowered position it tightens the net and causes the ring to bind against the post, whereby it is prevented from sliding on the post.

4. In an apparatus for supporting lawn tennis nets and the like, the combination of a supporting post, a line extending from the net, a ring slidably mounted upon said post, an extension carried by said ring and a lever pivoted thereto, said line being attached to said lever in such a manner that when the lever is in its lowered position the line is moved past the dead center of the pivot, whereby the lever is locked in said position and the ring caused to bind against said post so as to prevent it from sliding.

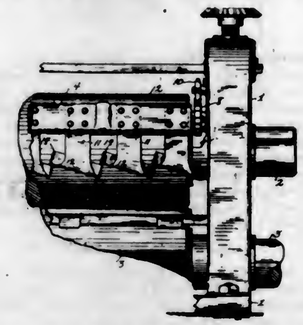
5. In an apparatus for supporting lawn tennis nets and the like, the combination of a supporting post, a pulley pivoted in said post, a line extending from the net passing over said pulley, a ring slidably mounted on said post, an extension carried by said ring, and a lever pivoted therein, said line being attached to said lever in such a manner that when said lever is in its lower position, the line is carried toward the post so that it occupies a position within a line drawn from the pulley to the pivot, whereby the strain on the net locks the lever in this position and causes the ring to bind against the post so as to prevent it from sliding.

[Claims 6 and 7 not printed in the Gazette.]



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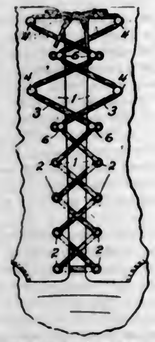
1,224,389. APPARATUS FOR POLISHING ROLLING-MILL ROLLS. AUGUST S. LIND, McKeesport, Pa. Filed Oct. 28, 1914. Serial No. 869,004. (Cl. 80—1.)



In combination with a rolling mill roll, a rotatable bar arranged adjacent to and longitudinally of the axis of said roll, a means comprising a ratchet wheel and locking pawl for holding said bar rigid, a series of spring arms attached to said bar, a holder attached to the free end of each of said arms, a polishing block fitted in each of said holders, said blocks arranged with over-lapping ends and inclined, the one with respect to the other.

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1,224,390. LACE-FASTENING DEVICE. JOHN LIPINSKI, Leavenworth, Kans. Filed Dec. 18, 1916. Serial No. 137,710. (Cl. 24—140.)



1. In a lace fastening device, two members having lace engaging means, two studs provided each with a transverse eye adapted to have a lace slidably mounted therein, said studs being secured respectively to said two members, and two lace engaging devices mounted respectively on said two members intermediate of said studs and said lace engaging means, each of said lace engaging devices being adapted to be releasably engaged by that portion of the lace which is mounted in the stud of the opposite member.

2. In a lace fastening device, two members having lace engaging means, two studs each having a transverse eye adapted to receive a lace, said studs being respectively secured to said two members, and two lace engaging devices mounted respectively on said two members intermediate of said studs and said lace engaging means, each of said devices being located out of alinement with the adjacent stud and lace engaging means.

3. In a lace fastening device, two members having lace engaging means, two studs each having a transverse eye adapted to receive a lace, said studs being respectively secured to said members, and two lace engaging hooks respectively mounted on said members intermediate of said studs and said lace engaging means, each hook being located out of alinement with the adjacent stud and lace engaging means.

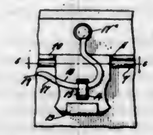
4. In a lace fastening device, two members having each an eyelet adapted to receive therethrough a lace, two studs respectively secured to said members and having each a transverse eye for receiving said lace, and two lace engaging devices respectively mounted on said members intermediate of said studs and said eyelets.

5. In a lace fastening device, two members each having an eyelet adapted to receive a lace, two studs respectively secured to said members and having each a transverse eye for receiving said lace, and two lace engaging devices respectively mounted on said members intermediate of said studs and said eyelets, each device being disposed out of alinement with the adjacent stud and eyelet.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,391. BOX. GEORGE LIVINGSTON, Philadelphia, Pa. Filed Oct. 14, 1916. Serial No. 125,583. (Cl. 220—10.)



1. A box comprising lid and body portions, a plate pivotally connected to one of said portions and having a hole therein, a staple in the other of said portions designed to project through said hole in the plate, and a hook mounted on one of said portions and designed to extend across the parting between said portions and having a hooked end adapted to pass through said staple, substantially as described.

2. A box comprising lid and body portions, one of said portions having a bead including a reinforcing core, said bead being interrupted in its length, a plate hinged to said core in the space provided by said interruption and having a hole therein, a staple in the other of said portions designed to project through the hole in said plate, and a hook movably secured to one of said portions and designed to extend across the parting between said portions and having a hooked end adapted to pass through said staple, said hook, when in said staple, being operative to press the plate into frictional contact with the box, substantially as described.

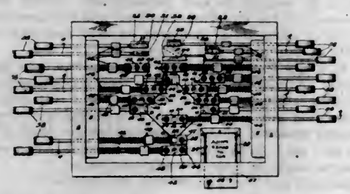
3. A box comprising lid and body portions, one of said portions having a bead including a reinforcing core, said bead being interrupted in its length, a plate hinged to said core in the space provided by said interruption and having a hole therein, a staple in the other of said portions designed to project through the hole in said plate, a bead formed on said latter portion and designed to be engaged by said plate, and a hook movably secured to one of said portions and designed to extend across the parting between said portions and having a hooked end adapted to pass thrbugh said staple and to press said plate into frictional engagement with said latter bead, substantially as described.

4. A box comprising lid and body portions, said lid having its lower edge terminating in a bead, a core for

said bead, said bead being interrupted in its length, said core extending across the space provided by said interruption, a plate pivotally mounted on said core and extending within said space, said plate having a hole therein, a staple on the body portion designed to project through said hole, said body portion having a turned upper edge, a portion of which fits within said lid, the outer lap of said turned edge depending and terminating in a bead below the bead of said lid, and a hook pivotally secured to one of said portions and designed to extend through said staple and to move said plate into frictional engagement with said bead on the body portion, substantially as described.

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1,224,392. PROJECTING APPARATUS. FRANCIS A. LOFTUS, Philadelphia, Pa. Filed Oct. 5, 1915. Serial No. 54,135. (Cl. 88—24.)



1. A projecting device of the character stated, comprising a plate having openings therein through which light is adapted to be directed onto a screen representing bases and players, and movable members controlling the openings to indicate the progress of the game, substantially as described.

2. A projecting device of the character stated, comprising a plate having openings therein through which light is adapted to be directed onto a screen representing bases and players, movable members controlling the openings, said members having colored transparent sections to indicate the progress of the game, substantially as described.

3. A projecting device of the character stated, comprising a plate having openings therein through which light is adapted to be directed onto a screen representing bases and players, movable members controlling the openings to indicate the progress of the game, said members having colored transparent sections, and means for moving the members to expose the openings or position colored transparent sections over the same, substantially as described.

4. A projecting device of the character described, comprising a plate having openings therein representing bases and players, slides controlling the player openings to indicate the progress of the game, said openings having transparent sections therein of different colors each being adapted to be moved into position in front of the opening, substantially as described.

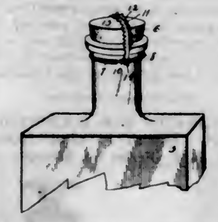
5. A projecting device of the character described, comprising a plate having openings therein representing bases and players, slides controlling the player openings to indicate the progress of the game, said openings having transparent sections therein of different colors each being adapted to be moved into position in front of the opening, said player slides also having openings therein to register with the player openings, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

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1,224,393. POISON-BOTTLE INDICATOR. ANNAH E. LONGABAUGH, Metz, Mo. Filed Dec. 12, 1916. Serial No. 136,481. (Cl. 215—113.)

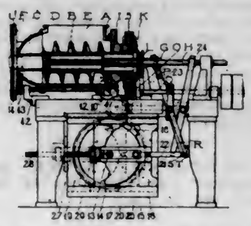
1. A device of the character described comprising a pair of coiled springs having their ends connected by links to provide an annular elastic member adapted to embrace the neck of a bottle and a pronged metallic strip bent to bow formation and having its opposite ends engaged with said links, said strip having upstanding teeth along one of its edges and outstanding teeth along the other of its edges and said strip being provided with pointed ends which are bent outwardly beneath said links and said strip having projections bent downwardly over said links to thereby secure said strip to the link.



2. A device of the character described comprising a pair of coiled springs and a pair of links by which the ends of said springs are connected to thereby form an annular elastic member adapted to engage the neck of a bottle, a sheet metal strip bent to bow formation and having upstanding prongs along one of its edges and outstanding prongs along the other of its edges and having pointed ends, said strips being passed beneath said links and said pointed ends being bent outwardly beneath said links and projections carried by said strip which are bent into engagement with said links.

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1,224,394. MACHINE FOR CUTTING PLASTIC OR PULVERULENT MASSES OF ALL KINDS. ALFRED LUTZE, Halle-on-the-Saale, Germany. Filed Aug. 1, 1916. Serial No. 112,496. (Cl. 31—65.)



1. In a machine of the class described, in combination, a pressing device, a cylindrical cutter, a piston within said cutter, means for operating said pressing device, and cams adapted to impart reciprocating motion to said cutter and said piston, each cam being divided and its parts being adapted to be displaced relatively to each other.

2. In a machine of the class described, in combination, a pressing device, a cylindrical cutter, a piston within said cutter, means for operating said pressing device, and cams adapted to impart reciprocating motion to said cutter and said piston, each cam being divided, and means for displacing and adjusting the parts of the cam relatively to each other.

3. In a machine of the class described, in combination, a pressing device, a cylindrical cutter, a piston within said cutter, means for operating said pressing device, cams adapted to impart reciprocating motion to said cutter and said piston, each cam being divided and its parts being adapted to be displaced relatively to each other, and means for transmitting motion from one part to the cutter and from the other part to the piston.

4. In a machine of the class described, in combination a pressing device, a cylindrical cutter, a piston within said cutter, means for operating said pressing device, cams adapted to impart reciprocating motion to said cutter and said piston, each cam being divided and its parts being adapted to be displaced relatively to each other, and links operatively connecting one part with said cutter and the other part with said piston.

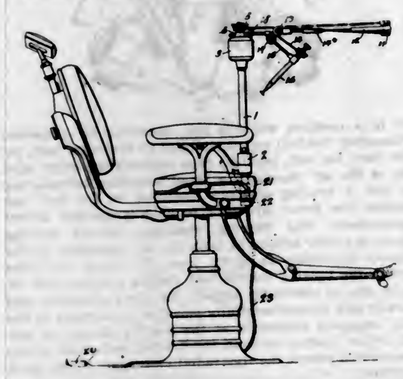


5. In a machine of the class described, in combination, a pressing device, a cylindrical cutter, a piston within said cutter, means for operating said pressing device, cams adapted to impart reciprocating motion to said cutter and said piston, each cam being divided and its parts being adapted to be displaced relatively to each other, and means for temporarily throwing the pressing device out of operation.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,395. DENTAL APPARATUS. WILLIAM THOS. LYON, Portland, Oreg., assignor to The International Dental Appliance Co., Portland, Oreg. Original application filed Sept. 24, 1914, Serial No. 863,332. Divided and this application filed Aug. 21, 1916. Serial No. 116,156. (Cl. 32—21.)



1. In an apparatus of the class described, the combination with a dental chair; of a motor support, a motor mounted on said support, a foot operated motor controller, connection between said motor and said controller, said motor having a neck, a sweep arm swiveled on said neck, a dental instrument carried by said arm, driving connections between said instrument and said motor, said motor including a housing having a track, and an idler wheel on said sweep arm to ride on said track.

2. In an apparatus of the class described, a motor support, a motor mounted on said support, said motor having a neck, a sweep arm swiveled on said neck, a dental instrument carried by said arm, and driving connections between said instrument and said motor, said motor including a housing having a trackway, and an idler wheel on said sweep arm to ride on said trackway.

3. In an apparatus of the class described, a motor support, a motor mounted on said support, said motor having a neck, a sweep arm swiveled on said neck, a dental instrument carried by said arm, and driving connections between said instrument and said motor, said motor including a housing having a trackway, and an idler wheel on said sweep arm to ride on said trackway, said sweep arm being composed of articulated sections and provided with means for extending or retracking the sections for belt tightening purposes, and said driving connection including a driving belt.

4. In an apparatus of the class described, a motor support, a motor mounted on said support, said motor having a bearing neck, an articulated sweep arm swivelly mounted on said neck, an idler wheel bearing engagement between said sweep arm and said motor, a dental instrument mounted on said sweep arm, a belt and pulley driving connection between said dental instrument and said motor, said sweep arm having a sustaining hook adjacent to the motor, which is adapted to receive the end of the sweep arm when folded back to sustain the dental instrument, substantially as shown and described.

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1,224,396. CHART-CASE. ANNA TAYLOR MCCLUER, New York, N. Y. Filed June 16, 1915. Serial No. 34,491. (Cl. 150—52.)



1. A case for charts or the like, which comprises a back, front, flap and sides, all made of a textile fabric, the said sides being extensible, there being elastic members attached to the sides to normally hold the sides in retracted position, and means for supporting the case from the back of a desk.

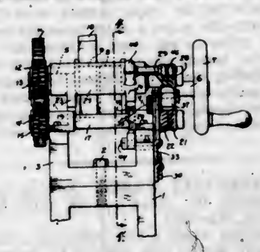
2. A case for charts or the like, which comprises a back, front, flap and sides, all made of a textile fabric, the said sides having portions which are double, elastic members within such portions, the ends of said members being secured to the sides so as to normally draw the front toward the back.

3. A case for charts or the like, which comprises a back, front, flap and sides, all made of a textile fabric, a portion of the material between the front, back and flap being stitched together to form a pocket, in combination with a rod passing through the pocket, said rod being adapted to be secured to the back of a desk.

4. A case for charts or the like, which comprises a back, front, flap and sides, all made of a textile fabric, a portion of the material between the front, back and flap being stitched together to form a pocket, in combination with a rod passing through the pocket, said rod being adapted to be secured to the back of a desk, and elastic members associated with the sides to normally draw the front toward the back.

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1,224,397. MACHINE FOR WINDING THE CORES OF GOLF-BALLS. MARTIN MCDAID, Leith, Scotland, assignor, by mesne assignments, to Revere Rubber Company, a Corporation of Rhode Island. Filed Aug. 1, 1916. Serial No. 112,492. (Cl. 242—3.)



1. A ball winding machine, comprising a pair of friction wheels adapted to contact with one side of a ball, means to hold said ball on the peripheries of said wheels, and means for rotating said wheels in the same direction at different relative constant peripheral speeds.

2. A ball winding machine, comprising pairs of friction wheels adapted to contact with opposite sides of a ball, the wheels of each pair being located adjacent each other, and means for rotating the wheels of each pair at different relative peripheral speeds to turn said ball on an axis at an angle to respective axes of said wheels.

3. A ball winding machine, comprising pairs of friction wheels adapted to contact with diametrically opposite sides of a ball, the wheels of each pair being located adjacent each other, and means for positively rotating the wheels of each pair at different relative peripheral speeds to turn said ball on an axis at right angles to the respective axes of said pairs of wheels.

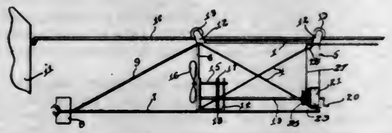
4. A ball winding machine, comprising pairs of friction wheels adapted to contact with diametrically opposite sides of a ball, parallel shafts on which said wheels are carried, means connecting said shafts for rotating one wheel of each pair at the same speed, and the other wheels of each pair at greater speeds.

5. A ball winding machine, comprising pairs of friction wheels adapted to contact with diametrically opposite sides of a ball for rotating the same, parallel shafts on which said wheels are carried, pinions on said shafts, the pinions for the respective shafts of each pair of wheels having different numbers of teeth, and a common driving gear meshing with all of said pinions.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,398. TOY. WILLIAM G. MCINTOSH, Plankinton, S. D. Filed Oct. 19, 1915. Serial No. 56,749. (Cl. 46—37.)



1. The combination with a supporting cable, of a plane suspended therefrom, and spring actuating means on the plane including a winding drum and a cable for moving the plane forwardly over the cable.

2. The combination with a supporting cable, of a plane, means on the upper surface of the plane for engagement with the cable to suspend the plane therefrom, a draw line associated with the plane, and means for winding the draw line on the plane to consequently cause the plane to move forwardly over the cable.

3. The combination with a supporting cable, of a plane, means for suspending the plane from the cable, operating means on the plane for moving the plane forwardly along the cable, and a propeller operably mounted on the plane for giving the plane the appearance of flying of its own accord.

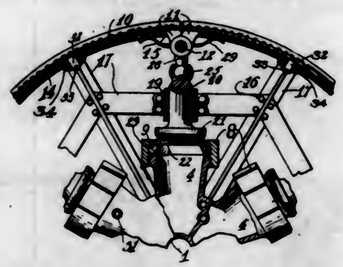
4. The combination with a supporting cable, of a plane, rollers mounted on the upper surface of the plane for association with the cable, a shaft rotatably mounted on the plane, a drum on the shaft, a draw line associated with the drum, spring means associated with the drum, means for winding the spring without rotating the drum, said spring means when released causing the rotation of the drum to consequently cause the draw line to be wound thereabout and thus move the plane along the cable.

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1,224,399. RESILIENT WHEEL. EDWARD L. MCKINNEY, Johnstown, Pa. Filed Aug. 23, 1915. Serial No. 46,933. (Cl. 152—30.)

1. In a resilient wheel, a hub, radial air chambers carried by the hub having open outer ends, elastic caps secured over the outer open ends of the air chambers and being normally distended, a bracing structure carried by the hub, a tread surrounding the hub, and radial supports guided by the bracing structure and having connection with the tread, said radial supports being movable independently of and bearing against the elastic caps to support the tread thereon.

2. In a resilient wheel, a hub, air cylinders radiating from the hub and being closed at their inner ends adjacent to the hub and being open at their outer ends remote from the hub, resilient caps fitting against the outer open ends of the cylinders, retaining rings detachably secured about the open outer ends of the cylinders and having inwardly extending flanges overhanging the marginal edges of the resilient caps and binding thereagainst to press and hold the same against the cylinders and close the outer open ends thereof, a tread structure surrounding the hub, and radial supports extending inwardly from the tread structure and having their inner ends abutting against the caps to resiliently support the tread structure.

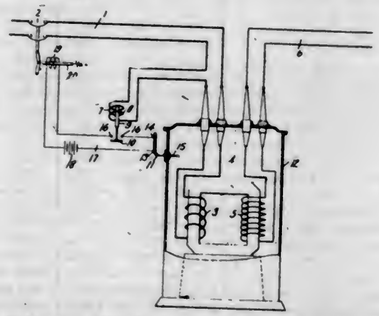


3. In a resilient wheel, a hub, radiating air chambers surrounding the hub and being open at the outer ends remote from the hub, resilient caps covering the outer open ends of the air chambers, a tread structure surrounding the hub, a bracing structure mounted on the hub and engaging the tread structure to hold it against lateral displacement, said bracing structure having bearing sleeves in radial alinement with the air chambers, radial supports extending inwardly from the tread structure through the bearing sleeves and resting against said resilient caps to resiliently support the tread structure, and laterally and circumferentially movable connections in the radial supports outwardly of the bearing sleeves to prevent undue binding between the bracing and tread structures and to permit the free radial movement of the tread structure.

4. In a resilient wheel, a sectional felly, a hub, radial universal supports between the hub and the sectional felly, a reinforcing ring spaced inwardly and extending throughout the length of the felly, a bracing structure rigidly supporting said reinforcing ring upon the hub, a plurality of keepers projecting inwardly from the sections of said felly and extending through the reinforcing ring, bracing plates surrounding the keepers to serve as abutments therefor to hold the felly sections from lateral and circumferential displacement, and pins projecting through the inner ends of said keepers and through said bracing structure for anchoring said keepers to the ring.

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1,224,400. ELECTRICAL PROTECTIVE DEVICE. PAUL MACGAHAN, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 9, 1915. Serial No. 44,440. (Cl. 175—294.)



1. In an electric circuit, the combination with a translating device and an electrically actuated device, of an overload relay and a temperature relay having their contacts so connected in series with the electrically actuated device that said device operates only when the overload on, and the temperature of, the translating device both reach predetermined values.

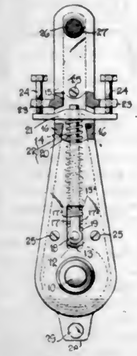
12. The combination with a translating device, of means responsive to the combined effect of the temperature of, and the load traversing, the translating device adapted to be rendered operative under predetermined conditions.

[Claims 2 to 11 and 13 not printed in the Gazette.]



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1,224,401. STARTING-CRANK FOR AUTOMOBILES. FRANKLIN E. MAINS, Orosi, Cal. Filed Nov. 18, 1916. Serial No. 132,135. (Cl. 123—185.)



1. A starting crank for internal combustion engines comprising a shaft, a disk mounted upon the shaft, the disk at one point in its periphery being formed with a concavity, a crank arm loosely mounted upon the shaft and housing the disk, a yoke slidingly mounted in the crank arm for longitudinal movement, a roller rotatably mounted in the yoke and having a curvature coinciding with the curvature of the concavity in the disk with which concavity the roller is adapted to engage, and a spring urging the yoke toward the disk, the spring and yoke being housed within the crank arm.

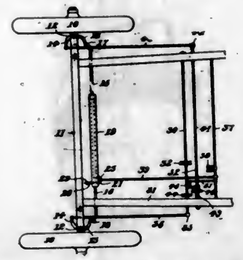
2. A starting crank for internal combustion engines comprising a shaft, a disk mounted upon the shaft, the disk at one point in its periphery being formed with a concavity, a crank arm loosely mounted upon the shaft and housing the disk, a yoke slidingly mounted in the crank arm for longitudinal movement, a roller rotatably mounted in the yoke and having a curvature coinciding with the curvature of the concavity in the disk with which concavity the roller is adapted to engage, a spring urging the yoke toward the disk, the spring and yoke being housed within the crank arm, and means whereby the tension of the spring may be adjusted.

3. A starting crank for internal combustion engines comprising a shaft, a disk mounted upon the shaft to rotate therewith and having a concavity in its periphery, a crank arm loosely mounted upon the shaft and comprising oppositely disposed sections disposed on opposite faces of the disk, said sections being longitudinally slotted, a yoke slidably mounted in the slots of said sections and extending across the interior of the crank arm, a pin carried by the yoke, a roller mounted upon the pin and fitting the concavity in said disk, a rod extending outward from the yoke, a cross bar slidingly mounted in said sections and through which the rod passes, a spring surrounding the rod and bearing at one end against the yoke and at the other end against said cross bar, and means mounted upon the crank arm for shifting the cross bar adjustably toward the yoke to thereby increase the tension of the spring.

4. A starting crank for internal combustion engines comprising a shank formed at one end with a clutch adapted to engage the clutch on an engine crank shaft, a disk mounted upon the first named shaft to rotate therewith, a crank arm formed in two opposed sections rotatably mounted upon the shaft on each side of the disk, a yoke slidingly mounted in the sections of the crank arm, a roller supported by the yoke and adapted to seat in the concavity of the disk, a rod extending from the yoke toward the free end of the crank arm, a cross bar slidingly mounted in the yoke and through which the rod passes, a spring surrounding the rod bearing at one end against the yoke and at the other end against the cross bar, oppositely projecting ears on the crank arm beyond the cross bar, adjusting screws passing through said ears and bearing against the cross bar, and a crank handle engaging the end of the crank arm and acting to hold the sections of the crank arm in engagement with each other.

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1,224,402. AUTOMOBILE STEERING ATTACHMENT AND SELF-STARTING DEVICE. JÓZEF MARCINKOWSKI and JOHN BUŚDA, Chicago, Ill. Filed June 29, 1916. Serial No. 106,700. (Cl. 21—90.)



1. A steering device for vehicles comprising forward ground wheels having pivoted steering knuckles, a forward and rear steering arm carried by each of the said knuckles, a disconnectible sectional connection pivotally arranged between the said rear arms, a transversely arranged steering shaft, shiftable connections between the said shaft and the forward arm of one of the said wheels and steering means operatively connected to the said shaft.

2. A steering device for vehicles comprising forward ground wheels having pivoted steering knuckles, a forward and a rear steering arm carried by each of the said knuckles, a disconnectible sectional connection pivotally arranged between the said rear arms, a transversely arranged steering shaft, shiftable connections between the said shaft and the forward arm of one of the said wheels, a transversely arranged wheel shifting shaft positioned adjacent the said steering shaft, operative connections between the said shifting shaft and the forward arm of the opposite one of said wheels, clutching means between the said shafts, a releasing latch for the sections of the said arm connecting means and a simultaneous operable closer for the said clutching means and release for the said latch.

3. A steering device for vehicles comprising forward ground wheels having pivoted steering knuckles, a forward and a rear steering arm carried by each of the said knuckles, a disconnectible sectional connection pivotally arranged between the said rear arms, a transversely arranged steering shaft, shiftable connections betwee the said shaft and the forward arm of one of the said wheels, a transversely arranged wheel shifting shaft positioned adjacent the said steering shaft, operative connections between the said shifting shaft and the forward arm of the opposite one of said wheels, a transversely arranged rock shaft adjacent the said shifting shaft, an operating pedal upon the said rock shaft, operative connections between the said rock shaft and latch, a fixed gear upon the said steering shaft, a shiftable gear upon the said shifting

shaft normally out of mesh with the said fixed gear, and clutching means for the said shiftable gear operatively connected to the said rock shaft.

4. A steering device comprising in combination with a vehicle having forward wheels connected to the vehicle by pivoted steering knuckles, detachable connections between the said knuckles, separate shifting means for each of the said wheels, clutching connections between the said separate shifting means operable simultaneously with a release for the said connections, and operating means for the said shifting means.

5. A steering device comprising in combination with a vehicle having forward wheels connected to the vehicle by pivoted steering knuckles, detachable connections between the said knuckles, separate shifting means for each of the said wheels, a steering post operatively connected to one of the said shifting means and an operating hand lever carried by the other shifting means.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,403. HAIR-BOBBING DEVICE. FREDDIE A. C. MEYERS, Porter, Minn. Filed Aug. 23, 1916. Serial No. 116,565. (Cl. 132—31.)



1. A hair bobbing device, comprising a curved comb having a guide, for a pair of shears, located outward and beyond the points of the teeth thereof, and a headband for supporting the comb in position.

2. A hair bobbing device comprising a curved comb having a laterally spaced guide, for a pair of shears located outward and beyond the points of the teeth thereof, a multiplicity of longitudinally spaced hair-holding points projecting from the guide toward the comb, and a headband for supporting the comb in position.

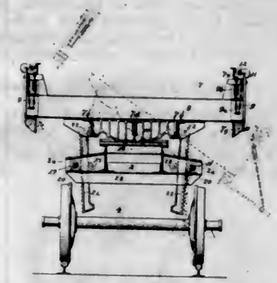
3. A hair bobbing device comprising a curved comb having a guide, for a pair of shears located outward and beyond the points of the teeth thereof, an adjustable headband for supporting the comb in position, and a strap adjustably connecting the intermediate portion of the comb with the headband.

4. A hair bobbing device comprising a curved comb adapted to fit the back of a wearer's head and having a guide, for a pair of shears located outward and beyond the points of the teeth thereof, and a head band extending over the top of the head for supporting the comb in position.

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1,224,404. DUMPING-CAR. ALBERT C. MURPHY, New York, N. Y. Filed July 3, 1914. Serial No. 848,728. (Cl. 105—191.)

1. In a dumping car, the combination of a longitudinal car frame having a plurality of transverse rocker beds, a box body arranged above the longitudinal frame and having a plurality of rockers on its under side adapted to the beds said body provided with discharge apertures at its sides, doors hinged to the sides of the body to normally close the discharge apertures, a longitudinal shaft journaled on the longitudinal car frame and extending to the end portion thereof and located wholly below and independent of the box body, non-flexible mechanical connections between the shaft and the body for tilting it in either direction, a platform at the end of the car, and means independent of the body located at the end of the car frame adjacent to the platform for rotating the longitudinal shaft whereby the box body may be rocked in either direction to discharge from either side of the car.



2. In a dumping car, the combination of a longitudinal car frame having a plurality of transverse rocker beds, a box body arranged above the longitudinal frame and having a plurality of rockers on its under side adapted to the beds, said body provided with discharge apertures at its sides, doors hinged to the side sof the body to normally close the discharge apertures, a longitudinal shaft journaled on the longitudinal car frame and extending to the end portion thereof and located wholly below and independent of the box body, non-flexible mechanical connections between the shaft and the body for tilting it in either direction, a platform at the end of the car, means independent of the body located at the end of the car frame adjacent to the platform for rotating the longitudinal shaft whereby the box body may be rocked in either direction to discharge from either side of the car, and unitary means for locking the longitudinal shaft against rotation in either and both directions, at the will of the operator.

3. In a dumping car, the combination of a longitudinal car frame having a plurality of transversely arranged rocker beds and a platform at each end, a box body arranged above the longitudinal frame and having a plurality of rockers on its under side adapted to the beds, said body provided with discharge doors on both of its sides, two longitudinal shafts journaled on the longitudinal car frame independent of the body and one of said shafts extending to one of the platforms and the other extending to the other platform, mechanical connections between car body and the respective shafts whereby the rotation of each of the shafts may tilt the box body in either direction so as to discharge from either side of the car, and power apply means arranged at each platform for rotating the respective shafts.

4. In a dumping car, the combination of a car frame having a platform at one end and a plurality of transverse rocker beds, with a box body arranged above the car frame and having a plurality of rockers on its under side adapted to the beds whereby the body may be rocked to incline said body and lower the dumping side thereof to either side of the car frame, side doors hinged to said body, two longitudinal shafts journaled in the car frame respectively upon each side of the rocker beds and the ends of said shaft extending to the platform end of the car frame, connecting means between the said shafts and the body upon opposite side of the rockers for oscillating the body, mechanical means adjacent to the platform for rotating one of the longitudinal shafts, and means also adjacent to the platform for locking the other longitudinal shaft against rotation in either and both directions at the will of the operator.

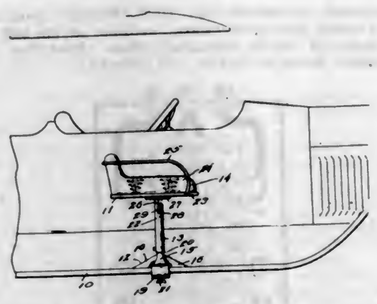
5. In a dumping car, the combination of a car frame having a platform at one end and a plurality of transverse rocker beds, with a box body arranged above the car frame and having a plurality of rockers on its under side adapted to the beds whereby the body may be rocked to incline said body and lower the dumping side thereof to either side of the car frame, side doors hinged to said body, two longitudinal shafts journaled in the car frame respectively upon each side of the rocker beds and the ends of said shafts extending to the platform end of the car frame, connecting means between the said shafts and the body upon opposite sides of the rockers for oscillating the body, mechanical means adjacent to the platform for rotating one of the longitudinal shafts, means also adjacent to the platform for locking the other longitudinal shaft against rotation in either and both directions at the will of the operator, and said locking means extending transversely from one of the longitudinal shafts to a point adjacent to the mechanical means for rotating the other of the longitudinal shafts, and hand controlled devices adjacent to the mechanical means for detachably holding the locking means in locking position whereby a single operator may unlock one of the shafts and rotate the other without shifting his position.

[Claims 6 to 15 not printed in the Gazette.]



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1,224,405. ATTACHABLE AUTOMOBILE-SEAT. JOHN HENRY NIENSTADT, Brooklyn, N. Y. Filed July 20, 1915. Serial No. 40,841. (Cl. 21—42.)



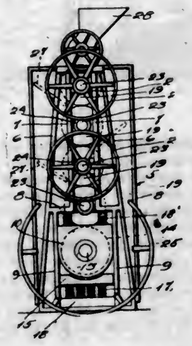
A seat for running boards of motor vehicles for the purposes described, comprising a foot piece having an arm adapted to lie transversely of a foot board, devices carried thereby to impinge upon a board, a member extended from the outer part thereof and spaced therebelow positioned and shaped for engagement beneath the running board, clamping devices in the last named member, said impinging and clamping devices including members spaced from each other whereby rotation of the foot piece will be prevented, an upstanding member formed on the said arms near its outer part but located to stand a distance within the edge of an engaged board, extensions on said seat to be disposed longitudinally of an engaged board upon the upper side, a seat, and detachable supporting connections between the seat and said upstanding member.

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1,224,406. MILL FOR GRINDING OR CRUSHING COTTON-SEED OR THE LIKE. ROBERT RUFUS NOLEN, Dallas, Tex. Filed Sept. 7, 1916. Serial No. 118,868. (Cl. 83—12.)

1. In a machine of the character described, a frame comprising guide means, a plurality of superposed rolls arranged to contact one with the other whereby the lowermost roll supports the combined weight of the upper rolls, a shaft carried by the lowermost roll, vertically movable bearings for the shaft arranged within the guide means, springs arranged beneath the vertically movable bearings to support them, springs arranged above the bearings to oppose their upward movement and take up rebound shocks, means whereby the upper rolls may move vertically with respect to the lowermost roll, means to feed material to be treated between the rolls, and means to drive the rolls.

2. In a machine of the character described, a frame comprising guide means, a plurality of superposed rolls arranged to contact one with the other whereby the lowermost roll supports the combined weight of the upper rolls, a shaft carried by the lowermost roll, vertically movable bearings for the shaft, blocks arranged beneath the lowermost bearings to contact therewith, springs arranged beneath the blocks to normally move the same upwardly, springs arranged above the lowermost bearings to contact therewith and to contact with a part of the frame to oppose upward movement and take up rebound shocks, means whereby the upper rolls may move with respect to the lower rolls, means to feed material to be treated between the rolls, and means to drive the rolls.



3. In a machine of the character described, a frame comprising guide means, a plurality of superposed rolls arranged to contact one with the other whereby the lowermost roll supports the combined weight of the upper rolls, a shaft carried by the lowermost roll; bearings for the shaft; guides for the lowermost bearings, said guides being substantially wider than the guide means for the upper bearings whereby the said guides have upper horizontal portions, said bearings having their tops formed flat and their lower faces rounded; blocks having concave upper faces adapted to contact with the rounded faces of the bearings, springs to move the blocks upwardly, springs to bear between the tops of the bearings and the horizontal portion of the guide to oppose the upward movement of the bearings to take up rebound shocks, a hopper to feed material to the rolls; and means to drive the rolls.

4. In a machine for grinding seed containing hard foreign particles; an upstanding frame; a plurality of crushing rolls mounted in the frame, one above the other in contacting relation, so that the combined weight of the upper rolls is carried by the lowermost roll, each roll being permanently vertically movable with respect to the frame, so that each roll may move away from its lower contacting roll upon the passage of material therebetween; resilient means serving to support the lowermost roll whereby hammering caused by the passage of hard particles between the rolls is absorbed by the yielding means; means to drive the rolls; and means to feed material to be treated therebetween.

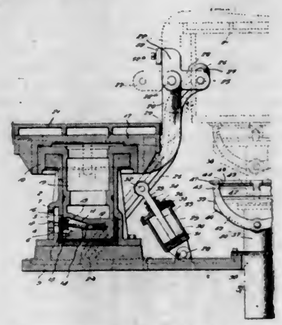
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1,224,407. COMBINATION JOLT-RAMMING AND ROCK-OVER MACHINE. WILLIAM C. NORCROSS, Terre Haute, Ind., assignor to American Molding Machine Co., Terre Haute, Ind., a Corporation of Indiana. Filed July 17, 1916. Serial No. 109,698. (Cl. 22—33.)

1. In a combination jolt-ramming and rock-over machine, a rock-over table, a rockable lever operatively connected thereto adapted to cause the table to rock over, and an elastic check or cushion coöperating with said lever.

2. In a combination jolt-ramming and rock-over machine, a rock-over table, a rockable lever operatively con-

nected thereto adapted to cause the table to rock over, and a piston-and-cylinder fluid check or cushion cooperating with said lever.



3. In a combination jolt-ramming and rock-over machine, a jolting device, a rock-over table supported thereby and movable therewith for the purpose of ramming the mold, rock-over means for causing the rock-over table to rise from the jolting device and to turn over, and a fluid check or cushion coöperating with said rock-over means.

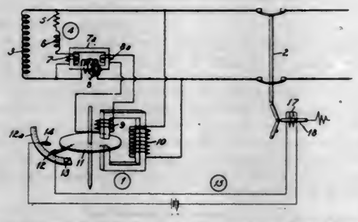
4. In a combination jolt-ramming and rock-over machine, a jolting device, a rock-over table supported thereby and movable therewith for the purpose of ramming the mold, a pivotal connection between the rock-over table and the jolting device, and rock-over means for causing the rock-over table to rise from the jolting device and to turn over.

5. In a combination jolt-ramming and rock-over machine, a jolting device, a rock-over table supported thereby and movable therewith for the purpose of ramming the mold, a pivotal connection between the rock-over table and the jolting device, and rock-over means for causing the rock-over table to rise from the jolting device and to turn over when the jolting device is elevated beyond its normal upward movement.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,408. ELECTRICAL PROTECTIVE DEVICE. LAURENCE M. PERKINS, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 30, 1916. Serial No. 128,414. (Cl. 175—294.)



1. In an electrical system, the combination with a translating device and a protective device, of a resistor having substantially constant resistance, a relay for controlling the protective device, and means for so connecting the relay to the translating device and the resistor that it is actuated in accordance with the difference in the energy loss in the resistor and the translating device.

2. The combination with a translating device and a resistor having substantially constant resistance operatively connected thereto, of an electro-responsive device, and means for so connecting the electro-responsive device to the resistor and the translating device that it will be actuated in accordance with the difference in the energy loss in the resistor and the translating device.

3. The combination with a translating device and a resistor having a predetermined energy loss, of a reverse-energy relay one winding of which is supplied with energy in accordance with the relative difference in energy loss in the said resistor and a portion of the translating device.

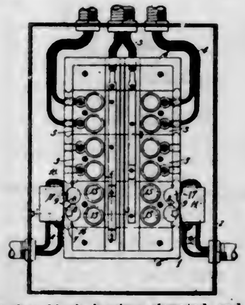
4. The combination with a translating device and a resistor, of means for determining the ratio of the energy losses in the translating device and the resistor, and an electro-responsive device adapted to be actuated when the translating device reaches such temperature that the ratio of the energy losses is greater than a predetermined value.

5. In an electric circuit, the combination with a translating device and a resistor connected to the circuit, of a reverse-energy relay one winding of which is supplied with current proportional to the relative difference in the currents traversing the resistor and the translating device and the other winding of which is supplied with current proportional to the voltage impressed across the resistor and the translating device.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,409. BARRIER-CUT-OUT SWITCH. JAMES C. PHELPS, Springfield, Mass., assignor of one-half to Henry H. Curtis, Springfield, Mass. Filed Nov. 19, 1915. Serial No. 62,326. (Cl. 247—13.)



1. A unit fuse-block having elevated end barrier portions extending to meet the cover of the box a considerable distance above the main portion of the block, the barrier portions being formed with grooves extending in opposite directions from the top and bottom edges of the barrier portion and of such a depth that they overlap to form lateral openings through said barrier portions, and a push button switch secured to the outer side of the barrier portions, with the push buttons of the switch extending through the lateral openings, as described.

2. A unit fuse-block having elevated end barrier portions with grooves in said portions which extend in opposite directions from the upper and lower edges respectively, of the barrier portions of the fuse block, and in overlapping relation for a short distance, the depth of the grooves being such that lateral openings are formed through the barriers, a push button switch, the push buttons of which are located in the openings, whereby branch circuits may be opened and closed by said buttons, as described.

3. An electrical device of the kind described, comprising in combination, a fuse block formed with openings in the end of the block, a switch secured to the outer end of said block, the operating device of the switch passing through the openings in the ends of said block as described, busbars secured to the block and electrical connections between the switch and said bars.

4. The combination with a fuse-block having an elevated end barrier portion of a switch device connected to the outer end of said barrier portion, with means for operating said switch device from the inner side of the barrier portion, a bus-bar and electrical connections between the switch and bus-bar.

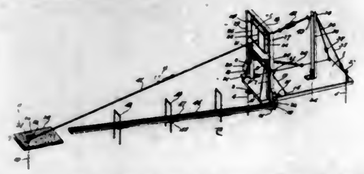
5. The combination with a fuse-block unit having an elevated and barrier portion, of a switch device mounted on the outer end of said portion, the barrier portion having openings therethrough to receive the operating devices of the switch, a bus-bar, and electrical connections between the switch and bar.

[Claim 6 not printed in the Gazette.]



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1,224,410. GOLF-PRACTISING DEVICE. THOMAS J. PORTE, Winnipeg, Manitoba, Canada. Filed Nov. 1, 1916.. Serial No. 128,958. (Cl. 46—4.)



1. In combination an arresting member, a guide wire or the like leading to the arresting member, a projectile captive to the wire, and means associated with the member to register the degree of impact of the projectile with the member.

2. In combination a movable arresting member, a projectile and a guide wire or the like for the projectile and passing through the member.

3. In combination a movable arresting member, a projectile and a fixed linear guide for directing the projectile to hit the arresting member.

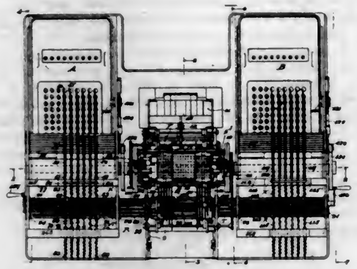
4. In combination a movable arresting member, a projectile, a fixed guide wire or the like for the projectile and directed to the arresting member and means actuated by the movement of the arresting member to indicate the degree of impact of the projectile with the member.

5. In combination a taut guide wire, a ball captive to the wire, an arresting pad adapted to be struck by the ball in flight on the wire and means associated with the pad to indicate the degree of impact of the ball with the pad.

[Claims 6 to 17 not printed in the Gazette.]

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1,224,411. TABULATING-MACHINE. JAMES POWERS, New York, N. Y., assignor, by mesne assignments, to Powers Accounting Machine Company, New York, N. Y., a Corporation of Delaware. Filed May 22, 1912. Serial No. 698,887. (Cl. 235—58.)



1. A tabulation-printing card-accounting machine of the type in which movable pins coact with record-card perforations to reproduce statements thereby recorded and comprising movable pins arranged in series adapted to be shifted to different record-point series of record cards and to coact with and reproduce statements recorded in perforations of such card-series, tabulation-printing mechanism adapted to print such statements in tabular form, and a purely mechanical action adapted to be operably located relatively to the locations, as aforesaid of said pin-series and to connect record-reproducing pins thereof with said tabulation-printing mechanism and cause its operation and the printing thereby of statements reproduced by said pins.

2. A tabulation-printing, card-accounting machine of the type in which movable pins coact with record-card perforations to reproduce statements thereby recorded and comprising movable pins arranged in a plurality of series, pin series adapted to be independently shifted to coact with different record-point series of record cards and to simultaneously and independently reproduce statements recorded in perforations of the different card-series with which said pin series coact, a plurality of tabulation-printing mechanisms adapted to print such statements in tabular form, and a plurality of purely mechanical actions each adapted to independently connect one of said pin-series with a tabulation-printing mechanism and cause its operation and the printing thereby of statements reproduced by pins of the pin series with which it is connected by said action.

3. A tabulation-printing, card-accounting machine of the type in which movable pins coact with record-card perforations to reproduce statements thereby recorded and comprising movable pins arranged in a plurality of series, pin-series adapted to be independently shifted to coact with different record-point series of record cards and to simultaneously and independently reproduce statements recorded in perforations of the different card-series with which said pin series coact, a plurality of tabulation-printing mechanisms adapted to print such statements in tabular form, and a plurality of actions each adapted to independently connect one of said pin-series with a tabulation mechanism and cause its operation and the printing thereby of statements reproduced by pins of the pin series with which it is connected by said action.

4. In a tabulation-printing, card-accounting machine of the type in which movable pins coact with record-card perforations to reproduce statements thereby recorded, a machine frame; mounted thereon power transmission members adapted to be connected with a source of power, a card-support plate with perforation series therein corresponding with record-point series of record cards, and a jig-frame operably connected with and adapted to be reciprocated by power-transmission members aforesaid; and an analyzing and recording mechanism comprising a pin box slidably mounted on said jig frame; movable pins arranged in series in said pin box and adapted to be shifted therewith to coact with different perforation-series of said card-support plate and record-point series of record cards properly located thereon and to reproduce statements recorded in perforations of such card-series; a tabulation printing mechanism adapted to print such statements in tabular form and a purely mechanical action adapted to be operably located relatively to the locations as aforesaid of said pin-series, and to connect record-reproducing pins thereof with said tabulation-printing mechanism and cause its operation and the printing thereby of statements reproduced by said pins.

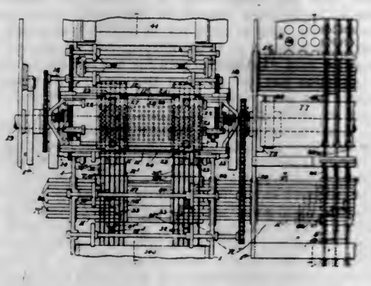
5. In a tabulation-printing, card-accounting machine of the type in which movable pins coact with record-card perforations to reproduce statements thereby recorded, a machine frame; mounted thereon power transmission members adapted to be connected with a source of power, a card-support plate with perforation series therein corresponding with record-point series of record cards, and a jig-frame operably connected with and adapted to be reciprocated by power-transmission members aforesaid: and a plurality of independently adjustable and operable analyzing and recording mechanisms each comprising a pin box slidably mounted on said jig frame; movable pins arranged in series in said pin box and adapted to be shifted therewith to coact with different perforation-series of said card-support plate and record-point series of record cards properly located thereon and to reproduce statements recorded in perforations of such card-series; a tabulation printing mechanism adapted to print such statements in

tabular form and a purely mechanical action adapted to be operably located relatively to the locations as aforesaid of said pin-series and to connect record-reproducing pins thereof with said tabulation-printing mechanism and cause its operation and the printing thereby of statements reproduced by said pins.

[Claims 6 to 35 not printed in the Gazette.]

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1,224,412. ANALYZING AND RECORDING MECHANISM. JAMES POWERS, New York, N. Y., assignor, by mesne assignments, to Powers Accounting Machine Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 4, 1913. Serial No. 758,775. (Cl. 235—58.)



1. An action for analyzing and recording mechanisms of accounting machines comprising an analyzer having a plurality of rack bars and pinions meshing therewith, a selector having a plurality of rack bars and pinions meshing therewith, shafts connecting the pinions of the analyzer and the pinions of the selector, means for driving the said pinions, a recorder, and means carried by the selector for causing an operation of the recorder.

2. An action for analyzing and recording mechanisms of accounting machines, comprising an analyzer having a plurality of rack bars and pinions meshing therewith, a selector having a plurality of rack bars and pinions meshing therewith, connecting means between the pinions of the analyzer and the pinions of the selector, means for driving the pinions of the analyzer, a recorder, and means carried by the selector for causing an operation of the recorder.

3. An action for analyzing and recording mechanisms of accounting machines, comprising an analyzer having a plurality of rack bars and pinions meshing therewith, a selector having a plurality of rack bars and pinions meshing therewith, connecting means between the pinions of the analyzer and the pinions of the selector, means for normally driving the pinions, means for retaining said driving means, a recorder, and means carried by the selector for causing an operation of the recorder.

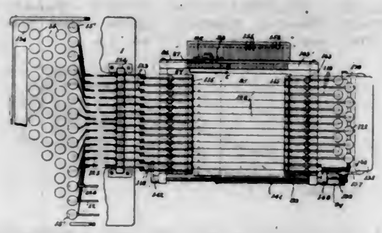
4. An action for analyzing and recording mechanisms of accounting machines, comprising an analyzer having a plurality of rack bars and pinions meshing therewith, means for driving the said pinions, means for limiting the movement of the said rack bars, a selector having a plurality of rack bars and pinions meshing therewith, the pinions of the analyzer and the pinions of the selector connected whereby the movement of the former transmits an equivalent movement to the latter, a recorder, and means carried by the selector for causing an operation of the recorder.

5. An action for analyzing and recording mechanisms of accounting machines, comprising an analyzer having a plurality of rack bars and pinions meshing therewith, means for driving the said pinions, stops carried by the said rack bars providing means for limiting their movement, a selector having a plurality of rack bars and pinions meshing therewith, shafts connecting the pinions of the analyzer and the pinions of the selector whereby the rotations of the former are transmitted equivalently to the latter, a recorder, and means carried by the selector rack bars for causing an operation of the recorder.

[Claims 6 to 18 not printed in the Gazette.]

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1,224,413. COMBINED PRINTING MECHANISM AND PERFORATING-MACHINE. JAMES POWERS, New York, N. Y., assignor to Powers Accounting Machine Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 8, 1914. Serial No. 855,724. (Cl. 101—94.)



1. In combination with a punch selecting mechanism, a printing mechanism, one key mechanism to simultaneously actuate said selecting mechanism and said printing mechanism, and another key mechanism to singly actuate said selecting mechanism.

2. In a perforating machine, a series of punches, a movably mounted punch selecting mechanism traveling transversely to said series of punches, a key mechanism stationary with respect to said punch selecting mechanism, and connecting means whereby said key mechanism actuates said punch selecting mechanism.

3. In a perforating machine, a plurality of rows of punches, a movably mounted punch selecting mechanism having one row of punch selectors corresponding to any one of the rows of said punches, said selecting mechanism being movably mounted to select any one of said punches, a key mechanism stationary with respect to said punch mechanism, and connecting means whereby said key mechanism actuates said punch selecting mechanism.

4. In a combined printing and perforating machine, a plurality of rows of punches, a movably mounted punch selecting mechanism having one row of punch selectors corresponding to one of the rows of said punches, said selecting mechanism being movably mounted to select any one of said punches, a printing mechanism, a key mechanism stationary with respect to said punch selecting mechanism and operatively connected to said printing mechanism, and connecting means whereby said key mechanism will simultaneously actuate said printing mechanism and said punch selecting mechanism.

5. In an apparatus of the class described having a perforating mechanism, a frame for said perforating mechanism, a plurality of rows of punches mounted in said frame, a carriage movably mounted on said frame, a row of punch selectors corresponding to one of the rows of said punches and operatively mounted on said carriage, said carriage being movably mounted so that said selectors can select any one of said punches, a key mechanism stationary with respect to said punch selectors, and connecting means whereby said key mechanism actuates said punch selectors.

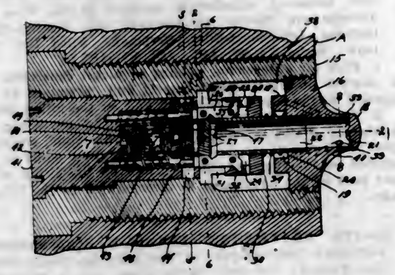
[Claims 6 to 47 not printed in the Gazette.]

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1,224,414. DETONATING-FUSE. JOHN N. POWERS, Washington, D. C., assignor to United States Ordnance Company, Washington, D. C., a Corporation of Virginia. Filed Feb. 14, 1916. Serial No. 78,130. (Cl. 102—39.)

1. In a detonating fuse for high explosive projectiles, the combination of a fuse stock, a guide tube element independent of and mounted in one end of the stock, a housing element independent of and mounted in the other end of the stock, a detonative compound container in the housing element in line with the guide tube, a normally closed barrier constantly carried by one of said elements and interposed between the container and guide tube, and automatically operated means for opening the barrier.





2. In a detonating fuse for high explosive projectiles, the combination of a fuse stock, a guide tube secured in one end of the stock, a detonative compound container disposed in the stock in line with the guide tube, a barrier normally closing the end of the guide tube adjacent the container, and impact operated means for opening the barrier.

3. In a detonating fuse for high explosive projectiles, the combination of a fuse stock, a guide tube independent of and mounted in one end of the stock, a housing independent of and mounted in the other end of the stock, a detonative compound container in the housing in line with the guide tube, a normally closed barrier carried by the housing and interposed between the container and guide tube, and automatically operated means for opening the barrier.

4. In a detonating fuse for high explosive projectiles, the combination of a detonative compound container housing adapted to be secured in the projectile, an automatically opened barrier carried by and normally closing the housing, a guide tube adapted to be secured in the projectile independently of and in advance of the housing, and an automatically opened barrier carried by and normally closing the guide tube.

5. In a detonating fuse for high explosive projectiles, the combination of a fuse stock, a guide tube mounted in one end of the stock, a detonative compound container disposed in the stock in line with the guide tube, a barrier normally closing the end of the guide tube adjacent the container, impact operated means for opening the barrier, and centrifugally released means normally locking the impact operated means inactive.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,415. BIRD-CAGE. PAUL REBER, Philadelphia, Pa. Filed Apr. 8, 1915. Serial No. 19,866. (Cl. 200—34.)



1. In a device of the character described, the combination of a tubular receptacle, a cap fitting the upper end of the receptacle, an insulating disk on said cap, a pair of members secured to said disk, said members being made of strip material and having upwardly diverging end portions forming electric contacts on the top of the receptacle, a rod extending through the cap into the receptacle, a weight on the lower end of the rod slidable within the receptacle and resting upon the contents thereof, said weight being movable downwardly as the contents are dispensed, a member fixed to the rod and adapted to move between and engage both of said diverging portions when the weight reaches a pre-determined position in the receptacle, a cover on said disk and inclosing said contacts, said cover having a hole therein through which said latter member and rod pass, substantially as described.

2. In a dispensing receptacle, a pair of members made of strip material and having upwardly diverging end portions forming contacts on the top of the receptacle, a rod extending through the top of the receptacle and located between the contacts, a weight on the lower end of the rod slidable within the casing and resting upon the contents in the receptacle, said weight being movable downwardly as the contents are dispensed, a ball fixed to the rod and adapted to engage between both of said diverging portions when the weight reaches a pre-determined position in the receptacle, a cover secured on the upper end of the receptacle inclosing said contacts and having an opening in its center for the passage of the ball, a finger-hold on the end of the rod above the ball and positioned above the upper end of the receptacle, said finger-hold being designed to be grasped to elevate the rod and weight when the ball is in its contact-engaging position, substantially as described.

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1,224,416. GRIPPING-TOOL FOR PACKING-RINGS. CHARLES A. RENNAU, Hannibal, Mo., assignor of one-half to John W. Shelburne, Hannibal, Mo. Filed Nov. 2, 1916. Serial No. 129,204. (Cl. 81—3.)



1. In a tool of the character described, a contractible band, a pair of pliers, a block permanently anchored to one end of the band and pivotally coupled to one of the plier jaws, a second block slidable along the band, a dog coöperating with said sliding block and positioned to bring the band between the dog and block, links connecting said dog to the opposite jaw of the pliers, and a spring exerting a draft on the links for normally forcing the dog into engagement with the band and causing the band to be gripped between the dog and block.

2. A clamping tool for expansible piston rings comprising a contractible band adapted to embrace the ring, a pair of pliers, a block anchored to one end of the band, and provided with ears pivotally coupled to one of the jaws of the pliers, a block slidable along the band and provided with a pair of lugs or ears between which the band is confined, a lever pivoted between the lugs and provided with a cam or nose for engaging the band, links coupling the opposite jaw of the pliers to the cam lever, a flexed spring having one end fixed to the jaw and its free end engaging the links to cause the same to exert a draft on the cam lever to normally force the cam against the band and frictionally hold the latter between the cam and the sliding block, the cam being forcibly driven against the band with a closing movement of the plier jaws whereby the band is firmly gripped between said cam and block, and contracted to close the packing ring confined within it.

1,224,417. WINDMILL ATTACHMENT. LEVI L. ROBERTSON, Madison, Minn. Filed June 28, 1916. Serial No. 106,417. (Cl. 103—62.)



1. A windmill attachment and connecting means comprising a link pivotally connected to one part and separately connected to another part, a lever pivoted to the movable end of said link and slidably connected to the second-named part to swing without moving the first named part when the link is disengaged, and means on the link adapted to lock the lever and hold said separable part in inseparable connection.

2. A windmill attachment comprising in combination with an operating means and a means to be operated, of a link pivoted to one of the means aforesaid, a separable connection adapted to be separably connected to the other of said means, a swinging lever pivoted to said link at the separably connected end and adapted to be held by its free end to the opposite end of said link and to one of said members for locking the separable connection against disconnection.

3. In a windmill attachment, the combination with an operating means and a means to be operated, of a connecting link therebetween, said link being pivotally connected to one of the means aforesaid and separably connected by a hook-like connection to the other of said means, an eye on the lower end of said means, a lever pivoted near the free end of said link and adapted after passing through said eye to extend along the said link and be connected thereto at its lower end to securely lock said separable connection against separation.

4. In a windmill attachment, the combination of a windmill rod, plates projecting beyond the lower end thereof in parallel relation and having a rivet or bolt extending therebetween, a pump rod or the like, a link pivoted to said pump rod and having a laterally extending notch in its upper end to engage said rivet or bolt and form a separable connection between the pump rod and windmill rod, a lever pivotally connected to the link near its notched end, an eye on the lower end of one of said plates through which said lever extends and curving downwardly is engaged at its lower end against movement by a hook on the lower end of said link.

5. In a windmill attachment, the combination of a pump rod, and a link pivotally connected to its upper end, said link having a lateral notch in one edge near its upper end, a windmill rod, plates bolted to the opposite sides of the lower end of said rod and projecting below the same in parallel relation between which plates said link is adapted to pass, a bolt or rivet between said plate extensions with which said notch is adapted to engage and connect said windmill rod and pump rod, an offset on said link below the notch and on the opposite sides of the link therefrom, a lever having a curved quadrant upper end terminating in a hub pivotally connected by means of said hub to said offset, an eye on the side of one of said plates at its lower end through which said quadrant end of the lever passes, and a hook near the lower end of the link to engage the lower end of said lever and lock the same against movement and the link in separable engagement with the windmill rod.

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1,224,418. FLUX FOR WELDING NICKEL AND NICKEL ALLOY. RICHARD SAMESREUTHER, Dusseldorf, Germany, assignor of one-half to the Firm of Autogenwerk Sirius, Gesellschaft mit beschrankter Haftung, Dusseldorf-Eller, Germany. Filed Dec. 29, 1914. Serial No. 879,445. (Cl. 75—187.)

1. Flux for autogenous welding of nickel consisting of a mixture of alkali, metal chlorid and chromium to be applied on the edges of the weld and on the filling wire.

2. Flux for autogenous welding of nickel consisting of a mixture of alkali, metal chlorid and chromium, whereof part of the substances is combined to make a paint to be applied on the edges of the weld and on the filling wire and part of the substances is incorporated in the filling wire.

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1,224,419. BRAKE-SHOE. HERMAN K. SCHOENHEITER, Baltimore, Md., assignor to The American Brake Shoe and Foundry Company, Wilmington, Del., a Corporation of Delaware. Filed Aug. 26, 1916. Serial No. 117,016. (Cl. 188—27.)



1. A brake shoe comprising a body portion of cast metal having embedded therein two or more different members of different metal from said shoe body and from each other, and so arranged throughout the vertical height of the shoe that at all times during the life of said shoe some portion of all of said members and said shoe body forms the tread surface.

2. A brake shoe comprising a body portion of cast metal having embedded therein two or more different members of different castings so arranged throughout the vertical height of the shoe that at all times during the life of said shoe, said body metal, and a portion of all of said members form the tread surface of said shoe.

3. A brake shoe having a plurality of independent differently shaped members embedded in the casting of the body portion thereof, and so arranged throughout the vertical height of the shoe that a portion of said members and of the shoe body metal are at all times during the wear of said shoe on the bearing surface thereof.

4. A brake shoe comprising a body portion having a plurality of wave shaped strips arranged one above the other and in contact with each other, and embedded in said shoe to extend the substantial longitudinal length thereof.

5. A brake shoe comprising a body portion having a wave shaped strip embedded therein to extend the substantial longitudinal length thereof and an insert of cast metal also embedded in said shoe body and arranged to extend the vertical height of said shoe.

[Claims 6 to 8 not printed in the Gazette.]

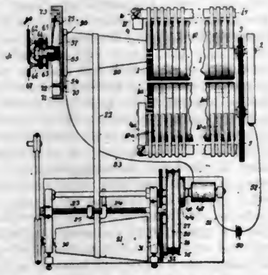
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1,224,420. SYNCHRONIZER. MELVIN L. SEVERY, Arlington Heights, Mass., and GEORGE B. SINCLAIR, Georgetown, Me., assignors to Choralcelo Company, Boston, Mass., a Corporation of Maine. Filed Mar. 15, 1913. Serial No. 754,475. (Cl. 64—4.)

1. In combination with a driving device and a mechanism driven thereby; electrically controlled means for regulating the speed of the driven mechanism, said means including a circuit closer for its energizing circuit consisting of a very light contact block carried by a resilient support mounted in or upon and movable with a rotating element of the driven mechanism, and a second contact



insulated from the first and suitably secured to said rotating element of the driven mechanism.



2. The combination with a driving device and a mechanism driven thereby, of a speed regulator for the driven mechanism comprising an accelerative and a retardative factor, one of which is constantly in operation during the operation of the driven mechanism; and an electric controlling mechanism for bringing into operation the other of said factors upon the occurrence of a predetermined speed change, said controlling mechanism including an electric circuit closer comprising a light contact member carried by a resilient arm mounted in or upon a rotating part of the driven mechanism, and a second contact also carried by said rotating part but insulated from the first contact.

3. The combination with a driving device and a mechanism driven thereby, of an electrically controlled speed-regulator for the driven mechanism, including a circuit closer consisting of a resilient member mounted in or upon a rotating part of the driven mechanism and having at its free end a contact member, and a second contact insulated from the first and also carried by said rotating part, the movable contact and its supporting arm being very light and hence capable of responding instantly to minute speed changes.

4. The combination with a driving device and a mechanism driven thereby, of a speed-regulator for the driven mechanism comprising a driving member, a driven member, and an intermediate connection for transmitting motion from the driving to the driven member; means tending normally so to adjust the intermediate member as to increase the speed of the driven member; and electrically controlled means brought into operation upon increase of speed of the driven member to adjust the intermediate member in a way to decrease the speed of said driven member.

5. The combination with a driving device and with mechanism driven thereby, of a speed-regulator for the driven mechanism, including a driving member, a driven member, and an intermediate device for transmitting motion from one to the other of said members; means acting constantly to adjust the transmitting device in a direction to accelerate the speed of the driven member; means acting intermittently to move the transmitting device in a direction to diminish the speed of the driven member; an electromagnet serving when energized, to bring the latter means into operation upon occurrence of a predetermined maximum speed; and a circuit closer directly carried by a rotative part of the driven mechanism, and positioned by centrifugal force generated therein, alternately to complete and to break the magnet circuit in accordance with increase and decrease in the speed of said rotating part.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,421. HEADLIGHT. FRANCIS D. SHENK, Medford, and RALPH H. HOLMAN, Stoneham, Mass. Filed Dec. 16, 1915. Serial No. 67,105. (Cl. 240—48.4.)

1. A refractive screen for an automobile headlight having transverse prisms on its rear face for the downward refraction of light rays, the forward face of said prisms having a cylindrical concavity for the lateral refraction of the rays passing through the ends of the transverse prisms.



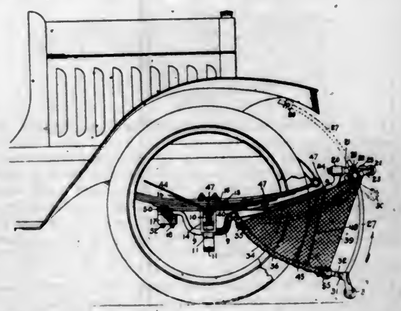
4. A refractive device for use with a headlight having a reflector, consisting of a member having transverse prismatic surfaces of downward refractive action on the reflected rays and having a surface so formed as to refract the reflected emerging rays on one side of an axial vertical plane of the reflector laterally away from said plane.

7. A refractive screen for use with a headlight having a reflector comprising surfaces of variant vertical distributive dispersion and surfaces of variant lateral distributive dispersion at and beyond the intercept of the roadway.

[Claims 2, 3, 5, and 6 not printed in the Gazette.]

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1,224,422. FENDER FOR VEHICLES. HIROO SHIHARA, Seattle, Wash. Filed June 11, 1914, Serial No. 844,494. Renewed Sept. 23, 1916. Serial No. 121,902. (Cl. 105—130.)



1. A fender, comprising a supporting frame having a plurality of supporting arms arranged for pivotal mounting on a relatively fixed angle; a swinging frame pivotally mounted on said supporting frame to drop below the same to form a forwardly-opening scoop; a hoisting mechanism permanently attached to the swinging frame and operable from the driver's seat; and means connecting said frames for guiding the relative movements thereof.

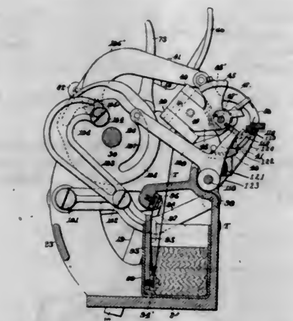
2. A fender, comprising a supporting frame embodying two horizontally forwardly-extending arms; pivot blocks for said arms to permit the same to swing horizontally and not vertically; means connecting said arms to maintain the same in parallel relation; a drop scoop frame mounted on said arms; and weights mounted on said arms, at the rear of the pivots thereof, to balance the weights of the forward portion of said arms and parts carried thereby.

3. A fender, comprising a supporting frame embodying a plurality of supporting arms; pivot blocks for said arms to provide for horizontal movement thereof; a drop scoop frame mounted on said arms opening forwardly and between the steering wheels of a vehicle; weights mounted on said arms to counter-balance the forward extension of said arms and frame carried thereby; and means for maintaining said arms in parallel relation to the vehicle wheels between which they are mounted..

4. A fender, comprising a supporting frame embodying a plurality of supporting arms; pivot blocks for said arms to provide for horizontal movement thereof; a drop scoop frame mounted on said arms opening forwardly and between the steering wheels of a vehicle; weights mounted on said arms to counter-balance the forward extension of said arms and frame carried thereby; means for maintaining said arms in parallel relation to the vehicle wheels between which they are mounted; and a buffer rail pivotally mounted on said arms, in advance thereof, said rail being adapted to move in a horizontal plane.

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1,224,423. TAKE-UP-ACTUATING MECHANISM FOR SEWING-MACHINES. PETER SJOSTROM, Maplewood, Mass., assignor to Victor Shoe Machinery Co., Lynn, Mass., a Corporation of Massachusetts. Original application filed Feb. 17, 1915, Serial No. 9,465. Divided and this application filed Aug. 4, 1915. Serial No. 43,899. (Cl. 112—20.)



1. In a sewing machine provided with mechanism for forming a lock stitch, the combination of a main driving shaft adapted to be oscillated and provided with means for actuating said stitch forming mechanism at each oscillation; a thread takeup lever; a disk on said drive shaft and oscillating therewith; a connector pivotally connected at opposite ends to said disk and lever; and means for imparting oscillatory movement to said main driving shaft.

2. In a sewing machine provided with mechanism for forming a lock stitch, the combination of a main driving shaft adapted to be oscillated and provided with means for actuating said stitch forming mechanism at each oscillation; a thread takeup lever, a disk on said drive shaft and oscillating therewith; a curved connector pivotally connected at opposite ends to said disk and lever and adapted to partially inclose said driving shaft during its movement about the axis of the pivotal connection with said disk; and means for imparting oscillatory movement to said main driving shaft.

3. In a sewing machine provided with mechanism for forming a lock stitch including a presser foot mechanism, the combination of a main driving shaft adapted to be oscillated and provided with means for actuating said stitch forming mechanism at each oscillation; means controlled by the presser foot mechanism for measuring the thread; a thread takeup lever; means on said oscillating driving shaft for operating said presser foot mechanism; a disk secured to said oscillating driving shaft; and a connector pivoted at one end to said disk and at the other end to said lever at a point intermediate the outer end and the pivot of said lever.

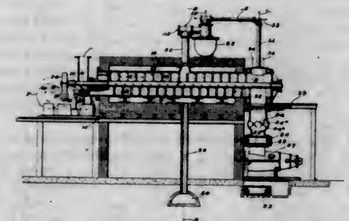
4. In a sewing machine provided with mechanism for forming a lockstitch, the combination of a main driving shaft adapted to be oscillated and provided with means for actuating said stitch forming mechanism at each oscillation; a disk on said drive shaft and oscillating therewith; a thread takeup lever below said disk; a connector pivoted at one end to said lever and pivoted at the other end to said disk at a point above and to the rear of said shaft, said connector being provided with a recess in its forward edge adapted to inclose said shaft during the oscillation of said disk; and means for imparting oscillatory movement to said main driving shaft.

5. In a sewing machine provided with mechanism for forming a lockstitch, the combination of a main driving shaft adapted to be oscillated and provided with means for actuating said stitch forming mechanism at each oscillation; a member on said drive shaft and oscillating therewith; a thread takeup lever below said member and pivoted to the frame of said machine at a point to the rear of said shaft; a connector pivoted at one end to said lever and pivoted at the other end to said member at a point above and to the rear of said shaft, said connector being provided with a recess in its forward edge adapted to inclose said shaft during the oscillation of said member; and means for imparting oscillatory movement to said main driving shaft.

[Claim 6 not printed in the Gazette.]

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1,224,424. PROCESS OF AND APPARATUS FOR TREATING COAL. CHARLES HOWARD SMITH, Short Hills, N. J. Filed May 5, 1916. Serial No. 95,547. (Cl. 202—8.)



1. The method of treating coal which method comprises heating the coal to drive off a substantial portion of the gases and tar vapors, fusing the particles into a coherent mass, maintaining the mass in said fused condition while gases and volatile vapors are passing therefrom, withdrawing said gases and volatile vapors, subsequently removing gases which are entrained with the coal while still in plastic condition, and finally compressing into a briquet the coal from which a substantial portion of the gases has been removed.

2. In the treating of coal the method which comprises heating the coal to drive off a substantial portion of the gases and vapors to fuse the coal into a plastic mass and to maintain the coal in said fused condition while the gases and volatile vapors are passing therefrom, agitating or mixing the coal while it is being heated, treating a portion of the mass after it has left the heating zone so that at least some of the gases entrained in the coal in said segregated mass will be liberated or eliminated therefrom and finally compressing into a briquet the coal from which some entrained gases have been substantially eliminated.

3. In the treating of coal the method which comprises heating the coal to drive off a substantial portion of the gases and vapors, to convert the coal into a fused condition and to maintain the coal in said fused condition while the gases are passing therefrom, the heat being continued or maintained until substantially all of the tar vapors within said coal have been eliminated except that portion necessary to keep the mass fused or plastic prior to compression and subsequently bind the pressed material, then treating a segregated portion of the mass while still in a fused or plastic condition and after it has left the heating zone to liberate or eliminate some of the gases entrained in said segregated mass and finally compressing into a briquet or briquets.

4. The method of treating finely divided or pulverized coal which method comprises heating the coal to drive off a substantial portion of the gases and vapors and maintaining the coal in a fused condition while the gases and vapors are passing from the coal, then removing from the fused or plastic material gases which are entrained therein and finally compressing said material into a briquet.

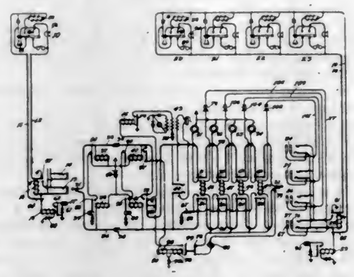
5. The method of treating coal which consists in heating the coal sufficiently to render it in a fused condition and to drive off a substantial portion of the volatile matters contained therein, removing the coal from the heating zone and while it still remains in said fused condition, treating the mass so as to free it of gases mixed therewith and finally compressing the treated mass into a briquet.

[Claims 6 to 32 not printed in the Gazette.]

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1,224,425. TELEPHONE SYSTEM. LE ROY W. STANTON, Davenport, Iowa. Filed June 26, 1916. Serial No. 105,891. (Cl. 179—35.)



1. A telephone system comprising a poly-station line; a plurality of connection terminals associated with said line; a link circuit; a connection terminal for connecting said link circuit to said line through any one of said connection terminals; a plurality of sources of ringing current, each being individual to one of the stations on said line; connections for operatively connecting said sources to said link circuit; relays for controlling said connections, each relay corresponding to and being usable only with one of said line connection terminals; and additional connections whereby said relays are operated individually according to the particular line connection terminal used in connecting the link circuit to the line.

2. A telephone system comprising a poly-station line, a plurality of connection terminals associated with said line, a link circuit, a connection terminal for connecting said link circuit to said line through any one of said connection terminals, a plurality of sources of ringing current, connections for individually connecting each of said sources to said link circuit, a relay individual to each of said sources and operative only to control the connections of the particular associated source, and additional connections whereby said relays are individually and selectively operated according to the particular line connection terminal used in connecting the link circuit to the line.

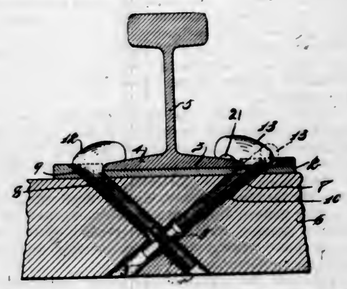
3. A telephone system comprising a poly-station line, a plurality of connection terminals associated with said line, a link circuit, a connection terminal for connecting said link circuit to said line through any one of said connection terminals, connections for providing a local circuit for each of said line connection terminals, a ringing relay in each of said local circuits, sources of ringing current corresponding to said ringing relays, and connections for bringing each of said sources into circuit with the connected line when the corresponding ringing relay is energized.

4. A telephone system including a telephone line of two conductors, substation apparatus, a link circuit having two talking conductors, tip and sleeve terminal contacts for uniting the conductors respectively of said line and link circuit, tip and sleeve relays and interposed battery in bridge of said talking conductors, a ringing source, means for connecting said source in circuit with said line conductors when connected to said link circuit talking conductors, a relay and connections for controlling said means, and connections for controlling said latter relay which are controlled in turn by said tip and sleeve relays.

5. A telephone system comprising a telephone line of two limbs, a link circuit of two strands for connecting with said line, a ringing relay actuated in response to the connection of said line and link circuit, a source of ringing current connected to said line by the actuation of said ringing relay, a control relay for varying the circuit of said ringing relay, and a pair of relays for in turn controlling said control relay, said pair of relays being connected one to one of said link circuit strands and the other to the other and one being controllable over said line and one of said strands and the other being controllable over a local circuit including a portion of the other of said strands and a portion of a limb of the connected line.

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1,224,426. RAIL-FASTENING. JAMES ROBERT STEELE, JR., Owego, N. Y., assignor to Steele Rail Anchor Company, Inc., Owego, N. Y., a Corporation of New York. Filed Dec. 4, 1912, Serial No. 734,838. Renewed Sept. 9, 1916. Serial No. 119,280. (Cl. 238—4.)



1. The combination with a rail and an underlying tie having formed holes therein extending diagonally beneath the rail, of fasteners having integral laterally extending heads engaging the flanges of the rail and plain cylindrical shanks inserted in said holes, and a tie plate having openings receiving and closely engaging said shanks, the tie plate resting on the fasteners.

2. In a rail fastening, the combination of a tie plate and fasteners having integral heads engaging the rail flanges and plain shanks passing through and closely fitting the openings of the tie plate and entered diagonally into the tie, the tie plate resting on the fasteners.

3. In a rail fastening, the combination of a tie plate and fasteners having integral laterally extending heads engaging the rail flanges and plain shanks circular in cross-section passing through the tie plate and extending diagonally beneath the rail, the tie plate having openings to fit the fasteners.

4. In a rail fastening, the combination of a tie plate and fasteners having integral laterally extending heads and plain shanks circular in cross-section passing through the tie plate into the tie in directions diagonal both transversely and longitudinally to the rail, the tie plate resting on the fasteners.

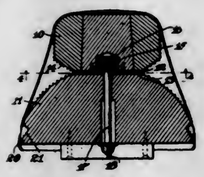
5. A rail fastening comprising a tie plate having openings and fasteners having integral laterally extending heads engaging the rail flanges and plain shanks circular

in cross-section extending diagonally beneath the rail, the upper parts of the shanks fitting closely in the openings of the tie plate, which rests upon the diagonal fasteners.

[Claims 6 to 18 not printed in the Gazette.]

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1,224,427. HAT-SHAPING APPARATUS. LESLIE STEVENS, Glen Ridge, N. J. Original application filed June 3, 1909, Serial No. 499,904. Divided and this application filed July 17, 1913. Serial No. 779,491. (Cl. 223—31.)



1. A form for shaping crowns of extension-crown hats, having its outer face or base formed with an outwardly inclined shaping surface extending inwardly from the sides of the form, such inclined shaping surface making a clearly defined angle with the sides of the form and providing a shaping surface of substantial width extending in an approximately straight incline from such angle.

2. A form for shaping crowns of extension-crown hats, having on its outer face or base a forming shoulder for determining the shape and size of the head opening of the hat and an outwardly inclined surface surrounding the forming shoulder, such inclined surface making a clearly defined angle with the sides of the form and providing a shaping surface of substantial width extending in an approximately straight incline from such angle to said forming shoulder.

3. A form for shaping crowns of extension-crown hats, having on its outer face or base a forming shoulder for determining the size and shape of the head opening of the hat and of a width corresponding to the desired width of the head band, and an outwardly inclined surface surrounding the forming shoulder, such inclined surface making a clearly defined angle with the sides of the form and providing a shaping surface of substantial width extending in an approximately straight incline from such angle to said forming shoulder.

4. Apparatus for shaping one-piece extension-crown hats, comprising a crown form having its outer face or base formed with an outwardly inclined shaping surface extending inwardly from the sides of the form, a brim form, and means for holding said forms in position relatively to each other with the inner portion of the shaping surface of the brim forming facing said inclined shaping surface of the crown form and with an outwardly opening space between them.

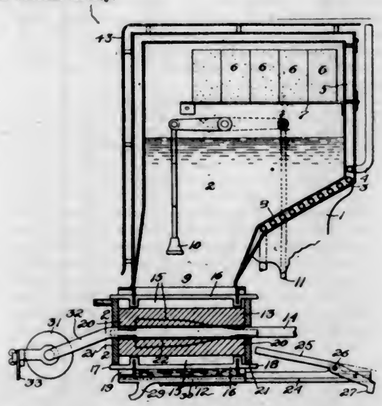
5. A form for shaping one-piece extension-crown hats, comprising a crown form having its outer face or base formed with an outwardly inclined shaping surface extending inwardly from the sides of the form, a brim form having an outwardly inclined shaping surface, and means for separably holding said forms together with their outwardly inclined shaping surfaces facing each other.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,428. APPARATUS FOR AUTOMATICALLY FILLING SHOE-BOTTOMS. ANDREW THOMA, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y., a Corporation of Maine. Filed Apr. 28, 1906. Serial No. 314,127. (Cl. 12—1.)

1. A filler machine, constructed and arranged to permit the presentation thereto of a shoe with its bottom cavity in position to be filled by said machine, and having means operable at the will of the operator for controlling the filler delivery and amount delivered as desired, into said bottom cavity.



2. An insole filling machine, comprising, in combination, automatic insole-filling mechanism to provide an insole with a layer of adhering filling material, said mechanism including means for putting a predetermined quantity of said material into the insole cavity, and operating means for actuating said last-mentioned means.

3. An apparatus for filling shoe-bottoms, comprising a reservoir of filler supply, measuring means for removing a predetermined measured amount of the filler from said supply, and work presenting means to present an insole in operative relation to said measuring means to receive said measured amount of shoe filler.

4. In a machine for handling shoe-bottom filler, means for delivering shoe filler to the bottom cavity of a shoe, controlling means for regulating the amount of filler delivered, and bottom laying means adjacent the delivery portion of the machine in position to permit the operator to press the shoe forcibly with both hands against the same for leveling and packing the filler into the shoe-bottom cavity.

5. A machine for filling the bottom cavity of shoes, comprising means for delivering shoe-bottom filler material into a shoe-bottom, means under the control of the operator, for the predetermined regulation of the amount of filler so delivered, and laying means adjacent the delivery portion of the machine for leveling and pressing the delivered filler into the shoe-bottom.

[Claims 6 to 27 not printed in the Gazette.]

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1,224,429. VEHICLE-WHEEL. SOLOMON THOMAS, near New Cambria, Mo., assignor of one-half to N. A. Balding, Calvin Elam, and J. J. Williams, Ethel, Mo. Filed Aug. 12, 1915. Serial No. 45,268. (Cl. 152—48.)

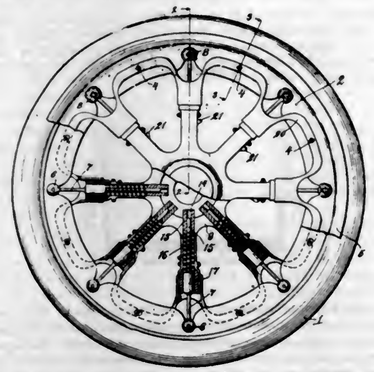
1. In a resilient wheel, a hub, a web rigid therewith, a second web detachably secured to the hub, a head in the space between said webs, a stem guided in said head, a spring around the stem, a plunger bearing against the other end of said spring, a flexible member connected with the plunger, a flanged rim, a ball and socket connection between said flexible member and rim, and lateral guide members at the rim rigid with and continuations of said webs of the hub and embracing the rim.

2. In a resilient wheel, a hub, webs radiating therefrom, spring members in the spaces between the webs, flexible members operatively connected with said spring members, an outer rim, ball and socket connections between the same and the flexible members and lateral guide members at the rim rigid with and continuations of said webs and engageable with the rim.

3. A resilient wheel comprising a hub having affixed thereto a series of radially arranged webs with elongated



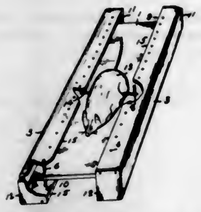
cylindrical spaces therebetween, a head in each cylindrical space having an axial bore, a stem reciprocable in said bore, a spring bearing at one end against said head, a plunger contacting with the other end of said spring, a bushing in an expanded portion between said webs, a



steel spring carried by said plunger, peripheral lateral guide members continuous of said webs and of each other, an outer rim embraced by said lateral guide members, and a ball and socket connection between the outer end of said spring and the outer rim.

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1,224,430. TOY. WILLIAM B. THURMAN, Madera county, Cal. Filed July 15, 1915. Serial No. 40,146. (Cl. 46—40.)



1. A toy comprising in combination a travel board having a substantially straight pathway, a row of upstanding pins on each side of said pathway, the pins in one row being out of transverse alinement with the pins in the other row, and a traveling member having projections engaging said pins alternately on the opposite sides.

2. A toy including a travel board; side strips overhanging the edges of said board; pins projecting through said strips and said board; the pins in one strip being out of transverse alinement with the pins in the other strip, a traveling member having projections engaging said pins.

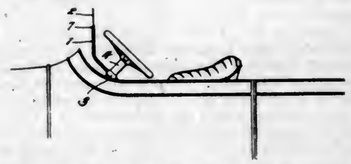
3. A toy including a travel board; side strips overhanging the edges of said board; end pieces on said strips spaced from the ends of said board; pins projecting through said strips and said board, the pins in one strip being out of transverse alinement with the pins in the other strip, and a traveling member having projections engaging said pins.

4. A toy comprising in combination a travel board having a substantially straight pathway thereon, a row of upstanding pins defining said pathway on each side, said pins being out of transverse alinement with each other, a traveling member having projections engaging said pins alternately on opposite sides, and means for concealing said pins from above.

5. A toy including a travel board; side strips overhanging the edges of said board; pins projecting through said board, and the strips on opposite sides of said board and out of transverse alinement with each other; end pieces on said strips spaced from the ends of said board; and a traveling member having projections engaging said pins alternately on opposite sides.

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1,224,431. MOTORIST'S EYE-SHIELD. JOHN VAN VORST, Scotia, N. Y. Filed Mar. 6, 1916. Serial No. 82,464. (Cl. 21—148.)



1. An eye shield of the class described comprising a pliable tube formed of a coiled strip of metal and having an internal shoulder following the convolutions of said coiled strip, a tapered plug received in one end of said tube and having external screw threads engaging said shoulder, said plug being split longitudinally into two parts whose outer ends extend beyond the tube and are fashioned into a pair of jaws, and a partially transparent plate having one edge gripped between said jaws.

2. An eye shield of the class described comprising a pliable tube formed of a coiled strip of metal and having an internal shoulder following the convolutions of said strip, a plug in one end of said tube having external screw threads frictionally contacting with said shoulder, such friction serving to contract the convolutions of the coil when an attempt is made to remove the plug by turning the same in a retrograde direction, thereby holding said plug against rotation in this direction, and a partly transparent plate carried by the plug.

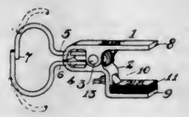
3. An eye shield of the class described comprising a pliable tube formed of a coiled strip of metal and having an internal shoulder following the convolutions of said strip, a plug in one end of said tube having external screw threads frictionally contacting with said shoulder, such friction serving to contract the convolutions of the coil when an attempt is made to remove the plug by turning the same in a retrograde direction, thereby holding said plug against rotation in this direction, and a partly transparent plate carried by the plug.

4. An eye shield of the class described comprising a pliable tube formed of a coiled strip of metal and having an internal shoulder following the convolutions of said strip, a plug in one end of said tube having external screw threads frictionally contacting with said shoulder, such friction serving to contract the convolutions of the coil when an attempt is made to remove the plug by turning the same in a retrograde direction, thereby holding said plug against rotation in this direction, a cam carried by the plug for expanding the convolutions of the tube when said plug is turned in the opposite direction, thus releasing the shoulder from engagement with the screw threads, and a partly transparent plate carried by said plug.

5. An eye shield of the class described comprising a tube having an internal screw thread at one end, a partially transparent eye shielding plate, and a clamp for securing said plate to the tube, said clamp comprising a pair of stamped metal semi-tubular members having external screw threads stamped thereon and serving to form a tapered attaching shank which is threaded in said end of the tube, the outer ends of the aforesaid members having thereon flat jaw plates between which the aforesaid eye shielding plate is gripped.

[Claims 6 and 7 not printed in the Gazette.]

1,224,432. CHECKING DEVICE. FRANK WEDGE, Elysian, Minn. Filed Feb. 14, 1916. Serial No. 78,282. (Cl. 40—10.)

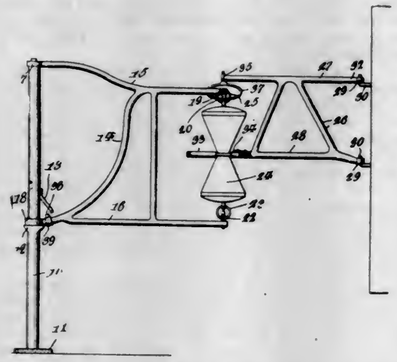


1. In a checking device the combination of a body comprised of two sections joined with a hinged connection, means on one of said sections for clamping a pad of identifying slips, a pair of U shaped extensions associated with said pair of sections, the outer end of which normally connects, and the inner end of which forms a spring for holding said pair of sections normally apart.

2. In a checking device the combination of a body comprised of two sections pivotally connected together, means on one of said sections for clamping an identifying pad of slips thereto, a pair of extensions from said sections exerting a spring tension on said sections to normally hold them open, the outer end of said extensions normally connecting and being adapted to open when said sections are closed.

3. In a checking device the combination of an identifying pad holder, means for clamping identifying pads thereon, a pair of distensible finger members normally closed against spring tension, and means associated with said identifying pad holder for distending said finger members.

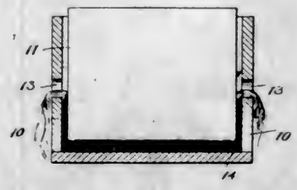
1,224,433. MAIL-CATCHER. WILLIAM R. WEST, Simla, Colo. Filed June 8, 1916. Serial No. 102,550. (Cl. 258—23.)



1. In a mail handling device, a station device comprising a standard, a frame having upper and lower arms having their inner end portions terminating in eyes for pivotally connecting the frame with the standard, a latching arm extending from said standard above the lower arm, a collar slidably mounted upon the lower arm and provided with spring arms for engaging the latching arm of said standard to releasably hold the frame in an adjusted position, said collar moving to a position out of engagement with the latching arm when the frame is swung upon the standard, sack holding means connected with the outer end portions of said arms and sack collecting means extending from one of said arms.

2. In a mail handling device, a station device comprising a standard, a frame having upper and lower arms pivotally connected with the standard, latching arm extending from said standard, a collar mounted upon one of the arms and provided with spring arms for engaging the latching arm of said standard to releasably hold the same in an adjusted position, sack holding means connected with said arms, and sack collecting means extending from one of said arms.

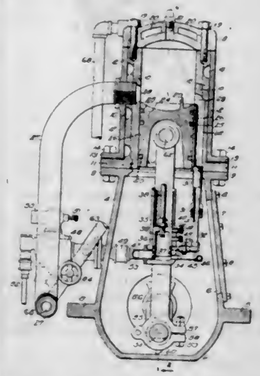
1,224,434. STORAGE BATTERY. THEODORE A. WILLARD, Cleveland, Ohio, assignor to Willard Storage Battery Company, Cleveland, Ohio, a Corporation of West Virginia. Filed May 12, 1915. Serial No. 27,481. (Cl. 204—53.)



1. In a storage battery, a battery box, one or more battery jars contained in the box and spaced from the side walls thereof, and a sealing compound filling the space between the jar or jars and the side walls of the box for a predetermined distance up from the bottom of the box, there being an overflow and ventilating space between the sealing compound and the top of the box.

2. In a storage battery, a battery box, a plurality of jars in the box and spaced from the side walls thereof, said box having openings in its side walls, a sealing compound securing the jars in the box and filling the space around the jars from the bottom of the box to said openings, the space between the jars and the box above said openings being open for overflow and ventilation purposes.

1,224,435. INTERNAL-COMBUSTION ENGINE. ROY C. WINCHESTER, Palmetto, Fla. Filed Aug. 27, 1915. Serial No. 47,607. (Cl. 123—173.)



1. In an internal combustion engine, the combination of a cylinder, a piston mounted therein, a driving shaft, connections from said piston to said driving shaft for the purpose of actuating said driving shaft, a pump having its piston connected with said engine piston and actuated directly by movements thereof, the pump piston being hollow and open at the bottom, connections from said pump to said cylinder for enabling said pump to discharge into said cylinder, and a carbureter connected with the lower part of said pump for supplying explosive charges thereinto, the said explosive charges being compressed in said pump.



2. In an internal combustion engine, the combination of a cylinder, a piston mounted therein, a pump having its piston connected with said engine piston and actuated by movements thereof, and means for maintaining a volume of air at the lower end of the pump cylinder to balance the thrust of the engine piston at the end of the down stroke.

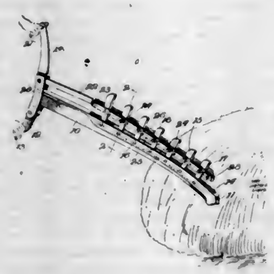
3. In an internal combustion engine, the combination with a cylinder, a piston movable therein, and a carbureter; of a pump having a cylinder and piston, the piston of said pump being connected with said engine piston and actuated by movements thereof, connections from said carbureter to said pump for enabling said pump to draw an explosive mixture from said carbureter into the pump cylinder and compress the same therein, and pipe connections from said pump to said cylinder for enabling said pump to charge said explosive mixture into said cylinder, the said connections being adjustable to vary the degree of compression exerted by the pump.

4. In an internal combustion engine, the combination with a cylinder, a piston movable within said cylinder, and a carbureter; of an air pump connected to said carbureter for the purpose of drawing a charge of explosive mixture from said carbureter into said pump, connections from said pump to said cylinder for enabling said pump to charge said explosive charge into said cylinder, and means connected with said pump below the said connections for the purpose of forming an air cushion in the lower part of the pump cylinder to balance the thrust of said piston at the end of the stroke thereof.

5. In an internal combustion engine, the combination with a cylinder, a piston movable therein, and a carbureter, of an air pump; connections between the air pump and the carbureter, the said air pump being actuated by the movements of the engine piston to draw a charge of explosive mixture from the carbureter into said pump and compress the same therein, connections between the air pump and the engine cylinder for enabling said pump to discharge the compressed explosive mixture into the engine cylinder, and means for varying the pressure exerted by the pump in compressing the charge.

[Claims 6 to 9 not printed in the Gazette.]

1,224,436. HAY-KNIFE. HENRY C. AMIS, Stanfield, Oreg. Filed July 6, 1916. Serial No. 107,795. (Cl. 30—8.)

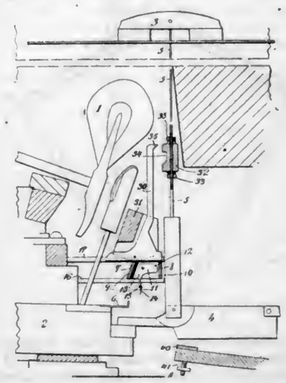


1. A device of the character described including a stock, a series of cutting blades pivotally connected to the stock and spaced longitudinally thereof, the said blades gradually increasing in length from the lowermost blade to the uppermost blade, and an operating member freely connected to the said blades for simultaneously shifting the blades relative to the stock.

2. A device of the character described including an elongated stock, a cutting blade pivotally connected at its inner extremity to the stock, and means having arms extending upon opposite sides of the blade intermediate the ends thereof and pivotally connected to the blade with the said means shiftable outwardly longitudinally of the stock to pivot the blade inwardly toward the stock and shift the cutting edge of the said blade between the said arms.

3. A device of the character described including a stock, a cutting blade pivotally connected at its inner extremity to the stock, an operating member pivotally connected to the blade intermediate the ends thereof, and a work holding member carried by said first mentioned member to extend longitudinally thereof in advance of the point of pivotal connection of the said operating member with the blade with the said operating member shiftable outwardly longitudinally of the stock to rock the blade inwardly toward the stock and move the free extremity of the blade past the said operating member and the said work holding member.

1,224,437. SOSTENUTO MECHANISM FOR PIANOS. ADRIANO ARIANI, New York, N. Y. Filed July 6, 1914. Serial No. 849,096. (Cl. 84—70.)



1. The combination with a key operated string instrument having dampers for the strings, of sostenuto mechanism comprising a movable support, guides for said support, means for imparting movement to said support, striking devices mounted on said support, damper stops mounted to be moved respectively by said striking devices and means controlled by the keys for actuating said striking device.

2. The combination with a key operated string instrument having dampers for the strings, of sostenuto mechanism comprising a support movable along a predetermined path, guides for said support, means for moving said support along said guides, striking devices movably mounted on said support, damper stops mounted to be moved respectively by said striking devices, and means controlled by the keys, for individually actuating said striking devices.

3. The combination with a key-operated string instrument having dampers for the strings, of sostenuto mechanism comprising a support movable along a predetermined path, striking devices movably mounted on said support, damper stops mounted to be moved respectively by said striking devices, means for mounting said damper stops, means for moving said support along said predetermined path and means controlled by the respective keys for actuating corresponding striking devices when said movable support passes an intermediate position of its path.

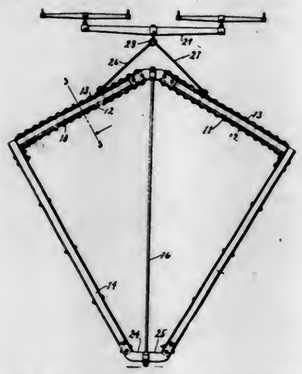
4. The combination with a key operated string instrument having dampers for the strings, of sostenuto mechanism comprising a movable support, means for moving said support, striking devices, means for mounting said striking devices on said support to effect rotational movement, damper stops mounted to be respectively moved by said striking devices and means individually controlled by the keys for individually actuating the corresponding striking devices.

5. The combination with a key operated string instrument having dampers for the strings, of sostenuto mechanism comprising a movable support, means for moving said support along a predetermined path, striking devices, means for mounting said striking devices on said support to effect rotational movement, damper stops mounted to be respectively moved by said striking devices, and means individually controlled by the keys for individually actuating said striking devices when said support passes an intermediate point along said predetermined path.

[Claims 6 to 15 not printed in the Gazette.]

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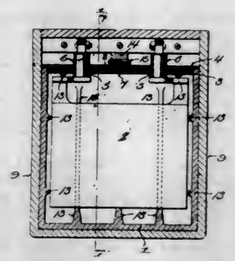
1,224,438. ROAD-DRAG. NICOLAI J. BERGE, Deerfield, Wis. Filed Nov. 27, 1916. Serial No. 133,608. (Cl. 37—5.)



In a road drag, in combination, an axial member, a pair of backwardly inclined toothed bars and a pair of scraper bars extending from the outer ends of the toothed bars backwardly to the axial member, all of said bars being hinged for vertical flexure at their inner ends.

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1,224,439. SHOCK-ABSORBER FOR BATTERIES. FREDERICK N. BOSSON, Calumet, Mich., and LYSANDER B. ARMSTRONG, Milwaukee, Wis. Filed Aug. 20, 1915. Serial No. 46,576. (Cl. 204—29.)



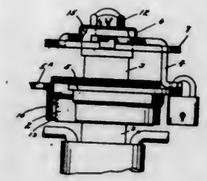
1. A container for battery elements embodying a casing having a series of independently removable cellular units adapted to nest within the same and in contact with each other, each cellular unit comprising a rectangular soft rubber jar, the walls of which were adapted to serve as a cushion for shielding the battery elements from shock incidental to vibration or jar of the casing walls.

2. A jar for the active elements of storage and other batteries formed of soft rubber and adapted to serve as a cushion for shielding said active elements from shocks and jars, horizontal ribs on the inner faces of a pair of oppositely disposed walls and vertical ribs on the inner faces of the other walls, said ribs serving to procure a further cushioning of the active elements disposed in the jar and to assist in retaining the normal shape of the jar.

3. A jar for the active elements of storage batteries formed of soft rubber and adapted to serve as a cushion for shielding said elements from shock and jars, ribs on the inner faces of oppositely disposed vertical walls, and other ribs on the inner faces of the bottom walls, said ribs serving to procure a cushioning of the active elements disposed in the jars and to assist in retaining the normal shape of the jars.

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1,224,440. STEERING-WHEEL-LOCKING MEANS FOR AUTOMOBILES. JUNIUS A. BOWDEN, Los Angeles, Cal. Filed Aug. 7, 1916. Serial No. 113,625. (Cl. 70—90.)



1. Means for locking the steering wheel of an automobile in combination with the steering wheel and gear case near the hub of the steering wheel, comprising a collar having a flange and a perforation in said flange as one element, an arm having a perforation in its outer extension as a second element, one of said elements adapted to be secured to the hub of the steering wheel and the other element adapted to be secured to the housing of the steering gears, said perforation in the arm and said perforation in the flange adapted to register with each other whereby the arm and flange may be secured together by means of a lock.

2. Means for locking the steering wheel of an automobile in combination with the steering wheel and gear case near the hub of the steering wheel, comprising a collar having a flange and a performation in said flange, an arm, said arm having an enlarged end, an opening in said end, said opening adapted to register with and engage the hub of said wheel, means adapted to rigidly secure said end to said hub adapted to prevent rotation and displacement of the arm, means for securing said collar to said housing, a perforation in the smaller end of said arm, the perforation in said flange and the perforation in said arm adapted to register with each other whereby the arm and flange may be secured together by means of a lock.

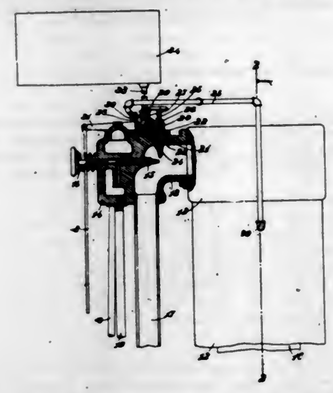
3. Means for locking the steering wheel of an automobile in combination with the steering wheel and gear case near the hub of the steering wheel, comprising a collar having a flange and a perforation in said flange, an arm, said arm having an enlarged end and opening in said end, said opening adapted to register with and engage the hub of said wheel, means adapted to rigidly secure said end to said hub, said means comprising projecting members on said enlarged end adapted to extend between the spokes of said wheel and engage the base of the spokes adapted to prevent rotation and displacement of the arm, means for securing said collar to said housing, a perforation in the smaller end of said arm, the perforation in said flange and the perforation in said arm adapted to register with each other whereby the arm and flange may be secured together by means of a lock.

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1,224,441. KEROSENE ATTACHMENT FOR GASOLENE-ENGINES. ARTHUR WARREN BRACKIN, Letohatchie, Ala. Filed July 31, 1916. Serial No. 112,241. (Cl. 123—25.)

1. A kerosene attachment for water-cooled gasolene engines comprising an injector provided with means for attachment to the engine intake in communication therewith, means for supplying priming fluid to said injector, and a pipe leading to said injector and having a coupling adapted for connection with the cooling system of the engine, said fluid supplying means and pipe being arranged for alternative communication with said injector.





2. A kerosene attachment for water-cooled gasolene engines comprising an injector communicating with the engine intake, a pipe communicating with the water jacket of the engine, and an auxiliary supply for priming fluid, said attachment having provision for placing said pipe and auxiliary supply alternatively into communication with said injector.

3. A kerosene attachment for water-cooled gasolene engines comprising a needle valve communicating with the engine intake, a pipe communicating with the water jacket of the engine, an auxiliary gasolene tank, and a two-way valve adapted to place said pipe and tank alternatively into communication with said needle valve.

4. The combination with an engine having a water-jacketed working cylinder, a charge forming device, and an intake leading from said charge forming device to said cylinder, of an injector communicating with said inlet, a pipe leading from the water jacket of said engine to said injector, and an auxiliary fuel supply, said pipe and fuel supply being arranged for alternative communication with said injector.

5. The combination with an engine having a cylinder, a water jacket provided with a tapped opening, a charge forming device, and an intake leading from said charge forming device to said cylinder and having a tapped opening, of an injector comprising a threaded, needle-valve-controlled nozzle located in the opening in said intake, a pipe leading to said injector and terminating in a threaded nipple located in the opening in said water jacket, and a fluid supply tank connected with said injector.

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1,224,442. TRANSFERRING PHOTOGRAPHIC PRINTS FROM SEPARATE SUPPORTS TO A SINGLE SUPPORT. PERCY DOUGLAS BREWSTER, East Orange, N. J. Filed June 7, 1916. Serial No. 102,170. (Cl. 41—33.)

1. The method of treating photographic prints on transparent supports, comprising treating one of the prints to toughen the emulsion and loosen the same from its support; coating the face of such print with a suitable cement or adhesive capable of setting without drying; placing the other print, face down, upon and in registry with the first print and allowing the cement to set; removing the transparent support of the first print whereby its emulsion-film is left on the emulsion-film of the other, the two forming a combined print; treating the combined print to toughen the lower emulsion-film and loosen it from its support; and transferring the two emulsion-films to a permanent support.



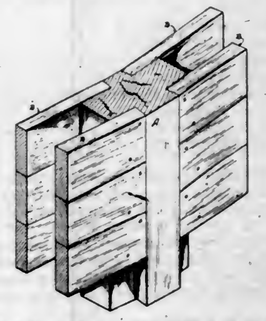
2. The method of treating photographic prints to transfer the same from separate supports to a single flexible support, comprising treating one of the prints to toughen and loosen its emulsion-film; cementing the other print on the first, face to face; removing the support of the first emulsion-film, leaving the two films on the support of the second film, treating the latter to toughen the same and loosen it from its support; and transferring the two films to a permanent flexible support.

3. The method of treating photographic color prints to transfer the same from separate rigid supports to a single flexible support such as opaque white celluloid or paper, comprising treating the first print to toughen its emulsion-film and loosen the same; cementing the other print upon the first, face to face, with a cement capable of setting without drying; removing the first support, leaving the two emulsion films cemented together on the second support, forming a combined print; treating the combined print to toughen the underlying emulsion film and loosen it from the rigid support; cementing the desired permanent flexible support to the uppermost emulsion-film of the combined print; and stripping off the flexible support with the two emulsion-films cemented to it.

4. The method of treating photographic color prints to transfer the same from separate rigid supports to a single flexible support, comprising treating the first print to toughen and loosen its emulsion film; coating its emulsion film with a cement containing gelatin; applying the second print to the first, face to face, and allowing the cement to set; removing the rigid support of the first print, leaving the two emulsion films on the second support to form a combined print; treating the latter to toughen the underlying emulsion-film and loosen the same from its support; coating the face of the combined print with a suitable cement; applying the desired permanent flexible support to the face of the combined print and allowing the same to adhere firmly thereto; and stripping off the flexible support with the two emulsion films adhering to it.

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1,224,443. STUD FOR THE ERECTION OF CIRCULAR STRUCTURES. WILLIS BRINDLEY, Seattle, Wash. Filed July 8, 1914. Serial No. 849,749. (Cl. 20—1.4.)



1. In a silo, a plurality of vertically arranged studs of substantially rectangular configuration in cross section

adapted to be arranged in spaced circular relation, each of said studs being rabbeted at its opposite corners upon the inner and outer sides thereof, the rabbets upon the inner sides of the studs being of greater depths than the rabbets upon the outer sides, and a plurality of horizontal staves of equal lengths having their ends received and retained in said rabbets upon the inner and outer sides of the studs to present two concentric walls, the aggregate lengths of the inner and outer staves being identical.

2. A double walled silo formed of horizontal staves including vertical studs of substantially rectangular cross sections having the four corners thereof rabbeted with the rabbets upon the inner sides being of greater width than the rabbets upon the outer sides, and a plurality of horizontal staves of equal lengths having right angle ends received in said rabbets to present inner and outer concentric walls, the rabbets being cut at such angles whereby the silo will assume a circular formation with faces of the staves and rabbets contacting over their entire adjacent faces, the aggregate lengths of the inner and outer staves being identical.

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1,224,444. HAIR-TRIMMER. WILLIAM H. BURNS, Chicago, Ill. Filed Aug. 7, 1915. Serial No. 44,264. (Cl. 30—12.)



1. A hair-cutter, comprising a main plate equipped with a handle and provided with guard-teeth, a V-form guard disposed at one side of said plate and having one wing adjacent to said plate and an inclined wing, a blade, and means for clampingly securing the blade and the first-mentioned wing of said guard to said plate in adjusted relation with respect to the extremities of said teeth, said V-form guard having its folded edge disposed back of the cutting-edge of the blade and having its wings divergent rearwardly from the folded edge of the guard.

2. A hair-cutter, comprising a plate having its upper portion equipped with a handle and its lower portion equipped with guard-teeth, said plate provided with a vertical slot, a blade provided with a vertical slot, a guard having a wing parallel with said plate and an inclined wing, and a stud extending through said members and equipped with a clamping device.

3. A hair-cutter, comprising a plate having its upper portion bent at an angle to afford a handle and having its lower portion equipped with guard-teeth, said plate provided with a vertical slot, a guard having one wing provided with a central opening and having another wing extending at an angle from the first-named wing, a blade provided with a central opening, a stud extending through said slot and openings, and a clamping lever engaging said stud.

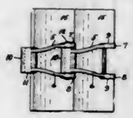
4. A hair-cutter, comprising a plate provided with a handle and equipped with guard-teeth, said plate having a central vertical slot, a stud adjustable in the said slot, a guard having a wing provided with a central opening through which said stud extends and having an inclined free wing, a blade interposed between said guard and plate and provided with a vertical slot, and a clamping lever disposed between the wings of said guard and engaging said stud.

5. In a device of the character set forth, the combination of a plate having its upper portion disposed at an angle affording a handle and having its lower portion equipped with guard-teeth, said plate provided with a vertical central slot, a guard having a wing parallel with said plate and an upwardly-inclined wing spaced with relation to said first-named wing, said first-named wing having a central perforation, a stud having a rear head engaging said plate adjacent said slot and having a smaller front head disposed in front of said first-named wing of said guard, a clamping lever located between the wings of said guard and detachably engaging the front head of said stud, and a blade detachably engaging said stud.

[Claims 6 to 10 not printed in the Gazette.]

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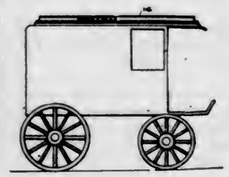
1,224,445. CONVEYER. FRANK W. BURPEE, South Bellingham, Wash., assignor to Burpee & Letson, Ltd., South Bellingham, Wash., a Corporation of Washington. Filed Apr. 19, 1916. Serial No. 92,308. (Cl. 193—2.)



A conveyer of the class described embodying a sprocket chain, each link thereof including a carrier element curved transversely to present a convexed upper side and a concaved lower side, a pair of angularly-disposed side bars carried by the concaved side of the carrier element and extending transeversely thereof, disk-like lugs formed on said side bars at the wider ends thereof, said lugs extending within the side limits of the carrier element, a cylinder carried by the narrower ends of the bars and lying completely beyond the adjacent side edges of the carrier element, the cylinder and lugs being apertured with the cylinder of one element lying between the lugs of the adjacent element, and a retaining pin passed through the registering openings in the lugs and cylinders, the adjacent edges of the carrier elements being beveled and lying at all times in overlapped relations.

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1,224,446. ADVERTISING APPARATUS FOR VEHICLE-TOPS. EDWARD A. CAMPBELL, St. Louis, Mo. Filed Nov. 8, 1915. Serial No. 60,180. (Cl. 40—129.)



1. In a device of the class described a rectangular supporting frame provided with sockets on its upper edge; a pintle mounted within said frame; an apertured plate adapted to be mounted on said pintle; and a plurality of display-sign members provided with hooks to engage said sockets and the apertures in said plate.

2. In a device of the class described a rectangular frame provided with sockets on its upper edge and composed of end-bars and side-bars; a plurality of display-sign members having pins to engage said sockets; said pins and sockets being so spaced that said sign members may be mounted and held in alinement with the end-bars or side-bars of said frame, or with one end of said sign-member engaging a side-bar and the other end engaging an end-bar of said frame.



1,224,447. VALVE MECHANISM. ARMISTEAD C. CRUMP, New York, N. Y. Filed Apr. 11, 1916. Serial No. 90,458. (Cl. 103—66.)



1. In an apparatus of the class described, a body portion and tubes in opposite sides thereof, said tubes provided with openings in their sides, second tubes over said first mentioned tubes also provided with openings, space between the interior wall of said body portion and said last mentioned openings, said space divided by a partition, and said space on one side of said partition open to the atmosphere.

2. In an apparatus of the class described, a pair of tubes connected together by a plug, a central tube extending in the open end of one of said tubes adjacent the end of said plug; and a central tube extending through the open end of the other of said tubes through said plug, each of said central tubes provided with openings within said first mentioned tubes, second tubes over said central tubes also provided with openings communicating with the space between said second tubes, and the interior of said first mentioned tubes, and an opening from said space to the atmsophere through the end of one of said first mentioned tubes whereby air may be alternately pumped through one of said central tubes into the atmosphere and drawn from one of said central tubes through the other of said central tubes by way of one set of said openings in one of said central tubes, and in the second tube over said one of said central tubes.

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1,224,448. DEVICE FOR REMOVING SNOW, STORM-WATER, AND SEWAGE. LOUIS DAVIDSON, New York, N. Y. Filed June 18, 1914. Serial No. 845,797. (Cl. 94—2.)



1. In a device of the character described, a receptacle for snow and water having its bottom above the bottom of a sewer and having an entrance opening into a low part of the street, covers therefor which are removable to permit insertion of snow therein and having openings to permit the passage of water, and a connection from the lower part of said receptacle to the sewer.

2. In a device of the character described, a surface drain having its bottom above the bottom of a sewer, covers therefor which are perforated to permit the passage of water, and a conduit leading from a lower part of said receptacle to the sewer, said drain extending in a substantially continuous line throughout the territory drained and forming an auxiliary high level sewer.

3. In a device of the character described, a receptacle for snow located below the surface of the street, having covers which are removable to permit the insertion of snow therein, said receptacle being located over a sewer and extending in a substantially continuous line to the outlet, and openings being provided between said receptacle and said sewer through which drainage water may pass.

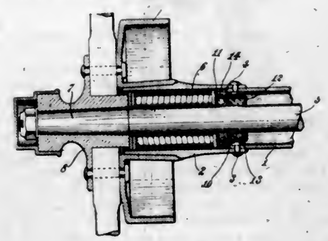
4. In a device of the character described, a receptacle for snow located below the surface of the street, having covers which are removable to permit the insertion of snow therein, said receptacle being located over a sewer and extending in a substantially continuous line between the manholes thereof, the receptacles on the sides of the manholes being connected to permit the flow of water, and openings being provided from the lower part of the receptacle to the manholes.

5. In a device of the character described, a receptacle for snow and storm water located below the surface of the street, having covers which are removable to permit the insertion of snow therein and are perforated to permit the passage of storm water, said receptacles being located over a sewer and extending in a substantially continuous line between the manholes of said sewer, said receptacles on each side of a manhole being connected and openings being provided from a low part of the receptacle to the sewers, whereby said receptacle serves as a receptacle for snow and serves to convey the melted snow to the sewer and as an auxiliary to the sewer in carrying off storm water.

[Claims 6 to 19 not printed in the Gazette.]

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1,224,449. AUTOMOBILE-AXLE CONSTRUCTION. CLARK A. DEAN, St. Louis, Mo., assignor, by mesne assignments, to Shurnuff Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 13, 1915. Serial No. 61,276. (Cl. 137—115.)



1. In an automobile, an axle casing, an axle therein, and a lubricant-retaining packing device positioned between the axle and the casing, said packing device comprising felted packing and a frame therefor adapted to maintain said packing in sealing engagement with both the axle and the casing.

3. In an automobile axle casing, a lubricant retaining packing device adapted to be positioned between the axle and the casing and comprising, a frame, a felted packing ring in said frame adapted to engage the axle, and a felted packing ring on said frame adapted to engage the casing.

5. In an automobile axle casing, a lubricant retaining packing device adapted to be positioned between the axle and the casing and comprising, a frame, a felted packing ring in said frame adapted to engage the axle, and a felted packing ring on said frame adapted to engage the casing, said frame having flanges adapted to engage said rings.

6. In an automobile axle casing, a lubricant retaining packing device adapted to be positioned between the axle and the casing and comprising, a frame, a felted packing ring in said frame adapted to engage the axle, a felted packing ring on said frame adapted to engage the casing, and a bearing ring engaging one of said packing rings.

8. In an automobile, an axle casing having an end shoulder, an axle therein, a bearing between said axle and said casing, and a lubricant-retaining packing device between said axle and said casing comprising a frame, a felted packing ring between said shoulder and said frame and compressed to engage said casing, and a felted packing ring between said bearing and said frame and compressed to engage said axle.

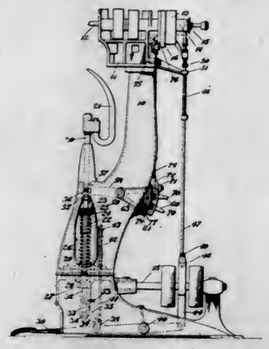
[Claims 2, 4, and 7 not printed in the Gazette.]

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1,224,450. HORN FOR FASTENER-INSERTING MACHINES. STEPHEN A. DOBYNE, St. Louis, Mo., assignor to Champion Shoe Machinery Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 21, 1914. Serial No. 820,216. (Cl. 1—41.)

1. In a machine of the class described, a machine frame, a horn or work support having a bearing in said

frame, a spring for maintaining said horn in raised position, means operating intermittently during the operation of the machine for depressing said horn against the action of said spring, a movable abutment for said spring and slidable in said frame, and manually controlled means constructed and arranged to move said abutment to one position adapted to raise said horn and to another position adapted to drop said horn.



2. In a machine of the class described, a machine frame, a horn or work support having a bearing in said frame, a spring for maintaining said horn in raised position, means operating intermittently during the operation of the machine for depressing said horn, a movable abutment for said spring and slidable in said frame, a treadle, and means connecting said treadle to said abutment.

3. In a machine of the class described, a machine frame, a horn or work support having a bearing in said frame, a spring for maintaining said horn in raised position, means operating intermittently during the operation of the machine for depressing said horn against the action of said spring, a movable abutment for said spring and slidable in said frame, a horn spindle slidable in said abutment, and a treadle connected to move said abutment adapted to raise and lower said horn.

4. In a machine of the class described, a machine frame, a horn or work support having a bearing in said frame, a spring for maintaining said horn in raised position, a movable abutment for said spring, mechanism having a connection to said horn above said spring for intermittently depressing said horn against the action of said spring, and a treadle connected with said abutment and adapted to raise and lower said horn.

5. In a machine of the class described, a machine frame, a horn or work support having a bearing in said frame, a spring for maintaining said horn in raised position, a movable abutment for said spring, mechanism for intermittently depressing said horn against the action of said spring, a treadle, a bell crank lever mounted in said frame and connected with said treadle, and a link connecting said abutment and said bell crank lever.

[Claims 6 to 20 not printed in the Gazette.]

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1,224,451. HINGED LAST. CHARLES C. DODGE, Boston, Mass. Filed Dec. 5, 1914. Serial No. 875,630. (Cl. 12—136.)

1. A hinged last comprising a forepart, a heelpart, hinged members connecting said parts, and a spring attached to said hinge-members and arranged to hold them in a plurality of angular positions.

2. A hinged last comprising a forepart, a heelpart, hinge-members connecting said parts, and a helical spring the ends of which are arranged to act upon two portions of said hinge-members to hold the latter in a plurality of angular relations, said portions being movable, one relatively to the other, to shift the effective line of spring stress across the "dead center" of the hinge.

3. A hinged last comprising a forepart, a heelpart, hinge-members connecting said parts, and a helical compression spring the ends of which are arranged to act upon two portions of said hinge-members to hold the latter in a plurality of angular relations, said portions being movable, one relatively to the other, to shift the effective line of spring stress across the "dead center" of the hinge.



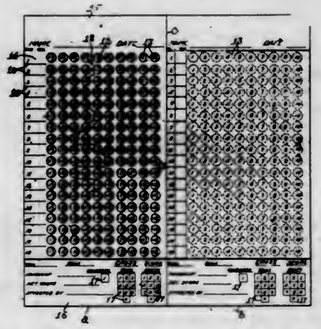
4. A hinged last comprising a forepart, a heelpart, hinge-members connecting said parts, and a spring pivotally connected to both said hinge-members and arranged to hold them in a plurality of angular positions.

5. A hinged last comprising a forepart, a heelpart, hinge-members connecting said parts, and a spring arranged between said hinge-members to coact as a toggle with one of said members to hold said hinge members in two angular positions.

[Claims 6 to 18 not printed in the Gazette.]

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1,224,452. SCORE-CARD FOR GOLF. JOSEPH J. EATON and ALBERT V. FREE, Yonkers, N. Y. Filed July 27, 1914. Serial No. 853,568. (Cl. 235—126.)



A score sheet or card for golf, consisting of a sheet or card having printed thereon within the edges of the sheet or card a plurality of rows of numbers indicative of strokes with corresponding numbers in the various rows arranged in columns, and having means bounding the individual numbers and for enabling the portion of the card associated with the individual numbers in each to be removed therefrom, the bounding means for the numbers in each column being spaced apart from the bounding means in adjacent columns.

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1,224,453. ROOSTING-POLE. AXEL F. ELFSTRUM, Willmar, Minn. Filed Feb. 19, 1915. Serial No. 9,404. (Cl. 119—25.)



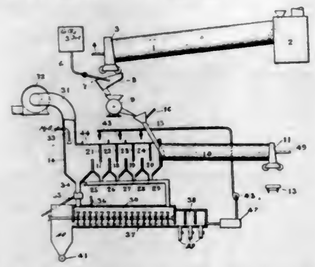
In a device of the class described, a member having a channel of angular cross section, the side walls of such



channel being substantially at right angles with relation to each other, in combination with a cover member of triangular cross section arranged within the channel, said cover member having a top wall of a width equal to the maximum width of the channel, and side walls at an obtuse angle to each other, thereby leaving an interspace between the side walls of the channel and the side walls of the cover member, the latter being provided with apertures and the channel being provided with pegs rising from the bottom thereof into said apertures to prevent tilting and displacement of the cover member.

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1,224,454. PROCESS OF MAKING WHITE HYDRAULIC CEMENT AND POTASH SALTS. CARLETON ELLIS, Montclair, N. J., assignor to Ellis-Foster Company, a Corporation of New Jersey. Filed June 29, 1911. Serial No. 636,118. (Cl. 106—25.)



1. A process of producing cement and soluble potassium compounds which comprises (*a*) heating a mixture including a potassium-containing silicate mineral and a calcareous agent, to a temperature below the volatilizing temperature of the potassium compounds contained therein, (*b*) quenching the heated mixture with a liquor containing a salt of an acid which produces a soluble and comparatively easily volatile salt with potassium, (c) rapidly heating the so obtained product, in a sub-divided condition, to a clinkering temperature and thereby producing a cement clinker and volatilizing the potassium in the form of a relatively volatile salt, and (*d*) then separating said volatilized potassium salt from the gases present.

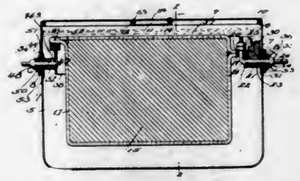
2. A process of producing cement and soluble potassium compounds which comprises (*a*) heating a mixture including a potassium-containing silicate mineral and a calcareous agent, to a temperature below the volatilizing temperature of the potassium compounds contained therein, (*b*), quenching the heated mixture with a solution of calcium chlorid, (c) rapidly heating the so obtained product, in a sub-divided condition, to a clinkering temperature and thereby producing a cement clinker and volatilizing the potassium in the form of a relatively volatile salt, and (*d*) then separating said volatilized potassium salt from the gases present.

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1,224,455. PRIMARY BATTERY. GEORGE S. ENGLE, Cranston, R. I. Filed May 5, 1914. Serial No. 836,467. (Cl. 204—38.)

1. A primary battery comprising a copper container, a positive metallic element mounted in the copper container and directly exposed to the opposite walls of said container, a negative element composed of copper oxids associated with the positive element, the positive element being interposed between the negative element and the container, and an alkaline electrolyte, electrical generation taking place between the positive and negative elements and also between the positive element and the copper container.

2. A primary battery comprising a copper container having a removable cover, a positive element consisting of a zinc plate, a negative element composed of copper oxids, the positive element being interposed between the negative element and the container, and an alkaline electrolyte having a small percentage of zinc hydroxid primarily incorporated therein, the positive and negative elements being free of attachment to the cover and electrical generation taking place between the positive and negative elements and between the positive element and the copper container, the alkaline electrolyte having a stronger affinity for the copper oxids of the negative element than for the copper container.



3. A primary battery comprising a copper container having a cover, positive and negative elements disposed within the container, the negative element being composed of copper oxids, a porcelain base supporting the positive and negative elements at one extremity of each of the latter, the negative element being supported at its opposite extremity by and insulated from a portion of the positive element, terminals connected to the elements and extending exteriorly of the container, the negative element adapted to be readily removed and recharged and renewed, and an alkaline electrolyte wholly covering the positive and negative elements and the suspending and terminal means thereof.

4. A primary battery comprising a copper container, a cover therefor, a positive element suspended within the container and free of attachmnet with relation to the cover, the upper margin of the positive element being below the top of the container and the cover, a copper oxid negative element having a grooved edge engaged by a suspending wire and also held below the upper edge of the copper container, terminals connected to the positive and negative elements and extending through the body of and exteriorly of the container, and an alkaline electrolyte covering the said elements and their terminals.

5. A primary battery comprising a copper container, a cover therefor, a positive element consisting of a substantially U-shaped plate suspended within the container, a copper oxid negative element removably suspended between the parts of the positive element and having means engaging the edge thereof and resting in part upon and insulated from the upper portion of the positive element, an insulating base within the container engaged by portions of the positive element, a terminal connected to the positive element and extending exteriorly of the container through one extremity of the latter and insulated therefrom, a terminal extending through said base and the opposite extremity of the container and having the edge engaging means of the negative element detachably connected thereto, and an alkaline electrolyte covering the elements and the terminals.

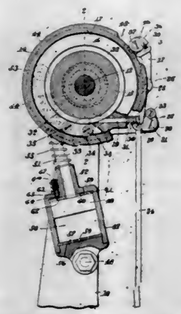
[Claims 6 and 7 not printed in the Gazette.]

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1,224,456. AUTOMATIC STOP-MOTION. EDWARD ERICKSON, Cliftondale, Mass., assignor to Victor Shoe Machinery Company, Lynn, Mass., a Corporation of Massachusetts. Filed Sept. 16, 1916. Serial No. 120,903. (Cl. 74—46.)

1. In a device of the class described, the combination of a driving shaft; a pulley secured thereto and provided with a cylindrical hub; a movable member having a chamber to receive said hub; a helical spring in said chamber and normally in gripping contact with the periphery of said hub, said spring having one end attached to said chambered member; and means for expanding said spring and removing it from contact with said hub.

2. In a device of the class described, the combination of a driving shaft; a pulley secured thereto and provided with a cylindrical hub; a movable member having a chamber to receive said hub; a helical spring in said chamber and normally in gripping contact with the periphery of said hub, said spring having one end attached to said chambered member; a slidable member adapted to engage the free end of said spring; and means for operating said slidable member.



3. In a device of the class described, the combination of a driving shaft; a pulley secured thereto and provided with a cylindrical hub; a movable member having a chamber to receive said hub; a slidable member adapted to engage the free end of said spring; and treadle actuated mechanism for operating said slidable member.

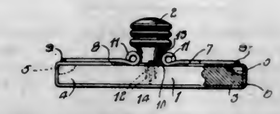
4. In a device of the class described, the combination of a driving shaft; a pulley secured thereto and provided with a cylindrical hub; a movable member having a chamber to receive said hub; a helical spring in said chamber and normally in gripping contact with the periphey of said hub, said spring having one end attached to said chambered member; a slidable member carried by said movable member and adapted to engage the free end of said spring; and means for operating said slidable member.

5. In a device of the class described, the combination of a driving shaft; a pulley secured thereto and provided with a cylindrical hub; a movable member having a chamber to receive said hub; a helical spring in said chamber and normally in gripping contact with the periphery of said hub, said spring having one end attached to said chambered member; a headed pin slidably mounted in said movable member and adapted to engage the free end of said spring; a resilient member for moving said pin outwardly; and mechanism under the control of the operator for moving said pin inwardly.

[Claims 6 to 23 not printed in the Gazette.]

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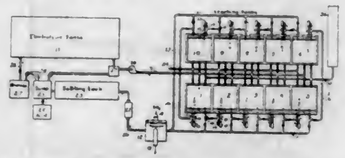
1,224,457. GRIDDLE-GREASER. CHARLES V. GLECKNER, Canton, Pa. Filed Feb. 1, 1916. Serial No. 75,544. (Cl. 65—12.)



A device of the class described comprising a substantially rectangular shaped block having an upright handle, a pad extending across the under face of said block and overlying the upper end portions of the same, a pair of U-shaped spring wire clamps overlying the ends of said pad and having the inner free ends of the arms terminating at points substantially midway the length of said block and in transverse alinement, said clamps having the free ends of their arms disposed adjacent each other and bent downwardly to form spurs which project into said block, coils adjacent the free ends of each of said arms, staples positioned in said block over the adjacent ends of the arms and the ends of said staples extending through the block and having said ends bent inwardly and lying flush with the under face of the same, said clamps having their entire lengths snugly contacting the overlapping portions of the pad and a notch in the upper face of said block at each end whereby the clamps may be easily disengaged from the ends of the pad for the removal thereof.

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1,224,458. HYDROMETALLURGY OF COPPER. JOHN C. GREENWAY, Warren, Ariz., and HARRY W. MORSE, Los Angeles, Cal. Filed June 5, 1916. Serial No. 101,757. (Cl. 204—15.)



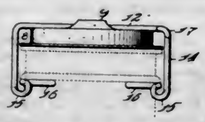
1. The process of extracting copper from ores containing copper and iron, which consists in passing a solution of sulfuric acid in contact with the ore until the solution is substantially neutral, subjecting the substantially neutral solution to the action of sulfur dioxid to reduce ferric sulfate in the solution to ferrous sulfate, and then electrolyzing the resulting solution for recovery of copper therefrom.

2. The process of extracting copper from ores containing copper and iron, which consists in passing a solution of sulfuric acid in contact with the ore until the solution is substantially neutral, subjecting the substantially neutral solution to the action of sulfur dioxid to reduce ferric sulfate in the solution to ferrous sulfate, and then acidifying the solution and electrolyzing the resulting solution for recovery of copper therefrom.

3. The process of extracting copper from ores containing copper together with iron, which consists in leaching the ore with sulfuric acid solution, subjecting a portion of the resulting solution to the action of metallic iron to precipitate metallic copper therefrom, subjecting another portion of the solution to the action of sulfur dioxid to reduce ferric sulfate to ferrous sulfate, and then to the action of metallic copper precipitate as aforesaid, to reduce a further quantity of ferric sulfate to ferrous sulfate, and to dissolve such metallic copper, and then electrolyzing the solution to deposit copper therefrom.

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1,224,459. CONTAINER-CAP. FREDERICK HACHMANN, St. Louis, Mo., assignor to Hachmann Specialty Company, a Corporation of Missouri. Filed Feb. 24, 1914, Serial No. 820,441. Renewed Aug. 12, 1916. Serial No. 114,640. (Cl. 215—26.)



1. A container cap having a bearing opening provided with an entrance slot, a cap retaining yoke having a reduced portion formed and disposed to pass through said slot for permitting introduction of the yoke into said bearing opening, and means on the yoke for engagement with a container.

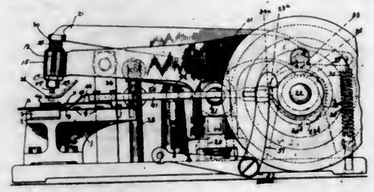
2. A container cap having a bearing opening provided with an entrance slot, and a cap retaining yoke comprising a crown portion and depending container engaging arms, one of said arms having a reduced portion adapted, when the yoke is inverted, to pass through said slot for permitting introduction of said crown portion endwise into said bearing opening.

3. A container cap comprising a cover stamped out of a single sheet of material, its center portion projecting and provided with an elongated slot, the ends thereof being wider than the center, a yoke formed of a single wire suitably bent, the corner of said wire being flattened for permitting the yoke to be inserted in the slot, the ends of said wire formed into loops, and terminating in curved arms, substantially as specified.



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1,224,460. EYELETING-MACHINE. FRANK L. HARMON, Beverly, Mass., assignor to Singer Manufacturing Company, Elizabeth, N. J., a Corporation of New Jersey. Filed Apr. 20, 1914. Serial No. 833,013. (Cl. 218—15.)



1. An eyeleting machine, comprising a material support equipped with a punch-block and a clenching surface, a telescopically combined punch and set operatively mounted at one side of said support for movement toward and from said support and for bodily lateral movement relative thereto, means for moving the punch to punch a hole and for moving the set to clench an eyelet therein, and means for then moving the punch laterally while still engaged in the hole of the clenched eyelet to feed the material for spacing the eyelets.

2. An eyeleting machine comprising a material support equipped with a punch-block and a clenching surface, a punch and set operatively mounted and connected at one side of said support for punching and setting operations against the same surface portion of said support as a backing, means for moving the set forward for clenching the eyelet, and means for then moving the punch while still engaged in the eyelet hole laterally to feed the material and space the eyelets.

3. An eyeleting machine, comprising a material support equipped with means against which a punch may act and an eyelet be clenched, a telescopically combined punch and set operatively mounted at one side of said support, means for positively moving the punch against said support for punching, means for positively moving the set forward for clenching the eyelet, said punch moving means being then released, means for yieldingly holding the punch in the eyelet hole, and means for then moving the punch laterally while still engaged in said hole to feed the material and space the eyelets.

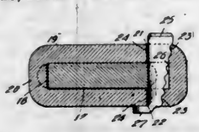
4. An eyeleting machine, comprising a material support equipped with means against which a punch may act and an eyelet be clenched, a telescopically combined punch and set operatively mounted at one side of said support, means for positively moving the punch to act against said support as a backing for punching, means for positively moving the set forward for clenching the eyelet, said punch moving means being then released, means for yieldingly holding the punch in the eyelet hole, and means for then moving the punch laterally while still engaged in said hole to feed the material and space the eyelets, said means against which the punch acts being connected for movement relative to said clenching surface whereby it is positioned over the clenching surface and beneath the punch for the punching and removed to uncover the clenching surface for the setting operation.

5. An eyeleting machine, comprising a material support, a punch and set mounted and operatively connected for punching and setting operations respectively against the same surface portion of said support as a backing, said support having parts presenting a punch-block face and a clenching surface face respectively and means to move said parts relatively to each other in timed relation to the punch and set movements so that one of said parts is superposed on the other of said parts for one of said operations, and removed to uncover the face of the other part for the other of said operations.

[Claims 6 to 12 not printed in the Gazette.]

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1,224,461. COUPLING-KEY-RETAINING MEANS. ALBERT JOHN BROMLEY HARRIS, East Rochester, N. Y. Filed Jan. 25, 1915. Serial No. 4,185. (Cl. 85—7.)



1. In a device of the character described, the combination with an elongated flat key, of a substantially rectangular collar therefor, and means, independent of the members with which the key is employed, for locking said collar on the key to prevent movement thereof in either direction longitudinally of the key, said means including a retaining pin extending transversely through the collar and perpendicular to the flat faces of the key, said pin engaging the key when in operative position.

2. In a device of the character described, the combination with a key, of a collar therefor, and a retaining pin extending transversely through the collar and engaging one side of said key, said pin being tapered in a plane transverse to the plane of the key, whereby the collar is prevented from movement longitudinally of the key.

3. In a device of the character described, the combination with a key, of a collar at the end thereof, said collar having holes therethrough of tapered form, and a retaining wedge-shaped pin extending through said holes, said pin and the walls of said holes being notched.

4. In a device of the character described, the combination with a key having notches on the edges thereof, a collar encircling said key and having one edge engaging in one of said notches, and a retaining pin passing through said collar and engaging in the other of said notches in the key.

5. In a device of the character described, the combination with a key having notched edges, of a collar surrounding said key and having one end thereof engaging in one of said notches, the opposite end of said collar being provided with transversely extending tapered holes, the walls of which are notched, and a wedge shaped pin extending through said holes and having also a notched edge coöperable with the notched walls of said holes, said pin having also a bendable lip.

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1,224,462. HAIR-CUTTING INSTRUMENT. EDWARD GRANT HARRIS, Jefferson Barracks, Mo. Filed July 24, 1916. Serial No. 111,012. (Cl. 30—12.)



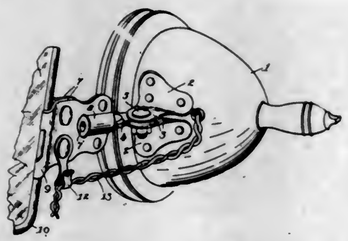
1. In a device of the class described, a body member having a hollow back and provided with teeth, the said back of the body member being provided at each end with an opening and beyond each opening with a bearing por

tion spaced in stepped relation below the plane of the top of the back, a blade holder disposed within the body and having a back and resilient portions designed to grip the blade to be held with the cutting edge of the blade located in juxta-position to the said teeth, the said back of the blade holder being provided at each end with an upward extension terminating in an outwardly extending ear projecting through the opening in the respective end of the back of the body member and above the respective bearing portion, and adjusting screws coacting with the said ears and bearing portion.

2. In a device of the class described, a body member having a hollow back and provided with teeth including spaced portions converging toward their ends, the said back of the body member being provided at each end with an opening and beyond each opening with a portion having a threaded aperture and spaced in stepped relation below the plane of the top of the back, a blade holder disposed within the body and having a back and resilient side portions designed to grip the back of a blade to be held with the cutting edge of the blade extending between the spaced portions of the teeth, the said back of the blade holder being provided at each end with an upward extension terminating in an outwardly extending ear projecting through the opening in the respective end of the back of the body member, each ear having a notch formed therein, and adjusting screws threaded into the said apertures and having their shanks provided with circumscribing grooves receiving the walls of the notches in the said ears of the blade holder, the ears projecting above the portions of the back of the body member in which the said threaded apertures are formed.

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1,224,463. VEHICLE-LAMP. ELLSWORTH A. HAWTHORNE, Bridgeport, Conn. Filed Mar. 9, 1916. Serial No. 83,192. (Cl. 240—57.)



1. A bracket comprising a pair of members having oppositely-faced portions defining a pintle socket, and having oppositely-faced jaws defining a seat for a supporting element, means for closing said socket about a pintle and setting said clamping jaws, and means carried by the pintle and engaging the pair of members for preventing accidental withdrawal of the pintle from said socket.

2. A bracket consisting of a pair of clamping members having oppositely pressed-out portions defining a pintle socket, a pair of swivel members having oppositely disposed pressed-out portions constituting a pintle arranged for lodgment in said socket, and means for pivotally attaching said swivel members to a lamp or the like.

3. A bracket consisting of a pair of clamping members having oppositely disposed jaws and having oppositely pressed-out portions defining a pintle socket arranged in the major axis of the bracket, a pair of duplicate swivel members having oppositely disposed pressed-out portions constituting a pintle arranged in alinement with the pintle socket, and a pair of duplicate plates having oppositely disposed spaced ears between which said swivel members are fastened for pivotally attaching said members to a lamp or the like.

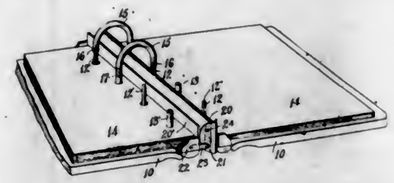
4. A bracket comprising in combination a headed pintle adapted to be attached to an object to be supported, and a pair of clamping members having oppositely disposed pressed-out portions constituting an open ended socket for said pintle and having opposed slots adapted to rotatably receive the head of said pintle.

5. A bracket having oppositely faced portions defining an axial pintle socket and having similarly faced movable clamping jaws arranged transverse to said socket, a pintle disposed for lodgment in said socket, means for pivotally attaching said pintle to an object to be supported, and means on the pintle for preventing accidental withdrawal thereof from the socket.

[Claims 6 to 13 not printed in the Gazette.]

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1,224,464. LOOSE-LEAF-BINDER CONSTRUCTION. EDWARD FLETCHER HILL, Chicago, Ill., assignor to Edward W. Hill, Chicago, Ill. Filed Apr. 12, 1916. Serial No. 90,581. (Cl. 129—8.)



1. The combination with a telescoping post, expansible binder comprising two back members and oppositely disposed telescoping posts on the respective back members freely slidable over each other to permit varying expansion of the binder and the complete separation from each other by continuation of the expansion movement, said back members when the telescopic posts are thus separated adapted to be placed in flat relation with their rear edges opposed and the coöperating members of the telescopic posts in opposition to each other, of connecting arches engageable with the upstanding oppositely disposed pairs of telescopic posts and reuniting the thus-separated book sections into book form.

2. In a construction of the character described, the combination of cover parts, telescoping post members carried by said cover parts, end plates carried by the cover parts, alining devices secured to the end plates for holding the cover parts and posts properly spaced apart when in the open position.

3. In a construction of the character described, the combination of cover parts, coöperating posts carried thereby, back plates carried by said cover parts, connecting arches carried by said cover posts, end plates carried by said cover parts, alining devices for connecting the end plates when the cover parts are spread open.

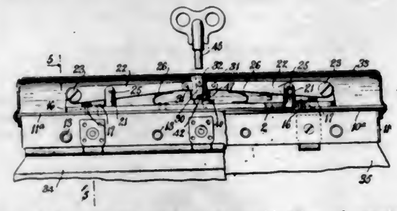
4. In a construction of the character described, the combination of cover parts, telescoping posts carried by said parts, alining devices hinged to one of said cover parts, and members carried by the other cover part having slots for receiving the ends of said alining devices.

5. The combination with a telescoping post, expansible two-part binder comprising two back members wholly separable from each other and oppositely disposed telescopic posts on the respective back members freely slidable over each other to permit varying expansion of the binder and separable from each other by continuation of the expansion movement to permit entire separation of the back members and the placing of the back members in flat relation with their rear edges opposed and coöperating members of the telescopic posts in opposition to each other, of means for alining the thus separated book sections to bring the upstanding telescopic posts thereon into alined opposition and connecting arches engageable with the upstanding oppositely disposed pairs of telescopic posts and serving to reunite the thus separated book sections into book form.

[Claims 6 and 7 not printed in the Gazette.]



1,224,465. LOOSE-LEAF BINDER. EDWARD W. HILL, Chicago, Ill. Filed Feb. 12, 1916. Serial No. 77,837. (Cl. 129—18.)



1. In a loose leaf binder, the combination of opposed back members, leaf engaging means between said members, interengaging locking shoulders on the respective back members adjacent opposite ends of the same for securing said back members firmly together and digitally operable means for simultaneously releasing both sets of said interengaging shoulders whereby said binder may be opened by hand without the use of a key.

2. In a loose leaf binder, the combination of opposed back members, leaf engaging means between said members, interengaging locking shoulders on the respective back members adjacent opposite ends of the same for securing said back members firmly together, digitally operable means for simultaneously releasing both sets of said interengaging shoulders whereby said binder may be opened by hand without the use of a key and means for locking said digitally operable means inoperative to release the interengaging shoulders.

3. In a loose leaf binder, opposed back members, leaf engaging means between said members, means for securing said members together in adjusted relation, digitally operable means for releasing said securing means to permit separation of the back members and means for locking said digitally operable means inoperative to release the securing means.

4. In a loose leaf binder, opposed back members, leaf engaging means between said members, a plate movably mounted on one of said members, coöperating locking shoulders on said plate and the other back member, means for normally holding the locking plate shifted into position with the coöperating locking shoulders in engagement, means for shifting the locking shoulders in a direction to release the locking shoulders and means for locking said releasing means against releasing movement.

5. In a loose leaf binder, opposed back members, leaf engaging means between said members, a locking plate mounted on one of said back members, coöperating locking shoulders on said plate and the other back member, a retracting lever operatively connected with said locking plate, a push button for operating said retracting lever, and a locking member shiftable into the plane of movement of said push button.

[Claims 6 to 23 not printed in the Gazette.]

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1,224,466. SAFETY HOSE-SUPPORTER. TRUMAN MEAD IRWIN, Wallaceburg, Ontario, Canada. Filed May 5, 1916. Serial No. 95,597. (Cl. 24—251.)



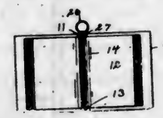
1. A supporter of the class described including a relatively fixed body portion constructed of sheet metal and composed of a front, back and connecting side portions forming side grooves, said body portion being provided at the upper portion of the front with an opening and having bearing and clamping flanges at the lower portion, a jaw of yieldable material secured to the relatively fixed member by the clamping flanges, a swinging frame hinged to the relatively fixed member by the bearing flange, a relatively movable member carried by the swinging frame and having a yieldable portion or jaw to coact with the jaw of the relatively fixed member and a resilient slide mounted in the said grooves and provided with means for engaging the relatively movable member.

2. A supporter of the class described including a relatively fixed member having a front opening and provided at opposite sides thereof with guiding grooves, a swinging frame hinged to the relatively fixed member at the bottom of the said opening, a movable member carried by the swinging frame, and a resilient slide constructed of a single piece of material and consisting of a front approximately U-shaped loop, substantially U-shaped rear loops slidable in the said grooves and bends connecting the front and rear loops, the said front loop being arranged to extend through the said opening and engage the movable member.

3. A supporter of the class described including a fixed member, a block of yieldable material mounted on and extending across the fixed member and provided in its outer face with an approximately V-shaped groove, a movable member provided with a substantially triangular block of yieldable material arranged to force a fabric into the said V-shaped groove, and means for holding the movable and fixed members in engagement with the fabric to be clamped.

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1,224,467. TELEPHONE-DIRECTORY HOLDER. BERTHOLD JAHN, New Britain, and JOSEPH C. HAMMER, Hartford, Conn., assignors to The B. Jahn Manufacturing Company, New Britain, Conn., a Corporation. Filed Mar. 18, 1916. Serial No. 85,189. (Cl. 129—38.)



1. A telephone directory holder comprising a frame for extending along the rear side of the directory and having forwardly extending branches at the ends, one of the said branches having a closed slot and the other an open slot, a holding member having end portions fitting in the said slots, a pivotally mounted locking member for closing the open end portion of the said open slot, and auxiliary locking means for holding the said locking member comprising a lug on the said locking member, the said frame having means for engaging with the said lug in both the open and the closed positions of the said locking member.

2. In a telephone directory holder, a frame having an upper end portion provided with an open slot, a holding member fitting in the said slot, and a locking member pivotally mounted on the said upper end portion, the said locking member comprising a hook shaped arm composed of a radial portion and a laterally directed branch portion suitable for bridging the said slot.

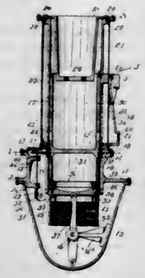
3. In a telephone directory holder, a frame having an upper end portion provided with an open slot, a holding member fitting in the said slot, and a locking member pivotally mounted on the said upper end portion, the said locking member comprising a hook shaped arm composed of a radial portion and a laterally directed branch portion suitable for bridging the said slot, and the free end portion of the said branch portion being provided with an inwardly directed stop lug.

4. In a telephone directory holder, a frame formed of a strip of sheet material having a body portion for extending along the rear edge of the directory and a forwardly extending upper end portion, the said upper end portion having an open slot, a holding member for extending

along between the pages of the directory and fitting in the said slot, a locking member pivotally mounted by a pivotal pin positioned at the rear of the said slot, the said upper end portion having a hole adjacent the said slot, and the said locking member having a book-shaped arm for bridging the said slot and having a lug for alternately engaging with the said hole and with one edge of the said upper end portion serving as auxiliary locking means for locking the said locking member in the closed and the open positions.

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1,224,468. VALVELESS FOUR-CYCLE ENGINE. ROLLY A. JOHNSON and GARFIELD JOHNSON, Los Angeles, Cal., assignors of one-sixth to Howard M. Hunter, Los Angeles, Cal., one-sixth to C. F. Goudy, one-sixth to Frank Sparks, and one-sixth to F. C. Hoffer. Filed Aug. 28, 1912. Serial No. 717,511. (Cl. 123—45.)



1. In an explosion engine, a cylinder provided with an inlet and a discharge port extending longitudinally in the walls thereof and opening into said cylinder a distance approximately equal to the piston stroke; and a reciprocating and revoluble piston therein, said piston having a port through the wall thereof adapted to register with one or the other of said inlet and discharge ports at predetermined times.

2. In an explosion engine a crank shaft; a cylinder; a piston having at its lower end exterior vertical grooves; a sprocket toothed rim on said piston provided with splines to slide in the grooves of the piston; a vertical shaft carrying at its upper end a sprocket wheel; a chain from said wheel to the sprocket toothed rim around the piston; a worm at the lower end of the shaft; a horizontal shaft carrying a worm wheel engaging with the worm; a sprocket wheel on the horizontal shaft; and a chain connecting said wheels whereby the piston may be revolved during the rotating of the crank shaft.

3. In an explosion engine a base; a cylinder provided with suitable inlet and outlet ports; a piston in said cylinder; a crank shaft and connecting rod, the lower end of said piston having exterior longitudinal grooves, a sprocket toothed rim having splines in engagement with the grooves and held in a suitable recess in said base; a vertical shaft having a sprocket wheel; a sprocket chain connecting said wheel and said toothed rim; the lower end of said vertical shaft being geared to the crank shaft.

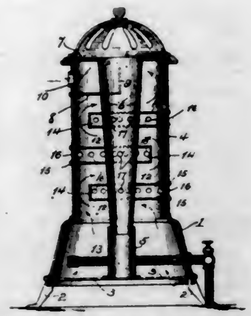
4. In an explosion engine a cylinder having in the inner wall thereof a pair of parallel channels extending longitudinally a distance equal to the stroke of the piston; a piston having a pair of oppositely disposed ports therethrough, said piston being revoluble and the ports so disposed relatively to each other that during the exhaust stroke one of the piston ports registers with one of the channels of the cylinder and with the other channel during the intake stroke, and during the compression and power strokes said ports are out of register and during the next exhaust stroke the other port of the piston registers with the first named channel of the cylinder and at the intake stroke with the second named channel.

5. In an explosion engine a cylinder having vertical parallel ports in one side thereof, one being the inlet and the other the outlet port; ribs extending around and intermediate said ports, integral with the cylinder; and a plate overlapping said ports and secured to the aforesaid ribs, the plate having channels which register with the vertical ports of the cylinder; and means for attaching manifolds thereto.

[Claims 6 to 18 not printed in the Gazette.]

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1,224,469. HEATING-STOVE. GEORGE H. KING, Anderson, Ind., assignor of one-fourth to R. H. Brunt, Summitville, Ind. Filed July 13, 1916. Serial No. 109,119. (Cl. 126—90.)



1. In a stove, the combination with a vertical outer drum and a vertical inner drum open from end to end, of a plurality of hollow deflecting radiator members disposed between said drums and communicating with the outer air and the inner drum.

2. In a stove, the combination of a vertical outer drum having perforations, a plurality of hollow deflecting and radiator members therein forming pockets in line with the perforations in the outer drum, a vertical inner drum open from end to end and passing through the hollow deflecting and radiator members and communicating with the pockets therein, and heating means below and in communication with said outer drum.

3. In a stove, the combination with a base, a vertical outer drum mounted thereon, and heating means within said base, of a plurality of hollow deflecting and radiator members alternating from diametrically opposite positions of the outer drum and communicating with the outer air, and a vertical conical inner drum open from end to end and passing through said deflecting and radiator members and communicating therewith, said deflecting and radiator members and conical drum forming a worm passage for products of combustion.

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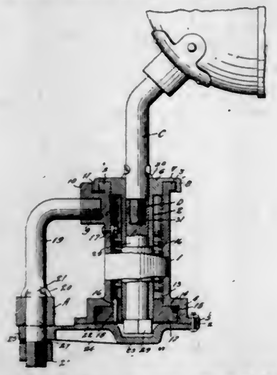
1,224,470. AUTOMOBILE-HEADLIGHT-LAMP MOUNTING. DAVID C. KITCHING, Valley Mills, Tex. Filed Nov. 22, 1916. Serial No. 132,739. (Cl. 240—61.)

1. The combination with the shank of an automobile headlight lamp, of a relatively fixed support, a lamp swinging member rotatively mounted in and surrounded by the support, and means extending through the swinging member for engaging and fastening the shank to said member.

2. The combination with the shank of an automobile headlight lamp, of a relatively fixed support, a lamp swinging member rotatively mounted in and surrounded by the support, means extending through the swinging member for engaging and fastening the shank to said member, and a closure plate covering the bottom of the support and concealing the fastening means.

3. In a headlight-lamp adjusting device, an outer relatively fixed member, an inner rotatable member within the outer member constructed for supporting a lamp, a spring coiled about the inner member and having one end connected with the inner member and the other end connected with the fixed member, an angular bracket extending from the fixed member radially and constructed for attachment to an automobile, and a closure member covering the bottom of the fixed member and attached to the bracket.



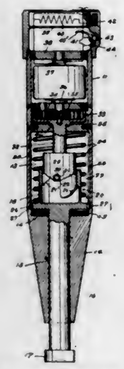


4. In a headlight-lamp adjusting device, a hollow relatively fixed outer member, an inner member rotatably mounted in the fixed member and constructed for supporting a lamp, a spring having one end attached to one member and the other end attached to the other member, a rotating member fastened on the inner member within the outer member, a closure member secured to the bottom of the fixed outer member and concealing the rotating member, and a supporting bracket extending radially from the outer member and by which the outer fixed member may be supported on an automobile.

5. The combination with the shank of an electric headlight lamp, of a relatively fixed supporting member constructed for attachment to an automobile, a rotatable member mounted in the support and constructed to receive the shank of the lamp, a fastening device carried by the rotatable member for engaging the lamp shank and fastening the same to the rotatable member, and a rotating element fastened to the rotatable member.

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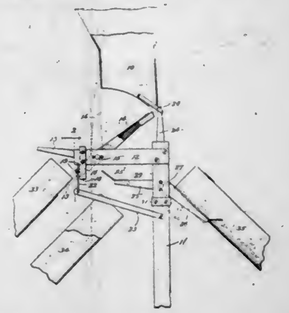
1,224,471. HAMMER. GEORGE L. KOLLOCK and ROBERT P. MARTIN, Seattle, Wash., assignors to Universal Hammer Company, Seattle, Wash., a Corporation of Washington. Filed Jan. 31, 1916. Serial No. 75,322. (Cl. 78—27.)



Apparatus of the class described, comprising a casing, a striking member arranged for reciprocatory axial movements, a compression spring engaging said striking member, a hollow cam provided on said striking member, means extending axially into and engaging said cam, an electric motor, and operative connections between the latter and said means for actuating the same to effect an endwise movement to said striking member.

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1,224,472. DISTRIBUTER FOR GRAVITY CONVEYER SYSTEMS. HENRY KORN, Chicago, Ill. Filed Nov. 9, 1916. Serial No. 130,421. (Cl. 193—44.)



1. A three-way distributing switch for gravity conveyer systems comprising, in combination, a horizontally journaled rocking switch-member adapted to receive material on, and discharge material from, its two faces alternately, a second rocking switch-member horizontally journaled and having a section adapted to swing over and swing away from one side of said first-named switch-member, and connections for operating said second-named switch-member from said first-named switch-member.

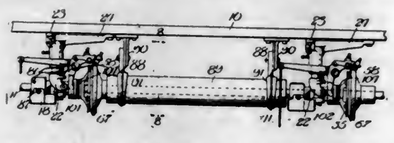
2. A three-way switch for gravity conveyer systems comprising, in combination, a horizontally-journaled rocking switch-member adapted to receive material on, and discharge material from, its two faces alternately, a second horizontally-journaled switch-member having an upper section adapted to swing over and swing away from one face of said first-named switch-member, means for locking said second-named switch-member in a position to expose the said face of the first-named switch-member, and means actuated by the movement of said first-named switch-member when discharging material from the said face for releasing said lock.

3. A three-way distributing switch for gravity conveyer systems comprising, in combination, a horizontally journaled rocking switch-member adapted to receive material on, and discharge material from its two faces alternately, a second horizontally-journaled switch-member having a platform-portion arranged above its journal and adapted to swing over, and swing away from the adjacent face of said first-named switch-member, means for locking said second-named switch-member in a position away from the said face, means operable by movement of the said face toward the second-named switch-member for releasing said lock, and means operable by movement of the said face away from the second-named switch-member for swinging the latter to a position over the said face.

4. A three-way distributing switch for gravity conveyer systems comprising a rocking switch-member having three sections arranged at angles to one another, the said switch-member being horizontally journaled substantially upon the line of intersection of the said sections, a second switch-member comprising two sections extending on opposite sides of a horizontal journal spaced away from the journal of said first member, said second switch-member being adapted to swing toward and away from said first member, means operable by movement of said first-named switch-member away from said second-named switch-member for causing the latter to blank the adjacent face of

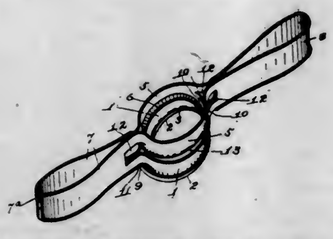
said first-named switch-member, and means operable by impact of material on said second-named member for moving it to a position to expose the adjacent face of the first-named switch-member.

1,224,473. TRANSMISSION FOR SEWING-MACHINES AND THE LIKE. ALBERT KRASA, Michigan City, Ind. Filed Aug. 18, 1913. Serial No. 785,334. (Cl. 192—8.)



The combination with a work table and a power shaft extending longitudinally under the table, of a plurality of independent bracket members rigidly secured against the under side of the table at intervals along the same, a second bracket member adjustably secured to each of the first named bracket members for both angular and longitudnal adjustment upon a vertical axis, a series of journal bearings for the shaft each pivotally mounted in one of the second mentioned bracket members for angular adjustment in a vertical plane to the alinement of the shaft, a pulley having an outwardly facing clutch engaging face turning upon the exterior of each of the said journal bearings adjacent one end of the same, a clutch plate fixed against rotation on the shaft adjacent the said end of each of the said journal bearings and forming, with the corresponding pulley, a coöperating pair of clutch members, one of each of the said pairs of clutch members being axially movable, and a separate controlling lever for moving each of the movable clutch members.

1,224,474. GREEN-CORN CUTTING AND SCRAPING IMPLEMENT. FRED O. LAKE, Washington, D. C. Filed July 27, 1916. Serial No. 111,654. (Cl. 130—10.)



1. A corn cutting implement comprising a pair of resilient circular cutters each having an inwardly projecting guard, and spring looped handles connecting and projecting from the cutters for controlling the circular movement of the cutters.

2. An implement of the character described, comprising a pair of resilient circular cutters, each provided with an inwardly projecting guard, a pair of resilient circular scrapers, and resilient handles connecting the cutters and the scrapers and controlling the circular movement of the cutters and the scrapers and for operating the implement in a cutting and scraping operation.

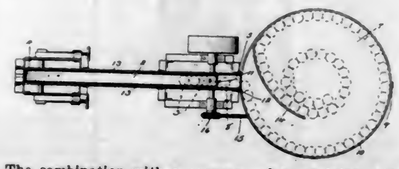
3. A corn cutting and scraping implement composed of a single piece of metal and comprising a pair of resilient handle members, a pair of circular resilient cutters between and connected by the handle members and having over-lapping portions struck from the handle members, and a pair of circular resilient scrapers between and connected by the handle members and having over-lapping portions struck from said members.

4. An implement for removing green corn from cobs, comprising circular cutting members, each provided with an inwardly projecting guard, scraping members adjacent to the cutting members and having a scraping edge projecting inwardly above the guards, and resilient handle members connecting the cutting and scraping members.

5. An implement for removing green corn from cobs, comprising circular cutting members, circular scraping members, a resilient handle portion connecting one end of the cutting and scraping members, a resilient handle portion connecting the other end of these members, and over-lapping projections struck out of the handle portions and projecting from the ends of each of said members.

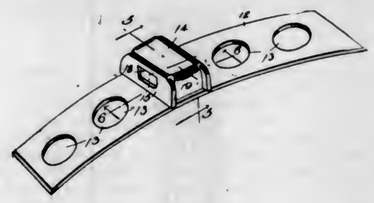
[Claim 6 not printed in the Gazette.]

1,224,475. REVOLVING TABLE. WILLIAM HUME LOGAN, Louisville, Ky., assignor to Dow Wire & Iron Works, Louisville, Ky., a Corporation. Filed May 3, 1916. Serial No. 95,242. (Cl. 193—1.)



The combination with a conveyer of a revolving table, an annular guide rail positioned above said table, a further guide rail having one end thereof secured to said annular guide rail, the body portion and free end of said further guide rail extending over the said revolving table in a curved direction, the free end of the curved guide rail terminating adjacent the center of the revolving table to receive and lead articles from said annular guide rail toward the center of the revolving table in regular order, and means for driving the revolving table, the body portion and free end of the said curved guide rail being adapted to yield to the pressure of articles thereagainst in such manner as to guide articles toward the center of the revolving table in a safe and in an efficient manner.

1,224,476. REINFORCING BACK-PLATE AND KEY-LUG ATTACHMENT FOR BRAKE-SHOES. WILLIAM H. MCDONOUGH, New York, N. Y., assignor, by mesne assignments, to The American Brake Shoe and Foundry Company, Wilmington, Del., a Corporation of Delaware. Filed Apr. 25, 1916. Serial No. 93,361. (Cl. 188—82.)



1. In a brake shoe attachment, a reinforcing backing having independent transverse slots therethrough, said slots lying within the side edges of said backing and extending substantially across the width thereof, in combination with a key lug having side walls transversely disposed across said back and tongues formed on said side walls and extending through said independent slots and clenched against the inner sides of said back.

2. In a brake shoe attachment, a reinforcing backing having independent transverse slots therethrough, said slots lying within the side edges of said backing and extending substantially across the width thereof, in combination with a key lug having side walls transversely disposed across said back and tongues formed on said side walls and extending through said slots and clenched against the inner side of said back, said side walls also having alined key way openings formed through the metal thereof.

3. The combination with a reinforcing back having slots therethrough, of a key lug having side and end walls, and disposed transversely across said back, said walls having tongues extending through the slots in said back and clenched against the inner surface of the back.

4. The combination with a reinforcing back having slots therethrough, of a key lug having side and end walls, and disposed transversely across said back, said walls having tongues extending through the slots in said back and clenched against the inner surface of the back, said side walls having alined key way openings formed therethrough.

5. In a brake shoe attachment, a reinforcing back and a key lug formed separately, said key lug being of inverted channel shape and disposed transversely across the back, said back being provided with a pair of parallel slots lying within the side edges and extending substantially across the width thereof, and the side walls of said lug being provided with tongues or feet extending through said slots and clenched toward each other against the inner face of said backing.

[Claim 6 not printed in the Gazette.]



1,224,477. SIPHON. JOHN F. MCMANN, Rochester, N. Y. Filed Apr. 11, 1911. Serial No. 620,288. (Cl. 137—20.)



1. A siphon comprising an imperforate flexible disk attached to the intake leg, and adapted to coact with the interior of the neck of a receptacle, of which the neck is of less diameter than the body, to commence a flow of the contents of the receptacle through the siphon, and to pass into the body of the receptacle and expose the contents to atmospheric pressure to allow the flow to continue.

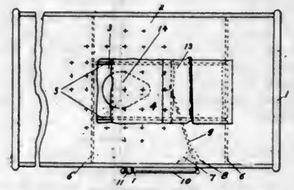
2. A siphon having a piston on its intake leg, and a fender supported by the piston to prevent the direct upward movement of liquid into the intake of the siphon.

3. A siphon having a piston on its intake leg, spring arms depending from the piston, and a fender detachably engaged by the arms to prevent direct upward movement of the liquid into the intake.

4. A siphon having a disk surrounding its intake leg, spring arms depending from the disk, and a fender carried by said arms to prevent direct upward movement of the liquids into the intake.

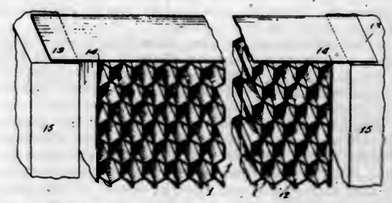
1,224,478. INVALID-BED. MICHAEL MCNEIL, Los Angeles, Cal. Filed Nov. 22, 1915. Serial No. 62,902. (Cl. 5—12.)

1. In an invalid bed, means forming a bed having a vertical aperture, a toilet apparatus with the bowl under a part of said aperture, a bed section slidingly mounted for horizontal movement in said aperture to cover and uncover said bowl, and a handle beside the bed and connected to said bed section for operating the said section to cover and uncover the bowl.



2. In an invalid bed, means forming a bed having a vertical aperture, a toilet apparatus with the bowl under a part of said aperture, a bed section slidingly mounted for horizontal movement in said aperture to cover and uncover said bowl, and a handle beside the bed and connected to said bed section for operating said section to cover and uncover the bowl, and means within reach of the occupant of the bed for operating the said toilet apparatus.

1,224,479. ARTIFICIAL HONEYCOMB. GEORGE M. MACDONALD, San Bernardino, Cal. Filed June 14, 1916. Serial No. 103,692. (Cl. 6—11.)



1. An artificial honeycomb consisting of strips crimped to form troughs on opposite sides of said strips open at one end and having end walls at the other end formed by bends of the strips, said troughs forming semi-cells, and said strips being fastened together side by side with the end-walls of the semi-cells in register with each other to form closures for the inner ends of complete cells.

2. An artificial honeycomb comprising crimped strips fastened together side by side, the crimps of the adjoining strips registering with each other to form cells open at one end and practically closed at the other end by portions of the crimped strips.

3. A honeycomb comprising strips crimped to form complementary grooves extending in parallelism with each other from opposite sides of the medial line of said strips, the grooves being open at the edges of the strips and closed by end walls formed by portions of the strips at the medial line of the strips, the grooves of adjoining strips registering with each other to constitute cells open at the edges of the strips and practically closed at the medial line by said portions of the strips.

4. An artificial honeycomb composed of strips crimped and forming grooves and end walls, the end wall of a groove on one side of the strip forming the end wall of a groove on the other side of the strip.

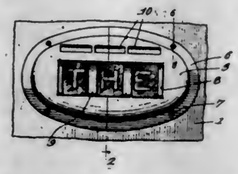
5. The artificial honeycomb composed of crimped strips fastened together to form cells open at opposite edges of the strips, and practically partitioned from each other endwise by intermediate bends in the strips.

[Claims 6 to 9 not printed in the Gazette.]

1,224,480. SIGN. CARRIE A. MARSHALL, Whitewater, Wis. Filed Apr. 29, 1915. Serial No. 24,767. (Cl. 40—133.)

1. An interchangeable sign comprising a base reflector plate, a forward cover plate having exposure openings

formed therein, those portions of the cover plate separating the openings being depressed to form abutment surfaces, a support extending longitudinally of the sign interiorly thereof and beneath the several openings, instruck retaining members integral with the cover plate, and letter blocks insertible through the openings thus formed, said members and said support releasably and yieldingly maintaining the letter blocks in place behind the exposure openings and against the abutment surfaces substantially as described.



2. An interchangeable sign comprising a base plate, a cover plate having an opening formed therein, a support affixed to the cover plate beneath the opening, an instruck retaining member integral with the cover plate above the opening, a retaining member at each side of the opening, and a letter block insertible through the opening thus formed, said members acting as a guide for the letter block during insertion, the mentioned block being held in place by the retaining members, the support member, and the mentioned instruck tongue.

3. An interchangeable sign comprising a base deflector plate, a forward substantially elliptical cover plate affixed to the base plate, the said cover plate having a plurality of openings formed therein; a depressed strip separating the openings and forming abutment surfaces therebetween, a support extending longitudinally of the sign interiorly thereof and beneath the several openings, an instruck retaining tongue integral with the cover plate and above each of the several openings, retaining members positioned at each side of the mentioned openings, an illuminating means located interiorly of the sign and forwardly of the reflector plate, and a plurality of letter blocks insertible one through each of the openings formed adjacent the several instruck tongues, the said tongues acting as guides therefor during insertion, the several letter blocks being held in place by the mentioned retaining members, the said support, and the several retaining tongues aforesaid, substantially as described.

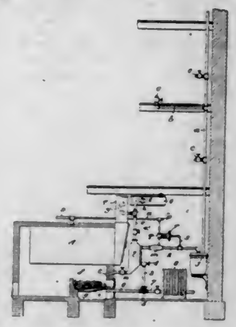
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1,224,481. VACUUM CLEANING AND FORCE-DRAFT SYSTEM. FRANK J. MATCHETTE and RICHARD RADDATZ, Milwaukee, Wis., assignors, by mesne assignments, to Richmond Radiator Company, New York, N. Y., a Corporation of Delaware. Original application filed Mar. 2, 1905, Serial No. 248,106. Divided and this application filed Sept. 30, 1910. Serial No. 584,585. (Cl. 110—150.)

1. In a vacuum cleaning and force draft system, in combination, a piping system having means for receiving material to be conveyed thereby, an aspirator in communication with a pressure supply for actuating it, and with the piping system, a furnace, means for directing the aspirator-exhaust to the desired part of the furnace and means controlled by the pressure in said system for regulating the pressure of the air aspirated through said exhaust.

2. In a vacuum cleaning and force draft system, the combination of a suction main provided with means for receiving material to be conveyed thereby, a furnace, means for exhausting air from said pipe having a discharge connection with said furnace below the fire therein, and means automatically responsive to changes of pressure in said suction main for controlling said exhaust.

3. In a vacuum cleaning and force draft system, in combination, a piping system having means for receiving material to be conveyed thereby, an aspirator in communication with a pressure supply for actuating the same and with the piping-system, a furnace, said aspirator being arranged to discharge its exhaust below the fire in said furnace, and means automatically responsive to changes of pressure in said piping system for controlling said exhaust.



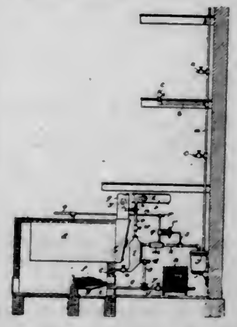
4. In a vacuum cleaning and force draft system, in combination, a piping-system having means for receiving material to be conveyed thereby, a stem ejector or aspirator adapted to draw air and dust through said system, a steam-generator, including a furnace and grate, adapted to supply steam to said aspirator for operating it, means for discharging the exhaust of said aspirator under the grate of said furnace and means automatically responsive to changes of pressure in said piping system for controlling said exhaust.

5. In a vacuum cleaning and force draft system, in combination, a piping-system having means for receiving material to be conveyed thereby, a steam ejector or aspirator in communication with a pressure-supply and adapted to draw air and dust through said system, a steam-generator, including a furnace, adapted to supply steam to said aspirator for operating it, and means for discharging the exhaust of said aspirator into the stack of said steam-generator, whereby increased draft is produced in the furnace.

[Claim 6 not printed in the Gazette.]

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1,224,482. VACUUM CLEANING AND FORCE-DRAFT SYSTEM. FRANK J. MATCHETTE and RICHARD RADDATZ, Milwaukee, Wis., assignors, by mesne assignments, to Richmond Radiator Company, New York, N. Y., a Corporation of Delaware. Original application filed Mar. 2, 1905, Serial No. 248,106. Divided and this application filed Sept. 30, 1910. Serial No. 584,586. (Cl. 110—102.)



1. In a vacuum cleaning and force draft system, in combination, a piping-system having means for receiving



material to be conveyed thereby, a steam ejector or aspirator in communication with a pressure supply and adapted to draw air and dust through said system, a steam-generator, including a furnace, adapted to supply steam to said aspirator for operating it, a chamber into which said aspirator discharges dust, a discharge pipe leading from said chamber to supply the dust to said furnace, and an independent discharge from said chamber for the air discharged through said aspirator arranged as a draft nozzle in the exhaust-flue or stack of said steam-generator.

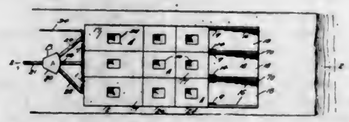
2. In a vacuum cleaning and force draft system, in combination, a piping-system having means for receiving material to be conveyed thereby, a steam ejector or aspirator in combination with a pressure supply and adapted to draw air and dust through said system, means actuated by a change of the pressure in said system for automatically controlling said ejector, a steam-generator, including a furnace, adapted to supply steam to said aspirator for operating it, a chamber into which said aspirator discharges dust, a discharge pipe leading from said chamber to supply the dust to said furnace, means for controlling said discharge pipe, and an independent discharge from said chamber leading under the fire in said furnace.

3. In a device of the class described, a piping system having means for receiving material to be carried thereby, an aspirator in communication with a pressure supply for actuating the same and designed to draw air and dust through said system, a fuel burning device, said aspirator being arranged to discharge air and dust from the system into the fuel burning device and means controlled by the air pressure in said system for regulating said aspirator.

4. In a device of the class described, a piping system having means for receiving material to be carried thereby, an aspirator in communication with a pressure supply for actuating the same and designed to draw air and dust through said system, a fuel burning device, said aspirator being arranged to discharge the air and dust from the system into the fuel burning device, a valve for controlling the admission of pressure fluid to said aspirator, and an automatic controller operatively connected with said valve and piping system.

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1,224,483. APPARATUS FOR TREATING HOUSE WASTE OR SEWAGE. EDWARD L. MEGILL, New York, N. Y. Filed July 14, 1915. Serial No. 39,781. (Cl. 210—18.)



1. In sewage disposal apparatus the combination of a plurality of downwardly tending troughs open for the delivery of liquid from their lower ends, sewage-receiving receptacles in the troughs having horizontally elongated side outlets near their bottoms for delivering the liquid from the sewage to the respective troughs; sand-like material in the troughs adjacent said receptacles to the approximate liquid level of the sewage upon delivery into the receiving receptacles; and horizontally reciprocatable rake means in the sand of the troughs having teeth which enter the aforesaid side outlets in the receptacles.

2. In sewage disposal apparatus the combination of a plurality of downwardly tending troughs open for the delivery of liquid from their lower ends; a succession of rectangular sewage-receiving receptacles extending down the middle of the respective troughs, successive receptacles being connected with each other by liquid overflow-connections, the sides of said receptacles having horizontally elongated liquid outlets near their bottoms, sand-like material in the alleys between the sides of the troughs and the sides of the receptacles, and rake-means for agitating the sand-like material in said horizontally elongated liquid outlets.

3. A unit of a sewage disposal system comprising a downwardly tending trough open for the delivery of the liquid from its lower end, a plurality of rectangular sewage-receiving receptacles arranged in succession down the middle of said trough to leave alleys between the sides of the receptacles and the sides of the trough, said sides of the receptacles being removable and having openings through them at the bottom, and the ends of the receptacles having liquid overflow openings through them which connect successive receptacles.

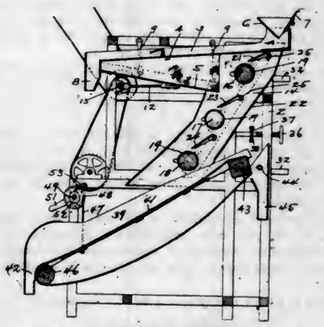
4. A unit of a sewage disposal system comprising a downwardly tending trough open for the delivery of the liquid from its lower end, a plurality of rectangular sewage-receiving receptacles arranged in succession down the middle of said trough to leave alleys between the sides of the receptacles and the sides of the trough, said sides of the receptacles being removable and having openings through them at the bottom, and the ends of the receptacles having liquid overflow openings through them which connect successive receptacles; a cover resting upon the sides of said trough, the sides and ends of the sewage-receiving receptacles being less deep than the sides of the trough so that they are not sealed by said cover; and the lower end of the trough extending beyond the last sewage-receiving receptacle and beyond the cover and being adapted to receive sand-like material to provide a finel filtration in the trough open to light and air.

5. Sewage disposal apparatus comprising the combination of a trough open for the delivery of liquid from its lower end, a sewage-receiving receptacle in said trough with a side alley between them, said receptacle near its bottom having an outlet for the delivery of the sewage-liquid from the receptacle to the aforesaid alley.

[Claims 6 to 28 not printed in the Gazette.]

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1,224,484. MACHINE FOR SEPARATING PEAS FROM REFUSE. JESSE R. MERO, Half Moon Bay, Cal., assignor of six-tenths to Jacob Blumlein, San Francisco, Cal. Filed Apr. 13, 1915. Serial No. 21,608. (Cl. 130—15.)



1. In a machine for separating peas from refuse, a plurality of rollers arranged in inclined superposed relation, means for directing the peas from one roller to another, and means for adjusting the position of the rollers with respect to the directing means.

2. In a machine for separating peas from refuse, a plurality of rotating corrugated rollers arranged in inclined superposed relation, inclined smooth surfaced plates arranged to deliver the peas to the successive rollers in a direction opposite to the direction of their rotation, whereby the peas bound from the roller and the refuse is caught thereby, and means for varying the inclination of the plates.

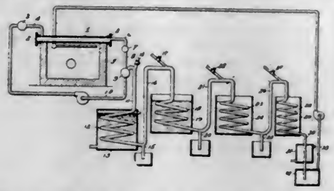
3. In a machine for separating peas from refuse, a plurality of horizontally disposed rollers arranged in inclined superposed relation, inclined smooth surfaced plates

arranged between the successive rollers and adapted to deliver peas to the rollers, means for varying the inclination of said plates and means for varying the position of the rollers with respect to the plates.

4. In a machine for separating peas from refuse, a shaking table having an inclined perforated bottom, an oppositely inclined smooth surfaced table secured to and arranged below the lower portion of said perforated bottom and onto which the peas fall from the perforated bottom, a chamber into which the peas are delivered from said smooth surfaced plate and perforated bottom, a plurality of rollers in said chamber over which the peas pass, and means in the chamber for directing the peas against said rollers.

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1,224,485. PROCESS OF CHLORINATING AND PRODUCTS THEREOF. GAIL MERSEREAU, New York, N. Y., assignor to Chemical Development Company, a Corporation of Maine. Filed Mar. 27, 1913. Serial No. 757,146. (Cl. 23—24.)



1. The process of making a solvent which comprises cracking petroleum oil to yield a complex mixture of unsaturated hydrocarbon gases and a gas adapted to serve as a diluent, removing condensable matter from said gas and treating the residual gas with chlorin under temperature-controlled conditions.

2. The process of making a solvent which comprises cracking petroleum oil to yield a complex mixture of unsaturated hydrocarbon gases and a gas adapted to serve as a diluent, removing condensable matter from said gas and treating the residual gas with chlorin under temperature-controlled conditions and chlorinating the residual gas, said chlorinating operation comprising a treatment of said gas with chlorin at about 100° C.

3. The process of making a solvent which comprises treating an oil gas with chlorin in a plurality of stages, the chlorinated product of each such stage being separately removed.

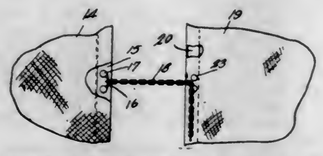
4. The process of making a solvent which comprises treating an oil gas with chlorin in a plurality of stages under temperature-controlled conditions, the temperature in each successive stage being higher than in the next preceding stage.

5. The process of making a solvent which comprises treating an oil gas with chlorin in a plurality of stages under temperature-controlled conditions, the temperature in one such stage being about 15° C. and in another about 100° C.

[Claims 6 to 19 not printed in the Gazette.]

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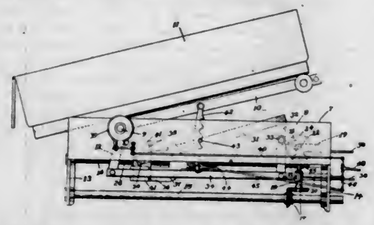
1,224,486. CORSET-FASTENER. JOHN MITCHELL, Northampton, Pa. Filed Oct. 25, 1916. Serial No. 127,636. (Cl. 24—206.)



In a separable fastener, a hook including base members having eyes, the base members terminating in outstanding arms merging into back-bent fingers extended toward the base members and connected by a cross bar disposed transversely of the base members and supported thereon; and a flexible element engaged between the arms and the fingers and supported on the cross bar, the flexible element having a projection coacting with the fingers.

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1,224,487. WAGON-DUMPING MECHANISM. ENRICO MORELLI, Cincinnati, Ohio, assignor of one-half to Domenico Venosa, Jr., Cincinnati, Ohio. Filed July 5, 1916. Serial No. 107,500. (Cl. 21—20.)



1. In a wagon dumping mechanism the combination of a chassis, a body-carrying frame pivotally mounted on the chassis and adapted to be lifted to bring the body mounted thereon from its normal load-carrying position to an elevated load-discharge position, a screw threaded driving, shaft, a split internally screw threaded nut mounted on the shaft, means operatively connecting the frame and the nut, and mechanism for clamping the nut in operative relation with the shaft when moved in one direction and for disconnecting the nut from the shaft when moved in the opposite direction, to permit the frame to return to its normal position after movement thereof to its load-discharging position.

2. In a wagon dumping mechanism the combination of a chassis, a body-carrying frame pivotally mounted on the chassis and adapted to be lifted to bring the body mounted thereon from its normal load-carrying position to an elevated load-discharging position, a screw threaded driving shaft, a split internally screw threaded nut mounted on the shaft, means operatively connecting the frame and the nut, mechanism for clamping the nut in operative relation with the shaft when moved in one direction and for operatively disconnecting the nut from the shaft when moved in the opposite direction, to permit the frame to return to its normal position after movement thereof to its load-discharging position, a ratchet link adapted to permit elevation of the body-carrying frame to a load-discharging position and to prevent return thereof to its normal position, a brake adapted to permit elevation of the body-carrying frame to a load-discharging position, and means adapted simultaneously to release the link and to operate the brake to restrain return of said body-carrying chassis to its load-carrying position.

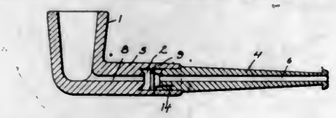
3. In a wagon dumping mechanism the combination of a chassis, a body-carrying frame pivotally mounted on the chassis and adapted to be lifted to bring the body mounted thereon from its normal load-carrying position to an elevated load-discharging position, a screw threaded driving shaft, a split internally screw threaded nut mounted on the shaft, a series of links operatively connecting the frame and the nut, and mechanism for clamping the nut in operative relation with the shaft when moved in one direction and for operatively disconnecting the nut from the shaft when moved in the opposite direction, to permit the frame to return to its normal position after movement thereof to its load-discharging position.

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1,224,488. PIPE. JOHN B. MORROW, Bay Shore, N. Y. Filed Nov. 17, 1915. Serial No. 62,047. (Cl. 131—12.)

A pipe comprising a bowl, a shank extending rearwardly from the bowl, said shank having a chamber opening out through its rear end and a reduced bore extending from the end wall of said chamber to the bowl, a stem having one of its ends in said chamber in spaced relation to said end wall and having its bore in alinement with said first bore, a diaphragm located in the chamber between said end wall and stem, said diaphragm having a plurality of circularly arranged openings and a central

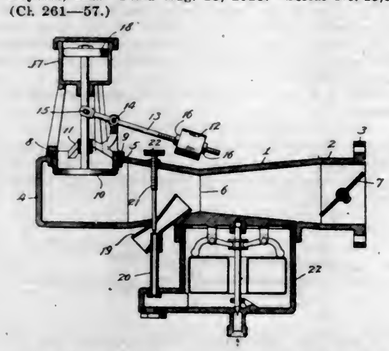




opening, the central opening being in alinement with said bores, a plurality of arms extending through the diaphragm and bent around the periphery thereof, said arms having inclined portions extending from said periphery in the direction of the axis of said diaphragm and being bent to extend in parallel relation to each other and driven into the stem to support the diaphragm in engagement with the wall of said chamber.

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1,224,489. CARBURETER. HOMER N. MOTSINGER, La Fayette, Ind. Filed Aug. 13, 1915. Serial No. 45,331. (Cl. 261—57.)



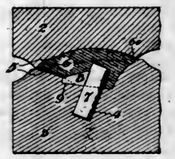
In a carbureter and in combination, a relatively large Venturi-tube having its exit end adapted to be connected to an engine to be supplied and having an air admission port in its entrance end, a constantly loaded automatically operating valve controlling the admission of air through the said port, a relatively small Venturi-tube having its entrance end open to the atmosphere and its exit end discharging into the said larger Venturi-tube at an angle to the axis thereof and at a point behind the throat of the same, a fuel nozzle discharging into said smaller Venturi-tube at an angle to the axis thereof and at a point behind the throat of the same, and a constant pressure means for supplying fuel to the said nozzle.

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1,224,490. MOLD FOR MAKING ARTIFICIAL TEETH. EDWIN MOUNTFORD, York, Pa., assignor to The Dentists' Supply Company, a Corporation of New York. Original application filed May 18, 1916, Serial No. 98,287. Divided and this application filed Nov. 7, 1916. Serial No. 129,955. (Cl. 18—42.)

1. A mold for making artificial teeth, consisting of a plurality of mold parts shaped to provide a tooth space having a bed portion and an incisor portion, combined with an inclined stud extending from the bed portion into the tooth space in a direction toward the incisor end thereof, and a web portion also extending from the bed into the tooth space and having greatest height at its end next to the stud, said stud arranged between the web and the incisor end of the mold space.

2. A mold for making artificial teeth, consisting of a plurality of mold parts shaped to provide a tooth space having a bed portion and an incisor portion, and provided with an inclined stud extending from the bed portion obliquely into the tooth space in a direction toward the incisor end thereof, and said mold also having a web extending from the bed into the tooth space on the side of the stud most distant from the incisor portion said web of less height at one end than at the other and said stud arranged next to the end of the web having the greater height and projecting slightly above it into the tooth space.

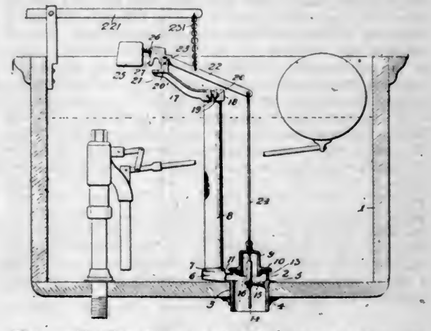


3. A mold for making artificial teeth, comprising a two-part mold forming a tooth space and one of the parts having a hole and a projecting web to one side of the hole and extending into the tooth space, combined with a detachable stud fitting the hole and also extending obliquely into the tooth space and fitting snugly to the web, said web of less thickness than the stud.

4. A mold for making artificial teeth, consisting of a plurality of mold parts shaped to provide a tooth space having a bed portion corresponding to the back of the tooth and an incisor portion, said bed provided with a web extending into the tooth space and of greater height at its end next to the incisor portion than at its other end, and also having a hole in the bed between the web and the incisor portion, combined with a detachable stud fitting the hole and extending obliquely into the tooth space and in close relation with the end of the web said web being of less thickness than the stud.

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1,224,491. VALVE MECHANISM FOR FLUSHING-TANKS. CHARLES H. MUCKENHIRN, Detroit, Mich., assignor to The Standard Sanitary Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Apr. 11, 1916. Serial No. 90,400. (Cl. 4—5.)



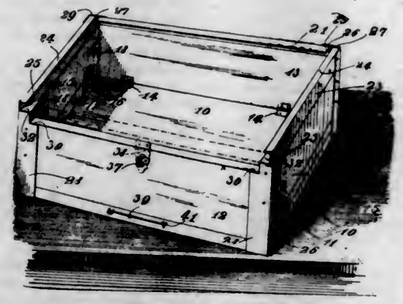
The combination with a closet tank having a flushing pipe communicating therewith, of a buoyant valve having a flat seating surface spanning said flushing pipe connection for controlling the same, an operating lever having a counterbalancing weight thereon suspended in the tank above the water level, a link pivotally connected to said operating lever and to the valve to permit a lateral movement of the link relative to the valve upon the shifting thereof, and means for maintaining said valve in its proper vertical alinement with the seat during the raising and lowering thereof comprising a guiding member carried by the valve, and a part cooperating with said guiding member, substantially as described.

1,224,492. PROCESS OF MAKING BREAD. FRANK NAROBE, New York, N. Y. Filed Dec. 13, 1916. Serial No. 136,670. (Cl. 99—10.)

1. The herein described steps of preparing dough and baking it as bread and comprising, a first kneading of the dough mixture, a second kneading after a rest period of approximately three hours, a rolling of the dough mixture into very thin flat sheets after a rest period of approximately one hour, an immediate preliminary heating for one hour followed by baking in a temperature of 400° to 500° Fah. for thirty seconds, and a reversing of the bread figures and a continuation of the baking for a period of from three to four minutes.

2. A process of baking bread, comprising subjecting the dough when in a raised condition, to a heat of 400 to 450 degrees Fah. for thirty seconds, reversing the sheet of dough and continuing the baking process for a period of from three to four minutes, whereby the sheet is baked thoroughly and completely.

1,224,493. FOLDING BOX. ALEXANDER NÉMEDY, Yonkers, N. Y. Filed Dec. 1, 1915. Serial No. 64,487. (Cl. 217—15.)

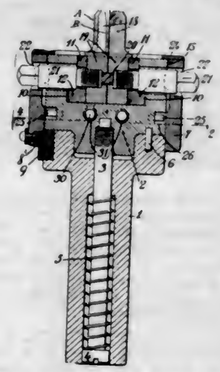


In a folding box, the combination of a bottom, side walls hinged thereto and foldable thereupon, one of said side walls being higher than the other and provided on its inner top edge with a strip having an inwardly projecting retaining flange, transverse cleats the height whereof matches the thickness of the side walls rigidly secured to the opposed end margins of the inner face of the bottom, end walls hinged to said cleats and foldable inwardly, strips attached to the outer faces of the top margins of said end walls and having inwardly projecting retaining flanges forming channels with the top edges of said walls, the said flanges being in the same horizontal plane as the aforesaid retaining flange of the side wall, strips attached to the vertical margins of the end walls and projecting inwardly at right angles therefrom to maintain the side walls vertically when erected, spring detents attached to the inner faces of the end walls and adapted to engage the side walls, and a top slidable in the channels and engageable with the side wall retaining flange, said top having a flange on one side edge of sufficient length to meet and complete the shorter side wall.

1,224,494. COLLAPSIBLE TAP OR REAMER. PAUL B. OATMAN, Erie, Pa. Filed June 24, 1915. Serial No. 36,005. (Cl. 10—144.)

3. A tap or reamer comprising a head, a pair of oppositely movable overlapping slides each interlocked with said head on one end thereof, means slidably interlocking said slides, a cutter on each slide, and a rotary cam ring for controlling the slides.

5. A tap or reamer comprising a stock, a head longitudinally movable thereon, a pair of lapping slides interlocked with said head and movable transversely thereof, and a rotatable cam ring mounted on said head and releasably engaging said stock, said cam ring having opposite cam surfaces for simultaneously moving said slides in opposite directions.



10. A tap or reamer comprising a rotatable head, oppositely movable cutter members carried by said head, each member carrying a plurality of cutting edges of different lengths and spaced at different distances from the axis of rotation of the tool.

[Claims 1, 2, 4, 6 to 9, and 11 to 15 not printed in the Gazette.]

1,224,495. WRITING INSTRUMENT. JOSEPH J. O'BRIEN, Washington, D. C. Filed Apr. 15, 1911, Serial No. 621,425. Renewed Mar. 26, 1917. Serial No. 157,587. (Cl. 120—98.)



1. A penholder comprising a handle, a metal tube forming a pen supply magazine secured on said handle, and a tube forming a closure for said magazine and having an end wall and pen holding means located forwardly thereof.

3. A penholder consisting of a solid staff, a tube fixed to the forward end of the staff and adapted to contain a supply of pens and having an opening through which pens are inserted and removed, a second tube mounted on the first tube and adapted to close the opening, means carried by said second tube for holding a pen in position for writing, and a wall extending transversely across the second tube and rearwardly of said holding means for preventing ink from creeping into the first tube.

5. An article of manufacture consisting of a handle, a magazine tube on the forward end of the handle, said magazine tube having a delivery opening, a second tube movable on the first tube to close the opening of said first tube and provided with a pen clamping member extending forwardly of the first tube and adapted to prevent ink from creeping from the same into the first tube.

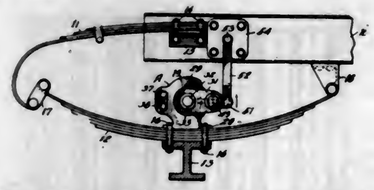
[Claims 2, 4, and 6 to 9 not printed in the Gazette.]

1,224,496. FRICTIONAL SHOCK-ABSORBER FOR VEHICLES. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Sept. 2, 1915. Serial No. 48,585. (Cl. 21—105.)

1. A shock absorber for vehicles and the like comprising, a casing adapted to be secured to one member of the vehicle, two sets of friction disks carried by said casing, and means for turning one set of disks in one direction relatively to the casing, and the other set of disks always in the opposite direction relatively to said casing, upon



relative movements of the vehicle member to which the casing is adapted to be secured and another member of the vehicle.



2. A shock absorber for vehicles comprising, a casing, two sets of friction disks carried by said casing, one set of disks being rotatable about centers eccentric to the centers of rotation of the other set of disks, and means for actuating one set of disks always in the same direction.

3. In a device of the character described, the combination with two members of a vehicle adapted to move forward and from each other, of a shock absorber, said shock absorber comprising, a casing secured to one of said members, two sets of friction disks carried by said casing, said disk having peripheral teeth, both sets being rotatable with respect to the casing, one set in one direction and the other set in the opposite direction, pawl means coöperating with the teeth of said disks, and devices for actuating said pawl means upon relative movement between said members of the vehicle.

4. In a device of the character described, the combination with two members of a vehicle adapted to move toward and from each other, of a shock absorber, said shock absorber comprising a casing secured to one of said members, two sets of eccentrically disposed friction disks carried by said casing, said disks having teeth around their peripheries, a double acting pawl coöperable with the teeth of said disks, and means for actuating said pawl upon relative movement betwen said members of the vehicle.

5. A shock absorber for vehicles and the like comprising, a supporting member, two sets of rotatably mounted friction disks, said disks having peripheral teeth, a train of gears interposed between the teeth of one set of disks and the teeth of the other set of disks whereby movement of one set is imparted to the other set, and a pawl adapted to coöperate with the teeth of either set of disks.

[Claims 6 to 11 not printed in the Gazette.]

1,224,497. HEATING APPARATUS. HENRY W. O'DOWD, Jersey City, N. J., assignor to William M. Crane Company, a Corporation of New York. Filed Oct. 16, 1915. Serial No. 56,189. (Cl. 126—39.)

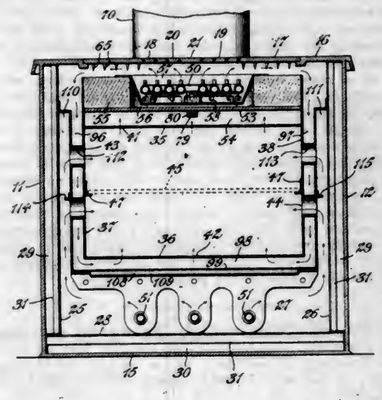
1. A stove, including in combination, an oven apertured at the bottom, a radiating element thereunder, an upper source of heat, and means for conveying the heat from said source down upon said element and thence into the oven.

2. A stove including an oven with an apertured bottom, a flue open at the aperture therein, a radiating element on said flue opposite said aperture, an upper heat generating chamber, and means for conveying heat from said chamber down upon said element.

3. A stove including an oven provided with apertures at top and bottom, a radiating element under the same, an upper source of heat, and means for conveying the heat from said source down to said element along opposite sides of the oven and up through said apertures.

4. A stove including a source of heat, an oven thereabove, an intermediate radiating element, means for conveying a current laterally to said oven past the under side of said element from said source, and other means directing a similar current against the upper side of the radiating element beneath the oven.

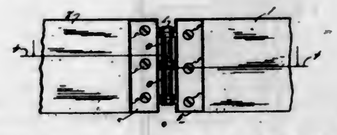
5. A stove including an oven with apertures in its bottom and sides, means for conveying heat currents exteriorly from the top of said oven to the apertures in the bottom thereof, and separate means leading other heat



currents from a point beneath the oven upwardly into its sides.

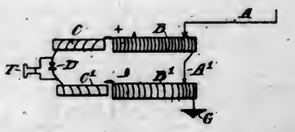
[Claims 6 to 30 not printed in the Gazette.]

1,224,498. BELT-FASTENER. HANS PETERSEN, Lostwood, N. D. Filed May 6, 1915. Serial No. 26,229. (Cl. 24—33.)



A belt-fastener, including pairs of plates, a pair being applied to each section of the belt, means for connecting said pairs of plates together, couplings having eyes at their ends, said plate-connecting means comprising screws having their heads counter-sunk into, and extending through said plates and threaded into said couplings, the eyes at one end of said couplings receiving said plate-connecting means, a locking pin inserted through the eyes at the other ends of said couplings and lying transversely of the belt, intermediate the opposed ends of said belt-sections, and spacing members sleeved upon said locking-pin, intermediate the locking-pin receiving eyes of said couplings.

1,224,499. RADIO TELEGRAPHY AND TELEPHONY RECEIVER. GREENLEAF WHITTIER PICKARD, Amesbury, Mass., assignor to Wireless Specialty Apparatus Company, Boston, Mass., a Corporation of New York. Filed Apr. 17, 1914, Serial No. 832,591. Renewed Mar. 13, 1917. Serial No. 154,560. (Cl. 250—20.)



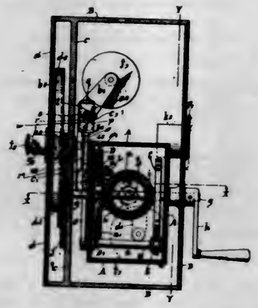
1. In a radio receiving system, the combination with a coil, of sufficient length to permit its natural period to be substantially equal to the shortest desired wave length, of a second coil, consisting of a few turns and having a

natural period much smaller than the shortest desired wave-length, said coils being open-circuited and having their free ends substantially facing one another, and the coils being bodily movable with reference to one another; the second coil having unilaterally connected to it suitable means for indicating the received intelligence, substantially as and for the purpose described.

2. In a radio receiving system, the combination with two coils, of sufficient length to permit the natural period thereof to be substantially equal to the shortest desired wave length, of a second pair of coils, consisting of a few turns and having a natural period much smaller than the shortest desired wave-length, each pair of coils being open-circuited, and the first pair of coils being so wound and connected that their free ends are of opposite polarity; the second pair of coils being arranged in coöperative relation with the first pair and being movable relative thereto and having unilaterally connected to them suitable means for indicating the received intelligence, substantially as and for the purpose described.

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1,224,500. MOTION-PICTURE APPARATUS. RICHARD H. PIETZSCH, Philadelphia, Pa., assignor to Cino Camera Company, Philadelphia, Pa., a Corporation of Delaware. Filed Aug. 8, 1914. Serial No. 855,723. (Cl. 88—18.)



1. In motion picture apparatus, the combination with a laterally movable frame, of film supporting means carried thereby, means biasing said frame toward one position, and means for intermittently moving said frame away from said position and permitting intermittent return to said position.

2. In motion picture apparatus, the combination with a laterally movable frame, of film supporting means carried thereby, means biasing said frame toward one position, and a cam for intermittently moving said frame away from said position and allowing intermittent return to said position.

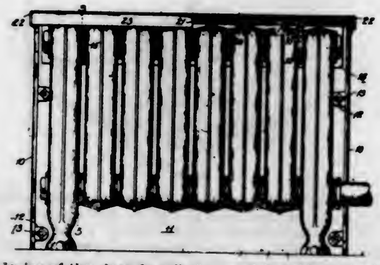
3. In motion picture apparatus, the combination with a laterally movable frame, of film supporting means carried thereby, a continuously rotating shaft, and a single continuously rotating cam mechanism intervening between said shaft and said frame, said mechanism driven by said shaft and controlling intermittent forward and backward movement of said frame.

4. In motion picture apparatus, the combination with a laterally movable frame, of film supporting means carried thereby, a continuously rotating cam mechanism, and a member connected with said frame and engaging said cam mechanism, said member intermittently moved as said cam mechanism rotates for controlling intermittent forward and backward movement of said frame.

5. In motion picture apparatus, the combination with a laterally movable frame, of film supporting means carried thereby, a lever connected to said frame for moving the same, and a cam controlling intermittent movement of said lever.

[Claims 6 to 44 not printed in the Gazette.]

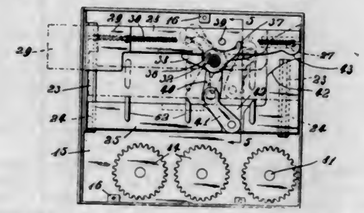
1,224,501. RADIATOR-COVER. CHESTER MILO FOETSCH, Chicago, Ill. Filed Dec. 11, 1915. Serial No. 66,270. (Cl. 237—79.)



A device of the class described comprising sides, a back, means for detachably securing the sides to the back, a removable, adjustable shelf top, means for detachably and slidably connecting the top with the back and sides, a moisture reservoir supported by the back, means engaging with the radiator and slidably engaged with the top for attaching the top and associated parts to and supporting on the radiator.

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1,224,502. LOCK. ARMIN POLLAK, New York, N. Y. Filed Sept. 1, 1915, Serial No. 48,451. Renewed Sept. 7, 1916. Serial No. 118,944. (Cl. 70—53.)



1. In a lock, the combination with a sliding bolt, a shaft, an arm on said shaft adapted to propel said bolt outwardly and an actuating means for said shaft, of a plurality of stops, an arm on said shaft engageable with said stops when in a locked position, pivoted levers operatively combined with said stops, a rotatable cylindrical cam for actuating each lever independently and means for actuating said cams, said means being permutatively adjustable and accessible from the exterior of the lock casing.

2. In a lock, the combination with a casing, a sliding bolt therein, and a shaft operatively combined in said casing for actuating said bolt, of a laterally movable recessed bar parallel to said bolt, a lever combined with said shaft, a link pivoted in said bar and said lever whereby said bar is operated conjunctively with said bolt, means operative in the recess of said bar for limiting an excess of motion of said shaft in either direction and means for operating said shaft.

3. In a lock, the combination with a casing, a sliding bolt therein, and a shaft operatively combined in said casing for actuating said bolt, of a laterally movable bar parallel to said bolt, connections between said shaft and said bar whereby a simultaneous motion is compelled, a plurality of slotted sleeves each independently operable in said casing, lugs formed with said bar engageable in the slots of said sleeves, means for rotating said sleeves a predetermined degree whereby the mentioned slots are brought into register with said lugs and a second operating means, disposed on the opposite side of said casing, and geared to the first mentioned operating means.

4. In a lock, the combination with a casing, a sliding bolt therein, and a shaft operatively combined in said casing for actuating said bolt, of a laterally movable bar parallel to said bolt, connections between said shaft and said bar whereby a simultaneous motion is compelled, a plurality of slotted sleeves each independently operable in said casing, lugs formed with said bar engageable in the slots of said sleeves, means for rotating said sleeves a predetermined degree whereby the mentioned slots are brought into register with said lugs, gears combined with said sleeves, a second series of gears engageable therewith and means for operating said second gears on the opposite side of said casing.

5. In a lock, the combination with a casing, a sliding bolt therein, a spindle operatively combined in said casing for actuating said bolt, of a laterally movable bar parallel to said bolt, connections between said spindle and said bar whereby a simultaneous motion is compelled, lugs formed transversely on the face of said bar, a plurality of sleeves rotatably mounted in said casing, each of said sleeves having a slot registrable with a corresponding lug, a barrel having an indented surface formed with said sleeve, a spring click engaging the mentioned indentations, a spindle adjustably secured in said sleeve and means for rotating said spindle whereby the slots in said sleeves may be brought into registration with said lugs.



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1,224,503. REINFORCING-BACK FOR BRAKE-SHOES. FITZ WILLIAM SARGENT, Mahwah, N. J., assignor to The American Brake Shoe & Foundry Company, Wilmington, Del., a Corporation of Delaware. Filed Feb. 20, 1917. Serial No. 149,715. (Cl. 188—82.)



1. A reinforcing back for brake shoes consisting of a plate substantially $\frac{3}{16}$ inches in thickness, with a portion thereof outwardly bent, forming an integral looped lug, the top surface of said lug projecting above the plane of the back the maximum height, for use in connection with a standard size brake head; means associated with the top of the lug whereby the under surface thereof is located at the required distance above the general plane of the back for use in connection with a standard size brake head, and tongues cut from the full height of the sides of the lug defining keyway openings therein and bent into the general plane of the back, said tongues rigidly joined together.

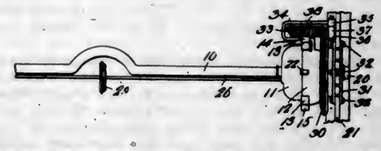
2. A reinforcing back for brake shoes consisting of a metal plate substantially $\frac{3}{16}$ inches in thickness, with a portion thereof outwardly extended, forming an integral looped lug, the top surface of said lug projecting substantially $1\frac{3}{16}$ inches above the general plane of the back measured at the sides of the lug, means whereby the under surface of the top of the lug extends to within substantially $\frac{1}{2}$ inches of the general plane of the back measured at the sides of the lug, and tongues cut from the full height of the sides of the lug defining keyway openings therein, said tongues bent into the general plane of the back and rigidly joined and connected together.

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1,224,504. FRONT-WHEEL DRIVE. EMANUEL M. SAUDER, Wauseon, Ohio. Filed Sept. 5, 1916. Serial No. 118,479. (Cl. 21—90.)

1. In a device of the kind described, a wheel, a bevel gear mounted on said wheel and having its rim spaced therefrom, a steering knuckle casing member supporting said wheel, an arm projecting from the member in the direction of the wheel, a roller carried by the arm and engaging the back of the gear, and a second bevel gear supported by the member and meshing with the first gear opposite the roller.

2. In a device of the kind described, a wheel, a bevel gear mounted on said wheel and having its rim spaced therefrom, a steering knuckle casing member supporting said wheel, an arm projecting from the member in the direction of the wheel, a roller carried by the arm and engaging the back of the gear, a second casing member, a shaft extending vertically through the casing members



and forming a pivot therefor, a second bevel gear fixed to the upper end of the shaft and meshing with the first gear opposite the roller, a third bevel gear fixed to said shaft within the casing members, a driving shaft journaled in the wall of the second casing member, and a driving gear fixed to the driving shaft and meshing with said third gear.

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1,224,505. ATTACHMENT-PLUG. RALPH A. SCHOENBERG, New York, N. Y. Filed Apr. 22, 1916. Serial No. 92,980. (Cl. 173—359.)



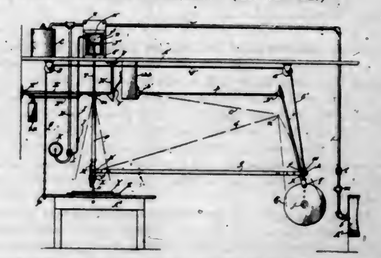
2. An attachment plug having a screw shell body, the inside of which is a hollow chamber, said shell having a perforation in its wall substantially below the top of the shell; a cap with a perforation; conducting means to hold said cap to said shell; a lead wire passing through the perforation of said cap and through the perforation of said shell and connected mechanically to said shell at the outside of the latter; and exterior insulation for said shell between said conducting means and the point of connection of said lead wire and said shell.

6. An attachment plug comprising a shell with a flange; a formed up cap of insulating sheet material; and means to hold said cap to said flange.

[Claims 1 and 3 to 5 not printed in the Gazette.]

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1,224,506. MACHINE FOR REDUCING HARD AND ROUGH SURFACES TO A POLISHED CONDITION. ALBERT R. SEAMAN, South Connellsville, Pa. Filed Sept. 20, 1916. Serial No. 121,325. (Cl. 51—11.)



1. A polishing machine comprising a stationary shelf, pulleys supported thereby, a block projecting from the

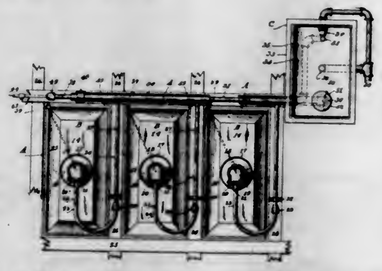
under surface of the shelf, an arm pivoted to said block, a collar fitted to said arm, a rod movable through said collar and a rotatable disk having adjustable pivotal connections between the same and said bar which moves through the collar, a pressure bar pivoted at one end, an adjustable weight upon the pressure bar, a pendent bar pivoted to the pressure bar, a polishing stone carried by the pendent bar, pivotal bar connections between the pendent bar and said bar which is movable through said collar, and means connected to the bar for raising and lowering the same.

2. A polishing machine comprising a stationary shelf, pulleys supported thereby, a block projecting from the under surface of the shelf, an arm pivoted to said block, a collar fitted to said arm, a rod movable through said collar and a rotatable disk having adjustable pivotal connections between the same and said bar which moves through the collar, a pressure bar pivoted at one end, an adjustable weight upon the pressure bar, a pendent bar pivoted to the pressure bar, a polishing stone carried by the pendent bar, pivotal bar connections between the pendent bar and said bar which is movable through said collar, a rope secured at one end to said pivotal bar and passing over said pulleys, a table, balls upon the latter, and apertures in said table through which said rope and balls are adapted to pass.

3. A polishing machine comprising a stationary shelf, pulleys supported thereby, a block projecting from the under surface of the shelf, an arm pivoted to said block, a collar fitted to said arm, a rod movable through said collar and a rotatable disk having adjustable pivotal connections between the same and said bar which moves through the collar, a pressure bar, a notched, ball-shaped member secured thereto and a weight adjustably mounted upon said ball-shaped member, a pendent bar pivoted to the pressure bar, a polishing stone carried by the pendent bar, pivotal bar connections between the pendent bar and said bar which is movable through said collar, means connected to the bar for raising and lowering the same, a piston and cylinder in which the same is mounted, and a stem to said piston adapted to bear against the pressure bar.

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1,224,507. APPARATUS FOR MAKING ICE. GILBERT SELLERS, Chicago, Ill. Filed Nov. 3, 1916. Serial No. 129,366. (Cl. 62—158.)



1. In an apparatus of the nature described, an ice-can, and a removable cover for the same, said cover being adapted for being ice-sealed to said can when ice is forming therein, said cover being dome-shaped, there being in said cover a tube, said tube projecting downwardly through said cover and an element in said tube, said element being secured to the lower end of said tube, whereby air will be entrapped in the upper end of said ice-can when the water in said can reaches said cover, and the ice-sealing attained.

2. In an apparatus of the nature described, an ice-can, and a removable cover for the same, said cover being adapted for being ice-sealed to said can when ice is forming therein, said cover being a dome-shaped structure having a plane top and a downwardly flaring skirt reaching to the inner walls of said ice-can, there being in said cover a central tube, said tube projecting downwardly through said cover, and an element in said tube, the lower end of said element being air tightly secured to the lower end of said tube.

3. In an apparatus of the nature described, an ice-can, and a removable cover for the same, said cover being adapted for being ice-sealed to said can when ice is forming therein, said cover being a dome-shaped structure having a plane top and a downwardly flaring skirt reaching to the inner walls of said ice-can, there being in said cover a centrally located tube, said tube projecting downwardly through said cover, and a metallic cone, the lower end of said cone being air-tightly attached to the lower end of said tube.

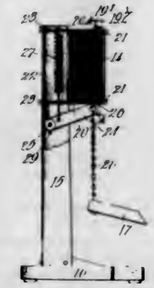
4. In an apparatus of the nature described, the combination, of an ice-can, a removable cover for said ice-can, said cover being adapted for being ice-sealed to said can when ice is forming therein, said cover being dome-shaped, there being in said cover a tube, said tube projecting downwardly through said cover, a tubular element in said tube, an expansion tank, and piping connecting said tubular element to said expansion tank.

5. In an apparatus of the nature described, the combination, of an ice-can, a removable cover for said ice-can, said cover being adapted for being ice-sealed to said can when ice is forming therein, said cover being a dome-shaped structure having a plane top and a downwardly flaring skirt reaching to the inner walls of said ice-can, a tube centrally located in said cover, said tube projecting downwardly through said cover, a tubular element in said tube, an expansion tank, and piping connecting said tubular element to said expansion tank.

[Claims 6 to 13 not printed in the Gazette.]

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1,224,508. CONTROL MECHANISM FOR SEWING-MACHINE MOTORS. HARRY E. SELLERS, Wausau, Wis., assignor to Marathon Electric Mfg. Company, Wausau, Wis., a Corporation of Wisconsin. Filed Feb. 5, 1916. Serial No. 76,295. (Cl. 219—48.)



1. A controlling element for sewing machine motors comprising a rheostat having a movable switch arm, a standard for supporting said rheostat, said standard being of U-shaped cross-section and supported on a horizontal base part, means at the upper end of said standard for attaching said rheostat, a lever pivoted within said U-shaped standard and connected to the movable part of said rheostat, a spring normally retracting said lever, and a connection for attaching said lever to the treadle of a sewing machine.

2. A controlling element for sewing machine motors comprising a rheostat having a movable member, a standard for supporting said rheostat, said standard being of U-shaped cross-section and supported on a horizontal base part, means at the upper end of said standard for attaching said rheostat, a lever pivoted within said U-shaped standard below said rheostat and connected to the movable part thereof, a spring housed within said standard behind said rheostat and connected so as to normally retract said lever, a connection for attaching said lever to the treadle of a sewing machine, and a radially disposed shoulder on said lever adapted to engage the back of said standard for limiting the downward movement of the treadle.

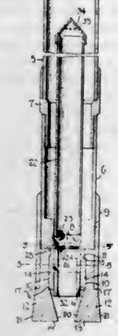
3. A controlling element for sewing machine motors comprising a rheostat having a movable member, a standard for supporting said rheostat, said standard being of U-shaped cross-section and supported on a horizontal base part, means at the upper end of said standard for attaching said rheostat, a lever pivoted within said U-shaped standard below said rheostat and connected to the movable part thereof, a spring housed within said standard behind said rheostat and connected so as to normally retract said lever, a connection for attaching said lever to the treadle of a sewing machine, and a connection for attaching said lever to the treadle of a sewing machine.

4. A controlling element for sewing machine motors comprising a rheostat having a movable member, a standard for supporting said rheostat, a pair of rods having their inner ends threaded and their outer ends bent transversely to form shoulders, said rods having their threaded ends extending through said standard so that their outer ends engage said rheostat at diametrically opposite points, nuts on said threaded ends adapted to set said rods for clamping said rheostat to said standard, a lever pivoted on said standard below said rheostat and connected to the movable part thereof, a spring normally retracting said lever, and a connection for attaching said lever to the treadle of a sewing machine.

5. A controlling element for sewing machine motors, comprising a rheostat having a movable switch arm, a standard for supporting said rheostat and having the base thereof adapted to permit said standard to be positioned adjacent to the treadle of a sewing machine, means at the upper end of said standard for attaching said rheostat, a lever pivoted on said standard and connected to the movable part of said rheostat, a spring normally retracting said lever, and a connection for attaching said lever to the treadle of a sewing machine.

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1,224,509. ROTARY CORE-DRILL. THOMAS B. SMITH, Wichita Falls, Tex. Filed July 7, 1916, Serial No. 108,031. Renewed Mar. 31, 1917. Serial No. 159,002. (Cl. 255—72.)



1. A well drill of the character described including a rotatable body, a core barrel concentrically mounted within said body, a plurality of cutting bits, means for assembling said cutting bits in operative relation in the lower end of the body wall, and opposed normally spaced valve plates mounted within the body beneath the core barrel and opened by the pressure of the material.

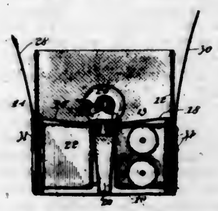
4. A well drill of the character described including a rotary body having a reduced bore at its lower end, a core barrel mounted in said bore and extending upwardly in concentric relation to said body, a plurality of cutting bits, means for detachably holding the bits in assembled relation upon the lower end of said body, said bits projecting below the drill body and having beveled faces, and spring-held valve plates mounted in the reduced bore of the body below said barrel and opened by the upward pressure of the material entering the barrel, said drill body being provided with means permitting the free circulation of fluid between the barrel and the drill body into the well.

7. A well drill of the character described including a rotary body having a reduced bore at its lower end and a plurality of spaced longitudinal channels in its periphery, a plurality of cutting bits each having a shank for engagement in one of said channels, a sleeve threaded upon said body for engagement over the shanks of the cutting bits to hold the bits against relative movement, a core barrel detachably mounted in the upper end of said bore and extending upwardly into said body in spaced concentric relation to the same, a sleeve rotatably mounted within the bore below said barrel, spring-held valve plates mounted upon the upper end of the sleeve and opened by the upward pressure of the material entering said barrel, and means to retain the sleeve in position therein.

[Claims 2, 3, 5, 6, and 8 not printed in the Gazette.]

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1,224,510. PACK-BAG FOR DELICATE INSTRUMENTS SUCH AS TELEPHONES. CHARLES A. SOPER, Jr., Chicago, Ill., assignor to Chicago Wholesale Saddlery & Mfg. Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 2, 1915. Serial No. 64,780. (Cl. 150—52.)

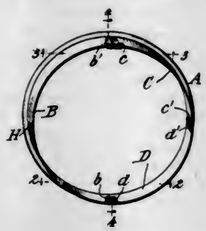


1. A device of the class described, comprising a bag member adapted to receive three or more articles, a plurality of flexible packing cloths secured to the bottom of the bag at a point intermediate between two articles to be packed placed on the bottom of the bag and adapted to be spread, one over the top of each such article to be packed, whereby said articles are separated from each other and from one or more other articles to be packed placed between or on top of said packing cloths after they are in place over the first two articles to be packed.

2. A device of the class described, comprising a bag member adapted to receive three or more articles, a plurality of flexible packing cloths secured to the bottom of the bag at a point intermediate between two articles to be packed placed on the bottom of the bag and adapted to be spread, one over the top of each such article to be packed, whereby said articles are separated from each other and from one or more other articles to be packed placed between or on top of said packing cloths after they are in place over the first two articles to be packed, this in combination with means for closing the bag.

3. A device of the class described, comprising a bag member adapted to receive three or more articles, a plurality of flexible packing cloths secured to the bottom of the bag at a point intermediate between two articles to be packed placed on the bottom of the bag and adapted to be spread, one over the top of each such article to be packed, whereby said articles are separated from each other and from one or more other articles to be packed placed between or on top of said packing cloths after they are in place over the first two articles to be packed, this in combination with covering devices for closing the bag, together with straps attached to opposite ends of the bag adapted to be secured together over the top of the bag to fasten the entire device together.

1,224,511. DEMOUNTABLE RIM AND FELLY-BAND. CHARLES D. STEPHENS, Austin, Tex., assignor of one-half to Joseph A. Bachman, Austin, Tex. Filed Feb. 12, 1916. Serial No. 77,820. (Cl. 152—21.)



1. A demountable rim composed of a plurality of transversely divided separable sections, locks between the ends of adjacent sections, one of which permits relative radial movement of said sections, but prevents relative lateral movement, and others of which prevent relative movement of the connected sections in any direction.

2. A demountable rim composed of a plurality of transversely divided separable sections, locks between the ends of adjacent sections and located on the inner wall of said rim, one of which permits relative radial movement of said sections but prevents relative lateral movement, and others of which prevent relative movement of the connected sections in any direction; and an integral felly band adapted to receive said rim and means on the periphery thereof for receiving said locks and securing the rim in place on the said band and reliably holding the sections thereof together.

3. A collapsible tire rim comprising a plurality of separable sections, and means for giving said rim temporary stability comprising blocks on the adjacent parts of the respective sections, and locking joints between the blocks, one of said joints comprising a mortise and tenon so located with respect to the adjacent rim joint that only one of said parts overlaps the adjacent rim section, permitting relative radial movement of said rim sections at said joint, but preventing relative lateral movement of said sections, and the locking joints between the other sections preventing relative radial or lateral movement of the connected sections.

4. A demountable tire rim constructed of a plurality of separable sections and means for assembling said sections comprising blocks on the adjacent edges of the respective sections and mortise joints between adjacent blocks, the mortise and tenon in one of said joints being so located with respect to the adjacent rim joint that only one of said parts overlaps the adjacent rim section and the mortises and tenons in the other joints each adapted to overlap the adjacent rim section.

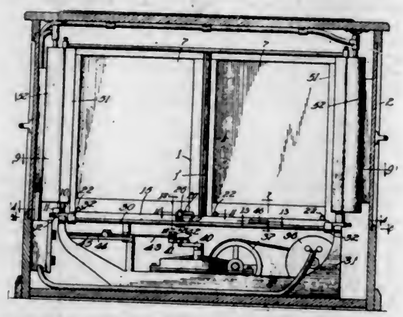
5. A demountable tire rim constructed of three sections separable on transverse lines, one of which comprises approximately one half of the said rim, and the other two the remainder, blocks on adjacent parts of the respective sections and mortise joints between the blocks, the mortise and tenon in one of said joints being so located with respect to the adjacent rim joint that only one of said parts overlaps the adjacent rim section, and the mortises and tenons in the other joints each adapted to overlap the respective adjacent rim section.

[Claim 6 not printed in the Gazette.]

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1,224,512. DISPLAY APPARATUS. DAN C. TEETOR, Hagerstown, Ind. Filed Mar. 10, 1915. Serial No. 13,316. (Cl. 40—36.)

1. Display apparatus including a support; a plurality of slides arranged upon said support in two groups; and mechanism for effecting transfer of slides from group to group, said support and slides respectively having interengaging rails and notches for maintaining the slides that are not undergoing transfer in alinement, said support having two longitudinal walls spaced apart from the ends of said rails to permit of the transfer of slides from group to group, that end of each rail at the end of each group where slides are introduced being of entering wedge formation, said walls being each anchored at one end adjacent the rail end where transferred slides are first engaged and free to swing at the other and having means for forcing them inwardly.



2. Display apparatus including a support; a plurality of slides arranged upon said support in two groups; and mechanism for effecting transfer of slides from group to group, said support and slides respectively having interengaging rails and notches for maintaining the slides that are not undergoing transfer in alinement, said support having two longitudinal walls spaced apart from the ends of said rails to permit of the transfer of slides from group to group, said walls being each anchored at one end adjacent the rail end where transferred slides are first engaged and free to swing at the other and having means for forcing them inwardly.

3. Display apparatus including a support; a plurality of slides arranged upon said support in two groups; and mechanism for effecting transfer of slides from group to group, said support and slides respectively having interengaging rails and notches for maintaining the slides that are not undergoing transfer in alinement, said support having two longitudinal walls spaced apart from the ends of said rails to permit of the transfer of slides from group to group, that end of each rail at the end of each group where slides are introduced being of entering wedge formation, said walls being each anchored at one end adjacent the rail end where transferred slides are first engaged and free to swing at the other and having means for forcing them inwardly.

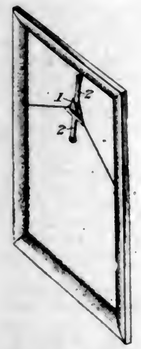
4. Display apparatus including a support; a plurality of slides arranged upon said support in two groups; and mechanism for effecting transfer of slides from group to group, said support and slides respectively having interengaging rails and notches for maintaining the slides that are not undergoing transfer in alinement, said support having two longitudinal walls spaced apart from the ends of said rails to permit of the transfer of slides from group to group, said walls being each anchored at one end adjacent the rail end where transferred slides are first engaged and free to swing at the other and having spring means for forcing them inwardly.

5. Display apparatus including a support; a plurality of slides arranged upon said support in two groups; and mechanism for effecting transfer of slides from group to group, said support and slides respectively having interengaging rails and notches for maintaining the slides that are not undergoing transfer in alinement, said support having two longitudinal walls spaced apart from the ends of said rails to permit of the transfer of slides from group to group, that end of each rail at the end of each group where slides are introduced being of entering wedge formation, said walls being each anchored at one end adjacent the rail end where transferred slides are first engaged and free to swing at the other and having spring means for forcing them inwardly.

[Claims 6 to 8 not printed in the Gazette.]



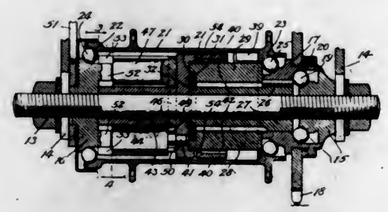
1,224,513. HANGER FOR PICTURES AND MIRRORS. GEORGE THOMPSON, New York, N. Y. Filed Nov. 27, 1912. Serial No. 733,727. (Cl. 40—145.8.)



A picture hanger having a flat body portion and a single projecting member cut therefrom and bent forward at an acute angle forming a sharp V-shaped grip at each side of said projecting member at its base.

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1,224,514. COASTER-BRAKE. JOHN J. TOBIN, Chicago, Ill., assignor to Tobin Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 3, 1915. Serial No. 59,408. (Cl. 208—57.)



1. In a device of the character described, the combination with a wheel-hub, of a driving element, a cage, and means mounted in said cage shiftable transversely of said hub adapted to occupy alternative positions depending upon the direction of force exerted by said driving element and including a section provided with a rack, said means being interposed between said element and said hub, to alternately drive or brake said hub and said element including a pinion meshing with said rack.

2. In a device of the character described, the combination with a wheel-hub, of a driving element, a cage, and means mounted in said cage shiftable transversely of said hub adapted to occupy alternative positions depending upon the direction of force exerted by said driving element and including sections each provided with a rack, said means being interposed between said element and said hub to alternately drive or brake said hub, said element including a pinion and said sections meshing at their racks with said pinion.

3. In a device of the character described, the combination with a wheel-hub, of a driving element, a cage, shifting means guidingly confined in said cage and interposed between said element and said hub and adapted to occupy alternative positions depending upon the direction of force exerted by said driving element and including a section provided with a rack, said element including a pinion intermeshing with said rack, and means stationarily mounted relative to said first-named means and adapted to coöperate with said first-named means when in one of its alternative positions.

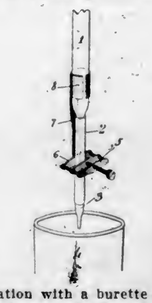
4. In a device of the character described, the combination with a wheel-hub, of a driving element, shifting means interposed between said element and said hub, said means being guidingly mounted to be movable in a straight line transversely of the device and affording portions adapted to occupy alternative positions depending upon the direction of force exerted by said driving element, said portions being disposed in different positions along the axis of said device, one of said portions being adapted to drive said hub, and a braking mechanism for said hub, positioned for coöperation with the other portion of said shifting means for actuation thereby when the latter is in one of its alternative positions.

5. In a device of the character described, the combination with a wheel-hub, of a driving element, shifting means interposed between said element and said hub, said means being movable transversely of the device and affording portions adapted to occupy alternative positions depending upon the direction of force exerted by said driving element, said portions being disposed in different positions along the axis of said device, one of said portions being adapted to drive said hub, a cage in which said shifting means are guidingly confined to have straight line movement, and a braking mechanism for said hub positioned for coöperation with the other portion of said shifting means for actuation thereby when the latter is in one of its alternative positions.

[Claims 6 to 13 not printed in the Gazette.]

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1,224,515. COMBINED CLAMP AND SUPPORT. CYRIL STANTON TREACY, New York, N. Y. Filed May 10, 1916. Serial No. 96,492. (Cl. 137—28.)



1. The combination with a burette and flexible outflow means connected thereto, of a base directly engaging and supported by said burette, a clamp in operative relation to said flexible outflow means and a member rigidly connecting a fixed portion of said clamp with said base.

2. The combination with a burette and flexible outflow means connected thereto, of a base having yieldable arms directly engaging and supported by said burette, a clamp in operative relation to said flexible outflow means and a member rigidly connecting a fixed portion of said clamp with said base.

3. The combination with a burette and flexible outflow means connected thereto, of a base having circularly extending arms frictionally engaging said burette and supported thereby, a screw clamp for said flexible outflow means and a member rigidly connecting said base with a fixed portion of said clamp.

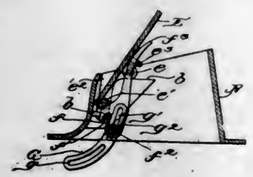
4. As an article of manufacture, a clamp and support therefor for use with a burette having flexible outflow means, comprising a base having oppositely extending arms adapted to directly frictionally engage the burette, a screw clamp for controlling the flexible outflow means and a member rigidly connecting said base with a fixed portion of the screw clamp.

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1,224,516. DAMPER. CLIFFORD M. TYLER, Brookline, Mass. Filed Dec. 10, 1913, Serial No. 805,840. Renewed Feb. 29, 1916. Serial No. 81,292. (Cl. 126—288.)

1. A device of the character described comprising a damper; and a handle operatively connected to the

damper and adjustable for operative relation to the damper for any single position of the latter and mounted to swing on an axis substantially parallel to the front of the fireplace.



2. A device of the character described comprising a damper; and a handle operatively connected to the damper and adjustable for operative relation to the damper for any single position of the latter and movable inwardly to operate the damper.

3. A device of the character described comprising a damper; and a handle operatively connected to the damper and adjustable for operative relation to the damper for any single position of the latter and movable inwardly as the damper is moved.

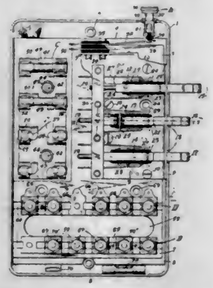
4. A device of the character described comprising a damper; and a handle operatively connected to the damper and adjustable for operative relation to the damper for any single position of the latter and movable inwardly as the damper is opened.

5. A device of the character described comprising a damper mounted to swing; a member mounted to swing on a fixed axis parallel to, but at a distance from, the axis of the damper and adapted to engage and operate a damper; and a second member having rigid but adjustable connection with the first member.

[Claims 6 to 12 not printed in the Gazette.]

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1,224,517. SWITCHING DEVICE. ALFRED H. WEISS, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 26, 1912. Serial No. 738,565. (Cl. 175—282.)



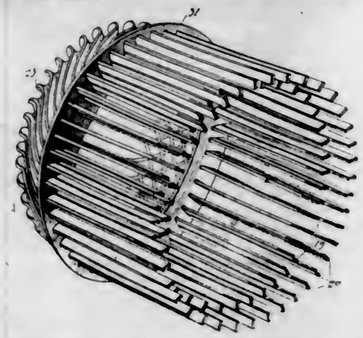
1. A switching device comprising a switch frame having front and rear supporting members, an angularly shaped switch operating-bar suitably supported by said frame so as to prevent rotation of said bar but to permit longitudinal movement thereof, the rear extremity of said bar being adapted to engage the rear mounting support to limit the backward movement of said bar, projections formed integrally with said bar adapted to engage the forward mounting support to limit the forward movement of said bar, an angularly disposed hook shaped handle portion for said bar extending from the face of said frame, switch contact springs suitably carried by said frame on opposite sides of said switch bar, insulating strips on said bar normally engaged by the contacting portions of said switch springs, and conducting strips also carried by said bar but insulated therefrom by said insulating strips and adapted to be engaged by said switch springs to render the circuit through them continuous when the bar is operated.

2. A switching device comprising a switch frame having front and rear supporting members, an angularly shaped switch operating bar suitably supported by the front member so as to prevent rotation of said bar but to permit longitudinal movement thereof, a round supporting stud driven into said bar and extending through the rear supporting member, switch springs suitably carried by said frame on opposite sides of said switch bar, insulating strips on said bar normally engaged by the contacting portions of said switch springs, conducting strips also carried by said bar and adapted to be engaged by said switch springs to render the circuit through them continuous when the bar is operated, and a hook shaped member extending from said switch bar at its forward end which is adapted to be grasped by the finger of the operator when said bar is to be longitudinally moved to operate the switch contacts.

3. A switching device comprising a switching frame, an angularly shaped movable switch operating member suitably carried by said frame, projections formed integrally with said member adapted to engage the frame to limit the forward movement of said member, a pair of strips of insulation and a pair of conducting strips mounted upon said switch operating member, conducting pins connecting said pair of conducting strips, a pair of springs mounted upon said frame and adapted to cooperate with said conducting strips, a spring member secured to said switching frame for yieldingly holding said operating member in its normal or operated position, and means for moving said operating member to its operated position thereby causing said switch springs to engage said conducting strips to close a circuit connection between said springs.

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1,224,518. ARMATURE CONSTRUCTION FOR DYNAMO-ELECTRIC MACHINES. VINCENT G. APPLE, Dayton, Ohio. Filed Nov. 19, 1914. Serial No. 872,959. (Cl. 171—206.)



1. The method of wiring a dynamo electric machine member having axially extending openings disposed around its peripheral portion with a plurality of independent conductors each having parallel legs for insertion in circumferentially spaced openings, which consists in stacking all of the conductors in regular order with the legs arranged for registry with the openings in the member, and relatively moving said member and the stacked conductors axially to insert said conductors into said openings.

2. The method of wiring a dynamo electric machine member having axially extending openings, disposed around the peripheral portion thereof, which consists in shaping a plurality of independent conductors with parallel legs for insertion in circumferentially spaced openings, stacking all of said conductors in regular order with the ends of two different bars arranged for registry with each opening in the member, and relatively moving said member and the stacked conductors axially to insert said conductors into said openings.

3. The method of wiring an armature core having a plurality of axially extending perforations disposed around the peripheral portion thereof, which consists in shaping a corresponding number of conductor bars into hairpin formation, stacking all of the bars in overlapped relation with their ends arranged for registry with the perforations, maintaining the bars in stacked relation and relatively moving said armature core and said conductors axially into said perforations.

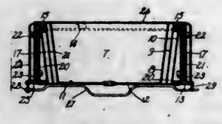
4. The method of wiring an armature core having a plurality of axially extending openings disposed around its peripheral portion, which consists in shaping a number of conductors equal to the number of openings into hairpin formation, stacking all of said conductors in regular order with the ends of two different conductors arranged for registry with each opening, and relatively moving the stacked conductors and said armature core axially to insert said conductors into said openings from one end thereof.

5. The method of wiring an armature core having a plurality of axially extending openings disposed around the peripheral portion thereof, which consists in shaping a plurality of conductors into hairpin formation, stacking said conductors in regular order with their ends arranged for registry with said openings, threading a perforated insulating ring over said conductors to hold them in stacked position, and relatively moving said stacked conductors and said armature core axially to insert said conductors into said openings.

[Claim 6 not printed in the Gazette.]

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1,224,519. COLLAPSIBLE CONTAINER. JOSEPH BRENNER and ABRAHAM BRESNICK, Boston, Mass. Filed Feb. 13, 1915. Serial No. 8,084. (Cl. 220—17.)

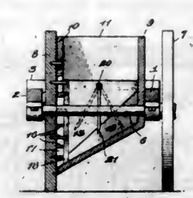


A collapsible container having in combination a series of tapered telescoping rings adapted to be moved relatively to each other to extend or collapse said container, a base attached to the lowermost ring of said series, extensible links adapted to secure said container either extended or collapsed, a closure adapted to fit over said base and inclose all of the rings of said series when said container is collapsed and a yoke pivotally secured at one end to said closure and detachably secured at its opposite end to said closure adapted to engage said base and retain said rings within said closure.

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1,224,520. FERTILIZER-DISTRIBUTER. JAMES W. CADE and JACK CADE, Mount Carmel, S. C. Filed June 28, 1916. Serial No. 106,327. (Cl. 111—34.)

1. In a fertilizer distributer, a frame embodying side bars and cross-bars; an axle carried thereby; a pair of draft wheels secured to said axle, one of said wheels being imperforate and mounted on the axle inside the frame adjacent to one of said side bars; a hopper body mounted between the sides of the frame and the imperforate draft wheel and having a bottom inclined downwardly and sidewise toward the imperforate draft wheel, said hopper body being provided with a vertical side wall lying closely adjacent to said imperforate wheel and provided with an opening closed thereby, said hopper being provided also with a discharge opening in its rear wall adjacent to said wheel; an adjustable gate for said discharge opening; and a series of fingers carried by the imperforate draft wheel and projecting into the hopper body through said side opening.



2. In a fertilizer distributer, a frame embodying side bars and cross-bars; an axle carried thereby; a pair of draft wheels secured to said axle, one of said wheels being imperforate and mounted on the axle inside the frame adjacent to one of said side bars; a hopper body mounted between the sides of the frame and the imperforate draft wheel and having a bottom inclined downwardly and sidewise toward the imperforate draft wheel, said hopper body being provided with a vertical side wall lying closely adjacent to said imperforate wheel and closed thereby, said hopper being provided also with a discharge opening in its rear wall adjacent to said wheel; and a series of fingers carried by the imperforate draft wheel and projecting into the hopper body through said side opening.

3. In a fertilizer distributer, a frame embodying side bars and cross-bars; an axle carried thereby; a pair of draft wheels secured to said axle, one of said wheels being imperforate and mounted on the axle inside the frame adjacent to one of said side bars; a hopper body mounted between the sides of the frame and the imperforate draft wheel and having a bottom inclined downwardly and sidewise toward the imperforate draft wheel, said hopper body being provided with an opening in its side wall adjacent to the imperforate wheel and closed thereby and a discharge opening in its rear wall adjacent to said wheel; a series of fingers carried by the imperforate draft wheel and projecting into the hopper body through said side opening; and means for forcing the contents of the hopper into contact with said fingers.

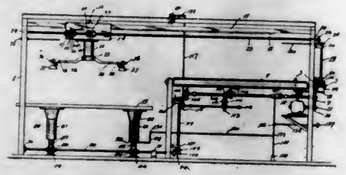
4. In a fertilizer distributer, the combination of a frame, an axle journaled therein; a pair of draft wheels on said axle, one of which is an imperforate disk having a series of pins on its inner face; a hopper carried by said frame having a rear discharge opening adjacent to the inner face of the imperforate wheel, said hopper having an opening in one side thereof closed by said imperforate draft wheel and an inclined bottom adapted to deliver the contents of the hopper against said wheel at a point near the ground; a rock shaft extending longitudinally through said hopper and provided with depending fingers adapted to force the contents of the hopper against the imperforate wheel; and means for varying the size of the discharge opening, embodying a closure plate slidably mounted on the rear wall of the hopper and a crank and pitman for operating said plate.

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1,224,521. APPARATUS FOR HANDLING METAL SHEETS. SAMUEL H. CARBIS, Freeport, Pa. Filed June 7, 1916. Serial No. 102,125. (Cl. 214—4.)

1. An apparatus for the purpose set forth comprising traveling carriages, propelling mechanism therefor, a sheet conveyer supported by the carriages and provided with a suitable sheet pick-up, a sheet support, means engaged and actuated by one of said carriages during the travel thereof in one direction for intermittently moving said sheet support upwardly for positioning the sheet to be engaged by the pick-up of the conveyer, means arranged in the path of and actuated by one of said carriages during the travel thereof for temporarily discon-

tinuing the drive of and reversing the direction of drive of said propelling mechanism causing thereby the arrest of the carriages and the travel of the carriages in a reverse direction, and means for controlling the travel of the carriages.



2. An apparatus for the purpose set forth comprising traveling carriages, propelling mechanism therefor, a sheet conveyer supported by the carriages and provided with a suitable sheet pick-up, a sheet support, means engaged and actuated by one of said carriages during the travel thereof in one direction for intermittently moving said sheet support upwardly for positioning the sheet to be engaged by the pick-up of the conveyer, means arranged in the path of and actuated by one of said carriages during the travel thereof for temporarily discontinuing the drive of and reversing the direction of drive of said propelling mechanism causing thereby the arrest of the carriages and the travel of the carriages in a reverse direction, and means for vertically moving said conveyer when the travel of the carriages is arrested.

3. An apparatus for the purpose set forth comprising traveling carriages, propelling mechanism therefor, a sheet conveyer supported by the carriages and provided with a suitable pick-up, a sheet support, means engaged and actuated by one of said carriages during the travel thereof in one direction for intermittently moving said sheet support upwardly for positioning the sheet to be conveyed by the pick-up of the conveyer, means arranged in the path of and actuated by one of said carriages during the travel thereof for temporarily discontinuing the drive of and reversing the direction of drive of said propelling mechanism causing thereby the arrest of the carriages and the travel of the carriages in a reverse direction, and means supported by said carriages for vertically moving said conveyer when the travel of the carriages is arrested.

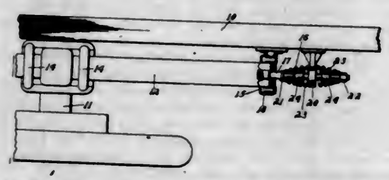
4. An apparatus for the purpose set forth comprising traveling carriages, propelling mechanism therefor, a sheet conveyer supported by the carriages and provided with a suitable pick-up, a sheet support, means engaged and actuated by one of said carriages during the travel thereof in one direction for intermittently moving said sheet support upwardly for positioning the sheet to be engaged by the pick-up of the conveyer, means arranged in the path of and actuated by one of said carriages during the travel thereof for temporarily discontinuing the drive of and reversing the direction of drive of said propelling mechanism causing thereby the arrest of the carriages and the travel of the carriages in a reverse direction, and means for vertically moving said conveyer when the travel of the carriages is arrested, and means for regulating the upward movement of the sheet support.

5. An apparatus for the purpose set forth comprising traveling carriages, propelling mechanism therefor, a sheet conveyer supported by the carriages and provided with a suitable sheet pick-up, a sheet support, means engaged and actuated by one of said carriages during the travel thereof in one direction for intermittently moving said sheet support upwardly for positioning the sheet to be engaged by the pick-up of the conveyer, means arranged in the path of and actuated by one of said carriages during the travel thereof for temporarily discontinuing the drive of and reversing the direction of drive of said propelling mechanism causing thereby the arrest of the carriages and the travel of the carriages in a reverse direction, and means supported by the carriages for vertically moving said conveyer when the travel of the carriages is arrested, and means for regulating the upward movement of the sheet support.

[Claims 6 to 13 not printed in the Gazette.]

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1,224,522. MOTOR-VEHICLE. HAROLD D. CHURCH, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 6, 1913. Serial No. 783,374. (Cl. 267—37.)



1. In a motor vehicle, the combination with the frame and the axle, of a spring secured to the axle and extending forwardly therefrom, a sliding connection from the forward end of the spring to the frame to support the frame thereon, and a spring device to transmit the end thrusts of the spring to the frame.

2. In a motor vehicle, the combination with the frame and the driving axle, of a spring connected to the axle, and two independent means for connecting the spring to the frame, one of said means being adapted to support the frame on the spring and the other said means being adapted to transmit the driving thrusts of the spring to the frame.

3. In a motor vehicle, the combination with the frame and the driving axle, of a spring secured to the axle and extending forwardly therefrom, a shackle connection from the forward end of the spring to the frame, and a spring connection at one end of the spring adapted to transmit the drive from the spring to the frame and the pull from the frame to the spring.

4. In a motor vehicle, the combination with the frame and the driving axle, of a spring secured to the axle and extending forwardly therefrom, a shackle connection from the forward end of the spring to the frame, and a spring device connecting said spring and frame to transmit the drive thereof, said device having stops coöperating with said frame whereby the thrusts are positively taken at predetermined positions of the spring.

5. In a motor vehicle, the combination with the frame and the axle, of a spring secured to the axle and extending forwardly therefrom, a shackle connection from the forward end of the spring to the frame, a bracket on the farme forward of the shackle, a rod connected to the forward end of the spring and passing through an opening in said bracket, abutments on said rod on both sides of said bracket, and springs between said bracket and said abutments.

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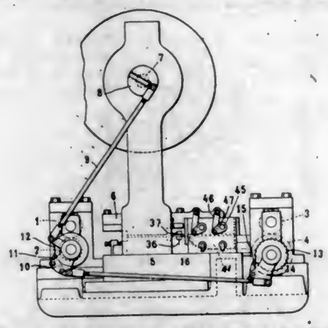
1,224,523. METAL-WORKING MACHINE. NORRIS ELMORE CLARK, Plainville, Conn. Filed Jan. 11, 1913. Serial No. 741,376. (Cl. 164—6.5.)

1. In a metal working machine, spaced punch and die cutters having their cutting edges arranged in zig-zag form, each cutting edge being interrupted so as to produce a plurality of short slits and leaving unslitted strips, and corrugating means in longitudinal alinement with the spaces between the cutters for engaging unslitted strips longitudinally along some of the centers of the points of change of direction of the zig-zag slits and carrying said centers of the slitted sections out of the original plane and opening the slits.

2. In a metal working machine, coöperating stationary and movable punch and die cutters arranged in spaced sections with their cutting edges interrupted between the sections, means for operating such cutters to form slitted sections consisting of short slits in staggered arrangement



and leaving marginal and intermediate unslitted strips and corrugating means in longitudinal alinement with the spaces between the sections of cutters for engaging the slitted stock along the lines of centers of the slitted sections and thereby opening the slits transversely.



3. In a metal working machine, means for forming a series of longitudinal corrugations in an unslitted sheet, punch and die cutters for forming successive rows of short slits in staggered arrangement between the corrugations and corrugating means for subsequently engaging the centers of the slitted portions and carrying the slitted portions out of the original plane to open the slits.

4. In a metal working machine, a holder with V-shaped recesses, cutter plates inclined in opposite directions in said recesses, wedges for clamping a pair of cutter plates in each recess, vertically movable cutting means having cutting edges inclined in opposite directions and both arranged to cut strands from a strip of stock in front of the inclined plates so as to leave the strands free to be fed forward without engaging the cutter plates after the cutting stroke, means for feeding a sheet of metal longitudinally to said cutters and means for feeding said sheet longitudinally away from said cutters.

5. In a metal working machine, a plurality of sets of inclined cutting and expanding punches and dies, each set being arranged to slit and open a section of the sheet into a deeply corrugated form of meshwork, adjacent sets being spaced apart laterally for leaving unslitted members, means for guiding and supporting the unslitted margins of the sheet, means for supporting other unslitted members between the said sets of punches and dies, means for intermittently operating said punches and dies to progressively slit and open the stock transversely between the supporting means and means for feeding the stock step by step.

[Claims 6 to 41 not printed in the Gazette.]

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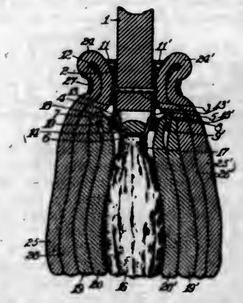
1,224,524. MOP-HEAD. EDWARD D. COURTNEY, Danville, Ind. Filed Jan. 20, 1917. Serial No. 143,499. (Cl. 15—56.)

1. A mop head comprising a tubular core having two series of arms thereon, the core having two apertures in its wall near one end thereof, a hanger having hooks suspended in the apertures, and two rings connected to the arms of the two series thereof respectively.

2. A mop head comprising a tubular core having two series of arms thereon, the arms of one series being radially arranged adjacent to one end of the core, the arms of the remaining series being radially arranged adjacent to the opposite end of the core, and two rings encircling the core and connected respectively to the arms of the two series thereof.

3. A mop head comprising a tubular core having a hanger in one of its ends and also radial arms adjacent to the end, the core having also relatively longer radial arms adjacent to its opposite end, a ring connected to the shorter radial arms, a relatively larger ring connected to the longer radial arms, and braces connected to the larger ring and to the core in proximity to the shorter arms.

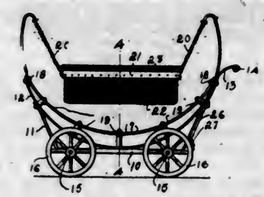
4. In a mop, the combination of a tubular core, a handle inserted into and extending partially through the core and secured therein, a hanger connected to the inside of the core adjacent to the end of the handle, two series of arms of different length secured to the core, the shorter arms



being the nearer to the hanger, a ring connected to the series of shorter arms, a relatively larger ring connected to the series of longer arms, and braces connected to the larger ring and also to the core adjacent to the shorter arms.

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1,224,525. CRADLE OR CRIB. JAMES E. FROMAN, Evansville, Ind. Filed Jan. 25, 1916. Serial No. 74,205. (Cl. 21—12.)



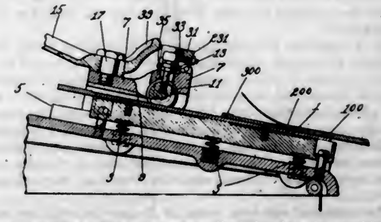
An infant's crib comprising a wheel supported frame including properly connected arcuate members, the arms of one of the members extending vertically in spaced relation, resilient suspending elements carried by the said arms, a ring connected to and suspended from and between the resilient elements, and a basket detachably received within the ring and formed with a shoulder for supporting engagement with said ring.

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1,224,526. [WITHDRAWN.]

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1,224,527. SPLITTING-MACHINE. FREDERICK M. FURBER, Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 2, 1914. Serial No. 822,105. (Cl. 69—15.)



1. A machine of the class described, having, in combination, means for forming a flap on a piece of stock, and

means acting in conjunction with the flap forming means for increasing the thickness of the flap along the entire base thereof.

2. A machine of the class described, having, in combination, means for forming a flap on a piece of stock, and automatic means acting in conjunction with the flap forming means for increasing the thickness of the flap at the base thereof.

3. A machine of the class described having, in combination, a substantially flat bed to support a piece of stock, a knife and gage arranged to act in unison in conjunction with said bed to produce on the piece of stock a flap of predetermined thickness, and means for increasing said thickness at the base of said flap.

4. A machine of the class described having, in combination, a substantially flat bed to support a piece of stock, a knife and gage arranged to act in unison in conjunction with said bed to produce on the piece of stock a flap of predetermined thickness, and automatic means for increasing said thickness at the base of said flap.

5. A machine of the class described having, in combination, a bed to support a piece of stock, a carriage, a knife and a gage mounted in said carriage, means for causing said bed to be traversed by said carriage to produce on said piece of stock a flap of predetermined thickness, and means for operating said gage to increase said thickness at the base of said flap.

[Claims 6 to 15 not printed in the Gazette.]

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1,224,528. BRACELET. HENRY GINNEL, Brooklyn, N. Y. Filed Apr. 20, 1915. Serial No. 22,567. (Cl. 267—12.)



1. A link for a spring expansion bracelet comprising an outer member with side pieces grooved on their inner faces and loops to hold the side pieces in spaced relationship, an inner member, an interposed spring and a guide piece having its ends engaged in the grooves of the side pieces of the outer member, one of the loops of the outer member having its limbs extended to engage said guide piece to prevent excessive compression of the spring.

2. A link for a spring expansion bracelet comprising an outer member with side pieces grooved on the inner faces, an inner member, an interposed spring and a roller interposed loosely between one end of the spring and the adjacent end of the inner member and having its ends entering the grooves of the side pieces of the outer member and movable freely in the side members longitudinally thereof.

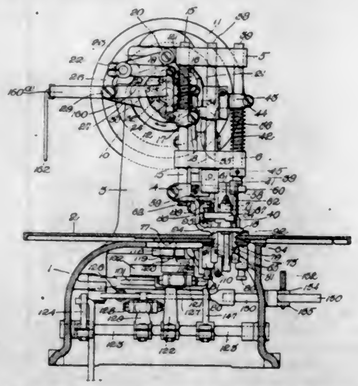
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1,224,529. FOLDING-MACHINE. PERLEY R. GLASS, Boston, Mass., assignor to P. R. Glass Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 13, 1910. Serial No. 537,947. (Cl. 12—54.)

1. A folding machine comprising a turning device, means for causing said turning device to press upon and release the stock, mechanism for moving the turning device back and forth while respectively pressing upon and clear of the stock to feed the stock in a series of steps, and mechanism for varying the rate of feed while the machine is in operation.

2. A machine for folding the edges of sheet stock, comprising a turning or folding device adapted to act on a short extent of stock, mechanism for causing a relative lateral movement between the stock and folding device to be effected whereby the latter is enabled to act successively upon contiguous portions of the stock, a snipping cutter arranged to act on the stock beside said turning device, and means for increasing the extent of such relative movement and simultaneously disabling said snipping cutter.

3. A folding machine adapted to double over the edge of sheet material and feed the same while under pressure, comprising a turning or folding device adapted to act on short lengths of the edge of such material, means for moving said folding device while gripping the material, a snipping cutter for making incisions in such edge, automatic mechanism for operating said cutter, and means under the control of the operator of the machine for making said operating mechanism inoperative.



4. A folding machine for folding the edge of sheet material, comprising a gripper, a folding device movable at right angles to stock placed on said gripper, and oscillatively about an axis substantially in the plane of the gripper, and means for so operating said folding device whereby a portion of the stock projecting from the gripper is bent over and doubled back upon the body of the stock.

5. A folding machine for folding the edge of sheet material, comprising a table to support the material, a folding device movable transversely through an aperture in said table and oscillatively about an axis substantially in the plane of the table, means for so operating said folding device whereby a portion of the stock projecting over such aperture is bent over and doubled back upon the body of the stock, a gripping member movable in the plane of the table and opposed to said folding device, arranged to coöperate with the latter and grip the folded stock, and means for moving said gripping device and folding device simultaneously to feed the stock.

[Claims 6 to 60 not printed in the Gazette.]

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1,224,530. TRANSPARENT PANE. OTTO GOETZKE, Jersey City, N. J., assignor of one-half to Edward A. Muth, Buffalo, N. Y., and Theodore G. Hartwig, Rockville, Conn. Filed Aug. 19, 1916. Serial No. 115,826. (Cl. 20—56.5.)



3. A transparent plane comprising two glass plates having beveled edges converging inwardly, a celluloid plate arranged between said glass plates, and a soft transparent cushion of glucose cement, filling the beveled spaces at the edges of said plates, thence running on and connecting the opposite sides of said celluloid plate with said glass plates and means at the edges of said glass plates for permanently inclosing the said glucose cushions.

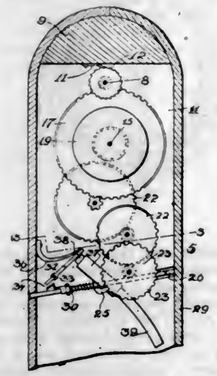


4. A transparent pane including, in combination, two glass plates coated on their interior opposite surfaces with transparent glucose, a celluloid plate between said glass plates, cushioning means between the edges of said glass plates and means holding the edges together.

[Claims 1 and 2 not printed in the Gazette.]

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1,224,531. CAMERA. WILLIAM S. GOLDWIRE and JOHN F. PATTON, Macon, Ga., assignors of one-third to Wade R. Bedingfield, Macon, Ga. Filed May 25, 1915. Serial No. 30,358. (Cl. 95—31.)



1. In a camera, a body, a spool supporting and rotating shaft, rotatably mounted in said body, spring means normally tending to rotate said shaft, a spring pressed slide rod normally engaged with a film supported in said camera body for stopping the movement of the film, means carried by and operable when said slide rod is in film stopping position to lock said spring means against operation, and manually operated means operable during its return movement to automatically actuate said slide rod to release the film.

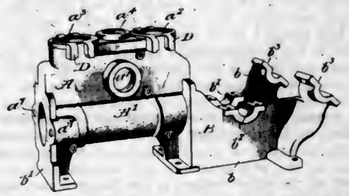
2. In a camera, a body, a spool supporting and rotating shaft rotatably mounted in said body, spring means for rotating said shaft, a spring pressed slide rod normally engaged with a film supported in said body to stop the movement of the film, a spring pressed lever pivotally secured in said body, manually operable means for moving the said lever against the spring means associated therewith, and a spring catch carried by said slide rod adapted to be engaged by one end of said lever whereby the longitudinal movement of said slide rod and the release of the film is thereby effected.

3. In a camera, a body, a spool supporting shaft rotatably mounted in said body, spring means for rotating said shaft, a spring pressed slide rod normally engaged with a film supported in said body, an arm carried by said slide rod adapted, when said slide rod is engaged with the film, to engage said spring means to lock the latter against operation, a lever pivotally mounted in said body, a spring catch carried by said slide rod adapted to be engaged by said lever to effect the longitudinal movement of the slide rod to release the film, spring means for returning said lever to initial position, and manually operable means for setting said lever and engaging one end thereof with said spring catch.

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1,224,532. DOUBLE-ACTING FORCE-PUMP. JAMES C. GORMAN, Jr., Mansfield, Ohio, assignor to The Barnes Manufacturing Company, Mansfield, Ohio, a Corporation of Ohio. Filed Aug. 9, 1916. Serial No. 114,022. (Cl. 103—76.)

1. An integral pump casing and jack; said jack being external to the pump and having shaft supporting bearings thereon, and said casing comprising a pump cylinder open at both ends and having inlet and outlet openings on opposite sides thereof and valve openings in its top together with water-ways connecting said openings and an opening for connection with an air chamber, all in one integral structure.



2. An integral pump body or casing and jack; said jack being external to the pump and having shaft-supporting bearings thereon, and said body comprising a pump cylinder open at both ends and having valve-openings in its top and inlet and outlet openings on opposite sides thereof; said openings being connected by suitable water-ways; and also having an opening in its top for connection with an air chamber.

3. An integral pump body or casing and jack; said jack being external to the pump and having shaft-supporting bearings thereon, and said body comprising a pump cylinder open at both ends and having a removable cap or cover for the open end thereof adjacent to said jack, and also having valve-openings in its top and an intermediate opening for connection with an air chamber, together with inlet and outlet openings on opposite sides thereof and connecting waterways.

4. A pump body or casing and a jack external thereto and integral therewith; said jack having integral shaft-supporting bearings thereon, and said body comprising a pump cylinder open at both ends and integral with a valve casing having valve openings in its top and inlet and outlet openings on opposite sides and water-ways in communication therewith and also having an opening in its top for connection with an air chamber, together with a removable cap for closing the open end of the cylinder adjacent to said jack.

5. In combination, a pump casing and a jack external to said casing and integral therewith; said jack having spaced bearings thereon for a plurality of shafts and piston-actuating mechanism comprising a shaft on said jack having gear wheels thereon, a cross-head at the opposite end of said casing having an intermediate connection with the piston-rod, pitman-rods on opposite sides of said casing each connecting one end of said cross-head with one of said gear wheels, and a second shaft on said jack geared to said first named shaft and to a main driving shaft.

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1,224,533. FOLDING UMBRELLA. OSCAR GUGLIELMONE, New York, N. Y. Filed June 23, 1914. Serial No. 846,801. (Cl. 135—46.)

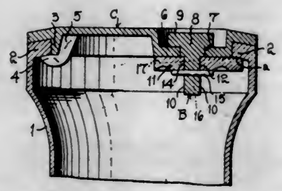


In an umbrella, a rod formed of sections, one of the sections having a longitudinal recess therein at one end thereof, the outer end of the recess being restricted so as to provide an internal shoulder, the mentioned end of the section having one side thereof provided with a bayonet slot communicating with the recess in the section and having one branch opening into the terminal of the mentioned end of the section, an elongated element ro-

tatably and slidably mounted within the recess, means on the inner end of the element adapted to engage the shoulder within the recess when the element is slid outwardly so as to limit the outward movement of the element, a link having one end pivotally connected to the outer end of the element and adapted to extend into the recess in the rod section when the element is slid inwardly, an extension carried by one end of the other section of the rod and adapted to be received by the outer end of the recess in the first-mentioned section of the rod when the element and the link are inserted within the recess, and a pin pivotally connecting the other end of the link to the extension and having one terminal projecting laterally beyond one side of the extension and adapted to be received by the mentioned branch of the bayonet slot during the insertion of the element and extension into the recess in the first-mentioned rod section, and to be received by the other branch of the bayonet slot when the element, link and extension are fully inserted within the recess, for the purpose specified.

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1,224,534. COVER FOR SERVICE-BOXES OR THE LIKE. JAMES F. HALL, Anniston, Ala. Filed Dec. 23, 1916. Serial No. 138,582. (Cl. 137—13.)



In combination with a body provided with an opening and having an inwardly directed annular flange adjacent its open end, a cover for said opening, said cover being provided with a depressed portion, a bolt rotatably disposed through the depressed portion of said cover and provided in its outer end with a head, the portion of the bolt underlying the depressed portion being angular in cross section, a button slidably engaged with the angular portion of the bolt, a marginal portion of said button being cut away to permit the passage of said button beyond the flange, the portion of the button coacting with the flange being beveled, said beveled portion extending around the marginal portion of the button and having separated ends, the space between said separated ends providing the cut away portion of the button, the high point of the beveled portion of the button being arranged substantially midway between the separated ends of said beveled portion, and a removable member disposed through the bolt inwardly of the button for holding the button against movement longitudinally of the bolt.

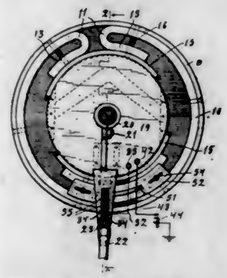
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1,224,535. MAGNETO. PETER HAMM, Milwaukee, Wis. Filed June 12, 1915. Serial No. 33,692. (Cl. 123—149.)

1. In a magneto, the combination of a non-rotatable armature member comprising a plate and a V-shaped armature core of greater length than the plate secured to said plate about its center and carrying primary and secondary coils extending on both sides of the V-shaped core to form substantially continuous coils of greater length than the plate, a field member including permanent magnets revoluble therearound, and means for interrupting the current in the primary.

2. In a magneto, the combination of a non-rotatable armature member provided with primary and secondary coils, a field member including permanent magnets revolubly mounted therearound, and means for automatically interrupting the current in the primary comprising a switch carried by the armature member, and a cam plate adjustably mounted on the under side of the field member adjacent the magnets for operating the switch.

3. In a magneto, the combination of a non-rotatable armature comprising a plate, and a core provided with primary and secondary coils mounted thereon, permanent magnets revoluble therearound, a circuit interrupter in the primary circuit comprising a fixed and movable contact carried by the plate and a cam carried by the magnets for automatically controlling the operation of the movable contact, said movable contact being also under the control of the operator whereby the primary circuit may be continuously interrupted.



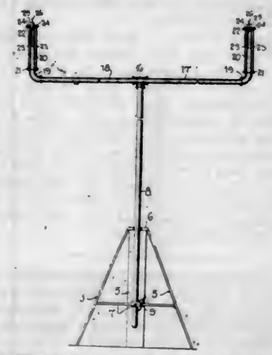
4. In a magneto, the combination of a non-rotatable armature comprising an adjustable plate, and a core provided with primary and secondary coils mounted thereon, a fly-wheel member including permanent magnets revolubly mounted around the armature, a circuit interrupter in the primary circuit comprising a fixed contact and a flexible contact carried by the plate and a cam plate carried by the magnets for automatically controlling the operation of the flexible contact, said flexible contact being also manually operable whereby the primary circuit may be continuously interrupted, and a handle carried by the plate for moving the same to advance or retard the spark.

5. In a magneto the combination of a non-rotatable armature comprising an adjustable plate and a core provided with primary and secondary coils mounted thereon, a fly-wheel member including permanent magnets revolubly mounted around the armature, a circuit interrupter in the primary circuit comprising a fixed and movable contact carried by the plate, said movable contact extending beyond the fly-wheel for manual control, and means on the fly-wheel for automatically controlling the operation of the movable contact.

[Claim 6 not printed in the Gazette.]

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1,224,536. LEVEL. ANDERS O. HAMMER, Williams, Mont. Filed Apr. 22, 1916. Serial No. 92,952. (Cl. 33—70.)



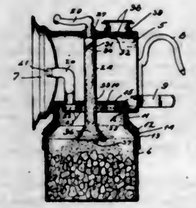
1. A leveling instrument comprising a tripod, a staff vertically adjustable through said tripod and having a leveling tube thereon formed with upwardly extending legs, a base plate detachably mounted upon the lower end of the staff, the staff being shiftable downward through the tripod so as to carry its base below the lower ends of the legs, and leveling fluid within said leveling tube.

2. A leveling instrument comprising a staff, a support upon which the staff is moutned, a leveling tube mounted upon the staff and extending at right angles thereto, elbows at the ends of the tube, the outer ends of the elbows having flanges, sight glasses mounted upon said elbows, an annular member mounted upon the upper end of each sight glass, longitudinally extending bolts passing through the annular member and through the flange of the corresponding elbow and holding the sight glass in position upon the elbow and acting as a protection to the sight glass, removable closures for the ends of the tubes, and leveling fluid within the leveling tube.



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1,224,537. ACETYLENE-LAMP. AUGIE L. HANSEN, Evanston, Ill., assignor to Justrite Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 28, 1916. Serial No. 117,127. (Cl. 48—4.)



1. In an acetylene lamp, the combination with a water container, of a carbid container, a water tube extending from the water container into the carbid container and terminating in an inverted cup-shaped extension, said extension being above the normal level of fresh carbid charged into the carbid container whereby slaked and powdered carbid will be forced into the extension to retard and distribute the flow of water to the carbid to thereby maintain uniform pressure in the carbid container, and a burner tip connected to receive the gas from the carbid container.

2. In an acetylene lamp, the combination of a water container, a carbid container, a water tube extending from the water container into the carbid container and having a water outlet, a valve within the tube controlling said outlet, the lower end of said water tube flaring to form an inverted cup below said outlet and said cup terminating above the normal level of carbid charged into the carbid container whereby when said outlet is opened to permit water to flow to the carbid the slaked and powdered carbid will be forced into said cup to thereafter control the flow of water to the carbid to maintain uniform pressure in the carbid container.

3. In an acetylene lamp, the combination of a water container, a carbid container, a water outlet from the water container to the carbid container, walls below said outlet terminating above the normal level of fresh carbid in the carbid container and forming a pocket into which slaked and powdered carbid is forced after initial water flow to thereafter act as a retarder for the water flow.

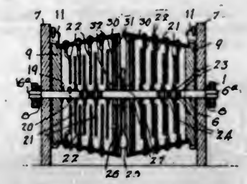
4. In an acetylene lamp, the combination of a water container, a carbid container, a water outlet between the water container and carbid container, an inverted cup communicating with and below said outlet and terminating substantially at the normal level of fresh carbid in the carbid container whereby the slaked and powdered carbid caused by the first flow of water will be forced into the cup to thereafter regulate and control the flow of water to the carbid to maintain uniform pressure in the carbid container.

5. In an acetylene lamp, the combination of a water container, a carbid container, a water outlet between the containers, an inverted conical cup secured to the water container below the outlet and terminating substantially at the normal level of fresh carbid in the carbid container whereby slaked and powdered carbid caused by the first flow of water will be forced into said cup to thereafter regulate and distribute the water flow to the carbid and to maintain uniform pressure in the carbid container.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,538. MANURE-DRILL. ROBERT LEE HARRILL, Lattimore, N. C. Filed Dec. 7, 1916. Serial No. 135,601. (Cl. 111—14.)



1. A fertilizer drill including a frame, a transverse shaft extending across the frame, a pair of supporting wheels mounted upon the shaft, complemental hopper sections operatively connected to the supporting wheels and formed with open inner ends which have an opposed relation to each other and are separated by a gap through which the fertilizer is discharged as the hopper sections rotate, and shifting means for moving one of the supporting wheels and the corresponding hopper section to vary the size of the gap between the hopper sections.

2. A fertilizer drill including a frame, a transverse fixed shaft upon the frame, a pair of supporting wheels journaled upon the transverse shaft, complemental hopper sections operatively connected to the supporting wheels and flared toward the inner ends thereof which are open and have an opposed relation to each other, a gap being normally provided between the flared open ends of the hopper sections to permit of the discharge of the fertilizer, and a shifting lever for sliding one of the supporting wheels and corresponding hopper section upon the shaft to vary the size of the gap between the hopper sections.

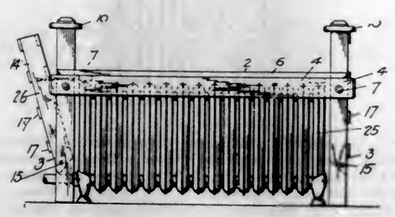
3. A fertilizer drill including a frame, a fixed transverse shaft upon the frame, a pair of supporting wheels journaled upon the shaft, disks loose upon the shaft and having pawl and ratchet connections with the respective supporting wheels, complemental hopper sections carried by the disks and formed with open inner ends which have an opposed and normally spaced relation to provide a gap through which the fertilizer is discharged, coöperating blades projecting from the shaft and hopper sections for reducing the fertilizer within the hopper sections, and means for adjusting the relation between the hopper sections to vary the size of the gap between the open ends thereof.

4. A fertilizer drill including a frame, a transverse fixed shaft thereon, a pair of supporting wheels journaled upon the fixed shaft, disks loose upon the shaft and having pawl and ratchet connections with the respective supporting wheels, complemental hopper sections carried by the disks and flared toward the inner ends thereof which are open and having an opposed and normally spaced relation to provide a gap through which the fertilizer is discharged, coöperating blades projecting from the shaft and hopper sections for reducing the fertilizer within the hopper sections, a fixed retarding blade arranged within the hopper over the bottom of the gap between the hopper sections to produce a uniform discharge of the fertilizer through the gap, and a shifting lever for moving one of the supporting wheels and the corresponding hopper section to vary the size of the gap between the open inner ends of the hopper sections.

5. A fertilizer drill including a frame, a fixed transverse shaft extending across the frame, a pair of supporting wheels journaled upon the shaft, disks loose upon the shaft and having pawl and ratchet connections with the respective supporting wheels, complemental hopper sections carried by the disks and formed with flared inner ends which are open and have an opposed and normally spaced relation to each other to provide a gap through which the fertilizer is discharged, a fixed retarding blade arranged within the hopper directly above the bottom of the gap between the hopper sections, means for adjustably supporting the retarding blade so that it can be raised and lowered, and a shifting lever for sliding one of the supporting wheels upon the axle to vary the size of the gap between the hopper sections.

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1,224,539. RADIATOR-COVERING. CHARLES E. HARRISON, Littleton, Colo. Filed July 27, 1915. Serial No. 42,209. (Cl. 155—22.)



1. A folding bench comprising a body-member and supporting-members relatively disposed to permit of the bench being placed in an unfolded condition, over a radiator, the body-member comprising a pair of parallel sills, and an apertured seat fastened to said sills and terminating at a distance from the ends of the same whereby to provide spaces for the reception of the supporting members, each supporting member being composed of a pair of legs and an arm-rest connecting the upper ends thereof, and the legs of the supporting-members being pivoted at a point between their extremities, to the sills within said spaces whereby in an upright position they extend partially above the seat, and in folded position they are partially contained between the sills below the seat, and devices to automatically lock said members in their relative folded and unfolded positions.

2. A folding bench comprising a body-member and supporting-members relatively disposed to permit of the bench being placed in an unfolded condition, over a radiator, the body-member comprising a pair of parallel sills, and an apertured seat fastened to said sills and terminating at a distance from the ends of the same whereby to provide spaces for the reception of the supporting-members, each supporting member being composed of a pair of legs and an arm-rest connecting the upper ends thereof, and the legs of the supporting-members being pivoted at a point between their extremities to the sills within said spaces whereby in an upright position they extend partially above the seat and in a folded position, they are partially contained between the sills below the seat, a paper-rack normally contained in the space between the legs and the arm-rest of one of said supporting members, and pivoted to the legs of the same for outward adjustment, and devices to automatically lock the members of the bench in their relative folded and unfolded positions.

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1,224,540. SHEET-METAL BAG-FRAME. WILLIAM A. HEILMANN, Newark, N. J., assignor to The R. Neumann Hardware Co., a Corporation of New Jersey. Original application filed Nov. 25, 1916, Serial No. 133,287. Divided and this application filed Jan. 24, 1917. Serial No. 144,117. (Cl. 190—49.)

1. A bag-frame comprising a pair of hinged frame-sections, each frame-section comprising a main body-member and a depending angular member integral with said main body-member, so as to provide a frame section of L-shaped cross section, a covering upon each frame-section, each covering having a sewing flange extending in an outward direction from the outer marginal edge-portion located at the angle formed between the said main body-member and the depending member of each frame section, said flanges being adapted to be located beneath the edge-portions of the mouth of a bag-body and further adapted to receive a continuous straight line of stitching closely to the said outer marginal edge of each frame-section, combined with a hasp-plate secured to the said main body-member having hasp-lug carrying posts extending from the upper surface-portion of said main body-member at points back of the outer face of the said depending member connected with said main body-member of the said frame-section.



2. A bag-frame comprising a pair of frame-sections, each frame-section consisting of a main body-member and a depending member integrally connected therewith, so as to provide a frame-section of L-shaped cross section, and a hasp-plate secured to the main body-member of one of said frame-sections having hasp-lug carrying posts extending from the upper surface-portion of said frame-section at points back of the outer face of the said depending member.

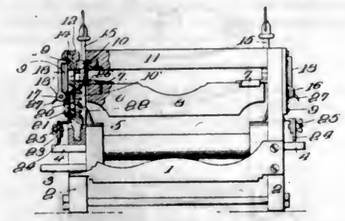
3. A bag-frame comprising a pair of frame-sections, each frame-section consisting of a main body-member and a depending member integrally connected therewith, so as to provide a frame-section of L-shaped cross section, and a hasp-plate secured to the main body member of one of said frame-sections having hasp-lug carrying posts extending from the upper surface-portion of said frame-section at points back of the outer face of the said depending member, each post being provided with an angularly bent portion extending forwardly in a direction toward the marginal edge formed by the angle of the said main body-member and the said depending member, all arranged so as to bring the outer face-portion of the said posts vertically in alinement with the outer face-portion of the said depending member.

4. A bag-frame comprising a pair of frame-sections, each frame-section consisting of a main body-member and a depending member integrally connected therewith, so as to provide a frame-section of L-shaped cross section, said main body-member being provided with openings, and a hasp-plate secured to the under or lower surface-portion of the main body of one of said members, hasp-lug carrying posts connected with said hasp-plate, said posts extending into and through the said openings and extending from the upper surface portion of the said main body-member of said frame-section.

5. A bag-frame comprising a pair of frame-sections, each frame-section consisting of a main body-member and a depending member integrally connected therewith, so as to provide a frame-section of L-shaped cross section, said main body-member being provided with openings, and a hasp-plate secured to the under or lower surface-portion of the main body of one of said members, hasp-lug carrying posts connected with said hasp-plate, said posts extending into and through the said openings and extending from the upper surface portion of the said main body-member of said frame-section, each post being provided with an angularly bent portion extending forwardly in a direction toward the marginal edge formed by the angle of the said main body member and the said depending member, all arranged so as to bring the outer surface portions of the said posts vertically in alinement with the outer face-portions of the said depending member.



1,224,541. AUTOMATIC PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. JOHN F. HEMENWAY, New York, N. Y. Filed Oct. 26, 1916. Serial No. 127,905. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, plates secured to the side bars of said frame having spaced flanges extending into the slots of the side bars a top bar having metal keepers at its ends slidably mounted between said flanges, means carried by said top bar for adjusting said pressure means, pivoted latches carried by said plates engaging said keepers for holding said top bar in predetermined position within said frame, releasing members slidably mounted on said plates between said flanges, arms carried by said latches arranged in the path of travel of said releasing members, and trip members carried by said releasing members arranged in the path of travel of the shaft of one of said pressure rolls on the separation of said rolls for moving said releasing members into engagement with the arms of said latches for swinging said latches out of said keepers to release said top bar.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar having metal keepers at its ends slidably mounted in said frame, pivoted latches carried by the side bars of said frame engaging said keepers, said latches having arms extending therefrom, and releasing members adapted to engage the arms of said latches for swinging said latches out of engagement with said keepers, said releasing members having adjustable trip members actuated by the separation of said pressure rolls for operating said releasing members for releasing said top bar.

3. A clothes wringer, comprising a frame having slotted side bars, pressure rolls and pressure means for said rolls mounted in said frame, plates secured to said side bars having parallel flanges extending into the slots thereof, a top bar having metal keepers at its ends, slidably mounted between the flanges of said plate, said keepers having recesses, stop lugs formed on the upper ends of said plate extending into said recesses, said plates having bearings, latches provided with pivots mounted in said bearings adapted to extend into the recesses of said keepers for holding said top bar in predetermined position therein, said latches having inwardly extending arms, and trip members slidably mounted between the flanges of said plates under said arms adapted to be moved upwardly into engagement with said arms, on the separation of said rolls for moving said latches out of said keepers for releasing said top bar.

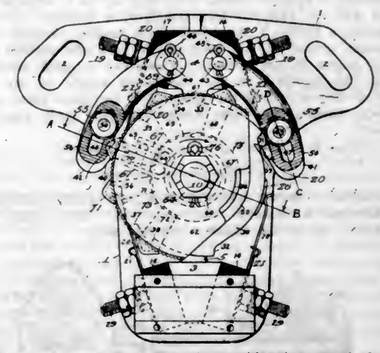
4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, said frame having slotted side bars, slotted plates secured to the outer faces of said side bars having spaced flanges extending into the slots thereof, a top bar having metal keepers at its ends slidably mounted between the flanges of said plate, said keepers having recesses, stop lugs formed on the upper ends of said plates extending into the recesses of said keepers, retaining members pivotally mounted on said plates engaging said keepers for holding said top bar in predetermined position within said frame, and means actuated by the abnormal separation of said rolls engaging said retaining members for moving said retaining members out of engagement with the keepers of said top bar.

5. A clothes wringer, comprising a frame having slotted side bars, pressure rolls and pressure means for said rolls mounted in said frame, plates secured to the side bars of said frame, a top bar having metal keepers at its ends slidably mounted in said frame, bearings formed on said plates, pivoted latches mounted in said bearings engaging said keepers for holding said top bar in predetermined position within said frame, arms formed on said latches, and releasing members slidably mounted on said plates engaging the arms of said latches on the separation of said pressure rolls for moving said latches out of said keepers for releasing said top bar.

[Claims 6 to 14 not printed in the Gazette.]

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1,224,542. CIRCUIT-CONTROLLER. WILLIAM S. HENRY, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Jan. 18, 1913. Serial No. 742,800. (Cl. 200—11.)



1. In a circuit controller, in combination: a shaft; a circuit controlling means moved with said shaft; a second circuit controlling means moved independently of said shaft; means fixed to said second means; means coacting with said last mentioned means for holding said second means against movement with said shaft in any one of a number of different positions of said second means; means controlled by said shaft for successively rendering ineffective said holding means as said shaft is turned; and resilient means tending to move said second means with said shaft.

2. In a circuit controlling device, in combination: a shaft; a circuit controller moved with said shaft; a second circuit controller capable of movement independently of said shaft; each of said circuit controllers being capable of assuming a plurality of circuit controlling positions; means for holding said second circuit controller against movement in any one of its circuit controlling positions; means for successively rendering said holding means ineffective as the shaft is turned successively to its different circuit controlling positions; and resilient means tending to move said second circuit controller with said shaft.

3. In a circuit controlling device, in combination: a shaft; a circuit controller moved with said shaft; a second circuit controller capable of movement independently of said shaft; each of said circuit controllers being capable of assuming a plurality of circuit controlling positions; a latch plate fixed to said second circuit controller having shoulders around its outer periphery; a latch adapted to engage said shoulders and hold said second circuit controller in each of its circuit controlling positions; means for successively releasing said latches as said shaft is turned; and means governed by said shaft for snapping said second circuit controller from one circuit controlling position to another such position as said shaft is turned and as said first mentioned circuit controller is advanced successively from one circuit controlling position to another such position.

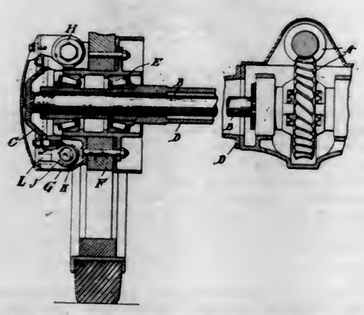
4. In a circuit controller, in combination: a shaft; a contact carrying drum loosely mounted on said shaft and having a plurality of circuit controlling positions; a latch plate fixed to said drum and having shoulders around its outer periphery; a latch adapted to engage said shoulders and to hold said drum in each of its circuit controlling positions; a part adjustably secured to said latch; a trip plate moved with said shaft and including a plurality of cams adjustable thereon, said cams being arranged to successively engage said part and to disengage said latch from said latch plate and to free said contact drum as the shaft is turned; and resilient means for snapping said drum successively from one circuit controlling position to another such position when said drum is released.

5. A circuit controller comprising a shaft, a contact carrying drum loose thereon, conductive fingers adapted to co-act with the drum contacts, a shouldered latch plate movable with the drum, a latch engaging the latch plate shoulder to stop the drum, said latch having a longitudinal slot and an adjacent serrated face, a facially serrated washer, a sleeve, a fastening means passing through said washer, said sleeve and said slot to hold said washer and said sleeve at any desired adjustment on said latch, a trip cam movable by the shaft and acting on the adjusted sleeve to free the latch from the latch plate, and means turning the loose drum when the latch plate is freed.

[Claims 6 to 25 not printed in the Gazette.]

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1,224,543. DRIVE MECHANISM FOR AUTOMOBILES. EDWARD R. HEWITT, Midvale, N. J. Filed June 22, 1915. Serial No. 35,536. (Cl. 21—90.)

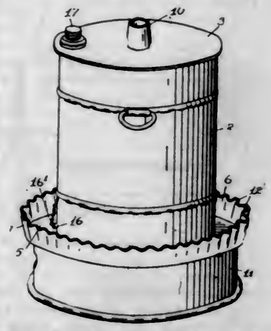


1. An automobile drive wheel hub, a rear axle housing supporting said hub, an axle projecting through said housing and engaging by a flange on the end of said axle two lugs within the outer limits of said hub, a projecting casing forming the outer portion of said hub, screw caps tangentially located in said casing and having their axes normally projecting through one of said lugs supported on the outer end of the drive axle, springs in said casing engaging said lug, for the purpose described.

2. In an automobile drive mechanism, a drive wheel, an axle housing, a drive-shaft in said housing, a worm gear operatively attached to said drive shaft and a yielding connection between said drive wheel and drive shaft end comprising a casing, recesses adapted to hold in position a plurality of pairs of coil springs normally in a straight line tangent to said casing, and a lug on the coöperating part located between the two of each of the pairs of springs, for the purpose described.

3. In an automobile drive mechanism, a drive wheel hub, a casing adjacent said hub, a drive axle, means at one end of said drive axle to transmit power and a connection between the other end of said drive axle to deliver the power to the hub including springs adapted to yield against relative rotary movement, removable caps in said casing whereby said yielding springs may be inserted and removed, for the purpose described.

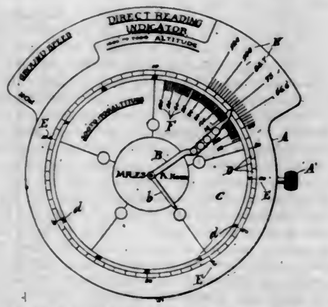
1,224,544. DRINKING-FOUNTAIN FOR POULTRY. CALVIN D. HIXSON, Hiawatha, Kans. Filed Mar. 1, 1917. Serial No. 151,807. (Cl. 119—73.)



In a drinking fountain, a casing having a trough surrounding the same and supplied therefrom, said trough having its outer side wall provided with convolutions extending upwardly and downwardly and designed to prevent a fowl from wetting its wattles in drinking.

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1,224,545. MEANS FOR DETERMINING GROUND SPEED. LODEWYK J. R. HOLST, Philadelphia, Pa., assignor to Arthur Brock, Jr., Philadelphia, Pa. Filed Sept. 8, 1916. Serial No. 118,956. (Cl. 88—1.)




1. Apparatus for determining the ground speed of air craft comprising in combination means, adjustable for different air craft elevations, for determining the beginning and end of the time interval required for an air craft to travel a predetermined distance over the earth's surface, and a timing mechanism graduated in units of ground speed for measuring the duration of said time interval.

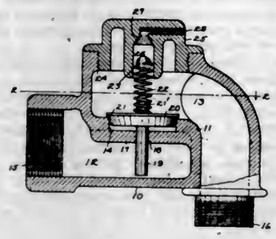
2. Means for measuring the ground speed of an air craft comprising a camera obscura having adjusting means for setting a pair of parallel marks on the image receiving screen of the camera at varying distances from one another and having means for indicating different predetermined settings of the marks for different air craft altitudes, and in combination therewith a time measuring device comprising an indicating member adapted to travel at a constant speed and a scale graduated in ground speed units for measuring the travel of said member.

3. Means for measuring the ground speed of an air craft comprising a camera obscura having adjustable means for setting a pair of parallel marks on the image receiving screen of the camera at varying distances from one another and having means, including a scale graduated in units of altitude, for indicating settings of the marks, for different altitudes, at distances apart which are each in the same predetermined inverse ratio to the corresponding altitude, and in combination therewith a time measuring device comprising an indicating member adapted to travel at a constant speed, and a scale for measuring the travel of said member and bearing symbols indicating ground speeds inversely proportional to the amount of travel of said member.



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1,224,546. DISCHARGE-VALVE. NATHANIEL D. HULL, Owensboro, Ky., assignor to The Hull Pump & Tank Company, Owensboro, Ky., a Corporation. Filed Apr. 14, 1916. Serial No. 91,039. (Cl. 103—60.)



1. The combination of a body having inlet and outlet connections, a partition dividing the interior of the body into a plurality of communicating compartments, a valve to control the said communication and means to vent one of said compartments comprising a valve operatively connected to the first named valve and a vent adapted to be closed by the second valve when fluid is flowing through the compartments.

2. In combination, a casing having inlet and discharge connections for fluid, and having a plurality of communicating compartments therein, means to control the latter communication, means to vent one of said compartments and means to control the vent having operative connection to the first named controlling means.

3. In combination, a casing having fluid inlet and discharge connections and having a plurality of communicating compartments within it, a valve to control the latter communication, a vent connecting one of said compartments with outside air, a valve seat adjacent the vent and a valve flexibly connected to the first named valve and adapted to be moved therewith to and off said seat for controlling the admission of outside air to said compartment.

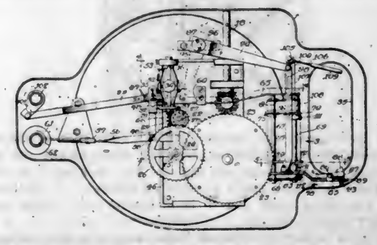
4. In combination, a casing having fluid inlet and discharge connections and having a plurality of communicating compartments within it, a valve to control the said communication, a recessed and apertured plug in the casing, a valve seat in the wall of the recess, a resilient member connected to the valve, a ball valve carried by the resilient member and adapted to be moved onto and away from said seat by the first named valve for closing and opening the aperture in the plug.

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1,224,547. MOTOR-CONTROLLING MECHANISM FOR TALKING-MACHINES. ALBERT A. HUSEBY, Chicago, Ill. Filed July 31, 1916. Serial No. 112,254. (Cl. 74—46.)

1. In a motor-controlling mechanism for talking machines, the combination of a motor, a brake therefor, a spring for applying said brake, a bodily shiftable latch mechanism located in the path of a movable element of the machine and adapted to hold said brake in retracted position, said brake being released through contact of said movable element with said latch mechanism, manually operable means for positioning said latch mechanism at any desired position in said path of movement, and means engageable by said movable element for withdrawing the brake and causing it to be held by said latch mechanism.

2. In a motor-controlling mechanism for talking machines, the combination of a motor, a brake therefor, a spring tending normally to apply said brake, a bodily adjustable arm extending across the path of movement of a movable element of the machine, a latch pivoted thereon, manual means for adjusting said arm to position said latch in any desired position in said path of movement, a latch bar connected with the brake and adapted to be engaged with said latch to hold the brake in inoperative position, and means projecting across said path of movement in a position to be actuated by said movable element whereby said latch bar is engaged with said latch when said movable element is brought into contact with said means.



3. In a motor-controlling mechanism for talking machines, the combination of a motor, a brake therefor, a spring for applying said brake, a guideway including an oscillatory member, an arm mounted for transverse sliding movement on said guideway, a latch carried by said arm, a latch bar splined on said oscillatory member and adapted to be engaged with said latch, connections between said oscillatory member and the brake whereby the brake is held in inoperative position when said latch-bar is engaged with said latch, and means for oscillating said member against the force of said brake-applying spring to move said latch-bar into engagement with said latch.

4. In a motor-controlling mechanism for talking machines, the combination of a motor, a brake therefor, a spring for applying said brake, a rock shaft, an arm mounted to slide longitudinally of said shaft, a latch-bar splined to the shaft and slidable with said arm, a latch carried by said arm in position to engage and retain said latch-bar, manually operable means for moving said arm to position the latch in the path of movement of a movable element of the machine, a connection between said brake and said rock shaft, and means also adapted to be actuated by said movable element of the machine for rocking said shaft to bring said latch-bar into locking relation with said latch.

5. In a motor-controlling mechanism for talking machines, the combination of a motor, a brake therefor, a spring tending normally to apply said brake, means for withdrawing said brake including a member mounted in the path of movement of a movable element of the machine, a rock shaft operable by said member, and connections between said rock shaft and said brake, and means for locking said brake in retracted position including a latch-bar splined on said rock shaft, an arm slidable with said latch-bar along the shaft, and a latch carried by said arm in the path of movement of said movable element, said latch being adapted to lock said latch-bar and to release the same when engaged by said movable element.

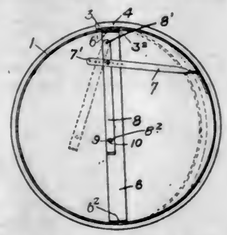
[Claim 6 not printed in the Gazette.]

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1,224,548. AUTOMOBILE-TIRE HOLDER PARTICULARLY ADAPTED TO CLENCHER-TIRES. JOHN CLARENCE INMAN, Eden, Ontario, Canada. Filed Apr. 3, 1916. Serial No. 88,602. (Cl. 224—29.)

1. In a holder for clencher tires, a split band U-shaped in cross section having overlapping ends, means for expanding the band against the tire and locking it in the expanded position, and means for forcing the clencher portions of the tire outwardly against the flanges of the U-shaped band as the band is carried to the expanded position.

2. In a holder for clencher tires, a split band U-shaped in cross section having overlapping ends, means for expanding the band against the tire and locking it in the expanded position, and a rib located centrally of the band and extending from end to end of the same adapted to force the clencher edges of the tire outwardly.



3. In a holder for clencher tires, a split band U-shaped in cross section having overlapping ends, means for expanding the band against the tire and locking it in the expanded position, and a rib located centrally of the band and extending from end to end thereof and having outwardly inclined sides.

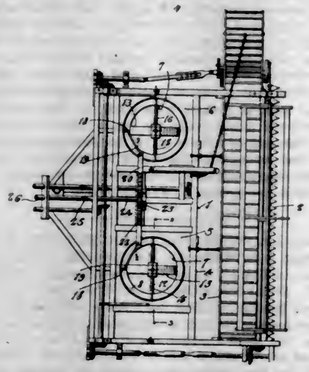
4. In a holder for clencher tires, a split band U-shaped in cross section having overlapping ends, a bridging bar extending across the holder and secured at one end to the underlapping end of the band and at the opposite end to the diametrically opposite portion of the band, a standard bar secured to the lower or free portion of the band having the overlapping end, a lever pivoted upon the bridging bar and pivotally connected to the standard bar, and means for locking the lever in the depressed position.

5. In a holder for a clencher tire, a split band U-shaped in cross section having overlapping ends, a bridging bar extending across the holder and secured at one end to the underlapping end of the band and at the opposite end to the diametrically opposite portion of the band, a standard bar secured to the lower or free portion of the band having the overlapping end, a lever pivoted upon the bridging bar and pivotally connected to the standard and having an orifice in proximity to its free end, a projection carried by the bridging bar over which the lever is designed to be sprung so that the projection passes into the orifice.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,549. STEERING APPARATUS. JOHN L. JOHNSON, Nekoma, Kans. Original application filed Apr. 29, 1916, Serial No. 94,377. Divided and this application filed July 22, 1916. Serial No. 110,714. (Cl. 21—192.)



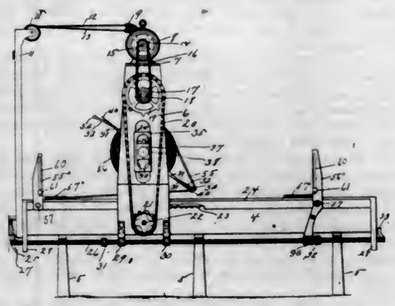
1. In a steering structure, the combination, of a supporting frame, a pair of fifth-wheels carried by said supporting frame for rotation in a horizontal plane, supporting wheels rotatably carried by said fifth-wheels, a rack bar slidably carried by said supporting frame, means connecting said rack bar to said fifth-wheels, for partially rotating the fifth wheels in unison upon slidable movement of said rack bar, and means for moving said rack bar.

2. In a steering structure, the combination, of a supporting frame, fifth-wheel structures carried by said supporting frame and rotatable in a horizontal plane, supporting wheels rotatable in a vertical plane carried by said fifth-wheel structures, a rack bar slidably carried by said supporting frame, rods connected to the end of said rack bar and to said fifth-wheel structures for rotating the fifth-wheel structures in unison upon slidable movement of the rack bar, a gear meshing with said rack bar, a shaft supporting said gear and adapted for rotation for rotating the gear and moving the rack bar.

3. In a steering structure, the combination, of a supporting frame, fifth wheel structures carried by said supporting frame and rotatable in a horizontal plane, axles rotatably carried by said fifth wheel structures, bracing means connected to said fifth wheel structures and said axle for bracing the axle, supporting wheels mounted upon said axle, a rack bar slidably carried by said supporting frame, rods connecting the ends of said rack bar to said fifth wheel structures, and means for moving said rack bar longitudinally for partially rotating said fifth wheel structures.

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1,224,550. CLOTH-PILER. JAMES S. JOHNSTON, Utica, N. Y. Filed Dec. 6, 1911. Serial No. 664,213. (Cl. 270—31.)



1. In a cloth piler, the combination of a table, a frame reciprocally mounted upon said table, a second frame supporting knives and bodily movably mounted in a vertical manner relative to said first-named frame, sockets carried by said second frame, whereby to hold a roll of cloth, means for causing said first named frame to reciprocate, whereby the roll of cloth may be piled upon said table in layers, bars and other bars movable relative to said first named bars, whereby to hold said layers upon said table.

2. In a cloth piler, the combination of a table, a frame movably mounted upon said table, bearings slidingly mounted in said movable frame, shafts carried by said bearings, a frame having knives supported by said shafts, a bevel gear on said frame having knives, a bevel gear in mesh with said bevel gear on said frame having knives, a shaft for supporting said second named bevel gear, a hollow shaft to which said shaft is splined, a sprocket wheel on said hollow shaft, ratchet racks adapted to engage with said sprocket wheel, whereby to turn said bevel gears and said frame having knives, so as to position said knives to cut the bight between the layers of fabric spread upon said table.

3. In a cloth piler, the combination of a table, a frame reciprocally mounted upon said table, bearings slidingly mounted in said movable frame, other bearings located within said sliding bearings, shafts carried by said last named bearings, a frame having knives supported by said shafts, sockets formed upon said frame having knives, whereby to detachably mount a spindle for carrying a fabric, a bevel gear on said frame having knives, a bevel gear in mesh with said bevel gear on said frame, a shaft for supporting said second named bevel gear, a hollow shaft to which said shaft is splined, a sprocket wheel on said hollow shaft, ratchet racks adapted to engage with said sprocket wheel, whereby to turn said bevel gears and said frame having knives, so as to position said knives to cut the bight between the layers of fabric spread upon said table, and means for holding said layers in place on said table.

4. In a cloth piler, the combination of a table, a frame reciprocally mounted upon said table, bearings slidingly mounted in said movable frame, other bearings located within said sliding bearings, shafts carried by said last named bearings, a frame having knives, supported by said shafts, sockets formed upon said frame having knives, whereby to detachably hold a spindle for carrying a fabric, a bevel gear on said frame having knives, a bevel gear in mesh with said bevel gear on said frame, a shaft for supporting said second named bevel gear, a hollow shaft to which said shaft is splined, a sprocket wheel on said hollow shaft, ratchet racks adapted to engage with said sprocket wheel, whereby to turn said bevel gears and said frame having knives, so as to position said knives to cut the bight between the layers of fabric spread upon said table, a serrated bar, and a second bar held normally against said first named bar by springs, whereby to hold the layers of fabric in place on said table.

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1,224,551. RAKE. ALONZO JOSLEN, Oklahoma, Okla. Filed July 22, 1916. Serial No. 110,721. (Cl. 55—10.)



A rake comprising a handle, a pair of metal strips secured by one of their ends to the opposite side faces of the handle and projecting forwardly beyond the same, the forwardly extending ends of the strips terminating into circular enlargements provided with openings, a rake head journaled in said openings centrally of its ends, teeth carried by the head, tines carried by the side face remote from the face carrying the teeth, a ratchet secured to the shaft and located centrally between the ends of the strips, said handle provided on its upper side with a longitudinally extending groove which is located between the connected ends of the strips, a latch pivoted intermediate its ends within the groove and projecting forwardly and rearwardly beyond the walls of the same, the forward end of said latch depending downwardly for engagement with the ratchet wheel, said handle provided with a recess in its upper side adjacent the rear wall of the groove, a spring seated in said recess and having one end engaging the rear end of the latch for normally urging its forward end into engagement with the ratchet wheel for the purpose of holding the rake head in various adjusted positions.

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1,224,552. TOILET-BOX. LUELLA STILWELL KINNARD, Chicago, Ill. Filed Dec. 16, 1915. Serial No. 67,296. (Cl. 41—14.)

1. A toilet article comprising, in combination, a box having an open top, a fabric covering the sides of the box and drawn inward at the bottom and having the box attached thereto, a cover for the box, and a series of flexible projections extending outwardly from the walls of the box and shaped and colored to imitate the petals of a flower.



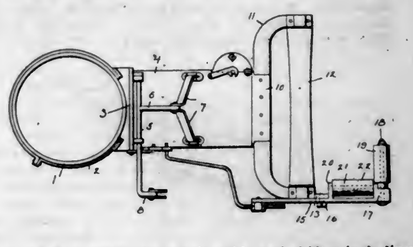
2. A toilet article comprising, in combination, a box having an open top, a cover for the box formed to fit within the box and having a flexible edge to frictionally engage the inside of the wall of the box, and a series of flexible projections extending outwardly from the walls of the box and shaped and colored to imitate the petals of a flower.



3. A toilet article comprising, in combination, a box having an open top, a series of flexible projections extending outwardly from the walls of the box and shaped and colored to imitate the petals of a flower, and a cover for the box formed to fit within the box and frictionally engage the inner surface of the wall, the under face of the cover being provided with a soft surface and the outer face made to imitate the center of the flower represented by the colored petals.

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1,224,553. ATTACHMENT FOR BELT GUIDES AND SHIFTERS. WILLIAM R. KLIER, Galva, Ill. Filed July 13, 1916. Serial No. 109,066. (Cl. 64—4.)



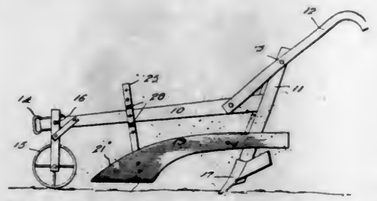
1. An attachment for a belt guide and shifter including a pair of guide rollers arranged at right angles to each other and means to keep the attachment in the same relation to the belt regardless of the position of the shifter.

2. The combination with a belt guide and shifter including a swinging plate attached to the boiler of a traction engine, a guide roller at the end of said plate and means to swing said plate to move the roller away from or toward the boiler of the engine, of an attachment including a bar pivoted to the forward end of the plate beneath the roller, auxiliary guide rollers on the bar for coöperation with the guide roller on the plate, and means to keep the attachment in the same angular relation with the engine boiler at all times.

3. The combination with a belt guide and shifter including a swinging plate attached to the boiler of a traction engine, a guide roller at the end of said plate and means to swing said plate to move the roller away from or toward the boiler of the engine, of an attachment including a bar pivoted to the forward end of the plate beneath the roller, auxiliary guide rollers on the bar for coöperation with the guide roller on the plate, a bell crank pivoted to the lower edge of the plate, a rod connecting one arm of the bell crank to the pivoted plate, and a rod connecting the oppo-

site arm of the bell crank to the bar whereby the attachment is held in the same angular relation with the engine boiler at all times.

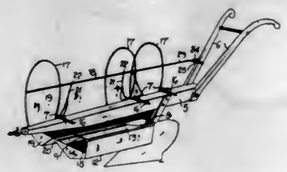
1,224,554. POTATO-VINE LIFTER FOR CULTIVATORS. FRED J. KRENZ, Bloomer, Wis. Filed Dec. 7, 1916. Serial No. 135,622. (Cl. 97—33.)



1. In a device of the class described, the combination with a plow stock and a beam extending therefrom having a supporting wheel on its forward end, of a pair of runners, transverse adjustable supporting bars for said runners, means to connect said bars to the plow beam and stock, the forward ends of said runners being enlarged and provided with curved margins to raise potato vines and the like into vertical position to prevent the same being buried during the cultivating process.

2. In a device of the class described, the combination with a plow stock and beam extending therefrom, of a pair of runners provided with enlarged front ends having the top margins thereof curved, a plurality of transverse bars carried by the beam and stock, said bars being adjustably connected, the free ends of the bars being connected to said runners whereby to adjustably support the same in parallel spaced relation to the cultivating blades.

1,224,555. BOLL-WEEVIL CATCHER AND DESTROYER. WILLIAM C. MCADAMS, Millport, Ala., assignor of one-half to Will B. Lacy, Columbus, Miss. Filed May 3, 1916. Serial No. 95,171. (Cl. 43—1.)



1. The combination with a supporting member, of a boll weevil catcher and destroyer comprising oppositely disposed parallel troughs and resilient supports extending upward from each trough and each adjustably engaging said supporting member whereby to permit the troughs to be shifted toward or from each other, said resilient supports yieldingly holding the troughs in parallel relation and in the same plane and being sufficiently yieldable to permit plant stalks to pass between the confronting edges of the troughs.

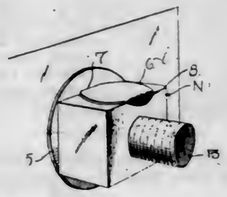
2. An insect catching attachment for plows comprising a trough having inwardly turned arms adapted to engage with a plow beam to support the trough below the beam, and a coacting trough having on its outer edge upwardly and then downwardly extending arms independent of the arms on the first named trough formed to engage the plow beam.

3. An insect catching attachment for plows comprising a trough adapted to be mounted upon a plow beam and below the same, and an oppositely disposed trough having a plurality of upwardly extending and then downwardly extending resilient arms adapted to be operatively engaged with the plow beam and laterally adjustable thereon independent of the first named trough.

4. An insect catching attachment for plows comprising a trough having slotted arms for engagement with a plow beam, and a coacting trough having arms extending upward, inward and downward, said arms being resilient and being angularly bent at their extremities and formed with slots whereby they may be adjustably engaged with a plow beam.

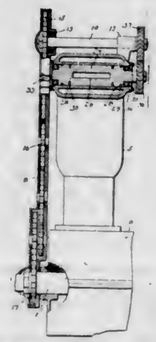
5. An insect catching attachment for plows comprising a trough having an upwardly extending outer wall and a plurality of inwardly extending resilient arms on said wall, the arms being longitudinally slotted whereby they may be engaged with a plow beam, and a coacting trough having a plurality of resilient arms extending from its outer edge, the arms extending upward then inward and downward, the extremities of the arms being angularly bent and longitudinally slotted, and a connecting member attached to said arms and extending longitudinally and formed at its extremity with an angularly bent longitudinally slotted rod for engagement with a plow handle.

1,224,556. NUT-LOCK. JAMES MCCONAHY, Ellwood City, Pa. Filed Oct. 23, 1916. Serial No. 127,231. (Cl. 151—3.)



As an improved article of manufacture, a combined washer and nut lock stamped from malleable metal and consisting of a substantially circular locking disk integrally connected to the inner edge of an annular washer plate at one side and normally disposed out of the plane of said washer plate and substantially at right angles thereto, said washer plate being adapted for arrangement upon the bolt and held in position by the nut threaded thereon, and said locking disk being adapted to be bent over upon the side and end faces of the nut and hold the same against turning movement with respect to the bolt.

1,224,557. INTERNAL-COMBUSTION ENGINE. THOMAS M. MCKELVY, Fresno, Cal. Filed Mar. 24, 1916. Serial No. 86,447. (Cl. 123—80.)



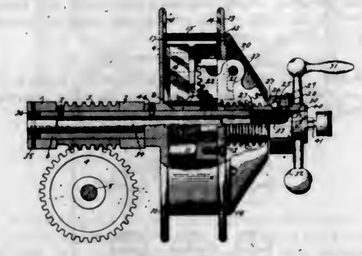
1. In an internal combustion engine, a cylindrical valve casing, a rotary valve mounted in said casing having a plurality of longitudinal grooves, and annular grooves of greater depth than the longitudinal grooves intersecting the latter intermediate their ends, packing strips arranged



in the longitudinal grooves, and split expanding rings arranged in the annular grooves normally retaining the packing strips in outwardly extended position.

2. In an internal combustion engine, a cylindrical valve casing, a rotary valve mounted in said casing having a plurality of longitudinal grooves, annular grooves at the ends of the longitudinal grooves, and annular grooves of greater depth than the longitudinal grooves intersecting the latter intermediate their ends, packing rings arranged in the first-mentioned annular grooves, packing strips arranged in the longitudinal grooves, and slit expanding rings arranged in the second-mentioned annular groove normally retaining the packing strips in outwardly extended position against the wall of the bore of said casing.

1,224,558. EXPANDING PULLEY. HARRY SEYMOUR MARSH, Brooklyn, N. Y., assignor to American Machine & Foundry Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 3, 1916. Serial No. 123,459. (Cl. 64—8.)



1. A rim segment for expanding pulleys having a radial web one edge of which is formed into a slide with an unbroken surface, the opposite edge being in part formed into a slide and in part into a rack.

2. A rim segment for expanding pulleys having a radial web one edge of which is formed into a slide extending substantially throughout its length, the opposite edge being in part formed into a slide and in part into a rack.

3. A rim segment for expanding pulleys having a radial web one edge of which projects beyond the operating belt surface of the segment and is formed into a slide, the opposite edge being in part projected beyond the operating belt surface and formed into a slide and in part formed into a rack stepped back from the slide.

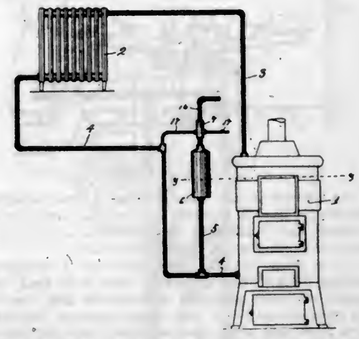
4. Operating mechanism for rim segments of expanding pulleys comprising a stationary stud mounted between and projecting beyond the rim segments, and a rim segment controlling device comprising rim segment actuating gearing and an operating member in threaded engagement with said stud arranged and adapted when manually operated on said stud to produce radial motion of the rim segments.

5. Operating mechanism for rim segments of expanding pulleys comprising a stationary stud mounted between and projecting beyond the rim segments, an operating member threaded upon said stud, a rim segment controlling member arranged and adapted to be moved longitudinally by and when the operating member is rotated upon the stud, and gearing operated by the rim segment controlling member for producing radial motion of the rim segments.

[Claims 6 to 17 not printed in the Gazette.]

1,224,559. VAPOR-HEATING SYSTEM. RICHARD MARTIN, Minneapolis, Minn. Filed May 1, 1916. Serial No. 94,625. (Cl. 237—68.)

1. In a heating system, the combination with a boiler, a radiator, a feed pipe between said boiler and radiator, and a return pipe between said radiator and boiler, of an air venting conduit tapping said return pipe at a point above the water level of said boiler and leading to the atmosphere, a float chamber, partly above and partly below the water level of said boiler and connected to said boiler at a point below the water level thereof, a float in said chamber, a valve actuated by said float and operating by a partial vacuum in the system, to close said air venting conduit, and an air conduit leading from said float chamber and arranged to be opened when the first noted air vent is closed by low altitude of water in said float chamber.

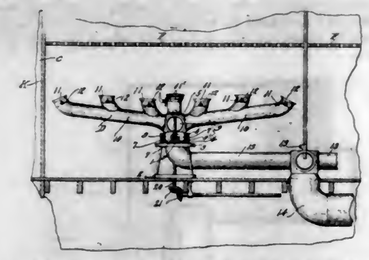


2. In a heating system, the combination with a boiler, a radiator, a feed pipe between said boiler and radiator and a return pipe between said radiator and boiler, a float chamber partly above and partly below the water level of said boiler and connected to said boiler at a point below the water level thereof, a valve casing having upper and lower valve seats, the latter being connected to said float chamber, an atmospheric air vent leading from the upper valve seat, a float in said float chamber having a projecting stem, two valves on said stem, one for engagement with said lower valve seat, and the other for engagement with said upper valve seat, an air venting conduit leading from said lower valve seat and tapping said return pipe at a point above the water level of the boiler, and a small air passage constantly connecting the upper portion of said valve casing to the upper portion of said float chamber.

3. In a heating system, the combination with a boiler, a radiator, a feed pipe between said boiler and radiator and a return pipe between said radiator and boiler, a float chamber partly above and partly below the water level of said boiler and connected to said boiler at a point below the water level thereof, a valve casing having upper and lower valve seats, the latter being connected to said float chamber, an atmospheric air vent leading from the upper valve seat, a float in said float chamber having a projecting stem, two valves on said stem, one for engagement with said lower valve seat, and the other for engagement with said upper valve seat, an air venting conduit leading from said lower valve seat and tapping said return pipe at a point above the water level of the boiler, a small air passage constantly connecting the upper portion of said valve casing to the upper portion of said float chamber, the said two valves being independently adjustable, one with respect to the other.

4. In a heating system, the combination with a boiler, a radiator, a feed pipe between said boiler and radiator, and a return pipe between said radiator and boiler, of a float chamber partly above and partly below the water level of said boiler and connected to said boiler below its water level, a valve casing having interior valve seats at its upper and lower extremities, the said upper valve seat leading to the atmosphere and the said lower valve seat being connected to said float chamber and to said return pipe at a point above the water level of the boiler, a float in said float chamber provided with a projecting stem, and two valves on said stem, one engageable with the said upper valve seat under upward movement of the float and the other engageable with said lower valve seat under downward movement of said float.

1,224,560. DRYING APPARATUS. FRANK EMERSON NEEDHAM and BERTON WASHINGTON EMERICK, Salem, Oreg. Filed May 15, 1916. Serial No. 97,679. (Cl. 34—19.)



1. In a device of the class described, a rotary distributer comprising a head, a plurality of radiating arms extending therefrom and a plurality of outlets in each arm, and means for supplying gas to said distributer.

2. In a device of the class described, a plurality of radiating hollow arms extending from said head, and a plurality of outlet pipes for each hollow arm, the outlet pipes from the adjacent arms being disposed varying distances from said head, whereby when said distributer is rotated the line of travel of said outlets on one arm will be between that taken by those on the other arms, means for rotating said distributer, and means for supplying gas to said hollow arms.

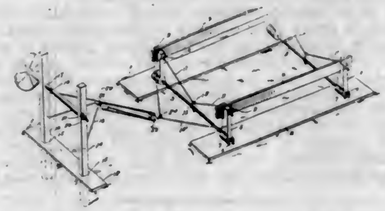
3. In a device of the class described, a plurality of rotary distributers, each comprising a hollow head, means for revolving said heads, a number of radiating hollow arms extending from each head and communicating with the interior thereof, a plurality of upwardly and outwardly discharging outlet pipes for each hollow arm, said outlet pipes being spaced varying distances from said heads, and means for supplying gas to each head to be discharged through said arms and outlet pipes.

4. In a device of the class described, a rotary distributer comprising a head, a plurality of radiating arms extending from said head, and a plurality of outlets in each arm, a stand, a track thereon, said head being rotatably mounted on said track, means for rotating said head, and a supply pipe extending through said stand to said head.

5. In a device of the class described, a rotary distributer comprising a head having an open bottom, a depending portion surrounding said opening, a plurality of radiating arms extending from said head, and a plurality of outlets on each arm, a stand, a track thereon, a number of bearing wheels carried by said head whereby the former may be rotated on the latter, an operating shaft extending through said stand and head and connected to the latter, means connected with the shaft for rotating the same, and a stationary supply pipe extending through said stand and projecting within said depending portion.

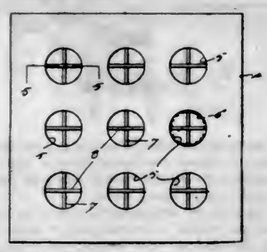
1,224,561. AUTOMOBILE-JACK. CHARLES T. NELSON, Oakland, Nebr. Filed Oct. 4, 1916. Serial No. 123,749. (Cl. 254—91.)

1. A jack of the class described including a base, a pair of shafts rotatably mounted on the upper side of the base near each end thereof, lifting elements secured by one end to the shafts at each end thereof for rotation therewith, the upper ends of said lifting elements being bifurcated forming spaced arms provided with horizontally alined openings, a pair of V-shaped reinforcing rods having their apexes removably secured to the medial portions of each shaft, the ends of the reinforcing rods being bent angularly and extended transversely through the horizontal alined openings in the arms of the lifting elements, longitudinally extended supporting bars arranged between the arms of the lifting elements and removably and pivotally secured therein by the angularly bent ends of the V-shaped reinforcing rod, and a power applying mechanism associated with certain of said lifting elements for raising and lowering the lifting elements and bars simultaneously.



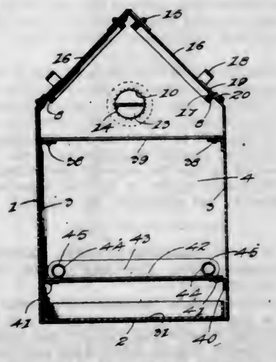
2. A jack of the class described including a base, a pair of shafts rotatably mounted on the base, lifting elements secured by one end to the shaft for rotation therewith, reinforcing rods secured to each shaft, the ends of the reinforcing rods passing through the upper end of the lifting elements, supporting bars removably and pivotally secured to the ends of the reinforcing rods, for movement with the lifting elements.

1,224,562. FILING-TABLE FOR TUBES. PAUL B. NEWMAN, La Fayette, Ind. Filed Sept. 30, 1916. Serial No. 123,076. (Cl. 45—31.)



In a filing table structure, the combination, of a supporting structure, horizontal braces for said supporting structure, a top, said top provided with a plurality of spaced circular openings, a plurality of crossed bars carried by said supporting structure and crossing directly beneath the center of said openings, said cross bars forming supports for tubes inserted through said openings.

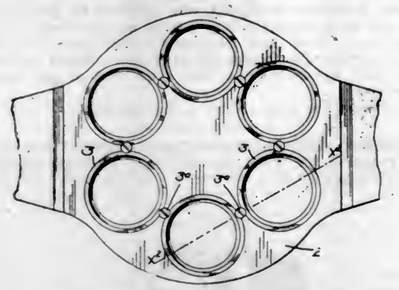
1,224,563. COOKER. ARTHUR S. OLDHAM, Helena, Ark. Filed Dec. 11, 1914. Serial No. 876,700. (Cl. 126—39.)



A cooker comprising a casing having a substantially triangular top, separate doors in each side of said top having inwardly extending drip flanges at their lower edges and spaced inwardly from the walls of the casing, a food support below the flanges, heating means below the food support, a drip pan below the heating means lying wholly within the casing and extending beyond the plane of the flanges, said drip pan having a nipple extending through the bottom of the casing, and a dampered air inlet and pan removing opening in a wall of the casing below the heating means.



1,224,564. BAKING-CONE. FREDERICK W. PEPPER, Minneapolis, Minn., assignor to Standard Baking Company, Minneapolis, Minn., a Corporation of Minnesota. Filed Jan. 27, 1916. Serial No. 74,595. (Cl. 107—66.)



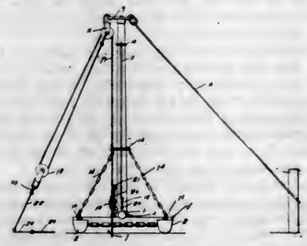
1. A baking mold having an approximately conical inner surface, and provided with a branding ring set in flush with the outer extremity thereof, and detachably seated therein.

2. A baking mold having a detachable tapered branding ring set in flush with the opening extremity thereof and detachably seated therein so as to bind when heated, the said branding ring being of a metal that has a greater heat expansion than the body of said mold.

3. A baking mold that is approximately circular in cross-section, provided at one end with a detachable annular branding ring.

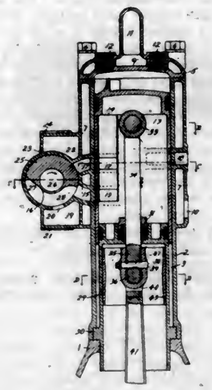
4. A baking mold that is approximately circular in cross-section, having a detachable branding ring set in flush with the open extremity thereof and detachably seated therein, so as to bind when heated, the said branding ring being of a metal that has a greater heat expansion than the body of said mold.

1,224,565. LOG-LOADER. WILLIAM J. PERONTO, Hardwood, Mich. Filed Sept. 8, 1916. Serial No. 119,061. (Cl. 254—139.)



A log loader comprising a base, a mast rotatably secured to said base, a plate swiveled to the upper end of the mast, means for supporting the upper end of the mast, a ring secured to the mast adjacent its lower end, guy cables secured to the ring and detachably secured to the base whereby the mast may be inclined to either side of the base, and a block and tackle pivotally connected to the base and detachably secured to the mast at the lower end thereof for elevating logs.

1,224,566. INTERNAL-COMBUSTION ENGINE. SYDNEY I. PRESCOTT, New York, N. Y. Filed Nov. 16, 1915. Serial No. 61,737. (Cl. 123—74.)



1. In an internal combustion engine, the combination with a source of gas supply, of a cylinder having a combustion chamber, a piston having a wall port elongated in the direction of piston travel and working within the cylinder, means coöperative with the piston to form an induction chamber within said piston, and means continuously coöperative with and controlling the piston port to establish open communication between the induction chamber and the source of gas supply, then confine the charge of gas within the induction chamber substantially to the end of the power stroke, and then effect its transfer to the combustion chamber during the first part of the return stroke.

2. In an internal combustion engine, the combination with a source of gas supply, of a cylinder having a combustion chamber, a piston having a wall port elongated in the direction of piston travel and working within the cylinder, stationary means coöperative with the piston to form an induction chamber within said piston, and means continuously coöperative with and controlling the piston port to establish open communication between the induction chamber and the source of gas supply, then confine the charge of gas within the induction chamber substantially to the end of the power stroke, and then effect its transfer to the combustion chamber during the first part of the return stroke.

3. In an internal combustion engine, the combination with a source of gas supply, of a cylinder having a combustion chamber, a piston having a wall port elongated in the direction of piston travel and working within the cylinder, a stationary closed-end cylindrical device coöperative with the piston to form an induction chamber within said piston, and means continuously coöperative with and controlling the piston port to establish open communication between the induction chamber and the source of gas supply, then confine the charge of gas within the induction chamber substantially to the end of the power stroke, and then effect its transfer to the combustion chamber during the first part of the return stroke.

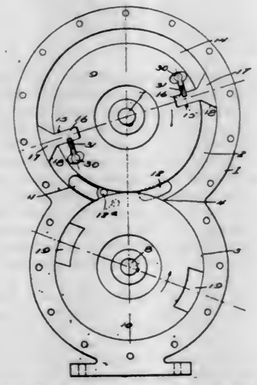
4. In an internal combustion engine, the combination with a source of gas supply, of a cylinder having a combustion chamber, a piston having a wall port elongated in the direction of piston travel and working within the cylinder, a closed-end cylindrical device coöperative with the piston to form an induction chamber within said piston, a cross-head working within said cylindrical device,

a piston rod connecting said cross-head with said piston, and means continuously coöperative with and controlling the piston port to establish open communication between the induction chamber and the source of gas supply, then confine the charge of gas within the induction chamber substantially to the end of the power stroke, and then effect its transfer to the combustion chamber during the first part of the return stroke.

5. In an internal combustion engine, the combination with a source of gas supply, of a cylinder having a combustion chamber, a piston having a wall port elongated in the direction of piston travel and working within the cylinder, means coöperative with the piston to form an induction chamber within said piston and having a clearance definitely larger than that of the combustion chamber, and means continuously coöperative with and controlling the piston port to establish open communication between the induction chamber and the source of gas supply, then confine the charge of gas within the induction chamber substantially to the end of the power stroke, and then effect its transfer to the combustion chamber during the first part of the return stroke.

[Claims 6 to 23 not printed in the Gazette.]

1,224,567. ROTARY PUMP. RALPH RAGAN, Atlanta, Ga. Filed Feb. 5, 1916. Serial No. 76,367. (Cl. 103—44.)



1. In a rotary pump, the combination with a housing containing connected chambers, of a driven rotor and valve element contained in the said chambers and having their peripheries in contact, of a recess in the periphery of the valve-element, and a radially movable impeller on the rotor entering said recesses and whose outer face bears on the wall of the inclosing chamber, and is of such length as to bear on such wall before it leaves such recess.

2. In a rotary pump, the combination with a housing containing connected chambers, of a driven rotor and valve element contained in the said chambers, and having their peripheries in contact, of a recess in the periphery of the valve-element, the base of the recess being struck from the center of rotation of the valve element, and a radially movable impeller on the rotor whose outer face is struck from the center of rotation of the rotor and which on entering the recess in the valve-chamber bottoms therein before its opposite end leaves the wall of the rotor chamber.

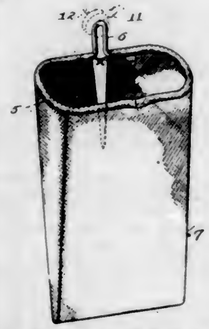
3. In a rotary pump, the combination with a housing containing connected chambers, of a driven rotor, and a valve element contained in said chambers and having their peripheries in contact, of a recess in the periphery of the valve element, the base of the recess being struck from the center of rotation of the valve element, and a radially movable impeller on the rotor whose outer face is struck from the center of rotation of the rotor, and subtends a greater arc than the arc between the line of centers of the chamber and the junction of their walls.

4. In a rotary pump, the combination with a housing containing connected chambers, of a driven rotor and valve element contained in the chamber and having their peripheries in contact, of a recess in the periphery of the valve element, and a radially movable impeller on the rotor whose outer face is struck from the center of rotation of the rotor and which, on entering the recess of the valve chamber and after leaving the wall of the rotor chamber, is limited in its outward movement by the bottom of the said recess.

5. In a rotary pump, the combination with a housing containing connected chambers, of a driven rotor and valve element contained in the said chambers and having their peripheries in contact, of a recess in the periphery of the valve element, and a radially movable impeller on the rotor whose outer face bears on the bottom of the recess when fully therein, and is of such a length to bear on such bottom before it leaves the wall of the rotor chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,224,568. LAUNDRY-RECEPTACLE. MYRTON E. REAM, Evanston, Ill. Filed Sept. 11, 1915. Serial No. 50,121. (Cl. 150—1.)



1. The combination of a laundry bag having a hem at its open upper end and provided with a slit passing through said hem and downwardly therefrom, a bag-supporting bar bent into the form of an elongated loop and having a short upstanding loop at one side open at its lower end, the ends of said bar approaching each other but spaced away from each other at the opposite side of the first mentioned loop, the bag being adapted to be associated with and disassociated from said bar by passing the hem of said bag onto and off of the ends of said bar, and a supporting knob adapted to be removably embraced by said smaller upstanding loop.

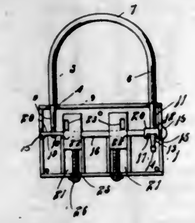
2. The combination of a laundry bag having a hem at its upper end and provided with a slit passing through said hem and downwardly therefrom, a bag-supporting bar bent into the form of an elongated loop and having its ends approaching each other, the bag being adapted to be associated with and disassociated from said bar by passing the hem of the bag onto and off of the bar over said ends, and supporting means for the bar.

3. A receptacle for laundry or the like comprising a bar bent to provide a main loop and a short upstanding loop at one side of the main loop, the ends of the bar approaching each other closely, and a bag provided with means at its upper edge adapted to be threaded onto the main loop over the free ends of the bar, whereby to support the bag from said main loop, said upstanding loop adapted to be hung upon a support.

4. A laundry receptacle comprising a supporting knob having a deep annular groove, a bag-supporting bar provided with a small upstanding loop open at its lower end and adapted to slidably embrace said knob and be rigidly confined in said groove, and a bag suspended from said bar.



1,224,569. COMBINATION-LOCK. JAMES M. ROBERTS, Marion, Ky. Filed Dec. 27, 1916. Serial No. 139,086. (Cl. 70—113.)



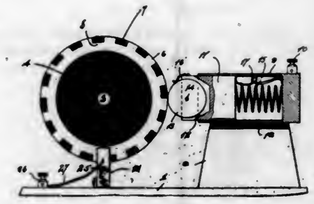
1. A lock comprising a casing, a substantially U-shaped shackle having its ends disposed within the casing and notched, a shaft journaled in the casing and having notches for coöperating with the notches in the shackle to permit the shackle to slide freely within the casing, a knob formed on the shaft and exteriorly of the casing for rotating the shaft to move said shaft into the notches of the shackle to lock said shackle against withdrawal from the casing, means engaging the shaft to lock it against rotation, and means connected with the last mentioned means and extending exteriorly of the casing for moving said means to free the shaft.

2. A lock comprising a casing, a substantially U-shaped shackle having its ends extending within the casing and notched, a shaft journaled within the casing and having notches for coöperating with the notches in the shackle to permit the shackle to slide freely in the casing, means for rotating the shaft to move said shaft into the notches of the shackle to lock said shackle against withdrawal from the casing, oppositely disposed lugs formed on the shaft, substantially U-shaped members located within said casing and receiving the shaft between its arm portions, said U-shaped members having elongated slots in the arm portions, means for moving the substantially U-shaped members to position the slots for receiving the lugs for permitting the shaft to be rotated.

3. A lock comprising a casing, a substantially U-shaped shackle having its ends disposed within the casing and notched, a shaft journaled in the casing and having notches therein for coöperating with the notches in the shackle to permit the shackle to slide within the casing, means for rotating the shaft to move said shaft into the notches of the shackle, guides formed within the casing, substantially U-shaped members slidable in the guides and receiving the locking shaft between their arm portions, said U-shaped members having elongated slots in the arm portions thereof, oppositely disposed lugs formed on the shaft and located between the arm portions of the substantially U-shaped members, and operating rods journaled in the casing and threaded to the substantially U-shaped members for moving said U-shaped members to position the slots so as to permit the lugs to enter them for permitting the shaft to be rotated.

1,224,570. INTERRUPTER. STUART SANDREUTER, Stamford, Conn. Filed July 1, 1916. Serial No. 107,049. (Cl. 175—347.)

1. In an interrupter, a base, a rotary disk rotatably mounted on the base and provided on its periphery with a plurality of alternate insulating and conductive plates, said plates being connected at their ends by a continuous ring, a sleeve mounted on the base, a rolling contact in one end of the sleeve for engagement with the periphery of the disk, spring means for urging said contact toward the disk to hold the peripheries thereof in continuous engagement, a rolling contact for engagement with the ring, and spring means for urging the last named rolling contact toward the disk, and binding posts connected to both of the contacts, as and for the purpose specified.



2. In an interrupter, a base, a disk rotatably mounted on one face of the base, and provided on its periphery with a plurality of alternating insulating and conductive plates, said plates being connected at their inner ends by a continuous ring, a sleeve mounted upon said base and having one end closed and its other open end in close proximity to the periphery of the disk, a rolling contact member rotatably mounted in the open end of the disk, its periphery adapted to have engagement with the periphery of the disk, spring means for urging said contact toward the disk to hold the peripheries thereof in continuous engagement, a rolling contact for engagement with the ring, spring means for urging the last named rolling contact toward the disk, and binding posts carried by the sleeve and base, said binding posts being connected to both of the contacts.

3. In an interrupter, standards mounted upon one face of the base, a disk rotatably mounted on the standards, said disk provided on its periphery with an alternating conductive and insulating plate, a pedestal on the base, a sleeve mounted on the pedestal, said sleeve having one end opened and its opposite end closed, a rolling contact rotatably mounted in the opened end of the sleeve and adapted for engagement with the periphery of the disk, a ring connecting the inner ends of the conductive plates together, pivoted arms mounted beside the rotating disk, outwardly extending fingers formed on said arms, a rolling contact rotatably mounted between the fingers, said contact being adapted to engage the ring of the disk, and spring means to urge said contact toward said disk to hold the rolling contact in engagement with the rings.

1,224,571. WEED-PULLER. LOUIS SCHAIER, Minneapolis, Minn. Filed June 19, 1916. Serial No. 104,475. (Cl. 55—148.)

1. In a device of the kind described, the combination with a handle, of a cutting blade secured to the lower end of the handle, a pair of pinching jaws for picking up a plant or weed, the root of which has been cut by the cutting blade, and an adjustable ground-engaging stop for limiting the depth to which the cutting blade enters the ground.

2. In a device of the kind described, the combination with a handle, of a cutting blade movably mounted on the lower end of the handle, a pair of pinching jaws pivotally secured in respect to the handle for picking up a plant or weed, the root of which has been cut by the cutting blade, and means for securing the cutting blade to the handle with its cutting edge in different adjustments in respect to the pinching jaws.

3. In a device of the kind described, the combination with a handle, of a cutting blade movably mounted on the lower end of the handle, a pair of pinching jaws pivotally secured in respect to the handle for picking up a plant or weed, the root of which has been cut by the cutting blade, means for securing the cutting blade to the

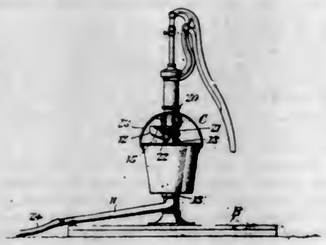
handle with its cutting edge in different adjustments in respect to the pinching jaws, and an adjustable ground-



engaging stop for limiting the depth to which the cutting blade enters the ground.

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1,224,572. PUMP ATTACHMENT. PETER SCHOEN, Jeffers, Minn. Filed July 11, 1916. Serial No. 108,651. (Cl. 103—65.)



1. The combination with a pump having a spout, of a drain pipe including a relatively movable section normally disposed beneath the spout, and bucket controlled means for moving said section to an inoperative position at one side of the spout.

2. The combination with a pump having a spout, of a drain pipe including a relatively movable section normally disposed beneath said spout, and means for moving said section to one side of the spout, said means including a bucket actuated element.

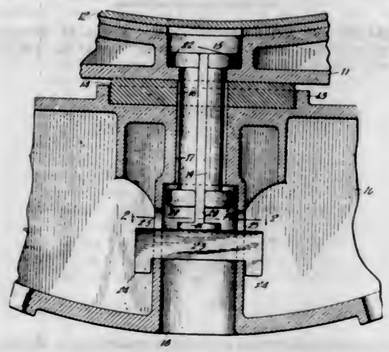
3. The combination with a pump having a spout, of a drain pipe including a relatively movable section normally disposed beneath said spout, bucket controlled means for moving said section to an inoperative position at one side of the spout, and means for automatically returning said section to normal position.

4. The combination with a pump having a spout, of a drain pipe including a relatively movable section normally disposed beneath said spout, and means operable under the weight of a bucket for moving said section to an inoperative position at one side of the spout.

5. The combination with a pump having a spout, of a drain pipe including a swingingly mounted section normally disposed beneath said spout, and a lever journaled on the spout and operable to move said section to an inoperative position.

[Claims 6 to 8 not printed in the Gazette.]

1,224,573. CAR CONSTRUCTION. ERNEST R. SCHULZ, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 1, 1916. Serial No. 81,299. (Cl. 105—108.)

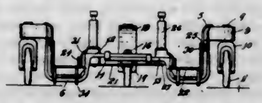


1. In car construction, the combination with body and truck bolsters perforated to receive a center pin, the perforation in the body bolster being inaccessible from the top of the bolster, of a center pin for pivotally connecting said bolsters, said pin comprising two similar members each having flanged upper and lower ends adapted to overlap adjacent shoulders on the body and truck bolsters, and an intermediate spreader for said members, and a key extending transversely through the truck bolster and upon which said spreader is adapted to rest, all of the parts of said center pin being insertible from the under side of the truck bolster and when in position, being adapted to lock the two bolsters against vertical separation.

2. In car construction, the combination with a truck bolster having a central perforation to receive a center pin, said perforation being accessible from the under side, of a multiple piece king pin all the parts of which are insertible from the underside of said bolster up through said opening, said bolster being provided with slots below the lower end of the king pin when the latter is in position, and a removable key inserted through said slots and adapted to retain one of the king pin members in position.

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1,224,574. VEHICLE-MOVING TRUCK. ALBERT L. SESSIONS, Bristol, Conn. Filed Apr. 15, 1913. Serial No. 761,238. (Cl. 254—88.)



1. A truck including a frame supported by a pair of rollers located one at each side thereof, said frame comprising tread supports spaced apart between said rollers to receive the wheels at opposite ends of an axle of a vehicle, said tread supports having outer side parts rising therefrom, roller supporting frames for said rollers journaled in the upper edges of said side parts, and connections between said tread supports located below the upper edges of the outer side parts to a degree to underlie the under part of a vehicle.

2. A truck including a frame supported by a pair of rollers located one at each side thereof, said frame comprising tread supports located between said rollers at opposite side edges of said frame to receive the wheels of a vehicle, said tread supports having side parts rising therefrom at the outer sides thereof and spaced apart to receive both wheels on the axle of a vehicle between them, and roller supporting frames for said rollers journaled in the upper edges of said side parts.



3. A truck including a frame supported by a pair of rollers located one at each side thereof, said frame comprising tread supports located at opposite sides thereof and between said rollers to receive the wheels of a vehicle and having side parts rising therefrom at the outer sides thereof and spaced apart to receive both wheels on the axle of a vehicle between them, roller supporting frames for said rollers mounted in said frame and rising above the tread supports, and skids pivotally secured to the tread supports, and roller supports to sustain said frame.

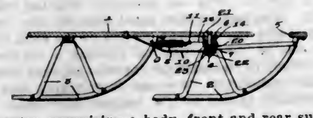
4. A truck including a frame supported by a pair of rollers located one at each side thereof, said frame comprising side parts vertically arranged and spaced apart and between said rollers to receive both wheels on the axle of a vehicle between them, a connection between the lower edges of said side parts constituting the floor upon which both wheels on an axle of a vehicle rest, and roller supporting frames journaled in bearings at the upper ends of said side parts.

5. A truck including a frame supported by a pair of rollers located one at each side thereof, said frame comprising tread supports located between said rollers to receive the wheels of a vehicle, said tread supports including side parts rising therefrom, roller supporting frames for said rollers mounted in said frame and rising above the tread supports, and a guide support also mounted in the frame at one end thereof and rising above said tread supports, and roller supports to sustain said frame.

[Claims 6 to 17 not printed in the Gazette.]

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1,224,575. COASTER. WILLIAM E. SHERWOOD, Canastota, N. Y. Filed May 16, 1914. Serial No. 838,916. (Cl. 21—94.)



1. A coaster comprising a body, front and rear supporting members for the body, one of said members being turnable laterally in either direction relatively to the body, a lever turnable with the member and connected at its opposite ends to said member and movable with the turnable member about axes located on opposite sides of its center, and a spring connected to the lever intermediate of the ends thereof and to the body of the sled, substantially as and for the purpose described.

2. A coaster comprising a body, front and rear supporting members for the body, one of said members being turnable in either direction relatively to the body, a lever connected to said member to be turned thereby, fulcrums for said lever located on opposite sides of the center of said lever, and spring means for returning said part and said member to their central position and to resist lateral turning thereof, substantially as and for the purpose specified.

3. A coaster comprising a body, front and rear supporting members, one member being turnable in either direction relatively to the body, a lever connected to said member to be turned thereby, a spring connected to the lever, and fulcrum points spaced for engaging the lever at points spaced apart so that the spring is tensioned when the member is moved in either direction, substantially as and for the purpose set forth.

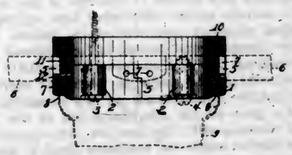
4. A coaster comprising a body, front and rear supporting members, one member being turnable in either direction relatively to the body, a lever connected to said member to be turned thereby, a spring connected to the lever, and fulcrum points spaced for engaging the lever at points spaced apart, the spring being connected to the lever between the fulcrum points, substantially as and for the purpose described.

5. A coaster comprising a body, front and rear supporting members for the body, one member being pivoted to the body, links pivotally connected to said member on opposite sides of its pivot, a cross piece connected to the links, and spring means connected to the cross piece, the cross piece being movable about an axis on one side of its center when the pivoted member is turned to the right and about an axis on the other side of its center when the pivoted member is turned to the left, substantially as and for the purpose specified.

[Claims 6 to 20 not printed in the Gazette.]

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1,224,576. MOLDING-BASE CANOPY-SEAT. ALLISON S. SMITH, Bellaire, Ohio. Filed May 1, 1916. Serial No. 94,542. (Cl. 247—5.)

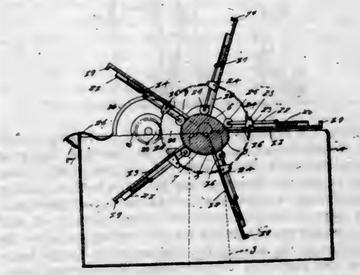


1. A canopy seat comprising a ring of non-conductive material having radially disposed sockets in its periphery for receiving the ends of wire-inclosing moldings and having wire-receiving holes leading from said sockets to the interior thereof, said ring also having a channel in its outer face for the reception of the larger end of a canopy fitting, said ring also having an internal annular recess in its inner face, and a base member for said ring conforming in diameter to the latter and having a rim adapted to be received within said recess, and attaching lugs carried by said ring.

2. A canopy seat comprising a ring of non-conductive material having radially disposed sockets in its periphery for receiving the ends of wire-inclosing moldings and having wire-receiving holes leading from said sockets to the interior thereof, said ring also having a channel in its outer face for the reception of the larger end of a canopy fitting, said ring also having an internal annular recess in its inner face, and a base member for said ring conforming in diameter to the latter and adapted to be encircled by the plaster of a wall or ceiling, said member having a projecting rim on its outer face adapted to be embraced by said ring and seated within said recess, and internal apertured ears carried by said ring, said ears being designed for use either as attaching lugs or as terminal mountings.

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1,224,577. ROTARY SPRING-FITTING MACHINE. GEORGE A. SPENCER, Jackson, Mich., assignor of one-third to Ida Glenn, Jackson, Mich. Filed Sept. 22, 1916. Serial No. 121,697. (Cl. 266—6.)



1. A machine of the class described comprising a tank, a rotary carrier mounted on a horizontal axis for rotation over the tank and including a plurality of radially extending tables for supporting spring bending forms, and adapted to be successively moved into the tank during rotation of the carrier, each of the tables having a plunger associated therewith adapted to close the spring bending form upon movement of the table into the tank

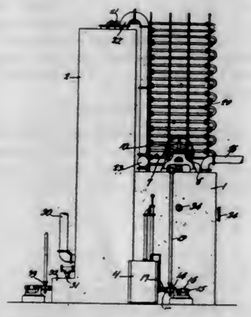
and to effect opening of the form upon the removal of the table from the tank, and a movable resiliently mounted spring-receiving platform mounted on the tank and lying in the path of rotation of the tables of the carrier, for the purpose specified.

2. A machine of the class described comprising a tank, a stationary shaft extending across the tank and having a central cam surface thereon, a rotary carrier mounted on the shaft and including a plurality of tables adapted to be successively moved into the tank and each having a pair of supporting legs lying, respectively, on opposite sides of the cam surface on the shaft, a gear disposed within the tank and located at one side of the carrier and secured to certain of the supporting legs, spring bending form closing elements mounted on the tables, rods carried by the elements and having rollers thereon for operatively engaging the cam surface on the shaft so as to effect movement of the elements when the carrier is rotated, a rotatable shaft having one end extending into the tank, and a gear on the mentioned end of the rotatable shaft and meshing with the gear on the carrier so as to rotate the carrier when the rotatable shaft is operated.

3. A machine of the class described comprising a tank, a rotary carrier mounted for rotation over the tank and including a plurality of radially extending tables for supporting spring bending forms and adapted to be successively moved into the tank during rotation of the carrier, each table having spring bending form closing means associated therewith and adapted to be moved to operative position upon the movement of the table into the tank and to be moved to inoperative position upon withdrawal of the table from the tank, and a spring-receiving and projecting element pivotally mounted on the upper end of the tank and normally lying in the path of rotation of the table, and adapted to be successively engaged by the tables during their withdrawal from the tank, for the purpose specified.

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1,224,578. APPARATUS FOR MAKING BISULFITE LIQUOR. GEORGE ALFRED STEBBINS, Watertown, N. Y. Filed Aug. 31, 1915. Serial No. 48,263. (Cl. 23—13.)



Apparatus for making bisulfite liquor including an absorption compartment, a receiver for bisulfite liquor in communication with the bottom of the absorption compartment, means for directing gas into the bottom portion of the absorption compartment, an agitating compartment, a suction pipe extending from the upper portion of said agitating compartment, means for conveying gas from the upper portion of the absorption compartment to the lower portion of the agitating compartment, an overflow receptacle in communication with the lower portion of the agitating compartment, means for maintaining the contents of the overflow receptacle substantially at a predetermined level, means for directing a basic solution into the upper portion of the agitating compartment, a cooling coil discharging into the upper portion of the absorption compartment, and means for elevating mono-sulfite liquor from the receptacle in communication with the agitating compartment to the cooling coil, and agitating means within the agitating compartment and between the gas inlet and the inlet of the basic solution.

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1,224,579. METHOD OF FORMING THE SHEET-METAL BARRELS OF WINDING-ROLLERS. EVERETT STUCK, Syracuse, N. Y., assignor to Oliver M. Edwards, Syracuse, N. Y. Filed May 29, 1913. Serial No. 770,612. (Cl. 113—116.)

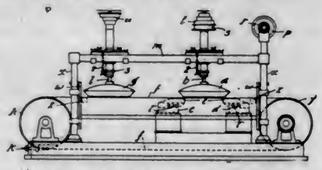


1. The method of forming the sheet metal barrels of winding rollers from flat strips comprising, forming the strip with a lengthwise corrugation, one side of which is higher than the other side, compressing the high side of the corrugation together with the adjacent portion of the strip, toward the other side of the corrugation so that a channel is formed, the entrance of such channel formed by the corrugation, being contracted and flush with the outer face of the strip, rolling the portions of the strip on opposite sides of the corrugation into cylindrical form, and uniting the meeting edges thereof, substantially as and for the purpose set forth.

2. The method of forming the sheet metal barrels of winding rollers from flat strips comprising forming the strip with a lengthwise corrugation, one side of which is higher than the other side and also bending the side margins of the flat strip one upwardly and the other downwardly, compressing the high side of the corrugation together with the adjacent portion of the strip toward the other side of the corrugation forming a channel, rolling the portions of the strip on opposite sides of the corrugation into cylindrical form and interlocking said margins, substantially as and for the purpose described.

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1,224,580. ORE-SEPARATING MACHINE. HERBERT HUBAND THOMPSON, Aldridge, and ALFRED EVAN DAVIES, Hockley Heath, England. Filed Oct. 13, 1915. Serial No. 55,618. (Cl. 83—71.)



1. In a magnetic separator, the combination of a main rotary disk armature, a carrier moving beneath the same, a pair of magnet poles under the main armature and below said carrier, a preliminary separating disk armature in advance of said main armature and located within the region of influence of a magnet influencing said main armature, said disk armatures having their faces toward said carrier, and means for rotating both of said armatures to carry attracted material from the magnetic fields.

2. A magnetic separator comprising in combination an electric magnet a main rotary disk armature arranged above and within the influence of said electro-magnet, a carrier for the materials to be treated, said carrier being less in width than the diameter of the armature and traveling through the space between said armature and said magnet, and a second rotary disk armature in advance of said main armature and located within the influence of said magnet influencing the main armature, said second disk armature effecting a preliminary separation of the more highly magnetic substances from the materials to be treated, both said armatures having their faces toward said carrier.



3. A magnetic separator comprising in combination a main rotary disk armature, an electro-magnet, said armature being arranged above and within the influence of said electro-magnet, a carrier for materials to be treated, said carrier being less in width than the diameter of the armature, and traveling through the space between said armature and said magnet, a second rotary disk armature in advance of said main armature and located within the influence of said magnet, both said armatures having their faces toward said carrier, and means whereby said disk armatures may be bodily raised or lowered to adjust their distances from the carrier and from the magnet.

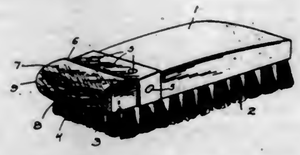
4. A magnetic separator comprising in combination a main rotary disk armature, an electro-magnet, said armature being arranged above and within the influence of said electro-magnet, a carrier for the materials to be treated, said carrier being less in width than the diameter of the armature and traveling through the space between said armature and said magnet, a second rotary disk armature in advance of said main armature and located within the influence of said magnet, said armatures having their faces toward said carrier, said magnet having two pole pieces, and means whereby said pole pieces may be adjusted closer together or farther from each other.

6. A magnetic separator comprising in combination a rotary disk armature, an electro-magnet, said armature being arranged above and within the influence of said electro-magnet, a carrier for the material to be treated, said carrier being less in width than the diameter of the armature and traveling through the space between said armature and said magnet, means for bodily adjusting said armature by inclining its axis so that the distance from the magnet of diametrically opposite portions is varied, and said magnet having two poles, and means for relatively adjusting said poles.

[Claim 5 not printed in the Gazette.]

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1,224,581. DEVICE FOR CLEANING CLOTH. CARY BRYON TWIFORD, Sistersville, W. Va. Filed June 17, 1914. Serial No. 845,654. (Cl. 15—30.)



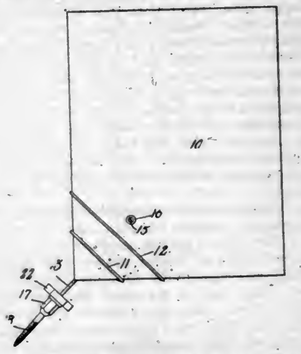
The hereindescribed device for cleaning cloth, comprising the rigid back of a brush, a pad secured to one of the projecting ends of said brush, said pad comprising a lining of batting extending over the top and the longitudinal and transverse sides of said end, and a fabric cover for said lining of batting having one end secured to the under side of said projecting end, said cover having its other end extending over and beyond the lining of batting and fastening means securing said other end of the cover to the upper and longitudinal sides of the brush back at a point beyond the lining of batting, said fastening means lying below the projecting surface of the pad to prevent them from coming in contact with the article being cleaned, said pad being adapted to be used simultaneously with or independently of the brush bristles, or used after each sweeping operation of the bristles.

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1,224,582. CARD-HOLDER. WILLIAM GEORGE VANDEGRIFT, Harrisburg, Pa. Filed June 17, 1916. Serial No. 104,206. (Cl. 40—146.)

1. A holder for the purpose described having an anchor or engaging device, a pocket or seat, a stem extending from the pocket or seat and swiveled in said anchoring device, said pocket or seat consisting of a blank of wire folded upon itself to form a series of flat loops of consecutively increased length.

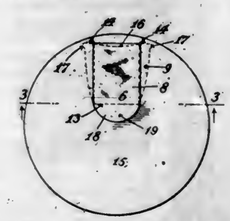
2. A holder for the purpose described having a pocket or seat formed of a blank of wire folded upon itself to produce flat loops of consecutively increased length, said blank terminating at one end in a stem and at the other



end in a pin disposed transversely of the plane of said loops, and means for supporting the stem, in combination with a card provided with an eyelet for the reception of said terminal pin.

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1,224,583. SPOUT FOR RECEPTACLES. ROSS VAUGHAN, New York, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 21, 1914. Serial No. 833,341. (Cl. 221—11.)



1. The combination with a receptacle having an opening in the wall thereof with a portion of the wall projecting inwardly to form a ledge, of a spout pivotally mounted in said opening on said ledge, said spot having a top of a size to cover said opening and ledge and having pendent sides at substantially right angles to said top, each of said sides having a lug spaced from the top a distance substantially equal to the thickness of the receptacle wall, said lugs being proportioned in width to be easily bent after the spout is mounted in said opening.

2. The combination with a receptacle having an opening in the wall thereof with a portion of the wall projecting inwardly to form a ledge, of a spout pivotally mounted in said opening, said spout consisting of a top of a size to cover said opening and ledge, and two sector sides bent at an angle to said top, each of said sides having a lug spaced from said top a distance substantially equal to the thickness of the receptacle wall and of a width less than half the length of one of said sides whereby said lugs may be easily bent with an instrument through said opening with the spout in position.

3. The combination with a recpetacle having an opening in the wall thereof with a portion of the wall projecting inwardly on a plane with the surrounding walls of the receptacle to form a ledge, of a spout pivotally mounted in said opening, said spout consisting of a top and two sector sides at an angle to the top, said top having a straight edge adapted to bear on said ledge during the swinging of the spot, and each of said sides having a

lug spaced from the top a distance substantially equal to the thickness of the receptacle wall, said lugs being bent at an angle to said sides whereby the top is pivotally held on said ledge.

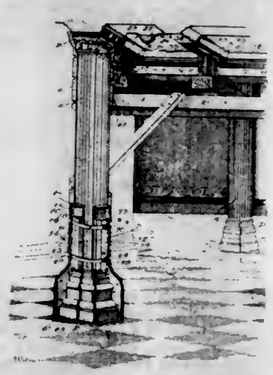
4. The combination with a receptacle having an opening in the wall thereof with a portion of the wall projecting inwardly to form a ledge, of a spout pivotally mounted in said opening on said ledge, said spout consisting of a top larger than said opening and pendent side wings adapted to enter said opening, each of said side wings having a lug spaced from said top a distance substantially equal to the thickness of the receptacle wall and each lug having a straight edge adjacent to said wall and substantially parallel therewith, said lugs being so positioned and limited in width whereby they may be easily bent by an instrument inserted through said opening, for the purpose set forth.

5. In combination, a container having an opening, a spout pivotally mounted adjacent said opening and comprising a flat central portion adapted to cover said opening and two sides at angles thereto and extending into the opening, one edge of the flat central portion coinciding with the pivotal axis of the spout, and lugs extending at right angles from said sides adjacent the pivotal line of the spout and within the container to hold the spout in proper position with respect to said opening.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,584. MOLD FOR CONCRETE CONSTRUCTION. FRANK M. VOGAN, Canton, Ohio. Filed May 1, 1915. Serial No. 25,280. (Cl. 25—131.5.)



1. For concrete construction a sheet metal mold unit of relatively thick material and an appliqué decorative member stamped from comparatively thin material and adapted to be removably connected to said mold unit.

2. For concrete construction a sheet metal mold unit provided with an aperture having a marginal edge provided with an off-set and an auxiliary mold member arranged in said aperture and having its marginal edge located in said off-set.

3. For concrete construction a sheet metal mold unit and an appliqué decorative member, flanges located around the edges of said mold unit and said appliqué decorative member, said flanges provided with apertures and bolts located through the apertures for removably connecting the said appliqué decorative member to said mold unit.

4. For concrete construction a sheet metal mold unit and an appliqué decorative member stamped from comparatively thin metal and adapted to be removably connected to said mold member, depressions formed in said mold unit, said depressions provided with apertures, projections formed upon said appliqué decorative member and adapted to register with the depressions in the mold unit, said projections provided with screw threaded apertures and screws located through the apertures in said mold units and through the screw threaded apertures in the projections.

5. For concrete construction a sheet metal mold adapted to form a pillar or the like comprising a plurality of sheet metal mold units, a plurality of appliqué decorative members stamped from comparatively thin material and provided with flanges at their marginal edges, means for connecting adjacent flanges together and means for clamping all of said molding units together.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,585. BRACELET. CHARLES B. WARE, Attleboro, Mass., assignor to T. I. Smith Company, North Attleboro, Mass. Filed Feb. 23, 1916. Serial No. 79,875. (Cl. 59—80.)



1. In a bracelet, hollow link boxes having open ends, and each having a central opening in its bottom, and plates having teats receivable in said openings and having ends which extend over the box ends and being formed to interconnect with the adjacent ends of adjacent plates to form flexible connections between the boxes.

2. In a bracelet, link boxes having central openings in their bottoms, plates having teats received in said openings, and means to connect the adjacent ends of adjacent plates.

3. In a bracelet, link boxes having central openings in their bottoms, plates having teats received in said openings, and means to flexibly connect adjacent plates.

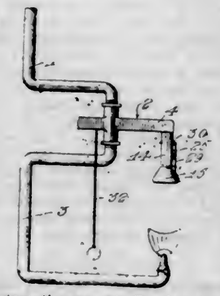
4. In a bracelet, link boxes, plates, means to rigidly and positively connect the plates to the boxes by relative movement therebetween, each plate having each of its ends forming the respective ends of the boxes, and means to connect adjacent plates.

5. In a bracelet, hollow boxes arranged in substantially end to end engagement, a filling member in each box, each having its ends forming the respective ends for the boxes, and means whereby to flexibly connect the ends of the filling members to impart to the bracelet the appearance of a solid band.

[Claims 6 to 11 not printed in the Gazette.]

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1,224,586. AUTOMATIC GAS CUT-OFF. CARL A. WIETING, Snoqualmie, Wash. Filed June 24, 1915. Serial No. 36,117. (Cl. 67—117.)



1. In an automatic gas cut-off valve device, the combination with the burner of a valve, a means operable manually to move said valve, and open the gas supply to said burner, resilient means for retaining the valve in normally closed position, a thermostatic device comprising a cylinder containing expansible fluid, a piston movable in said cylinder and connected to the valve for actuating the same, means engaging the piston to retain the same against movement and the valve in open position, and means for releasing said engaging means upon an extinguishment of the burner whereby the resilient means may return the valve to closed position.

2. In an automatic gas cut-off device; a valve, a cylinder, a piston operating within said cylinder, a connection between said valve and said piston, means engaging said piston subsequent to movement to afford a stop means precluding return movement thereof, thermostatic means operating automatically to disengage the stop means with the piston and itself preclude a return movement thereof, and means operating automatically upon disengagement of the thermostatic means with said piston to return said piston to its normal position and reversely move said valve.

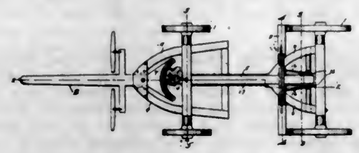
3. In an automatic gas cut-off device, a valve, a cylinder, a piston operating within said cylinder, a connection between said piston and said valve, a spring actuated stop device mounted for engagement with the piston subsequent to movement to act as a support therefor, a second piston movable to disengage the stop and said first piston, thermostatic means to actuate the last mentioned piston and provide a support for the first mentioned piston subsequent to movement of the stop device out of engagement therewith, and spring means operating automatically to return said piston to its normal position and accordingly actuate the valve.

4. In an automatic cut-off device, a spring actuated valve, a piston, a cylinder inclosing the piston, a connection between said piston and said valve, means operable to move said valve against tension of its spring and move said piston, a stop device operating automatically to support the piston subsequent to movement, a second piston actuatable to disengage said stop device and said first mentioned piston, thermostatic means within said cylinder to actuate said second mentioned piston and support said first mentioned piston subsequent to disengagement of the stop device therewith, and spring means operable to return the second piston and the stop device respectively to a normal position subsequent to actuation by said thermostatic means, substantially as described.

5. In an automatic gas cut-off device, the combination with a burner of a valve, a thermostatic device including a cylinder containing expansible fluid and a piston movable within the cylinder, a connection between said valve and said piston, a means operable to move said valve and accordingly move said piston, a spring actuated stop device automatically operable to engage with and hold said piston against movement, and thereby retain the valve in open position, a second thermostatic means operatively associated with said stop device to disengage the latter and said piston, and a means operating automatically to return the valve and piston to a position whereby the gas supply to the burner is cut off.

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1,224,587. AUTOMATIC WAGON-BRAKE. WILLIAM Z. WILLIS, Bear Creek, Ala. Filed Jan. 8, 1916. Serial No. 71,024. (Cl. 21—9.)

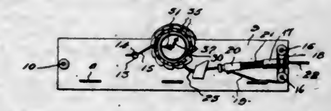


1. The combination with the front and rear hounds, the pole, the reach, and brake of a vehicle, of a plurality of bearings mounted on the under side of both arms of the rear hound, a shaft loosely mounted in the said bearings, a pin, lever arms mounted on the shaft and connected to the said pin, an arch shaped slotted member, a connecting rod having one end slidably engaged in the said arch-shaped member, the other end thereof being connected to the said pin, a plurality of rods connecting one end of the lever arm and the brake beam providing means for operating the brake upon any backward pressure on the pole, and means mounted upon the pole to prevent the automatic operation of the said brake.

2. The combination of the front and rear hound, the pole, reach, and brake of a vehicle, of a brake operating means, an arch-shaped slotted member mounted on the rear end of the said pole, a rod connecting the said brake operating means and the arch-shaped slotted member, the said pole being provided with a transverse and vertical slot therein, a pin connecting the front ends of the front hound and extending through the said transverse slot, a bearing supported by the front hound, a pin slidably mounted in said bearing and vertical slot, a spring member normally retaining the said pin out of engagement with the said vertical slot, and means for slidably engaging the said pin in the slot for a purpose specified.

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1,224,588. CAMERA ATTACHMENT. HARRY C. WRAY, North Bend, Oreg. Filed Dec. 30, 1914. Serial No. 879,763. (Cl. 95—1.1.)



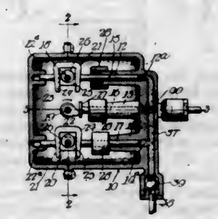
1. In a camera attachment, a casing adapted to be secured in the exposure opening of a camera, a ring rotatably mounted in said casing, a transparent disk secured in said ring and having an indicating mark thereon, external ratchet teeth on said ring, means for intermittently rotating said ring, and means to lock said ring against rotation in one direction.

2. In a camera attachment, a casing, transparent disks rotatably mounted in said casing, each disk having an indicating hand marked thereon, rings inclosing said disks, and means for intermittently rotating said rings and disks.

3. In a camera attachment, a casing, relatively large and small rings rotatably mounted in said casing, disks secured in said rings and each disk having an indicating hand marked thereon, external ratchet teeth formed upon said rings, a slidable spring member normally engaged with the ratchet teeth of the relatively large ring to intermittently rotate the latter, said large ring having a peripheral recess of such depth as to permit said spring means to engage the ratchet teeth and effect a rotary movement of the relatively small ring, and means to lock said rings against rotational movement in one direction.

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1,224,589. VARIABLE-DELIVERY PUMP AND INJECTOR. JOHN G. ZUBER, Chicago, Ill. Filed May 12, 1916. Serial No. 97,047. (Cl. 123—140.)



1. A variable delivery pump and injector, comprising in combination, two chambers in which the liquid is measured, plungers having fixed lengths of strokes reciprocating therein, means for reciprocating said plungers, controlling means for timing the strokes of said plungers, an ejector chamber in communication with said measuring

chambers having a valve controlled discharge port, a plunger in said ejector chamber and operating means for said plunger.

2. A variable delivery pump and injector, comprising in combination, two communicating charging cylinders having valve controlled inlet and discharge ports, plungers, one reciprocating in each cylinder, operating means for reciprocating said plungers with constant strokes, means for varying the timing of said plungers, an ejection cylinder in communication with the discharge port of the charging cylinders, a plunger in said ejection cylinder, operating means therefor, and a valve controlled discharge port for said ejection cylinder.

3. A variable delivery pump and injector, comprising two charging cylinders, having valve controlled inlet and discharge ports, plungers, one reciprocating in each cylinder, operating means for said pistons, and controllable means for changing the timing of strokes of said plungers to vary the volume of liquid displaced, an ejector cylinder in communication with said charging cylinders, having a valve controlled discharge port, a plunger in said ejector cylinder, and operating means therefor.

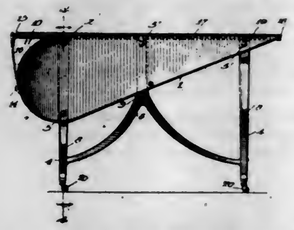
4. A variable delivery pump and injector, comprising two charging cylinders, opening to a valve controlled inlet passage, a plunger in each cylinder, an ejector cylinder connecting with said inlet charging cylinders, and having a valve controlled discharge port, a plunger in said ejector cylinder, a main drive shaft, a cam thereon for actuating the ejector cylinder piston, two shafts driven from said first named shaft, eccentric connections between said two shafts and the charging cylinder plungers, and means for varying the angular relation between the eccentrics.

5. A variable delivery pump and injector, comprising in combination, two intercommunicating charging chambers, an ejector chamber in communication therewith, means for admitting a charge to each charging chamber and discharging it into the ejector chamber, means for varying the size of said charging chambers to thereby vary the volume of charge admitted, and comprising reciprocatory plungers having constant lengths of strokes, and means for discharging the charge from the ejector chamber.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,590. COAL-CABINET. WILLIAM B. ARMSTRONG, Sigourney, Iowa. Filed May 10, 1916. Serial No. 96,706. (Cl. 126—283.)



1. In a device of the class described, the combination of a body, said body having a slanting bottom, vertical sides extending from said bottom, said sides terminating in horizontally extending outwardly bent tracks, a back converging into said bottom, a cover positioned upon the upper portion of said sides, said cover having bent side edges, thereby forming U-shaped guides, said U-shaped guides fitting upon said tracks, whereby said cover may slide upon and be guided by said tracks for permitting access to the interior of said body or for closing the entrance thereof, said cover being adapted to slide in either direction so as to permit access to either end of said body.

2. In a device of the class described, the combination of a body, said body having a bottom slanting downwardly from its forward end and terminating in an upwardly curved back, said back terminating in a rolled sleeve, sides extending from said bottom and having overhanging tracks formed upon their upper edges and in a plane above said sleeve, said tracks extending beyond said sleeve, braces connected to said tracks for reinforcing the same, a cover having U-shaped guides formed upon its side edges, whereby said cover may be moved for allowing access to either end of said body, and a brace rod passing through said sleeve for reinforcing said sides.

3. In a device of the class described, the combination of a body, said body having a bottom slanting downwardly from its forward end and terminating in an upwardly curved back, said back terminating in a rolled sleeve, sides extending from said bottom and having overhanging tracks formed upon their upper edges and in a plane above said sleeve, said tracks extending beyond said sleeve, braces connected to said tracks for reinforcing the same, a cover having U-shaped guides formed upon its side edges, said guides slidably mounted upon said tracks, whereby said cover may be moved for allowing access to the ends of said body, a brace rod passing through said sleeve for reinforcing the same, a stand secured to said body for supporting the same in its correct position, a rod carried by said stand, and said first-mentioned rod connected to said stand, whereby said stand and said rods will hold said body from falling or sagging when in use.

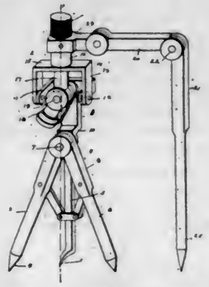
4. In a device of the class described, the combination of a body, parallel tracks carried upon said body, a cover positioned upon said body, U-shaped guides formed upon the side edges of said cover, said guides fitting upon said tracks, whereby said cover may slide upon and be guided by said tracks.

5. In a device of the class described, the combination of a body, parallel tracks carried upon said body and projecting beyond the ends thereof, a cover positioned upon said body, U-shaped guides formed upon the side edges of said cover, said guides fitting upon said tracks, whereby said cover will be movably held upon said body.

[Claims 6 to 14 not printed in the Gazette.]

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1,224,591. ELLIPSOGRAPH. ANTON BAUMEISTER, Groton, S. D. Filed Aug. 12, 1916. Serial No. 114,609. (Cl. 33—30.)



1. An ellipsograph comprising a center leg having a pointed end, a pair of spaced parallel arms connected with said leg, a U-shaped frame connected with said arms, a shaft including angularly adjustable sections, one of said sections being journaled in the web portion of said U-shaped member, a leg connected with the upper shaft section, a marker connected with said leg, and means connected to said leg to rotatably receive the lower terminal of the lower shaft section.

2. An ellipsograph including a center leg, a pair of spaced parallel arms carried by said leg, a U-shaped member connected at its ends with said arms, a shaft including pivoted and relatively adjustable sections, the upper shaft section being journaled in the U-shaped member, a bearing member pivotally secured to the center leg engaging the lower terminal of the lower shaft section, and a marker rigidly connected with the upper shaft section including a plurality of relatively adjustable sections.

3. An ellipsograph including a center leg, a pair of spaced parallel arms connected with the upper terminal of said leg, an inverted U-shaped member having the free ends pivotally connected with said arms, a shaft including pivotally connected and relatively adjustable sections, one of said sections being rotatably mounted in the web portion of the U-shaped member, an L-shaped member pivotally secured to said center leg and having its axis arranged at right angles to the pivotal axis of the U-shaped member, a socket carried by said L-shaped member pivotally receiving the lower terminal of the lower shaft section, a leg non-rotatably secured to the upper shaft section, and a marker carried by said leg.

4. An ellipsograph including a center leg, a pair of auxiliary bracing legs pivotally secured to said center leg, a rotatable marker, and means connecting said marker with said center leg whereby the distance between the latter and said marker is varied during rotary movement of the marker.

5. An ellipsograph including a center leg, members pivotally secured to said leg and having their axes angularly disposed, a shaft including a pair of pivotally connected sections supported by said pivoted members, and a marker connected with one of the shaft sections.

[Claim 6 not printed in the Gazette.]

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1,224,592. COMBINATION-RULER. MICHAEL BEGANY, Elizabeth, N. J. Filed Jan. 29, 1916. Serial No. 75,088. (Cl. 33—2.)



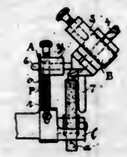
1. A combination ruler including a plate provided with markings for making correct measurements and having a longitudinal opening tapered at one end to form an edge having one portion arranged at an angle to the side edge of the plate, the remaining portion of the edge having a straight edge extending from the inclined edge and arranged in parallelism with the side edge of the plate and coöperating with the said inclined edge to enable plain bottom trousers to be marked off.

2. A combination ruler including a plate or bar having graduations for cuff measurements and provided with a plurality of longitudinal openings provided with straight edges arranged different distances from the side edges of the plate or bar for marking off cuffs of different widths for pants bottoms, one of the openings being provided with an enlarged substantially triangular portion forming an inclined edge arranged at an angle to the adjacent portion of the longitudinal edge of such opening and coöperating therewith for shaping plain bottom pants.

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1,224,593. GRINDING-MACHINE. BROR JOHANNES BENGTSSON, Kållered, Sweden. Filed Sept. 15, 1915. Serial No. 50,818. (Cl. 51—7.)

1. In a grinding machine, the combination of a frame, a grinding wheel rotatably mounted thereon, a clamping device for holding a drill, projections on said clamping device disposed at the same angle to each other as the angle required for the point of the drill, and means on said frame for pivotally receiving said projections alternatively for the purpose set forth.

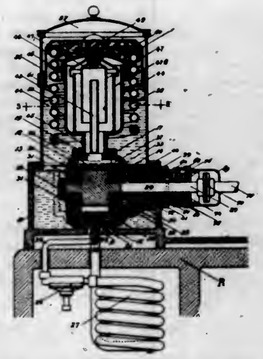


2. In a grinding machine, the combination of a frame, a grinding wheel rotatably mounted thereon, a clamping device for holding a drill, a sleeve member adjustably mounted on said frame, a pair of cylindrical projections on said clamping device arranged at substantially 90° to each other and each adapted to rotatably engage in said sleeve for the purpose set forth.

3. In a grinding machine, the combination of a frame, a grinding wheel rotatably mounted thereon, a clamping device for holding a drill, and means for adjustably supporting said clamping device upon said frame, said clamping device comprising two jaw members each having a plurality of prismatic gripping teeth adapted to engage between the teeth of the other and said teeth being cut away to form a central opening for the drill which is clamped therebetween, and each pair of gripping teeth which lie in a common plane at right angles to the drill being on opposite jaws and on diametrically opposite sides of the drill.

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1,224,594. REFRIGERATING APPARATUS. JOHN C. BERTSCH, New York, N. Y. Filed June 7, 1915, Serial No. 32,605. Renewed Sept. 27, 1916. Serial No. 122,561. (Cl. 62—116.)



1. In a refrigerating apparatus, the combination with a condensing conduit of a water jacket surrounding the same, said water jacket having an inlet at the bottom and an internal overflow wall in the upper port, forming an annular chamber in the jacket, and an outlet from said chamber.

2. In a refrigerating apparatus, the combination of a compressor, lubricant separator, condenser and evaporator connected in series for the circulation of a refrigerant through the same, and a water filled casing inclosing the compressor, the condenser and the separator, the connections to the evaporator extending through the wall of said casing.

3. In a refrigerating apparatus, the combination of a compressor, lubricant separator, condenser and evaporator connected in series for the circulation of a refrigerant

through the same, and a casing adapted to contain water and inclosing the compressor, the condenser and the separator, said casing comprising a hollow base with an opening in the bottom thereof and a shell supported on said base, the compressor being mounted in said base over the opening, the separator and condenser being mounted on the compressor, and the connections from the compressor to the evaporator extending through said opening.

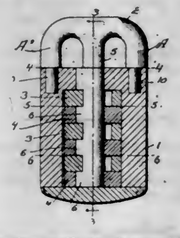
4. In a refrigerating apparatus, the combination of a compressor, lubricant separator, a condenser and an evaporator connected in series for the circulation of a refrigerant through the same, the separator and condenser being supported upon the compressor casing and the evaporator being connected to said casing.

5. In a refrigerating apparatus, the combination of a separator, a condenser coil surrounding the same and connected thereto, a compressor on which said separator and coil are supported and with which the separator communicates, and a water jacket surrounding the separator and the coil.

[Claims 6 to 15 not printed in the Gazette.]

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1,224,595. PERMUTATION-PADLOCK. GEORGE W. BONNEY, Phoenix, Miss., assignor of one-third to James R. Williams, Mechanicsburg, Miss. Filed Feb. 18, 1914. Serial No. 819,314. (Cl. 70—113.)



In a permutation padlock, the combination with a casing having a central recess therein opening into the outer faces of the casing and into the opposite ends of the casing, the upper end of the opening being restricted, a plurality of rotatable tumblers mounted in said recess, non-rotatable washers interposed between said tumblers, said tumblers and said washers being inserted in said recess at the lower end of said casing, a cover secured to the lower end of said casing for covering said recess and holding the different parts in operative position.

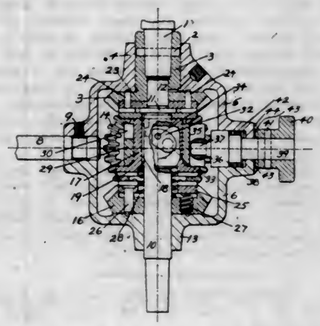
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1,224,596. TAPPING ATTACHMENT FOR BORING-MACHINES. BERTIL WILHELM BRONANDER, Brooklyn, N. Y., assignor to Wahlstrom Tool Company, New York, N. Y., a Corporation of New York. Filed Oct. 19, 1915, Serial No. 56,664. Renewed Sept. 19, 1916. Serial No. 121,067. (Cl. 10—137.)

1. In a tapping attachment for boring machines, the combination with a driving spindle, of a driven spindle, reversing mechanism associated with both of said spindles, automatcally operative means for actuating said reversing mechanism at rapidly recurring intervals during the tapping operation to alternately rotate the driven spindle in opposite directions the forward rotation of the driven spindle being in excess of the reverse rotation, and a non-rotating casing supporting the reversing mechanism.

2. In a tapping attachment for boring machines, the combination with a driving spindle, of a driven spindle, reversing mechanism associated with both of said spindles, automatically operative means for actuating said reversing mechanism at rapidly recurring intervals during the tapping operation to alternately rotate the driven spindle in opposite directions the forward rotation of the driven spindle being in excess of the reverse rotation, and a two-part non-rotating casing supporting the reversing mechanism.

3. In a tapping attachment for boring machines, the combination with a driving spindle, of a driven spindle, reversing mechanism associated with both of said spindles, automatically operative means for actuating said reversing mechanism at rapidly recurring intervals during the tapping operation to alternately rotate the driven spindle in opposite directions the forward rotation of the driven spindle being in excess of the reverse rotation, means for throwing and holding the reversing mechanism out of action, and a casing supporting the reversing mechanism and the means for throwing the reversing mechanism out of action.



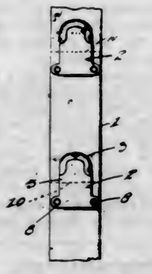
4. In a tapping attachment for boring machines, the combination with a driving spindle, of a driven spindle in axial alinement with the driven spindle, reversing mechanism associated with both of said spindles, and automatically operative means for actuating said reversing mechanism at rapidly recurring intervals during the tapping operation to alternately rotate the driven spindle in opposite directions the forward rotation of the driven spindle being in excess of the reverse rotation.

5. In a tapping attachment for boring machines, the combination with a driving spindle, of a driven spindle, reversing mechanism associated with both of said spindles and comprising a train of gears and a clutch device, and automatically operative means for actuating said clutch device at rapidly recurring intervals during the tapping operation to cause the reversing mechanism to alternately rotate the driven spindle in opposite directions the forward rotation of the driven spindle being in excess of the reverse rotation.

[Claims 6 to 15 not printed in the Gazette.]

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1,224,597. CORSET-STAY TIP. IDA BROWN, San Francisco, Cal. Filed Nov. 30, 1914. Serial No. 874,770. (Cl. 2—76.)

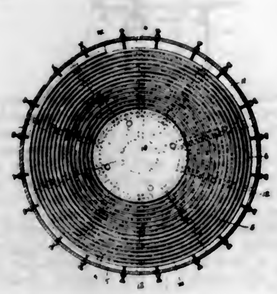


In combination with a corset stay having fabric thereon, of a main body portion, a strip of fabric positioned on said body portion, said body portion having its upper end and the upper end of its sides bent upon itself to form a socket for receiving the end of the stay, a pair of oppositely disposed ears formed on the lower sides of the body portion and having openings therein, eye rivets extending through the openings and the strip of fabric for securing the body portion thereto, and providing means whereby thread may be passed through the rivets and fabric on the stay to secure the body portion against movement upon the end of the stay.



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1,224,598. SCREEN. HENRY KENYON BURCH, Miami, Ariz. Filed Mar. 13, 1916. Serial No. 83,856. (Cl. 83—56.)

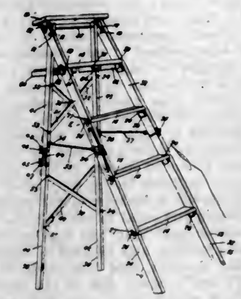


1. A screen, consisting of a bar or rod having suitably spaced projections on one side, and wound to form a substantially flat spiral.

2. A screen having in combination a bar or rod having suitably spaced projections made on one side thereof and so wound that the projections on one spiral bear against the plain side of an adjacent spiral, and means for locking the spirals, one with the other.

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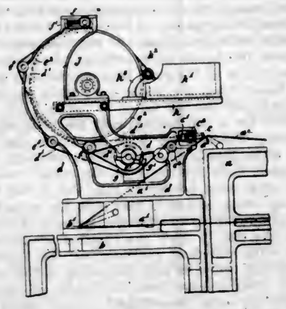
1,224,599. KNOCKDOWN STEP-LADDER. CUTHBERT W. BUTCHER, Mamaroneck, N. Y. Filed July 30, 1915. Serial No. 42,739. (Cl. 228—16.)



In a collapsible ladder with two stair-members, two rear legs, means connecting the stair-members and the rear legs together, a top-board, and a plurality of steps, the combination of a detachably pivoted collapsible rest, comprising two parallel side-bars, a plurality of transverse bars pivotally secured thereto, said side bars having in each an elongated slot with their ends curved at an angle therewith, one slot being longer than the other, and pins provided in the inner surface of the rear legs for engaging the said slots whereby the rest may be supported for use, substantially as shown and described.

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1,224,600. SCRAP-SEPARATING APPARATUS FOR DOUGH-CUTTING AND SIMILAR MACHINES. JOHN CARR and GEORGE SAMUEL BAKER, London, England. Filed Feb. 7, 1914. Serial No. 817,221. (Cl. 107—7.)



In a scrap separating apparatus, the combination of a cutting table, a substantially horizontally disposed web passing over said table on which the blanks are cut from the material and on which said blanks and scrap travel together, means for downwardly deflecting said web at a point of its length to convey the blanks forward, a second web spaced only sufficiently from said first mentioned web to permit passage of the blanks at the point of deflection of said web, said second web receiving and conveying the scrap in a horizontal plane, a drum about the periphery of which the scrap receiving web passes to convey the scrap between said web and drum for a substantial portion of said periphery, the scrap being finally supported on the drum alone, a scraper for removing the scrap from said drum, and means for collecting the scrap removed by the scraper.

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1,224,601. BED-SPRING-LOCKING DEVICE. FRANK PETER CHESLEY, Montreal, Canada. Filed Dec. 17, 1915. Serial No. 67,437. (Cl. 5—29.)



1. The combination with a bed frame having an inwardly extending flange, a frame for a bed spring having an outwardly extending flange adapted to rest upon the inwardly extending flange of the bed frame to support the spring and means for preventing the outwardly extending flange slipping off the inwardly extending flange and consisting of a strip loosely disposed within a slot formed in one of said frames, such strip having a hook formed at one end and adapted to take over one frame and a hook formed at its opposite end adapted to take over the other frame.

2. A frame for a bed spring adapted for use with a bed having a side rail with an inwardly extending flange and an upwardly extending flange, said frame having an outwardly extending flange and a downwardly extending flange, the outwardly extending flange having a slot therein and being adapted to rest upon the inwardly extending flange of the bed rail, and a strip loosely located in said slot, such strip having a hook at one end to engage the downwardly extending flange of the frame and being hooked at its opposite end to engage the upwardly extending flange of the bed rail and prevent the spring frame slipping off the latter.

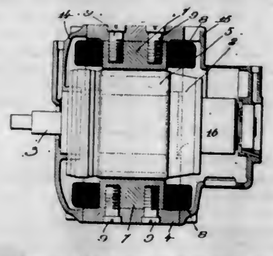
3. A frame for a bed spring adapted for use with a bed having a side rail with an inwardly extending flange and an upwardly extending flange, said frame having

an outwardly extending flange and a downwardly extending flange, the outwardly extending flange having a slot therein and being adapted to rest upon the inwardly extending flange of the bed rail, and a strip loosely located in said slot, said strip having a hook at one end to engage the downwardly extending flange of the frame and being hooked at its opposite end to engage the upwardly extending flange of the bed rail, the distance between the hooks being sufficient to permit of the required movement of the strip to take over said upwardly extending flange when the frame rests upon the inwardly extending flange of the bed rail.

4. A frame for a bed spring, said frame having angularly disposed flanges, the first of which has a slot therein, a strip loosely located within the slot and of greateer extent than the depth of the second flange, one end of the strip being hooked to take over a bed rail and the other end being hooked to take over the second flange, said strip being adapted to slide transversely of the frame and within the slot to vary the position of the strip in accordance with different positions of the frame relatively to varying bed rails and the length of the last mentioned hook being greater than the extent of the sliding movement of the strip transversely of the frame of the spring to maintain such last mentioned hook in overlapping position with respect to said second flange of the frame.

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1,224,602. ELECTRICAL APPARATUS. ALEXANDER CHURCHWARD, Boston, Mass., assignor to A-B-C Starter Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 23, 1915. Serial No. 23,329. (Cl. 171—252.)



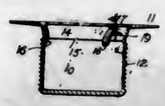
1. A motor or generator comprising a revolving armature, a frame inclosing the armature and having recesses formed in the opposite faces to provide pole pieces for the armature, counter-bored portions extending inwardly from adjacent ends of the recesses, an end piece, and pilot members projecting from the end piece and arranged to engage within the counter-bored portions of the recesses to position the end piece properly with relation to the frame and armature.

2. A motor or generator comprising a revolving armature, a frame of magnetic material inclosing the armature and having recesses formed in its opposite faces to provide pole pieces for the armature, counter-bored portions extending inwardly from the ends of the recesses, an end piece of non-magnetic material, and pilot members projecting from the end piece and arranged to be received in the counter-bored portions of the recesses to position the end piece with relation to the frame and armature.

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1,224,603. DRAIN FOR SINKS. ROBERT CLARK, Bridgeport, Conn., assignor to Bridgeport Brass Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Feb. 10, 1914. Serial No. 817,916. Renewed Sept. 2, 1916. Serial No. 118,312. (Cl. 4—35.)

1. In a drain fixture for sinks and the like, the combination of a bushing adapted to extend through an opening in the bottom of the sink and having exterior screw threads for a nut adapted to clamp the bushing in place in the sink bottom, a lateral flange projecting horizontally from the upper end of said bushing to overlie the bottom wall of the sink around the opening in said wall, said bushing having a smooth, substantially upright seat at the upper end or mouth thereof to make water tight contact substantially throughout its area with an ordinary plug or stopper having a slightly beveled seating surface, a strainer disk of a diameter substantially equal to the diameter of the mouth of the bushing, and means for detachably engaging said strainer disk with a part of the bushing below said stopper seat to secure the strainer detachably in said seat when the stopper is removed, with the strainer substantially flush with said horizontal flange; substantially as described.



2. In a drain fixture, the combination of a bushing having an integral outwardly directed flange projecting laterally from the upper end thereof, said flange constructed and arranged to overlie the bottom wall of the sink with a wide contacting surface, said bushing having a wide smooth seat adapted to make water-tight contact with an ordinary tapered plug or stopper, a strainer disk adapted to be inserted into said bushing sufficiently far to make its top substantially flush with the top of the bushing, and means carried by said strainer disk for engaging the bushing wall to prevent accidental displacement of said strainer disk with respect to the bushing, substantially as described.

3. In a drain fixture for sinks and the like, the combination of a bushing, a substantially horizontal laterally projecting flange on the upper end of the bushing adapted to overlie the bottom wall of the sink around the opening in the latter, said bushing being provided at the upper end or mouth thereof with a smooth, substantially upright seat for an ordinary stopper or plug having a beveled seating surface, a shoulder on the wall of the bushing beneath said seat, a flat strainer disk of a diameter substantially equal to the maximum diameter of the stopper seat, and lugs on said strainer disk formed by bending downward radial tongues extending beyond the periphery of said disk, said lugs being adapted to engage said shoulder below said stopper seat to hold the strainer disk in said stopper seat substantially flush with said horizontal flange, substantially as described.

4. In a drain fixture for sinks and the like, the combination of a sheet metal bushing having a substantially horizontal laterally projecting flange on the upper end thereof, the outer surface of said bushing being provided with screw threads for engagement with a nut to clamp the bushing in the bottom wall of the sink, said bushing having a portion spun therein immediately below said horizontal flange to present a smooth, substantially upright seat adapted to make water tight contact throughout substantially its entire area with an ordinary plug or stopper having a beveled seating surface, said bushing being of enlarged diameter immediately below said stopper seat so as to provide a shoulder, a flat strainer disk of a diameter substantially equal to the diameter of the upper portion of said stopper seat, and lugs on the peripheral portion of said strainer disk adapted to engage and interlock with said shoulder, said lugs being of such length as to support said strainer disk in the upper portion of the stopper seat substantially flush with said horizontal flange; substantially as described.

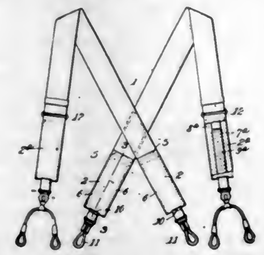
5. In a drain fixture, the combination of a bushing having an integral outwardly directed flange projecting laterally from the upper end thereof, and having a wide contacting surface on the sink bottom around the opening in the latter, said bushing having a tapered wide smooth seat formed directly in the wall thereof at the mouth of the bushing, adapted to make water tight contact with an ordinary tapered plug or stopper, a flat strainer of thin metal, of substantially the same diameter as the upper part of said stopper seat, adapted to fit in the upper part of said seat, substantially flush with said outwardly directed flange, and means carried by said strainer for engaging the bushing wall and detachably holding said strainer in the aforesaid flush position, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]



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1,224,604. GARMENT-SUPPORTER. WAITMAN DEVER CORDER, Philippi, W. Va. Filed Sept. 15, 1916. Serial No. 120,270. (Cl. 241—21.)



In a garment supporter, an inelastic webbing doubled upon itself at one end to form an inclosure, a member doubled upon itself to form a loop, said end of the webbing being bent in the form of an inverted U so as to inclose the free ends of said loop forming member and to engage the adjacent part of the body of the webbing, means passed through the inverted U, through the free ends of said loop and through said part of the webbing body engaged by the U to simultaneously support the loop forming member and to secure the doubled end of the webbing in position, said inclosure having a slot in its bottom, a garment engaging element passed through the slot and a coil spring secured to the element and loop forming member.

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1,224,605. CONVEYING APPARATUS. JEFFERSON F. CORRELL, Bucyrus, Ohio. Filed Jan. 18, 1916. Serial No. 72,756. (Cl. 104—113.)

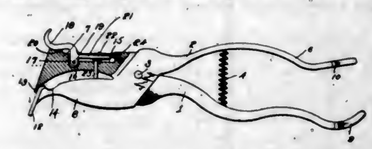


In a conveying apparatus, horizontally disposed track rails, means supporting said rails in an elevated position, inclined track rails connected with the front ends of the horizontal rails and extending forwardly and downwardly therefrom, a car adapted to travel upon said track rails, a winding drum, guide pulleys rotatably supported centrally between the front ends of the horizontal and inclined track rails, and a cable coiled centrally about said winding drum, extending over said guide pulley and connected at its opposite ends to the front end of said car, whereby, when the front end of the car passes over the guide pulley supported by the horizontal track rails, the cable is drawn taut and the rearward movement of the car is automatically stopped.

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1,224,606. CULINARY PLIERS. JOSEPH BROOKS COTTRELL, Edna, Ala. Filed Apr. 18, 1916. Serial No. 91,981. (Cl. 65—32.)

1. In a pair of pliers, a pair of pivoted members having handles and jaws formed thereon, an auxiliary jaw pivotally connected to the upper of said first named jaws, a tongue formed upon said auxiliary jaw member, a spring carried by said upper jaw and engaging said tongue for moving said auxiliary jaw into an open position, a pin slidably carried by said upper jaw and having a head end, said head end engaging said tongue for moving said auxiliary jaw into a closed position against the tension of said spring when said first named jaws are moved into a closed position, said pin being engaged by the lower of said first named jaws for forcing it into engagement with and to move said tongue upon the closing of said jaws.

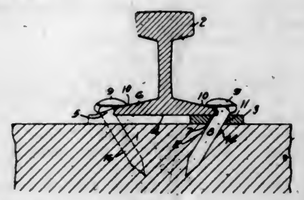


2. In a pair of pliers, a pair of pivoted members having handles and jaws formed thereon, an auxiliary jaw pivotally connected to the upper of said first named jaws, a tongue formed upon said auxiliary jaw, a spring carried by said upper jaw and engaging said tongue for moving siad auxiliary jaw into an open position, a pin slidably carried by said upper jaw and having a head end, said head end engaging said tongue for moving said auxiliary jaw into a closed position against the tension of said spring when said first named jaws are moved into a closed position, said pin being engaged by the lower of said first named jaws for forcing it into engagement with and to move said tongue upon the closing of said jaws, said pin falling by its own weight out of engagement with said tongue upon opening movement of said jaws, and said upper jaw provided with a recess for receiving the head end of said pin.

3. In a pair of pliers, a pair of pivoted members having handles and jaws formed thereupon, the upper of said first named jaws provided with a recess formed in its upper surface, and an auxiliary jaw having its lower end pivotally mounted within said recess, a tongue formed upon said auxiliary member and extending longitudinally within said recess, a spring carried by said upper jaw and engaging said tongue for moving said auxiliary jaw into an open position, said spring moving said tongue downwardly within said recess and the lower inner end of said recess limiting the downward movement of said tongue for limiting the opening or spreading movement of said auxiliary jaw, a pin slidably carried by said upper jaw and having a head end, said head end engaging said tongue for moving said auxiliary jaw into a closed position against the tension of said spring when said first named jaws are moved into a closed position, said pin being engaged by the lower of said first named jaws for forcing it into engagement with and to move said tongue upon the closing of said jaws.

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1,224,607. SPIKE AND TIE-PLATE. JAMES F. CRAVEN, Pittsburgh, Pa. Filed Aug. 7, 1916. Serial No. 113,518. (Cl. 238—2.)



1. In combination, a tie plate provided with a hole adjacent the rail seat, said hole being arranged to guide a spike in an inwardly inclined direction, and a spike adapted to be driven through said hole into the tie, and guided by said hole into an inwardly inclined position.

2. In combination, a tie plate provided with a hole adjacent the rail seat, said hole being arranged to guide a

spike in an inwardly inclined direction, and a spike adapted to be driven through said hole into the tie and guided by said hole into an inwardly inclined position, said spike having an overhanging head at a lesser angle to the shank than in standard spikes.

3. In combination, a tie plate provided with a hole adjacent the rail seat, said hole having an inclined wall, and a spike adapted to be driven through said hole into the tie and guided by said inclined wall into an inclined position.

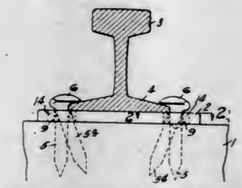
4. In combination, a tie plate provided with a hole adjacent the rail seat, said hole having an inclined wall, and a spike adapted to be driven through said hole into the tie and guided by said inclined wall into an inclined position, said spike having an overhanging head at a lesser angle to the shank than in standard spikes.

5. In combination, a tie plate provided with a hole adjacent the rail seat, said hole being inclined in a direction to extend underneath the rail seat, and a spike adapted to be driven through said hole into the tie and guided by the inclined walls of said hole into an inclined position.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,608. RAILWAY-RAIL FASTENER. JAMES F. CRAVEN, Pittsburgh, Pa. Filed Aug. 7, 1916. Serial No. 113,519. (Cl. 238—4.)



1. A spike guide comprising a member adapted to be positioned between two spikes and having on opposite sides guides for said spikes, one of said guides being inclined at an angle to the other guide.

2. A spike guide comprising a member adapted to be positioned between two spikes and provided on opposite sides with guides for the spikes, one of said guides being vertical and the other being inclined relative thereto.

3. In a rail fastening means, the combination of a member having two guides, one of which is inclined relatively to the other, and two headed drawn members guided thereby respectively into different inclined positions.

4. In rail fastening means, the combination of a member having two guides side by side, one of which is vertical and the other of which is inclined, and two drawn headed members guided thereby respectively into vertical and inclined positions.

5. In a driven fastening device the combination of a member having guides on opposite faces, one of said guides being inclined relatively to the other, and two headed members adapted to be driven into place on opposite sides of said member and guided thereby respectively into different inclined positions.

[Claim 6 not printed in the Gazette.]

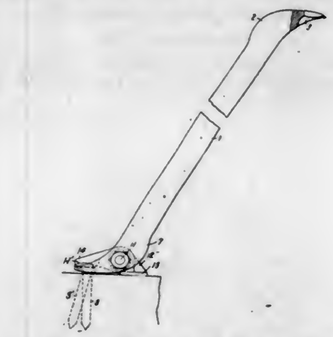
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1,224,609. SPIKE-PULLER. JAMES F. CRAVEN, Pittsburgh, Pa. Filed Aug. 7, 1916. Serial No. 113,520. (Cl. 254—27.)

1. A tool for pulling spikes driven in pairs, comprising a lever having a jaw adapted to pass under one spike head and a pivotally attached jaw adapted to be seated upon the other spike head and to form the fulcrum of said lever.

2. A tool for pulling spikes driven in pairs, comprising a lever arm having a claw head adapted to engage one spike, and a member carried by the claw head adapted to seat on the other spike and to form the fulcrum for said lever.

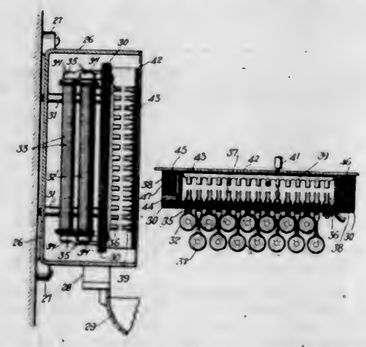
3. A tool for pulling spikes driven in pairs, comprising a lever arm having a claw head having a beveled recess to engage the head of one of the spikes, and a member carried by the claw head adapted to seat on the other spike and to form the fulcrum for said lever.



4. A tool for pulling spikes driven in pairs, comprising a lever arm having a claw head adapted to engage one spike, and a member pivotally carried by the claw head having an extension with an under face adapted to seat on the other spike and a base adapted to form the fulcrum of the lever.

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1,224,610. RHEOSTAT. MATTHEW S. CUMNER, New York, N. Y., and FREDERICK W. GEISSENHAINER, Freehold, N. J., assignors to Nestor Manufacturing Co., Inc., New York, N. Y., a Corporation of New York. Filed Dec. 11, 1914. Serial No. 876,659. (Cl. 219—61.)



1. A contact for electric regulators comprising a channel shaped member of conducting material notched to provide a plurality of resilient sockets and having perforations in alinement with the sockets whereby contact pins may extend through the perforated back of the channel into the sockets.

2. A rheostat comprising a supporting plate of insulating material, a plurality of channel shaped regulating contacts mounted thereon in parallel relation, a plurality of resistor units having end contacts, spring clips adapted to engage the end contacts of said resistor units secured to the opposite side of the plate and electrically interposed between said regulating contacts, a second set of channel shaped regulating contacts supported in parallel relation at a fixed distance from the first set of regulating contacts and extending at right angles thereto, each of said regulating contacts being notched and formed to provide a series of resilient contact sockets, and one of said contacts having perforations in alinement with the sockets, the sockets of one being in alinement with the sockets of the adjacent set and removable contact pins for connecting each of the contacts of one set with one of the contacts of the other set.

3. A rheostat comprising a supporting plate of insulating material, a plurality of channel shaped regulating contacts mounted thereon in parallel relation, a plurality of resistor units secured to the opposite side of the plate and electrically interposed between said regulating contacts, a pair of spaced insulating blocks secured to the insulating plate near its opposite edges in parallelism with the regulating contacts, a second set of regulating contacts extending in a direction at right angles to the first set and secured at their ends to said spaced blocks, each of said contacts comprising a series of contact sockets, the sockets of one set being in alinement with the sockets of the other set.

4. A rheostat comprising a supporting plate of insulating material, a plurality of channel shaped regulating contacts mounted thereon in parallel relation, a plurality of resistor units secured to the opposite side of the plate and electrically interposed between said regulating contacts, a pair of spaced insulating blocks secured to the insulating plate near its opposite edges in parallelism with the regulating contacts, a second set of regulating contacts extending in a direction at right angles to the first set and secured at their ends to said spaced blocks, each of said contacts comprising a series of contact sockets, the sockets of one set being in alinement with the sockets of the other set, and a perforated plate mounted upon and insulated from the second set of regulating contacts having its openings in alinement with the contact sockets.

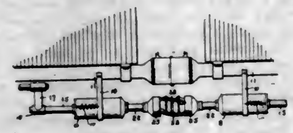
5. A rheostat comprising a supporting plate of insulating material, a plurality of channel shaped regulating contacts mounted thereon in parallel relation, a plurality of resistor units secured to the opposite side of the plate and electrically interposed between said regulating contacts, a pair of spaced insulating blocks secured to the insulating plate near its opposite edges in parallelism with the regulating contacts, a second set of regulating contacts extending in a direction at right angles to the first set and secured at their ends to said spaced blocks, each of said contacts comprising a series of contact sockets, the sockets of one set being in alinement with the sockets of the other set, and a perforated plate mounted upon and insulated from the second set of regulating contacts having its openings in alinement with the contact sockets, and a series of contact blocks embedded in one of said insulating blocks and severally connected to the regulating contacts supported by said insulating blocks and a movable contact member adapted to successively engage said contact blocks.

[Claims 6 to 9 not printed in the Gazette.]



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1,224,611. AUTOMATIC COUPLING FOR AIR-PIPES. HARRY CURRIER, Madison, Me., assignor of two-thirds to John A. Hamilton and John W. Stobie, Madison, Me. Filed June 15, 1916. Serial No. 103,783. (Cl. 188—18.)



1. The combination with a railway car including a body and drawhead, a frame carried by said drawhead, a cylinder pivotally supported on a vertical axis in said frame, means normally retaining said cylinder in parallel relation to said drawhead, pipe sections slidably mounted in said cylinder, means normally retaining said pipe sections in outwardly extended position, a coupling head carried by one of said pipe sections, and a pair of spring retaining members carried by said coupling head.

2. The combination with a railway car including a body, a drawhead, and a train pipe, of a supporting frame carried by said drawhead, a cylinder pivotally mounted on a vertical axis in said frame, means normally retaining said cylinder in parallel relation to said drawhead, connected pipe sections reciprocably mounted in said cylinder, means normally retaining said pipe sections in outwardly extended position, a flexible tube connecting the inner terminal of said pipe sections with said train pipe, a coupling head carried by the outer terminal of said pipe sections, and a pair of spring retaining members carried by said coupling head.

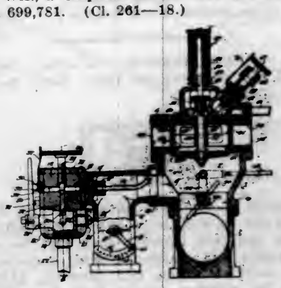
3. In an automatic coupling for air pipes, a cylinder, a piston reciprocably mounted in said cylinder, means normally retaining said piston extended toward one end of said cylinder, pipe sections connected with said piston, a hollow coupling head connected with one of said pipe sections having an external groove provided with an inclined wall, and a pair of toothed spring retaining members carried by said coupling head.

4. The combination with a railway car including a body and drawhead, a cylinder pivotally supported on a vertical axis by said drawhead, spring means normally retaining the cylinder in parallel relation to the drawhead, and a coupling head supported by said cylinder.

5. The combination with a railway car including a body and drawhead, a frame carried by said drawhead, a cylinder pivotally supported on a vertical axis in said frame, means normally retaining said cylinder in parallel relation to said drawhead, and a coupling head slidably supported by said cylinder.

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1,224,612. MIXER OR CARBURETER FOR INTERNAL-COMBUSTION ENGINES. DAVID P. DAVIES, Racine, Wis., assignor to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed May 25, 1912. Serial No. 699,781. (Cl. 261—18.)



1. A mixer or carbureter for explosive engines comprising a mixing chamber having a discharge port and having main and supplemental air inlets provided with ports opening directly into said mixing chamber, a fuel supply pipe opening into said main air inlet, a water supply having a port adjacent said supplemental air inlet port, a spring-held, automatically operating valve arranged to control said supplemental air inlet port and said water supply port, and a regulating throttle valve in said discharge port for controlling the suction within said mixing chamber and thereby automatically regulate the extent of movement of said spring-held valve and the amount of supplemental air and of water admitted thereby to said mixing chamber in accordance with the load on the engine, substantially as described.

2. A mixer or carbureter for explosive engines comprising a body portion having a mixing chamber with main and supplemental air-inlet ports opening through its side and upper portions respectively and a discharge port at its lower portion, a fuel supply pipe opening into said inlet port, a spring-held, downwardly-opening valve controlling said supplemental air-inlet port, a water-supply having a port adjacent said supplemental air-inlet, a valve controlling said water-supply port, and means connected to said supplemental air-inlet valve for opening said water-supply valve after a predetermined movement of said air valve, substantially as described.

3. A mixer or carbureter for explosive engines comprising a mixing chamber having main and supplemental air-inlet ports and a discharge port, a fuel supply pipe opening into said main air-inlet port, a spring-held valve controlling said supplemental air-inlet port, a water-supply having a port outside of said supplemental air-inlet, a spring-held valve normally closing said water supply port, and a part adjustably connected to said supplemental air-inlet valve for opening said water supply valve, substantially as described.

4. A mixer or carbureter for explosive engines comprising a body portion having a mixing chamber with main and supplemental air inlets opening through its side and upper portions respectively, a fuel supply pipe extending through said main air-inlet, an automatically-operated, downwardly-opening valve controlling said supplemental air inlet, a water supply having a port above said supplemental air-inlet, a spring-held valve normally closing said port, and a part for opening said water supply valve adjustably connected to the stem of said supplemental air-inlet valve, substantially as described.

5. A mixer or carbureter for explosive engines comprising a body portion having a mixing chamber with main and supplemental air-inlet ports opening through its side and upper portions respectively and a discharge port at its lower portion, a fuel supply pipe opening into said inlet port, a spring-held, downwardly-opening valve controlling said supplemental air-inlet port, a water supply pipe communicating with a port above said supplemental air-inlet, a spring-held valve on the stem of said air-inlet valve normally closing said water-supply port, an abutment adjustably threaded on said valve-stem for opening said water-supply valve, and a throttle valve in the discharge port from said mixing chamber.

[Claim 6 not printed in the Gazette.]

1,224,613. MINING METHOD. TRIMBLE DE ROODE, New York, N. Y. Filed Feb. 29, 1912. Serial No. 680,617. (Cl. 83—76.)



1. A method of mining comprising forming a working chamber in the material to be mined, progressively excavating into one face thereof, separating the excavated material within said chamber, refining a portion of the separated material within said chamber, hydraulically depositing the valueless portion from the refining step to the rear of said chamber, and there restraining it, but leaving at the rear of said working chamber an outlet passage of less cross-sectional area than that of said chamber, removing through said outlet passage the unrefined separated material, and removing the excess water from said hydraulically restrained material.

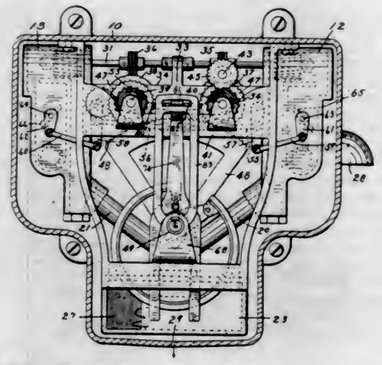
2. A method of mining comprising forming a bore and an enlarged working chamber at the front end thereof, providing protecting means within said chamber to prevent the collapse of the walls thereof, excavating in front of said protecting means and advancing said protecting means in the line of excavation, separating the material excavated within said protecting means, refining within said protecting means a portion of the separated material, transferring the valueless portion from the refining step to the rear of said protecting means, connecting said bore with said chamber by an outlet passage of less cross-sectional area than that of said working chamber, and removing through said outlet passage the unrefined separated material.

3. A method of mining comprising forming a bore and an enlarged working chamber at the front end thereof, providing protecting means within said chamber to prevent the collapse of the walls thereof, excavating in front of said protecting means and advancing said protecting means in the line of excavation, separating the material excavated within said protecting means, refining within said protecting means a portion of the separated material, hydraulically depositing the valueless portion from the refining step to the rear of said protecting means and there restraining it, connecting said bore with said chamber by an outlet passage of less cross-sectional area than that of said chamber, removing the excess water from said hydraulically restrained material, and hydraulically removing through said outlet passage the unrefined separated material.

4. A method of mining, comprising forming a bore in a mass to be mined, separating the excavated material into coarse and fine grades while in the bore, refining one of said grades to extract the value therefrom while in the bore, and depositing the tailings thereof in the bore so as to provide a progressively advancing working space adjacent the material to be excavated, and removing the coarser value containing material through the deposited material.

5. A method of mining, comprising forming a bore in a mass to be mined, separating the excavated material into coarse and fine grades while in the bore, refining the fine grade to extract the value therefrom while in the bore, and depositing the tailings thereof in the bore so as to provide a progressively advancing working space adjacent the material to be excavated, and removing the coarser value containing material from the bore.

1,224,614. TEMPERATURE-GOVERNOR FOR FLUIDS. KENNEDY DOUGAN, Minneapolis, Minn. Filed July 31, 1913. Serial No. 782,242. (Cl. 236—5.)



1. A temperature governor for fluids comprising a casing forming a mixing chamber, hot and cold water pipes for delivering through separate ducts into the mixing chamber, valves for controlling the flow of water through said pipes, a power driven mechanism adapted to open one valve and close the other, or vice versa, said mechanism being normally inoperative to effect movement of the valves, a thermostat positioned to be acted upon by the temperature of the mixture, means controlled by the thermostat for rendering said mechanism operative, and automatic means for terminating operation of the valves when the same has been moved a distance proportional to the extent of movement of the thermostat.

2. In a temperature governor for fluids, the combination with a body for containing liquid, a hot water pipe and a cold water pipe for delivering water into said body, valves for controlling the flow of water through said pipes, a motor actuated by the passage therethrough of the fluid the temperature of which is to be regulated, mechanism operative by said motor, normally inoperative connections therefrom adapted to open one valve and close the other, and a thermostat so positioned as to be acted upon by the temperature of the mixture and means movable by the thermostat for rendering said connections operative.



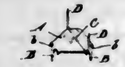
3. A temperature governor for fluids comprising a casing forming a mixing chamber, hot and cold water pipes for delivering through separate ducts into the mixing chamber, valves for controlling the flow of water through said pipes, a motor actuated by the passage of fluids through said ducts, mechanism operated by said motor, including two oppositely driven ratchets for opening one valve and closing the other, said mechanism being normally inoperative but being rendered operative whenever a ratchet is held from movement and being operative in opposite directions when the respectively opposite ratchets are held, a thermostat positioned to be acted upon by the temperature of the mixture, and means moved by the thermostat for engaging and holding either of said ratchets.

4. A temperature governor for fluids comprising a casing forming a mixing chamber, valves for admitting and controlling the flow of hot and cold streams through separate ducts into said mixing chamber, means for moving the valves, a thermostat positioned to be acted upon by the temperature of the mixture and connections therefrom for rendering the moving means operative, and automatic means for terminating operation of the moving means when the valves have been moved a distance proportional to the extent of movement of the thermostat.

5. A temperature governor for fluids comprising a casing forming a mixing chamber, hot and cold water pipes for delivering through separate ducts into the mixing chamber, valves for controlling the flow of water through said pipes, means including a continuously moving ratchet wheel for opening one valve and closing the other, said means being rendered operative by stopping of the ratchet wheel, a thermostat positioned to be acted upon by the temperature of the mixture, and means moved by the thermostat for engaging and holding said ratchet.

[Claims 6 to 20 not printed in the Gazette.]

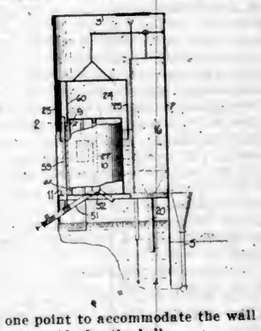
1,224,615. RUG-HOLDER. JOHN DOYLE, Hoboken, N. J. Filed Oct. 25, 1916. Serial No. 127,541. (Cl. 16—71.)



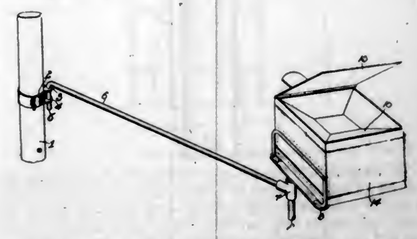
The rug holder described comprising a plate having a downwardly extended spur on its under face adapted to engage a floor, upwardly projecting pliable wire pins on its upper face adapted to penetrate a rug and fold downwardly thereon, said plate being formed at its edge with means to hold said plate with its lower face out of contact with the floor surface to permit of the entrance of a lifting implement beneath said plate.

1,224,616. RELIEF DEVICE FOR ACETYLENE-GAS GENERATORS. WARREN E. DASSEL, Edwardsville, Ill. Original application filed Feb. 27, 1915, Serial No. 11,012. Divided and this application filed May 8, 1915. Serial No. 26,886. (Cl. 48—56.)

In an acetylene gas generator, an exterior casing divided by a horizontal partition into a sealing chamber and a generating chamber, an annular wall extending upward from said partition into the sealing chamber and having a head at its upper end, there being communication between the generating chamber and the sealing chamber through said head, the space above said partition and between the wall and the casing being filled with sealing liquid, a gas bell disposed in the sealing chamber and having its open end surrounding the annular wall and depending into said sealing liquid, a gas outlet pipe communicating at its lower end with the exterior of the casing and at its upper end extending upward between the annular wall and the casing and extending slightly above the head, a wall extending downward from the head of the gas bell and at its edges engaging the side wall of the gas bell and forming a pocket, said wall terminating at its lower end short of the lower end of the gas bell and surrounding the escape pipe, the annular wall being inwardly deflected at one point to accommodate the wall of the pocket and to form a guide for the bell.

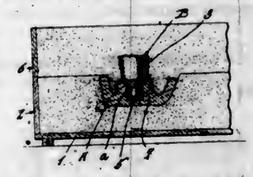


1,224,617. CUP-HOLDER. FRANK S. EASTON, Stamford, Conn., assignor of one-half to A. M. Suter, Taughannock Falls, N. Y. Filed July 12, 1916. Serial No. 108,767. (Cl. 248—20.)



In a device of the character described, a clamping support for a box or cup holder, said support comprising a journal pin, a base rigidly secured thereto having a pair of apertures at each end, and a pair of resilient bars having bent-over hook-shaped ends projecting through said apertures, said bars being resilient and spaced apart so as to grip the side of said box when in use.

1,224,618. METHOD OF CASTING. LUCAS EDEL, St. Louis, Mo. Filed Nov. 29, 1916. Serial No. 134,032. (Cl. 22—193.)

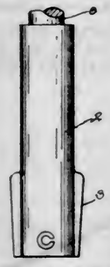


1. The method of producing a casting having an undercut rivet cavity therein, which consists in placing a pattern having a pocket therein in a flask drag, pouring sand into the flask drag and tamping it about the pattern, introducing into the pocket a core having an enlargement at its end which enters the pocket, applying a flask cope, pouring in green sand and tampering it about the core, opening the mold, removing the pattern therefrom, closing the mold, thereby returning the core so that the enlargement at its terminal end will project into the cavity left by the removal of the pattern, and then pouring casting material in mobile condition into the cavity.

2. The method of producing a casting having an undercut rivet cavity therein, which consists in placing a pattern having a pocket therein in a first mold section, pouring green sand into the first mold section and tamping it about the pattern, introducing into the pocket a core having an enlargement at its end which enters the pocket and also having an enlargement toward its opposite end, forming a second mold section above the first mold section and about the exposed portion of the core, so that that part of the core will be embedded in the second mold section, removing the second mold section with the core therein, removing the pattern from the first mold section, replacing the second mold section upon the first mold section so that the portion of the core which had projected into the pocket in the pattern will project into the cavity left by the removal of the pattern and thereafter pouring casting material in mobile condition into said mold cavity.

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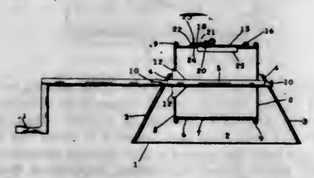
1,224,619. LOCK WHIP-SOCKET. THOMAS J. EDWARDS, Jamesport, Mo. Filed Oct. 14, 1914. Serial No. 866,676. (Cl. 21—130.)



A whip socket comprising a hollow tube enlarged laterally at opposite sides to provide a pair of vertically extending recesses communicating with the interior of the tube, the lateral side walls of said recesses inclining downwardly and inwardly, a partition located within said tube and provided with diametrically opposed slots, said partition being supported above the bottom of said tube, a pair of locking fingers having their lower ends pivoted in said recesses below said partition, the fingers extending up through the slots in said partition to a point above said partition, a hollow member extending transversely through and secured to said tube at a point below said partition and provided with a longitudinal and a circumferential slot, a cam rotatably mounted on said member at a point between said fingers and provided with a slot registering with said circumferential slot, and means carried by said member and engaging said cam to prevent the latter from moving longitudinally of the tube.

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1,224,620. COFFEE-ROASTER. PASQUALE EZZO, Newark, N. J. Filed Oct. 31, 1916. Serial No. 128,676. (Cl. 34—5.)



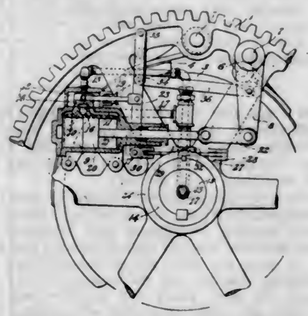
1. In a device of the character described, the combination of a hollow base adapted to seat over a burner of a gas stove or the like, said base having at its top a rectangular opening with bearings at the middles of two opposite sides, and handles projecting from the middles of the two other opposite sides, a shaft removably mounted in said bearings with one end projecting and provided with a crank handle, said shaft having between the two bearings and adjacent the bearing nearer the crank handle a radially projecting fin, a hollow cylindrical drum or container having in its opposite ends axial apertures for said shaft, one provided with a radial extension to receive said fin and cause said drum or container to rotate with the shaft and yet be removable therefrom, said drum or container substantially filling the rectangular opening at the top of the base, and having a door or closure at one side providing access to its interior.

2. In a device of the character described, the combination with a hollow base adapted to seat over the burner of a gas stove or the like, said base having at its top a rectangular opening with bearings at the middles of two opposite sides, a shaft removably mounted in said bearings with one end projecting and provided with a crank handle, of a hollow cylindrical drum or container axially and nonrotatably receiving said shaft, and adapted to substantially fill the rectangular opening in the top of the base, said drum or container having at one side thereof a hinged door or cover with flanges upon the inner side thereof adapted to project into the drum or container when the door is closed and extend longitudinally thereof, whereby the contents of the drum or container are agitated as the same is revolved.

3. In a device of the character described, the combination with a hollow base adapted to seat over the burner of a gas stove or the like, said base having at its top a rectangular opening with bearings at the middles of two opposite sides, a shaft removably mounted in said bearings with one end projecting and provided with a crank handle, of a hollow cylindrical drum or container axially and nonrotatably receiving said shaft, and adapted to substantially fill the rectangular opening in the top of the base, said drum or container having at one side thereof a longitudinal door or cover hinged at one end transversely to the container and having at its other end suitable removable fastening means and said door or cover having its opposite longitudinal edges bent or turned inward so as to form flanges which project into the drum or container when the door is closed and agitate the contents thereof as the same is revolved.

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1,224,621. OPERATING MECHANISM FOR BRAKES, CLUTCHES, AND THE LIKE. JACOB W. FELLMETH, Marion, Ohio, assignor to The Marion Steam Shovel Co., Marion, Ohio, a Corporation of Ohio. Filed Aug. 28, 1916. Serial No. 117,152. (Cl. 188—3.)



1. The combination with a brake and a power operated device for manipulating the same, of manually controlled means to control the operation of said device to cause said brake to be set in a selected position, and means controlled by said brake to cause it to be retained in said selected position.

10. The combination with a friction member, a cylinder, a piston mounted in said cylinder and connected with said friction member, and a valve to control the flow of fluid to said cylinder, of means to actuate said valve to admit fluid to said cylinder on one side of said piston to move said friction member into a selected position, and means controlled by said friction member to actuate said valve to admit fluid to said cylinder on the other side of said piston when said friction member moves beyond said selected position.

13. The combination with a friction member, a fluid operated device operatively connected with said friction member and a valve to control said device, of a lever pivotally mounted on an axis fixed with relation to said valve, a second lever pivotally mounted on the first-mentioned lever and connected with said valve, manually controlled means for actuating said second lever, and an operative connection between said first-mentioned lever and said friction member.

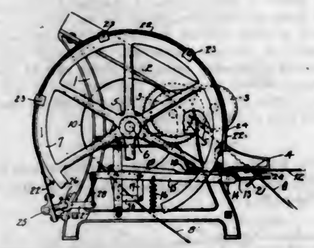
25. The combination with a friction member, a fluid operated device operatively connected with said friction member, and a valve to control said device, of an actuating device connected with said valve, a toggle having one arm pivoted on a fixed support and the other arm connected with said actuating device, a link connecting the adjacent ends of the two arms of said toggle, and a collar having a guideway in which said link is mounted.

[Claims 2 to 9, 11, 12, 14 to 24, 26, and 27 not printed in the Gazette.]

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1,224,622. AUTOMATIC SAFETY STOPPING DEVICE FOR MACHINES. FRANK P. FELLOWS, Tacoma, Wash. Filed Dec. 6, 1915. Serial No. 65,362. (Cl. 74—46.)



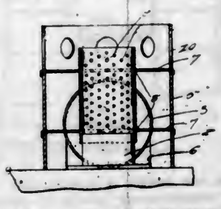
1. In an automatic stopping device for machines, the combination with a machine having a frame and a rotating flywheel; of a rocker shaft mounted on the machine and having a crank arm thereon; a brake band secured at one end to the frame of the machine and at the other end to the crank arm, and partially encircling said flywheel and adapted to apply an excessive retarding force thereto when in contact therewith; a lever connected to said rocker shaft and adapted to turn it; a latch engaging the lever to hold it from movement; a spring actuating said lever when it is released from said latch whereby the rocker shaft is turned and the brake band applied to said flywheel to stop its rotation; and a pivoted lever carrying said latch and positioned beside the operator's leg whereby, when said pivoted lever is displaced, said latch is removed and said brake band is applied to the flywheel.

2. In an automatic stopping device for machines, the combination with a machine having a frame and a rotating member mounted therein; of a spring-actuated brake mechanism adapted to engage said rotating member to stop it; a lever pivoted to the machine and having its free end projecting therefrom and positioned on one side of the operator's legs; a latch carried by the opposite end of said lever and engaging said spring-actuated brake mechanism to hold it from engaging said rotating member; a complementary lever pivoted to the machine and having its free end projecting therefrom and positioned on the other side of the operator's legs; and a connecting rod joining said complementary levers and secured to opposite sides of their pivots respectively, whereby if either of said levers is displaced said latch is removed and said brake mechanism is released to engage and stop the rotating member of the machine.

3. In an automatic stopping device for machines, the combination with a machine having a frame and a laterally released driving member; of a spring-actuated releasing mechanism adapted to laterally move said driving member to release it from driving connection with said machine; a lever pivoted to the machine and having its free end projecting therefrom and positioned on one side of the operator's legs; a latch carried by the opposite end of said lever and engaging said spring-actuated releasing mechanism to hold it from laterally moving said driving member; a complementary lever pivoted to the machine and having its free end projecting therefrom and positioned on the other side of the operator's legs; and a connecting rod joining said complementary levers and secured to opposite sides of their pivots respectively, whereby if either of said levers is displaced said latch is removed and said releasing mechanism is freed to move said driving member out of driving connection with the machine.

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1,224,623. HEATER FOR OIL-LAMPS. CARL S. FERGUSON, Jonesburg, Mo. Filed Nov. 4, 1916. Serial No. 129,500. (Cl. 126—256.)

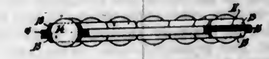


1. As a new article of manufacture, a heater attachment for oil lamps comprising an outer casing having openings near its upper edge and adapted to rest at its lower edge upon the body portion of the burner, relatively spaced supporting arms secured to and located within the casing, and a flame confining perforated tube located within the casing and secured to the arms, the lower end of said tube being spaced upwardly from the lower edge of the casing to receive the wick tube.

2. The combination with a lamp including a wick tube and a cap, of a cylindrical outer casing having a slot therein to receive the cap, relatively spaced supporting arms secured to the wall of the casing and having elongated slots therein, and a perforated tube extending through the slots of the arms and having its lower end disposed over the wick tube to confine the flame therein.

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1,224,624. BALL-RETAINER OF SHEET METAL FOR BALL-BEARINGS. BENGT WIKTOR FJELLMAN, Säfve Strandgata, Gottenborg, Sweden, assignor, by mesne assignments, to S. K. F. Ball Bearing Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 25, 1913. Serial No. 802,880. (Cl. 64—59.)



1. A ball retainer for ball bearings, consisting of a plurality of rings or disks of sheet metal provided with openings for the balls, such rings being so located, that the said openings are opposite each other by pairs, the edge of one of the rings or disks projecting beyond the edge of the other ring or disk, and bent around the edge of the said other ring, the same having a beveled face engaged by the turned over part of the first ring or disk.

2. A ball retainer for ball bearings, consisting of a plurality of rings or disks of sheet metal provided with openings for the balls, such rings being so located that the

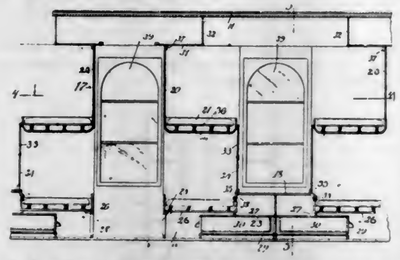
said openings are opposite each other by pairs, the rings being provided with turned up side walls, the edges of one of the rings embracing the edges of the other ring.

3. A ball retainer for ball bearings, consisting of a plurality of rings or disks of sheet metal provided with openings for the balls, such rings being so located that the said openings are opposite each other by pairs, the side walls of the rings extending obliquely with relation to the intermediate part, and the rings being connected only by the oblique relation of the side walls.

4. A ball retainer comprising two trough-shaped members each having a bottom portion provided with openings for the balls, and side walls disposed obliquely to bottom wall, the side walls of the respective troughs being interlocked.

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1,224,625. COMPARTMENT SLEEPING-CAR. ERNEST FLAGG, New York, N. Y. Filed Nov. 17, 1913. Serial No. 801,523. (Cl. 105—207.)



1. A sleeping car having a longitudinal corridor and a plurality of compartments formed of transverse partitions each communicating with said corridor, the alternate compartments having the floor raised above the floor of the corridor, and berths in inoperative position accommodated in said raised floor and the partitions of said compartments.

2. A sleeping car having a longitudinal corridor and a plurality of consecutive compartments each communicating with said corridor, the alternate compartments having the floor raised above the floor of the corridor; berths forming part of the partitions separating the compartments; and berths normally located under said raised floor portion of the compartments.

3. A sleeping car having a longitudinal corridor and a plurality of consecutive compartments communicating with said corridor, the alternate compartments having the floor raised above the floor of the corridor; berths forming part of the separating partitions of the compartments and accessible from the compartments having the raised floor; and berths under the said raised floor portion being accessible from the other compartments.

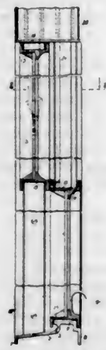
4. In a sleeping car, longitudinal and transverse partitions forming a longitudinal corridor and a plurality of independent compartments each communicating with said corridor, the alternate compartments having the floor raised above the floor of the corridor; berths forming part of said transverse partitions and accessible when in operative position from the compartments having the raised floor; and berths normally positioned under said raised floor portions and accessible when in operative position from the other of said compartments.

5. In a sleeping car, longitudinal and transverse partitions forming a longitudinal corridor and a plurality of consecutive independent compartments each communicating with said corridor, the alternate compartments having the floor raised above the floor of the corridor; berths in the transverse partitions separating said compartments and in said raised floor portion, said transverse partition and raised floor portion having movable parts whereby said compartments are made convertible, substantially as and for the purpose set forth.

[Claims 6 to 13 not printed in the Gazette.]

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1,224,626. METAL WINDOW. ERNEST FLAGG, New York, N. Y. Filed Jan. 5, 1916. Serial No. 70,442. (Cl. 189—72.)



In a metal window, a sill having a step along the rear thereof, a projection at each end of the sill having the shape of a corner iron, the inner walls of said projections facing, the other walls being located at the outer sill edge and pointed in the opposite direction; a corner-iron-shaped jamb rising from the sill at each projection, a lintel uniting the jambs, a pair of spaced channeled strips secured to each jamb so that the bottom of the channel rests on the jamb, a sash having channeled stiles engaging the outer sides of the corresponding channeled strip, said stiles having channeled rails, the lower rail of the lower sash being adapted to receive the step of the sill, and a channeled strip on the lintel to be received by the upper channeled rail of the upper sash.

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1,224,627. FENCE-STRETCHER. ROBERT E. LEE FREESE, Fayette, Mo. Filed Apr. 12, 1916. Serial No. 90,769. (Cl. 254—162.)



1. In a fence stretcher, a body having a laterally offset bracket terminating in a transverse jaw; a grip bar slidable longitudinally for adjustment in the body and disposed substantially at right angles to the jaw, the inner end of the grip bar coacting with the jaw to form a post engaging means; a tightening mechanism carried by the laterally offset bracket and including a drum; a sheave journaled on the outer end of the grip bar; a fence holding means; a flexible element looped around the sheave, one end of the flexible element being connected with the drum; and mechanism for connecting the flexible element with the fence holding means.

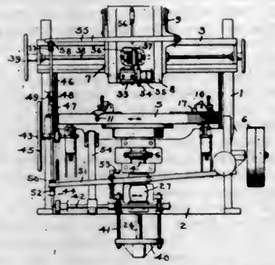
2. In a fence stretcher, a body provided with an eye projecting laterally in one direction, and provided at its rear end with an offset bracket projecting laterally in an opposite direction, the bracket terminating in a transverse jaw; a grip bar slidable longitudinally for adjustment in the body and disposed substantially at right angles to the jaw; a movable element mounted in the jaw and coacting with the inner end of the grip bar to form a post engaging means; a holding member carried by the eye and coöperating with the grip bar to prevent sliding movement of the grip bar independently of the body; a tightening mechanism carried by the laterally offset bracket and including a drum; a sheave journaled in the outer end of the grip bar; a fence holding means; a flexible element looped around the sheave, one end of the flexible element being connected with the drum; and mechanism for operatively connecting the flexible element with the fence holding means.

3. In a device of the class described, a body having a laterally offset bracket terminating in a transverse jaw; a grip bar slidable longitudinally for adjustment in the body, the grip bar being disposed substantially at right angles to the jaw; a movable element carried by the jaw, the inner end of the grip bar coacting with said movable element to form post-engaging means; a movable clamping device carried by the body and coacting with the grip bar to hold the same against longitudinal movement; a sheave journaled in the outer end of the grip bar; a fence holding means; a tightening mechanism carried by the laterally offset bracket; a flexible element looped around the sheave, one end of the flexible element being connected with the tightening mechanism; and means for operatively connecting the flexible element with the fence holding means.



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1,224,628. WHEEL-MACHINE. JOHN T. GARDNER, Hamilton, Ohio, assignor to The Bentel & Margedant Company, Hamilton, Ohio. Filed Feb. 21, 1917. Serial No. 149,996. (Cl. 144—3.)



1. A wheel machine comprising, a chuck-spindle, a chuck carried thereby and provided with a central recess, a cutter-spindle journaled concentrically within the chuck-spindle and capable of endwise motion therein, and a face cutter-head secured to said cutter-spindle and adapted to be reciprocated into and out of said recess by the endwise movement of the cutter-spindle, combined substantially as set forth.

4. A wheel machine comprising, a chuck-spindle, a chuck carried thereby and provided with a central recess, a cutter-spindle journaled concentrically within the chuck-spindle and capable of endwise motion therein, a face cutter-head secured to said cutter-spindle and adapted to be reciprocated into and out of said recess by the endwise movement of the cutter-spindle, a boring-cutter carried by the end of the cutter-spindle beyond the face cutter-head, and a filleting-cutter carried by the cutter-spindle between the face cutter-head and the boring-cutter, combined substantially as set forth.

7. A wheel machine comprising, a chuck-spindle, a chuck carried thereby and provided with a central recess, a cutter-spindle journaled concentrically within the chuck-spindle and capable of endwise motion therein, a face cutter-head secured to said cutter-spindle and adapted to be reciprocated into and out of said recess by the endwise movement of the cutter-spindle, a second facing cutter-head mounted contiguous to and free from the chuck and on an axis at right angles to the axis of the chuck and adapted to operate upon a piece of work held in the chuck and face the surface of the work farthest from the chuck, and a filleting-cutter carried by the spindle of the second facing cutter-head and independent thereof and adapted to sweep across the end of the bore in the work as faced by the second cutter-head, combined substantially as set forth.

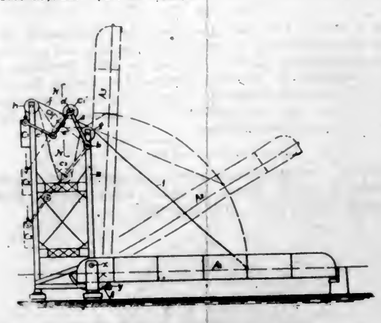
9. A wheel machine comprising, a chuck-spindle, a chuck carried thereby and provided with a central recess, a cutter-spindle journaled concentrically within the chuck-spindle and capable of endwise motion therein, a face cutter-head secured to said cutter-spindle and adapted to be reciprocated into and out of said recess by the endwise movement of the cutter-spindle, and means for rotating the chuck and cutter-spindle independently of each other and at different speeds, combined substantially as set forth.

12. A wheel machine comprising, a chuck mounted for rotation on a vertical axis and adapted to support a spider resting thereon, radially movable chuck-jaws for centering and clamping the spider while it is supported by the chuck, and upper and lower facing cutter-heads adjustable toward each other and adapted to face the upper and lower surfaces of a spider held in the chuck, combined substantially as set forth.

[Claims 2, 3, 5, 6, 8, 10, 11, and 13 to 27 not printed in the Gazette.]

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1,224,629. COUNTERBALANCING DEVICE. RANDALL D. GARDNER, Boston, Mass. Filed Nov. 23, 1915. Serial No. 63,048. (Cl. 14—36.)



1. A counterbalancing device comprising a pivoted member to be lifted; a counterweight; two members spaced apart; flexible means connecting said pivoted member and counterweight and passing over said spaced members; an auxiliary member between said spaced members and in engagement with said flexible means; and means operated by the counterweight to move said auxiliary member to deflect said flexible means.

2. A counterbalancing device comprising a pivoted member to be lifted; a counterweight; two members spaced apart; flexible means connecting said member and counterweight and engaging said spaced members; an auxiliary member between said spaced members and in engagement with said flexible means; and means connected to said counterweight and said auxiliary member through which the counterweight moves said auxiliary member to deflect said flexible means.

3. A counterbalancing device comprising a pivoted member to be lifted; a counterweight; two members spaced apart; flexible means connecting said member and counterweight and passing over said spaced members; an auxiliary member between said spaced members and in engagement with said flexible means; a pivoted arm carrying said auxiliary member; and means connecting said counterweight and pivoted arm through which said auxiliary member is moved to deflect said flexible means.

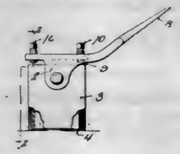
4. A counterbalancing device comprising a pivoted member to be lifted; a counterweight; two members spaced apart; flexible means connecting said pivoted member and said counterweight and engaging and extending between said two spaced members; and a movable member to engage and deflect said flexible means between said spaced members; and means to operate said movable member.

5. A counterbalancing device comprising a pivoted member to be lifted; a counterweight; two sheaves spaced

apart; flexible means connecting said pivoted member and said counterweight and in engagement with said sheaves; a support; an auxiliary member guided by said support; a link pivotally connected with said auxiliary member; a second link pivotally connected with the first link and pivotally connected with the counterweight, said first link carrying a sheave to engage the flexible means between the two spaced sheaves to deflect the flexible means so as to transfer a portion of the weight of the counterweight from the lifted member to the support.

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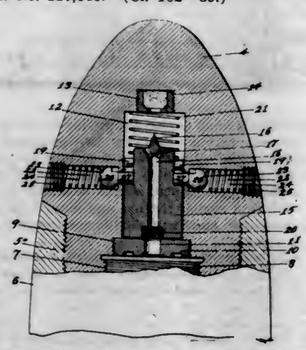
1,224,630. GARDEN-TOOL. JOHN GILSON, Sr., Port Washington, Wis. Filed July 26, 1915. Serial No. 41,975. (Cl. 55—42.)



In a tool of the class described, the combination of a head member having downwardly extending end portions, a U-shaped blade member having its arms pivotally secured between the said end portions and having the free ends of said arms inwardly directed and members adjustably held by the head member for engagement with said inwardly turned end portions.

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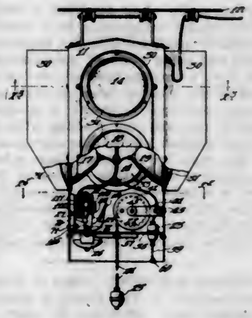
1,224,631. PERCUSSION-FUSE. KENNET JOHN GIRDWOOD, Montreal, Quebec, Canada. Filed Aug. 30, 1916. Serial No. 117,640. (Cl. 102—39.)



1. A percussion fuse, comprising a body having means for connection with an explosive shell, a detonator, a plunger, radially arranged bolts consisting of cylindrical members arranged in radial passages in said body and spherical heads arranged in enlarged radial chambers in said body, and springs for normally maintaining said cylindrical bolt members in engagement with said plunger to prevent movement of the latter toward said detonator, one side of each of said heads being cut away to destroy the balance thereof, said cylindrical members being adapted to be withdrawn from said passages by centrifugal force and said heads being turned with their heavier sides outwardly of said fuse by centrifugal force to move the axes of said cylindrical members out of the axes of said passages to prevent the entry of said cylindrical members into said passages after having been drawn out of the same by centrifugal force.

2. As an article of manufacture, for use in a percussion fuse, a plunger locking bolt consisting of a cylindrical member and an enlarged spherical head cut away at one side to destroy the balance thereof.

1,224,632. TRAFFIC-SIGNAL. WILLIAM GHIGLIERI, San Francisco, Cal. Filed Jan. 12, 1915. Serial No. 1,891. (Cl. 177—338.)



1. A traffic signal comprising a plurality of visible displays, means for exhibiting said displays, manual means by which a traffic officer may control the exhibition of said displays, and means by which the displays may be automatically changed at regular intervals in the absence of the officer.

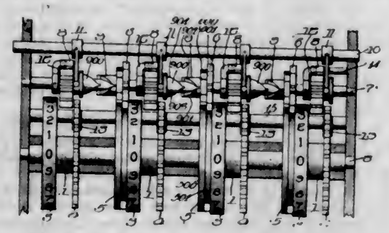
2. A traffic signal comprising a plurality of visible displays, means for exhibiting said displays, manual means by which a traffic officer may control the exhibition of said displays, means by which the displays may be automatically changed at regular intervals in the absence of the officer, and means by which the traffic officer can throw the control of the signal from the automatic means to the manual means or vice versa.

3. A traffic signal comprising a plurality of sensible indication means, means by which a traffic officer may control the operation of said indication means at such intervals as he may desire; and means by which said officer can cause said indication means to actuate at regular intervals without specific attention from him.

4. An electrically operated traffic control system comprising a plurality of signals; means by which traffic officers may independently control the operation of any or all signals; and means by which the traffic officers can cause all or a part of said signals to operate automatically at regular intervals.

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1,224,633. CALCULATING-MACHINE. HYMAN ELI GOLDBERG, Chicago, Ill. Filed Nov. 13, 1912. Serial No. 731,199. (Cl. 235—133.)



1. In a mechanism of the character described, the combination of a movable lower-value digit-member, a movable higher-value digit-member, a clutch connection between said members, and means to loosen and tighten said clutch, a carrying movement of said lower-value member being transmitted to said clutch while the latter is loose, the tightening of said clutch transferring such carrying-movement to said higher-value member, substantially as described.



2. In a machine of the character described, the combination of a movable lower-value digit-member, a movable higher-value digit-member, a clutch, means connecting said lower-value digit member to an element of said clutch, means adapted to connect said higher-value digit-member to and disconnect it from the companion element of said clutch, and means to tighten and loosen said clutch, a carrying-movement of said lower-value digit-member being transferred to its clutch-element while the clutch is loose and the higher-value digit-member is disconnected from its clutch-element and transmitted to said higher-value digit-member while the latter is connected to its clutch-element and during the tightening of the clutch, substantially as described.

3. In a mechanism of the character described, the combination of a movable lower-value digit-member, a movable higher-value digit-member, a clutch, means connecting said lower-value member to an element of said clutch, means adapted to connect said higher-value member to and disconnect it from the companion element of said clutch, and means to slide said clutch elements from and toward one another to loosen and tighten the clutch, a carrying-movement of the lower-value digit-member being transferred to its clutch-element while the clutch is loose and the higher-value member is disconnected from its clutch-element and transmitted to said higher-value member while the latter is connected to its clutch-element and during the tightening of the clutch, substantially as described.

4. In a mechanism of the character described, the combination of movable digit-members of different values, a wedge-clutch connection between said members, and means to loosen and tighten said clutch, a carrying movement of one of said digit-members being transmitted to said clutch while the latter is loose, the tightening of the clutch transferring such carrying-movement to a digit member of different value, substantially as described.

5. In a mechanism of the character described, the combination of a revoluble lower-value digit-wheel, a revoluble higher-value digit-wheel, a wedge-clutch, revoluble means connecting said lower-value wheel to an element of said clutch, revoluble means adapted to connect said higher-value digit-wheel to and disconnect it from a companion element of said clutch, and means to tighten and loosen said clutch, a carrying movement of the lower-value wheel being transferred to its clutch-element while the clutch is loose and the higher-value wheel is disconnected from its clutch element and transmitted to said higher-value wheel while the latter is connected to its clutch-element and during the coöperation of the clutch wedge surfaces during the tightening of the clutch, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,634. DUPLICATING-MACHINE. FREDERICK GOTTSCHALK, New York, N. Y., assignor to Graphic Duplicator Co., Inc., New York, N. Y., a Corporation of New York. Filed Feb. 25, 1916. Serial No. 80,369. (Cl. 242—55.)



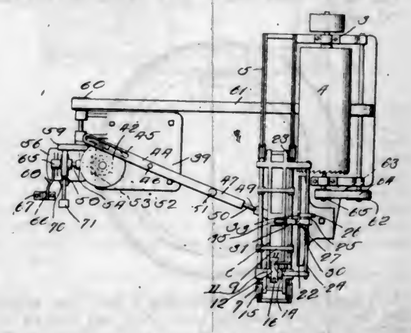
1. In a duplicating machine, a frame, two removable spindles, a threaded rod for each spindle with a knurled head and winged lock screw engaging one end of the said spindle, a disk on said end, a rod engaging the other end of the spindle, a ratchet wheel on the rod with two lugs thereon, a disk with square extension fitting between the lugs, a pawl with lateral extension, and a crank handle on the said rod.

2. In a duplicating machine, a frame with platform, two removable spindles, a threaded rod for each spindle with a knurled head and winged lock screw engaging one end of the said spindle, a disk on said end, a rod engaging the other end of the spindle, a ratchet wheel on the rod with two lugs thereon, a disk with square extension fitting between the lugs, a pawl with lateral extension, and a crank handle on the spindles running over the platform, and a clamp of semi-circular cross section for securing the end of the film.

3. In a duplicating machine, a frame with standards, a spindle for the gelatin film with a film protecting disk, and means on one side adapted to permit the insertion and removal of the spindle by hand, a like second disk at the other end of the spindle, a square extension with central opening on the second disk, a rod reaching into said opening and having a crank handle at its outer end, a ratchet wheel on the rod within the frame having two lugs adapted to receive the square extension of the spindle, and a pawl with projection extending beyond the frame.

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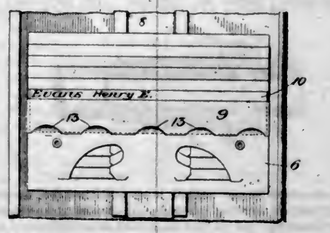
1,224,635. AUTOMATIC STAVE-SAWING MACHINE. GROVER B. HAMRIC, Sleith, W. Va. Filed July 15, 1914. Serial No. 851,167. (Cl. 143—85.)



A stave sawing machine comprising a bed, means on the bed for carrying a block to the saw, arms on the block carrying means, a rod supported by the arms, a spring pressed member pivotally supported by the rod, a disk fixed to the rod, said disk having a notch in its periphery, spring pressed means on the member for normally engaging the periphery of the disk and adapted to engage the notch to hold the member in an elevated position.

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1,224,636. INDEX OR FILE. ROBERT D. HAYES, New Haven, Conn., assignor to Index Visible, Incorporated, New Haven, Conn., a Corporation of New York. Filed Oct. 16, 1915. Serial No. 56,305. (Cl. 129—16.)




1. In an index or file, the combination of a support, a plurality of upstanding cards mounted flatwise on the support in overlapped relation and having their upper margins exposed, and transparent pockets running along

the upper margins of said cards; substantially as described.

2. In an index or file, the combination of a support, a plurality of cards, tongues on said cards nesting them together and securing them flatwise to said support with their upper edges exposed, and transparent pockets running along the upper margins of said cards; substantially as described.

3. A record member, comprising a card, means for attaching the lower portion of the card to a support, and a transparent pocket extending along and open adjacent the upper margin of the card; substantially as described.

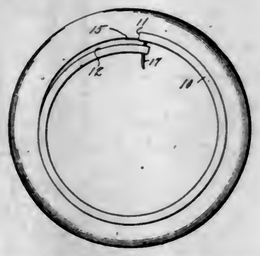
4. A record member, comprising a card, means at the lower portion of the card for securing it on a support, and a transparent pocket-forming strip extending along the upper margin of the card and around and behind the side edges thereof; substantially as described.

5. A record member, comprising a card, a pocket-forming strip extending across the same, and means on the card for closing the bottom of the pocket; substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

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1,224,637. DEMOUNTABLE RIM. EARL HENRY, Albert Lea, Minn. Filed June 2, 1916. Serial No. 101,344. (Cl. 152—21.)

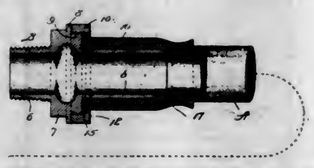


1. A demountable rim comprising a split ring slotted from one end and provided at its other end with an extension engageable in the slot, and a lever hinged at one end adjacent the extension and pivoted in the slot to expand or contract the ring.

2. A demountable rim comprising a resilient ring split transversely one end of the split having a slot therein, a lever hinged to the other end of the split and pivoted in the slot with its free end extending inwardly of the ring, and lugs carried by the second split, and engageable in openings in the first split and said lever being operable to move said split ends out of alinement to disengage said lugs from the openings and contract the ring.

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1,224,638. HOSE-COUPLING. HERBERT H. HEWITT and CHARLES H. PAEPLOW, Jr., Buffalo, N. Y. Filed Aug. 29, 1912. Serial No. 717,815. (Cl. 137—28.)

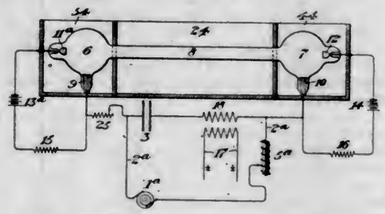


1. A coupling for rubber hose and the like, comprising a body portion having a rigid cylindrical shank adapted to fit within the end of the hose and a shoulder at the inner end of said shank, and a cylindrical sleeve adapted to encircle the shank and the hose thereon and having connecting means at its inner end for engaging said shoulder, said sleeve and said shank having substantially parallel, cylindrical hose-engaging surfaces and said sleeve being longer than said shank and having an internal rib at its outer end, said sleeve being arranged and adapted to be moved inwardly over said shank in straight line direction to compress the hose between said rib and the outer end of asid shank, substantially as described.

2. A coupling for rubber hose and the like, comprising a body portion having a rigid cylindrical shank adapted to fit within the end of the hose and a shoulder at the inner end of said shank, and a cylindrical sleeve adapted to encircle the shank and hose thereon, said sleeve and said shank having subtsantially parallel, cylindrical hose-engaging surfaces, said sleeve being longer than said shank and having an internal rib at its outer end, and connecting means between the inner end of said sleeve and said shoulder adapted to move said sleeve inwardly in straight axial direction over said shank to compress the hose between said rib and the outer end of said shank, said rib and the outer end of said shank having convexly rounded hose-engaging surfaces, substantially as described.

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1,224,639. APPARATUS FOR TRANSFORMING ELECTRICAL ENERGY. PETER COOPER HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Co., Hoboken, N. J., a Corporation of New Jersey. Original application filed June 7, 1905, Serial No. 264,071. Divided and this application filed July 1, 1905, Serial No. 267,982. Renewed Oct. 2, 1916. Serial No. 123,283. (Cl. 250—37.)



1. A gas or vapor device comprising gas or vapor arranged in direct contact with and between bodies of vapor conductor, normally maintained in conducting condition.

2. A gas or vapor device comprising gas or vapor, inclosed with and arranged in direct contact with and between bodies of vapor conductor normally maintained in conducting condition.

3. A discharge device, comprising two independent continuously operating vapor conductor devices, and a normally non-conducting column of gas in direct contact with and connecting the same.

4. A capacity circuit, and a long sealed and evacuated container, having pairs of similar electrodes at distant points therein, one electrode of each pair being vaporizable and constituting a discharge terminal of said capacity circuit, in combination with independent insulated sources of direct electromotive force for each pair of terminals, a vaporizable terminal of each pair being the negative electrode of the source to which it is connected.

5. A discharge device comprising two independent continuously operating insulated vapor conductor devices, and a normally non-conducting column of gaseous material in contact with and connecting the same.

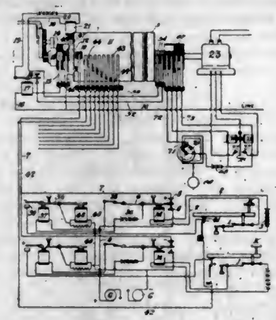
[Claims 6 to 18 not printed in the Gazette.]

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1,224,640. TELEGRAPH SYSTEM. ROMYN HITCHCOCK, New York, N. Y. Filed June 16, 1915. Serial No. 34,357. (Cl. 178—28.)

1. In a telegraph system, the combination with transmitting and receiving mechanism, of constantly running motors for imparting the proper movements thereto, clock mechanisms adjusted to run at a fixed rate, means operated by the same without affecting their rate, for maintaining the motors running at a correspondingly uniform and exact rate independently of the action or effect of line impulses, and means for connecting the sending and receiving devices with the motors in exact phase, whereby the circuit is selective for the particular movement desired at the instant of the transmission and receipt of such impulses.





2. In a telegraph system which depends for selective action upon apparatus at each station driven at exactly a fixed rate of speed, the combination with the signal selective means of constantly running motors adapted to operate the same at the proper times, local means independent in operation of the action or effect of line impulses, and comprising clock mechanism adjusted to run at a fixed and definite rate, and means operated thereby and imparting no varying load thereon to affect the rate, for controlling the speed of the motors and maintaining the same uniform at all times.

3. In a telegraphic system having transmitting and receiving apparatus operated by driving means running at the same speed at each station, the combination with means for selectively determining the operations of line impulses, of a constantly running driving motor therefor, means for connecting the said apparatus with the motor and thereby starting it in operation, means for stopping the same, a clock mechanism at each station adjusted to run at a fixed rate, and means operated by the same and imposing no load thereon that will affect its rate, for locally controlling the speed of the motor and maintaining it uniform at all times, independent of the action or effect of line impulses.

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1,224,641. METHOD OF TREATING COAL. CHARLES E. HITE, Burlington, N. J., assignor to Universal Briquetting Company, a Corporation of Delaware. Filed June 21, 1909, Serial No. 503,331. Renewed Oct. 6, 1916. Serial No. 124,192. (Cl. 44—1.)

1. The method of treating dry pulverized coal, culm or similar material, which consists in first mixing the material with a crude petroleum oil, heating the mixture to cause a close affiliation of the components, and afterward mixing water therewith.

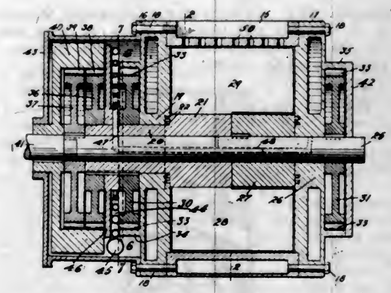
2. The method of treating pulvertzed coal, culm or similar material, which consists in first subjecting said material to a temperature sufficient to drive off the moisture, then mixing with said material a crude petroleum oil, heating the mixture to cause a close affiliation of the components, then adding to said mixture a sufficient quantity of water to stiffen the grease to render the oil constituent stiky or gummy.

3. The method of treating dry pulverized coal, culm or similar material, which consists in first mixing with said material crude petroleum, heating the mixture to cause a close affiliation of the components, then mixing therewith cold water to stiffen the mass, forming the mass into briquets while stiff, and then subjecting the same to heat.

4. The method of treating pulverized coal, culm or similar material, which consists in first subjecting said material to a temperature sufficient to drive off moisture, then mixing with said material a crude petroleum oil, then subjecting the mixture to a temperature of approximately 400° F., then adding to the mixture sufficient water to stiffen the grease, paraffin, asphaltum, or similar element of the oil, then forming the mass into suitable blocks or briquets and subjecting the same to a temperature of from 500° to 600° F.

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1,224,642. MOTOR. ROY B. HOLMES, Los Angeles, Cal., assignor to Holmes Motor Corporation, Los Angeles, Cal., a Corporation of California. Filed Aug. 17, 1914. Serial No. 857,030. (Cl. 123—11.)



1. In an internal combustion engine, a cylinder, end walls on said cylinder, outwardly extending annular flanges on said end walls, a tubular shaft extending into the cylinder through one of the end walls, a second shaft mounted in the tubular shaft extending through the other end wall, means on the shaft and tubular shaft engageable with the annular flanges for preventing reverse rotation of said shafts, and blades on said shafts within the cylinder adapted to be advanced by explosive impulses to rotate said shafts.

2. In an internal combustion engine, a cylinder, end walls on said cylinder, outwardly extending annular flanges on said end walls, a tubular shaft extending into the cylinder through one of the end walls, a second shaft mounted in the tubular shaft extending through the other end wall, disks on the shaft and tubular shaft engageable with the annular flanges for preventing reverse rotation of said shafts, and blades on said shafts within the cylinder adapted to be advanced by explosive impulses to rotate said shafts.

3. In an internal combustion engine, a cylinder, end walls on said cylinder, outwardly extending annular flanges on said end walls, a tubular shaft extending into the cylinder through one of the end walls, a second shaft mounted in the tubular shaft extending through the other end wall, disks on said shaft and tubular shaft adjacent the end walls of the cylinder, means on said disks engageable with the annular flanges for preventing reverse rotation of said shafts, and blades on said shafts within the cylinder adapted to be advanced by explosive impulses to rotate said shafts.

4. In an internal combustion engine, a cylinder, end plates thereon, annular flanges on the outer faces of said plates, a tubular shaft extending into the cylinder through one plate, a shaft revolubly mounted in the tubular shaft extending through the other end plate, disks mounted on said shaft and tubular shaft adjacent the outer faces of the plates having ratchet faces on their outer edges, rollers disposed in said ratchets adapted to engage the flanges to prevent reverse rotation of the shafts, and blades on said shafts within the cylinder, adapted to be advanced by explosive impulses to rotate the shafts.

5. In an internal combustion engine, a cylinder, end plates thereon, annular flanges on the outer faces of said plates, a tubular shaft extending into the cylinder through one plate, a shaft revolubly mounted in the tubular shaft extending through the other end plate, disks

mounted on said shaft and tubular shaft adjacent the outer faces of the plates having ratchet faces on their outer edges, rollers disposed in said ratchets adapted to engage the flanges to prevent reverse rotation of the shafts, blades on said shafts within the cylinder adapted to be advanced by explosive impulses to rotate the shafts intermittently, a drive shaft, a fly wheel on the drive shaft, and means on said shaft and tubular shaft engageable with said fly wheel whereby intermittent movement of the shaft and tubular shaft will effect a continuous rotation of the drive shaft.

[Claim 6 not printed in the Gazette.]

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1,224,643. TOY. RICHARD EDWARD HUMBERT, Montclair, N. J. Original application filed Aug. 24, 1916, Serial No. 116,595. Divided and this application filed Dec. 9, 1916. Serial No. 135,959. (Cl. 46—35.)



1. The combination of a set of blocks, a container therefor, and partitions in the container for maintaining certain of the blocks in assembled relation to represent a figure.

2. The combination of a set of toy blocks, certain of which are assembled in the form of a figure, a container for the blocks, and loose strips following the outline of the figure and engaging the walls of the container for maintaining the blocks of the figure in assembled relation.

3. The combination of a set of toy blocks, certain of which are assembled in the form of a figure, a container for the blocks, and loose strips following the outline of the figure and engaging the walls of the container for maintaining the blocks of the figure in assembled relation, said partitions and container forming compartments, and there being certain of the blocks of the set disposed in the compartments without filling the same.

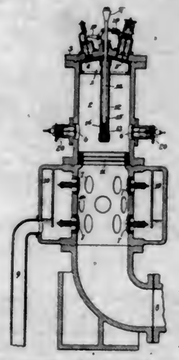
4. The combination of a set of toy blocks, certain of which are assembled in the form of a figure, a container for the blocks, and loose strips following the outline of the figure and engaging the walls of the container for maintaining the blocks of the figure in assembled relation, said figure being less than the length of the container, and certain of the blocks of the set being packed close together in the container to represent a wall on which the figure stands.

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1,224,644. UTILIZING AN EXPANSIVE FORCE IN FORCING OR RAISING LIQUID. HERBERT ALFRED HUMPHREY, London, England, assignor to Humphrey Gas Pump Company, a Corporation of New York. Filed Apr. 10, 1912. Serial No. 689,920. (Cl. 160—1.)

1. The combination of a power chamber for a primary medium having inlet and discharge valves, a play pipe connected therewith, for the free reciprocation of a liquid column capable of acquiring useful momentum, a solid piston operating between the liquid column and the primary medium to actuate and to be actuated by the liquid column, a piston rod connected to the piston and a valve gear operated thereby.

2. A play pipe for the free reciprocation of liquid column of sufficient bulk and path of travel to enable it to acquire useful momentum, an expansion chamber connected therewith, a piston operating in the expansion chamber and adapted to reciprocate with the liquid column to actuate the same and to be actuated thereby, inlet and exhaust valves connected with the expansion chamber and means actuated by the piston for controlling same.



3. A play pipe for the free reciprocation of liquid column of sufficient bulk and path of travel to enable it to acquire useful momentum, an expansion chamber connected therewith, a piston operating in the expansion chamber and adapted to reciprocate with the liquid column to actuate the same and to be actuated thereby, inlet and exhaust valves connected with the expansion chamber and means controlled by the piston for actuating same.

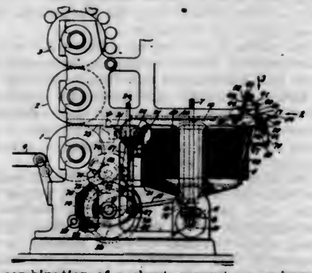
4. A play pipe for the free reciprocation of liquid of sufficient bulk and path of travel to enable it to acquire useful momentum, an expansion chamber connected therewith, a piston operating therein actuated by an expansible charge in one direction to actuate the liquid and actuated by the liquid in the opposite direction, and means, operated by the piston for charging the expansion chamber with a primary medium.

5. A play pipe for the free reciprocation of a liquid column of sufficient bulk and path of travel to enable it to acquire useful momentum, a power chamber connected therewith, a rigid piston operating therein between an expansible charge and the liquid, and an air intake port in the cylinder adapted to be over-run by the piston in its reciprocating movement.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,645. SHEET-FEEDING MECHANISM FOR PRINTING-PRESSES. IRVING A. HUNTING, Plainfield, N. J. Filed Dec. 9, 1914. Serial No. 876,207. (Cl. 271—30.)



1. The combination of a sheet support; a reciprocating carriage for advancing the sheet over said support by engaging with the rear edge thereof; a sucker for raising the rear edge of the sheet; a valve controlling the suction in said sucker and adapted to be opened and closed by the movement of the carriage; and means for raising and lowering the sucker.

2. A sheet-feeding mechanism including a sheet-support; a carriage; sheet-supporting fingers carried thereby; a pneumatic device for raising one end of the sheet the other end of which still remains supported by said sheet-support; and mechanism for reciprocating said carriage to bring said fingers into and out of engagement with the raised end of the sheet and to feed the latter along said sheet-support.

3. A sheet-feeding mechanism including a sheet-support; a carriage; yieldingly-mounted sheet-supporting fingers carried thereby; a pneumatic device for raising one end of the sheet the other end of which still remains supported by said sheet-support; and mechanism for reciprocating said carriage to bring said fingers into and out of engagement with the raised end of the sheet and to feed the latter along said sheet-support.

4. A sheet-feeding mechanism, including a sheet-support; a carriage; sheet-supporting devices carried thereby; a cam-controlled pneumatic device for raising one end of the sheet the other end of which still remains supported by said sheet-support; and cam-controlled mechanism for reciprocating said carriage to bring said devices into and out of engagement with the raised end of the sheet and to feed the latter along said sheet support.

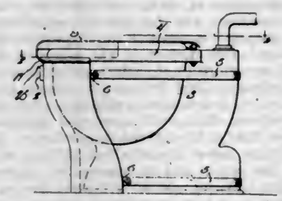
5. A sheet-feeding mechanism including a sheet-support; a carriage; sheet-supporting devices carried thereby; a pneumatic device for raising one end of the sheet the other end of which still remains supported by said sheet-support, said carriage controlling the supply of air to said device; and mechanism for advancing the carriage to bring said fingers into engagement with the raised end of the sheet and to feed the latter along said sheet support.

[Claims 6 to 12 not printed in the Gazette.]

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1,224,646. SANITARY SEAT-COVER APPARATUS. LOUIS A. JIRANEK, Birnamwood, Wis. Filed Aug. 28, 1915. Serial No. 47,849. (Cl. 211—29.)

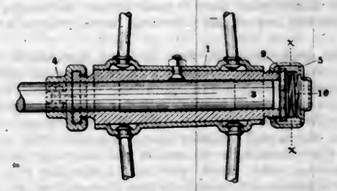


A dispensing apparatus for water-closet seat covers adapted for association with a substantially hemispherical water-closet bowl and a support therefor offset inwardly from the front and sides of the bowl and including a throat portion at the rear of the bowl, said apparatus including a casing horizontally curved to conform to the curvature of the mouth portion of the bowl and having its lower portion inwardly offset in an ogee curve to conform to and fit against the front and side portions of the bowl and the support, upper and lower straps secured to the sides of the casing and passed about said bowl and throat portion and about said support and throat portion respectively, the casing being adapted to receive a pad of covers, and means for procuring ejecting movements of the covers from the casing.

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1,224,647. LUBRICATING DEVICE. ERIC JOHNSON, Moline, Ill., assignor to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed Nov. 10, 1913, Serial No. 800,139. Renewed Oct. 4, 1915. Serial No. 54,090. (Cl. 64—26.)

1. In a device of the character described, the combination with a hub, of a cap on the hub adapted to be turned one way to approach the end of the hub and to recede therefrom when turned in the opposite direction, and a member carried by the cap and adapted to engage with a notch on the hub to hold the cap from turning.



2. In a device of the character described, the combination with a hub, of a cap on the end of the hub adapted to be turned one way to approach the end of the hub and to recede therefrom when turned in the opposite direction, a member carried by the cap and engaging with a notch in the end of the hub and adapted to be disengaged therefrom, and means to retain said member in engagement with a notch when the cap is at rest.

3. In a device of the character described, the combination with a hub having one or more notches in the end thereof, of a cap on the end of the hub and adapted to be turned one way to approach the end of the hub and to recede therefrom when turned in the opposite direction, a member within said cap engaging with a notch in the end of the hub and adapted to be disengaged therefrom by the turning of the cap, and resilient means within the cap operating to retain the member in engagement with a notch when the cap is at rest.

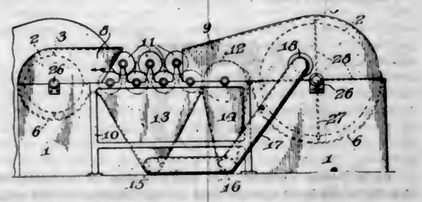
4. In a device of the character described, the combination with a hub having a series of notches in the end thereof, of a cap on the end of the hub and adapted to be turned one way to approach the end of the hub and to recede therefrom when turned in the opposite direction, a member within said cap engaging with a notch in the end of the hub and adapted to be disengaged therefrom by the turning of the cap, and resilient means between the end of the cap and the member to retain the latter in engagement with a notch when the cap is at rest.

5. In a device of the character described, the combination with a hub having a series of oppositely disposed notches in the end thereof, a cap on the end of said hub and turnable one way to approach the end of the hub and to recede therefrom when turned in the opposite direction, a member within said cap engaging with a notch in the end of the hub and adapted to be disengaged form said notch by the turning of the cap, and a spring in the cap between the end thereof and the member to retain the latter in engagement with the notch when the cap is at rest.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,648. FIBER-CLEANING MACHINE. WILLIAM R. JOHNSON, Camden, N. J. Filed Aug. 21, 1916. Serial No. 116,625. (Cl. 19—9.)



1. The combination in fiber cleaning mechanism, of a unitary casing having a movable cleaning member therein, suction producing means in said casing operatively connected to said member and operative in unison therewith,

said casing having an outlet through which said member ejects material after it has passed through said casing, a receptacle for receiving material after passing said outlet, and means forming a return passage between said receptacle and said suction producing means whereby material is sucked from said receptacle into the casing and again ejected out of said opening, substantially as described.

2. The combination in fiber cleaning mecahnism, of a unitary casing having a rotatable cleaning member therein, said member having a fan operatively connected thereto and mounted in said casing, said fan being rotatable in unison with said member, said casing having an outlet through which said member ejects material after it has passed therethrough, a receptacle for receiving material after passing said outlet, and means forming a return passage between said receptacle and the space within said casing occupied by said fan whereby said fan sucks material from said receptacle and again ejects it out of said opening, substantially as described.

3. The combination in fiber cleaning mechanism, of a unitary casing having a rotatable cleaning member therein, said member having a fan operatively connected thereto and mounted in said casing, said fan being rotatable in unison with said member, said casing having an outlet opening through which said member ejects material after it has passed therethrough, additional cleaning means adjacent said outlet opening, a receptacle located below said additional cleaning means, and means forming a passage between said receptacle and the space within said casing occupied by said fan whereby the latter sucks material from said receptacle and again ejects it out of said opening, substantially as described.

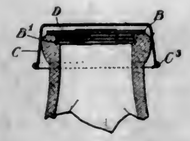
4. The combination in fiber cleaning mechanism, of a casing having a rotatable cleaning member therein, said member having a fan operatively connected thereto and mounted in said casing, an outlet opening through which said member ejects material after it has passed therethrough, a series of crushing rolls located adjacent said outlet opening, a receptacle located below said crushing rolls, and means forming a passage between said receptacle and the space within said casing occupied by said fan whereby said fan sucks material from said receptacle and again ejects it out of said opening, substantially as described.

5. The combination in fiber cleaning mechanism, of a casing having an inlet and an outlet opening, a rotatable shaft in said casing, a cylinder secured to said shaft within said casing, a fan operatively connected to said shaft and mounted within said casing, additional cleaning means adjacent said outlet opening, a receptacle located below said additional cleaning means, said casing having a third opening therein communicating with the fan, and means forming a passage between said receptacle and said third opening whereby material is sucked from said receptacle into the fan space and again ejected out of said opening, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

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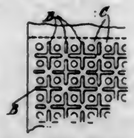
1,224,649. BOTTLE-CLOSURE. JOSEPH MOSES WARD KITCHEN, East Orange, N. J. Filed Mar. 3, 1915. Serial No. 11,669. (Cl. 215—9.)




In a bottle closure, the combination of a bottle lip having a recessed sealing seat in the interior of the upper part thereof, and an outwardly projecting annulus of curvilinear cross-section at the upper portion, a compressible seal seated in said recess and frictionally retained therein, and a one-piece metal cap having a flaring flange and fitting over said annulus to form a conditional seal, said flange and lip being of such relative size as to prevent the top of the metal cap from coming into contact with said lip or said seal.

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1,224,650. TOILET-PAPER. JOSEPH MOSES WARD KITCHEN, East Orange, N. J. Filed Feb. 25, 1916. Serial No. 80,352. (Cl. 92—68.)



1. In a toilet paper, irregularities of surface combining indented or projected dams for intercepting and holding effete matters, and flat interspace lines for resisting a pulling stress of the surface of the paper that would result in the stretching of the surface of the paper, the entire surface being unbroken and having its fibers intact and being moderately absorptive to moisture equably over the entire surface, the interspace lines for resisting pulling stress of the general surface having a flat smooth unindented or unprojected surface, the said interspace lines and dams being devoid of broken or stretched fibers such as would be produced by indenting a smooth flat surface of dry paper.

2. In a toilet paper, roughened or other irregularities of surface, and smooth flat interspace lines free from unroughened or irregularities of surface, for resisting pulling stress, said roughened or other irregularities of surface being in form and so arranged as to position, to place ridges or dams on the surface of the paper across all the lines of smooth flat surface for resisting pulling stress of the paper while in use, said ridges or dams having for purpose the interception and holding of excrementary matters.

3. In a toilet paper, embossings or irregularities of surface adapted by form and by position in relation to adjacent irregularities of surface, to intercept, scrape and hold effete matters, and flat smooth unembossed unindented or embossed interspaces for preventing stretching of the general area surface of the paper by a pulling stress, said irregularities of surface having projections or processes extending into the general surface of the flat smooth interlines or interspaces, said projections and processes intercepting effete matter, and said interspaces preventing stretching of the general flat surface of the paper.

4. In a toilet paper, irregularities of form on the flat surface of the paper, and interspaces of unindented or embossed flat surfaces, said irregularities having projecting processes so placed in relation to processes of adjoining irregularities of form as to prevent a straight line being drawn completely across the surface of the paper in any direction in the interspaces of the flat surface of the paper between the processes of said irregularities of surface.

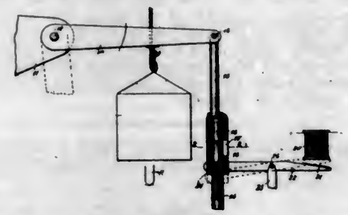
5. In a toilet paper, packaged into sheets, said sheets being partly divided by incisions, said sheets having irregularities of form on the surface of the paper and smooth flat interspaces between the irregularities of form, said surface interspaces being projected and running in at least two directions across the surface of the paper, and a marginal smooth flat surface surrounding each of the sheets of the package for maintaining strength in the edges of the sheets of paper.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,651. RELEASING DEVICE. WILLIAM C. KOCH, St. Paul, Minn. Filed Mar. 11, 1914. Serial No. 823,986. (Cl. 74—93.)

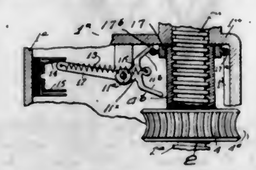
1. In a device of the character set forth, the combination of a supporting stem, a sleeve slidable thereon and projectable beyond the end thereof, and a finger arranged essentially in alinement with said stem and being adapted to be retained thereon by said sleeve when the sleeve projects beyond the end of the stem.



2. In a device of the character set forth, the combination of a fixed supporting stem arranged in a certain plane, a keeper slidable along said stem and adapted to project beyond the end thereof, a finger arranged in alinement with said stem and adapted to be maintained in position abutting the end of the stem by the aforesaid keeper, and a pressure sustaining arm to which said finger is connected tending to move in the aforesaid plane, said movement being resisted by the coöperation between the keeper and the stem.

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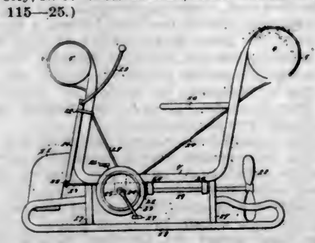
1,224,652. ELECTRIC JACK. HENRY KOCOUREK, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Aug. 26, 1914. Serial No. 858,746. (Cl. 172—152.)



In an electric jack in combination with a standard, a jack screw mounted therein for longitudinal movement, the standard being apertured between two bearings of the jack screw therein; an operating nut on the jack screw between said bearings and longitudinally stopped in both directions thereby; an electric motor operatively engaged with said nut for rotating it to propel the jack screw, said operating nut having an exterior thread finer than the jack screw engaging thread; a follower nut engaged with said finer thread for travel on the outside of the operating nut; two electric circuits in which said motor is energized, and a snap switch device mounted in the standard having terminals positioned for encounter by the follower nut at the limits of its travel for opening one circuit and closing the other at said limits.

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1,224,653. FLOATING BICYCLE. PAUL KRAEMER, Jersey City, N. J. Filed Dec. 28, 1916. Serial No. 139,245. (Cl. 115—25.)



1. A device of the class described including front and rear floats, a frame to the top of which at the front and rear thereof, the floats are secured, so that the frame is in the form of a drop frame suspended from and by the floats when in the water, a seat on said frame below the floats, and propelling and steering means carried by the said frame.

2. A device of the class described including front and rear floats, the rear float being the larger, a frame to the top of which at the front and rear the floats are secured, so that the said frame is in the form of a drop frame suspended from and by the floats, a seat on said frame below the floats and nearer to the rear float, and propelling and steering means carried by said float.

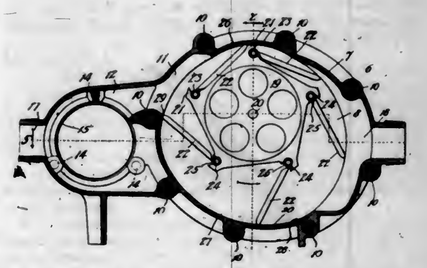
3. A device of the class described, comprising a plurality of floats, a frame dependent therefrom, a seat on said frame, propelling means, steering means, and a guard for said propelling and said steering means.

4. A device of the class described, comprising a plurality of floats, a frame dependent therefrom, a seat on said frame, propelling means, steering means, and a guard for said propelling and steering means, said guard being formed to maintain said device in vertical position on land.

5. A device of the class described including a U-shaped frame, presenting upwardly extending front and rear members united by a longitudinal depressed member, floats on the upwardly extending members at the upper ends thereof, a seat on the rearmost upwardly extending member below the float, steering means on the front upwardly extending member, and propelling means beneath the longitudinal member of the frame.

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1,224,654. VOLUMETRIC METER. OTTO A. KREUTZBERG, Lake Bluff, Ill., assignor to Kreutzberg Meter Company, Chicago, Ill., a Corporation of Illinois. Filed July 25, 1914. Serial No. 853,124. (Cl. 73—37.)



1. In a volumetric meter, the combination of a casing, a rotary member journaled therein and carrying vanes hinged thereto, said casing having a guide-wall against which said vanes operate, and containing an inlet port and an outlet port, the guide-wall intermediate said ports being so shaped as to permit a vane opposite to it to swing outwardly relative to the next succeeding vane when the latter is opposite said portion of the guide-wall, whereby suction is produced on said succeeding vane drawing it into engagement with said portion of said guide-wall, and indicating means actuated by said member.

2. In a volumetric meter, the combination of a casing, a rotary member journaled therein and carrying vanes hinged thereto, said casing having a guide-wall against which said vanes operate, and containing an inlet port and an outlet port, the guide-wall intermediate said ports being so shaped as to permit a vane opposite to it to swing outwardly relative to the next succeeding vane when the latter is at the point of inlet cut-off, whereby suction is produced on said succeeding vane drawing it into engagement with said portion of said guide-wall, and indicating means actuated by said member.

3. In a volumetric meter, the combination of a casing, a rotary member journaled therein and carrying vanes hinged thereto, said casing having a guide-wall against

which said vanes operate, and containing an inlet port and an outlet port, a portion of said guide-wall intermediate said ports diverging relative to the path traveled by the pivots of said vanes in a direction away from the axis of said member for causing the forward vane to exert suction action on the rear vane before said forward vane reaches said outlet port, for drawing said rear vane into engagement with said guide-wall, and indicating means actuated by said member.

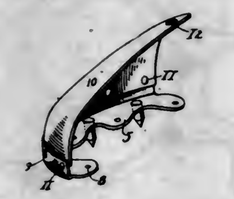
4. In a volumetric meter, the combination of a casing, a rotary member journaled therein and carrying vanes hinged thereto, said casing having a guide-wall against which said vanes operate, and containing an inlet port and an outlet port, a portion of said guide-wall intermediate said ports diverging relative to the path traveled by the pivots of said vanes in a direction away from the axis of said member, and so disposed as to begin at a point spaced from the point of cut-off at said inlet port a distance not greater than the distance between adjacent vanes when the rear one of said vanes is at said point of cut-off, and indicating means actuated by said member.

5. In a volumetric meter, the combination of a casing, a rotary member journaled therein and carrying vanes hinged thereto, said casing having a guide-wall against which said vanes operate, and containing an inlet port and an outlet port, a portion of said guide-wall intermediate said ports diverging relative to the path traveled by the pivots of said vanes in a direction away from the axis of said member, and so disposed as to begin at a point spaced from the point of cut-off at said inlet port a distance slightly less than the distance between adjacent vanes when the rear one of said vanes is at said point of cut-off, and indicating means actuated by said member.

[Claims 6 to 12 not printed in the Gazette.]

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1,224,655. SHOE-PROTECTOR. RICHARD PEARSON LLOYD, Trenton, N. J. Filed Oct. 11, 1915. Serial No. 55,133. (Cl. 36—72.)



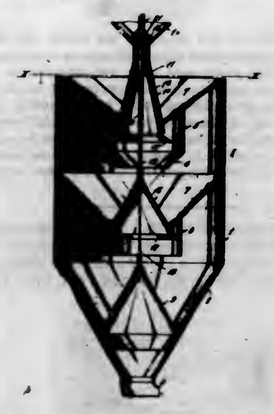
1. In a toe protector, the combination of a stiff member having a flat plate-like portion adapted to extend under a portion of a shoe sole near the front, and a wall rising from the outer edge of the plate-like portion and curved to extend around a portion of the toe of the shoe and extending for a distance along the edge of the shoe sole on the inner side of the foot, and a flexible member secured to said wall and shaped to lie over the inner part of the toe portion of the shoe while leaving the outer part substantially uncovered and formed to come to a corner adjacent to the shoe lace of the shoe and provided with an eyelet at such corner.

2. In a toe protector for shoes, the combination of an integral metal member comprising a wall adapted to extend across the forward portion of the shoe curving part way around the toe, and a plate portion extending inwardly from the lower edge of the wall and adapted to lie on the under side of a shoe sole, and a flexible member of approximately rectangular form riveted to the inner side of said curved wall and adapted to overlie the innermost part of the toe portion of the shoe while leaving the outermost part uncovered, said flexible member having an opening adjacent to its free corner.

3. The combination with a shoe provided with lacing eyelets and a lace, of a protector for the toe portion comprising a metal member extending beneath and secured to the under side of the shoe sole and a curved vertical wall extending part way about the toe and to the rear thereof on the inner side, and a flexible member secured to the vertical wall of the metal member and overlying approximately two-thirds of the toe portion of the shoe while having the remainder of the toe portion uncovered, said flexible member being provided with an eyelet adapted to register with the lowermost eyelet of the inner half of the shoe, whereby the regular shoe lace may pass through said eyelet in the protector.

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1,224,656. CONCRETE-MIXER. EDGAR S. MCCANDLISS, Rolla, Mo. Filed Sept. 30, 1916. Serial No. 123,002. (Cl. 83—73.)



1. A mixer comprising an upper hopper having a bottom outlet, a lower hopper beneath the upper hopper, having a bottom outlet, an inclined closure adapted to close the bottom outlet of said lower hopper, a receiver beneath the lower hopper, means beneath the upper hopper for deflecting material discharged therefrom against the inclined closure, and means beneath the lower hopper for causing the material discharged from the lower hopper to be deposited substantially vertically into the receiver.

2. A mixer comprising an upper hopper having a bottom outlet, a lower hopper beneath the upper hopper, having a bottom outlet, a conical closure adapted to close the bottom outlet of said lower hopper, a receiver beneath the lower hopper, means beneath the upper hopper for deflecting material discharged therefrom against the conical closure, and means beneath the lower hopper for causing the material discharged from the lower hopper to be deposited substantially vertically into the receiver.

3. A mixer comprising an upper hopper having a bottom outlet, a lower hopper beneath the upper hopper, having a bottom outlet, a conical closure adapted to close the bottom outlet of said lower hopper, and forming an inwardly inclined wall extending upwardly into said lower hopper, a receiver beneath the lower hopper, a depending baffle beneath the upper hopper having an inwardly extending lower portion for deflecting material discharged therefrom inwardly against the conical closure, and means beneath the lower hopper for causing the material discharged from the lower hopper to be deposited substantially vertically into the receiver.

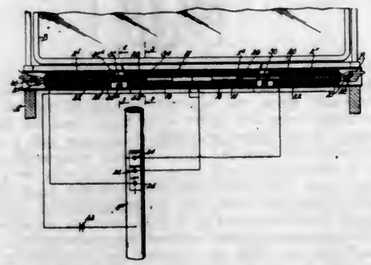
4. A mixer comprising an upper hopper having a bottom outlet, a lower hopper beneath the upper hopper, having a bottom outlet, a conical closure adapted to close the bottom outlet of said lower hopper, and forming an inwardly inclined wall extending upwardly into said lower hopper, a receiver beneath the lower hopper, means beneath the upper hopper for deflecting material against the conical closure, means beneath the upper hopper and encircled by the deflecting means, for deflecting material discharged from the upper hopper bottom outlet against the deflecting means, and means beneath the lower hopper for causing the material discharged from the lower hopper to be deposited substantially vertically into the receiver.

5. A mixer comprising an upper hopper having a bottom outlet, a lower hopper beneath the upper hopper, having a bottom outlet, a conical closure adapted to close the bottom outlet of said lower hopper, and forming an inwardly inclined wall extending upwardly into said lower hopper, an outwardly flaring tapering closure for the upper hopper, adapted to deflect material discharged therefrom outwardly, a depending baffle encircling the outwardly flaring closure and adapted to limit the outward movement of the deflected material and deflect it inwardly against the conical closure, a receiver beneath the lower hopper, and means whereby the material discharged from the lower hopper is caused to be deposited into the receiver.

[Claims 6 to 12 not printed in the Gazette.]

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1,224,657. DIRECTION-INDICATOR FOR AUTOMOBILES. ROMAN J. MILLER and JOHN BELL, Bremerton, Wash. Filed Aug. 9, 1916. Serial No. 113,862. (Cl. 177—337.)



1. The combination of an automobile, with an indicator of the class described, said indicator comprising signals projectable from opposite sides, guide means for the signals, electrical means for projecting the signals independently and with a two-step movement, a lamp associated with each signal and adapted to be automatically connected in circuit when one step is completed, means for stopping the signal at the end of its step and releasable to permit the signal to move another step, and an additional lamp associated with the signal and adapted to be automatically connected in circuit when the second step is completed.

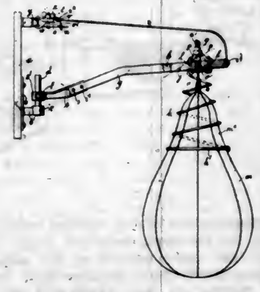
2. The combination of an automobile, with a direction indicator comprising signals movable in opposite directions beyond the side of the automobile, a guide for the signals, separate electrical devices for moving the signals to different distances outwardly, a lamp associated with each signal and adapted to be lighted automatically when the latter is moved the first distance, another lamp associated with each signal and adapted to be lighted when the latter is moved its full distance outwardly, and circuit closers for the separate means.

3. The combination of an automobile, with a direction indicator comprising signals movable in opposite directions beyond the side of the automobile, a guide for the signals, separate electrical devices for moving the signals to different distances outwardly, a lamp associated with each signal and adapted to be lighted automatically when the latter is moved the first distance, another lamp associated with each signal and adapted to be lighted when the latter is moved its full distance, circuit closers for the separate electrical means, and a catch normally set for arresting the outward movement of the signals and adapted to be released to permit the signals to be moved their full distance.





1,224,658. PUNCHING-BAG PLATFORM. JOSEPH R. MORANDO, New York, N. Y. Filed Aug. 7, 1916. Serial No. 113,480. (Cl. 46—69.)



1. A punching-bag platform comprising a base board, a frame of iron bars secured thereto and having curved end portions, a platform mounted between the curved end portions of the frame, and a helical spring attached to the platform and adapted to support the bag.

2. A punching-bag platform comprising a base board, a frame of iron bars secured thereto and having curved end portions, a wooden platform mounted between the end portions of the frame, and a helical spring attached to the platform and adapted to support the bar, said spring having the narrowest winding on the platform and other windings gradually increasing in diameter with the end secured to the adjoining winding.

3. A punching-bag platform comprising a base board, a frame of iron bars movably secured thereto and having curved end portions, a wooden platform mounted between the curved end portions of the frame, a helical spring attached to the platform and adapted to support the bag, and an adjusting device in connection with the platform and base board.

4. A punching-bag platform comprising a base board, a frame of iron bars movably secured thereto spreading out and having curved end portions, a wooden platform mounted between the end portions of the frame, a helical spring attached to the platform and adapted to support the bag, and an adjusting device composed of a curved bar secured to the base, a sliding device with wing screw thereon, and a long bar secured to the sliding device and to the platform.

5. A punching-bag platform comprising a base board, a bracket with bearing on its lower portion, a permanent pin in the bearing, a frame of iron bars movably mounted on said pin, a wooden platform with helical spring in the iron frame, a curved bar secured to the top portion of the base, a sliding device with wing screw thereon, and a bar secured to the sliding device and to the front end of the platform to move the device to the right or left.

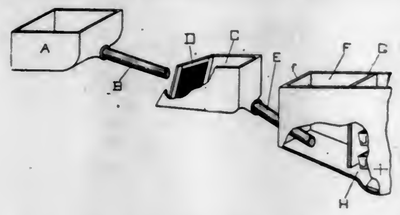
[Claim 6 not printed in the Gazette.]

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1,224,659. APPARATUS FOR MIXING MOLDING-SAND. WILLIAM J. NELSON, West Albany, N. Y., assignor to West Albany Moulding Sand Co., West Albany, N. Y., a Corporation. Filed Jan. 23, 1917. Serial No. 144,029. (Cl. 22—89.)

1. An apparatus for mixing molding sand, comprising a receptacle for the sand, loam and water; means connected with the lower portion of the said receptacle whereby the solution from the receptacle may flow by gravity; a grille into which the solution from the receptacle flows and is strained; pipes leading from the grille to a mixing device through which the solution after passing through the grille will flow by gravity; a mixing box into which said solution is delivered; a floor in said mixing box placed at an angle to the horizontal; and an obstruction in said mixing box, with a restricted opening at the bottom thereof through which the mixture of sand and loam

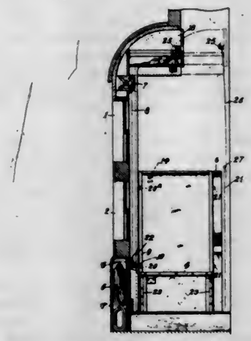
and a small quantity of water will be excluded from the bottom of the mixing chamber.




2. An apparatus for mixing molding sand, comprising a receptacle for the sand, loam and water; means connected with the lower portion of the said receptacle whereby the solution from the receptacle may flow by gravity; a mixing box into which said solution is delivered; a floor in said mixing box placed at an angle to the horizontal; and an obstruction in said mixing box, with a restricted opening at the bottom thereof through which the mineral contents of the solution after being thoroughly mixed will be excluded from the bottom of the mixing chamber.

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1,224,660. BERTH FOR SLEEPING-CARS. PETER J. O'CALLAGHAN, Chicago, Ill. Filed Feb. 5, 1916. Serial No. 76,369. (Cl. 105—211.)



1. In a berth for sleeping cars, the combination with a pair of seat members and a bar spanning said members, said bar having flanges at its extremities, of spring catches mounted in the car frame and adapted to be engaged by said bar, and means for projecting and retracting said bar lengthwise.

2. In a berth for sleeping cars, the combination with a seat frame having rollers and an upright rail, of a second frame adapted to be supported by said former frame when not in use, said second frame having rollers adapted to travel upon said rail and itself adapted to move in contact with said former rollers, and adapted to be raised to constitute an upper berth.

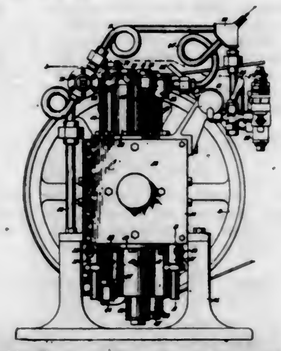
3. In a berth for sleeping cars, the combination with a frame adapted to be raised and lowered in a vertical plane and to constitute an upper berth when in its elevated position, said frame carrying a rod, and means for projecting and retracting said rod, of a catch spring adapted to engage and support said rod when said frame is elevated.

4. In a sleeping car, the combination with a berth having a seat frame, a compartment in the wall of said car adjacent said seat frame, and a second compartment in its top, of a second frame adapted to be seated in said former frame when not in use and capable of being raised in a vertical plane to constitute an upper berth.

5. In a sleeping car having upper and lower berths, a pair of curtains supported above said upper berth, and a second pair of curtains secured to said former pair near the lower ends thereof.

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1,224,661. MULTISTAGE COMPRESSOR. NELSON J. PARKER, Lincoln, Ill. Filed Apr. 28, 1916. Serial No. 94,144. (Cl. 230—32.)



1. In combination, a pair of independent multistage-compressor units, the smallest cylinder of one of said multistage-compressor units being larger than the largest cylinder of the second multistage-compressor unit, a reservoir associated with the outlets of said compressor units, and a pressure-governed valve associated with the outlet of the first compressor unit and with the inlet of the second compressor unit, said pressure-governed valve including means operable by a predetermined pressure for severing communication between the outlet of the first compressor unit with the reservoir and establishing communication between the outlet and the inlet of the second compressor unit to transform the two units into a single compressor unit.

2. In combination, a pair of multistage-compressor units, the smallest cylinder of one of said units being larger than the largest cylinder of the second of said compressor units, a reservoir associated with the outlets of said compressor units, and a valve connecting the outlet of the first compressor unit with the inlet of the second compressor unit, said valve becoming operable at a predetermined pressure to sever the first compressor unit from the reservoir and cause it to discharge into the second, whereby the two units are transformed into a single multistage compressor unit.

3. In combination, a pair of multistage-compressor units, the smallest cylinder of one of said units being larger than the largest cylinder of the second unit, a reservoir associated with the outlets of said units, a pressure-governed valve interposed between the outlet of the first compressor unit, the reservoir and the inlet of the second unit to cause said first compressor unit to discharge into said second unit when the pressure in said reservoir has reached a predetermined point.

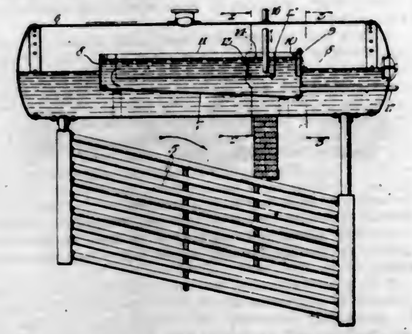
4. In combination, a pair of multistage-compressor units, the smallest cylinder of one of said units being larger than the largest cylinder of the second of said units, a reservoir associated with the outlets of said units, a valve casing interposed between the outlets of the first compressor units, the reservoir and the inlet of the second unit, a valve in said casing for simultaneously cutting off the communication between the outlet of the first compressor unit with the reservoir and establishing communication between said first compressor unit with the inlet of the second compressor unit, and vice versa, and pressure-applying means acting on the valve to maintain the same in a position such that normally the outlet of the first compressor unit is in communication with the reservoir, said pressure-applying means adapted to yield when a predetermined pressure is reached in the reservoir, whereby communication is severed between the outlet of the first unit with the reservoir and established between said outlet of the first unit and the inlet of the second unit.

5. In combination, a pair of multistage-compressor units, the smallest cylinder of one of said units being larger than the largest cylinder of the second of said units, a reservoir associated with the outlets of said units, a valve casing interposed between the outlet of the first compressor unit, the reservoir and the inlet of the second unit, a valve in said housing adapted to bring into communication the outlet of the first compressor unit with either the reservoir or the inlet of the second unit, a diaphragm exposed to the air pressure of the reservoir, a spring acting on the diaphragm to resist the movement thereof under the action of the air in the reservoir and whereby the valve normally tends to establish communication between the reservoir and the outlet of the first compressor unit, and resilient means coöperating with the valve for counteracting the spring acting on the diaphragm and helping the displacement of said valve when a predetermined pressure has been obtained in the reservoir, whereby the communication between the first compressor unit with the reservoir is severed and that of said first unit with the inlet of the second unit is established.

[Claims 6 to 17 not printed in the Gazette.]

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1,224,662. STEAM-BOILER. THOMAS T. PARKER, New York, N. Y. Filed Nov. 16, 1916. Serial No. 131,648. (Cl. 122—428.)



1. In a horizontal steam-boiler, an open-top main receptacle within the same having at one end a feed-water outlet located above the normal boiler-water level and having also a depending shield directly in front of the outlet, an auxiliary open-top elongated receptacle supported within the main receptacle above the bottom of the latter, said auxiliary receptacle being closed at that end adjacent the said outlet and open at the opposite end, and means for supplying feed-water to said auxiliary receptacle.

2. In a horizontal steam-boiler, an open-top main receptacle within the same having at one end a feed-water outlet located above the normal boiler-water level and having also a depending shield directly in front of the outlet, an auxiliary open-top elongated receptacle removably suspended within the main receptacle above the bottom of the latter, said auxiliary receptacle being closed at that end adjacent the said outlet and open at the opposite end, and means for supplying feed-water to said auxiliary receptacle.

3. In a horizontal steam-boiler, an open-top main receptacle within the same having at one end a feed-water outlet located above the normal boiler-water level and having also a depending shield directly in front of the outlet, an auxiliary open-top elongated receptacle supported within the main receptacle above the bottom of the latter, said auxiliary receptacle being closed at that end adjacent the said outlet and open at the opposite end, and having a transverse partition adjacent said closed end to provide within the auxiliary receptacle a supplemental chamber having an overflow below the level of the said outlet, and means for supplying feed-water to said chamber.

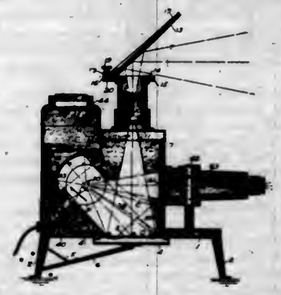
4. In a horizontal steam-boiler, an open-top main receptacle within the same having at one end a feed-water outlet located above the normal boiler-water level and having also a depending shield directly in front of the outlet, an auxiliary open-top elongated receptacle removably suspended within the main receptacle above the bottom of the latter, said auxiliary receptacle being closed at that end adjacent the said outlet and open at the opposite end, and having a transverse partition adjacent said closed end to provide within the auxiliary receptacle a supplemental chamber having an overflow below the level of the said outlet, and means for supplying feed-water to said chamber.

5. In a horizontal steam boiler, an open-top main receptacle within the same having at one end a feed-water outlet located above the normal boiler-water level and having also a depending shield directly in front of the outlet, an auxiliary open-top elongated receptacle provided with laterally-projecting supporting members adapted to be seated on the walls of the main receptacle, said auxiliary receptacle being closed at that end adjacent the said outlet and open at the opposite end and having a transverse partition adjacent said closed end to provide within the auxiliary receptacle a supplemental chamber having an overflow below the level of the said outlet, and means for supplying feed-water to said chamber.

[Claim 6 not printed in the Gazette.]

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1,224,663. PROJECTION APPARATUS AND ILLUMINATION SYSTEM THEREFOR. WILLIAM L. PATTERSON, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 7, 1916. Serial No. 76,580. (Cl. 88—26.)



1. In a projection apparatus, the combination with a holder for an object to be projected by reflection and an objective arranged in coöperative relation thereto, of an illuminating system comprising a single light source located at one side of the object and in close proximity to that surface of said object which is to be projected and in a direction inclined thereto, a light converging reflector arranged with its axis coincident with a straight line extending from said light source to said object and a compensating reflector mounted on that side of the object opposite to the light and arranged to direct the light rays received from the light source onto the object from a direction at the side of the object remote from the light.

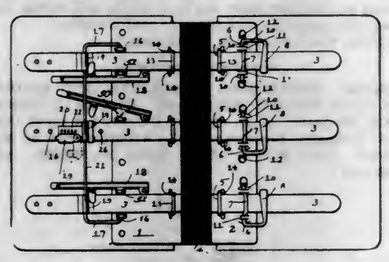
2. In a projection apparatus, the combination with a holder for an object to be projected by reflection, a holder for an object to be projected by transmitted light, an objective individual to the former and an objective and con-

densing lenses individual to the latter, of an illuminating system comprising a concentrated light source arranged in close proximity to the surface of the holder for the object to be projected by reflection, and in position to supply illumination to said condensing lenses, a mangin mirror mounted with its focus concentric with the light source and its axis co-incident with an axis extending from the first named object holder to the light source, of a supplementary reflector for directing light received from the light source onto said object holder from a direction opposite to that from which the light is directly incident thereon and means for interrupting the passage of light through one system while permitting the passage of light through the other system.

8. In a projection apparatus, the combination with a holder for the object to be projected by reflection, a holder for the object to be projected by transmitted light, and a lens system individual to each of the object holders, of a light source arranged in position to simultaneously direct light upon the first named object holder and to direct light through the last named object holder, and a swinging shutter adapted to selectively swing either in position to intercept the path of light from the first named object holder to its coöperating objective, or to swing into position to intercept the path of light from the light source through the last named object holder, said shutter functioning to open one light path while obstructing the other.

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1,224,664. LOOSE-LEAF BINDER. WILLIAM S. PROUDFIT, Grand Rapids, Mich. Filed May 27, 1915. Serial No. 30,789. (Cl. 129—41.)



1. In a device of the character described; a pair of covers; a flexible leaf-holding member connecting the covers; and means carried by one cover for holding said members in adjusted position thereon and comprising a rotatable shaft having an eccentric cam adapted in one rotary position of the shaft to engage said member directly and clamp it to said cover.

2. In a device of the character described; a flexible leaf-holding member connecting the covers; and means carried by one cover for holding said member in adjusted position thereon, and comprising a rotatable shaft having an eccentric cam adapted in one rotary position of the shaft to clampingly hold said member in its said adjusted position, said shaft having a handle portion adapted in the shaft's clamping position to overlie said member and hold it in parallel relation to the cover at a point other than that of the clamping action.

3. In a device of the character described; a pair of covers; a flexible leaf-holding member connecting the covers; and means carried by one cover for holding said members in adjusted position thereon and comprising a rotatable shaft having an eccentric cam adapted in one rotary position of the shaft to engage said member directly and clamp it to said cover, said cam being formed by flattening a portion of the shaft.

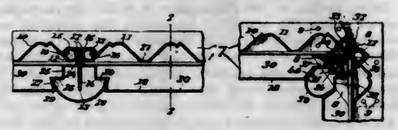
4. In a device of the character described; a pair of covers; a flexible leaf-holding member connecting the covers; a swinging arm to which said member is attached, and pivoted on one cover; and a latch pivoted on said cover and adapted in one position to abuttingly engage said member and hold the same and the arm against the slackening movement of said member.

5. In a device of the character described; a pair of cevers; a flexible leaf-holding member connecting the covers; means rotatably mounted on one cover for holding said member in adjusted position thereon: and rotary bearings for said means died up from said cover and comprising a portion forming the inner side of such bearing, and another portion forming the outer side of such bearing.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,665. WALL STRUCTURE FOR SHEET-METAL HOUSES. CLARENCE D. PRUDEN, Baltimore, Md. Filed May 13, 1914. Serial No. 838,194. (Cl. 189—2.)



1. In a wall structure for sheet-metal houses, the combination of a plurality of outer wall sections the vertical edges of adjacent sections being united; a plurality of inner wall sections joined together each section having at its vertical edges a zig-zag flange formation which projects toward and contacts with said outer wall sections; and a vertical strip whose surface is curved outwardly and bridges over the joint between every two inner wall sections and said curved strip retained to its position by the frictional contact of its edges within the edges of the wall sections.

2. In a wall structure for sheet-metal houses the combination with a series of outer sheet-metal wall sections, of means interposed between and connecting the vertical edges of adjacent wall sections,—said connecting means extending inwardly from the outer side of said outer wall sections; inner sheet-metal wall sections each having a plurality of shoulders adjacent to its vertical edges and the edges of two adjacent inner sections extending outwardly at opposite sides of the inwardly-extending connecting means of the outer wall sections, and a plate connected with and extending from a shoulder of one inner wall section over and covering the said inwardly-extending connecting means and engaging a shoulder on the wall section at the opposite side of said interposed connecting means.

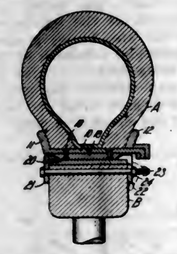
3. In a wall structure for sheet-metal houses the combination with a series of outer sheet-metal wall sections, of means for connecting the vertical edges of adjacent wall sections said connecting means having a web portion extending inwardly between the vertical edges of the wall sections which it connects; inner sheet metal wall sections extending between the inwardly-projecting webs of two connecting means and having a shoulder formed thereon at one side of each web and a plate having one of its vertical edges engaging a shoulder on an inner wall section at one side of the web said plate extending over and covering the said web and having its other edge engaging a shoulder on the wall section at the other side of said web.

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1,224,666. DEMOUNTABLE RIM. CHARLES REED RAGSDALE, St. Louis, Mo. Filed Feb. 17, 1916. Serial No. 78,858. (Cl. 152—21.)

1. A wheel rim having a tire retaining bead at one edge and a plurality of inwardly directed radial lugs at its other edge, a tire retaining bead member removably held on said rim at said last named edge, and means for holding said bead member in place consisting of a ring bearing on the outer side of said bead member and provided with a plurality of bayonet slots for the reception of the respective radial lugs, a dependent beaded pin on said rim, and a hook shaped latch pivoted to said removable bead member and adapted to engage said pin to hold said bead member in place.





2. A wheel rim having a tire retaining bead at one edge and a plurality of inwardly directed radial lugs at its other edge, a tire retaining member removably held on said rim at said last named edge, and a ring bearing on the outer side of said tire retaining member having a member arranged parallel with said rim provided with a plurality of spaced bayonet slots for the reception of the respective radial lugs, said tire retaining member and said ring jointly forming a recess for the last named edge of said rim, a dependent headed pin on said rim, and a hook shaped latch pivoted to said removable bead member and adapted to engage said pin to hold said bead member in place.

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1,224,667. BINDING FOR BOOKS. FREDERICK REUTER, New York, N. Y. Filed June 30, 1915. Serial No. 37,138. (Cl. 11—16.)



1. Means for binding books comprising an elongated strip of pliant material adapted to be secured lengthwise along the binding edges of the signatures at the back of the book, and head bands at the ends of said strip.

2. Means for binding books comprising an elongated strip of pliant material adapted to be secured lengthwise along the binding edges of the signatures at the back of the book and provided with extensions at its ends of greater thickness than said strip and forming, when the strip is secured to the signatures, head bands protruding beyond the ends of the signatures.

3. Means for binding books comprising an elongated strip of pliant material adapted to be secured lengthwise along the binding edges of the signatures at the back of the book, and provided at its ends with transversely folded two-ply portions having reinforcements secured between their plies and forming, when said strip is applied to the book, head bands protruding beyond the ends of the signatures and concealing the binding edges thereof at the heads of the binding.

4. A book having a body, a back, and covers, and an expansible connecting member including separable plies interposed between the inner surface of the back and the rear surface of the body, and head bands upon one of the plies of said expansible member, protruding beyond the ends of the body and concealing the binding edges of the signatures thereof.

5. A book having a body, a back, and covers, and a connecting member formed from tough pliant material having a central portion secured upon the rear surface of the body, forming flexible connections between the signatures thereof, and having opposite lateral portions provided with central inwardly directed cuts forming at each side of said member central oppositely arranged tongues or flaps connected with the back, and having spaced portions at the opposite sides of each of said central portions independently connected with the covers of the book to hold the body in relation to said back and covers.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,668. INK AND PROCESS OF MAKING THE SAME. ALLEN ROGERS, Brooklyn, N. Y. Filed Feb. 1, 1917. Serial No. 145,925. (Cl. 134—36.)

1. A news ink comprising an odorless and thickened asphalt base petroleum residuum, a thinning oil of about 40° Baumé, rosin and pigment.

3. A news ink comprising an odorless and thickened asphalt base petroleum residuum, a thinning oil, rosin and pigment.

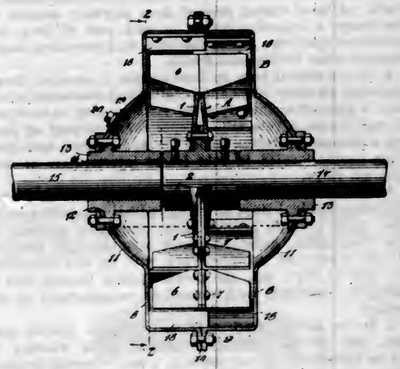
5. A news ink comprising about 39 per cent. thickened and odorless asphalt base residuum, about 47 per cent. oil of 40° Baumé, known as 300°, about 4 per cent. rosin, about 0.25 per cent. chip soap, and about 10 per cent. carbon black.

9. The process of making a news ink which comprises heating an asphalt base petroleum residuum until the same is odorless and acquires a density of about 14.5 Baumé, mixing with about two-thirds its volume of 300° oil, adding about 5 per cent. rosin and incorporating twelve per cent. carbon black and one quarter per cent. soap.

[Claims 2, 4, and 6 to 8 not printed in the Gazette.]

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1,224,669. HYDRAULIC CLUTCH. WILBUR LLOYD ROUNDS, Rensselaer, N. Y. Filed Mar. 4, 1916. Serial No. 82,109. (Cl. 138—22.)



1. A hydraulic clutch comprising driving and driven elements, one element being in the form of a liquid-tight casing having a cylindrical wall, and sets of vanes arranged on the internal surface of the said wall, the vanes of the sets being staggered with respect to each other, and the other element being in the form of an impeller wheel mounted in the casing and having blades for throwing the hydraulic medium outwardly against the vanes.

2. A hydraulic clutch comprising driving and driven elements, one element being in the form of a liquid tight casing having a circumferential wall, and internal vanes on the said wall, the vanes being arranged in sets in separate planes transverse to the axis of rotation, and one set of vanes being staggered with respect to the adjacent set, the inner ends of one set overlapping the inner ends of the other set, and the other element being rotatable in the casing and acting on the hydraulic medium therein for throwing the same outwardly against the vanes.

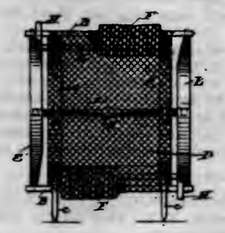
3. A hydraulic clutch comprising a casing rotatable on a horizontal axis and having vanes on its internal sur-

face, a shaft connected with the casing to rotate therewith, a paddle wheel rotatably mounted in the casing, a shaft extending into the casing and rotatably connected with the wheel, the opposite sides of the casing being dished outwardly, and a hydraulic medium in the casing of such volume that its surface lies below the shafts when the casing and paddle wheel are idle.

4. A hydraulic clutch comprising a rotatable casing divided transversely to the axis of rotation into two sections, a set of vanes arranged around the circumference of each section and extending inwardly, said sections being fastened together, with the vanes of one section staggered with respect to those of the other, and a paddle wheel rotatably mounted in the casing and having circumferential blades disposed in radial planes.

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1,224,670. GAME-TRAP. JOHN SABO, Cleveland, Ohio. Filed June 16, 1915. Serial No. 34,369. (Cl. 43—23.)



1. In an animal trap, in combination, a tubular skeleton frame, pairs of spring pressed jaws pivotally secured to the frame, a retaining device for each pair of jaws, and a common operating means therefor, said operating means released from within said frame.

2. In an animal trap, in combination, a skeleton frame including terminal rings and longitudinal connecting members, a pair of spring propelled jaws pivoted in each end of said frame, a releasable keeper for each pair of jaws and a common operating device for said keepers, said operating device located in said frame intermediate of said terminal rings.

3. In an animal trap, in combination, a skeleton frame, including terminal rings and longitudinal connecting members, pairs of jaws pivoted upon projecting portions of said longitudinal members, throw bars slidingly movable in said frame and provided each with an eye encircling one pair of jaws near the pivotal points thereof, and a spring for operating each throw bar, substantially as described.

4. In an animal trap, a frame having a central passage, and formed without projecting parts whereby it can be introduced into an opening, a pair of spring pressed jaws at each end of said frame, adapted to engage an animal entering from either end, a keeper for each pair of jaws, and a releasing device for said keepers, operable by the animal passing through the trap.

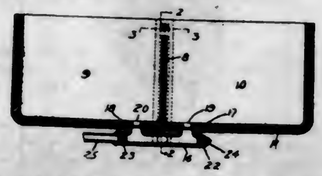
5. In an animal trap, a skeleton frame having a central passage, a pair of spring pressed jaws pivoted in each end of said frame, a releasing device operable by the animal passing through said frame, and a netting inclosing said frame, to limit the movement of the animal to the central passage.

[Claim 6 not printed in the Gazette.]

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1,224,671. STATIONARY WASHTUB. CHARLES SCHAEFER, New York, N. Y. Filed Apr. 10, 1916. Serial No. 90,025. (Cl. 4—24.)

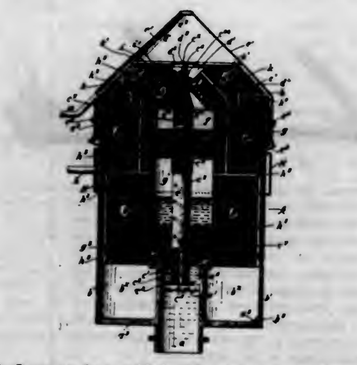
1. A wash tub having integral walls with a middle partition wall forming two compartments and provided with an integral vertical extension of the outer face of the rear wall that is chambered to form an overflow conduit opening into both the compartments a short distance below the top, said conduit extension projecting horizontally forward on the lower face of the tub bottom for a short distance, the tub bottom having an aperture in each compartment, and a pipe fitting in the form of a tube having extensions at the top secured in said tub bottom apertures and also having a rearward extension secured in said horizontal extension of the overflow conduit, said fitting being thereby secured to the tub offset from its bottom wall whereby the opposite ends of the fitting are adapted to have either end secured to a waste pipe and the other end closed by a plug.



2. A wash tub having a middle partition wall forming two compartments, and provided with a vertical conduit at the middle portion of the rear wall to form an overflow, said middle partition wall being cut away at the top adjacent the rear wall to provide an overflow from each compartment into the other compartment, said rear conduit having an opening in the tub rear wall at said cut-away portion whereby to receive the overflow from both compartments.

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1,224,672. CARBURETER-NOZZLE. WILLIAM C. M. SCHRADER, New York, N. Y. Filed Mar. 29, 1915. Serial No. 17,951. (Cl. 261—12.)



1. In a nozzle provided with an inlet for the supply of hydrocarbon, a direct feed chamber, an axially disposed direct feed fuel conduit, means including passages for heated air surrounding the nozzle for vaporising the hydrocarbon, and passages within the nozzle for heating all parts thereof, and means for inducing moist air at atmospheric pressure into the vaporized hydrocarbon.

2. A nozzle having auxiliary and main chambers and a mixing chamber at the end with a port at its inner end, a longitudinally adjustable axial hydrocarbon feed conduit controlling said port, in direct communication with the main feed chamber and formed with a conical portion for regulating the area of the port through which an auxiliary supply of hydrocarbon may be admitted to the mixing chamber, and means within the nozzle whereby a circulation of hot air through the body of the nozzle may be effected, said chambers being connected by ports extending lengthwise of the nozzle.

3. A nozzle having auxiliary and main chambers and a mixing chamber at the end with a port at its inner end, a longitudinally adjustable axial hydrocarbon feed conduit controlling said port in direct communication with the main feed chamber and formed with a conical portion for regulating the area of the port through which an auxiliary supply of hydrocarbon may be admitted to the mixing chamber, means within the nozzle whereby a circulation of hot air through the body of the nozzle may be effected, said chambers being connected by ports extending lengthwise of the nozzle, and a valve for controlling the auxiliary supply of hydrocarbon.

4. A nozzle having a mixing and a fuel chamber, means including longitudinally disposed ducts within said nozzle for effecting a supply of hydrocarbon to the mixing chamber through an auxiliary high speed supply chamber, an auxiliary high speed supply chamber, a helical duct leading from the fuel chamber for inducing a jet of hydrocarbon into a chamber adjacent the outer end of the nozzle, said nozzle being formed with ports affording communication between said fuel, auxiliary high speed supply and mixing chambers.

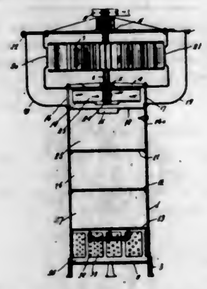
5. A nozzle having means including ducts within the nozzle for inducing air at atmospheric pressure into the vaporized hydrocarbon, means for vaporizing such hydrocarbon, a mixing chamber at the outer end of the nozzle, a main fuel feed supply chamber, an auxiliary fuel supply chamber for high speed, an axial main feed conduit, and ducts affording communication between the auxiliary high speed supply chamber and a valve-controlled chamber at the outer end of the nozzle.

[Claims 6 to 10 not printed in the Gazette.]



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1,224,673. POWER-GENERATOR. EDWARD SCOTT, Pittsburgh, Pa. Filed July 11, 1916. Serial No. 108,555. (Cl. 60—4.)



1. A power generator comprising a casing having apertured partitions to provide an air inlet compartment, a plurality of gas and air mixing compartments, and an explosive compartment, said air and gas mixing compartments interposed between the explosive compartment and air inlet compartment, means arranged within the air inlet compartment for supplying gas into the lower of the gas and air mixing compartments simultaneously with the supply of air to said compartments, an igniter within said explosive compartment, and means for conducting off the expanding gases of an explosive mixture from the explosive chamber.

2. A power generator comprising a casing having apertured partitions to provide an air inlet compartment, a plurality of gas and air mixing compartments, and an explosive compartment, said air and gas mixing compartments interposed between the explosive compartment and air inlet compartment, means arranged within the air inlet compartment for supplying gas into the lower of the gas and air mixing compartments, simultaneously with the supply of air to said compartments, an igniter within said explosive compartment, and means for conducting off the expanding gases of an explosive mixture from the explosive chamber, and means within said inlet compartment and operated by back pressure of the exploded mixture for closing said air inlet compartment.

3. A power generator comprising a casing having apertured partitions to provide an air inlet compartment, a plurality of gas and air mixing compartments, and an explosive compartment, said air and gas mixing compartments interposed between the explosive compartment and air inlet compartment, means arranged within the air inlet compartment for supplying gas into the lower of the gas and air mixing compartments simultaneously with the supply of air to said compartments, an igniter within said explosive compartment, said casing further including a fan or expeller chamber communicating with said explosive chamber, means leading from said fan or expeller chamber for conducting off the expanded gases of an explosive chamber from the explosive chamber, and an expeller operating in said fan or expeller chamber.

4. A power generator comprising a casing having apertured partitions to provide an air inlet compartment, a plurality of gas and air mixing compartments, and an explosive compartment, said air and gas mixing compartments interposed between the explosive compartment and air inlet compartment, means arranged within the air inlet compartment for supplying gas into the lower of the gas and air mixing compartments simultaneously with the supply of air to said compartments, an igniter within said explosive compartment, said casing further including a fan or expeller chamber communicating with said explosive chamber, means leading from said fan or explosive chamber for conducting off the expanded gases of an explosive mixture from the explosive chamber, and an expeller operating in said fan or expeller chamber, and means within said air inlet compartment and operated by back pressure of exploded mixture for closing said inlet compartment.

5. A power generator comprising a casing having means to provide a fan chamber, an explosive chamber, gas and air mixing chamber, and an air inlet compartment, said chambers communicating with each other and said gas and air mixing chamber communicating with said air inlet compartment, means arranged within the air inlet compartment for supplying gas into the gas and air mixing chamber simultaneously with the supply of air from said air inlet chamber, into said gas and air mixing chamber, an igniter within said explosive chamber, means communicating with said fan chamber for conducting off the exploded gases of an explosive mixture from an explosive chamber, and an expeller arranged within said fan chamber.

[Claim 6 not printed in the Gazette.]

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1,224,674. IMPREGNATED-FELT FILLER-FORM. ROY W. SEXTON, Wytheville, Va. Filed Oct. 21, 1914. Serial No. 867,807. (Cl. 2—147.)



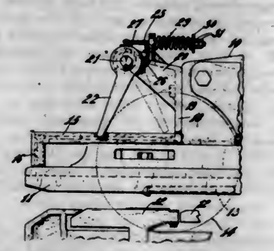
A washable filler-form embodying an embroidery design adapted to be completely covered by embroidery threads and comprising a flexible form body of compressed, unwoven fibrous material, matted together, an incorporated soluble binding agent extending from one surface inward a fractional part of the entire cross-section, by which the material is stiffened and held under partial transverse compression, said soluble binding agent being removable by washing to permit the portion of the form incorporated therewith to expand, and an incorporated water insoluble binding agent extending from the other surface of the form a fractional distance inward, by which the material is stiffened and held under transverse compression.

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1,224,675. CUT-OFF-SAW ATTACHMENT FOR END-MATCHERS. WILLIS S. SHERMAN, Milwaukee, Wis. Filed Apr. 17, 1916. Serial No. 91,524. (Cl. 143—33.)

1. In an end matcher having a work feeding passageway, a cut-off saw, and means for feeding work through the work feeding passageway past the cut-off saw, a sup-

plemental work supporting table at the side of the cut-off saw upon which work may be severed without being fed through the work feeding passageway.



2. An attachment for end matchers and the like having a cut-off saw, comprising a bed plate positioned at the side of the cut-off saw and forming a work supporting table and yieldingly resisting swinging guide arms mounted above the bed plate to guide the work as it is pushed against the cut-off saw.

3. An attachment for end matchers and the like having a cut-off saw, comprising a bed plate positioned at the side of the cut-off saw and forming a work supporting table, bracket arms connected to the bed plate, parallel guide arms pivotally mounted in the bracket arms and connected together to move in unison and swinging past the sides of the bed plate, and means for holding the guide arms in a forward position.

4. An attachment for end matchers and the like having a cut-off saw comprising a bed plate positioned at the side of the cut-off saw and forming a work supporting table, a back plate extending upwardly from the bed plate, bracket arms projecting forwardly from the back plate, a shaft rotatably mounted in the bracket arms, guide arms fixed on the shaft outside of the bracket arms, a tubular shell connecting the guide arms and having openings to receive the bracket arms, an adjustable stop on the tubular shell for engaging one of the bracket arms to limit the movements of the guide arms, a hook member engaged with the tubular shell, an ear on the back plate through which the hook member passes, and a spring surrounding the hook member and bearing against the ear and against a spring seat on the hook member for holding the guide arms in a forward position with spring pressure.

5. In an end matcher having a pressure head with a surface forming a wall of a work feeding passageway, a cut-off saw, means for feeding work through the work feeding passageway past the cut-off saw, and a supplemental work supporting table formed on the opposite face of the presser head upon which work may be severed by the cut-off saw without being fed through the work feeding passageway.

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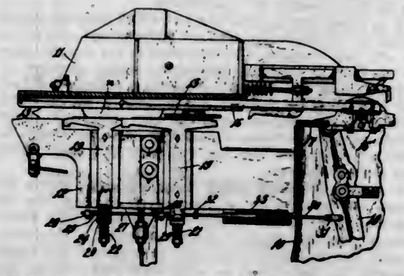
1,224,676. AUTOMATIC RELEASE FOR PRESSER-BARS. WILLIS S. SHERMAN, Milwaukee, Wis. Filed Aug. 28, 1916. Serial No. 117,130. (Cl. 144—242.)

1. A machine for operating upon the ends of strips of lumber or the like, comprising a tool, means for feeding the work to the tool, a clamping guide for the work in its travel to the tool, and means for automatically releasing the pressure of the clamping guide against the work before the work passes off therefrom.

2. A machine for operating upon the ends of strips of lumber or the like, comprising a tool, means for feeding work to the tool, a spring pressed clamping guide for the work in its travel to the tool, and means for automatically relieving the spring pressure of the guide upon the work before the work passes out of engagement therewith.

3. A machine for operating upon the ends of strips of lumber or the like, comprising a tool, means for feeding work to the tool, a spring pressed clamping guide for the work in its travel to the tool, and means for blocking the work guide to relieve the work of the crushing pressure thereof before the work is free therefrom.

4. In an end matcher, a cutter, means for feeding work past the cutter through a work feeding passageway, a presser bar forming a clamping guide for the work in the work feeding passageway, and means operated by the work feeding means for relieving the clamping action of the presser bar before the work passes out of engagement therewith.

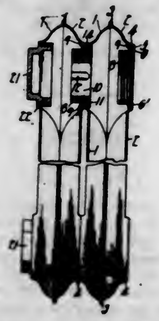


5. In an end matcher, a cutter having a work feeding passageway leading thereto, means for feeding work through the work feeding passageway, a presser bar forming a clamping guide for the work in its travel through the work feeding passageway, and a block limiting the movement of the presser bar and operated by the work feeding means while the work is in engagement with the presser bar.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,677. RADIATOR. FRANK J. SINGER, Detroit, Mich., assignor to American Pressweld Radiator Corporation, Detroit, Mich., a Corporation of Delaware. Filed Jan. 26, 1916. Serial No. 74,293. (Cl. 257—161.)



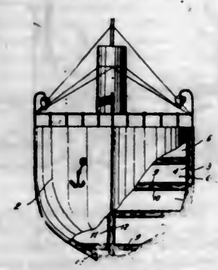
A sectional container comprising two thin metal sections having alined openings therein and flat annular flanges surrounding said openings, an outer internally threaded coupling member bearing on the inner face of the flange of one of the sections, and an inner externally threaded tubular coupling member projecting through the openings in the sections and bearing on the inner face of the flange on the other section and also being screwed into the first mentioned coupling member to draw the sections of the container together, said externally threaded coupling member having a lug projecting inwardly therefrom and having a depression in its external surface corresponding thereto.

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1,224,678. MARINE VESSEL. ERNEST L. SONS, Pittsburgh, Pa., assignor of one-half to Samuel A. Boyd and one-fourth to William L. McCandless, Pittsburgh, Pa. Filed June 21, 1916. Serial No. 104,867. (Cl. 114—68.)

1. A marine vessel comprising a hull including an inner and outer frame and further having a deck floor formed of an upper and lower section, a series of independent rows of air containing castings interposed between said frames, a series of independent rows of air containing casings interposed between said floor sections, each of said casings having one wall depressed to provide a longitudinally extending groove, an inlet valvular device mounted in the bottom of each of said grooves, and a series of independent air supply pipes, each of said pipes common to a row of casings, positioned in the grooves of and connected to the valvular device of the casings of the row.

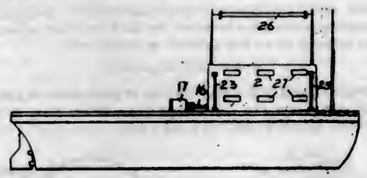




2. A marine vessel comprising a hull including an inner and outer frame and further having a deck floor formed of an upper and lower section, a series of independent rows of air containing casings interposed between said frames, and a series of independent rows of air containing casings interposed between said floor sections, each of said casings being oblong in plan and oval in cross section and each having one wall depressed to provide a longitudinal groove, an inlet valvular device in the bottom of each groove, and a series of independent air supply pipes, each of said pipes common to a row of casings, positioned in the grooves of and connected to the valvular device of the casings of the row.

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1,224,679. LIFE-SAVING DEVICE. ERNEST L. SONS, Pittsburgh, Pa., assignor of one-half to William L. McCandless and one-fourth to Samuel A. Boyd, Pittsburgh, Pa. Filed Aug. 9, 1916. Serial No. 113,868. (Cl. 9—12.)



1. A device for the purpose set forth comprising a compartment superstructure, inflatable sustaining elements interposed between the floors and walls of the compartments of said super-structure, protecting cylinders inclosing each of said inflatable elements, and means for inflating said elements.

2. A device for the purpose set forth comprising a compartment super-structure, inflatable sustaining elements interposed between the floors and walls of the compartments of said super-structure, protecting cylinders inclosing each of said inflatable elements, and means for inflating said elements, a wireless telegraph apparatus carried by said super-structure.

3. A device for the purpose set forth comprising a compartment super-structure, inflatable sustaining elements interposed between the floors and walls of the compartments of said super-structure, protecting cylinders inclosing each of said inflatable elements, and means for detachably connecting said super-structure upon the deck of a vessel.

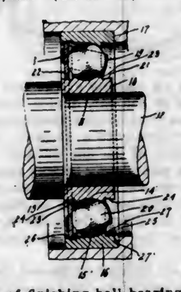
4. A device for the purpose set forth comprising a compartment super-structure, inflatable sustaining elements interposed between the floors and walls of the compartments of said super-structure, protecting cylinders inclosing each of said inflatable elements, and means for inflating said elements, a wireless telegraph apparatus carried by the said super-structure, and means for detachably connecting said super-structure upon the deck of a vessel.

5. A device for the purpose set forth comprising a compartment super-structure, inflatable sustaining elements interposed between the floors and walls of the compartments of said super-structure, protecting cylinders inclosing each of said inflated elements, said sustaining elements arranged in longitudinal and vertical rows, and an independent air supply pipe for the elements of each row, an inlet valve connection between each pipe and its associated element, and means for feeding air to said pipes.

[Claim 6 not printed in the Gazette.]

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1,224,680. METHOD OF FINISHING BALL-BEARINGS. FRANK STARIN, Springfield, Mass. Filed Jan. 15, 1916. Serial No. 72,260. (Cl. 51—4.)



1. A process of finishing ball bearing rings, which consists in providing conical grooves in that face of the ring in which the raceway is formed, said grooves being adjacent to the raceway and one on each side thereof, taking hold of and rotating the ring by means reaching first into one of said grooves and then into the other one of said grooves, and abrading during these two holding operations the raceway, the sides and the face opposite to said raceway of the ring.

2. The herein described process of finishing bearing rings which consists in providing the ring with a raceway and reëntrant grooves on opposite sides of the raceway, taking hold of the ring by revoluble means at one of the said reëntrant grooves at one side of the ring and rotating the ring, and abrading the said raceway, the side opposite the raceway and the third unobstructed side of the ring, and while the latter is held and rotated by the revoluble means.

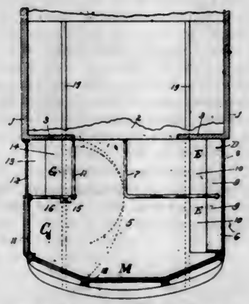
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1,224,681. PASSENGER-CAR. CHARLES BREWSTER STEELE, New York, N. Y. Filed Jan. 29, 1914. Serial No. 815,264. (Cl. 105—205.)

1. A car having an opening at the end thereof, supports extending from the end of the car, an extension on the supports provided with a floor, an ingress and an egress passageway leading over the floor from the car opening to one side of the extension provided with a plurality of immovable steps wholly inside a vertical plane of the side walls of the car extended, an egress passageway leading from the car opening to the other and opposite side of the extension provided with a plurality of immovable steps wholly inside a vertical plane of the side walls of the car extended, leaving a conductor's station.

2. A car having an opening at the end thereof, supports extending from the end of the car, an extension on the supports provided with a floor, an ingress and an egress passageway leading over the floor from the car opening to one side of the extension provided with a plurality of immovable steps wholly inside a vertical plane of the side

walls of the car extended, an egress passageway leading over the floor from the car opening to the other and opposite side of the extension provided with a plurality of immovable steps wholly inside a vertical plane of the side walls of the car extended leaving a station adapted for the conductor to perform his duties while facing simultaneously boarding incoming outgoing and alighting passengers.



3. A car having an opening at the end thereof, an extension at the end of the car, duplex ingress and egress passageways leading from the car opening to one side of the extension each provided with a plurality of steps wholly inside a vertical plane of the side walls of the car extended, an egress single passageway leading from the car opening to the side of the extension opposite the duplex passageways provided with a plurality of steps wholly inside a vertical plane of the side walls of the car extended leaving a conductor's station adjacent the steps of the single egress passageway.

4. A car having an opening at the end thereof, supports extending from the end of the car, an extension provided with a floor on the supports, a duplex ingress and egress passageway leading over the floor from the car opening to one side of the extension provided each with a plurality of steps wholly within a vertical plane of the side walls of the car extended, an egress single passageway leading over the floor from the car opening to the side of the extension opposite the duplex passageway provided with a plurality of steps wholly inside a vertical plane of the side walls of the car extended, the supports and top-risers of the steps being flush with each other for upholding the plurality of steps wholly inside a vertical plane of the side walls of the car extended.

5. A car having an opening for passengers at the end thereof, an extension at the end of the car, a duplex ingress and egress passageway divided by a barrier leading from the car opening to one side of the extension each passageway provided with steps the width of each passageway not exceeding one half the length of the extension, an egress single passageway leading from the car opening to the opposite side of the extension and intersecting one of the other passageways and provided with steps of approximately the same width not exceeding one half the length of the extension, and a barrier on the extension adapted to close off and guard the egress single passageway leaving a conductor's station.

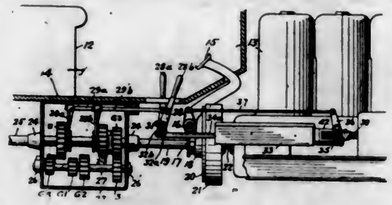
[Claims 6 to 21 not printed in the Gazette.]

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1,224,682. POWER-TRANSMITTING MECHANISM. JOHN H. STORTZ, Philadelphia, Pa., assignor to Stortz Gear Shift Company, Wilmington, Del. Filed Oct. 12, 1915. Serial No. 55,461. (Cl. 74—58.)

1. A power transmitting mechanism comprising, in combination, with the driving and driven elements of a machine, a transmitting mechanism comprising a member operatively connected with the driven element to reciprocate it and a member adapted to rotate it, and means adapted to selectively connect said members with the driving element.

2. In a power transmitting mechanism, a driving element, a driven element, a transmitting mechanism comprising a reciprocating member connected with the driven element and normally disconnected from the driving element and a rotating member normally adapted to connect the driving and driven elements, and means adapted to disconnect the driving element from the rotating member and contemporaneously therewith to connect the driving element with the reciprocating member.



3. A power transmitting mechanism comprising, in combination with the driving and driven elements of a machine, a transmitting mechanism comprising a reciprocating member connected with the driven element and a rotating member adapted to connect the driving with the driven element, and means adapted to prevent the connection between the rotating member and the driving element and to establish a connection between the reciprocating member and the driving element.

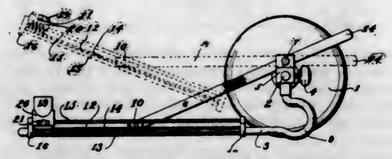
4. A power transmitting mechanism comprising, in combination with the driving and driven elements of a machine, a transmitting element operatively connected with the driven element and adapted to reciprocate said driven element, means adapted to cause the driven element to be rotated by the driving element, means to prevent said rotation, and yieldable means adapted to be actuated by the preventing means to connect the transmitting and driving elements.

5. A power transmitting mechanism comprising, in combination with the driving and driven elements of a machine, means for connecting said elements, a transmitting element operatively connected with the driven element, a connecting bolt carried by the transmitting element, a connecting collar mounted on the driving element, and means adapted to disconnect the driving and driven elements and contemporaneously therewith to establish an operative connection between the bolt and the collar.

[Claims 6 to 89 not printed in the Gazette.]

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1,224,683. SKIRT-MEASURING GAGE AND MARKER. DANIEL SULLIVAN, St. Louis, Mo. Filed Nov. 2, 1916. Serial No. 129,056. (Cl. 33—9.)



1. In a device of the character described, the combination of a base, a vertical member, an alining-rod adapted to be supported by the said vertical member, means for adjustably fastening the said alining-rod to the said vertical member, and a material-holder adapted to be moved into juxtaposition to the said alining-rod.

2. In a device of the character described, the combination of a base, a vertical member, an alining-rod adapted to be supported by the said vertical member, means for adjustably fastening the said alining-rod to the said vertical member, and a pivoted material-holder adapted to be moved into juxtaposition to the said alining-rod.



3. In a device of the character described, the combination of a base, a vertical member, an alining-rod adapted to be supported by the said vertical member, means for adjustably fastening the said alining-rod to the said vertical member, a material-holder adapted to be moved into juxtaposition to the said alining-rod, and a pivoted lever, the said material-holder being pivoted to the said lever.

4. In a device of the character described, the combination of an alining-rod, a support therefor, a cloth-holder adapted to act in coöperation with the said alining-rod, and a marker borne by the said cloth-holder and adapted for slidable movement in juxtaposition thereto, the said marker being adapted to hold suitable marking material and having means for holding the same stationary therein, the said means consisting of a movable plate and a set screw to adjust the same.

5. In a device of the character described, an alining-rod, a support therefor, a lever fulcrumed on the said support, and a cloth-holder pivoted on one end of the said lever and adapted to swing into alinement with the said alining-rod, and the said lever being adapted to be actuated by pressure upon that one of its ends opposite the one to which the cloth-holder is pivoted.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,684. LATERAL-MOTION TRUCK-BOLSTER. JEREMIAH JOSEPH SULLIVAN, Nashville, Tenn. Filed Aug. 22, 1916. Serial No. 116,275. (Cl. 105—108.)

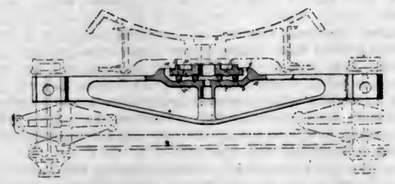


1. In an article of the class described, a bolster having a recess, there being a longitudinally disposed channel in the bolster at the bottom of the recess, the sides of which diverge upwardly from a center-line, and a center-plate disposed in the recess with its sides normally spaced from the bolster at the sides of the recess, the center-plate having supporting means for moving against the diverging sides of the bottom of the recess for holding the center-plate yieldingly in said normal position.

2. In an article of the class described, a bolster having a recess, the bolster at the bottom of the recess being inclined downwardly from its sides to a longitudinal center line, and a center-plate disposed in the recess and having its sides normally spaced from the bolster at the sides of the recess, the bottom of the center-plate being inclined downwardly from its sides to a longitudinally extending center line corresponding with the inclined bottom of the recess and for the purpose specified.

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1,224,685. LATERAL-MOTION TRUCK-BOLSTER. JEREMIAH J. SULLIVAN, Nashville, Tenn. Original application filed Aug. 22, 1916, Serial No. 116,275. Divided and this application filed Dec. 22, 1916. Serial No. 138,401. (Cl. 105—108.)



1. In an article of the class described, a bolster having a recess, the bolster forming sides for the recess, there being a plurality of longitudinally extending channels in the bolster at the bottom of the recess, the sides of each channel diverging upwardly, a center-plate disposed in the recess and having its sides normally spaced from the said sides of the recess, there being a plurality of longitudinally extending channels in the bottom of the center-plate, the sides of the last mentioned channels diverging downwardly, and a plurality of rollers disposed in the channels between the center-plate and the bolster, the bolster at the bottom of the recess being inclined outwardly and upwardly from the outer sides of the outer channels to offer greater resistance under unusual conditions.

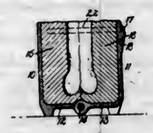
2. In an article of the class described, a bolster having a recess, the bolster forming sides for the recess, there being a plurality of longitudinally extending channels in the bolster at the bottom of the recess, the sides of each channel diverging upwardly, a center-plate disposed in the recess and having its sides normally spaced from the said sides of the recess, there being a plurality of longitudinally extending channels in the bottom of the center-plate, the sides of the last mentioned channels diverging downwardly, the last mentioned channels being of substantially the same width as the first mentioned channels, and a plurality of rollers disposed in the channels between the center-plate and the bolster, the bolster at the bottom of the recess being inclined outwardly and upwardly from the outer sides of the outer channels to offer greater resistance under unusual conditions.

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1,224,686. [WITHDRAWN.]

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1,224,687. MOLD FOR MAKING DENTAL-CROWN DIES. SAMUEL WALKER TALIAFERRO, New York, N. Y. Filed Oct. 26, 1916. Serial No. 127,784. (Cl. 22—113.)

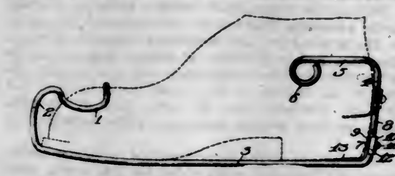


1. A mold comprising two hollow flask parts closed at the bottom and open at their opposite faces and entirely open at the top, a pivotal transverse connection connecting the flask parts with each other at their closed bottoms, and a plastic material filling the said flask parts and capable of withstanding a high heat to permit of first making an impression of a plaster cast in the said plastic material and subsequently allow casting of a die in the impression formed by the plaster cast in the plastic material.

2. A mold, comprising two hollow flask parts closed at the bottom and partly open at their opposite faces and entirely open at the top, a transverse pivotal connection connecting the flask parts with each other at their closed bottoms, a plastic material filling the said flask parts and capable of withstanding a high heat to permit of first making an impression of a plaster cast in the said plastic material and subsequently allow casting of a die in the impression formed by the plaster cast in the plastic material, and means for holding the said flask parts locked in closed position.

3. A mold, comprising two hollow flask parts closed at the bottom and open at the top, the opposite faces of the flask parts having inwardly extending flanges at the front and rear, the inner edges of the flanges on each flask part being spaced apart to provide an opening between them, the flanges of the flask parts engaging each other when the flask parts are closed, a transverse pivot connecting the flask parts with each other at their closed bottoms, and a plastic material filling the said flask parts flush with the outer faces of the said flanges, the plastic material being capable of withstanding a high heat to permit of first making an impression of a plaster cast in the said plastic material and subsequently allowing casting of a die in the impression formed by the plaster cast on the plastic material.

1,224,688. SKATE. GEORGE W. TAYLOR, Rochester, N. Y. Filed Jan. 25, 1917. Serial No. 144,363. (Cl. 46—50.)



1. A skate comprising a pair of parallel runners connected at one end and a shoe engaging portion extending upwardly from the opposite end of each runner.

2. In a skate, the combination with a pair of runners connected to each other at one end, of a shoe engaging portion at the other end of each runner, and means for drawing the shoe engaging portions toward each other.

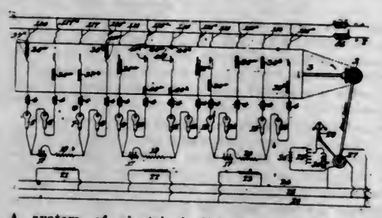
3. In a skate, the combination with a pair of runners connected to each other at one end, of a shoe engaging portion at the other end of each runner, and means operated by downward pressure of the wearer's shoe for drawing the shoe engaging portions toward each other.

4. In a skate, the combination with a pair of runners connected at their front ends, and a heel engaging portion at the rear end of each runner, of means operated by downward pressure of the wearer's heel for moving the heel engaging portions toward each other.

5. In a skate, the combination with a pair of runners connected at their front ends, an upwardly extending portion at the rear end of each runner, and heel engaging portions at the upper ends of the upwardly extending portions, of means coöperating with the upwardly extending portions to draw the heel engaging portions toward each other.

[Claims 6 to 13 not printed in the Gazette.]

1,224,689. SYSTEM OF ELECTRICAL DISTRIBUTION. PERCY H. THOMAS, Upper Montclair, N. J., assignor to Cooper Hewitt Electric Co., Hoboken, N. J., a Corporation of New Jersey. Filed Mar. 29, 1913. Serial No. 757,499. (Cl. 175—363.)



1. A system of electrical distribution comprising a direct current transmission line, a receiving system containing a source of alternating current, and vapor rectifiers interposed between said transmission line and said receiving system, in combination with means for completing the circuits of said rectifiers, for passing with regard to the direction of voltage in said alternating receiving system timed impulses to said receiving system, and for interrupting the circuit of said rectifiers at other times, energy being thus supplied to said receiving parts in separate integral sections.

2. In a system of electrical distribution, a direct current supply source, a receiving circuit containing a source of alternating current, and means for controlling the direction of current between said direct current source and said receiving circuit, in combination with means for controlling the time of current impulses from said supply to said receiving circuit.

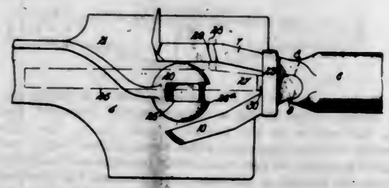
3. In a system of electrical distribution a direct current supply circuit, a receiving circuit, an alternating current machine in said receiving circuit maintaining a definite frequency and rectifiers interposed between said direct current circuit and said machine in combination with circuit making and circuit breaking devices whereby energy is delivered from said supply circuit to said alternating circuit.

4. In a system of electrical distribution, a constant direct current supply and an alternating receiving circuit, in combination with means for connecting the supply circuit to the alternating current circuit at a given point at times when the direct current and alternating electromotive forces are opposed, means for suppressing the flow of current from the receiving circuit to the source during such periods, and means for severing the said connection between the systems at periods when the direct voltage and the alternating voltage are in the same direction.

5. In a system of electrical distribution, the combination with a direct current source, a three phase alternating receiving circuit, three single phase transformers serving to raise the voltage in said receiving circuit and means for permitting the flow of current from the direct current supply against electromotive force in any of said transformers during periods of rising alternating voltage only in said transformer, of means for suppressing current flow in response to alternating voltage in said transformers operating in the same direction as in the direct source.

[Claims 6 to 14 not printed in the Gazette.]

1,224,690. FLEXIBLE COUPLING. CHARLES E. TOWNLEY, Dryden, N. Y. Filed Aug. 25, 1916. Serial No. 116,793. (Cl. 74—17.)



1. In a flexible coupling, a member having two jaws one movable relatively to the other, a collar disposed around the jaws and having a cross member disposed between the jaws, there being a bearing in one of the jaws for a fulcrum pin, and another member having a projection normally embraced by the jaws, there being a slot in the projection for a key carrying a fulcrum pin for disposal in the bearing in the jaw, and there being a stop on the cross member for engagement by the key so that the key may be used to press back the collar.

2. In a flexible coupling, a hollow member having a head with an opening and provided with a jaw, a second jaw mounted on the member and movable relatively to the first jaw, a collar disposed around the jaws and provided with a cross piece, a spring in the hollow member, a rod disposed through the opening in the hollow member and connecting the cross piece with the spring, and another member having a projection adapted to be embraced by the jaws.

3. In a flexible coupling, a hollow member with a jaw, there being a transverse bearing in the member adjacent the jaw, a second jaw having a knuckle journaled in the bearing, there being a longitudinal opening in the member at the jaw, and there being a cut-away portion in the knuckle which forms an enlargement of the opening in the member, a collar disposed around the jaws, a spring in the hollow member, a rod connecting the spring with the collar, and a second member having a projection normally embraced by the jaws.

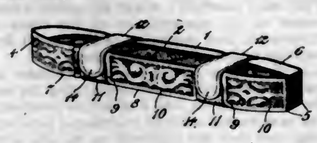
4. In a flexible coupling, a member having two jaws one movable relatively to the other, a collar disposed around the jaws, another member having a projection normally embraced by the jaws, there being a bearing in the projection for the insertion of a key for pressing back the collar.



5. In a flexible coupling, a member having two jaws one movable relatively to the other, a collar disposed around the jaws, there being a bearing in one of the jaws for a fulcrum pin, and another member having a projection normally embraced by the jaws, there being a solt in the projection for a key carrying a fulcrum pin for disposal in the bearing in the jaw, so that the key may be used to press back the collar.

[Claims 6 and 7 not printed in the Gazette.]

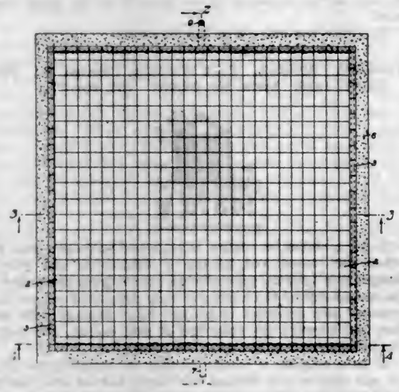
1,224,691. CONTAINER. ANTHONY J. TRASSO, West Hoboken, N. J. Filed July 26, 1915. Serial No. 41,867. (Cl. 131—11.)



1. A protective container for cigars having an elongated body portion formed from stiff protective material transversely bent at the end of the cigar and comprising spaced parallel members extended along opposite sides of the cigar to protect the same and separated from each other at their edges to facilitate inspection of the cigar, and a retaining band extended around the container and across the opposite exposed faces of the cigar to hold said parallel members in relation and to retain the cigar within the container.

[Claim 2 not printed in the Gazette.]

1,224,692. GRASS-PLOT FOUNDATION. WILLIAM H. TUCKER, Dobbs Ferry, N. Y. Filed Jan. 6, 1917. Serial No. 140,907. (Cl. 47—36.)



1. A golf putting green comprising a stratum of material impervious to water and provided with a plurality of passageways whereby water or air may circulate therethrough, a water absorbing material arranged on said impervious layer to an appreciable depth and designed to act as a sponge for retaining a predetermined amount of water, a layer of top soil arranged above said layer of absorbing material whereby moisture is continually supplied to the grass on the top soil, a wall of material impervious to water surrounding said impervious stratum, and mechanically operated means for controlling the flow of water from the upper surface of said impervious stratum.

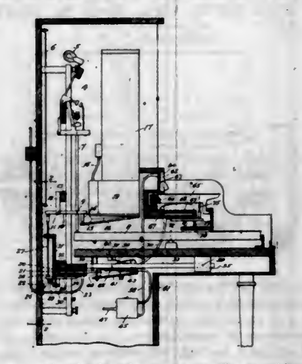
2. A golf putting green comprising a foundation, a hollow tile stratum on said foundation arranged at such an angle as to allow the water to drain therefrom, means for connecting said tile together so as to present an impervious surface, a hollow wall surrounding said tile, a porous wall surrounding said hollow wall, a layer of absorbent material arranged on said tile, a layer of top soil on said last mentioned layer, an air tube communicating with the opening in said tile, and a discharge tube communicating with the opposite end of the opening in said tile.

3. A golf putting green comprising a wall of cinders, a drainage pipe connected with said wall whereby the outside surface water will pass from said wall of cinders to said pipe and thereby avoid the space within said wall, a top soil coating within said wall and overlying the same, a porous stratum arranged below said top soil in communication with said drainage pipe whereby the water placed within said cinder wall will be retained by said porous stratum to the absorbing capacity thereof and the remaining part will be discharged out said pipe.

4. A golf putting green comprising a clay foundation, a cinder wall surrounding said foundation and contacting on the outer edge thereof, a drainage pipe in communication with said cinder wall, a stratum of material impervious to water arranged on said clay foundation, one end of said stratum being broken away for allowing water to flow therefrom into said cinder wall and from thence to said drainage pipe, a second wall arranged adjacent said cinder wall formed of material impervious to water whereby water cannot pass through the cinder wall into the space surrounded by said impervious wall, a layer or stratum of absorbent material arranged on said impervious stratum, and a superimposed layer of top soil arranged on said absorbent stratum and overlapping said walls.

5. A golf putting green, comprising a foundation, a hollow tile stratum on said foundation arranged at such an angle as to allow the water to drain therefrom, means for connecting said tile together so as to present an impervious surface, a wall surrounding said tile, a layer of absorbent material arranged on said tile, a layer of top soil on said last mentioned layer, an air tube communicating with the opening in said tile, and a discharge tube communicating with the opposite end of the opening in said tile.

1,224,693. AUTOMATIC MUSIC-PLAYING INSTRUMENT. HAROLD A. VAN VALKENBURG, Oakland, Cal., assignor to American Photo Player Company, Berkeley, Cal., a Corporation of California. Filed Jan. 13, 1916. Serial No. 71,910. (Cl. 84—198.)



1. In a music-playing instrument, the combination of a plurality of music-playing devices, each comprising a plurality of sound-producing elements, means for actuating the sound-producing elements of one of said devices, means actuated by said first-named means for simultaneously operating the elements of the other of said devices, and pneumatically-controlled means for controlling said second-named means to prevent or permit, at will, the operation of the latter by said first-named means.

2. In a music-playing instrument, the combination of a plurality of music-playing devices, each comprising a plurality of sound-producing elements, means for actuating the sound-producing elements of one of said devices, means actuated by said first-named means for simultaneously operating the elements of the other of said devices and shiftable into and out of position for effecting said last-referred to operation, and pneumatically-controlled means for controlling said second-named means to prevent or permit, at will, the operation of the latter by said first-named means.

3. In a music-playing instrument, the combination of a plurality of music-playing devices, each comprising a plurality of sound-producing elements, means for actuating the sound-producing elements of one of said devices, means actuated by said first-named means for simultaneously operating the elements of the other of said devices and shiftable into and out of position for effecting said last-referred to operation, means tending to shift said second-named means to a position in which they are actuated by said first-named means, and pneumatically controlled means for shifting said second-named means into a position in which the latter are not actuated by said first-named means.

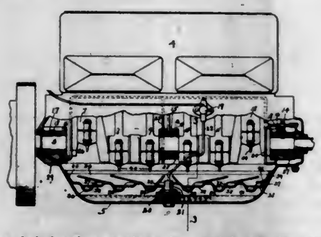
4. In a music-playing instrument, the combination of a plurality of music-playing devices each comprising a plurality of sound-producing elements, means for actuating the sound-producing elements of one of said devices, means actuated by said first-named means for simultaneously operating the elements of the other of said devices, shiftable into and out of position for effecting said last-referred to operation, an adjustable stop coöperating with said second-named means for fixing its position relative to said first-named means, and means for shifting said second-named means, for the purpose set forth.

5. In a music-playing instrument, the combination of a plurality of music-playing devices, each comprising a plurality of sound-producing elements, automatically operating means for actuating the said elements of one of said devices, means actuated by said first-named means for simultaneously operating the elements of the other of said devices and controllable to prevent or permit, at will, said last-referred to operation, and means for operating said last-referred to elements independently of said first-referred to device and simultaneously with the automatic actuation of the latter.

[Claims 6 to 22 not printed in the Gazette.]

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1,224,694. LUBRICATING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. ERNEST M. WHITE, Detroit, Mich. Filed July 31, 1916. Serial No. 112,229. (Cl. 184—13.)



1. In a lubricating system for multi-cylinder engines, the combination of a crank case constituting the main oil reservoir and an oil pan within the crank case and formed with transverse oil receptacles, one for each connecting rod, said oil pan having depressions connecting to said receptacles, and openings in said depressions through which the oil can flow to the main reservoir, said oil pan also having openings in transverse alinement and at one side of a plurality of said receptacles, and inclined troughs on the opposite side from said last named openings to convey oil longitudinally of the crank case.

2. In a lubricating system for multi-cylinder engines, the combination of a crank case constituting the main reservoir for lubricating oil and an oil pan within the crank case formed with transverse oil receptacles, one for each connecting rod, means to convey lubricating oil to the two end receptacles, said oil pan having openings at one side of the central plane of the engine through which oil may be thrown by the connecting rods as they dip into said receptacles, and inclined troughs on the opposite side of the oil pan to convey splashed up oil longitudinally of the crank case to other receptacles.

3. In a lubricating system for multi-cylinder engines, the combination of a crank case constituting the main reservoir for lubricating oil and an oil pan within the crank case formed with oil receptacles into which the connecting rods may dip to splash up the oil, said pan formed with openings through which the excess of splashed up oil may pass to the main reservoir; means to convey a portion of the splashed up oil longitudinally of the crank case to other receptacles, and means to carry the oil from the main reservoir to one of the receptacles.

4. In a lubricating system for multi-cylinder engines, the combination of a crank case constituting the main reservoir for lubricating oil, and a structure mounted within the crank case formed with oil receptacles into which the connecting rods may dip to splash up the oil, said structure formed with a plurality of openings through which the excess of oil splashed up by the connecting rods may pass to the main reservoir, and a series of troughs within said structure inclining inwardly to catch a portion of the oil splashed up from relatively outer receptacles and convey it to the next adjacent receptacles.

5. In a lubricating system for multi-cylinder engines, the combination of a main reservoir for the lubricating oil, means to convey the oil from the reservoir to the bearings of the engine, a structure mounted in the crank case below the bearings of the engine and adapted to receive the oil that flows therefrom and formed with transverse depressions adapted to hold oil into which the connecting rods of the engine may dip to splash up the oil, means to convey a portion of the splashed up oil to the depression next inside the one from which the oil was splashed up, said structure formed to permit the passage of another portion of the splashed up oil directly to the main reservoir.

[Claim 6 not printed in the Gazette.]

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1,224,695. SIGNAL. CARL WILLERS, Chicago, Ill. Filed May 1, 1916. Serial No. 94,570. (Cl. 40—77.)




1. In a signal, a casing having one end open and the other end closed and having a window in one side, a designating cylinder pivotally supported from the center of the closed end of the casing, a lamp supported within said cylinder and arranged to project light through said window and through the open end of said casing, and means for turning said cylinder on its pivot.

2. In a signal, a casing having an opening for light on one side, a cap closing the upper end of said casing, the lower end of the casing being open and unobstructed for the passage of light, a designating cylinder pivotally supported on said cap and within the casing, a lamp secured to the cap and supported within the cylinder below the pivot, said lamp being arranged to project light through the open side and bottom of the casing, and means controlled from the outside of the casing for turning the cylinder on its pivot to interpose different designations between the light and the open side of the casing.

3. In a signal, a cylindrical casing having its upper end closed and its lower end open and unobstructed, a designating cylinder located within the casing and pivotally supported from the closed end thereof, a driving connection located within the casing and secured to the pivotal support, and a lamp located within the cylinder.



4. In a signal, a cylindrical casing, a cap closing the upper end of the casing, a transparent cylinder located within the casing, covers closing the ends of said cylinder, the lower one of said covers being of transparent material, a pivotal connection between the cap and the upper cover of said cylinder by means of which connection the cylinder is supported and rotated within the casing, and a lamp supported within the cylinder, the support for said lamp being connected to said cap and extending through a slot in the upper cover for the cylinder.

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1,224,696. ANTISEPTIC TOOTH-BRUSH HOLDER AND STERILIZER. JOHN D. WISE, Jackson, Tenn. Filed Sept. 10, 1915. Serial No. 50,062. (Cl. 248—63.)



1. A device of the class described comprising a brush case, a longitudinal disinfectant holder within said case, the spaced ends of said disinfectant holder being formed to support opposite ends of a brush within said case, perforated end members for said case, and supporting means for said case.

2. A device of the class described comprising a case, a brush support within the bottom of said case, an upward extension from said support serving to carry a saturated member longitudinally in the body of said case, perforated end members for said case, perforated disinfectant holders positioned in said perforated end members, and means for supporting said case in upright position.

3. A device of the class described comprising a case, a perforated cap threaded upon one end of said case, a disinfectant holder extending longitudinally within said case, a brush support integral with one end of said holder, a perforated hinged cover air-tight upon the opposite end of said case, perforated disinfectant holders carried by said cap and said cover, and means for supporting said case.

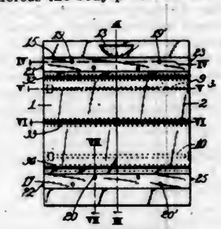
4. In a tooth brush-holder, a receptacle having closures mounted upon its ends, a brush supporting member mounted therein formed from a length of metal having one end thereof bent at right angles and engaged with the side of the receptacle, the opposite end of the length of metal being also bent at right angles and provided with an opening adapted to accommodate the handle of the tooth brush, the longitudinal edges of the length being bent upon itself and extended toward each other and a strip of absorbent material engaged in the bent longitudinal edges.

5. In a holder of the character described, a receptacle, a closure mounted on each end thereof having openings therein to permit the passage of air, a brush holder mounted in the receptacle and extending longitudinally thereof, and formed from a length of metal having its ends bent at right angles to engage and support a tooth brush, and means for supporting a disinfectant in the receptacle.

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1,224,697. DIVISION-BLOCK FOR BALING-PRESSES. JOHN WILLIAM WRIGHT, Marion township, Boone county, Ind. Filed Sept. 28, 1916. Serial No. 122,634. (Cl. 100—24.)

1. A division-block comprising a body part composed of two sections, one section having a groove, the remaining section having a tongue extending into the groove, bolts embedded in the sections and extending through the tongue, the bolts being rigidly secured in the sections and rigidly securing the tongue in the groove to constitute a solid body part, the body part having cylindrical guide channels bored therethrough and also relatively narrow slots extending from the faces of the body part to the channels, and protecting face plates set into the face portions of the body part and secured thereto, the face plates extending across the body part from end to end thereof.



2. A division-block comprising a body part composed of two sections, one section having a groove, the remaining section having a tongue extending into the groove, bolts stationarily embedded transversely in the sections and extending through the tongue, the bolts being rigidly secured in the sections and rigidly securing the tongue in the groove to constitute a solid body part, the body part having cylindrical guide channels bored therethrough and also relatively narrow slots extending from the faces of the body part to the channels, protecting face plates set into the face portions of the body part and secured thereto, the face plates extending across the body part from end to end thereof, and protecting end plates integrally connected to the face plates and set into the faces of the ends of the body part respectively.

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1,224,698. EXPANSION DEVICE. LOTHAR R. ZIFFERER, Ridgewood, N. J. Filed Dec. 18, 1915. Serial No. 67,591. (Cl. 85—3.)



1. An expansion device comprising, in combination, a bolt, a pair of wings pivotally mounted upon the bolt, the wings being U-shaped in cross-section and arranged to fold upon the bolt with the side walls of the wings overlapping the bolt, and each wing being provided with interengaging shoulders for determining the limit of expansion of the wings with respect to each other, substantially as described.

2. An expansion device comprising, in combination, a bolt, a pair of wings pivotally mounted upon the bolt, the wings being U-shaped in cross-section and arranged to fold upon the bolt with the side walls of the wings overlapping the bolt, there being means independent of the bolt for determining the limit of expansion of the wings, with respect to each other, substantially as described.

3. An expansion device comprising, in combination, a bolt, a pair of wings pivotally mounted upon the bolt, there being means for limiting the expansion of the wings with respect to each other, to a position where their bearing faces are in alinement with each other, said wings when fully expanded being capable of angular ad-

justment with respect to the bolt, substantially as described.

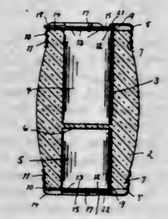
4. An expansion device comprising, in combination, a bolt, a pair of wings pivotally mounted upon the bolt, the wings being U-shaped and of the same size in cross-section, whereby the wings are pivoted out of alinement with each other, there being means for determining the limit of expansion of the wings with respect to each other, substantially as described.

5. An expansion device comprising, in combination, a bolt, a pair of wings pivotally mounted upon the bolt, the wings being U-shaped in cross-section, tension means for expanding the wings situated in the hollow portion of the wings at the pivotal ends thereof, there being means for determining the limit of expansion of the wings with respect to each other, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,699. CONDIMENT-SHAKER. ERNEST AROLAN, Kingston, N. Y. Filed Oct. 19, 1916. Serial No. 126,519. (Cl. 65—45.)

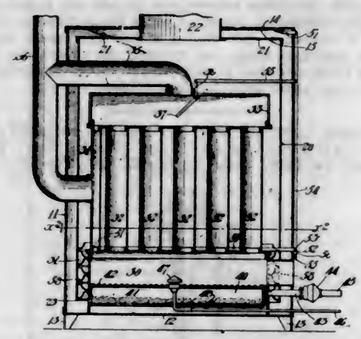


1. A condiment shaker comprising a receptacle provided with external threads at each end thereof and having the interior thereof divided into two compartments, a cap for each end of the receptacle, each cap consisting of an end plate having a central perforated depression and a plurality of other depressions radiating therefrom, said radiating depressions engaging the end of the receptacle to position the cap, a threaded flange formed integral with the end plate, a perforated closing plate rotatably mounted in the central depression, and means for holding said closing plate in its closed position.

2. A condiment shaker comprising a receptacle provided with external threads at each end thereof and having the interior thereof divided into two compartments, a cap for each end of the receptacle, each cap consisting of an end plate having a central perforated depression and a plurality of other depressions radiating therefrom, said radiating depressions engaging the end of the receptacle to position the cap, a threaded flange formed integral with the end plate, a perforated closing plate situated in the central depression, means for pivoting said plate in position, an operating handle formed integral with the closing plate and situated in one of the radial depressions, and means for normally holding said closing plate in its closed position.

3. A condiment shaker comprising a receptacle provided with external threads at each end thereof and having the interior thereof divided into two compartments, a cap for each end of the receptacle, each cap consisting of an end plate having a central perforated depression and a plurality of other depressions radiating therefrom, a threaded flange formed integral with the end plate, a perforated closing plate situated in the central depression, means for pivoting said plate in position, an operating handle formed integral with the closing plate and situated in one of the radial depressions, said handle having flanges formed with its sides and end, a lug formed integral with the edge of the closing plate, another lug formed from the cap in the region of one of the radial depressions, said lug being bent outward and the hole left thereby overlying the end of the receptacle, and a spring having its ends fastened to said lugs for normally holding the closing plate in its closed position.

1,224,700. GAS-FURNACE. CHARLES ATHERTON, Pasadena, Cal., assignor to Unit System of Heating and M'f'g Company, Pasadena, Cal., a Corporation of California. Filed Mar. 13, 1916. Serial No. 83,988. (Cl. 126—116.)



1. In a gas furnace, an outer shell having air inlet ports in the top thereof, an air inlet damper so formed and located as to close said air inlet ports; an inner shell inside said outer shell; a register pipe secured in said inner shell in open communication with the interior thereof, said register pipe projecting through said outer shell; a manifold located inside said inner shell near the top thereof; a combustion chamber resting on the bottom of said outer shell and projecting into said inner shell, said bottom of said outer shell having an opening therethrough connecting the interior of the combustion chamber with the outer air; a plurality of tubes connecting the top of the combustion chamber with the bottom of the manifold; burner means for producing hot gases in the combustion chamber; an indirect flue intake connecting one end of said combustion chamber with a corresponding end of said manifold; a direct flue passing through said outer and inner shells and connecting to the top of said manifold; a direct flue damper so located that it may be caused to close said direct flue; an indirect flue connected to a point in the side of said indirect flue intake between said combustion chamber and said manifold, said indirect flue passing through said inner shell and said outer shell and being connected into said direct flue outside said outer shell; a thermostat rod passing between said tubes above said combustion chamber and having one end secured in the heater and the other end projecting through said outer and inner shells; and means by which said rod operates said air inlet damper and said direct flue damper.

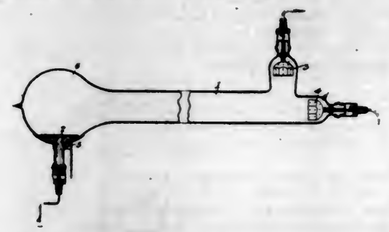
2. In a gas furnace; an outer shell having air inlet ports in the top thereof; an air inlet damper so placed as to open and close said ports; an inner shell located inside said outer shell, a space being left between said shells down through which the air from said air inlet ports can travel; a heating means inside said inner shell, said inner shell being perforated at its lower end to admit air to the space around said heating means; a register pipe secured to said inner shell and projecting through said outer shell; a thermostatic device in said inner shell; a direct flue for said heating means; a direct flue damper for said direct flue; means by which said thermostatic device operates said direct flue damper; and means by which said thermostatic device operates said air inlet damper.

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1,224,701. MULTIPLE-ANODE MERCURY-VAPOR APPARATUS. JAMES R. BAKER, Arlington, N. J., assignor to Cooper-Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed July 25, 1913. Serial No. 781,121. (Cl. 176—42.)

1. In a system of electrical distribution, the combination with an electric device having a plurality of anodes and a common cathode therein, each anode having a current carrying capacity less than the normal operative current of the device, of a source of energy supplying current to said device greater than the maximum current carrying capacity of an anode, and means for preventing an excessive rise of current at said anode.





2. In a system of electrical distribution, the combination with an electric device having a plurality of anodes and a common cathode therein, each anode having a current carrying capacity less than the normal operative current of the device, of means for supplying to said device a current greater than the current carrying capacity of an anode, and means responsive to energy variations at an anode for causing corresponding variations at another anode.

3. In a system of electrical distribution, the combination with an electric device having a plurality of anodes and a common cathode therein, each anode having a current carrying capacity less than the normal operative current of the device, of means for supplying to said device a current greater than the current carrying capacity of an anode, and means responsive to energy variations at said anode for causing corresponding energy variations at another anode, whereby the applied energy across the tube is equally divided between the anodes.

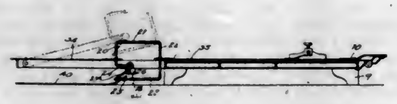
4. In a system of electrical distribution, the combination with a gas or vapor device having a plurality of anodes and a common cathode therein, each anode having a current carrying capacity less than the normal operative current of the device, of means for operating said gas or vapor device on a current greater than the current carrying capacity of an anode, and means for preventing an excessive flow of current to an anode.

5. In a system of electrical distribution, the combination with a gas or vapor device having a plurality of positive electrodes and a common negative electrode therein, each positive electrode having a current carrying capacity less than the normal operative current of the device, of means for operating said gas or vapor device on a current greater than the current carrying capacity of a positive, and means responsive to current variations at one positive for causing similar current variations at another positive.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,702. DUPLICATING-MACHINE. ALEXANDER T. BELL, Chicago, Ill. Filed Aug. 9, 1916. Serial No. 113,960. (Cl. 101—131.)



1. In a duplicating machine, the combination of a table, a holder adjacent one end of the table adapted to slidably carry duplicating sheets, and means permitting a shifting of said holder away from the table to allow a sheet to slide upon the holder and to pass from a position above the table to a position below the table, substantially as described.

2. In a duplicating machine, the combination of a table, a holder adjacent one end of the table adapted to slidably carry duplicating sheets, a swinging support for said holder to permit a movement of said holder away from the table and allow selected ones of said sheets to slide upon the holder and pass from a position above the table to a position below the table, substantially as described.

3. In a duplicating machine, the combination of a table, a holder adjacent one end of the table adapted to slidably carry duplicating sheets, a foldable and swinging support for said holder to permit a movement of said holder away from the table and allow selected ones of said sheets to slide upon the holder and pass from a position above the table to a position below the table, substantially as described.

4. In a duplicating machine, the combination of a table, a holder adjacent one end of the table, consisting of companion frames adapted to slidably carry duplicating sheets, and means permitting a shifting of said holder away from the table to allow selected ones of said sheets to slide upon said frames and pass from a position above the table to a position below the table, substantially as described.

5. In a duplicating machine, the combination of a table, a bar at one end of the table, a shiftable support for said bar, companion oppositely-disposed duplicating sheet holders carried by said bar adapted to slidably carry duplicating sheets, and said bar when shifted placing the holders in position to permit a sheet to slide upon said holders and move into a position on or off the table, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

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1,224,703. METHOD OF DEHYDRATING AND CURING TOBACCO. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed Sept. 23, 1914. Serial No. 863,100. (Cl. 131—6.)

1. The method of dehydrating and curing tobacco, which consists in subjecting the tobacco to the action of large volumes of highly heated dry air, continued until the moisture content of the tobacco is reduced to such an extent as will maintain the cell membrane of the tobacco in a condition to permit endosmosis with water, but insufficient without additional moisture, to coact with the enzym of the tobacco to produce fermentation or mold, and simultaneously subjecting the tobacco to the action of the rays of an electric light of sufficient intensity to affect bodies carried by the leaf and develop the color of the leaf and the aromatic properties of such bodies.

2. The method of dehydrating and curing tobacco, which consists in first subjecting the tobacco to the action of large volumes of highly heated dry air until the moisture content of the tobacco is reduced to such an extent as will maintain the cell membrane in a condition to permit endosmosis with water, but insufficient to coact with the enzym of the tobacco to produce fermentation or mold, and then subjecting the tobacco to a temperature sufficient to develop the aromatic characteristics of the essential oils of the tobacco and to progressively change the color of the tobacco.

3. The method of dehydrating and curing tobacco, which consists in first subjecting the tobacco to the action of large volumes of highly heated dry air until the moisture content of the tobacco is reduced to such an extent as will maintain the cell membrane in a condition to permit endosmosis with water, but insufficient to coact with the enzym of the tobacco to produce fermentation or mold, and simultaneously subjecting the tobacco to the action of electric light and a temperature sufficient to develop the aromatic characteristics of the essential oils of the tobacco and to progressively change the color of the tobacco.

4. The method of dehydrating and curing tobacco, which consists in first subjecting the tobacco to the action of large volumes of dry air heated originally to approximately 110° temperature, and then successively increasing the temperature until the moisture content of the tobacco is reduced to such an extent as will maintain the cell membrane in a condition to permit endosmosis with water, but insufficient to coact with the enzym of the tobacco to

produce fermentation or mold, then subjecting the tobacco to approximately 200° temperature to develop the aromatic characteristics of the essential oils of the tobacco and to progressively change the color of the tobacco.

5. The method of dehydrating and curing tobacco, which consists in first subjecting the tobacco to the action of approximately 110° temperature and maintaining said temperature for from one to two hours; then raising the temperature to approximately 120° and continuing said temperature for from two to five hours; then raising the temperature to approximately 140° and continuing said temperature until such time as the original moisture content of the tobacco is so diminished as to permit endosmotic action through the cell membrane but insufficient to coact with the enzym of the tobacco to produce fermentation or mold, then subjecting the tobacco to approximately 200° temperature and continuing said temperature for from two to ten hours, depending upon the character of the tobacco, color and flavor desired, to develop the aromatic characteristics of the essential oils of the tobacco and to progressively change the color of the tobacco.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,704. REVERSIBLE GARMENT. ADOLF BERGER, Philadelphia, Pa., assignor of one-half to Bernhard Gottlieb, Philadelphia, Pa. Filed Aug. 28, 1914. Serial No. 859,011. (Cl. 2—86.)



1. A reversible coat adapted to be worn with either side exposed and made of a single double-faced fabric and comprising parts having split and inturned edges and seams joining said inturned edges whereby the finished appearance on both sides of the coat is maintained.

2. A reversible garment made from a double faced single fabric and having integrally formed strap seams on one side and plain seams on the opposite side, one side exposing throughout one face of the fabric, and the opposite side exposing throughout the opposite face of the fabric.

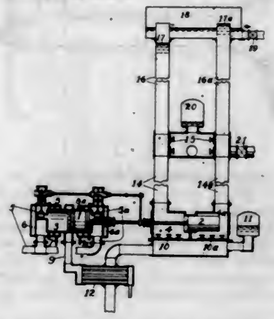
3. A reversible garment made from a double-faced single fabric having differently formed seams on opposite sides and adapted to be worn with either face of the fabric exposed, one side of the garment being of a design different from that of the opposite side.

4. A reversible garment adapted to be worn with either side exposed made from a double faced single fabric separable into two component weaves, and having seams formed by separating said material and lapping the separated portions over other portions of the garment and sewing the same thereto.

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1,224,705. UTILIZING EXPANSIVE ENERGY. WILLIAM CLINTON BROWN, Syracuse, N. Y., assignor to Humphrey Gas Pump Company, a Corporation of New York. Filed Dec. 6, 1912. Serial No. 735,246. (Cl. 103—62.)

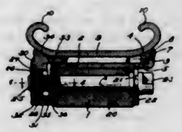
1. The method of utilizing expansive energy, which consists in introducing steam into a cylinder end and exhausting it through a discharge removed from said end, controlling the discharge by a piston which uncovers the discharge at the end of its power stroke, maintaining the inlet end sufficiently hot to prevent initial condensation, and maintaining the discharge cold, utilizing the power stroke of the piston to cause one movement of reciprocation of a liquid column adapted to acquire useful momentum and utilizing a return stroke of the column to entrap and compress the expanded steam that has not been discharged from the cylinder.



2. The combination of a uni-flow steam cylinder having an inlet port in the head or end thereof, a live steam jacket on the head or inlet end of the cylinder, said cylinder having exhaust ports at a point removed from the inlet end, an elongated piston operating therein, and adapted to uncover said ports at the end of its power stroke and quickly cover them on the return stroke and thereby to prevent cooling of the interior of the cylinder, a play pipe for the reciprocation of a column of liquid adapted to acquire useful momentum and means whereby the power stroke of the piston causes one stroke of reciprocation of the liquid column and the return stroke of the column causes the piston to entrap and compress steam in the cylinder as it moves toward the hot head.

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1,224,706. RIM FOR VEHICLE-WHEELS. RICHARD S. BRYANT, Cleveland, Ohio, assignor to The Standard Welding Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 27, 1912. Serial No. 699,928. (Cl. 152—21.)



1. In a vehicle wheel, the combination with a felly and a tire-supporting rim; of detachable means at the forward edge of said felly adapted to prevent removal of said rim, said means being locked in place by said rim when properly seated; and means adapted to prevent lateral movement of said rim in a rearward direction with reference to said felly, said last-named means including a wedging member transversely adjustable of said felly and adapted in one position to permit sufficient movement of said rim to unlock said detachable means.

2. In a vehicle wheel, the combination with a felly and a tire-supporting rim; of detachable means at the forward edge of said felly adapted to prevent removal of said rim, said means being locked in place by said rim when properly seated; and means adapted to prevent lateral movement of said rim in a rearward direction with reference to said felly, said last-named means including a wedging member transversely adjustable of said felly and adapted in one position to permit sufficient movement of said rim to unlock said detachable means, and means operable from



the forward side of said felly adapted thus to adjust said wedging member.

3. In a vehicle wheel, the combination with a felly and a tire-supporting rim; of detachable means at the forward edge of said felly adapted to prevent removal of said rim, said means being locked in place by said rim when properly seated; and means adapted to prevent lateral movement of said rim in a rearward direction with reference to said felly, said last-named means including a wedging member transversely adjustable of said felly and adapted in one position to permit sufficient movement of said rim to unlock said detachable means, and a rotatable member projecting from the forward side of said felly and having threaded engagement with said wedging member thus to adjust the same.

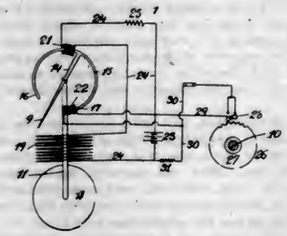
4. In a vehicle wheel, the combination with a felly and a tire-supporting rim; of detachable means at the forward edge of said felly adapted to prevent removal of said rim, said means being locked in place by said rim when properly seated; and means adapted to prevent lateral movement of said rim in a rearward direction with reference to said felly, said last-named means including a wedging member transversely adjustable of said felly and adapted in one position to permit sufficient movement of said rim to unlock said detachable means, and a transversely disposed bolt rotatably but non-longitudinally movable in said felly and having threaded engagement with said wedging member thus to adjust the same.

5. In a vehicle wheel, the combination, with a felly band having a fixed abutment at one edge, of a discontinuous ring surrounding said felly band and resting against said abutment, the outer portion of said ring being inwardly inclined, a demountable rim surrounding said felly band and having one of its sides seated on said ring, said rim being adapted to slip over said abutment upon removal of said ring, a wedging member introduced between said rim and felly band at the side opposite said abutment, said member having its outer side shaped to engage the portion of said rim opposite to said ring, and means for retaining said wedging member in place.

[Claims 6 to 36 not printed in the Gazette.]

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1,224,707. SPEEDOMETER. ALLEN A. CANTON, New York, N. Y., assignor to The Device Testing Company, a Corporation of Connecticut. Filed July 1,.1914. Serial No. 848,348. (Cl. 175—183.)



1. A speedometer comprising a pair of solenoids of different magnetic strength, a magnet mounted to move in response to the said difference of magnetic strength, a spindle upon which the said magnet is supported, a coil of wire around said spindle and means for supplying current to the latter and the said two solenoids.

2. A speedometer comprising a pair of solenoids of different magnetic strength, a magnet mounted to move in response to the said difference of magnetic strength, a spindle upon which the said magnet is supported, a source of electric energy, connections between the latter and the said two solenoids and a coil of wire surrounding the said spindle and connected in series with one of the said coils.

3. A speedometer comprising a pair of solenoids of different magnetic strength, a magnet mounted to move in response to the said difference of magnetic strength, a spindle upon which the said magnet is supported, a coil of wire around said spindle, means for supplying a constant electric current to the said coil of wire and the one solenoid, and means for supplying an intermittent current to the other solenoid.

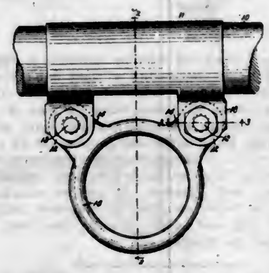
4. A speedometer comprising a movably mounted magnet, a pair of solenoids for operating said magnet, means for indicating the movement of the latter, movable supporting means for said magnet, a coil of wire surrounding said supporting means and means for supplying current to the said coil of wire and the said solenoids.

5. A speedometer comprising a pair of solenoids of different magnetic strength, a magnet mounted to move within said solenoids and in response to their different magnetic strength, a source of electric energy, connections between the latter and the said solenoids and electromagnetic means for strengthening the magnetism in said magnet and connected to the said source of energy.

[Claim 6 not printed in the Gazette.]

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1,224,708. CLIP FOR NECK-YOKES. WILLIAM JONES CASS, Easton, Me. Filed May 13, 1916. Serial No. 97,293. (Cl. 21—77.)



1. A neck yoke fixture comprising in combination a tubular split sleeve adapted to fit around the yoke bar and provided at its ends with pairs of lugs, reinforcing members engaging the inner walls of said lugs, bolts extending through the said pairs of lugs, a pole-ring provided with ears diverging from its periphery, said ears engaging said bolts loosely and free to move in all directions thereon between the lugs of each pair of lugs.

2. A clip for a neck yoke, comprising a tubular split clip adapted to fit around the yoke bar and provided at its ends with pairs of lugs, bolts extending through the said pairs of lugs, a pole ring connected with the said bolts intermediate the lugs of the said pairs of lugs, and inverted U-shaped strengthening members held on the said bolts intermediate the lugs and straddling the said ears.

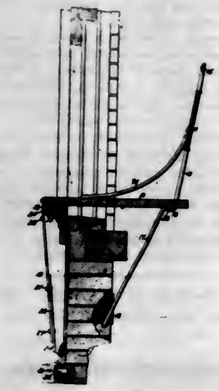
3. A clip for a neck yoke, comprising a tubular split clip adapted to fit around the yoke bar and provided at its ends with pairs of lugs, bolts extending through the said pairs of lugs, a pole ring connected with the said bolts intermediate the lugs of the said pairs of lugs, and inverted U-shaped strengthening members held on the said bolts intermediate the lugs and straddling the said ears, the said lugs having flanges extending inward toward each other and engaging the edges of the said strengthening members to hold the latter against turning on the bolts.

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1,224,709. SAFETY-CHAIR FOR WINDOW-CLEANERS. LEON CHOLET, New York, N. Y. Filed June 6, 1916. Serial No. 101,911. (Cl. 20—87.)

1. The herein described safety chair for window cleaners comprising a rigid seat, a back for the seat comprising a bow shaped frame extending upwardly from the seat and terminating in two straight brace members below the seat, the frame having short horizontal sections fitted squarely against the bottom of the seat, means connecting these horizontal sections rigidly to the seat, stationary wall

sockets into which the lower ends of said braces project at an acute angle with respect to the wall, and means securing the front portion of the seat upon the window sill.



2. In a safety chair for window cleaners, a rigid seat, a back for the seat comprising a rigid one-piece frame extending both above and below the seat, the free end portions of the frame extending below the seat in parallel relation to each other and constituting brace members, the frame having short horizontal sections fitted squarely against the bottom of the seat at the rear edge thereof, means connecting these horizontal sections rigidly to the seat, stationary wall members to receive and hold the free ends of the brace members at an acute angle with respect to the wall, and means securing the front portion of the seat upon the window sill.

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1,224,710. APPARATUS FOR TREATING EGGS. VICTOR CLAIREMONT, Petaluma, Cal. Filed Apr. 10, 1915. Serial No. 20,482. (Cl. 99—2.)

1. In combination, means for supporting eggs moving thereon, endless chains traveling adjacent to said means, open-bottomed wire baskets above said means and secured to said endless chains, means for treating eggs in said baskets while moving on said supporting means, and a traveling conveyer below said supporting means and having means for positioning fillers at intervals thereon, the path of said conveyer being such that a filler thereon will pass directly beneath the forward end of said supporting means.

2. In combination, means for supporting eggs moving thereon, endless chains traveling adjacent to said means, open-bottomed wire baskets above said means and secured to said endless chains, means for treating eggs in said baskets while moving on said supporting means, and a traveling conveyer below said supporting means and having means for positioning fillers at intervals thereon, the path of said conveyer being such that a filler thereon will pass directly beneath the forward end of said supporting means, one end of the conveyer being to one side of the rear end of said supporting means.

3. In combination, means for supporting eggs moving thereon, endless chains traveling adjacent to said means, open-bottomed wire baskets above said means and secured to said endless chains, means for treating eggs in said baskets while moving on said supporting means, a traveling conveyer below said supporting means and having means for positioning fillers at intervals thereon, the path of said conveyer being such that a filler thereon will pass directly beneath the forward end of said supporting means, and means for causing said endless chains and conveyer to travel at the same speed.

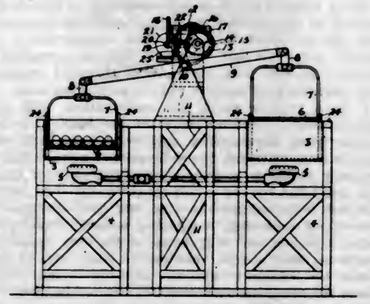
4. In combination, a series of parallel tight wires, endless chains traveling adjacent to the outermost wires of the series, open-bottomed wire baskets above said wires and secured to said endless chains, means for treating eggs in said baskets while moving on said wires, and a traveling conveyer beneath said wires and extending beyond them, and having means for positioning fillers at intervals thereon.

5. In combination, a series of parallel tight wires, endless chains traveling adjacent to the outermost wires of the series, open-bottomed wire baskets above said wires and secured to said endless chains, means for treating eggs in said baskets while moving on said wires, a traveling conveyer beneath said wires and extending beyond them, and having means for positioning fillers at intervals thereon, and means for causing the chains and conveyer to travel at the same speed.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,711. APPARATUS FOR PRESERVING EGGS. VICTOR CLAIREMONT, San Francisco, Cal. Filed Aug. 9, 1916. Serial No. 113,949. (Cl. 99—2.)



1. In means for preserving eggs, a tank for containing a preservative solution, a flat frame open on at least one side and adapted to loosely support a basket of eggs, means for guiding said frame when being lowered into, and raised out of, said tank, and means for controlling said guiding movement of said frame.

2. In combination with an open-topped tank, vertical guide rods therein, a plate guided vertically by said guide rods, a lever from the free end of which said plate is suspended, means for vertically oscillating said lever, a feed table on one side of the tank and lever approximately on a level with the plate in its uppermost position, and a delivery table on the opposite side approximately at the same level.

3. The combination of a suitably pivoted lever having equal oppositely extending arms, a vertically oscillating plate suspended from the free end of each arm, a tank into which said plate can descend, tables on opposite sides of each tank and arm, and approximately at the level of the uppermost position of the plate oscillating therein, and means for oscillating said lever.

4. The combination of a suitably pivoted lever having equal oppositely extending arms, a vertically oscillating plate suspended from the free end of each arm, a tank into which said plate can descend, tables on opposite sides of each tank and arm, and approximately at the level of the uppermost position of the plate oscillating therein, and a cam for oscillating said lever and formed to cause each plate to assume positions of rest during equal intervals within and without the tank.

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1,224,712. SINK-DRAIN. ROBERT CLARK, Bridgeport, Conn., assignor to Bridgeport Brass Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Aug. 22, 1914. Serial No. 858,147. (Cl. 4—35.)

1. In a drain fixture such as described, the combination of a bushing having a laterally projecting flange on the upper end thereof, a nut engaging said bushing to clamp said flange against the upper surface of the sink bottom, said bushing having a seat at the upper end or mouth thereof provided with a substantially smooth surface to receive an ordinary plug or stopper, a strainer disk of a diameter substantially equal to the diameter of the upper portion of said stopper seat, and means for detachably securing said strainer in said seat without interfering with a water tight fit of the plug or stopper in said seat when said plug or stopper is substituted for the strainer, said strainer-securing means being so constructed that the strainer is released from the bushing, for removal, by turning the strainer in said seat; substantially as described.





2. In a drain fixture for sinks and the like, the combination of a bushing having a laterally projecting flange on the upper end thereof, adapted to overlie the bottom wall of the sink around the opening in the latter, a nut to clamp the said flange against the upper surface of the sink bottom, said bushing having a seat at the upper end or mouth thereof, provided with a substantially smooth surface to receive an ordinary plug or stopper, a strainer disk of a diameter substantially equal to the diameter of the upper portion of said stopper seat, a depending peripheral wall on said strainer disk adapted to fit the smooth surface of said stopper seat, and means for detachably securing said strainer in said seat without interfering with a water tight fit of the plug or stopper in said seat when said plug or stopper is substituted for the strainer; substantially as described.

3. In a drain fixture for sinks and the like, the combination of a bushing having a laterally projecting flange on the upper end thereof, adapted to overlie the bottom wall of the sink around the opening in the latter, means carried by the bushing for clamping said flange against the upper surface of the sink bottom, said bushing having a seat at the upper end or mouth thereof to receive an ordinary plug or stopper, the surface of said stopper seat being substantially smooth throughout its area so as to make a water tight fit with the stopper, a strainer disk adapted to fit the upper portion of said stopper seat, a downturned peripheral wall on said strainer disk adapted to fit within the smooth surface of said stopper seat, and means for detachably securing the strainer in said stopper seat without interfering with the water tight fit of the stopper in said seat when it is substituted for the strainer, said strainer securing-means including small teats or projections on the seat surface merging gradually into the smooth portion of said surface, and coöperating with notches in the depending wall of the strainer, said notches so formed that the strainer is raised and lowered as it is turned on its axis; substantially as described.

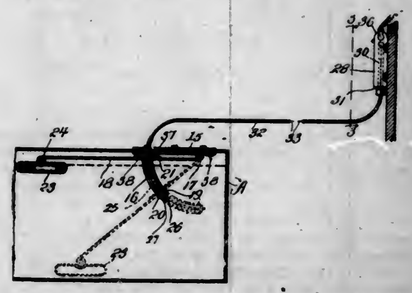
4. In a drain fixture for sinks and the like, the combination of a bushing adapted to extend through an opening in the bottom of the sink and having exterior screw threads for a nut adapted to clamp the bushing in place in the sink bottom, a lateral flange projecting horizontally from the upper end of said bushing to overlie the bottom wall of the sink around the opening in said wall, said bushing having a smooth, substantially upright seat at the upper end or mouth thereof to make water tight contact substantially throughout its area with an ordinary plug or stopper having a slightly beveled seating surface, a strainer disk of a diameter substantially equal to the diameter of the mouth of the bushing, and means for detachably engaging said strainer disk with a part of the bushing to secure the strainer detachably in said seat when the stopper is removed, said engaging means being so constructed that the strainer is raised and lowered as it is turned in said seat; substantially as described.

5. In a drain fixture for sinks and the like, the combination of a bushing, having a laterally projecting flange on the upper end thereof, adapted to overlie the bottom wall of the sink around the opening in the latter, said bushing having a seat at the upper end thereof with a smooth surface to receive an ordinary plug or stopper with a watertight fit, a strainer insertible into said seat when the stopper is removed, and means for securing said strainer in said seat, such that the strainer is raised and lowered as it is turned on its axis, without interfering with the water tight fit of the stopper in said seat when it is substituted for the strainer, said securing-means including small teats or projections on the surface of the combined stopper and strainer seat located beneath the upper margin of said seat, and adapted to coöperate with notches in the strainer; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,713. FLUID-GAGE. CLIFFORD M. COLE, Lander, Wyo., assignor of one-half to William S. Adams, Riverton, Wyo. Filed Mar. 31, 1916. Serial No. 88,084. (Cl. 73—82.)



1. In a fluid gage, a float-carrying lever fulcrumed within a tank, an arcuate tube supported in concentric relation with the fulcrum of the lever, an arcuate rod connected with the lever and guided through the tube, an indicator casing spaced from the tank and having a scale and a transparent tube, a flexible tube of relatively small diameter extending between and terminally connected with the arcuate guide tube and with the indicator casing, said flexible tube being in communication with the arcuate tube and also with the glass tube, a wire extending through the flexible tube, said wire being terminally connected at one end with the rod guided in the arcuate tube, and an indicating member carried by said wire and operating in the glass tube.

2. In a device of the class described, a supporting member, a float-carrying lever fulcrumed thereon, an arcuate guide tube extending through the supporting member, and a rod connected with the float-carrying lever and guided through the tube.

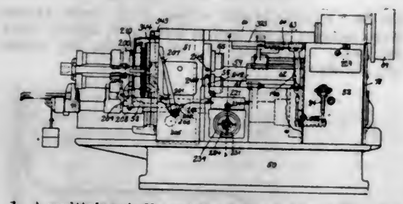
3. In a device of the class described, a supporting member, a float-carrying lever fulcrumed thereon, said lever having an arcuate yoke formed intermediate its ends, an arcuate guide tube extending through the supporting member, guide flanges on said tube between which one of the limbs of the yoke is guided, and an arcuate rod connected with the bridge portion of the yoke of the lever and guided through the arcuate tube.

4. In a device of the class described, a tank having a rectangular opening provided with tongues at the ends thereof, a washer frame supported adjacent to said opening by said tongues and having threaded apertures, a base plate mounted adjacent to said opening and having apertures corresponding with the threaded apertures of the washer frame, machine screws connecting the base plate with the washer frame, a lever fulcrumed on the underside of the base plate and extending within the tank, said

lever having a float hingedly connected therewith, and said lever having an arcuate yoke intermediate the ends thereof, an arcuate tube extending through the base plate and having guide flanges engaging one limb of the yoke, an arcuate rod connected with the yoke and extending through the arcuate guide tube, an indicator casing having a scale and a glass tube, a flexible tube connected terminally with the casing and with the arcuate guide tube and communicating with the latter and also with the glass tube in the indicator casing, a wire terminally connected with the arcuate rod and extending through the flexible tube and within the glass tube, and an indicating member carried by said wire and slidable in the glass tube.

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1,224,714. MULTIPLE-SPINDLE METAL-WORKING MACHINE. FRANK L. CONE, Windsor, Vt., assignor, by mesne assignments, to The National-Acme Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 20, 1915. Serial No. 67,853. (Cl. 29—37.)



1. A multiple-spindle metal-working machine comprising a bed, a turret journaled therein, a plurality of tool spindles carried by the turret, a tool slide, a plurality of tools disposed on said slide, a cam or feed shaft having a drum thereon, a pusher bar connected to the tool slide, and arranged to be operated by said drum, and guides for the pusher bar arranged on opposite sides thereof to resist the thrust of the drum on said pusher bar.

2. In a multiple-spindle metal-working machine, the combination with a tool slide having a plurality of side faces to receive tools, a central supporting guide therefor, a pusher bar therefor, a cam shaft and a cam thereon for reciprocating said pusher bar, of a guide bar parallel with the pusher bar, and a slide rigid with the pusher bar and movable on said guide bar.

3. In a multiple-spindle metal-working machine, the combination with a tool slide, a guideway therefor passing therethrough, a cam, and a pusher bar for said tool slide, of a member secured to said pusher bar and having means for engagement with said cam, a guideway parallel to said pusher bar, and a roll on said member movable on said guideway.

4. In a multiple-spindle metal-working machine, the combination with a tool slide, a guideway therefor, a cam, and a pusher bar for said tool slide, of a block secured to the end of said pusher bar, a roll on said block adapted to be engaged by said cam, a guideway parallel to the pusher bar, and a roll on said block movable on said guideway to resist the lateral thrust of the cam on said first-mentioned roll.

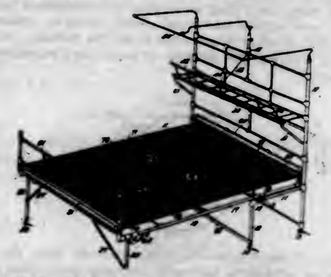
5. In a multiple-spindle metal-working machine, the combination with a tool slide, a central supporting guideway therefor, a cam, and a pusher bar for said tool slide, of a block secured to the end of said pusher bar, separated parallel guide bars alongside the pusher bar, means on said block for engaging guide bars with a rolling and a sliding engagement respectively, and means on said block for engagement by said cam.

[Claims 6 to 49 not printed in the Gazette.]

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1,224,715. FOLDING BED. MICHAEL COX, New York, N. Y. Filed Dec. 10, 1915. Serial No. 66,082. (Cl. 5—37.)

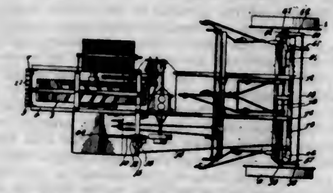
1. A folding bed, comprising a head stand having side arms, a bed spring frame provided at the sides a distance from the head with trunnions journaled on the said side arms, a longitudinally extending spring catch on the head crossbar of the said bed frame, a keeper adapted to be engaged by the said spring catch on swinging the bed frame into vertical position, the said keeper being in the form of a crossbar connecting the side arms of the said head stand with each other, a locking bolt slidable on the said crossbar, and a keeper on the said spring catch and adapted to be engaged by the said bolt.



2. A folding bed, comprising a head stand having side arms, a bed spring frame provided at the sides with trunnions journaled on the said side arms, a longitudinally extending spring catch on the head cross bar of the bed spring frame and provided at its free end with a head, a cross bar connecting the side arms of the head stand with each other, the head of said catch being adapted to snap under said cross bar on swinging the bed frame into vertical position, a guard plate attached to the spring catch to prevent accidental shifting of the parts at the time the bed spring frame is in vertical folded position, and coacting locking means on the said cross bar and spring catch.

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1,224,716. TRACTOR. CLAUD C. CRAVEN, Waurika, Okla. Filed Sept. 8, 1915. Serial No. 49,478. (Cl. 21—114.)



1. In a tractor, a main frame, a front wheel supporting frame having detachable connection with said main frame to be adjusted laterally thereof, a traction wheel, power means carried by said main frame for driving the traction wheel, and adjustable means directly associated with said supporting frame to maintain the main frame in a substantially horizontal plane.

2. In a tractor, a main frame, a supporting frame having detachable connection with said main frame to be adjusted laterally thereof, steering wheels mounted at the end of the supporting frame, a means to adjust one of the steering wheels vertically with respect to said supporting frame, a traction wheel, and a power means for driving said wheel.

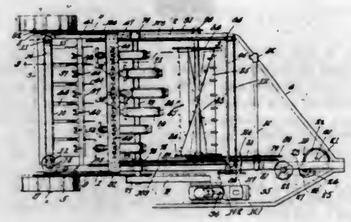
3. In a tractor, a main frame, a traction wheel, a power means mounted on the main frame for driving said traction wheel, steering wheels, a means to adjust one of said steering wheels vertically with respect to the main frame, and a steering mechanism having connection with the steering wheels.

4. In a tractor, a main frame, a supporting frame having detachable connection with said main frame to be adjusted laterally thereof, vertical axles mounted at the terminals of the supporting frame, a steering wheel mounted on each axle, one of said axles being relatively elongated, a pivoted lever having connection with said last mentioned axle, an operating screw turnable to actuate said lever and to adjust the steering wheel mounted on said elongated axle vertically relatively to said supporting frame, a traction wheel, and a power means mounted on the main frame to drive said traction wheel.

5. In a tractor, a main frame, a supporting frame, vertical axles mounted at the terminals of the said supporting frame, a steering wheel mounted on each axle, one of said axles being relatively elongated, a lever having pivotal connection with said elongated axle, means supporting the said lever for pivotal movement above said supporting frame, an operating screw carried by said lever and engaging the supporting frame to adjust the steering wheel mounted on said elongated axle vertically relatively to said supporting frame, arms mounted on said elongated axle in spaced relation, a rod connecting the mentioned arms, a bell crank mounted on the other of the said axles, a rod connecting the bell crank and the said connecting rod, and a means to actuate the bell crank for simultaneously bringing the said steering wheels at an angle to the frame, substantially as described.

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1,224,717. SPADING-MACHINE. ISAAC L. DARBY, Greeley, Colo., and GEORGE H. SMITH, Columbus, Ohio. Filed Sept. 16, 1915. Serial No. 51,041. (Cl. 97—53.)



1. A spading tiller comprising a vehicle with soil cutting means, vegetation flattening means associated with the soil cutting means, spading means for severing and lifting the cut soil, disintegrating means in the path of the cut soil leaving the spading means, and a leveling blade for the disintegrated soil.

2. A spading tiller comprising a vehicle, a laterally extended series of soil cutting devices carried by the vehicle with said devices spaced apart, a laterally extended series of vegetation flattening devices carried by the vehicle and alternating with the soil cutting devices, a laterally extended series of spading devices in line with the flattening means in the direction of travel, disintegrating means in the path of the cut soil leaving the spading devices, and leveling means for the disintegrated soil.

3. A spading tiller comprising a vehicle with supporting wheels, soil cutting means carried by the vehicle, vegetation flattening means associated with the soil cutting means, spading devices for severing and lifting the cut soil and following the cutting and flattening means, disintegrating means in the path of the cut soil leaving the spading means, leveling means for the disintegrated soil, and power means on the vehicle connected to the supporting wheels for driving the vehicle and provided with connections to the spading means and disintegrating means for actuating them.

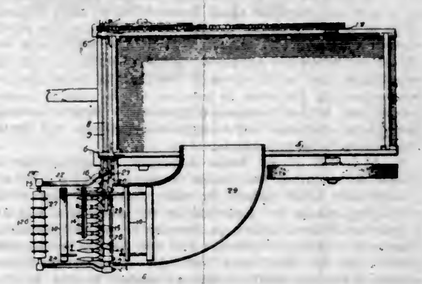
4. A spading tiller comprising a vehicle with soil cutting devices, vegetation flattening devices associated with the soil cutting devices, reciprocatory spading devices for severing and lifting the cut soil, rotary disintegrating means in the path of the cut soil leaving the spading means, and power means on the vehicle for reciprocating the spading devices and rotating the disintegrating means.

5. A spading tiller comprising a vehicle, a laterally extended series of laterally spaced rotary cutters on the vehicle, a laterally extended series of vegetation flattening devices interspersed with the cutters, reciprocatory and oscillatory spading devices for severing and lifting the cut soil and propelling it rearwardly with respect to the direction of travel of the vehicle, and a rotary disintegrator in the path of the cut soil leaving the spading devices.

[Claims 6 to 15 not printed in the Gazette.]

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1,224,718. MAIZE-HARVESTER ATTACHMENT FOR WAGONS. JAMES WITTEN DICKEY, Olustee, Okla. Filed Feb. 23, 1916. Serial No. 79,934. (Cl. 56—131.)



1. A harvester attachment for wagons including a pair of vertically arranged plates, means for securing the plates in spaced relation on the body of a wagon adjacent the forward end thereof, said plates being provided with a series of spaced openings, a shaft extending through openings at a common level in the plates, transmission means for driving the shaft from one of the ground wheels of the vehicle, said shaft at one end extending out beyond the side of the vehicle body, a reel carried by the extended end of the shaft, a drum cam carried by the shaft inwardly of the reel, a rod supported by the plates beneath the shaft, a cutting mechanism carried by said rod beneath the reel, a bracket carried by one of the plates, a lever pivotally connected to the bracket and having connection with the drum cam and the cutting mechanism whereby the latter may be operated, means for leveling the grain heads and separating the grain stalks to direct them properly against the cutting mechanism, and a chute arranged rearwardly of the cutting mechanism for directing the cut grain into the body of the vehicle.

2. A harvester attachment for wagons including a pair of plates, means for securing the plates in spaced relation on the body of a wagon, a shaft and a rod supported by the plates and adjustable vertically, means connecting the shaft and rod for retaining them at a constant distance apart irrespective of their adjustment, transmission means between the shaft and one of the ground wheels of the wagon whereby the shaft may be driven, said shaft at one end extending out beyond the side of the body of the vehicle, a reel carried by the extended portion of the shaft, a cutting mechanism carried by said rod beneath the reel, transmission means between the shaft and cutting mechanism whereby the latter may be driven, a pair of spaced arms carried by the rod on opposite sides of the cutting mechanism and extending forwardly thereof, a roller supported by the arms in advance of the cutting mechanism, and a chute arranged adjacent to and rearwardly of the cutting mechanism and reel for guiding the cut grain into the body of the vehicle.

3. A device of the class described including a pair of plates, means for securing the plates to the body of a vehicle, a shaft adjustably carried by the plates and extending to one side of the vehicle, a reel carried by said shaft, transmission means between the shaft and one of the ground wheels of the vehicle whereby the shaft may be driven, a rod adjustably carried by the plates below

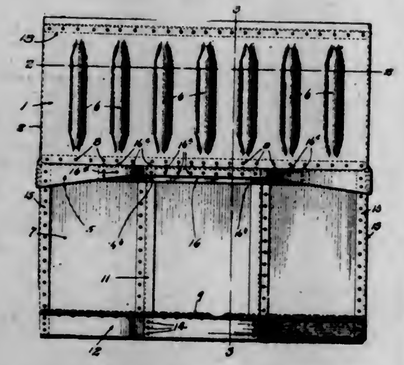
said shaft and likewise extending to one side of the vehicle, means for retaining the shaft and rod at a constant distance apart irrespective of their adjustment, a cutting mechanism on the extension of the rod, mechanism whereby the latter may be driven, a roller arranged in advance of the cutting mechanism, means carried by the rod for retaining the roller in adjusted position relatively to the cutting mechanism, and means for guiding the cut grain into the body of the vehicle.

4. A device of the class described including a pair of plates, means for securing the plates on a vehicle body, a rod and a shaft adjustably carried by the plates one above the other and extending at one end beyond the side of the vehicle, means for retaining the rod and the shaft at a constant distance apart irrespective of their adjustment, a reel and cutter mechanism carried by the shaft and rod respectively, means whereby the shaft may be driven as the vehicle advances, means whereby the cutting mechanism may be driven from the shaft, a roller, means for supporting the same in advance of the cutting mechanism, and a chute arranged rearwardly of the cutting mechanism and reel and adapted to guide the cut grain into the body of the vehicle.

5. A device of the class described including plates, means for securing the plates to the body of a vehicle, a shaft and a rod carried by said plates and adjustable vertically, means for maintaining the shaft and rod at a constant distance apart irrespective of their adjustment, means for driving the shaft, a reel and cutting mechanism carried by the shaft and rod, means for transmitting motion from the shaft to the mechanism carried by the rod, and means for guiding cut grain into the body of the vehicle.

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1,224,719. METALLIC END FOR RAILWAY-CARS. WILLIAM F. DIETRICHSON, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Apr. 26, 1916. Serial No. 93,626. (Cl. 105—192.)



1. A car end including a pair of conjoined panels, one of which has its margin shaped with a web and flange overlapping the other, a bar member disposed intermediate the overlapped portions of the panels and extending longitudinally thereof, and other bar members affixed to one of the panels and forming struts between the same and the first mentioned bar member for the purpose described.

2. A car end including two sheet metal panels, the first of which has a margin shaped with a web and flange to overlap the second panel and form a stiffening member extending longitudinally of the panels, the second panel having bar members affixed thereto and extending outwardly therefrom into coöperation with the overlapping margin of the first panel to form struts for the said stiffening member.

3. A car end including conjoined upper and lower panels, the upper panel having its lower margin flanged outwardly and downwardly to overlap the lower panel and provide a longitudinal stiffening member, and vertical bar members applied to the lower panel and connected at their upper extremities to the said stiffening member.

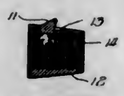
4. A car end including conjoined upper and lower panels, the lower margin of the upper panel being flanged outwardly to overlap the lower panel, vertical stiffening members applied to the lower panel, a transversely extending bar member applied to the upper portions of said vertical members and combined with the flanged margin of the upper panel to provide a transverse stiffening member.

5. In a car end, the combination of a lower panel, a second panel disposed thereabove and connected thereto, said second panel having its lower margin overlapping the lower panel, and a vertical reinforcing member applied to the lower panel and having its upper portion disposed between the lower panel and the lower margin of the second panel.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,720. EXPANSION DEVICE. JOSEPH DI SALVO, Joliet, Ill. Filed Oct. 2, 1916. Serial No. 123,399. (Cl. 85—2.4.)



1. As a new article of manufacture, an expansion nut comprising an integral circular piece of material threaded on its inner surface and having its outer surface formed substantially as a truncated cone, there being a recess in the outer surface of said nut, the floor of said recess being substantially parallel to the axis of the nut, and an integral tongue projecting from the outer surface of the nut commencing at the deep end of said recess, said tongue having a volume of material substantially equal to the volume of the recess, substantially as and for the purpose set forth.

2. As a new article of manufacture, an expansion nut comprising a single piece of material having its outer surface formed as a truncated cone and having its inner surface threaded, there being a recess in the outer surface of the nut, the floor of said recess being substantially parallel to the axis of the nut, and an integral tongue projecting from the outer surface of the nut at a point adjacent to the deep end of the recess, substantially as and for the purpose set forth.

3. As a new article of manufacture, an expansion nut comprising a single piece of material having its outer surface of substantially circular cross section, there being a recess in said outer surface, the floor of said recess lying substantially parallel to the axis of the nut, and an integral tongue projecting from the outer surface of the nut at one end of said recess, said tongue having a volume substantially equal to the volume of the recess, substantially as and for the purpose set forth.

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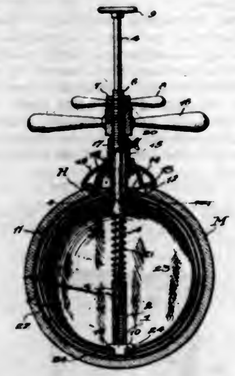
1,224,721. GAS-MAIN STOPPER. JAMES S. DONOHUE, Washington, D. C., assignor of one-third to Michael V. Moran and one-third to John E. Moreland, Washington, D. C. Filed Sept. 14, 1916. Serial No. 120,187. (Cl. 137—76.)

1. In a gas main stopper, expansible and contractible means to close the main, slidable means to move said means into operative position, slidable means borne by said moving means so as to move therewith and being movable independently of said moving means to seal the main tap-hole, and means to adjustably lock the sealing means to said moving means.

2. In a gas main stopper, expansible and contractible means to close the main, means to move said means into operative position, and a collapsed flexible ball for sealing the main tap-hole.



3. In a gas main stopper, expansible and contractible means to close the main, means to move said means into operative position, a sleeve slidable on said moving means, a collapsed flexible ball for sealing the main tap-hole carried by said sleeve, and means to lock the sleeve to said moving means.



4. In a gas main stopper, expansible and contractible means to close the main, a sleeve formed for manual engagement to actuate said means, a sleeve slidable on and independently of the first sleeve and borne thereby so as to move therewith, means borne by the second sleeve to seal the main tap-hole, and a set screw to lock adjustably the sleeves together.

5. In a gas main stopper, expansible and contractible means to close the main, means to move said means into operative position, and means to seal the main tap-hole, including a member having a top formed of two contacting thicknesses and a skirt depending therefrom and formed of diverging side parts connected by a ring-like bottom part.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,722. PROCESS OF RETTING VEGETABLE STALKS. WILLIAM DOUGLAS, Detroit, Mich. Filed June 19, 1916. Serial No. 104,405. (Cl. 92—10.)

1. The process of retting fibrous vegetable matter, consisting in subjecting the same to the contemporaneous action of a non-combining solvent and water at ordinary pressure and temperature, to effect the dissolution of the pectose sufficiently for the removal of the starchy element thereof by the action of specific gravity.

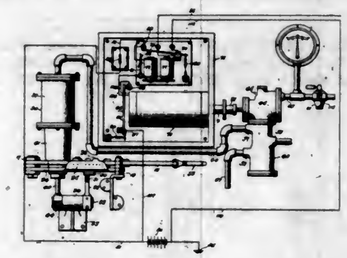
2. The process of retting vegetable matter, consisting in effecting a partial dissolution of the pectose therefrom by the action of a solvent, and its contemporaneous removal from further association therewith by the admixture of an aqueous element of varient specific gravity from that portion of the pectose whose removal is desired.

3. The process of retting fibrous vegetable matter, consisting in subjecting the same to the action of a solvent capable of releasing the undesired portion of the pectose from its association with the fibrous portion and to the action of an aqueous element of varient specific gravity from said solvent and the pectose released thereby.

4. The process of retting fibrous vegetable matter consisting in subjecting the same to the action of a non-combining solvent, and in effecting the disassociation of the released pectose and its solvent from the fibers through the medium of an aqueous bath.

5. The process of retting vegetable matter, consisting in subjecting the same to the action of a solvent capable of effecting the partial release of the pectose primarily associated with the fibrous portion, and in removing the released pectose and its solvent through the medium of an immersing element of variant specific gravity.

1,224,723. TRAIN-STOPPING APPARATUS. BALTIS ARTHUR DURHAM, Irvington, N. J. Filed Jan. 29, 1916. Serial No. 75,140. (Cl. 246—58.)



1. In automatic train stopping apparatus, the combination with a controlling element of the motor car, of a fluid motor for actuating said element to cut off position and adapted to be connected with a source of supply, a main valve controlling communication between said motor and its source of supply and comprising a head capable of sliding movement, a normally closed valve operable to open position in the movement of said head to permit the passage of the fluid from the source of supply, a piston operable from the fluid passing through said valve and coöperating with said valve to admit the fluid to said motor, said valve being adapted to be connected to the brake pipe, and means operable from said piston to establish communication between the brake pipe and the atmosphere.

2. The combination with a fluid motor and a source of supply therefor, of a main valve controlling communication between said motor and the source of supply and comprising a head capable of sliding movement, a normally closed valve operable to open position in the movement of said head to permit the passage of fluid from the source of supply, and a piston operable from the fluid passing through said valve and coöperating with said valve to admit the fluid to said motor.

3. The combination with a fluid motor and a source of supply therefor, of a main valve controlling communication between said motor and source of supply and comprising a head capable of sliding movement and having an inclined portion, a normally closed valve, a lever pivoted for swinging movement and having one end formed with a cam edge to operate said valve and the other end disposed within the influence of the inclined portion of said head, whereby in the movement of said head said valve will be opened to permit the passage of the fluid from the source of supply, and a piston operable from the fluid passing through said valve and coöperating with said valve to admit the fluid to said motor.

4. In automatic train stopping apparatus, the combination with the controlling element of a motor car, of a fluid motor for actuating said element to cut off position and adapted to be connected to a source of supply, a main valve controlling communication between said motor and source of supply and comprising a head capable of sliding movement, electroresponsive mechanism for moving said head, a normally closed valve operable to open position to permit the passage of the fluid from the source of supply, and a piston operable from the fluid passing through said valve and coöperating with said valve to admit the fluid to said motor.

5. In automatic train stopping apparatus, the combination with the controlling element of a motor car, of a fluid motor for actuating said element to cut off position and adapted to be connected to a source of supply, a main valve controlling communication between said motor and source of supply and comprising a head capable of sliding movement, electroresponsive mechanism for moving said head, a normally closed valve operable to open position to permit the passage of the fluid from the source of supply, a piston operable from the fluid passing through said valve and coöperating with said valve to admit the

fluid to said motor, and a normally closed valve under the control of said piston and controlling the brake system and operable from the piston in the movement thereof to render the brake system active.

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1,224,724. BRUSH-HANDLE. GEORGE DYER, Wallaceton, Va. Filed Sept. 4, 1914, Serial No. 860,255. Renewed Mar. 7, 1917. Serial No. 153,171. (Cl. 15—24.)

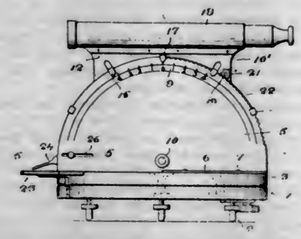


1. A device as specified, including a handle, an object engageable end revolubly mounted on the handle, a shaft slidably associated with the handle and being in engagement with said object engageable member to operate the latter for disposing the same at various angles, a member adjustably mounted on said shaft to facilitate actuating the latter, an elastic element in connection with the handle and said member for normally holding said object engageable member in its extreme point of adjustment in one direction, and means carried by the handle and being in engagement with said shaft to hold the latter from displacement, at times.

2. A device as specified, including a handle, an object engageable member revolubly mounted in one end of said handle, a shaft slidably mounted on the handle and being in connection with said object engageable member to operate the latter for disposing the same at various angles, a member adjustably and detachably carried by said shaft to facilitate the actuation of the latter, a spring in connection with said handle and being in engagement with said member to normally hold said object engageable member coincident with the longitudinal axis of the handle, and means detachably mounted in said handle and being in engagement with said shaft to hold the latter from displacement, at times.

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1,224,725. MEASURING INSTRUMENT. LOUIS O. ERICKSON, Denver, Colo. Filed Nov. 17, 1915. Serial No. 61,985. (Cl. 33—69.)

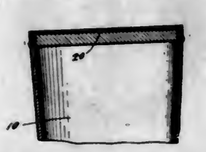


1. A measuring instrument comprising a base, a rotary member mounted upon the base, a segmental scale plate on the base having concentric and radial subdivisions, an upright partly circular scale plate carried by said rotary member, a swinging indicator movable in an arc coincident with the curved edge of said upright scale plate, a sight member carried by said indicator, and a pointer carried by the upright scale plate for coöperation with the scale plate upon the base.

2. A measuring instrument comprising a base, a rotary member mounted upon the base, a segmental scale plate on the base having concentric and radial subdivisions, an upright partly circular scale plate carried by said rotary member, a swinging indicator in guided connection with the curved edge of said upright scale plate, gearing for swinging said indicator, a sight member carried by said indicator, and a pointer carried by the upright scale plate for coöperation with the scale plate upon the base.

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1,224,726. PAPER CARTON. LUKE W. FARMER, Somerville, Mass. Filed Mar. 4, 1914. Serial No. 822,259. (Cl. 229—3.)

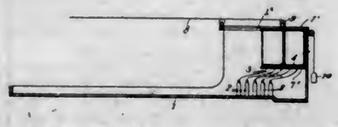


1. A carton including a paper body formed near its upper end portion to provide on the interior of the body an annular channel, and a portion above the channel in parallelism with the axial line of the body, and a disk of substantially uniform thickness having an annular edge projection coincident with the lower surface of the disk to fit the channel and the body, the edge surface of the disk above said projection being at right angles to the surface of the disk to fit throughout that portion of the body above the annular channel.

2. A carton including a paper body formed on the interior near the upper end thereof with an annular channel, a disk having an edge portion formed to seat in the channel, that portion of the disk above the edge portion, and the corresponding portion of the body above the channel being arranged for engagement and being disposed in parallelism with the axis of the body, and a second disk secured to the first mentioned disk and projecting beyond the edge of the latter to provide a portion to engage the upper edge of the body when the first mentioned disk is in seating condition therein.

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1,224,727. SKITTLE-GAME APPARATUS. LÉON FERON, Brussels, Belgium. Filed Aug. 1, 1914, Serial No. 854,544. Renewed Sept. 22, 1916. Serial No. 121,695. (Cl. 46—54.)



1. In a game apparatus, the combination of a frame provided with a track, horizontal guides at the rear of the frame, a frame slidably mounted in the horizontal guides, a plurality of skittles adapted to be supported on the track, means mounted in the slidable frame for raising the skittles including a flexible connection, said flexible connection also serving to draw the slidable frame forward after the skittles are elevated, and means for drawing the slidable frame rearwardly to normal position, the skittles falling from the sliding frame by gravity when the flexible connection is released.

2. In a game apparatus, the combination of a frame provided with a track, horizontal guides at the rear of the frame, a frame slidably mounted in the horizontal guides, a plurality of skittles adapted to be supported on the track, a vertically movable support mounted in the sliding frame, flexible connections between the skittles and the vertically movable support, a guide on the slidable frame, a flexible connection attached to the vertically movable support and passing over the guide to raise the latter and the skittles and to draw the sliding frame forwardly, and means for drawing the slidable frame rearwardly, the skittles and the vertically movable support falling by gravity when the flexible connection is released.

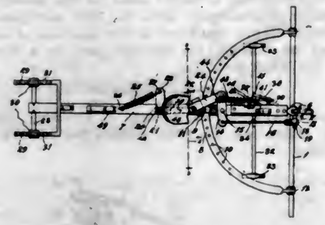
3. In a game apparatus, the combination of a frame having a track, horizontal guides near one end of the frame, a sliding frame mounted in the guides, said sliding frame having a plurality of openings, a vertically movable support mounted in the sliding frame, a plurality of skittles normally supported on the track, flexible connections between the skittles and the vertically movable support, means for guiding the vertically movable support in the frame, means for elevating the vertically movable support and drawing the skittles into the openings and subsequently moving the sliding frame forward, to position the skittles, the latter falling from the openings by gravity and simultaneously lowering the vertically movable support, and means for returning the sliding frame to normal position.

4. In a game apparatus, the combination of a frame provided with a track, horizontal guides at the rear of the frame, a frame slidably mounted in the horizontal guides, a plurality of skittles adapted to be supported on the track, a vertically movable support mounted in the sliding frame, flexible connections between the skittles and the vertically movable support, a guide on the slidable frame, a flexible connection attached to the vertically movable support and passing over the guide to raise the latter and the skittles and to draw the sliding frame forwardly, a second guide, a rope attached to the rear of the slidable frame, and passing over the second mentioned guide, and a weight at the end of the rope to return the sliding frame to normal position, the skittles and the vertical support falling by gravity when the flexible connection is released.



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1,224,728. ROAD-DRAG. BENJAMIN FRANKLIN FINDLEY, Denver, Mo. Filed Dec. 20, 1916. Serial No. 138,039. (Cl. 37—49.)

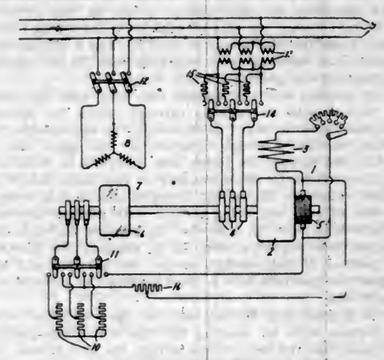


1. In a drag, a supporting element, a blade connected to the supporting element for universal angular movement and provided near its center with an upstanding lever, a cross lever mounted on said supporting element, a connection between one end of the cross lever and the lever of the blade, and a connecting means, including a cushioning spring between the other end of the cross lever and the supporting lever.

2. In a drag, a supporting element, a blade connected to the supporting element for vertical angular movement and provided with a lever, a cross lever mounted on said supporting element, connecting means between one end of the cross lever and the lever of the blade, an angular lever mounted on said supporting element, a link connecting one arm of the angle lever to the cross lever and a cushioning spring attached to the other arm of the angle lever and also attached to the supporting element.

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1,224,729. ROTARY CONVERTER. LIONEL FLEISCHMANN, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 12, 1914. Serial No. 838,161. (Cl. 171—123.)



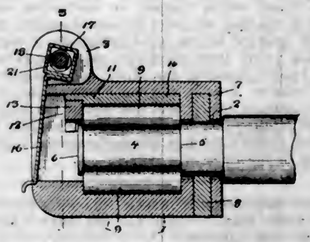
1. The method of starting a rotary converter having an induction motor with a phase wound secondary mechanically connected thereto, which consists in connecting said motor to the alternating current mains as an induction motor and connecting said converter to the mains so as to apply only a portion of the normal voltage of the mains thereto, and then connecting the converter to the secondary of the induction motor to supply alternating current of slip frequency thereto.

2. The method of starting a rotary converter having an induction motor with a phase wound secondary mechanically connected thereto, which consists in connecting said motor to the alternating current mains as an induction motor and connecting said converter to the mains so as to apply only a portion of the normal voltage of the mains thereto, then connecting the converter to the secondary of the induction motor to supply alternating current of slip frequency thereto, and then connecting said converter to said mains so as to supply the full voltage of the mains thereto.

3. The method of starting a rotary converter having an induction motor with a phase wound secondary mechanically connected thereto, which consists in connecting said motor to the alternating current mains as an induction motor and connecting said converter to the mains so as to apply only a portion of the normal voltage of the mains thereto, then connecting the converter to the secondary of the induction motor to supply alternating current of slip frequency thereto, and then connecting said converter to said mains so as to supply the full voltage of the mains thereto and disconnecting said motor from the mains and from the converter.

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1,224,730. JOURNAL-BOX. VAN BUREN FOSTER, Boyles, Ala. Filed Jan. 30, 1917. Serial No. 145,486. (Cl. 64—39.)



1. A journal box having one end open and the other end formed with an opening through which the journal

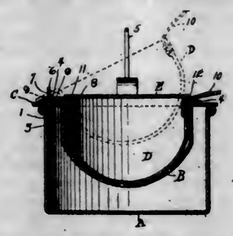
may pass into the box, rollers within the box around the journal therein, a wedge mounted in the upper end of the box and having the lower side concaved in cross section to conform to the curvature of the circle described by said rollers, a lip on the forward end of said wedge, the side of said box being formed with alining openings contiguous to said lip, and a key passing through said openings and engaging said lip to support the forward end portion of said wedge.

2. A journal box having one end open and the other end formed with an opening through which the journal may pass into the box, rollers within the box around the journal therein, a wedge mounted in the upper end of the box and having the lower side concaved in cross section to conform to the curvature of the circle described by said rollers, a lip on the forward end of said wedge, the side of said box being formed with alining openings contiguous to said lip, a headed key passing through said openings and engaging said lip to support the forward end portion of said wedge, means for holding said key in operative position, and a cover closing the forward end of said box.

3. A journal box having one end open and the other end formed with an opening through which the journal may pass into the box, rollers within the box around the journal therein, a wedge mounted in the upper end of the box and having the lower side concaved in cross section to conform to the curvature of the circle described by said rollers, a lip on the forward end of said wedge, the side of said box being formed with alining openings contiguous to said lip, a headed key passing through said openings and engaging said lip to support the forward end portion of said wedge, said key having a slot adjacent its free end, a pin passed through said slot for holding the key in operative position, and a cover closing the forward end of said box.

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1,224,731. COMBINED VEGETABLE COOKER AND DRAINER. MINNIE FOURNIER, Minong, Wis. Filed Aug. 14, 1916. Serial No. 114,898. (Cl. 53—1.)

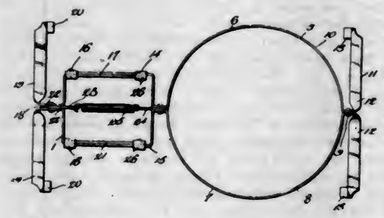


An apparatus for reducing a solid food product to a pulp and comprising the combination with a cooking vessel of a perforated outer receptacle arranged within the vessel and adapted to contain the product to be cooked, an outstanding flange on the receptacle of a diameter less than that of the vessel, a ring engaged upon the rim of the vessel and removably supporting the outer receptacle with its flange resting thereon, an upstanding apertured ear fixed to the ring, an inner receptacle smaller than and removably engaged in the outer receptacle, a lug formed on one side of the inner receptacle extending through the ear and loosely engaging the same, and a handle carried by the opposite side of the inner receptacle by which the latter may be rocked into and out of the outer receptacle with said lug and ear as a fulcrum, whereby to force the cooked product through the perforations of the outer receptacle in the form of a pulp.

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1,224,732. STRAINER-HOLDER. RALPH FULLENWIDER, Idaho Falls, Idaho. Filed July 10, 1916. Serial No. 108,495. (Cl. 248—30.)

1. A support for milk strainers comprising a substantially circular body portion formed from a pair of sections, a fixed jaw provided on one end of said sections, the opposite end of said sections being bent at a point diametrically opposite the point of formation of the fixed jaw to provide an integral U-shaped frame, a movable jaw slidably associated with the limbs of said frame and a spring connected with the movable jaw for drawing the same in a direction toward the fixed jaw.



2. A support for milk strainers comprising a circular body portion, a fixed jaw formed integral with and to one side of said body portion, a U-shaped frame formed integral with the body portion at a point diametrically opposite the point of formation of the fixed jaw and the terminals of the frames being provided with guide loops, a movable jaw having L-shaped arms provided with loops on the free extremities thereof, the loops of the U-shaped frame and the loops of the L-shaped arms forming a slidable connection of the movable jaw with the frame of the circular body portion, and a spring connected with the body portion and with the movable jaw for drawing the latter in a direction toward the fixed jaw.

3. A support for milk strainers comprising a circular body portion, a fixed jaw formed integral with and to one side of said body portion, a U-shaped frame formed integral with the body portion at a point diametrically opposite the point of formation of the fixed jaw and the terminals of the frames being provided with guide loops, a movable jaw having L-shaped arms provided with loops on the free extremities thereof, the loops of the U-shaped frame and the loops of the L-shaped arms forming a slidable connection of the movable jaw with the frame of the circular body portion, an apertured lug secured between the limbs of said frame, a second apertured lug secured between the L-shaped arms of the movable jaw and alining longitudinally with the first mentioned lug, and a coiled spring connected in the aperture of each of said lugs for forcing the movable jaw in a direction toward the fixed jaw.

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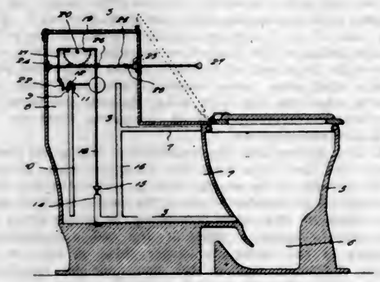
1,224,733. SAFETY-PIN. JAMES J. FURLONG, Tacoma, Wash. Filed Jan. 12, 1917. Serial No. 142,072. (Cl. 24—156.)



The herein described safety pin comprising a lower arm and an upper arm connected by a bend; and a guard including a head bent into V-shaped section with its angle secured to the end of the lower arm of the pin, its sides having incisions producing tongues and the tips of the latter borne inward into contact with each other, and its sides diverging upward into wings above said tips, and a body integral with the outer end of the head and bent up over the same, its upper portion being bent into inverted V-shaped cross section and its corners passed down between the wings of the head, the whole for use substantially as described.



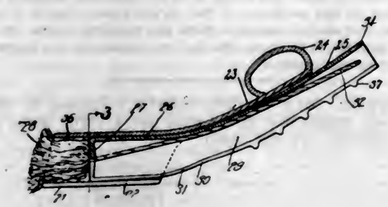
1,224,734. WATER-CLOSET. JOHN H. GALLAGHER, Macomb, Ill. Filed July 24, 1916. Serial No. 111,041. (Cl. 4—5.)



A device of this class, including an integral bowl and flush tank, the flush tank having an outlet adjacent the rim of the bowl and also intermediate of the ends of the bowl at the rear thereof, a supply pipe entering said flush tank terminating at a point adjacent the bottom thereof, a float valve in said pipe, a supply valve also in said pipe, a dispensing pipe in communication with the lower outlet and having a valve at the inner end thereof, a second pipe in communication with said pipe and the rim flush of the bowl, an oscillatory member mounted in the upper portion of the tank and operably connected to the supply valve and the dispensing valve, one of said valves being closed when the other is opened, said oscillatory member being provided with a plurality of teeth, and a spring projected lid actuated rod mounted in the tank and operably connected to said gear.

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1,224,735. TAMPON-APPLICATOR. CLOVIS GAMACHE, Jr., Nashua, N. H., and WALTER S. MCNEAR, Boston, Mass., assignors to Nur-Pon Company, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 21, 1916. Serial No. 126,924. (Cl. 128—28.)



1. An applicator for medicated tampons, provided with cords or tapes consisting of a slotted guide member adapted to releasingly house the tampon therein; and a slotted coacting tampon-holder adapted to disengagingly engage the tampon therewith by the insertion of the cord or tape within the slot provided therein for the purpose.

2. An applicator for medicated tampons provided with cords or tapes, consisting of a slotted movable sleeve member provided with a holding and operating shank; and a tampon-holding member provided with a slotted section for receiving and housing the tampon cord or tape, and adapted to support said movable sleeve member thereupon and to form a housing therewith for the tampon held thereby.

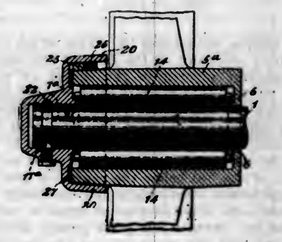
3. An applicator for medicated tampons provided with cords or tapes, consisting of a slotted tubular sleeve member provided with a shank member; and a tampon-holding member provided with a bearing end for said sleeve member and a longitudinal slot adapted to coincide with the slot of said tubular sleeve member for receiving the cord or tape of the tampon.

4. An applicator for medicated tampons, having projecting cords or tapes attached thereto consisting of an outer and slotted tubular member having an extension shank provided with a retaining finger section; and a tampon-holder adapted to slidably support said outer and slotted tubular member and provided with a grooved recess longitudinally positioned therein and coinciding with the slot of said outer and slotted tubular member for receiving the tampon cord and freely housing the same therein, and retaining means for the fingers of the hand holding the same.

5. An applicator for medicated tampons, having projecting cords or tapes attached thereto for handling purposes, consisting of an outer split sleeve member provided with a shank-piece having a hand engaging recess thereon; and a co-acting tampon-holder adapted to slidably support said outer split sleeve member thereon on the tampon end thereof, and provided with a tampon cord or tape recess adjacent to the split of said outer member and extending clear across the same longitudinally, and temporary locking means at the free end of said tampon-holder for temporarily engaging with and locking the cord or tape of the tampon with said tampon-holder in working position therewith.

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1,224,736. MINE-CAR WHEEL AND ATTACHING MEANS THEREFOR. FREDERICK H. GIBBS, Brooklyn, N. Y., assignor to American Car and Foundry Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 30, 1916. Serial No. 128,487. (Cl. 105—67.)



1. In combination, a wheel provided with a cast metal hub having an axle opening and an integral roller supporting flange at its inner end, a hub cap adapted to telescope with the outer end of said hub, a roller supporting flange within said hub cap and means adapted to cooperate with an axle within said hub cap to retain the wheel on an axle.

2. In combination, a wheel provided with a cast metal hub having an axle opening and an integral roller supporting flange at its inner end, a hub cap adapted to telescope with the outer end of said hub, a roller supporting flange integral with said hub cap, rollers supported by said flanges when the wheel is removed from an axle and removable means adapted to lock said hub cap in operative position.

3. In combination, an axle, a roller bearing wheel comprising but two parts each adapted to support one end of a set of bearing rollers and removable means wholly external to one of said parts adapted to lock said parts in operative position.

4. In combination, an axle, a roller bearing wheel comprising but two telescoping parts each adapted to support one end of a set of bearing rollers and removable means wholly external to one of said parts adapted to lock all of said parts in operative position.

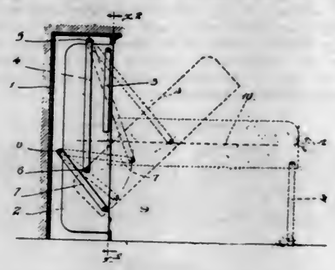
5. In combination, an axle, a roller bearing wheel comprising but two cast metal parts each adapted to support bearing rollers and tangentially disposed removable means adapted to lock all of said parts in operative position.

[Claims 6 to 10 not printed in the Gazette.]

**1,224,737. PROCESS OF PRODUCING LAUNDRY BLUE.** GEORGE F. GILLPATRICK, Kansas City, Mo., assignor to Deroe & Raynolds Company, Kansas City, Mo., a Corporation of Missouri. Filed Sept. 15, 1916. Serial No. 120,230. (Cl. 8—6.)

The process of producing laundry blue, consisting of confining dry ultra-marine in a sack composed of double-faced cotton cloth, confining the said sack and its contents within a second sack of the same material and submerging said double container with its contents in a body of water, whereby pigments may percolate through the double container into the water in proper quantity to produce a liquid blue.

**1,224,738. FOLDING BED.** WILLIAM GOODCELL, Balboa, Cal. Filed Aug. 1, 1914. Serial No. 854,456. (Cl. 5—54.)



1. In a folding bed having its center of gravity located approximately centrally of the ends of the bed, a casing therefor, hangers pivoted to the casing at points over and above the bed, said hangers being pivoted to the sides of the bed at opposite points substantially midway of its upper and lower sides between the inner end of the bed and the transverse center line thereof nearer to the center line than the inner end, thrust arms pivoted to the casing rearwardly of the bed below the center of gravity of the bed and extending downwardly and outwardly from the support, said arms being pivoted at opposite points on the sides of the bed between the pivot points of the hangers with the bed and the inner end of the bed below said hanger pivot points and nearer to the inner end of the bed than to said hanger pivot points, said arms adapted to swing outwardly and upwardly relative to the casing when the bed is opened and being downwardly and outwardly inclined with their inner ends located above their outer ends when the bed is in open position for use.

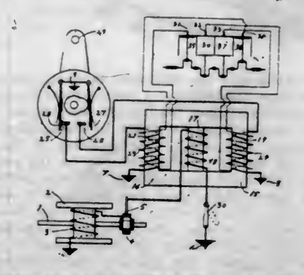
2. In combination a bed having its center of gravity located approximately centrally of the ends of the bed, a housing for the bed, hangers pivoted to the bed and to the housing, the relative arrangement of said pivots causing the hangers to move from the substantially vertical position when the bed is vertical to a forwardly and outwardly inclined position when the bed is moved from the vertical to the horizontal position and thrust arms pivoted to the bed and to the housing, the relative arrangement of the pivots of the thrust arms causing the thrust arms to move from nearer the vertical to nearer the horizontal when the bed is moved from the vertical to the horizontal and the relative arrangement of the pivots connecting the hangers and thrust arms to the bed causing the thrust arms to move forwardly and upwardly toward the hangers when the bed is moved from vertical to horizontal position, said thrust arms having their inner ends located above their outer ends when the bed is in position for use.

3. In a folding bed, the combination with a bed casing and a bed free from head and counterweights, adapted to lie upright within the casing when in out-of-the-way position and in horizontal position completely out of the casing when in operative position, of hangers pivoted to the casing above the bed and pivoted to opposite sides of the bed at points approximately midway of the inner side of the bed and transverse median line thereof midway of the upper and lower sides of the bed, and thrust arms pivoted to the casing at points below the center of gravity of the bed and rearwardly of the pivot points of the hangers with the casing, said arms being pivoted to opposite sides of the bed below and rearwardly of the pivots for the hangers with the bed at points substantially midway of the inner side of the bed and the hanger bed pivot points, said arms being inclined downwardly and outwardly when the bed is in out-of-the-way and operative positions and extending out of the casing when the bed is in operative position.

4. In a folding bed, the combination with a bed casing and a bed free from head and counterweights, adapted to lie upright in the casing when in out-of-the-way position and to lie completely out of the casing when in operative position, of hangers pivoted to the casing above the bed and to opposite sides of the bed approximately midway of the upper and lower sides of the bed between the inner side of the bed and the transverse median line thereof, and thrust arms pivoted to the casing at points below the center of gravity of the bed and rearwardly of the pivot points of the hangers with the casing, said arms being pivoted to opposite sides of the bed below and rearwardly of the pivots for the hangers with the bed, the lengths of said arms and the positions of the pivots thereof relative to the casing and bed being such that the center of gravity of the bed moves in a substantially horizontal line which has intermediately a downwardly extending curve traversed by the center of gravity when the bed is in approximately 45° position.

5. In a folding bed, the combination with a bed casing and a bed free from head and counter weights adapted to lie within the casing when in out-of-the-way position and to lie horizontally completely out of the casing when in operative position, of hangers pivoted to the casing and bed, thrust arms pivoted to the casing and bed and said hangers and thrust arms having lengths and the positions of their pivots such that the center of gravity of the bed moves substantially in a horizontal line which is intermediately downwardly curved, the lowest point of said downwardly curved line being traversed by the center of gravity when the bed is approximately in a 45° position and said thrust arms being substantially at right angles to the bed when the latter is in 45° positinn, whereby the effect of the positions of the thrust arms relative to the bed and casing, together with the position of the center of gravity, will cause the bed to balance in an approximately 45° position.

**1,224,739. ELECTRICAL SYSTEM.** HAYNER H. GORDON, Washington, D. C. Filed Dec. 4, 1916. Serial No. 134,917. (Cl. 123—148.)



1. A source of energy, and a primary circuit therefor, a plurality of secondary coils, and means for successively placing said primary circuit in energizing relationship with said secondary coils.

15. In a device for the generation of electricity, the combination with a plurality of separate magnetic paths, of means tending to simultaneously induce therein a magnetic flux change, and electrical means for normally restraining said change in certain of the magnetic paths.



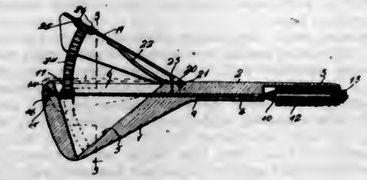
16. In a device for the generation of electricity, the combination with a plurality of separate magnetic paths, of means tending to simultaneously induce a magnetic flux change in all of said paths and electrical means comprising choke windings for normally restraining said change in certain of the magnetic paths.

19. An electrical transformer comprising two end pieces, a plurality of cores connecting said end pieces, a magnetc flux producing winding mounted on one of said cores, a magnetic flux producing and controlling winding, and a current generating winding mounted on the remainder of said cores, and means for opening and closing said magnetic flux producing and controlling windings successively thereby causing a flux change to take place successively in each of the generating windings, and thereby producing successive current impulses in the generating windings.

20. In an ignition system, an electrical transformer comprising a single exciting winding, a plurality of closed magnetic circuits associated therewith, a choke winding surrounding each closed magnetic circuit said choke coils being connected to a timer adapted to open circuit the choke windings successively, a second choke winding surrounding each closed magnetic circuit each of these latter windings being connected in series with each other and with an electromagnetic device adapted to open said second choke winding circuit when the current flow in the exciting winding reaches a maximum value.

[Claims 2 to 14, 17, and 18 not printed in the Gazette.]

**1,224,740. ROTARY TOOTH-BRUSH.** JOHN C. GREEN, Burwell, Nebr. Filed Oct. 1, 1914. Serial No. 864,504. (Cl. 15—37.)

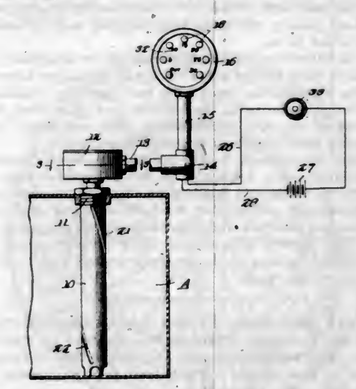


1. A rotary tooth brush of the class described comprising a grip portion, said grip portion being substantially triangular in shape, a rotary brush supporting shaft passing through said grip portion, a wing pivotally secured to said grip portion, and means carried by said grip portion and coöperating with means upon said rotary brush supporting shaft for rotating said brush supporting shaft as said wing is swung upon said grip portion, said grip portion being broader toward its rear end than toward the forward end thereof for resisting the slipping of said grip portion from the hand of an operator while the same is in use.

2. As a new article of manufacture, a rotary tooth brush comprising a body, said body terminating in a grip portion, said grip portion being gradually enlarged toward the rear end thereof, a wing pivotally secured to said body, a rotary brush supporting shaft, and means carried by said wing and coöperating with means upon said rotary brush supporting shaft for facilitating the rotation of said rotary brush supporting shaft as said wing is swung upon said grip portion, said grip portion constituting means for resisting the slipping of the same from the hand of the operator while in operation.

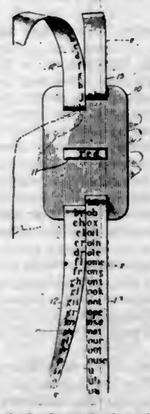
3. A rotary tooth brush comprising a body, a flat grip portion carried by one end of said body and provided with a substantially V-shaped pocket formed therein, said grip portion being widened toward the rear end thereof for producing a substantially triangular shape grip portion, a wing pivotally secured to said body, and means carried by said wing and coöperating with means upon said rotary brush supporting shaft for working in said substantially V-shaped pocket for rotating said rotary brush supporting shaft as said wing is swung upon said grip body.

**1,224,741. INDICATOR FOR FLUID-CONTAINERS.** GEORGE PATRICK HEWIS, Regina, Saskatchewan, Canada. Filed July 21, 1916. Serial No. 110,612. (Cl. 200—34.)



The combination with a container, of a stationary tubular guide therein having a spiral guideway, a rotary shaft extending longitudinally of said tubular guide and projecting outside of the container, a buoyant runner movable longitudinally within said tubular guide and having means in engagement with said spiral guideway whereby a partial rotary movement is imparted, the latter being slidable on said shaft and so related thereto as to impart a corresponding partial rotary movement to said shaft, an arm located exteriorly of said container and having a fixed relation to the projecting part of said shaft, and electric circuit controlling means embodying a stationary member having an arcuate series of contacts, and another contact on said arm adapted to sweep over said arcuate series of contacts.

**1,224,742. EDUCATIONAL DEVICE FOR TEACHING READING.** VIRGIL MORES HILLYER, Baltimore, Md. Filed Dec. 28, 1916. Serial No. 139,255. (Cl. 35—9.)



1. An educational device of the character described, comprising a card or holder having an intermediate pair of slits forming a sight opening, and having pairs of guide slits upon opposite sides of the sight opening, and the slits of each pair of which are offset laterally, character tapes threaded through the said guide slits with their obverse faces appearing in the sight opening, and extending

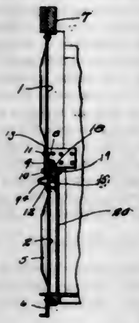
parallel with one another with their adjacent edges in close proximity between the guide slits and within the sight opening, said guide slits of each pair being offset from one another in the direction of the length and movement of the tapes, whereby to independently guide each tape and prevent the tapes from slipping over or beneath one another in use.

2. An educational device of the character described, comprising a card having guide slits, and character tapes extending through the guide slits and partially exposed at the center of the card, the slits of each tape being independent of the slits of the other tape and offset longitudinally therefrom for the purpose described.

3. An educational device of the character described, comprising a card having guide slits, character tapes extending through said guide slits, said guide slits being independent of one another for each tape and offset from one another laterally and longitudinally of the tapes, and said card having intermediate slits through which the tapes pass, forming a continuously framed sight opening common to the tapes.

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1,224,743. REINFORCED CAR-WALL CONSTRUCTION. OSCAR HOCHBERG, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed July 3, 1916. Serial No. 107,368. (Cl. 105—192.)



1. A wall structure for railway cars comprising conjoined sheet metal sections and an interposed reinforcing member overlapping and secured to both of said sections and having corrugations extending longitudinally of the sections and protruding in opposite directions.

2. A wall construction for railway cars comprising juxtaposed sheet metal sections and an interposed reinforcing member overlapping and secured to both of said sections and formed with corrugations extending longitudinally of the sections and protruding in opposite directions; said sections and said reinforcing member being secured at their extremities to car framing members.

3. In a wall construction for railway cars, a pair of juxtaposed sheet metal sections secured at their extremities to car framing members, and a reinforcing member interposed between the said sections and secured thereto; said reinforcing member being formed with corrugations extending longitudinally, one of which corrugations protrudes to the inside and the other to the outside of the car wall.

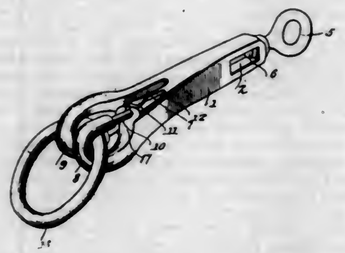
4. In a wall construction for railway cars, a reinforcing member secured at its extremities to car framing members and formed with collaterally disposed longitudinal corrugations protruding in opposite directions, and sheet metal sections secured at their margins to car framing members and to said reinforcing member.

5. In a wall construction for railway cars, a reinforcing member secured at its extremities to car framing members and formed with collaterally disposed corrugations, one of which protrudes to the interior of the car to form a compression member with respect to load thrusts, and the other of which extends exteriorly of the car to provide a tension member, and adjacently disposed wall sheets secured to said reinforcing member in positions to overlap the reëntrant sides of the said corrugations.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,744. SNAP-HOOK. LINDSEY E. HOLCOM, Twisp, Wash. Filed May 1, 1914. Serial No. 835,659. (Cl. 24—239.)

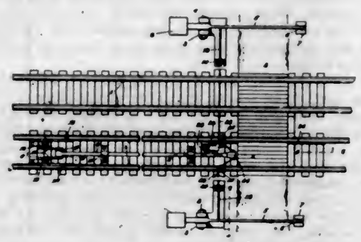


1. A snap hook comprising a body bifurcated at one end, and spaced parallel hooks carried by the arms of the bifurcation and each having its throat opening laterally and opposite to the shank of the other; combined with independent means out of line with the space between said hooks for normally closing their throats, and separate handles on such means exposed on relatively opposite edges of said arms.

2. A snap hook comprising a bifurcated body, the arms of the bifurcation having transversely alined abrupt faces and being provided with longitudinal chambers opening through said faces and with slots opening from the chambers through relatively opposite edges of the two arms, bolts in said chambers, springs therein independently projecting the bolts, handles on the latter extending through the respective slots; and twin hooks whose shanks are integral with the respective arms and deflected from their unslotted edges, whose bends are parallel, and whose bills have their tips directed toward and spaced from said faces and each alined with its respective bolt.

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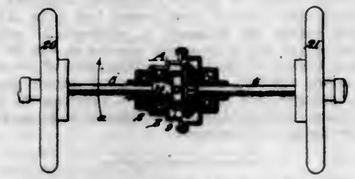
1,224,745. RAILWAY-GATE. ARTHUR C. HUMPHREYS, Toronto, Ontario, Canada. Filed June 13, 1916. Serial No. 103,562. (Cl. 269—5.)



The combination of a horizontally pivoted railway gate, a rod adapted to be mounted longitudinally of and between railway tracks, cranks connected to the rod and adapted to be operated by a train to shift the rod longitudinally, a bell-crank lever arranged intermediate said rod and gate, locking means for the rod at its limit of movement to hold the gate in lowered position, a trip member operated by the train to raise the rod to release the locking means, and a weight to raise the gate, upon release of said locking means.



1,224,746. GEARLESS DIFFERENTIAL DEVICE. MARTIN HVEEM, Bayles, Cal., assignor of one-fourth to John F. Finnegan and one-fourth to Sherman Brunner, La Moine, Cal. Filed Dec. 22, 1915. Serial No. 68,175. (Cl. 74—7.)



1. A differential mechanism comprising a divided casing, a pair of alined axles journaled in the casing, an enlarged head formed on the inner end of each shaft having opposing faces which are provided with eccentrically arranged recesses, a shaft extending between said opposing faces at right angles to the axles and also journaled in the casing, ball-shaped projections on said shaft engaging in the eccentrically arranged recesses formed in the axle heads, means for revolving the casing, and means for taking up end thrust of the axles against the ball-shaped projections with connected shaft.

2. A differential mechanism comprising a divided casing, a pair of alined axles journaled in the casing, an enlarged head formed on the inner end of each shaft having opposing faces which are provided with eccentrically arranged recesses, a bearing ring secured between the casing sections and between the opposing faces of the axle heads to form a thrust bearing, a shaft extending between said opposing faces at right angles to the axles and journaled in the bearing ring, ball-shaped projections on said shaft engaging in the eccentrically arranged recesses formed in the axle heads, and means for revolving the casing and bearing ring.

3. The combination with the headed ends of the axles, the right angularly disposed shaft provided with the ball-shaped projections which project into the eccentrically disposed recesses in the axle heads, and the casing sections inclosing same, of a bearing ring secured between the casing sections adapted to carry the right-angularly disposed shaft and serve as a thrust bearing for the axle heads.

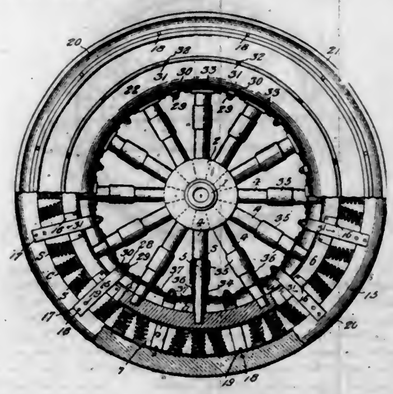
4. A differential mechanism comprising a divided casing, a pair of alined axles journaled in the casing, an enlarged head formed on the inner end of each shaft having opposed faces which are provided with eccentrically arranged recesses, a shaft extending between said opposing faces at right angles to the axles and also journaled in the casing, projections on said shaft engaging in the eccentrically arranged recesses formed in the axle heads, means for revolving the casing, and means for taking up end thrust of the axles against the projections with connected shafts.

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1,224,747. CUSHION-WHEEL. WILLIAM A. INGALLS, Arkansas City, Kans. Filed Apr. 4, 1912. Serial No. 688,866. (Cl. 152—28.)

1. The combination with a wheel and its felly, of an outer rim, the spokes of said wheel being cylindrical, a series of coil springs interposed between the felly of said wheel and said outer rim, a plurality of U-shaped yokes secured to said outer rim encompassing said felly, an annular shield having access openings to receive said spokes secured to said outer rim, a ferrule secured to the end of each spoke having a sleeve, a collar held upon each ferrule and outward of its sleeve, a slide plate connected to each collar, said slide plates closing said access openings, and flanges secured to said shield to slidably hold said plates.

2. The combination with a wheel, of an outer spaced rim, said wheel having cylindrical spokes, a series of springs interposed between the felly of said wheel and said outer rim, a plurality of U-shaped yokes secured to said outer rim and encompassing said felly, annular shields having access openings to receive said spokes, means to clamp said shields to said yokes, and slide plates upon said shields covering said access openings, each slide plate having a collar engaging a spoke.



3. A spring wheel comprising an outer rim, a series of cylindrical spokes, a felly spaced from the outer rim, a plurality of springs interposed between the felly and said rim, a plurality of U-shaped yokes secured to said outer rim and extending about said felly, annular shields having access openings to receive said spokes, means to clamp said shields to said yokes and slide plates upon said shields covering said access openings, each slide plate having a collar engaging one of the spokes.

4. A wheel of the type described, including a felly and an outer rim, of an inner band secured upon the outer periphery of the felly, an outer band secured upon the inner periphery of the rim, and a plurality of springs in series of three, the central spring of each series being radial and the lateral springs thereof converging toward the inner end of the central spring, said inner and outer bands having right-handed and left-handed screw-threaded studs, said springs having apertured butts, the apertures of said butts being arranged for engagement with said studs.

5. A wheel of the type described having spokes and a connected felly, of an outer rim resiliently connected to said felly, an outer casing having annular flanges covering said rim, an incasing sectional shield covering the resilient connection between said rim and felly the sections of said shield having their outer edges received under said flanges, the inner edges of said shield sections being rabbeted together and provided with spoke receiving openings, a spoke receiving ferrule secured to each spoke, and a sliding plate having a collar surrounding each ferrule said plates sliding over said spoke receiving openings.

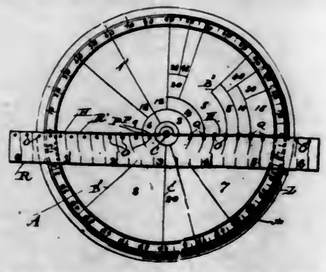
[Claims 6 and 7 not printed in the Gazette.]

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1,224,748. DEVICE FOR THE STUDY OF COMMON FRACTIONS. EDWIN C. JACOBS, Norwalk, Ohio. Filed Dec. 12, 1913, Serial No. 806,209. Renewed Nov. 22, 1916. Serial No. 132,913. (Cl. 35—2.)

1. In a device to assist in the study of fractions, a foundation disk having a central upwardly extending point, a disk centrally mounted and rotatable upon said point, said disk graduated in degrees of a great circle upon its edge, said disk having represented thereon radial lines, including fractional parts of the circle between them and arcs included between said radial lines, the fractional amount being represented upon each arc in common fractions, and a ruler revoluble upon said center

pin and having a radial side extending beyond the graduated edge, whereby the sum of any plural number of the fractions represented by said arcs and differences between them can be read in degrees of the great circle, and also in divisions of said arcs.



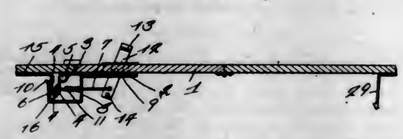
2. In a device to assist in the study of fractions, in combination, a disk having its outer edge graduated in degrees of a great circle, and provided with a series of arcs, representing divisional parts of the circle, and with a representation of a common fraction upon each arc, the limits of each arc being designated by radial lines, and a ruler rotatable upon the center of said disk, and having a radial edge, whereby the number of degrees subtended by each arc or portions of an arc can be read upon said graduated margin of said disk.

3. In a device for the graphical representation of operations in fractions, a disk having a radial base line extending thereacross, and provided with a graduated margin, arcs of circles originating in said base line and radial lines defining said arcs, said arcs designating fractional parts of the circle, additional radial lines, further subdividing some of these arcs, the fractional values of said arcs being represented thereon in common fractions, and a pivoted ruler having a radially extended edge, adapted to correspond in turn with said radial lines, and serving to register with the graduations on said graduated edge.

4. In a device for the graphical representation of operations in common fractions, and also adapted for the construction of angles in geometric forms, a centrally pivoted disk, provided with a graduated edge, and a radial base line, a series of arcs, of different lengths, and limiting radial lines therefor represented upon said disk, said arcs designated by the denominators of the common fractional parts they represent, and a centrally pivoted ruler having a radial edge adapted to register with said radial lines in turn and with the graduations on said edge, and extending beyond said edge, whereby the fractional amount included between any two of said arcs or the amount of difference between them can be read upon said graduated edge.

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1,224,749. DOOR LATCH AND HOLDBACK. FRANK E. JONES, South Coffeyville, Okla. Filed Feb. 20, 1917. Serial No. 149,860. (Cl. 16—49.)

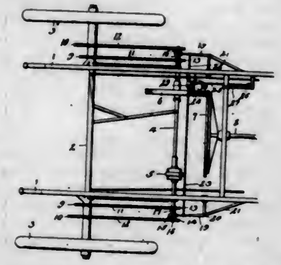


1. A latch comprising a base plate having a rectangular inclosure formed thereon, and a vertical extending lip forming one side of the inclosure, a pawl pivoted within the inclosure, said pawl and lip providing an entranceway, a draw rod pivotally connected to the pawl and extending rearwardly through the frame, means for actuating said draw rod to withdraw the pawl, means normally pushing said pawl toward the lip, and a keeper having a head adapted to enter between the lip and the pawl and engage behind the latter.

2. A latch comprising in combination, a base plate and a strap carried by the base plate, said strap and base plate being shaped to form a rectangular inclosure, and having its outer vertical sides formed into a lip, a pawl mounted within the inclosure in substantially parallel relation to the lip, a draw rod pivoted to the lip and having a bearing in the second vertical side of the inclosure, means normally pressing the pawl toward the lip, means operative upon the draw rod to withdraw the pawl, and a keeper having a keeper head adapted to be projected between the lip and the pawl.

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1,224,750. AUTOMOBILE DRIVING-GEAR. PERRY L. JORDAN, Clallam Bay, Wash. Filed Sept. 25, 1915. Serial No. 52,638. (Cl. 21—90.)



In a motor vehicle, the combination with the driving axle and driving wheels, of a rotary countershaft parallel to said driving axle, sprocket wheels on said countershaft in spaced relation to each other and provided on their adjacent sides with clutch faces, a clutch arranged between said sprocket wheels for throwing either one of said wheels into engagement with the countershaft, means for shifting said clutch, sprocket wheels of different diameters fast on the driving axle in spaced relation to each other, sprocket chains passing around the sprocket wheels on the countershaft and driving axle, the clutch shifting means embodying a clutch shifting lever engaging said clutch, a manually controlled lever, operating connections between said manually controlled lever and clutch shifting lever, said operating connections including a rod connected with the clutch shifting lever, another rod connected with the manually operated lever, a curved link connecting said rods, and guiding means for said link.

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1,224,751. PISTON PACKING-RING. LEWIS KINSLEY, Philadelphia, Pa., assignor to Hope Machine Company, a Corporation of Pennsylvania. Filed Dec. 1, 1915. Serial No. 64,411. (Cl. 121—108.)



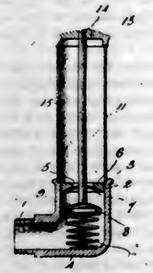
A piston packing, consisting of an inner ring having a radially shallow circumferential outer groove of uniform cross section, and a normally wide open gap at one place in its circumference, said ring oppositely tapered from a point diametrically opposite the gap whereby it is thickest



at said point and tapers gradually on each side thereof to the gap and further having the inner opening eccentric relatively to the outer circumference and the radial width of the opposite faces in tapering form, combined with a relatively thin and very flexible split ring of uniform rectangular cross section fitting the groove of the inner ring and having when under no tension or compression a normal outside diameter approximating the working diameter of the piston ring when compressed in use and relatively much smaller normally than the normal outside diameter of the tapered inner ring, said flexible outer ring in association with the inner ring normally tending to contract and oppose the normal expanding tendency of the inner ring, whereby the outer thin flexible ring in use is neutral as to tension and is expanded solely by the tension of the inner ring.

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1,224,752. LIQUID-GAGE. RAMBY KIRKWOOD, Abbeville, S. C. Filed Aug. 2, 1916. Serial No. 112,790. (Cl. 73—54.)



1. A liquid gage embodying an elbow, a valve seat arranged in one end thereof, a glass tube rising from said end of the elbow, a spring pressed valve disposed beneath said seat, a cap closing the upper end of said tube, and a rigid element carried by said cap, and depending therefrom through the valve seat for holding the valve normally unseated.

2. A liquid gage embodying an elbow, an apertured disk arranged in one end thereof and constituting a valve seat, a glass tube having one end fitted within one end of the elbow immediately above the seat, a spring pressed valve disposed beneath the seat, a cap closing said tube, and a rigid element carried by the cap and disposed within the tube, said element passing through the aperture in said disk for holding the valve normally unseated.

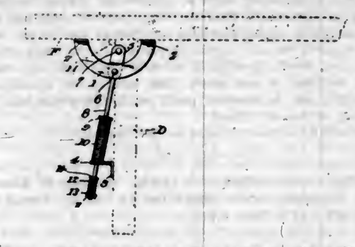
3. A liquid gage embodying an elbow having a reduced exteriorly threaded end portion, being interiorly threaded at its opposite end, a disk threaded in the last mentioned end and constituting a valve seat, said disk having an enlarged central opening, and relatively small opposed recesses at opposite sides of the opening, a glass tube rising from the elbow from a point above said seat, a closure for the upper end of the tube, and a rigid element depending from the cap and passing through the central opening in said seat for normally holding the valve unseated.

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1,224,753. DOOR-SPRING. JOHN KLASNICH, Universal, Ind. Filed Dec. 22, 1916. Serial No. 138,417. (Cl. 16—46.)

1. The combination with a door hinged in its frame, and a guide on the door remote from its hinge line; of a link, means for pivotally supporting the outer end thereof at a point directly forward of the hinge line, a rod pivoted to the other end of the link and extending slidably through said guide, a collar on the rod, and an expansive spring between the collar and the guide.

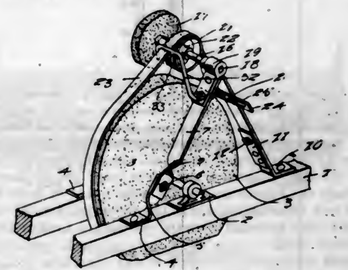
2. In a door spring, the combination with a bracket adapted for attachment to the frame over the hinge line of the door, and a guide adapted for attachment to the door remote from the hinge line; of a rod slidably mounted through said guide, a link pivotally connected at one end with the rod and at the other end with the bracket, a collar on the rod between the bracket and



guide, a stiff expansible spring between the collar and guide, a stop on the outer end of the rod, and a weak expansible spring between said stop and guide.

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1,224,754. GRINDSTONE ATTACHMENT. JOHN E. KNOUFF, Wilmot, Ind. Filed July 26, 1916. Serial No. 111,443. (Cl. 51—7.)



1. In combination with a grindstone frame having a grindstone journaled thereon, of a pair of V-shaped supports hingedly and detachably secured to the frame, a transverse shaft journaled to said supports, an emery wheel secured to the shaft, and means connected with the shaft and with the grindstone for rotating the emery wheel.

2. In combination with a grindstone frame having a grindstone journaled thereon, of a pair of substantially L-shaped brackets secured to the frame, a pair of V-shaped supports hingedly secured to said brackets, means for detachably securing the V-shaped supports to the frame, a transverse shaft journaled to said supports, an emery wheel secured to said shaft, and means connecting the shaft to the grindstone for rotating the emery wheel upon rotation of the grindstone.

3. In combination with a grindstone frame having a grindstone journaled thereon, of a pair of substantially L-shaped brackets secured to the frame, a pair of V-shaped supports hingedly secured to the brackets, a pair of L-shaped brackets secured to the frame, plates secured to the L-shaped brackets, means for securing the free ends of the supports to the plates, a transverse shaft journaled to said supports, an emery wheel secured to the shaft, and means for operatively connecting the transverse shaft with the grindstone for rotating the emery wheel upon rotation of the grindstone.

4. In combination with a grindstone frame having a grindstone journaled thereon, of a pair of V-shaped supports hingedly secured to the frame, a pair of L-shaped brackets secured to the frame, plates secured to the L-shaped brackets, bolts carried by said plates, wing nuts upon said bolts, said supports provided with their free ends slotted to receive the bolts for detachably securing the free ends of the supports to the plates, a transverse shaft journaled to said supports, an emery wheel secured

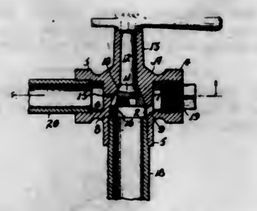
to the shaft, and means for operatively connecting the transverse shaft to the grindstone for rotating the emery wheel.

5. In combination with a grindstone frame having a grindstone journaled thereon, of a pair of V-shaped supports hingedly and detachably secured to the frame, bearings secured to the apex portions of the supports, a transverse shaft journaled in said bearings, an emery wheel secured to the shaft, and means for operatively connecting the transverse shaft with the grindstone for rotating the emery wheel.

[Claims 6 to 8 not printed in the Gazette.]

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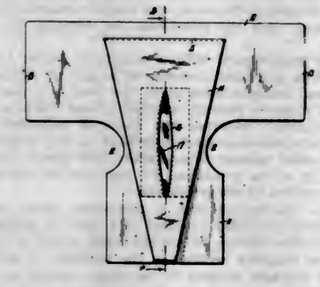
1,224,755. OIL-FEEDING VALVE. ALBERT P. KÖGLER, San Francisco, Cal. Filed Dec. 2, 1916. Serial No. 134,696. (Cl. 137—7.)



A valve including a casing having a central chamber with a conical valve seat thereabove, said casing having an outlet slot, an inlet having a port communicating with the chamber, and a conical plug valve in said seat, said valve having a peripheral groove extending axially thereof and at right angles to said slot, said groove extending through the bottom end of the solid valve to form a large inlet and terminating above the rectangular slot and having its said terminal directed outwardly toward the slot.

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1,224,756. DIAPER. SALLIE WEOR LAING, New York, N. Y. Filed Feb. 24, 1916, Serial No. 80,168. Renewed Mar. 22, 1917. Serial No. 156,738. (Cl. 2—131.)



1. A diaper, comprising a body of approximately rectangular shape and arranged to have its sides overlap at the front of the infant's abdomen, a leg flap of approximately rectangular shape and extending integrally from the lower edge of the middle portion of the said body, the said flap being narrower than the said body and the sides of the flap being provided at their upper ends with semicircular cut-out portions to form leg openings on folding the flap onto the front of the said body, and a pad holding pocket having tapering sides, said pocket being secured at its upper wider end to the middle portion of the body and extending loosely down upon the leg flap.

[Claim 2 not printed in the Gazette.]

1,224,757. INTERLOCKING BLOCK. HERMAN PETER THYGESEN LIND, Kew Gardens, England. Filed Nov. 12, 1915. Serial No. 61,194. (Cl. 72—38.)




1. A structural block for use in the formation of slab structures capable of resisting compressive, tensile, bending and shearing stresses caused by forces acting normal to the surface of the slab, said block having smooth, double symmetrical upper and lower surfaces, two plane end surfaces and two sides which have ribs and recesses forming lateral profiles which, at any point throughout the length of the block are symmetrical, said lateral profiles for the end parts being different to those of the central part of the block, the ribs on the end portions corresponding to and being supplemental to the recesses in the central portion substantially for the purpose hereinbefore set forth.

2. A structural block for use in the formation of slab structures capable of resisting compressive, tensile, bending and shearing stresses caused by forces acting normal to the surface of the slab, said block having smooth, double symmetrical upper and lower surfaces two plane end surfaces, and two sides which have tapering ribs and recesses forming lateral profiles which, at any point throughout the length of the block are symmetrical, said lateral profiles for the end parts being different to those for the central part of the block, the ribs on the end portions being of corresponding taper to, and being supplemental to, the recesses in the central portion substantially for the purpose hereinbefore set forth.

3. A structural block for use in the formation of slab structures capable of resisting compressive, tensile, bending and shearing stresses caused by forces acting normal to the surface of the slab said block having smooth, double symmetrical upper and lower surfaces, two plane end surfaces and two sides having projecting tapering ribs and tapering recesses, the tapering ribs adjacent to the ends of the blocks extending each for substantially a quarter of the length of the block and those at the center for substantially one half the length of the block, the aforesaid end ribs alternating with the said central ribs and being supplemental to the recesses in the central portion of the block substantially for the purpose hereinbefore set forth.

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1,224,758. METALLIC SPRING-ACTUATED MECHANISM FOR RUBBER TIRES. EDWARD G. LOESER, Roxbury township, Dane county, Wis., assignor to Cantilever Airless Tire Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Jan. 13, 1916. Serial No. 71,855. (Cl. 152—8.)



1. In a device of the described class, the combination with a wheel rim and a flexible casing, of an annular series of segmental arched members, pivotally connected together at their ends and adapted to support the tread portion of the casing, an annular series of loosely connected levers, pivoted to the wheel rim, and springs interposed between the meeting ends of the levers and rim, and arranged to push the levers into supporting relation to said segmental arched members.



2. The combination with a wheel rim and a flexible casing mounted thereon, of a set of interlapping segmental arches supporting the tread portion of the casing and an annular series of loosely connected levers, each having one end pivotally connected with the rim and the other end resiliently supported therefrom and each lever being also adapted to coöperate with all of the others in supporting said arches.

3. The combination with a wheel rim and a flexible casing mounted thereon, of an annular series of segmental arches supporting the tread portion of the casing, an annular series of levers pivotally fulcrumed to the rim and having sliding link connection with each other, springs interposed between said levers and the rim, and adapted to press the levers outwardly in the direction of the arches, and supporting connections between the arches and said levers.

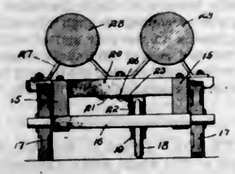
4. The combination with a wheel rim and a flexible casing mounted thereon, of an annular series of segmental arches supporting the tread portion of the casing, an annular series of levers pivotally fulcrumed to the rim and having sliding link connection with each other, springs interposed between said levers and the rim, and adapted to press the levers outwardly in the direction of the arches, and supporting connections between the arches and said levers, together with a set of guards interposed between the casing sides and said levers and springs, said guards being connected with the rim and being curved in substantial conformity to the curvature of the sides of the casing.

5. The combination with a wheel rim and a flexible casing mounted thereon, of a set of segmental arches in loose hinged joint connection with each other arranged in an annular series in supporting relation to the tread portion of the casing, said arches having inwardly projecting side flanges, a set of arch supporting levers in pivotal fulcrum connection with the rim and projecting outwardly between the side flanges of the arches, the ends of said levers distant from their fulcrums being loosely connected with each other, each alternate lever projecting in an opposite direction from its fulcrum to that in which the intermediate lever projects, springs supporting the loosely connected ends of said levers from the rim, and supporting connections between said levers and the arches, adapted to permit the arches and the levers to move inwardly against the tension of the springs when the casing is subjected to pressure.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,759. LINOLEUM-TRUCK. ALLAN JOSEPH MCCABE, Charlottetown, Prince Edward Island, Canada. Filed Apr. 8, 1916. Serial No. 89,839. (Cl. 21—65.)



1. In a truck for handling linoleum and the like, a frame, longitudinally disposed parallel rollers mounted thereon, an axle on which the frame is tiltably supported, said axle having ground engaging wheels, an auxiliary wheel supporting the front end of the frame, and a longitudinally disposed operating rod for swinging the front wheel upwardly beneath the frame, permitting the forward end of said frame to gravitate downwardly to a load receiving position, the operating rod projecting at the rearward end of the frame.

2. A truck for handling linoleum and the like comprising a frame, longitudinally disposed parallel rollers supported thereon, a wheel carrying axle on which the frame is tiltably supported, a yoke hingedly supported beneath the forward end of the frame, a front wheel journaled in the yoke, and means for swinging the wheel carrying yoke upwardly beneath the forward end of the frame to permit the latter to be tilted to load receiving position, said means including an operating rod connected with the wheel carrying yoke, extending longitudinally of the frame and terminating to the rearward of said frame conveniently accessible to the operator.

3. In a truck of the class described, a frame, a wheel carrying axle supporting the frame, said axle being located well toward the rear end of the frame, a yoke hingedly supported beneath the forward end of the frame, a front wheel journaled in the yoke, and means for swinging the wheel carrying yoke upwardly beneath the forward end of the frame, said means including a rod connected with and extending rearwardly from the pintle of the hinge, a connection between the rod and the wheel carrying yoke, and means for turning the rod about its axis.

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1,224,760. TIGHT AND LOOSE RUNNING-GEAR. JOHN LEE MCDOWELL, Berwick, Pa., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed June 30, 1916. Serial No. 106,824. (Cl. 105—68.)



1. In combination in a truck, an axle, a wheel having a hub which said axle enters without connection thereto, and a collar firmly affixed to said axle, said hub and collar having non-circular portions in inseparable telescopic driving engagement when the parts are assembled.

2. In combination in a truck, an axle, a wheel loosely mounted thereon and a collar immovably secured on said axle to form an abutment for said wheel, there being mutually interlocking portions of said wheel and collar forming a driving connection.

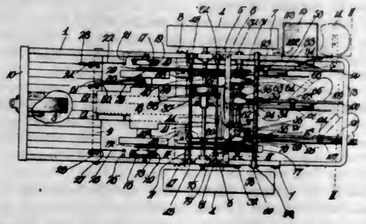
3. In combination in a truck, an axle, a journal box therefor, a collar spaced from said journal box and immovably secured to said axle and a wheel having a hub loosely mounted on said axle between said journal box and collar, said collar and wheel having flat-faced portions telescopically interlocking to form a driving connection.

4. In combination in a tight and loose running gear, an axle, journal boxes therefor near the opposite ends thereof, a collar spaced from each journal box and rigidly secured to said axle so as to be rotatable therewith, and wheels having hubs loosely mounted upon said axle between said journal boxes and collars, the hub of one wheel and its adjacent collar having non-circular telescopically engaging portions held against disassociation and adapted to cause mutual rotation of said wheel and axle and the other wheel and its adjacent collar having a relation permitting a free rotation of the last mentioned wheel.

5. In combination in a mine car, an axle, a journal box into which said axle extends, a collar having a portion secured to said axle without the embodiment of another attachment device and also having another portion fashioned to form a non-circular socket, and a wheel loosely mounted on said axle between said journal box and collar and having a non-circular hub extension projecting into said collar socket to form a driving connection between said wheel and axle.

[Claims 6 to 17 not printed in the Gazette.]

**1,224,761. TRACTOR-PLOW.** GEORGE WILLIAM MCGILL, Cleveland, Mo. Filed Apr. 17, 1914. Serial No. 832,658. (Cl. 97—59.)



1. The combination of a tractor, a plurality of plows connected to the tractor to be pulled thereby, means for suspending the plows from the tractor and positively limiting downward movement of the former, a shaft journaled on the tractor above each plow, connections between each shaft and one of said plows for raising the plows when their respective shafts are turned in the proper direction, and a shaft journaled on the tractor and geared to the first-named shafts for turning the same different distances and lifting the plows simultaneously equal distances; said shaft when reversely turned causing successive reverse movement of said first-named shafts and consequently successive lowering of their respective plows.

2. The combination of a tractor, a plurality of plows connected to the tractor to be pulled thereby, means for suspending the plows from the tractor and positively limiting downward movement of the former, a shaft journaled on the tractor, a worm secured on said shaft for each plow, a shaft journaled on the tractor for each plow thereof, a worm wheel secured on each of the last-named shafts and provided with different numbers of teeth, independent means for holding said worm wheels in engagement with their respective worms, and means for turning the worm shaft in one direction to rotate the worm-wheel carrying shafts different distances, and for turning said worm-carrying shaft in the reverse direction to effect successive reverse movement of said worm-wheel carrying shafts.

3. The combination of a tractor, a plurality of plows connected to the tractor to be pulled thereby, a flexible connection between the tractor and said plows to limit downward movement of the latter, a shaft journaled on the tractor above each plow, a crank arm on each shaft, a flexible connection between each crank arm and its respective plow, and a shaft journaled on the tractor and geared to the first-named shafts for turning the same different distances and lifting the plows simultaneously equal distances; said shaft when reversely turned causing successive reverse movement of said first-named shafts and consequently successive lowering of their respective plows.

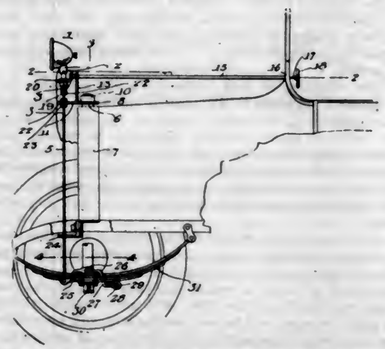
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**1,224,762. FLY-SCREEN HOLDER.** ANNIE T. MCKNOWN, Washington, D. C. Filed Aug. 27, 1915. Serial No. 47,685. (Cl. 24—259.)



The herein described screen frame holder, the same comprising a body adapted for attachment to the inner sash bead of a window, a flat jaw projecting at right angles from its outer edge, and a second resilient jaw projecting from its inner edge opposite the first jaw, inclining slightly toward it, and then bent outward from it at its tip, this jaw being shorter than that first mentioned, for the purpose set forth.

**1,224,763. REVOLVING LIGHT FOR AUTOMOBILES.** EDMUND K. MACOMBER, Amsterdam, N. Y. Filed Apr. 19, 1916. Serial No. 92,806. (Cl. 240—61.)



1. The combination with a motor vehicle, of a substantially vertical lamp turning shaft, means connecting said shaft with a member of the steering gear, whereby said shaft is turned simultaneously with the steering wheels, a lamp, a bushing by which said lamp is carried embracing and frictionally engaging said shaft, and a manually operable shaft geared to said bushing and adapted to turn said bushing and lamp independently of said lamp turning shaft.

2. The combination with a motor vehicle, of a substantially vertical lamp turning shaft, means connecting said shaft with a member of the steering gear, whereby said shaft is turned simultaneously with the steering wheels, a lamp, a bushing by which said lamp is carried embracing and frictionally engaging said shaft, and a manually operable shaft geared to said bushing and adapted to turn said bushing and lamp independently of said lamp turning shaft, said manually operable shaft being slidable toward and away from the lamp turning shaft for the purpose of connecting and disconnecting said lamp turning shaft and manually operable shaft.

3. The combination with a motor vehicle, of a substantially vertical lamp turning shaft, means connecting said shaft with a member of the steering gear, whereby said shaft is turned simultaneously with the steering wheels, a lamp, a bushing by which said lamp is carried embracing and frictionally engaging said shaft, a bracket attached to the vehicle and having a bearing for said lamp turning shaft, a gear fast on said bushing, a manually operable and substantially horizontal shaft journaled in an arm of said bracket and extending through the dash of the vehicle, operating means on the rear end of said shaft, and a gear on the forward end of said shaft adapted to mesh with the gear on the lamp turning shaft, said manually operable shaft being both rotatable and slidable, for the purpose specified.

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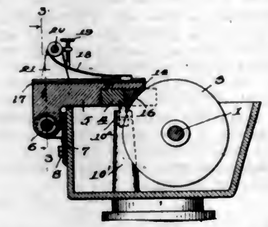
**1,224,764. GLUE-POT.** LEWIS C. MALTBY, Washington, D. C., assignor to The Stone Straw Company, Washington, D. C., a Corporation of New Jersey. Filed Feb. 21, 1916. Serial No. 79,757. (Cl. 91—51.)

1. The combination with a rotatable wheel, of a scraper-shoe or wear-plate having a curved face which coacts with the peripheral surface of the wheel, said contacting surfaces having the same general but non-concentric curves.

2. The combination with a rotatable wheel, of a scraper having a notched edge which straddles and substantially fits the sides of the wheel, and a wear-plate adjacent to the wheel having a curved face adapted to coact with the peripheral surfaces of the wheel, and the curvature of which is non-concentric therewith.

3. The combination with a glue-pot and a glue-wheel rotatably mounted therein, of a support mounted on the glue-pot, a spring hinge for pivotally connecting said support thereto, a scraper carried by the support, means for securing it thereto, and a wear-plate removably secured to the scraper.





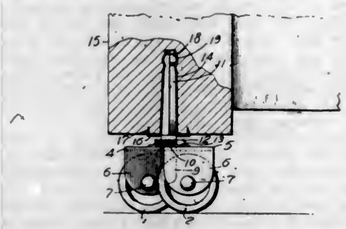
4. The combination with a glue-pot and a glue-wheel rotatably mounted therein, of a scraper-shoe or wear-plate adapted to be held in position to coöperate with the periphery of the glue-wheel and to remove superfluous glue therefrom, the operative surface of said shoe or wear-plate curved in an arc greater than that of the periphery of the glue-wheel.

5. The combination with a glue-pot and a glue-wheel rotatably mounted therein, of a scraper-shoe or wear-plate adapted to be held in position to coöperate with the periphery of the glue-wheel to remove superfluous glue therefrom, the operative surface of said shoe or wear-plate curved in an arc greater than that of the periphery of the glue-wheel, and an adjustable support for said scraper-shoe or wear-plate.

[Claims 6 to 10 not printed in the Gazette.]

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**1,224,765. CASTER.** HARRY MARTIN, St. Louis, Mo. Filed Apr. 10, 1916. Serial No. 90,141. (Cl. 16—4.)

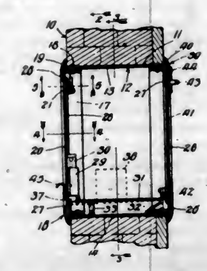


A caster construction substantially as herein described composed of a pair of spaced apart rollers whose axes are parallel, a bracket carrying the said rollers and having spindles therefor arranged parallel to each other and in the same horizontal plane but one in advance of the other at all times, the said bracket having midway between its said spindles and in a vertical plane at a right angle to the plane in which the said spindles lie a socket open at its upper end and having its lower end extended to a point approximately in the horizontal plane of the spindles, and a non-rotatable journal pin whose lower end extends into the said socket and bears at its lower extremity against the base thereof approximately in the horizontal plane of the spindles all substantially as described whereby the bracket is mounted to swing horizontally on a vertical stepped bearing whose step is arranged in the horizontal plane of its spindles to prevent the undue strain of what would result from a pivoting of the vertical spindle at a point above the bracket, all as and for the purposes set forth.

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**1,224,766. DELIVERY-BOX.** WILLIAM D. MARTIN and DAVID T. BJORK, Chicago, Ill. Filed May 5, 1916. Serial No. 95,552. (Cl. 232—41.)

1. A door construction of the character described, comprising a door frame having oppositely disposed end and side rails, a door for said door frame, and means for pivotally connecting said door between two of the oppositely disposed rails of said door frame, said pivot means being located adjacent one of the edges of said door and being offset inwardly from the rear face thereof; the rail of said door frame adjacent to said pivot means being provided with a flange arranged in front of said door and extending over the pivoted edge thereof when the door is closed, and each of the other rails of said door frame being provided with a flange arranged to the rear of said door and extending over the adjacent edges thereof when said door is closed, and each flange on the rails between which the door is pivoted having its end terminating short of said pivot means.



2. A door construction of the character described, comprising a door frame having oppositely disposed end and side rails, a door for said door frame, and a rod extending between two of the oppositely disposed rails of said door frame, said rod being secured against the rear face of said door adjacent one of the edges thereof; the rail of said door frame adjacent said rod being provided with a flange arranged in front of said door and extending over the edge thereof adjacent said rod, when said door is closed, and each of the other rails of said door frame being provided with a flange arranged in the rear of said door and extending over the adjacent edges thereof when said door is closed, and the flange on each of the rails between which said rod extends having its end terminating short of said rod.

3. A door construction of the character described, comprising a door frame having oppositely disposed end and side rails, a door for said frame, a rod extending between two of the oppositely disposed rails of said door frame, said rod being secured to the inner face of said door adjacent one of the edges thereof; the rails between which said door extends being provided with inwardly opening sockets adapted to receive the ends of said rod, and clamp members secured to said frame and extending over said sockets; the rail of said door frame adjacent said rod being provided with a flange arranged in front of said door and extending over the edge thereof adjacent said rod when said door is closed, and each of the other rails of said door frame being provided with a flange arranged to the rear of said door and extending over the adjacent edges thereof when said door is closed, and each flange on the rails between which said rod extends having its end terminating short of said rod.

4. A door construction for a delivery box of the character described, comprising a door frame having oppositely disposed end and side rails, a door for said door frame, a rod extending between two of the oppositely disposed rails of said door frame, said rod being secured to the inner face of said door adjacent one of the edges thereof, the rails between which said rod extends being provided with sockets adapted to receive the ends of said rod, clamp members secured to said frame over said sockets, the rail of said door frame adjacent said rod being provided with a flange arranged in front of said door and extending over the edge thereof adjacent said rod when said door is closed, and each of the other rails of said door frame being provided with a flange arranged to the rear of said door and extending over the adjacent edges thereof when

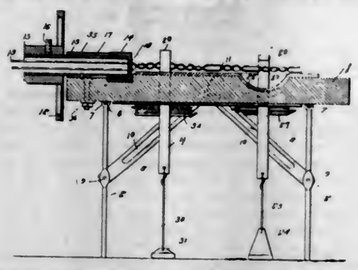
said door is closed, each flange on the rails between which said rod extends having its end terminating short of said rod, and a locking member mounted on said door adjacent the edge thereof opposite said rod.

5. A door construction for a delivery box of the character described, comprising a door frame having top, bottom, and side rails, a door for said door frame, a rod extending between the side rails of said door frame and having pivoted connection therewith, said rod being secured to the inner face of said door adjacent the upper edge thereof, the top rail of said door frame being provided with a flange arranged in front of said door and extending over the upper edge thereof when said door is closed; the side and bottom rails of said door frame each being provided with a flange arranged to the rear of said door and extending over the adjacent edges thereof when said door is closed, and a locking bolt slidably mounted on the inner face of said door adjacent the lower edge thereof and adapted to engage behind the bottom flange of said door frame.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,767. MACHINE FOR MAKING PINLESS CLOTHES-LINES. ANDREW J. MASON, Granite, Okla. Filed May 9, 1916. Serial No. 96,345. (Cl. 140—71.)



1. A machine of the class described including a support, a rotary twisting member having spaced openings and mounted on the support, said openings being arranged to receive and space strands of wire, and a loop-forming member having a projecting portion arranged to extend between the strands of wire and having also an outer portion adapted to clamp one of the wires while the strands are being twisted, whereby a loop is formed.

2. A machine of the class described including a support, a rotary twisting member having spaced openings and mounted on the support, and a loop-forming member having a projecting tapered portion arranged to extend between the strands of wire and further spread the same and having also an outer portion adapted to clamp one of the wires while the strands are being twisted, and a wire clamp spaced from the loop-forming member.

3. A machine of the class described including a support having vertical openings, a rotary twisting device mounted on the support in alinement with the openings and provided with spaced apertures adapted to receive strands of wire, vertically movable members having shanks or bars slidable in the said openings, one of the members being provided with a clamping arm and the other member having a head with a projecting portion arranged to extend between the strands for forming a loop.

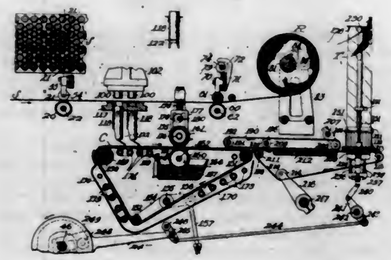
4. A machine of the class described including a support having vertical openings, a rotary twisting device mounted on the support in alinement with the openings and provided with spaced apertures adapted to receive strands of wire, vertically movable members having shanks or bars slidable in the said openings, one of the members being provided with a clamping arm and the other member having a head with a projecting portion arranged to extend between the strands for forming a loop, springs mounted on the support for elevating the shanks or bars, and treadles connected with the shanks or bars for depressing the same.

5. A machine of the class described including a support, a rotary twisting device comprising a hollow spindle mounted upon the support, a cap fitted on one end of the hollow spindle and provided with spaced apertures, a wheel mounted on the outer end of the spindle, a bearing embracing the hollow spindle between the cap and the wheel, and wire clamping means carried by the support.

[Claim 6 not printed in the Gazette.]

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1,224,768. MACHINE FOR COATING BOTTLE-CAPS. FRANCIS MEISEL, Boston, Mass., assignor to Meisel Press & Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 15, 1915. Serial No. 61,532. (Cl. 91—54.)



1. In a machine for water-proofing articles of sheet material, a belt conveyer of permeable felt-like material, guide rolls supporting said conveyer with a substantially straight operative run, means to deposit articles of sheet material thereon, and a pair of pressure rolls engaging said conveyer in said straight run intermediate said guide rolls, the upper roll being felt-covered and heated, and engaging the upper face of said conveyer, and the lower roll engaging and supplying heated water-proofing material to the underside of said conveyer, said water-proofing material permeating said conveyer and felt covering and thereby coating said articles on all sides as they pass with the conveyer between said pressure rolls.

2. In a machine for water-proofing articles of sheet material, a belt conveyer of permeable felt-like material, guide rolls supporting said conveyer with a substantially straight operative run, means to heat said conveyer at the beginning of said straight run, means to deposit articles of sheet material thereon at said heated portion, a pair of pressure rolls engaging said conveyer in said straight run intermediate said guide rolls and beyond said heating means, the upper roll being felt-covered and heated, and engaging the upper face of said conveyer, and the lower roll engaging and supplying heated water-proofing material to the underside of said conveyer, said waterproofing material permeating said conveyer and felt covering, and thereby coating said articles on all sides as they pass with the conveyer between said pressure rolls, means to remove said articles from said conveyer as they approach the end of said straight run, and means to positively rotate one of said guiding rolls and both of said pressure rolls.

3. In a machine for water-proofing articles of sheet material, the combination of a belt conveyer formed of felt-like material and having its edges re-inforced with leather strips, guide rolls supporting said conveyer and grooved to accommodate said strips, means to deposit articles of sheet material on said conveyer, and means to coat said articles with water-proofing material while on said conveyer, said conveyer forming an effective part of said coating means.

4. In a machine for water-proofing articles of sheet material, a belt conveyer of a width sufficient to support a plurality of said articles in lateral spaced relation, means to deposit said articles on said conveyer, means to coat said articles with water-proofing material while on said conveyer, said coating means including said conveyer as an effective part thereof, a second conveyer comprising a plurality of narrow parallel tapes spaced apart by less than the diameter of said articles, said conveyers being longitudinally adjacent, and a third conveyer comprising a plurality of narrow spaced parallel tapes overlying the tapes of said two conveyers for a portion of their length and also overlying a portion of said belt conveyer, whereby said articles may be removed from said belt conveyer and may be supported by their edges on the spaced tapes of said second conveyer.



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1,224,769. LEAD-PENCIL. THOMAS L. MELLICK, Plainfield, N. J. Filed July 26, 1916. Serial No. 111,464. (Cl. 120—83.)

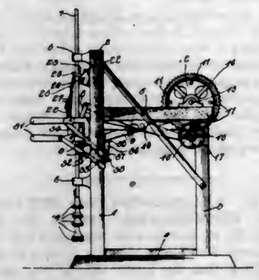


1. A lead pencil comprising a wooden stock inclosing a stick of lead and having an internal bore extending from end to end thereof parallel to the stick of lead, and a wick occupying the bore throughout its length.

2. A lead pencil comprising a wooden stock inclosing a stick of lead and having an internal bore extending from end to end thereof parallel to the stick of lead and a wick occupying the bore throughout its length in combination with a reservoir adapted to fit upon one end of said stock and inclose an absorbent material saturated with moisture for transmission by said wick to the pointed end of the pencil.

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1,224,770. POWER-TAMP. COLLETT H. MERRIMAN, Dana, Ind. Filed May 22, 1916. Serial No. 99,200. (Cl. 25—41.)



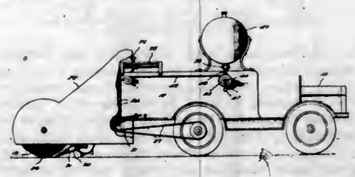
1. A tamp comprising an upright tamp bar, means for successively raising said bar and releasing it, a normally idle locking member for holding said bar in raised position, a rocking member having a laterally extending arm, a yieldable connection between said arm and said locking member for applying the latter when said rocking member is moved to a predetermined position, and means on said rocking member and bar for elevating the latter above the highest position to which it is moved by its operating means, when said rocking member is further turned to a second predetermined position.

2. A tamp comprising an upright tamp bar, means for successively raising said bar and releasing it, a normally idle locking member for holding said bar in raised position, a rocking member having a laterally extending arm, a yieldable connection between said arm and said locking member for applying the latter when said rocking member is moved to a predetermined position, a second arm extending laterally from said rocking member, and a projection on the tamp bar to be engaged by said second arm when said rocking member is further turned to another predetermined position, whereby to elevate said bar above the highest level to which it is moved by its operating means.

3. A tamp comprising an upright tamp bar, means for successively raising and releasing it, a lateral projection on said bar, a rocking member adjacent said bar, an arm rigidly secured on and projecting laterally from said rocking member for engagement with said projection to elevate said tamp bar when said rocking member is turned, and means for holding said member against retrograde movement.

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1,224,771. AUTOMOBILE STREET-SWEEPER. CARL G. MILLER, Bay City, Mich. Filed July 11, 1916. Serial No. 108,683. (Cl. 15—17.)

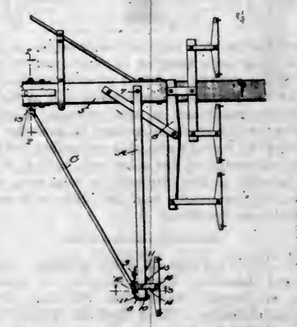


1. In a street sweeper, a frame adapted to be swingingly connected to a wheeled vehicle, caster wheels for supporting the free end of the frame, a transversely disposed brush journaled in the frame and operably connected to the wheels of said vehicle, a trackway adapted to be carried by the vehicle body, a shaft mounted upon the trackway for sliding movement, a second shaft journaled in the frame, an endless conveyer operably connected to both of said shafts, and means for operably connecting one of said shafts to the brush.

2. In a street sweeper, a frame adapted to be swingingly connected to a wheeled vehicle, caster wheels for supporting the free end of the frame, a transversely disposed brush journaled in the frame and operably connected to the wheels of said vehicle, a trackway adapted to be carried by the vehicle body, a shaft mounted upon the trackway for sliding movement, a second shaft journaled in the frame, an endless conveyer operably connected to both of said shafts, means for operably connecting one of said shafts to the brush, a dirt guide shelf adjustably connected to the frame forwardly of the rotary brush, and rods adjustably swiveled at opposite sides of the vehicle body and having connection with the caster wheels and frame.

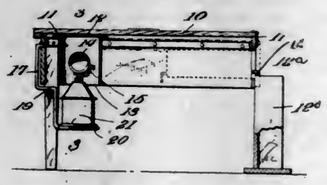
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1,224,772. DRAFT APPLIANCE. JACOB M. MILLER, Millersburg, Ohio. Filed Jan. 21, 1916. Serial No. 73,327. (Cl. 21—189.)



The combination with a vehicle, of a multiple horse draft element arranged at one side of the tongue of the vehicle and connected thereto, an arm arranged on the same side of the tongue as the said draft element, said arm being connected with the tongue, a rod adjustably connected at one end to the arm and connected at its other end to the tongue rearwardly of the arm, a swingletree, and links connecting the swingletree to the arm.

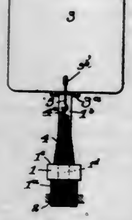
1,224,773. COMBINED STOVE AND TABLE. CHRISTOPHER C. MILES, Westover, Md. Filed Sept. 4, 1914. Serial No. 860,230. (Cl. 126—37.)



1. In combination, a body, supporting legs therefor, a plate secured in said body in spaced relation to the upper edges of the latter, said plate having a large central opening formed therein, a drum having an open bottom, a cover formed integral with said drum and crimped forming a horizontally disposed flange, said drum being secured in said central aperture and said flange overlying and engaging the upper edges of said plate, thereby supporting said drum, and a burner arranged in said drum to heat said cover.

2. In combination, a body, supporting legs therefor, a plate secured in said body in spaced relation to the upper edges of the latter, said plate having a large central opening formed therein, a drum having an open bottom, a cover formed integral with said drum and crimped forming a horizontally disposed flange, a rod secured to said body, said rod having a coiled offset end terminating below said drum forming a supporting bracket, and a removable burner resting on said coiled offset end to heat said cover.

1,224,774. GAS-SAVER ATTACHMENT FOR MOTOR-VEHICLES. JAMES H. MINER, Lumberton, Miss. Filed Jan. 23, 1917. Serial No. 144,018. (Cl. 137—139.)

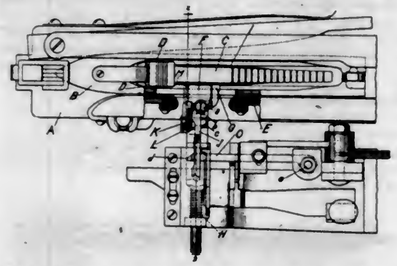


An attachment for internal combustion engines comprising a screw plug adapted to be screwed into an opening in the air intake manifold of said engine, said plug having an air passage therethrough and a flat seat surrounding the outer end of said passage, a spiral close-coil spring having its base secured to said flat seat, said plug having an arm at one side extending outwardly beyond the extremity of the close coil spring, a fan blade or wing pivoted to the extremity of said arm, and means for adjustably connecting said fan blade with said spring, substantially as described.

1,224,775. WEFT-FEELER FOR LOOMS. CHARLES E. NUTTING, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me., a Corporation of Maine. Filed Oct. 28, 1915. Serial No. 58,486. (Cl. 139—85.)

1. A weft replenishing loom having a feeler mechanism comprising two differentially moving feeler fingers both of which enter the shuttle and contact with the weft therein, and a lock for one of said feelers, said lock also having a penetrating member which enters the shuttle and contacts with the weft therein.

2. A weft replenishing loom having a feeler mechanism comprising two feeler fingers and a lock for one of them, said lock having a penetrating member entering the shuttle and contacting with the weft therein.



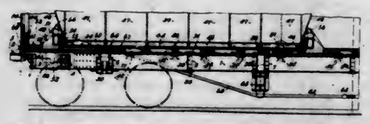
3. A weft replenishing loom having a feeler mechanism comprising two differentially moving feeler fingers both of which enter the shuttle and contact with the weft therein, and a lock for one of said feelers, said lock having a pointed actuating finger which enters the shuttle and sinks into the weft when the weft is present in ample quantity and thereby maintains the lock in locking position, said lock being moved to unlocking position when the penetrating member is effectively encountered by the weft carrier.

4. A weft replenishing loom having a feeler mechanism comprising two feeler fingers and a lock for one of them, said lock having a pointed actuating finger which enters the shuttle and sinks into the weft when the weft is present in ample quantity and thereby maintains the lock in locking position, said lock being moved to unlocking position when the penetrating member is effectively encountered by the weft carrier.

5. A weft replenishing loom having a feeler mechanism comprising two feeler fingers and a lock for one of them, said lock having a weft penetrating actuating finger, both said feeler finger and said lock actuating finger entering the shuttle and coming in contact with the weft therein, said weft penetrating lock actuating finger extending farther to the rear than said feeler finger when the shuttle is not at the detecting side of the loom.

[Claim 6 not printed in the Gazette.]

1,224,776. TANK-CARRYING BOX-CAR WITH TRUSSED UNDERFRAME. ALLEN E. OSTRANDER, Ridgewood, N. J., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Dec. 24, 1915. Serial No. 68,586. (Cl 105—264.)



1. In combination in a tank car, longitudinal central sills, forming compression members of a truss, spaced tank head blocks mounted thereon, tension truss members anchored to said head blocks and struts between said compression members and tension members.

2. In combination in a tank car, longitudinal central sills forming truss compression members, a tank bed supported from said sills, a tank, spaced tank head blocks mounted on said sills, tension truss members anchored to said head blocks and struts between said compression and tension members.

3. In combination in a tank car, longitudinal car sills, a tank positioned thereabove, tank head blocks mounted on said sills, a tank, tension members anchored to said head blocks and cross bearers connected with said sills, extending between the latter and said tension members and serving as struts.

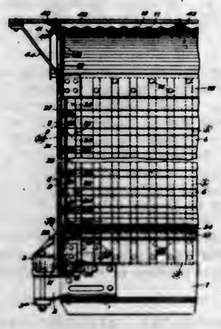
4. In combination in a tank car, longitudinal and transverse underframe members, a tank and tank head blocks mounted above said longitudinal members and tension members anchored to said head blocks, some of said transverse underframe members serving as struts between some of said longitudinal underframe members and said tension members.

5. In combination in a tank car, an underframe containing a truss provided with tension members, a tank supported thereby and tank head blocks, said tension members being anchored in said head blocks.

[Claims 6 to 20 not printed in the Gazette.]



1,224,777. CORRUGATED-SHEET-METAL CAR. ALLEN E. OSTRANDER, Ridgewood, N. J., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Dec. 24, 1915. Serial No. 68,587. (Cl. 105—192.)



1. In a car having an underframe, the combination of side walls and end walls, each comprising a plurality of relatively parallel conterminous sheets, each sheet having spaced apart arches producing channels therein and means for attaching said sheets together and to said underframe, some of said sheets closing the ends of channels of other sheets.

2. In a car having an underframe, the combination of side walls and end walls, each comprising a plurality of relatively parallel conterminous sheets, each sheet having spaced apart arches forming channels therein, corner posts at the corners of said underframe, and means passing through some of the channels joining said side and end walls to said corner posts.

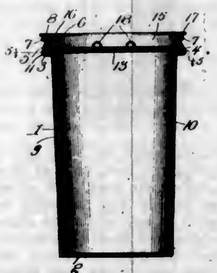
3. In a car having an underframe, the combination of side walls and end walls, each comprising a plurality of relatively parallel inner and outer sheets having spaced apart arches, the arches of contiguous sheets being angularly disposed to each other, a roof, side and end plates extending toward arches of the inner sheets and over the arches of the outer sheets of said side and end walls and in continuous proximity to the upper terminals of the last mentioned arches, said plates supporting said roof.

4. In a car having side and end sills, the combination of side and end walls each comprising a plurality of parallel sheets provided with alternate arches and furrows, said arches and furrows of contiguous parallel sheets being angularly disposed to each other and said furrows contacting and being secured together, said side and end walls being attached, respectively, to said side and end sills, and a floor supported by said sills, some of said arches being parallel therewith and bearing on the top thereof to hold said floor down.

5. In a car, an underframe, corner posts lapping the same and attached thereto, side and end walls supported by said underframe and said corner posts, connection and reinforcing members supplementing said corner posts, said side and end walls each comprising a plurality of conterminous parallel sheets having alternate arches and furrows forming channels in said sheets, those of contiguous parallel sheets crossing each other, and fastening means extending through said corner posts, channels of said sheets and connection members.

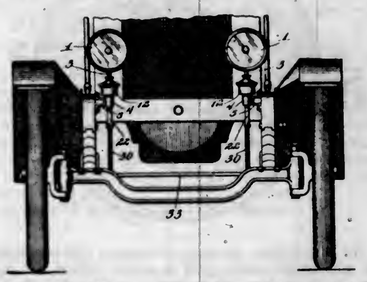
[Claims 6 to 18 not printed in the Gazette.]

1,224,778. CONTAINER. OLIVER PALM, Moran, Tex. Filed May 12, 1916. Serial No. 97,143. (Cl. 220—98.)



A container comprising a flared neck forming an inclined shoulder, a lining within said container having a flange for contact with said shoulder, tongues on said flange for contact with said neck, a closing flap connected with said flange and having tongues adapted to register with the tongues on the flange when the flap is in closed position, and a closing cap engageable with said neck and adapted to bear on the closing flap and flanges above said shoulder.

1,224,779. AUTOMATIC HEAD-LAMP CONTROL. IRA A. PALMER, Bayard, Iowa, assignor of one-half to W. W. Hidlebaugh, Bayard, Iowa. Filed Jan. 21, 1916. Serial No. 73,397. (Cl. 240—62.)

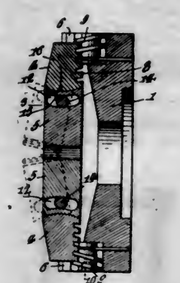


In automatic lamp control, the combination of a fixed lamp-supporting bearing having an internal gear face, a substantially vertical lamp post adapted to turn on its longitudinal axis, a gear fast on said post, an oscillatory shaft mounted in said bearing and having a pinion carrying head, planetary gears on said head meshing with said internal gear face and pinion to produce an amplified turning movement of the lamp post, and operating connections between said oscillatory shaft and the steering knuckle arm connecting rod of a vehicle.

1,224,780. LATHE-CHUCK JAWS. WILLIAM P. PARSONS, Corning, N. Y. Filed Mar. 14, 1916. Serial No. 84,153. (Cl. 29—147.)

1. In a device of the class described, a body comprising a section having a slot therein, a second section having a tongue thereon engaging the slot, said tongue having an arcuate slot therein and a pin passing entirely through the first section and through said slot, both of said sec-

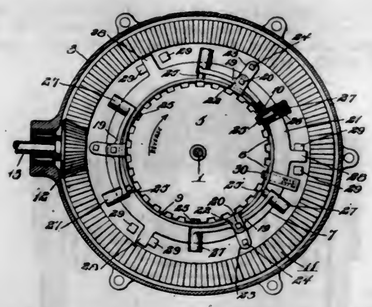
tions having coacting arcuate surfaces that contact with each other.



2. The combination with the body of a chuck having radial slots in its front face, of jaws mounted in said slots, means to adjust the jaws, each of said jaws comprising an inner section and an outer section, means carried by the outer of said sections to engage the adjusting means, a tongue and groove connection between the sections, a curved slot in the tongue, a pin passing entirely through the first section and through said slot, said sections having coacting curved surfaces where they contact with each other and the chuck face having an inner cut away portion below the jaws to permit movement of the inner sections.

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1,224,781. DIFFERENTIAL DRIVING MECHANISM. EUGENE D. PATTISON, Danville, Ill. Filed July 19, 1916. Serial No. 110,120. (Cl. 74—7.)



1. In differential driving mechanism, the combination with a sectional shaft, and a master wheel, of clutch wheels located at opposite sides of said master wheel and each fastened to one of the shaft sections, oscillatory clutch dogs carried by said master wheel, and spring pressed teeth slidably carried by each of said dogs and adapted to coöperate with said clutch wheels.

2. The combination with the adjacent ends of two alined shaft sections, of clutch wheels fast thereon, a master wheel operating between said clutch wheels, annular dog-carrying members at opposite sides of the master wheel and having a positive connection therewith and an oscillatory movement in relation thereto and also formed with guide openings, clutch dogs carried by said master wheels and having a pivotal connection with their carrying members and a positive connection with the master wheel, and spring pressed teeth carried by each of said dogs and working through said guide openings in the carrying members.

3. The combination with the adjacent ends of two alined shaft sections, of clutch wheels fast thereon, a master wheel operating between said clutch wheels, annular dog-carrying members at opposite sides of the master wheel and having a positive connection therewith and an oscillatory movement in relation thereto and also formed with guide openings, means for limiting the relative oscillatory movement of the master wheel and dog carrying members, clutch dogs coöperating with said clutch wheels and having a pivotal connection with their carrying members and a positive connection with the master wheel, each clutch dog embodying two arms each formed with a guiding socket in alinement with one of said guide openings, and spring pressed teeth carried by each of said dogs slidable in the sockets of the arms of the dogs and through the guide openings in the dog-carrying members.

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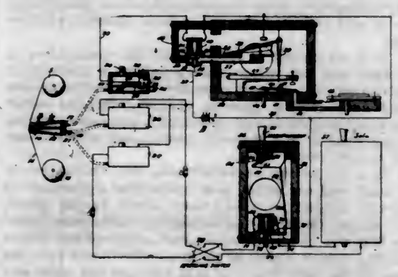
1,224,782. BED. PETER PEDERSEN, Newell, Iowa. Filed Apr. 24, 1916. Serial No. 93,185. (Cl. 5—5.)



In a camp bed, the combination of lazy-tong side supports, a flexible bottom disposed between said side supports and having its longitudinal edges formed into barrels or loops that extend longitudinally of the bottom, longitudinal bars arranged in endwise series in said barrels or loops of the bottom and separated by intervening spaces and having circumferential grooves at their middles, wire sections, of S-form, extending through the walls of the barrels or loops and having eyes disposed in said grooves of the longitudinal bars and also having eyes exterior of the barrels or loops, and eyes interlocked with said exterior eyes and having shanks which constitute rivets for the upper portions of the lazytong side supports.

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1,224,783. AUTOMATIC MUSICAL INSTRUMENT. FRANK A. PILCHER, Binghamton, N. Y., assignor of one-third to Myron C. Beman and one-third to Frank Beman, Binghamton, N. Y. Filed May 10, 1912. Serial No. 696,536. (Cl. 84—243.)



1. An automatic musical instrument comprising a stop action and player action for a given register, a trackerboard having two rows of staggered control connections, control devices for the stop action operatively connected to the control connections of one of said rows, and control devices for the player action operatively connected with the control connections of the other of said rows.

2. An automatic musical instrument comprising a stop action and sets of player actions for a plurality of registers, a trackerboard having two rows of staggered control connections, control devices for the stop action operatively connected to the control connections of one of said rows, and a set of control devices for each of said sets of player actions operatively connected each to the control connections of the other row, one set to the right portion and the other to the left portion of the row.



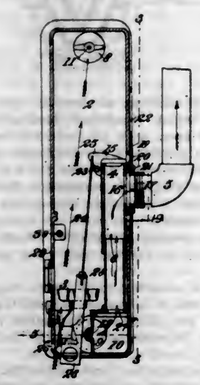
3. An automatic musical instrument comprising a stop action and sets of player actions for a plurality of registers, a trackerboard having two rows of staggered control connections, control devices for the stop action operatively connected to the control connections of one of said rows, and a set of control devices for each of said sets of player actions each operatively connected to control connections of the other row, one set to the right portion and the other to the left portion of the row, and means for interchanging the control of said set of player actions between the right and left portions of said row.

4. An automatic musical instrument comprising: sounding devices arranged in a plurality of registers; means for actuating said sounding devices individually; means for controlling each register of sounding devices as a whole; electromagnets one for actuating each of the last mentioned controlling means; a branch circuit for each of said magnets; a source of current for all of said circuits; a pneumatically operated circuit closer in each branch; a single manual switch in each branch, to open and close the same and thereby cut out or cut in at will the corresponding controlling device; a gang reversing switch connected in a plurality of said branches, to shift and reverse at will the connection of a plurality of registers of the sounding devices with the circuit closers; a trackerboard; and a note sheet with means to cause the same to travel over said trackerboard and means to control the circuit closers therethrough.

5. An automatic musical instrument comprising sounding devices divided into a plurality of registers, means for actuating individually the sounding devices in each register, a trackerboard and means to operate said actuating means from the trackerboard, a stop device for controlling all the sounding devices in each register, an electromagnet actuating each controlling device, a branch circuit for each electromagnet, a source of current for all of said circuits, a pneumatically operated circuit closer for each branch, and a gang reversing switch connected in said branch circuits to shift or reverse at will the control connections between the several registers and the several circuit closers.

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1,224,784. GAS-HEATED RADIATOR. FRANK J. PIOCH, San Francisco, Cal. Filed June 14, 1916. Serial No. 103,656. (Cl. 126—91.)



1. In combination a casing inclosing a combustion chamber, said casing being provided with an opening, a damper box arranged in said casing and engaging the wall thereof around said opening, a plate adapted to fit over said opening on the outside of said casing, said plate being provided with a discharge vent, said damper box being provided with a vent adapted to register with the vent in said plate, said damper box and said plate being adjustable with relation to the opening in said casing, means for securing said damper box and said plate together to grip the wall of the casing therebetween to secure the plate and the vent therein in adjusted position, and means for establishing and controlling direct and intermediate communication between said damper box and said combustion chamber.

2. In a heat radiator, a combustion chamber and a return chamber, a plurality of heat-radiating tubes communicating with the combustion chamber at their upper ends and with the return chamber at their lower ends, an adjustable damper box mounted in the combustion chamber, a reheating tube connecting the damper box and return chamber, a discharge flue, and an adjustable plate having a vent opening formed therein and adapted to form communication between the damper box and the discharge flue.

3. In a heat radiator, a combustion chamber and a return chamber, a plurality of heat-radiating tubes communicating with the combustion chamber at their upper ends and with the return chamber at their lower ends, an adjustable damper box mounted in the combustion chamber, a reheating tube connecting the damper box and return chamber, a discharge flue, an adjustable plate having a vent opening formed therein adapted to form communication between the damper box and the discharge flue, a damper pivotally mounted on the upper end of the damper box, and a rod attached to the damper and extending through the lower end of the combustion chamber.

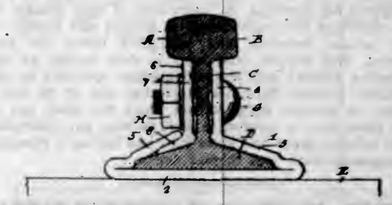
4. In a heat radiator, a combustion chamber and a return chamber, a plurality of heat-radiating tubes communicating with the combustion chamber at their upper ends and with the return chamber at their lower ends, an adjustable damper box mounted in the combustion chamber, a reheating tube connecting the damper box and return chamber, a discharge flue, an adjustable plate having a vent opening formed therein adapted to form communication between the damper box and the discharge flue, a damper pivotally mounted on the upper end of the damper box, a rod attached to the damper extending through the lower end of the combustion chamber, and a hook-shaped handle extension on the lower end of the rod adapted to secure the damper in its opened position.

5. In a heat radiator the combination with a central radiator section and an elongated opening formed in the rear side of the section, of a damper box mounted interiorly of the section, said damper box having an outlet opening formed therein and registering with the elongated opening, a plate having a discharge vent formed therein and mounted exteriorly of the radiator section, said plate being longer than the elongated opening and adapted to form a cover for same, and means for adjusting the plate and damper box vertically and securing the same when adjusted.

[Claims 6 to 8 not printed in the Gazette.]

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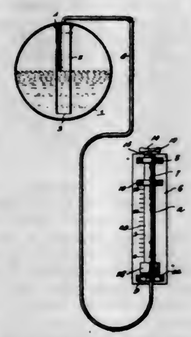
1,224,785. RAIL-JOINT. MOSES S. PITTMAN, Sawtelle, Cal. Filed Aug. 2, 1916. Serial No. 112,687. (Cl. 238—6.)



In a device of the character set forth, a tie plate having each of its sides folded over to form outer contacting parts, said sides being bent upwardly to form shoulders to engage the opposite sides of the rail base, one of said sides being extended to engage the top of one side of the rail base and one side of the rail web and head, the

other side having a wing terminating at a point adjacent the juncture of the other side of the rail base and web and having its outer part seating on top of the last named side of the rail base at the outer side of the latter, and an angle bar engaging the head and web and the inner side part of the base of the last named side of the rail, said wing of the tie plate being lifted up to seat on top of the base of the angle bar so as to be held by the latter against the top face of the outer side of the last named side of the rail base, and spike-holes formed in the contacting parts of the tie plates so that the spikes will bear on the folded parts and prevent upward movement of the wing.

1,224,786. LIQUID-LEVEL INDICATOR. RICHARD POWERS, Pittsburgh, Pa. Filed Aug. 22, 1916. Serial No. 116,344. (Cl. 73—111.)

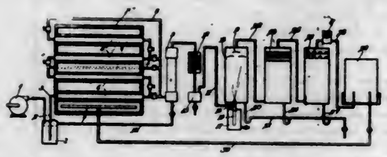


1. A liquid level indicating device comprising a support, a glass tube mounted upon said support, and having its upper end sealed, means connecting said tube to the support embodying a bracket, an expansible indicating plunger movable longitudinally within said glass tube, a spring for resisting the movement of said plunger in one direction and instrumental in moving said plunger in the reverse direction, and tensioning means for said spring, said bracket comprising a shelf having an upstanding tubular seat for said plunger, an annular flange within which the lower end of the glass tube is received, and a packing nut embracing said tubular flange and glass tube and having a threaded engagement with said tubular flange.

2. A liquid level indicating device comprising a support, a glass tube mounted upon said support and having its upper end sealed, means connecting said tube to the support embodying a bracket, an expansible indicating plunger movable longitudinally within said galss tube, and embodying a resilient annular flange adapted to be held by liquid pressure in close contact with the tube, a spring for resisting the movement of said plunger in one direction and instrumental in moving said plunger in the reverse direction, and tensioning means for said spring, said bracket comprising a shelf having an upstanding tubular seat for said plunger embraced by the resilient plunger flange at the initial end of its movement, an annular flange within which the lower end of the glass tube is received, and a packing nut embracing said tubular flange and glass tube and having a threaded engagement with said tubular flange.

1,224,787. PROCESS OF TRANSFORMING MINERAL OILS. ALEXANDER S. RAMAGE, Detroit, Mich., assignor to Bostaph Engineering Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 27, 1916. Serial No. 94,068. (Cl. 196—26.)

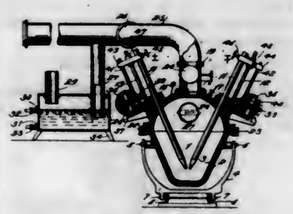
2. The process of transforming hydrocarbons into other hydrocarbons relatively poorer in hydrogen, which consists in bringing the hydrocarbon to be transformed, in a state of vapor substantially unmixed with reactive oxygen, into contact with iron oxid at a temperature of 580°–750° C., and so regulating the time of contact between the vapor and the oxid as to oxidize a portion only of the hydrogen component of the hydrocarbon, producing thereby as reaction products hydrocarbons relatively poorer in hydrogen, and steam.



4. The process of transforming paraffins and olefins into terpenes and aromatic hydrocarbons, which consists in subjecting said paraffins and olefins, in a state of vapor substantially unmixed with reactive oxygen, to restricted oxidation by means of iron oxid maintained at a temperature of 580°–750° C., producing thereby as reaction products hydrocarbons relatively poorer in hydrogen, and steam.

[Claims 1, 3, and 5 to 12 not printed in the Gazette.]

1,224,788. PROCESS OF SECURING COMBUSTIBLE FLUIDS FROM CARBONACEOUS SOLIDS. JAMES HENRY REID, Newark, N. J., assignor to Patents Process Company, a Corporation of Maine. Filed Aug. 26, 1915. Serial No. 47,537. (Cl. 204—64.)



1. The process of securing combustible fluids from carbonaceous solids, which comprises associating the substance to be acted upon with an electrical conductive resistor and passing electricity therethrough until the desired product is evolved and then securing such product.

2. The process of securing combustible fluids from carbonaceous solids, which comprises associating a substance containing fixed hydrocarbons with an electrical conductive resistor and passing electricity therethrough until the desired product is evolved and then securing such product.

3. The process of securing combustible fluids from carbonaceous solids, which comprises associating a carbonaceous shale with an electrical conductive resistor, and passing electricity therethrough until the desired product is evolved and then securing such product.

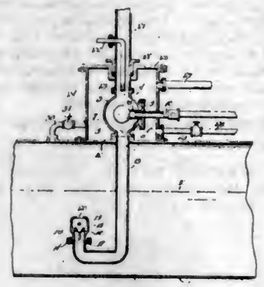
4. The process of securing combustible fluids from carbonaceous solids, which comprises associating the substance to be acted upon with charcoal and passing electricity therethrough until the desired product is evolved and then securing such product.

5. The process of securing combustible fluids from carbonaceous solids, which comprises associating a substance containing fixed hydrocarbons with charcoal and passing electricity therethrough until the desired product is evolved and then securing such product.

[Claims 6 to 12 not printed in the Gazette.]



1,224,789. METHOD AND APPARATUS FOR GENERATING MOTIVE FLUID. CHARLES E. REORDAN, Dallas, Tex. Filed Jan. 7, 1914. Serial No. 810,856. (Cl. 60—31.)



1. In an apparatus for generating motive fluid, a generator, a spherical combustion chamber disposed exteriorly of said generator, an inlet for supplies of a combustible fluid and of combustion supporting media under pressure, a diametrically opposed outlet therefor, and a spherical ignition device mounted within said chamber and in symmetrical relation thereto to block a continuous path through said chamber from said inlet to said outlet.

2. In an apparatus for generating motive fluid, a generator, a spherical combustion chamber disposed exteriorly of said generator, a pipe for conducting the products of combustion into said generator from said chamber, an inlet to supply said chamber with a combustible fluid and with combustion supporting media under pressure, a diametrically opposed outlet connecting with said pipe, and a spherical ignition device symmetrically mounted within said chamber to block a continuous path therethrough from inlet to outlet and to furnish also a continuous ignition of said fluid.

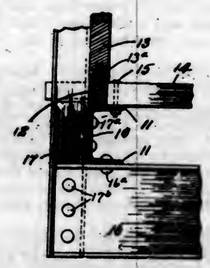
3. In an apparatus for generating motive fluid, a generator, a spherical combustion chamber disposed exteriorly of said generator, a pipe conducting the products of combustion into said generator from said chamber, an inlet to supply said chamber with a combustible fluid and with combustion supporting media under pressure, a diametrically opposed outlet for said chamber to connect with said pipe, and a spherical ignition device symmetrically disposed in said chamber, between said inlet and outlet and of a size sufficiently large to block a continuous path through said chamber and to furnish also a continuous ignition of said fluid.

4. In an apparatus for generating motive fluid, a generator, a pipe leading thereinto, a combustion chamber having a larger diameter than said pipe and connected thereto by an outlet, an inlet for said chamber diametrically opposed to said outlet to supply said chamber with a combustible fluid and with combustion supporting media under pressure, a hollow ignition device shaped similarly to and opening on the exterior of said chamber and symmetrically positioned therein to block a continuous path therethrough from inlet to outlet and to furnish also a continuous ignition of said fluid, and heating means for the ignition device leading thereinto from without the combustion chamber.

5. In an apparatus for generating motive fluid, a generator, a spherical combustion chamber disposed exteriorly of said generator, a pipe conducting the products of combustion into said generator from said chamber, an air inlet pipe connected with said chamber, a combustible fluid inlet pipe extended into said air inlet pipe having a discharge end directed toward said combustion chamber, a spherical ignition device disposed centrally in said chamber, and a cooling chamber positioned around said combustion chamber.

[Claim 6 not printed in the Gazette.]

1,224,790. FLOOR AND WALL CONNECTION FOR RAILWAY-CARS. WILLIAM J. ROA, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Nov. 18, 1915. Serial No. 62,081. (Cl. 105—192.)



1. In car construction the combination with a sill member having a wide upstanding flange formed integral with its upper outer corner, of flooring supported by the upper portion of said sill member, and wall sheathing, the lower member of which is thinner than the upper members and is interposed between the edge of the flooring and said upstanding flange.

2. In car construction, the combination with a sill member having a wide up-standing flange formed integral at its upper outer corner, and wall sheathing, the lower member of which is thinner than the upper members and bears on said sill member and against the up-standing flange thereon.

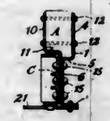
3. In car construction, the combination with a sill member having a wide up-standing flange formed integral at its upper outer corner, wall sheathing, the lower member of which is thinner than the upper members and bears on said sill member and against the up-standing flange thereon, and car flooring supported by said sill member with the edge of said flooring terminating adjacent to the inner face of the wall sheathing.

4. In car construction, the combination with a sill member having a wide up-standing flange formed integral at its upper outer corner, wall sheathing, the lower member of which is thinner than the upper members and bears on said sill member and against the up-standing flange thereon, and car flooring supported by and fixed to said sill member with the edge of said flooring terminating adjacent to the inner face of the wall sheathing.

5. In car construction, an underframe side sill member provided with a wide integral upwardly projecting combined riveting flange and wall sheathing engaging member.

[Claims 6 to 15 not printed in the Gazette.]

1,224,791. DRAFT-ARM AND SILL-REINFORCEMENT. WILLIAM J. ROA, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Feb. 5, 1916. Serial No. 76,371. (Cl. 105—76.)



1. In combination, a single metal plate having top and bottom terminal edges and comprising a lower vertical channel portion and an upper portion with a shoulder formed intermediate said upper and lower portions, another metal plate parallel with and spaced from the upper part of the first plate and in surface contact with the vertical web of the channel portion thereof, a wood center sill secured between the upper portions of said plates

and resting above said shoulder, and a draft lug secured to the lower portions of said plates.

2. In combination, shouldered plates comprising parallel plate metal portions spaced apart for a part of their upper portions and in surface contact for a part of their lower portions thereby forming a sill pocket, a wood center sill secured in said pocket between the spaced upper portions of said plates and a draft lug extending under said wood center sill and being secured to the lower portions of said plates.

3. In combination, a plurality of separately formed plates comprising parallel upper portions spaced apart said plates being juxtaposed for a part of their lower portions and stiffened by a lower flange throughout the major portion of their juxtaposition, and there being a shoulder intermediate the upper and lower portions of said plates adapted to support a wood center sill between the spaced upper portions of said plates and above said shoulder and a draft lug secured to the lower portions of said plates.

4. In combination, an end sill, a bolster, a single metal plate comprising a lower vertical channel portion and an upper angular portion a part of which forms part of said channel portion, another metal plate, the upper portions of both plates being spaced apart and the lower portions being in surface contact, a shoulder being formed intermediate the upper and lower portions of said plates, a wood center sill positioned between the upper portions of said plates to rest on said shoulder, and a draft lug secured to the lower portions of said plates, the channel portion of the first plate extending between the end sill and the bolster and the upper angular portion of that plate passing across said bolster.

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1,224,792. CAR-UNDERFRAME. WILLIAM J. ROA, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Feb. 5, 1916. Serial No. 76,372. (Cl. 105—76.)



1. In combination, a bolster, spaced center sill members having bottom flanges, a bottom cover plate connected to said flanges and outstanding laterally from said sill members, and wood center sills resting on and being bolted to the outstanding portions of said bottom cover plate, said wood sills having their major portions positioned below the top of said bolster.

2. In combination, a bolster, wood center sills, spaced center sill members having bottom flanges, a bottom cover plate conneted to said flanges and outstanding laterally from said sill members to support said wood sills, draft sills lapping and secured to the end portions of said flanged sill members and an offset casting interposed between said draft sills and sill members and extending into alined abutment with said wood center sills within and so as to derive underlying support from said bolster at their abutting terminals.

3. In combination, a bolster, draft sills, spaced wood sill members and metal center sill members the latter having bottom flanges, a bottom cover plate connected to said flanges and outstanding laterally therefrom the wood center sills resting on the outstanding portions of said bottom cover plate, said cover plate passing through said bolster and being connected to said draft sills.

4. In combination, spaced wood center sill members, auxiliary reinforcing sill members, a bottom cover plate connected to the reinforcing members and outstanding laterally therefrom to support said wood sill members, draft sills secured to end portions of said reinforcing sill members, draft lugs mounted on said draft sills and provided with draft gear follower stops, and a shouldered casting spaced from the follower stops and interposed between said draft sills and the other sill members and adapted to transfer buffing shocks from the draft sills to all of the other sill members.

5. In combination, a bolster, spaced center sill members having bottom flanges, a bottom cover plate extending laterally from said sill members, wood center sills resting on and being bolted to the outstanding portions of said bottom cover plate, draft sills secured to said flanged sill members and connection castings extending into alinement with said wood sills and between said other sill members, said cover plate passing through said bolster and being connected to said draft sills.

[Claims 6 and 7 not printed in the Gazette.]

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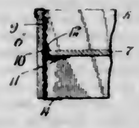
1,224,793. SCRAPING DEVICE. LAURA V. ROBINSON, Baltimore, Md. Filed June 15, 1914. Serial No. 845,230. (Cl. 65—12.)



A scraping device comprising a handle, a circular enlargement at one end of the handle, said enlargement projecting slightly beyond one horizontal side face of the handle, a disk removably secured to the projecting face of said circular enlargement, said disk having its periphery beveled, a plurality of scraping blades secured to the outer face of the disk at a spaced distance apart and, arranged in radial spaced rows, a circular row of spaced blades arranged on the beveled periphery of said disk and extending outwardly therefrom at an obtuse angle and a second circular row of spaced blades secured to and extending outwardly from the beveled portion of the disk and located in a plane below the first named circular row, as and for the purpose specified.

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1,224,794. BOX. MANVILLE F. ROBISON, Bar View, Oreg. Filed Mar. 22, 1916. Serial No. 85,942. (Cl. 217—64.)

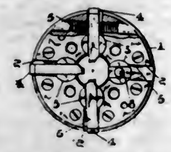


1. The combination with a box having a vertically movable bottom, of a plurality of oppositely disposed resilient corrugated strips having their corresponding upper extremities hooked over the upper edge of the adjacent wall of the box and secured thereto, said strips normally converging in a downward direction and spaced from said walls, said strips terminating to provide inwardly extending horizontal flanges disposed beneath the bottom plane of the box, and resilient catches carried by the bottom and engaging said corrugated strips for holding said bottom in adjusted position.

2. The combination with a box having a vertically movable bottom, of a plurality of oppositely disposed resilient corrugated strips having their corresponding upper extremities hooked over the upper edge of the adjacent wall of the box and secured thereto, said strips normally converging in a downward direction and spaced from said walls, said strips terminating to provide inwardly extending horizontal flanges disposed beneath the bottom plane of the box, and substantially L-shaped resilient catches secured to said bottom and having their vertical branches extending above the bottom and around it to engage in the corrugations of said strips for holding the bottom in adjusted position.

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1,224,795. SCREW-CUTTING DIE. RICHARD W. ROBERSON, Galt, Ontario, Canada. Filed Aug. 21, 1916. Serial No. 116,158. (Cl. 10—121.)



1. In a screw threading die, the combination of the die body; a plurality of radial chasers carried by said body and each pivotally mounted adjacent its cutting end; and stops limiting the rocking movement of each chaser in either direction.

2. In a screw threading die, the combination of the die body; a plurality of radial chasers carried by said body and each pivotally mounted adjacent its cutting end; and adjustable stops limiting the rocking movement of each chaser in either direction.

3. In a screw threading die, the combination of the die body; a plurality of pivots mounted on said body and slotted for the passage of chasers; a plurality of radial chasers adapted to slide through said pivots, said pivots being normally adjacent the cutting edges of the chasers; and stops engageable by the chasers limiting the rocking movement of each chaser in either direction.

4. In a screw threading die, the combination of the die body; a plurality of pivots mounted on said body and slotted for the passage of chasers; a plurality of radial chasers adapted to slide through said pivots, said pivots being normally adjacent the cutting edges of the chasers; and stops engageable by the chasers limiting the rocking movement of each chaser in either direction comprising screws threaded through the die body.

5. In a screw threading die, the combination of the die body; a plurality of radial chasers carried by said body and each pivotally mounted adjacent its cutting end and arranged to slide radially; stops limiting the rocking movement of each chaser in either direction; and a collet threaded on the body adapted to adjust the chasers radially.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,796. OPERATING MECHANISM FOR CAR-DOORS. JOHN M. ROHLFING, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Oct. 25, 1915. Serial No. 57,747. (Cl. 105—14.)

1. In combination in a dump car, doors provided with suitably supported hinges, a shaft parallel with the latter, door-actuating members operable by said shaft and a door lock comprising a plurality of pivotally connected members suspended from said shaft and operable independently thereof.

2. In combination in a dump car, doors provided with movement-permitting supports, a shaft parallel with the latter, door-actuating members and a plurality of suspended plural-part door locks the parts of which are adapted to be simultaneously swung, said members and locks being connected with said shaft but being independently operable.

3. In combination in a dump car, doors, a plurality of shafts, door-actuating members operable by one shaft and swingingly suspended door-locks provided with latches supported from said shaft by vibratory means and independently operable by another of said shafts.



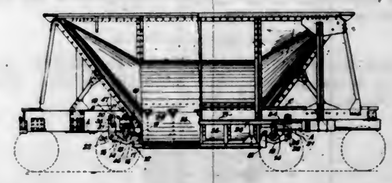
4. In combination in a dump car, doors, door-actuating members adapted to partly close said doors, an operating shaft therefor, door-locks for engaging the partly closed doors and completing their closure comprising an oscillatory hanger pivotally supported from said shaft, a swinging latch rockably connected thereto and means for advancing and withdrawing said latch to and from a door-supporting position.

5. In combination in a dump car, doors adapted to close against portions of the car structure, door-actuating means, door-locks supportedly connected with but independently operable from said door-actuating means and provided with latches held out of contact with said door-actuating means and adapted to be swung to a door-supporting position and means for operating said door-locks.

[Claims 6 to 23 not printed in the Gazette.]

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1,224,797. DUMPING-CAR-DOOR-OPERATING MECHANISM. JOHN M. ROHLFING, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Oct. 25, 1915. Serial No. 57,748. (Cl. 105—185.)



1. In combination in a dump car, opposing doors adapted to close against each other, door-raising means, members on each side of said doors, swing door locks supported from the car framing to move in a direction other than that of the paths of said doors, each adapted to engage the members on opposing doors to hold the latter closed and means for operating said door locks.

2. In combination in a dump car, opposing doors, door-raising means adapted to close said doors against each other, members on each side of said doors, swing door locks supported from the car framing adapted to simultaneously come into coöperative relation with the members on opposing doors after the latter have been raised and to maintain said doors closed and operating means for said door locks.

3. In combination in a dump car, opposing doors hinged near the sides of the car, members on each side of said doors, door-raising means connected with a plurality of said members and adapted to close the doors against each other, swing door locks supported from the car framing to swing in and parallel with the plane in which said doors meet, and adapted to engage said members after the doors have been raised to maintain them closed, and operating means for said doors locks.

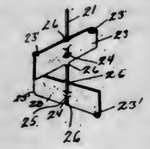
4. In combination in a dump car, opposing doors hinged near and adapted to swing toward the sides of a car on opening, members on each side of said doors, door-raising means connected to the members at one side of said doors, door locks supported from the car framing adapted to be projected under portions of the members on both sides of the doors after the operation of said door-raising means and to carry said doors into a tight closure and operating means for said door locks.

5. In combination in a dump car, doors adapted to swing toward each other in closing, attachment devices connected to the sides of said doors, and door-raising means comprising a winding shaft supported by the sills of the car, means for rotating the same from the side of the car, flexible members secured to said attachment devices and adapted to be wound on said shaft and retro-action prevention and permitting means for said shaft, and door-locking means.

[Claims 6 to 49 not printed in the Gazette.]

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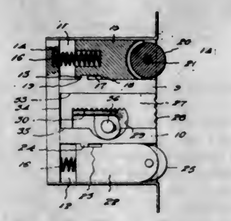
1,224,798. CHURN. JOHN L. SAXE, Waterbury, Conn. Filed Mar. 21, 1916. Serial No. 85,677. (Cl. 259—144.)



A churn dasher comprising a vertical shaft, a pair of flat, rectangular plates secured to said shaft intermediate their lengths and extending transversely at right angles thereto, said plates being arranged at right angles to each other and in superposed relation, the upper corners of the upper plate being bent at approximately right angles to the plane of the plate and in opposite directions, and the lower corners of the lower plate being bent at approximately right angles to the plane of the plate and in opposite directions.

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1,224,799. SASH RETAINER AND FASTENER. FRED E. SPARKS, Bellaire, Ohio. Filed Apr. 14, 1916. Serial No. 91,107. (Cl. 16—122.)



1. A sash lock comprising a casing, having a reciprocatory bolt, said bolt provided with a ratcheted face on one side and a rack upon another side thereof, a spring actuated bolt retaining device movably mounted between the bolt and its casing to engage said ratcheted face and a cylindrical fulcrum positioned upon a wall of the casing to be engaged by said bolt retaining device.

2. A sash lock comprising a reciprocatory bolt provided with a rack, and a ratcheted face, a key operated pinion adapted to engage said rack to reciprocate the bolt when said pinion is engaged by its key, a spring actuated bolt retaining device to engage said ratcheted face to retain the bolt in a plurality of predetermined positions, and a key to release said retaining device and to reciprocate said bolt.

3. A sash lock comprising a reciprocatory bolt provided with a rack and a ratcheted face, a key actuated pinion to engage said rack, a spring actuated bolt retaining device positioned beside said bolt to engage said ratcheted face, a cylindrical fulcrum to provide rocking engagement for said bolt retaining device, a pintle piercing said bolt retaining device at its forward end to retain said bolt retaining device in locking engagement with said cylindrical fulcrum, one end of said pintle slidably engaging a recess in the lock casing, and a key to actuate said bolt retaining device by engaging the other end of the pintle.

4. A sash lock comprising a casing having a removable wall provided with an aperture, a reciprocatory bolt carried by said casing and provided with a ratcheted face and a rack face, spring actuated means to engage the ratcheted face to maintain the bolt in a predetermined position, said spring actuated means having a pintle which is adapted to be positioned adjacent the rack, a pinion rotatably mounted in the aperture in the removable wall of the casing and adapted to journal upon the pintle to engage the rack of said bolt and means to rotate the pinion.

5. A sash lock comprising a casing having a removable wall provided with an aperture, a reciprocatory bolt mounted in the casing and provided with a rack, means carried by the casing provided with a pintle, a pinion rotatably mounted in the aperture of the removable wall of the casing and also rotatably mounted on said pintle for removal with the casing wall and removable means to rotate said pinion to reciprocate said bolt.

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1,224,800. THREAD-CUTTER. HARRY L. SPENCE, Sanford, Me. Filed Aug. 16, 1916. Serial No. 115,349. (Cl. 118—16.)



1. In a device of the class described, in combination, a bobbin lifting plate, a thread cutter connected with said bobbin lifting plate, and a washer engaging plate on said thread cutter.

2. In a device of the class described, in combination, a bobbin lifting plate, a rotatable thread cutter connected with said bobbin lifting plate, and a washer engaging plate connected with the thread cutter.

3. In a device of the class described, in combination, a bobbin lifting plate, a sleeve connected with said plate for turning movement, a washer engaging plate carried by said sleeve, and a cutter rod connected with the sleeve for turning the same.

4. In a device of the class described, in combination, a bobbin lifting plate, a sleeve rotatably connected with said bobbin lifting plate, a washer engaging plate carried by said sleeve, and a cutter rod for turning said sleeve mounted to slide therein.

5. In a device of the class described, in combination, a bobbin lifting plate, a sleeve rotatably connected with said bobbin lifting plate and having spaced slots therein, a washer engaging plate carried by said sleeve, and a cutter rod mounted to slide in said sleeve and having connection therewith whereby said sleeve may be turned by said cutter rod.

[Claim 6 not printed in the Gazette.]

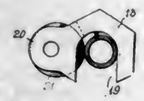
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1,224,801. STUD EXTRACTOR AND TIGHTENER. EDMUND SPRUNG, Detroit, Mich. Filed Sept. 3, 1915. Serial No. 48,932. (Cl. 81—183.)

A device of the type described, comprising a body having facets, said body having a longitudinal slot therein with the walls of said slot parallel with the facets of said body and the bottom of said slot semi-cylindrical relative to the longitudinal axis of said body, sets of parallel



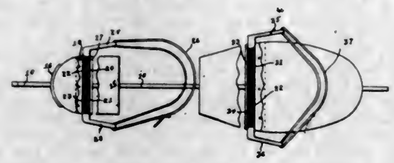
apertured lugs carried by one of the facets of said body and spaced apart thereon, the spaces between the lugs of each set being in open communication with the slot



of said body, and of a knurled gripping member pivoted between the lugs of each set, and adapted to be swung into the slot of said body.

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1,224,802. SKATE. OLOF STAFF, Milltown, Mont. Filed June 10, 1915. Serial No. 33,367. (Cl. 46—50.)



1. The combination in a skate, of a sleeve fixed to the under face of the heel supporting portion, the interior bore of said sleeve being oppositely threaded, correspondingly threaded rods adjustable in said sleeve, stops carried by each of said rods and a strap connecting said stops, for the purpose specified.

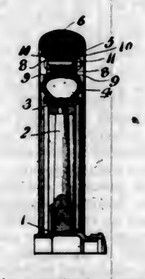
2. A skate comprising a shoe-supporting plate, a strap, and a pair of securing members each comprising an axial portion and a strap-engaging portion which latter stands at an angle to the axis of said axial portion, said securing members being rotatably mounted under said plate, and normally having their strap-engaging portions in engagement with said strap, and being turnable about a common axial line by movement of said strap.

3. A skate comprising a shoe-supporting plate, a strap, and a pair of securing members each comprising an axial portion and a strap-engaging portion which latter stands at an angle to the axis of said axial portion, said securing members being rotatably and adjustably mounted under said plate, and normally having their strap-engaging portions in engagement with said strap, and being turnable about a common axial line by movement of said strap.

4. A skate comprising a shoe-supporting plate, screw threaded supporting means under said plate and connected therewith, an adjustable strap, a pair of securing members each formed with a screw threaded portion and an apertured end portion which latter extends at an angle to the screw threaded portion, the threaded portions of said securing members being seated in said supporting means, said strap normally extending through the apertures of said securing members and preventing adjustment and disadjustment of the latter, but allowing adjustment thereof when the strap is disengaged from one of said securing members.

5. A skate comprising a shoe-supporting plate, internally screw threaded supporting means under said plate and connected thereto, an adjustable strap, and a pair of securing members each comprising an externally screw threaded portion and a relatively thin and wide apertured end portion which latter extends at an angle to the screw threaded portion, the threaded portions of said securing members being seated in said supporting means and each being therein adjustable independently of the other, said strap normally extending through the apertures of said securing members and preventing adjustment and disadjustment of the latter, but allowing adjustment thereof when the strap is disengaged from one of said securing members.

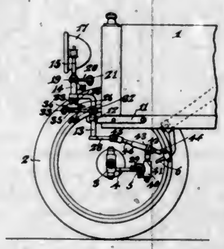
1,224,803. TIRE-PROTECTOR. ELI S. STALKER, Hallstead, Pa. Filed Dec. 13, 1915. Serial No. 66,573 (Cl. 152—33.)



A pneumatic tire provided on its outer face with integral projecting solid resilient bosses, a tire protector of solid resilient material encircling said tire and provided with projecting integral solid resilient bosses on its inner face corresponding in shape with and lying between and in abutting contact with the bosses of the tire and laterally insertible and removable in relation to said tire bosses, retaining rings located at opposite sides of both sets of bosses between the body of the tire and the body of the protector, and fastening means inserted through the tire bosses and said retaining rings.

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1,224,804. DIRIGIBLE HEADLIGHT. CHARLES ROBERT STENBERG, Genoa, Nebr. Filed Jan. 9, 1917. Serial No. 141,459. (Cl. 240—62.)



1. In a device of the character described, a bracket having a pair of spaced bearing sleeves fixed thereto and adapted to be attached to the frame of an automobile, a shaft journaled in one of said sleeves and provided with a lamp at its upper end, a shaft journaled in the other of said sleeves and provided with arms at its opposite ends, a connecting rod pivoted to the upper of said arms and having a sliding engagement with the lower end of said first mentioned shaft, and a flexible actuating device attached to the lower of said arms and adapted to be connected to the steering gear, whereby the lamp can be turned simultaneously with the wheels.

2. In a device of the character described, a bracket having a pair of spaced bearing sleeves and adapted to be attached to the frame of an automobile, a shaft journaled in one of said sleeves and provided with a lamp at its upper end and a transversely extending tube at its lower end, a shaft journaled in the other of said sleeves and provided with an arm at its upper end lying in a plane slightly below said tube, said tube being arranged parallel with said arm in one adjustment of the lamp, the free end of said arm being provided with a bearing, an angular connecting rod having a vertical portion pivoted in the bearing of said arm, and a horizontal portion telescoping said tube and slidably engaging the same, and an actuating device connected to the lower end of said last-mentioned shaft for actuating the lamp.

3. In a device of the character described, a bracket having a pair of spaced bearing sleeves fixed thereto and adapfed to be attached to the frame of an automobile, a shaft journaled in one of said sleeves and provided with a lamp at its upper end, a shaft journaled in the other of said sleeves and provided with arms at its opposite ends, a bearing adjustably mounted upon the free end of the upper of said arms, an angular connecting rod having a vertical portion pivotally mounted in said bearing and a horizontally extending portion slidably engaging the lower end of said first mentioned shaft, and a flexible actuating device attached to the lower of said arms and adapted to be connected to the steering gear whereby the lamp can be turned simultaneously with the wheels.

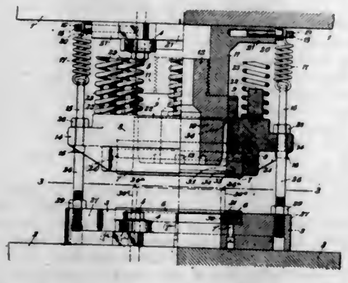
4. In a device of the character described, a bracket having a pair of spaced bearing sleeves fixed thereto and adapted to be attached to the frame of an automobile, a shaft journaled in one of said sleeves and provided with a lamp at its upper end, a cap adjustably mounted upon the lower end of said shaft and provided with a radially extending tube, a shaft journaled in the other of said sleeves and provided with arms at its opposite ends, the upper of said arms being rotatably adjustable thereon, an adjustable bearing mounted upon the free end of the upper of said arms, an angular connecting rod provided with a vertical portion pivoted in said bearing and with a horizontally extending portion telescoping said tube, and a flexible actuating device attached to the lower of said arms and adapted to be connected to the steering gear whereby the lamp is turned simultaneously with the wheels of the automobile.

5. In a device of the character described, a pair of spaced bearing sleeves, means attached to the frame of an automobile for supporting the sleeves in different vertical and horizontal planes, a vertical shaft journaled in the upper one of said sleeves and connected at its upper end to a lamp, a second vertical shaft journaled in the lower sleeve and provided with a pair of arms, said arms occupying different horizontal planes, a bearing connected to the upper arm, an angular connecting rod having a vertical portion journaled in the bearing and a horizontal portion telescoping with a part connected to the lower end of the first-mentioned shaft, and actuating means connecting the steering gear with the lower one of said arms.

[Claim 6 not printed in the Gazette.]

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1,224,805. APPARATUS FOR FORMING ANNULAR WORK. FREDERICK A. STEVENSON, Detroit, Mich., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Dec. 11, 1915. Serial No. 66,331. (Cl. 78—18.)



1. In combination, a work-holding-and-propelling forming die, an opposed forming-die, a guide member extending into the latter and forming an internal space between the same and itself, and means for causing said first mentioned forming-die to force work into said space and to compress the work, said forming-dies and guide member being adapted to expand said work at predetermined locations.

2. In combination, a work-holding-and-propelling forming-die, an opposing movable forming-die, separate means for driving each die toward the other die and a pilot member extending into said opposing die and forming a space between the same and itself, said work-holding forming-die being adapted to force work into said space and move said opposing die so that said forming-dies and pilot member coöperate to compress said work and to give variant thickness to its cross section.

3. In combination, a forming-die, an opposing movable forming die, a pilot member provided with a contour substantially corresponding to the intended interior contour of a piece of work, both of said dies being annular internally and normally out of engagement with said pilot member, and means for moving the first mentioned forming-die to cause it to force the work between said opposing forming-die and said pilot member and to make such relation between itself, said opposing forming-die and pilot member that said work is compressed and given a variant cross section.

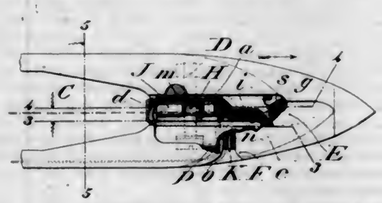
4. In combination, a forming-die adapted to be driven and an opposing forming-die under oppositely acting movement influences when in its normal position, both of said dies having internal portions substantially corresponding to the intended contour of external portions of a piece of work, and a pilot member provided with an external contour substantially corresponding to the intended interior contour of the work, and means for actuating said driven forming-die to overcome one of said influences applied to the opposite die and to force the work between said opposing forming-die and pilot member and to so adjust itself and said opposing forming-die to said pilot member that the work is compressed and given a variant cross section.

5. In combination in ring-shaping apparatus, a forming die adapted to be driven and an opposing movable die, means for resiliently positioning the latter, a pilot member with which said opposing die is adapted to contact and to have relative movement with, and means for driving said driven die, the last mentioned die being adapted to become interlocked with said pilot member and coöperatively related to said opposing die and to actuate the latter so that a ring of suitable thickness may be forced between said pilot member and opposing die and become compressed and given a variant thickness.

[Claims 6 to 43 not printed in the Gazette.]

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1,224,806. AUTOMATICALLY-THREADING LOOM-SHUTTLE. EDWARD S. STIMPSON, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me., a Corporation of Maine. Filed July 1, 1916. Serial No. 107,146. (Cl. 139—46.)




1. An automatically threading shuttle having a slotted side delivery eye B; and a sheet metal threader having spaced side walls *a*, *b*, a beak *e*, extending rearwardly from the front wall *b*, and outwardly beyond the eye, a horn *f*, directing the thread from the beak to the slot of the eye, and a guard *g*, extending from the rear wall *a*, forwardly over the point of the beak; in combination with a metal block G between the side walls of the threader, said block having a rearwardly extending thread retainer H, a floor *m*, beneath the retainer and spaced therefrom, the lower face of the retainer and the surface of the floor sloping downwardly toward the rear,



and sloping upwardly from the inner to the outer end, thereby forming a threading passage which is upwardly inclined from the inner to the outer end and from the rear to the front at both top and bottom, and a projection I, extending from the front portion of the block outwardly and over the lower part of the thread eye, said projection having a downwardly extending hook *i*, which is beyond the outer wall *j*, of the block and extends below the bottom of the thread eye, whereby said hook serves as an outer wall for said eye, the space between the hook *i*, and the outer face of the block constituting a throat the top of which is below the plane of the floor *m*.

2. An automatically threading shuttle having a slotted side delivery eye B; a sheet metal threader having spaced side walls *a* and *b*, a beak *e*, extending rearwardly from the front wall *b*, and outwardly beyond the eye; a horn *f*, directing the thread from the beak to the slot of the eye, and a guard *g*, extending from the rear wall *a*, forwardly over the point of the beak; and a delivery passage E, having a vertical wall *l*; in combination with a metal block G, between the side walls of the threader, said block having a rearwardly extending thread retainer H, a floor *m*, beneath the retainer and spaced therefrom, the lower face of the retainer and the surface of the floor sloping downwardly toward the rear, and sloping upwardly from the inner to the outer end, thereby forming a thread passage which is upwardly inclined from the inner to the outer end and from the rear to the front at both top and bottom, and a projection I extending from the front portion of the block outwardly and over the lower part of the thread eye, said projection having a downwardly extending hook *i*, which is beyond the outer wall *j*, of the block and extends below the bottom of the thread eye, whereby said hook serves as an outer wall for said eye, the forward edge of said hook constituting a downward continuation of the horn *f*, and being spaced from said wall *l* to form a narrow thread passage.

3. An automatically threading shuttle having, in combination, a slotted side delivery eye; a threader having spaced side walls; and a block between the side walls of the threader, said block having a rearwardly extending thread retainer, and a floor beneath the retainer and spaced therefrom, the lower face of the retainer and the surface of the floor sloping downwardly toward the rear, and sloping upwardly from the inner to the outer end, thereby forming a thread passage which is upwardly inclined from the inner to the outer end and from the rear to the front at both top and bottom.

4. An automatically threading shuttle having, in combination, a slotted side delivery eye; and a threader having a block with a rearwardly extending thread retainer, and a floor beneath the retainer and spaced therefrom, the lower face of the retainer and the surface of the floor sloping downwardly toward the rear, and sloping upwardly from the inner to the outer end, thereby forming a thread passage which is upwardly inclined from the inner to the outer end and from the rear to the front at both top and bottom.

5. An automatically threading shuttle having, in combination, a slotted side delivery eye; and a threader with a rearwardly extending thread retainer and a floor beneath the retainer and spaced therefrom, the lower face of the retainer and the surface of the floor sloping downwardly toward the rear, and sloping upwardly from the inner to the outer end, thereby forming a thread passage which is upwardly inclined from the inner to the outer end and from the rear to the front at both top and bottom.

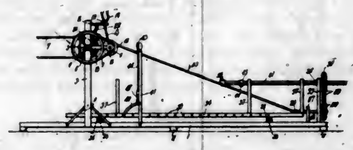
[Claims 6 to 8 not printed in the Gazette.]

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1,224,807. DISK-SHARPENING MACHINE. DANIEL STOCK, Clarence, Iowa. Filed Sept. 14, 1916. Serial No. 120,140. (Cl. 51—7.)

1. In a machine of the character described, the combination of a main frame, a drive shaft rotatably mounted thereon, a pivotally mounted counter shaft mounted for movement in the path concentric with the drive shaft, driving connections between the counter shaft and drive shaft, and means for securing the counter shaft in adjustment about the drive shaft.

2. In a machine of the character described, the combination of a frame, alined standards secured thereto near one end thereof, a main drive shaft rotatably mounted in the standards, an arm pivotally mounted at its inner end on the drive shaft, a counter shaft rotatably mounted in the outer end of the arm parallel with the drive shaft, driving connections between the drive shaft and counter shaft, a bracket arm mounted above the drive shaft, an adjusting rod projecting through said bracket arm and loosely connected at its lower end to the outer end of the arm carrying the counter shaft, and means for adjusting the said rod through the bracket arm.



3. In a machine of the character described, the combination of a frame, a drive shaft, an arm pivotally mounted on the drive shaft at its inner end, a counter shaft rotatably mounted in the outer end of the arm, driving connections between the drive shaft and counter shaft, means for adjusting the arm about its pivotal axis, a shaft rotatably mounted near the end of the frame remote from the drive shaft and projecting longitudinally of the frame, and driving connections between the drive shaft and the said longitudinally projecting shaft for rotating the latter.

4. In a machine of the character described, the combination of a frame, a drive shaft, an arm pivotally mounted on the drive shaft at its inner end, a counter shaft rotatably mounted in the outer end of the arm, driving connections between the drive shaft and counter shaft, means for adjusting the arm about its pivotal axis, a shaft rotatably mounted near the end of the frame remote from the drive shaft and projecting longitudinally of the frame, and connections between the main drive shaft, the counter shaft, and the said longitudinally projecting shaft.

5. In a machine of the character described, the combination of a frame, a drive shaft rotatably mounted thereon, an arm pivotally connected at one end on the drive shaft, a counter shaft rotatably mounted in the other end of the arm, driving connections between the drive shaft and the counter shaft, means for adjusting the arm about its pivotal axis, a shaft of polygonal cross section rotatably mounted at the end of the frame remote from the drive shaft and projecting longitudinally thereof, a sprocket wheel slidably mounted thereon, a stub shaft rotatably mounted parallel with the said longitudinal shaft, a transmission shaft universally connected to the stub shaft, a worm wheel keyed thereon, a worm secured on the main drive shaft and in mesh therewith, a sprocket wheel keyed on the outer end of the stub shaft, and driving connections between the sprocket wheel on the stub shaft and the sprocket wheel mounted on the longitudinally projecting polygonal shaft.

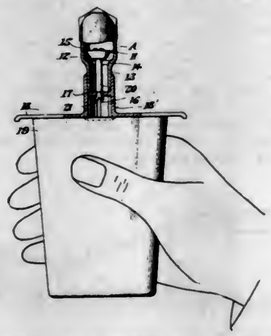
[Claim 6 not printed in the Gazette.]

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1,224,808. FAUCET. ARVID G. SUNDELL, Columbus, Ohio, and JOHN E. MARKKO, Washington, D. C. Filed Aug. 22, 1916. Serial No. 116,367. (Cl. 137—4.)

The combination with a faucet, of a sleeve detachably connected with the free end of the faucet and having an internal valve seat, a valve normally engaging the seat and having a stem, a hub telescoped upon the sleeve and having an internal cross guide piece engaged by the stem, laterally extending opposed presser arms formed on and coincident with the lower edge of the hub, the said sleeve being formed with longitudinally disposed elongated slots receiving the guide piece, and a reduced split end on the stem for engagement with the guide piece and fixed thereto on the spreading of the split end, the vertical

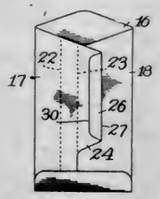
length of the slots corresponding approximately to the length of the hub below the cross guide base, whereby in



use no portion of the apparatus will project within the vessel used with the faucet.

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1,224,809. PAPER DRINKING-CUP. WILLARD E. SWIFT, Worcester, Mass., assignor to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Filed Mar. 9, 1912. Serial No. 682,796. (Cl. 229—53.)




As an article of manufacture, a drinking cup formed of flexible sheet material, having a body portion and two side flaps folded over said body portion and united at the overlapping edges, with one of said side flaps provided with an extension projecting over the other side flap, with a portion of said extension folded upon itself to form a doubled edge and allow the extension to be raised by either its free edge or by its folded edge.

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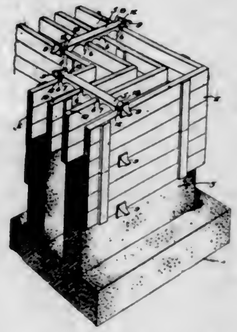
1,224,810. FORM-HOLDER AND WALL-TIE. HERMAN G. TENHOLDER, Beaumont, Tex., assignor of one-half to Geo. W. Smyth Lumber Company, Beaumont, Tex., a Corporation of Texas. Filed Nov. 20, 1916. Serial No. 132,413. (Cl. 25—131.)

1. A form holder and hollow wall tie consisting of a casting having a series of form seats disposed transversely in its length and having a tapering head at each end connected to the bar at reduced frangible neck portions, and lugs opposed to the bases of said heads at the ends of the reduced necks.

2. A form holder and hollow wall tie consisting of a unitary bar having a series of form seats disposed transversely in its length and having a pyramidal head at each end connected at the bases to the bar by reduced frangible neck portions which are coincident with the end seats, the bases of the heads projecting above and below the faces of the bar.

3. A concrete form holder and wall tie consisting of a bar having on one face, near each end, projecting shoulders forming seats for mold sections, outwardly tapering heads at the ends of the bar the bases of which project above and below the faces of the bar to form supports for sections, and reduced frangible necks joining the heads to the bar ends, at the line of said shoulders.

4. An integral mold or form holder and wall tie having on one face seats between transverse lugs for mold sections and notched at its opposite edges to form fracture lines coincident with certain faces of the seats, and between the lugs.

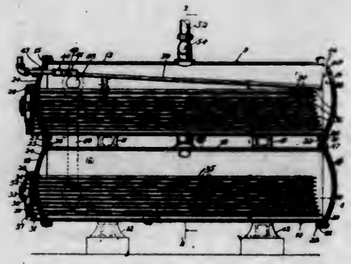


5. An integral mold or form holder and wall tie having adjacent its ends pairs of shoulders, each pair forming therebetween a seat, and the sides of said seats having angular notches forming weakened planes in the body coincident with the inner shoulder of the end seats.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,811. APPARATUS FOR REFRIGERATION PLANTS. SOREN THURSTENSEN, Louisville, Ky., assignor to Henry Vogt Machine Company, Louisville, Ky., a Corporation of Kentucky. Filed May 29, 1915. Serial No. 31,250. (Cl. 122—32.)



1. In a device of the class described, the combination of a drum, temperature exchanging means within the drum, and a rich liquor supply pipe extending longitudinally of and along the upper portion of the interior of the drum from the front to adjacent the rear thereof and in a diagonally downward direction toward the rear of the drum, there being an opening in communication with the upper end of said pipe for the liberation of vapors therefrom, substantially as described.

2. In an appliance of the class described, the combination of a drum, temperature exchanging means within the drum, a rich liquor supply pipe extending longitudinally of and along the upper portion of the interior of the drum, a chambered member with the interior of which said pipe communicates, and a main rich liquor supply pipe also communicating with the interior of said chambered member, said chambered member being formed with an opening to permit of the passage of gas out therefrom, substantially as described.

3. In an appliance of the class described, the combination of a drum, temperature exchanging means within the



drum, a rich liquor supply pipe extending longitudinally of and along the upper portion of the interior of the drum, a chambered member with the interior of which said pipe communicates, a main rich liquor supply pipe also communicating with the interior of said chambered member, said chambered member being formed with an opening to permit of the passage of gas out therefrom, and a weir depending into the interior of said chambered member and adjacent the opening therein, substantially as described.

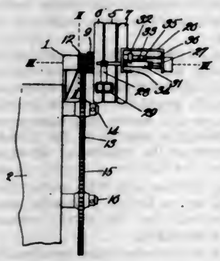
4. In an appliance of the class described, the combination of a drum, temperature exchanging means within the drum, a rich liquor supply pipe extending longitudinally of and along the upper portion of the interior of the drum, a chambered member with the interior of which said pipe communicates, a main rich liquor supply pipe also communicating with the interior of said chambered member, said chambered member being formed with an opening to permit of the passage of gas out therefrom, and a series of baffles at that end of the chambered member with which the main rich liquor supply pipe communicates, substantially as described.

5. In an appliance of the class described, the combination of a drum, temperature exchanging means within the drum, a rich liquor supply pipe extending longitudinally of the drum and along the upper portion of the interior thereof, a chambered member with the interior of which said pipe communicates, a main rich liquor supply pipe also communicating with the interior of said chambered member, said chambered member being formed with an opening to permit of the passage of gas out therefrom, a weir depending into the chamber of said chambered member and adjacent the opening therein, and a series of baffles at that end of the chambered member with which the main rich liquor supply pipe communicates, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,812. REVERSING-GEARING. JAMES O. TOW, Columbia, Mo., assignor, by mesne assignments, to Dorn-Cloney Laundry and Dry Cleaning Co., Columbia, Mo., a Corporation of Missouri. Filed May 17, 1916. Serial No. 98,039. (Cl. 64—4.)

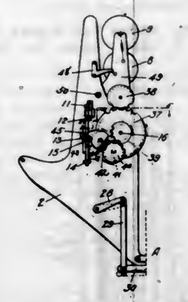


1. In a reversing gearing, a shaft, a central and two side wheels thereon, one of the side wheels being fixed to the shaft, a rotatable element driven from the shaft when the central wheel and the fixed side wheel are driven in unison in the same direction, means actuated by said element for driving the other side wheel in the reverse direction or for reversing the operation of the shaft and fixed side wheel when the central wheel and the other side wheel are driven in unison in the same direction, a worm journaled on said shaft, means operated by the fixed side wheel and central wheel for imparting an alternating rotary movement to said worm, and a belt shifting mechanism intergeared with said worm and adapted for automatically shifting a belt engaging the central and one of the side wheels from engagement with said side wheel and into engagement with the other side wheel without withdrawing the belt from operative position at any time on said central wheel.

2. In a reversing gearing, a shaft, a central and two side belt wheels upon said shaft, one of the side belt wheels being fixed to the shaft, a rotatable element driven from the shaft when the central wheel and the fixed side wheel are driven in the same direction, means actuated by the said element for driving the other side wheel in the opposite direction or for reversing the operation of the fixed side wheel when the central wheel and the said other side wheel are driven in unison by said belt, a gear pinion rigid with the central belt wheel, a gear wheel journaled on said shaft, a pair of planet gears rotatable together and carried by the fixed belt wheel, and respectively enmeshed with the said pinion and the said gear wheel journaled on the shaft, and means operated by the last-named gear wheel for shifting a belt engaging the central and one of the side wheels from engagement with the said side wheel and into engagement with the other side wheel without withdrawing the belt from operative position at any time on said central wheel.

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1,224,813. CARD-MAKING ATTACHMENT FOR ADDING AND LISTING MACHINES. ARTHUR S. TREW, Portland, Oreg. Filed June 17, 1915. Serial No. 34,585. (Cl. 101—227.)



1. An attachment for adding machines for making cards comprising in combination a supporting frame adapted to be attached to the adding machine, a roller mounted therein, means for feeding a strip of cardboard around said roller, means for cutting said strip of cardboard into cards, and means for connecting said feeding means and said cutting means with an operating part of said adding machine, whereby the operation of the latter operates the former.

2. An attachment for adding machines for making cards comprising in combination a supporting frame, a roller mounted therein, means for feeding a strip of cardboard around said roller, a die roller mounted in said frame and bearing against said first roller and between which said strip of cardboard passes, inking means, means for cutting said strip of cardboard into cards, and means for connecting said feeding means and said cutting means with an operating part of said adding machine, whereby the operation of the latter operates the former.

3. An attachment for adding and listing machines comprising a supporting structure adapted to be attached to the adding machine, adjacent the printing mechanism thereof, means for supporting and feeding a strip of cardboard through said supporting structure adjacent the printing mechanism of said adding machine, means in said supporting structure for printing a form upon said cardboard as it is fed through said supporting structure, means for cutting said strip of cardboard into cards, and means for connecting the feeding means and the cutting means of said device with an operating part of said adding machine, whereby the operation of the latter operates the former.

4. An attachment for adding and listing machines of the character referred to comprising a self-contained struc-

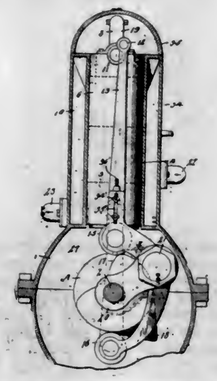
ture adapted to be attached to an adding and listing machine adjacent the printing mechanism thereof, said device comprising means for supporting and feeding a strip of cardboard therethrough adjacent the printing mechanism of said adding and listing machine, means for printing a form upon said cardbord as it is fed through said device, means for cutting said cardboard into cards, and means for operatively connecting said card feeding means and said card cutting means to operating parts of said adding and listing machine, whereby the operation of the adding and listing machine automatically operates said card feeding and card cutting means.

5. A device of the character referred to comprising in combination a supporting structure, a feed roller, a die roller therein, means for inking said die roller, means for feeding a strip of cardboard between said feed roller and said die roller, means for cutting said strip of cardboard into cards, operating connecting means for operating said rollers and said cutting means, and means for connecting said supporting structure and said operating connecting means to a listing machine having printing mechanism, whereby the operation of said listing machine automatically operates said feeding means and said cutting means, substantially as described.

[Claim 6 not printed in the Gazette.]

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1,224,814. ENGINE. ANTON VAN ALTENA, Kansas City, Mo. Filed Oct. 7, 1914. Serial No. 865,525. (Cl. 123—51.)

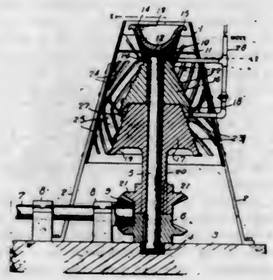


1. In an internal combustion engine, the combination of a rotary crank shaft, a cylinder, a reciprocatory power piston, connected to said rotary crank shaft, a second reciprocatory piston working in the same cylinder and operating to scavenge the burned gas in each complete cycle of operation of the engine, a second crank shaft located at the opposite end of the cylinder from the first crank shaft and having said second piston connected therewith, a cam on the first crank shaft, and a connecting rod forming a direct operating connection between said cam and the second crank shaft, said connecting rod embodying a substantially semicircular yoke embracing the first crank shaft and having rollers coacting with the cam at opposite sides of the first crank shaft.

2. In an internal combustion engine, the combination of a rotary crank shaft, a cylinder, a reciprocatory power piston connected to said rotary crank shaft, a second reciprocatory piston working in the same cylinder and operating to scavenge the burned gas in each complete cycle of operation of the engine, a second crank shaft located at the opposite end of the cylinder from the first crank shaft and having said second piston connected therewith, a cam on the first crank shaft, and a connecting rod forming a direct operating connection between said cam and the second crank shaft, said connecting rod being longitudinally extensible and embodying a substantially semicircular yoke embracing the first crank shaft and having rollers coacting with the cam at opposite sides of the first crank shaft.

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1,224,815. GRANULATING-MACHINE. EDWARD AMOS WALTERS, Youngstown, Ohio. Filed Sept. 14, 1916. Serial No. 120,044. (Cl. 83—91.)



1. A machine of the character specified, comprising a frusto-conical open ended casing arranged with the small end upward, a shaft journaled at the axis of the casing, a cup supported at the upper end of the shaft by the casing and having an outwardly extending marginal lip, a wheel secured to the shaft below the cup and having a frusto-conical periphery arranged with its small end upward, a second wheel journaled on the shaft below the first wheel and having a frusto-conical periphery arranged similarly to the first-named wheel, said cup delivering onto the periphery of the uppermost wheel and the uppermost wheel having means at its lower end for deflecting the slag onto the periphery of the lowermost wheel, said wheel having spiral ribs and the ribs of the wheels being oppositely arranged, said casing having internal spiral ribs at each wheel and arranged in an opposite manner to those on the wheel, means for rotating the shaft and the lowermost wheel in opposite directions, and means at the top of each wheel for delivering a spray of water through the falling slag.

2. A machine of the character specified, comprising a pair of similarly arranged frusto-conical wheels, said wheels being arranged one below the other and with their small ends upward, means for rotating the wheels in opposite directions, a cup above the uppermost wheel and having an outwardly extending lip for delivering the slag onto the periphery of the uppermost wheel, means at the top of each wheel for delivering a spray of water through the falling slag, and an inclosing casing for the wheels, said wheels and casing having peripheral ribs for slowing the flow of the slag, the ribs of the wheels and casing being oppositely arranged.

3. A machine of the character specified, comprising a pair of similarly arranged frusto-conical wheels, said wheels being arranged one below the other and with their small ends upward, means for rotating the wheels in opposite directions, a cup above the uppermost wheel and having an outwardly extending lip for delivering the slag onto the periphery of the uppermost wheel, means at the top of each wheel for delivering a spray of water through the falling slag, and an inclosing casing for the wheels, said wheels and casing having peripheral ribs for slowing the flow of the slag.

4. A machine of the character specified, comprising a pair of similarly arranged frusto-conical wheels, said wheels being arranged one below the other and with their small ends upward, means for rotating the wheels in opposite directions, a cup above the uppermost wheel and having an outwardly extending lip for delivering the slag onto the periphery of the uppermost wheel, means at the top of each wheel for delivering a spray of water through the falling slag, and an inclosing casing for the wheels.

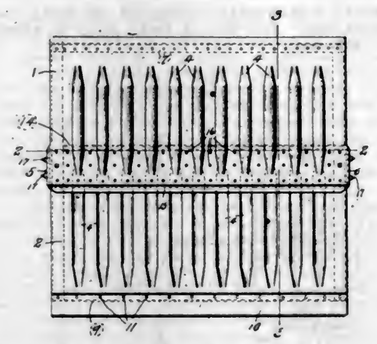


5. A machine of the character specified, comprising a pair of similarly arranged frusto- conical wheels, said wheels being arranged one below the other and with their small ends upward, means for rotating the wheels in opposite directions, means for delivering the slag to the topmost wheel, means at the top of each wheel for delivering a spray of water through the falling slag, and an inclosing casing for the wheels.

[Claims 6 to 11 not printed in the Gazette.]

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1,224,816. METALLIC CAR-WALL CONSTRUCTION. JACOB H. WEISBROD, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed July 3, 1916. Serial No. 107,383. (Cl. 105—192.)



1. In a railway car, a wall construction including sheet metal panels one disposed above another and having portions overlapping and secured together, said panels being provided with corrugations extending angularly relative to the overlapping edges, the corrugations in one panel overlapping the corrugation in the other with their reentrant sides together.

2. In a railway car, a wall construction including panels one disposed above another and having their adjacent marginal portions overlapped and secured together, said panels being provided with alined vertically extending corrugations extending into the overlapping portions, the corrugations in one panel protruding in a direction opposite to those in the other relative to the general plane of the wall.

3. In a railway car, a wall construction including sheet metal panels marginally conjoined and provided with corrugations, extending angularly relative to the line of junction, said panels being secured together in such relationship that the corrugations in one protrude in a direction opposite to the direction of protrusion of corrugations in the other and with the adjacent ends of the corrugations overlapped.

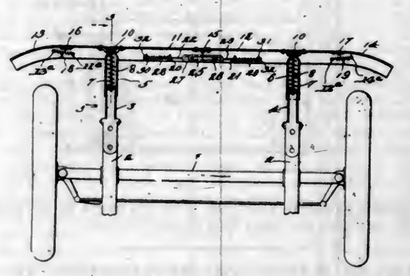
4. In a railway car, a wall construction including sheet metal panels one disposed above another, the uppermost and lowermost margins of the panels being connected to car framing members and the adjacent margins of the sections being overlapped and secured together, said panels being provided with vertically extending corrugations extending substantially to the uppermost and lowermost margins but terminating short thereof, the corrugations in one section overlapping the corrugations in the other to provide continuous vertical stiffening members across the line of jointure.

5. In a railway car, a wall construction including sheet metal panels one disposed above another, said panels being formed with vertically extending corrugations, the corrugations in one panel protruding inwardly of the wall structure, and the corrugations in the other panel protruding exteriorly of the wall, the adjacent margins of the panels being overlapped with the corrugations in alinement, and a flanged plate interposed between the overlapped portions of the panels and extending longitudinally of the joint to form a stiffening member.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,817. VEHICLE-BUMPER. CLAUDE O. WESTOVER, Jacksonville, Fla. Filed July 20, 1915. Serial No. 40,932. (Cl. 213—39.)



1. In a vehicle bumper, a body portion composed of a pair of alined sections, a hinge connecting the inner ends of the sections to permit said sections to flex rearwardly when the body portion engages an object, means yieldably holding the sections in normal position, and means connecting the sections to a vehicle.

2. In a vehicle bumper, a body portion composed of a pair of alined sections, a hinge connecting the inner ends of the sections to permit said sections to flex rearwardly when the body portion engages an object, means for yieldably holding the sections in and automatically returning them to normal position, and means securing the sections to a vehicle.

3. In a vehicle bumper, a body portion composed of a pair of alined sections, a hinge connecting the inner ends of the sections to permit said sections to flex rearwardly when the body portion engages an object, means for limiting the inward movement of the sections, and means securing the sections to a vehicle.

4. In a vehicle bumper, a body portion composed of a pair of alined sections, a hinge connecting the inner ends of the sections to permit said sections to flex rearwardly when the body portion engages an object, means for limiting the inward movement of the sections, said means also yieldably holding and automatically returning the sections to normal position, and means securing the sections to a wheel.

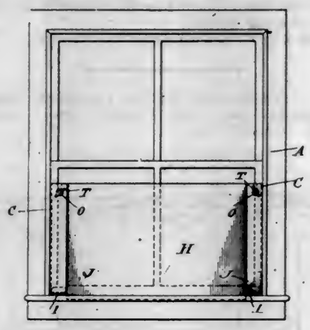
5. In a vehicle bumper, a body portion composed of a pair of alined sections, a hinge connecting the inner ends of the sections to permit said sections to flex rearwardly when the body portion engages an object, a rod slidably mounted on the inner face of each section, a link secured to the inner end of each rod, means for slidably connecting said links, a coil spring secured to each rod to automatically return and hold the sections to normal position, and means securing the sections to a vehicle.

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1,224,818. WINDOW-VENTILATOR. FRANKLIN MELVIN WHITE, Toledo, Ohio, assignor of one-half to Joseph Atkinson, Toledo, Ohio. Filed May 16, 1916. Serial No. 97,979. (Cl. 98—31.)

In a window ventilator, end pieces secured to the frame of a window, each end piece having a flange extending at right angles with relation to the end pieces, the lower end of each flange extending upwardly to provide a pocket, the upper end of each flange having a slot, a deflecting sheet having its lower corners cut away to provide shoulders and an intermediate extended portion, the shoulders

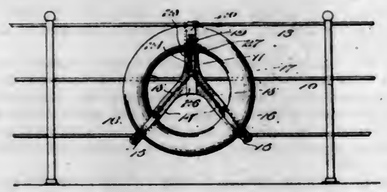
adapted to engage within the pockets, bolts carried by the upper portion of the deflecting sheet, said bolts



adapted to engage within the slots, and means on the bolts for clamping the sheet and flanges together.

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1,224,819. SUPPORT FOR LIFE-PRESERVERS. AMANDUS WIGREN, Ornskoldsvik, Sweden. Filed Aug. 8, 1916. Serial No. 113,812. (Cl. 114—190.)



1. A support for life preservers comprising a Y-shaped frame, a latch on said frame movably supported pieces to fit around the life preserver, a holding element normally fitting around the life preserver and connecting with the latch to be normally locked by the same and support the life preserver and a connection between said pieces and holding element.

2. A support for life preservers comprising a frame, pieces mounted on the frame to fit around the life preserver, a holding element fitting around the life preserver, releasing means normally locking the holding element in position to secure the life preserver and means connecting the pieces with the holding element for releasing the former from holding position when the latter is released.

3. A support for life preservers embodying a frame, a stirrup thereon, a U-shaped holding element for normally supporting the life preserver, a latch operable on the frame at a point below the stirrup, and an extension on the holding element adapted to project into the stirrup and be normally engaged by the latch to secure the life preserver against removal from the frame.

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1,224,820. REINFORCED-CONCRETE FLOWER-POT. EDEN B. WILLIAMS, Chamberlin, La. Filed Oct. 14, 1916. Serial No. 125,649. (Cl. 47—19.)

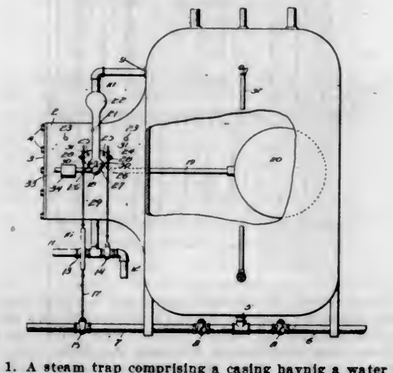
A reinforced concrete flower pot comprising a skeleton metallic frame comprising an upper and a lower ring with a series of rods connecting said upper and lower rings, and a hollow concrete body portion having a thickened annular head inclosing said upper ring and the joints between the rods and said ring, a comparatively thin body portion inclosing said rods connecting the two rings, and a flanged heavy bottom portion inclosing said lower ring and the joints between the ring and said rods and forming a weighted base to render the flower pot more stable, the said



bottom portion being perforated to permit the draining of water therethrough, substantially as described.

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1,224,821. STEAM-TRAP. GEORGE B. WILLIAMS, Cincinnati, Ohio. Filed Feb. 24, 1915. Serial No. 10,306. (Cl. 137—101.)



1. A steam trap comprising a casing havnig a water inlet and a water outlet in the bottom thereof, and a steam inlet in the top, a valve controlling said outlet, a valve connecting said steam inlet to a source of steam pressure, a valve for placing the same steam inlet in communication with the atmosphere, the first two mentioned valves being arranged in vertical alinement, a yoke forming a connection between said valves, a shaft journaled in one wall of the casing, a float on one end of the shaft, a weighted arm mounted upon the opposite end thereof for oscillatory movement, means for limiting the movements of said arm, and a connection between the valves and arm to simultaneously open the first two and close the last mentioned valve, and vice versa.

2. A steam trap comprising a casing having a wster inlet and water outlet in the bottom thereof, and a steam inlet in the top, a valve controlling said outlet, a valve for connecting said steam inlet to a source of steam pressure, a valve for placing said steam inlet in communication with the atmosphere, a shaft journaled in one wall of the casing and a float on one end of the shaft, a weighted arm mounted on the other end thereof for independent oscillatory movement, spaced pins projecting from said arm, a lug rising from the shaft between said pins and adapted to coöperate with the latter to initially impart movement to said arm, and a connection between the valves and arm to simultaneously open the first two and close the last mentioned valves and vice versa.

3. A steam trap comprising a casing having a water inlet and water outlet in the bottom thereof, and a steam inlet in the top, a valve controlling said outlet, a valve for connecting said steam inlet to a source of steam pressure, a valve for placing said steam inlet in communication with the atmosphere, a shaft journaled in one wall of the casing, a float on one end of the shaft, a weighted arm loosely



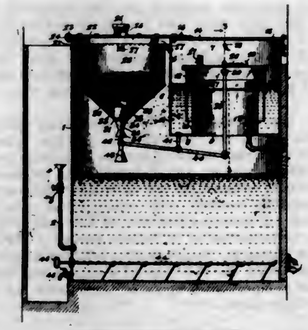
mounted on the opposite end of the shaft for independent oscillatory movement, spaced pins projecting from said arm, a lug carried by the shaft fitted between said pins to coöperate therewith for initially imparting movement to said arm, a plate loosely mounted on said shaft, pins projecting from said plate disposed at opposite sides of the said arm and a connection between the valves and plate to simultaneously open the first two and close the last mentioned of said valves and vice versa.

4. A steam trap comprising a casing having a water inlet and a water outlet in the bottom thereof, and a steam inlet in the top, a valve controlling said outlet, a valve for connecting said steam inlet to a source of steam pressure, a valve for placing said inlet in communication with the atmosphere, a shaft journaled in one wall of the casing, a float on one end of the shaft, a weighted arm mounted on the other end thereof for independent oscillatory movement, spaced pins projecting from said arm, a lug rising from the shaft between said pins and adapted to coöperate with the latter to initially impart movement to said arm, means for limiting the movement of said arm in opposite directions, a sector-like plate loosely mounted on said plate, means carried by the plate to be engaged by said arm, whereby the latter imparts a movement to said plate, and spaced parallel rods depending from said plate and connected with said valves at opposite sides of said arm, whereby the first two mentioned valves are simultaneously opened and the last mentioned valves closed upon movement of the arm in one direction, and vice versa.

5. A steam trap comprising a casing having a water inlet and a water outlet in the bottom thereof, and a steam inlet in the top, a valve controlling said outlet, a valve connecting said steam inlet to a source of steam pressure, a valve for placing said steam inlet in communication with the atmosphere, a lateral extension forming part of said casing, a shaft journaled in said extension, a float on one end of the shaft, a weighted arm on the other end thereof for independent oscillatory movement, pins projecting from said extension on the casing and arranged at opposite sides of the arm to limit the movements of the latter, a plate loosely mounted on said shaft, means carried by the plate and coöperating with said arm whereby the latter imparts movements to said plate, and a connection between said plate and said valves whereby the first two are simultaneously opened and the latter closed on movement of the arm in one direction, and vice versa.

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1,224,822. ACETYLENE-GENERATOR. MILFORD LEROY WILLIAMS, Revere, Mo. Filed May 1, 1916. Serial No. 94,822. (Cl. 48—53.1.)

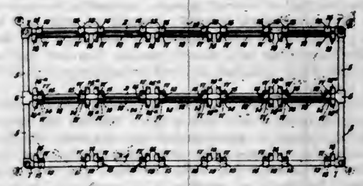


1. An acetylene generator, comprising a casing for containing a supply of water for the reduction of calcium carbid and having adjacent chambers in its upper portion above the water level, with one chamber containing a carbid receptacle and the other containing a gas bell with a liquid seal therein, and with the gas bell freely open to the interior of the casing below the liquid seal, a flat cover of an area corresponding to that of the casing and composed of two parts, one in normally fixed sealed relation to the portion of the casing overlying the carbid receptacle, and the other part being hinged to the first part of the cover and normally overlying the chamber containing the gas bell, means for discharging carbid from the carbid receptacle having a part in operative relation to the gas bell, and suspension means for the gas bell within the chamber containing the gas bell, whereby the latter may be suspended in inoperative position when it is desired to renew the supply of carbid.

2. An acetylene generator, comprising a casing with a flat top formed of two members, one in normally fixed sealed relation to the casing and the other hinged to the first member and readily movable into and out of covering relation to the corresponding portion of the casing, said casing having an interior upright wall depending from the cover and a horizontal wall continued from the lower end of the upright wall and together with the latter defining a chamber, a carbid receptacle in the casing in part supported thereby and in part supported by the upright wall, a gas bell in the chamber formed by the two walls and provided with a liquid seal and also communicating with the interior of the casing below the chamber containing the bell, means for discharging carbid from the carbid receptacle having a part in operative relation to the gas bell, and suspending means for the gas bell within the chamber containing the bell, whereby the bell may be held in inoperative position when it is desired to renew the carbid in the carbid receptacle located in the casing exterior to the chamber containing the gas bell.

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1,224,823. MAIL-POUCH RACK. VICTOR WILLOUGHBY, Jeffersonville, Ind., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Sept. 2, 1914. Serial No. 859,885. (Cl. 211—36.)



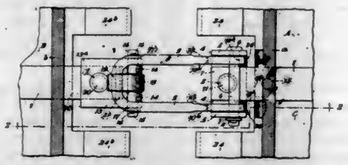
In a device of the class described, a central supporting member and additional supporting members spaced therefrom on opposite sides thereof, and longitudinally spaced pairs of constituent pouch-holding devices carried by each supporting member, alined transversely of said members and grouped into sets each adapted to hold a pouch with its opening expanded each pouch-holding device having a means for girdling one of said supporting members, those devices carried by the outer supporting members being each provided with a single inwardly extending L-shaped hook of angular cross section and means connecting the same with the girdling means of said device, and those devices carried by the central supporting member each being provided with a pair of oppositely extending L-shaped hooks of angular cross section and means for connecting the pair of hooks to the girdling means of said device.

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1,224,824. COUPLING FOR MINE-CARS. VICTOR WILLOUGHBY, Jeffersonville, Ind., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Dec. 30, 1915. Serial No. 69,400. (Cl. 213—36.)

1. In combination in a car coupling, a pivoted and slidable link deriving support from a car end, and a pivoted

gravity latch and a stop supported from another car end, said link being adapted to oscillate said latch, pass therebeyond and to be driven reversely by one of said car ends and caused by gravity to occupy a latch-engaging plane, said latch automatically assuming a link-engagement position and contacting with said stop.



2. In combination in car coupling means, a pivotal and slidable link supported from a car end, a pivoted gravity latch and stop supported from another car end and opposing bumpers on both car ends adapted to mutually engage to relieve said link from buffing shocks, said link being adapted to be automatically placed in neutral stress position by part of the opposing car body and also to oscillate and coöperatingly interlock with said latch, the latter automatically assuming a coöperating and stop-engaging position.

3. In combination in a car coupling, a pivoted and slidable link carried from a car end and adapted to be elevated for uncoupling, an oscillatory gravity latch adapted to be actuated by and interlock with said link near another car end, a pivot and a stop therefor, a supporting bracket for the latch pivot having a flat surface in a plane enabling said link to reciprocate thereon without being raised toward an unlocking altitude, and a draft member extending from the last mentioned car end, said bracket being secured thereto.

4. In combination in a car coupling, a pivotally mounted link carried near a car end, a draft member extending from another car end, a latch bracket having spaced legs and a bearing, said draft member extending between said legs, a gravity latch pivotally connected with said bearing, a stop therefor lapping said bracket legs, and means rigidly combining said draft member, bracket and stop, said link being adapted to oscillate said latch and interlock therewith.

5. In combination in a car coupling, a draft member extending from a car end, a latch bracket of strap-like material rebent to have spaced legs between which said draft member extends and is secured to, the bracket rebent portions being shaped to form bearings, a pivot supported by said bearings, a gravity latch mounted thereon, a latch stop and a pivotally mounted link carried near another car end adapted to oscillate said latch and interlock therewith.

[Claims 6 and 7 not printed in the Gazette.]

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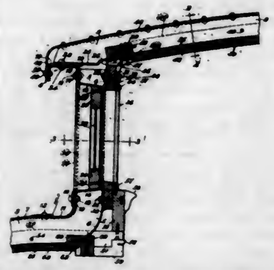
1,224,825. PASSENGER-CAR ROOF. VICTOR WILLOUGHBY, Jeffersonville, Ind., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed May 8, 1916. Serial No. 96,090. (Cl. 108—5.1.)

1. In combination in a car roof, side plates, lower deck carlines, upper deck carlines and a deck girder, said lower deck carlines being secured to said side plates and having deck post portions stiffening said girder.

2. In combination in a car roof, a side plate having an upstanding flange, an eaves member supported from and extending away from the outer side of said side plate, a lower deck carline secured to said flange and member and having a deck post extension, and an upper deck carline connected with said extension.

3. In combination in a railway car, a side post having an upward extension, a side plate connected to the body portion of said side post and provided with an upward extension, a water-drip strip supported from said side plate, and a carline secured to said strip and rigidly combined with said side plate and side post upward extension.

4. In combination in a railway car, a side post having an upwardly directed extension, a side plate provided with reversely directed flanges one of which is secured to said post, an eaves strip connected with said side plate, and a carline connected with said strip, another of said flanges lying between and being connected to said carline and side post extension.

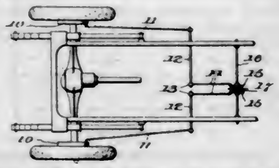


5. In combination in a railway car, a side post, an external side sheathing, an eaves strip lapping and projecting above the same, a carline lapping an upright portion of said post and eaves strip, and an angularly formed side plate, the enumerated elements except said plate being arranged to form a space approximating the sectional shape of said side plate, and the latter extending through said space.

[Claims 6 to 38 not printed in the Gazette.]

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1,224,826. BRAKE MECHANISM. GEORGE L. WISER, Elkhart, Ind. Filed Nov. 18, 1916. Serial No. 132,198. (Cl. 21—8.)



1. The combination of a vehicle having a differential drive, and brakes for the respective traction wheels, independent operating members for the respective brakes, a single operating lever, and a separate manually releasable latch that normally connects each operating member with said brake-operating member, said latch normally connecting its brake-operating member with said operating lever and automatically so connecting them when free to act.

2. The combination of a vehicle having differential drive, and brakes for the respective traction wheels, independent operating members for the respective brakes, a single operating lever, and independently releasable devices normally connecting the operating lever with said brake operating members, and consisting of a latch bolt for each of said members mounted on said operating lever.

3. The combination of a vehicle having a differential drive, and brakes for the respective traction wheels, separate brake levers for the respective brakes, an operating lever, and independently operable latch bolts for the respective brake levers.

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1,224,827. CONTROLLER FOR INDICATING SYSTEMS. ADOLPH ZEISEL, Bel Air, Md., assignor to Zeisel Electric Co., Bel Air, Md., a Corporation of Maryland. Filed Feb. 1, 1916. Serial No. 75,608. (Cl. 200—14.)

1. The combination of a controller of the class described comprising a resistant element, a handle movable over said element with a circuit closer comprising a slidable dash pot for retarding movement of said circuit closer and a switch operated by said dash pot upon movement thereof, one element of said switch being rigidly secured to said dash pot, and resilient means for normally holding said dash pot in position to open said switch.

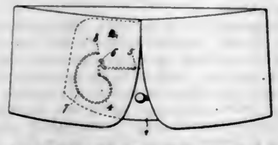


2. The combination of a controller of the class described comprising a resistant element, a handle movable over said element with a circuit closer comprising a slidable dash pot for retarding movement of said circuit closer and a switch operated by said dash pot upon movement thereof, one element of said switch being rigidly secured to said dash pot, and resilient means for normally holding said dash pot in position to open said switch, said dash pot having a pin and slot connection with said handle.

3. The combination of a controller of the class described comprising a resistant element, a handle movable over said element with a circuit closer comprising a slidable dash pot for retarding movement of said circuit closer and a switch operated by said dash pot upon movement thereof, one element of said switch being rigidly secured to said dash pot, and resilient means for normally holding said dash pot in position to open said switch, said dash pot having a pin and slot connection with said handle, and a notch segment engaging resilient means upon said handle for holding the dash pot in adjusted position.

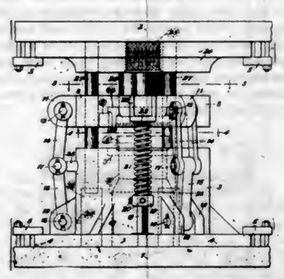
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1,224,828. COLLAR ATTACHMENT. JOSEPH H. ALLEN, El Paso, Tex. Filed Feb. 13, 1915. Serial No. 8,096. (Cl. 24—87.)



A device of the kind described composed of a spring wire member, said wire member being shaped to provide a straight shank, said shank being bent back to form a loop extending in the same direction as itself and terminating in a pin formed at an angle upon one side of the loop whereby a shoulder is formed between the shank and pin, said member being also shaped to provide a relatively large bowed spring upon its shank the inner end of which curves laterally beyond said shoulder in the direction of said pin and its free end curving around the shank on the opposite side of said shoulder and spaced from said shank, said spring having a prong formed at its outermost end disposed substantially in a plane at right angles to the axis of said shank.

1,224,829. DIE-MACHINE FOR FORGING ANNULAR WORK. JOSEPH H. AMES, Detroit, Mich., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Apr. 14, 1916. Serial No. 91,096. (Cl. 78—18.)



1. In combination in a device of the class described, opposingly positioned die holders, dies retained thereby, means normally separating said die holders, means positively connecting the latter and adapted to permit the same to relatively approach each other, and means for causing said die holders to move toward each other.

2. In combination in a device of the class described, opposing die holders, co-acting dies carried thereby, expansible means normally separating said die holders, operable means coöperating with said expansible means to maintain said opposing die holders in a given separated relation, a propelling device adapted to move said die holders while in said separated relation, and means for operating said expansible and operable means to drive said die holders together at predetermined times.

3. In combination in a device of the class described, opposing die holders, a co-acting die carried by each, resilient means normally forcing said die holders apart, operable mechanism for combining said die holders to adapt the same to travel in unison while separated, propelling means for said die holders, means for alining said co-acting dies and means for driving said die holders toward each other before the conclusion of the propulsion thereof.

4. In combination in a device of the class described, opposing die holders, perforated co-acting dies carried thereby, work-backing means passable through said dies, means normally forcing said die holders apart, devices limiting the separation of said die holders, propelling means for the latter and means for driving said die holders together and said work-backing means through said dies.

5. In combination in a device of the class described, opposing die holders, perforated co-acting dies carried thereby, a combined work-backing means and pilot passable through said dies, means for adapting said die holders to travel in unison and separated relation, propelling means for said die holders, means for causing said die holders to bring said dies together and for projecting said pilot through said dies, and auxiliary guiding means for said die holders effective with respect to the latter at times when said backing means and pilot is not so effective.

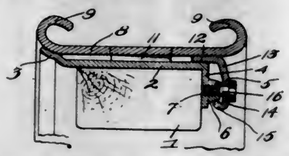
[Claims 6 to 31 not printed in the Gazette.]

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1,224,830. VEHICLE-WHEEL RIM. ROBERT W. ASHLEY, New York, N. Y., assignor of one-half to Frank Oberkirch, St. Marys, Pa. Filed June 17, 1916. Serial No. 104,324. (Cl. 152—21.)

1. A device of the character described comprising a felly band provided at one edge with a seating shoulder and at its opposite edge with a depending flange having punched therein apertures adapted to receive locking reception means, the walls of said apertures being arranged as auxiliary locking reception means, said felly band being arranged to receive a tire-carrying rim, having

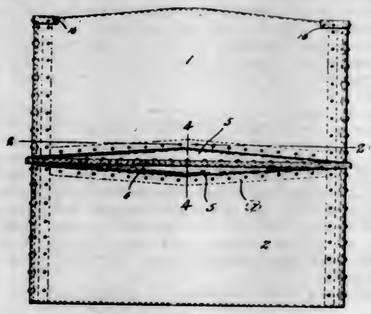
integrally mounted on the under surface thereof at one edge a plurality of locking traction cleats provided with means engaging the walls of said apertures, said locking traction cleats being provided with means for engaging said reception locking surfaces on and adjacent said apertures and being also provided with abutment surfaces for engagement with said felly band, and means engaging said locking traction cleats and said first mentioned locking reception means for exerting upon said tire-carrying rim a contractive action to seat same annularly around the periphery of said felly band at both of the respective edges of said felly band.



2. A device of the character described comprising a felly band having formed at one edge a reception seating shoulder and at its front edge with a depending flange having punched therein apertures, reception locking nuts mounted in said apertures, tapered locking surfaces formed on the walls adjacent said apertures, said felly band being arranged to receive a top rim having rigidly mounted at its front edge on its under surface thereof a plurality of traction locking cleats provided at their lower ends with hooks engaging the tapered surface of the walls of said apertures and arranged with abutment surfaces engaging the edge of said felly band and having formed therein apertures, and a plurality of locking bolts mounted in said reception locking nuts and engaging said locking traction cleats adapted to exert upon said top rim when brought into engagement a contractive seating action to seat said top rim on said reception seating shoulder and upon the under surfaces of said plurality of locking traction cleats on the front peripheral edge of said felly band.

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1,224,831. CAR END CONSTRUCTION. PAUL M. BEARD, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 16, 1915. Serial No. 14,696. (Cl. 105—192.)



1. In an end structure for cars, a pair of sheet metal sections juxtaposed and having their adjacent marginal portions shaped to provide offset beads and connecting flanges which unite on lines outside the plane of the sections to form a reinforcing member which is broadest and highest at the medial portion of the end structure and which tapers to the lateral margins thereof.

2. In a car end, a pair of sheet metal sections having their meeting edges secured together and displaced to form a bead or corrugation having its greatest transverse width at the medial portion of the end structure and tapering in width to the outer margins thereof.

3. In a car end, a sheet metal section having a marginal portion shaped to form an offset bead and connecting flange, the bead varying in width and height throughout its length for the purpose described.

4. In a car end, a sheet metal section having a portion adjacent a margin thereof displaced to form an offset portion and an attaching flange, said offset portion tapering in width from said margin throughout its length.

5. In a car end structure, the combination of end sheets and side sheets formed and connected together to provide tubular corner posts at their junction, side plates, and gusset plates connecting the side and end sheets and secured to the side plates.

[Claims 6 to 14 not printed in the Gazette.]

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1,224,832. STEEL ROOF. PAUL M. BEARD, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Jan. 15, 1916. Serial No. 72,254. (Cl. 108—5.4.)



1. In combination in a car roof, successively arranged roof units comprising connected central and side sections, successive side sections being rigidly connected near said central sections and contiguous ends of the central sections being unattached, and joint caps interlocking with and connecting said central sections in a relation-preserving manner.

2. In combination in a car roof, successively arranged roof units comprising central and side sections having rigidly connected substantially vertical side flanges, said central sections having unconnected opposing end portions, and joint caps projecting into and interlocking with contiguous central end portions and extending disconnectedly over connected portions of said side sections.

3. In combination in a car roof, side plates, successively arranged roof units comprising connected central and side sections of substantially the same extent longitudinally of the roof, the former and latter of succeeding units being, respectively, unattached and connected and caps extending over the joints of said units and being anchored to said side plates.

4. In combination in a car roof, side plates, successive roof units comprising central sections and side sections fastened to the sides of said central sections, the central and side sections of succeeding units being, respectively, unattached and connected, and joint caps interlocking with juxtaposed central section ends and being anchored to said side plates.

5. In combination in a car roof, successive roof units comprising central and side sections, the former of succeeding sections having upstanding portions and contiguous ends of said side sections being connected, and joint caps inclosing the connected side section portions and extending over and being supported by said upstanding portions and formed into running board saddle seats.

[Claims 6 to 20 not printed in the Gazette.]

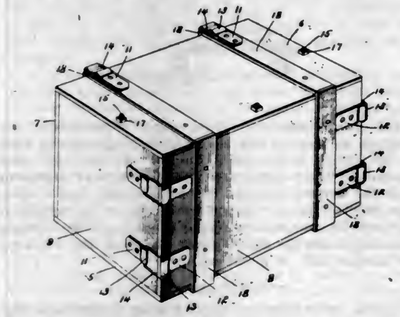
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1,224,833. COLLAPSIBLE CASE. THOMAS BEASLEY, North Vancouver, British Columbia, Canada. Filed Nov. 22, 1915. Serial No. 62,900. (Cl. 217—14.)

A foldable box or the like embodying a bottom, side walls hingedly connected thereto, end walls hingedly connected to one of said side walls, a top hingedly connected to the other of said side walls, spaced transversely disposed reinforcing elements secured to each of the side walls, said reinforcing elements projecting above and below the upper and lower edges of said walls and having their lower extremities engaging the opposed longitudinal edges of the bottom, and said top when in position being



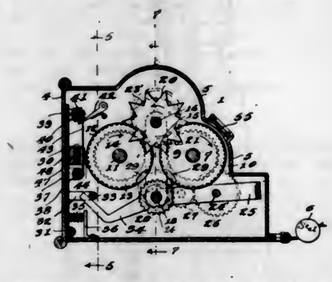
arranged between the upper extremities of said reinforcing elements, threaded bolts secured to the ends of the box, the bolts on each end being arranged in right angular relation and extending beyond two adjacent edges thereof



to project through openings in one side and the top of the box, and nuts on said bolts for holding the component parts of the box in assembled position.

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1,224,834. REGISTER MECHANISM FOR METERS. WALTER S. BLACKMER, Salisbury, N. C. Filed Oct. 25, 1915. Serial No. 57,813. (Cl. 235—144.)



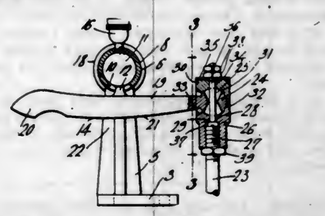
1. Registering and recording mechanism for meters comprising a set of counter disks, spur gears connected to said counter disks, respectively, concentrically to the axes thereof and each having a portion of the periphery cut out, a set of printing disks corresponding to the counter disks, spur gears connected to said printing disks, respectively, concentrically of the axes thereof and each having a portion of the periphery cut out, means for transmitting motion from one set of disks to the other, a shaft carrying said means and arranged above said disks, a second shaft arranged below said disks, vertical links interconnecting said shafts, pinions on said lower shaft adapted to mesh with corresponding spur gears, respectively, and normally out of engagement with such gears, and means for moving said shafts bodily to render said transmitting means inactive and engage said pinions with the corresponding spur gears, whereby upon the rotation of the second named shaft, the counter disks and printing disks may be restored to zero position, the cut out portions of said spur gears moving into juxtaposition to said pinions when said disks are in zero position.

2. Registering and recording mechanism for meters comprising a set of counter disks, spur gears connected to said counter disks, respectively, concentrically to the axes thereof and each having a portion of the periphery cut out, a set of printing disks corresponding to the counter disks, spur gears connected to said printing disks, respectively, concentrically of the axes thereof and each having a portion of the periphery cut out, means for transmitting motion from one set of disks to the other, a shaft carrying said means and arranged above said disks, a second shaft arranged below said disks, vertical links interconnecting said shafts, pinions on said lower shaft adapted to mesh with corresponding spur gears, respectively, and normally out of engagement with such gears, for moving said shafts bodily to render said transmitting means inactive and engage said pinions with the corresponding spur gears, whereby upon the rotation of the second named shaft, said counter disks and printing disks may be restored to zero position, the cut out portions of said spur gears moving into juxtaposition to said pinions when said disks are in zero position, a yoke connected to said lower shaft and fulcrumed for swinging movement for moving said shafts, and means on said lower shaft for rotating the latter to reset said disks.

3. Registering and recording mechanism for meters comprising a set of counter disks, a set of printing disks, corresponding to the counter disks and arranged alongside of the latter, means above said disks and between the same for transmitting motion from the disks of one set to the disks of the other set, means disposed below said disks between the latter and movable into engagement therewith to reset said disks to zero position, and connections between said last named means and first named means whereby the first named means will be drawn into inactive position in the movement of the second named means into resetting position.

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1,224,835. OPERATING MECHANISM FOR VALVES. JOHN WILFRED BLACKSTONE, Shullsburg, Wis. Filed Dec. 28, 1916. Serial No. 139,432. (Cl. 74—5.)



1. In a device of the class described, a supporting structure having a tubular end provided with a longitudinal slot and with a cross slot communicating with the longitudinal slot; a roller mounted to rock in the tubular end and having a neck movable in the cross slot, the neck being insertible into the cross slot through the longitudinal slot; a spring within the tubular end and cooperating with one end of the roller; means carried by the tubular end for engaging the spring; and a lever connected with the neck.

2. In a device of the class described, a supporting structure having a tubular end; a roller mounted to rock in said tubular end and provided with a neck extended through the tubular end, the tubular end having a transverse opening in which the neck is movable; and a lever assembled with the neck, exteriorly of said tubular end.

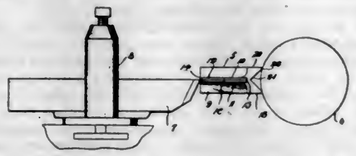
3. In a device of the class described, a supporting structure; a lever mounted to rock on the supporting structure and including a head having an opening; a connecting block and a bearing having complemental recesses in which the head is mounted to rock, the bearing and the block having coöperating openings through which the lever passes; a U-shaped guard mounted on the bearing and on the block and housing the end of the head; and a securing element passing through the block and through the bearing and through the opening in the head and engaging the guard to hold the same on the bearing.

4. In a device of the class described, a supporting structure; a lever mounted to rock on the supporting structure and provided with a head having an opening; a connecting block and a bearing having complemental recesses in which the head is mounted to rock, the bearing and the

block having coöperating openings through which the lever passes, the bearing and the block being provided with bores, and the block having an opening which is of larger diameter than the bore of the block, to define a shoulder; a securing element passing through the bores and through the opening in the head and including an enlarged end bearing against the shoulder; and a rod threaded into the enlarged opening of the block and bearing against the enlarged portion of the securing element.

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1,224,836. TOOL-SETTING GAGE. JOHN BLAINER, Farrell, Pa. Filed June 6, 1916. Serial No. 102,015. (Cl. 33—89.)



1. A tool gage comprising a body and a T-shaped level formed integral with said body, said body being formed in the base portion thereof with notches of different degrees arranged in a plane parallel with the level.

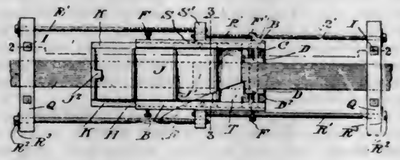
2. A tool gage comprising a body and a T-shaped level formed integral with said body having a grooved head presenting the head with spaced contact points, the said body having notches formed in the base portion thereof arranged in a plane parallel with the level.

3. A tool gage comprising a body portion, a T-shaped level formed integral with the body portion and having a grooved head extending longitudinally of the body portion.

4. A tool gage comprising a body portion, a T-shaped level formed integral with the body portion and having a grooved head extending longitudinally of the body portion, and a shank extending transversely of the body portion.

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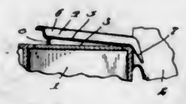
1,224,837. DEVICE FOR GLUING BELTS. HARRY A. BLANCHARD, Savannah, Ga. Filed Dec. 23, 1916. Serial No. 138,657. (Cl. 154—42.)



1. A device for gluing belts comprising a frame having flanged sides which are provided with inclined channels, said frame having transverse openings therein, movable clamping members in said openings adapted to engage and aline the opposite edges of the belt, a longitudinally movable clamping member having wedge-shaped edges movable in said channels, and a board interposed between the clamping member and the frame.

2. In combination with a frame having flanged sides which are longitudinally channeled, said frame having transverse openings, clamping members having shank portions with dove-tail connections with said openings, screws mounted in the flanges of the frame and engaging said clamping members, a longitudinally movable clamping member having wedge-shaped edges and transverse ribs, and a board interposed between the clamping member and frame.

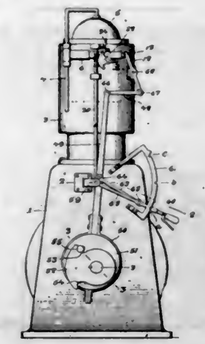
1,224,838. PORTABLE DRAIN-BOARD. AMOS BLISSMAN and RICHARD E. STRUSE, New York, N. Y.; said Blissman assignor to said Struse. Filed Oct. 8, 1915. Serial No. 54,816. (Cl. 141—11.)



The herein described drain board substantially rectangular in contour and having flanges upstanding from its body along both sides and across one end, and rolled outward at their upper edges, supporting feet depending from the bottom adjacent the flanged end, and a spout depending obliquely from the other end of the bottom to a greater extent than the length of said feet, said flanges extending along the side edges of the spout, the whole for use substantially as described.

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1,224,839. REVERSING MEANS FOR INTERNAL-COMBUSTION ENGINES. AUGUSTE BONNART, Philadelphia, Pa. Filed Dec. 13, 1916. Serial No. 136,727. (Cl. 123—41.)



1. The combination with an internal combustion engine, of a fuel injecting pump for supplying fuel under pressure to the combustion chamber of the engine, pump actuating means operated by the engine shaft, means for changing the timing of the working stroke of the pump in relation to the working stroke of the engine piston, the last named means comprising an eccentric normally loose in relation to the engine shaft, an eccentric rod actuated by said eccentric, and a motion transmitting member fast on the engine shaft and adapted to engage and disengage said eccentric.

2. The combination with an internal combustion engine, of a fuel injecting pump for supplying fuel under pressure to the combustion chamber of the engine, pump actuating means operated by the engine shaft, means for changing the timing of the working stroke of the pump in relation to the working stroke of the engine piston, the last named means comprising an eccentric normally loose in relation to the engine shaft, an eccentric rod actuated by said eccentric, and a motion transmitting member fast on the engine shaft and adapted to engage and disengage said eccentric, said motion transmitting member and said eccentric having a certain amount of free rotative movement in relation to each other.

3. The combination with an internal combustion engine, of a fuel injecting pump for supplying fuel under pressure to the combustion chamber of the engine, pump actuating means operated by the engine shaft, means for changing the timing of the working stroke of the pump in relation to the working stroke of the engine piston, the last named means comprising an eccentric normally loose in relation to the engine shaft, an eccentric rod actuated by said eccentric, and a motion transmitting member fast on the engine shaft and adapted to engage and disengage said eccentric, said motion transmitting member having a plurality of shoulders in spaced relation to each other and adapted one at a time to engage a shoulder on said eccentric.

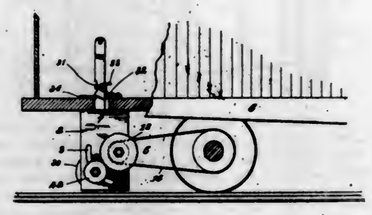
4. The combination with an internal combustion engine, of a fuel injecting pump for supplying fuel under pressure to the combustion chamber of the engine, pump actuating means operated by the engine shaft, means for changing the timing of the working stroke of the pump in relation to the working stroke of the engine piston, the last named means comprising an eccentric normally loose in relation to the engine shaft, an eccentric rod actuated by said eccentric, a motion transmitting member fast on the engine shaft and adapted to engage and disengage said eccentric, said motion transmitting member having shoulders in spaced relation to each other, and a shoulder on said eccentric adapted to be engaged by either one of the shoulders on the motion transmitting member and capable of movement from one shoulder to the other without affecting the motion transmitting member.

5. The combination with an internal combustion engine, of a fuel injecting pump for supplying fuel under pressure to the combustion chamber of the engine, pump actuating means operated by the engine shaft, means for changing the timing of the working stroke of the pump in relation to the working stroke of the engine piston, the last named means comprising an eccentric normally loose in relation to the engine shaft, an eccentric rod actuated by said eccentric, a motion transmitting member fast on the engine shaft and adapted to engage and disengage said eccentric, a fulcrum pin for said eccentric rod, and means for shifting said fulcrum pin to vary the effective throw of the pump plunger.

[Claim 6 not printed in the Gazette.]

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1,224,840. ICE-CUTTER. EDMOND BOUCHANE, Pittsfield, Mass. Filed Dec. 5, 1916. Serial No. 135,221. (Cl. 104—176.)



1. A track clearer embodying in combination with a hanger provided with a pair of alined arcuate slots, a driving shaft journaled in said hanger, a pulley on said shaft, of a frame mounted in said hanger for vertical movement, a driven shaft journaled in said frame and protruding through the arcuate slots of said hanger, means for driving the former mentioned shaft, and a series of cutting disks on said driven shaft.

2. A track clearer embodying in combination with a hanger provided with a pair of alined arcuate slots, a driving shaft journaled in said hanger, a pulley on said shaft, of a frame mounted in said hanger for vertical movement, a driven shaft journaled in said frame and protruding through the arcuate slots of said hanger, means for driving the former mentioned shaft, and a series of cutting disks on said driven shaft, said disks being arranged at an angle substantially as and for the purpose specified.



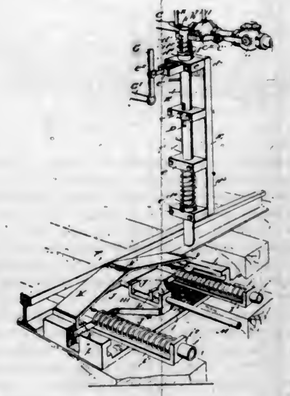


3. A track clearer, comprising in combination with a hanger provided with a pair of transversely alined arcuate slots, a driving shaft journaled in said hanger, gears on said shaft, of a movable frame mounted in said hanger and having a portion thereof protruding through a slot formed in the hanger, an operating lever connected with the protruding portion of the frame for effecting the vertical movement of the frame, a driven shaft journaled in the lower extremities of the frame and protruding through the arcuate slots of the hanger, gears on the protruding extremities of the driven shaft and adapted to mesh with the gears of the driving shaft, means for imparting movement to said driving shaft, and a series of spaced cutting elements on the driven shaft.

4. A track clearer, comprising in combination with a hanger provided with a pair of transversely alined arcuate slots, a driving shaft journaled in said hanger, gears on said shaft, of a movable frame mounted in said hanger and having a portion thereof protruding through a slot formed in the hanger, an operating lever connected with the protruding portion of the frame for effecting the vertical movement of the frame, a driven shaft journaled in the lower extremities of the frame and protruding through the arcuate slots of the hanger, gears on the protruding extremities of the driven shaft and adapted to mesh with the gears of the driving shaft, means for imparting movement to said driving shaft, and a series of spaced cutting elements on the driven shaft, said cutting elements being arranged at an angle, substantially as and for the purpose specified.

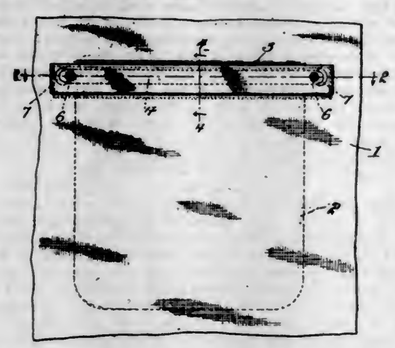
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1,224,841. AUTOMATIC TRAIN-STOP. CHARLES C. BOWMAN, Hinton, W. Va. Filed May 3, 1913. Serial No. 765,233. (Cl. 246—59.)



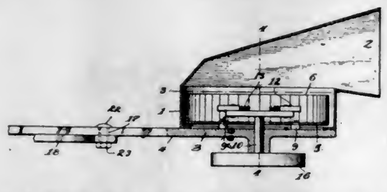
In an automatic train stop, a locomotive carried mechanism comprising the combination with the main air reservoir and train pipe, of a normally closed branch pipe leading to the train pipe, a controlling valve in the branch pipe, a vertically movable trip bar journaled at one side of the locomotive and having diametrically crossing slots therein, an arm projecting at one end through one of said slots, said controlling valve having an operating arm and said trip bar arm having a movable connection at its opposite end with the said controlling valve arm, a clamping bolt extending through the other side of the trip bar and through the said trip bar arm whereby to secure the latter in adjusted position, a spring normally holding the trip bar in lowered position, and a manually releasable latch for holding the trip bar in elevated position.

1,224,842. AUTOMATIC POCKET-CLOSER. HARCOURT W. BOYD, Chicago, Ill. Filed Oct. 13, 1916. Serial No. 125,453. (Cl. 2—151.)



In combination with a pocket, a closure comprising a pair of spring members, embracing the pocket lining near the opening, hollow rivets to secure said members together passing through said hollow rivets and said pocket and caps embracing the ends of the spring members.

1,224,843. MECHANICAL HORN. CHARLES P. BRADLEY, Pemberton, N. J. Filed Jan. 29, 1915. Serial No. 5,084. (Cl. 116—1.)



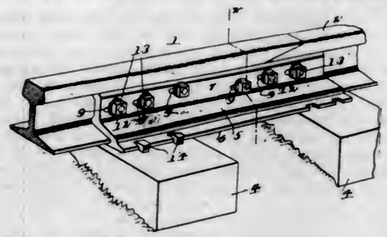
1. A mechanical horn including a casing, a sound disk secured to the casing, a flange projecting laterally from said disk and provided with teeth, a rotary shaft arranged coaxially with the disk, a rotary body fixed to said shaft, curved arms pivotally connected with said rotary body on opposite sides of the shaft, weights upon the arms, spring wipers upon the arms to engage teeth of the flange, and springs for normally resisting outward movement of said arms beyond a predetermined degree.

2. A mechanical horn comprising a disk, a circular flange projecting laterally from the periphery of the disk, said flange being provided upon its inner surface with a continuous series of teeth, a shaft projecting through the disk and with which said flange is concentric, means for imparting rotary motion to said shaft, a support carried by the shaft, curved arms resiliently connected with the shaft, and resilient wipers carried by said arms to contact with the teeth.

3. A mechanical horn including a circular member provided with teeth, a rotary shaft arranged coaxially with said member, a rotary body fixed to said shaft, curved arms pivotally connected with said rotary body on opposite sides of the shaft, weights upon the arms, spring wipers upon the arms to engage the teeth of the circular member, and springs for normally resisting outward movement of said arms beyond a predetermined degree.

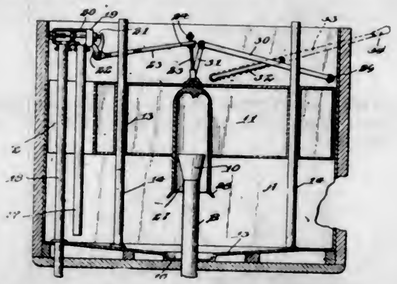
1,224,844. RAIL-JOINT. WILLIAM TATE BRADLEY, Troy, Ala. Filed Jan. 19, 1917. Serial No. 143,342. (Cl. 239—8.)

The herein described means for connecting the meeting ends of rails including two rails having their ends cut angularly from the head to the base thereof, whereby the base of one of the rails will be extended beyond the head thereof and the head of the other rail projected beyond the base thereof, said cut ends adapted to rest one upon the other, the webs of the rails having staggered openings, a chair member including a base and angular sides formed with the base and the rails adapted to rest upon the base of the said chair, the sides of the chair adapted to be



received in the fishing spaces of the rail, the sides of the chair having horizontally disposed elongated staggered openings registering with the openings in the webs of the rails, securing means passing through the said openings, ties upon which the rails and chair rest, and securing elements passing through notches in the edges of the chair and entering the ties.

1,224,845. FLUSHING-TANK. WALDO BRIGHAM and GEORGE A. FURNEAUX, Dufur, Oreg. Filed Aug. 22, 1916. Serial No. 116,350. (Cl. 4—5.)



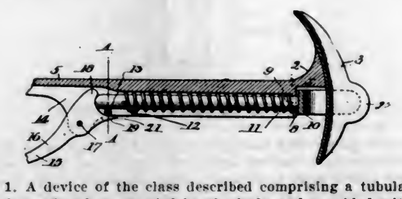
1. A flush tank comprising a container, a flush pipe leading therefrom and having one end protruded therein, a float within the container and having a siphon tube telescoped over the protruded end of the flush pipe, a supply pipe leading into the container and having an inlet valve, a lever adjustably connected with the float and operative upon the valve for the opening thereof on the lowering of said float and the closing thereof on the rising of the same, a rock shaft journaled in the container and having arms connected with the float, a crank shaft pivoted in the container and bridging said arms, and an operating lever on the crank shaft and without the container.

2. A flush tank comprising a container, a flush pipe leading therefrom and having one end protruded therein, a float within the container and having a siphon tube telescoped over the protruded end of the flush pipe, a supply pipe leading into the container and having an inlet valve, a lever adjustably connected with the float and operative upon the valve for the opening thereof on the lowering of said float and the closing thereof on the rising of the same, a rock shaft journaled in the container and having arms connected with the float, a crank shaft pivoted in the container and bridging said arms, an operating lever on the crank shaft and without the container, and vertical guides within the container for the said float.



3. A flush tank comprising a container, a flush pipe leading therefrom and having one end protruded therein, a float within the container and having a siphon tube telescoped over the protruded end of the flush pipe, a supply pipe leading into the container and having an inlet valve, a lever adjustably connected with the float and operative upon the valve for the opening thereof on the lowering of said float and the closing thereof on the rising of the same, a rock shaft journaled in the container and having arms connected with the float, a crank shaft pivoted in the container and bridging said arms, an operating lever on the crank shaft and without the container, vertical guides within the container for the said float, the said container being formed with a well, and a bearing flange on the open end of the siphon tube to rest in the well on the lowering of the float.

1,224,846. SHOE-HORN. HUGH BROOKS, Glasgow, Mont. Filed June 1, 1915. Serial No. 31,582. (Cl. 132—30.)



1. A device of the class described comprising a tubular body, a shoe horn carried by the body and provided with a pair of curved extensions, said extensions being adapted when the shoe horn is positioned within the shoe to engage along the inner surface of the sides of the heel counter of the shoe, a semi-circular jaw slidably mounted upon the body and adapted when in one position to engage the outer surface of the sides of the heel counter, at points opposite the shoe horn and the curved extensions, and means for operating the said movable jaw.

2. A device of the class described comprising a tubular body, a shoe horn carried by the body, a jaw in said body adapted to straddle said horn, and means for longitudinally sliding said jaw in said body.

1,224,847. TEST-DRILL. AMAN G. BROUSSARD, Breaux Bridge, La. Filed Nov. 14, 1916. Serial No. 131,323. (Cl. 255—68.)



1. In a device of the class described, an inner tube carrying a bit, an outer tube in which the inner tube is mounted for limited rotary movement, and a stop member limiting such rotary movement and preventing the relative longitudinal movement of the inner and outer tubes, said tubes having longitudinal slots which by partial rotation of one tube may be placed in and out of registry, a side wall of the outer tube being provided with a projecting cutting and scraping member; in combination with a valve device supported above the outer tube, said valve device being adapted to permit passage of liquid under pressure upwardly and downwardly.

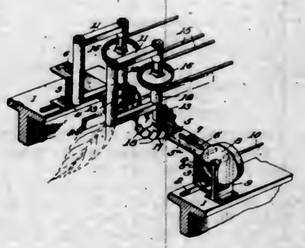
2. In a device of the class described, a valve device comprising a plug having two ports extending vertically therethrough, a stem on which the plug is mounted, valve disks seating on the two ends of the plug and having apertures alining with the respective ports, a guide pin extending through the plug and the valve disks to prevent axial rotation of the latter, and a spring whereby the bottom valve is normally held seated.

3. In a device of the class described, a valve device comprising a plug having two ports extending vertically therethrough, a stem on which the plug is mounted, valve disks seating on the two ends of the plug and having apertures alining with the respective ports, a guide pin extending through the plug and the valve disks to prevent axial rotation of the latter, and a spring whereby the bottom valve is normally held seated, the axial stem being longitudinally adjustable with respect to the plug.

4. In a device of the class described, a valve device comprising a plug having two ports extending vertically therethrough, a stem on which the plug is mounted, valve disks seating on the two ends of the plug and having apertures alining with the respective ports, a guide pin extending through the plug and the valve disks to prevent axial rotation of the latter, and a spring whereby the bottom valve is normally held seated, the axial stem being in threaded engagement with the plug for longitudinal adjustment with respect thereto, and said stem being provided with a stop member forming an abutment for an actuating spring for the bottom valve.

5. In a device of the class described, an inner tube carrying a bit, an outer tube in which the inner tube is fitted for rotation, said outer tube having diametrically opposed slots, a stop pin extending through the inner tube and engaging the slots to limit the rotary movement of the inner tube, said inner and outer tubes having longitudinal slots that may be placed in and out of registry by rotary movement of one tube, a nipple having bleed openings, a collar connecting the nipple with the outer tube, and a valve device housed in the collar, said valve device comprising a plug having vertical ports extending therethrough, valve disks seated on the top and bottom faces of the plug and having apertures registering with the respective ports, means whereby rotary movement of the valves will be prevented, and a spring whereby the bottom valve is normally maintained in seated condition.

1,224,848. TOBACCO-STEMMING MECHANISM. JAMES C. BUCHANAN, Washington, D. C., assignor to Rapid Tobacco Stemmer Co., Baltimore, Md., a Corporation of Delaware. Filed Mar. 1, 1917. Serial No. 151,787. (Cl. 131—57.)



1. In a tobacco stemming machine, a pair of horizontally disposed disks having peripheral teeth provided at their lower edges with cut away portions forming cutting edges, said disks being arranged in the same plane with their edges adjacent, and mechanism for rotating said disks.

4. In a tobacco stemming machine, a pair of horizontally disposed disks having peripheral portions provided with cutting surfaces, said disks being arranged in the same plane with their edges adjacent, and mechanism for rotating said disks, and a vibratory knife arranged below the disks and coöperating with said disks.

7. A tobacco stemming machine comprising horizontally disposed disks having peripheral teeth provided with cutting edges between which the stems of the leaves are adapted to be drawn, said disks being arranged in the same plane with their edges adjacent, means for rotating said disks, a horizontally disposed knife located beneath said disks and provided with a recess which normally alines with the meeting edges of the disks, and means for vibrating said knife.

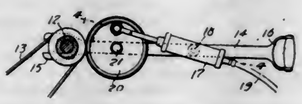
8. In a tobacco stemming machine, a pair of opposed disks having peripheral teeth cut away at one end to form cutting edges, means for rotating said disks, and means for drawing a tobacco leaf between said disks in position to have the cutting edges stem or strip the same.

10. In a tobacco stemming machine, a pair of parallel shafts mounted for movement toward and away from each other, a horizontal disk mounted on each of said shafts and having peripheral teeth cut away at one end to form cutting edges, means for rotating said disks, means for drawing a tobacco leaf between said disks in position to have the cutting edges stem or strip the same, and a horizontally disposed knife with a forwardly presented cutting edge disposed across the lower faces of said disks.

[Claims 2, 3, 5, 6, 9, and 11 to 17 not printed in the Gazette.]

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1,224,849. PUMP-OPERATING MECHANISM. HARRY O. BUTLER and WILLIAM B. JENNINGS, Franklin, Ind. Filed July 1, 1916. Serial No. 107,044. (Cl. 230—27.)



1. A portable tire inflating mechanism, comprising a bar having an open slot at one end to be slipped over a shaft and extended alongside a drive member, a pump mounted upon the bar, and a rotary pump actuator mounted upon the bar between the slotted end thereof and the pump and adapted to be brought into engagement with the said drive member by pressure exerted longitudinally on the said bar.

2. A portable tire inflating mechanism comprising a bar having an end portion laterally offset and provided with a longitudinally extending open slot, and having its opposite end provided with the handle, a pump pivotally mounted upon a side of the bar intermediate the ends thereof, and a rotary pump actuator mounted upon the same side of the bar as the pump and between the pump and slotted end of the bars and adapted to be brought into engagement with the said drive member by pressure exerted longitudinally on the said bar.

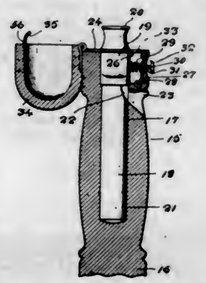
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1,224,850. COMBINED POLICE CLUB AND WHISTLE. JAMES A. BYRNE, West Orange, N. J. Filed Dec. 5, 1916. Serial No. 135,213. (Cl. 46—4.)

1. A club having a recess at one end thereof, in combination with a whistle having a neck, a mouth piece, and a disk secured on the neck, said disk being terminally attached to the club when the body of the whistle is located within the recess.

2. A club having a recess at one end thereof, in combination with a whistle having a neck, a mouth piece, and a disk secured on the neck, said disk being terminally attached to the club when the body of the whistle is located within the recess; and a cap hingedly connected with the disk at one side thereof, and latch means whereby the cap may be detachably connected with the diametrically opposite side of the disk.

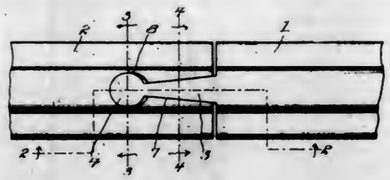
3. A whistle having a neck, a mouth piece and a disk secured about the neck, said disk having a slot, a tooth projecting from a side wall of said slot, a downwardly extending lug, a spring actuated latch plate hinged to said lug, and a threaded pin projecting from the latch plate through the lug, in combination with a cap hingedly connected with the disk and having an apertured spring adapted for engagement with the notch projecting from the wall of the slot.



4. A police club having a recess at one end, a whistle having a body portion seated in said recess and a neck and mouth piece projecting beyond the same, a disk fixed on the neck of the whistle and fastened to the end of the club, said disk having a slot provided with a tooth extending from one wall thereof and said disk having a lug extending downwardly, a spring actuated latch plate hinged to the lower end of the lug, a threaded pin extending from the latch plate through the lug, and a nut threaded upon said pin and constituting a push button, in combination with a lid or cap hingedly connected with the disk and having an apertured spring adapted to enter the slot in the disk and to engage the tooth projecting within said slot.

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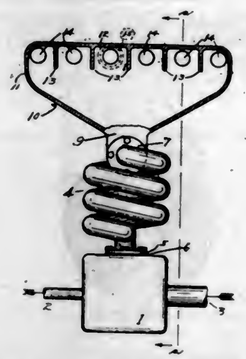
1,224,851. RAILWAY-RAIL JOINT. EUGENE F. CAIRD, St. Patricks, La. Filed July 10, 1916. Serial No. 108,427. (Cl. 239—8.)



A rail joint comprising two rails each having their webs, at their ends, thickened, one of the rails having its end formed with an extension which terminates in a rounded head, the side walls of the extension converging from their upper edges to their lower edges and likewise the head of said extension being beveled to provide a substantially frusto-conical member, the lower wall of the head being parallel with the upper wall thereof, the lower wall of the extension inclined downwardly at its juncture with the head to its connection with the end of the rail, and the other rail having a longitudinal groove which terminates in a rounded recess and the walls provided by the groove and recess being shaped to correspond with the outer surfaces of the extension of the head thereof whereby the said extension when received in the groove and recess will be wedged against the walls of the said recess and also whereby the tread surfaces of both of the rails will be thus maintained in alinement.



1,224,852. SPRAY-DISCHARGE EQUALIZER. FRANK CALDWELL, Cincinnati, Ohio. Filed Aug. 23, 1915. Serial No. 46,864. (Cl. 123—59.)



1. A manifold comprising a shell having a lower intake and upwardly projecting parallel side walls connected at their upper ends, and one of which has a horizontal series of laterally opening outlets adjacent its said upper end, a top wall connecting the said upper ends of said side walls, the other side wall having its upper end rounded adjacent the top wall and opposite the said outlets, and transverse partition plates connecting said side walls and arranged between the several outlets of the series, each of said partition plates depending from the top wall to a point below the lower edges of said outlets.

2. A manifold comprising a shell having a horizontal series of outlet openings adjacent its upper end, and a series of partition plates extending transversely therein and across the same between the several outlet openings, each of said plates depending from the upper end of the shell to a point below the lower edges of the said outlets.

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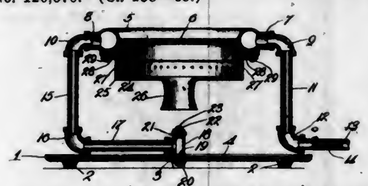
1,224,853. PROCESS OF MANUFACTURING AN AX. GEORGE WILFORD CAMPBELL, St. John, New Brunswick, Canada. Filed Aug. 2, 1916. Serial No. 112,879. (Cl. 76—103.)



1. The process of manufacturing an ax, consisting of slitting an ax blank from each side of its head end adjacent to the head thereof to provide oppositely disposed lugs, working outwardly said lugs to provide a recess therebetween, and then inserting a cast steel poll between the lugs and working the lugs around the poll to secure the poll to the lugs.

2. The process of manufacturing an ax, consisting of forming transverse grooves in the end adjacent to the head of the ax blank thereby forming oppositely extending lugs, working said grooves outwardly of the ax blank to form a substantially V-shaped recess therebetween, placing a cast steel poll having a lower V-shaped end within the recess so as to be embraced by the lugs, heating said lugs and working them around the poll to weld the said poll to the lugs.

1,224,854. GAS-GENERATING OIL-BURNER. CARL CHARLES, Rosedale, Kans. Filed Sept. 18, 1916. Serial No. 120,670. (Cl. 158—65.)



1. A gas generating oil burner, comprising a pipe line terminating in a tip provided with an orifice for discharging upwardly, said pipe line embodying two vertically disposed portions at opposite sides of and spaced from said tip, a pan underlying said vertically disposed portions of the pipe line and the discharge end thereof and secured in fixed relation to the latter, a circular generator forming a part of the pipe line and interposed between and connected at diametrically opposite points to the upper ends of the vertically-disposed portions of the pipe line and centralized with respect to and located in a higher plane than said tip; said circular generator having a central imperforate portion or web and a depending circular flange, and a cylindrical burner head fitting with a gas-tight relation around and firmly secured to said flange and provided in a lower plane than the latter with a horizontal series of radial orifices and with a depending mixing tube terminating above and centralized with respect to said tip.

2. A gas generating oil burner, comprising a pipe line terminating in a tip provided with an orifice for discharge upwardly, said pipe line embodying two vertically disposed portions at opposite sides of and spaced from said tip, a pan underlying said vertically disposed portions of the pipe line and the discharge end thereof and secured in fixed relation to the latter, a circular generator forming a part of the pipe line and interposed between and connected at diametrically opposite points to the upper ends of the vertically-disposed portions of the pipe line and centralized with respect to and located in a higher plane than said tip; said circular generator having a central imperforate portion or web and a depending circular flange, a cylindrical burner head fitting with a gas tight relation around said flange and provided in a lower plane than the latter with a horizontal series of radial orifices and with a depending mixing tube terminating above and centralized with respect to said tip, lugs extending outward from the burner head at opposite sides thereof and screws securing said lugs firmly to the generator.

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1,224,855. [WITHDRAWN.]

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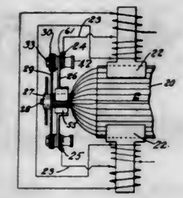
1,224,856. ELECTRICAL CONNECTION. WILLIAM A. CHRYST, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed May 13, 1912. Serial No. 696,992. (Cl. 200—24.)

1. In an electric machine, in combination, a removable brush-holder; a removable terminal clip; a common supporting element for said holder and clip; and means for locking one of the removable members to said common supporting element, said member having provisions for maintaining the unlocked removable member in position.

2. In an electric machine, the combination with a commutator brush and brush-holder; a common supporting element; a removable terminal clip; a removable brush-holder; means for locking said terminal clip to the common supporting element, said terminal clip having provisions for maintaining the removable brush-holder in position when the said terminal clip is in locked position.

3. In an electric machine, the combination with machine windings, a commutator brush and holder of conductive material; means for electrically connecting the windings

and the brush-holder; and resilient means for releasably maintaining said electrical connection and also releasably securing the brush-holder in its operable position.



4. In an electric machine, in combination, a support; a commutator brush and brush-holder mounted thereon, said brush-holder comprising a plate having a notched projecting portion, a part thereof being countersunk; means for normally and resiliently maintaining said brush-holder in operable position, comprising a button engaging with said countersunk part and having resilient connection with said support.

5. In an electric machine, in combination, a support; an arm secured thereto, having a collar thereon; a brush-holder releasably engaging said arm; a terminal clip consisting of a plate having an opening of greater diameter than said collar and an entrance to said opening of less diameter than said collar; with provisions for preventing the accidental displacement of said brush-holder; and means for maintaining said terminal clip and brush-holder in operable position.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,857. RAIL-JOINT. EDWARD T. LASKEWITZ, Lynnville, Iowa, assignor of one-half to Lewis C. Schnell, Kellogg, Iowa. Filed June 26, 1916. Serial No. 105,862. (Cl. 239—3.)



1. A rail joint comprising a pair of rails having the sides of the rail ball cut away adjacent to the ends of the rails, and having a notch in the upper portion of the web near each end of the rail, a joint member having substantially the form of a rail section with a web portion of less height than the web portion of the rail, said joint member being provided with slots to receive the ends of the ball and web of the adjacent rail ends when said joint member is installed by lowering it from above downwardly upon the ends of the rails, a cradle comprising a plate arranged beneath the rail joint, upwardly extending side members, and upwardly and inwardly projecting lugs at the ends of said side members arranged above the base of said rail joint member, and a pin extended through the central portion of said rail joint member for limiting the longitudinal movement of said cradle.

2. A rail joint comprising a pair of rails having the sides of the rail balls cut away adjacent to the ends of the rails, and having a notch in the upper portion of the web near each end of each rail, a joint member having substantially the form of a rail section with a web portion of less height than the web portion of the rail, said joint member being provided with slots to receive the ends of the ball and web of the adjacent rail ends when said joint member is installed by lowering it from above downwardly upon the ends of the rails, a cradle comprising a plate arranged beneath the rail joint, upwardly extending side members, and upwardly and inwardly projecting lugs at the ends of said side members arranged above the base of said rail joint member, a pin extended through the central portion of said rail joint member for limiting the longitudinal movement of said cradle, the parts being so arranged as to allow longitudinal play of the rails.

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1,224,858. COLLAR-WRAPPING MACHINE. PETER G. LEHMAN, Mishawaka, Ind. Filed May 3, 1915. Serial No. 25,610. (Cl. 223—55.)



1. A collar wrapping machine including a mounting for a paper roll, and a wrapping roll mounted for downward movement by gravity having operative contact with and supported against downward movement by the paper roll, whereby the wrapping roll will automatically adjust itself for operative relation with the paper roll as the latter is reduced in size by the use thereof.

2. A collar wrapping machine including a mounting for a paper roll, a wrapping roll, said wrapping roll being mounted on a swinging element to permit it to be positioned in contact with the paper roll or remain spaced therefrom.

3. A wrapping machine including a mounting for a paper roll, a wrapping roll, and means carried by the wrapping roll to feed the paper roll in the operation of the wrapping roll.

4. A collar wrapping machine including a paper roll supporting means and a wrapping roll, said wrapping roll having operative contact with the paper roll for rotating the latter in the operation of the wrapping roll.

5. A collar wrapping machine including a mounting for a paper roll, a wrapping roll, and means to guide the paper from the paper roll about the wrapping roll in the rotation of the latter.

[Claims 6 to 20 not printed in the Gazette.]

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1,224,859. HAMMOCK. FRANK A. PORTER and HARRY B. ARNOLD, New Britain, Conn., assignors to The National Spring Bed Company, New Britain, Conn., a Corporation of Connecticut. Filed Dec. 11, 1914. Serial No. 876,607. (Cl. 5—61.)



1. A main supporting frame including end pieces, a hammock frame suspended for swinging movement between said end pieces, legs depending from said hammock frame, suspension bars attached to said end pieces and to the lower ends of said legs, and connecting bars extending between the end frames and positioned to avoid interference with the legs of the hammock frame in swinging movement thereof.

2. A hammock frame including legs, socket pieces secured to said legs and having recesses, end pieces for the hammock frame, each end piece consisting of branches adapted to fit in the recesses in said socket pieces, and fastening bolts for removably securing the ends of the branches to the socket pieces, one of said parts having a groove to receive a bolt attached to the other of said parts.

3. A hammock frame including legs formed from angle iron and depending therefrom, socket pieces secured to the inner surface of the legs at the top thereof and having recesses and slots for fastening bolts, end pieces consisting of branches, the lower ends of which are shaped to fit the recesses in said socket pieces, and bolts projecting through holes in the lower ends of said branches in position to be received within the slots in said socket pieces, and means for drawing the lower ends of the branches and socket pieces together.

4. In combination with the end piece of a hammock frame, a fabric wrapped about said end piece and with its upper edge overlapping the top bar of said end piece, a tightening strip secured to the fabric at a distance from one edge, and means for uniting the edges of the fabric and tightening strip.

5. In combination with the end piece of a hammock frame, a fabric wrapped about said end piece and with its upper edge overlapping the top edge of said end piece and provided with holes, a tightening strip secured to the face of the fabric at a distance from said upper edge, said tightening strip having holes relatively arranged to those in the edge of the fabric, and a lacing passed through the holes in the tightening strip and edge of the fabric to draw said parts together.

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1,224,860. PROCESS OF TREATING HOG-CHOLERA ANTITOXIN. JOHN REICHEL, Philadelphia, and HENRY WERNER, Norwood, Pa., assignors to H. K. Mulford Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 19, 1917. Serial No. 143,276. (Cl. 167—10.)

1. The process of treating hog cholera antitoxin, defibrinated blood, plasma or serum with a solution of an aldehyde, as for example, formaldehyde or formalin, of an amount substantially to serve as an antiseptic or preservative or germicide or sterilizer.

2. The manufacture of hog cholera antitoxin, the process of changing the coagulation point thereof by the adding thereto a solution of an aldehyde to the extent substantially of not more than 0.5 per cent. of the content as a whole, to serve as a germicide or sterilizer, and to prevent coagulation and to obtain sterility upon being heated to avoid contamination by foot-and-mouth disease virus.

3. In the art of the manufacture of hog cholera antitoxin treated with the usual preservatives, phenol or trikresol, the additional treatment step, of mixing with the antitoxin, a solution of an aldehyde, as for example, formaldehyde or formalin, to control contamination.

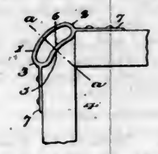
4. In the art of manufacturing hog cholera antitoxin for sale in a final marketable container, the step of mixing with the antitoxin a solution of an aldehyde, in form of formaldehyde or formalin, for example, and placing the antitoxin in the final marketable container, and heating the same therein to a sufficient length of time to kill the foot-and-mouth disease virus.

5. In the art of the manufacture of a phenolized hog cholera antitoxin, the step of compounding therewith a solution of an aldehyde to the extent of substantially 0.5% in the forms, for examples, of formaldehyde or formalin, to serve substantially as an antiseptic, germicide or sterilizer.

[Claims 6 to 11 not printed in the Gazette.]

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1,224,861. GRIP-HANDLE FOR CAR-SEATS. SHERIDAN A. WALKER, New York, N. Y., assignor to Walker & Bennett Manufacturing Company, a Corporation of New York. Filed Apr. 9, 1912, Serial No. 689,617. Renewed Sept. 28, 1916. Serial No. 122,739. (Cl. 155—2.)



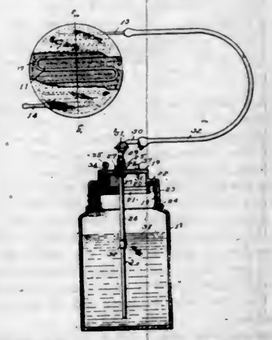
1. As an article of manufacture, a grip-handle comprising outer and inner walls forming a hand hold, the inner wall being provided with an inwardly-projecting hump, so as to limit the insertion of the hand, said walls being provided at each end with attaching means.

2. As an article of manufacture, a grip-handle for car-seats, comprising outer and inner walls and reversely-curved end walls, the inner wall being centrally provided with an inwardly-projecting hump for limiting the insertion of a person's hand, and attaching means at each end.

3. As an article of manufacture, a grip-handle comprising outer and inner walls and reversely-curved end walls, the inner wall being centrally provided with an inwardly-projecting hump for limiting the insertion of a hand, and an attaching-arm projecting at right angles from each end.

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1,224,862. TEMPERATURE-CONTROLLING DEVICE. NOAH BARKER, Seevers, Iowa. Filed Nov. 20, 1916. Serial No. 132,504. (Cl. 128—39.)



1. In a device of the class described, an absorbent pad, a perforated tube therein, and means for supplying liquid to said tube.

2. In a device of the class described, an absorbent pad, a perforated tube therein, and means for supplying liquid under pressure to said tube.

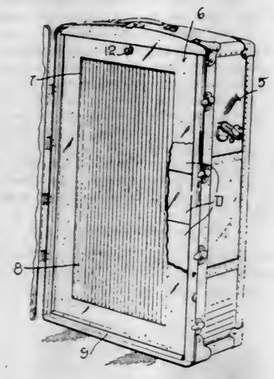
3. In a device of the class described, an absorbent pad, a perforated tube therein, a receptacle adapted to hold liquid under pressure, a cover therefor, a tube extending from the lower part of said receptacle through said cover, means for connecting said last tube with said first tube, and an adjustable valve for controlling the flow of liquid from said receptacle through said tubes.

4. In a device of the class described, an absorbent pad, a perforated tube therein, a receptacle adapted to hold liquid under pressure, a cover therefor, a tube extending from the lower part of said receptacle through said cover, means for connecting said last tube with said first tube, an adjustable valve for controlling the flow of liquid from said receptacle through said tubes, and a pressure gage on said cover communicating with the interior of said receptacle.

5. In a device of the class described, an absorbent pad, a perforated tube therein, a receptacle adapted to hold liquid under pressure, a cover therefor, a tube extending from the lower part of said receptacle through said cover, means for connecting said last tube with said first tube, and an adjustable valve for controlling the flow of liquid from said receptacle through said tubes, said receptacle having a screw-threaded neck, said cover having a pair of spaced, downwardly extending, screw-threaded, annular flanges whereby the cover is adapted to fit on receptacles having necks of different sizes.

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1,224,863. TRUNK. CLEMENT D. BARKSDALE, Petersburg, Va. Filed Jan. 29, 1917. Serial No. 145,272. (Cl. 190—3.)



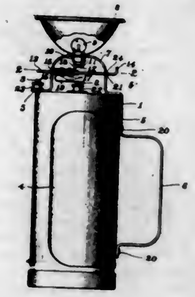
1. The combination with a trunk section adapted to receive a series of drawers arranged in superposed relation, of a removable panel adapted for insertion in the open side of the trunk, to retain the series of drawers therein, a cleat secured to the bottom wall of the trunk section at its forward edge in spaced relation to the contiguous drawer and between which and the drawer one edge of the panel is adapted for insertion, said panel being movable to a vertical position within the open side of the trunk section, a bar fixed to the inner face of the panel at its upper edge and adapted to engage the front wall of the uppermost drawer, and means mounted in said bar to lock the panel at its upper end to the top wall of the trunk section.

2. The combination with a trunk section adapted to receive a plurality of drawers arranged in superposed relation, of a rectangular open panel, a sheet of flexible material secured to one side of the panel and covering the opening therein, a cleat secured to the bottom wall of the trunk section at its forward edge in spaced relation to the contiguous drawer, the lower edge of the panel being adapted for insertion between said cleat and the drawer, and said panel being adapted to be moved to a vertical position within the open side of the trunk section, a keeper fixed to the top wall of the trunk section, and a spring locking bolt mounted upon the upper edge of the panel for engagement with said keeper to lock the panel in place, in front of the series of drawers.

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1,224,864. PORTABLE-ELECTRIC-LAMP HOLDER. CLARENCE CARSON, New York, N. Y., assignor to H. W. Johns-Manville Company, a Corporation of New York. Filed Feb. 24, 1915. Serial No. 10,243. (Cl. 240—8.5.)

1. A holder for an electric lamp adapted to be attached to a battery comprising in combination a metal strip adapted to make contact with one pole of the battery, a spring clip adapted to grasp the battery shell, a socket for the lamp, in circuit with the strip, and an independent conductor carried by, but insulated from the strip and adapted to complete the circuit from the central terminal of the lamp to the other pole of the battery.



2. A holder for an electric lamp adapted to be attached to a battery comprising in combination a metal strip adapted to make contact with one pole of the battery, a spring clip adapted to grasp the battery shell, a socket for the lamp, in circuit with the strip, and an independent conductor carried by, but insulated from the strip and adapted to complete the circuit from the central terminal of the lamp to the other pole of the battery, said independent conductor being movable with reference to the strip so as to serve as a circuit opening and closing device.

3. The combination of a metal strip adapted to make contact with the peripheral pole of a battery, an internally threaded, open-ended metal shell carried by said strip adapted to serve as a socket for an incandescent electric lamp, a sliding member mounted on said strip, and a conductor mounted on said sliding member, but insulated therefrom, and having spring terminals adapted to engage the central pole of the battery and the central terminal of the lamp.

4. The combination of a curved sheet of spring metal adapted to grasp a dry battery cell, a metal strip fastened to the sheet and bent to form a handle therefor, while a free end extends over the top of battery cell in U-shaped formation with its outer end in contact with the peripheral pole thereof, a socket for an incandescent lamp mounted on and in circuit with the U-shaped portion of said strip, and a sliding member mounted on the U-shaped portion of the strip carrying a conductor insulated from the strip and provided with spring terminals which are in contact with both the central pole of the battery and the central terminal of a lamp held in the before mentioned socket when the sliding member is in one position, but one of which is out of such contact when the sliding member is in another position.

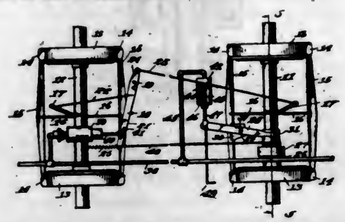
5. The combination of a metal strip adapted to make contact with the peripheral pole of a battery, an internally threaded, open-ended metal shell carried by said strip adapted to serve as a socket for an incandescent electric lamp, a sliding member mounted on said strip, and a conductor mounted on said sliding member, but insulated therefrom, and having spring terminals adapted to engage the central pole of the battery and the central terminal of the lamp, said sliding member having a notch engaging the metal strip when said sliding member is in one position.

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1,224,865. AUTOMATIC SAFETY-BRAKE FOR RAILWAYS. CLAUDE E. COLESTON, Fellows, Cal., assignor of one-half to Mericos H. Whittier, Los Angeles, Cal. Filed Feb. 23, 1916. Serial No. 79,956. (Cl. 246—59.)

1. In an automatic safety brake for railway cars, the combination of a car frame, axles therefor, a brake operating lever, yielding means for normally holding said lever in inoperative position, an air brake mechanism adapted to move said lever into brake operating position, a train pipe line connected with said brake mechanism, a clutch on one of said axles, a clutch operating lever, a pneumatic cylinder connected with said pipe line, a piston movable in said cylinder and operatively connected to said clutch lever, a spring tending to move said piston into operative position, manually operated means for moving said clutch lever into clutch releasing position against the tension of said spring, locking means for holding said clutch lever in inoperative position, and a flexible connection between said clutch and said brake operating lever, said connection being adapted to operate said brake lever when said clutch is fast to said axle.





2. In an automatic safety brake for railway cars, the combination with a car truck having axles and wheels rotatably mounted thereon, of brake shoes adapted to engage said wheels, pneumatic brake operating mechanism for moving said shoes against the peripheries of the wheels, a clutch mounted upon one of the axles beneath the truck, means for actuating it to become fixed to rotate with the axle, a trigger adapted to hold the clutch in its inoperative position, actuating means for releasing the trigger and permitting the clutch to become locked, and means operated by the clutch when in its locked position whereby the brake shoes will be set against the wheels without the aid of the pneumatic brake mechanism.

3. In an automatic safety brake for railway cars, the combination with the running gear thereof, of brake shoes adapted to engage the periphery of the wheels of said gear, pneumatic air brake mechanism for forcing said shoes against said wheels, a sleeve mounted upon one of the axles of the running gear, means whereby said sleeve may be locked to rotate with said axle, a trigger adapted to normally maintain the sleeve in a disengaged position, means for actuating the trigger in a manner to release the sleeve, flexible connecting means whereby the rotation of said sleeve will move the brake shoes against the wheels independent of the action of the pneumatic brake mechanism, and a pneumatic cylinder adapted to be actuated to cause the sleeve to disengage the axle and become locked in inoperative position by the trigger.

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1,224,866. DRAFT-ARM AND CENTER-SILL REINFORCEMENT FOR UNDERFRAMES. ROBERT G. ELLIS, University, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed May 16, 1916. Serial No. 97,841. (Cl. 105—76.)



1. In combination in a car underframe provided with end sills and center sills, draft arms held adjacent the end sills and comprising alternately reversing channel portions in some of which opposite end portions of the center sills lie and are securely affixed, and a reinforcement for the center sills extending between and rigidly connecting the draft arms.

2. In combination in a car underframe provided with end sills and a center sill, draft arms projecting inwardly from the end sills and provided with seats partly U-shaped and altering to have different form, opposite ends of the center sill being retained by said seats and held thereby against transverse displacement, and means connecting said center sill and draft arms.

3. In combination in a car underframe having end sills and spaced center sills, draft arms projecting inwardly from the end sills and each comprising spaced pocket portions in part embracing opposed sides of corresponding end portions of each of said spaced center sills and elsewhere embracing only adjacent sides thereof and other portions preventing the spreading of said pocket portions, and means securely attaching said center sills and draft arms together, said center sills connecting said draft arms.

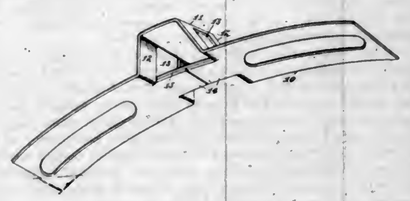
4. In combination in an underframe for railway cars having an end sill, a bolster and spaced center sills, a draft arm comprising spaced pocket portions fitted to the sectional shape of and embracing a greater and lesser number of sides of portions of said center sills in different parts of said pocket portions, a portion tying said pocket portions against lateral displacement and other depending portions extending between said end sills and bolster adapted to support draft gear elements, and means rigidly securing said center sills to said draft arm.

5. In combination in a railway car underframe having an end sill, a bolster, spaced center sills and a striking plate, a draft arm comprising spaced U-shaped pocket-forming portions in which end portions of said center sills lie, a portion preserving the alinement of said pocket forming-portions and depending draft sill portions extending forwardly from said bolster, under said end sill and connected to said striking plate, and means connecting said center sills and draft arm.

[Calims 6 to 20 not printed in the Gazette.]

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1,224,867. REINFORCING-BACK FOR BRAKE-SHOES. HARRY JONES, Suffern, N. Y., assignor to The American Brake Shoe & Foundry Company, Wilmington, Del., a Corporation of Delaware. Filed Feb. 19, 1917. Serial No. 149,481. (Cl. 188—82.)



1. A back for brake shoes with an outwardly looped lug, and a reinforcement extending across the open extremity of the lug and fused or welded to the back.

2. A back for brake shoes with an outwardly looped lug, and a tie plate extending across the open extremity of the lug and fused or welded to the back adjacent the sides of the lug.

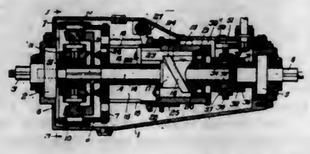
3. A back for brake shoes with an outwardly looped lug, and a tie plate extending across the open extremity of the lug and fused or welded to the back adjacent the sides of the lug, and located in the general plane of the back.

4. A back for brake shoes formed with a looped lug, and tongues extending across the open extremity of said lug, forming integral with the back, with the meeting extremities thereof welded together.

5. A back for brake shoes formed with a looper lug, tongues formed from the sides of the lug and projecting across the open extremity of said lug, with the meeting extremities of said tongues fused or welded together, forming a unitary and integral reinforcement for said lug and back.

[Claims 6 to 8 not printed in the Gazette.]

1,224,868. VARIABLE-SPEED-TRANSMISSION DEVICE. DORR MILLER, Chicago, Ill., assignor to Miller Transmission Company, a Corporation of Maine. Filed Dec. 22, 1913. Serial No. 808,074. (Cl. 74—34.)



1. In combination, a driving shaft, a driven shaft revoluble independently of and alined with the driving shaft, two gears each fixed to one of the shafts, a member revoluble about the axis of said shafts, connected pinions journaled on said member and each meshing with one of said gears and forming a driving connection between them, a part revolubly mounted on the driven shaft, means for clutching said part to the driven shaft or to a fixed support, and means for gradually clutching the aforesaid member to the said part.

2. In combination, a driving shaft, a driven shaft revoluble independently of and alined with the driving shaft, two bevel gears each fixed to one of said shafts, a member revoluble about the axis of said shafts, pinions journaled on said member so as to revolve about axes radial to said shafts, said pinions meshing with said gears and forming a driving connection between them, a part revolubly mounted on the driven shaft, means for clutching said part to the driven shaft or to a fixed support, and means for gradually clutching the said member to the said part.

3. In combination, a driving shaft, a driven shaft revoluble independently of and alined with the driving shaft, two bevel gears each fixed to one of said shafts, a member revoluble about the axis of said shafts, pinions journaled on said member so as to revolve about axes radial to said shafts, said pinions meshing with said gears and forming a driving connection between them, a second member revoluble about the axis of said shafts, means for clutching said second member at will either to the driven shaft or to a fixed support, and means for gradually clutching said members together.

4. In combination, a driving shaft, a driven shaft revoluble independently of and alined with the driving shaft, two bevel gears each fixed to one of said shafts, a member revoluble about the axis of said shafts, pinions journaled on said member so as to revolve about axes radial to said shafts, said pinions meshing with said gears and forming a driving connection between them, a second member revoluble about said axis, means for gradually clutching said members together, and a clutch device for connecting said second member to a fixed support.

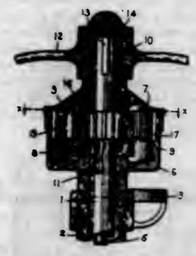
5. In combination, a driving shaft, a driven shaft revoluble independently of and alined with the driving shaft, two bevel gears each fixed to one of said shafts, a member revoluble about the axis of said shafts, pinions journaled on said member so as to revolve about axes radial to said shafts, said pinions meshing with said gears and forming a driving connection between them, a second member revoluble about said axis, a hydraulic clutch connecting said members together, and a clutch for connecting said second member to the driven shaft.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,869. MOTOR-VEHICLE STEERING MECHANISM. THORWALD B. PETERSON and WINFORD C. PETERSON, Omaha, Nebr., assignors to E. H. Sprague Manufacturing Company, Omaha, Nebr., a Corporation of Nebraska. Filed Sept. 13, 1915. Serial No. 50,502. (Cl. 74—79.)

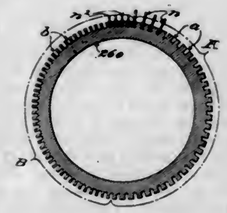
The combination with a motor-vehicle steering-mechanism having a steering-shaft, a hand-wheel, and members adapted to form parts of a planetary-gear connection between said wheel and shaft; said members including a stub-shaft carrying the wheel and alined with the steering-shaft, a pinion on the stub-shaft, a plate secured on the steering-shaft adjoining the pinion, and studs carried by the plate and extending alongside the pinion; of a spider having a central opening formed to fit removably



upon and between the teeth of the pinion, and arms for engaging the studs to form a fixed rotational connection between the pinion and the plate.

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1,224,870. STOCKING-KNITTING MACHINE. ROBERT W. SCOTT, Boston, Mass., assignor to Scott and Williams Incorporated, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 22, 1914. Serial No. 868,108. (Cl. 66—21.)



1. In a stocking knitting machine, the combination with needles and means coöperating with a segment thereof to knit heels and toes, of a needle carrier holding for cooperation with said knitting means the needles of said segment in more closed spaced relation than the remaining needles.

2. In a knitting machine a needle carrier, independently movable needles therein spaced more closely at one part than at an another part thereof, and means for knitting at all of said needles, in combination with means acting at predetermined times to adjust the stitch length at said closely spaced needles only.

3. In a knitting machine, a needle carrier having needle grooves therein spaced more closely at one part than at another part thereof, independently movable needles in said grooves, and automatic means coöperating with all of said needles at times to knit fabric of like texture at all parts of said carrier, and at times to knit of different texture at the differently spaced needles.

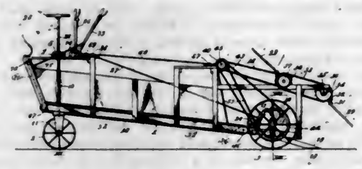
4. In a knitting machine, a needle carrier having needle grooves therein spaced more closely at one part than at another part thereof, needles in said grooves, means for knitting at all of said needles and means coöperating with said closely spaced needles to knit fabric of fine or of coarse texture at predetermined times.

5. In a knitting machine a needle carrier and needles therein spaced apart for coarse-textured knitting, another series of needles in said carrier spaced for finer-textured knitting, web-holders, and means coöperating with said web-holders to cause said last mentioned needles to knit coarse-textured and finer-textured web at predetermined times.

[Claim 6 not printed in the Gazette.]



1,224,871. GRAIN-COLLECTOR. GEORGE W. UNDERWOOD, Orienta, Okla., assignor of one-half to Frank E. Nicholson, Orienta, Okla. Filed May 29, 1916. Serial No. 100,596. (Cl. 56—61.

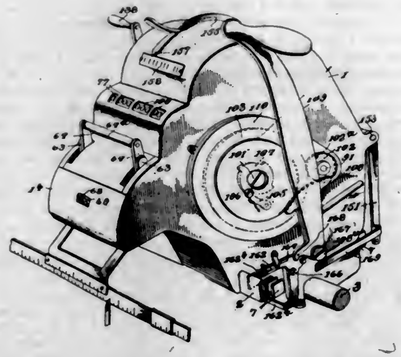


1. In a grain collector, a frame having spaced sills, a flat rockable bar having end journals in the sills, a plurality of pairs of brackets fixed on the bar each bracket consisting of a base flange secured to the bar and an upturned arm extending rearwardly beyond the bar in parallel relation with the corresponding arm of the companion bracket, a pivot pin connecting the rear end portions of the bracket arms, and a fork pivoted on each pin and resting on the bar.

2. In combination with the frame of a grain collector, a rockable bar having a flat upper face and pivoted to the frame for permitting its forward side to swing vertically, a plurality of forks supported by the flat face of the bar, means fixed to the bar and pivotally mounting each fork in rear of the pivotal mounting of the bar for independent movement, and means for rocking the bar to raise and lower the forks in unison.

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1,224,872. CALCULATING-MACHINE. EDWARD C. WALTER, New York, N. Y., assignor to Harry T. Ambrose, Orange, N. J. Filed July 6, 1911. Serial No. 637,199. (Cl. 235—60.)



1. The combination with a typewriter and the printing-keys thereof, of a computing attachment including selecting means operated by the keys, instrumentalities carried by the attachment and operable in one direction for effecting additive computation and, in a different direction, for effecting subtractive computation, setting means operable after as well as before the actuation of the selecting means by the keys for setting said computation instrumentalities to produce additive or subtractive computation, and means separate from the keys for acting on the computation instrumentalities to produce the computation.

37. In a computing attachment, setting means including a setting lever movable into any of a plurality of operative positions, a shiftable member to which the lever is connected, and means for automatically locking said shiftable member in position and from which position it is released by a pull or push on the lever, said means comprising a guiding element with which the lever is engaged by an oscillating movement of the lever independent of the member.

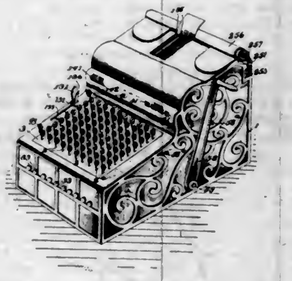
39. In an adding and subtracting machine, instrumentalities for producing additive and subtractive computation, a gear-support coöperating therewith and provided on one side with a large gear and on the opposite side with a pair of relatively small gears, an interposed gear between the large and small gears and disengaged therefrom, a segment-gear for effecting rotative movement of said interposed gear independent of said large and small gears, means for positioning said large and small gears alternately in mesh with said interposed gear whereby the large gear or the small gears may receive rotative movement from said interposed gear when the segment effects its rotation, and means including a rotatable cam for actuating the segment-gear.

56. The combination in a typewriter of a support, a letter-space carriage including operating-keys shiftably supported by said support, a calculating-attachment mounted on said support and including selecting-means adapted to be actuated by said operating-keys when said carriage is shifted past the calculating-attachment in one direction, means carried by the calculating-attachment for holding the carriage from being returned past the calculating-attachment until the selecting-means is restored to normal position, and means carried by the calculating-attachment for returning the selecting-means to normal position.

[Claims 2 to 36, 38, 40 to 55, and 57 to 60 not printed in the Gazette.]

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1,224,873. COMPUTING AND RECORDING MACHINE. EDWARD C. WALTER, New York, N. Y., assignor to Harry T. Ambrose, Orange, N. J. Filed Aug. 7, 1912. Serial No. 713,921. (Cl. 235—60.)



1. An adding and subtracting machine including, in combination, a row of depressible keys, a slide-bar adapted to abut against a key when depressed, a pawl for holding said slide-bar against movement until a key is depressed, a lever loosely connected to said slide-bar and caused to rotate when said slide-bar is moved, an arm connected to said lever, a segment-gear attached to said arm, a spring juxtaposed thereto, a manually-operated cam disposed adjacent thereto, and a pinion-gear in mesh with said segment and rotatable in one direction by said segment acting under the influence of the spring when a key is depressed and operated in the opposite direction by the manually-operated cam.

2. An adding machine including in combination, a row of depressible keys, a releasing member operated by a key when depressed, a pawl operated by said member, a slide-bar held in normal position by said pawl and when released from said pawl by the depression of the key

movable to abut against the depressed key, a locking member for holding the keys in a depressed position, a lever for moving said locking member to release said keys from such depressed position, manually-operated means juxtaposed to said lever, said lever being also actuatable to release keys from the depressed position by the slide-bar abutting thereagainst in being returned to normal position by said manually operated means.

3. The combination, in an adding machine of a row of keys, a slidable member operated by a key when depressed, a pawl operated by said member, a slide-bar held in normal position by said pawl and movable when released from said pawl by the depression of a key to abut against a depressed key, a sliding locking member for holding the keys in a depressed position, a lever for moving said locking member to release said keys from their depressed position, manually-operated means juxtaposed to the lever; the latter also being actuatable to release the keys from the depressed position by action of said slide-bar in abutting thereagainst while being returned to normal position by said manually operated means, and means for displacing the lever from its member-operating position.

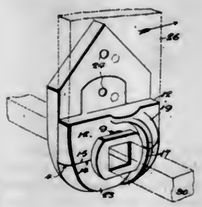
4. The combination, in an adding machine, of a row of keys, a slidable member for holding any of said keys in a depressed position when depressed, a slide-bar adapted to abut against said key when depressed, and repeat-mechanism including a lever adapted to abut against said member and move the same to release the key from its depressed position, and displaceable to prevent actuation of said member to prevent releasing of the depressed key, means for holding the lever in its displaced position, and means for effecting return thereof to normal position.

5. The combination, in an adding machine, of a swinging arm, repeat mechanism including a lever fulcrumed to the swinging arm, a spring for holding the lever and arm in a raised position, a manually-depressible button connected to said arm and adapted to lower the same when depressed, key operated selecting-means having movement when a key is depressed, and manually-operated means for restoring said key-operated selecting-means and keys to normal position and adapted to restore only the key-operated selecting-means to normal position when the repeat-button is in its depressed position.

[Claims 6 to 40 not printed in the Gazette.]

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1,224,874. BEARING. GARNETT H. WOLFE, Cheney Wash., assignor to Rotary Rod Weeder & Manufacturing Company, Incorporated, Cheney, Wash. Filed Dec. 28, 1916. Serial No. 139,349. (Cl. 64—12.)



1. A bearing of the character stated comprising a relatively fixed element and a rotative element, said fixed element consisting of separable bearing sections, means for supporting said fixed element and holding said separable sections in place, said rotative element including a spool having rotation in a bearing bore in said relatively stationary element, said spool having portions of its flanges removed to expose the bearing bore of the stationary element for self-cleaning purposes, said spool having a passage adapted to receive a rotating rod.

2. A bearing of the character stated comprising a relatively fixed element and a rotative element, said fixed element consisting of separable bearing sections, means for supporting said fixed element and holding said separable sections in place, said rotative element including a spool having rotation in a bearing bore in said relatively stationary element, said spool having portions of its flanges removed to expose the bearing bore of the stationary element for self-cleaning purposes, said spool having a passage adapted to receive a rotating rod, said relatively fixed element having laterally projecting guard ribs or flanges overlying the flanges of the spool.

3. A bearing of the character stated comprising a relatively fixed element and a rotative element, said fixed element consisting of separable bearing sections, means for supporting said fixed element and holding said separable sections in place, said rotative element including a spool having rotation in a bearing bore in said relatively stationary element, said spool having portions of its flanges removed to expose the bearing bore of the stationary element for self-cleaning purposes, said spool having a passage adapted to receive a rotating rod, said relatively fixed element having laterally projecting guard ribs or flanges overlying the flanges of the spool at the front or dirt penetrating edge of the bearing.

4. A bearing for rotary rod weeders and the like comprising a relatively fixed element and a rotative element, said fixed element consisting of a main body having an elongated passage through the same, the lower end of said passage merging with a half-bearing bore, said body being of greater thickness at its lower end than at its upper extremity, said relatively stationary bearing element including a second body having a portion to fit into said elongated slot and provided with a half-bearing bore to match with the half-bearing bore of said main body and having lateral and longitudinal projections to lie against said main body, said main and said supplemental bodies having bolt apertures, a pendent support to which said relatively stationary element is adapted to be bolted through said apertures to hold the two parts of the stationary bearing element in operative relation, said rotative element comprising a spool having flanges connected by a cylindrical body designed to rotate in said bearing bore of said stationary element, the flanges of said spool tending to partly hold the parts of said stationary element in matching relation adjacent to the bearing apertures.

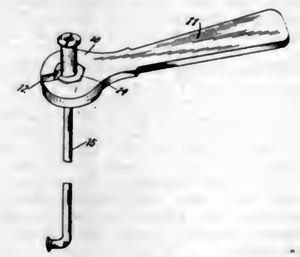
5. A bearing for rotary rod weeders and the like comprising a relatively fixed element and a rotative element, said fixed element consisting of a main body having an elongated passage through the same, the lower end of said passage merging with a half-bearing bore, said body being of greater thickness at its lower end than at its upper extremity, said relatively stationary bearing element including a second body having a portion to fit into said elongated slot and provided with a half-bearing bore to match with the half-bearing bore of said main body and having lateral and longitudinal projections to lie against said main body, said main and said supplemental bodies having bolt apertures, a pendent support to which said relatively stationary element is adapted to be bolted through said apertures to hold the two parts of the stationary bearing element in operative relation, said rotative element comprising a spool having flanges connected by a cylindrical body designed to rotate in said bearing bore of said stationary element, the flanges of said spool tending to partly hold the parts of said spool element in matching relation adjacent to the bearing apertures, each of said relatively stationary bearing sections having complementary guard ribs overlying the spool flanges.

[Claims 6 to 11 not printed in the Gazette.]

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1,224,875. NIPPLE-WRENCH. OTTO ZARTH, Aurora, Ill.; Anna Zarth administratrix of said Otto Zarth, deceased. Filed Aug. 4, 1916. Serial No. 113,095. (Cl. 81—119.)

1. In a nipple wrench, in combination, a handle having a flat head with an equilateral angular socket formed in one of the side faces of the head and a slot extending centrally into the socket from one edge of the head, and a slotted equilateral nut removably fitting the socket of the head in any one of a plurality of different angular positions, the slot of the nut extending to the edge of the nut and registering with the slot in the head of the handle in one of the said angular positions of the nut.

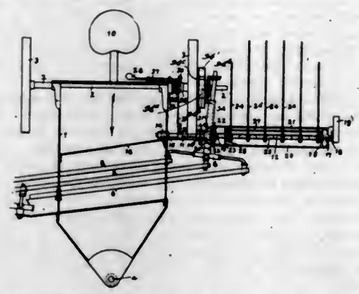


2. In a nipple wrench, in combination, a rotatable head having an equilateral angular socket in one side and a slot extending centrally into the socket from one edge of the head, and a slotted equilateral nut removably fitting the socket of the head in any one of a plurality of different angular positions, the slot of the nut extending to the edge of the nut and registering with the slot in the head in one of the said angular positions of the nut.

3. In a spoke nipple wrench, in combination, a slotted block adapted to straddle a spoke and non-rotatably engage a nipple thereon, and a slotted bar adapted to straddle the spoke and interlock with the block in a plurality of angular positions.

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1,224,876. SIDE-DELIVERY HAY-RAKING MACHINE. JOSEPH BAMFORD and CYRIL JOSEPH BAMFORD, St. Mary's Mount, Uttoxeter, England. Filed July 29, 1916. Serial No. 112,145. (Cl. 56—68.)



1. The combination with a side delivery hay raking machine, of a hay gathering device secured to the delivery side of the raking machine to gather the hay as the hay is delivered from the raking machine, said hay gathering device including a rock shaft composed of inner and outer sections, a universal joint connection between said shaft sections, means to support said shaft including an upright member to which the outer end of the outer shaft section is connected and a ground wheel journaled on the lower end of said upright, curved tines loosely mounted on the outer shaft section, a rod having fixed connection with the outer shaft section and arranged parallel therewith under the inner ends of the tines, and means for rocking said sectional shaft to force said rod into engagement with the tines to elevate the latter away from the gathered hay when the shaft is rocked so as to leave the hay on the ground in the form of a cock.

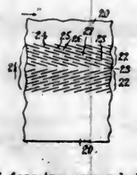
3. The combination with a hay raking machine having revolving tines which revolve across the path of the machine and deliver the hay at the side of the machine, of a hay gathering device secured to the raking machine to gather the hay as the hay is delivered from the raking machine, said hay gathering device including a rock shaft, means to support the shaft including a wheel to support the outer end of said shaft and tines loosely connected to the shaft, means to rock the shaft, and means to elevate the tines when said shaft is rocked.

6. The combination with a hay raking machine, of a hay gathering device secured to the raking machine to gather the hay as the hay is delivered from the raking machine, said hay gathering device including a sectional rock shaft, a universal joint connection between the shaft sections, means to support the shaft sections, tines pivotally mounted on the rock shaft, means to rock the shaft, and means to elevate the tines when said shaft is rocked.

[Claims 2, 4, and 5 not printed in the Gazette.]

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1,224,877. METAL-WORKING. NORRIS ELMORD CLARK, Plainville, Conn. Continuation in part of application Serial No. 869,025, filed Oct. 28, 1914. This application filed July 10, 1915. Serial No. 39,079. (Cl. 164—6.6.)



1. The method of forming expanded metal which comprises forming oppositely inclined rows of slits in a section of stock between unslitted strips, then feeding said unslitted strips forward on curved lines and simultaneously carrying the center of the slitted section around another curved line to a plane parallel with but spaced apart from the plane of the unslitted strips thereby producing a relative longitudinal movement between the unslitted strips and the center of the slitted section and opening the meshwork.

2. The method of forming reticulated fabric which comprises scoring certain sections along diagonal lines in staggered arrangement and leaving unscored strips at the edges and between the scored sections, then corrugating the sheet and moving all the strips in the same direction out of their original plane beginning at one end of the sheet and progressing gradually along curved lines, alternating strips at a given transverse section moving out of their original plane in advance of the other strips and opening the meshes adjacent the first mentioned strips in advance of the meshes adjacent the other strips.

3. The method of forming meshwork which consists in scoring sections of a sheet along rows alternately inclined to the right and left to form narrow strands connected in staggered arrangement and leaving unscored marginal and intervening strips, directing the unscored strips in a curved plane and directing the center of each scored section in another curved plane away from the first mentioned curved plane and thereby bending the strands gradually and uniformly to open the meshwork.

4. The method of forming a reticulated metal fabric which comprises, scoring parallel sections of a sheet leaving unscored marginal and intermediate strips, corrugating the sheet so as to bring the alternate strips into separated parallel planes and to open the scored sections into oppositely inclined meshwork sections, then corrugating some of the unscored strips to form beams, then spreading the beams and bringing the meshwork sections all into a common plane, and simultaneously corrugating the other unscored strips.

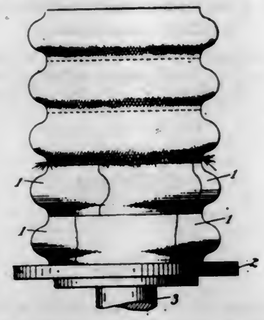
5. The method of forming a reticulated fabric which comprises slitting a longitudinal section along oppositely inclined lines and in staggered arrangement to form strands inclined toward the center and leaving longitudinal marginal and central unslitted strips, feeding the slitted stock in a direction such that the strands are inclined toward the center in the direction of feed, carrying the marginal unslitted strips into a plane inclined to the

plane of feed, carrying the central unslitted strip into another plane and thereby moving the marginal unslitted strips forward relative to the central unslitted strip and opening the meshwork into oppositely inclined sections.

[Claims 6 to 30 not printed in the Gazette.]

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1,224,878. TIRE FABRIC AND METHOD OF MAKING THE SAME. GEORGE F. FISHER, Plainfield, N. J., assignor to The Hartford Rubber Works Company, a Corporation of Connecticut. Filed Sept. 22, 1915. Serial No. 51,998. (Cl. 28—25.)



1. A tire fabric, comprising an endless annular strip or ring of braided rubberized fabric having substantially the shape of a tire cut from a continuous tube having its strands arranged diagonally or helically.

2. A tire fabric, comprising an unjointed circumferentially endless strip of rubberized fabric having the shape of a torus, the strands of said fabric being arranged diagonally or helically.

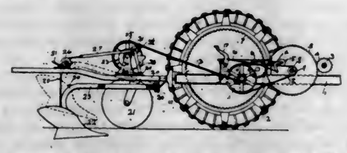
3. The method of making tire carcasses, which comprises braiding a continuous longitudinally corrugated tube thereof by forming helically arranged intermeshing strands conforming to said corrugations and then cutting said tube into successive annular strips between said corrugations.

4. The method of making fabric for tire carcasses, which comprises braiding a plurality of intermeshing strands of yarn continuously on a series of separable forms having substantially the shape of a tire core, rubberizing said strands, and then cutting the braided strands into successive annular strips.

5. The method of making fabric for tire carcasses, which comprises continuously braiding a plurality of intermeshing strands helically on a series of separable forms having substantially the shape of a tire core, rubberizing said strands, and then cutting the braided strands into successive annular strips.

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1,224,879. LIFTING MECHANISM FOR POWER-OPERATED PLOWS. GEORGE A. KENNEDY, Sandusky, Ohio; Marie Kennedy, administratrix of said George A. Kennedy, deceased, assignor to Jacob J. Dauch, Sandusky, Ohio. Filed June 19, 1913. Serial No. 774,616. (Cl. 74—1.)



1. In lifting mechanism the combination with a portable support, and an element on said support adapted to be lifted; of a shaft rotatably mounted on said support, a pulley rotatably mounted on said shaft; a disk attached to said shaft; one way connections between said pulley and said disk; a cam on said shaft; two pivotally mounted bars; one of said bars contacting said cam, said bars being attached to said support and said element whereby operation of said pulley in one direction raises said element.

2. In lifting mechanism the combination with a portable support and an element on said support adapted to be lifted; of a shaft rotatably mounted on said support, a pulley rotatably mounted on said shaft; a disk attached to said shaft; one way connections between said pulley and said disk; means adapted to limit rotation of said pulley in one direction; a cam on said shaft; two pivotally mounted bars; a roller mounted on said bars at their connecting point, said roller contacting said cam, said bars being attached to said support and said element respectively whereby operation of said pulley in one direction raises said element.

3. In lifting mechanism the combination with a portable support and an element on said support adapted to be lifted; of a shaft rotatably mounted on said support, a pulley rotatably mounted on said shaft; a disk attached to said shaft; one way connections between said pulley and said disk; means adapted to limit the rotation of said pulley in both directions, a cam on said shaft; two pivotally mounted bars; a roller rotatably mounted at the connecting point of said bars, said roller contacting said cam, said bars being attached to said support and said element respectively, whereby operation of said pulley raises said element.

4. In lifting mechanism the combination with a portable support and an element on said support adapted to be lifted; of a shaft rotatably mounted on said support, a pulley rotatably mounted on said shaft; a disk attached to said shaft; one way connections between said pulley and said disk; a lug on said pulley; spaced stops adapted to be contacted by said lug, thereby limiting rotation of said pulley in either direction, a cam on said shaft; two pivotally connected bars; a roller mounted at the connecting point of said bars, said roller contacting said cam, said bars being pivotally attached to said support and said element respectively, whereby operation of said pulley in one direction raises said element.

5. In lifting mechanism the combination with a portable support; and an element on said support adapted to be lifted; of a shaft rotatably mounted on said support; a pulley mounted on said shaft; a cam attached to said shaft; two pivotally connected bars, one of said bars being pivotally attached to said support, the other being connected to the element to be lifted; a roller mounted on said bars at their connecting point, said roller contacting said cam; a cable attached to said pulley and adapted to rotate the same, rotation of said pulley in one direction being adapted to actuate said cam, thereby lifting said element.

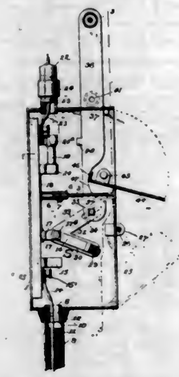
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1,224,880. ELECTRIC SWITCH AND FUSE BOX. LAWRENCE F. KRIES, Baltimore, Md., assignor to Charles Morgan Marshall, trustee, Baltimore, Md. Filed Mar. 12, 1910. Serial No. 548,925. (Cl. 175—282.)

1. The combination with a casing having an opening, and a door on the casing for closing said opening, of fuse terminals in one part of the casing, accessible through said opening when the door is open, supply-wire terminals and live switch contacts in another part of the casing, a barrier within the casing preventing access through said opening to said live terminals and switch contacts, a movable switch-member within the casing for connecting said switch contacts with said fuse terminals, and means operatively related to the door and switch member necessitating the closure of the door prior to the closure of the switch and the opening of the switch prior to the opening of the door.

4. The combination with a casing having a door thereon, of fuse terminals in one part of the casing accessible when the door is open and inaccessible when the door is closed, supply terminals and live switch contacts in another part of the casing, a barrier within the casing preventing access to said supply terminals and switch contacts when the door is open, pivoted switch arms for connecting said switch contacts with the fuse terminals, and means operable from without the casing for rocking the switch arms and acting to close and lock the door when said arms are moved toward closed position and to release the door when said arms are moved from closed position.





10. The combination with a casing having an opening and a door on the casing for closing said opening, of fuse terminals in one part of the casing accessible when the door is open and inaccessible when the door is closed, supply-wire terminals and live switch contacts in another part of the casing, a barrier within the casing preventing access to said supply terminals and switch contacts through said opening, movable switch members within the casing adapted to connect said fuse terminals and switch contacts, mechanism for operating said switch members and for simultaneously controlling the door, said mechanism projecting outside the casing and comprising means for locking the door when the switch members are in closed position and releasing the door when the switch members have been moved to open position, and means for locking the said operating mechanism so as to hold said switch members in open position.

[Claims 2, 3, 5 to 9, 11, and 12 not printed in the Gazette.]

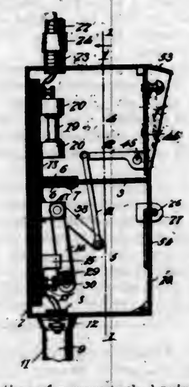
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1,224,881. ELECTRIC SWITCH AND FUSE BOX. LAWRENCE F. KRIES, Baltimore, Md., assignor to Charles Morgan Marshall, trustee, Baltimore, Md. Original application filed Mar. 12, 1910, Serial No. 548,925. Divided and this application filed Aug. 30, 1913. Serial No. 787,438. (Cl. 175—292.)

1. The combination of a receptacle for inclosing electrical apparatus, a closure for said receptacle movably mounted thereon and controlling access to said apparatus, an electric switch for controlling the flow of current to apparatus in said receptacle and having inaccessible live contacts and line terminals, and positive connections between said switch and closure for effecting the opening and closing of said switch by the opening and closing movements of the door, and for holding the closure in closing relation to the receptacle in all circuit closing positions of the switch.

2. The combination of a receptacle for inclosing electrical apparatus, a closure for said receptacle movably mounted thereon, an electric switch for controlling the flow of current to apparatus inclosed in said receptacle and having inaccessible live contacts and line connections, and a link connecting said switch and closure and adapted to cause the same to move simultaneously.

3. The combination of a receptacle for inclosing electrical apparatus, a closure for said receptacle movably mounted relative thereto, an electric switch for controlling the flow of current to apparatus inclosed in said receptacle, and comprising fixed and movable members, a line terminal to which one of said fixed members is electrically connected, means for preventing access to such line terminal and fixed member at all times, and mechanical connections between the said movable switch member and closure for causing them to move together in opening and closing directions.



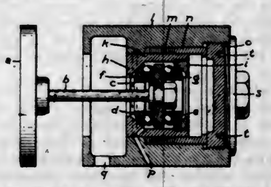
4. The combination of a receptacle having a closure for alternately permitting and preventing access to electrical connections, said closure being capable of a limited initial movement in an opening direction before permitting such access, an electric switch for controlling the flow of current to said connections and having inaccessible live contacts and line connections, and a positive mechanical connection between said door and switch for opening said switch by such initial movement of said door.

5. The combination with a box for inclosing electrical fuses, of a switch in said box, fuse terminals, and line terminals, said switch having contacts electrically connected with said line terminals, and controlling the supply of current to said fuse terminals, a manually operable swinging door for said box, the movable part of said switch being mechanically connected with said door so as to open and close therewith, all live parts in said receptacle, including said switch contacts and line terminals, being inaccessible in all positions of said door, and said fuse terminals being accessible only in the open position of said door.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,882. DEVICE FOR RESTRICTING AXIAL MOVEMENTS OF SHAFTS. FREDRIK LJUNGSTRÖM and BIRGER LJUNGSTRÖM, Finspong, Sweden, assignors to General Electric Company, a Corporation of New York. Filed Feb. 26, 1917. Serial No. 151,117. (Cl. 74—69.)



1. A device for suppressing axial oscillating movements of a rotating shaft, comprising a movable member connected with the shaft, a stationary member, a friction device interposed between the movable and the stationary members and adapted to oppose a displacement of the shaft, and means for allowing the shaft to rotate freely with respect to said movable member.

2. A device for suppressing axial oscillating movements of a rotating shaft, comprising a movable member connected with the shaft, a stationary member, a friction device interposed between the movable and the stationary members and adapted to oppose a displacement of the shaft, means allowing the shaft to rotate freely, and means for adjusting the pressure of the friction device.

3. A device for suppressing axial oscillating movements of a rotating shaft, comprising a bearing connected to and moved by the shaft, a stationary member, and a friction device interposed between the bearing and the stationary member and adapted to oppose a displacement of the shaft and the bearing.

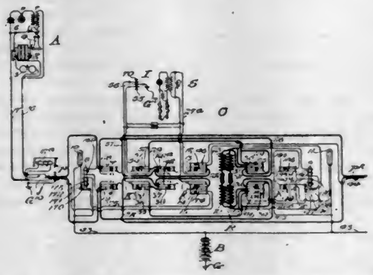
4. A device for suppressing axial oscillating movements of a rotating shaft, comprising a hollow piston, means connecting the shaft and piston so as to allow a swinging movement of the shaft, a cylinder inclosing the piston, and a friction device interposed between the piston and the cylinder and adapted to oppose a displacement of the shaft.

5. A device for suppressing axial oscillating movements of a rotating shaft, comprising an axial bearing for the shaft adapted to allow a swinging movement thereof, a hollow piston forming the stationary part of said bearing, a cylinder inclosing the piston, and a friction device interposed between the piston and the cylinder and adapted to oppose axial displacement of the shaft.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,883. TELEPHONE SUPERVISORY SYSTEM. CHRISTOPHER MOLLERUP, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1909. Serial No. 470,329. (Cl. 179—27.)



1. In a telephone system, a cord circuit, a local battery manual line, a common battery automatic line, a plug for use in extending connection from the cord to either line, and means including only a single relay for the calling end of the cord for completely supervising a call to either line.

2. In a telephone system, a cord circuit, a local battery line, a common battery line, a calling line, a plug for use in extending the call to either line, means for connecting the plug with the called line and means including only a single double-wound relay for each end of the cord for supervising the call to either local battery or common battery line.

3. In a telephone system, a cord circuit, a local battery manual line, a common battery automatic line, a plug for use in extending connection from the cord to either line, means including only a single relay for the calling end of the cord for supervising a call to either line, automatic selector and connector switches, and devices associated with the cord circuit to which said switches are responsive for calling and releasing.

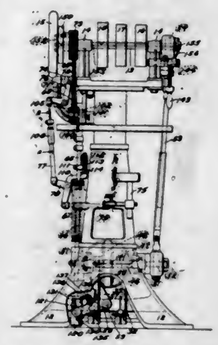
4. In a telephone system, a cord circuit, a manual line, an automatic line, a plug for use in extending a call through the cord to either line, a calling line, means including only a single relay for each end of the cord for supervising the call to either manual or automatic line, automatic selector and connector switches, and devices associated with the cord circuit to which said switches are responsive for calling and releasing.

5. In a telephone system, a cord circuit, a local battery line, a common battery line, a calling line, a plug for use in extending the call to either line, means including only a single double-wound relay for each end of the cord for supervising the call to either local battery or common battery line, automatic selector and connector switches, and devices associated with the cord circuit to which said switches are responsive for calling and releasing.

[Claims 6 to 25 not printed in the Gazette.]

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1,224,884. DRIVING MECHANISM FOR POWER-OPERATED MACHINES. AUGUST R. SCHOENKY, Somerville, Mass., assignor to The Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Sept. 10, 1914. Serial No. 861,001. (Cl. 74—46.)



1. In a power operated machine the combination with the power shaft and a driven shaft, of a transmitter between said shafts adjustable into and from driving positions, means for effecting said adjustments and supplemental means for assisting the restarting of said driven shaft.

2. In a power operated machine the combination with the power shaft and a driven shaft, of a transmitter between said shafts adjustable into and from driving positions, means for effecting said adjustments, a controller or lever therefor, and supplemental means operated by the control lever for assisting the restarting of said driven shaft.

3. In a power operated machine the combination with the power shaft and a driven shaft, of a transmitter between said shafts adjustable into and from driving positions, means for effecting said adjustments, comprising a power-storing device or spring adapted to adjust said transmitter to driving adjustment, a controller for said means, and supplemental means operated by the controller for assisting the restarting of said driven shaft.

4. In a power operated machine the combination with the power shaft and a driven shaft, of a transmitter between said shafts adjustable into and from driving positions, means for effecting said adjustments, a controller or lever therefor, and supplemental means operated by the control lever for assisting the restarting of said driven shaft by slightly turning the driven shaft to initiate its rotation.

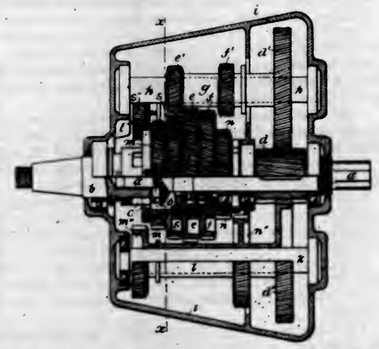
5. In a power operated machine the combination with the power shaft and a driven shaft, of a transmitter between said shafts adjustable into and from driving positions, means for effecting said adjustments, a controller or lever therefor, and supplemental means operated by the control lever for assisting the restarting of said driven shaft by starting the adjustment of said transmitter toward driving adjustment.

[Claims 6 to 40 not printed in the Gazette.]



# REISSUES.

14,293. CHANGE-GEAR. ALBERT AICHELE, Baden, Switzerland. Filed Mar. 22, 1917. Serial No. 156,769. Original No. 1,188,528, dated June 27, 1916, Serial No. 56,301, filed Oct. 16, 1915. (Cl. 74—58.)



1. A change gear comprising a driving shaft, a driven shaft, a counter shaft, a toothed wheel on the driving shaft, a sleeve with at least two toothed wheels movable together on the counter shaft, and a toothed wheel on the driven shaft, all toothed wheels having the teeth inclined circumferentially, the general direction of inclination of the teeth being the same for all wheels having the same geometrical axis and in reverse directions for the drive to and from the counter shaft so that the axial thrust of one wheel on the sleeve is substantially compensated by that of another wheel on the sleeve.

2. A change gear comprising a driving shaft, a driven shaft, a counter shaft, a toothed wheel on the driving shaft, a sleeve movable on the counter shaft, and three toothed wheels fixed on the sleeve, one of the latter wheels being constantly engaged with the wheel on the driving shaft, each of the two other wheels being adapted for being thrown into gear with a corresponding wheel on a driven shaft by moving the sleeve on the counter shaft, all wheels on said sleeve having their teeth inclined circumferentially in the same general direction so that the axial thrusts of two engaged wheels on the sleeve counterbalance each other and prevent axial thrust on the sleeve.

3. A change gear comprising a driving shaft, a driven shaft, a toothed wheel on the driving shaft, a toothed wheel on the driven shaft, a counter shaft and rigidly connected toothed wheels on the countershaft and mounted for axial movement, one of the rigidly connected wheels being constantly engaged with one of the first mentioned wheels and one of this pair of engaged wheels having a breadth substantially equal the sum of the breadth of the wheel engaged with itself and the extent of the axial movement of the wheels on said counter shaft, and all of said wheels having their teeth inclined in respect to their axes, the general direction of inclination of the teeth being the same for all wheels having the same geometrical axis and in reverse directions for the drive to and from the counter shaft so that the axial thrusts on the wheels on said countershaft are substantially compensated.

4. A change gear comprising a driving shaft, a driven shaft, a counter shaft, a toothed wheel on the driving shaft, a number of toothed wheels on the counter shaft, and axially movable together, and a number of toothed wheels on the driven shaft, all of said wheels having their teeth inclined in respect to their axes, the general direction of inclination of the teeth being in reverse directions for the drive to and from the counter shaft.

5. A change gear comprising a driving shaft, a driven shaft, a counter shaft, a toothed wheel on the driving shaft, a number of toothed wheels on said counter shaft and axially movable together, and a toothed wheel on the driven shaft, all of said wheels which have the same geometrical axis having their teeth inclined in the same general direction in respect to their axes, and the angles of inclination of the teeth of the wheels which are axially movable (which angles are formed between the teeth and the direction of the axis of the wheels) being such that their trigonometrical tangents are proportional to their respective pitch-circle diameters.

6. A change gear comprising a driving shaft, a driven shaft, a counter shaft, a toothed wheel on the driving shaft, a number of toothed wheels on said counter shaft and axially movable together, a number of toothed wheels on the driven shaft, all of said wheels having their teeth inclined in respect to their axes and in the same general direction for all wheels having the same geometrical axis and in reverse direction for the drive to and from the counter shaft so that the axial thrusts of the engaged wheels on the counter shaft substantially compensate each other, a further toothed wheel on the driven shaft, the general direction of inclination of teeth of which is inverse to the general direction of inclination of the teeth of the other wheels on the driven shaft, a further shaft, and a reversing wheel axially movable thereon, said last mentioned wheel being adapted to engage with both the above mentioned wheel on the driven shaft and one of the wheels on the counter shaft at the same time.

7. In combination, a driving shaft, a toothed wheel with inclined teeth thereon, a driven shaft, five toothed wheels with inclined teeth thereon, a movable clutch coupling between the driving and driven shafts, two counter shafts three toothed wheels with inclined teeth fastened together and axially movable on each counter shaft, a further shaft, and an axially movable toothed wheel thereon with inclined teeth, the inclination of the teeth of the various wheels being such that the axial thrust of one wheel is substantially compensated by that of another wheel, and a box surrounding the whole gear containing the bearings for all of said shafts.

8. In combination, a driving shaft, a toothed wheel thereon, a driven shaft, a number of toothed wheels on an enlarged hollow part of the driven shaft, a movable clutch-coupling and a step-bearing in the inner room of the hollow part of the driven shaft, a number of counter shafts, an axially movable sleeve on each counter shaft, toothed wheels on the movable sleeves, a further shaft with a movable reversing wheel thereon, and a box surrounding the whole gear containing the bearings for all of said shafts, all of said toothed wheels having their teeth inclined in respect to their axes, the general direction of inclination of the teeth being the same for all wheels having the same geometrical axis and in reverse directions for the drive to and from the counter shaft so that the axial thrust of one wheel is substantially compensated by that of another wheel.

9. A change gear including a driving shaft, a driven shaft, a counter shaft, a toothed wheel on the driving shaft, rigidly connected toothed wheels on the counter shaft and movable in the direction of their axis, and a toothed wheel on the driven shaft, all of said toothed wheels having their teeth inclined in respect to their axes, the general direction of inclination of the teeth being the same for all wheels having the same geometrical axis so that the axial thrust of one wheel is substantially compensated by that of another wheel.

10. A change gear comprising a driving shaft, a driven shaft, a counter shaft, a toothed wheel on the driving shaft, at least two toothed wheels on said countershaft movable together, and a toothed wheel on the driven shaft, all of said toothed wheels having their teeth inclined in respect to their axes, the inclination of the teeth being in reverse directions for the drive to and from the counter shaft so that the axial thrust of one wheel on the counter shaft is substantially compensated by that of another wheel on said counter shaft.

11. In combination, a driving shaft, a driven shaft, a counter shaft, a pair of toothed wheels for transmitting power from the driving shaft to the counter shaft, and a

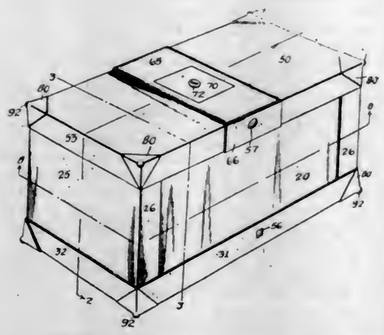
pair of toothed wheels for transmitting power from the counter shaft to the driven shaft, each of said wheels having its teeth inclined in respect to its axis and the wheels on the counter shaft having their teeth inclined in the same general direction and at angles having their trigonometrical tangents proportional to their respective pitch diameters, whereby the axial thrusts of the said wheels on the counter shaft are equal and opposite.

12. In combination, a driving shaft, a driven shaft, a counter shaft, a pair of rigidly connected, axially movable, toothed wheels on said counter shaft, means for rotating one of said wheels from said driving shaft, and means for rotating the driven shaft from the other of said wheels, said wheels having their teeth inclined in the same general direction in respect to their common axis and to such an extent that the trigonometrical tangents of the angles of inclination are proportional to the pitch diameters of the wheels, whereby axial thrust on one of said wheels is substantially compensated by that of the other.

13. In combination, a driving shaft, a driven shaft, a counter shaft, a toothed wheel on said driving shaft, a toothed wheel on said driven shaft, and a pair of rigidly connected toothed wheels on said counter shaft bodily movable into and out of power transmitting engagement with said first mentioned toothed wheels, the wheels on said counter shaft having their teeth inclined in the same general direction and to extents varying with the diameters of said wheels, whereby the end thrusts on the toothed wheels on said counter shaft are substantially equal and in opposite directions.

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14,294. KNOCKDOWN CONTAINER. ALBERT PAUL COCHRANE, Brooklyn, N. Y., assignor to Jane Hartley Cochrane, New York, N. Y. Filed Mar. 17, 1917. Serial No. 155,585. Original application filed June 21, 1913, Serial No. 774,981. Renewed Nov. 26, 1915, Serial No. 63,676. Original No. 1,195,908, dated Aug. 22, 1916. (Cl. 220—17.)




1. A container comprising the combination of separable side sections having inward projecting abutments at the edges, and pyramidal corner fastenings comprising inner and outer portions with means for uniting them diagonally through the apical corners.

2. A container comprising the combination of separable side sections having inward projecting abutments at the edges, and corner clamps comprising each a cap formed to bear upon the three outside faces meeting at the corner, an inner portion, and a portion passing diagonally through the apical corner in suitable openings provided therefor in the sections.

3. A container comprising the combination of separate and distinct side sections having inward projecting abutments at the edges whereby they fit into each other when set up and nest when collapsed, and pyramidal clamping fastenings for the apical corners.

4. A container comprising the combination of separate and distinct tray-like side sections having straight perpendicular flanges and registrable openings at the corners, and fastenings for the apical corners of the set-up box comprising inner and outer bearing portions, each engaging three surfaces, and diagonal connecting portions passing through said openings.

5. A container comprising the combination of separable side sections, abutments projecting inward from edges of said sections, and pyramidal fastenings for the apical corners comprising inner and outer members adapted to grip the sections and abutments, and connecting portions adapted to pass diagonally through openings provided therefor at the extreme corners.

6. A container comprising separable wall sections each having an inturned flange extending around the same and provided with openings at the corners adapted to aline with one another when the sections are set up, and fastening means passed through said alined openings.

7. In a container of the class described, the combination of separable wall sections including a top section having an opening therein, means accessible through said opening for securing the sections together, and means to close said opening comprising a lock having a groove in its edge opposite its bolt for engaging one edge of said opening, said bolt adapted to engage below the opposite edge of said opening.

8. In a container of the class described, the combination of separable wall sections including a top section having an opening therein, means accessible through said opening for securing the sections together, and means to close said opening comprising a reversible lock having a groove in its edge opposite its bolt for engaging one edge of said opening, said bolt also having a groove in its end to engage the opposite edge of said opening, whereby said lock may be applied with either side out for the purpose specified.

9. In a container of the class described, the combination of separable wall sections, including a top section having an opening extending across the same, an auxiliary cover section to close the opening in the top section and having an opening therein, means accessible through the opening in the top section when the cover section is removed for securing the wall sections together, means accessible through the opening in the cover section when the same is in place for securing said cover section to the wall sections, and a lock adapted to fill the opening in the auxiliary cover section and prevent access to the securing means.

10. In a container of the class described, the combination with separable base, side, end and top sections each having a right-angularly turned flange extending around its margin, the base and top sections being of a size to fit over the other sections after the end sections have been slipped over the ends of the side sections in erecting the container, of means for fastening said sections together comprising virtually pyramidal corner fastenings composed of inner and outer members united diagonally through the apical corners.

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14,295. RAILROAD SYSTEM. HANNIBAL C. FORD, Jamaica, N. Y., assignor to Arthur J. Baldwin, New York, N. Y. Filed Oct. 12, 1916. Serial No. 125,331. Original No. 815,086, dated Mar. 13, 1906, Serial No. 278,183, filed Sept. 12, 1905. (Cl. 246—59.)



1. In a railroad system, a plurality of trains each having a traveling zone of variable influence extending from the rear car thereof, and means governed by said zone of variable influence for controlling the speed of a following train.



2. In a railroad system, a plurality of trains each having a traveling zone of variable influence extending from the rear car thereof, and means governed by said zone of variable influence for controlling the speed of a following train, said system comprising a sectioned trackway, the sections of which are governed by one of said trains when passing therethrough, the said zone comprising an influence member associated with the trackway and governed by a section of said trackway, and the said means being carried by said following train and comprising a speed responsive device governed by the speed of said following train, an influence responsive device governed by said influence member, and means controlled by the joint action of the speed responsive and influence responsive devices for controlling the speed of the train.

3. In a railroad system, means whereby each train produces a zone of variable influence in the rear thereof, and means upon a following train for governing its speed in proportion to its entrance into said zone of influence, said system comprising a sectioned trackway, the sections of which are governed by one of said trains when passing therethrough, the said first-named means comprising a plurality of influence members associated with the trackway and governed by said track sectioned trackway in such manner as to cause a plurality of said members to assume different influence conditions at the same time, and the said last-named means comprising a speed responsive device governed by the speed of said following train, an influence responsive device governed by each of said influence members, and means controlled by the joint action of the speed responsive and influence responsive device for controlling the speed of the following train.

4. In a railroad system, means whereby each train produces a zone of variable influence in the rear thereof, and means upon a following train for governing its speed in proportion to its entrance into said zone of influence, said system comprising a sectioned trackway, the sections of which are governed by one of said trains when passing therethrough, the said first-named means comprising a series of influence members associated with the trackway and governed thereby in such manner as to have their condition altered successively in accordance with successive changing track section conditions, and the said last-named means comprising a speed responsive device governed by the speed of said following train, an influence responsive device governed by each of said influence members, and means controlled by the joint action of said speed responsive and influence responsive devices for controlling the speed of the following train.

5. In a railroad system, a track divided into units, train-controlling means at each unit, and means whereby a preceding train sets such controlling means at different conditions at the rear thereof so as to contral the speed of a following train, said train controlling means comprising track magnets adapted to be deënergized by a passing train and also comprising an auxiliary source of energy and apparatus controlled by the respective magnets to apply the said energy to modify the condition of the said controlling means associated therewith, and also to modify differently the condition of the controlling means associated with another track unit, and the said means for setting the controlling means to control the speed of a following train including a speed responsive device carried by the said following train and braking means controlled jointly by said speed responsive device and by said train controlling means.

6. In a railroad system, a track divided into units, train-controlling means at each unit, means whereby a preceding train displaces such train-controlling means at its rear, and controlled parts on a following train for automatically governing its speed.

7. In a railroad system, a track divided into units, train-controlling devices at each unit arranged to be variably displaced by a passing train, and controlled means on a following train for automatically governing its speed arranged to be engaged by said controlling means.

8. In a railroad system, a plurality of train-controlling devices arranged at intervals along the track, means on each train for displacing such devices variable distances diminishing in proportion to their distance from the rear of the train, and means on a following train for governing its speed controlled by said devices.

9. In a railroad system, a plurality of trains each having means thereon for producing a traveling zone of variable influence in the rear of the train, said influence being less in proportion to its distance from the rear of the train, and means whereby the speed of a succeeding train is automatically governed according to its amount of penetration into such zone.

10. In a railroad system, a track divided into units, a mechanical device at each unit arranged to have a lateral movement, means on each train for governing its speed in proportion to such lateral movement, and means on each preceding train for setting such devices to varying degrees of lateral movement.

11. In a railroad system, a track divided into units, a mechanical device at each unit arranged to have a lateral movement, means on each train for governing its speed in proportion to such lateral movement, and means on each preceding train for setting such devices to varying degrees of lateral movement an amount inversely proportional to their distance from the train.

12. In a railroad system, a track divided into units, a device at each unit arranged to be displaced by the movement of a train a distance inversely proportional to the distance of the rear of the train, and means located at the front end of the following train and acted on by such devices for governing its speed.

13. In a railroad system, a track divided into units, means set in operation by a train for creating a traveling zone of variable influence behind such train, and means on a following train for governing its speed in proportion to its entrance into such zone of influence, the said first-named means comprising a series of influence members associated with the track and each having its condition altered in a plurality of successive stages in accordance with the condition of the successive track units, and the said last-named means being carried by the following train and comprising a speed responsive device governed by the speed of said following train and an influence responsive device governed by said influence members, and braking means controlled jointly by said speed responsive and influence responsive devices.

14. In a railroad system, a track divided into units, means set in operation by a train for creating a traveling zone of variable influence behind such train, and means on a following train for governing its speed in proportion to its entrance into such zone of influence, the said first named means comprising a series of influence members associated with the track and having their condition altered in a plurality of stages successively in accordance with the condition of the successive track units, and the said last-named means being carried by the following train and comprising a speed responsive device governed by the speed of said following train and an influence responsive device governed by said influence members and a preparatory device, a service brake valve and an emergency brake valve adapted to be successively operated by the joint action of the said speed responsive and influence responsive devices.

15. In a railroad system, a track divided into units, connections from each unit for displacing a mechanical device arranged to govern the speed of a following train, and means whereby such device displaces following devices to a successively less distance than its own displacement.

16. In a railroad system, means for governing the speed of a train in proportion to its distance from a preceding train, the said system comprising a series of track sections and a series of influence members, each governed by one of the successive track sections, and the said means being carried by the said train and comprising (a) a speed responsive device governed by the speed of said train, (b) an influence responsive device governed by the respective influence members, and (c) means controlled by the joint action of said speed responsive and influence responsive devices for controlling the speed of the said train.

17. In a railroad system, means for governing the speed of a train in proportion to its distance from a preceding train, the said system comprising a series of track sections and a series of influence members, each governed by one of the successive track sections, and the said means being carried by the said train and comprising (*a*) a speed responsive device governed by the speed of said train, (*b*) an influence responsive device governed by the respective influence members, (*c*) means controlled by the joint action of said speed responsive and influence responsive devices for controlling the speed of the said train, and (*d*) means for manually controlling the speed of the train when said speed responsive and influence responsive devices are not conjointly acting.

18. In a railroad system, a track divided into units, train controlling means at each unit, adapted to have its condition changed by a passing train, and parts on a following train adapted to be affected by said train controlling means, said parts comprising a speed responsive device governed by the speed of the following train, and an influence responsive device governed by said train controlling means and braking means controlled jointly by the speed responsive and the influence responsive devices.

19. In combination, a track, a car thereon, a safety appliance for excessive speed on the car, a speed responsive device on the car, a movable member on the car, means partly on the car and partly on the track to initiate movement of said member and to continue its movement in correspondence with the progress of the car along the track, and means actuated through a certain range by said device and said member conjointly and adapted on the attainment of a certain stage of such range to actuate said safety appliance.

20. In combination, a track, a car thereon, a safety appliance for excessive speed on the car, two members on the car adapted conjointly to actuate said appliance, a speed responsive device connected to actuate one member, means partly on the car and partly on the track adapted initially to actuate the other member and thereafter further to actuate it in correspondence with the progress of the car along the track, said means being normally inoperative, the foregoing apparatus comprising parts capable of a certain range of ineffective change of relationship and effective only after such range has been accomplished.

21. In combination, a track, a car thereon, a safety appliance for excessive speed on the car, a speed responsive device on the car, means operative conjointly with said device idly over a range and thereafter effectively to actuate said appliance, means partly on the track to initiate the operation of said first-mentioned means and to continue its operation in correspondence with the progress of the car along the track.

22. In a railroad system, a train having means thereon by which its speed is automatically controlled to accord with the position of a controlling device actuated by a preceding train.

23. In a railroad system, devices along the track displaced at varying distances from a normal position, and means upon a train for governing its speed controlled by the position of such devices.

24. In a railroad system, a rail divided into subdivisions, means for displacing such subdivisions laterally to a varying distance proportioned to the distance from a preceding train, and means upon a following train for governing its speed controlled by the position of such subdivisions.

25. In a railroad system, a track divided into units, a rail divided into subdivisions corresponding to said units and laterally displaceable by a train, and an arm on each train guided by said rail arranged to govern its speed.

26. In a railroad system, a plurality of displaceable devices arranged along the roadway, an arm on each train arranged to be displaced by such devices, a part on each train mounted to be moved in proportion to the speed of the train, and means whereby such speed is made to automatically accord with the movement of said arm.

27. In a railroad system, a plurality of devices disposed at intervals along the track and arranged to be moved laterally by the passage of a train, an arm upon a succeeding train mounted to be displaced by such devices, and means whereby the speed of such following train is automatically made to accord with the movement of said arm.

28. In a railroad system, a plurality of devices which are displaced by the passage of a train diminishing distances in proportion to their distance from the train, and means whereby the speed of a following train is automatically reduced by such devices provided it exceeds a predetermined amount corresponding to its interval from the preceding train.

29. In a railroad system, a rail having laterally displaceable subdivisions extending the entire length of the track, telescoping extensions for each subdivision, means actuated by a passing train for displacing a subdivision laterally, and means whereby such displacement prevents the complete return movement of the following subdivision.

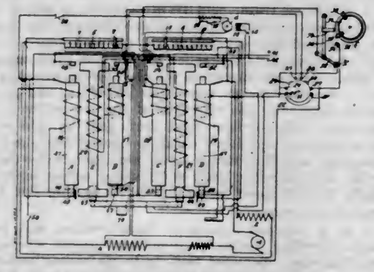
30. In a railroad system, a rail divided into subdivisions which are laterally displaceable, means on each train for displacing a subdivision to its extreme limit of movement, and means whereby such movement is effective to prevent the complete return of the preceding subdivisions, whereby a traveling zone of variable and decreasing influence is created in the rear of each train for the purpose of governing the speed of a following train.

31. In a railroad system, a rail divided into subdivisions each of which is longitudinally and slightly laterally movable, telescoping extensions on each subdivision whereby the preceding subdivision is permitted a slightly less degree of movement, and fluid pressure means controlled by the passage of a train for successively throwing the subdivisions to their limit of movement.

32. In a railroad system, a rail having a plurality of subdivisions each of which is guided to move forwardly and slightly laterally, means for moving a subdivision by the passage of a train, and means whereby such subdivision permits the partial but not complete return of the preceding subdivisions to their normal position.

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**14,296. PLANER AND SYSTEM OF MOTOR CONTROL THEREFOR.** WILLARD T. SEARS, Philadelphia, Pa., and SAMUEL H. KEEFER, deceased, Plainfield, N. J., by Niles-Bement-Pond Company, Jersey City, N. J., a Corporation of New Jersey, assignee of the entire interest. Filed Oct. 19, 1916. Serial No. 126,635. Original No. 996,529, dated June 27, 1911, Serial No. 589,567, filed Oct. 28, 1910. (Cl. 172—240.)



1. The combination of a reciprocating table; a reversible electric motor for driving the table; electromagnetic mechanism for controlling the motor; a pilot switch actuated by the reciprocating table for governing said mechanism to reverse the motor at regular intervals; a second motor controlled by said reciprocating table; and a motor actuated switch for governing the operation of the second motor.



2. The combination of an electric motor; electromagnetic mechanism for controlling the same; a pilot switch actuated from said motor for governing said mechanism; a second motor also controlled by said mechanism; and a switch actuated by the second motor for governing its operation.

3. A system including two motors; a reciprocating table driven by one motor; electromagnetic mechanism for controlling the flow of current to the motors; a pilot switch actuated by the reciprocating table for governing said mechanism to reverse the table driving motor at regular intervals; and an adjustable switch mechanism actuated by the other of the motors for also governing the flow of current thereto.

4. A system of motor control including two motors; a reciprocating table driven by one motor; electromagnetic mechanism for controlling the flow of current to said motors; a switch actuated by one of the motors and in circuit with the part of the electromagnetic mechanism for controlling said motor; with a pilot switch actuated by the reciprocating table and governing the electromagnetic mechanism to reverse the table driving motor at regular intervals and connected in circuit with said first switch.

5. A planer and a system of motor control therefor comprising a reciprocating table; a reversible drive motor for the table; a movable cutting tool; an intermittently operable feed motor for the tool; mechanism for controlling the flow of current to said motors; with a pilot switch mechanism actuated by the reciprocating table for governing the operation of said controlling mechanism to reverse the drive motor and start the feed motor at regular intervals; and a second switch actuated by the feed motor for causing the current to be cut off from the same after it has made a predetermined number of revolutions.

6. A planer and system of motor control therefor comprising a reciprocating table; a reversible drive motor for the table; a movable cutting tool; an intermittently operable feed motor for the tool automatically started by the table as it reciprocates; electromagnetic mechanism including reversing means for controlling the flow of current to said drive motor; with a pilot switch actuated by the table at each reciprocation for governing the operation of said mechanism; and a second switch actuated by the feed motor for causing the current to be cut off from the same after it has made a predetermined number of revolutions.

7. A motor controlling system including a driving motor, and a feed motor; electromagnetic mechanism for controlling the flow of current to said motors; and two switches respectively actuated by said motors; one of said switches controlling the flow of current to the electromagnetic mechanism, and also controlling the flow of current to the other switch.

8. A motor controlling system consisting of two motors, electromagnetic mechanism for controlling the flow of current to said motors; a pilot switch for governing the flow of current to said mechanism; with a second pilot switch in circuit with the first switch and placed to be actuated from one of the motors; said electromagnetic mechanism including means for short circuiting the armature of the said motor after its pilot switch has been opened.

9. A motor controlling system consisting of two motors; electromagnetic mechanism for controlling the flow of current to said motors; a pilot switch for governing the flow of current to said mechanism; with a second pilot switch in circuit with the first switch and placed to be actuated from one of the motors; said electromagnetic mechanism including means for short circuiting the armature of said motor after its pilot switch has been opened, and also including means for short circuiting the armature of the driving motor when its pilot switch is open.

10. A motor controlling system consisting of two motors; two solenoids having contacts and connections constituting a reversing switch for one of the motors; a third solenoid having contacts in circuit with certain of those of the other solenoids to form a reversing switch for the second motor; and a pilot switch for controlling the flow of current to said solenoids.

11. A motor controlling system consisting of two motors; two solenoids having contacts and connections constituting a reversing switch for one of the motors; a third solenoid having contacts coöperating with certain of those of the other solenoids to form a reversing switch for the second motor; and a pilot switch for controlling the flow of current to said solenoids; said reversing switches including connections for placing said motors in closed circuits.

12. A motor controlling system consisting of a motor; a body of armature resistance therefor; electromagnetic switches for governing the flow of current to said motor; one of said switches being connected to shunt to the said resistance; and a pilot switch for governing the flow of current to the electromagnetic switches; the magnet of the resistance controlling switch being connected to be energized only when the motor is turned in one of its two possible directions.

# DESIGNS.

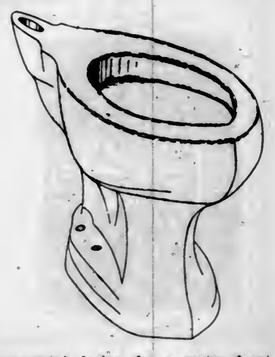
**50,673. TIRE-TREAD.** SALATHIEL S. ADAMS, Lafayette, Tenn. Filed Mar. 3, 1917. Serial No. 152,410. Term of patent 7 years.



The ornamental design for a tire tread as shown.

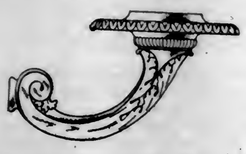
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**50,674. WATER-CLOSET BOWL.** STEPHEN D. BAKER, New York, N. Y., assignor to The Hotchkiss, Vail & Garrison Company, New York, N. Y., a Corporation of New York. Filed Nov. 28, 1916. Serial No. 133,991. Term of patent 7 years.



The ornamental design for a water-closet bowl, substantially as shown.

**50,675. ARM FOR LIGHTING-FIXTURES.** ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Co. Inc., New York, N. Y., a Corporation of New York. Filed Mar. 3, 1917. Serial No. 152,402. Term of patent 7 years.



The ornamental design for an arm for lighting fixtures as shown.

**50,676. WALL-PLATE FOR LIGHTING-FIXTURES.** ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Co. Inc., New York, N. Y., a Corporation of New York. Filed Mar. 3, 1917. Serial No. 152,403. Term of patent 7 years.



The ornamental design for a wall plate for lighting fixtures, as shown.

**50,677. WALL-PLATE FOR LIGHTING-FIXTURES.** ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Co. Inc., New York, N. Y., a Corporation of New York. Filed Mar. 3, 1917. Serial No. 152,404. Term of patent 7 years.



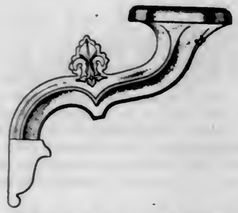
The ornamental design for a wall plate for lighting fixtures, as shown.

**50,678. WALL-PLATE FOR LIGHTING-FIXTURES.** ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Co. Inc., New York, N. Y., a Corporation of New York. Filed Mar. 3, 1917. Serial No. 152,405. Term of patent 7 years.



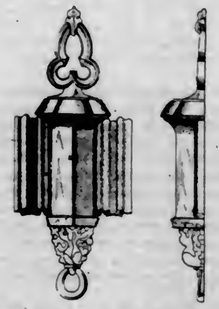
The ornamental design for a wall plate for lighting fixtures, as shown.

**50,679. ARM FOR LIGHTING-FIXTURES.** ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Co. Inc., New York, N. Y., a Corporation of New York. Filed Mar. 3, 1917. Serial No. 152,407. Term of patent 7 years.



The ornamental design for an arm for lighting fixtures, as shown.

**50,680. WALL-PLATE FOR LIGHTING-FIXTURES.** ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Co. Inc., New York, N. Y., a Corporation of New York. Filed Mar. 3, 1917. Serial No. 152,408. Term of patent 7 years.



The ornamental design for a wall plate for lighting fixtures, as shown.

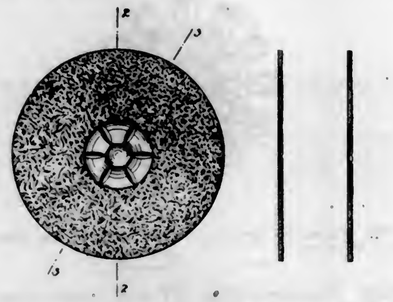


**50,681. TIRE.** JOHN S. BROUGHTON, Trenton, N. J., assignor to United and Globe Rubber M'f'g. Companies, Trenton, N. J., a Corporation of New Jersey. Filed Dec. 4, 1916. Serial No. 135,087. Term of patent 14 years.



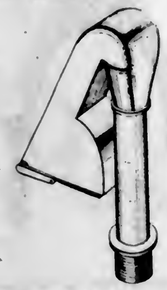
The ornamental design for a tire substantially as shown

**50,682. LENS FOR HEADLIGHTS.** HENRY D. COHEN Newark, N. J. Filed Feb. 28, 1917. Serial No. 151,569 Term of patent 7 years.



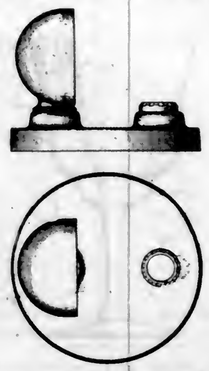
The ornamental design for a lens for headlights, as shown.

**50,683. FLUSHING DEVICE.** HENRY H. GOVE, Biddeford, Me. Filed Mar. 19, 1915. Serial No. 15,625. Term of patent 14 years.



The ornamental design for a flushing device, as shown.

**50,684. LIGHTING-FIXTURE.** EDWIN F. GUTH, St. Louis, Mo., assignor to Luminous Unit Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 26, 1917. Serial No. 151,132. Term of patent 7 years.



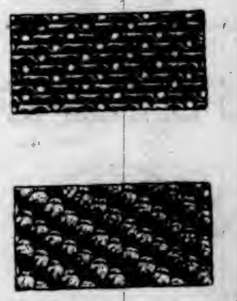
The ornamental design for a lighting fixture, as shown.

**50,685. LIGHTING-FIXTURE.** EDWIN F. GUTH, St. Louis, Mo., assignor to Luminous Unit Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 26, 1917. Serial No. 151,133. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

**50,686. CLOTH, PAPER, LEATHER, OR OTHER FABRIC.** HERBERT F. HATCH, Newton, Mass., assignor to W. H. Holbrook Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 4, 1916. Serial No. 135,090. Term of patent 14 years.



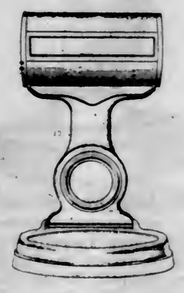
The ornamental design for cloth, paper, leather or other fabric as shown.

50,687. GOBLET. WILBER E. HUNTER, Morgantown, W. Va. Filed Feb. 25, 1916. Serial No. 80,533. Term of patent 7 years.



The ornamental design for a goblet as shown.

50,688. SCALE-FRAME. LOUIS JAENICHEN, Detroit, Mich., assignor to The Standard Computing Scale Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 15, 1915. Serial No. 61,698. Term of patent 14 years.



The ornamental design for a scale frame, as shown.

50,689. GRAVITY-CLAMP FOR LIGHT-REFLECTING BOWLS. CHARLES ERNEST JONES, Chicago, Ill. Filed Feb. 5, 1917. Serial No. 146,850. Term of patent 3½ years.



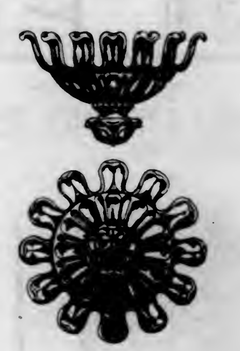
The ornamental design for a gravity clamp for light reflecting bowls, as shown.

50,690. ROSETTE-CLAMP FOR LIGHT-REFLECTING BOWLS. CHARLES ERNEST JONES, Chicago, Ill. Filed Mar. 6, 1917. Serial No. 152,937. Term of patent 3½ years.



The ornamental design for a rosette clamp for light reflecting bowls, as shown.

50,691. CHAIN-SUPPORT FOR CHANDELIERS. CHARLES ERNEST JONES, Chicago, Ill. Filed Mar. 6, 1917. Serial No. 152,939. Term of patent 3½ years.



The ornamental design for a chain support for chandeliers, as shown.

50,692. EXTENSION-BRACKET FOR LIGHTING-FIXTURES. CHARLES ERNEST JONES, Chicago, Ill. Filed Mar. 6, 1917. Serial No. 152,940. Term of patent 3½ years.



The ornamental design for an extension bracket for lighting fixtures, as shown.



50,693. ELECTRIC-BRACKET BACK. CHARLES ERNEST JONES, Chicago, Ill. Filed Mar. 12, 1917. Serial No. 154,408. Term of patent 3½ years.



The ornamental design for an electric bracket back, as shown.

50,694. CLAMP FOR LIGHT-REFLECTING BOWLS. CHARLES ERNEST JONES, Chicago, Ill. Filed Mar. 12, 1917. Serial No. 154,409. Term of patent 3½ years.



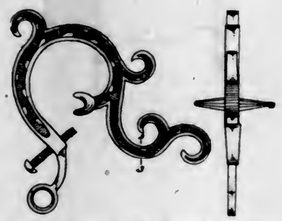
The ornamental design for a clamp for light reflecting bowls, as shown.

50,695. CLAMP FOR LIGHT-REFLECTING BOWLS. CHARLES ERNEST JONES, Chicago, Ill. Filed Mar. 12, 1917. Serial No. 154,410. Term of patent 3½ years.



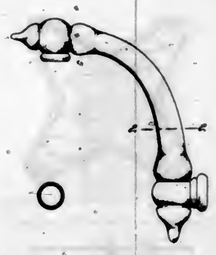
The ornamental design for a clamp for light reflecting bowls, as shown.

50,696. SCROLL-CLAMP FOR LIGHT-REFLECTING BOWLS. CHARLES ERNEST JONES, Chicago, Ill. Filed Mar. 12, 1917. Serial No. 154,411. Term of patent 3½ years.



The ornamental design for a scroll clamp for light reflecting bowls, as shown.

50,697. ARM FOR CHANDELIERS OR BRACKETS. CHARLES ERNEST JONES, Chicago, Ill. Filed Mar. 12, 1917. Serial No. 154,412. Term of patent 3½ years.



The ornamental design for an arm for chandelier or bracket, as shown.

50,698. BRACKET-ARM FOR LIGHTING-FIXTURES. CHARLES ERNEST JONES, Chicago, Ill. Filed Mar. 19, 1917. Serial No. 155,955. Term of patent 3½ years.



The ornamental design for a bracket arm for lighting fixtures, as shown.

50,699. CASING FOR VENDING-MACHINES. GEORGE KERN, Peru, Ill. Filed Feb. 1, 1917. Serial No. 146,036. Term of patent 7 years.



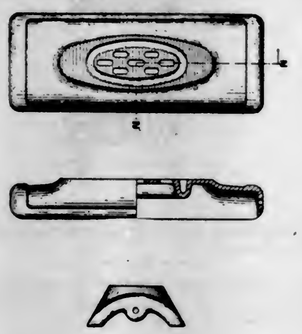
The ornamental design for a casing for vending machines, as shown.

50,700. POULTRY-FOUNTAIN. AARON B. MOE, Lombard, Ill., assignor to Otis & Moe Manufacturing Company, a Corporation of Illinois. Filed July 13, 1916. Serial No. 109,204. Term of patent 14 years.



The ornamental design for a poultry-fountain as shown.

50,701. TOP FOR GAS-STOVE. ROBERT T. PARISEN, Pittsburgh, Pa., assignor to Lawson Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 24, 1917. Serial No. 150,823. Term of patent 7 years.



The ornamental design for a top for gas stove, substantially as shown.

50,702. REDUCING-BRASSIÈRES. MARIE PERILLAT, New York, N. Y., assignor to Ovida Company, Inc., New York, N. Y., a Corporation of New York. Filed Nov. 25, 1914. Serial No. 874,078. Term of patent 14 years.



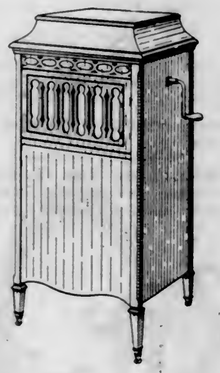
The ornamental design for a reducing brassière, as shown.

50,703. ARTICLE OF MANUFACTURE. EDWARD JOHN RIDGWAY, Staten Island, N. Y. Filed Dec. 27, 1916. Serial No. 139,217. Term of patent 7 years.



The ornamental design for an article of manufacture, as shown.

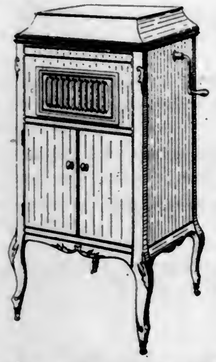
50,704. PHONOGRAPH-CABINET. EUGENE A. WIDMANN, Brooklyn, N. Y., assignor to Pathé Frères Phonograph Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 24, 1917. Serial No. 150,820. Term of patent 14 years.



The ornamental design for a phonograph cabinet, as shown.

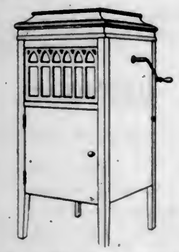


50,705. PHONOGRAPH-CABINET. EUGENE A. WIDMANN, Brooklyn, N. Y., assignor to Pathé Frères Phonograph Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 24, 1917. Serial No. 150,821. Term of patent 14 years.



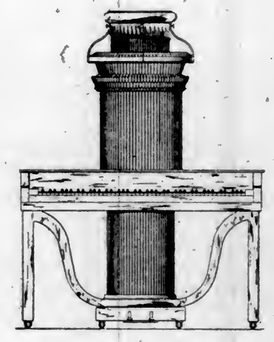
The ornamental design for a phonograph cabinet, as shown.

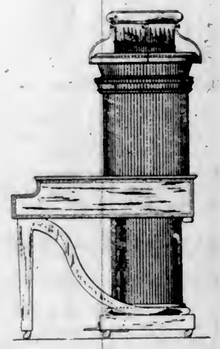
50,706. PHONOGRAPH-CABINET. EUGENE A. WIDMANN, Brooklyn, N. Y., assignor to Pathé Frères Phonograph Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 24, 1917. Serial No. 150,822. Term of patent 14 years.



The ornamental design for a phonograph cabinet, as shown.

50,707. PIANO. OTTO J. YOUNGMAN, Berkeley, Cal., assignor of one-half to John B. Hookstra, Berkeley, Cal. Filed Feb. 7, 1917. Serial No. 147,249. Term of patent 14 years.





The new and ornamental design for a piano, substantially as shown.

# TRADE-MARKS

## PUBLISHED MAY 1, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 81,000. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) A. Hofner & Sons, Buffalo, N. Y. Filed Sept. 5, 1914. Under ten-year proviso.

SUNSPINE

*Particular description of goods.*—Soaps, Washing-Powders, and Cleansers.
*Claims use* since May, 1885.

Ser. No. 82,923. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) National Grocery Co., Seattle, Wash. Filed Nov. 25, 1914.

EMPEROR

*Particular description of goods.*—Vinegar and Dried Fruits.
*Claims use* since Dec. 1, 1903.

Ser. No. 85,825. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) Wallis Tractor Company, Racine, Wis. Filed Apr. 9, 1915.



*Particular description of goods.*—Tractors.
*Claims use* since March, 1914.

Ser. No. 87,680. (CLASS 37. PAPER AND STATIONERY.) Thornton W. Burgess, Springfield, Mass. Filed July 1, 1915.

Quaddy

Consisting of the word "Quaddy."
*Particular description of goods.*—Correspondence-Paper and Correspondence-Cards.
*Claims use* since June 28, 1915.

Ser. No. 88,332. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) Joyful Manufacturing Company, Cleveland, Ohio, assignor to The Phoenix Oil Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 31, 1915.

JOYFUL

The trade-mark consists of the arbitrary word "Joyful."
*Particular description of goods.*—Soaps and Cleansers.
*Claims use* since prior to Nov. 5, 1912.

Ser. No. 89,311. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) John J. Ford, Ottumwa, Iowa. Filed Sept. 20, 1915.

NU-FEET

*Particular description of goods.*—Composition for Easing the Feet.
*Claims use* since Sept. 3, 1915.

Ser. No. 90,641. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) The Wirthlin-Mann Company, Cincinnati, Ohio. Filed Nov. 13, 1915.

Hiklas

*Particular description of goods.*—Fire-Extinguishers, Drills, Taps, and Reamers.
*Claims use* since Dec. 15, 1912.

Ser. No. 91,185. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) Geo. P. Braun Company, Chicago, Ill. Filed Dec. 6, 1915.

LIONA

*Particular description of goods.*—Lard Compound.
*Claims use* since January, 1907.

Ser. No. 92,642. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNION PACIFIC TEA COMPANY, New York, N. Y. Filed Feb. 4, 1916. Under ten-year proviso.

SOVEREIGN

*Particular description of goods.*—Eggs, Corn-Starch, Granulated Tapioca, Pearl-Tapioca, Jelly-Powder, Gelatin, Peanut-Butter, Dried Codfish, Cocoa, Milk-Chocolate, Premium Chocolate, Shredded Cocoanut, Table-Rice, Fancy Head-Rice, Farina, Oat Flakes, Corn Flakes, Salad-Dressing, Cotton-Seed Salad-Oil, Olive-Oil, White Pepper, Black Pepper, Onion-Salt, Tomato Catsup, Celery-Salt, Poultry-Seasoning, Cayenne Pepper, Thyme, Allspice, Paprika, Sage, Savory, Mace, Marjoram, Pastry-Spice, Cinnamon, Cloves, Ginger, Nutmegs, Chilli Sauce, Worcestershire Sauce, Mustard, Prepared Mustard, German-Style Mustard, and Flavoring Extracts for Foods.
*Claims use* since 1880.

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Ser. No. 92,987. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Feb. 19, 1916.

KINGIRL

*Particular description of goods.*—Snap-Buttons Used as Garment-Fasteners.
*Claims use* since Mar. 26, 1914.

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Ser. No. 92,988. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Feb. 19, 1916.

Uncle Sam

*Particular description of goods.*—Snap-Buttons Used as Garment-Fasteners.
*Claims use* since about July 29, 1913.

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Ser. No. 93,401. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KURT J. SCHULTZ, Chicago, Ill. Filed Mar. 8, 1916.

KOL-KUF

*Particular description of goods.*—A Wax Preparation for Application to the Edges of Collars, Cuffs, and Neckbands of Shirts.
*Claims use* since Feb. 10, 1916.

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Ser. No. 93,466. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NUTTY MCNUTT, INCORPORATED, New York, N. Y. Filed Mar. 11, 1916.

Nutty McNutt

*Particular description of goods.*—A Nut Confection.
*Claims use* since June 19, 1915.

Ser. No. 93,621. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN PEANUT CORPORATION, Norfolk, Va. Filed Mar. 18, 1916.

A.P.C.

No claim is made to the word "America" as a part of the trade-mark.
*Particular description of goods.*—Peanuts.
*Claims use* since 1906.

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Ser. No. 93,977. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE M. SEIPLE, York, Pa. Filed Mar. 29, 1916.



This being the portrait of George M. Seiple, the applicant.
*Particular description of goods.*—Liniment for Rheumatism, Neuralgia, Sprains, Cramps, Corns, Bunions, Stings of Insects, Poison, Scalds, Cuts, Bruises, Sore Nipples or Breasts, Sprained Back, Headache, Toothache, Boils, Carbuncles, Frozen Feet, and Eczema.
*Claims use* since July, 1914.

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Ser. No. 94,424. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VINCENZO MARRONE, Utica, N. Y. Filed Apr. 14, 1916.

PEACOCK



*Particular description of goods.*—Macaroni and Canned Sardines.
*Claims use* since Dec. 12, 1912.





Ser. No. 94,543. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MORRIS & COMPANY, Chicago, Ill. Filed Apr. 19, 1916. Under ten-year proviso.

Matchless

*Particular description of goods.*—Cooked Corned Beef; Roast Mutton; Cooked Lunch-Tongue; Roast Beef; Dried Beef; Potted Meat Products; and Vienna-Style Sausage.
*Claims use* since Mar. 1, 1891.

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Ser. No. 95,550. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG CO., Green Bay, Wis. Filed May 31, 1916.



*Particular description of goods.*—Toilet-Paper, Paper Toweling, and Paper Napkins.
*Claims use* since Mar. 19, 1914.

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Ser. No. 95,906. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) UNITED STATES SILICA CO., Chicago, Ill. Filed June 15, 1916.

FLINT SHOT

*Particular description of goods.*—Sand-Blast Sand.
*Claims use* since about Apr. 1, 1916.

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Ser. No. 95,955. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) S. S. BORDEN CO., Chicago, Ill. Filed June 19, 1916.

SILVER SPRING

*Particular description of goods.*—Butter and Eggs.
*Claims use* since June 5, 1916.

Ser. No. 96,743. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DUNDAS BROTHERS CO., Philadelphia, Pa. Filed July 22, 1916.




No claim is made to the exclusive use of the word "Farina."
*Particular description of goods.*—Wheat-Flour.
*Claims use* since May 25, 1916.

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Ser. No. 96,744. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DUNDAS BROTHERS CO., Philadelphia, Pa. Filed July 22, 1916.




The exclusive use of the words "Dundas Bros. Co.," "Philadelphia, U. S. A.," "Brand," and "Flour" are not claimed.
*Particular description of goods.*—Wheat-Flour.
*Claims use* since May 25, 1916.

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Ser. No. 96,861. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed July 26, 1916.

CHAMPA

*Particular description of goods.*—Toilet-Paper and Paper Towels.
*Claims use* since Feb. 19, 1913.

Ser. No. 97,007. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TEMPLE GARDEN COMPANY, Boston, Mass. Filed July 31, 1916.

TEMPLE GARDEN



*Particular description of goods.*—Tea, Coffee, Cocoa, Chocolate, Spices, Extracts for Flavoring Foods, and Olive-Oil.
*Claims use* since Feb. 1, 1909.

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Ser. No. 97,084. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JAMES W. MITCHELL, Russellville, Ala. Filed Aug. 4, 1916.

NOBO

*Particular description of goods.*—A Compound to be Dissolved in Water with Soap to Clean Fabrics.
*Claims use* since July 27, 1916.

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Ser. No. 97,703. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CHAMPION CHEMICAL CO., Asheville, N. C. Filed Aug. 30, 1916.



The trade-mark consists of a half-length portrait of Miss Margaret Sayer holding a can in one hand. Partly surrounding the portrait is arranged the shaft of an arrow, the head of which points to said can. Above the portrait is printed the word "MI" and below the portrait the word "Cleanser;" but no claim is made for said words.
*Particular description of goods.*—A Cleanser.
*Claims use* since Nov. 4, 1915.

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Ser. No. 97,744. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE BORGFELDT & CO., New York, N. Y. Filed Sept. 1, 1916.

STERLING PS POUND

*Particular description of goods.*—Face-Powder, Toilet Powder, Tooth Powder and Pastes, Rice Powder, Smelling-Salts, Talcum Powder, Sachets, Bath-Salts; Perfumes Used Either Pure or as an Ingredient in Toilet Preparations in Admixture with Suitable Substances in the Form of Pastes, Salves, Soaps, Powders, Pencils, and Liquids; Nail-Enamels, Eyebrow-Pencils, Rouges, (Liquid, Powder, and Compact,) Pomade Sticks, Hair-Wax, Toilet Waters, Tooth-Washes, Nail-Polishes, Toilet Creams, Hair-Tonics, Hair Dyes and Bleaches.
*Claims use* since Aug. 1, 1916.

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Ser. No. 98,054. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE OHIO BUTTERINE CO., Cincinnati, Ohio. Filed Sept. 18, 1916.

DOUBLE "C"

*Particular description of goods.*—Oleomargarin.
*Claims use* since about January, 1912.

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Ser. No. 98,633. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ZENON GATKOWSKI, Chicago, Ill. Filed Oct. 13, 1916.

Z.-G.

No claim is made for the use of the word "Herbs."
*Particular description of goods.*—Herbs for the Treatment of Nervousness, Heart Trouble, Indigestion, Rheumatism, Colds, Summer Complaint, Gonorrhea, Leucorrhea, and Diphtheria.
*Claims use* since April, 1915.

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Ser. No. 98,662. (CLASS 15. OILS AND GREASES.) FRANK W. KIMBALL, Boston, Mass. Filed Oct. 14, 1916.




Applicant disclaims exclusive right to the use of the words "Brand" and "Auto Oil."
*Particular description of goods.*—Lubricating-Oil.
*Claims use* since June 1, 1916.

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Ser. No. 98,799. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) JULIUS BLUM, New York, N. Y. Filed Oct. 21, 1916.

GIMPLEX

No claim is made to the diamond-shaped figure as a part of the trade-mark.
*Particular description of goods.*—Metal Seamless Tubing and Iron and Steel Moldings.
*Claims use* since June 4, 1915.





Ser. No. 98,949. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALTER A. LOVELAND, Kalamazoo, Mich. Filed Oct. 28, 1916.

FIT-RITE

The words "The," "Belt," "Health," and "Comfort" are disclaimed.
*Particular description of goods.*—An Invisible Garment or Trouser Supporter in the Form of a Belt.
*Claims use* since July 26, 1915.

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Ser. No. 98,951. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE W. NEEDHAM, Formosa, Ark. Filed Oct. 28, 1916.



*Particular description of goods.*—A Liquid Preparation and a Salve for Use in the Treatment of the Eyes.
*Claims use* since Sept. 10, 1916.

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Ser. No. 98,991. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CHRIST A. ZOES, Chicago, Ill. Filed Oct. 30, 1916.

Z-O-L-O

*Particular description of goods.*—A Combined Cleaner and Dye for Leather and Leather Articles.
*Claims use* since Oct. 10, 1916.

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Ser. No. 99,013. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) R. H. MACY & CO., New York, N. Y. Filed Oct. 31, 1916.

LILY WHITE

*Particular description of goods.*—Canned Goods—to wit, Saratoga Chips, Macaroni, Oyster-Cocktail Sauce, Chilli Sauce, Salad-Dressing, Grape-Juice, Honey, Fresh-Fruit Jam, Apple-Butter, Guava Jelly, Tomato Catsup, Early June Peas, Red Raspberries, Garden-Peas, White Asparagus-Tips, Lemon Cling-Peaches, Asparagus-Tips, Plums, Green Gage Plums, Tomatoes, Lima Beans, Cherries, White Cherries, Maple-Syrup, Maple-Sugar, Concentrated Strained Tomatoes, Grated Corn, Apricots, Mock-Turtle Soup, Ox-Tail Soup, Tomato Soup, Clam-Chowder Soup, Black-Bean Soup, White Asparagus, Green Asparagus, Golden Wax-Beans, Golden Wax Cut Beans, Pork and Beans, Stringless Beans, Red Kidney-Beans, Strawberries, Beets, Apples, Tomatoes, Bartlett Pears, Sliced Peaches, Wrinkled Peas, Sweet Wrinkled Peas, Sliced Pineapple, Evaporated Milk, Condensed Milk, Peanut-Butter, Spinach, Pumpkin, Okra, Sugar-Corn, Grated Pineapple, Succotash, Okra and Tomatoes, Plum-Pudding, Plum-Pudding Sauce, Vegetable Soup, Chicken Soup, Navy-Bean Soup, Mulligatawny Soup, Celery Soup, Beets, Black Raspberries, Chicken Gumbo Soup, Table-Syrup, Squash.
*Claims use* since 1896.

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Ser. No. 99,027. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOSEPH V. MEYER, St. Louis, Mo. Filed Nov. 1, 1916.

Sur-Ezy

*Particular description of goods.*—Soap.
*Claims use* since July 1, 1916.

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Ser. No. 99,101. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & CO., Prague-Wrschowitz, Austria-Hungary. Filed Nov. 4, 1916.

KINGIRL

*Particular description of goods.*—Snap-Fasteners of All Kinds, Snap-Fastener Tapes, Hair-Pins, Non-Ornamental Hat-Pins Made of Steel; Buttons of All Kinds Made of Non-Precious Metals and Used as Fastening Devices—Namely, Fancy Buttons Used for Ornamenting Ladies' Apparel, Trouser-Buttons and Glove-Buttons, Collar-Buttons, Cuff-Buttons, and Necktie-Clasps Made of Non-Precious Metals, Trimming-Buttons Made of Non-Precious Metal Used as Ornamental Devices for Clothing, Not Used for Fastening; Collar-Supporters, Dress-Shields, Tapes, Steel Needles Used for Hand-Sewing, Brass Pins Used as Fastening Devices, Placket-Fasteners, Safety-Pins, Hooks and Eyes, Buckles Made of Non-Precious Metals, Used as Fastening Devices for Clothing.
*Claims use* since Mar. 30, 1914.

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Ser. No. 99,176. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) ROTHACKER FILM MFG. CO., Chicago, Ill. Filed Nov. 8, 1916.

Rothacker

Said mark appearing in the handwriting of Watterson R. Rothacker, president of Rothacker Film Mfg. Co., no claim being made to the exclusive use of the words "Film Mfg. Co., Chicago, U. S. A., Trade Mark Reg."
*Particular description of goods.*—Motion-Picture Films.
*Claims use* since Sept. 30, 1916.

Ser. No. 99,286. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE SHOBERG COMPANY, Avon, S. D., and Sioux City, Iowa. Filed Nov. 13, 1916.

SKYLIGHT

*Particular description of goods.*—Photo Materials—Namely, Flash-Machines, Reflectors, Flash-Pans, Stands for Reflectors and Flash-Machines.
*Claims use* since Mar. 1, 1910.

Ser. No. 99,340. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SILVIO DE BONIS, Oakland, Cal. Filed Nov. 17, 1916.

KOFFYSUB

*Particular description of goods.*—A Food Beverage Composed of Roasted Grains and Fruit.
*Claims use* since Oct. 6, 1916.

Ser. No. 99,356. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PAULINE M. A. ROBERTS, Milwaukee, Wis. Filed Nov. 17, 1916.

Sisto-Viator

*Particular description of goods.*—A Preparation for the Treatment of Cancers.
*Claims use* since Sept. 12, 1916.

Ser. No. 99,635. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TRYON HONEY BALM COMPANY, Tryon, N. C. Filed Nov. 29, 1916.

HONEY



No claim being made to the use of the word "Balm."
*Particular description of goods.*—A Cold-Cream.
*Claims use* since June 15, 1916.

Ser. No. 99,653. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALBERT EHLERS, Brooklyn, N. Y. Filed Dec. 1, 1916.

TOPS ALL

*Particular description of goods.*—Dry Groceries—viz., Tea, Coffee, Extracts for Food-Flavoring, Rice, Spices, Tapioca, Celery-Salt, Curry-Powder, Paprika, Thyme, Sage, and Marjoram.
*Claims use* since Oct. 14, 1916.

Ser. No. 99,708. (CLASS 37. PAPER AND STATIONERY.) HESSE ENVELOPE & LITHO. COMPANY, St. Louis, Mo. Filed Dec. 4, 1916.

TERRIER



*Particular description of goods.*—Envelops, Letter-Heads, Bill-Heads, Drafts, Checks, and Writing-Paper.
*Claims use* since February, 1912.

Ser. No. 99,836. (CLASS 37. PAPER AND STATIONERY.) HAROLD CHESSON & SON, West Brookfield, Mass. Filed Dec. 11, 1916.

INKONOMY

*Particular description of goods.*—Ink-Well.
*Claims use* since Nov. 15, 1916.

Ser. No. 99,873. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LANDERS, FRARY & CLARK, New Britain, Conn. Filed Dec. 12, 1917.

RESISTAIN

*Particular description of goods.*—Pocket-Knives, Carving-Knives, Table-Knives, Orange-Knives, Fruit-Knives, Hunting-Knives, Fish-Knives, Butter-Knives, Scraping-Knives, Grape-Fruit Knives, Slicing-Knives, Oyster-Knives, Factory-Knives, Banana-Knives, Sloyd-Knives, One-Arm-Man Knives, Pie-Knives, Butcher-Knives, Cheese-Knives, Oil-Cloth Knives, Bread-Knives, Skinning-Knives, Cigar-Knives, Hacking-Knives, Broom-Corn Knives, Paper-Hangers' Knives, Pruning-Knives, Lemon-Knives, Paring-Knives, Boning-Knives, Beet-Knives, Rubber-Knives, Children's Knives, Steak-Knives, Tobacco-Knives, Clam-Knives, Ribbing-Knives, Cotton-Sampling Knives, Splitting-Knives, Cake-Knives, Cooks' Knives, Pallet-Knives, Hop-Knives, Pork-Knives, Bread-and-Butter Knives, Putty-Knives, Shoe-Knives, Gliding-Knives, Medium Knives, Dessert-Knives Having Blades of Base Metal, and Butter-Spades and Butter-Trowels, Carvers, Cleavers, Ice-Chisels and Ice-Picks, Knife Ink-Erasers, Market-Steels and Kitchen-Steels, Scissors and Shears, Razors and Safety-Razors, Vegetable-Slicers.
*Claims use* since May, 1916.

Ser. No. 99,916. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) GEORGE BORGFELDT & CO., New York, N. Y. Filed Dec. 14, 1916.

KEWPIE

*Particular description of goods.*—Ribbon-Wire, Button-Hooks, Corset and Shoe Laces, Braid-Tape; Celluloid Cuff-Protectors, Glove-Stretchers, Sewing and Darning Needles and Needle-Cases, Crochet and Knitting Needles, Hooks and Eyes; Beads, Placket-Fasteners; Buttons for Attachment to Wearing-Apparel, Except Precious Metal; Hair-Curlers other Than Electric, and Fans.
*Claims use* since about the middle of March, 1914.





Ser. No. 100,063. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KERNREX MEDICATED EARTH CO., Walla Walla, Wash. Filed Dec. 20, 1916.

Medicta

*Particular description of goods.*—Pyorrhea, Cuts, Burns, Running Sores, Catarrh, Piles, Lumbago, Eczema, Dandruff, Sore Feet, and Poison-Oak Poisoning.
*Claims use* since October, 1916.

Ser. No. 100,070. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) G. EDWARD SCHULTZ & CO., Washington, D. C. Filed Dec. 20, 1916.

MAKEM LAY

No claim being made to the words "Poultry Feeds" nor to the representation of a hen.
*Particular description of goods.*—Poultry Foods.
*Claims use* since Nov. 1, 1915.

Ser. No. 100,083. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE A. STRASSBURGER CO., INC., Pittsburgh, Pa. Filed Dec. 21, 1916.



Dianola

Trade-mark for the word "Phonograph" being disclaimed.
*Particular description of goods.*—Phonographs and Phonograph-Records.
*Claims use* since Dec. 1, 1915.

Ser. No. 100,151. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA-PACIFIC FISHERIES, Portland, Oreg. Filed Dec. 26, 1916. Under ten-year proviso.

SEA LION

*Particular description of goods.*—Canned Salmon.
*Claims use* since 1889.

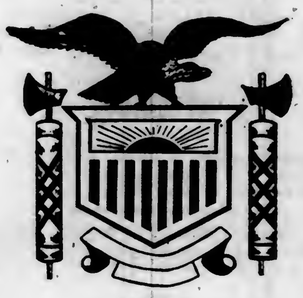
Ser. No. 100,170. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE KROGER GROCERY & BAKING CO., Cincinnati, Ohio. Filed Dec. 26, 1916. Under ten-year proviso.

Country Club



*Particular description of goods.*—Canned Salmon, Canned Cove-Oysters, Canned Shrimp, Canned Tuna Fish, Cocoa, Canned Peaches, and Canned Chilli-con-Carne.
*Claims use* since July 1, 1883.

Ser. No. 100,337. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ROCHESTER BUTTON COMPANY, Rochester, N. Y. Filed Jan. 3, 1917.



No claim is made for the words "None but the best is good enough."
*Particular description of goods.*—Buttons Adapted for Use for Attachment to Personal Apparel.
*Claims use* since Oct. 1, 1910.

Ser. No. 100,465. (CLASS 15. OILS AND GREASES.) THE ATLANTIC REFINING COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917.




The crossed arrows and the outer regular border are printed in red.
*Particular description of goods.*—Lubricating and Paraffin Oils; Cylinder, Engine, Motor, Spindle, Neutral, Black, Transformer, Transmission, Journal, Compounded, Turbine, Gas, Fuel, Road, and Roofing Oils; Lubricating-Greases; Axle, Gear, Black, Petroleum, and Transmission Greases; Naphthas, Gasolene.
*Claims use* since Jan. 28, 1915.

Ser. No. 100,400. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) HOWARD DANIEL DARLINGTON, Dayton, Ohio. Filed Jan. 9, 1917.

Organolagraf

*Particular description of goods.*—A Cabinet Talking-Machine.
*Claims use* since Sept. 15, 1916.

Ser. No. 100,531. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE VAN TILBURG OIL COMPANY, Minneapolis, Minn. Filed Jan. 10, 1917.

CEMENT-O-LAC

*Particular description of goods.*—Concrete-Hardener.
*Claims use* since Aug. 1, 1916.

Ser. No. 100,561. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAN-CURA-GON CO., Indianapolis, Ind. Filed Jan. 12, 1917.

SAN-CURA-GON

*Particular description of goods.*—A Remedy for Gonorrhea and Gleet.
*Claims use* since January, 1915.

Ser. No. 100,572. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) JULIUS BLUM, New York, N. Y. Filed Jan. 13, 1917.

SIMPLEX

No claim is made to the diamond-shaped figure as a part of applicant's trade-mark.
*Particular description of goods.*—Cold-Finished Steel, Steel Balls, Alloy Steels, Tool-Steel, and Machinery-Steel, Metal Stamped into Strips or Sheets.
*Claims use* since June 4, 1915.

Ser. No. 100,661. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. BOURJOIS & CO. INC., New York, N. Y. Filed Jan. 17, 1917.



No claim being made herein to any of the words appearing on the label.
*Particular description of goods.*—Toilet Powder.
*Claims use* in the business of said corporation and in the business of its predecessors for more than twenty years.

Ser. No. 100,710. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. F. HOUGHTON & Co., Philadelphia, Pa. Filed Jan. 18, 1917.

QUICK-LIGHT

*Particular description of goods.*—Carburizing and Case-Hardening Materials.
*Claims use* since Dec. 28, 1916.

Ser. No. 100,754. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMSON ROSENBLATT, New York, N. Y. Filed Jan. 19, 1917.

IKTOLE

*Particular description of goods.*—Medicinal Sulfonic Acids and Their Salts Derived from Mineral Shale.
*Claims use* since Jan. 1, 1917.

Ser. No. 100,839. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY E. ZUTZ, St. Paul, Minn. Filed Jan. 22, 1917.




While in actual practice the word "Preparations" is used associated with the word "Oakleaf," disclaimer is made to the word "Preparations" as a part of the trade-mark.
*Particular description of goods.*—Shampoo-Powder, Shampoo Liquid, and Pile-Ointment.
*Claims use* since Oct. 31, 1916.

Ser. No. 100,855. (CLASS 39. CLOTHING.) THE KOVAR COMPANY, INC., New York, N. Y. Filed Jan. 23, 1917.

KOVAROK

*Particular description of goods.*—Ladies' Silk Undergarments.
*Claims use* since Nov. 28, 1916.





Ser. No. 100,863. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SPHINX FUEL DEVICES COMPANY, INC., Brooklyn, N. Y. Filed Jan. 23, 1917.




The words "Fuel Devices" appearing upon the accompanying facsimile form no part of applicant's trade-mark and are hereby disclaimed.
*Particular description of goods.*—Carbureters.
*Claims use* since Dec. 16, 1916.

Ser. No. 100,866. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) VAN VLEET-MANSFIELD DRUG COMPANY, Memphis, Tenn. Filed Jan. 23, 1917.

"La Creole"

*Particular description of goods.*—Hair-Pomade, Shampoo Preparations, Tooth-Paste, Skin-Lotion, Rouge, Rice Powder, Tooth-Powder, and Peroxid Cream.
*Claims use* since about January, 1911.

Ser. No. 100,908. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) LOUIS G. ZECHIEL, South Coventry, Conn. Filed Jan. 24, 1917.

Rayn-Ite

*Particular description of goods.*—A Composition in Paste Form Used on Window-Panes and Eyeglasses to Prevent Frost, Fog, Hail, Sleet, or other Vapors from Collecting on Same and Obscuring Vision.
*Claims use* since Dec. 15, 1916.

Ser. No. 100,923. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RICHARD HAUGHTON, Paoli, Pa. Filed Jan. 25, 1917. Under ten-year proviso.

Great Valley Mills

*Particular description of goods.*—Wheat-Flour, Yellow Cornmeal, White Cornmeal, Rye-Flour, Graham Flour, Cracked Oats, Cracked Wheat, Cracked Rice, Cracked Barley, Cracked Rye, Buckwheat-Flour, Natural Brown Rice, Natural Brown Barley, Bran, Natural Brown Barley-Flour, Natural Brown Rice-Flour, Whole-Oat Flour.
*Claims use* since the year 1859.

Ser. No. 100,957. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE H. B. CLAFLIN CORPORATION, New York, N. Y. Filed Jan. 26, 1917.

TRIMEREI

Comprising the word "Trimerei."
*Particular description of goods.*—Trimmings—viz., Wash-Braids, Fancy Braids, Wash-Insertings, and Fancy Insertings for Dresses, Aprons, or Undergarments.
*Claims use* since Oct. 1, 1916.

Ser. No. 100,993. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WALTER W. LONGSTRETH, INCORPORATED, Rosemont, Pa. Filed Jan. 27, 1917.




No claim being made to the words "Longstreth," "Rosemont, Pa.," and "Trade-Mark."
*Particular description of goods.*—Automobile-Varnish.
*Claims use* since October, 1915.

Ser. No. 100,999. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE CASEMENT HARDWARE CO., Chicago, Ill. Filed Jan. 29, 1917.




No claim is made to the words "Dandelion" or "Rake" or the representation of a rake.
*Particular description of goods.*—Rakes.
*Claims use* since Jan. 25, 1917.

Ser. No. 101,023. (CLASS 37. PAPER AND STATIONERY.) SANIWAX PAPER CO., Kalamazoo, Mich. Filed Jan. 17, 1917.

SANIWAX

*Particular description of goods.*—Wrapping-Paper.
*Claims use* since Dec. 22, 1916.

Ser. No. 101,120. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) L. C. CHASE & COMPANY, Boston, Mass. Filed Feb. 2, 1917. Under ten-year proviso.

CHASE

*Particular description of goods.*—Pile Fabrics Made Wholly or in Part of Mohair or other Kinds of Cattle-Hair; Plush or Pile Robes for Carriage, Motor, and other Purposes Made Wholly or in Part of Mohair or other Kinds of Cattle-Hair; Wool Robes, Including Steamer-Rugs, with and without Fringe; Pile Fabrics Made Wholly or in Part of Mohair or other Cattle-Hair for Upholstery Purposes, Woven Textile Fabrics Made Wholly or in Part of Cotton Suitable for Slip-Covers and other Similar Purposes, Cloakings and Trimmings Made Wholly or in Part of Mohair and other Kinds of Cattle-Hair, Linings Made

of Pile Fabrics Made Wholly or in Part of Mohair or other Cattle-Hair, Woven Fabrics Used Particularly in the Lighter Weights for Garment-Linings and in the Heavier Weights for Garments, and Kersey, a Woven Fabric Used Particularly for Linings of Horses' Collars and Similar Purposes.

*Claims use* since at least as early as 1867.

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Ser. No. 101,124. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE GLOBE SOAP COMPANY, Cincinnati, Ohio. Filed Feb. 2, 1917.

ABUELA

*Particular description of goods.*—Soap, Soap Powder, and Washing-Powder.
*Claims use* since Sept. 5, 1916.

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Ser. No. 101,152. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. B. MATTHEWS & SONS, New Orleans, La. Filed Feb. 3, 1917.

GAME COCK



*Particular description of goods.*—Poultry Feed.
*Claims use* since Sept. 28, 1916.

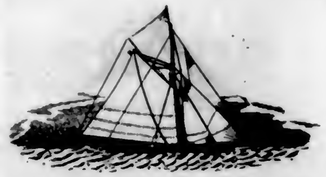
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Ser. No. 101,179. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEATTLE GRAIN CO., Seattle, Wash. Filed Feb. 5, 1917.

HI-UP

*Particular description of goods.*—Self-Rising Flour.
*Claims use* since Jan. 6, 1917.

Ser. No. 101,223. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed Feb. 8, 1917.



*Particular description of goods.*—Toilet-Paper.
*Claims use* since Aug. 1, 1887.

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Ser. No. 101,261. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COMMON SENSE GUM COMPANY, New York, N. Y. Filed Feb. 9, 1917.

NUGGETS

*Particular description of goods.*—Chewing-Gum.
*Claims use* since Feb. 1, 1917.

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Ser. No. 101,305. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE STERN & SAALBERG COMPANY, New York, N. Y. Filed Feb. 10, 1917.

LANCE

Comprising the word "Lance" pierced by a lance.
*Particular description of goods.*—Cough-Drops.
*Claims use* since Jan. 25, 1917.

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Ser. No. 101,306. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE STERN & SAALBERG COMPANY, New York, N. Y. Filed Feb. 10, 1917.




Comprising the representation of a knight in armor piercing the word "Lance" with a lance.
*Particular description of goods.*—Cough-Drops.
*Claims use* since Jan. 25, 1917.

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Ser. No. 101,334. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAURICE LETAW, Birmingham, Ala. Filed Feb. 12, 1917.

COCOLIVE

*Particular description of goods.*—A Hair Shampoo and Tonic.
*Claims use* since September, 1916.





Ser. No. 101,346. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILFRED WALLACE, New York, N. Y. Filed Feb. 12, 1917.

GOLDEN HUE

*Particular description of goods.*—Wheat-Flour.
*Claims use* since April, 1916.

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Ser. No. 101,347. (CLASS 37. PAPER AND STATIONERY.) SHEA SMITH & CO., Chicago, Ill. Filed Feb. 13, 1917. Under ten-year proviso.

SHEA SMITH & CO.

*Particular description of goods.*—Desk-Pads, Lead-Pencils, Bank-Pins, Rubber Bands, Ledger-Indexes, Note-Books; Books, either Blank, or Blank with Ruling, or Blank with Ruling and Printing; Envelops, Letter-Files, Writing and Blotting Papers, and Printed and Ruled Papers, Job-Printed.
*Claims use* since 1893.

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Ser. No. 101,386. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE CUSSINS & FEARN CO., Columbus, Ohio. Filed Feb. 15, 1917.

C.F.P.

*Particular description of goods.*—Oil-Paint.
*Claims use* since about Jan. 1, 1907.

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Ser. No. 101,400. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM E. CRUTCHER, Elizabethtown, Ky. Filed Feb. 15, 1917.

REX

*Particular description of goods.*—A preparation for the Treatment of Hog-Cholera.
*Claims use* since Sept. 18, 1916.

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Ser. No. 101,403. (CLASS 39. CLOTHING.) ROBERT REIS & CO., New York, N. Y. Filed Feb. 15, 1917. Under ten-year proviso.

GUARANTEED

UNDERWEAR

Consisting of the term "Guaranteed Underwear," no claim being made to either the word "Guaranteed" or the word "Underwear" except in the combination and order of words as shown.
*Particular description of goods.*—Underwear as Follows: Shirts, Drawers, and Union-Suits in Both Knit and Textile Fabrics.
*Claims use* since 1888.

Ser. No. 101,407. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PHILIP L. SOMMER, New York, N. Y. Filed Feb. 15, 1917.

POSTAL

*Particular description of goods.*—Coffee.
*Claims use* since Oct. 24, 1916.

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Ser. No. 101,440. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FANNIE MCCALL BROWN, New Canaan, Conn. Filed Feb. 17, 1917.

WHITE FEATHER FARM

*Particular description of goods.*—Poultry and Eggs.
*Claims use* since about February, 1914.

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Ser. No. 101,469. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILLIAM G. ALBRECHT, Baltimore, Md. Filed Feb. 19, 1917.

AL-BRENTO

The lines and background around the lettering or name "Al-Brento" are intended to indicate shading only in order to make the name prominent.
*Particular description of goods.*—Anticlouding and Cleaning Materials. The Preparation is Made in Caked Form and is Used for Preventing the Accumulation of Rain, Moisture, Steam, or Dirt on Glass, Wind-Shields, and the Like Surfaces and for Cleaning Glass and Similar Surfaces.
*Claims use* since Feb. 8, 1917.

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Ser. No. 101,485. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) FEDERAL EXPORT CORPORATION, New York, N. Y. Filed Feb. 19, 1917.




*Particular description of goods.*—Automobiles, Wagons, Carriages, Coaches; Iron and Steel Tires for Automobiles, Wagons, Carriages, and Coaches; Steel Springs for Automobiles, Wagons, Carriages, and Coaches; Aeroplanes, Flying-Machines.
*Claims use* since Jan. 1, 1916.

Ser. No. 101,498. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MUTUAL SALES CO., Kansas City, Mo. Filed Feb. 17, 1917.



The mark is lined to represent red color.

*Particular description of goods.*—An Antiseptic Surgical Dressing and Dusting-Powder for Cuts and Burns; and for Preparations for Fever and to Control Temperature; for Constipation of Infants and Children; for Grippe, Colds, and Malaria; for Biliousness and Bilious Colic; for Nervous Headache and Hysteria; for Diarrhea and Dysentery; for Coughs and Bronchitis; for Constipation; for Pain, as Headache, Neuralgia, Sciatica, and Monthly Pains; for Dyspepsia and Indigestion; for a Heart Stimulant and Tonic; for Croup; as an Emergency Remedy for Relieving Headache; as a General and Blood Tonic in Conditions of Debility; as a Spray or Gargle in Catarrh, Sore Throat, Tonsilitis, and as a Mouth-Wash; for Disorders of Generative Organs Which Cause Symptoms as Painful Menstruation, Ovarian Colic, and Uterine Pains; and for Acute and Chronic Articular Rheumatism.

*Claims use* since Jan. 8, 1917.

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Ser. No. 101,508. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Feb. 19, 1917.

PENZA

No claim being made to the exclusive use of any matter appearing thereon except the word "Penza" and the rectangular figure upon which it is shown.

*Particular description of goods.*—Tea.

*Claims use* since Mar. 5, 1907.

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Ser. No. 101,509. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Feb. 19, 1917.

APALDA

No claim being made to the exclusive use of any matter appearing thereon except the word "Apalda" and the rectangular figure upon which it is shown.

*Particular description of goods.*—Tea.

*Claims use* since Mar. 5, 1907.

Ser. No. 101,513. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCHULTZ PHARMACY, Schleswig, Iowa. Filed Feb. 19, 1917.

KATOLENE

*Particular description of goods.*—A Medical Compound for Use in Preventing and Treating Bloat in Cattle and for a Preventive Against Cornstalks Disease.

*Claims use* since Jan. 29, 1917.

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Ser. No. 101,520. (CLASS 15. OILS AND GREASES.) TIDE WATER OIL COMPANY, New York, N. Y. Filed Feb. 19, 1917. Under ten-year proviso.

CHESTER

*Particular description of goods.*—Petroleum Products Consisting of Lubricating Oils and Greases, Kerosene, Gasolene, Benzin, Naphtha, and Burning-Oils.

*Claims use* since July, 1881.

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Ser. No. 101,558. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES M. STEPHENS, near Fuquay Springs, N. C. Filed Feb. 20, 1917.



The portrait shown being that of myself.

*Particular description of goods.*—A Preparation for Cancers.

*Claims use* since Jan. 1, 1917.

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Ser. No. 101,588. (CLASS 37. PAPER AND STATIONERY.) AMERICAN LEAD PENCIL COMPANY, New York, N. Y. Filed Feb. 23, 1917.

FORUM

*Particular description of goods.*—Lead-Pencils.

*Claims use* since Dec. 1, 1906.

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Ser. No. 101,690. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INTERNATIONAL HARVESTER CORPORATION, Chicago, Ill. Filed Feb. 26, 1917.

TITAN

*Particular description of goods.*—Tractors and Internal-Combustion Engines and Parts Thereof.

*Claims use* since Jan. 1, 1910.





Ser. No. 101,691. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INTERNATIONAL HARVESTER CORPORATION, Chicago, Ill. Filed Feb. 26, 1917.

MOGUL

*Particular description of goods.*—Tractors and Internal-Combustion Engines and Parts Thereof.

*Claims use* since Jan. 1, 1910.

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Ser. No. 101,711. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) S. O. S. MANUFACTURING COMPANY, INC., Lake Charles, La. Filed Feb. 26, 1917.

S.O.S.

*Particular description of goods.*—A Dandruff-Remover and Hair-Dresser.

*Claims use* since August, 1916.

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Ser. No. 101,714. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SAL-ODA CHEMICAL CO., Oneonta, N. Y. Filed Feb. 26, 1917.

SAL-ODA

*Particular description of goods.*—A Preparation for the Treatment of Rheumatism.

*Claims use* since Feb. 2, 1917.

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Ser. No. 101,736. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) GENERAL OPTICAL COMPANY, INC., New York, N. Y. Filed Feb. 27, 1917.

NUVRAY

*Particular description of goods.*—Optical Lenses.

*Claims use* since Feb. 8, 1917.

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Ser. No. 101,750. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMUEL NEUMAN, Chicago, Ill. Filed Feb. 27, 1917.

DE-OX-IDE

*Particular description of goods.*—A Deodorizer and Disinfectant.

*Claims use* since Dec. 15, 1916.

Ser. No. 101,752. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANDREW P. PADGETT, Augusta, Ga. Filed Feb. 27, 1917.

VIXEN

*Particular description of goods.*—A Preparation for Disinfecting Purposes and for Exterminating Insects, Disease-Germs, and Vermin.

*Claims use* since February, 1917.

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Ser. No. 101,777. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE DANDERCIDE CO., Pocatello, Idaho. Filed Feb. 28, 1917.

Dandercide

*Particular description of goods.*—A Tonic in the Use of the Treatment of the Hair and Scalp.

*Claims use* since Feb. 1, 1917.

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Ser. No. 101,792. (CLASS 39. CLOTHING.) MORRIS & CO., Baltimore, Md. Filed Feb. 28, 1917.

MISS PLATTSBURG

*Particular description of goods.*—Women's and Children's Blouses, Coats, Skirts, and Bloomers.

*Claims use* since Feb. 1, 1917.

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Ser. No. 101,794. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMUEL H. MCKEAN, New York, N. Y. Filed Feb. 28, 1917.

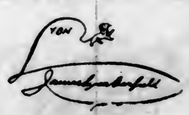
Septolac

*Particular description of goods.*—An Antiseptic Eye-Wash in Tablet Form to be Dissolved in Water.

*Claims use* since Feb. 10, 1917.

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Ser. No. 101,817. (CLASS 37. PAPER AND STATIONERY.) JAMES LYON GARFIELD, Philadelphia, Pa. Filed Mar. 1, 1917.



The signature being that of the applicant.

*Particular description of goods.*—Loose Card-Leaves, Loose-Card-Leaf Fillers, Card-Slips, Card-Guides, Index-Tabs, Binders, Loose Leaves, Index-Leaves, Index-Cards, Desk-Pads, Envelops for Filing Purposes, and Collapsible Wallets for Filing Purposes.

*Claims use* since about the latter part of December, 1915.

Ser. No. 101,818. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) RICHARD HUDNUT, New York, N. Y. Filed Mar. 1, 1917.

ELAINE

*Particular description of goods.*—Soap, (Solid and Liquid.)
*Claims use* since Jan. 27, 1917.

Ser. No. 101,823. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PAYNE CHEMICAL COMPANY, Minneapolis, Minn. Filed Mar. 1, 1917.



*Particular description of goods.*—Dye.
*Claims use* since Sept. 16, 1916.

Ser. No. 101,834. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) WALTER G. RUGGLES COMPANY, Boston, Mass. Filed Mar. 2, 1917.

R-K

*Particular description of goods.*—Stop and Check Valves, Balanced Valves, Float-Valves, Relief-Valves, Pressure-Modifying Valves and Regulators for Controlling the Same, and Exhaust-Heads.
*Claims use* since January, 1911, on exhaust-heads, and all other goods since on or about Aug. 1, 1915.

Ser. No. 101,840. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THREE-A MFG. CO., New Haven, Conn. Filed Mar. 2, 1917.

3-A

*Particular description of goods.*—A Cleaning Fluid for White Leather and Canvas.
*Claims use* since Feb. 10, 1917.

Ser. No. 101,847. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) AMERICAN STEEL PRODUCTS Co., Macomb, Ill. Filed Mar. 3, 1917.




The portrait in the trade-mark is fanciful.
*Particular description of goods.*—Hand-Carts and Shop-Trucks.
*Claims use* since Aug. 15, 1916.

Ser. No. 101,851. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BERNADETTE CHALOULT CLÉMENT, London, England. Filed Mar. 3, 1917.

YADIL

*Particular description of goods.*—Antiseptics and Disinfectants.
*Claims use* since Oct. 1, 1915.

Ser. No. 101,857. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. G. CHEMICAL PRODUCTS COMPANY, Cleveland, Ohio. Filed Mar. 3, 1917.

KALKOL

*Particular description of goods.*—An Antifreezing Compound.
*Claims use* since Feb. 1, 1917.

Ser. No. 101,860. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) INTERSTATE COTTON OIL REFINING CO., Sherman, Tex. Filed Mar. 3, 1917.




*Particular description of goods.*—Soap.
*Claims use* since July 13, 1914.



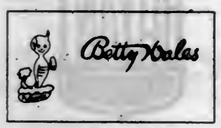


Ser. No. 101,897. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AMERICAN CHEMICAL PAINT COMPANY, Philadelphia, Pa. Filed Mar. 6, 1917.

DEOXYLYTE

*Particular description of goods.*—A Rustless Pickle for Steel.
*Claims use* since Jan. 1, 1917.

Ser. No. 101,910. (CLASS 47. WINES.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Mar. 6, 1917.




Comprising the words "Betty Wales" and "Ploshkin," with the doll figure, all within a rectangle.
*Particular description of goods.*—Sweet and Sour Wines, Clarets, Sauternes, Sherry, Grape-Wine, Port, Champagne, Sparkling Wines, and Rhine Wine.
*Claims use* since Jan. 5, 1917.

Ser. No. 101,911. (CLASS 48. MALT EXTRACTS AND LIQUORS.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Mar. 6, 1917.




Comprising the words "Betty Wales" and "Ploshkin," with the doll figure, all within a rectangular figure.
*Particular description of goods.*—Beer, Ale, Stout, Extracts, and Liquors Brewed from Malt.
*Claims use* since Jan. 5, 1917.

Ser. No. 101,916. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Mar. 6, 1917.




Comprising the words "Betty Wales" and "Ploshkin," with the doll figure, all within a rectangle.
*Particular description of goods.*—Carbonated Mineral and Spring Water, Distilled Water, Grape-Juice, Flavor, Extracts, Syrups, and Ingredients for Use in Non-Alcoholic Soda-Fountain Beverages, and Non-Effervescent Waters and Soft Drinks.
*Claims use* since Jan. 5, 1917.

Ser. No. 101,924. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANTHONY M. HANCE, Philadelphia, Pa. Filed Mar. 6, 1917.

POTASSAPHEN

*Particular description of goods.*—Antiseptic Compounds.
*Claims use* since Nov. 27, 1916.

Ser. No. 101,934. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LESHER, WHITMAN & CO. INC., New York, N. Y. Filed Mar. 6, 1917.

Honey

No claim is made to the exclusive use of the word "Cloth."
*Particular description of goods.*—A Dress Fabric with Cotton Warp and Filling of Wool or Mohair or Alpaca, Either Alone or Combined.
*Claims use* since Feb. 13, 1917.

Ser. No. 101,938. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARTIN H. SMITH CO., New York, N. Y. Filed Mar. 6, 1917.

GLYKERON

Comprising the word "Glykeron."
*Particular description of goods.*—A Treatment for Coughs, Bronchitis, Phthisis, Asthma, Laryngitis, Pneumonia, and Whooping-Cough.
*Claims use* since Feb. 2, 1917.

Ser. No. 101,946. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORTHAM WARREN CORPORATION, New York, N. Y. Filed Mar. 6, 1917.

Cutex

*Particular description of goods.*—Cuticle-Removers, Nail-White, Nail-Bleach, Nail-Polish, Nail-Enamel, Rouge for Nails, Skin, and Lips, and Cuticle-Salve.
*Claims use* since Aug. 24, 1912.

Ser. No. 101,959. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) INTER-OCEAN FILM CORPORATION, New York, N. Y. Filed Mar. 7, 1917.

INTER-OCEAN

*Particular description of goods.*—Moving-Picture or Cinematograph Films, Cards or Pictures for Use in Moving-Picture Machines or Cinematographs, and Apparatus for Taking and Exhibiting Such Films or Pictures.
*Claims use* since Oct. 1, 1916.

Ser. No. 101,960. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) HELEN JEDELL, Newark, N. J. Filed Mar. 7, 1917.

HEAT-OMETER

*Particular description of goods.*—Automobile-Radiator-Cap Indicating Devices.
*Claims use* since July 1, 1916.

Ser. No. 101,962. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) LAUTZ BROS. & CO., Buffalo, N. Y. Filed Mar. 7, 1917.

OAK LEAF

*Particular description of goods.*—Soap.
*Claims use* since 1887.

Ser. No. 101,974. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THOMAS YEOMANS, New York, N. Y., assignor to Ucan Specialties Corporation, New York, N. Y., a Corporation of New York. Filed Mar. 7, 1917.

UCAN

*Particular description of goods.*—Hair-Cutters.
*Claims use* since Dec. 23, 1916.

Ser. No. 101,999. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAVID BECKER, Yonkers, N. Y. Filed Mar. 9, 1917.

FLAXO

*Particular description of goods.*—Cough Medicine.
*Claims use* since Dec. 1, 1916.

Ser. No. 102,004. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FOOT FRIEND COMPANY, Ontario, Oreg. Filed Mar. 9, 1917.

FOOT FRIEND

*Particular description of goods.*—A Preparation for Foot-Powder and Chilblains.
*Claims use* since May 15, 1916.

Ser. No. 102,020. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE BRYANT ELECTRIC COMPANY, Bridgeport, Conn. Filed Mar. 10, 1917.

BRYANT

*Particular description of goods.*—Sockets and Receptacles for Electric Lamps and Plugs, Electric Pluge Therefor, Rosettes for Electric Wiring, Cut-Outs and Fuses, Adapters, Pull-Chains, Combination Outlet Devices, Cord Connections, Contacts, Lamp-Grips, Socket-Handles, Shade-Holders, Insulating-Links, Wire Lugs, Face-Plates, Reducers, and Parts for All of Said Devices.
*Claims use* since Sept. 17, 1909.

Ser. No. 102,021. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE BRYANT ELECTRIC COMPANY, Bridgeport, Conn. Filed Mar. 10, 1917.

PERKINS

*Particular description of goods.*—Electric Switches, Bases Therefor, Switch-Boxes, Switch Cut-Outs, Switch-Keys, Switch-Rosettes, and Parts for All of Said Devices.
*Claims use* since Sept. 17, 1909.

Ser. No. 102,031. (CLASS 39. CLOTHING.) FAN TAN DRESS CO., New York, N. Y. Filed Mar. 10, 1917.

FAN TAN

*Particular description of goods.*—Ladies' and Children's Outer Dress, Street, and Sport Skirts.
*Claims use* since Dec. 15, 1916.





Ser. No. 102,042. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOUIS L. LASKARIS, Elmira, N. Y. Filed Mar. 10, 1917.

BANQUET

*Particular description of goods.*—Ice-Cream.
*Claims use* since Feb. 7, 1916.

Ser. No. 102,044. (CLASS 6. CHEMICALS MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN NECLAS, New Haven, Conn. Filed Mar. 10, 1917.

NECL-ASIDE

*Particular description of goods.*—A Preparation for the Treatment of the Scalp.
*Claims use* since Feb. 17, 1917.

Ser. No. 102,056. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS MEDICINE CO., Allentown, Pa. Filed Mar. 10, 1917.

*Particular description of goods.*—A Salve for Use in Treating Colds, Coughs, Piles, Sore Feet, Headache, and Neuralgia.
*Claims use* since Feb. 1, 1917.

Ser. No. 102,073. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EAGLE MANUFACTURING CO., INC., Baltimore, Md. Filed Mar. 12, 1917.

EMCO

*Particular description of goods.*—Ice-Cream Cones.
*Claims use* since March, 1914.

Ser. No. 102,108. (CLASS 39. CLOTHING.) BEST & COMPANY, New York, N. Y. Filed Mar. 13, 1917.

*Fillette*

*Particular description of goods.*—Girls' and Misses' Undergarments and Clothing—Namely, Dresses, Skirts, Coats, Suits, Bloomers, Waists, Blouses, Nightgowns, Petticoats, Bodices, Drawers, Chemises, Combinations, Riding-Habits, Sport-Coats, Golf-Suits, Bathing-Suits, Swimming-Suits, Caps, Gloves, Collars, Sweaters, Mufflers, Bath-Robes Made Out of Textile Material, and Dresses, Skirts, Coats, Suits Bloomers, Waists, Blouses, Nightgowns, Petticoats, Bodices, Drawers, Chemises, Combinations, Riding-Habits, Sport-Coats, Golf-Suits, Bathing-Suits, Swimming-Suits, Caps, Gloves, Collars, Sweaters, Mufflers, Bath-Robes Made Out of Knitted Material, and Gloves, Slippers, House-Slippers, Boots, Overgaiters, Puttees and Leggings, Riding-Boots and Riding-Shoes, Shoes, Rubbers, Hats and Caps Made Out of Leather.
*Claims use* since Feb. 26, 1917.

Ser. No. 102,118. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EUSTAU R. KNOTT, Chelsea, Mass. Filed Mar. 13, 1917.

Ampoco

*Particular description of goods.*—Popcorn Confections.
*Claims use* since Feb. 1, 1917.

Ser. No. 102,134. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN BENE & SONS, INC., Brooklyn, N. Y. Filed Mar. 14, 1917.

NATIONAL

*Particular description of goods.*—Peroxid.
*Claims use* since Jan. 1, 1917.

Ser. No. 102,144. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHNSON & JOHNSON, New Brunswick, N. J. Filed Mar. 14, 1917.

"REDINTOL"

*Particular description of goods.*—A Waxen Preparation Used as a Dressing for Burns.
*Claims use* since January, 1917.

Ser. No. 102,173. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) M. J. WOHL & CO., Brooklyn, N. Y. Filed Mar. 15, 1917.

PANELITE

Consisting of the word "Panelite."
*Particular description of goods.*—Lighting-Cabinets Equipped with Electric Lamps.
*Claims use* since about Nov. 1, 1916.

Ser. No. 102,175. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE OMEGA CHEMICAL COMPANY, New York, N. Y. Filed Mar. 15, 1917.

Carmo

*Particular description of goods.*—Tooth-Paste.
*Claims use* since Mar. 10, 1917.

Ser. No. 102,179. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CARLISLE PACKING CO., Seattle, Wash. Filed Mar. 16, 1917.

Golden North

*Particular description of goods.*—Canned Salmon.
*Claims use* since July 2, 1916.

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Ser. No. 102,210. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HART & COMPANY, New York, N. Y. Filed Mar. 17, 1917.

ARROW
Hart & Company

The facsimile signature as signed by Albert Fromm.
*Particular description of goods.*—Bouillon Cubes and Beef Extracts.
*Claims use* since Aug. 21, 1916.

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Ser. No. 102,223. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUNKEL BROTHERS, INC., New York, N. Y. Filed Mar. 17, 1917.

RUNKEL'S

The trade-mark consists of the word "Runkel's" displayed in white letters on a brown ground.
*Particular description of goods.*—Confections—Namely, Sweet Milk-Chocolate with Roasted Nuts.
*Claims use* since September, 1914.

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Ser. No. 102,240. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NANNIE L. BEANE, Parkin, Ark. Filed Mar. 19, 1917.

ETHEOPIAN

*Particular description of goods.*—A Hair-Grower.
*Claims use* since June 15, 1915.

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Ser. No. 102,246. (CLASS 39. CLOTHING.) WM. FILENE'S SONS COMPANY, Boston, Mass. Filed Mar. 19, 1917.

SCOTTIE

*Particular description of goods.*—Golf-Shoes, Golf Hats and Caps, and Golf-Gloves, Golf-Shirts, Golf-Hosiery, Golf Coats and Suits for Men and Women.
*Claims use* since Mar. 10, 1917.

Ser. No. 102,250. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LUCY DUFF GORDON, New York, N. Y. Filed Mar. 19, 1917.

Lady Duff Gordon

The words "Lady Duff Gordon" appearing in the facsimile handwriting of the applicant.
*Particular description of goods.*—Perfumes, Toilet Waters, Face-Creams, Talcum Powder, Face-Powder, Face-Lotion, Hair Washes and Shampoos, and Hair-Dyes.
*Claims use* since Feb. 20, 1917.

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Ser. No. 102,255. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HASKIN PRODUCTS CO., Goshen, Ind. Filed Mar. 19, 1917.

BLUE BIRD

*Particular description of goods.*—Washing-Powder.
*Claims use* since Mar. 8, 1917.

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Ser. No. 102,269. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE S. S. WENZELL MACHINE COMPANY, Philadelphia, Pa. Filed Mar. 19, 1917.

Duplex

*Particular description of goods.*—Ferrules, Tips, and Fingers of Brushes for Bottle-Washing Machines.
*Claims use* since about July 1, 1901.

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Ser. No. 102,271. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEPHEN F. WHITMAN & SON, INCORPORATED, Philadelphia, Pa. Filed Mar. 19, 1917.

Nehi

*Particular description of goods.*—Chocolates and Candy.
*Claims use* since June 1, 1908.

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Ser. No. 102,279. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE BORGFELDT & CO., New York, N. Y. Filed Mar. 20, 1917.

TROIKA

*Particular description of goods.*—Face-Powder, Toilet Powder, Tooth Powder and Pastes, Tooth-Washes, Rice Powder, Smelling-Salts, Talcum Powder, Sachets, Bath-Salts, Toilet Waters, Perfumes Used Either Pure or as an Ingredient in Toilet Preparations in Admixtures with Suitable Substances in the Form of Pastes, Salves, Soaps, Powders, Pencils, and Liquids; Nail-Enamels, Eyebrow-Pencils; Rouges, (Liquid, Powder, and Compact;) Pomades, Pomade Sticks, Hair-Wax; Nail-Polishes, Toilet Creams, Hair-Tonics, Hair Dyes and Bleaches.
*Claims use* since Mar. 16, 1917.





Ser. No. 102,297. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) O. A. NELSON & COMPANY, San Francisco, Cal. Filed Mar. 20, 1917.

THELMA

*Particular description of goods.*—Canned Vegetables, Spaghetti, and Salad-Dressings.
*Claims use* since May 1, 1916.

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Ser. No. 102,315. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE E. S. KIBBE COMPANY, Hartford, Conn. Filed Mar. 21, 1917.

AUNT MARY'S

*Particular description of goods.*—Roasted Coffee.
*Claims use* since January, 1909.

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Ser. No. 102,325. (CLASS 39. CLOTHING.) JOHN WANAMAKER, PHILADELPHIA, Philadelphia, Pa. Filed Mar. 21, 1917.

JEANNE

*Particular description of goods.*—Corsets.
*Claims use* since about Feb. 24, 1917.

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Ser. No. 102,326. (CLASS 39. CLOTHING.) JOHN WANAMAKER, PHILADELPHIA, Philadelphia, Pa. Filed Mar. 21, 1917.

Adora

The word "Adora."
*Particular description of goods.*—Corsets.
*Claims use* since Feb. 15, 1917.

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Ser. No. 102,329. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE H. E. ALLEN MFG. CO. INC., Carthage, N. Y. Filed Mar. 22, 1917.

SO-BOS-SO

*Particular description of goods.*—Insecticides.
*Claims use* since Mar. 1, 1899.

Ser. No. 102,335. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) HAVERFORD CYCLE COMPANY, Philadelphia, Pa. Filed Mar. 22, 1917.

BLACK BEAUTY

*Particular description of goods.*—Motor-Cycles and Bicycles.
*Claims use* since about 1915.

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Ser. No. 102,374. (CLASS 39. CLOTHING.) THE FRIEDMAN COMPANY, New York, N. Y. Filed Mar. 23, 1917.

Woventen

*Particular description of goods.*—Hosiery.
*Claims use* since 1914.

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Ser. No. 102,416. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) INTERNATIONAL DRUG COMPANY, Wilmington, Del. Filed Mar. 24, 1917.



*Particular description of goods.*—Toilet Soaps.
*Claims use* since Oct. 27, 1916.

Ser. No. 102,437. (CLASS 39. CLOTHING.) L. GOLDSTEIN & SON, New York, N. Y. Filed Mar. 26, 1917.

Suco

Comprising the word "Suco."
*Particular description of goods.*—Envelop-Chemise.
*Claims use* since Mar. 16, 1917.

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Ser. No. 102,483. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE FENN MANUFACTURING CO., Charlotte, Mich. Filed Mar. 27, 1917.

GOLD VALUE

*Particular description of goods.*—Earth-Augers and Post-Hole Diggers.
*Claims use* since about October, 1916.

Ser. No. 102,517. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) IDEAL STENCIL MACHINE COMPANY, Belleville, Ill. Filed Mar. 28, 1917.

IDEAL

*Particular description of goods.*—Stencil-Cutting Machines.
*Claims use* since Apr. 1, 1914.

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Ser. No. 102,603. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN RYAN, Baltimore, Md. Filed Mar. 30, 1917. Under ten-year proviso.

ANTI FRICTION

*Particular description of goods.*—Belt-Dressing to Prevent Slipping.
*Claims use* since January, 1886.

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# TRADE-MARK REGISTRATIONS GRANTED

## MAY 1, 1917.

116,388. TOILET-PAPER AND PAPER TOWELS. ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y.
Filed July 26, 1916. Serial No. 96,862. PUBLISHED FEBRUARY 27, 1917.

116,389. TOILET-PAPER AND PAPER TOWELS. ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y.
Filed July 26, 1916. Serial No. 96,863. PUBLISHED FEBRUARY 27, 1917.

116,390. STEEL, STEEL CASTINGS, AND PARTICULARLY MANGANESE-STEEL CASTINGS. AMERICAN MANGANESE STEEL COMPANY, Chicago, Ill.
Filed December 11, 1916. Serial No. 99,831. PUBLISHED FEBRUARY 27, 1917.

116,391. WRITING-PAPER. AMERICAN PAPETERIE COMPANY, Albany, N. Y.
Filed May 20, 1916. Serial No. 95,288. PUBLISHED JANUARY 16, 1917.

116,392. ROAD-MAKING MACHINES. AMERICAN ROAD MACHINERY COMPANY INC., Kennett Square, Pa.
Filed January 15, 1917. Serial No. 100,604. PUBLISHED FEBRUARY 20, 1917.

116,393. TOOL-STEELS. ATLAS CRUCIBLE STEEL COMPANY, Dunkirk, N. Y.
Filed October 21, 1916. Serial No. 98,798. PUBLISHED FEBRUARY 20, 1917.

116,394. MEDICAL PREPARATION FOR INTERNAL USE FOR THE TREATMENT OF DIABETES. JOHN BARING, Chicago, Ill.
Filed December 30, 1916. Serial No. 100,246. PUBLISHED FEBRUARY 27, 1917.

116,395. SPECIALLY-PREPARED BARLEY AND PEARL-BARLEY. BARLEY FOODS CO., Morgantown, W. Va.
Filed December 9, 1916. Serial No. 99,805. PUBLISHED FEBRUARY 13, 1917.

116,396. FABRIC GLOVES. BERLIN FABRIC GLOVE CO. INC., New York, N. Y.
Filed January 13, 1917. Serial No. 100,571. PUBLISHED FEBRUARY 27, 1917.

116,397. MINTED EPSOM SALTS. CHARLES SAMUEL BERRY, Little Rock, Ark.
Filed August 25, 1916. Serial No. 97,613. PUBLISHED JANUARY 16, 1917.

116,398. PYROMETERS, TACHOMETERS, OPERATION-RECORDERS, THERMOMETERS, PRESSURE-GAGES, VACUUM-GAGES, VOLTMETERS, AMMETERS, AND WATTMETERS. THE BROWN INSTRUMENT COMPANY, Philadelphia, Pa.
Filed January 9, 1917. Serial No. 100,471. PUBLISHED FEBRUARY 20, 1917.

116,399. PASTE PAINTS. THE CHARLES H. BROWN PAINT CO., Brooklyn, N. Y.
Filed January 5, 1917. Serial No. 100,366. PUBLISHED FEBRUARY 20, 1917.

116,400. ELECTRIC WINDOW-LIGHTING AND ELECTRIC SIGNS. CHASE ELECTRIC COMPANY, Chicago, Ill.
Filed September 14, 1916. Serial No. 97,983. PUBLISHED FEBRUARY 20, 1917.

116,401. WEIGHING-SCALES. JOHN CHATILLON & SONS, New York, N. Y.
Filed January 11, 1917. Serial No. 100,532. PUBLISHED FEBRUARY 27, 1917.

116,402. CARBONATED SOFT DRINKS. JAMES G. CLEDON, Dixon, Ill.
Filed April 8, 1916. Serial No. 94,248. PUBLISHED FEBRUARY 27, 1917.

116,403. WIND INSTRUMENTS, STRINGED INSTRUMENTS, AND PERCUSSION INSTRUMENTS. C. G. CONN, LTD., Elkhart, Ind.
Filed June 28, 1916. Serial No. 96,196. PUBLISHED FEBRUARY 27, 1917.

116,404. ILLUMINATING, LUBRICATING, AND BURNING OILS AND GREASES. CREW LEVICK COMPANY, Philadelphia, Pa.
Filed January 9, 1917. Serial No. 100,475. PUBLISHED FEBRUARY 27, 1917.

116,405. ILLUMINATING, LUBRICATING, AND BURNING OILS AND GREASES. CREW LEVICK COMPANY, Philadelphia, Pa.
Filed January 9, 1917. Serial No. 100,477. PUBLISHED FEBRUARY 27, 1917.

116,406. ILLUMINATING, LUBRICATING, AND BURNING OILS AND GREASES. CREW LEVICK COMPANY, Philadelphia, Pa.
Filed January 9, 1917. Serial No. 100,478. PUBLISHED FEBRUARY 27, 1917.

116,407. ILLUMINATING, LUBRICATING, AND BURNING OILS AND GREASES. CREW LEVICK COMPANY, Philadelphia, Pa.
Filed January 9, 1917. Serial No. 100,481. PUBLISHED FEBRUARY 27, 1917.

116,408. WRAPPING-PAPER. CROWN WILLAMETTE PAPER COMPANY, San Francisco, Cal.
Filed December 27, 1916. Serial No. 100,197. PUBLISHED FEBRUARY 20, 1917.

116,409. WRAPPING-PAPER. CROWN WILLAMETTE PAPER COMPANY, San Francisco, Cal.
Filed December 27, 1916. Serial No. 100,198. PUBLISHED FEBRUARY 20, 1917.

116,410. WRAPPING-PAPER. CROWN WILLAMETTE PAPER COMPANY, San Francisco, Cal.
Filed December 27, 1916. Serial No. 100,200. PUBLISHED FEBRUARY 20, 1917.

116,411. PEN-RACKS. CUSHMAN & DENISON MFG. CO., New York, N. Y.
Filed December 22, 1916. Serial No. 100,086. PUBLISHED FEBRUARY 20, 1917.

116,412. MUSICAL INSTRUMENTS OF THE XYLOPHONE TYPE HAVING METAL OR WOODEN BARS. JOHN C. DEAGAN, Chicago, Ill., assignor to J. C. Deagan Musical Bells, Chicago, Ill., a Corporation of Illinois.
Filed February 23, 1916. Serial No. 93,041. PUBLISHED FEBRUARY 27, 1917.

116,413. MEDICINAL PREPARATIONS FOR SORE THROAT, PYORRHEA, CATARRH, HAY-FEVER, AND A MOUTH-WASH. ALICE DE COURCY, Cincinnati, Ohio.
Filed December 9, 1916. Serial No. 99,808. PUBLISHED FEBRUARY 27, 1917.

116,414. MOVING-PICTURE FILMS. GEO. L. DERR, New York, N. Y.
Filed January 10, 1917. Serial No. 100,518. PUBLISHED FEBRUARY 27, 1917.

116,415. MOVING-PICTURE FILMS. GEO. L. DEER, New York, N. Y.
Filed January 10, 1917. Serial No. 100,514. PUBLISHED FEBRUARY 27, 1917.

116,416. MOVING-PICTURE FILMS. GEO. L. DEER, New York, N. Y.
Filed January 10, 1917. Serial No. 100,515. PUBLISHED FEBRUARY 27, 1917.

116,417. CERTAIN NAMED LUBRICATING OILS AND GREASES. DURKEE-ATWOOD CO., Minneapolis, Minn.
Filed October 16, 1916. Serial No. 98,685. PUBLISHED FEBRUARY 20, 1917.

116,418. MEN'S AND BOYS' DRESS, NEGLIGÉE, AND WORK SHIRTS. ELDER MANUFACTURING CO., St. Louis, Mo.
Filed December 26, 1916. Serial No. 100,162. PUBLISHED FEBRUARY 27, 1917.

116,419. SHOE-POLISH. WILLIAM A. ELLIOTT, Brockton, Mass.
Filed November 8, 1916. Serial No. 99,164. PUBLISHED FEBRUARY 27, 1917.

116,420. BATH-TUB SEATS, SHELF-RAILS, SHELF-BRACKETS, AND ROBE AND SPRAY HOOKS. J. P. EUSTIS MANUFACTURING COMPANY, Boston, Mass.
Filed April 3, 1916. Serial No. 94,066. PUBLISHED FEBRUARY 20, 1917.

116,421. COLD-CREAM. THE E-ZE PRODUCTS CO., INC., New York, N. Y.
Filed January 11, 1917. Serial No. 100,533. PUBLISHED FEBRUARY 27, 1917.

116,422. MEN'S OVERALLS, JACKETS, TROUSERS, COATS, AND WORK-SHIRTS. W. M. FINCK & COMPANY, Detroit, Mich.
Filed April 13, 1916. Serial No. 94,381. PUBLISHED FEBRUARY 27, 1917.

116,423. RASPBERRY BRANDY. JOSEPH FINKELSTEIN & Co., New York, N. Y.
Filed January 17, 1917. Serial No. 100,668. PUBLISHED FEBRUARY 27, 1917.

116,424. CERTAIN NAMED CANNED GOODS. L. FRANK & SON CO., Milwaukee, Wis.
Filed October 2, 1916. Serial No. 98,354. PUBLISHED FEBRUARY 13, 1917.

116,425. CHEMICALLY-ALLOYED HIGH-SPEED BEARING METAL. FRICTIONLESS METAL CO., Chattanooga, Tenn.
Filed November 10, 1916. Serial No. 99,210. PUBLISHED JANUARY 9, 1917.

116,426. EFFERVESCENT SALT. GENERAL CHEMICAL COMPANY, New York, N. Y.
Filed June 20, 1916. Serial No. 96,002. PUBLISHED FEBRUARY 27, 1917.

116,427. LINSEED-OIL AND READY-MIXED PAINTS. W. R. GRACE & CO., New York, N. Y.
Filed January 15, 1917. Serial No. 100,621. PUBLISHED FEBRUARY 20, 1917.

116,428. LIQUID POLISH FOR POLISHING AUTO-BODIES, CARRIAGE-BODIES, FURNITURE, AND OTHER LIKE OBJECTS. JOHN GRIESHAMER, Jacksonville, Fla.
Filed November 17, 1916. Serial No. 99,347. PUBLISHED FEBRUARY 20, 1917.

116,429. NUTS, BOLTS, AND METAL WASHERS. GRIP NUT COMPANY, Chicago, Ill., and South Whitley, Ind.
Filed September 14, 1916. Serial No. 97,987. PUBLISHED FEBRUARY 20, 1917.

116,430. REPAIR PARTS FOR AUTOMOBILE-ENGINES AND CERTAIN NAMED TOOLS. THE HILL-SMITH METAL GOODS COMPANY, Boston, Mass.
Filed July 29, 1916. Serial No. 96,956. PUBLISHED FEBRUARY 20, 1917.

116,431. MEN'S AND YOUTHS' COATS, WAISTCOATS, TROUSERS, AND OVERCOATS. HIRSH, WICKWIRE COMPANY, Chicago, Ill.
Filed December 14, 1916. Serial No. 99,937. PUBLISHED FEBRUARY 27, 1917.

116,432. TRACTORS. INTERSTATE ENGINE & TRACTOR COMPANY, Waterloo, Iowa.
Filed January 22, 1917. Serial No. 100,804. PUBLISHED FEBRUARY 20, 1917.

116,433. OVERALLS, OVERALL COATS AND PANTS. JOBBERS OVERALL CO., INC., Lynchburg, Va.
Filed December 6, 1916. Serial No. 99,748. PUBLISHED FEBRUARY 27, 1917.

116,434. PIECE GOODS OF WOOL, COTTON, LINEN, SILK, AND COMBINATIONS THEREOF. KLAUBER BROS. & Co., New York, N. Y.
Filed December 21, 1916. Serial No. 100,080. PUBLISHED FEBRUARY 27, 1917.

116,435. WHEAT-FLOUR. LAUDERBACH-BARBER CO., Philipsburg, Pa.
Filed November 20, 1916. Serial No. 99,412. PUBLISHED FEBRUARY 13, 1917.

116,436. BUTTONS. LINDENHURST MANUFACTURING CO., Lindenhurst, N. Y.
Filed February 18, 1914. Serial No. 76,004. PUBLISHED FEBRUARY 27, 1917.

116,437. COOLING, HEALING, AND ODOR-DESTROYING COMPOUND FOR THE FEET. ROBERT E. MCCAIN, Chicago, Ill.
Filed January 2, 1917. Serial No. 100,299. PUBLISHED FEBRUARY 27, 1917.

116,438. HAMMERS. WILLIAM A. MCFADDEN, New York, N. Y.
Filed September 11, 1916. Serial No. 97,914. PUBLISHED FEBRUARY 6, 1917.

116,439. LATHES. MACHINERY MERCHANTS, INC., New York, N. Y.
Filed March 13, 1916. Serial No. 98,504. PUBLISHED FEBRUARY 27, 1917.

116,440. EMBROIDERIES MADE OF SILK AND WOOL, AND SUSPENDERS. ABRAHAM M. MALOUF, Salt Lake City, Utah.
Filed August 21, 1916. Serial No. 97,465. PUBLISHED JANUARY 2, 1917.

116,441. METAL-POLISH. WILLIAM E. MARTIN, Chicago, Ill.
Filed January 11, 1916. Serial No. 92,065. PUBLISHED FEBRUARY 27, 1917.

116,442. COTTON DUCK. MOUNT VERNON-WOODBERRY MILLS, INCORPORATED, Baltimore, Md.
Filed January 22, 1917. Serial No. 100,814. PUBLISHED FEBRUARY 27, 1917.

116,443. COTTON DUCK. MOUNT VERNON-WOODBERRY MILLS, INCORPORATED, Baltimore, Md.
Filed January 27, 1917. Serial No. 100,996. PUBLISHED FEBRUARY 27, 1917.

116,444. [WITHDRAWN.]

116,445. COTTON GOODS IN THE PIECE. NIAGARA SILK MILLS, North Tonawanda, N. Y.
Filed January 27, 1917. Serial No. 100,997. PUBLISHED FEBRUARY 27, 1917.

116,446. DAIRY-CULTURE. CHARLES A. OWEN, Syracuse, N. Y.
Filed December 27, 1916. Serial No. 100,205. PUBLISHED FEBRUARY 27, 1917.

116,447. WINDOW-SHADE CLOTHS OF SIZED AND OIL-PAINTED FABRICS. THE ESTATE OF GEORGE PABST, DEC'D, Philadelphia, Pa.
Filed January 5, 1917. Serial No. 100,374. PUBLISHED FEBRUARY 27, 1917.



116,448. WINDOW-SHADE CLOTHS OF SIZED AND OIL-PAINTED FABRICS. THE ESTATE OF GEORGE PABST, DEC'D, Philadelphia, Pa.
Filed January 5, 1917. Serial No. 100,375. PUBLISHED FEBRUARY 27, 1917.

116,449. HOSIERY. PARAMOUNT KNITTING COMPANY, Chicago, Ill.
Filed December 27, 1915. Serial No. 91,784. PUBLISHED FEBRUARY 29, 1916.

116,450. HOSIERY. PARAMOUNT KNITTING COMPANY, Chicago, Ill.
Filed January 6, 1916. Serial No. 91,979. PUBLISHED FEBRUARY 29, 1916.

116,451. DRY AND READY-MIXED PAINTS, DRIERS, ENAMELS, STAINS, WALL-PAINTS, LACS, FILLERS, AND VARNISHES. THE PATTERSON-SARGENT COMPANY, Cleveland, Ohio.
Filed August 28, 1916. Serial No. 97,671. PUBLISHED FEBRUARY 27, 1917.

116,452. MEDICINE FOR CERTAIN NAMED DISEASES. WILLIAM J. PEPPETT, Boston, Mass.
Filed December 20, 1916. Serial No. 100,068. PUBLISHED FEBRUARY 27, 1917.

116,453. LAWN-MOWERS. THE PHILADELPHIA LAWN MOWER COMPANY, Philadelphia, Pa.
Filed January 26, 1917. Serial No. 100,970. PUBLISHED FEBRUARY 20, 1917.

116,454. LAWN-MOWERS. THE PHILADELPHIA LAWN MOWER COMPANY, Philadelphia, Pa.
Filed January 26, 1917. Serial No. 100,971. PUBLISHED FEBRUARY 20, 1917.

116,455. LAWN-MOWERS. THE PHILADELPHIA LAWN MOWER COMPANY, Philadelphia, Pa.
Filed January 26, 1917. Serial No. 100,973. PUBLISHED FEBRUARY 20, 1917.

116,456. LAWN-MOWERS. THE PHILADELPHIA LAWN MOWER COMPANY, Philadelphia, Pa.
Filed January 26, 1917. Serial No. 100,974. PUBLISHED FEBRUARY 20, 1917.

116,457. MIXED VEGETABLE RELISHES AND PICKLES. DELLA E. PHILLIPS, Philadelphia, Pa.
Filed April 10, 1915. Serial No. 85,865. PUBLISHED AUGUST 3, 1915.

116,458. INDICATORS AND INDEX DEVICES. THE RAND COMPANY, North Tonawanda, N. Y.
Filed June 9, 1916. Serial No. 95,759. PUBLISHED FEBRUARY 27, 1917.

116,459. SOLIDIFIED ALCOHOL FOR FUEL PURPOSES. FRANK WILLIAM RICHARDSON, New York, N. Y., assignor to Richelow Mfg. Co., Inc., New York, N. Y., a Corporation of New York.
Filed December 10, 1915. Serial No. 91,385. PUBLISHED FEBRUARY 27, 1917.

116,460. CAKES OF SOAP MADE IN PART BY THE USE OF COCHIN OR COCOANUT OIL. EDGAR ROBERTS MANUFACTURING COMPANY, St. Louis, Mo.
Filed December 27, 1915. Serial No. 91,785. PUBLISHED FEBRUARY 20, 1917.

116,461. COMPOSITIONS FOR USE WITH PRINTERS' AND LITHOGRAPHERS' INKS. ROKO MANUFACTURING CO., Denver, Colo.
Filed October 13, 1916. Serial No. 98,637. PUBLISHED FEBRUARY 27, 1917.

116,462. WHEAT-FLOUR. RUSSELL-MILLER MILLING CO., Minneapolis, Minn.
Filed December 30, 1916. Serial No. 100,274. PUBLISHED FEBRUARY 13, 1917.

116,463. CHEMICAL COMPOUND FOR PRESERVING RUBBER. THE SAVE-O. CO., INC., Hartford, Conn.
Filed November 29, 1916. Serial No. 99,638. PUBLISHED FEBRUARY 27, 1917.

116,464. PRESERVATIVE FOR FRUIT, VEGETABLES, AND MEATS. BENJAMIN F. SMEYERS, Troutville, Pa.
Filed January 9, 1917. Serial No. 100,501. PUBLISHED FEBRUARY 27, 1917.

116,465. TELEPHONES, ELECTRIC CIGAR-LIGHTERS, ELECTRIC LAMPS. SPIELMAN ELECTRIC CO., New York, N. Y.
Filed December 20, 1916. Serial No. 100,071. PUBLISHED FEBRUARY 20, 1917.

116,466. MEDICINES FOR DOGS, CATS, RABBITS, FISH, BIRDS, AND POULTRY. SPRATT'S PATENT (AMERICA) LIMITED, London, England, and Newark, N. J.
Filed January 9, 1917. Serial No. 100,502. PUBLISHED FEBRUARY 27, 1917.

116,467. GRINDING-WHEELS. SPRINGFIELD GRINDING CO., Springfield, Mass.
Filed January 15, 1917. Serial No. 100,636. PUBLISHED FEBRUARY 20, 1917.

116,468. ELECTRIC FUSES AND CARTRIDGES. STAR FUSE CO., INC., New York, N. Y.
Filed September 24, 1914. Serial No. 81,488. PUBLISHED FEBRUARY 27, 1917.

116,469. SHOVELS, SPADES, HANDLES FOR SHOVELS, SPADES, AND AGRICULTURAL FORKS. THE STEEL BASKET COMPANY, Cedar Rapids, Iowa.
Filed June 23, 1916. Serial No. 96,092. PUBLISHED FEBRUARY 27, 1917.

116,470. CERTAIN NAMED CANNED GOODS. SUSSMAN, WORMSER & Co., San Francisco, Cal.
Filed January 6, 1917. Serial No. 100,406. PUBLISHED FEBRUARY 13, 1917.

116,471. WRENCHES, CLAMPS, AND CLAMP-CARRIERS. JAMES L. TAYLOR MFG. CO., Poughkeepsie, N. Y.
Filed January 4, 1917. Serial No. 100,361. PUBLISHED FEBRUARY 20, 1917.

116,472. SOAPS, WASHING-POWDERS, CLEANSERS, AND METAL-POLISH. THE TREBSTTS & GARLAND STORE, Chicago, Ill.
Filed January 17, 1917. Serial No. 100,687. PUBLISHED FEBRUARY 20, 1917.

116,473. CIGARS. THEOBALD AND OPPENHEIMER COMPANY, Philadelphia, Pa., and New York, N. Y.
Filed August 21, 1916. Serial No. 97,474. PUBLISHED JANUARY 2, 1917.

116,474. RUBBER-STAMP OUTFIT AND INKING-PAD COMBINED. MATTHEW TINKER, Baltimore, Md.
Filed August 9, 1916. Serial No. 97,227. PUBLISHED FEBRUARY 27, 1917.

116,475. ILLUMINATING, LUBRICATING, AND FUEL OILS. THE TOPEKA OIL COMPANY, Topeka, Kans.
Filed October 19, 1916. Serial No. 98,776. PUBLISHED FEBRUARY 20, 1917.

116,476. COTTON AND LINEN PIECE GOODS. TRIPPE BARKER & Co., New York, N. Y.
Filed January 20, 1917. Serial No. 100,785. PUBLISHED FEBRUARY 27, 1917.

116,477. LAXATIVE. TRYALAX MFG. CO., INC., Philadelphia, Pa.
Filed March 9, 1916. Serial No. 93,420. PUBLISHED MAY 23, 1916.

116,478. MOTION-PICTURE FILMS. UNITED STATES MOTION PICTURE CORPORATION, Wilkes-Barre, Pa.
Filed December 8, 1916. Serial No. 99,798. PUBLISHED JANUARY 30, 1917.

116,479. TOOTH-POWDER. UNIVERSITY CHEMICAL CO., Philadelphia, Pa.
Filed September 21, 1916. Serial No. 98,148. PUBLISHED FEBRUARY 27, 1917,

116,480. NETTINGS, VEILS, AND VEILINGS IN THE PIECE. E. & Z. VAN RAALTE, New York, N. Y.
Filed January 26, 1917. Serial No. 100,981. PUBLISHED FEBRUARY 27, 1917.

116,481. PREPARATION FOR EXTERNAL APPLICATION INDICATED IN THE TREATMENT OF RHEUMATISM. VIS VITAE COMPANY, INC., Portland, Oreg.
Filed September 18, 1916. Serial No. 98,067. PUBLISHED FEBRUARY 27, 1917.

116,482. OVERALLS AND JACKETS. ELMER E. WAGNER, Hazleton, Pa.
Filed January 15, 1917. Serial No. 100,638. PUBLISHED FEBRUARY 27, 1917.

116,483. CORSETS. THE WARNER BROS. CO., Bridgeport, Conn.
Filed January 12, 1917. Serial No. 100,565. PUBLISHED FEBRUARY 27, 1917.

116,484. COTTON DUCK, COTTON CANVAS, AND COTTON YARN SPUN OR WOVEN IN TEXTILE FABRICS. THE WARREN MANUFACTURING COMPANY, Warren, Md.
Filed December 14, 1916. Serial No. 99,951. PUBLISHED FEBRUARY 27, 1917.

116,485. COTTON PIECE GOODS—VIZ., CORDUROYS AND VELVETEENS. WATERSIDE MILLS, INC., Lowell, Mass.
Filed January 19, 1917. Serial No. 100,761. PUBLISHED FEBRUARY 27, 1917.

116,486. CERTAIN NAMED CANNED GOODS AND FOOD PRODUCTS. THE WEIDEMAN CO., Cleveland, Ohio.
Filed April 19, 1916. Serial No. 94,560. PUBLISHED FEBRUARY 13, 1917.

116,487. COATED LITHOGRAPHIC PAPER. WEST VIRGINIA PULP & PAPER CO., New York, N. Y.
Filed January 5, 1917. Serial No. 100,378. PUBLISHED FEBRUARY 20, 1917.

116,488. WRITING-PAPERS. WHITING PAPER COMPANY, Holyoke, Mass.
Filed January 15, 1917. Serial No. 100,639. PUBLISHED FEBRUARY 20, 1917.

116,489. TOILET-PAPER AND PAPER TOWELS. WORTENDYKE MANUFACTURING CO., Richmond, Va.
Filed September 1, 1916. Serial No. 97,762. PUBLISHED JANUARY 2, 1917.

116,490. TOILET-PAPER AND PAPER TOWELS. WORTENDYKE MANUFACTURING CO., Richmond, Va.
Filed September 1, 1916. Serial No. 97,764. PUBLISHED JANUARY 2, 1917.

116,491. TOILET-PAPER AND PAPER TOWELS. WORTENDYKE MANUFACTURING CO., Richmond, Va.
Filed September 1, 1916. Serial No. 97,765. PUBLISHED JANUARY 9, 1917.

116,492. INTERNAL-COMBUSTION ENGINES. WORTHINGTON PUMP AND MACHINERY CORPORATION, New York, N. Y.
Filed January 18, 1917. Serial No. 100,730. PUBLISHED FEBRUARY 20, 1917.

116,493. WOOLEN GOODS IN THE PIECE. WORUMBO MANUFACTURING COMPANY, Lisbon Falls, Me.
Filed January 16, 1917. Serial No. 100,660. PUBLISHED FEBRUARY 27, 1917.

116,494. MOVING-PICTURE FILMS. ZIEGFELD CINEMA CORPORATION, New York, N. Y.
Filed November 28, 1916. Serial No. 99,613. PUBLISHED FEBRUARY 6, 1917.

# TRADE-MARK REGISTRATIONS RENEWED.

14,368. COTTON THREADS AND YARNS OF ALL SORTS. ZWIRNEREI & NAEHFADENFABRICK GOEGGINGEN, Augsburg, Germany.
Registered May 10, 1887. Renewed May 10, 1917.

14,430. SOAP. JOSEPH CERVINKA, Chicago, Ill.; The N. K. Fairbank Company, a Corporation of New Jersey, assignee by mesne assignments.
Registered May 24, 1887. Renewed May 24, 1917.



# LABELS

## REGISTERED MAY 1, 1917.

20,051.—*Title:* "KOF NOT." (For Candy Cough-Tablets.) THE AROMINT COMPANY, Cincinnati, Ohio. Filed March 26, 1917.

20,052.—*Title:* "BROCKTON BRAND MACARONI." (For Macaroni.) BROCKTON MACARONI MANUFACTURING COMPANY, Brockton, Mass. Filed March 12, 1917.

20,053.—*Title:* "WA-KE-ZA FOR SORE FEET." (For Liquid for the Prevention and Cure of Sore Feet.) BURLY DRUG CO., Lansing, Mich. Filed March 30, 1917.

20,054.—*Title:* "MAGIC WHISTLE." (For Cartons Containing Whistles.) FRANK G. FAWKES & Co., Chicago, Ill. Filed December 22, 1916.

20,055.—*Title:* "DON'T FORGET GOPHERGET FOR GOPHERS." (For Poison for Gophers, Squirrels, Moles, and other Pest Animals.) THE FELIX GIRARD COMPANY, Minneapolis, Minn. Filed April 13, 1917.

20,056.—*Title:* "EGOLA." (For a Substitute for Eggs.) EGOLA MFG. CO., West Cornwall, Conn. Filed August 23, 1916.

20,057.—*Title:* "CHAMOIS." (For Book-Paper.) THE MEAD PULP AND PAPER COMPANY, Dayton, Ohio. Filed April 2, 1917.

20,058.—*Title:* "THE 20TH CENTURY SHIRT." (For Men's Work-Shirts.) MCCAWLEY & CO. INC., Baltimore, Md. Filed March 13, 1917.

20,059.—*Title:* "STIMPSON-RIVETS." (For Rivets.) EDWIN B. STIMPSON COMPANY, Brooklyn, N. Y. Filed March 28, 1917.

20,060.—*Title:* "MT. PURN BRAND COGNAC." (For Brandies.) SHORE DISTILLING CO., Philadelphia, Pa. Filed March 23, 1917.

20,061.—*Title:* "HOME MADE." (For Cough-Drops.) C. B. TRUESDELL, Sac City, Iowa. Filed February 12, 1917.

20,062.—*Title:* "GEO. WASHINGTON." (For Oranges.) TUSTIN HILLS CITRUS ASSOCIATION, Tustin, Cal. Filed April 13, 1917.

20,063.—*Title:* "KLEENE K-S SWEEPE." (For Brooms.) VICTORIA BROOM & WHISK FACTORY, Victoria, Tex. Filed December 26, 1916.

20,064.—*Title:* "CHOCOLATE-SPLASH." For a Game.) WILLIS G. YOUNG, Chicago, Ill. Filed December 7, 1916.

20,065.—*Title:* "CAN-YOU BEAT-IT? (SOLITAIRE)." (For a Game.) WILLIS G. YOUNG, Chicago, Ill. Filed December 20, 1916.

20,066.—*Title:* "TOP-PACHEEZA." (For a Game.) WILLIS G. YOUNG, Chicago, Ill. Filed January 2, 1917.

20,067.—*Title:* "FIG-MILL." (For a Game.) WILLIS G. YOUNG, Chicago, Ill. Filed January 9, 1917.

20,068.—*Title:* "LA BELLA 'CARMEN.'" (For Tobacco-Packages.) HERRERO BROS., San Francisco, Cal. Filed February 23, 1917.

20,069.—*Title:* "WATERMAN'S IDEAL INK." (For Ink.) L. E. WATERMAN COMPANY, New York, N. Y. Filed April 12, 1917.

# DECISIONS

OF THE

# COMMISSIONER OF PATENTS

AND OF

# UNITED STATES COURTS IN PATENT CASES.

## DECISIONS OF THE U. S. COURTS.

### Supreme Court of the United States.

MOTION PICTURE PATENTS COMPANY *v.* UNIVERSAL FILM MANUFACTURING COMPANY *et al.*

*Decided April 9, 1917.*

1. PATENTS—RIGHT TO RESTRICT USE OF PATENTED MACHINE.

A patentee or his assignee may not license another to manufacture and sell a patented moving-picture machine and by a mere notice attached to it limit its use by the purchaser or by the purchaser's lessee to moving-picture films which are no part of the patented machine and which are not patented. (*Henry v. Dick*, 224 U. S., 1; 176 O. G., 751, overruled.)

2. SAME—SAME—RIGHT TO IMPOSE CONDITIONS AFTER SALE.

The assignee of a patent which has licensed another to make and sell the machine covered by it may not by a mere notice attached to such machine limit the use of it by the purchaser or by the purchaser's lessee to terms not stated in the notice, but which are to be fixed, after sale, by such assignee in its discretion.

3. SAME—RIGHTS CREATED BY GRANT OF PATENT.

"It has long been settled that the patentee receives nothing from the law which he did not have before, and that the only effect of his patent is to restrain others from manufacturing, using or selling that which he has invented. The patent law simply protects him in the monopoly of that which he has invented and has described in the claims of his patent. (*United States v. American Bell Telephone Co.*, 167 U. S., 224, 239; *Paper Bag Patent Case*, 210 U. S., 405, 424; *Bauer v. O'Donnell*, 229 U. S., 1, 10; 191 O. G., 1068.)"

4. SAME—PURPOSE OF PATENT LAWS.

"The primary purpose of our patent laws is not the creation of private fortunes for the owners of patents but is 'to promote the progress of science and the useful arts.' (Constitution, Art. I, sec. 8.)"

5. SAME—SCOPE OF PATENT LIMITED BY ITS CLAIMS.

"The scope of every patent is limited to the invention described in the claims contained in it, read in the light of the specification. These so mark where the progress claimed by the patent begins and where it ends that they have been aptly likened to the description in a deed which sets the bounds to the grant which it contains."

6. SAME—SAME—PATENT FOR MACHINE DOES NOT COVER MATERIALS OPERATED UPON.

Section 4886, Revised Statutes, restricts the patent granted on a machine to the mechanism described in the patent as necessary to produce the described results. It is not concerned with the materials with which or on which the machine operates. The grant is of the exclusive right to use the mechanism to produce the results with any appropriate material, and the materials with which the machine is operated are no part of the patented machine or of the combination which produces the patented result.

CERTIORARI to the United States Circuit Court of Appeals for the Second Circuit.

*Mr. Melville Church* for the petitioner.

*Messrs. Wetmore & Jenner* and *Mr. Oscar W. Jeffrey* for the respondents.

Mr. Justice CLARKE delivered the opinion of the Court.

In this suit relief is sought against three defendant corporations as joint infringers of claim No. 7 of United States Letters Patent No. 707,934 granted to Woodville Latham, assignor, on August 26, 1902, for improvements in projecting-kinetoscopes. It is sufficient description of the patent to say that it covers a part of the mechanism used in motion-picture-exhibiting machines for feeding a film through the machine with a regular, uniform and accurate movement and so as not to expose the film to excessive strain or wear.

The defendants in a joint answer do not dispute the title of the plaintiff to the patent but they deny the validity of it, deny infringement, and claim an implied license to use the patented machine.

Evidence which is undisputed shows that the plaintiff on June 20, 1912, in a paper styled "license agreement" granted to The Precision Machine Company a right and license to manufacture and sell machines embodying the inventions described and claimed in the patent in suit, and in other patents, throughout the United States, its territories and possessions. This agreement contains a covenant on the part of the grantee that every machine sold by it, except those for export, shall be sold—

under the restriction and condition **that such exhibiting** or projecting machine shall be used solely for exhibiting or projecting motion pictures containing the inventions of reissued Letters Patent No. 12,192, ***leased by a licensee of the licensor while it owns said patents and upon other terms to be fixed*** by the licensor and complied with by the user while the said machine is in use and ***while the licensor owns said patents*** (which other terms shall only be the payment of a royalty or rental to the licensor while in use).

The grantee further covenants and agrees that to each machine sold by it, except for export, it will attach a plate showing plainly not only the dates

of the Letters Patent under which the machine is "licensed," but also the following words and figures:

Serial No. ————.

Patented No.

The sale and purchase of this machine gives only the right to use it solely with moving pictures containing the invention of reissued Patent No. 12192, leased by a licensee of the Motion Picture Patents Company, the owner of the above patents and reissued patent, while it owns said patents, and upon other terms to be fixed by the Motion Picture Patents Company and complied with by the user while it is in use and while the Motion Picture Patents Company owns said patents. The removal or defacement of this plate terminates the right to use this machine.

The agreement further provides that the grantee shall not sell any machine at less than the plaintiff's list price, except to jobbers and others for purposes of resale and that it will require such jobbers and others to sell at not less than plaintiff's list price. The price fixed in the license contract for sale of machines after May 1st, 1909, is not less than one hundred and fifty dollars for each machine and the licensee agrees to pay a royalty of five dollars on some machines and a percentage of the selling price on others.

It is admitted that the machine, the use of which is charged to be an infringement of the patent in suit, was manufactured by The Precision Machine Company and was sold and delivered under its "license agreement" to the Seventy-second Street Amusement Company, then operating a playhouse on Seventy-second street, in New York, and that when sold it was fully paid for and had attached to it a plate with the inscription which we have quoted as required by the agreement.

Reissued Patent 12,192, referred to in the notice attached to the machine, expired on August 31, 1914. The defendant Prague Amusement Company on November 2, 1914, leased the Seventy-second street playhouse from the Seventy-second Street Amusement Company, and acquired the alleged infringing machine as a part of the equipment of the leased playhouse. Subsequent to the expiration of reissued Patent 12,192 the defendant, Universal Film Manufacturing Company made two films or reels, which, between March 4th and 17th, 1915, were sold to the defendant the Universal Film Exchange and on March 17, 1915, were supplied to the defendant Prague Amusement Company for use on the machine, acquired as we have stated, and were used upon it at the Seventy-second street playhouse on March 18th, 1915.

On January 18, 1915, the plaintiff sent a letter to the Seventy-second Street Amusement Company, notifying it in general terms that it was using without a license a machine embodying the invention of Patent No. 707,934 and warning it that such use constituted an infringement of the patent, and on the same day the plaintiff addressed a letter to the defendant Universal Film Exchange notifying it that it also was infringing the same patents by supplying films for use upon the machine of the Seventy-second street playhouse and elsewhere. The bill in this case was filed on March 18, 1915.

The district court held that the limitation on the use of the machine attempted to be made by the notice attached to it, after it had been sold and paid for, was invalid, and that the Seventy-second Street Amusement Company, the purchaser, and its lessee, the Prague Amusement Company, had an implied license to use the machine as it had been used, and it dismissed the bill without passing on the question raised in the pleadings as to the validity of the patent. The circuit court of appeals affirmed the district court (235 Fed., 398) and the case is here for review on certiorari.

It was admitted at the bar that 40,000 of the plaintiff's machines are now in use in this country and that the mechanism covered by the patent in suit is the only one with which motion-picture films can be used successfully.

This state of facts presents two questions for decision:

First. May a patentee or his assignee license another to manufacture and sell a patented machine and by a mere notice attached to it limit its use by the purchaser or by the purchaser's lessee, to films which are no part of the patented machine, and which are not patented?

Second. May the assignee of a patent, which has licensed another to make and sell the machine covered by it, by a mere notice attached to such machine, limit the use of it by the purchaser or by the purchaser's lessee to terms not stated in the notice but which are to be fixed, after sale, by such assignee in its discretion?

It is obvious that in this case we have presented anew the inquiry, which is arising with increasing frequency in recent years, as to the extent to which a patentee or his assignee is authorized by our patent laws to prescribe by notice attached to a patented machine the conditions of its use and the supplies which must be used in the operation of it, under pain of infringement of the patent.

The statutes relating to patents do not provide for any such notice and it can derive no aid from them. Revised Statutes 4900, requiring that patented articles shall be marked with the word "Patented" affects only the damages recoverable for infringement. (*Dunlap* v. *Schofield*, 152 U. S., 244,) and Revised Statutes 4901 protects by its penalties the inventor, but neither one contemplates the use of such a "license notice" as we have here and whatever validity it has must be derived from the general and not from the patent law.

The extent to which the use of the patented machine may validly be restricted to specific supplies or otherwise by special contract between the owner of a patent and the purchaser or licensee is a question outside the patent law and with it we are not here concerned. (*Keeler* v. *Standard Folding Bed Co.*, 157 U. S., 659.)

The inquiry presented by this record, as we have stated it, is important and fundamental, and it requires that we shall determine the meaning of Congress when in Revised Statutes 4884 it provided that—

every patent shall contain * * * a grant to the patentee, his heirs, or assigns, for the term of seventeen years *of the exclusive right* to make, use and vend *the invention or discovery* throughout the United States and the territories thereof.

We are concerned only with the right to "use," authorized to be granted by this statute, for it is





under warrant of this right only that the plaintiff can and does claim validity for its warning notice.

The words used in the statute are few, simple and familiar, they have not been changed substantially since they were first used in the act of 1790, (1 Stat. at Large, ch. 7, p. 109; *Bauer* v. *O'Donnell*, 229 U. S., 1, 9,) and their meaning would seem not to be doubtful if we can avoid reading into them that which they really do not contain.

In interpreting this language of the statute it will be of service to keep in mind three rules long established by this Court, applicable to the patent law and to the construction of patents, viz:

1st. The scope of every patent is limited to the invention described in the claims contained in it, read in the light of the specification. These so mark where the progress claimed by the patent begins and where it ends that they have been aptly likened to the description in a deed, which sets the bounds to the grant which it contains. It is to the claims of every patent, therefore, that we must turn when we are seeking to determine what the invention is, the exclusive use of which is given to the inventor by the grant provided for by the statute,—"he can claim nothing beyond them." (*Keystone Bridge Co.* v. *Phoenix Iron Co.*, 95 U. S., 274; *Railroad Co.* v. *Mellon*, 104 U. S., 112, 118; *Yale Lock Mfg. Co.* v. *Greenleaf*, 117 U. S., 554, 559; *McClain* v. *Ortmayer*, 141 U. S., 419, 424.)

2d. It has long been settled that the patentee receives nothing from the law which he did not have before, and that the only effect of his patent is to restrain others from manufacturing, using or selling that which he has invented. The patent law simply protects him in the monopoly of that which he has invented and has described in the claims of his patent. (*United States* v. *American Bell Telephone Co.*, 167 U. S., 224, 239; *Paper Bag Patent Case*, 210 U. S., 405, 424; *Bauer* v. *O'Donnell*, 229 U. S., 1, 10; 191 O. G., 1068.)

3d. Since *Pennock* v. *Dialogue* (2 Pet., 1) was decided in 1829 this Court has consistently held that the primary purpose of our patent laws is not the creation of private fortunes for the owners of patents but is "to promote the progress of science and the useful arts" (Constitution, Art. I, sec. 8), an object and purpose authoritatively expressed by Mr. Justice Story, in that decision, saying:

While one great object (of our patent laws) was, by holding out a reasonable reward to inventors and giving them the exclusive right to their inventions for a limited period, to stimulate the efforts of genius, the main object was "to promote the progress of science and the useful arts."

Thirty years later this Court, returning to the subject, in *Kendall* v. *Winsor* (21 How., 322) again pointedly and significantly says:

It is undeniably true that the limited and temporary monopoly granted to inventors was never designed for their exclusive profit or advantage; the benefit to the public or community at large was another and doubtless the primary object in granting and securing that monopoly.

This Court has never modified this statement of the relative importance of the public and private interests involved in every grant of a patent, even while declaring that in the construction of patents and the patent laws, inventors shall be fairly, even liberally, treated. (*Grant* v. *Raymond*, 6 Pet., 218, 241; *Winans* v. *Denmead*, 15 How., 330; Walk. on Pats., sec. 185.)

These rules of law make it very clear that the scope of the grant which may be made to an inventor in a patent, pursuant to the statute, must be limited to the invention described in the claims of his patent (104 U. S., 118, *supra*) and to determine what grant may lawfully be so made we must hold fast to the language of the act of Congress providing for it, which is found in two sections of the Revised Statutes. Section 4886 provides that—

any person who has invented or discovered any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement thereof, * * * may obtain a patent therefor;

and section 4884 provides that such patent when obtained—

shall contain * * * a grant to the patentee, his heirs, or assigns * * * of the exclusive right to * * * use * * * the invention or discovery.

Thus the inventor may apply for, and, if he meets the required conditions, may obtain, a patent for the new and useful invention which he has discovered, which patent shall contain a grant of the right to the exclusive use of his discovery.

Plainly, this language of the statute and the established rules to which we have referred restrict the patent granted on a machine, such as we have in this case, to the mechanism described in the patent as necessary to produce the described results. It is not concerned with and has nothing to do with the materials with which or on which the machine operates. The grant is of the exclusive right to use the mechanism to produce the result with any appropriate material, and the materials with which the machine is operated are no part of the patented machine or of the combination which produces the patented result. The difference is clear and vital between the exclusive right to use the machine which the law gives to the inventor and the right to use it exclusively with prescribed materials to which such a license notice as we have here seeks to restrict it. The restrictions of the law relate to the useful and novel features of the machine which are described in the claims of the patent, they have nothing to do with the materials used in the operation of the machine; while the notice restrictions have nothing to do with the invention which is patented but relate wholly to the materials to be used with it. Both in form and in substance the notice attempts a restriction upon the use of the supplies only and it cannot with any regard to propriety in the use of language be termed a restriction upon the use of the machine itself.

Whatever the right of the owner may be to control by restriction the materials to be used in operating the machine must be a right derived through the general law from the ownership of the property in the machine and it cannot be derived from or protected by the patent law, which allows a grant only of the right to an exclusive use of the new and useful discovery which has been made—this and nothing more.

This construction gives to the inventor the exclusive use of just what his inventive genius has dis-

covered. It is all that the statute provides shall be given to him and it is all that he should receive, for it is the fair as well as the statutory measure of his reward for his contribution to the public stock of knowledge. If his discovery is an important one his reward under such a construction of the law will be large, as experience has abundantly proved, and if it be unimportant he should not be permitted by legal devices to impose an unjust charge upon the public in return for the use of it. For more than a century this plain meaning of the statute was accepted as its technical meaning, and that it afforded ample incentive to exertion by inventive genius is proved by the fact that under it the greatest inventions of our time, teeming with inventions, were made. It would serve no good purpose to amplify by argument or illustration this plain meaning of the statute. It is so plain that to argue it would obscure it.

It was not until the time came in which the full possibilities seem first to have been appreciated of uniting, in one, many branches of business through corporate organization and of gathering great profits in small payments, which are not realized or resented, from many, rather than smaller or even equal profits in larger payments, which are felt and may be refused, from a few, that it came to be thought that the "right to use * * * the invention" of a patent gave to the patentee or his assigns the right to restrict the use of it to materials or supplies not described in the patent and not by its terms made a part of the thing patented.

The construction of the patent law which justifies as valid the restriction of patented machines, by notice, to use with unpatented supplies necessary in the operation of them, but which are no part of them, is believed to have originated in *Heaton-Peninsular Button-Fastener Co.* v. *Eureka Specialty Co.*, (77 Fed. Rep., 288,) (which has come to be widely referred to as the *Button Fastener Case*,) decided by the Circuit Court of Appeals of the Sixth Circuit in 1896. In this case the court, recognizing the pioneer character of the decision it was rendering, speaks of the "novel restrictions" which it is considering and says that it is called upon—

> to mark another boundary line around the patentee's monopoly which will *debar him from engrossing the market for an article not the subject of a patent*,

which it declined to do.

This decision proceeds upon the argument that, since the patentee may withhold his patent altogether from public use he must logically and necessarily be permitted to impose any conditions which he chooses upon any use which he may allow of it. The defect in this thinking springs from the substituting of inference and argument for the language of the statute and from failure to distinguish between the rights which are given to the inventor by the patent law and which he may assert against all the world through an infringement proceeding and rights which he may create for himself by private contract which, however, are subject to the rules of general as distinguished from those of the patent law. While it is true that under the statutes as they were (and now are) a patentee might withhold his patented machine from public use, yet if he consented to use it himself or through others, such use immediately fell within the terms of the statute and as we have seen he is thereby restricted to the use of the invention as it is described in the claims of his patent and not as it may be expanded by limitations as to materials and supplies necessary to the operation of it imposed by mere notice to the public.

The high standing of the court rendering this decision and the obvious possibilities for gain in the method which it approved led to an immediate and widespread adoption of the system, in which these restrictions expanded into more and more comprehensive forms until at length the case at bar is reached, with a machine sold and paid for yet claimed still to be subject not only to restriction as to supplies to be used but also subject to any restrictions or conditions as to use or royalty which the company which authorized its sale may see fit, after the sale, from time to time to impose. The perfect instrument of favoritism and oppression which such a system of doing business, if valid, would put into the control of the owner of such a patent should make courts astute, if need be, to defeat its operation. If these restrictions were sustained plainly the plaintiff might, for its own profit or that of its favorites, by the obviously simple expedient of varying its royalty charge, ruin any one unfortunate enough to be dependent upon its confessedly important improvements for the doing of business.

Through the twenty years since the decision in the *Button-Fastener Case* was announced there have not been wanting courts and judges who have dissented from its conclusions, as is sufficiently shown in the division of this Court when the question involved first came before it in *Henry* v. *Dick Co.* (224 U. S., 1; 176 O. G., 751) and in the disposition shown not to extend the doctrine in *Bauer* v. *O'Donnell*, (229 U. S., 1.)

The exclusive right to "vend" a patented article is derived from the same clause of the section of the statute which gives the exclusive right to "use" such an article and following the decision of the *Button-Fastener Case*, it was widely contended as obviously sound, that the right existed in the owner of a patent to fix a price at which the patented article might be sold and resold under penalty of patent infringement. But this Court, when the question came before it in *Bauer* v. *O'Donnell*, (229 U. S., 1,) rejecting plausible argument and adhering to the language of the statute from which all patent-right is derived, refused to give such a construction to the act of Congress, and decided that the owner of a patent is not authorized by either the letter or the purpose of the law to fix, by notice, the price at which a patented article must be sold after the first sale of it, declaring that the right to vend is exhausted by a single, unconditional sale, the article sold being thereby carried outside the monopoly of the patent law and rendered free of every restriction which the vendor may attempt to put upon it. The statutory authority to grant the exclusive right to "use" a patented machine is not





greater, indeed it is precisely the same, as the authority to grant the exclusive right to "vend," and, looking to that authority, for the reasons stated in this opinion we are convinced that the exclusive right granted in every patent must be limited to the invention described in the claims of the patent and that it is not competent for the owner of a patent by notice attached to its machine to, in effect, extend the scope of its patent monopoly by restricting the use of it to materials necessary in its operation but which are no part of the patented invention, or to send its machines forth into the channels of trade of the country subject to conditions as to use or royalty to be paid to be imposed thereafter at the discretion of such patent owner. The patent law furnishes no warrant for such a practice and the cost, inconvenience and annoyance to the public which the opposite conclusion would occasion forbid it.

It is argued as a merit of this system of sale under a license notice that the public is benefited by the sale of the machine at what is practically its cost and by the fact that the owner of the patent makes its entire profit from the sale of the supplies with which it is operated. This fact, if it be a fact, instead of commending, is the clearest possible condemnation of, the practice adopted, for it proves that under color of its patent the owner intends to and does derive its profit, not from the invention on which the law gives it a monopoly but from the unpatented supplies with which it is used and which are wholly without the scope of the patent monopoly, thus in effect extending the power to the owner of the patent to fix the price to the public of the unpatented supplies as effectively as he may fix the price on the patented machine.

We are confirmed in the conclusion which we are announcing by the fact that since the decision of *Henry* v. *Dick Co.* (224 U. S., 1) the Congress of the United States, the source of all rights under patents, as if in response to this decision, has enacted a law making it unlawful for any person engaged in interstate commerce—

> to lease or make a sale or contract for sale of goods * * * machinery, supplies, or other commodities, *whether patented or unpatented*, for use, consumption or resale * * * or to fix a price charged therefor * * * on the condition, agreement or understanding that the lessee or purchaser thereof shall not use * * * the goods * * * machinery, supplies or other commodities of a competitor or competitors of the lessor or seller where the effect of such lease, sale or contract for resale, or such condition, agreement or understanding may be to substantially lessen competition or tend to create a monopoly in any line of commerce. (38 Stat. at Large, p. 730.)

Our conclusion renders it unnecessary to make the application of this statute to the case at bar which the circuit court of appeals made of it but it must be accepted by us as a most persuasive expression of the public policy of our country with respect to the question before us.

It is obvious that the conclusions arrived at in this opinion are such that the decision in *Henry* v. *Dick Co.* (224 U. S., 1) must be regarded as overruled.

Coming now to the terms of the notice attached to the machine sold to the Seventy-second Street Amusement Company under the license of the plaintiff and to the first question as we have stated it.

This notice first provides that the machine, which was sold to and paid for by the Amusement Company may be used only with moving-picture films containing the invention of reissued Patent No. 12,192, so long as the plaintiff continues to own this reissued patent.

Such a restriction in invalid because such a film is obviously not any part of the invention of the patent in suit; because it is an attempt, without statutory warrant, to continue the patent monopoly in this particular character of film after it has expired, and because to enforce it would be to create a monopoly in the manufacture and use of moving-picture films, wholly outside of the patent in suit and of the patent law as we have interpreted it.

The notice further provides that the machine shall be used only upon other terms (than those stated in the notice) to be fixed by the plaintiff, while it is in use and while the plaintiff "owns said patents." And it is stated at the bar that under this warrant a charge was imposed upon the purchaser graduated by the size of the theater in which the machine was to be used.

Assuming that the plaintiff has been paid an average royalty of five dollars on each machine sold, prescribed in the license agreement, it has already received over two hundred thousand dollars for the use of its patented improvement, which relates only to the method of using the films which another had invented, and yet it seeks by this device to collect during the life of the patent in suit what would doubtless aggregate many times this amount for the use of this same invention, after its machines have been sold and paid for.

A restriction which would give to the plaintiff such a potential power for evil over an industry which must be recognized as an important element in the amusement life of the nation, under the conclusions we have stated in this opinion, is plainly void, because wholly without the scope and purpose of our patent laws and because, if sustained, it would be gravely injurious to that public interest, which we have seen is more a favorite of the law than is the promotion of private fortunes.

Both questions as stated must be answered in the negative and the decree of the circuit court of appeals is affirmed.

Mr. Justice McREYNOLDS concurs in the result.

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Mr. Justice HOLMES, with whom concur Mr. Justice McKENNA and Mr. Justice VAN DEVANTER, dissenting.

I suppose that a patentee has no less property in his patented machine than any other owner, and that in addition to keeping the machine to himself the patent gives him the further right to forbid the rest of the world from making others like it. In short, for whatever motive, he may keep his device wholly out of use. (*Continental Paper Bag Co.* v. *Eastern Paper Bag Co.*, 210 U. S., 405, 422.) So much being undisputed, I cannot understand why he may not keep it out of use unless the licensee, or, for the matter of that, the buyer, will use some unpatented thing in connection with it. Generally

speaking the measure of a condition is the consequence of a breach, and if that consequence is one that the owner may impose unconditionally, he may impose it conditionally upon a certain event. (*Ashley* v. *Ryan*, 153 U. S., 436, 443; *Lloyd* v. *Dollison*, 194 U. S., 445, 449.) *Non debet, cui plus licet, quod minus est non licere*, (D. 50, 17, 21.)

No doubt this principle might be limited or excluded in cases where the condition tends to bring about a state of things that there is a predominant public interest to prevent. But there is no predominant public interest to prevent a patented teapot or film-feeder from being kept from the public, because, as I have said, the patentee may keep them tied up at will while his patent lasts. Neither is there any such interest to prevent the purchase of the tea or films, that is made the condition of the use of the machine. The supposed contravention of public interest sometimes is stated as an attempt to extend the patent law to unpatented articles, which of course it is not, and more accurately as a possible domination to be established by such means. But the domination is one only to the extent of the desire for the teapot or film-feeder, and if the owner prefers to keep the pot or the feeder unless you will buy his tea or films, I cannot see in allowing him the right to do so anything more than an ordinary incident of ownership, or at most, a consequence of the *Paper Bag Case*, on which, as it seems to me, this case ought to turn. (See *Grant v. Raymond*, 16 Pet., 218, 242.)

Not only do I believe that the rule that I advocate is right under the *Paper Bag Case*, but I think that it has become a rule of property that law and justice require to be retained. For fifteen years, at least since *Bement* v. *National Harrow Co.*, (186 U. S., 70, 88-93,) if not considerably earlier, the public has been encouraged by this Court to believe that the law is as it was laid down in *Heaton-Peninsular Button-Fastener Co.* v. *Eureka Specialty Co.* (25 C. C. A., 267) and numerous other decisions of the lower courts. I believe that many and important transactions have taken place on the faith of those decisions, and that for that reason as well as for the first that I have given, the rule last announced in *Henry* v. *A. B. Dick Co.* (224 U. S., 1) should be maintained.

I will add for its bearing upon *Straus* v. *Victor Talking Machine Co.*, that a conditional sale retaining the title until a future event after delivery, has been decided to be lawful again and again by this Court. (*Bailey* v. *Baker Ice Machine Co.*, 239 U. S., 268, 272.) I confine myself to expressing my views upon the general and important questions upon which I have the misfortune to differ from the majority of the Court. I leave on one side the question of the effect of the Clayton Act, as the Court has done, and also what I might think if the *Paper Bag Case* were not upheld, or if the question were upon the effect of a combination of patents such as to be contrary to the policy that I am bound to accept from the Congress of the United States.

Mr. Justice McKENNA and Mr. Justice VAN DEVANTER concur in this dissent.

## Supreme Court of the United States.

STRAUS *et al.* *v.* VICTOR TALKING MACHINE COMPANY.

*Decided April 9, 1917.*

PATENTS—LICENSE NOTICE ATTEMPTING TO CONTROL PRICE INVALID.

**Plaintiff, a manufacturer of sound-reproducing machines embodying various features covered by patents of which it was the owner, adopted a form of contract which is called a "license contract" and a form of notice called a "license notice." The notice was attached to each machine and licensed the machine for use only with certain materials made by plaintiff, granted to distributers the right to use the machine for demonstrating purposes only and a right to assign a like right to the public or to regularly-licensed dealers at the dealers' regular discount royalty, and provided that the dealers might convey the license only when a certain royalty had been paid. It also provided that the title to the machine should remain in plaintiff, with right of repossession upon breach of the conditions by paying to the user the amount paid by him less five per cent. for each year the machine was used, and that violation of the conditions or removal of the notice was an infringement of the patent. Defendant, being a member of the general unlicensed public and having no contract relations with plaintiff, secured from plaintiff's wholesale and retail agents some of the machines and sold them, and threatened to sell others, at prices less than the price fixed in the notice. *Held* that the "license notice" is merely a disguised attempt to control the price of the machines after they had been sold and paid for and that it is invalid under the doctrine announced in *Adams* v. *Burke* (17 Wall., 453) and *Bauer* v. *O'Donnell*, (229 U. S., 1.)**

CERTIORARI to the Circuit Court of Appeals for the Second Circuit.

*Mr. Edward D. Wise* and *Mr. Walter C. Noyes* for the petitioners.

*Mr. Frederick A. Blount* and *Mr. Hector T. Fenton* for the respondents.

Mr. Justice CLARKE delivered the opinion of the Court.

It will contribute to brevity to designate the parties to this proceeding as they were in the trial court—the respondent as plaintiff and the petitioners as defendants.

The plaintiff in its bill alleges: that it is a corporation of New Jersey; that for many years it has been manufacturing sound-reproducing machines embodying various features covered by patents of which it is the owner, and that, for the purpose of marketing these machines to the best advantage, about August 1st, 1913, it adopted a form of contract which it calls a "license contract" and a form of notice called a "license notice," under which it alleges all of its machines have, since that date been furnished to dealers and to the public.

This "license notice" which is attached to each machine and is set out in full in the bill, declares that the machine to which it is attached is manufactured under patents, is licensed for the term of the patent under which it is licensed having the longest time to run and may be used only with sound-records, sound-boxes and needles manufactured by the plaintiff; that only the right to use the machine "for demonstrating purposes" is granted to "distributers" (wholesale dealers), but that these "distributers" may assign a like right "to the public" or to "regularly licensed Victor dealers" (retailers) "at the dealer's regular discount royalty;" that the "dealers" may convey the "license to use the machine" only when a "royalty" of not less than two hundred dollars shall have been paid, and upon the "consideration" that all of the conditions of the "license" shall have been observed; that the title to the machine shall remain in the plaintiff, which shall have the right to repossess it upon breach of any of the conditions of the notice, by paying to the user the amount paid by him less five per cent. for each year that the machine has been used. The notice in terms reserves the right to the plaintiff to inspect, test and repair the machine at all times and to instruct the user in its use, "but it assumes no obligation to do so;" it provides that "any excessive use or violation of the conditions shall be an infringement of plaintiff's patent," and that any erasure or removal of the notice will be considered as a violation of the license. Finally, it provides that at the expiration of the patent "under which it is licensed" having the longest time to run the machine shall become the property of the licensee provided all the conditions recited in the notice shall have been complied with and the acceptance of the machine is declared to be "an acceptance of these conditions."

The contract between the plaintiff and its dealers is not set out in full in the bill but it is alleged that since August 1st, 1913, the plaintiff has had with each of its 7,000 licensed dealers a written contract in which all the terms of the "license notice" are in substance repeated and in addition it is alleged that each dealer "if he has signed the assent thereto" is authorized to dispose of any machines received from "the plaintiff directly or through a paramount distributing dealer," but subject to all of the conditions expressed in the "license notice." It is alleged that this contract contains the provisions that—

> a breach of any of the conditions on the part of a distributer will render him liable, not only for an infringement of the patent but to an action on the contract or other proper remedy.

As to the defendants the bill alleges that they conduct a large mercantile business in New York city; that with full knowledge of the terms of the contract, as described, between the plaintiff and its distributers and of the "license notice" attached to each machine, the defendants "being members of the general unlicensed public," and having no contract relation with the plaintiff or with any of its licensed distributers or licensed dealers, induced "covertly and on various pretenses," one or more of plaintiff's licensed distributers or dealers to violate his or their contracts with the plaintiff, providing that no machines should be delivered to any unlicensed member of the general public until "the full license price" stated in the "license notice" affixed to each machine was paid, and thereby obtained possession of a large number of such machines at much less than the prices stated in the "license notice;" that under the terms of the said license agreement and notice, they have no title to the same, and that they have sold large numbers thereof to the public and are proposing and threatening to dispose of the remainder of those which they have acquired to "the unlicensed general public," at much less than the price stated in the notice affixed to each machine.

The prayer is for an injunction restraining the defendants from selling any of the machines, possession of which they have acquired, from other and further violation of plaintiff's rights under its Letters Patent and for the usual accounting and for damages.

The district court regarded the transaction described in the "license notice" as in substance a sale which exhausted the interest of the plaintiff in the machine, except as to the right to have it used with records and needles as provided for therein, and this right not being involved in this case it dismissed the bill. (222 Fed., 524.)

On appeal, the circuit court of appeals affirmed this judgment and remanded the case, but with instructions to allow the plaintiff to amend its bill "if it be so advised." (225 Fed., 535.)

The bill was thereafter so amended as to allege that the defendants had in their possession a large number of machines which they had obtained from plaintiff's distributers and dealers at much less in each case than the price stated in the "license notice," and that they were proposing to dispose of these machines to the "unlicensed general public" at less than the prices stated in the "license notice" in disregard of plaintiff's rights.

Again the district court, on the same ground as before, sustained a motion to dismiss the bill, but the circuit court of appeals reversed this holding (230 Fed., 449) and the case is here for review on certiorari.

The abstract of the bill which we have given, makes it plain: that whatever rights the plaintiff has against the defendants must be derived from the "license notice" attached to each machine, for no contract rights existed between them, the defendants being only "members of the unlicensed general public;" and that the sole act of infringement charged against the defendants is that they exceeded the terms of the license notice by obtaining machines from the plaintiff's wholesale or retail agents and by selling them at less than the price fixed by the plaintiff.

It is apparent from the foregoing statement that we are called upon to determine whether the system adopted by the plaintiff was selected as a means of securing to the owner of the patent that exclusive right to use its invention which is granted through the patent law, or whether, under color of such a purpose, it is a device unlawfully resorted to in an effort to profitably extend the scope of its patent at the expense of the general public. Is it the fact, as is claimed, that this "license notice" of the plaintiff is a means or agency designed in candor and good faith to enable the plaintiff to make only that full, reasonable and exclusive use of its invention which is contemplated by the patent law or is it a disguised attempt to control the prices of its machines after they have been sold and paid for?

First of all it is plainly apparent that this plan of marketing adopted by the plaintiff is, in sub-

stance, the one dealt with by this Court in *Dr. Miles Medical Co.* v. *Park & Sons Co.* (220 U. S., 373) and in *Bauer* v. *O'Donnell*, (229 U. S., 1; 191 O. G., 1068,) adroitly modified on the one hand to take advantage, if possible, of distinctions suggested by these decisions, and on the other hand to evade certain supposed effects of them.

If we look through the words and forms, with which the plaintiff has most elaborately enveloped its purpose, to the substance and realities of the transaction contemplated, we shall discover several notable and significant features. First, while as if looking to the future, the notice, in terms, imposes various restrictions as to title and as to the "use" of the machines by plaintiff's agents, wholesale and retail, and by the "unlicensed members of the public," for itself, the plaintiff makes sure, that the future shall have no risks, for it requires that all that it asks or expects at any time to receive for each machine must be paid in full before it parts with the possession of it.

Second, while in terms the "use" of each machine is restricted and forfeiture for failure to strictly comply with the many conditions and requirements of the notice is provided for, this system, elaborate to the extent of confusion, fails utterly to provide for entering any evidence of a qualified title in any public office or in any public record, and no requirement is found in it for reporting by users or licensees, who may remove from one place to another taking the machine with them, as would very certainly be required if the plaintiff intended to enforce the rights so elaborately asserted in this notice;—if the system were really a genuine provision designed to protect through many years to come the restricted right to "use" and the seemingly qualified title which it purports to grant to dealers and to the public, from being exceeded or departed from.

Third. The fact that under this system "at different times" "large numbers" of machines, as is alleged in the plaintiff's bill, have been "covertly" sold to the defendants by the plaintiff's wholesale and retail agents at less than the price fixed for them, is persuasive evidence that the transaction is not what it purports on its face to be. If it were a reasonably guarded plan, really intended to keep the plaintiff in touch with each of its machines until the expiration of the patent of latest date, for the purpose of insisting upon its being used in the manner provided for in the "license notice" the plaintiff's prompt and sufficient remedy for such an invasion of its right as is claimed in this case would be found in its sales department or rather in its "license" department, and not in the courts. That the plaintiff comes into court with a bill to enjoin the defendants from reselling machines secretly sold to them in large numbers by the plaintiff's agents indicates very clearly that at least until the exigency out of which this case grew, arose, the scheme was regarded by the plaintiff itself and by its agents simply as one for maintaining prices by holding a patent infringement suit *in terrorem* over the ignorant and the timid.

And finally, while the notice permits the use of the machines, which have been fully paid for, by the "unlicensed members of the general public," significantly called in the bill "the ultimate users," until "the expiration of the patent having the longest term to run" (which, under the copy of the notice set out in the bill, would be July 22d, 1930) it provides that if the licensee shall not have failed to observe the conditions of the license, and the Victor Company shall not have previously taken possession of the machine, as in the notice provided, then, perhaps sixteen years or more after he has paid for it and in all probability long after it has been worn out or become obsolete and worthless "it shall become the property of the licensee."

It thus becomes clear that this "license notice" is not intended as a security for any further payment upon the machine, for the full price, called a "royalty," was paid before the plaintiff parted with the possession of it; that it is not to be used as a basis for tracing and keeping the plaintiff informed as to the condition or use of the machine, for no report of any character is required from the "ultimate user" after he has paid the stipulated price; that, notwithstanding its apparently studied avoidance of the use of the word "sale" and its frequent reference to the word "use," the most obvious requirements for securing a *bona fide* enforcement of the restrictions of the notice as to "use" are omitted; and that, even by its own terms, the title to the machines ultimately vests in the "ultimate users," without further payment or action on their part, except patiently waiting for patents to expire on inventions, which, so far as this notice shows, may or may not be incorporated in the machine. There remains for this "license notice" so far as we can discover, the function only, of fixing and maintaining the price of plaintiff's machines to its agents and to the public, and this we cannot doubt is the purpose for which it really was designed.

Courts would be perversely blind if they failed to look through such an attempt as this "license notice" thus plainly is to sell property for a full price, and yet to place restraints upon its further alienation, such as have been hateful to the law from Lord Coke's day to ours, because obnoxious to the public interest. The scheme of distribution is not a system designed to secure to the plaintiff and to the public a reasonable use of its machines, within the grant of the patent laws, but is in substance and in fact a mere price-fixing enterprise, which, if given effect, would work great and widespread injustice to innocent purchasers, for it must be recognized that not one purchaser in many would read such a notice, and that not one in a much greater number, if he did read it, could understand its involved and intricate phraseology, which bears many evidences of being framed to conceal rather than to make clear its real meaning and purpose. It would be a perversion of terms to call the transaction intended to be embodied in this system of marketing plaintiff's machines a "license to use the invention." (*Bauer* v. *O'Donnell*, 229 U. S., 1, 16.)

Convinced as we are that the purpose and effect





of this "license notice" of plaintiff, considered as a part of its scheme for marketing its product, is not to secure to the plaintiff any use of its machines, and as is contemplated by the patent statutes, but that its real and poorly-concealed purpose is to restrict the price of them, after the plaintiff had been paid for them and after they have passed into the possession of dealers and of the public, we conclude that it falls within the principles of *Adams* v. *Burke* (17 Wall., 453, 456) and of *Bauer* v. *O'Donnell*, (229 U. S., 1;) that it is, therefore, invalid, and that the district court properly held that the bill must fail for want of equity.

It results that the decree of the circuit court of appeals will be reversed and that of the district court affirmed.

Reversed.

## ADJUDICATED PATENTS.

(U. S. D. C.) The Bell reissue patent, No. 14,194, (original No. 1,111,432,) for a sewing-machine attachment, *Held* not within the original invention and void. *Pierce* v. *Bell*, 239 Fed. Rep., 549.

(U. S. C. C. A.) The Kenney patent, No. 847,947, for a vacuum-cleaner, *Held* not anticipated, valid, and infringed. *Vacuum Cleaner Co.* v. *Innovation Electric Co.*, 239 Fed. Rep., 543.

(U. S. C. C. A.) The Legg patent, No. 946,235, for a shoe-form, *Held* not infringed. *C. S. Pierce Co.* v. *Belcher*, 239 Fed. Rep., 529.

(U. S. C. C. A.) The Lindsay patent, No. 748,760, for a rear axle for automobiles, claims 2 and 3, in view of the prior art, *Held* void for lack of patentaable invention. *Winton Motor Carriage Co.* v. *Lindsay Auto Parts Co.*, 239 Fed. Rep., 521.

(U. S. D. C.) The Pierce patent, No. 1,154,337, for a sewing-machine attachment, *Held* valid and infringed. *Pierce* v. *Bell*, 239 Fed. Rep., 549.

(U. S. D. C.) The Wendell patent, No. 1,137,438, for an ironing-machine, *Held* void for prior use for more than two years. *Wendell* v. *American Laundry Machinery Co.*, 239 Fed. Rep., 555.

THE

# OFFICIAL GAZETTE

OF THE

## United States Patent Office.

Vol. 238—No. 2. TUESDAY, MAY 8, 1917. Price—$5 per year.

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### Issue of May 8, 1917.

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| Patents | 853—No. | 1,224,885 to No. | 1,225,737, inclusive. |
| Designs | 63—No. | 50,708 to No. | 50,770, inclusive. |
| Trade-Marks | 75—No. | 116,495 to No. | 116,569, inclusive. |
| Labels | 23—No. | 20,070 to No. | 20,092, inclusive. |
| Prints | 8—No. | 4,683 to No. | 4,690, inclusive. |
| Reissues | 4—No. | 14,297 to No. | 14,300, inclusive. |
| Total | 1026 | | |

### Disclaimer.

1,074,973.—*John Neuberger* and *James F. Hines*, Cleveland, Ohio. Shade and Curtain-Pole Support. Patent dated October 7, 1913. Disclaimer filed April 28, 1917.

Hereby disclaim:

"Being the joint inventors of the invention set forth in said Letters Patent No. 1,074,973, and the said John Neuberger disclaims being the inventor of any part thereof."

### Adverse Decisions in Interference.

Patent No. 1,121,911.

On January 30, 1917, a decision was rendered that William W. Essick was not the first inventor of the subject-matter covered by claims 3, 7, 8, 9, and 10 of his Patent No. 1,121,911, subject, "Goggles," and no appeal having been taken within the time allowed such decision has become final.

### Interference Notices

Department of the Interior,
United States Patent Office,
*Washington, D. C., May 2, 1917.*

***American Farmer Company, a Corporation, its assigns or legal representatives, take notice:***

An interference having been declared by this Office between the application of American Farming Publishing Company, 537 South Dearborn street, Chicago, Ill., for registration of a trade-mark and trade-mark registered August 20, 1895, No. 45,754, to American Farmer Company, a Corporation, 38 South Pennsylvania street, Indianapolis, Ind., and a notice of such declaration sent by registered mail to said American Farmer Company, a Corporation, at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said American Farmer Company, a Corporation, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the Official Gazette for three consecutive weeks.

R. F. WHITEHEAD,
*First Assistant Commissioner.*

Department of the Interior,
United States Patent Office,
*Washington, D. C., April 21, 1917.*

***Warren E. Smith, his assigns or legal representatives, take notice:***

An interference having been declared by this Office between the application of Kling Bros. & Co., 411–415 South Fifth avenue, Chicago, Ill., for registration of a trade-mark and trade-mark registered February 28, 1893, No. 22,521, to Warren E. Smith, 49 Lafayette Place, New York, N. Y., and a notice of such declaration sent by registered mail to said Warren E. Smith at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Warren E. Smith, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the Official Gazette for three consecutive weeks.

R. F. WHITEHEAD,
*First Assistant Commissioner.*

### ADJUDICATED PATENTS.

(U. S. C. C. A.) The Guy patent, No. 1,097,716, for a miner's carbid-lamp, *Held* void for prior public use. *Guy* v. *Stein*, 239 Fed. Rep., 729.

(U. S. C. C. A.) The Leonard patent, No. 615,863, for a rubber substitute and process of making the same, *Held* not infringed. *Leonard* v. *Corn Products Refining Co.*, 239 Fed. Rep., 734.

(U. S. C. C. A.) The Monroe reissue patent, No. 13,708, for a road-leveling machine, *Held* void for prior public use. *Monroe* v. *Bresee*, 239 Fed. Rep., 727.

# APPLICATIONS UNDER EXAMINATION.

*Condition at Close of Business May 4, 1917.*

| Room No. | Divisions and subjects of invention. | Oldest new application and oldest action by applicant awaiting office action. New. | Amended | No. of applications awaiting action. |
|---|---|---|---|---|
| 314 | 1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers. | Mar. 12 | Apr. 4 | 265 |
| 128 | 2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco. | Dec. 29 | Jan. 23 | 473 |
| 175 | 3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working. | Feb. 19 | Mar. 3 | 99 |
| 234 | 4. Conveyors; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists. | Mar. 15 | Apr. 20 | 237 |
| 167 | 5. Bookbinding; Harvesters; Jewelry; Music | Dec. 29 | Apr. 9 | 240 |
| 318 | 6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation. | Jan. 2 | Mar. 15 | 342 |
| 312 | 7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes | Dec. 21 | Dec. 21 | 683 |
| 131 | 8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports. | Dec. 6 | Mar. 17 | 986 |
| 142 | 9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps | Dec. 5 | Apr. 24 | 433 |
| 235 | 10. Carriages and Wagons | Dec. 7 | Apr. 7 | 850 |
| 154 | 11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus. | Feb. 23 | Apr. 6 | 159 |
| 324 | 12. Journal-Boxes, Pulleys, and Shafting; Machine Elements | Mar. 1 | Apr. 3 | 600 |
| 329 | 13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning. | Feb. 16 | Mar. 31 | 551 |
| 307 | 14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working. | Jan. 25 | Feb. 12 | 260 |
| 308 | 15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics. | Apr. 2 | Apr. 9 | 217 |
| 109 | 16. Electric Signaling; Radiant Energy; Telegraphy; Telephony | Dec. 2 | Feb. 9 | 631 |
| 303 | 17. Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting. | Jan. 27 | Apr. 7 | 167 |
| 327 | 18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Lubrication; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves. | Feb. 26 | Apr. 17 | 254 |
| 236 | 19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels | Jan. 4 | Jan. 24 | 493 |
| 179 | 20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking. | Apr. 6 | Apr. 2 | 228 |
| 182 | 21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling. | Jan. 16 | Mar. 7 | 303 |
| 249 | 22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships. | Dec. 14 | Feb. 28 | 605 |
| 379 | 23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism. | Jan. 2 | Aug. 26 | 283 |
| 144 | 24. Apparel; Apparel Apparatus; Sewing-Machines; Garment Supporters | Jan. 15 | Mar. 14 | 332 |
| 315 | 25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation. | Mar. 31 | Apr. 9 | 121 |
| 105 | 26. Electricity, Generation; Motive Power | Nov. 1 | Feb. 1 | 556 |
| 375 | 27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus | Apr. 5 | Apr. 6 | 213 |
| 63 | 28. Internal-Combustion Engines | Jan. 5 | Feb. 1 | 468 |
| 147 | 29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools. | Dec. 14 | Feb. 1 | 398 |
| 152 | 30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines | Feb. 2 | Apr. 21 | 418 |
| 172 | 31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt. | Feb. 1 | Mar. 14 | 267 |
| 278 | 32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration. | Oct. 9 | Mar. 27 | 869 |
| 70 | 33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving. | Jan. 15 | Mar. 19 | 408 |
| 304 | 34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners. | Nov. 15 | Mar. 16 | 270 |
| 57 | 35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet | Dec. 27 | Apr. 24 | 648 |
| 264 | 36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring | Jan. 27 | Apr. 16 | 596 |
| 107 | 37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications. | Nov. 20 | Mar. 17 | 698 |
| 378 | 38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells | Apr. 3 | Apr. 20 | 167 |
| 321 | 39. Water Distribution | Jan. 15 | Mar. 6 | 391 |
| 280 | 40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles. | Feb. 21 | Apr. 21 | 477 |
| 125 | 41. Railway Draft Appliances; Resilient Tires and Wheels | Feb. 12 | Mar. 12 | 308 |
| 244 | 42. Electricity, Conductors; Railway Signaling; Electricity-Transmission to Vehicles | Dec. 3 | Apr. 3 | 344 |
| 382 | 43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification. | Jan. 31 | Mar. 16 | 209 |

Oldest new case, Oct. 9; oldest amended, Aug. 26.
Total number of applications awaiting action..... 17,510

| | | | | |
|---|---|---|---|---|
| 163 | TRADE-MARKS, DESIGNS, LABELS AND PRINTS: | | | |
| | Trade-Marks | Feb. 17 | Apr. 5 | 1092 |
| | Designs | Mar. 28 | Mar. 17 | 329 |
| | Labels and Prints | Apr. 28 | Apr. 26 | 62 |



# PATENTS

## GRANTED MAY 8, 1917.

1,224,885. SAFETY DEVICE FOR SHELLS. NIELS WALTERSEN AASEN, Copenhagen, Denmark. Filed Nov. 18, 1915. Serial No. 62,162. (Cl. 102—29.)



1. In a shell, a firing pin at the front thereof and having an impact plate, means adapted to hold said firing pin in normal position including a slidable pin and located intermediate said impact plate and the front of the shell, a cylinder at the rear of said shell and open at the rear end thereof, and a piston in said cylinder carrying a releasing pin, said releasing pin being adapted, when the said piston is moved forward, to move the first-mentioned pin and release the means adapted to hold the said firing pin in normal position.

2. In a shell, a firing pin at the front thereof and having an impact plate, means adapted to hold said firing pin in normal position including a slidable pin and located intermediate said impact plate and the front of the shell, a cylinder at the rear of said shell and open at the rear end thereof, a plate adjacent the rear open end of the said cylinder and spaced therefrom, and a piston in said cylinder carrying a releasing pin, said releasing pin being adapted, when the said piston is moved forward, to move the first-mentioned pin and release the means adapted to hold the said firing pin in normal position.

3. In a shell, a threaded firing pin screwed into a socket and having a lateral opening, a holding pin thrust through said opening and preventing the rotation of said firing pin, a safety pin connected to said holding pin to prevent the withdrawal thereof, and to prevent the rotation of said firing pin, means for removing said safety pin out of position so that said holding pin can be ejected from the opening of the said firing pin, and a spring under torsion connected to said firing pin and adapted to revolve the same upon the release thereof.

4. In a shell, a firing pin at the front thereof, means adapted to positively maintain said firing pin in normal position, and to prevent the discharge of the shell, including a slidable pin, a cylinder at the rear of said shell, and open at the rear end thereof, and a piston in said cylinder carrying a releasing pin, said releasing pin being adapted, when the said piston is moved forward, to actuate the first mentioned slidable pin and release the means adapted to positively maintain the said firing pin in normal position.

1,224,886. FLEXIBLE SHAFTING. ROLLIN ABELL, Boston, Mass. Filed June 12, 1912. Serial No. 703,241. (Cl. 64—30.)

1. A shaft of the character described comprising a series of similar pieces of ductile sheet metal each having a pair of hook portions at each end, each said hook portion being arranged in hooked relation to a pair of such hook portions of the contiguous piece whereby it is adapted to sustain longitudinal stress from one piece to the next, independently of its companion hook portion.



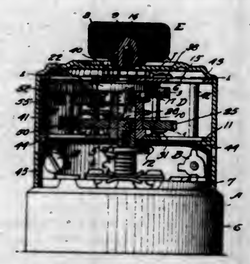
2. A flexible shaft comprising a series of similar pieces each having a pair of tongues at each end, the tongues of each said pair having bends and forming an eye, the free end portions of each said pair of tongues being arranged in an eye formed by such tongues of the contiguous piece.

3. A shaft of the character described comprising a series of similar members each having a body portion and two pairs of hook portions, said hook portions extending in opposite directions from the ends of said body portion, each said hook portion being arranged in hooked relation with and engaging a pair of such hook portions of the next such member, said hook portions being arranged to keep said members connected.

4. A device for the purpose explained consisting of a single piece of ductile sheet metal having a body portion and two pairs of hook portions projecting longitudinally in opposite directions from the ends of the body portion, the free ends of said hook portions of each pair extending toward each other and forming an eye to confine such free ends of another such device.

5. A device for the purpose explained consisting of a single piece of ductile sheet metal having two pairs of hook portions extending in opposite directions, the hook portions of each said pair being arranged to form an eye adapted to receive and confine the free ends of a pair of such hook portions of another such piece.

1,224,887. ELECTRIC TIME-SWITCH. GEORGE M. BACON, Salt Lake City, Utah. Filed Nov. 28, 1916. Serial No. 133,953. (Cl. 161—27.)



1. The combination with a snap switch having the usual detachable casing and turning button, of time-controlled means including a housing adapted to be substituted for said casing, an operating spindle adapted to be substituted on the snap switch for said turning button to hold the housing over said switch and operate the same, a setting stem projecting beyond the housing to receive said turning button thereon, and a one-way connection between the setting stem and the spindle to turn the latter and the snap switch upon the rotation of the button in one direction.

2. Controlling mechanism for electric switches comprising in combination, a revoluble cylindrical member provided with an axial way, a rotatable knob, mechanism for imparting movement of said knob in one direction to said cylindrical member, a device for limiting rotation of said cylindrical member in the said direction only, a wheel rotatable about said cylindrical member, a coil spring about said cylindrical member with one end portion coupled to said wheel and its other end portion movable with said mechanism to impel said wheel to rotate in the same direction as said cylindrical member is moved by said mechanism, a device for imparting movement of said wheel in the said direction to said cylindrical member, and mechanism for resisting quick movement of said wheel, and a snap switch-engaging head fitting in the way of said cylindrical member.

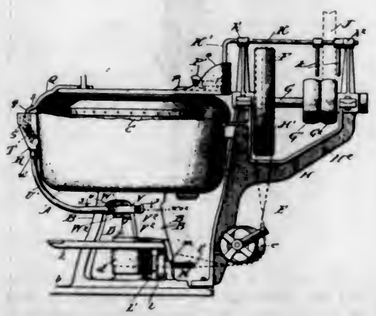
3. In controlling mechanism for electric switches of the character described, the combination of a revoluble cylindrical member adapted for connection with the switch and provided with circumferentially disposed ratchet teeth, a knob, a motion transmitting member coaxial with said cylindrical member and operatively connected with said knob to be rotated by its movement in a predetermined direction, a pawl carried by said motion transmitting member and coöperating with the teeth of said cylindrical member to rotate the same in the said direction only, a device resisting rotation of said motion transmitting member in a direction counter to said predetermined direction, a gear rotatable about said cylindrical member, a coil spring about said cylindrical member with its one end portion coupled to said gear and its other end portion movable with said motion transmitting member to urge said gear to rotate in the same direction as said cylindrical member is moved by said motion transmitting member, a device for imparting movement of said gear in the said direction to said cylindrical member, an escapement mechanism, and a train of gears in operative relation to said escapement mechanism and in meshing relation to said gear to resist quick movement of the latter.

4. In control mechanism for electric switches of the character described, the combination of a revoluble cylindrical member adapted for connection with the switch and provided with circumferentially disposed ratchet teeth, a knob, a motion transmitting member co-axial with said cylindrical member and operatively connected with said knob to be rotated by its movement in a predetermined direction, a pawl carried by said motion transmitting member and coöperating with the teeth of said cylindrical member to rotate the same in the said direction only, a device resisting rotation of said motion transmitting member in a direction counter to said predetermined direction, a wheel rotatable about said revoluble cylindrical member, a coil spring about said cylindrical member with one end portion coupled to said wheel and its other end portion movable with said motion transmitting member to impel said wheel to rotate in the said direction as said cylindrical member is moved by said motion transmitting member, a device for imparting movement of said wheel in the said direction to said cylindrical member, and mechanism for resisting quick movement of said wheel.

5. In control mechanism for electric switches of the character described, the combination of a revoluble cylindrical member adapted for connection with the switch and provided with two sets of circumferentially disposed ratchet teeth, a knob, a motion transmitting member coaxial with said cylindrical member and operatively connected with said knob to be rotated by its movement in a predetermined direction, a pawl carried by said motion transmitting member and coöperating with one of the said sets of teeth of said cylindrical member to rotate the same in said direction only, a device resisting rotation of said motion transmitting member in a direction counter to said predetermined direction, a wheel rotatable about said cylindrical member, a coil spring about said cylindrical member with one end portion coupled to said wheel and its other end portion movable with said motion transmitting member to impel said wheel to rotate in the same direction as said cylindrical member is moved by said motion transmitting member, a pawl carried by said wheel and coöperating with the other of said sets of ratchet teeth of said cylindrical member to impart the said movement of said wheel to said cylindrical member, and mechanism for resisting quick movement of said wheel.

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1,224,888. CENTRIFUGAL EXTRACTOR. FRITZ BALZER, Chicago, Ill., assignor to Troy Laundry Machinery Company, Limited, Chicago, Ill., a Corporation of New York. Original application filed Apr. 6, 1912, Serial No. 688,618. Divided and this application filed July 16, 1915. Serial No. 40,261. (Cl. 74—46.)



1. In a centrifugal extractor, the combination with the rotary basket thereof, of means controlling the application of power to said basket, a cover for preventing access to said basket, a lever mounted upon a fixed fulcrum at one side of said cover, and a projection on said cover for oscillating said lever when the cover is opened into position to obstruct the operation of said controlling means to apply power to the basket, said lever being automatically movable upon the closing of said cover into a position to permit the operation of said controlling means.

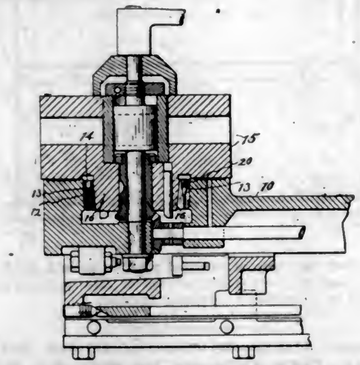
2. In a centrifugal extractor, the combination with a casing, of a cover for said casing, a rotary basket within said casing, means controlling the application of power to said basket, a lever mounted upon said casing, means on said cover for oscillating said lever when the cover is open into position to obstruct the operation of said controlling means to apply power to the basket, and means for automatically oscillating said lever to a position to permit the operation of said controlling means to apply power to said basket when the cover is closed.

3. In a centrifugal extractor, the combination with a casing, of a cover for said casing, a rotary basket within said casing, belt shifting mechanism controlling the application of power to said basket, a lever mounted upon said casing, a cam on said cover adapted to oscillate said lever when the cover is opened into the path of movement of said belt shifting mechanism to obstruct the application of power to said basket, and means on said lever for oscillating the same out of the path of said belt shifting mechanism when said cover is closed.

4. In a centrifugal extractor, the combination with a casing, of a cover for said casing, a rotary basket within said casing, belt shifting mechanism controlling the application of power to said basket, a lever fulcrumed intermediate of its ends upon said casing, and a projection movable with said cover to engage one end of said lever when the cover is opened, and moving the other end of said lever into the path of movement of said belt shifting mechanism to obstruct the application of power to said basket, said lever being automatically movable when disengaged by said projection into a position out of the path of said belt shifting mechanism.



1,224,889. TURRET-LATHE. GEORGE C. BARDONS, Cleveland, Ohio, assignor to Bardons and Oliver, a Partnership comprising George C. Bardons and John G. Oliver, Cleveland, Ohio. Filed Feb. 19, 1916. Serial No. 79,282. (Cl. 29—48.)



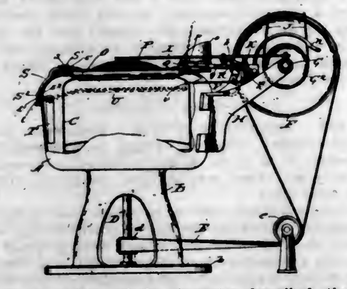
1. In a turret lathe, the combination of a turret slide having a threaded vertical hole and an upper surface around the same for supporting a turret, an externally threaded and internally conical ring which is screwed into said hole, and a turret which rests upon the slide and has a depending frusto-conical boss which is rotatably fitted in said ring.

2. In a turret lathe, the combination of a turret slide having a threaded vertical hole and an upper surface around the same for supporting a turret, a split ring which is screwed into said hole, means for expanding said split ring when it has been adjusted to the desired position with respect to the turret slide, and a turret which rests upon the slide and has a depending frusto-conical boss which is rotatably fitted in said ring.

3. In a turret lathe, the combination of a turret slide having a threaded vertical hole and an upper surface around the same for supporting a turret, a split ring which is screwed into said hole, said split ring having at its adjacent ends a threaded and tapered hole, and a threaded and tapered locking pin which screws into said hole, a turret which rests upon the slide and has a depending frusto-conical boss which is rotatably fitted in said ring.

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1,224,890. CENTRIFUGAL EXTRACTOR. WILLIAM BARTHOLOMEW, Chicago, Ill., assignor to Troy Laundry Machinery Company, Limited, Chicago, Ill., a Corporation of New York. Original application filed Mar. 26, 1912, Serial No. 686,404. Divided and this application filed July 16, 1915. Serial No. 40,237. (Cl. 74—46.)



1. In a machine of the character described, the combination with a moving member, of a safety guard for preventing access to said member, means for controlling the application of power to said member, and elements connected with said guard and with said controlling means having intersecting paths of movement whereby when said guard is in unprotecting position the element connected thereto lies in the path of the element connected to said controlling means to prevent the operation of the latter to apply power to said member, and when said power controlling means is in position to apply power to said member the element connected thereto lies in the path of the element connected to said guard to prevent the movement thereof from its protecting position.

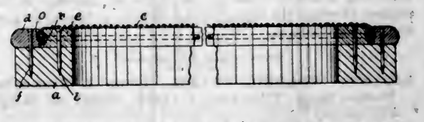
2. In a centrifugal extractor, the combination with a rotary basket, of a cover for closing said basket, means for controlling the application of power to rotate said basket, and elements connected to said cover and to said power controlling means having intersecting paths of movement whereby when said cover is in open position the element connected thereto lies in the path of the element connected to said power controlling means to prevent the operation thereof to apply power to the basket, and when said power controlling means is in position to rotate said basket, the element connected thereto lies in the path of the element connected to said cover to prevent the movement thereof into open position.

3. In a centrifugal extractor, the combination with a rotary basket, of a cover for closing said basket, means for controlling the application of power to said basket, a reciprocating rod connected to said means, a second reciprocating rod having a path of movement intersecting that of said first rod, means connecting said second rod with said cover for projecting the same into the path of said first rod when the cover is in open position and the power is disconnected from the basket, and for retracting said second rod out of the path of said first rod when the cover is closed, said first rod when the power is applied to the basket lying in the path of said second rod and thereby preventing the lifting of said cover.

4. In a centrifugal extractor, the combination with a casing, of a rotary basket within said casing, a cover for closing said casing, a belt shifter comprising a reciprocating rod, a second reciprocating rod having a path of movement intersecting that of said belt shifting rod, means connecting said second rod with said cover for projecting the same into the path of said belt shifting rod when the cover is opened and the belt is on the loose pulley and for retracting said rod out of the path of said belt shifting rod when the cover is closed, said belt shifting rod when the belt is on the tight pulley lying in the path of said second rod and thereby preventing the lifting of said cover.

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1,224,891. MANUFACTURE OF CHAIR-SEATS. ALBERT J. BAUM, New York, N. Y., assignor to Albert Wanner, Jr., New York, N. Y. Filed Nov. 19, 1915. Serial No. 62,340. (Cl. 155—4.)



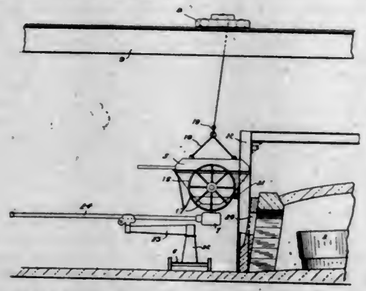
1. The herein described chair seat including concentric endless frame members, a seat proper formed of a piece of flexible sheet material, said piece being extended over, and being in a substantially uniformly taut state as to the whole area of, the inner frame member and having its marginal part extended between said frame members, and a hoop interposed between said members in concentric relation thereto and clamping the marginal part of said seat proper in place, said hoop having a continuous groove-interlock with each of said members.

2. The herein described chair seat including concentric endless frame members, a seat proper formed of a piece of flexible sheet material, said piece being extended over, and being in a substantially uniformly taut state as to

the whole area of the inner frame member and having its marginal part extended and continuously clamped between said frame members, said members having opposed continuous grooves, and a hoop engaging in one of said grooves and pressing the marginal part of the seat proper into the other groove and thus interlocking said members.

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1,224,892. PROCESS OF HANDLING MATERIAL IN GLASS-MAKING. JOHN A. BECHTEL, Tarentum, Pa., assignor to Pittsburgh Plate Glass Company, a Corporation of Pennsylvania. Filed July 8, 1913. Serial No. 777,860. (Cl. 214—23.)



1. In a glass plant, in combination with a batch mixer and a glass melting furnace having charging openings through its side and provided with melting pots, a wheeled truck adapted to receive batch from the mixer and movable along the floor of the plant from the mixer to a position adjacent the furnace, the said truck being provided with a gravity discharge passage and a valve or gate controlling said passage, an elevating device for engaging the truck and carrying it to a position over one of the charging openings of the furnace, and a ladle independent of the truck supported for movement from a receiving point beneath the discharge passage of the truck through the charging opening to a discharge position in the furnace.

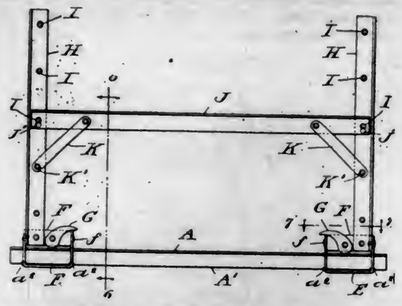
2. In a glass plant, in combination with a glass melting furnace having charging openings through its side and provided with melting pots, a portable hopper adapted to receive glass making materials for the pots and transport it to a position adjacent the furnace, an elevating device for engaging the hopper and carrying it to a position above one of the charging openings of the furnace, the said hopper having a gravity discharge passage from its lower portion provided with a gate or valve, a ladle support independent of the hopper and mounted for movement longitudinally of the furnace, and a ladle mounted for movement on said ladle support and movable from a receiving position beneath the discharge passage of the hopper through the charging opening to a discharge position in the furnace.

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1,224,893. FOLDING FRAME. LOUIS I. BECKWITH, Boston, Mass. Filed June 17, 1915. Serial No. 34,723. (Cl. 20—81.)

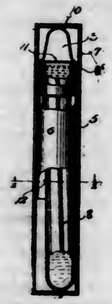
1. A frame comprising a top-bar T-shaped in cross-section, a pair of supporting legs therefor, U-shaped brackets formed of a single sheet of metal and having their vertical sides provided with T-shaped apertures conformable to the shape of said top bar whereby said brackets may be slipped onto said top bar, a tie member connecting the vertical sides of said T-shaped brackets, uprights of angle iron having one flange rigidly secured to said ties and the other flange to the side of said U-shaped brackets, and a cam lever pivoted to said tie and adapted to engage the top of said top bar to lock said brackets to said bar.

2. A frame comprising a top bar, a pair of supporting legs therefor, a bracket having apertures in its walls conforming to the shape of said top bar whereby the brackets may be adjusted longitudinally of said bar, uprights rigidly secured to said brackets, means carried by the brackets to lock the same in adjusted position to said top bar, and a cross-bar detachably secured to said uprights and adapted to be adjusted vertically thereon.



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1,224,894. DISPENSING-RECEPTACLE FOR MUCILAGE. EDWARD C. BERNERS, Two Rivers, Wis. Filed Sept. 25, 1916. Serial No. 122,177. (Cl. 91—67.5.)



1. A receptacle comprising a body including a mouth portion, a sealing cap of fragile material disposed over the mouth portion, and a flexible distributer hood having one end distended to receive said mouth portion, to secure said hood and the cap.

2. A receptacle comprising a body including a mouth portion, a sealing cap of fragile material disposed over the mouth portion and a resilient distributer hood having one end distended to receive said mouth portion, to secure said hood and the cap.

3. A receptacle comprising a body including a mouth portion, a circumscribing bead on said mouth portion, a sealing cap of fragile material disposed over the mouth portion, and a resilient distributer hood having one end distended to receive said mouth portion to secure said hood and the cap.

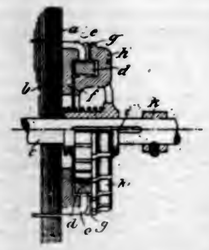
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1,224,895. INDUCTION-MOTOR. FERDINAND BLANC, Charlottenburg, Germany, assignor to Siemens-Schuckertwerke, G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed Jan. 16, 1914. Serial No. 812,460. (Cl. 172—120.)

1. In an induction motor of polyphase construction the combination of an armature having a squirrel-cage winding, the electrical resistance of said winding being such as to give a strong starting torque, and means, comprising a movable magnetizable ring partially surrounding a short-circuit ring of said winding, for increasing only the reactance of said winding.



2. In an induction motor of polyphase construction the combination of an armature having a squirrel-cage winding, the electrical resistance of said winding being such as to give a strong starting torque, and means, comprising a movable magnetizable ring divided into a plurality of segments individually surrounding a short-circuit ring of said winding, for increasing only the reactance of said winding.



3. In an induction motor of polyphase construction the combination of an armature having a squirrel-cage winding, the electrical resistance of said winding being such as to give a strong starting torque, means comprising a movable magnetizable ring partially surrounding a short-circuit ring of said winding, for increasing only the reactance of said winding, and means for enlarging the distance between said short-circuit ring and said magnetizable ring with increasing speed of said motor.

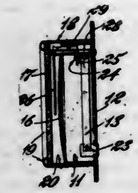
4. In an induction motor of polyphase construction the combination of an armature having a squirrel-cage winding, the electrical resistance of said winding being such as to give a strong starting torque, means comprising a movable magnetizable ring divided into a plurality of segments individually surrounding a short-circuit ring of said winding, for increasing only the reactance of said winding, and means for enlarging the distance between said short-circuit ring and said magnetizable ring with increasing speed of said motor.

5. In an induction motor of polyphase construction the combination of an armature having a squirrel-cage winding, the electrical resistance of said winding being such as to give a strong starting torque, means comprising a movable magnetizable ring partially surrounding a short-circuit ring of said winding, for increasing only the reactance of said winding, and a spring being under tension at the starting period, said spring being adapted to enlarge the distance between said short-circuit ring and said magnetizable ring with increasing speed of said motor.

[Claim 6 not printed in the Gazette.]

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1,224,896. OVEN-THERMOMETER. CHARLES D. BOLIN, St. Louis, Mo. Filed July 6, 1915. Serial No. 38,080. (Cl. 73—119.)



1. A thermometer comprising a casing and a heat sensitive spring inclosed therein and fixed thereto at one end, said spring having a finger at its free end, a pivot post fixed to the casing at its inner end and projecting out of the casing and carrying an index pointer pivoted on its outer end, said index pointer having an inner portion provided with an arm pivotally engaging said post within the casing, said arm having an opening in which said finger is engaged for turning the pointer on its pivot.

2. A thermometer comprising a casing with an open front closed by a dial and a heat sensitive spring inclosed in said casing and fixed to its back wall at one end, said spring having a finger at its free end, a pivot post fixed to the back wall of the casing at its inner end and projecting through said dial and carrying an index pointer pivoted on its outer end to sweep across the face of said dial, said index pointer having an inner portion provided with an arm within the casing, said arm having an opening in which said finger is engaged for turning the pointer on its pivot.

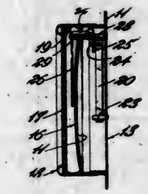
3. A thermometer comprising a support and a heat sensitive element fixed thereto, a dial, and a sheet metal index pointer swinging across said dial, said pointer having a hand and an arm in parallel planes on opposite sides of said dial, a pivot fixed to said support and passing through said dial and said pointer, and a strap passing through said dial alongside of said pivot and connecting said hand and arm, whereby said hand and said arm are caused to swing in unison, and means connecting said arm and heat sensitive element for swinging said arm in response to deflection of said heat sensitive element.

4. A thermometer comprising a base and a heat sensitive element fixed thereto, a dial, and a sheet metal index pointer swinging across said dial, said pointer having a hand and an arm in parallel planes, a pivot fixed to said base and passing through said hand and said arm, and a strap alongside of said pivot connecting said hand and arm and long enough to be twisted between its ends without injury, whereby said hand and said arm can be adjusted to stand at any desired angle to each other and are caused to swing in unison, and means connecting said arm and heat sensitive element for swinging said arm in response to deflection of said heat sensitive element.

5. As an article of manufacture, a thermometer needle formed from a single piece of sheet metal having two parallelly arranged arms, one disposed above the other, one arm serving as a heat indicating member and the other arm having provision for connection with a heat responsive member, a yoke formed integral with the arms for rigidly connecting them, there being a pivot hole in each arm, the pivot holes being in registration with each other.

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1,224,897. OVEN-THERMOMETER. CHARLES D. BOLIN, St. Louis, Mo. Filed Feb. 18, 1916. Serial No. 79,087. (Cl. 73—119.)



1. A thermometer comprising a case, having a solid front wall and an open side at the back, a dial on the front wall of said case, a back closing the open side of said case and fixed thereto, a heat sensitive spring and a pivot post secured to said back, said pivot post projecting through the front wall of said case, a pointer rotatable on the end of said pivot post, said pointer having an arm within said case pivoted on said post and adapted for cooperation with said spring.

2. A thermometer comprising a cupped case inclosing a heat sensitive spring, the front wall of said case having an enamel dial thereon, a retainer ring surrounding said case, said retainer ring having an inturned flange for holding a glass, a separator ring between the glass and the front wall of the case, said separator ring being con-

vex whereby its inner edge covers the edge portion of the dial, and an index pointer moved by said spring, said pointer being disposed between said glass and dial.

3. A thermometer comprising a cupped case having a front wall with a hole in it, a dial on the front wall of said case, a back closing the open side of said case and fixed thereto, said back being of thinner metal than said case, a heat sensitive spring and a pivot post within said case, said pivot post having its front end in alinement with said hole through the front face of said case, and a one-piece index pointer journaled thereon, and projecting through said hole.

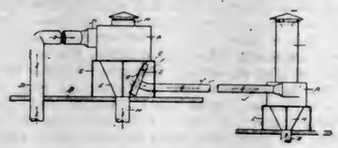
4. A casing for a thermometer comprising a shallow cup having a front wall and an open side, the front wall of said cup having a dial made thereon, a back wall secured to said cup and closing its open side, said cup having an opening in its front and peripheral walls for the insertion of an index pointer, and an outer ring closing the opening in the peripheral wall of said cup.

5. A thermometer comprising a cupped case having an open side, a dial on the front wall of said case, a back closing the open side of said case and fixed to said case, a heat sensitive spring and a pivot post arranged in the case, a pointer rotatable on the end of said pivot post, said pointer having an arm within said case pivoted on said post and adapted for coöperation with said spring, said case having an opening in its front wall for said index pointer, said opening having a lateral extension in the peripheral wall of the case for said arm, and a ring covering said extension.

[Claim 6 not printed in the gazette.]

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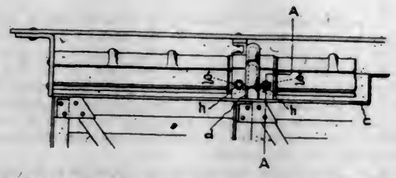
1,224,898. SHAVINGS AND SAWDUST SEPARATOR. FREDERIC W. BRENNEN, Hamilton, Ontario, Canada. Filed Apr. 29, 1916. Serial No. 94,392. (Cl. 83—74.)



In a device of the class described, a cylindrical refuse receiver provided concentrically at its lower end with a circular hopper having direct and free communication therewith, a screen fixed in a corresponding opening in the side of said hopper, extending a partial distance therearound, flush with and having the same contour as the sides of the hopper, an external casing secured to the sides of the hopper around the screen and constituting a substantial space between itself and the screen, a saw dust outlet pipe communicating with and extending from said casing, and a refuse outlet pipe communicating with the lower end of the hopper, all substantially as set forth.

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1,224,899. CAR-ROOF. RICHARD WEBB BURNETT, Montreal, Quebec, Canada. Filed Jan. 31, 1913. Serial No. 745,422. (Cl. 108—5.4.)




1. In a car roof, the combination with carlines of inverted U-form having bolts spaced from each other integrated with the interior thereof, roof sheets extending up within the carlines, and means carried by said bolts above the main planes of said sheets for sustaining said sheets.

2. In a car roof, the combination with carlines of inverted U-form having slotted bolts integrated with the interior thereof, roof sheets extending upward within the carlines, bars adjacent said sheets positioned within the carlines and fitted upon the bolts, said bars supporting said roof sheets and cotter pins inserted through the slots in the bolts for retaining said bars in position within the carlines.

3. In a car roof, the combination with side plates, of roof sheets bent down over the side plates, flanged inverted U-form carlines covering the joints between the roof sheets and also bent down over the side plates, means for spacing said carlines from the side plates, means for supporting said roof sheets from said carlines and out of contact therewith, and means for securing the sheets between said carlines and side plates while permitting play of the sheets incidental to the weaving of the roof, both with reference to the carline and said side plate.

4. The combination with inverted substantially U-form imperforate carlines, having a member depending within the U, of a roof sheet having a flange carried upward within the hollow of the carline above the plane of the body of the roof sheet, and supporting means therefor carried by said depending member.

5. The combination with inverted U-form imperforate carlines, having bolts depending within the U, of roof sheets having flanges carried upward within the hollow of the carline above the plane of the body of the roof sheet and transverse of said bolts and perforated to receive the bolts, and supporting means therefor carried by the bolts.

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1,224,900. CONCRETE-CULVERT FORM. ROBERT J. BURNS, Hewitt, Okla. Filed Oct. 12, 1911, Serial No. 654,385. Renewed Sept. 13, 1916. Serial No. 119,978. (Cl. 25—131.5.)



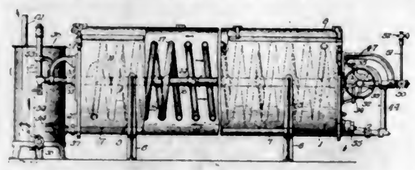
A culvert form including in combination, a segmental-shaped top section ending in two flat stop shoulders at right angles to its base, of two segmental side sections each at one end having a rectangular seat to receive a stop shoulder, one of said side members having a projecting ear at one end, hinges to connect said side sections to said top sections whereby said side sections may be swung inward, an arm, a hinge to secure said arm to one of said side sections whereby the end of said arm may be made to rest upon said projecting ear, and a semi-cylindrical sheet metal sheath held to said sections having its edges over-lapped and removably held below said arm, as and in the manner disclosed.

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1,224,901. APPARATUS FOR PASTEURIZING, COOLING, AND RIPENING MILK, CREAM, AND OTHER LIQUIDS. FRANK CHADIMA, Cedar Rapids, Iowa, assignor to J. G. Cherry Company, Cedar Rapids, Iowa, a Corporation of Iowa. Filed Apr. 21, 1915. Serial No. 22,780. (Cl. 257—79.)

1. In an apparatus of the character described, the combination of a receptacle, a shaft having hollow ends, hollow bearing nipples connected to said shaft and journaled in the ends of said receptacle, a hollow coil connected at each end to the interiors of the hollow ends of said shaft, a circulation tank, stationary means disposed within said tank adjacent the bottom thereof and adapted to be constantly immersed in the liquid contained therein to draw said liquid from the bottom only of said tank, a pipe connecting said means to one of said bearing nipples, a pipe connected to the other of said bearing nipples and arranged to deliver liquid to the upper portion of said tank, and means for rotating said shaft whereby liquid is caused to circulate constantly between said tank and coil.





2. In an apparatus of the character described, the combination of a receptacle, a shaft having hollow ends rotatably supported in said receptacle, a hollow coil connected at each end to the interiors of the hollow ends of said shaft, a circulation tank, an injector disposed within said tank adjacent the bottom thereof and adapted to be constantly immersed in the liquid contained therein, means for supplying steam to said injector whereby said liquid is withdrawn from the lower portion only of said tank and simultaneously heated, a pipe connecting said injector to one end of said shaft, a pipe connected to the opposite end of said shaft and arranged to deliver liquid to the upper portion of said tank, and means for rotating said shaft, whereby liquid is caused to circulate constantly between said tank and coil.

3. In an apparatus of the character described, the combination of a receptacle, a shaft having hollow ends rotatably supported in said receptacle, a hollow coil connected at each end with the interiors of the hollow ends of said shaft, a circulation tank supported in spaced relation to said receptacle, stationary means disposed within said tank adjacent the bottom thereof and adapted to be constantly immersed in the liquid contained therein to draw said liquid from the bottom only of said tank, a pipe connecting said means to one end of said shaft, a pipe connected to the opposite end of said shaft and arranged to deliver liquid to the upper portion of said tank, and means for rotating said shaft whereby liquid is caused to circulate constantly between said tank and coil.

4. In an apparatus of the character described, the combination of a hollow shaft, openings in said shaft adjacent the ends thereof, a hollow spiral coil having its ends disposed through said openings and flanged to engage the inner periphery of said shaft, a member disposed within said shaft at each end thereof with one edge abutting the flanged end of said coil, the opposite edge of said member being disposed in a plane normal to the axis of said shaft, and a bearing nipple secured to the end of said shaft with its edge abutting the edge of said member.

5. In an apparatus of the character described, the combination of a hollow shaft, a sleeve on said shaft, openings in said shaft and sleeve adjacent the ends thereof, a hollow spiral coil having its ends disposed through said openings and flanged to engage the inner periphery of said shaft, a member disposed within said shaft at each end thereof with one edge abutting the flanged end of said coil, the opposite edge of said member being disposed in a plane normal to the axis of said shaft, a bearing nipple secured to each end of said shaft with its edge abutting the edge of said member, and plugs in said shaft behind the flanged ends of said coil.

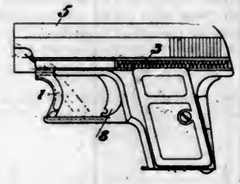
[Claim 6 not printed in the Gazette.]

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1,224,902. AUTOMATIC PISTOL. WITOLD CHYLEWSKI, Lemberg, Austria. Filed Mar. 22, 1916. Serial No. 85,818. (Cl. 42—3.)

1. In an automatic pistol, the combination of a frame provided with a stop, a forwardly spring-pressed slide slidable on the frame, a trigger mounted in the frame, and a finger-piece slidable along the frame, adapted to engage with said slide and drive the same into its rear position, said finger-piece being adapted to coact with said stop and to be thereby released from said slide when the finger-piece is directly in front of said trigger.

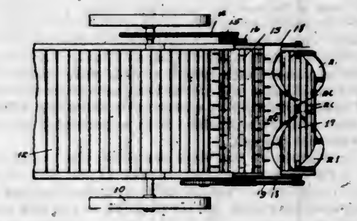
2. In an automatic pistol, the combination of a frame provided with a stop, a forwardly spring-pressed slide slidable on the frame, a trigger mounted in the frame, and a finger-piece slidable along the frame, said finger-piece



carrying an elastic hook adapted to engage with said slide and drive the same into its rear position, said hook being adapted to coact with said stop and to be thereby released from said slide when the finger-piece is immediately in front of said trigger.

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1,224,903. MANURE-SPREADER. WILLARD J. COOK, Des Moines, Iowa. Filed Sept. 21, 1916. Serial No. 121,446. (Cl. 111—40.)



1. In a manure spreader, the combination with a means for discharging material rearwardly from a body, of a rotatable cylinder in position to receive the material thus discharged from the body, and material engaging blades carried by said cylinder, the blades or parts of blades near the center of the cylinder having a minimum material engaging surface or area, and the blades or parts of blades near the ends of the cylinder having a maximum material engaging area or surface, said blades each being inclined relative to a line parallel with the axis of the cylinder in such direction as to impart to the material which they engage a lateral movement, and whereby greater quantities of the material delivered at the end portion of the cylinder will be engaged by the blades and thrown laterally than at the central portion of the cylinder.

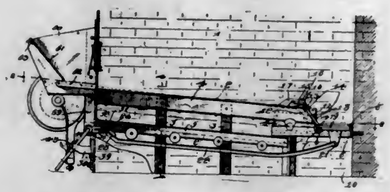
2. In a manure spreader, the combination with a means for discharging material rearwardly from a body, of a rotatable cylinder in position to receive the material thus discharged from the body, and a series of blades carried by said cylinder and extended spirally around it, the central portions of said blades being of comparatively small size in a direction radially of the cylinder, and the outer ends of the blades being of comparatively large size radially of the cylinder, for the purposes stated.

3. In a manure spreader, a wide spreading cylinder positioned to receive material to be distributed, disintegrating and spreading teeth at the central portion of said cylinder, and blades at the outer portions thereof, said blades being spaced laterally from the teeth and arranged spirally around the cylinder, the spaces between said blades at the outer portions of the cylinder being free and unobstructed, for the purposes stated.

4. In a manure spreader, the combination of a toothed rearwardly spreading cylinder, means for rotating it, a wide spreading cylinder arranged in position to receive

material from the toothed rearwardly spreading cylinder, means for rotating this wide spreading cylinder at a speed materially greater than that of the rearwardly spreading cylinder, teeth at the central portion of the wide spreading cylinder, and blades at the outer ends of the wide spreading cylinder, said blades being arranged spirally and spaced laterally from said teeth, and also being tapered from a maximum at the outer ends thereof to a minimum at the inner ends, for the purposes stated.

1,224,904. ASH-DUMPING MECHANISM. PAUL L. CROWE, New York, N. Y. Filed May 15, 1913. Serial No. 767,906. (Cl. 110—40.)



1. In a grate of the class described, the combination with a frame, a chute plate carried by said frame and provided with a rearwardly extending flange, a plurality of closely arranged bridge-bars overhanging said flange and provided with downwardly extending flange portions at the outer ends thereof for holding said bridge-bars against upward movement with respect to said plate, interlocking means formed upon said bridge-bars, said chute plate provided with a plurality of transversely extending tapering ribs, and said plate provided with a projecting lip upon the lower end thereof.

2. In a grate of the class described, the combination with a frame, a chute plate carried by one end of said frame, a plurality of transversely extending tapering ribs formed upon said plate and constituting a retarding means for said chute plate, a reinforcing plate of hardened steel secured to the under face of said chute plate, and a dumping gate supported below said chute plate, said chute plate being provided with a projecting lip partially overhanging a portion of said dump gate.

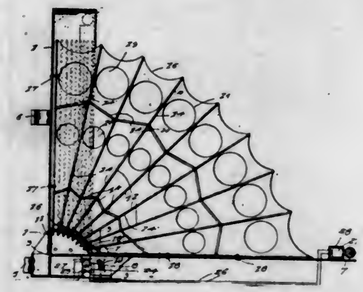
3. In a grate of the class described, the combination with a frame, a dumping gate carried thereby, of operating bars secured to said dumping gate and extending longitudinally of said frame, said operating bars provided with upturned ends, adjusting bolts secured to said ends, operating levers, an operating rod supporting said operating levers, heads rotatably secured to the outer ends of said levers, said heads provided with apertures formed therein, said adjusting bolts passing through said apertures for permitting the adjustment of the length of movement of said operating bars, said levers provided with notched rear ends, said operating rod provided with flattened portions formed thereon, and adjusting bolts passing through said notched rear ends of said operating levers for locking said operating levers in engagement with said operating rod.

4. In a grate of the class described, the combination with a frame, a chute plate carried by one end of said frame, a plurality of ribs formed upon said plate and constituting a retarding means for said chute plate, a reinforcing chute plate, a dumping gate supported below said chute plate, and said chute plate being provided with means overhanging a portion of said dump plate.

5. In a grate of the class described, the combination with a frame, a shaft, pulleys carried by said shaft and provided with laterally extending bearing portions, one of said bearing portions of each pulley overhanging said frame for permitting the sides of said pulleys to fit snugly against the sides of said frame, and a chain grate traveling upon said pulleys and being held in close engagement with the sides of said frame.

[Claims 6 and 7 not printed in the Gazette.]

1,224,905. DIRECTION-INDICATOR FOR AUTOMOBILES. JOSEPH W. DAVIS, San Francisco, Cal. Filed May 26, 1916. Serial No. 100,088. (Cl. 177—311.)



1. A direction indicator for automobiles comprising a casing, a movable wall carried by said casing, means for swinging said movable wall to a horizontal position, a bracket mounted within the lower end of said casing and provided with the upper edges of the side wall of substantially arcuate shape, a plurality of rods pivotally secured to the arcuate-shaped edges of the side wall of the bracket, links pivotally connected to each of the rods, fabric secured to the rods, means for securing the innermost rod to the casing, means for securing the outermost rod to the movable wall to cause said rods to spread apart when the movable wall is swung to a horizontal, and means for securing the casing to an automobile.

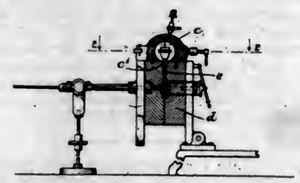
2. A direction indicator comprising a casing, a movable wall carried by said casing, means for swinging said movable wall to a horizontal position, a bracket mounted within the lower end of the casing and provided with the upper edges of the side wall thereof substantially arcuate-shape and provided with a plurality of relatively spaced and oppositely disposed openings, a plurality of rods provided with T-shaped lower ends journaled within the openings, means for connecting said rods together, fabric secured to the rods, means for securing the innermost rod to the casing, means for securing the outermost rod to the movable wall, and means for securing the casing to an automobile.

3. A direction indicator comprising a casing consisting of an inner side wall, a housing secured to said casing and inner side wall, a movable wall pivotally secured to the housing, a substantially fan-shaped signal secured to the inner side wall and to the movable side wall, an electric lamp carried by the movable side wall, a contact member mounted within the housing and operatively connected to an electrical source, contact members carried by the contact block, an enlarged portion formed on the lower end of the movable wall and provided with slots therein, spring pressed contact pins slidably mounted within the slots, means for connecting the slidable contact pins with the electric lamp, and means for swinging the movable side wall into a horizontal position to display the substantially fan-shaped signal and to illuminate the electric lamp.

1,224,906. METHOD OR ART OF CASTING FLUID METALS. HERMAN H. DOEHLER, Brooklyn, N. Y., assignor to Doehler Die Casting Company, a Corporation of New York. Filed Sept. 10, 1915. Serial No. 49,874. (Cl. 22—200.)

1. The herein described method or art of casting fluid metal, consisting of subjecting a melting pot or crucible containing metal of substantially the bulk of the casting a metal mold, and thereafter forcing and comprissing the to be made to a temperature approximating that of the fusing point of the metal until the metal is reduced to a molten condition, pouring the molten metal in said melting pot or crucible from within an inclosed chamber into metal by following it up with an elastic fluid under high pressure.





2. The herein described method or art of casting fluid metal, consisting of subjecting a melting pot or crucible containing metal of substantially the bulk of the casting to be made to a temperature approximating that of the fusing point of the metal until the metal is reduced to a molten condition, pouring the molten metal in said melting pot or crucible from within an inclosed chamber into a metal mold, and subjecting it while it is flowing from said chamber to the mold to an elastic fluid under high pressure.

3. The herein described method or art of casting fluid metal, consisting of subjecting a melting pot or crucible containing metal of substantially the bulk of the casting to be made to a temperature approximating that of the fusing point of the metal until the metal is reduced to a molten condition, pouring the molten metal in said melting pot or crucible from within an inclosed chamber into a constructed passageway leading to a metal mold, and forcing and compressing the metal by subjecting it while it is flowing through said passage way to an elastic fluid under high pressure.

4. The herein described method or art of casting fluid metal, consisting of subjecting a melting pot or crucible containing metal of substantially the bulk of the casting to be made to a temperature approximating that of the fusing point of the metal until the metal is reduced to a molten condition, pouring the molten metal in said melting pot or crucible from within an inclosed chamber into a metal mold, maintaining an equilibrium of pressures within said chamber and said mold while pouring, and destroying the equilibrium of pressures with a predominating pressure within said inclosed chamber whereby while the metal is flowing to the mold by gravity its movement is accelerated and it is forced into and compressed in the mold under heavy pressure.

5. The herein described method or art of casting fluid metal consisting of subjecting a melting pot or crucible containing metal of substantially the bulk of the casting to be made to a temperature approximating that of the fusing point of the metal until the metal is reduced to a molten condition, pouring the molten metal in said melting pot or crucible from within an inclosed chamber into a constricted passage way leading to a metal mold, maintaining an equilibrium of pressures within said chamber and said mold while pouring, and destroying the equilibrium of pressures with a preponderating pressure within said inclosed chamber, whereby while the metal is flowing to the mold by gravity its movement is accelerated and it is forced into and compressed in the mold under heavy pressure.

[Claims 6 to 10 not printed in the Gazette.]

1,224,907. ELECTRICAL CONNECTOR. HARRY A. DOUGLAS, Bronson, Mich., assignor to Douglas & Rudd Manufacturing Company, Bronson, Mich., a Corporation of Michigan. Filed May 11, 1915. Serial No. 27,455. (Cl. 173—328.)

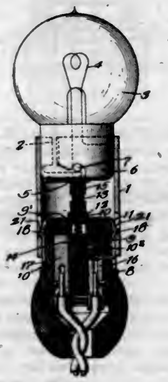
1. A circuit connector including a contact carrier having an aperture therethrough, formed to provide a shoulder therein; a contact provided with a flange that is seated on said shoulder; and a ring nut within the aperture and through which said flanged contact projects, and which nut is in threaded engagement with the carrier and



clamping engagement with the contact flange.

[Claim 2 not printed in the Gazette.]

1,224,908. ELECTRICAL CONNECTOR. HARRY A. DOUGLAS, Bronson, Mich., assignor to Douglas & Rudd Manufacturing Company, Bronson, Mich., a Corporation of Michigan. Filed May 11, 1915. Serial No. 27,456. (Cl. 173—346.)



1. A circuit connector including a contact carrier; a circuit terminal carried by and entering the carrier; a contact carried upon the exterior of the carrier; and an insetting spring connected with the contact and pressing upon the circuit terminal.

2. A circuit connector including a contact carrier; a circuit terminal carried by and entering the carrier; a contact carried upon the exterior of the carrier; and an insetting spring integrally formed with the contact and pressing upon the circuit terminal.

3. A circuit connector including a contact carrier; two current conducting contacts carried thereby; means for breaking engagement between said contacts; a second contact carrier; a third current conducting contact which is carried by the second contact carrier; and means whereby the contact carriers may be relatively positioned to enable the third current conducting contact to engage one of the first aforesaid contacts and force it into engagement with the other of the first aforesaid contacts.

4. A circuit connector including a contact carrier; two current conducting contacts carried thereby; means for breaking engagement between said contacts; a second contact carrier; a third current conducting contact which

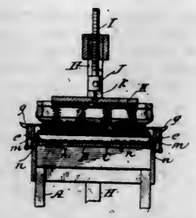
is carried by the second contact carrier; and a shell for holding said contact carriers and enabling the contact carriers to be so relatively positioned as to cause the third current conducting contact to engage one of the first aforesaid contacts and force it into engagement with the other of the first aforesaid contacts.

5. A circuit connector including a contact carrier; two current conducting contacts carried thereby; a spring for effecting separation of said contacts; a second contact carrier; a third current conducting contact which is carried by the second contact carrier; and means whereby the contact carriers may be relatively positioned to enable the third current conducting contact to engage one of the first aforesaid contacts and force it into engagement with the other of the first aforesaid contacts against the force of said spring, said latter means also enabling the contact carriers to be held farther apart by the spring to permit the spring to separate the contacts carried by the first carrier.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,909. FORMING-MACHINE FOR PLAIN UPHOLSTERED SEATS. WILLIAM DRITLEY, Chicago, Ill. Filed Aug. 27, 1915. Serial No. 47,597. (Cl. 155—48.)



1. In a machine of the kind specified, a suitable bench, a raised platform mounted thereon the top of which constitutes a bed against which the work is placed, a retaining-frame consisting of movable longitudinal and end members that inclose said bed, the edges of said members nearest the bed being spaced apart from the same, and means for holding said members together, in combination with means adapted to press the seat to be upholstered into the space inclosed by the members of the retaining-frame.

2. In a machine of the class specified, a platform the top of which constitutes a bed against which the work is placed, a retaining frame for inclosing the work, said frame being spaced apart from said bed and means constructed to press said work into said frame.

3. In a machine of the kind specified, a suitable bench, a platform mounted thereon which constitutes a bed against which the work is placed, a retaining-frame consisting of movable longitudinal and end members that inclose said bed, said members forming a holding means for the material that is to be attached to the work which is placed upon said bed and automatic means provided upon the movable members for locking said members together, in combination with means whereby the seat to be upholstered may be pressed into the space inclosed by the members of the retaining-frame.

4. In a machine of the class specified, a platform arranged to form a bed against which the work is placed, a retaining-frame consisting of movable longitudinal and end members that inclose said bed, means arranged inside of said members across which the material to be attached to the work may be stretched, means for holding said material in said stretched condition, said means including said movable side and end members and the means across which the material is stretched, and automatic means provided upon the movable members for locking said members together, in combination with means whereby the seat to be upholstered may be pressed into the space inclosed by the members of the retaining-frame.

5. In a machine of the kind specified, a flat table upon which the work may be placed having a molding frame secured thereon parallel with its edges, a retaining-frame consisting of movable longitudinal and end members that are adapted to rest edgewise on the margins of said bed outside said molding, and means for holding said members together, said table, molding-frame and retaining-frame composing a means whereby the material to be attached to the work may be held in combination with means adapted to press the seat to be upholstered into the space inclosed by the members of the retaining-frame.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,910. COLOR CONCENTRATE FOR EDIBLE OIL OR FAT COMPOSITIONS. CARLETON ELLIS, Montclair, N. J. Filed Oct. 21, 1916. Serial No. 126,866. (Cl. 99—13.)

1. A butter color concentrate comprising the liquid constituents of butter fat freed from water and butyric acid and saturated with yellow coloring matter.

2. A butter color concentrate comprising the liquid constituents of butter fat freed from water, butyric acid and casein and saturated with yellow coloring matter.

3. A butter color concentrate comprising the liquid constituents of butter fat freed from water, butyric acid and casein and saturated with yellow coloring matter, all in a sterile condition.

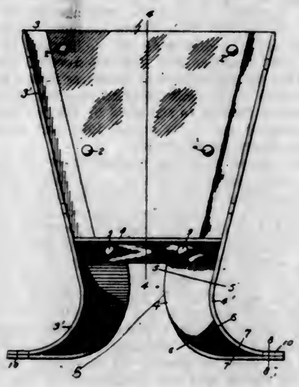
4. A butter color concentrate comprising the liquid constituents of neutral butter fat substantially saturated with yellow coloring matter.

5. A butter coloring composition comprising neutral butter fats free from casein and substantially saturated with yellow coloring material.

[Claims 6 to 17 not printed in the Gazette.]

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1,224,911. HOPPER FOR SEEDING-MACHINES. HENRY N. FAAS and WILLIAM L. BRALEY, Springfield, Ohio, assignors to The American Seeding Machine Company, Springfield, Ohio, a Corporation of Ohio. Filed Jan. 14, 1916. Serial No. 72,047. (Cl. 111—18.)



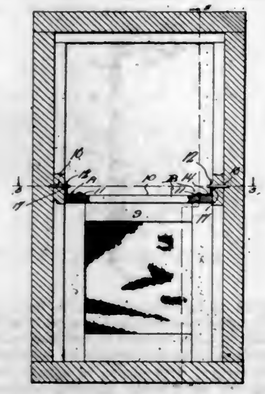
1. In the structure of the character described, the arrangement of a sheet metal panel and steel angle bars secured to said panel at each side edge thereof, one of the flanges of each of said bars projecting substantially at right-angles to the panel, wooden sides secured to said flanges, the lower ends of said angle-bars having their flanges bent to form legs, substantially as specified.

2. In the structure of the character described, the arrangement of a sheet metal panel and steel angle-bars secured to said panel at each side edge thereof, one of the flanges of each bar projecting substantially at right angles to the panel, wooden sides secured to said flanges, the lower ends of said angle bars having their flanges bent to form legs, and a metal cross bar secured to said angle bars to form a supporting shelf, for the purpose specified.



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1,224,912. HALF-SCREEN HANGER. EDWARD J. FELLMAN, Milwaukee, Wis. Filed June 2, 1916. Serial No. 101,230. (Cl. 16—48.)



1. A hanger device comprising the combination with a window frame and a sash member, of suspension plates on the sash member including upstanding ear portions, one of said ear portions being provided with a triangular aperture, the other portion being provided with a slot open at its bottom portion and having its top portion terminating in substantially the same horizontal plane as the apex of the triangular opening, and pivot members on the inner side faces of the frame engaged in said aperture and slot.

2. A hanger device comprising the combination with a window frame and a sash member, of angular suspension plates including base portions secured at the ends of the top of the sash, and upstanding ear portions, one of said ear portions being provided with an aperture, the other end portion being provided with a vertical slot extending into the respective base portion, the angular portion of the respective plate being offset inwardly, and pivot members engaged in said aperture and slot.

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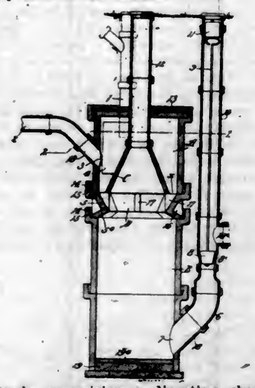
1,224,913. SEPTIC TANK. WILLIAM C. FERGUSON, St. Louis, Mo. Filed Nov. 16, 1916. Serial No. 131,703. (Cl. 210—18.)

1. A septic tank, comprising a digesting chamber, a settling chamber arranged above same, a partition member arranged inside of said settling chamber, and a throat piece for said digesting chamber that supports said partition member.

2. A septic tank, comprising a digesting chamber, a settling chamber arranged above same, a partition member inside of said settling chamber whose lower edge portion is spaced away from the side wall of said settling chamber so as to form a narrow discharge passageway for the solid particles of the sewage that settle out of the liquid, and a throat member that forms a contracted receiving opening for the digesting chamber and also acts as a support for said partition member.

3. A septic tank, comprising a digesting chamber, a settling chamber arranged above same, a cone-shaped partition member arranged inside of said settling chamber, and a supporting means for said partition member that forms a throat or contracted receiving opening for said digesting chamber.

4. A septic tank, comprising a digesting chamber, a throat member arranged at the upper end of said chamber, and a settling chamber carried by said throat member and provided with a cone-shaped partition member that is also supported by said throat member.



5. A septic tank, comprising a digesting chamber, a settling chamber arranged above same, a partition member arranged inside of said settling chamber whose lower edge portion is spaced away from the side wall of same so as to form a passageway through which the solid particles of the sewage that settle out of the liquid can escape from said chamber, and a supporting means for said partition member provided with a wall that slopes inwardly and downwardly from the opening through which the solid particles escape from said settling chamber.

[Claims 6 to 11 not printed in the Gazette.]

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1,224,914. GREASE-GUN. WILLIAM T. FIELD and JOHN A. DUMBOLTON, Lincoln, Nebr. Filed Aug. 4, 1914. Serial No. 855,015. (Cl. 221—78.)



A grease gun adapted to operate by compressed air and comprising a hollow cylindrical air and grease container, a plunger movable therein, a tubular plunger rod extending through the plunger and one end of the container through which the grease is adapted to be forced under pressure to charge said container between the plunger and the grease outlet, a discharge nozzle at one end of said container, stop cocks controlling said plunger rod and discharge nozzle, and a cock-controlled compressed air inlet and outlet communicating with said container behind the plunger.

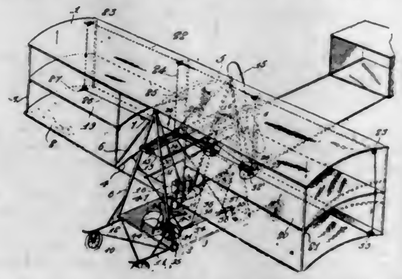
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1,224,915. AEROPLANE. LAWRENCE L. FOSBURGH, Sapulpa, Okla. Filed Mar. 4, 1915. Serial No. 12,095. (Cl. 244—29.)

1. An aeroplane including main planes, balancing planes movably mounted therebetween, a swinging platform associated with the upper main plane, flexible connecting means between the balancing planes and the upper main plane, other flexible means connecting the balancing planes the lower main plane and platform and arranged so that movement of the platform will actuate the balancing planes, a shaft rotatably mounted on the platform, cables having their respective ends connected to the lower main plane and their intermediate portions wrapped about the shaft, and a brake lever removably associated with the shaft for locking the shaft against rotation to consequently prevent actuation of the balancing planes.

2. An aeroplane including upper and lower supporting planes, means for bracing the planes, a bar associated

with the under surface of the upper plane, the lower plane being provided with an opening, a platform arranged beneath the opening, supporting members connected to the ends of the platform and pivoted to the bar, a propelling shaft rotatably associated with the members, means on the platform for imparting a rotary motion to the shaft to consequently propel the aeroplane, balancing planes mounted to swing between the main planes, flexible means for connecting the balancing planes with the upper planes, flexible means for connecting the balancing planes with the platform, another shaft rotatably mounted on the platform, cables having the free respective ends connected to the lower main plane and having their intermediate portions wrapped about the last mentioned shaft, a brake lever, means for holding the lever in engagement with the shaft for preventing actuation of the shaft, and means for removably holding the lever out of engagement with the shaft to permit of actuation of the balancing planes.



3. An aeroplane including upper and lower supporting planes, means for bracing the planes, a bar associated with the under surface of the upper plane, the lower plane being provided with an opening intermediate its ends, a platform, supporting means pivotally connected to the bar and arranged through the opening in the lower plane and connected to the platform for supporting the platform beneath the opening in the lower plane, a propeller operatively associated with the supporting means, means on the platform for actauting the propeller, balancing planes pivotally mounted and arranged to swing between the main planes, a cable movably connected to the main planes, a cable movably connected to the upper main plane and having its respective ends connected to the outer ends of the balancing planes, another cable movably mounted on the supporting means and the lower main plane and having its respective ends connected to the outer ends of the balancing planes whereby when the platform is moved the balancing planes will be actuated, flexible means arranged between the lower main plane and the platform, and means mounted on the platform and co-acting with the flexible means for preventing actuation of the balancing planes.

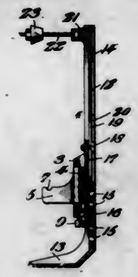
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1,224,916. RADIATOR-SUPPORT. CHARLES R. FOWLER, Philadelphia, Pa. Filed Oct. 25, 1916. Serial No. 127,557. (Cl. 248—30.)

1. In a device of the character stated, the combination of a base adapted to be secured to a fixed part, a substantially cylindrical slotted bearing formed in said base, a pivot member mounted in said bearing for free turning movement and a radiator support connected to said pivot member and extending laterally from said base whereby a radiator seating upon said support is held in operative position and is free to expand and contract.

2. In a device of the character stated, the combination of a base adapted to be secured to a fixed part, a support pivotally carried by said base and adapted to support a radiator and move laterally with said radiator under expansive and contractive movement and means between said support and radiator to prevent displacement of said radiator.

4. In a device of the character stated, the combination of a bracket adapted to be secured to a fixed part, a base mounted upon said bracket, means between said bracket and base to adjust the relative position of one of said parts with respect to the other and a laterally disposed support pivotally mounted on said base for lateral movement in a horizontal plane, said support being adapted to hold a radiator and move with said radiator under expansive or contractive movement.



5. In a device of the character stated, the combination of a bracket adapted to be secured to a wall and having a foot piece adapted to be secured to the floor, said bracket also being provided with a plurality of superposed openings, a base provided with means to engage any one of said openings for adjustment purposes, means to lock said base in adjusted position and a laterally disposed support pivotally mounted on said base for lateral movement in a horizontal plane, said support being adapted to hold a radiator and move with said radiator under expansive or contractive movement.

7. In a device of the character stated, the combination of a bracket adapted to be secured to a fixed part, a base or body mounted upon said bracket, means between said bracket and body to adjust the relative position of one of said parts with respect to the other, a laterally disposed support mounted on said base for lateral movement in either direction, said support being adapted to hold a radiator and move with said radiator under expansive or contractive movement and means adjustably secured to the upper portion of said bracket for engaging said radiator.

[Claims 3, 6, and 8 not printed in the Gazette.]

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1,224,917. METHOD OF TREATING ORES. HARRY LOUIS FRIEDBERGER, Eureka, Kans., assignor of three-tenths to Victor C. Joslyn and three-tenths to Cornelius Horatius Keller, El Paso, Tex. Filed June 3, 1916, Serial No. 101,564. Renewed Mar. 20, 1917. Serial No. 156,218. (Cl. 75—185.)

1. A process of treating ores containing precious metals, which consists in subjecting the same to the action of a liquid comprising a cyanid solution, a solution of a resinate and to the continued action of currents of air of sufficient volume to float any portion of the values amenable to flotation.

2. In the cyanidation of precious metal ores the step of frothing some constituents of the ore with subdivided currents of air while the said ore is mixed with a solution containing dissolved cyanid, and an alkali resinate.

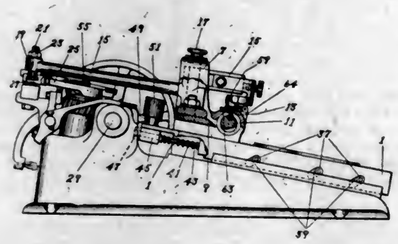
3. The combined process of cyanidation and flotation of previous metals bearing ores which comprises dissolving a resinous substance in alcohol, adding an alkali to substantially complete neutralization, distilling off superfluous solvent and incorporating the resultant residue with a cyanid solution, treating the ore in said liquid with sub-divided air to float some constituents of the ore and thereby separate said constituents and after filtration removing the precious metals from the said solution.

4. A process of treating ores which comprises floating the material containing metal in a cyanid solution by introducing divided air currents, into a body of cyanid solution containing the finely divided ore, while in the presence of a material capable of increasing the affinity of the metal containing particles for the air bubbles.

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1,224,918. SPLITTING-MACHINE. FREDERICK M. FURBER, Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 30, 1915. Serial No. 58,822. (Cl. 69—15.)



1. A machine for forming a thin flap on a piece of stock having, in combination, a support for the stock, a carrier located above the support, a knife and a presser mounted in said carrier, means for causing relative reciprocation between said support and said carrier, said presser being constructed and arranged to bear upon the stock in advance of the knife and to move over the surface of an uncut portion of the stock during the first half of the reciprocation and to bear upon the surface of the flap during the last half of the reciprocation, and means for relieving the pressure of the presser on the surface of the flap.

2. A machine for forming a thin flap on a piece of stock having, in combination, a support for the stock, a carrier, a knife and a presser mounted in said carrier, said presser being constructed and arranged to engage the stock at a point in advance of the knife and to determine by its pressure the thickness of the flap, means for causing relative movement between said carrier and support first in one direction to form said flap and then in the opposite direction to cause the knife and presser to be withdrawn, and means for relieving the pressure of the presser on the flap during the withdrawing movement.

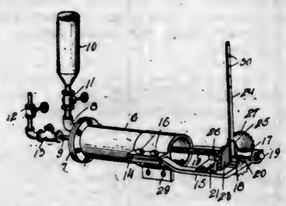
3. A machine of the class described having, in combination, a bed for supporting a piece of stock, a carrier, a knife mounted in said carrier, a gage also mounted in said carrier and arranged at all times to bear upon the stock in advance of the knife, means for producing relative movement between said bed and carrier first to cause the knife to produce a flap on the stock and then to cause the knife to be withdrawn from beneath the flap, and means for separating the gage and bed during said last-named movement to relieve the pressure of the gage upon the flap.

4. A machine of the class described having, in combination, a bed for supporting a piece of stock, a carrier, a knife mounted in said carrier, a gage also mounted in said carrier, means for producing relative movement between said bed and carrier first to cause the knife to produce a flap on the stock and then to cause the knife to be withdrawn from beneath the flap, and means for rendering said gage inoperative during said last-named movement.

5. A machine of the class described having, in combination, a bed for supporting a piece of stock, a carrier, a knife and a gage mounted in said carrier, means for imparting to said carrier one reciprocation in a path substantially parallel to the plane of said bed, and means becoming operative at the end of the first half of said reciprocation to increase the space between the gage and the bed and to maintain said increased space during the latter half of said reciprocation.

[Claims 6 to 15 not printed in the Gazette.]

1,224,919. LUBRICATOR. WILLIAM B. GAGE, Whitewater, Wis. Filed July 28, 1910. Serial No. 574,333. (Cl. 184—37.)



A forced feed lubricating device comprising a cylinder having openings in one end thereof, a pipe extending into one of the openings, a reservoir in communication with said pipe for supplying said cylinder with a lubricant, a discharge pipe extending from the other opening and being in communication with the interior of the cylinder, a valve for controlling the passage of material through said pipe, a frame comprising arms and clamping elements, the clamping elements adapted to embrace the opposite end of the cylinder, a threaded rod extending into the cylinder and having a piston on one end thereof, means supported by the arms and engaging the threaded rod of the piston for moving the piston longitudinally of the cylinder for forcing material therefrom, said means comprising a ratchet gear, a lever having one end pivotally mounted in a bearing and carrying a pawl to engage the ratchet member, the upper end of the said lever having a plurality of openings to receive a connecting arm, said pawl adapted to engage ratchet teeth of the ratchet, and means for causing the piston to move longitudinally of the piston.

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1,224,920. VEHICLE-TIRE. IRVIN M. HAAS, NELSON R. HAAS, and BERTRAM V. MYERS, Dayton, Ohio, assignors of one-fourth to Gus Haas, Dayton, Ohio. Filed Jan. 12, 1914. Serial No. 811,613. (Cl. 152—8.)



1. The combination with a rim of a tire including a plurality of independent metallic arcuate springs each having at the extremities of its arch a reversed or S shaped bend adapted to be engaged with the sides of the rim, and inturned foot portions adapted to abut each other in a common plane.

2. The combination with a wheel rim of a plurality of independent metallic arcuate springs each having at its extremities reversed bends adapted to be engaged under tension with the sides of the rim with which they are held in engagement by the lateral expansive tendency of the arcuate springs, and a body of rubber or similar material in which the crown or medial portion of each arcuate spring is embedded, the reversed ends of the springs being extended beyond the said body for direct engagement with the rim.

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1,224,921. BRACELET. ART HADLEY, Providence, R. I. Filed Mar. 4, 1916. Serial No. 82,030. (Cl. 63—5.)

1. A bracelet comprising a multiplicity of relatively short links pivotally connected in chain-like form to constitute a structure at all times freely flexible and thereby being adapted to conform to and fit closely about the

wrist, said bracelet embodying expansible means for increasing the length thereof during application to or removal from the wrist, resilient means tending to move said expansible means into expanded relation, and releasable catch means for holding said expansible means in contracted relation during the usual wearing of said bracelet on the wrist.



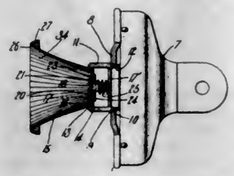
2. In an expansible bracelet, the combination with resiliently contracted expansible links, of resilient means tending to elongate said bracelet to reduce the tension on said resiliently contracted links during application or removal from the wrist of said bracelet, and releasable catch means for holding said resilient means in contracted relation during the usual wearing of said bracelet on the wrist.

3. In a bracelet, the combination of a plurality of flexibly connected links with a clasp for holding said links about the wrist, said clasp including two interlocking elements separable from each other for removing said links from about the wrist, resilient means tending to elongate said clasp to loosen said links on the wrist preparatory to removal thereof, and a releasable locking device for holding said clasp in contracted position against the pressure of said resilient means, whereby on release of said locking device said clasp is elongated by said resilient means, thereby increasing the length of said bracelet and facilitating the removal thereof from the wrist by the other hand of the wearer.

4. In a bracelet, the combination of a plurality of resiliently contracted expansible links, with a clasp for releasably holding said bracelet closed on the wrist, said clasp including two relatively slidable interlocking elements which provide for a reduction in the tension of said expansible links, resilient means for pressing said relatively slidable interlocking elements into extended relation, and releasable locking means for holding said interlocking elements in contracted relation with increased tension on said expansible links and against the pressure of said resilient means.

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1,224,922. MOUTHPIECE FOR TELEPHONE INSTRUMENTS. CHRISTOPHER M. HARTNETT, Chicago, Ill. Filed Feb. 1, 1916. Serial No. 75,572. (Cl. 179—187.)



1. The combination with a telephone transmitter of a socket connected with said transmitter, a stud mounted in said socket provided with a head having two transverse diameters, and a mouth-piece provided with an orifice substantially corresponding with the head of said stud adapted to receive said head and to be moved on said stud to aline the unlike diameters of said head and said orifice.

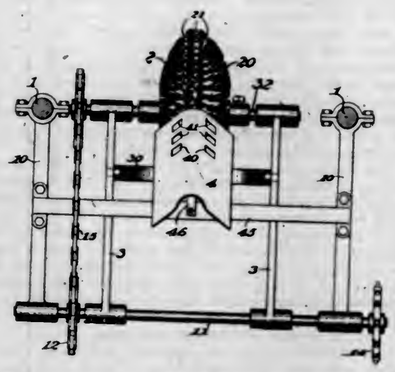
2. The combination with a telephone transmitter of a socket connected with said transmitter, a stud mounted in said socket provided with oppositely disposed projections at the outer extremity thereof, a mouth-piece constructed of sheet material having an orifice adapted to permit the passage of said projections therethrough, said mouth-piece being constructed and arranged to be rotated on said stud to disaline said projections and the corresponding portions of said orifice whereby said mouth-piece may be held upon said stud, and means adapted to yieldingly hold said mouth-piece in contact with said projections.

3. The combination with a transmitter of a stud mounted on said transmitter and provided with a head having two unlike transverse diameters, a mouth-piece provided with an orifice substantially corresponding with the head of said stud, said transmitter being arranged to be slipped upon said stud over said head and to be rotated thereon to aline the unlike diameters of said orifice and said head, and a disk yieldably mounted on said stud adapted to engage said mouth-piece and retain the same in contact with said head.

4. The combination with a transmitter of a stud mounted on said transmitter and provided with a head having two transverse diameters, a mouth-piece provided with an orifice substantially corresponding with the head of said stud, said transmitter being arranged to be slipped upon said stud over said head and to be rotated thereon to aline the unlike diameters of said orifice and said head, a disk mounted upon said stud and movable longitudinally thereof, and a spring engaging said disk adapted to yieldingly move said disk toward the head of said stud and to retain said mouth-piece in contact with said head.

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1,224,923. FISH-CLEANING DEVICE. JOHN W. HAUBNER, Friday Harbor, Wash. Filed Dec. 28, 1916. Serial No. 139,386. (Cl. 17—10.)



1. A rotative fish cleaning wheel comprising a body, flexible brush members projecting therefrom, and a spring-like coiled wire extending peripherally about the said body and coöperating with the flexible brush members to clean the fish.

2. A fish cleaning wheel comprising a rotative body having projecting bristles and a spring-like wire coil embedded in the bristles and extending peripherally about the body in the central plane thereof.

3. A fish cleaning wheel comprising a rotative body having a peripheral outline adapting it to fit within the interior cavity of an opened fish and having bristles projecting outward therefrom, and three spring-like wire coils extending peripherally about the body, said body having seats hollowed therein to receive said wire coils.

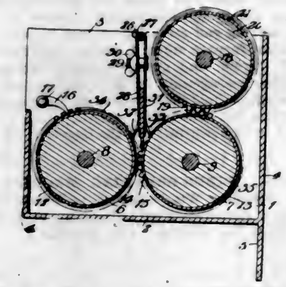
4. A fish cleaning device comprising a rotative body having its outer part of ovoidal cross section with shallow grooves extending peripherally about the same at and adjacent to its central plane, spring-like coiled wires seated in said grooves and bristles projecting between said coils and on the flank inwardly of said wire coils.

5. A rotative fish cleaning wheel comprising a body, flexible brush members projecting therefrom, and a spring-like coiled wire extending peripherally about the said body, and constituting a relatively stiff brushing member, and a spring support for said wheel.

[Claims 6 to 10 not printed in the Gazette.]



1,224,924. SAFETY-RAZOR-BLADE SHARPENER. PETER D. HAUSER, San Antonio, Tex. Filed Aug. 10, 1916. Serial No. 114,192. (Cl. 51—16.)



1. In a sharpening machine the combination of a pair of rotatable sharpening elements, of a work holder composed of a single piece of metal bent at its medial line to form a pair of clamping jaws, a horizontal axis for said holder, an adjustable clamping element carried by said jaws, a pair of oppositely arranged integral spring tongues at one end of said jaws, a cam carried by said sharpening elements adapted to alternately contact with said spring tongues to oscillate the work holder.

2. A sharpening machine of the class described comprising a casing, a pair of closely spaced rotatable elements mounted therein, means for imparting motion to said elements simultaneously, a horizontal axis removably positioned in notches in the upper edge of said casing, a substantially rectangular piece of metal, bent at its medial line around said axis to form work holding jaws, an adjustable clamping element carried by said jaws, a pair of outwardly extending opposed integral spring tongues at one end of said jaws, and cams carried by said rotatable sharpening elements adapted to alternately contact with said spring tongues.

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1,224,925. POST-ANCHOR. PERCY J. HINDMARSH, Lincoln, Nebr., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Mar. 26, 1915. Serial No. 17,098. (Cl. 189—31.)



1. In fence post construction, a spreader having a plurality of lateral wings, the lower portions of the wings converging to a point and the upper edges of the wings being inclined outwardly and downwardly from the body of the spreader, the inclination being such as to provide a relatively abrupt angle between the shank and the wings, in combination with a tubular post having a slitted lower end and adapted to be driven over said spreader, the construction of the spreader being such that the slitted lower end of the post is caused to flare outwardly to substantially a horizontal position, substantially as described.

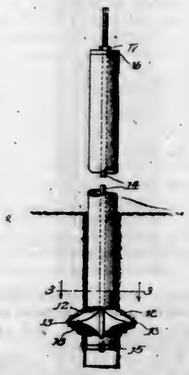
2. In fence post construction, a spreader having a plurality of lateral wings, the lower portions of the wings converging to a point and the upper edges of the wings being inclined outwardly and downwardly from the body of the spreader, the inclination being such as to provide a relatively abrupt angle between the shank and the wings, in combination with a tubular post having a slitted lower end and adapted to be driven over said spreader, the construction of the spreader being such that the slitted lower end of the post is caused to flare outwardly to substantially a horizontal position, the section of metal in the post at the inner end of the slit being lessened, thereby inducing a more abrupt bend of the said lower end portion, substantially as described.

3. In a fence post construction a spreader having a plurality of lateral wings, the upper edges of the wings being joined to the shank of the spreader by a curve, the arc of which is struck from a point outside of said shank, the radius of the curve being sufficiently short to provide a relatively abrupt angle between the shank and the wings, in combination with a tubular post having a slitted lower end and adapted to be driven over said spreader, the construction of the spreader being such that the slitted lower end of the post is caused to flare outwardly to substantially a horizontal position, substantially as described.

4. In a fence post construction a spreader having a plurality of lateral wings, the upper edges of said wings being inclined outwardly, the inclination being such as to provide a relatively abrupt angle between the shank and the wings in combination with a tubular post, having its lower end slitted to provide a plurality of segments, the number of segments being different from the number of wings on said spreader, the construction of the spreader being such that the slitted lower end of the post is caused to flare outwardly to substantially a horizontal position, substantially as described.

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1,224,926. FENCE-POST ANCHOR. PERCY J. HINDMARSH, Lincoln, Nebr., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Oct. 23, 1915. Serial No. 57,475. (Cl. 189—31.)



In a device of the class described, the combination of a tubular member adapted to be located in the ground and provided with slits located adjacent to one end thereof, said member projecting above the ground a distance sufficient to provide for the attachment of a fence thereto, a washer over the lower end of the post, a rod connected to said washer and extending through said post to the upper end thereof, and screw means acting upon the upper end

of said post and adapted to exert longitudinal force to cause the bulging of the metal at the lower end of the post and thereby form an anchor, substantially as described.

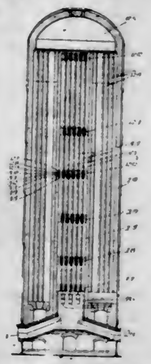
1,224,927. FENCE-POST. PERCY J. HINDMARSH, Lincoln, Nebr., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Oct. 23, 1915. Serial No. 57,476. (Cl. 189—23.)



1. A fence post, consisting of a tapered blank bent into tubular form at the point above the ground-line and of U-shape at the point beneath the ground, substantially as described.

2. A fence post of tubular form at its upper end and of U-shape at its lower end, said post being so constructed as to permit of its being driven into the ground to a point at which the U-shaped portion is entirely beneath the surface of the ground, substantially as described.

1,224,928. STOVE FOR BLAST-FURNACES. HENRY P. HOWLAND, Chicago, Ill. Filed Apr. 30, 1915. Serial No. 25,076. (Cl. 263—19.)



1. In a blast furnace stove, a single central combustion chamber formed therein, and checkerwork members having connected passageways located in and at points along the length of the combustion chamber.

2. In a blast furnace stove, a combustion chamber formed therein, vertically arranged checkerwork members within said combustion chamber, and checkerwork members within the combustion chamber extending crosswise at points along the length thereof.

3. In a blast furnace stove, a centrally arranged combustion chamber formed therein, and means including a checkerwork member having passageways with connections therebetween, through which connections air and gas pass to be thoroughly mixed.

4. In a blast furnace stove, a central combustion chamber formed therein having a plurality of passageways for the passage back and forth of hot products of combustion and a cold air blast, and means for interconnecting said passageways within the combustion chamber to increase the heat absorbing and radiating surface therein.

5. In a blast furnace stove, a central combustion chamber formed therein, and means including members with interconnected passageways in said combustion chamber to cause a mixed fluid fed thereto to take an irregular path in passing therethrough.

[Claims 6 to 14 not printed in the Gazette.]

1,224,929. FIBER-BREAKING MACHINE. JOHN HUNLER, Brandon, Wis., assignor to Wisconsin Hemp Company, a Corporation of Delaware. Filed Sept. 25, 1916. Serial No. 121,988. (Cl. 13—21.)



1. In a fiber breaking machine, the combination of two or more groups of upper and lower sets of driven breaking rolls, horizontally disposed endless skeleton carriers between the groups the working stretch of each of which travel, upon a gradual upward incline from the receiving end to a point intermediate of its length and then gradually in a downward direction from said point, to the discharge end of the stretch, a means for imparting a vibratory movement to the upward traveling portion of the stretch, and also to the downwardly traveling portion of the stretch.

2. In a fiber breaking machine, the combination of two or more groups of meshed corrugated driven breaking rolls, the said groups of rolls being successively increased in speed with relation to the first group of the series, horizontally disposed endless skeleton carriers between the groups of breaking rolls, the carrier succeeding each group being driven at a synchronized speed therewith, and means associated with the working stretch of each carrier for causing it to travel gradually upward from its receiving end to a point intermediate of its length, and from said point gradually downward to its discharge end.

3. In a fiber breaking machine, the combination of a fixed group of corrugated breaking rolls, an upper set of yieldable breaking rolls intermeshed with the first mentioned set, and yieldable guard plates in abutment with the ends of the rolls.

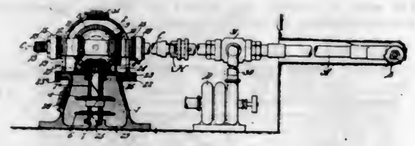
4. In a fiber breaking machine, the combination of groups of intermeshed corrugated driven breaking rolls, endless driven skeleton carriers interposed between these groups of breaking rolls, and yieldable guard plates juxtaposing the ends of the rolls and skeleton carriers.

5. In a fiber breaking machine, the combination of three groups of breaking rolls each comprising upper and lower corrugated intermeshed yieldable sets, means for imparting positive drive to all of the sets of breaking rolls in each group the drive of each group being slightly accelerated with relation to the first of the series of groups, a single endless skeleton carrier mounted between the first and second group and second and third group, means for driving the first carrier at an increased speed with relation to the first group of breaking rolls and for driving the second carrier at an increased speed with relation to the second group of breaking rolls, a finishing skeleton carrier positioned forwardly of the third group of breaking rolls and interrupted throughout its length to form two independent sections, and a single pair of positively driven yieldable breaking rolls between the sections of the last mentioned carrier.

[Claims 6 to 11 not printed in the Gazette.]



1,224,930. HORIZONTAL-DRILLING MACHINE. HOWARD R. HUGHES, Houston, Tex. Filed Dec. 27, 1915. Serial No. 68,859. (Cl. 255—20.)



1. A horizontal drilling machine, comprising a closed housing that comprises a base portion and a removable cover resting on same and adapted to be turned about a vertical axis, an approximately horizontally-disposed drill stem operating member that passes through openings in the cover of said housing, and a rockable carrier for said member journaled on the cover of horizontally-disposed trunnions on said housing.

2. A horizontal drilling machine, comprising a housing provided with a reservoir for holding lubricating oil and having a removable top portion that protects the elements arranged inside of the housing, a substantially horizontally-disposed drill stem operating member, means carried by said housing for supporting said member, coöperating gears and pinions in said housing for rotating said member and for feeding it longitudinally, some of said elements being immersed in the oil in said reservoir, and means for conducting oil to the remaining elements that are arranged above the oil in said reservoir.

3. A horizontal drilling machine provided with a housing that comprises a stationary base portion and a removable top portion that constitutes a cover for said base portion and protects the elements arranged inside of same, a substantially horizontally-disposed drill stem operating member, means mounted on the top portion of the housing for carrying said member, and mechanism for rotating said drill stem operating member and for feeding it longitudinally comprising coöperating elements in the base portion and in the top portion of the housing that loosely engage each other and which are mounted so that the top portion of the housing and the parts carried by same can be removed as a unit from the base portion of the housing without disturbing the elements arranged inside of said base portion.

4. A horizontal drilling machine provided with a housing that comprises a stationary base portion and a top portion that coöperates with said base portion to protect the elements arranged inside of the housing, a substantially horizontally-disposed drill stem operating member, a rockable carrier arranged on the top portion of said housing for supporting said member, driving gears in the base portion of the housing that revolve about a vertical axis, one of which is used to feed the drill stem-operating member and the other to rotate said member, coöperating gears on the top portion of the housing that revolve about a horizontal axis, and pinions on said drill stem operating member that mesh with said last mentioned gears and which rotate said member and feed it longitudinally when said gears are in operation.

5. A horizontal drilling machine, comprising a housing that is provided with a stationary base portion and a top portion, a substantially horizontally-disposed drill stem operating member, a yoke-shaped carrier on the top portion of said housing for supporting said member, a vertically-disposed shaft in the base portion of said housing provided with a gear, a sleeve surrounding said shaft and provided with a gear, one of said gears being used to feed said drill stem operating member and the other to rotate said member, and means carried by the top portion of the housing and by said drill stem operating member that coöperates with said gears to feed said member longitudinally and to impart rotary movement to same.

[Claims 6 and 7 not printed in the Gazette.]

1,224,931. METHOD OF OPERATING PUMPS. HERBERT ALFRED HUMPHREY, London, and WILLIAM JOSEPH RUSDELL, Dudley, England, assignors to Humphrey Gas Pump Company, a Corporation of New York. Filed Aug. 12, 1912, Serial No. 714,563. Renewed Sept. 25, 1916. Serial No. 122,131. (Cl. 160—1.)



1. The method of operating pumps without fly-wheels, which consists in reciprocating masses having sufficient weight to acquire useful momentum, one movement or outstroke of said reciprocation being due to an expansible medium, storing energy by the movement of the outstroke, utilizing a portion of the energy stored for causing a return stroke, and limiting the period during which the stored energy is communicated to the reciprocating mass to cause the return stroke.

2. The method of operating pumps without fly-wheels, which consists in reciprocating masses having sufficient weight to acquire useful momentum, one movement or outstroke of said reciprocation being due to an expansible medium, storing energy by the movement of the outstroke, utilizing a portion of the energy stored for causing a return stroke, and limiting the amount of said stored energy communicated to the reciprocating mass in causing said return stroke.

3. The method of operating pumps without fly-wheels, which consists in reciprocating masses having sufficient weight to acquire useful momentum, one movement or outstroke of said reciprocation being due to the expansion of an expansible medium, utilizing the outstroke to compress an elastic cushion, utilizing a portion of the energy stored in the elastic cushion to cause a return stroke, and limiting the amount of said energy which is communicated to the mass in causing said return stroke.

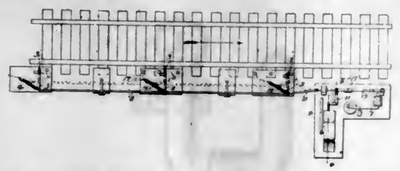
4. The method of operating pumps without fly-wheels, which consists in reciprocating masses having sufficient weight to acquire useful momentum, one movement or outstroke, of said reciprocation being due to the expansion of an expansible medium, utilizing the movement of the outstroke to deliver a liquid and compress an elastic cushion, utilizing the cyclical changes of level of the delivered liquid to determine the period or portion of a return stroke which occurs under the influence of pressure.

5. The method of operating pumps without fly-wheels, which consists in reciprocating masses having sufficient weight to acquire useful momentum, one movement or outstroke of said reciprocation being due to the expansion of an expansible medium, utilizing the movement of the outstroke to deliver liquid and compress an elastic medium, and utilizing a definite and adjustable change of level of liquid which occurs during a return stroke to determine that portion of such return stroke which occurs under the influence of pressure.

1,224,932. AUTOMATIC TRAIN-STOPPING MECHANISM. CÉZAIRE JOLY, Salem, Mass. Filed July 18, 1914. Serial No. 850,812. (Cl. 246—59.)

1. In a train stopping mechanism of the class described the combination of a tripping member arranged adjacent to the road bed, a supporting base on which said tripping member is horizontally disposed, an operating rod connected to one end of said tripping member for shifting the same in a horizontal plane on the base, a valve operating arm carried by said tripping member and movable to and from an operative position by the operating rod, a spring mounted upon said base and arranged to exert

pressure against the end of said tripping member opposite the end carrying the valve operating arm, said spring being under tension when the tripping member is in inoperative position and adapted to facilitate the shifting of the tripping member by the operating means upon actuation of the latter.

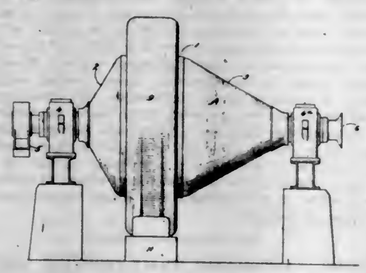


2. In a train stopping mechanism of the class described, the combination of a tripping member arranged adjacent to the road bed, an operating rod connected to the tripping member for actuation of the same to render it operative and inoperative, a spring coöperating with the tripping member and adapted to be compressed upon actuation of the operating rod for moving the tripping member into inoperative position, said spring being arranged to throw said tripping member into operative position upon disablement of the operating rod aforesaid, and guide means for said spring comprising a rod around which the spring is arranged for maintaining the same in proper position when under compression.

3. In automatic train stopping mechanism of the class described, the combination of a tripping member arranged adjacent to the track and adapted to coöperate with a train valve, said tripping member being pivoted intermediate its length for movement in a horizontal plane, a valve contact arm bent upwardly from one end of said tripping member, an operating rod connected to the opposite end of said tripping member for shifting the same into operative and inoperative positions, and spring means cooperating with the tripping member and adapted to be placed under tension upon shifting of the tripping member by the operating rod upon movement of said tripping member into inoperative position whereby to constitute auxiliary actuating means for said tripping member upon disablement of the operating means aforesaid.

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1,224,933. ROTARY MILL. FRED ALLEN JORDAN, Duluth, Minn., assignor of one-half to Walter G. Swart, Duluth, Minn. Filed June 17, 1916. Serial No. 104,241. (Cl. 83—9.)



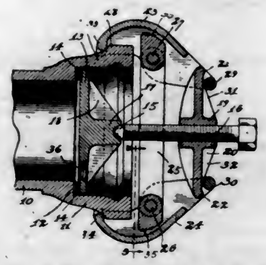
1. In a rotary mill, a rotatable receptacle, means for treating material in said receptacle while the same is being rotated, an electric motor having armature windings and field windings, one of said windings being fixed to said receptacle and the other winding being stationarily mounted, whereby said receptacle is the rotor of the electric motor so formed.

2. In a rotary grinding mill, an electric motor comprising a rotor and a stator, said rotor comprising a hollow rotatable element, grinding means within said element, and means for supplying ore to and discharging the same from said hollow rotatable element.

3. In a rotary mill, a motor comprising a stator and a rotor, said rotor having a relatively fixed hollow receptacle, means for treating material in said receptacle while the same is rotated, and means for feeding material to and discharging material from said receptacle.

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1,224,934. PIPE-CLOSURE. JOHN J. KENNY, Chicago, Ill. Filed Nov. 20, 1916. Serial No. 132,310. (Cl. 137—76.)



1. In a pipe closure, a seal, means for moving said seal to close the pipe, arms associated with said means for engagement with the pipe, and a spacing member for said arms between said seal and said means.

2. In a closure for the open end of a pipe, a seal, a screw, a bridge, said screw and bridge adapted to force said seal into contact with the open end of said pipe, clamps on said bridge, and a connecting member interposed between the bridge and said open end of the pipe for said clamps.

3. The combination of a pipe provided with an open end, a member adapted to close said open end, means for causing such closing, gripping members associated with said means for engagement with said pipe, and a tie pivotally connecting said gripping members, said closing means having cam engagement with said gripping members.

4. The combination of a pipe having a seat, a sealing member fitting said seat, a screw for forcing said sealing member toward said seat, a bridge for said screw, clamping means associated with said bridge, and a tie-piece pivotally connecting said clamping means, said bridge having cam engagement with the ends of said gripping means whereby the outward movement of said bridge causes a relative pivotal movement of said clamping means and said tie-piece.

5. The combination of a pipe having a socket and an internal outwardly facing seat in said socket, a sealing disk fitting over said seat, a gasket interposed between said sealing disk and said seat, a screw coaxial with said pipe socket for forcing said sealing disk toward said seat, a threaded bridge piece for said screw, clamping jaws extending from opposite ends of said bridge piece to opposite sides of the socket, and a tie-piece pivotally connecting said jaws and interposed between said bridge piece and the outer end of said socket.

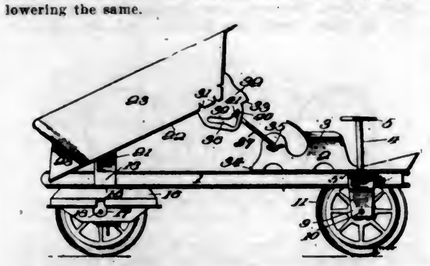
[Claim 6 not printed in the Gazette.]

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1,224,935. TOY DUMP-WAGON. HARRY T. KINGSBURY, Keene, N. H. Filed July 22, 1916. Serial No. 110,756. (Cl. 46—48.)

1. A toy dump wagon, comprising a frame, a body pivoted at its rear end to the frame, a crank shaft mounted in the frame at the forward end of the body, and means carried by the crank shaft for raising and lowering the forward end of the body.

2. A toy dump wagon, comprising a frame, a body pivoted at its rear end to the frame, a crank shaft mounted in the frame at the forward end, and a crank connection between the crank shaft and the body for raising and lowering the same.



3. A top dump wagon, comprising a frame, a body pivoted at its rear end to the frame, a crank shaft mounted in the frame at its forward end, a crank carried by the shaft and passing through an L-shaped slot in the body and means for oscillating said crank shaft whereby the forward end is raised and supported in the raised position by the crank shaft.

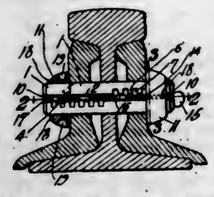
4. A toy dump wagon, comprising a frame, a body pivoted at its rear end to the frame, a crank shaft mounted in the frame at its forward end, a vertically disposed plate carried by the forward end of the body and having an L-shaped slot therein, and a crank carried by the crank shaft and passing through the slot whereby the forward end of the frame is raised and supported by the crank.

5. A toy dump wagon, comprising a frame, a body pivoted at its rear end to the frame, a crank shaft mounted in the frame at its forward end, a vertically disposed plate carried by the forward end of the body and having an L-shaped slot therein, a crank carried by the shaft and passing through said L-shaped slot, and means whereby said crank shaft is oscillated whereby the crank engages the walls of the slot and raises the forward end of the body and supports it in its raised position.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,936. LOCK-BOLT. JOHN A. KLINE, Bloomsburg, Pa. Filed Nov. 20, 1916. Serial No. 132,424. (Cl. 85—5.)



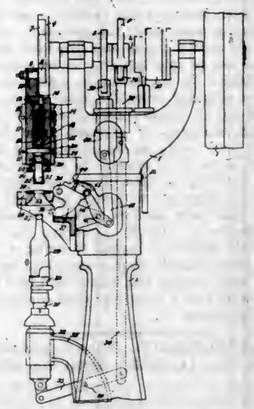
1. In a device of the class described, a bolt having a longitudinal groove and provided with a transverse recess opening into the groove; a collar movable longitudinally of the bolt and provided with an internal tooth movable in the longitudinal groove of the bolt when the collar is moved longitudinally of the bolt, the collar being rotatable to cause the tooth of the collar to enter the recess of the bolt; and a key insertible into the longitudinal groove of the bolt and engaging the tooth of the collar to hold the tooth in the recess and to prevent a movement of the collar circumferentially of the bolt and longitudinally of the bolt.

[Claims 2 to 4 not printed in the Gazette.]

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1,224,937. MACHINE FOR CLOSING BOTTLES AND THE LIKE WITH CAPSULES. AXEL JULIUS LAURITS LASSEN, Copenhagen, Denmark. Filed July 16, 1915. Serial No. 40,209. (Cl. 113—2.)

1. A machine for placing capsules on bottles, comprising means for supporting a capsule-blank, a sleeve shaped piston above said blank holder, a mandrel swingingly mounted below said holding means, and adapted to be swung upward against the capsule blank, and to coöperate with said piston to shape said capsule into a relatively shallow capsule pressed into said piston and having a laterally extending rim below said piston, a bottle support adapted to bring a bottle into contact with said capsule upon removal of said mandrel, and to press said capsule and lateral rim into said piston to form the same into a relatively deep capsule embracing the head of the bottle.



2. A machine for placing capsules on bottles, comprising means for supporting a capsule-blank, a sleeve shaped blank-cutting piston above said blank holder, a mandrel swingingly mounted below said holding means, and adapted to be swung upward against the capsule blank, and to coöperate with said piston to shape said capsule into a relatively shallow capsule pressed into said piston and having a laterally extending rim below said piston, a bottle support adapted to bring a bottle into contact with said capsule upon removal of said mandrel, and to press said capsule and lateral rim into said piston to form the same into a relatively deep capsule embracing the head of the bottle, and ejecting means within said piston adapted to move said capsuled bottle downwardly from said piston.

3. A machine for placing capsules on bottles, comprising means for supporting a capsule blank, a sleeve shaped piston above said blank, a swinging mandrel holder swingingly mounted upon the machine frame below said blank holder, a main shaft for operating said machine, a lever for swinging said mandrel holder, adapted to be operated from said main shaft, a mandrel stationarily fixed to said mandrel holder, said mandrel adapted to be swung upward against the capsule blank, and to coöperate with said piston to shape said blank into a relatively shallow capsule pressed into said piston and having a laterally extending rim below said piston, a bottle support adapted to bring a bottle into contact with said capsule upon removal of said mandrel, and to press said capsule and lateral rim into said piston to form the same into a relatively deep capsule embracing the head of the bottle.

4. A machine for placing capsules on bottles, comprising means for supporting a capsule blank, a sleeve shaped piston above said blank, a swinging sector-shaped mandrel holder, a mandrel stationarily fixed to said mandrel holder, a removal ring surrounding said mandrel, a spring pressed pawl adapted to yieldingly support said ring so that the upper edge of said ring in its normal position is at a level with the upper edge of the mandrel, said mandrel adapted to be swung upward against the capsule blank, and to coöperate with said piston to shape said blank into a relatively shallow capsule pressed into said piston and

having a laterally extending rim below said piston and engaged at its under side by said removal ring, said ring being pressed downwardly with respect to said mandrel, a bottle support adapted to bring a bottle into contact with said capsule upon removal of said mandrel, and to press said capsule and lateral rim into said piston to form the same into a relatively deep capsule embracing the head of the bottle.

5. A machine for placing capsules on bottles, comprising means for supporting a capsule blank, a sleeve shaped piston above said blank, a sector-shaped swinging mandrel holder swingingly mounted upon the machine frame below said blank holder, having a slot therein, a mandrel on said mandrel holder, a main shaft for operating said machine, a lever pivoted to the frame and provided with a roller engaging said slot of said mandrel holder, and adapted to swing said holder by movement in said slot, said lever adapted to be actuated from the main frame, said mandrel adapted to be swung upward against the capsule blank, the transmission of pressure from the mandrel holder to the lever being in the direction of the mandrel engaging arm of the lever toward the pivotal point of said lever, in the working position of said mandrel, said mandrel adapted to coöperate with said piston to shape said blank into a relatively shallow capsule pressed into said piston and having a laterally extending rim below said piston, a bottle support adapted to bring a bottle into contact with said capsule upon removal of said mandrel, and to press said capsule and lateral rim into said piston to form the same into a relatively deep capsule embracing the head of the bottle.

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1,224,938. LEVELING-ROD. WILL G. LENKER, Sunbury, Pa. Filed Oct. 14, 1915. Serial No. 55,869. (Cl. 33—74.)

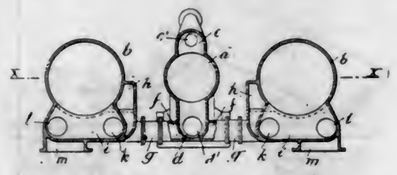


1. A leveling rod comprising two relatively movable sections, an endless sprocket belt carried by one of said sections and adjustable lengthwise thereon, an odometer and a target carried by said latter section, gearing connecting said odometer with said belt, and means for holding one part of said belt stationary with respect to the other section.

2. A leveling rod comprising two relatively movable sections, an endless sprocket belt carried by one of said sections and adjustable lengthwise thereon, an odometer and a target connected together and adjustably mounted on said latter section, gearing connecting said odometer with said belt, and means for holding one part of said belt stationary with respect to the other section.

3. A leveling rod comprising a rod, an endless belt thereon, an odometer and target adjustable on the rod, gearing connecting the odometer with said belt, a clutch for disconnecting the odometer from said gearing, and means for locking said clutch in its disengaged position.

1,224,939. MULTIPLE-EXPANSION STEAM-ENGINE. HUGO LENTZ, Halensee, near Berlin, Germany. Filed Oct. 19, 1914. Serial No. 867,518. (Cl. 121—35.)



1. In a multiple expansion steam engine, the combination of a high-pressure cylinder and two low-pressure cylinders adjacent thereto, said low-pressure cylinders having inlet and exhaust valve casings all arranged in one plane, and said high-pressure cylinder having inlet and exhaust valve casings arranged in a plane substantially at right angles to the first-named plane, the said exhaust valve casing of the high-pressure cylinder being substantially in the plane of the valve casings of the low-pressure cylinders and being connected directly to the inlet valve casings of the said low-pressure cylinders, whereby the steam has a continuous direction of flow in the high-pressure cylinder and the high-pressure exhaust steam can flow along the shortest path directly to both low-pressure cylinders at the same time and have a continuous direction of flow therein, substantially as described.

2. In a multiple expansion steam engine, the combination of a high-pressure cylinder and two low-pressure cylinders adjacent thereto, inlet and exhaust valve casings all arranged in one plane on the low-pressure cylinders, and inlet and exhaust valve casings arranged on the high-pressure cylinder in a plane substantially at right angles to the first-named plane, the exhaust valve casing on the high-pressure cylinder being substantially in the first-named plane, and receivers connected directly between the outlets of the exhaust valve casing on the high-pressure cylinder and the inlets of the inlet valve casings on the low-pressure cylinders, said receivers being formed by longitudinal passages cast only onto the low-pressure cylinders on the sides thereof adjacent the high-pressure cylinder, substantially as described.

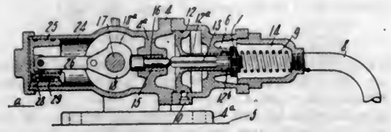
3. In a multiple expansion steam engine, the combination of a high-pressure cylinder and two low-pressure cylinders adjacent thereto, inlet and exhaust valve casings on the low-pressure cylinders all arranged in one plane, and inlet and exhaust valve casings arranged on opposite sides of the high-pressure cylinder in a plane substantially at right angles to the first-named plane, the exhaust valve of the high-pressure cylinder being substantially in the first-named plane, the arrangement being such that the high-pressure exhaust steam can flow directly to the low-pressure inlets and when the high-pressure exhaust is open steam can flow along the shortest path to both low-pressure cylinders at the same time, substantially as described.

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1,224,940. FLUID-PRESSURE-CONTROLLING APPARATUS FOR RAILWAY-VEHICLES. LLOYD V. LEWIS, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed May 7, 1914. Serial No. 836,927. (Cl. 246—59.)

1. In combination, a valve, a shaft mounted to oscillate, means for biasing said shaft to a middle position, an arm attached to said shaft for rocking the shaft in either direction from the middle position, a cam on said shaft for actuating said valve when the shaft is rocked in one direction from said middle position, and means for retarding the return movement of said shaft to said middle position whereby when said shaft is rocked in such direction that it does not actuate said valve the momentum of the shaft and arm at the end of the return movement toward the middle position will not be sufficient to cause the shaft to swing beyond the middle position and actuate the valve.





5. In combination, a member mounted to rock and biased to an intermediate position, a valve opened by said member when the member is rocked in one direction from said intermediate position but not in the other, and means for retarding the return movement of said member from the direction in which it does not open the valve.

11. In combination, a member biased to a middle position and capable of movement in opposite directions from said middle position, a source of fluid pressure, a valve connected therewith, means controlled by said member for opening said valve when the member is moved in one direction from its middle position, means for retaining said valve in the open position after the member returns to its middle position until a substantially complete reduction of said pressure is accomplished, and means for retarding the return movement of said member toward its intermediate position, whereby, when the member is rocked in such direction that it does not open said valve, the momentum of the member at the end of the return movement toward the intermediate position is not sufficient to cause the member to swing beyond its intermediate position and actuate the said valve.

[Claims 2 to 4 and 6 to 10 not printed in the Gazette.]

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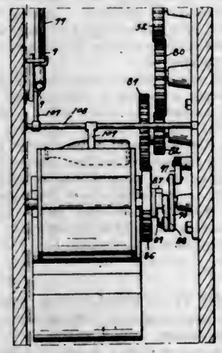
1,224,941. SOLDERING COMPOUND. FRANCIS E. J. LITOT, Wilkinsburg, Pa. Original application filed Mar. 22, 1915, Serial No. 16,253. Divided and this application filed June 5, 1916. Serial No. 101,863. (Cl. 75—1.)

1. A soldering compound, containing zinc, tin and lead, the tin and lead being each not less than the zinc, so as to reduce the melting point of the zinc to a safe limit below the heat which would injure the parts being soldered.

2. A soldering compound, containing zinc, tin and lead in the approximate proportions of 25 parts zinc, 45 parts tin, and 55 parts lead.

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1,224,942. BOTTLE-VENDING MACHINE. EDWARD C. LORENTZEN, Kendrick township, Greene county, Iowa. Filed Mar. 16, 1915. Serial No. 14,834. (Cl. 211—8.)



1. In a bottle vending machine, a cabinet, a bottle holding and discharging magazine therein, a bottle receiving magazine, means for operatively connecting said magazines, whereby when the bottle holding and discharging magazine is moved to discharging position, the bottle receiving magazine is moved to receiving position.

2. In a device of the class described, a bottle vending mechanism comprising a cabinet having therein a bottle holding and feeding magazine, a drum mounted for rotation in said cabinet, having pockets, a guard for the lower portion of said drum, a water receptacle receiving the lower portion of said drum below the central axis thereof, the parts being so arranged that the drum receives and discharges the bottles above the water level in said receptacle, a bottle receiving drum having pockets, a discharging carrier adapted to receive bottles from said first drum, means for actuating said first drum, a bottle receiving device in the wall of said cabinet adapted to receive a bottle outside the wall and carry such bottle through said wall to position adjacent to said second drum, means for operatively connecting the first and second drums, whereby when the first drum is moved for discharging a bottle the second drum is moved to position where one of its pockets is in position to receive a bottle from said bottle receiving member.

3. In a device of the class described, a bottle vending mechanism comprising a cabinet having therein a bottle holding and feeding magazine, a drum mounted for rotation in said cabinet having pockets, a guard for the lower portion of said drum, a water receptacle receiving the lower portion of said drum below the central axis thereof, the parts being so arranged that the drum receives and discharges the bottles above the water level in said receptacle, a bottle receiving drum having pockets, a discharging carrier adapted to receive bottles from said first drum, means for actuating said first drum, a bottle receiving device in the wall of said cabinet adapted to receive the bottle outside the wall and carry a bottle through said wall to position adjacent to said second drum, means for operatively connecting the first and second drums whereby when the first drum is moved for discharging a bottle, the second drum is moved to position where one of its pockets is in position to receive a bottle from said bottle receiving member, said means being so arranged that when said second drum is in its receiving position it may be rotated for a certain distance without effecting the first drum.

4. In a device of the class described, a bottle vending mechanism comprising a cabinet having therein a bottle holding and feeding magazine, a drum mounted for rotation in said cabinet having pockets, a guard for the lower portion of said drum, a water receptacle receiving the lower portion of said drum below the central axis thereof, the parts being so arranged that the drum receives and discharges the bottles above the water level in said receptacle, a bottle receiving drum having pockets, a discharging carrier adapted to receive bottles from said first drum, means for actuating said first drum, a bottle receiving device in the wall of said cabinet adapted to receive a bottle outside the wall and carry a bottle through said wall to position adjacent to said second drum, means for operatively connecting the first and second drums, whereby when the first drum is moved to position where one of its pockets is in position to receive a bottle from said bottle receiving member, said means being so arranged that when said second drum is in its receiving position, it may be rotated for a certain distance without affecting the first drum, and means adapted to be actuated from outside the cabinet, whereby partial rotation may be imparted to said second drum when said second drum is moved to its receiving position.

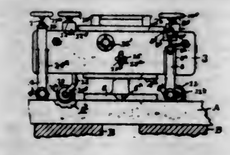
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1,224,943. PORTABLE, POWER, WOOD-SURFACER. ENGELBERT LUX, Bellingham, Wash. Filed Feb. 21, 1917. Serial No. 150,087. (Cl. 144—119.)

1. In a power surfacer for wooden ships' hulls, in combination, a set of revoluble surface cutters, power means to revolve said cutters, two calk-seam rollers, and a plurality of surface rollers.

2. In a power surfacer for wooden ships' hulls, in combination, a set of revoluble surface cutters, power means to revolve said cutters, two calk-seam rollers automatically

adjustable at right angles to the surface made by said cutters, and a plurality of surface rollers.

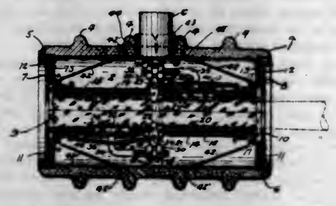


3. In a power surfacer for wooden ships' hulls, in combination, a set of revoluble surface cutters, power means to revolve said cutters, two calk-seam rollers automatically adjustable normal to the surface made by said cutters, two surface rollers independently adjustable at right angles to the surface made by said cutters, and two surface rollers automatically adjustable at right angles to the surface made by said cutters, but in relatively reverse direction.

4. In a power surfacer for wooden ships' hulls, in combination, a set of revoluble surface cutters, power means to revolve said cutters, two calk-seam rollers automatically adjustable normal to the surface made by said cutters, two surface rollers independently adjustable at right angles to the surface made by said cutters, and two surface rollers automatically adjustable at right angles to the surface made by said cutters, but in relatively reverse direction, also manually simultaneously adjustable normal to said surface in the same direction.

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1,224,944. POWDER-DISPENSER FOR BILLIARD-CUES. WALTER A. MCKINNON, San Francisco, Cal., assignor of one-sixth to Thomas E. Finley, San Francisco, Cal. Filed July 26, 1916. Serial No 111,489. (Cl. 46—8.)



1. In a dust dispenser for billiard cues, a powder receptacle having a chamber therein to receive a billiard cue, and means operated by the cue upon its insertion into said chamber for discharging a small quantity of powder upon it.

2. A powder dispenser for billiard cues comprising a powder receptacle having a chamber therein for the insertion of a billiard cue, a slidable plate for uncovering and covering the openings into the cue chamber, and means to move said plates to permit the escape of powder on to the cue upon its insertion into said chamber.

3. A powder dispenser for billiard cues comprising a powder receptacle having a chamber for the insertion of a billiard cue, flaps forming a closure for said chamber, and mechanical means for sifting a quantity of powder upon the cue upon its insertion into said chamber.

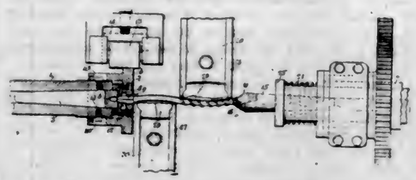
4. A powder dispenser for billiard cues comprising a powder receptacle having an extensible chamber therein for the insertion of a billiard cue, means to cause the deposit of a quantity of powder upon the cue when pushed into said chamber, and a polishing fabric secured to the inside of said extensible chamber and against which the cue may be rubbed.

5. A powder dispenser for billiard cues comprising a receptacle for the powder having an extensible chamber therein, a lining of polishing material secured to the walls of said extensible chamber, flaps to close said chamber when a cue is not inserted therein, and mechanical means for depositing a quantity of powder upon the cue when it is inserted in said chamber.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,945. CHUCK. ELMER T. MCPHERSON, Wilmington, Ohio, assignor to The Irwin Auger Bit Company, Wilmington, Ohio, a Corporation of Ohio. Original application filed May 20, 1915, Serial No. 29,285. Divided and this application filed Apr. 20, 1916. Serial No. 92,347. (Cl. 153—48.)



1. In a device of the character described, a rotatable chuck comprising a part having a socket to receive and support the tip of a shank of a bit and mounted to rotate about a fixed axis, a second part carried by said first part and movable laterally relatively thereto and having an opening to receive said shank and engage the same at a point remote from said socket, and means engaging said second part during the rotation thereof to cause said second part to move so that its opening will come into alinement with said axis during the rotation of the parts.

2. In a device of the character described, a rotatable chuck comprising a part having a socket to receive and support the tip of the shank of a bit and mounted to rotate about a fixed axis, a second part carried by said first part and movable laterally relatively thereto and having an opening to receive said shank and engage the same at a point remote from said socket.

3. In a device of the character described, a rotatable chuck comprising a part having a socket to receive and support the tip of the shank of a bit and mounted to rotate about a fixed axis, a second part carried by said first part and movable laterally relatively thereto and having an opening to receive said shank and engage the same at a point remote from said socket, and a guide arranged to engage said second part as it rotates.

4. In a device of the character described, a chuck comprising a part mounted for rotation about a fixed axis and having a socket to receive the tip of the shank of a bit, a second part mounted on said first part for movement longitudinally and transversely thereof, a spring interposed between said parts, said second part having an opening to receive said shank and engage the same at a point remote from the tip thereof.

5. In a device of the character described, a chuck comprising a part having a socket to receive the tip of the shank of a bit and mounted to rotate about a fixed axis, a second part movable longitudinally of said first part, said parts being connected together by means of a slot and lug, said parts also being arranged to allow relative lateral play, said second part being provided with an opening remote from the socket within said first part, a spring interposed between said parts, and means adapted to engage the outer portion of said second part.

[Claim 6 not printed in the Gazette.]

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1,224,946. OILING ATTACHMENT FOR DIE-STOCKS. FLOYD H. MCPHERSON, Everett, Wash. Filed Mar. 1, 1916. Serial No. 81,423. (Cl. 10—126.)

1. A die stock having a hollow handle adapted to serve as an oil reservoir, a separate pump tube within said reservoir having an oil supply port near the end toward the die and a discharge connection from this inner end of the pump to the dies, a check valve controlling this discharge connection, and a gravity actuated piston freely movable in the pump tube.



2. A die stock having a hollow handle adapted to serve as an oil reservoir, the inner end being provided with an oil discharge channel leading to the dies and a check valve controlling said discharge channel, a separate tube within the handle communicating with the said discharge channel and serving as a pump cylinder, said cylinder having an oil inlet port in its side near its inner end, means for adjusting the area of said inlet port and a gravity piston within said pump cylinder.

3. A die stock having a hollow handle adapted to serve as an oil reservoir, the inner end being provided with an oil discharge channel leading to the dies and a check valve controlling said discharge channel, a separate tube within the handle communicating with the said discharge channel and serving as a pump cylinder, said cylinder having an oil inlet port in its side near its inner end, a pump supply tube connecting with said inlet port and having its supply end facing the inner end of the die stock handle, an adjusting bolt passing through the inner end of said handle and entering said pump supply tube, and a gravity actuated piston freely slidable in the pump cylinder.

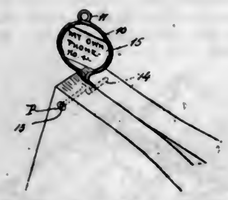
4. A removable hollow handle for a die stock closed to constitute an oil reservoir, an automatic oil delivery means carried on the handle, an air inlet valve, an outwardly opening valve controlling the discharge from the oil delivering means, and a spring acting to close said oil valve.

5. A hollow die stock handle closed to constitute an oil reservoir, an air inlet valve, a pump contained within the hollow of the handle and having a gravity acting piston and an outwardly opening spring held valve controlling the oil discharge from the pump.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,947. BOOK-HANGER. ALLAN J. MACDOUGALL, Detroit, Mich. Filed June 12, 1915. Serial No. 33,838. (Cl. 45—58.)



A book hanger adapted to support a book having a perforated corner, and consisting of a wire member having a suspending ring-terminal, and prongs at its opposite terminals at right-angles to the plane of the ring-terminal, said prongs being adapted to extend centrally into the book for engagement with the perforated corner of the book so that said prongs may be folded within the book and hold the book, when suspended, parallel to the supporting wall.

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1,224,948. METHOD OF MAKING EMULSIONS OF COMPOUND WAXES AND THE PRODUCT OF SAID METHOD. GEORGE WELLINGTON MILES, Belmont, Mass. Filed July 21, 1915. Serial No. 41,176. (Cl. 134—22.)

1. The method of making emulsions of compound waxes comprising paraffin wax and a relatively hard and high melting wax, which consists in melting the ingredient waxes together to form the compound wax, and then heating the wax mixture with soap and a quantity of water appropriate to the emulsification of the paraffin wax with the soap employed.

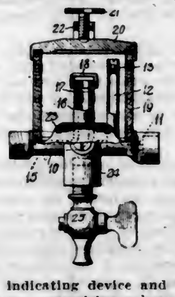
2. An emulsion in water and soap of a compound wax comprising paraffin wax and a hard wax.

3. The method of making emulsions of compound waxes comprising paraffin and a relatively hard and high melting wax, which consists in melting a preponderant proportion of paraffin wax with a hard wax to form the compound wax and then heating the wax mixture with soap and a quantity of water appropriate to the emulsification of the paraffin wax with the soap employed.

4. An emulsion in water and soap of a compound wax comprising a preponderant proportion of paraffin wax and a hard wax in subordinate proportion.

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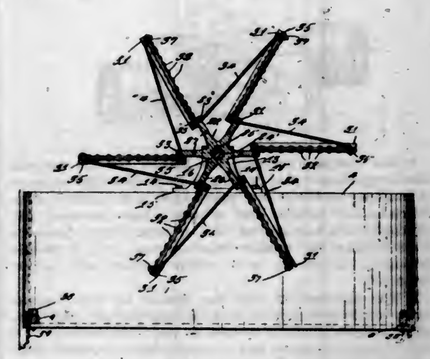
1,224,949. INDICATING DEVICE. JOHN MOHN, Detroit, Mich. Original application filed Aug. 29, 1913, Serial No. 787,256. Divided and this application filed Jan. 17, 1916. Serial No. 72,398. (Cl. 225—17.)



A combined indicating device and trap for liquid dispensing apparatus, comprising a base having ports therein one of which is adapted to receive air and the other of which is adapted to discharge air, a transparent casing on said base, a cap on said casing, a yoke carried by said base and extending over said cap, clamping means carried by said yoke for holding said cap on said casing, a pipe in said casing communicating with the air inlet port of said base, a check valve carried by said pipe, and an apertured tube in said casing in communication with the air outlet port of said base.

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1,224,950. TIDAL MOTOR. HENRY MONROE, Fairview, Kans. Filed Apr. 3, 1916. Serial No. 88,628. (Cl. 170—111.)



1. In a tidal wave motor comprising a pair of floats, a paddle wheel comprising a hub member having radially

extending spokes, reinforced blades and means for holding the blades to the spokes comprising a series of rods serving to tie the blades at their inner ends to the spokes and to brace the outer end of the next succeeding blade, substantially as described.

2. In a tidal motor having floats, a paddle wheel supported thereby comprising a hub with radiating spokes, a series of blades, and tie rods passing through said spokes and connecting with the inner end of one blade and the upper end of the next succeeding blade, substantially as described.

3. In a tidal motor, floats, and a paddle wheel mounted on said floats, comprising a hub with radiating spokes, a series of blades reinforced at their ends and center and a series of tie rods for each set of blades passing through the spokes and tying the inner end of one blade to the spoke and to the outer end of the next succeeding blade, substantially as described.

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1,224,951. PROCESS OF MAKING STARCH AND PRODUCTS THEREOF. CHARLES C. MOORE, Washington, D. C., assignor of one-half to Frederick C. Stevens, Attica, N. Y. Filed Dec. 16, 1911. Serial No. 666,161. (Cl. 127—23.)

1. The process of treating potatoes which comprises impregnating the same in a comminuted state with an enzym poison, desiccating the whole mass and recovering starch.

2. The process of treating potatoes which comprises impregnating the same in a comminuted state with a composition comprising $SO_2$, desiccating the whole mass and recovering starch.

3. In the manufacture of valuable products from potatoes, the process which comprises comminuting potatoes, desiccating, regrinding, converting the reground material into a starch milk and recovering starch therefrom.

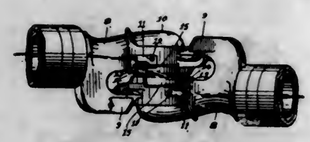
4. In the manufacture of valuable products from potatoes, the process which comprises comminuting potatoes, desiccating in the presence of an enzym-arresting agent, regrinding, converting the reground material into a starch milk and recovering starch therefrom.

5. In the manufacture of valuable products from potatoes, the process which comprises comminuting potatoes, desiccating, regrinding, converting the reground material into a starch milk, recovering starch therefrom and concentrating the effluent to form a food product.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,952. ELECTRIC-SWITCH STRUCTURE. SAMUEL R. NAGINEY, Bremen, Ohio, assignor of one-half to Clarence E. Maxwell, Bremen, Ohio. Filed Mar. 17, 1916. Serial No. 84,993. (Cl. 173—333.)



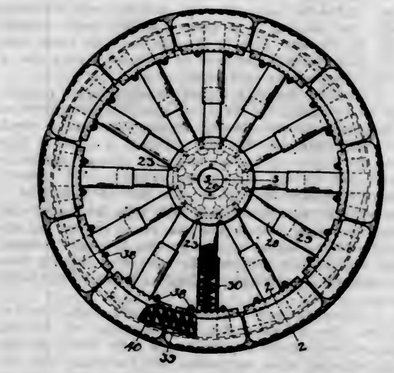
1. The combination with the jointed air line between cars comprising a pair of hose sections, pivotally connected coupling members carried by said hose sections, of a switch socket member and a switch knife member, one carried on the top side of each of said coupler members so that when the coupler members are given a pivotal uncoupling movement, said switch sections will be disconnected.

2. The combination with the jointed air line between cars comprising a pair of hose sections and pivotally connected coupler members carried by said hose sections, of a switch socket member and a switch knife member, both carried by each of said coupler members, so that when the coupler members are given a pivotal uncoupling movement the switch sections will be disconnected.

3. The combination with the jointed air line between cars comprising a pair of hose sections and pivotally connected coupler members carried by said hose sections, of interchangeable switch sections, one carried by each of said coupler members, each section comprising a knife portion and a laterally disposed socket portion for receiving the knife on the other section.

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1,224,953. VEHICLE-HUB. MAURICE O'CONNOR, Fort Adams, R. I. Filed Mar. 1, 1916, Serial No. 81,519. Renewed Mar. 6, 1917. Serial No. 152,781. (Cl. 21—31.)

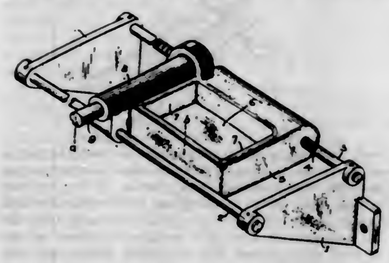


1. A vehicle-wheel including a flanged hub having thereon a plurality of spaced projections, a plurality of hub-supporting members, said projections and said hub-supporting members being interlocked, and tubular spoke-members intermediate said hub-supporting members and the wheel-rim, said hub-supporting members having internal screw-threaded connection with said tubular spoke-members.

[Claim 2 not printed in the Gazette.]

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1,224,954. BELT-SHIFTER. WILLIAM OESTERLEIN, Cincinnati, Ohio, assignor to The Oesterlein Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Original application filed July 9, 1913, Serial No. 778,192. Divided and this application filed Dec. 28, 1916. Serial No. 139,269. (Cl. 64—4.)

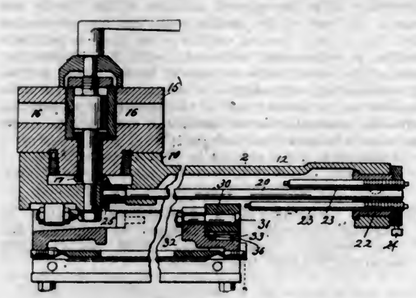


A pair of brackets adapted to be secured to a frame-part supporting a cone-pulley, a pair of guide-rods extending from one bracket to the other and rigidly secured to them in position parallel with the axis of the cone-pulley with which the belt-shifter is to deal, rack-teeth provided upon one of said guide-rods, a carriage fitted to slide freely upon the guide-rods and provided with a vertical mortise between the guide-rods, a shaft journaled in the carriage at one end of the mortise therein and at right angles to the guide-rods, a pinion fast on one end of the shaft and engaging said rack-sheet, and means connected with the other end of the shaft for rotating the shaft and pinion, combined substantially as set forth.



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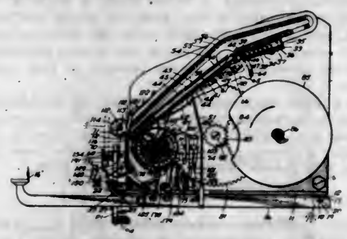
1,224,955. AUTOMATIC STOP MECHANISM FOR TURRET-LATHES. JOHN G. OLIVER and GEORGE C. BARDONS, Cleveland, Ohio. Filed Feb. 19, 1916. Serial No. 79,233. (Cl. 29—65.)



In a turret lathe, having a rotatable turret, the combination with a rotatable stop sleeve, intermediate mechanism for causing said turret and sleeve to turn simultaneously and equally, and a plurality of stop bars adjustably secured to said stop sleeve, of a rotatable stop block supported by the frame of the machine and having peripheral gear teeth and having a recess cut in it from end to end, and an endwise movable rack bar which engages the peripheral teeth on said stop bar whereby through the endwise movement of the rack bar this stop block may be turned to bring its recess into alinement with the operative stop bar or to bring an unrecessed part of said stop block into alinement with said stop bar.

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1,224,956. TELEGRAPH-TRANSMITTER. EDWIN H. PIERSEN, Topeka, Kans. Filed Jan. 13, 1913. Serial No. 741,783. (Cl. 178—79.)



1. In a telegraph transmitter, character members, driving mechanism common to all of said character members, tumblers for individually connecting said character members with said driving mechanism, spacing members for holding said tumblers in spaced relation, and means for switching said spacing members to release said tumblers.

2. In a telegraph transmitter, character members, driving mechanism comprising normally inert members for actuating the character members, tumblers adapted for coöperation with the normally inert members to render the same operative, devices for spacing the tumblers from the normally inert members, and mechanism for shifting said spacing devices to release the tumblers.

3. In a telegraph transmitter, character members, normally inoperative mechanism for actuating the character members, tumblers adapted for coöperation with the actuating mechanism to render same operative, members adapted for spacing the tumblers from the actuating mechanism, and spacers adapted for travel with the tumblers.

4. In a telegraph transmitter, character members, driving mechanism comprising normally inert members for actuating the character members, tumblers adapted for coöperation with the normally inert members to render the same operative, devices for spacing the tumblers from the normally inert members, mechanism for shifting said spacing devices to release the tumblers, and means for returning the tumblers and spacing devices to initial position.

5. In a telegraph transmitter, character members, normally inoperative mechanism for actuating the character members, tumblers adapted for coöperation with the actuating mechanism to render same operative, members adapted for spacing the tumblers from the actuating mechanism, spacers adapted for travel with the tumblers, means for holding the tumblers and spacers in storage, and means for releasing a tumbler and a spacer simultaneously.

[Claims 6 to 77 not printed in the Gazette.]

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1,224,957. GARDEN-TOOL. CHARLES W. ROBINSON, Battle Creek, Mich. Filed Dec. 20, 1915. Serial No. 67,759. (Cl. 55—45.)



In a garden tool, a blade formed with double cutting edges and provided with a tang or shank forming a continuation of said blade and terminating in a handle attachment centrally to both a transverse and longitudinal dimension of said blade, said blade having a rounded slot with a sharp cutting edge at the free end thereof, substantially as and for the purpose set forth.

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1,224,958. TATTING-SHUTTLE. HENRY A. ROEMISCH, Blackfoot, Idaho. Filed May 8, 1916. Serial No. 96,208. (Cl. 66—10.)



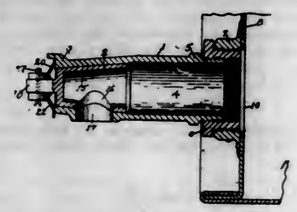
A shuttle comprising a pair of side members, one having a tube projecting centrally from the inner side thereof and the other having a member projecting centrally from its inner side and engaging in the tube, lugs fixedly positioned on the inner side of each of said side members and a bobbin having a hub engaging on the tube, said bobbin furthef having flanges at the ends of the hub, each of said flanges being provided with means to engage the lugs and thereby lock the side members and bobbin against rotation relative to each other.

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1,224,959. FAUCET. SIDNEY ROSENFELD, Cleveland, Ohio. Filed Oct. 27, 1916. Serial No. 127,988. (Cl. 137—7.)

1. A device of the character set forth comprising a casing having an internal tapered valve seat and an open end beyond the reduced end of said seat, a tapered valve

body for coöperation with said seat and having a passageway, the casing having an opening wherewith the passageway of the valve body is adapted to register, the valve body having an extension which projects from its smaller end through the aforesaid end of the casing and being provided therebeyond with an abutment, a spring member interposed between said abutment and the end of the casing and tending to hold the valve body in engagement with the bearing surface of the casing, said spring member being fixed against rotation with respect to the valve body, and means for turning the valve body, the casing and the aforesaid spring member having coöperating parts for limiting the angular movement of the valve body with respect to the casing.



2. A device of the character set forth comprising a casing having an internal tapered valve seat and an open end beyond the reduced end of said seat, a tapered valve body for coöperation with said seat and having a passageway, the casing having an opening with which the passageway of the valve body is adapted to register, the valve body having a polygonal lug which projects from its smaller end through the aforesaid end of the casing, an operating handle connected to said lug, and a spring plate interposed between the handle and the adjacent end of the casing, said plate having an aperture for the reception of the aforesaid lug that corresponds in shape substantially to the cross section of the lug, the plate and casing having parts which coöperate to limit the angular movement of the valve body with respect to the casing.

3. A device of the character set forth, comprising a casing having an internal tapered valve seat and an open end beyond the reduced end of said seat, a tapered valve body for coöperation with said seat and having a passageway, the casing having an opening with which the passageway of the valve body is adapted to register, the valve body having an extension which projects from its smaller end and through the aforesaid end of the casing and having a flat side, an operating handle connected to said extension, and a spring plate interposed between said handle and the adjacent end of the valve casing and having an aperture for the reception of the aforesaid extension, said aperture having a straight side for coöperation with the flat side of the extension, whereby the plate is held against turning with respect to the extension, the casing and plate having parts which coöperate to limit the angular movement of the valve body.

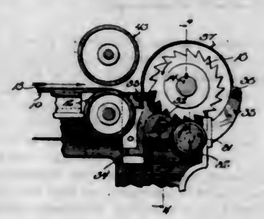
4. A device of the character set forth comprising a casing having an internal tapered valve seat and an open end beyond the reduced end of said seat, a tapered valve body for coöperation with said seat and having a passageway, the casing having an opening with which the passageway of the valve body is adapted to register, the valve body having an extension which projects from its smaller end through the aforesaid end of the casing, an operating handle pivotally connected to said extension, and a spring plate interposed between said handle and the end of the casing and having bearing surfaces which coöperate with the opposed surfaces of the handle and casing, the handle having substantially flat surfaces that are at an angle with respect to each other and one or the other of which is adapted to engage the adjacent bearing surface of the plate to retain said handle in one of two positions.

5. A device of the character set forth, comprising a casing having an internal tapered valve seat and an open end beyond the reduced end of said seat, a tapered valve body for coöperation with said seat and having a passageway, the casing having an opening with which the passageway of the valve body is adapted to register, the valve body having an extension which projects from its smaller end through the adjacent end of the casing, an operating handle pivotally connected to said extension, and a spring plate interposed between said handle and the end of the casing and having bearing surfaces which coöperate with the opposed surfaces of the handle and casing, the end of the handle being flat for coöperation with the aljacent bearing surface of the plate to hold said handle in substantial alinement with the longitudinal axis of the valve body, the handle having a flat portion at substantially right angles to its flat end and in a plane parallel to the pivotal axis of the handle for coöperation with the aforesaid bearing surface of the plate to retain the handle in operative position.

[Claims 6 to 9 not printed in the Gazette.]

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1,224,960. PAPER-STOCK SHREDDER. FRANK E. SAECKER, Appleton, Wis., assignor to Appleton Machine Company, Appleton, Wis. Filed Aug. 11, 1913. Serial No. 784,149. (Cl. 83—75.)



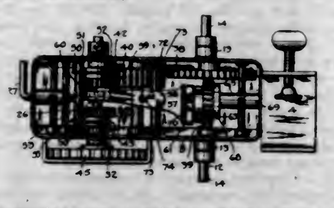
1. In a paper stock shredding machine, the combination of a feeding mechanism, a driven arbor, a series of circular shredding saws on the arbor to which the stock is fed, and a plurality of driven rollers disposed under the saws to engage the pulp and hold it against said saws.

2. In a paper stock shredding machine, the combination of a feeding mechanism, a driven arbor, a series of circular shredding saws on the arbor to which the stock is fed, a pair of rollers disposed under the saws for holding pulp thereadjacent, and means for driving the rollers in opposite directions preventing passage of pulp therebetween.

3. In a paper stock shredding machine, the combination of a feeding mechanism, a driven arbor, a series of circular shredding saws on the arbor to which the stock is fed, a plurality of driven rollers disposed under the saws, and disks on said rollers extending between the saws.

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1,224,961. DRIVING MECHANISM FOR LAUNDRY APPARATUS. FREDERICK W. SAUER, Hollis Court, N. Y., assignor to Home Devices Corporation, Brooklyn, N. Y., a Corporation. Filed Apr. 20, 1915. Serial No. 22,545. (Cl. 74—50.)



1. A reversing gear, comprising a driving shaft, a gear thereon, a broad idler in mesh with and driven by the gear on the driving shaft, two pinions simultaneously in mesh with and driven by said broad idler, a driven shaft whereon one of said pinions is mounted loosely, another pinion loose on the driven shaft, a countershaft whereon the other of the two pinions in mesh with the idler is fixed, and another pinion fixed on this shaft and meshing with the other of the loose pinions on the driven shaft, in combination with a worm on the driving shaft, a worm wheel driven by the worm, a cam united with said worm wheel, a shifter operated by said cam, and a clutch operated by said shifter and located between the loose pinions on the driven shaft to couple the same alternately to the shaft.

2. In a driving and reversing mechanism, a driven shaft, a pair of gears loose on said shaft, a clutch member adapted to couple said gears alternately to their shaft, and a lever for shifting said clutch member, in combination with a shaft, a worm thereon, a hanger on this shaft, a worm wheel having a shaft mounted on said hanger, and a cam united with said worm wheel for operating the shifting lever, said lever having a slotted recess in its end into which the end of the worm wheel shaft projects.

3. The combination with a gearing, of a lever controlling the same, a shaft, a worm thereon, a hanger on said shaft, a worm wheel having a shaft mounted on said hanger, and a cam united with said worm wheel for operating the shifting lever, said lever having a slotted recess in its end into which the end of the worm wheel shaft projects.

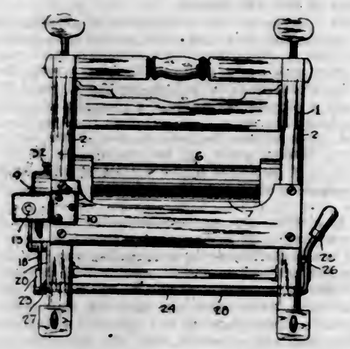
4. The combination with a gearing, of a lever controlling the same, said lever having a pair of spaced studs at one end and a slotted recess between said studs, a shaft bearing a cam between said pins, the said shaft entering the recess in the lever, and means for driving the cam.

5. In a driving and reversing mechanism, the combination with a driven shaft, a pair of gears loose on said shaft, a clutch member adapted to couple said gears alternately to their shaft, and a lever for shifting said clutch member, of power-driven means for operating said lever, and resilient means yieldingly holding the fulcrum of said lever in a mid-position and permitting displacement thereof to one side or the other.

[Claim 6 not printed in the Gazette.]

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1,224,962. REVERSING-GEARING FOR WRINGERS. FREDERICK W. SAUER, Hollis Court, N. Y., assignor to Home Devices Corporation, Brooklyn, N. Y., a Corporation. Filed Apr. 20, 1915. Serial No. 22,547. (Cl. 74—58.)



1. In driving mechanism for wringers, the combination with a vertical frame, and a driven member journaled therein, of a box fixed to one end of the frame adjacent the end of the driven member, a bevel gear on the said end of the driven member within said box, a transverse driving shaft journaled in said box, opposed bevel pinions loose on said shaft within the box meshing with the bevel gear, a double clutch member splined on the shaft between the pinions and adapted to engage alternately therewith, a lever fulcrumed intermediate its ends on the end of the frame and engaging at its upper end with said clutch member, and a rock-shaft extending across the lower portion of the frame through the end pieces thereof, one end of said shaft bearing a rocker engaging the lower end of said lever and the remote end of the shaft bearing a handle outside the opposite end of the frame.

2. In driving mechanism for wringers, the combination with a vertical frame, and a driven member journaled therein, of a box fixed to one end of the frame adjacent the end of the driven member, a bevel gear on the said end of the driven member within said box, a transverse driving shaft journaled in said box, opposed bevel pinions loose on said shaft within the box meshing with the bevel gear, a doubit clutch member splined on the shaft between the pinions and adapted to engage alternately therewith, a lever fulcrumed intermediate its ends on the end of the frame and engaging at its upper end with said clutch member, a rock-shaft extending across the lower portion of the frame through the end pieces thereof, one end of said shaft bearing a rocker engaging the lower end of said lever and the remote end of the shaft bearing a handle outside the opposite end of the frame, a retainer on this end of the frame for engagement by the handle, the rock-shaft being longitudinally movable to release the handle from the retainer, and a spring urging the rock-shaft lengthwise to hold the handle in engagement with the retainer.

3. In driving mechanism for wringers, the combination of a vertically slotted frame, a driven member journaled in bearings in the slots of said frame, a box fixed on one end of the frame opposite the end of the driven member, a gear on the end of said driven member, driving means mounted in said box for driving the driven meinber in either direction, and an abutment preventing the adjacent end of the driven member from rising.

4. In driving mechanism for wringers, the combination of a vertically slotted frame, a driven member journaled in bearings in the slots of said frame, a box fixed on one end of the frame opposite the end of the driven member, a gear on the end of said driven member, driving means mounted in said box for driving the driven member in either direction, and an adjustable abutment on said box for preventing upward movement of the adjacent end of the driven member.

5. In driving mechanism for wringers, the combination of a vertically slotted frame, a driven member journaled in bearings in the slots of said frame, a box fixed on one end of the frame opposite the end of the driven member, gearing in the box for driving the driven member in either direction, a plate on the adjacent end of the driven member, said plate being held against rotation, and an abutment screw extending downward through an overhanging portion of said box to bear against said plate.

[Claim 6 not printed in the Gazette.]

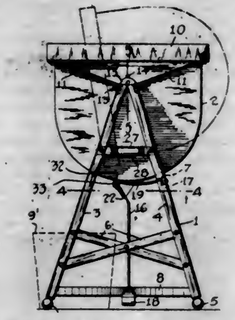
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1,224,963. LAUNDRY APPARATUS. FREDERICK W. SAUER, Brooklyn, N. Y., assignor to Home Devices Corporation, Brooklyn, N. Y., a Corporation. Filed Dec. 15, 1915. Serial No. 66,901. (Cl. 68—18.)

1. In a wash tub, a stand, a tub tiltably supported therein and having an outwardly projecting continuous top rim, said rim having an inclined notch formed in its inner side within the lines of the rim so as to constitute a non-projecting pouring lip, and a spout top comprising a flange projecting inward from said rim over the interior of the tub and extending at either side of said notch to opposite side portions of the tub.

2. A tiltable wash tub comprising a sheet metal body rectangular at the top and having an outwardly projecting hollow rim of boxed formation, said rim having a beveled recess at its inner side centrally of the front of the tub forming a non-projecting pouring lip, and a spout top comprising a flange projecting inward from the top

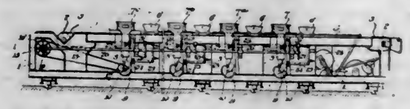
of the front of the tub and extending from side to side thereof, said flange being inclined upward from both ends



toward the middle, and having its central portion opposite said notch upwardly offset from its inclined portions.

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1,224,964. BLOCK-PRINTING MACHINE. EARLE B. SCHAEFER, Philadelphia, Pa., assignor to Geo. W. Blabon Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 7, 1916. Serial No. 129,948. (Cl. 101—199.)



1. In a printing machine, the combination of a plurality of printing blocks, with means for reciprocating said blocks, and means comprising a revoluble shaft extending longitudinally of the machine and having cams thereon and latching mechanism operated by said cams for periodically holding said blocks out of action in predetermined relation.

7. In a printing machine, the combination with a plurality of reciprocatory printing mechanisms, of latching mechanisms for holding said printing mechanisms out of action, a plurality of journaled shafts extending longitudinally of the machine, means for revolving said shafts at different speeds, cams fixed on said shafts respectively, and means whereby said cams operate said latching mechanisms in predetermined relation.

[Claims 2 to 6 and 8 not printed in the Gazette.]

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1,224,965. EMBLEM BROOCH, PIN, OR THE LIKE. ABRAHAM SCHWARTZMAN, St. Louis, Mo., assignor to Walter S. Hale, Pittsburg, Kans. Filed June 8, 1916. Serial No. 102,474. (Cl. 63—29.)



A jewelry article of the kind described comprising, in combination, a body, an approximately rectangular pin-inclosing casing upon the body having top, side, and rear walls, said casing being open at an end and being provided with an aperture in its top wall, an emblem-member having a depending-eye, said eye fitting through said aperture and within the casing, and a retaining-pin having a resiliently yieldable spring-end portion, said pin snugly fitting removably through the open end of and within the casing and through said eye and detachably locking the emblem-member upon the body, said retaining-pin frictionally engaging at its spring-end portion with the walls of the casing and thereby yieldingly locking itself against removal and having a finger-grip portion projecting exteriorly of the casing and to one side of, and embellishing, said body.

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1,224,966. ELECTRICAL DISTRIBUTING MEANS. EDMUND O. SCHWEITZER, Chicago, Ill. Original application filed Jan. 2, 1913, Serial No. 739,624. (Patent No. 1,162,657.) Divided and this application filed Nov. 26, 1915. Serial No. 63,603. (Cl. 247—13.)



1. In a device for the distribution of electrical energy the combination of a long rigid hollow pole open at its upper end, a distributer block extending part way into the upper end of the pole and constituting a plug which fills and closes the upper end of said pole, a plurality of conductors embedded in the block and extending from the lower end of the block within the pole to the upper end of the block without the pole, means for insulating the conductors from each other, and binding posts for the conductors at each end thereof.

2. In a device for the distribution of electrical energy the combination of a long rigid hollow pole open at its upper end, a distributer block extending part way into the upper end of the pole and forming a plug therefor, said block containing in its body portion disposed without the pole a plurality of grooves, a plurality of conductors embedded in the block, each extending from the lower end of the block within the pole to and within one of the grooves, binding posts for the upper ends of the conductors, and connector plates for electrically connecting the exposed portions of the conductors with the binding posts.

3. In a device for the distribution of electrical energy the combination of a long rigid hollow pole open at its upper end, a distributer block extending part way into the upper end of the pole and forming a plug therefor, said block having a portion of its length without the pole polygonal in cross-section and provided with recesses at its corners, and a plurality of conductors embedded within the block and extending from the lower end thereof within the pole to the recesses in the upper end of the block without the pole.

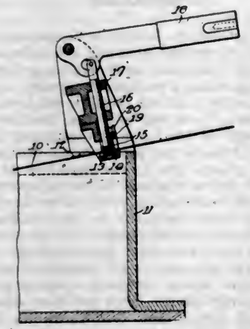
4. In a device for the distribution of electrical energy the combination of a long rigid hollow pole open at its upper end, a distributer block extending part way into the upper end of the pole and forming a plug therefor, said block having a portion of its length without the pole polygonal in cross-section and provided with recesses at its corners, a plurality of conductors embedded within the block and extending from the lower end thereof within the pole to the recesses in the upper end of the block without the pole, and binding posts for the conductors at each end thereof.

5. In a device for the distribution of electrical energy the combination of a long rigid hollow pole open at its upper end, a distributer block extending part way into the upper end of the pole and forming a plug therefor, said block having a portion of its length without the pole substantially polygonal in cross-section and provided with recesses at its corners, a plurality of conductors embedded within the block and extending from the lower end of the block within the pole to the recesses in the upper end thereof without the pole, a connector plate for each conductor adapted to electrically engage that portion of the conductor exposed by the recessed portion of the block, and a binding post for each connector plate.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,967. WIRE-WIPER. LARS PETER SEAHOLM and JOHN WILTON, De Kalb, Ill., assignors to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Aug. 14, 1916. Serial No. 114,769. (Cl. 91—59.4.)



1. In a wire wiping appliance, the combination of a lower wipe, a removable upper wipe, a plunger for holding the last named wipe against a wire, a fixed ledge having an aperture through which said plunger is adapted to pass, a replacing wipe being so shaped as to be retained in said aperture during the retraction of said plunger, whereby upon the return of said plunger said wipe is immediately forced into firm engagement with said wire, substantially as described.

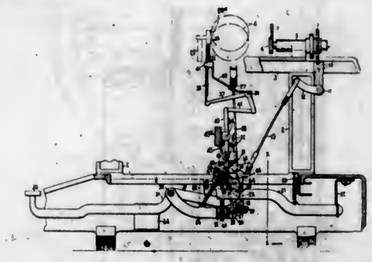
2. In a wire wiping appliance, the combination of a support for a lower wipe, an upper wipe, a plunger for forcing the latter into engagement with a wire, a lever for actuating said plunger, a frame member having an opening for the accommodation of said plunger, a replacing upper wipe having a flange of a diameter greater than the size of said opening, whereby the same is retained in the opening upon the retraction of said plunger until forced out of the opening by said plunger and directly into engagement with said wire, substantially as described.

3. In a wire wiping appliance, the combination of a support, a plunger and a wire wiping wad having a flange on one end thereof, and means adapted to accommodate said wad and retain the same above a wire by reason of engagement with the flange of said wad, whereby said plunger may act upon said wad to force the same instantly into engagement with the wire, substantially as described.

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1,224,968. TYPE-WRITING MACHINE. GEORGE A. SEIB, Ilion, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Dec. 11, 1916. Serial No. 136,240. (Cl. 197—83.)

1. In a typewriting machine, the combination of a series of printing keys, a universal member operated by said keys, a special key, and a coupler movably mounted on said universal member and capable of being moved into and out of position to couple said special key to said universal member.



2. In a typewriting machine, the combination with a carriage and carriage feed mechanism including a universal member, of a series of printing keys, each adapted to operate said universal member at each stroke of said keys, a special printing key, and a coupler mounted on said universal member and movable into and out of position operatively to connect said special key with said universal member.

3. In a typewriting machine, the combination with a carriage and carriage feed mechanism including a universal member, of a series of printing keys each adapted at each stroke thereof to operate said universal member, a special key, and an arm adjustably mounted on said universal member and movable into and out of position operatively to connect said special key with said universal member.

4. In a typewriting machine, the combination with a carriage, carriage feed mechanism including a universal member, and case shift mechanism, of a series of keys each adapted to operate said universal member, a special key, a coupler mounted on said universal member and movable into and out of position to connect said special key with said universal member, and means whereby said case shift mechanism controls said coupler.

5. In a typewriting machine, the combination with a carriage, carriage feed mechanism including a universal rock shaft, and case shift mechanism, of a series of keys each adapted to operate said rock shaft, a special key, and a coupler mounted on said rocker and movable by said case shift mechanism into and out of position to connect said special key with said rock shaft.

[Claims 6 to 17 not printed in the Gazette.]

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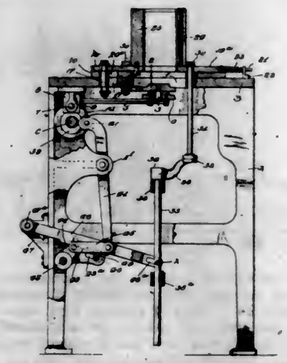
1,224,969. MACHINE FOR IRONING AND FINISHING PARAFFINED CONTAINERS. CHARLES W. SHEVLIN, Chicago, Ill., assignor to Climax Container Company, Chicago, Ill., a Corporation of Delaware. Filed Mar. 30, 1914. Serial No. 828,212. (Cl. 93—83.)

1. In a device of the kind specified, a sectional mandrel upon which a hollow receptacle is adapted to be retained, means for expanding said mandrel into contact with said receptacle, and a device substantially surrounding said mandrel for moving said receptacle with respect to said mandrel while the latter is in contact therewith and expanded.

2. A device of the kind specified, comprising an expansible mandrel upon which a hollow receptacle is adapted to be retained, means for expanding and contracting said mandrel into and out of contact with said hollow receptacle, and an ejector comprising a plurality of segmental plates surrounding said mandrel and against which said mandrel is expanded, said ejector adapted to be operated while said mandrel is in an expanded position.

3. A device of the kind specified, comprising a mandrel upon which a hollow receptacle is adapted to be retained, consisting of a plurality of segmental sections, a plurality of wedge members interposed between said segmental sections, a coresponding number of radially disposed reciprocable carriers upon which said segmental sections and wedge members are respectively mounted, and devices for

forcing said wedge members against said segmental sections to expand said mandrel into contact with said hollow receptacle.



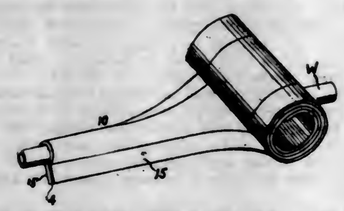
4. A device of the kind specified, comprising a mandrel upon which a hollow receptacle is adapted to be retained, consisting of a plurality of returnable segmental sections, a plurality of wedge members interposed between said segmental sections, a corresponding number of radially disposed reciprocable carriers upon which said segmental sections and wedge members are respectively mounted, and devices for forcing said wedge members against said segmental sections to expand said mandrel into contact with the walls of said receptacle.

5. A device of the kind specified, comprising a mandrel upon which a hollow receptacle is adapted to be retained, consisting of a plurality of segmental sections, a plurality of wedge members interposed between said segmental sections, a corresponding number of radially reciprocable carriers upon which said segmental sections and wedge members are mounted, devices for forcing said wedge members against said segmental sections to expand said mandrel, and means for automatically returning said segmental sections to normal position.

[Claims 6 to 13 not printed in the Gazette.]

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1,224,970. LINEMAN'S SHIELD. FRANK K. SINGER, Pittsburgh, Pa., assignor to American Telephone and Telegraph Company, Boston, Mass., a Corporation of New York. Filed Nov. 3, 1916. Serial No. 129,397. (Cl. 173—28.)

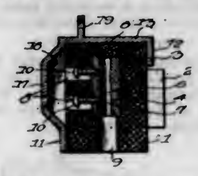


A lineman's shield comprising a tube of flexible insulating material, said tube being of approximately uniform internal diameter with its wall longitudinally divided at one side, there being a flange projecting outwardly from the tube along each edge of the division, such flanges lying closely adjacent and substantially parallel to one another.

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1,224,971. MULTIPLE SERVICE CONNECTION. JOHN T. SKINNER, Lawrence, Kans. Filed Apr. 24, 1915. Serial No. 23,713. (Cl. 247—12.)

1. A multiple service connection of the character described comprising an insulating body, the latter having a recess formed therein, a connecting bar seated within said recess, said bar having a plurality of transversely extending channels therethrough arranged in predetermined and spaced relation, and a screw opening communicating with each of said channels, said body having therein additional recesses communicating with each of said channels, said body having therein additional recesses communicating and alining with said screw opening and channels, binding screws egaged with said screw openings and passing through the additional recesses, a cover plate secured to the front surface of said body and overlying said recesses, that portion of said plate overlying the recesses being spaced therefrom, insulating material on the inner surface of said plate, and a flange formed on the upper edge of the latter and extending rearwardly therefrom substantially as and for the purpose set forth.



2. A multiple service connector comprising an insulating block having upright front and rear sides and horizontal top and bottom sides, said block being formed with a cavity opening through its upper side, with wire receiving apertures leading from said cavity through its lower side, and with screw receiving apertures leading from said cavity through its front side, a connecting bar received snugly in said cavity and spaced below the upper side of the block, a plastic filler in the upper end of the cavity, the aforesaid bar having wire receiving apertures alining with said wire receiving apertures in the insulating block, and binding screws threaded in the aforesaid bar for securing current conducting wires in the wire receiving apertures of said bar, said screws having their heads disposed in the aforesaid screw receiving apertures.

3. A multiple service connector comprising an insulating block having upright front and rear sides and horizontal top and bottom sides, said block being formed with a cavity opening through its upper side, with wire receiving apertures leading from said recess through its lower side, and with screw receiving apertures leading from said recesses through its front side, a connecting bar received snugly in said cavity and spaced below the upper side of the block, a plastic filler in the upper end of the cavity, the aforesaid bar having wire receiving apertures alining with said wire receiving apertures in the insulating block, binding screws threaded in the aforesaid bar for securing current conducting wires in the wire receiving apertures thereof, said screws having their heads confined in the aforesaid screw receiving apertures, and a protecting plate covering the front side of the insulating block and having a rearwardly extending flange overlying the upper side of said block to prevent water and the like from entering the cavity therein around the filler.

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1,224,972. BUTTON-FEEDING MECHANISM FOR BUTTON-ATTACHING MACHINES. AXEL C. STENMAN, Jamaica Plain, Mass., asignor to Independent Button Fastener Machine Company, a Corporation of Massachusetts. Filed Oct. 14, 1916. Serial No. 125,734. (Cl. 218—12.)

1. In combination, a button chute, a reciprocable lever, a spring controlled feed finger pivoted to said lever, a dog loosely pivoted to said finger, and a guide for said dog having an abutment between its ends adapted to partially reverse said dog during the movement of the feed finger thereby to lift said finger over the lowermost button in said chute.

2. In combination, a button chute, a reciprocable lever, a spring controlled feed finger pivoted to said lever, a dog loosely pivoted to said finger, and having a straight bearing face and a rounded end, and a guide for said dog having bearing faces disposed in different planes and along which said straight face of the dog is adapted to successively move and having a fixed abutment against which said rounded end of the dog is adapted to contact.



3. A button feeding device for a button attaching machine having a button chute, consisting of a pivoted spring controlled feed finger, a dog pivoted to said finger, and a guide having a stepped surface along which said dog is adapted to travel and including a shoulder adapted to swing said dog on its pivot during a phase of the movement of said feed finger, thereby to lift said feed finger over the lowermost button in said chute.

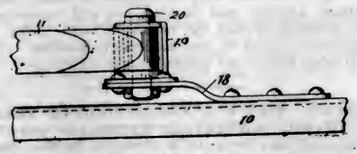
4. A button feeding device for a button attaching machine having a button chute, consisting of a pivoted spring controlled feed finger, a dog pivoted to said finger, a guide having a stepped surface along which said dog is adapted to travel and including a shoulder adapted to swing said dog on its pivot during a phase of the movement of said feed finger thereby to lift said feed finger over the lowermost button in said chute, and stops adapted to limit the movement of the feed finger in both directions of its travel.

5. A button feeding device for a button attaching machine having a button chute, consisting of a pivoted spring controlled feed finger, a stud fast on said finger, a dog pivoted on said stud, a guide plate having a stepped surface along which said dog is adapted to travel and including a shoulder adapted to swing said dog on its pivot during a phase of the movement of said feed finger thereby to raise said feed finger over the lowermost button in said chute, and a stop at each end of said stepped surface adapted to limit the movement of the feed finger in both directions of its travel.

[Claims 6 to 11 not printed in the Gazette.]

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1,224,973. MOTOR-VEHICLE. WILLIAM R. STRICKLAND, Cleveland, Ohio, assignor to The Peerless Motor Car Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 7, 1914. Serial No. 810,743. (Cl. 267—37.)



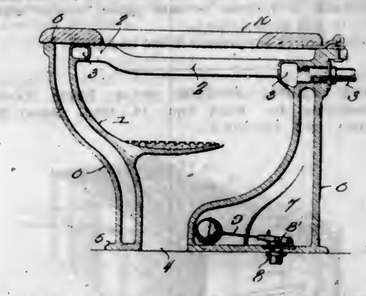
1. In a motor vehicle construction, in combination with a chassis frame, a spring extending along the side of the frame, a flexible bracket connecting the forward end of the spring to the chassis frame and permitting relative lateral movement between the spring and the chassis frame, a housing carried by said bracket, and a pin journaled in said housing and connected to the spring.

2. In a motor vehicle construction, in combination with a chassis frame, a spring extending along the chassis frame, a strap of flexible material secured at one end to the chassis said strap being bent outwardly from the chassis and at its free end secured to the said spring, a yoke or housing secured to the free end of the said strap, a pin rotatively mounted in said housing or yoke said pin engaging the aforesaid spring.





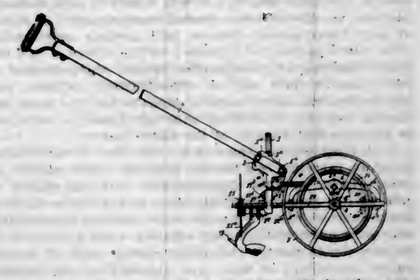
1,224,974. LAVATORY-BOWL. ANTON SUELFLOHN, Milwaukee, Wis. Filed Sept. 20, 1916. Serial No. 121,124. (Cl. 4—18.)



A device of the class described comprising a bowl having its front upper edge disposed in a plane above that of the main portion of said edge, a shell incasing the bowl and spaced from the wall thereof, whereby to form an overflow chamber, the top of said chamber being open, the rear portion of said chamber being enlarged and having an outlet, the upper edge of said shell being in the same substantially horizontal plane and coincident with the plane of the front upper edge of the bowl, a float operated valve in the outlet from said chamber, and a cover hinged to the shell and closing the open top of the chamber, said cover normally resting on the front upper edge of the bowl and the upper edge of the shell, the same forming a support therefor.

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1,224,975. ROTARY WEEDER AND CULTIVATOR. STARLEY S. SWANSON, Bellevue, Ohio. Filed Jan. 27, 1916. Serial No. 74,592. (Cl. 97—25.)



1. In a cultivator, a frame, adjustable bearing arms and brackets carried thereby, and geared wheels and weeder shafts detachably and adjustably mounted on said bearing brackets.

2. In a cultivator, a frame provided with adjustable bearing arms and brackets thereon, geared wheels on said brackets, shafts carried on said brackets, and reversibly geared to said geared wheels and weeder elements carried by said shafts.

3. In a cultivator, a frame, bearing arms and brackets adjustable on said frame relatively to each other, geared wheels and weeder shafts adjustably mounted on said brackets, and means for reversing the rotation of said weeder shafts.

4. In a cultivator, an arched frame, bearing arms laterally adjustable thereon, adjustable, vertically inclinable bearing brackets on said bearing arms, geared wheels and weeder shafts on said bearing brackets, and means for reversing the direction of rotation of said weeder shafts by said geared wheels.

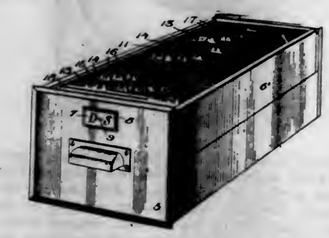
5. In a cultivator, a frame, laterally adjustable bearing arms thereon, horizontally extending inclinable bear-

ing brackets adjustably mounted on said arms, geared wheels and weeder shafts mounted on said brackets and adjustable relative to said arms, and means for reversing the direction of rotation of said geared weeder shafts relative to said geared wheels.

[Claims 6 to 14 not printed in the Gazette.]

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1,224,976. FILING SYSTEM. SILAS EDGAR TROUT, Philadelphia, Pa. Filed Sept. 15, 1913. Serial No. 789,862. (Cl. 129—16.5.)



1. A filing system comprising filing elements carrying identifying symbols representative of departmental divisions of filable matter; elements carrying identifying symbols representative of units of said departments coördinating with said departmental symbols; elements carrying identifying symbols representative of sub-classes of said units of departments; and spacer elements some carrying alphabetical and some numerical symbols forming subdivisions of said sub-classes of units of departmental divisions of the filable matter.

2. A filing system comprising a plurality of constitutive filing elements; certain of said elements carrying an identifying symbol representative of a departmental division of the filable matter; certain others of said elements carrying an identification symbol representative of a unit of said departmental division said symbols coördinating with said departmental symbols; certain others of said elements carrying an identification symbol representative of sub-classes of said unit of departmental division; and spacer elements some carrying alphabetical and some numerical symbols subdividing said sub-classes of said unit of departmental division of the filable matter.

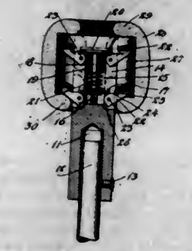
3. A filing system comprising a plurality of constitutive elements carrying coördinated symbols representative of departmental, unit of departmental, and sub-classes of said unit of departmental divisions of the filable matter; and a series of spacer elements some carrying alphabetical and some numerical symbols adapted when aggrouped to classify filable matter into departments, units of departments, sub-classes of units, and alphabetical and numerical subdivisions of said divisions.

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1,224,977. DEVICE FOR WINDING YARN AND THE LIKE. CARL J. ULMANN, New York, N. Y. Filed July 6, 1915. Serial No. 38,097. (Cl. 242—130.)

1. The combination of a carrier, a tubular core of even internal diameter throughout surrounding said carrier and spaced therefrom, and a plurality of devices normally projecting beyond the periphery of said carrier into frictional contact with the inner surface of said core whereby the latter is supported in spaced relation to said carrier, said devices being movable to positions in which no part thereof projects beyond said periphery of the carrier whereby said core and the ball of yarn or the like wound thereon and over its ends may be removed from said carrier.

2. The combination of a carrier, a tubular core surrounding said carrier and spaced therefrom, a plurality of fingers pivotally connected with said carrier and located in pairs at a distance from each other lengthwise of said carrier, said fingers normally projecting in a radial direction beyond said carrier into contact with the inner surface of said core whereby the latter is supported in spaced relation to said carrier, said fingers being movable to inoperative positions entirely within the periphery of said carrier whereby said core and a ball of yarn or the like wound thereon and over its ends may be removed from said carrier and yielding means for maintaining said fingers in their normal positions and arranged to yield as said fingers are moved to their inoperative positions.



3. The combination of a carrier having radial slots, fingers mounted in said slots and normally projecting radially out of same, said fingers being movable to an inoperative position entirely within the periphery of said carrier, resilient means for maintaining said fingers in their normal position and arranged to yield as said fingers are moved to said inoperative position and yarn clamping means operatively connected with said resilient means.

4. The combination of a carrier having radial slots, fingers mounted in said slots and normally projecting radially out of same, said fingers being movable to an inoperative position entirely within the periphery of said carrier, resilient means for maintaining said fingers in their normal position, and yarn clamping means operatively connected with said resilient means, said fingers being provided with cam surfaces adapted to actuate said resilient means as said fingers are moved to said inoperative position whereby said clamping means is moved to a releasing position.

5. The combination of a carrier having an axial chamber and radial slots communicating therewith, fingers pivotally mounted in said slots and normally projecting out of same, said fingers being movable to an inoperative position entirely within the periphery of said carrier, a member slidably mounted in said chamber, peripheral projections on said member extending into said slots, a yarn clamping plate at the free end of said carrier, a rod connecting said member and said plate, and a spring in said chamber bearing against said member, said fingers being provided with cam surfaces adapted to engage said projections whereby said member, rod and clamping plate are actuated against the tension of said spring as the fingers are moved to said inoperative position.

[Claims 6 to 9 not printed in the Gazette.]

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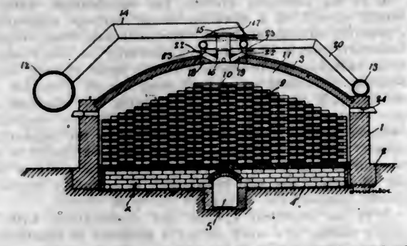
1,224,978. KILN FOR AND METHOD OF TREATING CERAMIC AND SIMILAR MATERIAL. JOHN T. UNDERWOOD and ITHAMAR M. JUSTICE, Dayton, Ohio, assignors to Underwood Engineering Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 17, 1916. Serial No. 91,511. (Cl. 25—148.)

1. The combination, with a kiln, of means located at the top thereof for artificially forcing into the same gas and air under pressure, said kiln being so constructed that the pressure therein will be in excess of the air pressure on the exterior of the kiln, whereby incoming drafts of cold air are prevented.

2. The combination, with a kiln, of means located at the top thereof for admitting gas and air under pressure and means for maintaining said pressure within the kiln above the normal atmosphere, said means comprising a restricted flue adjacent the bottom of the kiln to allow but retard the escape of the products of combustion.



3. The combination, with a kiln, of a burner located at the top centrally thereof and means for conveying to said burner gas and air under pressure in excess of the pressure in the exterior of the kiln.



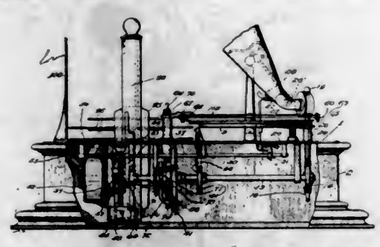
4. The combination with a kiln, of a burner located adjacent the top thereof and arranged to distribute the heat of combustion uniformly throughout the kiln, means for conveying to said kiln gas and air under pressure, and means for maintaining the pressure within the kiln in excess of the air pressure on the exterior of the kiln, whereby incoming drafts of cold air are prevented.

5. The combination, with a kiln, of a burner arranged centrally of the top thereof, and conduits for conveying gas and air to said burner, one of said conduits being provided with a plurality of branch conduits communicating with the burner, and means for independently regulating each of said branch conduits.

[Claims 6 to 16 not printed in the Gazette.]

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1,224,979. AUTOMATICALLY-OPERATED TALKING-MACHINE. LOUIS P. VALIQUET, New York, N. Y., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Oct. 27, 1904. Serial No. 230,202. (Cl. 274—10.)



1. A talking machine comprising a support for talking machine records, a magazine for holding talking machine records, and means for automatically clamping and moving a talking machine record from said magazine to said support.

2. A talking machine comprising a support for talking machine records, a magazine for talking machine records, and means for automatically gripping and moving a talking machine record from said magazine to said support and returning the same to said magazine.

3. A talking machine comprising a support for talking machine records, of actuating means therefor, a magazine for holding talking machine records, and means actuated by said actuating means for moving any one of said talking machine records selectively from said magazine to said record support.

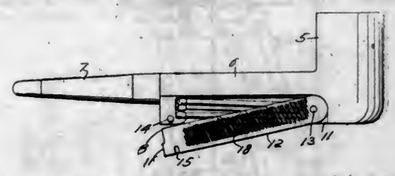
4. A talking machine comprising a support for talking machine records, actuating means therefor, a magazine for holding talking machine records, and means actuated by said first mentioned means for moving any one of said talking machine records selectively from said magazine to said record support and returning the same to said magazine.

5. In a talking machine, the combination with a sound reproducer, of a record carrier, a receptacle for the records, and means actuated by the movement of said reproducer for starting the operation of said record carrier and record receptacle.

[Claims 6 to 60 not printed in the Gazette.]

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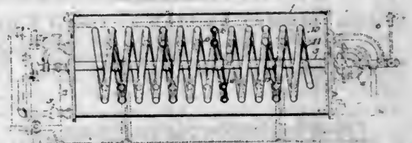
1,224,980. PIPE. ALEXANDER VAN BUREN, East Quogue, N. Y. Filed Apr. 21, 1916. Serial No. 92,781. (Cl. 131—12.)



A pipe having a stem with an enlarged portion below its smoke passage, said enlarged portion having a transverse slot, a plate secured to one side of the enlarged portion covering the slot, and a pivoted door covering the slot at the opposite side to confine matches.

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1,224,981. APPARATUS FOR PASTEURIZING, COOLING, AND RIPENING MILK, CREAM, AND OTHER LIQUIDS. STEPHEN J. VAN KUREN, Cedar Rapids, Iowa, assignor to J. G. Cherry Company, Cedar Rapids, Iowa, a Corporation of Iowa. Filed June 5, 1915. Serial No. 32,277. (Cl. 257—79.)



1. A rotatable heat interchanging member for pasteurizers, coolers, ripeners and the like comprising a shaft having a central portion closed against the passage of fluids and hollow end portions, openings in the opposite sides of said shaft adjacent both ends thereof, hollow metal fillers in said hollow end portions having openings registering with the openings in said shaft, a plurality of helical pipe coils disposed one within the other about said shaft with their convolutions arranged in substantially parallel relation and their ends secured within said fillers, said hollow end portions forming, respectively, the inlet and outlet of said coils, and means on said shaft for supporting said coils.

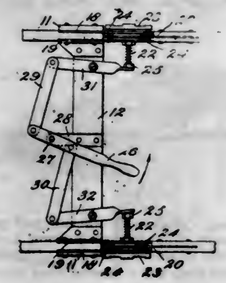
2. A rotatable heat interchanging member for pasteurizers, coolers, ripeners and the like comprising a shaft having a central portion closed against the passage of fluids and hollow end portions, openings in the opposite sides of said shaft and adjacent both ends thereof, hollow metal fillers in said hollow end portions having openings registering with the openings in said shaft, a pair of helical pipe coils disposed one within the other about said shaft with their convolutions arranged in substantially parallel relation, the ends of said parallel pipe coils being disposed through said openings and flanged within said fillers, said hollow end portions forming, respectively, the inlet and outlet of said coils, and a plurality of arms secured to said shaft, each having means thereon to embrace the pipes of the respective coils.

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1,224,982. CONVERTIBLE FURNITURE. HERMAN A. WASHEIM, New York, N. Y. Filed May 7, 1915. Serial No. 26,645. (Cl. 155—6.)

In a convertible chair, a main frame having side rails, hinge plates provided with pairs of registering openings

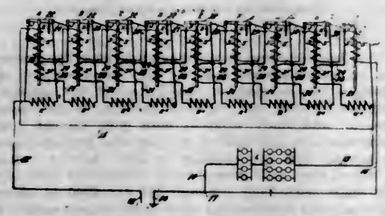
fixed to the end of each rail, an adjustable member on each side of the chair having plates extending between said first named plates and provided with pairs of openings adapted to register with the holes in said first named plates, a bearing pin passing centrally through said plates on each side of the chair, a cross piece mounted on the outer end of each pin, a pair of pins on each cross piece adapted to register with the holes in said plates, and a



spring on each bearing pin adapted to press it inward to lock the hinges, a hand lever pivoted to a portion of said main frame between said pins, pushing levers pivoted near said side rails on each side, and connections between said hand lever and said pushing levers adapted to cause the latter to press said bearing pins outward to unlock the hinges, substantially as described.

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1,224,983. ELECTRIC REGULATOR. THOMAS S. WATSON, Milwaukee, Wis., assignor to Car Lighting Improvement Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 9, 1915. Serial No. 20,133. (Cl. 171—312.)



1. In an electrical system, the combination, with a supply circuit, of a work circuit of variable resistance, a plurality of resistances in series with the work circuit, a regulator circuit sensitive to changes in voltage in both the supply and work circuits, and means controlled by said regulator circuit to simultaneously cut into circuit and to successively cut out of circuit the said resistances to maintain approximately the voltage of the work circuit regardless of variation in voltage in the supply circuit and in the resistance of the work circuit.

2. In an electrical system, the combination, with a supply circuit, of a work circuit of variable resistance, a circuit including a plurality of resistances in series with said work circuit, a regulator circuit in shunt to the work circuit, and means controlled by said regulator circuit to simultaneously cut into circuit and to successively cut out of circuit the said resistances to maintain approximately constant the voltage of the work circuit regardless of variation in voltage in the supply circuit and in the resistance of the work circuit.

3. In an electrical system, the combination, with a supply circuit, of a work circuit, a circuit including a plurality of resistances in series with said work circuit, a regulator circuit in shunt to the work circuit and in series with said resistances, and means controlled by said regulator circuit so as to simultaneously cut into and to successively cut out of circuit the said resistances to maintain approximately constant the voltage of the work circuit.

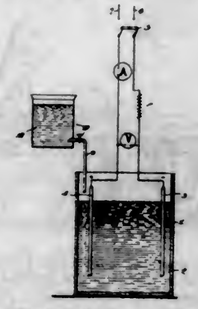
4. In an electrical system, the combination, with a supply circuit, of a work circuit of variable resistance, a plurality of resistances in series with said work circuit, automatic means comprising a plurality of electro-magnetic switches set to operate at the same voltage, each adapted to include or exclude from circuit a section of resistance, a regulator circuit including the windings of the electro-magnetic switches, said electro-magnetic switches being, through their windings in the regulating circuit, responsive to the voltage of the work circuit so as to simultaneously cut into circuit and to successively cut out of circuit the said resistances to maintain approximately constant the voltage of the work circuit.

5. In an electrical system, the combination, with a supply circuit, of a work circuit, a plurality of resistances in series with said work circuit, automatic means comprising a plurality of electro-magnetic switches set to operate at the same voltage, each adapted to include or exclude from circuit a section of resistance, a regulator circuit including the windings of the electro-magnetic switches in shunt to the work circuit and in series with said resistances, said electro-magnetic switches being through their windings in the regulating circuit responsive to the voltage of the work circuit so as to cut in and out of circuit the said resistances to maintain approximately constant the voltage of the work circuit.

[Claims 6 to 10 not printed in the Gazette.]

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1,224,984. PROCESS OF ELIMINATING SALTS OF THE WEAK SULFUR ACIDS FROM FIXED PHOTOGRAPHIC MEDIA. SAMPSON H. WEINHANDLER, New York, N. Y., and JULIAN S. SIMSOHN, Philadelphia, Pa. Continuation of application Serial No. 22,352, filed Apr. 19, 1915. This application filed Sept. 9, 1916. Serial No. 119,785. (Cl. 95—88.)



1. The process herein described of treating a photographic medium, which consists in subjecting the thiosulfate held in the gelatin of the films, to the action of a strongly alkaline solution of sodium hypochlorite for producing a soluble substance, said solution being sufficiently alkaline to rapidly open the pores of said gelatin before said film is bleached, and washing out this soluble substance.

2. The process herein described of treating developed and fixed photographic medium containing salts of the weak sulfur acids, which consists in subjecting said medium to the action of a strongly alkaline solution of sodium hypochlorite for the purpose of opening the pores of the gelatin rapidly, said solution of sodium hypochlorite forming a soluble substance of said salts, and then removing said soluble substance, said alkaline solution being so strongly alkaline as to open the pores of the gelatin before said film is bleached.

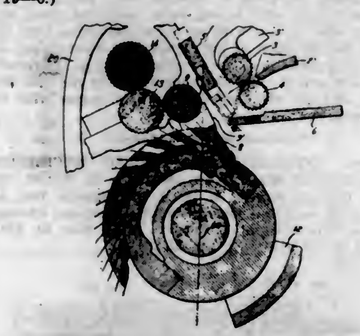
3. The herein described process of treating a developed and fixed photographic medium containing a salt of weak sulfur acids to a solution of a halogen salt, which is being subjected to the action of a controlled electric current, whereby the salt of a hypo halogen acid is produced in a quantity proportional to the quantity of said weak sulfur acid and said medium, for forming a soluble substance therewith, and thereafter removing said soluble substance, said solution being maintained in a state of substantial quiescence, an alkaline hydrate being formed by the action of said electric current, so as to make said solution strongly alkaline as to open the pores of said gelatin, before said medium is bleached.

4. The herein described process of treating fixed and developed photographic media containing salts of the weak sulfur acids, which consists in subjecting them to the action of an aqueous solution of common salt which is being decomposed by a controlled electric current, to produce quantities of sodium hypochlorite for forming a soluble substance with the said salt of the weak sulfur acid, washing out said soluble substance with water, said solution being maintained substantially quiescent during the electrolysis, and being always maintained so strongly alkaline as to rapidly open the pores of the gelatin of said medium, before said medium is bleached.

5. The process herein described of treating fixed and developed photographic medium containing a salt of the weak sulfur acids, which consists in treating said medium with a strongly alkaline solution of salt of a hypo halogen acid for producing a soluble substance, and washing out said soluble substance, said solution being so strongly alkaline as to produce the said soluble substance before said film is bleached.

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1,224,985. HEILMAN COMBER. GEORGE M. WHITIN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed May 20, 1913. Serial No. 768,712. (Cl. 19—6.)

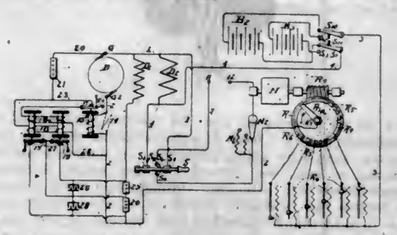


1. A cotton comber comprising a rotary comb cylinder, means for feeding a cotton lap toward the same and nippers holding the terminal fringe of the lap in contact with such rotary comb, in combination with a detaching roll disposed immediately in front of said nippers and close thereto and co-acting directly with the said feeding means to detach the combed fringe on a parting-line in advance of said nippers, and means for piecing the successively combed and detached tufts to form continuous sliver thereof, the said organization being adapted to comb only the forward ends of the fibers of the cotton lap.

2. A cotton comber comprising a rotary comb cylinder having a detaching segment, means for feeding the lap and nippers for holding the terminal fringe thereof in contact with the cylinder, in combination with a segment-engaged detaching roll mounted close to and immediately in front of the nippers and providing an unobstructed detachment space from the feeding means to the detaching members, the said roll coacting with the feeding means to detach the combed fringe on a parting line in advance of said nippers, and a piecing roll in contact with the detaching roll adapted to form continuous sliver of the successive detachments, the said organization being adapted to comb only the forward ends of the fibers of the cotton lap.

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1,224,986. APPARATUS FOR CHARGING STORAGE BATTERIES. DAVID H. WILSON, Ridgewood, N. J., assignor to Wilson Storage Battery Company, New York, N. Y., a Corporation of New York. Filed Apr. 16, 1912. Serial No. 691,198. Renewed Sept. 16, 1916. Serial No. 120,589. (Cl. 171—314.)



1. In combination with a storage battery and an external or charging circuit of a charging machine, time controlled automatic means in said external circuit adapted to reduce the current flow in said external circuit, step by step.

2. In combination, an external or charging circuit of a charging machine, a storage battery, time controlled automatic means in said external circuit adapted to reduce the current flow in said external circuit step by step, means to regulate the speed of said automatic means to gradually diminish the flow of current into said battery.

3. In combination, an external or charging circuit of a charging machine, a storage battery, a time controlled automatic resistance varying device adapted to increase and reduce the current flow in said external circuit step by step.

4. In combination, a storage battery, an external or charging circuit of a charging machine, a shunt winding in shunt thereof, a time controlled automatic resistance varying device adapted to reduce the current flow in said external circuit step by step, and means to regulate the speed of said automatic resistance varying device to gradually diminish the flow of current into said battery.

5. In combination a storage battery, an external or charging circuit of a charging machine, time controlled means in said external circuit adapted to reduce the current flow in said external circuit step by step, and a regulator to prevent an excess of current from flowing into said battery.

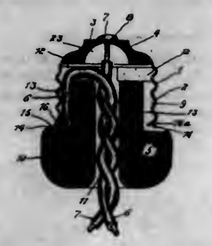
[Claims 6 and 7 not printed in the Gazette.]

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1,224,987. ATTACHMENT-PLUG. ROBERSON B. WOLCOTT, East Cleveland, Ohio, assignor to Ralph S. Mueller, Cleveland, Ohio. Filed Aug. 30, 1915. Serial No. 48,067. (Cl. 173—359.)

1. An attachment plug for electric circuits comprising a cylindrical metal shell having internal and external threads formed thereon, a metal contact disk at one end of said shell insulated therefrom and secured thereto, said disk having an aperture therethrough adapted to receive a conductor wire, a cylindrical body of insulating material threaded externally to fit the internal thread of said shell and having a central longitudinal hole therethrough and an external longitudinal groove along one side, said groove being covered by said shell, said longitudinal hole being adapted to receive the two conductor wires which are attached to the plug, one of which wires enters said hole, extends through said body, passes through said aperture in said disk and is electrically connected thereto, and the other of which wires enters said hole, extends first through said body, then radially outward and then backward through said external longi-

tudinal groove and is electrically connected to said shell at its outer end.



2. In an attachment plug for electric conductors, the combination with a body of non-conducting material having an externally threaded shank, an enlarged portion forming a transverse shoulder on said shank, a central longitudinal hole extending through said body adapted to receive two conductor wires, an external longitudinal slot in said shank extending from the end of said shank to said shoulder and a transverse slot in said shank intersecting said longitudinal slot and extending outward therefrom, said slots being adapted to receive a conductor wire, of a metal shell provided with internal and external threads, a metal contact disk, insulating material electrically separating and mechanically joining said disk to one end of said shell in axial alinement therewith, said disk and said insulating material each having a central longitudinal hole through it adapted to receive a conductor wire, said shell and said disk constituting the electric terminals of the attachment plug and being adapted to make contact with the terminals of an incandescent electric lamp socket, said shell being adapted to be screwed onto said shank.

3. In an attachment plug for electric conductors, the combination with a body of non-conducting material having an externally threaded shank, an enlarged portion forming a transverse shoulder on said shank, a central longitudinal hole extending through said body adapted to receive two conductor wires, an external longitudinal slot in said shank extending from the end of said shank to said shoulder and a transverse slot in said shank intersecting said longitudinal slot and extending outward therefrom, said slots being adapted to receive a conductor wire, of a metal shell provided with internal and external threads, a metal contact disk, insulating material electrically separating and mechanically joining said disk to one end of said shell in axial alinement therewith, said disk and said insulating material each having a central longitudinal hole through it adapted to receive a conductor wire, said shell and said disk constituting the electric terminals of the attachment plug, and being adapted to make contact with the terminals of an incandescent electric lamp socket, said shell being adapted to be screwed onto said shank, and two conductor wires, one of them being passed through said central longitudinal holes in said body, said insulating material and said disk and soldered to said disk, and the other being passed through said central longitudinal hole in said body, bent outward over the end of said shank and backward through said slots beneath said shell and soldered to said shell.

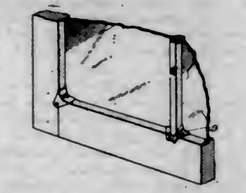
4. In an attachment plug for electric conductors, a body of non-conducting material having an externally threaded shank adapted to be screwed into the metal shell of an Edison incandescent electric lamp base, an enlarged portion forming means for manipulating said attachment plug and forming a transverse shoulder to limit the distance said shank may enter said shell, a central longitudinal hole extending through said body for the reception of the wires connected to the attachment plug and an external longitudinal slot extending from end to end of said threaded shank, terminating at said shoulder, adapted to receive that one of said wires which is to be connected to said shell.

5. An attachment plug comprising an insulating body having a threaded shank; a shell screwed onto the shank; a contact member insulated from the shell, said shank having an inner longitudinal passageway extending therethrough and an external groove which at its outer end leads into or communicates with said longitudinal passageway.

[Claims 6 to 8 not printed in the Gazette.]

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1,224,988. CORNER-PIECE FOR WINDOWS. HENRY WOLF, West Hoboken, N. J. Filed Apr. 20, 1916. Serial No. 92,470. (Cl. 20—56.)

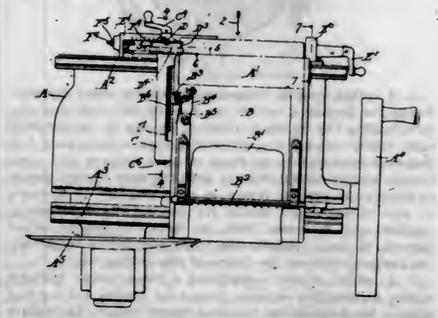


1. The combination with a window sash, a glass fitted thereto, and means for securing said glass to said sash, of corner pieces, each including a body having an inner prong and an outer apron, each of said corner pieces disposed to straddle the glass securing means and to have its prong enter the sash and contact with the glass and its apron to engage with the outer surface of the sash and to be secured thereto.

2. The combination with a window sash, a glass fitted thereto, and means for securing said glass to said sash, of resilient corner pieces for said sash, each of said corner pieces including a rounded body having one of its edges formed with an angularly extending prong and its outer edge formed with an apron extending from the body in the direction of the prong, said corner piece arranged to straddle the glass securing means at the corners of the sash and to have its prong forced in the sash into contact with the glass and its apron to engage with the outer surface of the sash.

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1,224,989. INTERMITTENT FEEDING MECHANISM FOR SLICING-MACHINES. WALLACE B. WOLFF, Chicago, Ill., and ERNEST K. HOOD, Indianapolis, Ind., assignors to American Slicing Machine Company, Chicago, Ill., a Corporation of New York. Filed Nov. 24, 1915. Serial No. 63,184. (Cl. 74—55.)



1. A reciprocating member, a rotatable element carried thereby, and means for effecting its rotation responsive to the movement of the reciprocating member comprising a drum rotatable on the element, a ratchet interposed between the drum and the element, and a flexible belt wound about the drum and having its free end anchored against movement.



2. A reciprocating member, a rotatable element carried thereby, and means for effecting its rotation responsive to the movement of the reciprocating member comprising a guide member mounted for reciprocation with respect to the reciprocating member, a drum rotatable on the element and a ratchet clutch between the element and the drum, a flexible belt wound about the drum and having its free end rigidly attached to the guide member.

3. A reciprocating member, a rotatable element carried thereby, and means for effecting its rotation responsive to the movement of the reciprocating member comprising a guide member mounted for reciprocation with respect to the reciprocating member, a drum rotatable on the element and a ratchet clutch between the element and the drum, a flexible belt wound about the drum and having its free end rigidly attached to the guide member and a stop in the path of the guide member out of line with the reciprocating member.

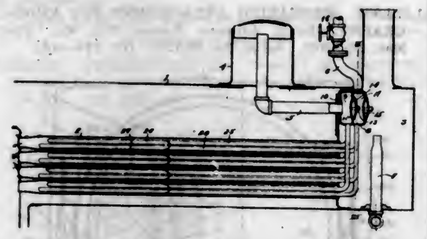
4. A reciprocating member, a rotatable element carried thereby, and means for effecting its rotation responsive to the movement of the reciprocating member comprising a guide member mounted for reciprocation with respect to the reciprocating member, a drum rotatable on the element and a ratchet clutch between the element and the drum, a flexible belt wound about the drum and having its free end rigidly attached to the guide member and a stop in the path of the guide member out of line with the reciprocating member and means for adjusting the position of said stop along the line parallel with the line of movement of the reciprocating member.

5. A reciprocating member, a rotatable element carried thereby, and means for effecting its rotation responsive to the movement of the reciprocating member comprising a drum rotatable on the element, a ratchet between the element and the drum a guide bar mounted for reciprocation on the reciprocating member, a finger projecting downwardly from said bar below such reciprocating member, a flexible belt wound about the drum and attached to such guide bar, a support upon which the reciprocating member is mounted and a stop carried by such support projecting in the path of the downwardly projecting member.

[Claim 6 not printed in the Gazette.]

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1,224,990. SUPERHEATER. CHARLES D. YOUNG, Altoona, Pa. Filed Oct. 31, 1913. Serial No. 798,390. (Cl. 122—462.)



1. In combination with a boiler having a fire box and smoke box and fire tubes extending through the boiler from the fire box to the smoke box, a pair of superheater headers, an inlet for supplying saturated steam from the boiler to one header, an oulet from the other header, and a plurality of superheater tubes each having one end connected to one header and the other end connected to the other header, such tubes each leading into a fire tube at the front end thereof, extending in a straight length from its point of entrance into the tube to a point adjacent the rear end of the fire tube, recurving and extending to the front a relatively short distance as compared with the length of the fire tube, then recurving and extending to a point adjacent the rear end of the fire tube, and finally recurving again and extending in a straight length out through the front end of the fire tube.

2. In combination with a boiler having a fire box and smoke box and fire tubes extending through the boiler from the fire box to the smoke box, a pair of superheater headers, an inlet for supplying saturated steam from the boiler to one header, an outlet from the other header, and a plurality of superheater tubes each having one end connected to one header and the other end connected to the other header, such superheater tubes each comprising four lengths only lying in a fire tube with two lengths extending substantially the entire length of the fire tube and the other two lengths extending only a relatively short distance as compared with the first two lengths, and such shorter lengths lying adjacent the fire box end of the fire tubes.

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1,224,991. SUPERHEATER. CHARLES D. YOUNG, Altoona, Pa. Filed Nov. 26, 1913. Serial No. 803,114. (Cl. 122—462.)

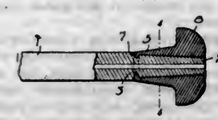


1. In combination with a boiler having fire tubes and a smoke box, a drum approximately circular in cross-section extending transversely of the end of the boiler and lying in the smoke box, and having its ends opening through the sides of the smoke box, cover plates for the ends of the drum, an upright partition in the drum dividing it into two chambers, and a plurality of superheater tubes lying in the fire tubes with their ends expanded into the wall of the drum on opposite sides of the partition.

2. In combination with a boiler having fire tubes and a smoke box, a drum in the smoke box extending transversely of the end of the boiler with its ends opening through the walls of the smoke box, cover plates for the ends of the drum, a partition dividing the drum into two chambers, and a plurality of superheater tubes lying in the fire tubes and having their ends communicating with the said chambers on opposite sides of the partition.

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1,224,992. PENCIL ATTACHMENT. FREDRICK ZIEMER, Freeport, N. Y. Filed Nov. 28, 1916. Serial No. 133,962. (Cl. 120—38.)



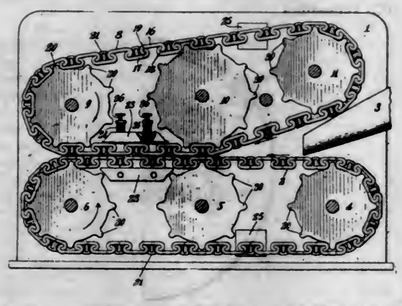
1. The combination with a pencil which terminates at one end thereof in a reduced stem, of an elastic sleeve slipped removably upon the reduced stem and provided with a flattened head projecting in diametrically opposite directions from the sleeve and providing opposed and substantially parallel side faces to prevent rolling of the pencil on a flat surface, the length of the head being considerably greater than its thickness so as to provide side faces having a large area and end faces having a small area.

2. The combination with a pencil terminating at the end thereof in a reduced and tapered stem, said stem hav-

ing longitudinal grooves in the sides thereof and an annular depressed seat at the base thereof, of a rubber sleeve fitted upon the stem and provided with interior longitudinal ribs for engagement with the grooves of the stem as well as an annular inwardly-projecting enlargement for engagement with the seat at the base of the stem, said sleeve being formed with a flattened head which projects laterally therefrom in diametrically opposite directions and has spaced and parallel side faces adapted to prevent rolling of the pencil on a flat surface.

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1,224,993. ENDLESS-APRON COMPRESSOR AND DISINTEGRATOR. JAMES A. ANDERSON, New York, N. Y. Filed Nov. 26, 1915, Serial No. 63,436. Renewed Mar. 28, 1917. Serial No. 158,121. (Cl. 146—9.)



2. A disintegrator comprising a pair of endless aprons, each of said aprons being formed of two sets of transversely extending flat links, one set of links forming the outer surface of the apron and the other set forming the inner surface thereof, hooks formed along the transverse edges of said links, the hooks of the outer links interlocking with the hooks of the inner links, supporting drums for the aprons, longitudinally extending ribs on said drums and adapted to fit between the hooks of adjoining inner links, transversely extending disintegrator bars fitting between the hooks of adjoining outer links, and means for driving said drums at differential speeds.

11. A disintegrator comprising a pair of endless aprons, each of said aprons consisting of a series of transversely extending interlocked links, each of said links being laterally removable from the apron, and means for driving said aprons.

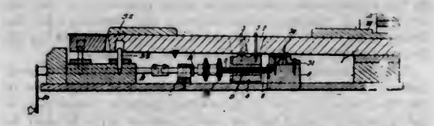
15. A disintegrator comprising a pair of endless aprons, each of said aprons consisting of a series of transversely extending flat links connected together at their edges, side frames fitting closely against the edges of said links and serving to hold on the aprons the material to be treated, drums supporting said aprons, means for yieldably supporting the drums for one apron, and means for driving the aprons.

19. A disintegrator comprising a pair of opposed endless aprons, each of said aprons consisting of a series of transversely extending flat links, each link extending the full width of the apron, disintegrator bars extending transversely of the apron, each bar extending the full width of the apron and projecting beyond the operative surface thereof, means for driving said aprons at differential speeds, and means for yieldably mounting one of said aprons.

21. An endless apron comprising two sets of transversely extending flat links of uniform construction, one set of links forming the outer surface of the apron and the other set forming the inner surface thereof, the transverse edges of said links being slidably interlocked to connect the links together, whereby any one of said links may be laterally removed from the apron.

[Claims 1, 3 to 10, 12 to 14, 16 to 18, and 20 not printed in the Gazette.]

1,224,994. KEYBOARD OF PIANOS. PIETRO ANELLI, Cremona, Italy. Filed Nov. 26, 1913. Serial No. 803,181. (Cl. 84—16.)



1. A piano keyboard comprising a balance rail to fulcrum a row of keys, means accessible from the exterior of the keyboard for displacing said balance rail longitudinally of and relatively to said keys, and means whereby the keys are retained in the same position during the displacement of said balance rail.

2. A piano keyboard comprising a balance rail to fulcrum a row of keys, a row of pins mounted in said rail and engaging said row of keys, means accessible from the exterior of the keyboard for displacing said balance rail longitudinally of and relatively to said keys, and means whereby the keys are retained in the same position during the displacement of said balance rail.

3. A piano keyboard comprising a balance rail to fulcrum a row of slotted keys, a row of pins mounted in said rail and engaging the slots in said keys, means accessible from the exterior of the keyboard for displacing said balance rail longitudinally of and relatively to said keys, and means whereby the keys are retained in the same position during the displacement of said balance rail.

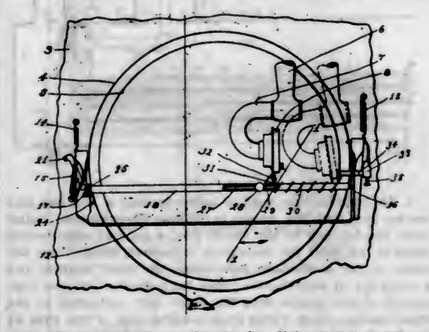
4. A piano keyboard comprising a balance rail to fulcrum a row of keys, means comprising a handle for displacing said balance rail longitudinally of and relatively to said keys, and means whereby the keys are retained in the same position during the displacement of said balance rail.

5. A piano keyboard comprising a balance rail to fulcrum a row of keys, means accessible from the exterior of the keyboard for displacing said balance rail longitudinally of and relatively to said keys, a stationary stop and means co-acting with said stop for retaining the keys in the same position during the displacement of said balance rail.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,995. REPEATING ATTACHMENT FOR PHONOGRAPHS. LOUIS ANGELLO, Kansas City, Mo. Filed Mar. 23, 1916. Serial No. 86,122. (Cl. 274—15.)



1. In a repeating attachment for disk record sound reproducing machines, a friction wheel, suitable supports for said friction wheel, said friction wheel being suitably constructed and arranged to contact with the outer edge of the disk of a sound reproducing machine, and mechanism driven by said friction wheel whereby the record disk contacting needle is returned to the starting position after traversing the record of the record plate.



2. In a repeating attachment for disk record sound reproducing machines, a shaft suitably arranged to span the disk of a disk record playing machine, whereby the record disk may be easily removed without disturbing the repeating mechanism, means to revolve said shaft, and means carried by said shaft whereby the machine is caused to repeat the playing of a record.

3. In a repeating attachment for disk record sound reproducing machines, a bracket suitably constructed to span a disk record, adjustable mechanism carried by said bracket whereby the machine is caused to repeat the playing of any size record, and said bracket and mechanism so arranged and located that the disk shaped record plates can easily be placed on and removed from the disk shaped platen of the machine without shifting or manipulation of said bracket or said mechanism.

4. In a repeating attachment for disk record sound reproducing machines, a shaft, a spiral carrier spaced away from and arranged around said shaft, means to drive said shaft, means to support said shaft, a hook arranged on a sound reproducer to engage with said spiral carrier, said carrier arranged to lift the hook and the disk contacting needle from the record plate at the end of the record on the plate and return the record contacting needle to the beginning of the record carried by the record plate, and said bracket and mechanism so arranged and located that the disk shaped records can easily be placed on and removed from the disk platen of the machine without any shifting or manipulation of said bracket or said mechanism.

5. In a repeating attachment for sound reproducing machines, a disk shaped platen for receiving disk shaped record plates, a suitable sound reproducing mechanism movably mounted above said platen, a record plate contacting needle connected to said sound reproducing mechanism, a bracket spanning said platen and suitably supported on opposite sides of said platen, a shaft journaled in said bracket, suitable driving connections connecting said shaft and the periphery of said platen, a spiral carrier surrounding and spaced away from said shaft, a hook arranged on said sound reproducing mechanism to engage said spiral carrier, said spiral carrier being adjustable along said shaft, said spiral carrier being resilient so that it will automatically adjust to a distance shorter than the length thereof, and an adjustable stop for said sound reproducing mechanism whereby said sound reproducing mechanism is returned a shorter distance than the length of said carrier.

[Claims 6 and 7 not printed in the Gazette.]

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1,224,996. CIGARETTE-BOX. CHARLES M. BALDWIN, Hudson Falls, N. Y. Filed Nov. 11, 1916. Serial No. 130,805. (Cl. 229—15.)



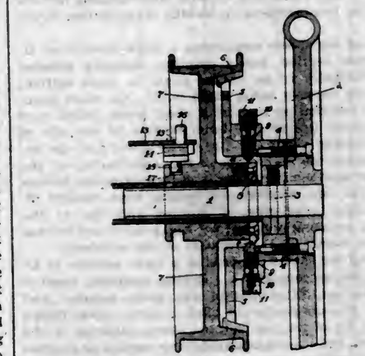
1. In a cigarette box, the combination of a containing body provided with a longitudinal partition and a plurality of transverse partitions forming compartments, a plurality of cigarette cartridges receivable in said compartments, a sectionalized top or closure for said box formed of a blank perforated longitudinally and transversely to form sections, and finger engaging tabs formed integrally with said sections to facilitate removal of the same to obtain access to the cigarettes.

2. In a cigarette box, the combination of a containing body provided with a longitudinal partition and a plurality of transverse partitions forming compartments, a plurality of cigarette cartridges receivable in said compartments, a top for said box including a blank formed with a plurality of longitudinal and transverse perforations providing sections corresponding with said compartments, said blank having gummed portions to engage the margins of the box and one of said partitions, and a plurality of finger engaging tabs extending from the sections of said blank to facilitate removal of one of the same to gain access to the contents of the box.

3. In a cigarette box, the combination of a containing body having a plurality of partitions arranged therein forming compartments, a sectionalized top arranged complementally to said partitions and provided with gummed portions engaging certain of the partitions and the margins of said box, means to facilitate removal of one or more of the cover sections, and a plurality of cartridges receivable in said compartments, said cartridges being provided with annular flanges to maintain the same evenly within their respective compartments.

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1,224,997. CLUTCH. GEORGE L. BALLARD, Norristown, Pa., assignor to Wildman Mfg. Co., Norristown, Pa., a Corporation of Pennsylvania. Filed June 30, 1916. Serial No. 106,854. (Cl. 192—8.)



1. In combination in a clutch, two friction clutch members coaxially arranged, means for moving said clutch members relatively into contact and for separating them, and automatically operating means for locking the clutch members together against axial disengagement, said locking means tending to press the members relatively together axially, substantially as described.

2. In combination in a clutch two friction clutch members, means for opening and closing said members, and spring pressed locking means of wedge-like form for holding said members locked in driving contact, said holding means by their wedge-like action tending to force the members into close contact in the direction of their axes.

3. In combination in a clutch, two friction clutch members, means for moving said members toward or from each other axially, and means carried by one of the members for setting the members in driving contact by pressing one axially in relation to the other, said means also serving to lock the members together against axial displacement, substantially as described.

4. In combination in a clutch, two friction clutch members, means for relatively moving them toward or from each other and spring pressed means carried by one of the members for setting the members in driving contact by pressing one axially in relation to the other, said means also serving to lock the members together against axial displacement, substantially as described.

5. In combination in a clutch, two friction clutch members, means for relatively moving them toward or from each other, and interengaging wedging means on the members acting under spring pressure to set the members in

driving contact by pressing one axially against the other, said wedge-means serving to lock the members against axial displacement.

[Claims 6 to 17 not printed in the Gazette.]

1,224,998. CLAMP FOR ADVERTISING, MANIFOLDING, AND OTHER SHEETS. ALBERT F. BARKER, San Francisco, Cal. Filed Apr. 18, 1916. Serial No. 92,014. (Cl. 24—66.)

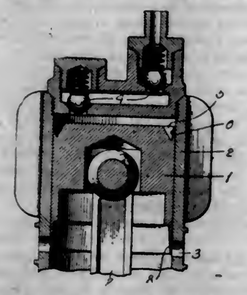


1. A clamp for sheets comprising a main member of U-shape in cross section, and a coacting clamping member bent longitudinally to an abtuse angle in cross section, said clamping member being fitted within the main member in such relation as to bind a sheet when folded over one of its edges, against the inner surface of one side of the main member along two lines, one above and one below and against the lower edge of the inner surface of the other side of said main member, and interengaging devices carried by the two members for locking them against direct separation.

2. A clamp for sheets comprising a main member of U-shape in cross section, and a coacting clamping member bent longitudinally to an obtuse angle in cross section, said clamping member being fitted within the main member in such relation as to bind a sheet when folded over one of its edges, against the inner surface of one side of the main member along two lines, one above and one below and against the lower edge of the inner surface of the other side of said main member, and interengaging devices carried by the two members for locking them against direct separation, consisting of tongues and lips at the ends of said members disposed for engagement and release by a relative longitudinal movement of the members.

3. A clamp for sheets comprising a main member of U-shape in cross section and a coacting clamping member of angle section, fitted within the main member and adapted by its angularity to bind a sheet when folded over one of its edges, against the inner surfaces of the main member, and interengaging devices carried by the two members for locking them against direct separation, consisting of tongues and lips at the ends of said members disposed for engagement and release by a relative longitudinal movement of the members.

1,224,999. PISTON. OLIVER E. BARTHEL, Detroit, Mich. Filed Aug. 31, 1914. Serial No. 859,273. (Cl. 103—63.)



The combination with a cylinder and a connecting rod extending therein, of a one piece piston body having a flat outer closed end devoid of connections and protuberances and provided with an annular groove coöperating with the periphery of the piston in forming an expansible air excluding wall having a feather edge in engagement with the wall of said cylinder, said wall having the feather edge thereof in a plane with the end of the piston body, and a bored and interiorly stepped inner end having the inner bored portion thereof connected to said connecting rod and the extreme outer bored portion providing an expansible lubricant excluding skirt terminating in a feather edge in engagement with the wall of the cylinder and coöperating with the feather edge at the outer end of said piston body in providing a positive seal between said piston body and said cylinder.

1,225,000. POSTERIOR INJECTION-PROTECTOR. EVAN ALLEN BARTLETT, Fairmont, W. Va. Filed May 25, 1916. Serial No. 99,850. (Cl. 128—28.)



1. A protector of the class described comprising a circular hollow body portion, a substantially crescent shaped clamp within the hollow of said body, means to move said clamp inwardly and an oval shaped knob adapted to be forced into engagement with parts of the body to close passage through said parts.

2. A protector for parts of the body, comprising a hollow circular body portion, a substantially crescent shaped clamp adapted to be forced into engagement with said parts of the body, and a knob coöperating with said clamp to close passage through said parts of the body.

1,225,001. LAUNDRY-BAG FOR TRUNKS. JOHN H. BARTLETT, Oshkosh, Wis., assignor to The Oshkosh Trunk Company, Oshkosh, Wis., a Corporation of Wisconsin. Filed Nov. 22, 1916. Serial No. 132,851. (Cl. 190—13.)



1. A trunk, comprising two hinged together sections, a door for closing one of said sections and adapted to extend between said sections when the trunk is closed, a laundry bag secured to said door and adapted to extend into one of said sections when the door is closed, said door being provided with an opening extending therethrough and opening into said bag so that access may be had thereinto when said door is closed, and a closure for said opening.

4. A device of the character described, comprising a supporting member, a laundry bag made of flexible material, said bag being secured to said supporting member on one side thereof, said supporting member forming one of the walls of said bag, a base member secured to said supporting member and forming the bottom wall of said bag, and fastening members on said supporting member and said bag and adapted, when engaged, to hold the mouth of said bag closed.

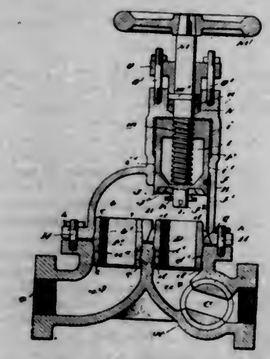
7. A wardrobe trunk, comprising two hinged together sections, one of which constitutes the wardrobe section of said trunk, a door for closing said wardrobe section and being hinged along one of its edges thereto, a laundry bag secured to said door and adapted to project into said wardrobe section when the door is closed, said door being provided with an opening extending therethrough and opening into said bag, a hinged closure for said opening and adapted to be swung outward from said door, and a shoe holder mounted on the inner face of said closure.

8. A wardrobe trunk, comprising two hinged together sections, one of which constitutes the wardrobe section of said trunk, a door for closing said wardrobe section, said door being provided with an opening extending therethrough, a closure for said opening, and a shoe holder mounted on the inner face of said closure.

[Claims 2, 3, 5, 6, and 9 not printed in the Gazette.]



1,225,002. VALVE. JACOB B. BEAM, Punxsutawney, Pa. Filed Mar. 19, 1913, Serial No. 755,370. Renewed Oct. 3, 1916. Serial No. 123,518. (Cl. 137—4.)

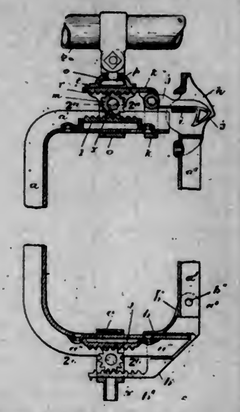


1. A blow-off valve, comprising a sectional valve casing having communicating openings with tapered walls, a reversible valve-seat having tapered outer walls engaging the tapered wall of the lower casing section, a ring surrounding and closely fitting the upper portion of the valve-seat detachable therefrom and having tapered outer walls engaging the tapered walls of the opening in the upper casing section.

2. A blow-off valve, comprising a casing having two sections communicating with each other, the lower section having an opening formed with tapered walls to receive a valve-seat and the upper section having an opening of larger diameter and having tapered walls, a valve removable through said last mentioned opening, a reversible valve-seat having tapered walls engaging the tapered walls of the opening in the lower casing section, and a ring surrounding the upper portion of the valve-seat closely fitting it detachable therefrom and having tapered outer walls engaging the tapered walls of the opening in the upper section of the casing.

1,225,003. CATTLE-STANCHION. WILLIAM GEORGE BEATTY, Fergus, Ontario, Canada. Filed Dec. 20, 1915. Serial No. 67,928. (Cl. 119—149.)

1. A cattle stanchion comprising an upright side, two horizontal sides extending one from the upper and the other from the lower end of the upright side, a bracket slidable on the lower horizontal side, an upright stanchion side hinged at its lower end to the bracket, a bracket slidable on the upper horizontal side, releasable locking means for securing the upper end of the hinged stanchion side to the upper bracket, racks for the upper and lower horizontal sides and for the brackets, and pinions engaging said racks to cause the sliding movements of the brackets on said horizontal sides, the side faces of the pinions being provided with radial grooves and the adjacent faces of the guide brackets being provided with corresponding tongues engaging in said grooves, to prevent the rotation of the pinions, and appropriate clamping means to compress the sides of the guide brackets against the pinions, whereby said tongues will engage in said grooves and prevent the rotation of the pinions to lock the slide brackets in their adjusted position and maintain the upright stanchion sides in their fixed relation.



2. A cattle stanchion comprising an upright side and two horizontal sides extending one from the upper end and the other from the lower end thereof, a bracket slidable on the lower horizontal side, an upright stanchion side hinged at its lower end to the bracket and having at its upper end a keeper for the latch, and a bracket slidable on the upper horizontal side having a latch engageable with the keeper, racks for the upper and lower horizontal sides and for the brackets, and pinions engaging said racks to cause the sliding movements of the brackets on said horizontal sides, the side faces of the pinions being provided with radial grooves and the adjacent faces of the guide brackets being provided with corresponding tongues engaging in said grooves, to prevent the rotation of the pinions, and appropriate clamping means to compress the sides of the guide brackets against the pinions, whereby said tongues will engage in said grooves and prevent the rotation of the pinions to lock the slide brackets in their adjusted position and maintain the upright stanchion sides in their fixed relation.

3. A cattle stanchion comprising an upright side, two horizontal sides extending one from the upper and the other from the lower end of the upright side, a bracket slidable on the lower horizontal side, an upright stanchion side hinged at its lower end to the bracket, a bracket slidable on the upper horizontal side, releasable locking means for securing the upper end of the hinged stanchion side to the upper bracket, racks for the upper and lower horizontal sides and for the brackets, and pinions engaging said racks to cause the sliding movements of the brackets on said horizontal sides, guide brackets embracing the upper and lower horizontal sides and the sliding brackets, and pinions journaled in the guide brackets engaging with said racks, the side faces of the pinions being provided with radial grooves and the adjacent faces of the guide brackets being provided with

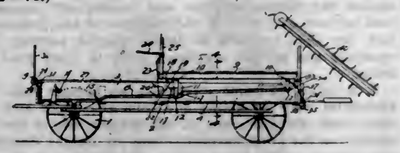
corresponding tongues engaging in said grooves, to prevent the rotation of the pinions, and appropriate clamping means to compress the sides of the guide brackets against the pinions, whereby said tongues will engage in said grooves and prevent the rotation of the pinions to lock the slide brackets in their adjusted position and maintain the upright stanchion sides in their fixed relation.

4. A cattle stanchion comprising an upright side and two horizontal sides extending one from the upper end and the other from the lower end thereof, a bracket slidable on the lower horizontal side, an upright stanchion side hinged at its lower end to the bracket and having at its upper end a keeper for the latch, and a bracket slidable on the upper horizontal side having a latch engageable with the keeper, racks for the upper and lower horizontal sides and for the brackets, pinions engaging said racks to cause the sliding movements of the brackets on said horizontal sides, guide brackets through which said upper and lower horizontal sides are movable, and pinions journaled in the guide brackets engaging with said racks, the side faces of the pinions being provided with radial grooves and the adjacent faces of the guide brackets being provided with corresponding tongues engaging in said grooves, to prevent the rotation of the pinions, and appropriate clamping means to compress the sides of the guide brackets against the pinions, whereby said tongues will engage in said grooves and prevent the rotation of the pinions to lock the slide brackets in their adjusted position and maintain the upright stanchion sides in their fixed relation.

5. A cattle stanchion comprising an upright side, two horizontal sides extending one from the upper, and the other from the lower, end of the upright side, a bracket slidably mounted on the lower horizontal side, an upright stanchion side hinged at its lower end to the bracket, a bracket slidable on the upper horizontal side, releasable locking means for securing the upper end of the hinged stanchion side to the upper bracket, guide brackets through which the upper and lower horizontal sides and slidable brackets are movable, racks for the upper and lower horizontal sides and for the slidable brackets, and pinions journaled in the guide brackets engaging said racks to cause the sliding movements of the slidable brackets on said horizontal sides, the side faces of the pinions being provided with radial grooves and the adjacent faces of the guide brackets being provided with corresponding tongues engaging in said grooves, to prevent the rotation of the pinions, and appropriate clamping means to compress the sides of the guide brackets against the pinions, whereby said tongues will engage in said grooves and prevent the rotation of the pinions to lock the slide brackets in their adjusted position and maintain the upright stanchion sides in their fixed relation.

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1,225,004. HAY-RACK. ROGER BLACK, Pleasant Hill, Ohio. Filed Apr. 27, 1916. Serial No. 93,950. (Cl. 21—74.)



A hay rack embodying a longitudinal frame, horizontal side wings carried thereby extending from one end of the frame to a point between the ends thereof, a pair of rails carried by the frame and extending from one end thereof to the other, said rails being inclined from end to end and having their upper ends located at the first mentioned end of the frame, a carriage having a platform movable over said wings in one direction and adapted to move flush with said wings when moved in the other direction, said carriage having brackets, wheels carried by said brackets running upon said rails, and rollers carried by the brackets working below the rails to hold the wheels thereon, said rails having offsets adjacent to those ends of the wings between the ends of the frame, the wheels at one end of the carriage being normally disposed adjacent to said offsets when the platform of the carriage is flush with said wings, and said wheels being adapted to move up said offsets for raising the corresponding end of the carriage when the carriage is moved toward the wings.

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1,225,005. WELL-CASING. PETER BOYD, Beaver, and AUGUSTUS M. SAUNDERS, McKeesport, Pa., assignors to National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Original application filed Nov. 17, 1911, Serial No. 660,846. Divided and this application filed May 5, 1915. Serial No. 25,905. (Cl. 166—4.)



1. A combined reamer and well casing consisting of a tubular section having cylindrical ends, the tubular section being angular in cross section throughout its length between the cylindrical end portions.

2. A combined reamer and well casing consisting of a tubular section having cylindrical threaded ends, the tubular section being angular in cross section throughout its length between the cylindrical end portions.

3. A tubular well-drilling rod which is angular in external cross section, the longitudinal external corners of the tubular rod constituting reamer elements.

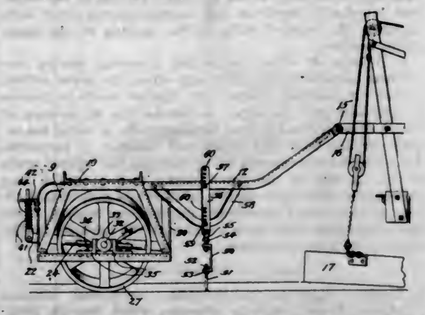
4. A combined reamer and well casing consisting of a tubular member which is angular in cross section and is provided with a cylindrical terminal portion.

5. A combined reamer and well casing consisting of a tubular member which is angular in cross section and is provided with a cylindrical threaded terminal portion.

[Claims 6 to 12 not printed in the Gazette.]

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1,225,006. ROAD-GRADING MACHINE. JAMES M. BARBEE, Mattoon, Ill. Filed June 26, 1916. Serial No. 106,037. (Cl. 55—12.)



1. An apparatus of the character described comprising a rectangular frame, arch bars, rising from the ends and center of said frame, a bar extending across and secured to the tops of said arch bars, draft bars secured to and extending forwardly from said last mentioned bar, rollers



mounted within said main frame, journal blocks for the outer ends of said rollers mounted upon the end bars of the main frame, and a vertically movable journal support extending transversely of the main frame and provided with pivoted journal blocks wherein the inner ends of said rollers are supported.

2. An apparatus of the character described comprising a rigid, rectangualr main frame, upstanding brackets at the outer ends of said main frame, journal boxes arranged between and pivoted to said brackets to turn in vertical direction, a centrally disposed, vertically movable journal support, journal blocks pivotally mounted upon said support and spring mechanism for normally forcing said journal support downward.

3. An apparatus of the character described comprising a main frame, rollers mounted in said main frame, pivoted journal blocks for the inner and outer ends of said rollers, a vertically movable bar extending transversely of the main frame, and whereon the journal blocks for the inner ends of the rollers are pivotally mounted and spring mechanism for forcing said bar normally downward.

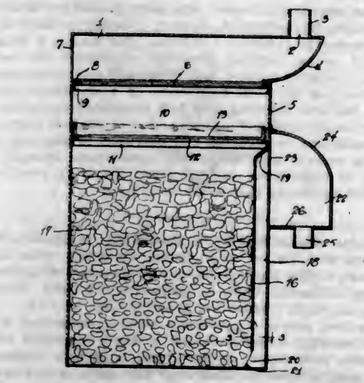
4. An apparatus of the character described comprising a rectangular main frame, upstanding brackets at the outer ends of said main frame, journal boxes arranged between and pivoted to said brackets to swing in vertical direction, a single centrally disposed, vertically movable journal support pivoted at one end to said main frame, journal blocks pivotally mounted upon said support, a rod extending upwardly from the free end of said support and a spring mounted upon said rod for forcing said support normally forward.

5. An apparatus of the character described comprising a main frame, rollers mounted in said main frame, pivoted journal blocks for the inner and outer ends of said rollers, a bar extending transversely of the main frame and whereon the journal blocks for the inner ends of the rollers are pivotally mounted, said journal bar being pivoted at one end, and a spring engaging the free end of said journal bar for forcing it normally downward.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,007. FILTER. ALONZO J. BRIDGES, Bedford, Iowa. Filed Aug. 11, 1916. Serial No. 114,453. (Cl. 210—4.)



1. A filter comprising a main container, a strainer chamber arranged at the top of the main container and having one of its end walls curved, from the upper edge of its top wall, downwardly to the bottom of the said strainer chamber, a second strainer chamber disposed directly beneath the first said strainer chamber, and a foraminous tray arranged within the second strainer chamber and provided with an auxiliary strainer element arranged in close proximity to the said tray.

2. A filter comprising a main container having a strainer chamber arranged at its top, a foraminous partition provided between the main container and the said strainer chamber, the end of the said strainer chamber being curved to provide a deflecting element whereby the water entering the said chamber will be spread evenly over the foraminous partition, the opposite end wall of the said chamber being provided with an opening for permitting the discharge of the refuse carried by the said water.

3. A filter comprising a main container divided into upper strainer chambers each provided with a foraminous partition, the said main container having a vertically extending partition terminating in spaced relation to the bottom of the container to provide a relatively narrow compartment, an ejecting chamber carried by the exterior of the said main container, the upper end of the said partition being bent to extend across the top of the said compartment, to deflect the water into the said ejecting chamber.

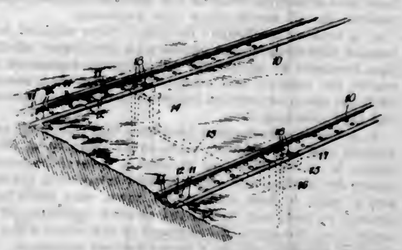
4. A filter comprising a main container having its upper portion divided into a pair of superposed chambers, the said chambers being divided by foraminous partitions arranged one above the other, the top wall of the said main container being projected over one side thereof and having its end wall bent from the end edge of the top wall and curved downwardly and inwardly to the plane of the uppermost foraminous partition, and an ejecting chamber for receiving the contents of the said first mentioned chambers.

5. A filter comprising a main container having its upper portion divided into a pair of superposed chambers, the said chambers being divided by foraminous partitions arranged one above the other, the top wall of the said main container being projected over one side thereof and having its end wall bent from the end edge of the top wall and curved downwardly and inwardly to the plane of the uppermost foraminous partition, an ejecting chamber for receiving the contents of the said first mentioned chambers, the said main container being provided with a packing of charcoal, a partition formed in the main container for providing a passageway between one wall of the container and the charcoal, the said partition being arranged to provide an opening at the bottom of the partition for permitting the water to pass from the charcoal into the said passageway.

[Claim 6 not printed in the Gazette.]

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1,225,008. VEHICLE ROAD-TRACK. ERIC F. BROWN, Buxton, Iowa. Filed Dec. 21, 1916. Serial No. 138,232. (Cl. 104—178.)



1. A vehicle track for highway traffic including coacting rails for receiving the wheels of a vehicle, cross ties connecting the rails, and anchoring stakes for the said ties arranged with the rails overlying the upper extremities of said stakes for holding the stakes against upward displacement.

2. A road track for vehicles including coacting rails formed to receive the wheels of a vehicle and provided with cupped tread surfaces.

3. A vehicle track for highway traffic including coacting rails for receiving the wheels of a vehicle, cross ties having the rails seated thereon, blocks mounted upon the ties and engaging beneath opposite margins of the rails for holding the rails against tilting with respect to the ties, and means connecting the rails with the ties and

engaging said blocks with the said means adjustable for clamping the blocks in position.

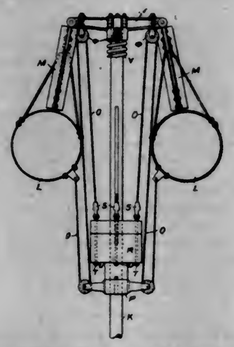
4. A vehicle track for highway traffic including coacting concavo-convex rails arranged with the concave sides of the rails presented upwardly to form ruts for the wheels of a vehicle, cross ties having the rails seated thereon with the blocks fitting the convex sides of the rails and engaging beneath opposite margins of the said rails and the ties for holding the rails against tilting with respect to the ties, and means connecting the rails with the ties.

5. A road track for vehicles including coacting rails formed to receive the wheels of the vehicle and provided with longitudinally tapered drain openings, the said drain openings being arranged with the smaller ends thereof presented downwardly and being adapted to provide air pockets in the tread surfaces of the rails.

[Claim 6 not printed in the Gazette.]

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1,225,009. BRAKE. FREDERICK C. CARSTARPHEN, Trenton, N. J., assignor to The American Steel and Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed June 3, 1916. Serial No. 101,518. (Cl. 74—45.)



1. A braking mechanism including means for exerting a braking effect at all speeds above a determined maximum and means for holding the aforesaid means in fixed position for all speeds below said maximum.

2. A braking mechanism including vanes adapted to be rotated and to be moved outward as their speed of rotation increases so as to offer an increased resistance and means for holding said vanes in their inward position until the speed of rotation reaches a determined maximum and then releasing them.

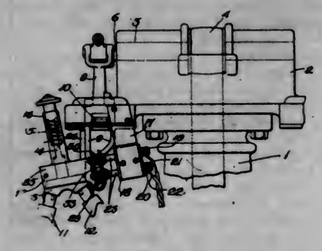
3. A braking mechanism including vanes adapted to be rotated and to be moved outward as their speed of rotation is increased so as to offer a greater resistance, means for holding said vanes inward comprising a weight and a latch to hold said weight down, said latch being adapted to yield and permit the upward movement of the weight and the outward movement of the vanes when the speed of rotation exceeds a predetermined maximum.

4. A braking mechanism including pivoted arms having vanes on one end thereof which are cup shaped, and means for rotating said arms, said arms being adapted to swing outward when rotated and means for rotating the arms and cups thereon, the open ends of the cups being forward to thereby increase the resistance to rotation offered thereby.

5. A braking mechanism including means for exerting braking effect at all speeds above a predetermined maximum, and means for holding the aforesaid means in fixed position for all speeds below said maximum, said means including a latch, a spring for maintaining said latch in holding position, and means for adjusting the compression on said opening.

[Claim 6 not printed in the Gazette.]

1,225,010. EDGE-SETTER. EDWIN N. CHANDLER, Braintree, Mass. Filed Aug. 21, 1915. Serial No. 46,675. (Cl. 12—78.)



1. A machine of the kind described, having a rapidly moving tool carrier, a casing on said carrier adapted to receive an electrical heater, conductors on said movable carrier, corresponding electrical conductors adjacent thereto on a fixed part of the machine, and means providing a sliding contact between the movable conductors and said fixed conductors.

2. A machine of the kind described, having a rapidly moving tool carrier, a casing on said carrier adapted to receive an electrical heater, conductors on said movable carrier, and corresponding electrical conductors adjacent thereto on a fixed part of the machine, each having an end in sliding contact with an end of the corresponding conductor on the carrier, in combination with means for yieldingly maintaining said ends in contact.

3. An electrically heated edge setter machine having a moving carrier for the edge setting tools, an electrical heater on said carrier, conductors for said electrical heater and coöperating conductors on a stationary part of the machine, comprising yieldingly actuated members adapted to abut against the corresponding conductors on the moving carriers, one of each of the abutting conductors having a surface sufficient to permit relative movement of the other abutting conductor while maintaining contact therewith.

4. An electrically heated edge setting machine, having a vibrating carrier for the setters, a casing on said carrier adapted to receive a removable plug heater, a flange on said casing carrying electrical conductors for said heater, insulation between said flange and said conductors, corresponding electrical conductors on a stationary part of the machine adjacent said first mentioned conductors, and yieldingly actuated members on each of these stationary conductors constructed and arranged to maintain a yielding contact with the moving conductors, whereby a supply of current for said electrical heater is provided from the stationary part of the machine.

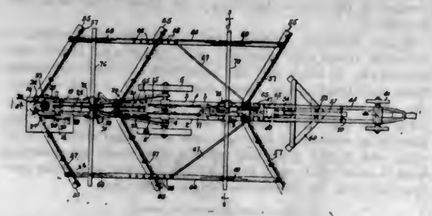
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1,225,011. ROAD-WORKING MACHINE. SHERWOOD M. CHASE and FRANK A. FLEMING, Columbus, Ohio, assignors to The Chase Foundry and Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed July 22, 1916. Serial No. 110,643. (Cl. 37—5.)

2. A road grader comprising a member consisting of a frame carrying scraping blades, a wheel supported axle extending transversely of said frame, a member comprising a longitudinally disposed lever fulcrumed on said axle, means connecting one end of said lever to the frame, a flexible connection between the opposite end of the lever and frame, said connection being fixed to one member, a guiding device on the other member around which the connection is directed, and a drum for winding up said connection.

9. In a road working machine, means for supporting the machine on the ground, a frame, a rigid member mounted on said supporting means and pivotally connected at one end to said frame on an axis extending from front to rear centrally of the frame, and an adjustable connection between the opposite end of said member and the frame and arranged to allow relative movement of the frame around said axis.





15. In a road working machine, an axle provided with wheels, a lever pivoted to said axle for movement there around as an axis, a fifth wheel connection between said lever and said axle, a main frame, a universal connection between one end of said lever and said frame, a flexible connection between the other end of said lever and said frame, means for adjusting said flexible connection to raise and lower the frame relatively to the axle, and means for moving said axle and wheels for steering.

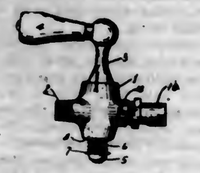
18. In a road working machine, the combination, with a main frame, and a plurality of raising and lowering devices carried thereby and comprising a bridge beam for each of said devices, of a succession of blades arranged in pairs, a connection between the inner end of each blade and said frame, and longitudinal beams connecting the bridge beams with the outer ends of the blades, the connections between the blades and the main frame and between the longitudinal beams and the bridge beams being flexible, whereby the blades may have limited movement.

23. In a road working machine, a main frame, a plurality of blades, flexible joints and rocker blades connecting the inner ends of said blades to the frame, and means for adjusting said blades around the joints and rocker blocks as pivots.

[Claims 1, 3 to 8, 10 to 14, 16, 17, 19 to 22, and 24 not printed in the Gazette.]

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1,225,012. COCK. EMIL L. CLAUS, Milwaukee, Wis. Filed Nov. 16, 1914. Serial No. 872,274. (Cl. 67—121.)



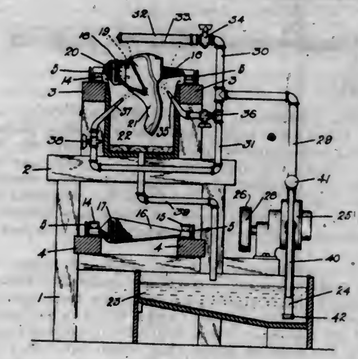
1. In a device of the described class, the combination with the discharge end of a cock, of an adjustable cap having longitudinal angular grooves, an orifice closing member located in said cock and having slidable bearings in said grooves and having ends conforming in shape to and adapted to fit the discharge openings in said cap.

2. In a device of the described class, the combination with the discharge end of a cock, of an adjustable cap having a discharge orifice, and longitudinal angular grooves, an orifice closing member located in said cock, having slidable bearings in said grooves, the ends of said orifice closing member conforming in shape to and adapted to close said discharge orifice.

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1,225,013. APPARATUS FOR VARNISHING RUBBER SHOES. LE BARON C. COLT, Bristol, R. I., assignor to National India Rubber Company, a Corporation of Rhode Island. Filed Jan. 18, 1909. Serial No. 472,807. (Cl. 91—44.)

1. An apparatus for varnishing rubber shoes having in combination a carrier adapted to receive and carry along the shoe to be varnished, and means for causing a stream of varnish to flow over said shoe as it is carried along by said carrier, whereby any lint or other matter upon the shoe is carried off by the flowing varnish.



2. An apparatus for varnishing rubber shoes having in combination a carrier adapted to receive and carry along the shoe to be varnished, and means for causing separate streams of varnish to flow over different portions of said shoe as it is carried along by said carrier.

3. An apparatus for varnishing rubber shoes having in combination a carrier adapted to receive and carry along a series of shoes, and means for causing a stream of varnish to flow over successive shoes as they are carried along by said carrier, whereby any lint or other matter upon the shoe is carried off by the flowing varnish.

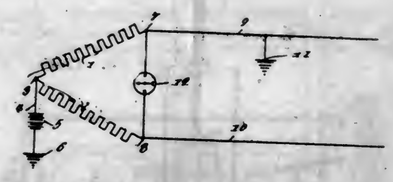
4. An apparatus for varnishing rubber shoes having in combination a carrier adapted to receive and carry along a series of shoes, and means for causing separate streams of varnish to flow over different portions of said shoes as they are carried along by said carrier.

5. An apparatus for varnishing rubber shoes having in combination a carrier adapted to receive and carry along a series of shoes with their heel portions upward, and means for causing a stream of varnish to flow over successive shoes as they are carried along by said carrier.

[Claims 6 to 21 not printed in the Gazette.]

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1,225,014. ELECTRICAL TESTING APPARATUS. CALEB J. CONNER, Coatesville, Pa. Filed Nov. 6, 1915. Serial No. 60,043. (Cl. 175—183.)



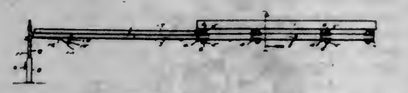
The method of finding grounds on electrical lines which consists in bridging the lines by a pair of resistors and an electrical detector, applying a source of potential between ground and the junction of said pair of resistors, and shunting the lines temporarily from place to place.

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1,225,015. AMBULANCE OPERATING-TABLE. ALBERT D. CROSSLEY, Hartford, Conn., assignor of one-half to Nichols F. Wilson, New York, N. Y. Filed May 23, 1916. Serial No. 99,423. (Cl. 21—80.)

1. The combination with an ambulance, of a table, means whereby the table may be pushed in under or drawn

out from beneath the ambulance, means at the rear end for supporting the table level or at a desired inclination longitudinally when drawn out, and means for tilting and holding the table level or at a desired angle transversely when drawn out.



2. The combination with an ambulance frame, of a track frame supported beneath the ambulance frame, a carrying frame adapted to be moved in along the track frame beneath the ambulance frame or drawn out from beneath the ambulance frame, adjustable means hinged to the rear end of the carrying frame for supporting that end of the frame when drawn out, and a table mounted on and adjustable at an angle with relation to the carrying frame.

3. The combination with an ambulance frame, of a track frame supported beneath the ambulance frame, a carrying frame adapted to be moved in along the track frame beneath the ambulance frame or drawn out from beneath the ambulance frame, means for supporting the rear end of the carrying frame when drawn out, and a table pivotally mounted on and adjustable at an angle with relation to the carrying frame.

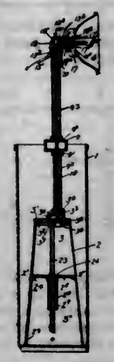
4. The combination with an ambulance frame, of a track frame supported beneath the ambulance frame, a carrying frame adapted to be moved in along the track frame beneath the ambulance frame or drawn out from beneath the ambulance frame, means for supporting the rear end of the carrying frame when drawn out, a table pivotally mounted on the carrying frame, and means for tilting the table on its axis.

5. The combination with an ambulance frame, of a track frame, a carrying frame movable in and out along the track frame beneath the ambulance frame, legs hinged to the rear end of the carrying frame, feet adjustably connected with the legs, and a table mounted on the carrying frame.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,016. ACETYLENE-LAMP. JAMES DEANS CUMMING, Copper Cliff, Ontario, Canada. Filed Aug. 18, 1916. Serial No. 115,706. (Cl. 48—56.)

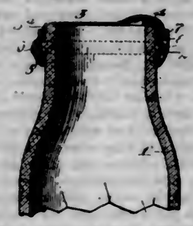


1. In an acetylene gas lamp, the combination with a submerged generating chamber and a gas burner head, of a gas duct extending vertically from the generator to the burner head, an excess gas duct extending between the generating chamber and burner head and surrounding the main duct whereby the excess gas in the generator, when its volume and pressure are sufficient to unseal the excess gas tube, will be conducted to the burner to be consumed thereat, and a water separating and expansion chamber located in the excess duct above the water submerging the generator.

2. An actylene burner and generator comprising a tapering receptacle provided with upper and lower compartments, a head for the receptacle, a pipe depending from said head to the lower compartment, a disk separating the compartments having a depending sleeve encircling the pipe and spaced therefrom, a burner, a pipe therefrom extending through said head, and a duct encircling the latter pipe and spaced therefrom terminating within said head, said head having a communicating passage between the depending pipe and the duct.

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1,225,017. MILK-BOTTLE AND SIMILAR RECEPTACLE. WILLIAM MORE DECKER, Buffalo, N. Y. Filed Dec. 27, 1915. Serial No. 68,699. (Cl. 215—11.)



1. A bottle-closure, comprising an elastic cap having a depending rim and a flexible spout adapted to be folded against the rim, said rim having a reversible extension constructed to overlap and compress the folded spout.

2. A bottle-closure, comprising an elastic cap having a depending rim and a flexible spout adapted to be folded against the rim, said rim having a reversible extension of greater elasticity than the remainder of the cap, constructed to overlap the folded spout.

3. A bottle-closure, comprising an elastic cap having a depending rim and a flexible spout adapted to be folded against the rim, said rim being provided with an annular bead and below said bead with a reversible extension constructed to extend above said bead when reversed to engage the folded spout.

4. A bottle-closure, comprising an elastic cap having a depending rim and a flexible spout adapted to be folded against the rim, said rim being provided with an annular bead and below said bead with a reversible extension terminating in an annular bead, the beaded edge of the extension being arranged to overlap the folded spout in the reversed position of the extension.

5. A bottle-closure, comprising an elastic cap having a depending rim and a flexible spout adapted to be folded against the rim and provided with a locking projection, said rim having a reversible extension constructed to overlap the folded spout and provided with a bead arranged to interlock with the projection of the spout.

[Claims 6 to 9 not printed in the Gazette.]

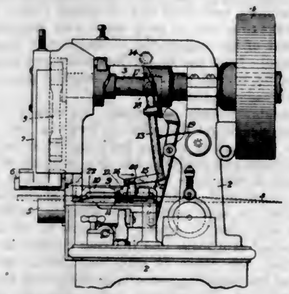
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1,225,018. FEEDING DEVICE FOR STAY-APPLYING MACHINES. HENRY DE SMITH, Rochester, N. Y., assignor to M. D. Knowlton Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 5, 1916. Serial No. 113,265. (Cl. 273.)

1. In a machine of the class described, strip feeding means comprising a guide-plate, a reciprocating carrier mounted on said guide-plate and supporting a pair of cooperating gripping members, a braking device for retarding the movement of the carrier on the guide-plate, and means for actuating said braking device and subsequently releasing the same at predetermined times in the working stroke of the carrier.

2. In a machine of the class described, strip feeding means comprising a guide-plate, a reciprocating carrier mounted on said guide-plate and supporting a pair of cooperating gripping members, a braking device for retarding the movement of the carrier on the guide-plate, and means for actuating said braking device prior to the commencement of the feed stroke of the carrier and releasing the same at the end of said feed stroke.





3. In a machine of the class described, strip feeding means comprising a guide-plate, a reciprocaitng carrier mounted on said guide-plate and supporting a pair of cooperating gripping members, a braking device for retarding the movement of the carrier on the guide-plate, and means maintaining said braking device in operation during the feed stroke of the carrier and releasing the same during the return stroke of the carrier.

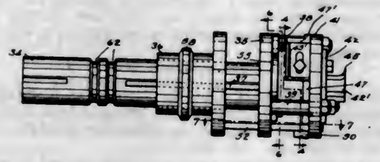
4. In a machine of the class described, strip feeding means comprising a guide-plate, a reciprocating carrier mounted on said guide-plate, and supporting a pair of cooperating gripping members, a braking device for retarding the movement of the carrier on the guide-plate, means normally maintaining said braking device in operation, and supplemental means for increasing the action of the braking device and subsequently releasing the same at predetermined times in the working stroke of the carrier.

5. In a machine of the class described, strip feeding means comprising a guide-plate, a reciprocating carrier mounted on said guide-plate and supporting a pair of cooperating gripping members, a braking device for retarding the movement of the carrier on the guide-plate, means normally maintaining said braking device in operation, and supplemental means for increasing the action of the braking device prior to the commencement of the feed stroke of the carrier and releasing the same at the end of said feed stroke.

[Claims 6 to 16 not printed in the Gazette.]

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1,225,019. CUTTER-HEAD. DAVID J. DIXON, Tacoma, Wash. Filed Mar. 21, 1916. Serial No. 85,732. (Cl. 142—27.)



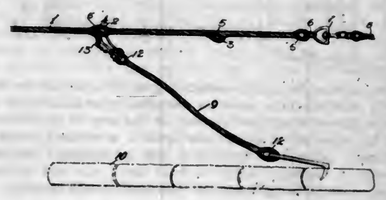
1. A hollow cutter head comprising a circular plate provided with a concentric bore, a knife holder having one end pivotally secured to the front side of said plate adjacent the periphery thereof and its other end adjustably secured to said plate opposite said pivot said knife holder having a knife secured thereto adjacent the pivot and being curved in its central portion to clear said concentric bore.

2. A hollow cutter head comprising a tubular shank, a disk provided on one end thereof and having a concentric bore, a circular plate rigidly secured to said disk adjacent thereto, an adjustable knife holder secured to the rear side of said circular plate and provided with a knife, and a guard member having one end pivoted to said disk and the other end adjustably secured to said disk, the central portion of said guard member being curved and adapted to be moved to overlap the concentric bore in said disk and said guard member being positioned diametrically opposite said knife.

3. A hollow cutter head comprising a shank, a circular plate having a concentric bore, supports rigid with said shank and fixedly secured to said circular plate at points removed from the center thereof to leave the inner central face of said plate clear, a knife holder having one end pivotally secured to the front side of said circular plate and the other end adjustably secured to said circular plate opposite said pivot, said knife holder having an arcuate central portion adapted to clear said concentric bore, a knife on said knife holder, another knife holder having an arm on one end and having its opposite end pivotally secured to the rear side of said circular plate, said last named knife holder having an arcuate center portion, a knife on said last named knife holder in diametrically opposite relation to said first named knife, and means for moving said arm on said last named knife holder to adjust the position thereof.

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1,225,020. CONVEYER CABLE OR ROPE. HUGH F. ELLARD, Missoula, Mont. Filed Mar. 29, 1915. Serial No. 17,910. (Cl. 104—18.)

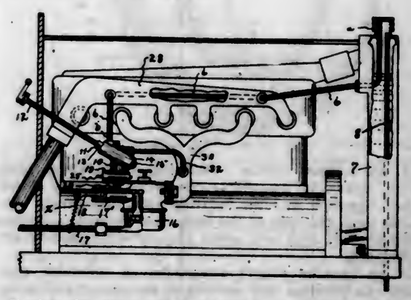


1. In a cable conveyer, a cable having intermediate its ends a loop formed of strands of its own material, an eyelet in said loop, and a trail rope adapted for attachment to a load and secured to said loop.

2. In a cable conveyer, a cable comprising a series of sections, each having a plurality of loops throughout its length, swivel connections between said sections, and a trail rope adapted for attachment at one of its ends to any of said loops and at its other end to a load.

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1,225,021. CARBURETER ATTACHMENT. ALBERT C. FERRIER, Lincoln, Nebr., assignor of one-half to William J. Hill, Lincoln, Nebr. Filed May 26, 1916. Serial No. 100,013. (Cl. 123—25.)

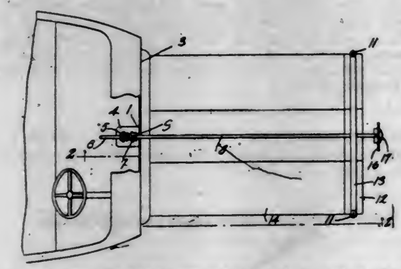


Devices for the purpose described, comprising, in combination with the intake manifold, the radiator, the ex-

haust manifold and the carbureter of an internal combustion engine, a conducting pipe traversing a part of the exhaust manifold and communicating with the radiator, a valve housing provided with a compartment communicating with the carbureter and also provided with an air intake, a valve in the valve housing, said valve being movable to permit a communication between the conducting pipe and said compartment, a second valve, said second valve being provided with resilient means for normally causing a closure of said air intake and adapted to have a movement to permit air to enter said compartment, said first named valve being also movable for terminating the communication of the conducting pipe with said compartment and permitting a communication of the conducting pipe with said intake manifold.

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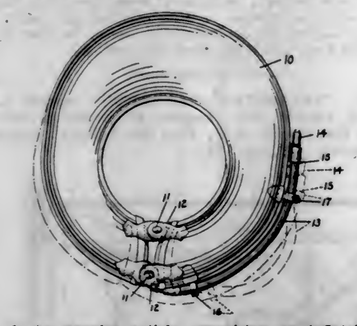
1,225,022. AUTOMOBILE-SIGNAL. JOHN W. FEY, Shreveport, La. Filed July 6, 1916. Serial No. 107,826. (Cl. 116—31.)



An automobile signal comprising an arm, means for pivotally mounting the same for swinging movement upon an automobile so that the free end of the arm is movable to the opposite sides of the automobile, a vertical member pivotally connected with said arm to oscillate relative thereto, a daylight signal member upon one end of said member, and a lamp upon the other end of said member.

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1,225,023. ANNULAR ARTICLE. HERMAN M. FOOTE, Cleveland, Ohio, assignor to The Mechanical Rubber Company, a Corporation of New Jersey. Filed Jan. 6, 1916. Serial No. 70,605. (Cl. 9—17.)



1. An annular article comprising an inflatable open collar, means for detachably connecting the ends of the collar together, and an inflating tube operatively connected with the ends of the collar and allowing a limited separation of said ends when the connecting means are unfastened.

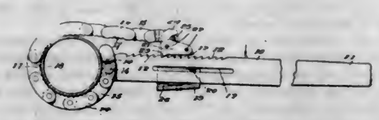
2. An annular article comprising an inflatable open collar, an inflating tube secured to one end of and bridging the gap between the ends of the collar, the free end of the tube extending along the outer periphery of the collar, means on the collar slidably confining said free end in place, and a stop on the tube engaging said means and limiting opening of the collar.

3. An annular article comprising an inflatable open collar, an inflating tube secured to one end of and bridging the gap between the ends of the collar, the free end of the tube extending along the collar, loops on the collar slidably confining said free end in place, and a stop on said tube engaging one of said loops and limiting opening movement of the collar, the other of said loops being spaced inwardly from the end of the collar and permitting said end to be turned above or below the plane of the collar to increase said gap.

4. An annular article comprising an inflatable rubber open collar, means for detachably securing the ends of said collar together, a rubber inflating tube secured to one of said ends and bridging the gap between said ends, the free end of the tube lying along the collar for substantially a quadrant of the collar, a pair of spaced rubber loops secured to said collar and slidably holding said free end in place, and a rubber enlargement on said tube engaging one of said loops and limiting opening movement of said collar, the other of said loops being spaced inwardly from the adjacent end of the collar and permitting said adjacent end to be turned above or below the plane of the collar.

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1,225,024. PIPE-WRENCH. MALON E. FREEMAN, Colby, Kans. Filed May 16, 1916. Serial No. 97,894. (Cl. 81—69.)



1. An implement of the class described, comprising a stock terminating in a handle and with a plurality of teeth in one edge and with a slot extending in parallel relation to the longitudinal plane of the stock, a flexible pipe engaging member connected at one end to said stock, a U-shaped slide engaging said stock and including sides spaced apart, a detent rigidly connected between said spaced sides and engaging said teeth one at a time and having a hook adapted to be engaged by said pipe engaging member, a pin extending through the slide of the slot, the slot guiding the slide and limiting its movement in both directions and the pin serving as a pivot on which the slide oscillates and a spring operating to maintain said detent yieldably engaged with said stock.

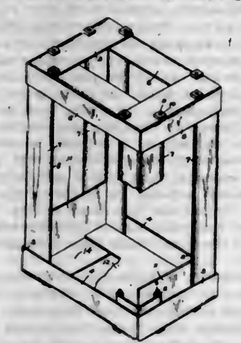
2. An implement of the class described comprising a stock having teeth at one edge and a longitudinally directed guide slot, a flexible gripping element swinging at one end from said stock, a slide movable upon said stock and having a detent for engaging said teeth one at a time and a hook for receiving one of the units of the gripping element, and a pin extending through the slide and through the slot guiding the slide and limiting its movement in both directions and the pin serving as a pivot to the slide.

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1,225,025. METALLIC CRATE. JOHNATHAN R. FREEZE, Middletown, Ohio, assignor to The American Rolling Mill Company, Newark, N. J. Filed Nov. 8, 1916. Serial No. 130,265. (Cl. 220—111.)

1. A crate comprising, a pair of frames adapted to form the ends of the crate, sheet-metal columns connecting the corners of one frame with the corners of the other frame, tubes formed by the longitudinal edges of the columns, and bolts extending through the frames and tubes, combined substantially as set forth.

2. A crate comprising, a pair of angle-irons provided with inwardly extending flanges perforated at their ends and forming the side members of an end frame of the crate, angle-irons independent of the first-mentioned angle-irons provided with inwardly extending flanges with their ends perforated in correspondence with the perforations in the first-mentioned angle-irons and forming separable end-members of the frame, the ends of the horizontal flanges of one pair of members overlapping the ends of the horizontal flanges of the other pair of members, a second end frame similarly formed of four angle irons provided with inwardly projecting flanges perforated and

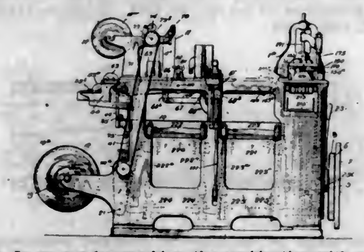


overlapping at their ends, columns extending from frame to frame at the corners of the frames, and bolts extending from frame to frame through said perforations therein and serving to clamp together the overlapping ends of the horizontal flanges of the frame-members and to clamp the opposite frames against the ends of the columns, combined substantially as set forth.

[Claims 3 and 4 not printed in the Gazette.]

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1,225,026. ENVELOP-MACHINE. NELSON E. FUNK, Montclair, N. J. Filed Nov. 4, 1913. Serial No. 799,221. (Cl. 93—64.)



1. In an envelop machine, the combination with means for supporting an envelop blank, said blank being provided with window apertures therein spaced to provide an aperture for each envelop blank after the same has been cut off, of means for adhesively applying a continuous transparent strip of less width than the said blank, to said blank over the window apertures therein, means for severing said transparent strip, means for operating upon a lateral portion of the blank not covered by said transparent strip to fold it over upon the portion adhesively engaged by said transparent strip and end flap folding mechanism.

2. In an envelop machine, the combination with means for supporting a continuous envelop blank strip, said strip being provided with window apertures therein spaced to provide an aperture for each envelop blank after the same has been cut off, of means for adhesively applying a continuous transparent strip of less width than said blank strip to said blank strip over the window apertures therein, mechanism for blanking and severing individual envelop blanks from said blank strip, and severing the transparent strip, mechanism for folding a portion of the blank strip not covered by the transparent strip upon the portion adhesively engaged by said transparent strip, and end flap folding mechanism.

3. In an envelop machine, the combination with means for supporting and feeding a continuous envelop blank strip, cutting mechanism for forming window apertures therein at spaced intervals to provide an aperture for each envelop blank after the same has been cut off, means for adhesively applying a continuous transparent strip of less width than said blank strip, to said blank strip over the window apertures therein, cutting mechanism for cutting out portions of the blank strip not covered by said transparent strip to blank individual envelops, and means for severing individual envelop blanks from said blank strip.

4. In an envelop machine, the combination with means for supporting and feeding a continuous envelop blank strip, cutting mechanism for forming window apertures therein, means for feeding a continuous transparent strip of less width than said blank strip, and adhesively applying it to said blank strip over the window apertures therein, mechanism for cutting out transverse portions of the blank strip laterally of the transparent strip, and mechanism for folding a portion of the envelop blank strip between said cut out portions not covered by the transparent strip, upon the portion of the envelop blank strip covered by the transparent strip, and means for severing the envelop blank strip into individual envelop blanks.

5. In an envelop machine, the combination with means for supporting and feeding a continuous envelop blank strip, cutting mechanism for forming window apertures therein, means for feeding and applying a strip of transparent material of less width than the blank strip to said blank strip over a window aperture therein, cutting mechanism for cutting out lateral portions of the blank strip to partially blank the envelop and define the end flaps and sealing flap, folding mechanism for folding a portion of the blank strip between said cut out portions over upon the portion covered by said transparent strip, mechanism for severing the individual blanks from the blank strip, and mechanism for folding the end flaps and sealing flap.

[Claims 6 to 42 not printed in the Gazette.]

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1,225,027. RUBBER GLOVE. RICHARD T. GRIFFITHS, Akron, Ohio, assignor to The Miller Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed July 10, 1916. Serial No. 108,341. (Cl. 2—9.)



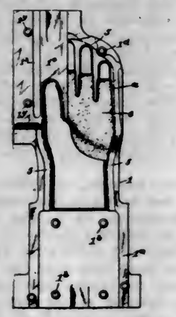
A vulcanized rubber glove made of edge joined blanks of uncured rubber sheeting united and vulcanized by mold or die pressure.

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1,225,028. MOLD FOR THE MANUFACTURE OF RUBBER GLOVES. RICHARD T. GRIFFITHS, Akron, Ohio. Original application filed July 10, 1916, Serial No. 108,341. Divided and this application filed Feb. 8, 1917. Serial No. 147,484. (Cl. 18—42.)

1. In combination a core conforming in shape to that of a hand with the thumb opposed to but spaced from the

index finger, mold sections for the front and back of the hand, and an intermediate mold section for fitting in the space between the thumb and index finger.



2. In combination a core shaped to conform to a hand, and complementary mold sections, the mold section corresponding to the palm of a hand having a rabbeted portion to produce a thickened grasping portion in the glove.

3. In combination a core shaped to conform to a hand and complementary mold sections, the mold section corresponding to the palm of a hand having a roughened portion to produce a roughened grasping portion in the glove.

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1,225,029. ATTACHMENT FOR SPRAY-RODS. RALPH W. E. HAYES, Galva, Ill., assignor of one-half to Hayes Pump & Planter Company, Galva, Ill., a Corporation of Illinois. Filed July 12, 1916. Serial No. 108,842. (Cl. 137—86.)



1. The combination with a spray rod, of a nozzle mounted on the end of the rod, means for changing the form in which the liquid is projected from the nozzle, said means including a slidable stem, a pivoted arm carried by the nozzle and adapted to engage the stem, a pivoted finger-piece, the axis of the finger-piece extending at right angles to the axis of the arm, and a connection between the finger-piece and arm, substantially as described.

2. The combination with a bamboo spray rod, of a nozzle mounted on the end of the rod, movable means for changing the form in which the liquid is projected from the nozzle, a finger-piece, a connection between the finger-piece and said means for changing the form of the liquid projected from the nozzle, a plate-like carrying member for the finger-piece, said carrying member having grooves formed therein, and a wire for securing said carrying member to the spray rod, said wire resting, when the carrying member is attached, within the grooves in said carrying member, substantially as described.

3. The combination with a bamboo spray rod, of a nozzle mounted on the end of the rod, movable means for changing the form in which the liquid is projected from the nozzle, a finger-piece, a connection between said finger-piece and said means for changing the form of the liquid projected from the nozzle, a plate-like carrying member for the finger-piece, said carrying member being formed with a recessed portion adapted to fit over a joint in the spray rod, and an encircling member for securing said carrying member to the spray rod, substantially as described.

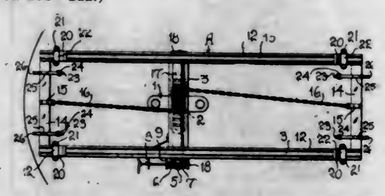
4. The combination with a bamboo spray rod, of a nozzle mounted on the end of the rod, movable means for changing the form in which the liquid is projected from the nozzle, a finger-piece, a connection between the finger-piece and the means for changing the form of the liquid projected from the nozzle, a carrying member for the finger-piece, comprising a plate formed with grooves extending from opposite edges thereof and merging into a recess, a wire for securing the plate to the pole, said wire passing around the pole and resting within the grooves in the plate, the end of the wire being twisted and forced into the recess of the plate, substantially as described.

5. The combination with a spray rod, of a nozzle mounted on the end of the rod, means for changing the form in which the liquid is projected from the nozzle, said means including a slidable stem, tension mechanism tending to move the stem to closed position, a swinging finger-piece, a pivoted member engaging the stem, a connection between said finger-piece and pivoted member, said finger-piece when moved to thrown position passing across and beyond its center of movement and carrying the point of securance between it and the connection across said center, and said tension mechanism acting through said pivoted member and connection to exert a pull on the finger-piece, tending to hold it in thrown position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,030. TILTABLE TURN-TABLE. DAVID W. HAYNES, Lakemp, Okla. Filed Jan. 13, 1917. Serial No. 142,274. (Cl. 104—212.)



1. A device of the character described comprising a base, a bolster mounted to swing thereon in a horizontal plane, a vehicle supporting frame tiltable in a vertical plane upon said bolster and carried thereby, and means carried by the bolster and engageable with said frame for tilting the latter and holding it in its adjusted positions, said means including a flexible member secured to the opposite end portions of the frame.

2. A device of the character described comprising a base, a bolster mounted to turn on said base, a transversely extending shaft journaled on said bolster, means carried by the bolster and engageable with the shaft for turning the latter, a frame tiltable on said bolster and adapted to support a car, a drum carried by said shaft, and a chain connected at its ends to said frame and winding around said drum.

3. A device of the character described, comprising a base, a bolster mounted to turn thereon, a transversely extending shaft journaled on said bolster, means carried by the bolster for turning said shaft, a frame adapted to support a car and tiltably mounted upon said shaft, a toothed segment carried by said frame, a pinion carried by said shaft and engaging said segment, and a flexible member connecting the opposite end portions of the frame and having its intermediate portion wound around the shaft.

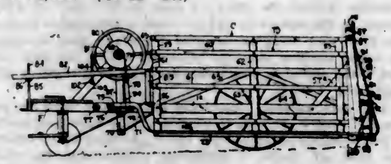
4. A device of the character described comprising a base, a bolster mounted to turn on said base, U-shaped bearings carried by said bolster at the ends of the latter, a shaft journaled in said bearings, bearings mounted to turn on said shaft between the first named bearings, a frame adapted to support a car and embodying side members to which said second named bearings are secured, said frame also embodying longitudinally extending sills, and cross bars connected to said sills at the ends of the latter, means carried by said sills for retaining a car thereon, and means carried by the bolster and connected to said drum for turning the latter on the bolster and holding the drum at different adjusted positions.

5. A device of the character described comprising a base, a pivot pin projecting upwardly therefrom, a bolster mounted to turn in a horizontal plane on said pin and provided at its ends with U-shaped bearings, a shaft journaled in said bearings and provided at one end with a worm gear, a bracket secured to one end in said bolster, a shaft journaled in said bracket, a worm carried by the last named shaft and meshing with said worm gear, pinions carried by said shaft, bearings mounted on the first named shaft between the members of said U-shaped bearings, a frame provided with side blocks connected to said second named bearings, toothed segments secured to the sides of said blocks and meshing with said pinions, said frame being also provided with longitudinal sills and grooved bars connecting said sills together in spaced relation to each other, retaining blocks carried by said sills and adjustably mounted thereon, a chain secured to said cross bars, a drum carried by the first named shaft and around which said chain is adapted to wind, arms carried by the cross bars of the frame and provided at one end with hooks, and chains secured to said arms and adapted to extend around the axles of the car, and engageable with said hooks, for the purpose specified.

[Claim 6 not printed in the Gazette.]

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1,225,031. GRAIN-HANDLING DEVICE. LOUIS W. HEIDEN, Arthur, N. D. Filed Apr. 15, 1916. Serial No. 91,418. (Cl. 21—20.)



1. A carrier including a portable frame, a basket having an end open, a gate for said open end, a plurality of endwise movable bars constituting the bottom of the basket, and means for elevating the bars.

2. A carrier including a portable frame, a basket having an end open, a gate for said open end, a plurality of endwise movable bars constituting the bottom of the basket, and means for elevating the bars, the end gate when in closed position affording a support for the bars.

3. A carrier including a portable frame, a basket having an end open, a gate for said open end, a plurality of endwise movable bars constituting the bottom of the basket, means for elevating the bars, the end gate when in closed position affording a support for the bars, and means for holding the gate in closed position, said means also serving to prevent the gate from returning to closed position.

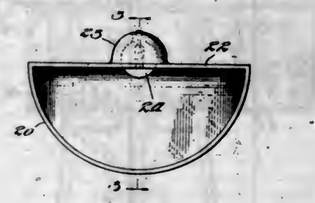
4. A carrier comprising a portable frame, a basket carried by the frame, a plurality of rock arms supported by the frame adjacent an end of the basket, bars constituting the bottom of the basket and having end portions pivotally secured to the rock arms intermediate the length of the rock arms, and means coacting with the lower extremities of the rock arms for elevating said rock arms and the bars.

5. A carrier comprising a portable frame, a basket carried by the frame, a plurality of rock arms supported by the frame adjacent an end of the basket, bars constituting the bottom of the basket and having end portions pivotally secured to the rock arms intermediate the length of the rock arms, means coacting with the lower extremities of the rock arms for elevating said rock arms and the bars, and a gate coacting with the basket, said gate when closed affording a support for the end portions of the bars remote from the rock arms.

[Claim 6 not printed in the Gazette.]

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1,225,032. REFLECTOR. PAUL M. HOTCHKIN, Chicago, Ill. Filed Jan. 2, 1915. Serial No. 4. (Cl. 240—41.)



1. A device for projecting light comprising a sector of a concave reflector provided with a supporting plate and a supplemental concave reflector supported on said plate, the axis of which latter reflector is at right angles to the axis of the first named reflector.

2. A device for projecting light comprising a sector of a hemispherical reflector having a plate closing said sector, and a supplemental reflector supported on said plate the axis of which latter reflector is at substantially right angles to the axis of the first named reflector.

3. A reflecting device comprising a substantially concave reflector, a top plate or shield extending from the front to the rear thereof and provided with an opening, and a concave reflector of relatively small dimensions mounted in said opening and adapted to reflect a portion of the light waves from a suitable light source through said opening upon said first mentioned reflector and a source of light mounted in said smaller reflector.

4. A reflecting device comprising a substantially concave reflector, a top plate extending from the front to the rear thereof and provided with an opening, and a concave reflector of relatively small dimensions mounted in said opening the axis of which is at right angles to said first mentioned concave reflector and adapted to reflect a portion of the light waves from a suitable light source through said opening upon said first mentioned reflector, and a source of light mounted in said smaller reflector.

5. A device for projecting light comprising a sector of a concave reflector provided with a supporting plate and a supplemental concave reflector supported on said plate the axis of which latter reflector is at substantially a right angle to the axis of the first-mentioned reflector.

[Claims 6 to 8 not printed in the Gazette.]

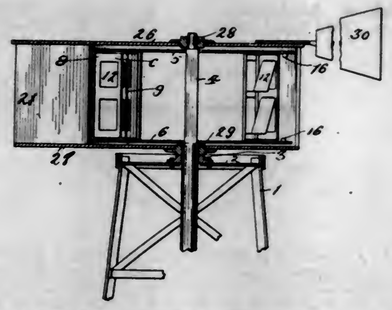
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1,225,033. WIND-WHEEL. CHARLES C. JACKSON, Akron, Ohio. Filed Apr. 15, 1916. Serial No. 91,350. (Cl. 170—15.)

1. A wind wheel comprising a supporting frame, a vertical shaft rotatably mounted therein, a pair of disks rigidly mounted on said shaft and arranged in spaced relation, and a plurality of horizontal rotatable blades or wings mounted on vertical axes between said plates, each of said blades comprising two portions, one of which is wider than the other, and each provided with an opening adapted to be closed by a swinging door, the doors on the two portions arranged to swing in the same general direction circumferentially with respect to the cycle of movement of the blade on which said doors are mounted.

2. A wind wheel comprising a supporting frame, a vertical shaft, a pair of disk-like members rigidly mounted

on said shaft and arranged in spaced relation, a plurality of blades rotatably mounted between said disk-like plates and each independently rotatable on its own axis, stops for limiting the rotation of said blades each of said blades embodying two portions arranged at obtuse angles with respect to each other, each of the portions of said blades provided with an opening, a swinging door on each portion adapted to cover the respective opening therein, the doors on the two portions arranged to swing in the same general direction circumferentially with respect to the cycle of movement of the blade on which said doors are mounted.



3. A wind wheel comprising a supporting frame, a vertical shaft, a pair of disk-like members rigidly mounted on said shaft and arranged in spaced relation, a plurality of blades rotatably mounted between said disk-like plates and each independently rotatable on its own axis, stops for limiting the rotation of said blades each of said blades embodying two portions arranged at obtuse angles with respect to each other, each of the portions of said blades provided with an opening, a swinging door on each portion adapted to cover the respective opening therein, said doors arranged on opposite sides of said blade, the doors on the two portions arranged to swing in the same general direction circumferentially with respect to the cycle of movement of the blade on which said doors are mounted.

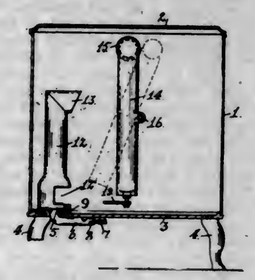
4. A wind wheel comprising a supporting frame, a vertical shaft, a pair of disk-like members rigidly mounted on said shaft and arranged in spaced relation, a plurality of blades rotatably mounted between said disk-like members and each independently rotatable on its own axis, stops for limiting the rotation of said blades, each of said blades embodying two portions arranged at obtuse angles with respect to each other, each of the portions of said blades provided with an opening, a door on each portion adapted to cover the respective opening therein, said doors arranged on opposite sides of said blade, the doors on the two portions arranged to swing in the same general direction circumferentially with respect to the cycle of movement of the blade on which said doors are mounted.

5. A wind shield embodying as an element a blade comprising two portions of unequal width, said portions arranged at an angle with respect to each other, pivoting means for said blade positioned near the angle between the portions, each of said portions provided with an opening, a door arranged to close each opening, said doors arranged on opposite sides of said blade and arranged to swing in the same general direction circumferentially with respect to the cycle of movement of the blade on which said doors are mounted.

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1,225,034. GAS-RADIATOR. CHARLES C. JESSEN, Oakland, Cal. Filed Feb. 3, 1917. Serial No. 146,504. (Cl. 126—91.)

1. A gas-radiator comprising a radiating shell having an exit in its upper portion; a gas-burner fitted to the lower portion of the shell; a flue-pipe within the shell, open at its lower end to the lower portion of the shell interior and at its upper end adapted to register with the shell exit; a pivot connection suspending said flue-pipe within the shell; and means for swinging said flue pipe into and out of registration with the shell exit.



2. A gas-radiator comprising a radiating shell having an exit in its upper portion; a gas-burner fitted to the lower portion of the shell; a flue-pipe within the shell, open at its lower end to the lower portion of the shell interior and at its upper end adapted to register with the shell exit; a pivot connection suspending said flue-pipe within the shell; a door in the shell to afford access to the burner to light it; and a connection between the door and flue-pipe, adapted when the door is opened to swing the flue pipe out of registry with the shell-exit, and when closed to swing the flue pipe into registry with said exit.

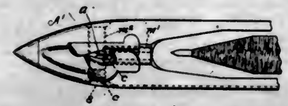
3. A gas-radiator comprising a radiating shell having an exit in its upper portion; a gas-burner fitted to the lower portion of the shell; a radiating pipe fitted at its lower end over the burner and open at its upper end into the upper portion of the shell interior; a flue-pipe within the shell, open at its lower end into the lower portion of the shell interior and at its upper end adapted to register with the shell exit; a pivot connection suspending the flue-pipe within the shell; a door in the shell to afford access to the burner to light it; and a connection between the door and flue-pipe, adapted when the door is opened to swing the flue pipe out of registry with the shell-exit, and when closed to swing the flue pipe into registry with said exit.

4. A gas-radiator comprising a radiating shell; a gas-burner fitted to the lower portion of the shell and having a surrounding entrained-air space; a controlling damper for said air space; a radiating pipe within the shell, fitted at its lower end over the burner and its damper controlled entrained-air space, and opening at its upper end into the upper portion of the shell interior; and a flue-pipe within the shell, open at its lower end to the lower portion of the shell interior, and at its upper end communicating with the exterior through the upper portion of the shell; a pivot connection suspending said flue-pipe within the shell; a door in the shell to afford access to the burner to light it; and a connection between the door and flue-pipe, adapted when the door is opened to swing the flue pipe out of registry with the shell-exit, and when closed to swing the flue pipe into registry with said exit.

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1,225,035. THREAD GUIDE OR EYE FOR LOOM-SHUTTLES. HENRY A. KENNEDY, Providence, R. I., assignor of five-eighths to Albert W. Chapman, Providence, R. I., and one-eighth to Hopedale Manufacturing Company, Hopedale, Mass., a Corporation of Massachusetts. Filed Aug. 28, 1914. Serial No. 859,057. (Cl. 139—46.)

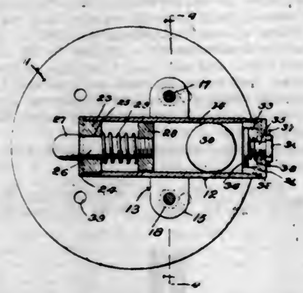
1. The combination in a loom-shuttle, a shuttle-body, means connected with the body for holding a limited amount of yarn, an opening cut in the shuttle body for the passage of a strand of the yarn, initial and secondary tubular eye members fixed in the shuttle body, the said eye members being disposed at substantially right angles to each other, the walls of the eye members being longitudinally slotted and communicating with said yarn passage, a pair of non-metallic yarn-guide members having longitudinally slotted walls, the said non-metallic guides being secured in and projecting from the yarn delivery ends of the respective said eye members, the slots formed in the guide members being in open communication with the slots of the respective eye members, substantially as described, and for the purpose set forth.



2. In a loom-shuttle, a shuttle body provided with means adapted for holding a supply of yarn, and a passage formed in the shuttle body adapted to receive the strand of yarn, the combination of an initial metal tube or eye positioned to receive the yarn direct from said supply, a non-metallic guide member secured within said initial eye and projecting from the terminal or outlet end of the eye, the walls of said initial eye and guide members being longitudinally slitted and in open communication with each other and with said yarn-passage in the shuttle body, a secondary metal eye member seated transversely in the shuttle body, a non-metallic yarn-guide member secured within the secondary eye and extending from the outer end of the latter, and having the walls of said secondary eye and its guide member longitudinally slitted and in open communication with each other and with the said yarn passage formed in the shuttle body, substantially as described and for the purpose set forth.

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1,225,036. ALARM FOR CARS. JOSEPH KIEREN, Gilbert, Minn. Filed July 17, 1916. Serial No. 109,770. (Cl. 116—9.)



1. An alarm device including a gong adapted to be attached to a rotating element to turn therewith, a hammer supported within the gong and movable into and out of engagement with the gong, and an impact imparting member supported to move into and out of engagement with the hammer through turning of the gong.

2. An alarm device including a gong adapted to be attached to a rotating element to turn therewith, a reciprocally mounted hammer supported within the gong and movable into engagement therewith, a spring normally holding the hammer out of such engagement, an impact imparting member mounted within the gong, and guiding means directing the member into and out of engagement with the hammer through turning of the gong.

3. An alarm device including a gong adapted for attachment to a revolving member to turn therewith, a housing supported within the gong, a hammer reciprocally mounted in the housing and extensible beyond one end to engage the gong, a spring normally holding the hammer out of engagement with the gong, and a spherical impact member mounted for rolling movement in the housing whereby turning of the gong and housing will cause movement of the impact member into and out of engagement with the hammer.

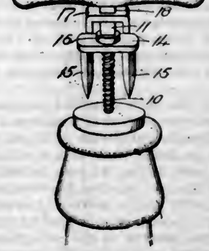
4. An alarm device including a gong adapted for attachment to a revolving member to turn therewith, a housing supported within the gong, a hammer reciprocally mounted in the housing and extensible beyond one end to engage the gong, a spring normally holding the hammer out of engagement with the gong, a spherical impact member mounted for rolling movement in the housing whereby turning of the gong and housing will cause movement of the impact member into and out of engagement with the hammer, and means in the housing for accelerating movement of the impact member toward the hammer.

5. An alarm device including a gong adapted for attachment to a rotating element to turn therewith, a cylindrical housing supported within the gong, caps closing the ends of the housing, a hammer reciprocally mounted through one cap with an enlarged outer end limiting its inward movement and adapted when the hammer is projected to engage the gong, a guide element secured to the hammer within the housing, a spring engaging between the guide element and the cap through which the hammer projects to normally hold the hammer in retracted position, a plunger reciprocally mounted through the other cap of the housing, means limiting the inward movement of the plunger, a spring normally holding the plunger in innermost position, and a spherical impact member mounted within the housing for movement between the hammer and plunger.

[Claims 6 and 7 not printed in the Gazette.]

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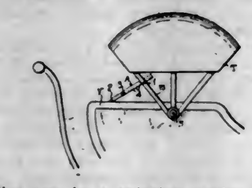
1,225,037. CORK-EXTRACTOR. MARTIN L. KINSEY, Dos Palos, Cal. Filed May 17, 1916. Serial No. 98,076. (Cl. 65—48.)



1. A cork extractor including a screw having a polygonal shank and a handle, said shank being tapered with its smaller portion adjacent the screw, a knife carrying element rotatable on the shank adjacent the screw, and a locking device slidably fitted on the shank and engaging said element in one position, the opening in said device fitting the larger end of the shank in binding relation when out of engagement with the element.

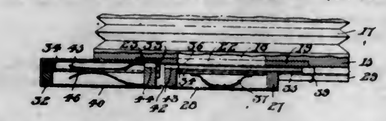
2. A cork extractor including a screw having a polygonal shank and a handle, the upper end of the screw being connected to the shank by a cylindrical portion constituting a journal, the shank being tapered with the smaller end adjacent the screw, a knife bar rotatably mounted on the journal, knives carried by the bar and projecting downward parallel to the screw, a collar fixed above the bar to prevent movement of the bar vertically and a lock bar of inverted U-shape and having a central polygonal opening through which said shank passes, the legs of said lock bar being arranged to embrace the sides of the knife bar when depressed, the opening in the lock bar being of such size as to effect binding engagement of the lock bar on the shank when the lock bar is raised.

1,225,038. CARRIAGE-TOP. FRANK H. KISER, Columbus, Ohio. Filed June 24, 1916. Serial No. 105,720. (Cl. 21—62.)



A holding arm for a swinging member including two sections, adjacent ends of said sections being in overlapping relation and pivotally connected one to the other, one of said sections being provided along one of its longitudinal margins with a series of spaced notches, the opposite longitudinal margin being provided with a flange to limit the movement of the first section in one direction relative to the second section, said first section at its longitudinal margin opposite to the flange and adjacent the free end of the portion thereof which overlaps the second section being provided with a stop co-acting with the second section for holding both sections of the arm in longitudinal allnement.

1,225,039. ADJUSTABLE PLATE-HOLDER ATTACHMENT FOR CAMERAS. ANDRE KISS, Cincinnati, Ohio. Filed Oct. 6, 1916. Serial No. 124,038. (Cl. 95—26.)



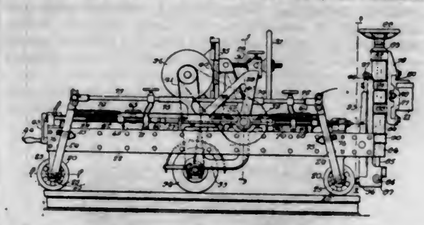
1. A device of the class described comprising in combination with a camera, a disk revolubly mounted thereon in operative relation thereto and having a sight opening therein, a plate magazine slidably carried by the said disk, a receiving case removably carried by the camera and means adapted for transferring plates from the said magazine to the said case without exposing the plates to the light.

2. A device of the class described comprising in combination with the rear portion of a camera having a sight opening therethrough, guide-ways arranged adjacent the said opening, a magazine plate holder slidably arranged within the said ways having an open bottom positionable in registry with the said opening, plate depressing means within the said holder guides positioned in alinement with the said ways, a receiving case carried by the said guides having a receiving opening in the side thereof, the said holder having an exit slot in the side thereof adapted for registry with the said case slot when the holder and slot are in contact with each other, plate centralizing means within the said case and a combined cover slide and pusher for the plates carried by the said holder having a path of movement through the said slots of the holder and case.

3. A device of the class described comprising in combination with a camera having a rear board provided with a central opening therein, a disk having a sight opening therein mounted for partial rotation upon the said board, a plate holder operatively carried by the said disk adjacent the said sight opening, and a plate receiving case and means for transferring exposed plates from said holder to the said case.

1,225,040. SURFACE-GRINDER. HENRY F. A. KLEINSCHMIDT, Johnstown, Pa. Filed Oct. 30, 1916. Serial No. 128,546. (Cl. 51—12.)

1. In a grinding machine, the combination of a frame, means for supporting the same above a rail, a carriage reciprocably mounted on said frame, a grinder frame mounted for oscillation on said carriage, a grinding wheel and means for rotating said wheel and for causing the reciprocation of said carriage, substantially as described.



2. In a grinding machine, the combination of a frame, means for supporting the same above a rail, a carriage reciprocably mounted on said frame, a grinding wheel and motor mounted on said carriage, means for causing the reciprocation of said carriage and means adapted to be actuated near the end of the stroke of said carriage for causing a bodily lifting of said frame.

3. In a grinding machine, the combination of a frame, means for supporting the same above a rail, a carriage reciprocably mounted on said frame, a grinding wheel and motor mounted on said carriage, means for causing the reciprocation of said carriage and means adapted to be actuated at the limit of the reciprocations of said carriage for causing an alternate raising and lowering of the ends of said frame and associated parts, substantially as described.

4. In a grinding machine, the combination of a frame, means for supporting the same above a rail, a carriage reciprocably mounted on said frame, a grinder frame mounted for oscillation on said carriage, a grinding wheel and a motor mounted on said grinder frame, automatic means for causing the reciprocation of said carriage and manually operable means for causing oscillation of said grinder frame, substantially as described.

5. In a device of the class described, the combination of a frame, means for supporting the same above a track rail, an eccentric shaft disposed between said track rail and said frame, a lever for causing rotation of said eccentric shaft and consequently a change in the distance between said frame and said rail, a carriage reciprocably mounted upon said frame and means actuatable by said carriage near the end of the stroke thereof for actuating said lever to cause the elevation of said frame, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

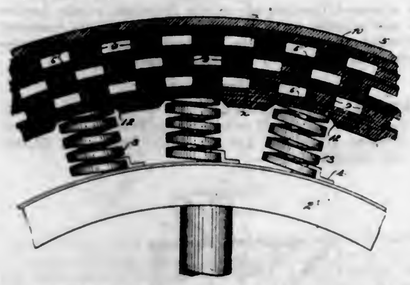
1,225,041. PUMP. AUGUST E. KUTSCHBACH, Houston, Tex. Filed Apr. 28, 1916. Serial No. 94,242. (Cl. 103—61.)



A pump including a barrel, a valve controlling the inflow of fluid into one end thereof, a plunger having a fluid passageway therethrough arranged to reciprocate in the barrel, a valve controlling said passageway, a hollow plunger rod connected to and provided to reciprocate said plunger through which fluid may be discharged against said valve and a fluid conduit communicating at its respective ends with the interior of said barrel on opposite sides of said plunger, and through which fluid may be driven against the barrel seat.



1,225,042. CUSHION-TIRE FOR VEHICLE-WHEELS. HENRY M. LAMBERT, Portland, Oreg., assignor to Lambert Multiplus Company, Phoenix, Ariz., a Corporation of Arizona. Filed June 2, 1914. Serial No. 842,338. (Cl. 152—8.)



1. A cushion tread for vehicle wheels comprising a plurality of concentrically arranged spaced bands each consisting of a multiplicity of layers of flexible material and separate cords, which layers of flexible material are individually stretched to their limit of elasticity, and the cords being independent of the layers of flexible material and encircling the latter, said cords being stretched so as to be under tension and bonded to the flexible material by vulcanization, and a plurality of series of circumferentially spaced, non-compressible blocks disposed transversely between the bands in the space between the latter, the blocks of one series being staggered with respect to the blocks of the next concentric series, the elements of the entire structure being vulcanized into a component mass.

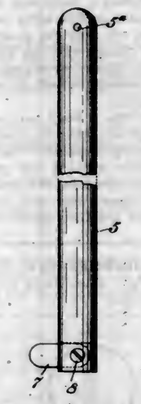
2. A vehicle tire comprising a series of circumferentially arranged, flexible bands radially spaced, and each stretched to its limit of elasticity, a series of flexible, non-compressible blocks lying between said bands and circumferentially spaced, those of one series being staggered relative to those of the adjacent series, and an outer covering for the whole.

3. In combination, a vehicle wheel, a tire therefor comprising a series of circumferentially arranged, flexible bands radially spaced, and each stretched to its limit of elasticity, a series of flexible, non-compressible blocks lying between said bands and circumferentially spaced, those of one series being staggered relative to those of the adjacent series, and resilient means lying between the tire and wheel rim.

4. A vehicle tire comprising a series of circumferentially arranged, flexible bands radially spaced, and each stretched to its limit of elasticity, and a series of flexible, non-compressible blocks lying between said bands and circumferentially spaced, those of one series being staggered relative to those of the adjacent series.

5. In combination, a vehicle wheel, a tire thereon comprising a series of circumferentially arranged, flexible bands radially spaced, and each stretched to its approximate limit of elongation, a series of flexible filler blocks lying between said bands and circumferentially spaced, and yielding means arranged between the inner one of said bands and the wheel rim, whereby a slight flexing of the bands will occur at the point of impact to accommodate small obstructions and said yielding supports will be compressed throughout the circumference of the tire when a large obstruction is met with, by reason of the non-stretchable character of the bands.

1,225,043. CLOTHES-STICK. STEPHEN LA POINT, Columbus, Ohio. Filed Nov. 20, 1916. Serial No. 132,244. (Cl. 68—6.)



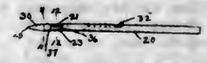
A laundry transferring device comprising, in combination, a stick having a slit in its end and an elongated lug pivoted in said slit to swing unrestrainedly therein to project beyond the side of the stick at an angle thereto and by gravity alone to aline longitudinally with the stick and permit clothes to slide off the stick by gravity when the stick is turned to vertical position with the lug-bearing end of the stick lowermost substantially as described.

1,225,044. METHOD FOR PRODUCING BANDS OF ALUMINIUM. ERWIN RICHARD LAUBER and ROBERT VICTOR NEHER, Emmishofen, Switzerland. Original application filed Sept. 21, 1911, Serial No. 650,505. Divided and this application filed Feb. 12, 1915. Serial No. 7,914. (Cl. 29—18.)

1. The method of producing aluminium foils in band form, which comprises lubricating the surfaces of superposed bands of aluminium, removing the excess of lubricant by washing the bands with a solvent, repeatedly subjecting the superposed strips to a rolling operation at a slight pressure while the strips are under tension to a thickness less than 0.0008 inch, and annealing the bands at intervals during the rolling operation.

2. The method of producing aluminium foils in band form, which comprises lubricating the surfaces of superposed bands of aluminium, removing the excess of lubricant by washing the bands with benzin, repeatedly subjecting the superposed strips to a rolling operation at a slight pressure while the strips are under tension to a thickness less than 0.0008 inch, and annealing the bands at intervals during the rolling operation.

1,225,045. NEEDLE. JAMES ALEXANDER LIND, Providence, R. I., assignor of one-third to Willis Q. Sampson and one-third to Fred. E. Horton, Cranston, R. I. Original application filed Feb. 29, 1912, Serial No. 680,653. Divided and this application filed Mar. 5, 1913. Serial No. 752,037. (Cl. 112—11.)



1. A needle comprising a pointed body portion provided with a thread receiving eye adjacent its pointed portion, a resilient guide arm integral with the pointed portion of the body and extending longitudinally of said body and having a free end that facilitates the placing of a thread between the arm and body, said body being pro-

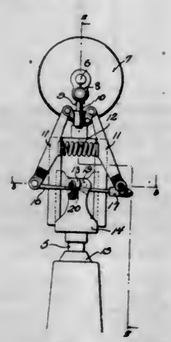
vided with means for engaging the arm between the eye and the pointed portion of the body to hold the arm across the eye.

2. A needle comprising a body and a resilient arm extending therefrom, said needle being pointed at one end and provided with an eye near the point, a groove formed in the body between the eye and the point to receive said arm, the walls of said groove overlying said arm whereby the latter is permanently united to said body between said eye and said point.

3. A needle comprising a body portion having an elongated longitudinal groove therein, said body being provided with an eye near its pointed end and having a reduced part united therewith at the point and lying in said groove over said eye and the walls of said groove below the eye being closed over said reduced portion for binding the two parts together above the point.

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1,225,046. POWER-HAMMER-RAM COUPLING. LOUIS MAYER, Antigo, Wis. Filed June 8, 1916. Serial No. 102,385. (Cl. 78—40.)



1. In a ram coupling for power hammers, the combination with a reciprocating ram and pivotally suspended yoke arms of bar portions carried by the ram, and links pivoted to said yoke arms and having their inner ends bent in hook shape to embrace the bar portions of the ram, and other portions of the ram being disposed adjacent said bar portions to hold said links thereagainst whereby said links may be interlockingly engaged and disengaged with the ram only by rotary movement about the bar portions.

2. In a ram coupling for power hammers, the combination with a reciprocating ram and a pair of pivotally suspended yoke arms of links pivoted to said yoke arms, the upper end of the ram being cut away to form a recess open at its sides, bar portions extending transversely of the recess and the inner ends of the links being bent in hook shape to engage about said bar portions, and being held against said bar portions by the body of the ram.

3. In a ram coupling for power hammers, the combination with a reciprocating ram and a pair of pivotally suspended yoke arms of links pivoted to said yoke arms, the upper end of the ram being cut away to form a recess open at its sides, bar portions extending transversely of the recess, the inner ends of the links being bent in hook shape to engage about said bar portions, and a projection on the bottom of the recess extending between the inner ends of the links whereby they may be interlockingly engaged and disengaged with the bars only by rotary movement about the bars.

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1,225,047. COOKING VESSEL. HENRY C. MILLIGAN, Canton, Ohio. Filed May 13, 1915. Serial No. 27,781. (Cl. 53—S.)

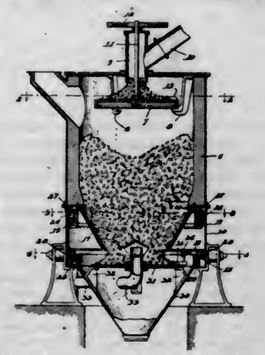
As an improved article of manufacture, the combination of a vessel body, the inner surface of said body provided with a groove and openings located through the vessel body, a strainer plate adapted to be seated in the groove, a tang located upon the strainer plate and adapted to



be extended through one of the openings, a wire beaded to said strainer plate and the ends of said wire extended outward and adapted to be located through apertures located at the ends of the strainer plate.

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1,225,048. GAS-PRODUCER. EMIL NIMPHIUS, Evanston, Ill., assignor of one-fourth to James H. Whitaker, Chicago, Ill. Filed Apr. 23, 1915. Serial No. 23,386. (Cl. 48—68.)



1. A gas producer comprising a combustion chamber; and a rotatable grate coöperating therewith, said grate being provided with sides having air passages therethrough extending inwardly at an inclination opposite to the direction of rotation, substantially as described.

2. A gas producer comprising a stationary combustion chamber; a rotatable frusto-conical grate coöperating therewith, said grate being provided with air passages extending inwardly at an inclination opposite to the direction of rotation; means for forcing air through said grate; a stationary ash platform arranged under said grate; and a revolving scraper blade coöperating with said platform, substantially as described.

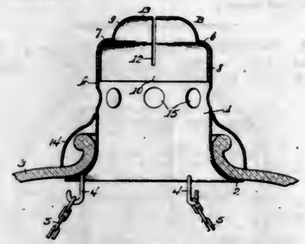
3. A gas producer comprising a stationary combustion chamber; a rotatable frusto-conical grate coöperating therewith, said grate being provided with air passages extending inwardly at an inclination opposite to the direction of rotation; means for forcing air through said grate; a stationary ash platform arranged under said grate; a revolving scraper blade coöperating with said platform; and means for introducing air into the lower central portion of the space inclosed by said grate, substantially as described.

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1,225,049. SOCKET-COVER. HARRY NORTHWOOD, Wheeling, W. Va. Filed Dec. 7, 1916. Serial No. 135,566. (Cl. 240—114.)

1. A socket cover comprising a shell having means for supporting a shade on its lower end and having an inturned annular flange at its upper end, and a one-piece dome member telescopically disposed within said shell, said member having an axially disposed opening in its top and being provided with a radial slot extending throughout one side thereof, said member also having a radial slot extending partially through the opposite side thereof.

2. A socket cover comprising a shell having means for supporting a shade on its lower end and having an inturned annular flange at its upper end, and a one-piece dome member telescopically disposed within said shell, said member having an annular shoulder adapted to seat against said flange, said member being provided with an axial opening in its top and having radial incisions therein which divide said member into two similar sections connected only by an integral uncut portion or tie located at one side thereof.



3. A socket cover comprising a shell having a cylindrical body portion terminated at its upper end by an internal flange and at its lower end by an external flange, the last-mentioned flange constituting a supporting seat for a shade or reflector, and a one-piece dome member telescoped within said shell and having its top apertured and protruding from the upper end of the latter, said member having incisions therein which divide it diametrically into two like sections connected only at one side by a relatively small uncut portion or tie, said member having an annular shoulder adapted to seat against the internal flange of said shell.

4. A socket cover comprising a shell having a cylindrical body portion terminated at its upper end by an internal flange and at its lower end by an external flange, the last-mentioned flange constituting a supporting seat for a shade or reflector, a one-piece dome member telescoped within said shell and having its top apertured and protruding from the upper end of the latter, said member having incisions therein which divide it diametrically into two like sections connected only at one side by a relatively small uncut portion or tie, said member having an annular shoulder adapted to seat against the internal flange of said shell, and means carried by the external flange of said shell whereon a light inclosing member may be supported.

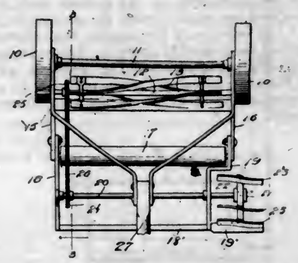
5. A socket cover comprising a shell having a cylindrical body portion terminated at its upper end by an internal flange and at its lower end by an external flange, the last-mentioned flange constituting a supporting seat for a shade or reflector, a one-piece dome member telescoped within said shell and having its top apertured and protruding from the upper end of the latter, said member having incisions therein which divide it diametrically into two like sections connected only at one side by a relatively small uncut portion or tie, said member having an annular shoulder adapted to seat against the internal flange of said shell, and hooks depending from said external flange whereon bowl-supporting chains may be suspended.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,050. LAWN-MOWER. WILLIAM S. PEDLAR, Vancouver, British Columbia, Canada. Filed July 16, 1913. Serial No. 779,309. (Cl. 56—19.)

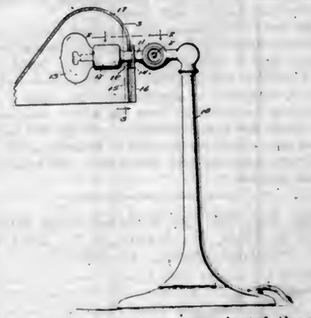
In a lawn mower the combination of a wheeled body including a rotatable knife shaft, and traction operated means for rotating said knife shaft, knives carried by the shaft, arms adjustably secured to opposite sides of the wheeled body, a supplemental knife shaft journaled in said arms, sprocket wheels fixed on the first named knife shaft and the supplemental knife shaft, a sprocket chain traveling on said sprocket wheels, and knives mounted on the supplemental knife shaft having their outer ends



disposed beyond the adjacent side of the body and their inner ends disposed inwardly of the adjacent ends of the knives mounted on the first named knife shaft.

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1,225,051. PORTABLE ELECTRIC LAMP. HENRY M. PETERS, Chicago, Ill. Filed July 6, 1916. Serial No. 107,844. (Cl. 240—81.)



1. In a lamp, a standard, an arm pivoted thereon and carrying an illuminating element, a plate carried by the arm, guides formed upon the plate, and a shade proportioned to span the arm, removably engage the guides, and cover the illuminating element.

2. In a lamp the combination with a standard, of an arm pivoted thereto and carrying a plate, guide members formed upon the opposite edges of the plate, and a shade provided with a slot properly proportioned to span the arm and with the edges of the slot engaging the guide members.

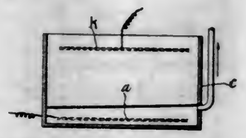
3. In a lamp, the combination with a standard, an arm pivoted thereto and carrying a socket adapted to receive a bulb, and a plate mounted on the arm between said pivot and socket and having upright guides; of a shade adapted to cover the socket and bulb and having in its rear wall an upright slot whose lower end is open and whose upper end is adapted to rest upon the arm when the edges of the slot engage said guides.

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1,225,052. PROCESS FOR TREATING ORGANIC COMPOUNDS BY ELECTROLYSIS. ALFRED PIGUET, Basel, Switzerland, assignor to Society of Chemical Industry in Basle, Basel, Switzerland. Filed Dec. 31, 1915. Serial No. 69,624. (Cl. 204—9.)

1. The described process for treating organic bodies by electrolysis, consisting in charging into an electrolyzer an electrolyte and the liquid organic body to be electrolyzed showing such a difference of specific gravities that near the active electrode a sufficient emulsion can be produced, which cannot reach the other electrode, producing such an emulsion and electrolyzing the contents of the electrolyzer in the usual manner.

2. The described process for treating organic bodies by electrolysis consisting in charging into an electrolyzer an electrolyte and a solution of the organic body in an indifferent solvent not mixable with the electrolyte, the said electrolyte and solution of the organic body showing such a difference of their specific gravities that near the active electrode a sufficient emulsion can be produced, which cannot reach the other electrode, producing such an emulsion and electrolyzing the contents of the electrolyzer in the usual manner.

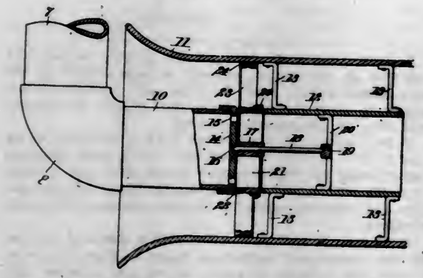



3. The described process for treating organic bodies by electrolysis, consisting in charging into an electrolyzer an electrolyte and the organic body to be electrolyzed having such a difference of specific gravities that a sufficient emulsion can be produced in the neighborhood of the active electrode which cannot reach the other electrode, putting the said active electrode into vibration in order to produce such an emulsion and electrolyzing the contents of the electrolyzer in the usual manner.

4. The described process for treating organic bodies by electrolysis, consisting in charging into the electrolyzer an electrolyte and a solution of the organic body in an indifferent solvent not mixable with the electrolyte, showing such a difference of specific gravities, that a sufficient emulsion can be produced near the active electrode which cannot reach the other electrode, putting the said active electrode into vibration in order to produce such an emulsion and electrolyzing the contents of the electrolyzer in the usual manner.

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1,225,053. BLOWER FOR STEAM-BOILER FURNACES. EDWIN B. PITTS, Sr., Oswego, N. Y. Filed May 22, 1915. Serial No. 29,749. (Cl. 230—11.)



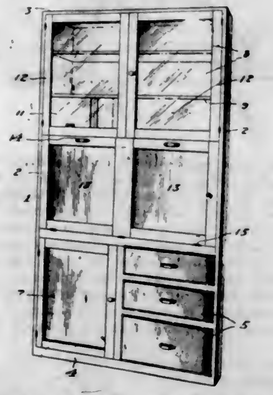
1. In a device of the character described, the combination with an intake tube of a steam nozzle mounted centrally therein and a combined steam turbine and fan mounted in said tube with the turbine adjacent said nozzle so as to be driven by steam issuing therefrom, the fan consisting of a series of radially extending blades surrounding the turbine and lying in the same plane, a pair of rings between which said fan blades are held and in which they are pivotally mounted, and means for adjusting the angle of said blades, whereby the relative quantities of air and steam delivered through said tube may be varied as desired.

2. A blower device for steam boiler furnaces comprising an intake tube, a steam nozzle disposed centrally thereof, an injector tube also mounted centrally in said intake tube and disposed in axial alinement with said nozzle, a steam turbine mounted between said nozzle and injector tube and being of substantially the same diameter as said tube so that steam issuing from said nozzle passes through said turbine and thence through said injector tube, and a fan blower surrounding said turbine whereby air is forced through said intake tube by the combined effect of said fan and the injector action of the steam jet.

3. A blower device for steam boiler furnaces comprising an intake tube, a steam nozzle centrally disposed therein and extending axially thereof, said nozzle being closed by a cap provided with a plurality of slots, a turbine mounted adjacent said slots so as to receive the impact of steam issuing therefrom, and a fan surrounding said turbine and rigidly secured thereto, said fan serving to impel air through the annular space between said tube and nozzle.

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1,225,054. KITCHEN-CABINET. MILTON C. POWELL, Ralston, Nebr. Filed Jan. 30, 1914. Serial No. 815,494. (Cl. 45—16.)



In a kitchen cabinet having a wall or member extending across its front, the combination with an interior horizontal shelf whose front edge is separated from the front of the cabinet by an open space, of a drop table having a short, continuous lower or inner free extension cut away on its inner face to a depth equal to the thickness of the front of the cabinet, so as to form a recess to receive the top edge of the said front when the drop table is in closed position, the extension being adapted to play in the said open space when the table is closed or opened and to underlie and engage with the under face of the outer or forward edge of said shelf when the table is in lowered position, and hinges permanently connecting the drop table to the upper part of the aforesaid wall or member, the pivots of said hinges being disposed substantially in line with the outer face of said wall or member, said drop table being adapted to fold or close substantially flush with the front of the cabinet.

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1,225,055. PAVEMENT. BERNARD RANSOME, Oakland, Cal. Filed Mar. 29, 1916. Serial No. 87,585. (Cl. 94—1.)



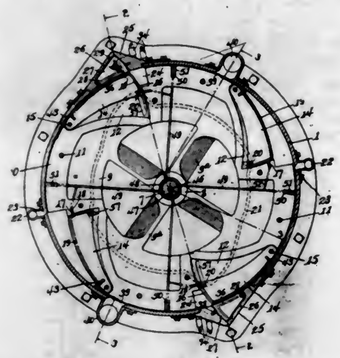
1. The combination in a pavement of the character described, of a base member of concrete, an expanded metal frame-work, lying edgewise upon said base, having cuts made at intervals, with the separated ends folded downward and driven into the base, and a covering of asphalt above and filling the interstices of the expanded metal.



2. A pavement including a base member of concrete, a surfacing member of asphalt and a connecting and holding member, composed of expanded metal embedded in the asphalt vertically on edge, said metal strips being separated at intervals and the ends folded downward, and driven into the concrete base.

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1,225,056. ROTARY INTERNAL-COMBUSTION ENGINE. LEWIS W. RIGGS and ASHLEY M. RIGGS, Wheeling, W. Va. Filed May 2, 1916. Serial No. 94,877. (Cl. 123—15.)



1. In an internal combustion engine, a cylinder, an axially disposed shaft, a rotary piston fixed on said shaft within said cylinder and having a plurality of pockets in its periphery, said piston being also provided with an offset peripheral recess in front of and opening into the outer portion of each pocket; compression heads mounted within said pockets and adapted to oscillate with respect to the cylinder walls, and means whereby said heads are actuated at definite intervals in the rotation of the piston.

2. In an internal combustion engine, a cylinder, an axially disposed shaft, a rotary piston of substantially cylindrical form fixed on said shaft within said cylinder, said piston having a plurality of pockets located at regularly spaced intervals in its periphery, compression heads mounted within said pockets, and operable into and out of close-fitting relation to the cylinder walls, movable resistance heads coöperating with said compression heads, and means whereby said compression heads are actuated to oscillate with respect to the cylinder walls at definite intervals in the rotation of said piston.

3. In an internal combustion engine, a cylinder, an axially disposed shaft, a rotary piston of substantially cylindrical form fixed on said shaft within said cylinder, said piston having a plurality of pockets located at regularly spaced intervals in its periphery, compression heads pivotally mounted in said pockets and adapted to swing toward and away from the cylinder walls, movable resistance heads disposed in coöperative relation to said compression heads, and means for actuating said compression heads at definite intervals in the rotation of said piston.

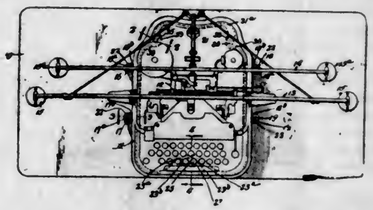
4. In an internal combustion engine, a cylinder, an axially disposed shaft, a rotary piston of substantially cylindrical form fixed on said shaft within said cylinder, said piston having a plurality of longitudinally disposed pockets located at regularly spaced intervals in its periphery, said pockets being of substantially triangular form in cross section, compression heads pivotally mounted within said pockets, movable resistance heads disposed in coöperative relation to said compression heads, and means for actuating said compression heads to swing toward and away from the cylinder walls at definite intervals in the rotation of said piston.

5. In an internal combustion engine, a cylinder, an axially disposed shaft, a rotary piston of substantially cylindrical form fixed on said shaft within said cylinder, said piston having a plurality of longitudinally disposed pockets located at regularly spaced intervals in its periphery, said pockets being of substantially triangular form in cross section, compression heads pivotally mounted within said pockets and operable to and from close-fitting relation to the cylinder walls, movable resistance heads disposed in coöperative relation to said compression heads, and means whereby said heads are actuated at definite intervals in the rotation of the piston.

[Claims 6 to 15 not printed in the Gazette.]

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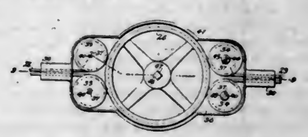
1,225,057. MEANS FOR SECURING TYPE-WRITERS TO BASE-BOARDS. CHARLES RODERICK and THERON L. KNAPP, Woodstock, Ill., assignors to The Oliver Typewriter Company, Chicago, Ill., a Corporation of Illinois. Filed July 1, 1910. Serial No. 569,960. (Cl. 45—52.)



The combination of a typewriting machine having a base portion provided with substantially upright side walls and fastener lugs rigid with said base portion, a base board, cushioning members interposed between said lugs and said base board for holding said machine base out of contact with said board, fastener bolts extending vertically through said base board and said cushioning members and engaging said lugs to loosely secure said machine base to said base board, and a plurality of abutments rigidly secured to said base board and having upwardly projecting portions engaging the side walls of said machine base to securely hold the same against lateral movement while permitting a limited vertical movement thereof relative to said base board, substantially as described.

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1,225,058. SIGNALING MECHANISM FOR MOTOR-CARS, &c. FRANK H. ROLL, Buffalo, N. Y. Filed Jan. 19, 1914. Serial No. 813,106. (Cl. 116—31.)



1. A signal mechanism for motor cars having a casing, comprising a body provided with an annular rabbet and a detachable rim extending over said rabbet, a rotatable support carrying an indicator and having a circular periphery arranged in said rabbet and a circumferential groove in said periphery, rollers mounted on said casing and engaging said support, and a belt engaging with said groove.

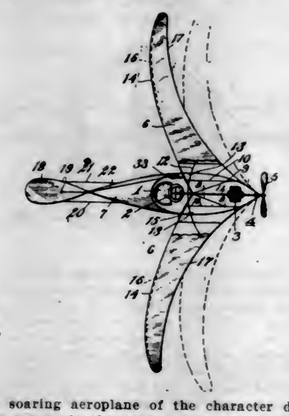
2. A signal mechanism for motor cars, comprising two rotatable supports each provided with an indicator, an operating wheel, two belts one of which passes around one of said supports and one part of the periphery of said operating wheel and the other passing around the other support and another part of the periphery of said operating wheel, a casing inclosing said operating wheel, and guide pulleys for said belts arranged within said casing, the

guide pulleys for one of said belts being arranged in a different plane from the guide pulleys of the other belt.

3. A signal mechanism for motor cars, comprising a rotatable support provided with an indicator, an operating wheel, a belt passing around said operating wheel and support, and means for guiding the intermediate parts of the stretches of said belt comprising a pulley casing having openings on its opposite sides, a partition arranged in a plane between the plane of one of said openings and the plane of the other of said openings, arbors on opposite sides of said partition, covers secured to said arbors and closing said openings, and pulleys mounted on said arbors and receiving the stretches of said belt.

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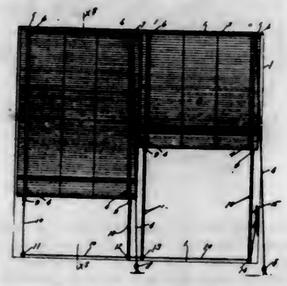
1,225,059. SOARING AEROPLANE. JOHN WOLDEMAR RUBEN, Portland, Oreg. Filed July 19, 1915. Serial No. 40,787. (Cl. 244—29.)



1. In a soaring aeroplane of the character described comprising a torpedo shaped body, two pterygoidal arch shaped planes projecting upwardly from the body in a dihedral angle, fast with respect to the vertical axis, movable in a wide angle along the longitudinal axis of the body; said planes being helicoidal each consisting of two diversely inclined surfaces each half of the length of the wing inclined in a negative angle with respect to the other half, means for increasing or decreasing the angular relations between two diversely inclined surfaces, means for the moving of main planes along the longitudinal axis of the body in unison with the variations of the angle of inclination of the negatively inclined surfaces on the outer wing tips, means for the shifting each of the main planes in an angle with respect to the longitudinal axis of the body independently of the downwardly inclined surfaces; above described surfaces in a combination with a horizontal rudder adapted to keep the main supporting planes in a proper angle of attack, and means for manipulating said rubber, substantially as and for the purpose specified.

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1,225,060. CURTAIN-ANCHORING DEVICE. ZACHARY E. RUSSELL, Sauk Rapids, Minn., assignor to Clyde W. Warren, Sauk Rapids, Minn. Filed Jan. 28, 1916. Serial No. 74,776. (Cl. 156—16.)

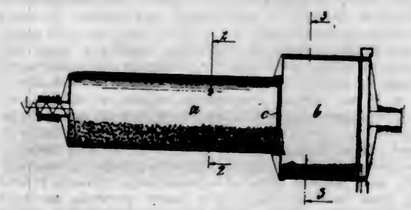


1. The combination with a suspended curtain and a pair of adjusting cords embracing the lower portion thereof for rolling the same and holding the curtain in different adjustments, and an anchoring cord passed alternately through guides on the lower portions of said adjusting cords and through anchor guides located below the curtain.

2. The combination with a suspended curtain and a pair of adjusting cords embracing the lower portion thereof for rolling the same and holding the curtain in different adjustments, of guide rings on the lowermost portions of said adjusting cords, and an anchoring cord passed alternately through said guide rings and through anchored guides located below the same.

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1,225,061. GRINDING IN TUBE-MILLS. OSCAR SCHULTZ, Brooklyn, N. Y., assignor to F. L. Smidth & Co., New York, N. Y., a Corporation of New Jersey. Filed Feb. 12, 1914. Serial No. 818,186. (Cl. 83—9.)



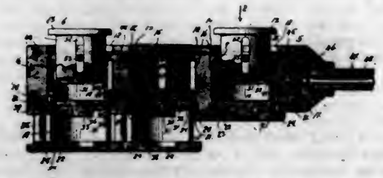
A tube mill for grinding with grinding bodies comprising an inlet chamber of relatively small diameter and an outlet chamber of relatively larger diameter, a perforated partition between said chambers, flint pebbles in the inlet chamber and small metallic grinding bodies in the outlet chamber, the relative diameters of said chambers being



such that the peripheral speeds cause the flint pebbles to have a cascading action while the metallic grinding bodies are carried by centrifugal force in a thin, whirling layer along an uninterrupted endless path and confined to such path so that a forward portion of the bodies falls upon a rear portion of the same.

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1,225,062. TELESCOPING-PISTON HYDRAULIC CARTRIDGE OF REACTION TYPE. DAVE VANCE SICKMAN, Denver, Colo. Filed July 9, 1915. Serial No. 38,856. (Cl. 138—10.)



1. An hydraulic cartridge including two piston members spaced by an interposed wall.

2. An hydraulic cartridge including two piston members spaced by an interposed stationary wall.

3. An hydraulic cartridge including two telescoping piston members spaced by an interposed wall.

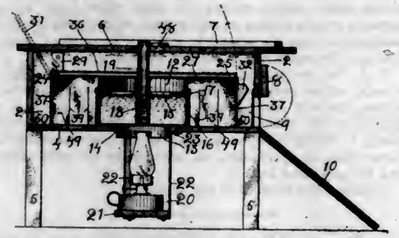
4. An hydraulic cartridge including two telescoping piston members spaced by an interposed stationary wall.

5. An hydraulic cartridge including two piston members spaced by an interposed stationary wall and means for introducing fluid under pressure to the inner surfaces of the piston members.

[Claims 6 to 15 not printed in the Gazette.]

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1,225,063. CHICKEN-BROODER AND GRAIN-SPROUTER. PAUL K. SIERT, Blair, Nebr. Filed May 21, 1914. Serial No. 840,066. (Cl. 119—32.)



1. A device of the character herein described, comprising an elevated rectangular open topped chamber having a centrally apertured bottom, a vertical cylindrical water radiator having a plain bottom end, a pendant flange surrounding a central area of the bottom of said radiator and adapted to project through the aperture to removably seat the radiator, a lamp supported from the underside of the chamber bottom to dispose its chimney top within the flange inclosure on the bottom of the radiator, a perforate brace tube disposed axially in the radiator and having its top end open through the top end of the radiator, a vent tube telescopically slidable in the brace tube, and a revoluble rectangular cover to the chamber having a central aperture to give it a revoluble bearing on said vent tube, a rectangular rack smaller than the chamber and removably supported above the radiator and spaced away from the walls of the chamber, and a removable hover blanket having a central portion to impose on said rack and side portions to hang from the edges of the rack to divide the brooding chamber into a smaller rectangular chamber surrounding the radiator and a surrounding corridor clear around along the outside walls.

2. A device of the character herein described, comprising an open topped rectangular chamber, a water radiator in the chamber, a perforate vertical brace tube in the radiator and its top end open through the top thereof, a vent tube fitted telescopically slidable in said brace tube and adapted to be extended above the open top of the chamber, and a revoluble rectangular cover having an aperture to give it a bearing on the upstanding end of the vent tube and to revolve edgewise sliding on the open top of the chamber.

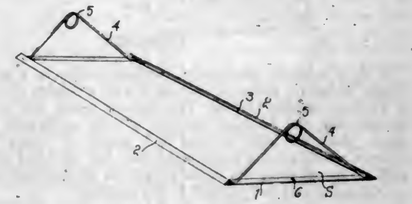
3. A device of the character herein described, comprising a rectangular chamber having adjustable ventilation openings at the tops of its vertical angles, a closure connected to open and close equally and simultaneously all of said openings, a heat radiator disposed centrally on the floor of said chamber, and a vertically-slitted fabric partition disposed in said chamber, to form a continuous fresh air corridor along its vertical side walls, communicable with said ventilation openings and to form a central warm air chamber around said radiator.

4. A device of the character herein described, comprising a principal open-topped rectangular chamber, a cover pivoted centrally to revolve edgewise and open vents equally and simultaneously at the tops of all vertical angles or corners of said chamber, a vertical cylindrical heat radiator of less height and diameter than said chamber and disposed centrally on the floor thereof, a horizontal support frame disposed over the radiator and spaced below the cover of the principal chamber, a hover blanket on the support frame, and a vertically-slitted curtain suspended from the support frame to form a smaller concentric rectangular warm chamber around the radiator with its angles or corners coincidentally disposed with the vents of the inclosing principal chamber.

5. A device of the character herein described, comprising a chamber, a hover rack of smaller dimensions than the chamber and having stiles with ends projected beyond its edge rails to form supporting arms, and a hover cloth consisting of a central field to lie on the rack and extensions to hang as curtains from the edges thereof and having closed armholes to receive the arms at one edge of the rack and openable armholes to close around the arms at the opposite edge.

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1,225,064. HOLDER. REMMER H. SIETSEMA, Little Rock, Iowa. Filed June 17, 1916. Serial No. 104,294. (Cl. 43—22.)



1. A holder of the class described comprising spaced, parallel sheet engaging parts extending along the holder, a clamping member to co-act with each of said parts substantially throughout the length thereof and means operatively connecting the clamping members to each other at their opposite ends and normally acting to urge the same to effective position and clamp the sheet upon said parts.

2. A holder of the class described comprising opposed, parallel sheet engaging parts extending along the holder, a clamping member to co-act with each of said parts substantially throughout the length thereof and yieldable means operatively connecting said members to each other at their opposite ends and normally acting to urge the same to effective position and clamp the sheet upon said parts.

3. A holder of the class described comprising opposed, parallel sheet engaging parts extending along the holder, a clamping member to co-act with each of said parts substantially throughout the length thereof, and yieldable means operatively connecting said members to each

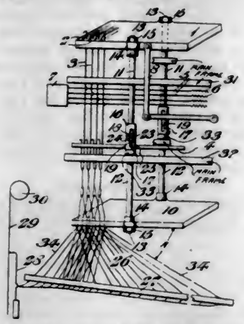
other at their opposite ends and disposed in a plane at right angles to the plane of said members and normally acting to urge the same to effective position and clamp the sheet upon said parts.

4. A holder of the class described comprising spaced sheet engaging parts, clamping members to co-act with said parts, each of said members consisting of a metal strip bent upon itself, and a yieldable connection between the corresponding ends of said clamping members fixed at its extremities between the opposed portions of the metal strips, said yieldable connections urging the clamping members to effective position to clamp the sheet upon said parts.

5. A holder of the class described comprising a sheet metal plate having its opposite marginal edges bent inwardly to afford longitudinal grooves, clamping members to co-act with the walls of said grooves, each of said members consisting of a metal strip longitudinally bent upon itself, and expansible elements connecting said clamping members to each other at their corresponding ends and having their extremities permanently fixed between the opposed portions of the metal strips, said elements urging the clamping members in relatively opposite directions and into operative engagement between the marginal edges of the plate.

[Claim 6 not printed in the Gazette.]

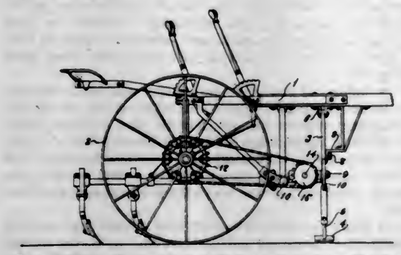
1,225,065. JACQUARD MECHANISM. CHARLES SIMMINS, Philadelphia, Pa. Filed Dec. 20, 1916. Serial No. 137,941. (Cl. 139—16.)



1. In a jacquard mechanism, the combination of a griff frame, means for reciprocating said frame, a comber board, a harness passing through said comber board and connected from the jacquard head to a loom mechanism, a guide plate for said harness and means to impart a shorter stroke to said guide plate than the stroke of said griff frame, whereby the strain is reduced on said harness.

[Claims 2 to 4 not printed in the Gazette.]

1,225,066. COTTON-CHOPPER. JAMES GORDON SIMS, Bowie, Tex. Filed Dec. 24, 1915. Serial No. 68,534. (Cl. 97—45.)



In a cotton chopper, a bracket supported by the frame of the implement, an arm pivoted at one end in said bracket and depending therefrom, a two edged hoe adjustably mounted in the lower end of said arm, a pitman arranged to swing said arm, and a means for guiding the arm in its oscillatory movement, said means consisting of a pin carried by the arm and a curved fixed bracing piece in which said pin is supported and guided.

1,225,067. LINE-PRODUCING PEN. JAMES E. SIMPSON, Brooklyn, N. Y. Filed June 30, 1916. Serial No. 106,757. (Cl. 120—110.)



1. A line producing device comprising a wheel, inking means therefor, and a supporting handle, said handle having adjustable endwise bearing against said inking means, and serving to operatively position said inking means with relation to said wheel.

2. A line producing device comprising a wheel, a mount therefor, inking means for said wheel carried by said mount, and an operating handle adjustably fitting in said mount, having endwise bearing against said inking means, and said handle serving to operatively position said inking means with relaton to said wheel.

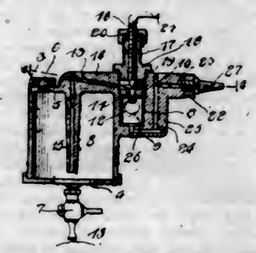
3. A line producing device comprising a wheel, a hollow mount in which said wheel is journaled, said mount containing an inking pad for said wheel, and a handle fitted in said mount, and having endwise bearing against said pad, and said handle being adjustable in said mount to regulate the pressure of said inking pad against said wheel.

4. A line producing device comprising a wheel, a mount therefor having a flat external bearing surface parallel with the plane of said wheel, for its guidance along a ruling edge, inking means for said wheel, and an adjustable handle fitting in said mount, said handle abutting against said inking means to operatively and adjustably position the latter with relation to said wheel.

5. A line producing device comprising a plurality of wheels, whose peripheral edges are of different widths, a mount therefor having flat external bearing surfaces respectively for the guidance of said wheels individually along a ruling edge, said bearing surfaces forming the three sides of a triangle, an ink supply for said wheels, and an operating handle.

[Claim 6 not printed in the Gazette.]

1,225,068. AUTOMATIC DECARBONIZER FOR INTERNAL-COMBUSTION ENGINES. HARVEY E. SMITH and WILLIAM H. LAISURE, Tacoma, Wash. Filed July 3, 1916. Serial No. 107,410. (Cl. 123—180.)



1. A decarbonizer of the class described adapted to be attached to the intake manifold of an internal combustion engine and comprising a fluid container, a vacuum chamber formed integrally with said container, a cut off valve in the upper portion of said chamber, said container having a port opening into said chamber above said valve, a threaded nipple formed integrally with said chamber for engagement with said manifold, said chamber having an outlet port extending through said nipple, and a spray nozzle in the end of said nipple.

2. A decarbonizer of the class described adapted to be attached to the intake manifold of an internal combustion engine and comprising a cylindrical fluid container having a substantially flat top and bottom, said top having a filling opening, an integral spray pipe depending from the top of said container to a point adjacent the bottom, a combined vacuum and sight feed chamber formed integrally with said container, said chamber having sight openings therein, the upper portion of said chamber being internally threaded, a sight feed glass in said chamber, a valve disk threaded into said chamber and engaged with the top of said glass, said disk being spaced from the top of said chamber and having a valve seat therein, a rib formed integrally with the top of said container and having a downwardly inclined passage-way communicating with said chamber above said valve disk, said passageway also communicating with the bore of said spray pipe, a threaded nipple formed integrally with the side of said chamber opposite its connection with the container, said nipple having a passageway communicating with the bottom of said chamber, a spray nozzle threaded in the end of said nipple, a needle valve holder threaded in the upper end of said chamber, said holder being internally threaded, and a needle valve disposed in said valve holder and having threads for engagement with the internal threads thereof, said needle valve being adapted to engage the valve seat in said disk.

3. The combination with an internal combustion engine having an intake manifold, and a carbureter on said manifold, of a decarbonizer comprising a fluid container, a combined vacuum and sight feed chamber formed integrally with said container, said chamber having a sight opening therein, a sight feed glass in said chamber, a member having a valve seat disposed in the chamber and in engagement with said glass to hold the latter therein, a needle valve for coaction with said seat, said container having a port opening into said chamber above said valve seat, a threaded nipple for engagement with the intake manifold, said chamber having a port extending through said nipple, and a spray nozzle in said nipple and disposed within said manifold.



1,225,069. BOTTLE-CARRIER. ARTHUR M. SNYDER, Fairfield, Iowa. Filed Mar. 18, 1916. Serial No. 85,227. (Cl. 215—1.)

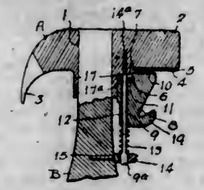


1. A bottle-carrier, comprising a suspending bail and a pair of half-ring stirrups, to encircle the bottle-neck, one of the stirrups having upstanding ears to connect with said bail, and the other stirrup having terminal loops engaging said ears, the opening between said stirrups being made larger or smaller by slipping the looped stirrup up or down.

2. A bottle-carrier, comprising a suspending bail having one of its legs extended to form a ticket-holder, with eyes in said bail to connect with bottle-holding stirrups, a pair of half-ring bottle-holding stirrups, one of them having a pair of upstanding ears coiled at the upper ends, the other having terminal loops inclosing said ears and slidable thereon, substantially as and for the purpose set forth.

3. The described bottle-carrier formed of wire, and comprising a bail with terminal eyes, a part of the wire being extended to form a ticket-holding clip straddling the bail-leg, an engaging stirrup with upstanding ears coiled at the upper ends to engage the bail, and a stirrup having terminal loops inclosing said ears and slidable thereon, whereby the pair of stirrups are made to encircle the bottle neck below the bead, and may be expanded to slip over said bead.

1,225,070. HAMMER FOR OVERHEAD NAILING. SAMUEL SPEED, Tatum, Tex. Filed Nov. 28, 1916. Serial No. 133,945. (Cl. 145—30.)



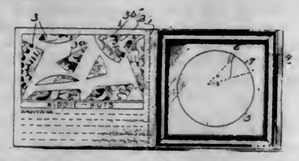
1. A hammer including a head formed with a driving end having the under side thereof formed to provide a fixed jaw, and also provided with a flattened guide surface, a handle upon one end of which the said hammer head is fitted, an arm projecting laterally from said handle and provided with a guide opening, a guide rod loosely fitted within the said guide opening and screwed into the hammer head, said guide rod being arranged parallel to the flattened guide surface on the hammer head, and a sliding jaw mounted upon said guide rod and having a flattened side which slidably engages the before mentioned guide surface on the hammer head, said sliding jaw coöperating with the fixed jaw to grip a nail to hold it in position for starting upon the initial stroke of the hammer.

2. A hammer including a head formed with a driving end having the under side thereof flattened to provide a fixed jaw, a seat for the head of a nail being formed in the hammer head at the inner end of said flattened surface at right angles thereto, said seat being provided at one side thereof with a recess adapted to receive one side of the nail head, and at the opposite side thereof with a flat guide surface, a handle upon one end of which the said head is fitted, an arm projecting laterally from said handle and provided with a guide opening, a guide rod loosely mounted within said guide opening and screwed into the head of the hammer, said guide rod being arranged parallel to the flat guide surface on the hammer head, a sliding jaw movable toward and away from said fixed jaw for coöperation therewith to grip a nail and hold it in position for starting upon the initial stroke of the hammer, said jaw being slidably mounted upon said guide rod and provided with a flattened side which slidably engages the before mentioned flat guide surface on the hammer head, and being also provided with a cut away portion adapted to coöperate with the before mentioned nail head seat to receive the opposite side of the nail head, and a coil spring surrounding the before mentioned guide rod and interposed between the sliding jaw and the lateral arm projecting from the hammer handle.

1,225,071. PUZZLE-PICTURE. FRANK D. SPOTSWOOD, Lexington, Ky. Filed July 19, 1916. Serial No. 110,117. (Cl. 46—41.)

1. An article of the class described comprising a sheet having a blank area defined thereon of a definite outline, the said sheet having upon another portion segments of a complete picture which segments will form said picture when separated from the sheet and properly relatively assembled within the outline of the area, the complete pic-

ture being of the same outline and dimensions as the said blank area.



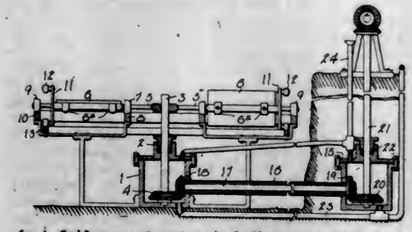
2. An article of the class described comprising a sheet having a blank area defined thereon of a definite curvilinear outline, the said sheet having upon another portion segments of a complete picture which segments will form said picture when separated from the sheet and properly relatively assembled within the outline of the area, the complete picture being of the same outline and dimensions as the said blank area.

3. An article of the class described comprising a sheet having a blank area defined thereon of a definite curvilinear outline, the said sheet having upon another portion segments of a complete picture which segments will form said picture when separated from the sheet and properly relatively assembled within the outline of the area, the complete picture being of the same outline and dimensions as the said blank area, the majority of said segments each having an edge for registration with the margin of the said blank area.

4. An article of the class described comprising a sheet having a blank area defined thereon of a definite outline, the said sheet having upon another portion segments of a complete picture which segments will form said picture when separated from the sheet and properly relatively assembled within the outline of the area, the complete picture being of the same outline and dimensions as the said blank area, the face of the sheet having within the area lines defining the position of a definite one of said segments.

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1,225,072. CURRENT-MOTOR. JAMES M. STAFFORD, Washington, Ind. Filed Nov. 9, 1915. Serial No. 60,542. (Cl. 170—153.)

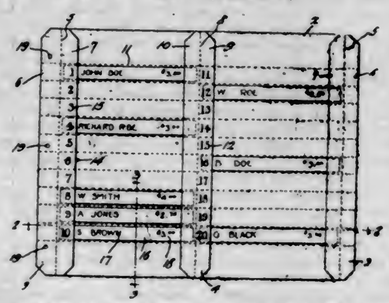


1. A fluid current motor, including a vertical shaft, a series of horizontal arms radiating therefrom, supporting rollers applied to the outer and inner ends of the arms, outer and inner concentric tracks engaging the said rollers and coöperating therewith to support the arms, a paddle mounted upon each of the arms between the two supporting rollers and adapted to rotate about the same as an axis, a frame rigid with each of the paddles and arranged at right angles to the plane thereof, rollers journaled upon the frame and arranged at the corners of a square, and an annular track for the said rollers of the frame, the track being provided at diametrically opposite points with depressions and two of the rollers of each paddle normally traveling upon the track to hold the paddle against rotation, although as the rollers reach the depressions the paddle is rotated a quarter turn.

2. A fluid current motor, including a vertical shaft, a series of horizontal arms radiating therefrom, supporting rollers applied to the outer and inner ends of the frames, supporting tracks engaging the said rollers, a paddle mounted upon each of the arms between the two rollers and adapted to rotate about the same as an axis, a frame rigid with each of the paddles and arranged at right angles to the plane thereof, guide rollers journaled upon the frame and arranged at the corners of a square, a guide track for the said rollers of the frame, the guide track being provided at diametrically opposite points with depressions, and guard plates arranged over the depressions and having a spaced and parallel relation thereto, two of each of the guide rollers normally traveling upon the guide track to hold the paddle against rotation, and the paddle being given a quarter turn by the movement of the rollers as they travel through the depressions.

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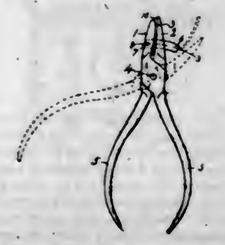
1,225,073. EMPLOYEE'S NUMBER, NAME, AND RATE RECORD. WILLIAM H. STAFFORD, ROBERT M. MILLARD, and JOSEPH PAUL, Eau Claire, Wis. Filed Oct. 31, 1916. Serial No. 128,795. (Cl. 11—7.)




A leaf for a loose leaf binder, comprising a body; separate alined inner end strips applied to opposed faces of the body and extended outwardly to one edge of the body; separate alined outer end strips applied to opposed faces of the body and extended outwardly to the opposite edge of the body; separate alined intermediate strips applied to opposed faces of the body; transverse securing means uniting the intermediate portions of the intermediate strips with each other and with the body and dividing each intermediate strip into lateral wings; transverse securing means uniting the intermediate portions of the respective end strips with each other and with the body, and dividing each end strip into inner and outer wings, the outer wings of the inner end strips and the body having holes for receiving a binding means; and longitudinal lines of securing means connecting the strips with the body and sub-dividing the wings of the intermediate strips and the inner wings of the end strips into coöperating card-holding pockets, the longitudinal lines of securing means being extended to said edges of the body thereby to maintain the holes of the inner strips and of the body alined, and to hold the outer wings of the outer end strips to the body thereby to form a double thick reinforcement.

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1,225,074. PLIERS. ERNEST STEAD, Binghamton, N. Y. Filed Mar. 31, 1916. Serial No. 87,981. (Cl. 81—15.)

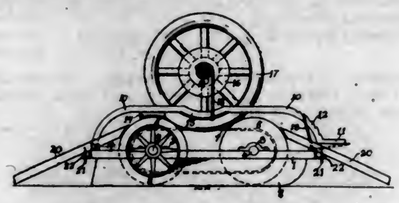


In a pair of pliers, the combination with a pair of main jaws having longitudinally curved gripping faces, of an intermediate jaw having opposite longitudinally curved gripping faces and provided with a raised transverse rib on one of said faces at a point slightly beyond the end face of the coöperative main jaw.



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1,225,075. POWER-TRANSMITTING MECHANISM. EUGENE R. SWAN, Billings, Mont. Filed June 24, 1916. Serial No. 105,761. (Cl. 21—90.)



1. In a device for transmitting power from the engine of an automobile, the combination with a frame, a pair of parallel drums journaled in the frame and adapted to support the drivers of the automobile, operative connection between the two drums to cause them to rotate in unison, means carried by one of the drums for transmitting power from the same, and inclined approaches at both ends of the frame, a horizontally disposed lever pivoted at one end to one end of the frame, and having at its other end a handle and a ratchet sector near the other end of the frame a bail pivoted to said other end of the frame and arranged to engage the ratchet sector, a brake shoe fixed on the lever and arranged to engage one of the drums when the lever is depressed to a certain extent.

2. In a device for transmitting power from the engine of an automobile, the combination with a frame, a pair of parallel drums journaled in the frame and adapted to support the drivers of the automobile, operative connection between the two drums to cause them to rotate in unison, means carried by one of the drums for transmitting power from the same, and inclined approaches at both ends of the frame, a horizontally disposed lever pivoted at one end to one end of the frame and having its other end provided with a handle and a ratchet sector, a pivoted bail at the other end of the frame adapted to engage the teeth of the sector, a hook near the middle of the lever for engaging over the axle tube of the automobile and pressing downward on the same when the lever is depressed to a suitable extent for that purpose.

3. In a device for transmitting power from the engine of an automobile, the combination with a frame, a pair of parallel drums journaled in the frame and adapted to support the drivers of the automobile, operative connection between the two drums to cause them to rotate in unison, means carried by one of the drums for transmitting power from the same, and inclined approaches at both ends of the frame, a horizontally disposed lever pivoted at one end to one end of the frame and having its other end provided with a handle and a ratchet sector, a pivoted bail at the other end of the frame adapted to engage the teeth of the sector, a hook near the middle of the lever for engaging over the axle tube of the automobile and pressing downward on the same when the lever is depressed to a suitable extent for that purpose, said lever being offset downwardly near the middle to avoid contact with the gear-housing of the automobile axle tube.

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1,225,076. CARBURETER-VALVE. GEORGE H. TABER, Binghamton, N. Y., assignor to The Taber Carbureter Company, Inc., Binghamton, N. Y., a Corporation of New York. Filed May 8, 1915. Serial No. 26,684. (Cl. 137—26.)

1. In an air valve structure for carbureters, comprising, in combination, an auxiliary air inlet of rectangular cross section and substantially uniform area, a swinging flange valve of rectangular section hinged at one edge of the rectangular air inlet and having the two sides extending closely to the walls of the rectangular inlet whereby on opening the valve all of the air passes between the bottom of the valve and the bottom of the rectangular inlet, and means in operative association with said moving flap valve for increasing the resistance to inward opening proportionally to engine suction.



2. In air valve structure for carbureters, comprising, in combination, an auxiliary air inlet of rectangular cross section and substantially uniform area, a swinging flap valve of rectangular section hinged at one edge of the rectangular air inlet and having an opening movement of substantially 90°, and means in operative association with said swinging flap valve for increasing the resistance to inward opening proportionately to the increase in engine suction.

3. An air valve structure for carbureters, comprising, in combination, a swinging air valve, a blade spring for holding said valve to its seat and resisting the inward movement of said valve under the influence of engine suction, a plurality of adjusting means for said spring, one device adjusting the spring for excessive engine suction, a second device adjusting the said spring for medium degrees of engine suction, said device comprising a slidably adjustable spring mounting, the said mounting being adapted to be slid up and down along on base disposed in a plane at an angle to the plane of the flap valve when closed, and a third device adjusting the spring for low engine suction.

4. An air valve for carbureters comprising, in combination, an inwardly opening flap valve, a seat therefor, a blade spring for retaining the flap valve in normally closed position, and means for increasing the spring tension after the valve has opened to a predetermined extent, said means comprising a pair of pivotally connected links connecting the valve and the spring, and a finger projecting outwardly from the valve and adapted to impact against said links and to thereby compound their action whereby the spring tension is increased substantially as described.

5. An air valve structure for carbureters comprising in combination a hinged, inwardly swinging flap-valve, a pressure finger or lever projecting outwardly therefrom, a pivoted connection to the outer side of said valve, and means for causing said connection to transmit pressure or pull applied to it in a direction perpendicular to the face of the valve.

[Claims 6 to 11 not printed in the Gazette.]

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1,225,077. GREASE-CUP CAP. DANIEL H. TWAITS, Chicago, Ill. Filed Dec. 22, 1913. Serial No. 808,165. (Cl. 184—48.)

1. The combination of a grease cup comprising a cap member and a body member coöperating therewith, and a substantially U-shaped spring secured to one of the members, and means carried by one of the legs of the spring for preventing distortion of the spring, said body member having means engaging the free ends of said spring.

2. The combination of a grease cup comprising a cap and a body portion and a substantially U-shaped spring

secured at the connecting portion thereof to one of said members and engaging the other member at the free ends of the spring and having means carried by one of the sides of the U of the spring and engaging the other side thereof, said body member having means engaging the free ends of said spring.



3. The combination of a grease cup comprising a cap member and a body member secured thereto, and a substantially U-shaped spring having two legs and a connecting portion secured to one of the members at the connection between the legs of the spring, and means carried by one of the legs and embracing the other leg, said body member having means engaging the free ends of said spring.

4. In a grease cup, the combination of a body portion and a cap threaded thereon, a spring having two legs and a connecting portion forming a U, and means connecting the two legs and carried by them respectively for preventing distortion of the spring, said body member having means engaging the free ends of said spring.

5. The combination of a grease cup comprising a body portion and a cap member threaded on the body portion, a spring having two legs connected together at one end and having means for securing the spring to the cap, and means carried by one of the legs and extending around the other limiting the movement of the legs in one direction, said body portion having a non-circular portion engaging the free ends of the spring.

[Claims 6 to 12 not printed in the Gazette.]

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1,225,078. GREASE-CUP BASE. DANIEL H. TWAITS, Chicago, Ill. Filed Dec. 22, 1913. Serial No. 808,166. (Cl. 184—38.)



1. A grease cup body comprising a stem having an angular tubular upper portion and a threaded lower portion, and a head having an angular tubular portion extending from the side thereof, the angular tubular portion of one member embracing the angular tubular portion of the other.

2. A grease cup body comprising a stem having a threaded lower end, an internal passageway, an angular portion at its upper end, a head comprising a disk having an angular sleeve extending from the side thereof and engaging the angular portion of the head, and projections on the stem extending through the disk and having their ends upset to engage the same.

3. A grease cup body comprising a stem having a threaded lower end, an internal passageway, an angular portion at its upper end; a head comprising a disk having an angular sleeve extending from the side thereof and engaging the angular portion of the stem, and means for positively securing the head to the stem.

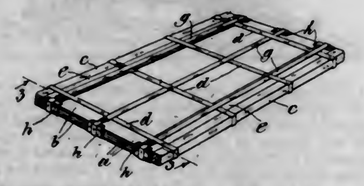
4. In a grease cup body, the combination of a stem having an angular tubular end, a disk having an angular tubular sleeve extending from the side thereof and pressed into said tubular end, and a resilient washer surrounding said sleeve and resting against said washer, and a second disk resting against said resilient washer and abutting the upper end of the stem.

5. In a grease cup body, the combination of a hollow stem having a threaded lower end and an angular portion at its upper end, a disk having an angular sleeve pressed from the side thereof and fitted into the upper end of said stem, a washer of resilient material surrounding said sleeve and fitted against said disk, and a second disk having an angular opening surrounding said sleeve, said second disk resting against said washer and abutting the upper end of the stem.

[Claims 6 to 16 not printed in the Gazette.]

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1,225,079. PACKAGING WALL-BOARD. CHARLES A. UPSON, Lockport, N. Y. Filed Apr. 17, 1916. Serial No. 91,629. (Cl. 206—60.)



1. In combination with sheets or panels of wall-board and the like, packaging therefor comprising stiffeners for opposite edges of approximately no greater width than the thickness of the package, and straps passed tightly around the opposite stiffeners and the bundle of sheets or panels to hold the stiffeners tightly against the edges of the bundle and to press the sheets or panels closely together.

2. In combination with sheets or panels of wall-board and the like, packaging therefor comprising stiffeners for opposite edges of approximately no greater width than the thickness of the package straps passed tightly around the opposite stiffeners and the bundle of sheets or panels, and binders interposed between the stiffeners and the adjacent edges of the bundle and having their edge portions overlapping the edge portions of the bundle.

3. In combination with sheets or panels of wall-board and the like, packaging therefor comprising stiffeners for opposite edges of approximately no greater width than the thickness of the package, straps passed tightly around the opposite stiffeners and the bundle of sheets or panels, and binders secured to the stiffeners between the stiffeners and the adjacent edges of the bundle and having their edge portions overlapping the adjacent edge portions of the bundle.

4. In combination with sheets or panels of wall-board and the like, packaging therefor comprising stiffeners of wood for opposite edges of the bundle having each a thickness approximately no greater than the thickness of the bundle, and straps passed tightly around the opposite stiffeners and the bundle of sheets or panels to hold the stiffeners tightly against the edges of the bundle and to press the sheets or panels closely together.

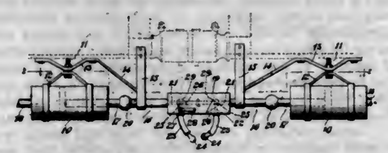
5. In combination with sheets or panels of wall-board or the like, packaging therefor comprising stiffeners of wood for opposite edges of the bundle having each a thickness approximately no greater than the thickness of the bundle, binders secured to the stiffeners between the stiffeners and the adjacent edges of the bundle and having their edge portions overlapping the adjacent edge portion of the bundle, and straps passed tightly around the opposite stiffeners and binders and the bundle.

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1,225,080. TRAIN-PIPE COUPLING. THOMAS W. VANBUSKIRK, Juniata, Pa., assignor of one-half to John L. Brubaker, Juniata, Pa. Filed June 8, 1916. Serial No. 102,551. (Cl. 188—13.)

1. A train line coupler comprising a cylinder, a piston slidably mounted in the cylinder, a pipe connected with the outer end of said piston, a coupler head connected with said pipe and having one end portion cut to provide an abutment face and a cam face, the coupler head being provided with a passageway leading from the pipe to the abutment face and with a branch passageway terminating at the lower face of the coupler head, an auxiliary pipe communicating with the branch passageway, a valve extending through the coupler head at the intersection of the passageway and auxiliary passageway, and a handle for said valve positioned for engagement with the cam face of an adjoining coupler head whereby the valve may be moved to permit passage of air through the main passageway of the valve head when the handle is moved by the cam face of an adjoining valve head.





2. A train pipe coupler comprising a cylinder, a piston slidably mounted in said cylinder and forming a conduit, a pipe connected with the outer end portion of said piston, a coupler head connected with said pipe and having one end portion cut to provide an abutment face and a cam face, the coupler head being provided with a passageway leading from the pipe and terminating at the abutment face, and a control valve for the passageway of the coupler head provided with a turning handle positioned for engagement with the cam face of an adjoining coupler head.

3. A train line coupler including a pipe, a coupler head connected with said pipe and having its outer end portion cut to provide an abutment shoulder and a cam shoulder to one side of the abutment shoulder and terminating short of the outer end of the coupler head, the coupler head being provided with a passageway leading from said pipe to said abutment shoulder, a valve for said passageway, and a turning handle for said valve positioned for engagement with the cam shoulder of an adjoining head whereby the valve may be moved to an open position when the coupler heads of adjoining cars are brought together with the outer end portions of the connected coupler heads extending to protect the turning handles.

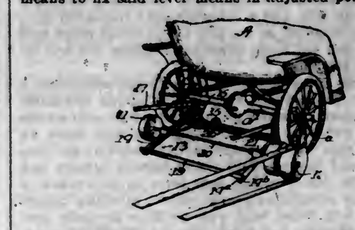
4. A train pipe coupler comprising a line pipe having a joint intermediate its length permitting universal movement, a coupler head connected with said pipe and provided with a passageway leading from the pipe to one end of the coupler head, said coupler head being provided with a shoulder forming a cam surface, a valve for said passageway having its stem extending beyond the side face of the coupler head, and a turning handle carried by the stem of said valve positioned for engagement with the cam face of an adjoining coupler whereby the valve may be opened when the couplers of adjoining cars are brought together.

5. A train pipe coupler comprising a line pipe, a coupler head connected with said pipe and provided with a passageway leading from the pipe through the coupler head, said coupler head being cut to provide a cam face, a valve for said passageway, and a turning handle for said valve positioned for engagement with the cam face of an adjoining coupler head whereby the valve may be opened when the couplers of adjoining cars are brought together.

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1,225,081. POWER TRANSMISSION. EMMET L. VAN DOLSEN, Laporte, Ind., assignor of one-half to Loren M. Russell, Laporte, Ind. Filed Mar. 16, 1916. Serial No. 84,502. (Cl. 21—90.)

1. In equipment of the character described, a frame-rectangle, a power shaft thereon, legs pivoted to the front end of the frame, means to lock the legs in adjusted positions to determine the height of the frame end, a pair of saddles pivoted below their heads adjacent the front end of said frame, lever means for moving said saddles and means to fix said lever means in adjusted position.



2. In equipment of the character described, a frame-rectangle, a power shaft thereon adjustable longitudinally of the frame, legs pivoted to the front end of the frame, means to lock the legs in adjusted positions to determine the height of the frame end, a pair of saddles pivoted below their heads adjacent the front end of said frame, lever means for moving said saddles and means to fix said lever means in adjusted position.

3. The combination of a frame having slotted side bars, shaft brackets adjustable in the slots, a power shaft therein bearing friction wheels, adjustable legs for the front end of the frame, pivoted saddle members, lever means to move said saddle members, and means to lock said levers in adjusted position.

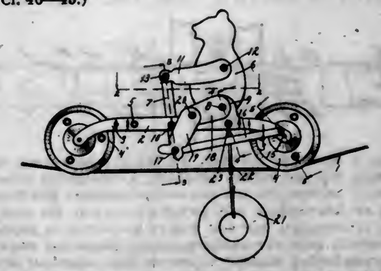
4. The combination of a frame comprising connected side members each comprising angle-irons set in slit-T arrangement, shaft bearings adjustable on said side members having bolts passing through the slot between the angle irons, a power shaft in said bearings, and means connected with the frame for lifting an automobile traction wheel from the ground into driving relation to the power-shaft.

5. The combination of a frame, wheel-supported legs at the front of the frame disposing said frame in inclined position with its rear end resting on the ground, a power-shaft carried by the frame, and means connected with the front end of the frame to lift an automobile wheel from the ground into power-delivering relation to the power-shaft.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,082. WHEELED TOY. THOMAS M. VAUGHAN, Battle Creek, Mich., assignor to B.-C. M'f'g Co., Battle Creek, Mich. Filed Aug. 15, 1916. Serial No. 114,962. (Cl. 46—45.)



1. In a toy, the combination of a frame comprising a pair of bars disposed side by side and having oppositely offset ends providing wheel forks, a pair of grooved wheels adapted to travel on a cord disposed in said forks, an axle for the rear wheel provided with a crank at one end, a lever pivoted between said frame bars, a pitman link connecting the lower end of said lever to said crank, a figure member comprising a body portion pivotally mounted between said frame bars, arm portions pivotally connected to said body and to the upper end of said lever, leg portions comprising pivotally connected inner and outer sections, the inner sections being mounted on the body

pivots on the outer sides of said frame bars, and the outer sections being mounted on the pivot connecting said lever to said pitman link, and a counterweight suspended by a rod pivotally mounted on the side of the frame below said body pivot, said rod being offset at its upper end and inclined below the offset.

2. In a toy, the combination of a frame comprising a pair of bars disposed side by side and having oppositely offset ends providing wheel forks, a pair of grooved wheels adapted to travel on a cord disposed in said forks, an axle for the rear wheel provided with a crank at one end, a lever pivoted between said frame bars, a pitman link connecting the lower end of said lever to said crank, a figure member comprising a body portion pivotally mounted between said frame bars, arm portions pivotally connected to said body and to the upper end of said lever, leg portions comprising pivotally connected inner and outer sections, the inner sections being mounted on the body pivots on the outer sides of said frame bars, and the outer sections being mounted on the pivot connecting said lever to said pitman link.

3. In a toy, the combination of a frame forked at its ends, grooved wheels adapted to travel on a cord disposed in said forks, an axle for the rear wheel provided with a crank, a lever pivoted on said frame, a pitman link connecting the lower end of said lever to said crank, a figure member comprising a body portion pivotally mounted on said frame, an arm portion pivotally connected to said body and to the upper end of said lever, and a leg portion comprising pivotally connected sections, the inner section being mounted on the body pivot and the outer section on the pivot connecting said lever to said pitman link, and a counterweight pivotally mounted on said frame to be suspended below said wheels.

4. In a toy, the combination of a frame forked at its ends, grooved wheels adapted to travel on a cord disposed in said forks, an axle for the rear wheel provided with a crank, a lever pivoted on said frame, a pitman link connecting the lower end of said lever to said crank, a figure member comprising a body portion pivotally mounted on said frame, an arm portion pivotally connected to said body and to the upper end of said lever, and a leg portion comprising pivotally connected sections, the inner section being mounted on the body pivot and the outer section on the pivot connecting said lever to said pitman link.

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1,225,083. HARNESS BACK-STRAP. JOHN H. VENTER, Lincoln, Nebr. Filed May 23, 1916. Serial No. 99,356. (Cl. 54—5.)

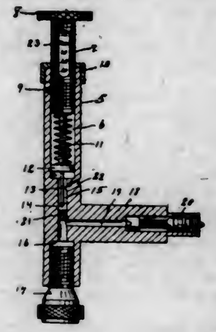


In a device of the class described, a back-strap comprising top and bottom members; a reinforcing element located between the top and bottom members and including an intermediate bar, socket portions at the ends of the intermediate bar and fingers projecting in opposite directions from the socket portions; means for securing the reinforcing element to one of said members; fillers between the top and bottom members and provided with notches receiving the fingers; and fillers between the top and bottom members and closing the spaces defined by the intermediate bar and the socket portions, at the sides of the back-strap.

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1,225,084. PRESSURE INDICATOR AND REGULATOR. WILLIAM M. VON SICK, Los Angeles, Cal., assignor of one-half to Daniel M. Critchley. Filed June 15, 1916. Serial No. 103,702. (Cl. 137—28.)

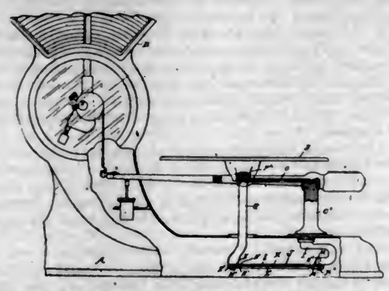
1. A pressure indicator and regulator comprising a casing substantially T shaped in vertical longitudinal section; a spring chamber in the upper end of the long leg of said casing; a longitudinally adjustable pressure regulating bar mounted in the upper end of said spring chamber in screw threaded engagement with said casing and projecting upwardly therefrom and terminating in a head; said bar having a portion of its opposite sides flattened, said flattened portions having indicia thereon for indicating the desired pressure; means projecting through said casing adapted to bear against said bar to prevent rotation thereof; an outlet chamber in the lower end of said long leg; a coupling member mounted at one end in said outlet chamber and projecting downwardly therefrom; a valve chamber connecting the inner ends of said spring and outlet chambers; an inlet passage extending longitudinally through the short leg of said casing and opening into said valve chamber, at its inner end the other end opening to atmosphere; an inwardly opening check valve in the outer end of said inlet passage; a valve seat in said valve chamber above said inlet opening; a piston slidably mounted in the lower end of said spring chamber; a stem projecting downwardly from said piston into the valve chamber; a valve on the lower end of said stem adapted to seat on said valve seat to close the opening therethrough; and a spring in said spring chamber between said pressure regulating bar and the piston adapted to hold said valve seated until the indicated pressure is reached.



2. A pressure indicator and regulator comprising a casing substantially T shaped in vertical longitudinal section; a spring chamber in the upper end of the long leg of said casing; a longitudinally adjustable pressure regulating bar mounted in the upper end of said spring chamber in screw threaded engagement with said casing and projecting upwardly therefrom and terminating in a head; said bar having a portion of its opposite sides flattened, said flattened portions having indicia thereon for indicating the desired pressure; means projecting through said casing adapted to bear against said bar to prevent rotation thereof; an outlet chamber in the lower end of said long leg; a coupling member mounted at one end in said outlet chamber and projecting downwardly therefrom; a valve chamber connecting the inner ends of said spring and outlet chambers; an inlet valve chamber in the outer end of the other leg of said casing; an inwardly opening check valve in said last valve chamber; an inlet passage connecting said inlet valve chamber and said first mentioned valve chamber; a valve seat in said valve chamber above said inlet opening; a piston slidably mounted in the lower end of said spring chamber; a stem projecting downwardly from said piston into the valve chamber; a valve on the lower end of said stem adapted to seat on said valve seat to close the opening therethrough; and a spring in said spring chamber between said pressure regulating bar and the piston adapted to hold said valve seated until the indicated pressure is reached.



1,225,085. SCALE-CHECK. GUSTAVUS A. N. WAHLEN, St. Johnsbury, Vt. Filed Jan. 24, 1916. Serial No. 73,806. (Cl. 265—62.)



1. In a scale, the combination with a pan or platform, of a spindle therefor, a fixed bearing and a check member operatively connected to said spindle and bearing, said check member being formed of resilient metal and having portions reinforced by substantially non-resilient members to localize the point or points of flexibility.

2. In a scale, the combination with a pan or platform, of a spindle therefor, and a check member having one end rigidly clamped to the spindle and its opposite end rigidly clamped from endwise movement, said check member comprising a metal strip having substantially non-flexible bars secured thereto to prevent flexing of the strip at other than predetermined points.

3. In a scale, the combination with a pan or platform, of a spindle therefor, and a check member for preventing lateral displacement of the spindle while permitting vertical adjustment thereof, said check member comprising a strip of flexible metal having one end fixedly secured from movement and its opposite end fixedly secured to said spindle, and bars secured to said flexible strip and extending longitudinally thereof, the adjacent ends of said bars being reversely tapered and said bars preventing the flexing of the tape except at points intermediate the tapered ends of the bars.

4. In a scale, the combination with a fulcrum stand, of a lever, a pan or platform having a spindle and operatively connected to said lever, said lever having a yoke mounted on knife-edge pivots, and parallelly-arranged check members formed of resilient strips and each having one end clamped to said yoke and its opposite end clamped to said fulcrum stand.

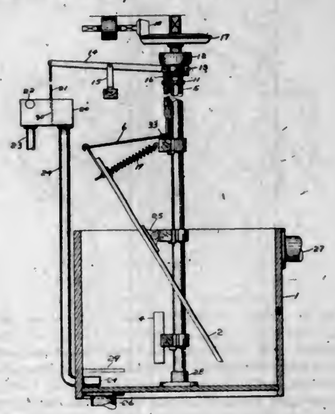
5. In a scale, the combination with a fulcrum stand, of a lever, a pan or platform having a spindle and operatively connected to said lever, said lever having a yoke mounted on knife-edge pivots, and parallelly-arranged check members formed of resilient strips and each having one end clamped to said yoke and its opposite end clamped to said fulcrum stand, said strips being reinforced to prevent their flexing at points out of alinement with the knife-edge pivots.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,086. AUTOMATIC MEANS FOR REGULATING PULP-STOCK. THOMAS WARNER, Oregon City, Oreg. Filed May 16, 1916. Serial No. 97,795. (Cl. 92—46.)

1. In a pulp stock regulator, in combination with a tank having a stock inlet and outlet and a water inlet contiguous to the stock inlet, of a central vertical shaft therein carrying three horizontal arms, the lower arm being located at bottom of tank and acting as an agitator, the middle horizontal arm having hinged thereon near its outer extremity an upright arm or paddle, the lower part of which reaches nearly to the bottom of the tank, means for rotating a central shaft, a coil spring attached to the top part of the paddle and the outer end of the top horizontal arm, a cable attached to the top of the paddle arm and to one arm of a bell crank on the top side of the top horizontal arm, two jointed vertical rods parallel with the central shaft, the bottom rod being attached to arm of bell crank, the top arm supporting a sliding spool on the shaft, a lever attached to said spool at one end and carrying a vertical plate at outer end and a box in which said plate slides up and down and divides into two sections, one of the sections being connected to the water inlet in tank.



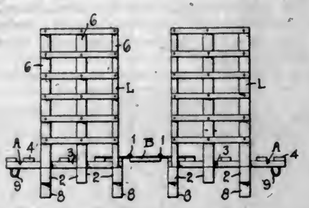
2. In a pulp stock regulator, in combination with a tank which has a stock inlet and outlet and a water inlet, of a hinged paddle therein whose deflection is proportional to the density of the stock through which it revolves and means for controlling the water supply to the tank dependent upon this deflection of the paddle.

3. In a pulp stock regulator of the character described means for revolving a hinged paddle therein so that its deflection will be proportional to the density of the stock through which it revolves.

4. The method of regulating the consistency of pulp stock which consists of automatically adding water to the stock in proportion to its density as indicated by the deflection of a hinged paddle that revolves through it.

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1,225,087. HAY-RACK. JAMES P. WATSON, Benton, Ill. Filed Aug. 28, 1916. Serial No. 117,343. (Cl. 21—74.)



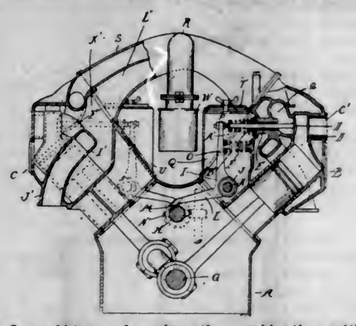
A hay rack comprising a plurality of sections, means for hingedly connecting adjacent margins of the sections whereby the same may be folded one upon the other, and ladders pivotally engaged with the opposite ends of the sections and adapted to fold thereover.

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1,225,088. ENGINE-CASING. FRANK E. WATTS and DONALD T. HASTINGS, Detroit, Mich., assignors, by mesne assignments, to Hupp Motor Car Corporation, Richmond, Va., a Corporation of Virginia. Filed Oct. 21, 1915. Serial No. 57,159. (Cl. 123—55.)

1. In a V-type of engine, the combination with the opposed cylinder casings, valves therefor, stems for the

valves arranged on the inner side of the cylinder casing, and an adjustable means between the valve stems and said actuating mechanism positioned adjacent the top of said cylinder casing, and spaced chambers respectively associated with said cylinder casings within which said adjustable means is arranged, said chambers having removable portions providing access to said means.



2. In a V-type of engine, the combination with the opposed cylinder casings, valves therefor, a substantially horizontal stem for each valve positioned adjacent the upper end of the casing, a rocker adjacent the lower end of the casing, a journal for said rocker, said rocker being provided with an arm, an adjustable bearing carried by said arm and engaging the end of the valve stem, and said rocker having a second arm, a cam shaft, and a cam on said shaft for actuating said second arm.

3. In a V-type of engine, the combination with the opposed cylinder casings, exhaust conduits for each of said casings communicating with the cylinders upon the inner sides thereof, said exhaust conduit terminating in a discharge end positioned upon the outer side of said cylinder casing.

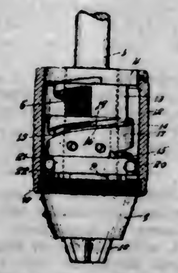
4. In a V-type of engine, the combination with the opposed cylinder casings, exhaust conduits for each of said casings communicating with the cylinders upon the inner sides thereof, said exhaust conduit terminating in a discharge end positioned upon the outer side and arranged beneath said cylinder casing.

5. In a V-type of engine, the combination with the opposed cylinder casings, the exhaust conduits of each of said casings communicating with the cylinders upon the inner sides thereof, said exhaust conduit being inclosed within the cylinder casing and terminating in a discrarge end positioned upon the outer side of said cylinder casing, and a comparatively large water-jacketing chamber surrounding said conduit.

[Claims 6 to 13 not printed in the Gazette.]

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1,225,089. CHUCK. DAVID WEIR, Hartford, Conn. Filed Dec. 1, 1915. Serial No. 64,559. (Cl. 29—115.)



1. A chuck body, a carrier slidably mounted on the chuck body, a carrier actuator rotatably mounted on the chuck body and having a steep pitched cam to operate the carrier, jaws attached to the carrier, a member to receive the thrust of the jaws and means independent of said cam to prevent rotation of said actuator on the chuck body by reason of thrust upon said cam.

2. A chuck body, a carrier slidably mounted on the chuck body and having a cam at its end, a carrier actuator rotatably mounted on the chuck body and having a cam at its end to coöperate with that on the carrier, an operating sleeve rigidly connected with the actuator, jaws attached to the carrier and a member to receive the thrust of the jaws.

3. A chuck body, a carrier slidably mounted on the chuck body and having a cam at its end, a carrier actuator rotatably mounted on the chuck body and having a cam at its end to coöperate with that on the carrier, jaws attached to the carrier, and a member to receive the thrust of the jaws.

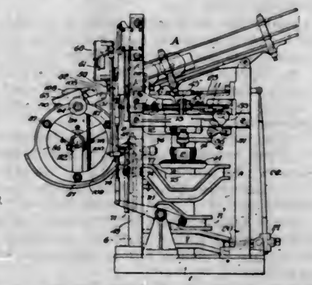
4. A chuck body, a carrier slidably mounted on the chuck body and having a jaw closing and a jaw opening cam, a carrier actuator rotatably mounted on the chuck body and having a cam at its end to coöperate with the jaw closing cam on the carrier, and also having means to coöperate with the jaw opening cam on the carrier, an operating sleeve rigidly connected with the actuator, jaws attached to the carrier and a member to receive the thrust of the jaws.

5. A chuck body, a carrier slidably mounted on the chuck body with a cam formation at its upper end said carrier also having a cam slot, a carrier actuator rotatably mounted on the chuck body above said carrier and having a cam formation on its lower end to coöperate with the cam formation on the carrier, said actuator having a pin to engage the slot on the carrier, an operating sleeve rigidly connected with the actuator, jaws attached to the carrier, and a member to receive the thrust of the jaws.

[Claims 6 to 15 not printed in the Gazette.]

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1,225,090. TAG-TYING MACHINE. ALFRED H. WHATLEY, Providence, R. I., assignor to Wetherell Tag-Stringing Machine Company, Fall River, Mass., a Corporation of Massachusetts. Filed Oct. 26, 1916. Serial No. 127,803. (Cl. 93—91.)



1. In a machine having a reciprocating pushrod for forming and delivering a loop of string at a predetermined point:—a reciprocating member; a pair of pick-up fingers pivotally mounted on said member; the free end portions of said fingers being designed to straddle said pushrod and move between said loop and said pushrod, into said loop to open wider and hold open said loop and permit the withdrawal of said pushrod to later form another loop of string; fixed cam surfaces engaged by said pick-off fingers to give the desired lateral movements to the fingers to enlarge and hold open the string loop; and means to return the reciprocating member and pick-off fingers to normal position.

2. In a tag-tying machine having a reciprocating pushrod for forming and delivering a loop of string at a predetermined point, and grippers to move forward and back through said loop:—a reciprocating member; a pair of pick-off fingers pivotally mounted on said member; the free end portions of said fingers being designed to straddle said pushrod and move between said loop and said pushrod, into said loop to open wider and hold open said loop and permit the withdrawal of said pushrod to later form another loop of string; fixed cam surfaces engaged by said pick-off fingers to give the desired lateral movements to the fingers to enlarge and hold open the string loop; and means to return the reciprocating member and pick-off fingers to normal position, after the forward movement of said grippers through said loop supported by said fingers.

3. In a tag-tying machine a reciprocating pushrod for forming and delivering a loop of string at a predetermined point; grippers to move forward and back through said loop; a standard fixed to the frame of the machine; a member reciprocatingly mounted therein; a lock member pivoted to said standard; a spring always tending to move said reciprocating member in one direction; an oscillating lever, one arm of which moves said member in the opposite direction; a spring always tending to move and hold said lock member in locking position; a lug on said reciprocating member, engaged by said lock member, at the end of one movement due to the oscillating lever; a cam surface on said lock member, engaged by the oscillating lever in its opposite movement to release the lock member from the lug on the spring operated plate and permit the spring to cause the plate to move with great speed for the desired distance; a pair of pick-off fingers pivoted to said reciprocating member, their free end portions being thin and normally close together and adapted to engage the loop on said pushrod; cam surfaces on said standard, engaged by said fingers and designed to cause said fingers to spread, enlarge and hold open the loop formed by the pushrod until said grippers have passed through the loop, when the reciprocating plate with said pickoff fingers closed is returned to normal position by said oscillating lever.

4. In a tag-tying machine having a rotary member with string grippers rotatably mounted in said member, to rotate in the plane of movement of said rotary member, said rotation in one direction being brought about by a spring, and in the opposite direction, by a series of turning cams:—a cam surface on the frame of the machine to engage a surface operatively connected with said grippers, to control the action of said spring so that said grippers will return in said plane to normal position substantially uniformly and quietly.

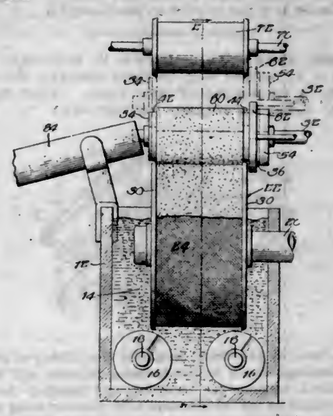
5. In a tag-tying machine having a rotary member; string grippers mounted on an arbor rotatable in said member; an arm fixed to said arbor and having two cam rolls; two cam turning surfaces fixed to the frame of the machine for their respective cam-rolls to successively engage to rotate the arbor in one direction; and a spring to tend to rotate the arbor in the opposite direction, and a cam surface on the frame of the machine to engage a surface operatively connected with said arbor, to control the action of said spring so that the said grippers will rotatably return to normal position substantially uniformly and quietly.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,091. MACHINE AND METHOD FOR MAKING PAPER TUBES. WILLIAM F. WHITCOME, Chicago, Ill. Filed Dec. 31, 1915. Serial No. 69,619. (Cl. 92—66.)

1. In a device of the class described, the combination of a hollow cylinder, a horizontal shaft carrying the cylinder, the inner wall of the cylinder being inclined toward one end of the cylinder, a hollow cap on the end of the cylinder to which said inner surface inclines provided with a plurality of separated compartments each communicating with the interior of the cylinder adjacent to the inner surface thereof, and with a passageway in the shaft, the interior of said compartments being so shaped and arranged that when a given compartment is at the bottom of the cylinder below the shaft, liquid in that cylinder drains into that particular compartment by which it is carried, as the cylinder rotates, up to a position where it can drain out of said compartment into the passages within the shaft.



2. In a device of the class described, the combination of a rotatable cylinder of substantially fire-proof material provided on its surface with a multiplicity of perforations through which air is drawn by a suitable vacuum pump, means for bringing particles of paper pulp into contact with said rotating cylinder so that they may be drawn onto the surface of said cylinder, and means for compressing and drying the paper pulp directly upon the cylinder, for the purposes set forth.

3. In a device of the class described, the combination of a tank containing paper pulp material suspended in liquid, a hollow rotatable cylinder having a perforated circumferential surface rotatable in said liquid, the interior of said cylinder communicating with a suitable discharge port located below the normal surface of the liquid in the tank, whereby particles of paper material in said liquid are normally deposited on the circumference of said cylinder as it rotates, flanges on the ends of said cylinder defining the length of the paper material deposited on said cylinder, a second rotatable cylinder in substantial contact with said first cylinder provided with superficial perforations leading to an air pump device constantly drawing air through said perforations, said second cylinder meshing with the flanges of the first cylinder, whereby as the two cylinders are rotated a cylinder of paper of definite length is deposited upon the second cylinder.

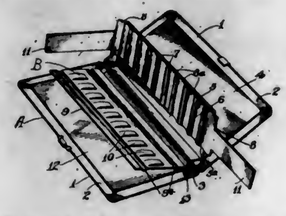
4. In a device of the class described, the combination of a tank containing paper pulp material suepended in liquid, a hollow rotatable cylinder having a perforated circumferential surface rotatable in said liquid, the interior of said cylinder communicating with a suitable discharge port located below the normal surface of the liquid in the tank, whereby particles of paper material in said liquid are normally deposited on the circumference of said cylinder as it rotates, flanges on the ends of said cylinder defining the length of the paper material deposited on said cylinder, a second rotatable cylinder in substantial contact with said first cylinder provided with superficial perforations leading to an air pump device constantly drawing air through said perforations, said second cylinder meshing with the flanges of the first cylinder, whereby as the two cylinders are rotated a cylinder of paper of definite length is deposited upon the second cylinder, and means for thereafter drying the paper upon said second cylinder, for the purposes set forth.

5. In a device of the class described, the combination of a rotatable cylinder provided with means for providing a suction through a multiplicity of perforations on its surface, a second cylinder provided with heating devices

adapted to mesh with the first cylinder to dry out paper material placed thereon, and means for supplying the first cylinder with paper material.

[Claims 6 to 9 not printed on the Gazette.]

1,225,092. CIGAR-CASE. GEORGE M. WILLIAMS, Elizabeth, N. J., assignor to P. Lorillard Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 2, 1916. Serial No. 129,180. (Cl. 206—41.)



1. A case of the class described comprising a pair of cover sections, and a holder inclosed thereby, said holder including a member for receiving and holding the individual cigars in spaced relation, said member being adapted to be positioned to lie substantially flat within one of the cover sections to enable the cigars to be packed flatwise therein, and a retaining member positionable to expose the receiving member throughout its inner face during such packing operation and adapted to be permanently united with the cigar receiving member after the cigars have been packed.

3. A case of the class described comprising a pair of hinged dished cover sections, and a holder adapted to be inclosed thereby, said holder including a hinged member having grooves therein for the reception of individual cigars, said grooved member being adapted to be positioned to lie flat within the adjacent cover section to enable the cigars to be packed flatwise in the grooves, and a hinged retaining member positionable to expose the receiving member throughout its inner face during such packing operation and adapted to be permanently united with the grooved member to retain the cigars within the holder, said retaining member having means adapted to bear against and maintain the cigars in the grooves of the grooved member.

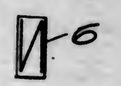
6. A case of the class described comprising a pair of hinged cover sections, a sheet pasted to the inner face of each cover section, a grooved wall section formed integral with and hingedly united to one of said sheets and adapted to be positioned to lie flat against said sheet in the packing of the cigars, and a retaining wall formed integral with and hingedly united to the other sheet and positionable to expose the grooved wall section throughout its inner grooved face during such packing operation and adapted to be permanently connected with the grooved wall after the cigars have been packed.

8. A case of the class described comprising a pair of hinged cover sections, and a box-like holder adapted to be inclosed thereby, said holder including two side walls and two end walls, one of said side walls having a series of cigar-receiving grooves formed therein and in which the cigars may be packed flatwise, the other of said side walls being positionable to expose the grooved wall throughout the length of the grooves and having a series of tongues adapted to aline with the grooves when the side walls are united in substantial parallelism after the cigars have been packed.

11. In a container of the character described, a case of the leaf section type, and a holder secured to the case and positioned therein to be housed thereby when the case is closed, said holder comprising opposing receiving and retaining walls adapted to combinedly produce a receptacle for positioning the cigars individually and for individually maintaining the cigars in such positions, said walls being positionable to wholly expose the receiving face of the receiving wall during loading of the holder to permit flatwise positioning of the cigars, and relatively movable to place said walls in receptacle-forming position after loading is completed, and means for permanently securing the walls in such latter position, whereby the cigars may be collectively introduced flatwise while removal of positioned cigars will be limited to cigar movements in an endwise direction.

[Claims 2, 4, 5, 7, 9, and 10 not printed in the Gazette.]

1,225,093. MATRIX OR TYPE BAR OR HOLDER. EDWARD E. WILSON, Cleveland, Ohio. Filed Apr. 11, 1916. Serial No. 90,412. (Cl. 199—12.)



1. The combination of a holder bar having recesses along one face thereof, a removable side plate extending across said recesses, and separate impression bodies having projections fitting in said recesses and held therein by said side plate.

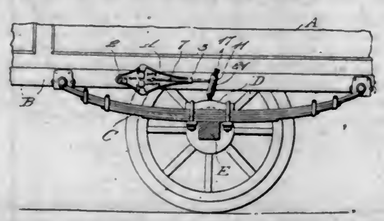
2. A matrix or type holder bar having recesses extending across the same along one face thereof adapted to hold matrix or type bodies, and side plates on the bar having spring tongues adapted to engage the sides of said bodies.

3. The combination of a holder bar having a row of undercut grooves across the face thereof, and a plurality of impression bodies assembled on said face and having projections engaged in said grooves.

4. The combination of a holder bar having a row of undercut grooves across one face thereof and recesses behind said grooves, and a plurality of impression bodies assembled on said face and having projections fitting in said grooves and lugs fitting in said recesses.

5. The combination of a holder bar having a row of undercut grooves across one face thereof and recesses behind said grooves, and a plurality of impression bodies assembled on said face and having projections fitting in said grooves and lugs fitting in said recesses and side plates on said bar, having tongues beside the recesses, engaging said lugs.

1,225,094. LOAD-INDICATOR FOR VEHICLES. ARTHUR C. WOLLENSAK, Milwaukee, Wis. Filed Aug. 17, 1916. Serial No. 115,460. (Cl. 265—42.)



1. A load indicator for vehicles comprising a plate provided with means for attachment to the body of a vehicle and having a scale thereon, an indicating pointer pivotally mounted intermediate its ends on said plate and having a ball on its outer end, a link having sockets in its opposite ends, said ball being retained in one of said sockets, and a screw having a ball on one end retained in the other socket, said screw being adapted to be attached to a portion of the vehicle not supported by the springs thereof.

2. A load indicator for vehicles comprising a plate provided with means for attachment to the body of a vehicle and having a scale thereon, an indicating pointer pivotally mounted intermediate its ends on said plate and having a ball on its outer end, a link composed of a pair of plates

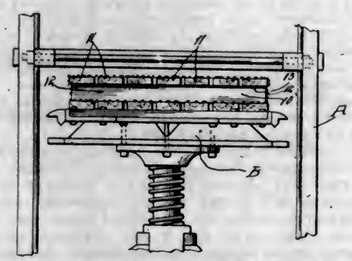


clamped together and having opposing recesses in their adjacent sides near their opposite ends to form sockets, said ball being retained in one of said sockets, a screw having a ball on one end thereof retained in the other socket, said screw being adapted to be attached to a portion of the vehicle not supported by the springs thereof.

3. A load indicator for vehicles comprising a plate provided with means for attachment to the body of a vehicle and having a scale thereon, an indicating pointer pivotally mounted intermediate its ends on said plate and having a ball on its outer end, a link composed of a pair of plates clamped together and having recesses in their adjacent sides near their opposite ends to form sockets, said ball being retained in one of said sockets, the adjacent sides of said plates being also provided with opposing grooves to form a channel extending through one socket to the other, a grease cup attached to one of said plates, a passage extending through the latter and communicating with said grease cup and one of said sockets, and a screw having a ball on one end thereof retained in the other socket, said screw being adapted to be attached to a portion of the vehicle not supported by the springs thereof.

4. A load indicator for vehicles comprising a diamond-shaped plate having a scale extending across the central portion thereof, an indicating pointer pivotally mounted intermediate its ends on one end of said plate for co-operation with said scale, the outer end of said pointer being bent laterally outwardly at right angles, and a link pivotally connected at one end to the laterally bent end of said pointer, said link being provided with means at its other end for attachment to a portion of the vehicle not supported by the springs.

1,225,095. COTTON-PRESS FOLLOWER-BOARD. HEARMAN WUENSCH and OTTO PFEIL, Fredericksburg, Tex. Filed Aug. 21, 1916. Serial No. 116,184. (Cl. 100—19.)

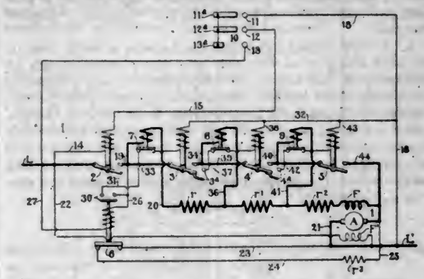


A removable follower board for the heads of plungers of baling presses comprising the combination with a plunger head, a plurality of spaced parallel bars removably carried by the head, spaced transversely extending members secured to said spaced bars, and a plate for covering the space between the transversely extending spaced members, said plate being retained in position between the spaced members and the transversely extending members substantially as described.

1,225,096. MOTOR-CONTROLLER. CHARLES W. YERGER, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 28, 1913. Serial No. 797,876. (Cl. 172—179.)

1. In a motor controller, in combination, means for establishing power connections, accelerating means, means to normally shunt the motor armature and means necessitating operation of the first means to establish power connections prior to operation of the third means to interrupt the armature shunt and necessitating such operation of said shunting means prior to operation of said accelerating means.

2. In a motor controller, in combination, means for establishing power connections, automatic accelerating means, means to normally shunt the motor armature and to control said accelerating means to insure against operation thereof pending interruption of the armature shunt and means insuring retention of said armature shunting means in normal position during establishment of power connections and for a temporary period thereafter.



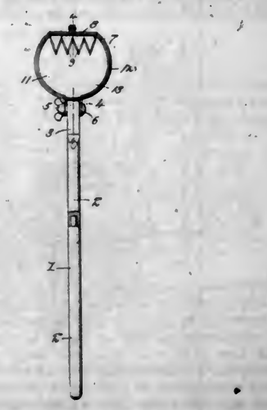
3. In a motor controller, in combination, means for establishing power connections, means to normally shunt the motor armature, automatic accelerating means dependent for operation upon prior operation of said second means to interrupt the armature shunt and manual control means for said first two mentioned means insuring maintenance of the armature shunt during establishment of power connections and for a temporary period thereafter variable at will.

4. In a motor controller, the combination with electro-responsive means for establishing power connections and increasing the power supply for accelerating the motor, of electro-responsive means normally completing an armature shunt and control connections for both of said means insuring retention of the armature shunt for a temporary period following establishment of power connections and necessitating interruption of the armature shunt prior to any increase in the power supply.

5. In a motor controller, the combination with electro-responsive means for establishing power connections for the motor and increasing the supply of power subject to the electrical conditions in the motor circuit, of means normally completing a shunt around the motor armature and insuring against response of said first mentioned means to increase the power supply until after interruption of the armature shunt.

[Claims 6 to 11 not printed in the Gazette.]

1,225,097. FRUIT-PICKER. VALNER W. YOUNG, Abilene, Tex. Filed May 23, 1916. Serial No. 99,354. (Cl. 56—99.)



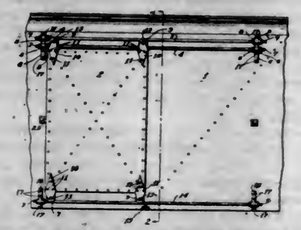
1. A fruit picker comprising a handle, a head consisting of a single piece of sheet metal bent into substantially

U-shaped form and having its arms pivotally and adjustably connected to the handle, a receptacle engaged with the outside of the head, the top portion of said head having one of its edges formed with cutting blades which are disposed at right angles to the top portion of the head and a band encircling the receptacle and having a part engaged with the head to hold the receptacle clamped thereto.

2. A fruit picker comprising a handle, a head consisting of a single piece of metal bent into a substantially U-shaped form and having its arms pivotally and adjustably connected to the handle, a receptacle engaged with the outside of the head, said arms having kerfs formed therein, and a clamping band encircling the receptacle and having a part removably engaged in said kerfs, the top portion of said head having one of its edges formed with cutting blades which are disposed at right angles to said top portion of the head.

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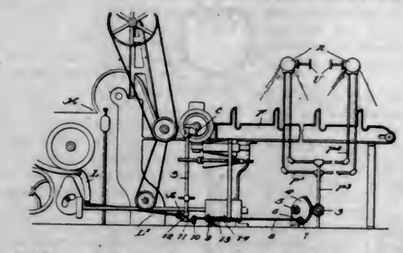
1,225,098. ROLLER CAR-DOOR HANGER. WILLIAM J. ADDISON, St. Louis, Mo., assignor of one-half to Alexander K. Boyer, St. Louis, Mo. Filed Jan. 10, 1917. Serial No. 141,614. (Cl. 16—90.)



An improved car-door hanger, comprising a pair of straight parallel track-rods, brackets having parallel horizontal slots into and through which said rods directly pass and are adjustably mounted above the door opening of a car, means for fixing said brackets upon the car, clamping-nuts threaded on said tracks, on opposite sides of said brackets for locking said rods in said slots after adjustment, a suitable door, and rollers having grooved peripheries and running upon said rods at the upper end of said door, in combination with suitable means for supporting and guiding the door at the bottom.

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1,225,099. MACHINE FOR ROLLING RAW COTTON INTO SHEETS. DOMINIQUE ALLARD, Manchester, N. H. Filed Oct. 28, 1915. Serial No. 58,516. (Cl. 19—11.)

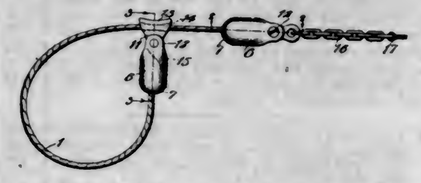


1. The combination with a feeder having a rock shaft for controlling its movement, a sprinkler for moistening the material handled by said feeder, and a rotary valve for controlling the flow of liquid to said sprinkler; of a crank arm projecting from the lower end of the shaft and having a longitudinal slot at its outer end, a horizontal rod having at one end a vertical projection received slidably in said slot, a guide bracket through which said rod passes slidably, a pinion secured on the aforesaid valve, a multiplying gear segment in mesh with said pinion and pivotally connected at an eccentric point with the aforesaid rod, whereby movement of said rod by the slight rotation of the rock shaft in stopping or starting the feeder will sufficiently turn the valve to respectively close or open the same, a stop on said rod, and a coiled spring interposed between said stop and the aforesaid guide bracket, said spring serving to yieldably retain all parts in normal position and assisting in returning said parts to this position when agan starting the machine after stopping the latter.

2. In combination, a conveyer, a clutch for stopping and starting said conveyer, a rock shaft having a restricted amount of movement for throwing said clutch in and out, a spraying device for moistening the material handled by the conveyer, a rotary valve for cutting off and turning on the liquid supply of said device, a crank arm extending laterally from said rock shaft, a pinion secured to said valve, a multiplying gear segment meshing with said pinion, and a rod pivoted to said crank arm at one end and to an eccentric point of the segment at its other end.

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1,225,100. ADJUSTABLE LOGGING-SLING. ORLEY R. AUBREY, Holbrook, Oreg. Filed Sept. 15, 1916. Serial No. 120,323. (Cl. 57—9.)



1. A device of the character described including a cable, balls anchored on the respective ends of the cable, casings for removably receiving the balls to permit of universal movement, a member pivoted to one casing for retaining the ball against accidental displacement and for slidable association with the main portion of the cable, and a member pivoted in the other casing for retaining the ball against accidental displacement and for attaching the device to a suitable hauling means.

2. A device of the character described including a cable, balls anchored on the respective ends of the cable, casings for removably receiving the balls to permit of universal movement, said casings being of substantial cylindrical configuration having one end thereof closed, ears formed on the other end of one of said cylindrical casings, a member pivoted to one casing between the said ears, said member being provided with oppositely arranged shoulders in alinement with the outer edge of the said ears preventing objects from interfering with the pivoted movement of said member, the inner end of said member having a lug formed thereon providing means for removably retaining the said ball in the casing.

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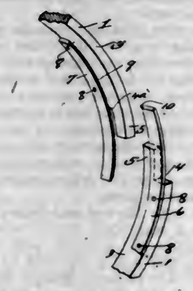
1,225,101. PISTON-RING. AUGUST A. BALLMER, Loma, Colo. Filed Mar. 14, 1916. Serial No. 84,080. (Cl. 121—108.)

1. An expansible piston ring having free ends provided with diagonally opposite angular recesses and tongues, said tongues being edgewise lapped, the inner faces of the adjacent ends having elongated plates edgewise lapping, the adjacent ends of the plates underlapping the diagonally disposed recesses of the adjacent ends and underlapping the opposite tongues, the inner edge of one plate being undercut to form a recess, the inner edge of the opposite plate having an elongated rib to slidably engage the recess formed by the undercut, said rib overlapping one of the first angular recesses.

2. An expansible piston ring having free ends, each end having an angular recess and an adjacent tongue, disposed diagonally to a corresponding recess and tongue



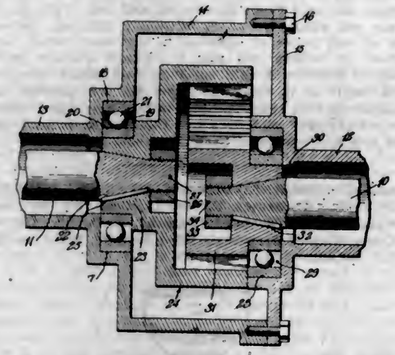
of the opposite end, so that said tongue will enter said recesses, a pair of plates secured to the inner faces of the adjacent free ends, each having a tongue reversely disposed to the first tongues, so that the tongues of the plates will edgewise lap, the said tongues of said plates



having portions constituting an edgewise and radially overlapping joint, said tongues of the plates being of greater length than the recesses and tongues of the adjacent free ends of the ring, thereby affording a lap joint at the ends of the recesses and tongues.

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1,225,102. GEARING FOR AUTOMOBILES. FRANK BANKS, Hibbing, Minn. Filed May 2, 1916. Serial No. 94,938. (Cl. 74—7.)



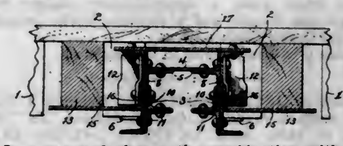
1. In a gearing, the combination with two shaft sections, of tubular housings inclosing the sections and formed with enlargements providing a casing about adjacent ends of the sections, and gear elements secured to the ends of the sections and meshing with each other, the gear elements being interchangeable from one section to the other.

2. In a gearing, the combination with two shaft sections, of tubular housings inclosing the shaft sections, one of the housings being formed with an enlargement providing a cylindrical casing open at one end and the other with an enlargement forming a cover plate for the casing, both enlargements being formed to provide annular chambers surrounding the shaft sections, bearing races mounted in the chambers, and interchangeable gear elements mounted upon the shaft sections and journaled by the bearing races.

3. In a gearing, the combination with two shaft sections, of tubular housings inclosing the shaft sections, one of the housings being formed with an enlargement providing a cylindrical casing open at one end and the other with an enlargement forming a cover plate for the casing, both enlargements being formed to provide annular chambers surrounding the shaft sections, bearing races mounted in the chambers, and interchangeable gear elements mounted upon the shaft sections and journaled by the bearing races, said gear elements including an internal gear having a hub journaled by a bearing race and adapted for attachment to one shaft section, and a pinion having a hub journaled by the other bearing race and adapted for attachment to a shaft section.

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1,225,103. CAR-UNDERFRAME. ANTON BECKER, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio. Filed July 21, 1916. Serial No. 110,591. (Cl. 105—76.)



1. In a car underframe, the combination with a car bolster, of Z-beam center girder members having flanged portions below the plane of the top of the bolster and having their end portions disposed approximately in the plane of the top of the bolster and extending over the latter.

2. In a car underframe, the combination with a car bolster, of Z-beam center girder members having their lower flanged edges depending below the plane of the top of the bolster, the lower flanged edges at the ends of the Z-beams being removed and these end portions of the Z-beams extending over the bolster.

3. In a car underframe, the combination with a bolster, of Z-beam center girder members having the lower flanges removed at the ends thereof, said end portions extending over the bolster, and angle beams secured to the webs of the Z-beams and reinforcing the end portions of the latter.

4. In a car underframe, the combination with a bolster, of Z-beam center girder members having their end portions extending over the bolster, draft sills secured to said center girder members, angle beams secured to the webs of the Z-beams and the draft sills, and angle beams secured to the webs of the draft sills and to said angle beams.

5. In a car underframe, the combination with a bolster and wooden center sills terminating at the bolster, metal center girder members projecting over the bolster, draft sills secured to the projecting portions of the center girder members, stops secured to said draft sills to receive the wooden center sills, laterally offset wooden center sills extending beyond the bolster, gussets secured to the bolster and to the draft sills, and means securing said offset center sill to said gussets.

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1,225,104. RAILWAY-RAIL JOINT WITH RERAILER AND DERAILER. JAMES EDWARD BENNETT and FRANK CELLITTI, Momence, Ill. Filed Oct. 17, 1916. Serial No. 126,201. (Cl. 239—6.)



1. The combination of a railway rail joint, provided with re-railing means and a derailer mounted thereon.

2. The combination of a railway rail joint, provided with re-railing means and a derailer hinged thereto.

3. A railway rail joint and re-railer comprising a main angular frame piece, a complementary angular frame piece partly encompassed by the main angular frame piece and secured thereto, and a re-railing groove formed in one of the angular frame pieces.

4. A railway rail joint and re-railer comprising a main angular frame piece, a complementary angular frame piece partly encompassed by the main angular frame piece and secured thereto, bosses on the main angular frame piece serving as stops to position the complementary angular frame piece within the bounds of the main angular frame piece, and a re-railing groove formed in each of the angular frame pieces.

5. A railway rail joint and derailer comprising a main angular frame piece, a complementary angular frame piece secured thereto, and a derailing device hinged to one of the angular frame pieces.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,105. PAINT COMPOSITION. WILLIAM J. BLACK and JOHN NEWTON BLACK, Washington, Pa. Filed Sept. 15, 1916. Serial No. 120,360. (Cl. 134—39.)

1. A paint composition including slaked lime, crude oil, sal-ammoniac and turpentine.

2. A paint composition including 43 parts of slaked lime, 32 parts of crude oil, four parts of sal-ammoniac, and 2½ parts of turpentine.

3. The herein described process of making a paint composition which consists in reducing 43 parts of slaked lime to pulverulent form, adding thereto 32 parts of crude oil, and thoroughly mixing the same, then adding four parts of sal-ammoniac, again mixing the whole, finally adding 2½ parts of turpentine to the mixture, subjecting the same again to a thorough intermixture, and straining through a sieve to remove conglomerations.

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1,225,106. INDEXING ATTACHMENT FOR LATHES AND THE LIKE. LEWIS A. BRINKMAN, Chicago, Ill. Filed July 5, 1916. Serial No. 107,620. (Cl. 90—57.)



1. A machine indexing device comprising a pivotally connected bar and plate, a pin extending from said plate, a pin extending from said bar in a direction at an angle to said first pin, said plate and bar having a plurality of holes therein arranged to register in different combinations for different adjustments of the distance between said pins, and a setting pin for passing through registered openings to preserve said adjustments.

2. The combination with fixed and movable parts of a machine, of a retaining member for holding said parts in different adjusted positions comprising two relatively movable elements, means for holding said retaining member elements in different adjusted positions relative to each other, certain of said machine parts having openings therein, a pin extending in one direction and coöperating with certain of said openings to secure one of said retaining member elements to one of said machine parts, and a pin extending in another direction and coöperating with another of said openings to secure said member to the other of said machine parts.

3. A machine indexing device including two pivotally connected members, connecting means on each of said members for use in connecting them respectively to fixed and movable parts of the machine, said members having a plurality of holes therein arranged to register in different combinations for different adjustments of the distance between said connecting means, and a setting pin for passing through registered openings in said members to preserve said adjustments.

4. The combination with fixed and movable parts of a machine, of a retaining member for holding said parts in different adjusted positions, comprising two relatively movable elements, means for holding said retaining member elements in different adjusted positions relative to each other, certain of said machine parts having openings therein, a pin coöperating with certain of said openings to secure one of said retaining member elements to one of said machine parts, and means coöperating with another of said openings to secure said retaining member to the other of said machine parts.

5. The combination with the bed and head-stock of a lathe, of cone pulleys, a gear wheel located between said head-stock and said pulleys and rotatable with the latter, a carriage movable on said bed, a tool rest on said carriage, a feed screw for said carriage, gearing actuated by said gear wheel to rotate said feed screw, said gear wheel having a series of openings near its periphery in that side nearest said head-stock, each of said openings extending in a direction substantially at right angles to the plane of said gear wheel, said bed having an opening in its front side between the plane of the adjacent face of said gear wheel and the adjacent face of said head-stock, said opening extending in a direction substantially parallel to the plane of said gear wheel, and an attachment for holding said gear wheel in different positions comprising a pin at its lower end shaped so as to fit snugly into said single opening in said bed, a pin at its upper end shaped so as to fit snugly into any desired one of said series of openings in said gear wheel, and means for holding said pins a constant distance apart when in position in said openings, said means being of such length as to bring the upper pin into position for engagement with those openings in said gear wheel which are substantially directly above the opening in said bed and directly forward of the axis of said gear wheel.

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1,225,107. COMBINED DISPENSING AND MEASURING DEVICE. FREDERICK O. BULLIS, Louisville, Ky., assignor to Lektric Sales Company, Louisville, Ky., a Corporation of Kentucky. Filed Sept. 28, 1914. Serial No. 863,963. (Cl. 221—107.)



1. In a measuring apparatus, a casing, a rotary measuring member mounted in said casing and comprising a cylinder having an inwardly directed partitioning blade, a sleeve carried by the blade, a member forming a closure for one end of said cylinder, a partitioning blade carried by said member and disposed to extend within the cylinder, a sleeve carried by said blade, and a shaft passing through the sleeves of the partitioning blades.

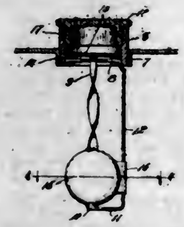


2. In a measuring apparatus, a casing, a shaft mounted in said casing, a rotary measuring member mounted on said shaft and comprising a cylinder, a partition extending inwardly from said cylinder, a closure for one end of said cylinder, a partition extending inwardly from said closure, and bearing means carried by the partitions through which the aforesaid shaft extends.

3. In a measuring apparatus, a casing, a shaft extending through the casing, a rotary measuring member on the shaft, a second shaft extending through the casing, a valve mounted on the second shaft, a dog on the first mentioned shaft, a crank arm on the second mentioned shaft, a bell crank lever mounted on the casing and having a slot at one end for engaging the crank arm, the other end of the bell crank lever adapted to engage the dog, and a spring for normally holding the bell crank lever in one position, whereby in one position of the measuring member the valve will be open and in another position of the measuring member the valve will be closed.

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1,225,108. FLUID-GAGE. ALBERT F. CARTON, Pipestone, Minn. Filed July 25, 1916. Serial No. 111,310. (Cl. 73—82.)



1. In a device of the class described, a tubular member adapted for insertion in a tank, a guide bar depending from said tubular member, a cross bar in said tubular member, a spindle supported at its lower end for rotation upon said guide bar and extending at its upper end through said cross bar, the said spindle being spiral throughout the major portion of its length, a float mounted to travel upon said spindle and to engage said spirals to rotate the spindle, arms carried by said float and engaging said guide bar, a dial in said tubular member, the said dial having a filling opening therein, and an indicator fixed to said spindle, substantially as described.

2. In a device of the class described, a tubular member having external threads adjacent one end for engagement with a tank opening, a guide bar carried by said tubular member and depending therefrom, a spindle rotatably mounted upon said guide bar and extending at its upper end into said tubular member, a dial in said tubular member, the said dial having an open central portion, a finger on said spindle adapted to travel around said dial, the said spindle being spiral throughout the major portion of its extent, a float mounted for sliding movement upon said spindle and adapted to engage said spirals to rotate said spindle, and means for maintaining said float against rotation, substantially as described.

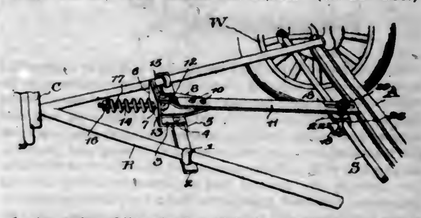
3. In a device of the class described, a tubular member having external threads at one end and internal threads at the opposite end, the said tubular member being adapted by its external threads to be screwed into a tank, an indicating means carried by said tubular member, means controlled by the liquid in the tank for operating said indicating means, and a transparent cap for engagement with said internal threads, substantially as described.

4. In a device of the class described, a tubular member having one end adapted for insertion in a tank, a bottom in said tubular member having a filling opening and being provided with a dial, an indicating finger adapted to travel around said dial, means controlled by the liquid in the tank for moving said finger, and a transparent cap closing the protruding end of said tubular member, substantially as described.

5. In a device of the class described, a tubular member adapted for insertion in a tank, a bottom for said member, the said bottom being provided with a dial, a spindle projecting through said bottom concentric with said dial, a finger on said spindle for traveling upon said dial, means controlled by the liquid in the tank for rotating said spindle, the said bottom being provided with a filling opening, and a cap for closing said tubular member, substantially as described.

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1,225,109. AUTOMOBILE-WHEEL-POSITIONING DEVICE. CHRISTIAN CHRISTIANSEN, Sioux Falls, S. D. Filed Oct. 22, 1915. Serial No. 58,599. (Cl. 21—200.)



1. An automobile wheel positioning device comprising an apertured abutment to be secured to an automobile at a point spaced longitudinally from the transverse steering rod thereof, a rocker plate having one edge bearing against the abutment, an arm secured adjacent one end to said rocker plate and having said end offset and spaced therefrom, a rod passing through the aperture in the abutment and having one end disposed between the arm and the plate, a fastener passing through the arm, the plate and the intervening rod, a stop on the other end of the rod, and a spring interposed between the stop and the abutment.

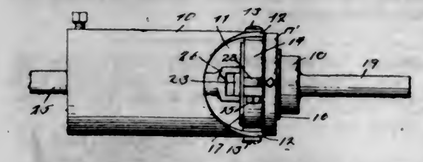
2. An automobile wheel positioning device comprising a bar to be secured to an automobile at a point spaced longitudinally from the transverse steering rod thereof, a plate secured to said bar and having one of its end portions extended at an angle to the body of the plate to provide an abutment, the latter being formed with an opening, a rocker adjacent the plate and disposed in contact with the abutment, a rod pivoted to the rocker and extending through the opening in the aforesaid abutment, a stop on said rod, a spring interposed between the stop and said abutment, and a rigid arm extending from the rocker and adapted to be connected with the steering rod of the automobile.

3. An automobile wheel positioning device comprising a horizontal bar to be secured to an automobile at a point spaced longitudinally from the transverse steering rod thereof, a plate secured to said bar and having its rear end bent upwardly to form an abutment, the latter having therein an aperture, a rocker plate resting on the aforesaid plate and having its rear edge disposed in contact with the abutment, a rigid arm secured adjacent its rear end to the rocker plate and having said end offset upwardly and spaced from said plate, the other end of said arm being adapted for connection with the steering rod of the automobile, a rod extending through the aperture in the abutment and having its front end interposed between the offset end of the arm and the rocker plate, a fastener passing through said offset end, through the plate, and through the intervening end of the rod, a stop on the rear end of the rod, and a spring interposed between said stop and the abutment.

4. The combination with the running gear of an automobile including a V-shaped radius rod and a transverse steering rod adjacent the front end thereof; of a transverse horizontal bar secured at its ends to the arms of said V-shaped radius rod, an abutment carried by the intermediate portion of said bar and elongated longitudinally thereof, a rocker bearing against said abutment, spring means for yieldably retaining said rocker in a neutral position in respect to the abutment, and a rigid lon-

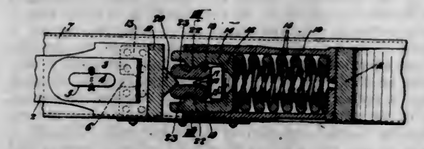
gitudinally disposed arm joined at its rear end to said rocker, said arm having a sliding connection at its front end with the steering rod.

1,225,110. STEERING-KNUCKLE. FRANK E. CHURCH, Clintonville, Wis. Filed July 23, 1914. Serial No. 852,691. (Cl. 21—90.)



In a device of the kind described, a hollow supporting sleeve having oppositely disposed cut-away portions at its outer end arranged to form vertically spaced ears, pivots carried by said ears, a diametrically split ring mounted on said pivots and carrying a steering arm, a hollow spindle member revolubly mounted in said ring and provided on one end with a flange to prevent movement of the member through the ring in one direction, a collar on said member to prevent movement thereof in the opposite direction through the ring, a collar ring mounted in said spindle member, a spindle adjustably projecting through said collar ring and forming a stub axle adapted to enter a wheel hub, means to hold the spindle and collar ring together in adjusted relation, a drive shaft, and a universal joint connecting the shaft and spindle and having its axis in alinement with the pivots of the diametrically split ring.

1,225,111. DRAFT-GEAR. JOHN F. COURSON, Pitcairn, Pa. Filed Dec. 11, 1916. Serial No. 136,141. (Cl. 213—64.)



1. A draft gear consisting of a casing, friction shoes within the casing, a wedge adapted to distend the friction shoes, a draw bar and follower in operative relation to the casing, and lever members between said wedge and the follower engaging and adapted to exert a radial pressure on the friction shoes.

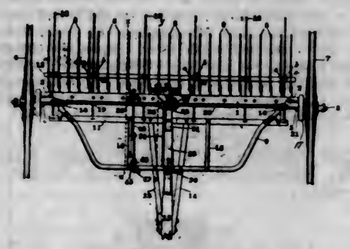
3. A draft gear consisting of a casing, friction shoes within the casing having interior rounded bearing portions, a wedge adapted to distend the friction shoes, a drawbar and follower in operative relation to the casing, and lever members engaging said wedge and follower and the rounded bearing portions of the friction shoes respectively.

7. A draft gear consisting of a casing, friction shoes within the casing having inwardly extending wedge portions at their rear ends, a centrally arranged wedge engaging said portions, lever members engaging the friction shoes and said wedge and operable to exert a radial pressure on the friction shoes, a drawbar connected with the casing, and a resisting element interposed between the drawbar and said levers.

[Claims 2, 4 to 6, and 8 not printed in the Gazette.]

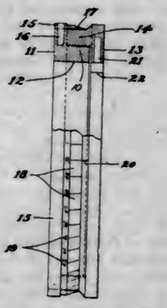
1,225,112. HORSE-RAKE. JOSEPH DAIN, Moline, Ill., and JAMES MACPHAIL, Davenport, Iowa, assignors, by mesne assignments, to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed June 9, 1913. Serial No. 772,569. (Cl. 56—65.)

1. In a horse rake, the combination of a rocking rake-head, stub axles at each end thereof, wheels journaled on said axles and having internally toothed hubs, two reversible dump rods in line with each other and substantially parallel with the rake head and having like outer right angular ends adapted to engage the internally toothed hubs, a casting hinged centrally to the rake-head and having oppositely disposed recesses, like inner right angular ends on the dump rods to engage with said recesses, means to retain said dump rods in said recesses independently of each other, either one of said dump rods being removable without affecting the operation of the other dump rod.



2. In a horse rake, the combination of a rocking rake-head, supporting wheels journaled on stub axles on the rake-head and having internally toothed hubs, two reversible dump rods substantially parallel with the rake-head and having like right angular ends, a casting pivoted centrally on the rake-head and having oppositely disposed recesses, the outer right angular ends of the dump rods adapted to engage with the internal teeth of the wheel hubs, each of the inner right angular ends of the dump rods held in the recesses of said casting by a pin, said pins being removable to withdraw either of said dump rods without affecting the operation of the remaining dump rod.

1,225,113. ADJUSTABLE SPACING-COLLAR. JOHN M. DAVIE, Cleveland, Ohio. Filed July 1, 1916. Serial No. 107,020. (Cl. 74—8.)

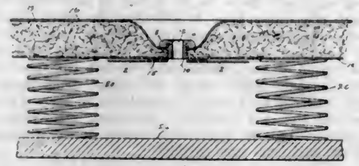


1. In a device of the character described, the combination of a pair of collars, one collar having an annular flange provided with an exterior screw thread, and the other collar having an annular flange provided with an interior screw thread, the diameters of the flanges being such that the interiorly screw threaded flange will receive the exteriorly screw threaded flange, and a band carried by one of the collars and arranged to overlap the flange on the other collar, the exterior surface of said band being beveled downwardly and provided on the beveled portion with a series of graduations.

2. In a device of the character described, the combination of two collars adapted to fit on the spindle of a machine, one of said collars being provided with means to prevent its rotation on the spindle, said collars carrying correspondingly screw threaded male and female members, and a band mounted on one of said collars and provided with a series of graduations arranged on the surface of said band for the purpose set forth.



1,225,114. VENTILATING-FASTENER. DON M. DAVIS, Houston, Tex., and THOMAS J. UNDERWOOD, Kansas City, Mo. Filed Apr. 29, 1916. Serial No. 94,368. (Cl. 24—152.)

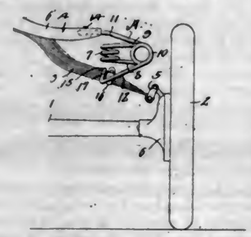


1. A ventilating fastener comprising a staple provided with a ventilating opening through its head portion, and a head member molded to said head portion of the staple, said member providing a free air passage through said opening and having a barrel portion extending partly along the legs of the staple.

2. A ventilating fastener comprising a head member formed with a head portion and a barrel portion provided with a ventilating passage extending axially through said portions, said barrel portion being formed with grooves in the opposite sides thereof, and a pair of clenching prongs secured to said head portion and extending through said grooves and beyond the end of said barrel portion.

3. A ventilating fastener comprising a staple provided with a ventilating passage through its head portion, and a head member molded about said head portion to form an enlarged head portion and a barrel portion extending within the legs of the staple and provided with exterior grooves for receiving said legs and permitting outward spreading thereof.

1,225,115. SPRING AND FRAME-SUPPORTER FOR MOTOR-VEHICLES. JOSEPH DOTTL, Madison, Wis., assignor to The Dottl Manufacturing Company, Madison, Wis., a Corporation of Wisconsin. Filed Nov. 16, 1916. Serial No. 131,724. (Cl. 267—17.)



1. A vehicle body supporting bolster extending transversely of the wheel base and having parallel longitudinal flanges extending downwardly therefrom, and an arched body supporting main spring centrally secured to the bolster and terminally connected with the axle housing, in combination with auxiliary supporting units interposed between the bolster ends and said spring, each unit consisting of a spring embodying a plurality of convolutions, an upper arm fixedly secured to the body of the bolster between the flanges thereof, and a lower arm adapted to rest upon the body supporting spring and to engage the adjacent clip of the body supporting spring.

2. A vehicle body supporting bolster extending transversely of the wheel base and having parallel longitudinal flanges extending downwardly therefrom, and an arched body supporting main spring centrally secured to the bolster and terminally connected with the axle housing, in combination with auxiliary supporting units interposed between the bolster ends and said spring, each unit consisting of a spring embodying a plurality of convolutions, an upper arm fixed secured to the body of the bolster between the flanges thereof, and a lower arm adapted to rest upon the body supporting spring and to engage the adjacent clip of the body supporting spring, said supporter being so related to the bolster and body supporting spring as to transfer a portion of the load of the vehicle from the central portion of the body supporting spring to a point adjacent to one end of said body supporting spring.

3. In combination, an axle housing, a bolster extending longitudinally thereof, an arched body-supporting main spring centrally secured to the bolster and terminally connected with the axle housing, and additional springs through which a portion of the load on the bolster is transmitted to the main spring, said additional springs each including a body portion which extends out beyond the corresponding end portion of the bolster and other portions which extend from said body portion toward a vertical plane through the center of the axle housing at right angles to the axle thereof.

4. In combination, an axle housing, a bolster extending longitudinally thereof, an arched body-supporting main spring centrally secured to the bolster and terminally connected with the axle housing, and additional springs through which a portion of the load on the bolster is transmitted to the main spring, said additional springs each including a body portion and end portions extending from the body portion, said end portions lying substantially in the longitudinal vertical plane through the axle housing.

5. In combination, a pair of wheels, a bolster substantially above and extending longitudinally of the common axis of said wheels, means for transmitting loads from said bolster to said wheels, said means including an arched main spring centrally secured to said bolster, and additional springs operatively connected to the corresponding ends of the bolster, said additional springs each including a body portion and end portions extending from the body portion and lying substantially in the longitudinal vertical plane through the common axis of the wheels.

[Claims 6 to 11 not printed in the Gazette.]

1,225,116. GOGGLES. LOUIS DUNKELSBERG, New York, N. Y. Filed Nov. 17, 1916. Serial No. 131,851. (Cl. 2—149.)



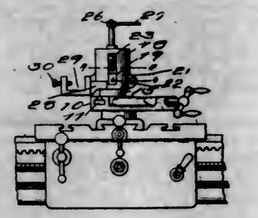
2. A goggle comprising two flexible sections overlapping each other at their inner ends and pivotally united at their overlapping ends and adapted to fold in a single plane, each of said sections having an integral cup-shaped portion pressed outward from the central portion thereof terminating in an inward annular extension, a lens fitted in each cup and seated against said extension, and a section of an adjustable securing band riveted to the outer end portion of each of said flexible sections.

[Claim 1 not printed in the Gazette.]

1,225,117. VERTICAL-FEED ATTACHMENT FOR TURNING-LATHES. DIX DUNLAP, La Junta, Colo. Filed June 30, 1914. Serial No. 848,241. (Cl. 82—34.)

In an attachment for turning lathes the combination with a tool slide, of a base detachably interlocking with the slide and having its upper face below the upper face of the slide, bolts engaged through the base, a hollow

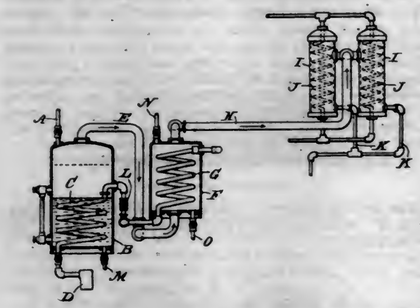
cylindrical member having its lower end engaging the base and its upper end closed, said bolt passing through the closed upper end of the cylindrical member, a second cylindrical member telescopically engaged over the first cylindrical member and provided with a longitudinal slot, said second cylindrical member having its upper end



closed, a screw rotatably mounted axially in the upper end of the second cylindrical member and engaged in and axially disposed threaded passages in the upper end of the first cylindrical member, a work support carried by the second cylindrical member and a lug carried by the first cylindrical member and slidably engaged in the slot of the second cylindrical member.

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1,225,118. METHOD FOR OBTAINING PURE WATER FROM SALT WATER. FRANK TAYLOR EVANS, U. S. Navy, assignor to George Hillard Benjamin, New York, N. Y. Filed July 1, 1913. Serial No. 776,755. (Cl. 203—5.)



1. The method described for obtaining pure water from salt water in a state of agitation, which consists in first subjecting such salt water to heat to set free a vapor containing water and a small percentage of salt, then superheating the vapor so derived to obtain a second vapor containing water but no salt, and finally condensing the last named vapor.

2. The method described for obtaining pure water from salt water in a state of agitation, which consists in first subjecting such salt water to sufficient heat to set free a vapor containing water and a small percentage of salt, then subjecting the vapor so derived to a very much higher degree of temperature to set free a second vapor containing water but no salt, and finally condensing the last named vapor.

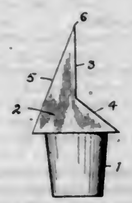
3. The method described for obtaining pure water from salt water in a state of agitation, which consists in first subjecting such salt water in a closed vessel to the action of sufficient heat to set free a vapor containing water and a small percentage of salt, then subjecting said vapor so derived in a closed vessel to a very much higher temperature to set free a second vapor containing water but no salt, and finally condensing the last named watery vapor.

4. The method described for obtaining pure water from salt water in a state of agitation, which consists in evaporating salt water by heat to obtain a watery vapor containing a small percentage of salt, then superheating the vapor so derived under conditions where no water is present as a body, and finally condensing the superheated vapor to obtain pure water.

5. The method described for obtaining pure water from salt water in a state of agitation, which consists in introducing a body of salt water into a vessel and therein subjecting such salt water to the action of heat transmitted through the water from a coil through which steam is passed, conveying the vapor thus derived from such vessel to a second vessel, and therein subjecting such vapor to the action of heat transmitted through the vapor from a coil through which steam of higher temperature is passed, whereby such vapor is expanded to form a second vapor and the salt separated therefrom, condensing the last named vapor to form fresh water, and removing the deposited salt from time to time.

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1,225,119. HORSESHOE-CALK. ADOLPH O. EVENSON, Duluth, Minn. Filed Dec. 26, 1916. Serial No. 138,973. (Cl. 168—41.)



1. A horse-shoe calk of the character described, comprising in combination a cylindrical shaped tapered shank and a rectangular shaped traction blade formed integral therewith, the major portion of one face of which blade is straight and in a direct line with the center of the shank, and the opposite face inclined from the point of the blade to the base thereof.

2. A horse-shoe calk of the character described, comprising in combination a cylindrical shaped tapered shank, a rectangular shaped traction blade formed integral therewith, the major portion of one face of which blade is straight and in a direct line with the center of the shank, the opposite face being inclined from the point of the blade to the base thereof and said base projecting beyond the shank on all sides thereof.

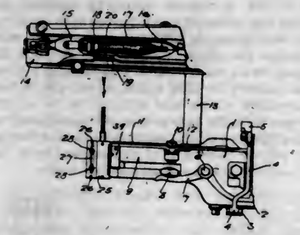
3. A horse-shoe calk comprising in combination a tapered cylindrical shank and a rectangular shaped blade having one face, the major portion of which is vertical and flat, the remaining portion being inclined and the opposite face inclined in a single plane from the point of the blade to the base thereof, the sides at right angles to said faces being straight and parallel.

4. A horse-shoe calk comprising in combination a tapered cylindrical shank and a rectangular shaped blade, the major portion of one face of the blade being vertical, flat and in direct line with the center of the shank and the opposite face inclined in a single plane from the apex of the blade to the base thereof.

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1,225,120. FEELER-MOTION FOR LOOMS. THOMAS FERGUSON, Lowell, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Jan. 22, 1916. Serial No. 73,716. (Cl. 139—85.)

1. In a feeler motion for looms, the combination of a feeler having a single filling engaging portion, a torsional spring normally acting to rotate the feeler and prevented from effecting such rotation on a detecting beat by the filling in the shuttle until substantial exhaustion thereof, means for preventing rotative movement of the feeler when not engaged by the filling or carrier in the shuttle, and means for initiating replenishment when the torsional action of the spring effects rotative movement of the feeler.



2. In a feeler motion for looms, the combination of a feeler, a spring normally acting to rotate the feeler, a finger connected to the feeler, a fixed cam having a portion for engaging the finger when the feeler is in rear position to prevent rotation of the feeler under the normal action of said spring, and a fixed inclined portion to permit the spring to rotate the feeler when the filling is substantially exhausted on a detecting beat.

3. In a feeler motion for looms, the combination of a rotatable feeler, a finger connected to the feeler, a fixed stop on which the finger normally rests when the feeler is in rear position to prevent rotation of the feeler, and a spring normally acting to rotate the feeler when the finger is removed from the stop on a detecting beat and the filling is substantially exhausted.

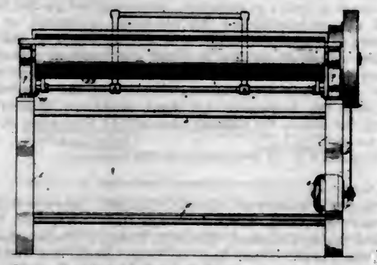
4. In a feeler motion for looms, the combination of a feeler having a filling engaging portion, a finger extending from the feeler, a fixed stop for said finger when the feeler is in rear position, and a spring normally acting torsionally upon the feeder and rotating the same when the finger is removed from the stop on a detecting beat and the filling is substantially exhausted.

5. In a feeler motion for looms, a feeler, a feeler stand having a stop, a finger connected to the feeler and normally resting on the stop when the feeler is in rear position, and a spring for rotating the feeler when the finger is removed from the stop by the frontward movement of the lay and the filling is substantially exhausted.

[Claims 6 to 14 not printed in the Gazette.]

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1,225,121. IRONING-MACHINE. ALVA J. FISHER, Evanston, Ill., assignor to Hurley Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 15, 1914. Serial No. 866,773. (Cl. 68—9.)



1. In an ironing machine including a cylindrical shell, a driving shaft on which said shell is loosely mounted, a series of engaging members carried by said shaft, a corresponding series of engaging members carried by said shell and arranged to coöperate with said first-mentioned engaging members, and means common to all the members of one series of engaging members for establishing and disestablishing coöperative relationship with the members of the other series.

2. In an ironing machine including a cylindrical shell, a driving shaft on which said shell is loosely mounted, a series of engaging members carried by said shaft, a corresponding series of engaging members carried by said shell and arranged to be shifted into and out of coöperative relation with said first-mentioned engaging members, and means carried by said shell for shifting said second-mentioned engaging members into and out of coöperative relationship with said first-mentioned engaging members.

3. In an ironing machine, including a roll, the roll being a cylindrical shell and having a series of circular members secured therein, a driving shaft which passes through said members and on which they are loosely mounted, driving collars secured to the shaft and dogs adapted to be engaged by and to thereby drive such members and roll, said dogs being manually movable from their said engagement.

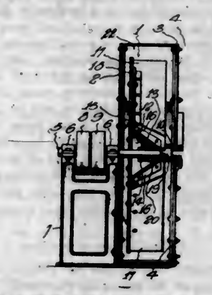
4. In an ironing machine, including a roll, the roll being a cylindrical shell and having a series of circular members secured therein, a driving shaft which passes through said members and on which they are loosely mounted, driving collars secured to the shaft, a rock shaft parallel to the driving shaft and extending through said members, and dogs secured to the rock shaft in proximity to the driving collars and adapted to normally form a driving connection between the collars and members.

5. In an ironing machine, including a roll, the roll being a cylindrical shell and having a series of circular members secured therein, a driving shaft which passes through said members and on which they are loosely mounted, driving collars secured to the shaft, a rock shaft parallel to the driving shaft and extending through said members, dogs secured to the rock shaft in proximity to the driving collars and adapted to normally form a driving connection between the collars and members, and means coöperating with the rock shaft for holding it in different positions.

[Claim 6 not printed in the Gazette.]

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1,225,122. FAN. FRANKLIN A. FLECK, Middletown, Pa. Filed Oct. 25, 1915. Serial No. 57,864. (Cl. 230—11.)



1. In a device of the class described comprising a fan casing, a shaft rotatably mounted therein, a plate surrounding said shaft and fixed thereon, fan blades secured to said plate, a sleeve surrounding said shaft, said sleeve being slotted on one face to receive the edges of the fan blades, and means for fixing said sleeve to the shaft.

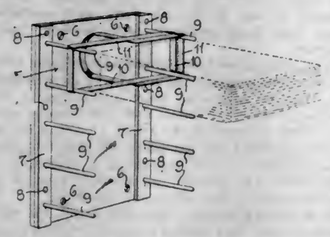
2. In a device of the class described comprising a fan casing, a shaft rotatably mounted therein, a plate surrounding said shaft, a hollow cone secured thereto and fixed to said shaft, fan blades secured to said plate and said cone and having shoulders extending downwardly beyond the edge of said cone, and a sleeve on said shaft slotted to receive said shoulders and means for fixing said sleeve to the shaft.

3. In a device of the class described comprising a fan casing, a shaft rotatably mounted therein, a hollow cone on said shaft having a sleeve extending from one end into said hollow portion, and means thereon whereby said cone is secured to the shaft, said cone having lips thereon, a circular plate secured on the opposite end of the cone, fan

blades secured to said lips and said plate, each blade bent at an angle to the plate and laterally above its adjacent lip and then upwardly to form pockets for said plate, each blade extending beyond the end of said cone and having a shoulder projecting downwardly over the end of said cone, a sleeve slotted in one face to receive said shoulders and contacting with the said cone, and means on the sleeve for fastening the same to the shaft.

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1,225,123. MAIL-RACK. THOMAS V. GALLAGHER, Leadville, Colo. Filed July 31, 1916. Serial No. 112,353. (Cl. 211—36.)



1. Means for binding mail packages including supports spaced apart a sufficient distance to permit a mail package to be inserted between the same, and an elastic cruciform binder having one of its loops engaged upon the supports and held open thereby to receive the mail package, said package in its insertion being fitted within one end of the other binder loop, the other end of the latter loop being extended around the opposite end of the envelop pack, whereby when the pack is removed from between the supports, the binder is likewise disengaged from the supports with the binder loops extending around the package in intersecting relation to each other.

2. Means for binding mail packages including pairs of supporting pins spaced apart a sufficient distance to permit an envelop pack to be inserted between them, and an elastic binder consisting of two continuous bands secured to each other in intersecting relation, one of said bands being engaged upon the spaced pairs of pins and held open thereby to receive the envelop pack, said pack in its insertion being engaged within one end of the other elastic band, the other end of the latter band being disposed over one pair of pins and adapted to be withdrawn therefrom and engaged over the other end of the envelop pack, whereby when the envelop pack is withdrawn, the elastic binder is disengaged from the pins with the bands extending at right angles to each other and around the envelop pack.

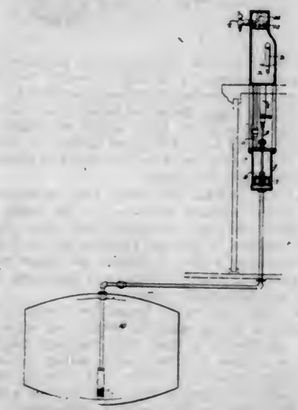
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1,225,124. PUMP. CHARLES A. GEHMAN, New York, N. Y., and JAMES W. HUGHES, Narberth, Pa., assignors, by direct and mesne assignments, to Gehman Pump Company, Phoenix, Ariz., a Corporation of Arizona. Filed Feb. 6, 1915. Serial No. 6,543. (Cl. 221—103.)

1. The combination, in a measuring apparatus, of a series of registers, a pivotally mounted swinging bar, means for moving the said swinging bar to aline with any one of the registers, a pumping device, a plurality of measuring stops interposed between the pumping device and the swinging bar, means for moving the swinging bar so as to actuate a given register through the medium of the pump operating device, and a brake for stopping the pumping device through the medium of said swinging bar.

2. The combination of a cylinder, a pump plunger, a pumping device connected to the plunger, a series of registers, selective means comprising a pivoted swinging bar movable to a plurality of positions and actuated by the pumping device to actuate any one of the registers, and adjustable stops carried by the pumping device for controlling the amount of liquid delivered and the actuation of the swinging bar.

3. The combination of a casing, registering mechanism carried thereby, a pump, a rack rod vertically movable in the casing and connected to the pump whereby the latter may be operated, a plurality of adjustable stops carried by the rack rod, a register operating member comprising a swinging bar adapted to be moved into registry with any one of said stops, a pinion in engagement with the rack rod, means for operating the same in both directions, a swinging frame on the same axis as said pinion, auxiliary pinions carried by said frame above and below the rack-rod operating pinion and adapted to be thrown into engagement with the rack rod, and connections between said swinging frame and the swinging bar whereby an auxiliary pinion will be thrown into engagement with the rack rod at the end of each movement of the latter.



4. The combination, in a measuring apparatus, of a casing, a pump, a plunger in said pump, a rod carrying said plunger, a rack rod vertically movable in the casing and connected to the plunger rod, a pinion for operating said rack rod, means for operating said pinion, means for stopping the movement of said rack rod, a swinging bar operatively connected with said rack-rod, and means for locking the rack rod stopping means through said swinging rod.

5. The combination, in a measuring apparatus, of a rack-rod, a plunger operating pump rod connected therewith, a cylinder, a pumping device including a plunger mounted in the cylinder and operatively connected to the rack-rod, a series of registers, means carried by the rack-rod for predetermining the discharge movement of the same; said pumping device discharging liquid on the upward movement of the rack-rod and plunger connected thereto, and a swinging bar movable into alinement with any one of said registers and actuated by the rack-rod to operate the respective registers; said bar coöperating with the means for limiting the upward movement of the rack-rod.

[Claims 6 to 16 not printed in the Gazette.]

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1,225,125. ELECTRIC-CABLE CLAMP. MONROE GUETT, Hartford, Conn., assignor to The Hart & Hegeman Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 24, 1913. Serial No. 763,272. (Cl. 247—1.)

As a new article of manufacture a cable clamp formed up to shape from a single piece of sheet metal, and comprising at one end a tubular part so formed as to leave a longitudinal slot, and at the other end a flat longitudinally extending arm, the outer end of the tubular portion having screw-receiving apertures and slotted circumferentially for a short distance to provide an elastic clamp for engagement with a cable armor, the tubular portion



near its inner end being provided with an inwardly projecting circumferential bead with a smooth rounding surface for engagement with the unarmored cable without



cutting the insulation, the end of the arm having a key slot to permit of its being slid under the head of a clamping member.

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1,225,126. RETAINING-CLAMP FOR DEMOUNTABLE RIMS. LOUIS B. HARVEY, WALTER HORNBECK, and BESSIE BISLINGER, Sacramento, Cal. Filed Apr. 20, 1916. Serial No. 92,402. (Cl. 152—21.)



1. A retaining clamp for automobile rims comprising the combination with a felly, a pair of V-shaped clamps carried by the felly, a rim, depending members on the rim, such members being shaped to fit closely into the inner vertexes of the V-shaped clamps whereby the inner sides of the clamps will engage and support the outer sides and lower edges of the depending members.

2. A retaining clamp for demountable rims comprising the combination with a felly, of a V-shaped flange projecting on one side of the felly, an annular ring removably mounted on the opposite side of the felly, a V-shaped flange similar to the first named flange carried by said ring, a rim, projecting members on the rim, the edges of said projecting members fitting squarely against one side of the V-shaped flanges, the outer sides of said projecting members fitting squarely against the other sides of said V-shaped flanges.

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1,225,127. CONNECTOR FOR CIRCUIT-WIRES. LEWIS W. HEATH, Hastings, Mich. Filed Aug. 2, 1915. Serial No. 43,174. (Cl. 173—363.)

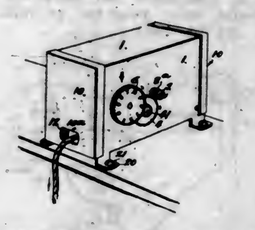


1. A device of the class described, comprising a pair of sheet metal members each having a shank portion provided with a laterally extending flange turned back parallel to and spaced from said shank to form a hook-like clamp, the clasp of one member being adapted to receive the shank of the other when it is presented laterally thereto, the bills of the clasps being provided with keepers and beveled at their ends to facilitate the engaging and disengaging of the members.

2. A device of the class described, comprising a pair of members each having a flat shank member with oppositely extending curved flanges extending from one end thereof and forming a wire clip, and a third flange extending from one side of the opposite end of said shank member bent at right angles thereto and then parallel therewith to form a clasp for receiving the shank of the complementary member, the outer end of said last named flange being beveled at its ends to facilitate the engaging and disengaging of the members and being provided with a bead-like keeper.

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1,225,128. ROPE-MEASURING DEVICE. SELMER H. HEIMARK, Hawley, Minn. Filed Apr. 12, 1916. Serial No. 90,579. (Cl. 33—134.)



1. A rope measuring device of the character stated comprising the following elements in combination; an open bottom casing having base members for mounting the same upon a counter or other base, each end of the casing having a guide slot, a bottom member that extends across the casing from one end guide slot to the guide slot at the opposite end, the said bottom member being hinged to the casing near one of its ends for swinging in the vertical plane, an upper rope guide roller, a shaft upon which the roller is fixedly mounted, the said shaft having bearings at the opposite ends in the opposite sides of the casing, one end of the shaft being formed for receiving an operating crank, a drive gear on the other end, an indicator dial mounted on one side of the casing, transmission gearing for connecting the dial and the drive gear on the upper rope guide roller, a lower rope guide roller journaled in the hinged bottom member, a tension device tending to normally hold the rope that passes through the casing and between the upper and lower rollers in frictional contact with the upper roller, whereby to rotate the said upper roller as the rope is pulled through the casing.

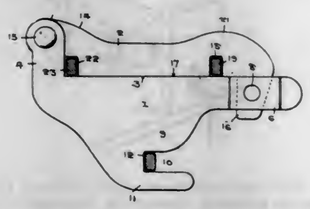
2. A rope measuring device, that comprises an open bottom casing adapted to be attached to a suitable base, an upper roller transversely journaled in the casing and having a shaft that extends beyond the side of the casing, a bottom member in the lower end of the casing that extends across the casing and under the upper roller, the said member being hingeably connected at one end to the casing and having said end shaped to form a guide for the rope to be measured, a lower rope guiding roller journaled on the said bottom member, means for holding the said bottom member under tension to press the lower roller up against the upper roller, an indicator dial, a stub shaft projected from one side of the casing, a dial gear slidably mounted on the said stub shaft and transmission gearing that connects the dial gear with the driven gear on the upper roller shaft and means on the stub shaft tending to normally hold the dial gear in mesh with the transmission gearing.

3. In a measuring device of the character described; a casing that includes opposite side members spaced apart, a relatively fixedly located upper rope engaging roller held between the aforesaid side members, a bottom rope engaging roller yieldingly supported between the side frame members to hold the rope under tension against the top roller, an indicator dial, a transmission gear driven by the rope engaging roller as the rope is pulled between the opposite rollers, the said gearing including a dial gear slidably and loosely mounted whereby it can be shifted on its bearing to turn freely backward, and means tending to normally hold the said dial gear in mesh with the transmission gearing.

1,225,129. PROCESS OF MIXING CEMENT MORTAR. MORGAN T. HOCHSTRASSER, Gainesville, Fla. Filed July 25, 1916. Serial No. 111,158. (Cl. 83—73.)

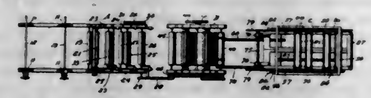
The process of mixing cement mortar and concrete which consists in sifting finely comminuted cement into an excess of water, to form a colloidal mass, draining off the excess water, and finally mixing the colloidal mass with the coarser ingredients of the concrete.

1,225,130. PEDAL-LOCK FOR AUTOMOBILES. ADOLPH B. HOEFELMAN and ERNST O. HOEFELMAN, Platte Center, Nebr. Filed Dec. 23, 1916. Serial No. 138,539. (Cl. 70—126.)



A safety pedal lock of the class described consisting of a pair of flat elongated members, one of said flat members formed with a right angular extension having its outer end slotted, said flat member having its opposite end thickened and provided with a transverse slot, and also having that portion between its ends widened and provided with a recess extending in longitudinally from one side to provide a longitudinally extending finger, the other of said flat elongated members having a longitudinal extension at one end pivotally mounted in the slotted outer end of said right angular extension of the first flat member, and having its opposite end provided with a right angular tongue disposed oppositely to the extension of the first flat member and adapted to project through said slotted thickened portion, said second flat member also having recesses in its inner longitudinal edge, and means for securing said right angular tongue in said slotted thickened end portion of the first flat member.

1,225,131. MACHINE FOR MAKING PAPER BOX-BLANKS. HORACE INMAN and FRANK M. JOSLIN, Amsterdam, N. Y., assignors to Inman Manufacturing Company, Incorporated, Amsterdam, N. Y., a Corporation of New York. Filed July 29, 1912. Serial No. 712,130. (Cl. 93—58.)



1. In a machine of the class described, the combination of mechanism for forming and continuously moving a heavy substantially non-flexible web, printing mechanism and reciprocating creasing and dieing mechanisms, said printing and creasing and dieing mechanisms being adapted to operate on the web while the latter is in motion and in a damp or moist condition.

2. In a machine of the class described, the combination of mechanism for forming and continuously moving at a uniform velocity, a heavy substantially non-flexible web, printing mechanism and reciprocating creasing and dieing mechanisms, said printing and creasing and dieing mechanisms being adapted to operate on the web while the latter is in motion and in a damp or moist condition.

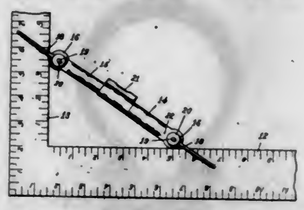
3. In a machine of the class described, the combination of mechanism for forming and continuously moving a heavy substantially non-flexible web and reciprocating creasing and dieing mechanisms, said creasing and dieing mechanisms being adapted to operate on the web while the latter is in motion and in a damp or moist condition.

4. In a machine of the class described, the combination of mechanism for forming and continuously moving at a substantially uniform velocity a heavy substantially non-flexible web, and reciprocating creasing and dieing mechanisms, said creasing and dieing mechanisms being adapted to operate on the web while the latter is in motion and in a damp or moist condition.

5. In a machine of the class described, the combination of mechanism for forming a heavy substantially non-flexible web, reciprocating creasing and dieing mechanisms operable on the web in a damp or moist condition, and means for moving the web through said mechanisms continuously and at a uniform velocity.

[Claims 6 to 10 not printed in the Gazette.]

1,225,132. ATTACHMENT FOR STEEL SQUARES AND THE LIKE. JOHN H. JOHNSON, Omaha, Nebr. Filed May 2, 1916. Serial No. 94,976. (Cl. 33—88.)



1. An attachment for steel squares and the like, comprising a bar having two alined sections united by a telescoping engagement; a spirit level mounted on one of the sections; and terminal junction members, pivoted to the ends of the bar respectively, and adapted to engage the limbs of the square.

2. An attachment of the specified class, comprising two telescoping tubes; a level mounted on one of the tubes in parallelism therewith; and junction members carried by the tubes respectively for engagement with a steel square or the like.

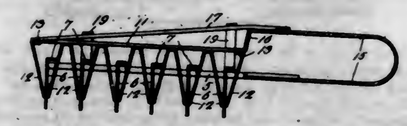
3. An attachment of the specified class, comprising two alined sections united by a telescoping engagement; a level carried by one of the sections; and terminal junction members pivoted to the sections respectively.

4. An attachment of the specified class, comprising a bar of variable length; a spirit level carried thereby; and terminal junction members pivoted to the bar and having index fingers.

5. An attachment of the specified class, comprising a bar having a level carried thereby; and terminal clamps pivoted to the bar and provided with index fingers.

[Claim 6 not printed in the Gazette.]

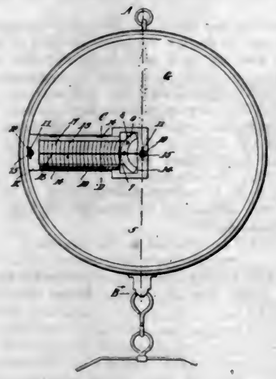
1,225,133. SELF-CLEANING CURRYCOMB. OSCAR O. JONES, Ontonagon, Mich. Filed Apr. 11, 1916. Serial No. 90,462. (Cl. 119—88.)



A curry-comb, comprising in combination, a two-armed spring handle having upper and lower arms, a rectangular frame carried by the lower arm, a plurality of scraper blades having their ends connected to said frame and spacing its sides apart, said blades having overturned flanges which rest on said frame, divergent extensions on the free end of the upper arm and having their ends overlying the corners of the rectangular frame, the extensions being also bent downwardly substantially at the point of divergence into parallel relation to said rectangular frame, pairs of cleaning blades secured across said extensions and embracing said scraper blades, and diagonally projected brace members extending from said upper arm to the outermost cleaning blade.



1,225,134. COMPUTING ATTACHMENT FOR DIAL-SCALES. WESLEY CORRY JONES, Portland, Oreg. Filed Sept. 28, 1914. Serial No. 863,907. (Cl. 73—104.)



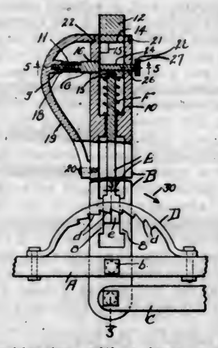
1. A computing attachment for dial scales, comprising oppositely extending interfitting rings forming a housing, said rings having registering cut away portions for the reception of projecting parts of scales, a glass carried by one of the rings, a face plate carried by the other ring, said face plate having a radial slot, a marker extending across the slot and adjustable relative thereto, and a computing dial within the housing for attachment to the index arbor of the scales.

2. A computing attachment for dial scales, comprising a cylindrical housing made up of opposed interfitting rings having registering cut away portions for the reception of projecting parts of the scales contained within the housing, a glass carried by one of the rings, a face plate carried by the other ring and having a radial slot, spacing elements extending from said face plate for engaging one side of scales contained within the housing, a marker extending along and adjustable across the slot, and a computing dial within the housing for attachment to the index arbor of scales within the housing.

3. The combination with dial scales including an index arbor, said scales having oppositely extending projecting portions, of a computing attachment comprising a housing detachably mounted upon and concentric with the scales, said housing consisting of opposed interfitting rings movable together from opposite sides of the scales to house the scales, a glass carried by one of the rings, a slotted face plate carried by the other ring, a marker extending across and adjustable relative to the slot in the face plate, and a computing dial secured to the index arbor of the scales, and means for holding the face plate at a fixed distance from the computing dial, the rings of the housing being provided with registering cut away portions for the reception of the projecting parts of the scales.

1,225,135. PAWL-LOCKING MECHANISM FOR PAWL-CARRYING LEVERS. HENRY JOSEPHSON, Cleveland, Ohio. Filed Dec. 1, 1916. Serial No. 134,262. (Cl. 74—39.)

1. The combination, with a suitably supported lever, a suitably applied rack, a rod arranged longitudinally and shiftable endwise of the lever and provided at one end with a pawl which engages the rack in one position of the rod, and a spring acting to retain said rod in said position, said rod being provided at its other end with a head which is exposed exteriorly of the lever and has a lateral slot enlarged at one end, of a suitably supported endwise shiftable bolt arranged at an angle to said rod and having its body abutting against said head at one side of the head and inoperative in the aforesaid position of the rod, said body being arranged to engage the enlargement of the slot and thereby lock the rod upon the actuation of the rod in the direction required to disengage the pawl from the rack, and a spring acting to retain the bolt in its locking position.



2. The combination, with a lever, a rack, a rod arranged longitudinally and shiftable endwise of the lever and provided at one end with a pawl which engages the rack in one position of the rod, and means acting to retain said rod in said position, said rod being provided at its other end with a head which is exposed exteriorly of the lever and has a slot extending laterally through the head and enlarged at one end, of an endwise shiftable bolt arranged at an angle to the rod and having its body abutting against said head at one side of the head and inoperative in the aforesaid position of the rod, said body being arranged to engage the enlargement of the slot and thereby lock the rod upon the actuation of the rod in the direction required to disengage the pawl from the rack, and means acting to retain the bolt in its locking position, said bolt having means for actuating the bolt from its locking position into its inoperative position.

3. The combination, with a suitably supported lever, a suitably supported rack, a rod arranged internally and longitudinally and shiftable endwise of the lever and provided at one end with a pawl which engages the rack in one position of the rod, and a spring acting to retain said rod in said position, said rod being provided at its other end with a head which is exposed exteriorly of the lever and provided with a slot extending laterally through the head and having a lateral enlargement at one end of the slot, of a suitably supported endwise shiftable bolt arranged at an angle to said rod and having its body abutting against said head at one side of the head and inoperative in the aforesaid position of the rod, said body being arranged to engage the enlargement of the slot and thereby lock the rod upon the actuation of the rod in the direction required to disengage the pawl from the rack, and a spring acting to retain the bolt in its locking position, said bolt having means instrumental in actuating the bolt from its locking position into its inoperative position.

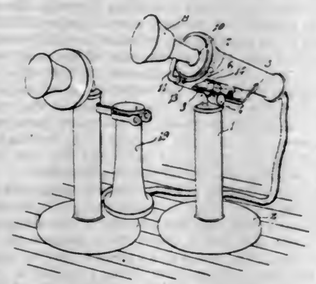
4. The combination, with a suitably supported upright lever, a suitably applied segmental rack arranged at one side of the lower portion of said lever and having its teeth arranged at its under side, a rod arranged internally and longitudinally and shiftable endwise of the lever and provided at its lower end with a pawl which engages the rack in the upper position of the rod, and a spring acting to retain said rod in said position, said rod being provided at its upper end with a head which is ex-

posed at the upper extremity of the lever and provided with a slot extending laterally through the head and having a lateral enlargement at the upper extremity of one end of the slot, of a suitably supported endwise shiftable bolt arranged substantially at a right angle to said rod and having a body abutting against the aforesaid head at one side of the head in the upper position of the rod, said body being arranged to engage the enlargement of the slot and thereby lock the rod in the lower position of the rod, a spring acting to retain the bolt in its locking position, and means instrumental in actuating the bolt from its locking into its inoperative position.

5. The combination, with a suitably supported lever, a suitably applied segmental rack, a rod arranged longitudinally and shiftable endwise of the lever and provided at one end with a pawl which engages the rack in one position of the rod, and a spring acting to retain said rod in said position, said rod being provided at its other end with a head which is exposed at the exterior of the lever and provided with a slot extending laterally through the head and having a lateral enlargement at one end of the slot, of a suitably supported endwise shiftable bolt arranged substantially at a right angle to said rod and having a body abutting against the aforesaid head at one side of the head in the aforesaid position of the rod, said body being arranged to engage the enlargement of the slot and thereby lock the rod upon the actuation of the rod in the direction required to disengage the pawl from the rack, and a spring acting to retain the bolt in its locking position, the body of the bolt having a stem which extends through the slot and externally of the lever in either position of the bolt.

[Claim 6 not printed in the Gazette.]

1,225,136. SOUND-INTENSIFYING DEVICE FOR TELEPHONES. HENRY J. KASTNER, Dayton, Ohio. Filed Feb. 7, 1916. Serial No. 76,575. (Cl. 179—147.)



1. In a device of the character described, a support comprising a pivoted bracket having seats spaced apart to receive and support a telephone receiver, a sound intensifier mounted on said pivoted bracket in a normally fixed position adjacent to one of said seats, and yieldable device mounted on said bracket to hold said receiver against lengthwise movement away from said sound intensifier and arranged to permit said receiver to be moved transversely away from said bracket.

2. In a device of the character described, a support having a seat for a telephone receiver, said seat having means to hold said receiver against lengthwise movement in one direction, means to hold said receiver against lengthwise movement in the other direction, and a sound intensifier mounted on said support in a normally fixed position relative to said seat.

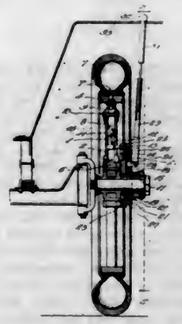
3. In a device of the character described, a support having a seat for a telephone receiver, said seat having a part to limit the lengthwise movement of said receiver in one direction, a resilient clip mounted on said support to engage said receiver and hold the same normally against movement away from said part on said seat, and a sound intensifier mounted on said support in a normally fixed position relatively to said seat.

4. In a device of the character described, a support having a seat for the head of a receiver and having a part to engage said receiver at a point removed from said head, a sound intensifier mounted on said support with one end adjacent to said seat, and a yieldable device carried by said seat to hold said receiver against longitudinal movement away from said sound intensifier, said yieldable device being arranged to permit said receiver to be moved transversely into and out of engagement with said support.

5. In a device of the character described, a support having a curved seat to receive the lower portion of the head of a receiver and having a part to engage said receiver at a point removed from said head, a sound intensifier mounted on said support with one end adjacent to said seat, and a resilient clip carried by said support and arranged to engage the lower portion of the head of said receiver when the latter is on said seat to hold the receiver against longitudinal movement away from said sound intensifier, the arrangement of said seat and said clip being such as to permit said receiver to be moved transversely into and out of engagement with the end of said sound intensifier.

[Claims 6 and 7 not printed in the Gazette.]

1,225,137. INFLATING DEVICE. GEORGE KEITH, Sheridan, Ill. Filed Aug. 3, 1916. Serial No. 112,979. (Cl. 152—11.)



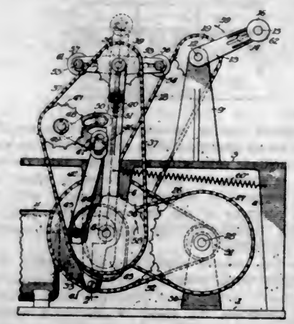
1. An inflating device comprising a pump having one end positioned against the hub of a wheel and projecting radially therefrom, said end having recessed opposite sides adapted to engage the adjacent spokes of the wheel, screw threads on the opposite end of said pump, an internally threaded cap member operatively engaging said end and adapted to connect the outlet of the pump with the air valve of said wheel to secure said pump in position, and pump actuating means carried by said wheel.

2. An inflating device comprising a pump adapted to be detachably connected to a vehicle wheel to inflate the tire thereof, an eccentric adapted to be mounted on the hub of said wheel, means to operatively connect said eccentric and pump, and an anchoring rod comprising two sections, one of said sections hinged to the eccentric and extending to a point in the direction of the guard of said wheel, and the other section extending downwardly through said guard, an enlarged head on the upper end positioned above said guard and the lower end of said section slidably engaging the adjacent end of the first mentioned section.

1,225,138. CANDY-PULLING MACHINE. JOHN E. KNECHT, Batavia, Ill. Filed Aug. 31, 1916. Serial No. 117,831. (Cl. 107—30.)

1. In combination a shaft adapted to be constantly rotated, a crank arm bearing a pin, adapted to be rotated by said shaft, a second shaft adapted to be rotated intermittently, a double crank arm on said shaft, said arm having a pair of diametrically spaced pins thereupon, and means for causing said second shaft alternately to approach toward and recede from said first shaft.





2. In combination a single pin crank arm adapted to be constantly rotated, a double pin crank arm adapted to be intermittently rotated and means for causing said second crank arm alternately to approach and recede with respect to said first crank arm, said second crank arm being rotated while approaching said first crank arm.

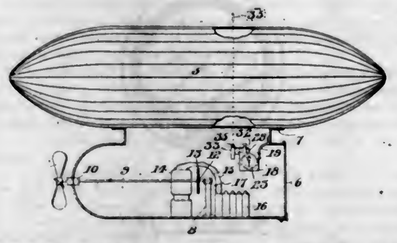
3. In combination a single pin crank arm adapted to be constantly rotated on a stationary axis, a double pin crank arm mounted on a movable axis and adapted to be rotated at a greater speed than said single crank arm and means for causing said pin of the single crank arm to pass between the pins of the double crank arm.

4. In combination, a single pin crank arm adapted to be constantly rotated and mounted on a stationary axis, a double pin crank arm adapted to be intermittently rotated and mounted on a movable axis, the single pin crank passing between the pins of the double crank, means to rotate both the single and double pin crank arm and means to rectilinearly move said double crank away from the single crank during a cessation of movement of said double crank, said double crank being returned toward the single crank along the same path.

5. In combination a single pin crank arm adapted to be constantly rotated, a double pin crank arm of approximately the same radius adapted to be rotated at a greater speed than said single crank arm, means for causing said pin of the single crank arm to pass between the pins of the double crank arm and means for imparting a relative motion of translation to one of said crank arms with respect to the other.

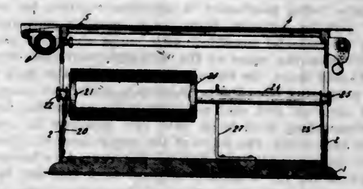
[Claims 6 to 12 not printed in the Gazette.]

1,225,139. BALLOON. JOHN KORZENIEWSKI, Toledo, Ohio. Filed Oct. 16, 1916. Serial No. 125,879. (Cl. 244—1.)



A device of the class described comprising a gas bag inflated with gas, a carriage suspended thereby, a propeller and motor mechanism therefor supported by said carriage, a clock mechanism and casing therefor supported within said carriage beneath said gas bag, a cylinder supported by said clock casing, a tensioned projectile within said cylinder, a sliding pin supported by said clock casing, a cam supported by said clock casing and means operated by the clock mechanism for shifting the cam into engagement with the said pin whereby the pin is caused to engage the projectile to release the same from the cylinder for puncturing the gas bag.

1,225,140. MANIFOLDING APPARATUS. ALBERT KRAUTH, Hamilton, Ohio. Filed Feb. 27, 1913. Serial No. 751,045. (Cl. 211—31.)

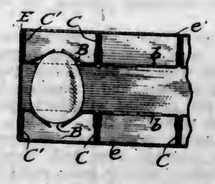


1. An autographic register comprising a pair of oppositely disposed apertured side frames, a spring member secured to one side frame extending radially to its aperture, and provided with a journaling boss on its free end, a spring member on the second side frame extending radially toward the aperture of the side frame, an extension rod secured to said spring member extended toward the opposing spring member and accessible from the exterior through the aperture, and a journaling boss upon the free end of said extension rod axially alining with the aforesaid opposing journaling boss.

2. A machine of the nature disclosed combining a pair of oppositely disposed side frames, a spring metal arm secured to each side frame, one thereof having a disk-shaped journal boss secured to its free end, a lateral extension secured to the second arm provided with a disk-shaped journaling boss in a coincident axial plane with said opposing boss.

3. A machine of the nature disclosed combining a pair of oppositely disposed side frames, a laterally yielding journal on one of said side frames, a spring metal arm on the opposite frame, a disk-shaped journaling boss mounted on said arm remotely therefrom, and a rigid bearing slidably supporting the axis of said boss.

1,225,141. EGG-CARRIER. FERDINAND KRONENBERGER, Brooklyn, N. Y., assignor to Frederic B. Clark, Englewood, N. J. Filed Aug. 9, 1913, Serial No. 783,863. Renewed Feb. 1, 1917. Serial No. 146,001. (Cl. 229—29.)



1. An article carrying package comprising a top member, a bottom member, and incasing means separate from both said members, each member embodying a web provided with rows of pocket forming portions and with a plurality of stays positioned at imperforate parts of the web and intermediate the pocket forming portions, certain of said stays extending in one direction and other stays extending in a direction transverse to the first stays

and crossing or intersecting therewith, said members being positioned in opposing relation to each other and with the pocket forming portions of one member in register with the similar portions of the other member, the stays of the upper member being in contact with a wall of said incasing means, and the crossing stays of the other member being in contact with another wall of said incasing means, whereby the pressure of said incasing means is communicated by the stays to the webs of the respective members for exerting pressure upon the articles contained between said webs without bending or deflecting the webs at points intermediate the pockets therein.

2. An article carrying package comprising a top member, a bottom member, and an incasing carton separate from both said members, said top member and bottom member being positioned in opposing relation for receiving articles between them, each member embodying a web of material provided with stays and with pockets offset from the plane of the web and positioned intermediate said stays, the stays and offset pockets of each member projecting from the same surface of the web composing said member, and said members being assembled for the corresponding pockets of said two members to register with each other, the stays of the upper member extending into contact with the top of the carton, whereas the stays of the lower member depend from the web thereof into contact with the bottom of the carton, whereby the pressure of the carton is transmitted through the stays to the webs so as to be applied to the articles retained within the pockets of said members.

3. An article carrying package comprising an upper member, a lower member, and an incasing carton separate from both said members, each member embodying a web provided with crossing stays and with slitted portions intermediate said stays, said slitted portions being yieldable so as to form a group of tongues which lie on the same surface of the web as the stays, said groups of tongues having a series of article receiving pockets, said members being assembled in facing relation so that the pockets of one member are in register with corresponding pockets of the other member, the yieldable tongues and stays of the upper member extending above the plane of the web of said member whereas the tongues and stays of the lower member depend from the under surface of the web of said member, said stays of the upper and lower members being in contact with the top and bottom respectively of the carton, whereby pressure is applied by the stays to the webs and the tongues to exert pressure upon the articles positioned between said members.

4. In an article carrier, a member composed of a web provided with rows of slitted portions, said web being creased on a plurality of parallel lines intermediate said slitted portions and provided with slots intersecting with said creases, said web being foldable on the crease lines and thereby forming stays integral with said web, said stays extending in one direction with respect to the web, and separate stays interlocked with the slotted parts of the integral stays, said separate stays and integral stays extending crosswise and lengthwise respectively of the web and being positioned between the slitted parts of said web.

5. In an article carrier, a top member comprising a web provided with pocket-forming portions and with stays projecting from the web on lines intermediate said pocket-forming portions, and a separate bottom member comprising a web provided with pocket-forming portions and with stays projecting from said web on lines intermediate said pocket-forming portions, combined with incasing means separate from both members, said top member and bottom member being positioned within the incasing means for the stays on the top member and on the bottom member to contact with the top and bottom respectively of said incasing means, whereby said incasing means is adapted to exert pressure against the stays so that the webs of the top and bottom members operate to exert pressure upon articles retained between the webs and within the pocket-forming portions thereof.

[Claim 6 not printed in the Gazette.]

1,225,142. EGG-CARRIER. FERDINAND KRONENBERGER, Brooklyn, N. Y., assignor to Frederic B. Clark, Englewood, N. J. Filed Aug. 9, 1913, Serial No. 783,865. Renewed Feb. 1, 1917. Serial No. 146,002. (Cl. 229—29.)



1. An article carrier embodying a plurality of sheets each sheet being provided with slitted portions and with stays intermediate said slitted portions, said sheets being assembled substantially parallel to each other and for the slitted portions of one sheet to register with the corresponding portions of the next sheet, the stays of said sheets being interlocked and retaining said sheets in a connected condition.

2. An article carrier embodying a plurality of sheets each provided with rows of slitted portions and with stays which are formed by folding the sheet intermediate the slitted portions, the stays of one sheet being interlocked with the stays of the adjacent sheet, and the slitted portions being in register on the adjacent sheets.

3. An article carrier embodying a plurality of sheets each provided with slitted portions adapted to be deflected from the plane of the sheet and produce a pocket, each sheet being foldable intermediate the slitted portions and producing a plurality of stays, the stays of the adjacent sheets projecting from the opposing faces thereof and said stays being inter-connected for retaining said sheets in such relation to each other that the slitted portions thereof are displaceable by contact with articles positioned intermediate the sheets.

4. An article carrier of the class described embodying a plurality of members provided with stays, the stays of one member crossing the stays of the other member and interlocked therewith, said members having slitted portions positioned intermediate said stays, said slitted portions being yieldable under the pressure of the articles introduced therein.

5. An article carrier embodying a plurality of sheets each folded at intervals and producing rows of stays, the stays of one sheet extending in one direction from the plane of the sheet and the stays of the adjacent sheet extending in an opposite direction to the first named stays, said sheets being positioned one above the other and the stays of one sheet being locked to the stays of the next sheet, said stays operating to retain the two sheets in a relatively spaced relation for receiving articles between the sheets and within the cells formed by the interlocked stays.

[Claims 6 and 7 not printed in the Gazette.]

1,225,143. DISPENSING APPARATUS. ISAAC KULICK, Brooklyn, N. Y. Filed Aug. 10, 1916. Serial No. 114,112. (Cl. 211—8.)

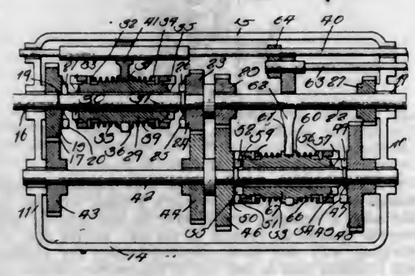


1. A dispensing apparatus comprising a stand, a slotted container pivoted thereto, a fixed gate mounted within the container, a pivoted ejector extending longitudinally through the container, and means for operatively connecting said ejector to said gate.

2. A dispensing apparatus comprising a stand, a slotted drum having heads, pivots connecting the drum with the stand, a fixed gate within the drum, arms that connect the gate to the pivots, a grooved ejecting member extending longitudinally through the drum, pivots that connect said member to the drum heads, and rods that connect said member to the fixed gate.



1,225,144. CLUTCH MECHANISM FOR TRANSMISSION-GEARINGS. FLOYD E. LAND, Medford, Oreg. Filed July 17, 1913. Serial No. 779,619. (Cl. 192—9.)



The combination of a frame, a drive shaft, a driven shaft disposed adjacent one end of the drive shaft, an element fixed on each of the drive and driven shafts and provided with inner and outer concentrically disposed teeth, said outer teeth being reversed with relation to the inner teeth, a sleeve non-rotatably and slidably mounted on the drive shaft and provided with teeth on each end for coöperation with the inner teeth of the adjacent element to lock said drive shaft selectively to the driven shaft, a second sleeve non-rotatably and slidably mounted on each end of the first named sleeve, each second sleeve being provided with teeth arranged for coöperation with the outer teeth of the adjacent element, a central circumscribing flange on the first named sleeve provided with a circumscribing groove, a yoke rotatably arranged in said groove, a rod slidably mounted in the frame and to which said yoke is connected, whereby the sliding of the rod will effect sliding of the first named sleeve, and springs encircling the first named sleeve and bearing at their inner ends against said flange and at their outer ends against the respective second named sleeves to normally hold the latter at the limit of their outward movement.

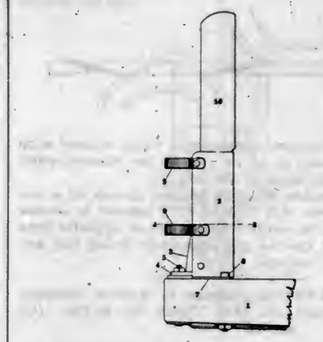
1,225,145. STAKE-HOLDER FOR VEHICLES. FRANCIS M. LAY, Moline, Ill., assignor to The John Deere Wagon Company, Moline, Ill., a Corporation of Illinois. Filed Oct. 3, 1916. Serial No. 123,511. (Cl. 21—54.)

1. A stake holder for vehicles comprising a shell having one side open, a block within the open side, means to secure said block and shell together to form a holder, and means to secure said holder to a vehicle.

2. A stake holder for vehicles comprising a shell having one side open, a block within the open side at the lower end thereof, a block within the open side adjacent the top thereof, means to secure both blocks and shell together to form a holder, and means to secure said holder to a vehicle.

3. A stake holder for vehicles comprising a shell having one side open and two opposite sides bent outwardly at the bottom to form a base, a block within the open side at the lower end having an outwardly extending portion to form a base, and means to secure said bases to a vehicle.

4. A stake holder for vehicles comprising a shell having one side open, means secured to the shell on the open side to form a holder, ring members secured to the open side of the shell in vertical alinement, and means to secure the holder to a vehicle.



5. A stake holder for vehicles comprising a shell having one side open, a block within the open side at the lower end thereof, a block within the open side adjacent the top thereof, means to secure both blocks and shell together, a ring member secured to the holder and extending outwardly of the lower block, a ring member secured to the holder adjacent the upper block, both rings being in vertical alinement, and means to secure the holder to a vehicle.

1,225,146. COATING MATERIAL FOR PAPER FOR PHOTOGRAPHIC USES. GEORGE W. LEIGHTON and CHARLES S. BABCOCK, Chicago, Ill. Filed May 10, 1909. Serial No. 495,167. (Cl. 95—7.)

1. The herein described coating material for photographic paper comprising ferric oxalate, a soluble silver salt, and a soluble mercury salt; substantially as specified.

2. A surface suitable for photography, having applied thereto the herein-described sensitive photographic coating comprising ferric oxalate, a soluble silver salt and a soluble mercury salt; substantially as specified.

3. A sensitizing composition for photography, said composition containing ferric oxalate, a silver salt as described, and a mercury salt.

4. A photographic paper coated with a solution of ferric oxalate, a silver salt as described and mercuric oxid, which is capable of being developed as platinotype paper is, substantially as specified.

5. A photographic paper coated with a solution of ferric oxalate, a silver salt as described and any salt of mercury which is soluble in a solution of ferric oxalate, which is capable of being developed as platinotype paper is, substantially as specified.

[Claim 6 not printed in the Gazette.]

1,225,147. INSULATOR. FRED M. LOCKE, Victor, N. Y. Filed Sept. 4, 1914. Serial No. 860,160. (Cl. 106—12.)

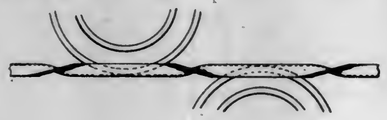
1. An insulator of high silica content formed by fusing silicic material with cryolite and boron material to form a homogeneous body and molding the mass to desired form.

11. A heat resisting glass of low co-efficient of expansion comprising boron oxid, alumina, a small amount of an alkali and a relatively large amount of silica and having a coefficient of expansion not greater than .0000050.

17. A glass of low expansion coefficient formed by fusing silicic material, boron material, cryolite and an alkali, and showing from analysis silica, boric oxid, alumina and an alkali.

[Claims 2 to 10, 12 to 16, and 18 not printed in the Gazette.]

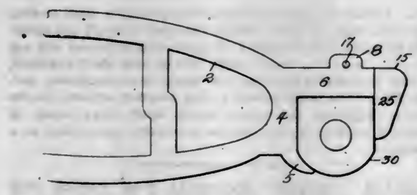
1,225,148. SPRING-CONNECTOR. THOMAS MAHONEY, Detroit, Mich., assignor to Leonard A. Young, Detroit, Mich. Filed Aug. 31, 1916. Serial No. 117,951. (Cl. 5—29.)



1. A spring connector comprising a single channel strip twisted in sections so as to present the channel alternately on opposite sides of the strip.

2. The combination with two or more springs, of a connector in the form of a channel strip twisted in section so as to present the channel alternately on opposite sides of the strip and thereby grip oppositely facing coil portions of adjacent springs.

1,225,149. CAR-TRUCK. GEORGE E. MARBLE, Dubuque, Iowa. Filed Aug. 21, 1915. Serial No. 46,723. (Cl. 105—243.)



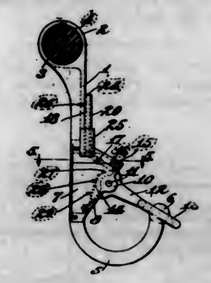
1. In a device of the character described, a frame, provided with a recess in its outer end, a journal box, an arm integral with the frame near its end and said arm bent at its lower end under the journal box, a member, and means for removably securing said member in the recess in the frame and engaging one side of the journal box, said arm and member being entirely disconnected from each other at their free ends.

2. In a car truck, a side frame provided in its end with a pair of spaced arms between which the journal box is adapted to fit and be held against vertical displacement, and a removable member on one of said arms and free from the other arm and adapted to hold the journal box from horizontal displacement, the arm to which the removable member is fitted being provided with a recess, and the removable member having a lug adapted to fit in said recess to prevent horizontal displacement of the said removable member.

3. In a device of the character described, a journal box, a frame provided with a recess in its outer end, a lug on opposite sides of the recess and said end resting on the top of the journal box, an arm connected to the frame at substantially right angles to the frame and bent at its lower end and engaging one side and a part of the base of the journal box, a member provided with a lug and adapted to rest in the recess in the end of the frame with its lug between the lugs on the frame, and means including a safety bolt for securing the member in the recess in the frame.

1,225,150. COAT-HANGER. ARTHUR L. MCGUIRE, St. Louis, Mo. Filed Apr. 13, 1914. Serial No. 831,507. (Cl. 45—13.)

1. A coat hanger comprising a hook having a spherical enlargement at its end over which the neck portion of the coat in the region of the collar is hung, a movable retaining arm coöperating with said hook, said arm having a ring at its end in which the spherical enlargement at the end of the hook is centrally located when the arm is in closed position, the ring being of round cross section and of relatively larger diameter than the end portion of said hook to provide clearance to accommodate the thickness of the cloth, a locking element arranged and adapted to engage said retaining arm, a key-check holder located in coöperative relation to said locking element, and a key-check detachably fitted to said holder and arranged and adapted to release said locking element from said retaining arm.



2. A coat hanger comprising a body portion, a hook thereon, said body portion having a housing adjacent to said hook, a retaining arm pivoted on said housing and working through an opening in the wall thereof and coöperating with said hook, yieldable means for holding said retaining arm in and out of coöperative relation to said hook, said retaining arm having a shouldered portion within said housing, a locking device within said housing, said locking device comprising a gravitating divided pivotal plate constituting a plurality of independently movable sections simultaneously engaging said shouldered portion of said retaining arm and each acting separately to lock said arm in coöperative relation to said hook, a key check holder located in coöperative relation to said locking device, and a key check detachably fitted to said holder and arranged and adapted to release all of the sections of said locking device from engagement with said retaining arm.

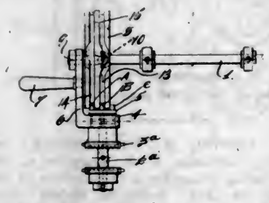
3. A coat hanger comprising a body portion, a hook thereon, a housing adjacent to said hook, a retaining arm pivoted to said housing and working through an opening therein, the outer portion of said arm coöperating with said hook, and the inner portion thereof having a locking shoulder within the housing, a locking element within said housing adapted to engage said locking shoulder on the retaining arm, said locking element comprising a plurality of independently-movable sections, a key check holder located in coöperative relation to said locking element, and a key-check detachably fitted to said holder and having a projection adapted to engage two adjoining sections of said locking element to release the same from engagement with said retaining arm.

4. In a coat hanger, a coat-supporting member, a movable retaining member coöperating therewith, said retaining member having a locking shoulder, a gravitating locking element comprising a plurality of adjoining independently movable sections severally engaging the locking shoulder of said retaining member simultaneously and each acting separately to lock said retaining member in coöperative relation to said supporting member, a key-check holder located in coöperative relation to said locking element, and a key-check detachably fitted to said holder and having provision for effecting the release of all of the sections of said locking member from engagement with said retaining member.

5. In a coat hanger, a coat-supporting hook, a pivoted retaining arm coöperating therewith, a gravitating locking element comprising a divided pivotal plate constituting a plurality of independently movable sections severally engaging said retaining arm simultaneously, and each acting separately to lock the latter in coöperative relation to said supporting hook, a key-check holder in coöperative relation to said locking element, and a key-check detachably fitted to said holder and having provision for effecting the release of all of the sections from engagement with said retaining arm.



1,225,151. INTERMITTENT-MOTION MECHANISM. ANTON MEHLFELDER, New York, N. Y. Filed June 13, 1913. Serial No. 773,394. (Cl. 74—41.)



1. An intermittent motion mechanism having a continuously rotating shaft, a cam mounted thereon, said cam having peripheral grooves, an intermittent shaft having a plurality of projections to be engaged by the peripheral grooves of the cam to impart an intermittent motion to said shaft, and a support for said continuously rotating cam and shaft adapted to shift the cam in its relative position to the driven shaft for the purpose of deducting from or adding to the regular rotation of the intermittent shaft independently of the intermittent motion.

2. The herein described intermittent motion mechanism comprising a drive shaft in two parts universally joined together, a cam carried by one part and free for oscillation, a driven shaft having cam engaging elements adapted to engage the aforesaid cam in all positions of its oscillations.

3. The herein described intermittent motion mechanism comprising a drive shaft in two parts universally joined together, a cam carried by one part and free for oscillation, a driven shaft having cam engaging elements adapted to engage the aforesaid cam in all positions of its oscillations, the cam having peripheral grooves.

4. The herein described intermittent motion mechanism comprising a drive shaft in two parts universally joined together, a cam carried by one part and free for oscillation, a driven shaft having cam engaging elements adapted to engage the aforesaid cam in all positions of its oscillations, the cam having peripheral grooves, and the axial line of the driven member coinciding with the axis of the universal joint.

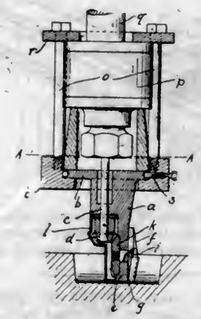
5. A driving shaft and bearings therefor, a continuation of such shaft, a universal joint connecting the two, a cam mounted to oscillate with the continuation upon said universal joint and a driven member engaged by the cam.

[Claims 6 to 10 not printed in the Gazette.]

1,225,152. TOOL AND TOOL-CARRIER. HERMAN W. MELLING, Jackson, Mich. Filed Mar. 31, 1916. Serial No. 87,922. (Cl. 90—17.)

1. In a device of the character described, the combination of a tool-carrier comprising a shank and a disk-like head provided with notches in its periphery, a spindle journaled in the shank, an extension on the shank, a disk journaled in said extension, a beveled gear located on the end of the spindle, a second beveled gear secured to the axle of the disk and meshing with the first-mentioned beveled gear, a tool carried by the said disk, and means for engaging in the said notches for holding the tool-carrier in various angular positions.

2. In a device of the class described, the combination of a tool-carrier comprising a shank and a disk-like head, the latter provided with notches in its periphery, an annulus in which the same sets, a spring dowel pin secured in the annulus and adapted to engage at different times in the said notches, a rotating spindle journaled in the shank, a disk rotatably journaled at the end of the shank on an axis at substantially right angles to the axis of the spindle, a cutting tool carried by the disk, and a pair of intermeshing beveled gears connecting the rotating spindle and the disk.



3. In a device of the class described, the combination of a tool-carrier comprising a disk-like head having a plurality of notches in its outside surface and a shank, a bracket in which the disk-like head is supported, a rotating spindle journaled in the shank, means on said bracket for engaging in the notches at various times to secure angular adjustment of the tool carrier, a rotating spindle journaled in the shank, a beveled gear on the end thereof, a disk journaled in the end of the shank at right angles to the spindle, a cutting tool carried by the disk, and a beveled gear secured to the disk and meshing with the first-mentioned beveled gear.

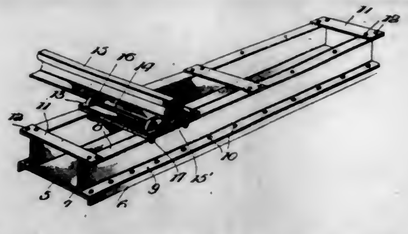
4. In a device of the character described, a tool-carrier comprising a shank and a disk-like head, a spindle rotatably journaled therein, a beveled gear on the end thereof, the said shank being provided with a flat web-like extension, a disk having an axle journaled in said extension and located immediately to the outside of the extension, a beveled gear on the end of the spindle, a beveled gear on the end of the axle and located immediately to the inside of the extension, the two said gears meshing, and a cutting tool projecting peripherally from the disk.

5. In a die sinking tool or routing tool, the combination of a tool carrier comprising a substantially solid shank having a downwardly extending web terminal located at one side of the axis of the shank and comprising a disk-like head offset to the axis of the shank, means for rotatably holding the disk-like head, means for locking the disk-like head in two or more positions of angular adjustment about the axis of the head, a spindle journaled in the tool carrier axially of the disk-like head and offset from the axis of the shank, a beveled gear on the end of the spindle, a disk and beveled gear journaled together in the downwardly extending web terminal and the beveled gear meshing with the beveled gear on the end of the spindle, and a cutting tool carried by the disk.

1,225,153. RAILWAY CROSS-TIE. JOHN H. MESSNER, Pittsburgh, Pa. Filed Feb. 7, 1914. Serial No. 817,258. (Cl. 238—5.)

A railway tie including parallel upstanding side walls, each of said side walls being substantially U-shape in cross section and having its web portion provided with outwardly extending upper and lower flanges defining an outwardly opening channel adapted to receive the material from which the road-bed is constructed, rigid plates of substantially the same width as the flanges of the side walls connecting the upper flanges of said side walls at the opposite ends of the tie and having their outer longitudinal edges disposed substantially flush with the ends of the tie, a base member connecting the lower flanges of the side walls and provided with oppositely disposed depending anchoring flanges, and tie plates of greater width than

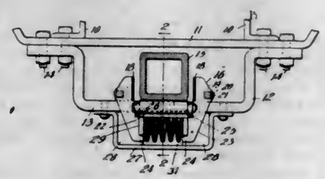
the rigid connecting plates bridging the side walls of the top of the tie and spaced from each other and from the



inner longitudinal edges of the adjacent connecting plates, the distance between the inner faces of the webs of the side walls being greater than the height of the tie.

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1,225,154. DRAW-BAR-CENTERING DEVICE. WILLIAM H. MINER, Chazy, N. Y. Filed July 6, 1915. Serial No. 38,090. (Cl. 213—42.)



1. In a draw bar centering device, the combination with a carry-iron, of a centering frame straddling said iron and slidable back and forth thereon, said frame having depending arms, a spring and spring followers, said followers and arms having interengaging shoulders which, in operative position of the parts, prevent accidental removal of either the frame or the followers.

2. In a draw bar centering device, the combination with a carry-iron, of a plate secured to the underside of said carry-iron, spring followers slidably mounted on said plate, a spring between said followers, and a frame slidably mounted on said carry-iron, said frame having depending arms on opposite edges of the carry-iron, said arms and followers being provided with interengaging, self-locking means.

3. In a draw bar centering device, the combination with a carry-iron having a plate secured to the bottom thereof, of spring followers slidably mounted on said plate between it and the carry-iron, said followers having forwardly and rearwardly extended shoulders, a spring interposed between said followers, a frame slidably mounted on said carry-iron and straddling the latter, said frame having depending arms at the corners thereof, each arm having a shoulder engaging a shoulder of a follower, anti-friction means interposed between said frame and the carry-iron, and anti-friction means carried by said frame upon which the draw bar is adapted to be supported.

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1,225,155. COTTON GLOVE. JOHAN PETER MÖLLER, Kewanee, Ill., assignor to Boss Manufacturing Company, Kewanee, Ill., a Corporation of Illinois. Filed July 29, 1916. Serial No. 112,086. (Cl. 2—9.)

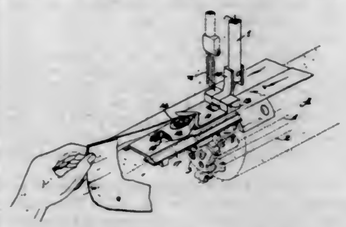
In a glove of the character described, a blank forming a body part having a single straight diagonally disposed slit E within the blank adjacent the thumb and extending upwardly through said blank, a thumb part of symmetrical formation having the straight inclined edges *f* on opposite sides and the pointed extensions *f'*, the parts *f* being stitched to the edges formed by the diagonal slit E within the blank, the stitches extending across the pointed



extremities *f'* of the thumb part and around the upper edges thereof to unite the same.

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1,225,156. SEWING-MACHINE GUIDE. GEORGE E. MOLYNEUX, Bayonne, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed July 19, 1915. Serial No. 40,566. (Cl. 112—9.)



1. In a sewing machine guide, means for guiding the edges of fabric into abutment preliminary to a stitching operation, comprising guiding walls adapted to receive and turn two margins of fabric into substantially V-shape formation and gradually to decrease the degree of such formation.

2. In a sewing machine guide, means for guiding the edges of fabric into abutment preliminary to a stitching operation, comprising two separable guiding members coacting to turn two margins of fabric into substantially V-shape formation and subsequently to decrease the degree of such formation to a point where the said margins are flattened into substantially the same plane.

3. In sewing machine guides, a guide-foot formed with a V-shape channel in its lower face, and a guide-block coacting with said foot, the said block having an upper face the reverse in contour to the lower face of the foot and being adjustable relatively thereto.

4. In sewing machine guides, a guide-foot formed with a V-shape channel in its lower face, and a guide-block coacting with said foot, the said block having an upper face the reverse in contour to the lower face of the foot and having a portion of its base cut away.

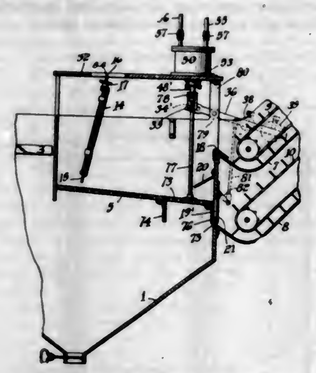
5. In a device for guiding the edges of fabrics into abutting relation and in a compact condition, an upper member having outwardly diverging and downwardly and laterally beveled walls, a lower member having a projecting nose spaced from the walls of the upper member and defining therewith a fabric passage, said passage being inclined downwardly.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,157. JIGGER FOR SEPARATING COAL AND SLATE. HARRY J. MOYER, Philadelphia, Pa. Filed July 14, 1915. Serial No. 39,916. (Cl. 83—79.)

1. In a device of the character stated, a water tank, a jigger box adapted to extend within the water, having slate and coal outlets and including an upwardly and downwardly movable screen bottom varying the extent of slate outlet, reciprocable means for producing relative movement between the water and the screen bottom, a stabilizer for the movable bottom and counterbalancing support for the movable bottom.



2. In a device of the character stated, a water tank, a jigger box having a slate outlet and providing an upwardly and downwardly movable screen bottom support for mixed slate and coal, affecting the extent of slate outlet, reciprocable means for producing relative movement between the water and the screen bottom, dash pot means directly connected with the bottom to resist the upward thrust of the water due to the plunger action and counterpoise means for supporting the weight of the slate and coal.

3. In a device of the character stated, a water tank, a jigger box having a slate outlet adapted to receive slate and coal to be separated and providing a vertically movable support for the same which affects the size of the outlet, reciprocable means for producing relative movement between the water and the support, dash-pot retarding mechanism directly connected to the movable support, and counter-balancing means engaging the connection varying in counterbalancing effect with the height of the support.

4. In a device of the character stated, a water tank, a plunger reciprocable therein, a vertically movable screen bottom supporting mixed slate and coal, means for counterbalancing the weight of the slate and coal, a dash pot and connections to damp vertical movement of the screen bottom, liquid in the dash pot and a connection extending above the dash pot to receive liquid and bring pressure upon the liquid in the dash pot.

5. In a device of the character stated, a water tank, a plunger reciprocable therein, an upwardly and downwardly movable bottom support for mixed slate and coal and counter-weighted lever means for supporting the slate and coal and having the proportion of length of lever to the support and counter-weight respectively upon opposite sides of the fulcrum point automatically varied with changing heights of support.

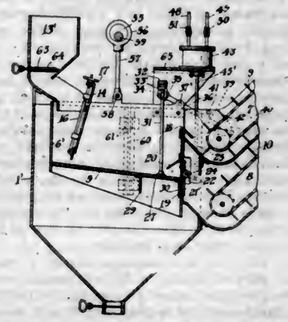
[Claims 6 to 19 not printed in the Gazette.]

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1,225,158. MOVABLE-BOTTOM-SCREEN JIGGER. HARRY J. MOYER, Philadelphia, Pa. Filed Aug. 21, 1915. Serial No. 46,667. (Cl. 83—80.)

1. In a device of the character stated, a jigger box having a screen in the bottom movable with respect to the bottom and adapted to be immersed in water, means for causing relative movement between the water and the jigger box, counter-weighting means for the movable screen and a dash pot stabilizer rigid with respect to the box and having its piston connected with the screen to damp its movement.

2. In a device of the character stated, a jigger tank adapted to contain water, a jigger box therein having a slate outlet and a perforated screen in the bottom movable with respect to the box, in a direction transverse to the outlet, means for causing pulsations of the water with respect to the box, counter-weighting means for the screen having variable weight to power distances from the fulcrum with different heights of the screen and a stabilizer for damping movement of the screen in both directions.



3. In a device of the character stated, a tank adapted to contain water, a jigger box adapted to enter the water, means for producing relative movement of the water and jigger box, a screen in the bottom of the box movable up and down with respect to the box, counter-weighted levers supporting the screen and dash pot stabilizing means connected with the levers for preventing sudden movement of the levers and screen.

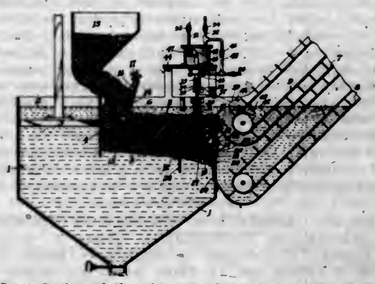
4. In a device of the character stated, a tank adapted to contain water, a jigger box adapted to enter the water, means for vertically reciprocating the jigger box to cause pulsations of the water therein, a screen in the bottom of the box adapted to support mixed coal and slate contained therein and movable up and down with respect to the box, in combination with counter-weighting means for the screen movable with the box and a stabilizer carried by the box connected with the screen and adapted to damp its movement in both directions.

5. In a device of the character stated, a tank adapted to contain water, a jigger box having a slate opening reciprocable in the water to cause pulsations of water therein, a screen section of the bottom of the box being movable up and down with respect to the box, transversely to the opening and in front of it, variant fulcrum counterweighting support for the section carried by the box and means carried by the box for damping the movement of the section and counter-weights with respect to the box.

[Claim 6 not printed in the Gazette.]

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1,225,159. STABILIZED MOVABLE BOTTOM FOR JIGGERS. HARRY J. MOYER, Philadelphia, Pa. Filed Nov. 15, 1915. Serial No. 61,487. (Cl. 83—79.)



1. In a device of the character stated, a tank adapted to contain water, a jigger box therein having a bottom screen movable with respect to the tank, means for causing relative movement between the screen and the water, counter-weighted support for the screen and a dash pot

stabilizer for the screen adapted to be filled with fluid to retard all movement of the screen or insufficiently filled with fluid to permit predetermined lost motion in each direction and at the end of the lost motion retard movement of the screen.

2. In a device of the character stated, a tank adapted to contain water, a jigger box therein having a bottom screen thereof movable with respect to the tank, means for causing relative movement between the screen and water and a stabilizer for the movable screen having lost motion therebetween and adapted to retard movement in either direction beyond the extent of the lost motion.

3. In a device of the character stated, a water tank, a jigger box therein having a slate outlet and a screen in the bottom movable with respect to the tank, support for the screen, means for causing relative movement of the screen and water and a stabilizer for the screen comprising a cylinder, a piston therein connected with the screen and a by-pass between the ends of the cylinder capable of regulation to determine the rate of flow of liquid from one end of the cylinder to another.

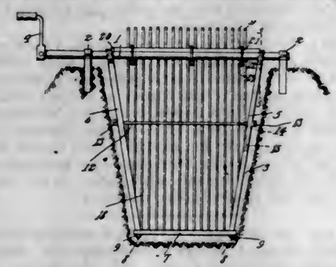
4. In a device of the character stated, a water tank, a jigger box therein having a bottom screen movable with respect to the tank, means for causing relative movement between the screen and water, support for the screen and a dash pot stabilizer for retarding movement of the screen provided with a tap for withdrawing part of the fluid from the dash pot to permit predetermined lost motion of the screen before the stabilizer becomes effective.

5. In a device of the character stated, a water tank, a jigger box therein having a screen in the bottom movable with respect to the tank, means for causing relative movement between the water and screen, support for the screen and a dash pot stabilizer for the screen having an outside regulable bypass for fluid between the ends of the dash pot and a tap for withdrawing liquid from the dash pot.

[Claims 6 to 12 not printed in the Gazette.]

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1,225,160. FISH-GATE. JULIUS NIHART, Flak, Minn. Filed Sept. 20, 1916. Serial No. 121,238. (Cl. 61—5.)



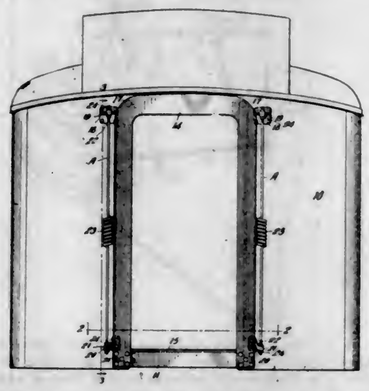
A screening gate for irrigation ditches comprising a shaft adapted to extend transversely over the ditch and to be rotatably supported on opposite sides of the ditch, a frame rigid with said shaft and adapted to depend into the ditch, said frame consisting of side and bottom bars adapted to lie substantially parallel with the walls of the ditch, said shaft and bottom bar having a plurality of spaced openings therein arranged in relative alinement, rods extended through said openings to provide a screen for the frame, the upper ends of said rods being extended at an angle to the frame so as to provide a laterally extending guard, substantially as for the purposes set forth.

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1,225,161. MEANS FOR SUPPORTING VESTIBULE-DIAPHRAGM FACE-PLATES. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Apr. 13, 1916. Serial No. 90,833. (Cl. 105—61.)

1. A single piece hanger rod for vestibule diaphragm face plates and the like, said rod being yieldingly extensible and laterally flexible.

2. A hanger rod for diaphragm face plates and the like having an integral coil formed therein intermediate its ends, thereby permitting extension and contraction in the length of said rod and lateral flexing thereof.



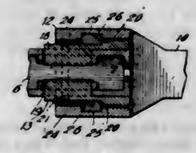
3. A hanger rod for diaphragm face plates and the like having an integral coil portion intermediate its ends, the ends of said rod being threaded.

4. The combination with a vestibuled car and a diaphragm face plate, of means for supporting said face plate, said means including a pair of upper brackets secured to the car end, a pair of lower brackets secured to said face plate, said brackets being arranged in pairs on opposite sides of the vestibule, and single piece hanger rods extending between and secured to each pair of brackets, each of said rods being extensible and readily flexible.

5. The combination with a vestibuled car and a diaphragm face plate, of a pair of upper brackets secured to the car end, one on each side of the vestibule, a pair of brackets secured to said face plate, one on each side thereof near the bottom, and a hanger rod extending between each pair of brackets on each side of the vestibule, each of said rods being secured at its ends to the corresponding brackets and having an integral coil therein intermediate its ends.

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1,225,162. DRAFT-RIGGING FOR RAILROAD-CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 13, 1916. Serial No. 109,005. (Cl. 213—42.)



1. In a draft rigging, the combination with a draw-bar having shouldered sides, of a draft yoke having a hollow head to receive the draw-bar, and keys, the sides of the head being provided with vertical grooves, the keys entering said grooves and engaging the shoulders of the draw-bar, said keys being removable downwardly when the yoke and draw bar are in position on a car.

2. In a draft rigging, in combination: a draw-bar, a yoke having sides adjacent the sides of the draw-bar, vertical keys interposed between the said sides of the yoke and the draw-bar to secure the draw-bar within the yoke, said keys being removable downwardly when the yoke and draw bar are in position on a car.



3. In a draft rigging for railway cars, the combination with a draw bar, of blocks on the sides of said draw bar and detachably secured thereto, said blocks having vertically extending shoulders on the outer faces thereof, and a yoke having a hollow hood at its forward end within which are adapted to be received the draw bar and said blocks, and vertically extending removable members between the side walls of the hood and said blocks, said members engaging said shoulders on the blocks.

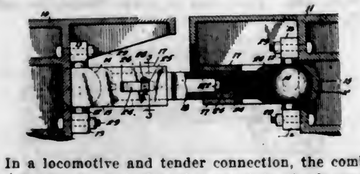
4. In a draft rigging for railroad cars, in combination: a draw-bar having upper and lower shoulders, a yoke having a hollow head to receive the draw-bar, draw-bar shoulder blocks, and keys, the said blocks having internal shoulders to engage the shoulders of the draw-bar, and also having external vertical shoulders, the yoke head being provided with vertical grooves to receive the keys, the said keys engaging the external shoulders of the blocks.

5. In a draft rigging for railroad cars, in combination: a draw-bar having upper and lower shoulders, a draft yoke having sides adjacent the sides of the draw-bar, blocks mounted upon the said draw-bar, and keys, the draw-bar being provided with openings at its sides, the blocks having lugs entering said openings, the said blocks being further provided with vertical shoulders at its sides, the keys engaging the sides of the yoke and the said vertical shoulders of the blocks.

[Claims 6 to 13 not printed in the Gazette.]

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1,225,163. LOCOMOTIVE AND TENDER CONNECTION. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 15, 1916. Serial No. 109,420. (Cl. 213—42.)



1. In a locomotive and tender connection, the combination with members rigid with respect to the locomotive and tender respectively, said members having each a central, spherical section, and means for connecting said members, said means including a loop at each end thereof curved to fit over the corresponding spherical section, and a removable bearing block within each loop fitting the outer side of the corresponding spherical section.

2. In a device of the character described, the combination with two end members each having a spherical central section, of a connection between said members, said connection including a loop at each end and a removable bearing block within each loop.

3. In a locomotive and tender connection, a shackle, the shackle comprising two end loop members and a central connecting bar, of means for connecting said loop members to the locomotive and tender respectively, and means for adjustably connecting said bar with each of said loop members, respectively.

4. In a locomotive and tender connection, the combination with two end members adapted to be rigidly attached to a locomotive and tender respectively, each of said members having a spherical section, of a shackle extending between said members, said shackle comprising two end loop members and an intermediate connecting bar, the loop members having a universal joint connection with each of said first named members, and the connecting bar being adjustably connected with each of the loop members.

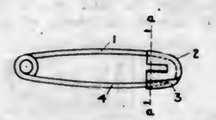
5. In a device of the character described, the combination with two end members each adapted to be attached to a locomotive or tender, of a connection between said members, said connection including a loop at each end encircling one of said members, and a removable bearing block within each loop engaging the outer side of said member.

[Claims 6 and 7 not printed in the Gazette.]



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1,225,164. SAFETY-PIN. FREDRIK OLIVER OLSEN, Horten, Norway. Filed Feb. 24, 1917. Serial No. 150,850. (Cl. 24—156.)

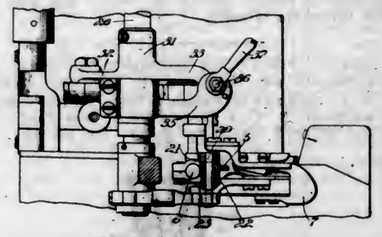


1. A safety pin comprising a spring-pressed pointed end, a leg carrying same, a casing mounted on said leg adapted to receive said end, said casing comprising two substantially straight parallel walls with a lateral opening to freely admit, and permit removal of, said pointed end and forming a passageway for said end the plane through the center of such passageway passing through the center of said leg, and an offset inclined end to said passageway lying in a different plane to the aforesaid plane.

[Claim 2 not printed in the Gazette.]

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1,225,165. TRIMMING MECHANISM FOR SEWING-MACHINES. LANSING ONDERDONK, New York, N. Y., assignor to The Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 31, 1913. Serial No. 757,944. (Cl. 112—6.)



1. A trimming mechanism for sewing machines including in combination, a work support, a presser foot having a shank with a recess therein, a stud secured to the presser foot and projecting centrally from said recess, an arm pivotally supported by said stud and projecting forwardly therefrom, a trimming member carried by said arm, a stationary trimming member mounted on said presser foot with which said first-named trimming member coöperates, a spring located in said recess on said stud and operating on the arm to hold the trimming members in contact, a second arm rigid with the first-named arm and projecting upwardly therefrom, and means for oscillating said second arm.

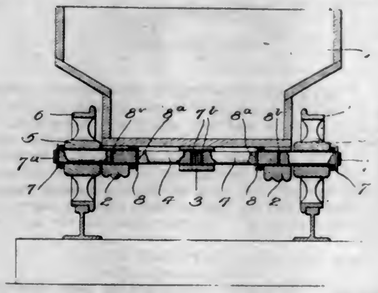
2. A trimming mechanism for sewing machines including in combination, a work support, a presser foot having a shank with a recess therein, a stud secured to the presser foot and projecting centrally from said recess, an arm pivotally supported by said stud and projecting forwardly therefrom, a trimming member carried by said arm, a stationary trimming member mounted on said presser foot with which said first-named trimming member coöperates, a spring located in said recess on said stud and operating on the arm to hold the trimming members in contact, a second arm rigid with the first-named arm and projecting upwardly therefrom, an operating shaft, a link connecting said operating shaft with said upwardly projecting arm, said link being substantially horizontal whereby the raising and lowering of the presser foot does not affect the cutting position of the trimming mechanism.

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1,225,166. PIT-CAR AXLE. FRANCIS M. OSBORNE, Washington, Pa. Filed Oct. 16, 1916. Serial No. 125,919. (Cl. 105—258.)

The combination with a car body, of a pair of bearings carried thereby beneath the sides thereof, a central bear-

ing alined with the other bearings, and a pair of reversible axle halves uniform in size and shape, said halves having their inner ends received rotatably in the central bearing and having their intermediate portions similarly received in the other bearings, the outer ends of said halves receiving rotatably thereon the wheels of the car, each of



said axle halves having a pair of openings through which inner and outer pins are to be passed to respectively hold said halves against outward shifting and to prevent removal of the wheels, and also having an additional pair of similarly spaced openings to receive said pins when said halves are reversed.

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1,225,167. BINOCULAR MICROSCOPE. WILLIAM L. PATTERSON and GUSTAV A. H. KELLNER, Rochester, N. Y., assignors to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 27, 1915. Serial No. 68,614. (Cl. 88—39.)



1. An attachment for binocular microscopes having a pair of twin objectives mounted on a common carrier, said attachment consisting of a single objective and an objective prism system associated therewith, a carrier for said objective and prism system, the last named carrier and the optical elements carried thereby being adapted to be interchangeable with the first named carrier and the twin objectives.

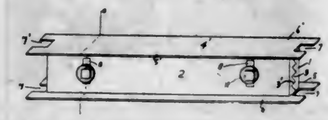
2. An attachment for binocular microscopes having a pair of twin objectives mounted on a common carrier, said attachment consisting in the combination of a prism system, a carrier for said prism system interchangeable with the carrier for the twin objectives, an objective system adapted to be associated with said prism system and a mounting for the objective detachably secured to the prism carrier.

3. An attachment for microscopes embodying a pair of oculars and a pair of twin objectives removably mounted in coöperative relation to said oculars, said attachment consisting in the combination of a casing having a pair of ocular openings in its upper wall and an objective opening in its lower wall, an objective detachably mounted in registry with said objective opening, a primary prism mounted within the casing in fixed relation to the objective opening and one of the ocular openings, a supplementary prism mounted on a universally adjustable plate having a single point bearing with the casing structure and disposed within said casing intermediate the primary prism and the other ocular opening, said casing and objective being adapted to be substituted for the twin objectives in coöperative relation with the oculars.

4. An objective prism system for microscopes including an objective and a pair of oculars, said prism system comprising a primary prism having a partially reflecting surface adapted to be interposed in the axis of the objective, said surface functioning to simultaneously reflect and transmit complementary portions of light received from the objective, a totally reflecting surface arranged in the path of the light reflected by the partially reflecting surface and functioning when in the light path of one coöperating ocular to reflect light received from said partially reflecting surface into said ocular and a totally reflecting surface disposed in the path of light transmitted by said partially reflecting surface, a supplementary prism coöperating with said primary prism, said supplementary prism being adapted to receive the light reflected by the last named totally reflecting surface and direct said light into the remaining ocular, and means for supporting the objective, oculars and the prism system in coöperative relation.

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1,225,168. BOLSTER FOR VEHICLES. FRANK R. PENCE, Pence, Ind. Filed July 6, 1914. Serial No. 849,194. (Cl. 21—39.)



1. An adjustable false bolster for vehicles comprising complementary sections, each having a horizontal portion and a vertical portion, the contiguous faces of said vertical portions being provided with horizontal ledges connected by inclined portions, said vertical portions being provided with alined openings; and bolts passing through said openings and holding said complementary sections together with said horizontal ledges in engagement with each other, substantially as described.

2. An adjustable, two-part, false bolster for vehicles comprising complementary sections, each having a horizontal portion and a vertical portion, the contiguous faces of said vertical portions being provided with horizontal ledges; and bolts passing through said vertical portions and holding said sections together with adjacent horizontal ledges in engagement.

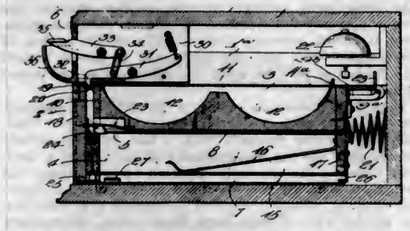
3. An adjustable, two-part false bolster comprising complementary sections, each section having a horizontal portion and a vertical portion, the contiguous faces of said vertical portions being provided with serrations; and bolts passing through said vertical portions and clamping said sections together with the serrated faces engaging each other.

4. An adjustable, two-part false bolster comprising complementary sections, each section having a horizontal portion and a vertical portion, said vertical portions being adjustable on each other; and means for clamping said sections together.

5. An adjustable, two-part false bolster comprising complementary sections, each section having a horizontal portion and a vertical portion, said horizontal portions being provided with notches in the ends thereof; and means for clamping said sections together.



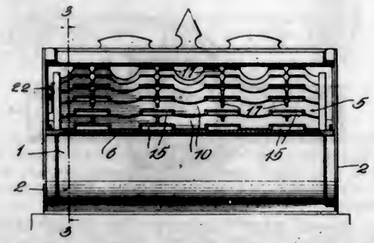
1,225,169. TILL. MICHAEL PERRETEN, Alliance, Ohio. Filed Apr. 13, 1916. Serial No. 90,953. (Cl. 45—7.)



A till comprising an upper drawer including a pair of sides and a bottom spaced above the lower edges of said sides, a lower drawer slidable between said sides below said bottom and movable forwardly beyond the upper drawer, the front of said lower drawer being extended upwardly to form a front for the upper drawer, and a flange extending rearwardly from the upper edge and ends of said front of the lower drawer, said flange forming a socket receiving snugly therein the front end of the upper drawer.

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1,225,170. FILING-CABINET. MICHAEL PERRETEN, Alliance, Ohio. Filed Apr. 13, 1916. Serial No. 90,954. (Cl. 45—3.)

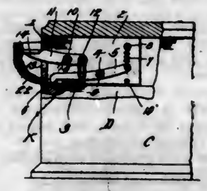


1. A device of the class described comprising, a rotary filing member including a plurality of radiating plates forming therebetween segmental pockets for papers to be filed, identification card holders carried by and extending laterally from the outer edges of said plates, said holders having inlet mouths at said edges of the plates, and paper holders carried by the aforesaid plates to hold the contents of the segmental pockets therein, said paper holders having portions normally disposed opposite said mouths to prevent removal of cards from the card holders but being movably mounted to allow them to be so shifted as to readily permit the insertion or withdrawal of the aforesaid cards.

2. A device of the class described comprising, a rotary filing member including a plurality of radiating plates forming therebetween segmental pockets for papers to be filed, identification card holders carried by and extending laterally from the outer edges of said plates, said holders having inlet mouths at said edges of the plates, and radially disposed springs pivoted between their ends to the sides of said plates, the outer ends of said springs being disposed opposite the inlet mouths of the holders to prevent removal of the cards from the holders, while the inner ends of said springs serve to retain the numerous papers in the aforesaid pockets.

3. A device of the class described comprising a filing member including a plurality of pockets for papers to be filed, identification card holders for said pockets, and multi-function members for holding papers in the pockets and for also holding the identification cards in the card holders.

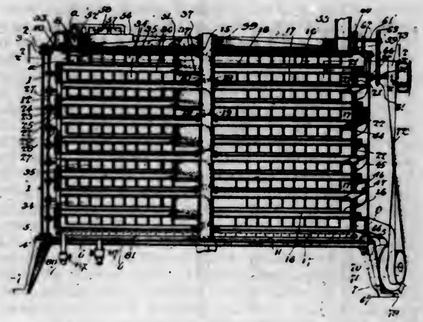
1,225,171. PERMUTATION-LOCK. MICHAEL PERRETEN, Alliance, Ohio. Original application filed Apr. 13, 1916, Serial No. 90,953. Divided and this application filed Dec. 4, 1916. Serial No. 135,033. (Cl. 70—67.)



A permutation lock comprising a casing having in its front side a plurality of vertical slots, a bottom plate for said casing, a horizontal rod extending across said casing parallel with said front side, a plurality of spaced horizontal locking levers fulcrumed between their ends on said rod and resting at their front ends on said bottom plate, said ends having integral locking noses depending below said plate, a second rod extending across the casing above the rear ends of said levers, springs connecting said rear ends and said second rod for yieldably holding the locking levers in operative position, a third rod above the front ends of said levers, a plurality of release levers fulcrumed between their ends on said third rod and projecting at their front ends through certain of the aforesaid slots, links connecting the rear ends of said release levers with the front ends of said locking levers, a third series of levers fulcrumed between their ends on said third rod and extending at their front ends through the other slots, a fourth rod below the rear ends of said third series of levers, springs connecting said rear ends and fourth rod, and integral locking fingers depending from the front ends of said third series of levers and having their lower ends disposed in a plane above that in which the lower ends of the aforesaid locking noses are located.

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1,225,172. CAN-CONVEYER. HENRY C. PRIVETT, Long Beach, Cal., assignor to Pacific Canning Machinery Company, Long Beach, Cal., a Corporation of California. Filed Apr. 29, 1915, Serial No. 24,647. Renewed Mar. 19, 1917. Serial No. 155,944. (Cl. 126—272.)



1. A can-conveyer comprising superposed disks, means to turn adjacent disks in opposite directions, and means to guide cans carried by the disks from the central portion of one disk to the periphery of a second one of said disks and from the periphery of the second disk to the central portion of said second disk.

2. A can-conveyer comprising superposed disks, means to turn adjacent disks in opposite directions, and means to guide cans carried by the disks from the periphery of one disk to the central portion of a second one of said

disks and from said central portion to the periphery of said second disk.

3. A can-conveyer comprising superposed disks, means to turn said disks, a spiral runway mounted above each disk, and means to guide cans from one spiral runway to another.

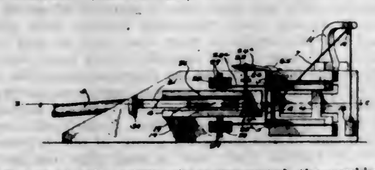
4. A can-conveyer comprising superposed disks, means to turn said disks, a stationary spiral runway mounted above each disk, and means to guide cans from one spiral runway to another.

5. A can-conveyer comprising superposed disks, means to turn said disks in opposite directions, a spiral runway mounted above each disk, and means to guide cans from one spiral runway to another.

[Claims 6 to 26 not printed in the Gazette.]

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1,225,173. BALE-TYING MECHANISM. WILLIAM J. RAY, Fort Smith, Ark. Filed June 10, 1916. Serial No. 102,953. (Cl. 100—20.)



1. In a mechanism of the character stated, the combination of a casing, a plunger head, operable therein, slidably mounted needles operable transversely of the casing, a slidably and pivotally mounted latch lever connected to the needles and optionally connectible to the plunger head, connections between said needles and latch lever for moving the needles inward across the casing when the latch lever is moved outward longitudinally of the casing, said connections being adapted to also rock the lever inward about its pivotal axis toward the head, a member carried by the plunger head and engageable by said latch lever so as to operatively connect the same to said head when the latch lever is rocked inward, means for normally holding the needles in their outermost position and the latch lever in its innermost position and for returning said needles and latch lever to their initial positions, and means for normally holding the latch lever in inoperative position.

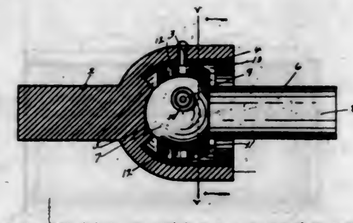
2. In a mechanism of the character stated, the combination of a casing, a plunger head operable therein, a plurality of slidably mounted needles movable transversely of the casing, means for normally holding said needles in their outermost position and for returning them to this position when moved inward transversely of said casing, a pivotally and slidably mounted latch lever connected to said needles and optionally connectible to the plunger head, means for automatically moving the latch lever into inoperative position and for maintaining it in this position, connections between the latch lever and the needles for moving the needles inward transversely of the casing when the latch-lever is moved outward longitudinally of the casing, said connections being adapted to also normally rock said lever inward toward the plunger head, a member carried by said plunger head and engageable by the head of said latch lever so as to operatively connect the plunger head and latch lever when the latch-lever is rocked inward, and means for automatically tripping the latch lever and releasing it from the plunger head at the end of the outward stroke of said head.

3. In hay presses, a casing, a plunger head operable in said casing, a latch-lever slidably mounted on the casing and pivoted intermediate its ends for movement toward and away from the casing, a member carried by the plunger head and engageable by the head of said latch-lever so as to operatively connect the lever and head, a pair of slidably mounted needles movable transversely of the casing, means for normally holding said needles in their outermost position and for returning them to this position when moved inward, and a cable secured at one end to said latch-lever so as to exert outward pressure thereon in back of the pivotal axis thereof and force the head of said latch-lever inward of the casing, the other end of said cable being secured to said needles whereby the needles are moved inward of the casing when the latch-lever is moved outward longitudinally of the casing by the plunger head, and the latch-lever is moved inward into its initial position when the said needles are moved outward.

4. In hay presses, a casing, a plunger head operable therein, a laterally projecting log carried by the head, said casing being provided with a slot to accommodate movement of the lug longitudinally of the casing, a latch lever slidably and pivotally mounted on the casing and having an inwardly directed head at its outer end operable through said slot adapted to engage over said lug, the pivotal axis of said latch lever being intermediate the ends thereof, a bracket mounted on the casing, a pair of needles slidably mounted on said bracket for movement transversely of the casing, means for normally holding the needles in their outermost position, a guide pulley mounted on said casing adjacent the needle supporting bracket, and a cable passed about said pulley and secured at one end to the latch-lever so as to exert outward pressure on the inner end thereof, the other end of said cable being secured to said needles.

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1,225,174. UNIVERSAL JOINT. FRED H. REAM, Kansas City, Mo., assignor to Noel Four-Wheel-Drive Manufacturing Company, Kansas City, Mo. Filed Apr. 10, 1916. Serial No. 90,139. (Cl. 74—19.)



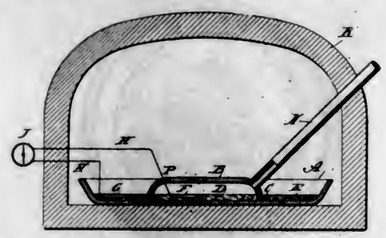
A universal joint, comprising a cup member provided circumferentially with inwardly projecting spaced apart studs having rollers, a shaft having a ball at its inner end provided circumferentially with outwardly projecting spaced apart studs having rollers, an idle ring interposed between said cup member and the ball on said shaft and having transversely extending elongated apertures alternately engaged by the rollers on said cup member and the rollers on said shaft, and a lock ring adjustably mounted on the inner side of said cup member and adapted for holding said ball on the shaft in said cup member.

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1,225,175. APPARATUS FOR GENERATING ELECTRICITY. SYLVANUS ALBERT REED, New York, N. Y. Filed Jan. 16, 1914. Serial No. 812,445. (Cl. 204—54.)

1. In a carbon or hydrogen consuming cell, means of subjecting an extended surface of a fused acid electrolyte containing a metallic oxid reducible to a lower degree of oxidation to an oxygen containing gas in an oxidizing region and to carbon or hydrogen in a reduction region, an electrode in conductive contact with the electrolyte in the oxidizing region, an electrode in conductive contact with the electrolyte in the reduction region, a circuit including said electrodes, and means for maintaining the electrolyte in the fused condition.

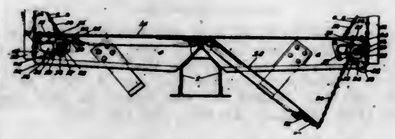
2. In a carbon or hydrogen consuming cell, means of subjecting an extended surface of a fused acid electrolyte containing a metallic oxid reducible to a lower degree of oxidation, to an oxygen containing gas in an oxidizing region and to carbon or hydrogen in a reduction region, the regions being in open communication below the surface of the electrolyte only, an electrode in conductive contact with the electrolyte in the oxidizing region, an electrode in conductive contact with the electrolyte in the reduction region, a circuit including said electrodes, and means for maintaining the electrolyte in the fused condition.



3. In a fuel consuming cell of the kind described, the combination of electrodes, means for supplying fuel independent of the electrodes, and a fused acid electrolyte comprising manganese in different stages of oxidation.

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1,225,176. DISCHARGE-DOOR-OPERATING MECHANISM. GEORGE W. RISTINE, Jr., Chicago, Ill., assignor to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Dec. 24, 1915. Serial No. 68,528. (Cl. 105—14.)



1. In a dump car, a discharge door, a bodily movable shaft adapted to support said door in its closed position, and a member adapted to be moved bodily into shaft supporting position by said shaft, said member being automatically movable by said shaft out of shaft supporting position when the doors are being opened.

2. In a dump car, the combination with a center sill, of a discharge door hinged to said center sill, a side wall, a bracket depending from said side wall, rollers mounted in said bracket, a member movable between said rollers and a bodily movable shaft mounted in said member and adapted to be moved into and out of door supporting position, said member being movable into and out of shaft supporting position.

3. In a dump car, the combination with an underframe, of a discharge door hinged thereto, a side wall, a bracket connected with said side wall, a bodily movable shaft adapted to be moved into or out of direct supporting position with said door, and a member shiftably mounted in said bracket adapted to be moved into or out of shaft supporting position.

4. In a dump car, a discharge door, an operating shaft adapted to be moved into or out of supporting position with said door, and a bracket secured to said car, said bracket having a web adapted to directly support said shaft only when out of supporting position with said door.

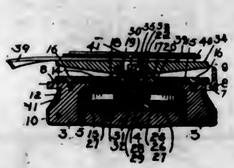
5. In a dump car, a discharge door, an operating shaft adapted to be moved into or out of door supporting position, a bracket secured to said car adapted to directly support said shaft out of door supporting position only, and a member mounted in said bracket adapted to move with and support said shaft in door supporting position.

[Claims 6 to 21 not printed in the Gazette.]

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1,225,177. TRUSS. CHARLES RODENBAUGH, Pittsburgh, Pa. Filed Sept. 20, 1916. Serial No. 121,102. (Cl. 128—26.)

1. A truss comprising a body portion consisting of a pivoted outer section having a cavity and a loosely mounted and vertically adjustable inner section arranged in said cavity, and a rocker element having the outer section of said body pivotally connected therewith and provided with means for connecting the truss in position upon the body of the wearer, said pivoted outer section of said truss body having a pair of oppositely disposed apertured extensions for the reception of supporting straps, one of said sections provided with a lip overlapping one end of said element.



2. A truss comprising a body portion consisting of an inner and outer section, said outer section having a cavity in which is arranged said inner section, means connected with said outer section and with said inner section to vertically adjust the latter relatively to the former, said inner section loosely mounted upon said means, and a rocker element pivotally connected with said outer section and provided with straps, the top of said outer section being flat and the lower face of said rocker element inclining downwardly from each end toward the center and said rocker element having means to constitute a clearance for the means for vertically adjusting said inner section.

3. A truss comprising a body portion consisting of an inner and outer section, said outer section having a cavity in which is arranged said inner section, means connected with said outer section and with said inner section to vertically adjust the latter relatively to the former, said inner section loosely mounted upon said means, and a rocker element pivotally connected with said outer section and provided with straps, said outer section provided with a pair of oppositely disposed apertured projections for the reception of supporting straps.

4. A truss comprising a body portion consisting of an outer section provided with a cavity and an inner section arranged within said cavity, means carried by the outer section and connected with the inner section for vertically adjusting the latter, said inner section loosely mounted upon the means to permit of the shifting of the inner section within the cavity, and a rocking element pivotally connected with the top of said outer section, the top of said outer section being flat and the lower face of said rocking element inclining downwardly from each end toward the center.

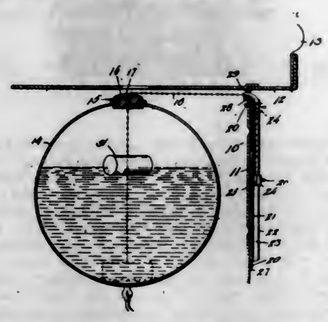
5. A truss comprising a body portion consisting of an outer section provided with a cavity and an inner section arranged within said cavity, means carried by the outer section and connected with the inner section for vertically adjusting the latter, said inner section loosely mounted upon the means to permit of the shifting of the inner section within the cavity, and a rocking element pivotally connected with the top of said outer section, the top of said outer section being flat and the lower face of said rocking element inclining downwardly from each end toward the center, said rocking element provided with means to provide a clearance for the means for vertically adjusting said inner section.

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1,225,178. FUEL-TANK GAGE. JOHN F. ROGERS, New York, N. Y. Filed Apr. 7, 1916. Serial No. 89,708. (Cl. 73—82.)

1. The combination with a tank having a filling opening in the top thereof, and an upright panel arranged at one side of the tank, of a removable apertured closure for the filling opening of the tank, an indicator plate applied to the panel, an indicator weight slidable upon the indicator plate, a float in the tank, and a flexible member operatively connecting the float and indicator weight and passing loosely through the aperture of the closure.

2. The combination with a tank having a filling opening in the top thereof, and an upright panel arranged at one side of the tank, of a removable apertured closure for the filling opening of the tank, the upper end of the aperture being flared, an indicator plate applied to the panel, an indicator weight slidably mounted upon the indicator plate, a float in the tank, and a flexible member operatively connecting the float to the indicator weight, said flexible member passing upwardly from the float, through the aperture of the closure, and laterally to the panel, the flared upper end of the aperture in the closure providing a guide for the flexible member.



3. The combination with a tank having a filling opening in the top thereof and an upright panel arranged at one side of the tank, of a removable apertured closure for the filling opening of the tank, an upright indicator plate applied to the panel and formed at its upper end with an integral ear which is longitudinally concaved and curved rearwardly, an indicator weight slidable upon the indicator plate, a float in the tank, and a flexible member operatively connecting the float and the indicator weight, said flexible member extending through the panel and being guided by the rearwardly curved ear of the indicator plate.

4. The combination with a tank having a filling opening in the top thereof and an upright panel arranged at one side of the tank, of a removable apertured closure for the filling opening of the tank, the upper end of the aperture being flared, an upright indicator plate applied to the panel and formed at the upper end thereof with an integral ear which is longitudinally concaved and curved rearwardly, an indicator weight slidable upon the indicator plate, a float in the tank, and a flexible member operatively connecting the float and the indicator weight, said flexible member extending from the float upwardly through the aperture of the closure laterally to the rearwardly curved ear of the indicator plate, and downwardly to the indicator weight, the flared upper end of the aperture in the closure and the curved ear of the indicator plate providing guide means for the flexible member.

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1,225,179. PLAQUE. ISADOR RUDOLPH, Philadelphia, Pa. Filed May 5, 1915. Serial No. 26,024. (Cl. 41—32.)

1. As a new article of manufacture, a circular plaque having a circular backing and an outer circular ornamented felt facing of smaller diameter than and secured concentrically to the backing, substantially as described.

2. As a new article of manufacture, a circular plaque comprising a backing, a facing sheet of felt on the outer face of the backing, said felt having on its outer face an ornamental stenciled design, said facing being of concavo-convex shape of smaller surface area than and terminating short of the edge of the backing, substantially as described.

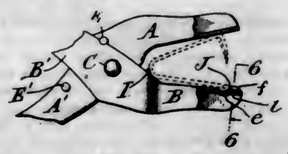
3. As a new article of manufacture, a plaque comprising a backing, a felt facing sheet secured to the backing, said sheet being of the same shape as the backing but of smaller area than the backing so as to expose as a margin a portion of the backing throughout the edge thereof, said backing and sheet being of different colors, substantially as described.




4. As a new article of manufacture, a plaque comprising a backing, a facing sheet having an ornamental design thereon and of smaller area than said backing, a covering sheet secured to the rear face of said backing, and an edging strip bent around the edge of said backing and having its edges respectively secured between the facing sheet and the front face of the backing, and between the rear face of the backing and the inner face of the covering sheet, substantially as described.

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1,225,180. IMPLEMENT FOR ATTACHING EAR-TAGS. JACOB SCHAUB, Salt Lake City, Utah, assignor to Salt Lake Stamp Co., Salt Lake City, Utah, a Corporation of Utah. Original application filed June 1, 1916, Serial No. 101,114. Divided and this application filed Aug. 30, 1916. Serial No. 117,687. (Cl. 128—27.)



1. An implement for affixing a cattle tag provided with guide flanges, comprising complemental jaws adapted for movement relatively to each other, one of said jaws being provided with a single positioning rib adapted to coöperate with the guide flanges of the tag, and the other jaw having a working face for clenching one part of the tag relatively to the other part thereof, the width of said single rib being less than the width of the jaw and said single rib being equidistant from the respective side edges of the jaw.

2. An implement of the class described embodying coöperating jaws one of which is provided with a back gage and with a prong deflecting recess positioned forwardly of said back gage, said back gage projecting from the working face of one jaw and intermediate the ends thereof.

3. An implement of the class described embodying coöperating jaws one of which is provided with a prong-deflecting recess and with a positioning projection adjacent said recess, the rear face of said projection being substantially continuous with the forward edge of said recess.

4. An implement of the class described embodying coöperating jaws one of which is provided with a prong deflecting recess and with an upstanding projection forwardly of said recess, the rear face of said projection being substantially continuous with the forward edge of said recess whereby the projection is adapted to enter a slot in the tag.

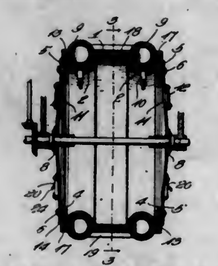
5. An implement of the class described embodying coöperating jaws one of which is provided with a prong deflecting recess and with an ear or projection the wall of which is curved continuously with reference to a curved face of the recess, said curved wall of the ear or projection being substantially continuous with the curved face of the recess.

[Claims 6 and 7 not printed in the Gazette.]



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1,225,181. VEHICLE-WHEEL. JOHN C. SCHLEICHER, Mount Vernon, N. Y. Filed Apr. 29, 1916. Serial No. 94,461. (Cl. 152—10.)



1. A wheel having a rim provided at its edges with pneumatic tires and having a solid cushion tire between said pneumatic tires with its tread spaced inwardly from the treads thereof, and a pair of detachable rings for securing said pneumatic tires on the rim, said rings having solid cushion tires whose tread surfaces are disposed on substantially the same radius as that of the aforesaid solid cushion tire.

2. A wheel having a rim provided at its edges with circumferential channels and having flanges extending inwardly from said edges, a pair of circular side plates secured to said flanges and projecting beyond the rim, pneumatic tires in said channels, removable rings interposed between said tires and the projecting edges of said side plates to hold said tires in position, said rings having tread surfaces spaced inwardly from the treads of the tires, and a tread surface surrounding the rim between said pneumatic tires, the tread surfaces of said second-named tread and said rings being disposed on substantially the same radius.

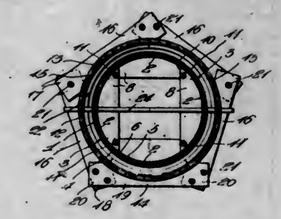
3. A wheel having peripheral channels in the edges of its rim, pneumatic tires disposed in said channels, a solid cushion tire surrounding the rim between the projecting portions of said pneumatic tires, said cushion tire having transverse integral ribs on its periphery, a pair of rings engaging the outer sides of said pneumatic tires to retain the same in position, and solid cushion tires surrounding said rings, the tread surfaces of all of the cushion tires being disposed on substantially the same radius.

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1,225,182. MOLD FOR TUBULAR ARTICLES. EMIL A. SCHUETTIG, Poteet, Tex. Filed Aug. 21, 1916. Serial No. 116,077. (Cl. 25—127.)

1. An inner wall mold comprising a plurality of arcuate separable sections placed end to end, a removable fastening strip between the ends of two of said sections, transverse boards having arcuate outer edges secured to the inner surfaces of the sections, certain of the boards projecting at their ends beyond the end edges of the sections and overlapping the boards of the other sections, said overlapping ends of the boards being formed with alined openings, and removable bolts passed through said alined openings.

2. In a mold for tubular articles, the combination with an outer wall, of an inner wall comprising a plurality of arcuate sections placed end to end, a removable spacing strip between the ends of two of said sections, bars having arcuate outer edges secured to the inner surfaces of said sections at the top and bottom of the same, certain of said bars being slightly larger than the sections and having projecting ends overlapping the other bars, removable fastening members positioned through said overlapped ends, a metallic cover for the outer surface of said sections, and a removable ring surrounding said sections at their upper edge.



3. An outer wall mold comprising three arcuate separable sections placed end to end, two of said sections being of equal size and the other smaller, transverse boards with arcuate inner edges secured to the outer surfaces of said sections, said boards having their ends projecting beyond the end edges of the sections and overlapping, said overlapped ends being formed with alined openings, and removable bolts passed through said alined openings.

4. An outer wall mold comprising three arcuate separable sections placed end to end, two of said sections being of equal size and the other smaller, transverse boards with arcuate inner edges secured to the outer surfaces of said sections, said boards having their ends projecting beyond the end edges of the sections and overlapping, each of said overlapping ends being formed with pairs of alined openings, and removable bolts passed through said alined openings.

5. In a mold for tubular articles, the combination with an inner wall, of an outer wall comprising three arcuate sections placed end to end, two of said sections being of equal size, and the other smaller, pairs of bars with overlapping ends secured to the outer surface of the larger sections adjacent the top and bottom of the same, single bars adjacent the top and bottom of said smaller sections with ends overlapping the ends of the bars of the adjacent sections, and removable fastening members positioned through said overlapping ends to detachably lock the sections in position.

[Claim 6 not printed in the Gazette.]

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1,225,183. RESILIENT TIRE AND WHEEL. WILLIAM D. SEAL, Piedmont, Mo. Filed Nov. 16, 1916. Serial No. 131,732. (Cl. 152—33.)



The combination with a wheel rim, of a pair of casing sections substantially semicircular in cross section, each of said sections being formed with inner and outer circumferentially extending beads, the inner beads adapted to engage the wheel rim flanges, a tread rim formed with inner and circumferentially extending flanges adapted to engage the outer beads of said casing sections, a solid tire mounted upon the tread rim, a plurality of spaced radially extending resilient reinforcing stays mounted in each of said sections, and hooks formed at the opposite ends of each stay which project laterally into said inner and outer beads, said hooks engaging behind the wheel rim and tread rim flanges to positively prevent accidental disengagement of the casing sections from said rims.

1,225,184. SELF-THREADING DEVICE FOR MOTION-PICTURE APPARATUS. MICHAEL SEGEL, New York, N. Y., assignor to Elizabeth Mehlfelder Uebelmesser, Bayside, N. Y. Filed Jan. 14, 1914. Serial No. 812,055. (Cl. 88—17.)



1. In combination with a film advancing mechanism of a motion picture apparatus, a roll of film, a support therefor, a guide for the film mounted in close proximity to the outer surface of the roll of film whereby on the rotation of the film roll the free end of the film is caused to enter said guide and directed by said guide to the feeding mechanism in the motion picture apparatus.

2. The combination of a roll of film and a feed sprocket, a supporting frame for the same, a film guiding device interposed between the roll of film and the feed sprocket for the purpose of guiding and directing the free end of the film into said guide and from the delivery reel on to the feed sprocket in a motion picture apparatus automatically.

3. The combination of a driven film reel and a sprocket mounted in a film manipulating apparatus, and a guide mounted between the roll of film and a feed sprocket to catch the film for automatic delivery to the feed sprocket.

4. The combination of a roll of film, a feed sprocket, a guide mounted between the roll of film and the feed sprocket for the purpose of receiving and delivering a film from the feed sprocket to a film receiving roll after the film has passed through the film manipulating apparatus or motion picture apparatus.

5. In a motion picture apparatus, a delivery reel and a feed sprocket, a device consisting of a guide funnel interposed between the delivery reel and the feed sprocket to catch the free end of a film from the delivery reel and deliver it automatically to a feed sprocket in a motion picture apparatus substantially as described.

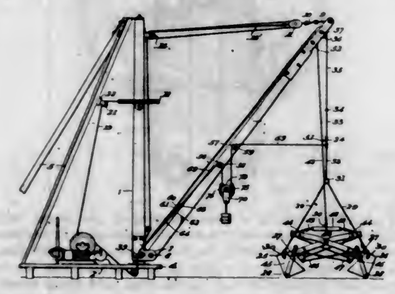
[Claims 6 to 12 not printed in the Gazette.]

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1,225,185. MECHANISM FOR TURNING DERRICK-SUSPENDED GRAB-BUCKETS IN A HORIZONTAL PLANE. GLENN K. SEYMOUR, Denver, Colo., assignor of forty one-hundredths to Alice A. Teats, Denver, Colo. Filed June 8, 1915. Serial No. 32,874. (Cl. 37—30.)

1. The combination with a derrick boom and a bucket suspended therefrom, of mechanism for turning said bucket on its vertical axis in a horizontal plane comprising a pair of ropes attached at one end to said bucket, a lever attached to the opposite ends of said ropes and pivotally mounted centrally of its ends on said boom, a weighted sheave mounted on said ropes intermediate of said lever and said bucket, sheaves arranged to support said ropes on each side of said weighted sheave, and means for turning said lever to swing said bucket in opposite directions as desired.

2. In a device of the character described, the combination with a derrick boom and means for operating the same, of a sheave wheel mounted on said boom, a lifting rope which travels over said sheave, and means for operating said rope, a cross bar secured upon the lower end of said lifting rope, a lifting device supported from the ends of said cross bar, a lever pivoted centrally of its length upon said boom, sheave pulleys on opposite sides of said boom beyond said lever, a weighted support having sheave pulleys, ropes which pass under the pulleys in said weighted support and up over the pulleys on said boom, their opposite ends being secured respectively to the ends of the cross bar and the ends of said lever, and means for rocking said lever.



3. In a device of the character described, the combination with a derrick boom, and means for raising and lowering and laterally swinging the same, of a sheave pulley supported upon the outer end of said boom, a lifting rope which travels over said pulley, and means for operating said rope, a cross bar secured upon the lower end of said rope, a material lifting device suspended from the opposite ends of said cross bar, a centrally pivoted lever mounted upon said boom adjacent its inner end, a pair of sheave pulleys on opposite sides of said boom beyond said lever, a weighted support having sheave pulleys, ropes secured at their ends to the opposite ends of said cross bar and said lever, the central portions thereof extending down over the pairs of sheaves on said boom, and under the sheaves of said weighted support, an operating drum and a rope wound around the same, the opposite ends of which are attached to the ends of said centrally pivoted lever.

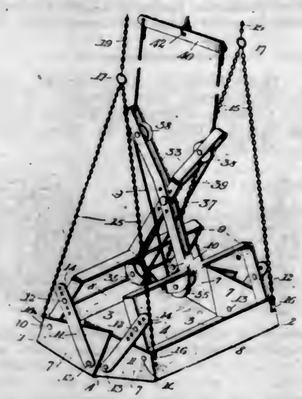
4. In a device of the character described, the combination with a derrick boom and means for operating the same, of a lifting rope supported by said boom and means for operating the same, a cross bar on the free end of said rope, a lifting device suspended from the opposite ends of said cross bar, ropes also attached at one end to the opposite ends of said cross bar, a centrally pivoted lever mounted on said boom, to the ends of which the opposite ends of said ropes are secured, means for turning said lever in opposite directions thereby to effect a corresponding movement of said lifting device, depending loops midway the lengths of said ropes, and a weighted sheave which is carried by the said looped portions, whereby variations in the lengths of the said ropes may be automatically effected relatively to the vertical position of the lifting device.

5. The combination with a derrick boom and means for operating the same, of a lifting rope supported by said boom and means for operating the same, a cross bar on the free end of said rope, a lifting device suspended from the ends of said cross bar, a pair of pulleys on each side of said boom, ropes having depending loop portions which extend down between said pulleys, the ropes passing over said pulleys and being secured at one end to the opposite ends of said cross bar, means carried by the boom and connected to the opposite ends of said ropes, for simultaneously drawing on one of said ropes and paying out the other, and a weighted support having a double sheave wheel which rests in the looped portions of said ropes.

[Claim 6 not printed in the Gazette.]



1,225,186. GRAB-BUCKET FOR DERRICKS. GLENN K. SEYMOUR, Denver, Colo., assignor of forty one-hundredths to Alice A. Teats, Denver, Colo. Filed June 8, 1915. Serial No. 32,875. (Cl. 37—30.)



1. A device of the character described, comprising coöperating bucket portions provided with adjustable bails terminating in lever extensions which cross each other and are pivotally connected, sheaves mounted in the opposite ends of said lever extensions, a lifting line, a closing line, ropes each of which passes over one sheave in one lever extension and around the other sheave in said extension and across to and is connected with the opposite lever extension, the opposite ends of said ropes being connected to said closing line, flexible suspension means attached at one end to the side of each bucket, and at their other ends to said lifting line, and means for operating said lines.

2. In a device of the character described, the combination with a derrick provided with a lifting line and a closing line, and means for operating said lines, of coöperating bucket portions having adjustable bails which terminate in lever extensions which cross each other and are pivotally connected, sheaves in the opposite extremities of each lever extension, ropes each of which is connected at one end to the lower portion of one of said lever extensions, whence it extends to and around the lower sheave in the opposite lever extension and over the upper sheave in said extension, a cross bar secured to said closing line to which the free ends of said ropes are secured, a suspension bar connected to said lifting line, and flexible means connecting the outer corners of said buckets with said suspension bar.

3. The combination with a derrick provided with a lifting line, and a closing line, and means for operating said lines, of coöperating bucket portions having bails which are pivotally connected to their opposite ends, said bails terminating in extensions which cross each other and are pivotally connected, means for holding the bails in different adjusted positions, means connected with the closing line for effecting an inward pull on the outer end of one extension and the inner end of the other extension simultaneously, and flexible means connecting the outer corners of said buckets with the said lifting line.

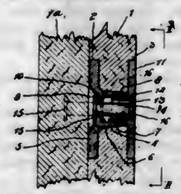
4. The combination with a derrick provided with a lifting line, and a closing line, and means for operating said lines, of coöperating bucket portions having bails which are pivotally connected to their opposite ends, said bails terminating in extensions which cross each other, and are pivotally connected intermediate of their extremities, bars pivotally connected at one end to the inner lower corner portions of said buckets and adjustably connected at their other ends to the sides of said bails, sheaves mounted in said bail extensions on opposite sides of their pivotal connection, a cross bar on said closing line, and ropes connected at one end to said cross bar, each of said ropes being passed over the sheave in the outer portion of one of the extensions and under and over the other sheave in said extension, and across to and connected with the lower portion of the other extension, and flexible means connecting the outer corners of said buckets with the said lifting line, said bail extensions being each provided with a plurality of pivot-receiving holes.

5. The combination with a derrick provided with a lifting line, and a closing line, and means for operating said lines, of coöperating bucket portions having bails which are pivotally connected thereto, and means for holding the bails in different adjusted positions, said bails having extensions which cross each other and are pivotally connected, flexible means connected with the said closing line, for simultaneously effecting an inward pull on the outer end of one extension and the inner end of the other extension, a cross bar on said lifting line, means connecting the outer corners of said buckets with the said cross bar, means also connected with the said cross bar for turning said bucket, and means for operating the bucket turning means.

[Claim 6 not printed in the Gazette.]

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1,225,187. PATTERN APPLIANCE. MAX A. SILZ and ADOLF PLATZER, Cleveland, Ohio. Filed Nov. 4, 1916. Serial No. 129,606. (Cl. 22—158.)



1. A pattern appliance comprising a rapping plate and a rapping pin passed through and inseparable from said plate.

2. A pattern appliance comprising a rapping plate having an opening and a rapping pin passed through said opening and provided near each end with a projection whereby its withdrawal is prevented.

3. A pattern appliance comprising the combination of a hollowed pattern, a rapping plate occupying a portion of such hollow and having a plurality of openings, means passed through some of said openings for fastening said plate to the pattern, a hollow boss surrounding one of said openings and firmly seated over the major portion of its lateral surface whereby to hold the plate securely in place and prevent tilting and rocking, and a rapping pin attached to said plate and adapted to lie in another portion of such hollow.

4. A pattern appliance comprising the combination of a pattern, a rapping plate having a plurality of openings, means passed through some of said openings for fastening said plate to one side of said pattern and a hollow threaded boss surrounding one of such openings and firmly fitted over all in said pattern whereby to resist tilting and loosening and means abutting the opposite sides of the pattern and coöperating with said screw threads on the boss to hold the plate in position.

5. A pattern appliance comprising the combination with a pattern of a hollow structure set in said pattern and including a rapping plate, means for securing the same to the pattern, said plate being provided with an opening to the hollow interior of said structure, and a rapping pin adapted to lie in its entirety within the confines of said structure.

[Claims 6 to 29 not printed in the Gazette.]

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1,225,188. WEED-DIGGING IMPLEMENT. JACOB EDWIN SMITH, Homestead, Pa. Filed May 11, 1916. Serial No. 96,927. (Cl. 55—65.)

1. In a digging implement for the purposes set forth, the combination of a tubular rod, blades at the lower end

thereof, a spreader through which the blades pass, and a spring-actuated rod for moving the spreader with respect to the blades.



2. In a digging implement for the purposes set forth, the combination of a tubular rod, blades at the lower end thereof, a spreader through which the blades pass, a spring-actuated shaft for moving the spreader with respect to the blades, and means for holding the shaft against the action of the spring.

3. In a digging implement for the purposes set forth, the combination of a tubular rod having blades projecting from the lower end thereof, a spreader-plate through which the blades pass, a spring-actuated shaft carrying the spreader-plate and having notches therein, and a catch on the tubular rod to engage the notches and hold the shaft against the action of the spring.

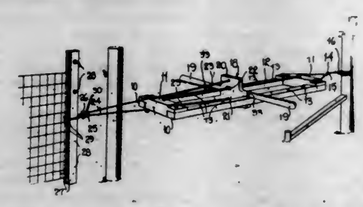
4. In a digging implement for the purposes set forth, the combination of a tubular rod having blades projecting from the lower end thereof, a shaft extending through the tubular rod and between the blades, a spreader-plate loosely mounted on the shaft to have a limited movement at the outer end thereof, and a disk at the outer end of said shaft.

5. In a digging implement for the purposes set forth, the combination of a tubular rod bent into a handle at its upper end, a foot piece near the lower end of the rod, and blades projecting downwardly from said rod, together with a spreader-plate through which the blades pass, and means for connecting the spreader-plate movably with respect to the rod.

[Claim 6 not printed in the Gazette.]

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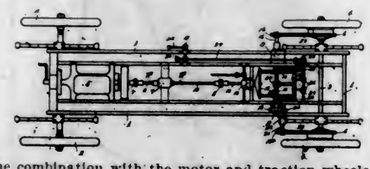
**1,225,189. WIRE-STRETCHER.** LEMUEL SORRELLS, Industry, Ill. Filed Sept. 13, 1916. Serial No. 119,917. (Cl. 254—68.)



A strain applying device comprising parallel side bars formed with perforations at predetermined intervals, cross bars connecting the side bars, a longitudinally extending rod attached to the end bars and disposed between the side bars, anchoring devices secured to the rear end bar, a strain applying member comprising a T-shaped body portion and laterally projecting arms, the arms and the T-shaped body portion slidingly engaging the side bars, the body portion having a slot through which the guide rod passes, pins adapted to be inserted in the perforations in the side bars, each pin forming a fulcrum for the strain applying member, flexible connections extending from the body portion of the strain applying member, and wire clamping members operatively connected to the connections.

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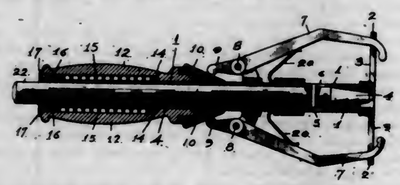
**1,225,190. TRANSMISSION MECHANISM.** ROWLAND SPARLING, Minneapolis, Minn., assignor to Dispatch Motor Car Company, Minneapolis, Minn., a Corporation of South Dakota. Filed Apr. 20, 1914. Serial No. 833,100. (Cl. 21—90.)



The combination with the motor and traction wheels of a motor-propelled vehicle, of an engine driven shaft, a toothed reversing gear mechanism interposed in said shaft, and a friction gear mechanism having three coöperating friction wheels, one of which is driven from said shaft and the other two of which are connected, one to each of the traction wheels of said vehicle.

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**1,225,191. AUTOMATIC CENTER-PUNCH.** CHARLES L. THROCKMORTON, San Francisco, Cal. Filed Sept. 23, 1914. Serial No. 863,988. (Cl. 33—191.)



1. An automatic center punch comprising a tubular member; means secured to one end of the tubular member and adapted to parallel the same with a shaft to be centered; a center punch slidably mounted within the tubular member; levers pivotally mounted upon the tubular member and adapted to engage the periphery of a shaft; and means freely slidable upon the tubular member and adapted to move the levers into engagement with the periphery of a shaft.

2. An automatic center punch comprising a tubular member; a disk secured at right angles to one end of the tubular member and having radial slots therein, said disk being adapted to parallel the tubular member with a shaft to be centered; a center punch slidably mounted within the tubular member; levers pivotally mounted upon the tubular member and arranged to engage the periphery of a shaft to be centered; and means slidably mounted upon the tubular member and adapted to engage one end of each lever and to move the opposite end thereof onto the periphery of a shaft to be centered.

3. An automatic center punch comprising a tubular member; a disk secured at right angles to one end of the tubular member; a center punch slidably mounted within the tubular member; and means operatively connected to the tubular member and adapted to aline the same with the shaft, said means passing through the disk and slidably engaged thereby.

4. An automatic center punch comprising a tubular member; a center punch slidably mounted within the tubular member; means secured to one end of the tubular member and adapted to parallel the same with a shaft to be centered; levers pivotally mounted upon the tubular member and adapted to engage the periphery of a shaft to be centered; and means freely slidable upon the tubular member and adapted to engage one end of each lever and cause the opposite end thereof to engage the periphery of the shaft and thereby aline the tubular member and center punch therein with the shaft, said levers extending through said first mentioned means and being braced thereby.

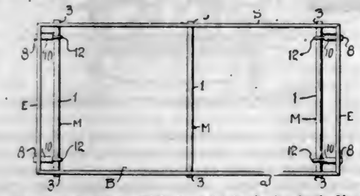
5. An automatic center punch comprising a tubular member; a center punch slidably mounted within the tubular member; a disk having radial slots therein secured to one end of the tubular member, whereby the same may be parallel with a shaft to be centered; levers pivotally mounted upon the tubular member and extending through the radial slots and arranged to engage the periphery of the shaft; and means slidably mounted upon the tubular member and adapted to engage one end of each lever and to cause the opposite ends of said levers to engage the periphery of the shaft to be centered and to aline the tubular member and punch therein with said shaft.

[Claim 6 not printed in the Gazette.]

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**1,225,192. VEHICLE-BODY.** EZRA A. TRAYLOR, Commerce, Tex. Filed Nov. 18, 1916. Serial No. 132,167. (Cl. 21—7.)

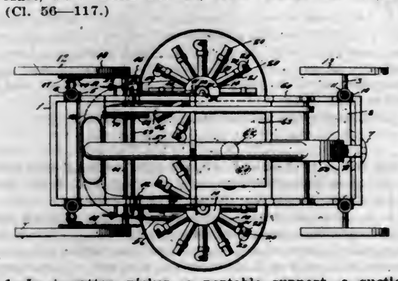


1. In combination with a vehicle body including side panels and end panels, transversely disposed bracing members interposed between the side panels adjacent the end panels, eye bolts engaged with the transverse bracing members and provided with threaded shanks, T-bolts provided with threaded shanks disposed through the end panels, and sleeves with which the shanks of the eye bolts and the T-bolts are engaged.

2. In combination with a wagon body including side panels, a brace member for said side panels including an elongated member interposed between the panels and provided with threaded openings at its opposite ends, and T-bolts having their shanks disposed through the side panels and in threaded engagement with the opening of the ends of the elongated member, the head of each of the bolts having an angular extremity underlying the body.

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**1,225,193. COTTON-PICKER.** JAMES W. VITTETOE, Mart, Tex. Filed Oct. 26, 1916. Serial No. 127,943. (Cl. 56—117.)



1. In a cotton picker, a portable support, a suction creating device mounted on the support, a conveyer connected thereto, and a revolving picking member communicating with the conveyer and including a plurality of radial conveyers each having a revolving cotton picking head on its outer end communicating with the radial conveyers.

7. In a cotton picker, the combination of a portable support, a vertical revolving drum, hollow arms radiating from the drum and communicating therewith, a plurality of toothed disks fixed to the outer ends of the arms, revolving heads surrounding the disks and mounted on the arms, each head having an opening exposing a portion of the toothed peripheries of the disks, said heads communicating with the arms, means for creating a suction through the drum, arms and head, and means for conveying cotton from the drum.

[Claims 2 to 6 and 8 not printed in the Gazette.]

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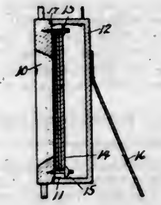
**1,225,194. ARC-LIGHT ELECTRODE.** ROBERT P. WALKER, Cleveland, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Dec. 3, 1912. Serial No. 734,656. (Cl. 176—121.)



An arc lamp electrode having two longitudinal channels, flaming material in one of said channels and a metallic conductor in the other channel, the protruding end of said conductor being looped around the core of flaming material and secured to the electrode end.

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**1,225,195. PICTURE-FRAME.** FRANK W. WANDA, Madison, Me. Filed Apr. 24, 1916. Serial No. 93,130. (Cl. 40—152.)



The combination with a frame having a ledge on its rear face extending entirely around the same, a backboard and means for securing said backboard to the ledge; of a box-like back applied to said frame to entirely cover said ledge and backboard, means for removably securing the box-like back to the frame and a packing interposed between the outer edges of the frame and said box-like back, whereby to provide a dust proof connection.

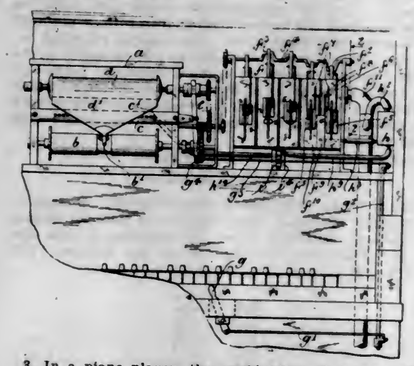
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**1,225,196. PIANO-PLAYER.** JOHN A. WEBER, New York, N. Y. Filed Feb. 17, 1915. Serial No. 8,786. (Cl. 84—166.)

1. In a piano player, the combination of an actuating pneumatic motor, music-sheet winding devices operated thereby, and means the operation of which is determined by the position of the music-sheet for admitting atmospheric air directly to the interior of said motor to stop the same.

2. In a piano player, the combination of a pneumatic motor, music-sheet winding-devices operated thereby, a

tracker-bar having a port adapted to be uncovered by the movement of the music-sheet, and means, the operation of which is initiated by the uncovering of said port, for admitting atmospheric air directly to the interior of said motor to stop the same.



3. In a piano player, the combination of a pneumatic motor, means for admitting atmospheric air directly to the interior of said motor to stop the same, pneumatic devices for actuating said means and pneumatic controlling devices for placing said actuating devices in communication with the main exhaust, the operation of said pneumatic devices being determined by the position of the music-sheet.

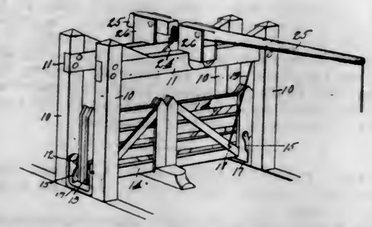
4. In a piano player, the combination of a pneumatic motor, means for admitting atmospheric air directly to the interior of said motor to stop the same, pneumatic devices for actuating said means, pneumatic controlling devices to place said operating devices in communication with the main exhaust, a tracker-bar having a port adapted to be uncovered by the movement of the music-sheet, and a connection from said port to said controlling devices.

5. In a piano player, the combination of a pneumatic motor having motor bellows and slide valves therefor, music-sheet winding-devices operated thereby, means to move one of said valves from its seat to admit atmospheric air and stop the motor and devices whereby the operation of said means is determined by the position of the music-sheet.

[Claims 6 to 14 not printed in the Gazette.]

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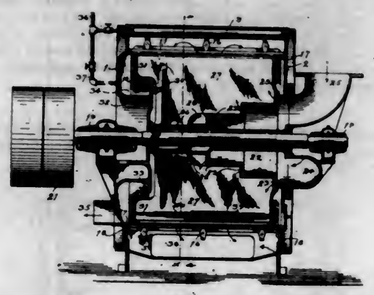
1,225,197. GATE. THOMAS C. WESSELS and WILLIAM KANE, Lytton, British Columbia, Canada. Filed July 14, 1916. Serial No. 109,363. (Cl. 39—61.)



The combination with a frame having a pair of spaced uprights; a pivot bar connecting said uprights, a gate pivoted on the bar, springs fixed to each side of the gate and having their free ends bearing against the adjacent faces of the uprights, said springs having openings whereby through said bar passes, a pivot pin carried by the gate and spaced from the gate pivot toward the center of gravity of the gate, a link having its lower end connected to the pivot pin and including length adjusting means, a bell crank lever pivoted at its angle to the frame and having one of its arms connected to the link, a link connected to the second arm of said lever, a second bell crank lever pivoted to the frame at its angle and having one arm connected to the second link, a third link connected to the remaining arm of the second lever, and an operating lever fulcrumed to the frame and having a short arm connected to the third link, the remaining arm of said lever extending adjacent the path of the operator.

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1,225,198. PULP-SCREEN. PEDER P. WESTBY, Peterborough, Ontario, Canada. Filed June 9, 1913. Serial No. 772,568. (Cl. 92—34.)



1. In a pulp screening machine, a casing, a screen member, a stepped feeding chamber projecting within the casing, said member having discharge ports in the transverse faces of succeeding steps, and a rotary distributer within the casing, the blades of which have stepped notches therein conforming to the contour of the feeding chamber which they overhang.

2. In a pulp screening machine, a casing, a screen member, a rotary distributer therein, a feeding chamber projecting within the casing in a position concentric with the distributer and having pulp discharge ports located in different vertical planes substantially perpendicular to the axis of rotation of the distributer.

3. In a pulp screening machine, a casing, a screen member, a rotary distributer, a feeding chamber projecting into the distributer in a position concentric therewith, said feeding chamber having pulp discharge orifices located at different distances from the axis of rotation of the distributer and in different planes substantially perpendicular thereto.

4. In a pulp screening machine, a casing, a screen member, a rotary distributer, a stepped feeding chamber projecting within the casing, said feeding chamber having pulp discharge ports in the transverse faces of succeeding steps.

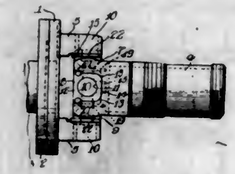
5. In a pulp screening machine, a casing, a screen member, a circular feeding chamber projecting within the casing concentric with the distributer and having concentric pulp discharge ports in the transverse face thereof and coincident with the peripheral wall of the chamber, and a rotary distributer.

[Claims 6 to 24 not printed in the Gazette.]

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1,225,199. UNIVERSAL JOINT FOR POWER-SHAFTS. WILLIAM ERASTUS WILLIAMS, Chicago, Ill. Filed May 24, 1916. Serial No. 99,616. (Cl. 74—19.)

1. A joint of the class described having driving and driven members, provided with suitable shoulders, an intermediate connecting member provided with trunnions having shoulders at their bases and adapted to form hinge connections to the driving and driven members, bearing bushings mounted in the driving and driven members and adapted to serve as journals for the trunnions, said bushings having rectangular cross sections and being provided with flange bases adapted to abut against the shoulders on the driving and driven members and against the shoulders at the bases of the trunnions on the intermediate member, and means for securing the bushings in place.



2. A joint of the class described composed of two forked end members and an intermediate or connecting member, embraced by the forks and having hinge pins or trunnions connecting the members together, bearing bushings for the journals of the hinge pins or trunnions, said bushings having faces of approximately rectangular outline rounded at the rear corners.

3. A joint of the class described composed of two end members and an intermediate or connecting member having hinge pins or trunnions connecting the members together, bearing bushings for the journals of the hinge pins or trunnions, said bushings having faces of approximately rectangular outline rounded at the rear corners and provided with flanges at the base for taking the radial thrust of the connecting member.

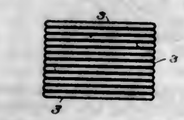
4. In a device of the class described, two end members, a third or intermediate member hinged to both, bearing bushings for the hinge journals, said bushings being approximately rectangular in cross section and provided with flanges at their bases adapted to resist radial displacement and to furnish radial wearing surfaces, and being further provided with ribs on the flanges adapted to aid in resisting circumferential displacement and to tie the parts together.

5. In a device of the class described, two end members, a third or intermediate member, hinged to both end members, bearing bushings for the hinge journals, said bushings being rectangular in cross section and provided with flanges at their bases adapted to resist radial displacement and to furnish radial wearing surfaces, and being further provided with ribs on the flanges adapted to aid in resisting circumferential displacement and to tie the parts together; and means for fastening the bushings against displacement.

[Claims 6 to 15 not printed in the Gazette.]

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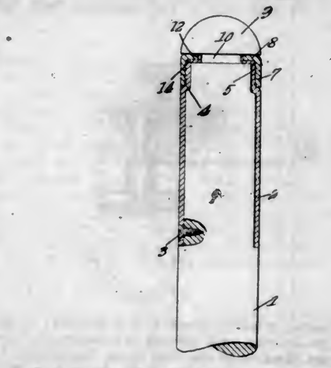
1,225,200. ART OF OPERATING ON CAN-BODIES. JOHN M. YOUNG, San Francisco, Cal., assignor to American Can Company, San Francisco, Cal., a Corporation of New Jersey. Filed May 9, 1914. Serial No. 837,426. (Cl. 113—116.)



An improvement in the art of making cans and preparing the same for subsequent use in the art of canning, which consists in forming a metallic blank into a substantially cylindrical body and uniting the side edges of said blank, then for storage purposes deforming said body into a condition substantially flattened from end to end of the body along lines parallel with its axis without injury or cracking of the metal, then reforming the deformed can body into substantially its original form and then flanging the reformed body for maintaining the body in its reformed condition and truing the same for the reception of a can end or ends.



1,225,201. CUE-TIP. FREDRICK ZIEMER, Freeport, N. Y. Filed Nov. 24, 1916. Serial No. 133,218. (Cl. 46—9.)

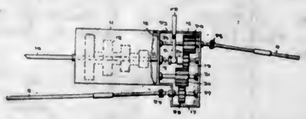


1. In a device of the class described, a cap having an inwardly projecting flange defining an opening; a cue tip abutting against the outer face of the flange and including a rearwardly extended hollow tubular neck of less diameter than the tip, the neck being compressible to permit its insertion through the opening, the neck being expanded outwardly in a direction substantially at right angles to the axis of the cap to lie against the inner face of the flange; and a relatively fixed member wherewith the cap is detachably assembled, the neck being bound between the inner face of the flange and said member.

[Claim 2 not printed in the Gazette.]

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1,225,202. GEARING. WILLIAM H. AHLE and EDWARD L. FITZGERALD, Gerald, Mo. Filed Apr. 24, 1916. Serial No. 93,163. (Cl. 74—7.)



In a four wheel drive motor vehicle, the combination with the power shaft thereof, of a main jack shaft disposed on each side of said power shaft, a pinion fixed upon each of said main jack shafts, a driving pinion feathered upon said power shaft, an auxiliary jack shaft, a pinion fixed upon said auxiliary jack shaft and meshing with the pinion upon one of said main jack shafts, oppositely extending drive shafts swivelly connected to the other of said main jack shafts and to said auxiliary jack shaft, and means for shifting said feathered pinion into mesh with either one or both of said main jack shaft pinions, whereby power may be transmitted to either one or both of said oppositely extending drive shafts.

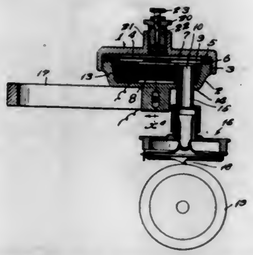
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1,225,203. MEANS FOR UTILIZING ELECTRICALLY-TRANSMITTED IMPULSES. EDWARD H. AMET, Redondo Beach, Cal. Filed Mar. 4, 1916. Serial No. 82,265. (Cl. 179—114.)

1. The combination with a telephone receiver diaphragm and electro-magnetic means for operating said diaphragm, of dash-pot forming means containing air open to atmospheric pressure, means to regulate the size of the chamber, and means to nearly close the opening to the atmosphere.

2. A telephone receiver comprising a housing and a diaphragm mounted therein, said housing and diaphragm

forming a dash-pot, of which the diaphragm constitutes the movable member, an electro-magnet in operable relation to the diaphragm, a collecting chamber and an outlet therefrom on the same side of the diaphragm with the electro-magnet.



3. A telephone receiver comprising a housing; a diaphragm in the housing, said housing and diaphragm forming a dash-pot chamber on one side of the diaphragm; an electro-magnet on the other side of the diaphragm, there being an impulse chamber on the same side of the diaphragm with the electro-magnet and an impulse outlet from said impulse chamber.

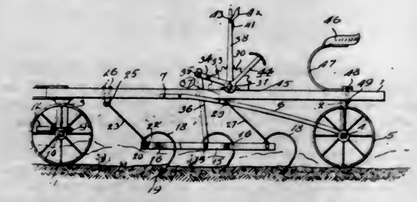
4. The combination with a telephone receiver electro-magnet, of a diaphragm in operable relation thereto, a housing inclosing the diaphragm and forming a practically closed air chamber on the side thereof opposite the electro-magnet and also forming a second air chamber on the same side with said electro-magnet, and an impulse outlet from the second air chamber.

5. In a telephone receiver comprising a diaphragm, an electro-magnet, a collecting chamber and an impulse outlet all on the same side of the diaphragm, a dash-pot chamber on the side of the diaphragm opposite to the electro-magnet.

[Claims 6 to 8 not printed in the Gazette.]

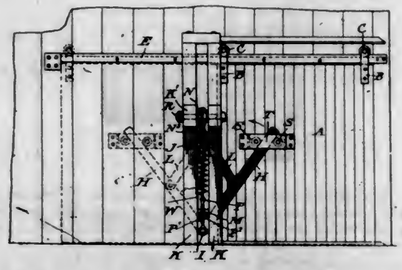
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1,225,204. HARROW. CARL J. ANDERSON, Sanborn, N. D. Filed Jan. 4, 1916. Serial No. 70,288. (Cl. 55—88.)



A harrow including a beam having a slot therein, means for supporting the beam in spaced relation to the ground, a harrow frame disposed transversely of the beam, inverted V-shaped supports pivoted at their vertices and the undersurface of the beam and connected at their outer ends to the harrow frame, a segmental rack connected to the side of the beam, a transversely arranged stub shaft having one end rotatably mounted in the rack, a bracket straddling the other end of the shaft and holding it on the beam, a rigid arm extending from the shaft, a rod arranged through the slot and having the respective ends thereof pivoted to the arm and the frame, a foot lever rigid with the shaft and extending therefrom whereby when depressed the arm and consequently the frame will be raised, a hand lever rigidly connected to and extending from the shaft, a pawl slidably mounted on the hand lever for engaging the rack to hold the frame in various adjusted positions, and means for releasing the pawl whereby to permit of the actuation of the foot lever.

1,225,205. DEVICE FOR OPENING AND CLOSING DOORS FOR GARAGES, &c. LOUIE F. ALSWORTH, Chicago, Ill. Filed Jan. 3, 1917. Serial No. 140,474. (Cl. 268—8.)

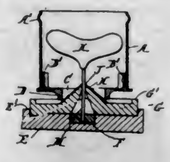


1. A device for operating sliding doors for garages, etc., comprising, in combination with a sliding door, a pivotal metallic throw bar and post to which the lower end of said bar is pivoted, anti-friction wheels mounted upon said door and spaced apart and between which said throw bar is adapted to have a play, means for confining the bar between said rollers, a tilting lever mounted upon the post and having pivotal link connections with said throw bar, a screw adjustably mounted upon the post, and a coiled spring fastened at one end to said screw and its other end to the inner arm of said lever.

2. A device for operating sliding doors for garages, etc., comprising, in combination with a sliding door, a pivotal metallic throw bar and post to which the lower end of said bar is pivoted, anti-friction wheels mounted upon said door and spaced apart and between which said throw bar is adapted to have a play, means for confining the bar between said rollers, a tilting lever mounted upon the post and having pivotal link connections with said throw bar, a sliding hollow bolt, pivotal link connections between the same and said lever, said bolt having a lug projecting from the inner hollow surface, a lock, the tongue of which is adapted to be thrown in the path of said lever, and a handle for moving the bolt.

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1,225,206. METAL MOLDING AND CASTING APPLIANCE. ALFRED CHARLES ATKINSON, Kelburn, Wellington, New Zealand. Filed Oct. 14, 1916. Serial No. 125,592. (Cl. 22—97.)



1. In means for the purposes herein described the combination with a mold casing, of a cover adapted to fit over one end thereof and formed with a central circular aperture and with a rim surrounding such aperture on its outer surface, substantially as herein specified.

3. In the means for the purposes herein described, the combination with the mold casing, of a cover therefor formed with a central circular aperture, a disk having a central upwardly projecting cone upon which the aperture in the casing cover is adapted to pass and rest and formed with an aperture extending vertically through the cone, and a base plate on which the disk rests formed with a depression beneath the cone of the disk.

4. Means for the purposes herein described comprising the combination with the mold casing, of a cover

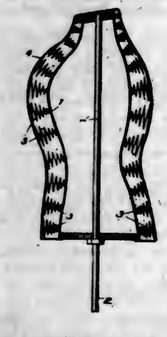


therefor formed with a central circular aperture and with a rim on its outside surrounding the edge of such aperture, and a disk plate having a cone shaped center upon which the aperture in the casing cover is adapted to pass and rest, such cone being formed with an aperture extending vertically through it, and formed with a number of slight ribs extending radially down its surface, substantially as and for the purposes specified.

[Claim 2 not printed in the Gazette.]

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1,225,207. ADJUSTABLE DRESS-FORM. ANNA DEANE BAILEY, New York, N. Y. Filed July 30, 1913. Serial No. 781,953. (Cl. 223—18.)



1. A dress form comprising an inner body conforming approximately to the shape of the human form, outwardly extending compressible coil springs supported by said inner body and extending outwardly therefrom approximately radial to the center of said form, the outer coils of adjoining springs being close together and the entire surface of the inner body being covered with springs, a flexible inclosing casing surrounding the inner body and the springs, said casing conforming to the shape of the human form and compressing the springs, the outer coils of the springs engaging said casing, whereby said flexible casing will be held taut by the springs.

2. A dress form comprising a rigid inner body, outwardly extending compressible springs secured to said rigid body and extending outwardly therefrom approximately radial to the center of said body, said springs being approximately conical with their smaller ends secured to the rigid inner body, the outer coils of adjoining springs being close together and the entire surface of the rigid body being covered with springs, a flexible inclosing casing surrounding the rigid body and the springs, said casing conforming to the shape of the human form and compressing the springs, the outer coils of the springs engaging said casing, whereby said flexible casing will be held taut by the springs, and a detachable inelastic covering for said form smaller than the normal size of the inclosing casing and adapted to be fitted thereover, and means for detachably securing said inelastic covering about the inclosing casing said covering further compressing the springs, whereby said covering will be held taut by a spring pressure exerted thereon throughout its surface.

3. A dress form comprising an inner body, outwardly extending compressible springs secured to said body and extending outwardly therefrom approximately radial to the center of said form, said springs being approximately conical with their smaller ends secured to the inner body, the outer coils of adjoining springs being close together and the entire surface of the inner body being covered with springs, a flexible inclosing casing surrounding the body and the springs, said casing conforming to the shape of the human form and compressing the springs, the outer coils of the springs engaging said casing, whereby said flexible casing will be held taut by the springs.

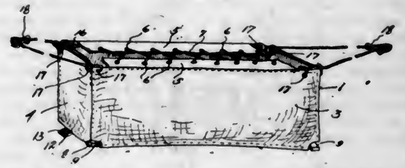
4. A dress form comprising a rigid inner body conforming approximately to the shape of the human form, outwardly extending compressible springs secured to said rigid body and extending outwardly therefrom approximately radial to the center of said form, said springs being approximately conical with their smaller ends secured to the rigid inner body, the outer coils of adjoining springs being connected together and the entire surface of the rigid body being covered with springs, a flexible inclosing casing surrounding the rigid body and the springs, said casing conforming to the shape of the human form and compressing the springs, the outer coils of the springs engaging said casing, whereby said flexible casing will be held taut by the springs, and a detachable inelastic covering for said form smaller than the normal size of the inclosing casing and adapted to be fitted thereover, and means for detachably securing said inelastic covering about the inclosing casing said covering further compressing the springs, whereby said covering will be held taut by a spring pressure exerted thereon throughout its surface.

5. A dress form comprising an inner form, a flexible outer casing larger than the form and conforming substantially to the shape of the human form, compressible springs interposed between the form and the outer casing, said springs being arranged over substantially the entire surface of the form and extending outwardly therefrom and being held under compression by the outer casing, whereby said outer casing will be held taut, and a non-elastic outer covering conforming to the shape of the human form and smaller than the outer flexible casing and adapted to be fitted thereover to contract the form to the desired size and shape, and means for holding said non-elastic outer covering in position.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,208. COMBINED BABY HAMMOCK AND SWING. BELLA P. BAILEY, Portland, Oreg. Filed July 14, 1916. Serial No. 109,377. (Cl. 5—10.)



1. A device of the class described comprising a body, tabs associated with the body, ropes connected with the body, said ropes having snap hooks carried by their ends adapted to engage a support to hold the hammock in a horizontal position, or to engage the tabs to support the hammock in a vertical position.

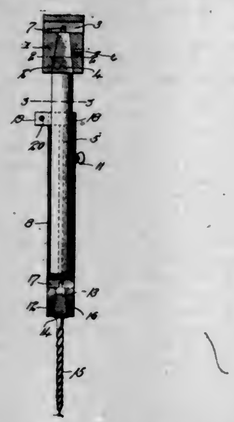
2. A hammock of the class described comprising a bottom, sides and ends, flaps carried by the upper edges of the sides, means for lacing the adjacent edges of the flaps together, second flaps carried by the upper edges of the sides and having eyelets formed therein, ropes extending longitudinally of the hammock and engaged in said eyelets, said ropes being stretched to the corners of the hammock, the ends of said ropes being provided with snap hooks, and tabs carried by the ends of the bottom and adapted to be engaged by the snap hooks to suspend the hammock in a vertical position, as and for the purpose set forth.

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1,225,209. DRILL EXTENSION. ALFRED F. BEAULIEU, Chicago, Ill. Filed Jan. 20, 1916. Serial No. 73,228. (Cl. 77—55.)

A drill holder comprising a cylinder having its lower end closed and further provided with a longitudinal groove, a tool holding block formed upon the lower end of the cylinder, a longitudinally adjustable rod fitting snugly within the cylinder and carrying means for connection

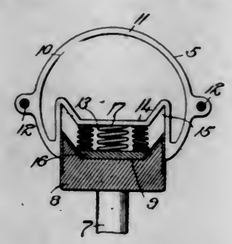
to a tool, a longitudinal rib formed on the rod and fitting within the longitudinal groove in the cylinder, and an



adjustable collar carried by the rod adapted to engage the upper edge of the cylinder.

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1,225,210. SPRING-TIRE. IRA S. BERSON, Monticello, Miss., assignor of one-fourth to Belle Lee, Macomb, Miss., and one-fourth to Emma F. Smith, Monticello, Miss. Filed Dec. 20, 1916. Serial No. 138,071. (Cl. 152—37.)



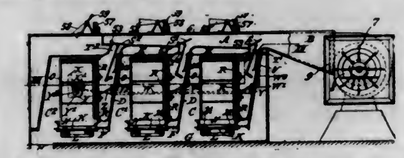
In a spring wheel the combination of a felly provided with a peripheral channel having divergent side walls, an annular ring seated within said channel, a substantially rigid tire encircling the felly and provided with an inwardly opening channel slidably embracing the sides of the felly, the web of the second named channel having a cross-section similar to that of the first named channel and being movable thereinto at times, and springs secured to said annular ring and interposed between it and the web of the second named channel.

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1,225,211. APPARATUS FOR CONDITIONING AND DEHYDRATING FIBROUS AND OTHER BODIES. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed Aug. 1, 1914. Serial No. 854,598. (Cl. 34—39.)

1. In an apparatus for conditioning wool, the combination of, means for filtering air, means for heating air, a series of dehydrating cells, means for conveying the modified air to and from the cells, means for changing at intervals the line of movement of the air current through the cells, and a supplemental air heating device in proximity to each cell.

2. In an apparatus for conditioning wool, the combination of, means for filtering air, means for heating air, a series of dehydrating cells, means for conveying the modified air to and from the cells, means for changing at intervals the line of movement of the air current through the cells, a supplemental air heating device in proximity to each cell, and means for controlling the heat developed by each supplemental air heating device.



3. In an apparatus for conditioning wool, the combination of means for primarily modifying the condition of the air to be introduced into the apparatus as regards temperature and humidity, a series of dehydrating cells, means for changing at intervals the line of movement of the introduced air currents through the cells, a weighing apparatus for each cell, and means structurally independent of the weighing apparatus but energized by the weighing apparatus for indicating the change of weight of the material acted upon contained within the cells.

4. In an apparatus of the class described, the combination of a blower, an air feed trunk, a waste air trunk, a series of cells interposed between the air feed trunk and the waste air trunk, air passages leading from the air feed trunk to the cells, air passages leading from the cells to the waste air trunk, means in said air passages leading from the air feed trunk to the cells for changing at intervals the line of movement of the air currents through the cells, and air heating devices in each of the cells located in the path of movement of the air currents through the cells.

5. In an apparatus of the class described, the combination of an air heater, a blower, an air feed trunk through which hot air may be transmitted, a waste air trunk, a series of cells interposed between the air trunks, air passages leading from the air feed trunk to the cells, air passages leading from the cells to the waste air trunk, means in each cell for adding heat to the air currents delivered to the cell, and means in relation to each cell for changing the level of the air currents passing through the cell at intervals.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,212. ART OF DRYING BODIES. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed Nov. 20, 1914. Serial No. 873,108. (Cl. 34—5.)



1. The method of partially dehydrating bodies, which consists in imparting motion to the body and while in motion subjecting it to the action of air currents, independently applied heat, and electrically produced light for a sufficient time to remove at least 80% of the normal water content and produce color changes.

2. The method of treating cellular bodies to produce a partially dehydrated body, which consists in subjecting the body to the action of heated air currents, independently applied heat, and electrically produced light, the physical effects of the heat and light being regulated so as not to destroy the enzyms present in the body treated.

3. In a dehydrating apparatus, the combination of a rotary member, an air inlet, an air outlet, means for continuously altering the level at which the air is transmitted through the rotary member, and means for heating the rotary member.

4. In a dehydrating apparatus, the combination of a rotary member, an air inlet, an air outlet, means for continuously altering the level at which the air is transmitted through the rotary member, and means for heating and lighting the interior of the rotary member through the instrumentality of electric energy.

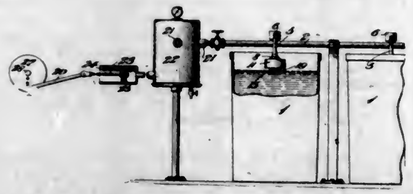
5. In a dehydrating apparatus, the combination of a rotary member open at both ends and divided into compartments by partitions, an air inlet located at one end, an air outlet located at the other end, a series of air deflecting dampers located in the air inlet, together with means for continuously varying the positions of the dampers.

[Claims 6 to 13 not printed in the Gazette.]



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1,225,213. METHOD OF AND APPARATUS FOR MANUFACTURING ICE FROM RAW WATER. ROBERT J. BERRYMAN, Philadelphia, Pa. Filed Mar. 8, 1915. Serial No. 12,872. (Cl. 62—172.)



1. In the method of manufacturing ice by subjecting a body of water to a freezing temperature and agitating the unfrozen water during congelation by intermittently withdrawing and returning a portion of the unfrozen water, the improvement which consists in segregating impurities from the water withdrawn before returning the water.

2. In the method of manufacturing ice by subjecting a body of water to a freezing temperature and agitating the unfrozen water during congelation by intermittently withdrawing and returning a portion of the unfrozen water, the improvement which consists in trapping and retaining impurities in the water so withdrawn before returning the water.

3. In the method of manufacturing ice in receptacles partially immersed in a freezing solution and in which the unfrozen water content is agitated during congelation by alternately sucking up and squirting back a portion of the unfrozen water through conduits extending downward into the upper ends of the receptacles, the improvement which consists in segregating impurities from the water sucked out of each receptacle before the return of the water to the can.

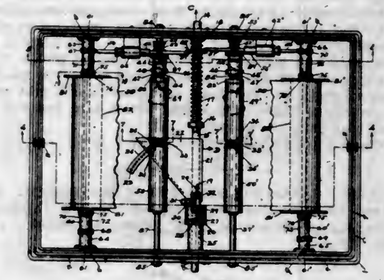
4. Apparatus for the manufacture of ice comprising in combination a receptacle for the water to be frozen, and means for intermittently withdrawing water from the receptacle, segregating impurities therefrom and returning it to the receptacle, said means including an impurity collecting trap through which the water so withdrawn and returned is passed.

5. Apparatus for the manufacture of ice comprising in combination a receptacle for the water to be frozen, and agitating and purifying provisions comprising a conduit dipping into the upper end of the body of the water contained in said receptacle, and means for intermittently withdrawing through said conduit a portion of the water contained in said receptacle, segregating impurities therefrom and then returning it to said receptacle.

[Claims 6 to 10 not printed in the Gazette.]

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1,225,214. STREET-INDICATOR. JAMES BIRD, Buffalo, N. Y. Filed Apr. 14, 1916. Serial No. 91,242. (Cl. 40—88.)



1. In a car indicator for streets, the combination of a box, a curtain in said box, a shaft in said box, a storage roller on said shaft and having said curtain attached thereto, a second shaft and an operating roller on said second shaft which is adapted to move said curtain by frictional contact therewith, means to operate said operating roller, a pinion on said storage roller shaft and a rack to mesh with said pinion and adapted to operate said storage roller and wind said curtain thereon, a second rack operatively connected to said first rack and a pinion on said operating roller shaft normally held out of contact with said second rack and adapted to mesh with and operate said second rack when said operating roller is moving said curtain.

2. In a car indicator for streets, the combination of a box, a curtain having the names of streets thereon, two storage rollers to which are attached, and upon which are wound said curtain, two operating rollers, the first of which is adapted to move said curtain from the first storage roller to the second storage roller and the second of which is adapted to move said curtain from the second storage roller to the first storage roller, reversible means to operate said operating rollers alternatively, means for operating said storage rollers from said operating rollers, said means consisting of racks and pinions, which are normally held out of mesh with each other and adapted to be brought into mesh with each other by movement of the operating roller.

3. In a car indicator for streets, the combination, of a box, a sight opening in said box, a curtain in said box having the names of streets on both sides thereof, a storage roller in said box to which said curtain is attached, an operating roller in said box adapted to move said curtain by frictional contact therewith, means to reverse said storage roller whereby the names on either side of said curtain may be shown through said sight opening, means to rotate said operating roller to show the names of said streets successively, and means between said operating roller and said storage roller to rotate said storage roller and store said curtain when in the original or reverse position, said latter means consisting of pinions connected to said operating and storage rollers and two racks yieldingly connected to each other and adapted to be brought into and out of mesh with said pinions, and one of said racks adapted to be reversed.

4. In a car indicator for streets, the combination of a box, a sight opening in said box, an operating roller journaled in said box, two frames in said box which are pivotally connected, and the outer of which is hinged to said box, two storage rollers fastened to the inner one of said frames, a curtain on said storage rollers and having the names of streets on both sides thereof and means to operate said operating roller whereby the names on both sides of said curtain may be successively shown through said sight opening.

5. In a car indicator for streets, the combination, of a box, a sight opening in said box, a curtain having the

names of streets thereon, a storage roller to which said curtain is attached, an operating roller adapted to move said curtain across said sight opening toward said storage roller, means to operate said operating roller and means to rotate said storage roller from said operating roller, said latter means consisting of a pinion connected to said storage roller by a ratchet mechanism, a rack adapted to mesh with and rotate said pinion, a second pinion connected to said operating roller through a ratchet mechanism, a second rack yieldingly connected to said first rack and means to throw said second pinion into and out of mesh with said second rack.

[Claim 6 not printed in the Gazette.]

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1,225,215. CARGO-BUCKET-OPERATING DEVICE. ERNEST EUGENE BISSETT, Vancouver, British Columbia, Canada. Filed Oct. 18, 1915. Serial No. 56,509. (Cl. 37—30.)



1. The combination with a cargo bucket, means for suspending two hoisting lines at different points of location, the first point of location being over the place from which the load is to be lifted and the other over the place at which the load is to be discharged, said bucket comprising a suspension block, and bucket elements suspended therefrom and adapted to open and close, one of said hoisting lines being connected directly to said suspension block, the other of said hoisting lines coöperating with the bucket elements for opening and closing the same, and a device connecting said hoisting lines adjacent to the bucket whereby when said device is in one position, the bucket will hang closed beneath one of said points of suspension, and when said device is in another position said bucket will hang open beneath the other of said points of suspension, said device being operable by slacking one or the other of said hoisting lines according to the location of the bucket.

2. The combination with a cargo bucket, two hoisting lines, one suspended over the place from which the load is to be lifted and the other suspended over the plate at which the load is to be deposited, means operative by the hoisting lines for sustaining the bucket in the open position over the place from which the load is to be lifted and for sustaining it in the closed position over the place of deposit, comprising a link for holding the lines substantially parallel to one another adjacent to their place of connection to the bucket, and a tumbling rod one end of which is pivotally connected to each line between said link and the bucket, and releasable means for holding the lower end of the tumbling rod adjacent the lines.

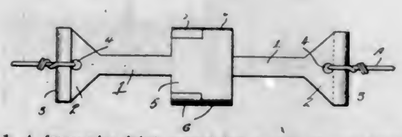
3. The combination with a cargo bucket, two hoisting lines and means for suspending said lines at two different locations, a linking block through which both lines pass before being connected to the bucket, a tumbling lever, one end of which is connected to each line between the linking block and the places of connection of the lines with the bucket, and movable means on both lines and on the tumbling rod, for holding the lower end of the lever adjacent to said lines.

4. The combination with a clamp shell bucket, of two hoisting lines for suspending said bucket, means over the place where the load is to be lifted for sustaining one of said lines and means over the device where the load is to be deposited for sustaining the other of said lines, a linking block through which both lines are freely movable, a tumbling rod, one end of which is pivotally connected to each line between the linking block and the bucket, and connecting linking shackles endwise movable on the tumbling rod and on the lines for connecting the lower end of the tumbling rod to said lines.

5. The combination with a cargo bucket, two hoisting lines from which said bucket is suspended, means for suspending one of said lines at one place and the other of said lines at another place, means whereby the bucket may be sustained over the place from which the load is to be lifted on one line and on a part of the other line and for sustaining the bucket over the place of deposit on the other line and on a part of the first line, and means operated by the hoisting lines for transferring the weight of the bucket from one line to the other in each case.

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1,225,216. FENCE-WIRE JOINT. WILLIAM E. BOYER, Beebe, Ark. Filed Aug. 11, 1916. Serial No. 114,428. (Cl. 24—201.)



1. A fence-wire joint comprising a pair of complementary coupling members, a relatively wide plate carried by one end of each member, the opposite edges of each plate being bent and curved and having cut-out portions extending half the length of each edge, the said curved edge of each member adapted to be disposed in the said cut-out portion of the corresponding member for interlocking the ends of the said members.

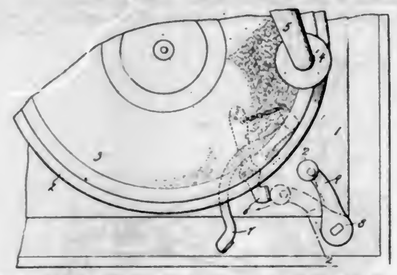
2. A fence-wire joint comprising a pair of complementary coupling members, a relatively wide plate carried by one end of each member, the opposite edges of each plate being bent and curved and having cut-out portions extending half the length of each edge, the said curved edge of each member adapted to be disposed in the said cut-out portion of the corresponding member for interlocking the ends of the said members, and extensions formed on the said curved edges and in spaced relation to the said plate, the said extensions of each member being disposed in the said spaces of the adjacent member when in interlocked engagement.

3. A fence-wire coupling member comprising a shank having its end provided with a relatively wide plate, retaining flanges carried by and overlying the plate and providing spaces between the surfaces of the plate and the said retaining flanges, the said flanges of each corresponding member adapted to be disposed in the said spaces for holding the ends of each member in interlocked engagement.

4. A fence wire joint comprising a pair of complementary members, each having a shank, means for attaching a wire to one end of the shank, a coupling element formed on the end of each shank, comprising a pair of flanges spaced apart at their edges whereby the shank of each corresponding member may be disposed between the said flanges, a relatively wide plate integrally formed with the shank and having its edges connected to the said retaining flanges whereby the said flanges will be disposed in spaced relation to the plate, the said retaining flanges and the edges of the plate being cut away to provide a slot for permitting the interlocking of the said flanges in the said spaces in each corresponding member.



1,225,217. STOP MECHANISM FOR PHONOGRAPHS. WILLIAM R. BOYER, Philadelphia, Pa. Filed May 18, 1916. Serial No. 98,242. (Cl. 74—46.)



1. The combination in a talking machine having a record, mechanism for rotating the record, means movable to stop said mechanism, of a movable member, an arm secured to said member, a second member carried by and adjustable into different positions relative to said arm, and means for locking said latter member against relative accidental movement with respect to the arm, said latter means being manually movable to permit adjustment between the arm and said second member, said second member being operative to engage and move said first means to stop said mechanism, substantially as described.

2. The combination in a talking machine having a record, mechanism for rotating the record, means movable to stop said mechanism, of a movable member, an arm secured to said member, and a second member carried by and adjustable into different positions relative to said arm, and automatically operative means for adjustably securing said latter member to the arm and normally operative to prevent accidental movement between the arm and said second member, substantially as described.

3. The combination in a talking machine having a rotatable support, a record on said support, a movable member, a stopping lever movable to effect the stopping of said support, of an arm on said second member, and a plate eccentrically mounted on said arm for engagement with the stopping lever, and means for adjustably securing the plate to the arm, substantially as described.

4. The combination in a talking machine having a rotatable support, a record on said support, a rotatable member, and a stopping lever movable to effect the stopping of said support, of an arm secured to said rotatable member and having a series of grooves therein, a plate having a series of ribs designed to engage the grooves on said arm, and means for adjustably clamping said plate to the arm, said means being operative to permit said plate to be moved away from the arm and turned into different positions, said plate being designed to engage said stopping lever to stop the rotation of said support, substantially as described.

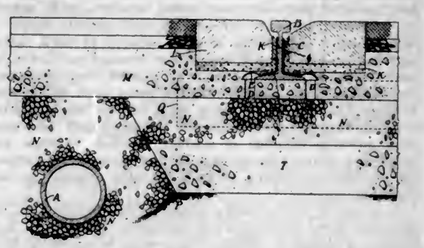
5. The combination in a talking machine having a rotatable support, a record on said support, a rotatable member, and a stopping lever movable to effect the stopping of said support, of an armed secured to said rotatable member and having a series of grooves therein, an eccentrically mounted plate having a series of ribs designed to engage the grooves on said arm, and means for adjustably clamping said plate to the arm, said means being operative to permit said plate to be moved away from the arm and turned into different positions, said plate being designed to engage said stopping lever to stop the rotation of said support, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,218. RAILWAY ROAD-BED. CHARLES F. BROWN, Salt Lake City, Utah. Filed Mar. 13, 1917. Serial No. 154,630. (Cl. 104—14.)

1. A railway roadbed consisting of a cement concrete layer having a plurality of vertical holes therethrough; ties resting in said concrete to support rails; spaced apart angle plates adjacent the web and base flanges of rails carried on said ties; lugs struck outwardly from said plates; and a cementitious paving strata covering said concrete and engaging with said lugs and bearing against said plates.



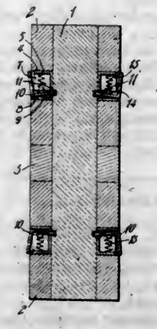
2. A railway roadbed consisting of a layer of cement concrete having a plurality of vertical openings therethrough; ties partially surrounded by and resting in said concrete; angle plates spaced from rails fastened on said ties; lugs struck from said angle plates to space them from the rails and to engage with a cementitious paving strata; a convex portion of said plates to form a water channel leading to said openings in said concrete; and a surface strata covering said concrete and abutting against the outer side of said plates at their upper edges.

3. A railway track consisting of a layer of gravel within which is placed a drain pipe; a layer of concrete on said gravel and having a plurality of vertical openings therethrough; ties partially surrounded by said concrete and resting on said gravel; rails fastened on said ties; opposed sheet metal angle plates spaced from the web and flange portion of said rails; lugs integral with said plates; a cement grouting engaging with said lugs and resting on said cement concrete; an arc shaped longitudinally disposed portion of said plates spaced above the openings in said concrete; and a surface strata resting on and adhering to said grouting and concrete.

4. A railway roadbed comprising a drainage layer of gravel; a drain pipe therein; a layer of concrete on said gravel and having a plurality of openings therethrough; opposed sheet metal plates having a portion of each curved upwardly as a covering for said openings in said concrete; lugs struck from said plates; a cement grouting engaging with and adhering to said lugs; and a surface strata supported by said concrete and grouting.

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1,225,219. BLOCK FOR HAY-BALERS. WILLIAM M. BAUSH, Brule, Nebr. Filed Jan. 25, 1916. Serial No. 74,211. (Cl. 100—24.)



1. A baling press block having grooves therein, angle irons pivotally mounted in the recesses and normally closing the same.

2. A baling press block having grooves therein, angle irons pivotally mounted in the recesses, and resilient means urging the angle irons to a position to close the recesses.

3. A block for a baling press comprising a main body member, transverse outer members secured to said main body member, certain of said outer members being spaced to provide transverse recesses in the opposite sides of said block, a supporting member secured in each recess and having end flanges, a bearing member positioned in each recess to form one wall of a wire accommodating recess, a movable member hinged upon each supporting member to form an opposite wall for one of said wire accommodating recesses, means for resiliently retaining each movable member in normal position to close the outer side of the wire accommodating recesses, and means for limiting movement of each movable member in one direction.

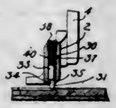
4. A block for a baling press having pockets in its opposite sides, wire clamping members pivoted in said pockets, and means within said pockets to normally hold said clamping members in operative position.

5. A baling press block having spaced longitudinal recesses therein, a metallic lining for the recesses, and pivoted angle irons mounted in the recesses and normally closing the same.

[Claim 6 not printed in the Gazette.]

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1,225,220. SEWING-MACHINE. CARSON J. CADY, Rochester, N. Y., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 27, 1915. Serial No. 47,621. (Cl. 112—20.)



1. A sewing machine comprising a presser-foot, actuating mechanism for the presser-foot to cause the presser-foot to clamp the work during the formation of a stitch and to entirely remove the presser-foot from engagement with the work during the feeding movement, a grooving knife supported by the presser-foot and movable relative thereto, and means for maintaining the grooving knife in engagement with the work when the presser-foot is elevated.

2. A sewing machine comprising a presser-foot, actuating mechanism for moving the presser-foot toward and from the work, a grooving knife supported by the presser-foot, a spring for moving the grooving knife toward the work when the presser-foot is removed from the work, and means for limiting the movement of the grooving knife toward the work.

3. A sewing machine comprising a presser-foot having a recess provided with a shoulder portion, actuating mechanism for moving the presser-foot toward and from the work, a grooving tool slidingly supported in the recess and having a shoulder coöperating with the shoulder portion of the recess to limit the outward movement of the tool in the recess, and a spring for normally maintaining the grooving tool in contact with the shoulder portion of the recess.

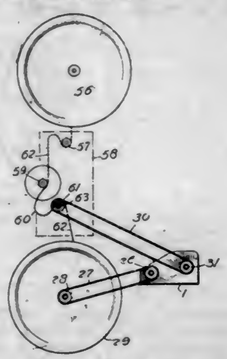
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1,225,221. [WITHDRAWN.]

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1,225,222. GOVERNING DEVICE FOR TAKE-UP REELS OF MOVING-PICTURE MACHINES. ALBERT D. COVERT, Leland, Ill. Filed May 5, 1916. Serial No. 95,684. (Cl. 74—97.)

1. In a moving picture machine, the combination with a power shaft and a take-up reel, of means disposed between the power shaft and the take-up reel, for driving the latter from the power shaft, and means for limiting the maximum speed of the take-up reel.



2. In a moving picture machine, the combination with a power shaft and a take-up reel, of means disposed between the power shaft and the take-up reel for driving the latter from the power shaft, means for limiting the maximum speed of the take-up reel, and means for varying the limit of the maximum speed of the take-up reel.

3. In a governing device for the take-up reels of moving picture devices, a power shaft, a ball governor actuated thereby, a lever, a friction wheel carried by the lever, a second friction wheel arranged to be engaged by said first named friction wheel, means for transmitting the movement of the second named friction wheel to the take-up reel, and means for limiting the amount of movement of the lever.

4. In a governing device for the take-up reels of moving picture devices, a power shaft, a ball governor actuated thereby, a lever, a friction wheel carried by the lever, a second friction wheel arranged to be engaged by said first named friction wheel, means for transmitting the movement of the second named friction wheel to the take-up reel, and means for limiting the amount of of movement of the lever, said last named means comprising a screw.

5. In a governing device for the take-up reels of moving picture devices, a power shaft, a ball governor actuated thereby, a lever, a friction wheel carried by the lever, a second friction wheel arranged to be engaged by said first named friction wheel, means for transmitting the movement of the second named friction wheel to the take-up reel, and means for limiting the amount of movement of the lever, said last named means comprising a screw, and means for causing a progressive forward movement of the screw along its axis during the rotation of the take-up reel.

[Claims 6 and 7 not printed in the Gazette.]

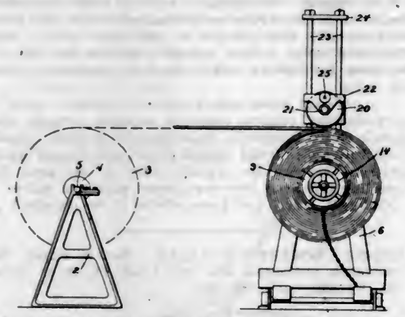
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1,225,223. BELT-MEASURING DEVICE. ARTHUR DAVIS, New Westminster, British Columbia, Canada. Filed Apr. 9, 1915. Serial No. 20,227. (Cl. 33—129.)

1. A belting measuring device, comprising a shaft rotatably mounted in a suitable frame, said shaft having an arbor secured on one end to which arbor the end of the belt to be measured is connected, and a measuring wheel rotatably mounted on an axis parallel to that of the arbor in a frame which is vertically slidable over the arbor and a support for said frame on which said frame has vertical sliding movement for the purpose of changing the distance between the arbor and the measuring wheel according to the depth of the material wound on the arbor.

2. A belting measuring device, comprising a shaft rotatably mounted in a suitable frame, said shaft having a contractible arbor secured on one end to which arbor the end of the belting to be measured is connected, a measuring wheel rotatably mounted on an axis parallel to that of the arbor in a frame which is vertically slidable over the arbor, and means for indicating the linear measurement corresponding to the revolutions of the measuring wheel and a support for said frame on which said frame has vertical sliding movement for the purpose of changing the distance between the arbor and the measuring wheel according to the depth of the material wound on the arbor.



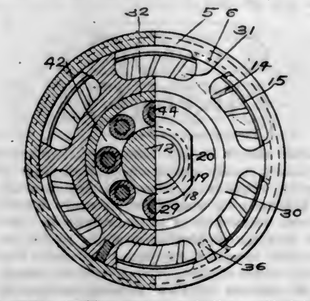


3. A belting measuring device, comprising in combination a frame mounted to run on wheels, a shaft rotatably mounted in said frame the axis of which is normal to those of the carrying wheels of the frame, an arbor secured on the end of the shaft to project beyond the same to which arbor the end of the belting to be measured is connected, means for rotating the shaft, parallel columns upwardly projecting from the frame, a measuring wheel secured on a spindle which is rotatably mounted in a frame slidably mounted on the columns to project the measuring wheel over the arbor, means for balancing the weight of the slidable frame on the contact of the measuring wheel on the belt as coiled on the arbor, and means for indicating the linear measurement corresponding to the revolutions of the measuring wheel.

4. A belt measuring device comprising a support, a crank shaft journaled in said support, an arbor mounted on said shaft, said arbor adapted to receive the end of the belting to be measured and on which arbor the belting is designed to be wound, a pair of vertical guides projecting above said arbor, a vertically slidable frame on said guides, a measuring register carried by said frame and including an operating shaft and a measuring wheel mounted on said operating shaft, and weight means for holding said measuring wheel in contact with the belt on said arbor, substantially as shown and for the purposes described.

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1,225,224. ROTARY MOTOR. PHILIP J. DARLINGTON, Hartford, Conn., assignor to The Roto Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 1, 1915. Serial No. 18,595. (Cl. 253—3.)



In a rotary turbine motor, a hollow cylindrical casing with internal projections at its front end, a front head having radial arms abutting on said projections and a key seated in one of said arms and entering a key-way in one of said projections to retain said arms in angular position to register with said projections.

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1,225,225. RESILIENT WHEEL. ANSON W. DELANE, New York, N. Y. Filed Oct. 26, 1915. Serial No. 58,041. (Cl. 152—28.)



1. A resilient wheel having a double-convex wheel-body of resilient material secured between parallel plates separated by a felly, and encircled plates, separated by a hub.

2. A wheel of resilient material having an interior air-retaining, annular tie or brace diagonally secured across a double convex wheel-body, said brace or tie separating the wheel-body into two separate compartments.

3. A wheel of resilient material having an annular tie of resilient material, diagonally secured across the wheel-body between the felly plates and the opposite side of the hub plates.

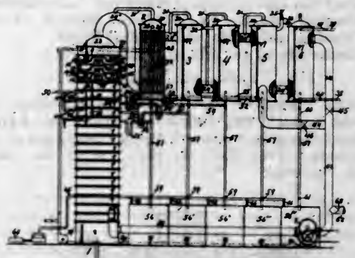
4. A resilient wheel having within a double-convex, flexible wheel-body, an annular, diagonally disposed, flexible tie and two unequal, opposed, annular, pneumatic chambers.

5. A wheel of resilient material having within a double-convex wheel-body, an annular, diagonally disposed tie, spun of steel sheets, secured across the wheel-body forming two unequal, opposed, annular pneumatic chambers, the diagonal wall of one of said chambers lying in close contact with that of the other.

[Claim 6 not printed in the Gazette.]

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1,225,226. DISTILLATION PROCESS. HENRY L. DOHERTY, New York, N. Y. Filed July 16, 1912. Serial No. 709,796. (Cl. 195—12.)



1. The method of distilling volatile ingredients from liquid bodies which comprises the counter-current contacting of a liquid carrying volatile ingredients with a gaseous heat-carrying medium and the introducing of heat into said gaseous medium at a locality intermediate between the locality at which the said liquid makes contact and the locality at which the said liquid breaks contact with said heat-carrying medium.

2. The method of distilling volatile ingredients from liquid bodies which comprises heating a body of liquid to the temperature of distillation by counter-current contact with a gaseous heat-carrying medium having an initial temperature above the temperature of distillation, whereby said body of liquid is heated and volatile ingredients are distilled from said body of liquid and the said gaseous medium is cooled, and establishing heat transferring relationship between the relatively cool heat-carrying medium and the relatively hot residual liquid from which

the desired volatile ingredients have been distilled, whereby the said heat-carrying medium is reheated and the said residual liquid cooled.

3. The method of distilling volatile ingredients from liquid bodies which comprises heating a body of liquid to the temperature of distillation by counter-current contact with a gaseous heat-carrying medium having an initial temperature above the temperature of distillation, whereby said liquid is heated and volatile ingredients are driven off from said body of liquid and the said gaseous medium is cooled, and bringing the relatively cool heat-carrying medium into counter-current contact with the relatively hot residual liquid from which the desired volatile ingredients have been distilled, whereby said heat-carrying medium is reheated and the said residual liquid cooled.

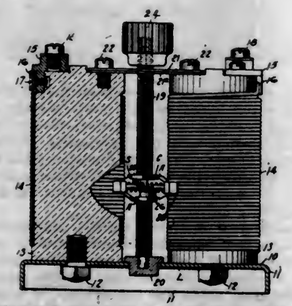
4. The method of distilling volatile ingredients from bodies of liquid which comprises maintaining a closed circulation of a gaseous medium, introducing heat into said medium at some locality in the circulation, bringing a body of liquid into heat transferring relationship with said heat-carrying medium beyond the place of introduction of heat into the same, whereby said liquid is heated, volatile ingredients driven off from said liquid and the said heat-carrying medium cooled, and bringing the heated residual liquid from which the desired volatile ingredients have been distilled into heat-transferring relationship with the cooled heat-carrying medium, whereby the said medium is reheated by the heat of said residual liquid and the said residual liquid cooled.

5. The method of distilling volatile ingredients from bodies of liquid which comprises maintaining a closed circulation of a gaseous medium, introducing heat into the heat-carrying medium at some locality in the circulation, bringing a body of preheated liquid into heat-transferring relationship with the heated gaseous medium, whereby the volatile ingredients of said liquid are vaporized and taken up by the said gaseous medium, bringing the vapor-laden gaseous medium into heat-transferring relationship with the initially cool liquid, whereby vapor is condensed out of said gaseous medium and latent heat of the condensed vapor and sensible heat of the gaseous medium are transferred to the initially cool liquid to preheat the same and the said gaseous medium is cooled, and bringing the heated residual liquid into heat-transferring relationship with the cooled gaseous medium, to reheat said medium and to cool said residual liquid.

[Claims 6 to 23 not printed in the Gazette.]

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1,225,227. RHEOSTAT. CHARLES W. DUNHAM, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Feb. 17, 1917. Serial No. 149,232. (Cl. 219—62.)



1. A rheostat comprising a pair of resistance units, a movable bridge connecting said units and comprising a pair of superimposed intersecting arms, and biasing means interposed between the ends of the arms for retaining the arms in contact with said units, said arms and biasing means being formed of conducting material of low and high electrical resistance respectively.

3. A rheostat comprising a pair of resistance units, a movable bridge connecting said units and comprising a pair of crossed arms biased to engage said units, said arms being formed of conducting material, and means for moving said bridge over said units.

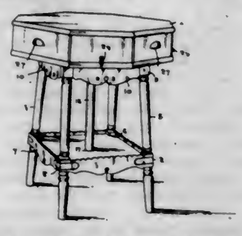
6. A rheostat comprising a pair of resistance units, crossed arms electrically connecting said units, said arms being movable with relation to said units and to each other, and coiled springs arranged between the ends of the arms for biasing said arms into engagement with said units.

8. A rheostat comprising a pair of resistance units, a screw-threaded member rotatably mounted between said units, a sleeve threadedly engaging said member, crossed conducting arms carried by said sleeve, and biasing means interposed between the opposite ends of said arms for expanding said arms into engagement with said units.

[Claims 2, 4, 5, 7, and 9 not printed in the Gazette.]

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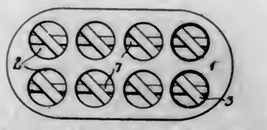
1,225,228. ROTARY-TOP TABLE. HALVER OLSON EDDINGSAAS, Stoughton, Wis. Filed July 11, 1914. Serial No. 850,452. (Cl. 45—26.)



In a rotary top table, the combination with a supporting stand embodying an upper and lower deck, the upper deck being formed centrally with an opening and the lower deck formed centrally with a reduced opening, of a spindle formed with a reduced lower end to provide a bearing shoulder, said spindle being disposed through the apertures of the upper and lower deck so that the said bearing shoulder will bear upon the lower deck, radial arms formed integral with the upper end of said spindle, a multi-chambered top rigid upon said radial arms, and anti-friction means disposed between said arms and said upper deck, said bearing shoulder serving in conjunction with the anti-friction means to support the combined weight of the spindle and top and further serving to reduce the wear upon the anti-friction means to a minimum.

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1,225,229. JAR-HOLDING DEVICE. WILLIAM OSCAR ELLIS, Dallas, Oreg. Filed July 6, 1915. Serial No. 38,221. (Cl. 53—1.)



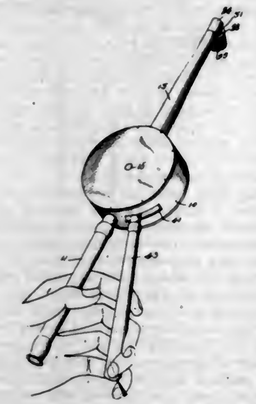
1. A holder for fruit jars comprising a plate having parallel rows of closely spaced opposed openings therein, longitudinally extending strips disposed beneath said openings, U-shaped jar supporting members having their base portions secured to said longitudinally extending strips, and said jar supporting members having laterally bent upper ends secured to the lower surface of said plate adjacent the edges of the openings and at points intermediate the shortest distance between contiguous openings, whereby the ends will not overlap and place any undue strain upon the narrowest parts of said plate.



2. A holder for fruit jars comprising a plate having parallel rows of openings disposed therein, vertical longitudinally extending strips positioned beneath said openings, said strips having inwardly bent flanges, transversely extending bars connecting the ends of said strips, U-shaped jar supporting members with laterally bent upper ends and flat base portions, said upper ends of each member secured to the lower surface of the plate at diametrically opposite points adjacent the edge of each opening, said base portions of the members being connected to the upper flanges of the vertical longitudinally extending strips, and said supports positioned diagonally with respect to the plate.

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1,225,230. ROTARY TOOTH-BRUSH. GEORGE N. ELWIN, Victoria, British Columbia, Canada. Filed Sept. 28, 1916. Serial No. 122,648. (Cl. 15—37.)



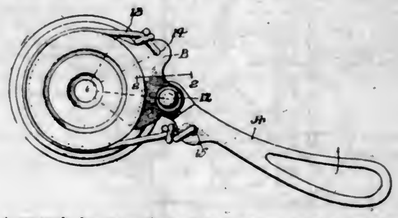
1. In a tooth brush, the combination of a flat casing having operating mechanism therein, a supporting handle detachably connected to one edge of the casing and projecting outwardly in the plane thereof, an operating lever detachably connected to said mechanism and projecting therefrom through the casing in the plane thereof and in diverging relation to the handle, an arm detachably connected to the opposite edge of the casing and extending outwardly in the plane thereof and in longitudinal alinement with said handle to provide substantially a continuation thereof, a shaft carried longitudinally in said arm and adapted to be held in detachable engagement with said mechanism by the arm when in position, a brush spindle mounted transversely in the outer end of said arm and having operative connection with said shaft, and a brush mounted on the end of said spindle and extending outwardly at right angles to the arm for application to the teeth.

2. In a tooth brush, the combination of a supporting arm, an attaching plate mounted on the arm and having spring fingers upon its outer face, a brush head, and eyes projecting from the brush head adapted for engagement over said spring fingers, the attaching plate having sockets arranged behind said fingers to receive said eyes and yieldingly hold the brush head to the attaching plate.

3. In a rotary toothbrush, a tubular arm, a transversely extending spindle carried in one end of the arm and projecting through one side thereof, an attaching plate carried on said end of the spindle and having spaced-apart spring fingers upon its outer face, a brush-head, rigid eyes projecting from said brush-head for engagement over said spring fingers, said attaching plate having sockets arranged behind said fingers for the reception of said eyes to yieldingly hold the brush-head to said attaching plate, and a bunch of bristles mounted in said brush-head.

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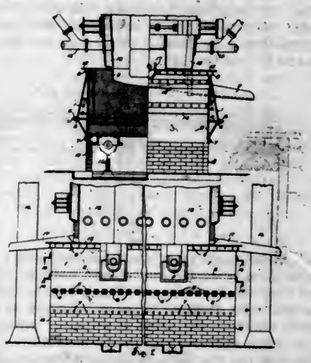
1,225,231. SCREW-CAP WRENCH. EMANUEL L. FENSTERMAKER, Lancaster, Pa., assignor of one-third to Franklin H. Burkhart, Lancaster, Pa. Filed Mar. 1, 1915. Serial No. 11,294. (Cl. 65—26.)



A wrench for removing screw tops comprising a clamping shoe having a curved face formed to fit against the periphery of the screw top upon which the wrench is to operate and having apertures positioned equidistant from the ends thereof with end portions projecting uniformly beyond said apertures, a handle fulcrumed in one of said apertures, and a wire loop secured at one of its ends in the other aperture and at its other end to the handle at a point adjacent to the fulcrum of the shoe, said shoe and the main part of the wire loop being adapted to be brought into circular alinement to uniformly grip the peripheral edge of a screw top, substantialy as set forth.

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1,225,232. TRUSS. CHARLES A. FISCHER, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Dec. 5, 1914. Serial No. 875,993. (Cl. 189—34.)

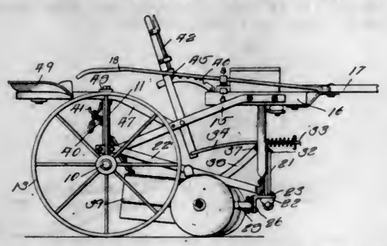


1. In combination, a truss comprising, a bent continuous member, means connecting the edges of said member remote from the bend, and means for causing the portions of said member adjacent said bend to serve as struts, means for rigidly securing one portion of said truss, and an abutment engaging a second portion of said truss whereby a third portion serves as a cantaliver.

2. In combination, a truss comprising, a bent member, means connecting the edges of said member remote from the bend, and tension means urging the bent portion toward said connecting means, means for rigidly securing one portion of said truss and an abutment engaging a second portion of said truss whereby a third portion serves as a cantaliver.

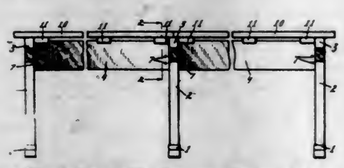
3. In combination, a truss comprising, a longitudinally bent continuous plate, a second plate connecting the longitudinal edges of said bent plate, and a series of bolts urging the bent portions of said first plate toward said second plate, means for rigidly securing said truss at said bolts, and an abutment engaging said truss at a longitudinal edge on one side of said securing means whereby the portion of said truss on the opposite side of said securing means serves as a cantaliver.

1,225,233. DISK PLOW. WALTER C. FORD, Erick, Okla. Filed Nov. 9, 1914. Serial No. 871,128. (Cl. 97—37.)



A disk plow comprising a wheeled axle, a frame supported by said axle, a disk arch pivoted on said frame, clamps secured to respective ends of the disk arch, each of said clamps embodying a block and a U-shaped member embracing the arch and having its arms extending through passages in the block, an L-shaped member having one arm bearing upon and provided with openings through which the arms of the clip extend, the other arm of the L-shaped member extending downwardly and provided with an upper arcuate slot and a lower opening, bolts engaged through the slots and opening respectively, a plate engaged on said bolts, a U-shaped member secured between the plate and the adjacent arm of the L-shaped member, an axle mounted on the U-shaped member, and a disk gang mounted on the axle.

1,225,234. KNOCKDOWN TABLE. BERT M. FOX, Grand Rapids, Mich., assignor to Grand Rapids Hand Screw Co., Grand Rapids, Mich. Filed Dec. 3, 1915. Serial No. 64,847. (Cl. 45—48.)



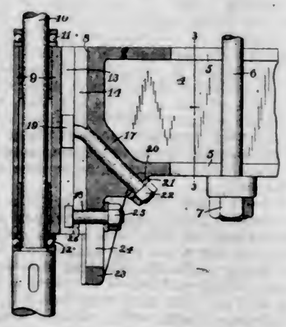
1. In a knock-down table, the combination of a plurality of pedestals, each comprising a base portion, an upright mounted centrally thereon, and a top piece on the upright, longitudinal rails disposed on edge centrally of and with their ends abutting the sides of adjacent pedestals, said pedestals being slotted opposite the ends of the rails and provided with pin-like keepers disposed transversely of the slots, plate-like fasteners set into the ends of said rails to project therefrom into said slots in said pedestals and provided with downwardly facing hooks coacting with the keepers therein, the hooks being forwardly inclined so that the ends of the rails are drawn against the sides of the pedestals as the hooks are forced into position, the intermediate pedestals being provided with opposed slots and keepers to receive a rail at each side, and table top sections arranged on said pedestal top pieces with the ends of adjacent sections abutting above the intermediate pedestals, said top sections having cross cleats on their under sides to engage said rails to support the top sections against transverse movement and disposed so that the end cleats engage the pedestals to support the top sections against longitudinal movement, the parts below said rails and between said pedestals being unobstructed.

2. In a knock-down table, the combination of a plurality of pedestals, each comprising a base portion, an upright mounted centrally thereon, and a top piece on the upright, longitudinal rails disposed on edge centrally of and with their ends abutting the sides of adjacent pedestals, fasteners on the ends of said rails provided with hooks, said pedestals being provided with coacting keepers, the intermediate pedestals being provided with opposed keepers to receive a rail at each side, and table top sections arranged on said pedestal top pieces with the ends of adjacent sections abutting above the intermediate pedestals, said top sections having cross cleats on their under sides engaging said rails to support the top sections against transverse movement and said pedestals to support said top sections against longitudinal movement, the space below said rails and between said pedestals being unobstructed.

3. In a knock-down table, the combination of pedestals, each comprising a base portion, an upright thereon, and a top piece on the upright, a longitudinal rail disposed on edge centrally of and with its ends abutting the sides of the pedestals, said pedestals being slotted opposite the ends of the rail and provided with pin-like keepers disposed transversely of the slots, plate-like fasteners set into the ends of said rail to project therefrom into said slots in said pedestals and provided with downwardly facing hooks coacting with the keepers therein, the hooks being forwardly inclined so that the ends of the rail are drawn against the sides of the pedestals as the hooks are forced into position, and a table top arranged on said pedestal top pieces and having cross cleats on its under side notched to engage the rail to support the top section against transverse movement and disposed so that the end cleats engage the pedestals to support the top sections against longitudinal movement, the space below said rails and between said pedestals being unobstructed.

4. In a knock-down table, the combination of pedestals, each comprising a horizontal base portion, an upright mounted centrally thereon, and a top cross piece on the upright, a longitudinal rail extending between the pedestals, said rail being disposed centrally and on edge with its ends abutting the sides of the pedestals, fasteners on the ends of said rail provided with hooks, said pedestals being provided with coacting keepers, and a table top arranged on said pedestal top pieces and having cross cleats on its under side engaging the rail to support the top against transverse movement and said pedestals to support said top sections against longitudinal movement, the spaces below said rails and between said pedestals being unobstructed.

1,225,235. MULTIPLE-SPINDLE DRILLING-MACHINE. WILLIAM R. FOX and EDGAR W. CLEVELAND, Jackson, Mich.; said Cleveland assignor to said Fox. Filed Oct. 31, 1916. Serial No. 128,767. (Cl. 77—24.)



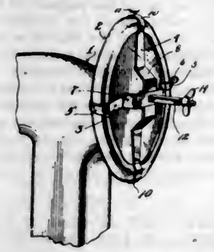
2. In combination a supporting arm, a spindle bearing vertically adjustable relative thereto and a plurality of clamping means for the bearing engaging the same at different heights and carried by the arm, one of said clamping means extending at an inclination upwardly in relation to the vertical axis of the spindle bearing, substantially as described.

12. In combination, a vertically slotted supporting arm, a drill spindle bearing vertically adjustable relative to the arm, a bolt passing through the slot in the arm and having a head engaging the spindle bearing, said spindle bearing having a way or channel receiving said head, means for supporting the bolt in said channel and a second bolt passing through the arm to clamp the spindle bearing thereto, said supporting means for the bolt first mentioned consisting of a pin in the bearing upon which the bolt rests, substantially as described.

[Claims 1, 3 to 11, 13, and 14 not printed in the Gazette.]

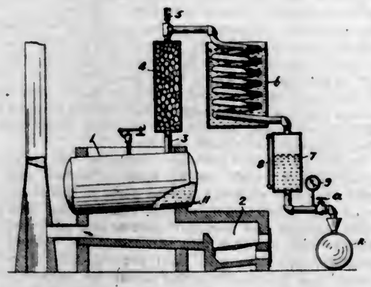


1,225,236. SEWING-MACHINE ATTACHMENT. ISAAC N. FRAZURE, St. Petersburg, Fla., assignor of one-third to F. W. Covey, Tampa, Fla. Filed Aug. 23, 1916. Serial No. 116,464. (Cl. 51—7.)



An attachment for sewing machines, comprising in combination, with the hand wheel of the machine, a pair of outwardly bridged plates intersecting at the bridged portions in interfitted relation, one of said plates having a transverse recess forming a seat for the other plate, inturned fingers formed on the ends of said plates to fit over the rim of the hand wheel, means for clamping said fingers in position, a squared bolt having its head seated in the bridged portion and extending outwardly from the intersecting portions thereof, said bolt having an extended shank, abrading and polishing elements interchangeably mounted upon the shank, and means for securing the elements upon the bolt.

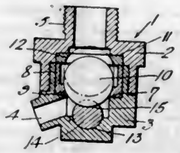
1,225,237. MANUFACTURE OF TOLUOL. WILLIAM H. GARTLEY, Philadelphia, Pa., assignor to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 30, 1916. Serial No. 18,061. (Cl. 196—25.)



1. In the process of making toluol the method which consists in subjecting the naphtha of gas tar distillation to destructive distillation in a pressure still at a pressure exceeding about thirty-five pounds per square inch, thereby converting some of it into toluol recoverable as a distillate and leaving a residue that boils at a higher temperature than the naphtha, substantially as described.

2. In the process of making toluol the method which consists in subjecting the naphtha of gas tar distillation to pressure distillation at a pressure exceeding about thirty-five pounds per square inch, thereby converting some of it into toluol recoverable as a distillate and leaving a residue that boils at a higher temperature than the naphtha, distilling this residue at atmospheric pressure and recovering a distillate with lower boiling point than the residue and leaving coke or heavy hydro-carbon in the still, and treating the last named distillate by pressure distillation in repetition of the process, substantially as described.

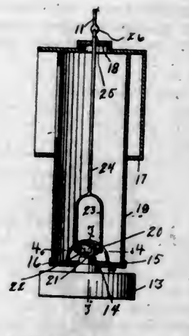
1,225,238. CYLINDER-COCK. JOSEPH P. GRAY, Pittsburg, Kans. Filed Sept. 14, 1916. Serial No. 120,155. (Cl. 137—32.)



1. A drain cock embodying a casing comprising a pair of detachably connected sections, valve seat members fitted within said sections and holding each other in place, a ball valve within the casing and movable between said members and seatable against either of them, and means for unseating said valve from one of said members.

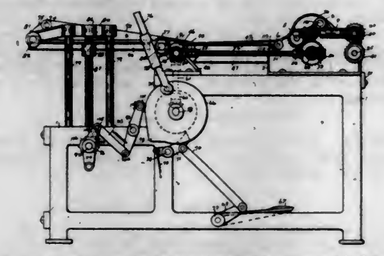
2. A drain cock embodying a casing comprising a lower cup-shaped section and an upper cap-shaped section having its rim fitted detachably upon the rim of the lower section, the lower section having an upwardly facing shoulder and an outlet below said shoulder, the upper section having an inlet and a recess below said inlet, a ring fitted within the lower section and having its lower edge provided with an inturned flange seating upon said shoulder and providing a valve seat, an annular valve seat fitting within the recess of the upper section and seating upon the upper edge of said ring, a ball valve within said ring and movable between and seatable against either of said valve seats, and means for raising the valve from the first mentioned valve seat.

1,225,239. FLAME-REGULATOR FOR INCUBATORS. LEWIS B. GRIFFIN, Candor, N. Y. Filed June 28, 1916. Serial No. 106,430. (Cl. 67—72.)



In combination with an incubator having a wick provided lamp and a thermostatic regulator provided with a lever having an end projecting over the lamp; a wick collar freely slidably on the wick, and a rod attached to the lever and terminating at its lower end in a fork having its arms attached to the collar.

1,225,240. TOBACCO-STEMMING MACHINE. AARON GRODSKY, Cincinnati, Ohio. Filed Aug. 2, 1915. Serial No. 43,281. (Cl. 131—57.)



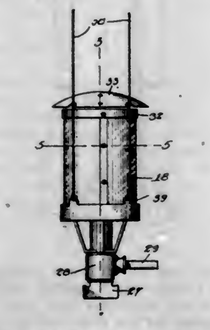
1. In a machine for stemming tobacco, oppositely disposed cylindrical brushes operating diagonally from a common center to brush, straighten out, clean and smooth a tobacco leaf forward and laterally, on each side of the stem on both sides of the leaf simultaneously, and means for cutting and removing the stem from said tobacco leaf, an endless apron suitably supported, a delivery fly, said apron carrying the acted upon leaf to said delivery fly, a pressure fly, the delivery fly delivering the leaf under said pressure fly while said pressure fly is elevated and means for moving the pressure fly down upon the leaves as they are delivered.

2. In a machine for stemming tobacco, oppositely disposed cylindrical brushes operating diagonally from a common center to brush, straighten out, clean and smooth a tobacco leaf forward and laterally, on each side of the stem on both sides of the leaf simultaneously, and means for cutting and removing the stem from said tobacco leaf, an endless apron suitably supported, a delivery fly, said apron carrying the acted upon leaf to said delivery fly, a pressure fly, the delivery fly delivering the leaf under said pressure fly while said pressure fly is elevated and means for moving the pressure fly down upon the leaves as they are delivered.

3. In a machine for stemming tobacco, mechanism for brushing and cleaning the leaf, means for cutting and removing the stem from said tobacco leaf, a delivery fly, means for delivering the cleaned leaf to said delivery fly, a pressure fly, the delivery fly delivering the leaf under said pressure fly while said pressure fly is elevated and means for moving the pressure fly down upon the leaves as they are delivered.

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1,225,241. ILLUMINATING-BURNER FOR CHRISTMAS TREES. GROVER R. GRUPE, Elizabeth, N. J. Filed Feb. 24, 1915. Serial No. 10,302. (Cl. 67—87.)

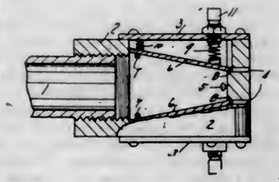


1. Means for illuminating a Christmas tree comprising a gas burner having a nipple for the attachment of a flexible gas pipe and a stop cock for cutting off the flow of gas, a circular bracket having a peripheral rim supported by said burner, suspending wires connected to the bracket for supporting the same and the burner from the branch of the tree, a chimney seated in said bracket and projecting above the burner, a cap for said chimney extending laterally beyond the periphery thereof, and fingers attached to said cap and extending into the chimney for supporting the cap in position.

2. Lighting means for Christmas trees comprising a gas burner including a burner tip, a stop cock screwed to said tip, and a nipple projecting from one end of said stop cock for the attachment of a flexible gas pipe, a circular bracket having a peripheral rim secured to said gas burner between the burner tip and the stop cock and having a central opening therein for the passage of the burner tip, suspending wires connected to the bracket and extending upwardly for attachment to the limb of a tree, a chimney seated in said bracket and projecting above the burner tip, a cap for the chimney extending laterally beyond the periphery thereof, and flexible fingers secured to said cap and extending downwardly into the chimney for supporting the cap by flexible contact with the inner sides thereof, said fingers having outwardly curved portions that extend beyond the chimney and serve as stops to prevent the closure by the cap of the top of the chimney.

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1,225,242. OIL-BURNER. JOSEPH A. GUERIN, Seattle, Wash. Filed Aug. 28, 1916. Serial No. 117,153. (Cl. 137—80.)



1. In an oil burner head which includes a chambered and ported head casting, the combination of automatic pressure actuated port closing flap valves pivotally mounted within said head, whereby when the supply and pressure of oil mixture is reduced the ports are automatically closed, and auxiliary ports in said head which are independent of said valves.

2. In a device of the class described, the combination of a ported and chambered burner head, port closing flap valves mounted within said head and normally closing the said ports, adjustable spring means for retaining said valves in a closed position, whereby the pressure necessary to open said valves may be regulated, and auxiliary ports cut in said head, whereby when the pressure and quantity of fuel mixture is reduced to such an extent that the said valves are in a closed position, the reduced amount of fuel mixture will pass through the auxiliary ports with sufficient pressure to atomize the fuel.

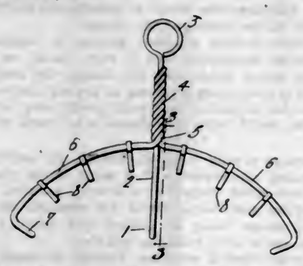
3. An automatic pressure regulated oil burner head comprising a cored casting open at either side, cover plates for said openings, slotted ports in the front of said head, flap valves loosely pivoted adjacent the back of said head chamber and normally closing said ports and dividing the said chamber into three separate compartments, auxiliary ports in said head intermediate of said flap valves, and adjustable spring means for normally holding said valves in normal position.

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1,225,243. SYRINGE AND TUBE HANGER. OLGA B. HAWES, Paterson, N. J. Filed Aug. 3, 1916. Serial No. 112,981. (Cl. 248—31.)

1. A hanger including an arcuate frame, arcuate cross strips connecting the sides of the frame and coöperating therewith to form a tube supporting rack, a hook depending from the middle portion of the frame, and a support engaging element extending upwardly from the middle portion of the frame.

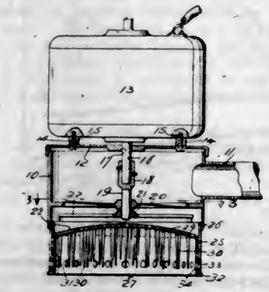




2. A hanger including an arcuate frame formed of wire and having its ends constituting depending loops, arcuate cross strips connecting the sides of the frame and coöperating therewith to form a tube supporting rack, a wire depending from the frame at the center thereof and forming a receptacle supporting hook, and a support engaging element extending upwardly from the center of the frame.

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1,225,244. HAIR-CLEANER. JAMES S. HENDRICKS, Colville, Wash., assignor of one-half to Frank B. Goetter, Colville, Wash. Filed June 22, 1916. Serial No. 105,248. (Cl. 34—26.)



1. An apparatus of the class described, having a casing within the mouth of which is arranged a comb, a suction fan mounted within the casing and a fan operating motor connected therewith.

2. An apparatus of the class described, having a casing, a comb arranged in the mouth of the casing, a rotary fan arranged in the casing adjacent to the plane of said comb, and a motor carried by the casing and having its shaft connected with the spindle of the fan.

3. An apparatus of the class described, having a casing, a fan arranged therein and a motor for operating said fan, a comb being fitted in the mouth of the casing and consisting of a perforated back, teeth depending from said back, and bearing elements for contact with the head of the person upon which the apparatus is being used.

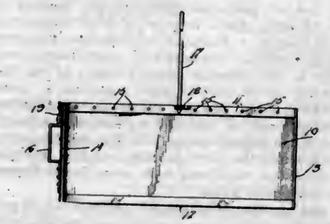
4. An apparatus of the class described, having a casing, a fan mounted therein and a motor for operating said fan, and in combination therewith a comb attachment consisting of a comb ring detachably connected with said casing, a comb having a perforated back located adjacent to the plane of said fan, teeth depending from the back, and a bearing element located in a plane slightly beyond the extremities of said teeth.

5. An apparatus of the character described, having a casing, a rotary fan mounted therein, and means for operating said fan, and in combination therewith a comb attachment having a comb ring detachably secured to said casing, a comb removably fitted in said ring and having a perforated back arranged adjacent to the plane of said fan, comb teeth depending from said back and terminating short of the mouth of the comb attachment, and a bearing element arranged at the outlet of the comb attachment and arranged in a plane beyond that of the extremities of said comb teeth.

[Claim 6 not printed in the Gazette.]

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1,225,245. CARRIER. EMIL M. HENNIES, Donnellson, Iowa. Filed Nov. 24, 1916. Serial No. 133,175. (Cl. 220—135.)



1. A receptacle, a frame secured about said receptacle and including an end plate, a handle secured to the end plate, a clip extending from said handle, a bail secured to said frame for pivotal movement and engaged by said clip when swung to extend longitudinally of the receptacle, and clips carried by said frame for engaging said bail when swung to extend transversely of said receptacle.

2. A receptacle, a frame positioned about said receptacle and including side strips, end strips connecting said side strips, and an end plate connecting said side strips, a handle carried by said end plate and extending transversely of the receptacle and having an extension forming a clip, a bail pivotally connected with said frame intermediate the length of said receptacle and engaged by said clip when swung to extend longitudinally of the receptacle, and clips carried by the frame for engaging the bail to hold the same in an upright position.

3. A receptacle, a frame positioned about the receptacle for bracing the same, a handle carried by said frame and extending transversely of the receptacle at one end thereof, a clip extending from the handle, and a bail pivotally connected with the frame and engaged by the clip when swung to extend longitudinally of the receptacle.

4. A receptacle, a bracing frame positioned about the receptacle, a bail pivotally mounted intermediate the length of the receptacle, means for releasably holding the bail in an upright position, a handle extending transversely of one end of said receptacle, and means extending from the handle for engaging the bail to releasably hold the same extended longitudinally of the receptacle.

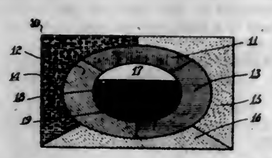
5. A receptacle, a handle at one end of said receptacle, a bail adjustably mounted intermediate the length of said receptacle and extending out from the receptacle when in an operative position and extending longitudinally of the receptacle when in an inoperative position, and means extending from the handle for releasably holding the bail in an inoperative position.

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1,225,246. COLOR PHOTOGRAPHY. HENRY HESS, Philadelphia, Pa., assignor to Hess-Ives Corporation, Philadelphia, Pa., a Corporation of Virginia. Filed Mar. 26, 1914. Serial No. 827,483. (Cl. 95—2.)

1. In the art of color photography, the method of producing multi-color prints from a multi-color diapositive comprising preparing a plurality of separate negatives by exposing through the diapositive to lights respectively corresponding to the different primary colors of the diapositive, preparing from said negatives a plurality of corresponding monochrome positives each having the complementary color of the light with which the corresponding negative was produced, and thereafter combin-

ing the resulting monochrome images to form a multi-color print.



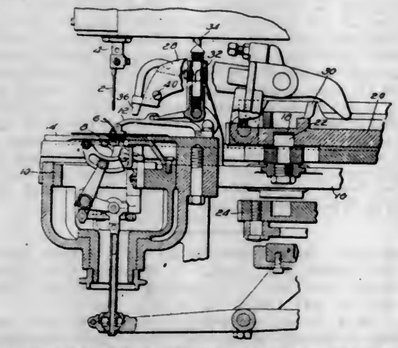
2. In the art of color photography, the method of producing multi-color prints from multi-color diapositive, comprising preparing a plurality of separate negatives by exposing through the diapositive to lights respectively corresponding to the different primary colors of the diapositive printing from each of said negatives a corresponding positive, each positive consisting of a colloid relief, printed through its base and washed, and staining each positive to correspond in color to the complement of the color with which the corresponding negative was produced, and thereafter combining such monochrome images to form the multi-color print.

3. In the art of color photography, the method of producing multi-color prints from a multi-color transparency comprising preparing a plurality of separate monochrome positives from the transparency by the exposure therethrough of sensitized members to lights respectvely corresponding to the different primary colors of the transparency, giving each positive a color complementary of the light to which it was exposed by the incorporation therein of suitable coloring matter, and thereafter combining such monochrome images to form the multi-color print.

4. In the art of color photography, the method of producing multi-color prints from a multi-color transparency comprising preparing a plurality of separate colloid relief positives from the transparency by exposure therethrough and through their bases of sensitized colloid members to lights respectively corresponding to the different primary colors of the transparency, washing and staining each positive a color complementary to the light to which it was exposed, and thereafter combining such monochrome images to form the multi-color print.

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1,225,247. EYELET-SEWING MACHINE. GEORGE S. HILL, Strafford, N. H., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 6, 1915. Serial No. 12,529. (Cl. 112—4.)



1. An eyelet sewing machine, having, in combination, stitch forming mechanism and a work clamp relatively movable to sew about the edge of an eyelet, and an eyelet positioning device for engaging the eyelet and positioning it in the work clamp.

2. An eyelet sewing machine, having, in combination, stitch forming mechanism and a work clamp relatively movable to sew about the edge of an eyelet, mechanism for closing the clamp, an eyelet positioning device, and means for operating the device to engage and position an eyelet prior to the closing of the clamp.

3. An eyelet sewing machine, having, in combination, stitch forming mechanism and a work clamp, an eyelet positioning device, mechanism for closing the clamp and for moving it from work receiving to sewing position, and mechanism for actuating the eyelet positioning device to position the eyelet while the clamp is in work receiving position.

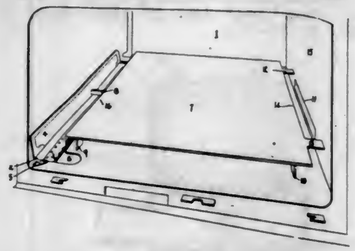
4. An eyelet sewing machine, having, in combination, stitch forming mechanism and a work clamp relatively movable from work receiving to sewing position, and a yielding eyelet positioning device for engaging and positioning an eyelet when the clamp and stitch forming mechanism are in work receiving relation.

5. An eyelet sewing machine, having, in combination, stitch forming mechanism and a work clamp relatively movable to sew about an eyelet, mechanism for closing the clamp, and a yielding finger for engaging and positioning an eyelet prior to the closing of the clamp.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,248. COMBINATION-RANGE. ROGER HOGAN, Geneva, N. Y. Filed Oct. 10, 1916. Serial No. 124,783. (Cl. 126—39.)



1. A combination range comprising an oven, a burner pocket at one side of said oven, a burner in said pocket, a vent for said oven, and a deflector plate having one portion of its edge adjacent said burner pocket, whereby the heated gases on leaving said burner pass partly above said plate and partly below the same, said deflector plate having another portion of its edge adjacent said vent, whereby the passage of heated gases through said oven is substantially unrestricted.

2. A range comprising an oven, means for supplying heat to said oven, a vent in said oven and a deflector plate having one portion of its edge adjacent said means, whereby the heat from said means passes partly above said plate and partly below the same, said deflector plate having another portion of its edge adjacent said vent, whereby the passage of heat through said oven is substantially unrestricted.

3. A range comprising an oven, means for supplying heat to said oven, a vent for said oven, said means and said vent being at opposite sides of said oven, and a deflector plate removable from said oven and having one portion of its edge adjacent said means, whereby the heat from said means passes partly above said plate and partly below the same, said deflector plate having another portion of its edge adjacent said vent, whereby the passage of heat through said oven is substantially unrestricted.

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1,225,249. INSULATED SCREW-DRIVER. LEO G. G. HOLTSCHNEIDER, St. Louis, Mo. Filed Jan. 29, 1917. Serial No. 145,076. (Cl. 145—61.)

1. In a device of the class described, a screw driver proper having a shank and a bit, an insulating tube surrounding said shank, and a handle fitted on the shank on the end opposite the bit and over the inner extremity of the insulating tube.



6. In a device of the class described, a screw driver proper having a shank and a bit, an insulating tube, snugly but slidably fitted around the shank with its outer end extending in proximity to the bit, a handle fitted on the inner end of the shank opposite the bit and over the inner extremity of the insulating tube, said handle having a longitudinal recess to receive the end of the shank and insulating tube and a series of radial slits extending from said recess through the wall of the handle, and a compressing and locking ferrule fitted on the inner end of the handle, the peripheral surface of the handle being tapered and a groove being formed at the inner termination of the taper, and the ferrule being tapered to correspond to the taper of the handle and having a bead adapted to be forced into said groove.

7. A tool of the class described having a wooden handle, a metallic shank, and an insulating tube surrounding the shank with one of its extremities fitted within and protected by the handle.

[Claims 2 to 5 and 8 not printed in the Gazette.]

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1,225,250. APPARATUS FOR MEASURING THE GLOSS OF NON-METALLIC SURFACES. LEONARD R. INGERSOLL, Madison, Wis. Filed Dec. 20, 1915. Serial No. 67,867. (Cl. 88—23.) (Dedicated to the public.)

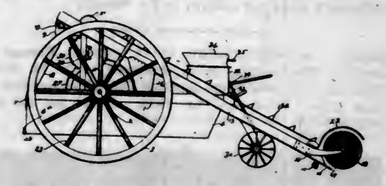


An apparatus consisting of a casing, a support for the sample to be tested, a source of light directed at an angle to the support, a measuring instrument at an angle to the support, said instrument comprising an objective opening, a polarizer and a smoked glass, each covering approximately one-half of the objective opening and an analyzer.

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1,225,251. STREET-SWEEPER. CHARLES JOHNSON, Seaside, Oreg. Filed May 13, 1914. Serial No. 838,235. (Cl. 37—32.

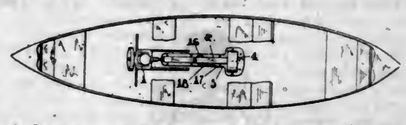
A machine of the type described, including an inclined conveyer pivotally supported at its upper end, said conveyer comprising a bed, the floor of said bed having an opening therein, said conveyer bed having a pan at its lower end and having journaled at said end, the driving shaft of the conveyer proper, said conveyer bed having intermediate of its ends an inclined hopper secured thereto at its underside and in such manner as to receive the sweepings or refuse through the opening in the floor of said conveyer bed, means providing for the adjustment of said conveyer upon its pivot, into elevated position, or



lowering it into depressed position, a refuse receptacle tiltingly supported laterally of the conveyer, said inclined hopper extending transversely of, and below said conveyer and delivering laterally thereof, into said refuse receptacle.

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1,225,252. MOTOR ATTACHMENT FOR BOATS. WILLIAM JAMES JOHNSTON, Port Carling, Ontario, Canada, assignor of one-half to John Robinson Clair Hodgson, Gregory, Ontario, Canada. Filed Feb. 12, 1916. Serial No. 78,048. (Cl. 115—17.)



1. In a motor attachment for boats, the combination of a casing open at its underside and adapted to receive and house a propeller and propeller shaft; a crank shaft having a bearing in one end; a propeller shaft carrying a propeller; a universal joint connecting the two shafts; a propeller shaft support pivoted at one end within the casing, the pivot extending through the side of the casing; and a bearing on said support for the propeller shaft.

2. In a motor attachment for boats, the combination of a casing open at its underside and adapted to receive and house a propeller and propeller shaft; a crank shaft having a bearing in one end; a propeller shaft carrying a propeller; a universal joint connecting the two shafts; a propeller shaft support pivoted at one end within the casing, the pivot extending through the side of the casing; a bearing on said support for the propeller shaft; and an open bearing in which said propeller shaft rests when the said shaft is in its lowest position.

3. In a motor attachment for boats, the combination of a casing open at its underside and adapted to receive and house a propeller and propeller shaft; a crank shaft having a bearing in one end; a propeller shaft carrying a propeller; a universal joint connecting the two shafts; a propeller shaft support pivoted at one end within the casing, the pivot extending through the side of the casing; a bearing on said support for the propeller shaft; and a projecting skeg extending from said support to a point below the propeller.

4. In a motor attachment for boats, the combination of a casing open at its underside and adapted to receive and house a propeller and propeller shaft; a crank shaft having a bearing in one end; a propeller shaft carrying a propeller; a universal joint connecting the two shafts; a double propeller shaft support pivoted at one end within the casing, the pivot extending through the side of the casing; and a bearing for the propeller shaft pivoted between the parts.

5. In a motor attachment for boats, the combination of a casing open at its underside and adapted to receive and house a propeller and propeller shaft; a crank shaft having a bearing in one end; a propeller shaft carrying a propeller; a universal joint connecting the two shafts;

a double propeller shaft support pivoted at one end within the casing, the pivot extending through the side of the casing; a bearing for the propeller shaft pivoted between the parts; and an open bearing in which said propeller shaft rests when the said shaft is in its lowest position.

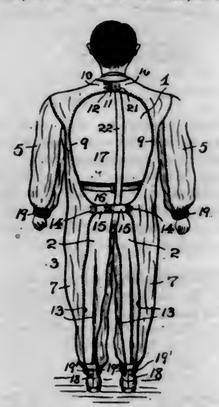
[Claims 6 to 12 not printed in the Gazette.]

1,225,253. MANUFACTURE OF LABELS. CORNELIUS JORDAN, Weehawken, N. J., assignor to E. H. Kluge Weaving Company, New York, N. Y., a Corporation of New York. Filed Nov. 14, 1916. Serial No. 131,325. (Cl. 40—2.)




The art of forming labels which consists in weaving a strip of material with portions at intervals narrowed, dividing the strip through each narrowed portion to form pieces each including a body portion and reduced ends, and then folding back each end approximately at the junction line between the same and the body portion.

1,225,254. GARMENT. JULIUS KAPLAN, New York, N. Y. Filed June 23, 1916. Serial No. 105,402. (Cl. 2—144.)



1. A garment of the character specified comprising a body open at the back, said opening extending from the top of the garment to the bottom of each leg-member thereof, and a strap attached to the upper portion of said body, said strap extending in a downward direction and being attached to the crotch-portion of the body with its leg-members so as to prevent dropping of the garment-portions at the crotch of the garment.

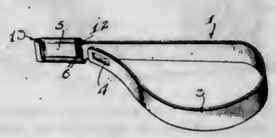
2. A garment of the character specified comprising a waist-member having shoulder-portions, arms, and leg-members extending from said waist-member, said garment being open at the back and said open portion extending down each leg-member, and a strap attached at one end to one of said shoulder-portions, said strap extending in a downward direction and the other end of said strap extending in a forward direction into the crotch of the garment at the point of connection of the said leg-members with said waist-member and being attached at said point to prevent sagging or dropping of the garment-portions located at the said crotch, and means connected with said various garment-members for securing the garment about the wearer.

3. A garment of the character specified comprising a waist-member having shoulder-portions, arms, and leg-members extending from said waist-member, said garment being open at the back and said open portion extending down each leg-member, and a strap attached at one end to one of said shoulder-portions, said strap extending in a downward direction and the other end of said strap extending in a forward direction into the crotch of the garment at the point of connection of the said leg-members with said waist-member and being attached at said point to prevent sagging or dropping of the garment-portions located at the said crotch, and spring-like clamping members connected with the lower portions of the open leg-members of the garment for springing said lower portions of the leg-members into held relation about the ankles of the wearer.

4. A garment of the character specified comprising a waist-member having shoulder-portions, arms, and leg-members extending from said waist-member, said garment being open at the back and said open portion extending down each leg-member, and a strap attached at one end to one of said shoulder-portions, said strap extending in a downward direction and the other end of said strap extending in a forward direction into the crotch of the garment at the point of connection of the said leg-members with said waist-member and being attached at said point to prevent sagging or dropping of the garment-portions located at the said crotch, means connected with said waist-member for securing said waist-member about the body of the wearer, and spring-like clamping members connected with the lower portions of the open leg-members of the garment for springing said lower portions of the leg-members into held relation about the ankles of the wearer.

5. A garment of the character specified comprising a waist-member having shoulder-portions, arms, and leg-members extending from said waist-member, said garment being open at the back and said open portion extending down each leg-member, and a strap attached at one end to one of said shoulder-portions, said strap extending in a downward direction and the other end of said strap extending in a forward direction into the crotch of the garment at the point of connection of the said leg-members with said waist-member and being attached at said point to prevent sagging or dropping of the garment-portions located at the said crotch, fastening means connected with the said shoulder portions, straps connected with the garment at points intermediate of the waist-member and the said leg-members, fastening means connected with said straps, and spring-like clamping members connected with the lower portions of the open leg-members of the garment for springing said lower portions of the leg-members into held relation about the ankles of the wearer.

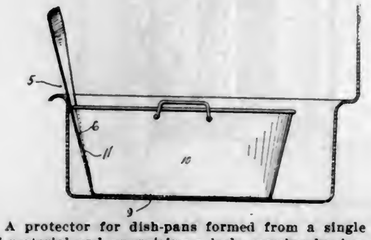
1,225,255. CAR-SEAL. CHARLES B. KYLER, Evansville, Ind. Filed May 1, 1916. Serial No. 94,684. (Cl. 70—99.)



A car seal of the class described formed from a single strip of sheet metal, one end being reduced in width to form a tongue, its other end forming a stem, said stem having a slot in its free end, said tongue being bent inwardly at its junction with said strip and into contact therewith, the free end of said tongue being bent outwardly to provide a hook, a socket surrounding said hook and tongue and adapted to receive the slotted end of said strip, said socket comprising a pair of wings, one extending from each edge of said strip at a point spaced from the point of connection of the tongue therewith, said wings being bent over said strip and tongue, and flanges formed on the longitudinal edges of the said wings, said flanges being interlockingly engaged, said wings and flanges thereby forming one side of the socket, the other being formed by said strip, the inner end of said socket being open, the outer end being closed by pressing the ends of the wings and flanges into engagement with said tongue and then bending the end of the strip and the adjacent end of the tongue over said downwardly bent ends of the wings and flanges and into engagement therewith, the ends of said bent over portion being substantially in the plane of the upper side of said socket.

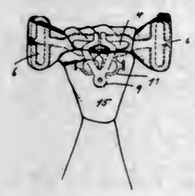


1,225,256. SPLASH-BOARD. MARY JOHNSTON LAMBRIX, Dayton, Ohio. Filed Oct. 9, 1916. Serial No. 124,576. (Cl. 141—9.)



A protector for dish-pans formed from a single blank of material and comprising a body member having a portion of its margin directed at an angle to the body member to provide a flange, and an angular extension at one edge of the body adapted to be engaged beneath a dish-pan and thereby support the protector in position for use.

1,225,257. NECKTIE-HOLDER. ROBERT LÉPINE, New York, N. Y. Filed Feb. 8, 1917. Serial No. 147,304. (Cl. 2—84.)



1. A necktie holder comprising a slotted transverse member having an upper rim and a lower rim, a nose that tapers from its top toward its lower pointed end and has an upper contracted neck integral with the upper rim, collar-button engaging means depending from the lower rim, and a pair of longitudinal end members having eyes and slotted outer rims that form passages which open into said eyes.

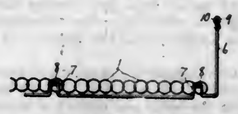
2. A necktie holder comprising a slitted resilient transverse member having an elongated slot, a pair of longitudinal end members having elongated eyes that extend at an angle to said slot, and a plurality of apertured lugs depending from the transverse member and adapted to be alined to permit the insertion of a collar-button, and means normally tending to separate the same.

[Claim 3 not printed in the Gazette.]

1,225,258. WIRE MATTRESS. WILLIAM LEWIS, Utica, N. Y. Filed Apr. 9, 1915. Serial No. 20,249. (Cl. 5—39.)

1. The combination with a wire mattress, of reinforcing means for the edges thereof comprising cross bars having loops inserted into the mattress from one side, and a rod slidable through a portion of the mattress and through said loops for detachably locking the bar and rod to each other and to the mattress.

2. The combination with a wire mattress, of reinforcing means for the edges thereof comprising a U-shape bar having its opposite arms provided with loops inserted into the mattress from the underside and a rod slidable through a portion of the mattress and through the loops for detachably locking the bar and rod to each other and to the mattress.

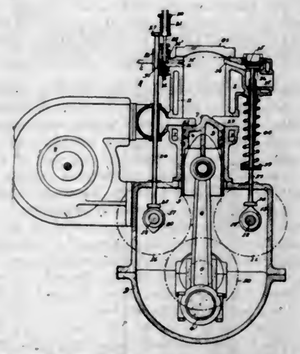


3. The combination with a wire mattress, of reinforcing means for the edges thereof comprising a U-shape bar having its opposite arms extending transversely from one edge of and under the mattress and each provided with a pair of loops for insertion into a portion of the mattress, and separate rods slidably interlocked with portions of the mattress and with said loops.

4. In combination with a wire mattress, reinforcing members extending inwardly from one edge part way across said mattress and attached thereto at points near the edge and at other points some distance inwardly therefrom, the outer edges of said reinforcing members being provided with upwardly arched portions extending some distance above the plane of the mattress to retain the bedding thereon, and a guard rail attached to the apexes of the arched portions and extending along the edge of the mattress.

5. A reinforcing device for the longitudinal edges of wire mattresses consisting of a U-shape bar of wire having substantially parallel arms extending part way across the mattress from one edge and provided with loops for engaging said edge and with additional loops some distance inwardly from the first named loops for engaging other portions of the mattress, and locking wires passed through said loops and incorporated in the mattress to retain the reinforcing members in operative position.

1,225,259. ENGINE. HENRY LELAND LOWE, Indianapolis, Ind. Filed Sept. 15, 1911. Serial No. 649,570. (Cl. 123—33.)



1. An internal combustion engine comprising a cylinder, a piston reciprocating in said cylinder, said cylinder having an exhaust opening at its lower end, and an air inlet opening beyond said exhaust opening, a continuously operating air pump for continuously supplying air under pressure at said air inlet opening, whereby the products of combustion are dispelled from said cylinder and air substituted therefor, means for discharging a portion of the air from said cylinder during the up-stroke of the piston, and means for introducing fuel into said cylinder in proportion to the quantity of air remaining therein.

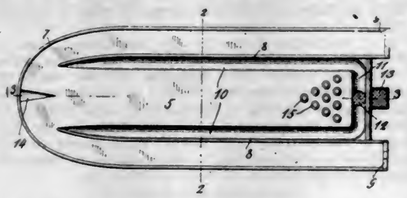
2. An internal combustion engine comprising a cylinder, a piston reciprocating therein, said cylinder having an exhaust opening at the lower end thereof, and having an air inlet opening beyond said exhaust opening, whereby said

air inlet opening is uncovered by said piston subsequently to said exhaust opening, a continuously operating air pump for supplying air continuously to said air inlet opening, whereby the gases of combustion are dispelled from said cylinder and air substituted therefor, means for discharging a portion of the air from the cylinder during the upstroke of the piston, and means for introducing fuel into said cylinder in proportion to the quantity of air remaining therein.

3. An internal combustion engine comprising a cylinder, a piston reciprocating therein, said cylinder having an exhaust opening at the lower end thereof, a mechanically actuated valve associated with said cylinder for admitting air thereinto, means for actuating said valve after said exhaust port has been uncovered by said piston, a continuously operating air pump associated with said valve, whereby, after said valve has been opened, the gases of combustion are dispelled from said cylinder, and air substituted therefor, means for discharging a portion of the air from said cylinder, and means for introducing fuel into said cylinder in proportion to the quantity of air remaining therein.

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1,225,260. GAME-TABLE. LEON LUKACHER, Detroit, Mich. Filed Dec. 14, 1914, Serial No. 877,152. Renewed Jan. 10, 1917. Serial No. 141,694. (Cl. 46—62.)



1. A game table comprising a top which is inclined toward its head-end and has alleys along its opposite longitudinal edges, said table top also having channels extending along the alleys on the inside thereof and a cross-channel connecting said channels at the foot of the table top, said cross-channel having an outlet, and a curved wall extending between the alleys near the head-end of the table top.

2. A game table comprising a top which is inclined toward its head-end and has alleys along its opposite longitudinal edges, said table top also having channels extending along the alleys on the inside thereof and a cross-channel connecting said channels at the foot of the table top, said cross-channel having an outlet, a curved wall extending between the alleys near the head-end of the table top, and a pin field at the foot-end of the table.

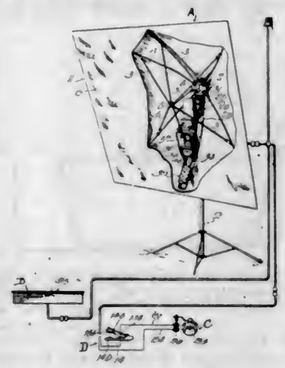
3. A game table comprising a top which is inclined toward its head-end and has alleys along its opposite longitudinal edges, said table top also having channels extending along the alleys on the inside thereof and a cross-channel connecting said channels at the foot of the table top, said cross-channel having an outlet, a curved wall extending between the alleys near the head-end of the table top, and a pin field at the foot-end of the table, the head-end of the table having a depression which is in longitudinal alinement with the center of the pin field.

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1,225,261. FLASH-LIGHT APPARATUS. DAVID CHARLES MCCANDLESS, Boise, Idaho. Filed Sept. 21, 1916. Serial No. 121,473. (Cl. 67—28.)

1. In an apparatus for photographing by artificial light, the combination of a base member composed of upper and lower sections hinged together, a powder pan mounted on the upper section and having in its bottom an opening, a pair of spaced terminals on the lower section for reception in said opening when the upper section is lowered, said terminals being adapted to be connected by a fuse, and means for supplying electric current to said terminals for blowing said fuse to ignite the contents of the pan.

2. In an apparatus for photographing by artificial light, the combination of a base, a powder pan mounted thereon and having a vertically projecting wall rising from its rear side, said wall having therethrough an opening, an angular vibrating arm mounted on said base and extending through said opening, a finger depending from the front end of said arm for contact with the pan, and means for vibrating said finger to make and break contact between said finger and pan, electric current being supplied to said finger and pan whereby to create electric sparks as the finger is raised and lowered.



3. In an apparatus for permitting photography by artificial light, a folding frame consisting of a vertically elongated back plate, a disk hinged at its lower edge to the upper end thereof and adapted to fold forwardly, a plurality of ribs pivoted to and radiating from said disk, braces pivoted to said ribs and extending inwardly to a central point spaced in advance of the disk, an additional brace pivoted to the back plate and also extending to said point, an operating member at this point to which all of said braces are pivoted, an anchoring device connected to said operating member and slidable through an opening in the aforesaid disk for holding said operating member in operative position or for releasing the same, a flash creating device mounted on the back plate, and a flexible casing mounted on the aforesaid ribs and having an opaque front.

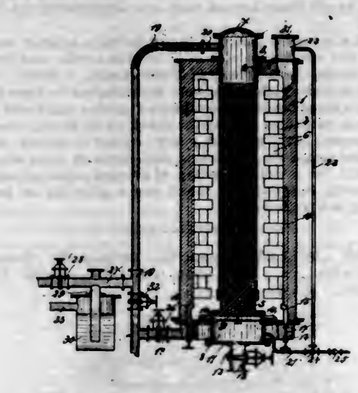
4. In an apparatus for permitting photography by artificial light, a folding frame consisting of a vertically elongated back plate, a disk hinged at its lower edge to the upper end thereof and adapted to fold forwardly, a plurality of ribs pivoted to and radiating from said disk, braces pivoted to said ribs and extending inwardly to a central point spaced in advance of the disk, an additional brace pivoted to the back plate and also extending to said point, an operating member at this point to which all of said ribs are pivoted, an anchoring device connected to said operating member and slidable through an opening in the aforesaid disk for holding said operating member in operative position or for releasing the same, upper and lower members extending forwardly from the back plate, upper and lower electric lamps mounted on said members, a flash creating device mounted between said members, and a flexible casing supported by the aforesaid ribs and having an opaque front.

5. A mechanism for electrically depressing the manual control of a camera shutter, said mechanism comprising an arm to be secured to said control, a plurality of vertically spaced metal plates suspended from said arm, and an electro-magnet below said plates for successively attracting the same, said plates having loose connections with the arm to permit continued downward movement of the latter after any plate has reached the limit of its downward movement.

[Claims 6 to 10 not printed in the Gazette.]



1,225,262. APPARATUS FOR PRODUCING HYDROGEN. ANTON MESSERSCHMITT, Stolberg, Germany. Filed June 26, 1912. Serial No. 706,118. (Cl. 48—118.1.)



1. In a hydrogen apparatus, a heating chamber, a vertical casing within the chamber and in communication therewith at one end, a pervious ferruginous reaction mass within the casing, means for introducing and burning gas in said chamber and means for passing draft currents of gas and of steam through both the chamber and the casing.

2. In a hydrogen apparatus, a heating chamber, a vertical iron casing within the chamber and in communication therewith at one end, a pervious ferruginous reaction mass within the casing, means for introducing and burning gas in said chamber and means for passing draft currents of gas and of steam through both the chamber and the casing.

3. In a hydrogen apparatus, a pair of concentric cylinders, a ferruginous contact mass in the space between said cylinders, an inclosing combustion chamber surrounding said cylinders and containing a refractory checkerwork, a combustion chamber surrounded by said cylinders, means for introducing combustible gas into each combustion chamber, means for introducing air into each chamber, means for introducing steam into each chamber and means for removing hydrogen from the space between the cylinders.

4. In a hydrogen apparatus, means for maintaining a pervious column of ferruginous reaction material, a heating chamber in heat-imparting relationship to such column, means for introducing air into said heating chamber, means for passing gas through said column and said chamber in succession, means for passing steam through said chamber and said column in succession and means for removing hydrogen from said column.

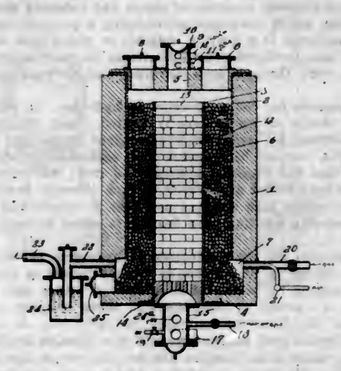
5. In a hydrogen apparatus, an iron container, a pervious ferruginous charge therein, means for external heating of the container, means for passing gas through the container into the heating means, means for supplying air to the heating means for the combustion of such gas, means for passing steam through the heating chamber into the container and means for removing hydrogen from the container.

[Claims 6 to 19 not printed in the Gazette.]

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1,225,263. APPARATUS FOR PRODUCING HYDROGEN. ANTON MESSERSCHMITT, Stolberg, Germany. Filed June 10, 1913, Serial No. 772,784. Renewed Feb. 17, 1917. Serial No. 149,375. (Cl. 48—70.)

1. In a hydrogen apparatus, an inner furnace chamber formed by an annular casing, an outer heat insulating wall spaced therefrom to form a chamber to receive an annular pervious column of ferruginous reaction material, firing means for producing combustion in said furnace chamber, means for removing waste gases therefrom, means for passing reducing gases and draft currents of steam alternately into and through said column and means for removing hydrogen produced in steaming.



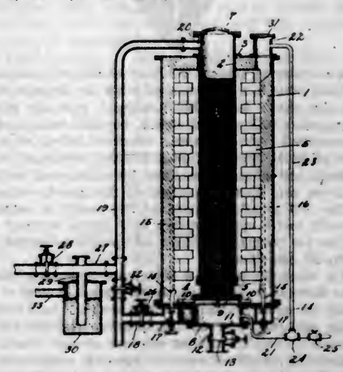
5. In a hydrogen apparatus, a vertical inclosing wall, a contained annular casing, a mass of pervious ferruginous reaction material between said casing and said wall, means for producing combustion within said annular casing, means for alternately passing draft currents of reducing gases and of steam into and through said mass and means for removing the hydrogen produced in steaming.

9. In a hydrogen generator, an annular mass of ferruginous reaction material, a wall surrounding and supporting the same, connections for introducing combustible gas, air and steam into and through said annular mass, and for removing waste gases and hydrogen therefrom, an annular casing wall within and supporting said mass, and means for producing combustion within an internal chamber formed by said annular wall.

[Claims 2 to 4, 6 to 8, 10, and 11 not printed in the Gazette.]

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1,225,264. PROCESS OF PRODUCING HYDROGEN. ANTON MESSERSCHMITT, Stolberg, Germany. Original application filed June 26, 1912, Serial No. 706,118. Divided and this application filed Jan. 9, 1915. Serial No. 1,444. (Cl. 48—198.)



1. The process of producing hydrogen by alternately passing steam and a purified reducing gas over a ferruginous mass and passing the steam and the reducing gas before they enter the reaction furnace through regenerators situated outside the furnace and passing the reducing gas, after it leaves the said furnace, in admixture with

oxygen, through one of the said regenerators, thereby raising the temperature of the said regenerator.

3. In the manufacture of hydrogen by the alternate treatment of a mass of material comprising a metal of the iron group by draft currents of steam and reducing gases, the process which comprises maintaining a pervious mass of such material in a heating chamber in which high temperature heat is stored and transmitting the various draft currents both through such chamber and through such mass.

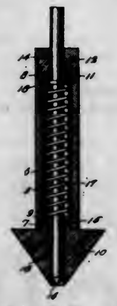
8. A process for the production of hydrogen, in which an iron charge in an externally heated vessel is alternately oxidized by means of a current of steam and reduced by a current of reducing gas, and these reaction currents and the liberated hydrogen on their way to and from the said vessel are caused to flow through heating spaces in which high temperature heat is stored and in which reducing gas has been burned to effect storage of the heat.

9. A process for the production of hydrogen, in which an iron charge in an externally heated vessel is alternately oxidized by means of a current of steam and reduced by a current of reducing gas, these reaction currents and the liberated hydrogen on their way to and from the said vessel being caused to flow through heating spaces in which high temperature heat is stored, and between these alternating oxidizing and reducing stages a heating stage being interpolated as required to maintain the temperature of the heating spaces.

[Claims 2, 4 to 7, 10, and 11 not printed in the Gazette.]

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1,225,265. SELF-CENTERING PUNCH. GEORGE JOHN MILLER, Winnebago, Minn. Filed May 19, 1916. Serial No. 98,634. (Cl. 33—191.)



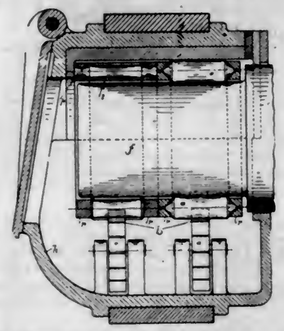
1. In a centering punch, a hollow shank, threads at the ends of said shank, a cap engaged with the threads of one end of said shank, and a head engaged with the threads at the opposite end of said shank, the said head and cap being provided with openings communicating with the interior of said shank, a punch slidably arranged within said shank and adapted to have its sharpened end projected from said head the stem of the punch extending above the cap in all positions of the punch, a collar on said punch, and a spring within said shank engaged with said collar for normally holding said punch retracted, substantially as described.

2. In a centering punch, a hollow shank having threads upon its interior walls at the ends thereof, a cap of substantially the same diameter as said shank, a boss projecting from said cap and having exterior threads for engagement with the threads at one end of said shank, the said cap being provided with an opening communicating with the interior of said shank, a head, a boss projecting from said head and having exterior threads thereon for engagement with the threads at the opposite end of said shank, the said head having inclined exterior walls, and the head being provided with an aperture communicating with the interior of said shank, a drill extending through said shank and resting in the openings in said head and cap, a collar on said drill and a coil spring interposed between said boss and said collar for holding the latter engaged with the cap boss and with one end of said drill projecting at all times beyond said cap, substantially as described.

3. In a centering punch, a shank having a tapered head at one end adapted to seat in a circular cavity, and having a central bore extending therethrough, a punch arranged to slide within said bore and adapted to have its point projected beyond said tapered head the upper end of the punch extending beyond the shank at all times, means for normally holding said punch retracted within the head, and means for supporting said shank in axial alinement with the cavity, consisting of an open-ended cylinder for slidably receiving the shank and a plurality of legs carrying said cylinder.

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1,225,266. ROLLER-BEARING. THOMAS W. OWEN, Pittsburgh, Pa. Filed Nov. 14, 1916. Serial No. 131,247. (Cl. 64—61.)

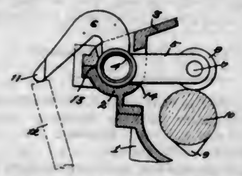


1. The combination in a roller bearing, a series of spacing rollers "$t$" rotatably mounted on pins "$p$," said pins alternately spaced with pressure rollers "$e$" and secured in fixed alinement to retaining rings "$r$," forming an annular cage, a series of loosely mounted pressure rollers "$e$" within said cage so constructed adapted to rotate with said spacing rollers, substantially as and for the purpose described.

2. The combination in a roller bearing arranged in multiple units, a series of antifriction rollers "$t$" rotatably mounted on pins "$p$," said pins alternately spaced with pressure rollers "$e$" and secured in fixed alinement to retaining rings "$r$," forming annular cages; a series of loosely mounted pressure rollers "$e$" within said cages so constructed adapted to rotate with said spacing rollers, substantially as described.

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1,225,267. ROCKER-ARM. STANLEY H. PAGE, San Francisco, Cal., assignor to Union Gas Engine Company, Oakland, Cal., a Corporation of California. Filed Dec. 11, 1916. Serial No. 136,153. (Cl. 74—5.)



1. In combination with an apertured housing a rocker arm for inclosed valve operating mechanism comprising a cylindrical shaft portion adapted to oscillate within a journal located within said housing, an arm extending laterally therefrom within said housing, by means of which said shaft is oscillated, and a downwardly curved arm extending from said shaft in an upward direction, the upwardly directed portion thereof extending through the aperture of said housing, and the end of said curved arm lying in substantially the same horizontal plane as the end of the first mentioned arm.

2. A rocker arm comprising a shaft portion and a pair of oppositely disposed arms extending laterally therefrom, one of said arms springing from the upper side of said shaft portion, and thence curving outwardly and downwardly; and an apertured housing for partially inclosing the same, the upwardly directed portion of said curved arm extending through the aperture of said housing.

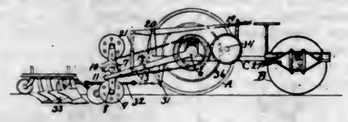
3. A rocker arm comprising a shaft portion and a pair of oppositely disposed arms extending laterally therefrom, one of said arms springing from the upper side of said shaft portion, and thence curving outwardly and downwardly; and an oil retaining journal within which said shaft portion is adapted to oscillate, said journal having its bottom and one side extending continuously the entire length of said shaft portion, the continuous side of said journal being extended upwardly and lying within the curve of said arm.

4. In a valve operating mechanism, a housing having a substantially vertically disposed aperture in its upper portion; a journal formed within said housing below said aperture; and a rocker arm comprising a shaft portion mounted for oscillation within said journal, and a pair of oppositely disposed arms extending therefrom, one of said arms extending upwardly through the aperture in said housing and thence curving outwardly and downwardly outside said housing.

5. In a valve operating mechanism, a housing having an aperture formed in the upper portion thereof, and a rocker arm journaled within said housing below said aperture, said rocker arm having a pair of oppositely directed arms, one lying entirely within said housing, and the other extending upwardly and outwardly through said aperture.

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1,225,268. MOTOR-PLOW TRACTOR. WILLIAM PATERSON, Oakland, Cal. Filed Mar. 13, 1916. Serial No. 83,993. (Cl. 97—71.)

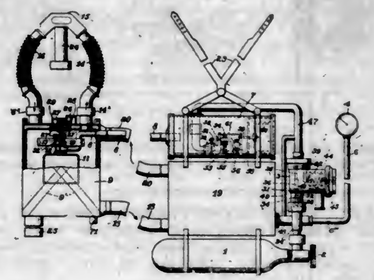


In a power driven plow in combination, a motor truck supported near its rear end on a driving axle, a pair of rearwardly extending arms having their forward ends pivotally attached by sleeve encircling said axle, a horizontal power driven revoluble shaft journaled upon the rear ends of said arms, radial arms secured to said shaft, disks pivotally mounted on the outer ends of said last named arms, a trailing gang of plows secured to said motor truck, the plows being so mounted that the point of each plow will travel in rear of and in alinement with its corresponding disk, as shown and described and for the purposes set forth in the foregoing specification.

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1,225,269. BREATHING APPARATUS FOR USE IN NOXIOUS GASES. JAMES W. PAUL and CLARENCE HALL, Pittsburgh, Pa.; said Paul assignor to said Hall. Filed July 10, 1916. Serial No. 108,335. (Cl. 128—13.)

1. In combination, a main breathing bag, a primary container for oxygen, a secondary container for oxygen connected with the main container and having a yielding wall, a valved connection between said secondary container and the main bag, automatically controlled pressure reducing means between the primary and secondary oxygen containers, inlet and outlet connections for the main bag, an absorber, connected with the inlet of the main bag and a mouth piece connected with the outlet of the main bag and with the absorber, substantially as described.



2. In combination, a main breathing bag, a secondary container for oxygen having a yielding wall, a valved connection between said secondary container and the main bag, inlet and outlet connections for the main bag, an absorber, connected with the inlet of the main bag, and a mouthpiece connected with the outlet of the main bag and with the absorber, said valve opening under the oxygen pressure to permit oxygen to flow into the main bag, substantially as described.

3. In combination a main breathing bag, a primary oxygen container, a secondary bag of deflatable form and containing oxygen, automatically controlled pressure reducing means between the primary container and the secondary bag, a connection between the secondary bag and the main bag including a valve opening in the direction of pressure of the gas coming from the reducing means, and under said pressure, whereby the user can draw through the main breathing bag from the deflatable secondary bag, an absorber connecting with the main bag and a mouth-piece communicating with the main bag and with the absorber, substantially as described.

4. In combination a main breathing bag, a secondary bag within the main bag, an oxygen supply connected with the secondary bag, a valve between the secondary bag and the main bag opening toward the latter and in the direction of the oxygen pressure thereon, an absorber communicating with the main bag and a mouth piece communicating with the main bag and the absorber, substantially as described.

5. In combination an oxygen bottle, a breathing bag, an absorber communicating therewith, a mouth piece communicating with the absorber and the main bag, an automatic pressure reducing valve and an automatic oxygen constant volume regulator communicating with the main bag, and with the oxygen bottle, whereby volumes of oxygen under a substantially uniform pressure are delivered to the main bag according to the needs of the user, substantially as described.

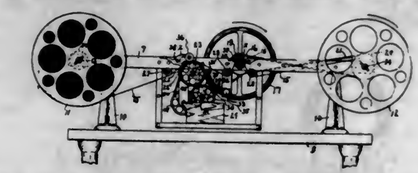
[Claims 6 to 28 not printed in the Gazette.]

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1,225,270. FILM-LUBRICATOR. ELMER R. PEARSON, Omaha, Nebr., and CHELSIE E. JONES, Council Bluffs, Iowa. Filed Aug. 26, 1914. Serial No. 858,616. (Cl. 91—50.)

A film-lubricator of the type described, including rotary members over which may be passed a film and the like, rollers for aiding the retention of the film in its passage over the first referred to rotary members, lubricant-applying rotary members for engagement with the first referred to rotary members for applying the lubricant thereto, pairs of resiliently-held wiping members engaging said lubricant-applying rotary members, one wiping member of each pair being arranged in advance of the other member, each of said lubricant applying rotary members

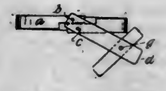
including a sleeved shaft, the sleeve being spaced from said shaft and the shaft having a spherical formation



arranged in contact with the inner surface of said sleeve, said sleeve having pivotal connection with said shaft.

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1,225,271. LEVER DEVICE FOR COUPLING HOSE AND FOR OTHER PURPOSES CONNECTED WITH WATER SYSTEMS. HENRY POPE, North Adelaide, South Australia, Australia. Filed Jan. 24, 1917. Serial No. 144,292. (Cl. 137—28.)

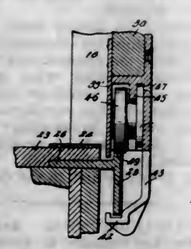


1. A device of the character described, comprising a flexible band having its opposite ends reduced in width and overlapped, projections at each end of the band at opposite sides of its center line, and a lever having at one end thereof oppositely disposed perforations through which said projections pass, whereby said projections serve as a fulcrum for said lever during turning of the latter to tighten said band about an object.

2. A device of the character described, comprising a flexible band having its opposite ends reduced in width and overlapped, projections at each end of the band at opposite sides of its center line, a lever having at one end thereof oppositely disposed perforations through which said projections pass, whereby said projections are adapted to serve as a fulcrum for said lever, and a locking plate pivoted adjacent the opposite end of said lever and adapted to be moved into engagement with said band.

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1,225,272. CAR-DOOR. EDWARD POSSON, Chicago, Ill. Filed Jan. 19, 1912, Serial No. 672,154. Renewed Mar. 22, 1917. Serial No. 156,737. (Cl. 16—7.)



1. In a device of the class described, a wall having a door opening therein, an outside door, a supporting and guiding track across the lower edge of the door opening and extending to one side thereof, a bracket member secured to the said door and having a socket extending upwardly from the bottom thereof, a member mounted in said socket, a stud projecting from one side of said member, a roller mounted on said stud and adapted to engage said track, and a flange extending around part of said stud between said member and said roller.

2. In a device of the class described, a door frame, an outside door to coact therewith, a track to guide and support said door, said door having sockets, members in said sockets, rollers carried by said members, downwardly extending members secured to said door and having inwardly turned hooks at their lower extremities, said track having an upwardly extending flange to coact with said rollers, and a downwardly extending flange adapted to receive said hooks.

3. In a device of the class described, a door frame, an outside door, a guide track across the lower edge of the door opening, a bracket attached to the outside of said door adjacent the lower edge thereof, said bracket having a socket extending upwardly from the bottom thereof, a rectangular member loosely mounted in said socket, the inner wall of said socket having a U-shaped slot therein, a stud carried by said rectangular member and extending through said slot, and a roller mounted on said stud to coact with said guide track, the outer wall of said socket having a slot in the upper part thereof through which a shim may be passed to regulate the position of said rectangular member.

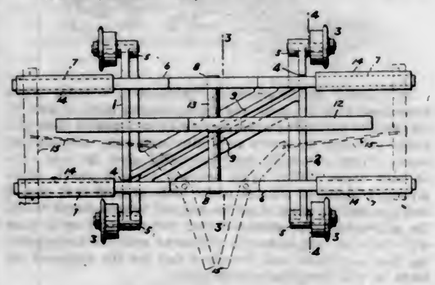
4. In a device of the class described, a door sill and guide track formed from a T-section member, the main part thereof extending across the lower edge of the door opening to form a door sill and being bent down at one side of the door opening to attach to the side wall adjacent thereto, the two sides of the T projecting up and down, and the upper part forming a track on which the door rests.

5. In a device of the class described, a door frame, an outside door, a track to guide and support said door, brackets attached to the outside of said door and having sockets therein extending upwardly from the bottom thereof, blocks loosely mounted in said sockets and having studs projecting inwardly therefrom, said sockets having slots in their walls through which said studs pass, and rollers mounted on said studs to coact with said track, said track having an upwardly extending flange upon which said rollers rest, said flange having notches therein to engage said rollers and hold said door in a desired position.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,273. CAR FOR MOLDING-MACHINES. JOHN T. RAMSDEN, Philadelphia, Pa., assignor to The Tabor Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 13, 1917. Serial No. 142,231. (Cl. 105—32.)



1. An equalizing car comprising the combination of two truck members free for twisting movement in respect to each other and each having three-point support, two of said supports consisting of a pair of wheels and the third support being inelastic and consisting of the other truck members, substantially as described.

2. An equalizing car comprising the combination of two truck members free for twisting movement in respect to each other and each having a pair of wheels, and flexible inelastic connections by which each member is supported by the other, substantially as described.

3. An equalizing car comprising the combination of two triangular truck members each provided with a pair of wheels, and inelastic connections whereby each supports the other.

4. An equalizing car comprising the combination of two truck members free for twisting movement in respect to each other and each having a pair of wheels and each provided with a laterally disposed extension, and inelastic means for connecting the lateral extension of each member for support by the other member, substantially as described.

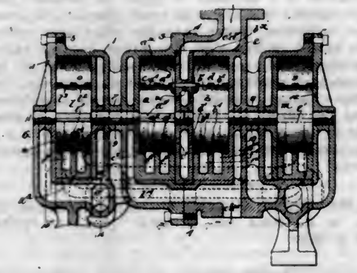
5. An equalizing car comprising the combination of two truck members each having a pair of wheels and a wedge way and a bearing, means for supporting each truck member upon the other, a saddle pivotally mounted in said bearing, and wedge mechanism for the wedge ways, substantially as described.

[Claim 6 not printed in the Gazette.]



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1,225,274. STEAM-PUMP. EUGENE ROBERTS, Salt Lake City, Utah, assignor to Sugar Centrifugal Discharger Company, Salt Lake City, Utah, a Corporation of Utah. Filed Jan. 30, 1915. Serial No. 5,304. (Cl. 103—67.)



1. The combination of a pair of pump pistons mounted in their respective pump chambers, a pair of steam pistons mounted in their respective steam chambers, each of said steam pistons being operatively connected with one of the pump pistons, a casing inclosing the said chambers and provided with steam passages and water passages affording communication between the chambers of each pair and the supply and exhaust passages of the casing, the respective piston members being provided with ports or passages by which the inflow and outflow of water and of steam is regulated in a predetermined order, substantially as described.

2. A steam pump embracing in combination a casing provided with a series of steam chambers and of water chambers of approximately semiannular contour arranged side by side, a series of piston members movably mounted in said chambers, the casing being provided with steam inlet and steam outlet passages having communication with the two intermediate chambers alternately through passages formed in the movable piston members mounted in said intermediate chambers, the casing also being provided with water inlet and outlet passages having alternately communication with the end chambers through passages formed in the respective end piston members, substantially as described.

3. The combination of a pair of coöperating oscillatory piston members mounted in a pair of containing steam chambers, a casing provided with passages for the admission and exhaust of steam, said passages having alternately communication with each steam chamber through passages formed in the piston of the companion steam chamber, a pair of pump pistons mounted in water chambers, said pump pistons being operatively connected with the respective steam pistons to cause them to move to and fro in order to alternately admit and expel water from the pump chambers, substantially as described.

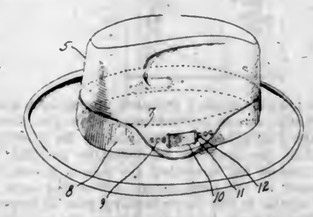
4. The combination of a casing containing a pair of approximately semiannular steam chambers, oscillatory piston members mounted therein, each piston member being formed to control in alternation the admission and exhaust of steam from the companion steam chamber, a shaft secured to each piston member, pump pistons secured to the respective shafts and mounted to oscillate in their respective pump chambers and acting in alternation to admit and expel water from their respective pump chambers, substantially as described.

5. The combination of a casing containing a pair of steam chambers arranged side by side, a pair of steam pistons mounted in the respective steam chambers, each steam piston being formed when at rest at the end of its stroke to control in alternation the admission and exhaust of steam from the companion piston chamber, and means for automatically preventing each piston from moving away from its position of control until the companion piston has come to rest, and a pair of pump pistons mounted in their respective pump chambers and operatively connected with the respective steam pistons to cause them to alternately expel the water content from their respective pump chambers, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

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1,225,275. HAT-ADJUSTER. LEON ROSENZWEIG, New York, N. Y. Filed Dec. 7, 1916. Serial No. 135,616. (Cl. 2—32.)



1. In combination with a hat having a plurality of spaced-apart fastener members, a connecting member provided with an eye in each end for the purpose of engaging a choice of the fastener members whereby to contract the hat in such manner as to adjust it to the head of the wearer.

2. In combination with a hat, having a plurality of spaced-apart fastener members behind a band, a connecting member provided with means on its oppositely disposed ends for engagement with a choice of the fastener members whereby to contract and indraw the hat in such manner as to adjust it to the head of the wearer.

3. In a hat, the combination with a band having a plurality of spaced-apart fastener members, a connecting member having an eye in each end for the purpose of engaging a choice of the fastener members whereby to tighten the band in such manner as to adjust the hat to the head of the wearer.

4. In a hat, the combination with a band having a plurality of spaced-apart fastener members, an elastic connecting member provided with means on its oppositely disposed ends for engagement with a choice of the fastener members whereby to tighten and indraw the band in such manner as to adjust the hat to the head of the wearer.

5. In a hat, the combination with a band having openings partly transverse its width and having a plurality of spaced-apart fastener members, a member having an eye arranged in each end and adapted for engagement at will, with a choice of the fastener members whereby to tighten and indraw the band in such manner as to adjust the hat to the head of the wearer.

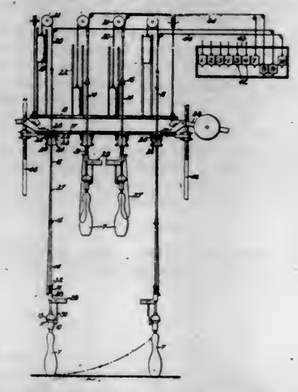
[Claim 6 not printed in the Gazette.]

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1,225,276. AUTOMATIC PIN-SETTER. EMIL SCHLOSSBERG, Brooklyn, N. Y. Filed Aug. 11, 1916. Serial No. 114,356. (Cl. 46—54.)

1. In a ten-pins game, a plurality of pins each suspended independently, means overbalancing each pin, spring-

actuated locking means for retaining the suspended pins in their operative position, flexible means connecting the locking means to the corresponding pin whereby the sudden displacement of the pin on its suspension causes the operation of the locking means and the pin is moved from the operative to the inoperative position by the overbalancing means, means for raising the balancing means for placing the pins into operative position.



2. In a ten-pins game, a plurality of pins each suspended independently, means overbalancing each pin, means preventing the displacement of the pins by the overbalancing means when the pins are in operative position, spring-actuated means for operating the means preventing the displacement of the pins, means connecting said spring-actuated means to the corresponding pins to operate said means when the pin is displaced from its operative position, whereby the means preventing the displacement of pins are operated and the overbalancing means becomes effective and moves the corresponding pin to the inoperative position.

3. In a ten-pins game, a plurality of pins, a jointed rod for each pin, a weight overbalancing the jointed rod and pin, automatic locking means for engaging the rod when the pin is in operative position, a flexible member connecting the locking means to the pin so that a sudden displacement of the pin from its operative position actuates the locking means and releases the rod, whereby the weight raises the pin to the inoperative position, a platform for receiving the weights, and means for raising the platform whereby the pins are placed into operative position and said locking means automatically engage the rod, substantially as and for the purpose set forth.

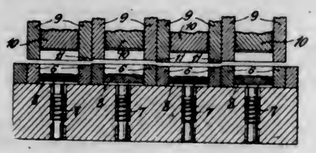
4. In a ten-pins game, a plurality of pins, a jointed rod for each pin, said pin and rod having a jointed connection, a weight overbalancing each rod and pin, automatic locking means engaging the rod when the pin is in operative position, thereby preventing the weight from moving the pins, a flexible member connecting the locking means to the pin for actuating the locking means by a sudden displacement of the pin and rendering the weight operative to move the pin to the inoperative position, and means for raising the weights to place the pins into operative position and bring the rods into engagement with the locking means.

5. In a ten-pins game, a plurality of pins, a jointed rod for each pin, a ball joint between the rod and the pin, a weight overbalancing each rod and pin, automatic locking means engaging the rod when the pin is in the operative position thereby preventing the displacement thereof by the weight, a flexible member connecting the automatic means to the ball joint of the pin with the rod so that the sudden displacement of the pin operates the locking means to release the rod, whereby the weight raises the pin to the inoperative position, means for indicating the displacement of a pin, flexible means connecting said indicating means to the rod of the pin, and means for raising the weights to place the pins into operative position.

[Claims 6 to 12 not printed in the Gazette.]

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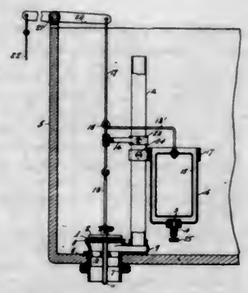
1,225,277. GANG-DIE FOR CUTTING AND SHAPING SHEET-METAL ARTICLES. PAUL SCHOLZ, Damsgaard, pr. Bergen, Norway. Filed Mar. 16, 1915. Serial No. 14,643. (Cl. 113—42.)



In a die for manufacturing simultaneously a plurality of rectangular conserving boxes or similar articles, the combination of a plurality of upper die members placed closely together in a row with every alternate die member located somewhat higher than the other ones, whereby offsets having cutting edges are formed between adjacent die members, and a row of corresponding lower die members arranged similarly to the upper die members, whereby offsets having cutting edges are formed therebetween, so that the offsets of the upper die members, in passing closely by those of the lower die member, perform a cutting action during the downward stroke of the upper die members.

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1,225,278. FLUSH-VALVE. WILLIAM H. SCHULTE, Trenton, N. J. Filed June 9, 1916. Serial No. 102,623. (Cl. 4—5.)



1. A flushing apparatus having a flush tank and a flush valve, a float connected to said valve which by rising tends to open the valve and acts to hold the valve open during the flushing, and a float tank for said float having the flow of water therefrom controlled to secure a slow closing of the flush valve.

2. A flushing apparatus having a flush tank and flush valve, a float connected to said valve which by rising tends to open the flush valve, a float tank and means for controlling the discharge from said float tank to regulate the length of the flow.

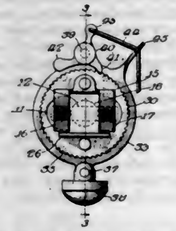
3. In a flushing apparatus, the combination with a flush tank, of a flush valve, a float connected to said flush valve which by rising tends to open the flush valve, a float tank within which said float operates, a discharge passage for said float tank, said passage having ports connecting with the flush tank, and a regulating valve adapted to control the rate of flow through said passage and ports.

4. In a flushing apparatus, the combination with a flush tank, of a flush valve, a float connected to said flush valve, a float tank within which said float operates, said float in rising tending to open the valve and in lowering tending to slowly close said flush valve, and means for controlling the discharge of water from said float tank to secure a slow refill flow after the flush.



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1,225,279. ATTACHMENT FOR ELECTRIC-LAMP-SOCKET KEYS. ALBERT H. SIMMONS, Chicago, Ill., assignor of one-third to Paul B. Asch, Chicago, Ill. Filed Mar. 22, 1916. Serial No. 85,757. (Cl. 240—123.)



1. In an appliance of the character described adapted for the operation of and attachment to the key of an electric lamp socket or the like, the combination of a ratchet main-body, means to fasten said body to the key, an operating-member oscillatory on said ratchet main-body, a pawl on said member adapted to coöperate with said ratchet and normally retracted therefrom, a cord secured to said pawl adapted to rock the member from its normal position and pull the pawl into operative engagement with said ratchet, whereby said main-body and key are turned, and means to return said operating-member to normal position upon release of the cord, substantially as described.

2. In an appliance of the character described adapted for the operation of and attachment to the key of an electric lamp socket or the like, the combination of a main-body, means to fasten said main-body to the key, an operating-member oscillatory on said main-body, a guide on said operating-member, means to lock said member and body together when the operating-member is rocked in one direction and permitting the operating-member to return to normal position without actuating said main-body, a cord coöperating with said guide and secured to said locking-means, whereby a pull upon the cord actuates said operating-member, locking-means, main-body, and key, and means to return said operating-member to normal position upon release of the cord, substantially as described.

3. In an appliance of the character described adapted for the operation of and attachment to the key of an electric lamp socket or the like, the combination of a ratchet main-body, means to fasten said body to the key, an operating-member oscillatory on said main-body, a pawl on said member adapted to coöperate with said ratchet and normally retracted therefrom, a guide on said operating-member, a cord secured to said pawl and coöperating with said guide, and adapted to rock the member from its normal position and pull the pawl into operative engagement with said ratchet, whereby said body and key are turned, and means to return said member to normal position upon release of the cord, substantially as described.

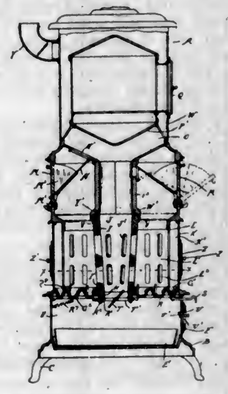
4. In an appliance of the character described adapted for the operation of and attachment to the key of an electric lamp socket or the like, the combination of a ratchet main-body, means to fasten said body to the key, an operating-member oscillatory on said main-body, a weighted pawl on said member adapted to coöperate with said ratchet and normally retracted therefrom by said weight, a guide on said operating-member, a cord secured to said pawl coöperating with said guide, and adapted to rock the member from its normal position and pull the pawl into operative engagement with said ratchet, whereby said main-body and key are turned, and a weight pivoted to said operating-member adapted to return said member to normal position upon release of the cord, substantially as described.

5. In an appliance of the character described adapted for the operation of and attachment to the key of an electric lamp socket or the like, the combination of a main-body, means to fasten said main-body to the key of the lamp-socket, including a clamping-member having a divergent hook-portion adapted to engage over an edge of the key and adjustable toward and from said edge in the plane of the key, an operating-member oscillatory on said main-body, a cord to actuate said operating-member, means between said operating-member and said main-body adapted to shift the body and key with the operating-member when the latter is swung in one direction from its normal position and to permit the operating-member to return to normal position without shifting said body and key, and means to return said operating-member to its normal position, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

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1,225,280. FUEL-BURNING DEVICE. WILLIAM C. SKINNER, Toronto, Ontario, Canada. Filed Feb. 28, 1916. Serial No. 80,833. (Cl. 110—30.)



1. In a fuel burning device, the combination with the fuel chamber, of a combustion chamber located centrally of said fuel chamber, an air chamber outside of said fuel chamber, there being openings for permitting air to pass laterally from the air chamber through the fuel chamber to the combustion chamber, and a normally closed grate beneath said fuel chamber and air chamber, said grate being adjustable to provide openings through which finely divided ash can be removed from the fuel chamber and the air chamber.

2. In a fuel burning device, the combination with the fuel chamber, of a combustion chamber, an air chamber outside of said fuel chamber, there being openings for permitting air to pass laterally from the air chamber through the fuel chamber to the combustion chamber, and a normally closed grate beneath said fuel chamber and air chamber, said grate being adjustable to provide openings through which finely divided ash can be removed from the fuel chamber and the air chamber, said grate having an upper stationary part and a lower movable part.

3. In a fuel burning device, the combination with an outer wall, an inner wall and a central wall spaced from each other a sufficient distance to provide a combustion chamber, a fuel chamber outside of said combustion chamber and an air chamber outside of said fuel chamber, said combustion chamber having an outlet for the heated gases, and an air inlet at its lower end, said walls being provided with apertures to permit a transverse draft from the air chamber, through the fuel chamber to the combustion chamber, the draft apertures being arranged to

prevent the discharge from the air chamber of ash or dust through such apertures, and means for cleaning the air chamber from ash or dust.

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1,225,281. POST CARRYING CROSSED THREADS FOR THE SUPPORTING OF CROP OR PLANTS. NIELS GEORG SÖRENSEN, Stockholm, Sweden. Filed Dec. 21, 1915. Serial No. 68,062. (Cl. 47—12.)



1. A post for carrying crossed threads for the support of crops or plants, said post being provided at its upper end with crossed slots of different depths and transverse holes of greater diameter than the bottoms of said slots communicating with the bottoms of said slots respectively, the shallower slot having an oblique direction with respect to the hole with which it communicates.

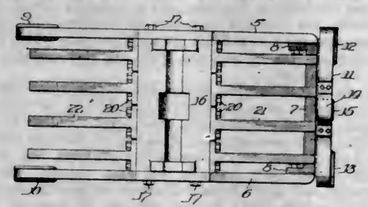
2. A post for carrying crossed threads for the support of crops or plants, said post being provided at its upper end with crossed slots of different depths and transverse holes of greater diameter than the bottoms of said slots communicating with the bottoms of said slots respectively, each slot having an oblique direction with respect to the hole with which it communicates.

3. A post for carrying crossed threads for the support of crops or plants, said post being provided at its upper end with crossed slots of different depths and two adjacent transverse holes each of greater diameter than the bottoms of the said slots communicating with each other through a narrow opening and with the bottoms of said slots respectively, each slot having an oblique direction with respect to the two adjacent holes.

4. A post for carrying crossed threads for the support of crops or plants, the said post being provided at its upper end with crossed slots of different depths and transverse holes of greater diameter than the bottoms of said slots communicating with one of the said slots through a restricted opening provided between two of three adjacent holes placed in a triangle and communicating with each other through narrow openings.

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1,225,282. MACHINE-FRAME. BURT D. STEVENS, Riverside, Ill., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 30, 1914. Serial No. 815,463. (Cl. 248—30.)



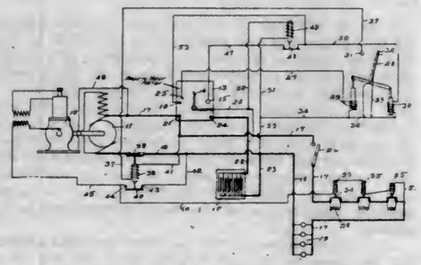
1. In a machine of the character described, the combination of a main frame adapted to rest near one end on the foundation or floor, a secondary support disposed transversely of the main frame, a rocking connection between said secondary support and main frame near the end of the latter opposite its other supports, a main body carried by said main frame and adapted to carry the operative parts of the machine, and one or more supporting brackets carried by said main body for supporting the operative parts of the mechanism.

2. In a machine of the character described, the combination of a main frame adapted to rest near one end on the foundation or floor, a secondary support disposed transversely of said main frame at the opposite end thereof, a rocking connection between said main frame and secondary support, and a main body adapted to carry the operative parts of the machine disposed transversely of and fastened to said main frame near the center thereof.

3. In a machine of the character described, the combination of a main frame having near one end a pair of spaced feet adapted to rest on the foundation or floor, a secondary support disposed transversely of the main frame at the opposite end thereof, a rocking connection between said support and main frame, a main body carried by said main frame and disposed transversely thereof approximately midway between the supports for the main frame at its opposite ends, and one or more brackets fastened to said main body to support the operative parts of the mechanism in conjunction with said main body.

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1,225,283. AUTOMATIC ELECTRIC GENERATING APPARATUS. CHESTER F. STRONG, Des Moines, Iowa. Filed Nov. 8, 1912. Serial No. 730,276. (Cl. 171—314.)



1. In an automatic electric generating apparatus, the combination of an engine, a dynamo electric machine, a storage battery, service wires, an ampere hour meter, means for electrically connecting the storage battery, the dynamo electric machine, the service wires and the ampere hour meter, whereby all of the current flowing from the dynamo electric machine to the storage battery will flow through the ampere hour meter, and all of the current flowing from the storage battery will also flow through the ampere hour meter, and corrent flowing from the dynamo electric machine to the service wires will pass directly to the service wires and will not pass through the ampere hour meter, said ampere hour meter being capable of being operated in one direction by the current flowing from the dynamo electric machine to the storage battery, and of being operated in the opposite direction by the current flowing from the storage battery either to the dynamo electric machine or the service wires, and means actuated by said ampere hour meter when in one position of its movement for operating the dynamo electric machine from the storage battery to start the engine.

5. In an automatic electric generating apparatus, the combination of an engine, a dynamo-electric machine operatively connected therewith, a storage battery electrically connected with the dynamo-electric machine, a current measuring device arranged in the circuit between the dynamo-electric machine and the storage battery, an electric ignition device for the engine, and two coacting means for breaking the circuit of the electric ignition device, one of said means being controlled by the current measuring device and the other by a rise in the battery voltage, said coacting means being so arranged that both must be actuated before the ignition circuit is broken.

7. In an automatic electric generating apparatus, the combination of an internal combustion engine having an electric ignition device, a dynamo-electric machine operatively connected therewith, a storage battery electrically connected with the dynamo-electric machine, an ampere hour meter included in the circuit between the dynamo-electric machine and the battery, and having a movable indicator arm and also having a contact device for the movable indicator arm, an independent circuit in which the movable indicator arm and the contact device are included, means automatically actuated upon the closing of this independent circuit for breaking the circuit through the engine ignition device, and a switch included in said independent circuit normally open and designed to be automatically closed upon a rise in voltage of the storage battery.

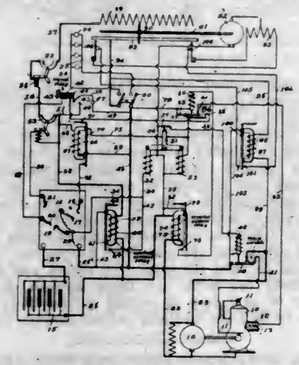
8. In an automatic electric generating apparatus, the combination of an internal combustion engine, a dynamo-electric machine operatively connected therewith, a storage battery electrically connected with the dynamo-electric machine, an ampere hour meter included in the circuit between the dynamo electric machine and the battery, and means controlled by the ampere hour meter, after a certain predetermined amount of electricity has passed from the dynamo-electric machine to the storage battery, for stopping the operation of the engine, said latter means also including a switch device operated by a rise in voltage in the storage battery, and said parts being so arranged that the latter means must be operated before the engine will stop.

[Claims 2 to 4, 6, and 9 not printed in the Gazette.]



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1,225,284. AUTOMATIC ELECTRIC GENERATING APPARATUS. CHESTER F. STRONG, Des Moines, Iowa. Filed Sept. 15, 1913. Serial No. 789,906. (Cl. 171—314.)



1. In an automatic electric generating apparatus, the combination of an engine, a dynamo electric machine operatively connected with the engine, a storage battery electrically connected with the dynamo electric machine, a main switch included in a circuit between the storage battery and the dynamo electric machine for closing the circuit to operate the dynamo electric machine as a motor to start the engine, an overload current relay included in a circuit from the storage battery so arranged as to close said main switch when the current in the battery is being discharged at a certain predetermined rate, and a current measuring device electrically connected with the storage battery and also electrically connected with the main switch for automatically closing said main switch when the battery has reached a certain predetermined condition of discharge.

2. In an automatic electric generating apparatus, the combination of an engine, a dynamo electric machine operatively connected with the engine, a storage battery electrically connected with the dynamo electric machine, a main switch included in a circuit between the storage battery and the dynamo electric machine for closing the circuit to operate the dynamo electric machine as a motor to start the engine, an overload current relay included in a circuit from the storage battery so arranged as to close said main switch when the current in the battery is being discharged at a certain predetermined rate, and a current measuring device including a movable member capable of moving in one direction when the battery is discharging, and in another direction when the battery is being recharged, said current measuring device being electrically connected with the storage battery, and said movable member being capable in one position of closing a circuit through the main switch for automatically closing the main switch when the movable member has reached the predetermined position which it assumes when the battery is in condition to be recharged.

3. In an automatic electric generating apparatus ,the combination of an engine, a dynamo electric machine operatively connected with the engine, a storage battery electrically connected with the dynamo electric machine, a main switch included in a circuit between the storage battery and the dynamo electric machine for closing the circuit to operate the dynamo electric machine as a motor to start the engine, an overload current relay included in a circuit from the storage battery so arranged as to close said main switch when the current in the battery is being discharged at a certain predetermined rate, and a current measuring device electrically connected with the storage battery and designed to be operated in one direction when the battery is discharging and in another direction when the battery is being recharged, said current measuring device including a movable member so arranged that until said movable member has reached a certain predetermined position the said main switch will be held closed, and when said predetermined position has been reached the main switch may be opened to permit the engine and dynamo electric machine to discontinue their operation.

4. In an automatic electric generating apparatus, the combination of an engine, a dynamo electric machine operatively connected with the engine, a storage battery electrically connected with the dynamo electric machine, a main switch included in the circuit between the storage battery and the dynamo electric machine for closing the circuit to operate the dynamo electric machine as a motor to start the engine, and two devices each capable at times of controlling said main switch, one of said devices comprising an overload relay capable of closing the switch upon an excessive discharge from the battery, and the other comprising a current measuring device capable of closing said main switch when said current measuring device is in condition indicating that the battery should be recharged, whereby the apparatus will be maintained in an economical working condition with the dynamo electric machine working constantly during an overload in the current consumption, and the battery supplying all of the current at other times until the battery is in condition to be recharged.

5. In an automatic electric generating apparatus, the combination of an engine, a dynamo electric machine operatively connected with the engine, a storage battery electrically connected with the dynamo electric machine, a current measuring device electrically connected with the storage battery and including a movable member, means for closing a circuit when the movable member has reached a certain predetermined position, a signal relay included in the latter circuit, a signal device, means actuated by the signal relay for actuating the said signal device, means whereby a circuit will be closed when said movable member reaches another predetermined position, and a circuit breaker capable of operating when said latter circuit is closed by means of the movable member, said circuit breaker being designed to open the main circuit from the storage battery to the service wires to thereby automatically prevent further discharge of the storage battery.

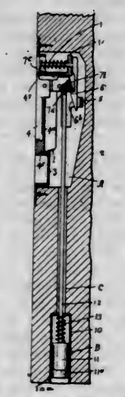
[Claims 6 to 11 not printed in the Gazette.]

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1,225,285. DOOR-HOLDER DEVICE. CLAUDE R. SWAIM, Muncie, Ind., assignor to Orin H. McDowell, Steubenville, Ohio. Filed Jan. 20, 1917. Serial No. 143,442. (Cl. 16—84.)

A door holder device, comprising a frame adapted to be seated in a mortise provided therefor in the door, the face plate of said frame having a vertical slot, a detent ing disposed slidingly between the sides of said frame and

having a threaded hole in its bottom side, and there being transverse studs on said detent lug to move in vertical guideways in said frame, a tubular guide member adapted to be inserted to secure position in the bottom of the door, a plunger slidingly disposed in said tubular guide member and having an upwardly disposed stem adapted to be screwed into the said detent lug, a spring in said guide member to normally depress the said plunger, a



spring pressed pawl retained slidingly between the sides of said frame to engage and hold the detent lug at the raised position but which pawl is adapted to be shifted from said engaged position, and a lift handle loosely connected to the said detent lug and arranged to normally hang in the slot of said face plate but which when swung outwardly has fixed engagement with the detent lug.

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1,225,286. PACKING AND THE LIKE. ERNEST J. SWEETLAND, Montclair, N. J. Filed Jan. 20, 1916. Serial No. 73,130. (Cl. 154—45.5.)



1. An article of manufacture comprising a woven metallic fabric embedded in rubber, said rubber being secured to the fabric by chemical bond.

2. An article of manufacture comprising a woven fabric, one set of threads of which is composed of bundles of metallic wires, said fabric being embedded in rubber.

3. An article of manufacture comprising a woven fabric, one set of threads of which is composed of bundles of metallic wires, said fabric being flattened under pressure and embedded in rubber.

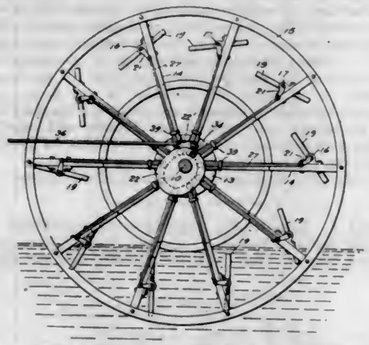
7. An article of manufacture comprising a woven fabric, one set of threads of which is composed of twisted bundles of metallic wires, said fabric being elongated under pressure in one direction more than another, after weaving, as by rolling, and having rubber incorporated therewith throughout its mass.

[Claims 4 to 6 and 8 to 11 not printed in the Gazette.]

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1,225,287. FEATHERING PADDLE-WHEEL. OSCAR E. THOMPSON, Hadlock, Wash. Filed Nov. 2, 1915. Serial No. 59,191. (Cl. 170—149.)

1. A paddle-wheel, comprising in its construction spokes, paddles provided with pintles whereby the paddles are pivotally connected to the spokes, a crank on each of said pintles, a cam formed with a web member and two spaced flanges extending laterally therefrom, said web member being provided with an opening between said flanges, a series of rollers operable against the opposing surfaces of said flanges and adapted to be introduced or removed through said openings, rods connecting said rollers with the respective cranks, and means provided on the spokes and serving to direct the rods whereby the rollers are caused to revolve with the wheel to effect the tilting movements of the various paddles through the agency of said cam flanges.



2. A paddle-wheel, comprising in its construction, spokes, paddles pivotally connected to said spokes, a cam formed with a web member and two spaced flanges extending laterally therefrom, said web member being provided with an opening intermediate said flanges, a series of rollers operable against the opposing surfaces of the cam flanges and adapted to be introduced or removed through said opening, a pin serving for the axle of each of said rollers, said pins being provided with chambers serving for lubricant receptacles communicating with the journal bearings for the respective rollers, and operative connections between the respective rollers and said paddles whereby the latter are tilted through the instrumentality of said cam to occupy substantially upright positions as they are revolubly carried through the water.

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1,225,288. SPRING-MOUNTING FOR VEHICLES. ELVA B. TOWLER, Macon, Ill., assignor of one-half to George F. Wilson, Macon, Ill. Filed June 8, 1916. Serial No. 102,399. (Cl. 267—30.)



1. In combination with the frame and running gear of a vehicle, a main spring extending from the front to the rear axle, said main spring having a pivotal connection with said frame, a supplemental spring element connected to the rear axle and the frame, and an additional spring element pivotally connected to said main spring and to said supplemental spring and having a movable bearing on said main frame.

2. In combination with the frame and running gear of a vehicle, a main spring extending from the front to the rear axle, said main spring having a double curve and being pivotally connected at the highest point of the forward curve with the frame, a supplemental spring element connected to the rear axle and extending forward therefrom and connected to the frame and an additional spring element pivotally connected to an intermediate part of said main spring and to an intermediate part of said supplemental spring element, said additional spring element having a movable bearing on said frame.



3. In combination with the frame and running gear of a vehicle, a main spring extending from the front to the rear axle, said main spring having a double curve and being pivotally connected at the highest point of the forward curve with the frame, a supplemental spring element connected to the rear axle and extending forward therefrom and connected to the frame, and a pair of additional spring elements spaced apart on opposite sides of said supplemental spring element and pivoted at one end to an intermediate part of the main spring and also having an intermediate pivotal connection with an intermediate part of said supplemental spring element, said additional spring elements having a movable bearing on said frame.

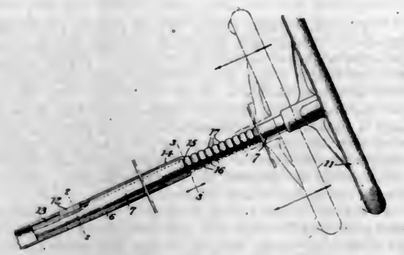
4. In combination with the frame and running gear of a vehicle, a main spring extending from the front to the rear axle, said main spring having a double curve and being pivotally connected at the highest point of the forward curve with the frame, a supplemental spring element connected to the rear axle and extending forward therefrom and connected to the frame, and a pair of additional spring elements spaced apart on opposite sides of said supplemental spring element and pivoted at one end to an intermediate part of the main spring and also having an intermediate pivotal connection with an intermediate part of said supplemental spring element, said additional spring elements having a roller member mounted on their other ends and bearing against said frame.

5. In combination with the frame and running gear of a vehicle, a main spring extending from the front to the rear axle, said main spring having a double curve and being pivotally connected at the highest point of the forward curve with the frame, a supplemental spring element connected to the rear axle and extending forward therefrom and connected to the frame, and a pair of additional spring elements spaced apart on opposite sides of said supplemental spring element and pivoted at one end to an intermediate part of the main spring and also having an intermediate pivotal connection with an intermediate part of said supplemental spring element, said additional spring elements having a movable bearing on said frame, said supplemental spring element and said additional spring elements crossing each other and having a scissors-like movement.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,289. STEERING MECHANISM. WILLARD IRVING TWOMBLY, New York, N. Y., assignor to Twombly Car Corporation, New York, N. Y., a Corporation of New York. Filed Oct. 15, 1913. Serial No. 795,199. (Cl. 74—39.)



1. The combination with steering mechanism, of a rotatable post consisting of a pair of sections, one section mounted to rotate in a fixed position and operatively connected to the steering mechanism, and the other section having a telescoping movement into and rotatable with the fixed section; a plurality of axially spaced recesses in the inner post section; and spring fingers integral with the outer section adapted to engage substantially the entire circumference of either one of said recesses to retain the post sections in adjusted position, and said fingers adapted to be thrown out of engagement with said recesses by an axial push or pull on the post, substantially as and for the purpose specified.

2. The combination with steering mechanism, of a longitudinal adjustable rotatable post consisting of a section operatively connected to the steering mechanism and a section to have telescoping movement into the tubular section and bodily removable therefrom; a key fixed in the outer section to slidably engage in a groove in the inner section whereby one section is rotatable with the other; integral spring fingers formed at the free end of the walls of the tubular section; and recesses in the telescoping section for the engagement of said fingers, substantially as and for the purpose specified.

3. The combination with steering mechanism, of an adjustable rotatable post consisting of a tubular section operatively connected to the steering mechanism and having integral resilient fingers with inwardly turned flanges substantially encircling its free end and tensioned to spring inward, and a section to have telescoping movement into and rotatable with the tubular section, said telescoping section having a series of axially spaced apart annular recesses in which the finger flanges of the tubular section are adapted to engage to retain the post sections in adjusted position in normal use, and adapted to be thrown out of engagement with said recesses when subjected to abnormal axial pressure for the purpose specified.

4. The combination with steering mechanism, of an adjustable rotatable post consisting of a tubular section mounted to rotate in a fixed position and operatively connected to the steering mechanism, transverse slots in the free end of said tubular section to provide resilient fingers, said fingers having inwardly projecting flanges, and a post section having a hand wheel fixed thereto slidably engaging in the tubular section, a series of annular grooves in said post section in either one of which the resilient finger flanges of the tubular post are adapted to engage to lock said post section in adjusted position, said resilient fingers adapted to be sprung out of operative engagement with the annular grooves to unlock the post section when an axial pressure or pull is applied to the slidable post section, a longitudinal groove in the slidable post section, and a key fixed in the tubular post section to engage in said groove to rotatably connect the post sections and permit adjustment thereof.

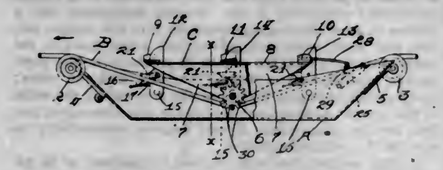
5. An axially adjustable steering wheel pillar, comprising a tubular post fixed to the steering reduction groove mechanism, a movable post telescoping therein and fixed to the steering wheel and adapted to be axially removed from said fixed tubular section, a key interior to the tubular section and a longitudinal groove in engagement therewith extending from one end of said adjustable post toward the middle of said post, a series of spaced circumferential grooves on said adjustable post from a point adjacent the end of said longitudinal groove to a point adjacent to said steering hand-wheel, a yielding clip at the free end of said tubular section substantially surrounding the adjustable post and adapted to engage any of said circumferential grooves about their circumference, whereby said post is held against axial movement under normal pressure and may be readily displaced for quick adjustment by abnormal axial pressure.

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1,225,290. INSULATION-REPAIRING DEVICE. WILLIAM C. ULRICH, St. Paul, Minn., assignor of one-half to Peter J. Lavalle, St. Paul, Minn. Filed Jan. 31, 1916. Serial No. 75,405. (Cl. 91—32.)

1. A device for repairing the insulation on electrical conductors, comprising, a portable receptacle for holding a bath of insulating material, guides at its opposite ends having a rolling contact with the conductor, a carriage having a deflecting guide adapted to immerse the conductor in said bath, and means held under spring tension for securing said carriage to said receptacle.

2. A device for repairing the insulation on electrical conductors, comprising, a portable receptacle for holding a bath of insulating material, guides at its opposite ends having a rolling contact with the conductor, a carriage having a deflecting guide adapted to immerse the conductor in said bath, and means held under spring tension for detachably securing said carriage to said receptacle.



3. A device for repairing the insulation on electrical conductors, comprising, a portable receptacle for holding a bath of insulating material, guides at its opposite ends adapted to travel upon the conductor and hold the receptacle in position to receive the conductor, a carriage arranged upon said receptacle having means for immersing the conductor in said bath, a series of fasteners hinged to secure said carriage on said receptacle and arranged to successively release from said carriage by contact with cross wires connected with said conductor.

4. A device for the repairing of insulation on electrical conductors, comprising, a portable receptacle for holding a bath of insulating material, guides at the opposite ends of said receptacle adapted to travel upon the conductor and hold the receptacle in position to receive the conductor, a carriage arranged upon said receptacle, and having means for immersing the conductor in said bath, fasteners having shoulders adapted to releasably secure said carriage on said receptacle, said fasteners being releasable by contact with cross wires connected with said conductor, means on said fasteners for guiding said cross wires over said shoulders without said cross wires engaging said fasteners and means for wiping the superfluous insulating material on said conductor received from said bath.

5. A device for repairing insulation on electrical conductors, comprising, a portable receptacle for holding a bath of insulating material, guides at the opposite ends of said receptacle adapted to travel upon the conductor and hold the receptacle in position to receive the conductor, a carriage arranged upon said receptacle and having means for immersing the conductor in said bath, a series of fasteners hinged upon said receptacle and releasably engaging said carriage, said fasteners being successively releasable from said carriage by contact with cross wires connected with said conductor without entirely releasing the carriage from said receptacle and wipers carried by said parts for removing superfluous insulating material received from said bath.

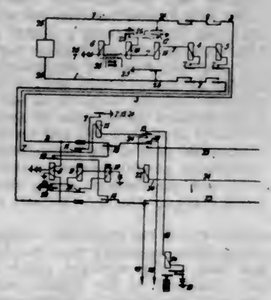
[Claims 6 to 11 not printed in the Gazette.]

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1,225,291. TELEPHONE SYSTEM. FRANCIS MORLEY WARD, GEORGE HENRY BRYANT, and THOMAS MONTAGU INMAN, London, England, assignors to The Relay Automatic Telephone Company, Limited, London, England. Filed June 5, 1916. Serial No. 101,769. (Cl. 179—18.)

1. In a telephone system, a subscriber's line, a cut-off relay associated therewith, a calling circuit controlled by said relay, a holding circuit for said relay extending over the subscriber's line, means for completing said holding circuit upon the disconnection of the talking circuit and a busy signal circuit controlled by said means and adapted to cause a busy signal to be sent to the subscriber upon the release of the connection.

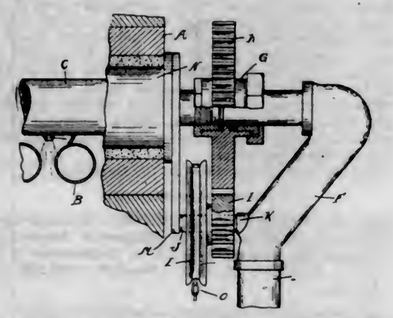
2. In a telephone system, a subscriber's line, a relay associated therewith, a calling circuit controlled by said relay, a holding circuit for said relay extending over the subscriber's line, a relay operating upon the disconnection of the talking circuit to complete said holding circuit, and a busy signal circuit controlled by said relays and adapted to cause a busy signal to be sent over the subscriber's line.



3. In a telephone system, a plurality of subscribers' lines, automatic switches for interconnecting said lines, a relay associated with each subscriber's line, a holding circuit for said relay extending over the subscriber's line, a time switch operating to disconnect a non-completed talking circuit after a certain period, means for completing the holding circuit of said relay upon the release of the connection and a busy signal circuit controlled by said means and adapted to cause a busy signal to be sent to the subscriber.

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1,225,292. BOILER-TUBE CLEANER. GLENN W. WATSON, Detroit, Mich., assignor to Diamond Power Specialty Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 16, 1915. Serial No. 67,270. (Cl. 122—392.)



1. The combination with a furnace wall, of a rotatively adjustable cleaner tube extending through said wall and provided with one or more jet nozzles, a supply conduit for said tube, a fitting for connecting said supply conduit with said tube having a swivel connection with the latter and including a laterally deflected portion or goose-neck, a spur-gear mounted on said tube, a pinion in mesh with said spur-gear having a journal bearing on the laterally deflected portion of said fitting, and manually-operable means for rotating said pinion to impart a slow and steady movement to said rotative tube.

2. The combination with a furnace wall, of a rotative tube projecting through said wall and having one or more jet nozzles, a supply conduit outside said wall, a fitting for connecting said supply conduit with said rotative tube having a swivel connection with the latter and including a laterally deflected portion or goose-neck, a spur-gear mounted on said rotative tube, a pinion meshing with said spur-gear, a pin forming a journal for said pinion mounted in the laterally deflected portion of said fitting and projecting laterally therefrom, a sheave also journaled on said pin and coupled to said pinion, and a chain for rotating said sheave and imparting through the medium of said pinion and spur-gear a slow and steady rotation to said tube.

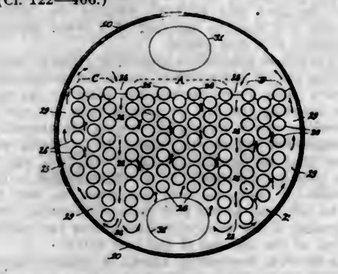
3. The combination with a furnace wall, of a rotative tube extending therethrough having one or more jet nozzles at its inner end, a bearing for said tube in said furnace wall, a supply conduit outside of said wall, a fitting connecting said supply conduit with said rotative tube including a laterally-deflected portion or goose-neck and a swivel connection for said rotative tube, a spur-gear mounted on said rotative tube, a pinion meshing with said spur-gear, a pin forming a journal bearing for said pinion mounted in a boss on said fitting, a sheave connected to said pinion and also journaled on said pin, a chain for operating said sheave, and a bracket member connecting a bearing in said furnace wall with said pin and forming an anchorage for said fitting.

4. The combination with a furnace wall, of a rotatively adjustable cleaner tube extending through said wall and provided with one or more jet nozzles, a bearing for said tube in said furnace wall, a bracket arm projecting from said bearing, a gear mounted upon said tube outside of said wall, a pinion in mesh with said gear, a supply conduit having swivel connection with said tube and having a portion return-bent in proximity to said pinion, and coacting with said bracket arm to support the pinion, and means for rotating said pinion.

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1,225,293. STEAM-BOILER. HOWARD J. WEBSTER, Philadelphia, Pa. Filed Apr. 17, 1916. Serial No. 91,642. (Cl. 122—406.)



1. A return flue boiler comprising a shell, a plurality of separated groups or banks of horizontal fire tubes arranged within the shell from the upper section of the boiler down to the lower section of the boiler shell and the outer tubes of the outer groups being spaced from the boiler shell, thereby forming unobstructed narrow longitudinal vertical passageways between the groups or banks of fire tubes and passageways between the outer tubes and the boiler shell, said vertical passageways between the groups of tubes being arranged intermediate of the central vertical plane and the outer shell of the boiler, whereby when heat is applied to the exterior of the lower portion of the shell and to the interior of the fire tubes, the water within the boiler shell elevated at the upper and central section of each group of fire tubes during the generation of steam within the boiler, is permitted to directly pass into and circulate in a downward direction in the vertical passageways between the groups or banks of fire tubes to the bottom section of the boiler and thence in an upward direction between the rows of fire tubes in each group or bank and in the passageways between the boiler shell and the outer rows of fire tubes of the outer groups or banks and the generated steam will pass unobstructedly into the upper steam space of the boiler.

2. A return flue boiler comprising a shell, means for heating the underside of the shell, a plurality of separated groups or banks of horizontal fire tubes arranged within the shell from the upper section of the boiler down to the lower section of the boiler shell and the outer tubes of the outer groups being spaced from the boiler shell, thereby forming unobstructed narrow longitudinal vertical passageways between the groups or banks of fire tubes, and passageways between the outer tubes and the boiler shell, said vertical passageways between the groups of tubes being arranged intermediate of the central vertical plane and the outer shell of the boiler, whereby when heat is applied to the exterior of the lower portion of the shell and to the interior of the fire tubes, the water within the boiler shell elevated at the upper and central section of each group of fire tubes during the generation of steam within the boiler, is permitted to directly pass into and circulate in a downward direction through the vertical circulating funnels between the groups or banks of fire tubes to the bottom section of the boiler and thence in an upward direction between the rows of fire tubes in each group or bank and in the passageways between the boiler shell and the outer rows of fire tubes of the outer groups or banks, and the generated steam will pass unobstructedly into the upper steam space of the boiler.

3. A return flue boiler comprising a shell, a plurality of separated groups or banks of horizontal fire tubes arranged within the shell from the upper section of the boiler down to the lower section of the boiler shell and the outer tubes of the outer groups being spaced from the boiler shell, thereby forming unobstructed narrow longitudinal vertical passageways between the groups or banks of fire tubes and passageways between the outer tubes and the boiler shell, said vertical passageways between the groups of tubes being arranged intermediate of the central vertical plane and the outer shell of the boiler, whereby when heat is applied to the exterior of the lower portion of the shell and to the interior of the fire tubes the water within the boiler shell elevated at the upper and central section of each group of fire tubes during the generation of steam within the boiler, is permitted to directly pass into and circulate in a downward direction in the vertical passageways between the groups or banks of fire tubes to the bottom section of the boiler and thence in an upward direction between the rows of fire tubes in each group or bank and in the passageways between the boiler shell and the outer rows of fire tubes of the outer group or banks, and the generated steam will pass unobstructedly into the upper steam space of the boiler.

4. A return flue boiler comprising a shell, a plurality of separated groups or banks of horizontal fire tubes arranged within the shell from the upper section of the boiler down to the lower section of the boiler shell and the outer tubes of the outer groups being spaced from the boiler shell, thereby forming unobstructed narrow longitudinal vertical passageways between the groups or banks of fire tubes and passageways between the outer tubes and the boiler shell, said vertical passageways between the groups of tubes being arranged intermediate of the central vertical plane and the outer shell of the boiler, and the fire tubes of each group disposed in straight vertical rows and staggered horizontal rows and arranged to form unobstructed straight vertical passageways between said tubes, whereby when heat is applied to the exterior of the lower portion of the shell and to the interior of the fire tubes the water within the boiler shell elevated at the upper and central section of each group of fire tubes during the generation of steam within the boiler, is permitted to directly pass into and circulate in a downward direction in the vertical passageways between the groups or banks of fire tubes to the bottom section of the boiler and thence in an upward direction between the rows of fire tubes in each group or bank and in the passageways between the boiler shell and the outer rows of fire tubes of the outer group or banks, and the generated steam will pass unobstructedly into the upper steam space of the boiler.

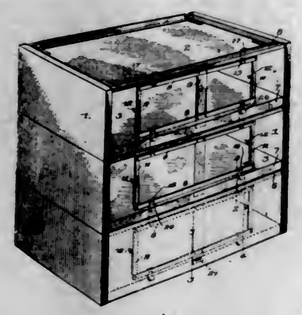
5. A return flue boiler comprising a shell, a plurality of separated groups or banks of horizontal fire tubes arranged within the shell from the upper section of the boiler down to the lower section of the boiler shell and the outer tubes of the outer groups being spaced from

the boiler shell, thereby forming unobstructed narrow longitudinal vertical passageways between the groups or banks of fire tubes and passageways between the outer tubes and the boiler shell, said vertical passageways between the groups of tubes being arranged intermediate of the central vertical plane and the outer shell of the boiler, and the two upper horizontal rows of fire tubes being disposed in staggered relation and arranged to form unobstructed straight vertical passageways between said tubes, whereby when heat is applied to the exterior of the lower portion of the shell and to the interior of the fire tubes, the water within the boiler shell elevated at the upper and central section of each group of fire tubes during the generation of steam within the boiler, is permitted to directly pass into and circulate in a downward direction in the vertical passageways between the groups or banks of fire tubes to the bottom section of the boiler and thence in an upward direction between the rows of fire tubes in each group or bank and in the passageways between the boiler shell and the outer rows of fire tubes of the outer group or banks, and the generated steam will readily escape through the spaces between the upper two rows of staggered fire tubes and the boiler shell, and unobstructedly pass into the upper steam space of the boiler.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,294. INTERLOCKING MECHANISM FOR SECTIONAL FURNITURE. ALBERT T. WEISS, Rochester, N. Y., assignor to Yawman & Erbe Mfg. Co., Rochester, N. Y., a Corporation of New York. Filed Jan. 26, 1914. Serial No. 814,405. (Cl. 45—94.)



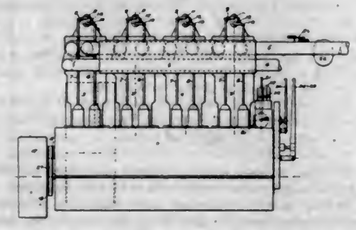
The combination with two separable superposed sectional furniture units having drawers operating therein, the upper one provided with a marginal supporting flange projecting below its bottom wall and the other with a marginal seat on its upper wall occupied by said flange, of a vertically movable member on the rear of each unit provided with a drawer catch movable therewith into and out of locking position, means for detachably interlocking the members for joint movement comprising two coöperating members mounted on the movable members respectively, and guided respectively in the lower wall of the upper member and the upper wall of the lower member so that they engage between said walls, and a key controlled device for actuating one of the members.

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1,225,295. INTERNAL-COMBUSTION ENGINE. JOHN F. WENTWORTH, Quincy, Mass. Filed Feb. 26, 1915. Serial No. 10,833. (Cl. 123—179.)

1. In an internal combustion engine, a cylinder, means for admitting air at atmospheric pressure to the cylinder, means for compressing said air to the ignition temperature of the fuel, means for admitting fuel to the cylinder at the beginning of the working stroke, means for varying the amount of air admitted to the cylinder and means for first warming the cylinder through the operation on the volatile mixture cycle.

2. In an internal combustion engine, a cylinder, means for admitting air at atmospheric pressure to the cylinder, means for compressing said air to the ignition temperature of the fuel, means for admitting fuel to the cylinder at substantially the beginning of the working stroke, means for varying the amount of air admitted to the cylinder, and means whereby said engine may be started by the use of a volatile mixture and an ignition device.



3. In an internal combustion engine, a cylinder, means for admitting air for compression, means for compressing said air to a point above the ignition point of the fuel to be injected, means for injecting the fuel at substantially the beginning of the working stroke, means for varying the amount of air compressed per stroke and means for warming said cylinder whereby the ignition point of said fuel may be obtained at a lower pressure than is possible in a cold engine.

4. In an internal combustion engine, a cylinder, means for admitting air for compression, means for compressing said air to a point above the ignition point of the fuel, means for injecting the fuel at substantially the end of the compression stroke, means for varying the amount of charge compressed per stroke, means for warming said cylinder so that the ignition point of the fuel may be below the pressure necessary in a cold cylinder, a fuel pump, means for operating said fuel pump so that the fuel may be delivered to the fuel valve substantially during the opening of the fuel valve and means for varying the duration of the opening of the fuel valve.

5. In an internal combustion engine, a cylinder, means for admitting air for compression, means for compressing air to a point above the ignition point of the fuel, means for injecting the fuel at substantially the end of the compression stroke, means for varying the amount of charge compressed per stroke, means for warming said cylinder whereby the ignition point of the fuel may occur at a lower point of compression than would be the case in a cold engine, said means consisting of a carbureter on a branch of the air inlet pipe, of an ignition device on said cylinder and of a timing device and means whereby the engine may be run either by the volatile mixture when the engine is cold or by the non-volatile fuel after the engine has been warmed by the operation of the engine on the volatile fuel.

[Claim 6 not printed in the Gazette.]

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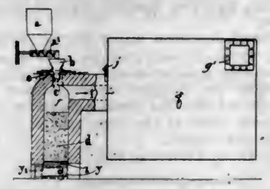
1,225,296. TREATMENT OF LEAD-SULFID ORES. PERCY C. H. WEST, London, England. Filed Nov. 24, 1915. Serial No. 63,280. (Cl. 75—19.)

1. A process of treating lead sulfid ores to obtain basic lead sulfate which comprises feeding lead sulfid onto an incandescent bed of coke, partially oxidizing the vapors thus formed and then completing the oxidation of the vapors at a lower temperature.

2. A process of treating lead sulfid ores to obtain basic lead sulfate which comprises feeding powdered galena onto a deep bed of incandescent coke, volatilizing the lead sulfid at a uniformly low temperature, partially oxidizing the vapors formed and then completely oxidizing the vapors at a lower temperature.



3. A process of treating lead sulfid ores to obtain basic lead sulfate which comprises feeding the lead sulfid ore onto a deep bed of incandescent coke, volatilizing the lead sulfid at a temperature of 1000–1100° C. partially oxidizing the vapors formed and then completely oxidizing the vapors at a lower temperature.



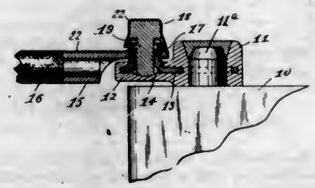
4. A process for the treatment of lead sulfid ores comprising feeding the lead sulfid on to a bed of incandescent coke while maintaining the bed of coke at a temperature below that which injection of a gaseous mixture of the composition of air would cause it to assume.

5. A process for the treatment of lead sulfid ores comprising volatilizing the lead sulfid at a comparatively low temperature in an attenuated atmosphere and oxidizing the vapors produced.

[Claims 6 to 10 not printed in the Gazette.]

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1,225,297. CONNECTOR AND CONNECTION FOR STORAGE BATTERIES. THEODORE A. WILLARD, Cleveland, Ohio, assignor to Willard Storage Battery Company, Cleveland, Ohio, a Corporation of West Virginia. Filed July 16, 1915. Serial No. 40,188. (Cl. 204—52.)



1. A battery connector comprising a body having an insert of relatively hard material, said insert being composed of a sheet metal stamping provided with a tapered part projecting from the connector.

2. A battery connector comprising a body having a lateral extension, a sheet metal insert of relatively hard material in said extension and provided with a tapered terminal portion.

3. A battery connector comprising a body having a socket for a terminal post and having a relatively hard sheet metal insert with a portion extending about the socket and a tapered portion projecting from the connector and adapted to be attached to a conductor terminal.

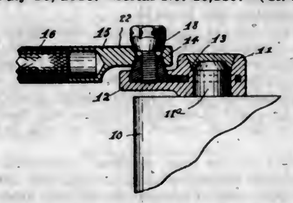
4. A connection adapted particularly for storage batteries comprising a battery terminal having an insert of relatively hard material with a part projecting from the terminal, a conductor terminal having a tapered portion which engages the projecting part of the insert, and clamping means for fastening the parts together and provided with a portion tapered which fits onto the tapered part of the conductor terminal.

5. A connection adapted for storage batteries comprising a battery terminal having a tapered part; a conductor terminal having a part with tapered surfaces, one tapered surface engaging the tapered part of the battery terminal; and clamping means having a tapered surface fitting onto another tapered surface of the conductor terminal.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,298. CONNECTOR AND CONNECTION FOR STORAGE BATTERIES. THEODORE A. WILLARD, Cleveland, Ohio, assignor to Willard Storage Battery Company, Cleveland, Ohio, a Corporation of West Virginia. Filed July 16, 1915. Serial No. 40,189. (Cl. 204—52.)



1. A storage battery connector or terminal, comprising a body having a socket for a battery terminal post and having an insert provided with a protruding part to which a conductor may be connected.

2. A connector or terminal adapted for storage batteries, comprising a body having an insert of relatively hard material, said insert having a projecting tapered portion to which a terminal of a conductor may be connected.

3. A connector or terminal for storage batteries, comprising a body having a socket for a terminal post and having a lateral extension projecting from the socketed part, an insert of relatively hard material buried in said extension and provided with an outwardly projecting part to which a terminal of a conductor may be attached.

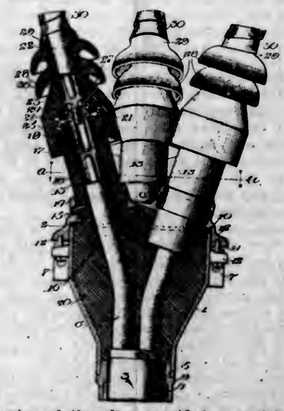
4. A connector having a body portion provided with a socket for a terminal post of a battery and with an insert of relatively hard material, said insert having a portion extending around said socket and a tapered projecting part to which a terminal of a conductor may be attached.

5. A storage battery connector having a body portion provided with a socket for a terminal post and having an extension, an insert of relatively hard material buried in the connector and extending through the extension and around the socket of the body portion of the connector, said insert having near one end of the extension a projecting part to which a terminal of a conductor may be attached.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,299. POTHEAD-CONNECTOR. PAUL F. WILLIAMS, Chicago, Ill., assignor to G & W Electric Specialty Co., Chicago, Ill., a Corporation of Illinois. Filed Mar. 15, 1910. Serial No. 549,489. (Cl. 247—12.)



1. A device of the class specified comprising in combination a bowl having its top provided with an annular

upstanding wall or collar, an insulator having a groove arranged within said annular collar said insulator forming an outlet for the bowl, cementing material in said groove to hold said insulator in place, and a screw or screws extending through said annular wall forming said rim and engaging said insulator.

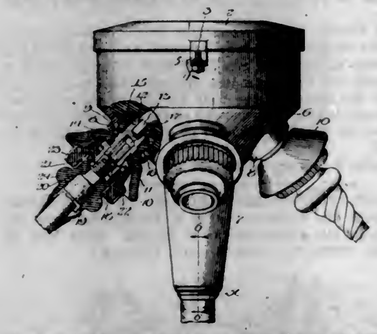
2. A device of the class specified comprising in combination a casing, an insulator extending through the wall of said casing and forming an outlet from the same, and means for detachably securing said insulator in place within said casing, said insulator being provided with interiorly arranged connecting devices and being made in separate parts to permit access to said connecting devices.

3. A device of the class specified, comprising a bowl having an outlet formed by an insulating tube, connecting devices within said insulator, means for holding said connecting devices detachably in position within said insulator, said means extending through the insulator, and an insulating cap arranged to be fitted over the outer end of said insulator and cover said securing means.

4. A device of the class specified, comprising a bowl having an outlet formed of an insulating tube, said bowl having upstanding annular walls forming an annular rim through which said insulator is extended, screws passing through said annular rim and engaging said insulator, connecting devices within said insulator, screws extending through said insulator and engaging said connecting devices, and a cap fitting over said insulator and covering the screws for the connecting devices.

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1,225,300. CONNECTING DEVICE FOR ELECTRIC CONDUCTORS. PAUL F. WILLIAMS, Chicago, Ill., assignor to G & W Electric Specialty Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 11, 1911. Serial No. 664,916. (Cl. 247—12.)



1. A pothead comprising in combination, a casing having an aperture, a perforated closure for said aperture, said closure being provided with threads whereby the same is secured to the casing, said closure being adapted to receive a cable and having a tapering cut-away portion largest at its inner end, and a ring adapted to fit into the inner end of said tapering cut-away portion, said ring and closure being provided with threads whereby the same are secured together.

2. A pothead comprising in combination, a casing having an aperture, a perforated closure for said aperture, said closure having the outer end portion of its bore of substantially the same size as a cable sheath, and having the inner end portion of its bore larger than a cable sheath, and a ring having a screw-threaded connection with the inner end of said closure, said ring being adapted to fit within the enlarged bore of said closure and also adapted to fit closely upon said cable sheath.

3. A pothead comprising in combination, a casing having an inlet aperture, a closure for said aperture provided with an opening for receiving a cable sheath and having a cut away portion for receiving a ring also surrounding said cable sheath, posts carried on said ring and supporting a second ring above said first named ring, and a third ring detachably secured to said second ring.

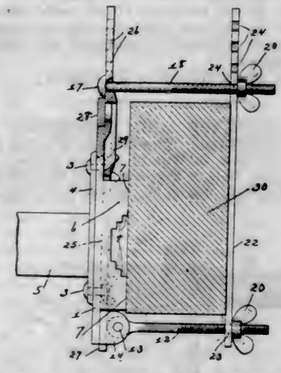
4. A pothead comprising in combination, a casing having an aperture, a perforate closure for said aperture, said closure being adapted to receive a cable sheath, and holding means within the casing for engaging the cable sheath at a place separated from the place of engagement by said closure.

5. The combination with a casing having an aperture, of a perforate closure for said aperture, said closure having an aperture for a cable sheath, and holding means within the casing for engaging the turned-back end of the cable sheath, said holding means comprising members for engaging both sides of the cable sheath at a place separated from said closure.

[Claims 6 to 16 not printed in the Gazette.]

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1,225,301. PIPE-VISE CLAMP. WALLACE F. WOLFE, Schenectady, N. Y. Filed Mar. 29, 1915, Serial No. 17,663. Renewed Mar. 15, 1917. Serial No. 155,092. (Cl. 81—41.)



1. A pipe-vise-clamp, having in combination, a clamp-base-plate provided with a plurality of bolt apertures for interchangeable connection with the bases of different pipe-vises and having along its opposite sides bearing-flanges formed with stepped seats and with extended flat bearing-surfaces on opposite sides of said stepped seats; a clamp-member complementary to said clamp-base-plate having stepped seats and on either side thereof an extended flat bearing-surface; and screw-mechanism for drawing together said clamp-base-plate and said complementary clamping member independently of the base of the pipe-vise.

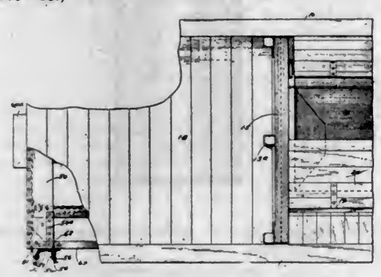
2. In a pipe-vise-clamp, and in combination, a clamp-base-plate provided with bolt-holes for connection with the base of a pipe-vise; an extension bar detachably secured to said clamp-base-plate, both said clamp-base-plate and said extension bar being adapted to receive screw-mechanism; a clamping-bar complementary to said clamp-base-plate; and screw-connections between said complementary clamping-bar, and either said clamp-base-plate or said extension-bar interchangeably.

3. In a pipe-vise-clamp, and in combination, a clamp-base-plate provided with bolt-holes for connection with the base of a pipe vise and with an opening for a clamping-bolt; of an extension-bar detachably secured to said plate, said bar having a hook embracing a portion of the plate at one end and being provided with an opening for a clamping-bolt; a clamping-member complementary to said clamp-base-plate provided with bolt-apertures; a screw-bolt connected with one end of said complementary clamping-member and adapted to interchangeably occupy the clamping-bolt-openings in the clamp-base-plate and said extension-bar; and a screw-bolt-connection between the other end of said complementary clamping-member and the other end of said clamp-base-plate.



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1,225,302. CAR. WINFIELD H. YOST, Montreal, Quebec, Canada, assignor to Rodger Ballast Car Company, Chicago, Ill., a Corporation of Maine. Original application filed July 6, 1908, Serial No. 442,106. Divided and this application filed May 7, 1913. Serial No. 766,173. (Cl. 105—15.)



1. In a car, side walls, end walls, said side walls being provided with corner members flaring outwardly at the ends of said side walls.

2. In a car, a corner stake, said stake comprising a channel beam, and a curved guide and reinforcing member carried by said beam.

3. In a car, a corner stake, said stake comprising a channel beam, a curved guide and reinforcing member carried by said beam, and a second curved member secured to said reinforcing member.

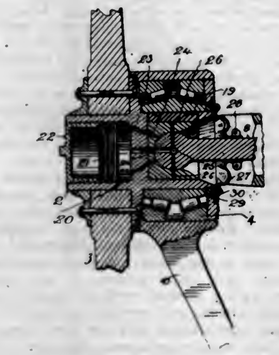
4. In a car, a corner stake, said stake comprising a channel beam, a curved guide and reinforcing member carried by said beam, and a second curved member secured to said reinforcing member adjacent the floor of said car.

5. In a car, a corner stake, said stake comprising a channel beam, and a curved guide and reinforcing member carried by said beam, said beam being rigidly secured to the underframing of said car.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,303. UNIVERSAL JOINT. WALTER S. ADAMS, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 17, 1916. Serial No. 78,815. (Cl. 74—19.)

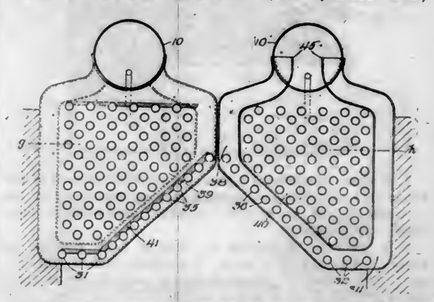


1. In a device of the class described, a casing, a cylinder rotatively mounted in said casing, said casing having an opening through which said cylinder is placed within the casing, means for closing the opening through which the cylinder is passed, the cylinder having an opening and a shaft having a head movably mounted in the opening in said cylinder, said shaft head being removable from the opening in the cylinder without removing said cylinder from its casing.

2. In a device of the class described, a casing, a cylinder rotatively mounted therein, the casing having an opening through which the cylinder is passed, a cap for said opening to close the same, said cylinder having an opening, a shaft having a head fitting the opening in the cylinder adapted to pivot about an axis at right angles to the axis of the cylinder, said shaft head being removable from the opening in the cylinder without removing said cylinder from its casing.

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1,225,304. BOILER. PAUL A. BANCEL, New York, N. Y. Filed July 9, 1913. Serial No. 778,034. (Cl. 122—291.)



1. A header or water leg for water tube boilers, provided with a separate passageway within the same to convey the steam and water from the lower tubes directly to the water and steam drum, and formed by a partition or partitions normal to the plane of the header.

2. A header or water leg for water tube boilers, provided with a plurality of passageways within the same, each of said passageways adapted to convey steam and water from groups or nests of tubes located at different heights, said passageways formed by partitions normal to the plane of the header.

3. A water tube boiler comprising front and rear headers, each divided into a plurality of passageways, the upper nest of boiler tubes connected to one of the passageways of each of said headers and the lower nest of tubes connected to another passageway in each of said headers, and means for admitting feed water through the upper nest of tubes and its corresponding passageway to the water and steam drum, said passageways in said headers for the lower nest of tubes connecting directly with the drum whereby the water from said drum previously heated by passing through the upper tubes is permitted to circulate through the lower nest of tubes and the last mentioned passageways.

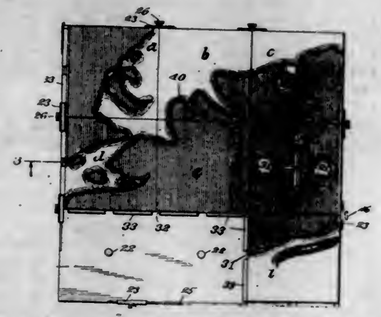
4. A water tube boiler provided with means for admitting only water to the lower nest of tubes which has already passed through the upper nest of tubes, comprising a front and rear header provided with passageways to which the upper tubes are connected, and separated passageways opening into the water and steam drum to which the lower tubes are connected, and means for admitting feed water to the drum through the upper tubes and connected passageways.

5. A water tube boiler provided with means for admitting only water to the lower nest of tubes which has already passed through the upper nest of tubes, comprising front and rear headers each provided with a passageway leading to and from the drum respectively and to which the upper tubes are connected, and separated passageways opening into the water and steam drum to which the lower tubes are connected, and means for admitting feed water to the boiler and steam drum through the upper tubes and its connected passageways, said last mentioned passage-

ways opening directly into the steam drum whereby water from said drum is adapted to circulate through said upper nest of tubes in addition to the flow from the feed pipe.

[Claims 6 to 14 not printed in the Gazette.]

1,225,305. SECTIONAL MOUNTING OF CHARTS, &c. JOHN H. BARNARD, Brooklyn, N. Y. Filed Sept. 10, 1913. Serial No. 789,018. (Cl. 35—6.)



1. A chart comprising a plurality of sections each of the same area and inter-engaging means on the edges of the sections to lock the sections together and position their edges in alinement.

2. A sectional mounting for charts, drawings and so forth, consisting of a series of sections each carrying a part of the chart or drawing, and a support, the sections being provided with means for interlocking them with each other and with the support so that consecutive sections will produce a combined area made from the several sections.

3. A chart comprising a plurality of sections each of the same area and inter-engaging means on the edges of the sections to lock the sections together and position their edges in alinement, a support for each of said sections and means for securing each section to said support.

4. A chart comprising a plurality of sections each of the same area and dove-tail engaging means on the edges of the sections to lock the sections together and position their edges in alinement.

5. A sectional mounting for charts, drawings and so forth, consisting of a series of blocks each carrying a part of the chart, and a slab, the blocks being provided with means for interlocking them with each other and with the slab, so that, consecutive sections of a print or drawing, will produce a combined area, made from each of several charts or drawings.

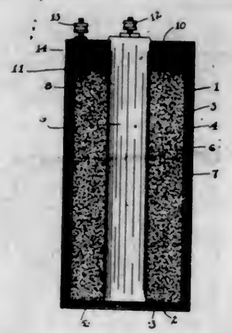
[Claims 6 to 8 not printed in the Gazette.]

1,225,306. ELECTRIC BATTERY. RAYMOND C. BENNER and HARRY F. FRENCH, Fremont, Ohio, assignors to National Carbon Company, a Corporation of New Jersey. Filed Oct. 22, 1915. Serial No. 57,231. (Cl. 204—38.)

1. In electric batteries, a sheet metal container, a bottom plate secured in one end of said container, a lining of pitchy material covering the inside of said container and bottom plate, a paper lining adhering to the inside surface of said pitchy material, and a zinc electrode inside said coating of pitchy material.

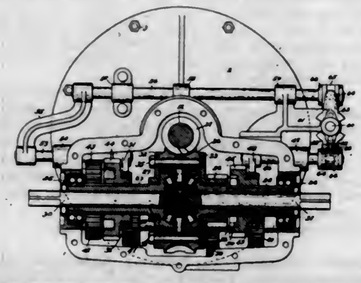
2. In electric batteries, a sheet metal container, a bottom plate in one end of said container, a coating of pitchy material inside of the container and bottom plate, a paper lining inside of said pitchy material, a thin zinc electrode fitting inside of said paper lining and a cardboard disk on top of the pitchy lining on said bottom plate.

3. In electric batteries, a sheet metal container, a metal bottom plate closing one end of the container, a coating of pitchy material on the inside of said container and bottom plate, a paper lining inside of the coating, a thin zinc electrode inside of the paper lining, a conducting strip secured to said zinc electrode and passing up over the edge of the container, a layer of insulating material



between said strip and the container and a binding post secured to said strip.

1,225,307. POWER-TRANSMISSION MECHANISM. CARL H. BLOMSTROM and LOWELL C. BLOMSTROM, Detroit, Mich. Filed Jan. 8, 1916. Serial No. 70,900. (Cl. 74—34.)



1. In a power transmission mechanism, a casing, a main shaft adapted for driving engagement with an engine, a pinion thereon, a sleeve journaled in said casing and having an enlarged portion forming a gear housing, shaft sections journaled in said sleeve, differential gearing inclosed by said housing, and connected in driving engagement with said shaft sections, a gear ring embracing and bearing circumferentially on said enlarged portion of said housing and meshing with the pinion of said main shaft, and clutch mechanism operably carried on said sleeve and coöperating with said gear ring for establishing a direct driving connection between said main shaft and said shaft sections through said differential gearing.

2. In a power transmission mechanism, a casing, a main shaft adapted for driving engagement with an engine, a pinion thereon, a sleeve journaled in said casing and having an enlarged portion forming a gear housing, shaft sections journaled in said sleeve, differential gearing inclosed by said housing and connected in driving engagement with said shaft sections, a gear ring embracing and bearing circumferentially on said enlarged portion of said housing and overlapping the sides of the same, said gear ring meshing with the pinion gear of said main shaft, and clutch mechanism operably carried on said sleeve and coöperating with said gear ring for establishing a direct driving connection between said main shaft and said shaft sections through said differential gearing.

3. In a power transmission mechanism, a casing, a main shaft adapted for driving engagement with an engine and a pinion carried thereon, a sleeve journaled in said



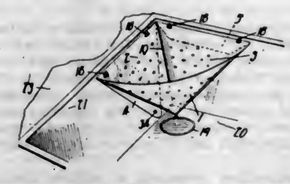
casing and forming a gear housing, shaft sections journaled in said sleeve, differential gearing in said housing and connected in driving engagement with said shaft sections, a countershaft journaled in said casing, transmitting gears of varying sizes carried thereby, a gear ring rotatably embracing said housing and in driving engagement with said pinion, a pinion thereon in mesh with a gear of said countershaft, and a slidable gear mounted on said sleeve and operatively arranged for locking engagement with the pinion of said gear ring and for direct engagement with a gear of said countershaft for transmitting motion either directly from said gear ring or through said countershaft to said shaft sections.

4. In a power transmission mechanism, a casing, a main shaft adapted for driving engagement with an engine and a pinion carried thereon, a sleeve journaled in said casing and forming a gear housing, shaft sections journaled in said sleeve, differential gearing mounted in said housing and connected in driving engagement with said shaft sections, a countershaft journaled in said housing, transmitting gears of varying sizes, on said counter shaft, a gear ring rotatably embracing said housing and overlapping the sides of the same, said gear ring being in driving engagement with said pinion, a pinion thereon in mesh with a gear of said countershaft, and a slidable gear mounted on said sleeve and operatively arranged for locking engagement with the pinion of said gear ring and for direct engagement with a gear of said countershaft for transmitting motion either directly from said gear ring or through said countershaft to said shaft sections.

5. In a power transmission mechanism, a main shaft adapted for driving engagement with an engine and a pinion carried thereon, a sleeve structure, shaft sections journaled in said sleeve structure, differential gearing carried by said sleeve structure and connected in driving engagement with said shaft sections, a countershaft, transmitting gears of various sizes on said countershaft, a gear ring in mesh with said pinion and a pinion thereon in mesh with a gear on said countershaft, a slidable gear mounted on said sleeve structure and movable into and out of engagement with a gear on said countershaft for transmitting motion from said gear ring through said countershaft to said shaft sections.

[Claims 6 to 11 not printed in the Gazette.]

1,225,308. GARBAGE-RECEPTACLE FOR SINKS. JULIUS L. BORN, Detroit, Mich. Filed Jan. 26, 1916. Serial No. 74,285. (Cl. 4—35.)



1. In combination with a sink, a garbage receptacle support mounted in position to support a garbage receptacle therein, said support including an arm having a plurality of spaced, upwardly extending projections thereon, and a paper garbage receptacle having perforations in which the projections are received, whereby the receptacle may be readily secured on the arm or detached therefrom.

2. In combination with a sink, a garbage receptacle support mounted in position to support a garbage receptacle therein, said support including an arm having a plurality of spaced upwardly extending projections thereon, and a paper garbage receptacle having perforations in which the projections are received, whereby the receptacle may be readily secured on the arm or detached therefrom, said receptacle having an open top and a flap arranged to be swung over the contents of the receptacle to prevent the hand of the user from being soiled thereby.

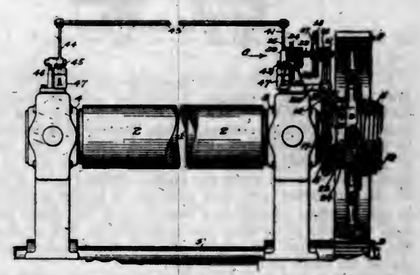
3. In combination with a sink and a drainboard therefor, a garbage receptacle conforming to one wall of the sink, said receptacle including a flap which is adapted to lie on top of the drainboard, and means for retaining the flap in the position stated.

4. In combination with a sink and a drainboard therefor, a paper garbage receptacle conforming to one wall of the sink, said receptacle including a flap which is adapted to lie on top of the drainboard, and to be swung over the top of the receptacle to prevent the hand of the user from being soiled by the contents thereof, and means for retaining the flap in the first named position, whereby the receptacle is prevented from moving away from the wall of the sink.

5. A garbage receptacle formed from a blank having a substantially sector shaped body portion, side portions along the radial edges of the body portion and arranged to be bent at right angles thereto, and a cover flap along one edge of one of the side portions, said cover portion being arranged to be swung about the said edge.

[Claims 6 to 14 not printed in the Gazette.]

1,225,309. CLUTCH FOR ROLL-DRIVING MECHANISM. DAVID R. BOWEN, Ansonia, Conn., assignor to Farrel Foundry & Machine Company, Ansonia, Conn., a Corporation of Connecticut. Filed June 16, 1908. Serial No. 438,701. (Cl. 192—14.)



1. The combination with a driven shaft, of a driver arranged to drive said shaft and mounted on the shaft, a clutch connecting the driver to and disconnecting it from the shaft and arranged to yieldingly open, clutch operating connections including a rock-shaft, an actuating member for the rock-shaft, means for giving the actuating member a gradual movement in two directions to rock the rock-shaft, thus throwing the clutch into and out of operation, and means for quickly releasing it to allow it to move quickly in one direction to rock the shaft to throw the clutch out.

2. The combination with a driving pinion, of a driven shaft, a relatively large gear operating also as a fly wheel loosely mounted on the shaft and arranged to drive the shaft, a slip clutch connection between the gear and the shaft, and means for operating the clutch.

3. The combination with a driving pinion, of a driven shaft, a relatively large gear operating also as a fly wheel mounted on the shaft and arranged to drive the shaft, a slip clutch connection between the gear and the shaft, means for operating the clutch to connect it to and disconnect it from the shaft, and an instantaneous release mechanism for disconnecting the gear from the shaft.

4. The combination with a driven shaft, of a relatively large gear operating also as a fly wheel on the shaft and arranged to drive the shaft, a coil clutch connection between the gear and the shaft, means for operating the clutch to connect the gear to and disconnect it from the shaft, and a release mechanism including an actuator accessible from points along the shaft for instantaneously disconnecting the clutch from the shaft.

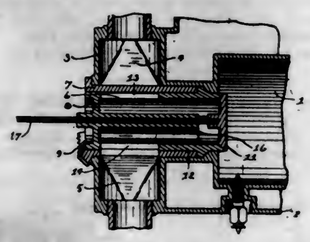
5. The combination with a driven shaft, of a gear mounted on the shaft and arranged to drive said shaft,

said gear having a recessed hub, a clutch lying on one side of the hub and extending into the recess and arranged to release the shaft, a sliding collar on the opposite side of the hub, connections between the collar and clutch extending through the gear, a lever for operating the collar, means including a screw and a hand operated nut for operating the lever, means for holding the screw against endwise movement, and an actuator arranged to release the said screw-holding means.

[Claim 6 not printed in the Gazette.]

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1,225,310. INTERNAL-COMBUSTION ENGINE. JOHN W. BURKETT, Columbus, Ohio, assignor to The Burkett Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Dec. 1, 1916. Serial No. 134,302. (Cl. 123—79.)



1. In an internal combustion engine provided with intake and exhaust passages, a common passage leading into the engine cylinder and communicating with both the intake and exhaust passages, a cage member located within said common passage and provided with a valve seat at its inner end, a hollow valve supported by said cage member movable to bring the engine cylinder into or out of communication with said passages, a pocket structure in said common passage in a position over the intake passage and open at its front end to permit the flow of gases therethrough into the engine cylinder, and a valve working on the valve seat of said cage.

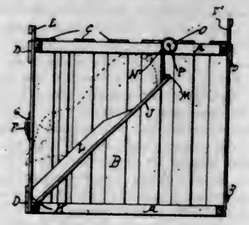
2. In an internal combustion engine provided with intake and exhaust passages, a common passage leading into the engine cylinder and communicating with both the intake and exhaust passages, a cage member located within said common passage and provided with a valve seat at its inner end, a hollow valve supported by said cage member and movable to open or close communication between the engine cylinder and said passages, a pocket wall located within said common passage between said intake and exhaust passages to form a pocket for the incoming gases, and a valve working on the valve seat of said cage.

3. In an internal combustion engine provided with intake and exhaust passages, a common passage leading into the engine cylinder and communicating with both the intake and exhaust passages, a cage member located within said common passage and provided with a valve seat on its inner end, a hollow sleeve valve supported on the exterior of said cage member movable to open or close the communication between said passages and the engine cylinder, a pocket wall within said cage member interposed between said intake and exhaust passages and open at its inner end, and a primary valve working on the valve seat of said cage.

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1,225,311. HOG RINGING AND CASTRATING CRATE. EUGENE BUTTS, Evansville, Wis. Filed Mar. 22, 1916. Serial No. 85,842. (Cl. 119—99.)

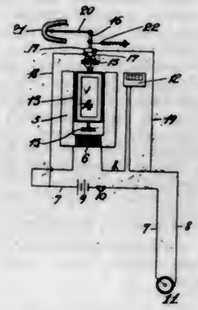
The combination with an open ended crate of rectangular construction, of sliding doors mounted in the open ends thereof, one of said doors having a centrally disposed enlarged opening to admit either the nose or posterior portion of the animal and a pair of leg receiving openings disposed near its bottom and on either side of said enlarged opening, a platform forming the floor of the crate and having one end free and its other end hinged to the crate near the door having the openings, said platform having guides on either side to prevent the feet of the animal from slipping therefrom, and means for elevating the free end of said platform consisting of a



drum mounted on the top of the crate, a handle for operating the drum, a rope connected to the free end of the platform and wound upon said drum, and a pawl and ratchet on the drum and crate for securing the platform in raised position.

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1,225,312. SPEEDOMETER. ALLEN A. CANTON, New York, N. Y., assignor to The Device Testing Company, a Corporation of Connecticut. Filed May 17, 1913. Serial No. 768,220. (Cl. 175—183.)



1. A speedometer comprising a movable indicator, an electromagnet for producing a magnetic field, a coil mounted to move within said magnetic field to operate said movable indicator, an electric circuit for supplying current to said electromagnet, a current interrupting device in said circuit and means for operating said interrupting device to cause current impulses of equal duration to pass through said electric circuit and said electromagnet.

2. A speedometer comprising a movable indicator, an electromagnet for producing a magnetic field, a coil mounted to move within said magnetic field to operate said movable indicator, an electric circuit for supplying current to said electromagnet, a current interrupting device in said circuit and means for operating said interrupting device to cause current impulses of equal duration to pass through said electric circuit and said electromagnet irrespective of the operating speed of said interrupting device.

3. A speedometer comprising a movable indicator, an electromagnet for producing a magnetic field, a coil mounted to move within said magnetic field to operate said movable indicator, an electric circuit for supplying current to said electromagnet, a rotatable current interrupter device in said circuit and means for rotating said device stepwise through a constant angle for each step irrespective of the operating speed of said interrupting device.

4. The combination with a shaft the speed of which is to be measured, of a speedometer comprising an indicator,



an electric circuit, an electromagnet therein for operating said indicator, means for varying the strength of said electromagnet comprising a current interrupting device and a member driven by said shaft for intermittently operating said device to cause current impulses of equal duration to pass through the said electric circuit and electromagnet irrespective of the operating speed of the said shaft.

5. The combination with a shaft the speed of which is to be measured, a speedometer comprising an indicator, an electromagnet for operating said indicator, means for passing current impulses of equal duration through said electromagnet to vary the strength thereof, said means comprising an electric circuit, an interrupting device for interrupting the current in said circuit and means driven by said shaft for intermittently operating said interrupting device.

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1,225,313. HOOD-CLAMP. CHAUNCEY CHAMBERLAIN, Ionia, Mich., assignor to John F. Field, Ionia, Mich. Filed Sept. 2, 1916. Serial No. 118,186. (Cl. 70—82.)



1. A hood clamp, comprising a fixed bolt, a barrel engaging thereabout and provided with a spring, and a hook on the lower end of the barrel whereby the barrel may be lifted and turned through quarter of a turn for disengaging the hook or engaging the hook with the bead of the hood cover.

2. A hood clamp, having in combination, a strip of metal securable to the side frame bar of an automobile and having an outwardly and downwardly bent portion, a bolt secured thereto in fixed relation so as to project upwardly and tip slightly outwardly, a barrel arranged to reciprocate upon the bolt and turn thereabout, a coiled spring engaging between the lower end of the barrel and the head of the bolt, and a hook on the lower end of the barrel adapted to engage the bead of the hood cover.

3. A hood clamp, having in combination, an inclined upright arranged to have a fixed and permanent relation with respect to the hood, a barrel engaging thereabout and arranged to reciprocate and turn about the fixed upright, a coiled spring in the barrel tending to force the barrel downward, and means on the barrel for engaging with the hood for holding the same down.

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1,225,314. GAGE. ROBERT CONRAD, Weissensee, near Berlin, Germany. Filed Dec. 29, 1908. Serial No. 469,859. (Cl. 33—168.)



1. In a gage, the combination of a tubular holder, a tube shorter than said holder mounted therein, one or more spheres in said tube, and one or more spheres in said holder, said spheres being tangential to one another to form the determinative measuring parts.

2. In a gage the combination of a tubular holder, a tube shorter than said holder mounted therein, a plurality of spheres of varying diameters in said tube and one or more spheres in said holder, all said spheres being tangential to one another to form the determinative measuring parts.

3. A measuring instrument including a tubular holder, and a single row of spheres within said holder and contacting with each other, the two terminal spheres of said row projecting slightly beyond the ends of said holder and adapted to engage with opposed surfaces between which it is desired to gage the distance.

4. A measuring instrument including a holder and a plurality of spheres disposed therein and contacting with each other, portions of opposed surfaces of separate spheres being exposed and adapted to engage with the surfaces between which it is desired to gage the distance.

5. In a measuring instrument the combination of a holder and a plurality of spheres, a surface portion of one sphere being opposed to a surface portion of another sphere and other surface portions being exposed and adapted to engage with the surface to be gaged.

[Claim 6 not printed in the Gazette.]

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1,225,315. GAGE. ROBERT CONRAD, Berlin, Germany. Filed June 26, 1913. Serial No. 775,842. (Cl. 33—168.)



1. A gage comprising a one-piece gaging member in the form of a spherical steel ball presenting a polished, hardened peripheral surface with all diameters constituting the determinative measuring distance and having a portion at one side of said peripheral surface cut away to leave a non-spherical surface, and a handle secured to said member at said non-spherical surface and of smaller diameter than said member, whereby said member may enter the bore or interior to be gaged and insure accurate gaging irrespective of wide variation in the angle of the handle in respect to said bore or interior.

2. A gage comprising a steel spherical ball having a hardened polished surface and a handle secured thereto, said handle being of smaller diameter than said ball at the point of attachment whereby said ball is adapted to enter the bore or interior to be gaged irrespective of wide variations in the angle of the handle in respect to the bore, and the diameter of said ball constituting the determinative measuring distance.

3. A gage comprising a steel ball having a hardened polished surface and a tubular sheet metal handle of smaller diameter than said ball and having a portion of said ball projecting into said handle and rigidly secured thereto.

4. A plug or bore gage comprising in combination a one-piece gaging element in the form of a steel ball having a hardened spherical surface, said member being adapted to enter the bore or interior to be gaged and afford all the gaging contacts therefor, and a separate handle, said gage piece being provided with a projecting portion and said handle at one end serving to receive and retain said projection.

5. A plug or bore gage comprising in combination a one-piece gaging element adapted to enter the bore or interior to be gaged and afford all the gaging contacts therefor, and a separate handle, said gage piece provided with a projecting portion and said handle at one end serving to receive and retain said projection, and a locking ring encircling said end portion and retaining the latter in engagement with said projection.

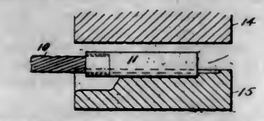
[Claims 6 to 12 not printed in the Gazette.]

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1,225,316. PROCESS OF MAKING RAIL-BONDS. LAWRENCE P. CRECELIUS, Cleveland, Ohio, assignor to The Electric Railway Improvement Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 23, 1914. Serial No. 873,517. (Cl. 29—148.)

1. The method of producing a rail bond, which comprises inserting a conductor into a socketed terminal; heating the conductor and terminal; and by pressure bra-

ing together the conductor and terminal and simultaneously swaging the terminal.




2. The method of producing a rail bond, which comprises uniformly uniting by heat and predetermined pressure a conductor and a portion of a bond terminal, and simultaneously applying pressure to another portion of the terminal so as to form a swaged end suitable to be united to a rail.

3. The method of forming a rail bond, which consists in uniting a conductor to a portion of a terminal by brazing the same thereto through the application of heat and pressure, and simultaneously applying pressure to another portion of the bond located beyond the end of the conductor so as to form a swaged end suitable to be united to a rail.

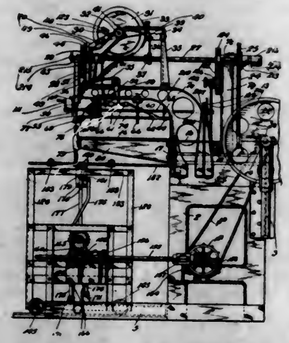
4. The method of forming a terminal for a rail bond which comprises simultaneously intimately uniting a conductor and terminal member with a portion of the terminal member wholly surrounding a portion of the conductor and simultaneously shaping the terminal.

5. The method of forming a terminal of a rail bond which comprises simultaneously intimately uniting by heat and pressure a conductor and a portion of a terminal member with a portion of the terminal member surrounding a portion of the conductor and simultaneously flattening or shaping the portion of the bond terminal which is to be applied to the rail.

[Claim 6 not printed in the Gazette.]

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1,225,317. AUTOMATIC NAILING-MACHINE. THOMAS G. CUMMINGS, Grand Rapids, Mich., assignor of one-half to Patrick Grant, Grand Rapids, Mich. Filed Aug. 30, 1915. Serial No. 47,974. (Cl. 1—10.)



1. In a nailing machine, a supporting frame, a plurality of nailing mechanisms mounted on said frame lengthwise thereof and in alinement, each nailing mechanism overhanging a distance in front of the frame, tracks extending at right angles to the length and in front of said frame, a work holder movably mounted on said tracks, means to drive said nailing mechanisms, means for moving the workholder step by step toward or from the frame, and means for moving the nailing mechanisms step by step lengthwise of the frame and over the workholder, substantially as described.

2. In a nailing machine, a supporting frame, a plurality of nailing mechanisms mounted on said frame in alinement lengthwise thereof, each nailing mechanism overhanging a distance in front of the frame, tracks extending at right angles to the length and in front of the frame, a work-holder movably mounted on said tracks, means to drive the nailing mechanisms, means for moving the work holder step by step toward or from the frame while the nailing mechanisms are in operation, means for similarly moving the nailing mechanisms step by step in either direction lengthwise of the frame and over the workholder, and a manually operated means for the workholder and for the nailing mechanisms for controlling the action of each as to direction of movement and time of operation, substantially as described.

3. In a nailing machine, a supporting frame, a nailing mechanism mounted on the frame, means to drive the nailing mechanism, a work holder positioned below the nailing mechanism and in front of the supporting frame, means interposed between the driving means and the work holder for moving it step by step in a direction at right angles to the length of the frame and toward or from the supporting frame when said driving means is in operation, and means carried by the work holder to reverse the direction of movement of the work holder, substantially as described.

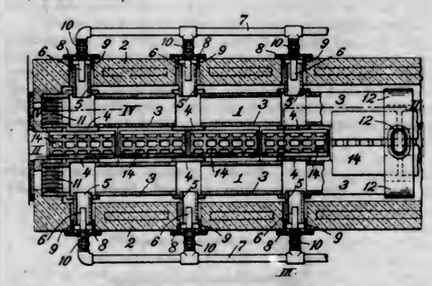
4. In a nailing machine, a supporting frame, a nailing mechanism mounted on the frame, a work holder positioned below the nailing mechanism and in front of the supporting frame, means to drive the nailing mechanism, means driven by the said driving means for moving the work holder in a direction at right angles to the length of the frame back and forth step by step in front of the supporting frame, and means carried by the workholder and engaged by the supporting frame to automatically render said moving means inoperative on attainment of a predetermined position thereof with reference to the supporting frame, substantially as described.

5. In a nailing machine, a supporting frame, a nailing mechanism mounted on the frame, means to drive said mechanism, a work holding frame positioned below the nailing mechanism, and in front of the supporting frame, tracks supporting the work holder, a shaft extending lengthwise of the work holder, racks paralleling the tracks, pinions on the shaft engaging the racks, a ratchet wheel on the shaft, a pair of levers loosely mounted on the shaft and extending in opposite directions, pawls on the levers normally engaging the ratchet wheel, means driven by the driving means to oscillate the levers through a limited arc about the shaft, and means for holding either pawl away from the ratchet, and simultaneously permitting the engagement of the other pawl therewith, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

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1,225,318. TUNNEL-KILN. CONRAD DRESSLER, Marlow, England. Filed May 24, 1916. Serial No. 99,535. (Cl. 25—142.)



1. A tunnel oven of the type described, comprising an inclosing chamber, a combustion chamber arranged longitudinally on each side of the inclosing chamber, and adapted to heat by radiation and discharge the products of combustion exterior to the inclosing chamber, means for heating the combustion chamber, and means for regulating the heating means.

2. A tunnel oven of the type described, comprising an inclosing chamber, a combustion chamber arranged longitudinally on each side of the inclosing chamber and adapted to heat by radiation and discharge the products of combustion exterior to the inclosing chamber, means for heating the combustion chamber situated at one end thereof, means for heating the combustion chamber situated at sections of the length thereof, and means for conveying the products of combustion from the combustion chambers.

3. A tunnel oven of the type described, comprising an inclosing chamber, a combustion chamber arranged longitudinally along the floor at each side of the inclosing chamber and adapted to heat by radiation and discharge the products of combustion exterior to the inclosing chamber, means for heating the combustion chamber situated at one end thereof, means for heating the combustion chamber situated at a distance from each other and along the length of said chamber, and means for conveying the products of combustion from the combustion chamber.

4. A tunnel oven of the type described, comprising an inclosing chamber, a combustion chamber arranged longitudinally on each side of the inclosing chamber and adapted to heat by radiation and discharge the products of combustion exterior to the inclosing chamber, said combustion chamber consisting of a series of sections and a series of interposed sleeves, means for heating the combustion chamber located along the length thereof, and means for controlling the supply of heat.

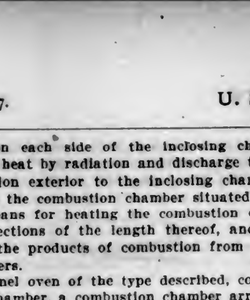
5. A tunnel oven of the type described, comprising an inclosing chamber, a combustion chamber arranged longitudinally on each side of the inclosing chamber and adapted to heat by radiation and discharge the products of combustion exterior to the inclosing chamber, means for heating the combustion chamber situated at one end thereof, means consisting of gas and air burners arranged at intervals along said combustion chamber, and means for controlling the heat at the gas and air burners.

[Claims 6 to 8 not printed in the Gazette.]



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1,225,319. SUPPORT FOR WASHTUBS. MAURICE M. ELY, Clinton, Iowa, assignor of one-half to C. F. Hooks, Clinton, Iowa. Filed Oct. 30, 1913. Serial No. 798,181. (Cl. 68—35.)

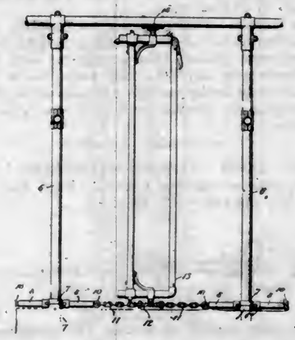



1. In apparatus of the class described, an angle plate, a bent leg, a transverse slot therein adapted to receive one flange of said angle plate, said plate having a bolt hole therein, a pair of bolt holes in said leg one of which is adjacent the slot, bolts passing through said holes, a hook plate having a pair of apertures to receive the bolts passed through said bolt holes, and wing nuts on said bolts, all so constructed and arranged that when said leg, angle plate and hook plate are bolted together said hook plate will reinforce said leg at the slot, and the angle plate will form a support for a tub.

2. In apparatus of the class described, an angle plate, a leg, a recess therein to receive said angle plate, an adjustable hook plate adapted to fit over the upper rim of a tub and having elongated bolt holes therein and adapted to be bolted to the rear of said leg, the lower end of said hook plate overlying the back of the leg opposite the recess therein, substantially as described, whereby said leg will be bolted between the angle plate and the hook plate.

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1,225,320. STALL CONSTRUCTION. HENRY L. FERRIS, Harvard, Ill., assignor to Hunt, Helm, Ferris & Company, Harvard, Ill., a Corporation of Illinois. Filed Nov. 7 1913. Serial No. 799,651. (Cl. 119—150.)



1. In combination, a stanchion, an elastic device secured to one end thereof to normally hold the stanchion in a central position and to yield under force and permit longitudinal movement of the stanchion in either direction, and stationary supporting means for the said elastic device.

2. In combination, a stanchion, two loosely mounted elastically extensible devices permitting both longitudinal and transverse movement of the stanchion, each having one end attached to one end of the stanchion and extending oppositely therefrom, and stationary supports for the opposite ends of said elastic devices.

3. In combination, a stanchion, two elastically extensible devices, each having one end attached to one end of the stanchion and extending oppositely therefrom, and stationary pivotal supports for the opposite ends of said elastic devices.

4. In combination, a stanchion, a flexible device in the center of which the stanchion is attached at one end permitting both longitudinal and transverse movement of the stanchion, and means to hold said flexible device under tension.

5. In combination, a stanchion, a stationary support, an elastic device connecting said stationary support with one end of said stanchion, and means for supporting the opposite end of the stanchion, said stanchion being free to move longitudinally against the resistance of said elastic device.

[Claims 6 to 12 not printed in the Gazette.]

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1,225,321. PROCESS OF NITRATING TOLUOLS CONTAINING PARAFFINS. BERNHARD JACQUES FLURSCHEIM, Ficet, England, assignor to Aetna Explosives Company, Inc., New York, N. Y., a Corporation of New York. Filed Mar. 23, 1916. Serial No. 86,180. (Cl. 23—24.)

1. The process of separating mononitrotoluol from contained paraffins which consists in mixing the same with sulfuric acid until the mononitrotoluol is dissolved therein and then separating the solution from the paraffins.

2. The process of separating mononitrotoluol from contained paraffins which consists in mixing the same with a substantially equal quantity by volume of sulfuric acid, and then separating the solution of mononitrotoluol and acid from the paraffins.

3. The process of manufacturing trinitrotoluol from toluol containing paraffins, which consists in nitrating the toluol to mononitrotoluol, then mixing the mononitrotoluol with sulfuric acid until the mononitrotoluol is

dissolved therein and separating out the undissolved paraffins, and then nitrating the purified mononitrotoluol to trinitrotoluol.

4. The process of manufacturing trinitrotoluol from toluol containing paraffins, which consists in nitrating the toluol to mononitrotoluol, then adding to the mononitrotoluol a substantially equal quantity by volume of sulfuric acid to dissolve the mononitrotoluol, separating out the undissolved paraffins, and then nitrating the purified mononitrotoluol to trinitrotoluol.

5. The process which consists in nitrating a hydrocarbon of the benzol series containing paraffin to a mononitro derivative thereof, then mixing the said derivative with sulfuric acid until the said derivative is dissolved therein and separating out the undissolved paraffins, and then nitrating the purified derivative to a higher degree of nitration.

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1,225,322. DOOR-CLOSING MECHANISM. CHARLES FORTH, Ottawa, Ontario, Canada. Filed Aug. 4, 1916. Serial No. 113,100. (Cl. 16—88.)



1. In a door closing mechanism, the combination of a closing motor, an arm actuated thereby, a link pivoted to the arm, a toothed member carried by one of said parts adjacent the pivot, a yielding locking member carried by and movable relatively to the other part and adapted to engage the toothed member and hold the link and arm yieldingly against relative pivotal movement, and a manually operable releasing device sustained in position to act on the locking member, said releasing device being operable at will to disengage the locking member from the toothed member and hold the same disengaged.

2. In a door closing mechanism, the combination of a closing motor, an arm actuated thereby, a link pivoted to the arm, a toothed member carried by the link adjacent the pivot, a yielding locking member mounted on the arm and adapted to engage the toothed member and hold the parts yieldingly against relative movement, and a manually operable releasing device sustained in position to act on the locking member, said releasing device being operable at will to disengage the locking member from the toothed member and hold the same disengaged.

3. In a door closing mechanism, the combination of a closing motor, an arm actuated thereby, a link, a pivot connecting the arm and link pivotally together, a toothed member surrounding the pin between the arm and link and movable with the link, a spring-pressed locking bolt mounted on the arm in position to engage the toothed member and hold the arm and link yieldingly against relative pivotal movement, and a manually operable releasing cam sustained in position to act on the locking bolt and disengage it from the toothed member.

4. In a door closing mechanism, the combination of a closing motor, an arm actuated thereby, a link, a pivot pin connecting the arm and link pivotally together, a toothed disk surrounding the pin between the arm and link and connected with the link, a spring-pressed locking bolt mounted on the arm and provided on its end with a locking tooth in position to engage between the teeth on the disk, and acting when so engaged to hold the arm and link yieldingly against relative pivotal movement, and a manually operable releasing cam rotatable on the pivot pin between the toothed disk and arm in position to act on the locking tooth and disengage the same from the toothed disk.

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1,225,323. SANITARY SOAP-DISK. OTTO GOETZKE, Jersey City, N. J. Filed Mar. 19, 1917. Serial No. 155,739. (Cl. 87—23.)

1. A circular centrally concaved paste-board disk having an inwardly raised and beveled edge seated upon a corresponding paste-board disk both of which are coated on their outer surfaces with a thin coating of soap and a film of soap closing the edges and holding the two disks together.




2. The combination of a circular concaved shell like disk loosely seated on the rim surface of another circular concaved shell like disk and a film of soap inclosing the outer surfaces and edges thereof and holding the two shells together substantially as described.

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1,225,324. IDENTIFICATION DEVICE. CHARLES F. GOLDBECK, Philadelphia, Pa. Filed Aug. 8, 1916. Serial No. 113,686. (Cl. 40—10.)



1. An identification device composed of an attaching plate, a bar of resilient material which is connected pivotally with said plate, said bar and plate having between them a chamber for receiving identification matter, said bar being adapted to cover and uncover said chamber and means on said bar and plate for locking said bar in closed position over said chamber, said bar being adapted to be bent out from its pivotal end thus disconnecting the locking means and turned to the right or left and to spring back flat upon said attaching plate preserving the uncovered condition of said chamber.

2. An identification device composed of an attaching plate, a bar which is connected pivotally with said plate, said bar and plate having between them a chamber for receiving identification matter, said bar being adapted to cover and uncover said chamber, and means for locking said bar and plate with each other, said bar being of resilient material and held at one end on said plate by the pivot of the plate, and having a member of said locking means on the free end of the bar, the sides of the bar extending from the side walls of said chamber forming flanges which are adapted to rest flat on said attaching plate.

3. An identification device composed of an attaching plate, and a resilient bar which is connected pivotally with said plate, said bar and plate having between them a chamber for receiving identification matter, said bar being adapted to cover and uncover said chamber, said bar being provided on its free end with a teat, and said plate being provided with a socket with which said teat may be engaged for resiliently locking said bar with said plate, the sides of said bar forming on the sides of said chamber flanges which are adapted to rest flat on said attaching plate.

4. An identification device composed of an attaching plate having a locking member thereon, a resilient laterally movable bar pivotally connected at one end with said plate and having on its free end a locking member adapted to engage that on said attaching plate, said bar being bendable by its resiliency in and out from said pivot, said bar and plate having in the same a chamber for containing the identification matter.

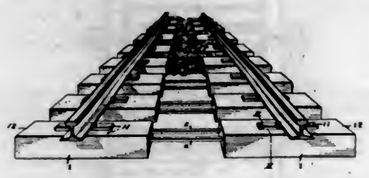
5. An identification device composed of an attaching plate having a locking member thereon, a resilient laterally movable bar pivotally connected at one end with said plate and having on its free end a locking member adapted to engage that on said attaching plate, said bar being bendable by its resiliency in and out from said pivot, said bar and plate having in the same a chamber for containing the identification matter, the sides of said bar forming on the sides of said chamber flanges which are adapted to rest flat on said attaching plate.

[Claim 6 not printed in the Gazette.]



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1,225,325. CONCRETE RAILWAY-TIE. EDGAR N. GOODLETT, San Francisco, Cal. Filed Feb. 3, 1916. Serial No. 75,894. (Cl. 238—3.)



1. A railway tie including a plurality of sections joined by resilient rods and having recesses therein tapering downwardly; and tapered blocks fitting said recesses, each section being formed with a hole running from the lower face thereof to the recess therein to receive a block dislodging tool.

2. A railway tie including concrete end sections with recesses therein tapering downwardly; removable compressible blocks frictionally engaging the walls of said recesses; and rods joining said end sections each section being formed with an unobstructed hole to receive a block dislodging tool.

3. A railway tie including concrete end sections with downwardly tapering recesses therein opening in the center of the tops of said end sections; blocks fitting said recesses, and continuous resilient rods joining said end sections and embedded therein.

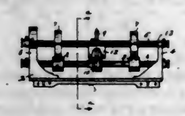
4. A railway tie including concrete end sections with downwardly tapering recesses therein opening in the center of the tops of said end sections; blocks fitting said recesses, and continuous resilient joining rods embeded in the ends of said end sections.

5. A railway tie including concrete end sections with recesses therein tapering downwardly; pairs of blocks combined and shaped to fit said recesses and projecting above said end sections; and resilient joining rods embedded in said end sections.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,326. PERFORATOR. HAROLD D. HAHL and JAMES J. LAMBERT, Houston, Tex. Filed Mar. 17, 1916. Serial No. 84,797. (Cl. 164—100.)

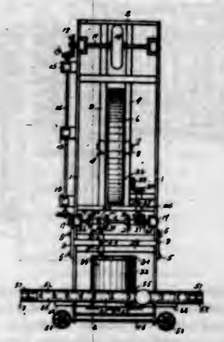


1. A device of the character described including two rotatable shafts, a disk whose margin is tapered to an edge and serrated forming teeth, adjustably mounted on one of the shafts, a roller having a plurality of peripheral grooves fixed upon the other shaft, said teeth projecting into the opposing groove of said roller, ejector wheels fixed on one of said shafts and opposing ejector bearings formed of yieldable material fixed on the other shaft and contacting with said respective wheels.

2. A device of the character described including two rotatable shafts, a disk whose margin is tapered to an edge and serrated forming teeth adjustably mounted on one of the said shafts, a roller having a plurality of peripheral grooves fixed on the other shaft, said teeth projecting into the opposing groove of said roller, and flexible fingers opposing the roller and tending to hold the paper being perforated against said roller and between which the disk operates.

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1,225,327. DITCHING-MACHINE. WALTER W. HARTSOUGH, Minneapolis, Minn. Filed Apr. 24, 1915. Serial No. 23,588. (Cl. 37—29.)



1. In a device of the character described, a rotatable drum, a plurality of knives radiating relative to each other and whose inner ends are pivoted to the forward end of said drum, each edge of each knife being a cutting edge, a strap for each knife, each end of each strap being secured to the drum and each strap being spaced from the drum, providing a slot in which each knife oscillates, each slot being arcuate in contour, so as to cause a lateral oscillation of the knife as it moves back and forth in said slot.

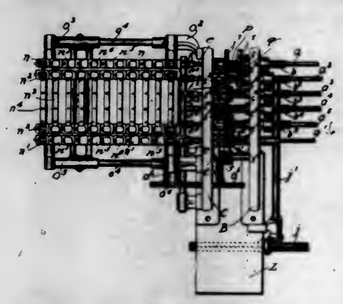
2. In a device of the character described, a rotatable drum, a knife whose inner end is pivoted to one end of said drum and whose outer end extends beyond the periphery of said drum, each edge of said knife being a cutting edge, a means for securing the knife against the end of the drum, said means providing a slot through which the knife projects and in which it has a limited lateral movement, said slot being so shaped as to hold the operative edge of the knife at an outwardly diverging angle relative to the end of the drum.

3. A device of the character described including a supporting frame, a drum rotatably mounted at one end thereof, a chute arranged on each side of the drum and carried by the frame, said chutes diverging upwardly from the drum, an endless conveyer driven by the drum and traveling along said chutes, scapers carried by said conveyer, whose free edges travel along the bottom of said chutes and convey material along the chutes and discharge it from the upper end thereof, means for driving said drum, a reversing mechanism whereby said driving means may be caused to operate in either direction, cutting blades carried by the forward end of the drum, by means of which the material to be excavated is delivered into the path of said conveyer.

4. In a device of the character described, a rotatable drum, a plurality of knives radiating relative to each other and whose inner ends are pivoted to the forward end of said drum, the free end of each knife being widened, each edge of each knife being formed into a cutting edge and means permitting a limited lateral operation of each knife.

5. In a device of the character described, a rotatable drum, a plurality of knives radiating relative to each other and whose inner ends are pivoted to the end of said drum, the free end of each knife being turned at right angles to the body thereof, each edge of said knife being formed into a cutting edge and the bearing in which each knife operates, permitting a limited lateral movement thereof.

1,225,328. PATTERN-CONTROLLED DEVICE. EDGAR F. HATHAWAY, Boston, and CHARLES D. LANNING, Dorchester, Mass., assignors to American Warp Drawing Machine Company, Boston, Mass., a Corporation of Maine. Filed Apr. 2, 1906. Serial No. 309,323. (Cl. 139—94.)



1. Driving mechanism for machines having operating devices to be intermittently actuated, comprising an intermittently rotated clutch member normally free to turn relatively to its corresponding operating device, a counter clutch member capable of linear movement independent of the other member, means for disengaging said clutch members, pattern mechanism controlling the movement thereof, and means permitting a yielding longitudinal movement of said rotatable clutch member.

2. In a machine for operating upon warp threads having a plurality of operating parts to be intermittently actuated, the combination with pattern mechanism, clutch members controlled thereby comprising an intermittently rotatable part, a stationary part, a part adapted to be moved into engagement with said rotatable or stationary part, and means permitting relative yielding movement between said stationary and rotatable parts.

3. In a machine of the class described, the combination with pattern mechanism of the sleeve *d*, the gear *i*, the coöperative clutch pin *f* adapted to be connected thereto and the spring *p* associated with the gear.

4. In a warp-drawing machine the conbination with drawing-in mechanism, harness eye positioning devices adapted to be intermittently actuated, pattern mechanism, clutch members controlled thereby for the actuation of said positioning devices, said clutch members comprising each an intermittently rotatable part, a stationary part, a part adapted to be moved into engagement with said rotatable or stationary part, and means permitting relative yielding movement between the said stationary and rotatable parts.

5. In a warp-drawing machine the combination with drawing-in mechanism of harness eye selecting devices adapted to be intermittently actuated, pattern mechanism for selecting and causing the actuation intermittently of one or more of said devices, driving means, and yieldable connections between said driving means and a part to be actuated to prevent injury to the machine.

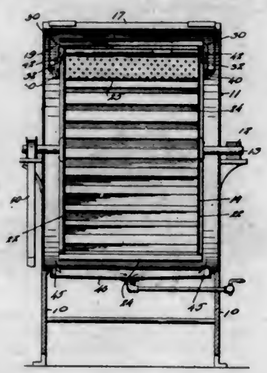
[Claims 6 to 27 not printed in the Gazette.]

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1,225,329. WASHING-MACHINE. GUY E. SHEPARD, Hardwick, Vt. Filed Mar. 10, 1916. Serial No. 83,287. (Cl. 68—18.)

1. In a washing machine, a stationary liquid holding casing, a rotatable apertured container, said casing having a plurality of narrow slots therein at the lower part alined with the direction of rotation of the cylinder, a transverse trough on the casing beneath and around the slots and extending considerably beyond the superficial area of the slots, and an outlet connection on the trough.

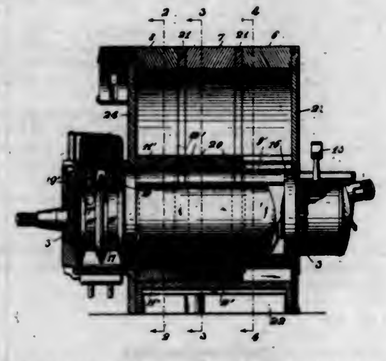
2. In a washing machine, a stationary casing, a rotatable open work container therein, said casing having adjacent each side at the lower part a slot alined with the direction of rotation of said container, a trough on the



casing beneath said slot and drain connections with the trough intermediately of the slots.

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1,225,330. MAGNETO. OTTO HEINS, New York, N. Y., and CHARLES M. WILD, Springfield, Mass., assignors to Bosch Magneto Company, New York, N. Y., a Corporation of New York. Filed Mar. 1, 1916. Serial No. 81,349. (Cl. 123—149.)



1. In a magneto for electric ignition systems, a rotatable bipolar armature with polar projections, and a six-pole field member composed of three permanent magnets having poles embracing different axial parts of the armature, the polar projections of the armature being designed to bridge the spaces between the poles of a single one of the magnets at a time.

2. In a magneto for electric ignition systems, a rotatable bipolar armature with polar projections, and a six-pole field member composed of three permanent magnets having poles embracing different axial parts of the armature, the polar projections of the armature being designed to bridge the spaces between the poles of a single one of the magnets at intervals of 60°.

3. In a magneto for electric ignition systems, a rotatable bipolar armature with polar projections, and a six-pole field member composed of three permanent magnets having poles embracing different axial parts of the armature, one axial part of the polar projections being designed to bridge the spaces between the poles of one of the magnets while the other axial parts simultaneously register with the poles of the other magnets.

4. In a magneto for electric ignition systems, a rotatable armature of shuttle form, and a six-pole field member composed of three permanent magnets each having poles embracing a different axial part of the armature.

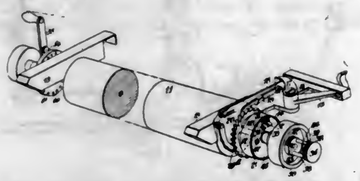
5. In a magneto for electric ignition systems, a rotatable bipolar armature of shuttle form, and a six-pole field member composed of three horse-shoe magnets each having poles shoes disposed on a diameter at 60° to the diameters of the pole shoes of the other magnets and embracing a different axial part of the armature.

[Claims 6 to 20 not printed in the Gazette.]



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1,225,331. TYPE-WRITING MACHINE. WILLIAM F. HELMOND, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 6, 1915. Serial No. 26,213. (Cl. 197—123.)



1. The combination with a platen and a line-space wheel, of clutch mechanism connecting said platen and wheel, comprising clutch parts movable into and out of gripping engagement and means forming an inclosing casing for certain of the clutch parts, an adjusting device within the casing for adjusting the clutch parts to thereby regulate the holding power of the clutch, and locking means located externally of the casing, and thereby accessible for locking said adjusting device in its adjusted position.

2. The combination with a platen and a line-space wheel, of clutch mechanism connecting the platen and line-space wheel, said mechanism comprising clutch parts movable into and out of gripping engagement, means forming an abutment for one of said parts, a wedge for adjusting said abutment, means forming an inclosure for certain of said clutch parts, and a locking device operable to lock said wedge in adjusted position, said locking device located externally of said inclosure, and thereby accessible for operation.

3. The combination with a platen and a line-space wheel, of friction clutch mechanism to connect said parts, said mechanism comprising a pair of clutch grips, a spacing device between adjacent ends of said grips, said spacing device comprising parts expansible, or movable toward and from each other, a wedge for adjustably spreading or expanding said parts, to thereby adjust said grips, means forming with the clutch mechanism an inclosure for said grips and spacing device, said expansible parts comprising lugs or projections extending through an opening or openings in said inclosure, and a locking screw mounted in said projections and accessible for operation from the outside of the inclosure, to clamp or lock said expansible parts to said wedge and thereby lock the latter in its adjusted position.

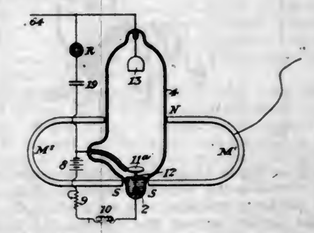
4. The combination with a platen and a line-space wheel, of clutching mechanism for connecting the platen and said wheel, said mechanism comprising a drum having a peripheral bearing surface, a pair of grips extending along opposite sides of said bearing surface and movable into and out of frictional holding contact with said surface, a split block against which adjacent ends of the grips bear, an operating device for moving the opposite ends of said grips into position to cause them to grip said surface, an adjusting screw, the opposing faces of said block having threaded sockets to receive said screw and in which the screw is adjustable to expand said bearing block and thereby change the position of the grips relatively to the operating device to regulate the pressure with which said grips will engage said surface when moved to gripping position by said operating device, and a locking screw to lock the clutch parts against relative rotation in either direction, said locking screw extending through an opening formed in said drum, and entering a screw-threaded opening in the said adjusting screws.

5. The combination with a platen and a line-space ratchet wheel, of a clutch mechanism to releasably connect the platen and wheel, said mechanism comprising clutch parts connected respectively to the platen and wheel, and means to connect said parts while the platen is in any position of rotary adjustment relative to the line-space wheel; a device for rotating the platen through distances greater than a line-space distance, said device comprising a driving ratchet connected to rotate with the platen, a driver having a pawl to engage said ratchet and thereby rotate the platen through a predetermined fixed distance, and means to positively lock the line-space ratchet wheel to rotate with the platen, said locking means arranged to hold the line-space ratchet wheel in register with said driving ratchet.

[Claim 6 not printed in the Gazette.]

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1,225,332. METHOD OF AND APPARATUS FOR TRANSLATING ELECTRICAL VARIATIONS. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Mar. 30, 1907, Serial No. 365,597. Divided and this application filed May 15, 1915, Serial No. 28,433. Renewed Aug. 25, 1916. Serial No. 116,805. (Cl. 250—27.)



1. An apparatus for translating electrical variations comprising indicator, variation and main current supply-connections, in combination with a gas or vapor tube provided with electrodes for maintaining normal current flow therein, one of said electrodes being liquid, a conducting solid projecting above the surface of the said liquid and an auxiliary pocket adapted to contain a supply of said liquid.

2. An apparatus for detecting electrical variations, comprising variation and main circuit connections, in combination with a gas or vapor device having two main electrodes, the main negative electrode being in the broken down state of resistance and passing current, in combination with a magnetic field arranged with the magnetic lines in the region of said negative electrode, lying approximately parallel with the general direction of the negative electrode flame, substantially as described.

3. An apparatus for detecting electrical variations, comprising variation and main circuit connections and a gas or vapor device having two adjacent main electrodes, the main negative electrode being in the broken down state of resistance and passing current, in combination with a magnetic field arranged with magnetic lines lying in the path between said main electrodes, substantially parallel with the direction thereof, substantially as described.

4. An apparatus for detecting feeble electrical variations, comprising an hermetically sealed container having a high vacuum when cold and provided with main electrodes and a source of current for maintaining normal

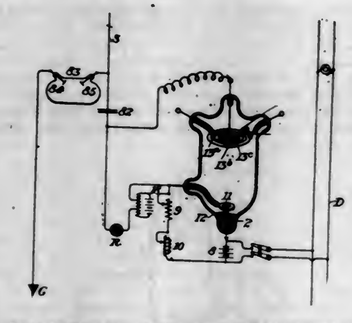
current flow therethrough, an auxiliary terminal and a circuit therefrom through an indicator, one of said main electrodes containing mercury and being provided with a projection wetted thereby, in combination with a magnetic field, arranged with its magnetic lines in the region of said negative electrode, lying approximately parallel with the general direction of the negative electrode flame, substantially as described.

5. An apparatus for detecting feeble electrical variations, comprising an hermetically sealed container having a high vacuum when cold, and provided with main electrodes and a source of current for maintaining normal current flow therethrough, an auxiliary terminal and a circuit therefrom through an indicator, in combination with a magnetic field arranged with its magnetic lines in the region of said negative electrode, lying approximately parallel with the general direction of the negative electrode flame, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

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1,225,333. APPARATUS FOR TRANSLATING ELECTRICAL VARIATIONS. PETER COOPER HEWITT, Ringwood Manor, N. J. Filed Aug. 8, 1916. Serial No. 113,691. (Cl. 250—20.)



1. In a system for causing electrical variations to produce corresponding amplified electrical effects, an evacuated container provided with main electrodes for maintaining normal current flow therein, the main positive eletrode extending into the dark space adjacent the main negative electrode, and an auxiliary electrode independent of said main electrodes; a main current supply circuit, a circuit for supplying variations to the device, and a circuit adapted to be enregized by amplified currents flowing from said device in response to said variations, in combination with a vacuum discharge gap connected in shunt between said variation supplying circuit and the ground and a condenser between the shunt connection of said discharge gap and said amplifying device, for the purposes described.

2. An aerial conductor for receiving electrical energy, a translating device for utilizing energy received thereby and a condenser in said aerial, in combination with a circuit connection leading to the ground from a point above said condenser and a gas or vapor vacuum device interposed in said circuit connection.

3. An aerial conductor for receiving electrical energy, a translating device for utilizing energy received thereby and a condenser in said aerial, in combination with a circuit connection leading to the ground from a point above said condenser and a vacuum device having means whereby the voltage required to pass current is lowered, interposed in said circuit connection.

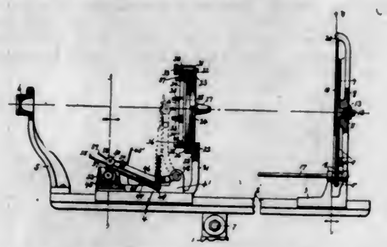
4. An aerial conductor for receiving electrical energy, a translating device for utilizing energy received thereby and a condenser in said aerial, in combination with a circuit connection leading to the ground from a point above said condenser and a vacuum device containing ray emitting material, interposed in said circuit connection.

5. An aerial conductor for receiving electrical energy, a translating device for utilizing energy received thereby and a condenser in said aerial, in combination with a circuit connection leading to the ground from a point above said condenser and a vacuum device containing ray emitting material whereby the voltage required to pass current is lowered, interposed in said circuit connection.

[Claims 6 to 10 not printed in the Gazette.]

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1,225,334. MACHINE FOR CENTERING, MARKING, AND TESTING LENSES. CHAUNCEY W. HOWLAND, Geneva, N. Y., assignor to The Standard Optical Company, Geneva, N. Y., a Corporation of New York. Filed Dec. 14, 1915. Serial No. 66,736. (Cl. 88—56.)



1. In a machine of the character described, the combination of a bed having lengthwise guides, a sight tube mounted on one end of the bed, a carriage movable along and upon the guides on the opposite end of the bed, a cross-line target rotatably mounted on said carriage coaxial with the sight tube and having its side facing the tube provided with a circular row of numbered graduations, each representing a predetermined number of degrees of a circle, a relatively short fixed degree scale adjacent the upper edge of the target in the vertical plane of its axis and extending circumferentially a distance approximately equal to the distance between two adjacent numbered graduations of the target, a separate carriage mounted on the guide-ways of the bed between the target and sight tube, a ring mounted on the second-named carriage coaxial with the axis of the target and sight tube, a lens-holder mounted on the ring, and a marking device mounted upon the second-named carriage between the ring and sight-tube.

2. In a machine of the character described, the combination of a bed having lengthwise guides, a sight tube mounted on one end of the bed, a carriage movable along and upon the guides on the opposite end of the bed, a cross-line target rotatably moutned on said carriage coaxial with the sight tube and having its side facing the tube provided with a circular row of numbered graduations, each representing a predetermined number of degrees of a circle, a relatively short fixed degree scale adjacent the upper edge of the target in the vertical plane of its axis and extending circumferentially a distance approximately equal to the distance between two adjacent numbered graduations of the target, a separate carriage mounted on the guide-ways of the bed, a ring mounted on the second-named carriage coaxial with the axis of the target and sight tube, a lens-holder rotatably mounted on the ring, and a lens-marking device mounted on the second-named carriage between the ring and sight tube.

3. In a machine for centering, marking and testing lenses, the combination of a lens rest having separate bearing points for a lens in spaced relation axially, a marking device, and a supporting carriage therefor having a relatively movable section upon which the marking device is directly mounted for adjustment thereof to different positions corresponding to the spaced relation of the separate lens bearing.

4. In a machine for centering, marking and testing lenses, the combination of a lens rest having separate bearing points for a lens in spaced relation axially, a marking device and a supporting carriage therefor having a relatively movable section upon which the marking device is directly mounted for adjustment thereof to different positions corresponding to the spaced relation of the separate lens bearings, and means for locking the relatively movable sections in its adjusted position relatively to the main supporting body of the carriage.

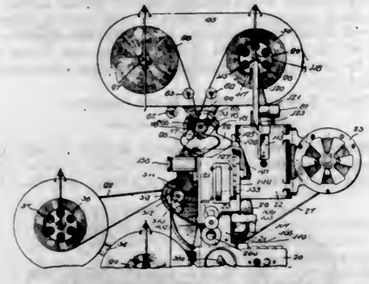
5. In a machine for centering, marking and testing lenses, the combination of a target, lens-rests at different distances from the target, and a lens-marker movable about an axis to inpress a mark upon the lens, said axis being shiftable lengthwise of the target-axis relatively to the lens-rests to cause the marker to strike the lens at the same place when the lens is engaged with either rest with its optical axis in the same relation to the axis of the target.

[Claims 6 and 7 not printed in the Gazette.]



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1,225,335. CONTROL MEANS FOR MOTION-PICTURE-PRINTING MACHINES. ALBERT S. HOWELL, Chicago, Ill., assignor to Bell & Howell Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,020. (Cl. 95—75.)



1. In motion picture apparatus, a movable member adapted to contact a film, means for pressing one end of said member toward the film, an electrical contact device operable by the movement of said member, an electro-magnet in circuit through said contact, an escapement actuated by said electro-magnet, a ratchet bar coacting with said escapement, an indicator carried by said ratchet bar, and an index card-holder disposed in coöperative relation with said indicator.

2. In motion picture apparatus, a movable member adapted to contact a film, means for pressing one end of said member toward the film, an electrical contact device operable by the movement of said member, an electro-magnet in circuit through said contact, an armature depending within the influence of said magnet, means coacting with said armature for controlling mechanism for stopping the operation of said machine, and a circuit breaking device actuated by said stop mechanism for interrupting the electro-magnetic circuit.

3. In motion picture apparatus, a movable member adapted to contact a film, means for pressing one end of said member toward the film, an electrical contact device operable by the movement of said member, an electro-magnet in circuit through said contact, an armature depending within the influence of said magnet, means coacting with said armature for controlling mechanism for stopping the operation of said machine, a valve controlling the flow of air through said machine, and a movable member actuated by said stop mechanism adapted to operate said valve.

4. In motion picture apparatus, a movable member adapted to contact a film, means for pressing one end of said member toward the film, an electrical contact device operable by the movement of said member, an electro-magnet in circuit through said contact, an armature depending within the influence of said magnet, means coacting with said armature for controlling mechanism for stopping the operation of said machine, a valve controlling the flow of air through said machine, a circuit breaker in the circuit of said electro-magnet, and a movable member actuated by said stop mechanism and adapted to control the movement of said valve and coact with said circuit-breaker.

5. In motion picture apparatus, a film actuating mechanism including a main drive gear, means for stopping said mechanism, comprising a rod adapted to be moved into the path of said gear, mechanism for retaining said rod in inoperative position, an armature coacting with said retaining mechanism, and an electro-magnet disposed in coactive relation with said armature, and means for controlling the circuit through said magnet coacting with the film, actuated by said film actuating mechanism.

[Claims 6 to 21 not printed in the Gazette.]

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1,225,336. BRAKE-SHOE. HARRY JONES, Suffern, N. Y., assignor, by mesne assignments, to The American Brake Shoe & Foundry Company, Wilmington, Del., a Corporation of Delaware. Filed Aug. 31, 1916. Serial No. 117,863. (Cl. 188—27.)



1. A brake shoe consisting of a cast metal body, an insert embedded therein and formed of superposed layers of openwork metal, the strands of said openwork metal being in alinement and defining open-ended pockets with substantially continuous side walls.

2. A brake shoe consisting of a cast metal body, an insert embedded therein and formed of superposed layers of openwork metal, the strands of said openwork metal being in alinement and defining open-ended pockets with substantially continuous side walls, and a composition filling positioned within said pockets.

3. A brake shoe consisting of a cast metal body, an insert therein formed of openwork metal extending to the wearing face of said body, a coating of hard steel surrounding the strands of said insert, and forming in connection therewith pockets extending to the wearing face of said shoe body, and a composition filling positioned within said pockets.

4. A brake shoe consisting of a cast metal body, a netting of connected and interlaced strands of ductile metal and hard wear-resisting steel, embedded in said cast metal body and extending to the wearing face thereof, the openings between the interlaced strands of said insert extending to the wearing face of said body and defining open-ended pockets, and a composition filling disposed within said pockets.

5. A brake shoe consisting of a cast metal body, an insert of superposed and registering layers of expanded metal, and a coating member extending around and between adjoining strands of the expanded metal, defining pockets in said insert with substantially continuous side walls, and a composition filling disposed within said pockets.

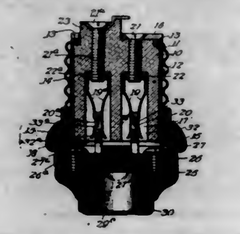
[Claims 6 and 7 not printed in the Gazette.]

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1,225,337. SEPARABLE ATTACHMENT-PLUG. WALTER CLYDE JONES, Chicago, Ill. Filed Jan. 21, 1913. Serial No. 743,264. (Cl. 173—343.)

1. In a separable attachment plug, the combination with an insertible portion comprising an insulating base, an end contact, a stationary contact member at the top of said base, a threaded shell contact rotatably mounted on said base and having a sliding engagement with said stationary contact at the top of the base, a pair of separable contact members mounted on said base and connected to said stationary contact member and end contact respectively, of a separable member comprising an insulating base, a pair of separable contact members mounted thereon and con-

structed to coöperate with the separable contact members mounted on the insertible member, and binding-posts connected with said second pair of separable contact members.



2. In a separable attachment plug, the combination with an insertible portion comprising an insulating base, a center contact mounted on the top of said base, a separable contact member oppositely disposed on said base, a connection extending through said base from the center contact to the separable contact member, a stationary contact member mounted on the top of said base, a rotatable threaded shell mounted on said base and having a sliding engagement with said stationary contact member, a separable contact member oppositely disposed on said base from said stationary contact member, a connection extending through said base connecting said separable contact member with the stationary contact member, of a separable member comprising an insulating base, separable contact members mounted on said base and coöperating with the separable contact members mounted on the insertible portion, and binding-posts mounted on said separable member and connected with the separable contact members mounted thereon.

1,225,338. SHADE-ROLLER. EMIL KRAEMER and GEORGE SCHULER, Woodside, N. Y. Filed Oct. 21, 1916. Serial No. 126,818. (Cl. 156—36.)



1. In a shade roller, a longitudinally movable spindle, in combination with a casing containing the same but permitting such movement of the spindle through the end of the casing, means carried by the protruding end of said spindle to engage a fixed bracket, a spring surrounding said spindle and attached thereto at one end, the other end being relatively fixed within said casing, the said spring acting to cause the longitudinal movement of the spindle and also serving to rewind the roller, and the bracket-engaging means carried by the spindle maintaining the latter in its longitudinally adjusted position against the tension of the spring after said spindle has been longitudinally adjusted.

2. A shade-roller consisting of a casing adapted to be rotatably supported at one end thereof by a bracket, a spindle carried by said casing and the outer end of which is adapted to be engaged by a bracket arranged to prevent the rotation thereof, a spring within the casing secured to said spindle at one end thereof, a plate located at one end of said casing surrounding said spindle but free to rotate thereupon, means connecting said plate and said casing, means to connect the outer end of the spring to said plate, pawls carried by said plate to engage said spindle, said spring acting to move said spindle longitudinally of the casing and means to prevent said plate from moving longitudinally of said spindle under the action of said spring.

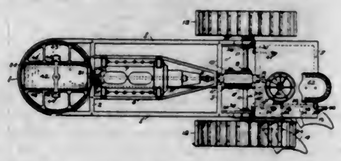
3. In a shade-roller, a casing, a spindle carried thereby provided with grooves longitudinally thereof, a cap carried by said casing at one end thereof, the end wall of said cap being spaced from the adjacent end of said casing to provide a chamber, a plate located in said chamber provided with an opening for the free passage of said spindle, pawls carried by said plate to engage the grooves in said spindle, means carried by the cap to engage said plate, and a spring connected at one end thereof to said plate, the other end of said spring being connected to said spindle.

4. In a shade-roller, a casing, a cap at one end thereof, the end of said cap being spaced from the adjacent end of said spindle to form a chamber, longitudinal ribs carried by said cap, a plate within said chamber provided with recesses to engage said ribs, said plate being provided with a central opening, a spindle passing loosely through the opening in said plate and through said cap, the spindle having grooves longitudinally thereof, pawls carried by said plate engaging the grooves in said spindle, and a spring secured at one end thereof to said spindle.

5. In a shade-roller, a casing, a cap at one end thereof, the end of said cap being spaced from the adjacent end of said spindle to form a chamber, longitudinal ribs carried by said cap, a plate within said chamber provided with recesses to engage said ribs, said plate being provided with a central opening, a spindle passing loosely through the opening in said plate and through said cap, the spindle having grooves longitudinally thereof, pawls carried by said plate engaging the grooves in said spindle, a spring secured at one end thereof to said plate, the other end of said spring being secured to said spindle, and means carried by said cap to prevent the longitudinal displacement of said plate.

[Claims 6 to 9 not printed in the Gazette.]

1,225,339. AUTOPLOW. ANTHONY KUEFER, Toledo, Ohio, assignor to Robert B. Wilson, trustee, Toledo, Ohio. Filed Nov. 23, 1914. Serial No. 873,520½. (Cl. 21—114.)

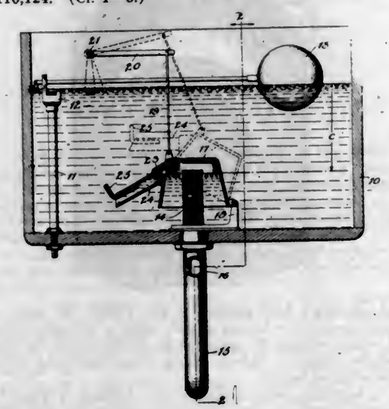


1. The combination in a tractor, a main frame, a main and a secondary axle spaced parallel and journaled transverse the main frame, a pair of intermeshing duplicate gears, one rigidly fixed on each of said axles, a pair of opposed worm wheels spaced and rigidly fixed one on each of said axles, a worm shaft spaced and journaled transverse the main and secondary axles, a pair of opposed worms spaced and rigidly fixed on the worm shaft and intermeshing the worm wheels on the main and secondary axles, means to rotate and reverse the rotation of the worm shaft, a pair of tractor wheels revolubly mounted on the main axle, a pair of clutches, one to each tractor wheel, adapted to clutch or unclutch the said wheels in relation to the main axle, means to simultaneously or separately operate said clutches, an annular frame secured to the main frame and adapted to rotate horizontally, a steering wheel revolubly mounted in the annular frame, and means to rotate the annular frame.

2. The combination in a plow tractor, of a main frame, a main driving axle journaled transverse the main frame, a secondary axle parallel with the main axle in the same horizontal plane, a pair of intermeshing duplicate gears, one fixedly mounted on the main axle, and the other on the secondary axle, a pair of worm wheels, one having teeth oppositely pitched to the teeth of the other, one of said worm wheels being fixedly mounted on the main axle, and the other on the secondary axle in the same vertical plane, each in fixed relation with the companion duplicate gear, a worm shaft journaled transverse the main and secondary axles in the vertical plane of the worm wheels, a pair of worms fixedly mounted on the worm shaft, and intermeshing respectively the worm wheels of the main and secondary axles, a pair of tractor wheels revolubly mounted on the main axle, each having the inner end of its hub adapted as a clutch member, a companion clutch member for each traction wheel slidably mounted on the main axle, and means to manually operate the companion clutch members to each engage or disengage its respective traction wheel.



1,225,340. FLUSH-TANK MECHANISM. EDWARD P. LACEY, Zolfo, Fla., assignor of one-half to David L. Skipper, Zolfo, Fla. Filed July 19, 1916. Serial No. 110,124. (Cl. 4—5.)



1. A flush tank mechanism comprising in combination with a tank, a pipe extending upwardly in the tank and having an open upper end, a bell covering the open upper end of the pipe and hinged to swing, a nipple communicating with the upper end of the bell and extending downward and open at both ends, a vent tube leading from the nipple to a point within the tank below the normal water line and above the lower end of the nipple, and means to raise the bell upon its hinge.

2. A flush tank mechanism comprising in combination with a flush tank, a pipe extending upwardly within the tank and having an open upper end, a bell over said pipe, a nipple communicating with the upper end of the bell and extending diagonally downward to a point adjacent the bottom of the bell and having an open outer end, and a bent tube occupying a small portion of the nipple and having its opposite ends above the uppermost portion of the open outer end of the nipple.

3. A flush tank mechanism comprising in combination with a flush tank, a pipe extending upwardly into the tank and having an open upper end, a bell covering the pipe, a nipple communicating with the upper end of the bell and extending diagonally downward to a point adjacent the bottom of the bell, a bent tube inserted in the lower end of the nipple and having its opposite ends above the uppermost open portion of the nipple, and means to raise the bell until the nipple and tube extend above the bell.

1,225,341. SURGICAL DEVICE. OTTO LEDERER, Vienna, Austria. Filed Nov. 29, 1913. Serial No. 803,853. (Cl. 128—9.)

1. A device of the character described, comprising in combination, an annular compression member, the aperture in which is of substantially the same diameter as that of the part to which the device is applied, before congestion of said part, a collar surrounding said compression member, inwardly projecting flanges on said collar to engage on both sides of said compression member, a removable sleeve carried by said collar, and means for creating a vacuum within said sleeve.

2. A device of the character described, comprising in combination, an annular compression member, a collar surrounding said compression member, inwardly projecting flanges on said collar to engage one on each side of said compression member, a removable sleeve carried by said collar and having a greater internal diameter than said compression member, and means for creating a vacuum within said sleeve.



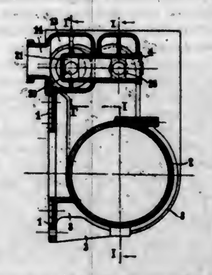
3. A device of the character described, comprising in combination, an annular compression member, the aperture in which is normally of substantially the same diameter as that of the part to which the device is applied, before congestion of said part, means for varying the diameter of said compression member, a removable sleeve connected with said compression member, and means for creating a vacuum within said sleeve.

4. A device of the character described, comprising in combination an annular compression member, consisting of a plurality of rings each having an aperture of substantially the same diameter as that of the part to which the device is applied, before congestion of said part, a collar surrounding said rings and holding the same in position, a removable sleeve carried by said collar, and means for producing a vacuum within said sleeve.

5. A device of the character described, comprising in combination an annular compression member, a collar surrounding said member, flanges on said collar to fit upon each side of said compression member, a removable sleeve carried by said collar, a tubular inexpansible extension on said collar and within said sleeve, and means for producing a vacuum within said sleeve.

[Claims 6 to 9 not printed in the Gazette.]

1,225,342. STEAM-ENGINE FOR LOCOMOTIVES. HUGO LENTZ, Berlin-Halensee, Germany. Filed Jan. 6, 1915. Serial No. 717. Renewed Oct. 2, 1916. Serial No. 123,447. (Cl. 121—105.)



1. In a steam engine for locomotives and the like, the combination with a supporting plate, of a steam cylinder disposed at a distance from the supporting plate, valves and means including a shaft for operating the same, and

a casing providing a support for the valve shaft, said casing being disposed independently of the cylinder and having steam admission and exhaust chambers arranged about the same and independently of the cylinder.

2. In a steam engine for locomotives and the like, the combination with a supporting plate, of a steam cylinder disposed at a distance from the supporting plate, valves and means including a shaft for operating the same, and a casing providing a support for the valve shaft, said casing being disposed independently of the cylinder and having steam and exhaust chambers arranged about the same and independently of the cylinder and each other.

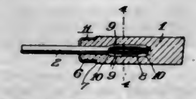
3. In a steam engine for locomotives and the like, the combination with a supporting plate, of a steam cylinder disposed at a distance from the supporting plate, valves and means including a shaft for operating the same, a casing providing a support for the valve shaft, said casing being disposed independently of the cylinder, and at least one chest surrounding the casing of the valve shaft and having its inner wall at a distance from the casing and providing admission and exhaust chambers.

4. In a steam engine for locomotives and the like, the combination with a supporting plate, of a steam cylinder disposed at a distance from the supporting plate, valves and means including a shaft for operating the same, a casing providing a support for the valve shaft, said casing being disposed independently of the cylinder, and admission and exhaust chests surrounding said casing and disposed with their inner walls at a distance from the casing.

5. In a steam engine for locomotives and the like, the combination with a supporting plate, of a steam cylinder disposed at a distance from the supporting plate, valves and means including a shaft for operating the same, and a casing providing a support for the valve shaft, said casing being disposed independently of the cylinder and having steam admission and exhaust chambers arranged about the same and independently of the cylinder, said casing communicating with the exhaust chamber.

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1,225,343. TEMPLE FOR SPECTACLES AND METHOD OF MAKING SAME. WILLIAM E. MCDONELL, Rochester, N. Y., assignor to E. Kirstein Sons Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 7, 1914. Serial No. 875,774. (Cl. 88—52.)



1. The method of making temples for spectacles which consists in forming a longitudinal cavity in the end of an ear-piece composed of celluloid or similar material and then forcing endwise into such cavity a lens attaching wire of greater diameter so that the material of the ear-piece is expanded or displaced.

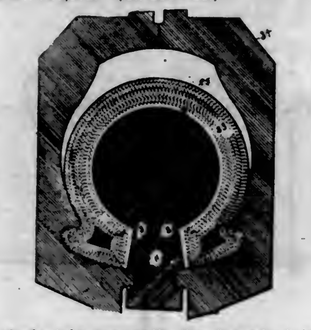
2. In a temple for spectacles, the combination with a solid ear-piece of comparatively large diameter composed of celluloid or similar material and having a recess in its forward end, of a relatively smaller lens attaching wire having its extremity anchored in the recess of the ear-piece by forcing it endwise therein, said extremity being provided with a laterally outstanding longitudinal fin while adjacent portions of the wire are approximately the size of the prepared recess.

3. In a temple for spectacles, the combination with a solid ear-piece of comparatively large diameter composed of celluloid or similar material and having a recess in its forward end, of a relatively smaller lens attaching wire having its extremity anchored in the recess of the ear-piece by forcing it endwise therein, said extremity being provided with a laterally outstanding longitudinal fin while adjacent portions of the wire are approximately the size of the prepared recess.

4. In a temple for spectacles, the combination with a solid ear-piece of comparatively large diameter composed of celluloid or similar material and having a recess in its forward end, of a relatively smaller lens attaching wire having a fluted head at its extremity anchored in the recess of the ear-piece by forcing it endwise therein, the recess being the same size as the body of the wire, and a ferrule surrounding the wire and clamped over the tip of the ear-piece, the said head being embedded in the material of the ear-piece beyond the ferrule.

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1,225,344. PNEUMATIC TIRE FOR VEHICLES AND METHOD OF MAKING THE SAME. ISAAC S. MCGIBHAN, Mount Vernon, N. Y. Filed Oct. 10, 1916. Serial No. 124,871. (Cl. 154—14.)



1. A single tube pneumatic tire formed of layers of fabric and rubber having uniting edges, a cylindrical strip of rubber between the edges of the fabric where the structure is integrally united, and a valve vulcanized within said strip of rubber.

2. A single tube pneumatic tire formed of layers of fabric and rubber constructed with circular uniting edges where the tire is joined together during the process of vulcanization, and a suitable valve for inflating the same, substantially as specified.

3. The herein described method of constructing a single tube pneumatic tire which consists of first forming the tire over a circular collapsible core leaving an opening from which the core may be removed,—then joining the said edges at the opening, and, by means of a suitably inserted valve, inflating the tire within a mold for vulcanizing as described.

4. The herein described method of constructing a single tube tire which consists of rolling the layers of rubber filled fabric on a collapsible metal core, leaving an opening at the bottom with bead formation on either side of the said opening,—removing the core from the opening on the lower side of the tire and placing the tire within a vulcanizing mold so formed as to close the said opening and cause the edges of the same to unite firmly, a suitable valve for inflating the tire within the mold and vulcanizing with internal pressure substantially as described.

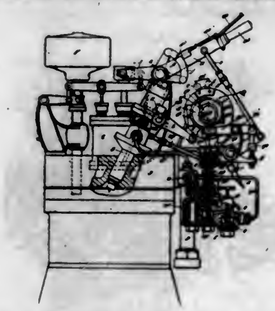
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1,225,345. CONTROLLING THE SUPPLY OF LIQUID FUEL TO INTERNAL-COMBUSTION ENGINES. JAMES MCKECHNIE, Barrow-in-Furness, England, assignor to Vickers Limited, London, England. Filed Nov. 7, 1916. Serial No. 129,953. (Cl. 123—140.)

1. In an internal combustion engine, a fuel injection valve by which liquid fuel is sprayed into the cylinder, a fuel pump including a mechanically controlled suction valve, a pair of adjustable lever and cam devices for operating the said injection and suction valves and a common control gear adapted simultaneously to vary the adjustment of the lever and cam devices for both of the said valves.

2. In an internal combustion engine, a fuel injection valve by which liquid fuel is sprayed into the cylinder, a fuel pump including a mechanically controlled suction valve, a pair of adjustable lever and cam devices for operating the said injection and suction valves, means for varying the effective clearance between the valve levers and their respective cams and a common control gear adapted simultaneously to actuate the said varying means of the lever and cam devices of both of the said valves.





3. In an internal combustion engine, a fuel injection valve by which liquid fuel is sprayed into the cylinder, a fuel pump including a mechanically controlled suction valve, a cam for operation of the injection valve, an injection valve lever mounted on an eccentrically adjustable pivot, a cam for operating the pump suction valve, an eccentrically pivoted suction valve lever actuated by the said cam and a common control effecting the adjustment of both eccentric pivots simultaneously.

4. In an internal combustion engine, a fuel injection valve by which liquid fuel is sprayed into the cylinder, a fuel pump including a mechanically controlled suction valve, a cam for operation of the injection valve, an injection valve lever mounted on an eccentrically adjustable pivot, a cam for operating the pump suction valve, a suction valve lever actuated by the said cam, a rockshaft on which the latter lever is eccentrically mounted, a connection from the rockshaft to the eccentric pivot of the injection valve lever and engine regulating mechanism operatively connected to the said rockshaft for simultaneous adjustment of the two levers.

5. In an internal combustion engine, a fuel injection valve by which liquid fuel is sprayed into the cylinder, a fuel pump including a mechanically controlled suction valve, a pair of adjustable lever and cam devices for operating the said injection and suction valves, an engine governor, hand regulating mechanism, control gear adapted for operation by both the governor and the hand regulating mechanism and adapted to vary the adjustment of both of the lever and cam devices simultaneously and means for disconnecting the hand regulating mechanism from the governor.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,346. GRAVITY-BATTERY ELECTRODE. PATRICK T. MACNAMARA, New York, N. Y., assignor to The Western Union Telegraph Company, New York, N. Y., a Corporation of New York. Filed Apr. 6, 1916. Serial No. 89,280. (Cl. 204—49.)



1. A battery electrode comprising a member having a plurality of spaced limbs with connecting portions, such limbs and the connecting portions being of triangular cross-section with the point of the triangle downward.

4. A battery electrode comprising a body having a peripheral rim with a diametral member and with limbs extending radially inward toward the center, but not contacting with each other or with the said diametral member, such rim, diametral member and limbs all of triangular cross-section with the point of the triangle downward.

6. A battery electrode comprising a body having a rim with limbs extending therefrom, such rim and extending limbs being each of a cross-sectional figure having a more or less sharp lower edge with sides extending obliquely upward, the section being devoid of flat horizontal lower surfaces upon which hydrogen may collect.

[Claims 2, 3, and 5 not printed in the Gazette.]

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1,225,347. NITRO AROMATIC COMPOUND AND PROCESS OF MAKING SAME. JOHN R. MARDICK, New York, N. Y. Filed June 6, 1916. Serial No. 101,920. (Cl. 52—3.)

1. The process of preparing nitro compounds from tar which consists in first nitrating impure tar or tars in a relatively weak mineral acid bath while agitating said mixture and maintaining the temperature below 60° C. and above 10° C.; then increasing the strength of said bath by adding thereto relatively strong nitric acid while maintaining the temperature below 60° C.; then raising the temperature of said bath while still constantly agitating the mixture to a point in excess of 70° C. and not exceeding 90° C. and maintaining such elevated temperature for a prolonged period of time until substantial reaction has been effected, then permitting the mass to settle and separate into layers, separating the lower acid layer from the upper substantially solid layer, then dissolving the solid mass so obtained in relatively strong nitric acid while maintaining the temperature between 30° and 60° C., then adding fuming sulfuric acid and heating the mixture to a temperature in excess of 95° C. and not exceeding 105° C., and maintaining such temperature for a sufficient time to effect high nitration.

2. The process of preparing nitro compounds from tar which consists in first nitrating impure tar or tars in a relatively weak mineral acid bath while agitating said mixture and maintaining the temperature below 60° C. and above 10° C.; then increasing the strength of said bath by adding thereto relatively strong nitric acid while maintaining the temperature below 60° C.

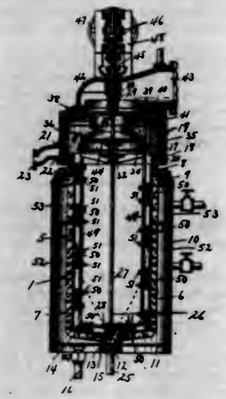
3. The process of preparing nitro compounds from tar which consists in first nitrating impure tar or tars in a relatively weak mineral acid bath while agitating said mixture and maintaining the temperature below 60° C. and above 10° C.; then increasing the strength of said bath by adding thereto relatively strong nitric acid while maintaining the temperature below 60° C.; then raising the temperature of said bath while still constantly agitating the mixture, to a point in excess of 70° C. and not exceeding 90° C. and maintaining such elevated temperature for a prolonged period of time until substantial reaction has been effected, then permitting the mass to settle and separate into two layers, and separating the lower acid layer from the upper substantially solid layer.

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1,225,348. PROCESS FOR CHANGING THE CONSISTENCY OF LIQUIDS CONTAINING SOLIDS. IRVING S. MERRELL, Syracuse, N. Y., assignor to Merrell-Soule Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 19, 1916. Serial No. 126,524. (Cl. 99—5.)

1. The process of concentrating a substance containing liquid consisting in introducing the substance into a container of substantially circular cross section heated to a temperature sufficient to vaporize liquid constituents of the substance at substantially atmospheric pressure, shaping the substance in a unitary layer of continuous exterior conformation and with an interior substantially unobstructed vapor zone of paraboloid form, rapidly moving the layer circularly over the surface and simultaneously causing the entire body of substance to move from the point of introduction toward the opposite end of the container,

permitting the substance to escape after treatment, and permitting the vapor to escape inwardly from the layer and freely from the container.



2. The method of condensing liquids consisting in introducing the liquid into a vertically arranged cylindrical heated container, centrifugally shaping the liquid with an interior vapor zone of paraboloid form and moving the liquid endwise of the container, and simultaneously wiping the inner surface of the container.

3. The method of condensing liquids consisting in introducing the liquid into a vertically arranged cylindrical heated container, centrifugally shaping the liquid with an interior vapor of paraboloid form and moving the liquid endwise of the container, and mechanically removing the adhering particles from the surface of the container without interrupting the movement of the body of liquid.

4. The process of condensing liquids consisting in introducing the liquid into the bottom of a vertically arranged cylindrical container, heating the container, centrifugally causing the liquid to move upwardly upon the interior surface of the container, and wiping the interior surface of the container.

5. The method of condensing liquids consisting in centrifugally causing the liquid to move rotarily and longitudinally of a vertically arranged heated container, and polishing the surface of the container.

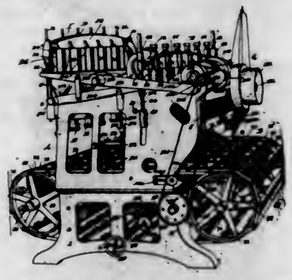
[Claims 6 to 21 not printed in the Gazette.]

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1,225,349. APPARATUS FOR FILLING AND CAPPING BOTTLES. JOHN C. MILLER, Canton, Ohio, assignor to The Miller Pasteurizing Machine Company, Canton, Ohio, a Corporation of Ohio. Filed Aug. 24, 1903. Serial No. 170,645. (Cl. 226—28.)

1. In a machine of the class described, the combination of a frame, a liquid holder, mechanism connected with said liquid holder for filling a plurality of bottles simultaneously, said mechanism including a plurality of ducts having valve seats and valves therefor, means for advancing rows of bottles step by step and successively positioning the rows at the filling station with the mouth of each bottle of a row in alinement with one of said filling ducts, means for adjusting said bottle advancing and positioning means relative to said filling mechanism, means for opening and closing said valves substantially simultaneously, and means for varying the period of time that said valves are open.

2. In mechanism for filling bottles with liquid, the combination of power mechanism, a holder or receptacle for the liquid, a withdrawing duct communicating with the receptacle and having a downwardly movable section, and a valve movable downwardly with and also relatively to said duct section to permit operation of the valve, and a conveyer for the bottles to be filled, said conveyer having its operative part adjustable relative to the movable section of the aforesaid duct.



3. In a machine of the class described, the combination of a liquid holding receptacle, means for supporting a bottle below said receptacle, a depending filling duct leading from said receptacle and comprising a stationary section connected thereto and a section slidable relative to said stationary section and arranged to engage with the mouth of a bottle, a vertically movable frame, a valve mounted in the movable section of the filling duct for controlling the flow of liquid therethrough, and connections between the stem of said valve and said frame for supporting and operating said valve.

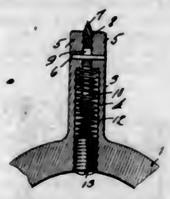
4. In a machine for filling bottles with liquid, the combination of a frame, a holder or receptacle for the liquid, a duct leading from the liquid receptacle to a bottle and having a movable section, a weighted arm bearing against said movable section, power devices, and means actuated by the power devices for moving the movable duct section relative to said holder or receptacle and in opposition to the weighted arm.

5. In a machine for filling bottles with liquid, the combination of a frame, a holder or receptacle for the liquid, a duct extending from the receptacle and having thereon a movable section, the lower free end of which engages with and closes the mouth of the bottle, a valve adapted to engage the lower end of the movable section, a rod passing through the duct and connected to said valve, means for holding said movable section in engagement with the bottle, and means for positively moving the valve through said valve rod independently of the movable section and relative to said holder or receptacle.

[Claims 6 to 48 not printed in the Gazette.]

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1,225,350. SPUR. JULIUS G. NEGRETE, Cerro, Cuba. Filed July 5, 1916. Serial No. 107,629. (Cl. 54—83.)

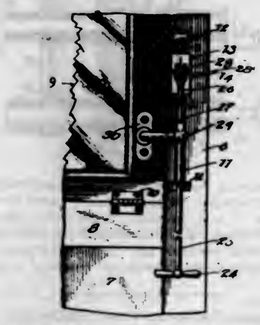


In a spur, the combination with a heel engaging frame, of a shank carried by the frame and having a socket formed therein, said shank having spaced plates at its free end, a pin supported by the plates, a head having spurs which are normally extended beyond the adjacent edges of the plates, said spurs being movable to a position between the plates when pressure is exerted thereon, said head having a slot formed therein for slidably engaging the pin, shoulders carried by the head, a coil spring engaged at one end with the shoulders, and a plug engaged in one end of the socket, said plug being engaged by the other end of the spring, and being adjustable to regulate the tension of the spring.

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1,225,351. TRANSOM-LIFTER. WILLIAM F. O'ROURKE, Chicago, Ill. Filed Aug. 17, 1916. Serial No. 115,358. (Cl. 16—28.)



1. A transom lifter, comprising a stationarily supported rod, a rod clamp housing closed at the front and formed with spaced lugs on its interior, said housing being slidably mounted thereon, angularly disposed, rearwardly extending rod gripping levers pivotally supported between said lugs in said housing, each having two holes in its free end in alinement with corresponding holes in the other lever, and said rod passing through one pair of alined holes, a coiled compression spring encircling said rod and extending from one of said levers to the other, an operating rod extending through the other alined holes of said levers and having shoulders engaging the outer sides of said levers, a brace rod pivotally connected to a lug formed on the front wall of said housing and lying in the same plane as the stationarily supported rod and operating rod, and an angular transom bracket adjustably secured to said brace rod and adapted to be secured to a transom window, at either side of said rods.

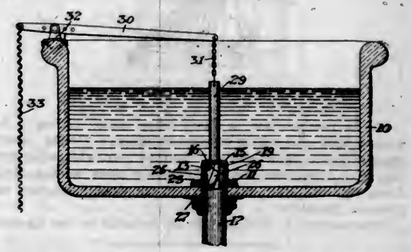
2. A transom lifter, comprising a stationarily supported rod, a rod clamp housing slidably mounted thereon, said housing having a front wall, sides and ends and open at the back, and having four pairs of spaced, rearwardly extending, oppositely disposed lugs cast upon the inner sides of the side walls, two angularly disposed, rearwardly extending rod gripping levers, each pivotally supported between two pairs of oppositely disposed lugs, and each lever having two holes in its free end in alinement with corresponding holes in the other lever, said rod passing through two alined holes of said levers, a spring extending between said levers, an operating rod extending through the other alined holes of the levers and having shoulders engaging the outer sides of said levers, a brace rod pivotally connected with ears extending out from the front wall of said housing, said brace rod lying in the same plane as the stationarily supported rod and operating rod, and an angular transom bracket adjustably secured to said brace rod and adapted to be secured to a transom window at either side of said rods.

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1,225,352. FLUSH-VALVE APPARATUS. ABRAM N. PASMAN, East Orange, N. J. Filed Dec. 1, 1916. Serial No. 134,285. (Cl. 4—5.)

1. A flush valve comprising a tubular body member having a seat, a valve adapted to bear against the said seat, and a vane movably connected to the said valve and actuated by pressure exerted against one portion thereof by the medium flowing through said tubular body member to cause another portion thereof to bear directly against a part of the said tubular body member to maintain the valve in an open position.

2. In a flush valve apparatus and in combination, a tank, a flush valve comprising a tubular body member having a seat, a valve head adapted to bear against the said seat, and vanes pivotally connected to the said valve head and actuated by pressure exerted against corresponding portions thereof by water flowing through the said tubular valve member to cause other portions thereof to bear directly against a part of the said tubular body member in order to maintain the valve in an open position until the water in the tank is lowered to a predetermined level.



3. In a flush valve apparatus and in combination a tank, a flush valve comprising a tubular body member having a seat, a valve head adapted to bear against said seat, means connected to the said valve head, movable therewith, and actuated by the pressure of water flowing through the body member to coöperate with the said body member in order to maintain the valve in an open position until the water in the tank is lowered to a predetermined level, and adjustable devices associated with the said valve for determining the water level in the tank at which the valve will close.

4. In a flush valve apparatus and in combination, a tank, a flush valve comprising a tubular body member having a valve seat at the inner end thereof, a valve head adapted to bear against the said seat, blades secured to the said valve head and fitting within the said body member to guide the valve head in the movements thereof, and means carried by the said blades and bearing directly against the body member by the pressure of the water flowing therethrough to maintain the valve head in an open position until the supply in the tank has been lowered to a predetermined level.

5. In a flush valve apparatus and in combination, a tank, a tubular body member fixed in the tank and having a seat at its inner end, a valve head adapted to bear against the said seat, radially placed blades secured to the said valve head and adapted to fit within the valve-body to guide the valve head in the movements thereof, and vanes pivotally connected to the said blades and coacting with said body member against the pressure of the water flowing therethrough to maintain the valve in an open position until the supply in the tank has reached a predetermined level.

[Claims 6 to 10 not printed in the Gazette.]

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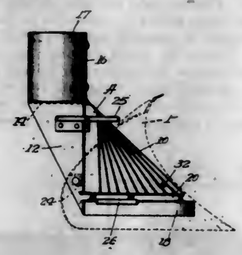
1,225,353. LOCOMOTIVE-PILOT. GEORGE B. PHILLIPS, Lima, Ohio, assignor of one-fourth to Arthur W. Wheatley, Shawnee township, Ohio, and one-fourth to William A. Austin and one-fourth to Watson M. Myers, Lima, Ohio. Filed Sept. 11, 1916. Serial No. 119,485. (Cl. 105—254.)

1. A pilot made of sheet metal and having a horizontally extending groove adjacent its base, and steps detachably secured at said groove.

5. A sheet metal pilot having a deep horizontally extending groove just above its base, said groove forming a strong reinforcing ridge.

7. A sheet metal pilot having a deep horizontally extending groove just above its base formed by deflecting the metal inwardly and forming a strong reinforcing ridge at the inside of said pilot, the lower wall of said groove

forming a comparatively wide supporting seat for attachments to the pilot.

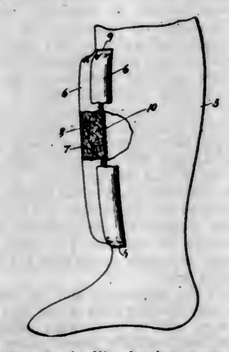


10. In combination, a sheet metal pilot having a deep horizontally extending groove forming a strong interior strengthening ridge and a comparatively wide supporting seat just above the pilot base, and a plow having projections for engaging said seat to vertically support said plow on the pilot.

[Claims 2 to 4, 6, 8, and 9 not printed in the Gazette.]

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1,225,354. PROTECTED STOCKING OR THE LIKE. GEORGE L. PIERCE, Brooklyn, N. Y., assignor to A. G. Spalding & Bros., New York, N. Y., a Corporation of New Jersey. Filed June 15, 1914. Serial No. 845,054. (Cl. 2—130.)



1. A stocking, or the like, having secured thereto a plurality of flexible sausage-like cushion members secured in parallel relation longitudinally of the stocking and separable from each other as the stocking stretches.

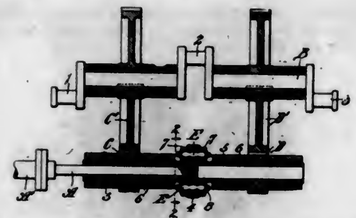
2. A stocking or the like having secured thereto a plurality of flexible sausage-like members secured in parallel relation longitudinally of the stocking, each of said members having an outstanding seam at its back whereby it is secured to the stocking.

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1,225,355. DRIVING MECHANISM. GEORGE D. POGUE, St. Louis, Mo. Filed Oct. 26, 1916. Serial No. 127,819. (Cl. 74—7.)

1. A driving mechanism, comprising a drive shaft provided with a laterally-projecting portion, driving members having flanges arranged on opposite sides of said portion, a device rockably mounted in the laterally-projecting portion on said drive shaft and projecting into openings in said flanges, resilient means for clamping said flanges tightly against the portion on the drive shaft which they embrace, and an independent means for limiting the circumferential movement of said flanges with relation to the laterally-projecting portion on the drive shaft.

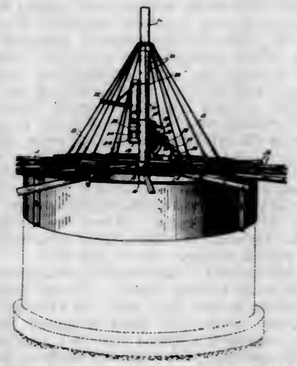
2. An equalizing device for gearing, comprising a substantially disk-shaped driving member, parts arranged on opposite sides of said member, transversely-disposed pins having substantially spherical-shaped portions that fit in openings in said member and parts, and spring washers on said pins that exert pressure on said parts and hold them tightly against said member.



3. An equalizing device for gearing, comprising a substantially disk-shaped driving member, parts arranged on opposite sides of said member, transversely-disposed pins having substantially spherical-shaped portions that fit in openings in said member and parts, and stops in said member that project into elongated openings in said parts.

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1,225,356. CONCRETE-CASTING MACHINE. WALTER C. POLK, Fort Branch, Ind. Filed Sept. 7, 1916. Serial No. 118,805. (Cl. 25—124.)



1. That improvement in the art of casting monolithic structures, which comprises the substantially continuous vibration and vertical lifting of the forms during placing of the fresh concrete.

2. Apparatus for casting monolithic structures comprising a form therefor, a support for said form, and means for lifting said forms and for vibrating the form during the lifting operation.

3. Apparatus for casting monolithic structures, comprising a form therefor, a support for said form, a vibratory motor arranged to vibrate said form, lifting mechanism arranged between the form and the support, and means operated by the motor for operating said lifting mechanism.

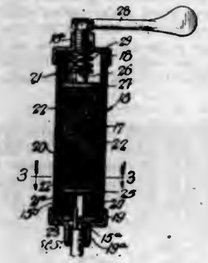
4. Apparatus for casting monolithic structures, comprising a supporting mast, casting forms supported by said mast, an internal combustion engine mounted upon said forms, a hydraulic jack carried by said forms and engaging the mast, and a pump operated by said engine and connected to said hydraulic jack.

5. Apparatus for casting monolithic structures, comprising forms therefor, a support for said forms, an internal combustion engine mounted upon said forms so as to vibrate the same, a lifting jack arranged between said support and forms, and means operated by the engine for operating said lifting jack.

[Claim 6 not printed in the Gazette.]



1,225,357. VARIABLE-RESISTANCE DEVICE. ROY E. REED, Ripon, Wis. Filed Nov. 13, 1916. Serial No. 131,001. (Cl. 219—51.)



1. A variable resistance device of the kind described, comprising a casing, a resistance-conductance device contained in said casing and comprising a plurality of conducting blocks arranged in a stack, means for insulating said resistance-conductance device from said casing, a pressure rod mounted in said casing and engaged with one end of said stack, means for adjusting said rod to vary the pressure on said stack, and means for maintaining said rod in its adjusted position.

2. A variable resistance device of the kind described, comprising a casing, a resistance-conductance device contained in said casing and comprising a plurality of conducting blocks arranged in a stack, means for insulating said resistance-conductance device from said casing, a screw pressure rod rotatively mounted in said casing and engaged with one end of said stack, a crank arm fixed to said rod, and means for maintaining the said rod in any adjusted position.

3. A variable resistance device of the kind described, comprising a casing consisting of a tubular body and top and bottom end caps, an insulation tube within said casing, a plurality of separate carbon blocks arranged in a stack within said casing, means for supporting said stack above said bottom cap and for insulating the bottom end of said stack from said casing, said blocks being of smaller diameter than the internal diameter of said insulation tube, a screw pressure rod threaded through the top cap and arranged to impart pressure to the top end of said stack, and a crank arm fixed to said screw pressure rod and adapted to rotate the same.

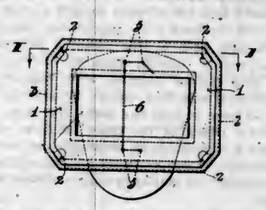
4. A variable resistance device, adapted to be interposed in an electric circuit supplying a translating device, comprising a plurality of conducting blocks of comparatively large cross-sectional area in proportion to the voltage of the current in the circuit, said blocks being arranged in a stack forming part of said electric circuit, a pressure device for varying the intimacy and closeness of the contact between adjacent blocks of the said stack, and means for preventing chattering of said blocks when the pressure on the stack is reduced.

5. A variable resistance device, adapted to be interposed in an electric circuit supplying a translating device, comprising a plurality of conducting blocks of comparatively large cross-sectional area in proportion to the voltage of the current in the circuit, said blocks being arranged in a stack forming part of said electric circuit, a pressure device for varying the intimacy and closeness of the contact between adjacent blocks of the said stack, the several blocks being provided with recesses in their proximate ends, and expansion springs interposed between said blocks and seated in said recesses.

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1,225,358. ORNAMENTAL BUCKLE. SAMUEL RIVELIS, Philadelphia, Pa. Filed Aug. 11, 1916. Serial No. 114,316. (Cl. 2—187.)

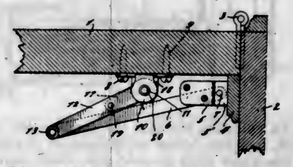
1. In an ornamental buckle, the combination of the frame; a stiff backing with its edges extending beyond the frame and having its front properly surfaced to present the appearance of a filler piece; and means for securing the frame to the backing; said backing having means for securing it to the object with which it is to be associated, said last mentioned means being substantially within the planes bounding the surface of the backing.



2. In an ornamental buckle, the combination of the frame; a stiff backing with its edges extending beyond the frame and having its front properly surfaced to present the appearance of a filler piece; and means for securing the frame to the backing; said backing having openings for securing it to the object with which it is to be associated, which openings are completely covered and hidden by the frame.

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1,225,359. FRICTION-STAY. OSCAR C. RIXSON, New Rochelle, N. Y. Filed Jan. 20, 1916. Serial No. 73,121. (Cl. 16—22.)



1. In a friction stay for swinging closures, a plurality of rigid members pivotally connected together, one of the end members comprising an anchor piece, a pair of ears carried by said anchor piece, a bolt passing through said ears, a link comprising spaced bar plates pivoted upon said bolt between said ears, each of said bar plates having a portion of its outer surface engaging the inner surface of an ear, means mounted on said anchor piece and held against rotation with respect thereto surrounding said bolt and having surfaces engaging the inner surfaces of said bar plate, said bolt being adjustable to press said surfaces into frictional engagement.

2. In a friction stay for swinging closures, a plurality of rigid members pivotally connected together, one of the end members comprising an anchor piece, a pair of ears carried by said anchor piece, a bolt passing through said ears, a link comprising spaced bar plates pivoted upon said bolt between said ears, each of said bar plates having a part of its outer surface engaging the inner surface of an ear, a part mounted on said anchor piece surrounding said bolt and having its surfaces engaging the inner surfaces of said bar plates, said bolt being adjustable to press said surfaces into frictional engagement, and a spring washer on said bolt exerting its tension to hold said surfaces in frictional engagement.

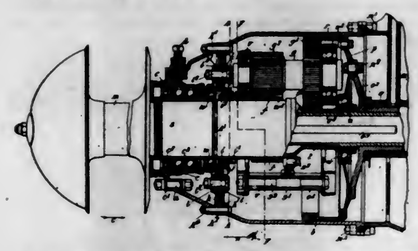
3. In a friction stay for swinging closures, a plurality of rigid members pivotally connected together, one of the end members thereof comprising an anchor piece, a pair of ears carried by said anchor piece, a bolt passing through said ears, said member pivoted to said anchor piece comprising a link composed of spaced bar plates pivotally mounted on said bolt, a disk mounted between said bar plates and secured thereto, and disks carried by the anchor piece and held against rotation with respect thereto interposed between said disk carried by said bar plates and the inner surfaces of said bar plate, the outer surfaces of said bar plates engaging the inner surfaces of said ears,

said bolt being adjustable to press said surfaces into frictional engagement.

4. In a friction stay for swinging closures, a plurality of rigid members pivotally connected together, one of the end members thereof comprising an anchor piece, a pair of ears carried by said anchor piece, a bolt passing through said ears, said member pivoted to said anchor piece comprising a link composed of spaced bar plates pivotally mounted on said bolt, a disk mounted between said bar plates and secured thereto, disks carried by the anchor piece and held against rotation with respect thereto interposed between said disk carried by said bar plates and the inner surfaces of said bar plate, the outer surfaces of said bar plate engaging the inner surfaces of said ears, said bolt being adjustable to press said surfaces into frictional engagement, and a spring washer on said bolt exerting its tension to maintain said surfaces in frictional engagement.

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1,225,360. EPICYCLIC GEARING. FREDERICK HENRY ROYCE, Derby, England, assignor to Rolls-Royce Limited, Derby, England. Filed Sept. 19, 1916. Serial No. 121,070. (Cl. 74—34.)



1. In an epicyclic gearing, the combination of a main gear shaft, a motive power shaft disposed co-axially therewith, a sun-wheel fixed on said gear shaft, planet wheels driven from the power shaft in mesh with said sun-wheel to drive the same, an annular gear encircling said planet wheels and in driving engagement therewith, means for driving said annular gear from said power shaft, a casing inclosing the gearing elements, an end bearing for the gear shaft, a housing for said bearing secured to the casing, and means for preventing relative rotation between said casing and sun-wheel while permitting limited radial and axial movements of the latter.

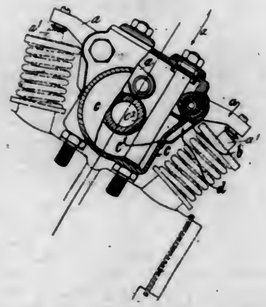
2. In an epicyclic gearing the combination of a main gear shaft, a motive power shaft disposed co-axially therewith, gearing elements comprising a sun-wheel on said gear shaft, and planet-wheels in mesh with said sun-wheel, means for driving said planet-wheels from said power shaft, a casing inclosing said gearing elements, an end-bearing for the gear shaft, means for adjusting said end bearing radially in relation to said power shaft, means for anchoring said sun-wheel against rotation in relation to the casing, and means for permitting limited radial and axial movements of said sun-wheel relatively to the gear casing.

3. In an epicyclic gearing, the combination of a main gear-shaft, a motive power shaft disposed co-axially therewith, gearing elements comprising a sun-wheel on the gear shaft and planet wheels in mesh with said sun-wheel, means for driving said planet wheels from said power shaft, a casing inclosing said gearing elements, a carrier for said sun-wheel having recesses, an anchor plate adjacent said sun-wheel-carrier also having recesses positioned angularly to those of the carrier, means for permitting axial movement of said anchor plate relatively to the casing, and floating rings having members adapted to slide in the recesses of the carrier and anchor plate to permit limited radial movement of the sun-wheel carrier.

4. In an epicyclic gearing, the combination of a main gear shaft, a power shaft disposed co-axially therewith, gearing elements comprising a sun-wheel on said gear-shaft and planet wheels in mesh with said sun-wheel, means for driving said planet wheels from said power shaft, a casing inclosing said gearing elements, means for anchoring the sun-wheel to the casing adapted also to permit alinement of the sun-wheel in an exactly central position in relation to the planet wheels, an end bearing for the gear shaft, and means for adjusting said end bearing radially in relation to the axis of the power shaft.

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1,225,361. LUBRICANT-RETAINING DEVICE FOR THE VALVE MECHANISM OF INTERNAL-COMBUSTION ENGINES. FREDERICK HENRY ROYCE, Derby, England, assignor to Rolls-Royce Limited, Derby, England. Filed Sept. 19, 1916. Serial No. 121,071. (Cl. 64—22.)



1. In an internal combustion engine having overhead valves the combination of a cam shaft casing adapted to contain lubricant, a cam shaft therein, levers operated by said cam shaft adapted to actuate the valves and extending through said casing, and plates on said levers forming baffles adapted to prevent lubricant tending to creep along said valve levers from passing to the exterior of said casing.

2. In an internal combustion engine the combination with a cam-shaft casing adapted to contain lubricant and having an aperture in its wall, a valve operating lever projecting through said aperture, a baffle plate in connection with said lever adjacent said aperture and adapted to arrest lubricant passing therethrough, a second aperture in the casing wall and a conduit exterior to the casing and in communication with said second aperture and the baffle plate for conducting lubricant from the latter back to the interior of the casing.

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1,225,362. DENTIFRICE. WILLIAM M. RUTHRAUFF, Chicago, Ill. Filed Oct. 2, 1916. Serial No. 123,212. (Cl. 167—9.)

1. A dentifrice comprising an acid salt inert to the tribasic calcium phosphate of the tooth structure, and capable of stimulating secretion of alkaline saliva and of reacting therewith to deposit tri-basic calcium phosphate in the interstices of the tooth surface.

2. A dentifrice acid in reaction, containing a soluble acid salt inert to the calcium phosphate of the tooth structure and adapted to stimulate the flow of saliva.

3. A calcifying dentifrice containing substantially calcium salts entering into the composition of the tooth held in a vehicle in such condition as to be acted upon by the saliva, and to be converted thereby and deposited on interstices of the tooth surface.

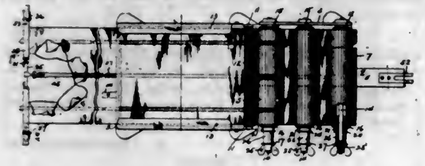
4. An acid dentifrice inert to the tooth structure, made by combining calcium phosphate in excess of the theoretical combining amount, with an acid, the excess calcium phosphate serving as a protective and abrasive agent.

5. A dentifrice comprising a soluble acid calcium salt inert to the structure of the teeth, adapted to be carried into intimate contact with the soft tissues in the mouth, whereby the antiphlogistic and hemostatic properties of the calcium ion are availed of to prevent inflammation and bleeding, and promote quick recovery of said tissues.



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1,225,363. ROLL-HOLDER. LUCIUS N. SABIN, San Francisco, Cal. Filed June 29, 1914. Serial No. 848,052. (Cl. 211—31.)

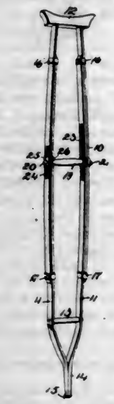


1. In a holder for a roll of paper, a spindle, hubs rotatably mounted on said spindle and adapted to hold a roll of paper, a nut on said spindle, a resilient element arranged between said nut and the adjacent hub, a ball race engaging said hub, a ball race engaging said resilient element and a plurality of balls between said races.

2. In a holder for a roll of paper, a spindle, hubs rotatably mounted on said spindle and adapted to hold a roll of paper, a nut on said spindle, a resilient element arranged between the nut and the adjacent hub, a ball race engaging said hub, a second ball race engaging said resilient element and being held by said first ball race against longitudinal movement outward and a plurality of balls between said races.

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1,225,364. CRUTCH. PETER W. SANDERS, Belleville, N. J. Filed Dec. 19, 1916. Serial No. 137,756. (Cl. 135—50.)

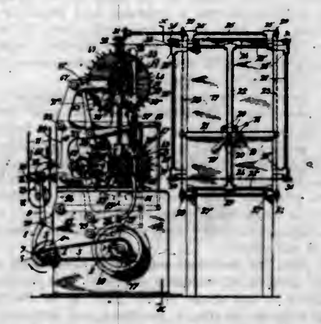


1. A crutch comprising two members having arms adapted to slide on each other, the arms on each side of the crutch being slotted with alined slots, a bolt passing through the slots and having means on its ends for exerting pressure inward, a handle on the bolt between the arms on each side, and plates, each plate having an opening through which the bolt passes and being adapted to bear against the outer face of one of the arms and having projections to enter the arm to prevent slipping, each plate having side flanges to engage the sides of the slotted portion of the arm with which said plate engages, the flanges having their engaging faces terminating short of the arm adjacent to the one with which said plate is in contact.

2. A crutch comprising two members having arms, the arms of one member sliding on the inner faces of the arms of the other, said arms being narrow and having vertical slots therein, clamping plates engaging the outer faces of the assembled pairs of arms, the plates having end flanges to engage the outer edges of the slotted parts of the arms, a handle, a headed bolt passing through the plates, the slots and the handle, a nut on one end of the bolt for forcing the parts in binding engagement, said clamping plates having projections to enter the arms when the parts are so forced together, the slots in the outer arms being short, the slots in the inner arms being materially longer.

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1,225,365. APPARATUS FOR PERFORATING JACQUARD-CARDS. HIPPOLYT SAURER, Arbon, Switzerland. Filed Nov. 14, 1911. Serial No. 660,267. (Cl. 164—114.)



1. In apparatus for perforating jacquard cards, several perforating devices, means to operate the perforating devices so that one part of the perforating devices executes one portion or phase of working necessary for each perforating stroke simultaneously when the other part of the perforating devices executes another portion or phase of working necessary for completing a course of working, but belonging to another perforating stroke.

2. In apparatus for perforating jacquard cards, perforating devices, means to operate the perforating devices so that one perforating device executes one portion or phase of working necessary for a perforating stroke at the same time that the other perforating device executes another portion or phase of working necessary for completing a course of working, but belonging to another perforating stroke.

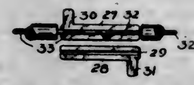
3. In an apparatus for perforating jacquard cards, the combination with mechanism for measuring the length of a stitch; of perforating devices, and selecting mechanisms between the perforating devices and stitch measuring mechanism for selectively controlling the perforating devices, and means to cause one or more selecting mechanisms to control the punching mechanism while one or more selecting mechanisms are being controlled from the stitch measuring mechanism.

4. In a jacquard card punching machine embodying perforating elements for perforating a jacquard card; means alternately operating for selecting the punching elements at different periods, whereby the selecting means effect different portions of their cycle of operations at different times.

5. A punching machine comprising means for perforating a card, alternately operating selecting means for selecting the perforating means, manually operated means to initiate the movement of the selecting means, and mechanically and automatically operating mechanism to complete the operations of the machine including mechanism for automatically and alternately returning the selecting means to zero position.

[Claims 6 to 11 not printed in the Gazette.]

1,225,366. JOINT FOR ELECTRICAL CONDUCTORS. CHARLES B. SCHOENMAN, Wilkinsburg, and RALPH M. HOUCK, Swissvale, Pa. Filed Sept. 11, 1916. Serial No. 119,334. (Cl. 173—263.)




1. A joint for electrical conductors comprising a pair of sections formed of weldable material and corresponding in contour to the shape of the joint to be formed, each of said sections having a weldable and bendable lug for connecting the sections to the conductors to be joined prior to the welding of said sections together.

2. A joint for electrical conductors comprising a pair of sections formed of weldable material and corresponding in contour to the shape of the joint to be formed, each of said sections having a weldable and bendable lug for connecting the sections to the conductors to be joined prior to the welding of said sections together, each of said sections provided with grooves to receive the ends of the conductors when freed from insulation.

3. A joint for electrical conductors comprising a pair of sections formed of weldable material and corresponding in contour to the shape of the joint to be formed, each of said sections having a weldable and bendable lug for connecting the sections to the conductors to be joined prior to the welding of said sections together, each of said sections provided with grooves to receive the ends of the conductors when freed from insulation, each of said lugs being disposed laterally with respect to that section with which it associates.

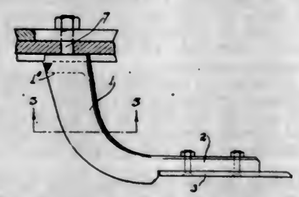
4. A joint for electrical conductors comprising a pair of sections formed of weldable material and corresponding in contour to the shape of the joint to be formed, each of said sections having a weldable and bendable lug for connecting the sections to the conductors to be joined prior to the welding of said sections together, the lug of one section being disposed in opposite direction with respect to the lug of the other section.

5. A joint for electrical conductors comprising a pair of sections formed of weldable material and corresponding in contour to the shape of the joint to be formed, each of said sections having a weldable and bendable lug for connecting the sections to the conductors to be joined prior to the welding of said sections together, each of said sections provided with grooves to receive the ends of the conductors when freed from insulation, the lug of one section being disposed in opposite direction with respect to the lug of the other section.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,367. HARROW-TOOTH. HENRY HUDSON SCOTT, Strassburg, Saskatchewan, Canada. Filed June 11, 1915. Serial No. 33,436. (Cl. 55—37.)

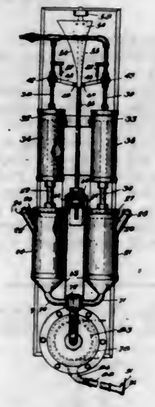



1. In a harrow tooth, a downwardly and backwardly curved body portion provided at one side of its upper end with an offset angularly disposed block and having the other side of its upper end cut at an angle parallel with the said block, an attaching shank integral with the said body portion formed by cutting away the under face of the back thereof, a triangular fishtail cutting plate detachably secured to the said shank, and securing means integral with the upper end of said body portion.

2. In a harrow tooth comprising a downwardly and backwardly curved body portion, said body portion being triangular in cross section having its apex directed forwardly and sharpened to form a cutting edge, a horizontal portion extending from said body portion, the lower face of said horizontal portion being cut away, and a triangular fishtail cutting plate secured to the lower face of said horizontal portion substantially as and for the purpose set forth.

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1,225,368. METHOD OF MAKING RESISTANCE ELEMENTS. MELVIN L. SEVERY, Arlington Heights, Mass., assignor to Severy Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 15, 1914. Serial No. 812,238. (Cl. 219—76.)



2. The process of forming a resistance element having a progressively varying conductivity in different portions thereof, which consists in feeding two plastic materials having different degrees of conductivity, at relatively varying rates to a mixing device, performing a progressive and localized mixing action upon the material passing through said mixing device, discharging the resulting mixed material progressively to a mold or former, and finally pressing the same to shape.

5. The method of making resistance elements having a progressively varying conductivity in different portions thereof, which consists in feeding two substances having different degrees of conductivity, at relatively varying rates, to a mixing device, effecting a progressive and localized mixing action upon said material in said device, and ejecting the material in a continuous stream in said mixed condition.

[Claims 1, 3, 4, and 6 not printed in the Gazette.]

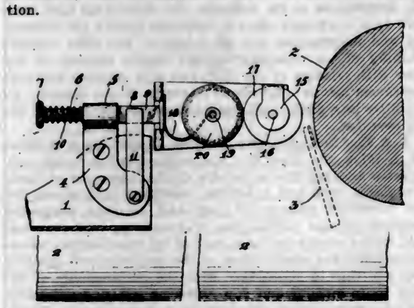
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1,225,369. LINE-FORMING DEVICE FOR TYPE-WRITING MACHINES. JAMES E. SIMPSON, Brooklyn, N. Y. Filed May 1, 1916, Serial No. 94,526. Renewed Jan. 16, 1917. Serial No. 142,742. (Cl. 197—113.)

1. The combination, in a typewriting machine, having a revoluble platen, with endwise movement, of a pair of line forming wheels, having inking means of different colors respectively, a holder therefor, means for slidably supporting said holder for movement toward and from said platen, means for shifting one of said wheels in advance and rearwardly of the other wheel, and means for detaining said shiftable wheel in its set positions.

2. In a typewriting machine, the combination of a revoluble platen having an endwise movement, a line forming wheel having inking means, a slidably and rotatably mounted support for said wheel whereby said wheel may be reciprocated toward and from the platen with the axis of the wheel parallel with or at right angles to the axis of the platen, and yieldable means engaging said support to slidably hold the support in its rotatably adjusted position.





3. A line forming device, comprising a line forming wheel having inking means, a holder for said wheel, means for slidably supporting said holder for movement toward and from a platen, means for rotating said holder to position the wheel to form lines of various angles, yieldable means having a sliding engagement with said holder to maintain the wheel in its set position, and yieldable means for normally retracting the slidable holder from the platen.

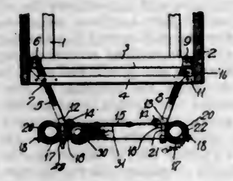
4. A line forming device, comprising a line forming wheel having inking means, a rotatably mounted holder for said wheel, means for moving said holder toward and from a platen and for rotating said holder to set the wheel to form lines of various angles, bearing surfaces on said holder, and a spring adapted to slidably and yieldably engage either of said bearing surfaces to maintain the wheel in set position and permit reciprocation of the holder.

5. In a typewriting machine, the combination of a frame, a rotatable platen having an endwise movement, a line forming wheel, a holder for the wheel, means for slidably supporting the holder for movement toward and from the platen, bearing surfaces on the holder, means mounted on a stationary part of the frame adapted to slidably and yieldably engage either of said bearing surfaces to maintain the wheel in set position, and means for rotating said holder against the resistance of said yieldable means to set the wheel.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,370. TIRE-CARRIER. MILTON H. STEWART, Detroit, Mich., assignor to Thomas J. Walsh, Detroit, Mich. Filed Nov. 4, 1916. Serial No. 129,407. (Cl. 224—29.)

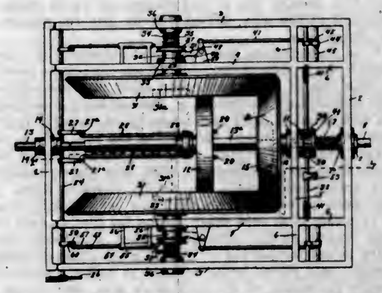


1. A tire carrier comprising a pair of brackets adapted to be detachably interlocked with and secured to the frame members of a vehicle chassis, a transverse bar having outwardly curved end portions outside the bracket ends to which the transverse member is secured, a stud extending from each bracket, a clamp apertured at one end to engage over the stud and interlocked at the other end in an opening through the curved end portion of the transverse bar, nuts on the studs for securing the clamps and lugs on the nuts adapted to register with corresponding lugs on the clamp and apertured to receive a lock.

2. A tire carrier comprising a pair of brackets adapted to be detachably secured at the inner end portions thereof to the frame members of a chassis, a transverse bar secured across the outer end portions of the brackets, the end portions thereof extending beyond the brackets and curving rearwardly to conform to an applied tire casing, clamps each having a T head detachably engaging a slot in the companion end portion of the transverse bar and encircling a stud that extends from each bracket the portions of the clamps adjacent the studs being formed to clear the latter when the clamp is swung away therefrom while still engaged with the end portion of the transverse bar, and nuts for securing the clamps adapted to be locked to the clamps to prevent removal from the studs.

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1,225,371. FRICTION TRANSMISSION-GEAR. JOHN W. SUTTON, Oakhill, and MORRISON MEADE, Longford, Kans. Filed Dec. 6, 1916. Serial No. 135,396. (Cl. 74—26.)



1. In transmission gearing, the combination of a transmission shaft, a disk slidably mounted on said shaft and connected to the shaft for rotation therewith, an axially movable driven-cone-gear mounted at each side of the transmission shaft, said gears being in axial alinement and having their common axis disposed at right angles to the axis of said shaft, means for forcing said gears toward said shaft so as to maintain the inner faces of the gears in driving engagement with said disk, a drive shaft mounted in axial alinement with said transmission shaft, a cone drive gear mounted thereon for axial movement and connected to said shaft so as to rotate therewith, means for holding said drive gear in mesh with said driven gears, means for simultaneously moving all of said gears outward axially into inoperative position, said means being adapted to permit return of the drive gear to its innermost position independently of said driven gears, and means for locking the driven gears in inoperative position and for simultaneously connecting the said disk directly to said drive gear so as to rotate therewith.

2. In transmission gearing, the combination of a drive shaft, a transmission shaft in axial alinement therewith, a cone driven gear mounted at each side of said transmission shaft in axial alinement, a disk slidably mounted on the transmission shaft and connected to said shaft for rotation therewith, means for normally forcing said gears inward so as to maintain the inner faces thereof in engagement with said disk, each of said gears being provided with a central recess in its inner face, a cone drive gear mounted on said drive shaft and connected to the shaft so as to rotate therewith, means for holding said drive gear in frictional engagement with both of said driven gears, and means for adjusting said drive disk longitudinally on the transmission shaft at either side of the common axis of the said driven gears.

3. In transmission gearing, the combination of a transmission shaft having an enlarged intermediate portion, a drive shaft in axial alinement therewith and closely adjecent one end of the transmission shaft, said enlarged intermediate portion being reduced to form a bearing stud, the said drive shaft being provided with an axial bore to

rotatably receive said stud, a cone clutch member rotatably mounted on the transmission shaft intermediate said enlarged portion thereof and said stud, said cone being provided with a plurality of recesses in its inner face, a drive disk slidably mounted on the enlarged portion of the transmission shaft and connected thereto so as to rotate with said shaft, said disk being provided with a plurality of pins adapted to engage into the recesses of the clutch cone, an axially movable cone gear mounted at each side of the drive shaft, means for forcing said gears inward, a drive cone gear mounted on said drive shaft for axial movement and connected to the shaft so as to rotate therewith, said gear being provided with a conical recess to receive the said clutch cone, resilient means for forcing the said drive cone inward axially, means for simultaneously moving all of said gears outward into inoperative position, said means being adapted to permit inward movement of the drive gear independently of the driven gears, and means for locking the said driven gears in inoperative position and for simultaneously forcing the said disk toward the drive-cone-gear so as to cause engagement of the pins carried thereby into the recesses of the clutch cone.

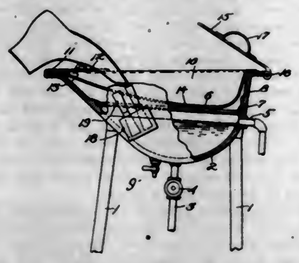
4. In transmission gearing, the combination of a transmission shaft, axially movable driven cone-gears mounted at each side of the transmission shaft in axial alinement and equi-distant therefrom, a disk slidably mounted on the transmission shaft and connected thereto for rotation with said shaft, means for forcing the said driven gears inward into engagement with said disk, a drive shaft mounted in axial alinement with, and closely adjacent, said transmission shaft, an axially movable drive cone gear mounted on the drive shaft and connected thereto so as to rotate with said shaft, means for forcing said drive gear inward axially into engagement with said driven gears, means for moving all of said gears outward simultaneously, said means being adapted to permit independent inward movement of the said drive gear, and means for releasably securing the driven gears in inoperative position independently of the drive gear whereby inward movement of the driven gears into engagement with the drive gear subsequent to the inward movement of the drive gear may be obtained so as to insure accurate mesh of the said gears.

5. In transmission gearing, the combination of two axially alined driven cone-gears, a drive cone having its axis disposed at right angles to the common axis of the driven gears, all of said gears being mounted for axial movement in either direction, means for forcing each of said gears inward axially, and means for moving all of said gears outward axially simultaneously, said means being adapted to permit return of the said drive gear to its innermost position independently of the driven gears.

[Claim 6 not printed in the Gazette.]

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1,225,372. MACHINE FOR FILLING THE BOTTOMS OF SHOES. ANDREW THOMA, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y., a Corporation of Maine. Filed Mar. 28, 1912. Serial No. 686,977. (Cl. 18—1.)



1. A shoe bottom filling machine, comprising a chamber for holding the filler for use, said chamber being constructed and adapted to handle a filler composed of finely granulated cork and a binder, combined with means for the restricted passage of an even tempering moisture to and within the filler-mass in said chamber, said means containing as a part of its construction means for evening the distribution of the moisture and restricting said moisture to a tempering amount sufficient merely for developing and maintaining the stickiness of the filler without washing off or deteriorating the binder portion of the filler with relation to the cork, and said chamber and first mentioned means coöperating to retain in the chamber all the filler in a finely moistened and tempered condition for the operator.

2. A shoe bottom filling machine, comprising a chamber for holding the filler for use, said chamber being constructed and adapted to handle a filler composed of finely granulated cork and a binder, combined with means for the restricted passage of heat and an even tempering moisture to and within the filler-mass in said chamber, said means containing as a part of its construction means for evening the distribution of the moisture and limiting said moisture in accordance with the requirements of the filler to an amount and flow sufficient merely for developing and maintaining the filler in a homogeneous, sticky, united condition without washing off or deteriorating the binder portion of the filler with relation to the cork, and said chamber and first-mentioned means coöperating to retain in the chamber all the filler in a finely moistened and tempered condition for the operator.

3. A shoe bottom filling machine, comprising a chamber for holding the filler for use, said chamber being constructed and adapted to handle a filler composed of finely granulated cork enveloped in a binder, having latent capacity for increased stickiness, combined with mechanism for heating the filler and for simultaneously introducing a tempering fluid to and within the filler-mass in said chamber, said mechanism containing as a part of its construction means for evening and distributing said fluid in limited amount to the filler-mass sufficient merely, in connection with the heat, for developing and quickening the latent binder so as to maintain the stickiness of the filler without washing off or deteriorating the binder portion of the filler with relation to the cork, and said chamber and mechinsm coöperating to retain all the filler in said finely moistened and tempered sticky condition in the chamber ready for the operator.

4. A shoe bottom filler machine, comprising a chamber for holding the filler for use and adapted to contain a filler composed of comminuted cork intermingled with a binder, said chamber having a bottom perforated with a restricted area of fine perforations capable of permitting the upward passage of vapor while preventing the downward escape through the bottom of the filler, the front part of the supporting portion of said bottom having the vapor directly excluded therefrom to facilitate the holding of the filler thereat by the bottom and the manipulating of the filler from said bottom into the shoe.

5. A shoe bottom filler machine, comprising a tank containing a water chamber, means for heating and vaporizing the water therein, a filler receptacle constructed and arranged to support and retain the filler, said receptacle being mounted within the influence of the heated vapor from said chamber, and having provision for affording the vapor direct access to the filler in one part of the receptacle and for excluding said vapor from said direct access to the filler in another part of the receptacle.

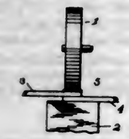
[Claims 6 to 13 not printed in the Gazette.]

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1,225,373. METHOD OF ELECTRIC WELDING. ROLAND DAVIS THOMSON, Schenectady, N. Y., assignor to Thomson Electric Welding Company, Lynn, Mass., a Corporation of Massachuetts. Filed Aug. 21, 1916. Serial No. 115,989. (Cl. 219—10.)

1. The herein described improvement in making a joint progressively along the line of desired union by the electric welding process, consisting in interposing a supplemental piece of good conducting material between the work and the electrode and adapted to be engaged by the electrode progressively as it passes over the work.





2. The herein described improvement in forming a joint progressively by the use of a rolling contact electrode applying welding current and pressure to the work, consisting in interposing between said electrode and the work a piece of good conducting material adapted to be progressively engaged by the contact surface of said electrode as and for the purpose described.

3. In an electric welding apparatus for forming a seam or line of welding progressively by the electric welding process, the combination with a rocking electrode having an operating handle, of supplemental means for assisting in holding the roller contact electrode against the work.

4. In an electric welding apparatus for forming an electric line or seam weld progressively, the combination of a rocking electrode and a supplemental contact piece adapted to be engaged progressively by the contact surface of the electrode as it is applied to the work in the formation of the line of weld, said supplemental piece being interposed between said electrode and the work.

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1,225,374. PROCESS FOR MANUFACTURING METALLIC CHROMATES. KEBE TOARE, Winchester, Mass. Filed Oct. 6, 1916. Serial No. 124,047. (Cl. 134—58.)

1. The process herein described for manufacturing metallic chromates, which consists in subjecting the metallic element employed, to a selected temperature between 60° and 140° C., to the action of a solution consisting of water, chromium containing substance and an acid which has a solvent action on the metallic element.

2. The process herein described for manufacturing metallic chromates, which consists in subjecting the metallic element employed, to a selected temperature between 60° and 140° C., to the action of a solution consisting of water, chromic acid and an acid which has a solvent action on the metallic element.

3. The process herein described for manufacturing metallic chromates, which consists in subjecting the metallic element employed, to a selected temperature between 60° and 140° C., to the action of a solution consisting of water, chromic acid and nitric acid.

4. The process herein described for manufacturing metallic chromates, which consists in subjecting the metallic element employed to a selected temperature between 60° and 140° C., to the action of a solution consisting of water, chromium containing substance and an acid which has a solvent action on the metallic element.

5. The process herein described for manufacturing metallic chromates, which consists in subjecting metallic lead, to a selected temperature between 60° and 140° C., to the action of a solution consisting of water, chromic acid and nitric acid.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,375. GREASE-CUP BODY. DANIEL H. TWAITS, Chicago, Ill. Filed Jan. 19, 1914. Serial No. 812,873. (Cl. 184—38.)

1. A grease cup body comprising a stem, a disk rigid therewith and having a cylindrical flange at its outer edge, a resilient member, and a ring embracing said resilient member and having a portion tightly fitting the inner periphery of the first mentioned flange.

2. In a grease cup body, the combination of a tubular stem, a disk rigid with the upper end thereof and having a cylindrical flange, a resilient ring at the edge of said flange, a ring having a groove in which said resilient ring is mounted and having a cylindrical flange tightly fitting the interior of the first mentioned flange.



3. In a grease cup body, the combination of a tubular stem, a disk rigid with the upper end thereof and having a cylindrical flange at its outer edge, a ring having a portion substantially U-shaped in cross section forming an annular groove facing outwardly and a resilient ring mounted in said groove, and a flange integral with said ring and adapted to engage the inner surface of the first mentioned flange, and means for holding the same in position.

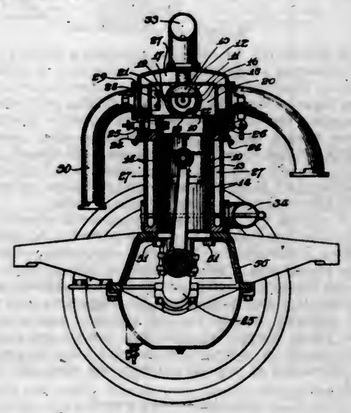
4. In a grease cup body, the combination of a tubular stem, a disk rigid with the upper end thereof and having a cylindrical flange at its outer edge, a resilient member at one edge of said flange, and a ring having a grooved portion carrying said resilient member and having a cylindrical flange extending from one side thereof, said ring being split at one point and adapted to spring outwardly whereby it is held in position by its flange engaging the inner surface of the flange on the disk.

5. In a grease cup body, the combination of a tubular stem having a disk rigid with the upper end thereof and having a downwardly turned flange externally threaded, a resilient ring having its outer periphery adjacent the threaded portion of said flange, and a ring having a U-shaped cross section forming the groove in which said resilient ring is mounted, and an upwardly extending cylindrical flange adapted to engage the interior of the flange on the disk, said U-shaped ring and flange being split and having a T-slot and a T-member adapted to have its head portion passed through the corresponding portion of the T-slot and adapted to engage the shank of said slot when the ring is in position, and being held in position by the ring member tending to spring outwardly.

[Claims 6 to 11 not printed in the Gazette.]

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1,225,376. ENGINE. HENRY P. T. VAN KEUREN, Philadelphia, Pa. Filed Aug. 18, 1913. Serial No. 785,267. (Cl. 123—59.)



1. In an engine, the combination of a stationary housing, a cylinder movably seated therein, a piston operating in the cylinder, a rotatable valve member journaled in the housing and operating in a concave valve seat in the head of the cylinder and positively adjustable means at

the cylinder head for maintaining the relative position between the cylinder and the housing.

2. In an engine, the combination of a stationary housing, a cylinder movably seated therein, a piston operating in the cylinder, a rotatable valve member journaled in the housing and operating in a concave valve seat in the head of the cylinder and means at the cylinder head for limiting the relative movement between the cylinder and the housing.

3. In an engine, the combination of a stationary housing, a cylinder movably seated therein, a piston operating in the cylinder, a rotatable valve member journaled in the housing and operating in a concave valve seat in the head of the cylinder and means at the cylinder head for limiting the relative movement between the cylinder and the valve.

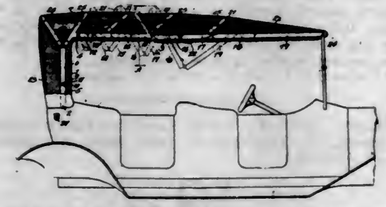
4. In an engine, the combination of a stationary housing, a cylinder movably seated therein, a piston operating in the cylinder, a rotatable valve member journaled in the housing and operating in a concave valve seat in the head of the cylinder, and adjustable means at the cylinder head for maintaining the relative position between the cylinder and the housing.

5. In an engine, the combination of a stationary housing, a cylinder movably seated therein, a piston operating in the cylinder, a rotatable valve member journaled in the housing and operating in a concave valve seat in the head of the cylinder and positively adjustable means at the cylinder head for maintaining the relative position between the cylinder and the housing, whereby the pressure of the expanding charge in the cylinder is utilized to make effective the fit between the valve and its seat.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,377. AUTOMOBILE-TOP. JOHN VICIC and HENRY J. SANDBERG, Chicago, Ill. Filed Mar. 8, 1916. Serial No. 82,960. (Cl. 21—62.)



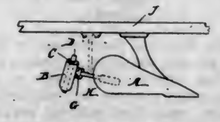
1. A folding top for vehicles, comprising pivoted vertically extending supporting arms, a plurality of members extending longitudinally from said supporting arms and having hinged joints which permit of folding said members one against the other alternately in opposite directions, and bow-shaped members for supporting cover material pivotally secured to said members near the hinged joints thereof, whereby said bow-shaped members will be spaced in substantially parallel relation and will form extensions of said hinged members when the top is folded.

2. A folding top for vehicles, comprising pivoted vertically extending supporting arms, a plurality of members extending longitudinally from said supporting arms and having hinged joints which permit of folding said members one against the other alternately in opposite directions, and bow-shaped members for supporting cover material pivotally secured to said members near alternate hinged joints thereof, whereby said bow-shaped members will be spaced in substantially parallel relation and will form extensions of said hinged members when the top is folded.

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1,225,378. POTATO-HILLING PLOW. RUDOLPH BOSSERT DOCETTI WALKER, Blenheim, New Zealand. Filed Nov. 26, 1913. Serial No. 803,303. (Cl. 97—24.)

1. The combination with a plow having a mold board, of an arm fixed to said mold board and extending rearwardly therefrom, a second arm extending rearwardly from said first mentioned arm, a connection between said arms having means whereby said second mentioned arm may be angularly adjusted with respect to said first mentioned arm, a socket at the end of said second arm, a stem slidably mounted in said socket, and extending substantially at right angles to said second mentioned arm, means for holding said stem in adjusted position in said socket and a cylindrical roller mounted at the end of said stem.



2. The combination with a plow having a mold board, of an arm fixed to said mold board and extending rearwardly therefrom in a curve, a second arm extending rearwardly from said first-mentioned arm, a connection between said arms having means whereby said second-mentioned arm may be angularly adjusted with respect to said first-mentioned arm, a socket at the end of said second arm, a stem slidably mounted in said socket, and extending substantially at right angles to said second-mentioned arm, means for holding said stem in adjusted position in said socket and a cylindrical roller mounted in the end of said stem.

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1,225,379. TOY. JOHN H. WARNER, Dayton, Ohio. Filed Dec. 26, 1916. Serial No. 138,840. (Cl. 46—37.)



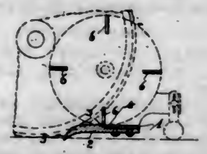

1. A toy comprising a flat piece provided with an aperture, and a flat spinner mounted within the latter for rotation by a blast of air from the human mouth.

2. A toy comprising a flat piece provided with an aperture, and a flat spinner mounted within the latter for rotation by a blast of air from the human mouth, said spinner adapted to be brought to rest in the same plane as that occupied by the piece which supports it.

3. A toy comprising a flat piece provided with an aperture, a flat spinner conforming in shape to, but of less size than, the aperture, and means by which said spinner is supported within said aperture for rotation by a blast of air from the human mouth, said spinner adapted to be brought to rest in the same plane as that occupied by the piece which supports it.

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1,225,380. LAWN-MOWER. HOWARD WARREN, Los Angeles, Cal. Filed Aug. 21, 1916. Serial No. 116,034. (Cl. 56—19.)



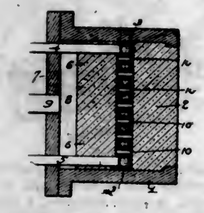
1. An attachment for the cutter bar of a lawn mower, consisting of a suitable number of tines each adjustably and removably attached to the cutter bar, the tines projecting in a forward direction from the cutter bar and pointing downwardly.



2. An attachment for the cutter bar of a lawn mower, consisting of a suitable number of tines each adjustably and removably attached to the cutter bar having a shoulder resting against the cutting edge of the cutter bar, the front ends of the tines projecting forward and with the pointed ends downwardly from the lawn mower.

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1,225,381. GAS-BURNER. UTLEY WEDGE, Ardmore, Pa. Filed Mar. 1, 1915. Serial No. 11,363. (Cl. 158—99.)



1. A gas burner having a block of porous refractory material on the surface of which combustion is effected, another block of porous refractory material inwardly beyond the same and through which the fuel is compelled to pass on its way to the first block, and a cooling device interposed between said blocks.

2. A gas burner having a block of porous refractory material on the surface of which combustion is effected, and means embedded in the block for increasing the heat of the same.

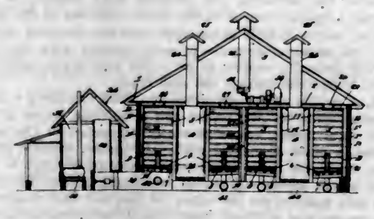
3. A gas burner having a block of porous refractory material on the surface of which combustion is effected, and heat conducting bars embedded in the block and projecting from that face of the same on which combustion is maintained.

4. A gas burner having a block of porous refractory material on the surface of which combustion is effected, means embedded in the block for increasing the heat of the same, and cooling means at the rear of the block.

5. A gas burner having a block of porous refractory material on the surface of which combustion is effected, means for increasing the heat of said block, and water cooled means at the rear of the block for reducing the temperature of the combustion fluid at that point.

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1,225,382. POTATO-CURING APPARATUS. JAMES B. WELLS, Longview, Tex. Filed Dec. 4, 1915. Serial No. 65,086. (Cl. 98—26.)



1. A potato curing apparatus, including a housing structure inclosing a plurality of bins and providing an upper chamber above said bins with means for exhausting air therefrom, each bin communicating with said chamber and having in its lower portion an upwardly extending air distributing nozzle, a distributing conduit connecting with said nozzles, a damper to control the communication with each nozzle, and means whereby air at any desired temperature may be forced into said conduit.

[Claims 2 and 3 not printed in the Gazette.]

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1,225,383. ACETYLENE-BURNER. BERNHARD WIENER, Chicago, Ill. Filed Oct. 19, 1915. Serial No. 56,702. (Cl. 158—27.4.)



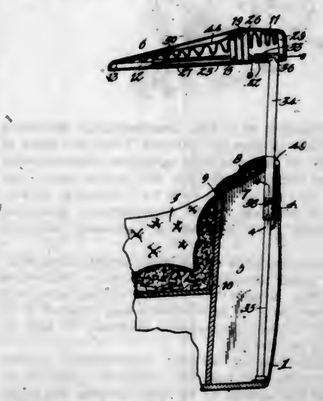
1. A burner comprising a gas pipe; a flame tip coöperating with said gas pipe; means for admitting air at the base of said tip; and a casing surrounding the base of said tip and said gas pipe, there being air admission openings in said casing remote from the base of said tip, substantially as described.

4. A burner comprising a gas pipe; a gas nozzle at the discharge end of said pipe; a sleeve surrounding said nozzle and projecting beyond the same; a flame tip threaded in said sleeve to coöperate with said nozzle, there being a gap between the end of said tip and said nozzle and air admission openings in said sleeve opposite said gap; a casing mounted on said sleeve surrounding said gas pipe; and an enlargement at the base of said gas pipe fitting the corresponding end of said casing, there being longitudinal air admitting notches in said enlargement, substantially as described.

[Claims 2 and 3 not printed in the Gazette.]

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1,225,384. VEHICLE-TOP. MICHAEL F. WILDAU, Buffalo, N. Y. Filed Feb. 7, 1916. Serial No. 76,500. (Cl. 21—62.)



1. The combination of a vehicle-body having a transverse pocket which is narrower in its lower than in its upper portion, vertically-movable supports arranged in said pocket, a collapsible and foldable top-frame pivoted to said supports and adapted to enter said pocket, said frame narrowing toward its front end to conform to the lower portion of said pocket, and a flexible covering applied to said frame.

2. The combination with a vehicle-body having a pocket extending from side to side thereof and made narrower in its lower than in its upper portion, of telescopic standards secured within said pocket adjacent to its side walls, and a collapsible and foldable top adapted to enter said pocket, said top having a frame comprising telescopic vertically swinging side-members pivoted at their rear portions to the upper ends of said standards and transverse bows each carried by a pair of opposing sections of said side-members and extending laterally beyond the same nearly to the side walls of said pocket in the folded position of the top, the front portion of said top-frame being narrower than its rear portion to conform to the lower portion of said pocket.

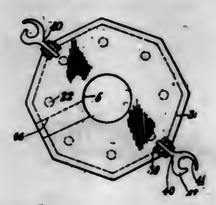
3. The combination of a vehicle-body having a pocket, telescopic standards arranged in said pocket, a cross-bar connecting the upper movable members of said standards, guide-pulleys journaled on the rear wall of said pocket, a lifting cord attached to said cross-bar and engaging said pulleys, and cushioning springs attached at their lower ends to said cross-bar and at their upper ends to the wall of said pocket.

5. A vehicle-top having a frame comprising telescopic side-members provided with longitudinal slots and transverse bows each having its end-portions secured to a pair of said side-members and normally arranged in the slots of the adjacent side-members, the slots of the foremost pair of side-members terminating short of their front ends, while the slots of the remaining side-members extend to their front ends and are constructed to admit the end-portions of the preceding bows.

[Claims 4, 6, and 7 not printed in the Gazette.]

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1,225,385. REINFORCED-CONCRETE PILE AND METHOD OF MAKING THE SAME. JESSE E. WILHELM, Cleveland, Ohio, assignor to The Great Lakes Dredge & Dock Company, Chicago, Ill., a Corporation of New Jersey. Filed Nov. 3, 1915. Serial No. 59,386. (Cl. 72—76.5.)



1. The combination of a pile, longitudinally extending interlocking wings projecting laterally from the sides of the pile, a series of securing rods extending perimetrically about the outer surface of the pile and spaced apart, and means carried by each of said rods for convenient attachment of each of the rods to the longitudinally extending members, whereby these members are securely mounted on the pile.

2. The combination with a pile, of an interlocking member extending longitudinally along the same, transverse grooves extending around the outside of the pile, and securing members lying in said grooves and adapted to be attached to the interlocking member whereby it may be held in position on the pile.

3. The combination of a pile, longitudinal grooves formed in the surface of the pile, transverse grooves extending around the outside of the pile between the longitudinal grooves, interlocking members adapted to seat in the longitudinal grooves, securing members adapted to lie in the transverse grooves, and means for clamping the last named members to the interlocking members.

12. The method of making a concrete pile consisting of casting the pile in a mold and forming on the exterior surface perimetrical grooves, then securing a laterally extending wing to the pile by transverse members lying in said grooves.

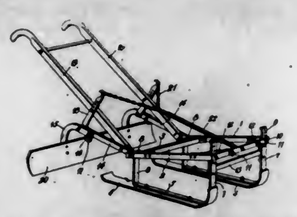
13. The method of making a concrete pile consisting of casting the pile with a longitudinal groove in the exterior thereof, then placing a laterally projecting interlocking wing in said groove and securing the same in place by a series of transverse members around the exterior of the pile.

[Claims 4 to 11 and 14 to 21 not printed in the Gazette.]

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1,225,386. HOE. CHARLES H. WILLIAMS, Fowler, Cal. Filed May 17, 1916. Serial No. 98,156. (Cl. 97—34.)

1. An agricultural implement comprising spaced parallel runners adapted to span a furrow, standards secured rigidly to and rising from the runners adjacent the front and rear ends thereof, a main frame, a hinge rod pivotally connecting the rear end of the main frame with the rear standards with the front end of the said frame adjustably secured to the front standards for tilting the frame upon the standards, and a ground-treating blade supported from the rear end of the main frame by the said rod.



2. In an agricultural implement, the combination of a main frame comprising side members and front and rear cross bars connecting the side members, a hinge rod fitted in the rear extremities of the side members, a blade pivotally supported from the hinge rod, rear standards having their upper ends supporting the hinge rod with the said rod pivotally connecting the main frame with the said standards, front standards adjustably secured to the front portion of the main frame, and runners secured rigidly to the lower ends of said standards and disposed beneath the side members of the main frame and adapted to span a furrow.

3. In an agricultural implement, the combination of a main frame comprising side members and front and rear cross bars connecting the side members, a hinge rod fitting on the rear extremities of the side members, a blade pivotally supported from said hinge rod, rear standards having their upper ends supporting the hinge rod with the said rod pivotally connecting the main frame with the said standards, front standards adjustably secured to the main frame, longitudinally extending base bars connecting the lower ends of the standards, and runners each secured rigidly to one of said base bars.

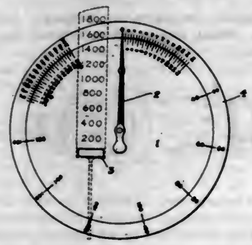
4. A device of the character described including a main frame having side bars and front and rear cross bars with the said side bars projecting beyond the rear cross bars, means for supporting and permitting travel of the said main frame, beams fitting between and pivotally connected to the projecting portions of the side bars of the main frame, a blade connected with the outer extremities of said beams, handles pivotally connected to the said beams, hangers secured to the beams and extending above the handles with the said handles adjustably secured thereto for elevating the handles with respect to the beams, a spring secured to the front cross bar of the main frame, and a flexible connection between the said spring and the upper extremities of said hangers with the said spring normally tending to pivot the said beams upon the main frame and elevate the said blade.

5. A device of the character described including a main frame, means for supporting and permitting travel of the said main frame, beams pivotally connected to the main frame, a blade connected with said beams, handles pivotally connected with the beams, hangers secured to the said beams, means adjustably connecting the handles with the said hangers for elevating the handles with respect to the beams, and resilient means operatively connected with the said hangers and normally tending to pivot the beams upon the main frame for elevating the said blade.

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1,225,387. WEIGHING-MACHINE. BENNIAH H. WINTERS and NELSON C. MASSEY, Springfield, Ohio, assignors to The Winters-Coleman Scale Company, Springfield, Ohio, a Corporation of Ohio. Filed Dec. 21, 1914. Serial No. 878,339. (Cl. 265—68.)

1. The combination of an indicator dial graduated to indicate amounts or weights of initial dial capacity, a supplemental indicator dial associated therewith having graduations corresponding to said first dial, one of said indicator dials being arranged to indicate the presence of a load greater than initial dial capacity, and means for moving one dial relatively to the other a predetermined fixed distance whenever the presence of said last mentioned load is indicated.



2. The combination of an indicator dial with graduated spaces for indicating loads of initial dial capacity and having a supplemental and additional ungraduated space for loads greater than said initial capacity, a supplemental indicator dial associated therewith having graduated spaces corresponding to said first dial, and means for retracting one of said dials to the extent of said supplemental space, substantially as specified.

3. The combination of an indicator dial with graduated spaces for loads of initial dial capacity and a supplemental space for loads greater than that, a supplemental indicator dial associated therewith and graduated correspondingly to the first dial, and means for moving one dial in its relation to the other a predetermined fixed distance equal to said supplemental space, for the purpose specified.

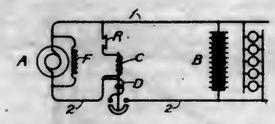
4. The combination of an indicator dial graduated to indicate loads of initial dial capacity and having a supplemental space for indicating the presence of loads greater than that, a supplemental indicator dial associated therewith and graduated correspondingly to the first dial, an indicator for indicating counterbalances, and means for moving one of said dials a predetermined distance equal to said supplemental space, substantially as specified.

5. The combination of an indicator dial graduated for loads of initial capacity and having a supplemental space for loads exceeding dial capacity, a supplemental indicator dial associated therewith having graduated spaces corresponding to the graduated spaces of the first dial, and means for advancing and retracting said supplemental dial a fixed amount equal to said supplemental space, for the purpose specified.

[Claim 6 not printed in the Gazette.]

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1,225,388. ELECTROMAGNETIC SWITCH. JOSEPH LESTER WOODBRIDGE, Philadelphia, Pa. Filed Feb. 6, 1915. Serial No. 6,413. (Cl. 175—281.)



In an electromagnetic switch, the combination of a movable switch element, a coil adapted, upon energization, to operate said element to close the switch, said coil having a rising voltage characteristic with increments of current therethrough, and in series with said coil a negative temperature coefficient resistor of material characterized by a drooping voltage characteristic with increments of current through it and adapted to substantially neutralize the rising voltage characteristic of the coil.



1,225,389. PROCESS FOR TREATING LEATHER. PERCY ALEXANDER, Marblehead, Mass. Filed Sept. 26, 1914. Serial No. 863,711. (Cl. 149—6.)

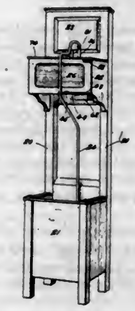
1. The process of treating leather which consists in impregnating the leather with a solution comprising a heated emulsion of a dextrinous gum and an oleaginous substance, drying same partially or wholly and finally ironing the leather.

2. The process of treating leather which consists in impregnating the leather with a solution comprising a heated mixture of a dextrinous gum, and Turkey red oil and subsequently ironing the leather.

3. The process of treating leather which consists in impregnating one side of the leather with a solution comprising a heated mixture of dextrinous gum and Turkey red oil substantially in the proportions specified, applying pressure to the leather to cause more uniform impregnation and to remove the surplus of the fluid and finally ironing the leather by a heated means.

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1,225,390. TOWEL-SERVING APPARATUS. CARL E. ANDERSON, Austin, Ill., assignor to Jacques Rousso, Chicago, Ill. Filed June 27, 1912. Serial No. 706,219. (Cl. 45—32.)



1. In a device of the class described, a screw threaded shaft adapted to extend through the alining apertures in the towels of a pile of towels, an internally screw threaded carrier engaging said shaft, means on said carrier to engage one of said towels, and means to rotate the said shaft and thereby advance the carrier along the same.

2. In a device of the class described, a slotted tubular standard passing through the gromets of a pile of towels, a screw threaded shaft within said standard, an internally screw threaded carrier within the standard engaging said shaft, means on said carrier projecting out through the slot of the standard to engage one of the said towels, and means to rotate the said shaft and thereby advance the carrier along the same.

3. In a device of the class described, a frame, a rod having both ends supported by the frame, said rod being adapted to be engaged by the gromets of a series of towels, a carrier mounted on and adapted to move along a portion of said rod, means on the carrier to engage a towel, and means to advance the carrier and thereby deliver a towel along said rod.

4. In a device of the class described, a box with a false bottom, a standard rising from said false bottom and adapted to engage a pile of towels, a carrier adapted to move along the standard, and mechanism beneath the false bottom adapted to move said carrier.

5. In a device of the class described, a platform to support a pile of towels, a fixed standard projecting up from said platform and adapted to extend through the gromets of said towels, a carrier adapted to slide up and down said standard and adapted to engage the gromet of the uppermost towel of the pile, a lever under the platform with its handle projecting beyond the edge thereof, said

lever being pivoted on a vertical axis under the platform, and operating mechanism connecting said lever to said carrier.

[Claims 6 to 15 not printed in the Gazette.]

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1,225,391. ATTACHMENT-PLUG. ERNST G. K. ANDERSON, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company. Filed Apr. 10, 1913. Serial No. 760,261. (Cl. 173—343.)



A separable attachment plug comprising two members, one of said members including an insulating base, electrically connected inner and outer center contacts carried by said base, a conducting sleeve secured to said base and extending rearwardly thereof so as to form a chamber, and a threaded outer contact rotatably mounted on said sleeve, and the other member including an insulating base having a center contact for engagement with said inner center contact and having an outer contact for engagement with said sleeve, said members having interengaging manually releasable means for retaining them together.

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1,225,392. MOTION-PICTURE APPARATUS. LOUIS ARKIN and SAMUEL ADELMAN, Boston, Mass. Filed Jan. 8, 1917. Serial No. 141,131. (Cl. 88—19.)



1. In apparatus of the class described, a knock-down casing having overlapping portions on opposite sides thereof, a pair of fasteners adapted to pass through said overlapping portions, a rotor mounted in said fasteners and a series of pictures radially disposed on said rotor.

2. In apparatus of the class described, a knock-down casing having overlapping portions on opposite sides thereof, a pair of fasteners adapted to pass through said overlapping portions, a rotor, a series of pictures radially disposed on said rotor, and a spindle engaging said rotor and journaled in said fasteners.

3. In apparatus of the class described, a knock-down casing having overlapping portions on opposite sides thereof, a pair of fasteners adapted to pass through said overlapping portions, a rotor, a series of pictures radially disposed on said rotor, and a spindle detachably engaging said rotor and journaled in said fasteners.

4. In apparatus of the class described, a knock-down casing having overlapping portions on opposite sides thereof, a pair of fasteners adapted to pass through said overlapping portions, a rotor having a slot, a series of pictures radially disposed on said rotor, a spindle having a flattened portion adapted to fit within said slot, said spindle journaled in said fasteners.

5. In apparatus of the class described, a casing, and a rotor comprising a pair of heads and a picture carrying member detachably secured thereto.

[Claims 6 to 20 not printed in the Gazette.]

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1,225,393. GAME. MAURICE A. AUDSLEY, West Philadelphia, Pa. Filed Aug. 2, 1916. Serial No. 112,847. (Cl. 46—59.)



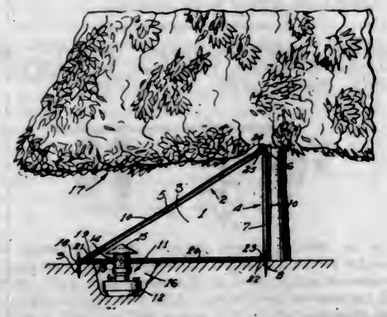
1. A toy or game vessel having a loosely fitting deck portion and loose elements thereon, in combination with spring mechanism contained in said vessel, beneath said deck portion, a release for said spring mechanism whereby the latter is caused to create a sharp impact against the under surface of said deck portion to throw it and the loose elements thereon upwardly, and a detent exposed through the vessel side, as a target, to, when struck, operate said release mechanism.

2. The combination in a game, of a toy battleship comprising a rigid hull, a deck loosely fitting thereon, and target elements consisting of smoke stack, fighting mast, bridge and turret loosely fitting on said deck, together with spring mechanism to throw upwardly said deck and the target elements, a release for said spring mechanism, and a detent, visible at one side of said toy battleship, to receive the impact of a projectile and thus to actuate said release mechanism.

3. The combination in a toy battleship, having a rigid hull, of forward and after loosely fitting deck portions therefor, an individual spring to react upon each deck portion, release means for each spring, and a separate detent for each release means, said detents being visible as targets at the side of the battleship, to separately receive the impact of a projectile, and thus to actuate the release mechanism, said springs being arranged, respectively, to exert their force in opposite directions, whereby the deck portion which is thrown upwardly is directed in its projected movement away from the other deck portion.

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1,225,394. MEANS FOR PREVENTING FROST ON TREES AND OTHER VEGETATION. GEORGE H. BARKER, Pasadena, Cal. Filed Mar. 11, 1913. Serial No. 753,049. (Cl. 126—59.5.)



1. A portable foldable frame having side walls and a front wall, a top inclined downward from the front wall to the ground, means for detachably securing the frame to the ground, said frame being covered with a fabric permeable to heat, and a heater within the inclosure and located beneath the top at its lower end.

2. A device as described having a vertical rectangular front wall, triangular side walls, and a top inclined downward from the front wall to the ground, a heater within said inclosure at the lower end thereof, a deflector for said heater extending beneath the top at its lower end, and a cloth fabric permeable to heat, covering the inclosure.

3. A device as described having a vertical rectangular front wall, triangular side walls, and a top inclined downward from the front wall to the ground, said walls being formed from a heat fabric, a heater within said inclosure, and a deflector for the heater extending beneath said top at its lower end.

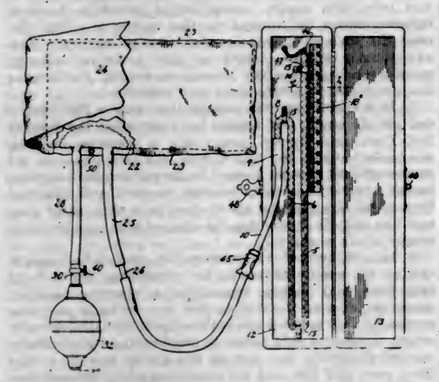
4. A device of the character described comprising a chamber having a vertical rectangular front wall, side walls in the form of right angled triangles, a slanting cloth top permeable to heat, a heater in said chamber at the lower portion of the top; and means for deflecting the heat across said lower portion of the top.

5. A device of the character described comprising a portable foldable frame having a vertical front wall, triangular side walls, a top sloping from the front wall to the ground, means for detachably securing the frame to the ground, said frame being covered with a fabric permeable to heat, said frame and cover forming a wedge shaped inclosure, a heater within the inclosure at its lower end; and means for deflecting the heat across said lower end.

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1,225,395. SPHYGMOMANOMETER. GEORGE F. BEACHLER, Cleveland, Ohio. Filed Aug. 13, 1914. Serial No. 856,533. (Cl. 73—44.)

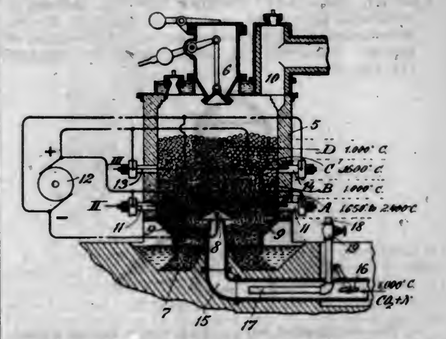


1. In a sphygmomanometer, the combination with a pneumatic bag, of a tube leading to the bag, a collapsible bulb attached to the tube for inflating the bag, a screw valve adjacent the bulb and adapted to vent the passage leading therefrom and adapted to be operated by the hand operating the bulb, a separate tube leading from the bag, a U-shaped mercury tube connected with the last named tube having one leg extending higher than the other, a scale opposite this last named leg, means for removably closing the upper end of the leg of the tube adjacent the scale, and means for closing the tube leading from the bag to the mercury tube.

2. In a sphygmomanometer, the combination with a mercury tube, of a flexible tube leading thereto, a pneumatic bag connected with the last mentioned flexible tube, a separate flexible tube leading to the bag, a collapsible bulb for inflating the bag through the last mentioned tube, a valve casing secured to the collapsible bulb and having a passage connecting the bulb with the flexible tube leading therefrom, a check valve closing toward the bulb and mounted in said casing, a vent passage in the valve casing on the side of the valve away from the bulb, and a screw closing said vent opening and adapted to be operated by the hand operating the bulb.

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1,225,396. METHOD OF PRODUCING CARBONIC OXID. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed June 7, 1911. Serial No. 631,762. (Cl. 48—65.)




1. The herein described process of producing CO which consists in creating a zone of high temperature in a body of coal in a producer by the action of highly heated waste furnace gases and air, thereby causing the evolution of $CO_2$, and then subjecting the $CO_2$ to the high temperature effects of an electric current between electrodes so disposed as to use the coal as a resistance medium, whereby the $CO_2$ is disassociated and combined with carbon to form 2CO.

2. The herein described process of producing CO, which consists in disassociating the coal in the producer by the high temperature effects of mixed furnace gases and air thereby setting free $CO_2$, then disassociating the $CO_2$ by the high temperature effects of an electric current transmitted through a portion of the coal in the producer, whereby the disassociated gas will combine with carbon to form 2CO.

3. The herein described process of producing CO, which consists in heating a body of coal contained in a producer by the introduction of waste products of combustion and air to a sufficiently high temperature to disassociate the coal to produce CO, and simultaneously heating the coal in the producer in a zone to a sufficiently high temperature by the passage of an electric current across said zone, using the coal as a resistance medium, to disassociate the $CO_2$ passing said zone and form 2CO and to compensate for the lowering of the temperature in the furnace due to the endothermic action taking place in converting $CO_2$ into 2CO.

4. The herein described process of producing CO, which consists in introducing under a body of coal in a producer, highly heated products of combustion and air, whereby the coal is heated to a point sufficiently high to partially decompose the coal and set free CO; causing a current of electricity to traverse the fuel in the furnace in a zone, whereby said fuel is heated to a high temperature and rendered incandescent whereby the $CO_2$ carried by the products of combustion and the $CO_2$ set free by the combining action of the air with the fuel in the incandescent zone are converted into 2CO.

5. The herein described process of producing CO, which consists in introducing highly heated products of combustion containing $CO_2$ and N under a body of coal in a producer, whereby the coal is primarily heated to a point at which it will give off a certain amount of CO; causing a current of electricity to traverse the coal in the producer disposed in a horizontal zone whereby the fuel in the zone is rendered incandescent, causing the air introduced with the products of combustion to combine with the incandescent coal in the zone to add to the temperature of

the zone and generate $CO_2$ then causing the aggregate temperature of the zone to disassociate the $CO_2$ of the products of combustion as well as the $CO_2$ produced within the zone to produce in combination with free carbon, 2CO.

[Claims 6 and 7 not printed in the Gazette.]

1,225,397. SHADE-SUPPORTING DEVICE. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 22, 1913. Serial No. 802,507. (Cl. 240—114.)



1. The combination with a lamp socket having a bead, of a shade supporting device including a shade supporting member, a plurality of spring tongues formed thereon and adapted to embrace said bead, a rotatable ring having a plurality of spiral cams thereon adapted to engage said tongue and force them against the bead when the ring is rotated, and a plurality of flexible members on said supporting member adapted to be bent into engagement with said ring to hold the same in place.

2. The combination with a lamp socket having a bead, of a two pice shade supporting device including a member having means associated therewith for supporting the shade, a plurality of spring-tongues on said member, said tongues having means for embracing said bead, a rotatable ring mounted on said supporting member and having on its upper inside edge a plurality of spiral cams adapted to be brought into engagement with said spring-tongues to press the same against said bead when the ring is rotated.

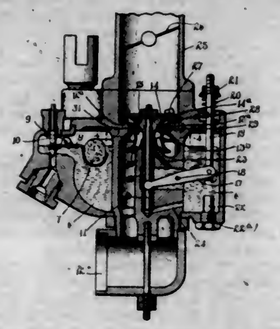
3. The combination with a lamp socket having a bead, of a two piece shade supporting device including a shade supporting member having thereon a plurality of spring-tongues, said tongues having longitudinal grooves formed therein and vertically struck-in portions below said grooves, whereby said tongues embrace said bead, a rotatable ring mounted on said supporting member and having on its upper edge a plurality of spiral cams adapted to be brought into engagement with said spring-tongues to press the same against said bead when said ring is rotated.

4. The combination with a lamp socket having a bead, of a shade supporting device including a shade supporting member, a plurality of spring-tongues formed thereon and adapted to embrace said bead, a rotatable ring having a plurality of spiral cams thereon adapted to engage said tongues and force them against the bead when the ring is rotated, said tongues having a portion bent outward to embrace said ring, and a plurality of flexible members on said supporting member adapted to be bent into engagement with said ring to hold the same in place.

5. The combination with a lamp socket having a bead, of a shade supporting device including a shade supporting member, a plurality of spring-tongues on said member and adapted to embrace said bead, a rotatable ring having a plurality of spiral cams thereon adapted to engage said tongues and force them against the bead when the ring is rotated, said tongues having a portion bent outward to embrace said ring, a plurality of lugs on said supporting member bearing on said ring to retain the same in place, and a stop on said ring adapted to engage said lugs to limit the extent of rotation of the ring.

[Claims 6 to 9 not printed in the Gazette.]

1,225,398. CARBURETER. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 5, 1914. Serial No. 855,196. (Cl. 261—48.)



1. In a carbureter, the combination with a fuel supply and an air supply, of means for controlling the flow of fuel from said supply, comprising a conical rotating member, means for causing the fuel to flow in a thin film over the surface of said member toward its larger end, and means movable with said rotating member for causing the air to flow in a thin sheet over said film.

2. In a carbureter, the combination with a fuel supply and an air supply, of means for controlling the flow of fuel from said supply, comprising a rotatable tapering member, means for causing the fuel to flow in a thin film over the surface of said member toward its larger end, and tubular means carried by said rotatable tapering member and substantially coaxial therewith, for causing the air to flow in a thin sheet over said film.

3. In a carbureter, the combination with a fuel supply and an air supply, of means for controlling the flow of fuel from said supply, comprising a tapering member, means for causing the fuel to flow in a thin film over the surface of said member toward its larger end, and movable means surrounding said tapering member and adjacent thereto for causing the air to flow in a thin sheet over said film and for controlling the admission of an additional supply of air to the fuel.

4. In a carbureter, the combination with a fuel supply and an air supply of means for controlling the flow of fuel from said supply, comprising a tapering member, means for causing the fuel to flow in a thin film over the surface of said member toward its larger end, and tubular means carried by said tapering member and substantially coaxial therewith, for causing the air to flow in a thin sheet over said film and for admitting an additional supply of air to said fuel.

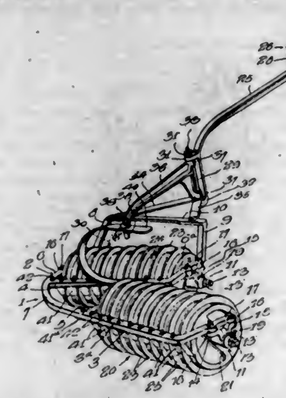
5. In a carbureter, the combination with a fuel supply and an air supply, of a fuel outlet port, a member comprising a needle valve portion controlling said port, and a portion tapering outwardly away from said port and a movable tubular member surrounding said first member and adjacent thereto, for causing the air to flow in a thin sheet over the surface of said tapering part, said tubular member also comprising valve means for controlling the admission of an additional supply of air.

[Claims 6 to 12 not printed in the Gazette.]

1,225,399. COMBINED MULCHING AND LEVELING ATTACHMENT FOR PLOWS. JOHN RANDALL BLACK, Toulon, Ill. Filed Jan. 17, 1916. Serial No. 72,583. (Cl. 97—44.)

1. A mulching and leveling attachment for plows comprising a supporting frame, cylinders revolubly mounted therein, a rigid bar connector having means for engagement with a plow frame and a swiveled connection with said supporting frame, and means for exerting a yielding pressure on said supporting frame whereby the cylinders are held in yielding contact with the surface over which they are drawn.





2. A mulching and leveling attachment for plows comprising a supporting frame, cylinders revolubly mounted therein, a rigid bar connector having means for engagement with a plow frame and a swiveled connection with said supporting frame; and coöperating means carried by said connector and supporting frame for exerting a yielding pressure on said frame.

3. A mulching and leveling attachment for plows comprising a supporting frame, cylinders revolubly mounted therein, a rigid bar connector having means for engagement with a plow frame and a swiveled connection with said supporting frame; and coöperating means carried by said connector and supporting frame for exerting a yielding pressure on said frame, said means being detachably connected.

4. A mulching and leveling attachment for plows comprising a supporting frame, cylinders revolubly mounted therein, a rigid bar connector having means for engagement with a plow frame, said bar having a depending arm at its other end provided with longitudinally spaced laterally extending apertured ears, a pivot bolt extending through said ears, an arm pivoted to swing on said bolt between said ears and having a depending stud on its free end, spring metal straps pivotally engaged at one end with said bolt, said straps diverging and connected at their other ends to said supporting frame, and an outwardly bowed plate spring secured at one end to said frame and having an aperture at its free end for detachable engagement by said stud.

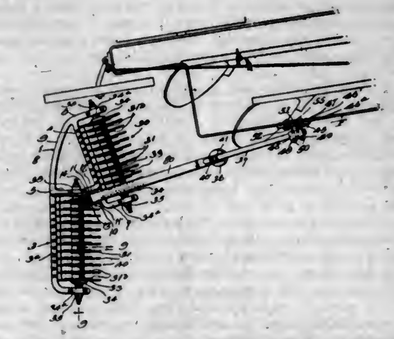
5. In a device of the class described, the combination with a supporting frame and a surface engaging member carried thereby; of a rigid connector with which said frame is pivotally connected to swing in a horizontal plane, an arm mounted on the pivot of said frame to swing in a horizontal plane and held against vertical movement, said arm projecting over said frame, and a spring disposed between said arm and frame for exerting a yielding pressure on said frame.

[Claims 6 to 10 not printed in the Gazette.]

1,225,400. LEVELING AND MULCHING ATTACHMENT FOR PLOWS. JOHN RANDALL BLACK, Toulon, Ill. Filed June 5, 1916. Serial No. 101,807. (Cl. 97—44.)

1. An attachment of the class described comprising a supporting frame, earth working means carried by said frame, a draw bar, and a plate spring fixed at one end to said frame and swiveled at its other end to said draw bar.

2. An attachment of the class described comprising a supporting frame, earth working means carried by said frame, a draw bar, a plate spring fixed at one end to the center of said frame and swiveled at its other end to said draw bar.



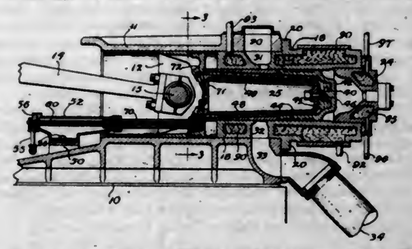
3. An attachment of the class described comprising a supporting frame, earth working elements carried by said frame, a platform rising from the center of said frame, a draw bar, and a plate spring fixed at one end to said platform and swiveled at its other end to said draw bar to provide for the lateral swinging of said frame.

4. An attachment of the class described comprising a supporting frame, earth working elements carried by said frame, a draw bar, a plate fixed to said draw bar, a spring metal bar secured at one end to said frame and extending under said plate and pivotally connected to swing laterally relatively to said draw bar, the contacting faces of said plate and spring frictionally engaging.

5. An attachment of the class described comprising a supporting frame, pulverizing elements carried by said frame, a draw bar, a disk-shaped plate fixed to said draw bar, a spring metal bar secured at one end to said frame and extending under said plate and pivotally connected to swing laterally relative to said draw bar, said plate having a flat lower face across which said spring metal bar extends and engages, a bolt extending through said spring bar, said plate and draw bar, and a roller on said bolt in the aperture of said spring bar.

[Claims 6 to 9 not printed in the Gazette.]

1,225,401. WATER-COOLING DEVICE FOR ENGINE-PISTONS. CHARLES M. BLANCHARD, Willoughby, Ohio. Filed Apr. 7, 1916. Serial No. 89,575. (Cl. 123—176.)



1. In a device for cooling a reciprocating piston, the combination with telescoping tubes leading to the piston, and a tube surrounding these tubes leading from the piston and reciprocable therewith, the sliding joint of the first mentioned tubes being within the latter tube.

2. In a device for cooling a reciprocating piston, the combination with telescoping tubes leading to the piston, a tube surrounding these tubes leading from the piston and rigid therewith, the joint of the first mentioned tubes being within the latter tube, and a receptacle for the tube leading from the piston, said receptacle having an exit opening larger than the inlet tubes.

3. In a device for cooling a reciprocating piston, the combination with telescoping tubes leading to the piston, and a tube rigid with and leading from the piston, a receptacle for the tube leading from the piston into which it may project, the receptacle having a large draining opening which may prevent water accumulating in the receptacle.

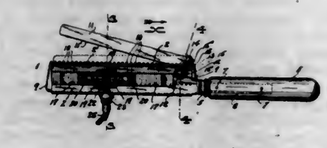
4. In a device for cooling pistons, the combination with a piston having a chamber at the head, passages leading to and from the chamber, a stationary casing, an inlet tube carried by said casing, a tube connected with the inlet passage of the piston and telescoping with the latter tube as the piston reciprocates, means for leading water to said tubes, a tube surrounding the telescoping tubes and adapted to project at all times into the casing and be reciprocated by the piston, the latter tube surrounding the telescoping tubes, and an exit opening leading from the casing larger in diameter than the inlet opening.

5. In a device for cooling pistons for internal combustion engines, the combination with a chamber in the piston, passages leading to and away from the same, a pair of telescoping tubes connected with one of said passages for leading water thereto, and a tube concentric with the other tubes connected with the other passage for leading the cooling water away from the piston, the latter tube at all times surrounding the sliding joint of the telescoping tubes whereby any water leaking at this joint may be carried away in the exit tube.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,402. HAIR-SINGEING DEVICE. ERNEST BOCCHINO, Passaic, N. J., assignor of one-half to Walter Brouillier, Haledon, N. J. Filed Dec. 30, 1916. Serial No. 139,849. (Cl. 132—3.)



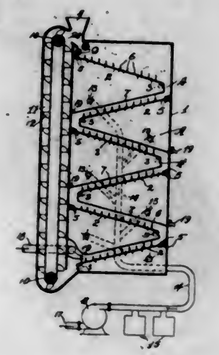
9. In a device of the kind described, a face-plate, means for securing a comb on the rear of said face-plate so that the free ends of its teeth project above said face-plate, a handle portion connected with one end of said face-plate, a movable guard-plate adapted to coöperate with the upper edge of said face-plate to clamp the tips of hair gathered by said comb and distributed over said upper edge of said face-plate, means for pivoting the end of said guard plate to the inner end of said face-plate, spring means for moving said guard-plate to operative position, a finger-piece on said guard-plate for manipulating the same, a longitudinally extending guide rail secured on the exterior surface of said face-plate, a slide-piece mounted on said guide-rail, a burner member, embracing fingers connected with said slide-piece adapted to embrace and hold said burner member free to oscillate thereon, but adapted to move longitudinally with said slide-piece, an inlet pipe connected with said burner-member, and a finger-piece on said inlet pipe for the purpose described.

[Claims 1 to 8 not printed in the Gazette.]

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1,225,403. APPARATUS FOR CLEANING AND DRYING GRAIN. MICHAEL BORISLAVSKY, Minsk, Russia. Filed Sept. 5, 1913. Serial No. 788,267. (Cl. 34—38.)

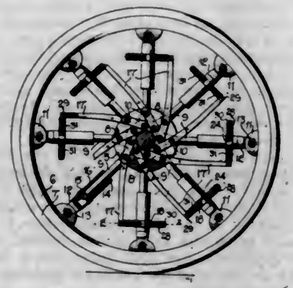
1. Apparatus for cleaning and drying grain, comprising a casing, a plurality of movable sieves arranged therein so as to continuously conduct the grain through the casing, partitions flexibly connected to said sieves to form therewith separate closed compartments, each having an outlet opening, a common conduit connected to said outlet openings, a suction pump in said conduit, an air chamber, a plurality of apparatus for supplying to said chamber air at various temperatures, means for controlling the supply of air from each of said apparatus, means connecting said air chamber with said casing, and a fan in said connecting means for forcing the air from said chamber through said casing.



2. Apparatus for cleaning and drying grain, comprising a casing, a plurality of movable sieves arranged therein so as to continuously conduct the grain through the casing, partitions flexibly connected to said sieves to form therewith separate closed compartments each having an outlet opening, a common conduit connected to said outlet openings, a suction pump in said conduit, an air chamber, a plurality of apparatus for supplying to said air chamber air at various temperatures, means for controlling the supply of air from each of said apparatus, means connecting said air chamber with said casing, a fan in said connecting means for forcing the air from said chamber through said casing, and a dust collector connected to said conduit.

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1,225,404. SPRING-WHEEL. WILLIAM ROY BOWLING, Selden, Kans. Filed Dec. 24, 1915. Serial No. 68,585. (Cl. 152—28.)



A spring wheel including a wheel hub and rim, a series of spoke sections pivotally connected to the hub, a series of tubular spoke sections pivotally connected at their outer ends to the rim to telescopically receive the first named spoke sections, a collar secured upon each of the tubular spoke sections, a guide member rotatably mounted upon each collar and having its axis of rotation disposed at right angles to the spoke axis, a rod movable through each guide member, means yieldingly retarding the movement of said rod, and arms rigidly fixed to the wheel hub at their inner ends and pivotally connected to one end of the respective rods.



1,225,405. LIQUID-FUEL COMPOSITION AND PROCESS OF MAKING THE SAME. ARTHUR W. SWANBERG, Minneapolis, Minn., assignor of one-half to Frederick C. Fisk, Williamsville, N. Y. Filed June 23, 1916. Serial No. 105,396. (Cl. 44—8.)

1. A liquid fuel for internal combustion engines and similar purposes comprising kerosene, anthracene and carbon bisulfid.

2. A liquid fuel for internal combustion engines and similar purposes comprising kerosene, anthracene, carbon bisulfid and as much water as the mixture will take up.

3. A liquid fuel for internal combustion engines and similar purposes comprising kerosene, carbon bisulfid and anthracene, the anthracene being present in the amount of about two ounces per gallon and the carbon bisulfid in the amount of about six ounces per gallon.

4. The process of making a liquid fuel for internal combustion engines and like purposes which comprises dissolving anthracene in carbon bisulfid and mixing the solution with kerosene.

5. The process of making a liquid fuel for internal combustion engines and like purposes which comprises mixing anthracene with carbon bisulfid in the presence of moisture and dissolving the solution so formed in kerosene.

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1,225,406. AUTOMOBILE-GUARD. GEORGE T. BURRELL, River Forest, Ill. Filed Dec. 2, 1915. Serial No. 64,713. (Cl. 128—198.)



1. In an automobile, the combination of an engine, a foot board, an exhaust conduit extending from the engine underneath said foot board, a device for throttling the exhaust gases inserted in said conduit underneath said foot board, and a lock in the foot board for placing and holding said throttling device in operative or inoperative position.

2. In an automobile, the combination of an engine, an exhaust conduit connected with the engine, and extending underneath the foot board, an alarm device operatable by the exhaust gases disposed in said conduit underneath the foot board, and a lock operated in said foot board, placing said alarm device in operative or in inoperative position respectively.

3. A safety device for automobiles, including in combination with the exhaust of the automobile engine, a movable element adapted to create back pressure when moved in a predetermined position, and means for locking said back pressure element in said position.

4. In a safety device for automobiles, in combination with the exhaust conduit of the automobile engine, an element within said conduit adapted to create back pressure in the engine when placed in a predetermined position, a signal device associated with said element and becoming operative when said element is moved in said predetermined position, and means for locking said element in said position.

5. In a safety device for automobiles, the combination with the exhaust conduit of the automobile engine, of a lockable back pressure creating device combined with an alarm device, an ignition circuit, and a switch for the same, the lock for said back pressure and alarm device being operatively connected with the ignition circuit switch.

[Claims 6 and 7 not printed in the Gazette.]

1,225,407. MANUFACTURE OF CALCIUM ACETYL SALICYLATE. ALBERT BUSCH, Brunswick, and RICHARD LAUCH, Berlin, Germany, assignors to the Firm of Johann A. Wülfing, Berlin, Germany. Filed June 9, 1915. Serial No. 33,064. (Cl. 23—24.)

1. The improved manufacture of calcium acetyl-salicylate, consisting in mixing equivalent proportions of acetyl-salicylic acid and calcium hydroxid in a dry state, and moistening the mixture with a ketone of the aliphatic series.

2. The improved manufacture of calicum acetyl-salicylate, consisting in mixing equivalent proportions of acetyl-salicylic acid and calcium hydroxid in a dry state, and moistening the mixture with a ketone of the aliphatic series to moist paste.

3. The improved manufacture of calcium acetyl-salicylate, consisting in mixing equivalent proportions of acetyl-salicylic acid and calcium hydroxid in a dry state, and moistening the mixture with a ketone of the aliphatic series to a moist paste and subjecting the paste thus obtained to a kneading action.

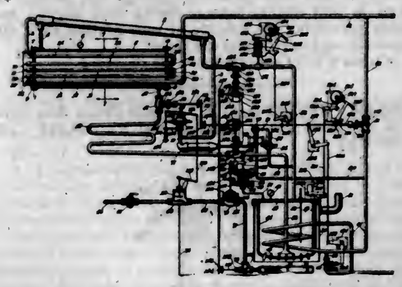
4. The improved manufacture of calcium acetyl-salicylate, consisting in mixing as intimately as possible equivalent proportions of acetyl-salicylic acid and calcium hydroxid in a dry state, moistening the mixture with a ketone of the aliphatic series to a moist paste, and kneading the mass till the product of reaction is clearly soluble in water.

5. The improved manufacture of calcium acetyl-salicylate, consisting in mixing equivalent proportions of acetyl-salicylic acid and calcium hydroxid in a dry state, moistening the mixture with a ketone of the aliphatic series, subjecting the moistened mixture to a kneading action, and removing the solvent.

[Claims 6 to 11 not printed in the Gazette.]

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1,2225,408. REFRIGERATING-MACHINE. GEORGE P. CARROLL, Bridgeport, Conn. Filed Oct. 11, 1913. Serial No. 794,583. (Cl. 62—5.)



1. In combination a condenser, an evaporator leading from said condenser, a still adapted to contain an absorbent, having a cooling water passage and leading from said evaporator into said condenser, valve means controlling the flow of water through said passage, an expansion valve controlling the flow of refrigerant from said condenser into said evaporator, an inlet valve controlling the passage from said evaporator into said still, an outlet valve controlling the passage from said still into said condenser, means for heating at intervals said still, means for acting on said valve means to prevent the presence of water in said cooling passage during such heating, and means preventing the starting of such heating and the opening of said outlet valve until said expansion valve is closed and said valve means is so acted upon.

2. In combination a condenser, an evaporator leading from said condenser, a still adapted to contain an absorbent, having a cooling water passage and leading from said evaporator into said condenser, a flow valve controlling the expansion of refrigerant from said condenser into said

evaporator, an inlet valve controlling the passage from said evaporator into said still, an outlet valve controlling the passage from said still into said condenser, means for heating at intervals said still, and means preventing the opening of said expansion valve and a flow of water through said cooling passage until said outlet valve is closed.

3. In combination a condenser, an evaporator leading from said condenser, a still adapted to contain an absorbent and leading from said evaporator into said condenser, an expansion valve controlling the flow of refrigerant from said condenser into said evaporator, an inlet valve controlling the passage from said evaporator into said still, an outlet valve controlling the passage from said still into said condenser, means for heating at intervals said still, and means preventing the opening of said expansion valve until after the termination of such heating and the closing of said outlet valve.

4. In combination a condenser, an evaporator leading from said condenser, a still adapted to contain an absorbent, having a cooling water passage and leading from said evaporator into said condenser, an expansion valve controlling the flow of refrigerant from said condenser into said evaporator, an inlet valve controlling the passage from said evaporator into said still, an outlet valve controlling the passage from said still into said condenser, means for heating at intervals said still, and means preventing the opening of said expansion valve and a flow of water through said cooling passage until after the termination of such heating and the closing of said outlet valve.

5. In combination a condenser, an evaporator leading from said condenser, a still adapted to contain an absorbent, having a cooling water passage and leading from said evaporator into said condenser, valve means controlling the flow of water through said passage, an expansion valve controlling the flow of refrigerant from said condenser into said evaporator, an inlet valve controlling the passage from said evaporator into said still, an outlet valve controlling the passage from said still into said condenser, means for heating at intervals said still, means for acting on said valve means to prevent the presence of water in said cooling passage during such heating, and means preventing the starting of such heating until said expansion and inlet valves are closed.

[Claims 6 to 59 not printed in the Gazette.]

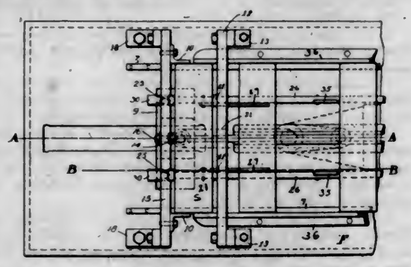
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1,225,409. SAFETY-RAZOR. MORRIS CECIL, New York, N. Y. Filed Oct. 9, 1916. Serial No. 124,719. (Cl. 30—12.)



In a safety razor the combination of a guard plate having oppositely disposed punched up registering portions, a razor blade comprising two blade sections spaced in parallel position, each of said blade sections consisting of a blade and a stiffening member folded over the inner edge of the blade, the inner corners of the said blades being cut away between the folds of the stiffening member, holding members having portions extending into said cut away portions of the blades between the folds of the stiffening member for joining the two blade sections to form a safety razor blade, said holding members being further provided with socket portions extending inwardly a distance between the said blade sections and adapted to receive the punched up registering portions of the guard plate aforesaid to register the blade on the guard, a backing plate having sockets for receiving the holding member sockets aforesaid and means for clamping the blade between the said guard and backing plate.

1,225,410. SHEET-FEEDING MECHANISM. ROBERT G. CLARK, Brooklyn, N. Y. Filed Sept. 4, 1915. Serial No. 48,977. (Cl. 101—39.)



1. In a sheet feeder, the combination of a support for a pile of sheets; a reciprocable carriage; means on said carriage to engage with and move a sheet from the pile when moving in one direction; means to engage with and buckle said sheet during said movement thereof; and means on said carriage to engage with the buckled portion of the sheet when the carriage is moved in reverse direction to separate and feed the sheet from the pile.

2. In a sheet feeder, the combination of a support for a pile of sheets; a reciprocable carriage; means on said carriage to engage with one edge of a sheet and move it from the pile when moving in one direction; means to engage with the opposite edge of the sheet and buckle the same during said movement of the sheet; and means on said carriage to engage with the buckled portion of the sheet when the carriage is moved in reverse direction to separate and feed the sheet from the pile.

3. In a sheet feeder, the combination of means to support a pile of sheets adjacent the sides; a reciprocable support for the central portion of the sheets; means carried by said support to engage with and move a sheet from the pile when moved in one direction; means to buckle said sheet during said movement thereof; and means carried by said support to engage with and separate said sheet from the pile when the support is moved in a reverse direction.

4. In a sheet feeder, the combination with a support for a pile of sheets, of a reciprocable carriage; a dog movable with the carriage to engage with and move the lowermost sheet from the pile for a predetermined distance when the carriage is moved in one direction; means to engage with and buckle said sheet during said movement; and fingers movable with the carriage to engage over the buckled portion of the sheet when the carriage is moved in a reverse direction to separate and feed the sheet from the pile.

5. In a sheet feeder, the combination with a support for a pile of sheets, of a reciprocable dog to engage with the lowermost sheet of the pile and move it a predetermined distance in one direction; an abutment with which said sheet engages during said movement to buckle the same; and fingers movable with the dog to engage with the buckled portion of said sheet when the dog is moved in a reverse direction to separate and feed the sheet from the pile.

[Claims 6 to 13 not printed in the Gazette.]

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1,225,411. ELECTRIC-LIGHTING FIXTURE. ALBERT COHN and LOUIS H. DEBS, Chicago, Ill. Filed Dec. 1, 1916. Serial No. 134,299. (Cl. 240—81.)

1. In a lighting fixture, a bracket comprising a central supporting member, a plurality of projecting arms, and a socket-supporting nipple carried by each of said arms, said arms being integral with said central member.

2. In a lighting fixture, a unitary bracket device comprising a washer, a plurality of projecting arms, and a socket-supporting nipple integral with each of said arms, said arms being integral with said washer.



3. In a lighting fixture, a bracket comprising a washer, a socket-supporting nipple carried thereby, and a stud and supporting finger therefor integral with said washer.



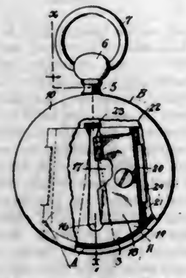
4. In a lighting fixture, a bracket comprising a washer, a plurality of arms integral therewith, a socket-supporting nipple carried by each of said arms, a stud, and a supporting finger integral therewith and integral with said washer.

5. In a lighting fixture, a unitary bracket device comprising a central supporting member, a plurality of nipples, and a threaded stud all formed in a unitary piece.

[Claims 6 to 13 not printed in the Gazette.]

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1,225,412. PENCIL-SHARPENER. GEORGE COOPER, Ansonia, Conn. Filed Apr. 1, 1916. Serial No. 88,244. (Cl. 120—93.)



1. A pencil sharpener comprising a pair of oppositely disposed circular cups each of which is provided with a lateral opening, and a socket member provided with sharpening instrumentalities disposed transversely of one of said cups so that the open end of the socket is in back of said opening in the latter, one of said cups being sleeved upon the other whereby both of said openings may be brought into alinement to permit the insertion of a pencil point into said socket.

[Claims 2 and 3 not printed in the Gazette.]

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1,225,413. RAILWAY-TIE. WILLIAM G. COUGHLIN, Philadelphia, Pa. Filed June 30, 1914. Serial No. 848,225. (Cl. 238—5.)

1. The combination with a wooden cross-tie, of two separated and independent rail-supporting and tie-protecting devices mounted on said tie, one of said devices being located beneath each rail and each device comprising a channel member having a web extending across the top of the tie with integral flanges embracing the sides of the tie, and a second channel member having a web extending across the tie beneath the same with integral flanges embracing the sides of the tie, means extending through the tie for securing said members thereto, and means carried by the top channel members for securing rails in place thereon.



2. The combination with a wooden cross-tie, of two separated and independent rail supporting and tie protecting devices, each comprising a channel piece resting on the tie and adapted to carry the rail, a second channel piece beneath the tie, the upper channel piece having downwardly converging flanges and the lower channel piece having upwardly diverging flanges.

3. The combination with a wooden cross-tie, of two separated rail supporting and tie protecting devices, each comprising a channel piece resting on the tie and adapted to carry the rail, a second channel piece beneath the tie, the upper channel piece having downwardly converging flanges and the lower channel piece having upwardly diverging flanges, the flanges on the opposing channel pieces overlapping and the webs of said pieces constituting stops engaging said flanges to limit the movement of the channel pieces toward each other.

4. The combination with a cross-tie, of a rail supporting and tie protecting device comprising a channel piece having a web beneath the tie and upwardly extending flanges embracing the tie, the web being concave on its under surface and extending laterally beyond said flanges in conformity with the curvature of said surface.

5. A tie-reinforcing and rail-supporting device comprising a channel member the flanges of which are capable of fitting the sides of the tie beneath and a short distance on opposite sides of a rail supported thereon, the web of said channel having a rib on its tie-engaging face, and means carried by the web of the channel for clamping the foot of the rail in place on said device.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,414. FIREPROOFING OF FABRICS AND OTHER ARTICLES. THOMAS JOHN IRELAND CRAIG, Manchester, England. Filed Feb. 6, 1915. Serial No. 6,610. (Cl. 23—5.)

1. The process of treating textile fibers and fabrics and other porous or absorbent substances or articles to render them less inflammable by precipitation or forming therein or thereon a double carbonate of alumina and alkali which consists in treating such a substance with a solution of a suitable alkali aluminate and then treating the aluminated substance with a suitable liquid or solution which is a source of supply of carbon dioxid, substantially as hereinbefore described.

2. The process of treating textile fibers and fabrics and other porous or absorbent substances or articles to render them less inflammable by precipitating or forming therein or thereon a double carbonate of alumina and alkali which consists in treating such a substance with a solution of suitable alkali aluminate, drying the aluminated substance and then treating it with a suitable liquid or solution which is a source of supply of carbon dioxid, substantially as hereinbefore described.

3. The process of treating textile fibers and fabrics and other porous or absorbent substances or articles to render them less inflammable by precipitating or forming therein or thereon a double carbonate of alumina and alkali which consists in treating such a substance with a solution of suitable alkali aluminate, subjecting the aluminated substance to a temperature of over 100° C. and then treating it with a suitable liquid or solution which is a source of supply of carbon dioxid, substantially as hereinbefore described.

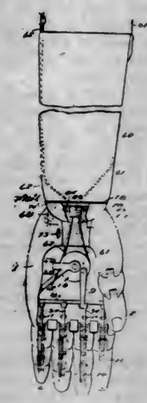
4. The process of treating textile fibers and fabrics and other porous or absorbent substances or articles to render them less inflammable by precipitating or forming therein or thereon a double carbonate of alumina and alkali which consists in treating such a substance with a solution of alkali aluminate, treating it with carbon dioxid gas, then treating it with a suitable liquid or solution which is a source of supply of carbon dioxid, substantially as hereinbefore described.

5. The process of treating textile fibers and fabrics and other porous or absorbent substances or articles to render them less inflammable by precipitating or forming therein or thereon a double carbonate of alumina and alkali which consists in treating such a substance with a solution of suitable alkali aluminate, drying the aluminated substance, treating it with carbon dioxid gas, then treating it with a suitable liquid or solution which is a source of supply of carbon dioxid, substantially as hereinbefore described.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,415. ARTIFICIAL ARM AND HAND. MOSES E. CRONEMILLER, Patton, Pa. Filed Feb. 9, 1916. Serial No. 77,271. (Cl. 3—12.)



1. An artificial hand having a plurality of fingers each composed of a plurality of pivotally connected joints or members, a toggle lever having its links pivoted at their outer ends to adjacent finger members, and an actuating link-rod connected to the outer toggle link and to a part separate from said adjacent members.

2. An artificial hand having a plurality of fingers each composed of a plurality of pivotally connected joints or members, a toggle lever having its links pivoted at their outer ends to adjacent finger members, and means directly connected with said toggle lever for causing it to fold or bend when the finger is swung toward the palm of the hand.

3. An artificial hand having a plurality of fingers each composed of a plurality of pivotally connected joints or members, toggle levers connecting the adjacent members, a rod extending transversely across the hand upon which the innermost finger members are pivoted, a link bar member secured to said innermost finger joint and pivoted on said rod, a rock-shaft, and links connecting said rock-shaft with the said link bar member.

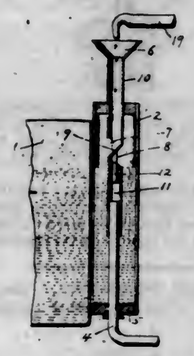
4. An artificial hand having a plurality of fingers, each composed of a plurality of pivotally connected joints or members, a rock-shaft extending transversely of the hand, links connecting said shaft with the respective fingers, a rotary disk mounted to rotate in the plane of the hand, and a connecting rod or link pivoted to said disk and to said rock-shaft respectively.

5. An artificial hand having a plurality of fingers, each composed of plurality of pivotally connected joints or members, toggle-levers connecting adjacent members, means for causing said toggles to bend or fold when the fingers are moved toward the palm of the hand, a rock-shaft extending transversely of the hand, links connecting said shaft with the respective fingers, a rotary disk mounted to rotate in the plane of the hand, and a connecting rod or link pivoted to said disk and to said rock-shaft respectively.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,416. LIQUID-LEVEL REGULATOR. ACHILLES DE KHOTINSKY, Chicago, Ill., assignor to Central Scientific Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 25, 1916. Serial No. 86,588. (Cl. 137—21.)



1. Apparatus for maintaining liquid in a container at a constant level including a relatively small auxiliary receptacle connected to said container near the bottom thereof, and replenishing and overflow means both connected to said auxiliary container, said means being simultaneously adjustable to vary the height of the operative connections between said auxiliary container and said replenishing and overflow means while maintaining said replenishing means in predetermined relation to the surface of the liquid as determined by said overflow means.

2. Apparatus for maintaining the level of liquid in a container including a vertical tube with oppositely directed lateral openings, a partition dividing said tube into sections leading respectively from each opening to the upper and lower ends of the tube, an outlet connected to the lower end of the tube, said tube being vertically adjustable whereby the level of the liquid in said container is varied and the predetermined relation of said partition to the surface of the liquid is maintained.

3. Apparatus for maintaining the level of liquid in a container including an outlet pipe for said liquid, and means associated with the entrance to and wholly contained within said pipe for rupturing the surface tension of liquid rising in the container above the said entrance.

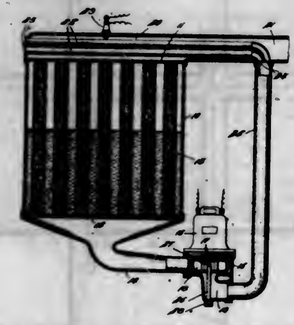
4. Apparatus for maintaining the level of liquid in a container including means for supplying replenishing liquid, an overflow outlet, an inlet for the replenishing liquid, said outlet and inlet being oppositely directed with respect to said container and simultaneously adjustable to maintain said inlet in predetermined relation to the surface of the liquid as determined by said outlet.

5. Apparatus for maintaining the level of liquid in a container, including a vertical tube with oppositely directed lateral openings, a partition dividing said tube into sections leading respectively from each opening to the upper and lower ends of the tube, means for supplying replenishing liquid to the upper end of the tube, and an outlet connected to the lower end of the tube.

[Claims 6 to 17 not printed in the Gazette.]



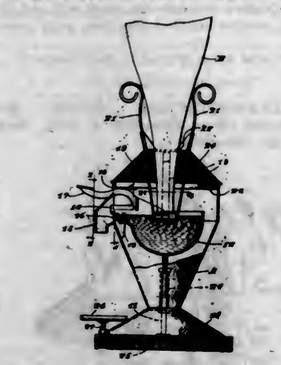
1,225,417. APPARATUS FOR VAPORIZING AND BURNING HYDROCARBON FUELS. JOHN ASHTON DOBLE, Waltham, Mass. Filed Jan. 28, 1914. Serial No. 815,059. (Cl. 122—45.)



A steam generating construction for automobiles comprising the combination of a vertical boiler having at the top thereof a chamber for the products of combustion, a motor and direct connected fan, a conduit for conducting the fan discharge to the bottom of the tubes of the boiler, means for conducting liquid fuel to said fan, a plurality of air pipes in said top chamber and a conduit for carrying the air heated in said pipes around said fuel conducting means and to the fan.

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1,225,418. LIQUID-DISPENSING DEVICE. CHARLES DOERING, Jr., and HENRY H. DOERING, Chicago, Ill. Filed Aug. 12, 1915. Serial No. 45,100. (Cl. 221—98.)



1. A device of the class described, comprising a receptacle adapted to receive an inverted bottle or container, a reservoir tiltably mounted in the receptacle at a point beneath the orifice of the bottle and arranged to receive the orifice of the inverted bottle or container so that fluid in the reservoir will automatically control the flow of the liquid from the bottle or container, said reservoir being adapted to tilt upward toward the bottle orifice into discharging position without disturbing its receiving relation with the bottle.

2. A device of the class described, comprising a receptacle provided with a discharge opening, means for holding an inverted bottle or container, and a reservoir tiltably mounted in the receptacle and arranged to receive the orifice of the bottle or container so that fluid in the reservoir will automatically control the discharge from the bottle or container, said reservoir being arranged to discharge into the discharge-opening of the receptacle when the reservoir is tilted.

3. A device of the class described, comprising a receptacle provided with an opening in the top thereof adapted to receive an inverted bottle or container, the receptacle being provided with a discharge-opening, a reservoir tiltably mounted in the receptacle, and means arranged within the receptacle whereby the inverted bottle or container will be held in fixed relation to the normal position of the reservoir.

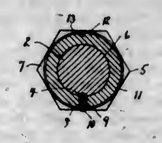
4. A device of the class described, comprising a receptacle adapted to receive an inverted bottle or container, a reservoir tiltably mounted in the receptacle, with the upper portion of the reservoir normally arranged in a horizontal plane above the plane of the orifice of the bottle, and a discharge-outlet in the receptacle arranged coincident with the discharge-end of the reservoir.

5. A device of the class described, comprising a receptacle provided with a holding portion adapted to receive an inverted bottle or container, a reservoir tiltably mounted in the receptacle and adapted to receive the orifice of the inverted bottle or container so that liquid in the reservoir will automatically control the flow from the bottle or container, and means whereby the reservoir may be tilted and liquid discharged therefrom.

[Claims 6 to 11 not printed in the Gazette.]

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1,225,419. NUT-LOCK. GEORGE A. DONAHUE, Wilmington, Del. Filed June 15, 1916. Serial No. 103,818. (Cl. 151—6.)



1. In a nut lock a bolt having a cavity, a nut provided with a tapered opening mounted on said bolt, the larger end of said opening being inward, and a tapered locking pin mounted in said opening.

2. In a nut lock a bolt having a cavity, a nut provided with a tapered opening mounted on said bolt, the larger end of said opening being inward, a tapered locking pin mounted in said opening, and means for normally forcing said locking pin inward.

3. In a nut lock a bolt having a cavity, a nut provided with a tapered opening mounted in said bolt, the larger end of said opening being inward, and a spring actuated tapered locking pin mounted in said opening with the larger end inward, said larger end arranged to engage the cavity in the bolt.

4. In a nut lock the combination with a bolt having a longitudinal groove, of a nut provided with a bolt receiving opening having a circumferential groove, said nut also provided with a hole leading from said groove, a tapered opening communicating with said groove and the bolt receiving opening, said tapered opening having its larger end in communication with the bolt receiving opening, a tapered locking pin mounted in the tapered opening with its larger end projecting into the bolt receiving opening, said locking pin having a notch in its smaller or outer end, an annular wire spring adapted to surround the nut mounted in the circumferential groove and register with the notch in the locking pin, and an extension formed from one end of said spring and engaging the hole in the nut to prevent rotation thereof.

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1,225,420. FASTENING MEANS. LOUIS H. EGGERT, Rochester, N. Y., assignor to Bastian Brothers Co., Rochester, N. Y., a Corporation of New York. Filed Oct. 18, 1916. Serial No. 126,309. (Cl. 24—217.)

1. The combination with a rigid wall and a device attached thereto, and abutting said wall, of fastening means between said two members surrounded by said abutting portions and comprising a rigid projection on one of said members, having an effective portion uniform in cross-

sectional area throughout its length, a wall of sheet material on the other member of less thickness than the effective length of the projection, said wall having an opening conforming substantially in shape to a cross-sectional area of the effective portion of the projection but being slightly smaller in size than said cross-sectional area, the wall of said opening being slightly yieldable in a direction transverse of the sheet wall and being unyielding in the direction of the plane of the sheet wall.



2. The combination with a rigid wall, and a device attached thereto and abutting said wall, one of said members having a concavity surrounded by said abutting portions, of fastening means between said members arranged in said concavity and comprising a rigid projection secured to one of the members having an effective portion uniform in cross-sectional area throughout its length, a wall of sheet material secured to the other part and having less thickness than the effective length of the projection, said wall having an opening conforming substantially in shape to a cross-sectional area of the effective portion of the projection but being slightly smaller in size than said cross-sectional area, the wall of said opening being slightly yieldable in a direction transverse of the sheet wall and being unyielding in the direction of the plane of the wall, said projection and wall being contained within the concavity.

3. Fastening means between two members comprising a rigid projection on one of said members, having an effective portion uniform and noncircular in cross-sectional area throughout its length, a wall of sheet material on the other member of less thickness than the effective length of the projection, said wall having a noncircular opening conforming substantially in shape to a cross-sectional area of the effective portion of the projection but being slightly smaller in size than said cross sectional area.

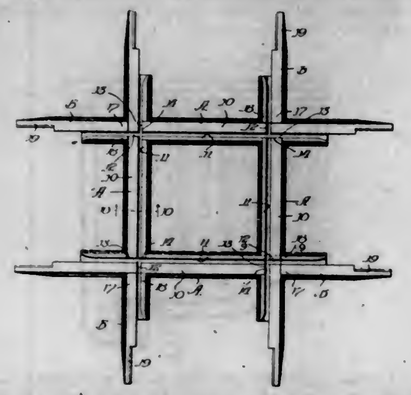
4. The combination with a rigid wall and a device attached thereto and abutting said wall, of fastening means between said two members surrounded by said abutting portions and comprising a rigid projection on one of said members, having a portion uniform in cross-sectional area throughout its length, a wall of sheet material on the other member of less thickness than the effective length of the projection, said wall having an opening conforming substantially in shape to a cross-sectional area of the effective portion of the projection but being slightly smaller in size than said cross-sectional area, the sheet wall being provided with radial openings so that the wall of the opening is slightly yieldable in a direction transverse of the sheet wall and is unyielding in the direction of the plane of the sheet wall.

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1,225,421. RAILROAD-CROSSING. HENRY G. ELFBORG, Chicago, Ill., assignor to American Manganese Steel Company, Chicago, Ill., a Corporation of Maine. Filed Nov. 2, 1916. Serial No. 129,086. (Cl. 104—40.)

1. A crossing, comprising in combination a plurality of pairs of rail extensions, the members of one pair being duplicates of the members of the other pairs composing the crossing, the ends of the members of each pair being out of abutting engagement.

2. A crossing, comprising in combination a plurality of pairs of sections, each pair of sections being complementary, the inner ends of said sections being secured in abutting engagement with a similar transversely-extending section.



3. A crossing unit composed of two members adapted to be disposed in end-to-end relation, an element of a transversely-extending coöperating unit spacing apart the ends of said members, four duplicate units being sufficient to complete a crossing, substantially as described.

4. A railroad crossing, comprising in combination four duplicate crossing units suitably joined, each unit being composed of two members, one of the members of each of the four units passing transversely through one track of the crossing and abutting the other track of said crossing.

7. A railroad crossing composed of four units, each unit being composed of a plurality of complementary sections, one section extending through one track rail and abutting another, and another section abutting said last-named track rail.

[Claims 5, 6, and 8 not printed in the Gazette.]

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1,225,422. EAR-PROTECTING DEVICE. MICHAEL FEHER, Alliance, Ohio. Filed Feb. 7, 1917. Serial No. 147,143. (Cl. 128—10.)



1. In an ear-protecting device, adjustably supported elements, one of which is resilient, an ear-engaging flap carried by the resilient element, a sound stop provided on said flap and designed to engage within the auditory canal of the ear, and means combined with said sound stop for expanding and contracting it peripherically.

2. In an ear-protecting device, suitably supported elements connected at one end and movable conjunctively, one being rigid and one being resilient, an ear-engageable flap carried by the resilient member, a sound stop provided on said flap and designed to engage the auditory canal of the ear, means combined with said sound stop for expanding and contracting it peripherically and means carried by the rigid element for limitedly advancing the resilient element therefrom.

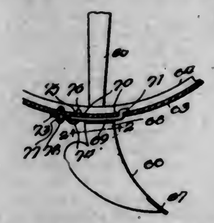
3. The combination of an arcuate head engaging element, connected rigid and resilient elements limitedly slidable conjunctively thereon, a cone-like sound stop supported by the resilient element, spring means within the sound stop for expanding it peripherically, and means carried by the rigid element for limitedly advancing the resilient element therefrom.

4. In an ear-protecting device, the combination with a supported element, of a rigid and a resilient element connected together and slidable limitedly on the supported element, a relatively flexible cone-like sound stop supported by the resilient element, spring means combined with the sound stop for expanding it peripherically, and means carried by the rigid element for limitedly advancing the resilient element therefrom.



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1,225,423. AGRICULTURAL IMPLEMENT. LEON FONNESBECK, Logan, Utah. Original application filed Apr. 6, 1916, Serial No. 89,415. Divided and this application filed July 11, 1916. Serial No. 108,676. (Cl. 97—63.)



1. In a rotary plow, the combination of a drum provided with slots disposed in triangular relation, a plow, a triangular cap plate at the upper end of the plow provided at one edge with projections passing through two of the slots in the drum and engaging the inner surface of the same, the cap plate being provided at the corner remote from said projections with a slot registering with a slot in the drum, a latch inserted through said registering slots, said latch having a neck to pass through said slots and a head at the inner end of said neck to bear against the inner side of the drum and permit rocking of the latch, the latch being further constructed with an arched portion to clear the edge of the cap plate and permit its extremity to lie close against the drum, projections on the drum at the sides of the latch, and a securing device inserted through said projections and passing over the latch.

2. In a rotary plow, the combination of a drum, a plow, a cap plate on said plow having means at one end to enter the drum and engage the inner face thereof, and means at the opposite end of the cap plate for locking the same to the drum.

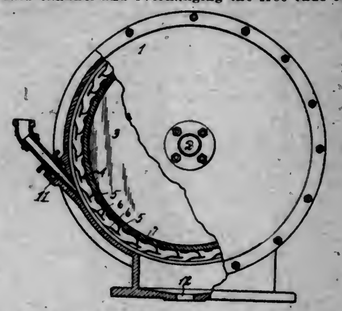
3. In a rotary plow, the combination of a drum, a plow, a cap plate at the upper end of the plow having a slot at one end, projections at the opposite end of the cap plate extending into the drum and engaging the inner side of the same, a latch inserted outwardly through the drum and the slot in the cap plate and turned over against the drum, and a retaining device secured upon the drum and extending over the end of the latch.

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1,225,424. STEAM-TURBINE. CLARENCE E. FOWLER, Toledo, Ohio. Filed July 26, 1916. Serial No. 111,379. (Cl. 253—50.)

2. In a turbine, a rotatable wheel having in its periphery a circumferential channel, a series of buckets or blades mounted in and across said channel and capable of elastically yielding in the direction of the rotation of the wheel, and a nozzle for directing a steam jet into said channel and successively against said buckets or blades.

5. In a turbine, a rotatable wheel having in its periphery a channel, in said channel a series of blades or buckets comprising, respectively, a plurality of thin resilient fingers secured at one end to the bottom of the channel, the free ends of the fingers being bent backwardly, a like series of deflecting plates secured in and across said channel and overhanging the free ends of said

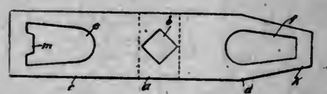


fingers, and a nozzle which discharges between the successive pairs of deflecting plates.

[Claims 1, 3, and 4 not printed in the Gazette.]

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1,225,425. PROTECTOR FOR INCANDESCENT LAMPS AND THE LIKE. EDWARD G. B. FOX, Hartford, Conn., assignor to The Franklin Electric Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Feb. 9, 1916. Serial No. 77,254. (Cl. 217—29.)



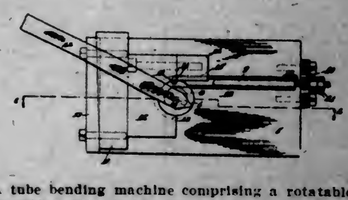
1. An article of the character described made from a single piece of flexible material and comprising an apertured base to receive the lamp base, side members folded down from two opposite edges of said base, one side member being apertured to receive the end of the other side member, the ends of said side members being extended to form resilient feet.

2. An article of the character described made from a single piece of flexible material and comprising an apertured base to receive the lamp base, side members folded down from two opposite edges of said base, the ends of said side members being crossed and interengaged, and extending beyond the point of engagement to form resilient feet.

3. An article of the character described made from a single piece of flexible material and comprising an apertured base to receive the lamp base, side members folded down from two opposite edges of said base, one side member being apertured, the end of the other side member being reduced in width to pass through said aperture, interengaging parts on said side members, and extensions beyond said point of engagement forming resilient feet.

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1,225,426. TUBE-BENDING MACHINE. WILLIAM P. FRANK, Chicago, Ill. Filed Dec. 18, 1915. Serial No. 67,606. (Cl. 153—40.)



1. A tube bending machine comprising a rotatable element provided with means for engaging a tube; a plug insertible in a tube engaged by said element; and a

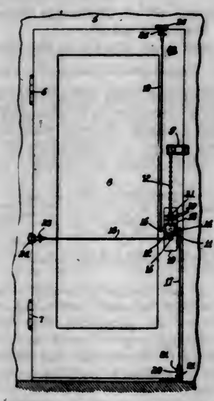
grooved die partially encircling and coöperating with said element, substantially as described.

2. A tube bending machine comprising a grooved rotatable element provided with means for engaging a tube; a plug insertible in a tube engaged by said element; and a grooved die partially encircling and coöperating with said element, substantially as described.

3. A tube bending machine comprising a base; a grooved head rotatably mounted in said base; a grooved die partially encircling and coöperating with said head; a wedge for forcing said die into coöperating relation with said head; a threaded stem anchored on said base substantially tangential to said head; and a plug on said stem positioned substantially at said tangent point and insertible in a tube arranged in said grooves, substantially as described.

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1,225,427. DOOR-SECURING MECHANISM. EDWARD E. GAGE, New York, N. Y. Filed June 30, 1916. Serial No. 106,845. (Cl. 70—74.)



1. The combination with a door and door casing, a latching mechanism for said door, a key controlled lock for said door, and additional securing means for said door comprising a plurality of bolts adapted to secure said door to said casing at top, bottom and side, and means controlled jointly by said lock and said latching mechanism for controlling the operation of said additional securing means.

2. The combination with a door and door casing of a knob controlled latching mechanism for said door, a key controlled lock for said door, a socket in said casing remote from said latching mechanism and said lock, a bolt carried by said door adapted to be moved into and out of engagement with said socket by means of said latching mechanism, and means controlled by said lock for preventing the movement of said latching mechanism.

3. The combination with a door and door casing, a latching mechanism therefor, a rotatable member for said latching mechanism, a socket in said casing at one end of said door, a bolt carried by said door and adapted to engage said socket, a key controlled lock on said door separate from said latching mechanism, and means controlled by said key controlled lock for controlling the rotation of said rotatable member, and an operating connection between said rotatable member and said bolt.

4. The combination with a door and door casing a latching mechanism, a knob for operating said latching mechanism, a plate secured to rotate with said knob, a key controlled lock separate from said latching mechanism, a bolt controlled by said key controlled lock adapted to engage said plate to hold said knob against rotation, a socket in said door casing at one end thereof a second bolt on said door adapted to engage said socket and connection between said bolt and said plate whereby the rotation of said plate moves said second bolt into and out of engagement with its socket.

5. The combination with a door and door casing, a latching means carried by said door, a key controlled lock on said door, a rotatable member for controlling said latching mechanism, a plate secured to rotate therewith a plurality of radial arms extending from said plate, slidable bolts secured to said door at the top, bottom and one side thereof and operatively connected with said plate and locking means for said plate controlled by said key controlled lock.

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1,225,428. TRACTOR-BINDER HITCH. JOSEPH W. GAMBLE, Carpentersville, Ill. Filed Aug. 7, 1916. Serial No. 113,467. (Cl. 21—137.)



1. In a device of the class described a main bar adapted to connect with a tractor draw bar, a rocking lever, a plate adapted to support said rocking lever mounted on said main bar, and means for adjustably securing said rocking lever to said tractor draw bar.

2. In a device of the class described a main bar adapted to connect with a tractor draw bar, a rocking lever, a plate mounted on said main bar below said rocking lever, and means for securing said rocking lever rigidly to said plate, and means for adjustably securing said rocking lever to said tractor draw bar.

3. In a device of the class described a main bar adapted to connect with a tractor draw bar, a rocking lever mounted on said main bar, a plate supporting said rocking lever and means whereby said lever may be adjustably mounted on said plate, and a cross strap connecting the opposite end of said rocking lever to either end of said tractor draw bar.

4. In a device of the class described, a main bar, one end of which is adapted to be secured to the forward end of an implement and the front end secured to the rear end of the tractor, and a grain bar positioned on the grain side of said main bar, and means for adjustably securing said grain bar to said main bar, said means including a rocking lever pivotally mounted on said main bar and a plate containing means for holding said rocking lever in any desired position.

5. In a tractor binder hitch the combination with a rear bar, a main bar, a grain bar pivotally mounted thereon, a rocking lever mounted on said main bar, a plate mounted on said main bar to which said rocking lever may be rigidly secured, the end of said grain bar being pivotally connected to the left-hand side of said rocking lever, a forward extension bar to which said main bar is pivotally secured, and a cross strap connecting the right hand end of said rocking lever to one end of said extension bar.

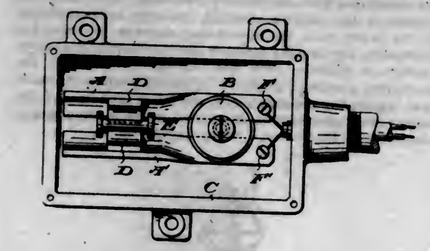
[Claim 6 not printed in the Gazette.]

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1,225,429. MICROPHONIC SIGNALING DEVICE. JOHN GARDNER, Knott End, England. Filed July 18, 1914. Serial No. 851,702. (Cl. 177—311.)

1. A microphonic instrument comprising two vibratory reeds each supported at one end and having a current conducting element at the other end, said reeds vibrating in a vertical plane, a current conducting member bridging said conducting elements, said member resting upon said elements and being maintained in position thereon by gravity.

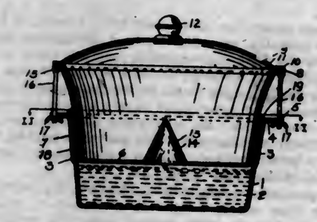
2. A microphonic instrument comprising two vibratory reeds each supported at one end and carrying an electrode at the other, said reeds vibrating in a vertical plane, said electrode comprising pieces arranged to provide a V-shaped space between them, a cylindrical electrode bridging said first named electrodes and positioned in said V-shaped space, said cylindrical electrode being maintained in contact with said first named electrodes by gravity.



3. A microphonic instrument comprising a support, two vibratory reeds comprising flat strips each secured at one end of said support, said reeds vibrating in a vertical plane and having their free ends provided with electrodes arranged to form a V-shaped space between them, a cylindrical electrode bridging said first named electrodes and positioned in said V-shaped space, said cylindrical electrode being maintained in contact with said first named electrodes by gravity.

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1,225,430. KITCHEN UTENSIL. JOSEPH G. GAVLAK, Monongahela, Pa. Filed Aug. 3, 1916. Serial No. 112,938. (Cl. 53—1.)



1. A kitchen utensil comprising a tapering water container having a flat bottom, a tapering dough receiving receptacle having a portion permanently extended above the container and its other portion extending into and frictionally engaging with the inner face of the container, the bottom of said receptacle being flat and being spaced from the bottom of the container, said bottom of said receptacle provided centrally with an upwardly extending hollow cone closed at its apex and open at its base, a lid for closing said receptacle, said container having its bottom formed with diametrically opposed vertical offsets extending from the top edge and terminating above the bottom of a container, said offsets providing outlet passages for steam.

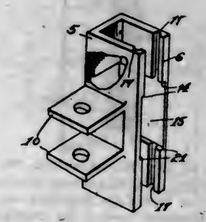
[Claim 2 not printed in the Gazette.]

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1,225,431. KNOCKDOWN FURNITURE. THEOPHILUS A. GILBERT, New York, N. Y. Filed Mar. 8, 1916. Serial No. 82,802. (Cl. 5—4.)

1. A device for releasably connecting the component parts of furniture, comprising a tubular member having a longitudinal opening with opposite transverse shoulders formed in the inner wall to coöperate with shoulders formed on parts adapted to be inserted into the tubular member through the longitudinal opening to prevent endwise displacement of said parts, opposite recesses in the sides of the tubular member adjacent the sides of the opening, and a locking member to slidably engage in said recesses, substantially as and for the purpose specified.

2. A device for releasably connecting component parts of furniture, comprising a tubular member having a longitudinal opening, opposite transverse shoulders in the inner wall of said member to coöperate with shoulders formed on parts adapted to be inserted into the tubular member through the longitudinal opening to prevent endwise displacement of the parts, and a pair of ears projecting laterally from one side of said member, and a locking member having laterally projecting ears adapted to slidably engage in the opening in the tubular member, substantially as and for the purpose specified.

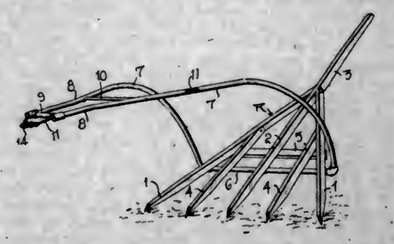


3. A device for releasably connecting component parts of furniture, comprising a rectangular hollow member having one side open with longitudinal recesses in the sides of the opening, opposite transverse shoulders in the inner wall of said member, a pair of ears projecting laterally from one side of said member, and a locking member of T-shape in cross section having a pair of laterally projecting ears to slidably engage in said recess, substantially as and for the purpose specified.

4. A device for releasably connecting component parts of furniture, comprising a tubular member having a longitudinal opening in the side wall communicating with the bore of said member and through which opening a component part or parts of furniture are adapted to be inserted into the tubular member to project from opposite ends, and said tubular member having means exterior thereof for the connection of another part of furniture, and a member having a releasable connection with the tubular member adjacent the opening to close said opening and lock the component part or parts of furniture therein and having means exterior thereof to connect a component part of furniture thereto.

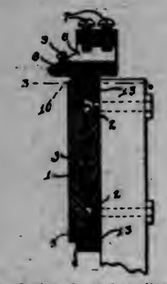
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1,225,432. BRUSH-RAKE. HORACE M. GILBERT, North Yakima, Wash. Filed Jan. 6, 1917. Serial No. 140,995. (Cl. 56—66.)



A brush rake comprising an elongated tine, side tines diverging therefrom, supplemental tines arranged at opposite sides of the first named tine and secured at their inner ends to the diverging tines, a brace member secured to all of the tines, a tubular member underlying all of the tines and terminating in upstanding forwardly directed extensions, a flexible member disposed through said tubular member and the extensions and with the extremities of said flexible member terminating in advance of the free ends of the extension, and a hitch member to which said extremities of the flexible member are secured.

1,225,433. DETACHABLE CONTACT-PLATE. GEORGE W. GILMORE, Alliance, Ohio. Filed Sept. 14, 1915. Serial No. 50,694. (Cl. 175—282.)



1. In a device of the class described, the combination with a contact plate, of a supporting terminal base plate having a projecting flange for engaging one edge of the contact plate, adjustable means for engaging the other end of the contact plate and clamping it against said projecting flange in electrical contact with the terminal base plate, and means for preventing transverse movement of said contact plate.

2. A device of the class described comprising the combination with a contact plate; of a terminal base plate having means for supporting one end of said contact plate, a terminal sleeve carried by said terminal base plate, means carried by said sleeve for engaging the opposite end of said contact plate and retaining the latter in engagement with said terminal base plate, means for preventing movement of said contact plate upon said terminal base plate, and means for supporting said terminal base plate.

3. A device of the class described comprising the combination with a contact plate having notched ends, of a terminal base plate in electrical contact therewith and having a projecting flange for engaging one end of the contact plate, a terminal socket carried by said terminal base plate, means for supporting said terminal base plate, adjustable means on the terminal socket for engaging the other end of said contact plate and clamping it securely against said terminal base plate flange, and members projecting from said terminal base plate and engaging said notches to prevent lateral movement of said contact plate between its clamping members.

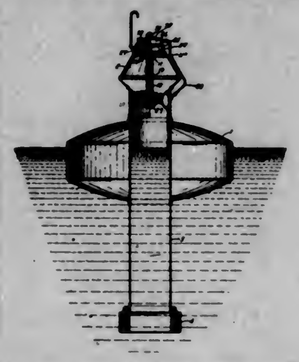
4. A device of the class described comprising the combination with a contact plate; of a terminal base plate, a terminal upon said terminal base plate and provided with an extension, means carried by said terminal base plate for supporting said contact plate, means mounted in the extension of said terminal for securing said contact plate against said terminal base plate, means for preventing movement of said contact plate upon said terminal base plate, and means for supporting said terminal base plate.

5. A device of the class described comprising the combination with a contact plate having channels formed in its opposite ends, and a notch extending across each of said channels, of a terminal base plate in electrical contact with said contact plate and having a projecting flange for engaging one of the channels of the contact plate, a terminal socket carried by said base plate at the end opposite said projecting flange, screws carried by said terminal socket engaging the channels in the unsupported end of said contact plate for clamping said plate securely to the base plate, pins projecting from the base plate and through the notches in the end of the contact plate for preventing transverse movement of said contact plate, and means for supporting said terminal base plate.

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1,225,434. ACETYLENE-GENERATOR. ARTHUR P. NAGAR, Newark, N. J., assignor to Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Dec. 19, 1912. Serial No. 737,610. (Cl. 48—53.3.)

1. A gas generator having, in combination, a holding chamber provided with an opening in its bottom; a floating generating chamber arranged below the holding chamber and having its entire bottom open and unobstructed to the admission and emission of water, the opening in the bottom of the holding chamber enabling communication of the latter with the generating chamber; a valve for controlling the opening between the two chambers and the passage of material from the holding chamber into the generating chamber; means for normally holding the valve open against a predetermined pressure; and means for closing the valve against the action of its holding means controlled by the pressure of the gas generated.



2. A gas generating buoy comprising a float; a holding chamber mounted upon the float; a generating chamber carried by the float and extending from the latter into the water and to the holding chamber, said generating chamber being entirely open at its bottom and unobstructed to the admission and emission of water; a valve between the holding chamber and the generating chamber; means for automatically opening said valve and maintaining it thus against a predetermined pressure; and pressure actuated means for closing said valve.

3. A generator comprising a chamber for holding the material from which the gas is produced; a generating chamber having its entire bottom open and unobstructed to the admission and emission of water, said chamber being located below the holding chamber and having operative connection therewith; means controlled by the pressure of gas in the generating chamber for regulating the flow of the material into said generating chamber; means for utilizing the gas; a conduit connecting the generating chamber with the gas-utilizing means; and a float for supporting the entire structure upon the surface of a body of water.

4. A gas generator comprising a chamber for holding a powder of the material from which the gas is produced; a generating chamber located below the first-named chamber and having operative connection therewith, said generating chamber having its entire bottom open and unobstructed to the admission and emission of water; means controlled by the pressure of gas in the generating chamber for regulating and discontinuing the flow of the powder; means opposing the action of the controlling means for continuing the flow of the powder; means for utilizing the gas; a conduit connecting the generating chamber with the gas-utilizing means; a purifier connected to said conduit; and a float for supporting the entire structure upon the surface of a body of water.

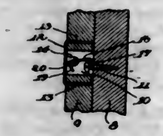
5. A generator of a combustible gas comprising a chamber for holding the material from which the gas is produced; a generating chamber arranged adjacent the first-named chamber and having its entire bottom open for the admission and emission of water; means for feeding the material from one to the other chamber; means controlled by the pressure of the gas generated for regulating the feed of the generating material; means for utilizing the gas; a conduit connecting the generating chamber with the gas-utilizing means; means for supporting all of said parts on a body of water with the generating chamber extending into the latter so that the united weight of the structure and the opposing pressure of the water in the generating chamber shall produce the gas pressure and automatically effect its regulation as used.

[Claims 6 and 7 not printed in the Gazette.]



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1,225,435. WINDOW CONSTRUCTION. WILLIAM F. HAJEK, Chicago, Ill. Filed Feb. 29, 1916. Serial No. 81,097. (Cl. 16—29.)



1. The combination of a window-frame, a sash slidable in said frame; a molding strip constituting a guide for the inner side of said sash, said strip being provided with a plurality of openings extending therethrough; headed studs in the frame opposite said openings; a plate secured over the outer side of each of said openings; and a locking member in the form of a bell crank pivotally mounted on each of said plates in the corresponding opening, the upper arm of said bell crank being extended inwardly and provided with a depending notched flange adapted to engage the corresponding stud, the other arm of said bell crank depending and extending inwardly, there being an opening in said plate opposite said depending arm, substantially as described.

2. A fastening for window moldings or the like comprising a plate having securing tangs at opposite ends thereof and perforated lugs at opposite sides thereof; and a locking member pivoted in said lugs, said locking member being in the form of a bell crank one arm of which extends upwardly and inwardly, the inner end of said arm being provided with a depending notched flange adapted to engage a headed stud, and the other arm of said bell crank depending inwardly, said plate being provided with an opening opposite said depending arm, substantially as described.

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1,225,436. GARMENT-SUPPORTER. GEORGE HAKE, St. Louis, Mo. Filed Feb. 28, 1916. Serial No. 80,996. (Cl. 24—245.)

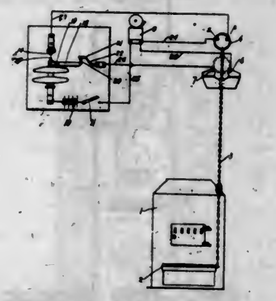


1. A garment supporter comprising a button, means for suspending said button, and a clasp between which and said button a garment may be held, said clasp including a suspension member, a button receiving loop and connecting members between said suspension member and loop, said button receiving loop having alined inturned end portions arranged end to end beneath the button; and means operable on said connecting members whereby said button receiving loop may be contracted to move its inturned end portions endwise toward each other.

2. A garment supporter comprising a button, means for suspending said button, and a clasp between which and said button a garment may be held to said button, said clasp including a suspension member, a button-receiving loop and connecting members between said suspension member and loop, said button receiving loop having end portions arranged end to end beneath the button, one of which is telescopically fitted to the other; and means operable on said connecting members whereby said button receiving loop may be contracted to move its inturned end portions endwise toward each other.

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1,225,437. ELECTRIC SIGNAL AND DAMPER CONTROL. PHILLIP W. HAMMOND, Columbus, Ohio. Filed Apr. 20, 1914. Serial No. 833,063. (Cl. 177—355.)



1. In combination with a valve control, an alarm operative when the said valve should be moved toward open position, and means connecting said alarm and said valve control of such a nature that the rendering of such alarm inoperative moves said valve toward open position.

2. In combination with a valve, a valve control, an alarm operative when the said valve should be moved toward closed position, and a removable bridge in said alarm circuit and connected to said valve control, said control and the valve being of such form that removal and release of said bridge permits automatic movement of said valve toward closed position.

3. In combination with a valve control a manually operable alarm operative when the said valve control should be moved toward either open or closed position, and means connecting said alarm and valve control of such a nature, that the rendering of said alarm inoperative results in the movement of the said valve control toward open or closed position.

4. In combination with a valve control, an alarm operative when said valve control should be moved toward open or closed positions, and means connecting said alarm and valve control of such a nature that the rendering of said alarm inoperative results in the movement of the said valve control automatically toward one position and adjustment of said alarm for operation when another danger limit shall be reached.

5. In combination with a thermal alarm adapted to give a maximum limit signal and a minimum limit signal, a manually operable valve control, and means for coaction with said valve control and maximum and minimum limit signals to make said signals operative or inoperative, said valve control being adjustable to two positions and so constructed and connected to said means that when adjusted to one position it places the maximum signal in operation and the said valve control is moved toward open position, and when adjusted to the other position the minimum limit signal is placed in operation and the said valve control is moved toward closed position.

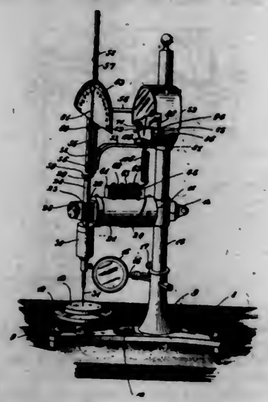
[Claims 6 to 13 not printed in the Gazette.]

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1,225,438. AUTOMATICALLY-TIMED ASPHALT-TESTER. WILLIAM B. HOWARD, Brooklyn, N. Y. Filed June 21, 1915. Serial No. 35,247. (Cl. 265—10.)

1. Apparatus for testing viscosity comprising in combination, a penetrator-bar adapted to force a penetrator into the substance to be tested and being normally free to move for the purpose of adjustment; a grip-means to hold said penetrator-bar against operating movement; a time-interc-

val-controller; an actuator operable by a single movement for automatically causing the grip means to release said penetrator-bar and the time-interval-controller to start in operation; automatically operating means for effecting the regripping of said penetrator-bar after a predeterminable time-interval; and said grip-means having provisions operable independently from the control of said time-interval-controller to effect the release of said penetrator-bar.



2. Apparatus for testing viscosity comprising in combination a penetrator-bar adapted to force a penetrator into the substance to be tested; a normally inactive grip for holding said penetrator-bar against the operating force of said bar; a grip-operator for making said normally inactive grip active to hold said penetrator-bar after it has been freely adjusted; a time-interval-controller; an actuator operable by a single movement for automatically stopping the operation of said grip-operator and starting the operation of said time-interval-controller; and automatic means for returning said actuator to normal position after a predetermined time interval to restore the operation of said grip-operator for the purpose of causing the grip again to hold the penetrator-bar.

3. Apparatus for testing viscosity comprising in combination, a penetrator-bar adapted to force a penetrator into the substance to be tested and being normally free to move for the purpose of adjustment; an electro-magnetic grip to hold said penetrator-bar against operating movement; a time-interval-controller; an actuator-switch; openable circuit connections between said grip and said actuator-switch and adapted to include a source of electricity, said connections adapted when closed, to cause said grip to hold said penetrator-bar against operating movement; an actuator under the control of said time interval-controller and operable by a single movement for automatically opening said actuator-switch and starting the operation of said time-interval-controller; and automatic means for returning said actuator to normal position after a predeterminable time-interval to close said actuator-switch, causing said grip to operate.

4. Apparatus for testing viscosity comprising in combination, a penetrator-bar adapted to force a penetrator into the substance to be tested; a grip for said penetrator-bar; a time-interval-controller having provisions for any one of various time-intervals for control; an actuator normally causing said grip to operate and operable by a single movement to release said grip and start said time-interval-controller in operation; means for holding said actuator throughout the predeterminable time interval and then, returning it to normal position to cause said grip to operate; and means for varying the time-interval of control of said time-interval-controller upon said actuator.

5. Apparatus for testing viscosity comprising in combination, a penetrator-bar adapted to force a penetrator into the substance to be tested; a grip for said penetrator-bar; a time-interval-controller having provisions for any one of various time-intervals for control; an actuator normally causing said grip to operate and operable by a single movement to release said grip and start said time-interval-controller in operation; means for holding said actuator throughout the predeterminable time interval and then returning it to normal position to cause said grip to operate; means for varying the time-interval of control of said time-interval-controller upon said actuator; and means independent of said actuator and said time-interval-controller for releasing said grip to permit movement for adjustment of said penetrator-bar.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,439. HINGE FOR VANITY-CASES. WILLIAM G. KENDALL, Newark, N. J. Filed Jan. 25, 1917. Serial No. 144,508. (Cl. 220—11.)



1. In a hinge construction, the combination with two members to be hinged, one being formed with a slot, of a hinge ear projecting from the other, a tongue projecting laterally from the ear at its free end, and a second tongue projecting forwardly from the free end of the ear at that side opposite the first tongue, the ear at the base of the second tongue being formed in its side edge with a notch whereby the second tongue may be swung to aline with the first.

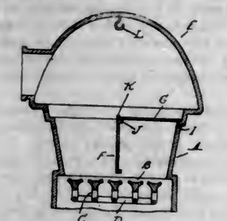
2. In a hinge construction, the combination with a receptacle having an upstanding wall formed adjacent its free edge with a horizontal slot and a cover having a depending flange to engage about the wall, of a hinge ear projecting from the flange and substantially equal in width to the width of the slot, said hinge ear having its free end portion bent to extend at substantially right angles to its body portion, an anchoring tongue extending laterally from the free end of the ear at one side, and an anchoring tongue extending beyond the free end of the ear and in the direction of the ear at the free side, such side of the ear being notched whereby after the first tongue has been passed through the slot of the box wall and the ear swung to pass its free end through the slot after the first tongue, the second tongue may be bent to aline with and extending in a direction opposite to the first tongue while still lying in the plane of the free end of the ear.

3. In a hinge construction, a hinge ear, a tongue projecting laterally from one side of the ear at its free end, and a second tongue projecting in the direction of and beyond the ear at its free end and adjacent the opposite side of the ear, the ear at the base of the second tongue being formed in its side edge with a notch whereby the second tongue may be swung to extend in alinement with the first.

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1,225,440. FIRE-POT ATTACHMENT. ERNEST KIMMICH, Detroit, Mich. Filed Nov. 10, 1916. Serial No. 130,534. (Cl. 126—147.)

1. The combination with a fire-pot and a series of movable grate-bars arranged therebeneath and coacting therewith, of a division plate for the fire-pot extending across the same and suspended to clear said grate-bars and permit shaking movement thereof, and a horizontal plate at the top of said division plate for excluding fuel from one side of the latter and preventing short circuiting of the air, the space beneath said horizontal plate at one side of said division plate being in free air communication with the space below the grate to permit circulation of the air and cooling of said plates.



2. The combination with a fire-pot and a series of movable grate-bars arranged therebeneath and coacting therewith, of a vertical division plate extending diametrically across said fire-pot and suspended therein, with its lower edge clearing the grate bars, and a horizontal plate for closing the space at one side of said division plate and at the upper end thereof, said horizontal plate being supported on said division plate and abutting thereagainst to prevent lateral displacement, the space beneath said horizontal plate being in free air communication with the space below the grate.

3. The combination with a tapering fire-pot having an interior ledge and a series of movable grate bars arranged below said fire-pot and coacting therewith, of a division plate arranged in a vertical plane to extend diametrically across said fire-pot and conforming to the taper thereof, said plate having a ledge substantially on a level with that of the fire-pot, the lower edge of said division plate clearing said grate bars and its upper edge portion being supported at its ends upon said ledge of the fire-pot and a horizontal plate resting upon said ledges of the vertical plate and fire-pot and closing the space at one side of the vertical plate.

4. The combination with a fire-pot having an interior ledge and a series of movable grate bars arranged therebeneath and coacting therewith, of a vertical division plate extending across said fire-pot and suspended therein with its lower edge clearing the grate bars, said plate being restrained against lateral displacement by the fire-pot wall and having a ledge substantially opposite that upon the fire-pot wall, and a horizontal plate supported on said ledges and restrained against lateral displacement by the vertical plate, a space having free air communication with the space below the grate, being formed between the grate and said horizontal plate.

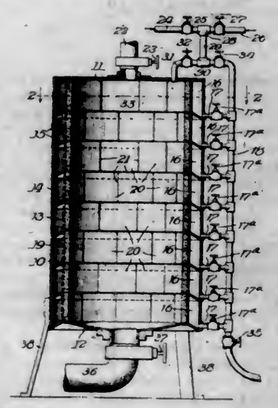
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1,225,441. FILTER-TANK. BRUNO RICHARD KOERING, Detroit, Mich. Filed Dec. 22, 1915. Serial No. 68,155. (Cl. 210—11.)

1. In a filter tank, the combination of an inclosing shell, a vertically-disposed filtering medium within said shell and dividing the interior of the latter into a receiving chamber and a filtrate chamber, means for introducing into said receiving chamber liquid to be filtered, means for introducing into said receiving chamber a gas under pressure, a horizontally-disposed partition in said filtrate chamber dividing the latter into a plurality of compartments, and a closable outlet from each of said compartments.

2. In a filter tank, the combination of an inclosing shell, a vertically-disposed filtering medium dividing the interior of said shell into a receiving chamber and a filtrate chamber, means for introducing into said receiving chamber liquid to be filtered, means for introducing into said receiving chamber a gas under pressure, a horizontally-disposed partition in said filtrate chamber dividing the latter into a plurality of compartments, said partition sloping downwardly from said filtering medium to said shell, and a closable outlet from each of said compartments at the lowermost portion thereof.

3. In a filter tank, the combination of an inclosing shell, a vertically-disposed filtering medium closed on itself and spaced inwardly from said shell, whereby a receiving chamber is formed within said filtering medium and a filtrate chamber is formed between said filtering medium and said shell, means for introducing into said receiving chamber a liquid to be filtered, means for introducing into said receiving chamber gas under pressure, a horizontally-disposed partition within said filtrate chamber dividing the latter into a plurality of compartments, and a closable outlet from each of said compartments.



4. In a filter tank, the combination of a cylindrical inclosing shell, a cylindrical and vertically-disposed filtering medium spaced inwardly from said shell whereby a receiving chamber is formed within said filtering medium and an annular filtrate chamber is formed between said filtering medium and said shell, means for introducing into said receiving chamber a liquid to be filtered, means for introducing into said receiving chamber a gas under pressure, a horizontally-disposed partition within said filtrate chamber whereby the latter is divided into upper and lower compartments, and a closable outlet from each of said compartments.

5. In a filter tank, the combination of a cylindrical inclosing shell, a vertically-disposed cylindrical filtering medium spaced inwardly from said shell, whereby a receiving chamber is formed within said filtering medium and an annular filtrate chamber is formed between said filtering medium and said shell, means for introducing into said receiving chamber a liquid to be filtered, means for introducing into said receiving chamber a gas under pressure, a plurality of horizontally-disposed partitions within said filtrate chamber whereby the latter is divided into a plurality of compartments one above the other, and a closable outlet from each of said compartments.

[Claims 6 to 8 not printed in the Gazette.]

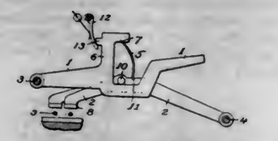
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1,225,442. MECHANICAL MOVEMENT. JOHN KONAR, Chicago, Ill., assignor of two-thirds to Thomas Francis Adams, Sunnyside, Mont. Filed Mar. 16, 1912, Serial No. 684,292. Renewed Sept. 27, 1916. Serial No. 122,547. (Cl. 74—14.)

1. A mechanical movement comprising, a primary lever pivoted at one end, a secondary lever pivoted at one end and provided with a lug intermediate its length for bearing engagement upon an upper surface of the primary lever, and a resilient means having bearing against an under surface of the primary lever and an upper surface of the secondary lever, substantially as set forth.

2. A mechanical movement comprising, a primary lever pivoted at one end and provided with a bracket extension intermediate its length, a secondary lever pivoted at one

end and provided with a lug intermediate its length for bearing engagement upon an upper surface of the primary lever, and a resilient means having bearing against an under surface of the aforesaid bracket extension and an upper surface of the secondary lever, substantially as set forth.



3. A mechanical movement comprising, a primary lever pivoted at one end, a secondary lever pivoted at one end and provided with a lug intermediate its length for bearing engagement upon an upper surface of the primary lever, and an arc shape spring having bearing against an under surface of the primary lever and an upper surface of the secondary lever, substantially as set forth.

4. A mechanical movement comprising, a primary lever pivoted at one end and provided with a bracket extension intermediate its length, a secondary lever pivoted at one end and provided with a lug intermediate its length for bearing engagement upon an upper surface of the primary lever, and an arc shaped spring having bearing against an under surface of the aforesaid bracket extension and an upper surface of the secondary lever, substantially as set forth.

5. A mechanical movement comprising a plurality of primary levers pivoted at one end and provided with a plurality of latch toes, a plurality of secondary levers pivoted at one end and provided with lugs intermediate their lengths for bearing engagement upon upper surfaces of the primary levers, resilient means having bearing against an under surface of the primary levers and upper surfaces of the secondary levers, and a latch plate common to the series of latch toes aforesaid, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

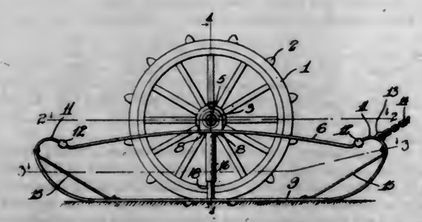
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1,225,443. HEAT-INSULATING BOARD COMPOSED OF CEREAL STRAW. JAMES E. LAPPEN, Winona, Minn., assignor to Union Fibre Company, Winona, Minn., a Corporation of Minnesota. Filed Dec. 27, 1915. Serial No. 68,661. (Cl. 92—3.)

As a new article of manufacture, a thermal insulating board composed of long, partially purified fibers of cereal straw felted and agglomerated with a binder of the gummy components of said straw and constituting a coarsely porous and coherent body.

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1,225,444. RUNNER ATTACHMENT FOR VEHICLES. HENRY H. LECLAIR, Lowville, N. Y. Filed May 13, 1916. Serial No. 97,366. (Cl. 21—47.)



1. The combination with a vehicle wheel and a shaft for the wheel, bearings mounted on said shaft at opposite sides of the wheel, a flat spring having a slot formed therein for the reception of the wheel, and a runner also provided with a slot for receiving said wheel, said runner and said flat spring being connected at their terminals.

2. The combination with a vehicle wheel and a shaft for the wheel, bearings mounted on said shaft at opposite sides of the wheel, a flat spring having a slot formed therein for the reception of the wheel, a runner also provided with a slot for receiving said wheel, said runner and said flat spring being connected at their terminals, and resilient means interposed between said runner and said flat spring.

3. The combination with a vehicle wheel and a shaft for the wheel, bearings mounted on the shaft at opposite sides of the wheel, a flat spring having a slot formed therein for the reception of said wheel, a runner also provided with a slot for receiving said wheel, the ends of the runner being curved upwardly and having its terminals bent toward each other and connected to the ends of said flat spring.

4. The combination with a vehicle wheel and a shaft for the wheel, bearings mounted on said shaft at opposite sides of the wheel, a flat spring secured to said bearings and provided with center longitudinally extending slot through which the wheel is disposed, a runner having curved end portions and its terminals secured to the terminals of said flat spring, said runners also provided with a slot through which said wheel extends, and brace members having their ends secured to said runners for bracing the curved portions thereof.

5. The combination with a vehicle wheel and a shaft for the wheel, bearings carried by said shaft at opposite sides of said wheel, a flat spring secured to said bearings, a runner having its terminals fastened to the terminals of said spring, a pair of cylinders depending from said flat spring and secured thereto, and resilient means connected to said runner and disposed within the central bores of said cylinders.

[Claims 6 to 12 not printed in the Gazette.]

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1,225,445. SOUNDING TOY. LOUIS LEOMBRUNI, Meriden, Conn. Filed Dec. 20, 1916. Serial No. 138,108. (Cl. 46—46.)



1. In combination with a member provided with an explosive chamber, a magazine carried by the member and delivering within the chamber, valves carried by the member and extending within the magazine, and means for moving said valves in unison but in reverse directions.

2. In combination with a member provided with an explosive chamber, a magazine carried by the member and delivering within the chamber, valves carried by the member and extending within the magazine, and means for moving said valves in unison but in reverse directions, said valves being spaced longitudinally of the magazine.

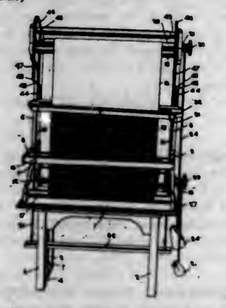


3. A device of the character described comprising a member provided with an explosive chamber, a magazine carried by the member and delivering within the chamber, valves extending within the magazine for controlling the delivery therefrom and extending exteriorly thereof, the exterior portions of the valves being provided with openings, an endwise movable member carried by the first named member and extending through the openings of the valves, the portion of the endwise movable member coacting with the valves being bent to afford cams whereby said valves upon movement of said last named member are caused to move in unison but in reverse directions.

4. A device of the character described comprising a member provided with an explosive chamber, a magazine carried by the member and delivering within the chamber, valves extending within the magazine for controlling the delivery therefrom and extending exteriorly thereof, the exterior portions of the valves being provided with openings, an endwise movable member carried by the first named member and extending through the openings of the valves, the portion of the endwise movable member coacting with the valves being bent to afford cams whereby said valves upon movement of said last named member are caused to move in unison but in reverse directions, and means for normally maintaining the endwise movable member at the limit of its movement in a direction away from the explosive chamber.

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1,225,446. HAND-LOOM. CORINNE M. LEWIS, Newtonville, Mass. Filed Sept. 29, 1915. Serial No. 53,186. (Cl. 139—12.)



1. In a hand loom comprising a frame, a warp roll and a cloth roll journaled therein, guiding rolls for said warp spaced apart and lying in the same substantially vertical plane, a vertically reciprocable and laterally movable lay carrying a reed and harness, a support for the lay located at a distance below the fell of the cloth formed upon said warp, flexible members having at one end hangers secured to the ends of said lay, said hangers being so constructed that the center of gravity of the lay and hangers will lie in the longitudinal vertical central plane of the lay, rotary guides for said flexible members mounted upon the frame above the upper guide roll and a light treadle member connected to the opposite end of said flexible members whereby the weight of the lay will cause it normally to descend and rest upon said support and the depression of said treadle will raise the lay to beat up the filling.

2. In a hand loom comprising a frame, a warp beam and a cloth roll mounted therein, means for guiding the warp from said warp beam to said cloth roll and means for beating up the filling; pawl and ratchet mechanism for said warp beam and cloth rolls adapted to permit adjustment of the tension upon the warp and means for maintaining the teeth of the ratchet in firm engagement with the pawl thereby preventing alteration of the tension after the same has been set.

3. In a hand loom comprising a frame, a warp beam and a cloth roll mounted therein, means for guiding the warp from said warp beam to said cloth roll and means for beating up the filling; pawl and ratchet mechanism for said warp beam and cloth rolls adapted to permit adjustment of the tension upon the warp and means for preventing alteration of the tension after the same has been set consisting of counterweighted flexible members fixed to and coiled about the shafts of said warp beam and said cloth roll in a direction to maintain the ratchets and pawls in constant engagement notwithstanding the shocks and rebound caused by the beating up of the filling.

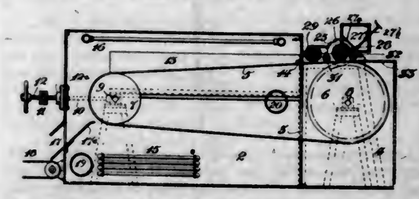
4. A lay for a hand loom comprising a reed and a demountable harness frame carrying a series of movable heddles.

5. A lay for a hand loom comprising a hollow frame containing a reed and a demountable rectangular metallic heddle frame consisting of parallel heddle bars and end pieces detachably secured together and a series of heddles mounted upon said heddle bars whereby broken heddles may readily be removed and others substituted therefor without dismantling the lay.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,447. METHOD AND MEANS FOR DYEING FURSKINS. HARRY C. LUBARSKY, Philadelphia, Pa. Filed Oct. 5, 1916. Serial No. 123,879. (Cl. 8—5.)



1. The herein described method of dyeing fur skins, which consists in laying the skins fur side up upon a traveling carrier, brushing into the hair of the skins a dye material, transferring the carrier and skins into a drying atmosphere, discharging the dyed skins, returning the carrier in a dried condition to the initial position and repeating the operation.

2. The herein described method of dyeing fur skins, which consists in laying the skins fur side up upon a traveling carrier, successively pressing back the hair of the skins to expose the sides of the hairs as the skins are conveyed by the carrier, brushing upon the exposed hairs at their free ends alone and at a distance from the skin surface a dye material, transferring the carrier and skins into a drying atmosphere, discharging the dyed skins, returning the carrier in a dried condition to the initial position and repeatng the operation.

3. The herein described method of dyeing fur skins, which consists in laying the skins fur side up upon a traveling carrier, brushing into the hair of the skins a dye material, thoroughly distributing the dye applied by the brushing operation by a second brushing operation, transferring the carrier and skins into a drying atmosphere, discharging the dyed skins, returning the carrier in a dried condition to the initial position and repeating the operation.

4. The herein described method of dyeing fur skins, which consists in laying the skins fur side up upon a traveling carrier, successively pressing back the hair of the skins to expose the sides of the hairs as the skins are conveyed by the carrier, brushing upon the exposed hair at their free ends alone and at a distance from the skin surface a dye material, thoroughly distributing the dye applied by the brushing operation by a second brushing operation, transferring the carrier and skins into a drying atmosphere, discharging the dyed skins, returning the carrier in a dried condition to the initial position and repeating the operation.

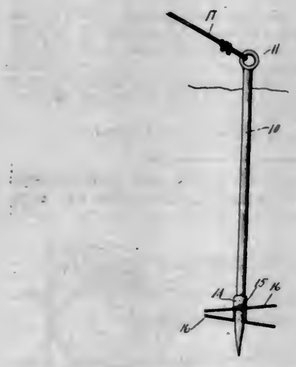
5. In dyeing apparatus, the combination of a drying chamber, an endless belt carrier guided through the chamber and guided to a point outside of the same, a rotating dye applying brush arranged transversely of the

carrier outside of the drying chamber, and means for supplying the brush with a dye material whereby it may be applied to skins conveyed by the carrier under the brush, and means for heating and drying the carrier surface before returning to position under the brush.

[Claims 6 to 18 not printed in the Gazette.]

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1,225,448. GUY-ANCHOR. LUCY LUSARDI, Defiance, Mich. Filed Aug. 17, 1914. Serial No. 857,169. (Cl. 189—91.)



A guy rope anchor comprising a stem provided with rope attaching means and pointed at one end, a sleeve fixed in said stem adjacent the point and having oppositely extending ears placed in a staggered relation to each other, said ears being inclined in opposite direction transversely of their minor dimensions, auger blades secured to said ears and inclined in the same direction of the ears, said blades being formed of semi-circular disks and being pointed at the junction of the curved and straight lines.

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1,225,449. FEED-MILL. HARRY G. MCCULLOCH, Freeport, Ill., assignor, by mesne assignments, to Stover Manufacturing and Engine Company, Freeport, Ill., a Corporation of Illinois. Filed Feb. 9, 1914, Serial No. 817,396. Renewed Mar. 1, 1917. Serial No. 151,814. (Cl. 83—8.)



1. In a feed grinder, the combination with a suitable frame and driving gear of grinding burs mounted therein, housings inclosing a breaking chamber, a main breaker shaft journaled in the lower portion of said chamber near the grinding burs, suitable breaking teeth and spirally arranged, conveying devices upon the shaft to break up the feed and urge it toward the grinding burs, a preliminary breaker shaft journaled in the breaking chamber and geared to a slower rotation than the main breaker shaft and radially projecting breakers upon the preliminary breaker shaft spirally arranged to give the feed a slight preliminary movement toward the grinding end of the machine.

2. In a feed grinder, the combination with a suitable frame and driving gear of grinding burs mounted therein, housings inclosing a breaking chamber, a main breaker shaft journaled in the lower portion of said chamber near the grinding burs, suitable breaking teeth and spirally arranged conveying devices upon the shaft to break up the feed and urge it toward the grinding burs, a preliminary breaker shaft journaled in the breaking chamber and geared to a slower rotation than the main breaker shaft and radially projecting breakers upon the preliminary breaker shaft.

3. In a feed grinder, the combination with a suitable frame and driving gear of grinding burs mounted therein, housings inclosing a breaking chamber, a main breaker shaft journaled in the lower portion of said chamber near the grinding burs, suitable breaking teeth and spirally arranged conveying devices upon the shaft to break up the feed and urge it toward the grinding burs, a preliminary breaker shaft journaled in the breaking chamber and radially projecting breakers upon the preliminary breaker shaft spirally arranged to give the feed a slight preliminary movement toward the grinding end of the machine.

4. In a feed mill, a breaker chamber having an adjustable discharge opening, a feed chamber to receive material discharged through said opening and itself open on the side opposite said opening, a screw conveyer arranged to force material out of the feed chamber at said opposite side, grinding devices through which said conveyer forces the material which it expels from the feed chamber, and means in the breaking chamber for breaking material and forcing it through said discharge opening, said means, conveyer and a part of the grinding devices being fixed to a common shaft.

5. The combination with a breaker chamber having an adjustable outlet opening, devices in said chamber for breaking material and urging it toward said opening, a feed screw in position to receive material delivered through said opening, grinding devices in position to receive material discharged by the screw, and a casing inclosing the screw and resisting outward movement of material in its path.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,450. COMPOSITION OF FRUIT MATTER FOR FOOD PRODUCTION. ALICE MACLEOD, San Jose, Cal. Filed July 18, 1916. Serial No. 109,960. (Cl. 99—11.)

The herein described composition of matter, compounded in the manner and in the quantities substantially as described, consisting of water substantially pure, prune pulp from cured prunes, olive pulp from cured olives, garlic, fine salt, ground red pepper, ground ginger, ground cloves, ground cinnamon, vinegar substantially pure, substantially as described and for the purpose specified.

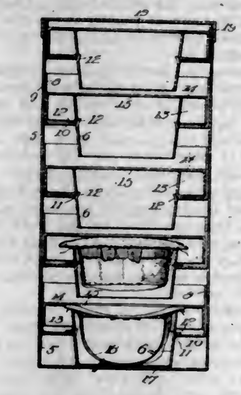
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1,225,451. SECTIONAL HAT-BOX. JOSEPH B. MACON, Pine Bluff, Ark. Filed Oct. 2, 1914. Serial No. 864,628. (Cl. 206—9.)

1. A hat box composed of a plurality of sections stacked one upon another, each section including a body, said body being open at top and bottom, a sleeve disposed in the upper end of the body and projecting above the same, an inwardly extending annular flange provided on the lower end of said sleeve and disposed horizontally in the body and midway between the ends thereof, a substantially conical collar adapted to be disposed within the body and having prongs struck therefrom and adapted to engage said flange to provide a stop and rest for the collar, a rim, said rim comprising a band adapted to fit snugly within the sleeve, said band provided with a top having a central opening therein of smaller dimensions than the corresponding dimensions of the collar, whereby said top may overhang the collar on all sides, said collar adapted to receive the crown of a hat, the rim of the latter adapted to be disposed upon the upper edge of the collar between the same and the top of said rim, substantially as described.

2. A hat box comprising a plurality of individual sections stacked one upon another, each section comprising a hollow body, a flange arranged therein, a collar supported on the flange and adapted to receive a hat, and a rim including a band snugly fitting in the body above the flange, and means carried by the band for overlying the brim of the hat.



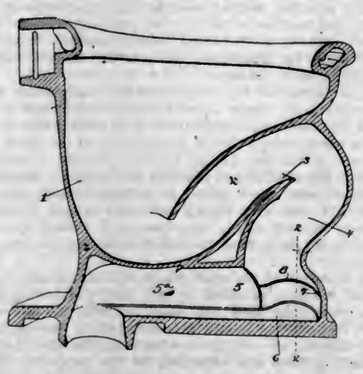


3. A sectional hat box comprising a plurality of individual sections stacked one upon another, each section including a hollow body, a collar, and a rim, said body, collar and rim being separable, coöperating means between the collar and body for supporting the former within the latter, said collar adapted to receive a hat, said rim adapted to fit within the body above the collar, said collar, rim and body adapted to support said hat against movement relative to the section.

4. A hat box comprising a plurality of sections stacked one upon the other, each section including a body having a sleeve therein projecting at its upper portion above the upper edge of the body and having an inturned flange positioned within the body, a collar extending through the opening defined by the flange and having means engaging the flange for detachably retaining the collar in position thereon, and a rim detachably fitting in the body above the said inturned flange and including means overlying the collar at a distance therefrom.

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1,225,452. SIPHON STRUCTURE FOR USE IN WATER-CLOSETS. JOHN MADDOCK, Trenton, N. J., assignor to John Maddock & Sons, Trenton, N. J., a Corporation of New Jersey. Filed Sept. 11, 1916. Serial No. 119,577. (Cl. 4—22.)

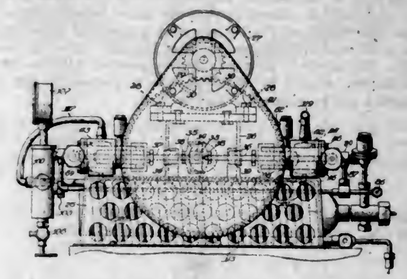


1. A siphon structure for use in water closets having at the bottom of the down leg a horizontal splash surface, and a lateral enlargement extending around three sides of the bore of the down-leg at and adjacent to the juncture of said down-leg with said splash surface.

[Claim 2 not printed in the Gazette.]

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1,225,453. REFRIGERATING APPARATUS. GUSTAVE F. MAISCH, Chicago, Ill. Filed Oct. 2, 1916. Serial No. 123,274. (Cl. 62—115.)



1. In a refrigerating-appliance of the character described, the combination of a gas-compressor, a refrigerating-coil connected thereto, a supply-tank of gas under pressure, and an automatic-valve connecting said supply tank to the system and adapted to compensate for the leakage of gas from the system by admitting gas from the tank thereto, substantially as described.

4. In a refrigerating-appliance of the character described, the combination of a gas-compressor, a refrigerating coil connected thereto, a supply-tank of gas under pressure and an automatic-valve connecting said supply-tank to the system and adapted to compensate for the leakage of gas from the system by admitting gas from the tank thereto, said valve having means to subject the valve to an opening action and to a greater closing action, both by the pressure of the gas on the low pressure side of the valve, substantially as described.

9. In a refrigerating-appliance of the character described, the combination of a gas-compressor, a refrigerating-coil connected thereto, a supply-tank of gas under pressure, an automatic-valve conencting said supply-tank to the system and adapted to compensate for the leakage of gas from the system by admitting gas from the tank thereto, a manually-operated valve between said automatic-valve and said tank, and a detachable connection between said manual and automatic-valves permitting removal and replacement of the tank, substantially as described.

10. In a refrigerating-system of the character described, the combination of a refrigerating-coil, a gas-compressor, a condenser receiving the compressed-gas from said compressor, and a gas supply-tank connected to the system and located adjacent to said condenser to receive heat therefrom, substantially as described.

19. In a refrigerating-system of the character described, the combination of a refrigerating-coil, a gas-compressor, and a condenser-coil between said compressor and refrigerating-coil, said condenser-coil comprising two pipes one within the other, the inner pipe being adapted to contain a cooling medium, the space between the inner and outer pipe being adapted to accommodate the compressed gas received from said compressor, and a gas supply-tank inside of said condenser-coil, substantially as described.

[Claims 2, 3, 5 to 8, and 11 to 18 not printed in the Gazette.]

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1,225,454. CHANGEABLE SIGN. AARON H. MANDEL and MAXIMILIAN ROTH, New York, N. Y. Filed Sept. 29, 1913, Serial No. 792,302. Renewed Sept. 22, 1916. Serial No. 121,686. (Cl. 40—124.)

1. In a sectional sign supporting frame, a plurality of detachable card receiving sections, a forwardly extending

flange on the lower edge of each section, said flange comprising an upwardly extending inner ply spaced from the face of the body of said section, to form a groove, a downwardly extending outer ply spaced from the inner ply, an end ply extending between the inner and outer plies in spaced relation thereto, a forwardly and downwardly extending flange on the upper edge of said section, the upper edge of each section extending between the inner and end plies of the section next above, and the upper flange of each section extending into the space between the end and outer plies of the section next above, the upper edge of each section being spaced from the end ply of the section next above to provide a groove parallel with the first mentioned groove to afford therewith means for the reception of the edges of a sign section.



2. An article of manufacture designed to constitute a sign element and including a sheet provided with a flange on its lower edge, said flange comprising an upwardly extending inner ply, spaced from the face of the body portion of the sheet to form a groove, a downwardly extending outer ply spaced from the inner ply, an end ply extending between the inner and outer plies in spaced relation thereto, and a forwardly and downwardly extending flange on the upper edge of said sheet.

3. An article of manufacture designed to constitute a sign element and including a sheet provided with a flange on its lower edge, said flange comprising an upwardly extending inner ply, a downwardly extending outer ply spaced from the inner ply, an end ply extending between the inner and outer plies in spaced relation thereto, and a forwardly and downwardly extending flange on the upper edge of said sheet.

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1,225,455. PNEUMATIC SHOE. RAFFAELE MARABINI, New York, N. Y. Filed June 23, 1916. Serial No. 105,462. (Cl. 36—3.)



1. The combination with a shoe, of a support located within the shoe and provided with a groove, a pneumatic cushion consisting of an elastic tube seated in and projecting above the groove, and an inner sole arranged upon the cushion and adapted to compress the same when subjected to pressure, the compression of the cushion being limited by the said support.

2. The combination with a shoe, of a support located within the shoe and provided with a groove, a pneumatic cushion consisting of an elastic tube seated in and projecting above the groove, an inner sole arranged upon the cushion and adapted to compress the same when subjected to pressure, the compression of the cushion being limited by the said support, said cushion being provided with apertures communicating with the interior of the shoe and a rear air tube connected with the cushion and mounted in the rear portion of the shoe and communicating with the outside atmosphere.

3. The combination with a shoe provided at the back with a tapering support having a substantially U-shaped groove, of an inner sole provided at the front of the support with perforations and an approximately U-shaped pneumatic cushion arranged in the said groove and projecting above the said support and having front outlets communicating with the said perforations and a rear air tube mounted in the back portion of the shoe and having a lower terminal portion extending into the back of the pneumatic cushion.

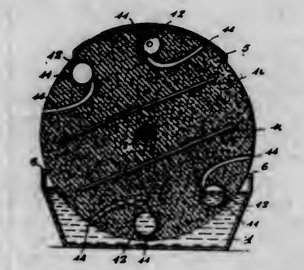
4. The combination with a shoe, of a support arranged within the shoe and provided with a substantially U-shaped groove curved in cross section and tapered longitudinally in depth, an inner sole located above the support and provided intermediate of its ends with perforations located at the front of the said support, a substantially U-shaped pneumatic cushion seated in the said groove and approximately D-shaped in cross section to fit the groove and present upper flat faces to the inner sole, said cushion being provided at the front with outlets communicating with the said perforations and a rear air tube mounted in the back of the shoe and having a lower inwardly extending terminal portion piercing the back of the pneumatic cushion.

5. A pneumatic cushion for shoes consisting of an elastic tube approximately D-shaped in cross section and rounded at the bottom and having a flat top portion, said tube being provided with apertures and having longitudinally disposed sides conforming to the configuration of the shoe, a rear air tube, an inner sole supported by the flat upper portions of the tube, and a spring extending along the elastic tube and having a leaf or portion bearing against the under side of the flat top portion of the tube.

[Claim 6 not printed in the Gazette.]

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1,225,456. ANIMAL-OILING DEVICE. WILLIAM J. MARSH, Dexter, Iowa. Filed July 21, 1916. Serial No. 110,595. (Cl. 119—157.)



1. A device of the class described comprising a tank, and a rotating cement member supported adjacent said tank and having a portion thereof projecting into the same, said member having pockets molded therein, to form wells for dipping up the contents of said tank and spilling it over the same.

2. A device of the class described comprising a rectangular tank, plates secured to the upper edge of said tank and inclining downwardly from their inner to their outer edges, flanges struck upwardly from the inner edges of said plates and having bearings therein, a shaft rotatably mounted in said bearings and having a wheel fixed thereon, said wheel having a portion thereof projecting into said tank and having pockets arranged on the periphery thereof, and a U-shaped hood having the lower ends of its sides fixed to said flanges and covering said wheel.

3. A device of the class described comprising a tank, a wheel rotatably mounted on said tank and having a portion projecting into the same, pockets in said wheel near its periphery having contracted inlets opening in one side thereof, and outlets opening from the inner portions of said pockets and extending to the periphery of said wheel.

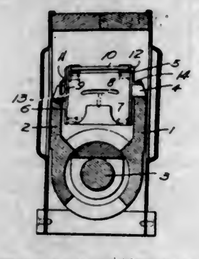
4. A device of the class described comprising a tank, a cover for said tank having a central longitudinal opening,



material on the edges of said opening extending upwardly and forming flanges, bearings extending upwardly from said flanges midway the length thereof, a wheel having axially projecting studs received in said bearings, a portion of said wheel projecting through said opening into the tank, an inverted U-shaped hood covering the major portion of said wheel, the lower ends of the side portions of the hood having notches therein alined with the bearings on the aforesaid flanges, said studs extending through the bearings and notches, and means for securing the lower ends of said side portions of the hood to said flanges.

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1,225,457. COMBINATION COIL AND CONDENSER FOR DYNAMOS. CHARLES THOMAS MASON, Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 7, 1916. Serial No. 70,801. (Cl. 123—149.)



1. In a dynamo, a removable core, a generating winding about said core, and a condenser associated with said core and winding, said condenser being removable with said core and winding and removable from said core and winding.

2. In a dynamo, a removable core, a generating winding about said core and supported wholly thereon, a condenser having terminals connected with said winding and core and supported thereby, said condenser being removable with said core and winding and removable therefrom.

3. In a dynamo, a generating winding, a core therefor, heads supporting said winding, terminals on said heads, and a condenser across said heads and connected to one of said terminals and to said core, substantially as described.

4. In a dynamo, generating windings, a core therefor, heads on said windings, an insulating block between said heads, a conducting segment carried upon said block, a condenser mounted on said windings and heads and supported thereby, and connections between the terminals of said coil and the segment, the condenser, and core.

5. In a dynamo, a structure adapted to be removed as a unit and comprising a core, a generating winding about said core, inclosing heads for the winding, said heads carrying terminals and a condenser connected to said structure and supported thereby.

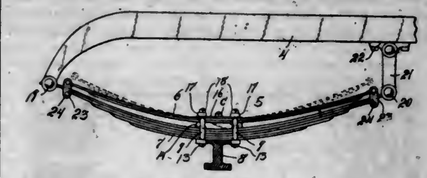
[Claims 6 to 9 not printed in the Gazette.]

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1,225,458. VEHICLE-SPRING. EDWARD MATTHEWS, Denver, Colo., assignor of one-half to Lewis E. Lemen, Denver, Colo. Filed May 22, 1916. Serial No. 99,027. (Cl. 267—27.)

1. A vehicle spring composed of upper and lower sections, a block interposed between the said sections midway of the extremities of the latter, H-bolts for securing the central portion of the spring to the axle of the vehicle, the upper and lower arms of said bolt embracing the upper and lower sections respectively, and cross pieces of the said H-bolts adapted to bear upon the upper surface of the lower section whereby the leaves comprising the latter are independently secured in place.

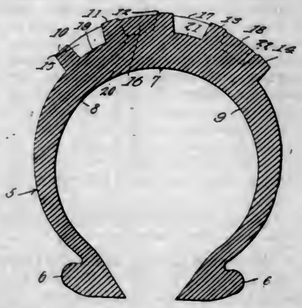
2. A vehicle spring composed of upper and lower sections, a block interposed between the said sections midway of the extremities of the latter, H-bolts for securing the central portion of the spring to the axle of the vehicle, the upper and lower ams of said bolt embracing the upper and lower sections respectively, and cross pieces of the



said H-bolts engaging recesses formed in the said block and adapted to bear upon the upper surface of the lower section whereby the leaves comprising the latter are independently secured in place.

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1,225,459. WHEEL-TIRE. ALBERT S. MAUK, Orangeville, Md. Filed Dec. 3, 1914. Serial No. 875,235. (Cl. 152—14.)



A non-skid tire having on its tread a central circumferential main rib and at each side of said main rib a plurality of circumferential auxiliary ribs and having a plurality of transverse bars lying in staggered relation between the main and the auxiliary ribs and integrally formed at their ends therewith, the circumferential main and auxiliary ribs and transverse bars providing circumferential rows of cups, all the said circumferential ribs extending beyond the outer faces of the transverse bars to gradually break the sealing of the cups when being relieved from compression, the transverse bars bracing the circumferential ribs and by their staggered relation acting when the tread is compressed to distort the circumferential ribs into sinuous form at the points under compression, said auxiliary circumferential ribs providing lateral abutments for engagement with the road-way when the central rib is compressed to hold the tire from lateral skidding.

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1,225,460. INSULATOR WALL-BRACKET. JAMES B. MCCARTHY, Birmingham, Mich., assignor to National Metal Molding Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 31, 1916. Serial No. 88,024. (Cl. 173—366.)

1. An insulator bracket, comprising a supporting member provided with holes for attaching an insulator thereto, an insulator provided with a wire-receiving hole extending substantially transversely through the axis thereof and further provided with a pair of longitudinally disposed holes lying one on each side of said first named hole, an annular groove in the outer surface of said insulator, and an attaching member extending through said pair of holes in the insulator and through said holes of the supporting member, said attaching member clamping the inner end of the insulator to said supporting member.

2. An insulator wall bracket for the attachment and support of electrical conductors, comprising in combination a supporting member provided with means for attaching an insulator thereto, a unitary substantially cylindrical insulator provided with an open wire-receiving hole extending substantially transversely through the axis thereof, and further provided with a pair of longitudi-

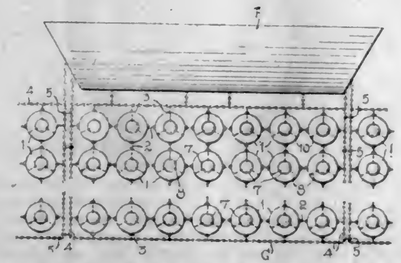


nally disposed holes lying one on each side of said first named hole, an annular groove in the outer surface of said insulator in the general plane of said transverse hole, and an attaching member extending through said pair of holes in the insulator and engaging said supporting member and clamping the insulator to said member.

[Claim 3 not printed in the Gazette.]

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1,225,461. GUARD. ROBERT H. MCCARTHY, Madella, Minn. Filed Mar. 24, 1917. Serial No. 157,197. (Cl. 114—240.)



1. A guard comprising a plurality of connected disks, a face of each of said disks being provided with a pocket, and an explosive medium arranged within each of the pockets.

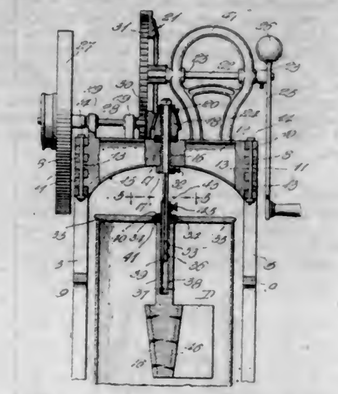
6. A guard comprising a plurality of connected disks, a face of each of said disks being provided with a pocket, an explosive medium arranged within each of the pockets, a member overlying the explosive medium, detachable means coacting with the member and the disk for holding the member in applied position, and a pliable member operatively engaged with the first named member and the disk for holding said first named member in applied position.

[Claims 2 to 5 not printed in the Gazette.]

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1,225,462. CHURN. FORD MCENTIRE, Shelby, N. C. Filed Mar. 2, 1916. Serial No. 81,725. (Cl. 64—29.)

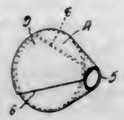
In combination, a stationary member having a circular opening therein, a rotary member, a stem extending from the rotary member into said circular opening, said stem having a longitudinally extending bore, a tube in said bore and projecting beyond the end of the stem, said tube having a radial flange formed thereon at a point spaced from its outer end and disposed in engagement with the end of the stem, an annular flange being formed on the edge of the radial flange and surrounding the end of the stem, said annular flange being disposed in said circular opening to form a bearing surface for the stem, means for securing the tube and flanges to the stem, a rod slidable and nonrotatable in said tube, means on the tube between its end and said radial flange for engagement with the



rod to hold the same in adjusted positions in said tube, and operating means connected with the rod.

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1,225,463. MOUTHPIECE FOR TELEPHONES AND THE LIKE. JEROME T. MCGONIGAL, Pottersdale, Pa., assignor of one-half to M. T. Bowman, Clearfield, Pa. Filed Apr. 5, 1916. Serial No. 89,102. (Cl. 179—184.)



An antiseptic guard to be selected from a multiple thereof, for temporary use in a telephone transmitter mouth piece; lugs on the outer edge of said transmitter mouth piece and diametrically disposed; said guard comprising a circular fiber piece having a central opening, and provided with a slit radially extending from said opening to the outer edge of the guard piece, said circular guard piece when to be used turned conically upon itself to form a cone, the parts adjacent said slit to be adjustably and automatically slidably overlapping, whereby the diameter of the cone may be varied to fit different sized pieces, and to spring outwardly adjacent the inner surface of the mouth piece, whereby the outer edge of the guard will spring into engagement with said lug to hold the guard in place.

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1,225,464. DRAFTING INSTRUMENT. ROY F. MCINTIRE, Pella, Iowa. Filed May 10, 1916. Serial No. 96,650. (Cl. 33—104.)



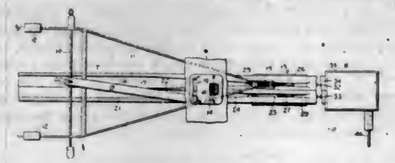
As a new article of manufacture, a drafting block, having four flat faces, two faces being identical and each in form of a right angle triangle, the hypotenuse of each being disposed at angles of sixty and thirty degrees to the sides thereof, and having another face in the form of a



right angle triangle having its hypotenuse at an angle of forty five degrees to its sides, the remaining face being formed of a triangle all the edges of which are being arranged at acute angles to each other.

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1,225,465. SWITCH-SHIFTER. AMBROSE MCVEY, Wilmington, Del. Filed May 23, 1916. Serial No. 99,305. (Cl. 104—171.)

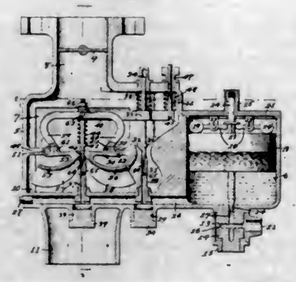


1. The combination with a movable switch in a railway track, of a transversely slidable frame carried by a car, a roller carried by said frame and normally held in raised position, means for forcing said roller toward the track, a horizontally arranged lever pivoted to said car and in operative connection at one end with said frame, foot actuated means on the other lever end for swinging said lever to move said frame and roller transversely of the track, and track means in the path of the roller for actuating said switch.

2. The combination with a movable switch in a railway track, of a transversely slidable rod carried by a car, a frame carried by said rod, a roller carried by said frame and normally held in raised position, foot actuated means for forcing said roller toward the track, foot actuated means for moving said rod, frame, and roller transversely of the car, and track means in the path of the roller for actuating said switch.

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1,225,466. CARBURETER. HARRY CARROLL MERRIAM, Indianapolis, Ind., assignor to American Carbureter Co., Indianapolis, Ind., a Corporation of Indiana. Filed Mar. 22, 1916. Serial No. 85,886. (Cl. 261—41.)



1. A carbureter, comprising an oil supply, a plurality of nozzles in communication therewith, a valve for each nozzle, means for leading air around each nozzle, two pivoted dampers embracing one of said nozzles adapted to be raised by a demand of an engine, and links connecting said dampers pivotally with the respective valve to open the latter as said dampers are raised to increase the air supply.

2. A carbureter, comprising an oil supply, a plurality of nozzles in communication therewith, a valve for each nozzle, means for leading air around each nozzle, two pivoted dampers embracing one of said nozzles and provided with surfaces eccentric to their pivots whereby said dampers are gradually separated from each other and from said nozzle when raised from normal positions to increase the air supply, and links connecting said dampers pivotally with the respective valve to open the latter as said dampers are raised to increase the air supply.

3. A carbureter, comprising an oil supply, a plurality of nozzles in communication therewith, a valve for each nozzle, means for leading air around said nozzles, two pivoted dampers embracing one of said nozzles and provided with surfaces eccentric to their pivots whereby said dampers recede from each other and from said nozzle when raised from normal positions to increase the air supply, and links pivoted to said dampers adjacent their pivots and to said valve of said nozzle whereby said valve will be raised in gradually decreased degree as said dampers are progressively raised to increase the air supply and thus impoverish the mixture at increasing engine speeds.

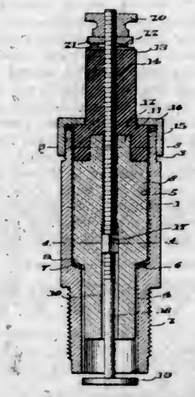
4. A carbureter, comprising a casing, an oil supply, a plurality of nozzles in communication therewith, means for leading air around said nozzles, a partition arranged horizontally in said casing consisting of oppositely directed plates, and a leaf member pivoted to each plate and normally touching each other at their outer edges and embracing one of said nozzles, a valve for each nozzle, and means for raising the valve of said embraced nozzle when said leaf members are raised, thereby increasing the supply of the fuel mixture.

5. A carbureter, comprising a casing, an oil supply, a plurality of nozzles in communication therewith, a valve for each nozzle, means for leading air around each nozzle, a partition in said casing consisting of oppositely directed plates and normally contacting plates pivoted to said first named plates and embracing one of said nozzles, means for raising the valve of said embraced nozzle when said contacting plates are raised, and means for providing a circular venturi around said embraced nozzle consisting of dependent wings of interior arcuate formation the radius of which is progressively increased downwardly, whereby a gradually increasing diameter of said venturi results as said contacting plates are raised to increase the air supply.

[Claim 6 not printed in the Gazette.]

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1,225,467. SPARK-PLUG. OSCAR C. MILLER, Philadelphia, Pa., assignor of one-half to Cyril M. Gidley, Philadelphia, Pa. Filed July 21, 1914. Serial No. 852,221. (Cl. 123—169.)

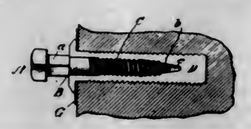


In a device of the kind described, in combination a metallic shell, having a transverse inner annular shoulder, a packing engaging said shoulder, an electrode holder disposed in said shell and having a shoulder seated on said packing, and formed with an unthreaded polygonal bore and with an elongated unthreaded opening of lesser diameter than said boss, a circular block formed terminally of said shell, a boss formed with a cavity in which said block fits, said bore having its lower portion formed of a uniform diameter with said electrode holder and its upper

portion reduced to form a shoulder, a cap threaded on said shell and pressing the shoulder of said boss to hold the boss and holder in engagement, a stem screw threaded throughout its main length and adapted to pass loosely through the bore and opening of said electrode holder but threaded into said boss, an annular disk formed at one end of said stem, a nut fitted simply in said polygonal bore, said stem being threaded into said nut, and a lock nut engaging the free end of said stem, said disk disposed outside of said shell.

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1,225,468. EXPANSION-BOLT. GEORGE F. MINNIS, Chicago, Ill. Filed Dec. 29, 1915. Serial No. 69,143. (Cl. 85—2.4.)



1. The combination with a bolt having a head, a shank having a barrel next the head of greater diameter than the remainder of the shank, which latter has a smooth barrel portion and a screw-threaded portion extending to its end, of a casing split longitudinally into halves the outer ends of which are provided with lateral flanges and the bore of which is provided with a medial screw-threaded portion, and a washer surrounding the outer flanged ends thereof.

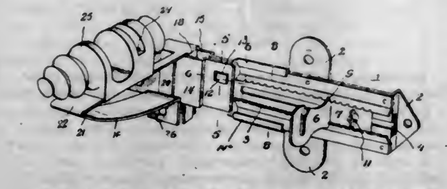
2. The combination with a bolt having a head, a shank having a barrel next the head of greater diameter than the remainder of the shank, which latter has a smooth barrel portion and a screw-threaded portion extending to its ends, of a casing split longitudinally into halves the outer ends of which are provided with lateral flanges and the bore of which is provided with a medial screw-threaded portion and a smooth tapered portion between it and its inner extremity, and a washer surrounding the outer flanged ends thereof.

3. The combination with a bolt having a head, a shank having a barrel next the head of greater diameter than the remainder of the shank, which latter has a smooth barrel portion and a screw-threaded portion extending to its ends, of a casing split longitudinally into halves the outer ends of which are provided with lateral flanges and the bore of which is provided with a medial screw-threaded portion, a smooth portion between the same and its outer end and a smooth tapered portion between said medial threaded portion and its inner extremity, and a washer surrounding the outer flanged ends thereof.

4. The combination with a bolt having a head and a screw-threaded portion extending to its end, a casing split longitudinally into halves the outer ends of which are provided with lateral flanges and the bore of which is provided with a medial screw-threaded portion, and a smooth tapered portion between it and its inner extremity.

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1,225,469. CURTAIN-BRACKET. JOHN MISTRIK, Etna, Pa. Filed Oct. 5, 1916. Serial No. 123,911. (Cl. 156—24.)



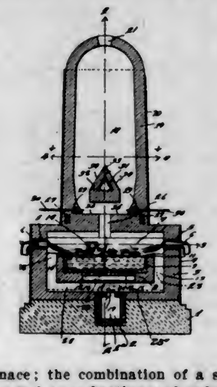
1. In a device of the class described a plate having a resilient tongue struck therefrom, a clip slidably mounted upon the plate and having an opening receiving the tongue and a curtain pole supporting a clamp adjustably supported upon the clip.

2. In a device of the class described, a plate having a resilient tongue struck therefrom, a clip slidably mounted upon the plate and having an opening receiving the tongue and a curtain pole supporting a clamp adjustably supported upon the clip, said clamp including an element mounted for movement at right angles to the movement of the clamp as a whole.

3. In a bracket of the character described, a supporting plate having an upstruck tongue, a clip having an opening receiving the tongue and further shaped to have a slot and a curtain pole supporting clamp stamped from a single sheet of metal to have limbs arranged in the slot and limbs arranged exterior of the clip and a thumb nut passing through said exterior limbs for securing the clamp in any of its adjusted positions.

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1,225,470. OIL OR GAS BURNING SMELTING-FURNACE. OLIVER P. MOORE, Spokane, Wash. Filed Aug. 2, 1916. Serial No. 112,759. (Cl. 263—15.)



1. In a furnace; the combination of a smelting or refining chamber and a preheating and reduction chamber in communication at its bottom with said refining chamber, and having a filling opening at its top axially with said opening of communication; of a wedge shaped arch extending transversely of said pre-heating chamber, adjacent the bottom portion thereof, just above the opening of communication in substantially direct line with said filling, thereby dividing the ore and deflecting same upon opposite sides of the bottom of the pre-heating chamber, said opposite sides of the bottom constituting ledges for retaining or retarding the ore in said pre-heating chamber; and means in opposite walls of the pre-heating chamber, adapted to be reciprocated at intervals, for feeding the ore through said opening of communication, into said refining chamber.

2. In a furnace; the combination of a pre-heating and reduction chamber and a smelting or refining chamber in communication at its top with said pre-heating chamber; of means, at opposite sides of the refining chamber adjacent the top, to throw flames over the surface of the bath; the lower portion of the base of the furnace having an air passage, and air flues leading from the opposite sides of the refining chamber from points just below said means and connecting with said air passage beneath the floor of the refining chamber; a discharge chamber and flue in the base of the furnace; and heat flues leading from the opposite sides of the refining chamber at points just below said means and extending under the floor of the refining chamber and communicating with the discharge chamber, the relation of said heat flues and the air flues, and the air passage, and the discharge chamber being such as to provide a draft out through the discharge, a circuit of air passing from the air flues through the heat flues, the relation between the air flues and the air passage being such as to provide a partial upward draft in the preheating chamber at a time when the discharge may be closed.

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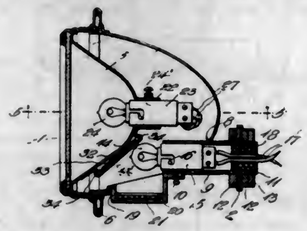


1,225,471. ANT-EXTERMINATOR. GEORGE G. MORRHEAD, San Jose, Cal. Filed Oct. 11, 1915. Serial No. 55,209. (Cl. 167—3.)

An insect exterminator, comprising a bromid of an alkaline metal, one portion, in substance sixteen portions of a syrupy vehicle containing glucose.

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1,225,472. AUTOMOBILE TAIL-LIGHT. JOSEPH A. MORIN, Springfield, Vt. Filed July 20, 1916. Serial No. 110,340. (Cl. 240—46.)



1. A tail light comprising a casing, a rearwardly facing reflector positioned in the rear end of said casing, a lamp in said reflector, a second lamp in the casing between the front end thereof and the reflector, said reflector having an opening with a colored screen across the same disposed to receive the rays from said second lamp and said casing having between its ends an opening adjacent said second lamp for illuminating a license tag.

2. A tail light comprising a cup-shaped casing having an opening adjacent its edge, an angularly disposed hood for said opening having a transparent outer end, a lamp in said casing adjacent said opening to direct its rays therethrough to illuminate a license tag, a reflector hinged to the edge of the casing and adapted to close the open rear end of the same when in position, a second lamp located in said reflector, said reflector having an opening therein disposed for receiving the rays of the first named lamp, and a colored screen across said opening and carried by the reflector.

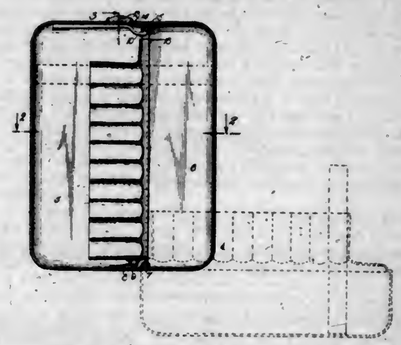
3. A tail light comprising a cup-shaped casing, a reflector hinged to the edge of said casing and adapted to cover the open rear end of the same when in position, a centrally disposed socket member in said reflector, a lamp positioned in said socket member, said reflector having an opening adjacent one side of said lamp, a colored screen extending across said opening, a second socket member in the casing in substantial alinement with the opening in the reflector, and a lamp in said last named socket member.

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1,225,473. CIGARETTE-CASE. GEORGE T. MORITZ, Brooklyn, N. Y. Filed Nov. 22, 1916. Serial No. 132,759. (Cl. 206—41.)

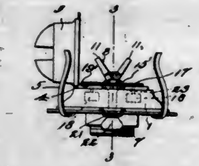
1. In a cigarette case, a hollow body having substantially parallel sides and open at one end, the hollow body being adapted to be held in the hand of a user and having a catch in position to be actuated by the said hand when holding the body, a lid hinged to the open end of the hollow body on an axis disposed transversely of the said sides of the hollow body and having means for supporting a cigarette substantially parallel with the sides and with the ends of the hollow body, connecting its sides adjacent the open end of the hollow body, the lid being adapted to be held in closed position by the catch, and a spring for throwing forward the lid with its cigarette-supporting means when the catch on the lid is actuated.

2. In a cigarette case, a hollow body having substantially parallel sides and open at one end, the hollow body being adapted to be held in the hand of a user and having a catch in position to be actuated by the said hand when holding the body, a lid hinged to the open end of the hollow body on an axis disposed transversely of the said sides of the hollow body, members secured to the lid and having a plurality of cells the axes of which are disposed substantially parallel with the sides and the ends of the hollow body connecting the sides adjacent the open end of the hollow body, the lid being adapted to be held in closed position by the catch, and a spring for throwing forward the lid with the said members when the catch on the body is actuated.



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1,225,474. LAMP-BURNER ATTACHMENT. HARRY J. MORSE, Norwich, Conn. Filed Apr. 12, 1915. Serial No. 20,885. (Cl. 67—79.)



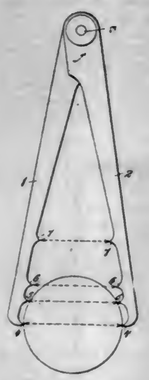
The combination with a lamp burner including a wick tube, of a sleeve carried by said wick tube, oppositely disposed lugs formed on said sleeve, jaw members pivoted on said lugs and extending upwardly and outwardly upon each side of the wick tube, a plate slidable on the wick tube, extensions formed on each end of the plate, flanges formed on the lower ends of the jaw members and resting upon the extensions, weights pivoted to the burner, and disks secured to the weights for engaging the extensions to move the jaw members in engagement with each other upon lateral movement of the weights.

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1,225,475. CALIPERS. ROY LYNN MOSSMAN, Humboldt, Tenn. Filed Aug. 9, 1916. Serial No. 113,863. (Cl. 33—149.)

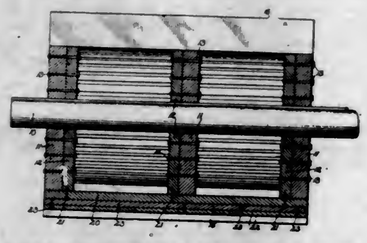
An instrument of the class described comprising hingedly connected caliper members, and a series of cusps on complementary lateral edges of the members, the cusps on one member being arranged to register with the cusps on the other, the outermost cusp of the members being so related to the other cusps that the distance between

the outermost cusps will give the diameter of a circle from which even-sided polygons of the same diagonal dimension and having diameters equal to the distances between the other registering cusps, can be obtained.



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1,225,476. BEATER-ROLL. JAMES A. MUIR, Morristown, N. J. Filed Jan. 9, 1917. Serial No. 141,381. (Cl. 92—22.)

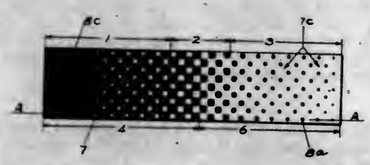


1. A beater roll, comprising a shaft provided with heads having registering dovetail grooves, beater blades having dovetail bases fitting the said grooves, wooden supports fastened to the sides of the said heads, fillet bars fitting between the blades and fastened to the said supports, and reinforcing strips fitting between adjacent blades and removably attached to the said bars.

[Claim 2 not printed in the Gazette.]

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1,225,477. PROCESS FOR PRODUCING HALF-TONE ENGRAVINGS. ARTHUR C. MURRAY, Buffalo, N. Y. Filed June 22, 1915. Serial No. 35,732. (Cl. 41—43.)



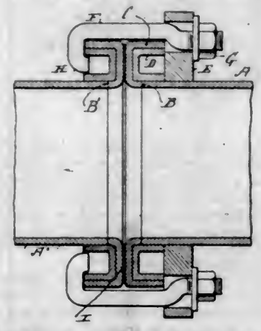
1. The improved process of making half-tone engravings, such process consisting in making a plate from a negative and giving it the first etch in the usual manner, then heating the plate and rubbing over it a block of paraffin wax, completely covering the plate and filling up all of the etched portions, then, while still hot, cleanly wiping out the wax from all the portions of said plate which are to be etched and lastly etching said plate in the usual manner.

2. In the art of producing half-tone plates, treating a plate to obtain a half-tone surface, applying to such surface a coating of paraffin or similar wax while in a heated condition, wiping such surface while still heated and removing the wax from the portion of said surface to be further etched, cooling said plate and etching the plate while thus prepared.

3. A method of producing half-tone plates, which consists in preparing a flat etched plate, heating the plate and applying a coating of paraffin or similar wax to fill up the etched surfaces, cleaning out the wax from the high lights and thinning out the wax from the middle tones while the plate is still heated, cooling said plate and applying an etching fluid in such a manner as to give a full etch to the high lights and to gradually clean out the wax in said middle tones and thereby give said middle tones a graduated etch according to their tone values.

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1,225,478. TUBE-FLANGE AND CLAMPING DEVICE THEREFOR. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 14, 1916. Serial No. 136,864. (Cl. 137—28.)



1. A tube, a channeled ring of sheet metal, the said tube being butt-welded to the edge of the inner wall of said ring, and a channeled ring of sheet metal seated in said first-named ring.

2. A tube, a channeled ring of sheet metal, the said tube being butt-welded to the edge of the inner wall of said ring, a channeled ring of sheet metal seated in said first-named ring, an annular washer of metal on said tube and having openings, bolts hooked at one end and pasaing through said openings in said washer, and means for setting up said bolts.

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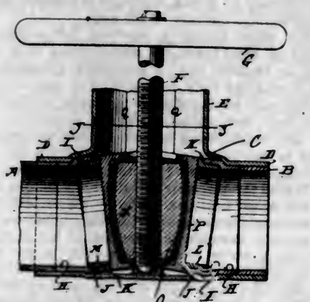
1,225,479. VALVE. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 29, 1916. Serial No. 139,504. (Cl. 137—5.)

1. A valve chamber, a tubular valve seat having ports in its wall, and a valve; the said valve comprising a stem, a core thereon, an expansible shell inclosing said core and bearing against said seat, and resilient means interposed between said core and said shell for expanding said shell to force it against said seat.

2. A valve chamber, oppositely disposed ducts communicating with said chamber, a tubular valve seat in said chamber having ports in its wall, tubular externally threaded projections on said seat surrounding said ports, a valve in said seat, means for moving said valve to open and close said ports, and internally threaded rings secured in said chamber, receiving said threaded projections and registering with the ends of said ducts.

3. A valve chamber, oppositely disposed ducts communicating with said chamber, a tubular valve seat in said chamber having ports in its wall, tubular externally threaded projections on said seat surrounding said ports, a valve in said seat, guide grooves on the inner periphery of said chamber wall, ribs on said valve entering said grooves, means for moving said valve to open and close said ports, and internally threaded rings secured in said chamber, receiving said threaded projections and registering with the ends of said ducts.





5. A valve chamber of sheet metal formed in two half sections electrically welded at their meeting edges and having oppositely disposed tubular projections for receiving the ends of ducts, a tubular valve seat of sheet metal in said chamber having oppositely disposed ports and formed in two half sections electrically welded at their meeting edges, tubular projections on said valve seat surrounding said ports and secured in said chamber projections, and a valve in said seat; the said valve comprising a solid core, a shell formed of two semi-tubular half sections on said core and bearing on said seat, and means for moving said valve to open and close said ports.

6. A valve chamber, a tubular valve seat therein in inverted frusto conical form having ports in its wall, a valve in said seat, and means for moving said valve to open and close said ports; the said valve comprising a core, a resilient casing formed of two semi-tubular half sections inclosing said core and having flanges extending above and below said core, and a shell formed of two semi-tubular half sections inclosing said casing and having flanges extending over said casing flanges.

[Claim 4 not printed in the Gazette.]

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1,225,480. HOSE-COUPLING. FRANK NICKOLAI, JULIUS E. NICKOLAI, and CARL L. NICKOLAI, De Beque, Colo. Filed June 12, 1916. Serial No. 103,219. (Cl. 137—28.)



1. The herein described coupling exteriorly smooth and free from abutments or projections and made up of two complementary members; the said members each comprising a face disposed at an obtuse angle to the longitudinal center of the member, inwardly tapered lugs arranged at right angles to and extending laterally relative to said face and having inner tapered flanges disposed at acute angles to the face, tapered recesses shaped in conformity to and adapted to receive the tapered lugs of the other member, and tapered grooves communicating with said recesses and disposed at acute angles to the face and adapted to receive the lug flanges of the other member, and a spring strip connected with the member and having a free portion adapted when the other member is moved home to spring outwardly and assume a position back of the same.

2. A hose coupling made up of two complementary members, each member having a longitudinal bore and also having a face disposed at an obtuse angle to the longitudinal center of the member, lugs tapered inwardly in the direction of their length and arranged at right angles to and extending laterally relative to said face, and endwise tapered recesses shaped in conformity to and adapted to receive the endwise-tapered lugs of the other member when the members are moved endwise inwardly into engagement with each other, and means on each member constructed and arranged to engage the other member and retain the members in interlocked relation.

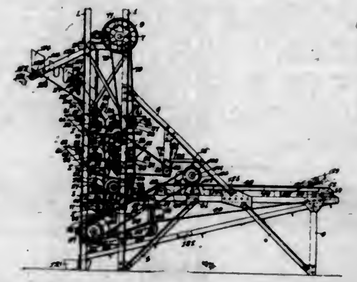
3. A hose coupling made up of two complementary members, each member having a longitudinal bore and also having a face disposed at an obtuse angle to the longitudinal center of the member, lugs tapered inwardly in the direction of their length and arranged at right angles to and extending laterally relative to said face, and endwise tapered recesses shaped in conformity to and adapted to receive the endwise-tapered lugs of the other member when the members are moved endwise inwardly into engagement with each other, and automatic resilient means on each member constructed and arranged to spring into engagement with the other member to retain the members in interlocked relation.

4. A hose coupling made up of two complementary members, each member having a longitudinal bore and a face disposed at an obtuse angle to its longitudinal center and also having endwise-tapered, hook-like means for interlocking with corresponding means on the complementary member to force the faces of the members together in opposed relation, and automatic means for detachably fastening the members in their interlocked relation.

5. A hose coupling comprising two complementary members, each member having a longitudinal bore and a face oblique to its longitudinal center and also having endwise tapered hook-like means for interlocking with corresponding means on the complementary member when the members are hooked together and then moved endwise in opposite directions.

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1,225,481. DOUGH-SHEETING MACHINE. OLE C. NUDSON and JOHAN A. NUDSON, Duluth, Minn. Filed May 4, 1915, Serial No. 25,796. Renewed Mar. 21, 1917. Serial No. 156,459. (Cl. 107—12.)



1. A dough sheeting machine comprising an upright series of opposed rollers in pairs and adapted to progressively thin the dough sheet, means for driving the rollers at speeds corresponding to the progressive thinning of the dough sheet, and means projecting across the path of the dough sheet traveling from one pair of rollers to another for supporting the dough sheet and opposing the action of gravity thereon.

2. A dough sheeting machine comprising an upright series of opposed rollers in pairs and adapted to progressively thin the dough sheet, means for driving the rollers at speeds corresponding to the progressive thinning of the dough sheet, and means in the path of the dough sheet traveling from one pair of rollers to another for supporting the dough sheet and opposing the action of gravity thereon, said last-named means comprising deflecting devices in the path of the dough sheet for divert-

ing it to opposite sides of the direct line of travel between the sets of rollers.

3. A dough sheeting machine comprising an upright series of pairs of opposed rollers, flour receptacles adjacent to the rollers and discharging beneath the rollers, each receptacle having its discharge end provided with a gauze covering, and a rotatable brush adjacent to the discharge end of each flour receptacle causing the discharge of flour and its projection against the dough sheet after having passed between the rollers above the discharge end of the flour receptacle.

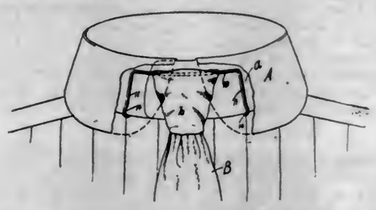
4. In a dough sheeting machine, dough thinning rollers, flour receptacles having discharge ends below the rollers with each receptacle having its discharge end covered with gauze, and a rotatable brush adjacent to the gauze and positioned with reference to a dough sheet discharged from the rollers to direct flour thereupon.

5. In a dough sheeting machine, dough thinning rollers, flour receptacles having discharge ends below the rollers with each receptacle having its discharge end covered with gauze and positioned with reference to a dough sheet discharged from the rollers to direct flour thereupon, each flour receptacle having its discharge end movable toward and from the brush for determining the quantity of flour discharged.

[Claims 6 to 20 not printed in the Gazette.]

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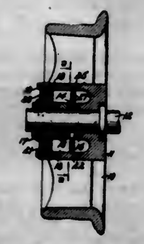
1,225,482. NECKTIE FORMER AND FASTENER. WILLIAM F. OLSON, Omaha, Nebr. Filed Dec. 31, 1915. Serial No. 69,589. (Cl. 2—84.)



As a new article of manufacture, a necktie former, and fastener, of substantially inverted U-shape, and formed of a single piece of resilient wire bent intermediate of its ends downwardly and laterally to form a curved body free from projections, then having its ends bent downwardly to form eyes with the terminals extending to within a short distance of the body and parallel with and close to the downwardly extending end portions to form therewith clamps.

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1,225,483. AXLE-LUBRICATOR. THOMAS OPIE ORGAN, Philadelphia, Pa. Filed May 26, 1916. Serial No. 99,957. (Cl. 64—26.)



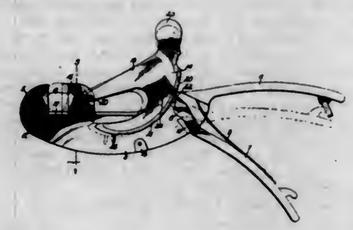
1. A wheel having an annular reservoir to contain a lubricant, a removable cap on the hub at one side, said cap and the opposite fixed side of the wheel having opposed bosses spaced to form an annular slot extending from the bore of the hub to the said reservoir, the said slot being flared inwardly, producing an enlarged annular chamber adjacent to the bore of the hub, and a pendulous ring accommodated in the annular slot and weighted at the lower end to prevent its turning, said ring having a bore to freely receive an axle, the ring at the top having an upwardly extending member terminating at the top of the reservoir to detach lubricant therefrom and permit it to gravitate to the bore of the ring.

2. In a wheel having a reservoir for receiving lubricant, and an axial bearing communicating with the reservoir by an annular slot; a pendulous lubricating device having a ring-like body formed with a bore to fit loosely on an axle and having a pendent weight in fixed relation to said body and radially outward therefrom, the ends of the said weight being tapered to offer the minimum resistance to the lubricant, said body having an upwardly projecting arm thereon at the top and extending adjacent to the top of the reservoir to collect the lubricant.

3. In a wheel having a reservoir for receiving a lubricant and formed with an axial bearing communicating with said reservoir through the medium of an annular slot; a lubricating device comprising a body in the form of a ring, having a bore to fit loosely on an axle, an arm rising from the ring at the top and terminating adjacent to the top of the reservoir to collect the lubricant from the latter as the wheel revolves, and an integral arcuate weight on the ring at the bottom and radially outward from said body, the ends of said arcuate weight being tapered to offer the minimum resistance to the lubricant.

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1,225,484. NUTCRACKER. WILLIAM JOHNSON PAYNE, Panther Burn, Miss. Filed Sept. 19, 1916. Serial No. 120,943. (Cl. 146—3.)



1. In a device of the class described, a fixed jaw, a movable jaw, a cam plate pivotally connected to the movable jaw and whereby said movable jaw can be moved to and from the fixed jaw, and operating means connected to the fixed jaw for engaging the cam plate at any position thereof and move the same through a predetermined limited distance toward the fixed jaw by a complete displacement of said operating means, substantially as and for the purpose set forth.

2. In a device of the class described, a fixed jaw, a movable jaw, a cam plate presenting an arcuated ratchet surface and having an arm in pivotal connection with the movable jaw, and means in pivotal connection with the fixed jaw for engaging said ratchet surface of the cam at any position thereof whereby a predetermined limited movement may be imparted to the movable jaw toward the fixed jaw by a complete movement of said means, substantially as and for the purpose set forth.

3. In a device of the class described, a fixed jaw, a movable jaw, a cam plate presenting an arcuated ratchet surface having an arm in pivotal connection with the movable jaw, and a first-class lever mounted on the fixed jaw and having means for engaging the ratchet surface of the cam and whereby a limited displacement may be imparted to the movable jaw toward the fixed jaw.

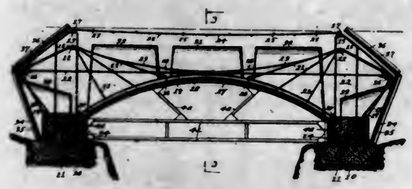
4. In a device of the class described, a fixed jaw, a movable jaw, a cam plate presenting an arcuated ratchet surface and pivotally connected to the movable jaw, and a first-class lever on the fixed jaw for engaging the ratchet surface at any position of the movable jaw to impart a limited displacement to said movable jaw toward the fixed jaw.

5. In a device of the class described, a body portion presenting a fixed jaw, a jaw movable on the body to and from the fixed jaw, a cam plate pivoted to said movable jaw to swing in the body, a lever of the first class pivoted to the body to move into the path of the cam plate, said cam plate presenting an arcuated ratchet surface to the lever to be engaged thereby and whereby a limited movement may be imparted to the movable jaw toward the fixed jaw by said lever, the arcuated ratchet surface of said cam being so formed that the displacement imparted to the movable jaw by the lever is substantially constant at any position of the movable jaw relative to the fixed jaw.



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1,225,485. CONCRETE BRIDGE CONSTRUCTION. HOWARD LEONZO PEGRAM, Mulvane, Kans. Filed July 9, 1915. Serial No. 38,878. (Cl. 72—56.)



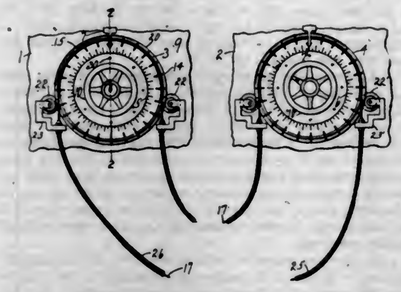
1. In a bridge, a plurality of truss elements comprising, each, an upper hammocked set of rods, a horizontal set of rods, a lower arched set of rods, means for tying the same together at the center of the bridge, means for anchoring the ends thereof, and a concrete inclosure therefor.

2. In a bridge, a plurality of piers at each bridge end, vertically arranged yokes secured to the respective piers, bars carried by said yokes, and a plurality of truss elements comprising, each, an upper hammocked set of rods, a horizontal set of rods, and a lower arched set of rods carried by said bars, and a concrete inclosure therefor.

3. In a bridge, a plurality of piers at each bridge end, vertically arranged yokes secured to the respective piers, bars carried by said yokes, a set of upper hammocked rods over each pair of piers, a set of horizontal rods thereover, a set of arched rods thereover, said rods being carried by said bars, stays from certain of said bars to said arched rods, and a concrete inclosure therefor.

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1,225,486. MEANS FOR TRANSMITTING ANGULAR MOVEMENTS. SOPHUS PETERSEN, Brooklyn, N. Y., assignor to Sperry Gyroscope Company, Brooklyn, N. Y., a Corporation of New York. Filed Sept. 17, 1915. Serial No. 51,188. (Cl. 64—40.)



1. A rope grip device comprising resilient members adapted to grip a rope therebetween and a wedge positioned adjacent the point where the rope engages or leaves said members for spreading said members.

2. The combination with a rope grip pulley, of a wedge-shaped roller positioned adjacent the point where the rope leaves or engages the pulley for releasing the grip of the pulley on the rope.

3. A rope grip pulley comprising resilient members adapted to grip a rope therebetween, a wedge-shaped roller mounted adjacent the point where the rope engages or leaves said members adapted to hold said members in an open position at said point, as the pulley is rotated.

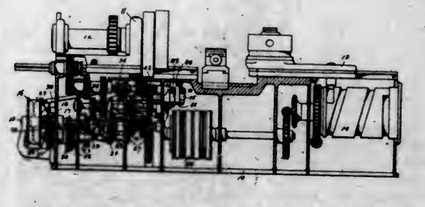
4. A rope grip pulley comprising a plurality of sheet metal disks at least one of said disks having a flared periphery provided with a plurality of slits and an annular depression, the disks being secured together so that the annular depression forms gripping jaws for the rope.

5. A rope grip pulley comprising a pair of sheet metal disks each of said disks having a flared periphery provided with a plurality of slits and an annular depression, the disks being secured together so that the annular depressions form gripping jaws for the rope.

[Claims 6 to 11 not printed in the Gazette.]

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1,225,487. GEARING FOR TURRET-LATHES AND OTHER MECHANISM. JAMES C. POTTER, Pawtucket, R. I. Filed Apr. 3, 1913. Serial No. 758,691. (Cl. 74—58.)



1. In a gear changing mechanism for lathes, the combination of a driving shaft, a spindle, a plurality of gear trains between the shaft and the spindle, and means for changing from one gear train to another, comprising a constantly revolving shaft, a clutch operating shaft, a positive gear connection between the constantly revolving shaft and the clutch operating shaft, and automatic means to render said positive gear connection operative or inoperative at predetermined times.

2. In a gear changing mechanism for lathes, the combination of a driving shaft, a spindle, a plurality of gear trains between the shaft and the spindle, and means for changing from one gear train to another, comprising a constantly revolving shaft, a clutch operating shaft, a positive gear connection between the constantly revolving shaft and the clutch operating shaft, a clutch for said positive gear connection having a slotted flange and a stationary flange-engaging lug, that fixes the duration of the clutching engagement.

3. In a gear changing mechanism for lathes, the combination of a driving shaft, a spindle, a plurality of gear trains between the shaft and the spindle, and means for changing from one gear train to another, comprising a constantly revolving shaft, a pair of clutch operating shafts, a positive gear connection between the constantly revolving shaft and the two clutch operating shafts, and automatic means to render said positive gear connection operative or inoperative at predetermined times.

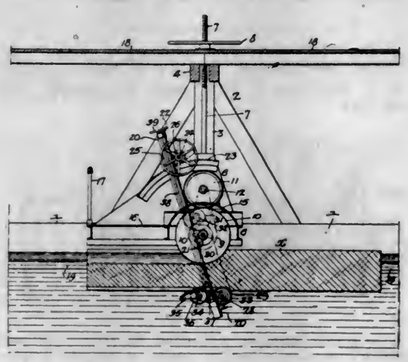
4. In a gear changing mechanism for lathes, the combination of a driving shaft, a spindle, a plurality of gear trains between the shaft and the spindle, and means for changing from one gear train to another, comprising a constantly revolving shaft, a clutch operating shaft, a positive gear connection between the constantly revolving shaft and the clutch operating shaft, including a clutch member slidably mounted on said clutch-operating shaft, automatic means for moving said clutch member in each direction, and automatic means that fix the duration of the clutch engagement of said clutch member.

5. In a gear changing mechanism for lathes, the combination of a driving shaft, a spindle, a plurality of gear trains between the shaft and the spindle, and means for changing from one gear train to another, comprising a constantly revolving shaft, a clutch operating shaft a positive gear connection between the constantly revolving shaft and the clutch operating shaft, including a clutch member slidably mounted on said clutch-operating shaft, automatic means for moving said clutch member in each direction, and automatic means that fix the duration of the clutch engagement of said clutch member, comprising a notched flange and a lug coöperating with the flange.

[Claims 6 to 16 not printed in the Gazette.]

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1,225,488. ICE-SAWING MACHINE. HOWELL D. PRATT, Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 24, 1914. Serial No. 863,351. (Cl. 125—14.)



1. The combination in apparatus for sawing ice, of a channel having water therein and through which the ice has to be passed; a fixed frame spanning the channel; a vertically adjustable saw frame mounted on the fixed frame and extending under the surface of the water in the channel; a gang of saws on the saw frame; means for driving said saws, said saws being so arranged as to cut a series of kerfs in the bottom of a block of ice as it passes through the channel; and means for vertically adjusting the frame so as to regulate the position of the saws in respect to the under side of a block of ice.

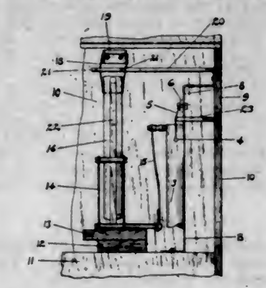
5. The combination of a channel having water therein; a main saw frame; a saw spindle vertically adjustable thereon; a series of saws mounted on the spindle; means for driving the spindle; a supplemental frame pivotally mounted on the main saw frame; a segment on the main saw frame of the apparatus; a hand shaft having pinions meshing with the segment; a saw spindle on the lower end of the supplemental frame below the surface of the water in the channel; a series of saws on the saw spindle for cutting a kerf in the under side of a block of ice; a shaft having a retarder consisting of a toothed cam; a shaft carried by the supplemental frame and geared to the shaft carrying the retarder so that on turning the first mentioned shaft the retarder will be moved toward or from the under side of a block of ice.

[Claims 2 to 4 not printed in the Gazette.]

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1,225,489. TUBULAR CHIME-CLOCK. JAMES R. PUTNAM, Waterbury, Conn., assignor to Waterbury Clock Co., Waterbury, Conn., a Corporation. Filed Aug. 30, 1916. Serial No. 117,646. (Cl. 58—13.)

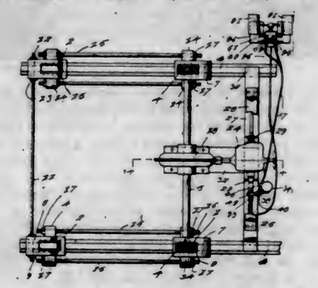
In a tubular chime clock, the combination with a tube suspended by a cord, of a sounding-board, a chime-bridge interposed between the said sounding-board and cord in such manner as to place the cord under tension in the direction of the sounding-board against which the said



chime-bridge is thus pressed by the weight of the tube, and a hammer for striking the tube.

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1,225,490. LOCOMOTIVE-VALVE-SETTING MACHINE. CHARLES D. RAFFERTY, Middleport, Ohio. Filed Sept. 6, 1916. Serial No. 118,733. (Cl. 105—17.)



1. A locomotive valve setting machine including spaced front and rear rotary elements arranged to engage and support the driving wheels of a locomotive, a transverse shaft connecting the front rotary element, a worm wheel mounted on the transverse shaft, a worm meshing with the worm wheel and a pneumatic motor connected with the worm for rotating the same.

2. A locomotive valve setting machine including spaced front and rear rotary elements arranged to engage and support the driving wheels of a locomotive, a transverse shaft connecting the front rotary element, a gear case, a worm wheel mounted on the transverse shaft and located within the gear case, a longitudinal shaft journaled in the gear case and having a worm meshing with the worm wheel, a motor having a shaft connected with the longitudinal shaft and bracing means connecting the gear case with the motor.

3. A locomotive valve setting machine including front and rear rotary elements arranged in pairs, a transverse shaft connected with one pair of the rotary elements, the latter being adapted to support the driving wheels of a locomotive, a gear case having bearings receiving the transverse shaft, a transversely disposed supporting frame arranged in spaced relation with the transverse shaft and having rail engaging means, a motor mounted on the transverse frame and connected with the transverse shaft and means for rigidly connecting the gear case with the transverse frame.

4. A locomotive valve setting machine including bearing blocks arranged in pairs and designed to be arranged upon the rails of a track, means for connecting the bearing blocks, rotary elements arranged in pairs and carried by the bearing blocks, a transverse shaft connecting one pair of the rotary elements, a gear case having bearings receiving the transverse shaft, a transverse frame arranged in spaced relation with the transverse shaft and provided with rail engaging means, a motor mounted on the transverse frame, and gearing connecting the motor with the transverse shaft.

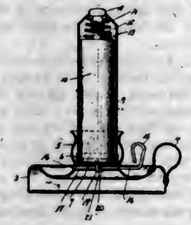
5. A locomotive valve setting machine including bearing blocks arranged in pairs and designed to be arranged upon the rails of a track, means for connecting the bearing blocks, rotary elements arranged in pairs and carried by the bearing blocks, a transverse shaft connecting one pair of the rotary elements, a gear case having bearings receiving the transverse shaft, a transverse frame provided with rail engaging means, a motor mounted on the transverse frame, rigid bracing means connecting the gear case with the transverse frame, and gearing located within the gear case and connecting the transverse shaft with the motor.

[Claims 6 to 24 not printed in the Gazette.]



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1,225,491. PORTABLE ELECTRIC LAMP. ADOLPH C. RECKER, Oakville, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed Nov. 8, 1916. Serial No. 130,131. (Cl. 240—8.5.)

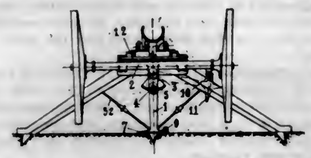


3. In a portable electric lamp, the combination with a candlestick comprising a base, a handle therefor, a socket, and a threaded cup located within the socket, of a tubular battery-casing having its lower end threaded for being screwed into the threaded portion of the said cup, an electric lamp located in the upper end of the said casing, a vertically movable battery located within the said casing, and a rocking battery-lifter interposed between the said base and the bottom of the said socket, and provided with a lifting-member arranged to engage with the lower end of the battery for lifting the same to light the lamp, and for sustaining it in its elevated position.

[Claims 1 and 2 not printed in the Gazette.]

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1,225,492. GUN-CARRIAGE FOR ORDNANCE. EMILE RIMAILHO, Paris, France, assignor to Compagnie Des Forges Et Acieries De La Marine Et D'Homecourt, Paris, France. Filed May 5, 1915. Serial No. 25,968. (Cl. 89—40.)



1. A gun carriage, and means for supporting the gun carriage at three points of contact independent of the wheels, the said means comprising trail members diverging toward the rear, the ends of the trail members forming two of the points of contact, and a strut placed underneath the axle, the end of the strut forming the other point of contact with the ground.

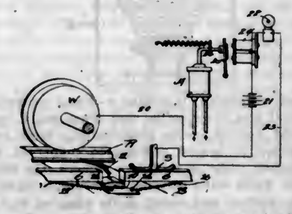
7. In a gun carriage, the combination with the wheels and axle, of means for supporting the gun carriage independent of the wheels, and comprising trail members diverging rearwardly and adapted to engage the ground, a strut arranged between the wheels and extending centrally below the axle, the said strut being of such length that when in a supporting position on the ground the wheels of the gun carriage are raised above the ground, the strut being mounted to be swung transversely and also adapted to be moved in a forward and rearward direction, and means for locking the strut in the desired position.

11. In a gun carriage adapted to be dismantled, the combination with the wheels and axle of the gun carriage, the gun carriage being removably supported on the axle, and means for supporting the axle and gun carriage independently of the wheels, of a safety device comprising a lock mounted to oscillate on the gun carriage, and adapted to engage the axle to lock the same to the gun carriage, and means for holding the said lock in locked position.

[Claims 2 to 6, 8 to 10, and 12 not printed in the Gazette.]

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1,225,493. RAILWAY SIGNALING SYSTEM. ALPHONSE RIOUX, Nashua, N. H., assignor of one-half to Joseph Richard, Nashua, N. H. Filed June 2, 1916. Serial No. 101,373. (Cl. 246—58.)



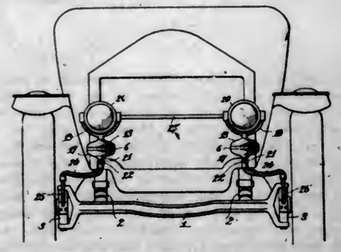
1. A conductor for railway systems made in sections spaced apart from each other at their ends, a contact block in such space connected with a main rail, supports in which the sections are slidably mounted, and means for automatically moving the parts of a broken section into contact with said block, for the purpose set forth.

6. In a railway signaling system, the combination with the main rails, a third rail made in sections and normally out of electrical contact with said main rails, and means for throwing the parts of any broken section into electrical connection with said rails; of a source of electric energy, means traveling on said rails to make electrical contact therewith, conductors connected to said means and said source to make a complete circuit when contact is completed by a broken third rail, and a signal device connected within the circuit elements to be energized thereby.

[Claims 2 to 5 not printed in the Gazette.]

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1,225,494. AUTOMATIC HEADLIGHT CONTROL. ROBERT S. RISDON, San Francisco, Cal., assignor of one-half to Mary Lawson, San Francisco, Cal. Filed Sept. 24, 1915. Serial No. 52,423. (Cl. 240—62.)

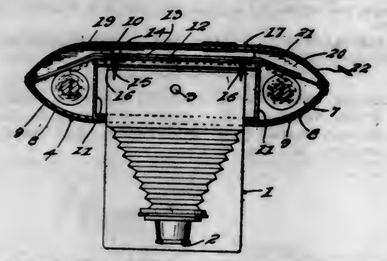


The combination with a vehicle frame and steering axles therefor, of mounting brackets secured to opposite sides of the frame and each embodying a fixed ring having bev-

eled and outwardly sloping top and bottom bearing faces, bearing plates detachably mounted in said brackets, lamp-supporting shafts extending through said bearing plates, operating connections between said shafts and the steering axles, and bearing collars arranged above and below said bearing plates and rings, surrounding said shafts, and provided with outwardly sloping beveled bearing faces corresponding and coöperating with the beveled faces of the fixed rings.

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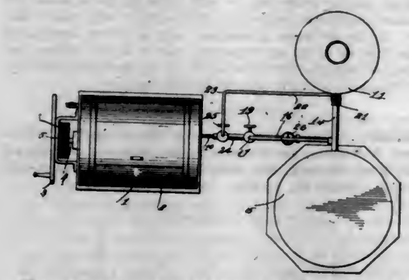
1,225,495. CAMERA ATTACHMENT. WILLIAM P. ROBINETT and JAMES A. GULLEDGE, Malden, Mo. Filed Jan. 12, 1915. Serial No. 1,852. (Cl. 95—32.)



A camera attachment including a casing comprising top, bottom, front and inner walls, said inner walls connecting the top and bottom walls intermediate their ends and being arranged in spaced relation to coöperate with the top and bottom walls to receive a camera, the outer ends of the front walls being directed inwardly, a mask secured to the top, bottom and inner walls adapted to engage a camera back and having an exposure opening therein, means to secure said mask to a camera back, and a cover removably secured to said casing, said cover including top and bottom walls engaged with the top and bottom walls of the casing, and a rear wall having inwardly turned edges snugly fitting against the inwardly turned edges of the front walls.

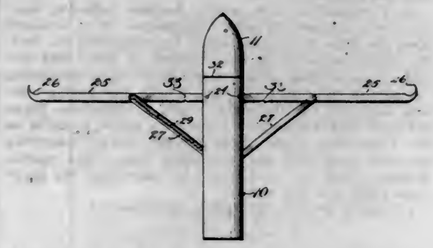
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1,225,496. DETERGENT DEVICE. OLINTHUS B. ROBINSON, Denton, Tex. Filed May 7, 1914. Serial No. 837,010. (Cl. 137—78.)



The combination with a washing machine of an intake pipe connection from the bottom of the shell thereof, a cold water feed tank, a hot water tank, a first pipe leading from said cold water tank to the top of said hot water tank, a valve in said pipe, a second pipe leading from the lower portion of said hot water tank to said intake pipe connection, controlling means for the flow through said second pipe, a third pipe communicating with said first pipe at a point in advance of said valve and leading to said intake pipe connection, means for controlling the flow through said third pipe, a fourth pipe communicating with said first pipe at a point beyond said valve and leading to said intake pipe connection, and a valve in said fourth pipe.

1,225,497. ANTI-AIRCRAFT BOMB OR SHELL. NIKOLAJ F. RODZIKEVITCH, Farrell, Pa. Filed Nov. 27, 1916. Serial No. 133,647. (Cl. 102—29.)

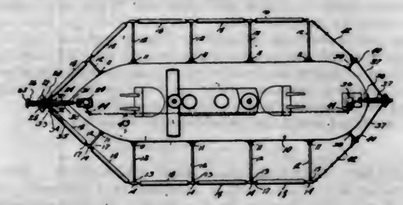


1. A bomb of the class described having longitudinal channels in its sides, tearing arms having their rear ends pivoted in the channels, braces having their front ends pivoted to the arms and their rear ends slidably mounted in the channels, and springs connecting the free portions of said arms and the body of the bomb adjacent the rear ends of the channels.

2. A bomb of the class described having longitudinal channels in its sides, tearing arms having their rear ends pivoted in the channels, braces having their front ends pivoted to the arms and their rear ends slidably mounted in the channels, springs connecting the free portions of said arms and the body of the bomb adjacent the rear ends of the channels, said arms and the body of the bomb being provided with grooves alining when the arms are folded, and a cartridge casing partly enveloping the bomb and arms and having its mouth crimped into said grooves.

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1,225,498. TORPEDO-GUARD FOR WAR-SHIPS. NIKOLAJ F. RODZIKEVITCH, Farrell, Pa. Filed Dec. 1, 1916. Serial No. 134,446. (Cl. 114—240.)



1. The combination with a ship; of a series of pontoons, a series of swinging booms pivoted to the ships, vertical guides supported by the free ends of said booms, connected nets supported from said pontoons, and universally jointed connections between said guides and the ends of said pontoons.

2. The combination with a ship; of a series of pontoons, a series of swinging booms pivoted to the ships, vertical guides supported by the free end of said booms, connected nets supported from said pontoons, and universally and telescopically jointed connection between said guides and the ends of said pontoons.

3. The combination with a ship; of a series of pontoons, a series of swinging booms pivoted to the ships, vertical guides supported by the free ends of said booms, connected nets supported from said pontoons, balls slidably mounted in said guides, and stems on said balls connected to the ends of said pontoons and universally jointed connections between said guides and the ends of said pontoons.

4. The combination with a ship, of a series of pontoons, a series of swinging booms pivoted to the ships, vertical guides supported by the free ends of said booms, connected nets supported from said pontoons, balls slidably mounted in said guides, and stems on said balls telescopically connected to the ends of said pontoons.

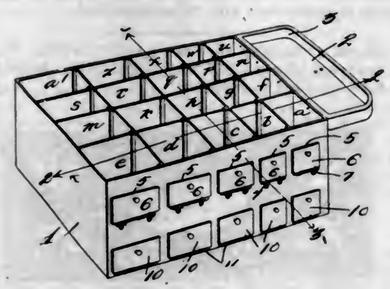
5. The combination with a ship; of a series of pontoons, a series of swinging booms pivoted to the ships, vertical guides supported by the free ends of said booms, connected nets supported from said pontoons, balls slidably mounted in said guides, stem on said balls connected to the ends of said pontoons and universally jointed connections between said guides and the ends of said pontoons, and tubes extending through the pontoons and receiving said stems.

[Claims 6 to 10 not printed in the Gazette.]



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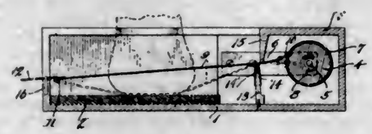
1,225,499. MAIL-ASSORTING DEVICE. LOUIS ROSENBERG, Richmond, Va. Filed July 20, 1915. Serial No. 40,867. (Cl. 211—36.)



An apparatus in which package mail matter may be assorted, comprising a frame rectangular in plan, side and end views, said frame having a plurality of compartments arranged in four parallel rows, each compartment terminating in a correspondingly shaped inlet opening flush with the upper surface of the frame, said compartments being arranged in two outside rows adjacent the sides of the frame, and two intermediate rows, the walls of the compartments of the outside rows being fixed, the intermediate compartments being L-shaped and extending in lateral opposite directions and under the compartments of the outside rows, the wall between the two intermediate rows of compartments branching into forks in cross section extending laterally in opposite directions forming the bottoms of said intermediate compartments, said intermediate and outside rows of compartments terminating in outlet openings formed in the opposite sides of the frame, whereby access may be had to said compartments, and a closure for each of said outlet openings.

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1,225,500. DEVICE FOR TAKING FOOT IMPRESSIONS. GILBERT G. ROSINO, Sandusky, Ohio. Filed Mar. 28, 1916. Serial No. 87,238. (Cl. 11—23.)



1. A device for taking foot impressions comprising a base of suitable size to receive a foot, a rolled inking member normally disposed adjacent to the base in inoperative position and adapted to be unwound for disposition adjacent to the base aforesaid to receive the foot in the taking of an impression thereon, means for temporarily holding the inking member in the operative position over the base and spaced therefrom whereby only such portions of the under surface as are depressed by the foot will contact with the base, and means for inking the surface of the inking member upon the side thereof adapted to contact with the base when in the operative position aforesaid, the other side of the inking member being impervious.

2. A device for taking foot impressions comprising a base of suitable size to receive a foot, a rolled inking member normally disposed adjacent to the base in inoperative position and adapted to be unwound for disposition adjacent to the base aforesaid to receive the foot in the taking of an impression thereon, means for temporarily holding the inking member in the operative position over the base and spaced therefrom whereby only such portions of the under surface as are depressed by the foot will contact with the base, means for inking the surface of the inking member upon the side thereof adapted to contact with the base when in the operative position aforesaid, the other side of the inking member being impervious, and means for withdrawing the inking member into inoperative position upon release from the holding means whereby to render the impression made upon the base accessible.

3. A device for taking foot impressions comprising a base of suitable size to receive a foot, an inking device for making an impression on the base consisting of a flexible member a support therefor comprising an ink supplying element with which the operative surface of the flexible member contacts normally to receive a coating of ink from the support, manipulative means for moving the flexible member into operative position over the base and into impression taking relation with respect thereto, and means for holding one end of the flexible member normally spaced from the base when in the operative position, said support being arranged to hold the other end of said member likewise spaced from the base whereby only such portions of the under surface as are depressed by the foot will contact with said base.

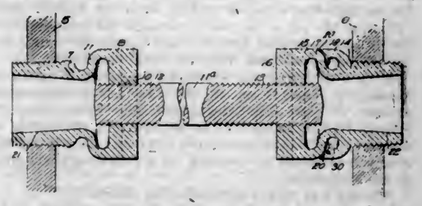
4. In combination, a spring actuated inking member, an ink supplying roll about which the inking member is adapted to be wound to ink a surface of the same contacting with the roll, and guide means coacting with said surface to hold the inking member in elevated position and constituting ink distributing means for said inking member.

5. In combination, a foot receiving receptacle for taking foot impressions, an impervious ink carrying member mounted at one end of the receptacle and movable into position over the base of said receptacle, and revoluble supporting means for said carrying member for inking the under surface thereof.

[Claims 6 to 13 not printed in the Gazette.]

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1,225,501. FLEXIBLE SLEEVE FOR STAY-BOLTS. ANTON G. RUBER and CLARENCE H. PORTER, Albany, N. Y. Filed Sept. 17, 1915. Serial No. 51,146. (Cl. 85—1.5.)



1. A flexible sleeve for stay bolts, provided at one end with means for securing it to a boiler wall and at the other end with a head adapted to receive a wrench and having a threaded opening, a flexible web adjacent the head and an annular passage adjacent the web for increasing the flexibility of said web.

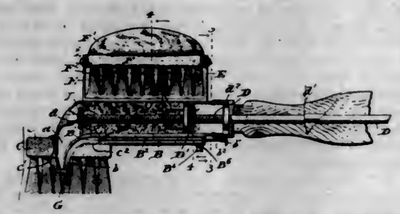
2. A flexible sleeve for stay bolts, provided with a head having a threaded opening, a flexible web extending from the head, an annular enlargement adjacent the web, an annular passage in the enlargement, and a slot leading from the passage out through the enlargement and sepa-

rating the enlargement from the web, whereby the resiliency of the web is increased and the enlargement made to serve as a limiting stop.

[Claims 3 and 4 not printed in the Gazette.]

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1,225,502. SHOE-CLEANER. JOSEPH RUSSEL, St. Louis, Mo. Filed May 3, 1912. Serial No. 695,003. (Cl. 15—46.)



1. In a device of the character described, a polish distributing member, a paste receptacle and a liquid polish container provided with outlets terminating adjacent said polish distributing member, and independent means for controlling the discharge of material from said containers through the outlets thereof.

2. In a device of the character described, a paste receptacle provided with a downwardly turned outlet portion, a liquid container secured alongside of said paste receptacle and provided with a downwardly turned outlet portion, a polish distributing member apertured to receive the downwardly turned portions of the paste receptacle and liquid container, a handle for the device, and independent means for controlling the discharge of material from the paste receptacle and liquid container.

3. In a device of the character described, a paste receptacle provided with a downwardly turned outlet portion, a liquid container extending along the underside of said paste receptacle and provided with a downwardly turned outlet portion lying alongside the downwardly turned outlet portion of the paste receptacle, a polish distributing member apertured to receive the downwardly turned portions of the paste and liquid containers, a handle for the device, and independent means for controlling the discharge of material from the paste receptacle and liquid container.

4. In a device of the character described, a paste receptacle provided with a discharge outlet, a liquid container secured to said paste receptacle and provided with a discharge outlet, a shaft rotatably supported in said paste receptacle and projecting without the same, a handle secured to the projecting portion of said shaft, means acting upon the rotation of said shaft for feeding material from the paste receptacle through the outlet thereof, and means positioned adjacent said handle for controlling the discharge of liquid from the liquid container.

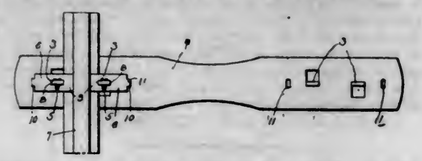
5. In a device of the character described, a polish receptacle provided with an outlet, a polish distributing member at said outlet, in combination with means for forcing the discharge of the polish from the polish receptacle, and means associated with said last mentioned means for cutting or breaking up a polishing paste within the receptacle.

[Claims 6 to 10 not printed in the Gazette.]

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1,225,503. RAILROAD CROSS-TIE. EDMOND A. SALTER, Provencial, La., assignor of one-half to Eugene H. Holder, Cypress, La. Filed Dec. 20, 1916. Serial No. 137,983. (Cl. 238—5.)

The combination of a cross tie provided with integral upwardly extending lugs spaced apart a distance equal to the bottom flanges of a rail and adapted to fit against the side edges of the same to form stops for the said rail, said lugs being provided with openings and the said cross tie having transverse slots spaced from the lugs, clamping plates provided between their ends with slots to receive the said lugs and having engaging terminal portions at one end and provided at the other end with reduced



depending tongues extending through the transverse slots of the cross tie and fastening devices arranged in the openings of the said lugs and retaining the clamping plates in engagement with the adjacent rail.

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1,225,504. PROCESS OF DECORATING WOOD. PAUL SCHRAMM, Chicago, Ill. Filed Aug. 2, 1915. Serial No. 43,307. (Cl. 41—29.)

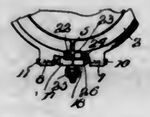


1. A process of imitating inlaid wood which comprises (a) printing designs upon the wooden article, said designs representing closed figures, (b) treating inside of the outline of said figures with a water-soluble repellent resist; (c) treating outside of said lines with a material to which paint will adhere, (d) passing a paint roller over the entire surface, whereby, the portion of the surface outside the said lines becomes coated with the paint, (e) and drying the painted surface.

2. In the described process of producing imitation inlaid wood which comprises (1st) producing an entirely smooth surface to the wooden article, (2nd) bleaching said surface, (3rd) printing upon the smooth bleached surface an outline representing the outer edges of the inlay, (4th) treating the surfaces inside of said outlines with dextrin, and treating the surface outside said outline with shellac, (5th) passing a paint roller over the entire surface, whereby the paint adheres to the portion of the wood treated with shellac and not to the portion treated with dextrin, (6th) drying the painted surface and (7th) varnishing the entire surface.

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1,225,505. SOUND-BOX. LOUIS K. SCOTFORD, Chicago, Ill. Filed May 9, 1916. Serial No. 96,343. (Cl. 274—35.)



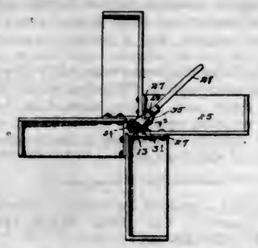
1. In a sound box, the combination of a box proper, and a stylus bar pivotally supported thereby, the box being split and having its ends adjustable toward each other, substantially as described.

5. In a sound box, the combination of a box proper having lugs projecting therefrom, a stylus bar having its arbor supported between said lugs, said box being split and having lugs projecting therefrom on opposite sides of said "split", and a screw for adjustably securing said last named lugs together, substantially as described.

[Claims 2 to 4 not printed in the Gazette.]



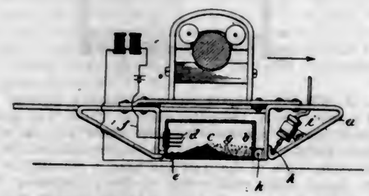
1,225,506. CIRCLE-SWING. LUTHER SCOTT, Garden Grove, Iowa, assignor of one-half to May Conner, Garden Grove, Iowa. Filed Oct. 23, 1916. Serial No. 127,261. (Cl. 46—27.)



A circle swing comprising an upright support, a plurality of seats mounted for rotation on said support, means for adjustably supporting said seats at different heights on said support, said upright having a vertically elongated slot, a ratchet on said upright, having a lug projecting into said slot, a handle rotatably mounted on said support, said ratchet being operatively mounted with relation to said handle, and a pawl pivoted to said handle and designed to coact with said ratchet.

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1,225,507. MAGNETIC CIRCUIT-CLOSER FOR TRAIN-STOPS AND SIGNALS. HIRAM G. SEDGWICK, Mill Valley, Cal., assignor to The National Safety Appliance Company, a Corporation of California. Filed Nov. 22, 1912, Serial No. 732,984. Renewed Oct. 9, 1916. Serial No. 124,682. (Cl. 246—25.)



1. In combination with a road bed magnet, and a railway vehicle, of a receptacle mounted on the vehicle and having a space at its front end, an armature in said space consisting of a mass of loose magnetic material, said receptacle having at its rear a pair of separated contacts which are adapted to be connected by said mass when the same is moved rearwardly by passage over the magnet on the road bed.

2. In a circuit closed of the class set forth, the combination of a magnet on the roadbed, a railway vehicle, a support adapted to be attached thereto, a receptacle attached to the support in such position as to pass through the magnetic field of the magnet, electrical contacts within the receptacle, and a mass of loose comminuted magnetic material confined in said receptacle and adapted to be moved in a direction opposite to the direction of movement of the vehicle to close the circuit between said contacts.

3. In a circuit closer for the purpose set forth, a railway vehicle carrying a receptacle, electrical contacts extending thereinto, and a mass of loose magnetic material adapted to close the circuit between said contacts, and a magnet on the road bed for shifting said magnetic material in a direction opposite to the direction of movement of the vehicle into contact with said contacts, said receptacle being so located on the vehicle as to pass through the magnetic field of the magnet.

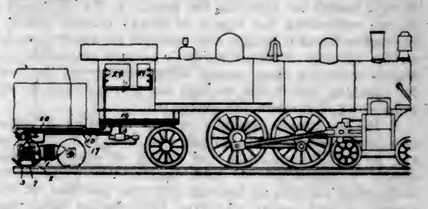
4. A circuit closer consisting of a receptacle and means supporting it on a railway vehicle, electrical contacts at the rear end of the receptacle, and a circuit-closing armature consisting of electrical-conductive magnetic material confined loosely within the receptacle.

5. In combination with a road bed magnet and a railway vehicle, of a receptacle mounted on the vehicle in such position as to pass through the field of the magnet, electrical contacts at the rear end of the receptacle and a train-control circuit connected thereto, and an electrically-conductive armature freely movable in said receptacle, the bottom of the receptacle being shaped so as to hold the armature normally at the forward end of the receptacle, whereby upon passage of the receptacle through the field of the magnet the armature will be thrown backwardly against the contacts.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,508. TRAIN-STOP AND SIGNALING SYSTEM. HIRAM G. SEDGWICK, Mill Valley, Cal., assignor to The National Safety Appliance Company, a Corporation of California. Filed Nov. 23, 1912, Serial No. 733,162. Renewed Oct. 9, 1916. Serial No. 124,683. (Cl. 246—25.)



1. In combination with a railway vehicle, two sets of armatures carried thereby, one set being arranged at each side of the center of the vehicle, two groups of train control devices, means operated by one set of armatures while the train is going in one direction to actuate the devices of one group and means operated by the other set when the train is going in the opposite direction to actuate the devices of the other group and means to operate each armature independently of all the other armatures.

2. In combination with a railway vehicle, train control devices thereon embodying a non magnetic armature box having its lower side open, an armature and means for normally drawing it upwardly and forwardly into the box, a positive abutment being provided at the rear end of the armature for preventing it actuating the train control devices while in normal position, and means whereby the armature will actuate the train control devices when it is drawn downwardly and rearwardly out of abutting relation.

3. In combination with a railway vehicle, train control devices thereon, an armature box horizontally supported, a series of separated horizontal bars in said box, a series of bar armatures flanged at their lower edges and having their web portions extending up between said bars, springs for normally drawing these armatures upwardly, and means whereby when each armature is pulled downwardly against the action of its spring it will cause an independent actuation of one of the train control devices.

4. In combination with a railway vehicle, two sets of visual signals, one set being mounted forward of the engineer's usual position in the vehicle and the other set being located at the rear thereof, and constantly operable means for actuating the forward set when the vehicle is moving forwardly and the rear set when the vehicle is moving rearwardly said means embodying devices whereby each set operates wholly independent of the devices for actuating the other set.

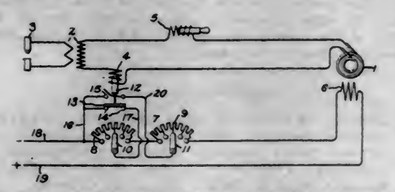
5. In combination with a railway vehicle, two sets of visual signals, one set being in front of the engineer's position and the other set being at the rear thereof, and means on the vehicle adapted to coöperate with road

bed devices whereby either set of signals will be actuated according to the direction of movement of the vehicle, said means being constantly operable.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,509. ELECTRIC WELDING. JOHN A. SEEDS, Niskayuna, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 9, 1914. Serial No. 811,121. (Cl. 219—4.)



1. In an electric welding system including a source of energy, means for applying the energy to the work and a circuit controlling the supply of energy to said means, a resistance for said circuit, two contacts for completing the circuit through different portions of said resistance and means operative upon energy being supplied to the work for breaking the circuit through one of said contacts and completing it through the other.

2. In an electric welding system including a source of energy, means for applying the energy to the work and a circuit controlling the supply of energy to said means, a resistance for said circuit, two contacts for completing the circuit through different portions of said resistance and means operative upon energy being supplied to the work for completing the circuit through one of said contacts, the circuit prior to the operation of said means being completed through the other of said contacts.

3. In an electric welding system including a source of energy, means for applying an electrical welding current to the work, a separate circuit controlling the supply of energy to said means, an adjustable resistance completing said separate circuit, and means operative upon energy being supplied to the work for removing an adjustable portion of said resistance from said circuit.

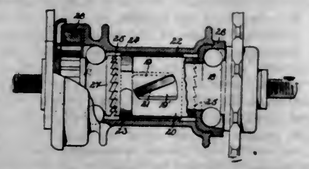
4. In an electric welding system including a generator, a resistance, the field winding circuit being completed through an adjustable portion thereof, and means operative upon energy being supplied to the work for completing the circuit through another adjustable portion thereof.

5. In an electric welding system including a generator, an adjustable resistance for the field winding circuit of the generator and means operative upon energy being supplied to the work for removing all but an adjustable portion of said resistance from the field circuit.

[Claim 6 not printed in the Gazette.]

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1,225,510. MECHANICAL MOVEMENT. ROLF F. SEGERBERG, New Britain, Conn. Filed Dec. 22, 1916. Serial No. 138,400. (Cl. 208—57.)



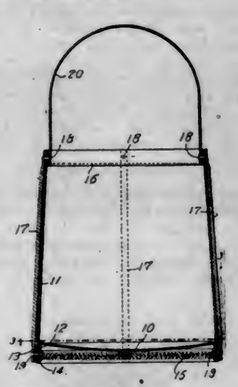
1. In a mechanical movement, a pair of relatively movable members each having an angular recess, and a key mounted to swing in each of the recesses about its ends and engage simultaneously the facing sides of the two recesses when locking the relative movement of said members.

8. In a coaster brake, a driver, a driven member, a sleeve revolubly mounted on the driver, said sleeve and driver having sectorial recesses with rounded corners, the arcuated sides of the recesses facing each other, a prismatic key having rounded corners fitting radially into said recesses, means for coupling the sleeve yieldingly to the driven member, and a braking mechanism associated with the driven member, said sleeve and driven member having coupling means adapted to coöperate when the key engages one pair of the facing radial sides of the recess, said sleeve and braking mechanism having coupling means becoming operative when the key engages the other pair of opposite radial sides of the recesses.

[Claims 2 to 7 and 9 not printed in the Gazette.]

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1,225,511. COLLAPSIBLE BUCKET. GEORGE B. SEXTON, San Francisco, Cal. Filed May 9, 1916. Serial No. 96,372. (Cl. 150—48.)



1. A collapsible bucket having a flexible circular wall and a flexible base, the outer edge of which is secured in flatwise contact against the lower inner portion of the wall, a flexible reinforcing strip secured around the said connecting edges of the wall and base, a plurality of vertical spaced rigid reinforcing members extending along the wall, rivets securing the said reinforcing members to the upper and lower edges of the wall, the rivets at the lower ends of said members extending through the connected edges of the wall and base and through the said flexible reinforcing strip, and a flexible handle through the extremities of which certain of the rivets at the upper ends of said rigid reinforcing members are extended to secure the handle in connection with the body.

2. A collapsible bucket having a flexible circular wall and a flexible base, the outer edge of the base being connected in flatwise contact with the lower inner portion of the said wall, a flexible reinforcing strip secured around the said connecting edges of the wall and base, and a plurality of spaced vertical rigid reinforcing members extending externally along the said wall, and rivets securing the upper and lower edges of said rods to the wall, the lower rivets being extended through the said connected edges of the base and wall and through the said flexible reinforcing strip.

3. A bucket having a flexible circular wall and a flexible base secured to one another, a plurality of vertical, spaced, rigid, reinforcing members projecting exteriorly along said wall, rivets securing the upper and lower ends of said reinforcing members to the said wall, and a flexible handle the extremities of which are also engaged by certain of the said rivets at the upper ends of the reinforcing members, to securely fasten the handle in connection with the body.

4. A collapsible bucket having a flexible circular wall and a flexible base, and having vertical external reinforcing members of rigid material along the said wall and secured at their upper and lower ends thereto.

5. A collapsible bucket having a flexible base and a flexible circular wall secured at its lower portion to the base and tapering toward its upper open end.

[Claims 6 and 7 not printed in the Gazette.]



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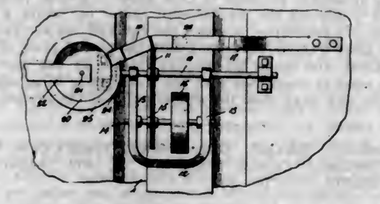
1,225,512. CHECK. JOHN F. SHOEMAKER, Des Moines, Iowa. Filed May 3, 1916. Serial No. 95,266. (Cl. 11—13.)




A bank check having columns of figures arranged in progressively increasing amounts near the left-hand end of said check, a vertical line at the right side of each column, inclined lines arranged between the successive sums of each column, said check having a body portion on one side of said columns and a stub portion on the other side thereof, said body portion having blank lines to receive the name of the payee, the name of the maker and the amount for which the check is drawn, a warning line extended diagonally across said blank lines and having characters to indicate that the check is not good for more than the largest amount shown in the figures on the margin, said check having the words "Pay to the order of" or their equivalent arranged adjacent to said columns and adjacent to one end of the blank line for the name of the payee, and means for further indicating the peculiar nature of the check extending into the body of the check from said columns above and below said last mentioned words, whereby it is made necessary to sever the check body from the stub on lines having certain relations to said figures in order to use the check and whereby it is made impossible to raise the check.

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1,225,513. LUMBER-STAMPING MACHINE. BERT E. SIMPSON, Chassell, Mich. Filed June 9, 1916. Serial No. 102,730. (Cl. 101—41.)



1. An article stamping machine comprising a horizontally disposed rotary shaft, stamping mechanism operable upon rotation of the shaft, a second shaft mounted for rotation, gearing connecting the shafts for simultaneous rotation, and a roller fixed upon the second shaft for rotating the latter and operated by the article to be stamped.

2. An article stamping machine comprising a horizontally disposed rotary shaft, stamping mechanism operable upon rotation of said shaft, a yoke mounted on the shaft, a second shaft journaled on said yoke, gearing connecting the respective shafts for simultaneous rotation, and means under the control of the article to be stamped for rotating said second shaft.

3. An article stamping machine comprising a horizontally disposed rotary shaft, stamping mechanism operable upon rotation of said shaft, a yoke mounted on said shaft, a second shaft journaled on the yoke, gearing connecting said shafts for rotation, and a roller fixed upon the shaft and operated by the article to be stamped for rotating said second shaft.

4. An article stamping machine comprising a horizontally disposed shaft, a stamping mechanism operable upon rotation of said shaft, a yoke, a second shaft journaled in the yoke, gearing connecting the respective shafts for rotation, a roller on said second shaft for rotating the latter and operated by the article to be stamped, and said yoke being mounted for vertical swinging movement for the purpose described.

5. An article stamping machine comprising a rotary shaft, stamping mechanism including a horizontally disposed flat resilient arm secured at one end to a support, means coöperating with the opposite end of the arm for elevating and tensioning the latter as the shaft rotates, said means permitting the arm to forcibly gravitate to stamping position, and means under control of the article to be stamped for rotating said shaft.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,514. COURSE-FINDER. WILLIAM M. SISTARE, New London, Conn. Filed Sept. 27, 1916. Serial No. 122,399. (Cl. 33—75.)



1. In a device for finding courses, the combination of a blade and a circular disk on one end having an annular depression on one face, of a head transversely arranged and slidably adjustable on the blade, a direction dial pivoted in said depression, and means for holding the dial in adjusted position according to the variations of a chart compass.

2. In a device for finding courses, the combination of a blade and a circular disk on one end having an annular depression on one face, of a head transversely arranged and slidably adjustable on the blade, a direction dial pivoted in said depression, and means for holding the dial in adjusted position according to the variations of a chart compass, and a device having swiveled connections on said means to extend between two predetermined points on a chart and extend radially from the center of the dial to determine the course relative to the variation as set on the dial.

3. In a course finder, a direction dial, a holder therefor, and a thumb screw whereby the dial may be held set according to the variations between the true and magnetic norths of a compass of a chart, said thumb screw having a tapering base, a ring swiveled on the tapering base, the taper of which prevents upward displacement of the ring, and means attached to the ring and designed to extend between two predetermined points on a chart and extending radially across the dial to find the course of a vessel relative to said variations.

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1,225,515. PRINTING-MACHINE. GEORGE S. SLINGERLAND, JOHN F. ZEIFANG, and JOHN GOFFIN, Niagara Falls, N. Y., assignors to Niagara Multiple Typewriter Company, Niagara Falls, N. Y. Filed June 30, 1913. Serial No. 776,519. (Cl. 101—11.)

1. In a printing machine, the combination of a chase which carries the type, a base which supports said chase and which is provided with means to permit the chase to slide lengthwise of the base, an inked ribbon which extends over the type in a fixed relation with regard to the

base and which, in its operative position is arranged at a distance from the base and forms with the base a passage through which the chase can pass into a position in which one end of the chase extends beyond the ribbon to render the type accessible, a hand-operated presser roller adapted to be moved over the type, and means for withdrawing the chase by hand from its operative position under the ribbon.



2. In a printing machine, the combination of a chase which carries the type, an inked ribbon extending over said type, a base which supports said chase and which has walls between which said chase is confined, one end of said base being open to permit the chase to slide lengthwise of the base into its operative position and into a position in which one end of said chase extends beyond said ribbon to render the type accessible, spools on which said ribbon is wound, one of said spools being arranged at the open end of said base and above the level of the type on the chase, a handle on said chase extending underneath said spool and beyond said ribbon whereby the chase can be withdrawn from its operative position under the ribbon, and a hand operated roller adapted to be moved over the type and coöperating therewith to perform the printing operation.

3. In a printing machine, the combination of a base, a chase which is slidably mounted on said base and which carries the type, an inked ribbon extending over the type, spools on which said ribbon is wound, one of said spools being arranged above the level of the type, a handle on said chase extending underneath said spool and beyond said ribbon whereby the chase can be withdrawn from its operative position under the ribbon, means for yieldingly holding said chase in operative relation under the ribbon, and a platen adapted to coöperate with the type for performing the printing operation.

4. In a printing machine, the combination with a platen, a carriage on which said platen is rotatably mounted and which is adapted to move back and forth over the type on the machine, a rotatable eccentric on said carriage which supports said platen, a worm gear on said eccentric, and a worm engaging said worm gear for adjusting said eccentric to control the position of said platen relatively to the type, a second eccentric journaled within said first mentioned eccentric, and relatively stationary means at opposite ends of the path of travel of said carriage for engaging said second eccentric for turning the same to move the platen alternately into and out of operative relation to the type.

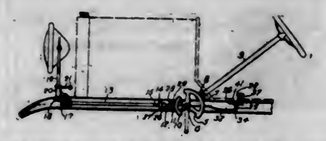
5. In a printing machine, the combination of a chase which carries the type, a base which supports said chase and which is provided with means to permit the chase to slide lengthwise of the base, an inked ribbon which extends over the type, rollers on which said ribbon is wound and which are mounted on said base in position to guide the ribbon clear of the path of movement of said slidable chase so that the chase can be removed from its operative position into a position in which the end of the chase extends beyond the ribbon to render the type accessible, and a hand operated presser roller adapted to be moved over the type.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,516. DIRIGIBLE-HEADLIGHT-OPERATING MECHANISM. EDGAR CHRISTIAN SMITH, Fallon, Nev. Filed Dec. 29, 1915. Serial No. 69,177. (Cl. 240—62.)

1. The combination with a vehicle having a steering apparatus, of movable head lights coupled together, a rod, connecting means between the rod and one of the lights whereby motion imparted longitudinally to the rod will be imparted to the light for shifting the latter, a bracket connected with the steering arm of the steering apparatus, said bracket being provided with a slot which registers at its inner end with the pivotal point upon which the arm reciprocates, a pin carried by one end of said rod and extending through said slot, a pivoted lever, foot operable means for actuating the latter, and connecting means between said lever and rod whereby the pin may be moved through the slot into or out of alinement with the pivotal point upon which said arm reciprocates.



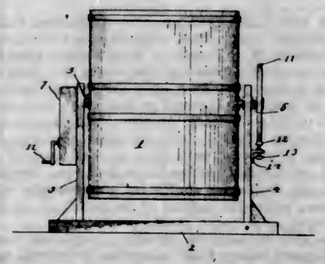
2. The combination with a vehicle having a steering apparatus, of movable headlights, means connecting the head-lights whereby they will move in unison, a rod, connecting means between the rod and one of the lights whereby longitudinal movement of the rod will shift the lights, a bracket connected with the steering arm of a steering apparatus, a pin and slot connection between the rod and bracket having an inner terminal alined with the pivotal point upon which the arm reciprocates, a lever having a connection with the rod whereby the latter may be shifted along the bracket when the lever is actuated, and means whereby the lever may be actuated at will.

3. The combination with a vehicle having a steering apparatus, of movable headlights coupled together, a rod connected with one of the lights, whereby motion imparted to the rod will be imparted to the light for shifting the latter, a pin and slot connection between the rod and the steering arm of the steering apparatus, allowing movement of the rod toward and away from the pivotal point of the steering arm and adapted to actuate the rod when the latter is out of alinement with the pivotal point of the steering arm, and means operable at will whereby said rod may be shifted toward and away from the pivotal point of the steering arm.

4. The combination with movable head-lights coupled together for operating in unison, and the steering apparatus, of a bracket connected with a portion of the steering apparatus provided to turn about a pivotal point, a rod connecting the bracket with one of the lights, a pin and slot connection between the rod and bracket having an inner terminal coinciding with the pivotal point of the bracket, and means for shifting the rod at will whereby its point of connection with the bracket may be moved toward and away from the pivotal point of the bracket.

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1,225,517. BRAKE. GLENN SMITH, Young's Cove, New Brunswick, Canada. Filed Apr. 28, 1914. Serial No. 835,013. (Cl. 74—13.)



In a device of the kind described, in combination a standard, including a pair of upright bars, pintles mounted in said bars, a rotatable body supported upon said pintles between said bars, a brake wheel mounted upon one of said pintles, a bracket secured to one of said bars beneath said wheel, a brake shoe having a boss formed therebelow, a threaded bolt passing through said bracket and having a swiveling support in the boss of said shoe, a wing head formed upon said threaded bolt, and a lock nut threaded onto said bolt and adapted to engage said bracket, said brake shoe being arcuate and of a greater length than said boss.



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1,225,518. FLEXIBLE COUPLING. ROBERT ARMSTRONG SMITH, Mahwah, N. J., assignor to Smith-Serrell Co., Inc., New York, N. Y., a Corporation of New Jersey. Filed Oct. 13, 1915. Serial No. 55,729. (Cl. 64—13.)



1. A coupling comprising in combination driving and driven members, one of said members being formed with a recess, a laminated flexible member for connecting the driving and driven members, a set of superimposed leaf springs having one end seated in said recess, and spacing means between certain of said springs.

2. A coupling comprising in combination a driving and a driven member, one of said coupling members being formed with a recess, a laminated flexible member for connecting the driving and driven members comprising a set of superimposed leaf springs having one end seated in said recess, and means coöperating with said springs whereby a clearance is afforded between the edge of the recess in the coupling member and said springs.

3. A coupling comprising in combination a driving and a driven member, one of said members being formed with a recess, a laminated flexible member for connecting the driving and driven members of the coupling comprising a set of superimposed leaf springs having one end seated in said recess, and means free from contact with said coupling member spacing apart certain of the leaf springs at one end.

4. A laminated flexible spring member for connecting the driving and driven members of a coupling, one of said coupling members being provided with a recess, the laminated flexible spring member having an end movably seated in said recess, the first point of contact between the outside spring of the laminated flexible spring member and the recessed member being normally back of the inside edge of said recessed coupling member.

5. The combination with a driving and a driven member, one of said members being formed with a recess, of a laminated flexible member for connecting the driving and driven members comprising a set of superimposed leaf springs having one end firmly retained and the opposite end slidably retained, and spacing means for the springs at the latter end so positioned in relation thereto as to maintain a clearance between the outermost springs and the corners of the recessed member.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,519. BLOTTER. WALTON DUANE SMITH, Prophetstown, Ill., assignor to Carl W. Thurow, Aurora, Ill. Filed May 13, 1916. Serial No. 97,353. (Cl. 120—24.)



1. In a blotter, a pair of superimposed leaves of blotting paper having compressed ends of reduced thickness directly fastened together and engaging each other, the opposite ends of said leaves being normally divergent by reason of the compression of the fastened ends.

2. In a blotter, a pair of superimposed leaves of blotting paper having compressed ends of reduced thickness lying face to face and directly fastened together by means of adhesive material, the opposite ends of said leaves being normally divergent by reason of the compression of the fastened ends.

3. In a blotter, a pair of superimposed leaves of blotting material having compressed ends of reduced thickness directly engaging each other and lying face to face, the compressed portions of the leaves extending for a distance substantially one-fourth of the length of one of the leaves and fastened together by means of an adhesive, the opposite ends of said leaves diverging by reason of the connection at the first-mentioned ends thereof.

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1,225,520. SHIPPING-PAIL. HARRISON L. STALEY, Martinsville, Ind., and WALTER B. SIMMONS, Richmond, Va., assignors to Wilts Veneer Company, Richmond, Va., a Corporation of North Carolina. Filed Apr. 28, 1916. Serial No. 94,158. (Cl. 217—89.)



1. In combination with a pail body, closure-holding means embodying a sheet metal hoop fitting around the edge of the pail body, said hoop being provided along one edge with a plurality of oblique slits to form nail-like fastening points, these points being formed by bending the sharpened points of the tabs formed by the slits inwardly, the said slits extending into the band to a point beyond the bent-in points.

2. In combination with a pail body, a band fitting the upper rim of the body and fastened thereto, the upper part of this band being bent outwardly to form an upwardly-facing shoulder at the upper edge of the pail, the extreme upper edge of this band being bent upwardly to form an annular upstanding flange; a cover fitting down on said upwardly-facing shoulder and within said flange; and means for clamping the cover down on said shoulder.

3. In combination with a pail body, a band fitting the upper rim of the body and fastened thereto, the upper part of this band being bent outwardly to form an upwardly-facing shoulder at the upper edge of the pail, the extreme upper edge of this band being bent upwardly to form an annular upstanding flange; a cover fitting down on said upwardly-facing shoulder and within said flange; and means for clamping the cover down on said shoulder, said means consisting of wire bails anchored to the band and extending up over the upstanding flange and pressing the same against the edge of the cover.

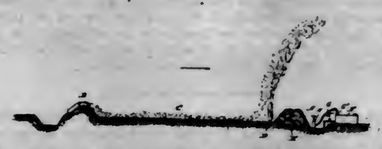
4. In combination with a pail body, a band fitting the upper rim of the body and fastened thereto, the upper part of this band being bent outwardly to form an upwardly-facing shoulder at the upper edge of the pail, the extreme upper edge of this band being bent upwardly to form an annular upstanding flange; a cover fitting down on said upwardly-facing shoulder and within said flange; and means for clamping the cover down on said shoulder, said means consisting of wires having their ends extending upwardly through the outwardly-bent shoulder and headed at their upper ends.

5. In combination with a pail body, a band fitting the upper rim of the body and fastened thereto, the upper part of this band being bent outwardly to form an upwardly-facing shoulder at the upper edge of the pail, the extreme upper edge of this band being bent upwardly to form an annular upstanding flange; a cover fitting down on said upwardly-facing shoulder and within said flange; and means for clamping the cover down on said shoulder, said means consisting of wires having their ends extend-

ing upwardly through the outwardly bent shoulders and headed at thir upper ends, said wires being flattened at a point below the horizontal flange, for the purpose herein set forth.

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1,225,521. PROTECTING FROM POISONOUS GAS IN WARFARE. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed Sept. 4, 1915. Serial No. 49,133. (Cl. 98—27.)



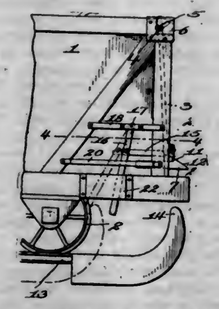
1. The method of protecting against poisonous gas advancing toward an area to be protected which consists in burning along a line slightly in front of the boundary of the area to be protected, highly combustible fuel, thus forming a protecting wall of heated rising gas which deflects the poisonous gas to a safe height above such area.

2. The method of defending against poisonous gas advancing toward an area to be protected which consists in delivering along a line slightly in front of the margin of such area highly combustible fluid fuel under pressure and igniting the fuel so delivered, thereby forming a wall of rapidly rising heated gases to deflect to a safe height the advancing poisonous gas.

3. The method of defending against poisonous gas used in warfare which consists in delivering a supply of fluid fuel under controlled pressure along a line slightly in front of the area to be protected and igniting the fuel so delivered, thereby forming a controllable wall of heated rising gases to deflect advancing poisonous gas to a safe height above said area.

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1,225,522. SAFETY-LOCK FOR DUMP-CARS. CHARLES W. STICKLER, Lansford, Pa. Filed Apr. 1, 1916. Serial No. 88,332. (Cl. 214—11.)



1. In a dump car having an upwardly movable gate for unloading it, and a catch projecting laterally from and movable with the gate for holding the gate in its lower closed position, said catch being releasable to unfasten the gate by upward movement of the gate, a device coöperative with the catch to lock the gate in its lower closed position during transit of the car and having a pendant portion normally holding said device in locking position and adapted to be actuated by an obstruction or projection to retract said device and thereby automatically unlock the catch and permit upward movement thereof and of the gate as the car is brought to the dumping point.

2. In a dump car adapted to be used in connection with a tipple, the combination of a gate for unloading the contents of the car, a catch carried by the gate for holding the latter in closed position, the gate and catch being movable downwardly and upwardly to fastened and unfastened positions respectively, and a horizontally slidable bolt movable into a position above the catch to lock the same and the gate in their lowered fastened position during transit of the car, said bolt having a lever pendant therefrom and in position to engage a part of the tipple to automatically unlock the catch as the car is brought to the dumping point.

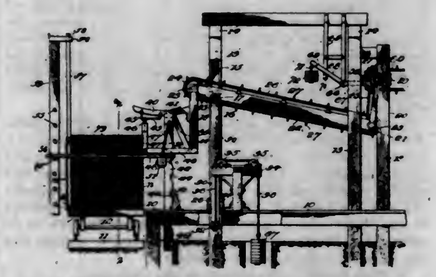
3. In a dump car having a gate for dumping the contents thereof, and a catch for holding the gate in closed position, the gate and catch being movable downwardly and upwardly to fastened and unfastened positions respectively, a latch movable into a position above the catch to lock the same in gate-holding position during the transit of the car, and means for retracting said latch to unlock the catch when the car is brought to the dumping point, said latch having means for automatically moving it into a position to lock the catch as the latter is returned to gate-holding position.

4. In a dump car having a gate for unloading the same and a catch for holding the gate in closed position, the gate and catch being movable vertically into fastened and unfastened positions, a device operative to lock the catch in gate-holding position during transit of the car, said device having a member movable into a position above the catch to retain the latter in gate-fastening position and also a coöperating part movable in a direction longitudinally of the car and adapted to engage a projection as the car is brought to the dumping point, thereby automatically unlocking the catch.

5. In a dump car, a load discharging gate pivotally mounted thereon, means for holding the lower portion of the gate in closed position embodying a detent fixed on the body of the car and a catch carried by and having a limited vertical movement relatively to the gate and adapted to coöperate with the detent, and means operative by the pressure of the load against the gate for lifting the latter and said catch and thereby disengaging the catch from said detent, said catch being movable vertically independently of the gate to reëngage with said detent.

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1,225,523. LUMBER-STACKER. ROBERT E. SUBLER, Cuthbert, Ga. Filed Feb. 27, 1915. Serial No. 10,979. (Cl. 214—6.)



1. An apparatus of the class described comprising a receiving device, means adapted to support parting members and carried by said receiving device, guide devices for said parting members spaced from said supporting means, and means for vertically adjusting said receiving device.

2. In an apparatus of the class described, a vertically movable receiver, a stationary guide device spaced from said receiver and adapted to support one end of spacing strips, and a support for the other end of said spacing strips removably connected to said receiver.

3. In an apparatus of the class described, a vertically movable receiver, a beam carried by said receiver, vertical supports spaced from said receiver, supports for one end of spacing strips carried by said vertical supports, supports for the other ends of said spacing strips and movably connected to said receiver, running boards engaged at one end by said beam, and means for supporting the other ends of said running boards from said vertical supports.

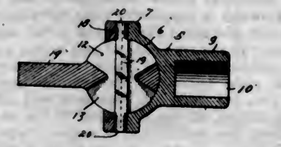
4. In an apparatus of the class described, a vertically movable receiver, stationary vertical supports spaced from said receiver, supports for one end of spacing strips swinging from said stationary vertical supports, and supports for the other ends of said spacing strips and movably connected to said receiver.

5. In an apparatus of the class described, a member mounted to swing, supporting members connected to said swinging member, holding means adapted to engage said supporting members at a plurality of points, a receiving device for the material and carried by said supporting members, means for holding the material upon the receiving device and discharging it therefrom, a rod slidable relative to said supporting members and carrying supporting fingers adapted to engage spacer members, and means for moving said rod longitudinally to withdraw said fingers from engagement with said spacer members.



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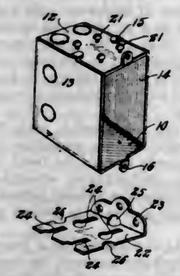
1,225,524. SHAFT-COUPLING. GEORGE A. SWARTZ, Pearl River, N. Y. Filed July 15, 1914. Serial No. 851,156. (Cl. 74—19.)



A shaft-coupling, comprising in combination, a semi-spherical shell having an outturned flange formed around its edge, said flange having diametrically opposite bearing notches formed therein, a narrow complementary retaining ring faced against said flange and having companion notches registering with the notches in said flange, a spindle rotatably mounted in said bearing notches and having a squared shank, and a solid spherical head mounted in said shell and retained by said ring, said head having a diametrical slot through which said spindle extends and the latter riding against the opposing faces of the slot.

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1,225,525. OUTLET-BOX AND SUPPORT THEREFOR. OLIVER T. SWEET, St. Louis, Mo. Filed May 25, 1914. Serial No. 840,821. (Cl. 247—6.)



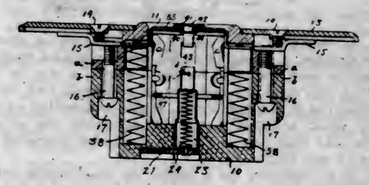
1. The combination with an outlet box having a plurality of studs projecting from the side thereof, which studs are disposed in square arrangement, of an attaching member having an angular flange at one extremity thereof, said attaching member being provided with apertures adapted to accommodate the plurality of studs whereby the attaching plate may be selectively secured to the box with the angular flange at either the front or rear or at either side thereof.

2. The combination with an outlet box having a plurality of headed studs projecting from one side thereof, which studs are disposed in square arrangement, of an attaching plate having an angular flange at one extremity thereof, said attaching plate being provided with key hole apertures disposed in square arrangement and adapted to accommodate the headed studs whereby the attaching plate may be selectively secured to the box with the angular flange disposed toward the front or rear of the box or toward either side thereof.

3. The combination with an outlet box having a plurality of studs projecting from one side thereof, of an attaching member comprising a plate and a flange projecting at right angles from one end thereof, said plate being provided with apertures adapted to accommodate said studs, said studs and apertures being relatively located so as to permit the attaching member to be selectively secured to the box with the flange disposed toward the front or rear of the box or toward either side thereof.

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1,225,526. ELECTRICAL RECEPTACLE. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 1, 1914. Serial No. 828,909. (Cl. 173—330.)



1. A plug receptacle having a chambered body with entrance aperture for a plugging member of the Edison type, a center contact in the receptacle chamber, a door normally closing said entrance aperture but inwardly displaceable into engagement with said center contact, for the purpose described.

2. A plug receptacle having an inwardly displaceable door and means positively forced by the door, upon the inward displacement of the latter, into gripping engagement with an inserted plug.

15. In a plug receptacle, a plug gripping lever of the first class pivoted on an axis at right angles to the axis of the receptacle and provided at its outer end with an inwardly extending projection adapted to engage the thread of an inserted attachment plug, together with an outwardly angled shoulder above said projection and against which an entering member may bear to tilt said lever out of obstructing position, in combination with downwardly moving means bearing against the lower end of said lever to force said end outward and thus move the upper end inward into gripping engagement with the inserted plug.

18. In a device of the character described, the combination of a normally "dead," inwardly displaceable center contact, with a coöperating "live" conductor engaging said center contact on the inward displacement of the latter by an inserted plug.

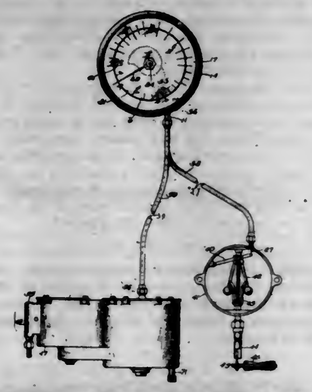
[Claims 3 to 14, 16, 17, and 19 to 22 not printed in the Gazette.]

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1,225,527. INDICATING MECHANISM. RALPH E. THOMPSON, Brookline, Mass. Filed Jan. 19, 1914. Serial No. 813,109. (Cl. 73—51.)

1. An indicator comprising a standard scale, a dial rotatably mounted and having a retracting spring, means for rotating said dial against the action of said spring, a spring retracted rotary shaft extending through said dial and having a needle extending over the face of said dial and said scale, and means for effecting rotation of said shaft, the movement of said dial and said needle being correlated with said scale.

2. An indicator comprising a spring retracted dial, a spring retracted shaft having a needle extending over the face of said dial, said shaft and said dial having cams, cables for effecting the rotation of said cams, and disassociated mechanisms adapted to operate said cables.



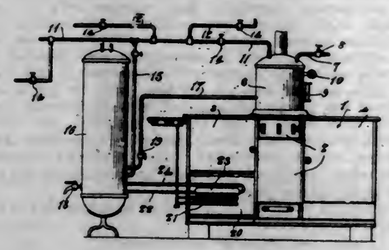
3. An indicator comprising a casing having an annular scale member, a spring retracted shaft rotatably mounted axially of said scale and having a needle, a cam on said shaft, a dial rotatably mounted on said shaft and having a retracting spring and a cam, cables coöperating on said cams, speed actuated means for actuating one of said cables, and fluid flow measuring means for operating the other of said cables.

4. In an indicator for a motor, the combination with a fuel supply for said motor, a gage, a pair of indicating members mounted to move relatively to each other and to said gage, a connecting mechanism for one of said indicating members adapted to be operated by said motor in relation to the output of said motor, and means adapted to be influenced with relation to the flow of fuel through said supply and having a connection adapted to actuate the other of said indicating devices.

[Claims 5 to 9 not printed in the Gazette.]

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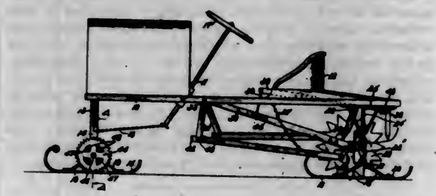
1,225,528. STEAM-HEATING COOKING-RANGE. ISAIAH P. TOWLER, Newark, N. J. Filed Nov. 18, 1914. Serial No. 872,808. (Cl. 126—5.)



In combination, a cooking range including a fire box and a compartment, of a steam boiler positioned upon the range and directly above the fire box, means for supplying water to said boiler, a steam pipe connected to the upper end of the boiler for receiving steam therefrom, means for connecting the steam pipe to a plurality of radiators for heating a building, a water retaining tank located adjacent the range, a branch steam pipe connected to said steam pipe and to the tank for heating and softening the water therein, a pipe connected to the tank adjacent the bottom thereof and to the boiler adjacent its bottom to allow the water from the boiler to pass into the tank to aid in heating the water therein, and an auxiliary heater located in the compartment and operatively connected to the tank adjacent the bottom thereof to heat the water therein when not using the boiler.

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1,225,529. SLED. OSCAR JOHN TUBBS, Winslow, Me. Filed May 23, 1916. Serial No. 99,295. (Cl. 208—161.)



1. In a sled, the combination of a frame, a center rod arranged transversely in said frame, a pair of radius arms journaled at their front ends on said center rod, a plurality of transverse braces connected to said arms and forming therewith a practically rigid rectangular frame, a digger wheel, a cranked axle secured to the digger wheel and journaled in the rear ends of said radius arms, pedal devices journaled upon said center rod, connecting rods between the pedal devices and the axle, and spring means acting between the frame and certain of said cross braces to variably control the digging action of the wheel.

2. In a sled, the combination of a main frame, a center rod arranged transversely in the frame, propelling devices mounted on said center rod for vertical oscillation within the rear portion of the frame, a lever acting upon the rear portion of the propelling devices as a fulcrum, one end of the lever being adjustably connected to another portion of the propelling devices, and spring means acting upon the rear end of the frame and the other end of the lever serving to automatically hold the propelling mechanism down with a force proportionate to the position of adjustment of the first mentioned end of the lever.

3. The herein described sled comprising in combination, a rigid frame, a center rod arranged in the frame, a pair of springs connected adjacent the rear corners of the frame, propelling devices mounted for oscillation upon said center rod and including a U-shaped brace extending across the rear portion thereof and another brace extending transversely of the propelling devices, a lever bearing upon the upper face of said brace and having spaced rear ends connected to said springs, and means connecting the front end of the lever to the latter mentioned brace and acting upon the front end of the lever to variably adjust the automatic action of the springs to hold the propelling devices in contact with the roadway according to varying conditions thereof.

4. In a sled, the combination of a frame, front and rear bobs connected thereto, propelling means suspended from the frame, means to turn the front bob around a vertical axis, and an anti-skidding wheel for the front bob journaled on a transverse spindle whose axis lies in the same vertical plane as the axis around which the bob is turned.

5. In a sled, the combination of a frame, a plurality of runners and connections between the frame and the runners, each connection comprising a hanger rod having a transverse spindle, and a bracket, said bracket comprising a pair of similar bar metal members having their lower ends constituting diagonal braces connected to the runners, their upper ends constituting a pair of ears spaced laterally in parallel vertical planes through which said spindle projects, the intermediate portions of the members being bent in vertical planes perpendicular to the plane of the ears and connected rigidly together.

[Claim 6 not printed in the Gazette.]



1,225,530. CASING FOR SAUSAGES AND PROCESS OF PREPARING. GEORGE B. TWITCHELL, Cincinnati, Ohio. Filed Apr. 26, 1915. Serial No. 24,102. (Cl. 99—8.)

1. The herein described process of preparing gut sausage casings, which consists in incorporating into the membraneous tissue a non-deleterious material having the property of structurally strengthening the same without impairing the elasticity.

2. The herein described process of preparing gut sausage casings, which consists in incorporating into the membraneous tissue a food product having the property of structurally strengthening the same without impairing the elasticity.

3. The herein described process of preparing gut sausage casings, which consists in incorporating into the membraneous tissue a casein having the property of structurally strengthening the same without impairing the elasticity.

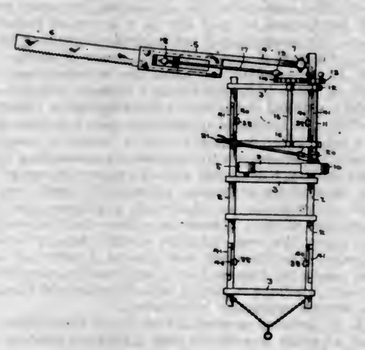
4. The herein described process of preparing gut sausage casings which consists in soaking the gut in a solution of casein.

5. The herein described process of preparing gut sausage casings which consists in soaking the gut in a solution of casein and then fixing the casein in the tissue.

[Claims 6 to 8 not printed in the Gazette.]

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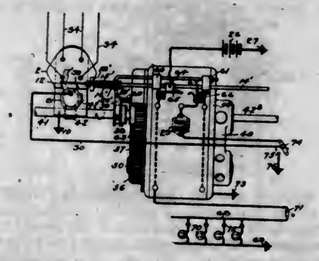
1,225,531. BRUSH AND TIMBER CUTTING DEVICE. WILLIAM FREDRICK TWOMBLY, Orient, Iowa. Filed June 30, 1916. Serial No. 106,936. (Cl. 143—68.)



1. In a cutting device of the class described, the combination with a sled structure, of a power driven shaft rotatably mounted thereon, a second shaft rotatably mounted on the sled structure, intermeshing gears attached to said shafts, one of said gears being larger than the other, a frame, an arm extending from said frame, a ball and socket joint connecting said arm to the sled structure, a saw reciprocatingly mounted in said frame, a pitman, a ball and socket joint at each end of said pitman connecting the ends of the pitman to said saw and one of said gears respectively, a clutch mechanism on the power driven shaft, a lever adapted to connect or disconnect the clutch mechanism, and means to hold the sled structure against skidding movement.

2. The combination with a sled, of an arm, a ball and socket joint connecting said arm with the sled, a guide frame carried by the outer end of said arm, a cutter bar reciprocatingly mounted in said frame, a power driven gear mounted upon the sled, a pitman, and ball and socket joints connecting the opposite ends of said pitman with the cutter bar and the power driven gear respectively, said ball and socket joints of the arm and pitman permitting the cutter bar to be moved vertically and laterally with respect to the sled.

1,225,532. POWER SYSTEM AND APPARATUS. RICHARD VARLEY, Englewood, N. J., assignor to Varley Duplex Magnet Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 12, 1913. Serial No. 753,703. (Cl. 74—59.)



1. In apparatus of the character described, the combination with a combustion engine, of a shaft adapted to transmit power to and be driven by the engine, a generator connected to the shaft, a starting motor, a gear loosely carried by the shaft and adapted to be driven by the motor, and clutch means for bringing the gear into engine starting relationship with the shaft.

2. In apparatus of the character described, the combination with a combustion engine, of a shaft adapted to transmit power to and be driven by the engine, a generator connected thereto, a starting motor, a gear loosely carried by the shaft and adapted to be driven by the starting motor, clutch means for bringing the gear into starting relationship with the shaft, and means for normally rendering said gear inoperative, whereby the shaft may actuate the generator without driving the motor.

3. In apparatus of the character described, the combination with a combustion engine, of a shaft adapted to transmit power to and be driven by the engine, a generator connected to the shaft, a starting motor having a shaft paralleling the first shaft, a gear loosely carried by the first shaft, a gear carried by the motor shaft and operatively associated with the first gear, and clutch means for bringing the first gear into starting relationship with the first shaft.

4. In apparatus of the character described, the combination with a combustion engine, of a shaft adapted to transmit power to and be driven by the engine, a generator connected to the shaft, a starting motor, a shaft therefor mounted beside the first shaft, a gear carried by the first shaft, a gear carried by the motor shaft and operatively associated with the first gear, and clutch means for bringing the first gear into starting relationship with the first shaft.

5. In apparatus of the character described, the combination with a combustion engine, of a shaft adapted to transmit power to and be driven by the engine, a generator connected to the shaft, a starting motor, a shaft therefor mounted beside the first shaft, a gear loosely carried by the first shaft, a gear carried by the motor shaft and meshing with the first gear, and clutch means for bringing the first gear into starting relationship with the first shaft.

[Claims 6 to 8 not printed in the Gazette.]

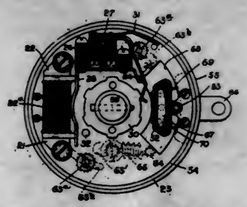
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1,225,533. IGNITION SYSTEM AND APPARATUS. RICHARD VARLEY, Englewood, N. J. Original application filed Aug. 29, 1914, Serial No. 859,160. Divided and this application filed Sept. 11, 1914. Serial No. 861,280. (Cl. 123—148.)

1. In ignition systems and apparatus, circuit controlling means comprising a yieldable contact, a shiftable support therefor and actuating means, and means, comprising said support, for bringing the contact into and out of operative association with said actuating means.

2. In ignition systems and apparatus, circuit controlling means comprising a yieldable contact, a pivotal support

therefor, and actuating means, and means, including said support, for bringing the contact into and out of operative association with said actuating means.



3. In ignition systems and apparatus, circuit controlling means comprising a resilient contact blade, a support therefor, and actuating means, and means, including said support, for shifting the contact blade into and out of operative association with the actuating means.

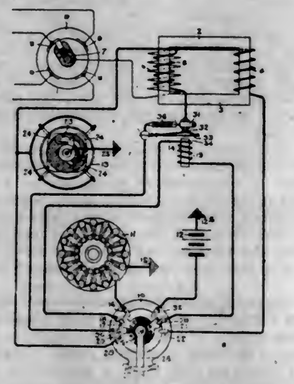
4. In ignition systems and apparatus, circuit controlling means comprising a resilient blade, a pivotal support therefor, and rotatory cam means, and means including said support, for swinging the contact blade into and out of operative association with the cam means.,

5. In ignition systems and apparatus, circuit controlling means comprising a contact lever carried by a support, an actuating cam, and means for varying the position of the support, whereby the contact lever may be brought into and out of operative association with the cam.

[Claims 6 to 19 not printed in the Gazette.]

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1,225,534. ELECTRICAL SYSTEM. RICHARD VARLEY, Englewood, N. J. Filed Apr. 27, 1915. Serial No. 24,252. (Cl. 123—148.)



1. A source of energy and a circuit therefor, a coil inductively related to said circuit and a second coil inductively related to the other coil, of current responsive means for intermittently short circuiting said first coil.

2. A source of energy and a circuit therefor, a plurality of coils inductively related to said circuit, one of said coils having in circuit a spark gap, and current actuated means for intermittently short circuiting another of said coils.

3. A source of energy and a circuit therefor, a plurality of coils inductively related to said circuit and to one another, and current actuated means for intermittently short circuiting one of said coils.

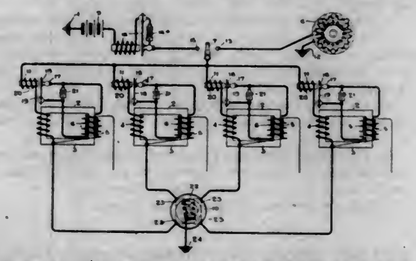
4. A source of energy and a circuit therefor, a plurality of coils inductively related to said circuit and to one another, one of said coils having in circuit a spark gap, and current actuated means for intermittently short circuiting another of said coils.

5. A source of energy and a circuit therefor, a coil inductively related to said circuit and having in circuit a spark gap, a coil for controlling said inductive relationship, and current responsive apparatus for intermittently short circuiting said controlling coil.

[Claims 6 to 27 not printed in the Gazette.]

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1,225,535. ELECTRICAL SYSTEM. RICHARD VARLEY, Englewood, N. J. Original application filed Apr. 27, 1915, Serial No. 24,252. Divided and this application filed Sept. 29, 1915. Serial No. 53,196. (Cl. 123—148.)



1. In electrical systems, a plurality of transformer units each of which is provided with a primary winding, a secondary winding inductively related thereto, and a circuit controlling said inductive relationship, a current responsive interrupter for said circuit, a source of energy, and means for intermittently successively connecting the primary windings in circuit with the source of energy.

2. In electrical systems, a plurality of transformer units, each of which is provided with a primary winding, a secondary winding inductively related thereto, a circuit controlling said inductive relationship, and a current responsive interrupter for said circuit, a source of energy and means for intermittently successively connecting the primary windings in circuit with the source of energy.

3. In electrical systems, a plurality of transformer units, each of which is provided with a primary winding, a secondary winding inductively related thereto, and a circuit controlling said inductive relationship, a current responsive interrupter for said circuits, a source of energy, and means for intermittently successively connecting the primary windings in circuit with the source of energy and the current responsive interrupter.

4. In electrical systems, a plurality of transformer units, each of which is provided with a primary winding, a secondary winding inductively related thereto, a circuit controlling said inductive relationship, and a current responsive interrupter for said circuit, a source of energy, and means for intermittently successively connecting the primary windings and the current responsive interrupters in circuit with the source of energy.

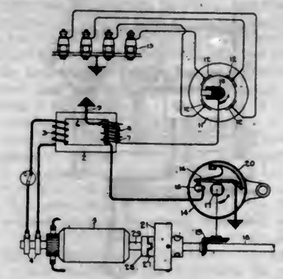
5. In electrical systems, a plurality of transformer units each of which is provided with a primary winding, a secondary winding inductively related thereto, and a circuit controlling said inductive relationship, interrupter mechanism connected in the said controlling circuits, a source of alternating current, a source of continuous current, vibrator mechanism, and means for intermittently successively connecting the primary winding in circuit with the source of alterating current or in circuit with the source of continuous current and the vibrator mechanism.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,536. ELECTRICAL SYSTEM. RICHARD VARLEY, Englewood, N. J. Filed Dec. 6, 1915. Serial No. 65,382. (Cl. 123—148.)

1. In an electrical system, spark producing means including a circuit and a controller for periodically opening and closing said circuit for the production of sparks and capable of spark adjustment, an alternating current generator supplying said sparking means with energy and having a shiftable generator phase adjusting member actuable without thereby effecting adjustment of the controller, and power actuated means for shifting said phase adjusting member.



2. In an electrical system, spark producing means including a circuit and a controller for periodically opening and closing said circuit for the production of sparks and capable of spark adjustment, an alternating current generator supplying said sparking means with energy and having a shiftable generator phase adjusting member actuable without thereby effecting adjustment of the controller, and a centrifugally operated device for shifting said phase adjusting member.

3. In an electrical system, spark producing means including a circuit and a controller for periodically opening and closing said circuit for the production of sparks and capable of spark adjustment, an alternating current generator supplying said sparking means and having winding connected in said circuit and having a shiftable generator phase adjusting member actuable without thereby effecting adjustment of the controller, and power actuated means for shifting said phase adjusting member.

4. In an electrical system, spark producing means including a circuit and a controller for periodically opening and closing said circuit for the production of sparks and capable of spark adjustment, an alternating current generator supplying said sparking means with energy and having a revoluble armature shiftable for adjusting the generator phases without thereby effecting adjustment of the controller, and means for shifting the armature.

5. In an electrical system, a transformer forming part of spark producing means and having a winding, circuit controller means for said winding, capable of adjustment for varying the time of sparking, an alternating current generator supplying said transformer and having a current phase adjusting member, and means for automatically adjusting said member without thereby effecting adjustment of the controller means.

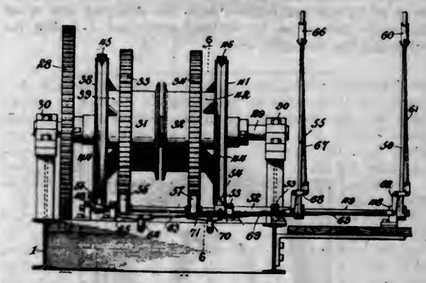
[Claims 6 to 9 not printed in the Gazette.]

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1,225,537. EXCAVATING-MACHINE. GEORGE ELDER WAGNER, Beaver Falls, Pa., assignor to Keystone Driller Co., Beaver Falls, Pa., a Corporation of Pennsylvania. Filed June 10, 1916. Serial No. 102,956. (Cl. 254—184.)

1. In an excavating machine, load controlling means comprising a winding drum, planetary gearing and brake devices for controlling the transmission of power to the drum, a ratchet wheel fast to the drum, a pawl for the ratchet wheel in normal engagement therewith, means for actuating the brake devices, and means movable with the last-named means and provided with connections in operative relation to the pawl for moving the latter out of engagement with the ratchet wheel at will and independent of the movements of the brake actuating means.

2. In an excavating machine, load controlling means comprising a winding drum, driving gearing and brake devices for the gearing for controlling the application of power to the drum, a ratchet wheel fast to the drum, a pawl for the ratchet wheel in normal engagement therewith, a lever having connections to the brake devices for controlling the latter, and manually operable means in part carried by the lever and provided with connections in operative relation to the pawl for moving the latter out of engagement with the ratchet wheel at will, said pawl controlling means being operable irrespective of movements of the lever to control the brake devices.



3. In an excavating machine, load controlling means comprising a winding drum, driving gearing and brake devices for the gearing for controlling the application of power to the drum, a ratchet wheel fast to the drum, a pawl for the ratchet wheel in normal engagement therewith, a lever having connections to the brake devices for controlling the latter, and manually operable means in part carried by the lever and provided with connections in operative relation to the pawl for moving the latter out of engagement with the ratchet wheel at will, said pawl-controlling means being operable irrespective of movements of the lever to control the brake devices, the pawl having a normal trend toward engagement of the ratchet wheel by gravity and the pawl operating means including devices for moving the pawl in opposition to the action of gravity.

4. In an excavating machine, load controlling means comprising a winding drum, brake means for controlling the drum, pawl and ratchet means for controlling the drum, brake operating means, and means for controlling the pawl operatively independent of and in part carried by the brake operating means, whereby an operator in controlling the brake can at the same time control the pawl.

5. In an excavating machine, load controlling means comprising a winding drum; means for the application of power to the winding drum, a lever for controlling the means for applying power to the drum, a ratchet wheel fast to the drum, a pawl for the ratchet wheel, and controlling means for the pawl in part mounted on and movable with the lever and having connections in operative relation to the pawl extending from the lever closely adjacent to the pivotal axis of said lever.

[Claims 6 to 8 not printed in the Gazette.]

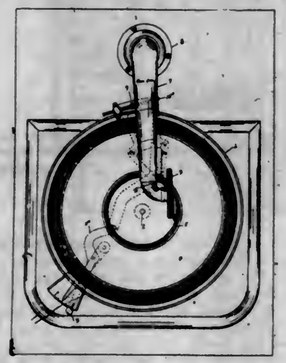
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1,225,538. ATTACHMENT FOR GRAPHOPHONE-MACHINES. EDWARD C. WALTER, New York, N. Y. Filed June 5, 1913. Serial No. 771,978. (Cl. 74—46.)

1. A device of the kind described including in combination, a motor-driven element, a controlling instrumentality therefor, a movable arm coöperating with the motor-driven element, a bell-crank-lever tiltable on an approximately horizontal axis in relation to the movable arm and provided with an arm-locking notch, and a swinging arm extending from the controlling instrumentality and underlying the bell-crank-lever and moving on an approximately vertical axis; the bell-crank-lever being tiltable on its horizontal axis to effect engagement and disengagement of its notched portion with the swinging arm when the same swings on its vertical axis.

2. A device of the kind described including in combination, a motor-driven element, a controlling instrumentality therefor, a movable arm coöperating with the motor-

driven element, a bell-crank-lever tiltable on an approximately horizontal axis in relation to the movable arm and provided with an arm-locking notch, and a swinging arm extending from the controlling instrumentality and underlying the bell-crank-lever and moving on an approximately vertical axis; the bell-crank-lever being tiltable on its horizontal axis to effect engagement and disengagement of its notched portion with the swinging arm when the same swings on its vertical axis, and a spring for actuating the swinging arm.



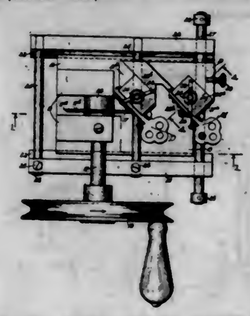
3. A device of the kind described, including in combination, a motor-driven disk-operating element, a movable arm coöperating therewith, a machine-controlling contrivance comprising an actuating arm, a tripping lever arranged in the path of movement of said traveling-arm and adapted to be operated thereby, a base-member to which said tripping member is operatively connected, said actuating arm being centrally-pivoted on said base-member and interposed between said base-member and said tripping member and adapted to be held in one position by said tripping member, and means operating on said actuating arm to move the same when released from said tripping-member.

4. A device of the kind described, including in combination, a motor-driven operating-element, a movable element-operated arm overlying the same, a machine-controlling contrivance, including a controlling-lever, a spring-operated actuating-arm connecting with said controlling-lever and adapted to be moved in one direction by said controlling-lever, arm-operating means acting on said actuating-arm to move it in the opposite direction, a base-member underlying said actuating-arm, and a tripping-member overlying said actuating-arm and occupying a position in the path of movement of said element-operated arm, whereby when the latter engages said tripping-member, said actuating-arm is thereby released and moved under the action of the aforementioned arm-operating means.

5. A device of the kind described, including in combination, a motor-driven operating-element, a movable element-operated arm overlying the same, a machine-controlling contrivance, including a controlling-lever, a spring-operated actuating-arm connecting with said controlling-lever and adapted to be moved in one direction by said controlling-lever, arm-operating means acting on said actuating-arm to move it in the opposite direction, a base-member underlying said actuating-arm, and a tripping-member overlying said actuating-arm and occupying a position in the path of movement of said element-operated arm, whereby when the latter engages said tripping-member, said actuating-arm is thereby released and moved under the action of the aforementioned arm-operating means, said tripping-member carrying an adjustable buffer-element adapted to be engaged by said element-operated arm to move it and the tripping-member.

[Claims 6 to 15 not printed in the Gazette.]

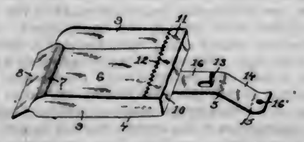
1,225,539. KEY-CUTTING MACHINE. FRANK WANKEL, New York, N. Y. Filed Dec. 7, 1916. Serial No. 135,541. (Cl. 90—13.)



1. In a key cutting machine, the combination of a stationary table having a pair of guide grooves along its opposite edges, a carriage movable longitudinally of the table and comprising a pair of side rails having tongues projecting into and glidable along said grooves, said carriage also comprising a pair of tie rods extending from one side bar to the other and serving to determine the adjustment of the same with respect to the table grooves, said carriage having at one end a pair of alined holes, a guide bar fitted in said holes and movable longitudinally of its axis therein transversely of the carriage and table, a clamping head for master and blank keys secured to said guide bar and slidable along one of the tie rods for lateral movement with respect to the carriage and movable with the carriage longitudinally of the table, a rotary cutter journaled upon the table for action upon the blank, and a guide post fixed to the table in the plane of the cutter for coöperation with the master key for determining the direction and extent of movement of the head and carriage.

2. The combination with a fixed table and a rotary cutter journaled therein for operation in a definite plane, of a guide post secured to the table and having its operative portion in the plane aforesaid, a carriage comprising a pair of parallel side bars fitted to the side edges of the table and adapted to reciprocate freely thereon, said carriage also including a pair of tie rods, each having a head at one end coöperating with one side bar and having its other end threaded in the other side bar, whereby the distance between the side bars is accurately determined and means to lock the tie rods in adjusted position, a clamping head, means to secure master and blank keys to said head in parallel relation to each other for coöperation with the side post and cutter respectively, and means to support said head upon the carriage for movement laterally independently thereof and longitudinally with the carriage whereby convolutions will be formed by the cutter in the blank key exactly similar to the convolutions in the master key.

1,225,540. DUST-PAN. GEORGE TILLEY WELLS, Providence, R. I. Filed Apr. 27, 1916. Serial No. 93,899. (Cl. 65—63.)



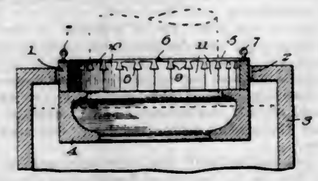
1. A dust-pan having a bottom, two sides, a back, a forwardly extending top portion having a saw-tooth edge, a spring arm having a free end adapted to rest on the floor and an upwardly extending member adjacent the back of the pan, the back of the pan, the upwardly extending member and the intermediate portion of the spring arm forming a foot hold.

2. A dust-pan having a bottom, a transverse rounded retaining ridge, a spring lip, two sides, a back, a forwardly extending top portion having a saw-tooth edge all formed integral, a spring arm extending outwardly from the back and having a curved free end adapted to rest on the floor and an upwardly extending member adjacent the back of the pan, the back of the pan, the upwardly extending member and the intermediate portion of the spring arm forming a foot hold.

3. A dust-pan having a flat bottom 6, a transverse rounded retaining ridge 7, a downwardly extending spring lip 8, having a straight edge, two upwardly extending sides 9, 9, an upwardly extending flat back 10, and a forwardly extending flat top portion 11 having a saw tooth edge 12, said saw teeth pointing toward the front of the pan, all formed integral, a spring floor arm 5 extending centrally outwardly from the bottom 6 at the back 10 and having an upwardly bent member 13, adjacent the back 10, a downwardly inclined portion 14 and an upwardly curved floor end, the back 10, the upwardly bent member 13 and the intermediate portion of the spring floor arm 5 forming a foot hold 16, as described.



1,225,541. GUARD OR SHIELD FOR GLASS-DRAWING APPARATUS. WILLIAM WESTBURY, Okmulgee, Okla., assignor to L. S. Skelton, Okmulgee, Okla. Filed Jan. 26, 1916. Serial No. 74,469. (Cl. 49—17.)



1. A shield of the character described comprising a sectional supporting ring, and an annular series of fire proof bricks disposed beneath the ring, said bricks being provided with lapping portions and detachably connected with the ring.

2. A shield of the character described comprising a sectional supporting ring having depending supporting projections, and an annular series of fire-proof bricks disposed beneath said ring, said bricks having lapping engagement with each other and detachable interlocking engagement with said projections.

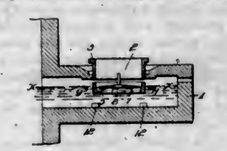
3. A shield of the character described comprising a sectional supporting ring having depending, spaced dove-tailed projections, and an annular series of fire-proof bricks having flanges for lapping engagement with each other, said bricks being provided with dove-tailed projections, said projections forming dove-tailed recesses between the bricks, for detachable interlocking engagement with the dove-tailed projections of the ring.

4. A shield of the character described comprising a sectional supporting ring having depending spaced dove-tailed supporting lugs, and fire-proof bricks having lapping portions and provided with dove-tailed projections for lateral interlocking engagement with said lugs.

1,225,542. DRAWING-RING. WILLIAM WESTBURY, Okmulgee, Okla., assignor to L. S. Skelton, Okmulgee, Okla. Filed Feb. 8, 1916. Serial No. 77,053. (Cl. 49—61.)

1. A drawing ring or pot comprising a ring-shaped body, and a bottom or partition vertically movable in said body and provided with an inlet opening, said bottom or partition operating when in a determined position to form a drain passage between the same and the pot body.

2. A glass drawing ring or pot comprising an annular body and a movable bottom or partition having an inlet opening and adapted when in a raised position to form a drain passage between the edge thereof and the pot body.



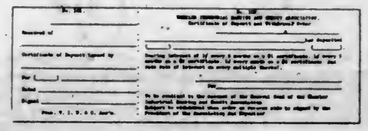
3. A drawing ring or pot comprising a ring-shaped body having a portion of minimum diameter at the bottom thereof, and a bottom or partition adjustable in said body and having an inlet opening therein, said bottom being engageable with said portion of minimum diameter when lowered and adapted when elevated to be spaced from the wall of the body to form an intervening drain passage.

4. A glass drawing ring or pot comprising a ring-shaped body, and a body or partition adjustable vertically therein, and provided with a glass inlet opening, said body and bottom having surfaces to close the bottom of the pot with the exception of said opening when the bottom is in lowered position and to form a drain passage when the bottom is in raised position, said bottom having an upper surface sloping from said opening toward its peripheral edge, such edge being adapted when the bottom is elevated to be spaced from the wall of the body to form an intervening drain passage.

5. A glass drawing ring or pot comprising a ring-shaped body, and a body or partition adjustable vertically therein, and provided with a glass inlet opening, said body and bottom having sloping surfaces to close the bottom of the pot with the exception of said opening when the bottom is in lowered position and to form a drain passage when the bottom is in raised position, said bottom having an upper surface sloping from said opening toward its peripheral edge, such edge being adapted when the bottom is elevated to be spaced from the wall of the body to form an intervening drain passage.

[Claims 6 and 7 not printed in the Gazette.]

1,225,543. BLANK FOR NEGOTIABLE BANKING INSTRUMENTS. DAVID BIRD WHEELER, Washington, D. C. Filed Aug. 9, 1916. Serial No. 114,077. (Cl. 11—13.)



1. As a feature of a banking system, a blank form for a negotiable instrument containing data with blanks to be filled in to make a certificate of deposit; directions that the amount deposited for which the certificate is issued be credited to a pooled account; and an order for the withdrawal of the deposit good only when signed by the depositor and a person authorized to act for the pooled account, substantially as set forth.

2. A banking system blank for a negotiable instrument containing data with blanks to be filled in to make a certificate of deposit; directions that the amount deposited be credited to a pooled account; an order for the withdrawal of the deposit good only when signed by the depositor and a person authorized to act for the pooled account; and a stub receipt having a form on which the person authorized to act for the pooled account may receipt to the depositor for the certificate of deposit, substantially as set forth.

3. A blank form for a negotiable instrument for use in a pooled banking account containing data with blanks to be filled in to make a certificate of deposit to the individual members of the pool; directions that the amount

deposited be credited to the pooled account; an order for the withdrawal of the deposit good only when signed by the depositor and a person authorized to act for the pooled account; a stub provided with a blank form for a receipt to be given by the person acting for the pooled account to the owner of the certificate of deposit; and a statement thereon of the interest at a given rate expressed in even cents for specified periods, substantially as set forth.

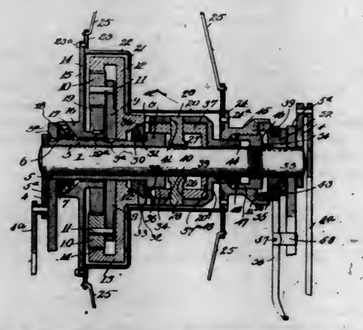
4. In a banking system, a blank form for use in pooled accounts containing data with blanks to be filled in to make a certificate of deposit; information expressing the interest at a given rate in even cents for specified periods; authority to credit the deposit to the pooled account; and an order for the withdrawal of the deposit plus earned interest good only when signed by the depositor and one authorized to act for the pooled account, substantially as set forth.

5. In a banking system for the accommodation of pooled accounts, blanks therefor including a certificate of deposit for each individual showing the amount deposited; directions to credit the amount to the pooled account; an order for withdrawal; and a receipt made for the certificate of deposit to be given by a person representing the pooled account, substantially as set forth.

[Claim 6 not printed in the Gazette.]

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1,225,544. BICYCLE-GEARING. FRANK VEEDER WHITMAN, Walkerville, Mont. Filed Jan. 5, 1911. Serial No. 600,925. (Cl. 208—57.)



1. In a bicycle, the combination with the rear axle, of a two part casing forming a hub for the rear wheel in which the axle is journaled, a sleeve journaled on the axle at one end and rigid with the frame, a cross head fixed on the sleeve, a pinion journaled at each end of the cross head, a gear ring rigid with the hub with which the pinions mesh, a crown wheel having a hub journaled on the sleeve and meshing with the pinions, the hub of the said wheel having its end internally beveled, and having clutch teeth at the said end, a brake ring having the end adjacent to the crown wheel beveled and coöperating with the beveled surface of the said wheel, a plurality of concentric sleeves journaled on the axle, each sleeve having the end adjacent to the crown wheel provided with clutch teeth for coöperating with the teeth of the brake ring and of the crown wheel hub, respectively, each sleeve having a spiral slot intermediate its ends, the slots of the respective sleeves being oppositely arranged, a pair of oppositely arranged arms extending radially from the axle and engaging the slots, the hub of the rear wheel having clutch teeth at the end remote from the crown wheel, a collar slidable on the axle and keyed thereto, and having clutch teeth coöperating with the teeth of the hub, means for operating the collar, and means to turn the axle.

2. In combination with the rear axle and the rear wheel, of a hub for the rear wheel journaled on the axle and having clutch teeth at one end, a collar having clutch teeth for coöperating with the teeth of the hub slidable on the axle and keyed thereto, means for shifting the collar, a cross head rigid with the frame of the bicycle, a gear ring rigid with the hub adjacent to the cross head, a pinion journaled at each end of the cross head and meshing with the gear ring, a crown wheel journaled on the axle and meshing with the pinions, a sleeve on the axle, said sleeve and crown wheel having interengaging clutch parts, a connection between the sleeve and the axle for moving said sleeve toward and from the crown wheel when the axle is moved angularly with respect to the sleeve, a braking device for the crown wheel, and means for operating said device simultaneously with the sleeve and in the opposite direction.

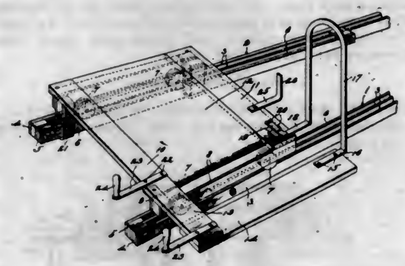
5. In a bicycle, a rear axle, means for rotating the axle, a wheel having a hub encircling the axle, a gear ring rigid with the hub, a fixed bar rigid with the frame, a pinion on each end thereof and meshing with the gear ring, an internal gear meshing with the pinions, a clutch for connecting the internal gear to the axle, and means operated by the angular movement of the axle for operating the clutch.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,545. SAW-TABLE AND TRACK. WILLIAM J. WHITAKER, Reeds, Mo. Filed Apr. 13, 1915, Serial No. 21,092. Renewed Oct. 21, 1916. Serial No. 127,034. (Cl. 143—52.)

A saw table comprising a pair of end bars, one of said end bars extending beyond the other, side bars connecting the end bars, said side bars comprising a pair of spaced strips held in spaced parallel relation by blocks, guide rollers journaled between the strips and near the end bars, U-shaped brackets secured to one of the side bars to prevent the table from tipping, the longer end bar extending beyond the plane of the opposite side bar, a platform supported on the side bars and extending between the end bars, a forwardly-extending bar secured to the extension of the longer end bar and projecting in a plane parallel with the side bars, the ends of said forwardly-extending bars being in the same plane with the



ends of the side bars, the said bar being positioned in a plane beneath the upper face of the platform, and an inverted U-shaped bracket connecting the forward end of the forwardly-extending bar with the foremost end bar, said bracket being adapted to accommodate a saw when the carriage is moved forwardly.

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1,225,546. MUSIC-LEAF TURNER. BENJAMIN F. WILLIAMS, Grand Rapids, Mich. Filed Oct. 29, 1915, Serial No. 58,620. Renewed Apr. 3, 1917. Serial No. 159,522. (Cl. 84—17.)



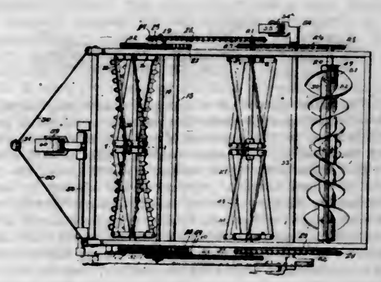
1. In a music leaf turner having leaf carrying arms and a rocking spindle, an arm turning element consisting of a dome mounted slidably on the spindle for rotation therewith, said dome having a notch extending through an arc of approximately 180 degrees, said notch engaging the leaf carrying arms.

2. A leaf turning device comprising a plurality of leaf carrying arms supported pivotally in approximately vertical series, a rock shaft having a double spiral groove, a spring retracted sleeve slidably engaging the rock shaft and having means to engage the double spiral groove therein, means for actuating the sleeve against the tension of its retracting spring, and a dome having a sleeve slidably engaging the rock shaft and feathered thereon for rotation therewith, said dome having an approximately triangular notch engaging the topmost leaf carrying arm and extending through an arc of approximately 180 degrees.

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1,225,547. ROAD-MAKING MACHINE. AUGUSTUS C. WILLSON, Des Moines, Iowa. Filed Mar. 27, 1916. Serial No. 87,109. (Cl. 37—50.)

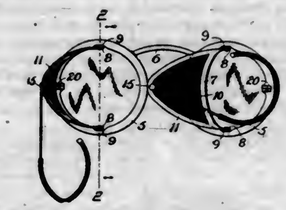
1. In a device of the class described, a frame, a transverse shaft mounted therein, a plurality of bars, means for adjustably mounting said bars on said shaft for varying the positions of the ends of the bars radially of the shaft and also in circles around the shaft, whereby the total diameter of the device formed by said bars may be varied, and whereby the angles at which they approach the ground may be varied, and digging devices mounted on said bars.



2. In a device of the class described, a frame mounted on suitable devices, whereby said frame may be carried over the ground, forward and rearward rotatable shafts mounted in said frame, adjustable digging devices mounted on the forward shaft, adjustable cutting devices mounted on the rearward shaft, adapted to move dirt upon the longitudinal center of the path over which the machine travels, a source of power, and means for operatively connecting said shafts therewith.

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1,255,548. EYE-SHIELD SPECTACLES. FREDERICK WILLSON and NUMA BOURQUIN, Reading, Pa., assignors to T. A. Willson & Co., Inc., Reading, Pa., a Corporation of Pennsylvania. Filed Jan. 15, 1915. Serial No. 2,301. (Cl. 2—149.)



1. A spectacle frame having eye-wires, curved eye shields hingedly connected to approximately diametrically opposite sides of the respective eye-wires, and temples attached only to said hinged shields.

6. A spectacle frame having eye-wires, curved eye shields hingedly connected to opposite sides of the respective eye-wires, and temples pivotally attached to the respective shields and adapted to fold back upon, and extend beyond the pivot portion of, the folded shields.

7. A combined eye shield and temple for spectacles, said shield having a semi-circular base bar formed with pivoting terminals, and said temples being pivotally and detachably connected to said shield so as to swing laterally thereon.

8. A frame having eye-wires provided with lateral detents, eye-shields pivotally connected with the respective eye-wires at substantially diametrically opposite sides and having means arranged to be engaged by said detent, and temples carried by said eye-shields and projecting outwardly from the free edge thereof.

10. As an article of manufacture, a combined eye-shield and temple for goggles, comprising an ovate frame having separate points of pivotal engagement and a reticulated web extending over the space included within said frame and a flexible ear engaging piece fixed to the edge of the frame.

[Claims 2 to 5, 9, 11, and 12 not printed in the Gazette.]

**1,225,549.** AUTOMOBILE RUNWAY AND LIFT. ANDREW A. WINER, Ocala, Fla. Filed Sept. 22, 1916. Serial No. 121,633. (Cl. 254—88.)



1. The combination of a runway comprising parallel members having oppositely located sets of inclined portions pitched in the same direction, a vehicle elevating truck mounted for movement longitudinally of said members and embodying truck wheels movable along the inclined portions thereof, friction shoes carried by said truck having inclined friction faces, inclined friction tables adapted to be engaged by the friction faces of said shoes and to support said shoes and the weight imposed thereon, and means for raising and lowering said friction tables comprising a rock shaft common to both tables.

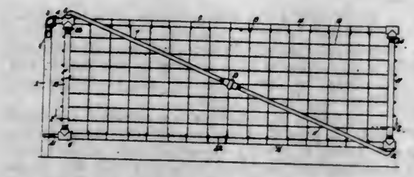
2. The combination of a runway comprising parallel members having oppositely located sets of inclined portions pitched in the same direction, a truck mounted for movement longitudinally of said members and embodying truck wheels movable along the inclined portions thereof, friction shoes carried by said truck having inclined friction faces, inclined friction tables adapted to be engaged by the friction faces of said shoes and to support said shoes and the weight imposed thereon, means for raising and lowering said friction tables comprising a rock shaft common to both tables, and springs arranged under said tables and exerting an upward pressure against the same.

3. The combination of a runway comprising parallel members having oppositely located sets of inclined portions pitched in the same direction, a vehicle elevating truck mounted for movement longitudinally of said members and embodying truck wheels movable along the inclined portions thereof, friction shoes carried by said truck having inclined friction faces, inclined friction tables adapted to be engaged by the friction faces of said shoes and to support said shoes and the weight imposed thereon, means for operating said friction tables comprising a rock shaft common to both tables, arms fast on said rock shaft, links pivotally connected at one end to said arms and directly pivoted at their other ends to the tables, and means for operating said rock shaft.

4. The combination of a runway comprising parallel members having oppositely located sets of inclined portions pitched in the same direction, a truck mounted for movement longitudinally of said members and embodying truck wheels movable along the inclined portions thereof, friction shoes carried by said truck, inclined friction tables adapted to be engaged by said friction shoes and to support said shoes and the weight imposed thereon, means for operating said friction tables comprising a rock shaft common to both tables, arms on said rock shaft, pivotal links connecting said arms directly with the tables, means for operating said rock shaft, buffers on said runway members, and projections on said truck adapted to strike against said buffers in the return movement of the truck.

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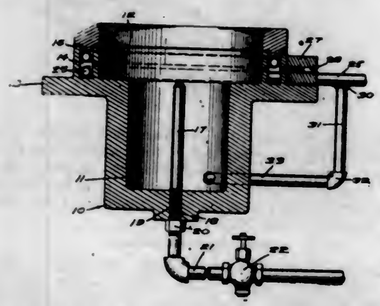
**1,225,550.** GATE. CHRISTIAN WINTER, Oskaloosa, Iowa. Filed Dec. 1, 1916. Serial No. 134,289. (Cl. 256—73.)



A gate comprising a frame provided with longitudinal members, a pair of end members connected with said longitudinal members, said end members each having a right hand thread at one end and a left hand thread at the other end whereby upon the rotation of the end members the longitudinal members will be adjusted, a plurality of vertical wires connecting the longitudinal members, and a plurality of longitudinal wires connected with said end members, said longitudinal wires being partially wound on the end members on the same side whereby one end member may cause the longitudinal wires to be loosened when spreading said longitudinal members and the opposite end member tighten said longitudinal wires when spreading said longitudinal members.

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**1,225,551.** CRUDE-OIL BURNER. HARRY WOOD, Santa Barbara, Cal. Filed July 6, 1916. Serial No. 107,769. (Cl. 158—92.)



1. A liquid fuel burner, comprising a vertically disposed cylindrical mixing chamber open at the top, a tubular combustion chamber thereabove and co-axial therewith, a vertically extending liquid fuel inlet pipe within said mixing chamber, an air inlet nozzle horizontally disposed and tangential to the lateral walls of said mixing chamber for supplying air thereto.

2. A liquid fuel burner, comprising a vertically disposed cylindrical mixing chamber open at the top, a tubular combustion chamber thereabove and co-axial therewith, said combustion chamber having a greater diameter than said mixing chamber, a vertically extending liquid fuel inlet pipe within said mixing chamber, an air inlet in the lower end of said mixing chamber adapted for supplying air in a horizontal plane and tangential to the wall of said mixing chamber, and means incorporated within the burner whereby the air delivered to said air inlet is pre-heated.

3. A liquid fuel burner comprising a vertically disposed tubular mixing chamber, an enlarged tubular combustion chamber thereabove and co-axial therewith, a pre-heating coil adapted to surround said combustion chamber, an air pipe connected to said pre-heating coil, an air nozzle in communication with said air pipe and adapted to project through the wall of the mixing chamber and to extend horizontally and tangentially to the lateral wall thereof, a fuel supply pipe adjustably mounted to the bottom wall of the mixing chamber, and to extend vertically therefrom to a point adjacent to and below said combustion chamber.

4. A liquid burner comprising a vertically disposed tubular mixing chamber, an enlarged combustion chamber thereabove and co-axial therewith, means incorporated in said burner for pre-heating air, an air pipe connected to said means, an air nozzle in communication with said air pipe and projecting through the wall of the mixing chamber and adapted to deliver a current of air tangentially to the wall of said mixing chamber, a vertically adjustable fuel supply pipe having its outlet located adjacent and below said combustion chamber, and means connected to said air pipe for delivering air under pressure.



**1,225,552.** KNIFE-SETTING GAGE. FREDERICK J. WUESTHOFF, San Francisco, Cal. Filed May 17, 1916. Serial No. 98,052. (Cl. 33—185.)



1. The combination with a cutter head and its blade, of means for setting and gaging the blade including gage plates adjacent opposite ends of the blade, each of said plates having a surface movable into firm even contact with the periphery of the cutter head and also having a gage surface overlying and bearing upon the outer edge of the blade, and pressure means including a screw carried by each gage plate for forcing its first mentioned surface against the cutter head.

2. The combination with a cutter head and its blade, of means for setting and gaging the blade including gage plates adjacent opposite ends of the blade, each of said plates having a surface movable into firm even contact with the periphery of the cutter head and also having a gage surface overlying and bearing upon the outer edge of the blade, and relatively engaging means carried by the cutter head and each gage plate whereby to maintain said gage plates in uniform relation to the cutter head and to the blade.

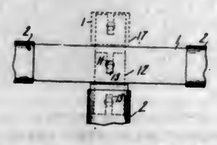
3. The combination with a cutter head and its blade, of means for setting and gaging the blade including gage plates adjacent opposite ends of the blade, each of said plates having a surface movable into firm even contact with the periphery of the cutter head and also having a gage surface overlying and bearing upon the outer edge of the blade, and means whereby to maintain said gage plates in uniform relation to the cutter head and to the said blade.

4. The combination with a grooved cutter head and its blade adjustable in the groove, of springs in the groove inwardly against which the blade is movable to set position, and gage plates for bearing against the outer edge of the blade adjacent opposite ends thereof, having surfaces movable into firm even contact with the periphery of the cutter head, to limit inward adjustment of the blade.

5. The combination with a grooved cutter head and its blade adjustable in the groove, of springs in the groove inwardly against which the blade is movable to set position, gage plates having gage surfaces bearing against the outer edge of the blade adjacent opposite ends thereof, and means whereby to force the said gage plates into firm even contact with the periphery of the cutter head whereby to move the blade to set position against the tensions of the said springs.

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**1,225,553.** ELECTRICAL CONDUIT. CHAUNCEY W. ABBOTT, Auburn, N. Y., assignor to The American Conduit Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 22, 1914. Serial No. 846,567. (Cl. 247—S.)



1. A joint for electrical conduits, comprising a pair of substantially flat base sections disposed at an angle one to the other and lying with the end of one base section in immediate proximity to the other base section, said base sections being provided with edge portions closely spaced from and substantially parallel to the supporting surfaces by which they are carried, and a cover member of resilient material having portions of general U- or channel-shaped cross section lying at an angle to each other, each portion thereof having its edges turned inwardly to lie around the edges of the base sections.

2. A joint for electrical conduits, comprising a pair of substantially flat base members having edge portions closely spaced from and substantially parallel to a supporting surface, one of said members having an end thereof lying in proximity to a lateral edge of the other member, and a cover member of resilient material having portions of general U-shaped cross section lying at an angle to each other, each portion thereof having its edges turned inwardly to engage over the edges of the base members.

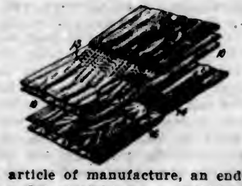
3. A joint for electrical conduits, comprising a pair of substantially flat base members having edge portions closely spaced from and substantially parallel to a supporting surface, one of said members abutting endwise against an edge of the other member, and a cover member of resilient material having portions of channel or bow shape in cross section lying at an angle to each other, each portion thereof having its edges turned inwardly to engage over the edges of the base members.

4. A joint for electrical conduits, comprising a pair of substantially flat base members closely spaced from and substantially parallel to a supporting surface, one of said members abutting endwise against an edge of the other, a coupling plate uniting said base members, and a cover member of resilient material and comprising a body of general U, channel or bow shape in cross section and having edge portions turned inwardly to engage over the edges of said base members.

5. A joint for electrical conduits, comprising a pair of substantially flat base members lying in the same plane and having edge portions closely spaced from and substantially parallel to a supporting surface, one of said members abutting endwise against a side edge of the other, cover members engaging with said base members, and a joint cover member having portions at an angle to each other and whose edges engage with the edges of said cover members.

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**1,225,554.** ENDLESS-WEB BELT. WILLIAM ACHTMEYER, Middletown, Conn. Filed July 10, 1916. Serial No. 108,434. (Cl. 74—63.)



1. As an article of manufacture, an endless web belt, comprising a flat straight woven webbing rolled up to form an endless band of a plurality of superimposed layers, the webbing having its warp threads projecting beyond each end, the projecting warp threads of the ends of the webbing passing through the adjacent layers of the webbing and extending lengthwise between adjacent superimposed layers.

2. As an article of manufacture, an endless web belt, comprising a piece of webbing formed into superimposed layers and having each end provided with projecting warp threads, certain of the layers of the webbing being provided with transverse rows of holes through which extend the projecting ends of the warp threads, the said projecting warp thread ends extending lengthwise between adjacent superimposed layers to join each end of the webbing to a layer thereof.

3. As an article of manufacture, a many-ply endless web belt, comprising a single piece of single-ply webbing rolled up into an endless band having a body of a plurality of superimposed layers, the ends of the webbing

having projecting warp threads, each layer next to an end of the webbing having a transverse row of holes through which the projecting warp threads of said end extend lengthwise in a forward direction between the adjacent layers, and longitudinal rows of stitches connecting the several layers of the body with each other.

4. As an article of manufacture, a many-ply endless web belt, comprising a single-piece of single-ply webbing rolled up into an endless band having a body of a plurality of superimposed layers, the ends of the webbing having projecting warp threads and the layer next to each end of the webbing having a transverse row of holes through which the projecting warp threads of said end extend lengthwise in a forward direction between the two adjacent layers, the rows of holes being located approximately opposite each other, and longitudinal rows of stitches connecting the several layers of the body with each other.

5. As an article of manufacture, an endless web belt, comprising a piece of single-ply webbing formed into superimposed layers and having each end provided with projecting warp threads passing through the adjacent layer and extending lengthwise between adjacent superimposed layers, successive warp threads being short and long.

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1,225,555. WEB-FASTENER. WILLIAM ACHTMEYER, Middletown, Conn. Filed July 13, 1916. Serial No. 109,051. (Cl. 74—37.)



1. In combination, a multiply web having an under layer and a wearing layer of greater density than the under layer, a support on which rests the said under layer, the support having an aperture, and a fastener provided with a shank, a head and prongs, the said shank engaging the said aperture, the said head being integral with one end of the said shank and being seated on the said support adjacent the said under layer, and the said prongs extending integrally from the top marginal portion of the head and being driven into the said web, the said prongs prior to being driven into the web being bent slightly outwardly to cause the material of the under layer to compact between the prongs and the head and thereby spread the prongs intermediate the outer and inner faces of the web.

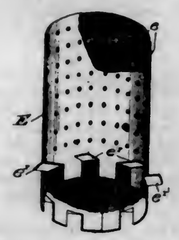
2. In combination, a multiply web, a support on which rests the said web, the support having a countersunk aperture, and a fastener attaching the said web to the said support, the fastener having a shank, a head and prongs, the said shank engaging the aperture, the said head being integral with one end of the shank and having its under side beveled and seated in the countersink of the said aperture, and the said prongs extending integrally from the top marginal portion of the said head and being driven into the said web, the said prongs prior to being driven into the web being bent slightly outwardly to cause the material of the under layer to compact between the prongs and the head and thereby spread the prongs intermediate the outer and inner faces of the web.

3. As an article of manufacture, a metallic fastener for fastening multiply web linings, web blocks and similar web articles to their supports, the fastener having a head, a shank and prongs, the said shank engaging the said support and extending integrally and centrally from the underside of the said head and the said prongs extending integrally from the marginal portion of the top of the said head in a direction opposite to that of the shank, the said prongs being slightly bent outwardly and being adapted to be driven into one face of the web article to compact the web material between the prongs and the head and thereby cause the prongs to spread intermediate the faces of the web article.

4. As an article of manufacture, a metallic fastener for fastening multiply web linings, web blocks and similar web articles to their supports, the fastener having a head, a shank and prongs, the said shank engaging the said support and extending integrally and centrally from the under side of the said head and the said prongs extending integrally from the marginal portion of the top of the said head in a direction opposite to that of the shank, the said prongs being slightly bent outwardly and the outer ends of the prongs being beveled from the inner face upward and outward to the outer face of the prongs, the underside of the said head being beveled and the said prongs being adapted to be driven into one face of the web article to compact the web material between the prongs and the head and thereby cause the prongs to spread intermediate the faces of the web article.

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1,225,556. FLY-CATCHER. JAMES ALLEN, Washington, D. C. Filed Apr. 26, 1916. Serial No. 93,741. (Cl. 43—22.)



1. A fly catcher comprising a receptacle made of non-transparent sheet material open at the bottom and closed at the top and coated on the interior with sticky material, the said receptacle being provided with a series of perforations in its outer walls to permit the passage of light therethrough, and the side walls of said receptacle being provided at their base with a series of tabs bent up so as to form entrance openings for the flies, substantially as described.

2. A fly catcher made of a single semicircular sheet of non-transparent material, bent with its edges overlapping to form a hollow cone, the said sheet being provided on the interior with a coating of sticky material, adapted both to catch the flies and to form a securing means for the overlapping edges forming the joint, and the shell of the said cone being provided with a series of perforations, and the said shell being also provided at its base with a series of tabs bent up so as to form entrance openings for the flies, substantially as described.

3. A fly catcher made of a single semicircular sheet of non-transparent material, provided with a semicircular zone of sticky coating and having a semicircular uncoated band at the outer curved edge thereof, the said sheet being bent to form a hollow cone, and the shell of said cone being provided with a series of perforations to permit the passage of light therethrough, and the shell being also provided at its base with a series of tabs bent up so as to form entrance openings for the flies, substantially as described.

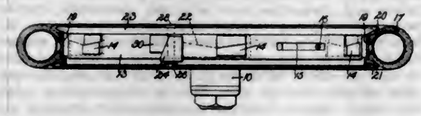
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1,225,557. DEMOUNTABLE RIM. AXEL ALLGRUNN, Dover, N. J. Filed Sept. 14, 1916. Serial No. 120,040. (Cl. 152—21.)

The combination with a relatively fixed rim of solid or unbroken nature throughout its circumference, a series



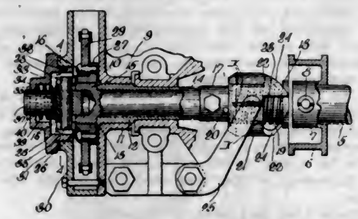
of equally spaced lugs carried by the outer surface of said rim, each lug having two parallel offset surfaces eccentric to the rim, one of these surfaces pertaining to a projection of flared form, the wider portion thereof being at the same end as the thicker portion, of a relatively movable rim surrounding the fixed rim, a series of wedges carried by the inner surface of the movable rim and spaced similarly to the spacing of the lugs aforesaid, each wedge having a plurality of parallel surfaces eccentric to the wheel and having a shoulder extending circumferentially



of the wheel between said two surfaces and adapted to interlock with the offset portion of an adjacent lug, an abutment secured to the fixed rim between two of the lugs thereof, a binding wedge movable transversely of the wheel between said abutment and one of the wedges of the movable rim, and screw operated means to cause said binding wedge to move positively in either direction, as and for the purposes set forth.

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1,225,558. STARTING DEVICE. FRED ALLISON, Detroit, Mich., assignor to A. B. C. Starter Company, Detroit, Mich., a Corporation of Michigan. Filed June 26, 1916. Serial No. 105,971. (Cl. 74—5.)



1. Starting mechanism of the nature described comprising an engine crank shaft, a starter shaft in alinement with said crank shaft, coupling means actuated in one direction through rotation of said starter shaft, power transmitting means having a terminal member, and releasable means for fixedly connecting said terminal member with said starter shaft.

2. Starting mechanism of the nature described comprising an engine crank shaft, a starter shaft in alinement with said crank shaft and adapted to be operated by a crank, a coupling clutch for said shafts, a power transmitting gear rotatable about the axis of said starter shaft, and releasable means to fixedly connect said gear with said starter shaft.

3. Starting mechanism of the nature described comprising an engine crank shaft, a starter shaft, means automatically to couple and uncouple said shafts, a means adapted to be manually operated to rotate said starter shaft, a power transmitting means rotatable on said starter shaft, and releasable means to fixedly connect said transmitting means and said starter shaft.

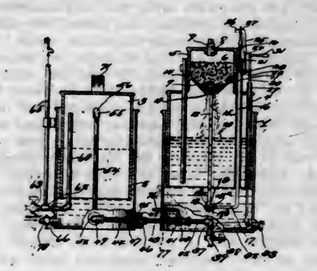
4. Starting mechanism of the nature described comprising an engine crank shaft, a starter shaft, means carried by said starter shaft automatically to couple with said crank shaft, a power transmitting means having a member rotatable about the axis of said starter shaft, and releasable means to lock said member to said starter shaft.

5. Starting mechanism of the nature described comprising an engine crank shaft, a starter shaft, means carried by said starter shaft automatically to couple with said crank shaft, a power transmitting means having a member rotatable about the axis of said starter shaft, and rotatable releasable means to lock said member to said starter shaft.

[Claims 6 to 11 not printed in the Gazette.]

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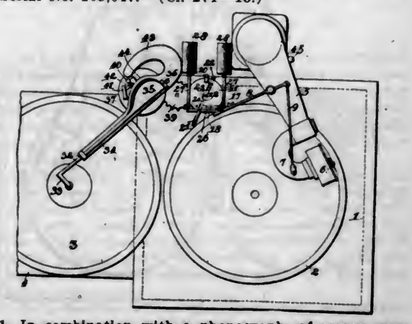
1,225,559. ACETYLENE-GAS GENERATOR. TELESPHORE BABIN, Houma, La. Filed Dec. 12, 1912. Serial No. 736,383. (Cl. 48—44.)



In combination with a bell casing of a gas generator to rise and fall incident to the increase and decrease of gas therein, said casing having a chamber containing gas generating material in its upper end provided with a conical bottom terminating in an opening, said casing having a guide pipe, a rod mounted in said guide pipe and having at its lower end a right angle extending portion, a second rod pivoted to said right angle extending portion and extending through the opening of the conical bottom, and provided with a valve to open and close said opening to control the flow of the gas generating material through said opening, the first rod having its upper end threaded and provided with an aperture at its extremity, a nut engaging the threads of the first rod and to coöperate with the upper end of the guide pipe to lift and assist in holding the first rod in different adjusted positions, said casing having an apertured member, a link pivoted in the aperture of said member, and a tubular rod threaded to said link and having at its upper end a hook to engage the aperture at the upper end of the first rod, to hold the nut in contact with said guide pipe, to secure the valve in different adjusted opened positions.

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1,225,560. ATTACHMENT FOR PHONOGRAPHS. FRANK LEE BARROWS, Moscow, Idaho. Filed July 13, 1916. Serial No. 109,047. (Cl. 274—15.)



1. In combination with a phonograph, of means operated by the motor of the phonograph and controlled by the position of the needle, for lifting the reproducer, moving the reproducer arm to commencing position and lowering the reproducer into playing position, said means comprising a lever pivoted to the reproducer arm, a link connecting one end of the lever to the reproducer support for lifting the reproducer when the lever is swung in the proper direction, a cam disk, a connection between the

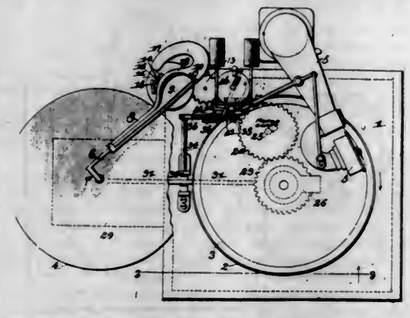
motor and the cam disk for operating the same, a trip lever for normally holding the said connection out of engaging position, and in position to be engaged by the other end of the reproducer supported lever when the needle is at the end of the record for swinging the said trip lever to release the connecting mechanism, said lever having a notch at the said end and a disk having a pin for engaging the notch to first swing the lever to lift the reproducer, and afterward move the lever and the reproducer to commencing position, and means for cushioning the movement of the reproducer toward the record.

2. In combination with a phonograph, of means operated by the motor of the phonograph and controlled by the position of the needle for lifting the reproducer, moving the reproducer arm to commencing position and lowering the reproducer into playing position, such means comprising a lever pivoted to the reproducer arm, a link connecting one end of the lever to the reproducer support for lifting the reproducer when the lever is swung in the proper direction, a cam disk, a connection between the motor and the cam disk for operating the same, a trip lever for normally holding the said connection out of engaging position, and in position to be engaged by the other end of the reproducer supported lever when the needle is at the end of the record for swinging the said trip lever to release the connecting mechanism, said lever having a notch at the said end and a disk having a pin for engaging the notch to first swing the lever to lift the reproducer, and afterward move the lever and the reproducer to commencing position.

3. In a combination with a phonograph, of means operated by the motor of the phonograph and controlled by the position of the needle for lifting the reproducer, moving the reproducer arm to commencing position and lowering the reproducer into playing position, such means comprising a lever pivoted to the reproducer arm, a link connecting one end of the lever to the reproducer support for lifting the reproducer when the lever is swung in the proper direction, a cam disk, a connection between the motor and the cam disk for operating the same, means for normally holding the said connection out of engaging position and in position to be engaged by the other end of the reproducer supporting lever when the needle is at the end of the record, for operating the said means to release the connecting mechanism.

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1,225,561. ATTACHMENT FOR PHONOGRAPHS. FRANK L. BARROWS, Moscow, Idaho. Filed Nov. 16, 1916. Serial No. 131,689. (Cl. 274—10.)



1. In combination with a phonograph, of means operated by the motor of the phonograph and controlled by the position of the needle for removing the record, said mechanism comprising an arm having an angular lug provided with a depending pin for engaging the opening of the record, and counter-balanced to normally engage the said opening, a cam plate on which the arm is journaled, said arm having a laterally extending cam portion, a cam disk normally disconnected from the motor and having a cam for engaging the cam of the removing arm to lift the pin out of engaging position, and having a pin for engaging the cam plate to swing the arm with the pin over the opening of the topmost record and to swing the arm with the topmost record away from the turn table, and means controlled by the movement of the reproducer for connecting the said cam with the motor.

2. In combination with a phonograph having a vertically movable turn table for supporting a series of superposed records to be played in succession, a receiving table adjacent to the turn table, a lever pivoted between the tables and supporting and balancing the tables, the receiving table being counter-weighted to overbalance the turn table and a series of superposed records, an escapement device in connection with the lever, means controlled by the movement of the reproducer for moving the topmost record from the turn table to the receiving table, and means operated by the reproducer for releasing the escapement before a record has been removed to the receiving table.

3. In combination with a phonograph having a vertically movable turn table for supporting a series of superposed records to be played in succession, a receiving table adjacent to the turn table, a lever pivoted between the tables and supporting and balancing the tables, the receiving table being counter-weighted to overbalance the turn table and a series of superposed records, an escapement device in connection with the lever, and means controlled by the movement of the reproducer for releasing the escapement.

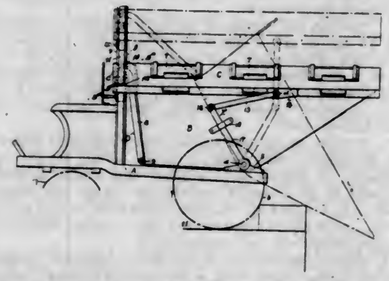
4. In combination with a phonograph having a vertically movable turn table for supporting a series of superposed records to be played in succession, a receiving table adjacent to the turn table, a connection between the tables for balancing the same, means controlled by the movement of the reproducer for moving the said tables, and means controlled by the movement of the reproducer for removing the records in succession from the turn table to the receiving table.

5. In combination with a phonograph having a vertically movable turn table for supporting a series of superposed records to be played in succession, a receiving table adjacent to the turn table, and a connection between the tables for balancing the same, and means controlled by the movement of the reproducer for moving the said tables.

[Claim 6 not printed in the Gazette.]

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1,225,562. COLLECTION-WAGON. HERMAN BAUMAN and ISRAEL TEITELBAUM, New York, N. Y. Filed Nov. 30, 1914, Serial No. 874,676. Renewed Apr. 5, 1917. Serial No. 159,982. (Cl. 21—20.)



1. A vehicle of the class described comprising a wheel-supported frame, a pivoted rear dumping body mounted on the frame, a cover for the top of the body and having a vertical movement of translation, means on the frame for maintaining the cover in a horizontal position during its opening and closing movement, and means for bodily raising the cover off the body as the latter tilts from normal to dumping position.



3. A vehicle of the class described comprising a wheel-supported frame, fixed guides at the front thereof, a rear dumping body mounted on the frame, a cover movable up and down at the top of the body, means connected with the cover and movable along the guides, link means between the front of the body and the said means for raising and lowering the front of the cover as the body moves to and from dumping position, and means connected with the rear portion of the cover and acted on by the said body to raise and lower the rear portion of the said cover as the body moves to and from dumping position.

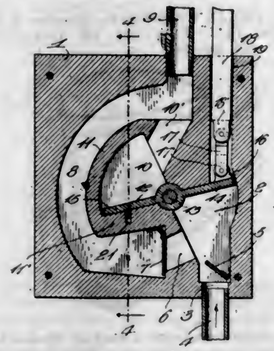
5. A vehicle of the class described comprising a supporting frame, a pivoted body thereon, a cover for the body, a guide on the frame, an element movable longitudinally of the guide and connected with the cover, and a link connected with the said element and the body for causing simultaneous movement of the body and cover.

7. A vehicle of the class described comprising a wheel-supported frame, a swinging rear dumping body open at its top, a unitary cover for the top of the body, guide means fixed on the frame, means on the cover engaging the guide means, whereby the cover is confined to an up and down movement and prevented from having lateral or longitudinal movement, links pivotally connected with the front of the body and connected with the cover for raising and lowering the latter as the body moves, additional links connected with the cover, and arms connected with the links and movable with the body.

[Claims 2, 4, and 6 not printed in the Gazette.]

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1,225,563. PUMP. SAMUEL E. BELLAH, Chiricahua, Ariz., assignor of one-half to Timothy Perkins Blevins, Chiricahua, Ariz. Filed Mar. 23, 1916. Serial No. 86,229. (Cl. 103—73.)

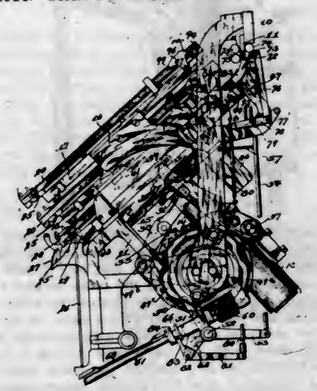


1. A suction pump comprising a pump body, main and auxiliary segmental piston chambers in said body and having their curved sides formed around the same axis, a main and an auxiliary piston rigidly joined and mounted on a common pivot, said pistons being disposed respectively in said main and auxiliary chambers, an inlet into the lower end of the main chamber having a check valve opening into the latter, a piston rod slidable in said body and connected to the main piston, a passage formed in the body from a point adjacent the main chamber and extending around the auxiliary chamber to a point adjacent the upper end of the body, an outlet pipe communicating with the upper end of said passage, a port establishing constant open communication between said end of the passage and the upper end of the auxiliary chamber, an unobstructed air vent from the lower end of said auxiliary chamber, and a port leading from the main chamber into the lower end of said passage and having a check valve opening into the latter.

2. A suction pump comprising a flat body disposed in a vertical plane and having formed in one side a segmental main piston chamber and a segmental auxiliary piston chamber, each having its curved wall formed around the same axis, said side also having formed therein a passage leading from a point adjacent said main chamber around said auxiliary chamber to a point adjacent the upper end of the body, an outlet pipe rising rigidly from said body and communicating with the upper end of said passage, a port establishing constant open communication between said end of the passage and the upper end of the auxiliary piston chamber, a port leading from the main piston chamber into the lower end of said passage and having a check valve opening into the latter, an inlet into the lower end of said main chamber having a check valve opening into the same, a main and an auxiliary piston joined rigidly and received respectively in the main and auxiliary chambers, said pistons being mounted on a common pivot, a vertical piston rod connected to said main piston, said side of the body having a vertical groove slidably receiving said rod, and a cover plate secured over said side of the body and closing the two chambers, the aforesaid passage and said groove.

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1,225,564. TYPOGRAPHICAL MACHINE. WILLIAM E. BERTRAM, Brooklyn, and THOMAS S. HOMANS, Hempstead, N. Y., assignors to Intertype Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 17, 1914. Serial No. 812,779. (Cl. 199—7.)



1. In a machine of the class described, the combination of a plurality of magazines, a set of upwardly projecting escapement actuating rods, and single means operative to alternately effect movement bodily of all the magazines and to effect relative movement between certain of said magazines to bring any one of said magazines into operative position above the escapement actuating rods.

2. In a machine of the class described, the combination with escapement actuating means, of a magazine frame, and a plurality of magazines carried thereby, certain of said magazines being movable relatively to the others to carry the escapements thereof into or out of operative position above said actuating means, and the magazine frame being movable to shift the magazines bodily.

3. In a machine of the class described, the combination with escapement actuating means, of a magazine frame, and a plurality of magazines carried thereby, certain of said magazines being slidable in said frame and independently of the other magazines therein to shift the magazine escapements to and from operative position above the escapement actuating means, the magazine frame being movable to shift the magazines therein bodily.

4. In a machine of the class described, the combination with escapement actuating rods, of a plurality of

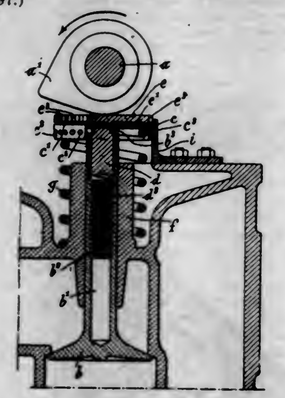
magazines, a frame therefor movable perpendicularly to the planes of said magazines, and single means operative to alternately effect such movement of the magazine frame and to effect independent movements of certain of said magazines to move them to and from a position above the escapement actuating rods.

5. In a machine of the class described, the combination of escapement actuating rods, a plurality of magazines, and means for shifting the magazines bodily in a direction transverse to the planes thereof and for shifting certain of said magazines longitudinally and independently of the others, to move the escapements thereon to and from a position above the escapement actuating rods.

[Claims 6 to 13 not printed in the Gazette.]

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1,225,565. VALVE-GEAR. MARC BIRKIGT, Bois-Colombes, France. Filed June 21, 1915. Serial No. 35,383. (Cl. 121—97.)



1. A valve gear comprising a valve stem formed of two telescopically associated adjustable sections, the one section having a head on the upper free end thereof and a lower screw-threaded stem and the other section tubular and interiorly screw-threaded to receive the stem of the other section and also provided with a valve on the lower end of the same, a non-rotatable disk mounted on the section provided with the valve and having a vertical sliding movement on said section, the lower side of the head and the upper side of the disk being respectively provided with interlocking teeth, and resilient means engaging the under side of the disk and a part of the valve gear for holding said valve upon its seat and forcing said disk against the head whereby the teeth of the head and disk are caused to engage to lock the valve stem sections in adjusted positions.

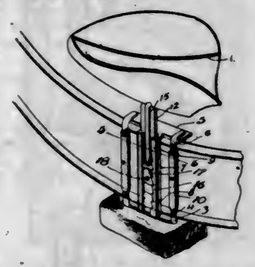
2. A valve gear comprising a valve stem composed of two adjustable sections, one of the sections being tubular and threaded and the other movable in the tubular one, the tubular section having a valve on its lower end and the remaining section being provided with a head on its upper free end, a non-rotatable slidable disk on the stem adjacent to the said head, beveled teeth being formed on the adjacent opposing sides of the disk and head, spring means engaging the disk and a suitable abutment and operating to normally seat the valve and force the toothed sides of the disk and head into engagement to lock the valve stem sections in adjusted positions, the disk and head being formed with means for adjustably turning one with relation to the other.

3. The combination with a valve seat, of a valve stem having a valve normally held in closed position against the said seat, the valve stem comprising two adjustable sections, one section carrying the valve and of elongated tubular form with interior threads and the other section also threaded and adjustably fitted in the tubular section and carrying a disk head on its free upper end, the said disk head being provided with peripheral spaced operating means, a non-rotatable disk slidably associated with the tubular portion of the stem and held adjacent to the said head, the disk being also provided with peripheral operating means, the spaced operating means of the head and the peripheral operating means of the non-rotatable disk providing means for turning one of these devices relatively to the other to effect the adjustment, the disk and head on their adjacent faces having interlocking teeth, and a spring surrounding said valve stem and engaging the disk and an abutment forming part of the valve seat organization and exerting a tension to normally seat the valve and force the teeth of the slidable disk into engagement with the teeth of the head to lock the valve stem sections in adjusted positions.

4. The combination of a valve seat having an upstanding guide, a valve normally closed against said seat and having a stem comprising two adjustable sections, one being tubular and threaded and the other threaded and shiftable in the tubular section, the valve being carried by the tubular section and the remaining section having an enlarged head at its upper end, a non-rotatable disk slidably mounted on the valve stem and engaging the tubular section and held adjacent to the said head, the head and disk being provided with interlocking teeth on their adjacent faces and both the head and disk engaging the upstanding guide, the said guide serving to brace the head and disk and maintain the latter in proper vertical alinement, and a spring engaging a part of the valve seat and the said disk to effect an interlock of the teeth of the head and disk and maintain the sections of the valve stem in locked adjusted positions, the head and disk being provided with peripheral means whereby one may be turned relatively to the other in effecting the adjustment of the valve.

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1,225,566. VIOLIN CHIN-REST. ARTHUR R. BOLES, Indianapolis, Ind. Filed Oct. 11, 1916. Serial No. 125,081. (Cl. 84—74.)

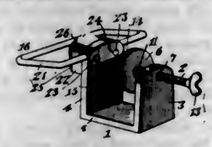


1. In a violin chin rest, attaching means embodying clamping jaw members, one of said members being provided with a channeled guide and the other member having a resilient bowed shank slidably fitting within the guide, means for relatively adjusting the members, a chin plate, and a supporting post for the plate slidably fitting the said channeled guide, the said bowed shank bearing frictionally against the said post.

2. In a violin chin rest, attaching means embodying clamping jaw members, means for relatively adjusting the members, one of said members having a channeled guide, the side walls of the channel having inwardly extending flanges and the edge of one flange being formed with rack teeth, the other member having a bowed shank fitting within the channeled guide with its bowed side presented toward the said flanges, a chin plate, a supporting post for the plate slidably fitted within the channeled guide between the inner sides of the said flanges and the said bowed shank and frictionally engaged by the said shank, and a pawl upon the shank coacting with the said rack teeth.



1,225,567. HEAD-REST HANGER FOR BARBERS' CHAIRS. ANTONIO BONGIOVANNI, Barnesboro, Pa., assignor of one-half to Harry Greenwood, Barnesboro, Pa. Filed Aug. 31, 1914, Serial No. 859,336. Renewed Feb. 8, 1917. Serial No. 147,508. (Cl. 155—26.)



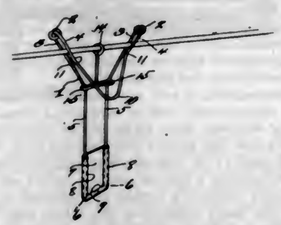
1. The combination with a chair frame, of a clamp consisting of a stationary and a movable jaw for fastening the clamp to the frame, a frame connected to the stationary jaw, and a block removably connected to the stationary jaw, said block and last mentioned frame being adapted to support a head rest when not in use.

2. A head rest hanger for barbers' chairs comprising an approximately U-shaped clamp provided at its inner side with adjusting means, an open frame extending outwardly from the outer side of the clamp and adapted to receive the rack or bar of a head rest, and a block or member located within the frame and fitted against and detachably interlocked with the outer side of the clamp.

3. A head rest hanger for barbers' chairs including a clamp adapted to engage a barber's chair and provided with an exterior jaw or portion, an open frame extending downwardly from the said exterior jaw or portion at an inclination, and a removable block or member arranged within the frame and detachably interlocked with the exterior jaw or portion of the clamp, said block comprising an inclined outer face.

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1,225,568. CLOTHES-PIN. WILLIE A. BOYNTON, Newcastle, Tex., assignor of one-half to Geo. A. Terrell, Newcastle, Tex. Filed Sept. 14, 1916. Serial No. 120,076. (Cl. 24—139.)

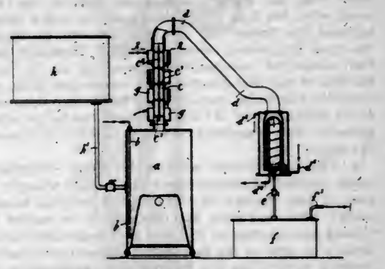


1. A clothes pin constructed from a single piece of spring wire bent to form spaced opposing spring coils, the wire portions beyond each coil forming clamping jaws, the corresponding jaws of both pairs extending downwardly and converging toward each other and being bent and merging into downwardly extending portions, which slightly converge toward each other, said last named downwardly extending portions having means for securing them together, the other corresponding jaws of each pair extending downwardly and converging toward each other and merging together to form a loop extending outwardly and downwardly and having its free end spaced from said last named downwardly extending portion, whereby the clothes line with the clothes thereon may be forced between two pairs of jaws, an anchoring device carried by the clothes line for connecting the clothes pin to the line, and having means for drawing said last named downwardly extending portions toward each other.

2. A clothes pin constructed from a single piece of spring wire bent to form spaced opposing spring coils, the wire portions beyond each coil forming clamping jaws, the corresponding jaws of both pairs extending downwardly and converging toward each other, one pair uniting and forming a loop flared outwardly from the other pair, the second pair having depending extensions which slightly converge and are connected by right angled bends, and an anchoring device having a loop for attachment to the clothes line and loops which engage the depending members of one pair of jaws, so that when the clothes pin is pulled over the ends of two adjacent pieces hung on the line said anchoring device will pull the two sets of jaws together and tend to stretch the pieces which it engages on the line.

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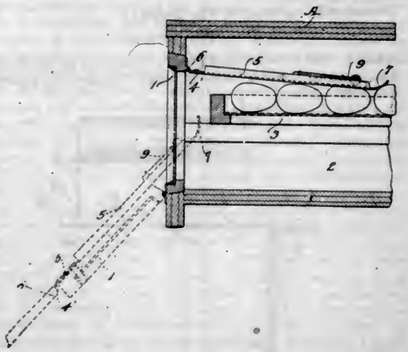
1,225,569. APPARATUS FOR TREATING HEAVY OILS. ERNEST BROWN, London, England, assignor to M. Marie Amédée Henry de Dampierre, Paris, France. Filed Apr. 13, 1915. Serial No. 21,081. (Cl. 196—26.)



Apparatus for treating heavy oils, comprising a boiler for vaporizing the oil to be treated, a pipe extending into the boiler for introducing a current of hydrogen into the lower portion thereof, a conduit through which the vapor passes from the boiler, nickel plates extending transversely of and closing said conduit, said plates having numerous holes therethrough for the passage of the vapor, and a pipe for connecting the outlet end of said conduit to a condenser.

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1,225,570. THERMOMETER-HOLDER FOR INCUBATORS. LUCIUS A. BROWN, Clay Center, Nebr., assignor to The M. M. Johnson Co., Clay Center, Nebr. Filed Mar. 23, 1916. Serial No. 86,211. (Cl. 73—52.)



1. The combination, with an incubator comprising an incubating compartment and a door whereby access may be had thereto, of a thermometer holder disposed in the incubator and loosely connected at one end with the door whereby it will move freely into and from said chamber upon closing and opening the door, the other end of said holder being formed so as to act as a runner so that it may freely skid over eggs in the incubator chamber, and a thermometer mounted on said holder.

2. The combination, with an incubator comprising an incubating compartment and a door whereby access may

be had thereto, of a thermometer holder disposed in the incubator and loosely connected at one end with the door whereby it will move freely into and from said chamber upon closing and opening the door, the other end of said holder being upturned after the manner of a runner whereby to facilitate the movement of this portion of the holder over eggs in the incubator chamber and while engaged with said eggs, and a thermometer supported by said holder, the holder being provided with an opening to permit said thermometer to rest in direct contact with an egg in the incubator chamber.

3. The combination, with an incubator comprising an incubating compartment and a door whereby access may be had thereto, of a thermometer holder disposed in the incubating compartment, a thermometer on said holder for registering the temperature of the eggs in the compartment when the door is in closed position, and a connection between the holder and the door whereby on opening of the door the holder moves outwardly therewith and also has movement independent thereof so as to facilitate reading of the thermometer, said connection being such as to afford additional movement of the holder independently of its movement by the door to carry the holder and thermometer into a position to avoid liability of breakage of the same.

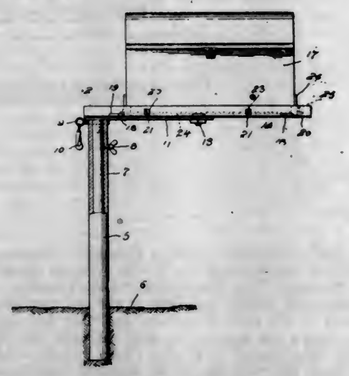
4. The combination, with an incubator comprising the usual incubating compartment and a door whereby access may be had thereto, of thermometer holding means connected with said door and adapted to be moved by the closing and opening of the door into indicating relation in respect to eggs in the incubating compartment and into a position facilitating the reading of a thermometer carried thereby, the said holding means being provided with a runner to facilitate movement of the same over and in contact with eggs in the incubating compartment.

5. The combination, with an incubator comprising the usual incubating compartment and a door whereby access may be had thereto, of a thermometer holder, means movably connecting one end of said holder with the door whereby the holder may be moved into and out of the incubator upon closing and opening the door to assume positions facilitating temperature registering and reading of a thermometer carried thereon, and a thermometer supported on said holder, said holder being formed at its other end with a runner to facilitate engagement and movement of said holder in contact with eggs in the incubating chamber.

[Claim 6 not printed in the Gazette.]

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1,225,571. MAIL-BOX SUPPORT. BERNARD N. BRUNING, Breda, Iowa. Filed Sept. 22, 1915. Serial No. 52,091. (Cl. 248—19.)



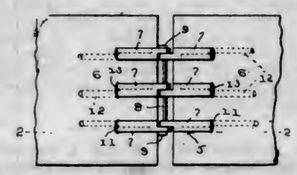
1. A mail box support comprising a frame including adjustable longitudinal members, transverse members connecting said longitudinal members, means for moving said longitudinal members into operative engagement with a mail box, and means to secure the mail box against endwise movement in the frame.

2. A mail box support including a post, an arm pivotally secured to the upper end of said post, a frame carried by said arm, said frame including a pair of spaced parallel side members, means for moving said side members into operative engagement with a mail box, a rod, clamping members slidably mounted on said rod, and means for moving said clamping members into clamping engagement with the ends of a mail box.

3. A mail box support including a post, an arm pivotally secured to the upper end of said post, a frame carried by said arm, said frame including a pair of spaced parallel side members, means for moving said side members into operative engagement with the sides of a mail box, transverse members connecting the side members, a rod confined between the moving means and said transverse members, clamping members slidably mounted upon said rod, and means for moving said clamping members into clamping engagement with the ends of the mail box to secure the latter against endwise movement in the frame.

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1,225,572. BELT-FASTENER. CHARLIE BRYANT, Coin, Iowa. Filed Apr. 8, 1916. Serial No. 89,828. (Cl. 24—33.)



1. A belt fastener including a body plate having one end reduced and hooked, the opposite end of said hinge section being formed with an inwardly extending longitudinal slit defining a pair of oppositely directed tongues adapted for insertion through a belt, the tongue lying opposite the hook being provided with an angularly directed end adapted to be anchored in one end of a belt.

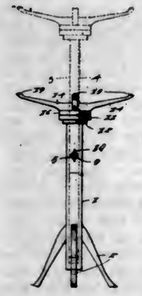
2. In combination, a belt, a plurality of hinge sections secured to the adjacent ends of said belt, a hinge rod connecting said sections, each hinge section including a body plate having one end hooked and engaged with said hinge rod, and formed at its opposite end with an inwardly extending slit defining a pair of tongues, one of said tongues being extended outwardly toward the free end of said belt and along the inner surface of the latter and the other tongue being extended oppositely to the first-mentioned tongue and provided with an angularly directed end penetrating the belt.

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1,225,573. ADJUSTABLE PEDESTAL. HENRY H. BUSH, Muskegon, Mich. Filed Feb. 16, 1916. Serial No. 78,660. (Cl. 45—117.)

1. In a pedestal, the combination with a hollow base having one side thereof provided with an opening and an internal annular recess surrounding the opening, of a body adjustably mounted within the base and having one side thereof provided with an elongated recess opposing the opening in the side of the base, a metal strip secured within the recess in the body, a block mounted within the opening in the side of the base, a flange formed on the inner end of the block and engaging within the recess in the side of the base and opposing the strip on the adjustable body, fastening elements extending through the flange and the adjacent side of the base, the said block having an opening therein, and means adjustable within the opening in the block and against the strip carried by the body for holding the body in adjusted position.

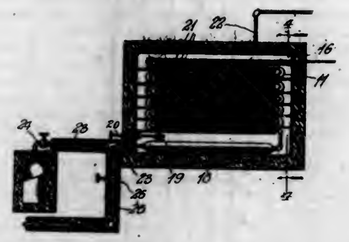
2. A pedestal consisting of a pair of telescoping members, means for holding the members in adjusted position, the inner member having a longitudinally extending bore therein extending in from the outer end thereof, a disk carried by the outer end of the inner member, a rotatable disk mounted on the first-mentioned disk, a



pair of intersecting and supporting arms resting on the rotatable disk, and a shaft extending through the point of intersection between the arms and through the disk and rotatably received by the bore in the inner member.

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1,225,574. APPARATUS FOR CONDENSING GAS UNDER HIGH PRESSURE. GODFREY L. CABOT and JAMES J. CABOT, Boston, Mass. Filed Oct. 26, 1914. Serial No. 868,680. (Cl. 257—240.)



A device of the class described comprising a closed heat insulated chamber having a zig-zag passage extending therethrough from its upper to its lower end, said passage being provided with an outlet at its upper end, a coil of pipes arranged within said chamber and having its turn following the course of said passage and being provided with an inlet at its upper end, a horizontally extending closed collecting tank arranged in the lower end of said chamber, one of the ends of said tank being connected to the lower end of said coil, an outlet at the other end of said tank extending through said chamber to the exterior thereof, and an expansion valve fixed to the upper side of said tank at its opposite end thereof to provide an exit for the gases collected in the upper portion of the same, said valve being provided with manually operable means disposed on the exterior of said chamber for operating the same.

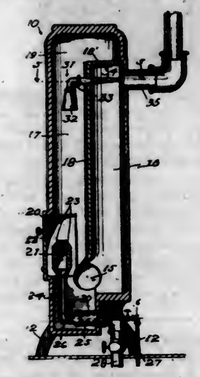
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1,225,575. GAS-HEATER. WILLIAM H. CAIN, Los Angeles, Cal. Filed Oct. 23, 1916. Serial No. 127,149. (Cl. 126—91.)

1. A ventilating gas radiator comprising a central section, having a partition wall dividing the same into a vertical combustion chamber and a vertical waste gas offtake flue, a plurality of vertical burner sections arranged on either side of said central section, each of said burner sections comprising a pair of vertical flues connected at the top, a common burner chamber horizontally disposed and communicating with the bottom of a flue in each



burner section, and with said combustion chamber, a burner located therein, a gas and air mixer supplying a gaseous fuel mixture to said burner, a waste gas collecting flue arranged near the lower ends of said burner sections for conducting the waste gases to said waste gas offtake flue, a vent pipe at the upper end of said waste gas offtake flue, and a draft accelerator comprising a tubular member having the shape of an inverted cone located in the upper part of said vertical combustion chamber, and a pipe tapering toward its orifice connected to said tubular member whose orifice is located adjacent to the center of the inlet of said vent pipe.



2. A ventilating gas radiator, comprising a vertical combustion chamber, a burner at the lower end thereof, a plurality of radiator sections, burners in said sections, means for supplying fuel and air to all of said burners, a waste gas collecting flue connecting said sections, a conduit conveying the waste gases from said collecting flue, a discharge pipe leading from said conduit, and a draft accelerator inducing a positive draft in said discharge pipe, said accelerator comprising a tube leading from the combustion chamber into said conduit to a point near said discharge pipe whereby, on ignition of the burner, a positive draft is established, causing immediate circulation of the gases through the various flues of the radiator.

3. A ventilating gas radiator, comprising a combustion chamber, a burner located therein, means for supplying fuel to said burner, one or more burner sections provided with burners, a conduit conveying the waste gases from said burner sections, a discharge pipe leading from said conduit, and a draft accelerator comprising a tube leading from said combustion chamber into said conduit whereby, on ignition of the burner in said combustion chamber, a positive draft is established causing immediate circulation of the hot gases through the various flues of the radiator.

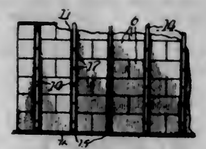
4. A ventilating gas radiator, comprising a vertical combustion chamber, a burner located therein, means for supplying fuel to said burner, a waste gas discharge pipe located adjacent to said combustion chamber, and a draft accelerator comprising a tubular member extending from the upper part of said combustion chamber and leading into said discharge pipe, the outlet orifice of said tubular member being of a comparatively small size whereby, on ignition of the burner in the combustion chamber, a positive draft is established in the discharge pipe.

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1,225,576. PARTITION-WALL. JOHN B. CAMPBELL, Louisville, Ky. Filed Feb. 9, 1914. Serial No. 817,440. (Cl. 72—46.)

1. A partition wall construction comprising a series of slabs each having end and side grooves and tongues to form interlocking joints and superposed in staggered relation, each slab having spaced apart vertical channels across one face, said channels alining and forming con-

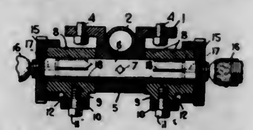
tinuous grooves, studding strips countersunk in the grooves, bolts passing through each slab and strips from one side, nuts secured on the opposite ends of the bolts adjacent the studding strips, the bolt heads and nuts being countersunk within the surfaces of the slabs on both sides, and means for securing the upper and lower ends of the strips to a ceiling and floor respectively.



2. A partition wall construction comprising a series of slabs each having end and side grooves and tongues to form interlocking joints and superposed in staggered relation, each slab having spaced apart vertical channels across one face, said channels alining and forming a continuous groove, channel iron studding strips seated within said continuous grooves, said strips countersunk in the grooves, bolts passing through each slab, and strips from one side, nuts secured on the opposite ends of the bolts adjacent the studding strips, the bolt heads and nuts being countersunk within the surfaces of the slabs on both sides, and means for securing the upper and lower ends of the strips to a ceiling and floor respectively.

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1,225,577. LUBRICATING-BEARING. MERLE P. CHAPLIN, Fairfield, Me., assignor to Keyes Fibre Company, Fairfield, Me., a Corporation of Maine. Filed Aug. 8, 1913. Serial No. 783,695. (Cl. 64—27.)



1. In an apparatus of the class described, a fixed member provided with a laterally extending shaft having an axial duct and slots, substantially equal in length to the bearing portion of the shaft, leading from said duct to the surface of the shaft, a member rotatably mounted upon said shaft and bearing at one end against said fixed member, a cap secured to the opposite end of said rotatable member and engaging the end of the shaft, means for supplying lubricant through said cap to said duct and means for forcing the lubricant toward the bearing between the fixed and rotatable members whereby the shaft bearing will be protected against entry of foreign matter.

2. In an apparatus of the class described, a fixed member provided with a laterally extending shaft having an axial duct and slots, substantially equal in length to the bearing portion of the shaft, leading from said duct to the surface of the shaft, a member rotatably mounted upon said shaft and bearing at one end against said fixed member, a cap inclosing the opposite end of said rotatable member and tightly engaging the end of said shaft, means for supplying a lubricant axially through said cap to the duct in the shaft and means for forcing the lubricant toward the bearing between the fixed and rotatable members whereby the shaft bearing will be protected against the entry of foreign matter.

3. In an apparatus of the class described, a fixed member provided with a laterally extending shaft having an axial duct and slots, substantially equal in length to the bearing portion of the shaft, leading from said duct to the surface of the shaft, a member rotatably mounted upon said shaft and bearing at one end against said fixed member, a cap inclosing the opposite end of said rotatable member and engaging tightly the end of the shaft, means for supplying a lubricant through a plurality of apertures in said cap to the axial duct in said shaft and means for forcing lubricant simultaneously through said passages to said axial duct, whereby constant lubrication of the bearing between said shaft and said movable member will be maintained.

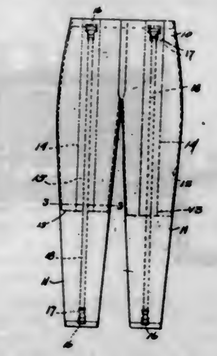
4. In an apparatus of the class described, a fixed member, a shaft secured thereto, a member having a yoke rotatably mounted upon the ends of said shaft, and means for introducing a lubricant at the ends of said shaft and for distributing it uniformly throughout the relatively rotatable surfaces and causing the same to flow toward the fixed member, whereby the shaft bearings are protected against foreign matter entering through the bearings between the fixed and rotatable members.

5. In an apparatus of the class described, a stationary member, a shaft secured thereto, a member having a yoke provided with sleeves rotatably mounted at the end of said shaft caps secured to said sleeves and inclosing the ends of said shaft, means for introducing a lubricant through said caps for distributing the lubricant uniformly, substantially throughout the relatively rotatable surfaces and for causing a flow of said lubricant toward the stationary member, whereby the shaft bearings are protected against foreign matter entering through the bearings between said fixed and rotatable members.

[Claims 6 to 12 not printed in the Gazette.]

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1,225,578. NETHERGARMENT. ANTONI CIESLIK, Lorain, Ohio. Filed Jan. 26, 1917. Serial No. 144,697. (Cl. 2—122.)



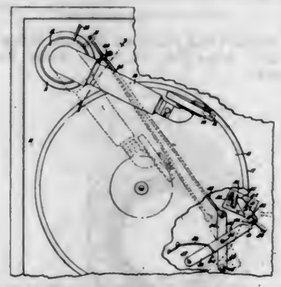
1. The combination with a pair of trousers; of a lining for the legs of said trousers constructed of non-adherent material and terminating above the knee portion of the trouser legs, said lining being secured at its lower end portions to said legs and being further secured to the trouser legs on each side of the front median line of each leg to form a pocket in connection with the material of the trousers, and elastic webbings each extending through a pocket and down the front of a trouser leg, each webbing being secured at its upper and lower ends to the trousers, the warp threads of said webbings being of elastic material and the woof threads being formed of material adapted to adhere to the material of the trousers.

2. The combination with a pair of trousers; of a lining for the legs of said trousers constructed of non-adherent material and terminating above the knee portion of the trouser legs, said lining being secured at its lower end portions to said legs and being further secured to the trouser legs on each side of the front median line of each leg to form a pocket in connection with the material of the trousers, and elastic webbings each extending through a pocket and down the front of a trouser leg, the warp threads of said webbings being of elastic material and the woof threads being formed of material adapted to adhere to the material of the trousers, loops fixed at the top and bottom seams of the trousers, and hooks carried by the ends of the webbings and engaging the loops.



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1,225,579. STOP FOR PHONOGRAPHS. WILLARD E. CLEVELAND, Fall River, Mass., assignor to Cote Piano Mfg. Co., Fall River, Mass., a Corporation of Massachusetts. Filed Apr. 22, 1916. Serial No. 92,996. (Cl. 74—46.)



1. An automatic stop for phonographs, comprising an actuating rod controlled by the tone arm, a trigger, a spring pressed brake lever adapted to be engaged by the said trigger to hold the brake lever in inactive position and to release the brake lever at the time the stylus reaches the end of the record, and an adjusting lever connecting the rod and trigger and pivotally connected with both.

2. An automatic stop for phonographs, comprising an actuating rod controlled by the tone arm, a trigger having two levers, of which one is pivotally connected with the other lever and pivotally connected with the said actuating rod, and the other lever being mounted to swing on a fixed fulcrum, and a spring-pressed brake lever for stopping the phonograph and adapted to be held in inactive position by the free end of the said other lever and a spring pressing the said other lever.

3. An automatic stop for phonographs, comprising an actuating rod controlled by the tone arm, a trigger having two levers, of which one is pivotally connected with the other lever and pivotally connected with the said actuating rod and the other lever being mounted to swing on a fixed fulcrum, the said lever connected with the actuating rod having a manually controlled handled extension for adjusting one lever relatively to the other, and a spring-pressed brake lever for stopping the phonograph and adapted to be held in inactive position by the free end of the said other lever and a spring pressing the said other lever.

4. An automatic stop including a trigger having two levers, one of which is adjustably mounted on the other, and an actuating rod connected with and controlled by one of the levers to be moved into various positions relatively to the other lever.

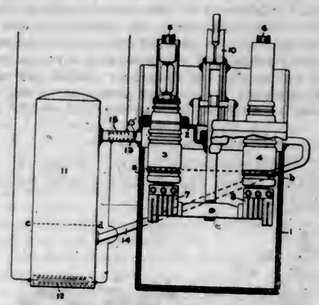
5. An automatic stop including a trigger having two levers, of which one is mounted to swing on a fixed pivot, a friction pivot connecting the levers with each other to normally move the levers as a unit and to allow of adjusting the other lever with respect to the first named lever, and an actuating rod connected with the said other lever and adapted to be moved thereby into various positions relatively to the first named lever.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,580. ELECTRIC SWITCH. HARRY E. CLIFFORD, Cambridge, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 29, 1913. Serial No. 770,637. (Cl. 175—282.)

1. The method of maintaining an inert atmosphere in an electrical device containing oil, which consists in vaporizing a fluid miscible with the oil, passing the vapor through the space in said device above the oil, removing all gaseous products in said space, condensing the mixture of gases and vapor, returning the condensed mixture to said fluid, and holding the condensed gases in solution with said fluid.



2. The method of preventing the formation of explosive gaseous mixtures in a circuit interrupting device containing oil, which consists in vaporizing carbon tetrachlorid, passing the vapor through the space in said device above the oil, removing thereby all gaseous products in said space as fast as such are formed, cooling said mixture of gases and vapors removed from said device, allowing the return of said vapors to said device and preventing the return of said gases.

3. The method of preventing the formation of explosive gaseous mixtures in an oil switch, which consists in vaporizing a fluid which does not impair the dielectric properties of the oil, passing said vapor through the switch to cleanse said switch of all gaseous products as fast as such are formed, condensing the mixture of gases and vapor, returning the mixture to the fluid, revaporizing the condensed fluid, and trapping the condensed gases in the fluid reservoir.

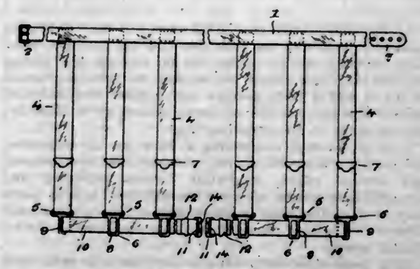
4. The method of preventing the formation of explosive gaseous mixtures in a circuit-interrupting device containing oil, which consists in vaporizing a fluid capable of dissolving the oil, circulating said vapor over the oil in said device, carrying off by entrainment from said device the gaseous products of volatilization formed from the oil, and condensing said gaseous products in said fluid.

5. The method of preventing the formation of explosive gaseous mixtures in a circuit-interrupting device containing oil, which consists in vaporizing carbon tetrachlorid, circulating the vapor over the oil in said device, carrying off by entrainment from said device the gaseous products of volatilization formed from the disrupted oil, and condensing said gaseous products in said carbon tetrachlorid.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,581. SUPPORTER. FRANKIE M. COLSON, Salt Lake City, Utah. Filed May 12, 1916. Serial No. 97,128. (Cl. 241—1.)

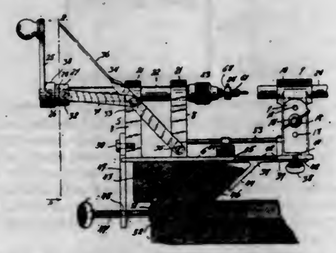


A garment supporter including a waist section in the form of a strap, means for adjustably connecting the ter-

minals of the strap, a plurality of garter sections, connector straps intermediate the garter sections and waist section, metal connectors carried by the connector straps and supporting the garter sections to permit independent longitudinal adjustment of the garter sections with respect to the connected straps, an engaging member carried by one free end of each of the garter sections, one of said metal connectors being formed with an opening to receive one terminal of the garter section and of sufficient size to permit the coupling therewith of the engaging member carried by the opposite end of the garter section.

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1,225,582. CUE-POINTING TOOL. FRANK C. COOK, Denver, Colo. Filed Aug. 18, 1915. Serial No. 46,028. (Cl. 142—1.)

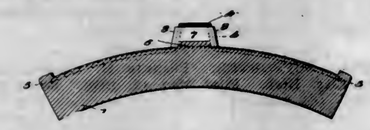


1. A cue pointing tool including a rotary chuck, a support for the cue stick, said support being suitably spaced from the chuck, a trimmer comprising a shank mounted to be swung manually on a pivot whose axis is parallel with the axis of the chuck, and a knife pivotally applied to the free extremity of the shank, the axis of the pivot being perpendicular to the axis of the chuck, the knife being also slidably adjustable bodily on the shank.

2. A cue pointing tool including a rotary chuck, a support for the cue stick, said support being suitably spaced from the chuck, and a trimmer including a shank mounted to be swung manually on an axis parallel with the axis of the chuck, a holder plate rotatably applied to the free end of the shank, and a knife provided with elongated slots mounted upon the holder plate and means secured in the latter and projecting through said slots whereby the said knife is slidably adjustable upon the holder plate.

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1,225,583. BRAKE-SHOE. JUDSON COOK, Albany, N. Y. Filed Jan. 10, 1917. Serial No. 141,538. (Cl. 188—82.)



1. The combination in a brake shoe, of a back having an upwardly projecting lug with side and end openings, separate retaining means located within the lug and closing the end openings, means for holding the retaining means in place, and a body portion cast around the back and against the parts of the retaining means which close the end openings of the projecting lug.

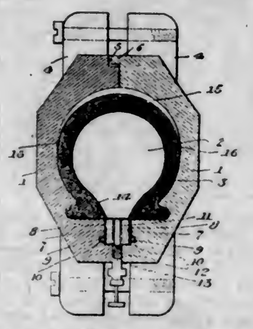
2. A brake shoe comprising a back having bifurcated end portions, a struck up lug with side and end openings and beveled edges, separately formed retaining and strengthening means inserted beneath the lug and parts bent to hold the same in place, and a body portion cast around the beveled edges of the back and against the retaining means.

3. A brake-shoe comprising a shoe body, a back upon which said body is cast, a lug struck up from said back, and means consisting of a separate retaining piece bent to shape from an H-shaped blank, and having arms inserted beneath the lug and the arms bent into retaining positions for boxing in the opening to the lug to permit the material of the body to flow into each end of the lug.

4. The combination in a brake shoe, of a back with a struck up lug having side and end openings, retaining means with arms inserted beneath the lug and the arms bent outwardly and around the metal defining the edges of the lug with part of the retaining means closing the end openings, and a body portion cast around the back.

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1,225,584. TIRE-VULCANIZING MOLD. HUGH COONEY, Marion, Ind. Filed Feb. 16, 1916. Serial No. 78,718. (Cl. 18—34.)



1. A tire vulcanizing mold comprising a pair of members having a mold chamber in their opposing sides and also provided in their opposing sides with grooves near the inner side of the mold, packing rings in said grooves, counter-grooves in the tire members at the outer side of said packing rings, packing in said counter-grooves, and a protecting lining for arrangement in the tire and with its sides extending beyond the sides of the tire, said extended sides of the lining being engaged between said packing rings and the opposing sides of said grooves and said packings in the counter-grooves.

2. A tire vulcanizing mold comprising a pair of members having a mold chamber in their opposing sides and also provided in their opposing sides with grooves near the inner side of the mold, packing rings in said grooves, a protecting lining for arrangement in the tire and having its sides extending beyond the sides of the tire, said extending sides of the lining being engaged between said packing rings and the opposite sides of said grooves, said mold members and packing rings having alined openings in their opposing sides, and a valve arranged in said openings.

3. A tire vulcanizing mold comprising a pair of members having a mold chamber in their opposing sides and also provided in their opposing sides with grooves near the inner side of the mold, packing rings in said grooves, a protecting lining for arrangement in the tire and having its sides extending beyond the sides of the tire, said extending sides of the lining being engaged between said packing rings and the opposing sides of said grooves, said mold members and packing rings having alined openings in their opposing sides, and a valve arranged in said openings, and a clamping means connecting the pair of mold members detachably together and also clamping the valve in place.

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1,225,585. SUPPORTING-HOOK. EDDIE L. COSNER, Roanoke, W. Va. Filed Nov. 2, 1916. Serial No. 129,158. (Cl. 248—26.)

1. A supporting hook constructed from a single length of yieldable or spring wire material, said hook having an eye at its upper end and having a portion extending downwardly merging into an outwardly and downwardly inclined part, which in turn curves or merges into a downwardly and inwardly inclined part, thereby forming a loop, said downwardly and inwardly inclined part merging into a loop having a straight portion, which is engaged by a hook of a fastener to secure the second loop to a stationary support, said straight portion of the second loop merging or bending into an outwardly and downwardly inclined part, the terminus of which terminates into an upwardly projecting hook, said eye designed to receive a fastener to secure the upper part of the hook to a stationary support.



2. A supporting hook constructed from a single length of yieldable or spring wire material, said hook at its upper end having an eye to receive a fastener to secure the upper part of the hook to a stationary support, said hook having a portion extending downwardly merging into an outwardly and downwardly inclined part, which in turn curves or merges into a downwardly and inwardly inclined part, thereby forming a loop, said downwardly and inwardly inclined part merging into a loop having a straight portion, which is engaged by a hook of a fastener to secure the second loop to a stationary support, said straight portion of the second loop merging or bending into an outwardly and downwardly inclined part, the terminus of which terminates into an upwardly projecting hook, said second outwardly and downwardly extending portion being yieldable and provided with an arch arching over the downwardly and inwardly inclined portion, to clamp articles therebetween.

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1,225,586. SELECTIVE DISCHARGE-CONVEYER. JAMES T. COWLEY, Minot, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Oct. 8, 1915. Serial No. 54,884. (Cl. 193—4.)



1. Selective-discharge conveying apparatus comprising means for conveying articles along a determined path, means for unloading said articles as they arrive at a point in said path, a controlling device to be loaded upon said conveying means, said conveying means after being loaded with said device carrying the latter lengthwise of said path, and means, controlled by said device upon its arrival at a pre-determined point in its line of travel, for unloading an article carried by said conveying means, at a point other than that aforesaid.

2. Conveying apparatus comprising means for conveying articles along a determined path, in combination with means for determining the point of discharge of an article traveling along said path, said determining means including a controlling device to be moved lengthwise of said path by a part of said conveying means and applicable to and removable from the latter and means, controlled by said device upon its arrival at a pre-determined point in its path of travel, for unloading said article from said conveying means.

3. Conveying apparatus comprising means for conveying articles along a determined path, in combination with means for determining the stopping point of an article traveling along said path, said determining means including a controlling device to be moved lengthwise of said path by a part of said conveying means and applicable to and removable from the latter and movable means, controlled by said device upon its arrival at a pre-determined point in its path of travel, to engage said article and interrupt its further progress along said path.

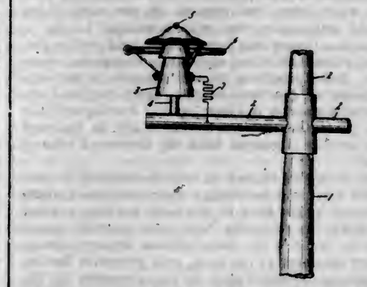
4. Conveying apparatus comprising means for conveying articles along a determined path, in combination with means for determining the stopping point of an article traveling along said path, said determining means including a controlling device to be moved lengthwise of said path by a part of said conveying means and applicable to and removable from the latter and means, controlled by said device upon its arrival at a pre-determined point in its path of travel, to engage said article and interrupt its further progress along said path.

5. Conveying apparatus comprising means for conveying articles along a determined path, in combination with means for determining the point at which articles traveling along said path cease to travel therealong, said determining means including a controlling device to be conveyed along said path by said conveying means and applicable to and removable from the latter and means to engage and automatically prevent further travel of said device along said path and co-acting therewith to interrupt the movement along said path of articles, following said device.

[Claims 6 to 29 not printed in the Gazette.]

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1,225,587. PROTECTING MEANS FOR TRANSMISSION SYSTEMS. ELMER E. F. CREIGHTON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 14, 1913. Serial No. 767,543. (Cl. 175—30.)



1. The combination with an electrical conductor, of means located in proximity to said conductor for localizing discharges from said conductor, supports for said means providing paths to ground from said means, and means connecting said supports and said first mentioned means coöperating with said supports to provide paths having a resistance sufficient to render discharges over said paths non-oscillatory.

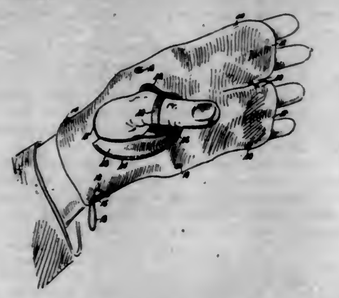
2. The combination with an electrical conductor, of an insulated metallic member positioned relative to said conductor to receive any discharges therefrom, a path to ground from said member including a support for said member, and a resistance between said member and said support of a value which provides said path with a total resistance sufficient to render all discharges over the same non-oscillatory.

3. The combination with an electrical conductor, of an insulated metallic member positioned relative to said conductor to reduce the insulation value of said conductor at that point, a support for said member, and a resistance between said member and said support which combined with the resistance of said support provides a path having a total resistance to conduct all discharges to ground and render them non-oscillatory.

4. The combination with an electrical conductor, an insulating support therefor, an arcing ring carried by said support, and a connection to ground from said ring having a resistance of approximately critical value.

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1,225,588. HAND-PROTECTOR. DANTE S. CURTISS, Orillia, Wash. Filed Apr. 8, 1916. Serial No. 89,787. (Cl. 2—104.)



1. A hand protector formed of flexible material in flat form, presenting a palm portion, a transverse strap permanently secured at both ends at the back of the palm portion, a centrally divided front end portion presenting finger members, each adapted to afford protection for two fingers, separate transverse straps on said finger members at the backs thereof, each permanently secured at its ends, a wrist strap permanently secured to the wrist portion at one side of the protector, co-acting fastener members on the protector at the opposite side and on the wrist strap, the member on the strap being longitudinally adjustable, the said protector having a thumb opening, a thumb flap permanently held to the protector at the front end of the opening, a transverse strap on said flap, and a reinforce member secured to the face of the protector at the base of the thumb flap and extending partially around the opening and overlapping the thumb flap, the said reinforce having a slit in the said overlapping portion extending from the unsecured edge of the reinforce.

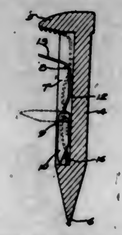
2. A hand protector formed of flexible material in substantially flat form and including a palm portion, a strap on the protector at the back of the palm portion, a wrist portion, a strap for fastening said wrist portion, finger members at the front of the palm portion, separate straps on said finger members at the back, said protector having a thumb opening, a thumb flap on the protector at the opening, and a reinforce secured to the protector at the base of the thumb flap and extending around the said opening at the front, the said reinforce having a free portion overlapping the thumb flap, said free portion being slitted and presenting separate flap members at each side of said slit, the said thumb flap extending beyond the slitted portion of the reinforce.

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1,225,589. RAILROAD-SPIKE. WILLIAM S. CUTTING, Onaway, Mich. Filed Jan. 26, 1916. Serial No. 74,505. (Cl. 85—23.)

1. A rail spike having a longitudinal recess therein, pins mounted in the walls of said recess, a spur pivoted upon one pin and normally positioned within the recess, a longitudinally movable member retained in the recess by one of said pins and slotted to receive said spur, one end of the slot being adapted, as the member is moved longitudinally in one direction, to impinge against the edge of the spur to throw the same to a position at right angles to the length of the spike.

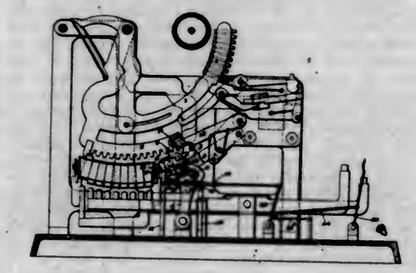
2. A rail spike having a longitudinal recess therein, pins mounted in the walls of said recess, a longitudinally movable member retained within the recess by one of said pins and provided with a curved slot, one end of the member being outwardly bent, a spur pivoted upon one pin



and extending through said slot and having a portion of its rear edge inclined, adapted to bear against the end of said slot.

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1,225,590. ADDING-MACHINE. JAMES L. DALTON, Poplar Bluff, Mo., assignor, by mesne assignments, to The Dalton Adding Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 27, 1904, Serial No. 195,551. Renewed Nov. 27, 1916. Serial No. 133,818. (Cl. 235—60.)



1. In an adding machine, the combination with movable racks, of a shaft, a group of adding wheels on said shaft, automatic means for moving the shaft and thereby the wheels toward the racks when necessary to add, two arms pivoted to said shaft, a lock-rod supported by said arms between the teeth of the adding wheels, and a hook arranged to engage with one of said arms to hold the rod out of engagement with the teeth of the adding wheels when the latter are being operated.

2. The combination with the recording mechanism in an adding machine, of a positioning frame, a plurality of separate groups of adding wheels carried by said positioning frame, a locking mechanism for each group of wheels, manual means for moving said positioning frame to carry any selected group of adding wheels to and from position to be engaged with the recording mechanism by operation of the actuating frame, and an actuating frame supporting said positioning frame for moving the same as required to engage the selected group of adding wheels with the recording mechanism.

3. The combination with the recording mechanism in an adding machine, of a positioning frame, a plurality of separate groups of adding wheels carried by said positioning frame, a locking mechanism for each group of wheels, manual means for moving said positioning frame to carry any selected group of total wheels to and from position to be engaged with the recording mechanism by operation of the actuating frame, an actuating frame supporting said positioning frame for moving the same as required to engage the selected group of adding wheels with the recording mechanism, and automatic means for releasing the locking mechanism from any group of adding wheels that is moved into engagement with the recording mechanism, as aforesaid.



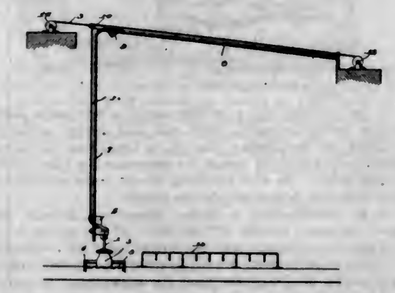
4. In an adding machine the combination with the sectors 2, of the wheels 9 operable thereby to add, means for moving the wheels into and out of engagement with the said sectors, the arms 19, the rod 20 carried by said arms 19, means for holding said rod 20 between the teeth on the wheels 9 when the said wheels are out of engagement with the sectors 2, and means for holding the said rod away from the said wheels when the latter are in engagement with the sectors 2, substantially as specified.

5. In an adding machine, a series of actuators, a plurality of sets of adding wheels arranged to contain separate numbers simultaneously, a separate lock for locking all of the wheels in each set, manually controlled means for positioning any selected set of wheels in alinement with said actuators for operation thereby, automatic means for moving any selected set of wheels into engagement with the actuators after the selected set has been placed in alinement with said actuators as aforesaid, and a device for positively disengaging all of said locks from the selected sets of wheels respectively as an incident to the movement of said selected sets of wheels into engagement with said actuators.

[Claims 6 to 38 not printed in the Gazette.]

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1,225,591. GLASS-DRAWING APPARATUS. CHARLES DAY, Okmulgee, Okla., assignor to Okmulgee Glass Company, Okmulgee, Okla. Filed Sept. 24, 1915. Serial No. 52,483. (Cl. 49—17.1.)



1. In a glass drawing apparatus, the combination with a drawing mechanism including a draw carriage and a bait, of a horizontal cylinder support, a second horizontally movable carriage, and means for moving said carriages successively to form the cylinder, to swing the cap end of the cylinder laterally with relation to the line of draw, and to lower said cap end of the cylinder and the bait from the draw carriage so as to adapt said cylinder to be turned from a vertical to a horizontal position so as to dispose it upon said support.

2. In a glass drawing apparatus, the combination of a vertical trackway, a horizontal trackway connected at one end with said vertical trackway, a draft carriage mounted to travel upon the horizontal trackway, a draw carriage arranged to travel upon both trackways, and means for operating the draw carriage to first form the cylinder and support the same from the draft carriage and for then moving both carriages along the horizontal trackway and lowering the cylinder from the draw carriage so as to turn and dispose said cylinder in a horizontal position.

3. In a glass drawing apparatus, the combination of a vertical trackway, a horizontal trackway arranged in an inclined plane and connected at its higher end with the vertical trackway, a draft carriage mounted to travel upon the horizontal trackway, a draw carriage mounted to travel upon both trackways and means for operating the draw carriage to first form the cylinder and support the same from the draft carriage and for then moving both carriages along the horizontal trackway and lowering the cylinder from the draw carriage so as to turn and dispose said cylinder in a horizontal position.

4. In a glass drawing apparatus, the combination of a vertical trackway, a horizontal trackway leading at one end from the vertical trackway, a draft carriage mounted to travel upon the horizontal trackway, a draw carriage mounted to travel upon both trackways, a windlass, a bait, a draft cable carrying the bait and in running connection with the draw carriage and guided connection with the draft carriage, and a second cable connected with the draft carriage, whereby the draw carriage may be first elevated to form the cylinder and both carriages then moved along the horizontal trackway and the cylinder swung and lowered so as to turn said cylinder from a vertical to a horizontal position, said cables being operative for returning the parts to normal position after actuation.

5. In a glass drawing apparatus, the combination of a vertical trackway, a horizontal trackway leading at one end from the vertical trackway, a draft carriage mounted to travel upon the horizontal trackway, a drawing mechanism including a bait and a draw carriage mounted to travel upon both trackways, and means coöperating with said carriages whereby the draw carriage may be operated to form the cylinder and both carriages then moved along the horizontal trackway and the cylinder lowered to turn said cylinder from a vertical to a horizontal position, said means being operative for returning the parts to normal position after actuation.

[Claims 6 to 18 not printed in the Gazette.]

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1,225,592. NIGHT-SIGHT FOR FIREARMS. BRITANNIO SOLARO DEL BORGO, Paris, France. Filed Feb. 1, 1916. Serial No. 75,560. (Cl. 33—52.)

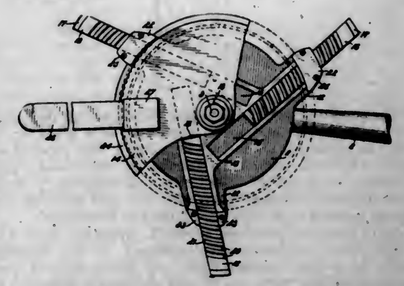


1. A device for use in sighting fire-arms in the dark, comprising a plurality of chambers each having a concave base with a deposit of radio-active material, lenses closing each of said chambers at the front, and supporting devices adapted to be secured to the fire-arm near the front and rear ends thereof and adapted to hold said chambers in positions to constitute back and fore-sights.

2. A device for use in sighting fire-arms in the dark, comprising in combination a fore-sight with means for securing it on the fire-arm adjacent the forward end thereof, and a back-sight with means for securing it on the fire-arm adjacent the rear end thereof, each of said sights including a pair of chambers containing radio-active material and each closed at the rear by a lens, the said chambers on the back-sight being disposed wider apart than those on the fore-sight.

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1,225,593. PNEUMATIC-TIRE-BUILDING APPARATUS. PETER DE MATTIA and BARTHOLD DE MATTIA, Clifton, N. J. Filed June 13, 1916. Serial No. 103,427. (Cl. 154—9.)



1. An apparatus as described comprising a series of centering bars grouped about a central bearing, said bars

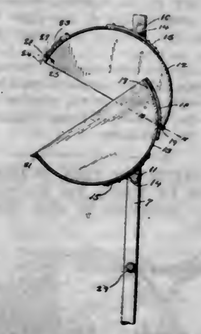
being movable in lines offset from said bearing; means for moving said bars simultaneously toward and away from the center of said bearing; means for guiding said bars in their movement, said means embodying a rotary supporting plate supporting said bearing and having end-opening channels therein for holding said bars; and a cover plate rotatively mounted on said supporting plate and operatively engaging all of said bars for moving the same in unison for expansion and contraction thereof.

2. An apparatus as described comprising a series of centering bars grouped about a central bearing, said bars being movable in lines offset from said bearing; means for moving said bars simultaneously toward and away from the center of said bearing; means for guiding said bars in their movement, said means embodying a rotary supporting plate supporting said bearing and having end-opening channels therein for holding said bars; a cover plate rotatively mounted on said supporting plate and operatively engaging all of said bars for moving the same in unison for expansion and contraction thereof; and means operatively connecting said bars and said plate, said means embodying rack teeth on each of said bars, and a spiral ridge on said cover plate engaging said teeth.

3. An apparatus as described comprising a series of centering bars grouped about a central bearing, said bars being movable in lines offset from said bearing; means for moving said bars simultaneously toward and away from the center of said bearing; means for guiding said bars in their movement, said means embodying a rotary plate supporting said bearing and having end-opening channels therein for holding said bars; a cover plate rotatively mounted on said supporting plate and operatively engaging all of said bars for moving the same in unison for expansion and contraction thereof; and means operatively connecting said bars and said plate, said means embodying rack teeth on each of said bars, and a spiral ridge on said cover plate engaging said teeth, said teeth on said bars being curved in correspondence to the pitch of said ridge in service relation.

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1,225,594. MAIL CATCHING AND DELIVERING APPARATUS. JOSEPH D. DENBURGER, Lents, Oreg. Filed May 22, 1916. Serial No. 99,178. (Cl. 258—20.)



1. In mail bag receiving means, a supporting post, and a receptacle carried thereby composed of a plurality of sections mounted for movement toward and away from each other and slidably connected at their rear edges whereby, when one of said sections is subjected to pressure adjacent its rear edge, the two said sections are moved toward each other to close the receptacle.

2. In mail bag receiving means, a supporting post, and a receptacle carried thereby composed of two rockably mounted sections having their rear edges slidably connected whereby, when one of said sections is subjected to pressure adjacent its rear edge, the two said sections are moved toward each other to close the receptacle.

3. In mail bag receiving means, a supporting post, and a receptacle carried thereby composed of two superposed sections mounted for movement toward and away from each other and slidably connected at their rear edges, the upper edge of one side of the lower one of said sections being inclined and said lower section being provided with an opening at the lower end of this inclination.

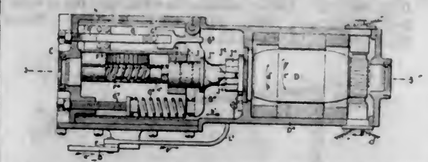
4. In a mail bag receiving means, a receptacle having a lower section pivotally mounted on a horizontal axis, and a similarly mounted upper section, the axes of the two said sections being in the same vertical plane, and the rear edge of one of said sections being slidably connected to the other section.

5. In mail bag receiving means, a receptacle having a lower section pivotally mounted on a horizontal axis, a similarly mounted upper section, a guide strip secured to the rear portion of the lower section, and a guide member secured to the upper section and engaging about the guide strip so as to slidably connect the two said sections.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,595. BRAKE MECHANISM. EDWARD A. DIETRICH, New York, N. Y. Filed Mar. 24, 1915. Serial No. 16,736. (Cl. 185—40.)



1. In combination, a spring motor, a reversible power-driven motor connected with the said spring motor for winding up the spring thereof, a brake for the spring motor, and releasing means for releasing the brake of the spring motor, the said releasing means being operated by reversing the said power-driven motor.

9. In combination, a spring motor, an internal gear wheel mounted loosely on the shaft of the spring motor and forming a brake wheel, a brake band for preventing rotation of said brake wheel, gearing for winding up the said spring motor at the time the brake band is applied to the brake wheel, a power driven motor for actuating the gearing, the said gearing including pinions in mesh with the internal gear wheel and traveling around the same when the gearing is actuated to wind up the spring of the motor, and means for releasing the said brake band to allow the spring motor to exert its power independent of the said power driven motor.

13. In combination, a spring motor, a gearing for winding up the said spring motor, a brake mechanism for the said gearing and having a spring-pressed lever, a reversible electric motor, a governor controlling the said lever, a clutch mechanism controlled from the said electric motor and adapted to connect the latter with the said gearing and the said electric motor with the said governor, and a limit switch for the circuit of the said electric motor and controlled by the said spring motor.

[Claims 2 to 8, 10 to 12, and 14 not printed in the Gazette.]

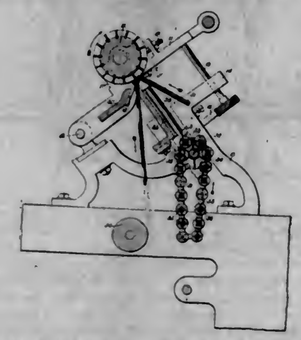
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1,225,596. ATTACHMENT FOR CUTTING FIGURES ON FABRICS. MICHAEL E. DRISCOLL, Somerville, N. J. Filed Jan. 12, 1917. Serial No. 141,987. (Cl. 26—6.)

1. The combination in a pile fabric shear, with cutting devices for clipping the ends of the pile and a frame supporting the cutting devices, of a series of plungers supported upon the frame with their ends adjacent to the line of coöperation between the cutting devices, and actuator means coöperating selectively with the several plungers for reciprocating the same individually toward the cutting devices.



2. In a pile fabric shear, the combination with a main frame, a cutter frame adjustably secured thereon and relatively movable cutting devices carried by the cutter frame, of a series of dart-like plungers arranged with their axes in the same plane and directed so as to intersect the cutting devices, means supporting the plungers upon the main frame adapting any or all of them to be reciprocated longitudinally, and an endless actuator belt operating beneath and in contact with the ends of the plungers remote from the cutting devices to reciprocate the plungers selectively, substantially as set forth.

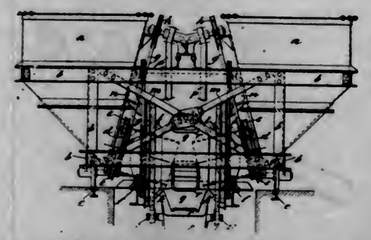


5. In an attachment of the character set forth, the combination of a series of plungers arranged parallel to one another and over which the fabric is adapted to be drawn, means to support said plungers for endwise reciprocation, and means for reciprocating the plungers comprising an endless actuator belt carrying a plurality of larger and smaller rollers movable beneath the ends of the plungers.

[Claims 3, 4, and 6 not printed in the Gazette.]

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1,225,597. APPARATUS FOR DISCHARGING COKE-HOPPERS OR THE LIKE. ARTHUR MCDOUGALL DUCKHAM, Ashstead, England. Filed Dec. 17, 1915. Serial No. 67,468. (Cl. 193—24.)



1. Means for discharging coke hoppers, comprising, in combination, an inclined cylinder rotating on its axis and arranged to receive the coke from the hopper; a revolving discharge drum structurally separate from the cylinder and capable of rotation relative thereto, said drum being adapted to receive the coke from said cylinder; conveyer buckets arranged to pass beneath said drum to receive the coke discharged thereby; an actuating chain for said buckets; a toothed ring connected to said drum to rotate the same and engaging said chain to be driven thereby; and means including belting connecting said ring and said cylinder to drive the latter from the former.

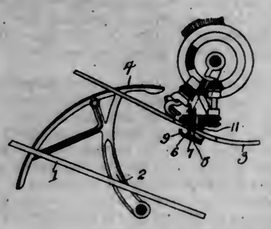
2. Means for discharging coke hoppers, comprising, in combination, an inclined cylinder rotating on its axis and arranged to receive the coke from the hopper; a revolving discharge drum structurally separate from the cylinder and capable of rotation relative thereto, said drum being adapted to receive the coke discharged thereby; conveyer buckets arranged to pass beneath said drum to receive the coke discharged thereby; an actuating chain for said buckets; a toothed ring connected to said drum to rotate the same and engaging said chain to be driven thereby; and means including belting connecting said ring and said cylinder to drive the latter from the former, said belting leading from said ring to a point remote from said cylinder and then back from such point to said cylinder.

3. Means for discharging coke hoppers, comprising, in combination, an inclined cylinder rotating on its axis and arranged to receive the coke from the hopper; a revolving drum structurally separate from the cylinder and capable of rotation relative thereto, said drum being provided with an open end into which the discharge end of said cylinder projects, and also with peripheral discharge mouths; conveyer buckets arranged to pass beneath said mouths so as to receive the coke discharged therefrom; an actuating chain for said buckets; a toothed ring connected to said drum to rotate the same and engaging said chain to be driven thereby; and means including belting connecting said ring and said cylinder to drive the latter from the former.

4. Means for discharging coke hoppers, comprising an inclined cylinder rotating on its axis, a revolving drum adapted to receive the coke from the cylinder, said drum being structurally separate from said cylinder and capable of rotation relative thereto, conveyer buckets into which the coke is discharged from said drum as they arrive in turn below the drum, a chain for actuating the conveyer buckets, a toothed ring loosely encircling said cylinder and engaging said chain to be driven thereby, a bearing ring on said toothed ring, rollers for supporting the bearing ring, a belt pulley fixed to said bearing ring, a shaft driven by the belt pulley, and means for rotating the cylinder from said shaft.

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1,225,598. DISK-GUARD FOR GRAIN-BINDERS. FRANK DUMLER, Isabella, Okla. Filed Aug. 9, 1916. Serial No. 114,024. (Cl. 56—126.)



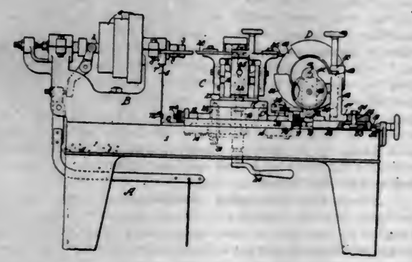
1. In a binding and knotting mechanism, in combination with a disk and a breast plate having an opening sufficiently large to clear the disk and through which opening the disk extends below the breast plate, a stationary guard secured to the under side of the breast plate, arranged under and across the opening thereof and also under the disk to prevent straw from coming in contact with the disk.

2. In a binding and knotting mechanism, in combination with a disk and a breast plate having an opening sufficiently large to clear the disk and through which opening the disk extends below the breast plate, a stationary guard secured to the under side of the breast plate, arranged under and across the opening thereof and also under the disk to prevent straw from coming in contact with the disk, the said guard having an opening directly below the disk for the passage of bits of twine and the like therethrough.

3. In a binding and knotting mechanism, in combination with a disk and a breast plate having an opening

sufficiently large to clear the disk and through which opening the disk extends below the breast plate, a stationary guard secured to the under side of the breast plate, arranged under and across the opening thereof and also under the disk to prevent straw from coming in contact with the disk, the guard being also provided on the rear side with a flange which closely approaches the under side of the breast plate.

1,225,599. AUTOMATIC TOOL-SHARPENING BUTTON-LATHE. PAUL F. DUSHA and ANTON FEYK, New York, N. Y., assignors to Holub-Dusha Company, New York, N. Y., a Corporation of New York. Filed Oct. 14, 1916. Serial No. 125,544. (Cl. 79—8.)



1. A machine of the class described comprising a turning head, a slidable tool turret movable toward and from the head, a grinding device associated with the turret and with which a tool is engaged and disengaged while another tool in the turret moves into and out of cooperative relation with the turning head, and automatically adjustable stop means for increasing the range of movement of the turret in the same proportion as the tools grind away.

2. A machine of the class described comprising a turning head, a tool turret carrying a plurality of tools and rotatable to bring the tools successively into coöperative relation with the turning head, means for moving the turret toward and from the turning head, and a plurality of grinding devices of different grinding power for automatically grinding a plurality of tools upon the back and forth movement of the turret and past which each tool travels.

3. A machine of the class described comprising a turning head, a tool turret carrying a plurality of tools and rotatable to bring the tools successively into coöperative relation with the turning head, means for moving the turret toward and from the turning head, a plurality of grinding devices for automatically grinding a plurality of tools upon the back and forth movement of the turret, and automatically adjustable stop means for maintaining the tools in proper relation to the turning head and grinding devices as the tools grind away.

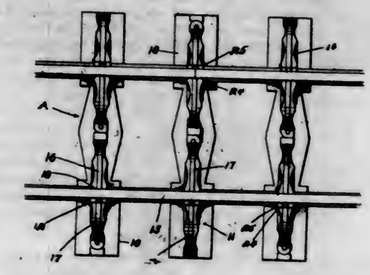
6. In a machine of the class described, the combination of a turning head, a slidable turret movable toward and from the head and having a rotatable tool-carrying body, a grinding device arranged to successively grind the tools as the turret body turns, and means for automatically increasing the range of movement of the turret as the tools grind away.

8. A machine of the class described comprising a tool turret, in combination with a grinding device for successively sharpening the tools as the turret is turned, said device comprising a grinding wheel, and a structure adjustable rectilinearly in two directions at right-angles to each other and adjustable angularly for properly positioning the grinding wheel with respect to the tools.

[Claims 4, 5, 7, and 9 to 15 not printed in the Gazette.]

1,225,600. RAILROAD-TIE. RUBEN DUVAL, Arma, Kans. Filed Nov. 7, 1916. Serial No. 130,099. (Cl. 238—5.)

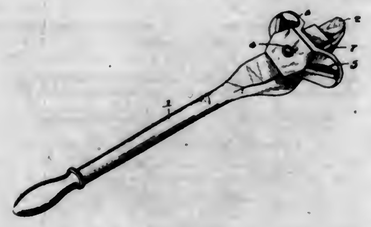
1. A railroad tie having a pair of rail engaging clamps thereon, each of said clamps having a fixed jaw and a movable jaw, said jaws having recesses therein providing rail seats, a beveled face on said fixed jaw having a tapered groove therein, and a beveled face on said movable jaw having a tapered tongue thereon to be received in said groove when said movable jaw is in rail engaging position.



2. A railroad tie having a pair of spaced rail engaging clamps thereon, each of said clamps having a fixed jaw formed integral therewith and a movable jaw, said jaws having rail receiving recesses therein providing the jaws with rail retaining lips to engage with the base flanges on a rail placed therebetween, a latch bar on said fixed jaw, and a keeper on said movable jaw to engage with the latch bar when said movable jaw is in rail engaging position.

3. A railroad tie having a pair of spaced rail engaging clamps thereon, each of said rail engaging clamps having a pair of interengaging jaws recessed to provide a rail seat, one of said jaws being formed integral with the tie and having a shank rigidly connected therewith, the other of said jaws having a shank pivotally connected with the tie, and means for holding said jaws in interengaging position.

1,225,601. STOVE-LID LIFTER. LABEN STAFORD EDMONDS, Chapmanville, W. Va. Filed Apr. 25, 1916. Serial No. 93,491. (Cl. 126—323.)



1. A stove lid lifter comprising a handle supporting a lip, a foot detachably secured to the handle and an adjustable element associated with said lip.

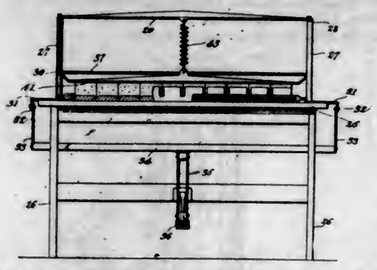
2. A stove lid lifter comprising a handle formed with a lid engaging lip, a foot detachably secured to the handle adjacent said lip and a rest slidably mounted on the handle contiguous said lip.

3. A stove lid lifter comprising a handle formed with a lid engaging lip, a foot detachably secured to the handle adjacent said lip and a rest having a pin and slot connection with said handle.

4. A stove lid lifter comprising a handle formed with a lid engaging lip, a foot detachably secured to the handle adjacent said lip and a rest U-shape in cross section and embracing three sides of the handle, said rest having a pin and slot connection with the handle.

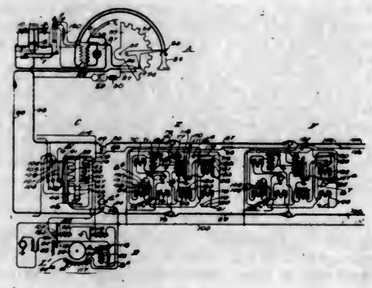


1,225,602. FORMING-MACHINE. CHARLES E. ERICKSEN, Indianapolis, Ind., assignor of one-third to Joseph Allerdice and one-third to W. H. Allerdice. Filed Jan. 24, 1916. Serial No. 73,956. (Cl. 31—65.)



In an apparatus of the character described, a molding table including a platform, pairs of guides uprising from said platform adjacent the ends thereof, frames slidably mounted in said guides, the rods connecting said frames, a stamp or mold connected to the frames adjacent to their upper ends, a pair of yokes connected to the frames adjacent their lower ends and extending longitudinally of the platform, adjusting screws connected to said yokes for longitudinal and lateral movement and cutter wires connected to the adjusting screws.

1,225,603. MEASURED-SERVICE TELEPHONE SYSTEM. JOHN ERICKSON, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 5, 1910. Serial No. 575,751. (Cl. 179—6.5.)



1. In a telephone system, a calling and a called subscriber's line, means including automatic progressively movable switches controllable over two sides of a line in series for establishing connection between said lines, means for rendering the calling telephone inoperative for talking when the called subscriber answers, and means for thereafter rendering said telephone operative.

2. In a telephone system, a calling and a called subscriber's line, means including automatic progressively movable switches controllable over two sides of a line in series for establishing connection between two of said lines, means for reversing the current in the calling line when the called subscriber answers, means responsive to said reversal of current to render said telephone inoperative for talking, a measured service device, and means controlled by the operation thereof for thereafter rendering said telephone operative.

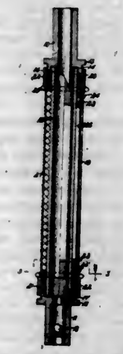
3. In a telephone system, a plurality of subscribers' lines divided into groups, means including automatic switches having motion of one character to select groups and a second motion to find a line in the selected group for establishing connection between two of said lines, means for controlling the two sides of a line in series to operate said switches, means for rendering said calling telephone inoperative for talking when the called party answers, and means for thereafter rendering said calling telephone operative.

4. In a telephone system, a plurality of subscribers' lines divided into groups, means including automatic switches having motion of one character to select groups and a second motion to find a line in the selected group for establishing connection between two of said lines, means for controlling the two sides of a line in series to operate said switches, means for reversing the current in the calling line when the called party answers, means responsive to said reversal of current to render the calling telephone inoperative for talking, a measured service device, and means controlled by the operation of said device for rendering said calling telephone operative.

5. In a telephone system, a calling and a called subscriber's line, means including automatic switches having motion in two intersecting planes for establishing a connection between two of said lines, means for controlling the operation of said switches over two sides of a line circuit in series, a transmitter and a receiver on each of said lines, and means controlled upon the response of the called subscriber for closing a short-circuit directly around said transmitter on the calling line, said short-circuit excluding the calling receiver.

[Claims 6 to 44 not printed in the Gazette.]

1,225,604. SAFETY GAGE-GLASS. GEORGE ERNST, Newark, N. J. Filed June 1, 1916. Serial No. 101,045. (Cl. 73—54.)



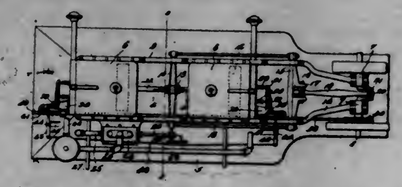
1. In a safety gage glass, the combination of end nipples each having an externally threaded socket extension directed toward the other, a frame comprising socket pieces having threaded connection with said nipple extensions and each having a semi-cylindrical integral neck projecting toward the other, said frame also including a semi-cylindrical back, detachable fasteners securing its ends rigidly to said semi-cylindrical necks, and a gage glass extending freely through the socket members and into the nipple sockets out of contact with the parts aforesaid.

2. In a safety gage glass of the character set forth, the combination with a gage glass tube, of a metal frame therefor comprising end socket pieces into which the ends of the tube project and also including a frame back of segmental tubular form extending from one socket piece to the other, each socket piece having a neck projecting toward the other to which the adjacent end of the back is rigidly secured, a reticulated guard member embracing the open side of the tube and extending from one socket piece to the other, and a pair of elastic rings surrounding the ends of the same and the ends of the frame holding the reticulated member resiliently in place.

3. In a safety gage glass of the character set forth, the combination with a gage glass tube, of a frame there-

for comprising upper and lower end socket pieces and a rigid semi-cylindrical back extending from one socket piece to the other and secured rigidly thereto, said back being provided with a vertical series of holes passing therethrough for the passage of light, each socket piece having a neck projecting toward the other to which the back is connected, means carried by the inner surface of the back along said holes to intensify the disparity of visual effect above and below the water line, and means coöperating with the socket pieces to make steam-tight connection therewith and holding the ends of the glass tube out of contact with the parts aforesaid.

1,225,605. INTERNAL-COMBUSTION ENGINE. GEORGE FLOYD, Portsmouth, Ohio. Filed Nov. 26, 1915. Serial No. 63,573. (Cl. 123—57.)



1. In an internal combustion engine, a base, a pair of opposed cylinders supported upon said base, pairs of guides connecting said cylinders and projecting forwardly thereof, a pair of bearings supported upon the forward end of said base and connected with the forward extremities of said guides, a crank shaft rotatably supported in said bearings, a pair of spaced cross heads supported in said guides, adjustable rigid connections between said cross heads, a connecting rod connecting the forward cross head with said crank shaft, pistons reciprocably mounted in said cylinders, piston rods carried by said pistons fitted in one of said cross heads and adjustable with relation to each other and with relation to the cross head, and means for locking said piston rods in adjusted position with relation to said cross head.

2. In an internal combustion engine, a cylinder, a crank shaft, a piston reciprocably mounted in said cylinder, connections between said piston and said crank shaft, a cam shaft connected with said crank shaft, valves mounted in the heads of said cylinders, bell cranks associated with said valves, a pair of spaced sleeves slidably and non-rotatably secured upon said cam shaft, pairs of cams formed upon each sleeve and adapted to be moved into operative position with relation to said bell cranks, laterally projecting lugs formed on the opposite sides of the cam-engaging ends of the bell cranks having inclined faces adapted to permit free sliding movement of said cams, and means for simultaneously adjusting said sleeves.

1,225,606. OPERATING MEANS FOR ELEVATOR SHAFT AND CAR DOORS. JOHN E. W. FOCAL, Quincy, Ill., assignor to Quincy Elevator Gate Company, Quincy, Ill. Filed Sept. 9, 1916. Serial No. 119,249. (Cl. 187—52.)

1. An elevator shaft, a car movable therein, a gate for the car, an element extending up and down the shaft and capable of movement independently of the car, and means on the car and having a running connection with the said element for receiving motion therefrom when the element is moved to open and close the gate.

2. An elevator shaft, a car movable therein, a gate for the car, an element extending up and down the shaft and capable of movement independently of the car, means on the car and having a running connection with the said element for receiving motion therefrom when the element is moved to open and close the gate, a shaft door, and means for opening and closing the shaft door by the movement of the said element.

3. The combination of an elevator shaft, a car movable therein, elevator shaft doors, a gate on the car, means in the shaft for opening and closing any of the shaft doors, means on the car for operating the car gate, a cable device connected with the first-mentioned means for actuating the same and having a running connection with the said means on the car, a mechanism for actuating the said device, and a controller operative from the car for throwing the said mechanism into operation.

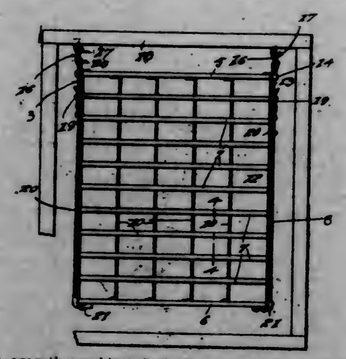


4. The combination of an elevator shaft, a car movable therein, elevator shaft doors, a gate on the car, means in the shaft for opening and closing any of the shaft doors, means on the car for operating the car gate, a cable device connected with the first-mentioned means for actuating the same and having a running connection with the said means on the car, a mechanism for actuating the said device, and a controller operative from the car for throwing the said mechanism into operation, said mechanism including a device for automatically stopping it when the gates reach open or closed position.

5. An elevator shaft, a car movable therein, a gate for the car, an element extending up and down the shaft and capable of movement independently of the car, a pulley system on the car and having a running engagement with the said element, one pulley of the said system being movable, and means actuated by the movable pulley for opening the said gate.

[Claims 6 to 10 not printed in the Gazette.]

1,225,607. ASSORTING-CABINET. OSCAR B. FORD, ERNEST H. LOY, and JESSE J. HEETER, Lewisburg, Ohio. Filed Mar. 7, 1916. Serial No. 82,757. (Cl. 211—36.)

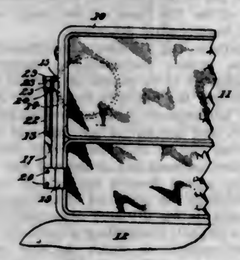


An assorting cabinet including a rigid top and bottom, rigid horizontally disposed partitions arranged in spaced



relation intermediate said top and bottom, flexible end walls connecting said partitions and top and bottom, vertically disposed flexible partitions connecting said top and bottom and intersecting said horizontally disposed partitions, straps carried by the opposite ends of said bottom, straps carried by the top, and means for adjustably securing the adjacent ends of the first and second mentioned straps to retain the cabinet in collapsed condition.

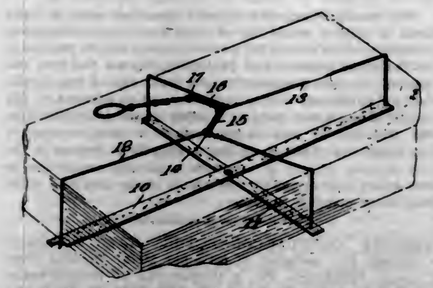
1,225,608. GLARE-SHIELD FOR AUTOMOBILES. ARTHUR C. FREEMAN, Jr., Norfolk, Va. Filed Sept. 12, 1916. Serial No. 119,761. (Cl. 21—148.)



1. A device of the class described comprising a mounting rod, an attaching clamp carried by the said rod, projecting pins at one end of the said rod, a carrying member journaled upon the said rod having receiving notches adapted for adjustably seating over the said pins, a resilient washer having radially projecting fingers overlying the free end of the said carrying member, and an anti-glare shield member carried by the said carrying member.

2. A device of the class described comprising a supporting rod having one end portion thereof rectangular and the other cylindrical in cross-section, a mounting clamp attached to the rectangular portion of the said rod, adjustable spacing means between the said clamp and rod, a carrying member journaled upon the cylindrical portion of the rod having slots in its lower edge, projecting pins carried by the said rod over which the said slots are normally seated, a resilient washer non-rotatably mounted upon the free end of the said cylindrical rod portion having radial resilient fingers normally overlying the upper end of the said carrying member in contact therewith, a cap threaded upon the upper end of the said carrying member overlying the said washer, and an anti-glare member carried by the said carrying member.

1,225,609. PACKAGE-TIE. ROBERT C. FUELLER, Chapman, Ill. Filed Sept. 22, 1915. Serial No. 51,919. (Cl. 24—17.)



1. A tie of the character described including a body portion adapted to lie upon one side of a package, flexible elements secured at their extremities to the body portion with the intermediate portions of said elements defining co-acting loops free with respect to each other for engagement over the package, and means for connecting the intermediate portions of said loops upon the side of the package opposite the body portion.

2. A tie of the character described including crossed members adapted to lie upon one side of a package, flexible elements connected at their extremities to the extremities of said members with the intermediate portions of said elements defining co-acting loops having their intermediate portions free with the said loops free with respect to each other for engagement over the package, and means for connecting the intermediate portions of said loops upon the side of the package opposite the said members.

3. A tie of the character described including crossed members secured together and adapted to lie upon one side of a package, flexible elements secured at their extremities to the extremities of the said members with the intermediate portions of said elements free to define co-acting loops free with respect to each other for engagement over the package, and a hook freely connected to the intermediate portion of one of said loops and engaging the intermediate portion of the other loop for connecting the said loops upon the side of the package opposite to the said members.

4. A tie of the character described including crossed members, flexible elements secured at their extremities to the extremities of said members with the intermediate portions of the said elements free and defining coacting loops free with respect to each other for engagement over the package, a stop carried by one of said flexible elements, and a hook connected to the said element upon opposite sides of said stop and engaging the other of said elements for connecting the intermediate portions of said loops upon the side of the package opposite to the said members with the said stop adapted to hold the hook against shifting movement longitudinally upon the said first mentioned element.

5. A tie of the character described including a body portion adapted to lie upon one side of a package, flexible elements carried by the body portion and defining co-acting loops free with respect to each other for engagement over the package, a fastening device carried by one of said loops, and means carried by the other of said loops and adapted to engage said fastening device for adjustably connecting the intermediate portions of said loops upon the side of the package opposite to the said body portion.

[Claims 6 and 7 not printed in the Gazette.]

1,225,610. POWDER-CONTAINER. ASA BERT GARNER, Kitzmiller, Md. Filed July 7, 1915. Serial No. 38,580. (Cl. 221—1.)

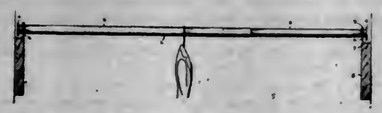


In a device of the kind described in combination a hollow body having a bottom and an upwardly tapering annular top portion terminating in a spout making an angle with itself, an upwardly inclined tubular fuse receptacle secured upon the bottom of said tapering top portion, a funnel having its spout fitted over said first-named spout

and its main body fitting around said tapering top portion, said funnel formed with an arcuate shaped cutaway portion adapted to fit around said tubular fuse receptacle and be held against rotation on said tapering top portion, a keeper on said funnel, and a hook on said hollow body, engaging said keeper to hold said funnel against vertical displacement from said hollow body.

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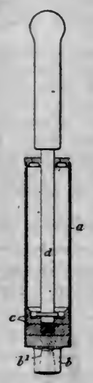
1,225,611. GARMENT-SUPPORT. EDWARD C. GATLIN, Kansas City, Mo. Filed Apr. 27, 1916. Serial No. 93,973. (Cl. 45—37.)



In a garment supporting device, the combination with a telescopic supporting pole having circumferential flanges at its opposite ends, of a pair of supporting brackets, each bracket formed from a single piece of sheet metal and provided with a U shaped pole receiving recess, a flexible arm carried by the upper portion of each bracket and adapted to be bent over the pole into alinement with the bracket, said flexible arms each being of a length sufficient to extend across the recess whereby the bracket will completely encircle the pole, and attaching tongues struck up from each bracket for anchoring said bracket upon a support.

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1,225,612. PERCUSSIVE TOOL. GEORGE JAMES GAWLEY, Fleet, England. Filed Apr. 24, 1916. Serial No. 93,291. (Cl. 81—3.)




1. An apparatus for utilizing atmospheric pressure for delivering impacts comprising a chamber having a closed end adapted to be placed against the article to be struck, the opposite end of said chamber being open to the atmosphere, a piston mounted in said chamber and adapted to be moved toward said closed end for delivering an impact thereto by atmospheric air entering said cylinder and means for moving said piston away from the closed end of the cylinder, whereby a vacuum will be created between the closed end of the cylinder and said piston.

2. An apparatus for utilizing atmospheric pressure for delivering impacts comprising a cylinder having an anvil at one end, a second cylinder slidably mounted in the first named cylinder, and provided with a closed end which is adapted to contact with said anvil, said second cylinder being open to the atmosphere at its opposite end, a piston slidably mounted in the second cylinder and adapted to be moved away from the closed end to create a vacuum between the piston and the closed end of the second cylinder, and means for moving the second cylinder relatively to the piston whereby a vacuum will be created in the second cylinder on one side of the piston and atmospheric air will act on the opposite side of the piston.

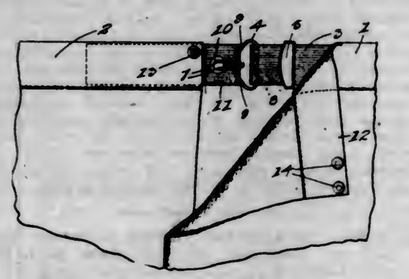
3. Apparatus for utilizing atmospheric pressure for operating percussive tools, comprising a cylinder or chamber, closed at one end, an outer cylinder in which it slides, a piston sliding within the inner cylinder, a handle or extension connected to the said inner cylinder, a guard or shield on the said handle which telescopes over the outer cylinder, means for connecting the piston with the outer cylinder and a device in connection with the handle or extension for disconnecting the piston from the outer cylinder so that the said piston can move under atmospheric pressure to strike the base of the inner cylinder, substantially as hereinbefore described.

4. An apparatus for utilizing atmospheric pressure for delivering an impact comprising a chamber having a closed end adapted to be placed in contact with the surface to be struck, the opposite end of the chamber being open to the atmosphere, a member slidably mounted in said chamber, and means for moving said member away from the closed end of said chamber to create a vacuum in said chamber between the closed end and member, said member being moved toward said closed end by atmospheric air entering the open end of the chamber.

5. An apparatus for utilizing atmospheric pressure for delivering an impact, comprising a cylinder closed at one end, an outer cylinder in which the first cylinder slides, a piston slidably mounted in the inner cylinder, means for moving the inner cylinder relative to the piston for creating a vacuum between the piston and the closed end of the inner cylinder, means for detachably connecting the piston with the outer cylinder, and means for disconnecting the outer cylinder and piston so that the said piston can move under atmospheric pressure to strike the base of the inner cylinder.

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1,225,613. SKIRT-FASTENER. CORNELIUS M. GEIGER, St. Petersburg, Fla. Filed Feb. 20, 1915. Serial No. 9,684. (Cl. 2—143.)




The combination with a skirt provided with a waist band, a placket consisting of inner and outer overlapping members, of an elastic tab secured at one end to the inside of the inner member and projecting beyond the free end thereof, an eyelet secured to the other end of the elastic tab, an adjustable elastic strap secured at one end to the inside of the waist band at a point spaced inwardly from the free end of said outer member, a hook secured to the other end of the strap and having loops formed in the bill portion thereof to establish a locking connection to the eyelet, and means for adjustably connecting said outer and inner members together.

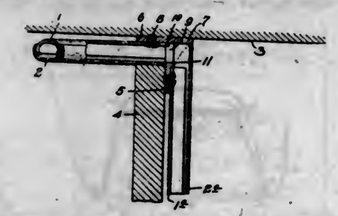
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1,225,614. CONDUIT-CONNECTOR. HENRY R. GILSON, Baden, Pa., assignor to National Metal Molding Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 21, 1916. Serial No. 79,698. (Cl. 247—10.)

In an electrical installation, the combination of a T-shaped connector formed of integrally united plates and



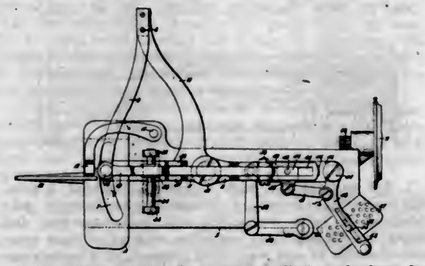
comprising a stem and oppositely projecting arms at one end thereof, said stem adjacent to said arms being provided with an opening through which electrical conductors may pass, a two-part conductor conduit extending




parallel with and having its base attached to one of said arms, and a second such conduit extending parallel with and having its base attached to said stem, the second arm of said connector forming a closure for the otherwise open end of said second-named conduit.

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1,225,615. BUTTON AND BUTTONHOLE MARKER COMBINED. JOHN ALFRED GORMAN, Newton, N. J. Filed Apr. 11, 1916. Serial No. 90,340. (Cl. 33—190.)



1. In a device of the character described, a platform for receiving the quarters of a pair of shoes, a pin for marking or piercing said quarters, a pressing bar for pressing said quarters against said pin, and means for moving the pin together with said pressing bar while the pin is engaging the quarters so as to move the quarters.

2. In a marking machine of the character described, a marking pin, means for causing the same to engage a pair of quarters, said means including mechanism for causing the pin to press against the quarters and swinging mechanism for moving said last mentioned means and said pin while the pin is in engagement with the uppers for moving the uppers a predetermined distance.

3. In a marker of the character described, a platform for receiving quarters of shoes, a marking device for marking and intermittently moving said quarters, said marking device being formed with a pair of gripping members for gripping the quarters, means for moving the gripping members forward while gripping said quarters, means for causing the gripping members to release the quarters and move back a predetermined distance from the first gripping point ready for a second operation, and a clamping mechanism for holding the quarters against movement while the marking mechanism is moving back to again grip the quarters.

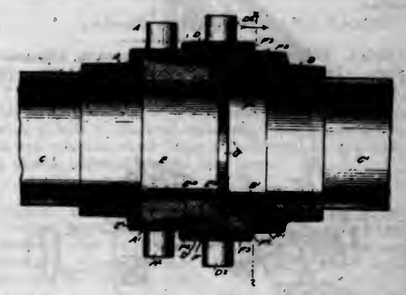
4. In a marking device of the character described, a platform provided with a slot therein, an anvil extending beneath said paltform, a pin connected with said anvil and extending into said slot so that the upper end will be flush with the platform, a presser bar arranged above said pin, a piercing or marking member arranged between said presser bar and said pin, means for operating said presser bar for moving the same down against said piercing member and moving the piercing member against said pin, and means for swinging said anvil, presser bar and parts associated therewith including said quarters a predetermined distance.

5. In a marker of the character described, a platform for receiving quarters of shoes to be marked, said platform having a slot therein, a swinging bar having a pin extending through said slot so as to be flush with the top of the platform, a quarter marking member arranged above said pin, a presser bar for pressing said quarters against said marker and said marker in turn against said pin, means for swinging the pin, presser bar and associated parts including the quarters a predetermined distance, means for gripping and holding the quarters against return movement, and means for causing said pin to alternately grip and release said quarters.

[Claims 6 to 13 not printed in the Gazette.]

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1,225,616. FIRE-HOSE COUPLING. WILLIAM R. GOUGH, Brooklyn, N. Y.; Isabelle V. Gough administratrix of said William R. Gough, deceased. Filed May 27, 1915. Serial No. 30,782. (Cl. 137—28.)



1. A hose coupling, comprising coupling heads and a coupling member, the said heads and coupling member being made of a low-priced metal and the said coupling member being mounted to turn loosely on one of the coupling heads, the other coupling head and the coupling member having interior brass bushings of which the brass bushing of the coupling head projects beyond the end thereof and is provided with an exterior screw thread, and the brass bushing of the coupling member is provided with an interior screw thread screwing onto the threaded projecting end of the other brass bushing.

2. A hose coupling, comprising coupling heads, a coupling member, the said heads and member being made of a low priced metal and the said coupling member being mounted to turn loosely on one of the said coupling heads, the other coupling head having a conical opening, the apex of which is at the face of this coupling member, a brass bushing having a conical inner end fitting the said seat and having an outer portion projecting beyond the face of this coupling member, the projecting end being provided with an exterior screw thread, the said coupling member having a conical opening throughout its length and with the apex on the inner face of the coupling member, and a conical bushing fitting into the said conical opening and having an interior screw thread screwing on the said exterior screw thread on the projecting end of the other bushing.

3. A hose coupling, comprising coupling heads, a coupling member, the said heads and member being made of a low priced metal and the said coupling member being mounted to turn loosely on one of the said coupling heads, the other coupling head having a conical opening, the apex of which is at the face of this coupling member, a brass bushing having a conical inner end fitting the said seat and having an outer portion projecting beyond the face of this coupling member, the projecting end being provided with an exterior screw thread, the said coupling member having a conical opening throughout its length and with the apex on the inner face of the coupling member, and a conical bushing fitting into the said conical

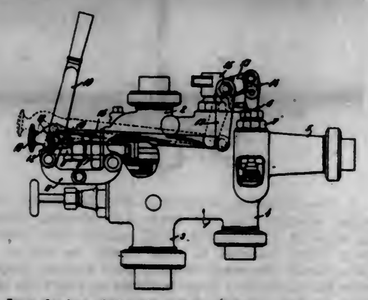
opening and having an interior screw thread screwing on the said exterior screw thread on the projecting end of the other bushing, the said bushings having exterior lugs on the non-threaded portions fitting into recesses in the walls of the said seat and the said opening.

4. A hose coupling, comprising a pair of coupling heads and a coupling member, the said heads and member being made of pressed steel, and bushings of non-corrodible metal having screw threads screwing one on the other, one of the bushings being expanded in one of the coupling heads and the other being conical and pressed into a conical opening in the coupling member.

5. A hose coupling, comprising a pair of coupling heads and a coupling member, the said heads and member being made of pressed steel, and non-corrodible bushings having screw threads screwing one on the other, one of the bushings being expanded in one of the coupling heads and the other being conical and pressed into a conical opening in the coupling member, the said bushings having exterior lugs on the non-threaded portions engaging recesses in the walls of the corresponding coupling head and the coupling member.

[Claims 6 to 8 not printed in the Gazette.]

1,225,617. INJECTOR. JOHN W. GRANTLAND, Cincinnati, Ohio. Filed Aug. 9, 1915. Serial No. 44,511. (Cl. 162—1.)



1. In a device of the class described, a valve rod mounted and slidable in a stationary support, a lever connecting with said valve rod, a valve operating rod pivotally connected at one end to valve operating devices, and a link member connecting said valve operating rod to said lever, and relatively arranged to adapt said valve operating rod to be moved independent of the lever, or with said lever and first named valve rod.

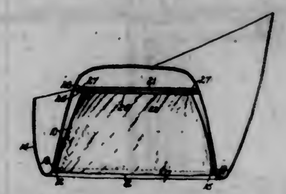
2. In a device of the class described, a lever, a valve rod directly connected with said lever to be reciprocated thereby, a second rod longitudinally extending in a direction at an angle to the lever and arranged to pivotally connect with said lever for unitary motion of said connected members, and a link connecting said lever and second rod, adapting said second rod to be swung about said pivotal connection for said lever and second rod for moving said second rod independent of the lever.

4. In a device of the class described, a lever, a valve connecting with and controlled by said lever, a valve operating rod extending in a direction lateral to the lever, and a link connecting said lever and rod, said rod being adapted to move with said link to bring the rod into engagement with the link lever pivot to join the parts for unitary motion and alternately for swinging said connected rod and link about the link lever pivot for rod motion independent of the lever.

[Claim 3 not printed in the Gazette.]

1,225,618. ADJUSTABLE HAT-LINING. FREDERIC GRUNIG, New York, N. Y., and MAXIME L. VAN HUELS, Elizabeth, N. J. Filed Nov. 24, 1916. Serial No. 133,151. (Cl. 2—113.)

As a new article of manufacture, a hat lining comprising a crown, the side portion of which is formed of a flexible material cut at a bias, the lower edge of the said side portion being formed into a hem for attachment to the inside of a hat, an adjustable hoop held in the said hem, a flat top formed of an inner piece of flexible material similar to that of the crown and an outer reinforcing



piece of buckram, to which top the upper edge of the side portion is attached in gathered relation, and a ring trimming on the under side of the said top at the junction of the top with the said side portion and contrasting in color with the side and top.

1,225,619. PRESSURE-REGULATOR. JAMES CLARKE HAGEY, Chicago, Ill., assignor of one-half to The Cable Company, Chicago, Ill., a Corporation of Illinois. Filed May 11, 1908. Serial No. 432,200. (Cl. 85—168.)



1. The combination, with a pressure chamber, a pressure-regulating chamber, a communication between said chambers, a valve controlling said communication and means for automatically operating said valve upon pressure-variation in said regulating chamber, of a perforation in said valve and means (1) operable through said perforation to act with counterbalancing effect upon said valve.

12. The combination of a main pneumatic having a port to be regulated, a supplemental pneumatic arranged within said main pneumatic and rigidly mounted therein, said supplemental pneumatic having its swinging member mounted to control said port, a rod connected with the swinging member of said supplemental pneumatic and also connected with the movable member of the main pneumatic, whereby the movement of the latter actuates the former to control said port, a third pneumatic mounted upon the vibratory member of the main pneumatic and connected with said rod which is connected with the swinging member of the supplemental pneumatic, and tension springs controlling the swinging member of the main pneumatic and also controlling said third mentioned pneumatic.

17. The combination with first and second fluid pressure systems, of a pressure regulator operated by and acting upon the pressure in the first of said systems, and means through which varying changes in pressure in the second of said systems may determine the pressure which said regulator automatically acts to maintain in the first of said systems.

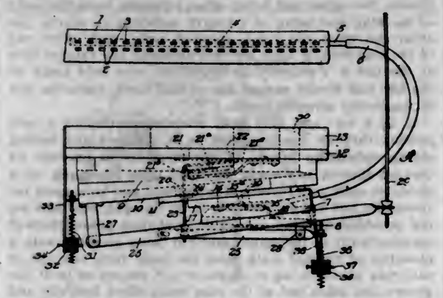
32. The combination with a motor for advancing a music sheet across a tracker, of means for automatically varying the motor operating pressure in accordance with and controlled by variations in the retarding influence of said tracker upon said sheet.

33. The combination with a motor for advancing the music sheet of an automatic musical instrument, of means for automatically controlling the motor operating pressure by variations in the action operating pressure.

[Claims 2 to 11, 13 to 16, 18 to 31, and 34 to 40 not printed in the Gazette.]



1,225,620. POWER-REGULATING APPARATUS. JAMES CLARKE HAGEY, Chicago, Ill., assignor of one-half to The Cable Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 16, 1913. Serial No. 761,470. (Cl. 84—168.)



1. The combination of means for determining the number of notes to be sounded and means for varying the power in proportion to variations in the number of said notes, said power varying means being arranged to operate to determine the power prior to the sounding of the notes.

2. The combination of means for determining the number of notes to be sounded and means for controlling the power so that the power available for each such note shall be automatically maintained substantially uniform when the number of such notes is varied.

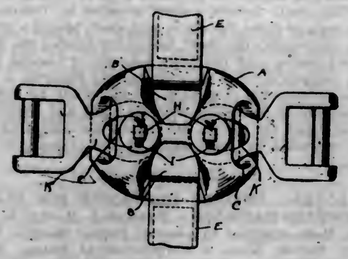
3. The combination of means for determining the number of notes and means whereby the power is varied in proportion to the number of such notes so that each such note shall have the same amount of power irrespective of the number of such notes.

4. The combination of means for determining the amount of the load and means for varying the power in accordance with variations in the load, said power varying means being provided with mechanism whereby it is adjusted prior to the variation in the load.

5. The combination of a device for controlling fluid pressure, a second device susceptible to and operable by variations in fluid pressure to any degree of adjustment between its extremes, said second device being arranged to operate and control said pressure controlling device, means for varying the load, and means whereby prior to variations in the load said second device is supplied with fluid pressure varying in degree in proportion to such variations in the load.

[Claims 6 to 58 not printed in the Gazette.]

1,225,621. TRACE-HOLDER. SAMUEL K. HAINES, Shubert, Nebr. Filed Feb. 2, 1917. Serial No. 146,162. (Cl. 54—56.)



A trace holder comprising a skeleton frame adapted to be attached to the back strap of a harness and provided with opening at its ends, said frame having apertures rectangular in cross section, gravity hooks mounted in said apertures and arranged to extend across said openings, and having curved portions against which the end of a cockeye is adapted to contact to cause the hook to be elevated to permit the cockeye to pass by the hook, and means fastened to the ends of the hooks for limiting their downward movement.

1,225,622. AUTOMOBILE STEERING-WHEEL. CHARLES SYBIL HALL, Sandcoulee, Mont. Filed Sept. 13, 1916. Serial No. 119,820. (Cl. 74—33.)



As a new article of manufacture a steering wheel having a hub, a rim, and connecting means between the hub and rim, the whole being formed entirely of a yielding plastic material molded into form.

1,225,623. DEVICE FOR FASTENING OR SECURING ROPES, ROPE HANDLES, CORDS, AND THE LIKE. ROBERT OWEN DE KINGSLEY HALL and HENRY ARTHUR DUXBURY, Wigan, England. Filed Dec. 17, 1915. Serial No. 67,376. (Cl. 24—129.)



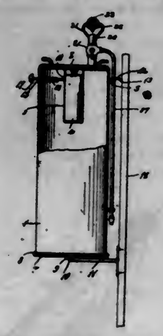
1. In a device for fastening or securing ropes, rope handles, cords or the like, a washer or plate member having a hole through which the strands of the rope are collectively passed, and in addition a plurality of open ended slots terminating in round holes at the inner ends into which the individual strands of the rope after having been passed through the center hole are passed laterally.

2. Means for fastening or securing ropes, rope handles, cords or the like, comprising a washer or plate member having a central opening through which the strands of the rope are collectively passed, and supplementary openings in the said washer or plate through which the individual strands are passed in succession backwardly and forwardly whereby they may be clenched by the openings, and are locked by the succeeding strands which may be clenched on the top of them.

1,225,624. FIRE-EXTINGUISHER. PEARL M. HALLER, Bay City, Mich. Filed July 13, 1916. Serial No. 109,067. (Cl. 169—8.)

In a fire extinguisher, a bracket, a bar pivoted to the bracket, a tank supported on the bar, a link near the upper end of the tank and adapted to be readily destroyed by heat, an acid container within the tank, a discharge pipe in the upper end of the tank, a spreader on the end of the discharge pipe, a hose connected laterally of the discharge pipe, a valve directing the discharge of the contents of the tanks either into the spreader or hose and

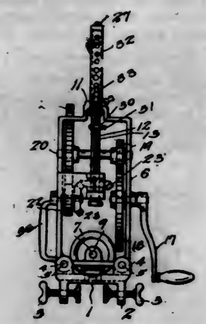
a plunger operable through the side of the tank and adapted to engage the support to which the bracket is secured



to puncture the acid container upon the falling of the tank into operative position.

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1,225,625. MORTISING-MACHINE. HENRY S. HALLWOOD, Columbus, Ohio. Filed Feb. 1, 1916. Serial No. 75,543. (Cl. 144—69.)



1. The combination in a drilling machine with a supporting carriage and a revoluble, reciprocable drill holding spindle, of hinged braces connected to the carriage having adjustable means for holding the drill in rigid position.

2. The combination with a supporting carriage and a revoluble, reciprocable drill holding spindle, of a pair of braces hinged to the carriage, and oppositely disposed set screws in the braces for retaining the drill in inflexible operative position.

3. The combination with a fixed bed having a lineal series of equidistant holes therein, of a reciprocable carriage supported on the bed, a pawl pivoted on the carriage and provided with fingers of different radii adapted to engage said holes, a drilling tool supported in the carriage, and operating means therefor.

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1,225,626. NUT AND BOLT LOCK. CUSTER L. HANNON and CLAY CROSS, Skiatook, Okla. Filed June 6, 1916. Serial No. 101,921. (Cl. 151—13.)

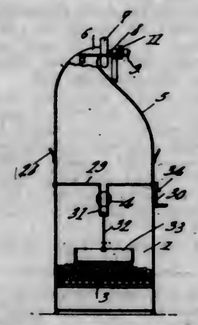


1. In a nut and bolt lock, the combination of a bolt passing through two members to be clamped and having means embedding in one of the members to prevent movement of the bolt and provided with an elongated groove in its shank and a nut threaded upon the shank and provided upon its inner face with a plurality of ratchet teeth, of a yieldable split ring interposed between the nut and the member to be clamped, one end of the ring having a lug extending toward the shank and shaped to fit the groove, the other end being offset laterally from the body of the ring and being of a length sufficient to overlie the other end when the nut is screwed home, said offset end of the ring having upon its face adjacent the ratchet face of the nut a V-shaped lug to ratchet over said teeth of the nut and finally engage one of said teeth when the nut is completely screwed home.

2. In a nut and bolt lock, the combination of a bolt passing through two members to be clamped and having means embedding in one of the members to prevent its turning therein and a nut threaded upon its shank, of a yieldable split ring surrounding the bolt and interposed between the nut and the member to be clamped, said bolt being provided with an elongated V-shaped groove formed longitudinally in its shank, said nut being provided with a plurality of ratchet teeth upon its inner face, one end of said ring having a lug so disposed and shaped as to fit the groove, the other end of the ring being offset laterally and circumferentially with respect to the first end and having a V-shaped lug to ratchet over said teeth of the nut, the offset end of the ring contacting with the teeth of the nut and having the V-shaped lug so disposed that one leg of the V is perpendicular to the face of the ring and being of a length sufficient to overlie the other end of the ring, so that when the nut is screwed home and the V-shaped lug has engaged a final tooth the offset end may be in a position to be prized out beyond the radius of the nut to permit the release of the same when it is desired to unscrew the nut.

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1,225,627. FUMIGATING APPARATUS. FLETCHER M. HAWKINS, Greenville, Tex. Filed Feb. 20, 1915. Serial No. 9,616. (Cl. 167—3.)

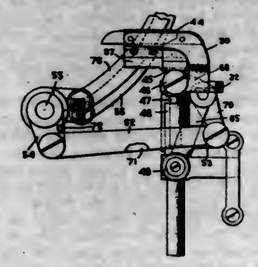


Fumigating apparatus including a stove casing, a fuel supporting grate therein, a shaft mounted for rotation in the casing and above the grate, said shaft having a crank, means for rotating the shaft, means for holding the shaft against rotation with the crank held out of lowered position, a receptacle for holding fumigating material, a connection between the receptacle and the crank for raising and lowering the receptacle with the crank and relative to the fuel upon the grate, and means for collecting the fumes generated by the heating of the contents of the receptacle.

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1,225,628. FEEDING MECHANISM FOR BLIND-STITCHING-MACHINES. THOMAS J. HAYES, Roslindale, Mass., assignor to Arbetter Felling Machine Company, Boston, Mass., a Corporation of Maine. Filed Apr. 9, 1914. Serial No. 830,790. (Cl. 112—8.)

1. Feeding mechanism for sewing machines comprising a work support, a feed dog, toggle mechanism connected to said work support and said feed dog adapted to cause relative movement between said feed dog and said work support alternately to raise and lower said work support and feed dog into engagement with the under surface of the work, means for actuating the same and means actuated intermediate of the raising and lowering of said feed dog automatically to advance and to retract said dog.



2. Feeding mechanism for sewing machines comprising a reciprocable work support, an under feed dog movable relatively thereto, toggle mechanism connecting said work support and said feed dog to cause relative up and down movement therebetween, means for actuating said toggle, and means actuated intermediate of successive movements of the feed dog alternately to advance and to retract said dog.

3. Feeding mechanism for sewing machines comprising a reciprocable work support, an under feed dog movable relatively thereto, toggle mechanism connecting said work support and said feed dog to cause relative up and down movement therebetween, means for actuating said toggle, means actuated intermediate of said movements of the feed dog alternately to advance and to retract said dog, an upper feed dog and means for causing the same to clamp the work against the lower feed dog and to partake of the advancing movement of the lower feed dog.

4. Feed mechanism for a sewing machine comprising a reciprocable work support, a feed dog pivotally and slidably mounted thereon, a toggle mechanism connecting said feed dog and said work support, means for actuating said toggle mechanism to cause said work support and said dog alternately to engage the goods and means for advancing and retracting said dog.

5. Feeding mechanism for sewing machines comprising a work support and a feed dog pivotally and slidably mounted thereon, a rock shaft, means connecting the pivotal support for said feed dog to said rock shaft to cause forward and backward movement thereof, toggle mechanism connecting said work support and said feed dog adapted to raise and lower said support and dog alternately, a rocking sleeve mounted upon said rock shaft, means connecting said sleeve to said toggle and means for actuating said rock shaft and said sleeve.

[Claims 6 to 14 not printed in the Gazette.]

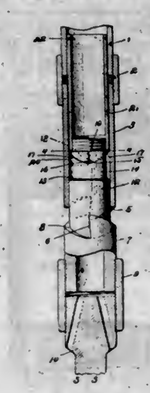
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1,225,629. DRILL. SEWELL S. HENSLEY, Mexia, Tex. Filed Oct. 13, 1916. Serial No. 125,498. (Cl. 255—61.)

1. A drill comprising continuously rotatable stem sections, an intermittently rotated bit, means for automatically raising and dropping a portion of the stem sections, and means interposed between said bit and the revolving mechanism of the stem sections for compensating for the raising and lowering of the stem sections.

2. A drill comprising stem sections, a bit-carrying shank rotatable within said stem sections, lugs located upon the shank and coacting with lugs upon the interior of the stem sections, ratchet teeth located between the said lugs and the bit and vertically movable compensating means located above the bit.

3. A drill comprising stem sections, an intermittently rotated bit adapted to be secured to said stem sections, means for alternately raising and dropping the stem sections and means interposed in said stem sections to provide for said raising and dropping, said means comprising a vertically movable section, longitudinal keys formed on said section and grooves formed in an adjacent section.



4. A drill comprising stem sections, a bit operated by said stem sections, a removable shank connected to said bit, ratchet teeth formed on said shank and coacting with similar ratchet teeth formed on the stem sections, lugs secured to said shank and coacting with similar lugs carried by the lowermost stem section, a coupling section formed with a thickened lower portion and provided with longitudinal grooves, a reduced section slidable within this coupling and longitudinal keys formed on this reduced section.

5. A drill comprising a continuously rotatable drill stem, a removable bit operated by said stem, a shank for said bit, ratchet teeth located on said shank and coacting with similar ratchet teeth carried by the stem, cam lugs carried by said shank and coacting with similar lugs carried by the rotatable stem, a telescopic coupling located in said rotatable stem and a feather and spline between the members of said telescopic coupling.

[Claims 6 to 8 not printed in the Gazette.]

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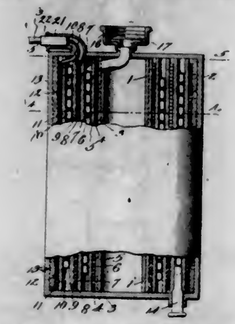
1,225,630. CLOTHES-PIN. JAMES WILLIAM HICKS, Clifton Hill, Victoria, Australia, assignor of one-third to Thomas Aloysius Nolan and one-third to Ebenezer Webb, Victoria, Australia. Filed June 20, 1916. Serial No. 104,753. (Cl. 24—139.)



A clothes pin comprising a handle, a continuous piece of wire bent to form two legs secured in the handle, said wire being bent from the lower end of one of the legs to form a substantially oval shape loop of spiral form the smaller end being at the bottom, and continued from the upper end of said loop and bent to form a second substantially oval shape loop of spiral form, the smaller end being at the bottom and said loop being larger than the first mentioned oval loop, the upper end of the second mentioned oval loop joining the other leg, whereby the greater portion of the first mentioned loop may be passed through the second mentioned loop, the smaller loop being transversely bent to form gripping surfaces, the lower

end of the first mentioned loop being bent outwardly and the lower end of the second mentioned loop being bent outwardly in the opposite direction.

1,225,631. PORTABLE ELECTRIC WATER-HEATER. CLARENCE E. HINKLE, Roswell, N. Mex. Filed Dec. 13, 1916. Serial No. 136,719. (Cl. 219—39.)

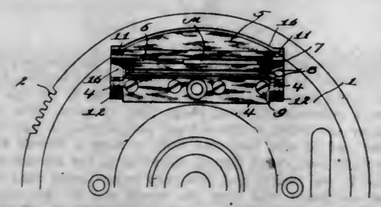


1. An electrical water heater including an inner core, an outer casing, a series of sets of electrically insulated resistance units and heating coils disposed between said core and casing, said coils having a common inlet and common outlet, means for connecting the resistance wires with a source of electric supply and electrical insulating material between the coils and resistance units, said material permitting the free transmission of heat.

2. An electrical heater including an inner core, an outer casing, a pair of spaced concentric water conducting coils disposed between the core and casing, said coils having a common inlet and a common outlet, electrical resistance coils disposed respectively between the outer coil and the casing and between the inner coil and the core, a third resistance coil between the water heating coils and common to both coils, electrical insulating and heat non-insulating material between the resistance coils and heating coils, and means for connecting the resistance coil with a source of current supply.

3. An electrical water heater comprising an inner core, an outer casing, a pair of resistance coils between the core and casing, a pair of water heating coils disposed between said resistance coils, a third resistance coil disposed between the water heating coils, layers of electric insulating heat-conducting material between said resistance wires and heating coils, a layer of heat non-conducting material between the outer resistance coil and the casing, and means for connecting the resistance coils with a source of electric supply.

1,225,632. MOLD FOR LINE-CASTING MACHINES. THOMAS S. HOMANS, Hempstead, N. Y., assignor to Intertype Corporation, New York, N. Y., a Corporation of New York. Filed June 4, 1913. Serial No. 771,766. (Cl. 199—13.)



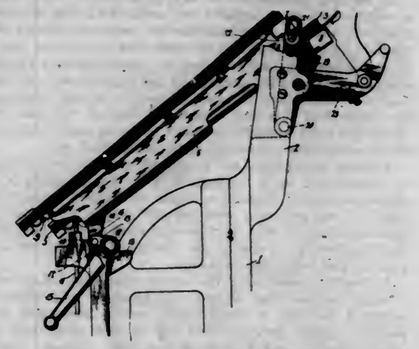
1. In a mold of the class described, the combination of a mold having relatively separable parts to form the top and bottom walls of the mold cavity, and means for holding together the mold parts comprising a clamp member attached to one of the mold parts and having an offset lug within the plane of the mold, and an adjustable member on the other mold part coöperative with said lug to exert pressure to hold the mold cap and body together.

2. In a slug-casting mold for machines of the class described, the combination of the mold body, the mold cap, clamp members pivotally attached to one of said mold parts to swing toward and from the respective ends of the mold and provided with shoulders, and adjustable devices on the other mold part arranged to act on said shoulders to draw the cap and body relatively toward one another.

3. In a line casting mold, the combination of the body portion, the cap portion, the interposed liners, clamp members pivotally connected to the cap and extending into the body portion and having steps or shoulders offset to occupy positions in the plane of the mold, and pressure devices on the body adapted to act on said steps whereby the body and cap may be held to the liners.

4. In combination in a line casting mold, the body, the superposed cap, the liners interposed between said cap and body, connections extending from the cap down to the body and provided with forwardly offset steps, and downwardly-acting screws in the body adapted to engage the connections and thereby hold down the cap.

1,225,633. TYPOGRAPHICAL MACHINE. THOMAS S. HOMANS, Hempstead, N. Y., assignor to Intertype Corporation, New York, N. Y., a Corporation of New York. Filed Aug. 27, 1915. Serial No. 47,679. (Cl. 199—7.)



1. In a machine of the class described, the combination of a plurality of forwardly and downwardly inclined magazines jointly mounted at different inclinations, and means for moving the forward and rear ends of the magazines about different axes to bring any one of them into certain operative register with coöperative parts of the machine.

2. The combination of a plurality of inclined, superimposed, non-parallel magazines, mounted in fixed relation to each other; and single actuating means for moving the respective ends of the magazines about different axes to bring any one of the magazines into the proper operative angle and register.

3. In a machine of the linotype class, the combination of a movable magazine carrying frame, a plurality of inclined magazines mounted thereon; said magazines being spaced relatively far apart at their upper ends and relatively close together at their lower ends, and means for guiding and moving the upper and lower ends of the magazine-carrying frame about different axes and through arcs of different angles.

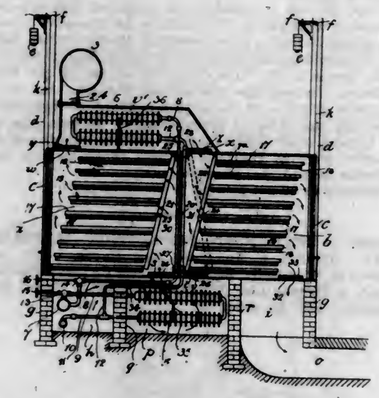
4. In a machine of the linotype class, in combination with a plurality of inclined matrix magazines, a movable carrying frames for said magazines, means for moving the lower end of the carrying frame in a circular arc, means for moving the upper end of said frame through a circular arc of relatively smaller angle, a fixed stop for the upper end of said frame in its lower position, and means for the upper end of said frame to slide longitudinally after reaching its stop to compensate for excess movement of the lower end.

5. In a machine of the linotype class, in combination with a plurality of inclined martix magazines, a movable carrying frame for said magazines, means for moving the lower end of the carrying frame in a circular arc about an operative shaft, means for moving the upper end of said frame through a circular arc of relatively smaller angle, a fixed stop for the upper end of said frame in its lower position, and means to compensate for excess movement after the upper end of the frame has reached its stop.

[Claim 6 not printed in the Gazette.]



1,225,634. DEHYDRATING OR DRYING APPARATUS. GEORGE FREDERICK HUMPHREY, London, England, assignor to Alliance Vegetable Company Limited, London, England. Filed Sept. 20, 1916. Serial No. 121,213. (Cl. 34—39.)



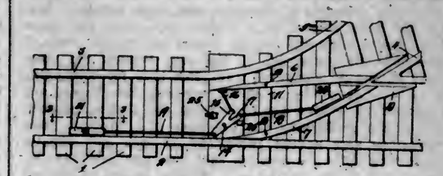
1. Apparatus for dehydrating food stuffs, comprising a pair of drying chambers, arranged back to back, heating chambers above and below said drying chambers, said heating chambers having heaters therein, and communicating with both of said drying chambers, an air inlet duct communicating with the lower of said heating chambers, air outlet ducts communicating with said drying chambers, and means for opening and closing the communications between the said heating chambers and said drying chambers, whereby air is led either through the heating and drying chambers in series, or through one heating chamber and either of the drying chambers only while the other drying chamber is being recharged.

[Claims 2 to 7 not printed in the Gazette.]

1,225,635. RAILWAY-SWITCH. MAXEY JACKSON, Toppenish, Wash. Filed July 18, 1916. Serial No. 109,873. (Cl. 104—24.)

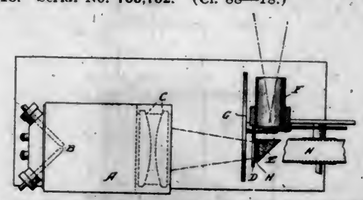
1. In a switch mechanism, fixed main and branch rails, a pair of movable switch points, a bar pivotally connecting the points for simultaneous movement, a lever pivoted between its ends, a link connecting one end of the lever to one of the switch points, a point-throwing lever pivoted to the other of said points, a second point-throwing lever pivoted to a fixed main rail, and links connecting the point-throwing levers to the first lever.

2. In a switch, fixed rails, a movable switch point associated therewith, a lever pivoted between its ends and having one end furcated and one of its furcations connected to the point, a stop for limiting the movement of the lever in one direction, and means operable by a trip and connected to the other furcation of the lever and to the opposite end of the latter for actuating the switch point.



[Claim 2 not printed in the Gazette.]

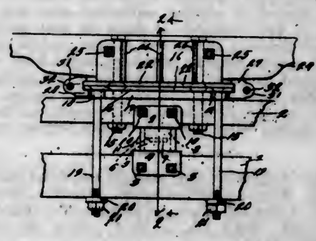
1,225,636. MOTION-PICTURE MACHINE. CHARLES FRANCIS JENKINS, Washington, D. C. Filed Mar. 20, 1913. Serial No. 755,752. (Cl. 88—18.)



1. The combination with a source of light and means for properly presenting the film in the path of the light at a certain point, of a moving apertured shutter located in free cooling air and in the path of the light from its source to said point.

2. The combination with a light, a condensing lens, and a plate having an exposure aperture, of a rotary shutter interposed between said lens and exposure aperture and forming the sole means of interrupting a light beam passing from said lens to said aperture, said plate and shutter being located in free cooling air.

1,225,637. FIFTH-WHEEL OR COUPLING-GEAR. CHARLES HIRAM JENKINS, Garfield, Wash. Filed July 21, 1916. Serial No. 110,544. (Cl. 21—39.)

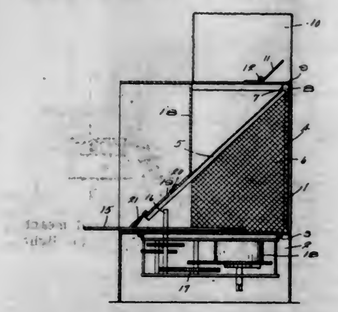


1. In a fifth wheel for vehicles, the combination of a body supporting bolster, an axle bolster, a pair of circular plates, one plate having a base for the body bolster at a higher level than the upper face of said plate and having flanges on opposite sides of said base for connection to the body bolster, the other plate having an elongated transverse boss connecting it to the axle bolster, a clamping device for connecting the plates, said transverse boss having extensions at each end wherein supporting bolts are secured, said boss and said base between said flanges acting as a spacing means to prevent the clamping device from engaging either the axle bolster or body bolster, an axle, and a stirrup bolting means connecting said axle and the lower plate of said pair of plates with the axle bolster intervening.

2. In a fifth wheel for vehicles, the combination of a body supporting bolster, an axle bolster, a pair of circular plates differing in diameter, one plate having a base for the body bolster at a higher level than the upper face of said plate and having flanges on opposite sides of said base for connection to the body bolster, the other plate having an elongated transverse boss for connecting it to the axle bolster, a clamp separable into halves and U-shaped in section for connecting the plates together, said clamp performing the functions of a king-pin, said transverse boss having extensions at each end wherein supporting bolts are secured, said boss and said base between said flanges acting as a spacing means to prevent the clamp from engaging either the axle bolster or body bolster.

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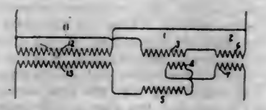
1,225,638. FLY-TRAP. ALBERT S. JERNIGAN, Cheyenne, Okla., assignor of one-fourth to J. L. M. Curry and A. J. Smith, Cheyenne, Okla. Filed Dec. 8, 1915. Serial No. 65,734. (Cl. 43—32.)



A fly trap comprising a lower receptacle of substantially rectangular formation, a motor mounted in said receptacle, an upper rectangular receptacle having an opened front, a partition arranged diagonally in said upper receptacle and positioned inward of said opened front and ending short of the top of the lower receptacle and spaced from the rear wall forming an outlet opening, a cage removably supported on the top of said upper receptacle having an opening registering with said outlet opening, a disk rotatably mounted on said motor and positioned partially inside and outside of said diagonal partition, a door hingedly connected to the front edge of sad diagonal partition for permitting access to the interior of said upper receptacle, and a brush secured to the free edge of said door and partially overlying the same for engagement with said disk for the purpose specified.

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1,225,639. METHOD AND MEANS OF VOLTAGE CONTROL. SVEND E. JOHANNESEN, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Jan. 3, 1913. Serial No. 740,003. (Cl. 171—119.)



1. The method of controlling the resultant voltage impressed on a circuit having a load connected thereto which consists in providing electromotive forces inducing other electromotive forces in the load circuit by means of said first mentioned electromotive forces, and changing the relative phase relation of the first mentioned electromotive forces and the ratio of transformation between one of said induced electromotive forces and its inducing electromotive force as the load changes.

2. The method of maintaining constant the current produced in a circuit by a plurality of component electromotive forces, which consists in maintaining the values of the component electromotive forces substantially constant and varying the relative phase relation between two of the components to compensate for tendencies toward change of current.

3. The method of maintaining constant the current produced in a circuit by a plurality of component electromotive forces, which consists in maintaining two of such component electromotive forces substantially equal in value and varying their phase relation to compensate for tendencies toward change of current.

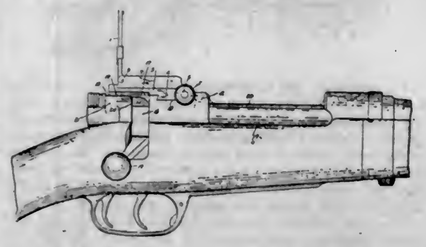
4. The method of maintaining constant the current produced by a plurality of component electromotive forces in a circuit having a load connected thereto, which consists in partially regulating the voltage by varying the phase angle between two components and partially by controlling the relation of the values of the components as the load changes to compensate for tendencies toward change of current.

5. The method of maintaining constant the current produced by a plurality of component electromotive forces in a circuit having a load connected thereto, which consists in providing electromotive forces, inducing electromotive forces in the load circuit by means of the first mentioned electromotive forces and changing the relative phase relation of the first mentioned electromotive forces and the ratio of transformation between one of said induced electromotive forces and its inducing electromotive force as the load changes to compensate for tendencies toward change of current.

[Claims 6 to 20 not printed in the Gazette.]

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1,225,640. REAR-SIGHT BOLT-ACTION MILITARY ARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Feb. 23, 1917. Serial No. 150,519. (Cl. 42—16.)

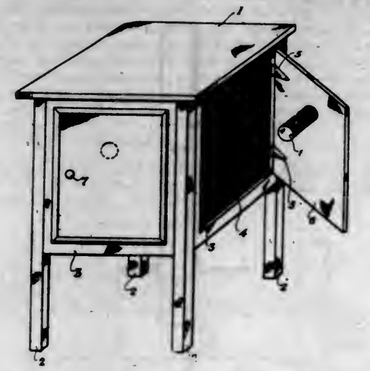


In a bolt-action military arm, the combination with a receiver having an upwardly and laterally extending cartridge-charging and cartridge-ejecting opening, a transverse undercut groove formed in its top to the rear of the said opening and also having its left hand wall extended rearwardly to form a sight-base support; of a sight having its base formed upon the lower face of its forward end with a transverse dovetail rib to enter the said groove, and the said base being extended rearwardly to overhang the rear end of the receiver and to rest upon the said rearwardly extended sight-base support.

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1,225,641. MILLINERY-CABINET. LUCY B. JONES, Chattanooga, Tenn. Filed Oct. 23, 1915. Serial No. 57,519. (Cl. 211—16.)

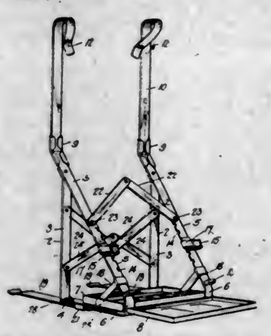
A cabinet table comprising a top, legs supporting said top, a plurality of frames between and supporting the said legs, each frame having an opening, and a door in each frame hinged to swing in a lateral direction and independently of the doors of the other frames, said doors carrying apparel holding means whereby apparel carried



thereby may be concealed beneath the table and supported on said means when the door is closed.

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1,225,642. FOLDING EASEL. WILLIAM G. A. JONES, Denver, Colo. Filed Nov. 3, 1915. Serial No. 59,359. (Cl. 45—129.)



1. A folding easel comprising a pair of adjustably connected supports each including a sole member, a slanting member, means on the last mentioned member for the support of a sketch-pad or the like, and between said members, a connection adapted to engage the forward edge of a paint-box supported upon the sole members of the said supports, and fingers adjustably connected with the slanting-members of the supports, to be placed in engagement with a paint-box supported upon the sole members of the same, for the purpose specified.

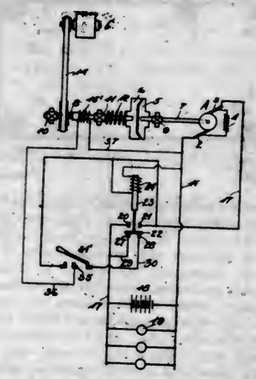
2. A folding easel comprising a pair of adjustably connected supports each including a slanting member for the support of a sketch-pad or the like, the said slanting members being notched for the attachment of rests at different elevations, rests having detents to enter the notches of the slanting members of the supports, and sliding sleeves for securing the rests in their adjusted positions on the slanting members.

3. A folding easel comprising a pair of supports each including a sole member and a member slanting with relation thereto, a connection between said supports, adapted to permit of their being moved apart or closed together, rests on the slanting members of the support, adapted to conjointly support a sketch-pad or the like, a copy-holder composed of two coöperative parts provided with means for the suspension of a copy above the supports, and means for securing said parts at the upper ends of said supports.

4. A folding easel comprising two elements adapted to coöperatively support an object in a slanting position upon a surface and each composed of a triangularly bent strap provided at its upper corner with an extension for the attachment of a copyholder, straps connecting said elements and coöperatively arranged to permit of the latter being moved toward and from each other, a copy-holder composed of two members provided with means for the suspension of a copy, and means for detachably securing said members separately to the extensions of said elements.

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1,225,643. ELECTRIC GAS-ENGINE-STARTING AND BATTERY-CHARGING SYSTEM. HEINRICH H. M. KAMMERHOFF, Orange, N. J. Filed Oct. 14, 1914. Serial No. 866,622. (Cl. 171—315.)



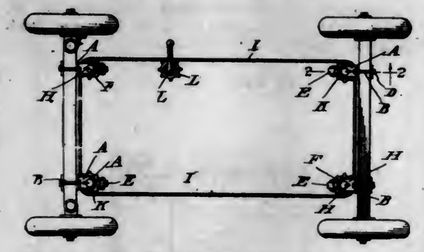
1. The combination of an engine to be started, a shaft divided into two sections, means connecting one section of the shaft to the engine, a dynamo electric machine connected with the other section of the shaft, a clutch for operatively connecting the shaft sections, spring means operating on the clutch, a battery connected with the dynamo electric machine, a magnet connected with the battery and dynamo electric machine and operatively related to the clutch for controlling the driving relation of the shaft sections, a starting switch in circuit with the magnet, a solenoid responsive to current generated by the dynamo electric machine after the engine has started and drives the said machine, and a switch controlled by the solenoid for controlling the circuit connections between the dynamo electric machine and battery and the electromagnet.

2. The combination of an engine to be started, a dynamo electric machine adapted to operate as a motor for starting the engine and adapted to be operated as a generator by the engine, clutch elements for connecting the said machine with the engine, yielding means for influencing the driving engagement of the clutch elements, electrical means coöperating with said yielding means to control the driving engagement of the clutch elements, a source of current for the motor, a starting switch for connecting the said electrical means and motor with the said source, a switch for cutting out the starting switch and electrical means from the circuit of the said source, and means responsive to the voltage generated by the said machine when driven by the engine for operating the last-mentioned switch.

3. The combination of an engine to be started, a dynamo electric machine adapted to act as a motor to start the engine and as a generator when driven by the engine, connecting means between the engine and machine and including clutch elements, yielding means for forcing the clutch elements together, electrical means for assisting

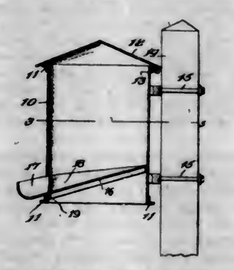
the said yielding means, a source of current for the said machine, a starting switch for connecting the said source with the motor and for connecting the said electrical means in circuit with the source, and a circuit controller for cutting the said electrical means and starting switch out of circuit when the said machine operates as a generator and for connecting the said machine with the said source for charging the same, said circuit controller including a winding responsive to the voltage of the said machine when operating as a generator.

1,225,644. AUTOMOBILE-LIFTING-JACK APPARATUS. EMELIA F. KANDLBINDER, Springfield, Ill. Filed Aug. 17, 1916. Serial No. 115,550. (Cl. 254—86.)



An automobile jack comprising hangers and means for clamping the same against the adjacent edges of the forward and rear axles of a vehicle, each hanger having a yoke which is recessed, the opposite walls of the recess provided with registering apertures, a threaded shaft mounted in said apertures and a key for holding the shaft from rotation, a caster wheel secured to the bottom of each shaft, a sprocket wheel with a central opening having interior threads, said wheel journaled upon the threaded shaft within the recess of said yoke, a sprocket chain passing about the several sprocket wheels, and a driving sprocket wheel in engagement with the sprocket chain and having a driving handle, as set forth.

1,225,645. SALT-HOLDING DEVICE FOR ANIMALS. WILLIAM J. KENNEDY, Fairfield, Iowa. Filed May 17, 1916. Serial No. 98,132. (Cl. 119—52.)



1. In a device of the class described, a container having a reduced opening in one side, and a bottom member for said container and inclined to the transverse plane of the same having a trough-shaped extension projecting through said opening, the bottom of the trough merging without obstruction into the bottom member.

2. In a device of the class described, a container having a reduced opening in one side, and a bottom member for said container having a trough-shaped extension projecting through said opening, said bottom member and the bottom of the trough-shaped extension being inclined to the transverse plane of the container and merging one into the other, and a guard member rising from the bottom member and bearing against the inner face of the shell.

1,225,646. PERISCOPE. WILLIAM EMIL KESSLER, Jersey City, N. J. Filed Sept. 30, 1916. Serial No. 123,181. (Cl. 88—1.)



1. In a periscope, a tube, an objective lens movable longitudinally within the periscope tube from its normal position to a position permitting access thereto for cleaning or repair, and means for causing such movement.

2. In a periscope, a tube, an objective lens movable longitudinally within the periscope tube from its normal position to a position permitting access thereto for cleaning or repair, and means for causing said movement, said means automatically retaining said lens in its adjusted position.

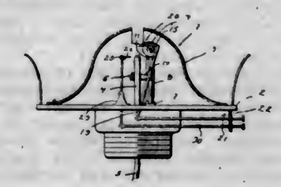
3. In a periscope, a tube, an objective lens therewithin, means for moving the lens longitudinally within the periscope tube from its normal position therewithin to a position permitting access to the lens for cleaning or repair and means for guiding the lens during such movement.

4. In a periscope, a tube, an objective lens adapted for movement longitudinally within the periscope tube, means for guiding the lens in such movement, and means for moving the lens along its guide, said moving means acting automatically to retain the said lens in adjusted position.

5. In a periscope, guide-ways extending longitudinally within the tube, an objective lens, a casing for said lens mounted for movement between the guides, and means for moving said lens casing and lens from its normal position, to a position permitting access thereto for cleaning or repair.

[Claim 6 not printed in the Gazette.]

1,225,647. AUTOMATIC LAMPLIGHTER. ROBERT L. KING, Yancy Mills, Mo. Filed July 21, 1916. Serial No. 110,565. (Cl. 67—10.1.)

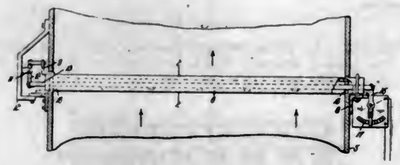


In combination, a lamp burner including a wick tube and a wick therein, of a pair of relatively spaced ears struck up from the burner, a casing pivoted to said ears, a spring arm secured to the wick tube and engaging the casing for supporting it in parallel alinement therewith, a piece of pyrophoric material slidable in said casing, a spring positioned in said casing for urging the pyrophoric material upwardly therein, a pair of relatively spaced



standards secured to the burner and extending parallel with the casing, a transverse shaft journaled in said standards, an igniting wheel secured to the shaft and in engagement with the pyrophoric material, clutch elements carried by the shaft, a spring for normally holding the clutch elements in engagement with each other, a gear carried by one of the clutch elements, a lever pivoted to the spring arm, a rack bar formed on said lever and in mesh with the gear, and means for rocking the lever to rotate the igniting wheel.

1,225,648. TEMPERATURE-SIGNAL FOR STACKS. WILLIAM R. KLECKNER, Cowell, Cal. Filed Mar. 16, 1916. Serial No. 84,583. (Cl. 236—5.)



1. In a device of the class described, a tubular member open longitudinally, means for rigidly securing one end of said tubular member, an arm associated with the other end of said member, a first-class lever having one end thereof connected to said arm, and an expansible rod within the tubular member adapted to be exposed to heat through the gap of the tubular member, one end of said rod being connected to the other end of the first-class lever.

2. In a device of the class described, an expansible tubular member open longitudinally, means for securing one end of said tubular member, a rigid arm extending from the other end of said tubular member, a first-class lever having one end thereof in pivotal connection with said arm, an expansion rod within said tubular member and having one end thereof connected to the other end of said first-class lever, and transverse members bridging the longitudinal opening of the tubular member adapted to support the expansion rod, said expansion rod being accessible to heat through the longitudinal opening in said tubular member.

3. In combination with a stack, an expansible tubular member having a longitudinal gap whereby in cross section the tubular member has substantially the shape of a horseshoe, said tubular member projecting through the end of the stack, means for securing one projecting end of said tubular member to the stack, an arm extending from the other projecting end of the tubular member, a lever of the first class having its fulcrum secured to the stack, one end of said lever being in pivotal connection with the arm, an expansion rod passing through the tubular member and having one end thereof in communication with the other end of said lever, and transverse members bridging the gap of said tubular member and forming supporting means for the rod in the tubular member.

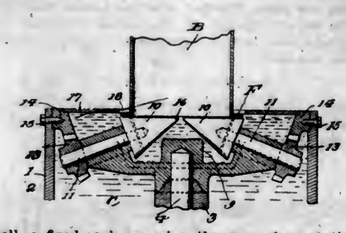
1,225,649. COATING-MACHINE. ALFRED L. KRONQUEST, Chicago, Ill., assignor to Continental Can Company, Inc., Syracuse, N. Y., a Corporation of New York. Filed Dec. 29, 1916. Serial No. 139,538. (Cl. 91—51.)

1. A coating machine for cans, including in combination, a series of radially disposed coating rolls arranged to simultaneously engage and coat the end flange of the can body.

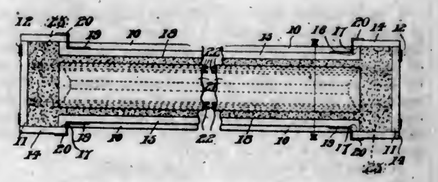
2. A coating machine for cans, including in combination, a tank adapted to contain coating material, a series of radially disposed coating rolls located in said tank and extending above the surface of the sealing material, said rolls being shaped and disposed so as to simultaneously engage and support and coat the end flange of a can body.

4. A coating machine for cans, including in combination, a tank, a vertical shaft extending into the tank, a support carried thereby, a series of cone-shaped rolls mounted on the support and having their upper faces located in a horizontal plane, a gear carried by each coating roll, a fixed rack engaging the gears for rotating the rolls as the support rotates.

[Claim 3 not printed in the Gazette.]



1,225,650. MOLD FOR MAKING PIG-TROUGHS. JOHN KRONSER, Appleton, Wis. Filed Jan. 27, 1917. Serial No. 144,907. (Cl. 25—121.)



1. A trough mold including a bottom of rectangular configuration, end walls hinged thereto with the lower edges thereof resting upon the upper face of the bottom, inward extensions carried by the opposite ends of the end walls with the inner faces thereof engaging the outer side edges of the bottom, bodily removable sides for the mold, each side having an angular extension projecting in the same direction, the outer faces of the angular extensions being perpendicular to the mold bottom, the inner faces of the side walls converging downwardly, the perpendicular outer faces of the extensions adapted to lie juxtaposed to the inner faces of the end wall extensions, metallic angle straps fixed to the side walls and adapted to engage the end wall extensions to clamp the parts in operative position, and a central core within the mold.

2. A trough mold including a bottom, end walls hinged thereto, inward extensions carried by the opposite ends of the end walls, bodily removable sides for the mold, each side having an angular extension projecting in the same direction, the inner faces of the side walls converging downwardly, the outer faces of the extensions adapted to lie juxtaposed to the inner faces of the end wall extensions, straps adapted to clamp the parts in operative position, and a central core within the mold.

3. A trough mold comprising a bottom, end walls hinged thereto, inward extensions carried by the end walls and positioned laterally of the sides of the bottom, side members having angular extensions positioned on the mold bottom with the outer sides of the extensions engaging the end wall extensions in a manner to present rectangular pockets at opposite ends of the mold, and a V-shaped central core removably positioned therein.

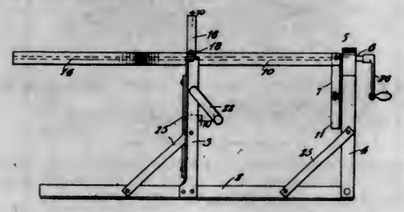
4. A mold comprising a bottom, end walls hinged thereto and side walls operatively associated with the end walls and bodily removable from the mold, the end walls being wider than the distance between the side walls and spaced therefrom, means extending between the side and end walls, and means for securing the side walls in engagement with the last named means.

5. A mold including a bottom, end walls and side walls, one set of walls being hinged to the bottom and the outer set of walls being loosely supported thereon and bodily removable therefrom, the end walls being wider than the

distance between the side walls and spaced there from, means extending between the side and end walls, means for clamping the parts together, and one set of walls adapted to be moved relative to the bottom to permit movement of the other set of walls when the plastic material is set in the mold.

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1,225,651. ENGINE-SUPPORTING DEVICE. WILLIAM G. KNOUSE, Wyoming, Iowa. Filed Apr. 3, 1916. Serial No. 88,533. (Cl. 29—89.)

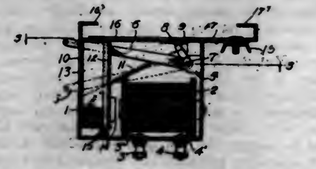


1. In a testing frame for internal combustion engines, a base, standards thereon, a supporting frame on said standards, means for rotating the frame including a pair of sections mounted on said standards, a casing formed by said sections, a gear wheel rotatably mounted in the casing, an operating shaft, a worm gear mounted on the end of said shaft meshing with the gear wheel, and the said supporting frame being rigidly connected to the said gear wheel for a purpose specified.

[Claims 2 to 4 not printed in the Gazette.]

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1,225,652. SHUTTER-OPERATING ATTACHMENT FOR CAMERAS. THEODORE KRUGER, Peoria, Ill. Filed Apr. 1, 1916. Serial No. 88,312. (Cl. 74—93.)



1. In a shutter operating attachment for cameras, a casing, an electromagnet within the casing, a spring pressed arm carried by the casing, one end of said arm being arranged to project out of the casing, a spring pressed trigger for normally holding said arm against the tension of the spring, said trigger having an armature, and a flexible connection between said spring pressed arm and the shutter arm.

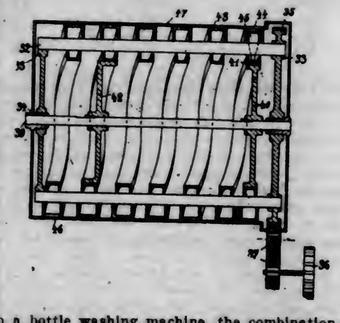
2. In a shutter operating attachment for cameras, a casing, a magnet disposed within the casing, an arm pivotally mounted within the casing and arranged to extend outside the casing, a second arm rigidly connected with said first-mentioned arm, a spring for exerting a tension on said second-mentioned arm, a pivotally mounted trigger having an armature disposed in close relation to the core of the magnet, one end of said trigger being arranged to extend in the path of said first-mentioned arm, and a spring for holding said trigger normally in the path of said first-mentioned arm.

3. In a shutter operating attachment for cameras, a casing, a magnet disposed within the casing, an arm pivotally mounted within the casing and arranged to extend outside the casing, a second arm rigidly connected with said first-mentioned arm, a spring for exerting a tension on said second-mentioned arm, a pivotally mounted trigger having an armature disposed in close relation to the core of the magnet, one end of said trigger being arranged to extend in the path of said first-mentioned arm, a spring for holding said trigger normally in the path of said first-mentioned arm, and adjustable means for attaching said casing to the camera.

4. In a shutter operating attachment for cameras, a casing, a magnet disposed within the casing, an arm pivotally mounted within the casing and arranged to extend outside the casing, a second arm rigidly connected with said first-mentioned arm, a spring for exerting a tension on said second-mentioned arm, a pivotally mounted trigger having an armature disposed in close relation to the core of the magnet, one end of said trigger being arranged to extend in the path of said first-mentioned arm, a spring for holding said trigger normally in the path of said first-mentioned arm, adjustable means for attaching said casing to the camera, and flexible connections between said first-mentioned arm and the shutter arm of the camera.

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1,225,653. BOTTLE-WASHING MACHINE. TADEUSZ JAN LAMPE, Warsaw, Russia. Filed Mar. 9, 1914. Serial No. 823,514. (Cl. 141—7.)



1. In a bottle washing machine, the combination of a liquid holding receptacle, a shaft mounted therein, inner and outer revoluble members mounted on said shaft, each of said members being provided with spaced bottle engaging elements, spirally formed means intermediate the spaced revoluble members and relatively stationary with respect thereto, said spiral means being adapted to engage the bottles and to cause movement thereof longitudinally of the receptacle upon actuation of the revoluble means aforesaid.

2. In a bottle-washing machine the combination of a cylindrical trough, adapted to be filled with a cleansing liquid, a shaft rotatably mounted therein, two cylinders rotatably arranged within the trough, the one cylinder lying within the other and being provided with external axially extending and radially disposed vanes, the outer cylinder being provided with internal axially extending and radially disposed vanes lying in radial line with the vanes of the inner cylinder, a stationary worm between the two sets of vanes, and means adapted to rotate the two cylinders correspondingly and with the same velocity.

3. In a bottle-washing machine the combination of a cylindrical trough, adapted to be filled with a cleansing liquid, a shaft rotatably mounted therein, two cylinders, the one being rotatably mounted on the said shaft, the other being rotatably mounted on projecting hubs of the said trough, the cylinders lying one within the other, the inner cylinder being provided with external axially extending and radially disposed vanes, the outer cylinder being provided with internal axially extending and radially disposed vanes lying in radial line with the vanes of the inner cylinder, a stationary worm between the two sets of vanes, the worm being fixed to the said hubs of the said casing, and means adapted to rotate the two cylinders correspondingly and with the same velocity.

4. In a bottle-washing machine, the combination of a cylindrical trough, adapted to be filled with a cleansing liquid, a shaft rotatably mounted therein, two cylinders, the one being rotatably mounted on the said shaft, the other being rotatably mounted on projecting hubs of the said trough, the cylinders lying one within the other, the inner cylinder being provided with external axially extending and radially disposed vanes, the outer cylinder being provided with internal axially extending and radially disposed vanes lying in radial line with the vanes of the inner cylinder, a stationary worm between the two sets of vanes, the worm being fixed to the said hubs of the said casing, and means adapted to rotate the two cylinders correspondingly and with the same velocity, the inner cylinder being driven by directly rotating the shaft, and the outer being provided with teeth engaged by a member positively connected with the driving means actuating the said shaft.



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1,225,654. ADDING-MACHINE. HARRY LANDSIEDEL, Cincinnati, Ohio, assignor to The Dalton Adding Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 28, 1916. Serial No. 80,941. (Cl. 235—60.)



1. In an adding machine, differential mechanism comprising transverse series of longitudinally movable stop pins, a resilient supporting device adjacent to each series of pins, a series of resilient arms carried by said supporting device, and projections on said pins engaging said arms.

2. In an adding machine, differential mechanism comprising series of longitudinally movable stop pins, a resilient support adjacent to each series of pins, resilient arms extending from said support, and projections on said arms engaging said pins, whereby said arms will retain said pins in their lower position.

3. In an adding machine, differential mechanism comprising series of longitudinally movable stop pins, a resilient support adjacent to each series of pins, resilient arms extending from said support, and projections on said arms engaging said pins, whereby said arms will retain said pins in their upper positions.

4. In an adding machine, differential mechanism comprising series of longitudinally movable stop pins, a resilient support adjacent to each series of pins, resilient arms extending from said support, and projections on said arms engaging said pins, whereby said arms will retain said pins in their lower and upper positions.

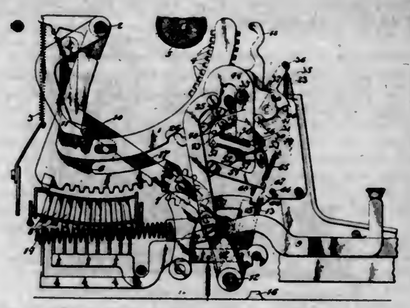
5. In an adding machine, differential mechanism comprising a carriage having upper and lower wall plates, series of vertically movable stop pins carried by said plates, means for limiting upward and downward movement of said pins, a resilient support adjacent to each series of pins, and resilient arms on said support engaging and retaining said pins in their lower positions.

[Claims 6 to 11 not printed in the Gazette.]

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1,225,655. ADDING AND RECORDING MACHINE. HARRY LANDSIEDEL, Cincinnati, Ohio, assignor to The Dalton Adding Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Apr. 17, 1916. Serial No. 91,766. (Cl. 235—58.)

1. In an adding machine, the combination of type-carriers, spring actuated hammers for driving the type on said type-carriers to print, a rock shaft, mechanism for positioning said type-carriers for printing as an incident to the rocking of said shaft in one direction, and mechanism for operating said hammers to drive the type controlled by said rock shaft and arranged to operate during the initial movement of said rock shaft toward its starting point after said type-carriers have been positioned.



2. In an adding and recording machine, type-carriers movable to and from recording position, hammers for driving the type on said type-carriers to print, actuators for said hammers, a rock shaft, automatic mechanism for moving said type-carriers to and holding them in recording position while said rock shaft is moving in one direction, and mechanism, controlled by said rock shaft during the initial portion of its movement to its starting point after said type-carriers have been positioned, for operating said actuators to drive the type to print.

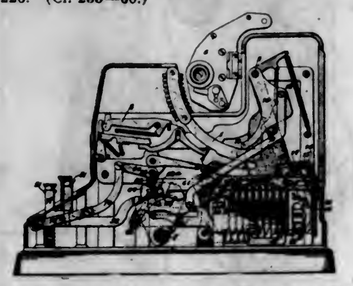
3. In an adding and recording machine, the combination of type-carriers movable to and from recording position, differential mechanism for stopping said type-carriers in recording position, a rock shaft, means for moving said type-carriers to recording position as an incident to the rocking of said shaft in one direction from its starting point, hammers for coöperating with the type to print, actuators for said hammers, releasable couplings for connecting said actuators and hammers, and mechanism controlled by said rock shaft for operating said hammers to coöperate with the type after said rock shaft has completed its movement in one direction and has started on its movement in the opposite direction toward its starting point.

4. In an adding and recording machine, the combination of type-carriers, differential mechanism for stopping said type-carriers, a rock shaft, actuators for said type-carriers, means controlled by said rock shaft to enable said actuators to move said type-carriers to recording position during the movement of said rock shaft from its starting point, hammers for coöperating with the type to print, a pivoted actuator for each of said hammers, a spring for operating each actuator, means preventing operation of said actuators and said hammers while said rock shaft is moving from its starting point, and means controlled by said rock shaft for enabling said actuators to operate said hammers during the movement of said rock shaft toward its starting point after said type-carriers have become stationary.

5. In an adding and recording machine, the combination with type-carriers, a rock shaft, mechanism controlled by said shaft for moving said type-carriers to recording position while said rock shaft is moving from its starting point, and mechanism for stopping said type-carriers in recording position during the movement of said rock shaft from its starting point, of hammers for coöperating with said type-carriers to print, couplings for said hammers, means operated by said type-carriers for connecting said couplings with said hammers, and mechanism controlled by said rock shaft for operating couplings and thereby said hammers after said type-carriers have stopped and during the movement of said rock shaft toward its starting point.

[Claims 6 to 56 not printed in the Gazette.]

**1,225,656. ADDING AND RECORDING MACHINE.** HARRY LANDSIEDEL, Cincinnati, Ohio, assignor to The Dalton Adding Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Apr. 28, 1916. Serial No. 94,226. (Cl. 235—60.)



1. In an adding and recording machine, a movable support, series of differential stops mounted in said support, stop setting elements, mechanism for moving said stop setting elements to position in alinement with said stops, mechanism for moving said support to engage stops therein with the setting elements positioned as aforesaid, magazines for receiving said stops, and means for actuating said stops into said magazines.

2. In an adding and recording machine, a series of stops for each of several digits, stop setting elements for the stops of each digit, means for supporting the stop setting elements corresponding to each digit separate from the elements corresponding to the other digits, mechanism for selecting and moving said elements from their supports and positioning them in alinement with the stops, a movable support in which said stops are mounted, and means for moving said support to engage the stop setting elements in alinement therewith.

3. In an adding and recording machine, the combination with a number of positioning devices and corresponding respectively to each of several digits, an actuator for operating said devices simultaneously, a series of stop setting elements under control of each of said devices, and optional means for placing said elements under control of said devices, of a movable support, stops in said support, and means for moving said support to engage stops therein with the elements which had been positioned by said devices.

4. In an adding and recording machine, the combination of positioning devices corresponding respectively to each of several digits, a series of parts adapted to be positioned by each of said devices, means for supporting said parts out of control of said devices, means for placing said parts selectively under control of said devices, an actuator for operating said devices to move the parts controlled thereby to selected positions, series of differential stops, and mechanism for setting those of said stops which correspond to the parts positioned by said devices.

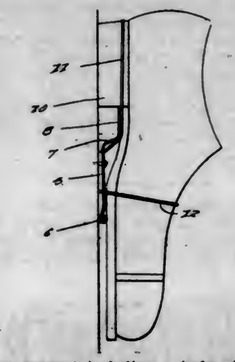
5. In an adding and recording machine, the combination of positioning devices corresponding respectively to each of several digits, a series of stop setting elements adapted to be positioned to represent numbers, means for supporting said elements out of control of said devices, means for selectively placing said elements under control of said devices, an actuator for operating said devices to move said elements to position to represent numbers, differential stops adapted to be set to represent numbers, a movable support for said stops, and means for actuating said support to engage stops therein with the stop setting elements positioned as aforesaid.

[Claims 6 to 21 not printed in the Gazette.]

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**1,225,657. SHOE-SUPPORT.** CHARLES J. LANG, Lawrenceburg, Ind. Filed July 29, 1916. Serial No. 112,051. (Cl. 211—14.)

1. A shoe support including a body plate having the upper portion thereof offset and extended vertically, and a flexible shoe-engaging member secured to said body plate and adapted to embrace the heel of a shoe, to secure the latter in position upon the body plate.

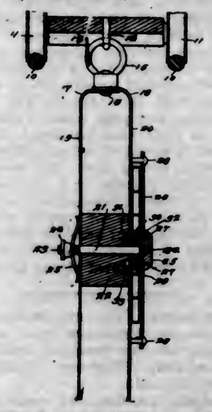


2. A shoe support including a body plate having the upper portion offset and extended vertically for engaging the heel of a shoe to support the latter in an elevated position, and elastic bands carried by said body plate, one of said bands being adapted to engage the heel of a shoe to secure the latter upon the offset portion of the body plate and the other band being adapted to engage the vamp of the shoe to secure the latter against the front of the body plate.

3. A shoe support including a body plate having the upper portion offset for engaging the heel of a shoe to support the latter, and a flexible member carried by the body plate adapted to embrace the shoe heel and retain the latter in position upon the plate.

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**1,225,658. REEL.** EDWIN V. LAWRENCE, Brookfield, Mass., assignor to Ideal Coated Paper Co., Brookfield, Mass., a Corporation of New Jersey. Filed June 29, 1915, Serial No. 37,113. Renewed Apr. 9, 1917. Serial No. 160,896. (Cl. 242—107.)

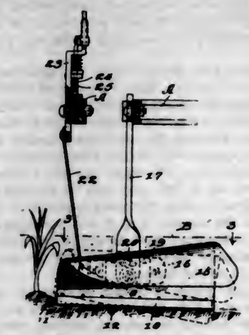


1. A reel of the class described comprising side plates, a spindle carried by said side plates, a spool frictionally held between said side plates, a head rotatably carried by said spindle, a pawl yieldably carried by said head engaging said spool, a spring connecting said head and one side member, and means for regulating the frictional contact of said side plates, spool and head.

[Claims 2 and 3 not printed in the Gazette.]



**1,225,659. CULTIVATOR-SHOVEL.** VALENTINE D. LAWRENCE, Nemaha, Nebr. Filed May 3, 1916. Serial No. 95,172. (Cl. 97—13.)



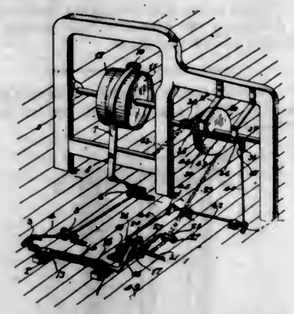
2. A cultivator shovel comprising a blade having a cutting edge, and a conical shaped receiving portion, a support, a standard depending from the support and pivotally connected with said receiving portion, a lever fulcrumed on said support, and a rod connecting the lever with said receiving portion whereby the shovel is placed in different inclinations with respect to the surface.

3. A cultivator shovel comprising a blade, and a conical shaped receiving portion thereon, said blade being detachable from said member, a support, a standard for suspending the shovel from the support, a pivotal connection between the standard and said shovel, a lever pivoted on said support, a rod connecting the lever with the shovel whereby the latter is placed in different inclinations with respect to the surface for the purpose specified.

[Claim 1 not printed in the Gazette.]

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**1,225,660. MULE STOP-MOTION.** ARTHUR RANDOLPH LAYMAN, Dover, N. H. Filed May 28, 1915. Serial No. 30,974. (Cl. 64—4.)



1. The combination with means for operating a shipper lever including a shaft having an arm, a spring for automatically rotating the said shaft, a latch normally engaging the arm for holding the shaft against rotation and the said means out of operation, and means adapted to be held normally against movement by the opposite flights of a draft rope, the last mentioned means when released being arranged to move the latch out of engagement with the said arm to permit the said shaft to rotate.

2. The combination with mechanism for automatically operating a shipper lever including a spring actuated shaft having an arm, a pivoted latch provided with means for engaging the arm to hold the shaft against rotation and the shipper lever against movement, a pair of separate levers arranged to engage the said latch to release the arm and spaced means connected with the levers and held against movement by the opposite flights of a draft rope for actuating the said pair of levers to release the latch when the draft rope breaks.

3. The combination with mechanism for automatically actuating a shipper lever including a shaft having an arm, a spring for automatically rotating the said shaft, of a latch provided with means for engaging the arm, a lever arranged to swing the latch out of engagement with the arm, a spring for actuating the lever, means for connecting the lever with one of the flights of the draft rope for holding the lever normally against movement, and automatically operable means normally maintained in an inoperative position by the other flight or stretch of the draft rope for actuating the latch to release the said arm.

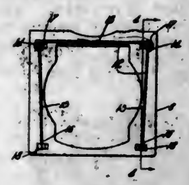
4. The combination with means for automatically actuating a shipper lever including a rotary spring actuated shaft having an arm, a pivotally mounted latch provided with means for engaging the arm, a cam arranged to move the latch out of such engagement, a crank shaft provided with means for engaging one of the flights or stretches of a draft rope and having a crank arm, a spring for actuating the crank shaft, a rock shaft, means for connecting the rock shaft with the cam, and a rod extending from the rock shaft and having an opening engaged by the said crank.

5. The combination of mechanism for automatically actuating a shipper lever including a spring actuated shaft provided with an arm, a pivotally mounted approximately L-shaped latch provided at one of its arms with a hook for engaging the said arm of the said shaft for holding the shipper lever against movement, the other arm of the latch being provided with lateral projections, a cam arranged to engage one of the projections and located at one side of the latch, a lever located at the other side of the latch and arranged to engage one of the said projections to trip the latch, said lever being provided with means for engaging one of the flights or stretches of a draft rope and means connected with the cam for engaging the other flight or stretch of the draft rope.

[Claim 6 not printed in the Gazette.]

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**1,225,661. TAG-HOLDER.** JOHN E. LEAVITT, Stoughton, Mass. Filed May 24, 1915. Serial No. 29,972. (Cl. 40—16.)



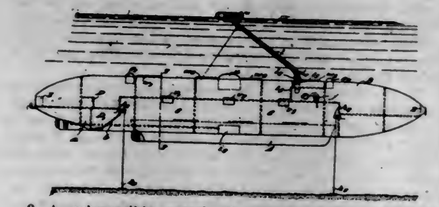
A tag holder having, in combination, a piece of sheet material having its edges bent backwardly to form grooves adapted to hold a tag, a fastener comprising a wire bent to form a cross-bar with a coil at each end thereof, prongs extending substantially at right angles to said cross-bar from said coils, two tongues on said sheet material and projecting through said coils for securing said fastener and two other tongues on said sheet material and adjacent the points of said prongs and arranged to engage the ends of said prongs.

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**1,225,662. SUBMERSIBLE VESSEL.** ALBERT JOHN FREDERICK LEE, West Ealing, England. Filed Mar. 8, 1917. Serial No. 153,452. (Cl. 114—0.5.)

1. A submersible vessel, the cross section of which amidships has approximately the form of an inverted U, and a second vessel housed between the sides and bottom

plating of the outer vessel and separated from it by a cushion of air.



2. A submersible vessel, the cross section of which amidships has approximately the form of an inverted U, the limbs of which are divided into water-tight compartments, means for filling these compartments with water ballast and for emptying the compartments, and a second vessel housed between the sides and bottom plating of the outer vessel and separated from it by a cushion of air.

3. A submersible vessel, the cross section of which amidships has approximately the form of an inverted U, a second vessel housed between the sides and bottom plating of the outer vessel and separated from it by a cushion of air, internal combustion engines provided in one of the said vessels for propulsion and means for supplying the engines with air for combustion from the air cushion between the vessels.

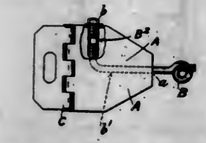
4. A submersible vessel, the cross section of which amidships has approximately the form of an inverted U, a second vessel housed between the sides and bottom plating of the outer vessel and separated from it by a cushion of air, air compressors for supplying air as required to the said air cushion and means for obtaining this supplementary supply of air from above the surface of the water.

5. A submersible vessel, the cross section of which amidships has approximately the form of an inverted U, a second vessel housed between the sides and bottom plating of the outer vessel and separated from it by a cushion of air, air compressors for supplying air as required to the said air cushion, and a swiveling tube connected to a float resting on the surface of the water for obtaining this supplementary supply of air.

[Claims 6 to 10 not printed in the Gazette.]

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**1,225,663. LAPPET AND THREAD-GUIDE FOR SPINNING AND LIKE MACHINES.** THOMAS ERNEST LEIGH, Manchester, England, assignor to Anglo-American Textile Machinery Company, Abington, Mass., a Corporation of Massachusetts. Filed May 17, 1913. Serial No. 768,251. (Cl. 242—157.)



1. In a lappet and thread guide for spinning machines and the like, the combination with a lappet of box-like form, of a thread guide having a shank passed through the front wall of the lappet, said shank having an inner offset portion extended toward one side wall of the lappet, and means for attaching the offset portion to said side wall.

2. In a lappet and thread guide for spinning machines and the like, the combination with a lappet of box-like form having a slot in one side wall, of a thread guide having a shank passed through the front wall of the lappet, said shank having an inner offset portion extended toward the slotted side wall, and means for adjustably attaching the offset portion of said shank to the slotted portion of said side wall.

3. In a lappet and thread guide for spinning machines and the like, the combination with a lappet of box-like form, of a thread guide having a shank passed through the front wall of the lappet, said shank having an inner offset portion extended toward one side wall of the lappet, and a bushing attached to said side wall, the offset portion of said shank being engaged with one end of said bushing.

4. In a lappet and thread guide for spinning and like machines the combination with a lappet of box-like formation and having an opening in its front portion and a longitudinal slot to the rear thereof of a thread guide adapted to pass through the said opening and having its rear end bent transversely of its main portion, an extension of the said shank the said extension comprising a bushing screwed on to the rear end of the shank and to extend transversely from the main portion of the shank to one side of the lappet, and a screw adapted to pass through the longitudinal slot in the rear portion of the lappet and to engage with and to clamp the said bushing and thread guide to the lappet.

5. In a thread guide, a lappet having an opening in its front end and a longitudinal slot in its rear portion, a thread guide having its shank passing through said opening, the rear end of said shank extending transversely of said lappet and provided with a threaded end, an internally threaded sleeve to receive the threaded end of said shank adjustably mounted in said longitudinal slot, and a screw for locking said sleeve in its adjusted position.

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**1,225,664. MANUFACTURE OF CORN-OIL.** ADOLPH W. H. LENDERS and HANS F. BAUER, Cedar Rapids, Iowa. Filed Nov. 3, 1915. Serial No. 59,842. (Cl. 87—6.)

1. Improvement in the manufacture of corn oil from germs previously treated with an acid which consists in neutralizing the acid before subjecting the germs to the drying and pressing operations.

2. Improvement in the manufacture of corn oil which comprises steeping the grain in an acid solution, removing the germ, treating the same with a neutralizing agent and drying the germ and expressing the oil therefrom.

3. Improvement in the manufacture of corn oil which consists in steeping the grain in dilute sulfurous acid, breaking up the kernels and removing the germ, washing the germ in water containing an alkali in sufficient quantities to neutralize the acid remaining from the steeping process, subjecting the germs to heat to dry the same, and expressing the oil therefrom.

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**1,225,665. KNOCKDOWN CRATE.** JOSEPH LIMONCELLO, Chicago, Ill. Filed Aug. 17, 1916. Serial No. 115,365. (Cl. 217—44.)



2. A knock down structure of the character described comprising a series of spaced-apart slats or staves; flat hoops crossing the outside surfaces of said slats near their respective ends; wire hoops, secured to the inside surfaces



of said slats within the diametric plane in which said flat hoops are located, when the structure is assembled, fastening devices passing over said wire hoops through the slats and through the flat hoops, clenched on the outside thereof and heads resting on the inner wire hoops; hooks on the ends of the wire hoops to hold the structure in cylindrical shape and crossing wires for fastening the heads in place, crossing the outside surfaces of the heads, having their ends secured in staples driven into the outside of the assembled structure.

3. In a structure of the character described the combination of a series of spaced-apart slats or staves; flat flexible hoops extending around the outside near the ends thereof and lapped at their meeting ends; a wire hoop at each end, inside the structure when set up, each hoop having hooks at each of its ends, located on the outside of the structure, overlying the over lapped ends of the flat hoops when the structure is set up for separable engagement and cleats secured to selected slats below said wire hoops to support the heads to be inclosed therein, and a head overlying each wire hoop.

4. In a structure of the character described the combination of a series of spaced-apart slats or staves; flat flexible hoops extending around the assembled slats near their ends, connected thereto and having over-lapped ends and wire hoops on the inside of the structure under said flat hoops, the ends whereof are provided with separable hooks located outside of said structure, said wire hoops extending through the structure so as to include a plurality of slats between the outwardly projecting ends.

[Claim 1 not printed in the Gazette.]

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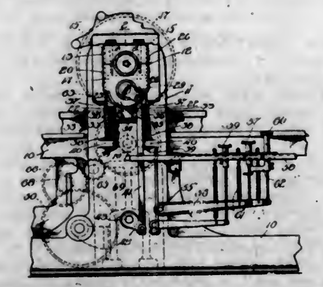
**1,225,666. ORGAN SWELL-BOX.** LOUIS S. LOCKWOOD, North Tonawanda, N. Y., assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y., a Corporation of New York. Filed June 30, 1915. Serial No. 37,181. (Cl. 84—23.)



An organ swell-box having spaced stiles provided with concave edges and longitudinal grooves in said edges, and a rotary shutter fitted between said stiles and provided with convex edges and longitudinal grooves in said edges arranged to register with the grooves of the stiles in the closed position of the shutter.

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**1,225,667. PRINTING-PRESS IMPRESSION MECHANISM.** CYRUS A. MCCAIN, Bensonhurst, N. Y. Filed Jan. 5, 1916. Serial No. 70,411. (Cl. 101—4.)



1. A printing press impression mechanism comprising an impression cylinder, journal-boxes for said cylinder, a support for one of said boxes having a substantially horizontal ledge, an extension of said support having a cooperating substantially horizontal ledge, a wedge between said ledges for determining the vertical adjustment of said extension relative to said support, an eccentric acting between said extension and the associated journal box, and means for actuating said eccentric to raise and lower the associated journal box.

2. A printing press impression mechanism comprising an impression cylinder, journal boxes for said cylinder, a support for one of said boxes having a substantially horizontal ledge, an extension of said support having a cooperating substantially horizontal ledge, a wedge between said ledges for determining the vertical adjustment of said extension relative to said support, a screw passing through a portion of said support and into the end of said wedge and operative to move said wedge longitudinally, an eccentric acting between said extension and the associated journal box,, and means for actuating said eccentric to raise and lower the associated journal box.

3. A printing press impression mechanism comprising an impression cylinder, journal boxes for said cylinder, a support for one of said boxes having a substantially horizontal ledge, an extension of said support having a cooperating substantially horizontal ledge, a wedge between said ledges for determining the vertical adjustment of said extension relative to said support, a screw passing through a portion of said support and into the end of said wedge and operative to move said wedge longitudinally, cap screws passing through said support and extension to clamp the latter in adjusted position when once adjusted by said wedge, an eccentric acting between said extension and the associated journal box, and means for actuating said eccentric to raise and lower the associated journal box.

4. A printing press impression mechanism comprising an impression cylinder, journal boxes for said cylinder, a support for one of said boxes having a substantially horizontal ledge, an extension of said support having a cooperating substantially horizontal ledge positioned beneath the ledge of said support, a wedge between said ledges for determining the vertical adjustment of said extension relative to said support, means acting against the under side of said extension and between it and said support to force the ledge on said extension against said wedge, means for adjusting said wedge, means for clamping said extension in adjusted position, an eccentric acting between said extension and the associated journal box, and means for actuating said eccentric to raise and lower said associated journal box.

5. A printing press impression mechanism comprising an impression cylinder, journal boxes for said cylinder, a main frame, a support extending upward from said frame toward one of said boxes, an extension on said support extending upward from a portion of said support into engagement with portions of the underside of the associated box, an eccentric located below the axis of said cylinder and acting between said extension and portions of the under side of said associated box, and means acting between said support and extension for adjusting said extension and box as a unit relative to said support.

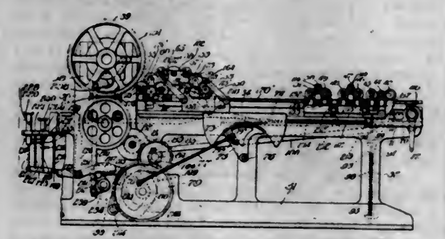
[Claims 6 and 7 not printed in the Gazette.]

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**1,225,668. PRINTING-PRESS INKING MECHANISM.** CYRUS A. MCCAIN, Bensonhurst, N. Y. Filed Jan. 6, 1916. Serial No. 70,694. (Cl. 101—78.)

1. In a printing press, the combination with an impression cylinder and reciprocating bed, of form inking rollers, ink distributing rollers for supplying ink to said form inking rollers, a supporting frame having sockets into which the shafts of said distributing rollers extend in all positions of said frame, a main support, and radius links pivoted to said support and to said frame at normally different distances from the impression cylinder, the connection of each link to said frame being nearer to said cylinder than its connection to said support, whereby said frame and impression rollers may be swung up and away from said inking rollers and away from said cylinder.

2. In a printing press, the combination of an impression cylinder and reciprocating bed, of form inking rollers, ink distributing rollers for supplying ink to said form inking rollers, a supporting frame having sockets into which the shafts of said distributing rollers extend in all positions of said frame, a main support, and means acting between said support and frame to swing said frame and distributing rollers up and away from said inking rollers and away from said cylinder.



3. A printing press inking mechanism comprising form inking rollers, associated distributing rollers, a reciprocating ink plate, an oscillating form duct roller for transferring ink from said plate to said distributing roller, means for oscillating said form duct roller in response to the reciprocations of said plate, and means for raising said duct roller out of the path of travel of said plate and independently of the position of said plate.

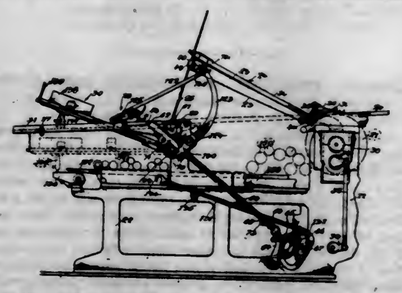
4. A printing press inking mechanism comprising form inking rollers, associated distributing rollers, a reciprocating ink plate, an oscillating form duct roller for transferring ink from said plate to said distributing rollers, means for oscillating said form duct roller in response to reciprocations of said plate, a cam pivoted beneath one end of said duct roller and operative to raise said roller above the path of travel of said plate, and an actuating bar secured to said cam and operative to cause said cam to assume its different operative positions.

5. A printing press inking mechanism comprising form inking rollers, associated distributing rollers, a reciprocating ink plate, an oscillating form duct roller for transferring ink from said plate to said distributing rollers, means for oscillating said form duct roller in response to reciprocations of said plate, a cam pivoted adjacent to one end of said duct roller and operative to raise said roller above the path of travel of said plate, a bar secured to a portion of said cam, and a pedal connected to said bar and operative through it to cause said cam to assume its different operative positions.

[Claims 6 to 25 not printed in the Gazette.]

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1,225,669. PRINTING-PRESS SHEET-DELIVERY MECHANISM. CYRUS A. MCCAIN, Bensonhurst, N. Y. Filed Jan. 8, 1916. Serial No. 71,089. (Cl. 101—31.)



1. In a printing press, the combination of a main frame, an impression cylinder, a conveyer having its frame pivotally supported adjacent to said cylinder, a reciprocating carriage, pivoted carriage-actuating arms, connections between said arms and said carriage, and means for connecting the free ends of said arms with the free end of said conveyer frame to hold the conveyer elevated to permit access to the parts of the press below it.

2. In a printing press, the combination of a main frame, an impression cylinder, a conveyer having its frame pivotally supported at a point adjacent to said cylinder, carriage way-bars extending from the free end of said conveyer frame when in its conveying position, a carriage on said way-bars, arms pivoted to said main frame adjacent to the free end of said conveyer frame, connecting bars between said arms and said carriage, means for oscillating said arms to reciprocate said carriage, and means for connecting the free ends of said arms with the free end of said conveyer frame to hold the latter elevated to permit access to the parts of the press beneath it.

3. In a printing press, the combination of a main frame, an impression cylinder, a conveyer having its frame pivotally supported adjacent to said cylinder, a reciprocating carriage, pivoted carriage-actuating arms, connections between said arms and said carriage, said arms being positioned to move in their normal operation past the sides of said conveyer frame, laterally movable pins journaled in the sides of said conveyer frame adjacent to its free end, means for throwing said pins outward into the path of travel of said arms, and means on the outer ends of said arms for engaging said pins to enable said arms to hold said conveyer frame in elevated position.

4. In a printing press, the combination of a main frame, an impression cylinder, a conveyer having its frame pivotally supported adjacent to said cylinder, a reciprocating carriage, pivoted carriage-actuating arms, connections between said arms and said carriage, said arms being positioned to move in their normal operation past the sides of said conveyer frame, laterally movable pins journaled in the sides of said conveyer frame adjacent to its free end, a pivoted lever having one arm secured to one of said pins, and a member secured to the other arm of said lever and to said other pin, whereby the actuation of said lever throws said pins outward into the path of travel of said arms.

5. In a printing press, the combination of a main frame, an impression cylinder, a conveyer having its frame pivotally supported adjacent to said cylinder, a reciprocating carriage, pivoted carriage-actuating arms, connections between said arms and said carriage, said arms being positioned to move in their normal operation past the sides of said conveyer frame, laterally movable pins journaled in the sides of said conveyer frame adjacent to its free end, a pivoted lever having one arm secured to one of said pins, a member secured to the other arm of said lever and to said other pin, whereby the actuation of said lever throws said pins outward into the path of travel of said arms, and means for holding said pins in either extended or retracted position.

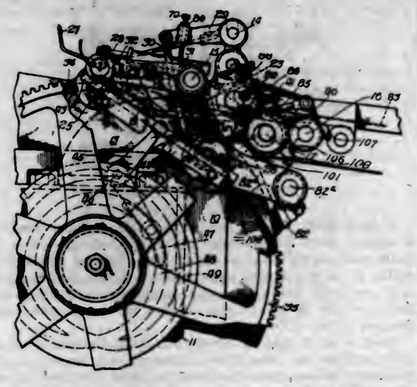
[Claims 6 to 17 not printed in the Gazette.]

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1,225,670. PRINTING-PRESS. CYRUS A. MCCAIN, Bensonhurst, N. Y. Filed Jan. 12, 1916. Serial No. 71,705. (Cl. 101—411.)

1. Printing press mechanism comprising a cylinder, sheet grippers on said cylinder, a gripper shaft, a tumbler on said shaft, gripper pins for engaging said tumbler to actuate said shaft, a reciprocating sliding bar having oppositely inclined slots, a guide bar along which said reciprocating bar travels, pins in said gripper pins extending through said slots, and means for actuating said bar in response to the rotations of said cylinder.

2. Printing press mechanism comprising a cylinder, sheet grippers on said cylinder, a gripper shaft, a tumbler on said shaft, gripper pins for engaging said tumbler to actuate said shaft, a reciprocating sliding bar having oppositely inclined slots, a guide bar along which said reciprocating bar travels, pins in said gripper pins extending through said slots, an oscillating lever to reciprocate said bar and actuate said pins, a wheel rotatable with said cylinder, a cam shoe on said oscillating lever, and a cam groove on said wheel for coöperating with said shoe to oscillate said lever.



3. Printing press mechanism comprising a cylinder, sheet grippers on said cylinder, a gripper shaft and tumbler on said shaft, and a pin for engaging said tumbler, said tumbler having two oppositely disposed open-ended grooves separated by a central interposed partition and having a central conical surface outward of said grooved portions, said surface having its conical axis concentric with the axis of said gripper shaft, said grooves being for the reception of the pin in normal operation and said convex surface being to ward off the pin when engaged while not in receiving position and said pin being mounted to yield in response to the pressure exerted by said conical face.

4. Printing press mechanism comprising a cylinder, sheet grippers on said cylinder, a gripper shaft and tumbler on said shaft, and a pin for engaging said tumbler, said tumbler having two oppositely disposed open-ended grooves separated by a central interposed partition and having a central conical surface outward of said grooved portions, said surface having its conical axis concentric with the axis of said gripper shaft, said grooves being for the reception of the pin in normal operation and said convex surface being to ward off the pin when engaged while not in receiving position, and said pin having two relatively movable parts normally held distended by an interposed spring.

5. A tumbler for gripper mechanisms comprising two oppositely disposed pin-engaging slots and a central conical face outward of said slots for warding off the pin when said tumbler is engaged while not in receiving position, said conical face having its conical axis extending at right angles to the plane of said tumbler and intersecting the same at a point between said slots.

[Claims 6 to 12 not printed in the Gazette.]

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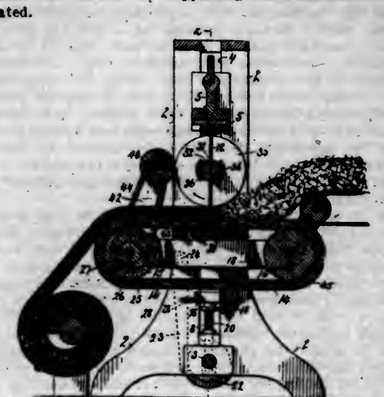
1,225,671. MACHINE FOR INTERLACING CURLED HAIR. FREDERICK MAUSSNER, Philadelphia, Pa., assignor to Madeline L. Maussner, Collingswood, N. J. Filed Oct. 23, 1916. Serial No. 127,088. (Cl. 38—7.)

1. In a machine of the character described the combination of, a frame, reciprocating needles mounted in the frame, a shaft secured in the frame, said shaft having apertures formed therein through which the needles operate and means for supporting the material to be treated.

2. In a machine of the character described the combination of, a frame, reciprocating needles mounted in the frame, a shaft located in the path of said needles, said shaft having apertures formed therein through which said needles are guided, and means for supporting the material to be treated.



3. In a machine of the character described the combination of, a frame, reciprocating needles mounted in said frame, a shaft secured in said frame, pressure disks rotatably mounted upon said shaft, said shaft having apertures formed through the same for the passage of the needles and means for supporting the material to be treated.



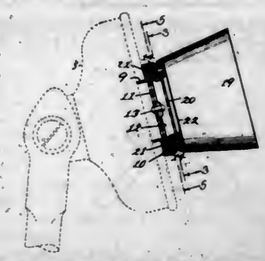
4. In a machine of the character described the combination of, a frame, reciprocating needles mounted in the frame, a shaft secured in the frame, apertures formed through the shaft for the passage of the needles, pressure disks rotatably mounted upon said shaft, spacing members secured upon the shaft between the disks and means for supporting the material to be treated.

5. In a machine of the character described the combination of, a frame, reciprocating needles mounted in the frame, a shaft secured in the frame, apertures formed through the shaft for the passage of the needles, pressure disks rotatably mounted upon said shaft, segmental spacing blocks secured upon said shaft at either side of the apertures formed therein for separating the pressure disks, and means for supporting the material to be treated.

[Claims 6 to 10 not printed in the Gazette.]

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1,225,672. TELEPHONE TRANSMITTER AND MOUTHPIECE. HITASU NAKAI, Havre, Mont. Filed June 28, 1916. Serial No. 106,344. (Cl. 179—187.)



1. The combination with a telephone transmitter provided with a threaded opening for a mouthpiece, of a casing provided with a threaded neck engaged in said opening, a mouthpiece in detachable engagement with said casing, and means for preventing the use of said telephone operable by the removal of said detachable mouthpiece.

2. The combination with a telephone transmitter provided with a threaded opening for a mouthpiece, of a casing provided with a threaded neck engaged in said opening, a mouthpiece in detachable engagement with said

casing, a perforated plate in the bottom of said casing, a disk rotatable in said casing provided with complemental perforations, and means on said detachable mouthpiece in engagement with said disk for rotating the latter upon mouthpiece removal to carry the perforations of said disk and plate out of register.

3. The combination with a telephone transmitter provided with a threaded opening for a mouthpiece, of a casing provided with a threaded neck engaged in said opening, a perforated plate in said casing, a similarly perforated disk rotatable in said casing, said casing having a flange at its outer side cut away at opposed points, a mouthpiece provided with hooks adapted to be passed beneath said flange through said cuts, and means on said disk for engagement with said hooks whereby said disk is rotated by said mouthpiece to carry said perforations into and out of register in the installation and removal of said detachable mouthpiece.

4. As an article of manufacture, for use with a telephone provided with a casing having an interrupted flange at the front thereof; a mouthpiece provided with hooks adapted to be passed beneath said flange, a plurality of destructible mouthpieces nested within said first named mouthpiece and adapted for individual removal after successive uses of said telephone, all of said mouthpieces having perforated bottoms with the perforations in register, to permit the passage of sound waves, and means passed through certain perforations in all of said mouthpieces for holding the latter together while permitting the removal of the innermost one by its destruction after use.

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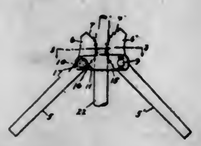
1,225,673. SANITARY TOILET-SEAT COVER. ELLA LE GORE NICHOLS, Kansas City, Mo. Filed Nov. 3, 1913. Serial No. 798,852. (Cl. 4—18.)



A sanitary cover for toilet seats comprising a ring-like body having a flap, said flap and body being folded to provide an overlapping portion extending in a line radially of the latter to vary the size of the body and said tongue being further folded transversely onto the body to constitute a lock for the overlapped portion of the latter.

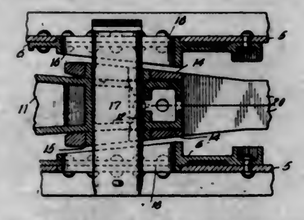
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1,225,674. CLAMP FOR WELL-POLISHED RODS. HUGH W. NUTT, Rainier, Oreg. Filed Apr. 1, 1916. Serial No. 88,285. (Cl. 24—249.)



A clamping device of the character described, consisting of two oppositely disposed arms of suitable length, said arms having oppositely disposed curved jaws provided with teeth and two lateral straps within and near the ends of which said arms are pivotally mounted and so arranged that the gripping faces of the jaws are movable a suitable distance apart and the curvature of each is eccentrical to the center of its arm pivot in a pre-determined manner to adapt the jaws to engage the opposite sides of a cylindrical object between them and the arms to forthwith engage an upper end of a rigid casing surface below each, substantially as described.

1,225,675. DRAFT-RIGGING FOR RAILWAY-CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 1, 1916. Serial No. 81,331. (Cl. 213—42.)

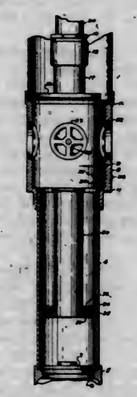


1. In a draft rigging for railway cars, in combination, a slotted draw bar having laterally extended bosses, a draft yoke comprising a pair of loops having connecting plates at their forward ends, and a coupler key, the lateral plates of the yoke being perforated to receive the bosses of the draw bar, the coupler key passing through the slot of the draw bar.

2. In a draft rigging for railway cars, the combination with a draw bar having a transverse slot therethrough, the draw bar being provided with laterally extended bosses surrounding the terminals of said slot, of a two-part yoke, each part having a plate at its forward end perforated to receive said bosses, whereby a coupler key is adapted to be extended through said slot and the perforations in the yoke part.

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1,225,676. PUMP-CYLINDER ATTACHMENT. GEORGE E. OKELL, Los Angeles, Cal., assignor to (Miss) Cora M. Lane, Los Angeles, Cal. Filed Feb. 29, 1916. Serial No. 81,125. (Cl. 103—71.)



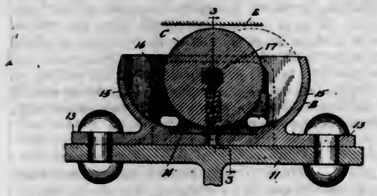
1. In combination with a reducer having a cylindrical bore, a shoulder adjacent an end thereof, and intake ports in its wall communicating with said bore; a draw head comprising a cylindrical shell slidably disposed in the bore abutting said shoulder having openings registering with said intake ports, intake valves within said shell detachably mounted in said openings, a piston guide shell axially disposed in said cylindrical shell, a discharge valve disposed at the upper end of said cylindrical shell; and means for detachably locking said cylindrical shell to said reducer.

2. In combination with a reducer having a cylindrical bore, a shoulder adjacent an end thereof, and intake ports in its wall communicating with said bore; a draw head comprising a cylindrical shell slidably disposed in the bore of said reducer and abutting said shoulder, having openings registering with said intake ports, intake valves within said shell detachably mounted in said openings, a piston guide shell axially disposed in said shell and extending above the latter, an annular valve reciprocably mounted on the extended portion of said guide shell, and seating on the upper end of said cylindrical shell; and a bayonet joint for locking said cylindrical shell to said reducer.



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1,225,677. ROLLER SIDE BEARING. CALVIN B. PATCH, Glenellyn, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 14, 1916. Serial No. 109,232. (Cl. 64—64.)



1. In a roller side bearing, the combination with a retaining member, and a roller bodily movable therein, of means for returning said roller to normal position after actuation thereof, said means comprising, a pin extending through the roller, and spring means connected at their ends to the end of said pin and also to the retaining member.

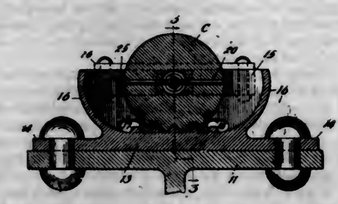
2. In a roller side bearing, the combination with a base casting having a tread portion, of a roller, a detachable journal pin extending through said roller, the side walls of said base casting being provided with lugs on their inner faces, and springs on each side of the roller, each spring being attached at one end to said journal pin and at its other end to one of said lugs.

3. In a roller side bearing, the combination with a hollow base casting, the side walls being each provided with an offset portion, of a roller mounted within said base casting, a detachable journal pin extending through said roller and having the ends thereof working in the pockets formed by said offset portions, and springs connected to the ends of said journal and to portions of the base casting.

4. In a roller side bearing, the combination with a base casting having side and end walls, the side walls being each provided with an offset portion forming a pocket on the inner side, the base casting being provided with lugs near the bottom of said pockets, a roller mounted within said base casting, a journal pin extending through said roller and having the ends thereof working within said pockets, and springs extending between the ends of said journal pin and said lugs and being attached to the latter, the side walls of the base casting being provided with openings through which said journal pin may be inserted or removed.

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1,225,678. SPRING-CONTROLLED ROLLER SIDE BEARING. CALVIN B. PATCH, Glenellyn, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 14, 1916. Serial No. 109,233. (Cl. 64—64.)



1. In a roller side bearing, the combination with a base casting, of a roller located therein, spring caps longitudinally slidably mounted in said base casting, and springs extending from said caps to the interior of the roller, the latter and the spring caps being movable in unison.

2. In a roller side bearing, the combination with a base casting, of a roller located therein, spring caps longitudinally slidably mounted in said base casting, and springs extending from said caps to the interior of the roller, the latter and the spring caps being movable in unison, the roller and the base casting being geared together.

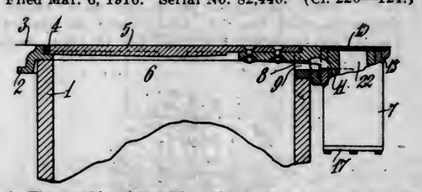
3. In a roller side bearing, the combination with a base casting, of a roller, the base casting and roller having meshing teeth, spring caps longitudinally slidably mounted on the base casting, and springs extending from the roller to said spring caps, the springs being non-rotatably secured both to the roller and to the respective spring caps.

4. In a roller side bearing, the combination with a base casting having side walls, the latter being provided with longitudinally extending guide channels, of spring caps slidably mounted in said channels, a roller located within the base casting and having a central perforation, the inner ends of said spring caps extending into said perforation, and springs extending from said spring caps to the interior of the roller and non-rotatably secured at their ends to the roller and respective spring caps.

5. In a roller side bearing, the combination with a base casting having side walls, the latter being provided with longitudinally extending guide channels, of spring caps slidably mounted in said channels, a roller located within the base casting and having a central perforation, the inner ends of said spring caps extending into said perforation, and springs extending from said spring caps to the interior of the roller and non-rotatably secured at their ends to the roller and respective spring caps, the roller and base casting having meshing gear teeth.

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1,225,679. OPERATING MECHANISM FOR COVER-PLATES. LYMAN A. RANSEHOUSEN, Springfield, Mass. Filed Mar. 6, 1916. Serial No. 82,440. (Cl. 220—124.)



1. The combination with a rim having an opening of a cover adapted to fit flush in said rim and close said opening, key operable means to raise said cover from its rim, and a key operable device to thereafter rotate said cover.

2. An operating device for manhole covers and the like, comprising, a member adapted to be secured to the rim of the cover, a part within said member having an arm extending without the latter adapted to be secured to said cover, means operable by a key from without said member to raise the cover from its rim, and a device operable by further movement of the key to swing the cover on said member as a pivot.

3. The combination with a rim having an opening, of a cover adapted to fit flush in said rim to close said opening, means normally locking the cover to said rim and key operated devices to release said means, and move the cover to expose said opening.

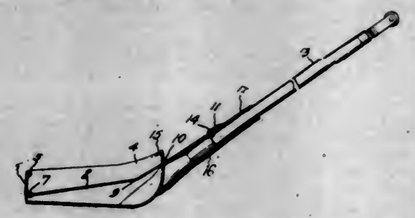
4. The combination with a rim having an opening of a cover normally fitting flush in said rim to close said opening, means normally locking said cover to said rim, key operable devices to release said means and raise said cover from the rim, and means operable by further movement of the key to swing the cover away from the rim to expose said opening.

5. The combination with a frame having an opening, of a cover adapted to fit flush into the frame to close said opening, means arranged to normally lock said cover in the frame, key operable devices to release said means and

raise the cover from said frame, and another key operable device to swing said cover away from the frame to expose the opening, said means including mechanism to positively force said cover into the frame as said devices are returned to normal position.

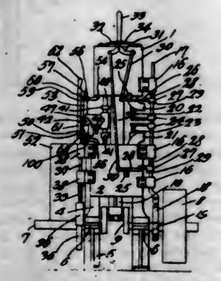
[Claims 6 to 12 not printed in the Gazette.]

1,225,680. SHOVEL. JOHN D. REDMAN, Fillmore, N. Y. Filed July 24, 1916. Serial No. 110,923. (Cl. 55—14.)



In a shovel, a bowl having a rear and side walls, a handle for the said bowl, a gate at the front of the shovel to close the space between the side walls, means at the upper corners of the said gate for hinging it to the side walls of the shovel, said shovel having an opening forming a guide, a rod slidable in the said opening, said rod having a portion of its length lying parallel to the handle of the shovel and the forward end standing at an angle thereto, means for pivoting the forward end to the said gate, a collar slidable on the handle, means for pivotally connecting the said collar to the said rod, and means for limiting the movement of the said collar.

1,225,681. IGNITER AND VALVE MECHANISM. FREDERICK E. RUPRIGHT, Interlochen, Mich., assignor of one-half to Willis Pennington, Interlochen, Mich. Original application filed Feb. 17, 1913, Serial No. 749,041. Divided and this application filed Apr. 13, 1914. Serial No. 831,597. (Cl. 123—143.)



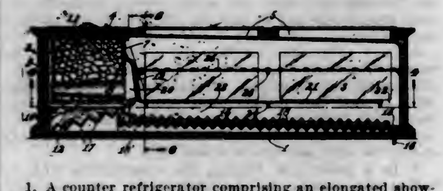
1. An internal combustion engine comprising cylinders; spaced levers and means for supporting the levers; a slidably mounted rod; fingers slidably mounted upon the rod and adapted to engage the respective levers to form switches constituting parts of igniters individual to the cylinders, the rod and the fingers being provided with interengaging elements coacting to space the fingers from the levers; mechanism for operating the rod; and means under the control of an operator for shifting both levers at once thereby to effect a timing of the explosions in the cylinders.

2. An internal combustion engine comprising cylinders; levers and means for supporting the levers; links connected with the levers; a walking beam pivotally connected with the links; movable switch members adapted to engage the levers and coöperating therewith to form igniters individual to the cylinders; and means for adjusting the position of the walking beam thereby to effect a timing of the spark.

3. An internal combustion engine comprising cylinders; levers and means for supporting the levers; links connected with the levers; a slidably mounted rod; fingers slidable upon the rod and coacting with the levers to form switches constituting parts of igniters individual to the cylinders, the fingers and the rod being provided with interengaging elements coöperating to space the fingers from the levers; means for moving the links to effect a timing of the explosions in the cylinders; and means for holding the links in adjusted positions.

4. In an internal combustion engine, ignition mechanism comprising a lever; means for supporting the lever intermediate its ends; a link connected with one end of the lever; a walking beam pivoted to the link and provided with a handle; a fixed locking means coacting with the handle to hold the handle in adjusted positions thereby to effect a timing of the explosion; and a movable switch member adapted to come into and out of engagement with the other end of the lever.

1,225,682. SHOW-CASE REFRIGERATOR. JOHN SCHULDE, St. Louis, Mo., assignor, by mesne assignments, to Harry L. Hussmann Refrigerator & Supply Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 21, 1915. Serial No. 46,686. (Cl. 62—37.)



1. A counter refrigerator comprising an elongated show-case having transparent panels, a refrigerating unit including a container adapted to receive a freezing mixture and mounted at one end of said show-case, said container having a vertical passage at the back thereof and having tubes passing therethrough and open at their rear ends to said vertical passage and at their forward ends to said show-case, constructed and arranged to permit a circulation of air through the unit and along the back thereof, and said unit being adapted and positioned to cause a current of air to circulate in a path from the bottom of said unit along the bottom of said show-case and in a return path along the top of the show-case into the top of said unit.

2. A counter refrigerator comprising an elongated show-case having transparent panels, a refrigerator unit including a container adapted to receive a freezing mixture and mounted at one end of said show-case, and a drip pan arranged below the container and receiving the brine therefrom, said container having a vertical passage at the back thereof and having tubes passing therethrough and open at their rear ends to said vertical passage and at their forward ends to said show-case, constructed and arranged to permit a circulation of air through said unit and along the back thereof, and said unit being adapted and positioned to cause a current of air to circulate in a path from the bottom of said unit along the bottom of said show-case and in a return path along the top of the show-case into the top of said unit.

3. A counter refrigerator comprising an elongated show-case provided with transparent panels, a refrigerating unit adapted to receive a freezing mixture and mounted at one end of said show-case, said unit having passages constructed and arranged to permit a circulation of air therethrough and along the back thereof, and said unit being adapted and positioned to cause a current of air to circulate in a path from the bottom of said unit along the bottom of the show-case and in a return path along the top of the show-case into the top of said unit, and a pan extending along the bottom of the show-case beyond said unit and adapted to receive the brine from said unit.

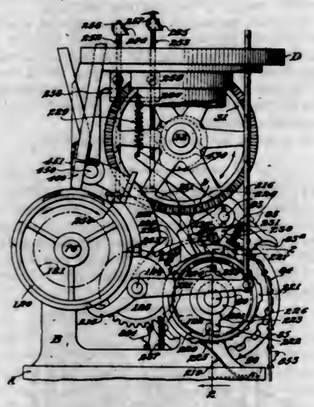
4. A counter refrigerator comprising an elongated show-case having transparent panels, a refrigerating unit adapted to receive a freezing mixture and mounted at one end of said show case, said unit having passages constructed and arranged to permit a circulation of air therethrough and along the back thereof, and said unit being adapted and positioned to cause a current of air to circulate in a path from the bottom of said unit along the bottom of the show-case and in a return path along the top of the show-case into the top of said unit, and a baffle positioned between the inlet and outlet of said unit and adapted to direct said current of air.

5. A refrigerator comprising a casing having a refrigerator compartment and a compartment adapted to receive a refrigerative body, said body being provided with open ended passages each opening at one end toward said refrigerator compartment, the said passages having their other ends terminating and adapted for communication with one another within said body, whereby the air being refrigerated will pass from one to another of said passages without leaving the said body.

[Claims 6 to 15 not printed in the Gazette.]



1,225,683. PATTERN MECHANISM FOR KNITTING-MACHINES. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Boston, Mass., a Corporation of Massachusetts. Filed July 25, 1913. Serial No. 781,052. (Cl. 66—24.)



1. In a pattern mechanism, a timing or pattern shaft, a primary pattern surface, and a pattern surface normally moved by said shaft, means controlled by said primary pattern surface to move said pattern shaft intermittently, in combination with devices independently controlled by said primary pattern surface for advancing said pattern surface with respect to said shaft at predetermined times.

2. A knitting machine having a rotary knitting element, needles, and needle controlling devices, an intermittently actuated timing or pattern shaft, a pattern surface normally moved by said shaft, and connections from said surface to said controlling devices, in combination with devices for advancing said pattern surface with respect to said shaft at predetermined times during a predetermined part of a revolution of said rotary element only.

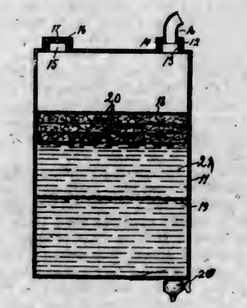
3. A knitting machine having a rotary knitting element, needles, and needle controlling devices, an intermittently actuated timing or pattern shaft, a pattern surface normally moved by said shaft, and connections from said surface to said controlling devices, in combination with devices for advancing said pattern surface with respect to said shaft at predetermined times during a predetermined part of a revolution of said rotary element only, and means for holding said surface stationary during subsequent movement of said shaft.

6. A pattern mechanism comprising a timing or pattern shaft, a primary pattern surface, and a main pattern surface moved by said shaft, means controlled by said primary pattern surface to move said pattern shaft at predetermined times, an auxiliary pattern surface and means to cause said auxiliary surface normally to move coördinately with said shaft, in combination with devices controlled by said primary pattern surface for advancing said auxiliary pattern surface with respect to said means at predetermined times.

7. A knitting machine having a rotary knitting element, a timing or pattern shaft, a primary pattern surface, and a main pattern surface moved by said shaft, means controlled by said primary pattern surface to move said pattern shaft intermittently, an auxiliary pattern surface and means to cause said auxiliary surface normally to move coördinately with said shaft, in a combination with devices controlled by said primary pattern surface for advancing said pattern surface intermittently with respect to said means at predetermined times related to predetermined parts of a revolution of said knitting element.

[Claims 4, 5, and 8 to 13 not printed in the Gazette.]

1,225,684. AIR-MOISTENING DEVICE. OLIVER I. SHAVER, Park Rapids, Minn. Filed Aug. 18, 1916. Serial No. 115,681. (Cl. 261—95.)



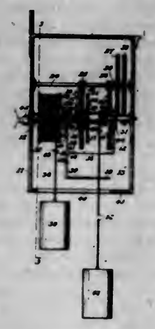
1. In a device of the class described, a closed vessel adapted to contain water, a horizontal perforated partition fixed some distance from the bottom of the vessel, and one or more felt pads adapted to float upon the water above said partition.

2. In a device of the class described, a closed vessel adapted to contain water, a horizontal perforated partition fixed some distance from the bottom of the vessel, one or more felt pads adapted to float upon the water above said partition, said vessel having in its top an air inlet and outlet and therebelow a foraminons horizontal partition by which to limit the upward floating of the felt pad or pads.

1,225,685. WEIGHT-MOTOR. JAKOB SKANDORA, Racine, Wis. Filed June 27, 1916. Serial No. 106,166. (Cl. 185—4.)

1. A weight motor including a driving shaft consisting of two independently revoluble sections, a primary weight operated driving drum keyed to one of said sections, a gear journaled on said section, a clutch sleeve for clutching the said gear to said section shiftably splined upon said section, a secondary drum upon the other section, a weight carrying operating cord upon said secondary drum, a gear having a clutching hub member journaled upon one of said shaft sections, a coöperating hub clutch member upon the secondary drum, an automatic means for releasing the clutch sleeve of the first-named gear and simultaneously closing the clutch members of the secondary drum and the second named gear and a driven shaft hav-

ing pinions secured thereto, each of which mesh with one of said gears.

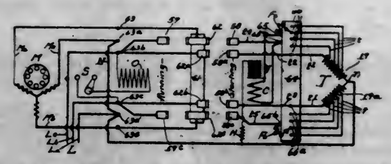


2. A weight motor including a driving shaft comprising two alined independently revoluble sections, a drum keyed to one of said sections, a gear journaled on said section, means for clutching said gear to said section, a drum shiftably splined to the other shaft section and provided with a clutching hub member, a gear journaled on the first-named shaft section and provided with a clutching hub member adapted to be engaged by the clutching hub member of said drum, a driven shaft having pinions secured thereto, each of which mesh with one of said gears, a weighted cord adapted to be wound upon each of said drums, and means for automatically unclutching said first-mentioned gear from its shaft section and simultaneously moving the second-mentioned drum to engage its clutching hub member with the clutching hub member of said second-named gear after the unwinding of the cord from the first-named drum.

3. A weight motor comprising a driving shaft consisting of two independently revoluble sections, a primary drum upon one of said sections, a secondary drum upon the other section, a weight carrying cord upon each of said drums, a stop secured to each of said cords, a clutch for each of said drums, a pivotally-mounted lever for shifting said clutches, and a pivoted fork carried by said lever in normal supporting relation with respect to the stop upon the cord of said secondary drum, the said lever being adapted to be moved by the stop upon the cord of the primary drum to release said fork from the stop upon the cord of the secondary drum upon the termination of the operation of the primary drum.

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1,225,686. ELECTRIC CONTROLLER. HARRY FROST STRATTON, Cleveland, Ohio, assignor to The Electric Controller & Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 9, 1915. Serial No. 49,687. (Cl. 172—289.)



1. In a motor control system, a source of supply, an induction motor, a transformer for supplying a reduced starting voltage for the motor, means for connecting the motor to the transformer and directly to the source, and means controlling the change of the motor connection from the transformer to the source, said means including two opposing windings, one of which is connected in series with the motor and the other of which is energized by the starting voltage.

2. In a motor control system, a source of supply, an induction motor, an adjustable transformer for supplying starting voltage for the motor, means for connecting the motor to the transformer and directly to the source, and means controlling the change of the motor connection from the transformer to the source, said means including two opposing windings, one of which is connected in series with the motor and the other of which is so connected with relation to the transformer that when the transformer is adjusted to increase or decrease the starting voltage, the energizing current of the winding will be respectively increased or decreased.

3. In a motor control system, a source of supply, an induction motor, an adjustable transformer for supplying starting voltage for the motor, means for connecting the motor to the transformer and directly to the source, and means controlling the change of the motor connection from the transformer to the source, said means including two opposing windings, one of which is energized by the motor current and the other by the motor starting voltage, and means whereby when the transformer is adjusted to increase the starting voltage, the energizing voltage of the other winding will be increased.

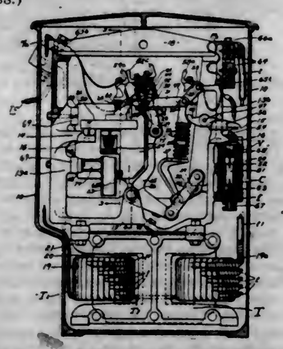
4. In a motor controller, movable contacts, starting and running contacts arranged to be engaged thereby, a single electromagnet for operating said contacts and for holding them in their operated positions, and means cooperating with said magnet for causing the movable contacts to engage the starting contacts before engaging the running contacts, but permitting the return of said movable contacts from the running contacts to neutral position without engaging the starting contacts.

5. In a motor controller, movable contacts, starting and running contacts arranged to be engaged thereby, a single electromagnet for operating the contacts, and means cooperating with the magnet for causing the movable contacts to engage the starting contacts by movement in one direction and to engage the running contacts by movement in the opposite direction.

[Claims 6 to 45 not printed in the Gazette.]

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1,225,687. ELECTROMAGNETIC APPARATUS. HARRY F. STRATTON, Cleveland, Ohio, assignor to The Electric Controller & Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Sept. 9, 1915, Serial No. 49,687. Divided and this application filed Mar. 8, 1917. Serial No. 153,337. (Cl. 175—338.)



1. In an electromagnet, a plurality of poles, a loosely pivoted armature arranged to be attracted thereto, a winding surrounding one pole, a loosely supported non-magnetic separator between said pole and the armature, means providing a continuous pull between a second pole and the armature when the winding is energized with alternating current, and external means causing a thrust of the armature against the pole not having the continuous pull.



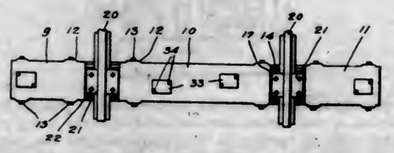
3. In an electromagnet, a plurality of poles, a loosely pivoted armature arranged to be attracted thereto against a working load, a winding surrounding one pole, a loosely supported non-magnetic separator between said pole and the armature, means providing a continuous pull between a second pole and the armature when the winding is energized with alternating current, means between the working load and the armature whereby the direction and point of application of the load tends to separate the armature from the second pole and to rotate the armature toward the first pole on the second pole as a fulcrum.

5. In an electromagnet, a plurality of stationary poles, an armature arranged to be attracted thereto, an energizing winding for the stationary poles, a loosely supported non-magnetic separator between one pole and the armature, means providing a continuous pull between a second pole and the armature when the winding is energized with alternating current and when the armature engages the said second pole, a loose pivotal connection for the armature whereon the armature may rotate when attracted toward the stationary poles, and whereby the armature may have movement toward and from the first pole without disengaging the armature from the second pole.

[Claims 2, 4, and 6 to 8 not printed in the Gazette.]

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1,225,688. RAILROAD CROSS-TIE. EDWARD WARTMAN and NELS MITCHELL, Everett, Wash. Filed Aug. 22, 1916. Serial No. 116,562. (Cl. 238—5.)



1. A metallic railroad tie comprising a casing, boxes disposed therein in spaced relation, rail-carrying blocks movable vertically in said boxes and resilient means supporting said rail-carrying blocks.

2. A railroad tie comprising a metallic casing, guide boxes disposed therein in spaced relation, rail-carrying blocks movable vertically in said boxes, resilient means supporting said blocks and rigid means limiting the downward movement of said blocks.

3. A railroad tie comprising a metallic casing, guide boxes disposed therein in spaced relation, said guide boxes having interiorly disposed, upwardly directed shoulders, rail-carrying blocks adapted to fit within said boxes, said blocks having downwardly directed shoulders engageable with the shoulders in said boxes to limit the downward movement of said blocks, and resilient means supporting said blocks.

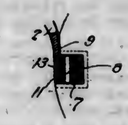
4. A railroad tie comprising a metallic casing, having an open top side, cover plates for said casing, guide boxes disposed in said casing, said guide boxes having interiorly directed shoulders, rail-carrying blocks having shoulders engageable with the shoulders in said boxes to limit the downward movement thereof, lever arms pivoted to said boxes, the short ends of said lever arms forming supports for said blocks, and compression springs engaging the longer ends of said lever arms.

5. A railroad tie comprising a rectangular metallic casing, a guide box removably secured therein and resting on the bottom of said casing, said guide box having upwardly directed shoulders, levers pivoted in said guide box and extending lengthwise of said casing, said levers having inwardly directed short arms and outwardly directed longer arms, springs exerting a downward pressure on the outer ends of said longer arms, and rail-carrying blocks adapted to rest on the short ends of said levers, said rail-carrying blocks having shoulders to engage with the shoulders in said boxes and limit the downward movement thereof.

[Claim 6 not printed in the Gazette.]

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1,225,689. OPHTHALMIC MOUNTING. JOEL C. WELLS, Southbridge, Mass. Filed May 3, 1915. Serial No. 25,498. (Cl. 88—47.)



1. An eyeglass mounting comprising in combination with a lens having a recess formed therein, a bridge having a portion thereof disposed within the recess with the terminus of its inner face flush with the edge of the lens, whereby the inner face of said portion of the bridge forms a continuation of the curve of the edge of the lens.

2. In a mounting of the character described, the combination with a lens having a recess formed therein, of a clip disposed within said recess, said lens having a second recess formed adjacent said first recess, and a bridge having a portion thereof secured within said second recess.

3. In an ophthalmic mounting, the combination with a lens having recesses formed therein, of a bridge having the end thereof shaped to be received within one of said recesses, the other recess being adapted to receive a portion of the bridge whereby the symmetrical curvature of the edge of the lens is unimpaired, and an adhesive material for securing the bridge and clip within the recess.

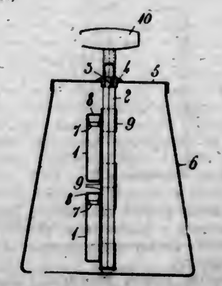
4. A bridge for an ophthalmic mounting, comprising a central arched portion bearing a lens attaching member on each end thereof, said members each comprising a box having a central opening surrounded on three sides by walls each comprising a cross web connection and upstanding lateral flanges substantially normal to the web, the fourth wall of the box being formed by the bridge proper, substantially as described.

5. The combination with a lens having a larger aperture formed therein, of a mounting for the lens comprising an arch member bearing a box at its terminus, said box fitting within the aperture of the lens to bring the inner face of the arch flush with the edge of the lens, whereby the edge of the lens will contact with the nose when the mounting is in position on the face, the said box being centrally apertured and having a continous web fitting the entire face or wall inclosing the aperture in the lens, and being further provided with front and rear side flanges overlying the web and the edges of the slot in the lens, and a cementitious medium uniting both the web and the side flanges with the inclosed portion of the lens, substantially as illustrated.

[Claim 6 not printed in the Gazette.]

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1,225,690. APPARATUS FOR PREPARING COFFEE, TEA, OR SIMILAR DRINKS. GEORG WIBERG, Stockholm, Sweden. Filed May 11, 1915. Serial No. 27,322. (Cl. 53—3.)

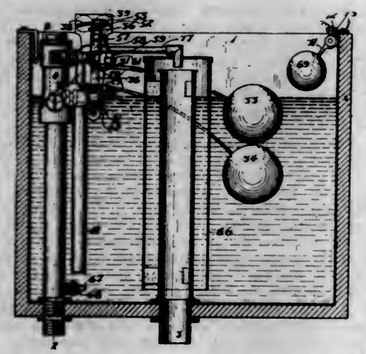


In an apparatus for making coffee, tea and so forth, the combination with a vessel adapted to receive the apparatus, a removable cover and a bearing therein, of a rod vertically journaled in said bearing and adapted to

rest with its lower end on the bottom of said vessel, one or more foraminous containers of narrow width, a hub attached to the back of each container and fitted to the said rod, at the same time acting as spacers between two containers, and means for rotating said rod and said containers.

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1,225,691. FLUSHING-TANK. WILLIAM A. WILLIAMS, San Francisco, Cal. Filed Sept. 5, 1916. Serial No. 118,434. (Cl. 137—106.)

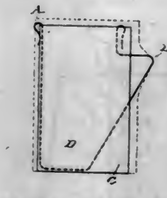


1. The combination of a tank, a supply pipe therefor, two means for controlling said supply pipe, floats for controlling the respective means, one of said floats being adapted by its descent to open the supply pipe, and the other to close it, means for preventing the rising of the latter float with the rise of the level of the water in the tank, and means for withdrawing said preventive means, controllable from the outside of the tank.

2. In a device for automatically operating flushing tanks, the combination of a tank, a supply pipe therefor, two means for controlling said supply pipe, floats for controlling the respective means, one of said floats being adapted by its descent to open the supply pipe, and the other to close it, means for preventing the rising of the latter float with the rise of the level of the water in the tank, a jet for supplying a small quantity of water continuously to the flushing tank, a buoyant float, and means actuated by the rise of the latter float for withdrawing said preventive means.

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1,225,692. SAFETY PURSE-HOLDER. BERNARD D. WILLIS, Chicago, Ill. Filed Sept. 19, 1912. Serial No. 721,166. (Cl. 24—3.)



1. A guard having a wire bent into a loop, one side arranged for engaging a pocket book, another one of the sides provided with a pocket engaging shelf extending substantially horizontally.

2. A guard having a wire bent into a loop, one side arranged for engaging a pocket book, another one of the sides provided with a pocket engaging shelf extending substantially horizontally, said mentioned sides adjustable toward and away from each other.

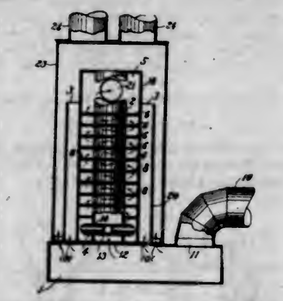
3. A pocket guard having a pair of pocket engaging limbs, a link connecting said limbs, said link adjustable, whereby the space between the limbs may be varied.

4. A pocket guard having two limbs, one provided with a pocket book engaging clasp and the other with a pocket engaging shoulder, said shoulder slidably mounted upon the other of said limbs, said slidable shoulder provided with space for advertising purposes.

5. A pocket guard having two limbs, one provided with a pocket engaging clasp and the other with a pocket engaging shoulder, said shoulder slidably mounted upon the other side of said limbs.

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1,225,693. GAS HEATING APPARATUS. JOHN WOLLANT, Cleveland, Ohio. Filed Feb. 18, 1913. Serial No. 749,144. Renewed Apr. 7, 1917. Serial No. 160,540. (Cl. 126—90.)



In combination, a cold air cell, a cold air pipe leading thereto, a combustion chamber, said chamber being provided with an opening in the top thereof for the escape of the products of combustion, a circular gas burner in said combustion chamber located in the bottom thereof, a conduit communicating with said cold air cell and substantially concentric with the combustion chamber and extending substantially parallel to said chamber, the walls of the combustion chamber and the conduit forming a passage for the air, the conduit being shorter than the combustion chamber, a plurality of baffle plates in said chamber, such baffle plates being provided along that part of the chamber co-incident with said conduit, each baffle plate being provided with an opening, and mounted so that the openings are in staggered relation with respect to one another and form a tortuous passage for the products of combustion through the combustion chamber, the baffle plates engaging the side walls of the chamber, a casing surrounding the combustion chamber and the conduit and spaced therefrom to form a passage for the passage of air from said cold air cell, a second conduit leading through the circular gas burner and the combustion chamber to conduct cold air therethrough, the inner edges of said baffle plates resting against said second conduit, and hot air flues leading from the top of said casing.

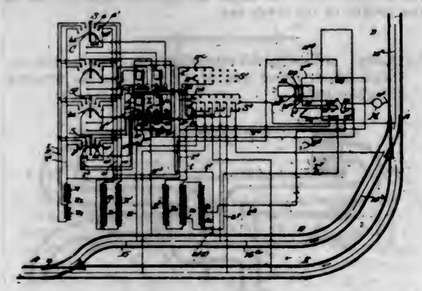
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1,225,694. CAR-HANDLING APPARATUS. FRANK E. WOODFORD, Chicago, Ill. Filed Dec. 20, 1911. Serial No. 667,047. (Cl. 104—210.)

1. The combination with a railway track, of a feed conductor independent of the track, means for supplying currents of different potentials to said conductor, a central switchboard having a variable resistance and a single controller to vary the currents in said conductor; and a series of independent cars on the track provided with motors and brakes, and motor and brake circuits having operative contact with said conductor.

2. The combination with a railway track, of a feed conductor independent of the track, means for supplying currents of different potentials to said conductor, a single controller to vary the currents in said conductor; and a series of independent cars on the track provided with motors and brakes, and motor and brake circuits having operative contact with said conductor.





3. The combination with a motor driven car having an electric brake, of a single feed conductor external of the car for supplying the motor and brake, and an electric controller for controlling the motor and brake in alternation from a distant point through said feed conductor.

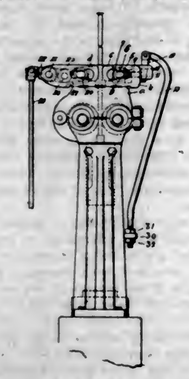
4. The combination with a motor driven car having an electric brake, of a single feed conductor external of the car for supplying the motor and brake, and means to control the motor and brake in alternation from a distant point through said feed conductor.

5. The combination with a plurality of motor driven cars each having an electric brake, of a single feed conductor for the motor and brake, and means for controlling the motors and the brakes of the cars in alternation from a distant point.

[Claims 6 to 50 not printed in the Gazette.]

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1,225,695. DROP-HAMMER. LOUIS G. BAYER, Hartford, Conn., assignor to The Billings & Spencer Company, Hartford, Conn., a Corporation of Connecticut. Filed Mar. 2, 1915. Serial No. 11,448. (Cl. 78—29.)



1. In a machine of the character described, a board clamp comprising an active clamp member operable to release a board, and an inactive clamp member, slide ways in which said inactive member is free to move toward and away from the active member to adjust and retain the spacing of said board clamps, a support, a wedge depending therefrom at the rear of and adapted to act upon said inactive member, and means for adjusting and holding said support.

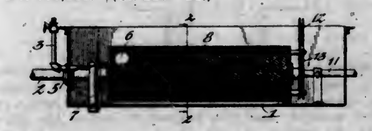
2. In a machine of the character described, a base, side uprights, a head, a board clamp mounted on said head and comprising active and inactive clamp members, said inactive clamp member being slidingly supported, a socket into which the rear end of the inactive member projects, a wedge fitting in said socket and bearing against the rear end of said inactive member to cause its movement toward said active member, a downwardly extending bar connected with said clamp, a lug near the bottom of one of said side uprights through which said bar passes, and adjusting nuts threaded onto said bar above and below said lug.

3. In a machine of the character described, the combination with the slidingly mounted active member of a board clamp, of operating means therefor, comprising a lever pivotally supported in said head, a connection between the outer end of said lever and a foot treadle, and a link connecting the inner end of said lever with said clamp member.

4. In a machine of the character described, including a head and a board clamp located therein, a pin upon which the active member of said board clamp is mounted, a sliding support for said pin in the sides of the head, a lever pivotally mounted in said head, and a link connection between the inner end of said lever and said clamp member.

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1,225,696. AIR-WASHING APPARATUS. CHARLES H. BICALKY, Buffalo, N. Y. Filed May 31, 1913. Serial No. 770,844. (Cl. 210—14.)



1. The combination of a sump which is adapted to contain water, a movable screen having a part submerged in said water and a part arranged above the level of the water, a spray nozzle adapted to deliver a spray of water against the unsubmerged part of said screen, and means for intermittently flushing said nozzle.

2. The combination of a sump which is adapted to contain water, a movable screen having a part submerged in said water and a part arranged above the level of the water, a spray nozzle adapted to deliver a spray of water against the unsubmerged part of said screen and having an outlet and a head movable toward and from said outlet, and means for automatically actuating said nozzle at intervals.

3. The combination of a sump which receives water, a rotatable screen having one part submerged in the water of said sump and another part arranged above the level of the water in the sump, means for withdrawing water from the interior of said screen and means for clearing the meshes of said screen comprising a sprayer arranged within the screen and adapted to deliver a spray of water outwardly against the unsubmerged part of the screen and having a water delivery nozzle, a head movable toward and from the outlet of the nozzle, and means for opening said head by movement derived from said screen.

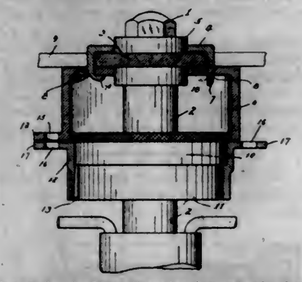
4. The combination of a sump which receives water, a rotatable screen having one part submerged in the water of said sump and another part arranged above the level of the water in the sump, means for withdrawing water from the interior of said screen and means for clearing the meshes of said screen comprising a sprayer arranged within the screen and adapted to deliver a spray of water outwardly against the unsubmerged part of the screen and having a water delivery nozzle, a head movable toward and from the outlet of the nozzle, a spring operating to close said head, a lever operating to open said head, and a cam arranged on the inner side of said screen and adapted to shift said lever.

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1,225,697. STEERING-WHEEL-LOCKING MEANS FOR AUTOMOBILES. JUNIUS A. BOWDEN, Los Angeles, Cal. Filed Aug. 21, 1916. Serial No. 116,036. (Cl. 70—90.)

1. In a device for locking a steering wheel of an automobile, comprising a clamping ring, a cylindrical member having an external flange and an inwardly directed

flange, a perforation in said external flange, numerous perforations in said inwardly directed flange, said ring having numerous prongs, said member adapted to engage the lower part of the hub of the steering wheel, said ring adapted to engage upper part of the hub of the steering wheel, said prongs adapted to enter said perforations in the inwardly directed flange and adapted to be clenched thereto for binding the ring and member to said hub, a collar adapted to be secured upon the housing of a steering rod, a flange on said collar and a perforation in said flange, for the purpose described.

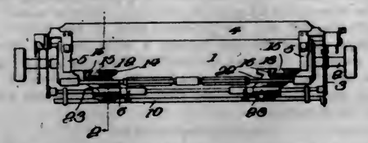


2. Means for locking the steering wheel of an automobile, in combination with the steering wheel and housing of the steering rod, comprising a clamping ring and a cylindrical member, said ring adapted to engage the upper part of the spokes of said wheel near the hub of the wheel, said member adapted to engage the lower part of the spokes of said wheel near the hub of the wheel, means between said spokes adapted to extend from the ring to the member whereby the ring and member may be drawn securely to said spokes, a flange on said member, a perforation in said flange, a collar adapted to be secured upon said housing, a flange on said collar, a perforation in said flange, said perforation adapted to register with the perforation in the flange of said member for the purpose described.

3. Means for locking the steering wheel of an automobile, in combination with the steering wheel and housing of the steering rod, comprising three main elements, a clamping ring, a cylindrical member having an external flange, a collar having a flange, a perforation in the flange of said collar, a perforation in the flange of said member, said member having an end wall and a central opening in said wall, means between the ring and member adapted to attach to the ring and to the member whereby the ring and member may be bound rigidly against the hub of the steering wheel, the collar adapted to be secured upon the housing of the steering rod, the perforation in the flange of said member adapted to register with the perforation in the flange of said collar whereby said flanges may be locked together for the purpose described.

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1,225,698. TYPE-WRITING MACHINE. MICHAEL BRANCH, Richmond, Va. Filed Aug. 16, 1916. Serial No. 115,311. (Cl. 197—139.)

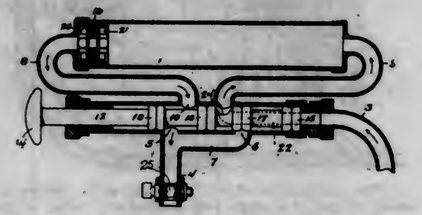


1. In a typewriting machine having a platen, the combination with three rods adjacent the platen, a guide plate having a looped central portion to receive the center rod and having the upper end curved to pass under the upper rod and bear against the platen, and the other end engaging the outer face of the lower bar.

2. In a typewriting machine having a platen, the combination with three rods adjacent the platen, of a metal guide plate supported by the center rod, and having one end passing under the upper bar and the opposite end on the outside of the lower bar.

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1,225,699. MEASURING-FAUCET. EDWARD R. BROWN, Boston, Mass. Filed Aug. 27, 1910. Serial No. 579,283. (Cl. 221—102.)



1. A valve casing having an inlet and an outlet, and having two intermediate ports opening into its interior, passages exterior to said casing leading from said ports, a valve having packings arranged to prevent flow of liquid directly from the inlet to the outlet, and a pair of packings spaced to correspond with the distance between said ports, the valve having also an inclosed channel leading from the inlet side of the first packing to the space between said pair of packings and being movable to register such channel with either of said ports, at the same time closing the passage leading from said port to the outlet and opening the passage leading from the other port to the outlet.

2. A valve comprising a casing and a spindle of less diameter than the bore of the casing movable longitudinally in the casing, said casing having an inlet at one end and four ports in its sides located in different longitudinal zones, and the spindle having four spaced apart packings making liquid-tight engagement with the sides of the casing, and said spindle having a port between the middle packings and an opening through its inner end, said opening extending to the port in the spindle.

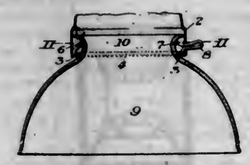
3. A four-way valve comprising a casing having an end opening and four side ports in different longitudinal locations, a valve spindle of a less diameter than the bore of the casing movable endwise in said casing and having a passage extending from its end adjacent the end opening of the casing to a port in its side, packings carried by said spindle on respectively opposite sides of said last named port, and additional packings carried by the spindle between the respective ends of the casing and the side ports of the casing.

4. A four-way valve comprising a casing having an inlet, two ports constituting entrances to an external circuit, and two outlet ports, and a controller having a plurality of closures arranged with passages between them, one of said passages being always in connection with the inlet, and the controller being so movable as to place the latter passage in registry with each circuit port alternately; the closures being located to put the other circuit port than that which registers with such passage in connection with one of the outlet ports, in either position of the controller, and to close the other outlet port.

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1,225,700. SHADE-HOLDER. WILLIAM L. COLLINS, Pittsburgh, Pa. Filed June 6, 1916. Serial No. 101,910. (Cl. 240—115.)

1. A shade support, comprising a downwardly extending gallery having an opening through the lower portion thereof, upwardly and inwardly extending globe suspending members connected to said gallery and arranged to support the globe, one of said members being formed of spring metal bent upon itself and extending outwardly and inwardly through the opening in the gallery and then upwardly to form a support for the globe, said outwardly and inwardly extending portion forming an actuating handle for drawing said member outwardly substantially as described.

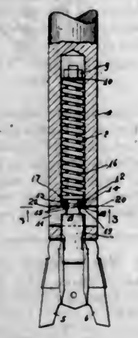


2. A shade holder having a gallery, a spring metal band connected to said gallery, and having a plurality of upwardly and inwardly extending projections formed thereon arranged to support the globe, one of said projections having a handle which extends outwardly through an opening in the gallery to permit said projection to be withdrawn laterally to release the shade; substantially as described.

3. A shade holder having a gallery, a spring metal band connected to said gallery, and having a plurality of upwardly and inwardly extending projections formed thereon to support the globe, said gallery having an opening through the lower end thereof, one of said projections being bent upon itself and extending outwardly and inwardly through the opening, and then upwardly to form a shade support, said outwardly and inwardly extending portion forming an actuating handle to withdraw said projection laterally to release the shade; substantially as described.

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1,225,701. UNDERREAMER. WILLIAM C. CUTLER, North Glendale, Cal. Filed Mar. 6, 1917. Serial No. 152,856. (Cl. 255—75.)



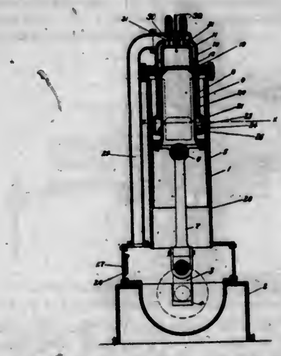
1. In an under-reamer comprising a body, cutters yieldingly mounted on the body, and operating means connected to the cutters, the combination of a key loosely mounted in the reamer connecting the body and operating means having recesses suitably provided in the surface of the key, and locking means yieldingly inserted in the reamer engaging with the recesses in the key for holding the cutters and operating means in operative position in the reamer.

4. In an under-reamer of the type described comprising body, cutters and connecting members, the combination of a key loosely mounted in said body and operatively connecting said body and said connecting members having interlocking means provided in its surface, and locking means yieldingly inserted in said body having interlocking means for engaging with the interlocking means in the key locking the key within the reamer.

[Claims 2 and 3 not printed in the Gazette.]



1,225,702. INTERNAL-COMBUSTION ENGINE. GEORGE K. DAVOL, San Francisco, Cal. Filed Feb. 21, 1910. Serial No. 545,029. (Cl. 123—172.)



1. In an internal combustion engine, the combination of a cylinder in which expansion of the working gases takes place, a piston guided to reciprocate within but not in contact with the said cylinder being separated therefrom by an annular clearance, the said clearance being open or unconfined at the open or crank end of the cylinder, and means for supplying water to the said clearance.

2. In an internal combustion engine, the combination of a cylinder in which expansion of the working gases takes place, a piston guided by means external to the said cylinder to reciprocate within but not in contact with the walls of the said cylinder, said piston being separated from said cylinder by a free annular space open or unconfined at the open or crank end of the cylinder, and means for introducing water into said annular space.

3. In an internal combustion engine, the combination of a working cylinder, a piston guided to reciprocate within but not in contact with the walls of said cylinder being separated therefrom by a free annular space, said annular space opening freely at its outer end to an exhaust passage, and means for introducing water into the said annular space.

4. In an internal combustion engine, the combination of a cylinder in which expansion of the working gases takes place, a piston guided by means external to the said cylinder to reciprocate within but out of contact with the walls of the said cylinder being separated therefrom by an annular clearance, the said clearance opening at its outer end to an exhaust passage, and means for introducing water into the said annular clearance.

5. In an internal combustion engine the combination of a cylinder in which expansion of the working gases takes place, a piston guided to reciprocate within but not in contact with the said cylinder being separated therefrom by a free annular space, means for introducing water into the said annular space, and a plurality of substantially parallel unconnected grooves between the piston and cylinder for receiving said water and producing eddy currents therein.

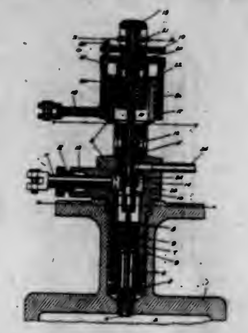
[Claims 6 to 19 not printed in the Gazette.]

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1,225,703. FUEL-VALVE FOR INTERNAL-COMBUSTION ENGINES. GEORGE K. DAVOL, San Francisco, Cal. Filed Nov. 12, 1912. Serial No. 730,881. (Cl. 123—33.)

1. In a fuel injecting apparatus for internal combustion engines, the combination of a spraying valve, a spring or other yielding means for holding said valve against its seat, means for imparting angular movement to said valve immediately upon closing and while so held against its seat, and means for forcing liquid fuel between said valve

and its seat against the action of said spring or other yielding means.



2. In a fuel injecting apparatus for internal combustion engines, the combination of a spraying valve opening inwardly into the cylinder of the engine and held on its seat by a spring or other yielding means, means for intermittently forcing liquid fuel between said valve and its seat, and means for turning or oscillating said valve on its seat in opposite directions.

3. In combination, an annular valve seat, a valve for said seat, yielding means for holding said valve upon its seat, means for periodically forcing liquid fuel between the valve and the seat against the action of said yielding means, and means for oscillating said valve upon its seat in opposite directions between successive periods of fuel injection.

4. In a fuel injecting apparatus for internal combustion engines, the combination of a chamber, means of supplying fuel to said chamber, a spraying valve placed between said chamber and the engine cylinder, means for periodically twisting or oscillating said spraying valve on its seat, an escape valve when open permitting the fuel to escape from said chamber, and means for opening and closing said escape valve.

5. In a fuel injecting apparatus for internal combustion engines, the combination of a chamber, a passage or port connecting said chamber with the engine cylinder, a spraying valve closing said passage or port except during the periods of fuel injection, a spring or other yielding means forcing said spraying valve on its seat, means for periodically imparting angular movement to said spraying valve immediately upon closing and while held against its seat by the said spring or other yielding means, and means for periodically establishing a fluid pressure of liquid fuel within the said chamber, the said pressure being sufficient to force the said spraying valve off its seat against the action of the said spring or other yielding means.

[Claims 6 to 14 not printed in the Gazette.]

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1,225,704. CONTAINER FOR EGGS AND THE LIKE. HENRY P. DWYER, San Francisco, Cal. Filed Feb. 2, 1916. Serial No. 75,643. (Cl. 217—27.)

1. A container for fragile articles comprising a case, and an arched support therein having a hole therethrough for receiving an end of the article and the ends of the arch are supported against pressure perpendicular to its base and cut out to form tongues part of which extend outwardly and part inwardly from the arch.

2. A container for fragile articles comprising a box or case, and a compound arch-shaped member comprising two arch-shaped members secured together at their edges, the outer arch-shaped member having a recess to receive the article, and the inner arch-shaped member being curved less than the outer arch-shaped member.

3. A container for fragile articles comprising a box or case, and a compound arch-shaped member comprising two arch-shaped members secured together at their edges, an outer arch-shaped member having tongues extending therefrom and an inner arch-shaped member having in its margin tongues to engage the tongues of the other arch-shaped member.

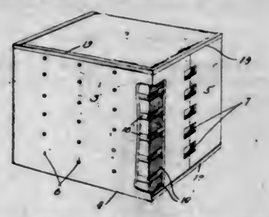


4. A container for fragile articles comprising a box or case, and a compound arch-shaped member comprising two arch-shaped members secured together at their edges, an outer arch-shaped member having tongues extending therefrom and an inner arch-shaped member having in its margin tongues to engage the tongues of the other arch-shaped member, and having also a tongue extending between the tongues of the outer arch-shaped member.

5. A container for fragile articles comprising a box or case, and an arched support cut out to form outwardly extending tongues to engage the sides of the article and tongues to engage the end of the article.

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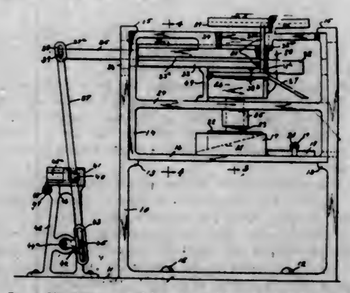
1,225,705. SHIPPING-CASE. EDWARD T. DYSON and HARRY S. BULLEN, Oakland, Cal. Filed May 5, 1915. Serial No. 25,961. (Cl. 229—16.)



A shipping case comprising an outer container having top and bottom closures and ventilating openings in the sides and ends thereof, a plurality of nested trays adapted to be held in said container, shoulders formed on each of said trays adapted to support the superimposed tray a fixed distance therefrom, the space between said trays aliining with the ventilating openings in said container.

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1,225,706. CASTING MECHANISM FOR PRODUCING LINOTYPE. LEGRAND FRIEL and CLAUDE L. FRIEL, Los Angeles, Cal. Filed July 8, 1915. Serial No. 38,814. (Cl. 199—13.)

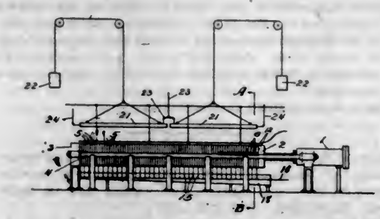


1. In a linotype machine a mold comprising a stationary end member; an adjustable top member; means to adjust the position of the top member; an adjustable end member partly carried by said top member and adjusted as to its position longitudinally by said top member; and a bottom member adjustable vertically; and means to adjust said bottom member.

2. In a linotype machine a mold comprising a movable top plate having a lug projecting from its lower face; a stationary end plate across which said top plate can move; a bottom plate; means to adjust said bottom plate vertically; an end plate carried by said bottom plate and connected to said top plate; means to adjust said last end plate and top plate; and other means to cause the movement of the top plate to eject a linotype.

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1,225,707. APPARATUS FOR MOLDING WAX AND OTHER MATERIALS. ALANSON MCD. GRAY, Elizabeth, N. J. Filed Aug. 7, 1913. Serial No. 783,453. (Cl. 196—24.)

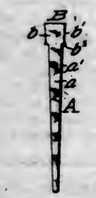


1. An assemblage of molding and chilling plates arranged in alternation and heating caps adapted to cover the top of such assemblage of plates.

2. An assemblage of molding and chilling plates arranged in alternation, heating caps adapted to cover the top of such assemblage of plates and counterbalancing means applied to the heating caps whereby the latter may readily be elevated to inoperative position or lowered to operative position over the assemblage of plates.

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1,225,708. NAIL. JOHN H. GRAY, Worcester, Mass. Filed July 26, 1916. Serial No. 111,529. (Cl. 85—28.)

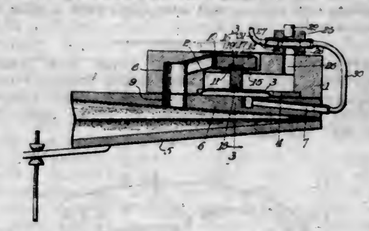


As an article of manufacture, a square-ended cut-nail for use in wood having a shank provided with sides slightly diverging and edges diverging more widely from the point toward the head and farther apart than said sides, and having a head wider than the upper end of the shank, its two sides being substantially flush with the upper ends of the sides of the shank but diverging from each other from that point to the top of the head, the edges of the head being farther apart than the edges of the shank at any point and having square shoulders under them whereby when driven into the wood with its slightly diverging sides parallel with the grain the head can be driven slightly into the wood, but will be stopped by said shoulders before being driven materially into it.

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1,225,709. PNEUMATIC ACTION FOR PNEUMATICALLY-OPERATED MUSICAL INSTRUMENTS. ADOLPH PETER GUSTAFSON, Chicago, Ill., assignor to M. Schulz Co., Chicago, Ill. Filed Dec. 18, 1913. Serial No. 807,400. (Cl. 84—178.)

1. The combination of a longitudinally extending member provided with a longitudinally extending duct or passage, flexible strips extended crosswise of said member, longitudinal and crosswise strips limiting the extent of flexible portion of said flexible strips and pneumatics secured to the under side of said longitudinally extending member with the end portions of said flexible strips between said pneumatics and said member.



2. The combination of a longitudinally extending member having a longitudinally extending passage in its lower portion, valve openings in its upper portion, valves in said openings, flexible strips extended crosswise of the lower surface of said member and having flexible portions extending up into said duct or passage, cross side and end strips for limiting the loose portions of said flexible strip, pneumatics secured to the under side of said member and holding said flexible strips in position, ducts or passages leading from said valve openings to said pneumatics, and connections securing said valves and diaphragms together.

3. The combination of a board provided with a longitudinally extending channel, of a strip mounted thereon and provided with horizontal and vertical intersecting cross channels, the former being connected with tracker board tubes and the latter extending to said longitudinally extending channel and containing vents, the upper ends of said vertical channels being provided with removable closures, and their lower ends opening into the top of said longitudinally extending channel.

4. The combination of a valve chamber, a valve provided therein, said valve being provided with a flexible member, a pouch chamber and diaphragm closing said chamber, and a member extending between said flexible member and said diaphragm and having its opposite ends secured to said valve and pouch diaphragms.

5. The combination of a valve chamber, a valve provided therein, said valve being provided with a flexible member, a pouch chamber and a diaphragm closing said pouch chamber, said diaphragm being substantially cup shaped and the opening of said cup shaped diaphragm facing the pouch chamber, a member connecting said diaphragm and flexible member together and the diaphragm provided in said pouch chamber being constructed to lift the valve in said valve chamber.

[Claims 6 to 13 not printed in the Gazette.]

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1,225,710. CLASP. EDWARD F. HERSCHEDE, Cincinnati, Ohio. Filed May 22, 1916. Serial No. 99,008. (Cl. 24—222.)



1. In a clasp, the combination of a sleeve, a coöperating member, and means for frictionally securing the sleeve upon a strap end; the sleeve being adapted to receive the strap end, and the coöperating member being adapted to be located at another strap end.

2. In a clasp, the combination of a sleeve, a coöperating member, and a wedge for frictionally securing the sleeve upon a strap end, the sleeve being adapted to receive the strap end, and the coöperating member being adapted to be located at another strap end.

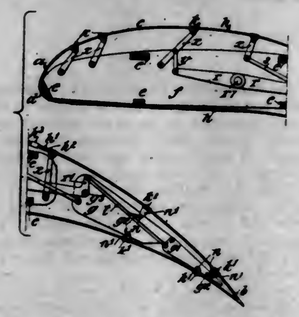
3. In a clasp, the combination of a sleeve adapted to receive a strap end, a pin secured to the strap end, and

a plate having an aperture to receive the pin and being adapted to be secured to another strap end.

4. In a clasp, the combination of a sleeve adapted to receive a strap end, means for frictionally securing the sleeve upon the strap end, a pin secured to the sleeve and a plate having a slot therein and having spring fingers projecting into the slot and adapted to yield to pass the head of the pin.

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1,225,711. PLANE AND THE LIKE FOR AEROPLANES. ALEXANDER ALBERT HOLLE, Thames Ditton, England, assignor to The Varioplane Company Limited, London, England. Filed Dec. 22, 1916. Serial No. 138,464. (Cl. 244—31.)



1. In an aerofoil for aeroplanes, the combination of a rigid frame carried by the fuselage of the machine, a nose piece carried by said frame forming the front or entering edge of the aerofoil, a continuous or unbroken undeformable under surface carried by said frame, a continuous or unbroken deformable upper surface carried by said frame, and a flexible trailing edge carried by said frame.

2. In an aerofoil for aeroplanes, the combination of a rigid frame carried by the fuselage of the machine, a nose piece carried by said frame forming the front or entering edge of the aerofoil, an articulated frame connected to said frame, a continuous undeformable under surface carried by the rigid frame, a continuous deformable upper surface carried by the rigid frame and mechanism coupling the articulated frame with the deformable upper surface of the forward part of the aerofoil, so that as the trailing edge of the articulated frame is flexed downward the camber of the deformable upper surface is increased and as the trailing edge is flexed upward the camber of the deformable upper surface is decreased.

3. In an aerofoil for aeroplanes, the combination of a rigid frame carried by the fuselage of the machine, a nose piece carried by said frame and forming the front or entering edge of the aerofoil, an undeformable under surface carried by said frame, a deformable upper surface carried by said frame, an articulated frame forming a flexible trailing edge carried by said frame, a rocking beam mounted on the rigid frame, mechanism operated by one end of the rocking beam for flexing the trailing edge, mechanism operated by the other end of the rocking beam for raising and lowering the upper surface of the front or leading part of the aerofoil so that as the trailing edge is flexed downward the camber of the upper surface is increased and as the trailing edge is flexed upward the camber of the upper surface is decreased.

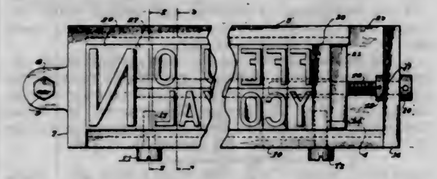
4. An aerofoil comprising a rigid frame carried by the fuselage of the machine, an articulated frame coupled to and forming an extension of the rigid frame, a series of flexible upper and lower ribs transversely arranged in respect to and carried by said frames, a series of longitudinally arranged girders connected to said ribs, mechanism for raising and lowering said girders and ribs, mechanism for flexing the elements of the articulated frame, rocking beams pivoted on the rigid frame said beams being connected at their front ends to the mechanism for raising and lowering the upper surface of the front part of the aerofoil and at their rear ends to the mechanisms for flexing the articulated frame forming the rear or trailing edge of the aerofoil.

5. An aerofoil comprising a main rigid frame carried by the fuselage of the machine and consisting of two or more plates and a plurality of longitudinally arranged spars, an articulated frame consisting of a plurality of elements pivoted together said frame being coupled to the main or rigid frame, a series of flexible upper and lower ribs transversely arranged in respect to and carried by said frames, a series of longitudinally arranged girders connected to said ribs, a series of levers pivoted to the rigid frame and connected to the upper parts of the flexible ribs, links connecting the elements of the articulated frame to the main frame, rocking beams pivoted to the main frame the forward parts of said beams being connected to the levers operating the upper surface of the forward part of the aerofoil and the rear parts of said beams being connected to the inner elements of the articulated frame forming the flexible trailing part of the aerofoil.

[Claim 6 not printed in the Gazette.]

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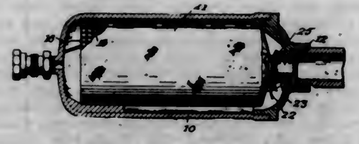
1,225,712. LOCKING MEANS FOR PRINTING-TYPES. LABAN A. HOSKINS, Los Angeles, Cal., assignor to Edwin T. Earl, Los Angeles, Cal. Filed May 13, 1916. Serial No. 97,290. (Cl. 101—169.)



In combination, a chase for a press cylinder having means to prevent radial displacement of the types, two or more lines of individual types in said chase, each type in an end line having one end arranged to coöperate with said means, and a rabbet cut in the opposite end thereof, the types of each row abutting the types in the contiguous row, said rabbets on adjacent types registering, a key in each set of registering rabbets, and spacers extending the width of said chase locked therein and overlaying said keys to prevent displacement of the latter.

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1,225,713. SPRAYING DEVICE. FREDERIC D. HOUGHTON, Worcester, Mass. Filed Jan. 20, 1916. Serial No. 73,241. (Cl. 137—14.)



1. In a device for use for spraying purposes, the combination with a casing having an inlet at one end and an outlet at the other, of a cake of solid soluble material centered within said casing and spaced from the outer walls thereof, and a woven textile filter bag inclosing and covering the end of said cake which is located adjacent to said outlet and also inclosing said inlet to prevent any water passing through the casing without also passing through the filter bag.

2. In a device for use for spraying purposes, the combination of a casing having an outlet at the end, a cake of soluble material located therein and spaced from said outlet end, the end of said cake toward the outlet being concave and a woven textile filter bag surrounding the end of said cake toward the outlet end and stretched across the concave end of the cake to provide a space for receiving solid particles and to prevent the filter bag entering said outlet.

3. In a device for spraying purposes, the combination of a reticulated member of a long hollow form for holding a soluble substance in solid form, a woven filter bag inclosing said member and the soluble substance, and means for directing a stream of water through one end of said reticulated member into contact with the soluble substance and out at the other end, whereby the water will be filtered by said bag.

4. In a device for spraying purposes, the combination of a casing having an inlet and an outlet located at opposite ends, a filter bag located between said inlet and outlet and having one end thereof substantially flat and located remote from said inlet, whereby the liquid passing through the bag will be filtered through the said end of the bag.

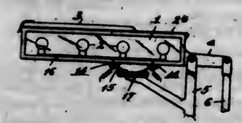
5. As an article of manufacture, a holder for a soluble solid cake for spraying purposes comprising a wire screen member for containing the cake therein, means for holding said member adjacent to a hose or pipe connection to cause water to flow through the interior of said screen member, and a textile filter in bag form entirely surrounding said screen member and having only one opening and that constituting a mouth secured around said hose or pipe connection for the purpose of directing all the water passing through the device into and through the filter.

[Claims 6 and 7 not printed in the Gazette.]



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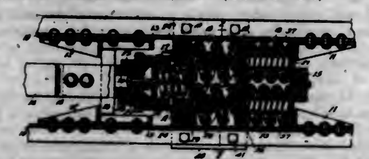
1,225,714. AUTOMOBILE-SIGNAL. EDWIN L. JOHNSON, Kansas City, Mo. Filed June 8, 1916. Serial No. 102,456. (Cl. 116—31.)



In an automobile signal, a bracket having a vertical arm and a laterally extending arm, a signal having an end arm projecting therefrom and pivoted to said vertical arm, a horizontal member secured to the upper end of the laterally extending bracket arm, a depending link pivoted to the outer end of the signal arm, contacts for the lamp extending beyond the bottom of the signal, and a single curved flat contact spring connected at its center to the horizontal member and formed to engage said signal at its ends, said spring serving to cushion the movement of the signal when the latter is moved into display position.

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1,225,715. HIGH-CAPACITY FRICTION SPRING DRAFT-RIGGING. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Nov. 30, 1914. Serial No. 874,665. (Cl. 213—64.)



1. In a draft rigging for railway cars, the combination with a friction shell having friction devices coöperable therewith, of a spring case rigid with respect to said shell, said case having two spaced followers rigid therewith, tandem arranged sets of springs within said case, and two movable followers within said case.

2. In a draft rigging for railway cars, the combination with a casing having a friction cylinder, rear wall and intermediate wall, of friction devices coöperable with said cylinder, springs within said casing between the intermediate wall and the friction cylinder, and springs between said intermediate wall and the first named wall.

3. In a draft rigging for railway cars, the combination with a friction cylinder having a spring case formed integrally therewith, said case being divided into two compartments by a rigid intermediate wall, springs in each of said compartments, a movable follower in each of said compartments, one of said followers having extensions into the adjacent chamber and adapted to be engaged by the other movable follower, and friction devices coöperable with the friction shell.

4. In a draft rigging for railway cars, the combination with a casing having a friction cylinder, rear wall and intermediate wall, of friction devices coöperable with the friction cylinder, a spring follower between the friction cylinder and the intermediate wall, springs between said follower and said intermediate wall, a spring between said follower and the friction devices, another follower mounted within said casting between the rear wall and the intermediate wall thereof and having extensions passing through said intermediate wall, and springs between said follower and the rear wall of the casting.

5. In a draft rigging for railway cars, the combination with a friction shell, friction elements coöperable with said shell, a follower at the inner end of said elements and with which some of the latter are adapted to directly engage, a spring normally in engagement with said follower and exerting pressure thereagainst during all movements of said follower, a second spring in alinement with the first named spring, a second follower coöperable with said second named spring, and thrust means extending from said second named follower toward the first named follower but normally out of engagement with the latter, said thrust means and first named follower coming into engagement after a predetermined movement of the friction elements and the first named follower, whereby said springs come into action in sequence and their resistance to the movements of the friction elements is rendered cumulative.

[Claim 6 not printed in the Gazette.]

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1,225,716. LIQUID-FUEL BURNER. PHILIP D. JOHNSON, Chicago, Ill., assignor of one-half to Charles A. Brown, Hinsdale, Ill. Filed Mar. 13, 1916. Serial No. 83,704. (Cl. 158—30.)



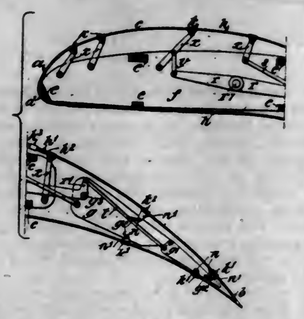
1. In combination a main burner, a shell surrounding said main burner, a mixing tube for said burner, a housing mounted on said shell, said housing comprising a base portion and a cap portion, a vaporizing tube extending through said shell over and along said burner and projecting into said housing, a nozzle for said mixing tube, a connecting block joining said vaporizing tube and said noz-

a plate having an aperture to receive the pin and being adapted to be secured to another strap end.

4. In a clasp, the combination of a sleeve adapted to receive a strap end, means for frictionally securing the sleeve upon the strap end, a pin secured to the sleeve and a plate having a slot therein and having spring fingers projecting into the slot and adapted to yield to pass the head of the pin.

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1,225,711. PLANE AND THE LIKE FOR AEROPLANES. ALEXANDER ALBERT HOLLE, Thames Ditton, England, assignor to The Varioplane Company Limited, London, England. Filed Dec. 22, 1916. Serial No. 138,464. (Cl. 244—31.)



1. In an aerofoil for aeroplanes, the combination of a rigid frame carried by the fuselage of the machine, a nose piece carried by said frame forming the front or entering edge of the aerofoil, a continuous or unbroken undeformable under surface carried by said frame, a continuous or unbroken deformable upper surface carried by said frame, and a flexible trailing edge carried by said frame.

2. In an aerofoil for aeroplanes, the combination of a rigid frame carried by the fuselage of the machine, a nose piece carried by said frame forming the front or entering edge of the aerofoil, an articulated frame connected to said frame, a continuous undeformable under surface carried by the rigid frame, a continuous deformable upper surface carried by the rigid frame and mechanism coupling the articulated frame with the deformable upper surface of the forward part of the aerofoil, so that as the trailing edge of the articulated frame is flexed downward the camber of the deformable upper surface is increased and as the trailing edge is flexed upward the camber of the deformable upper surface is decreased.

3. In an aerofoil for aeroplanes, the combination of a rigid frame carried by the fuselage of the machine, a nose piece carried by said frame and forming the front or entering edge of the aerofoil, an undeformable under surface carried by said frame, a deformable upper surface carried by said frame, an articulated frame forming a flexible trailing edge carried by said frame, a rocking beam mounted on the rigid frame, mechanism operated by one end of the rocking beam for flexing the trailing edge, mechanism operated by the other end of the rocking beam for raising and lowering the upper surface of the front or leading part of the aerofoil so that as the trailing edge is flexed downward the camber of the upper surface is increased and as the trailing edge is flexed upward the camber of the upper surface is decreased.

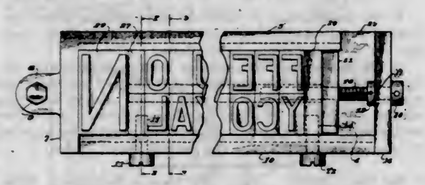
4. An aerofoil comprising a rigid frame carried by the fuselage of the machine, an articulated frame coupled to and forming an extension of the rigid frame, a series of flexible upper and lower ribs transversely arranged in respect to and carried by said frames, a series of longitudinally arranged girders connected to said ribs, mechanism for raising and lowering said girders and ribs, mechanism for flexing the elements of the articulated frame, rocking beams pivoted on the rigid frame said beams being connected at their front ends to the mechanism for raising and lowering the upper surface of the front part of the aerofoil and at their rear ends to the mechanisms for flexing the articulated frame forming the rear or trailing edge of the aerofoil.

5. An aerofoil comprising a main rigid frame carried by the fuselage of the machine and consisting of two or more plates and a plurality of longitudinally arranged spars, an articulated frame consisting of a plurality of elements pivoted together said frame being coupled to the main or rigid frame, a series of flexible upper and lower ribs transversely arranged in respect to and carried by said frames, a series of longitudinally arranged girders connected to said ribs, a series of levers pivoted to the rigid frame and connected to the upper parts of the flexible ribs, links connecting the elements of the articulated frame to the main frame, rocking beams pivoted to the main frame the forward parts of said beams being connected to the levers operating the upper surface of the forward part of the aerofoil and the rear parts of said beams being connected to the inner elements of the articulated frame forming the flexible trailing part of the aerofoil.

[Claim 6 not printed in the Gazette.]

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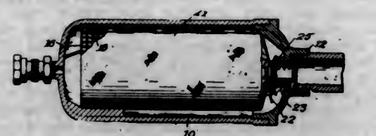
1,225,712. LOCKING MEANS FOR PRINTING-TYPES. LABAN A. HOSKINS, Los Angeles, Cal., assignor to Edwin T. Earl, Los Angeles, Cal. Filed May 13, 1916. Serial No. 97,290. (Cl. 101—169.)



In combination, a chase for a press cylinder having means to prevent radial displacement of the types, two or more lines of individual types in said chase, each type in an end line having one end arranged to coöperate with said means, and a rabbet cut in the opposite end thereof, the types of each row abutting the types in the contiguous row, said rabbets on adjacent types registering, a key in each set of registering rabbets, and spacers extending the width of said chase locked therein and overlaying said keys to prevent displacement of the latter.

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1,225,713. SPRAYING DEVICE. FREDERIC D. HOUGHTON, Worcester, Mass. Filed Jan. 20, 1916. Serial No. 73,241. (Cl. 137—14.)



1. In a device for use for spraying purposes, the combination with a casing having an inlet at one end and an outlet at the other, of a cake of solid soluble material centered within said casing and spaced from the outer walls thereof, and a woven textile filter bag inclosing and covering the end of said cake which is located adjacent to said outlet and also inclosing said inlet to prevent any water passing through the casing without also passing through the filter bag.

2. In a device for use for spraying purposes, the combination of a casing having an outlet at the end, a cake of soluble material located therein and spaced from said outlet end, the end of said cake toward the outlet being concave and a woven textile filter bag surrounding the end of said cake toward the outlet end and stretched across the concave end of the cake to provide a space for receiving solid particles and to prevent the filter bag entering said outlet.

3. In a device for spraying purposes, the combination of a reticulated member of a long hollow form for holding a soluble substance in solid form, a woven filter bag inclosing said member and the soluble substance, and means for directing a stream of water through one end of said reticulated member into contact with the soluble substance and out at the other end, whereby the water will be filtered by said bag.

4. In a device for spraying purposes, the combination of a casing having an inlet and an outlet located at opposite ends, a filter bag located between said inlet and outlet and having one end thereof substantially flat and located remote from said inlet, whereby the liquid passing through the bag will be filtered through the said end of the bag.

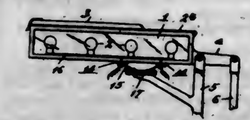
5. As an article of manufacture, a holder for a soluble solid cake for spraying purposes comprising a wire screen member for containing the cake therein, means for holding said member adjacent to a hose or pipe connection to cause water to flow through the interior of said screen member, and a textile filter in bag form entirely surrounding said screen member and having only one opening and that constituting a mouth secured around said hose or pipe connection for the purpose of directing all the water passing through the device into and through the filter.

[Claims 6 and 7 not printed in the Gazette.]



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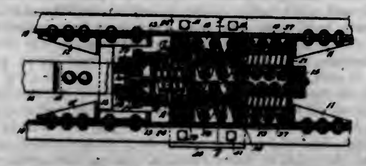
1,225,714. AUTOMOBILE-SIGNAL. EDWIN L. JOHNSON, Kansas City, Mo. Filed June 8, 1916. Serial No. 102,456. (Cl. 116—31.)



In an automobile signal, a bracket having a vertical arm and a laterally extending arm, a signal having an end arm projecting therefrom and pivoted to said vertical arm, a horizontal member secured to the upper end of the laterally extending bracket arm, a depending link pivoted to the outer end of the signal arm, contacts for the lamp extending beyond the bottom of the signal, and a single curved flat contact spring connected at its center to the horizontal member and formed to engage said signal at its ends, said spring serving to cushion the movement of the signal when the latter is moved into display position.

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1,225,715. HIGH-CAPACITY FRICTION SPRING DRAFT-RIGGING. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Nov. 30, 1914. Serial No. 874,665. (Cl. 213—64.)



1. In a draft rigging for railway cars, the combination with a friction shell having friction devices coöperable therewith, of a spring case rigid with respect to said shell, said case having two spaced followers rigid therewith, tandem arranged sets of springs within said case, and two movable followers within said case.

2. In a draft rigging for railway cars, the combination with a casting having a friction cylinder, rear wall and intermediate wall, of friction devices coöperable with said cylinder, springs within said casting between the intermediate wall and the friction cylinder, and springs between said intermediate wall and the first named wall.

3. In a draft rigging for railway cars, the combination with a friction cylinder having a spring case formed integrally therewith, said case being divided into two compartments by a rigid intermediate wall, springs in each of said compartments, a movable follower in each of said compartments, one of said followers having extensions into the adjacent chamber and adapted to be engaged by the other movable follower, and friction devices coöperable with the friction shell.

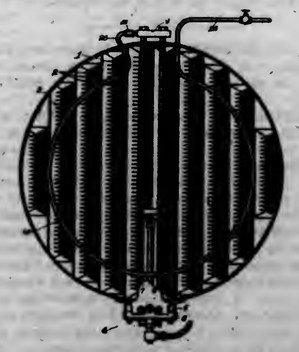
4. In a draft rigging for railway cars, the combination with a casting having a friction cylinder, rear wall and intermediate wall, of friction devices coöperable with the friction cylinder, a spring follower between the friction cylinder and the intermediate wall, springs between said follower and said intermediate wall, a spring between said follower and the friction devices, another follower mounted within said casting between the rear wall and the intermediate wall thereof and having extensions passing through said intermediate wall, and springs between said follower and the rear wall of the casting.

5. In a draft rigging for railway cars, the combination with a friction shell, friction elements coöperable with said shell, a follower at the inner end of said elements and with which some of the latter are adapted to directly engage, a spring normally in engagement with said follower and exerting pressure thereagainst during all movements of said follower, a second spring in alinement with the first named spring, a second follower cooperable with said second named spring, and thrust means extending from said second named follower toward the first named follower but normally out of engagement with the latter, said thrust means and first named follower coming into engagement after a predetermined movement of the friction elements and the first named follower, whereby said springs come into action in sequence and their resistance to the movements of the friction elements is rendered cumulative.

[Claim 6 not printed in the Gazette.]

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1,225,716. LIQUID-FUEL BURNER. PHILIP D. JOHNSON, Chicago, Ill., assignor of one-half to Charles A. Brown, Hinsdale, Ill. Filed Mar. 13, 1916. Serial No. 83,704. (Cl. 158—30.)



1. In combination a main burner, a shell surrounding said main burner, a mixing tube for said burner, a housing mounted on said shell, said housing comprising a base portion and a cap portion, a vaporizing tube extending through said shell over and along said burner and projecting into said housing, a nozzle for said mixing tube, a connecting block joining said vaporizing tube and said noz-

zle, said block having a readily releasable threaded stud secured to the base of said housing, said cap being readily removable to permit said vaporizing tube and block to be withdrawn through said base.

2. In combination a main burner, a shell surrounding said main burner, a mixing tube for said burner, a housing mounted on said shell, said housing comprising a base portion and a cap portion, a vaporizing tube extending over and along said burner and projecting into said housing, a nozzle for said mixing tube, said nozzle extending into said housing, a connecting block joining said vaporizing tube and said nozzle, said block having a stud secured to the base of said housing, said cap being readily removable to permit withdrawal of said block, said nozzle and said vaporizing tube, and a tongue forming a part of said housing, said tongue extending over said main burner to be heated thereby.

3. In combination a main burner, a shell surrounding said main burner, a housing mounted on said shell, said housing comprising a base portion and a cap portion, said base portion being open at its bottom, a pair of vaporizing tubes extending over and along said burner and projecting into said housing, a nozzle for each of said vaporizing tubes, separate connecting blocks for joining each of said vaporizing tubes to the corresponding nozzle, a stud for each block to secure the same to the base of said housing, and a pilot burner having means for closing off the bottom of the base portion of said housing, said pilot burner having portions of its active surface extending below said connecting block.

4. In combination a pair of vaporizing tubes, a housing comprising a base and a cap therefor, said tubes projecting into said housing, a pair of nozzles, connecting blocks for joining said tubes and said nozzle, a bracket secured to said vaporizing tubes, a pilot burner vaporizer secured to said cap, said vaporizer being adapted to have its end supported by said bracket, and means for removably securing said cap to the front of said base.

5. In combination a main burner having a grooved or corrugated face, a shell surrounding said main burner, a housing mounted on said shell, said housing comprising a base portion open at the front and at the bottom and a cap for closing said front, vaporizing tubes projecting into said housing, said tubes having nozzles for feeding said main burner, a pilot burner having a plate for closing off the bottom of said base, said pilot burner having a portion adapted to project into said housing to heat the end of said vaporizing tube, said pilot burner having a split lug secured to the inner end thereof, and a pin mounted on said main burner for holding said split lug.

[Claims 6 to 10 not printed in the Gazette.]

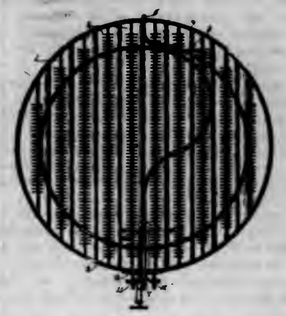
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1,225,717. OIL-BURNER. PHILIP D. JOHNSON, Chicago, Ill., assignor of one-half to Charles A. Brown, Hinsdale, Ill. Filed Apr. 26, 1916. Serial No. 93,577. (Cl. 158—31.)

1. In combination, a main burner casting, a main vaporizer tube extending over said casting, a pilot burner below said vaporizer tube, a ring secured to said vaporizer tube, a pilot vaporizer comprising a pair of concentric tubes, the outer tube having its inner end closed and adapted to be inserted in said ring, and means to supply liquid fuel to the inner one of said concentric tubes.

2. In combination, a main burner, a casing surrounding said burner, a main vaporizer tube extending over said burner and projecting out of said casing, a ring rigidly secured to said vaporizer tube, a pilot burner beneath said vaporizing tube, a pilot vaporizer comprising a tube having a closed end adapted to project through said ring and means for feeding liquid fuel to the interior of said pilot vaporizer tube adjacent said closed end.

3. In combination, a main burner, a casing surrounding said main burner, a vaporizer tube for said main burner projecting through the front of said casing, a ring rigidly secured to said vaporizer tube, a pilot burner below said vaporizer tube, a pilot vaporizer tube having its inner end closed, the inner end of said pilot vaporizer tube being supported in said ring, a plate secured to the outer end of said pilot vaporizer tube, and means for securing said plate to said burner casing.



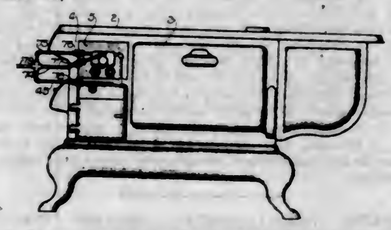
4. In combination, a main burner, a casing surrounding said main burner, said casing having a slot in the upper end thereof, a vaporizer tube above said main burner, said tube having its end lying in said slot, a plate secured to said vaporizer tube, said plate having an aperture therethrough, a pilot burner vaporizer tube having its inner end closed, a plate secured to the outer end of said pilot burner tube, and means for holding said plates against the casing of said main burner.

5. In combination a shell defining a fire box, a burner in said shell, a vaporizer for said burner, said vaporizer comprising a pair of concentric tubes projecting into said fire box, said outer tube having its inner end closed, a plate forming a flange about said outer tube, said plate being secured to said shell, a nozzle opening into said outer tube at its outer end, and means for supplying liquid fuel to said inner tube.

[Claims 6 to 10 not printed in the Gazette.]

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1,225,718. OIL-BURNER. PHILIP D. JOHNSON, Chicago, Ill., assignor of one-half to Charles A. Brown, Hinsdale, Ill. Filed June 19, 1916. Serial No. 104,358. (Cl. 158—8.)



1. In combination a pilot burner having a separate vaporizer and a plurality of independently operable main burners having separate vaporizers, said main burners and said pilot burner being so organized that said pilot burner conditions said main vaporizers for operation at all times, means for supplying liquid fuel to all of said vaporizers and means for individually turning on or off all of said burners independently.

2. In combination a prismatic hollow casing having an open top, a main oil burner located in said casing, a pilot burner for said main burner, a front plate secured to said casing, said front plate forming a flange extending beyond the sides of said casing, a housing projecting upon the outside of said front plate, and a vaporizer for said liquid fuel burner projecting into said housing, said housing comprising a base portion and a cap portion, said pilot burner being removable by removing said cap portion.

3. In combination a burner casting having a pair of perforated ridges to form burners, a wall dividing said casting into two separate chambers to form independent burners, individual vaporizers above said burners, regulating means for controlling the height of flame of each burner individually and independent valve means controlling the off and on position of each burner.

4. In combination a burner casting having pair of perforated ridges, a wall between said ridges to form independent passages or chambers for two separate burners, an individual vaporizer for each of said burners, a pilot burner disposed between said main burners and adapted to condition said main vaporizers for operation, a pilot vaporizer above said pilot burner, means for regulating the flame of each main burner, means for regulating the flame of the pilot burner and valve means for shutting off each of the main burners.

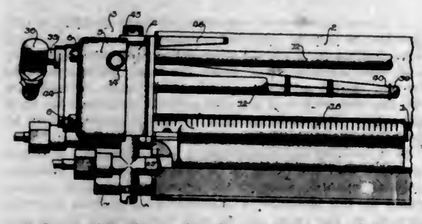
5. In combination a main burner casting having a plate or bracket at its rear end projecting vertically, a socket in said vertical plate, a pair of vaporizing tubes arranged one above the other, a connecting block at the inner ends of said vaporizing tubes, said block having a projecting member in line with the lower one of said vaporizing tubes adapted to lie in said socket, a second connecting block for mechanically connecting the vaporizing tubes, a housing for supporting said second block and a nozzle secured to and communicating with the lower vaporizing tube through said latter block.

[Claims 6 to 9 not printed in the Gazette.]



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1,225,719. PILOT-BURNER. PHILIP D. JOHNSON, Chicago, Ill., assignor of one-half to Charles A. Brown, Hinsdale, Ill. Filed Sept. 20, 1916. Serial No. 121,295. (Cl. 158—31.)



1. In combination a housing comprising a base portion and a cap portion, main vaporizer blocks secured to said base portion, said blocks diverging from each other, a pilot vaporizer block secured to the cap of said housing, said pilot vaporizer block being of substantially the same thickness as the main vaporizer blocks and being tapered to fill the space between said main vaporizing blocks, nozzles for said main vaporizing blocks and a nozzle for said pilot vaporizing block and a pilot burner having wings extending between the main vaporizing nozzles and the pilot nozzle and being adapted to heat said block and nozzle.

2. In combination a pilot burner, a nozzle for said burner, a vaporizer for said burner, said vaporizer being connected to said nozzle, said vaporizer comprising a block having a passage therein and a pair of tubes, a cleaning screw lying in line with the bore of each of said tubes and normally closing an opening permitting access to both of said tubes, both of said tubes being free to expand under the influence of heat, said tubes and said block being heated by said pilot burner.

3. In combination a housing comprising a base portion and a cap portion, main vaporizer blocks secured to said base portion, said blocks being inclined toward each other, a pilot vaporizer block secured to said cap portion, said block closely fitting between said main vaporizer blocks, a pilot burner having wings projecting below all of said blocks, a pilot vaporizer nozzle embraced by said burner wings and a pair of vaporizer tubes connected to said pilot vaporizer block, said tubes being supported by said block alone, and a single cleaning screw providing access to the bore of both vaporizing tubes.

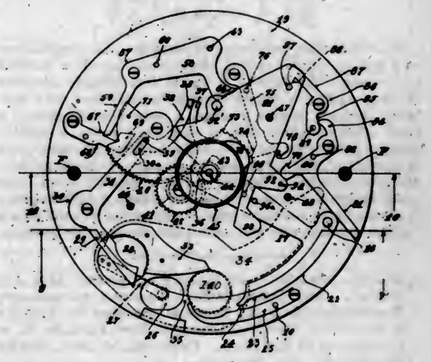
4. In combination, a housing comprising a base and cap, a pair of divergently related vaporizer blocks therein, a tapering pilot vaporizing block snugly arranged between first said blocks and having a duct, a pair of converging tubes communicating with each other at their free ends, one of said tubes communicating with the pilot block and the other tube passing through said block, and a pilot nozzle carried by the block.

5. In combination a pilot vaporizer block having a passage therein, a vaporizer tube secured to said block and communicating with said passage, a second vaporizer tube closely secured in said block, said vaporizing tubes being joined together at an angle and having a single cleaning screw permitting access to both of said tubes, said screw lying at the intersection of said tubes.

[Claim 6 not printed in the Gazette.]

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1,225,720. COIN-CONTROLLED MACHINE. GEORGE KEAN, Peru, Ill. Filed June 8, 1916. Serial No. 102,438. (Cl. 194—61.)



1. A device of the class described, including in combination, a casing, a supporting plate therein, a coin-receiving element, a coin-lever constructed to impel a coin, a coin-impelled pawl constructed to release said lever, dial-rotating means including a ratchet wheel actuated by said coin, a dial, a pawl in connection with said dial constructed to engage said ratchet wheel, and a dial-indicating bar.

2. A device of the class described, including, in combination, a casing, a supporting plate therein, a coin-receiving element, a coin-lever constructed to impel a coin, a dial-rotating mechanism actuated by said coin, a dial, a dial-indicating bar, a gong, and gong-striking means, said gong-striking means being released by said dial-rotating mechanism.

3. A device of the class described, including, in combination, a casing, a supporting plate therein, a coin-receiving element, a coin-lever constructed to impel a coin, a coin-impelled pawl constructed to release said lever, dial-rotating means including a ratchet wheel actuated by said coin, a dial, a pawl in connection with said dial constructed to engage said ratchet wheel, a dial-indicating bar, a gong, and gong-striking means released by said dial-rotating mechanism.

4. A device of the class described, including in combination, a casing, a supporting plate therein, a coin-receiving element, a coin-lever constructed to impel a coin, a coin-impelled pawl constructed to release said lever, dial-rotating means actuated by said coin, a dial, a dial-indicating bar, a gong, and gong-striking means released by said dial rotating mechanism.

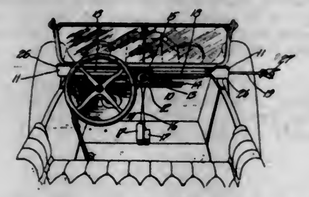
5. A device of the class described including, in combination, a casing, a supporting plate therein, a dial, a dial-indicating bar, a coin-receiving element, a coin-lever

constructed to impel a coin, a dial-release mechanism actuated by said coin-lever, dial-rotating means actuated by said coin, a gong, gong-striking mechanism released by said dial-rotating means, and dial-stopping means released by said coin-lever.

[Claims 6 to 14 not printed in the Gazette.]

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1,225,721. DIRECTION-INDICATOR FOR AUTOMOBILES. CHARLES M. NASH, Covina, Cal., assignor of one-half to Frank C. Johnson, Covina, Cal. Filed Mar. 21, 1916. Serial No. 85,708. (Cl. 116—31.)



In a direction indicator for vehicles, the combination of a pair of tubular casings, each casing having a housing at the outer end thereof, a signal arm slidably mounted in each casing, a signal carried by said arm and normally inclosed in said housing, a large grooved pulley, a small grooved pulley fast to said large pulley, a flexible member connected to said arms and wound about the periphery of the large pulley, a pair of independently operated pedals, a flexible member wound about said small pulley and connected to said pedals, a helical spring in each of said casings acting in opposition to said pedals for moving said arm and signal into inoperative position.

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1,225,722. PROCESS OF MANUFACTURING ALKALI-METAL PERCARBONATE. ALOIS SCHAIDHAUF, Frankfort-on-the-Main, Germany, assignor to Roessler & Hasslacher Chemical Company, New York, N. Y., a Corporation of New York. Filed Jan. 16, 1917. Serial No. 142,752. (Cl. 23—13.)

1. A process of manufacturing alkali metal percarbonate, consisting in mixing hydrogen peroxid with alkali metal carbonate previously subjected to calcination or roasting treatment in order to destroy detrimental catalysts therein.

2. A process of manufacturing alkali metal percarbonate consisting in mixing hydrogen peroxid with alkali metal carbonate previously subjected to a roasting treatment in order to destroy detrimental catalysts therein, and performing the mixing operation in the presence of at least one stabilizing agent.

3. A process of manufacturing alkali metal percarbonate, consisting in mixing hydrogen peroxid with alkali metal carbonate previously subjected to a roasting treatment in order to destroy detrimental catalysts therein, adding at least one stabilizing agent during the mixing operation and at least one further stabilizing agent to the product of the reaction.

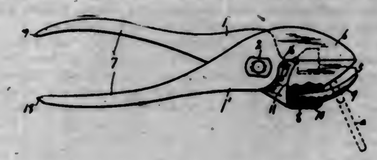
12. A process of manufacturing sodium percarbonate, consisting in mixing hydrogen peroxid with sodium carbonate previously subjected to a roasting treatment in order to destroy detrimental catalysts therein, performing the mixing operation in the presence of a magnesium-alkali-silicate, and adding gum-arabic to the product of reaction.

[Claims 4 to 11 not printed in the Gazette.]

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1,225,723. COMBINATION-TOOL. FRANK SINGER, Syracuse, N. Y., assignor to Syracuse Twist Drill Company, Syracuse, N. Y., a Corporation of New York. Filed Apr. 24, 1915. Serial No. 23,577. (Cl. 254—28.)

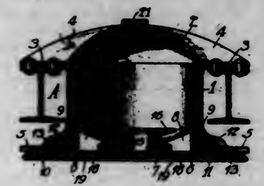
A device of the class described including a handle having a head integral therewith, said head being provided with a curved edge and having a boss extending laterally therefrom at a point spaced from the end of said head, said boss being provided with a socket, and a cotter pin



removing spur having one end secured in said socket and having its other end curved to lie adjacent and spaced from the curved edge of said head.

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1,225,724. VACUUM LIFTING-CUP. CARLTON L. SMITH, Saginaw, Mich., assignor to Saginaw Plate Glass Company, Saginaw, Mich., a Corporation of Michigan. Filed Apr. 23, 1915. Serial No. 23,412. (Cl. 57—9.)



1. A suction device comprising a body portion, a diaphragm of flexible material secured to the face thereof, said diaphragm being of substantially uniform thickness and being curved away from the body portion of said suction device adjacent to its outer edges, whereby in use the exhaustion of air will proceed progressively from the edges of said diaphragm inwardly, substantially as described.

2. A vacuum cup comprising a casing one end of which is closed and the other open, said casing being provided with an opening adapted for connection with a vacuum pump or the like, and a diaphragm of flexible material secured to the open end of said casing, said diaphragm being of substantially uniform thickness and being curved away from the body portion of asid vacuum cup adjacent to its outer edge, whereby in use the exhaustion of air will proceed progressively from the edges of said diaphragm inwardly, and said diaphragm being constructed and arranged to conform to the surface of the object to be lifted when compressed against the same, substantially as described.

3. A vacuum cup comprising a casing one end of which is closed and the other open, a flange around the open end of said casing, a spider secured in the open end of said casing provided with a central opening and with other openings outside of said central opening, and a diaphragm of flexible material secured to the open end of said casing, said diaphragm being provided with a central opening and with holes outside of said central opening which respectively communicate with the central and outer openings in said spider, said diaphragm being also provided in its exposed face with shallow recesses communicating with said outer holes therein, said diaphragm being of substantially uniform thickness and being curved away from the body portion of said vacuum cup adjacent to its outer edge, whereby in use the exhaustion of air will proceed progressively from the edges of said diaphragm inwardly, and being constructed and arranged to conform to the surface of the object to be lifted when compressed against the same, substantially as described.

4. A diaphragm for a suction device of the type described, made of flexible material and adapted to conform to the surface of an object when compressed against the same, said diaphragm being of substantially uniform thickness and being curved toward its suction side adjacent to its edges, whereby in use the exhaustion of air will proceed progressively from the edges of said diaphragm inwardly, substantially as described.

5. A diaphragm for a vacuum cup of the type described, said diaphragm being of substantially uniform thickness and being curved toward its suction side adjacent to its edge, and being provided with holes adapted to communicate with the interior of a vacuum cup casing and with shallow recesses in its under surface which communicate with said holes, substantially as described.



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1,225,725. BAIL-EAR FOR OIL-CANS. CHARLES L. WAGANDT, Baltimore, Md., assignor to The National Enameling & Stamping Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 19, 1914. Serial No. 867,335. (Cl. 220—23.)

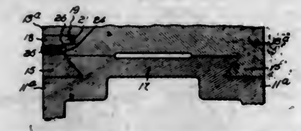


2. An oil-can having a breast provided with a screw-nozzle secured to the breast by an annular joint; two bail-ears one of which has position at one side of the nozzle diametrically opposite the other and the bases of both ears engaged in the same annular joint that secures the screw-nozzle to the breast.

[Claims 1 and 3 not printed in the Gazette.]

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1,225,726. STANDARD AND KNEE CONNECTION FOR MILLING AND OTHER MACHINES. JOHN BECKER, Hyde Park, Mass., assignor to Becker Milling Machine Company, Hyde Park, Mass., a Corporation of Massachusetts. Filed Apr. 21, 1910. Serial No. 556,718. (Cl. 74—84.)



1. The combination of an upright standard 1 with a knee 11 having a dove-tail projection 17 thereon, a guide member 15, said standard and member being formed to present a dove-tail groove, and means 23 to press said member against said projection to secure said knee to said standard in different positions of adjustment.

2. The combination of an upright standard having a dove-tail groove in a face thereof with a knee vertically adjustable relatively to said standard and having a rectilinear dove-tail projection fitting in said groove, the latter having a clamp member set in a recess in said standard; and means adjustable to connect said clamp member to said standard for securing said knee to the latter in different positions of vertical adjustment, the vertical outer faces of said knee and standard at one side of the knee being in the same plane, and the corresponding opposite faces of said knee and standard being in the same plane, said clamp member presenting an external surface substantially flush with one of said planes.

3. The combination of an upright standard having a dove-tail groove in a face thereof, with a knee vertically adjustable relatively to said standard and having a rectilinear dove-tail projection fitting in said groove, the latter having a guide member seated in an external recess in said standard, said guide member and recess being formed to present shoulders for preventing movement of said member in one direction; and adjustable means for securing said member against movement in a different direction for clamping said knee in different positions of vertical adjustment.

4. The combination of an upright standard having a dove-tail groove in a face thereof, with a knee vertically adjustable relatively to said standard and having a rectilinear dove-tail projection fitting in said groove, the latter having a guide member seated in an external recess in said standard; and means detachable to connect said guide member to said standard and having provision for clamping the knee thereto.

5. In a machine of the class described, the combination of a support having guides projecting therefrom; an adjustable member having guides coöperating therewith; gage screws threaded into one of said guides and adapted to bear against said support; and screws loosely entered through said guide and threaded into said support for clamping said guide thereto.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,727. JOINT FOR SASH-BARS. JOAH BROGDEN, Philadelphia, Pa., assignor to David Lupton's Sons Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 28, 1913. Serial No. 781,467. (Cl. 189—36.)



1. A joint for metal sashes comprising crossing bars, one of which has a mortised tongue, and the other of which is divided transversely, forming sections, the end of each section having a portion adapted to abut against the side faces of the tongue of the other cross bar, and a projecting portion extending through said mortise, said projecting portions being the full thickness of the tongue of the sash bar, and lying one over the other and filling said mortise, the adjacent faces of said projections having registering recesses adapted to receive locking members for holding said sections together and in assembled relation with the other cross bar.

2. A joint for metal sashes comprising cross bars one of which has a mortised tongue, the mortise being located at a point above the lower edge of the tongue and the other of which is divided transversely forming sections the end of each section having a portion adapted to abut against the side faces of the tongue of the other cross bar below the mortise, said projecting portions being the full thickness of the tongue of the sash bar and lying one over the other in and filling said mortise, the adjacent faces of said projections having spaced registering recesses adapted to receive locking rivets for holding said sections together and in assembled relation with the other cross bar.

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1,225,728. CUP-DISPENSING APPARATUS. HENRY B. COOLEY, Kensington, Conn., assignor to The American Paper Goods Company, Montclair, N. J., a Corporation of New Jersey. Filed June 17, 1914. Serial No. 845,519. (Cl. 211—8.)



1. In a cup dispensing apparatus, a separator of continuous annular form having resiliently acting separating members located at intervals and circumferentially yieldingly connected one with another throughout its length, said separator being of a size to support the cups by lips at the upper edges thereof resting on the separator, and means for supporting the separator.

2. In a cup dispensing apparatus, a separator of yielding continuous annular form having members located at substantially regular intervals and circumferentially yieldingly connected one with another throughout its length, said separator being of a size to support the cups by lips at the upper edges thereof resting on the separator, and means for supporting the separator.

3. In a cup dispensing apparatus, a base, a separator supporting sleeve mounted on the base and provided with openings arranged at intervals throughout its length, and a separator of continuous annular form located upon the outside of said sleeve and having separating members projecting through said openings.

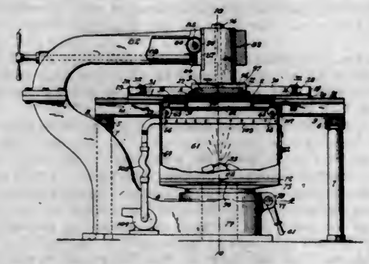
4. In a cup dispensing apparatus, a supporting base, a separator supporting sleeve located within said base and having a groove on its outer surface, radial openings from said groove into the center of the sleeve, and a separator of continuous annular form located in said groove and with portions projecting through said openings.

5. In a cup dispensing apparatus, a supporting base, a separator supporting sleeve located within the base and having an annular groove in its outer surface and spacers projecting downwardly forming openings at intervals around the sleeve, and a separator of continuous annular form located within said groove and with portions projecting radially through said openings.

[Claims 6 to 11 not printed in the Gazette.]

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1,225,729. PHOTOGRAPHIC-PRINTING MACHINE. JOHN H. FULLMER and ROBERT W. RUNSER, Buffalo, N. Y., assignors to Huebner-Bleistein Patents Company, Buffalo, N. Y., a Corporation of New York. Filed June 16, 1914. Serial No. 845,347. (Cl. 95—73.)



1. A photographic printing machine comprising a main frame, a primary carriage movable horizontally in one direction on said frame, a secondary carriage movable horizontally on said primary carriage, means for supporting a sensitized member on said secondary carriage, comprising a rack having a frame detachably mounted on the secondary carriage, and stretching bars adjustably mounted on said frame and adapted to be connected with said sensitized member, and means for producing photographic impressions on said sensitized member.

2. A photographic printing machine comprising a main frame, a primary carriage movable horizontally in one direction on said frame, a secondary carriage movable horizontally on said primary carriage, means for supporting a sensitized member on said secondary carriage, comprising a rack having a frame detachably mounted on the secondary carriage and provided with parallel rows of openings in two of its bars, parallel stretching bars each provided at its ends with perforated lugs engaging said perforated bars, pins passing through the openings in said lugs and perforated bars, and clamps mounted on said stretching bars and adapted to grip said sensitized members.

3. A photographic printing machine comprising means for supporting a member having a sensitized surface, a transparent printing plate adapted to engage said sensitized surface, a frame on which said plate is mounted, means for moving said frame toward said member comprising a plurality of cams engaging said frame, and means for operating said cams simultaneously comprising rock shafts on which said cams are mounted, rock arms secured to said shafts, a relatively fixed guide arranged between said shafts and a clamping device slidable on said guide and adjustably connected with both of said arms.

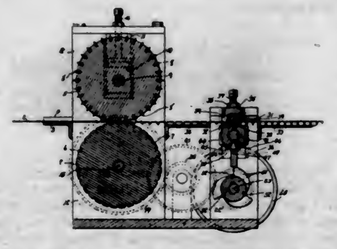
4. A photographic printing machine comprising a main frame, a primary carriage movable horizontally in one direction on said frame, a secondary carriage movable horizontally on said primary carriage, means for supporting a sensitized member on said secondary carriage, a transparent printing plate adapted to engage the sensitized surface of said member and a supporting block adapted to engage the unsensitized surface of said member, means for moving said plate and block toward and from opposite sides of said member, and means for rotating said plate and block in planes parallel with the surfaces of said sensitized member.

5. A photographic printing machine comprising means for supporting a member having a sensitized surface, a printing plate, a printing frame supporting said printing plate, and a light chamber having its upper end open and adapted to receive said printing frame and having the upper part of one of its walls provided with a passageway through which the printing frame and associated parts may be moved horizontally into and out of said light chamber.

[Claims 6 to 22 not printed in the Gazette.]

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1,225,730. MACHINE FOR PRODUCING RADIATOR-TUBING FOR AUTOMOBILES. SALVATORE GARGIULO, New Haven, Conn., assignor to The G & O Manufacturing Co., New Haven, Conn., a Corporation. Filed Aug. 19, 1915. Serial No. 46,393. (Cl. 153—77.)



1. In a machine for making radiator tubing for automobiles and the like, the combination with means for producing folds in a stock-strip, of an anvil located on one side of the path in which said strip is fed, a pair of oscillating segmental jaws, a shaft movable toward and away from the said path and mounting the said jaws, a bar-cam co-acting directly with the said jaws for moving them into operative position and operating them in that position, and means for so operating the said bar-cam.

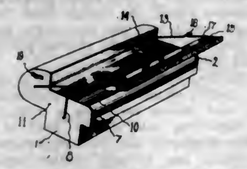
2. In a machine for making radiator tubing for automobiles and the like, the combination with means for producing folds in a stock-strip, of an anvil located on one side of the path in which the strip is fed, a pair of oscillating segmental jaws, a shaft movable toward and away from the said path and mounting the said jaws, a bar-cam co-acting directly with the said jaws to move the same into operative position and to operate them in that position, means for so operating the said bar-cam, and means for controlling the pinching action of the said jaws upon the folds of the stock-strip.

3. In a machine for making radiator tubing for automobiles and the like, the combination with means for producing open V-shaped folds in the stock-strip, of an anvil located above the path in which the said strip is fed, a vertically movable shaft located below the said path, oscillating segmental jaws applied to the said shaft by which they are carried, a bar-cam co-acting with the lower ends of the said jaws for forcing their upper ends together to operate upon the folds in the strip, and cams for operating the said bar-cam.



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1,225,731. PAPER-HANGING MACHINE. ALBERT J. HITCH, Windsor, Ontario, Canada. Filed Sept. 5, 1916. Serial No. 118,353. (Cl. 216—6.)



1. A paper hanging machine comprising end walls, a paste receptacle supported thereby, a paste roller in said receptacle, guide rollers between said end walls, a paper roll receptacle carried by said end walls, a brush, and a ball supporting said brush and having ends thereof extending through said end walls to provide pintles for a paper roll in the paper roll receptacle.

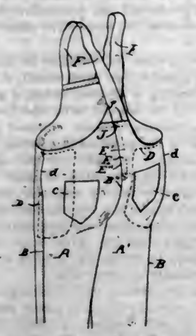
2. A paper hanging machine comprising end walls, a channel-shaped bottom plate carried thereby and providing a paste receptacle, a paste roller in said receptacle, a C-shaped housing carried by said end walls and providing a paper roll receptacle, a paper applying device having ends pivotally connected to said end walls and extending therethrough to serve as pintles for a paper roll in said housing, and guide rollers supported by said end walls and adapted for maintaining paper from the paper roll on the paste roller and over the paste receptacle.

3. A paper hanging machine comprising a paste receptacle, a paper roll receptacle, a paper applying device having ends thereof extending into the paper roll receptacle and adapted as pintles for a paper roll, said paper applying device having lateral portions to facilitate manipulating said device when said machine is held in the hands, and means in said paste receptacle adapted for guiding paper from the paper roll through said paste receptacle.

4. A paper hanging machine comprising a paste receptacle, a paste roller therein, a paper roll receptacle, a brush, a ball supporting said brush and having the ends thereof pivotally mounted in the ends of said paper roll receptacle and adapted for supporting a paper roll therein, and guide rollers in said paste receptacle adapted to retain paper from said roll on said paste roller and as a closure for said paste receptacle.

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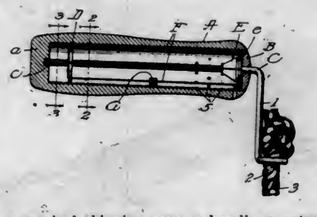
1,225,732. GARMENT. HYMAN EDELMAN, Chicago, Ill. Filed Aug. 9, 1916. Serial No. 113,906. (Cl. 2—144.)



A garment made of substantially nonextensible fabric closed on the sides thereof and adapted to extend from the ankles of the wearer only to a point below the arms and provided with an aperture in the back thereof extending above and below the waist line of the garment, a flap the ends whereof extend laterally across and beyond the ends of said aperture and are attached to said back, said flap being adapted to cover said aperture and said aperture being adapted to automatically close while said garment is in wearing position and to open when the upper end of the garment is turned down on the waist line thereof, to enlarge said waist line and permit said garment to be drawn over the hips of the wearer and suspender straps secured to the upper edge of the back of the garment and adapted to be secured to the front of the garment.

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1,225,733. MUSICAL TOY. HENRY ANDREW GRASS, Chicago, Ill. Filed June 26, 1916. Serial No. 105,785. (Cl. 46—46.)



1. In a musical skipping rope, a handle, a rotary harp in said handle, and means in the handle for engaging and vibrating the strings of the harp during the rotation thereof by the swinging motion of the rope.

2. The structure of claim 1, substantially as shown and described, said harp comprising a longitudinal shaft provided with disks spaced apart thereon, and wires stretched between said disks.

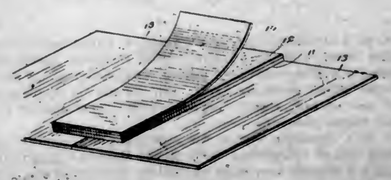
3. The structure of claim 1, substantially as shown and described, said harp comprising a rotary longitudinal shaft, a crank arm on the end of said shaft for the end of the rope, a fixed shoulder on said shaft, a disk bearing against said shoulder, said shaft having a threaded portion, a disk screwed onto said threaded portion, and wires stretched between said disks.

4. In a musical skipping rope, a handle, a rotary support for said handle, a wire stretched taut on said support, and means on said handle to engage and vibrate said wire when the support is rotated by the swinging motion of the rope.

5. In a toy, a hollow body, a support in said body, said support and body being capable of relative rotation, wires stretched taut on said support and extending substantially parallel with the axis of said rotation, means on the inner surface of said body to engage and vibrate said wires, and means to rotate said body and support relative to each other.

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1,225,734. PROCESS OF VENEERING. JOHN MACLAURIN, Brookfield, Mass. Filed Dec. 29, 1915, Serial No. 69,248. Renewed Apr. 9, 1917. Serial No. 160,894. (Cl. 91—68.)



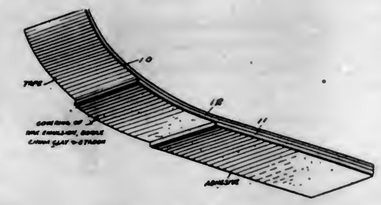
1. The process of veneering comprising, the application of a veneering tape to the meeting edges of veneering to temporarily hold said edges together, said tape having a

film of adhesive carried thereby, and the removal of said tape from the film of adhesive through a film of binding material.

2. The process of veneering comprising the application of a fabric veneering tape to the meeting edges of veneering, to temporarily hold said veneering in fixed relation, said tape having a film of adhesive carried thereby to adhere to said veneering, and the subsequent removal of the fabric tape through a film of binding material between said tape and film of adhesive, said binding material having the desired tenacity for securely holding said tape and film of adhesive together until said tape is forcibly removed by the separation of said film of binding material.

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1,225,735. VENEERING-TAPE. JOHN MACLAURIN, Brookfield, Mass. Filed Dec. 29, 1915, Serial No. 69,249. Renewed Apr. 9, 1917. Serial No. 160,895. (Cl. 91—68.)



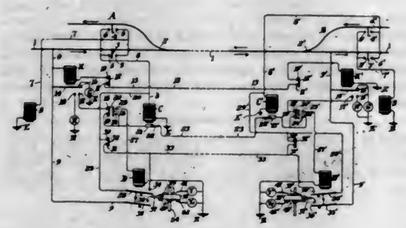
1. In a veneering tape, a fabric tape, a film of adhesive, and a binder of impervious material connecting said tape and film of adhesive.

6. In a veneering tape, a fabric tape, a film of adhesive, and a binder connecting said tape and film of adhesive, said binder comprising a mixture of starch and wax emulsion to partly penetrate the fibers of said tape, and to render said binder impervious, borax to partly absorb portions of the adhesive, and china clay to afford a body to receive adhesive.

[Claims 2 to 5 not printed in the Gazette.]

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1,225,736. SIGNALING SYSTEM. CARL P. NACHOD, Philadelphia, Pa., assignor to Nachod Signal Company, Inc., a Corporation of New York. Filed Sept. 18, 1914. Serial No. 862,264. (Cl. 246—36.)



1. In a signaling system for vehicles, plural aspect signaling means comprising three signal elements, means including a vehicle controlled switch for displaying one only of said signal elements alone, and means for displaying said one of said signal elements with either one of the other signal elements.

2. In a signaling system for vehicles, plural aspect signaling means comprising three signal elements, means including a vehicle controlled switch for displaying one only of said signal elements alone, the display of said one of said signal elements giving a stop indication, and means for displaying said one of said signal elements with either one of the other of said signal elements to form a permissive signal.

3. In a signaling system, plural aspect signaling means comprising three signal elements, means for displaying one only of said signal elements alone, the display of said one of said signal elements giving a stop indication, means for displaying said one of said signal elements with another of said signal elements to form a permissive signal, and means for displaying said one of said signal elements with the remaining one of said signal elements to likewise give a permissive signal, the change from the display of signal elements which give one permissive signal to that of signaling elements which give another permissive signal giving a third indication.

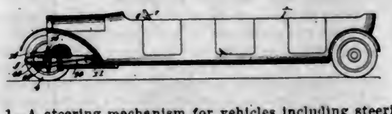
4. In a signaling system for vehicles, a stop signal, a plurality of similar signal elements associated with said stop signal, and means including a vehicle controlled switch for displaying said signals, each of said signal elements when displayed with said stop signal forming a permissive signal, one of said similar signal elements being disposed to one side of said stop signal and at a height different from said stop signal.

5. In a signaling system for vehicles, a stop signal, a plurality of similar signal elements associated with said stop signal, and means including a vehicle controlled switch for displaying said signals, each of said signal elements when displayed with said stop signal forming a permissive signal, said stop signal being disposed above said similar signal elements, one of said signal elements being disposed to one side of said stop signal.

[Claims 6 to 47 not printed in the Gazette.]

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1,225,737. STEERING MECHANISM FOR AUTOMOBILES. REMUSZ SERBAN, South Bethlehem, Pa. Filed Sept. 8, 1915. Serial No. 49,487. (Cl. 21—192.)



1. A steering mechanism for vehicles including steering wheels, and a steering column, opposed gears at opposite sides of the column loosely mounted on a shaft, said column extending through the shaft, means operable by the gears for turning the wheels, a gear on the column engaging both of the aforesaid gears, the column being movable to disengage its ear from the others and a spring for resisting such disengagement.

2. A steering mechanism for vehicles including the steering wheels, a divided shaft, opposed gears, a shaft on which said gears are mounted, a steering column journaled in said last mentioned shaft, means on the steering column and engaging the opposed gears for turning said gears oppositely and in unison, a connection between the respective opposed gears and the respective shaft sections, and a connection between the respective shaft sections and the steering wheels.

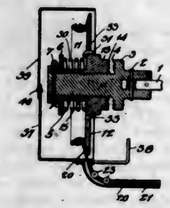
3. A steering mechanism for vehicles including steering wheels, a steering knuckle for each wheel, a gear carried by each steering knuckle, a divided shaft, a gear mounted on each shaft section to engage with the respective first mentioned gears, a steering column, opposed gears mounted one on each side of the mentioned column, a shaft conjunctively utilizable as a support for the opposed gears and as a bearing for said column, a gear mounted on said column to engage with the opposed gears that the latter may be turned oppositely and in unison, and a connection between the respective opposed gears and the respective shaft sections that the latter may be turned oppositely and in unison to swing the wheels at an angle to the vehicle, substantially as described.

4. In a steering mechanism for vehicles, the steering wheels, a steering column, opposed bevel gears mounted one at each side of said column, a shaft conjunctively utilizable as a support for the mentioned gears and as a bearing for said column, a bevel pinion mounted on said column to engage with the opposed gears that the latter may be turned oppositely and in unison, resilient means maintaining said pinion in engagement with the gears, a divided shaft, the respective sections of which have connection with the steering wheels, and a connection between the respective opposed gears and the respective shaft sections.



# REISSUES.

14,297. AUTOMOBILE-STARTER. EUGENE BOOTZ, Edgewater, Colo. Filed Nov. 18, 1916. Serial No. 132,201. Original No. 1,196,650, dated Aug. 29, 1916, Serial No. 92,540, filed Apr. 20, 1916. (Cl. 74—54.)



1. In an engine starter, the combination with a main shaft having a clutch element, a second clutch element opposed thereto, and yielding means for holding these elements out of engagement; of a pulley connected with said second element, a guide tube leading from the floor of the automobile beneath its engine and with its forward end directed upward tangentially toward the pulley and obliquely across the rim thereof, an anti-friction pulley within said tube and at its bend, and a rope leading from said floor along the tube and over the anti-friction pulley, upward to and around the rim of said driving pulley, and attached to the latter.

2. In an engine starter, the combination with a main shaft having a clutch element, a second clutch element opposed thereto, and yielding means for holding these elements out of engagement; of a pulley connected with said second element and having a wide rear flange, a guide tube led from a distant point with its forward end directed tangentially toward the periphery of said pulley and obliquely to its plane and across said wide flange, and a flexible operating member passing through said tube and wound around the rim of the pulley and attached thereto.

3. In an engine starter, the combination with a main shaft having a clutch element, a second clutch element opposed thereto, and yielding means for holding these elements out of engagement; of a pulley connected with said second element and having a wide rear flange, a guide tube leading from the floor of the automobile beneath its engine and with its forward end directed upward tangentially toward the pulley and obliquely across the rim thereof, anti-friction pulleys within the length of said tube and at its bends, and a rope leading from said floor along the tube and over the anti-friction pulleys, upward to and around the rim of said driving pulley, and attached to the latter.

4. In an engine starter, the combination with a main shaft, a clutch element attached thereto, a second clutch element slidably mounted on said shaft, and a flanged pulley on this element; of a guide tube with its front end directed toward said pulley and obliquely across its wide flange, an operating rope passing through said tube and wound around and secured to the rim of the pulley, and a spring attached at one end to the pulley and having its other end attached to said tube, for the purpose set forth.

5. In an engine starter, the combination with a main shaft, a toothed clutch element attached thereto and having a spindle projecting forward therefrom, a collar fixed on the front end of the spindle, a second toothed clutch element having a sleeve slidably mounted on said spindle between the first element and collar, and a pulley carried by this element and having a wide rear flange; of a guide tube led from the automobile floor beneath its engine and with its front end directed toward said pulley and obliquely across its wide flange, an operating rope passing through said tube and wound around and secured to the rim of the pulley, and a weak spring attached at one end to the pulley, making several convolutions around said sleeve, and having its other end attached to said tube, for the purpose set forth.

6. In an engine starter, the combination with a main shaft, a toothed clutch element attached thereto and having a spindle projecting forward therefrom, a collar fixed on the front end of the spindle, a second toothed clutch element having a sleeve slidably mounted on said spindle between the first element and collar, and a pulley carried by this element and having a wide rear flange; of a guide tube led from the automobile floor beneath its engine and with its front end directed toward said pulley and obliquely across its wide flange, an operating rope passing through said tube and wound around and secured to the rim of the pulley, a casing carried by the automobile frame and inclosing said pulley, the front end of the tube passing upward through the bottom of said casing, and a weak spring having one end attached to the pulley, then coiled around said sleeve between the pulley and collar, and its other end passing through the casing, attached to said tube, and attached to the casing, for the purpose set forth.

7. In an engine starter, a shaft, a clutch element carried on the shaft, a second clutch element slidable upon the shaft, means to hold the clutch elements yieldingly out of engagement, a drum carried by the sliding clutch element having a flange extending beyond the periphery of the drum, a rope wound about the drum and drawing across the flange at an angle to the axis and initially operative directly thereon to pull the drum along the shaft and subsequently to turn said clutch.

8. In an engine starter, the combination with a shaft having a clutch element thereon, a second clutch element slidable upon the shaft into engagement with the first clutch element, yielding means for holding the elements out of engagement, a pulley carried by the sliding clutch element having a wide flange, and an operating rope wound about the pulley and drawing angularly across the flange in the direction toward the clutch element carried by the shaft the reaction of said rope axially on the flange operating to shift the pulley to close the clutch members and then rotate them.

9. In a starting device for engines, a shaft with a fixed clutch member, a complementary clutch member slidable along the shaft to operatively couple therewith, means normally holding the sliding member disengaged from the other, and a rope connected to the sliding clutch member and operative directly thereon to first pull the member along the shaft to effect clutch engagement.

10. In a starting device for engines, a shaft with a fixed clutch member, a complementary clutch member slidable along the shaft to operatively couple therewith, means normally holding the sliding member disengaged from the other, and a rope connected at one end to said sliding member and so disposed relative thereto that the rope acts directly, when drawn taut, on the said member to shift it axially to close the clutches and subsequent pulling then turns the shaft.

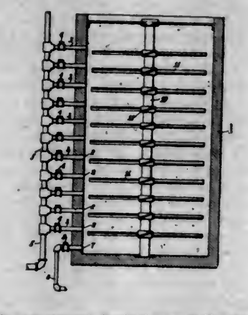
11. In a starting device for engines, a shaft with a fixed clutch member, a complementary clutch member slidable along the shaft to operatively couple therewith, means normally holding the sliding member disengaged from the other, and a draft rope connected to the sliding member and leading therefrom angularly in the direction of pull, whereby when the rope is drawn taut it acts first and directly upon said member to move it in the direction of pull to close the clutch.

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14,298. HYDROMETALLURGY. EDWARD R. HOLDEN, Los Angeles, Cal. Filed June 10, 1916. Serial No. 103,043. Original No. 1,175,867, dated Mar. 14, 1916, Serial No. 39,727, filed July 14, 1915. (Cl. 75—18.)

1. The improvement in hydro-metallurgy consisting in putting into a tank a quantity of ore and a solvent there-

for, in imparting to the contents of the tank, such motion as will cause particles of ore to rise above the bottom stratum but without elevating from the bottom stratum the larger particles of metals and their compounds not dissolved by the solvent and, at the proper time, without stopping such motion, removing from the upper part of the tank downwardly all the contents of the tank except the bottom stratum.



2. The improvement in hydro-metallurgy consisting in putting into a tank a quantity of ore and solvent therefor, in imparting to the contents of the tank a rotary motion and gradually drawing off the contents of the tank from the top downward to a predetermined level, while maintaining the rotary motion substantially as set forth.

3. The herein described improvement in hydro-metallurgy, which consists in mixing pulverized ore with a dissolving solution, and giving the mixture of solution and pulverized ore a rotary motion in a tank, whereby the particles of ore are elevated to the different strata in the solution, according to their size and specific gravity and when the solution has dissolved the metallic contents, withdrawing the gangue and solution from the tank, stratum by stratum in successive steps downward from the top.

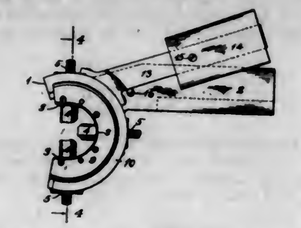
4. The herein decsribed method of dissolving and concentrating the valuable constituents of an ore, at one and the same time, which consists in mixing pulverized ore with a liquid solvent, rotating the mixture of the ore and solvent in a tank so that the particles of ore are elevated by the action of the rotary motion of the liquid, and form various strata in conformity with their specific gravities and sizes, while the larger particles of metals and their compounds, not wholly dissolved in the solution, remain in the bottom of the tank, then withdrawing the solution containing the dissolved metals and the gangue from the tank, in successive steps downward from the top, while maintaining and continuing the rotary motion of the solution and its contents, leaving the non-dissolved metals and their compounds in the lowermost stratum of the tank, and subsequently recovering and removing such separate remaining non-dissolved metals and their compounds.

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14,299. AUTOMATIC BACK-REST. GUSTAV E. PETERSON, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Feb. 17, 1917. Serial No. 149,362. Original No. 1,191,220, dated July 18, 1916, Serial No. 91,312, filed Apr. 15, 1916. (Cl. 82—39.)

1. A back-rest having a yoke-shaped body, radially arranged plungers loosely supported by the body, means for varying the length of the plungers, springs for thrusting the plungers outward, and a weight for moving the plungers inward.

2. A back-rest having a yoke-shaped body, radially extensible plungers loosely supported by the body, means for increasing or diminishing the length of the plungers, springs for thrusting the plungers outwardly, a cam-plate for forcing the plungers inwardly, and a weight mounted on and adapted to turn the cam-plate.



3. A back-rest having a yoke-shaped body, radially arranged plungers loosely supported by the body, means for adjusting the inner ends of the plungers independently of the body part of the plungers, springs for thrusting the plungers outwardly, a cam-plate for forcing the plungers inwardly, and a weight for turning the cam-plate and moving the plungers radially inward.

4. A back-rest having a body, radially arranged extensible plungers loosely supported by the body, means for increasing or diminishing the length of the plungers, springs for thrusting the plungers outward, and a weight for moving the plungers inward.

5. A back-rest having a yoke-shaped body, radially arranged sleeves loosely supported by the body, studs loosely carried by the sleeves, means for adjusting the studs longitudinally with relation to the sleeves, means for thrusting the sleeves outwardly, and a weight for moving the sleeves and studs inwardly.

6. A back-rest having a yoke-shaped body with radially arranged sockets, sleeves loosely mounted in said sockets, studs loosely mounted in said sleeves, adjusting screws connecting the sleeves and the studs, springs arranged in the sockets for thrusting the sleeves and studs outward, a cam-plate with cams engaging the outer ends of the sleeves, and a weight adapted to turn the cam-plate and force the sleeves and studs inward.

7. A back-rest having a yoke-shaped body, radially arranged plungers loosely supported by the body, means for varying the length of the plungers, means for thrusting the plungers outward, and means for moving the plungers inward.

8. In a back-rest adapted to support stock while being acted upon by a grinding wheel, the combination of a body, a plunger, mechanism for automatically moving the plunger inward as the diameter of the stock is reduced, and means dependent on the diameter of the stock for limiting the action of the said mechanism.

9. In a back-rest adapted to support stock while being acted upon by a grinding wheel, the combination of a body, a plunger, mechanism for automatically moving the plunger inward as the diameter of the stock is reduced and for automatically locking it against outward movement, and means dependent on the diameter of the stock for limiting the first said action of the said mechanism.

10. In a back-rest adapted to support stock while being acted upon by a grinding wheel, the combination of a body, two plungers positioned to respectively engage the stock at the bottom and at the side opposite the wheel, mechanism for automatically moving the plungers inward as the diameter of the stock is reduced, and means for engaging the stock at the top to limit the extent of inward movement of the plungers.

11. The combination in an open-sided back-rest, of a body and radial plungers constructed and arranged to permit stock held thereby to be engaged by a grinding wheel, and mechanism having positive engagement with all of the plungers and automatically tending to move them inward uniformly.

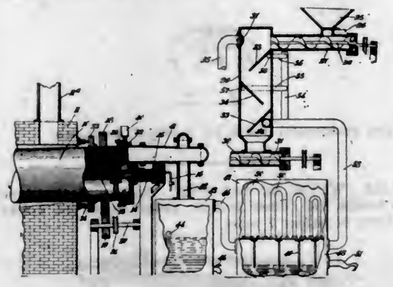
12. The combination in an open-sided back-rest of a body and radial plungers constructed and arranged to permit stock held thereby to be engaged by a grinding wheel, two of the plungers being substantially diametrically opposite each other, and mechanism having positive engagement with all of the plungers and automatically tending to move them inward uniformly.

13. The combination in an open-sided back-rest, of a body and radial plungers constructed and arranged to permit stock held thereby to be engaged by a grinding wheel, and mechanism automatically tending to move the plungers inward and automatically locking them against movement outward.

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14,300. DESTRUCTIVE DISTILLATION OF WOOD AND THE LIKE. STEWART E. SEAMAN, Gauley Mills, W. Va., assignor to Seaman Waste Wood Chemical Company, Incorporated, New York, N. Y., a Corporation of New York. Filed July 28, 1916. Serial No. 111,952. Original No. 1,108,403, dated Aug. 25, 1914, Serial No. 809,112, filed Dec. 27, 1913. (Cl. 203—6.)



1. The herein described improvement in the art of destructive distillation of wood and the like, which consists in treating the charge in a sealed retort from which air is excluded, and eliminating the air from the charge before it reaches the retort by forcing the cool uncondensed gases generated in the retort through the charge before it enters the retort.

2. The herein described improvement in the art of the destructive distillation of wood and the like, which consists in heating the charge in a suitable retort, drawing off the gaseous products of the charge from the retort, condensing said gaseous products, forcing the cool uncondensed gases of the condenser through the charge before the latter enters the retort, thereby expelling the air from the charge and delivering the mixed gas and air so obtained as a fuel beneath the retort.

3. The herein described improvement in the art of the destructive distillation of wood and the like, which consists in feeding a charge through an air tight casing into a suitable retort, condensing the gaseous products of the retort, discharging the cool uncondensed gases from the condenser into the aforesaid air tight casing, and withdrawing the air and gases from said casing and discharging them as fuel beneath the retort.

4. The improvement in the art of the destructive distillation of wood and the like, which consists in feeding a charge to a retort through an essentially air tight casing, drawing off the gaseous products of the charge from said retort, then trapping said gaseous products to collect the tar, then condensing said gaseous products, next drawing the cool uncondensed gases through the aforesaid feed casing thereby forcing the air from the charge, and finally delivering the mingled air and gas collected from said casing to a point below the retort as a fuel.

5. The hereindescribed improvement in the art of the destructive distillation of wood and the like, which consists in feeding the finely divided charge to the retort from an essentially air tight casing, condensing the gaseous products of the retort, and forcing the cool uncondensed gases through the aforesaid air tight casing, thereby driving out the excess of air from the charge.

6. The improvement in the art of continuous destructive distillation of wood and the like, which consists in continuously subjecting the material to be distilled to destructive distillation in a suitable retort, feeding such material to the retort, and expelling air from the said material as it is being fed and before it reaches the retort, so that the said material is delivered to the retort substantially free from air.

7. The improvement in the art of continuous destructive distillation of finely divided wood and the like, which consists in continuously subjecting the said material to destructive distillation in a suitable retort, feeding such material to the retort, and expelling air from the said material as it is being fed and before it reaches the retort, so that the said material is delivered to the retort substantially free from air.

8. The improvement in the art of continuous destructive distillation of wood and the like, which consists in feeding to a suitable retort the material to be subjected to destructive distillation, expelling air from such material while it is being so fed, continuously treating the material to destructive distillation in the retort, withdrawing the gaseous products therefrom, cooling the said gases and condensing therefrom the condensable constituents thereof, and passing the cool uncondensed gases through the material as it is being fed and before it enters the retort, to expel air therefrom.

9. The improvement in the art of continuous destructive distillation of wood and the like, which consists in feeding to a suitable retort the material to be subjected to destructive distillation, expelling air from such material while it is being so fed, continuously treating the material to destructive distillation in the retort, withdrawing the gaseous products therefrom, cooling the said gases, and passing them through the material as it is being fed and before it enters the retort, to expel air therefrom.

# DESIGNS.

50,708. HOLY-WATER FONT. GEORGE R. BAILEY, Brooklyn, N. Y., assignor to Sterling Casket Hardware Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 7, 1917. Serial No. 153,194. Term of patent 7 years.



The ornamental design for a holy water font, as shown.

50,709. WALL-PLATE FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Co., Inc., New York, N. Y., a Corporation of New York. Filed Mar. 3, 1917. Serial No. 152,406. Term of patent 7 years.



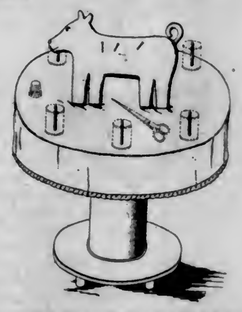
The ornamental design for a wall plate for lighting fixtures, as shown.

50,710. CASKET-HANDLE LUG. GEORGE R. BAILEY, Brooklyn, N. Y., assignor to Sterling Casket Hardware Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 7, 1917. Serial No. 153,196. Term of patent 7 years.



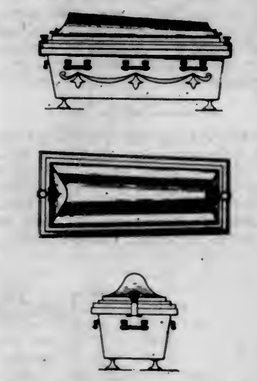
The ornamental design for a casket handle lug, as shown.

50,711. SEWING-TABLE. LOLA A. BOYER, Firdale, Wash. Filed Jan. 25, 1917. Serial No. 144,540. Term of patent 14 years.



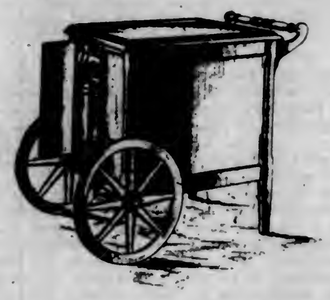
The ornamental design for a sewing table, as shown.

50,712. CASKET. HERMAN COLEMAN, Kansas City, Mo. Filed Jan. 23, 1917. Serial No. 144,066. Term of patent 7 years.



The ornamental design for a casket, as shown.

50,713. WHEELED CABINET. THOMAS F. CUMMINGS, Chicago, Ill. Filed Nov. 21, 1914. Serial No. 873,412. Term of patent 7 years.



The ornamental design for a wheeled cabinet as shown.

50,714. AEROPLANE-BODY. NELSON W. DALTON, Buffalo, N. Y., assignor to Curtiss Aeroplane & Motor Corporation, a Corporation of New York. Filed Feb. 28, 1917. Serial No. 151,571. Term of patent 14 years.



The ornamental design for an aeroplane body as shown.

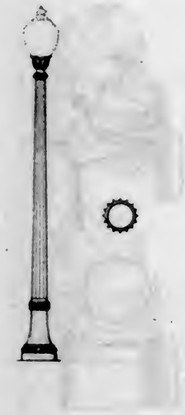


50,715. EMBLEM. PAUL EDWARD FLEMING, Huron, S. D. Filed Jan. 3, 1917. Serial No. 140,467. Term of patent 7 years.



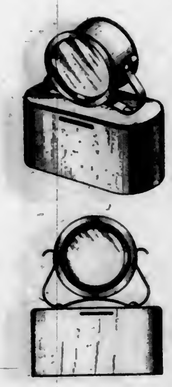
The ornamental design for an emblem, as shown.

50,716. STREET-LIGHT STANDARD. IHNA T. FRARY, Cleveland, Ohio, assignor to Charles Andrew, Terrace Park, Ohio, Frank Andrew, Cincinnati, Ohio, and William Andrew, Norwood, Ohio, doing business as Electric Railway Equipment Company, Cincinnati, Ohio. Filed Oct. 13, 1916. Serial No. 125,519. Term of patent 14 years.



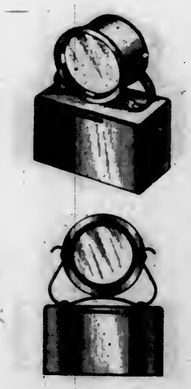
The ornamental design for a street light standard as shown.

50,717. CLOCK-BANK CASE. ALBERT C. GRUNWALD, Maywood, Ill., assignor, by mesne assignments, to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,115. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

50,718. CLOCK-BANK CASE. ALBERT C. GRUNWALD, Maywood, Ill., assignor, by mesne assignments, to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,116. Term of patent 7 years.



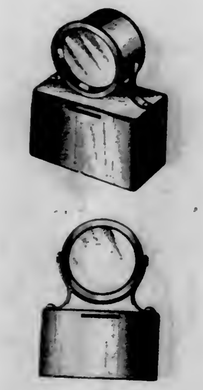
The ornamental design for a clock-bank case, as shown.

50,719. CLOCK-BANK CASE. ALBERT C. GRUNWALD, Maywood, Ill., assignor, by mesne assignments, to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,117. Term of patent 7 years.



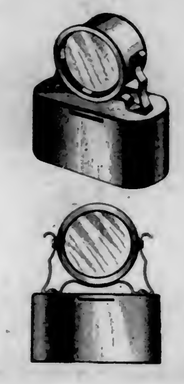
The ornamental design for a clock-bank case, as shown.

50,720. CLOCK-BANK CASE. ALBERT C. GRUNWALD, Maywood, Ill., assignor, by mesne assignments, to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,118. Term of patent 7 years.



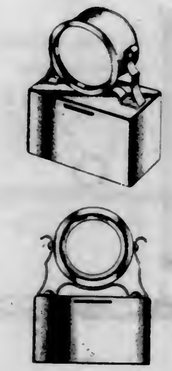
The ornamental design for a clock-bank case, as shown.

50,721. CLOCK-BANK CASE. ALBERT C. GRUNWALD, Maywood, Ill., assignor, by mesne assignments, to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,119. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

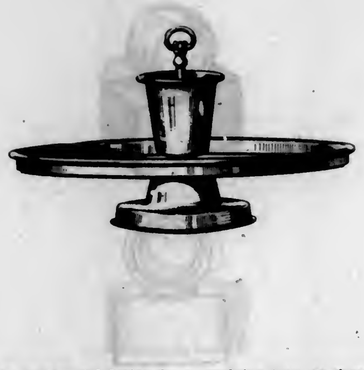
50,722. CLOCK-BANK CASE. ALBERT C. GRUNWALD, Maywood, Ill., assignor, by mesne assignments, to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,120. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.



50,723. REVOLVING TRAY. EDWIN F. GUTH, St. Louis, Mo., assignor to Luminous Unit Co., St. Louis, Mo., a Corporation of Missouri. Filed May 17, 1917. Serial No. 155,620. Term of patent 14 years.



The ornamental design for a revolving tray, as shown.

50,724. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,121. Term of patent 7 years.



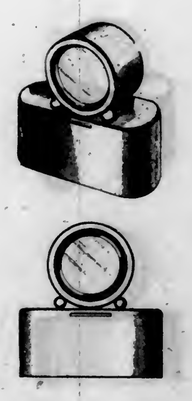
The ornamental design for a clock-bank case, as shown.

50,725. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,122. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

50,726. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,123. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

50,727. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,124. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

50,728. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,125. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

50,729. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,126. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

50,730. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,127. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

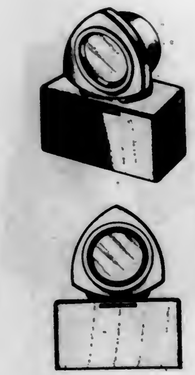


50,731. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,128. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

50,732. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,129. Term of patent 7 years.



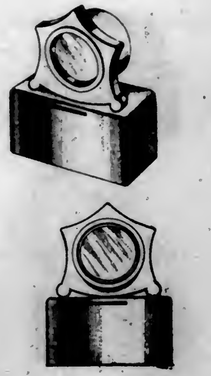
The ornamental design for a clock-bank case, as shown.

50,733. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,130. Term of patent 7 years.



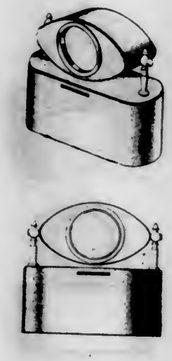
The ornamental design for a clock-bank case, as shown.

50,734. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,131. Term of patent 7 years.



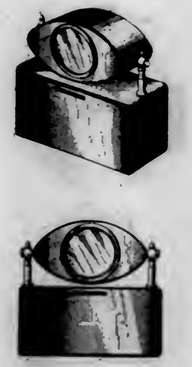
The ornamental design for a clock-bank case, as shown.

50,735. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,132. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

50,736. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,133. Term of patent 7 years.



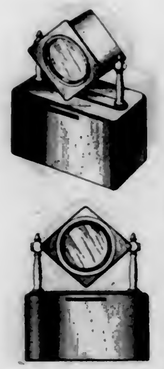
The ornamental design for a clock-bank case, as shown.

50,737. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,134. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

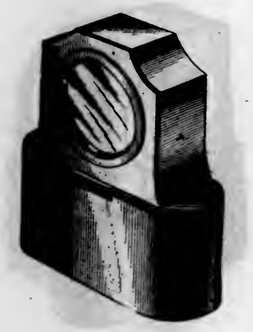
50,738. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,135. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

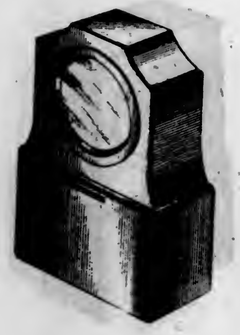


50,739. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,136. Term of patent 7 years.



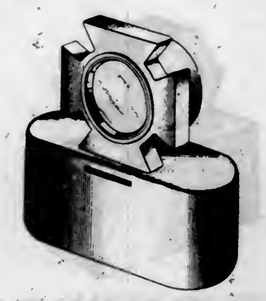
The ornamental design for a clock-bank case, as shown.

50,740. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,137. Term of patent 7 years.



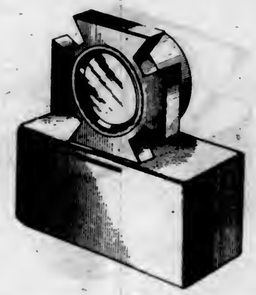
The ornamental design for a clock-bank case, as shown.

50,741. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,138. Term of patent 7 years.



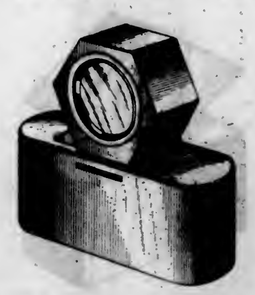
The ornamental design for a clock-bank case, as shown.

50,742. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,139. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

50,743. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,140. Term of patent 7 years.



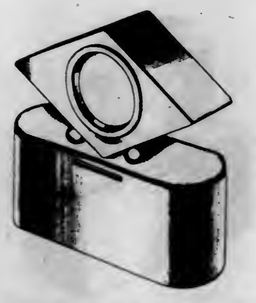
The ornamental design for a clock-bank case, as shown.

50,744. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,141. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

50,745. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,142. Term of patent 7 years.



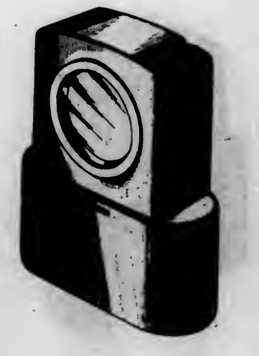
The ornamental design for a clock-bank case, as shown.

50,746. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,143. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

50,747. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,144. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.

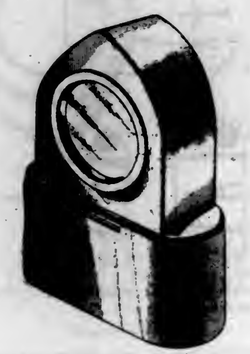
50,748. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,145. Term of patent 7 years.



The ornamental design for a clock-bank case, as shown.



50,749. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,146. Term of patent 7 years.



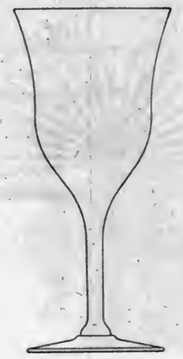
The ornamental design for a clock-bank case, as shown.

50,750. CLOCK-BANK CASE. EDMUND S. HOCHE, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,147. Term of patent 7 years.



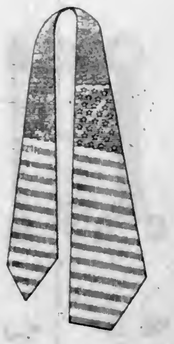
The ornamental design for a clock-bank case, as shown.

50,751. GOBLET. WILBER E. HUNTER, Morgantown, W. Va. Filed Dec. 28, 1916. Serial No. 139,412. Term of patent 7 years.



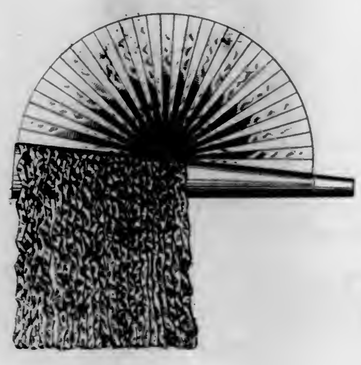
The ornamental design for a goblet, as shown.

50,752. NECKTIE. BENJAMIN H. KUNKEL, Lemoyne, Pa. Filed Mar. 16, 1917. Serial No. 155,838. Term of patent 7 years.



The ornamental design for a necktie, as shown.

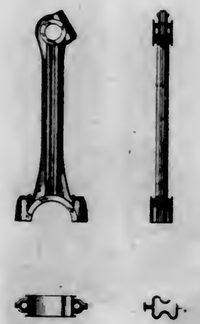
50,753. HORN. CHARLES T. LAMONT, Milwaukee, Wis. Filed Mar. 10, 1917. Serial No. 154,046. Term of patent 14 years.



The ornamental design for a horn, as shown.

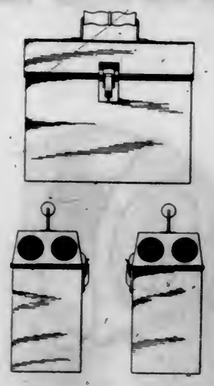
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50,754. CONNECTING-ROD. HEBRON B. LAYMAN, New York, N. Y., assignor to The Layman Pressed Rod Company, Inc., New York, N. Y., a Corporation of New York. Filed Mar. 17, 1916. Serial No. 84,978. Term of patent 7 years.



The ornamental design for a connecting rod as shown.

50,755. MINNOW-BUCKET OR SIMILAR ARTICLE. PHILIP G. LUCAS, Jr., St. Louis, Mo. Filed Nov. 13, 1915. Serial No. 61,423. Term of patent 14 years.



The ornamental design for a minnow bucket or similar article, as shown.

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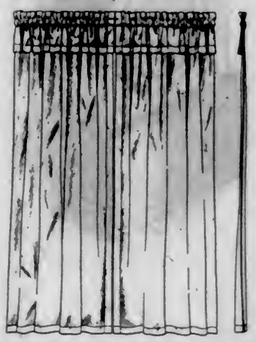
50,756. COFFEE-POT. WALTER LUTTRINGHAUS, Maywood, Ill. Filed Feb. 19, 1917. Serial No. 149,683. Term of patent 7 years.



The ornamental design for a coffee pot, as shown.

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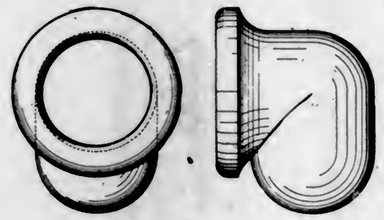
50,757. CURTAIN. THOMAS J. MCMAHON, Brooklyn, N. Y. Filed Oct. 27, 1916. Serial No. 128,137. Term of patent 3½ years.



The ornamental design for a curtain, as shown.



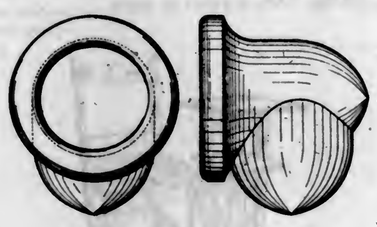
50,758. NON-GLARE LAMP-CASING. WILLIAM C. PAUL, Newark, N. J. Filed Feb. 7, 1917. Serial No. 147,261. Term of patent 14 years.



The ornamental design for a non-glare lamp casing, as shown.

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50,759. NON-GLARE LAMP-CASING. WILLIAM C. PAUL, Newark, N. J. Filed Feb. 7, 1917. Serial No. 147,262. Term of patent 14 years.



The ornamental design for a non-glare lamp casing, as shown.

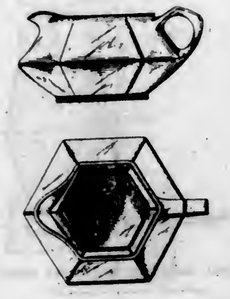
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50,760. CRETONNE OR OTHER TEXTILE FABRIC. MATTHEW W. RYAN, New York, N. Y. Filed Jan. 30, 1917. Serial No. 145,533. Term of patent 3½ years.



The ornamental design for a cretonne or other textile fabric consisting of the design substantially as shown.

50,761. CREAM-PITCHER OR SIMILAR ARTICLE. OLIVER H. SEBRING, Sebring, Ohio. Filed Mar. 4, 1916. Serial No. 82,246. Term of patent 7 years.



The ornamental design for a cream pitcher or similar article as shown.

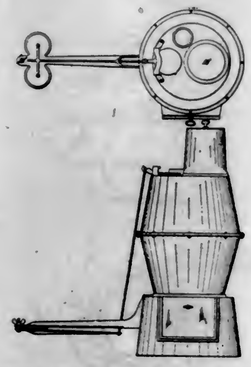
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50,762. RING. WILLIAM SHEFF, New York, N. Y. Filed Mar. 2, 1917. Serial No. 152,130. Term of patent 14 years.



The ornamental design for a ring as shown.

50,763. BROODER-STOVE. SAMUEL B. SMITH, Cleveland, Ohio, assignor to The Buckeye Incubator Company, Springfield, Ohio, a Corporation of Ohio. Filed Dec. 6, 1915. Serial No. 65,431. Term of patent 7 years.



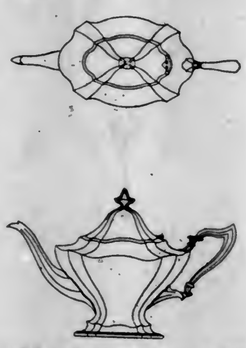
The ornamental design for a brooder stove, as shown.

50,764. TEAPOT OR SIMILAR ARTICLE. WINFIELD DEXTER SMITH, Asbury Park, N. J., and RUDOLPH J. BOURGEOIS, Oak Park, Ill., assignors to W. D. Smith Silver Company, Chicago, Ill., a Corporation of Delaware. Filed Feb. 27, 1917. Serial No. 151,353. Term of patent 7 years.



The ornamental design for a teapot or similar article, substantially as shown.

50,765. TEAPOT OR SIMILAR ARTICLE. WINFIELD DEXTER SMITH, Asbury Park, N. J., and RUDOLPH J. BOURGEOIS, Oak Park, Ill., assignors to W. D. Smith Silver Company, Chicago, Ill., a Corporation of Delaware. Filed Feb. 27, 1917. Serial No. 151,354. Term of patent 7 years.



The ornamental design for a teapot or similar article, substantially as shown.

50,766. LINK FOR NECK-CHAINS. EDWIN SPEIDEL, Cranston, R. I., assignor to Standard Neckchain Company, Providence, R. I., a Firm comprising Albert Speidel and Edwin Speidel. Filed Feb. 17, 1917. Serial No. 149,364. Term of patent 7 years.



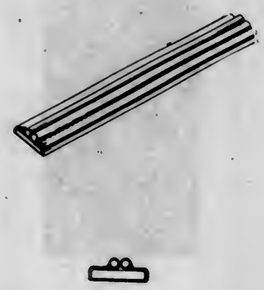
The ornamental design for a link for neck chains, as shown.

50,767. TABLE-CHAIR. WILLIAM B. TROWBRIDGE, Baldwinsville, N. Y. Filed Mar. 20, 1917. Serial No. 156,205. Term of patent 3½ years.



The ornamental design for a table-chair as shown.

50,768. MOLDING. HOMER P. TAVEL, New Berlin, Ohio. Filed Feb. 2, 1917. Serial No. 146,294. Term of patent 7 years.



The ornamental design for molding, substantially as shown.



50,769. TREAD FOR AUTOMOBILE-TIRES. EUGENE VON VAROYAS, Washington, D. C., assignor of sixty one-hundredths to John J. Vavora, Binghamton, N. Y. Filed Dec. 19, 1916. Serial No. 137,764. Term of patent 14 years.



The ornamental design for the tread for automobile tires as shown.

50,770. VEHICLE-LAMP. GORDON WILLIAMS, Mount Carmel, Conn., assignor to The English & Mersick Co., New Haven, Conn., a Corporation. Filed Mar. 10, 1917. Serial No. 154,048. Term of patent 3½ years.



The ornamental design for a vehicle lamp, as shown.

# TRADE-MARKS

## PUBLISHED MAY 8, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 81,881. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) EDWARD M. WARING, New York, N. Y. Filed Oct. 14, 1914.

KORRECT IKUT

*Particular description of goods.*—Cutting-Machines and Machine-Knives—Namely, Certain Cloth-Cutting Machines with the Knives and Separate Parts of said Cloth-Cutting Machines.

*Claims use* since May, 1914.

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Ser. No. 85,251. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE BRAINERD AND ARMSTRONG COMPANY, New London, Conn. Filed Mar. 19, 1915.

GILT EDGE

*Particular description of goods.*—Fabrics in the Piece Woven of All Silk.

*Claims use* since Jan. 1, 1896.

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Ser. No. 90,492. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE TURNBULL MANUFACTURING COMPANY, Wilmington, Ohio. Filed Nov. 6, 1915.

Turko

*Particular description of goods.*—Valve-Grinders, Valve-Spring Lifters, Gas-Engines, Cone-Machines, and Batter-Mixers.

*Claims use* since about Aug. 1, 1915.

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Ser. No. 91,892. (CLASS 12. CONSTRUCTION MATERIALS.) THE OAKLAND PAVING COMPANY, Oakland, Cal. Filed Jan. 3, 1916.

ROCKITE

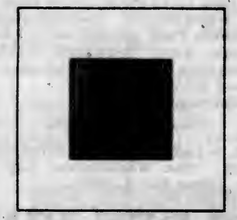
No claim being made to the words "The Oakland Paving Co."

*Particular description of goods.*—Asphaltic Road-Surfacing Materials.

*Claims use* since January, 1915.

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Ser. No. 92,087. (CLASS 12. CONSTRUCTION MATERIALS.) COLETTE T. OVERTON, Towanda, Pa. Filed Jan. 12, 1916.



The drawing illustrates a red square, which forms a feature of this trade-mark, no claim being made to the words "Rubber Roofing."

*Particular description of goods.*—Rubber Roofing.

*Claims use* since Feb. 1, 1914.

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Ser. No. 92,640. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) UNION PACIFIC TEA COMPANY, New York, N. Y. Filed Feb. 4, 1916. Under ten-year proviso.

SOVEREIGN

*Particular description of goods.*—Baking-Powder, Cream of Tartar, Bicarbonate of Soda, Saleratus, Table-Salt, Coloring Extracts for Foods, Tooth-Paste, Tooth-Powder, Talcum Powder, Bay-Rum, Bluing, Powdered Borax, and Jamaica Ginger.

*Claims use* since 1880.

Ser. No. 94,290. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE LABORATORY SUPPLY CO., Columbus, Ohio. Filed Apr. 10, 1916.

CIRCLE - "S"

*Particular description of goods.*—Chemical and Scientific Laboratory Appliances Consisting of Crucibles, Beakers, Microscopic Slides, Casseroles, Evaporating-Cans, Tubing, Stoppers, Clamps, Support-Stands.
*Claims use* since about Mar. 15, 1916.

Ser. No. 94,292. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) MOTOR-ACCESSORY DISTRIBUTING COMPANY, Boston, Mass., assignor to Longford Company of America, Cambridge, Mass., a Corporation of Maine. Filed Apr. 10, 1916.

Longford

No claim is made to the words "Trade Mark."
*Particular description of goods.*—Automobile-Truck Chassis, Automobile Parts and Accessories—Namely, Side Frames, Springs, Axles, Truss-Rods, Running-Boards, Brackets, Brake-Rods, Mud-Pans, Universal Joints for Automobiles, and Drive-Shafts.
*Claims use* since Apr. 1, 1914.

Ser. No. 94,848. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE WORTHINGTON BALL COMPANY, Elyria, Ohio. Filed May 1, 1916.

GOLDEN KING

*Particular description of goods.*—Golf-Balls.
*Claims use* since Apr. 11, 1916.

Ser. No. 95,496. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING CO. INC., New York, N. Y., and Kansas City, Mo. Filed May 27, 1916.

COCKATOO

*Particular description of goods.*—Wheat-Flour, Rye-Flour, Self-Rising and Prepared Flour.
*Claims use* since September, 1914.

Ser. No. 96,366. (CLASS 43. THREAD AND YARN.) RICHARDSON SILK CO., Chicago, Ill. Filed July 6, 1916.

BLUE BIRD

The lining appearing on the shield is not intended to indicate color, no claim being made to the words "Richardson Silk Co., M'f'r's., Crochet Cotton, Art 88,100 Yds., Wash with Ivory Soap."
*Particular description of goods.*—Cotton Threads, Mercerized and Unmercerized, for Embroidery, Crochet, Knitting, Tatting, Sewing, and All other Hand or Machine Uses.
*Claims use* since June 15, 1916.

Ser. No. 96,431. (CLASS 39. CLOTHING.) GOLDENBERG'S, Washington, D. C. Filed July 8, 1916.

Luxedo

*Particular description of goods.*—Coats, Vests, Trousers, Hats, Caps, Outer Shirts, Undershirts, Drawers, Union-Suits, Collars, and Cuffs.
*Claims use* since May 1, 1916.

Ser. No. 98,119. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORTHERN INSECTICIDE SPECIALTY CO., Hermon, N. Y. Filed Sept. 20, 1916.

*Particular description of goods.*—An Insecticide in Liquid and Powdered Form, a Louse-Killer, a Fly and Germ Killer and Disinfectant, a Fly-Killer and Insecticide.
*Claims use* since Nov. 1, 1915.





Ser. No. 99,652. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE DELSON CHEMICAL CO. INC., New York, N. Y. Filed Dec. 1, 1916.

DELCREO

No claim being made to the exclusive use of the words "For Distemper," the representation of the dog's head being a reproduction of a photograph of Meadowview Forester F. D. S. B. 32501 Blue Belton English Setter, (Lavarack.)
*Particular description of goods.*—A Treatment for Distemper.
*Claims use* since Oct. 1, 1916.

Ser. No. 99,821. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LACK MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 9, 1916.

WONDER-LIN

*Particular description of goods.*—Cotton and Mercerized Textile Fabrics in the Piece.
*Claims use* since Nov. 1, 1916.

Ser. No. 100,257. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JAMES A. HEARN & SON, INC., New York, N. Y. Filed Dec. 30, 1916.

JAHSON

Comprising the word "Jahson."
*Particular description of goods.*—Cotton, Wool, and Linen Piece Goods and Mixtures Thereof, Table and Art Linen, Silk Piece Goods, Towels and Toweling, Blankets and Comforters and Pillow-Cases, Curtain Material, Flannels, Lace Curtains, Linings and Muslin Pillow-Cases, Portières, Upholstery Fabrics, and Sheets.
*Claims use* since Friday, Sept. 1, 1916.

Ser. No. 100,570. (CLASS 32. FURNITURE AND UPHOLSTERY.) ART METAL CONSTRUCTION CO., INC., Jamestown, N. Y. Filed Jan. 13, 1917.

Art Metal

No claim being made for the expression "Jamestown, New York, U. S. A."
*Particular description of goods.*—Metal Filing-Cabinets, Desks, Cupboards, Library-Stacks, Beds, Counters, Tables, Chairs, Roller Book-Shelving, Plain Shelving, Counter-Screens, Wardrobes, Lockers, and Bookcases.
*Claims use* since Nov. 1, 1914.

Ser. No. 100,665. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) RUDOLPH DEUTSCH, New York, N. Y. Filed Jan. 17, 1917.

NATRMA

No claim being made to the exclusive use of the word "Fabrics" apart from the mark as shown in the specimens.
*Particular description of goods.*—Woven Knitted Piece Goods of Wool, Worsted, or Silk or Mixtures Thereof.
*Claims use* since Oct. 1, 1916.

Ser. No. 100,743. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) OTTO HIGEL COMPANY, INC., New York, N. Y. Filed Jan. 19, 1917.

Electrola

*Particular description of goods.*—Electric Motor-Driven Pump.
*Claims use* since Jan. 6, 1917.

Ser. No. 100,862. (CLASS 5. ADHESIVES.) CHAS. A. SCHIEREN COMPANY, New York, N. Y. Filed Jan. 23, 1917.

DUXBAK

*Particular description of goods.*—Adhesive Belt-Cement.
*Claims use* since Mar. 1, 1907.

Ser. No. 100,864. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) SUFFOLK BREWING COMPANY, Boston, Mass. Filed Jan. 23, 1917.




The words and figures "Registered, Non-Intoxicating Beverage, Nutritious, Healthful, Cereal Beverage, Trade-Mark, Contents 12 Fluid Ozs., Suffolk Brewing Co., Boston, Mass." are disclaimed.

*Particular description of goods.*—A Non-Alcoholic Cereal Beverage Sold as a Soft Drink.

*Claims use* since Oct. 30, 1916.

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Ser. No. 100,991. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH GRETSCHEL, Long Island City, N. Y. Filed Jan. 27, 1917.




*Particular description of goods.*—Herb Compounds (Bitters) Remedial in Cases of Stomach and Bowel Disorders.

*Claims use* since about December, 1915.

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Ser. No. 100,998. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) NORTHAM WARREN CORPORATION, New York, N. Y. Filed Jan. 27, 1917.

CUTEX

*Particular description of goods.*—Manicure-Buffers, Emery-Boards, Manicure-Sticks, Manicure-Files.

*Claims use* since Apr. 1, 1915.

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Ser. No. 101,071. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) REENOR MANUFACTURING COMPANY, Mercer borough, Pa. Filed Jan. 31, 1917.

Glowarm

*Particular description of goods.*—Gas and Oil Stoves and Heaters.

*Claims use* since on or about Sept. 16, 1916.

Ser. No. 101,108. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) RELIABLE FUR DRESSING & DYEING CO., New York, N. Y. Filed Feb. 1, 1917.



No claim is made to the word "Reliable."

*Particular description of goods.*—Dyed Animal Skins.

*Claims use* since about Jan. 12, 1917.

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Ser. No. 101,134. (CLASS 12. CONSTRUCTION MATERIALS.) TRUSSED CONCRETE STEEL COMPANY, Detroit, Mich. Filed Feb. 2, 1917.

Asbestile

*Particular description of goods.*—Asbestos Shingles and Asbestos Building-Lumber.

*Claims use* since Dec. 1, 1916.

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Ser. No. 101,190. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) R. J. BUSH AND COMPANY, Stroudsburg, Pa. Filed Feb. 6, 1917.

BUSHOLINE



The portrait shown being that of Reeves J. Bush.

*Particular description of goods.*—A Compound for Vitalizing Gasolene.

*Claims use* since on or about Jan. 1, 1917.

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Ser. No. 101,224. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed Feb. 8, 1917.

POLYGON

*Particular description of goods.*—Toilet-Paper.

*Claims use* since Dec. 1, 1887.





Ser. No. 101,354. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE CROWN CORK AND SEAL COMPANY OF BALTIMORE CITY, Baltimore, Md. Filed Feb. 14, 1917.

axia

*Particular description of goods.*—Closures for Bottles and the Like.

*Claims use* since Jan. 4, 1917.

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Ser. No. 101,366. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HOLDEN-LEONARD CO., New York, N. Y. Filed Feb. 14, 1917.

SILVERTONE

*Particular description of goods.*—Fabric Woven of Worsted Yarn, Woolen Yarn, and Silk for Garments and Coverings.

*Claims use* since December, 1916.

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Ser. No. 101,373. (CLASS 39. CLOTHING.) TROY UNDERWEAR CO. INC., Troy, N. Y. Filed Feb. 14, 1917.

TUCO

No claim being made to the words "Distinctively, Tailored."

*Particular description of goods.*—Dress, Negligée, and Work Shirts, Underwear Consisting of Union-Suits, Undershirts, and Drawers, and Sleeping-Garments Consisting of Night-Dresses and Pajamas.

*Claims use* since Feb. 8, 1917.

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Ser. No. 101,420. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FORSTMANN & HUFFMANN CO., Passaic, N. J. Filed Feb. 16, 1917.

Valeria

Comprising the word "Valeria."

*Particular description of goods.*—Woolen and Worsted Piece Goods.

*Claims use* since Feb. 7, 1917.

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Ser. No. 101,446. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) A. KREAMER, INC., Brooklyn, N. Y. Filed Feb. 17, 1917. Under ten-year proviso.

KREAMERWARE

*Particular description of goods.*—Square and Oval Washboilers, Washkettles, Suction Clothes-Washers, Hat-Baths, Clothes-Sprinklers.

*Claims use* since Jan. 1, 1886.

Ser. No. 101,661. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NELLIE H. RHOADS, Severy, KANS. Filed Feb. 24, 1917.

S.O.S.

*Particular description of goods.*—Salve for the Treatment of Old Sores, Blood-Poison, Gangrene, Ulcers, Abscesses, Boils, Burns, Cuts, Wounds, and Bruises.

*Claims use* since June 15, 1916.

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Ser. No. 101,671. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ATLAS EMBROIDERY WORKS, Brooklyn, N. Y. Filed Feb. 26, 1917.

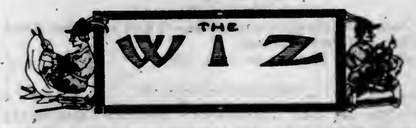
BRUSSELETTE

*Particular description of goods.*—Embroidery and Laces by the Piece.

*Claims use* since Feb. 10, 1917.

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Ser. No. 101,748. (CLASS 39. CLOTHING.) ABRAHAM H. MORGEN, New York, N. Y. Filed Feb. 27, 1917.




No claim is made to the exclusive use of the words "Dress Co., Nos. 22, 24, 26 West 32nd Street, New York."

*Particular description of goods.*—Dresses and Petticoats.

*Claims use* since Jan. 1, 1913.

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Ser. No. 101,789. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) E. C. MILLS LEATHER CO., Boston, Mass. Filed Feb. 28, 1917.

DUCHESS

The word "Duchess."

*Particular description of goods.*—Finished Calfskins.

*Claims use* since January, 1907.

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Ser. No. 101,795. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMUEL H. MCKEAN, New York, N. Y. Filed Feb. 28, 1917.

Irophos

The trade-mark consists of the word "Irophos," appearing in black letters on a white background.

*Particular description of goods.*—A Tonic to Increase the Red Corpuscles of the Blood, Strengthen the Nerves, and Correct Faulty Metabolism.

*Claims use* since Feb. 10, 1917.

Ser. No. 101,798. (CLASS 12. CONSTRUCTION MATERIALS.) THE NATIONAL BUILDERS COMPANY, Cleveland, Ohio. Filed Feb. 28, 1917.

ARMORCRETE

*Particular description of goods.*—Metallic Hardeners for Concrete.
*Claims use* since about the 20th day of February, 1916.

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Ser. No. 101,803. (CLASS 39. CLOTHING.) HARRY E. SCHWARZ, New York, N. Y. Filed Feb. 28, 1917.

Salstel

*Particular description of goods.*—Hosiery and Knitted Underwear in One and Two Piece Garments.
*Claims use* since Feb. 15, 1917.

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Ser. No. 101,832. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) NEPTUNE METER COMPANY, Jersey City, N. J., and New York, N. Y. Filed Mar. 2, 1917.

TRIDENT

*Particular description of goods.*—Water and other Fluid Meters and Parts Thereof.
*Claims use* since about July, 1892.

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Ser. No. 101,846. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) AMERICAN STEEL PRODUCTS CO., Macomb, Ill. Filed Mar. 3, 1917.




The trade-mark in which the portrait is fanciful.
*Particular des ription of goods.*—Hog-Oilers.
*Claims use* since about Aug. 15, 1916.

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Ser. No. 101,850. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. BASH & CO., Huntington, Ind. Filed Mar. 3, 1917.

BUSY BIDDY

*Particular description of goods.*—Poultry Food—Namely, Egg-Mash and Chick-Grower.
*Claims use* since January, 1914.

Ser. No. 101,881. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NEWTON MILLING & ELEVATOR CO., Newton, Kans. Filed Mar. 3, 1917.

Meridian

*Particular description of goods.*—Wheat-Flour.
*Claims use* since Nov. 1, 1916.

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Ser. No. 101,888. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WOLFF MILLING COMPANY, New Haven, Mo. Filed Mar. 3, 1917.

UPPER TEN

*Particular description of goods.*—Wheat-Flour.
*Claims use* since July 1, 1892.

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Ser. No. 101,902. (CLASS 39. CLOTHING.) COBDEN-SCOTT CO., INC., New York, N. Y. Filed Mar. 6, 1917.

"Come Out of the Kitchen"

*Particular des ription of goods.*—Outer Waists for Women and Girls.
*Claims use* since Feb. 19, 1917.

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Ser. No. 101,904. (CLASS 39. CLOTHING.) J. E. FRENCH CO., Rockland, Mass. Filed Mar. 6, 1917.

MANOEUVRE

*Particular description of goods.*—Leather Boots and Shoes.
*Claims use* since December, 1915.

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Ser. No. 101,948. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE GEO. WIEDEMANN BREWING COMPANY, Newport, Ky. Filed Mar. 6, 1917.

QUIZZ

*Particular description of goods.*—Non-Alcoholic Effervescent Beverages Sold and Used as Soft Drinks.
*Claims use* since about the 1st day of February, 1917.





Ser. No. 101,956. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE JOSEPH N. EISENDRATH COMPANY, Chicago, Ill. Filed Mar. 7, 1917. Under ten-year proviso.

Eisendrath's

*Particular description of goods.*—Leather.
*Claims use* since about the year 1876.

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Ser. No. 101,983. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DIGESTIVE FERMENTS CO., Detroit, Mich. Filed Mar. 8, 1917.

RENZYME

*Particular description of goods.*—Milk-Curdling Products.
*Claims use* since June 1, 1916.

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Ser. No. 102,032. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GORDONVILLE ROLLER MILLS, Gordonville, Mo. Filed Mar. 10, 1917.

SALLY SUE

*Particular description of goods.*—Self-Rising Wheat-Flour.
*Claims use* since about Jan. 1, 1917.

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Ser. No. 102,033. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GORDONVILLE ROLLER MILLS, Gordonville, Mo. Filed Mar. 10, 1917.

TORPEDO

*Particular description of goods.*—Self-Rising Wheat-Flour.
*Claims use* since about Jan. 1, 1917.

Ser. No. 102,046. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE PARK & POLLARD COMPANY, Boston, Mass. Filed Mar. 10, 1917.

OVERALL

*Particular description of goods.*—Corn, Oats, Barley, Wheat, Buckwheat, Cornmeal, Cracked Corn, Sprouting Oats, and Mixed Corn and Oats.
*Claims use* since May 1, 1915.

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Ser. No. 102,050. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) G. ROTTENKOLBER, Scranton, Pa. Filed Mar. 10, 1917.

BRILLIANTO

The signature shown is a facsimile of the applicant's.
*Particular description of goods.*—A Preparation for Clarifying Beer.
*Claims use* since Feb. 23, 1917.

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Ser. No. 102,079. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) GEO. KIPP & SON, Baltimore, Md. Filed Mar. 12, 1917.

KIPSON

*Particular description of goods.*—Leather.
*Claims use* since Feb. 2, 1917.

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Ser. No. 102,093. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. P. PLANT MILLING CO., St. Louis, Mo. Filed Mar. 12, 1917.

KALOGRAM

*Particular description of goods.*—Wheat-Flour.
*Claims use* since July 7, 1916.

Ser. No. 102,094. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. P. PLANT MILLING CO., St. Louis, Mo. Filed Mar. 12, 1917.



*Particular description of goods.*—Wheat-Flour.
*Claims use* since July 7, 1916.

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Ser. No. 102,095. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. P. PLANT MILLING CO., St. Louis, Mo. Filed Mar. 12, 1917.

CALLIGRAM

*Particular description of goods.*—Wheat-Flour.
*Claims use* since July 7, 1916.

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Ser. No. 102,111. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CENTENNIAL MILL CO., Seattle Wash. Filed Mar. 13, 1917.

CENTENNIAL

*Particular description of goods.*—Wheat-Flour.
*Claims use* since 1899.

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Ser. No. 102,126. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) POTTER & WRIGHTINGTON, Boston, Mass. Filed Mar. 13, 1917. Under ten-year proviso.

ARLINGTON

*Particular description of goods.*—Wheat-Meal and Entire-Wheat Flour.
*Claims use* since 1865.

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Ser. No. 102,130. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) UNION STOVE WORKS, Peekskill, N. Y. Filed Mar. 13, 1917.

Gasco

*Particular description of goods.*—Gas Cooking-Ranges, Gas Heating-Stoves, and Combination Coal and Gas Ranges.
*Claims use* since Jan. 1, 1917.

Ser. No. 102,163. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. D. MANOR & CO., New Market, Va. Filed Mar. 15, 1917.




*Particular description of goods.*—Self-Rising Wheat-Flour.
*Claims use* since Feb. 15, 1917.

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Ser. No. 102,181. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DULUTH-SUPERIOR MILLING COMPANY, Duluth, Minn. Filed Mar. 16, 1917.

HIGH-LOAF

*Particular description of goods.*—Wheat-Flour.
*Claims use* since Sept. 1, 1882.

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Ser. No. 102,192. (CLASS 39. CLOTHING.) LIBERTY-DURGIN INC., Haverhill, Mass. Filed Mar. 16, 1917.

Miss Haverhill

*Particular description of goods.*—Leather and Textile Roots and Shoes.
*Claims use* since Mar. 12, 1917.

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Ser. No. 102,206. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MOSES MILTON BAUMGARTNER, Freeport, Ill. Filed Mar. 17, 1917.

YEL-O-RYS

*Particular description of goods.*—Rice.
*Claims use* since Dec. 1, 1916.





Ser. No. 102,212. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAZEL MILLING COMPANY, East St. Louis, Ill. Filed Mar. 17, 1917.

Numancia

*Particular description of goods.*—Wheat-Flour.
*Claims use* since Nov. 23, 1911.

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Ser. No. 102,220. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PLATTE VALLEY MILLING COMPANY, Gothenburg, Nebr., and Denver, Colo. Filed Mar. 17, 1917.




*Particular description of goods.*—Self-Rising Wheat-Flour.
*Claims use* since Sept. 30, 1916.

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Ser. No. 102,270. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE S. S. WENZELL MACHINE COMPANY, Philadelphia, Pa. Filed Mar. 19, 1917.

"IDEAL"

*Particular description of goods.*—Rubber Brushes for Bottle-Washing Machines.
*Claims use* since about Jan. 1, 1910.

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Ser. No. 102,309. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FORSTMANN & HUFFMANN Co., Passaic, N. J. Filed Mar. 21, 1917.

Gratilla

Comprising the word "Gratilla."
*Particular description of goods.*—Woolen and Worsted Piece Goods.
*Claims use* since Jan. 15, 1917.

Ser. No. 102,310. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FORSTMANN & HUFFMANN Co., Passaic, N. J. Filed Mar. 21, 1917.

Loopine

Comprising the word "Loopine."
*Particular description of goods.*—Woolen and Worsted Piece Goods.
*Claims use* since Sept. 17, 1916.

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Ser. No. 102,408. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FORSTMANN & HUFFMANN Co., Passaic, N. J. Filed Mar. 24, 1917.

Loretta

Comprising the word "Loretta."
*Particular description of goods.*—Woolen and Worsted Piece Goods.
*Claims use* since Feb. 1, 1917.

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Ser. No. 102,419. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MODEL MILLING & ELEVATOR COMPANY, Greeley and Denver, Colo., assignor to Colorado Milling & Elevator Co., Denver, Colo., a Corporation of Colorado. Filed Mar. 24, 1917.

MOUNTAIN ASH



*Particular description of goods.*—Wheat-Flour.
*Claims use* since Jan. 16, 1917.

Ser. No. 102,420. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MODEL MILLING & ELEVATOR COMPANY, Greeley and Denver, Colo., assignor to Colorado Milling & Elevator Co., Denver, Colo., a Corporation of Colorado. Filed Mar. 24, 1917.




*Particular description of goods.*—Wheat-Flour.
*Claims use* since Jan. 16, 1917.

Ser. No. 102,421. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MODEL MILLING & ELEVATOR COMPANY, Greeley and Denver, Colo., assignor to Colorado Milling & Elevator Co., Denver, Colo., a Corporation of Colorado. Filed Mar. 24, 1917.




*Particular description of goods.*—Wheat-Flour.
*Claims use* since Jan. 16, 1917.

Ser. No. 102,422. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MODEL MILLING & ELEVATOR COMPANY, Greeley and Denver, Colo., assignor to Colorado Milling & Elevator Co., Denver, Colo., a Corporation of Colorado. Filed Mar. 24, 1917.




*Particular description of goods.*—Self-Rising Wheat-Flour.
*Claims use* since Jan. 16, 1917.

Ser. No. 102,423. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) FRANK H. SETTELE, Baltimore, Md. Filed Mar. 24, 1917.

NULO

*Particular description of goods.*—A Non-Alcoholic Beverage Sold as a Soft Drink.
*Claims use* since May, 1915.

Ser. No. 102,435. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN B. DIXSON, Buffalo, N. Y. Filed Mar. 26, 1917.

Dr. Roswell Park

A facsimile of the signature of Dr. Roswell Park, deceased.
*Particular description of goods.*—Compound Liquor of Arsenic Bromid.
*Claims use* since Feb. 1, 1917.

Ser. No. 102,456. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM A. MINICK, Glasgow, Ky. Filed Mar. 26, 1917.




*Particular description of goods.*—A Tonic for Treatment of Syphilis, Scrofula, Kidney Trouble, Bright's Disease, and All Diseases Arising from an Impure Blood.
*Claims use* since Sept. 1, 1916.

Ser. No. 102,458. (CLASS 38. PRINTS AND PUBLICATIONS.) NEWSPAPER FEATURE SERVICE, INC., New York, N. Y. Filed Mar. 26, 1917.

FULLER BUNK

*Particular description of goods.*—A Newspaper-Section.
*Claims use* since Feb. 19, 1917.

Ser. No. 102,460. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PFEFFER MILLING COMPANY, Lebanon, Ill. Filed Mar. 26, 1917.

ETHEREAL

*Particular description of goods.*—Wheat-Flour.
*Claims use* since about 1895.





Ser. No. 102,462. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PFEFFER MILLING COMPANY, Lebanon, Ill. Filed Mar. 26, 1917.

FLUFFY RUFFLES

*Particular description of goods.*—Wheat-Flour, More Specifically Self-Rising Flour.
*Claims use* since about 1911.

Ser. No. 102,463. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PFEFFER MILLING COMPANY, Lebanon, Ill. Filed Mar. 26, 1917.

GYPSY LOVE

*Particular description of goods.*—Wheat-Flour, More Specifically Self-Rising Flour.
*Claims use* since about 1911.

Ser. No. 102,464. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PFEFFER MILLING COMPANY, Lebanon, Ill. Filed Mar. 26, 1917.

JUNE

ROSES

*Particular description of goods.*—Wheat-Flour.
*Claims use* since about 1914.

Ser. No. 102,466. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PFEFFER MILLING COMPANY, Lebanon, Ill. Filed Mar. 26, 1917. Under ten-year proviso.

LEBANON JEWEL

*Particular description of goods.*—Wheat-Flour.
*Claims use* since about January, 1895.

Ser. No. 102,467. (CLASS 46. FOODS AND INGREDIENTS OF GOODS.) PFEFFER MILLING COMPANY, Lebanon, Ill. Filed Mar. 26, 1917.

MARS

*Particular description of goods.*—Wheat-Flour.
*Claims use* since about 1915.

Ser. No. 102,478. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) L. C. BLANCKE CO. INC., New York, N. Y. Filed Mar. 27, 1917.

"TOP NOTCH"

Comprising the words "Top Notch."
*Particular description of goods.*—Steel.
*Claims use* since Mar. 1, 1916.

Ser. No. 102,485. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) M. HEMINWAY & SONS SILK CO., Watertown, Conn. Filed Mar. 27, 1917.

PILGRIM

Comprising the word "Pilgrim."
*Particular description of goods.*—Silk Piece Goods.
*Claims use* since Jan. 1, 1914.

Ser. No. 102,492. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MCCOMB BROTHERS, New York, N. Y. Filed Mar. 27, 1917.

Aladdin

*Particular description of goods.*—Rejuvenator for Oriental and Domestic Rugs, Carpets, and Clothing.
*Claims use* since Mar. 1, 1909.

Ser. No. 102,493. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THEODORE F. MEYER, Springfield, Mass. Filed Mar. 27, 1917.




*Particular description of goods.*—Bluing for Laundry Purposes.
*Claims use* since Feb. 6, 1917.

Ser. No. 102,505. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SOL. BLUM & BROS., New York, N. Y. Filed Mar. 28, 1917.

PRIORITY.

*Particular description of goods.*—Dress-Silks, Lining-Silks, Clothiers' Silk, and Silk Jersey-Cloth Known as Piece Goods.
*Claims use* since Mar. 27, 1917.

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Ser. No. 102,507. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) E. W. CONKLIN & SON, INC., Binghamton, N. Y. Filed Mar. 28, 1917.

SWEEP STAKES

*Particular description of goods.*—Seed-Corn, Seed-Grain, Grass-Seeds, Clover and Field Seeds.
*Claims use* since Mar. 8, 1917.

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Ser. No. 102,537. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SALOMON & PHILLIPS, New York, N. Y. Filed Mar. 28, 1917.

S&P

*Particular description of goods.* — Manufactured Leather.
*Claims use* since Dec. 31, 1873.

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Ser. No. 102,561. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) H. L. HEATH FIBER COMPANY, San Francisco, Cal. Filed Mar. 29, 1917.

SLIVER

*Patricular description of goods.*—Cordage Fiber.
*Claims use* since about March, 1914.

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Ser. No. 102,573. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PONEMAH MILLS, Taftville, Conn. Filed Mar. 29, 1917.

Fleetwing Flying

*Particular description of goods.*—Cotton Piece Goods.
*Claims use* since Mar. 15, 1917.

Ser. No. 102,591. (CLASS 39. CLOTHING.) CONVERSE RUBBER SHOE CO., Malden, Mass. Filed Mar. 30, 1917.

Dainty Maid

*Particular description of goods.*—Women's Boots and Shoes.
*Claims use* since at least as early as Mar. 23, 1917.

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Ser. No. 102,600. (CLASS 39. CLOTHING.) A. E. LITTLE CO., Lynn, Mass. Filed Mar. 30, 1917.

PREPAREDNESS

*Particular description of goods.*—Boots and Shoes Made of Leather or Cloth and Leather.
*Claims use* since Mar. 20, 1917.

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Ser. No. 102,605. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE WESTMORELAND CHEMICAL AND COLOR COMPANY, Philadelphia, Pa. Filed Mar. 30, 1917.

FER-AGULANT

*Particular description of goods.*—Ferric Sulfate in Solution.
*Claims use* since Mar. 5, 1917.

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Ser. No. 102,649. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) S. M. FONTAINE, Minneapolis, Minn. Filed Apr. 2, 1917.

LANTOF

*Particular description of goods.*—A Vegetable Compound for the Treatment of Asthma.
*Claims use* since Mar. 23, 1917.

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Ser. No. 102,655. (CLASS 39. CLOTHING.) THE KAUTREITH SHOE COMPANY, Carthage, Mo. Filed Apr. 2, 1917.

SPORT WALKS

*Particular description of goods.*—Boots and Shoes of Kid, Leather, Bearskin, and Canvas.
*Claims use* since Mar. 22, 1917.

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Ser. No. 102,678. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) BAER BROTHERS, New York, N. Y. Filed Apr. 3, 1917.

BAERNAMEL

*Particular description of goods.*—White Enamel.
*Claims use* since Mar. 1, 1917.





Ser. No. 102,693. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MCKESSON & ROBBINS, INCORPORATED, New York, N. Y. Filed Apr. 3, 1917.

SOSOL

Consisting of the word "Sosol."
*Particular description of goods.*—An Antiseptic and Disinfectant.
*Claims use* since November, 1916.

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Ser. No. 102,696. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MCKESSON & ROBBINS, INCORPORATED, New York, N. Y. Filed Apr. 3, 1917.

PINOTOL

Consisting of the word "Pinotol."
*Particular description of goods.*—A Disinfectant.
*Claims use* since March, 1916.

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Ser. No. 102,697. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MCKESSON & ROBBINS, INCORPORATED, New York, N. Y. Filed Apr. 3, 1917.

Renée

*Particular description of goods.*—Perfumery, Including Liquid and Powder.
*Claims use* since April, 1915.

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Ser. No. 102,701. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) WILLIAM J. SHEEHAN CO. INC., New Haven, Conn. Filed Apr. 3, 1917.

No. 86

*Particular description of goods.*—Whisky.
*Claims use* since August, 1904.

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Ser. No. 102,713. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CHEMICAL PIGMENTS CORPORATION, Philadelphia, Pa. Filed Apr. 4, 1917.

ZINCOLITH

*Particular description of goods.*—Chemical Pigments.
*Claims use* since Feb. 9, 1917.

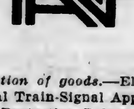
Ser. No. 102,719. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOGWOOD PRODUCTS CORPORATION, New York, N. Y. Filed Apr. 4, 1917.



*Particular description of goods.*—Vegetable Dyes—viz., Logwood Liquid Extract, 51° Twaddell; Hematin Crystals, and Logwood Paste.
*Claims use* since November, 1916.

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Ser. No. 102,723. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE NATIONAL SAFETY APPLIANCE COMPANY, San Francisco, Cal. Filed Apr. 4, 1917.



*Particular description of goods.*—Electrical Train-Stop Appliances, Electrical Train-Signal Appliances, Connector-Plugs, Line-Relays, Protective Relays, Time-Element Relays, Engine-Relays, Engine-Relay Cases, Track-Magnet Cases, Receiving-Coil Cases, Electropneumatic Valves and Cases for the Same.
*Claims use* since Aug. 5, 1915.

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Ser. No. 102,735. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JESSE CLYDE DUBLE, New York, N. Y. Filed Apr. 5, 1917.

Jack Frost

*Particular description of goods.*—Ginger-Ale, Sarsaparilla, Birch-Beer, Lemon-Soda, Orange-Soda, Vanilla-Soda, Pineapple-Soda, Raspberry-Soda, Strawberry-Soda, Nectar, Root-Beer, Pop, and Soda.
*Claims use* since Mar. 24, 1917.

Ser. No. 102,740. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES D. HOFFAR, Louisville, Ky. Filed Apr. 5, 1917.

ZIN-KAS

*Particular description of goods.*—A Medicinal Compound for Constipation and Indigestion, Usually in the Form of Tablets.
*Claims use* since on or about Sept. 1, 1916.

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Ser. No. 102,741. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN H. HOWATT, Port Chester, N. Y. Filed Apr. 5, 1917.

NON-COROSO

Comprising the words "Non-Coroso."
*Particular description of goods.*—An Antifouling Compound.
*Claims use* since Sept. 21, 1915.

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Ser. No. 102,749. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) NATHAN AND COHEN CO. INC., New York, N. Y. Filed Apr. 5, 1917.

LIN-N-LIK

*Particular description of goods.*—Cotton Piece Goods.
*Claims use* since Mar. 1, 1917.

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Ser. No. 102,765. (CLASS 39. CLOTHING.) BUCKINGHAM & HECHT, San Francisco, Cal. Filed Apr. 6, 1917.

BUCKHECHT

*Particular description of goods.*—Boots, Shoes, and Slippers Made Wholly or in Part of Leather and Fabric.
*Claims use* since Jan. 19, 1917.

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Ser. No. 102,781. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) C. A. PETERS LIMITED, Derby, England. Filed Apr. 6, 1917.

PETERLINEUM

*Particular description of goods.*—Wood-Preservatives.
*Claims use* since Mar. 1, 1917.

Ser. No. 102,803. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ROESSLER & HASSLACHER CHEMICAL CO., New York, N. Y. Filed Apr. 7, 1917.

CIANUOVO

*Particular description of goods.*—Cyanid Salts Adapted for Metallurgical and other Uses.
*Claims use* since Apr. 2, 1917.

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Ser. No. 102,804. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ROESSLER & HASSLACHER CHEMICAL CO., New York, N. Y. Filed Apr. 7, 1917.

CIANHUEVO

*Particular description of goods.*—Cyanid Salts Adapted for Metallurgical and other Uses.
*Claims use* since Apr. 2, 1917.

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Ser. No. 102,816. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BERFELDEN MILLS, Plainfield, N. J. Filed Apr. 7, 1917.

"Morning Glory"

*Particular description of goods.*—Broad Silk.
*Claims use* since Jan. 3, 1917.

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Ser. No. 102,846. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) BURGESS BATTERY COMPANY, Madison, Wis. Filed Apr. 10, 1917.

BANNER

*Particular description of goods.*—Electric Batteries.
*Claims use* since Jan. 23, 1917.

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Ser. No. 102,847. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM H. BOLTON, Seattle, Wash. Filed Apr. 10, 1917.

Lavasepsis

*Particular description of goods.*—Germicide and Antiseptic Solution.
*Claims use* since Jan. 1, 1917.





Ser. No. 102,850. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Apr. 10, 1917.

JUPO

*Particular description of goods.*—Illuminating, Lubricating, and Burning Oils and Greases.
*Claims use* since Mar. 21, 1917.

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Ser. No. 102,851. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Apr. 10, 1917.

PACEMAKER

*Particular description of goods.*—Illuminating, Lubricating, and Burning Oils and Greases.
*Claims use* since Mar. 21, 1917.

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Ser. No. 102,852. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Apr. 10, 1917.

SENTRY

*Particular description of goods.*—Illuminating, Lubricating, and Burning Oils and Greases.
*Claims use* since Mar. 21, 1917.

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Ser. No. 102,853. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Apr. 10, 1917.

PERFECTOL

*Particular description of goods.*—Illuminating, Lubricating, and Burning Oils and Greases.
*Claims use* since Mar. 21, 1917.

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Ser. No. 102,854. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Apr. 10, 1917.

AMPLEX

*Particular description of goods.*—Illuminating, Lubricating, and Burning Oils and Greases.
*Claims use* since Mar. 21, 1917.

Ser. No. 102,855. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Apr. 10, 1917.

SANDOW

*Particular description of goods.*—Illuminating, Lubricating, and Burning Oils and Greases.
*Claims use* since Mar. 21, 1917.

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Ser. No. 102,856. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Apr. 10, 1917.

RAVEN

*Particular description of goods.*—Illuminating, Lubricating, and Burning Oils and Greases.
*Claims use* since Mar. 21, 1917.

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Ser. No. 102,857. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Apr. 10, 1917.

PARAMOUNT

*Particular description of goods.*—Illuminating, Lubricating, and Burning Oils and Greases.
*Claims use* since Mar. 21, 1917.

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Ser. No. 102,858. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Apr. 10, 1917.

GANADOR

*Particular description of goods.*—Illuminating, Lubricating, and Burning Oils and Greases.
*Claims use* since Mar. 21, 1917.

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Ser. No. 102,868. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LOVEMAN BROTHERS, New York, N. Y. Filed Apr. 10, 1917.

Netquisette

Comprising the word "Netquisette."
*Particular description of goods.*—Piece Goods of Cotton Silk, Cotton, and Artificial or Real Silk and Mixtures of the Same.
*Claims use* since Apr. 3, 1917.

Ser. No. 102,879. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHERWOOD E. CHEESEMAN, Phoebus, Va. Filed Apr. 11, 1917.



*Particular description of goods.*—A Germicide.
*Claims use* since July, 1916.

Ser. No. 102,913. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE STORK COMPANY, Boston, Mass. Filed Apr. 12, 1917.

Stork

*Particular description of goods.*—Rubber Nipples, Baby Comforters or Pacifiers, and Babies' Nursing-Bottles.
*Claims use* since prior to April, 1910.

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Ser. No. 102,995. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDERICK STEARNS & CO., Detroit, Mich. Filed Apr. 14, 1917.

VIROX

*Particular description of goods.*—Nerve-Tonic.
*Claims use* since November, 1916.

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# TRADE-MARK REGISTRATIONS GRANTED

## MAY 8, 1917.

116,495. CERTAIN PILE REMEDY. AJAX PILE REMEDY COMPANY, Chicago, Ill.
Filed October 9, 1916. Serial No. 98,510. PUBLISHED MARCH 6, 1917.

116,496. STUFFED RIPE OLIVES AND RIPE OLIVES. ALEXANDER & CALLEN, Los Angeles, Cal.
Filed January 8, 1917. Serial No. 100,414. PUBLISHED FEBRUARY 27, 1917.

116,497. SUGAR FOR USE AS A FOOD. THE AMERICAN SUGAR REFINING COMPANY, Jersey City, N. J., and New York, N. Y.
Filed January 12, 1917. Serial No. 100,540. PUBLISHED FEBRUARY 27, 1917.

116,498. APPETIZER MADE FROM SELECT OLD WINES. LUCIEN ARDIN, New York, N. Y.
Filed December 2, 1916. Serial No. 99,673. PUBLISHED MARCH 6, 1917.

116,499. CAPSULES CONTAINING ATROPIN, STRYCHNIN, AND EXTRACT CANNABIS INDICA, USED AS HOME LIQUOR AND DRUG TREATMENT. FRED I. BARKER, Minneapolis, Minn.
Filed January 15, 1917. Serial No. 100,605. PUBLISHED MARCH 6, 1917.

116,500. NON-INTOXICATING BREWED SOFT DRINK. VAL. BLATZ BREWING CO., Milwaukee, Wis.
Filed January 26, 1917. Serial No. 100,979. PUBLISHED MARCH 6, 1917.

116,501. CANNED SALMON. BOOTH FISHERIES COMPANY, Chicago, Ill.
Filed January 9, 1917. Serial No. 100,470. PUBLISHED FEBRUARY 27, 1917.

116,502. SODA-ASH, CAUSTIC SODA, CHLORATE OF POTASH, AND BICHROMATE OF SODA. B. BROWN & BRO., New York, N. Y.
Filed January 15, 1917. Serial No. 100,606. PUBLISHED MARCH 6, 1917.

116,503. SALTED PEANUTS, PEANUT-BUTTER, PEANUT-OIL, COFFEE, SUGAR, AND TEA. THE BRUNDAGE BROS. CO., Toledo, Ohio.
Filed January 22, 1917. Serial No. 100,793. PUBLISHED FEBRUARY 27, 1917.

116,504. DENTIFRICES. BUCADYNE CHEMICAL COMPANY, San Francisco, Cal.
Filed January 2, 1917. Serial No. 100,278. PUBLISHED MARCH 6, 1917.

116,505. CERTAIN NAMED FOODS. CASTLE BROTHERS, San Francisco, Cal.
Filed January 15, 1917. Serial No. 100,610. PUBLISHED FEBRUARY 27, 1917.

116,506. CERTAIN NAMED FOODS. CHAMBERLAIN & COMPANY, INC., Boston, Mass.
Filed November 20, 1915. Serial No. 90,786. PUBLISHED MARCH 6, 1917.

116,507. VALVE-GRINDING COMPOUND. HARRY H. CHANDLER, New York, N. Y.
Filed January 13, 1916. Serial No. 92,100. PUBLISHED FEBRUARY 27, 1917.

116,508. HAIR-WATER FOR TREATING DANDRUFF AND MEDICATED INJECTION AND PILLS FOR TREATING VENEREAL DISEASES. HOLGER V. CLAUSEN, New York, N. Y.
Filed January 17, 1917. Serial No. 100,663. PUBLISHED MARCH 6, 1917.

116,509. WORK-SHIRTS. AUGUST P. EIGENMANN, Evansville, Ind.
Filed October 23, 1916. Serial No. 98,832. PUBLISHED MARCH 6, 1917.

116,510. PREPARATION FOR THE TREATMENT OF CERTAIN NAMED DISEASES. STEPHEN FARGO, Cleveland, Ohio.
Filed January 29, 1917. Serial No. 101,005. PUBLISHED MARCH 6, 1917.

116,511. FRUIT JELLIES, PRESERVES, AND MARMALADES. FLORIDA FRUIT PRESERVING CO., Jacksonville, Fla.
Filed January 15, 1917. Serial No. 100,618. PUBLISHED FEBRUARY 27, 1917.

116,512. ASPARAGUS GIN. FOLSOM ASPARAGUS GIN CO., San Francisco, Cal.
Filed December 30, 1916. Serial No. 100,252. PUBLISHED MARCH 6, 1917.

116,513. REMEDY FOR MUSCULAR RHEUMATISM. ALPHONSE P. FOOSE, Dayton, Ohio.
Filed January 18, 1917. Serial No. 100,698. PUBLISHED MARCH 6, 1917.

116,514. REMEDY FOR ASTHMA. FROST REMEDY COMPANY, Albany, Mo.
Filed November 29, 1916. Serial No. 99,624. PUBLISHED JANUARY 2, 1917.

116,515. WOOD-PRESERVATIVES AND CREOSOTE SHINGLE-STAINS. GENERAL ROOFING MANUFACTURING COMPANY, East St. Louis, Ill.
Filed December 6, 1915. Serial No. 91,220. PUBLISHED MARCH 6, 1917.

116,516. ANTIPHLOGISTIC PREPARATION IN THE FORM OF A PLASTIC DRESSING. THE GERMICIDE COMPANY, Denver, Colo.
Filed October 27, 1916. Serial No. 98,923. PUBLISHED JANUARY 2, 1917.

116,517. SPAGHETTI, APPLE-BUTTER, MINCE-MEAT, AND MARMALADES. GLENCREST FOOD CO., Chicago, Ill.
Filed November 18, 1916. Serial No. 99,374. PUBLISHED FEBRUARY 27, 1917.

116,518. TOILET WATER, PERFUMES, AND NAIL-POLISH. GOODRICH DRUG COMPANY, Omaha, Nebr.
Filed January 29, 1917. Serial No. 101,007. PUBLISHED MARCH 6, 1917.

116,519. SOLES AND HEELS FOR BOOTS AND SHOES FORMED OF AN ARTIFICIAL COMPOSITION. THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio.
Filed January 31, 1917. Serial No. 101,065. PUBLISHED MARCH 6, 1917.

116,520. ORGANIC PHOSPHORUS COMPOUNDS. THE GRAIN CHEMICAL COMPANY, INC., New York, N. Y.
Filed January 17, 1917. Serial No. 100,670. PUBLISHED MARCH 6, 1917.

116,521. SELF-LUBRICATING TROLLEY-WHEEL BUSHINGS AND METAL AND GRAPHITE BEARINGS AND BUSHINGS. THE GRAPHITE LUBRICATING COMPANY, Boundbrook, N. J.
Filed October 19, 1914. Serial No. 81,982. PUBLISHED JANUARY 23, 1917.

116,522. CONDENSED MILK. GEORGE R. HARDIE, New York, N. Y.
Filed January 8, 1917. Serial No. 100,427. PUBLISHED FEBRUARY 27, 1917.

116,523. [WITHDRAWN.]

116,524. CERTAIN NAMED CONFECTIONERY. IMPERIAL CANDY CO., Seattle, Wash.
Filed November 11, 1916. Serial No. 99,245. PUBLISHED MARCH 6, 1917.

116,525. TALKING-MACHINES. E. P. JOHNSON PIANO CO., Ottawa, Ill.
Filed June 21, 1916. Serial No. 96,018. PUBLISHED FEBRUARY 27, 1917.

116,526. ODORLESS KEROSENE USED AS A HAIR-DRESSING AND DANDRUFF-REMOVER. CHARLES KERVAN, New York, N. Y.
Filed February 2, 1917. Serial No. 101,127. PUBLISHED MARCH 6, 1917.

116,527. REMEDY FOR CERTAIN NAMED AFFECTIONS AND DISEASES. LOUIS W. KIRCHNER, Baltimore, Md.
Filed January 18, 1917. Serial No. 100,712. PUBLISHED MARCH 6, 1917.

116,528. REMEDY FOR CHOLERA AFFECTING CATTLE AND FOWL. MARIE KLABENES, Leigh, Nebr.
Filed February 1, 1917. Serial No. 101,098. PUBLISHED MARCH 6, 1917.

116,529. CALCIUM SALTS. P. MAX KUEHNRICH, Los Angeles, Cal.
Filed September 27, 1916. Serial No. 98,262. PUBLISHED MARCH 6, 1917.

116,530. CALCIUM SALTS. P. MAX KUEHNRICH, Los Angeles, Cal.
Filed September 27, 1916. Serial No. 98,264. PUBLISHED MARCH 6, 1917.

116,531. CALCIUM SALTS. P. MAX KUEHNRICH, Los Angeles, Cal.
Filed September 27, 1916. Serial No. 98,266. PUBLISHED MARCH 6, 1917.

116,532. POWDER USED AS A REMEDY FOR PILES. SHIELDS DAVID LANCE, Troy, Ohio.
Filed January 31, 1917. Serial No. 101,073. PUBLISHED MARCH 6, 1917.

116,533. CANNED FRUITS AND VEGETABLES. LANGE CANNING CO., Eau Claire, Wis.
Filed June 8, 1916. Serial No. 95,710. PUBLISHED JANUARY 23, 1917.

116,534. DANDRUFF AND FALLING HAIR. THE LONGWOOD LABORATORIES, INCORPORATED, Kingston, N. Y.
Filed January 27, 1917. Serial No. 100,994. PUBLISHED MARCH 6, 1917.

116,535. MINERAL WATER, CARBONIC WATER, AND TABLE-WATER. JUAN MARTI, Santa Coloma de Farnés, Spain.
Filed October 14, 1916. Serial No. 98,663. PUBLISHED MARCH 6, 1917.

116,536. DIPHTHERIA SPECIFIC. SIDNEY C. MATHIS, Walton county, Ga.
Filed January 25, 1917. Serial No. 100,932. PUBLISHED MARCH 6, 1917.

116,537. PINE-OIL ANTISEPTIC. THE WILLIAM S. MERRELL CHEMICAL COMPANY, Cincinnati, Ohio.
Filed January 29, 1917. Serial No. 101,010. PUBLISHED MARCH 6, 1917.

116,538. ANTISEPTIC, GERMICIDE, AND DISINFECTANT FOR DENTAL USE. HENRY MESTAYER, New Orleans, La.
Filed January 8, 1917. Serial No. 100,440. PUBLISHED MARCH 6, 1917.

116,539. OINTMENT ESPECIALLY PREPARED FOR THE EYE, EAR, AND NOSE AND GENERAL USE. E. R. MILLER, Frederick, Md.
Filed December 1, 1916. Serial No. 99,661. PUBLISHED MARCH 6, 1917.

116,540. CLEANSING OR SCOURING CAKE OR POWDER. ENOCH MORGAN'S SONS COMPANY, New York, N. Y.
Filed August 7, 1916. Serial No. 97,140. PUBLISHED MARCH 6, 1917.

116,541. BREAKFAST-BACON. JOHN MORRELL & CO., Ottumwa, Iowa.
Filed November 4, 1916. Serial No. 99,092. PUBLISHED DECEMBER 5, 1916.

116,542. PORK, AND PARTICULARLY FOR PORK CURED WITH DRY SALT AND PLAIN PICKLE. MORRIS AND COMPANY, Chicago, Ill.
Filed October 2, 1916. Serial No. 98,370. PUBLISHED FEBRUARY 27, 1917.

116,543. CANDIES. WILLIAM A. MOSBY, Marvell, Ark.
Filed January 13, 1917. Serial No. 100,586. PUBLISHED FEBRUARY 27, 1917.

116,544. BEVERAGE MADE FROM A COMPOUND OF MALT AND HOPS AND CEREALS. MÜNCH BREWERY BOTTLING DEPT., INC., New York and Brooklyn, N. Y.
Filed October 26, 1916. Serial No. 98,906. PUBLISHED JANUARY 16, 1917.

116,545. [WITHDRAWN.]

116,546. LAXATIVE TABLET. THE S. S. NETTLES CO., Montgomery, Ala.
Filed January 26, 1917. Serial No. 100,968. PUBLISHED MARCH 6, 1917.

116,547. NASAL SALVE. THE NORYZON COMPANY, INC., New York, N. Y.
Filed January 20, 1917. Serial No. 100,775. PUBLISHED MARCH 6, 1917.

116,548. FIRE-EXTINGUISHING COMPOUND. THE NU-EX FIRE APPLIANCE CO., Columbus, Ohio.
Filed January 29, 1917. Serial No. 101,017. PUBLISHED MARCH 6, 1917.

116,549. SODIUM SILICATE. PHILADELPHIA QUARTZ COMPANY, Philadelphia, Pa.
Filed January 20, 1917. Serial No. 100,778. PUBLISHED MARCH 6, 1917.

116,550. MEDICAMENTS FOR RECTAL AND VAGINAL APPLICATION. EDMUND MORSE POND, Rutland, Vt.
Filed January 9, 1917. Serial No. 100,500. PUBLISHED MARCH 6, 1917.

116,551. RUBBER SOLES AND HEELS. QUABAUG RUBBER COMPANY, Brookfield and North Brookfield, Mass.
Filed January 8, 1917. Serial No. 100,450. PUBLISHED MARCH 6, 1917.

116,552. OVERALLS. RELIANCE MANUFACTURING COMPANY, Chicago, Ill.
Filed November 27, 1916. Serial No. 99,586. PUBLISHED JANUARY 23, 1917.

116,553. CANDY. RIDLEY'S, THE OLD CHAMBER ST. CANDY MANUFACTORY, New York, N. Y.
Filed October 6, 1916. Serial No. 98,483. PUBLISHED MARCH 6, 1917.

116,554. PREPARATION FOR THE TREATMENT OF GRAVEL, BLADDER, BACKACHE, AND KIDNEY TROUBLE. ALBERT ROBART, Minerva, Ohio.
Filed July 10, 1916. Serial No. 96,473. PUBLISHED MARCH 6, 1917.

116,555. ICE-CREAM CONES. ROBERTS CONE MANUFACTURING COMPANY, St. Joseph, Mo.
Filed December 15, 1916. Serial No. 99,969. PUBLISHED MARCH 6, 1917.



116,556. VETERINARY REMEDY—NAMELY, A PREPARATION FOR THE TREATMENT OF HEAVES IN HORSES AND MULES. ELMER R. RODGERS, St. Joseph, Mich.
Filed November 14, 1916. Serial No. 99,302. PUBLISHED MARCH 6, 1917.

116,557. TEA. THE "SALADA" TEA COMPANY INCORPORATED, Portland, Me., and Boston, Mass.
Filed August 8, 1916. Serial No. 97,171. PUBLISHED MARCH 6, 1917.

116,558. PERFUMES, COLD-CREAM, MASSAGE-CREAM, TOILET WATER, AND FACE-POWDER. SALUX DRUG COMPANY, St. Louis, Mo.
Filed February 4, 1916. Serial No. 92,650. PUBLISHED JANUARY 23, 1917.

116,559. LEATHER SHOES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed January 30, 1917. Serial No. 101,045. PUBLISHED MARCH 6, 1917.

116,560. CHILDREN'S SLEEPING-GARMENTS. W. SHANHOUSE & SONS, Rockford, Ill.
Filed September 5, 1916. Serial No. 97,811. PUBLISHED MARCH 6, 1917.

116,561. CAKES. HARRY W. SLOAT, Chicago, Ill.
Filed October 9, 1916. Serial No. 98,532. PUBLISHED FEBRUARY 27, 1917.

116,562. PHOTOGRAPHIC DEVELOPERS. STRUSS-ANDERSON LABORATORIES, New York, N. Y.
Filed January 17, 1917. Serial No. 100,684. PUBLISHED MARCH 6, 1917.

116,563. PHOTOGRAPHIC DEVELOPERS. STRUSS-ANDERSON LABORATORIES, New York, N. Y.
Filed January 17, 1917. Serial No. 100,685. PUBLISHED MARCH 6, 1917.

116,564. CHOCOLATES. SWEET CANDY CO., Salt Lake City, Utah.
Filed January 15, 1917. Serial No. 100,634. PUBLISHED FEBRUARY 27, 1917.

116,565. COMPOSITION INSOLES, BOX-TOES, AND HEEL-COUNTERS FOR BOOTS AND SHOES. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed January 29, 1917. Serial No. 101,025. PUBLISHED MARCH 6, 1917.

116,566. COMPOSITION INSOLES, BOX-TOES, AND HEEL-COUNTERS FOR BOOTS AND SHOES. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed January 29, 1917. Serial No. 101,026. PUBLISHED MARCH 6, 1917.

116,567. PREPARATION FOR TREATMENT OF CANCER AND FOR CHARGING WATER WITH RADIO-ACTIVE THERAPEUTIC PROPERTIES. JAMES FRANK WALLIS, Pleasantville, N. J.
Filed December 27, 1916. Serial No. 100,213. PUBLISHED MARCH 6, 1917.

116,568. BUTTER. FRANK WASKOW, Chicago, Ill.
Filed September 22, 1916. Serial No. 98,173. PUBLISHED FEBRUARY 27, 1917.

116,569. MEDICINAL PREPARATION OR TONIC FOR USE IN CERTAIN NAMED CONDITIONS. HORACE P. WILKINS, Chicago, Ill.
Filed February 2, 1917. Serial No. 101,186. PUBLISHED MARCH 6, 1917.

# TRADE-MARK REGISTRATIONS RENEWED.

14,837. PREPARED BARLEY. KEEN, ROBINSON & BELLVILLE, London, England; Keen Robinson and Company, Limited, London, England, a Corporation of Great Britain, assignee by mesne assignments.
Registered October 18, 1887. Renewed October 18, 1917.

# LABELS

## REGISTERED MAY 8, 1917.

20,070.—*Title:* "JEWEL STOVES AND FURNACES DETROIT STOVE WORKS." (For Stoves and Furnaces.) DETROIT STOVE WORKS, Detroit, Mich. Filed March 17, 1917.

20,071.—*Title:* "HEALTH FOOD." (For Bread.) JOHN W. HAMILTON, Hutchinson, Kans. Filed April 19, 1917.

20,072.—*Title:* "HEALTH FOOD." (For Candy.) JOHN W. HAMILTON, Hutchinson, Kans. Filed April 19, 1917.

20,073.—*Title:* "MORTON'S." (For Chewing-Gum.) INDEPENDENT GUM CO., Kansas City, Mo. Filed April 18, 1917.

20,074.—*Title:* "MORTON'S." (For Chewing-Gum.) INDEPENDENT GUM CO., Kansas City, Mo. Filed April 18, 1917.

20,075.—*Title:* "MEN'S SUIT BUTTONS." (For Buttons.) INDEPENDENT BUTTON & MACHINE COMPANY, Chicago, Ill. Filed April 25, 1917.

20,076.—*Title:* "SAVE-THE-COW." (For Medicine for Cows.) GEORGE H. LAPE, Adrian, Mich. Filed April 9, 1917.

20,077.—*Title:* "WHITE LILY BRAND BUTTER." (For Butter.) S. LESHIN, Milwaukee, Wis. Filed February 12, 1917.

20,078.—*Title:* "OLD MORRIS 1878 BRAND." (For Whisky.) I. MICHELSON & BROTHERS, Cincinnati, Ohio. Filed April 20, 1917.

20,079.—*Title:* "FOR PLAYTIME AND ALL TIMES." (For Boys' and Girls' Outer Garments.) MCCAWLEY & Co. INC., Baltimore, Md. Filed March 13, 1917.

20,080.—*Title:* "NOWATER CLEANSER MADE IN U. S. A." (For Cleansers.) THE NOWATER SOAP AND CLEANSER CO. OF U. S. A., Warren, Pa. Filed March 1, 1917.

20,081.—*Title:* "HAPPY HOLLOW." (For Coffee.) OLSON COFFEE CO., Omaha, Nebr. Filed April 24, 1917.

20,082.—*Title:* "FOR THAT THIRST." (For Non-Alcoholic Beverage.) THE QUENCHO CO., Baltimore, Md. Filed April 9, 1917.

20,083.—*Title:* "FOR DRY PEOPLE." (For Non-Alcoholic Beverage.) THE QUENCHO CO., Baltimore, Md. Filed April 9, 1917.

20,084.—*Title:* "FOR GOODNESS SAKE." (For Non-Alcoholic Beverage.) THE QUENCHO CO., Baltimore, Md. Filed April 9, 1917.

20,085.—*Title:* "RANDOLPH SPECIAL." (For Oranges.) RANDOLPH FRUIT CO., Los Angeles, Cal. Filed April 24, 1917.

20,086.—*Title:* "SUNAPEE." (For Fine Yarn Chambray.) RELIANCE MANUFACTURING COMPANY, Chicago, Ill. Filed April 16, 1917.

20,087.—*Title:* "BO." (For Cigars.) R. P. RICHARDSON, JR. & CO. INC., East Orange, N. J., and Reidsville, N. C. Filed April 6, 1917.

20,088.—*Title:* "COTTON-TOP." (For Non-Intoxicating Beverages.) JULIUS F. TIEBERMAN, Cincinnati, Ohio. Filed April 23, 1917.

20,089.—*Title:* "NAIL BRIGHT." (For Nail-Polish.) WHEELER BEAUTY CO., New York, N. Y. Filed January 23, 1917.

20,090.—*Title:* "QUALITY CIGARS." (For Cigars.) AMERICAN LITHOGRAPHIC COMPANY, New York, N. Y. Filed March 21, 1917.

20,091.—*Title:* "DIRECTIONS." (For E-Z Marvel Cleaner.) GEORGE HESS, Chicago, Ill. Filed April 19, 1917.

20,092.—*Title:* "E-Z MARVEL KLEANER." (For a Cleaner.) GEORGE HESS, Chicago, Ill. Filed April 19, 1917.

# PRINTS

## REGISTERED MAY 8, 1917.

4,683.—*Title:* "CHEERFULLY BRIGHT WHEREVER O-CEDAR POLISH IS USED." (For O-Cedar Polish.) CHANNELL CHEMICAL COMPANY, Chicago, Ill. Filed November 3, 1916.

4,684.—*Title:* "THE O-CEDAR WAY." (For O-Cedar Polish.) CHANNELL CHEMICAL COMPANY, Chicago, Ill. Filed November 3, 1916.

4,685.—*Title:* "BULLETIN B-602." (For Lathes.) DALTON MACHINE CO. INC., New York, N. Y. Filed April 25, 1917.

4,686.—*Title:* "BULLETIN B-601." (For Lathes.) DALTON MACHINE CO. INC., New York, N. Y. Filed April 25, 1917.

4,687.—*Title:* "BULLETIN B-603." (For Lathes.) DALTON MACHINE CO. INC., New York, N. Y. Filed April 25, 1917.

4,688.—*Title:* "ALWAYS IMPROVING." (For Stoves and Ranges.) RATHBONE SARD & COMPANY, Albany, N. Y. Filed April 4, 1917.

4,689.—*Title:* "ALWAYS IMPROVING." (For Ranges and Heaters.) RATHBONE SARD & COMPANY, Albany, N. Y. Filed April 4, 1917.

4,690.—*Title:* "NUGGET FASTENER." (For Spring Snap-Fasteners.) SPRING SNAP FASTENER COMPANY, Lynn, Mass. Filed April 7, 1917.



# DECISIONS

OF THE

# COMMISSIONER OF PATENTS

AND OF

# UNITED STATES COURTS IN PATENT CASES.

## DECISIONS OF THE U. S. COURTS.

### Court of Appeals of the District of Columbia.

IN RE TRAVILLA.

*Decided January 29, 1917.*

PATENTABILITY—PROCESS OF CONSTRUCTING ROADS.

Claims *Held* to be unpatentable in view of the art of record.

*Mr. James A. Carr* for the appellant.

*Mr. W. R. Ballard* for the Commissioner of Patents.

SHEPARD, *C. J.*:

This is an appeal from a decision of the Patent Office rejecting the following claims in an application for a patent:

1. The improvement in the process of constructing roads which consist in spreading, raking and rolling a course of stone, spreading and rolling a second course of stone on said first course, the stones of said second course being smaller than the stones of said first course and being spread in a predetermined quantity equal to the quantity which can be rolled tightly into said first course and below the surface thereof, and applying a penetrating bitumen binder to said course.

2. The improvement in the process of constructing roads which consist in forming a bond between the constituent parts thereof by applying thereto a coat of tar, and then applying a binder of asphaltic cement.

3. The improvement in the process of constructing roads which consist in spreading a course of stones of comparatively large size, spreading on said first course a second course of stones of smaller size, rolling the stones of said second course tightly into the spaces between the stones of said first course and below the surface of said first course, applying liquid tar, and then applying liquid asphaltic cement.

4. The improvement in the process of constructing roads which consists in rolling courses of stones together, the size of the stones of each of said courses being successively smaller than the stones in the preceding course, and the amount of stones in each of said courses being predetermined as the amount which can be rolled tightly into the surface of the unfinished road formed by the preceding courses, applying a coat of refined tar to the constituent parts of said courses, and then applying a binder of asphaltic cement.

5. The improvement in the process of constructing roads which consists in rolling courses of stone together, the size and amount of the stones in said course being proportioned to fill partially the void spaces in said unfinished road, applying an adhesive coat of a material capable of inseparably adhering to the stones in said courses, and then applying a cohesive binder capable of adhering to said adhesive coat.

6. The improvement in the process of building roads which consists in coating the constituent parts of a course of stone with a penetrating adhesive bitumen, and afterward bonding together the constituent parts thus coated with a cohesive bitumen.

7. The process of making roads which consists in spreading, raking and rolling a course of stone, spreading and rolling on said first course a second course of stone, the stones of said second course being smaller than the stones of said first course, the quantity of stones of said second course being predetermined as the quantity which will enter tightly into the spaces between the stones of said first course, then applying a bituminous cement to the unfinished road thus formed and finally rolling into the spaces between the stones of said unfinished road other still smaller stones.

8. The process of making roads which consists in rolling together a series of separately applied courses of stone, the size and amount of the stones in each of said courses being proportioned to fill partially the void spaces in the upper part of the road, in applying a coat of tar to the constituent parts of the upper part of said road, and then filling the spaces between said constituent parts with a binder of asphaltic cement.

9. The improvement in the process of constructing roads which consists in making a base, laying a course of stone on said base, raking and rolling said course, and partially filling the void spaces in said course by rolling into the surface of said course other courses of stone the stones in each of said other courses being proportioned in size and amount according to the size and amount of the void spaces in said course so as to form a road body having inherent stability.

10. The process of constructing roads which consists in spreading a course of comparatively large stone over a base, raking and rolling said course, the stone in said course constituting the major portion of the stone in the completed road, spreading on said first course a second course whose stones are smaller than the stones in said first course, rolling the stones of said second course tightly into the spaces between the stones of said first course, applying hot tar to said stones, applying heated asphaltic cement after said tar has set, spreading a third course of stone of smaller size than the stones in said second course, rolling the stones of said third course tightly into the interstices of the partly formed road, and spreading and rolling a fourth course of still smaller stone.

11. The process of constructing roads which consists in spreading a layer about five inches thick of stones of a size from three inches to one and three-quarters inches, raking and rolling said stones, spreading and rolling on said layer a comparatively small quantity of stones of a size of from one and one-half inches to three-quarters of an inch, applying hot tar to the partly formed road, then applying heated asphaltic cement to said partly formed road after said tar has set spreading and rolling a comparatively small quantity of stones of a size of from one-half of an inch to one-quarter of an inch, and then spreading and rolling a small quantity of stone of still another smaller size.

12. A road composed of stone graded in size and having the amount of each size proportioned to fill partially the void spaces in said road, an adhesive coat on said stone, and a cohesive binder between said stone.

13. A road composed of stone, an adhesive coat of tar on said stone, and a cohesive binder of asphaltic cement between said stone.

14. A road composed of stone, the larger stones of said road being at the top of said road, the space between said larger stones being partially filled by smaller stones, the stones in the upper part of said road having a coat of tar thereon, the spaces between said stones in the upper part of said road being occupied by asphaltic cement.

15. A road composed of stones of different sizes, the different sized stones being interlocked with one another to form a body having the amount of void space therein sufficiently small to prevent internal displacement under traffic, an adhesive coat of a material capable of inseparably adhering to said stones, and a cohesive binder between said stones of a material capable of adhering to said adhesive coat.

The decisions of the various tribunals of the Office discuss the questions raised by the applicant very fully. They cite a patent to Warren, March 11, 1902; Warren, May 5, 1903; Badger, August 21, 1906; and an old English patent to Cassell, 1834, and, also, Bulletin 98 of the United States Department of Agriculture, Office of Public Roads, issued December 12, 1912, page 10, section 6.

The experiment noted by the United States Department of Agriculture, taken in connection with the various patents cited, was considered to show a

complete anticipation of the invention claimed by the applicant.

We agree with the conclusions of the Commissioner, and content ourselves with referring to the several decisions of the Office which are found in the record.

The decision is affirmed.

Affirmed.

## Court of Appeals of the District of Columbia.

IN RE MATTULLATH.

*Decided February 5, 1917.*

1. PATENTABILITY—FLYING-MACHINE.

Claims *Held* to be unpatentable on the ground of inoperativeness.

2. SAME—RES ADJUDICATA.

The decision in *in re Mattullath* (38 App. D. C., 497; C. D., 1912, 490) was directed to the question of abandonment, and the question of operativeness was not passed upon.

*Mr. W. H. Swenarton* for the appellant.

*Mr. W. R. Ballard* for the Commissioner of Patents.

ROBB, *J.:*

This is an appeal from a decision of the Commissioner of Patents rejecting ten claims of an application for patent. Claims 1, 3 and 10 are here reproduced:

1. In a flying machine, the combination with a supporting body and the aeroplane mounted thereon, of supporting stanchions composed of vertical uprights, keels of hollow ship-shaped cross section united at a distance apart by a vertical series of transverse members constituting aeroplanes and stiffening members.

3. In a flying machine of the character described, the herein described means for promoting its lateral stability during flight, the same consisting in the combination with the fixed supporting aeroplanes thereof, of two boat-shaped cars extending longitudinally of the flying machine adjacent its outer edges, said boats being widely separated and dividing between them the principal part of the weight so as to increase the moment of inertia of the vessel.

10. In a flying machine of the aeroplane type, the combination of a plane supporting means, elevation controlling means movable about a transverse horizontal axis of the machine, laterally arranged stabilizing means positioned on opposite sides of the longitudinal axis of said machine, and a steering rudder operatably connected with said machine.

The alleged invention, as will be gathered from a reading of the above claims, relates to a heavier-than-air flying-machine, and the rejection was on the ground of inoperativeness. About 1903 the application was held abandoned for failure to respond to Office action within the year provided by law. Several years later, upon the refusal of the Commissioner to grant a petition to revive it, an appeal was taken to this court and we ruled that there had been no abandonment and therefore reversed the decision of the Commissioner—

with direction to set aside the order of abandonment and reinstate the application. (*In re Mattullath*, 38 App. D. C., 497.)

It now is urged that our decision involved the question of operativeness, and hence is *res adjudicata* here. The fallacy of this contention soon will become apparent. The Office had ruled that the application was abandoned for failure of the applicant properly to respond to Office action. A petition was addressed to the Commissioner to revive the application, and the only question before this court was whether the Commissioner erred in refusing that petition. A reversal of his decision simply established the *status quo;* in other words, it reëstablished the situation at the time of the alleged abandonment. The question of operativeness had not been passed upon by the Examiners-in-Chief or the Commissioner, and was neither involved nor passed upon here.

Each of the three tribunals of the Patent Office has very carefully and satisfactorily stated the reasons for the rejection of these claims, and as it would serve no useful purpose to repeat them we shall not do so. It is enough to suggest that in our opinion appellant is attempting to read into the application the wonderful development that has taken place in this art since the filing of this application.

The decision is affirmed.

Affirmed.

## Court of Appeals of the District of Columbia.

IN RE CURTISS.

*Decided March 6, 1917.*

1. INTERFERENCE—RES ADJUDICATA.

The broad rule stated in *Blackford* v. *Wilder* (28 App. D. C., 535; C. D., 1907, 491; 127 O. G., 1255) that "the final decision in the first interference is conclusive, unless it can be made to appear that the question upon which the determination of the second case rests is one that neither was nor could have been presented and determined in the first case," applies only when the cause of action is the same or the claim and demand in controversy is the same.

2. SAME—SAME.

"It follows, therefore, that only the matters that might have been presented relative to the particular thing or issue determined in the former interference can constitute estoppel in a second proceeding between the same parties relating to the same subject-matter."

3. SAME—SAME—TEST.

Where, after final decision in an interference, claims are presented by the losing party, the test to determine whether they should be refused on the ground that the matter is *res adjudicata* is whether they would dominate the subject-matter upon which the other party prevailed.

4. SAME—SAME.

Where in an interference between C. and J. it was finally held that "the issue calls for and describes a hydroaeroplane, a machine capable of rising from and alighting upon the water," and priority was awarded to J. on the ground that the building and testing by C. of a machine which could skim on the water at high speed but could not rise into the air was not a reduction to practice of the invention there in issue, *Held* that this was the only point or question actually litigated and determined in that interference and that C. was not estopped to thereafter make claims relating solely to a device capable of traveling at high speed upon the water without regard to its ability to rise from or alight upon the water.

*Mr. S. M. Ward, Jr.,* for the appellant.

*Mr. W. R. Ballard* for the Commissioner of Patents.

VAN ORSDEL, *J.:*

This appeal is from a decision of the Commissioner of Patents rejecting six claims of a divisional application for a patent on a machine supported





jointly by air and water while at speed upon the water. The invention is sufficiently described for our purpose in claim 6, as follows:

6. In a machine adapted to be supported jointly by air and water while running at speed on the water, the combination of a main aeroplane supporting surface acted upon by the air so as to tend to lift the machine to lessen displacement of the machine when running at speed on the water, lateral balancing aeroplane surfaces to assist in controlling the machine while running at speed on the water, a main water-borne central boat structure adapted to support substantially the entire machine on the water, and except for the aeroplane lift, constituting substantially the entire supporting element at all speeds of the boat structure on the water, relatively small horizontal balancing water engaging means located below the supporting plane and beyond each side of said boat structure, said balancing means being located above the level of the boat bottom and provided with surfaces inclined downwardly and rearwardly, adapted to be acted upon by the rush of water when the machine loses its lateral equilibrium, means for operating the lateral balancing aeroplane surfaces to create a difference of air lift to assist in controlling the machine at speed on the water, one or more elevator air planes, means for controlling the same to vary the angle of incidence of the boat on the water, and an air propeller with means for driving the same to propel the boat at speed on the water.

The claims were rejected, not for lack of patentability, but because of a former adjudication in an interference in which appellant Curtiss was a party. (*Janin* v. *Curtiss*, 45 App. D. C., 362; C. D., 1916, 233; 231 O. G., 1539.) In that interference, the application of Curtiss, of which the present one is a division, was involved. The issue there consisted of a single count, as follows:

A hydroaeroplane comprising a main aeroplane supporting surface, lateral stabilizing aeroplane surfaces to create a difference of lift, a main water-borne central boat structure adapted to support the entire machine when on the water, and except for the aeroplane lift, constituting substantially the entire supporting element at all speeds so long as the boat structure is traveling in contact with the water, relatively small horizontal water balancing floats located below the supporting plane and beyond each side of said boat structure, said floats being located above the level of the boat bottom and provided with surfaces inclined downwardly and rearwardly, adapted to be acted upon by the rush of water when the machine loses its lateral equilibrium, and means for operating the stabilizing surfaces to create a difference of air lift.

The interference turned upon a single issue. The Examiner construed the count as broad enough to embody a machine capable of operating at high speed upon the water, but not capable of rising from the water and flying in the air. The Board of Examiners-in-Chief held the issue limited to a machine capable of rising from the water by its own power and flying in the air. The Commissioner of Patents agreed with the Examiner, reversing the Board. This court reversed the Commissioner, holding that—

the issue calls for and describes a hydroaeroplane, a machine capable of rising from and alighting upon the water.

In other words, we held that the invention there in issue, and of which Curtiss sought to establish a reduction to practice, was a flying-machine capable of rising from and alighting upon the water. The interference turned on the question of reduction to practice of the invention in issue by Curtiss, Janin claiming his filing date as a constructive reduction to practice.

Curtiss's case depended upon what was known as the Hammondsport experiment, where his machine demonstrated ability to skim on the water at high speed, but could not rise into the air. The latter function we held was called for by the issue, and was what Curtiss was aiming to accomplish on the lake at Hammondsport. Speaking of the object sought by Curtiss, this court said:

To determine whether this test was a reduction to practice of the invention for which Curtiss is now seeking a patent, it is important to consider his application. In the introduction to his specification he describes the invention as follows: "My invention relates to improvements in heavier than air flying machines, and has reference particularly to a machine adapted to alight on the water and arise therefrom by its own power. Some of the features of the invention are, however, applicable to ordinary heavier than air machines." This statement of the scope of his invention embodies in brief what he describes in his specification. His drawings disclose a flying machine, and of his fifty-one claims all but claim 38 call for a flying machine, and that claim calls for an aeroplane.

The present claims were rejected as *res judicata* in the light of our decision in the former case. The invention to which the claims of the issue are here directed is described in the application as follows:

This present divisional application is directed particularly to machines having a water-borne boat structure, air planes and control devices so as to be capable of safe operation at high speed on the water, regardless of whether the machines are constructed so as to be able to subsequently rise from the water and fly in the air. The object of the invention claimed herein is to provide a machine having a boat structure for supporting a machine when at rest on the water, air planes acted upon by the air to help support the machine when operating at speed on the water, means including an aerial propeller for driving the machine at speed on the water, and means for balancing and controlling the machine when so operating. The invention consists in certain novel combinations that are directed to operation of the machine on the water. The invention may be embodied and used in a machine of the character described, capable of operation at speed on the water only, or it may be embodied and used in one capable both of operation at speed on the water and of then rising by its own power from the water and flying in the air. The invention herein claimed is generic to machines capable of performing one or both of these operations. In either case, operation and control at speed on the water is attained in the same way.

It will be observed that the claim here made is totally different from the issue involved in the interference. It is not an attempt to broaden the scope of the former claim, as in *Blackford* v. *Wilder* (28 App. D. C., 535) and other cases cited by the tribunals below and by counsel for the Government. The real test here is whether or not the granting of these claims to Curtiss would dominate the subject-matter upon which Janin prevailed in the interference. If so, the claims should be denied. (*In re Marconi*, 38 App. D. C., 286; C. D., 1912, 483.) The claim in the interference, however, relating solely to a hydroaeroplane capable of rising from and alighting upon the water by its own power, was awarded to Janin as the prior inventor, and is in no respect dominated by the present claims relating solely to a device capable of traveling upon the water at high speed. If Curtiss should be found to be entitled to priority of the claims in issue, it would in no respect affect the prior rights of Janin acquired through the former interference. True, an attempt was made by Curtiss in the former case to claim both the flying and skimming features in the count of the issue, but we held, in the light of his specification and his attempted reduction to practice, that he should be limited strictly to a hydroaeroplane; and this was the only question adjudicated.

The rule of *res judicata* or estoppel by judgment was announced in *Nesbit* v. *Independent District*, (144 U. S., 610, 618,) as follows:

When the second suit is upon the same cause of action and between the same parties as the first, the judgment in the former is conclusive in the latter as to every ques-

tion which was or might have been presented and determined in the first action; but when the second suit is upon a different cause of action, though between the same parties, the judgment in the former action operates as an estoppel only as to the point or question actually litigated and determined, and not as to other matters which might have been litigated and determined.

The same rule has been applied by this court to adjudications made by the tribunals of the Patent Office. Indeed, Rule 127 of the Rules of Practice of the Patent Office expressly forbids the declaration of a second interference—

upon a new application for the same invention filed by either party.

In *Blackford* v. *Wilder*, *supra*, the court stated the rule in sweeping terms when applying it to the facts before it, as follows:

To sum up: The parties are the same. The applications are the same, and disclose the invention of each issue. The constructions relied on, respectively, as evidencing conception and reduction to practice of the invention of both issues are the same. The fundamental facts of both cases are the same. Applying the well-settled principle of estoppel by judgment, before stated, it follows inevitably that the final decision in the first interference is conclusive, unless it can be made to appear that the question upon which the determination of the second case rests is one that neither was nor could have been presented and determined in the first case.

But these broad rules apply only where not only the cause of action is the same, but where the claim or demand in controversy is the same. The distinction is well stated in *Cromwell* v. *County of Sac*, (94 U. S., 351,) where the action was upon four county bonds and four coupons thereto attached. Estoppel was claimed by a judgment in favor of the county in a prior action upon earlier-maturing coupons attached to the same bonds between the same parties in interest. The Court, speaking through Mr. Justice Field, said:

In considering the operation of this judgment, it should be borne in mind, as stated by counsel, that there is a difference between the effect of a judgment as a bar or estoppel against the prosecution of a second action upon the same claim or demand, and its effect as an estoppel in another action between the same parties upon a different claim or cause of action. In the former case, the judgment, if rendered upon the merits, constitutes an absolute bar to a subsequent action. It is a finality as to the claim or demand in controversy, concluding parties and those in privity with them, not only as to every matter which was offered and received to sustain or defeat the claim or demand, but as to any other admissible matter which might have been offered for that purpose. * * * The language, therefore, which is so often used, that a judgment estops not only as to every ground or defense actually presented in the action, but also as to every ground which might have been presented, is strictly accurate, when applied to the demand or claim in controversy. Such demand or claim, having passed into judgment, cannot again be brought into litigation between the parties in proceedings at law upon any ground whatever. But where the second action between the same parties is upon a different claim or demand, the judgment in the prior action operates as an estoppel only as to those matters in issue or points controverted, upon the determination of which the finding or verdict was rendered. In all cases, therefore, where it is sought to apply the estoppel of a judgment rendered upon one cause of action to matters arising in a suit upon a different cause of action, the inquiry must always be as to the point or question actually litigated and determined in the original action, not what might have been thus litigated and determined. Only upon such matters is the judgment conclusive in another action.

There are compelling reasons why the rule of estoppel by judgment should not be applied with the same severity in interference proceedings in the Patent Office as in cases at law and in equity. In the latter instances the issues are made up by the parties themselves, with wide latitude for amendment to meet unexpected contingencies arising in the course of trial. In interferences the issues are made up by the proper official in the Patent Office, and the case is confined to the issues thus found. True, they are made from the applications of the respective parties, which, in a sense, constitute the pleadings in the case; but the issue, nevertheless, is the result of the view taken by the official of the case presented by the applications, and is conclusive on the parties.

Unlike a suit at law or in equity, the parties are limited in an interference to the specific issue or issues found by the Patent Office. The broad rule that all questions are *res judicata* which were, or might have been, determined in the former case must be applied with reference to the limitations of the particular proceeding. It may often occur within the broad scope of a proceeding at law or in equity that matters which might have been determined and which constitute estoppel in a second action, would have no application in an interference proceeding. In the former proceeding the whole purpose of the litigation may be examined to ascertain the issues which might have been determined in a prior suit, but in the latter the investigation is limited to the specific issue or issues pointed out by the Patent Office, as embraced within the interference. It follows, therefore, that only the matters that might have been presented relative to the particular thing or issue determined in the former interference can constitute estoppel in a second proceeding between the same parties relating to the same subject-matter.

This brings us to the narrow issue of the interference and the claims of the present divisional application. Do they present a single cause of action? We think not. In the interference, the sole issue upon which the case was decided was whether or not the claim called for a device capable of rising from and alighting upon the water. That was the only "point or question actually litigated and determined" in that action. The present claims relate solely to a device capable of traveling at high speed upon the water, without regard to its ability to rise from or alight upon the water. That question was not determined in the former case. Indeed, we held that it could not be under the count there in issue. The claims of the present issue were found to be patentable over the prior art, but were rejected solely upon the grounds herein stated. Though relating to the same structure, the specific claim found to have been made in the former case was for a different invention than that here involved; and, the cause of action being different, we are of opinion that appellant is not estopped to make the claims of the present issue.

The decision of the Commissioner of Patents is reversed, and the clerk is directed to certify these proceedings as by law required.

Reversed.





THE
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## Notice—Proposed Amendment to Rule 93.

In view of the decision in *Ewing, Commissioner of Patents, v. United States, ex rel. The Fowler Car Company*, printed elsewhere in this issue of the GAZETTE, it is proposed to change Rule 93 by the insertion of the matter printed in italics, so that the rule shall read as follows:

"An interference is a proceeding instituted for the purpose of determining the question of priority of invention between two or more parties claiming substantially the same patentable invention. *In order to ascertain whether any question of priority arises the Commissioner may call upon any junior applicant to state in writing the date when he conceived the invention under consideration. All statements filed in compliance with this rule will be returned to the parties filing them. In case the applicant makes no reply within the time specified, not less than ten days, the Commissioner will proceed upon the assumption that the said date is the date of the oath attached to the application.* The fact that one of the parties has already obtained a patent will not prevent an interference, for, although the Commissioner has no power to cancel a patent, he may grant another patent for the same invention to a person who proves to be the prior inventor."

Any communications on this subject received prior to May 29 will be considered.

## Disclaimers.

1,040,043.—*Franklin H. Smith*, Yonkers, N. Y. ELECTRIC HEATER. Patent dated October 1, 1912. Disclaimer filed May 2, 1917, by the assignee, *Gold Car Heating & Lighting Company*.

Enters this disclaimer—

"To that part of the claim in said specification which is in the following words, to wit:

"5. In an electric heater, a casing, slotted end plates secured thereto, each of said slots adapted to hold a heater and to permit its removal independently of the other heaters, and means for mounting the heaters in said slots comprising blocks secured to each end of the heater and adapted to slide in said slots.

"13. In an electric heater, a casing having grooved end plates, and a plurality of heating units in said casing each mounted in a groove in said end plates so as to be independently removable."

1,112,184.—*Daniel K. Allison*, Cincinnati, Ohio, and *Bryan D. Pinkney*, Newport, Ky. CRACKER-CUTTING MACHINE. Patent dated September 29, 1914. Disclaimer filed May 7, 1917, by the assignee, *The J. H. Day Company*.

Heretofore cracker-cutting machines have been provided with pan-skipping mechanism in which means are employed for setting the conveyer relatively forward or backward to register the pans with the pan-skip, disconnecting the pan conveyer from its driving power and from the pan-skipping mechanism as in the United States Letters Patent No. 1,180,080 to Thomas L. Green, issued April 18, 1916; and therefore any interpretation of the claims which would include such a construction is disclaimed.

1,152,375.—*Franklin H. Abbott*, Buffalo, N. Y. SPLICE-BAR. Patent dated August 31, 1915. Disclaimer filed May 1, 1917, by the inventor and the assignee, *Lackawanna Steel Company*.

Enter this disclaimer—

"To all the claims of said patent, said claims being numbered from 1 to 5, respectively, and are as follows:

"1. A splice-bar for rail joints formed with a central depression on its upper edge to avoid contact with the rail ends.

"2. A splice-bar for rail joints having the central portion of its upper edge slightly depressed and correspondingly thickened, to prevent contact with the ends of the rails, while preserving the full strength of the bar at the center.

"3. A splice-bar for rail joints formed to fit snugly in the 'fishing angle' of the rail, and having a depression in its upper portion adapted to be arranged adjacent the rail ends to insure clearance between the bar and the corners on the under surface of the rail ends.

"4. As a new article of manufacture, a splice-bar for rail-joints formed with an upper surface to engage the under side of the rail heads, and having a small depression formed in said upper surface and adapted to underlie the corners on the underside of the rail ends, substantially as shown.

"5. The combination in a rail joint of the two rails having their ends arranged adjacent and a splice bar bolted to said two ends to connect the two rails, said joint being formed to provide a clearance between the upper surface of the splice-bar and the under side of the rail heads adjacent their ends, substantially as described and shown."

## Access to Pending Applications.

No person except the applicant, the assignee whose assignment is of record, or the attorney of record will be permitted to have access to the file of any application, except as provided for under the interference rules, unless written authority from the applicant, assignee, or attorney, identifying the application to be inspected, is filed in the case to become a part of the record thereof, or upon the written order of the Commissioner, which will also become a part of the record of the case.

# APPLICATIONS UNDER EXAMINATION.

*Condition at Close of Business May 11, 1917.*

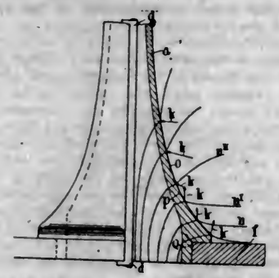
| Room No. | Divisions and subjects of invention. | Oldest new application and oldest action by applicant awaiting office action. | | No. of applications awaiting action. |
|---|---|---|---|---|
| | | New. | Amended | |
| 314 | 1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers. | Mar. 22 | Apr. 4 | 263 |
| 128 | 2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco. | Jan. 13 | Jan. 23 | 463 |
| 175 | 3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working. | Feb. 19 | Mar. 3 | 87 |
| 234 | 4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists. | Mar. 31 | Apr. 27 | 219 |
| 167 | 5. Bookbinding; Harvesters; Jewelry; Music | Jan. 4 | Apr. 9 | 333 |
| 318 | 6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation. | Jan. 10 | Mar. 15 | 324 |
| 312 | 7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes | Jan. 9 | Jan. 8 | 672 |
| 131 | 8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports. | Dec. 18 | Mar. 29 | 907 |
| 142 | 9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps | Dec. 14 | Apr. 27 | 419 |
| 235 | 10. Carriages and Wagons | Dec. 20 | Apr. 16 | 837 |
| 154 | 11. Boot and Shoe Making: Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus. | Apr. 3 | Apr. 6 | 151 |
| 324 | 12. Journal-Boxes, Pulleys, and Shafting; Machine Elements | Mar. 6 | Apr. 2 | 578 |
| 329 | 13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning. | Feb. 21 | Apr. 7 | 546 |
| 307 | 14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working. | Feb. 3 | Feb. 12 | 248 |
| 308 | 15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics. | Apr. 13 | Apr. 13 | 207 |
| 109 | 16. Electric Signaling; Radiant Energy; Telegraphy; Telephony | Dec. 2 | Feb. 9 | 622 |
| 303 | 17. Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting. | Feb. 3 | Apr. 20 | 155 |
| 327 | 18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Lubrication; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves. | Feb. 26 | Apr. 4 | 237 |
| 236 | 19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels | Jan. 4 | Jan. 24 | 494 |
| 179 | 20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking. | Apr. 12 | Apr. 13 | 180 |
| 182 | 21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling. | Jan. 16 | Apr. 2 | 302 |
| 249 | 22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships. | Dec. 20 | Feb. 26 | 614 |
| 379 | 23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism. | Jan. 23 | Aug. 26 | 282 |
| 144 | 24. Apparel; Apparel Apparatus; Sewing-Machines; Garment Supporters | Jan. 15 | Mar. 14 | 238 |
| 315 | 25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation. | Apr. 11 | Apr. 14 | 120 |
| 105 | 26. Electricity, Generation; Motive Power | Nov. 20 | Feb. 21 | 546 |
| 375 | 27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus | Apr. 13 | Apr. 7 | 208 |
| 63 | 28. Internal-Combustion Engines | Jan. 10 | Feb. 3 | 420 |
| 147 | 29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools. | Jan. 2 | Feb. 1 | 380 |
| 152 | 30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines | Feb. 16 | Apr. 21 | 407 |
| 172 | 31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt. | Feb. 3 | Mar. 20 | 264 |
| 278 | 32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration. | Nov. 1 | Apr. 3 | 891 |
| 70 | 33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving. | Jan. 15 | Apr. 2 | 379 |
| 304 | 34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners. | Nov. 17 | Mar. 28 | 272 |
| 57 | 35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet | Jan. 5 | Apr. 25 | 626 |
| 264 | 36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring | Feb. 3 | Apr. 23 | 618 |
| 107 | 37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications. | Dec. 4 | Mar. 21 | 677 |
| 378 | 38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells | Apr. 12 | Apr. 25 | 140 |
| 321 | 39. Water Distribution | Jan. 15 | Feb. 24 | 336 |
| 280 | 40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles. | Feb. 21 | Apr. 24 | 473 |
| 125 | 41. Railway Draft Appliances; Resilient Tires and Wheels | Feb. 12 | Mar. 27 | 293 |
| 244 | 42. Electricity, Conductors; Railway Signaling; Electricity-Transmission to Vehicles | Dec. 14 | Apr. 12 | 351 |
| 382 | 43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification. | Jan. 31 | Apr. 2 | 201 |
| | Oldest new case, Nov. 1: oldest amended, Aug. 26. | | | |
| | Total number of applications awaiting action | | | 17,159 |
| 163 | TRADE-MARKS, DESIGNS, LABELS AND PRINTS: | | | |
| | Trade-Marks | Feb. 28 | Apr. 14 | 1206 |
| | Designs | Apr. 2 | Apr. 14 | 373 |
| | Labels and Prints | May 2 | May 3 | 83 |



# PATENTS

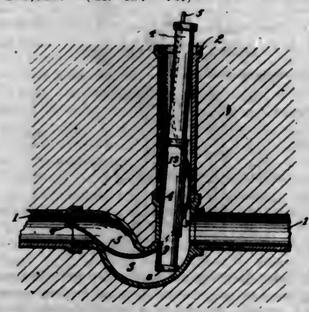
## GRANTED MAY 15, 1917.

1,225,738. INSULATOR FOR HIGH-TENSION CONDUCTORS. ALBERT AICHELE, Baden, Switzerland, assignor to Aktiengesellschaft Brown Boveri & Cie., Baden, Switzerland. Filed Nov. 25, 1913. Serial No. 802,971. (Cl. 178—311.)



A sleeve insulator in a socket for high tension conductors, formed as a body of revolution with a concave outer surface for the maximum part of its length, the maximum diameter being at a position slightly displaced from the socket.

1,225,739. SEWER-OPENING APPARATUS. JACOB ALDER, Sr., St. Louis, Mo. Filed Jan. 6, 1917. Serial No. 140,983. (Cl. 137—70.)



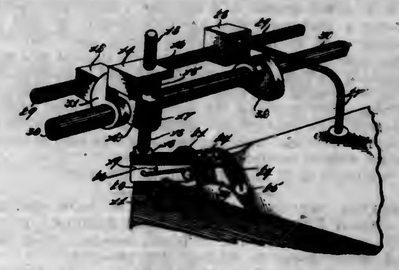
1. A sewer and drain opening apparatus, comprising a guiding-tube having a guiding-slot formed in it adjacent its end, and having another slot formed in it at a point diametrically-opposite the first-mentioned slot, and a flexible-shaft adapted to enter and engage the walls of said slots and be guided thereby.

2. A sewer and drain opening apparatus, comprising a guiding-tube having diametrically-opposite slots near one end, one of said slots extending to the end of said tube and being open at that end, and a flexible-shaft adapted to enter the said slots and be guided by the walls thereof when force is exerted longitudinally upon the said shaft exterior of said tube.

3. As a new article of manufacture, a guiding-tube for use in opening sewers and drains, comprising a metallic cylindrical body having diametrically opposite slots in it, and reinforcing-strips of metal riveted to the wall of the tube, to strengthen the walls of said slots.

4. The herein-described method of opening sewers and drains, which consists in first inserting a flexible-shaft within a guiding-tube therefor; bending said shaft at a right-angle and passing the bent-portion into a guiding-slot in said tube, so that a cutting or grappling tool carried by said shaft will be located upon the exterior of the tube; then exerting force upon said shaft to bend the same at a point diametrically-opposite the said slot and cause same to enter another guiding-slot at an opposite point in said tube; then tying the said shaft in said first-mentioned slot; then placing the apparatus in the sewer or drain riser; and finally forcing said shaft carrying the tool to the obstruction, and removing the latter.

1,225,740. BUCKLING DEVICE. NELS A. ANDERSON, Warren, Ohio, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed Dec. 11, 1915. Serial No. 66,271. (Cl. 101—40.)



1. A buckling device for sheets comprising a movable structure carrying a holding member, a buckling member and a pile-retaining member, and means for actuating said members in proper succession.

2. A buckling device for sheets comprising a movable unitary structure carrying a holding member, a buckling member and a pile-retaining member, and means for actuating said members in proper succession.

3. A buckling device for sheets comprising a movable structure carrying a holding member, a buckling member and a pile-retaining member, and a single mechanism for actuating said members in proper succession.

4. A buckling device for sheets comprising a movable unitary structure carrying a holding member, a buckling member and a pile-retaining member, and a single mechanism for actuating said members in proper succession.

5. A buckling device for sheets comprising a vertically-movable frame having incorporated therewith holding, buckling and pile-retaining members, and means to actuate said frame whereby the said incorporated members operate in proper succession.

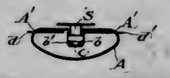
[Claims 6 to 32 not printed in the Gazette.]

1,225,741. FASTENER. LOUIS ARKIN, Boston, Mass. Filed Oct. 9, 1916. Serial No. 124,484. (Cl. 24—211.)

1. A socket member of a fastener, comprising a casing having a stud receiving aperture, stud retaining means within said casing, and a resilient member adapted to force the stud from the socket without manipulation of said stud.

2. A socket member of a fastener, comprising a casing having a stud receiving aperture, stud retaining means within said casing, stud releasing means extending out-

side said casing and adapted to coöperate with said retaining means to release the stud, and a resilient member within said casing adapted to force the stud from the socket without manipulation of said stud.



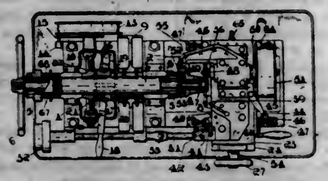
3. A socket member of a fastener, comprising a casing having a stud receiving aperture, stud retaining means within said casing, stud releasing means projecting outside said casing and adapted to coöperate with said retaining means to release the stud, and a resilient member within said casing adapted to be engaged and stressed by the stud upon its insertion into the casing and to force the stud from the socket without manipulation of the stud.

4. A socket member of a fastener, comprising a casing having a stud receiving aperture, a pair of stud retaining arms within said casing spaced apart and extending on opposite sides of said stud receiving aperture, stud releasing means extending outside said casing and adapted to coöperate with said retaining arms to release the stud, and a resilient member adapted to be engaged and stressed by the stud upon its insertion into the casing and to force the stud from the socket without manipulation of the stud.

5. A socket member of a fastener, comprising a casing having a stud receiveing aperture, a pair of stud retaining arms within said casing spaced apart, provided with sockets and extending on opposite sides of said stud receiving aperture, stud releasing means extending outside said casing and adapted to coöperate with said retaining arms to release the stud, and a resilient member adapted to be engaged and stressed by the stud upon its insertion into the casing and to force the stud from the socket without manipulation of the stud.

[Claims 6 to 11 not printed in the Gazette.]

1,225,742. MACHINE FOR FINISHING BASE OR GAS-CHECK PLUGS FOR ARTILLERY-SHELLS. EDWIN J. BANFIELD, Toronto, Ontario, Canada. Filed Dec. 4, 1915. Serial No. 65,114. (Cl. 29—27.)



1. In apparatus of the class described the combination of a spindle provided with a chuck at one end; a two-speed drive; controlling means for the drive; a tool holder carriage movable transversely of the apparatus; turning tools carried thereby; a milling cutter and spindle therefor; a bearing for said spindle slidable on said carriage longitudinally of the apparatus; and means for moving said bearing.

2. In apparatus of the class described the combination of a spindle provided with a chuck at one end; a two-speed drive; controlling means for the drive; a tool holder carriage movable transversely of the apparatus; turning tools carried thereby; a milling cutter journaled on said carriage to cut transversely of the apparatus; means for moving the cutter longitudinally of the apparatus comprising a chaser adapted to move the cutter; and a thread rotatable with the driving spindle of the apparatus and with which the chaser engages when the cutter is in working position.

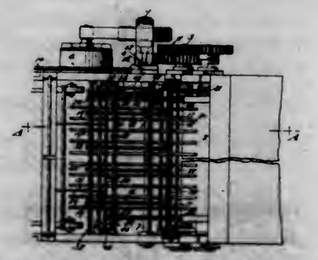
3. In apparatus of the class described the combination of a spindle provided with a chuck at one end; a two-speed drive; controlling means for the drive; a tool holder carriage movable transversely of the apparatus; turning tools carried thereby a milling cutter journaled on said carriage to cut transversely of the apparatus; means for moving the cutter longitudinally of the apparatus comprising a chaser arm adapted to move the cutter, a chaser adjustably connected to the arm so that it may be set radially of the milling cutter, and a thread rotatable with the driving spindle of the apparatus and with which the chaser engages when the cutter is in working position.

4. In apparatus of the class described the combination of a spindle provided with a chuck at one end; a two-speed drive; controlling means for the drive; a tool holder carriage movable transversely of the apparatus; turning tools carried thereby; a milling cutter journaled on said carriage to cut transversely of the apparatus; means for moving the cutter longitudinally of the apparatus comprising a chaser arm adapted to move the cutter, a chaser adjustably connected to the arm so that it may be set radially of the milling cutter; a thread rotatable with the driving spindle of the apparatus and with which the chaser engages when the cutter is in working position; and means for limiting the movement of the carriage bringing the milling cutter toward its work.

5. In apparatus of the class described the combination of a spindle provided with a chuck at one end; a two-speed drive; controlling means for the drive; a feed carriage oscillatable on the frame of the apparatus; a tool holder carriage movable on said feed carriage transversely of the apparatus; turning tools carried thereby; a milling cutter journaled on said carriage to cut transversely of the apparatus; and means for moving the cutter longitudinally of the apparatus.

[Claims 6 to 8 not printed in the Gazette.]

1,225,743. SHEET-DELIVERY APPARATUS FOR PRINTING-MACHINES. HOWARD M. BARBER, Stonington, Conn., assignor, by mesne assignments, to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed June 24, 1909. Serial No. 504,110. (Cl. 101—31.)



1. In a sheet delivery apparatus for printing machines, a printing mechanism, a sheet feeding endless tape carrier driven at a certain speed and a positive sheet forwarding device located intermediate the ends of the tape carrier and driven constantly at the speed of the tape carrier arranged to be brought into and out of engagement with the sheet.

2. In a sheet delivery apparatus for printing machines, a printing mechanism, a sheet feeding endless tape carrier driven continuously at a certain speed and a positive sheet forwarding device located intermediate the ends of the tape carrier and driven constantly at the speed of the tape carrier arranged to be brought into and out of engagement with the sheet.

3. In a sheet delivery apparatus for printing machines, a printing mechanism, a sheet delivery device, a continuously driven sheet feeding endless tape carrier and a positive sheet forwarding device located intermediate the ends of the tape carrier and arranged to be brought into engagement with both sides of the sheet for feeding it into position to be engaged by the delivery device.

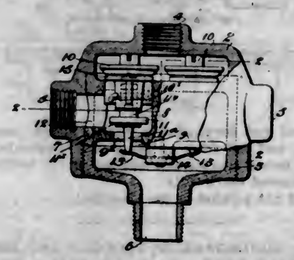


4. In a sheet delivery apparatus for printing machines, a printing mechanism, a sheet delivery device, a continuously driven sheet feeding endless tape carrier and a positive sheet forwarding device located intermediate the ends of the tape carrier and driven constantly at the speed of the tape carrier arranged to be brought into engagement with the sheet for feeding it into position to be engaged by the delivery device.

5. In a sheet delivery apparatus for printing machines, an endless sheet delivery carrier, a continuously driven sheet feeding endless tape carrier, and a positive sheet forwarding device located intermediate the ends of the tape carrier and driven constantly at the speed of the tape carrier arranged to be brought into engagement with the sheet for feeding it into position to be engaged by the delivery carrier.

[Claims 6 to 20 not printed in the Gazette.]

1,225,744. DRAIN AND RELIEF VALVE. NOEL WILLIAM BARKER, Victoria, British Columbia, Canada. Filed May 18, 1916. Serial No. 98,370. (Cl. 137—32.)



1. A water drainage and pressure relief valve for an engine cylinder or the like, said valve comprising a hollow body divided by partitions into three chambers, the upper one of which having provision for connecting it to the steam chest of the engine, the middle chamber having provision for connecting it to the engine cylinder, and the lower chamber being open to the atmosphere, the partitions between the chambers being apertured in alinement, connected valves seating downward in the partition apertures and a spring normally holding the valves open.

2. A water drainage and pressure relief valve of the class described, said valve comprising in combination a hollow body divided into three chambers the upper chamber being connected to the middle one by a circular aperture and the middle one to the lower by a relatively smaller aperture in the same axial alinement, a valve seating in the upper aperture and opening upward, a valve seated in the lower aperture and opening upward, means for connecting the two valves together to allow a limited movement between them, a spring tending to hold both valves open, means for delivering steam from the steam chest into the upper chamber, means for delivering drainage water from the cylinder into the middle chamber, and means for delivering from the lower chamber to the atmosphere.

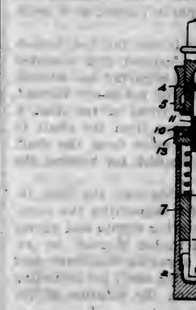
3. A water drainage and pressure relief valve of the class described, said valve comprising in combination a hollow body divided into three chambers the upper chamber being connected to the middle one by a circular aperture and the middle one to the lower by a relatively smaller aperture in the same axial alinement, a valve seating in the upper aperture and opening upward, a valve seated in the lower aperture and opening upward, the stem of the lower valve being socketed into the upper valve and pin-connected in a manner to permit of limited endwise movement, a spring within the lower chamber tending to hold both valves open, means for delivering steam from the steam chest into the upper chamber, means for delivering drainage water from the cylinder into the middle chamber, and means for delivering from the lower chamber to the atmosphere.

4. A water drainage and pressure relief valve of the class described, said valve comprising in combination a hollow body divided into three chambers the upper chamber being connected to the middle one by a circular aperture and the middle one to the lower by a relatively smaller aperture in the same axial alinement, a winged valve seating in the upper aperture and opening upward, said valve having a conical seat and having a cylindrical portion fitting the aperture and of a depth slightly less than the maximum upward movement of the valve, a valve opening upward and having a flat seat to close the lower aperture the lower valve being socketed and pin-connected to the upper valve, a spring within the lower chamber tending to hold both valves open, means for delivering steam from the steam chest into the upper chamber, means for delivering drainage water from the cylinder into the midle chamber, and means for delivering from the lower chamber to the atmosphere.

5. A water drainage and pressure relief valve of the class described, said valve comprising a hollow casing open at the lower end, a partition body fitted steam-tight within the casing and retained in position by a lower cover screwed in the casing, chambered apertures through the body portion connecting the space above it to the space beneath, connected valves to open upward seated on the upper edge and on the chambered projection of each aperture, a spring tending to hold each pair of valves in the open position, means for delivering steam from the steam chest into the space above the upper valves, means for delivering the drainage water from each cylinder end into the chambered space between each pair of connected valves, and means for delivering from the space beneath the valves to the atmosphere.

[Claims 6 to 8 not printed in the Gazette.]

1,225,745. BORING-BAR FOR USE IN THE MANUFACTURE OF AMMUNITION-SHELLS OR THE LIKE, JOHN WILLIAM BARNES, Rock Ferry, England. Filed Apr. 17, 1916. Serial No. 91,794. (Cl. 77—58.)



1. In a boring apparatus for shells or the like, in combination, a cutter bar, a bearing piece mounted revolubly and slidably on the bar, a disk adjustable longitudinally on the bar for limiting the depth of the cut, and a compression spring disposed between the disk and the bearing piece.

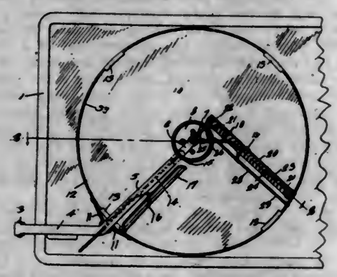
2. In a boring apparatus, in combination, a cutter bar, a disk mounted on the bar, a bearing piece mounted below the disk, and resilient means disposed between the bearing piece and disk for permitting longitudinal movement of the bar with relation to the bearing piece.

3. In a boring apparatus, in combination, a disk vertically adjustable on the cutter bar, a bearing block through which the cutter bar operates, adjustable means carried by the disk for limiting the movement of the cutter bar without adjusting the disk, and means for holding the disk and bearing block in spaced relation.

1,225,746. WIND-SHIELD ATTACHMENT. JOHN BAUER, Louisville, Ky. Filed Jan. 12, 1917. Serial No. 142,038. (Cl. 15—59.)

1. An attachment for wind shields and the like including a revoluble transparent disk, an endless belt extending from the periphery of the disk to a point adjacent the

center thereof and engaging one surface of the disk, means for continuously actuating said belt during the rotation of the disk to rub one surface of the disk.



2. An attachment for wind shields and the like, including a supporting structure, a transparent disk mounted for rotation therein, an endless belt engaging one surface of the disk and extending toward the periphery thereof, means for supporting said belt in front of the disk, a shaft, means for transmitting motion from the shaft to the disk, means for transmitting motion from the shaft to the belt.

3. An attachment for wind shields and the like, including a supporting structure, a transparent disk mounted for rotation therein, an endless belt engaging one surface of the disk and extending toward the periphery thereof, means for supporting said belt in front of the disk, a shaft, means for transmitting motion from the shaft to the disk, means for transmitting motion from the shaft to the belt, and an elongated roller engaging the disk and extending from the periphery thereof to a point adjacent its center.

4. An attachment for wind shields and the like, including a supporting structure, a transparent disk mounted for rotation therein, an endless belt engaging one surface of the disk and extending toward the periphery thereof, means for supporting said belt in front of the disk, a shaft, means for transmitting motion from the shaft to the disk, means for transmitting motion from the shaft to the belt, and means engaging the disk for holding the same against vibration.

5. An attachment for wind shields and the like, including a circular frame, means for supporting the same, a transparent disk mounted for rotation within and guided by the frame, a shaft, means actuated thereby for rotating the disk, an endless belt engaging the front face of the disk, and means operated by the shaft for actuating the belt relative to the disk during the rotation of the disk.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,747. RAILROAD-SIGNAL. JOHN D. BEATTY, Ivanhoe, N. C. Filed May 4, 1916. Serial No. 95,469. (Cl. 246—59.)

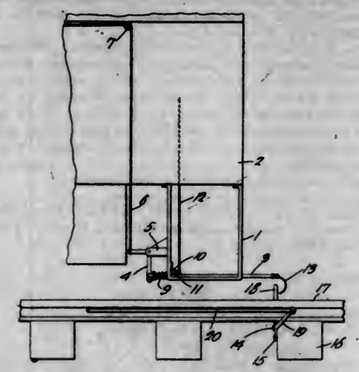
1. A signal mechanism embodying a tripping device, in combination with a train carried reciprocable member having a spring hook engageable with the tripping device, and a signal controlled by said member.

2. A signal mechanism embodying a rock shaft having an offset tripping member, in combination with a train carried reciprocable member having a spring hook engageable with said tripping member, and a signal controlled by said reciprocable member.

3. A signal mechanism embodying a rearwardly slidable member having a spring hook to engage a tripping device, a signal, and means operatively connecting the signal and said member whereby the signal is operated when said member is slid rearwardly.

4. A signal mechanism embodying a frame, a rod slidable therein, and having a spring hook at its rear end engageable with a tripping device, a signal, means connecting said signal and forward end of the rod whereby when the rod is slid rearwardly relative to the frame, the signal is operated, and spring means for moving said rod forwardly.

5. A signal mechanism embodying a rod having a resilient hook to engage a tripping device, spring means for



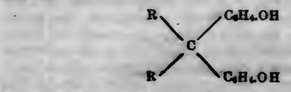
moving said rod forwardly, a signal, means connecting said signal and rod whereby the signal is operated when the rod is moved rearwardly, and means for holding said rod when moved rearwardly.

[Claim 6 not printed in the Gazette.]

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1,225,748. CONDENSATION PRODUCT AND PROCESS OF MAKING SAME. WALLACE A. BEATTY, New York, N. Y., assignor, by direct and mesne assignments, to George W. Beadle, New York, N. Y. Filed June 6, 1912. Serial No. 702,046. (Cl. 106—22.)

1. A condensation product of a substance having the formula

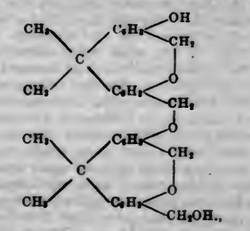


in which R represents an alkyl radical; and a substance having at least one methylene group, said product being of a gummy nature, and soluble in strong alkali, substantially as described.

2. An odorless gum soluble in alkalis, which gum, when acted upon by an acid, is converted into a substance which is insoluble in alkalis.

3. An odorless condensation product in the form of a brittle gum, which is soluble in alkalis, acetone, alcohol, amyl alcohol, amyl acetate, glacial acetic acid, acetylene tetrachlorid, and insoluble in linseed oil, turpentine or mineral oils, said gum, when acted upon by an acid, being converted into a substance which is insoluble in alkalis, and said gum being convertible by heat into a substance insoluble in the above mentioned solvents.

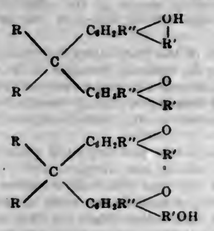
4. A substance having a formula of approximately :—



substantially as set forth.



5. A substance having a formula of approximately :—



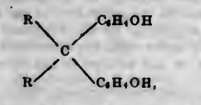
in which R represents an alkyl radical, R' an alkylidene radical, and R'' a hydrogen or an alkyl radical.

[Claims 6 to 31 not printed in the Gazette.]

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1,225,749. SYNTHETIC GUM. WALLACE APPLETON BEATTY, New York, N. Y. Filed June 30, 1915. Serial No. 37,337. (Cl. 106—22.)

1. An insoluble substance, which may be produced by heating the condensation product of a substance of the class



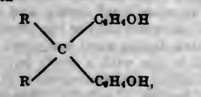
(in which R represents an alkyl radical), and a substance containing at least one active methylene group, said substance being insoluble, and unacted upon by acids, alkalis, acetone, alcohol, amyl alcohol, amyl acetate, glacial acetic acid, acetylene tetrachlorid, or mixtures of these, being hard, inodorous, transparent, non-brittle and burning only when held in a flame or under other similar conditions, as described.

2. A process of making an insoluble, substantially noncombustible substance, comprising reacting upon a body having the formula



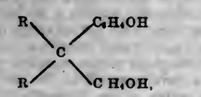
(in which R represents an alkyl radical) with a substance containing at least one active methylene group and then heating the resulting condensation product.

3. A process of making an insoluble, substantially noncombustible substance, comprising reacting upon a body having the formula



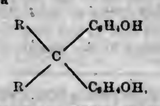
(in which R represents an alkyl radical) with a substance containing at least one active methylene group, in the presence of an alkali, and then heating the resulting condensation product.

4. A process of making an insoluble, substantially noncombustible substance, comprising reacting upon a body having the formula



(in which R represents an alkyl radical) with a substance containing at least one active methylene group, in the presence of a condensing agent, and then heating the resulting condensation product.

5. A process of making an insoluble, substantially noncombustible substance comprising reacting upon a body having the formula



(in which R represents an alkyl radical) with a substance containing at least one active methylene group, in the presence of an alkali at a temperature of about 100 to 150° C., and then heating the resulting condensation product.

[Claims 6 to 28 not printed in the Gazette.]

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1,225,750. ARTIFICIAL GUM AND PROCESS OF PRODUCING THE SAME. WALLACE APPLETON BEATTY, New York, N. Y. Filed June 30, 1915. Serial No. 37,338. (Cl. 106—22.)

1. The process of making a condensation product which comprises condensing a ketone with a cresol, and condensing the resulting product with an aldehyde, substantially as described.

2. The process of making a condensation product which comprises condensing a ketone with a mixture of cresols, and condensing the resulting product with an aldehyde, substantially as described.

3. The process of making a condensation product suitable for reacting with formaldehyde to produce a gum, which consists in heating an impure phenol containing a cresol with an impure ketone in the presence of a condensing agent, allowing crystals to form, and washing the product thus obtained, substantially as described.

4. A gum derived by the condensation of a ketone with a cresol, and further condensation with an aldehyde, said gum being soluble in alcohol and alkali and convertible into an insoluble mass, substantially as described.

5. The herein described gum derived by the condensation of an acetone and cresylic acid, and further condensation with formaldehyde, said gum being soluble in alcohol and alkali, and convertible into an insoluble mass, substantially as described.

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1,225,751. RAILWAY-TIE. HERMAN L. BEE, Webster Springs, W. Va. Filed Feb. 28, 1917. Serial No. 151,533. (Cl. 238—5.)



1. A metallic railway tie comprising a plate and depending marginal flanges, brace members interposed between the longitudinal marginal flanges at a point beneath the rail seats, and additional members interposed between the longitudinal marginal flanges of the tie at opposite sides of each of the first named braces, the longitudinal marginal flanges being provided with openings at opposite sides of each of the first named braces and inwardly of the second named braces at opposite sides thereof, said second named braces being substantially U shaped in form with their bases oppositely directed.

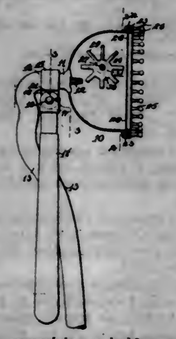
3. A metallic railway tie comprising a plate and depending marginal flanges, brace members interposed between the longitudinal marginal flanges at a point beneath the rail seats, additional members interposed between the longitudinal marginal flanges of the tie at opposite sides of each of the first named braces, the longitudinal marginal flanges being provided with openings at opposite sides of each of the first named braces and inwardly of the second named braces at opposite sides thereof, said second named braces being substantially U-shaped

in form with their bases oppositely directed, and additional brace members interposed between the longitudinal marginal flanges of the tie at the central portion thereof, the bases of the inner of the second named brace members being secured to said last named members.

[Claim 2 not printed in the Gazette.]

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1,225,752. COMBINED VIBRATOR AND SPRAY. HENRY BEHM, Elizabeth, N. J., assignor to William S. Heal, Elizabeth, N. J. Filed Aug. 15, 1914. Serial No. 856,886. (Cl. 128—16.)



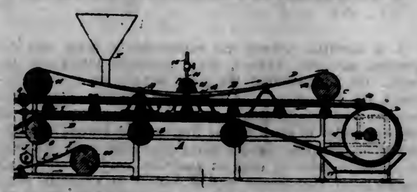
1. A vibrator comprising a holder, a nozzle for injecting fluid into the holder and out through the front, a rotor arranged to rotate in the holder, and means for suspending the rotor so that it can be shifted into and out of the path of the stream of fluid.

2. A vibrator comprising a holder, a nozzle for directing a stream of fluid through the holder, a perforated screen in the holder and opposite the nozzle to transform the stream into a spray, and an unbalanced rotor mounted between the nozzle and the screen and adapted to impart a vibration to the holder by its rotation.

3. A vibrator comprising a holder, a nozzle for directing a stream of fluid through the holder, a perforated screen in the holder and opposite the nozzle to transform the stream into a spray, a rotor rotatably arranged in the holder, and means for suspending the rotor so that it can be moved into and out of the path of the stream of fluid from the nozzle.

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1,225,753. PLASTER-BLOCK-MAKING MACHINE. DAVID FREDRICK BERNHARDT, New York, N. Y. Filed Apr. 15, 1916. Serial No. 91,834. (Cl. 25—1.)



1. A machine of the class described comprising an endless belt having an external forming surface, an endless belt disposed over the first-mentioned belt and having its upper flight forming a mixing trough from which material is conducted to the first-mentioned belt continuously and having its lower flight in close proximity to the upper flight of the first-mentioned belt to apply pressure to the material delivered to the latter.

2. A machine of the class described comprising an endless belt having an external forming surface, an endless belt disposed over the first-mentioned belt and having its upper flight forming a mixing trough from which material is conducted to the first-mentioned belt continuously, and traveling means at the edges of the belts to give shape to the lateral edges of the strip of plastic material.

3. A machine of the class described comprising an endless belt having an external forming surface, and an endless belt disposed over the first-mentioned belt and having its upper flight forming a mixing trough from which material is conducted to the first-mentioned belt continuously.

4. A machine of the class described comprising a traveling former, an endless belt disposed over the former with its lower flight in close proximity thereto to serve as a pressure applying means to the strip of material formed on the former, the upper flight of the belt being supported to form a mixing trough from which material feeds continuously to the former by the travel of the belt, and means for supplying dry material and liquid to the trough.

5. A machine of the class described comprising a traveling former, an endless belt disposed over the former with its lower flight in close proximity thereto to serve as a pressure applying means to the strip of material formed on the former, the upper flight of the belt being supported to form a mixing trough from which material feeds continuously to the former by the travel of the belt, means for supplying dry material to the trough, a rotary drum extending across the trough to act on the material therein, and a water supplying device disposed over the drum and discharging water onto the drum and into the trough.

[Claims 6 to 10 not printed in the Gazette.]

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1,225,754. DRIVING-CLUTCH FOR MAGNETOS. DOMENIO BLANDITI, Arbon, Switzerland, assignor to the Firm Adolph Saurer, Arbon, Switzerland. Filed Jan. 31, 1916. Serial No. 75,346. (Cl. 64—13.)



1. The combination with a shaft having a claw thereon constituting one member of a clutch, and an annular element having a recess for the reception of said claw and constituting the other member of said clutch, said clutch members being separable by axial movement of either member; of a spring and a ball retained in a bore in one of said members, said ball being urged by the spring to project from the bore against the driving face of the other member, said spring and bore coöperating to prevent the ball from rolling out of alinement with the axis of the spring during axial movement of said members.

2. The combination with a shaft having a radial claw thereon constituting one member of a clutch, and an annular element having a radially disposed recess therein and constituting the other member of said clutch, said clutch members being separable by axial movement of either member, said annular element having a bore opening into said recess; of a coil spring retained in said bore and arranged to exert pressure against said claw.

3. The combination with a shaft having a radially disposed claw thereon constituting one member of a clutch, and an annular element having a radially disposed recess to receive said claw and constituting the other member of the clutch, said clutch members being separable by the axial movement of either member, one of said members having a bore opening at the driving face of the member; of a spring of less diameter than said bore, and a ball retained in said bore, said ball being urged by the spring to project from the bore against the driving face of the other member with a force at least equal to the driving pressure, whereby slight axial play of said members will not cause the ball to roll out of alinement with the axis of the spring.

4. The combination with a shaft having a radially disposed claw thereon constituting one member of a clutch, and an annular element having a radially disposed recess to receive said claw and constituting the other clutch member, said clutch members being separable by the axial movement of either member, and said annular member having a bore from its periphery to one of the faces of said recess; of a spring and a ball retained in said bore, said spring urging the ball to project from said bore and engage the claw.

5. The combination with a shaft having a radial claw thereon constituting one member of a clutch, and an annular element having a radially disposed recess therein for receiving said claw and constituting the other member of said clutch, said clutch members being axially separable, said annular element having a bore opening into said recess; of a coil spring in and of less diameter than said bore, a ball seated on one end of said spring and projecting from the end of the bore against one face of the claw, said spring exerting a pressure at least equal to the driving pressure.

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1,225,755. CATALYTIC PRODUCTION OF AMMONIA. CARL BOSCH and ALWIN MITTASCH, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Nov. 18, 1911. Serial No. 661,014. (Cl. 23—21.)

1. The process of producing ammonia catalytically by passing a mixture of nitrogen and hydrogen over iron which has been obtained by heating pure iron oxid to a high temperature and then reducing the iron oxid when solid.

2. The process of producing ammonia catalytically by passing a mixture of nitrogen and hydrogen over iron which has been obtained by heating pure iron oxid until it melts, then allowing it to solidify and then reducing it.

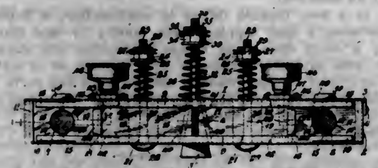
3. The process of producing ammonia catalytically by passing a mixture of nitrogen and hydrogen over iron which has been obtained by heating pure iron in the presence of oxygen to a high temperature and then reducing the iron oxid thus obtained when solid.

4. The process of producing ammonia catalytically by passing a mixture of nitrogen and hydrogen over iron which has been obtained by heating pure iron in the presence of oxygen until a molten mass is obtained, and then allowing the iron oxid thus obtained to solidify, and reducing it.

5. The process of producing ammonia catalytically by passing a mixture of nitrogen and hydrogen over iron which has been obtained by heating pure iron in the presence of oxygen until a molten mass is obtained, then allowing the iron oxid thus obtained to solidify, and reducing it with a mixture of nitrogen and hydrogen.

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1,225,756. PITMAN. ELMER RICHARD BOUCHARD, Knowles, Okla., assignor of one-half to Guy Parker, Knowles, Okla. Filed Oct. 9, 1916. Serial No. 124,571. (Cl. 74—17.)



1. A pitman comprising an open sided frame with pairs of journal blocks at the ends adjustable for wear, intermediate blocks between the pairs of journal blocks and movable lengthwise of the frame to correspondingly move the journal blocks of each pair together, spring-actuated means between the intermediate blocks and having a constant tendency to spread the blocks apart, and holding means extending through the frame and through the intermediate blocks with the latter movable in the direction of their length on the holding means, whereby the frame is held from spreading at points intermediate of its length.

2. A pitman comprising a frame with journal blocks at opposite ends, intermediate blocks between the first named journal blocks and having beveled adjacent ends and also being slotted between the ends, bolts traversing the slots and the frame and provided with springs bearing against one face of the frame, a bolt traversing the frame between the beveled ends of the intermediate blocks and provided with a wedge-shaped head engaging the beveled ends of the blocks, and a spring surrounding the last-named bolt and bearing against the face of the frame.

3. A pitman comprising an open sheet metal frame with longitudinal side flanges having flexible extremities, journal blocks seated in the end portions of the frame and removable therefrom, other blocks in the frame intermediate of the ends of the frame and bearing against the journal blocks, and spring actuated means having a constant tendency to move the intermediate blocks against the journal blocks.

4. A pitman comprising an open sheet metal frame with longitudinal side flanges having flexible extremities, journal blocks seated in the end portions of the frame and removable therefrom, other blocks in the frame intermediate of the ends of the frame and bearing against the journal blocks, and spring actuated means having a constant tendency to move the intermediate blocks against the journal blocks, the end portions of the frame having flanges extending laterally of the length of the frame to retain corresponding journal blocks, and the intermediate blocks having flanged members engaging others of the journal blocks for holding them against lateral movement in the frame.

5. A pitman having journal blocks at opposite ends for engaging corresponding journals and provided with passages for the preliminary application of lubricant between the blocks for the respective journals to reach journals mounted therein, other blocks between the pairs of journal blocks and engaging the latter to hold the journal blocks against journals mounted therein, and lubricant cups adjacent to the journal blocks for the lubrication of the journals by grease softened by heat frictionally generated in the journal blocks, said second-named blocks and the journal blocks adjacent thereto having matching passages for conducting lubricant from the cups to the respective journals.

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1,225,757. ATTACHMENT FOR CAMERAS. GEORGE W. BRETZ, Houston, Tex., assignor of three-fifteenths to Claud A. Lowry, Oscar O. Wood, J. H. Wade, and P. R. Pirtle, one-fifteenth to F. E. Jones, one-fifteenth to S. H. Gripp, and one-fifteenth to L. C. Irons, Houston, Tex. Filed Apr. 18, 1916. Serial No. 90,889. (Cl. 95—1.1.)



1. The combination with a photographing machine having an opening through the wall thereof, of a translucent member arranged to be exposed through said opening, means excluding light admitted through said member when in its exposed position, a mechanism connected to said member for withdrawing the same from said opening and seating the same against the camera film, a shutter normally closing said opening after the translucent member is withdrawn therefrom, said mechanism also engaging against said shutter to open the same after said member has seated against the film.

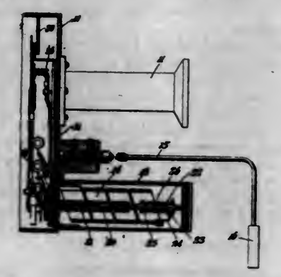
5. The combination with a photographing machine, having an opening through the wall thereof and provided with a film, of a translucent member arranged to be exposed through said opening, a shutter normally in closed position between said opening and film to exclude the light from the latter, a slidable plate closing said opening when said member is withdrawn therefrom, a mechanism actuating said member and plate and withdrawing the former from said opening and seating it against the film, a shutter carried by the plate which alines with the opening, and is temporarily opened by said mechanism when said member is seated against the film.

13. A casing having a controllable exposure opening, within which casing a sensitized photographic element may be protected from light and held in position from exposure, a ground glass inscription receiving member arranged to be exposed through said opening and having a surface adapted to receive an inscription differing in light transmitting properties from the remainder of the surface, a light excluding means arranged to exclude light from the sensitized element when said ground glass member is exposed through said opening, a mechanism connected to said member for withdrawing the same from its exposed position and reversing it and bringing it into printing relation with said sensitized element, and controllable means whereby light may be admitted through said inscribed member to light print its inscription on said sensitized element.

[Claims 2 to 4 and 6 to 12 not printed in the Gazette.]

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1,225,758. THERMOSTAT. WILLIAM H. BRISTOL and HERMAN KOESTER, Waterbury, Conn., assignors to The Bristol Company, Waterbury, Conn., a Corporation of Connecticut. Filed June 11, 1915. Serial No. 33,522. (Cl. 200—31.)



1. In a measuring instrument: a measuring member; contacts to coöperate therewith; a spindle attached to the measuring member; an actuating member rotatably mounted on said spindle; resilient means carried by said spindle to engage said actuating member; and means to restrict the range of movement of the measuring member in one direction.

2. In a measuring instrument: a tensioned measuring member; an actuating member therefor rotatably mounted with respect to said measuring member and free to leave same in one direction of rotation; means carried by one of said members to be engaged by the other to actuate the measuring member in one direction; means to restrict the range of movement of the measuring member in the opposite direction; and means to cause said measuring member to follow said actuating member in this direction to a predetermined extent, the said actuating member being free to continue its movement in said direction beyond the point of restriction.

3. In a measuring instrument: a measuring member; a spindle attached thereto; an actuating member rotatably mounted on said spindle; resilient means carried by said spindle to engage said actuating member; and means to restrict the range of movement of the measuring member in one direction.

4. In a measuring instrument: a measuring member; a spindle attached thereto; an actuating member rotatably mounted on said spindle; a pin extending from said spindle to engage said actuating member; a bushing movable with said spindle; a collar mounted about said bushing and attached to said actuating member; a coiled spring about said bushing, one end of which spring is fixed to said collar and the other to said bushing; and means to restrict the range of movement of the measuring member in the direction in which the spring tends to urge the same.

5. A thermostat, comprising: suitable adjustable contacts and each including two parallel strips, the inner one of insulating material being the longer, having beveled ends and its edge projecting beyond the corresponding edge of the other and conducting strip; a resilient contact making member adapted to first ride upon said insulating strip and then upon said conducting strip to make contact with the latter; means to actuate said contact making member; and means to restrict the range of movement of the same, said actuating member being adapted to continue its movement beyond the point of restriction without transmitting the same to said contact making member.

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1,225,759. BEET-TOPPER. HOMER D. BROWN, Ogden, Utah. Filed June 30, 1916. Serial No. 106,869. (Cl. 55—107.)



1. In a device of the class described in combination a supporting frame, a plurality of bars beneath said supporting frame, flexible connections uniting the ends of said bars, horizontal blades carried by certain of said bars, and means connecting said bars with said frame.

2. In a beet topping machine in combination a plurality of bars, flexible means secured to the ends of said bars for flexibly connecting said bars together to constitute a drag, topping knives carried by certain of said bars, and means for dragging said bars over the earth to enable said knives to cut the tops from the beets.

3. In a beet topping machine in combination a plurality of transversely extending wooden bars, means for flexibly connecting said bars together, a topping blade carried by one of said bars, and means for forcing said topping blade into contact with beets to top said beets prior to their being removed from the earth.

4. In a beet topping machine in combination a supporting frame, a plurality of transversely arranged drag bars beneath said supporting frame, a topping blade carried by one of said bars, means for flexibly connecting said bars together and resilient means for connecting said bars to said supporting frame whereby said bars may have an undulatory motion in passing over uneven ground, substantially as described.

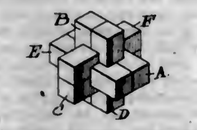
5. In a beet topping device in combination, a flexible frame-work, a beet topping blade carried by said frame work, a draft frame and means connecting said frame-work with said draft frame in such manner as to maintain said beet topping blade in contact with the earth to enable said blade to cut the tops from beets when said device is operated in the manner described.

[Claims 6 to 15 not printed in the Gazette.]

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1,225,760. PUZZLE. OSCAR W. BROWN, White Rock, S. D. Filed June 27, 1916. Serial No. 106,243. (Cl. 46—41.)

1. A block puzzle comprising a rectilinear key block and a plurality of counterpart rectilinear blocks each notched out on two of its adjacent sides and in the middle portion to permit interfitting of the blocks in a relation that they are assembled in crossed mounting and leave an opening through which the key block may be inserted to hold the counterpart notched blocks in the mounted relation.

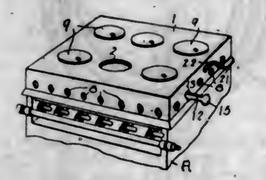



2. A puzzle comprising a plurality of rectilinear blocks each notched on two adjacent sides and certain of said blocks mortised out adjacent to the notches to thus form grooves and cavities, said blocks having the grooves and cavities thereof formed to permit interfitting of the blocks in a crossed relation and to leave an opening through the structure, and a counter-part rectilinear key block to be fitted through the opening to hold the notched and mortised blocks against displacement from their interfitted mountings.

3. A block puzzle comprising six counterpart rectilinear blocks, one of which is left plain to be used as a key block, each of the remaining blocks notched on two adjacent sides and three of the notched blocks mortised out to form cavities in addition to the grooves formed by the notching, said notched and mortised blocks being shaped to be interfitted in crossed relation and in interlocking mounting, and the key block adapted to be fitted through an opening formed by the proper fitting of the remaining blocks to secure the same in the proper relation and against disassembly.

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1,225,761. HEAT-CONSERVER FOR GAS-STOVES. HARRY BUNCE, East Islip, N. Y. Filed Aug. 21, 1916. Serial No. 116,084. (Cl. 126—215.)

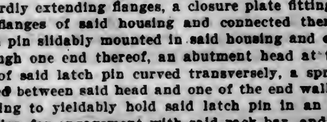


1. A cooking stove including a gas burner, a shallow casing arranged over the gas burner and inclosing a heat conserving chamber, the top of the casing being provided with a series of cooking openings, removable lids for the cooking openings, a pair of substantially parallel dampers extending across the casing on opposite sides of the burner and arranged to shut off the end portions of the casing from the middle portion thereof, a transverse damper extending between the parallel dampers on one side of the burner for further reducing the size of the heat chamber, and means for operating the said dampers.

2. A cooking stove including a gas burner, a shallow casing arranged over the gas burner and inclosing a heat conserving chamber, the top of the casing being provided with a series of cooking openings, removable lids for the cooking openings, a pair of substantially parallel dampers extending across the casing on opposite sides of the burner, said dampers being hinged to the bottom of the casing and being adapted to be swung upwardly into engagement with the top thereof to shut off the end portions of the casing from the middle portion thereof, transversely extending operating rods connected to the dampers and extending through the sides of the casing for manipulating the dampers, a transverse damper extending between the parallel dampers on one side of the burner for further reducing the size of the heat chamber, a rock shaft extending along the bottom of the casing and carrying the transverse damper, and means for rotating the rock shaft to move the transverse damper into operative and inoperative positions.

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1,225,762. FIRE-SCREEN. ALLEN BURCH, Amory, Miss., assignor of one-half to Walter W. Fennell, Amory, Miss. Filed Aug. 18, 1915. Serial No. 46,159. (Cl. 126—298.)

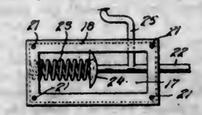


1. A fire screen including spaced front panels, threaded rods connecting the panels and constituting adjustable connections therebetween, said rods extending across the space between the panels, a central panel, ears extending therefrom and engaging one of the rods to support the central panel normally in front of the inner end portions of the side panels, the upper edge of the middle panel coöperating with the back faces of the side panels to support the middle panel in a substantially horizontal position back of the side panels and irrespective of the extent of adjustment of said side panels relative to each other.

2. A fire screen including spaced front panels, threaded rods connecting the panels and constituting adjustable connections therebetween, said rods extending across the space between the panels, a central panel, ears extending therefrom and engaging one of the rods to support the central panel normally in front of the inner end portions of the side panels, the upper edge of the middle panel coöperating with the back faces of the side panels to support the middle panel in a substantially horizontal position back of the side panels and irrespective of the extent of adjustment of said side panels relative to each other, and arms adjustably connected to the rods and supporting feet extending from the arms.

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1,225,763. WINDOW-FASTENER. JAMES ALEXANDER BURKE, Ligonier, Pa. Filed Mar. 31, 1916. Serial No. 88,109. (Cl. 16—119.)



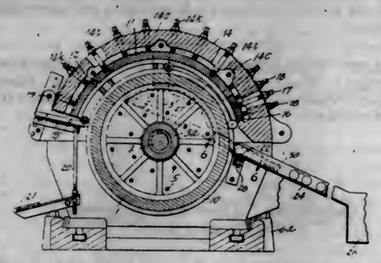
A window frame, a sash slidably mounted in said frame, a strip guiding the movement of said sash and provided with a toothed flange forming a rack bar, a housing connected with said sash and having its walls provided with inwardly extending flanges, a closure plate fitting against the flanges of said housing and connected therewith, a latch pin slidably mounted in said housing and extending through one end thereof, an abutment head at the inner end of said latch pin curved transversely, a spring positioned between said head and one of the end walls of said housing to yieldably hold said latch pin in an extended position for engagement with said rack bar, and an actuating pin extending from said latch pin and having its outer end portion bent to provide an engaging hook.

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1,225,764. ALUMINUM-SOLDERING FLUX. HUGH V. BURT, Rock Island, Ill. Filed Mar. 2, 1916. Serial No. 81,664. (Cl. 75—187.)

A flux for soldering alumina, consisting of oleic acid, ninety parts and spirit of ammonia eight parts.

1,225,765. BALL-ROLLING MACHINE. FERDINAND E. CANDA, New York, N. Y. Filed Jan. 11, 1916. Serial No. 71,504. (Cl. 80—18.)



1. A machine for forming balls and other objects of rotation, comprising a base, a grooved roll mounted for rotation with respect to said base, said base having pedestals on opposite sides of said roll, a frame member spanning the roll and secured to said pedestals, and a grooved breast located in proximity to the roll and with its grooves in registry with the grooves of the roll, said breast supported by said frame member.

2. A machine for forming balls and other objects of rotation, comprising a grooved roll and a correspondingly grooved breast, and a support for said breast comprising two side members on opposite sides of said roll, and an intermediate member spanning the roll and firmly secured to said side members and also connected to the breast to support the same.

3. A machine for forming balls and other objects of rotation, comprising a grooved roll and a correspondingly grooved breast located in proximity to the roll, a base, a support for said breast rigidly secured to said base, and means, carried by said support and engaging the sides of said roll, and arranged to prevent lateral motion of said roll.

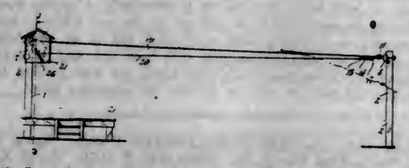
4. A machine for forming balls and other objects of rotation, comprising a grooved roll and a correspondingly grooved breast located in proximity to the roll, a base, a support for said breast rigidly secured to said base and spanning the roll and having spokes near the sides of said roll, and means engaging said spokes and comprising shoes bearing against the sides of the roll and preventing lateral motion thereof.

5. A machine for forming balls and other objects of rotation, comprising two grooved die members, one of which is movable with respect to the other, the grooves of such die members registering respectively, and the space between said die members growing progressively narrower in the direction of motion of one of said members with relation to the other, and means for introducing material to be acted upon between said die members comprising a movable support for such material to be acted upon, and means for moving such support toward the entrance to the space between said die members.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,766. CLOTHES-LINE REEL. JOHN CARLSON, Fort William, Ontario, Canada. Filed June 22, 1915. Serial No. 35,681. (Cl. 68—3.)



1. In a device of the class described, in combination, a vertical post, a cross bar secured thereupon, an eye secured at one end of said cross bar, a pulley secured upon the opposite end thereof, a fixed support, a shaft mounted on said support, a drum fixed upon said shaft between its ends, a bar having a pair of pulleys secured at opposite ends and substantially spaced apart a distance equal to the distance apart between said eye and pulley on the cross bar, a feed rope wound around said drum, a pulley secured to the cross bar between its ends, said feed rope passing around the last named pulley over the pulley at one end of said cross bar, back around the two pulleys on the other bar and being secured to said eye, a pair of ropes secured upon said shaft at opposite sides of said drum but adapted to wind on the shaft when the drum unwinds, said ropes being secured at their opposite ends upon said second named bar for actuating the same in movement, and means for operating said shaft.

2. In a device of the class described, in combination, a support having a cross bar at its upper end, an eye and pulley secured respectively at opposite ends of said cross bar, a movable bar, a pair of pulleys secured upon the opposite ends of said movable bar, a pulley secured upon said cross bar between its ends, a rope passing over this last named pulley around the two pulleys on the movable bar and being secured upon said eye, a second support mounted thereop and connected to the movable bar, flexible means for operating said movable bar and means whereby said rope may be paid out in a direction opposite to that in which said movable bar moves.

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1,225,767. FLORAL DECORATION. ANTONIOS CASTERIS, Newark, N. J. Filed Jan. 6, 1916. Serial No. 70,599. (Cl. 47—18.)



1. A floral decoration comprising endless branches of a structure to permit the circulation of liquid therethrough and provided with holes, means for supplying liquid to the branches, means for supporting the branches in fixed spaced relation, and floral elements having their stems inserted in the holes of the branches.

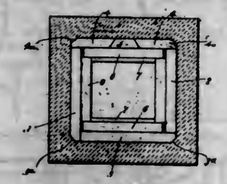
2. A floral decoration comprising a plurality of branches of a structure to permit the circulation of a liquid therethrough and provided with holes, means for holding the branches in spaced relation, a bottle adapted to fit between the branches, said bottle having an angular off-set thereon, a tube extending from the bottle into a branch, and floral elements with their stems inserted in the holes in the aforesaid branches.

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1,225,768. CULVERT-MOLD. GEORGE H. CAVIL, West De Pere, Wis. Filed June 26, 1916. Serial No. 105,920. (Cl. 25—128.)

1. A culvert mold including planks forming the sides and bottom respectively, a pair of planks of less width than the first named planks forming part of the top and having beveled edges at their inner sides, a key plank engaging with beveled edges the beveled edges of said top forming planks, brace pieces at the top and bottom, and wedge plates engaging said brace pieces.

2. A culvert mold including planks forming the sides and bottom respectively, a pair of planks of less width than the first named planks forming part of the top and having beveled edges at their inner sides, a key plank engaging with beveled edges the beveled edges of said top forming planks, brace pieces of a length less than the inside width of the mold, cleats formed on said brace pieces and wedge plates fitting between said cleats and the side forming planks, substantially as described.

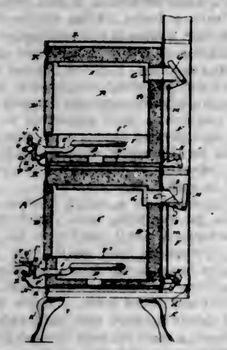


3. A core structure comprising bottom, sides, and top forming planks, said top forming plank being divided longitudinally to form side and intermediate sections, the said sections being formed with beveled outer corners, brace pieces at the top and bottom, and wedge plates engaging said brace pieces.

4. A core structure of the kind set forth comprising bottom, sides, and top forming planks, said top forming plank embracing longitudinal sections at the ends having beveled inner and outer edges, and an intermediate section engaging the beveled inner edges of said longitudinal sections, said longitudinal sections resting on said side forming planks, brace pieces at the top and bottom, cleats formed on said brace pieces, and wedge plates fitting between said cleats and the side forming planks.

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1,225,769. COMBINED GAS-STOVE AND FIRELESS COOKER. JOHN E. CHAMBERS, Shelbyville, Ind. Filed Mar. 30, 1911. Serial No. 618,047. (Cl. 126—39.)



1. In a combined stove and fireless cooker, a cooking compartment provided with an opening therein leading to the exterior thereof, a burner in said cooking compartment, a fuel valve controlling the passage of fuel to said burner, said valve being provided with a rotatable stem, a damper for the opening in the cooking compartment, operating mechanism for the damper including an operating handle loosely mounted on the stem of the fuel valve, said operating handle and valve stem being provided with coöperating portions acting to turn the valve to closed position when the operating handle is shifted to move the damper to closed position and permitting free action of the valve independent of the damper operating mechanism.

2. In a combined stove and fireless cooker, a cooking compartment provided with an opening therein leading to the exterior thereof, a burner in said cooking compartment, a fuel valve controlling the passage of fuel to said burner, said valve being provided with a rotatable stem, and an operating handle projecting laterally therefrom, a damper for the opening in the cooking compartment, operating mechanism for the damper including a lever loosely mounted on the stem of the fuel valve and provided with a projection normally positioned alongside of the operating handle of the fuel valve so as to contact therewith as the lever is shifted.

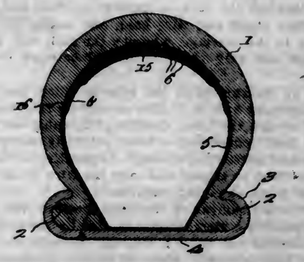
3. In a combined stove and fireless cooker, a cooking compartment, provided with an opening leading to the outside, a burner for said cooking compartment, a fuel valve controlling the passage of fuel to said burner, a handle for said valve, a closure for the opening in the cooking compartment, operating mechanism for the closure including an operating handle, the said handles being mounted to rotate about a common vertical axis, and operatively associated means whereby a movement of one handle in one direction will result in a movement of the other handle in the same direction, and said connection permitting independent movement of one of said handles.

4. In a combined stove and fireless cooker, the combination of a cooking compartment provided with an opening leading to the outside, a damper for controlling said opening, a burner for the cooking compartment, a valve for controlling the fuel supply to said burner, an operating handle for the valve, operating mechanism for the damper, an operating handle for said mechanism, said operating handles being mounted to rotate about a common axis, and an operative engagement between said handles whereby as the damper is moved to closed position, the burner valve is simultaneously moved to closed position, and said operative engagement permitting free independent movement of the fuel supply valve when the damper is open.

5. In a combined stove and fireless cooker, the combination of a cooking compartment provided with a vent opening, a damper for said opening, a burner for the compartment, fuel supply means for the burner, a rotatable valve for regulating the fuel supply, a handle for said valve, operating mechanism for the damper including a handle, said handles being arranged adjacent to one another and a connected part of one handle constituting a support for the other handle, the handle for the fuel valve being adapted to move independently of the handle for operating the damper, and inter-engaging means carried by the handles whereby as the damper handle is moved to close the damper the fuel supply valve is moved to closed position.

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1,225,770. PNEUMATIC TIRE. JAMES FARQUHARD CHAUVIN, Houma, La., assignor to Campbell P. Jones, Houma, La. Filed Sept. 22, 1916. Serial No. 121,629. (Cl. 152—18.)

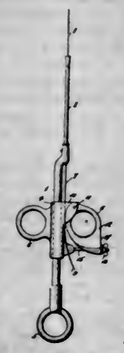


1. A tire protector of the character described including a series of round resilient rods extending circumferentially of the tire and forming an outer row, a second series of similar rods extending circumferentially and forming a second inner row, such rods of the second row being disposed opposite the spaces between the rods of the outer row, substantially inelastic stitching wound alternately about the adjacent rods of both inner and outer rows for securing the rods against transverse displacement, a covering extending over the outer faces of the outer row of said rods, and a lining placed over the inner faces of the inner row, substantially as described.

2. A tire protector of the character described including a series of round resilient rods extending circumferentially of the tire and forming an outer row, a second series of similar rods extending circumferentially and forming a second inner row, such rods of the second row being disposed opposite the spaces between the rods of the outer row, substantially inelastic stitching wound alternately about the adjacent rods of both inner and outer rows for securing the rods against transverse displacement, a covering composed of a series of transversely extending strips having their ends overlapped and placed over the outer faces of the outer row of said rods, other strips placed over and concealing the joints of the overlapping ends of said first mentioned strips, and a lining covering the interior faces of the inner row of said rods and secured at its ends to said covering, substantially as described.

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1,225,771. ECRASEUR OR SUCH LIKE INSTRUMENT. JAMES P. CLARK, Newton, Mass. Filed Sept. 1, 1916. Serial No. 117,981. (Cl. 128—28.)



1. In an instrument of the type specified, the combination comprising a stem, a tube carried by the stem, a wire passed through the tube, a carriage movable on the stem, a finger hold pivotally secured to the carriage, said hold presenting an edge for engaging and holding the wire passed between it and the carriage.

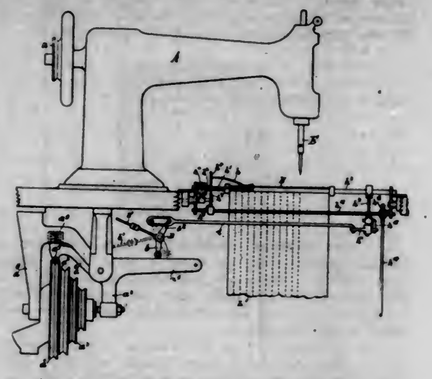
2. In an instrument of the type specified, the combination comprising a stem, a tube carried by the stem, a wire passed through the tube, a carriage movable on the stem, a combined finger and wire hold, and means for securing the same to the carriage, whereby the hold may be turned to engage and grip the wire passed between it and the carriage.

3. In an instrument of the type specified, the combination comprising a stem, a tube carried by the stem, a wire passed through the tube, a carriage movable on the stem, a finger hold comprising a lever pivotally secured to the carriage and presenting an edge coöperating with the side of the carriage to engage and grip the wire when the lever is turned to an engaging position.

4. In an instrument of the type specified, the combination comprising a stem, a tube carried by the stem, a wire passed through the tube, a carriage movable on the stem, a finger hold pivotally secured to the carriage to turn thereon and engage the wire passed between it and the carriage for holding the wire, and means for applying pressure to the finger hold when turned to an engaging position.

5. In an instrument of the type specified, the combination comprising a stem, a tube carried by the stem, a wire passed through the tube, a carriage movable on the stem, a cam-shaped finger hold, means for pivotally securing the hold to the carriage whereby it may be turned to grip the wire passed between the hold and the carriage, and means for applying pressure to the hold when occupying its engaging position and for maintaining it in such position.

1,225,772. SEWING-MACHINE. LOFTUS GEORGE COADE, Birmingham, England. Filed Nov. 27, 1914. Serial No. 874,297. (Cl. 112—29.)



1. In a sewing-machine, a clutch driving said machine, tripping means for retaining said clutch in engagement with said machine, supports beneath the fabric led through said machine, a lever connected to said tripping means, a claw on said lever, a feeler resting on the border of said fabric between said supports and connected to said claw lever and a moving claw adjacent to said claw.

2. In a sewing-machine, a clutch driving said machine, tripping means for retaining said clutch in engagement with said machine, supports beneath the fabric led through said machine, a lever connected to said tripping means, a claw on said lever, a feeler resting on the border of said fabric between said supports and connected to said claw lever and a rotating claw adjacent to said claw.

3. In a sewing-machine, a clutch driving said machine, tripping means for retaining said clutch in engagement with said machine, pivoted supports beneath the fabric led through said machine, a lever connected to said tripping means and to said pivoted supports, a claw on said lever, a feeler resting on the border of said fabric between said supports and connected to said claw lever and a rotating claw adjacent to said claw.

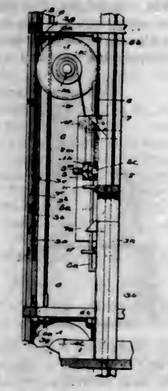
4. In a sewing-machine, a clutch driving said machine, tripping means for retaining said clutch in engagement with said machine, a shaft connected to said tripping means, levers secured to said shaft, bars extending between said levers beneath the fabric led through said machine, another lever secured to said shaft, a lever pivoted to said last-mentioned lever, a feeler resting on the border of said fabric between said bars and connected to said pivoted lever, a claw on said pivoted lever and a rotating claw adjacent to said claw.

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1,225,773. AUTOMATIC SAFETY ELEVATOR-GATE. JAY HARDING COLE, Binghamton, N. Y. Filed Mar. 29, 1916. Serial No. 87,547. (Cl. 187—60.)

1. In combination an elevator car and elevator gate; a slidable and laterally movable member adjacent the gate, a trip on said member, operative connections between said slidable member and the gate to operate the latter when the slidable member is moved vertically, means for swinging the said trip into position to be engaged by catches on the car, catches attached to the car adapted to engage the trip when in operative position, devices adapted to hold the trip in position to be engaged by the catches on the car, and means adjacent the path of the car adapted to cause the trip to disengage the catches on the car when the slidable member has made sufficient movement.

2. In combination with an elevator car and gate; a cable and drum for operating said gate, a slidable swingable member adjacent the gate, a trip on said member, means whereby said slidable member operates the drum, means for swinging said slidable member into position to have the trip engaged by members on the car, members attached to the car adapted to engage the trip when in operative position and cause same to move with the car, devices adapted to hold the trip in position to be engaged by the members on the car, and means to cause the trip to disengage the members on the car, when the slidable member has made a sufficient movement.



3. In combination with an elevator car and floor gate; of a slidable laterally swingable member adjacent the path of the elevator, means manually controllable by the operator on the car for shifting said swingable member into position to be engaged by a member on the car so that said swingable member will be shifted by the movement of the car, means connected with said swingable member for opening the gate when said slidable member is shifted by the car, and means for disengaging the slidable member to close the gate when the car moves beyond certain limits.

4. In combination with an elevator car and floor gate; a slidable swingable member adjacent the floor landing, means adapted to be operated by said swingable member for opening the gate at such floor, means manually operable by the operator on the car for throwing said swingable member into operative position, means on the car adapted to engage said swingable member when in operative position and actuate said member, and means for disengaging said swingable member from the car means after the gates are opened when the car moves beyond certain limits.

5. In combination with an elevator car and gate; of a vertically and laterally movable member mounted adjacent the path of the elevator; means manually operable by the operator on the car for causing said member to be engaged by members on the car, means connected with said movable member for opening the gate when the member is actuated by the car, members on the car adapted to engage the movable member and move the same as the car moves, and means for automatically disengaging said movable member from the car member if the car moves beyond certain limits.

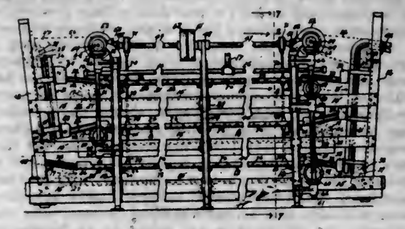
[Claim 6 not printed in the Gazette.]

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1,225,774. APPARATUS FOR COOLING STERILIZED OR COOKED CANNED GOODS. JUSTIN B. COOK, Tempe, Ariz. Filed Mar. 4, 1916. Serial No. 82,513. (Cl. 259—55.)

1. In apparatus of the class specified, the combination of conveyers having pivotally mounted runways, and means for oscillating said runways.

2. In apparatus of the class specified, the combination of conveyers having pivotally-mounted runways, elevators at the ends of the conveyers, and means for oscillating the runways.



3. In apparatus of the class specified, the combination of a pivotally-mounted runway, a shaft, an eccentric on the shaft, a link connected to the eccentric, and a lever having one end portion thereof pivotally connected to the link and having the other end portion thereof attached to the runway.

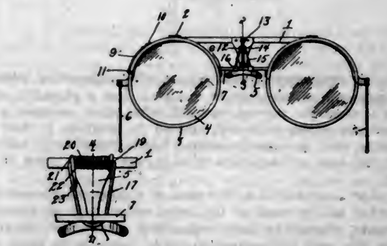
4. In apparatus for cooling canned goods, the combination of conveyers arranged in a substantially vertical plane and at different levels, means for moving the canned goods to the conveyers in succession, and means whereby the canned goods is agitated while being carried by said conveyers.

5. In apparatus for cooling canned goods the combination of oscillatable conveyers arranged in a substantially vertical plane and at different levels, and means for elevating the canned goods from the lower to the higher conveyers in succession.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,775. SPECTACLES. ARTHUR M. COX, Commerce, Okla. Filed Oct. 12, 1916. Serial No. 125,241. (Cl. 88—41.)



1. A device of the character described including a frame, lenses pivoted thereto, a nose-piece connected to the frame, means for bracing the lenses so that they may be moved simultaneously, means for retaining the lenses in an operative position against the frame, and means arranged between the nose-piece and the bracing means for removably holding the lenses in a raised or inoperative position.

2. A device of the character described comprising a spectacle frame consisting of a bar having its opposite ends curved downwardly, lens holders pivotally connected to the bar adjacent its curved ends and adapted to lie in operative position against said curved ends, a nose piece depending from the bar and lying between the lens holders, means connecting said lens holders together so that they may be moved in unison, and means between the nose piece and connecting means for retaining the lens holders in a raised and inoperative position relative to the frame.

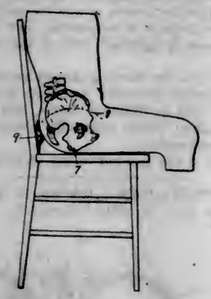
3. A device of the character described including a supporting frame, lens holders pivoted thereto, lenses receivable in the holders, means for bracing the lens holders so that they may be moved simultaneously, means for retaining the lens holders in an operative position against the frame, a substantially U-shaped support arranged

adjacent the bracing means, and resilient means for receiving the support connected to the support and to the nose-piece so as to exert a tension on the bracing means to automatically swing the lens holders into a raised or inoperative position when the retaining means is released.

4. A device of the character described comprising a spectacle frame consisting of a bar having its opposite ends curved, lens holders pivotally connected to the bar adjacent its curved ends and adapted to lie in operative position against said curved ends, a nose piece projecting from the bar and lying between the lens holders, means connecting said lens holders together so that they may be moved in unison, an arm pivotally connected to the nose piece and in constant engagement with said last mentioned connecting means, resilient means associated with said arm and normally tending to raise said arm whereby said lens holders are moved to an inoperative position, and means for retaining the lens holders in an operative position relative to the frame.

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1,225,776. SPINE REST OR SUPPORT. ARTHUR STILL CRAIG, Kansas City, Mo. Filed July 3, 1914. Serial No. 848,893. (Cl. 155—26.)



1. The combination with a seat, of a supporting member mounted at the rear of the seat, and a plurality of elastic elements carried by said supporting member at points above the seat and located in position to exert pressure only at opposite sides of and immediately adjacent the base of the spine of a person sitting upon the seat.

2. The combination with a seat, of a supporting member mounted at the rear of the seat, and a pair of elastic elements carried by said supporting member at points above the seat and spaced apart in position to exert a combined upward and forward pressure only at opposite sides of and immediately adjacent the base of the spine of a person sitting upon the seat.

3. In combination with a seat, an appliance comprising a member adapted to be held against the back of the seat, and a pair of conical helical springs having their apex ends secured to said member and projecting forward therefrom in position to engage the opposite sides of the pelvic portion of a person sitting upon the seat and exert pressure thereon, said springs being spaced apart to avoid pressure upon the base of the spine, and means for holding compressed the upper portions of the convolutions of each spring while permitting their lower portions to remain spread apart, thereby adapting the same to exert an upward as well as forward pressure.

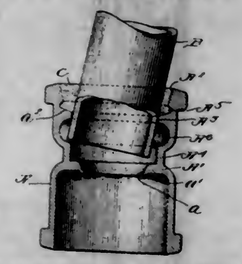
4. In combination with a seat, a plate adapted to be held against the back of the seat, a pair of conical helical springs in front of said plate, the upper corners of the latter being turned over to clamp the ends of the apices of said springs and support said springs in horizontally spaced relation, and a link associated with each spring and embracing the upper portions of its convolutions to compress the same while permitting their lower portions to remain spread apart, thereby causing the springs to face in an upward and forward direction.

5. A device of the character described comprising a plate, a pair of spaced lugs provided on said plate, a pair of conical helical springs, each having its apex end clamped between one of said lugs and said plate, links compressing the upper portions of the convolutions of each spring while permitting their lower portions to remain spread apart, and a flexible covering for said plate and springs.

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1,225,777. PIPE-UNION. DAVID CRAIG, Peabody, Mass. Filed Nov. 5, 1914. Serial No. 870,402. (Cl. 137—29.)

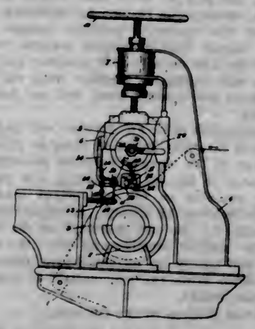
1. A pipe union comprising a hub having a partition dividing it into two parts, said partition having a central bore provided with a beveled wall and a lip.



2. A pipe union comprising a hub having a mouth provided with a beveled wall and a partition dividing said hub into two parts said partition provided with a central bore having a beveled wall and a lip, circumferential guide surfaces within said hub for guiding a pipe into position therein, a circumferential groove whereby the pipe may be secured in angular position within said hub, and another circumferential groove adapted to receive a packing interposed between said pipe and said hub and to prevent dislodgment of said packing.

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1,225,778. WET MACHINE. HERVEY G. CRAM and CLIFFORD A. PARSONS, Millinocket, Me., assignors to Great Northern Paper Company, Millinocket, Me., a Corporation of Maine. Filed July 19, 1916. Serial No. 110,224. (Cl. 92—67.)



1. A wet machine comprising a pair of coöperating press-rolls arranged to compress a layer of pulp on the pulp-receiving roll during the formation thereon, and having means associated therewith for forming a line of weakness longitudinally thereof, and pneumatic-means arranged to rupture said layer at said line of weakness.

2. A wet machine comprising a pair of coöperating press-rolls arranged to compress a layer of pulp on the pulp-receiving roll and to leave a narrow unpressed weakened line longitudinally thereof and pneumatic-means arranged to rupture the layer of pulp at said weakened line.

3. A wet machine comprising a pair of coöperating press-rolls arranged to compress a layer of pulp on the pulp-receiving roll and to leave a narrow unpressed weakened line longitudinally thereof and pneumatic means arranged to rupture the layer of pulp at said weakened line, and a deflect the end-portion of the ruptured layer away from the roll.

4. A wet machine comprising a pair of coöperating press-rolls arranged to compress a layer of pulp on the pulp-receiving roll and to leave a narrow unpressed weakened line longitudinally thereof, and pneumatic-means arranged to deliver a current of air against the inner side of the layer of pulp on said roll at the unpressed weakened portion thereof to rupture the pulp layer entirely across the same.

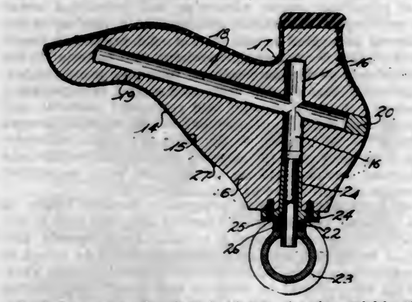
5. A wet machine comprising a pair of coöperating press-rolls arranged to compress a layer of pulp on the pulp-receiving roll and to leave a narrow unpressed weakened line longitudinally thereof, and pneumatic-means arranged to deliver a current of air against the inner side of the layer of pulp on said roll adjacent the unpressed weakened portion thereof to rupture the same, and to deflect the end-portion of the ruptured layer away from the roll.

[Claims 6 to 39 not printed in the Gazette.]



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1,225,779. APPARATUS FOR TREATING RUBBER ARTICLES. JOHN T. CROWLEY, Beacon Falls, Conn., assignor to The Beacon Falls Rubber Shoe Company, Beacon Falls, Conn., a Corporation of Connecticut. Filed Nov. 10, 1916. Serial No. 130,527. (Cl. 18—46.)



1. A porous wooden last having a chamber within the foot portion and means for communicating the said chamber with a source of low fluid pressure.

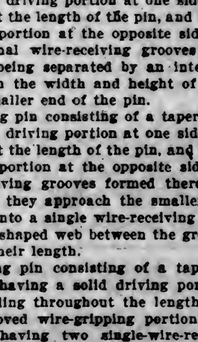
5. A form comprising a wooden last having a bore extending from its upper portion toward the heel and adjacent the juncture between the heel portion and the sole portion, and a bore extending longitudinally of the last and adjacent the in-curve between the instep portion and the toe portion, and means for connecting said bores with a desired condition of fluid pressure.

[Claims 2 to 4 not printed in the Gazette.]

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1,225,780. SAFETY DEVICE FOR ELEVATORS. JOHN L. DAVIS, Walnut Springs, Tex. Filed Apr. 19, 1916. Serial No. 92,271. (Cl. 187—89.)

The combination with an elevator car and vertical guide rails therefor, of a vertically disposed lever pivotally mounted upon the top of the car, pivotally mounted brake shoes to engage the respective guide rails, links operatively connecting said shoes to the lever on relatively opposite sides of its pivot, a latch bar pivotally mounted at one of its ends upon the top of the car and provided with a slot in which the upper end of the pivoted lever is engaged, a roller mounted in said slot, a spring connected to the lower end of the lever and holding said lever at its upper end in bearing engagement against the roller, a counterbalanced fan blade pivotally mounted upon the top of the car at one of its ends, and a link connection between said blade, adjacent to its pivoted end, and the other end of the latch bar, whereby said bar is actuated



in the upward movement of the fan blade when subjected to excessive air pressure to permit of the movement of said lever under the action of the spring and the frictional engagement of the brake shoes with the guide rails.

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1,225,781. BONDING-PIN. EDWARD M. DEEMS, Forest Hills, N. Y., assignor to Duplex Channel Pin Company, Inc., a Corporation of New York. Filed May 13, 1916. Serial No. 97,266. (Cl. 173—283.)



1. A bonding pin consisting of a tapered body portion having a solid driving portion at one side thereof throughout the length of the pin, and having two wire receiving grooves formed in the opposite side thereof, said grooves converging and merging into a single channel as they approach the smaller end of the pin.

2. A bonding pin consisting of a tapering body portion having a solid driving portion at one side thereof extending throughout the length of the pin, and having a grooved wire-gripping portion at the opposite side thereof having two wire-receiving grooves formed therein, said grooves converging as they approach the smaller end of the pin and merging into a single broad channel at a point intermediate the ends of the pin.

3. A bonding pin consisting of a tapering body portion having a solid driving portion at one side thereof extending throughout the length of the pin, and having a grooved wire-gripping portion at the opposite side thereof having two longitudinal wire-receiving grooves formed therein, said grooves being separated by an intermediate wedge-shaped portion the width and height of which decreases toward the smaller end of the pin.

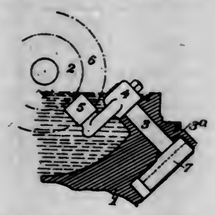
4. A bonding pin consisting of a tapering body portion having a solid driving portion at one side thereof extending throughout the length of the pin, and having a grooved wire-gripping portion at the opposite side thereof having two wire-receiving grooves formed therein, said grooves converging as they approach the smaller end of the pin and merging into a single wire-receiving channel so as to form a wedge-shaped web between the grooves throughout a portion of their length.

5. A bonding pin consisting of a tapering soft metal body portion having a solid driving portion at one side thereof extending throughout the length of the pin, and having a grooved wire-gripping portion at the opposite side thereof having two single-wire-receiving channels formed therein converging and merging into a broad two-wire-receiving channel as they approach the smaller end

of the pin, said channels having thin deformable side walls adapted to be crushed tightly around the wires when the pin is driven into the rail.

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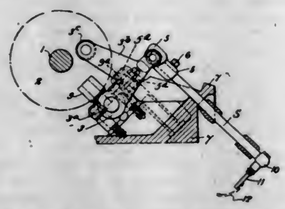
1,225,782. CAM-OPERATED TRANSMISSION MECHANISM. MARK THOMAS DENNE, Rushden, England. Filed Sept. 22, 1914. Serial No. 863,019. (Cl. 74—1.)



In a device of the class described, the combination with a driving cam member, of an oil-tight casing in which said cam member is received and which is adapted to receive sufficient lubricating oil so that said cam member will be at least partially immersed in the oil, an oscillatory shaft journaled in and extending through the wall of the casing at a point below the level of the oil therein, means making an oil-tight joint between said shaft and casing, an arm connected to the inner end of said shaft within said casing, and having operative engagement with said cam, and a tool-actuating member on the outer end of said shaft exterior to said casing.

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1,225,783. THREADING DEVICE FOR HOOK-NEEDLES IN SEWING-MACHINES. MARK THOMAS DENNE, Rushden, England. Filed Sept. 22, 1914. Serial No. 863,022. (Cl. 112—20.)

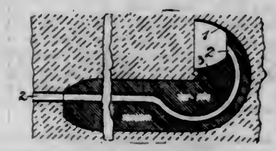


In a sewing machine, the combination with an oscillatory needle, of a looper spindle situated substantially in the plane of oscillation of the needle and inclined to the horizontal plane passing through the axis of oscillation of the needle, means supporting said spindle for both axial and oscillatory movement about its axis, a looper secured to the lower end of the spindle, a saddle piece secured to the upper end of the spindle, and an arm extending laterally therefrom in a downwardly-inclined direction, a lever pivotally mounted at one end and extending at substantially right angles to the spindle, a block carried by the other end of said lever and embraced by said saddle piece, an arm extending laterally from said lever, a second lever pivoted intermediate of its ends and connected to the arm extending from the saddle piece, and a cam for giving oscillatory movement to both of said levers.

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1,225,784. MINING METHOD. TRIMBLE DE ROODE, New York, N. Y. Filed Dec. 29, 1911. Serial No. 668,411. (Cl. 37—51.)

1. A method of mining comprising forming an opening in the material to be mined, providing means to prevent the collapse of the walls thereof, excavating in front of said protecting means, advancing said protecting means in the line of excavation, transferring a portion of the material excavated to the rear of said protecting means as the latter is advanced, restraining said material to the rear of said protecting means for forming a protected passage to the rear of said protecting means, said protected passage extending through said restrained material, and transferring the balance of said excavated material through said protected passage to the rear.



2. A method of mining comprising forming an opening in the material to be mined, providing means to prevent the collapse of the walls thereof, excavating in front of said protecting means, advancing said protecting means in the line of excavation, transferring a finer portion of the material excavated to the rear of said protecting means as the latter is advanced, restraining said material to the rear of said protecting means for forming a protected passage to the rear of said protecting means, said protected passage extending through said restrained material, and transferring a coarser portion of said excavated material through said protected passage to the rear.

3. A method of mining comprising forming an opening in the material to be mined, providing means to prevent the collapse of the walls thereof, excavating in front of said protecting means, advancing said protecting means in the line of excavation, transferring a portion of the material excavated to the rear of said protecting means as the latter is advanced, restraining said material to the rear of said protecting means for forming a protected passage to the rear of said protecting means, said protected passage extending through said restrained material, and transferring the balance of said excavated material through said protected passage to the rear, the restrained material being finer than the material transferred through said protected passage, said coarser material being transferred through said protected passage hydraulically.

4. A method of mining comprising forming a bore in the material to be mined, advancing into said bore a protecting shield furnishing a working space therein protected thereby, cutting away the material to be mined in front of the edge of said shield by hydraulic means, excavating the material in front of said shield, constructing behind said shield a protected outlet passage communicating with the interior of the shield but of less cross sectional area than the cross sectional area of said shield, transferring to the space around said protected passage and at the rear of said shield a portion of the excavated material, advancing the shield as the excavation progresses and continuing to deposit to the rear of said shield and around said smaller protected passage a portion of the excavated material.

5. A method of mining comprising forming a cut into the material to be mined and placing therein a movable bulkhead, excavating the material to be mined in front of said bulkhead and transferring the excavated material to the rear of said bulkhead and utilizing the pressure of said material at the rear thereof to advance said bulkhead.

[Claims 6 to 28 not printed in the Gazette.]

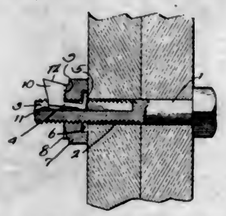
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1,225,785. NUT-LOCK. MEHO DERVOZ, Chicago, Ill. Filed Aug. 31, 1916. Serial No. 117,845. (Cl. 151—9.)

1. In combination, a longitudinally slotted bolt, a nut having ratchet teeth formed in its outer end surface, a one piece dog having a foot sliding in said slot and an upstanding body having a tooth facing the toothed surface of said nut, and a spring located between the bottom of the slot and the foot of the dog for pressing said body toward said teeth.



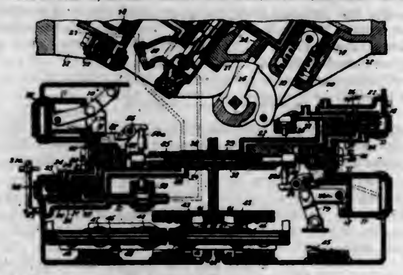
2. In a nut lock, the combination of a threaded bolt having a longitudinal slot, a nut having ratchet teeth formed in its outer surface and an annular countersink on its inner surface, a dog having a foot sliding in said slot, an upturned toe fitting into said countersink, an upstanding body at the outer end of the foot, a tooth on the inner surface of said body for engaging the teeth on the foot, and a leaf spring located between the bottom of the slot and the foot of the dog for pressing the latter radially outward.



3. In a nut lock, the combination of a threaded bolt having a longitudinal slot, a nut having ratchet teeth formed in its outer surface and an annular countersink on its inner surface, a dog having a foot sliding in said slot, an upturned toe fitting into said countersink, an upstanding body at the outer end of the foot, a tooth on the inner surface of said body for engaging the teeth on the foot, and a spring on the sole of the foot for urging the body of the dog toward the teeth on the nut.

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1,225,786. CAR AND ELECTRIC COUPLING. EDWARD H. DEWSON, New York, and THOMAS R. BROWN, Sparkill, N. Y., assignors to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 3, 1914. Serial No. 810,112. (Cl. 173—332.)



1. In a car coupling, the combination with a casing containing a plurality of fixed contacts connected to train line circuits, and a movable carrier having corresponding contact bars, of fluid pressure means for projecting said carrier to electrically connect the corresponding contacts of counterpart couplers, and a valve device for controlling the return movement of said carrier.

2. In a car coupling, the combination with a casing containing a plurality of fixed contacts connected to train line circuits, and a movable carrier having corresponding contact bars, of fluid pressure means for projecting said carrier to electrically connect the corresponding contacts of counterpart couplers, and means carried by each coupler for controlling the return movement of the contact carrier upon either one of the couplers.

3. In a car coupling, the combination with a casing containing a plurality of fixed contacts connected to train line circuits, and a movable carrier having corresponding contact bars, of fluid pressure means for projecting said carrier to electrically connect the corresponding contacts of counterpart couplers, and a manually controlled valve device for releasing fluid from said fluid pressure means to effect a return movement of said carrier.

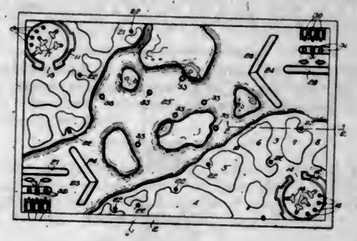
4. In a car coupling, the combination with a casing containing a plurality of fixed contacts connected to train line circuits, and a movable carrier having corresponding contact bars, of fluid pressure means for projecting said carrier to electrically connect the corresponding contacts of counterpart couplers, a valve device for controlling the release movement of said carrier and a conduit establishing communication between said valve devices of the counterpart couplers.

5. In a car coupling, the combination with a casing containing a plurality of fixed contacts connected to train line circuits, and a movable carrier having corresponding contact bars, of fluid pressure means for projecting said carrier to electrically connect the corresponding contacts of counterpart couplers, a valve operated automatically upon the coming together of the couplers for supplying fluid pressure to said means, and a manually controlled valve device for releasing fluid therefrom to effect a return movement of said carrier.

[Claims 6 to 20 not printed in the Gazette.]

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1,225,787. EDUCATIONAL MAGNETIC TOY. ARTHUR V. DIEHL, Buzzards Bay, Mass. Filed May 15, 1916. Serial No. 97,488. (Cl. 46—41.)



1. In a magnetic toy, a container having a transparent cover, a plurality of para-magnetic objects within the container and under said cover, a series of disks fastened to the container, a magnet adapted to be manipulated outside the cover and to lift said objects up within the container and to carry the same over said disks, whereby said objects may be released and drop on said disks which aid in neutralizing the force of inductive magnetism of the magnet.

2. In a magnetic game of the kind described, a container comprising the representation of land or water, a glass cover for said container, a plurality of raised portions of said container in touch with the cover, a plurality of metallic disks in said container, a plurality of para-magnetic objects representing aerial and similar para-magnetic objects representing bombs and adapted to be conducted with the aerial craft about the container by means of a magnet held on the outside of the glass cover, said metallic disks facilitating the neutralizing of the inductive magnetism and the separation of the bomb from an aerial craft.

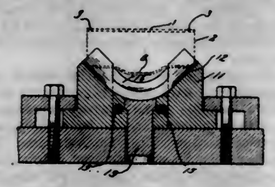
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1,225,788. PROCESS OF MAKING ELBOWS. CHARLES A. DIBB, Chicago, Ill., assignor to Clayton Mark, Chicago, Ill. Filed Feb. 15, 1912, Serial No. 677,790. Renewed Sept. 30, 1916. Serial No. 123,015. (Cl. 113—116.)

1. The process of making elbows, comprising reducing the ends of a tubular blank and thickening the walls of that side of the blank designed to form the long side of the elbow, then bending the blank centrally to the desired angle.

2. The process of making elbows, comprising thickening by compression (in varying degrees from ends toward the center) the stock along one side of a tubular blank, then bending the blank toward the opposite side to the desired angle.

3. The process of making elbows, comprising reducing the ends of a tubular blank, bending the blank to the desired angle and forming it to an elliptical cross sectional shape, then truing the blank to a uniform diameter.



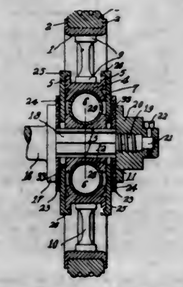
4. The process of making elbows, comprising bending an internally unsupported tubular blank to the desired angle, and reducing it to an elliptical cross sectional shape, then sizing the blank to bring it to a uniform diameter.

5. The process of making elbows, comprising reducing the diameter of the ends of a tubular blank and thickening the walls of one side of the blank, bending the blank to the desired angle with the thickened walls forming the long side of the angle and shaping the blank to an elliptical form, then truing the blank to a uniform diameter.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,789. AUTOMOBILE-WHEEL. SALVADOR DOMINGUEZ, San Antonio, Tex. Filed Sept. 1, 1916. Serial No. 118,126. (Cl. 152—41.)

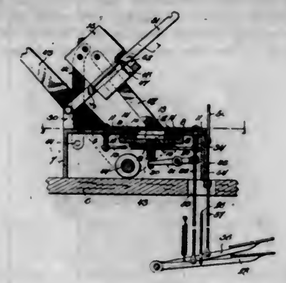


In a device of the class described, an axle; wear plates carried by the axle; side plates mounted to reciprocate with respect to the axle and located between the wear plates, the side plates being provided at their peripheries with flanges which project toward the median plane of the wheel, the flanges having lugs which project toward the axle; an outer hub provided at its sides with flanges which project away from the axle, the said flanges being peripherally provided with notches which extend entirely therethrough and are located exteriorly of the body portion of the hub, the notches receiving the lugs to prevent relative circumferential movement between the side plates and the hub; a tire; means for connecting the tire with the hub; an inner hub carried by the axle; and a cushion interposed between the hubs.

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1,225,790. EDGE-FOLDING MACHINE FOR POCKET-BOOK BODIES. WALTER C. EICHELBERGER, West Bend, Wis., assignor to Enger-Kress Pocket Book Co., West Bend, Wis. Filed Oct. 16, 1916. Serial No. 126,053. (Cl. 69—8.)

1. A machine of the class described comprising a body plate provided with a recess, means for holding the sheet of work material in the recess, means movable inwardly of the recess for bending the edge portions of the sheet of work material, means for actuating said bending means, a false bottom in said recess, and means for moving said false bottom toward the mouth of said recess simultaneously with actuation of said bending means to feed the edge portions of the work material to said bending means.



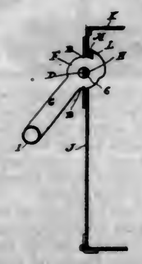
3. A machine of the class described comprising a bed plate provided with a recess, means for holding a sheet of work material in the recess, means movable inwardly of the recess for bending the edge portions of the sheet of work material, a pressing member movable toward and away from the body plate, said pressing member including a portion movable outwardly thereof, and means for holding said movable portion in outward position and adjacent the bed plate to form a guide for the work material upon actuation of said bending means.

4. A machine of the class described comprising a body plate provided with a recess, means for holding a sheet of work material in the recess, a pair of plates slidable on the body plate and movable inwardly of the edges of the recess, a second pair of plates slidable on the first plates and movable inwardly of the edges of the recess, means for simultaneously moving said plates inwardly, and upstanding enlargements on the undermost bending plates having their top faces flush with the top faces of the uppermost plates.

[Claims 2 and 5 to 8 not printed in the Gazette.]

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1,225,791. COUPLING ELEMENT. FREDERICK MACDONALD FAIRGRIEVE, Toronto, Ontario, Canada. Filed June 16, 1916. Serial No. 104,106. (Cl. 16—11.)



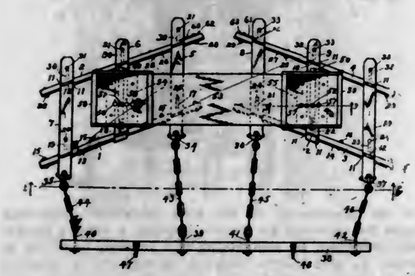
1. As a new article of manufacture a coupling element within the perimeter of which has been stamped two alined holes, and a tongue positioned between said holes, the top and bottom edges of which are substantially parallel to each other; one side of said tongue being severed from said coupling element, but normally resting substantially in contact therewith.

2. The combination with a coupling element provided with two alined holes separated by a tongue, the top and bottom edges of which are substantially parallel to each other, one end of said tongue being severed from said coupling element, which element is designed to be "buckled" on a line passing substantially centrally through said holes and tongue, to provide a passageway through said coupling element, of an element provided with a hole passed into said passageway and coupled to said tongue by means of its hole; the said coupling element, after said second-mentioned element has been positioned, being pressed back into normal position, as set forth.



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1,225,792. ROAD-DRAG. CHARLES FERGUSON, Milton, Ind. Filed May 22, 1916. Serial No. 99,035. (Cl. 37—5.)



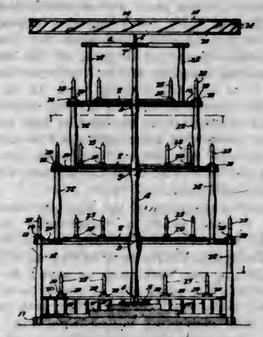
1. A road drag comprising a pair of interchangeable sections disposed in angular relation with the line of the road way, and with each other, each of said sections comprising a pair of sills, a pair of end bars and a center bar rigidly connecting said sills of each section in spaced parallel relation one to the other, a blade secured to the forward face of the front sill and extending therebelow, an angle-iron smoother secured to the rearward sill, a tie-plate extending across said sections, means for adjustably securing the ends of the tie-plate to the central bar of the sections, a container formed at either end of said tie-plate for the reception of suitable weights therein, a draw-bar, and means connecting said draw-bar and the end bars of said sections whereby the drag may be drawn over the road way.

2. In a road drag, the combination with a pair of angularly and oppositely disposed scraper sections, a plate adjustably connecting said sections in any desired spaced angular relation, means carried by said plate for supporting weights centrally of said sections, draw bars spacedly secured on said sections in parallel relation to the line of the roadway and to each other, a draft bar coextensive with said sections, and means spacedly connecting said draft bar with each of said drawbars.

3. In a road drag, the combination with a pair of reversible angularly and oppositely disposed scraper sections, of an elongated plate connecting said sections, means for adjusting said sections in spaced relation one with the other, means carried at the opposite ends of said plate for supporting weights centrally of said sections, drawbars spacedly secured on said sections in parallel relation to the line of the roadway and to each other, a draft bar coextensive with said sections, and means spacedly connecting said draft bar with each of said drawbars.

4. In a road drag, the combination with a pair of reversible angularly and oppositely disposed scraper sections, of an elongated plate connecting said sections in either of their operative positions, means for adjusting said sections in spaced relation one with the other, extensions carried by said sections, and adapted to coöperate with the latter in one of their positions of operation, means carried at the opposite ends of said plate for supporting weights centrally of said sections, drawbars spacedly secured on said sections in parallel relation to the line of the roadway and to each other, a draft bar coextensive with said sections, and means spacedly connecting said draft bar with each of said drawbars.

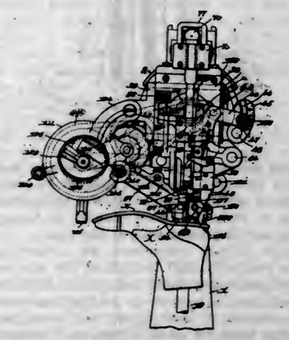
1,225,793. REVOLVING PLATFORM. ANTON E. FISCHER and ANTON C. FISCHER, Cedarburg, Wis. Filed Jan. 10, 1916. Serial No. 71,154. (Cl. 211—20.)



In a device of the described class, the combination of a plurality of annular stationary platforms, a plurality of candles supported by said stationary platforms, a revoluble spindle centrally located within said stationary platforms, an annular series of vanes supported from the upper end of said spindle, a plurality of revoluble platforms supported from said spindle centrally located within said stationary platforms, a plurality of candles supported from said revoluble platforms, all substantially as and for the purpose specified.

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1,225,794. NAILING-MACHINE. JOHN B. FLINT, Winthrop, Mass., assignor to The Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed July 6, 1912. Serial No. 708,041. (Cl. 1—18.)



1. In a nailing machine of the kind specified, a longitudinally movable awl bar, an awl block laterally movable on said bar, and an awl fixed in said block, said block being composed of two separable parts and having means for clamping them together with the awl between them, and for adjustably securing the block to said bar, and means for insuring correspondence of the said separable block parts in their adjustments.

2. In a nailing machine of the kind specified, the combination with nail driving means of a reservoir for loose nails, a chute for conducting a series of nails from the reservoir to the driving means, means for causing nails in said reservoir to pass into the chute, said chute being fitted to reciprocate and oscillate, and a rocking bearing piece on the reservoir having a sliding connection with the chute.

3. In a nailing machine of the kind specified the combination with a reservoir, a chute movable with relation

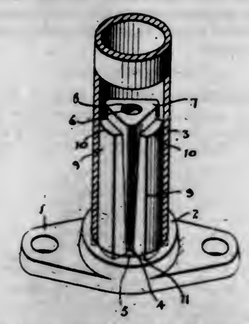
to said reservoir, and a clearing wheel part of which extends into the reservoir near the chute for clearing obstructing nails therefrom, said wheel mounted on an auxiliary power driven shaft and a safety device in connection with said shaft for permitting slippage or disengagement of the clearing wheel when the clearing wheel is stopped from rotation by clogging or the like.

4. In a nailing machine of the kind specified the combination of a to and fro moving head, an up and down moving driver carried thereby, a driving shaft, a walking beam lever, a connection at one end of said lever to said driver, and a connection from said shaft to the other end of said lever, said last named connection comprising an eccentric on the shaft and a universal joint between said eccentric and said lever.

5. In a nailing machine of the kind specified, the combination of a main shaft, a horizontally reciprocating head, an awl bar movable vertically in the head, a pair of parallel horizontal shafts each having an arm or crank, means connecting one such arm or crank to said head, means connecting the other arm or crank to said bar, and a cam on said main shaft for actuating both said parallel shafts, said first connecting means comprising a link and said second connecting means comprising a stud or roller on said bar engaged directly by the arm or crank.

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1,225,795. PIPE-FITTING. DANIEL M. FRASER, Toronto, Ontario, Canada. Filed Apr. 21, 1916. Serial No. 92,599. (Cl. 189—28.)



1. A pipe fitting comprising an anchoring member having a rigid threaded extension adapted to enter the end of the pipe, a wedge threaded on the said extension, and a plurality of wedge members adapted to engage the central wedge and the inner wall of the pipe.

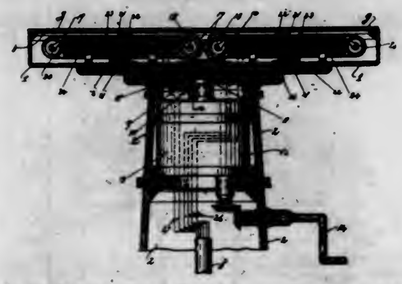
2. A pipe fitting, comprising an anchoring member adapted to rotatably abut the end of the pipe and having an annular projecting flange adapted to encircle the pipe end, a stud rigidly secured in said anchor member, centrally in relation to said flange and having a threaded end, a wedge threaded on said stud, and wedges placed in the pipe and expanded into locking contact by said central wedge on the rotation of said anchor member.

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1,225,796. AUTOMATIC FOG SAFETY SHIP'S GUIDE. OTTO FRICKE, New York, N. Y. Filed Dec. 2, 1914. Serial No. 875,166. (Cl. 181—5.)

1. The combination of a sending station, a receiving station, at least one of said stations being in motion, a record receiving member located at the receiving station and means coöperating with said record receiving member, and arranged to be actuated by signals sent coincidentlly from the sending station and having different speeds of travel whereby a record visibly indicating the movements of the moving station is produced upon said record receiving member.

2. The combination of a sending station, a receiving station, at least one of said stations being in motion, a record receiving member located at the receiving station and means coöperating with said record receiving member and arranged to be actuated by an electric impulse and the sound waves of an audible signal sent coincidentally with said electric impulse from said sending station whereby a record visibly indicating the movements of the moving station is produced upon said record receiving member.



3. An instrument of the kind described comprising means for receiving an electric impulse, a driving mechanism controlled by said means and adapted to be set in motion as said electric impulse is received, a marking device caused to travel in an inoperative position by said driving mechanism, a chart located in proximity to the path of said marking device and means actuated by sound waves produced by an audible signal sent coincidentally with said electric impulse whereby said marking device is moved from an operative to an inoperative position to produce a mark upon said chart.

4. An instrument of the kind described comprising means for receiving an electric impulse signal, a driving mechanism controlled by said means and adapted to be set in motion as said electric impulse is received, a plurality of endless belts extending radially from a given point and adapted to be actuated by said driving mechanism, marking devices carried by said belts and movable therewith in inoperative positions, a chart located in proximity to the paths of said marking devices and a plurality of means each controlling one of said marking devices and each adapted to be actuated by sound waves produced by an audible signal sent coincidentally with the electric impulse whereby said marking devices are operated to produce marks upon said chart.

5. The combination of a sending station and a receiving station, at least one of which is traveling, a record receiving member located at the receiving station and provided with indications designating distances, and means cooperating with said record receiving member and arranged to indicate the direction of location of one station relatively to the other, said means being operated by signals sent coincidentally from the sending station and having different speeds of travel whereby a record visibly indicating the path of the movable station, its distance from and its direction of location from the other station is produced upon said record receiving member.

[Claims 6 to 15 not printed in the Gazette.]

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1,225,797. FLOUR-BIN. PERCY W. GARDNER, Holdenville, Okla. Filed Oct. 1, 1915. Serial No. 53,582. (Cl. 211—6.)

1. The combination with a structure having a compartment, of supporting arms pivotally mounted for swinging movement to position within the compartment and to position extending exteriorly of the compartment, a bin supported between the said arms, and supplemental means carried by the bin for supporting the same both when in position within the compartment and when in position for filling exteriorly of the compartment.

2. The combination with a structure having a compartment, of supporting arms pivotally mounted for swinging movement to position within the compartment and to position extending exteriorly of the compartment, a bin supported between the arms, a yoke pivotally connected to the bin, a flexible element connected to the yoke, a pulley about which the said element is passed, and a counterweight connected with the said element.



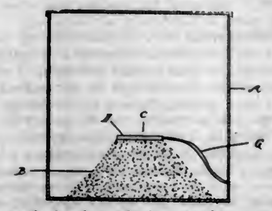


3. The combination with a structure having a compartment, of supporting arms pivotally mounted for swinging movement to position within the compartment and to position extending exteriorly of the compartment, a bin supported between the said arms, and supporting legs carried by the bin and constituting a supplemental means for supporting the bin, both when in position within the compartment, and when in position for filling exteriorly of the compartment.

4. The combination with a structure having a compartment, of supporting arms pivotally mounted for swinging movement to position within the compartment and to position extending exteriorly of the compartment, a bin supported between the arms, a yoke including spaced arms and a connecting portion, the said yoke being arranged with its arms extending at opposite sides of the bin and pivotally connected therewith by the pivots which connect the bin and the first-mentioned arms, a flexible element connected to the connecting portion of the yoke, a pulley about which the said element is passed, and a counterweight connected with the said element.

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1,225,798. METHOD OF PRODUCING SMOKE FOR CURING MEATS. RALPH J. GAUDY, Detroit, Mich. Filed Nov. 16, 1916. Serial No. 131,669. (Cl. 219—29.)



1. The method of producing smoke, comprising the electrical generation of heat limited in temperature to less than required for ignition of the smoke-producing material, and the subjection of said material to said heat generation.

2. The method of producing smoke, comprising the electrical generation of heat, limiting the temperature to less than the ignition point of the smoke-producing material, and relatively feeding the material and electrical heat generator to produce a continuous and uniform smoke production.

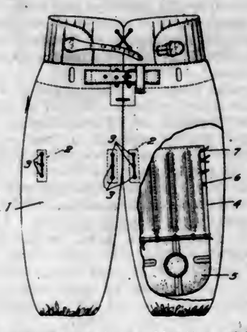
3. The method of producing smoke, comprising the passing of an electrical current through a resistor proportioned to generate in said resistor heat limited in temperature to less than the ignition point of the smoke-producing material, and feeding said resistor through the smoke-producing material.

4. The method of producing smoke, comprising the passing of an electric current through a resistor, placing said resistor on the top of a pile of smoke-producing material, and feeding the same by gravity through said pile.

5. The method of producing smoke, comprising the generation of heat in a heater, of a temperature less than the ignition point of the smoke-producing material but sufficiently high to carbonize said material, placing said heater on the top of a pile of smoke-producing material and feeding the same by gravity through said pile.

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1,225,799. FOOT-BALL PANTS. HUGO GOLDSMITH, Cincinnati, Ohio. Filed Jan. 8, 1917. Serial No. 141,071. (Cl. 2—126.)



1. In athletic pants, in combination with the leg portions, leg guards having eyelets therein, and eyelets set into the pants in the front portion of said leg portions and spaced apart the width of said leg guards, whereby the guards may be laced in place in the inside of the front of the pants.

3. In athletic pants, in combination with the leg portions, leg guards having a plurality of sets of eyelets therein, said eyelets set into the front part of the pant legs, leg guards having a plurality of eyelets along the sides thereof, and laces to secure the guards to the legs by means of said eyelets, said sets of eyelets in the legs being spaced apart a distance equal to the width of the leg guards.

[Claims 2, 4, and 5 not printed in the Gazette.]

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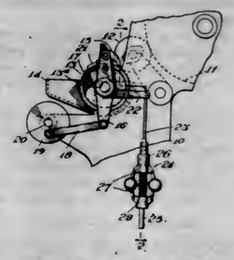
1,225,800. OPERATING MECHANISM FOR INK-ROLLERS. SAMUEL G. GOSS, Glencoe, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed June 16, 1916. Serial No. 103,944. (Cl. 101—74.)

1. In a printing press, the combination of an inking mechanism, and means for driving said inking mechanism, comprisng means serving upon an increase in the speed of the press to decrease the speed of the inking mechanism relative to that of the press.

2. In a printing press, the combination of an inking mechanism, and means driven in timed relation to the speed of the press adapted to drive said inking mechanism at a differential speed, serving upon an increase in the speed of the press to decrease the speed of the inking mechanism relative to that of the press.

3. In a printing press, the combination of an inking mechanism, and means for driving said inking mechanism in timed relation to the speed of the press, adapted when the press is being driven at its low speed and when the press is being brought up to its high speed to drive the inking mechanism at a comparatively higher speed rela-

tive to that of the press than when the press has attained its normal high speed rotation.

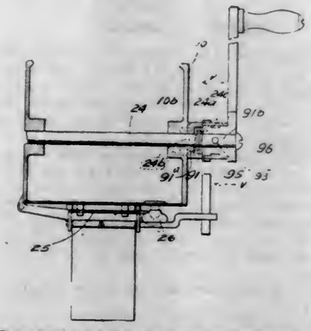


4. In a printing press, the combination of an inking mechanism, and means for driving said inking mechanism in timed relation to the speed of the press, comprising a governor driven in timed relation to the speed of the press adapted upon an increase in the speed of the press to decrease the speed of the inking mechanism relative to that of the press.

5. In a printing press, the combination of an ink-fountain, a fountain-roller revolubly mounted in said fountain, and means for rotating said fountain-roller, comprising means serving upon an increase in the speeed of the press to decrease the speed of rotation of the fountain-roller relative to that of the press.

[Claims 6 to 13 not printed in the Gazette.]

1,225,801. MOVING-PICTURE MACHINE. JOHN GRANT, Chicago, Ill. Filed Sept. 9, 1913. Serial No. 788,857. (Cl. 88—19.4.)

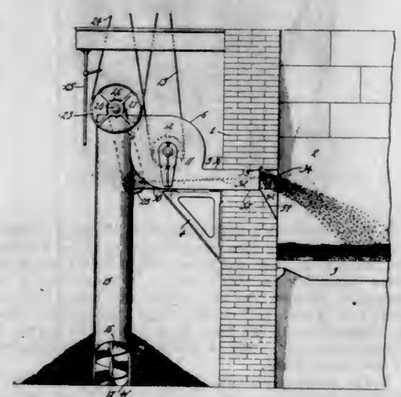


1. In a device of the class described having an opening, a shutter for said opening, said shutter having an arm, means to drive a film or the like, said means comprising a shaft, a hub member adapted to be mounted upon and engage said shaft, a lever having a portion mounted to slip upon said hub portion, means associated with said hub to rotate the same together with said shaft and means to frictionally engage said lever with said hub upon rotation thereof, whereby said lever will be actuated to coact with said shutter arm and thereby open said shutter and maintain the same in open position during the operation of said driving means.

2. In a device of the class described, a fire shutter, a rotatable shaft, a pin or the like carried by said shaft, a hub member mounted on said shaft and engaging said pin, a collar loosely mounted on said hub and operatively associated with said shutter, and a friction-producing means having a portion interposed between said hub and pin and operable upon rotation of said shaft by said hub to engage said collar and rotate the same to open said shutter.

3. In a device of the class described, a fire shutter, a rotatable shaft, a pin or the like carried by said shaft, an operating handle having a hub split to engage said pin and fitting around said shaft, a collar loosely fitting around said hub, means carried by said collar to operate said shutter, and a friction-producing member having a portion partially fitting between said hub and collar and a portion fitting between said hub and said pin, said member being arranged and constructed so that proper rotation of said handle will effect frictional engagement between said collar and hub to open said shutter.

1,225,802. STOKER. SAMUEL G. GREENAWALT, Shawinigan Falls, Quebec, Canada. Filed June 1, 1916. Serial No. 101,018. (Cl. 110—115.)



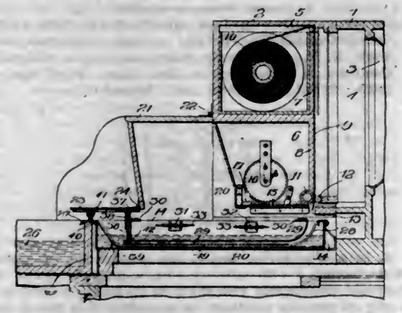
1. The combination of a furnace having an opening in its wall, a grate within said furnace and mounted below said opening, a casing providing a housing, a rotor in said housing having a plurality of paddles thereon, said casing having an elongated neck forming a complete inclosure and providing a relatively narrow passage communicating with the interior of said housing and extending partway into the opening, said opening having an inclined bottom extending directly from the lower inner edge of the neck toward said grate, means for rotating the rotor, a deflector hinged to the upper inner edge of said neck, and means for moving said deflector toward and from the inner end of the neck, said deflector being designed to deflect fuel, which is ejected through said neck by the rotor, directly on the inclined bottom of the opening and over the entire area of the grate, substantially as described.

2. The combination of a furnace having an opening through its wall, a casing forming a housing, a rotor therein, a neck on said casing providing a passage in communication with the interior of the housing, and projecting into said opening, means for actuating the rotor to cause fuel placed thereon to be passed through the passage in the neck, a deflector adjacent the open end of the neck to vary the direction of the fuel as it passes out of said neck, a sleeve having an opening communicating with the interior of the housing, a conveyer in said sleeve, two sprockets, a crank pin on one sprocket, a rod connecting said crank pin with the deflector and passing through an opening in the wall of the furnace, means for rotating the other of said sprockets and the conveyer, a chain operatively connecting the sprockets, and means for rotating said rotor, substantially as described.

1,225,803. PHOTOGRAPHIC DEVELOPING APPARATUS. JOHN S. GREENE, Rochester, N. Y., assignor to Commercial Camera Co., Providence, R. I., a Corporation of Rhode Island. Filed Nov. 1, 1916. Serial No. 128,889. (Cl. 95—90.5.)

1. In a photographic developing apparatus, the combination with a liquid container adapted to receive sheets of photographic material at one end and having an inclined guide for delivering them out of the container at the opposite end, of means for feeding the sheets up the inclined guide.





4. In a photographic developing apparatus, the combination with a liquid container adapted to receive sheets of photographic material and having an inclined guide at one end leading out of the container, of a fixed wringing element adjacent to the guide, a movable wringing element normally coöperating therewith and adapted to be raised by the operator into spaced relationship, and a paddle device for feeding the sheets up the guide and between the wringing elements.

6. In a photographic developing apparatus, the combination with a liquid container having an inclined guide at its delivery end, of a paddle device for feeding photographic sheets through the container toward the guide and for agitating the liquid, and a displaceable stop for preventing the sheets from advancing onto the guide.

10. In a photographic developing apparatus, the combination with a liquid container having an inclined guide at its delivery end and a wringing element adjacent to the guide, of a hinged cover above the latter, a second wringing element carried thereby to coöperate with the first when the cover is down, a paddle device for agitating the fluid and for feeding a sheet of photographic material from the container onto the guide and between the wringing elements when the cover is raised, and a swinging plate on the underside of the cover adapted to act as a light guard when the latter is raised and as a stop for preventing the advance of the sheet by the paddle device when the cover is down.

[Claims 2, 3, 5, and 7 to 9 not printed in the Gazette.]

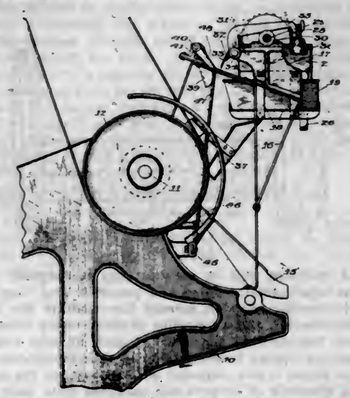
1,225,804. MACHINE FOR TREATING FIBER. CHARLES M. GREISING, St. Paul, Minn., assignor, by mesne assignments, to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Oct. 9, 1913. Serial No. 794,255. (Cl. 19—11.)

1. In a machine for treating fiber, the combination of means for supplying treating fluid to material passing through the machine, and shiftable guide means for changing automatically the course of the fluid when operation of the machine is affected.

2. In a machine for treating fiber, the combination of means for supplying treating fluid to material passing through the machine, and means for diverting the supply of fluid away from the material when the machine is stopped.

3. In a machine for treating fiber, the combination of means for supplying treating fluid to material passing through the machine, and operated means for diverting the supply of fluid away from material when the machine is stopped and to permit the supply of fluid to the material when the machine is set in motion.

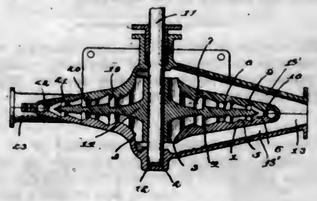
4. In a machine for treating fiber, the combination of means for supplying treating fluid to material passing through the machine, and means for simultaneously controlling the operation of the machine and changing the course of a continuous flow of fluid relative to the material passing therethrough.



5. In a machine for treating fiber, the combination of means for supplying treating fluid to material passing through the machine, and simultaneously controlled means for starting the machine into operation and changing the direction of the flow of fluid to the material.

[Claims 6 to 14 not printed in the Gazette.]

1,225,805. AIR AND GAS COMPRESSOR. AUGUSTUS W. H. GRIEPE, New York, N. Y., assignor to Turbo Company, a Corporation of New Jersey. Filed Jan. 24, 1914. Serial No. 814,135. (Cl. 253—189.)



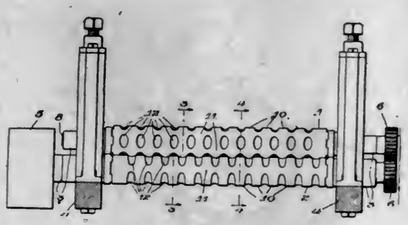
A fluid compressor having a plurality of concentric series of velocity increasing chambers the entrances of which are of greater transverse dimensions than the exits, and like series of pressure augmenting chambers the entrances of which are of less transverse dimensions than the exits, each series of velocity increasing chambers and each series of pressure augmenting chambers progressively decreasing in radial width, size and capacity from the center toward the outer periphery of the casing, the casing being provided with a single admission throat at the periphery thereof and branches leading therefrom divergently inward to the center of the casing where they communicate directly with the pressure augmenting and velocity increasing chambers of the series of least diameter.

1,225,806. SNAPPING-ROLLS FOR CORN HUSKERS, PICKERS, AND THE LIKE. BARNEY GRONKE, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed May 8, 1913. Serial No. 766,296. (Cl. 130—5.)

1. A snapping roll having a plurality of longitudinally extending grooves therein, longitudinally extending rounded or rolling ribs intermediate said grooves and a transversely extending groove in each of said rounded ribs.

2. A snapping roll of substantially rectangular cross section, longitudinally fluted, and provided with longitu-

dinally extending rounded ribs intermediate the fluted portions thereof and a plurality of transversely extending grooves intermediate the ends of each of said rounded ribs.



3. A snapping roll of substantially rectangular cross section longitudinally fluted and provided with longitudinally extending rounded corners intermediate the fluted portions thereof, and a plurality of transversely extending grooves intermediate the ends of each of said rounded ribs having convex bottoms lying in the circumference of a circle whose center coincides with the axis of the roll.

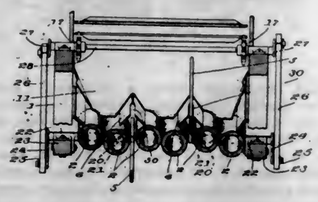
4. A plurality of coöperating snapping rolls, each having a plurality of longitudinally extending grooves therein, longitudinally extending rounded ribs intermediate said grooves, and a plurality of transversely extending grooves in each of said ribs communicating with the longitudinal grooves, the transverse grooves in one roll being arranged in staggered relation with respect to the corresponding grooves in the other roll, and the longitudinally extending ribs on one roll being received in the longitudinally extending grooves in the other.

5. A snapping roll having a plurality of grooves therein, rounded or rolling ribs intermediate said grooves, and a groove in each of said ribs.

[Claim 6 not printed in the Gazette.]

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1,225,807. CORN-HUSKER. BARNEY GRONKE, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed June 9, 1913. Serial No. 772,477. (Cl. 130—5.)



1. In a corn husker, a frame, a husking roll rotatably mounted thereon, an agitator supported by said frame and reciprocable above and below said roll, and means for reciprocating said agitator.

2. In a corn husker, a frame, a plurality of husking rolls rotatably mounted thereon, an oscillating agitator supported by said frame and vibratable up and down between certain of said husking rolls, and means for vibrating said agitator.

3. In a corn husker, a frame, a plurality of husking rolls journaled thereon, a plurality of oppositely oscillating agitators movable above and below the axes of certain of said rolls and rotatably mounted in said frame, and means for oscillating said agitators.

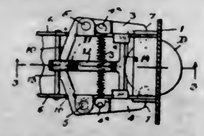
4. In a corn husker, a frame, a plurality of husking rolls rotatably mounted therein, a plurality of agitators movable between certain of said rolls in a plane at right angles thereto, and means for oppositely actuating said agitators.

5. In a corn husker, a frame, a plurality of husking rolls rotatably mounted thereon, and an agitator journaled beneath said rolls and movable between the same in a plane at right angles to the plane of said rolls.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,808. COIN-TESTING MECHANISM FOR COIN-CONTROLLED MACHINES. ALBERT D. GROVER, New York, N. Y., assignor to Autosales Gum & Chocolate Company, a Corporation of New York. Filed Sept. 2, 1915. Serial No. 48,581. (Cl. 194—102.)

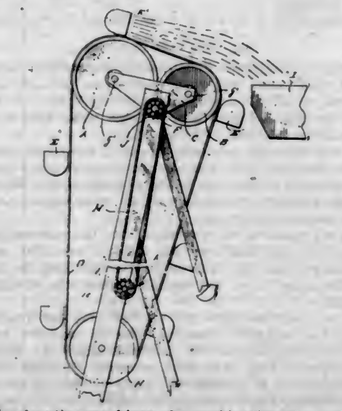


1. In a coin-testing device, the combination of a coin-chute having a coin-entrance slot, a movable device for normally closing said coin-chute in proximity to said slot, a pair of movable members for actuating said device into open position, said members being adapted to be simultaneously operated by a proper coin entering said slot, the connections between said members and said device being such that the simultaneous operation of both members is necessary to move said device into open position, and means provided at the free ends of said members for preventing simultaneous operation thereof when a disk of less than prescribed thickness is inserted into the slot, whereby said disk is stopped by said device from fully entering said slot.

2. In a coin-testing device, the combination of a coin-chute having a coin-entrance slot, a hinged gate for normally closing said coin-chute near the slot, a pair of levers mounted independently of said gate and adapted to move the same into open position, said levers being adapted to be simultaneously operated by a proper disk as it enters said slot, coöperating means on said gate and said levers for compelling the simultaneous operation of said levers to open the gate, and means provided at the free ends of said levers for preventing simultaneous operation thereof when a disk of less than prescribed thickness is inserted into the slot, whereby said disk is stopped by said gate from fully entering said slot.

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1,225,809. ELEVATING-MACHINE. CHARLES W. HADLEY, Ogden, Utah. Filed Dec. 26, 1912. Serial No. 738,679. (Cl. 193—6.)



1. In elevating machines, the combination of a multiple-run conveyer, and means for increasing or diminishing the number of runs of the conveyer, optionally.



2. In elevating machines, the combination of a multiple-run conveyer, and means for increasing or diminishing the number of runs of the conveyer, optionally, during the operation of the conveyer.

3. In elevating machines, the combination of a lower pulley, two upper pulleys mounted in spaced relation, a belt passed about all of said pulleys, and means for moving one of said upper pulleys out of engagement with said belt and for simultaneously raising the other said pulley, whereby the conveyer can be converted from a three-run into a two-run conveyer, optionally, and said belt maintained under constant tension.

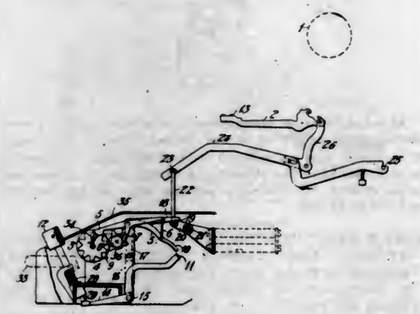
4. In elevating machines, the combination of a pulley, a tiltably journaled bracket, two pulleys carried by said bracket and mounted in spaced relation, a belt passed about all of said pulleys, the pulleys carried by said bracket being inside of the runs of the belt, and means for tilting said bracket.

5. In elevating machines, the combination of a pulley, a tiltably journaled bracket, two pulleys carried by said bracket and mounted in spaced relation and closely adjacent each other, a belt passed about all of said pulleys, the pulleys carried by said bracket being inside of the runs of said belt, and means for tilting the bracket.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,810. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Jersey City, and BURNHAM C. STICKNEY, Elizabeth, N. J., assignors, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Nov. 4, 1911. Serial No. 658,470. (Cl. 235—60.)



1. The combination with computing wheels, of spring detents therefor; means being provided for causing said detents to assume abnormal positions when the wheels stand in zero positions, and said detents provided with dogs; a special type; a key to control said type, and a key-locking bar movable by said key past said dogs when the latter are in their abnormal positions, but intercepted by said dogs when the latter are in normal positions.

2. The combination of computing wheels, spring detents therefor, a special character-printing key, and a bar movable by said key; said detents having dogs which are idle whenever all the wheels stand at zero, but which at other times may rest in the path of said bar.

3. The combination of computing wheels, spring detents therefor, a special character-printing key, and a bar movable by said key; said detents having dogs which are idle whenever all the wheels stand at zero, but which at other times may rest in the path of said bar, a key-controlled mechanism, and means controlled thereby releasing said bar from said dogs.

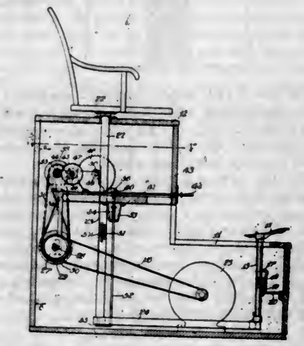
4. The combination with dial wheels having notches, of spring detents to engage said notches, said detents having dogs, a universal bar, a key for moving said universal bar, and a special type operable by said key, the notches of each wheel including one deepened notch into which the detent falls when the wheel stands at zero, to move a dog out of the path of said universal bar.

5. The combination with dial wheels having notches, of spring detents to engage said notches, said detents having dogs, a universal bar, a key for moving said universal bar, the notches of each wheel including one deepened notch into which the detent falls when the wheel stands at zero, to move a dog out of the path of said universal bar, a rock arm operated by said key, a rock arm connected to the first-named rock-arm, a bell crank connected to the second-named rock-arm, a swinging rod operable by said bell crank, an arm connected to said swinging rod, a link connected to said arm, and a type-operating lever connected to said link.

[Claims 6 to 23 not printed in the Gazette.]

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1,225,811. SHOE-SHINING CHAIR. OTIS R. HASTY, Elgin, Ill. Filed Aug. 28, 1916. Serial No. 117,191. (Cl. 155—7.)

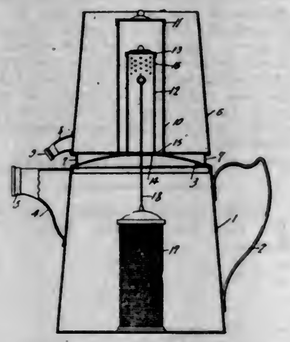


2. In a shoe shining chair, a platform providing an under space, a foot rest standard vertically disposed within the space with the upper end projecting slightly above the floor level, a foot rest thereon, a seat standard likewise vertically disposed within the space with its upper end projecting above the platform, a seat on the latter standard at an elevation appropriately corresponding to that of the foot rest, the seat and foot rest standards cross connected together, and mechanism for raising and lowering the seat and foot rest jointly.

8. In a shoe shining chair, a platform providing an under space, a foot rest standard vertically disposed within the space with the upper end projecting slightly above the floor level, a foot rest thereon, a seat standard likewise vertically disposed within the space with its upper end projecting above the platform, a seat on the latter standard at an elevation appropriately corresponding to that of the foot rest, the seat and foot rest standards cross connected together, the seat standard bearing a toothed rack, a pinion meshing therewith, a motor-driven shaft, a countershaft, a pair of loose pulleys thereon, driving connection between the pulleys on the countershaft and the driven shaft, a double-faced clutch on the countershaft arranged to engage the two loose pulleys alternatively, a train of gearing connecting the countershaft and pinion, means to actuate the clutch whereby to raise or lower the seat and foot rest jointly, means to shift the clutch to neutral position when the seat approaches its extreme upper position and likewise when it approaches its extreme lower position, said means comprising cams moving with the seat standard and arranged to act on the clutch-actuating means, a detent arranged to engage and hold the seat standard in elevated position, and a connection between the clutch actuating means and detent whereby to automatically retract the detent as the clutch is thrown into operation.

[Claims 1 and 3 to 7 not printed in the Gazette.]

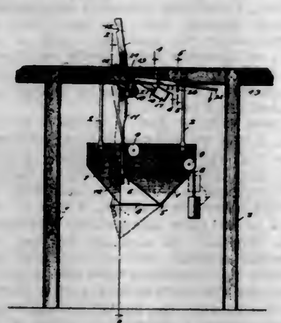
1,225,812. COFFEE-POT. LORING B. HESTER, Bond, Miss., assignor of one-half to James William Black, Bond, Miss. Filed May 10, 1916. Serial No. 96,677. (Cl. 53—3.)



1. A coffee pot, a cold water receptacle supported thereby, a sleeve upstanding within said receptacle and communicating with the pot, and an inner sleeve upstanding within the aforesaid sleeve for conveying the steam from the pot into the first mentioned sleeve.

2. A coffee pot having a cover, a cold water receptacle mounted upon said cover, a sleeve upstanding from the bottom of said receptacle, a second sleeve upstanding from the bottom of the receptacle within the first mentioned sleeve, caps closing the upper ends of said sleeves, the second mentioned sleeve having apertures adjacent its upper end, said cover and bottom of the receptacle having an opening registering with the second mentioned sleeve, and having apertures between the sleeves.

1,225,813. DUMPING DEVICE. CLARENCE E. HILTON, Monarch, Wyo. Filed June 20, 1916. Serial No. 104,755. (Cl. 193—46.)



1. In combination with a weigh basket having a counterweighted discharging door and stops for limiting the opening movement of the door, of means normally operative for locking the door in open or closed position and manually operated means for releasing the said locking means in either position, said locking means comprising vertically movable bars pivoted at their lower ends to the ends of the door, said bars having notches, and a support for the basket having catches for engaging the notches to hold the door in open or closed position, yielding means normally pressing the bars toward the catches, said releasing means comprising a cross arm journaled transversely of the basket at the edges of the bars provided with the notches and having extensions for engaging the bars to release them from the catches, and means for oscillating the cross arm.

2. In combination with a weigh basket having a counterweighted discharging door and stops for limiting the opening movement of the door, of means normally operative for locking the door in open or closed position and manually operated means for releasing the said locking means in either position, said locking means comprising vertically movable bars pivoted at their lower ends to the ends of the door, said bars having notches, and a support for the basket having catches for engaging the notches to hold the door in open or closed position, and yielding means normally pressing the bars toward the catches.

3. In combination with a weigh basket having a counterweighted discharging door and stops for limiting the opening movement of the door, of means normally operative for locking the door in open or closed position and manually operated means for releasing the said locking means in either position.

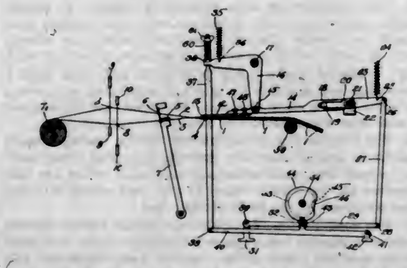
4. In combination, a hopper having a counterweighted discharge door, means normally operative for locking the door in open or closed position, and manually operated means for releasing said locking means when in either position.

1,225,814. BUTTON-FASTENER. NELS M. HOLSTE, Brooklyn, N. Y. Filed July 18, 1913. Serial No. 779,704. (Cl. 24—90.)



As an article of manufacture, a sewing element consisting of a length of waxed thread tapered to a point at each end, and a needle on each of said ends not greater in diameter than the thread and having an eye in one end large enough to receive a portion only of the tapered end of the thread.

1,225,815. MECHANISM FOR WEAVING SLAT-BLINDS. AZEL CLARENCE HOUGH, Janesville, Wis., assignor to Hough Shade Corporation, Janesville, Wis., a Corporation of Connecticut. Filed May 4, 1916. Serial No. 95,476. (Cl. 139—32.)



1. Apparatus of the kind described, comprising slat weaving and slat beating mechanism, in combination with additional automatically actuated means to hold a partly woven slat closely adjacent the next preceding woven slat and to exert an additional tension thereon in the line of direction of said beating up mechanism.

2. Apparatus of the kind described, comprising slat weaving and slat beating mechanism in combination with additional automatic means to move and hold a partly woven slat closely adjacent the next preceding woven slat.

3. Apparatus of the kind described, comprising slat weaving and slat beating mechanism adapted to beat up a slat during the weaving operation closely adjacent the next preceding woven slat and a plurality of pressure applying devices to exert tension in the line of direction of beating to retain a slat in its beaten up position.

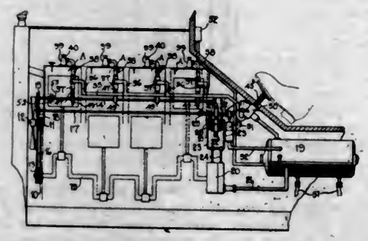
4. Apparatus of the kind described, comprising slat weaving and slat beating mechanism adapted to beat up a slat during the weaving operation closely adjacent the next preceding woven slat and adjustable means to engage automatically the edge of a partly woven slat and hold the same in woven position with a yielding tension in the line of the direction of beating during the retraction of the beating up mechanism, and the insertion and beating up of another slat.

5. Apparatus of the kind described, comprising slat weaving mechanism adapted to beat up a slat during the weaving operation closely adjacent the next preceding woven slat and adjustable means to engage automatically the edge of a partly woven slat, including a lever carrying a thin edge-engaging prong, and means to impart a four-motion feed to said lever.

[Claims 6 to 9 not printed in the Gazette.]



1,225,816. SELF-STARTER FOR AUTOMOBILE-ENGINES. LEE HOWE and CHARLES M. HOWE, Nemaha, Iowa. Filed Feb. 2, 1916. Serial No. 75,809. (Cl. 123—181.)



1. In a mechanism of the character described, a valve casing including chambers disposed at right angles to each other there being a valve seat at the intersection of the chambers, a spring actuated valve disposed in one of said chambers and when in a closed position bearing against the seat and having a rounded portion projecting into the other chamber, and a plunger operating in the other chamber and adapted to engage said rounded portion of the valve to force it from its seat.

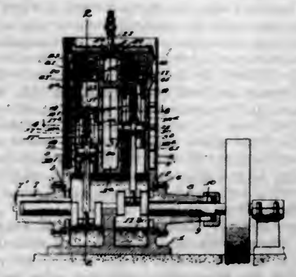
2. In a self-starting system for automobiles, the combination with a cylinder, of a manifold leading from a source of compressed air, a valve casing connected to the cylinder and the manifold and including chambers disposed at right angles to each other, one of said chambers having a valve seat, a spring actuated valve disposed in one of said chambers and when in a closed position projecting into the other chamber, a plunger operating in the other chamber and adapted to engage said valve to force it from its seat, means for urging the plunger out of engagement with the valve, and power-operated means for intermittently reciprocating the plunger.

3. The combination with an automobile engine comprising a plurality of cylinders, pistons operating in the cylinders and a crank shaft connected thereto, of a compressed air tank disposed rearward of the engine, a compression pump disposed rearward of the engine and operatively connected to the tank, a pump driving shaft operatively connected at one end to the crank shaft and at its rear end formed with a jointed section, a friction wheel mounted upon said shaft section, a driven friction wheel with which said first friction wheel engages, springs holding the friction wheels in engagement, and means for shifting said friction wheels out of engagement comprising a casing connected to the reservoir or tank and a piston therein and adapted to engage with said shaft section to shift it away from the driven friction wheel when the pressure within the reservoir rises beyond a predetermined degree, and means for establishing communication between any one of said cylinders and the reservoir.

4. The combination with an internal combustion engine including a plurality of cylinders, of means for starting the engine including a compressed air reservoir, a manifold extending therefrom, manually operable means permitting the entrance of air into the manifold and automatically operated means for establishing communication between the manifold and the several cylinders in accordance with the timing of the pistons for the several cylinders comprising valves, one for each cylinder, a cam shaft, cams thereon operating said valves, the cam shaft being made in two sections, means for transmitting the power from the crank shaft to one of the sections of the cam shaft, and a clutch automatically engaging both sections of the cam shaft with each other but thrown out of operation upon an increase of the speed of the engine beyond a predetermined point.

5. The combination with an internal combustion engine including a plurality of cylinders, of means for starting the engine including a compressed air reservoir, a manifold extending therefrom, manually operable means permitting the entrance of air into the manifold and automatically operated means for establishing communication between the manifold and the several cylinders in accordance with the timing of the pistons for the several cylinders comprising valves, one for each cylinder, a cam shaft, cams thereon operating said valves, the cam shaft being made in two sections, means for transmitting the power from the crank shaft to one of the sections of the cam shaft, and a clutch automatically engaging both sections of the cam shaft with each other but thrown out of operation upon an increase of the speed of the engine beyond a predetermined point, said clutch comprising oppositely disposed disks, one of said disks being formed with a socket and a governor arm pivotally mounted upon the other disk and having a centrifugally actuated head at its extremity normally seating in said socket and connecting the two sections of the shaft when the engine is running below a predetermined speed.

1,225,817. COMPRESSOR. WILLIAM H. HOWE, Chicago, Ill. Filed Dec. 1, 1914. Serial No. 875,033. (Cl. 230—6.)



1. In a refrigerant compressor, parallel cylinders cast in spaced relation and forming a gas chamber therebetween of substantially cylinder length, a partition wall between the upper end of the cylinders and forming a relatively small chamber isolated from the large gas chamber.

2. In a refrigerant compressor, parallel cylinders cast in spaced relation and forming a gas chamber therebe-

tween of substantially cylinder length, a partition wall between the upper end of the cylinders and forming a relatively small chamber isolated from the large gas chamber and gas ports in the small chamber adjacent the upper and lower portions thereof.

3. In a refrigerant compressor parallel cylinders cast in spaced relation and forming a gas chamber therebetween of substantially cylinder length, a partition wall between the upper end of the cylinder and forming a relatively small chamber isolated from the large gas chamber, gas discharge ports in the small chamber adjacent the upper and lower portions thereof and gas inlet ducts formed circumferentially of the cylinder and communicating with the large chamber.

4. In a refrigerant compressor, parallel cylinders cast in spaced relation and forming a gas chamber therebetween and a wall extending between the cylinders and forming a gas chamber isolated from the first mentioned gas chamber.

5. In a refrigerant compressor, parallel cylinders cast in spaced relation and forming a gas chamber therebetween, a partition wall extending between the cylinders and forming a gas chamber isolated from the first mentioned gas chamber, and gas ports in both gas chambers.

[Claims 6 to 11 not printed in the Gazette.]

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1,225,818. SNAP BUTTON OR FASTENER. ELSIE A. JANTZER, Brooklyn, N. Y. Filed July 7, 1915. Serial No. 38,508. (Cl. 24—208.)



1. In a snap fastener, a socket element for receiving and engaging with the stud element, comprising a securing device formed of wire arranged to provide a rectangle with sides 6, 6, rigidly secured together and points 5 projecting from the sides of the rectangle, a socket plate 8 formed with a central socket aperture and fitted to the said wire rectangle and having its corner portions bent around said sides 6 and brought to the edge of the said central socket aperture and the extreme corner tips bent outward from said edge, and a stud element having a contracted neck and an expanded sheet metal head adapted to be passed through the opening in the socket element and to engage with the bent corner parts of the plate thereof.

2. The herein described snap fastener having in combination a socket element and a stud element each formed of a securing device and a rectangular plate, each securing device having a wire rectangle formed of wires rigidly secured together with the pointed ends of the wires extending laterally from the corners of the rectangle, and said rectangular plate being arranged to have its sides respectively inclined to the sides of the rectangle and having its corner portions bent around the side wires of the rectangle, the projecting wire points at the corners being adapted to be bent so as to project at right angles to the plane of the plate, the plate of the socket element having a central aperture with the extreme corners of the plate bent in to the edge thereof, and the stud element having a central integral narrow neck and a wider button head, substantially as set forth.

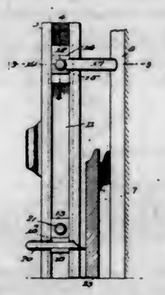
3. A snap fastener having two elements adapted to detachably engage with each other, one of said elements comprising a multiple pointed frame of wires all lying in approximately the same plane and each wire having its inner end rigidly secured to an adjacent wire, and a sheet metal plate secured to said frame by bends in the sheet metal carried around the wires, and the wires being adapted to be bent to lines approximately at right angles to the plane of the sheet metal to permit insertion into a fabric and adapted to be clenched on the side of the fabric opposite to the plate.

4. A snap fastener having two elements adapted to detachably engage with each other, one of said elements comprising a multiple pointed frame of diverging wires each wire having its inner end rigidly secured to an adjacent wire and all the wires adapted to have their diverging pointed ends passed through a fabric for clenching, and a sheet metal plate secured to said frame having a passage through the plane of the plate, said plate being secured to said frame by bends in the sheet metal carried around the wires, and having projections adapted to be bent inward to the edge of the passage and then bent outward to position the bends therein at points adjacent said edge.

5. A snap fastener having two elements adapted to detachably engage with each other, one of said elements comprising a multiple pointed frame of wires each of said wires having its inner end rigidly secured to an adjacent wire and all the wires adapted to have their pointed ends passed through a fabric for clenching, and a sheet metal plate secured to said frame by bends in the sheet metal carried around the inner ends of the frame wires, and said plate being formed with means for engaging a companion element.

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1,225,819. GAGE. JOHN T. JOHNSON, Chicago, Ill. Filed Nov. 17, 1916. Serial No. 131,888. (Cl. 33—82.)



1. A gage comprising a straight edge base bar, spaced slides carried by the bar, one of the slides having a projecting part extending laterally from the base bar, and a scratcher carried by the other slide and projecting laterally from the same side of the base bar as the aforesaid projecting part of the first-mentioned slide.

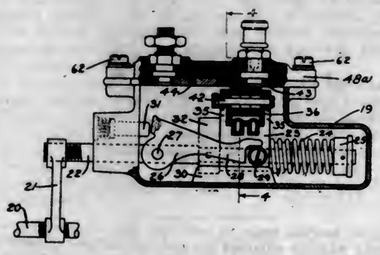
2. A gage comprising a straight edge base bar, spaced slides carried by the bar, one of the slides having a projecting part extending laterally from the base bar, and a longitudinally adjustable scratcher carried by the other slide and projecting laterally from the same side of the base bar as the aforesaid projecting part of the first-mentioned slide.

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1,225,820. ELECTRIC SWITCH. CHARLES F. KETTERING and ROBERT S. DE MARRE, Dayton, Ohio, assignors to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed July 14, 1913. Serial No. 778,940. (Cl. 175—282.)

1. In a switch, the combination with a casing having a head portion; sets of stationary contact plates mounted in said head portion; of a movable contact element slidably mounted in said casing and including a plurality of sections in electrical contact with each other, but capable of relative movement thereto; of a resilient member having sets of oppositely disposed fingers, each set of said fingers being adapted to resiliently support one section of said movable contact in contact making position.

2. In a switch, the combination with a casing, including a head having sets of stationary contacts mounted therein; of a rod passing through said casing; a carrier mounted on said rod; and a movable contact including a plurality of sections having slots therein of determined diameters; a rod extending through said slots and adapted to be secured to said carrier for maintaining said sections of the movable contact from improper displacement, the diameters of said rod being less than the diameters of the slots provided in said sections; and a resilient member mounted on said carrier and having sets of oppositely disposed resilient fingers, each set of said fingers being adapted to engage with and support one section of said movable contact in contact making position.



3. In a switch, the combination with stationary contact elements; of a coöperating contact element comprising a plurality of sections; and a cradle having sets of oppositely disposed resilient fingers each set of fingers being adapted to resiliently support each of said sections independently whereby said sections are capable of relative movement.

4. In a switch, the combination with a casing, of a removable head having sets of stationary contacts mounted therein; of an operating rod mounted within said casing; a movable contact mounted on said rod, including a plurality of sections, each having an enlarged central portion provided with an elongated slot; a carrier for said movable contact and a rod secured to said carrier and adapted to pass through said elongated slots; and a resilient cradle having substantially independent sets of oppositely disposed fingers, each set of fingers being adapted to resiliently support one of said sections of the movable contact member in contact making position relative to the stationary contacts.

5. In a switch, the combination with a casing having a head portion; sets of stationary contact plates mounted in said head portion and adapted to be separated by part of said head portion; of a movable contact element slidably mounted in said casing and including a plurality of sections in electrical contact with each other, but capable of relative movement thereto, each of said sections being cut away in alinement with that part of the head portion which separates the stationary contacts; and a common supporting element having provisions for resiliently supporting each of the sections of the movable contacts in contact making position; and means for permitting relative movement of the independent sections of the movable contact but preventing accidental displacement thereof.

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1,225,821. TOY PISTOL. JOSEPH D. KILGORE, Homestead, Pa. Filed Mar. 10, 1916. Serial No. 83,325. (Cl. 42—57.)



1. A pistol, having a loading aperture in its wall, a gate seat in rear of and below said aperture, a gate pivoted forwardly of and below said aperture to swing upwardly and forwardly in opening, and an abutment at the forward end of said gate seat to support said gate in open position.

2. A pistol, having a loading aperture in its wall, an outstanding gate seat in rear of and below said aperture, and a gate pivoted forwardly of and below said aperture to swing upwardly and forwardly in opening; the forward end of said outstanding gate seat forming a supporting abutment for said gate in open position.

3. A pistol, having a loading aperture in its wall, a gate for said aperture having a single pivot mounted in a suitable bearing in one wall of the pistol frame, and a projection adjacent said pivot to engage the other wall of said frame and prevent displacement of said gate.

4. A pistol, having a loading aperture in its wall, a gate for said aperture having a single pivot mounted in a suitable bearing in the pistol frame, and a circumferential fin at the base of said pivot to engage the other wall of said frame and prevent displacement of said gate.

5. A pistol, comprising complementary sections one of which has a magazine and the other of which has a loading aperture, a gate for said aperture having a single pivot, a pivot bearing on the magazine section, a projection on said pivot to engage the inner wall of said apertured pistol section and prevent displacement of said gate, and a bolt to lock said sections together and said gate between said sections.

[Claims 6 and 7 not printed in the Gazette.]

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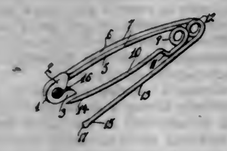
1,225,822. JACK. PHILIP SWETT KIMBALL, Milford, Mass. Filed Dec. 16, 1916. Serial No. 137,279. (Cl. 254—103.)



1. An extension handle for screw jacks comprising sections having complementary flat interlocking end-portions carried by said section, a pivotal connection between said end portions offset from and at right angles to the axial line of the sections, whereby the sections may be closely folded together, each end-portion having a square end face and a square shoulder disposed on opposite sides of the pivotal connection, the end face and shoulder of the end portion of one section being adapted to engage a shoulder and end face respectively of the end portion of the other section to limit the movements of said sections in one direction to a substantially alined position, said complementary end portions, when said faces and shoulders are in engagement, serving to transmit a rotary motion from one section to the other, and grip members carried by one section.

2. An extension handle for screw jacks comprising two sections, complementary interlocking end-portions carried by said sections, a pivotal connection between said end portions offset from and at right angles to the axial line of the sections, whereby said sections may be closely folded together, square end-faces and shoulders disposed on said end portion on opposite sides of the pivotal connection, adapted for engagement to limit the angular movement of the sections in one direction, and pivotally supported hand grips carried by the free terminal of the other section, the pivots of the hand grips being permanently perpendicular to the pivot of the sections to permit the section and hand grips to be folded into compact relation without interference.

1,225,823. SAFETY-PIN. FREDERICK A. KINNEY, Philadelphia, Pa. Filed July 6, 1916. Serial No. 107,728. (Cl. 24—150.)



1. A safety pin including a recessed head, and two longitudinally extending bars spaced apart, said bars and head forming an elongated loop, and an elongated pin extending longitudinally between the elongated sides of the loop and having its free end designed to catch within the recess of the head, one of said bars having a free end designed to catch within said recess, said latter bar having a spring portion designed to move its free end away from said head after having been manually released therefrom, substantially as described.

2. A safety pin including a recessed head, and two longitudinally extending bars spaced apart, said bars and head forming an elongated loop, and an elongated pin extending longitudinally between the elongated sides of the loop and having its free end designed to catch within the recess of the head, one of said bars forming an auxiliary bar and having a free end designed to catch within said recess, said free end of the auxiliary bar having a smooth enlarged head, substantially as described.

3. A safety pin including a main bar having a recessed head secured at one end and an auxiliary bar springing from its opposite end, said auxiliary bar having a blunt free end designed to engage the recess in the head, and a pin springing from said latter end of the main bar, said pin having a sharp free end adapted to engage the recess with the blunt end of the auxiliary bar, said pin extending longitudinally between the main and auxiliary bars, substantially as described.

4. A safety pin including a main bar comprising two strands of wire secured together and having a recessed head at one end, one of said strands, at the end opposite said head, being turned to form a spring and then extended to form an auxiliary bar, said bar having a blunt end designed to engage in the recess of said head, the other of said strands, at the end opposite the head, being turned to form a spring and then extended between said main and auxiliary bars to form a pin, said pin having a sharp free end adapted to engage the recess with the blunt end of the auxiliary bar, substantially as described.

5. A safety pin including a recessed head, and two longitudinally extending bars leading from said head and being spaced apart, said bars and head forming an elongated loop, and an elongated pin extending from one of said bars and including a coil providing a spring at a position remote from said head and having its free end designed to fit within said recess, said pin being offset between said coil and the free end of the pin to form a shoulder, substantially as described.

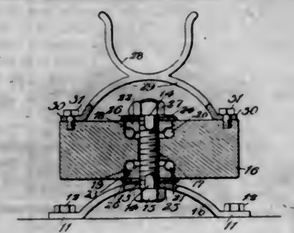
[Claim 6 not printed in the Gazette.]

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1,225,824. ROWLOCK. HENRY W. KIPPES, Brooklyn, N. Y. Filed Oct. 2, 1916. Serial No. 123,350. (Cl. 9—26.)

1. A rowlock of the class described including a bottom brace adapted to be secured to the gunwale of a boat, a stem projecting upwardly therefrom, a circular plate having a centrally disposed opening therethrough journaled on said stem, ball-bearing means associated therewith, a U-frame adapted to receive an oar, and arcuate outwardly and downwardly projecting arms extending from the base portion of said frame and secured to the top of the plate at diametrically opposite points adjacent the marginal edge thereof.

2. A rowlock of the class described including a bottom brace adapted to be secured to the gunwale of a boat, a bolt extending upwardly therethrough, a circular plate having a centrally disposed opening mounted on said bolt, the upper and lower faces of said plate having recesses therein surrounding the opening, ball-bearings in said



recesses, bearing cones to hold said balls in position, stationary washers adjacent the ends of the bolt to hold the cones in the recesses, a locking nut on the upper end of said bolt, a top brace on the upper surface of the plate, and an integral U-frame carried thereby and adapted to receive an oar.

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1,225,825. FERTILIZER AND PROCESS FOR MAKING SAME. EDWARD C. L. KRESSEL, Camden, N. J. Filed July 21, 1914. Serial No. 852,292. (Cl. 71—9.)

1. A fertilizer in the form of a dry, non-hygroscopic and non-putrescible mass comprising the solid organic and inorganic matter of sulfite waste liquor mixed with biological agents and adapted, in connection with the soil, to form a powerful culture medium for bacterial development and growth.

2. A fertilizer in the form of a dry, non-hygroscopic and non-putrescible mass, derived from sulfite waste liquor, calcium oxid and a chlorid of an alkali metal, constituting, in connection with the soil, a culture medium for the development of bacteria and growth.

3. A fertilizer in the form of a granular, non-hygroscopic and non-putrescible mass derived from biologically treated sulfite waste liquor, calcium oxid, and a chlorid of an alkali metal, constituting a culture medium for bacterial development and growth in soil.

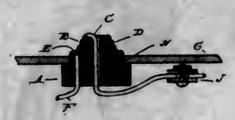
4. A fertilizer in the form a granular, non-hygroscopic and non-putrescible mass, derived from sulfite waste liquor treated with a biological agent and calcium oxid, and sodium chlorid, a mass constituting a culture medium for bacterial development and growth in soil.

5. A fertilizer in the form of a granular, non-hygroscopic and non-putrescible mass, derived from sulfite waste liquor mixed with biological agents, calcium oxid, and sodium chlorid, the whole constituting a culture medium for bacterial development and growth in soil.

[Claims 6 to 11 not printed in the Gazette.]

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1,225,826. ELECTRICAL HEATING UNIT. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich., assignors to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed May 8, 1915. Serial No. 26,792. (Cl. 219—63.)



1. An electrical heater, comprising a series of units each comprising an insulator support having a conical and a shouldered portion, and a tapering coil seated upon and anchored to said conical portion, means for connecting a plurality of said units in series, a mounting for said units in spaced relation to one side of said means, and an apertured plate supported upon the shouldered portions of said insulator supports upon the opposite side of said connecting means.

2. An electrical heating unit, comprising an insulator support having a conical portion, and a tapering resistor coil engaging said conical portion, having contacting adjacent convolutions of slight resistance.

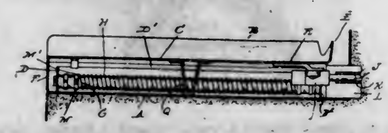
3. An electrical heating unit, comprising an insulator support having a conical portion, and a tapering close-coiled resistor of slight resistance between convolutions supported on said conical portion and anchored thereto by a central terminal wire.

4. An electrical heating unit, comprising a tapering insulator support having a conical portion and a central aperture, a resistor coil seated upon the conical portion of said insulator, having contacting adjacent convolutions with but slight difference of potential therebetween, and a terminal extending from the small end of said coil, through said central aperture, and forming an anchor for retaining said coil.



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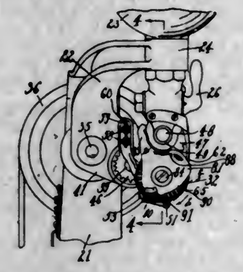
1,225,827. ELECTRICAL HEATING UNIT. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich., assignors to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 15, 1915. Serial No. 55,940. (Cl. 219—37.)



An electrical heating unit, comprising a pan, a depending frame secured to said pan, an insulator rod extending across said depending frame, a resistor coiled upon said insulator rod, terminal contacts, an insulator block for supporting said contacts mounted on the bottom of said pan, connectors extending from said terminal contacts bent to embrace said insulator rod, and clamps for securing said connectors to said resistor.

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1,225,828. CEMENT-APPLYING MACHINE. WILLIAM F. LAUTENSCHLAGER, Cincinnati, Ohio. Filed June 5, 1916. Serial No. 101,840. (Cl. 91—40.)



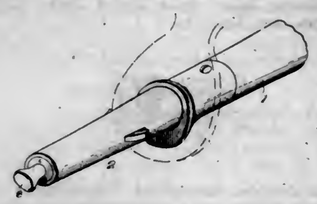
1. In a machine for applying cement to the margin of flexible material, the combination of a rotary cement-applier, a margin supporting and guiding means at the feeding-in side of said rotary cement-applier for guiding said margin in a path crosswise of the path of rotation of said rotary cement-applier, and a yieldable cement-control at the feeding-out side of said rotary cement-applier extending crosswise of the position of the margin guided by said margin supporting and guiding means.

7. In a machine for applying cement to the margin of flexible material, the combination of a rotary cement-applier and a gage for the outer edge of the margin of the flexible material arranged for feeding movement of the margin crosswise of said rotary cement-applier and lengthwise of the margin, said rotary cement-applier provided with a flexing periphery having flexing movement across the outer edge of said margin, and a yielding cement-string control at the feeding-out side of said rotary cement-applier extending across said periphery and said outer edge.

[Claims 2 to 6 and 8 to 11 not printed in the Gazette.]

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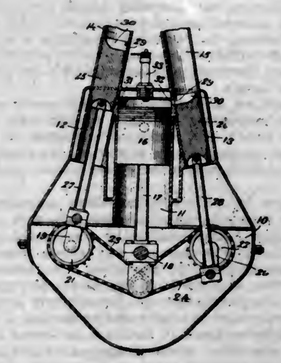
1,225,829. POLE-TIP. CHARLES L. LEAR, Burton, Nebr. Filed Dec. 31, 1915. Serial No. 69,628. (Cl. 21—92.)



In a device of the class described, a hollow tubular body provided in its opposite sides with openings and interiorly threaded at its outer end, a plug removably fitted into the threaded end of the body and provided axially with a bore, a stem slidably fitted within the said bore, a head at the inner end of the stem, retaining fingers pivotally connected with the said head and projecting through the said openings, a spring upon the stem within the said body bearing at one end against the head and at its other end against the plug, and an abutment upon the stem between the forward end thereof and the said head arranged to coact with the plug to limit the outward movement of the stem against the tension of the said spring.

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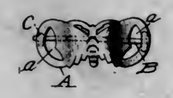
1,225,830. INTERNAL-COMBUSTION ENGINE. FRED C. LEDVINA, Irving, Iowa. Filed Jan. 25, 1916. Serial No. 74,221. (Cl. 123—86.)



An internal combustion engine comprising a casing, a main cylinder in said casing, piston cylinders in said casing extending above the casing and open at their upper and lower ends and provided with side openings communicating with the upper end portion of said main cylinder, a driving piston slidably mounted in said main cylinder, valve pistons slidably mounted in said valve cylinders and of greater length than the distance between the openings communicating with the main cylinder and the bottoms of the valve cylinders, the upper end portions of the

valve pistons being provided with depressions terminating in side openings registering with the openings communicating with the main cylinder when the valve pistons are at their lowest point of movement, a driving shaft extending into said casing and rotated by said main piston, crank shafts extending into said casing and having connection with the valve pistons for reciprocating the same as the crank shaft rotates, and means for imparting movement from the driving shaft to the crank shaft.

1,225,831. BRAID-BINDER. JOHN PHILIP LEGERE, Leominster, Mass., assignor to Standard Comb Company, a Firm consisting of W. H. Lane and John Philip Legere, Leominster, Mass. Filed July 3, 1916. Serial No. 107,244. (Cl. 132—22.)



As an article of manufacture, a braid binder comprising a back member and a retaining bar connected thereto, located in a plane transverse to the plane of said back member and having hair engaging means projecting toward said back member at a short distance therefrom for holding the same pressed against and in position on a braid, said back member having a pair of transverse passages at its opposite ends for receiving a ribbon.

1,225,832. PROCESS OF MANUFACTURING ALKALI PERCARBONATES. OTTO LIEBKNECHT, Frankfort-on-the-Main, Germany, assignor to Roessler & Hasslacher Chemical Company, New York, N. Y., a Corporation of New York. Filed Jan. 27, 1917. Serial No. 145,021. (Cl. 23—13.)

1. A process of manufacturing alkali percarbonates, consisting in associating hydrogen peroxid with alkali-carbonate in the presence of such a restricted proportion of water as to insure the direct obtainment therefrom of solid percarbonates.

2. A process of manufacturing alkali percarbonates, consisting in associating hydrogen peroxid with alkali-carbonate by means of a restricted proportion of water so as to insure the direct obtainment of solid percarbonates therefrom, and simultaneously providing for the presence of stabilizing agents.

6. A process of manufacturing alkali percarbonates, consisting in associating hydrogen peroxid with alkali-carbonate by means of a restricted proportion of water, and providing for the presence of a displacing agent so as to insure the direct separation of crystalline percarbonates.

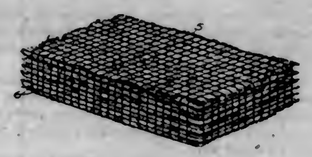
7. A process of manufacturing alkali percarbonates, consisting in incorporating alkali-carbonate with a solution of hydrogen peroxid containing a restricted proportion of water, and adding common salt thereto to facilitate the direct separation of the crystalline percarbonates.

11. A process of manufacturing alkali percarbonate, consisting in associating hydrogen peroxid with alkali carbonate in the presence of a restricted proportion of water, adding a displacing agent to facilitate the direct separation of the crystalline percarbonate, and providing for the presence of stabilizing agents containing a silicate of magnesium and an alkali metal.

[Claims 3 to 5 and 8 to 10 not printed in the Gazette.]

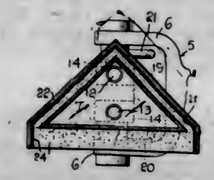
1,225,833. PAPER ABSORBENT MATERIAL FOR SURGICAL AND SANITARY PURPOSES. AGNES BENNETT LILLEY, Los Angeles, Cal. Filed Dec. 14, 1911. Serial No. 665,809. (Cl. 128—3.)

An absorbent material comprising a series of layers of bibulous paper of soft and fluffy texture, and having longitudinal and lateral binding threads composed of twisted paper passed therethrough, whereby said layers are held



together, and a mesh of twisted paper threads inclosing said layers, substantially as described.

1,225,834. WATER-HEATER FOR GAS OR GASOLENE STOVES. JAMES A. LITTLE, Bismarck, N. D. Filed Aug. 26, 1916. Serial No. 117,053. (Cl. 126—357.)



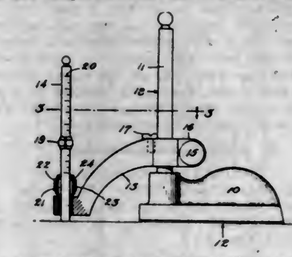
1. In a water heater, a source of heat, a heating chamber mounted for horizontal swinging movement, said chamber being of triangular form in cross-section and having a horizontal base wall, a water supply and means for establishing a continuous circulation of water between the same and said chamber when the chamber is swung to an operative position over the source of heat, and a heat retaining hood having inclined walls extending in parallel relation to the top walls of the water chamber and vertical marginal walls extending below the horizontal bottom wall of the chamber.

2. In a water heater, a source of heat, a fixed, vertical support having separate water receiving compartments, a heating chamber having spaced nipples mounted upon the support for turning movement and communicating with the respective compartments, a source of water supply, supply and return pipes connecting the same to the respective compartments of said support, and a heat retaining hood extending over the water chamber and having slots in one of its end walls to accommodate the nipples, said nipples limiting the vertical movement of the hood with respect to the chamber.

3. In a water heater, the combination with a range having a burner, of a water heating chamber mounted at one side of the range for horizontal swinging movement to operative or inoperative position with respect to the burner, a water reservoir, means establishing a circulation of water between the reservoir and the heating chamber when said chamber is in operative position, said circulation being cut off when the chamber is swung to an inoperative position, and a heat retaining hood inclosing said chamber and having limited vertical movement with respect thereto, said hood resting upon the range around the burner thereof when the heating chamber is in operative position.

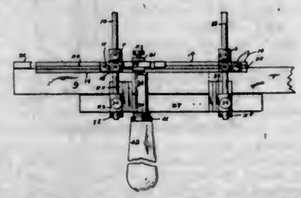
1,225,835. CALIPERS. GEORGE A. LUCK, Cambridge, Mass. Filed July 19, 1915. Serial No. 40,633. (Cl. 33—169.)

A caliper comprising a stand having a cylindrical base surface, an arm carried by said stand and projecting laterally beyond the base of said stand, a bar arranged to slide in said arm in a line intersecting the axis of curvature of said base surface, and a friction device carried by said bar and adapted to slide thereon and abut said arm,



said bar being arranged a substantial distance away from said base.

1,225,836. GAIN-CUTTER. HENRY MCLOUGHLIN, Sioux City, Iowa. Filed Mar. 4, 1916. Serial No. 82,111. (Cl. 144—27.)



1. In a device of the class described, a chisel gage adapted to be secured to a body of stock and including two parallel rods, a pair of jaws slidably secured on each of the rods and engageable with opposite sides of the stock, side chisel-guides, a rear chisel-guide movable transversely and interconnecting said rods, said rods being movable toward and from each other, and a front chisel-guide adapted to rest adjacent the side of the stock and movable vertically to regulate the depth of cutting by the chisel.

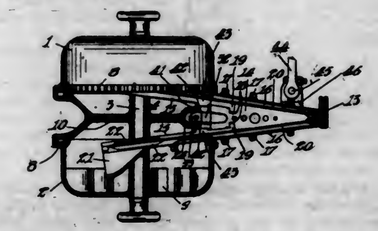
2. A device of the class described comprising a chisel movable laterally and longitudinally to cut gains in a body of stock, two pairs of interconnected jaws engageable with opposite sides of the body of stock, each pair being movable toward and from the other, and each jaw being movable toward and from its mate, guides carried by the jaws to limit lateral movement of the chisel, a chisel-guide disposed at right-angles to said first guides and movable transversely, a gage adjustable at the side of the stock to regulate the depth of the gains, and a stop carried by the chisel, said stop being adjustable longitudinally of the chisel and engageable with the gage to limit the longitudinal movement of the chisel.

3. A device of the class described comprising a chisel movable laterally and longitudinally to cut gains in a body of stock, a gage adapted to be secured to the stock and including two parallel rods, a pair of jaws slidably secured on each of the rods and engageable with opposite sides of the stock, side chisel-guides, a rear chisel-guide movable transversely and interconnecting said rods, said rods being movable toward and from each other and a front chisel guide adapted to rest adjacent the side of the stock, and movable vertically to regulate the depth of the gains, and a stop on the chisel, engageable with the latter guide to limit the longitudinal movement of the chisel.

4. A device of the class described comprising a chisel movable laterally and longitudinally to cut gains in a body of stock, a chisel gage adapted to be removably secured to the stock and including two parallel rods, front and rear jaws slidably mounted on the rods to engage opposite sides of the stock, side chisel guides carried by the front jaws and adapted to rest upon the stock, a rear chisel guide adapted to rest upon the stock and slidably secured to the rods to move forwardly and rearwardly, and a front chisel guide carried by the front jaws and movable vertically adjacent the side of the stock to regulate the depth of the gains, said rods being movable toward and from each other, and a longitudinally adjustable stop on the chisel to limit the movement of the chisel.

5. A device of the class described comprising means for cutting gains in a body of stock, and a gage adapted to be removably secured to the stock and including two parallel rods, front and rear jaws slidably mounted on the rods to engage opposite sides of the stock, side guides for the cutting means carried by the rods and adapted to rest upon the stock, a rear guide for the cutting means adapted to rest upon the stock and slidably secured to the rods to move forwardly and rearwardly, and a front guide for the cutting means carried by the front jaws and movable vertically adjacent the side of the stock to regulate the depth of the gains, said rods being movable toward and from each other.

1,225,837. MACHINE FOR INSERTING FASTENINGS. FRED L. MACKENZIE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 23, 1915. Serial No. 41,543. (Cl. 1—6.)



1. In a machine for inserting fastenings in boots and shoes, the combination of a hopper having a plurality of chambers, a raceway having a plurality of grooves for directing fastenings to the inserting position, and means for pivotally mounting the raceway inside the exterior limits of the hopper.

2. In a machine for inserting fastenings in boots and shoes, the combination of a hopper having a plurality of chambers, a raceway having guiding grooves converging toward their delivery ends for directing fastenings to inserting position, and provided with a projection extending between and in a direction toward the diverging portions of said guiding grooves, and means for pivotally mounting said projection within the exterior contour of the hopper.

3. In a machine for inserting fastenings in boots and shoes, the combination of a hopper having a plurality of chambers, a raceway having guiding grooves converging toward their delivery ends for directing fastenings to inserting position and provided with a projection extending between and in a direction toward the diverging portions of said guiding grooves, and means for adjustably pivoting said projection to permit lateral swinging movement of the raceway and adjustment of the pivot in a direction longitudinally of the raceway.

4. In a machine of the character described, the combination of a hopper having a plurality of chambers for supplying fastenings of different character, a raceway having a plurality of continuous guiding grooves for said fastenings and pivotally mounted for swinging movement to present the end of any one of said grooves in delivering position, and means permitting adjustment of said pivotal mounting in a direction longitudinally of the raceway.

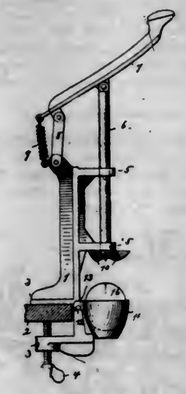
5. In a machine of the character described, the combination of a hopper having a plurality of chambers for supplying fastenings of different character, a raceway having a plurality of continuous guiding grooves for said fastenings and pivotally mounted between its fastening-

receiving and delivering portions for swinging movement to present the end of any one of said grooves in delivering position, a bracket by which said pivotal mounting is carried, and means for adjusting said bracket and pivotal mounting in a direction longitudinally of the raceway.

[Claims 6 to 20 not printed in the Gazette.]

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1,225,838. FRUIT-STONING APPARATUS. BERNHARD MAI, West Hoboken, N. J. Filed Oct. 31, 1916. Serial No. 128,651. (Cl. 146—6.)

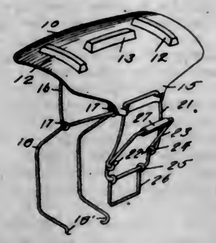


1. A fruit stoning apparatus comprising a frame, a plunger mounted therein, a plurality of radially disposed blades carried by the plunger, one of said blades being longer than the other blades, and a cup below the plunger, said cup having a longitudinal outwardly opening slot adapted to accommodate the protruding end of the longer blade.

2. A fruit stoning apparatus comprising a frame, a plunger mounted therein, a plurality of radially disposed blades carried by the plunger, one of said blades being longer than the other blades, the cutting edges of all of the blades having inner concaved sections and outer convexed sections and a cup below the plunger.

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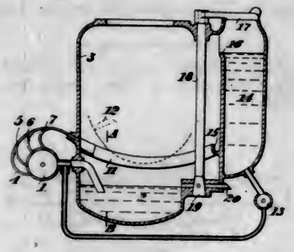
1,225,839. ANTISKID DEVICE FOR AUTO-TIRES. JOHN P. MARTINY, Big Rapids, Mich. Filed Jan. 18, 1916. Serial No. 72,818. (Cl. 24—68.)



A tightening device for bands having spaced eyes at each end consisting of, a yoke member arranged to pass through one pair of said eyes and having eyes at the ends of its legs, a second yoke member having a bight portion passing pivotally through the eyes of the first yoke and having parallel legs each bent twice in the same direction to provide central portions adapted to lie beneath a wheel rim and end portions adapted to lie at the sides of such a rim, the ends of said legs being provided with hooks, a third yoke member adapted to extend through the remaining eyes of the element and having inwardly directed ends on its legs, a yoke lever having its sides pivotally supported on the ends of the third yoke member, and a yoke member swingingly connected to one end of said lever and having its bight portion engageable with the hook ends of the second member, the outer free end of the lever being movable to a position inwardly of a line drawn through its pivotal axis and the pivotal axis of the last mentioned yoke.

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1,225,840. CIRCULATING LUBRICATING SYSTEM. HEINRICH MAYER and GUSTAV SCHLATTER, Arbon, Switzerland, assignors to the Firm of Adolph Saurer, Arbon, Switzerland. Filed Jan. 31, 1916. Serial No. 75,325. (Cl. 184—6.)



1. In a lubricating system, a circulating oil tank, a series of scoop channels above the latter, and a fresh oil tank arranged to overflow into the channels for furnishing a preliminary supply of oil to said channels.

2. In a circulating lubricating system, a circulating oil tank having an overflow outlet, a series of scoop channels above the tank, a fresh oil tank having an inlet port and communicating with the channels and circulating oil tank for furnishing a preliminary supply of oil to said channels, and means to simultaneously open or close said inlet and outlet.

3. The combination with a circulating lubricating system comprising a circulating oil tank and a pump connected thereto, of a fresh oil tank having an overflow opening into the former tank, and means connecting the lower part of the fresh oil tank to the said system.

4. The combination with a circulating lubricating system comprising a circulating oil tank, scoop channels, and a pump for supplying oil from said tank to said channels, of a fresh oil tank having an overflow leading to said channels and thence to said tank, and means for supplying oil from the fresh oil tank to said system.

5. The combination with a circulating lubricating system comprising a circulating oil tank having an overflow outlet and a pump connected to said tank, of a fresh oil tank having an overflow opening into the former tank for filling the same, a pump for supplying oil from the fresh oil tank to said system, means controlling said outlet and means for closing the inlet of said fresh oil tank operatively connected with the former means.

[Claims 6 to 8 not printed in the Gazette.]

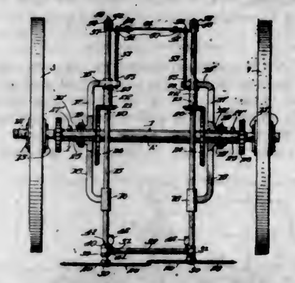
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1,225,841. BEET AND VEGETABLE TOPPER. LAWRENCE NOBLE MEEK, Squirrel, Idaho. Filed Jan. 25, 1916. Serial No. 74,130. (Cl. 55—107.)

1. A topping machine having a topping member, means to support said member for vertical movement, a presser member for the topping member having a bearing head therefor and a spring connected to said presser member and supporting means to urge the topping member downwardly.

2. A topping machine having a topping member, a supporting member, a shaft for said topping member movable vertically through said supporting member, means to drive said shaft, a presser member for said shaft and a spring associated with said supporting member and presser member to urge the shaft and cutter member downwardly.





3. A topping machine having topping members, shafts, brackets supporting said shafts for vertical yielding movement, means to drive said shafts, presser members engaging the tops of said shafts, friction reducing means intermediate the ends of said shafts and presser members, connecting means for said presser members, and a spring associated with one of said presser members and one of said brackets to urge the shafts and cutters downwardly.

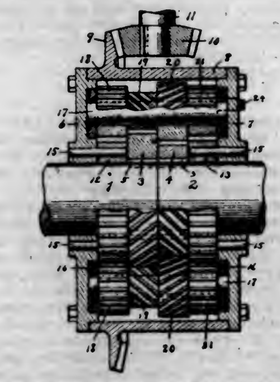
4. A topping machine having topping members, shafts, one on each of said members, a supporting body, brackets extending upwardly from said body and supporting said shafts, brackets extending downwardly from said body and supporting said shafts, and fastening bolts, each common to one of said brackets supported above and one of said brackets supported below the body.

5. An agricultural machine having a tool, a supporting shaft, a body, means to mount said shaft from said body, means on said shaft to limit the depth of penetration of said tool into the soil, a brace member pivoted to said last mentioned means, said member having a substantially horizontal portion, an eye member carried by the body through which said substantially horizontal portion passes, springs, one on each side of said eye member, and fastening members on said portion to prevent displacement of said springs and serve as abutments therefor.

[Claim 6 not printed in the Gazette.]

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1,225,842. DIFFERENTIAL GEARING. WILLIAM MENNIE, Detroit, Mich., assignor of one-half to Carl A. Fettig, Detroit, Mich. Filed Oct. 9, 1916. Serial No. 124,479. (Cl. 74—34.)



1. In a differential gearing, the combination of a pair of alined shafts, gears on the adjacent ends of the shaft, a casing revolubly mounted on the adjacent ends of the shafts and means to revolve the casing, a pair of gears revoluble on said shafts and connected to said casing to revolve therewith, and a set of alined planetary pinions rigidly united and meshing with said four gears.

2. In a differential gearing, the combination of a pair of alined shafts, a pair of gears of unequal size on said shafts, one being attached to each shaft, a casing revolubly mounted on the adjacent ends of the shafts and means to revolve the casing, a pair of gears revoluble on said shafts and connected to said casing to revolve therewith, and a set of alined planetary pinions rigidly united and meshing with said four gears.

3. In a differential gearing, the combination of a pair of alined shafts, a pair of gears of unequal size on said shafts, one being attached to each shaft, a casing revolubly mounted on the adjacent ends of the shafts and means to revolve the casing, a pair of gears of equal size revoluble on said shafts and rigidly connected to the casing to revolve therewith, and a set of alined rigidly united planetary pinions meshing with said gears.

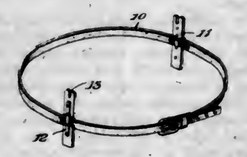
4. In a differential gearing, the combination of a pair of alined shafts, a pair of gears of unequal size on said shafts, one being attached to each shaft, a casing revolubly mounted on the adjacent ends of the shafts and means to revolve the casing, a pair of gears of equal size revoluble on said shafts and rigidly connected to the casing to revolve therewith, and a set of alined rigidly united planetary pinions meshing with said gears, the diameters of the gears attached to the casing being intermediate the diameters of the gears attached to the shafts.

5. In a differential gearing, the combination of a pair of alined shafts, a pair of gears of unequal size on said shafts, one being attached to each shaft, a casing revolubly mounted on the adjacent ends of the shafts and means to revolve the casing, a pair of gears revoluble on said shafts and connected to said casing to revolve therewith, and a set of alined planetary pinions rigidly united and meshing with said four gears, the teeth of the gears attached to the shafts being substantially spiral and inclined in opposite directions.

[Claims 6 to 9 not printed in the Gazette.]

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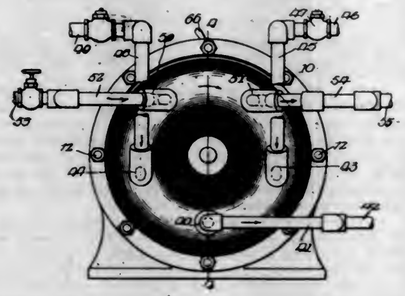
1,225,843. BELT. CHARLES MINNICH and JOHN J. MATHEWS, Greenville, and HENRY B. MATHEWS, Ansonia, Ohio. Filed Aug. 20, 1915. Serial No. 46,523. (Cl. 241—9.)



1. A device of the class described including a belt, and flexible stay members each connected at an intermediate point to the belt with the opposite ends of the stays projecting beyond the adjacent longitudinal edges of the belt a distance greater than the width of said belt, said stays having their upper ends formed with button engaging devices, the belt being adapted to extend around the body of the wearer with the free ends of the stays conforming to the shape of the hips and coöperating with the belt to receive the weight of a garment connected to said stays.

2. A device of the class described comprising oppositely disposed flexible stays having spaced longitudinal openings formed in the intermediate portions thereof and their upper ends provided with button receiving notches, a belt threaded through the openings in the stays and bearing against the inner faces of the stays between said openings, and resilient reinforcing members secured to the outer faces of the stays between the openings therein, each end of each stay projecting beyond the adjacent longitudinal edge of the belt a distance at least equal to the width of the belt.

1,225,844. ROTARY ENGINE. AUGUST E. MUELLER, Chicago, Ill., assignor of one-third to Thomas J. Hruby and one-third to John O. Hruby, Jr., Chicago, Ill. Filed June 12, 1916. Serial No. 103,271. (Cl. 253—74.)



1. A rotary engine comprising a casing provided with a central unobstructed annular space and with laterally opposed steam chambers; a rotor comprising a disk-like body in said central space and provided with two annular series of oppositely directed bodies which extend into said steam chambers; inlet ports arranged to admit motive fluid simultaneously to said chambers at both sides of the rotor for impact with the blades and to balance pressure on opposite sides of the rotor, and exhaust ports communicating also with said steam chambers.

2. A rotary engine comprising a casing formed with a central unobstructed space to receive the body of a rotor and provided with laterally opposed annular steam chambers; a rotor rotatively mounted in said central space by means which divides or separates said steam chambers and provided with two annular series of oppositely directed blades which extend into said steam chambers, with means to afford fluid-tight joints between the edges of the blades and the walls of the steam chambers; inlet ports opening into said steam chambers at both sides of the rotor, and open exhaust ports leading from said steam chambers.

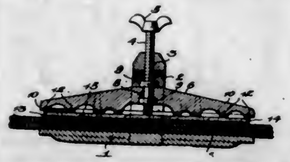
3. A rotary engine comprising a casing formed with a central unobstructed space to receive the body of a rotor and provided with lateral annular steam chambers; a rotor rotatively mounted in said central space by means which divides or separates said steam chambers and provided with two annular series of oppositely directed blades which extend into said steam chambers, with means to afford fluid-tight joints between the edges of the blades and the walls of the steam chambers; inlet ports leading into said steam chambers at both sides of the rotor and disposed in a plane at one side of the axis of rotation thereof; other inlet ports leading to said steam chamber at both sides of the stator and disposed in planes at the other side of the axis of rotation of the rotor, and open exhaust ports in planes on opposite sides of said axis of rotation and leading from said steam chambers.

4. A rotary engine comprising a casing formed with laterally separated annular steam chambers; a rotor therein to separate said steam chambers and provided with two annular series of oppositely directed blades and two sets of inlet ports leading to the steam chambers on respective opposite sides of the axis of rotation of the rotor, and outlet ports leading from said steam chambers.

5. A rotary engine comprising a casing provided with laterally spaced steam chambers; a rotor in said casing constituting a fluid barrier between said steam chambers and provided with oppositely directed blades which extend into said steam chambers; inlet ports leading to the steam chambers on respective opposite sides of the axis of rotation thereof, and exhaust ports arranged between the inlet ports to serve as a common exhaust for motive fluid admitted to said steam chambers through said inlet ports, whereby the engine may be driven in either of two opposite directions.

[Claims 6 to 20 not printed in the Gazette.]

1,225,845. VULCANIZING DEVICE. FRANK M. NAYSMITH, THOMAS J. GILLASPY, and FORREST D. CARL, Davenport, Iowa, assignors, by direct and mesne assignments, of one-half to said Thomas J. Gillaspy and one-half to A. D. Brownlie, Davenport, Iowa. Filed May 22, 1916. Serial No. 99,099. (Cl. 18—18.)



1. A vulcanizing device, comprising in combination with a heating member, a clamp having a base and a crab movably supported with relation thereto and adapted to exert pressure upon said heating member, said crab having retaining means located at various distances from a central point for engaging various sizes of heating members.

2. A vulcanizing device, comprising in combination with a heating pan, a clamp having a base and a crab movably supported with relation thereto and adapted to exert pressure upon said pan, said crab having a plurality of feet provided with pan retaining means located at various distances from a central point for engaging various sizes of pans.

3. A vulcanizing device, comprising a clamp having a base and a crab movably mounted with respect thereto and consisting of a longitudinal bar, and arms extending outwardly from said bar, said bar and arms being provided with pan retaining means located at various distances from a central point to engage various sizes of pans for holding them on the base during the vulcanizing operation.

4. A vulcanizing device, comprising a base and an overhanging arm, a crab adjustably mounted on said arm, and having a plurality of pan engaging feet located at various distances from a central point to accommodate various sizes and shapes of pans.

5. A vulcanizing device, comprising a clamp having a base and a crab movably supported with respect thereto, said crab consisting of a bar and a plurality of arms extending outwardly from the bar, said bar and arms having pan engaging feet with grooves therein located at various distances from a central point for engaging various sizes of vulcanizing pans.

[Claim 6 not printed in the Gazette.]

1,225,846. COMBINED SUPERHEATER AND ECONOMIZER. RUDOLF M. OSTERMANN, Chicago, Ill., assignor to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 24, 1916. Serial No. 133,202. (Cl. 122—423.)

1. In a boiler provided with a plurality of enlarged flue tubes, the combination with each of some of such tubes, of a superheater element comprising four serially disposed pipes, two of which are in one plane and extend substantially the entire length of the flue tube while the other two are in a parallel plane and extend from the rear ends of the longer pipes to a point well to the rear of the smoke box, an economizer element in the same plane as the shorter leg of the superheater element and extending from the end of said shorter leg to the smoke box, means for passing steam from the boiler through the superheater elements and means for passing water through the economizer elements to the boiler.

2. In a boiler provided with a plurality of enlarged flue tubes, the combination with each of some of such tubes, of a superheater element comprising four serially disposed pipes two of which are in one plane and extend substantially the entire length of the flue tube while the other two are in a parallel plane and extend from the rear ends of the longer pipes to a point well to the rear of the smoke box, an economizer element comprising a single loop of two pipes in the same plane as the shorter leg of the superheater element and extending from the end of said shorter leg to the smoke box, means for passing steam from the boiler through the superheater elements and means for passing water through the economizer elements to the boiler.

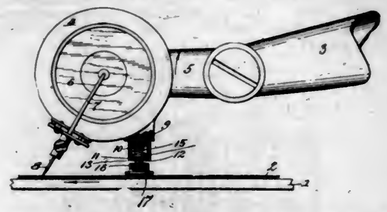


3. In a boiler provided with a plurality of enlarged flue tubes, the combination with each of some of such tubes, of a superheater element comprising four serially disposed pipes two of which are in one plane and extend substantially the entire length of the flue tube while the other two are in a parallel plane and extend from the rear ends of the longer pipes to a point well to the rear of the smoke box, an economizer element comprising a single loop of two pipes in the same plane as the shorter leg of the superheater element and extending from the end of said shorter leg to the smoke box, means for passing steam from the boiler through the superheater elements in parallel and means for passing water through the economizer elements in series to the boiler.

4. In a boiler provided with a plurality of enlarged flue tubes, the combination with each of some such tubes, of a superheater element comprising four serially disposed pipes two of which are in one plane and extend substantially the entire length of the flue tube while the other two are in a parallel plane and extend from the rear ends of the longer pipes to a point well to the rear of the smoke box, an economizer element comprising a single loop of two pipes in the same plane as the shorter leg of the superheater element and extending from the end of said shorter leg to the smoke box, means for passing steam from the boiler through the superheater elements, an economizer header in the smoke box provided with a plurality of independent chambers the chambers being adapted to be connected serially by the economizer elements, and means for introducing water into one end chamber of the series and for transferring water from the other end chamber to the boiler.

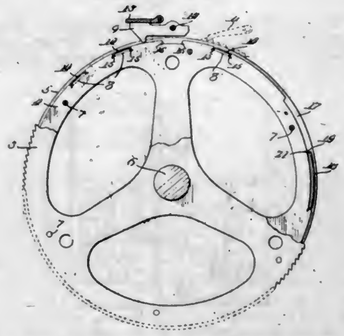
5. In a boiler provided with a plurality of enlarged flue tubes arranged in horizontal rows, the combination with each of a plurality of tubes in said rows, of a superheater element comprising four serially disposed pipes two of which lie in one horizontal plane and extend substantially the entire length of the flue tube while the other two are in a parallel plane and extend from the rear ends of the longer pipes for substantially half the length of the flue tube, an economizer element comprising a single loop of two pipes in the same plane as the shorter leg of the superheater element and extending from the end of said shorter leg to the smoke box, a steam header having a collecting and distributing chamber for saturated and superheated steam respectively, the ends of the superheater elements being connected in parallel to said chambers, and a transverse economizer header for each row of economizer elements adjacent to the ends of the flue tubes said header having independent chambers and the ends of the economizer elements being connected between chambers so as to constitute one continuous series, the end chambers of the series being respectively joined to a source of water supply and to the boiler.

1,225,847. PHONOGRAPH-RECORD CLEANER AND LUBRICATOR. CHARLES PALMER, Buffalo, N. Y. Filed May 6, 1916. Serial No. 95,899. (Cl. 274—1.)



A phonograph comprising a needle adapted to engage a record, a sound box on which said needle is mounted, and a cleaning device mounted on said box and comprising a supporting lug depending from the box and provided with a screw thread, a guide sleeve having a thread at its upper end which engages with the thread of said lug and having a head at its lower end which is provided with a guide opening, a plunger having a guide rod arranged in said opening and a head at its upper end arranged in said sleeve, a spring arranged in said sleeve between said head and said lug, and a shoe having a screw connection with the lower end of said rod and provided on its underside with a felt pad adapted to rest on said record.

1,225,848. CONTROLLING DEVICE FOR KNITTING-MACHINES. WILLIAM SMITH PARKER, Rockford, Ill., assignor to Burson Manufacturing Company, Rockford, Ill., a Corporation of Illinois. Filed Aug. 9, 1915. Serial No. 44,474. (Cl. 66—30.)



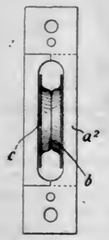
1. A controlling device for knitting machines comprising a disk provided on its periphery with a controlling depression having slots at the ends thereof, and an insert provided with fingers adapted to fit in said slots to retain the insert in position in said depression.

2. A controlling device for knitting machines comprising a disk provided on the periphery with controlling depressions and spring steel inserts constructed to fit said depressions and be detachably attached to the disk so that the outer surfaces of said inserts will present curved continuations of the periphery of the disk across said depressions.

3. A controlling device for knitting machines comprising a disk provided on its periphery with a controlling

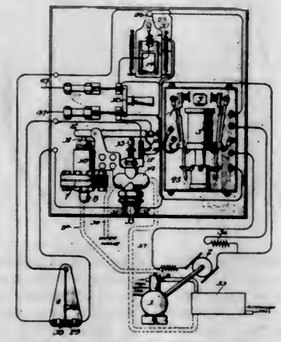
depression, an insert constructed to fit said depression so that the outer surface of said insert will present a curved continuation of the periphery of the disk, said disk having a retaining recess extending from said depression and said insert being shaped so as to be detachably engaged in said recess without the use of tools so as to be detachably retained in operative connection with the disk.

1,225,849. CASE FOR SASH PULLEYS, LOCKS, OR THE LIKE. SAMUEL ROWLAND PARKES, Willenhall, England. Filed Feb. 25, 1916. Serial No. 80,498. (Cl. 16—17.)




A case for sash pulleys comprising a pair of side members, abutments formed along the edges of said side members adjusted to hold said side members in spaced relationship, a sash pulley positioned between said side members, a pintle passing through said sides and supporting the pulleys, a casing face being formed integral with said side members, the extremity of one half thereof being pressed back out of the main plane of the same to an extent equal to the thickness of the metal so that when the two halves are placed together the whole of the back presents a flat surface, the overlapping ends of these side members being provided with openings adapted to receive screws adapted to connect the whole of the parts of the casing together and further serving to secure the casing in applied position.

1,225,850. REFRIGERATING APPARATUS. JOHN M. PETERSON, Chicago, Ill., assignor to George J. Sayer, Chicago, Ill. Filed Dec. 4, 1915. Serial No. 64,976. (Cl. 62—4.)



1. A refrigerating system having a compressor for compressing refrigerant, a water supply valve for controlling the supply of condensing water, a thermostat responsive to the temperature of a chamber to be cooled by said refrigerant, a motor for operating said compressor, means responsive to the pressure on the high side of said compressor to control said valve, and means controlled by said first aforesaid means and said thermostatic element to govern the operations of said compressor, said last aforesaid means including a diaphragm responsive to water pressure, and a plurality of contacts controlled thereby.

2. A refrigerating system having a compressor for compressing refrigerant, a water supply valve for controlling the supply of condensing water, a thermostat responsive to the temperature of a chamber to be cooled by said refrigerant, a motor for operating said compressor, means responsive to the pressure on the high side of said compressor to control said valve, and means controlled by said first aforesaid means, said thermostat, and by the presence of said condensing water to govern the operations of said compressor, said last aforesaid means including a diaphragm responsive to water pressure, and a plurality of contacts controlled thereby.

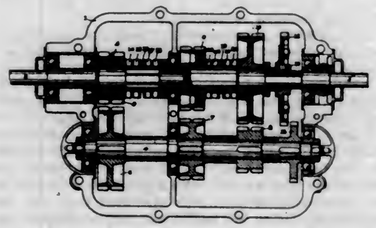
3. A refrigerating system having a compressor for compressing refrigerant, a water supply valve for controlling the supply of condensing water, a thermostat responsive to the temperature of a chamber to be cooled by said refrigerant, a motor for operating said compressor, means responsive to the pressure on the high side of said compressor to control said valve, and switching means controlled by said first aforesaid means and said thermostatic element to govern the operations of said compressor, said last aforesaid means including a diaphragm responsive to water pressure, and a plurality of contacts controlled thereby.

4. A refrigerating system having a compressor for compressing refrigerant, a water supply valve for controlling the supply of condensing water, a thermostat responsive to the temperature of a chamber to be cooled by said refrigerant, a motor for operating said compressor, means responsive to the pressure on the high side of said compressor to control said valve, and switching means controlled by said first aforesaid means, said thermostat, and by the presence of said condensing water to govern the operations of said compressor, said last aforesaid means including a diaphragm responsive to water pressure, and a plurality of contacts controlled thereby.

5. A refrigerating system having a compressor for compressing refrigerant, a water supply valve for controlling the supply of condensing water, a thermostat responsive to the temperature of a chamber to be cooled by said refrigerant, a motor for operating said compressor, means responsive to the pressure on the high side of said compressor to control said valve, and means controlled by said first aforesaid means, said thermostat and by means responsive to the presence of condensing water to govern the operations of said compressor, said last aforesaid means including a diaphragm responsive to water pressure.

[Claims 6 and 7 not printed in the Gazette.]

1,225,851. CHANGE-SPEED GEARING. WALTER PHILLIPS and HENRY W. ALLINGHAM, London, England, assignors to Morse Chain Company, Ithaca, N. Y., a Corporation of New York. Filed Nov. 6, 1911. Serial No. 658,666. (Cl. 74—59.)



1. In a transmission mechanism, the combination with a driving shaft, a sprocket gear wheel loosely mounted thereon, a driven shaft in axial alinement therewith, and a loosely mounted sprocket gear wheel on said driven shaft, of a lay shaft, corresponding sprocket gear wheels rigidly mounted thereon, connections between said wheels on the driving and driven shafts and the gears on the lay shaft, clutch devices for the sprocket gears of the driving and driven shafts, a longitudinally adjustable reversing gear mounted on the driven shaft, and a corresponding gear mounted to turn with the lay shaft.

2. In a transmission mechanism, the combination of a driven shaft, a sprocket gear wheel mounted thereon, another shaft, a corresponding sprocket gear wheel thereon, a connection between said wheels, a pair of reversing gears mounted to turn with the respective shafts, a laterally adjustable bearing for one of the shafts, and a coupling between the adjustable shaft and its reversing gear.

3. In a transmission mechanism, the combination of a shaft having a laterally adjustable bearing, a sprocket gear mounted on said shaft, a gear mounted on a fixed bearing surrounding said shaft, and a driving connection between the shaft and the last mentioned gear.

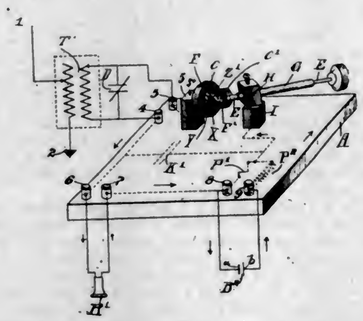
4. In a transmission mechanism, the combination of a shaft having a laterally adjustable bearing, a sprocket gear mounted on said shaft, a gear mounted on a fixed bearing, and a flexible coupling between the shaft and said gear for driving the same.

5. In a change speed mechanism, the combination with a driving shaft, a loosely mounted sprocket gear thereon, a driven shaft mounted in axial alinement therewith, and a loosely mounted sprocket gear on said driven shaft, of a parallel lay shaft, laterally adjustable bearings for said lay shaft, rigidly mounted sprocket wheels on said lay shaft, connections between the corresponding sprocket gear wheels of the driving and driven shafts, and the gears on the lay shaft, clutch devices for said gears, a longitudinally adjustable reversing gear wheel mounted on the driven shaft, a corresponding gear wheel mounted on a fixed bearing surrounding the lay shaft, and a coupling between the lay shaft and the said gear wheel.

[Claim 6 not printed in the Gazette.]



1,225,852. RECTIFIER. GREENLEAF WHITTIER PICKARD, Amesbury, Mass., assignor to Wireless Specialty Apparatus Company, New York, N. Y., a Corporation of New York. Filed Nov. 21, 1908. Serial No. 463,769. (Cl. 250—31.)



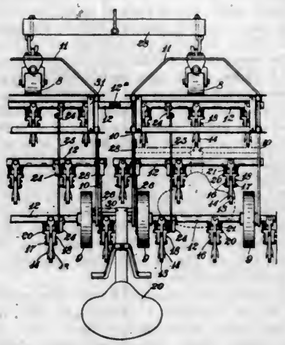
1. In an oscillation detector, the combination with a rectifying conductor of the class described and a contacting conductor therefor, of a rotatable support for one of said conductors, said conductor being mounted eccentric to the axis of its said support.

3. In an oscillation detector, the combination with a rectifying conductor of the class described and a contacting conductor therefor, of a support for one of said conductors, said support consisting of a reciprocating, swinging and rotating arm, said conductor being mounted eccentric to the axis of rotation of the arm.

7. In an oscillation detector, the combination with a rectifying conductor of the class described, and a contacting conductor therefor; of a rotatable support for one of said conductors; one of said conductors being mounted eccentrically to the axis of rotation of said support, whereby the rotation of the support permits contact selection along a circular path on the surface of one of said conductors.

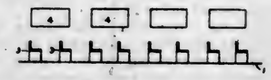
[Claims 2 and 4 to 6 not printed in the Gazette.]

1,225,853. CULTIVATOR. CLIFFORD H. PIDGEON, Columbus, Ohio. Filed Sept. 13, 1915. Serial No. 50,326. (Cl. 97—34.)



In a cultivator, the combination of a frame containing a transverse horizontal rock shaft and means for latching the same in position, a cultivator tooth having a shank, a head with which said shank is connected, said head being pivoted directly to said rock shaft to oscillate horizontally, said head also provided with a lateral extension at each side thereof and a spring between each of said extensions and the rock shaft and operating directly thereon, substantially as shown and described.

1,225,854. SLEEPING-CAR. EDWARD D. PRIEST, Schenectady, N. Y. Filed Oct. 19, 1916. Serial No. 126,536. (Cl. 105—23.)



1. A sleeping car comprising seats spaced apart, and upper berth members spaced apart, each of said upper berth members being pivotally mounted in the side of said car and arranged to swing downwardly to form an upper berth, said seats and upper berth members being arranged to form compartments, each of said compartments comprising a lower berth formed of two of said seats adjacent to each other, an upper berth formed of a single one of said upper berth members swung downwardly into a horizontal plane directly above said seats forming the lower berth, and partitions for separating one end only of each upper berth from the adjacent compartment, the other end of said upper berth being in communication with the space between said lower berth and said adjacent compartment formed by the spacing of said seats, whereby access may be had to said upper berth.

2. A sleeping car comprising seats spaced apart, and upper berth members spaced apart, each of said upper berth members being pivotally mounted in the side of said car and arranged to swing downwardly to form an upper berth, said seats and upper berth members being arranged to form compartments, each of said compartments comprising a lower berth formed of two of said seats adjacent to each other, an upper berth formed of a single one of

said upper berth members swung downwardly into a horizontal plane directly above said seats forming the lower berth, partitions for separating one end only of each upper berth from the adjacent compartment, the other end of said upper berth being in communication with the space between said lower berth and said adjacent compartment formed by the spacing of said seats, whereby access may be had to said upper berth, and a platform above the floor of said car and arranged in said space between said lower berth and the adjacent compartment.

3. A sleeping car comprising reversible seats arranged to face in the direction of motion of said car for day travel, said seats being spaced apart, and upper berth members spaced apart, each of said upper berth members being pivotally mounted in the side of said car and arranged to swing downwardly to form an upper berth, said seats and upper berth members being arranged to form compartments for night travel, each of said compartments comprising a lower berth formed of two of said seats adjacent to each other, one of each being reversed so as to face the other, an upper berth formed of a single one of said upper berth members swung downwardly into a horizontal plane directly above said seats forming the lower berth, and partitions for separating one end only of each upper berth from the adjacent compartment, the other end of said upper berth being in communication with the space between said lower berth and said adjacent compartment formed by the spacing of said seats whereby access may be had to said upper berth.

4. A sleeping car comprising reversible seats arranged to face in the direction of motion of said car for day travel, said seats being spaced apart, and upper berth members spaced apart, each of said upper berth members being pivotally mounted in the side of said car and arranged to swing downwardly to form an upper berth, said seats and upper berth members being arranged to form compartments for night travel, each of said compartments comprising a lower berth formed of two of said seats adjacent to each other, one of each being reversed so as to face the other, an upper berth formed of a single one of said upper berth members swung downwardly into a horizontal plane directly above said seats forming the lower berth, and partitions for separating one end only of each upper berth from the adjacent compartment, the other end of said upper berth being in communication with the space between said lower berth and said adjacent compartment formed by the spacing of said seats whereby access may be had to said upper berth, and a platform above the floor of said car and arranged in said space between said lower berth and the adjacent compartment.

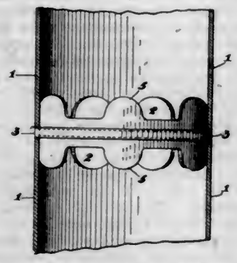
5. A sleeping car comprising seats having removable backs so that said seats may be arranged to face in the direction of motion of said car for day travel, said seats being spaced apart, and upper berth members spaced apart, each of said upper berth members being pivotally mounted in the side of said car and arranged to swing downwardly to form an upper berth, said seats and upper berth members being arranged to form compartments for night travel, each of said compartments comprising a lower berth formed of two of said seats adjacent to each other, an upper berth formed of a single one of said upper berth members swung downwardly into a horizontal plane directly above said seats forming the lower berth, and partitions for separating one end only of each upper berth from the adjacent compartment, the other end of said upper berth being in communication with the space between said lower berth and said adjacent compartment formed by the spacing of said seats whereby access may be had to said upper berth.

[Claim 6 not printed in the Gazette.]

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1,225,855. COMBINED STEEL AND CONCRETE PILE. FRANCIS L. PRUYN, New York, N. Y. Filed Mar. 17, 1914. Serial No. 825,245. (Cl. 72—81.)

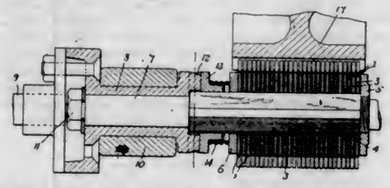
The combination with a pair of tubular sections of a bushing provided with a central flange portion having faces beveled inwardly for confining the abutting ends of the sections and having ends provided with resilient portions for holding the sections in alinement and a non-



resilient portion adapted to effect a watertight joint in conjunction with the flange portion.

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1,225,856. TOOTHED TRANSMISSION-GEARING. ALFRED ARTHUR QUICK, London, England. Filed Mar. 22, 1915, Serial No. 16,094. Renewed Mar. 28, 1917. Serial No. 158,111. (Cl. 74—28.)



1. A toothed gear element for use in toothed gearing, composed of a series of toothed disks, a series of friction disks alternately arranged with the disks of the first named series, a carrying member for both series of disks, the toothed disks being mounted on said carrying member so as normally to rotate therewith but so as to be capable, under certain conditions, of an axial movement on said carrying member and of a rotary movement in a reverse direction to the rotary movement of the carrying member, the friction disks being mounted so as to rotate with said carrying member but so as to be capable, under certain conditions, of an axial movement on said carrying member, means for drawing the two series of disks together thereby setting up frictional resistance between such disks, and means for increasing such resistance as the load increases whereby the disks are caused to rotate with the carrying member as the load increases.

4. In a toothed gearing a toothed gear element composed of a plurality of disks, a carrying member upon which such disks are frictionally mounted, said disks being mounted on the carrying member so as normally to rotate therewith but so as to be free to adjust themselves to any inaccuracies in the teeth of a co-acting toothed element so that the load is distributed along the entire length of the intermeshing teeth, and means for increasing the resistance as the load increases comprising clutch elements located between the driving element and the disks such elements having inclined co-acting faces whereby the torque on the shaft effects a separation of such clutch elements and a consequent increase of friction between the disks.

8. In toothed gearing a toothed gear element composed of a plurality of disks, a carrying member upon which such disks are frictionally mounted, bearings for supporting said carrying member, said disks being mounted on the carrying member so as normally to rotate therewith but so as to be free to adjust themselves to the load and to any inaccuracies in the teeth of a co-acting toothed element so that the load is distributed along the entire length of the intermeshing teeth, and means for drawing the disks toward each other and away from the bearings supporting

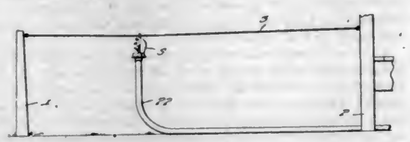


the carrying member whereby the friction between the disks is increased and the gear element is able to gradually pick up the load as such load increases.

[Claims 2, 3, and 5 to 7 not printed in the Gazette.]

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1,225,857. SPRINKLING DEVICE. JOHN R. RAUHUT, Chicago, Ill. Filed Dec. 20, 1916. Serial No. 138,052. (Cl. 137—59.)



1. The combination with a pair of posts, of a wire member suspended from and between the said posts, of a sprinkler comprising a body, said body having an opening therein to receive the water supply means and a second opening to permit the discharge of the water, a pair of standards extending from the sides of said body and joining above the same, a hook member extending from said jointure for a purpose specified.

2. The combination with a pair of posts, of a wire member suspended from and between the said posts, of a sprinkler comprising a body, a pair of standards extending from the sides of said body and joining above the same, a hook member extending from said jointure adapted to engage said wire, said body having an enlargement formed on one side thereof, the said enlargement being provided with a recess, a supporting means for the sprinkler mounted in said recess, and the said body having means associated therewith to receive the water supplying means, and an opening formed in the said body to permit the discharge of the water.

3. The combination with a pair of posts, of a wire member suspended from and between the said posts, of a sprinkler comprising a body, a pair of standards mounted on said body joining above the same, a neck member formed at said jointure, a hook formed on the free end of said neck adapted for slidable engagement with the said wire, and a distributer suspended from said neck for a purpose specified.

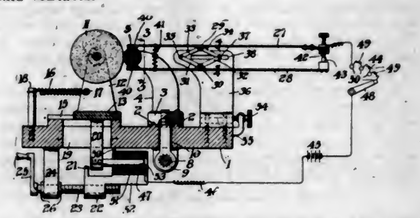
4. The combination with a pair of posts, of a wire member suspended from and between the said posts, of a sprinkler comprising a body, a pair of standards mounted on said body joining above the same, a neck formed at said jointure, a hook formed on the free end of said neck adapted for slidable engagement with the said wire, a frusto-conical distributer, a rod mounted on said distributer, the said neck having a longitudinal opening therein, the said rod being adapted for slidable engagement in the said longitudinal opening for a purpose specified.

5. The combination with a pair of posts, of a wire member suspended from and between the said posts, of a sprinkler comprising a body, said body having an opening therein to receive the water supply means and a second opening to permit the discharge of the water, a pair of standards extending from the sides of said body and joining above the same, a hook member extending from said jointure, and a semi-circular deflecting member detachably associated with said standards for a purpose specified.

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1,225,858. AUTOMATIC SIZING DEVICE. CLIFFORD T. RAULE, Philadelphia, Pa. Filed July 20, 1915. Serial No. 40,832. (Cl. 51—4.)

1. In a device of the character stated, a grinder having means for holding the work to be ground, a transversely movable grinding wheel, guides for two cumulative transverse feeds of the grinding wheel and separate means for transversely feeding the wheel on one of the guides and giving relative longitudinal feed to the work and wheel, one with respect to the other in combination with a gage in contact with the work, contacts maintained by the gage until the work has been ground to the required size and electromagnetic means for resiliently drawing the wheel transversely upon the other guide in advance of the first named transverse feed and having its circuit closed by said contacts.



2. In a device of the character stated, a grinder having normal longitudinal feed for the work with respect to the grinding wheel, two sets of guides for transverse feed of the wheel and a positive transverse feed for the wheel upon one set of guides, a gage in contact with the work being ground, contacts closed by the operation of the gage until the required size of the work has been reached, an electric circuit closed by the contacts, resilient means for holding the wheel in engagement with the positive feed and electromagnetic means connected with the circuit for pulling the wheel along the second set of guides in advance of the forced feed against said resilient means.

3. In a device of the character stated, a grinder having lost motion between its grinding wheel and the transverse positive feed for the wheel and a resilient device adapted to draw the wheel toward the feed, taking up the lost motion, in combination with a gage resting against the work being ground, a circuit closed by the gage and an electromagnet in the circuit and connections adapted to move the wheel against the work overcoming the pull of the resilient device.

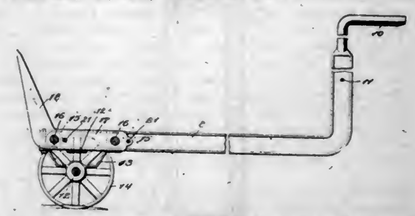
4. In a device of the character stated, a grinder having a positive feed for the grinding wheel, an electromagnetic resilient feed for the wheel adapted to press it against the work in advance, in a transverse direction, of the positive feed and work-operated automatic means for applying the automatic feed.

5. In a device of the character stated, a grinder having a positive feed for the grinding wheel, an electromagnetic resilient feed for the wheel adapted to press it against the work in advance, in a transverse direction, of the positive feed, resilient means for pulling the wheel back from the work, opposing the electromagnetic feed and work-operated automatic means for applying the automatic feed.

[Claims 6 to 18 not printed in the Gazette.]

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1,225,859. TRUCK. HOMER L. REED, Louisiana, Mo. Filed May 12, 1916. Serial No. 97,056. (Cl. 21—65.)



1. In combination with a wheeled truck frame, comprising channels bent at an angle at their rearmost ends, a carriage frame having rollers arranged for movement in said channels, a truck head movable with said carriage and disposed at an angle relative to the body of said carriage whereby to elevate one end of a box or the like,

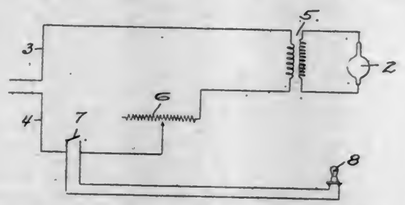
so that the entire truck may be moved to underlie the major portion of the box and to automatically lower the elevated end of the box to lie upon the body of the truck.

2. In combination with a truck body having next its rearmost end an angularly disposed portion and a wheeled support next its forward end, a carriage mounted for movements along the said body and its angular portion, said carriage comprising a truck head inclining forwardly and upwardly relative to the carriage body, said truck head arranged to be moved into and out of the plane of said body portion by a movement of the carriage relative to said body and its angular portion.

3. In combination with a truck frame comprising parallel channeled elements having angular portions at their rearmost ends and a wheeled support adjacent their forward ends, a carriage having rollers arranged for movements in said channeled elements, and a forwardly and upwardly inclined truck head carried by said carriage.

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1,225,860. ELECTRIC CONTROL SYSTEM. FRANK RIEBER, San Francisco, Cal., assignor to The Rieber Laboratories, San Francisco, Cal., a Corporation of California. Filed Aug. 17, 1916. Serial No. 115,414. (Cl. 250—34.)

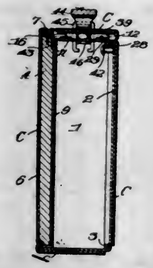


1. The combination with a Röntgen-ray tube and a circuit therefor, of a high resistance lamp in series in said circuit and means for shortcircuiting the lamp and causing the tube to be energized.

2. The combination with a transformer of a supply circuit connected to the primary of the transformer, a Röntgen ray tube connected to the secondary, a high resistance lamp in series with the primary and adapted to limit the current therethrough and to illuminate the room in which the tube is arranged and a switch for shortcircuiting said lamp.

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1,225,861. LATCH MECHANISM FOR FOLDING CAMERAS. ALFRED A. RUTTAN and CHARLES E. HUTCHINGS, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 24, 1916. Serial No. 133,113. (Cl. 70—82.)



1. In a folding camera, the combination with a camera body having a door at the front and a removable back member, of a plate secured on the inner face of one of the side walls of the body to extend from front to rear of the latter, and two latches carried wholly by the plate to coöperate respectively with the door and back member.

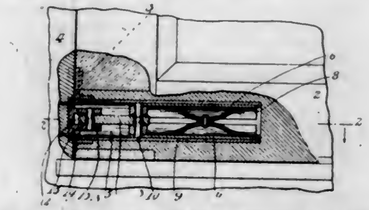
2. In a folding camera, the combination with a camera body having a door at the front and a removable back member, of a plate secured on the inner face of one of the side walls of the body to extend from front to rear of the latter, and two latches carried wholly by the plate to coöperate respectively with the door and back member, said latches embodying spring arms having catches thereon and sliding cam plates coöperating with the arms and terminating in push buttons projecting through an adjacent wall of the camera body.

4. In a folding camera, the combination with a camera body having a door at the front, of a plate secured on the inner face of one of the side walls of the body, a latch carried wholly by the plate to coöperate with the door, links extending through the said wall of the body, a handle on the outside of the latter secured to the links and projections on the plate interlocking with the links on the inside of the body.

[Claim 3 not printed in the Gazette.]

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1,225,862. ADJUSTABLE STOP FOR WINDOWS OR DOORS. CHARLES JEWETT SAXE, Montreal, Quebec, Canada. Filed Dec. 13, 1915. Serial No. 66,617. (Cl. 16—6.)

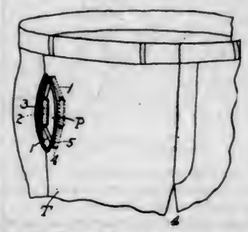


1. In combination, a frame, a window sash hinged to the frame and having a recess therein, shoes within the recess, a spring device pressing the shoes against the wall of the recess and a connection between the shoes and frame and having a lateral movement within the recess.

2. In combination, a frame, a window sash hinged to the frame and having a recess therein, the edge of the frame being adapted to cover the recess, a tube within the recess, such tube being longitudinally split at diametrically opposite points, a pair of laminated springs between and respectively bearing against the halves of the tube, a stop to limit the withdrawal of the tube from the recess and a link pivotally connected at its ends to the tube and frame respectively and having a lateral movement within the recess.

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1,225,863. SAFETY ATTACHMENT FOR GARMENT-POCKETS. JOHN J. SCHAAB, St. Louis, Mo. Filed Oct. 16, 1916. Serial No. 125,873. (Cl. 2—151.)



1. A safety attachment for pockets comprising a frame composed of pairs of terminal toggle links, a pair of intermediate links pivotally joined to the toggle links, slides on the toggle links operating to fold the links together with a movement of the slides toward the intermediate links, and to allow the toggle links to open with a movement of the slides away from the intermediate links.

2. A safety attachment for pockets comprising a jointed linked frame securable to, and between the pocket walls, slides for controlling the relative position between the members of a jointed pair of links, and means for frictionally holding the slides at any point along the links.

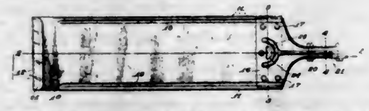
3. In a safety attachment for pockets, a collapsible link frame provided with terminal toggle links, a slide provided with an opening for the free passage of the links, resilient lobes on the slide engaging the links, and a pin mounted between the lobes and operating between the links for maintaining the slide in position on the links.

4. A safety attachment for pockets comprising a jointed frame composed of a pair of intermediate links, a pair of terminal toggle links at each end of the intermediate links, and slides for controlling the folding and unfolding of the toggle links and the movement to and from each other of the intermediate links, the intermediate links being provided with means for securing the same to the pocket walls.



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1,225,864. BAKER'S PEEL. LEON SCHLAGER, New York, N. Y. Filed July 16, 1915. Serial No. 40,156. (Cl. 107—67.)



1. A baker's peel comprising a blade of thin sheet metal, a pair of clamp members to which the blade is attached, said clamp members being formed with a socket for holding the width of the blade and a socket in which the handle is inserted, tapering walls upstanding from the longitudinal edges and merging with the body of the blade a distance from the forward edge thereof, and corrugations in the blade adjacent the walls and extending along the length thereof to stiffen the blade.

2. A baker's peel comprising a thin sheet metal blade, a pair of sheet metal clamp members between which said plate is attached, said clamp members being provided with a transverse socket in which the blade is secured, a longitudinal socket in which the handle is secured, and longitudinal corrugations formed upon said clamp members to strengthen the same.

3. A baker's peel comprising a sheet metal blade, a mounting therefor to which the blade is secured, said mounting being formed with a socket for the insertion of the handle, and air passages about the socket for preventing undue heating of the handle.

4. A baker's peel comprising a thin sheet metal blade, a sheet metal mounting in which said blade is attached, said mounting being provided with a transverse socket in which the blade is secured, a longitudinal socket in which the handle is secured, and air passages formed within the mounting about said handle.

5. A baker's peel comprising a thin sheet metal blade, a pair of sheet metal clamp members in which said blade is adapted to be attached, said clamp members having a transverse socket in which the blade is secured, a longitudinal socket in which the handle is fitted, means for joining the members together at the longitudinal socket and also for securing the handle therein, corrugations formed in each of the clamping members to strengthen the same, and apertures communicating with the transverse socket and with the corrugations whereby air is admitted to pass freely therethrough and circulate about said handle.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,865. ELECTRICAL ADVERTISING DEVICE. FRANK SCHNEIBLE, New York, N. Y., assignor to C. A. Schneible, Inc., New York, N. Y., a Corporation of New York. Filed Jan. 13, 1916. Serial No. 71,850. (Cl. 177—346.)

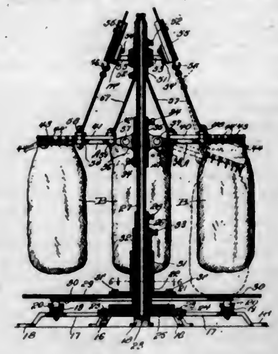
An electrical advertising device for liquids to be dispensed comprising in combination with a faucet, a visual globe bearing distinctive insignia thereon mounted directly on the faucet between the attendant and the



customer, an electric light to illuminate the globe, and means to change the condition of the circuit of the light upon manipulation of the handle of the faucet.

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1,225,866. BAG-HOLDER. CORNELIUS SCHREARS, Tolna, N. D. Filed Aug. 9, 1916. Serial No. 114,012. (Cl. 88—26.)



1. In a device of the class described, an upright shaft supported for rotation, a collar fixed adjustably on the shaft, T-shaped arms pivotally connected with the collar, said arms including cross bars at their outer ends, bag holding elements pivoted on the arms, a second collar fixed adjustably on the shaft above the first mentioned collar and having radially extending arms, casings connected with said arms, springs within the casings, hook members supported by the springs, and links connecting the hook members with the arms connected pivotally with the first mentioned collar.

2. In a device of the class described, an upright shaft supported for rotation, a collar fixed adjustably on the shaft, T-shaped arms pivotally connected with the collar, said arms including cross bars at their outer ends, bag holding elements pivoted on the arms, a second collar fixed adjustably on the shaft above the first mentioned collar and having radially extending arms, casings connected with said arms, springs within the casings, hook members supported by the springs, and links connecting the hook members with the arms connected pivotally with the first mentioned collar; in combination with a platform connected with the upright shaft and revoluble therewith.

3. In a device of the class described, an upright shaft supported for rotation, a collar fixed adjustably on said shaft, an arm pivotally connected with said collar, said arm having a cross bar at its outer end, bag holding elements pivotally connected with the arm, a bolt or pin connecting one of the elements adjustably with the cross bar, and a ratchet member pivoted on the arm and adapted to engage the other bag holding element.

1,225,867. SECTIONAL CULVERT-PIPE AND THE LIKE. GERARD SCHUMACHER, Anniston, Ala. Filed Feb. 4, 1915. Serial No. 6,107. (Cl. 61—9.)



1. A pipe length having a spigot end formed with a double-taper continuous rib around its extremity, the annular end wall of said spigot end being beveled from the circumference of the rib to the inner surface of the pipe, the top and bottom portions of said rib being formed with lateral enlargements, said pipe length also having a hub end formed with a continuous internal V groove, the top and bottom portions of said groove having lateral enlargements, said pipe length being composed of upper and lower longitudinal sections having abutting longitudinal edges, the meeting sides of said sections having corresponding exterior under-cut longitudinally-inclined lugs adapted to form wedge-shaped blocks at the sides of the sections between their hub and spigot ends, and exterior clamping members adapted to embrace said blocks and wedge thereon longitudinally of the pipe sections to clamp said sections together, substantially as described.

2. A pipe length having a spigot end and a hub end, the spigot end at its extremity having an exterior rib, and the hub end having an interior groove to receive and center said rib of an adjoining pipe length and to form flush joints between the inner surfaces of adjoining pipe lengths, said length being composed of upper and lower longitudinal sections having meeting longitudinal edges, the rib of the lower section having a lug projecting laterally therefrom toward the hub end of the section and the groove of the lower section having a corresponding recess projecting laterally therefrom toward the outer end of the hub to receive the lug of the lower section of an adjoining pipe length for maintaining the upper longitudinal edges of said lower sections in alinement, substantially as described.

3. A pipe length having a spigot end and a hub end, the spigot end extremity having an exterior rib and the hub end having a corresponding internal groove, said length composed of upper and lower longitudinal sections having longitudinal meeting edges, said edges at the hub ends thereof having short tapered pins and corresponding sockets to interlock and hold the end edges of the sections in alinement, exterior means for clamping said sections together, the hub and spigot ends of the lower section formed with lateral recess 14, and lateral lug 15, to interlock with the corresponding portions of adjoining lower sections to hold said sections with their top longitudinal edges flush and in alinement.

4. A pipe length having a spigot end formed with a double-taper continuous rib around its extremity, the annular end wall of said spigot end being beveled from the circumference of the rib to the inner surface of the pipe, the top and bottom portions of said rib being formed with lateral enlargements, said pipe length also having a hub end formed with a continuous internal V groove, the top and bottom portions of said groove having lateral enlargements, said pipe length being composed of upper and lower longitudinal sections having abutting longitudinal edges, substantially as described.

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1,225,868. STAMP-AFFIXING MACHINE. WILLIAM F. SCHWEIGER, Rochester, N. Y., assignor to Multipost Company, Rochester, N. Y., a Corporation of New York. Filed June 30, 1914. Serial No. 848,290. (Cl. 211—33.)

1. In combination with a support, a finger pivotally mounted thereon and comprising a body portion that is hollow for a portion of its length, and a spring having one end connected to the support and its opposite end freely movable in said hollow portion of the finger.



2. In combination with a support, a finger pivotally mounted thereon and comprising a substantially U-shaped body portion, and a spring having one end connected to the support and its opposite end freely movable between the walls of said body portion of the finger.

3. In combination with a support, a finger pivotally mounted thereon and comprising a substantially U-shaped sheet metal body portion bent upon itself, and a spring having one end connected to the support and its opposite end freely movable between the walls of said body portion of the finger.

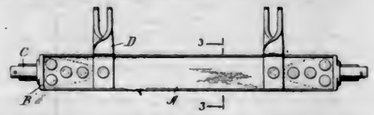
4. In combination with a support including a bearing or spindle, a finger pivotally mounted on the bearing and comprising a substantially U-shaped body portion, and a spring overlying the bearing and having one end attached to the support and its opposite end freely movable between the walls of the body portion of the finger.

5. In combination with a support including a bearing or spindle, a finger pivotally mounted on the bearing and comprising a substantially U-shaped body portion, and a spring overlying the bearing and having one end attached to the support and its opposite end freely movable between the walls of the body portion of the finger, and means for limiting the movement of the finger on the support.

[Claims 6 to 12 not printed in the Gazette.]

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1,225,869. BRAKE-BEAM. FRANCIS E. SCHWENTLER, St. Louis, Mo., assignor to American Brake Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 16, 1914. Serial No. 861,971. (Cl. 188—22.)



1. A brake beam comprising a beam portion formed of a rolled metal section, end members secured thereto and projecting beyond the ends of said sections, pivot pins on said end members and brake lever lugs also secured to said beam.

2. A brake beam comprising a beam portion formed of a rolled metal section, end members secured thereto and having pockets, said end members projecting beyond the ends of said section, and pins supported in both the inner and outer walls of said pockets.

3. A brake beam comprising a beam portion formed of a rolled metal section, end members secured thereto and having pockets closed at the bottom and one side, and hanger pins supported in the walls of said pockets.

4. A brake beam comprising a beam portion formed of rolled channel sections, end members riveted between the webs of said channel sections and carrying pivot pins, and brake lever lugs also riveted between said channel sections.

5. A brake beam comprising a beam portion formed of a rolled metal section, integrally formed end members and brake lever lugs secured at the ends of said sections and carrying pivot pins for the hangers.

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1,225,870. SERVING-DISH. HENRIETTA SCHWING, New York, N. Y., assignor to Mark Cross Company, New York, N. Y., a Corporation of New York. Filed Dec. 29, 1915. Serial No. 69,178. (Cl. 65—53.)

A serving dish holder comprising a split ring of resilient material, claws projecting inwardly and adapted to engage the edge of a plate, cups adapted to hold condiment shakers on the ring, a handle extending from one

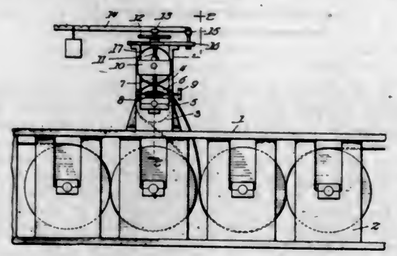


portion of the split ring to a point diametrically opposite and a closed, horizontal ring in the handle at the top portion thereof adapted to receive a cup.

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1,225,871. WATERMARKING DEVICE. FRANK O. SCOTT, Mittineague, Mass., assignor to Southworth Company, Mittineague, Mass., a Corporation of Massachusetts. Filed Aug. 17, 1916. Serial No. 115,354. (Cl. 101—23.)



1. In a paper making machine, a plurality of drier drums, a hard backing roll located intermediate the drier drums, a pressure roll adapted to bear with a heavy pressure against said backing roll, a fabric covering over the pressure roll, said covering comprising two independent pieces of fabric, each covering a portion of the roll.

2. In a paper making machine, a plurality of drier drums, a hard backing roll located intermediate the drier drums, a pressure roll adapted to bear against the backing roll, said pressure roll comprising an incomplete roll and a section adapted to complete the same, each covered with an impression producing fabric.

3. In a paper making machine, a plurality of drier drums, a pressure roll comprising a roll having a depressed portion longitudinally thereof, cleats at the base of said depressed portion to engage and clamp fabric, a sector for filling said depressed portion, means to cover the outer side of said sector with fabric, substantially as described.

4. In apparatus of the class described, a pressure roll having a depressed portion longitudinally arranged therein and a sector for filling said depressed portion, the underside of said sector being cut away along a portion of its length, securing devices passing through the uncut away portion of the sector into the roll to secure the sector thereto.

5. In apparatus of the class described, a pressure roll having a depressed portion longitudinally arranged therein and a sector for filling said depressed portion, the underside of said sector being cut away along a portion of its length, securing devices passing through the uncut away portion of the sector into the roll to secure the sector thereto, and abutting devices extending into the space between the cut away portion of the sector and the roll to take the pressure of the roll.

[Claims 6 and 7 not printed in the Gazette.]

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1,225,872. PROCESS FOR RENDERING ALKALI PERCARBONATES STABLE. ALOIS SCHAIDHAUF, Frankfort-on-the-Main, Germany, assignor to Roessler & Hasslacher Chemical Company, New York, N. Y., a Corporation of New York. Filed Jan. 16, 1917. Serial No. 142,719. (Cl. 23—13.)

1. The method of rendering alkali-percarbonates stable, consisting in incorporating stabilizing agents with the alkali percarbonates during the process of manufacturing said alkali percarbonates.

3. A process of imparting storage stability to alkali percarbonates, consisting in incorporating with the alkali percarbonates stabilizing agents capable of rendering solid percarbonates stable, and adding further stabilizing agents capable of rendering solutions of percarbonates stable.

4. A process of imparting storage stability to alkali percarbonates, consisting in incorporating with the alkali percarbonate stabilizing agents containing silicic acid combined as a silicate.

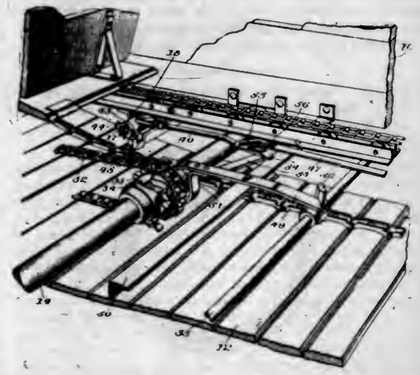
12. A process of imparting storage stability to alkali percarbonates, consisting in adding to the alkali percarbonates stabilizing agents containing silicic acid combined as a silicate and gum-arabic.

13. An alkali-percarbonate, containing silicic acid combined as a silicate as a stabilizing agent.

[Claims 2, 5 to 11, and 14 to 19 not printed in the Gazette.]

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1,225,873. FERTILIZER-DISTRIBUTER. JAMES A. SHARP, Springfield, Ohio, assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Oct. 24, 1913. Serial No. 797,044. (Cl. 111—40.)



1. In a fertilizer distributer, an apron, variable speed driving mechanism therefor including a movable member, means for shifting said movable member, reverse-driving mechanism for said apron, means for shifting said reverse-driving mechanism in and out of operative position, a single operating lever for both of said shifting means, and positive means including a slotted cam control mechanism and in addition a movable locking member for preventing movement of said reverse-gear shifting means when operating said variable speed gear shifting means.

2. In a fertilizer distributer, an apron, variable speed driving mechanism therefor including a movable member, shifting mechanism for said movable member, reverse-driving mechanism for said apron, means for shifting said reverse-driving mechanism in and out of operative relation, an operating lever, a bar connected to said operating lever and to both of said shifting means, and a cam-shaped guiding member for said bar and an additional safety member whereby the variable speed shifting means may be operated without imparting movement to said reverse shifting means.

3. In a fertilizer distributer, an apron, variable speed driving mechanism therefor including a movable member, means for shifting said movable member, means for shifting said variable speed driving mechanism out of operative relation with the apron, reverse-driving mechanism for said apron, including a movable clutch member, shifting means for controlling said movable clutch member, and means including two separate control members, at least one of which is controlled by the position of said driving-gear shifting means for positively preventing movement of said reverse driving clutch member while said variable speed member is being moved.

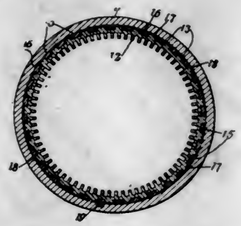
4. In a fertilizer distributer, an apron, variable speed driving mechanism therefor including a movable member, means for shifting said movable member, a rock shaft for moving said driving mechanism out of operative relation with said apron, reverse driving mechanism for said apron, a lever for shifting said reverse driving mechanism out of operative relation with said apron, an operating lever, a link connected to said lever and to the reverse-gear shifting lever, shifting means for said movable driving member connected to said operating lever, a cam-shaped guiding member for said connecting link and lever whereby the movable driving member may be shifted without imparting movement to the shifting mechanism for said reverse mechanism, and additional means to prevent movement of the shifting mechanism for said reverse mechanism under certain conditions.

5. In a fertilizer distributer, an apron, forwardly-driving mechanism therefor, shifting means for said driving mechanism, a rock shaft for operating said shifting means, reverse-driving mechanism for said apron, a horizontal lever for shifting said reverse-driving mechanism in and out of operative relation, and a lug on said rock shaft adapted to engage said lever for preventing operation of said reverse driving mechanism when the forwardly-driving mechanism is in operative position.

[Claims 6 to 10 not printed in the Gazette.]

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1,225,874. ENGINE. CHARLES W. SHARTLE, Middletown, Ohio. Filed Aug. 5, 1916. Serial No. 113,214. (Cl. 92—27.)



1. In a Jordan engine, the combination, with an outer casing and an inner lining, of longitudinal strips or lagging interposed between the adjacent walls of the casing and lining and acting to bind the two structures together.

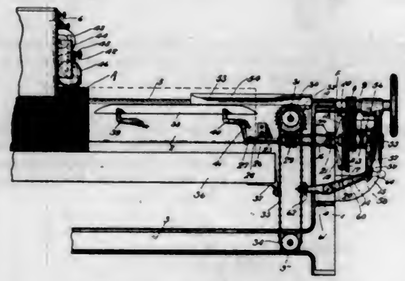
[Claims 2 to 8 not printed in the Gazette.]

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1,225,875. AUTOMATIC TABLE CONTROL FOR FABRIC-PILING MACHINES. HARRY A. SHIELDS, Grand Rapids, Mich. Filed Apr. 28, 1916. Serial No. 94,142. (Cl. 270—30.)

1. In a device of the character described, a supporting frame, a cloth piling machine mounted to move back and forth over the frame, a table located below the machine on to which the cloth is delivered, said table being mounted for vertical movements with respect to the frame, and means carried by the frame and machine and operated by the material piled on the table for automatically lowering the table with each reciprocation of the machine a distance equal to the thickness of the material laid on the table from said machine.

2. In a device of the character described, a frame, upper and lower shafts at each end of the frame, sprocket wheels on the shafts, sprocket chains around the wheels, a table supported by the chains, a cloth piling machine mounted for movement back and forth over the frame above the table, means normally at rest for turning said shafts to lower the table, and means carried by the cloth piling machine and operated by the material piled on the table for connecting the shaft turning means with a source of power to lower the table, said means operating only as long as the material on the table is above a predetermined plane, substantially as described.



3. In a device of the character described, a supporting frame, a table carried by the frame and mounted for movements to different positions, a cloth piling machine supported by the frame and movable back and forth lengthwise thereof, a drive shaft, mechanism interposed between said shaft and the table supports for raising and lowering the table when said mechanism is driven by the shaft, means mounted on the frame, operation of which will connect said shaft with said mechanism, and means on the cloth piling machine adapted to contact with the upper layer of cloth piled on the table, and moved thereby when the cloth is above a predetermined plane to engage with and operate said first mentioned means causing the lowering of the table so that said upper layer of cloth is lowered to said predetermined plane.

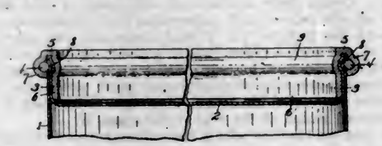
4. In a device of the character described, a supporting frame, upper and lower cross shafts at each end of the frame, sprocket wheels at each end of said shafts, chains around the wheels, a table connected to the chains and supported in substantially horizontal position, a drive shaft on the frame, a second shaft mounted on the frame, a gear loose on said second shaft, a pinion on the drive shaft engaging with and driving said gear, a clutch secured to the second shaft adjacent the gear, gearing connections between an upper cross shaft and the second shaft, a bar mounted on the frame for up and down movements, and means interposed between the bar and clutch for moving the clutch to engage with and turn with the gear on downward movement of the bar.

5. In a device of the character described, a supporting frame, upper and lower cross shafts at each end of the frame, sprocket wheels at each end of said shafts, chains around the wheels, a table connected to the chains and supported in horizontal position, a drive shaft on the frame, a second shaft on the frame, a member loosely mounted on the second shaft and driven continuously from the drive shaft, a clutch element splined on the second shaft, gearing connections between the second shaft and an upper cross shaft, a bar for moving the clutch element into engagement with said continuously rotating member, bell crank levers mounted on the frame, a horizontal bar carried by the levers, an arm on a lever engaging with the bar for moving it to operate said clutch element on depression of the horizontal bar, and means for normally freeing the clutch element and holding the bar to upper position.

[Claims 6 to 15 not printed in the Gazette.]



1,225,876. SHEET-METAL BARREL. THOMAS SILK, Portsmouth, Ohio. Filed July 8, 1916. Serial No. 108,083. (Cl. 220—1.)



1. A sheet-metal barrel comprising a body, a head having a peripheral flange, said flange being seated within an end of said body to form a chime of double thickness, a wire ring embracing said chime, and a chime-embracing hoop having a part disposed in seated relation to the inner face of said chime and having another part bent to conformably embrace and interlock with said ring.

2. A sheet-metal barrel comprising a body, a head having a peripheral flange, said flange being seated within an end of said body to form a chime of double thickness, said chime being slightly bowed to form an annular channel, a wire ring seated in said channel, and a hoop having a part disposed in close-fitting relation to the inner face of said chime and having another part bent to embrace and interlock with said ring.

3. A sheet-metal barrel comprising a body, a head having a peripheral flange, said flange being seated within an end of said body to form a chime of double thickness, said chime being slightly bowed to form an annular channel, a wire ring seated in said channel, and a hoop disposed in inclosing relation to the chime and said wire and interlocking with the latter.

4. A sheet-metal barrel comprising a body, a head having a peripheral flange, said flange being seated within an end of said body to form a chime of double thickness, the parts of said chime having their edges welded together, a ring embracing said chime, and a hoop disposed in clamping relation to said chime and said ring, said hoop being interlocked with said ring and exerting such a binding force that a ring-seating indentation is formed in said chime.

5. A sheet-metal barrel comprising a body, a head having a peripheral flange, said flange being seated within an end of said body to form a chime of double thickness, the parts of said chime having their edges welded together, a ring embracing said chime, and a hoop disposed in inclosing relation to said chime and said ring, said ring being interlocked with said chime and said hoop being interlocked with said ring.

[Claim 6 not printed in the Gazette.]

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1,225,877. METHOD OF PREPARING TUBERS FOR MANUFACTURE OF DOUGH OR FLOUR FOR BREAD AND BAKERS' WARES. ERNST SIMONS, Cassel, Germany. Filed Sept. 22, 1915. Serial No. 52,130. (Cl. 99—10.)

1. The method of preparing tubers for the manufacture of flour for bread and bakers' wares, consisting in subjecting said tubers to the action of steam of less than 100° C. in order to preserve the diastase, substantially as described.

2. The method of preparing tubers for the manufacture of flour for bread and bakers' wares, consisting in subjecting said tubers to the action of steam of less than 100° C. in order to preserve the diastase, and then drying and crushing said tubers, substantially as described.

3. The method of preparing tubers for the manufacture of flour for bread and bakers' wares, consisting in subjecting said tubers to the action of a hot gas having a temperature of less than 100° C., in order to produce steam within said tubers, said steam then acting as an opening or disintegrating medium.



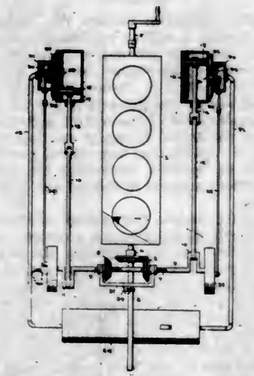
1,225,878. METHOD OF PREPARING LEGUMES FOR THE MANUFACTURE OF DOUGH OR FLOUR FOR BREAD AND BAKERS' WARES. ERNST SIMONS, Cassel, Germany. Filed Sept. 22, 1915. Serial No. 52,131. (Cl. 99—10.)

1. The method of preparing legumes for the manufacture of dough or flour for bread and bakers' wares, consisting in subjecting said legumes to the action of steam of less than 100° C. in order to preserve the diastase, substantially as described.

2. The method of preparing legumes for the manufacture of dough or flour for bread and bakers' wares, consisting in subjecting said legumes to the action of steam of less than 100° C. in order to preserve the diastase, and then drying and crushing said legumes, substantially as described.

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1,225,879. ENGINE-STARTER. WILLIAM E. SNIPES, Roxboro, N. C. Filed June 30, 1916. Serial No. 106,820. (Cl. 123—179.)



1. The combination with a motor, a driving shaft connected to the motor, and a bevel gear on said driving shaft, of a cross shaft, a pair of gears slidably mounted on said cross shaft and rotatable therewith, said gears being positioned on opposite sides of the driving shaft, means to move either of said gears into engagement with the bevel gear for rotating the cross shaft in either direction, crank portions in said cross shaft, fly wheels connected to said shaft, pistons connected to the crank portions of said cross shaft, cylinders in which said pistons are reciprocatingly mounted, said cylinders having ports, valves cooperating with said ports, means to eccentrically attach the valves to said fly wheels, casings surrounding said valves, and means to convey propelling medium into said valve casings whereby the pistons will be operated and the cross shaft rotated in one direction for starting the motor.

2. The combination with a motor, a driving shaft and a beveled gear on said driving shaft, of a cross shaft having crank portions, fly wheels at each end of the cross shaft, pistons connected to said crank portions, cylinders incasing said pistons, said cylinders having inlet and exhaust ports, valve casings on said cylinders, valves slidably mounted in said casing adapted to control the admission and exhaust of the power medium in said cylinders, means to eccentrically attach the valves to said fly wheels, a tank for containing the propelling medium, means to connect the tank with said valve casings, a gear on the cross shaft adapted to be moved into engagement with the bevel gear for rotating the motor, a second gear on said cross shaft adapted to be moved into engagement with said bevel gear for reversing the rotation of the cross shaft and causing said pistons to store propelling medium in said tank, and means to simultaneously move one of said

gears on the cross shaft into engagement with the bevel gear and the other gear of the cross shaft out of engagement with the bevel gear.

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1,225,880. FILLER FOR TIRE-CASINGS. THEODORE A. SPRAGUE, Pittsburgh, Pa. Filed Apr. 26, 1916. Serial No. 93,709. (Cl. 152—5.)

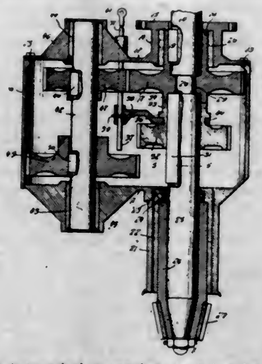


1. A resilient filler for cushion tire casings consisting of a body having a central continuous annular supporting portion extending circumferentially of the rim and providing a continuous support between the rim and the tread portion of the tire casing, the inner edge of said body portion being circumferentially grooved or channeled, and the opposite sides of the central portion adjacent the groove being shouldered to engage and retain the clencher portions of the tire casing; said central portion being also provided on its opposite sides with laterally projecting spaced partitions adapted to distend and support the sides of the casing.

2. A filler for cushion tire casings consisting of a body formed of elastic material having a central continuous annular supporting portion extending circumferentially of the rim and providing a continuous support between the rim and the tread portion of the tire casing, said central portion being provided on opposite sides with laterally projecting spaced partitions adapted to distend and support the sides of the casing; the outermost portion of the core being of softer material than the major portion thereof; the inner edge of said body portion being circumferentially grooved or channeled and the sides of the body portion adjacent the groove being shouldered to engage and retain the clencher portions of the tire casing; with a clencher casing adapted to surround the core, substantially as described.

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1,225,881. TRANSMISSION-GEARING. WILLIAM G. STANEK, Renwick, Iowa. Filed Jan. 27, 1916. Serial No. 74,656. (Cl. 74—58.)

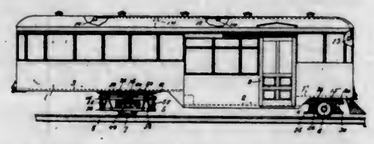


1. In a transmission gearing, a casing having one end fixed and the other detachable, a driving shaft extending through said detachable casing end into the interior thereof, a pinion on said shaft within said casing having an elongated sleeve keyed to said driving shaft, a socket in the end of said pinion opposed to the sleeve carrying end, a driven shaft rotatable in said socket, a gear slidable on said driven shaft, coöperating clutch members carried by the socketed end of said pinion and the opposed end of said gear, a counter shaft, a pinion on said counter shaft normally meshing with said first mentioned pinion, a second pinion fixed on said counter shaft, and means for shifting said gear to cause it to mesh with said last mentioned pinion at the will of the operator.

2. The combination with a transmission device of a gear casing having one end fixed and the other detachable, said detachable end being provided with a carrying sleeve having an attaching plate, a drive shaft having one end mounted in said sleeve and extending into said casing, a driving pinion in said casing associated with the inner end of said shaft, said pinion having an elongated sleeve at one end snugly fitting said driving shaft within said carrying sleeve and keyed to said shaft, a bearing sleeve interposed between said carrying sleeve and pinion sleeve to eliminate friction, and insure the correct centering of the pinion at all times, said pinion having a socket in its inner end, a clutch member on said socket end, a driven shaft having one end rotatable in said pinion socket, a gear keyed to slide on said driven shaft and having a clutch member for coöperative engagement with the pinion carrying clutch member on the movement of said gear in one direction, a counter shaft, a pinion on said counter shaft normally meshing with said first mentioned pinion, a second pinion on said counter shaft, and means to shift said gear on said driven shaft to engage it either with said first mentioned pinion or said counter shaft pinion.

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1,225,882. CAR. FRED STEFFENS, St. Joseph, Mo. Filed Aug. 23, 1915. Serial No. 46,767. (Cl. 105—139.)



1. A car body, and two independently operable trucks centrally pivoted thereto and operable independently of another car, one truck being located closely adjacent to the forward end of the car and the rear truck disposed so that it carries a greater portion of the load.

2. A car body, and two independently operable trucks centrally pivoted thereto and operable independently of another car, each truck provided with a single axle, one truck being located closely adjacent to the forward end of the car and the rear truck disposed so that it carries a greater portion of the load.

3. A car body, and two independently operable trucks centrally pivoted thereto, each truck having a single axle, one truck being located closely adjacent to the forward end of the car, and the rear truck disposed so that it carries a greater portion of the load, the car body having intermediate of said trucks a drop floor portion and floor portions above said trucks, and a side door in said lower portion.

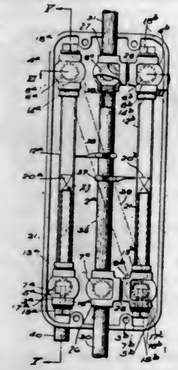
4. A car body, and two single axle trucks centrally pivoted thereto and operable independently of each other and another car, the car body having a drop floor portion between said trucks and floor portions above said trucks, and a side door in said drop floor portion.

5. A car body, two single axle trucks pivoted thereto and operable independently of each other and of another car, and means operable independently of the weight of the car body for forcing the trucks to the straight ahead position.

[Claims 6 to 33 not printed in the Gazette.]



1,225,883. DRAFT-GAGE. ALFRED STEINBART, Pittsburgh, Pa. Filed Aug. 16, 1915. Serial No. 45,752. (Cl. 73—31.)



1. A draft gage comprising a transparent conduit having fluid pressure inlet and outlet openings and an indicator movable within and visible from the exterior of the conduit, said indicator having means connected thereto and inclosed within the conduit whereby the weight acting upon the indicator is varied with changes in the position of the indicator within said conduit caused by the pressure of fluid within the tube.

2. A draft gage comprising a transparent conduit having fluid pressure inlet and outlet openings and an indicator movable within and visible from the exterior of the conduit, said indicator having means connected thereto and inclosed within the conduit whereby the weight acting upon the indicator increases when moved in one direction by fluid pressure within the conduit.

3. A draft gage comprising a vertical transparent conduit having fluid pressure inlet and outlet openings and a movable indicator within said conduit, said indicator having means connected thereto and inclosed within the conduit whereby the weight acting upon the indicator increases when lifted by fluid pressure within the conduit.

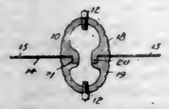
4. A draft gage comprising a transparent conduit having fluid pressure inlet and outlet openings, a movable indicator within said conduit, said indicator having flexibly joined elements suspended therefrom whereby the weight acting on the indicator increases with increase in the extent of lifting movement thereof, and means forming a support for unlifted portions of said flexibly joined elements.

5. A draft gage comprising a transparent conduit having fluid pressure inlet and outlet openings, a movable indicator within said conduit, said indicator having a chain suspended therefrom whereby the weight acting on the indicator is increased when lifted by fluid pressure within said conduit and a support for unlifted portions of said chain.

[Claims 6 to 20 not printed in the Gazette.]

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1,225,884. GRENADE. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed Jan. 22, 1917. Serial No. 143,655. (Cl. 102—29.)



1. A grenade provided with a thin approximately rigid projecting sheet adapted when in approximately horizontal position to resist descent of the grenade while in flight.

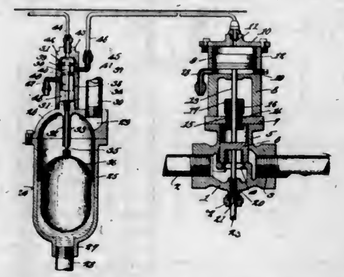
3. The combination with a grenade, of a thin stiff sheet projecting from the equatorial region of the same and provided with suitable finger-holds at some distance from the grenade.

6. The combination with a grenade, of a thin stiff equatorial sheet projecting therefrom and marginally weighted to give it gyroscopic resistance, when rotating, to change of plane.

[Claims 2, 4, and 5 not printed in the Gazette.]

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1,225,885. BOILER-FEED-WATER REGULATOR. WILLIE JUDSON STEVENS, Portland, Me., assignor to Stevens Regulator Co., Portland, Me. Filed Nov. 22, 1915. Serial No. 62,845. (Cl. 137—101.)



1. A boiler feed water regulator comprising a pressure fluid operated feed water valve, means for normally supplying pressure fluid thereto for holding the valve closed, pressure fluid operated means coöperable with said means, means independent of the first mentioned means for supplying pressure fluid to the second mentioned means, and float controlled means coöperable with the third mentioned means whereby when the float is raised, the pressure fluid is shut off from the second mentioned means, and when the float is lowered, the pressure fluid operates the second mentioned means to shut off the flow of pressure fluid in the first mentioned means to the valve.

2. A boiler feed water regulator comprising a pressure fluid operated feed water valve, piping connected thereto for supplying pressure fluid thereto, a valve controlling the flow of pressure fluid through said piping, pressure fluid operated means for operating the second mentioned valve, independent means for supplying pressure fluid to said means, a valve controlling the second mentioned means, and a float connected to the third mentioned valve for operating it.

3. A boiler feed water regulator comprising a pressure fluid operated feed water valve, piping connected thereto, a normally open valve for said piping for permitting pressure fluid to pass therethrough to the first mentioned valve, pressure fluid operated means for seating the second mentioned valve, independent means for supplying pressure fluid to the said means, a valve for the second mentioned means to normally shut off the flow of pressure fluid to the first mentioned means, and a float operatively connected to the third mentioned valve for unseating it when the float lowers.

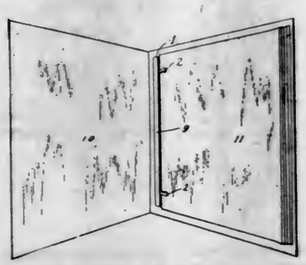
4. A boiler feed water regulator comprising a pressure fluid operated feed water valve, piping connected thereto for supplying pressure fluid thereto, a valve for controlling the passage of pressure fluid through the said piping, a float chamber having upper and lower ports for connection with a boiler above and below the water level, a cylinder connected to the upper portion of the float chamber to receive pressure fluid therefrom, a piston within the cylinder for operating the second mentioned valve, a float within said chamber, and a valve operated by the float for controlling the flow of pressure fluid from the chamber into the cylinder.

5. A boiler feed water regulator comprising a pressure fluid operated feed water valve, piping connected thereto for supplying pressure fluid to the valve, a normally open valve for said piping, a float chamber having upper and lower ports for connection with a boiler above and below the water level, a cylinder connected to the upper portion of said chamber to receive pressure fluid therefrom, a piston within the cylinder for seating the second mentioned valve when pressure fluid is admitted to the cylinder, a float within said chamber, and a valve operated by said float and normally shutting off the flow of pressure fluid from the chamber to the cylinder, the last mentioned valve being unseated when the float lowers.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,886. LEAF-BINDER. FRANCIS J. STROBEL, Chicago, Ill., assignor to F. J. Strobel & Co., a Corporation of Delaware. Filed Aug. 28, 1915. Serial No. 47,721. (Cl. 129—19.)



1. An article of manufacture comprising a binding strip, a plurality of adhesive tabs hinged thereto along one edge and normally folded over onto said strip, and a flap hinged along the other edge of said strip and folded over onto said tabs.

2. An article of manufacture comprising a binding strip, a plurality of adhesive tabs attached along the edge thereof, and perforations extending transversely across said strip in alinement with the space between said tabs.

3. An article of manufacture comprising a binding strip, a plurality of adhesive tabs attached along one edge thereof, there being perforations extending transversely of said strip in alinement with the spaces between said tabs, and a flap having a perforated connection to the other edge of said strip.

4. An article of manufacture comprising a binding strip, a plurality of adhesive tabs integrally hinged thereto, said tabs being integrally attached one to another at points distant from their connection to said strip, and parallel perforations extending transversely across said strip in alinement with the space between said tabs.

5. An article of manufacture, comprising a binding strip, a plurality of adhesive tabs attached along the edge thereof and normally folded over onto said strip, and a flap having a perforated hinge connection to the other edge of said strip and foldable over onto said tabs.

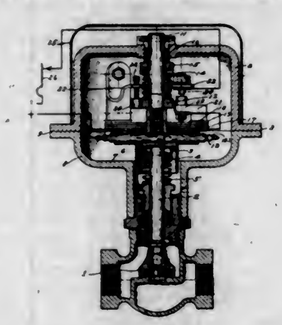
[Claims 6 and 7 not printed in the Gazette.]

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1,225,887. VALVE-OPERATING MECHANISM. JOHN H. SWAN, Chicago, Ill., assignor to Klipfel Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 22, 1915. Serial No. 41,312. (Cl. 236—4.)

1. A device of the class described, comprising a valve, a spring normally urging said valve to one position, a fluid pressure motor for shifting said valve to another position, an electric heater for heating the fluid in said motor, a switch for controlling said heater, a second spring of greater strength than the first mentioned spring for normally urging said switch to a closed position, said fluid pressure motor being arranged to actuate said switch to an open position after said valve has been shifted to said other position.

4. A device of the class described, comprising an expansion motor, an electric circuit including means for heating and thereby causing the operation of said motor, a pair of springs of unequal strength for resisting the opera-

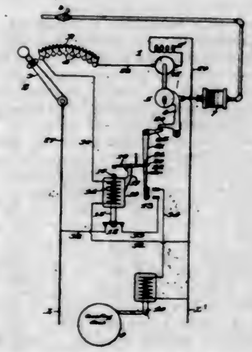


tion of said motor, and separate devices connected to said springs for the purpose of being operated in succession by said motor.

[Claims 2 and 3 not printed in the Gazette.]

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1,225,888. AUTOMATIC CONTROLLER. FLOYD T. TAYLOR, Boston, Mass. Filed Mar. 22, 1911. Serial No. 616,268. (Cl. 161—15.)



1. In combination, a power responsive device, a plurality of controller instrumentalities therefor, each of said instrumentalities being movable independently of the other to a predetermined position whereby said device is rendered ineffective and means necessitating movement of certain of said instrumentalities into said predetermined position prior to movement of the other out of said predetermined position.

2. In combination, a power responsive device, a plurality of controlling instrumentalities therefor, any one of said instrumentalities being operable at will independently of the remainder to interrupt the supply of power to said device, and an interlock necessitating the operation of both the said instrumentalities to renew the supply of power to said device.

3. In combination, a power responsive device, a plurality of controlling instrumentalities therefor, any one of said instrumentalities being operable at will independently of the remainder to interrupt the supply of power to said device, and an interlock necessitating the operation of both the said instrumentalities to renew the supply of power to said device after interruption of the supply of power by a certain one of said devices.



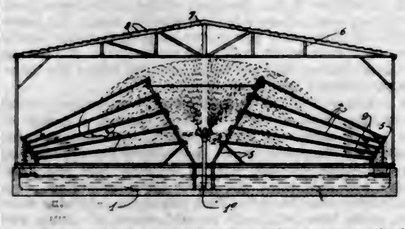
4. In combination, a power responsive device, two controlling instrumentalities therefor, either being operable independently of the other to interrupt the supply of power to said device, and an interlock necessitating the operation of both of said instrumentalities to renew the supply of power to said device after interruption thereof by a certain one of said instrumentalities, the other of said instrumentalities when operated to interrupt the supply of power to said device being operable to renew the supply of power without further operation of the first mentioned instrumentality.

5. In combination, a power responsive device, a plurality of controlling instrumentalities therefor, any one of said instrumentalities being operable at will to interrupt the supply of power to said device, and one of the same being operable at will to renew the supply of power to said device, while the other of said instrumentalities remains in a predetermined position, and an interlock between said instrumentalities necessitating movement of said first mentioned instrumentality to a position to interrupt the supply of power to said device prior to movement of said other instrumentality to said predetermined position.

[Claims 6 to 16 not printed in the Gazette.]

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1,225,889. APPARATUS FOR COOLING WATER AND OTHER LIQUIDS. CARL C. THOMAS, Baltimore, Md. Filed Sept. 14, 1915. Serial No. 50,697. (Cl. 261—103.)



1. Water cooling apparatus comprising spray producing means and a plurality of inclined water-film supporting means located one above another and arranged around such spray means and adapted to receive the spray therefrom and to permit the flow of water from such spray downward over them in the form of thin films, whereby through transfer of heat between such water films and the air between said inclined film-supporting means air is caused to flow along and in contact with such films.

2. Water cooling apparatus comprising spray producing means and a plurality of inclined water-film supporting means located one above another and arranged around such spray means and adapted to receive the spray therefrom and to permit the flow of water downward in the form of thin films, the space between the said film-supporting means being greater near the center than near the sides of the apparatus.

3. Water cooling apparatus comprising spray producing means and a plurality of inclined water-film supporting means located one above another and arranged around such spray means and adapted to receive the spray therefrom and to permit the flow of water from such spray downward over them in the form of thin films, whereby through transfer of heat between such water films and the air between said inclined film-supporting means air is caused to flow along and in contact with such films, said water film-supporting means having approximately the form of truncated conical surfaces.

4. Water cooling apparatus, comprising spray producing means, and an open-center water-film-supporting means surrounding such spray producing means and adapted to receive the spray therefrom and having approximately the form of a truncated conical surface, whereby through transfer of heat between the water film on such surface and the air above, such air is caused to flow over the water film.

5. Water cooling apparatus comprising spray producing means and a plurality of inclined water-film supporting means located one above another and arranged around such spray means and adapted to receive the spray therefrom and to permit the flow of water downward in the form of thin films, and a screen of wide mesh located at the entrance, near such spray producing means, to the spaces between said water-film supporting means.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,890. FUSE-PLUG. HENRY VON PHUL THOMAS, Kirkwood, Mo., assignor to Killark Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed May 15, 1916. Serial No. 97,582. (Cl. 175—277.)



1. A fuse plug or the like including a combined socket-engaging and window-retaining member.

2. A fuse plug or the like including an insulation-member, an insulation-window, and a metallic-member fixed upon the insulation-member and including a window-retaining portion, the metallic-member adapting the plug for engagement with a socket and its said window-retaining portion engaging upon said window to retain the same in operative position upon the insulation-member.

3. A fuse plug or the like including a chambered insulation-member, an insulation-window fitting flatwise upon the insulation-member and providing a closure for its said chamber, and a metallic-member fixed upon the insulation-member, said metallic-member having a portion adapting the plug for engagement with a socket and a portion engaging upon the window to retain the same in operative position upon the insulation-member.

4. A fuse plug or the like including a cylindrical chambered insulation-member, an insulation-disk fitting flatwise upon the insulation-member and providing a closure for its said chamber, and a metallic member fixed upon the insulation-member, said metallic-member having a partly threaded portion adapting the plug for engagement with a threaded socket and a portion engaging upon said disk to retain the same in operative position upon the insulation-member.

5. A fuse plug or the like including a cylindrical chambered insulation-member, an insulation-disk fitting flatwise upon the insulation-member and providing a closure for its said chamber, and a partly threaded metallic-member fitting upon, and engaging at opposite ends with, the insulation-member, the metallic-member adapting the plug for engagement with a threaded socket and retaining said disk in operative position upon the insulation-member.

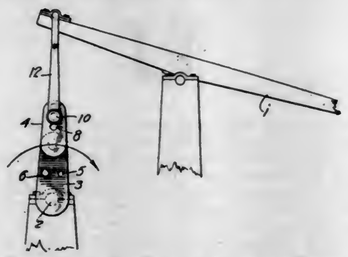
[Claims 6 to 13 not printed in the Gazette.]

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1,225,891. OIL-WELL-DRILLING APPARATUS. JAMES V. THOMPSON, Spencer, W. Va., assignor of one-fourth to Chester A. Crisip and one-half to John D. Russ, Spencer, W. Va. Filed Mar. 30, 1916. Serial No. 87,705. (Cl. 255—13.)

1. In a rocking-arm impact-rig for oil-well drilling apparatus, a driving-shaft, a crank fixed near one end and centrally of the width thereof to said shaft and provided, intermediate its ends, near the longitudinal edges of said crank, with openings, a removable tripping-pin projecting through one of said openings, said crank being pivotally connected, at the other end thereof, with one end of a movable crank, said movable crank being provided with a plurality of longitudinally-extending holes extending from the end thereof opposite the pivotal end, a wrist-pin passing through one of said openings in the movable crank, and a link pivoted on said wrist-pin.

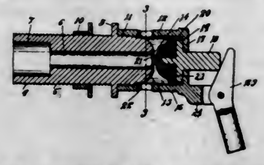
2. In a rocking-arm impact-rig for oil-well drilling apparatus, a driving-shaft, a crank fixed near one end and centrally of the width thereof to said shaft and provided, intermediate its ends, near the longitudinal edges of said crank, with openings, a removable tripping-pin projecting through one of said openings, said crank being pivotally connected, at the other end thereof, with one end of a movable crank, said movable crank being provided, in one face, with a longitudinally-extending pocket and with a plurality of longitudinally-extending holes registering with said pocket and extending from the end of the movable crank opposite the pivotal end thereof, a wrist-pin passing through one of said openings in the movable crank and provided with a threaded end, a nut screwed on said threaded end and resting in said pocket, and a link pivoted on said wrist-pin.



3. In a rocking-arm impact-rig for oil-well drilling apparatus, a driving shaft, a crank fixed near one end thereof to said shaft and provided with a movably-positioned trip-pin, a movable crank pivotally connected at one end thereof with the otherwise free end of said fixed crank, and a link pivotally connected to the movable crank and to the walking-beam, said movable crank being provided with means, coöperating with said link, for changing the length of drop of said walking-beam.

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1,225,892. BALL-COCK. PATRICK JOSEPH TROY, Bristol, Conn. Filed Apr. 25, 1916. Serial No. 93,388. (Cl. 137—104.)

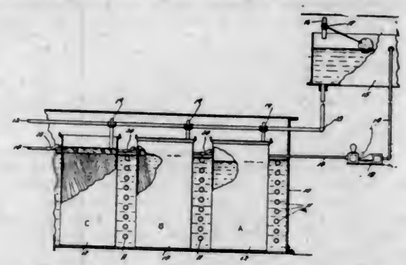


A ball cock including a body having a passage extending therethrough and with a rounded end including a valve seat, a cap secured to the body and providing a valve chamber between its outer end and the body and having ports through its side wall, a plunger mounted in said chamber and having a threaded stud at its inner end, and a valve having an opening partially through it to receive said threaded stud, said valve being rounded to provide a space between it and the valve body gradually increasing in length outwardly, said valve fitting in said valve seat when in the closed position.

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1,225,893. APPARATUS FOR MANUFACTURING ARTIFICIAL ICE. GEORGE T. TURNER, Philadelphia, Pa. Filed July 16, 1915. Serial No. 40,210. (Cl. 62—160.)

1. The herein described method of manufacturing ice artificially which consists in introducing to molds positioned with respect to a freezing agent, raw water of predetermined constant static head in a continuous cycle to promote an agitation thereof in said molds during the freezing process, the water being maintained at a level higher than the level of the freezing agent line.



2. In apparatus for the artificial manufacture of ice, a source of water supply maintained at a constant level at a given pressure, a tank containing a freezing agent, molds positioned therein, means for feeding water under force of gravity to said molds, and means for returning at least a portion of said water to the source of supply, said supply and return comprising a continuous cycle of water for creating an agitation within said molds during the freezing process, the water being maintained at a level higher than the level of the freezing agent line.

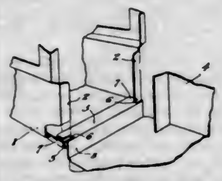
3. Apparatus of the character stated embracing a tank containing brine, a mold located therein, means for introducing to said mold raw water of predetermined static head in a continuous cycle, the water being maintained at a level higher than the brine line and means for maintaining constant said static head.

4. Apparatus of the character stated embracing a tank containing brine, a mold contained therein, a source of raw water supply of predetermined static head located above said receptacle, piped connections for establishing communication through gravity between said source of supply and said mold, the water being maintained at a level higher than the brine line, means for returning overflow water from said mold to said source of supply and means for maintaining constant said static head.

5. Apparatus of the character stated embracing a covered tank containing brine, a series of molds located therein, a source of raw water supply of predetermined static head, means for maintaining said static head constant, and piped connections for establishing a continuous cycle of water between the molds and said source of supply, the major portion of said piped connections being contained within said tank above the brine line thereof.

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1,225,894. WHEELED TOY. JOHN C. TURNER, Dayton, Ohio. Filed Nov. 25, 1916. Serial No. 133,301. (Cl. 46—48.)



1. In a toy having two parts adapted to be connected one to the other, a connecting device comprising upright flanges extending inwardly from the opposed edges of one part of said toy near one end thereof and having their inner edges spaced apart, a plate secured to and projecting beyond the adjacent end of the other part of said toy, said plate being of a width greater than the distance between said flanges and having notches in the lateral edges thereof to receive the respective flanges.

2. A toy comprising two parts adapted to be connected one to the other and having overlapping portions, one of said portions having openings near the respective lateral edges thereof, and the other portion having upright members rigidly secured thereto and spaced apart to enter the respective openings in the first mentioned portion, said upright members extending some distance above said overlapping portions when the two parts of said toy are in their connected positions.

3. A wheeled toy comprising two parts, one of said parts comprising a body portion formed of sheet metal and having integral inturned flanges at one end thereof, said flanges being spaced apart, the other part of said toy having a bottom plate of sheet metal, said plate extending beyond that end of the last mentioned part of said toy adjacent to the flanged end of the first mentioned part thereof, a projecting part of said plate being of a width greater than the distance between the inner edges of said flanges and having notches in the lateral edges thereof to receive the edges of said flanges and establish a separable connection between the two parts of said toy, said flanges being unobstructed at their inner and upper edges to permit said notched plate to be placed in interlocking engagement therewith.

4. In a toy having two parts adapted to be connected one to the other, a connecting device comprising members carried by the respective parts of said toy and adapted to be placed in interlocking relation to connect together the two parts of said toy, said interlocking parts having relative movement to permit one part of said toy to move about a horizontal axis relatively to the other part thereof, and the two parts of said toy having opposed surfaces arranged below said interlocking members to limit the movement of said part of said toy about said horizontal axis.

5. In a toy having two parts adapted to be connected one to the other, a connecting device comprising upright members carried by one part of said toy near one end thereof and spaced apart and a coöperating member carried by the adjacent end of the other part of said toy, projecting beyond said end thereof and having openings to receive the respective upright members, said openings being of a width greater than the thickness of said upright members to permit the free movement of the latter therein, the two parts of said toy also having coöperating means to limit their relative movement about the horizontal axis of said connecting device.

[Claims 6 to 8 not printed in the Gazette.].

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1,225,895. RADIATOR. GEORGE W. TURNEY, Rome, N. Y., assignor to Rome-Turney Radiator Co., Rome, N. Y., a Corporation of New York. Original application filed Dec. 6, 1915, Serial No. 65,265. Divided and this application filed Mar. 21, 1916. Serial No. 85,547. (Cl. 257—262.)



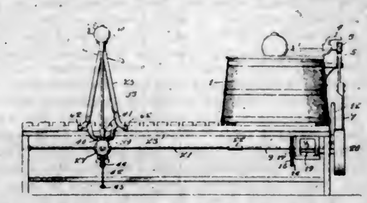
1. An improvement in radiators comprising a tube, a closed annular helix of resilient metallic ribbon coiled edgewise, each convolution having a recess in its inner periphery, the convolutions of said ribbon being distended along the tube, and a solder thread contained in said recesses and attaching said convolutions to said tube.

2. An improvement in radiators comprising a tube, a closed annular helix of resilient metallic ribbon coiled edgewise, each convolution having a recess in its inner periphery, said recesses being in alinement longitudinally of the tube, the convolutions of said ribbon being distended along the tube, and a solder thread contained in said recesses and attaching said convolutions to said tube.

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1,225,896. WASHING-MACHINE GEARING. WILLIAM H. VOSS, Davenport, Iowa. Filed June 28, 1913. Serial No. 776,386. (Cl. 74—50.)

1. In a gearing device, the combination of a support, a power shaft mounted on said support lengthwise thereof, a frame positioned to slide along said support, a pair of driven shafts carried by said frame, operative driving connections between said power shaft and said driven shafts and irrespective of the position of said frame on said support, and a foot treadle for establishing or interrupting said driving connections at the will of the operator.



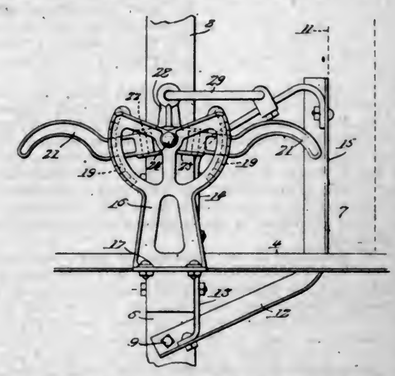
4. In a gearing of the class described, the combination of a power shaft, a bevel gear slidable along said shaft, a horizontal shaft driven by said bevel gear, a swinging vertical shaft operable by said horizontal shaft, and reversing mechanism interposed between said horizontal shaft and said vertical shaft, a pair of horizontal driven shafts operatively connected with said vertical shaft, and a frame whereon said driven shafts, said vertical shaft and said horizontal shaft are carried.

7. The combination of a support, a power shaft carried by said support and having a square portion, gear mechanism mounted to slide along said power shaft and driven thereby, a horizontal shaft driven by said gear mechanism, reversing gears operatively connected with said horizontal shaft, a frame mounted to slide along said support, driven shafts carried on said frame, a vertical shaft movable with said frame and operative to connect said horizontal shaft with one of said driven shafts, and control means movable with said frame for swinging said vertical shaft through a short arc to change the geared relation between the horizontal shaft and the vertical shaft in starting, stopping or reversing the movement of said driven shafts.

[Claims 2, 3, 5, 6, and 8 not printed in the Gazette.]

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1,225,897. LANDING DEVICE. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed July 10, 1916. Serial No. 108,459. (Cl. 21—36.)



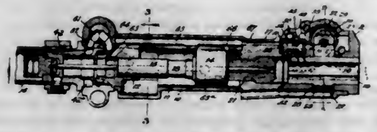
1. A landing device comprising a frame, a tongue connected with the frame so as to swing laterally relatively thereto, means for swinging the tongue laterally and holding it locked against such movement comprising a pair of opposed foot levers movable about a common pivot to effect said swinging movement, and means for locking the foot levers in set position to lock the tongue against said swinging movement, said foot levers and locking

means being arranged so that the levers must be vertically depressed to release them from locking position and then swung backwardly and forwardly in a horizontal plane to swing the tongue laterally.

2. A landing device comprising a frame, a draft element pivotally mounted thereon to swing laterally relatively to the frame, a bracket fixed to the frame, an element pivotally mounted on said bracket on an upright axis, a connection between said element and the draft element so that the two will swing in unison, a pair of foot levers pivotally mounted on said element on horizontal axes and extending in opposite directions from the pivot axis of said element, a ratchet connection between each lever and the bracket arranged so that the levers will be disengaged from the bracket upon being swung downwardly upon their pivots, and spring means urging the levers into engagement with the brackets, whereby to swing the draft element the levers must be first depressed to disengage from the ratchet faces and then swung forwardly and rearwardly on the upright axis of said element.

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1,225,898. ROCK-DRILL. DANIEL SHAW WAUGH, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Feb. 19, 1915. Serial No. 9,477. (Cl. 121—10.)



1. In apparatus of the character set forth, the combination with a drill actuating motor, of a drill rotating motor, means for supplying motive fluid to the drill rotating motor, a distributing valve for said motive fluid, and means controlled by the actuating motor for delivering a charge of motive fluid partly against the distributing valve and partly and simultaneously to the motor to move both.

2. In apparatus of the character set forth, the combination with a drill actuating motor including a cylinder member and a piston operating therein, of a drill rotating motor, means for supplying motive fluid to the rotating motor, a distributing valve controlling said supply, and a passageway for delivering fluid against the piston and valve to move them, said passageway being controlled by the actuating motor piston on its movement.

3. In apparatus of the character set forth, the combination with a drill actuating motor including a cylinder member and a piston operating therein, of a drill rotating motor, means for supplying motive fluid to the rotating motor independently of that supplied to the drill actuating motor piston, a distributing valve controlling said supply, and a passageway for delivering fluid against the actuating piston and valve to move both, said passageway being controlled by the actuating motor piston on its movement.

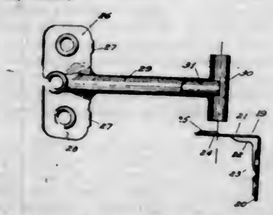
4. In apparatus of the character set forth, the combination with a drill actuating motor, of a drill rotating motor, means for delivering motive fluid to the latter, a differential distributing valve for the motive fluid delivered to the rotating motor, said valve having a pressure surface operated on by said motive fluid, to move the valve in one direction and having an opposed pressure surface, and means controlled by the actuating motor for independently delivering a charge of motive fluid partly to said motor to operate it and partly and simultaneously against said opposite pressure surface.

5. In apparatus of the character set forth, the combination with a drill actuating motor, of a drill rotating motor, means for delivering motive fluid to the latter, including a distributing valve chamber, spaced passages leading therefrom to the rotating motor, and a supply passage leading to the intermediate portion of the chamber, a differential distributing valve in said chamber having a pressure surface against which the supply constantly operates and an opposing end surface of greater area, and means controlled by the actuating motor for delivering motive fluid intermittently against said end surface, to move said valve against said constant pressure.

[Claims 6 to 16 not printed in the Gazette.]

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1,225,899. HINGE CONTRIVANCE. MAX WEBER, Cleveland, Ohio. Filed Oct. 7, 1915. Serial No. 54,519. (Cl. 16—163.)



1. A hinge contrivance comprising in combination with a door and casing, a pair of brackets secured to the casing and having vertically alined projecting portions, the latter formed with openings out of vertical alinement spaced different distances from the casing, to form bearings, and a pair of arms of different length secured equal distances from the attached edge of the door and spaced apart the same distance as said brackets, the ends of said arms formed with studs adapted to have universal movement in said bearings respectively.

2. A hinge contrivance comprising two pairs of cooperating members, one of said members of one pair being provided with a socket and an arcuate rib thereabout, the other pair of said members each including a hollow L shaped part, one extension of each of said parts adapted loosely to pivot in said sockets respectively, and stiffening bars fitted within the other extension of said parts, one of said last mentioned extensions adapted to ride upon said rib, one of the members of one cooperating pair being furthermore longer than the corresponding member of the other pair such that the pivot centers are alined at an angle to the perpendicular.

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1,225,900. SOLE-SPLITTING MACHINE. EDWIN A. WEBSTER, Plaistow, N. H., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 7, 1915. Serial No. 49,205. (Cl. 69—12.)



1. A sole-splitting machine having a splitting knife and a sole supporting bed, means to reciprocate said knife and bed relatively, a presser gage for holding the sole against the bed in proximity to the knife edge, and means permitting said gage to move out of effective pressing engagement with the sole on the return movement of the reciprocating part.

2. A sole-splitting machine having a splitting knife and a sole supporting bed, means to reciprocate said knife and bed relatively, a presser gage, means for causing said gage to press the sole firmly against the bed in proximity to the knife edge during the forward movement, and means permitting the sole-engaging portion of said gage to move away from the bed and the knife edge on the return movement of the reciprocating part, whereby the pressure of the gage upon the sole is greater during the forward movement than during the return movement.

3. A sole-splitting machine having a splitting knife and a sole-supporting bed, means to reciprocate said knife and bed relatively, a presser-gage having a sole-engaging face normally extending into proximity to the knife edge and terminating abruptly at that point, and means permitting movement of said gage to carry its sole-engaging face away from the knife-edge and the surface of the bed, at the beginning of the return movement of the reciprocating part.

4. A sole-splitting machine having a splitting knife and a sole-supporting bed, means to reciprocate said knife and bed relatively, a presser-gage mounted above the bed to swing about an axis approximately parallel to the knife-edge, and having a curved face arranged to engage the sole in proximity to the knife edge, and recessed over the edge portion of the knife to terminate said face abruptly, and a stop for limiting the swinging movement of said gage toward the knife.

5. A sole-splitting machine having a splitting knife and a sole-supporting bed, means to reciprocate said knife and bed relatively, a presser-gage mounted above the bed to swing about an axis approximately parallel to the knife-edge, and having a curved face arranged to engage the sole in proximity to the knife edge, and recessed over the edge portion of the knife to terminate said face abruptly, a stop for limiting the swinging movement of the gage toward the knife, and means to hold said gage yieldingly in engagement with said stop.

[Claim 6 not printed in the Gazette.]

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1,225,901. HIGH-TENSION SWITCH. ERNST WEISSBERG, Cassel, Germany. Filed June 10, 1914. Serial No. 844,234. (Cl. 175—308.)

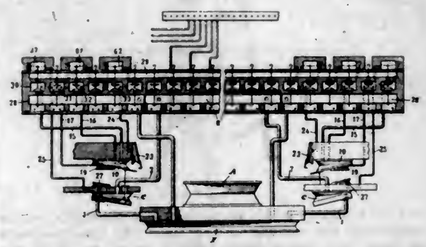


1. A high tension switch mechanism, comprising a gas tight chamber, a switch therein, a second gas tight chamber in axial alinement with the first said chamber, a plunger extending into both said chambers and supporting the movable part of said switch, and controllable means for carrying a pressure medium to and away from the opposite faces of said plunger, for the purpose of alternately opening and closing it, said pressure medium being also adapted to extinguish the arc set up on operation of the switch.

2. In a high tension switch mechanism, in combination, a gas tight switch box, a switch or switches therein, a pressure chamber in axial alinement with said box, a plunger operably extending into said box and said chamber, said switch adapted to be operated by said plunger, a tank containing a gaseous pressure medium, conduits connecting said tank with said switch box and said pressure chamber, means for controlling respectively the admission and emission of the pressure medium to and from said switch box and said pressure chamber, said pressure medium being adapted to operate said plunger and to also extinguish the switch arc, and said controlling means being secured to, and operated with, the said plunger.

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1,225,902. PRESSURE-CONTROLLING MECHANISM FOR AUTOMATIC MUSICAL INSTRUMENTS. EDWIN WELTE, Freiburg, Germany. Filed May 25, 1914. Serial No. 840,911. (Cl. 84—168.)



1. In combination, striker pneumatics, a main source of power for actuating said striker pneumatics, a regulator comprising a movable member having a port provided with a valve, for controlling communication between the main source of power and the striker pneumatics, the said valve being arranged to move bodily with said movable member, and a pneumatic device connected to said valve and arranged when actuated to impart a movement to the valve relatively to the movable member.

2. In combination, striker pneumatics, a main source of power, a regulator having a movable member provided with a port communicating with the main source of power, a valve controlling said port, said valve being arranged to move with and to have movement relatively to the movable member and pneumatically actuated devices mounted for movement with and movable independently of the movement of the regulator and connections between said devices and the valve for varying the position of the valve of said regulator whereby any pressure may automatically be maintained by the regulator.

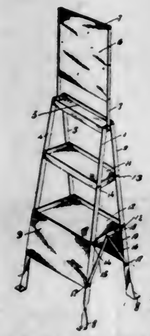
3. A regulating device for musical instruments comprising a movable regulating member having a wind passage, a main source of power communicating therewith, a valve moving with said movable regulator and controlling said wind passage, pneumatically actuated means connected with said valve and including automatic pneumatic controlling mechanism arranged to cause the said means to move with or have a movement relative to the movable regulating member.

4. In combination, a source of power, a regulator comprising a movable member having an air passage communicating with said source of power, a valve carried thereby and having a bodily movement corresponding to the movements of the regulator pneumatic devices communicating with the main source of power by which said pneumatic devices are controlled, connections between said devices and the valve of the regulator arranged to move simultaneously therewith or to have a movement relatively thereto whereby the regulator will assume different positions with reference to the controlling valve and determine the action of the main source of power with reference to the regulator.

5. In combination, striker pneumatics, a main source of power for actuating the same, a regulator communicating with said main source of power and the striker pneumatics, a valve for said regulator mounted to be controlled by the movements of the regulator, a pneumatic device communicating with said regulator through its valve and automatically controlled devices for simultaneously admitting atmospheric air to the regulator and to the pneumatic controlling device.

[Claims 6 to 8 not printed in the Gazette.]

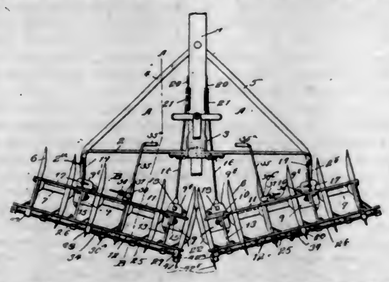
1,225,903. DISPLAY-RACK. EDWARD B. WESTON, Dayton, Ohio. Filed Apr. 7, 1915. Serial No. 19,784. (Cl. 211—24.)



1. In a display rack, two pairs of side standards, sheets connecting and holding spaced apart the side standards of each pair, intermediate linking means to which the pairs of standards are independently secured adapted to permit the standards to swing in substantially a half circle thereon, and a frame rigidly secured to the intermediate linking means, whereby the side standards may be folded down to hold the frame upright, or folded up to inclose the frame between the standards.

2. In a display rack, two pairs of side standards, sheets connecting and holding spaced apart the side standards of each pair, intermediate linking means to which the pairs of standards are independently secured adapted to permit the standards to swing in substantially a half circle thereon, and a frame rigidly secured to the intermediate linking means, whereby the side standards may be folded down to hold the frame upright, or folded up to inclose the frame between the standards, said side standards having spacer members comprising shelves between the pairs, and means for removably securing said spacer shelves to the side standards of one pair.

1,225,904. HARROW. CHARLES E. WHITE, Moline, Ill., assignor to Deere & Mansur Company, a Corporation of Illinois. Filed Feb. 4, 1909, Serial No. 476,068. Renewed Sept. 30, 1916. Serial No. 123,194. (Cl. 55—81.)



1. In a disk harrow, the combination of a draft frame, two oppositely arranged gang frames having their inner end parts vibratable vertically and horizontally and independently movable longitudinally, means for preventing the inner end of either gang from rising above horizontal lines predetermined relatively to the other gang, draft connections with the draft frame permitting all of the said movements of the disk gangs, and abutting devices for the inner ends of the gang frames adapted to constantly inter-engage, each abutting device being a widely extended flattened boss having a convex operative surface which at its edge fits closely to the convex surface of the innermost disk of a gang the central part being relatively flattened and the peripheral part being described with a radius approximating but slightly less than the radius of the convexity of the disk whereby the abutment bosses are relatively thin at the axial lines but are relatively wide in vertical planes and are adapted to abut constantly against each other independently of the disks irrespective of the angle of the gangs to permit each other to bodily slip radially while they are abutting.

2. In an implement of the class set forth, the combination of the draft frame, the gang frames pivotally connected to the draft frame, the curved draft bars each having a relatively downward curved rear end portion and connected at its rear end to the inner end of one of the gang frames, the hand levers pivotally mounted on the draft frames and connected to the forward ends of the said draft bars, and the vertically adjustable contact plate mounted on the draft frame above the draft bars and adapted to limit upward movement of said bars, the curvature of the draft bars being such that the limit of the upward movement of the inner ends of the gangs remains constant for all positions of the draft bars when they are adjusted backward and forward.

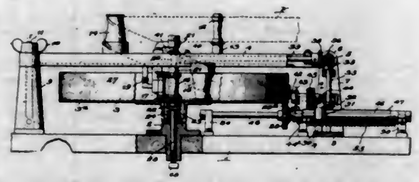
3. The combination of the axle, the spaced disks thereon, the upright bars or standards carried by the axle and disks, and the rectangular frame secured to the standards above the disks, said frame comprising front and rear bars arranged longitudinally of the disk axis, and transverse bars connecting the longitudinal bars, the upright bars being disposed in the angles formed by the longitudinal and transverse bars and being bolted to the latter.

4. The combination of a series of disks and interposed spacing spools, means for securing the disks and spools together on a common axis, the bearing boxes mounted on the spacing spools, the upright bars or standards rigidly secured to the bearing boxes, and the rectangular frame secured to the standards above the disks, said frame comprising front and rear bars arranged longitudinally of the disk axis, and transverse bars having their ends bent at right angles and bolted to the inner faces of the longitudinal bars, the upright bars being disposed in the angles formed by the longitudinal and transverse bars and being bolted to the latter.

5. The combination of the axle, the spaced disks thereon, the upright bars or standards carried by the axle and disks, and the rectangular frame secured to the standards above the disks, said frame comprising front and rear bars arranged longitudinally of the disk axis, and transverse bars having their ends bent at right angles and bolted to the longitudinal bars, the upright bars being disposed in the angles formed by the longitudinal and transverse bars and being bolted to one of said bars and braces connecting the vertical and transverse bars.

[Claims 6 and 7 not printed in the Gazette.]

1,225,905. FILM-WINDING DEVICE. DAVID P. WHITESELL, Greenville, Ohio. Filed Mar. 30, 1916. Serial No. 87,760. (Cl. 88—18.7.)



1. In a film winding mechanism, a rotatable film receiving receptacle, a feeding means for the film, means for rotating the receptacle and operating the feeding means, and means operated by said receptacle for increasing the speed of the receptacle relative to the feeding means.

2. In a film winding device, a rotatable film receiving receptacle, means for rotating said receptacle and feeding the film to said receptacle, and means carried by said receptacle coacting with a speed changing mechanism for changing the speed of said receptacle.

3. In a film winding device, a rotatable film receiving receptacle, means for feeding film to said receptacle, means for holding said receptacle in yielding contact with a friction roller whereby said receptacle is rotated.

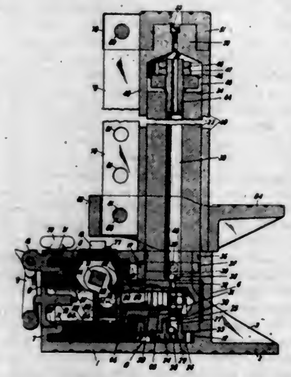
4. In a film winding device, a rotatable film receiving receptacle, means for feeding film to said receptacle, means for holding said receptacle in yielding contact with a friction roller, whereby said receptacle is rotated, and means for moving said friction roller nearer the axis of rotation of said receptacle in a manner to increase the speed of said receptacle.

5. In a film winding device, a rotatable film receiving receptacle, means for constantly feeding film to said receptacle, a driving friction wheel for said receptacle in driving relation with said feeding means and means for moving said wheel nearer the axis of rotation of said receptacle as said receptacle rotates in a manner to constantly increase the speed of said receptacle, and means carried by said receptacle for operating said wheel moving means.

[Claims 6 to 11 not printed in the Gazette.]



1,225,906. HYDRAULIC JACK. CARL WIGTEL, Brooklyn, N. Y., assignor to The Watson-Stillman Company, Aldene, N. J., a Corporation of New Jersey. Filed Mar. 10, 1915. Serial No. 13,312. (Cl. 138—9.)



1. A hydraulic jack comprising a reservoir at the base, an upright ram-post projecting from the base, the lower part of the post being within the reservoir and the post being removable from the base and reservoir and containing a fluid-passage which extends lengthwise, a ram into which the post extends and which is vertically movable thereon, a suction-valve in the post at its lower end, a horizontal pump, the cylinder of which extends into the ram-post above the suction-valve, the interior of the cylinder communicating with the fluid-passage, and a ram-valve in the post above the pump-cylinder.

2. A hydraulic jack comprising a reservoir, a hollow vertically movable ram, a horizontal pump, a suction-valve, and a ram-valve, and containing a vertical fluid-passage which communicates with the reservoir and extends upward therefrom to the interior of the ram and includes vertical ports normally closed by said valves and communicates with the pump-cylinder between the valves, the suction-valve being at the lower end of the fluid-passage and the ram-valve being above the other.

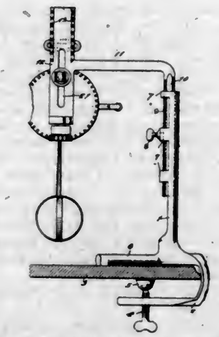
3. A hydraulic jack comprising a reservoir at the base, a ram-post mounted on the base and extending through the top of the reservoir and removable from the base and reservoir, a ram on the ram-post, a pump, a suction-valve and a ram-valve, the post containing a fluid-passage which extends lengthwise thereof and from the reservoir to the ram and includes vertical ports normally closed by said valves, and the interior of the pump-cylinder being in communication with the fluid-passage between the valves.

4. A hydraulic jack comprising a ram-post mounted on and removable from the base, a ram on this post, a pump, a suction-valve and a ram-valve, the ram-post containing a fluid-passage, the valves being in that passage, and the interior of the pump-cylinder being in communication with the passage between the valves.

5. In a hydraulic jack the combination with the ram of a claw movable lengthwise of the ram, and means for securing the claw on the ram at different distances from the head of the ram, said means including a fastening composed of two parts, one of which is engageable with the other at different places.

[Claims 6 to 18 not printed in the Gazette.]

1,225,907. EGG-BEATER HOLDER. FRANS F. WIKSTEDT, Fitchburg, Mass. Filed Aug. 13, 1915. Serial No. 45,358. (Cl. 248—30.)



1. A device of the class described comprising an upright rigidly supported socket, a stem adapted to be raised and lowered in said socket and having an arm projecting horizontally therefrom, means for securing said stem to said socket in any adjusted position, a vertical plate terminating the outer end of said arm, and locking means adjustable on said plate for clamping an agitator in engagement therewith.

2. A device of the class described comprising an upright rigidly supported socket, a stem adapted to be raised and lowered in said socket and having an arm projecting horizontally therefrom, means for securing said stem to the socket in any adjusted position, a vertical plate terminating the outer end of said arm, means on opposite sides of said plate for supporting an agitator in adjusted position on either side, and means for clamping said agitator to said plate.

3. A device of the class described comprising an upright rigidly supported socket, a stem adapted to be raised and lowered in said socket and having an arm projecting therefrom, means for securing said stem to the socket in any adjusted position, a vertical plate terminating the outer end of said arm, vertically disposed serrations forming recesses on opposite sides of said plate for adjustably supporting an agitator member on either side, and a clamping member movable vertically in a slot in said plate to lock said agitator member in operative position.

4. A device of the class described comprising an upright rigidly supported socket, a stem adapted to be raised and lowered in said socket, means for securing said stem to the socket in any adjusted position, a vertical plate carried by said stem, vertically disposed serrations forming recesses on opposite sides of said plate at its upper end, a laterally projecting and bifurcated extension from the lower end of said plate on each of said sides, said recesses and extensions adapted to support an agitator in adjusted position on either side, and a locking bolt vertically adjusted in a slot in said plate adapted to clamp said agitator member to the plate in operative position.

1,225,908. FLOOR-TILE. HENRY N. WILL, Elmhurst, N. Y., assignor to Non-Slip Tile Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 10, 1914. Serial No. 876,472. (Cl. 72—18.)



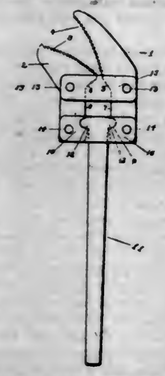
1. A tread for either vitrified, encaustic or glass floor tiles comprising a base block having a socket formed therein, said socket being reduced at its lower portion, the walls of the upper portion of the socket being inclined downwardly and inwardly, the walls of the reduced portion of the socket being inclined upwardly and inwardly forming a dove-tail, and a rough filler mounted within the socket, the upper portion of said socket forming a tread portion and the reduced portion a retaining means for the rough filler.

2. The combination with a floor tile either vitrified, encaustic, glass or any other so-called floor tile, having a socket formed in its upper face, said socket being reduced at its inner end, said reduced portion equal in depth to approximately half the depth of the socket, the unreduced portion of the socket having its side walls inclined upwardly and outwardly and a rough filler mounted within the socket and secured to the side walls thereof.

3. The combination with a floor tile either vitrified, encaustic, glass or any other so-called floor tile having a socket opening out through its upper face, said socket being formed of less width at its inner portion than at its outer portion, the inner portion leaving a table located at a point between the upper face of the floor tile and the bottom of the socket of plastic material placed within the socket and forming a tread surface for the tile, said plastic material being supported by said table.

4. A composite tile consisting of an encaustic or other suitable body, provided with an opening or cavity in its upper surface the sides of which are substantially vertical and a sub-cavity smaller than the first cavity leaving a table surrounding the sub-cavity; the sides of the sub-cavity being dove-tailed under the said table, thereby forming an anchorage for the insert, and a table for the edges of the insert to rest upon; the said cavities being filled with a non-slipping material substantially as described.

1,225,909. PIPE-WRENCH. GEORGE WILLIAM WILLARD, Sherbrooke, Quebec, Canada, assignor of one-third to Cyrus A. French, Sherbrooke, Quebec, Canada, and one-third to Lockhart Rand Willard, East Angus, Quebec, Canada. Filed Mar. 16, 1916. Serial No. 84,706. (Cl. 81—91.)



The combination of two jaw members having gripping faces and shanks therefrom and arc-shaped recesses in said shanks, a handle having lugs at the end engaging in said recesses and two pairs of parallel bars joining said jaw members and pivotally workable thereon on the turning of said handle.

1,225,910. TIRE-VALVE-UNSEATING DEVICE. WILLIAM A. WILLIAMS, Barton, Ohio. Filed Nov. 7, 1916. Serial No. 129,939. (Cl. 152—12.)



1. A tire-valve-unseating device consisting of a single-wire bent to form a resilient clamp embodying a spring coil, said clamp being adapted for slipping over a valve-tube and having a member designed to engage and seat upon the valve-stem for depressing the latter.

2. A tire-valve-unseating device composed of a single length of wire shaped to form opposed resilient members adapted for assuming clamping engagement with a valve-tube, a spring coil intermediate said members, and a member adapted for entrance within the end of said tube for engaging and depressing the valve-stem.

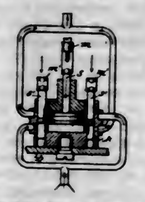
3. A tire-valve-unseating device composed wholly of a single length of wire and embodying opposed resilient members adapted to be slipped longitudinally over the end of a valve-tube and to assume clamping engagement with the latter, and a member formed of one of the wire terminals carried in fixed relation to said members and adapted to enter said tube in axially alined relation thereto for engaging and depressing the valve-stem.

4. A tire-valve-unseating device composed wholly of a single length of wire and adapted to seat upon a valve-tube in clamping relation to the body portion of the latter, said device comprising a pair of clamp-members designed to be slipped longitudinally into gripping engagement with said tube, one of said members embodying means for limiting the extent to which the members may be applied, and a member adapted to automatically assume valve-unseating relation to the valve-stem as said members are applied to said tube.

5. A tire-valve-unseating device adapted to seat upon a valve-tube in clamping relation to the latter, said device being composed wholly of a single length of wire bent to form opposing clamp-members of which one embodies a stop adapted to seat against the shoulder located intermediate the body of the valve-tube and the reduced end of the latter, and a terminal member adapted to automatically seat upon and depress the valve-stem as the clamp-members are moved to seated position.

[Claims 6 to 10 not printed in the Gazette.]

1,225,911. FORCE-PUMP MECHANISM. EUGEN WOERNER, Stuttgart, Germany, assignor to the Firm of Robert Bosch, Stuttgart, Germany. Filed July 14, 1914. Serial No. 850,957. (Cl. 184—27.)

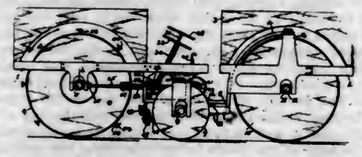


1. In consolidated high and low pressure pump mechanism, a single-acting high-pressure pump having a pump piston and a valve piston, a double-acting low-pressure pump having a pump piston and two valve pistons, and common driving mechanism for both pumps comprising a rotary shaft, a cam mounted on the shaft in driving engagement with both pump pistons to reciprocate them, and a second cam mounted on the shaft in driving engagement with the valve pistons of both pumps to reciprocate them in suitable relation with the respective pump pistons.

2. In consolidated high and low pressure pump mechanism, a plurality of high-pressure pumps having pump pistons with driving connections disposed in one circle and valve pistons with driving connections disposed in another circle about the same center, a low-pressure pump of large bore having a pump piston with a driving connection located in the circle with the driving connections of the high-pressure pump pistons and also having valve pistons with driving connections extending into the circle of the driving connections of the high-pressure pump pistons, and common driving mechanism for all the pumps comprising a shaft rotatable on an axis passing through the center of said circles, a cam mounted on the shaft in driving engagement with the driving connections of all the pump pistons to reciprocate them, and a second cam mounted on the shaft in driving engagement with the driving connections of all the valve pistons to reciprocate them in suitable relation with respect to the pump pistons.



1,225,912. COMBINED TRACTOR, ROLLER, AND PLOW. ROBERT UDOLPHO WOLFE, Omaha, Nebr. Filed Aug. 12, 1916. Serial No. 114,511. (Cl. 55—24.)



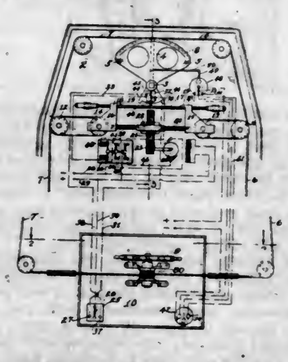
1. In an implement for the purpose described, a frame having an axle, a drum revoluble on the axle having its peripheral wall provided with apertures, shifting bars within the drum, resilient means for controlling the movements of the shifting bars, a plurality of plungers traversing the peripheral wall of the drum, each being movable by a movement of a shifting bar, a plurality of teeth disposed in the apertures of the drum each being connected with a plunger, each of said plungers being adapted to be moved inwardly of the drum against the force of said resilient means to cause a movement simultaneous therewith of a tooth outwardly of the drum.

2. In an implement for the purpose described, a frame having an axle, a drum supported by the axle and having its peripheral wall provided with apertures, shifting-bars within the drum and disposed approximately parallel with the axle, resilient means for controlling the movements of the shifting bars, rock levers suitably mounted and disposed within the drum and movable by the movements of the shifting bars, a plurality of plungers traversing the peripheral wall of the drum, a plurality of teeth engaging in the apertures of the drum, said plungers and teeth being arranged in pairs and mounted on the rock levers, each of said plungers being adapted to be moved inwardly of the drum against the force of said resilient means to cause a movement simultaneous therewith of a tooth outwardly of the drum.

3. In an implement for the purpose described, a frame having an axle, a drum supported by the axle and having its peripheral wall provided with apertures, shifting-bars within the drum disposed parallel with the axle, resilient means for controlling the movements of the shifting-bars, sleeves normally disposed radially of the drum, rock levers mounted on the sleeves and movable by the movements of the shifting bars, a plurality of plungers traversing the peripheral wall of the drum, a plurality of teeth engaging the apertures of the drum, said plungers and teeth being arranged in pairs and mounted on the rock levers, each of said plungers being adapted to be moved inwardly of the drum against the force of said resilient means to cause a movement, simultaneously therewith, of a tooth outwardly of the drum, the sleeves being movable longitudinally to permit the shifting bars, plungers and teeth to move inwardly of the drum.

4. In an implement for the purpose described, a frame having an axle, a drum revoluble on the axle and having its peripheral wall provided with apertures, shifting-bars within the drum, springs engaging and normally tending to move the shifting-bars inwardly of the drum, rock levers within the drum, a plurality of plungers traversing the peripheral wall of the drum, a plurality of teeth traversing the shifting-bars and disposed in the apertures of the drum and pivotally mounted on the rock levers, each of said plungers being adapted to be moved inwardly of the drum subject to the resistance of the springs to actuate a rock lever for moving a tooth outwardly of the drum.

1,225,913. RUDDER CONTROL. FRANK W. WOOD, Montclair, N. J., assignor to Charles Cory & Son, Inc., New York, N. Y., a Corporation of New York. Filed May 20, 1916. Serial No. 98,718. (Cl. 114—146.)



1. The combination with the rudder of a vessel, a manually operable steering element, and tiller connections extending between the rudder and said element for producing rudder movements, of power mechanism in permanent operative engagement with said connections intermediate the rudder and steering element and adapted to produce rudder movements when the mechanism is active and when said element is held stationary, the length of the connections between rudder and steering element remaining constant during mechanism operation.

2. The combination with the rudder of a vessel, of a manually operable steering element, tiller cable connections extending between the rudder and said element for producing rudder movements, said connections including a bight in each connection, and power mechanism for varying the bight lengths when said element is held stationary, said mechanism including a device in permanent operative engagement with each bight and movable rectilinearly by mechanism movements.

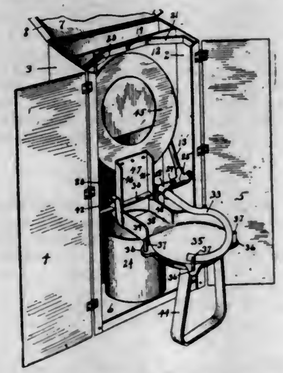
6. In a vessel the combination of a quadrant connected to the rudder of the vessel, a hand gear including a helm, oppositely disposed tiller ropes connecting the quadrant with the helm, a power gear disposed at a point between the connected ends of the tiller ropes and including a motor, a controller further arranged adjacent to the helm, oppositely disposed travelers permanently connected to the tiller ropes and means connecting the travelers with the motor, said means operating to move the travelers rectilinearly when the motor is in action, and to lock the travelers against bodily movement when the motor is at rest whereby the operation of substituting hand power for

motor power and vice versa to operate the tiller ropes and quadrant may be performed while either of said gears is in any of its possible positions of adjustment.

[Claims 3 to 5 not printed in the Gazette.]

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1,225,914. PORTABLE WATER-CLOSET. HERBERT J. WOOD, Mount Clemens, Mich. Filed July 21, 1916. Serial No. 110,474. (Cl. 4—23.)



1. In a portable water closet, the combination of a cabinet, a water tank therein, a horizontal axis mounted in the cabinet, a bowl and rearwardly extending spout mounted on said axis, a flushing pipe extending from said axis along the outer edge of the bowl and provided with holes to discharge water into said bowl, a discharge pipe extending from said tank to said flushing pipe, a valve to control the flow of water to said pipe, and means connected to said bowl to operate said valve.

2. In a portable water closet, the combination of a cabinet, a water tank mounted therein, a horizontal axis mounted in said cabinet below the tank, a bowl and a rearwardly extending spout connected to said bowl, said axis extending through the rear end of said spout, a flushing pipe extending from said axis along the outer edge of the bowl and provided with holes to discharge water into said bowl, a discharge pipe extending from said tank to said axis, a hinged connection between the flushing pipe and the discharge pipe, a valve within the tank to close the upper end of the discharge pipe, means connected to said valve and to said spout to close the valve when the bowl reaches a horizontal position, and a seat pivoted on the axis, independent of the bowl.

3. In a portable water closet, the combination of a cabinet, a water tank mounted therein, a horizontal axis mounted in said cabinet below the tank, a bowl mounted on said axis, a flushing pipe extending along the upper front edge of the bowl and having a series of holes to discharge water into the outer edge of the bowl, connections between said pipe and tank, and a valve controlled by the bowl for stopping the flow of water to the bowl.

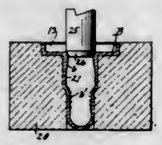
4. In a portable water closet, the combination of a support, a water tank carried thereby, a bowl and an axis therefor, said bowl having a rounded bottom and front edge and rearwardly extending discharge spout, a flushing pipe extending along the upper and outer edge of the bowl and having downwardly opening discharge holes, and means connected to the bowl to control the flow of water through said pipe.

5. In a portable water closet, the combination of a support, a water tank carried thereby, a bowl and a horizontal axis therefor, said bowl having a rearwardly extending discharge spout adjacent the axis, a flushing pipe extending along the upper front edge of the bowl and having downwardly opening discharge holes, and means to control the flow of water from the tank to said pipe.

[Claim 6 not printed in the Gazette.]

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1,225,915. PROCESS FOR MAKING GREASE-CUP BODIES. OSCAR ZERK, Cleveland, Ohio, assignor, by mesne assignments, to George W. Bowen, Auburn, N. Y. Filed July 31, 1913. Serial No. 782,181. (Cl. 29—148.)



1. The process of making a grease cup body, consisting in forming the body into an elongated cup like form, thickening the portion of the body near the closed end thereof and compressing the closed end of the form by pressure applied to said end while the form is held internally and externally throughout its entire length with the exception of the inner end portion being compressed.

2. The process of making a grease cup body, consisting in forming the body into an elongated form closed at one end, then causing the metal to flow toward the closed end of the body to thicken the same, and compressing the closed end by pressure applied to said end while the cup like form is held internally and externally throughout its length with the exception of the closed end.

3. The process of making a grease cup body from sheet metal consisting in stamping the metal into a cup like form having a cylindrical shank closed at its outer end and formed with a reduced extension at said end, causing the metal to flow from the large end of the shank into the reduced extension, and compressing the extension endwisely when the blank is held internally and externally with the exception of a portion of said reduced extension.

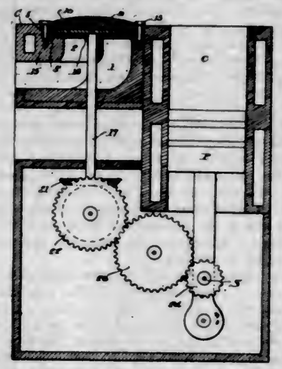
4. The process of making grease cup bodies consisting of forming a blank into an elongated form having a cylindrical shank, and pushing the metal from the upper end of the bore of the shank toward the lower end thereof.

5. The process of making grease cup bodies consisting in forming a blank into an elongated form having a tubular shank, pushing the metal toward the lower end of the shank and compressing the lower end of the shank while the form is held internally and externally.

[Claim 6 not printed in the Gazette.]

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1,225,916. ROTARY DISK VALVE FOR GAS-ENGINES. EDWIN T. ARMSTRONG, Adrian, Mich. Filed Nov. 8, 1916. Serial No. 130,288. (Cl. 123—190.)



1. The combination with an engine having a seat therein; of a valve disk disposed in said seat and having a central aperture and a pair of openings spaced outwardly from said aperture, a second valve disk spaced from the first and having a pair of openings alined with those

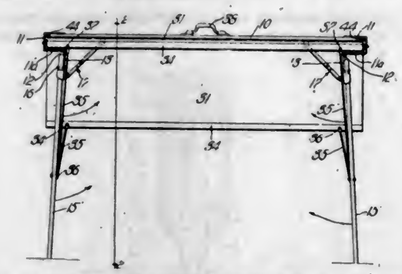


therein, a valve head comprising a flat circular plate disposed between said disks and having a single opening adapted to register with either of the alined openings in the disks, a valve stem connected with the valve head and extended through said central aperture into the crank case of said engine, a beveled gear carried by the inner end of said stem, a spur gear, a second beveled gear carried by said spur gear to mesh with the first beveled gear, a second spur gear in mesh with the first mentioned spur gear, each of said gears being of the same size, and a pinion carried by the crank shaft of said engine and meshing with the second spur gear, said pinion being one-half the size of said gear.

2. The combination with an engine having a seat therein; of a valve disk disposed in said seat and comprising a flat circular plate, said disk having a central aperture and a pair of openings spaced outwardly from said aperture, a second valve disk also disposed in said seat and comprising a circular plate having a pair of openings alined with the openings in the first mentioned disk, the inner face of said plate being flat and its outer face convex, a ring of a diameter equal to the diameter of said disks and disposed therebetween, fastening elements connecting said disk and ring to the engine, a valve head in the form of a flat circular plate disposed within said ring, said head being of a diameter substantially equal to the opening in said ring and of approximately the same thickness as said ring and having a single opening therein, a valve stem extended through said central aperture and connected to the valve head centrally thereof, and means for rotating said valve head to move its opening into registration with either of the openings in said disks.

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1,225,917. FOLDING SUNSHADE AND TENT. JOHN BARKER, Los Angeles, Cal. Filed Feb. 29, 1916. Serial No. 81,142. (Cl. 135—5.)



1. In combination, an elongated ridge member, a bracket at each end of said ridge member, said bracket extending downwardly and then inwardly longitudinally under the ridge member, a transverse pivot carried at the inner under end of each bracket, a leg plate mounted on each of said transverse pivots and adapted to lie normally in an approximately vertical plane or to fold inwardly and upwardly under the ridge member to a horizontal position, a pair of supporting legs pivoted to each of said leg plates to swing thereon transversely of the elongated ridge member so that the legs of each pair may swing outwardly from each other at the lower ends, folding brace means for holding said leg plates normally in their vertical positions, a pair of spring winding rollers carried longitudinally beneath the ridge member and supported in the end brackets, a pair of roof canvases rolled upon said rollers, edge slats for the upper edges of said roof canvases, and folding means for supporting the slats from the legs embodying arms pivoted one to each leg to swing in the planes of the legs and pivoted to said slats to swing in the planes of the slats and longitudinally of the ridge member.

2. In combination, a ridge member, extensible canvases attached thereto, supports for the ridge member at each end thereof embodying a member pivoted to the ridge member to swing between a position extending vertically downwardly from the member and a position folded horizontally against the ridge member, and a pair of supporting legs pivoted to each of said pivoted members to swing thereon in a plane transverse of the length of the ridge member.

3. In combination, a ridge member, extensible canvases attached thereto, supports for the ridge member one at each end thereof embodying a member pivoted to the ridge member to swing between a position extending vertically downwardly from the member and a position folded horizontally against the ridge member, and a pair of supporting legs pivoted to each of said pivoted members to swing thereon in a plane transverse of the length of the ridge member; edge slats for the canvases, and supporting means for the canvases embodying arms pivoted one to each leg to swing in the planes of the legs transversely of the ridge member and pivoted to said slats to swing in the planes of the slats and longitudinally of the ridge member.

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1,225,918. CLOSE-RANGE ATTACHMENT FOR GUN-SIGHTS. JAMES W. BEELER, St. Louis, Mo. Filed Oct. 2, 1916. Serial No. 123,264. (Cl. 33—47.)



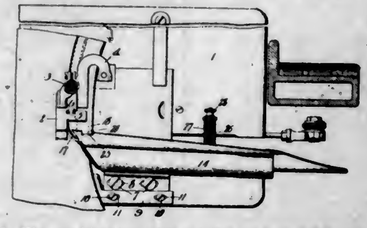
1. A close range attachment for gun sights comprising a plate provided with a sight perforation and adapted to be attached to the end of the range member of a standard sight, substantially as specified.

2. A device of the character described comprising in combination with a standard gun sight, a detachable member having a sight opening and means for supporting said member in position on the standard sight, substantially as specified.

3. A device of the character described comprising a detachable member in combination with a standard gun sight, said member equipped with a sight opening to be used for close range and a means for clamping the member in position on said sight, substantially as specified.

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1,225,919. FOLDER FOR SEWING-MACHINES. JOSEPH BERGER, Jr., Utica, N. Y., assignor to Union Special Machine Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 6, 1906. Serial No. 346,566. (Cl. 270—36.)



1. The combination with a folder having means for folding a strip upon itself and inverting said fold, of a tension member independent of the folder, said member being constructed and arranged to bear solely on the edges of the strip, as the strip is passing through the folder.

2. The combination with a folder having means for folding the strip and turning in its edges, a tension member having a forked end bearing upon the folded edges of the strip passing through said folder; substantially as described.

3. The combination with a folder having means for folding the strip and turning in its edges, a tension member, a bracket carried by said folder and supporting one end of said tension member, the other end of said tension member bearing upon the folded edges of the strip pass-

ing through said folder, and means for holding said tension member on said strip; substantially as described.

4. The combination with a folder having means for folding the strip and turning in its edges, a tension member, a bracket secured to said folder and supporting one end of said member, the other end of said tension member being forked and bearing upon said strip passing through said folder and means for placing said member under tension; substantially as described.

5. The combination with a folder having means for folding the strip and turning in its edges, a tension member independent of the folder, a bracket located near the receiving end of said folder and forming a support for said tension member, the other end of said tension member extending to a point adjacent the delivery end of said folder and bearing on the fabric passing therethrough and means for placing said member under tension; substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

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1,225,920. RUBBING-POST. REUBIN H. BLOOMER, Council Bluffs, Iowa. Filed Sept. 8, 1914. Serial No. 860,638. (Cl. 119—157.)



1. In combination, a standard, a receptacle secured to said standard having an escape opening, a valve normally closing said opening, a bar capable of being vertically reciprocated located below said valve to unseat the same, means for grinding said bar at its upper end and a link pivotally securing said bar to said standard, said link limiting the upward movement of said bar.

2. In combination, a standard, a receptacle secured to said standard having an escape opening, a spring actuated valve normally closing said opening, a bar capable of being vertically reciprocated to unseat said valve, means for guiding said bar at its upper end and links pivotally securing said bar to said standard, and limiting the upward movement of said bar.

3. In combination, a standard ending in a receptacle having an escape opening, a spring actuated valve normally closing said opening, a bar, means for guiding said bar at its upper end, and links securing said bar to said standard, said bar being capable of being vertically reciprocated to unseat said valve, said bar in its upward movement contacting with said standard, thus limiting the upward movement of said bar.

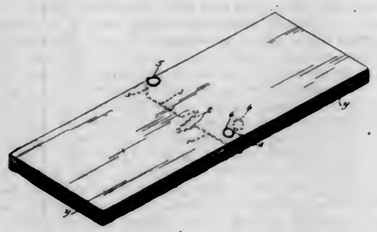
4. In combination, a standard, ending in a receptacle having an escape opening, a spring actuated valve normally closing said opening, a bar, means for guiding said bar at its upper end, links pivotally securing said bar to said standard, said bar being capable of being moved upward to unseat said valve, said standard limiting the upward movement of said bar.

5. The combination with a standard ending in a receptacle having an escape opening, with a yoke located below said opening, of a spring actuated valve normally closing said opening, and ending above said yoke, a link pivotally secured to said standard, a rub bar vertically reciprocating within said yoke and secured at its lower end to said link, said link limiting the downward movement of said bar, said bar being provided with a plurality of downwardly extending drain channels, each communicating with a rib extending beyond the sides and outer edge of said bar.

[Claims 6 to 11 not printed in the Gazette.]

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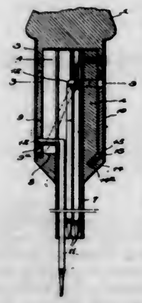
1,225,921. CLIP. LESLIE S. BROCKWAY, Minneapolis, Minn. Filed Mar. 2, 1916. Serial No. 81,690. (Cl. 24—17.)



A pack holding clip constructed from a single piece of wire, having alined straight body portions connected by a zig-zag intermediate spring section, having end portions bent at a right angle to the plane of said body portion and zig-zag spring section, and having looped ends bent into planes parallel to the above noted plane.

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1,225,922. TRIPLE SCREW-DRIVER. JOHN B. BROWN, Akron, Ohio. Filed Nov. 24, 1915. Serial No. 63,249. (Cl. 145—50.)



In a device of the kind described, the combination with a handle, wood working tools normally concealed therein, a rotatable sleeve having a cam slot normally engaged by said tools and adapted to project and withdraw them one at a time, a spring pressed ball carried by the handle, and recesses carried by the sleeve and adapted to receive said ball, a recess alining with said ball during extreme outward projection of one of said tools, as and for the purpose set forth.

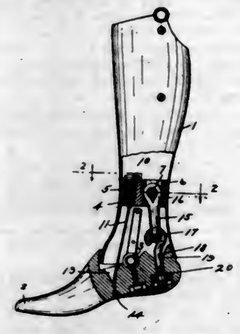
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1,225,923. ARTIFICIAL LEG. FERDINAND BUCHSTEIN, Minneapolis, Minn. Filed Oct. 19, 1916. Serial No. 126,497. (Cl. 3—6.)

1. In an artificial leg, the combination with a hollow lower leg section and a foot connected thereto by an ankle joint, of a bridge block in said leg section and having a passageway and an anchor pin extending therethrough, and a heel connection secured to said pin.



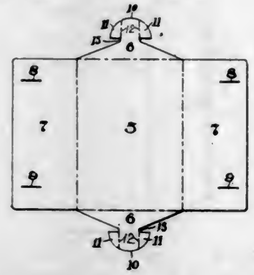
2. In an artificial leg, the combination with a hollow lower leg section and a foot connected thereto by an ankle joint, of a bridge block in said leg section and having a seat, and a toe lift including an inverted conically coiled spring mounted in said seat.



3. In an artificial leg, the combination with a hollow lower leg section and a foot connected thereto by an ankle joint, of a bridge block in said leg section and having a vertical seat and passageway located, the former in front of the latter, a toe lift including an inverted conically coiled spring seated in the upper end of said seat and having clearance with the lower end thereof, a pin extended transversely through said passageway and secured to the bridge block, and a heel connection secured to said pin.

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1,225,924. SAFETY-ENVELOP. GEORGE P. BURRIS, Pueblo, Colo. Filed Nov. 22, 1915. Serial No. 62,719. (Cl. 229—84.)

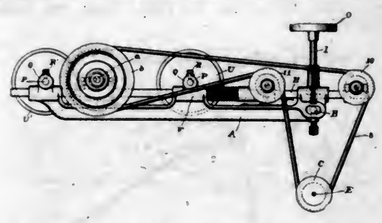


1. An envelop blank adapted to be so folded as to constitute a front section, two rear sections on the sides of the front section, and two end sections on the ends of said front section, said end sections each having a neck projecting therefrom and a tongue connected to said neck, said tongue being wider than said neck and being adapted to be so folded as to form wings extending out of the plane thereof, the parts being so proportioned and the line of fold being so taken that the wings extend inwardly beyond the imaginary line connecting their bases but not so far as to extend beyond said neck.

2. An envelop comprising a front section, a pair of doubly slotted overlapping rear sections, and a pair of end sections, each end section having a neck projecting therefrom and a tongue connected to said neck adapted to be passed through the adjacent pair of slots, said tongue being wider than said neck and being so folded as to form wings extending out of the plane thereof, the parts being so proportioned and the line of fold being so taken that the wings extend inwardly beyond the imaginary line connecting their bases but not so far as to extend beyond said neck, said rear sections being secured together by paste through a portion of their overlapping surfaces.

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1,225,925. VARIABLE-SPEED-TRANSMISSION GEARING. FRANCIS B. CANNOCK, New York, N. Y. Filed July 9, 1915. Serial No. 38,847. (Cl. 74—26.)



1. In a variable speed transmission gear, the combination of a supporting frame provided with a single bearing, a member rotatably and slidably mounted in said bearing and provided with a pair of disks, a parallel rotary member provided with a disk adapted to be received between the pair of disks and to contact therewith and means for varying the distance between said members to vary the speed of one of said members.

2. In a variable speed transmission gear, the combination of a supporting frame provided with a single bearing, a member rotatably and slidably mounted in said bearing and provided with a pair of conical disks having the conical sides thereof facing toward each other, a parallel rotary member provided with a disk having a conical rim adapted to be received between the pair of disks and to contact therewith, means for rotating the pair of disks and means for varying the radial position of said conical rim relatively to the conical disks to thereby vary the speed of one of said members.

3. In a variable speed transmission gear, the combination of a frame provided with a single bearing, a member rotatably and slidably mounted in said bearing and provided with a pair of conical disks having the conical sides facing toward each other, said disks being longitudinally separable but connected to rotate together, means for normally forcing said disks toward each other, a rotary driven member parallel to the first said member and provided with a disk having a rim beveled on both sides, said rim being adapted to lie between said pair of disks and contact with the conical sides thereof, means for rotating said pair of disks, and means for varying the distance between the axes of said rotary members to vary the speed of the driven member.

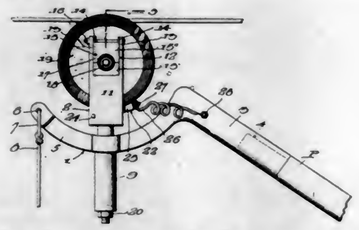
4. A variable speed transmission gear, comprising a rotary driven member carrying a friction disk, a frame, a longitudinally movable member carried by said frame, a single bearing carried by said movable member, a driving member rotatably and slidably mounted in said bearing in parallel relation to the driven member and provided with a pair of friction disks, means independent of said bearing for normally pressing said disks toward each other, the friction disk on the rotary driven member being adapted to enter between said pair of friction disks and contact therewith and means mounted on said frame for moving said longitudinally movable member to thereby vary the speed of the rotary driven member.

5. A variable speed transmission gear, comprising a rotary driven member carrying a friction disk, a frame a longitudinal member carried by said frame, a single bearing carried by said movable member, a sleeve and shaft rotatably and slidably mounted in said bearing in parallel relation to the rotary driven member, said shaft being slidable in the sleeve but rotating therewith, friction disks carried by the shaft and sleeve respectively and means independent of said bearing for normally pressing said disks toward each other, the friction disk on the rotary member being adapted to enter between the two

friction disks and contact therewith, and means mounted on said frame for adjusting the said longitudinally movable member, to thereby vary the speed of the rotary driven member.

[Claims 6 to 14 not printed in the Gazette.]

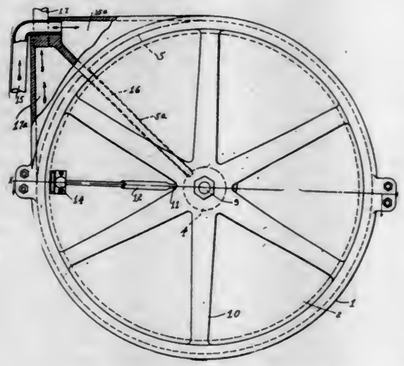
1,225,926. TROLLEY-HARP. JAMES H. CARMACK, Denison, Tex. Filed Nov. 26, 1915. Serial No. 63,536. (Cl. 191—61.)



1. In a device of the class described, a harp, a trolley wheel rotatably mounted in the fork thereof, a brush for collecting the electricity from the wheel, said brush comprising a T-shaped member, the opposite ends of the head thereof being pivoted within said fork, the body portion of said member being substantially semi-cylindrical and adapted to lie in the groove in said wheel, the flat face of said portion having a socket, the adjacent surface of said fork being also provided with a socket, an expansion spring having its ends disposed in said sockets for forcing the brush into the groove of said wheel, and a conductor extending from said brush to the trolley pole.

2. In a device of the class described, a harp comprising a body member, a fork mounted thereon, the upper ends of the arms of said fork being bifurcated, tongues formed on the inner side of the furcations, bearing blocks having grooves in their edges adapted to receive said tongues, insulating bearings in said blocks, a bolt extending between the furcations of each of said arms above said blocks to hold the same therein, a trolley wheel rotatably mounted in said bearings, and a brush for engagement with said wheel to collect the electricity therefrom.

1,225,927. MUFFLER FOR INTERNAL-COMBUSTION ENGINES. GEORGE S. CLARK, Oilfields, Cal. Filed Apr. 22, 1916. Serial No. 92,858. (Cl. 123—194.)



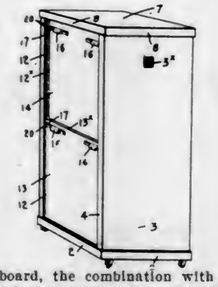
1. A muffler comprising a cylindrical member having its sides concave to form two cone-shaped members disposed in opposite relation, a radial division wall in the casing, an inlet opening into the casing on one side of the division wall, an outlet leading from the casing on the opposite side of the division wall, and a disk pivoted within the casing and arranged to have a rocking motion vertically and circumferentially as described.

2. A muffler comprising a cylindrical member having two concave sides forming cones disposed in opposite relation, a sphere pivoted between the cones, a pin fixed to the sphere obliquely with respect to its vertical axis and arranged to gyrate around the vertical axis, a disk on the sphere movable within the casing, and an inlet and outlet from the casing, as described.

3. A muffler comprising a casing having its sides formed into two cones disposed in opposite relation, a sphere pivoted between the cones, a pin fixed to the sphere obliquely with respect to the vertical axis thereof, another pin fixed to the casing in the same vertical line to the vertical axis of the sphere, a turnable sleeve on each of the pins, such sleeves being fixed together, a disk on the sphere within the casing, the casing being provided with a radial wall, and an inlet and outlet on opposite sides of the wall, as described.

4. A muffler comprising a casing having its sides formed into two cones disposed in opposite relation, a sphere pivoted between the cones, a pin fixed to the sphere obliquely with respect to the vertical axis thereof, another pin fixed to the casing in the same vertical line to the vertical axis of the sphere, a turnable sleeve on each of the pins, such sleeves being fixed together, a disk on the sphere within the casing, the casing being provided with a radial wall, an inlet and outlet on opposite sides of the wall, an arm connected with the first named pin and socketed to the casing, such arm being provided with a slip joint, as described.

1,225,928. STEEL CUPBOARD. HARRY GORDON CLIFF, Hamilton, Ontario, Canada. Filed Jan. 10, 1916. Serial No. 71,365. (Cl. 45—102.)

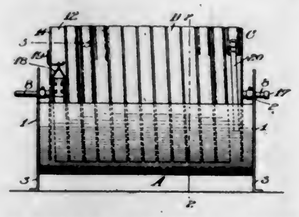


1. In a cupboard, the combination with a base, of a cover portion, side and rear wall portions detachably engaging one with the other and with the base and cover portions, a door sash, arm members permanently carried by the sash and adapted to swing in vertical planes to the rear wall and each provided with a downwardly projecting portion, and a coacting angle bracket for each carried by the rear wall portion all adapted to form interlocking connections with the brackets so as to detachably lock the front sides and back together, and also form tray supports.

2. In a cupboard, the combination with a metal cover having downwardly extending edge flanges and a base having upper extending edge flanges adapted to slip outside of the top and bottom of the vertical walls, of back and sides detachably connected together, and a front reinforcing sash extending around the interior of the front portion of the sides and cover and base and means for detachably connecting the sash to the cover and base, and arms hinged on the sides of the sash having rear hooks adapted to swing in vertical planes and brackets on the back with which the hooks are designed to engage to bind the cupboard together.



1,225,929. APPARATUS FOR TREATING PHOTOGRAPHIC FILMS. JOHN I. CRABTREE, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Original application filed May 11, 1914. Serial No. 837,961. Divided and this application filed Jan. 15, 1916. Serial No. 72,194. (Cl. 242—77.)

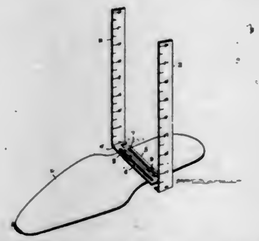


2. In an apparatus of the character described, the combination with a cylindrical rigid hollow drum having a slatted periphery adapted to take the winding pressure of a film strip, of an outer covering of dental rubber thereon against which the film is wound and means for introducing fluid under pressure to the interior of the drum to expand the covering and cause it to intimately contact with the under surface of the film in a fluid tight manner.

3. In an apparatus of the character described, the combination with a perforate rigid hollow drum having a slatted periphery adapted to take the winding pressure of a film strip, of an outer elastic and non-absorbent covering therefor against which the film is wound and which is adapted to be expanded against the film by fluid pressure within the drum, and a flexible but nonelastic body connecting the covering to the drum at the ends of the latter.

[Claim 1 not printed in the Gazette.]

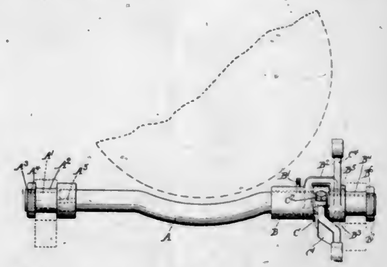
1,225,930. MEASURING INSTRUMENT FOR TAILORS. CLIFFORD H. CRAIG, Redstone, N. H. Filed May 29, 1916. Serial No. 100,634. (Cl. 33—8.)



1. A device of the class described comprising a foot plate embodying a heel and a toe portion, spaced rulers disposed at right angles to the plane of the foot plate, extensions carried by the lower ends of said rulers and disposed transversely of the foot plate between the heel and toe portion thereof, and means for adjustably connecting said extensions to said foot plate.

2. A device of the class described comprising a foot plate embodying a heel and toe portion, spaced rulers disposed at right angles to the plane of said foot plate, extensions carried by the lower ends of said rulers and disposed transversely of the foot plate in overlapping relation to each other, said extensions being each provided with a longitudinal slot, and a clamping screw extending through each of said slots and into the base plate whereby the spaced rulers may be adjusted relatively to one another.

1,225,931. REVERSING-SHAFT FOR ENGINE VALVE-GEARS. CHARLES W. DAKE, Chicago, Ill., assignor to The Pyle-National Company, Chicago, Ill., a Corporation of New Jersey. Filed Sept. 18, 1916. Serial No. 120,619. (Cl. 74—5.)

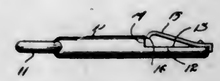


1. A reversing shaft assembly for steam engines and the like comprising a central rigid shaft, a bearing for one end thereof, a rock arm rigidly mounted thereon adjacent the bearing, a sleeve rotatable on the other end of the shaft, a bearing for the sleeve, a rock arm rigidly mounted on the sleeve adjacent the end of the shaft and a pair of rock arms having their ends located in a common plane perpendicular to the axis of the shaft intermediate its ends, one of them being mounted on the sleeve and the other on the shaft.

2. A reversing shaft assembly for steam engines and the like comprising a rigid continuous central shaft, bearings at either end thereof, a sleeve rotatably mounted on one end of the shaft within one of said bearings, a rock arm on the sleeve adjacent the end of the shaft and a rock arm mounted on the opposed end of the shaft, the sleeve being expanded and cut away for a portion of its circumference intermediate its end, a rock arm on the shaft in line with the expanded portion of the sleeve projecting outwardly through the cutaway portion and a rock arm on the sleeve adjacent the latter.

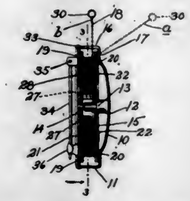
3. A reversing shaft assembly for steam engines and the like comprising a rigid central shaft, bearings adjacent the ends of the shaft, a sleeve mounted on one end of the shaft within one of said bearings and rock arms adjacent the ends of the shaft one on the sleeve, the other on the free end of the shaft, a collar mounted on the shaft intermediate the ends of the sleeve, the sleeve being expanded and cut away for a portion of its circumference to leave room for said collar, and rock arms one of them on the collar, the other on the sleeve.

1,225,932. COUPLING-BOLT. ISAAC DAVIDSON, Albert Lea, Minn. Filed Apr. 21, 1916. Serial No. 92,729. (Cl. 74—8.)



A coupling bolt comprising an integral straight body having one end portion reduced in one direction diametrically of the body with a resultant shoulder, a leaf spring riveted against the outer end portion of the face of the reduced portion and having its butt extended against and across the adjacent end face of the body, said leaf spring extending divergingly from the face of the reduced portion to a point beyond the face of the unreduced portion and short of said shoulder and then extending to a point behind said shoulder, whereby the leaf spring will be held against pivotal movement on its rivet and the bolt may be seated by hammer blows against the opposite end of the integral body member.

1,225,933. CHAIN-REEL. DANIEL D. DAWLEY, Providence, R. I., assignor to Payton & Kelley Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 27, 1915. Serial No. 17,517. (Cl. 242—98.)



1. A reel comprising a drum, a casing for said drum being provided with a lateral slot on its periphery and a connecting radial slot in its side wall, a chain leading from the drum out through said slot, means in the drum cooperating with said slot in the side wall of the casing for gripping the chain and temporarily preventing rotation of the drum, said gripping action being effected by the moving of the chain from the lateral into the radial slot.

2. A reel comprising a spring actuated winding drum having a flange provided with a notch in its periphery, a casing for said drum having a slotted wall through which the chain wound on the drum may be led, said drum being adapted to be locked by causing the notch and slot to register and then moving the chain into engagement with both.

3. A reel comprising a casing having a slot in its walls, a spring actuated winding drum rotatably mounted in said casing, a flange on the drum having a peripheral notch adapted to register with said slot, whereby the flexible member on the drum in leading out through said slot may be moved into engagement with both the slot and notch to lock the drum against rotation.

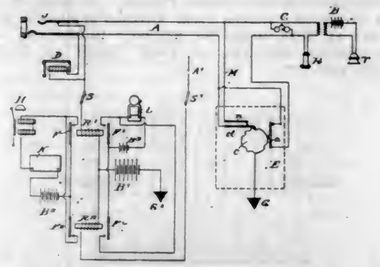
4. A reel comprising a casing having a slot in its peripheral wall and extending over into its side wall, a spring actuated winding drum rotatably mounted in said casing and having a flange provided with one or more notches in its periphery any of which may be caused to register with the slot in the side wall portion of the casing, whereby a lateral movement of the flexible members on the drum in leading out through said slot may cause the flexible member to enter both the notch and slot to lock the drum against rotation and said member being readily withdrawn to release the drum.

5. A reel comprising a casing having one of its members formed in a cup shape with a peripheral flange and a front wall, the same being provided with a slot in said flange and extending over into its front plate, a drum rotatably mounted in said casing, a spirally formed actuating spring in said drum, one of the flanges of said drum having one or more notches adapted to register with said slot, a chain wound on the drum leading out through said slot and adapted to be positioned therein to also enter said notch to lock the drum against rotation, and a plate for closing the back of said casing.

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1,225,934. FIRE-ALARM SYSTEM. DAVID G. DEE, Chicago, Ill., assignor, by mesne assignments, to Rochester H. Rogers, Rochester, N. Y. Filed Feb. 10, 1913. Serial No. 747,309. (Cl. 179—5.)

1. In a fire alarm system for magneto telephone lines, the combination with a subscriber's metallic circuit terminating in a spring cut-off line jack, adapted for the insertion of an operator's connecting plug, and a ring-down drop adapted to be eliminated from the subscriber's circuit upon the insertion of the operator's connecting plug in the spring cut-off line jack, of a fire alarm circuit connected to both sides of the subscriber's circuit and to ground, whereby the ring-down drop will be operated when the operator's connecting plug is inserted in the line jack aforesaid.



2. In a fire alarm system for magneto telephone lines, the combination with a subscriber's metallic circuit terminating in a spring cut-off line jack adapted for the insertion of an operator's connecting plug, and a ring-down drop connected to both sides of the subscriber's circuit, of a fire alarm circuit connected to the subscriber's circuit and to ground, an alarm box in the fire alarm circuit, a battery and relay also included in the fire alarm circuit, an alarm controlled by said relay, and means for closing the fire alarm circuit when the alarm box is operated, the subscriber's circuit being closed when the alarm box is idle and open when the alarm box is operating.

3. In a fire alarm system for magneto telephone lines, the combination with a subscriber's metallic circuit terminating in a spring cut-off line jack adapted for the insertion of an operator's connecting plug, and a ring-down drop connected to the subscriber's circuit, of a fire alarm circuit normally open and connected to the subscriber's circuit, and an alarm controlled by the fire alarm circuit and adapted to be operated when the latter is closed, and means for closing the fire alarm circuit through either side of the subscriber's circuit.

4. The combination with a subscriber's line circuit, of an open alarm circuit connected to both sides of said subscriber's line circuit and to ground, a normally open auxiliary alarm circuit, a normally open trouble alarm circuit, and a relay in said alarm circuit for simultaneously closing both the auxiliary alarm circuit and trouble alarm circuit upon the closing of a circuit through either side of the subscriber's circuit and the ground.

5. The combination with a subscriber's line circuit, including a ring-down drop bridged across the same, of a normally open alarm circuit connected to both sides of said subscriber's circuit and to ground, and means operable upon the alarm circuit for despatching impulses over either side of the subscriber's line circuit and the ground irrespective of the connections between the drop and the subscriber's line circuit.

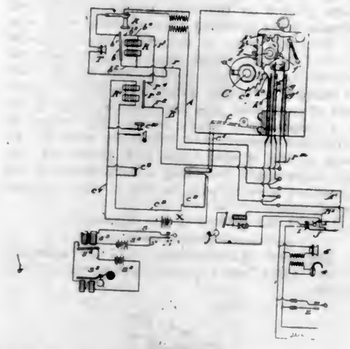
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1,225,935. FIRE-ALARM TELEPHONE TRANSMITTING MECHANISM. DAVID G. DEE, Rochester, N. Y., assignor, by mesne assignments, to Rochester H. Rogers, Rochester, N. Y. Filed Feb. 25, 1914. Serial No. 820,948. (Cl. 179—5.)

1. In a telephone fire alarm system, the combination with a subscriber's line circuit having a telephone instrument set and provided with contacts normally maintaining said instrument connected to the line and which may be operated to disconnect it and close the line circuit independently of the instrument, of a trouble alarm mechanism comprising a circuit having a pair of contacts and an alarm apparatus controlling the first mentioned contacts and serving to despatch current impulses over the line circuit and simultaneously operating the trouble circuit contacts to break the trouble circuit.

2. In a telephone fire alarm system, the combination with a subscriber's line circuit having a telephone instrument set and provided with contacts normally maintaining said instrument connected to the line and which may be operated to disconnect it and close the line circuit independently of the instrument, of a trouble alarm mechanism comprising a circuit having a pair of normally closed contacts and an alarm apparatus serving to open the latter and control the line circuit contacts to despatch impulses of current over said line circuit.





3. In a telephone fire alarm system, the combination with a subscriber's line circuit having a telephone instrument set and provided with contacts normally maintaining said instrument connected to the line and which may be operated to disconnect it and close the line circuit independently of the instrument, of a trouble alarm mechanism comprising a circuit having a pair of normally closed contacts and an alarm mechanism adapted to transmit a plurality of groups of impulses controlling the line circuit contacts to disconnect the telephone set during the transmission of the impulses and subsequently reconnect it to the line upon the termination of the last group of impulses, said mechanism also serving to open the trouble circuit contacts upon the commencement of the transmission of the alarm impulses and permitting them to remain open after the telephone set has been reconnected to the line.

4. In a telephone fire alarm system, the combination with a subscriber's line circuit, of an alarm mechanism for despatching current impulses over said line circuit, a local circuit for setting said alarm mechanism in operation, a trouble circuit for maintaining the local circuit under constant test, and trouble circuit contacts under the control of the alarm mechanism for opening said trouble circuit.

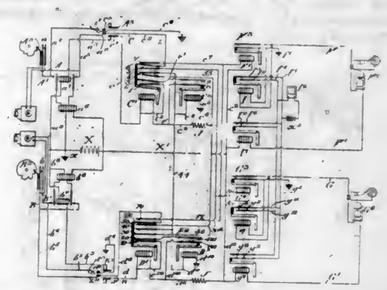
5. In a fire alarm telephone system, the combination with a subscriber's line circuit, of an alarm mechanism for despatching current impulses over said line circuit, a local circuit for setting said alarm mechanism in operation, a trouble circuit for maintaining said local circuit under constant test and transmitting a trouble alarm over the line circuit aforesaid, and trouble contacts under the control of the alarm mechanism aforesaid, for opening said trouble circuit when the alarm mechanism is actuated.

[Claims 6 to 11 not printed in the Gazette.]

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1,225,936. FIRE-ALARM TRUNK SWITCHING MECHANISM. DAVID G. DEE, Rochester, N. Y., assignor, by mesne assignments, to Rochester H. Rogers, Rochester, N. Y. Filed Feb. 25, 1914. Serial No. 820,949. (Cl. 179—5.)

1. The combination with a plurality of telephone lines each provided with impulse despatching mechanism and terminating in line jacks at the central office, of a plurality of plugs each comprising a repeater trunk adapted to be connected with the telephone lines and having normally open contacts, relays for closing the latter adapted to be energized when the plugs are inserted in the jacks, of means for short circuiting the relay of one trunk when the other relay is operated.



2. In a telephone fire alarm trunk switching mechanism, the combination with two separate sets of signal apparatus, and a plurality of subscribers' telephone lines including telephone sets each line provided with means independent of said telephone sets for despatching impulses of current thereover, of central office switchboard mechanism for connecting the subscribers' lines with the signal apparatus comprising means coöperating with both sets of signal apparatus and serving to seize one set for the first incoming call and switch subsequent incoming calls onto the other set of signal apparatus.

3. In an alarm trunk signal switching mechanism for telephone fire alarm systems, the combination with a plurality of subscribers' lines, of separate sets of alarm mechanisms, an alarm signal despatching mechanism on each subscriber's line and operable independent of the normal functions of said line, a plurality of means for connecting the different lines and one or another of the alarm mechanisms upon the operation of a despatching mechanism, and apparatus associated with said connecting means for automatically appropriating one of the alarm mechanisms to one of the subscribers' lines and rendering the other alarm mechanism capable only of being connected to another subscriber's line.

4. In an alarm trunk signal switching mechanism, the combination with a telephone exchange system comprising a plurality of subscribers' lines and a plurality of alarm trunks, of switch board plug circuits for connecting the subscribers' lines to the alarm trunks, and apparatus for connecting the plug circuits with one or another of the alarm trunks and serving when one trunk is connected to a line to connect the other plugs to the idle alarm trunk.

5. In a fire alarm telephone system, the combination with a plurality of subscribers' lines, a central exchange, a plurality of alarm trunks and a plurality of plug circuits for connecting said lines and trunks, of an automatically operated switching apparatus, controlling the connections between the plug circuits and trunks and acting to seize one trunk upon the connection of a plug to a line and to connect the remaining plugs to the other trunk.

[Claims 6 to 18 not printed in the Gazette.]

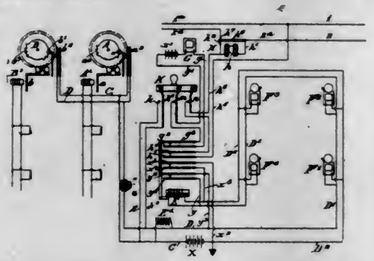
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1,225,937. FACTORY-FIRE-DRILL SYSTEM. DAVID G. DEE, Rochester, N. Y., assignor, by mesne assignments, to Rochester H. Rogers, Rochester, N. Y. Filed Feb. 25, 1914. Serial No. 820,950. (Cl. 177—367.)

1. The combination with a normally energized alarm circuit provided with alarm mechanism thereon, a resistance reducing the flow of current bridged to said circuit and a galvanometer arranged in the latter and acting to cut out said resistance upon a decrease in the flow of current below a predetermined voltage and indicating mechanism actuated by the deënergizing of the resistance.

2. The combination with a normally energized alarm circuit provided with alarm mechanism, and a resistance included in said circuit for normally rendering said mech-

anism inoperative, of a device for maintaining the flow of current under a constant test and serving to cut out said resistance when the flow of current drops below a given voltage and a circuit having trouble indicating mechanism adapted to be set into action upon the opening of the alarm circuit.



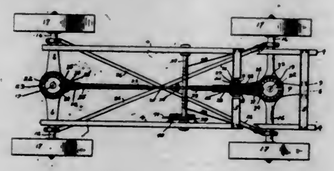
3. The combination with a main alarm circuit which is normally energized and provided with alarm mechanism, of means for testing the flow of current comprising a movable member, contacts arranged in said circuit and adapted to be opened by the movement of said member in one direction due to a fall in the potential of the current flowing in the main circuit, an independent circuit having trouble indicating devices and means for energizing said circuit when the main circuit is opened.

4. The combination with a main alarm circuit which is normally energized and provided with alarm mechanism, and also a relay coil of sufficient resistance to normally render the alarm mechanism inoperative, normally open contacts controlled by the relay and a local trouble indicating circuit extending from said contacts, of normally closed contacts in the main circuit and means controlled by current in the main circuit for opening said contacts when the flow of current falls below a predetermined voltage.

5. The combination with a main circuit normally energized and provided with alarm devices, a resistance for normally rendering said devices inoperative, a trouble alarm circuit having indicating devices normally maintained inoperative by the energized condition of the resistance, of testing apparatus for operating the alarm devices comprising normally open contacts adapted when closed to bridge the main circuit and shunt the resistance, normally closed contacts in the trouble circuit and means for opening the latter contacts when the former are closed.

[Claims 6 to 13 not printed in the Gazette.]

1,225,938. MOTOR-VEHICLE. HERBERT F. DEPUE and CLARK A. DEPUE, Moville, Iowa. Filed June 12, 1916. Serial No. 103,300. (Cl. 21—90.)

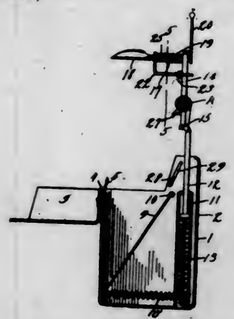


1. In a motor vehicle, a main frame, a drive axle including an axle housing, a differential gear and its housing, a bolster disposed longitudinally of the main frame and supported by the differential housing, the bolster being provided with journals at its ends, bearings on the main frame inclosing the journals, a drive shaft extending through one of the journals, and a driving connection between the shaft and said gearing.

3. In a motor vehicle, a main frame, front and rear axles, each including an axle-shaft and its housing, a differential-gear housing, and a differential-gear inclosed thereby and having intermediate parts supported by the differential-gear housings, upright shafts rotatably inclosed by said parts, and upon which the latter housings are pivoted, bevel pinions on the lower ends of said shafts and engaged with the drive rings, bevel-gears on the upper ends of said shafts, the front bolster being disposed longitudinally of the main-frame and provided at its ends with journals pivoted on the main frame, the rear one of said journals being provided with an axial bore communicating with said part, a main-drive shaft disposed longitudinally of the main-frame, and having its front end portion inclosed by said bore, bevel-pinions on the main drive shaft engaged with said latter gears, links connecting the ends of each axle with the opposite ends of the other axle, a steering-gear shaft, flexible links wound in opposite directions thereon, and connected with the respective ends of one of said axles, and means for controlling said latter shaft, including a worm-wheel on the latter shaft and a steering-post having a worm engaged with the worm-wheel.

[Claims 2 and 4 not printed in the Gazette.]

1,225,939. POCKET MATCH-BOX. JAY H. DEWEESE, Moscow, Ky. Filed July 12, 1916. Serial No. 108,869. (Cl. 206—21.)



1. In a match box, the combination with a container, of a rod vertically movable therein, resilient means for urging the rod in one direction, a match holder pivotally mounted on the outer end of the rod, resilient means for moving the match holder in one direction and means for ejecting a match from said holder.

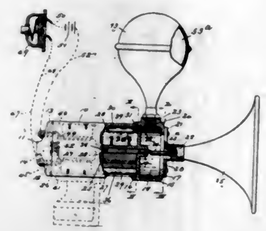
2. In a match box, the combination with a container, of a vertically movable rod therein, a spring for normally pressing said rod outwardly from the container, a bar pivoted to the rod and adapted to swing at right angles thereto, a dog secured to the bar, means within the container for engaging the dog to retain the rod within the container against the action of the aforementioned spring, a match holder rotatably mounted on the bar, means for rotating the match holder and means for ejecting matches therefrom.

3. In a match box, the combination with a container, of a follower for moving the matches toward one wall of the container, a pivotally mounted match holder mounted on a sliding rod and adapted to move into said container and means for moving the holder pivotally upon its movement from the container.

4. In a match box, the combination with a container, of a rod slidably mounted therein, means for urging said rod outwardly, a bar pivoted on the rod, a spring for moving the bar in substantial alinement with the rod, a match holder rotatably mounted on the bar, a finger piece secured to the match holder, a trip member slidably mounted on the match holder, means for moving the trip member in one direction to eject a match from the holder, the finger piece being adapted to engage the trip member to prevent such movement, a dog carried by the bar, means within the container for engaging the dog and means for releasing the dog.



1,225,940. ALARM DEVICE. LAURENS P. DIXON, New York, N. Y. Filed Jan. 20, 1914. Serial No. 813,235. (Cl. 116—1.)



1. In an alarm device of the character described, a compression chamber with a valve controlled air inlet, means on the chamber whereby a sound producing device adapted to be operated by air pressure may be detachably mounted on the chamber, an air compressing means connected to the chamber, adapted to be operated at intervals for supplying air through the valve controlled inlet to increase the air pressure therein for operating the sound producing device to signal an alarm, elastic means on and directly connected to the compression chamber, providing an auxiliary chamber which is filled with air under pressure in unison with the charging of the compression chamber, said elastic means being adapted to be manually manipulated to feed air into the compression chamber to operate the sound producing device independently of the operation of the air compressing means.

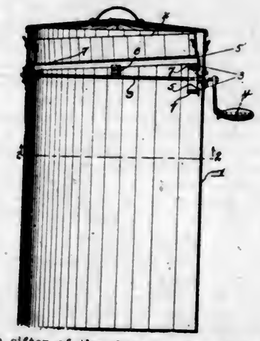
2. In an alarm device of the character described, a compression chamber having a partition wall provided with a valve controlled air inlet, means on the chamber whereby a sound producing device adapted to be operated by air pressure may be detachably mounted thereon, electrically operative air compressing means connected to the chamber, adapted to be operated at intervals for supplying air through its inlet to increase the air pressure therein for operating the sound producing device to signal an alarm, and an elastic auxiliary chamber on the compression chamber between the partition wall and the sound producing device, said auxiliary chamber being filled with air under pressure in unison with the charging of the compression chamber, whereby a reserve supply of air pressure is maintained to equalize variations of the air pressure in the compression chamber to produce a uniform note of alarm when the sound producing device is operated.

3. In an alarm device of the character described, a compression chamber having a casing with a dividing wall and with a valve controlled air inlet therein, means on the chamber whereby a sound producing device adapted to be operated by air pressure may be detachably mounted thereon, an electrically operative air generator connected to the chamber and mounted in the casing on the side of the dividing wall opposite to the compression chamber adapted to be operated at intervals for supplying air through the inlet of the compression chamber to increase the air pressure therein for operating the sound producing device to signal an alarm, and an elastic bulb on the compression chamber, for the purpose specified.

1,225,941 ASH-SIFTER. SAMUEL DUSKES, Montreal, Quebec, Canada. Filed Nov. 11, 1916. Serial No. 130,752. (Cl. 83—60.)

1. An ash sifter of the character described comprising, an ash can, a shaft journaled therein, bars carried by said shaft and arranged at right angles to each other, and a sifter adapted to be engaged by said bars.

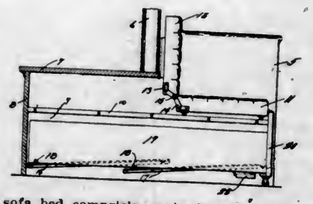
2. An ash sifter of the character described comprising, an ash can, a shaft journaled therein, bars carried by said shaft and arranged at right angles to each other, a sifter adapted to be engaged by said bars, and means carried by said bars and adapted to prevent said bars from engaging the screen portion of said sifter.



3. An ash sifter of the character described comprising, an ash can, a shaft journaled therein, bars carried by said shaft and arranged at right angles to each other, a sifter provided with an extension rim adapted to be engaged by said bars, and means carried by said bars and adapted to engage said extension rim to prevent lateral movement of said sifter relatively to said bars.

4. An ash sifter of the character described comprising, an ash can, a shaft journaled therein, bars carried by said shaft and arranged at right angles to each other, a sifter provided with an extension rim adapted to be engaged by said bars, and washers carried by the opposite ends of each bar and adapted to engage said extension rim to prevent lateral movement of said sifter relatively to said bars.

1,225,942. SOFA-BED. OLE J. ENGLUND, Worthington, Minn. Filed Nov. 26, 1915. Serial No. 63,648. (Cl. 5—18.)



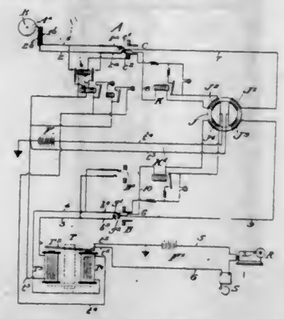
1. A sofa bed comprising a back and ends, a compartment extending rearwardly from said back, a vertical back cushion, a horizontal seat cushion, said cushions being respectively hinged to one another at their adjacent ends and adapted to fold together and pass into said rear compartment, and a bed frame disposed below said cushions extending into said compartment and adapted to be withdrawn therefrom to form a bed.

2. A sofa bed comprising, in combination with back and end sections, a compartment adjacent to and extending rearwardly from said back, seat and back cushions pivoted along their meeting edge, casters upon the bottom of said seat cushion, guideways upon the walls of said compartment and said end sections over which said cushions are adapted to travel, and a bed section mounted upon inclined tracks substantially below said cushions.

1,225,943. SWITCHBOARD CORD-CIRCUITS FOR FIRE-ALARM TELEPHONE SYSTEMS. JOHN ERICKSON, Chicago, Ill., assignor, by mesne assignments, to Rochester H. Rogers, Rochester, N. Y. Filed Feb. 25, 1914. Serial No. 821,096. (Cl. 179—5.)

1. The combination with a main circuit, a source of current supply therefor and means for varying the poten-

tial of said current comprising an alarm impulse despatching mechanism, of an inductive circuit in which current impulses are generated by fluctuations in the potential in said main circuit, a polarized magnet coil in the inductive circuit and devices operated by the magnetism developed in said coil for transmitting impulses equivalent to the originally despatched impulses.



2. The combination with a main circuit, a source of current supply therefor and means for varying the potential of said current comprising an alarm impulse despatching mechanism, of two inductive circuits in which current impulses are generated by variations in the potential in said main circuit, two polarized magnet coils, one located in each of said inductive circuits and devices operated by the magnetism developed in said coils for recording the impulses originally despatched.

3. The combination with a main circuit, means for varying the potential of the flow of current therein and a polarized electromagnet device comprising magnet coils, of a separate circuit for each magnet coil, means associated with the main circuit and with each of said magnet circuits for inductively generating current in the latter upon the occurrence of fluctuations of current in the main circuit.

4. The combination with a telephone answering cord circuit, of a calling cord circuit, a pair of inductive circuits one side of each constituting one side of said calling cord circuit, means for varying the potential of the current flow in said answering cord circuit, and means whereby an induced current is generated in said inductive circuits by the variation of the potential of the current flow in the answering cord circuit.

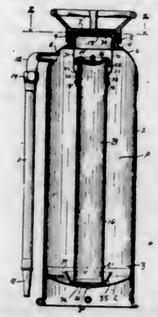
5. In a telephone fire alarm system, the combination with a subscriber's circuit provided with means for varying the potential of current flowing therein comprising a code signal impulse despatching mechanism, and a separate fire alarm circuit, provided with a polarized magnetic operating device, of switchboard mechanism for connecting said circuits whereby the code impulses may be reproduced in the alarm circuit comprising answering and calling cords each having tip and ring strands provided with inductive windings and a source of current supply connected to the tip and ring strands of the answering cord.

[Claims 6 to 19 not printed in the Gazette.]

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1,225,944. FIRE-EXTINGUISHING APPARATUS. JAMES B. ERWIN and ORLANDO R. ERWIN, Milwaukee, Wis. Filed Aug. 31, 1916. Serial No. 117,827. (Cl. 169—7.)

1. The combination of an ordinary standard tip-over fire extinguisher tank of the soda-and-acid type, an elongated cylindrical inner solution receptacle, removably installed therein, through the usual top collar-neck of said extinguisher tank, a bail, rigidly connected to the upper end of said inner receptacle, said bail fitting loosely in the collar of said extinguisher tank, for loosely retaining the upper discharge end of said inner receptacle in a central longitudinal position in said extinguisher tank, and a gravity opening stopple seating unattached upon and closing the upper end of said inner receptacle.

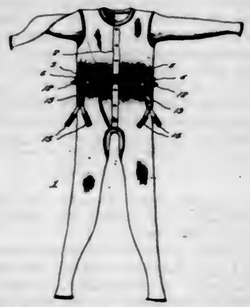


2. A fire extinguisher, comprising a substantially closed tubular outer receptacle, an elongated tubular inner receptacle loosely and removably installed therein in a longitudinal position, said receptacles having openings at corresponding ends, a collar attached to said outer receptacle at the opening thereof and having a neck rigidly fastened thereto, an outer cover for said neck, means for securely holding said cover upon said neck, a bail, rigidly connected to the discharge end of said inner receptacle and said bail fitting loosely in the collar of said outer receptacle, an inner stopple seating upon but unattached to the discharge end of said inner receptacle, together with means rigidly affixed to the inside wall of said outer receptacle for loosely and removably supporting and retaining the lower end of said inner receptacle in a longitudinal position within said exterior receptacle.

3. In a fire extinguisher of the described class, the combination of an exterior receptacle provided at its upper end with a discharge opening and a contracted neck, and at its lower end with an outwardly and upwardly tapering bracket adapted to surround and removably retain the lower end of an inner receptacle in place in said exterior receptacle, an inner receptacle provided at its upper end with a loosely fitting stopple and a bail, said inner receptacle being of uniform diameter throughout its length, said bail being adapted to removably fit the contracted neck of said inclosing receptacle, while it retains said inner receptacle in place and facilitates removing the same from said outer receptacle.

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1,225,945. CHILD'S UNDERGARMENT. JENNIE L. P. FEINSTEIN, Grand Forks, N. D. Filed Mar. 23, 1916. Serial No. 86,119. (Cl. 2—144.)



1. A knit undergarment having a belt integrally knit therewith provided with eyelets adapted to receive fastening devices for garment supporters.

[Claim 2 not printed in the Gazette.]



1,225,946. EMERGENCY-WINDLASS FOR AUTOMOBILES. LAWRENCE FERNHOLZ, Arcadia, Wis. Filed June 6, 1916. Serial No. 101,927. (Cl. 242—95.)

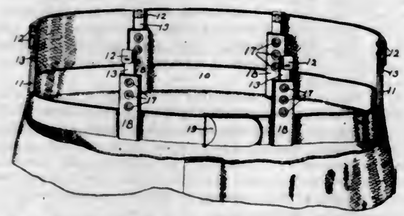


1. An emergency draft windlass for the purpose set forth provided with a flexible draft member, comprising a hollow drum fitted telescopically over the hub of an automobile wheel, and having end flanges, one of said flanges having a plurality of T-shaped slots arranged in pairs, each coincident to a spoke of the driving wheel, the portion of each slot forming the top of the T being concentric with the center of the drum, the other portion of the T-shaped slot extending toward the edge of the flange of the drum, and staples arching the spokes, the arms of each entering the T-shaped slots adjacent the T-portions thereof, whereby upon imparting a partial movement to the drum the arms of the staples will enter the ends of the T-portions of the slots, thereby detachably clamping the drum to the wheel.

2. An emergency draft windlass for the purpose set forth provided with a flexible draft member, comprising a hollow drum fitted telescopically over the hub of an automobile wheel, and having end flanges, one of said flanges having a plurality of T-shaped slots arranged in pairs, each coincident to a spoke of the driving wheel, the portion of each slot forming the top of the T being concentric with the center of the drum, the other portion of the T-shaped slot extending toward the edge of the flange of the drum, and staples arching the spokes, the arms of each entering the T-shaped slots adjacent the T-portions thereof, whereby upon imparting a partial movement to the drum the arms of the staples will enter the ends of the T-portions of the slots, thereby detachably clamping the drum to the wheel, means upon the arms of the staples to tighten the drum in position, the arms of the staples having means whereby the staples may arch the spokes of the wheel without removal of the tightening means.

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1,225,947. BELT. ALLISON HOWARD FLEMING, Fairmont, W. Va. Filed Oct. 30, 1916. Serial No. 128,451. (Cl. 241—9.)



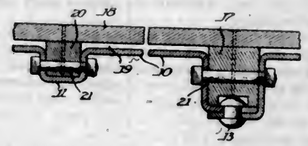
1. A trousers-supporting belt having flat stiffened hip-surmounting elements slidably mounted upon and adapted to maintain the belt in a plane above the hips of the wearer, each of said elements consisting of a folded member forming a belt-receiving guide, and an upwardly extending trousers-engaging device carried by said member and secured between the folds thereof to define the width of the belt-receiving guide.

2. A trousers-supporting belt having flat stiffened hip-surmounting elements slidably mounted upon and adapted to maintain the belt in a plane above the hips of the wearer, each of said elements consisting of a plate provided with an inclosing fabric sheath, doubled upon itself to form a lower rounded bearing edge, and an upwardly extending trousers-engaging device carried by said member and secured at its lower end between and spacing the folds of said member, and terminating short of the bottom of the same to define a belt-receiving guide.

3. A trousers-supporting belt having flat stiffened hip-surmounting elements adapted to maintain the belt in a plane above the hips of the wearer, each of said elements consisting of a folded and stiffened member, a trousers engaging device having its arm located between the parts of said folded member, and fastening means extending through the parts of the folded member and the arm, the end of the latter defining a belt receiving guide between parts of the folded member.

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1,225,948. STEEL-SHEATHED BOX-CAR. WILLIAM E. FOWLER, Sr., Chicago, Ill., assignor to The Fowler Car Company, Chicago, Ill., a Corporation of Illinois. Original application filed May 28, 1914, Serial No. 841,465. Divided and this application filed Feb. 17, 1915. Serial No. 8,756. (Cl. 105—192.)



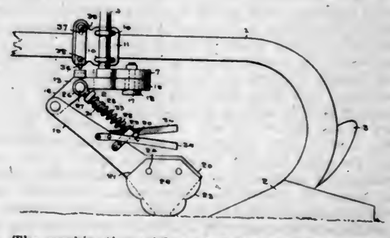
1. In a railway car, the combination of a side wall composed of a plurality of sheets or plates, the marginal edges of which are bent into L-shape, the terminal flanges of adjacent L-shaped portions being overlapped and riveted, the channel-shaped space formed by such construction being open to the inside of the car and being adapted to receive a wooden post.

2. In a railway car, the combination of a sheathing composed of metallic sheets, two of the marginal edges of each of which sheets are bent and overlapped to form channels, said channels extending outside of the plane of the sheets, means for securing together the overlapped portions of the sheets, and means extending parallel to the plane of the side of the car for bridging said channels and preventing their spreading under strain, substantially as described.

3. A car end constructed of a plurality of alined metal plates having their meeting edges constructed in Z-shape, the lateral ribs whereof extend outwardly beyond the plane of the plates and the vertical flanges whereof overlap and are connected together in channel-beam formation.

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1,225,949. COLTER. MORGAN C. FRENCH, Denver, Colo. Filed Oct. 11, 1916. Serial No. 125,058. (Cl. 97—6.)



1. The combination with a plow beam, of a supporting member adapted to be attached thereto, a horizontal swivel arm attached to said supporting member, a downwardly

inclined colter arm pivotally attached at its upper end to said horizontal swivel arm, and a cutter blade carried by the lower end of the colter arm.

2. The combination with a plow beam, of a supporting member adapted to be attached thereto, an angular swivel arm pivotally attached at one end to said supporting member for horizontal movement, a downwardly inclined colter arm pivotally attached at its upper end to the other end of said swivel arm, a cutter blade carried by the lower end of the colter arm, and spring tension means positioned between the angular portion of said swivel arm and the lower end of said colter arm to permit the colter arm to yield upwardly.

3. The combination with a plow beam, of a supporting member, an angular swivel arm pivotally attached at one end to said supporting member for horizontal adjustment, a downwardly inclined colter arm pivotally attached at its upper end to the other end of the swivel arm, a bracket carried by the lower end of the colter arm, a tension adjusting rod pivotally attached at its upper end to the angular portion of said swivel arm and having its lower end slidably projecting through said bracket and provided with a retaining nut, an adjusting nut mounted on and adjacent the upper end of the tension rod, and a spring positioned on the tension rod between said bracket and the said adjusting nut, whereby the tension upon the colter arm may be varied.

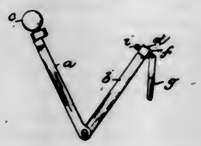
4. The combination with a plow beam, of a vertically adjustable shaft adapted to be attached to and supported by the plow beam, a horizontally disposed eccentric plate carried by the lower end of said shaft and adapted to be adjusted in a horizontal plane, a swivel arm pivotally attached at one end to said eccentric plate for horizontal swinging movement, and a colter arm pivotally attached at its upper end to the other end of the swivel arm.

5. The combination with a plow beam, of a vertically adjustable and rotatable shaft, means for clamping said shaft in adjusted position to the plow beam, a horizontally arranged eccentric plate carried by the lower end of said shaft, a horizontal swivel arm pivotally attached at one end to said eccentric plate, and a colter arm pivotally attached at its upper end to the other end of said swivel arm.

[Claim 6 not printed in the Gazette.]

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1,225,950. BAG-FASTENER. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 25, 1914. Serial No. 858,526. (Cl. 70—116.)

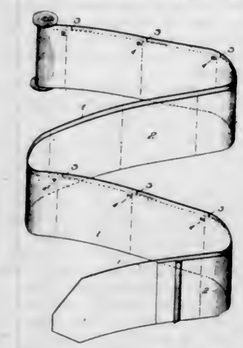


1. In combination with a bag frame, two channeled frame members, each provided with a centrally-arranged, upwardly receiving pocket, one of said frame members being provided with a pair of alined apertures, a latch stud provided with a pair of correspondingly alined flanges, said flanges designed to be received in the said alined apertures, said latch stud being further provided with a flattened portion located between said flanges, mounted to turn in one member of said frame, and further provided with a latch head adapted to have locking engagement with the other member of said frame, and a spring comprising two members, one member being provided with end means to receive the other member and said other member being provided at the other end with an offset to position said member with relation to the other member, said spring being located in the receiving pocket of one frame member and between the flanges of said latch stud to receive and be operated upon by the flattened portion of the latch stud for controlling the movement of said latch stud and for simultaneously rotatively securing said latch stud to turn in one member of said frame.

2. In combination with a bag frame, two channeled frame members, one of said frame members being provided with a pair of alined apertures, a latch stud provided with a pair of correspondingly alined flanges, said flanges designed to be received in the said alined apertures, said latch stud being further provided with a flattened portion located between said flanges, mounted to turn in one member of said frame, and further provided with a latch head adapted to have locking engagement with the other member of said frame, and a spring located in the channel of one frame member and between the flanges of said latch stud to be received and operated upon by the flattened portion of the latch stud for controlling the movement of said latch stud and for simultaneously rotatively securing said latch stud to turn in one member of said frame.

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1,225,951. PHOTOGRAPHIC-FILM CARTRIDGE. HARRY LE B. GRAY, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Original application filed May 18, 1914, Serial No. 839,232. Divided and this application filed June 30, 1915. Serial No. 37,372. (Cl. 95—9.)



1. A film cartridge consisting of a strip of flexible film and a flexible backing or covering strip of translucent flexible material associated therewith having sequential designations printed thereon adapted to be light printed on the film by exposure to actinic light.

2. A film cartridge consisting of a strip of flexible film and a flexible backing or covering strip of translucent flexible material associated therewith having sequential designations printed thereon and adapted to be printed on the film by exposure to actinic light with said designations interposed and additional designations at the margin of the covering strip.

3. A film cartridge consisting of a strip of flexible film and a flexible backing or covering strip of translucent flexible material associated therewith having sequential designations printed thereon and adapted to be printed on the film by exposure of the film to actinic light passing through the covering and additional designations printed on the margin of the covering at points removed from the first mentioned designations.

4. A film cartridge consisting of a strip of flexible photographic film and a flexible translucent covering strip of greater length than the film and having a marginal portion extending beyond a side edge of the film, said strip having designating marks inside of the marginal portion adapted to be printed on the film by exposure to actinic light and further marks on said marginal portion as an aid in positioning the film within a camera.

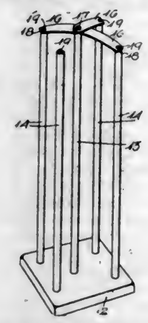
5. A film cartridge consisting of a strip of flexible film and a flexible covering strip associated therewith having



sequential designations permanently indicated thereon which are adapted to be light printed on the film by light passing through the strip when the designation bearing portion of the covering strip and the associated portion of the film are exposed to actinic light.

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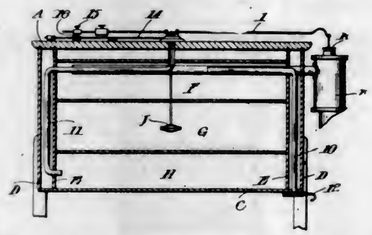
1,225,952. HOLDER FOR SEWING-MACHINE BOBBINS, &c. HUGH R. HAMILTON, Webster, Mass., assignor to Richard W. Milzner, Montreal, Canada. Filed Feb. 8, 1916. Serial No. 77,111. (Cl. 211—14.)



A holder for sewing-machine bobbins and the like, said holder comprising a base, a central rod attached thereto, a series of storage spindles attached to the base and having reduced outer ends equidistant from the rod, and independently movable rod-obstructing stops pivoted to the outer end of the rod, the stops being apertured to receive the reduced outer ends of the spindles and being arranged to spring downwardly so as normally to maintain engagement between the stops and the spindles therebeneath.

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1,225,953. INCUBATOR. RICHARD CRAIG HAMILTON, Inverness, Nova Scotia, Canada. Filed Aug. 30, 1915. Serial No. 48,135. (Cl. 119—40.)

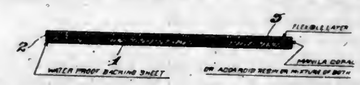


In an incubator, a nursery chamber, an egg chamber thereupon, a heat chamber superposed upon the egg chamber, an air inlet pipe terminating in the heat chamber, means for heating the air in said pipe, ventilation means comprising air outlet pipes extending from the lower part of the nursery upwardly, then inwardly and through the upper part of the heat chamber to the atmosphere, dampers for the exhaust ends and an automatic control for simultaneously operating the heating means and the ventilation means.

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1,225,954. FLOOR-COVERING. DANIEL F. HAVERSTICK, Trenton, N. J. Filed May 17, 1916. Serial No. 98,009. (Cl. 154—49.)

1. As an article of manufacture a composite sheet material comprising a backing of relatively tough fibrous material rendered water proof by a water proofing substance, a layer of varnish comprising a mixture of Manila copal and acaroid resin and a top or surface layer of flexible material upon the said layer of varnish.



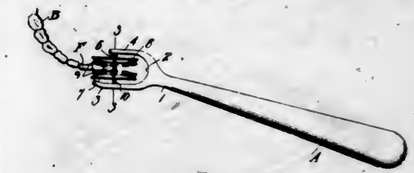

2. As an article of manufacture a floor covering comprising a backing of suitable fibrous sheet material saturated with a water proofing substance, an impervious layer of flexible material comprising Manila copal fixed to the said backing sheet and a top or surface layer of flexible material upon the layer of Manila copal.

3. As an article of manufacture a floor covering such as linoleum, cork carpet or oil cloth comprising a backing sheet of porous material saturated with water-proofing substance, a layer or coating of material upon the said backing sheet, said layer or coating comprising Manila copal and a top or surface layer of flexible material upon the said layer of Manila copal.

4. As an article of manufacture a floor covering such as linoleum, cork carpet or oil cloth comprising a backing sheet of porous material, a layer comprising Manila copal affixed to said sheet and a top or surface layer of flexible material upon said layer of Manila copal.

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1,225,955. ROTARY TOOTH-BRUSH. JOHN HICKMAN, Tangleflag, Saskatchewan, Canada. Filed June 3, 1915. Serial No. 32,019. (Cl. 15—39.)



1. In an article of the class described, the combination with a handle, of a pair of spaced rotary disks provided with oppositely extending bristles, means rotatably supporting the disks on the handle, and a connection between said disks whereby the movement of the brush in one direction over the teeth will cause the disks to recede relatively to each other, and the movement of the handle in the opposite direction over the teeth will cause the disks to approach each other.

2. The combination with a handle, of a pair of spaced rotary brushes carried thereby, a connection between the brushes whereby when the article is moved in one direction over the teeth the bristles will be moved apart relatively to each other, and when the article is moved in the opposite direction over the teeth the bristles will be moved toward each other.

3. In a rotary tooth brush, the combination with a handle terminating in a forked section, a threaded spindle having one end socketed in one of the arms of the forked section, a disk mounted upon the spindle and provided with bristles, a second disk having a pin adapted to rotatably bear in the other arm of the forked section, a tubular stud carried by said second disk and threaded interiorly to receive the threaded spindle of the first mentioned disk, and bristles carried by the second disk and projecting the opposite direction to the bristles of the first mentioned disk.

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1,225,956. PICKLING-BATH AND METHOD OF MAKING THE SAME. ADDISON F. HOFFMAN, Pittsburgh, Pa., assignor of one-half to William M. Parkin, Pittsburgh, Pa. Filed July 24, 1915. Serial No. 41,690. (Cl. 148—42.)

1. A pickling bath formed by the reaction of concentrated salt water and sulfuric acid in the presence of an

abundance of water, the salt water and sulfuric acid being proportioned to substantially eliminate free sulfuric acid in the bath.

2. A pickling bath formed from concentrated salt water and sulfuric acid proportioned to substantially satisfy the chemical equation of

$$NaCl + H_2SO_4 = NaHSO_4 + HCl.$$

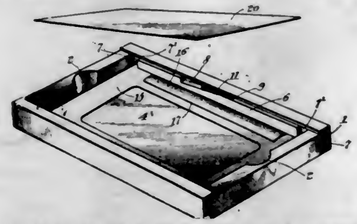
3. A pickling bath substantially non-wasting in character and composed of a solution having not less than two acid pickling elements adapted to form precipitates in the presence of the material being pickled, the non-precipitate having the property of continued activity upon the addition of the element-producing chemicals.

4. A pickling bath substantially non-wasting in character and composed of a solution having not less than two pickling elements adapted to form precipitates in the presence of the material being pickled, the precipitates, under the action of heat, forming gases combinable with the non-precipitate of the solution to produce pickling elements.

5. The method of producing a pickling bath which consist in combining not less than two pickling elements in an abundance of water, forming precipitates by the presence of the material being pickled, removing the precipitates and heating them to form gases combinable with the non-precipitate of the solution to produce pickling elements.

[Claims 6 to 12 not printed in the Gazette.]

1,225,957. PRINTING-FRAME. EDWIN H. HOLLISTER, Ashland, Nebr. Filed Oct. 12, 1914. Serial No. 866,289. (Cl. 95—77.)



1. A frame having a seat therein for a transparent pane, a clamping device in said frame adapted to bear against said pane whereby a film or the like may be clamped with the glass against said seat, and a resilient strip adapted to be interposed along one of its long edges between said clamping device and said seat.

2. A printing frame having a seat for the reception of a transparent pane and means lying within one side of said frame for clamping a film or the like against said pane, said means acting along one edge of said film.

3. In apparatus of the class described a support for a pane, means including pressure elements adapted to bear along one edge of said pane and a removable resilient strip inserted sidewise under said means for clamping a film to the pane at a point removed from the edge of said means.

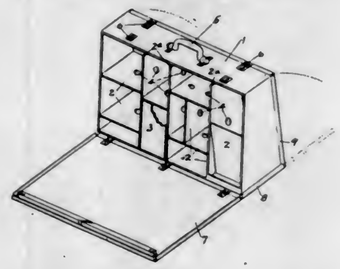
4. In combination with a printing frame and clamping means therein, a resilient strip substantially curved in cross section and adapted to be engaged with said clamping means along one of its longer edges.

5. A printing frame having a manually operable locking means including pressure means in one side in combination with a resilient strip curved in cross section and adapted to be engaged with said clamping means along one of its longer edges.

[Claims 6 to 12 not printed in the Gazette.]

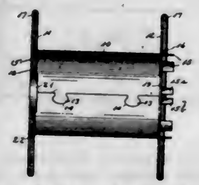
1,225,958. COMBINATION CUPBOARD AND TABLE. ERNEST P. HOPWOOD, Portland, Oreg. Filed Sept. 2, 1915. Serial No. 48,664. (Cl. 190—12.)

1. A combination cupboard and table of the character shown and described comprising a vertical cupboard structure having bottom, top and end walls secured together and provided with partition members dividing said cupboard structure into compartments, said cupboard structure being provided with carrying means, whereby it can be lifted bodily, a table composed of three sections hinged together, the middle section corresponding to the bottom of said cupboard structure and adapted to receive the same thereupon, and two side sections adapted to be folded upwardly over the opposite sides of said cupboard structure, whereby to close the same, and means for securing said side sections to said cupboard structure, substantially as shown and described.



2. A combination cupboard and table of the character referred to adapted to fit against the back of the front seat of an automobile, comprising a vertical cupboard structure having bottom, top and end walls and tapering from the bottom to the top and provided with partition members dividing said cupboard into receiving compartments for food stuffs, and a table composed of middle and side sections hinged together, said middle section corresponding in breadth to the bottom of said cupboard structure and adapted to receive the same in upright position thereupon, and said side sections being adapted to fold upwardly over the opposite sides of said cupboard structure, whereby to close the same, securing means for securing said table to said cupboard structure when folded thereabout, and carrying means upon said cupboard structure, whereby the same can be conveniently carried, substantially as shown and described.

1,225,959. SHEET-METAL SPOOL. EBER J. HUBBARD, Chicago, Ill. Filed Jan. 21, 1916. Serial No. 73,272. (Cl. 242—123.)



1. In a sheet metal spool, the combination of a cylindrical sheet metal core, end disks having openings, the ends of said core extending through said openings and being turned over against the outer faces of the disks, and strengthening and finish plates applied to the bent over ends, said ends being welded to said disks and plates thus intimately and rigidly securing the parts together.

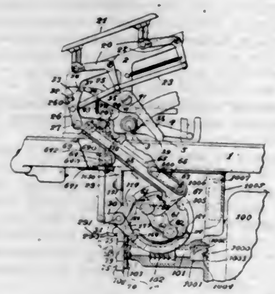
2. In a sheet metal spool, the combination of a cylindrical sheet metal core, end disks having openings, the ends of said core extending through said openings and being turned over against the outer faces of the disks, and strengthening and finish plates applied to the bent over ends, said ends being welded to said disks and plates thus intimately and rigidly securing the parts together, the outer edges of said plates being deflected over into engagement with the disks to act as abutments for resisting bending of the disks.

3. In a sheet metal spool, the combination of a sheet metal core, sheet metal end disks, said core having tongues at its ends and said disks having slots for receiving said tongues, said tongues being bent over against the outer sides of the disks to lock the disks to the core, finish plates engaging the outer faces of asid bent-over tongues and said tongues being intimately welded to said end disks and finish plates, said plates having outer peripheral flanges inclosing said tongues, said plates and end disks having central registering openings, and the peripheral edges of said disks being turned outwardly and inwardly to form strengthening flanges, said finish plates being entirely within the outer radial planes of said disk flanges so as not to interfere with the flat seating of said spool on said disk flanges.

4. In a sheet metal spool, the combination of a cylindrical core, sheet metal end disks, said end disks having central openings and slots concentric with said openings, said core having tongues at its ends for extending through said slots and being bent over against the outer sides of the disks, circular finish plates applied against the outer sides of said bent-over tongues and said tongues being spot-welded to said end disks and finish plates, said finish plates having central openings and the metal adjacent said openings being deflected inwardly a distance through the end disk central openings, flanges at the peripheries of said finish plates engaging against the outer edges of the bent-over tongues and inclosing said tongues, the outer edges of said end disks being bent outwardly and radially inwardly to form protecting flanges, the outer faces of said finish plates being within the outer radial planes of said flanges.



1,225,960. MECHANICAL MOVEMENT FOR ADDING-MACHINES. JOHN PIRRONO HUNTER and HENRY KUENTZLER, Wilkes-Barre, Pa., assignors, by direct and mesne assignments, to Adder Machine Company, a Corporation of Pennsylvania. Filed Dec. 28, 1908. Serial No. 469,529. (Cl. 74—14.)



1. The combination in an adding machine, of an operative rock shaft, a motor, a clutch mechanism adapted to be intermittently actuated therefrom; and a floating power transmission member intermediate the rock shaft and the clutch mechanism, the said member being provided with stationary guiding means.

2. The combination in an adding machine, of an operative rock shaft, a motor, a clutch mechanism adapted to be intermittently actuated therefrom; and a floating, rectilinearly moving power transmission member intermediate the rock shaft and the clutch mechanism unconnected with the clutch mechanism, and intermittently driven thereby to transmit power from the clutch to the rock shaft, the said member being provided with stationary guiding means.

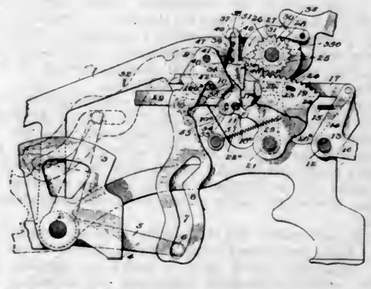
3. The combination in an adding machine, of an operative rock shaft, a motor, a clutch mechanism adapted to be intermittently actuated therefrom; and a floating bar adapted to be driven by the clutch to transmit power to the rock shaft in one direction only, the said bar being provided with stationary guiding means.

4. The combination in an adding machine, of an operative rock shaft, a motor, a clutch mechanism adapted to be intermittently actuated therefrom; and a floating bar adapted to be driven by the clutch to transmit power to the rock shaft in one direction only.

5. The combination in an adding machine of an operative rock shaft, a motor, a clutch mechanism adapted to be intermittently actuated therefrom; a float bar adapted to be driven by the clutch to transmit power to the rock shaft and means for restoring it to its original position, the said bar being provided with stationary guiding means.

[Claims 6 to 72 not printed in the Gazette.]

1,225,961. CARRYING MECHANISM. JOHN P. HUNTER and HENRY KUENTZLER, Wilkes-Barre, Pa., assignors to Adder Machine Company, Wilkes-Barre, Pa., a Corporation of Pennsylvania. Filed June 27, 1913. Serial No. 776,104. (Cl. 235—133.)



1. A wheel of lower order, a wheel of higher order, means for rotating both wheels, a vibrating arm, an oscillating lever pivoted thereon; and means for tilting the lever to engage the means whereby the wheel of higher order is rotated.

2. A wheel of lower order, a wheel of higher order, means for rotating both wheels, a vibrating arm, an oscillating lever pivoted thereon; and means adapted to be moved when the wheel of lower order is rotated, for tilting the lever to engage the means whereby the wheel of higher order is rotated.

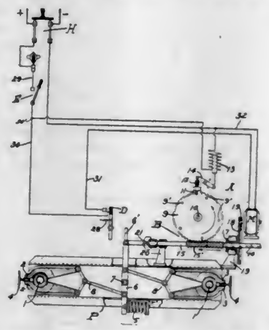
3. In a calculating machine, the combination with a main shaft; a series of numeral wheels; and means to rotate the numeral wheels; of a vibratory arm driven from the main shaft; an oscillatory lever pivoted on the arm; and means contacted by the lever when the latter is traveling in one direction, to shift the lever to cause it to positively actuate the wheel-rotating means.

4. In a calculating machine, the combination with a main shaft; a series of numeral wheels; and means to rotate the numeral wheels; of a vibratory arm driven from the main shaft; an oscillatory lever pivoted on the arm; means contacted by the lever when the latter is traveling in one direction, to shift the lever to cause it to positively actuate the wheel-rotating means; and a lock to hold the lever-shifting means in effective position to cause the operation of the lever.

5. A tens carrying device comprising a series of denominational wheels; means to rotate the numeral wheels; a vibratory arm; a lever pivoted on the arm, and normally ineffective to actuate the wheel-rotating means; and means to increase the effective length of the lever, including a device interposed in the path of the lever, to tilt the lever and cause it to positively actuate the wheel-rotating means of a wheel of higher denomination.

[Claims 6 to 39 not printed in the Gazette.]

1,225,962. SAFETY DEVICE. FREDERICK HYMANS, Glen Ridge, N. J., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 20, 1914. Serial No. 867,589. (Cl. 187—91.)



1. In an elevator, the combination with an elevator car, a spring operated car brake, an electrical switch actuating speed governor, electro-mechanical apparatus controlled thereby for controlling the application of the brake, and means for maintaining the said electrical switch in open position when the car speed is excessive.

2. In an elevator, the combination with an elevator car, a car brake, means for applying the brake, electro-mechanical apparatus operatively associated with the car brake, a governor, and means comprising a switch and circuits controlled thereby for effecting the application of the brake by the aforesaid means, and for effecting the release thereof by means of the electro-mechanical apparatus.

3. In an elevator, the combination with an elevator car, a car brake comprising brake members carried by the car and coöperating guide rails, a spring for applying the brake, electro-mechanical apparatus for releasing the brake members and maintaining the same in released position, a speed governor, and means comprising an electric switch and a system of electrical circuits for effecting the application of the brake members by means of the spring when the car speed is excessive.

4. In an elevator, the combination with an elevator car, a car brake, a spring for applying the brake, and means comprising a rotary electric motor and mechanical connections for effecting the release of the brake.

5. In an elevator, the combination with an elevator car, a car brake comprising members carried by the car and coöperating guide rails, means for applying the brake, and means for releasing the brake members carried by the car, the said means comprising a rotary electric motor and power transmitting connections between the said motor and the brake members carried by the car.

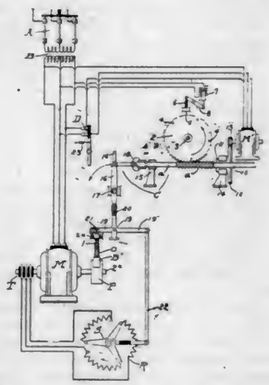
[Claims 6 to 11 not printed in the Gazette.]

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1,225,963. MOTOR-CONTROL APPARATUS. FREDERICK HYMANS, Glen Ridge, N. J., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 20, 1914. Serial No. 867,590. (Cl. 74—70.)

1. In combination with mechanism required to be operated, a translating device, means for effecting a movement of the said mechanism from an initial to an operated position by means of the translating device, means to return the mechanism to intial position without transmitting motion to the translating device, means independent of the translating device for moving the said mechanism to an initial position, and means for maintaining the said mechanism in operated position for a predetermined period of time.

2. In combination with mechanism required to be operated, a pilot motor, means for effecting a movement of the said mechanism from an initial position to an operated position by means of the pilot motor, means to return the mechanism to an initial position without imparting motion to the pilot motor, means independent of the pilot motor for moving the said mechanism to an initial position, and electrically operated means for maintaining the said mechanism in operated position.



3. In apparatus of the class described, the combination with a translating device, a member having bodily and rotary movements, means connected to the said member for operation thereby, for effecting a bodily movement of the said member in one direction by means of the translating device, and means coöperating with said first named means for effecting a return movement of said bodily movable and rotary member independently of the translating device and without transmitting motion thereto.

4. In apparatus of the class described, the combination with a translating device, a member having bodily and rotary movements, means dependent for operation on the movement of the said member bodily, and connections between the translating device and the said means for effecting a bodily movement of the said member in one direction, and means to return the said member independently of the translating device and without imparting motion thereto.

5. In apparatus of the class described, the combination with a member having bodily and rotary movements, a rotary actuating device operatively connected with the said member, and means for effecting a bodily movement of the said member in one direction by the said rotary device, and means coöperating with said first named means to effect movement of the said member independent of the rotary device in the opposite direction and without imparting motion thereto.

[Claims 6 to 20 not printed in the Gazette.]

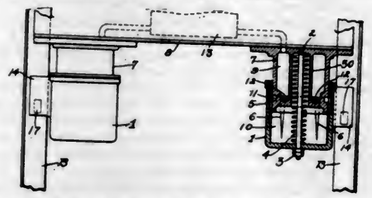
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1,225,964. SAFETY DEVICE. GRIFFITH JOHN, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 27, 1914. Serial No. 834,668. (Cl. 187—90.)

1. In a safety appliance for elevators, the car, guide rails therefor, means for engaging the guide rails when the car attains an undue speed, and cushioning means for gradually arresting the car, when the said means engage the guide rails, the cushioning means comprising a cylinder having graduated openings and rigidly connected with the first named means, a piston having openings therein and fixed to the car and movable in the cylinder, the graduated openings in said cylinder coöperating with said openings in the piston, and means independent of the piston for supporting the cylinder on the car.



2. In a safety appliance for elevators, the car, a fluid cylinder carried by the car, a piston fixed to the car and movable in the cylinder, the said piston having an interior chamber communicating with the cylinder chamber, means for arresting the cylinder, and means independent of the cylinder and piston for receiving the discharge fluid upon the movement of the piston into the cylinder.



3. In a safety appliance for elevators, the car, a fluid cylinder, a piston fixed to the car and movable in the cylinder, the said piston having an interior chamber communicating with the cylinder chamber, means independent of the piston for suspending the cylinder from the car, means movable with the car for arresting the cylinder when the car attains an undue speed, and means independent of the cylinder and piston for receiving the discharge fluid, upon the movement of the piston into the cylinder.

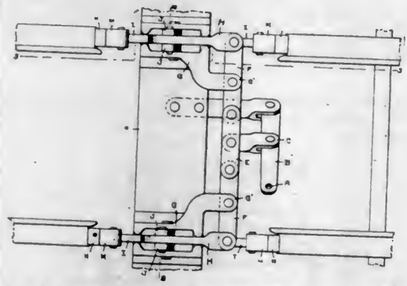
4. In a safety appliance for elevators, the car, a fluid cylinder carried by the car, a piston fixed to the car and movable in the cylinder, the said piston being in plunger form and having a chamber communicating with the fluid in the cylinder, the cylinder having graduated openings coöperating with the piston chamber to effect a gradual retardation of the piston in the cylinder, and means for arresting the cylinder when the car attains an undue speed.

5. In a safety appliance for elevators, the car, a fluid cylinder carried by the car and having a sleeve therein provided with graduated openings, a piston fixed to the car and movable in the said sleeve, the piston being in plunger form and having a chamber communicating with the interior of the sleeve, a tank carried by the car and communicating with the piston chamber, and means for arresting the cylinder when the car attains an undue speed.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,965. BRAKE MECHANISM. JOHN W. JOHNSON and GEORGE W. HOOVER, Wapella, Ill. Filed June 13, 1916. Serial No. 103,518. (Cl. 188—24.)

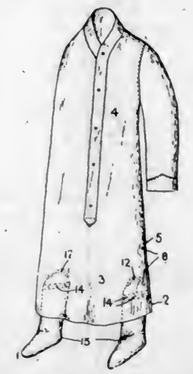


1. A brake mechanism, comprising the combination with parts of a truck, of brackets carried by said parts of the truck, said brackets having channels, arms projecting from the brackets, links mounted in the channels in the brackets, bars pivoted to said links, brake shoes carried by the bars, means to suspend the brake shoes, thrust bars adjustably attached to the upper ends of said links, levers pivoted to the arms of the brackets and to one end of each thrust bar, a head block pivoted to the inner ends of said levers, a pivotally mounted lever connected to said head block and adapted to move the same inwardly or outwardly to operate the brake shoes.

2. In a brake mechanism, the combination with parts of a truck, of brackets mounted upon parts of the truck, said brackets having channels, the walls of said brackets having curved slots, links extending vertically into the channels of the brackets, a pair of thrust bars for each link, pivot pins for securing the inner ends of the bars to the links, the ends of said pivot pins entering said slots, brake shoes pivotally attached to the outer ends of said bars, means to suspend said brake shoes from parts of the truck, a thrust bar adjustably attached to the upper end of each link, an operating lever pivotally attached to the outer end of each thrust bar, an arm on each bracket to which said levers are pivotally attached, a head block pivotally connecting said levers, and means to apply pressure to said head block for operating the brake shoes.

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1,225,966. SLEEPING-ROBE. DAVID R. JONES, Jr., Dubuque, Iowa, assignor to Jones Bros. Overall Company, Dubuque, Iowa, a Corporation of Iowa. Filed Feb. 1, 1916. Serial No. 75,501. (Cl. 2—41.)



1. In a device of the character described, a sleeping robe having a front and back portion united together and each portion provided with a flap at the bottom, securing members attached at their upper ends to the inside of the front flap, buttons on the inside of the securing members, foot receptacles provided with buttonholes near their top through one side adapted to be engaged by the buttons on the securing members.

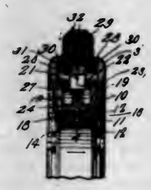
2. In a device of the character described, a sleeping robe formed in two parts and each part provided with a flap at the bottom and sewed together to near the lower end of both parts and the lower ends detachably united by buttons and buttonholes, securing members attached to the inner side of the front flap and provided with buttons and foot receptacles provided with buttonholes adapted to be engaged by the buttons on the members whereby the foot receptacles shall project below the front flap.

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1,225,967. VEHICLE-WHEEL. WILLIAM J. JONES, Martinsville, Va. Filed July 12, 1916. Serial No. 108,864. (Cl. 152—8.)

A vehicle wheel comprising an inner rim member, the member being provided with spaced radial openings, an outer member concentric to the inner member and provided with polygonal openings of substantially larger area than the openings in said inner member, plungers each having a polygonal body slidable through a respective outer member opening and a reduced stem slidable through a respective opening in the inner member, each

of said plungers having a rectangular head, springs surrounding said stems and urging said plungers outward, a tire resting on said heads and laterally coterminous



therewith, said tire having lateral flanges, and rigid side plates having internal flanges overlapping the flanges of the tire and lateral portions of the plunger heads.

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1,225,968. UNDERREAMER. WILLIAM M. KECK, Coalinga, Cal. Filed Oct. 28, 1916. Serial No. 128,243. (Cl. 255—75.)



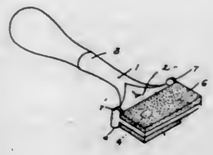
1. An underreamer comprising a body portion formed with an axial bore and a lineally disposed slot communicating with said bore and having a relatively deep portion, a relatively shallow portion, a semi-cylindrical upper end and a semi-cylindrical back; a cutter member carried within said slot and adapted for lineal sliding movement and swinging transverse movement, said cutter member having a cutting edge adapted to protrude beyond the body when said cutter member lies in the shallow portion of said slot, and to be retracted within said body when in the deep portion of said slot, and said cutter member being further formed with semi-cylindrical bearing faces adapted to seat against the upper end and back of said slot when said member is in the shallow portion thereof, and said cutter member being also formed on its back with a flat bearing face; a lineally movable mandrel fitting closely within the bore of the body portion, said mandrel having a flat face forming a lateral thrust bearing for the flat face on the cutter back; and a connection between the mandrel and cutter member.

2. An underreamer comprising a body portion formed with an axial bore and a lineally disposed slot communicating with said bore and having a relatively deep portion, a relatively shallow portion, a semi-cylindrical upper end and a semi-cylindrical back; a cutter member carried within said slot and adapted for lineal sliding movement and swinging transverse movement, said cutter member having a cutting edge adapted to protrude beyond the body when said cutter member lies in the shallow portion of said slot, and to be retracted within said body when in the deep portion of said slot, and said cutter member being further formed with semi-cylindrical bearing faces adapted to seat against the upper end and back of said slot when said member is in the shallow portion thereof, and said cutter member being also formed on its back with a flat bearing face and a lug projecting rearwardly therefrom; and a lineally movable mandrel fitting closely within the bore of the body portion, said mandrel having a flat face forming a lateral thrust bearing for the flat face on the cutter back and having also a slot in which the lug of the cutter member engages.

3. An underreamer comprising a body portion adapted to be passed through the casing of a well, and having means at its upper end for connection with a drilling line and means at its lower end for connection with a drill bit, said body portion being offset laterally with respect to said end connection means; and a cutter member carried within said body portion and adapted to be protruded therefrom and retracted thereinto, said cutter member having an elongated bearing surface adapted to project beyond the side of said body portion when said cutter member is retracted, said bearing surface being adapted to bear against the side of the well-casing and to coact with said offset body portion to guide said drill bit centrally within said casing.

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1,225,969. INSTRUMENT. CHARLES J. KENNEDY, Duluth, Minn., assignor to Northern Novelty Manufacturing Company, Duluth, Minn., a Corporation of South Dakota. Filed June 1, 1916. Serial No. 101,008. (Cl. 51—6.)

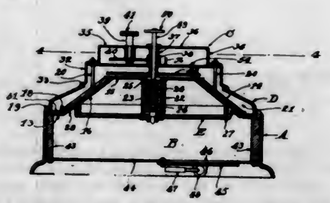


1. An instrument of the character described, comprising a handle portion, a thin flattened portion fixed to the handle and having the faces thereof parallel, pads of different character fixed to the opposite faces of the flattened portion and means adjacent the innermost edges of the pads for supporting the instrument when not in use.

2. An instrument of the character described, comprising a cylindrical shaped body portion having a handle at one end, the opposite end flattened to a rectangular shape transverse the body portion, the two faces of said flattened portion being parallel, pads fixed to the opposite faces of the flattened portion and means for preventing the pads from contacting the object upon which the instrument rests when not in use.

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1,225,970. VENDING APPARATUS. GEORGE KERN, Peru, Ill. Filed Oct. 12, 1916. Serial No. 125,202. (Cl. 46—56.)



1. In an apparatus of the nature described, the combination, of a coin receptacle, a series of coin-receiving compartments above said coin receptacle, said coin receptacles having movable bottoms, a superstructure on said coin receptacle, a rotatable disk in said superstructure, gearing constructed to rotate said disk, and a coin receiving element in said superstructure through which a coin may be dropped upon said disk and projected into one of said coin-receiving compartments.

2. In an apparatus of the nature described, the combination, of a closed coin receptacle, a series of coin-receiving compartments above said coin receptacle, said coin receiving compartments having drop-bottoms, a superstructure on said coin receptacle, means in said superstructure constructed to project a coin into one of said coin-receiving compartments, and means for depressing said bottoms to cause said coin to drop into said coin receptacle.

3. In an apparatus of the nature described, the combination, of a coin receptacle, a series of coin-receiving compartments above said coin receptacle, a coin-receiving element above said coin-receiving compartments, a movable bottom common to all of said coin-receiving compartments, means for projecting a coin deposited in said superstructure into one of said coin-receiving compartments, and means for depressing said movable bottom to cause a coin in one of said coin-receiving compartments to drop into said coin receptacle.

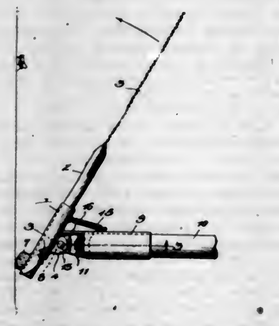
4. In a structure of the nature described, the combination, of a coin receptacle, a series of coin-receiving compartments above said coin receptacle, a coin-receiving element above said coin receptacle, a transparent cover over said coin-receiving compartments, a coin-receiving element above said compartments, means for projecting a coin deposited in said coin-receiving element into one of said coin-receiving compartments, and means for removing a coin from said coin-receiving compartments and passing it into said coin receptacle.

5. In an apparatus of the nature described, the combination, of a coin receptacle, a series of coin-receiving compartments above said coin receptacle, a dome above said coin-receiving compartments, said dome having a coin-slot, a rotatable disk, said disk being horizontally disposed in said dome and adapted to support a coin passed through said coin slot, and means for rotating said disk to project said coin into one of said coin-receiving compartments.

[Claims 6 to 18 not printed in the Gazette.]

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1,225,971. INSECT-BEATER. WILLARD W. KESTER, Paso Robles, Cal. Filed Jan. 20, 1916. Serial No. 73,219. (Cl. 43—1.)



1. A device of the class described comprising a pair of pivotally connected socket members, one of said socket members being adapted to receive one end of a handle member, the other socket member being adapted to receive the handle of a beater, and a spring connected to said socket members for retaining the same in their relative normal positions.

2. A device of the class described comprising a tubular socket member adapted to receive one end of a handle member, a second tubular socket member adapted to receive the handle of a beater, one end of the first socket member being pivotally connected to said second socket member at a point intermediate the ends thereof, and a coiled spring connected at one of its ends to one of said socket members and at its other end to the other socket member.

3. A device of the class described comprising a tubular socket member adapted to receive one end of the handle of a beater, an anti-slipping member secured to one side of said socket member at one end thereof, a second tubular socket member adapted to receive one end of a handle member, one end of said second socket member being pivotally connected to the intermediate portion of the first socket member, a coiled spring connected at one of its ends to one of said socket members and at its other end to the other socket member, and a stop secured to one of said socket members for limiting the relative movement of the same.

4. A device of the class described comprising a tubular socket member adapted to receive one end of the handle of a beater, a pair of spaced apertured ears extending laterally outward from one side of said socket member intermediate the ends thereof, a second tubular socket member adapted to receive one end of a handle member, additional apertured ears extending longitudinally of said second socket member and disposed between the first mentioned ears, a pivot pin extending through the apertures in said ears for pivotally connecting said socket members together, a coiled spring connected at one of its ends to one of said socket members and at its other end to the other socket member, and a lug extending longitudinally of the second socket member and having its free end positioned to engage one side of the first socket member for limiting the relative movement of said socket members.

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1,225,972. ROOFING-CLEAT. HARRY C. KETTELSON, Milwaukee, Wis. Filed Aug. 19, 1916. Serial No. 115,784. (Cl. 108—7.)



1. A roofing cleat comprising a strip of wire having spaced portions flattened whereby the portions of wire therebetween extend below said spaced portions to grippingly engage a roof and said spaced flattened portions being provided with nail receiving apertures.

2. A roofing cleat comprising a strip of wire having spaced portions flattened whereby the portions of wire therebetween extend below said spaced portions to grippingly engage a roof, said spaced flattened portions being provided with nail receiving apertures, and nails disposed in said apertures and having their adjacent portions swaged to secure the nails in the apertures and to provide water tight joints between the nails and the flattened portions.

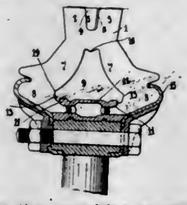
3. A roofing cleat comprising a strip of wire having spaced portions flattened and upwardly offset whereby the portions of wire disposed therebetween extend below said spaced portions to grippingly engage in a roof and said flattened portions being provided with nail receiving apertures.

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1,225,973. RUBBER TIRE AND ITS ATTACHMENT AND DETACHMENT TO AND FROM WHEELS. EDWARD BRICE KILLEN, London, England. Filed Feb. 18, 1914. Serial No. 819,438. (Cl. 152—1.)

1. A rubber tube tire having an annular air tight chamber of substantially gable-like cross section and an upstanding tread having a right and a left treading wall with unbroken plain treading surfaces and a row of deep cavities located centrally around the upstanding tread above the apex of the gable-like air chamber, said cavities being of substantially triangular shape in plan and arranged so that the base of each triangular cavity lies upon

the same circumferential line as the apex of the next and each corner of the triangular cavity being made blunt by means of extra walls, tread surface of the tire being substantially flat transversely and extending a considerable distance beyond the cavities at each side when the tread surface is free from compression so that the cavities are brought into sealed contact with the road surface substantially immediately upon engagement therewith.

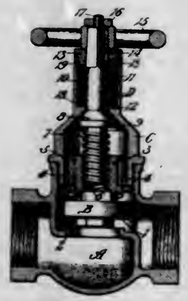


2. A rubber tube tire comprising an upstanding tread, base beads, thick side walls for carrying the load inclined toward one another, joining the tread with said base beads and an endless retaining rim which together with said side walls form an air-tight chamber of gable-like shape in cross-section, a rubber formation consisting of extended toes on the inner side of said beads and a short extra side wall at each of the corners of the base of the gable-like air chamber inclined outward and arranged between each extended toe and the adjacent portion of its corresponding side wall out of contact with the endless retaining rim, the junctions of the extra walls with the side walls being the widest part of the air chamber and out of contact with the endless retaining rim, as and for the purposes described.

3. A rubber tube tire comprising an upstanding tread, base beads, thick side walls for carrying the load inclined toward one another joining the tread with said base beads and forming an air tight chamber between them of gable-like shape in cross section, a rubber formation consisting of extended toes on the inner side of said beads, a short extra wall at each of the corners of the base of the gable-like air chamber arranged between each extended toe and the adjacent portion of its corresponding side walls and an extra wall in the form of an inwardly projecting rib of open V-shape in cross section at the apex of the gable-like air chamber, as and for the purposes described.

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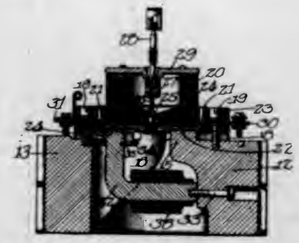
1,225,974. VALVE. JOHN J. LANE, St. Louis, Mo. Filed Mar. 20, 1916. Serial No. 85,346. (Cl. 137—4.)



A valve, comprising a casing provided with a valve seat, a valve disk that coöperates with said seat and which is provided with an upwardly-extending boss, said boss having an internally-screw-threaded bore and a plurality of laterally-projecting lugs or wings, a bonnet arranged on said casing and provided with guideways that cooperate with said lugs, said bonnet being also provided with a conical portion, a one-piece valve stem having a threaded portion that coöperates with the threaded bore in said valve disk and also a conical shoulder that cooperates with the conical portion of said bonnet so as to prevent leakage around said valve stem and out of the upper end of said bonnet, said bonnet having a cylindrical pocket that surrounds said valve stem above said conical portion, a resilient washer in the base of said pocket, an abutment carried by said valve stem and lying partly within said pocket, said abutment and pocket being provided with alining grooves for the reception of packing material, and a coiled expansion spring interposed between said abutment and said washer, said spring exerting pressure on said washer so as to expand the same and cause it to tightly engage the valve stem and prevent leakage around same in case the first-mentioned leak-preventing means becomes inefficient.

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1,225,975. MERCURY MOTOR-METER. ROBERT C. LANPHIER, Springfield, Ill., assignor to Sangamo Electric Company, Springfield, Ill., a Corporation of Illinois. Filed Mar. 12, 1913. Serial No. 753,719. (Cl. 171—265.)



1. An electricity meter, comprising a casing having a mercury chamber through which the current to be measured flows, an armature adapted to rotate in the mercury in said chamber, a magnet having a main driving pole, for causing the armature to rotate, and a pair of magnet poles of opposite polarity to that of the main driving pole and disposed at diametrically opposite sides of the armature and at right angles to the line of maximum current flow therethrough, all of said magnet poles being adjacent to the same surface of said armature.

2. An electricity meter, comprising a casing having a mercury chamber through which the current to be measured flows, an armature adapted to rotate in the mercury in said chamber, a magnet having a main driving pole, for causing the armature to rotate, and branched magnet poles of opposite polarity to that of the main driving pole and disposed at diametrically opposite sides of the armature and at right angles to the line of maximum current flow therethrough, all of said magnet poles being adjacent to the same surface of said armature.

3. An electricity meter, comprising a casing having a mercury chamber through which the current to be measured flows, an armature adapted to rotate in the mercury in said chamber, a magnet having a main driving pole, for causing the armature to rotate, a pair of magnet poles of opposite polarity to that of the main driving pole and disposed at diametrically opposite sides of the armature and at right angles to the line of maximum current flow therethrough, all of said magnet poles being adjacent to the same surface of said armature, and means adjacent to the opposite surface of said armature for providing a path for the lines of force.

4. An electricity meter, comprising a casing having a mercury chamber through which the current to be measured flows, an armature adapted to rotate in the mercury in said chamber, a magnet having a main driving pole, for causing the armature to rotate, a pair of magnet poles of opposite polarity to that of the main driving pole and disposed at diametrically opposite sides of the armature and at right angles to the line of maximum current flow



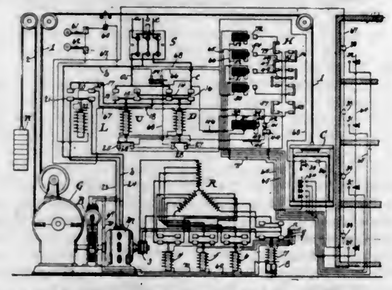
therethrough, and a soft iron pole-piece disposed at the diametrically opposite side of the armature from said main driving pole and connected with the latter, said soft iron pole-piece having a winding through which more or less of the current measured by the meter flows in one direction or the other, depending on the direction of flow of current through the armature.

5. An electricity meter, comprising a casing having a mercury chamber through which the current to be measured flows, an armature adapted to rotate in the mercury in said chamber, a magnet comprising a substantially continuous frame disposed in a plane parallel with the mercury chamber and supporting the same, said frame having a main driving pole arranged in proximity to the lower surface of the armature for causing the same to rotate, said frame also having a pair of magnet poles of opposite polarity to that of the main driving pole and disposed at diametrically opposite sides of the armature and at right angles to the line of maximum current flow therethrough, all of said magnet poles being adjacent to the same surface of said armature.

[Claims 6 to 16 not printed in the Gazette.]

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1,225,976. ELEVATOR-CONTROL SYSTEM. DAVID LARSON, Berlin, Germany, assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 30, 1912. Serial No. 712,341. (Cl. 172—152.)



In a push button controlled elevator, the combination of a polyphase supply circuit, an alternating current motor, a magnet controlled reversing switch for the motor, a magnet controlled main line switch for the motor, a relay controlling the reversing switch, and a push button for operating the relay, the operating magnets of the reversing switch, main line switch and relay being connected in a different phase of the supply circuit.

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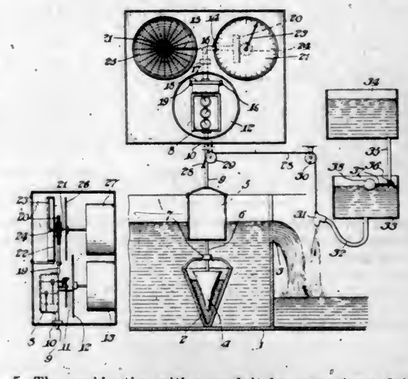
1,225,977. FLUID-MEASURING MECHANISM. JOHN W. LEDOUX, Swarthmore, Pa. Filed Mar. 18, 1915. Serial No. 15,208. (Cl. 210—19.)

1. The combination with a conduit having a weir for the passage of fluid, of counter-balancing devices movable by resultant fluid pressures due to variations of the depth of fluid in said weir and adapted to be subjected respectively to different pressures in their different positions due to said variations.

2. The combination with a conduit having a weir for the passage of fluid, of counter-balancing devices comprising a float having variable submergence and exerting variable force due to variations of the level of said fluid, whereby the positions of said devices are functions of the depth of fluid in said weir.

3. The combination with a conduit having a weir for the passage of a fluid, of counter-balancing devices acting in different mediums and adapted to be subjected to different pressures respectively at different levels of the fluid in said weir, one of said devices displacing a different bulk of a medium aforesaid at different elevations of levels of said fluid, whereby the positions of said devices are functions of the depth of fluid in said weir.

4. The combination with a conduit having a weir for the passage of a fluid, of counter-balancing devices comprising connected floats acting in mediums of different specific gravity, one of said floats having variable cross-sections and different parts thereof submerged at different depths of fluid in said weir.

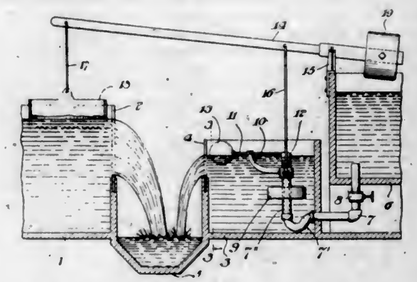


5. The combination with a conduit for conveying a fluid, of counter-balancing devices movable by resultant fluid pressures due to changes in the flow in said conduit, one of said devices having variable cross-sections and exerting variable pressures at different elevations thereof, whereby the movements of said devices are proportional to changes in the rate of flow in said conduit, a second conduit for conveying a fluid, and means operated by said devices for regulating the flow in said conduit second named proportionately to the flow in said conduit first named.

[Claims 6 to 8 not printed in the Gazette.]

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1,225,978. PROPORTIONAL METER. JOHN W. LEDOUX, Swarthmore, Pa. Filed Apr. 16, 1915. Serial No. 21,626. (Cl. 210—19.)



1. In a proportionate meter, a plurality of fluid conduits having discharge apertures of constant character, and means for providing heads in one of said apertures proportionate to the heads in the other, said means comprising a duct having a movable outlet, valve mechanism for controlling said outlet, and mechanism for moving said duct to control the position of said outlet.

2. In a proportionate meter, the combination of a plurality of fluid conduits having respective weirs of constant character and means, comprising a float movable with variations of the level of fluid in one of said weirs and a float movable with variations of the level of fluid in the other of said weirs, whereby the heads in one of said weirs are maintained in substantially constant relation to the heads in the other of said weirs.

3. In a proportionate meter, a plurality of open fluid passages having discharge notches of constant character, a float movable by fluid flowing in one of said passages, a lever movable by said float, a duct having a movable outlet discharging into the other of said passages, means whereby said lever regulates the elevation of said outlet, and valve mechanism for controlling said outlet.

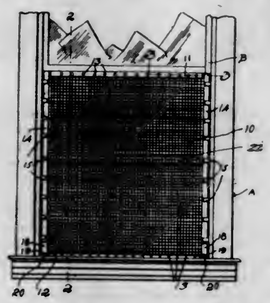
4. In a proportional meter, a weir of constant character, a movable duct having an outlet, and means whereby said duct is moved to vary the elevation of its outlet with variations in the head of fluid flowing through said weir.

5. In a proportional meter, a conduit having a movable outlet, a lever, means whereby said lever regulates the elevation of said outlet, a weir of constant character, and means movable with fluid in said weir whereby the position of said lever is varied with changes in the level of fluid in said weir.

[Claims 6 to 9 not printed in the Gazette.]

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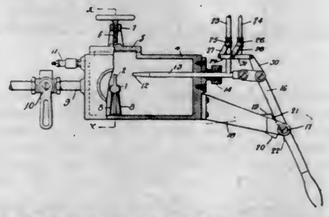
1,225,979. WINDOW-SCREEN. BERTHA E. LITTGE, Paonia, Colo. Filed Jan. 28, 1916. Serial No. 74,841. (Cl. 156—14.)



A screen comprising a body, U-shaped metallic reinforcing members embracing the upper and lower edges of the body, said members being provided with upset portions interlocking with the body, flexible reinforcing members along the side edges of the body, U-shaped clips embracing the last named reinforcing members and the body to secure said members and body together, and means for detachably securing the upper and lower ends of the screen to a window element.

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1,225,980. APPARATUS FOR SEALING GLASS BULBS. ALBERT J. LOEPSINGER, Cranston, R. I., Assignor to General Fire Extinguisher Company, New York, N. Y., a Corporation of New York. Filed July 3, 1912, Serial No. 707,473. Renewed Apr. 2, 1917. Serial No. 159,327. (Cl. 226—4.)



1. An apparatus for sealing glass bulbs comprising a closed receptacle, means for maintaining pressure within said receptacle, and means for applying heat to a bulb within said receptacle to seal said bulb.

2. An apparatus for sealing glass bulbs comprising a closed receptacle provided with means for holding a bulb therein, means for maintaining pressure within said receptacle, and means for applying heat to said bulb to seal the same.

3. An apparatus for sealing glass bulbs comprising a closed receptacle, means for maintaining pressure within said receptacle, a burner within said receptacle, and means for moving said burner toward and from the bulb to be sealed.

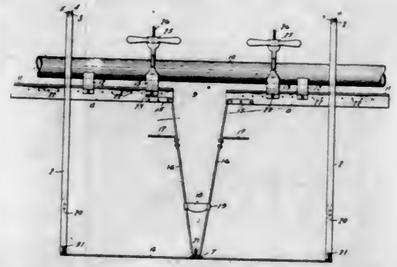
4. An apparatus for sealing glass bulbs comprising a receptacle, a burner located within said receptacle, means for supplying gas to said burner, and means for moving said burner toward and from the bulb to be sealed.

5. An apparatus for sealing glass bulbs comprising a receptacle, a burner located within said receptacle, means for supplying gas to said burner, means for regulating the quantity of gas supplied to said burner, and means for moving said burner toward and from the bulb to be sealed.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,981. PIPE-CUTTER'S WORK-BENCH. CLYDE H. LOUGHRIDGE and HOWARD R. LOUGHRIDGE, Pittsburgh, Pa. Filed Nov. 4, 1915. Serial No. 59,548. (Cl. 81—41.)



1. A pipe supporting table having a vise-supporting bar at each side of an intervening working position, a longitudinally adjustable vise mounted on each of said bars, means for rigidly supporting the bars at each end, and additional supports for the inner ends of the vise-supporting bars providing an intervening clearance space.

2. In a work bench or frame of the type disclosed, the combination with a supporting bench having a securing device, of a similar bench spaced beyond the end of said first named bench and provided with a securing device, the securing devices being movable toward and away from each other independently of their supporting benches.

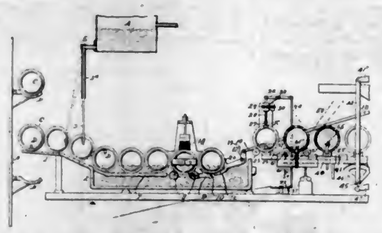
3. In a work bench or frame of the type disclosed, the combination with a supporting bench having a securing device, of a similar bench in alinement therewith spaced beyond the end of said first named bench and also provided with a securing device, a vertically arranged standard for each of said benches, vertical supports connecting the adjacent ends of said benches and providing an intervening clearance space, and bracing members connecting the bench standards and said vertical supports.

4. In combination, an interrupted two-part support terminating at each side of an intervening clearance space, a mounting frame therefor having rigidly connected bracing devices, and longitudinally adjustable supporting and securing devices mounted on each of said main supports.

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1,225,982. BARREL WASHING AND RENOVATING MACHINE. MAX LUPINSKI and GEORGE J. MEYER, Milwaukee, Wis. Filed Dec. 30, 1915. Serial No. 69,506. (Cl. 91—11.)

1. In a barrel washing and renovating machine, the combination with interior and exterior barrel washing apparatus, of a bung stopper removing device, a bung finder, a heater adapted to enter the bung hole, and an injector nozzle also adapted to enter the bung hole and connected with a source of calking and sterilizing material under pressure, and means for automatically removing barrels from the washing apparatus and advancing them step by step to the stopper removing device, bung finder, heater and injector.



2. In a barrel washing and renovating machine, the combination with a bung remover, of a spray nozzle adapted to enter the bung hole of the barrel to deliver water to the interior thereof, a heater also adapted to enter said bung hole, and means for automatically delivering barrels from the spray nozzle to the heater, whereby the heating operation may fill the barrel with superheated steam, developed from the water left in the barrel after the spraying operation.

3. In a barrel washing and renovating machine, the combination with a barrel runway, of a tank for liquid cleansing material and a flexible longitudinally extensible pipe adapted to connect said tank with the interior of a barrel while the latter is moving along the runway.

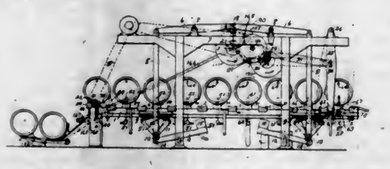
4. In a barrel washing and renovating machine, the combination with a barrel run-way, of a tank for liquid cleansing material, a flexible pipe adapted to connect said tank with the interior of the barrel, and a water tank provided with washing devices for the exterior surfaces of the barrel and to which said run-way leads.

5. In a barrel washing and renovating machine, the combination with a barrel run-way, of a tank for liquid cleansing material, a flexible pipe adapted to connect said tank with the interior of the barrel, and a water tank provided with washing devices for the exterior surfaces of the barrel and to which said run-way leads, together with barrel lifting mechanism adapted to lift barrels out of said water tank, means for opening the barrel, removing the cleansing compound, rinsing the interior surfaces, melting and draining out old calking material and injecting fresh calking material, all in a series of automatic operations.

[Claims 6 to 9 not printed in the Gazette.]

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1,225,983. BARREL CALKING AND RENOVATING MACHINE. MAX LUPINSKI and GEORGE J. MEYER, Milwaukee, Wis. Filed Dec. 30, 1915. Serial No. 69,507. (Cl. 91—11.)



1. A barrel renovating and calking machine, including the combination with a series of lineally alined spaced blow torches, an injector nozzle alined with the blow torches and similarly spaced from the last one, means for supplying melted pitch to said injector nozzle under pressure sufficient to drive it through the nozzle to all parts of the interior surface of a barrel into which the nozzle is inserted, means for advancing barrels step by step along the series of blow torches to the injector nozzle, said barrel advancing means being adapted to deposit the barrels in the intervals between step by step movements, with the blow torches and injector nozzle extending into the bung holes of the respective barrels, and means controlled by the barrels for automatically turning on combustible fluid to the blow torches and opening the injector nozzle as the barrels move into position upon the torches and nozzle.

2. A barrel renovating and calking machine, including the combination of means for intermittingly lifting and advancing barrels from one station to another, of flame injecting means at one station and pitch injecting means at another station, and means for utilizing the barrels to control the flame injecting means and the pitch injecting means.

3. A barrel renovating and calking machine, including the combination of means for intermittingly lifting and advancing barrels from one station to another, of flame injecting means at one station and pitch injecting means at another station, and means for utilizing the barrels to control the flame injecting means and the pitch injecting means, together with additional means for cutting off the supply of pitch after a predetermined interval independently of the barrel control.

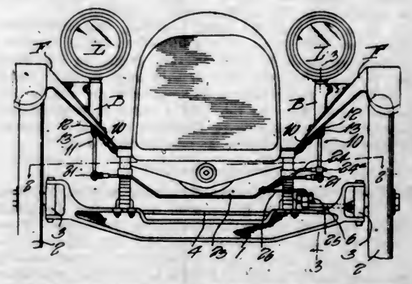
4. A barrel renovating and calking machine, including the combination of a pitch supply tank, means for heating the pitch in said tank, a spray nozzle connected with said tank, means for forcibly ejecting the pitch from said nozzle, means for automatically and successively adjusting barrels with said nozzle projecting into the bung hole thereof, and barrel actuated valve mechanism controlling the ejection of pitch from said nozzle.

5. A barrel renovating and calking machine, including the combination of a pitch supply tank, means for heating the pitch in said tank, a spray nozzle connected with said tank, means for forcibly ejecting the pitch from said nozzle, and means for automatically and successively adjusting barrels with said nozzle projecting into the bung hole thereof, and valve mechanism controlling the ejection of pitch from said nozzle, said valve mechanism including a set of valves, one provided with connections for opening it directly from the barrel and another provided with connections for opening and closing it intermittingly at predetermined intervals, and the delivery of pitch being dependent upon both valves being open at the same time.

[Claims 6 to 18 not printed in the Gazette.]

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1,225,984. DIRIGIBLE HEADLIGHT FOR VEHICLES. EVA M. LYON, Escondido, Cal. Filed Oct. 17, 1916. Serial No. 126,177. (Cl. 240—62.)

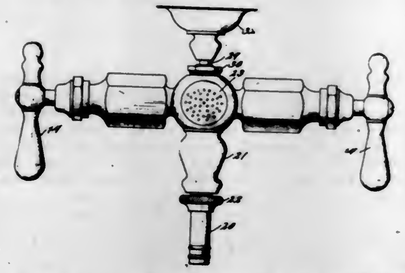


1. The combination with a vehicle steering mechanism; of a lamp supporting bracket secured upon the vehicle frame, a lamp carrying casting mounted in said bracket and having vertically alined laterally extending collars, a lamp post loosely mounted in said collars and having a tubular upper end, a lamp having a stem fixed to said tubular post end, said lamp resting and turning on the uppermost of said collars, and a connection between said post and steering mechanism whereby said lamp post is turned in said collars when the steering mechanism is operated.

2. The combination with a vehicle steering mechanism; of triangular lamp supporting brackets composed of folded sheet metal, triangular lamp carrying castings mounted in said brackets and having vertically spaced alined collars,

lamp posts having tubular upper ends loosely mounted in said collars and with openings formed therein, lamps each having a stem fixed to one of said tubular post ends, said lamps resting and turning on the uppermost of said collars, a connection between said posts for synchronously turning them, and a connection between one of said posts and said steering mechanism whereby the posts are turned in said collars when the steering mechanism is operated.

1,225,985. SHOWER-BATH APPARATUS. JOHN HOWARD MCELROY, Chicago, Ill. Filed Apr. 6, 1909. Serial No. 488,164. Renewed May 27, 1912. Serial No. 700,080. (Cl. 4—26.)



1. In a device of the class described, the combination with a hot-water cock, of a cold-water cock, a spherical mixing-chamber body between said cocks, an apertured disk mounted in the face of said body through which a shower of water can be thrown into the tub, a discharge outlet into the tub, and a valve in said mixing-chamber body adjustable to discharge the water through the apertures or the outlet, as may be desired.

2. In a device of the class described, the combination with a hot-water cock, of a cold-water cock, a spherical mixing-chamber body between said cocks, an apertured disk removably mounted in the face of said body through which a shower of water can be thrown into the tub, a discharge outlet into the tub, and a valve in said mixing-chamber body adjustable to discharge the water through the apertures or the outlet, as may be desired.

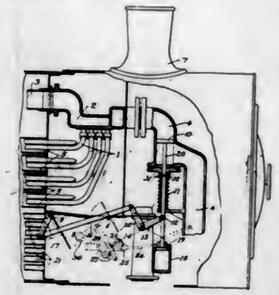
3. In a device of the class described, the combination with a hot-water cock, of a cold-water cock, a spherical mixing-chamber body between said cocks, an apertured disk threaded into the face of said body through which a shower of water can be thrown into the tub, a discharge outlet into the tub, and a valve in said mixing-chamber body adjustable to discharge the water through the apertures or the outlet, as may be desired.

1,225,986. DAMPER. NEAL TAIMBLE MCKEE, Yonkers, N. Y., assignor to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 22, 1916. Serial No. 86,034. (Cl. 122—480.)

1. In a boiler of the class described, the combination of flues, superheater elements located in said flues, fire tubes, and means to increase with an increased steam demand the proportionate part of the hot gases flowing through the fire tubes.

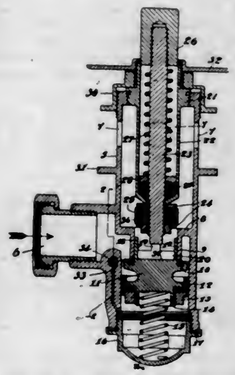
2. In a boiler of the class described, the combination of flues, fire tubes, a steam pipe delivering steam from the boiler, superheater elements located in said flues, means for controlling the flow of hot gases through the flues, and means responsive to the flow of steam through said steam pipe permitting an increased proportionate flow of hot gases through the fire tubes as the steam flow increases.

3. In a boiler of the class described, the combination of flues, a superheater whose elements are located in said flues, a pipe to carry steam from the superheater, fire tubes, a baffle adapted to prevent gases from the fire tubes, from reaching the superheater elements and to shut off the flow of hot gases through the flues, a damper in said baffle opening to its full extent in response to steam pressure in the steam pipe, and a damper adapted to permit a freer flow of hot gases through the fire tubes with an increase in steam demand, but never shutting said flow off completely.



4. In a boiler of the class described, the combination of flues, a superheater whose elements lie within said flues, a conduit carrying steam from the boiler to said superheater, a throttle in said conduit, a damper controlling the flow of hot gases through the flues, damper rigging which opens the damper to its full extent, when the throttle is opened, and keeps it open until the throttle is again closed, fire tubes, a second damper controlling the flow of hot gases through said fire tubes, mechanism adapted to open the second damper to a greater or lesser extent.

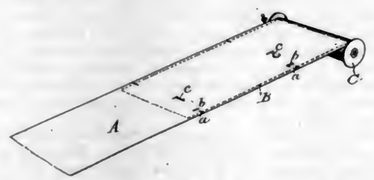
1,225,987. FLUSH-VALVE FOR WATER-CLOSETS. DANIEL W. MCNEIL, Cincinnati, Ohio, assignor to The John Douglas Company, Cincinnati, Ohio, a Corporation of Ohio. Filed June 4, 1915. Serial No. 32,083. (Cl. 137—93.)



In a flush valve, the combination of a casing closed at its lower end and having, upon its interior intermediate its ends, an annular flange, an outlet port near the upper end of the casing and an inlet port below the flange, a cap for the casing having a hollow cylindrical extension projecting into the casing, a push rod extending through the cylindrical extension, an auxiliary valve upon the lower end of the push rod and adapted to fit within the annular flange, a spring within the cylindrical extension and adapted to hold the push rod in a position with the auxiliary valve above the annular flange, a main valve normally contacting with the lower end of the annular flange, and means for permitting seepage of water between the main valve and the lower end of the casing.



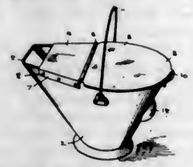
1,225,988. PHOTOGRAPHIC-FILM CARTRIDGE. BERNARD H. MEYERING, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed July 31, 1914. Serial No. 854,218. (Cl. 95—9.)



1. A photographic film cartridge embodying a flexible strip of sensitive film and an opaque flexible covering strip wound with it into a roll, said covering strip being provided with a plurality of light permeable portions each adapted, when the backing and film are unrolled, to transmit light to a restricted area of the film in the form of a designating character to be light printed thereon.

2. A film cartridge embodying a flexible strip of sensitized film, an opaque flexible covering strip wound with it into a roll, said covering strip having perforations therein forming designating characters and permitting the passage of light to the film when the strip is exposed to light and a translucent covering for reducing the intensity of the light passing to the film through said perforations.

1,225,989. COVER FOR COAL-HODS OR SIMILAR DEVICES. HERMAN F. MILLER, Rushville, Nebr. Filed Apr. 27, 1916. Serial No. 93,999. (Cl. 220—41.)

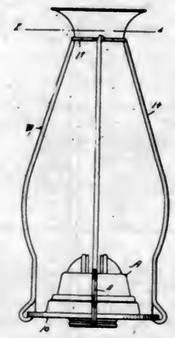


1. The combination with a receptacle having a flared mouth section, and a bail pivotally attached to said receptacle, of a cover formed of a stationary section, and a movable section hingedly connected to said stationary section, said movable section being of slightly larger diameter than the open end of the receptacle and having its side edges disposed in the path of movement of said bail whereby when the bail is moved rearwardly of the receptacle to the vertical, it will bind against the circumferential edge of the movable section to hold the removable section in closed position.

2. The combination with a receptacle having a flared mouth section, and a bail pivotally attached to said receptacle, of a cover formed of a stationary section, a movable section hingedly connected thereto, said movable section being of slightly larger diameter than the open end of the receptacle and having its side edges disposed in the path of movement of said bail whereby the bail, when swung rearwardly of the receptacle, will frictionally bind and hold the movable section in closed position, and means for normally holding the movable section closed.

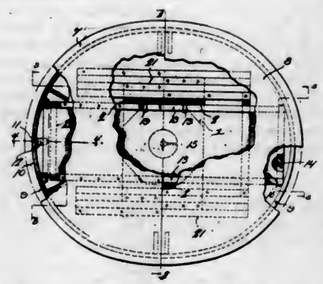
1,225,990. LAMP-CHIMNEY HOLDER. JAMES E. MITCHELL, Pine Hill, Ky. Filed Mar. 11, 1914. Serial No. 824,002. (Cl. 240—97.)

A chimney holder comprising in combination with a lamp burner, a continuous wire length forming a pair of legs having their ends secured to the burner, and a chimney engaging yoke at the upper ends of the legs, said yoke consisting of forwardly extending spring fingers formed by bending the intermediate portion between the legs forward horizontally to the latter and doubling the



remainder rearwardly to form a closed loop behind the legs, a socket formed centrally of the loop, a third leg secured in said socket and having its lower end secured to the burner, and a handle formed on said third leg thereby to steady the holder upon removing a chimney.

1,225,991. EXTENSION-TABLE. JULIUS MOHR, Milwaukee, Wis. Filed Aug. 6, 1915. Serial No. 44,009. (Cl. 45—112.)



2. An extension table comprising a table top formed in sections, one section having its underside provided with a leaf receptacle, the leaf receptacle being provided with spaced parallel walls having spaced parallel seats formed therein for the reception of the longitudinal edges of leaves, and at its ends being provided with spaced parallel supports for the ends of leaves, and a closure controlling access to the receptacle.

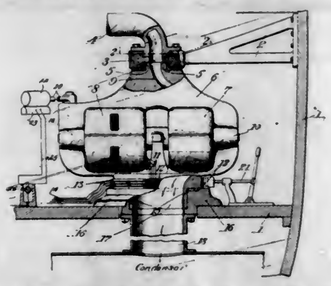
[Claims 1 and 3 not printed in the Gazette.]

1,225,992. TURBO-GENERATOR FOR SHIPS. ROBERT V. MORSE, Ithaca, N. Y. Filed Apr. 5, 1915. Serial No. 19,349. (Cl. 74—78.)

1. A gyroscopic mounting for ships' generators comprising in combination a main frame, a turbo-generator secured to said frame, a hollow trunnion through which steam may enter to the turbo-generator, a second hollow trunnion through which expanded uncondensed exhaust steam may exhaust from the turbo-generator, the main frame being mounted to swing upon said hollow trunnions, and means for controlling said swing.

2. A gyroscopic mounting for ships' generators, comprising in combination a steam turbine mounted with its

axis in a substantially horizontal position, trunnions pivotally supporting said turbine, the trunnions being arranged in a substantially vertical position, and means for conducting steam to said turbine.



3. A gyroscopic mounting for ships' turbines, comprising in combination a turbine, trunnions supporting said turbine to permit swinging movements thereof, one of said trunnions having an intake passage, one of said trunnions having an exhaust passage, the exhaust passage being sufficiently larger than the intake passage to allow expanded uncondensed exhaust steam to flow freely through the exhaust passage.

4. A gyroscopic mounting for ships' turbines, comprising in combination a turbine, trunnions supporting said turbine to permit swinging movements thereof, one of said trunnions having an intake passage, one of said trunnions having an exhaust passage, the exhaust passage being sufficiently larger than the intake passage to allow expanded uncondensed exhaust steam to flow freely through the exhaust passage, and means for controlling the swinging movements of the turbine.

5. In a gyroscopic mounting for ships' turbines, the combination of a turbo-generator mounted for swinging movements relative to a ship, means for conducting the motive fluid to the turbo-generator, means for conducting the electric current from the turbo-generator, and means for locking the turbo-generator against swinging movements relative to the ship.

[Claims 6 to 13 not printed in the Gazette.]

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1,225,993. STRAINER FOR FLUIDS. JOHN F. MULLANEY, Colorado Springs, Colo. Filed Mar. 5, 1912. Serial No. 681,692. (Cl. 210—16.)



1. The combination of a strainer for milk, water or other liquids comprising a receptacle having an intake at its top and an outlet at its bottom, with an upward projecting strainer shell approximately of the shape of the frustum of a cone with a dome-shaped apex and covering said outlet, and being perforated from top to near its base and being liquid tight about its base so that the recess between its wall and the wall of the receptacle forms a trap adapted to receive debris and retain it from the strainer surface, and a cloth or fiber strainer member covering said shell and a heavy ring securing by compression said strainer member about the said base, substantially as set forth.

2. The combination in a strainer for milk, water or other liquids compising a receptacle having an intake at its top and an outlet at its bottom, with an upward projecting perforated shell member in the form of a frustum of a cone with a dome-shaped apex, covering said outlet, the recess in the bottom of said receptacle and between said member and the wall of the receptacle forming a liquid tight trap for debris around the base of said member, a cloth or fiber strainer member covering said shell member and a heavy open ring securing said strainer member by compression about the said base, substantially as set forth.

3. In a strainer for liquids in combination with a receptacle having an intake at its top and an outlet at its bottom, an upwardly projecting flange about its outlet, forming a trap recess between it and the wall of the receptacle adapted to receive and retain debris, a shell member with perforated walls in the form of the frustum of a cone with a dome-shaped apex, detachably secured to the top of said flange and covering said outlet, a cloth or other fabric strainer member covering said shell member and secured about the base of said shell member by means of an open spring ring dropped over said fabric and down to the base of said shell member and adapted to compress said strainer member, substantially as set forth and for the purposes specified.

4. In a strainer for milk, water or other liquids, a receptacle having an intake at its top and an outlet at its bottom, an upwardly projecting flange about its outlet, forming a trap recess between it and the wall of the receptacle adapted to receive and retain debris, a shell member with perforated walls in the form of the frustum of a cone detachably secured to the top of said flange and covering said outlet, in combination with a cloth or fabric strainer member covering said shell member and secured about the base of said shell member by means of a thick open ring dropped over said fabric and down to the base of said flange, substantially as set forth and for the purposes specified.

5. A strainer for liquids comprising a receptacle having an intake at its top and an outlet at its bottom, an upwardly projecting strainer shell approximately of the shape of the frustum of a cone with a dome-shaped apex and covering said outlet, and being perforated from top to near its base and being liquid tight about its base so that the recess between its wall and the wall of the receptacle forms a trap adapted to receive debris and retain it from the strainer surface, in combination with a cloth or fiber strainer member covering said shell and a heavy ring securing said strainer member about the said base, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

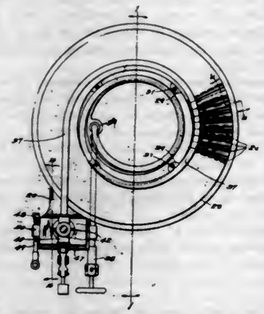
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1,225,994. OIL-BURNER. ALEXANDER Q. NASH, Kansas City, Mo. Filed Jan. 11, 1917. Serial No. 141,877. (Cl. 158—65.)

1. A burner having an annular distributing chamber of uniform cross-sectional area, means to feed carbureted gas into said distributing chamber at a tangent whereby the gas flows continuously in one direction, and a baffle dividing said chamber into upper and lower annular passages.

4. A burner having a continuous annular chamber of uniform cross-sectional area, a perforated baffle dividing said chamber into upper and lower portions, and means to feed carbureted gas into said lower portion in a line with the path of flow therethrough whereby the flow of gas is continuous in one direction.

5. A burner head comprising a ring like chamber having a starting trough arranged within the ring opening below the zone of combustion, and a retort arranged vertically over said starting trough and continuous throughout the length of the latter, and means connecting the retort and burner ring to feed gas into the latter at a tangent.

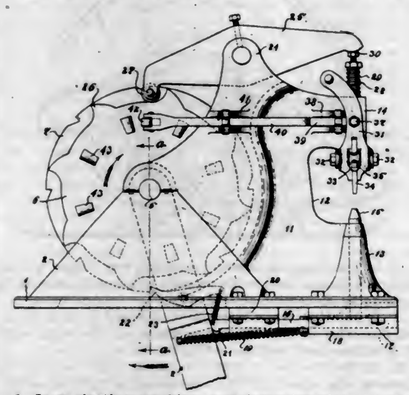


8. A burner head comprising a channel provided with a laterally extending flange, an inverted channel member having one edge resting on said laterally extending flange and the other edge seated within the bend of the first named channel to form a closed distributing chamber and a starting trough.

[Claims 2, 3, 6, 7, and 9 not printed in the Gazette.]

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1,225,995. RIVETING-MACHINE. HENRY O. NORRIS, Celeste, Tex., assignor to Burr E. Porter, Celeste, Tex. Filed Nov. 19, 1915. Serial No. 62,277. (Cl. 78—49.)



1. In a riveting machine, a reciprocatory hammer and a movable anvil, a cutting device, a means for periodically reciprocating the hammer, a means for periodically moving the anvil toward or away from the hammer while said hammer is at rest and a means for operating the cutting device after the movement of the anvil toward the hammer and prior to the reciprocation of the hammer, in combination with a revoluble tripping wheel having peripheral offsets arranged to control the operating means for both anvil and hammer and side offsets arranged to control the operating means for the cutting device.

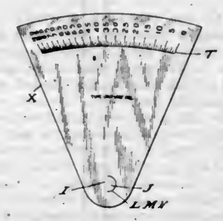
2. In a riveting machine, the combination with an anvil, a reciprocating hammer, and a cutting device, of means for operating the hammer, means for operating the cutting device, and a revolving operating element having provision for operating the hammer operating means and also the cutting device operating means, the cutting device being operated previous to the hammer.

3. In a riveting machine, the combination with a base, of an anvil mounted thereon, a hammer supported over the anvil, a hammer operating arm, a cutting device having cutters disposed relatively between the anvil and hammer, tripping levers for operating the cutting device, a tripping wheel having provision for rocking the hammer and arm and also means for operating the tripping levers.

4. In a riveting machine, the combination with a base, of an anvil mounted on the base, a hammer supported over the anvil, means for elevating the anvil, a hammer operating arm, a cutting device having cutters disposed relatively between the anvil and the hammer, an operating device for the cutting device, a tripping wheel having provision for rocking the hammer arm and also means for operating the cutting device, and an operating element having connection with the anvil elevating means and provision for imparting rotation to the tripping wheel.

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1,225,996. INDICATOR. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Nov. 10, 1915. Serial No. 60,687. (Cl. 33—1.)



1. An indicator of the character described comprising a member having an index scale and an arc of a circle thereon, the lines forming the scale corresponding to angles between a series of tangents to said arc and one of the diameters of said circle.

2. An indicator of the character described, comprising a member having an arc of a circle described thereon, the radius of said circle corresponding to a predetermined unit of time, said member having two points indicated thereon and located on a diameter within the arc of said circle, said points being located equi-distant from the center of said circle and indicia corresponding to the angles between the diameter located by said points and a series of tangents drawn to said arc.

3. An indicator of the character described, comprising a member having an arc of a circle described thereon, the radius of said circle corresponding to a predetermined unit of time, said member having two points indicated thereon located within the arc of said circle and on a diameter thereof, and an index scale which is determined by a series of tangents to said arc, the zero point of said scale corresponding to the tangent perpendicular to said diameter.

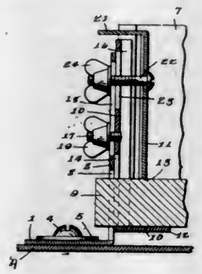
4. An indicator of the character described, comprising a transparent member having a circle described thereon, said circle being adapted to be placed tangent to a vertical line passing through the zero point of a described curve, said member being provided with means locating a diameter of said circle, said diameter paralleling a tangent to said curve at a point located a predetermined distance from said vertical line, said member having also a scale thereon indicating the number of predetermined units of displacement on said vertical line between the point where it intersects said curve and where said tangent, if projected, would interesect said vertical line.

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1,225,997. PANEL-BOARD AND LINING-STRIP SUPPORTING MEANS. EDWIN A. OLLEY, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed June 14, 1913. Serial No. 773,747. (Cl. 247—13.)

1. A device of the character described including a bracket comprising a standard formed with an opening for receiving the corner of the panel board, and means ad-

justably carried by the standard for holding the panel board, substantially as and for the purpose set forth.



2. A device of the character described including a bracket comprising a standard, the major part of the standard being flat and formed with an opening for receiving a corner of the panel board, and means carried by the standard for holding the panel board, substantially as and for the purpose described.

3. A device of the character described comprising a bracket including a standard, the major part of which is flat, the standard being formed with angularly arranged margins and the flat portion being formed with an opening for receiving the corner of the panel board, and also with a vertical guide, means for holding the panel board at the corner including a member arranged in the guide, and means for securing said member to the standard, substantially as and for the purpose specified.

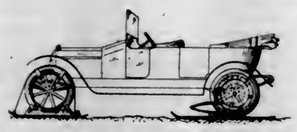
4. A device of the character described including a bracket comprising a flat portion having an opening for receiving the corner of the panel board, and means for holding the panel board engaging the upper and lower sides thereof, and means for securing the holding means to the flat part of the standard, substantially as and for the purpose set forth.

5. A device of the character described including a bracket comprising a base flange and a standard bent upwardly from the base flange, the major part of the standard being flat and formed with a centrally located opening near the base flange for receiving the corner of the panel board, and clamping means carried by the standard for engaging the panel board, substantially as and for the purpose described.

[Claims 6 to 15 not printed in the Gazette.]

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1,225,998. DEVICE FOR TRANSFORMING A MOTOR-CAR INTO A SLED. JOCELYN EMILE OLLIVIER, La Vignette St. Gervais, France. Filed Oct. 5, 1914. Serial No. 865,160. (Cl. 21—47.)



1. A motor sled having a vehicle wheel, a sled runner adapted to be used in conjunction with said wheel to raise the latter from the ground, and driving mechanism for said wheel comprising a number of pivoted spikes, said spikes being adapted to swing outwardly to extract the snow from between the spikes after the spikes are released from contact with the ground.

2. In combination, a wheel, driving mechanism for said wheel comprising a number of spikes, means for pivoting said spikes to said wheel, and means for causing said spikes to swing outwardly to extract the snow from between the spikes.

3. In combination, a wheel, a plurality of spikes pivotally mounted on said wheel, the backs of said spikes being adapted to bear against the rim of said wheel when in contact with the snow, and resilient means associated with said pivoted spikes to cause the backs of said spikes to move from the rim to extract snow, and the like, from between the spikes.

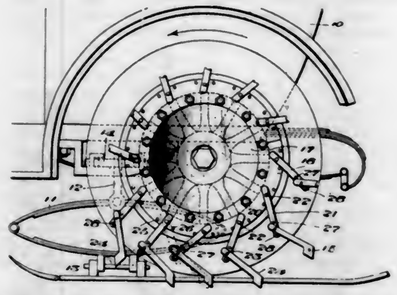
4. The combination with a sled runner, of a sled propeller comprising a vehicle wheel mounted upon said runner, and driving mechanism for said wheel having a number of pivoted spikes mounted on said wheel, the backs of said spikes being adapted to engage against the rim of said wheel when in contact with the snow, and springs associated with said pivoted spikes to cause the backs of said spikes to move from the rim to extract snow and the like from between the spikes.

5. In combination, a vehicle wheel, spikes pivotally mounted to said wheel, said spikes being adapted to engage with their backs against the outer circumference of said wheel and adapted to dig successively into the ground to effect propulsion of the vehicle, and resilient means associated with said pivoted spikes to swing the spikes outwardly to extract snow therefrom and stops on said wheel to limit the pivotal movement of said spikes.

[Claims 6 to 17 not printed in the Gazette.]

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1,225,999. DRIVING MECHANISM FOR AUTOSLEDS. JOCELYN EMILE OLLIVIER, La Vignette, St. Gervais les Bains, France. Filed Feb. 29, 1916. Serial No. 81,151. (Cl. 21—47.)



1. In combination, a wheel, a spike, and toggle mechanism connecting said spike to said wheel and permitting a swinging movement of said spike.

2. In combination, a wheel, links pivoted to said wheel, arms pivoted to said links, and spikes on the outer ends of said arms and having a swinging movement.

3. In combination, a wheel, a spike, toggle mechanism between the spike and the wheel and permitting swinging movement of said spike, and means for limiting the toggle action of said toggle means.

4. In combination, a wheel, spikes, links pivoted to said wheel, arms pivoted to said links and carrying at their outer ends said spikes, a stop to limit the movement of said link, and a stop for limiting the toggle movement between said arms and links.

5. In combination, a wheel, spikes, links pivoted to said wheel, arms pivoted to said links and carrying at their outer ends said spikes, stops at either side of said links on said wheel, and means for limiting the toggle movement between said arms and links.

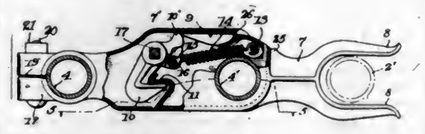
[Claims 6 to 20 not printed in the Gazette.]

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1,226,000. GATE-LOCK. JOHN OLSON, Fort Atkinson, Wis., assignor to James Manufacturing Company, Fort Atkinson, Wis., a Corporation of Wisconsin. Filed Mar. 15, 1916. Serial No. 84,291. (Cl. 70—28.)

1. In a device of the described class, the combination with a gate and gate posts, of a latch support, means for rigidly connecting said support to a gate, a swinging arm pivotally connected to said support and adapted, as said gate is closed, to contact with one of the posts, means for locking and normally retaining said swinging arm in post engaging position, means for manually unlocking said locking means, and means for automatically imparting a quick lateral movement to said swinging arm when unlocked, whereby said gate is thrown open as soon as said locking mechanism is released.





2. In a device of the described class, the combination of a latch support, means for rigidly connecting said latch support to a gate, a relatively fixed post, a swinging latch arm pivotally connected to said support and adapted as said gate is closed to contact with said post, whereby the arm is swung toward the plane of the gate, means for locking and normally retaining said swinging arm substantially in the plane of the gate, means for manually unlocking said arm, and a spring connected with said swinging arm, and arranged for increasing tension as said swinging arm moves toward the plane of the gate.

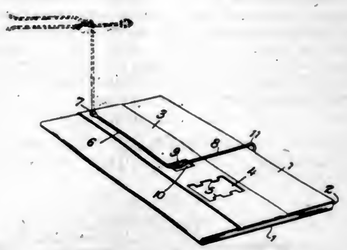
3. In a device of the described class, the combination of a shank, means for rigidly connecting said shank to a gate, a post, a swinging arm pivotally connected to said shank and adapted as said gate is closed to contact with said post, whereby it is brought into alinement with said shank, means for locking and normally retaining said swinging arm in alinement with said shank, means for manually unlocking said locking means, a spring, a wedge connected with said locking means and swinging arm, and means for increasing the tension of said spring as said swinging arm is brought into alinement with said shank, said wedge being adapted to bear against said locking mechanism whereby said last named locking mechanism is retained in its unlocked position until said wedge is withdrawn by the action of said swinging arm as the latter is brought into alinement with said shank.

4. In a device of the described class, the combination of a shank, means for rigidly connecting said shank to a gate, a post, a swinging arm pivotally connected to said shank and adapted as said gate is closed to contact with said post, whereby it is brought into alinement with said shank, a hook pivotally connected to said shank, a lug formed integral with said hook, another hook formed on the inner end of said swinging arm adapted to engage said first named hook as said swinging arm is brought into alinement with said shank, a wedge pivotally connected at one end to said shank and adapted to bear against said lug, and a spiral spring connected at one end to said last named lug and at its opposite end with said swinging arm, the tension of said spring being increased by the movement of said swinging arm, and said wedge being adapted to be drawn forward as said swinging arm is brought into alinement with said shank.

5. In a device of the described class, the combination of a shank, means for rigidly connecting said shank to a gate, a post, a swinging arm, the free end of which is provided with bifurcated members, said arm being pivotally connected to said shank and adapted as said gate is closed to contact with a gate post, whereby it is brought into alinement with said shank, means for locking and normally retaining said swinging arm in alinement with said shank, means for manually unlocking said locking means, and means for imparting a quick movement to said swinging arm, whereby said gate is thrown open as soon as said locking mechanism is released.

[Claims 6 to 11 not printed in the Gazette.]

1,226,001. BOOK-CLASP. ARTHUR T. PALMER, Albany, N. Y. Filed July 20, 1916. Serial No. 110,352. (Cl. 24—2.)



1. A clasp comprising an arm having its outer end adapted to be pivotally attached to a cover of a book, and bent at its inner end to form a crossbar, said bar being doubled over on to itself to form a clamp adapted to engage and compress the covers of a book.

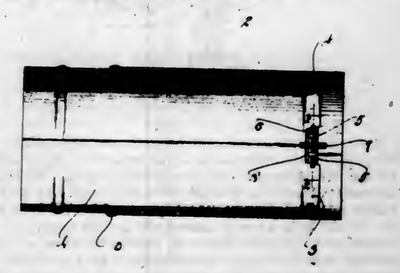
2. A clasp comprising an arm having its outer end adapted to be pivotally attached to a book cover and bent at its inner end to form a crossbar, said bar being doubled over on to itself to form a clamp having a loop at the outer portion of said clamp to adjust the width and increase the tension of said clamp.

3. A clasp comprising an arm having its outer end adapted to be pivotally attached to a book cover and bent at its inner end to form a crossbar, said bar being doubled over on to itself to form a clamp adapted to engage and compress the covers of a book, said clamp and cover having a respective projection and depression adapted to engage each other.

4. A clasp comprising an arm having its outer end adapted to be pivotally attached to a book cover and bent at its inner end to form a crossbar, said bar being doubled over on to itself to form a clamp, said clamp being depressed in part inward toward the cover of said books to increase the tension of said clamp onto a predetermined part of said book.

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1,226,002. SLIP-JOINT-PIPE-LOCKING MEANS. JOSIAH PEEPER, Coeur d'Alene, Idaho. Filed Oct. 9, 1916. Serial No. 124,594. (Cl. 126—308.)



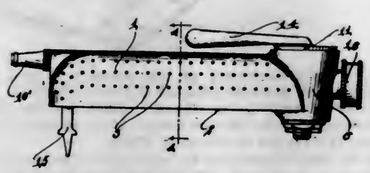
1. In a device of the character described, the combination of two telescopically joined pipe sections, a circumferential bead for one of said sections, a contractible and expansible spring band encircling said bead, and means for manually contracting and expanding the band.

2. In a device of the character described, the combination of two telescopically joined pipe sections, a circumferential bead for one of said sections, a contractible and expansible spring band encircling said bead, said band having turned or angular ends, and means carried by said ends for manually contracting and expanding said band.

3. In a device of the character described, the combination of two telescopically joined pipe sections, a circumferential bead for one of said sections, said bead having a cut-out portion, a contractible and expansible band encircling said bead and provided with turned or angular spaced end portions having threaded apertures, said end portions being mounted in said cut-out portion of the bead, and a right and left hand threaded screw-bar mounted in said threaded apertures for manually contracting and expanding said band.

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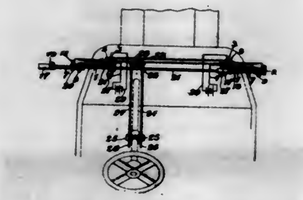
1,226,003. LAWN-SPRINKLER. JOSIAH PEEPER, Coeur d'Alene, Idaho. Filed Oct. 9, 1916. Serial No. 124,595. (Cl. 137—17.)



A lawn sprinkler having a chambered body, a hollow partition extending longitudinally of the body and dividing it into two separate chambers, one wall of each chamber being perforated, a nozzle connected to the outer end of the hollow partition, a separate intake opening for each chamber and for the hollow partition, a supply duct, a valve adapted to direct liquid from the supply duct selectively to either chamber or to both chambers simultaneously, or to shut it off from the chambers and direct it to the interior of the partition or to cut off the supply entirely.

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1,226,004. AUTOMOBILE-SIGNAL. HARRY T. RANDLE, St. Louis, Mo., assignor of one-fourth to George A. Cibulka, St. Louis, Mo. Filed Aug. 16, 1916. Serial No. 115,143. (Cl. 177—311.)



1. A signal comprising a support, an arm pivoted on the support, an illuminating element on the arm, a source of electrical energy, a circuit for supplying and illuminating said element, a bracket for supporting said arm in folded position, a handle, and connections from said handle to said arm whereby movement of said handle in one direction will extend said arm outwardly from a folded position and a subsequent movement of said handle in the same direction will move said arm again to folded position.

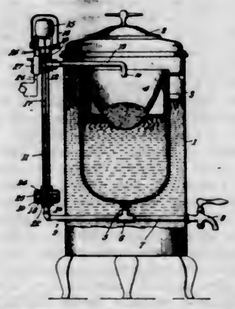
2. A signal, comprising a vertical support, a stationary arm secured to said support, a movable arm pivoted on said stationary arm, an illuminating element on the movable arm, a wire carried by said movable arm for conducting electrical energy to said illuminating element, a source of electrical energy, a circuit wire carried by said stationary arm for supplying energy to said wire to illuminate said element, means for supporting said movable arm in folded position, a handle, and connections from said handle to said arm whereby movement of said handle in one direction will impart a movement to said arm by which it will be extended outwardly from folded position, and subsequent movement of said handle in the same direction will impart a movement to said arm by which it will be moved again to folded position.

3. A signal, comprising a support, an arm pivotally carried by the support and movable from a folded position outwardly to an unfolded position, an illuminating element supported by said arm, electrical means for illuminating said illuminating element as an incident to movement of said arm from folded position outwardly to an unfolded position as aforesaid, an actuator, and connections from said actuator to said arm, whereby movement of said actuator in one direction will impart a movement to said arm by which it will be extended from folded position outwardly to an unfolded position, and a subsequent movement of said actuator in the same direction will impart a movement to said arm by which it will be moved again to folded position.

4. A signal, comprising an arm, means for fastening said arm to one of the upright side members of the wind shield of an automobile, a movable arm pivoted on said first-named arm, a wire passing through said first-named arm, a wire passing through said movable arm, contact members whereby said wires are placed in circuit when said movable arm is extended relative to said first-named arm, and whereby said wires are out of circuit when said movable arm is folded relative to the first-named arm, a source of electrical energy for energizing said wires, a lamp carried by said movable arm and illuminated by the energy of said wires, when said wires are in circuit as aforesaid, and an actuating handle for moving said movable arm to and from folded position.

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1,226,005. COFFEE-PERCOLATOR. GILBERT RATHMAN, New York, N. Y., assignor of three-tenths to William Hodgkinson and four-tenths to James A. Brown, New York, N. Y. Filed Oct. 23, 1916. Serial No. 127,083. (Cl. 53—3.)



1. In a coffee percolator, the combination of a casing, a liquid holding tank therein, a coffee bag supported above said tank, a conduit connected at its lower end with the lower portion of said tank and terminating at a point above the coffee bag, a pump in said conduit having an unobstructed liquid passage therethrough, and means for driving said pump to draw liquid from the tank and return it thereto through the coffee bag, and a coffee off-take connected with the lower end of said tank, whereby when the tank is drained through said off-take, the pump and conduit are also drained.

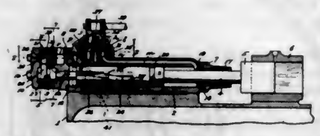
3. In a coffee percolator, the combination of a casing, a liquid receptacle therein having an open upper end, a coffee bag supported over said receptacle, a coffee off-take connected at one end with the lower portion of said receptacle and having a faucet at its outer end, a vertically extending liquid circulating conduit connected at its lower end with said off-take, and having a lateral extension on its upper end adapted to discharge the liquid into the coffee bag, a rotary pump in said circulating conduit having an unobstructed liquid passage therethrough, an electric motor for operating said pump, and a time-controlled switch for automatically stopping said motor after a predetermined period of operation.

[Claims 2 and 4 not printed in the Gazette.]



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1,226,006. POWER-HAMMER MECHANISM. SAMUEL V. RAWLINGS, Calumet, Mich. Original application filed Feb. 24, 1913, Serial No. 750,389. Divided and this application filed Jan. 22, 1917. Serial No. 143,561. (Cl. 121—10.)



1. In a power hammer mechanism, the combination with a cylinder and piston, of a distributing valve for alternately connecting the opposite ends of said cylinder to the supply and exhaust, means controlled by said piston for automatically operating said valve, and a manually controlled starting and stopping valve arranged, in idle position, to connect the forward end of the cylinder to the source of supply, and in working position, to connect the same to a port controlled by said distributing valve.

2. In a power hammer mechanism, the combination with a cylinder and piston, of a valve chest, a distributing valve therein for alternately connecting the opposite ends of said cylinder to the supply and exhaust, means controlled by said piston for automatically shifting said distributing valve and a manually operable starting and stopping valve arranged to alternately connect said valve chest and the front end of said cylinder to the source of supply.

3. In a power hammer mechanism, the combination with a cylinder and piston, of a valve chest, a distributing valve therein for alternately connecting the opposite ends of said cylinder to the supply and exhaust, means controlled by said piston for automatically shifting said valve, and a manually operable starting and stopping valve arranged, in working position, to connect said valve chest to the source of supply and the forward end of said cylinder to a port controlled by said distributing valve, said starting and stopping valve, in idle position, being arranged to connect said valve chest and the rear end of said cylinder to the exhaust and the front end of said cylinder to the source of supply.

4. In a power hammer mechanism, the combination of a cylinder having a valve chest at one end, a piston in said cylinder, a distributing valve in said valve chest for controlling the flow of motive fluid to and from the opposite ends of said cylinder, and a rock shaft journaled in the end of said cylinder and having a crank arm engaging said valve, said rock shaft and said piston having a cam slot and follower connection for effecting the movement of said valve and said cam slot having straight end portions for holding said rock shaft and valve against movement.

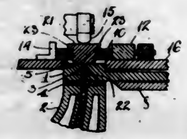
5. In a power hammer mechanism, the combination of a cylinder, a piston in said cylinder, a distributing slide valve for connecting the opposite ends of said cylinder to the supply and exhaust, an operating rock shaft and an arm on said shaft having a lost motion connection with said valve, said rock shaft and said piston having a cam slot and follower connection and said cam slot having straight end portions for holding said rock shaft against movement.

[Claims 6 to 11 not printed in the Gazette.]

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1,226,007. TYPOGRAPH MECHANISM. WILLIAM A. READE, Cleveland, Ohio, assignor to The Ludlow Typograph Company, Cleveland, Ohio, a Corporation of Maine. Filed Aug. 20, 1915. Serial No. 46,499. (Cl. 199—10.)

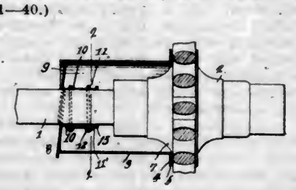
1. In a typograph machine, the combination with a suitable holding member; of a set of detached matrix bars each having an edge adapted to coöperate with a mold, and oppositely extending lateral projections, said member being formed with an elongated opening adapted to receive and support a number of said bars in selected relation with such projections resting on the sides of said member, so as to form a composite matrix, the mold coöperative edges of said bars lying below the under face of said member when thus supported therein; and other bars provided with similar lateral projections and with other projections on their mold coöperative edges adapted to extend from such composite matrix into the mold, substantially as described.



2. In a typograph machine, the combination with a suitable mold having a casting slot, and a suitable holding member; of a set of detached matrix bars each having an edge adapted to coöperate with said mold, and oppositely extending lateral projections, said member being formed with an elongated opening adapted to receive and support a number of said bars in selected relation with such projections resting on the sides of said member, so as to form a composite matrix, the mold coöperating edges of said bars lying below the under face of said member when thus supported therein; and other bars provided with similar lateral projections and with other projections on their mold coöperative edges adapted to extend from such composite matrix into the mold, substantially as described.

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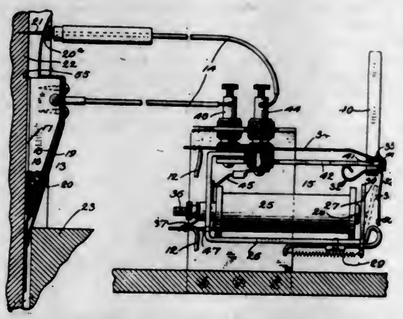
1,226,008. SPINDLE-PROTECTOR. JAMES T. RIDER, Riensi, Miss. Filed Feb. 26, 1916. Serial No. 80,672. (Cl. 21—40.)



1. The combination with a spindle and a wheel rotatably mounted with respect thereto, of a cylindrical casing rigidly secured to the wheel hub and encompasing the spindle, and a closure mounted at an inclination on the spindle and having the upper edge arranged within the upper part of the casing and the lower edge projecting beyond the lower part of the casing and the sides thereof arranged in close relation with the inner wall of the casing to prevent the access of mud to the casing and direct the mud toward the ground and to also remove mud from the outer edge of the casing.

2. The combination with a spindle and a wheel rotatably mounted with respect thereto, of a cylindrical casing connected to the wheel hub and encompassing the spindle, semi-circular closure plates, means for mounting the plates at an angle on the spindle at an inclination so that the upper plate will be arranged within the upper part of the casing and the lower plate will be arranged within the lower part of the casing while the lower edge of the lower plate will be arranged below the lower outer edge of the casing for preventing mud entering the casing and deflecting it toward the ground, and the side edges of the plates being arranged in close relation with the outer edge of the casing for removing mud from the outer edge of the casing during the rotation of the wheel and casing.

1,226,009. BURGLAR-ALARM. CHARLES RIESER, Chicago, Ill. Filed Sept. 3, 1915. Serial No. 48,810. (Cl. 177—314.)



1. A burglar alarm comprising an operating circuit branch, and an alarm circuit branch, said branches normally connected in series, and means for testing said branches independently and for locking said branches open.

2. In a burglar alarm, an operating circuit, an alarm circuit, a shunt circuit branch, a switch in said shunt circuit, a switch in said alarm circuit, a lever; the respective terminals of said circuits being connected; when said lever is in one position, both of said switches being open; when said lever is in a second position, said shunt circuit switch being closed or open and said alarm circuit switch being closed; when said lever is in a third position, said shunt circuit switch being opened and said alarm circuit switch being closed.

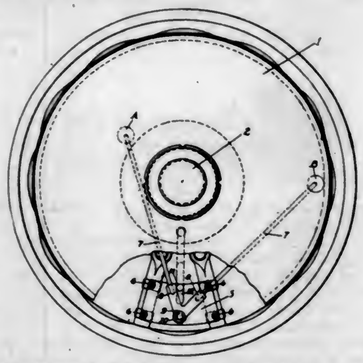
3. In a burglar alarm, an operating circuit and an alarm circuit; said two circuits being normally connected in series; a shunt circuit connecting the terminals of said alarm circuit; and a testing member; when said member is in one position, said alarm circuit and said shunt circuit both being open; when said member is in a second position, said alarm circuit being closed and said shunt circuit being open; when said member is in a third position, said alarm circuit being closed and said shunt circuit being opened or closed.

4. The combination of a burglar alarm and testing means; said alarm comprising an operating circuit, an alarm circuit, and a shunt circuit; the respective terminals of said circuits being connected; said operating circuit including an electro-magnet; said shunt circuit including a switch operated by an armature adjacent said electro-magnet; when said testing means is in one position, both said alarm and said shunt circuits being locked open; when said testing means is in second position, said armature being against said electro-magnet and the shunt circuit switch being open; when said testing means is in a third position, said armature being free to move away from said electro-magnet to close said shunt circuit when said operating circuit is open, and resilient means tending to move said armature away from said electro-magnet.

1,226,010. ALARM-BELL. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Nov. 17, 1911. Serial No. 660,871. (Cl. 116—33.)

1. In a device of the character indicated, the combination with a traction wheel, a sounding member, and means immediately under the influence of the centrifugal force immediately generated by the rotation of said wheel about its traction point and movable under the immediate action of such force to sound said member, of means under the control of the operator for permitting or preventing he movement of said first named means; substantially as described.

2. In a device of the character indicated, the combination with a traction wheel and a sounding member in the character of a circular gong mounted concentrically upon said wheel, of striking means for said member carried by said wheel and within said gong and movable into contact with said gong by the centrifugal force generated by the rotation of said wheel about its traction point; substantially as described.



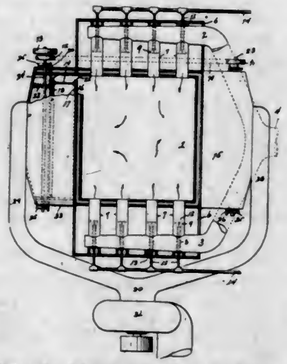
3. In a device of the character indicated, the combination with a traction wheel and a sounding member, of a pair of angularly related sounding-member-striking arms rigidly connected approximate the apex of the angle therebetween and eccentrically pivoted to said wheel near said apex and extending crosswise of the wheel; substantially as described.

4. In a device of the character indicated, the combination with a sounding member and an arm movable to sound said sounding member, of an arm rigidly connected to said movable arm and extending therefrom at an angle thereto, and a stop located between said arms and movable to and from the injunction thereof; substantially as described.

5. In a device of the character indicated, the combination with a sounding member and a pair of angularly related sounding-member-striking arms rigidly connected approximate the apex of the angle therebetween and movable to sound the sounding member, of a stop located between said arms and movable to and from said apex; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,226,011. DESICCATING APPARATUS. CHARLES E. ROGERS, Detroit, Mich. Filed Oct. 18, 1913. Serial No. 796,043. (Cl. 99—5.)



1. Desiccating apparatus comprising a chamber of comparatively large cubical content, main conduits adjacent opposite sides of the chamber, branch conduits leading from said main conduits into the chamber whereby air forced through one series of branch conduits flows into the chamber toward the branch conduits on the opposite side, means for producing a flow of heated air through the conduits, means for spraying fluid to be desiccated into each of the branch conduits, exhaust chambers at the bottom of said first named chamber upon opposite sides thereof, a screen between each of said exhaust chambers and the first named chamber, each of said screens having an area in excess of the combined cross-sectional area of the conduits, exhaust conduits in communication with said exhaust chambers, and means for withdrawing air through said exhaust conduits.



2. Desiccating apparatus comprising a chamber of comparatively large cubical content, main conduits adjacent opposite sides of the chamber, branch conduits leading from said main conduits into the chamber, means for producing a flow of heated air under pressure through the conduits, means for spraying fluid to be desiccated into each of the branch conduits in the direction of flow of the air therethrough, exhaust chambers at the bottom of said first named chamber upon opposite sides thereof, a pivotally mounted screen between each of said exhaust chambers and the first named chamber, each having an area in excess of the combined cross-sectional area of the conduits leading into any one side of the chamber, means for slowly forcing said screens out of normal position, means for returning the screens to normal position in such manner that the screen is sharply jarred or shaken, exhaust conduits in communication with said exhaust chambers, and means for withdrawing air through said exhaust conduits.

3. In a desiccating apparatus, a conduit for heated air, means for forcing heated air through the conduit, a tube in the conduit with the longitudinal axis thereof practically coinciding with the longitudinal axis of the conduit, and terminating in a bell-shaped portion at a distance from the discharge end of the conduit, a spray nozzle in said bell-shaped portion, a fluid-supply pipe, and a flexible tube connecting the nozzle with the supply pipe, said bell-shaped nozzle being less in diameter than the conduit.

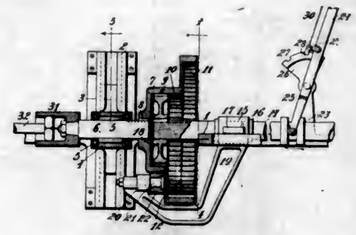
4. Desiccating apparatus comprising a chamber of comparatively large cubical content, a plurality of conduits leading thereinto upon opposite sides of the chamber, means for supplying each of the conduits with heated air having substantially equal pressure, a spraying device in each of the conduits connected with a source of the fluid to be desiccated, a screen, having a superficial area greater than the combined cross-sectional areas of the conduits, and means for withdrawing air from the chamber through the screen; said means being adapted to maintain a pressure in the chamber less than the pressure in the conduits.

5. In desiccating apparatus, conduits for heated air, means for discharging liquid to be desiccated in finely divided form into the air in the conduits, a separating chamber into which the conduits lead, an exhaust chamber communicating with the separating chamber at the bottom, means for exhausting air from the exhaust chamber, said means being of a capacity sufficient to maintain the air in the separating chamber at not greater than atmospheric pressure, and a screen between the exhaust chamber and the separating chamber having a superficial area greater than the cross-sectional area of the conduits leading into the separating chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,226,012. TRANSMISSION-GEARING. HARRY BEAUREGARD ROSS, Denver, Colo., assignor to Ross Transmission Gear Co., Incorporated, Denver, Colo. Filed Sept. 16, 1912. Serial No. 720,563. (Cl. 74—58.)

1. In a transmission gearing, a first and a second shaft, a gear carried by said first shaft, an internal gear member carried by said second shaft within which said gear operates, said internal gear member having a set of alternately disposed concentric and eccentric gear surfaces, means for shifting said gear into mesh with the respective internal gear surfaces, and means for holding said gear in mesh with said gear surfaces, said last-named means comprising an arm mounted on said first shaft to shift said shiftable gear, and a connection between said arm and said internal gear member substantially as shown and described.



2. In a transmission gearing, a first and a second shaft, a gear carried by said first shaft, an internal gear member carried by said second shaft within which said gear operates, said internal gear member having a set of alternately disposed concentric and eccentric gear surfaces, means for shifting said gear into mesh with the respective internal gear surfaces, and means for holding said gear in mesh with said gear surfaces, said last-named means comprising an arm mounted on said first shaft to shift said shiftable gear, and a connection between said arm and said internal gear member, said set of concentric and eccentric gear surfaces including a concentric gear surface of the same diameter as that of said shiftable gear, in virtue of which when said shiftable gear is in mesh with the same said internal gear member and said shiftable gear will turn as one to offset a direct connection between said shafts.

3. In a variable speed gearing, the combination of a shaft and an internal gear member fast thereon and having a set of internal gear faces a plurality of which are concentrically arranged and another eccentrically disposed with relation thereto, said gear member having shoulders on its outer side in different planes forming abutments, a second shaft, a gear carried thereby for cooperation with said internal gear, a movable member and a roller carried thereby for continuous engagement with the outer periphery of said gear member and coöperable with said abutments.

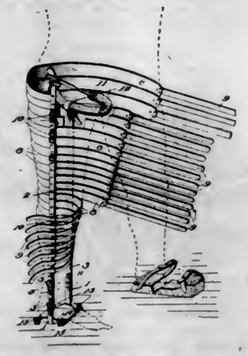
4. In variable speed gearing, the combination of a driving element, a driven element comprising change speed gears, an operating device for shifting the driving element and for moving the change speed gears of the driven member to effect changes of speed of the driven member, said driven member having external abutments in different planes, and a roller movable with the driving element and arranged for continuous engagement with the outer periphery of the driven member and for coöperation with said abutments to prevent shifting of the driving element from one position to another.

5. In variable speed gearing the combination of a driving gear, a driven gear member composed of gears of different diameters, said gear member having exterior shoulders in different planes forming abutments, means for shifting the driving gear, and means movable with the latter for continuous engagement with the outer periphery of said gear member and coöperable with said abutments to prevent shifting of the driving gear.

1,226,013. FRACTURE APPARATUS. ADOLPH ROTH, New York, N. Y. Filed Mar. 30, 1915. Serial No. 18,147. (Cl. 128—52.)

1. In a fracture apparatus, the combination with a support, of external and internal members connected to the support and located on each side of the injured limb, a plurality of bands connected to the external member, and means on said external member to which the terminals of the bands are connected, a perineum strap connected to

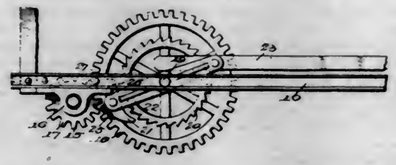
said external member, and means for connecting said strap to the internal member.



2. In a fracture apparatus, the combination with a support, of external and internal members connected to the support and located on each side of the injured limb, a plurality of reversible bands connected to the external member, and reversible means on said external member to which the terminals of the bands are connected, a perineum strap connected to said external member, and means for connecting said strap to the internal member.

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1,226,014. PROPULSION MECHANISM. GEORGE W. RUNDLE, Columbus, Ohio. Filed Nov. 8, 1916. Serial No. 130,174. (Cl. 208—36.)



1. A propulsion mechanism for vehicles, comprising a driving axle, a rotatable driving member operatively connected to said axle, a ratchet fixed to said member, a pivoted pawl engaging the ratchet, a lever carrying the pawl at one end, actuating means connected to the other end of the lever, and an abutment in the path of the pawl located to intercept the same to disengage it from the ratchet.

2. A propulsion mechanism for vehicles, comprising a driving axle, a rotatable driving member operatively connected to said axle, a ratchet fixed to said member, a pivoted pawl engaging the ratchet, a lever carrying the pawl at one end, a longitudinal drive link connected to the other end of the lever and extending transversely thereof, and an abutment in the path of the pawl to intercept the same at the end of the stroke of the lever in one direction to disengage the pawl from the ratchet, said abutment being located to intercept the pawl prior to the relative movement of the lever and the link into a dead-center position.

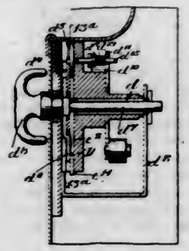
3. A propulsion mechanism for vehicles, comprising a driving axle, a rotatable driving member operatively connected to said axle, a ratchet fixed to said member, a pivoted pawl engaging the ratchet, a lever carrying the pawl at one end, a longitudinal drive link connected to the other end of the lever and extending transversely thereof, and a stop for limiting the stroke of the lever in one direction, said stop being located to stop the lever prior to the relative movement of the lever and the link into a dead-center position.

4. A propulsion mechanism for vehicles, comprising a pawl-and-ratchet device, a lever carrying the pawl at one end, a drive link connected to the other end of the lever, and an abutment intercepting the link at the limit of its strokes in opposite directions.

5. A propulsion mechanism for vehicles, comprising a pawl-and-ratchet device, a lever carrying the pawl at one end, a drive link connected to the other end of the lever, and an abutment extending transversely of the link and intercepting the latter prior to its dead-center position with respect to the lever.

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1,226,015. CHECK-CONTROLLED APPARATUS. ADOLPH RYDQUIST, Rochester, N. Y. Filed Dec. 17, 1913. Serial No. 807,162. (Cl. 194—102.)



1. In a check controlled apparatus, the combination with an oscillatory check carrier, of an actuator operatively connected to the carrier, a locking abutment, a locking member movably supported on the carrier and adapted to coöperate with said abutment, and a check controlled positioning device parallel to and connected with the locking member and operating to move it relatively to the carrier when a proper coin is not inserted, so as to engage the abutment after a limited movement of the carrier.

2. In a check controlled apparatus, the combination with an oscillatory check carrier, of an actuator operatively connected to the carrier, a locking abutment, a locking member movably supported on the carrier and adapted to coöperate with said abutment, and a plurality of independent check controlled positioning devices cooperating with different portions of a check adapted to extend beyond the face of the check nearest thereto, said positioning devices being connected with the locking member and operating to move it relatively to the carrier when a proper coin is not inserted so as to engage the locking abutment after a limited movement of the carrier.

3. In a check controlled apparatus, the combination with an oscillatory check carrier, of an actuator operatively connected to the carrier, a locking abutment, a locking member movably supported on the carrier and adapted to coöperate with said abutment, and a pair of independent check controlled positioning devices, one coöperating with the central portion and the other with the exterior edge of a check, said positioning devices being connected with the locking member and operating to move it relatively to the carrier when a proper coin is not inserted, so as to engage the locking abutment after a limited movement of the carrier.

4. In a check controlled apparatus, the combination with a check carrier, of an actuator operatively connected to the carrier, a locking abutment, a locking member movably supported on the carrier, and a check controlled positioning device connected with the locking member arranged to extend beyond the face of the check nearest thereto and operating to move it relatively to the carrier when a proper coin is not inserted so as to engage the abutment upon a limited movement of the carrier.

5. In a check carrier, of an actuator operatively connected to the carrier, a locking abutment, a locking member movably supported on the carrier, and a plurality of independent check controlled positioning devices parallel to said locking member and coöperating with different portions of a check, said positioning devices being connected with the locking member and operating to move it relatively to the carrier, when a proper coin is not inserted so as to engage the abutment upon a limited movement of the carrier.

[Claims 6 to 26 not printed in the Gazette.]

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1,226,016. TOY RIFLE. JACOB R. SANDAGE, St. Joseph, Mich., assignor to Upton Machine Company, St. Joseph, Mich., a Corporation of Michigan. Filed May 5, 1916. Serial No. 95,546. (Cl. 124—13.)



1. A toy rifle, comprising a barrel, a projectile-impelling spring associated with said barrel, a manually operable member, movable in one direction to set said spring and in the opposite direction to be moved beyond the path of movement of said spring, a trigger adapted to retain said spring in set position and to release the same, and a locking member actuated by said endwise movable member into and out of locking engagement with said trigger, in the movement of said movable member into and beyond the path of movement of said spring.

2. A toy rifle, comprising a barrel, a projectile-impelling spring, a plunger in axial alinement with said spring and movable endwise with a reciprocating movement to compress said spring and to be withdrawn beyond the path of movement thereof, a trigger adapted to engage and retain said spring in compressed position, and an endwise movable locking member located adjacent to the path of movement of said plunger and adapted to be actuated by said plunger through a relatively short distance into and out of locking engagement with said trigger.

3. A toy rifle, comprising a barrel, a projectile-impelling spring associated with said barrel, a trigger adapted to retain said spring in compressed position, a plunger in axial alinement with said spring and adapted to be moved endwise with a reciprocating movement into and beyond the path of movement of said spring to compress said spring, and a locking member arranged parallel to said plunger and adjacent to the path of movement thereof, said locking member and plunger being provided with coacting members adapted to move said locking member into locking engagement with said trigger during the compression of said spring and out of locking engagement with said trigger during the movement of said plunger beyond the path of movement of said spring.

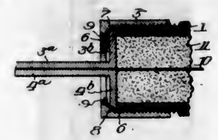
4. A toy rifle, comprising a barrel, a projectile-impelling spring associated with said barrel, a trigger including a head movable transversely to said spring and adapted to retain the same in compressed position, a plunger in axial alinement with said spring, adapted to be moved in one direction to compress said spring and in the opposite direction beyond the path of movement of said spring, and a locking member comprising an endwise movable strip located adjacent the path of movement of said spring and provided at one end with a projection extending into the path of movement of said plunger, the latter being provided with shoulders spaced apart and adapted to engage said projection of the locking member to move the same into and out of locking engagement with said trigger.

5. A toy rifle, comprising a barrel, a projectile-impelling spring associated with said barrel, a trigger including a head movable transversely into and out of the path of movement of said spring to engage and release the same in compressed position, a plunger in axial alinement with said spring, adapted to be moved in one direction to compress said spring and in the opposite direction beyond the path of movement of said spring, and a locking member comprising an endwise movable strip located adjacent the path of movement of said spring and provided at one end with a projection extending into the path of movement of said plunger, the latter being provided with shoulders spaced apart, adapted to engage said projection of the locking member to move the same a relatively short distance into a position to engage the head of said trigger during the movement of said plunger in a direction to compress said spring, and to move said locking member out of engagement with said head in the movement of said plunger in the opposite direction.

[Claim 6 not printed in the Gazette.]

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1,226,017. INCLOSED FUSE. GEORGE A. SCHAEFER, Chicago, Ill., assignor of one-half to Fred W. Irving, Chicago, Ill. Filed Apr. 23, 1914. Serial No. 833,872. (Cl. 175—273.)



1. In an inclosed fuse, the combination of a tube, a pair of plates associated with one end of said tube and each having a portion extending outwardly to constitute a part of the end wall of the tube, a fuse link having its end between said contact plates, and a sleeve carried by the end of the tube for holding the contact plates in position upon either side of said fuse link, said sleeve and said outwardly extending portion having coöperating beveled surfaces for exerting a clamping effect upon said fuse link.

2. In an inclosed fuse, the combination of an insulating tube, a pair of angular clamping plates at each end of said tube, coöpearting keys and keyways carried by the tube and clamping plates for alining them, a flat fuse link extending through said tube and between the clamping plates at either end thereof, and a threaded sleeve carried by each end of the tube for holding the corresponding clamping plates in position upon opposite sides of said fuse link, the outwardly extending portions of said clamping plates being circular and beveled and engaging similar internal beveled surfaces carried by said sleeves.

3. In an inclosed fuse, the combination of an insulating tube, a closure for each end of said tube, comprising a pair of integral bent plates, each having a longitudinally extending contact portion and a laterally extending semicircular portion, a flat fuse link extending between the longitudinal extensions of the end closures, and a threaded sleeve mounted upon each end of said tube for holding said closures securely in contact with said tube, said closures having beveled edges coöpearting with similar internal beveled surfaces upon said sleeves to clamp said longitudinal extensions against said fuse link.

4. In an inclosed fuse, the combination of an insulating tube, threaded sleeves on the ends of the tube, semicircular end closures separate from said sleeves and held in position thereby to close the ends of said tube, said end closures being of rigid metal each having a contact blade extending rigidly therefrom axially of the tube, said tube having keyways and said end closures having keys coöperating therewith to prevent rotation of said end closures relatively to said tube without interfering with the seating of said end closures against the ends of the tube, and a flat fuse link extending through said tube and between said blades, whereby the insertion of said blades into connecting jaws clamps the ends of said fuse link between said blades.

5. In an inclosed fuse, the combination of an insulating tube, threaded sleeves on the ends of the tube, a pair of rigid semi-circular metal plates separate from the corresponding sleeve and held in place thereby to close each end of said tube, said plates having rigid integral blades extending outwardly in parallel relation with the

axis of the tube, said tube having keyways and said plates having keys coöperating therewith to prevent rotation of said plates relatively to said tube without interfering with the seating of said plates against the ends of the tube, and a flat fuse link extending through the tube and between the blades substantially from end to end of said blades, whereby each pair of blades firmly clamps the corresponding end of said fuse link when said blades are inserted in a connector jaw.

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1,226,018. COLLAPSIBLE BARREL. ERNST C. SCHREINER, Toledo, Ohio. Filed Jan. 6, 1916. Serial No. 70,659. (Cl. 217—44.)



1. A collapsible barrel having staves hinged together at their outer ends for outward hinged movements relative to each other, and pairs of staves having hinges connecting together the staves of each pair for inward hinged movements relative to each other and relative to the first named staves.

2. In a collapsible barrel, a plurality of staves hinged together at points along their edges for outward movement of adjoining staves, two pairs of staves located in diametrically opposite positions relative to the barrel, each pair of staves hinged together, and flexible members for connecting the staves of each pair to the first named staves adjoining the said pairs of staves.

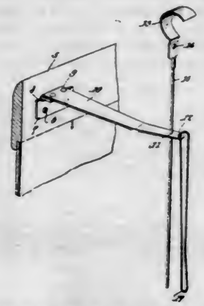
3. In a collapsible barrel, a plurality of staves, two pairs of staves located in diametrically opposite positions relative to the barrel, a pair of chains, the links of the chains having lengths substantially the same width as the width of the staves and secured only to the first named staves, the pairs of diametrically positioned staves being hinged together, and flexible means for connecting the staves of the pairs to the adjoining staves of the barrel.

4. In a collapsible barrel, a plurality of staves, two pairs of staves located in diametrically opposite positions relative to the barrel, a pair of chains, the links of the chains having lengths substantially the same as the width of the staves and secured only to the first mentioned staves, the pairs of diametrically positioned staves being hinged together, a flexible means for connecting the staves of the pairs to the adjoining staves of the barrel, and metal bands surrounding the outside of the ends of the barrel.

5. In a collapsible barrel, a plurality of staves, two pairs of staves located in diametrically opposite positions relative to the barrel, a pair of chains, the links of the chains having lengths substantially the same as the width of the staves and secured only to the first mentioned staves, the pairs of diametrically positioned staves being hinged together, a flexible means for connecting the staves of the pairs to the adjoining staves of the barrel, metal bands surrounding the outside of the ends of the barrel and having inwardly extending lips for engaging the top of the barrel, and means for locking the band relative to the staves.

[Claim 6 not printed in the Gazette.]

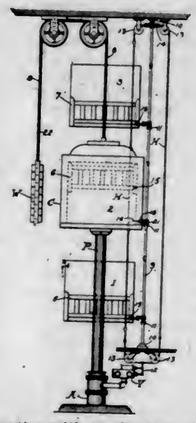
1,226,019. PICTURE-HANGER. GEORGE I. SCHLEY, Chicago, Ill. Filed Dec. 4, 1916. Serial No. 134,905. (Cl. 40—145.2.)



The combination with a picture frame having a rearwardly extending horizontal bracket arm apertured vertically at its outer end, of a vertical rod passing loosely through the aperture of the bracket arm, means for mounting the rod in holding position, and a pull device connected to the outer end of the arm beyond the aperture through which the rod passes.

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1,226,020. ELEVATOR. ALFRED L. SCHULLER, Upper Montclair, N. J., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 28, 1914. Serial No. 841,410. (Cl. 187—47.)



1. The combination with an elevator, of a shipper cable for actuating the starting and stopping mechanism, a shaft extending vertically of the hatchway, a sheave carried by said shaft about which the shipper cable is wrapped, a vertically movable landing gate, and means separate therefrom actuated by the movement of said gate toward open position for locking said shaft against movement and thereby preventing the operation of the shipper cable to start the car.

2. The combination with an elevator, of a shipper cable for actuating the starting and stopping mechanism, a shaft arranged for rotation by said cable, a landing gate, a clutch member carried by said shaft and rotating therewith, a co-acting stationary clutch member, a lever adapted to effect the engagement and disengagement of said clutch members to lock and unlock said shaft against rotation, and an operative connection between said lever and gate.



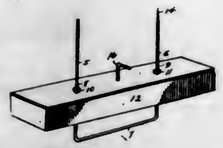
3. The combination with an elevator, of a shipper cable for actuating the starting and stopping mechanism, a shaft arranged for rotation by said cable, a landing gate, a clutch member slidably mounted on said shaft but prevented from rotating with respect thereto, a co-acting stationary clutch member, and means associated with said sliding clutch member and the gate for effecting an interlock of the clutch members to prevent the rotation of the said shaft.

4. The combination with an elevator, of a shipper cable for actuating the starting and stopping mechanism, a shaft arranged for rotation by said cable, a landing gate, a clutch member, splined to said shaft, a co-acting stationary clutch member adapted to be engaged by the first named clutch member to prevent a rotation of the said shaft, a pivoted lever associated with said splined clutch member, and a detent on said gate adapted to engage said lever when the gate is moved toward closed position and thereby effect a disengagement of said clutch members to permit a rotation of the shaft.

5. The combination with an elevator, of a shipper cable for actuating the elevator starting and stopping mechanism, a shaft extending vertically of the hatchway and constrained to rotate when said cable is operated, a landing gate, a sliding clutch member splined to said shaft, a co-acting stationary clutch member, means for effecting an engagement of said clutch members to prevent a rotation of the shaft when the gate is in open position, and means for permitting a relative rotative movement of said clutch members when in engagement with each other.

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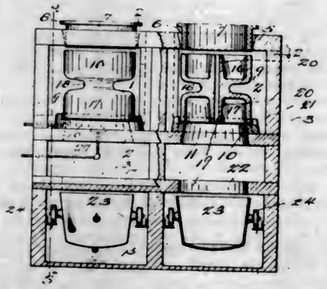
1,226,021. ANIMAL-YOKE. KIVA LEOTA SEAMAN, Arpan, S. D. Filed Feb. 10, 1917. Serial No. 147,811. (Cl. 119—136.)



An animal yoke comprising a horizontally and transversely disposed bar having spaced openings formed vertically therethrough, a U shaped member of wire having one of its ends pointed to adapt it to pierce the skin of an animal, the legs of said member passing upwardly through the spaced openings of the bar and extending a considerable distance thereabove, nuts threaded upon said legs above said bar, and a right angular fence engaging member carried by said bar and disposed between the legs.

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1,226,022. REVERSIBLE POT. GEORGE A. SHIELDS, Columbus, Ohio. Filed Oct. 26, 1914. Serial No. 868,675. (Cl. 49—53.)



1. An integral reversible glass pot comprising oppositely disposed receptacles and formed with an annular groove in the body of the pot between said receptacles of less diameter than the receptacles, adapted to accommodate an operating tool.

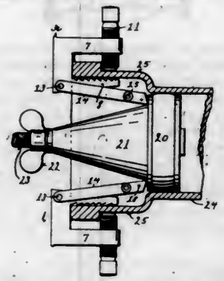
2. An integral reversible pot comprising alined oppositely, opening receptacles, and a single air duct extending through the body of the pot from end to end as described.

3. A glass pot comprising a pair of oppositely opening receptacles, a perforated boss projecting through each receptacle and an air duct extending through the body of the pot and communicating with said perforated bosses.

4. An integral pot comprising a pair of receptacles and formed with a central reduced throat between the receptacles adapted to accommodate an operating tool, a boss projecting through each receptacle, and an air duct extending through said bosses and throat.

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1,226,023. CLAMP FOR SOIL-PIPE TEST-PLUGS. WALTER ARCHIE SMITH, Topeka, Kans. Filed Jan. 22, 1917. Serial No. 143,672. (Cl. 137—76.)



1. The combination of a clamping member proper having a spanner portion formed with an outer leg and an inner leg, the outer face of the inner leg being formed with teeth and being convexed and the inner face of the inner leg being concaved, a brace comprising two legs pivoted at their upper ends to the upper inner corners of the clamp proper and a spacer extending between said two brace legs and securing them rigidly together, a spring secured to said brace and adapted to bear against the inner face of the inner leg of the clamp proper, and a set-screw having screw-threaded engagement through said outer leg; said clamping member proper being also formed with a projection with which said spring engages when the brace is swung around to the outer side of the member.

2. The combination of a clamping member proper having a spanner portion formed with two legs, a set-screw having screw-threaded engagement through one of said legs and adapted in conjunction with the other leg to clamp the end of a pipe, and a brace pivoted to said clamping member proper and extending inwardly of the pipe beyond the end of the last-mentioned leg.

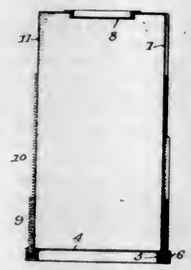
3. The combination of a clamp proper comprising a spanner portion and two substantially parallel legs, one of said legs being formed with teeth facing the other leg, and a set-screw having screw-threaded engagement through said other leg and adapted in conjunction with said toothed leg to clamp the wall of a pipe, and the end of said toothed leg being formed as an abutment for a testing-plug.

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1,226,024. FLUID-RECEPTACLE. CHARLS LEOPOLD STOHS and GUSTAVE R. FUNKE, Milwaukee, Wis. Filed May 29, 1916. Serial No. 100,552. (Cl. 229—1.)

1. In a device of the described class, a receptacle formed of a single sheet of fibrous material, which sheet has been previously creased preparatory to being folded into the desired shape, a metallic bottom member provided with an angular groove, the vertical sides of which are rigidly clamped to two opposing sides of the vertical walls of said receptacle, an aperture formed in the opposite end of said receptacle from said metallic bottom, and a cap

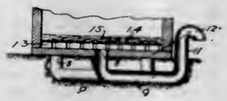
adapted to close said aperture, said receptacle when formed comprising at its lower end a plurality of thicknesses of material, at its upper end a single thickness of material, and a plurality of thicknesses of material at intermediate points between its respective ends.



2. In a device of the described class, a receptacle formed of a single sheet of fibrous material, which sheet has been previously creased preparatory to being folded into the desired shape, a metallic bottom member provided with an angular groove, the vertical sides of which are rigidly clamped to two opposing sides of the vertical walls of said receptacle, an aperture formed in the opposite end of said receptacle from said metallic bottom, and a cap adapted to close said aperture, said receptacle when formed comprising at its lower end five thicknesses of material, at its center three sheets, and at its upper end one thickness, substantially as and for the purpose specified.

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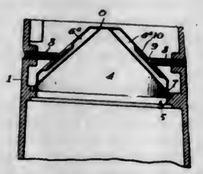
1,226,025. STORAGE-BIN. MACK DANIEL STOKER, Appleby, Tex. Filed Mar. 6, 1916. Serial No. 82,515. (Cl. 98—26.)



In a bin, a housing with a floor, supports on the floor in spaced relation to each other at their sides and ends, permitting transverse and longitudinal ducts, a screen on the said supports, pipes extending upwardly through the said floor and having their outer ends terminating in goose neck extensions with the openings facing the earth, and a layer of fibrous material on the said screen.

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1,226,026. OPTICAL INSTRUMENT. CHARLES H. STOUT, Rochester, N. Y., assignor to Crown Optical Company, Rochester, N. Y., a Corporation. Filed Apr. 19, 1916. Serial No. 92,283. (Cl. 88—33.)



1. In combination in an optical instrument, a seat, a prism arranged on the seat and having two angularly arranged faces, a device bearing on said prism throughout the lengths of both faces, and having a space next to the prism for evaporating any moisture on the prism, and adjusting devices bearing against the first named device to hold the prism to its seat and to shift the prism on its seat in the plane of said seat.

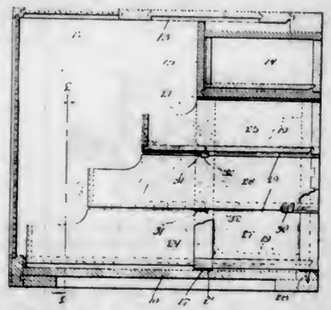
2. In combination in an optical instrument, a seat, a prism arranged on the seat and having two angularly-arranged faces, and a cover for the prism provided with portions engaging the angularly-arranged faces near opposite sides of the latter and having a space between such engaging portions next to the prism for evaporating any moisture on the prism.

3. In combination in an optical instrument, a seat, a prism arranged on the seat and having a pair of angularly arranged faces, a cover for both faces formed with two grooves, and two adjusting devices bearing in the grooves and acting to hold the cover to the prism and the latter to its seat.

4. In combination in an optical instrument, a seat, a prism arranged on the seat and having a pair of angularly arranged faces, a cover member bearing against both faces throughout their lengths and extending about the corner of the prism, said cover member providing an evaporating space in proximity to the faces of the prism and having two grooves, and two adjusting screws having pointed ends operating in said grooves to hold the cover member to the prism and the latter to its seat.

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1,226,027. NOTION-COUNTER. MAURICE TAUSSIG, Chicago, Ill. Filed Sept. 7, 1915. Serial No. 49,148. (Cl. 211—16.)



A notion counter comprising a counter frame, having a glass front and top portion, and an open back, a metal, open work frame secured in said counter and consisting of front and back metal strips, each arranged in the form of a rectangle, horizontal cross connecting strips and intermediate upright strips extending between the top and bottom members of the rectangular members, transversely extending, metal rails secured to said upright members, drawers slidably supported on said rails, with their front ends overhanging said metal frame, and increasing in length from top to bottom, and stops on said rails and drawers co-acting to limit movement of the drawers in one direction.

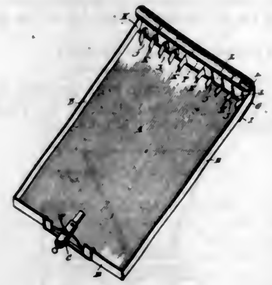
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1,226,028. GAME APPARATUS. WILLIAM C. TAYLOR, Bloomfield, N. J. Filed Jan. 25, 1916. Serial No. 74,270. (Cl. 46—61.)

1. A game apparatus including a ball course and a ball catching device formed of metal or other suitable material, comprising a pen formed with floor having means therein for retaining a ball and having two side walls, and a scroll shaped tubular deflector extending from such floor in a curve forming an upward and forward scroll continued sufficiently to pitch a ball backward after a complete circular course therein.



2. A game apparatus including a ball course, a series of pens extending across one end of such course and formed by setting partitions upon and vertical to its playing surface, backed or backed and surmounted by a scroll-shaped tubular deflector extending from the rear end of such course in an upward and forward scroll continued sufficiently to pitch a ball backward after a complete circular course therein.



3. A game apparatus including a ball course, a series of pens extending across one end of such course and formed by setting partitions upon and vertical to its playing surface, the forward part of such partitions being located radially to the pivotal point of a projectile-throwing device swiveling horizontally upon such course, and the rearward part of such partitions being curved or bent in a course divergent from said radial course, said pens being backed or backed and surmounted by a scroll-shaped tubular deflector extending from the rear end of such course in an upward and forward scroll continued sufficiently to pitch a ball backward after a complete circular course therein.

4. A game apparatus including a ball course, a series of pens extending across one end of such course and formed by setting partitions upon and vertical to its playing surface, the forward part of such partitions being located radially to the pivotal point of a projectile throwing device swiveling horizontally upon said course, and the rearward part of such partitions being curved or bent in a course divergent from such radial course, said pens being backed or backed and surmounted by a scroll-shaped tubular deflector extending from the rear end of such course in an upward and forward scroll continued sufficiently to pitch a ball backward after a complete circular course therein, and means for retaining a ball in such pens after deposit from such tubular deflector.

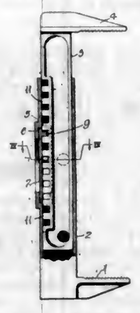
5. A game apparatus including a ball course, a series of pens extending across one end of such course and formed by setting partitions upon and vertical to its playing surface, the forward part of such partitions being located radially to the pivotal point of a projectile-throwing device swiveling horizontally upon said course, said pens being backed or backed and surmounted by a scroll shaped tubular deflector extending from the rear end of such course in an upward and forward scroll continued sufficiently to pitch a ball backward after a complete circular course therein, the floor of said pens having an inclined plane section, or a step, or trench or pocket therein to prevent the escape of a ball when deposited from such tubular deflector, substantially as and for the purpose described.

[Claim 6 not printed in the Gazette.]

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1,226,029. CLAMP. FREDERICK P. TESSMER, Detroit, Mich. Filed Feb. 23, 1916. Serial No. 79,920. (Cl. 144—299.)

1. A clamp comprising a pair of members having cooperating jaws and telescoping shanks one of which is provided with a series of rack teeth and the other of which is provided with a counterbored annular boss, a cam plate journaled in and housed by the boss having a cam segmental flange on the base adjacent the rack teeth for engaging the latter, and a handle for oscillating the plate that lies between the confines of the telescoping shanks.



[Claims 2 to 4 not printed in the Gazette.]

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1,226,030. DEVICE FOR PROTECTING RECEPTACLES AGAINST FREEZING. GEORGE W. TRIBBEY, Marshfield, Oreg. Filed July 31, 1916. Serial No. 112,389. (Cl. 137—71.)



1. The combination with a receptacle, of a glass member having a connection between the same and the vessel, and adapted to be broken by the freezing of water therein, and a spring associated with said glass member and adapted to eject the broken portion of the member out of the connection, in order to make a free passageway for the water.

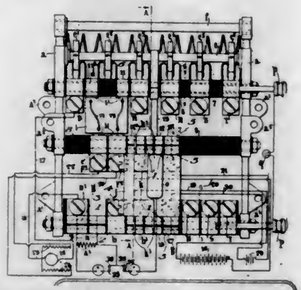
2. The combination with a receptacle for water, of a frangible member, a connection between the frangible member and the lower portion of the receptacle, a spring associated with said frangible member and adapted to force the broken portion thereof from the connection when the member is broken, and a perforated guard around said frangible member, for protecting the same and also for holding the broken portions thereof in case the member is broken.

3. In a device of the character set forth, the combination of a vessel, a glass tube, connections between the tube and the vessel to permit the water in the vessel to enter the tube and a spring associated with said tube, the arrangement being such that the tube will be broken by the freezing of the water therein before the water in the vessel is frozen, and when broken will permit the escape of water from the vessel, said spring serving to eject a portion of the broken tube to make a free passageway for the water.

4. The combination with a receptacle, of a glass tube having a reduced portion therein, connections from the end of the tube to the vessel, and a spring arranged between one end of the tube and its connection so that the spring will force the end of the tube out of the connection when the tube is broken.

5. In a protective device of the character set forth, the combination with a vessel or receptacle, of a pair of connections, a glass tube having constricted portions forming a restricted area therebetween, and having its ends fitting in said connections, and a compression spring arranged between one of said ends and its connection and adapted to eject said end when the tube is broken.

1,226,031. ELECTRIC SWITCHBOARD. CHARLES ANTHONY VANDERVELL and ALBERT HENRY MIDGLEY, Acton Vale, London, England. Filed June 2, 1913. Serial No. 771,257. (Cl. 175—298.)



1. An improved switchboard more particularly for use in connection with lighting and like electric installations on motor-cars and other vehicles, comprising in combination with two end brackets and a plurality of fixed rods arranged between said end brackets and secured thereto, a plurality of fixed contacts provided with holes by which they are strung together and supported on said fixed rods and a plurality of insulating members provided with holes by which they are strung together on the fixed rods between the fixed contacts, as set forth.

2. An improved switchboard more particularly for use in connection with lighting and like electric installations on motor-cars and other vehicles, comprising in combination with two end brackets and a plurality of fixed rods arranged between said end brackets and secured thereto, a plurality of fixed terminal contacts provided with holes by which they are strung together on said fixed rods and with fixing screws arranged with their heads toward the front of the switchboard, and a plurality of insulating members provided with holes by which they are strung together on the fixed rods between the fixed contacts, as and for the purpose set forth.

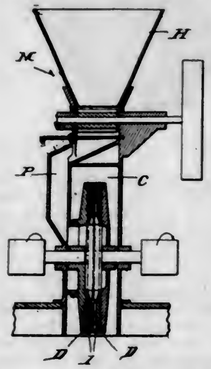
3. An improved switchboard more particularly for use in connection with lighting and like electric installations on motor-cars and other vehicles, comprising in combination with two end brackets and a plurality of fixed rods arranged between said end brackets and secured thereto, a plurality of fixed rigid terminal contacts and a plurality of fixed spring contacts, said fixed rigid terminal contacts and fixed spring contacts being provided with holes by which they are strung together on said fixed rods and the sides of the terminal contacts abutting against the sides of the spring contacts, and a plurality of insulating members provided with holes by which they are strung together on the fixed rods between the said rigid terminal contacts and spring contacts, as and for the purpose set forth.

4. An improved switchboard more particularly for use in connection with lighting and like electric installations on motor-cars and other vehicles, comprising in combination with two end brackets and a plurality of fixed rods arranged between said end brackets and secured thereto, a plurality of fixed rigid terminal contacts and a plurality of fixed spring contacts, the fixed rigid terminal contacts and the fixed spring contacts being provided with holes by which they are strung together on said fixed rods, a plurality of insulating members provided with holes by which they are strung together on the fixed rods between the said rigid terminal contacts and spring contacts and a removable bridge member arranged between two of the rods and provided with contacts engaging with some of the spring contacts, as and for the purpose set forth.

5. An improved switchboard more particularly for use in connection with lighting and like electric installations on motor-cars and other vehicles, comprising in combination with two end brackets and a plurality of fixed rods arranged between said end brackets and secured thereto, a plurality of fixed rigid terminal contacts and a plurality of fixed spring contacts, said fixed rigid terminal contacts and fixed spring contacts being provided with holes by which they are strung together on the fixed rods, a removable bridge member arranged between two of the rods and provided with contacts engaging with some of the spring contacts, and a switchboard lid provided with a suitable contact, whereby when the lid is placed in position, the contacts thereon close certain circuits by coming into contact with certain of the contacts carried by the rods and by the bridge member, as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,226,032. GRINDING-RING FOR ATTRITION-MILLS. WILLIAM VAN NOSTRAND, Dalton, N. Y. Filed July 24, 1916. Serial No. 111,003. (Cl. 83—3.)

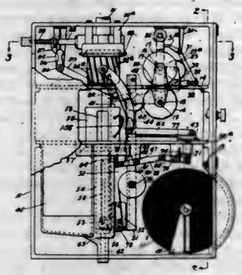


1. A mill of the class described including a pair of axially alined flat rings each having at its outer edge a continuous finishing rib and having at their inner edges a plurality of crushing ribs, said rings being equipped between said crushing and finishing ribs with grinding ribs extending substantially in radial directions, and a plurality of grading ribs extending between the grinding ribs of each ring, and flush with said grinding ribs, the spaces between the grading ribs of one ring and those of the other measured in a radial direction decreasing gradually from the inner to the outer edge portions of said rings, whereby to permit only grain which has been ground to predetermined fineness to travel outwardly toward the finishing ribs to be ultimately discharged therethrough.

2. A mill of the class described including a pair of axially alined flat rings each having at its outer edge a continuous finishing rib and having at their inner edges a plurality of crushing ribs, said rings being equipped between said crushing and finishing ribs with grinding ribs extending substantially in radial directions, and a plurality of pairs of circumferential rows of grading ribs extending between and flush with the grinding ribs, the ribs of each pair of rows being disposed in staggered relation and the spaces between the ribs of said pairs measured in a radial direction decreasing gradually from the inner toward the outer edge portions of said rings, whereby to permit only grain which has been ground to predetermined fineness to travel outwardly toward the finishing ribs to be ultimately discharged therethrough.

1,226,033. MECHANISM FOR MAKING AND DISPENSING DRINKING-CUPS AND DISPENSING LIQUIDS. FRANK H. VICK, New York, N. Y., assignor to George F. Maguire, New York, N. Y. Filed Oct. 7, 1914. Serial No. 865,441. (Cl. 93—36.)

1. In a machine of the class described, a cup-holder, means for forming a cup within said holder, and means for dispensing a liquid into the cup when formed, said holder, containing the liquid-filled cup, being thereafter manually withdrawable from the machine to allow of the drinking of the contents of the cup.



2. In a machine of the class described, a cup-holder, means for forming a cup within said holder, and means for dispensing a liquid into the cup when formed, said holder, containing the liquid-filled cup, being thereafter manually withdrawable from the machine to allow of the drinking of the contents of the cup, in combination with means for returning the cup to its normal, operative position in the machine.

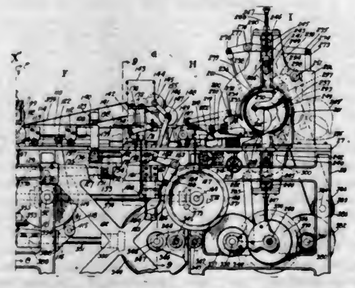
3. In mechanism of the class described, means for forming a cup from a blank, in combination with means for delivering liquid into said cup, and means for disrupting the cup after the liquid has been removed therefrom.

4. In mechanism of the class described, means for forming a cup from a blank and positioning it interiorly of a holder, means for feeding liquid to said cup while positioned in the holder, and means for disrupting the cup prior to the reuse of the holder.

5. In a machine of the class described, cup-forming mechanism embodying a cup-holder, a hollow forming die adapted to contain a liquid, said holder and die being relatively movable whereby said parts coöperate upon a blank to position said blank, in the form of a cup, within the cup-holder, and means for releasing the liquid in the die and depositing it in the cup thus formed, said holder, containing the liquid-filled cup, being thereafter withdrawable from the machine to allow of the drinking of the contents of the cup.

[Claims 6 to 19 not printed in the Gazette.]

1,226,034. MACHINE FOR MAKING PAPER RECEPTACLES. FRANK H. VICK, New York, N. Y., assignor to Thomas Liston, New York, N. Y. Filed Nov. 6, 1914. Serial No. 870,680. (Cl. 93—81.)



1. In a machine of the class described, the combination of means for forming a blank with projections along one of its edges, means for rolling said blank to form a container having a plurality of plies, and means for infolding the projections on the blank to form the bottom of the container.

2. In a machine of the class described, the combination of means for forming a blank with projections along one of its edges, means for rolling said blank to form a container having a plurality of plies, and means for simultaneously infolding the projections on the blank in succession to form the bottom of the container.

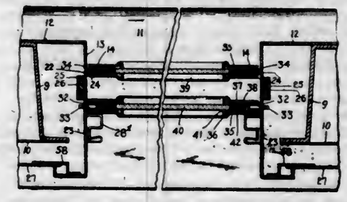
3. In a machine for making paper containers from blanks having projections along their edges, embodying, in combination, means for winding the bodies of the blanks to form the sides of the containers, and means for infolding the projections to form the bottoms of the containers.

4. In a machine of the class described, scoring mechanism, notching mechanism, and mechanism for cutting into blanks the material thus scored and notched, in combination with glue applying mechanism, and means for forming blanks into containers the sides and bottoms of which are integral and contain a plurality of plies of material.

5. In a machine of the class described, scoring mechanism, notching mechanism, and mechanism for cutting into blanks the material thus scored and notched, in combination with glue applying mechanism, means for forming blanks into containers the sides and bottoms of which are integral and contain a plurality of plies of material, and means for ejecting the containers thus formed from the machine.

[Claims 6 to 33 not printed in the Gazette.]

1,226,035. CAR CONSTRUCTION. VICTOR VON SCHLEGELL, New York, N. Y., assignor to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed July 12, 1913. Serial No. 778,641. (Cl. 189—72.)



1. In a structure of the character described, having a wall with a window opening therein, the combination of an outer sheet-metal sheathing secured to the wall and having its edges overlapping the opening, a sheet-metal window-frame in said opening having flanges at its side edges adapted to abut against said overlapping edges of the sheathing in parallel relation thereto, and a vertically movable sash in said window-frame having grooves in its side edges in which said abutting portions of the overlapping edges of the sheathing and the flanges of the window-frame are received, said abutting portions serving as guides for the sash, substantially as set forth.

2. In a structure of the character described, having a wall with a window opening therein, the combination of an outer sheathing of sheet-metal secured to the wall and having its edges overlapping the opening, a window-frame in said opening having the side members thereof formed of sheet-metal and flanged at their outer edges so that when the window-frame is moved into the opening therefor from the interior of the structure said flanges will engage said overlapping edges of the sheathing, sheet-metal strips embracing the abutting edges of the sheathing and the flanges of the frame, and a sash in said window-frame movable vertically upon the said strips, substantially as set forth.

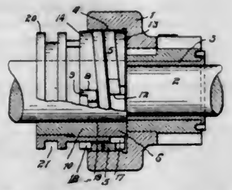
3. In a structure of the character described, having a wall with an opening therein, the combination of an integral window frame adapted to be removably mounted in said opening, said frame having sheet-metal side members, a sill and a top member secured together at their ends, and two sashes mounted side by side in said window-frame, each of the side members of said frame being formed of inner and outer sheet-metal strips secured together at their edges with insulating material between

them and the insulated joint between the said two pieces lying between the two sashes of the frame, substantially as set forth.

4. In window construction, the combination of a pair of wall members spaced apart to form an opening, and having flanged edges extending laterally into said opening, a window frame comprising side members having flanges adapted to abut said flanged edges, channel-shaped strips secured about the abutting edges of said wall-members and window side members, and a sash mounted in said frame with grooved lateral edges in which said strips are received, said strips being adapted to operate as sash guides and also as weather-strips, substantially as set forth.

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1,226,036. CLUTCH. WILLIAM H. WAITE, Cleveland, Ohio, assignor to The Browning Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 8, 1916. Serial No. 119,108. (Cl. 192—13.)



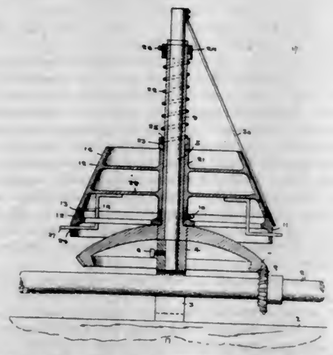
1. In a friction clutch, the combination of a shaft, a driven member rotatively mounted upon the latter; a spring within said driven member and surrounding said shaft; driving means adapted to expand said spring to engage said driven member; said spring being non-unitary in structure whereby it may be removed from said shaft in a direction transverse with respect to the latter.

3. In a friction clutch comprising a shaft and driving and driven members, a spring consisting of a multiplicity of parts separable from each other, said parts being mounted in juxtaposition and engaging each other so that they coact to perform the function of a single spring, each such part being capable of being removed from the shaft without dismounting the latter or removing any of said members therefrom.

[Claim 2 not printed in the Gazette.]

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1,226,037. INDICATOR DEVICE FOR SAWMILLS. WILLIAM L. WALDING, Milford, La. Filed Aug. 7, 1915. Serial No. 44,231. (Cl. 143—124.)



1. An indicator device comprising a dial, an operating gear for the dial, an adjustable dial mounted on the first dial, coöperating graduations on the faces of said dials, an indicator finger extending over the faces of said dial, and means to rotate said dials from the set shaft of a saw mill carriage and bring said graduations on the dials in line with the said finger to determine the thickness of the timbers being sawed.

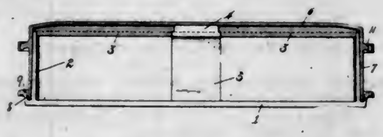
2. An indicator device for saw mill carriages comprising a gear having an elongated hollow sleeve, means to support said gear, a dial fixed to said sleeve, said dial having an inclined face portion on which are placed graduations, an adjustable dial rotatably mounted on said sleeve and resting on the upper edge of the first dial, said adjusting dial having an inclined face divided into spaces, each space having graduations thereon of different dimensions, an indicating finger adapted to coöperate with the graduations on said dials, and means to rotate said gear and dials from the set shaft of a mill carriage to successively move certain of the graduations on the dial to register with said finger.

3. A calculating device for saw mill carriages comprising a bracket having a socket, a standard fixed in said socket and extended upwardly therefrom, a gear rotatably mounted on said standard, said gear having an elongated hollow sleeve, a dial fixed in said sleeve and having graduations thereon, an adjustable dial rotatable on said sleeve and having graduations to coöperate with the graduations of the fixed dial, means to hold said adjustable dial in engagement with the fixed dial under tension, an indicating finger carried by the standard and extending over the faces of the dials adapted to coöperate with the graduations thereon, and means to rotate said dials to successively bring certain of the graduations thereon into registration with the indicating finger.

4. A calculating device for saw mill carriages comprising a bracket, a standard carried by the bracket and fixed thereto, a gear rotatable on said standard, an elongated hollow sleeve carried by the gear, a graduated dial fixed to the sleeve, a graduated adjustable dial rotatable on the sleeve and engaging the upper edge of the fixed dial, means to direct downward pressure on the adjustable dial, an indicating finger adapted to coöperate with the graduations on the dials, and means to operate said dials from the set shaft of the mill carriage.

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1,226,038. CASKET. WILLIAM C. WATKINS, Weston, Ohio. Filed Mar. 27, 1916. Serial No. 86,968. (Cl. 27—7.)



1. A casket comprising a base having an integral endless flange rising therefrom to form side and end walls and having an endless trough without said flange, closure means telescoping over said flange and seating at its lower edge in said trough, said base and closure means each having hand hold forming parts projecting laterally therefrom, and means coöperating with said hand hold parts to secure the base and closure means together.

2. In combination, a casket member having an open top, removable closure parts for said top, one of said parts having supporting legs projecting down into the casket at opposite sides thereof, and a vault member for telescopically fitting down over the casket member and resting at its top on the top closure having said supporting legs.

3. In combination, a casket member, an inverted U-shaped part removably mounted in said member and serving to partially close the top of said member, and an inclosing member telescopically fitting over said casket member and resting at its top on said part.

4. In combination, a casket member, an inclosing member for telescoping down over said casket member, flanges projecting, respectively, from the side walls of said members in vertically spaced relation and forming hand holds, and means connecting said flanges to secure the members in assembled relation.

5. A casket comprising a base having an integral endless flange rising therefrom to form side and end walls and having an endless trough without said flange, primary closure means for the top of the body receiving chamber formed by said flange and base, and secondary closure means telescoping over said flange and primary closure means and resting on the latter with its lower edge seating in said trough said base and secondary closure means each having hand hold forming parts projecting laterally therefrom.



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1,226,039. GARMENT-FASTENING. JULIUS WEIL, Philadelphia, Pa. Filed Nov. 6, 1916. Serial No. 129,675. (Cl. 24—218.)

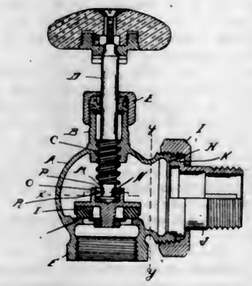


1. A resilient fastening member for garments made of a single piece of wire bent to form marginal securing edges of substantially circular outline by which it may be sewed directly to a fabric, the end portions of the wire extending across the circular marginal portion and having the terminals thereof bent around the marginal portion to be supported by and guided on a circular marginal portion as the terminals are moved relative in directions of approach and separation, the said end portions being bent to form a stud-receiving opening and intertwisted at one side of the stud receiving opening between the marginal securing edges and the stud-receiving portion.

[Claims 2 to 4 not printed in the Gazette.]

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1,226,040. VALVE. NEAL W. WHITBECK, Detroit, Mich., assignor to Michigan Lubricator Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 31, 1916. Serial No. 87,940. (Cl. 137—4.)

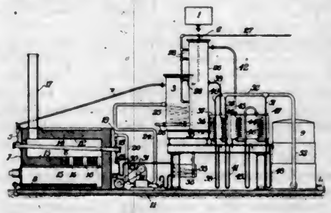


1. A valve, comprising a casing having alined and opposite nipples, a valve seat therebetween and a laterally-extending nipple, one of said alined nipples being interiorly threaded, a threaded valve stem insertible into engagement with said interiorly-threaded nipple through said alined nipple and the aperture in the valve seat, said stem having an annular groove adjacent one end a valve disk insertible through said lateral nipple above said seat into alinement with said stem and provided with a recess for receiving the grooved end of said stem, and a coupling between said disk and stem, comprising a U-shaped member insertible through spaced apertures in said disk embracing said stem and engaging in the groove thereof, and allowing the valve disk both to rotate and rock relative to the stem.

2. A valve, comprising a casing having alined opposite nipples with a valve seat therebetween and a laterally-extending nipple, one of said alined nipples being interiorly threaded, of a threaded valve stem insertible into engagement with the threaded nipple and the aperture in said valve seat, a valve disk insertible through said lateral nipple above said valve seat into alinement with said valve stem, said disk being provided with a projecting boss recessed to receive the end of said stem and said stem having a groove in the portion engaging said recess, a member for securing said disk to said stem of U-shaped form, engaging apertures in said boss on opposite sides of said stem and intersecting the groove in said stem, said member being insertible through said lateral nipple and having a projecting end clenched to hold the same from disengagement, the valve disk being free to rotate and rock relative to its stem.

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1,226,041. TREATMENT OF MINERAL OILS AND RESIDUES FOR THE PRODUCTION OF LOWER-BOILING HYDROCARBONS. CARTER WHITE, London, England. Filed May 13, 1914. Serial No. 838,230. (Cl. 196—26.)



1. Process for the treatment of mineral oils or residues for the production of lower boiling products, comprising bringing the oil or residue in a liquid state on to quicklime heated to a temperature of between about 400° to about 650° C., in the absence of added water vapor, the lime remaining in an unslaked condition during the carrying on of the process.

2. Process for the treatment of mineral oils or residues for the production of lower boiling products, comprising bringing the oil or residue in a liquid state on to quicklime heated to a temperature of about 550° to 575° C., in the absence of added water vapor, the lime remaining in an unslaked condition during the carrying on of the process.

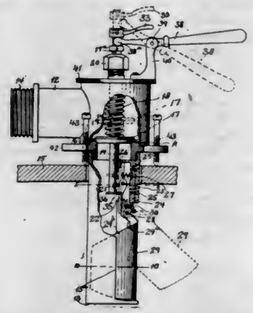
3. Process for the treatment of mineral oils or residues for the production of lower boiling products, comprising bringing the oil or residue in a liquid state on to quicklime containing carbon and heated to a temperature of about 550° to 575° C., in the absence of added water vapor, the lime remaining in an unslaked condition during the carrying on of the process.

4. Process for the treatment of mineral oils or residues for the production of lower boiling products, comprising bringing the oil or residue in a liquid state on to quicklime heated to a temperature of between about 400° to about 650° C., in the absence of added water vapor, the lime remaining in unslaked condition during the carrying on of the process, and applying suction to draw away the vapors generated, for the purpose of restraining reduction of same into undesired low forms.

5. Process for the treatment of mineral oils or residues for the production of lower boiling products, comprising bringing the oil or residue in a liquid state on to quicklime heated to a temperature of about 550° to 575° C., in the absence of added water vapor, the lime remaining in unslaked condition during the carrying on of the process, and applying suction to draw away the vapors generated, for the purpose of restraining reduction of same into undesired low forms.

[Claims 6 and 7 not printed in the Gazette.]

1,226,042. RECEPTACLE-FILLER. LYMAN J. WILBER, Brockton, Mass. Filed Aug. 2, 1916. Serial No. 112,709. (Cl. 226—13.)



1. A receptacle filler comprising a conduit having a delivering portion adapted to enter a receptacle and provided with a valve seat, a normally closed valve cooperating with said seat, means whereby the valve may be manually opened, automatic means for locking the valve in an open position, and a lever supported by and adapted to oscillate on a fixed fulcrum in the delivering portion of the conduit and having a longer arm provided with a float, and a shorter arm, the said float being displaceable by liquid rising in the receptacle, and the shorter arm constituting a trip adapted to render said locking means inoperative and automatically unlock the valve when the float is displaced by the rise of liquid in the receptacle.

2. A receptacle filler comprising a conduit having a delivering portion adapted to enter a receptacle and provided with a valve seat, a normally closed valve cooperating with said seat, means whereby the valve may be manually opened, automatic means for locking the valve in an open position, and a lever supported by and adapted to oscillate on a fixed fulcrum in the delivering portion of the conduit and having a longer arm provided with a float, and a shorter arm, the said float being displaceable by liquid rising in the receptacle, and the shorter arm constituting a trip adapted to render said locking means inoperative and automatically unlock the valve when the float is displaced by the rise of liquid in the receptacle, the shorter arm being provided with an adjustable member whereby the float-displacing rise of liquid may be regulated.

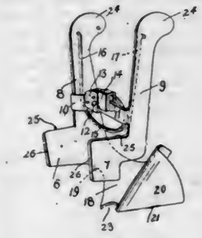
4. A receptacle filler comprising a conduit having a delivering portion adapted to enter a receptacle and provided with a valve seat, a normally closed valve cooperating with said seat and provided with a stem composed of an upper portion projecting above the valve through a wall of the conduit and a lower portion projecting below the valve into said delivering portion, said upper portion being manually movable to open the valve, and the lower portion being toothed at one side, a spring-pressed detent adapted to automatically engage a tooth on said lower portion and lock the valve open, and means operable by a rise of liquid in the receptacle to shift said detent and unlock the valve.

[Claims 3 and 5 to 7 not printed in the Gazette.]

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1,226,043. DEVICE FOR FILLING PIPE-JOINTS. GEORGE H. WILKINS, Greenfield, Mass., assignor to George H. Wilkins Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 14, 1916. Serial No. 136,880. (Cl. 22—118.)

1. A device of the class described, comprising in combination, clamping members pivotally connected together, each member being formed with a clamping surface for engaging the rope that is designed to be drawn around the outer surface of a pipe, a pouring spout connected to a member for directing the flow of molten material into the space between the meeting ends of the rope, and means for normally forcing the clamping plates toward each other.



2. In a device of the class described, the combination, of substantially parallel members, means for pivoting the members together, a stop device for limiting the inward movement of the lower ends of said members toward each other, said members having clamping surfaces for holding the ends of a rope together, one member having a spout formed at the lower end thereof to direct the flow of the molten material.

3. In a device of the class described, the combination with a pair of clamping members, means for pivoting the members together, a stop device for limiting the movement of the members toward each other, said members having clamping surfaces to receive a rope, one member having a pouring spout to direct the flow of molten material.

4. A device of the class described, comprising clamping members, said members being pivotally connected together, the lower ends of which are formed with plates for receiving a flexible packing or the like which is designed to be placed around the spigot end of a pipe section and close to the bell end of an adjacent pipe section for confining the flow of molten material, a pouring-spout integral with one of the clamping plates, and located so as to direct the flow of the material through the rope and into the annular chamber surrounding the spigot end of a pipe, said pouring-spout being formed so as to conform to the upper surface of the spigot end of a pipe, and means for moving the clamping plates toward the rope so as to engage the opposite outer surfaces of the rope.

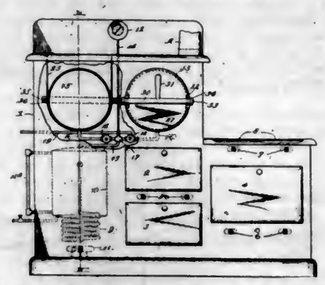
5. A device of the class described, comprising a pair of plates, each having an arm for pivotally securing the same together, a stop device for limiting the movement of the plates toward each other, a spring attached to the plates for forcing the plates toward each other, one of the plates having an inclined spout connected thereto and the outer side of the spout being substantially triangular in form, its lower edge being designed to rest upon the spigot end of the pipe.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,044. STEAM COOK-STOVE. JOHN M. WILSON, Wichita, Kans., assignor of one-third to Vernon E. Mitchell and one-third to Keith and Wright, a Firm consisting of William Keith and Monroe Wright, Wichita, Kans. Filed Nov. 19, 1915. Serial No. 62,393. (Cl. 126—20.)

1. In a cook stove, a casing, a front oven, a pair of superposed ovens arranged to the rear of the front oven and adjacent to but spaced from the latter, heating means for the front oven arranged therebeneath and opposite to the lower of the pair of ovens, heating means for the pair of ovens arranged in the space between the latter and opposite to the rear of the front oven, a boiler arranged to the rear of the pair of ovens and spaced from the latter, a pair of steam ovens connected to the boiler and arranged respectively over the latter and over the upper of the first named pair of ovens, and heating means for the boiler arranged therebeneath and adjacent to the lower oven of the first named pair of ovens.

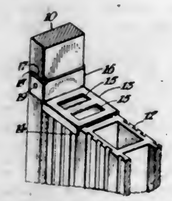


2. In a cook stove, a case, a pair of steam ovens in the case, a steam boiler, a pipe extending from the boiler and having combined steam supplying and drainage branches connected to each oven, a three-way valve for each oven arranged in each branch of the pipe, a common drain pipe connected to each three-way valve, and means to operate the valves independently whereby to allow steam to enter either oven and to allow drainage of either oven independently or simultaneously.

3. In a cook stove, a casing, a pair of superposed ovens therein, heating means for said ovens arranged in the space between the latter, a boiler at one end of the pair of ovens and extending across the space between the ovens so as to receive heat from said heating means, a pair of steam ovens connected to the boiler and arranged respectively over the latter and over the upper oven of said pair of ovens, and heating means for the boiler arranged therebeneath and adjacent to the lower oven of the said pair of ovens.

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1,226,045. BUCK-CLAMP. CHARLES W. WOLFE, New York, N. Y. Filed Aug. 19, 1916. Serial No. 115,809. (Cl. 72—101.)



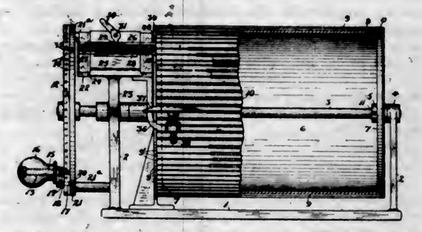
1. A buck clamp, including an anchor plate adapted to be embedded in the concrete between superposed wall blocks, and having opposed, substantially parallel, side flanges both extending in the same general direction to embrace the opposite sides of a wall block, a plate portion at one end of said anchor plate and extending substantially vertically in the opposite direction from said side flanges, for engagement with the face of a buck, and flanges at opposite ends of said second mentioned plate and spaced apart to receive the buck therebetween, said flanges having inturned terminal portions constituting teeth spaced from said vertical plate to a distance greater than one-half the thickness of said buck and adapted to be driven into said buck adjacent to the face thereof away from said vertical plate.

2. A buck clamp including an anchor plate adapted to be embedded in the concrete between superposed wall blocks and having opposed, substantially parallel, side flanges extending downwardly to embrace the opposite sides of the wall block therebeneath, a plate portion at one end of said anchor plate of a width substantially equal to the width of the buck and extending upwardly for engagement with the back face of a buck, flanges at the opposite ends of said second mentioned plate to receive the buck therebetween and engage with the opposite side thereof, and means for securing said last mentioned flanges to the opposite sides of the buck.

3. A buck clamp including an anchor plate adapted to be embedded in the concrete between superposed wall blocks, a plate portion at one end of said anchor plate and extending vertically between one of the wall blocks and the buck, flanges upon opposite ends of said last mentioned plate and extending in the same general direction and spaced apart to receive the buck therebetween, and means for securing said flanges to the buck at points adjacent to the face of the latter away from said vertical plate.

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1,226,046. ROTARY TYPE-SUPPLY DRUM. WALTER WRIGHT, New York, N. Y. Filed Mar. 10, 1909, Serial No. 482,530. Renewed Oct. 6, 1916. Serial No. 124,206. (Cl. 276—15.)



1. In an apparatus of the character described, the combination of a frame, a type drum, channels on said drum for carrying grooved type, an index with characters displayed thereon, type in said channels corresponding to the characters displayed on said index opposite thereto, a pointer, a type holder having a series of longitudinal type channels therein, said holder being supported on the frame between said type drum, and said index, a handle for rotating said drum and index in unison, and means associated with said handle for locking said drum and index, so that any one of the channels of the type drum may be locked in alinement with one of the channels of the holder, substantially as described.

2. In an apparatus of the character described, the combination of a frame, a type drum, type channels in said drum for carrying grooved type capable of sliding therein, a character index having a character displayed thereon opposite to one of said type channels, a stationary pointer supported on said frame, a type holder having type channels therein corresponding with the channels in said drum, said holder being supported from the frame, a handle for rotating said drum and index, and means associated with said handle for locking said drum and index when any character displayed on said index is opposite to said pointer, and means whereby one of the channels of said holder will be in alinement with the channel of the drum carrying type of the same character as that displayed on said index opposite to said pointer, when so locked, so that type may be moved from said drum, into one of the channels of the holder, substantially as described.

3. In an apparatus of the character described, the combination of a frame, a type drum, type channels on said drum for carrying grooved type, a character index having characters displayed thereon opposite to said channels, a stationary pointer, a type holder having channels therein suitable for holding grooved type, means for supporting said holder, a handle for rotating said drum, and means associated with said handle for locking said drum from further rotation when any character on the index plate is opposite to said pointer, a carriage for adjustably supporting said holder, and means whereby any one of the type channels in said holder may be brought into alinement with the end of the type channel on said drum, con-

taining type of the same character as that displayed on said index, opposite to said pointer, substantially as described.

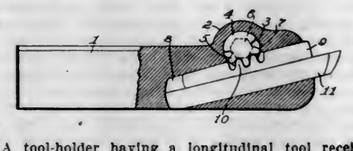
4. In an apparatus of the character described, the combination of a frame, a type drum, type carried on said drum, a character index rotatable therewith, a pointer, a type holder, a carriage for supporting said holder, means whereby said carriage may be raised or lowered so that any one of the type channels therein may be brought into alinement with any one of the channels of the type drum, a handle for rotating said drum, and means associated with said handle for locking said drum when any one of its channels is in alinement with the end of one of the channels of said holder, substantially as described.

5. In an apparatus of the character described, the combination of a frame, a type drum, type channels on said drum for carrying grooved type, grooved type in said channels capable of being moved longitudinally in said channels, a character index having characters displayed thereon to correspond with the type carried in the different channels of said drum, a pointer, a type form holder having longitudinal type channels therein, a carriage for supporting said holder, means through the movement of said carriage for bringing any one of the type channels of said holder into alinement with any desired channel of the type drum, a handle and means associated with said handle for locking any type channel of said drum, opposite to a channel of said type form holder, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

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1,226,047. TOOL-HOLDER. OSCAR T. ANDERSON, Waterloo, Iowa. Filed Dec. 14, 1916. Serial No. 136,912. (Cl. 29—100.)



1. A tool-holder having a longitudinal tool receiving channel and a socket at right angles to said channel communicating with same, a rock-body in said socket having a number of gear-teeth, and a wedge mounted in said channel having a number of gear teeth in mesh with the teeth on said rock-body and adapted to adjustably clamp a tool between itself and the inner wall of the channel.

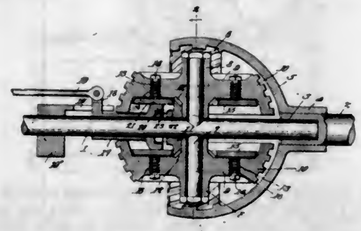
2. A tool-holder having an inclined tool receiving channel opening at one end and a lateral socket at right angles to said channel communicating therewith and spaced away from the end of the holder, a rock-body in said socket having an outwardly extending projection and having a number of gear-teeth extending into said channel, and a body seated movably in said channel and adapted to clamp a tool between itself and the inner wall of the channel, said body having a number of gear-teeth in mesh with the gear-teeth on said rock-body.

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1,226,048. TRANSMISSION MECHANISM. JOSEPH ARNER, Washington, D. C., assignor of one-fourth to George V. Gadde and three-sixteenths to Claude C. Hawbaker, Washington, D. C. Filed Mar. 14, 1914. Serial No. 824,809. (Cl. 74—34.)

1. A transmission mechanism, including a driving element, a driven element, an internal gear carried by one of the elements, a rotatable gear carried by the other element and having its teeth in mesh at one point with the internal gear, and selective means for regulating the speed of the rotary gear and the speed and forward or reverse transmission effect between the driving and driven elements.

2. A transmission mechanism, including a driving and driven element, an internal gear carried by one of the elements, a gear mounted for independent and free rotation in mesh at one point with the internal gear and carried bodily by the other element, the rotation of the driving element imparting rotary movement to the free gear, and means for regulating the speed of the free gear independent of the speed of the driving element and consequently the speed and forward or reverse movement transmitted to the driven element.



3. A transmission mechanism, including a driving element, a driven element, an internal gear carried by one of the elements, a rotatable gear carried by the other element and having its teeth in mesh at one point with the internal gear, selective means for regulating the speed of the rotary gear and the transmission effect between the driving and driven elements, and coöperable means interposed between the selective means and the freely rotatable gear whereby a greater speed is imparted to the rotatable gear and a consequent reversal of rotation to the driven element.

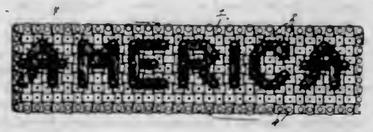
4. A transmission mechanism, including driving and driven elements, an internal gear carried by one of the elements, a gear mounted for independent and free rotation in mesh at one point with the internal gear and carried bodily by the other element, the rotation of the driving element imparting rotary movement to the free gear, means for regulating the speed of the free gear independent of the speed of the driving element and consequently the speed transmitted to the driven element, and coöperable means interposed between the last means and the freely rotatable gear whereby a greater speed is imparted to the rotatable gear and a consequent reversal of rotation to the driven element.

5. A transmission mechanism, including a driving shaft, a driven shaft, an internal gear carried by the driven shaft, a rotatable gear carried by the driving shaft and having its teeth in mesh at one point with the internal gear, and a relatively fixed slidingly mounted selective means disposed to engage the rotatable gear to regulate the free rotation thereof without effecting the rotation of the driving shaft, whereby the speed transmitted from the driving to the driven shaft is regulated.

[Claims 6 to 14 not printed in the Gazette.]

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1,226,049. EDUCATIONAL MODELING DEVICE. ALWIN B. BACHMANN, Cincinnati, Ohio. Filed Jan. 12, 1916. Serial No. 71,737. (Cl. 46—35.)




1. An educational modeling device comprehending a series of strips apertured at intervals and interwoven to form concrete figures, and members extending through the registering apertures of the various strips to form a fastening means therefor.

2. An educational modeling device comprehending a series of flexible strips interwoven to form a pattern, said strips having apertures spaced therealong, and fastening means inserted through such registering apertures of the overlapping strips.

3. An educational modeling device comprehending a series of strips woven together, said strips being provided with apertures registering when woven, fastening means disposed in such apertures, and a figure formed on said woven strips by similar strips and held in place by the same fastening means.

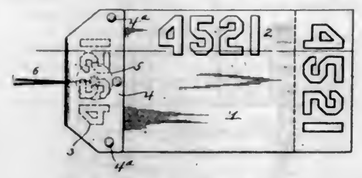
4. An educational modeling device comprehending a series of strips woven together, said strips being provided with apertures registering when woven, fastening means disposed in such apertures, a figure formed on said woven strips by similar strips, and separate fastening means from the first mentioned means for holding the said figure in place relative to the woven strips.

5. An educational device consisting of a plurality of strips, means interconnecting said strips in woven relation, fastening means disposed in the interstices of said strips, and a figure superposed on said woven strips and held in place by said last mentioned fastening means.



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1,226,050. TAG. WILLIAM F. BARNES, Spartanburg, S. C. Filed Feb. 18, 1916. Serial No. 79,141. (Cl. 40—27.)

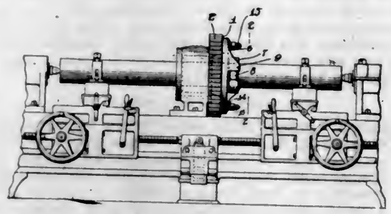



1. A tag having identifying data thereon and also having a duplicate of said identifying data thereon, and an indestructible fireproof shield applied to said tag and covering said duplicate identifying data and serving also to reinforce the tying end of the tag.

2. A tag having identifying data thereon and also having a duplicate of said identifying data thereon near one end of the tag and an indestructible fireproof shield comprising two metal leaves embracing and secured to the end portion of the tag and covering said identifying data.

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1,226,051. LATHE. CARL G. BARTH, Philadelphia, Pa. Filed Sept. 14, 1916. Serial No. 120,019. (Cl. 82—8.)



1. In a lathe having the usual head, a face plate, and a dog, the combination of an equalizing plate having limited movable connections with the face plate and with the dog, and means for causing yielding frictional engagement between the equalizing plate and the face plate.

2. In a lathe having the usual head, a face plate, and a dog, the combination of an equalizing plate having limited movable connections with the face plate and with the dog, and means including helical springs for causing yielding frictional engagement between the equalizing plate and the face plate and means for varying the tension or pressure exerted by the springs.

3. In a lathe having the usual head, a face plate and a dog, the combination of an equalizing plate having limited movable connections with the face plate and with the dog, means including helical springs for causing yielding frictional engagement between the equalizing plate and the face plate and means for varying the tension or pressure exerted by the springs.

4. In a lathe having the usual head, a face plate and a dog, the combination of an equalizing frame having limited movable connections with the face plate and with the dog, the said frame and the points of said connections all being in the same plane.

5. In a lathe having the usual head, face plate, and dog, the combination of an equalizing frame having limited movable connections with the face plate and with the dog, the points of said connections all being in the same plane, so arranged that the main strains to which the equalizing plate is subjected are strains of compression and of tension in straight lines in the same plane.

[Claims 6 to 15 not printed in the Gazette.]

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1,226,052. METHOD OF DRYING HOPS. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed Sept. 23, 1914. Serial No. 863,101. (Cl. 99—5.)

1. The method of drying hops, which consists in subjecting them to the action of large volumes of dry air heated first to approximately 120° temperature, and then to successively increasing temperatures until such portion of the moisture remaining in the hops is sufficient to maintain the cell membrane of the hops in a condition to permit endosmosis of water at some subsequent period, but insufficient to coact with the living enzyms carried by the hops to produce fermentation of mold, the enzyms not being destroyed by the temperature employed.

2. The method of drying hops, which consists in subjecting hops to the action of large volumes of dry air heated to approximately 120° temperature for from one to two hours; then to the action of large bodies of air heated to between 140–165° temperature for from two to five hours, until such time as the amount of moisture left in the body will be insufficient to effect fermentation or the production of mold with the enzym present.

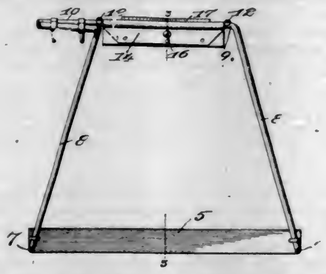
3. The method of drying hops, which consists in subjecting hops to the action of large volumes of dry air heated to approximately 120° temperature for from one to two hours; then to the action of large bodies of air heated to between 140–165° temperature for from two to five hours, until such time as the amount of moisture left in the body will be insufficient to effect fermentation or the production of mold with the enzym present, and then to the action of a temperature of approximately 170° Fahrenheit for from thirty minutes to one hour.

4. The method of drying hops, which consists in subjecting hops to the action of large volumes of dry air heated to approximately 120° temperature for from one to two hours; then to the action of large bodies of air heated to between 140–165° temperature for from two to five hours, until such time as the amount of moisture left in the body will be insufficient to effect fermentation or the production of mold with the enzym present, then to the action of a temperature of approximately 170° Fahrenheit for from thirty minutes to one hour and then to the action of sulfurous acid gas for from fifteen minutes to half an hour.

5. The method of drying hops herein described, which consists in extracting all of the water present by the action of dehydrated hot air, and without destroying the enzyms present, except such an amount as is necessary to maintain the capacity of the cell membranes to bring about endosmosis when the hops are subsequently immersed in water and to protect the lupulin within the cell walls from the oxidizing action of the air or external moisture, but such water insufficient in amount to coact with the enzyms present to produce fermentation or mold.

[Claims 6 to 9 not printed in the Gazette.]

1,226,053. SHOE-POLISHING STAND. CHARLES A. BEYERS, Kane, Pa. Filed Sept. 2, 1915. Serial No. 48,671. (Cl. 15—58.)



1. A polishing stand for shoes including a base tray, upright supports on two opposite sides of said tray extending in parallel planes, each support comprising a wire bent into substantially U-shape with horizontal top and outwardly inclined legs fastened at their lower ends to the corners of said tray on one side, a horizontal inclosure formed integrally of the wire of one of said supports projecting outwardly from the top of the same, braces joining the horizontal top portions of said supports and forming guides for a polishing cloth, and a foot rest pivoted in parallelism between said braces to rock laterally.

2. A polishing stand including a base tray, uprights secured to said tray at each side thereof, transverse braces joining the uprights of opposite sides, plates carried by said uprights between said braces and formed with abutment flanges, and a foot rest pivotally supported by said plates in parallelism to said braces and adapted to have its movement limited by contact with said flanges.

1,226,054. GARTER. HARVEY B. BLACK, Bogota, N. J. Filed Jan. 2, 1914. Serial No. 809,898. (Cl. 241—6.)



1. A garter, comprising a slotted plate, and a clasp-carrying strap threaded therethrough and held in adjustment thereby, said strap having two depending ends, each carrying a clasp, and a looped portion extending laterally from the plate and constituting a part of the girdle of the garter, said looped portion varying in length according to the adjustment of the clasp-carrying strap, in combination with another girdle portion, the same being separate from the clasp-carrying strap and having a separable fastening and a compensating take-up device.

2. A garter, comprising a clasp-carrying strap, and an adjustment-holding and direction-changing device through which the strap is threaded, said strap having two depending ends, each carrying a clasp, and a laterally extending portion forming part of the girdle of the garter, in combination with a separate girdle strap and a take-up device therefor.

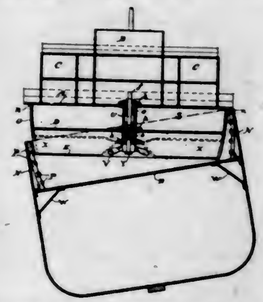
3. A garter, comprising a slotted plate, a clasp-carrying strap threaded therethrough and held in adjustment thereby, said strap having two depending ends, each carrying a clasp, and a laterally extending looped portion forming part of the girdle of the garter, in combination with a member of a separable fastening attached to the end of the laterally extending portion, and a separate girdle strap secured at one end to the slotted plate and at the other end carrying the complementary member of the separable fastening and having a take-up to compensate for adjustment of the clasp-carrying strap.

4. In a garter, the combination of a clasp-carrying strap carrying hose supporting clasps at its opposite ends, and a common plate through which the strap is threaded and from which both said ends depend, said plate being provided with two reversely diagonal slots and a horizontal slot which frictionally hold the strap and direct the said ends in diverging diagonal directions.

5. A garter, comprising a slotted-plate, and a clasp-bearing strap threaded through the plate with its ends directed in diverging relation and provided each with a hose-supporting clasp, said clasp-bearing strap having a laterally extending looped portion, in combination with a separate girdle member which connects with the looped portion.

[Claims 6 to 13 not printed in the Gazette.]

1,226,055. LIFE-SAVING DEVICE FOR OCEAN VESSELS. FRANK BOHN, Chester, Pa. Filed Aug. 10, 1916. Serial No. 114,286. (Cl. 114—77.)



1. The combination with the hull of a ship having a compartment in the upper portion thereof which has its upper end open, of a float located in the compartment, and a downwardly directed propeller connected with the lower portion of the float.

5. The combination with the hull of a ship provided in its upper portion with a compartment which has its upper end open, of rollers secured to the sides of the compartment, the contacting inner surfaces of the rollers of each side defining an arc of a circle, the radius of which has its center taken at the top of the opposite side; of a float arranged within the compartment and having curved sides to coöperate with the rollers, the curved sides being taken on arcs which are concentric with the first named arcs.

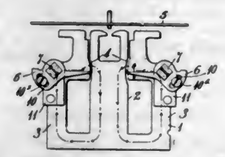
[Claims 2 to 4 not printed in the Gazette.]

1,226,056. ELECTRICAL MEASURING INSTRUMENT. WILLIAM M. BRADSHAW and WALTER G. MYLIUS, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 28, 1913. Serial No. 803,447. (Cl. 171—264.)

1. In an electrical measuring instrument, the combination with a magnetizable core having a central member and side members spaced from each other at one end by air gaps, of two closed-circuit conductors comprising sides movable respectively in the said air gaps, sides having polygonal openings, and sides having circular openings, and bolts having polygonal heads for engaging said polygonal openings for adjusting the positions of the sides of the conductors in the said air gaps.

2. In an electrical measuring instrument, the combination with a magnetizable core having a central member and side members spaced from each other at one end by air gaps, of two closed-circuit conductors comprising sides movable respectively in the said air gaps, sides having polygonal openings, and sides having circular openings, bolts having polygonal heads for engaging said polygonal openings for adjusting the positions of the sides of the conductors in the said air gaps, and means for clamping both sides of the said closed-circuit conductors to the said bolts.





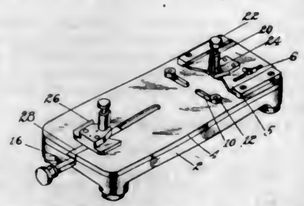
3. In an electrical measuring instrument, the combination with a laminated magnetizable core having a central member and side members spaced from each other at one end by air gaps, of two closed-circuit conductors comprising sides movable respectively in said air gaps, sides having polygonal openings, and sides having circular openings, and means for engaging said polygonal openings for adjusting the positions of the sides of the conductors in the said air gaps.

4. In an electrical measuring instrument, the combination with a laminated magnetizable core having a central member and side members spaced from each other at one end by air gaps, of two closed-circuit conductors comprising sides movable respectively in said air gaps, sides having polygonal openings, and bolts having means for engaging said polygonal openings to adjust the positions of the sides of the conductors in the said air gaps.

5. In an electrical measuring instrument, the combination with a laminated magnetizable core having a central member and side members spaced from each other at one end by air gaps, of two closed-circuit conductors comprising sides movable respectively in said air gaps, sides having polygonal openings, and sides having circular openings, two bolts constituting means for pivotally mounting said closed circuit conductors, means for adjusting the relative positions of the sides of the conductors in the said air gaps, and means for securing the laminæ of said magnetizable core together.

[Claims 6 and 7 not printed in the Gazette.]

1,226,057. TOE-CENTERING DEVICE. LOUIS M. BROWN, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 3, 1911. Serial No. 618,627. (Cl. 33—4.)



1. Apparatus for finding the centers of the ends of soles having, in combination, a toe receiving fork, a table having the slots 10, the feelers 12 projecting through said slots and above the surface of the table, the carrier levers 14 for the feelers, the toggle 15 and the actuator 16 arranged to slide lengthwise of the table to actuate the toggle 15 to produce symmetrical movement of the feelers together toward and from the middle of the table.

2. Apparatus for finding the center of the toe end of a sole having, in combination, a toe receiving fork, feelers, means whereby they are moved together symmetrically with relation to the center of the fork to position laterally a sole placed in the toe fork, and a stamp mounted on the toe fork in position to mark the center of the toe when the sole has been so positioned.

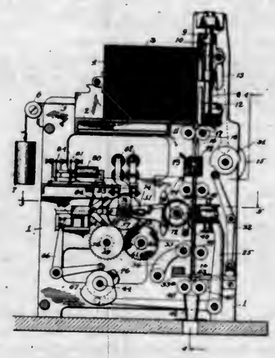
3. Apparatus for finding the center of the end of a sole, having, in combination, a toe receiving fork, feelers, means whereby they are moved together symmetrically with relation to the center of the fork to position laterally a sole placed in the toe fork, and a marker arranged with relation to the fork to place a mark on the sole at the center of the periphery of the toe.

4. Apparatus for finding the center of the end of a sole having in combination, a toe receiving fork, feelers, means whereby they are moved together symmetrically with relation to the center of the fork to position laterally a sole placed in the toe fork, a plunger guide erected over the center of the fork, a yieldingly upheld plunger guided therein against turning movement, and a marking blade on the lower end of the plunger to make a line extending from the center of the tip of the sole rearwardly in the median line of the sole.

5. An apparatus for finding the center of the end of a sole, having, in combination, a table for supporting a sole, a toe receiving fork, a heel centering fork, one of said forks being adjustable relatively to the other lengthwise of the table to center a sole, and a stamp associated with the toe fork for marking the edge center of the toe of the sole.

[Claims 6 to 10 not printed in the Gazette.]

1,226,058. ELECTRICALLY-CONTROLLED CALCULATING-MACHINE. JAMES W. BRYCE, Bloomfield, N. J. Filed Apr. 12, 1916. Serial No. 90,567. (Cl. 235—92.)



1. In an electrically operated elapsed time calculating machine which comprises means for introducing and moving through the machine punched time cards, means for closing an electric circuit when the punched holes are encountered by contacts and means for recording the calculated time, the calculating mechanism herein described consisting in the combination with type wheels indicating time units, of means for adjusting the same to bring the proper type to printing position, electro-magnets for controlling the operation of the same, and circuit controllers for limiting the activity of such magnets to the periods which elapse between the encountering of the holes in the cards by the contacts.

2. In an electrically operated elapsed time calculating machine which comprises means for introducing and moving through the machine punched time cards, means for closing an electric circuit when the punched holes are encountered by contacts, and means for recording the calculated time, the calculating mechanism herein described consisting in the combination with type-wheels indicating

time units, of means for adjusting the same to bring the proper type to printing position, electro-magnets for controlling the operation of the same, circuit controllers for limiting the activity of such magnets to the periods which elapse between the encountering of the holes in the cards by the contacts and subtracting magnets controlled by the circuit controllers for throwing back the type-wheels representing units of higher value one space whenever the first or "in" figure of any group of units is greater than the second or "out" figure of the same group.

3. In a calculating machine such as herein described, the combination with electro-magnetic type-wheel adjusting mechanism, of circuit controllers for operating the same, comprising two actuating electro-magnets and circuit controlling levers either one of which magnets is adapted when energized to maintain the adjusting mechanism in operation until it is thrown out of operation by the subsequent energization of the other magnet.

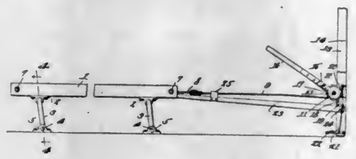
4. In a calculating machine such as herein described, the combination with the electro-magnetic type-wheel adjusting mechanism of circuit controllers for operating the same, comprising two actuating electro-magnets, adapted respectively to cause the type-wheels to move in opposite directions, and circuit controlling armature levers, either magnet adapted when energized to turn the type-wheel until its motion is checked by the energization of the other magnet.

5. In a calculating machine controlled in its operation by current impulses produced by the relative movement of contacts and time cards punched with lines of holes which by their position indicate different points of time, the combination with electro-magnetic type-wheel adjusting mechanism of circuit controllers operated by the said current impulses, either magnet when once energized being adapted to set and maintain the adjusting mechanism in operation, the other magnet being adapted when subsequently energized to throw such mechanism out of operation.

[Claims 6 to 20 not printed in the Gazette.]

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1,226,059. AUTOMOBILE-JACK. WILLIAM H. BULLA, King City, Mo. Filed Aug. 14, 1916. Serial No. 114,829. (Cl. 254—91.)



1. A vehicle jack embodying a supporting frame mounted for movement upwardly and downwardly away from and toward a floor when moved longitudinally, a stop movable upwardly and downwardly relative to the floor into and out of operative position, the frame when moved upwardly being adapted to abut against the stop in operative position, said frame and stop being movable independently of one another, means for moving said frame longitudinally in one direction, and means whereby when said means is operated, the stop is raised to operative position for the abutment of the frame thereagainst.

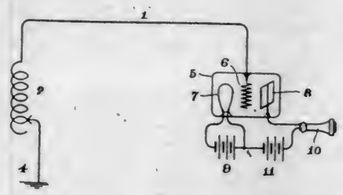
2. A vehicle jack embodying a supporting frame mounted for movement upwardly and downwardly away from and toward a floor when moved longitudinally, a stop movable upwardly and downwardly relative to the floor into and out of operative position, a device for moving the frame longitudinally in one direction for raising it and including a flexible element connected to the frame, and means connecting said stop with the flexible element whereby when said device is operated the stop is raised to operative position for the abutment of the frame thereagainst.

3. A vehicle jack embodying a supporting frame, swinging members supporting it, a stop bar having one end pivotally supported remote from said frame and having its other end abuttable with the frame when it is raised, the last mentioned end of said bar being swingable downwardly when the frame is lowered, a device for pulling said frame longitudinally to raise it, and means whereby when said device is operated said bar is raised to frame stopping position.

4. A vehicle jack embodying a supporting frame, swinging members supporting it, a device for pulling said frame in one direction to raise it having a flexible element connected to the frame, a stop bar having one end pivotally supported remote from the frame, the free end of said bar being abuttable with the frame when it is raised, and means carried by said bar slidably engaging said cable whereby the bar is raised to frame stopping position when the frame is raised.

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1,226,060. RECEIVER OF ELECTRICAL OSCILLATIONS. ELMER E. BUTCHER, Interlaken, N. J., assignor to Marconi Wireless Telegraph Company of America, a Corporation of New Jersey. Filed Apr. 9, 1914. Serial No. 830,593. (Cl. 250—20.)



1. In a receiver of electrical oscillations, an aerial grounded at only one end and a detector connected to the opposite end thereof.

2. In a receiver of electrical oscillations, a circuit earthed at only one end and containing means for adjusting to the periodicity of the received oscillations adjacent to the earthed point and detecting means connected to the circuit at a point remote from said means and from the earthed end.

3. In a receiver of electrical oscillations, a circuit earthed at only one end and containing means for adjusting to the periodicity of the received oscillations and detecting means connected to the circuit at a point of maximum potential remote from the earthed end.

4. In a receiver of electrical oscillations, a circuit earthed at only one end and containing means for adjusting to the periodicity of received oscillations adjacent to the earthed point and detecting means connected to the circuit at a point of maximum potential remote from the earthed end.

5. In a receiver of electrical oscillations, a circuit in the form of an extended elevated horizontal conductor earthed at only one end and containing means for adjusting to the periodicity of received oscillations and detecting means connected to the circuit at a point remote from the earthed end.

[Claims 6 to 13 not printed in the Gazette.]

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1,226,061. RAILROAD-RAIL. CHARLES W. CASON, Sr., Camden, N. J. Filed Feb. 7, 1917. Serial No. 147,218. (Cl. 239—16.)

A rail road rail comprising a pair of alined base members each including a web and a flange, the webs being provided in their upper edges with alined longitudinal grooves, the base members being cut away longitudinally at their meeting ends to form a lower extension on one base member and a superposed upper extension on the other base member, one of said extensions being provided with recesses communicating with the groove thereof, and the other of said base members having lateral lugs received in the recesses; a removable bail extending unbrokenly across the meeting ends of the base members and provided with a depending flange received in the

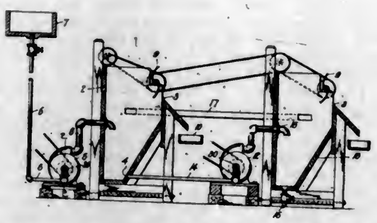




grooves; and means for holding the ball on the base members.

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1,226,062. ORE-FLOTATION PROCESS. HERBERT C. COLBURN, Colorado Springs, and ERNEST A. COLBURN, Denver, Colo. Filed May 31, 1916. Serial No. 100,947. (Cl. 83—85.)

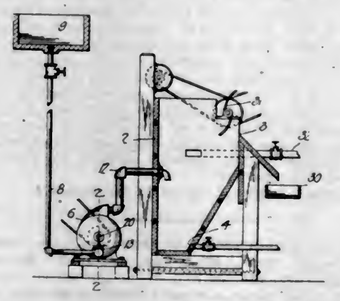


1. The process of separating valuable particles of finely divided ores, consisting in mixing ore-pulp with a substance having a selective affinity for the desired valuable particles, agitating and emulsifying the mixture with the addition of a gas, under a pressure less than atmospheric, and then conducting the emulsified mixture to a separate receptacle in which the froth can rise under a higher pressure.

2. The process of separating valuable particles of finely divided ores, consisting in mixing ore-pulp and oil, agitating and emulsifying the mixture with the addition of a gas, under a pressure less than atmospheric, and then conducting the emulsified mixture to a separate receptacle in which the froth can rise under a higher pressure.

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1,226,063. ORE-FLOTATION APPARATUS. HERBERT C. COLBURN, Colorado Springs, and ERNEST A. COLBURN, Denver, Colo. Original application filed May 31, 1916, Serial No. 100,947. Divided and this application filed Oct. 31, 1916. Serial No. 128,721. (Cl. 83—85.)



1. Apparatus for separating valuable particles of finely divided ores by a flotation process, comprising in combination, a mixing chamber having a feed-opening, an inlet for introducing a gas into material admitted through said feed-opening, and an outlet, a mixing element operating in said mixing chamber for the agitation and emulsification of its contents, means for maintaining a partial vacuum in the mixing chamber during the operation of said element, and a settling chamber under a higher pressure, connected with said outlet.

2. Apparatus for separating valuable particles of finely divided ores by a flotation process, comprising in combination, a mixing chamber having a feed-opening, an inlet for introducing a gas into material admitted through said feed-opening, and an outlet, a mixing element operating in said mixing chamber for the agitation and emulsification of its contents, means for maintaining a partial vacuum in the mixing chamber during the operation of said element, and a settling chamber under a higher pressure, connected with said outlet.

3. Apparatus for separating valuable particles of finely divided ores by a flotation process, comprising in combination, a mixing chamber having a feed-opening, an inlet for introducing a substance having a selective affinity for the desired valuable particles, into material admitted through said feed-opening, and an outlet, a mixing element operating in said mixing chamber for the agitation and emulsification of its contents, means for maintaining a partial vacuum in the mixing chamber during the operation of said element, and a settling chamber under a higher pressure, connected with said outlet.

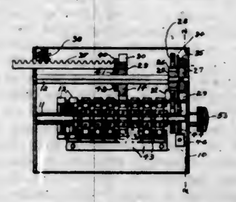
4. Apparatus for separating valuable particles of finely divided ores by a flotation process, comprising in combination, a mixing chamber having a feed-opening, an inlet for introducing an oil into material admitted through said feed-opening, and an outlet, a mixing element operating in said mixing chamber for the agitation and emulsification of its contents, means for maintaining a partial vacuum in the mixing chamber during the operation of said element, and a settling chamber under a higher pressure, connected with said outlet.

5. Apparatus for separating valuable particles of finely divided ores by a flotation process, comprising in combination, a mixing chamber having a feed-opening, inlets for introducing a gas and an oil into material admitted through said feed-opening, and an outlet, a mixing element operating in said mixing chamber for the agitation and emulsification of its contents, means for maintaining a partial vacuum in the mixing chamber during the operation of said element, and a settling chamber under a higher pressure, connected with said outlet.

[Claims 6 to 12 not printed in the Gazette.]

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1,226,064. ADDING-MACHINE. GEORGE CORDTS, New York, N. Y., assignor to Charles E. Dressler, New York, N. Y. Filed May 18, 1912. Serial No. 698,088. (Cl. 235—142.)



1. In an adding machine the combination of a shaft; a plurality of toothed wheels having digits on the apex of the teeth mounted on said shaft in juxtaposed relation; a toothed propelling wheel rotatable and adjustable on an axis parallel with the axis of the digit wheels to advance the digit wheels in one direction; means carried by the digit wheels coöperating when a digit wheel has made a complete revolution to advance the next adjacent digit wheel of higher denomination one tooth space, comprising a pawl carried upon the side of each

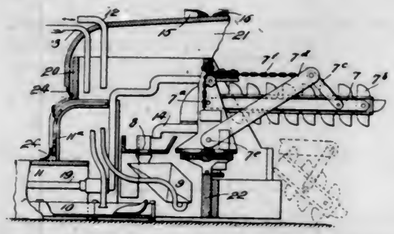
digit wheel, a disk having a flat portion fixed on the shaft adjacent each of the digit wheels and with the perimeter of which disks the pawls engage, and a ratchet wheel connected to the side of the wheel of the next higher denomination with which the pawls coöperate as they pass over the flat portions of the disks; means to manually rotate the digit wheel shaft; and a pawl carried by each of the digit wheels to coöperate with a longitudinally extending groove in the shaft to return all of the digit wheels to initial position.

2. An adding machine, comprising in combination a casing, a plurality of juxtaposed toothed wheels having digits on the apex of the teeth mounted in the casing to have independent movement in one direction; an opening in the casing with which axially alined digits on the digit wheels are adapted to register; means carried by said wheels and operable when the wheels have made a complete revolution in one direction to advance the next adjacent wheel of higher denomination one tooth space; a shaft extending parallel with the axis of the said digit wheels; a toothed wheel mounted on said shaft to have adjustment along the same and rotatable therewith and adapted to mesh with either of the digit wheels; means carried by said wheel to extend through an opening in the casing and register with numerals on the casing to indicate the position of said wheel with relation to the digit wheels; manually operable means to adjust such wheel along its shaft; and a lever to impart movement to the shaft and connected wheel, substantially as and for the purpose specified.

3. An adding machine comprising in combination a casing; a shaft journaled in said casing; a plurality of juxtaposed toothed wheels having digits on the apex of the teeth loose on said shaft and have independent movement on the shaft; an opening in the casing through which an axially alined row of digits of the digit wheels are adapted to be exposed; a toothed propelling wheel adjustable along an axis parallel with the axis of the digit wheels and adapted to mesh with either one of the latter wheels to advance said wheels in one direction, said wheel having means to project through an opening in the casing to indicate the position of said wheel; means to rotate said wheel a predetermined distance; means carried by the digit wheels to coöperate when a digit wheel has been actuated by the propelling wheel and made a complete revolution to advance the adjacent digit wheel of the next higher denomination one tooth space; means connected to the digit wheel shaft to manually rotate the same; and pawls carried by the digit wheels to engage in a longitudinal groove in the shaft when the digit wheel shaft is rotated in a direction reverse to the movement of the digit wheels imparted thereto by the propelling wheel to return the digit wheels to zero position.

4. An adding machine comprising in combination a casing; a shaft journaled in said casing; a plurality of juxtaposed toothed wheels having digits on the apex of the teeth loose on said shaft; an opening in the casing through which an axially alined row of digits on said wheels are adapted to be exposed; a shaft in the casing extending parallel with the axis of the digit wheels; a toothed propelling wheel slidably mounted on said shaft and to rotate therewith; means to adjust said wheel along its shaft to cause it to mesh with either one of the digit wheels; means connected to said propelling wheel projecting through an opening in the casing to indicate the position of said wheel; means carried by the digit wheels to coöperate when a complete revolution has been imparted to a digit wheel in one direction to advance the adjacent digit wheel of the next higher denomination one tooth space; and means to rotate the propelling shaft, comprising a toothed segment having a lever, a pinion with which said segment meshes loose on the shaft of the propelling wheel, a pawl carried by said pinion, and a ratchet wheel fixed on the shaft of the propelling wheel with which the pawl coöperates when the segment is moved in one direction to couple the pinion to the shaft, substantially as and for the purpose specified.

1,226,065. MINING APPARATUS. TRIMBLE DE ROODE, New York, N. Y. Filed Feb. 29, 1912. Serial No. 680,618. (Cl. 83—76.)



1. In an apparatus for use in a bore or cut, a movable protecting means furnishing a working space therein open at one end, a refining apparatus within said protecting means, and means for transferring and depositing the material excavated in the bore to the rear of and adjacent said protecting means as the latter is advanced to progressively refill said bore or cut.

2. In an apparatus for use in a bore of cut, a movable protecting means furnishing a working space open at one end, means within said working space for separating the excavated material, and means for progressively depositing the finer part of said excavated material in the bore at the rear of the protecting means as the latter is advanced to progressively refill said bore or cut, said protecting means having an outlet passage at the rear with means for moving the coarser excavated material through said passage.

3. In an apparatus for use in a bore or cut, a movable protecting means open at the front forming a working space, means for separating excavated material into fine and coarse grades, a refining apparatus within said protecting means coöperating with said separating means, and means for transferring and depositing the finer grade of the separated material in the bore to the rear of said protecting means as the latter is advanced to progressively refill said bore or cut.

4. In an apparatus for use in a bore or cut, a protecting means open at the front forming a working space, means for separating the excavated material within said working space into fine and coarse grades, and means for progressively depositing the finer grade in the bore to the rear of the protecting means to progressively refill said bore or cut, said protecting means having an outlet passage of less cross sectional area than the cross sectional area of the working space, and means for moving the coarser grade of material through said passage.

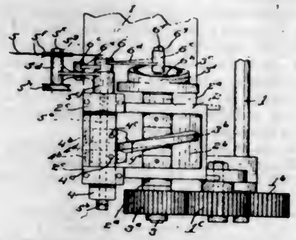
5. In an apparatus for use in a bore or cut, a protecting means furnishing a working space open at one end, means for separating the excavated material within said working space into fine and coarse grades, a refining apparatus coöperating with said separating means to treat part of the material separated thereby, means for progressively depositing the material from said refining apparatus in the bore to the rear of the protecting means, said protecting means having an outlet passage of less cross-sectional area than the cross-sectional area of the working space, and means for removing through said passage the part of the separated material not treated by said refining apparatus.

[Claims 6 to 26 not printed in the Gazette.]

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1,226,066. ROD-CUTTING DEVICE. NAPOLEON DU BRUL, Cincinnati, Ohio. Filed Sept. 18, 1915. Serial No. 51,454. (Cl. 131—37.)

1. In a rod cutter, a housing having a lubricant chamber, a slide mounted on said housing and intersecting the lubricant chamber, a shaft also intersecting said chamber, a cam located within the chamber and coacting with the slide to reciprocate the same, a knife mounted upon the slide outside of the chamber, and means for developing a transverse reciprocating movement in the knife comprising a second cam mounted on the cam shaft; said slide having mounted thereon, studs within the chamber, in position to receive the first-mentioned cam in developing the said reciprocating movement.



2. In a rod cutter, a housing having a lubricant chamber, a slide mounted on said housing and intersecting the lubricant chamber, a shaft also intersecting said chamber, a cam located within the chamber and coacting with the slide to reciprocate the same, a knife mounted upon the slide outside of the chamber, and means for developing a transverse reciprocating movement in the knife comprising a second cam mounted on the cam shaft; said slide having mounted thereon, studs within the chamber, in position to receive the first mentioned cam in developing the said reciprocating movement; said studs being introduced transversely through the slide and being accessible from the outer side of said slide.

3. In a rod cutter, a housing having a lubricant chamber, a slide mounted on said housing and intersecting the lubricant chamber, a shaft also intersecting said chamber, a cam located within the chamber and coacting with the slide to reciprocate the same, a knife mounted upon the slide outside of the chamber, and means for developing a transverse reciprocating movement in the knife comprising a second cam mounted on the cam shaft; said slide having mounted thereon, studs within the chamber, in position to receive the first-mentioned cam in developing the said reciprocating movement; said studs being introduced transversely through the slide and being accessible from the outer side of said slide; said lubricant chamber having an opening permitting the introduction and withdrawal of said studs without removal of the slide.

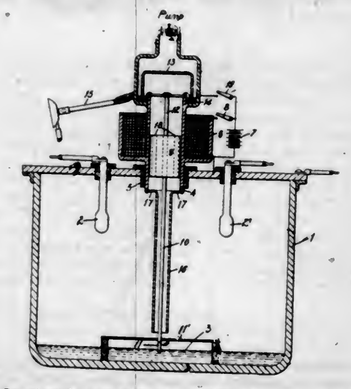
4. In a rod cutter, the combination of a housing having a lubricant chamber, a slide mounted upon said housing and intersecting said chamber, a cam located in said chamber and coacting with said slide to reciprocate the same, a knife mounted on said slide and reciprocating therewith in the line of rod feed, and means for developing a transverse reciprocating movement in the knife; the mounting for said knife comprising a rocker-arm pivotally supported on the slide and carrying a bearing in which the knife is mounted to rotate; and the means for developing said transverse reciprocating movement comprising a second arm extending from the knife mounting, and a second cam mounted upon the shaft of the cam within the lubricant chamber; said second cam having a face groove substantially corresponding in curvature with the curvature of the slide reciprocating cam, and said second arm carrying a stud having its end working in said face groove.

5. In a rod cutter, the combination of a housing having a lubricant chamber, a slide mounted upon said housing and intersecting said chamber, a cam located in said chamber and coacting with said slide to reciprocate the same, a knife mounted on said slide and reciprocating therewith in the line of rod feed, and means for developing a transverse reciprocating movement in the knife; the mounting for said knife comprising a rocker-arm pivotally supported on the slide and carrying a bearing in which the knife is mounted to rotate; and the means for developing said transverse reciprocating movement comprising a second arm extending from the knife mounting, and a second cam mounted upon the shaft of the cam within the lubricant chamber; said second cam having a face grooved substantially corresponding in curvature with the curvature of the slide reciprocating cam, and said second arm carrying a stud having its end constructed in the form of a curved segment fitted to and working in said face groove.

[Claim 6 not printed in the Gazette.]

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1,226,067. AUXILIARY APPARATUS FOR VAPOR-CONVERTERS. EARL E. EBY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 6, 1915, Serial No. 60,000. Renewed Oct. 21, 1916. Serial No. 127,039. (Cl. 175—354.)



1. In electric apparatus embodying a closed container, the combination with said container, of an exhausting tube leading therefrom, a valve for closing said tube, a movable electrode within said container, and a common actuating means for said valve and said electrode.

2. In electric apparatus embodying a closed container, the combination with said container, of an exhausting tube leading therefrom, a valve for closing said tube, an auxiliary starting and maintaining electrode within said container, and a common actuating means for said valve and said electrode.

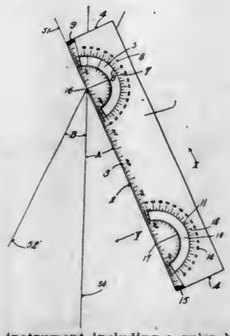
3. In electric apparatus embodying a closed container, the combination with said container, of an exhausting tube leading therefrom, a valve for closing said tube, a movable electrode within said container, an armature within said tube, a solenoid exterior to said tube and operatively associated with said armature, and connections from said armature to said electrode and to the moving portions of said valve, whereby both of said members may be operated by the energization and deënergization of said solenoid.

4. In electric apparatus embodying a closed container, the combination with said container, of a vertically disposed exhausting tube extending therefrom and terminating in an open end, a casing surrounding said open end and forming an annular trough therearound, a mass of sealing material in said trough, a cap surmounting said tube and having its lower edge extending into proximity to said sealing material, a movable electrode within said continer, a movable armature within said tube, magnetic operating means therefor exterior to said tube, and connections whereby the movement of said armature actuates said cap to move the lower edge thereof into and out of said sealing material and also actuates said electrode.

5. In electric apparatus embodying a closed container, the combination with said container, of a vertically disposed exhausting tube extending therefrom and terminat-

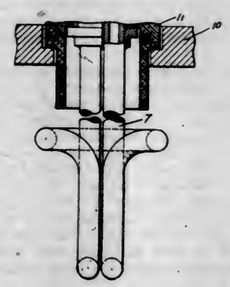
ing in an open end, a casing surrounding said open end and forming an annular trough therearound, a mass of sealing material in said trough, a cap surmounting said tube and having its lower edge extending into proximity to said sealing material, a movable electrode within said container, a movable armature within said tube, magnetic operating means therefor exterior to said tube, and connections whereby the movement of said armature actuates said cap to move the lower edge thereof into and out of said sealing material and also actuates said electrode, the connection to said cap embodying a loose coupling whereby said electrode may be actuated without operation of said valve.

1,226,068. DRAFTING-TOOL. WALTER FAAS, El Paso, Tex., assignor of one-fourth to Catherine Steffen, El Paso, Tex. Filed Aug. 2, 1916. Serial No. 112,771. (Cl. 33—1.)



A drawing instrument including a ruler having a fiducial edge and provided with arcuate slots located entirely within the contour of the ruler and disposed near to the ends of the fiducial edge, the ruler being inscribed with 180 degree protractors, the 90 degree marks of which are disposed at right angles to the fiducial edge of the ruler, the protractors having graduations which read in opposite directions from the ends of the ruler toward the middle portion thereof, a part of the markings of the protractors lying adjacent the slots, and a part of the markings of the protractors lying along the extreme end edges of the ruler.

1,226,069. ANODE STRUCTURE FOR VAPOR-CONVERTERS. SIDNEY W. FARNSWORTH, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 12, 1915. Serial No. 39,362. (Cl. 176—50.)



1. An electrode for vapor-electric apparatus comprising a loop of tubing composed of impervious material, means for circulating a temperature-regulating medium therethrough, and a mass of arc-supporting material mounted thereupon.

2. An electrode for vapor apparatus comprising a mass of pervious arc-supporting material, and means for circulating a cooling medium therethrough without permitting the passage of gas from said medium into said arc-supporting material.

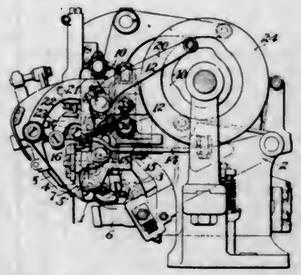
3. In vapor-electric apparatus, the combination with an electrode provided with a gas-free portion, and means for restricting the operating arc to said gas-free portion.

4. The combination with an evacuted container, of an electrode therein comprising a member projecting downwardly through the upper portion thereof, bending transversely and terminating in an upwardly extending portion and a coöperating electrode.

5. In a vapor converter, an anode depending from the cover and having substantially a J shape and means for maintaining an arc on the terminal portion thereof from a coöperating electrode.

[Claims 6 and 7 not printed in the Gazette.]

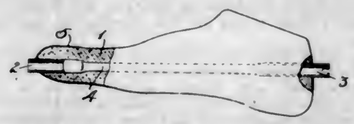
1,226,070. CHANNEL-GUIDE MECHANISM FOR SEWING-MACHINES. ALFRED B. FOWLER, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 24, 1915. Serial No. 41,675. (Cl. 112—20.)



1. An inseam shoe sewing machine, having in combination, stitch forming devices, a channel guide movable transversely to the direction of feed to engage and release the work during each cycle of operations, a cam for positively moving the guide in both directions, and a spring acting in advance of the cam for moving the guide yieldingly into engagement with the work.

2. An inseam shoe sewing machine, having in combination, stitch forming devices, a channel guide movable transversely to the direction of feed to engage and release the work and movable in the direction of feed during each cycle of operations, a cam for positively moving the guide in both directions acting to complete the work engaging movement when the guide is at the end of its feed movement, and a spring acting in advance of the cam for moving the guide yieldingly into engagement with the work.

1,226,071. MASTER-LAST. MEDOREM W. GREER, New York, N. Y. Filed Sept. 7, 1916. Serial No. 118,820. (Cl. 142—55.)

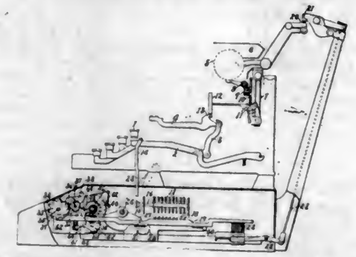


1. A master-last comprising a body formed of plastic compound of a relatively fragile material, a core extending longitudinally through said last to reinforce the same against endwise crushing strain.

2. A master-last comprising a body formed of a plastic compound of a relatively fragile material, a core extending longitudinally through said last to reinforce the same against endwise crushing strain, with means for locking said core in said body against relative rotary movement.



1,226,072. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Jersey City, N. J., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Jan. 6, 1912. Serial No. 669,751. (Cl. 235—60.)



1. The combination with computation wheels, carry-over trains, said wheels having teeth to start said carry-over trains, and gears to complete the movements of said carry-over trains, of stop devices normally in position to prevent overthrow of said carry-over trains when started by said wheels, and means for automatically withdrawing said stop devices during the operation of said gears.

2. The combination with computation wheels, carry-over trains, said wheels having teeth to start said carry-over trains, and gears to complete the movements of said carry-over trains, of stop devices normally in position to prevent overthrow of said carry-over trains when started by said wheels, a rotatable shaft on which said gears are mounted, an actuator on said shaft, and means to enable said actuator to withdraw said stop devices.

3. The combination with computation wheels, carry-over trains, said wheels having teeth to start said carry-over trains, and gears to complete the movements of said carry-over trains, of stop devices normally in position to prevent overthrow of said carry-over trains when started by said wheels, a rotatable shaft on which said gears are mounted, an actuator on said shaft, means to enable said actuator to withdraw said stop devices, and a spring to restore said stop devices to normal positions.

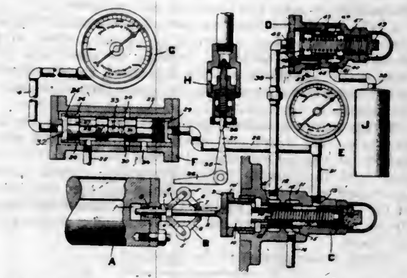
4. The combination with computation wheels, carry-over trains, said wheels having teeth to start said carry-over trains, and gears to complete the movements of said carry-over trains, of a rotatable shaft carrying said gears, a stop bar in position to prevent overthrow of the carry-over trains when started by said wheels, a rock shaft having an arm to withdraw said stop bar, a cam on said gear shaft, a connection from said cam to said rock shaft to withdraw said stop bar at the beginning of the rotation of the gear shaft, and a spring device to restore the bar and rock shaft to normal positions at the conclusion of the movement of said gear shaft.

5. The combination with computation wheels, carry-over trains, said wheels having teeth to start said carry-over trains, and gears to complete the movements of said carry-over trains, of means to prevent overthrow of the carry-over trains when started by said wheels, and means to release said carry-over trains for actuation by the gears brought into action concomitantly with the movement of said gears.

[Claims 6 to 24 not printed in the Gazette.]

1,226,073. SPEED-INDICATOR. HERBERT T. HERR, Pittsburgh, Pa., assignor, by mesne assignments, to The Westinghouse Machine Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 23, 1912. Serial No. 685,722. (Cl. 264—15.)

1. In combination with two fluid actuated tachometers, a pressure responsive device responsive to variations in the pressure of the fluid delivered to one of the tachometers for controlling the operation of the other.



2. In combination, a liquid actuated tachometer, a fluid actuated tachometer, and a liquid actuated synchronizing device for synchronizing the two tachometers.

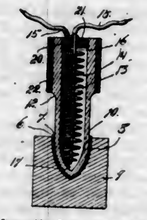
3. The combination with a liquid operated tachometer, means for supplying liquid thereto, an air operated tachometer, means for supplying air thereto, and means for synchronizing the movements of the mechanism of the second mentioned tachometer with those of the first.

4. The combination with a liquid operated tachometer, means for supplying liquid thereto, a motor-controlled valve for the liquid, an air operated tachometer, means for supplying air thereto, and means controlled by the valve for synchronizing the movements of the liquid operated tachometer with those of the air operated tachometer.

5. In combination with a device, the speed of which is to be indicated, a pressure actuated tachometer at a distance from the device, a pressure actuated tachometer adjacent to said device, and pressure actuated means responsive to the actuating pressure delivered to the adjacent tachometer, for controlling the operation of the remote tachometer.

[Claims 6 to 20 not printed in the Gazette.]

1,226,074. PROCESS FOR MAKING CIGAR-TIPS. BARNETT I. HORWITZ, Denver, Colo. Filed Apr. 19, 1915. Serial No. 22,285. (Cl. 131—52.)



1. The herein described process of producing a tip or mouth piece for cigars, consisting in coating a blank with paraffin or similar substance, bending the blank into tip form with the paraffin surface innermost, causing parts to overlap so as to leave an aperture adjacent the point of the tip, and finally heating the inner surface to cause the paraffin to melt and close the said aperture and seal the overlapping portions of the blank.

2. The herein described process of producing a tip or mouthpiece for cigars consisting in coating a blank with paraffin or similar substance, bending the blank into tip form with the paraffin surface innermost, causing parts to overlap, and finally heating the inner surface to cause the paraffin to melt and seal the overlapping portions of the blank.

3. The herein described process of producing a tip or mouthpiece for cigars consisting in coating a blank with paraffin or similar substance, bending the blank into tip

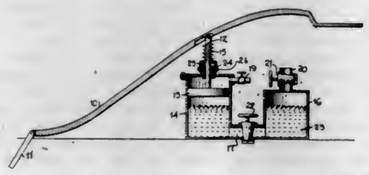
form with the paraffin surface innermost, causing parts to overlap so as to leave an aperture adjacent the point of the tip, and finally heating the inner surface to cause the paraffin to melt and close the said aperture.

4. The herein described process of producing a tip or mouthpiece for cigars, consisting in coating a blank with paraffin or similar substance, bending the blank into tip form with the paraffin surface innermost, causing parts to overlap, and finally heating the inner surface to cause the paraffin to melt.

5. The herein described process of producing a tip or mouthpiece for cigars, consisting in coating a blank with paraffin or similar substance, bending the blank into tip form with the paraffin surface innermost, causing parts to overlap so as to leave an aperture adjacent the point of the tip, and finally heating the inner surface to cause the paraffin to melt and seal the overlapping portions of the blank.

[Claim 6 not printed in the Gazette.]

1,226,075. FORTIFICATION-SHIELD. GEORGE GOAL ISON, Mangum, Okla. Filed July 29, 1916. Serial No. 112,061. (Cl. 89—36.)



1. A movable projectile shield and means resisting the movement of the shield including a pair of connected fluid containing chambers, a plunger disposed in one of the chambers and operatively connected to the shield, and means for resisting the movement of fluid from one chamber to the other.

2. A movable projectile shield and means for adjustably resisting the movement of the shield including a pair of connected fluid containing chambers, a plunger disposed in one of the chambers and operatively connected to the shield, and means for resisting the movement of fluid from one chamber to the other.

3. A movable projectile shield and means for resisting the movement of the shield comprising a pair of connected fluid containing chambers, a plunger disposed in one of the chambers and operatively engaged with the shield, means for controlling the outlet of fluid from the other chamber, and means for adjustably controlling the passage of fluid between the chambers.

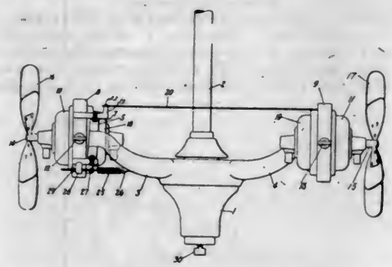
4. A fortification shield pivotally supported at its forward edge and normally extending upward and rearward, casings disposed beneath the shield and connected by a duct, a plunger operatively connected to the shield and extending into one of said casings, a valve controlling passage between the casings, and valves controlling outlets from the casings.

5. A fortification shield pivotally supported at its forward end and normally extending upward and rearward, a pair of casings disposed beneath the shield and connected by a duct, a piston disposed in one of said casings and having a piston rod extending out of the casing and engaged by the shield, a spring normally supporting the shield, fluid disposed within the casings, and means for controlling the passage of fluid from one casing into the other.

[Claims 6 to 10 not printed in the Gazette.]

1,226,076. REVOLVING FAN. OLIVER S. JENNINGS, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 6, 1915. Serial No. 788. (Cl. 230—1.)

1. The combination with a rotatable supporting member provided with an inclined pivot member, of a rotatable fan pivotally mounted upon the said pivot member, whereby the said fan tends to rotate under the influence of gravity around the said pivot.



2. The combination with a rotatable supporting member provided with an inclined pivot for supporting a rotatable fan, of means for opposing the tendency of the said fan to rotate under the influence of gravity around the said pivot.

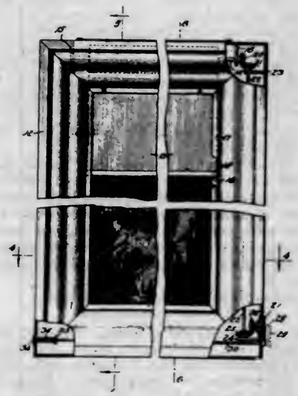
3. The combination with a rotatable supporting member provided with an inclined pivot for supporting a rotatable fan, of a spring adapted to oppose the tendency of the said fan to rotate under the influence of gravity around the said pivot.

4. The combination with a rotatable supporting member provided with an inclined pivot member, of a rotatable fan pivotally supported by the said pivot member and adapted to be pivotally moved thereon by centrifugal force during the rotation of the said supporting member, and a stop associated with the said supporting member for limiting the degree of such pivotal movement of the said fan.

5. The combination with a rotatable supporting member provided with an inclined pivot member, of a rotatable fan pivotally mounted upon the said pivot member and adapted to be pivotally moved in one direction under the influence of gravity and also adapted to be pivotally moved in the opposite direction by centrifugal force during the rotation of the said supporting member.

[Claims 6 to 14 not printed in the Gazette.]

1,226,077. PICTURE-FRAME. THOMAS E. JOPE, New York, N. Y. Filed Apr. 3, 1915. Serial No. 18,939. (Cl. 40—152.)



1. A picture frame comprising a plurality of hollow rails; a flexible curtain for covering the view opening of said frame; and a winding mechanism for raising said curtain from in front of said view opening, said mechanism embodying a rotary pole, a latch for preventing the unwinding of said curtain, and a flexible member for preventing the release of said latch.

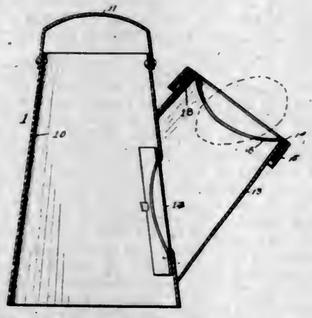


2. A picture frame comprising a plurality of hollow rails; a flexible curtain for covering the view opening of said frame; and a winding mechanism for raising said curtain from in front of said view opening, said mechanism embodying a rotary pole, a latch for preventing the unwinding of said curtain, a flexible member for preventing the release of said latch, and automatic means for releasing said latch.

3. A picture frame comprising a plurality of hollow rails; a flexible curtain for covering the view opening of said frame; and a winding mechanism for raising said curtain from in front of said view opening, said mechanism embodying a rotary pole, a latch for preventing the unwinding of said curtain, a flexible member for preventing the release of said latch, and automatic means for releasing said latch, said automatic means embodying a pivot rod, a spring for shifting said rod, and a fusible detent for retaining said rod in service relation.

4. A picture frame comprising a plurality of hollow rails; a flexible curtain for covering the view opening of said frame; and a winding mechanism for raising said curtain from in front of said view opening, said mechanism embodying a rotary pole, a latch for preventing the unwinding of said curtain, a flexible member for preventing the release of said latch, and automatic means for releasing said latch, said automatic means embodying a pivot rod, a spring for shifting said rod, a fusible detent for retaining said rod in service relation, and a fusible link for retaining said latch in engagement with said pole, said link and said detent being situated at opposite sides of said frame.

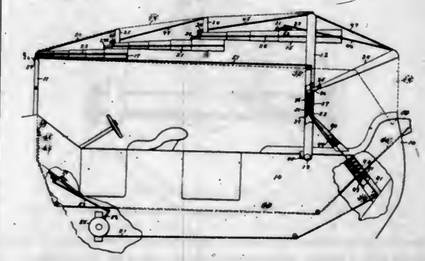
1,226,078. EGG-TESTER. JOHN H. KATE, Des Moines, Iowa, assignor, by direct and mesne assignments, to X Ray Incubator Company, Des Moines, Iowa, a Corporation of Iowa. Filed Sept. 21, 1916. Serial No. 121,439. (Cl. 99—6.)



1. In an egg tester, the combination of a chimney portion, a cylinder supported on the chimney portion and extended outwardly and upwardly therefrom and open at its upper end, a cap for the cylinder, having a large central opening therein and fitted to the outer end of the cylinder, and a flexible light excluding egg retaining member contained within the cap and curved or bowed downwardly at its central portion and provided with a central opening to receive and support an egg.

2. An improved egg tester, comprising a metallic lamp chimney having a transparent portion in one side, a metallic cylinder surrounding said transparent portion and extending upwardly and outwardly therefrom and having its outer end inclined downwardly and outwardly from the chimney, a cap having a large central opening and flanges at its sides, a detachable rim on the interior of the cap, and a flexible light excluding egg retaining member between the flanges of the cap and the said ring, and provided with a central opening and curved or bowed downwardly at its central portion, the amount of such curvature being capable of adjustment by a manipulation of said ring, for the purposes stated.

1,226,079. AUTOMATIC VEHICLE-TOP. RALPH A. KAUFFMAN, Waterloo, Iowa, assignor, by mesne assignments, of one-half to Earl Von Osterheldt, Des Moines, Iowa. Filed Mar. 24, 1916. Serial No. 86,504. (Cl. 21—62.)



1. A vehicle top, comprising an upright bow pivoted at its lower end, a spring-pressed member pivoted to said bow and acting to raise it to upright position, telescoping members carried by and extending forwardly from said upright bow, yielding pressure devices acting normally to expand said telescoping frame members, and a flexible cover carried by said bow and frame members.

2. A vehicle top, comprising an upright bow pivoted at its lower end, a spring-pressed member pivoted to said bow and acting to raise it to upright position, telescoping members carried by said bow in horizontal position, yielding pressure devices acting normally to expand said telescoping members, means for latching said telescoping members in contracted position, and a flexible cover carried by said bow and frame members.

3. A vehicle top, comprising an upright bow pivoted at its lower end, a spring-pressed member pivoted to said bow and acting to raise it to upright position, telescoping frame members carried by said bow in horizontal position, yielding pressure devices acting normally to expand said telescoping members, means for contracting said telescoping members, and means for latching said telescoping members in contracted position.

4. A vehicle top, comprising an upright bow pivoted at its lower end, a spring-pressed member acting to raise said bow to vertical position, telescoping members fixed at right angles to said bow, yielding pressure devices acting normally to expand said telescoping members, means for contracting said telescoping members, means for latching said telescoping members in contracted position, and means for automatically releasing said latches.

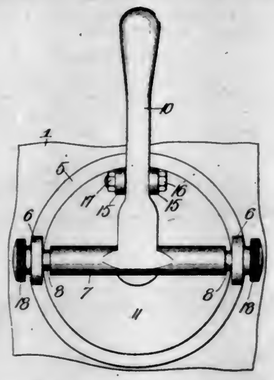
5. A vehicle top, comprising an upright bow pivoted at its lower end, a spring-pressed member pivoted to said bow and acting to raise it to upright position, a rear bow pivotally and slidingly connected to said upright bow, telescoping frame members carried by said upright bow, springs acting to expand said telescoping members, and a flexible cover carried by said bows and frame members.

[Claims 6 to 10 not printed in the Gazette.]

1,226,080. HAND-HOLE PLATE FOR BOILERS. HENRY D. KELLY, Kansas City, Mo. Filed Jan. 19, 1914. Serial No. 813,055. (Cl. 70—3.)

A fastener for hand-hole plates for boilers comprising perforated ears rigid with the boiler, a T-shaped lever having a head portion of greater diameter than said perforations and formed with a cam at an intermediate point; said head being provided at its ends with reduced cylindrical extensions of unequal length, respectively en-

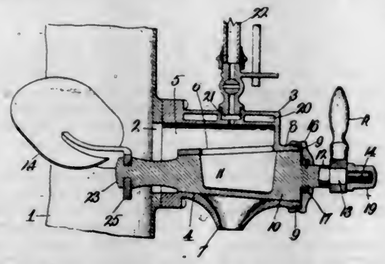
gaging the perforations of said ears, and screws engaging said reduced portions of the lever head and provided with



heads of greater diameter than the perforations of said ears and bearing against the outer sides of the same.

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1,226,081. MEASURING-FAUCET. HENRY D. KELLY, Kansas City, Mo. Filed June 30, 1915. Serial No. 37,156. (Cl. 225—21.)



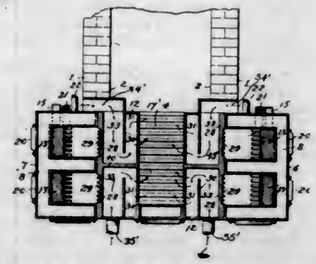
1. A faucet provided with a charging chamber, a plug passage, a port connecting the chamber and passage and a spout for and below said passage, a plug fitting rotatably in said passage and provided with a measuring chamber for alternate communication with the said port and spout; said plug having a stem projecting from its inner end, an agitator detachable on the stem, and a handle for operating the plug and agitator.

2. A faucet provided with a charging chamber, a plug-passage, a port connecting the chamber and passage and a spout for and below said passage, a plug fitting said passage and provided with a measuring chamber for alternate communication with the said port and spout; said plug having a stem projecting from its inner end and formed with grooves in its opposite sides, an agitator or stirrer provided with a bifurcated arm for engaging said grooves of the plug-stem, and a handle for oscillating the plug and agitator or stirrer.

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1,226,082. FURNACE OR STOVE CONSTRUCTION. GEORGE C. KIDDER, Salt Lake City, Utah. Filed Mar. 27, 1916. Serial No. 86,891. (Cl. 110—31.)

1. A furnace of the character described having a combustion chamber, a retort adjacent thereto adapted to receive a relatively large supply of fuel during the burning thereof and having a communication with the combustion chamber for the passage of the gases generated from the fuel in the retort, an air supplying means conveying air to the combustion chamber to mix with the gases led thereto, said air supplying means consisting of a conduit disposed below the inner wall of the retort and having a plurality of independent air chambers therein, each chamber being provided with spaced discharge openings facing the combustion chamber, one air feeding chamber being disposed above the other, for the purpose described.



2. A furnace of the character described comprising a combustion chamber, a retort for burning fuel adjacent thereto and in communication with the combustion chamber, an air supplying conduit of substantially rectangular formation directly underlying the inner wall of the retort and having a plurality of division walls therein dividing the chamber into independent air passages, each passage having discharge openings facing the combustion chamber, means for introducing air to each of said passages, substantially as described.

3. A furnace of the character described, comprising a combustion chamber, a retort on each side of said chamber, for burning fuel and having communications with the combustion chamber to permit the gases generated in the retorts to enter the combustion chamber, air supplying conduits disposed beneath the inner walls of each retort having a plurality of division walls therein dividing each conduit into independent air chambers, said chambers having spaced air feeding openings therein facing the combustion chamber for permitting the escape of air to the combustion chamber to mix with the gases led thereto, substantially as described.

4. A furnace of the character described comprising a combustion chamber, a retort on each side of said chamber for burning fuel and having communications with the combustion chamber to permit the gases generated in the retorts to enter the combustion chamber, air supplying conduits disposed beneath the inner walls of each retort having a plurality of division walls therein dividing each conduit into independent air chambers, said chambers having spaced air feeding openings therein facing the combustion chamber for permitting the escape of air to the combustion chamber to mix with the gases, the said air chambers being arranged one above another and the discharge openings therein being of different dimensions.

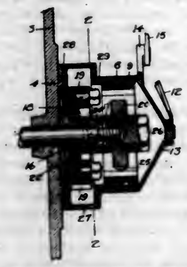
5. A furnace of the character described having a combustion chamber, a retort adjacent thereto adapted to receive a relatively large supply of fuel and communicating with the combustion chamber for the discharge of the gases generated from the fuel in the retort, air supplying means for introducing air to the combustion chamber comprising a member having independent air chambers therein disposed at different heights, each of said chambers being provided with spaced discharge openings of different dimensions for feeding the air to the combustion chamber, for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,083. IGNITION DEVICE FOR INTERNAL-COMBUSTION ENGINES. GUSTAVE A. KROHN, Coarsegold, Cal. Filed Feb. 7, 1916. Serial No. 76,507. (Cl. 123—167.)

1. An ignition timing device for internal combustion engines comprising a driving member, a driven member, a centrifugal element forming an operative connection between said members and adapted to vary the angular relation of the members by changes in its position, a contact arranged on the driven member, a stationary commutator surrounding said contact and engaged thereby, a casing containing the commutator, an extension ring fixedly engaging the engine casing and surrounding said centrifugal element, a shoulder on said ring engaged by said commutator casing and means for holding said casing on said ring.



2. In an internal combustion engine having a casing and timing shaft extending therethrough and a shoulder on the casing concentric with said timing shaft, a contact holder, a centrifugal element forming an operative connection between said timing shaft and contact holder and adapted to vary the angular relation of the contact holder with respect to the shaft by changes in its position, an extension ring fixedly engaging the shoulder on the engine casing, a shoulder on the extension ring, a commutator casing engaging the shoulder on the extension ring, a commutator in said casing in position to be engaged by the contact in said contact holder and a spring for pressing said commutator casing against said ring.

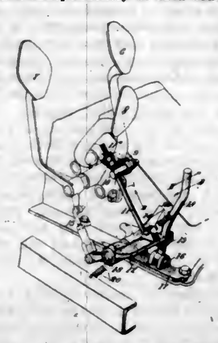
3. The combination with an internal combustion engine having a casing provided with a circular shoulder, a timing shaft extending through the casing and concentric with said shoulder, a commutator, a casing surrounding the commutator adapted to seat on said shoulder and a contact arranged to engage the commutator, of an extension ring arranged between the engine casing and the commutator casing arranged to seat on the shoulder on the engine casing and having a shoulder of the same diameter on which the commutator casing seats and a centrifugal element forming an operative connection between the timing shaft and the contact adapted to vary the angular relation of the contact with respect to the timing shaft by changes in its position.

4. The combination with an internal combustion engine having a casing provided with a circular shoulder, a timing shaft extending through the casing and concentric with said shoulder, a commutator, a casing surrounding the commutator and adapted to seat on said shoulder, of a flanged bushing secured to the timing shaft, governor weights pivotally attached to the flange of said bushing, a sleeve surrounding the bushing, a gear on said sleeve, gear segments on said governor weights meshing with said gear, a contact carrier secured to said sleeve, a contact carried by said carrier, an extension ring engaging said shoulder and provided with a shoulder on which said commutator casing seats, a nut engaging said shaft and holding said sleeve on said bushing and means pressing the commutator casing against said ring.

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1,226,084. TRANSMISSION-CLUTCH CONTROL. CHARLES C. LANE, San Francisco, Cal. Filed May 8, 1916. Serial No. 96,033. (Cl. 74—81.)

1. The combination with the transmission clutch and the brake pedal on an automobile, of means connected with the brake pedal for throwing the clutch out of engagement when the brake pedal is operated, locking means adapted to act in conjunction with or independently of said brake pedal for positively locking the clutch out of clutching condition, and means for operating said locking means independently of said brake pedal.



2. The combination with the transmission clutch and the brake pedal on an automobile, of means connected with the brake pedal for automatically throwing the clutch out of engagement when the brake pedal is operated, and means for automatically locking the clutch against return movement or engagement when the brake or clutch pedal is actuated to disengage the clutch.

3. The combination with the transmission clutch and the brake pedal on an automobile, of means connected with the brake pedal for automatically throwing the clutch out of engagement when the brake pedal is operated, means for automatically locking the clutch against return movement or engagement, and means for manually releasing said lock to permit the clutch to return and engage.

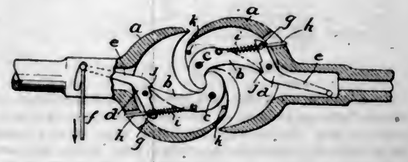
4. The combination with the transmission clutch and the brake of an automobile, of means for automatically throwing the clutch into ineffective position when the brake is actuated, means for automatically locking the clutch in ineffective position and for retaining the clutch so locked independently of said brake, and independent means to enable said clutch to return to effective position.

5. The combination with the transmission clutch and the brake and pedal therefor of an automobile, of means connected with the brake pedal for automatically throwing the clutch into ineffective position when the brake is actuated, means for automatically locking the clutch in ineffective position and for retaining the clutch so locked independently of said brake pedal, and means independent of said brake-pedal-and-clutch connecting means for disengaging said locking means to enable said clutch to return to effective position.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,085. CAR-COUPLING. JAMES A. LARMORE, Westgrove, Pa. Filed June 9, 1916. Serial No. 102,607. (Cl. 213—9.)



1. In a car coupling, in combination, a pivoted knuckle jaw provided with a tail, a pivoted latching lever adapted to engage said tail and means comprising a compression spring interposed between said jaw and lever tending to hold the jaw closed when it is in latched position and operating in connection with a pull on the jaw when the

latching lever is moved to release the jaw, to turn and maintain said jaw fully open.

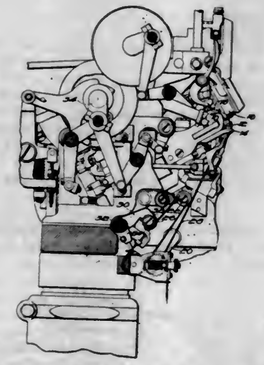
2. In a car coupling, in combination, a pivoted knuckle jaw provided with a tail, a pivoted latching lever adapted to engage said tail and means comprising a compression spring interposed between said jaw and lever tending to hold the jaw fully open, and operating when said jaw is turned toward its closed position to reverse its action and hold the jaw in locking relation with the latch lever, said spring being constantly under tension.

3. In a car coupling, in combination, a lever pivoted between its ends and having a rearwardly extending arm on one side of its pivot and an arm on the other side of its pivot, said lever being notched near its pivot, a pivoted jaw having a tail engaging said notch when in closed position and thereby held from opening, and a tension device one end of which is carried by and movable with the second arm of the latch lever and the other end of which is carried by the jaw between its pivot and the engaging end of the tail.

4. In a car coupling, in combination, a lever pivoted between its ends and having a rearwardly extending arm on one side of its pivot and an arm on the other side of its pivot, said lever being notched near its pivot, a pivoted jaw having a tail engaging said notch when in closed position and thereby held from opening, and a tension device one end of which is carried by and movable with the second arm of the last lever and the other end of which is carried by the jaw between its pivot and the engaging end of the tail, and the point of connection of the tension device to the jaw, when closed, being at one side of, but relatively close to a line connecting the jaw's pivot and the point of connection of the tension device with the lever, whereby, when the jaw is moved away from its closed position by the manual turning of the latch lever, said point of connection of the tension device to the jaw moves on the other side of the line, causing the tension device to open said jaw fully.

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1,226,086. THREAD-LOCK. ALBERT LATHAM, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 15, 1915. Serial No. 39,993. (Cl. 112—20.)



1. A thread lock for lock-stitch sewing machines, the stitch forming devices of which include a needle and a take-up, said thread lock consisting of a lever provided on its thread clamping end with a wear plate, said lever and plate having coöperating portions whereby said plate may be sprung into operative position on the lever.

2. A thread lock for lock-stitch sewing machines, the stitch forming devices of which include a needle and a take-up, said thread lock consisting of a lever and a wear plate located on the thread clamping end of the lever, said plate being composed of resilient material by virtue of which it may be sprung into operative position on the lever.

3. A thread lock for lock-stitch sewing machines, the stitch forming devices of which include a needle and a take-up, said thread locking device comprising a lever, a slot in the thread clamping end of the lever, and a wear plate mounted on the clamping end of the lever having ears adapted to enter the slot and prevent lateral displacement of the wear plate.

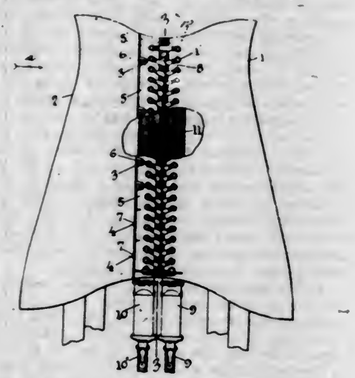
4. A thread lock for lock-stitch sewing machines, the stitch forming devices of which include a needle and a take-up, said thread locking device consisting of a lever having a wear plate mounted on the clamping end thereof, said lever and plate having coöperating portions whereby when said plate is sprung into operative position on the lever, it is held against longitudinal and lateral displacement thereon.

5. A thread lock for lock-stitch sewing machines, the stitch forming devices of which include a needle and a take-up, said thread locking device consisting of a lever having a concave surface at its thread clamping end provided with a longitudinal slot, the extremities of the clamping end of the lever being arranged in acute angular relation with said surface, and a wear plate mounted on the clamping end of the lever having a clamping surface shaped in conformity with the surface of the lever, the ends of the plate being arranged similarly to the extremities of the clamping end of the lever and being provided with inwardly projecting tongues adapted to enter the slot in the clamping end of the lever.

[Claim 6 not printed in the Gazette.]

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1,226,087. CORSET. AUGUSTE J. LECOUTRE, Worcester, Mass., assignor to Royal Worcester Corset Co., Worcester, Mass., a Corporation of Massachusetts. Filed Apr. 13, 1916. Serial No. 90,864. (Cl. 2—74.)



1. In a corset, the combination with two parts laced together, of a shield or tongue permanently attached at its upper end only to the insides of the upper portions of said parts, said shield or tongue being of a proper width to bridge the space between the said corset parts behind the lacing, and hose supporters comprising looped portions the ends of which are attached to the lower ends of the corset parts and to the lower end of said shield or tongue.

2. In a corset, the combination with two parts laced together, of a shield or tongue permanently attached at its upper end only to the insides of the upper portions of said parts, said shield or tongue being of a proper width to bridge the space between the said corset parts behind the lacing, and said shield or tongue being provided with transverse stiffeners, and hose supporters comprising looped portions the ends of which are attached to the lower ends of the corset parts and to the lower end of said shield or tongue.



1,226,088. INSULATOR AND COMPOSITION MATERIAL FOR INSULATING AND OTHER PURPOSES. FRED M. LOCKE, Victor, N. Y. Filed June 16, 1914. Serial No. 845,371. (Cl. 106—36.1.)

1. An insulator of high silica content formed by fusing silicic material with halogen material and boron material into a homogeneous body, and molding the mass.

2. The method of forming a homogeneous body of high silica content consisting in fusing silicic material, halogen material and boron material to form a homogeneous body.

3. An insulator of high silica content formed by fusing silicic material, halogen carrying material and boron material to form a homogeneous body.

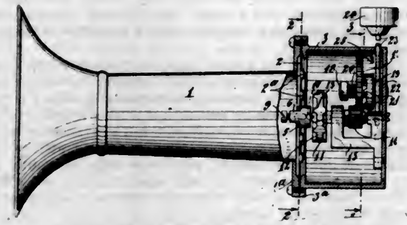
4. An insulator for high voltage current formed by fusing silicic material, boron material and halogen-carrying material to form a homogeneous body.

5. An insulator for high voltage current formed by fusing silicic material, boron material and fluorin material to form a homogeneous body.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,089. AUTOMATIC HORN. GEORGE F. LONG, New York, N. Y., assignor to Gottfried Piel, New York, N. Y. Filed Dec. 16, 1910. Serial No. 597,677. (Cl. 116—1.)



1. A horn comprising a metal diaphragm having annular corrugations therein, an actuating member secured to said diaphragm, a movable disk having radial ribs or flanges thereon adapted to engage with said actuating member and vibrate the diaphragm, and means to actuate said disk.

2. A horn comprising a diaphragm under tension, an actuating member secured to said diaphragm comprising a plug and a passage therein with a restricted opening at one end to form a ball seat, a ball in said passage and means for securing said ball in said passage to cause a segment thereof to project beyond the end of the plug, a disk provided with means engaging said projecting segment of said ball to produce to and fro movement of the diaphragm and means for moving said disk.

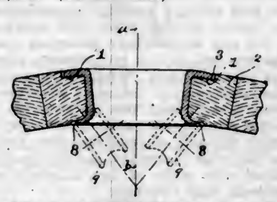
3. A horn comprising a metal diaphragm under tension having annular grooves therein, an actuating member secured to said diaphragm and comprising a ball rotatable in said member and held against displacement with respect thereto, a disk having radial ribs on its surface to engage with said actuating member, a driving gear for rotating said disk, a driving pinion, means for actuating said driving pinion, and a clutch mechanism between said pinion and driving gear substantially as described.

4. In a device of the class described, mechanism for actuating a diaphragm horn comprising a diaphragm actuating member formed of a disk provided with diametrically disposed diaphragm contacting ribs and provided with open spaces between adjacent ribs, a shaft supporting said disk centrally thereof, a pinion fixed to said shaft and constituting the end member of a train of gears, a second member of said train meshing with said pinion, a manually actuated reciprocating member and means between said reciprocating member and said second gear train member for converting the reciprocating movement of said handle into continuous rotary movement of said disk, said mechanism being freely rotatable.

5. In a mechanism for actuating a diaphragm horn, a diaphragm engaging member comprising a shaft, a disk mounted on said shaft, one flat surface of said disk being provided with radial grooves to form ribs beveled in section and of varying width, said ribs being spaced apart and adapted to engage a projection from the diaphragm of the horn to vibrate said diaphragm and means for rotating said disk about an axis perpendicular to said grooved face.

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1,226,090. BUSHING FOR BUNGS. ALBERT C. LUDLUM, New York, N. Y., assignor to National Bush Company, a Corporation of New York. Filed Mar. 25, 1914, Serial No. 827,019. Renewed Mar. 31, 1917. Serial No. 159,026. (Cl. 217—113.)

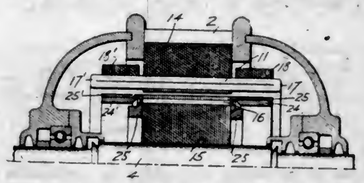


1. A bushing for a bung hole having a resilient arched external flange, an externally smooth body, and an expansible inner end, whereby the bushing when set resiliently grips the material of the barrel throughout its thickness to prevent rotation and leakage.

2. A bushing for a bung hole having a resilient arched external flange, an externally smooth body, and an expansible inner end having its outer surface relatively sharply tapered, whereby the bushing when set resiliently grips the material of the barrel throughout its thickness to prevent rotation and leakage.

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1,226,091. ALTERNATING-CURRENT INDUCTION-MOTOR. BURTON MCCOLLUM, Washington, D. C. Filed Aug. 2, 1915. Serial No. 43,151. (Cl. 172—120.)



1. In an induction motor, the combination of a primary winding, a secondary element providing a plurality of secondary electrical circuits in inductive relation with said primary winding, but substantially not inductively related to each other, and means providing paths of low and substantially unvarying magnetic reluctance for the flux linking said primary winding with certain of said secondary circuits, and separate paths of high and substantially unvarying reluctance for the fluxes linking said primary winding with the others of said secondary circuits.

2. In an induction motor, the combination of a primary winding, a secondary element providing a plurality of secondary electrical circuits in inductive relation with said primary winding, but substantially not inductively related to each other, and means providing a path of low and substantially unvarying magnetic reluctance for the flux linking said primary winding with one only of said secondary circuits, and separate paths of high and substantially unvarying reluctance for the fluxes linking said primary winding with the others of said secondary circuits.

3. In an induction motor, the combination of a primary winding, a secondary element providing a plurality

of secondary electrical circuits in inductive relation with said primary winding, but substantially not inductively related to each other, and means providing paths of low and substantially unvarying magnetic reluctance for the flux linking said primary winding with certain of said secondary circuits, and separate paths of high and substantially unvarying reluctance for the fluxes linking said primary winding with the others of said secondary circuits, the said secondary circuits which are linked with the paths of low reluctance having relatively low electrical resistance, and the said secondary circuits linked with the paths of high reluctance having high resistance.

4. In an induction motor, the combination of a primary winding, a secondary element providing a plurality of secondary electrical circuits in inductive relation with said primary winding, but substantially not inductively related to each other, and means providing a path of low and substantially unvarying magnetic reluctance for the flux linking said primary winding with one only of said secondary circuits, and separate paths of high and substantially unvarying reluctance for the fluxes linking said primary winding with the others of said secondary circuits, the said secondary circuit which is linked with the path of low reluctance, having a relatively low electrical resistance, and the said secondary circuits linked with paths of high magnetic reluctance, having relatively high resistance.

5. In an induction motor, the combination of a primary winding with end connections, and a secondary element providing three secondary electrical circuits, one of said secondary electrical circuits being in inductive relation with the said primary winding through a magnetic circuit of low reluctance, and the other secondary electrical circuits being in inductive relation with the end connections only of the said primary winding through magnetic circuits of relatively high reluctance.

[Claims 6 to 19 not printed in the Gazette.]

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1,226,092. UNCOUPLING MECHANISM. WILLIAM MCCONWAY, Jr., and WILLIAM J. REGAN, Pittsburgh, Pa., assignors to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 21, 1916. Serial No. 138,229. (Cl. 213—59.)



1. In an uncoupling mechanism, the combination with a coupler, its lock, and carrying-iron, of means for moving said lock to unlocked position, said means involving a member operatively connected to said lock and supported on said carry-iron so as to be rotatable only, said rotation being performed about a plurality of axes.

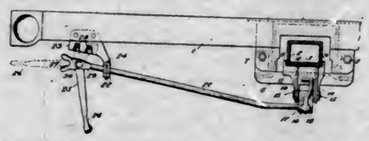
5. In an uncoupling mechanism, the combination with a coupler, and its lock, of means for moving said lock to unlocked position, said means involving a plurality of pivotally connected members one of which is pivotally mounted on a stationary part of the car and a rotatable uncoupling lever having a portion forming the pivotal connection of said pivotally connected members.

[Claims 2 to 4, 6, and 7 not printed in the Gazette.]

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1,226,093. UNCOUPLING AND CENTERING MECHANISM FOR CAR-COUPLINGS. WILLIAM MCCONWAY, Jr., and WILLIAM J. REGAN, Pittsburgh, Pa., assignors to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 21, 1916. Serial No. 138,230. (Cl. 213—59.)

1. In mechanism of the character indicated, the combination with a coupler provided with a movable lock, of a carry-iron for said coupler, a shoe interposed between said coupler and carry-iron, and means connected to said shoe for unlocking said coupler.



2. In mechanism of the character indicated, the combination with a laterally movable coupler, of a carry-iron for said coupler, and manually operated means for shifting said coupler laterally, said means involving a laterally movable shoe interposed between said coupler and carry-iron and serving to shift said coupler laterally to any desired position.

3. In mechanism of the character indicated, the combination with a coupler, of a carry-iron for said coupler, a shoe interposed between said coupler and carry-iron and provided with means whereby it may support mechanism for unlocking the coupler, and anti-friction devices interposed between and engaging said shoe and carry-iron.

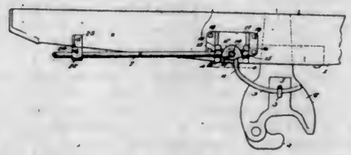
8. In mechanism of the character indicated, the combination with a laterally movable coupler, of means for shifting said coupler laterally, said means involving a fulcrum member and a lever, said fulcrum member and said lever being each provided with a plurality of coöperating teeth.

10. In mechanism of the character indicated, the combination with a laterally movable coupler, of means for shifting said coupler laterally, said means involving a fulcrum member carried by the car and a lever adapted to be moved into engagement with said fulcrum member, said lever having an operating arm and an arm adapted to engage said fulcrum member, said lever arms extending at an angle to each other, and said operating arm being displaced from the vertical when the lever is in engagement with said fulcrum member.

[Claims 4 to 7 and 9 not printed in the Gazette.]

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1,226,094. UNCOUPLING MECHANISM. WILLIAM MCCONWAY, Jr., and WILLIAM J. REGAN, Pittsburgh, Pa., assignors to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 2, 1917. Serial No. 146,132. (Cl. 213—59.)



1. In an uncoupling mechanism for car couplers, the combination with a coupler locking mechanism, of a rotatable uncoupling lever, a bracket secured to the car at one side of the coupler, a member journaled on said bracket and a lock actuating member operatively connected to and having slidable engagement with said locking mechinsm, said uncoupling lever constituting means for pivotally connecting said lock actuating member to the member journaled on said bracket.

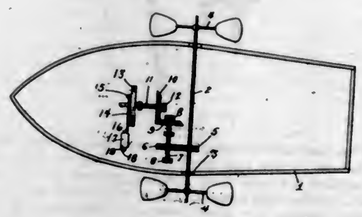
2. In an uncoupling mechanism for car couplers, the combination with coupler locking mechanism, of a rotatable uncoupling lever, a bracket rigidly secured to the car at one side of the coupler, a supporting member for said uncoupling lever pivotally mounted on said bracket, and a curved member pivotally connected to said supporting member and operatively connected to and having slidable engagement with said coupler locking mechanism.

3. In an uncoupling mechanism for car couplers, the combination with coupler locking mechanism, of a rotatable uncoupling lever journaled on the car and extending toward the side thereof, a bracket secured to the car and having a plurality of bearing members, a socketed member having pintles adapted to be journaled in said bearing member, and a curved member operatively connected to and having slidable engagement with said locking mechanism, said curved member extending into said socket and being pivotally connected to said socketed member by means of said uncoupling lever.



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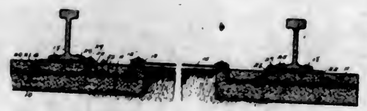
1,226,095. ROWBOAT. GEORGE G. MCDONALD, St. Esprit, Nova Scotia, Canada. Filed Oct. 30, 1916. Serial No. 128,551. (Cl. 115—23.)



A boat propelling means including a rotatably mounted shaft, paddle wheels thereon, a gear connected to the shaft, another shaft, a gear thereon in mesh with first mentioned gear, another shaft arranged in operable relation with the second mentioned shaft, a fly wheel on the last mentioned shaft, a pivotally mounted foot pedal, a link pivotally connected to the free end of pedal, and a pin for removably, pivotally and eccentrically connecting the free end of the link to the fly wheel, substantially as described.

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1,226,096. RAILWAY-TIE PLATE. FINIS MCLEAN, Valley Junction, Iowa. Filed Oct. 7, 1915. Serial No. 54,676. (Cl. 238—6.)

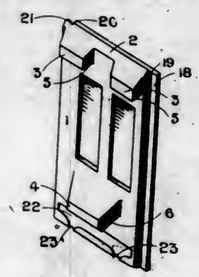


An improved railway tie plate comprising two flat metal reinforcing members designed to be embedded in concrete, each having one end extended upwardly and designed to project above the concrete, a flat metal connecting piece detachably and adjustably secured to the upper ends of the reinforcing members and capable of holding said reinforcing members exactly in line with each other, flat metal rail engaging members designed to rest above the concrete in which the reinforcing members are embedded, said rail engaging members having portions extended downwardly and fixed to the said reinforcing members, and means on said rail engaging members for engaging and supporting rails.

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1,226,097. ROOFING AND WALLING. WILLIAM MCLEOD, Wanganui, New Zealand, assignor of one-fourth to Louis Cohen, Wanganui, New Zealand. Filed Sept. 14, 1916. Serial No. 120,025. (Cl. 108—10.)

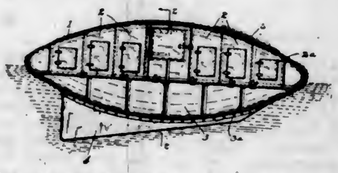
In a structure of the character described, the combination with tile battens having beveled supporting edges, of tiles supported by said battens, certain of said tiles each having a beveled top edge and upper oppositely disposed undercut lugs adjacent the corners adapted to rest upon the beveled edge of the battens, and a lower undercut lug adapted to rest upon the beveled top edge of two adjacent lower tiles, said lower lug being also adapted to span the juxtaposed upper lugs of a pair of adjacent lower tiles, the tiles being so formed that the overlapped portion of



each tile is capable of being slid laterally into and out of place under the overlapping portion of the tile above.

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1,226,098. SAFE FOR SEA-GOING VESSELS. THOMAS MCWATTERS, Chestnut Ridge, Pa. Filed July 27, 1914. Serial No. 853,341. (Cl. 9—10.)



1. A buoyant safe including an elongated hollow shell adapted to float upon one side, a horizontal floor arranged within the shell at a point above the bottom thereof and dividing the interior of the shell into an upper chamber and a lower air chamber, transverse partitions subdividing the air chamber into a plurality of independent compartments, and a plurality of independent valuable receiving compartments arranged within the upper chamber.

2. A buoyant safe including an elongated hollow shell adapted to float upon its side, a horizontal floor arranged above the bottom of the shell and dividing the same into an upper chamber and a lower air chamber, a longitudinal row of independent valuable receiving compartments arranged within the upper chamber at each side thereof, and a door in the side of the shell for entering and leaving the upper chamber.

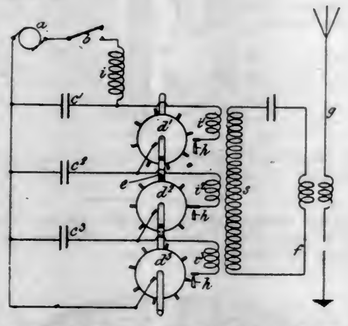
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1,226,099. TRANSMITTING APPARATUS FOR USE IN WIRELESS TELEGRAPHY AND TELEPHONY. GUGLIELMO MARCONI, London, England, assignor to Marconi Wireless Telegraph Company of America, New York, N. Y., a Corporation of New Jersey. Filed Dec. 31, 1913. Serial No. 809,712. (Cl. 250—37.)

1. In a device of the character described, a closed oscillatory circuit, a plurality of auxiliary oscillatory circuits connected thereto, each provided with a stationary and a movable terminal, means for charging one of said circuits, and means for actuating said movable terminals whereby the auxiliary circuits are discharged in sequence, said auxiliary circuits being so arranged that the discharge of each one but the last, charges a succeeding one.

2. In a device of the character described, a closed oscillatory circuit, a plurality of auxiliary oscillatory circuits connected thereto, each provided with a stationary terminal and a movable terminal consisting of a toothed disk, means for charging one of said auxiliary circuits, and means for rotating said disks whereby the auxiliary circuits are discharged in sequence, said auxiliary circuits being so arranged that the discharge of each one but the last, charges a succeeding one.

3. In a device of the character described, a closed oscillatory circuit including an inductance which constitutes the secondary of a transformer, a plurality of auxiliary oscillatory circuits each including an inductance, all of said last-mentioned inductances constituting the primary of the transformer, means for charging one of said auxiliary circuits, and means for discharging said auxiliary circuits in sequence, said auxiliary circuits being so arranged that the discharge of each one but the last, charges a succeeding one.



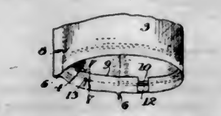
4. In a device of the character described, a plurality of oscillatory circuits, each provided with a stationary terminal and a movable terminal, means for charging one of said circuits, means for actuating said movable terminals whereby the circuits are discharged in sequence, and an aerial conductor operatively connected to said circuits, said circuits being so arranged that the discharge of each one but the last, charges a succeeding one.

5. In a device of the kind described, an oscillatory circuit, a plurality of exciting circuits connected therewith each comprising a condenser, means for discharging a condenser in one exciting circuit into a condenser in another exciting circuit and then discharging the condenser in the last-mentioned circuit and continuing and repeating these steps in orderly manner for the purpose of maintaining continuous oscillations in said oscillatory circuit.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,100. GYMNASIUM-SKIRT. MOLLIE MARKUN, New York, N. Y. Filed Sept. 20, 1916. Serial No. 121,128. (Cl. 2—137.)



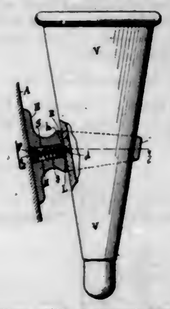
1. In a garment, the combination with a hem, of a casing formed by a portion of the inner fold of the hem and a strip secured along its edges thereto, and a drawing string in said casing for the purpose specified.

2. In a garment, the combination with a hem, of a casing formed by a portion of the inner fold of the hem and a strip of less width than the hem secured along its edges thereto, and a drawing string in said casing for the purpose specified.

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1,226,101. VASE-HOLDER. JOHN E. MARSDEN, Philadelphia, Pa. Filed Feb. 25, 1916. Serial No. 80,481. (Cl. 248—20.)

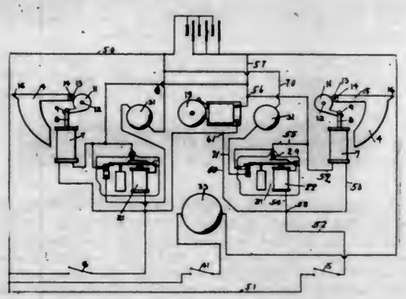
1. The combination with a ring holder, of a vase having a narrow elongated transverse depression in its exterior surface, and a lug carried by and movable with respect to said ring holder adapted to engage in said depression when the vase is in the holder, the side walls of said depression being of such slope that the lug cannot be forced out of the depression in the direction of the longitudinal axis of the vase by force applied to the vase, said depression being of such shape that the lug may be removed therefrom by turning the vase in the holder.



2. The combination with a tapering-walled vase, of a ring holder having similarly tapered walls forming the sole support for said vase, a spring-pressed lug carried by and movable with respect to said ring holder, said vase having a narrow elongated transverse depression in its exterior surface, said lug adapted to engage in said depression when the vase is in the holder, said depression being relatively slightly concave outwardly in the direction of the longitudinal axis of the depression, whereby the vase is locked in said ring holder against movement in the direction of the longitudinal axis of the vase, but may be unlocked by turning the vase in the ring holder.

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1,226,102. DIRECTION-INDICATOR AND SIGNALING DEVICE FOR VEHICLES. RANDALL F. MEDICUS, Youngstown, Ohio. Filed May 10, 1916. Serial No. 96,500. (Cl. 177—337.)



1. In a direction indicator and signaling device for vehicles the combination of a casing adapted for attachment to the vehicle and constructed with a casing cover with a central round opening, vertical slots positioned to the right and left of said central opening, said slots formed with a point extending outwardly at its upper end, direction indicating leaves mounted within said casing, lights immediately underneath the openings of said casing, solenoids in conjunction with said leaves, flickering devices causing the lights underneath the vertical slots of said casing cover to flicker, controlling switches mounted upon the steering wheel energizing by means of an electric circuit said parts either singly or simultaneously.

2. In a direction indicator and signaling device for vehicles the combination of a casing adapted for attachment to the vehicle and constructed with a casing cover, having a central round opening, vertical slots positioned to the right and left of said central opening, said slots

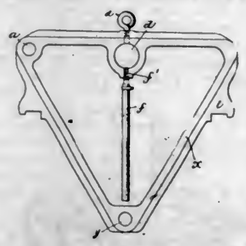


formed with a point extending outwardly at its upper end, direction signaling leaves mounted within said casing and controlled by solenoids within the casing, electric lights immediately underneath said vertical slots and central opening, flickering devices for the lights energized by common circuits, solenoids in conjunction with the signaling leaves and an electric bell, circuits to energize the above parts either singly or simultaneously, and a central tail light operating upon an independent circuit arranged to shed light upon a license number sign positioned directly underneath said tail light.

3. A direction indicator and signaling device for vehicles comprising a casing, a signaling leaf mounted within the casing at each end, a cover provided with a central round opening and two vertical slots located at the right and at the left of said central opening, these slots formed with a point extending outwardly in the direction of the position of the signaling leaves, electric lights, immediately underneath these vertical slots, a central tail light located directly underneath the central round opening and directly under an arched portion of the casing side, the signaling leaves connected to solenoids, a solenoid in conjunction with each leaf, said solenoid attached to a cog wheel with an extended arm mounted within the casing, engaging another cog wheel journaled within the casing and upon which is attached a signaling leaf, a coil spring attached to the cog wheel with the extended arm and to the bottom of the casing, an electric bell secured within the casing, flickering devices located to the right and to the left of the central opening and securely fastened within the casing, said flickering device consisting of a magnet, a vibrating arm mounted between two contact points, a piston rod pivotally connected to said arm and operating a piston within a cylinder filled with oil, two electric circuits to energize the solenoids, either singly or simultaneously, also the lights located immediately underneath the vertical slots of the casing cover, the electric bell operating on either circuit, or both, a license number sign attached immediately below a slot in the casing, the tail light operating upon an independent circuit and lighting said license number sign, and a common mounting for the casing and the license number sign.

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1,226,103. APPARATUS FOR SEPARATING UNFILTERABLE MATERIAL FROM A MIXTURE OF FILTERABLE AND UNFILTERABLE MATTER. CHARLES W. MERRILL, Berkeley, Cal. Filed June 7, 1910, Serial No. 565,545. Renewed Feb. 16, 1917. Serial No. 149,146. (Cl. 210—13.)



1. The combination in a pressure filter of a series of suitable filter plates, one or more containers converging toward the bottom, each provided with a duct leading from a feed channel located above the bottom of the container and terminating within the same adjacent to said bottom, and a suitable outlet through the upper portion of the side-wall of each filter plate whereby the filtrate is discharged by means of a suitable delivery.

2. A container for use in a pressure filter provided with a non-metallic duct of convenient size and suitable material, leading from a feed channel located above the bottom of the container and terminating within the same at or near said bottom.

3. A container for use in a pressure filter provided with a removable non-metallic duct of convenient size and suitable material, leading from a feed channel located above the bottom of the container and terminating within the same at or near said bottom.

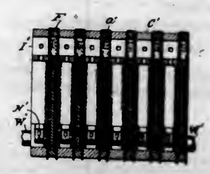
4. A container for use in a pressure filter provided with a non-metallic removable duct of convenient size and made of suitable material, leading from a feed channel located above the bottom of the container, and terminating within the same at or near the bottom thereof, and devices substantially as described for attaching the duct to the feed channel.

5. A container for use in a pressure filter provided with a non-metallic duct of convenient size and suitable material, leading from a feed channel located above the bottom of the container and terminating within the same at or near said bottom and connected with said feed channel in any suitable manner.

[Claim 6 not printed in the Gazette.]

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1,226,104. PROCESS FOR TREATING SEMISOLID MATERIAL IN THE CONTAINERS OF FILTER-PRESSES AND REMOVING THE SAME THEREFROM. CHARLES W. MERRILL, Berkeley, Cal. Filed June 7, 1910. Serial No. 565,547. (Cl. 210—13.)



1. The hereinbefore described method of treating in and removing solid or semi-solid material from the containers of pressure filters consisting in depositing the same in thin layers upon the filter cloths which form the closure of the filters so that a space is left between the layers, then subjecting the layers to any desired metallurgical treatment, subjecting the material during the deposition and treatment to continuous pressure upon the layers and then opening the gates of the containers and finally subjecting the layers to the pressure of liquid, vapor or gas acting from behind the filter cloths whereby the same are discharged from the pressure filter through said bottom outlet gates of the containers.

2. The hereinbefore described method of treating in and removing solid or semi-solid material from, the containers of pressure filters consisting in depositing the same in thin layers upon the filter cloths which form the closure of the filters so that a space is left between the layers, then subjecting the layers to any desired metallurgical treatment, subjecting the material during the deposition and treatment to continuous pressure upon the layers, subjecting the layers to the pressure of the liquid, vapor or gas acting from behind the filter cloths, then forcing said material out of the containers by the impingement of a stream of liquid, vapor or gas under pressure directly upon and below the upper surface of the contents of said containers without separating the units of the same.

3. The hereinbefore described method of removing solid or semi-solid material from the containers of pressure filters consisting in depositing the same in thin layers upon the filter cloths which form the closure of the filters so that a space is left between the layers, then subjecting the layers to any desired metallurgical treatment, subjecting the material during the deposition and treatment to continuous pressure upon the layers and then opening the gates of the containers and finally subjecting the layers to the pressure of liquid, vapor or gas acting from behind the filter cloths then sluicing or forcing said material out by the impingement of a stream of liquid, vapor or gas under pressure introduced upon the

contents of said containers at a point adjacent to the outlet thereof.

4. The hereinbefore described method of treating solid or semi-solid material in the containers of pressure-filters consisting in depositing the same under continuous pressure in thin layers on the filter-cloths which form the closure of the containers so that a space is left between the layers, then subjecting the layers while under continuous pressure to any desired metallurgical treatment.

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1,226,105. NECKTIE. WILLIAM K. MEYER, Brooklyn, N. Y., assignor to Meyer, Bacharach and Friedheim, New York, N. Y., a Firm composed of William K. Meyer, Robert L. Bacharach, and Arthur Friedheim. Filed June 24, 1915. Serial No. 36,039. (Cl. 2—11.)

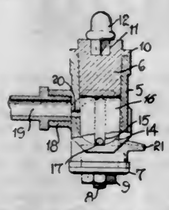


1. A necktie having a neck-band portion which merges into expanded or enlarged tying ends, an inner lining and transverse criss-cross lines of reinforcing stitching extending entirely through the body of one of said tying ends and the lining thereof.

[Claim 2 not printed in the Gazette.]

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1,226,106. WATER-FAUCET. CHARLES THOMAS MILLER, Macon, Ga. Filed Feb. 21, 1916. Serial No. 79,718. (Cl. 137—7.)

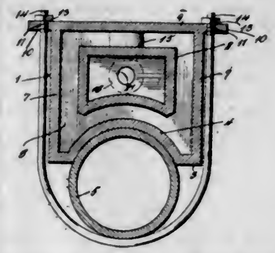


A combined cut-off and drain cock including a casing having longitudinally elongated inlet and outlet service ports, of a rotary valve member mounted in said casing also having an elongated port to register with the service ports, said casing being further provided with a hot water waste pipe connection, said valve member having a transverse opening through one side thereof communicating with the port of said member adjacent to its lower end and adapted, when said member is in its closed position, to register with the lower end of the outlet service port, the wall of the valve casing also having an orifice opening into the hot water waste port connection adjacent the lower side thereof and communicating with the bore of the valve member when the same is in its closed position, said valve casing having a discharge port also in communication with the bore of the valve casing to register with the lower end of the elongated valve port and receive and discharge the water drained from the service and waste pipes through said valve member.

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1,226,107. GASOLENE-EVAPORATOR. WILLIAM NEVILLE, Duluth, Minn. Filed Oct. 23, 1915. Serial No. 57,562. (Cl. 257—241.)

1. In a gasolene evaporator, the combination of a casing, said casing having a base provided with an inwardly bulged portion, said bulged portion being adapted to fit snugly upon the exhaust pipe of an engine, means for retaining said casing in its correct position, said casing being adapted to be supplied with water whereby the heat from the exhaust pipe will heat the water, said casing provided with an internal chamber and means whereby gasolene may pass through said chamber so as to be heated by the water carried within said casing.

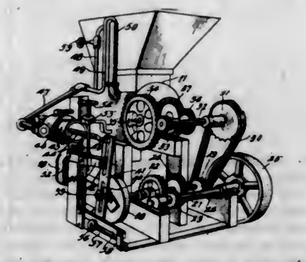


2. In a gasolene evaporator, the combination of an outer casing, said casing provided with a base having an inwardly bulged portion, integral ears extending from the upper portions of said casing, a U-bolt carried by said ears, said bulged portion being adapted to fit upon the exhaust pipe of an engine so as to allow said U-bolt to embrace the exhaust pipe for securely retaining the casing in its correct position upon the exhaust pipe, a chamber carried within said casing and fixedly secured at spaced distances from the side portions thereof, means for supplying said casing with water, means for supplying said chamber with gasolene, whereby the heat from the exhaust pipe will heat the water within the casing for heating said chamber, thereby heating the gasolene passing through said chamber to a high degree.

3. In a gasolene evaporator, the combination of a casing, said casing being adapted to be mounted upon an exhaust pipe of an explosive engine, a chamber positioned within said casing, integral necks connecting the upper portions of said chamber to the upper portions of said casing, said necks provided with vertically internally threaded openings, pipes carried within said openings and communicating with the interior of said chamber whereby gasolene may be conducted to and conveyed from said chamber, said casing provided with openings in its side portions, pipes threaded into said openings for conveying water to and from said casing, whereby the water within the casing may be heated by the exhaust pipe upon which the casing is mounted so that as the water circulates about said chamber it will be heated so as to impart heat to said chamber, whereby the gasolene passing through said chamber may be heated to a high degree.

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1,226,108. MEASURING AND MIXING DEVICE. GEORGE J. OLNEY, Westernville, N. Y. Filed Feb. 7, 1916. Serial No. 76,820. (Cl. 86—44.)



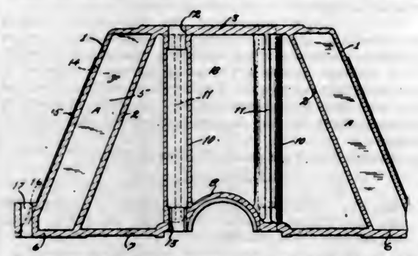
1. In a measuring and mixing machine the combination of two separate hoppers, a hollow cylindrical casing therebelow with openings opposite the hoppers, a cylinder mounted therein closing the outlet from said hoppers and having two series of pockets, one series under each hopper and adapted to be filled therefrom, said cylinder being revolubly mounted whereby its pockets are filled when in upward position and may empty themselves when in downward position and will return to receiving position as the cylinder revolves, a pipe for conducting liquid directly into the cylinder for one series of pockets at a point before the said pockets reach the outlet from their hopper and an air outlet from the cylindrical casing opposite said pockets adapted to let the air escape from the pockets being filled without passing upward through the hopper.



2. In a measuring and mixing machine the combination of two separate hoppers, a hollow cylindrical casing therebelow with openings opposite the hoppers, a cylinder mounted therein closing the outlet from said hoppers and having two series of pockets, one series under each hopper and adapted to be filled therefrom, said cylinder being revolubly mounted whereby its pockets are filled when in upward position and may empty themselves when in downward position and will return to receiving position as the cylinder revolves, a pipe for conducting liquid to the hopper feeding one series of pockets and a pipe for conducting liquid directly into the cylinder for the other series of pockets at a point before the said pockets reach the outlet from their hopper and an air outlet for the cylindrical casing opposite said second pockets adapted to let the air escape from the pocket being filled without passing upward through the hopper.

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1,226,109. ENGINE CRANK-CASE. STANLEY H. PAGE, San Francisco, Cal., assignor to Union Gas Engine Company, Oakland, Cal., a Corporation of California. Filed Dec. 11, 1916. Serial No. 136,155. (Cl. 121—105.)



5. An engine cylinder supporting base and crank case comprising interconnected side and end walls, the side walls converging toward their upper ends and each consisting of a plurality of parallel spaced wall members, a plurality of vertically disposed webs connecting the members of the respective side walls at intervals, a ported top wall connecting said side walls at their upper ends, a plurality of transverse webs connecting the side walls at their lower ends, and a plurality of vertically disposed tubular open ended pillars connecting each of said last mentioned webs with said top wall, said pillars providing a means for connecting the engine cylinders and the cam shaft bearing housing to said crank case.

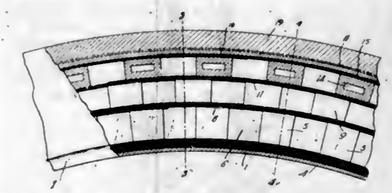
8. An engine cylinder supporting base and crank case, comprising a single unit casting having interconnected side and end walls, a ported top wall connecting the upper portion of the side walls, said side walls consisting of a plurality of parallel spaced wall members, the outer wall member of each side being provided with a suitable opening, a plurality of webs, one connecting the respective side wall members intermediate the openings in said outer wall members, whereby an open chamber is provided in the crank case side wall.

[Claims 1 to 4, 6, and 7 not printed in the Gazette.]

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1,226,110. AIRLESS AUTO-TIRE. LON H. PATTERSON, Portland, Oreg. Filed July 14, 1916. Serial No. 109,340. (Cl. 152—1.)

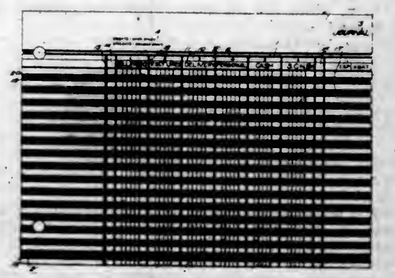
1. A tire comprising a plurality of circumferential binders; and sets of blocks between the binders, the blocks of the sets being spaced from each other circumferentially of the tire, the blocks of the respective sets being supported at one end by those portions of the binders which bridge the spaces between the blocks of an adjoining set, and being supported at the other end upon the blocks of an adjoining set.



2. A tire comprising binders in the form of continuous circumscribing strips disposed in a plurality of convolutions; and filling means between the binders; each of the strips including warp threads and weft threads, the weft threads being of smaller diameter than the warp threads, and the weft threads being flexed upon abrupt angles giving slackness to the weft threads.

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1,226,111. ACCOUNTING-SHEET. JAMES WILLIAM PENNEWILL, Silver City, N. Mex. Filed Oct. 5, 1915. Serial No. 54,156. (Cl. 11—19.)



1. In a sheet of the character described, a plurality of horizontal rulings arranged so as to produce independent horizontal spaces, a guide formed with notches adjacent the upper end corresponding to said spaces, and a plurality of apertures in the body of the guide corresponding to said notches, whereby one of the horizontal rulings will be disclosed through said aperture when one of the notches engages the upper edge of said sheet, and when the other notch engages the upper edge of said sheet another horizontal ruling will be disclosed to view, thus allowing a vertical addition of numbers on the different horizontal rulings.

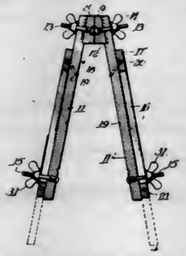
2. In a sheet of the character described, a plurality of horizontal rulings for producing horizontal spaces, said spaces being of the same width, each alternate space being filled with shading for causing the alternate spaces to be distinct, a guide formed with spaced openings, said openings being spaced apart equal to the width of said spaces, and means on the guide for causing said openings to appear opposite either of said spaces.

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1,226,112. TRESTLE. JULE C. PEPIN and JOSEPH N. PEPIN, East Chicago, Ind. Filed Oct. 8, 1913. Serial No. 794,017. (Cl. 20—83.)

1. In a folding trestle, laterally inclined legs, a bridge having its side faces inclined to correspond to the incline of the legs, bolts having their heads located in the interior of the bridge and their threaded portions extending outwardly and perpendicular to the inclined sides, said

bolts extending through the legs and serving as pivots for them, and nuts for clamping the legs to the bridge.

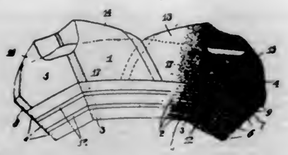


2. In a folding trestle, a bridge formed of two pieces secured together, bolts having their heads located in pockets at the joint between the two pieces and extending outwardly through said pieces, legs pivoted upon said bolts, and nuts for securing the legs in place.

3. In a folding trestle, a bridge having inclined sides, bolts extending into the bridge and perpendicular to said inclined sides, laterally inclined legs pivoted to the bridge, and nuts for holding said legs in place.

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1,226,113. BRASSIÈRE. GABRIELLE M. POIX, Brooklyn, N. Y. Filed Feb. 16, 1917. Serial No. 148,931. (Cl. 2—98.)



1. A brassière comprising in combination front and back portions, the upper part of said front and back portions comprising a plurality of gores, sewed together to form a support for the bust, the lower part of said front and back portions comprising a plurality of rows of elastic material, and bands of inelastic shirred material connecting said elastic bands to permit of the stretching of said elastic bands arranged to support the diaphragm.

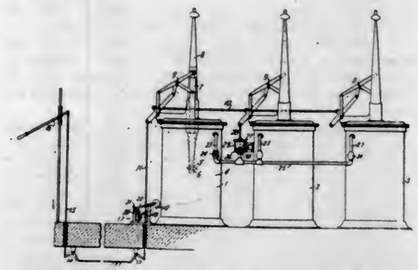
2. A brassière comprising in combination front and back portions, the upper part of said front and back portions comprising a plurality of gores, sewed together to form a support for the bust, the lower part of said front and back portions comprising a plurality of rows of elastic material, the upper row of elastic material being greater in circumference than the succeeding lower rows, each row being less in circumference than the row above it, said elastic material arranged to support the diaphragm.

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1,226,114. CIRCUIT-INTERRUPTER. KARL C. RANDALL, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 6, 1914. Serial No. 829,861. (Cl. 175—282.)

1. In a circuit interrupter, the combination with cooperating contact members and an operating mechanism, of a fluid-actuated accelerating device operatively connected to the operating mechanism, and conduits for conducting the gases generated by the separation of the contact members to the accelerating device.

2. In a circuit interrupter, the combination with cooperating contact members and an operating mechanism, of a fluid-actuated accelerating device operatively connected to the operating mechanism, and conduits having one-way valves therein for conducting the gases generated by the separation of the contact members to the accelerating device.



3. In a circuit interrupter, the combination with cooperating contact members, and an operating mechanism, of an accelerating device, means for operatively connecting said accelerating device to the said operating mechanism, and means for supplying said accelerating device with gas generated by the separation of the contact members.

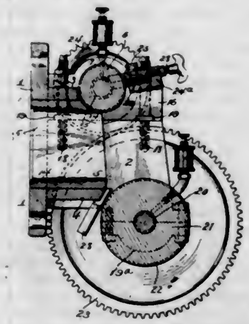
4. In a circuit interrupter, the combination with a substantially air-tight receptacle, coöperating contact members therein, and an operating mechanism therefor, of a fluid-actuated device operatively connected to the operating mechanism, and means for supplying the said device with the gases generated by the separation of the contact members.

5. In a circuit interrupter, the combination with a substantially air-tight receptacle, coöperating contact members therein, and an operating mechanism therefor, of a cylinder having a piston operatively connected to the operating mechanism, and means for conducting the gas generated in the substantially air-tight receptacle by the separation of the contact members to the said cylinder.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,115. BRICKMAKING-MACHINE. DANIEL E. REAGAN, Columbus, Ohio. Filed Mar. 18, 1916. Serial No. 85,091. (Cl. 25—21.)



1. In an attachment for a brick machine, the combination of a frame having a die opening and flanges at the four sides thereof, a removable four sided integral die or lining within said opening and supported by the flanges, the top member of said die being cut away at its outer end, the cut away edge being shaped to conform to the periphery of a roll, a roll carried by the frame and located adjacent the free edge of the bottom of the die and in a position to receive the clay bar and be rotated thereby, and a roll mounted in said frame adjacent the free edge of the top of the die with its lower portion resting in the said cut away and recessed portion of the die, whereby the lower portion of the roll forms a continuation of the upper side of the die.

2. In an attachment for brick making machines, the combination of a frame having a box like opening, a removable four sided integral die or lining for said opening, the top member of said die being cut away and recessed at its outer edge and provided with a longitudinal ridge on its lower face, a roll carried by the frame and located adjacent the free edge of the bottom of the die in a position to receive the clay bar and be rotated thereby, the said roll being provided with a peripheral enlargement comforming to the ridge on the die, a roll adjustably mounted in the cut away and recessed portion of the die, and gearing connecting the two rolls whereby they will be rotated in unison by the movement of the clay bar as it is ejected from the machine.

3. In an attachment for brick making machines, the combination of a die, a positively driven roll located to engage the top face of the clay bar as it is forced from the machine, a holder movably mounted with relation to said roll, means for moving and for locking said holder in place, and a wiper carried by the holder and engaging the periphery of said roller.

4. In an attachment for brick making machines, the combination of a die, a positively driven roll located to engage the top face of the clay bar as it is forced from the machine, the said roll having a plurality of recesses or pockets in its periphery and a peripheral enlargement, a flexible wiper and lubricator engaging the periphery of said roll, a holder for said wiper, and means for moving the holder toward the roll and adjustably secured to said frame.

5. In an attachment for brick making machines, the combination of a die, a roll located to receive the weight of the clay bar as the latter is forced from the die, a roll located to engage the top face by the clay bar and mounted in bearings which are adjustable toward and from the clay bar, the said latter roll having a plurality of recesses or pockets in its periphery, gearing connecting said rolls whereby they will be positively rotated by the movement of the clay bar, and an adjustable holder carrying a flexible wiper engaging the periphery of the top roll.

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1,226,116. COUPLING-CENTERING MECHANISM. WILLIAM A. REDMAN, Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Sept. 23, 1916. Serial No. 121,780. (Cl. 213—59.)



1. In mechanism of the character indicated, the combination with a laterally movable car coupler, of means for moving the locking mechanism of said coupler to unlocked position and for shifting said coupler laterally, said means involving a lever comprising relatively movable connected sections, one of said sections being independently movable to effect an unlocking movement of said coupler locking mechanism.

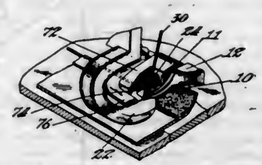
3. In mechanism of the character indicated, the combination with a laterally movable car coupler, of means for moving the locking mechanism of said coupler to unlocked position and for shifting said coupler laterally, said means involving a jointed lever which is attached at one end to the railway vehicle.

5. In mechanism of the character indicated, the combination with a laterally movable car coupler, of means for shifting said coupler laterally, said means involving a lever having a ball and socket connection with the railway vehicle, the socket having oppositely disposed downwardly flaring recesses.

[Claims 2, 4, and 6 to 9 not printed in the Gazette.]

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1,226,117. METHOD OF FINISHING EDGES. LLOYD T. REMICK, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Apr. 13, 1914, Serial No. 831,614. Divided and this application filed Oct. 14, 1914. Serial No. 866,673. (Cl. 12—146.)



1. That improvement in the method of finishing the edges of sheet material which consists in moving the material intermittently, forming step-by-step in the margin of the material during its periods of rest a fold, applying during each intermittent movement a portion of a reinforcing element in predetermined relation to said fold and intermittently securing to the body of the material said folded over margin and said portion.

2. That improvement in method of finishing an edge of sheet material which consists in cementing the marginal portion of the sheet, thereafter progressively folding over the cemented margin of the sheet, progressively applying in predetermined relation to the folded portion a reinforcing element, and progressively securing the folded portion and the reinforcing element to the body portion of the sheet.

3. That improvement in method of finishing the skived edge of a sheet of material which consists in applying cement to the skived portion, forming a crease or angle in the skived portion, laying a reinforcing member in said crease, folding the skived portion over against the body portion of the sheet, and pressing the folded portion and the reinforcing element against the body portion of the sheet.

4. That improvement in method of finishing an edge of sheet material which consists in applying cement to the inner side of the marginal portion of the material, thereafter initiating a fold in said cemented portion, introducing a reinforcing element into the fold, and completing the fold to inclose the reinforced element in the fold and to bring the cemented surfaces of the fold and the reinforcing element into holding relation to the sheet material.

5. That improvement in method of finishing the edges of sheet material which consists in forming step by step a crease or angle in the marginal portion of the material, laying a reinforcing element progressively into said crease or angle, slitting the margin of the upper, folding the margin of the upper over said element and down upon the body portion of the material, and securing the folded portion andt he body portion together.

[Claims 6 to 12 not printed in the Gazette.]

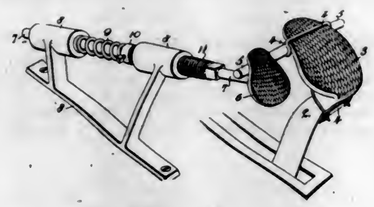
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1,226,118. CLUTCH CONTROL. GERALD C. SALT, Victoria, British Columbia, Canada. Filed Sept. 5, 1916. Serial No. 118,480. (Cl. 74—81.)

1. In a mechanism of the character stated, the combination with the clutch lever of an automobile; of a push device adapted to be coöperatively engaged with the clutch lever when said device is moved in one direction to impart a limited movement to the clutch lever, such clutch lever being independently movable through its normal range.

2. Means for imparting a limited movement to the clutch lever of an automobile, said means comprising a

supplementary pedal having such limited movement, and means secured to the clutch pedal and projecting in the path of the supplementary pedal.

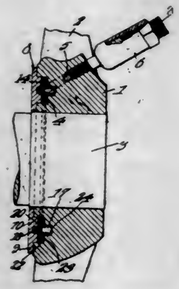


3. Means for imparting movement to the clutch lever of an automobile as far as the neutral position, said means comprising a supplementary pedal having such limited movement, and an attachment to the clutch lever projecting in the path of the supplementary pedal.

4. Means for imparting movement to the clutch lever of an automobile to the neutral position, said means comprising a supplementary pedal movable adjacent to the clutch lever in a plane parallel thereto, a member secured to the clutch lever and projecting therefrom in the path of the supplementary pedal, a spring normally maintaining the supplementary pedal at the backward limit of its movement, and means limiting movement of the supplementary pedal to that sufficient only to move the clutch lever into the neutral position.

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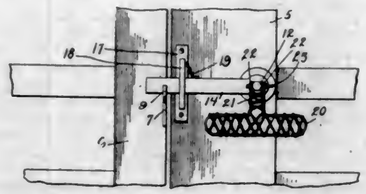
1,226,119. HUB-PLATE. ALBERT J. SAMS, Pittsburg, Kans. Filed Apr. 10, 1916. Serial No. 90,154. (Cl. 105—146.)



1. In a device of the class described, a hub plate comprising separable parts; a relatively stiff reinforcing face plate applied to the hub plate and comprising separable parts, the ends of the parts of the hub plate and the ends of the parts of the face plate being disposed in break-joint relation; pins forming connections between the parts of the face plate and the parts of the hub plate; and a hub including a groove wherein the hub plate and the face plate are received, there being recesses in the hub, at the base of the groove and receiving the pins.

2. In a device of the class described, a hub plate comprising parts; a face plate applied to the hub plate and comprising parts, the ends of the parts of the hub plate and the ends of the parts of the face plate being disposed in break-joint order; screws including heads and threaded shanks defining shoulders, the shoulders engaging the face plate and the shanks passing through the face plate and engaging the hub plate; and a hub including a groove wherein the face plate and the hub plate are received, there being recesses in the hub at the base of the groove, and receiving the heads of the screws.

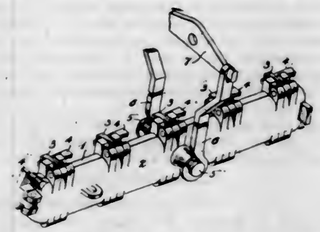
1,226,120. GATE-LATCH. WILLIAM SCHREIBER, Philadelphia, Pa. Filed May 19, 1915. Serial No. 29,125. (Cl. 70—28.)



In a gate latch, the combination with a post carrying a keeper, a gate movable with relation thereto, a shaft mounted for rotation in said gate and having its ends transversely apertured, a latch bar fixed on said shaft and projecting into operative engagement with said keeper, a spring carried on said latch bar and bearing below the upper end of the keeper for holding the latch bar at the limit of its downward movement, handles having looped ends spaced apart and alined with the ends of the aperture through the shaft and pins detachably inserted through the aperture and the alined loops for supporting the handles.

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1,226,121. MANUFACTURE OF ELECTRODES. ARTHUR P. SCOTT, Chicago, Ill., assignor to Chile Exploration Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 17, 1915. Serial No. 61,904. (Cl. 22—200.)



1. The method of casting hollow magnetite electrodes, which comprises pouring the molten magnetite into molds heated to about 350° C., allowing the mold to stand undisturbed until a shell of solid magnetite has been formed, and pouring the still molten magnetite from the mold; substantially as described.

2. The method of forming hollow magnetite electrodes, which comprises pouring the molten magnetite at a temperature of about 1590° C. into molds heated to about 350° C., allowing the mold to stand undisturbed for about one minute, pouring the still molten magnetite from the mold, stripping the hollow magnetite electrode from the mold at a temperature of about 1100° to 1200° C., and slowing annealing the resulting electrode; substantially as described.

3. The method of forming hollow magnetite electrodes, which comprises pouring the molten magnetite at a temperature of about 1590° C. into molds heated to about 350° C., allowing the mold to stand undisturbed for about one minute, pouring the still molten magnetite from the mold, stripping the hollow magnetite electrode from the mold at a temperature of about 1100° to 1200° C., and slowly annealing the resulting electrode by burying the same in a pulverulent non-conducting material for a sufficient period of time to permit the desired cooling to take place; substantially as described.

4. The method of casting hollow magnetite electrodes, which comprises pouring the molten magnetite into a heated mold provided with a heated removable top forming an extension thereof, allowing the mold to stand undisturbed until a shell of solid magnetite has been formed in the mold and removable top, and subsequently removing said top and the shell formed therein and pouring the still molten magnetite from the mold; substantially as described.

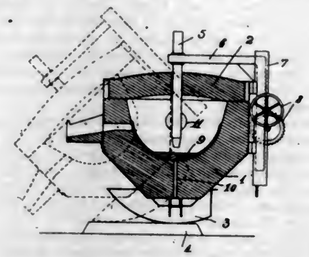
5. The method of casting hollow magnetite electrodes, which comprises pouring the molten magnetite into a heated mold provided with a heated removable top forming an extension thereof, allowing the mold to stand undisturbed until a shell of solid magnetite has been formed in the mold and removable top, inverting said mold and pouring the still molten magnetite therefrom, and automatically removing said top with a shearing effect during the inversion of said mold; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]



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1,226,122. ELECTRIC FURNACE AND METHOD OF PRODUCING MOLTEN MAGNETITE THEREIN. ARTHUR P. SCOTT, Chicago, Ill., assignor to Chile Exploration Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 17, 1915. Serial No. 61,905. (Cl. 204—64.)



1. An electric furnace of the direct arc type provided with a bottom protective conducting layer of magnetite; substantially as described.

2. An electric furnace of the direct arc type provided with a lower fixed contact and an upper movable electrode, and with a protective conducting layer of magnetite overlying said bottom contact and forming the bottom electrode; substantially as described.

3. An electric furnace of the direct arc type provided with a bottom protective conducting layer of magnetite with which cast magnetite scrap is incorporated; substantially as described.

4. An electric furnace of the direct arc type provided with a lower fixed contact and an upper movable electrode, and with a protective conducting layer of magnetite overlying said bottom contact and forming the bottom electrode, said layer of magnetite having cast magnetite scrap incorporated therewith; substantially as described.

5. A single phase alternating current electric furnace of the direct arc type provided with a lower fixed electrode and an upper movable electrode, and with a protective conducting layer of magnetite overlying said bottom contact and forming the bottom electrode; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,123. CASTING-MOLD. ARTHUR P. SCOTT, Chicago, Ill., assignor to Chile Exploration Company, New York, N. Y., a Corporation of New Jersey. Original application filed Nov. 17, 1915, Serial No. 61,904. Divided and this application filed Feb. 1, 1916. Serial No. 75,477. (Cl. 22—153.)

2. A metal mold for casting magnetite, said mold having a plurality of parts readily detachable from one another, a trunnion on each of said parts forming a transverse axis on which said mold may be swung to pour out the liquid magnetite after a shell has formed within said mold, and automatic means operative during said swinging for shearing one end of the casting while still hot; substantially as described.



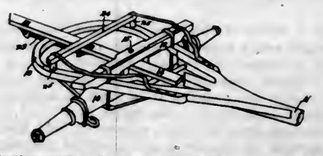
3. A metal mold for casting magnetite, said mold comprising two parts readily detachable to release the casting while still hot, said mold having pivots on which it may swing to pour out the liquid magnetite after a shell has formed in the mold and a removable top section forming an extension of said parts and capable of being removed from the mold with a shearing effect.

4. A mold for casting magnetite, said mold being of cast iron and split diagonally into two parts, readily detachable means for securing said parts together, a trunnion on each part to provide a transverse axis on which said mold may be swung end for end to pour out liquid magnetite after a shell has formed within the mold and a pouring funnel forming an extension of said parts and removable therefrom with a shearing movement.

[Claims 1 and 5 not printed in the Gazette.]

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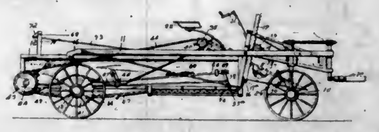
1,226,124. ATTACHMENT FOR WAGON-REACHES. ALBERT SEXAUER, Madrid, Iowa. Filed Oct. 12, 1915. Serial No. 55,578. (Cl. 21—85.)



In a device of the class described, the combination of a wagon ring gear having a reach provided with a plurality of openings, with an attachment comprising a pair of opposite brackets having horizontal members, bolts extended through said horizontal members, and selectively received in the openings in said reach, each bracket having a vertical member provided with a plurality of openings, a roller having at its ends spindles selectively received in the openings in said vertical members, and a diagonal brace connecting the horizontal member of each bracket with the vertical member thereof.

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1,226,125. MANURE-LOADER. ROBERT SHEDENHELM, Ladora, Iowa, assignor, by mesne assignments, of four-tenths to H. S. Butler, Ladora, Iowa. Filed May 11, 1908. Serial No. 432,098. (Cl. 37—32.)



1. In a device of the class described, the combination of a relatively long and shallow wagon bed, capable of receiving a load of material, and of carrying it from place to place, an apron in the bottom of the wagon bed capable of moving material toward the rear of the wagon bed, said wagon bed being capable of tilting downwardly at its forward end to run close to the ground, a scraper arranged at the forward end thereof, a conveyer interposed

between the scraper and the front end of the wagon bed to deliver material from the scraper to the forward end of the wagon bed, and means for operating said conveyer and apron when the wagon bed is in any position of its vertical adjustment.

2. In a device of the class described, the combination of a wagon frame, supporting wheels therefor, a relatively long and shallow wagon bed mounted on the frame, capable of vertical adjustment thereon, a movable apron therein, a scraper at the forward end of the wagon bed, a conveyer between the scraper and the wagon bed, and means operated from a supporting wheel for driving the apron and conveyer when the wagon bed is in any position of its vertical adjustment.

3. In a device of the class described, the combination of a wagon bed, a scraper secured to the forward end thereof, bars fixed to the scraper and extended rearwardly and upwardly toward the wagon bed, a conveyer interposed between the scraper and the wagon bed, said conveyer having toothed cross bars thereon, and said teeth on the cross bars being arranged to travel between said bars on the scraper.

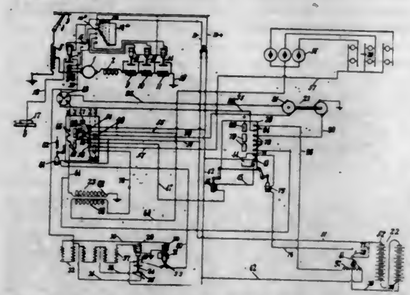
4. In a device of the class described, the combination of a wagon bed, a frame secured to the forward end thereof, and extended downwardly and forwardly, a scraper block tiltingly connected with the forward end of the frame, means for securing it in various positions of its adjustment, bars fixed to the upper portion of the block, and extended upwardly and rearwardly, bars fixed to the lower portion of the block and extended rearwardly, an endless conveyer mounted between the sides of the frame and having cross slats thereon, teeth on the cross slats, said teeth being so arranged as to move upwardly and rearwardly between the upper bars to receive material from the scraper block, and discharge it into the wagon bed.

5. In a device of the class described, the combination of a wagon bed, a frame secured to the forward end thereof, and extended downwardly and forwardly, a scraper block tiltingly connected with the forward end of the frame, means for securing it in various positions of its adjustment, bars fixed to the upper portion of the block and extended upwardly and rearwardly, bars fixed to the lower portion of the block and extended rearwardly, an endless conveyer mounted between the sides of the frame and having cross slats thereon, teeth on the cross slats, said teeth being so arranged as to move upwardly and rearwardly between the upper bars to receive material from the scraper block and discharge it into the wagon bed, and means operated upon the advance of the wagon bed for moving the conveyer.

[Claims 6 to 22 not printed in the Gazette.]

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1,226,126. SYSTEM OF DISTRIBUTION AND CONTROL FOR ELECTRIC RAILWAYS. KARL A. SIMMON, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 28, 1912. Serial No. 722,937. (Cl. 171—314.)



1. An alternating direct-current system of distribution, comprising a change-over switch and a relay switch for governing the position of the change-over switch, said relay switch being provided with an actuating coil and with a neutralizing coil which is effective in neutralizing the actuating coil only on alternating current.

2. A system of distribution comprising a supply circuit, an alternating-current and a direct-current source adapted to be connected to said supply circuit, translating means, a transformer, an auxiliary source of direct-current energy and a change-over switch adapted to connect the translating means either to the transformer or to the auxiliary source of direct-current energy, according as the supply circuit is charged with alternating or direct-current energy.

3. A system of distribution comprising a supply circuit, an alternating and a direct-current source adapted to be connected to said supply circuit, a distributing circuit, an auxiliary source of direct current and means for supplying energy to the distributing circuit either from the auxiliary source of direct current or from the supply circuit, according as the supply circuit conductor is charged with direct current or alternating-current energy.

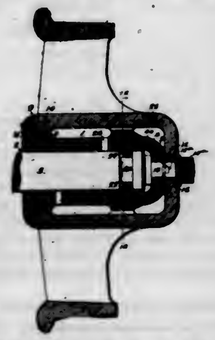
4. A system of distribution comprising a supply circuit, an alternating-current and a direct-current source adapted to be connected to said supply circuit, a distributing circuit, an auxiliary source of direct-current energy, a transformer and automatic means for supplying energy to said distributing circuit either from the auxiliary source of direct current or from the transformer, according as the supply circuit is charged with direct-current or alternating-current energy.

5. A system of distribution comprising a supply circuit, a direct-current and an alternating-current source adapted to be connected to said supply circuit, a distributing circuit, a storage battery, a transformer and means for energizing the transformer from the supply circuit and supplying energy from the transformer to the distributing circuit when the supply circuit is connected to the alternating-current source and connecting the storage battery to the distributing circuit when the supply circuit is connected to the direct-current source.

[Claims 6 to 16 not printed in the Gazette.]

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1,226,127. SELF-LUBRICATING CAR-WHEEL. JAMES MONROE SLAUGHTER, Chattanooga, Tenn. Filed Sept. 11, 1916. Serial No. 119,497. (Cl. 105—67.)



1. In a car wheel, the combination with the axle having a locking groove, a bushing bored to fit over the grooved end of the axle, a locking means independent of the axle and the bushing coöperating with the said axle groove and the said bushing to lock the said bushing to the axle, a car wheel having a tubular hub in which the bushing and axle are received, means for interlockably connecting the bushing and the hub and other means for holding the wheel and hub from endwise displacement over the bushing and axle.

2. In a car wheel, the combination with the axle having a locking groove, a bushing bored to fit over the grooved



end of the axle, a locking means coöperating with the said axle groove and the said bushing to lock the said bushing to the axle, a car wheel having a tubular hub in which the bushing and axle are received, means for interlockably connecting the bushing and the hub and other means for holding the wheel and hub from endwise displacement over the bushing and axle, the said bushing and axle having a relative limited longitudinal movement.

3. In a car wheel, the combination with the annularly grooved axle and the wheel hub; of a bushing bored to fit over the end of the axle, locking means coöperating with the bushing and the axle, said axle and bushing having a relatively limited longitudinal movement, and means interposed between the end of the axle and the bushing for transferring the end thrusts on the axle to the bushing and the hub to thereby relieve the locking means from end thrust strains.

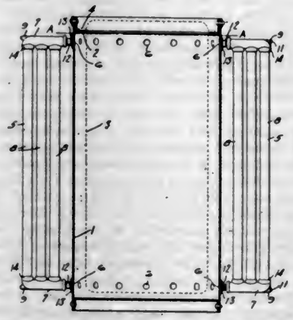
4. In a wheel, the combination with the end closed wheel hub and the axle, the said axle having an annular groove in the end that enters the wheel hub; a bushing bored to fit over the grooved end of the axle, a closure member that engages the axle and covers the open end of the hub, the said bushing having a closed end face, means for holding the said end face of the bushing up against the closed end of the hub, locking devices that coöperate with the bushing and the groove in the axle, the said axle having a limited movement relative to the locking devices, whereby to relieve the said devices of end thrust strains, and means interposed between the axle end and the bushing for transferring the axle end thrust to the bushing and the wheel hub.

5. In a wheel, the combination with the end closed wheel hub and the axle, the said axle having an annular groove in the end that enters the wheel hub; a bushing bored to fit over the grooved end of the axle, a closure member that engages the axle and covers the open end of the hub, the said bushing having a closed end face, means for holding the said end face of the bushing up against the closed end of the hub, locking devices that coöperate with the bushing and the groove in the axle, the said axle having a limited movement relative to the locking devices, whereby to relieve the said devices of end thrust strains, and means interposed between the axle end and the bushing for transferring the axle end thrust to the bushing and the wheel hub, the said hub and bushing having relatively annular grooves that form oil wells, the hub having a normally closed inlet for receiving the oil.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,128. HEAT-RADIATOR. CHARLES SONNEBORN, West Pittsburgh, Pa., assignor to Pressed Metal Radiator Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 22, 1916. Serial No. 73,762. (Cl. 257—191.)

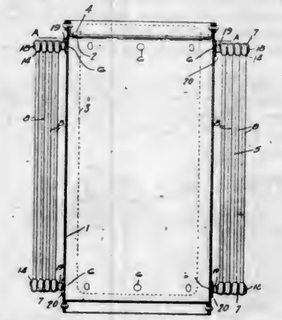


1. A heat radiator, comprising a tank or reservoir for containing a liquid and provided with two series of openings near its top and bottom, and a series of built-up radiator units spaced around said tank, each unit comprising two header sections communicating with openings near the top and bottom of said tank, and metal tubes secured to and connecting said header sections.

2. A heat radiator, comprising a tank or reservoir for containing a liquid and provided with two series of openings near its top and bottom, and a series of radiator units spaced around said tank, each unit comprising two header sections communicating with openings near the top and bottom of said tank, and a plurality of metal tubes of oblong cross section welded or brazed to said header sections.

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1,226,129. HEAT-RADIATOR. CHARLES SONNEBORN, West Pittsburgh, Pa., assignor to Pressed Metal Radiator Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 22, 1916. Serial No. 73,763. (Cl. 257—191.)



1. A heat radiator, comprising a tank or reservoir for containing a liquid, and a series of built-up radiators spaced around the periphery thereof, each of said radiators comprising a plurality of header sections having a central portion provided with openings and two wings, metal tubes secured to the edges of openings in said wings and connecting the header sections, and nipples threaded into the central openings in said header sections and connected to the reservoir.

2. A heat radiator, comprising a tank or reservoir for containing a liquid and provided with two series of openings near its top and bottom, and a series of radiators spaced around said tank, each radiator comprising a plurality of units each embodying hollow metal sections and a plurality of metal tubes welded or brazed thereto, internal connections for the units of said radiators, and nipples connecting said radiators to the tank.

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1,226,130. BRUSH FOR ELECTRIC MACHINERY. EDGAR M. SORENG, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed July 8, 1912, Serial No. 708,111. Renewed Oct. 10, 1914. Serial No. 866,336. (Cl. 200—25.)



1. A brush for electric machinery, consisting of the combination of electric conductors, and a backing of solder connecting some of said conductors together and extending to the tip of the brush.

3. A brush for electric machinery, consisting of the combination of copper wires, and solder impregnating the upper surface of the brush and extending to the tip thereof.

4. A brush for electrical machinery comprising a body portion of metal and of generally porous structure at

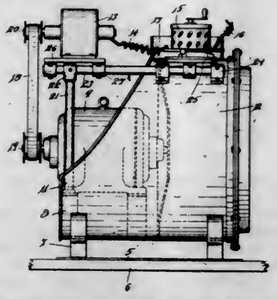
one portion of its surface, and a reinforcing metal backing for said body portion, said backing and said body portion being intimately united along said surface portion of generally porous structure at that part of the body portion that is adapted and intended for current-collecting engagement with a coöperative current-collecting device.

7. A brush for electrical purposes comprising a body portion of metal fabric, and a reinforcing metal backing for said body portion, said backing being intimately united to said body portion by impregnation of said body portion with particles of said backing.

10. A brush for electrical purposes comprising a body portion of fabricated metal, and a reinforcing metallic backing for said body portion, said backing being of material less capable of resisting abrasion than the material of said body portion and being intimately united with said body portion at the part thereof normally intended for current-collecting engagement with a coöperative current-collecting device.

[Claims 2, 5, 6, 8, and 9 not printed in the Gazette.]

1,226,131. BLOWER. IRA H. SPENCER, West Hartford, Conn., assignor to The Organ Power Company, Hartford, Conn., a Corporation of Connecticut. Filed Aug. 14, 1915. Serial No. 45,494. (Cl. 230—11.)



1. A blower including a case with blower mechanism therein, a motor connected with the blower mechanism, a base to support said motor, and a generator supported by said base and operatively connected with said motor.

2. A blower including a case with blower mechanism therein, a motor connected with the blower mechanism, a base to support said motor, a generator supported by said base and operatively connected with the motor, and an electrical device supported by the base and operatively connected with said generator.

3. A blower including a case, a base located within the case, blower mechanism supported by the base, a motor connected with the blower mechanism and supported by the base, and a generator supported by said base and operatively connected with said motor.

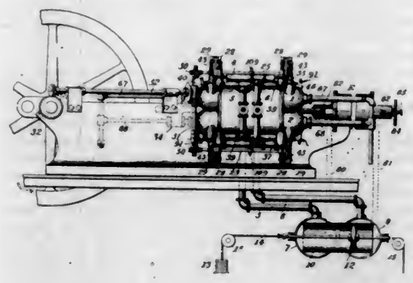
4. A blower including a case with blower mechanism therein, a motor connected with the blower mechanism, a shaft secured to the blower case, a generator secured to said shaft, and connections between said motor and generator.

5. A blower including a case having blower mechanism therein, a motor connected with the blower mechanism, a shaft secured to the blower case, a generator secured to said shaft, connections between said motor and generator, a rheostat secured to said shaft, and electrical connections between said generator and rheostat.

[Claims 6 to 11 not printed in the Gazette.]

1,226,132. COMBUSTION-ENGINE. ELMER A. SPERRY, Brooklyn, N. Y. Filed Jan. 18, 1905, Serial No. 241,680. Renewed May 6, 1915. Serial No. 26,424. (Cl. 123—36.)

1. In a compound four-cycle internal combustion engine having prior to cobustion an inhalation and a compression stroke within the combustion cylinder, means for utilizing the further expansion of the gases after the normal combustion or working stroke, means for compressing the air, a separate means for comprissing the fuel prior to introduction into the said combustion cylinder, an air valve opening into the combustion cylinder, a separate fuel valve, and means for operating the valves in succession with the air valve leading the fuel valve in opening, as and for the purpose specified.



2. In a compound four-cycle internal combustion engine having prior to combustion an inhalation and a compression stroke within the combustion cylinder, means for utilizing the further expansion of the gases after the normal combustion or working stroke, means for compressing the air, a separate means for compressing the fuel prior to introduction into the said combustion cylinder, an air valve opening into the combustion cylinder, a fuel valve opening to the air valve, and means for opening the air valve previous to and closing it after the opening and closing of the fuel valve, for the purpose specified.

3. In a four-cycle, compound internal combustion engine, in combination, a low pressure cylinder, a pair of double acting high pressure cylinders operatively connected with the low pressure cylinder by suitable passages, pistons for said cylinders, a common crank shaft having a crank connected with the low pressure piston, and a second crank connected to both of the high pressure pistons, and valves for said cylinders timed so that the high pressure cylinders will alternately exhaust into the low pressure cylinder at the termination of the power stroke of the respective high pressure pistons.

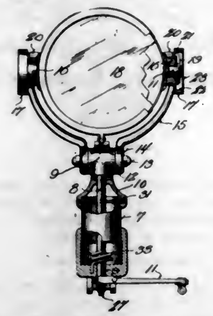
4. In a four-cycle compound internal combustion engine, in combination, a low pressure cylinder, a pair of double acting high pressure cylinders located one above the other and side by side and operatively connected with the low pressure cylinder by suitable passages, pistons for said cylinders, a crank shaft having a crank connected with the low pressure piston, a common cross head for the high pressure pistons, a second crank on the crank shaft connected with the cross head and displaced 180° from the first crank, and valves for said cylinders timed so that the high pressure cylinders will alternately exhaust into the low pressure cylinder.

5. In a four-cycle compound internal combustion engine, in combination, a double acting low pressure cylinder, a pair of double acting high pressure cylinders operatively connected with the low pressure cylinder by suitable passages, pistons for said cylinders, a common crank shaft having cranks connected to the pistons, air, fuel and exhaust valves for the high pressure cylinders, exhaust valves for the low pressure cylinder, means for supplying air and fuel under pressure to the high pressure cylinders, means for opening the air valves during the exhaust of the high pressure cylinders, and means for opening alternately the high pressure cylinder exhaust valves which control the passage of the exhaust to the same end of the low pressure cylinder.

[Claims 6 to 38 not printed in the Gazette.]

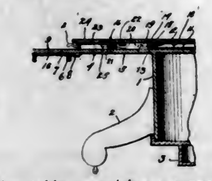


1,226,133. DIRIGIBLE-HEADLIGHT MECHANISM. JOHN S. SPIREWFKI, Jr., Milwaukee, Wis., assignor of one-third to Daniel C. O'Connell and one-third to James E. O'Connell, Milwaukee, Wis. Filed Mar. 28, 1916. Serial No. 87,196. (Cl. 240—61.)



A lamp structure of the type described comprising a hollow attaching member having an open top, a lamp carrying head including upwardly extending arms, a lamp journaled in the arms for vertical swinging movement, a depending flange on the head engaging the attaching member to form an upper journal for the head, a shaft extending through the attaching member and journaled in the bottom thereof, a pulley on the head, and a cable secured to the forward end of the lamp and trained about said pulley and extended through the flange and attaching member.

1,226,134. CIRCULAR EXTENSION-TABLE. PEARL M. SRADER, Lebanon, Kans. Filed Nov. 15, 1915. Serial No. 61,618. (Cl. 45—26.)

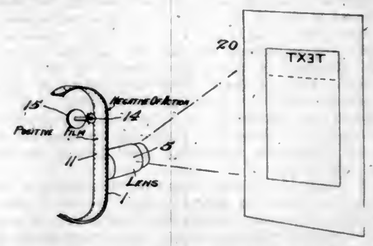


An extension table comprising a supporting pedestal, a main table supported by the pedestal and comprising a top having a depending circular flange provided with openings therein, means for forming sockets interiorly of said flange and in registration with said openings, extension sections having arms the inner ends of which detachably engage said openings in the sockets, a rotary table top having extension sections detachably connected thereto, a circular plate fixed to the upper surface of the first named top, spaced concentric flanges carried by said plate for forming a raceway, ball bearings in said raceway, and a circular plate carried by the second named top and engaging the balls in said raceway and having a depending flange engaging the outer surface of the outer concentric flange of the first named plate.

1,226,135. PROCESS OF MAKING MOVING-PICTURE FILMS. REGINALD V. STAMBAUGH, Dayton, Ohio, assignor to Artfilm Studios, Cleveland, Ohio, a Corporation of Ohio. Filed May 26, 1916. Serial No. 100,036. (Cl. 88—16.)

1. The method of making a photographic print, consisting in photographing upon the print surface through a lens and simultaneously making a print thereon through a negative placed between the print and the lens.

2. The process of making moving-picture films, consisting in photographing a view upon a sensitized surface and simultaneously printing upon the same surface from a negative.



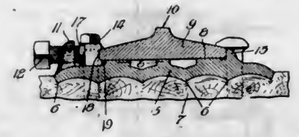

3. The process of making moving picture films, consisting in preparing a negative film, superposing it upon a raw positive film and simultaneously photographing a view and printing from said negative upon said positive film.

4. The pocess of making moving picture films, consisting in making a strip of negative film, superposing it upon raw positive film behind a lens directed at photographable subjectmatter, and thus simultaneously photographing and printing upon the positive film to make a complete positive view.

5. The process of making moving picture films, consisting in making a strip of negative film of a field having a dark background and lighter subjectmatter thereon, superposing the negative upon a raw positive film in a moving picture camera, arranging dark images (text) upon a white field before the camera, and making exposures, thus simultaneously photographing said black images upon the positive film and printing on said film through said negative.

[Claims 6 to 16 not printed in the Gazette.]

1,226,136. RAIL-ANCHOR TIE-PLATE. ARTHUR L. STANFORD, Chicago, Ill. Filed Aug. 25, 1916. Serial No. 116,896. (Cl. 238—2.)



1. A device of the class described comprising, in combination, a tie plate having on one side an abutment for engaging one side of the base of a rail, and having on its other side an abutment for the accommodation of a set-screw, the said abutments being separated a sufficient distance for the accommodation of the base of the rail and for the provision of a space between the last mentioned abutment and the adjacent edge of the base of the rail, a spring block located in said space, said spring block having a curved face adjacent to the edge of the rail base, and a set-screw threaded into the adjacent abutment and engaging the spring block for the purpose of compressing the same against the base of the rail.

2. A device of the class described comprising, in combination, a tie plate having on its upper portion a pair of abutments, one of said abutments preventing movement of the rail base away from the other abutment, and the abutments being separated a sufficient distance to provide a space between the other abutment and the base of the rail, a spring block located in said space, said spring block having a curved face adapted for engagement against the adjacent edge of the rail base, and a set-screw threaded through the adjacent abutment and engaging the spring block to compress the spring block against the rail base.

3. A device of the class described comprising, in combination, a tie plate having on its upper portion a pair of abutments, one of said abutments serving to prevent movement of the rail base away from the other abutment, the abutments being separated a sufficient distance to provide a space between the rail base and the last mentioned abutment, a spring block located in said space, said spring block having a curved face adapted to engage the adjacent edge of the rail base, and means under the control of the operator for exerting a force between the last mentioned abutment and the spring block for the purpose of compressing the spring block against the edge of the rail base.

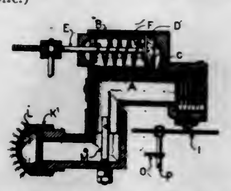
4. A device of the class described comprising, in combination, a tie plate having on its upper portion a pair of abutments, one of said abutments serving to prevent movement of the rail base away from the other abutment, the abutments being separated a sufficient distance to provide a space between the rail base and the last mentioned abutment, a spring block located in said space, said spring block having a curved face adapted to engage the adjacent edge of the rail base, and means for exerting a force between the last mentioned abutment and the spring block for the purpose of compressing the spring block against the edge of the rail base.

5. A device of the class described comprising, in combination, a tie plate having on its upper portion a pair of abutments, one of said abutments serving to prevent movement of the rail base away from the other abutment, the abutments being separated a sufficient distance to provide a space between the rail base and the last mentioned abutment, a spring member located in said space and bearing against the adjacent edge of the rail base, and means under the control of the operator for exerting a force between the last mentioned abutment and the spring member for the purpose of compressing the latter against the edge of the rail base.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,137. AUTOMATIC IRRIGATION-NOZZLE. FREDERICK W. STANLEY, Washington, D. C. Filed Jan. 31, 1917. Serial No. 145,811. (Cl. 137—155.) (Dedicated to the public.)



1. In an irrigation device, the combination of a supply pipe, a nozzle movably connected thereto, a cylinder in communication with said supply pipe, a piston in said cylinder, a rod connected to said piston, a ratchet wheel connected to said nozzle and adapted to be engaged by said rod so that movement of the piston is communicated through said ratchet wheel to said nozzle.

2. In an irrigation device, a movable nozzle, a cylinder, a piston therein, a supply pipe in communication with said nozzle and said cylinder, and connections between said nozzle and said piston including a series of rods and a ratchet wheel, the piston adapted to be moved by turning on and off the water to the supply pipe to change the position of said nozzle.

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1,226,138. SAFETY APPLIANCE FOR MOTOR-VEHICLE STEERING MECHANISM. CHARLES A. STAPLETON, Anthony, Kans., assignor of one-half to Otha P. Burchfiel, Anthony, Kans. Filed Aug. 10, 1915. Serial No. 44,802. (Cl. 21—200.)

1. In a safety appliance for the steering mechanism of motor vehicles, an axle member comprising angularly disposed wings, a link member arranged in the angle formed between the wings of the axle member and comprising angularly disposed wings, an arm projecting from the link member, a curved rod passing through a wing of the link member and attached to the adjacent wing of the

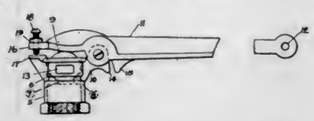


axle member, and an expansible helical spring mounted upon the curved rod and arranged to exert a pressure against opposite ends of the link member.

[Claim 2 not printed in the Gazette.]

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1,226,139. FLOAT-VALVE. TIMOTHY STEBBINS, Davenport, Iowa, assignor to Red Jacket Mfg. Co., Davenport, Iowa, a Corporation of Iowa. Filed July 29, 1915. Serial No. 42,559. (Cl. 137—104.)



1. In a float valve, the combination of a body portion; a valve cage mounted thereon having an open outer end and communicating at its inner end with the body portion; a valve seat in said cage; a freely movable ball valve normally resting on said seat with a portion of its periphery projecting from the open end of the cage; a lever pivoted intermediate its ends at one side of said cage and having one arm extending across the open end of the cage and adapted to press the ball to its seat; an adjustable stop carried by said ball-engaging arm for limiting the pressure thereof on the ball; and a stop carried by the other arm of said lever for limiting the movement of the ball-engaging arm away from the open end of the cage to confine the ball within the cage.

2. In a float valve, the combination of a body portion; a valve cage communicating therewith at its inner end and having an open outer end; a valve seat in said cage; a ball valve normally resting on said seat with a portion of its periphery projecting from the open end of the cage, said ball being capable of free movement in the cage; a lever pivoted intermediate its ends at one side of said cage and having one arm extending over the open end of the cage and adapted to press the ball to its seat; means for limiting the pressure of said arm on the ball; and means for limiting the movement of said arm away from the open end of the cage to confine the ball within the cage.

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1,226,140. PUMP. TIMOTHY STEBBINS, Davenport, Iowa, assignor to Red Jacket Mfg. Co., Davenport, Iowa, a Corporation of Iowa. Filed Nov. 26, 1915. Serial No. 63,447. (Cl. 103—56.)

1. In combination with a pump casing, a check valve frictionally held in position in the lower end thereof, a plunger provided with a valve, and means whereby the plunger may be interlocked with said check valve and at the same time open the valve in the plunger, whereby the check valve may be lifted off its seat and the water above the plunger allowed to drain through the plunger and past the valve, for the purpose set forth.

2. In combination with a pump casing, a check valve frictionally held in position in the lower end thereof, a plunger provided with a valve, and means whereby the plunger may be interlocked with said check valve and at the same time open the valve in the plunger, whereby the check valve may be lifted off its seat and the water above the plunger allowed to drain through the plunger and past the valve, the check valve being provided with an upstanding threaded stem and the plunger being provided with a depending threaded ring for engaging said stem.





3. In combination with a pump casing, a check valve frictionally held in position in the lower end thereof and provided with an upstanding threaded stem, a plunger provided with a valve having a depending stem and also with a depending internally-threaded ring, whereby the plunger may be interlocked with the stem of the check valve and this stem may be made to contact with the depending stem of the valve in the plunger and hold the same open, for the purpose set forth.

4. In a pump of the character set forth, a pump base, a T-casting and means for removably supporting the same in the pump base with its horizontal branch in communication with the outlet thereof, a pump rod extending down through said casting out of contact therewith, a pipe surrounding the pump rod and having packed sliding connection with the upper end of said pipe, and a water pipe surrounding the aforesaid pipe and having a packed sliding connection with the lower end of said T-casting, the pump base being provided wtih a movable cap through which said pump rod extends.

5. In a pump of the character set forth, a pump base, a frost casing depending therefrom, a well casing and a connection attaching the same to the lower end of the frost casing, the interior of said connection being provided with a packing seat, a pump rod, a pipe surrounding the pump rod, a water pipe surrounding said aforesaid pipe, a head attached to the lower ends of said pipes and provided with a lateral leak-discharge opening, a packing ring inserted between the lower end of said head and and said packing seat in the connection, and means whereby said pipes and said head may be forced downwardly independently of the pump rod to make an annular watertight joint at the packing, for the purposes set forth.

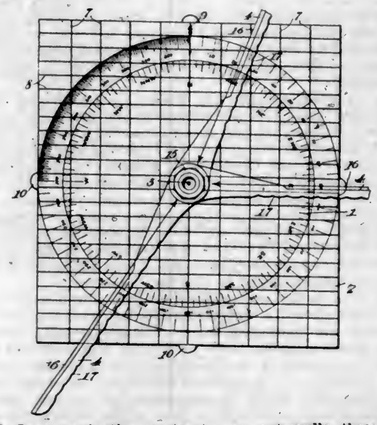
[Claims 6 and 7 not printed in the Gazette.]

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1,226,141. NAVIGATION-PROTRACTOR. FRANK W. STERLING and RALPH A. KOCH, U. S. Navy. Filed Aug. 16, 1913. Serial No. 785,120½. (Cl. 33—75.)

1. In a navigation protractor, a boss, two cards pivotally mounted on said boss, means for simultaneously adjusting the frictional resistance of said cards, a plurality of pointers pivotally mounted on said boss, and means for simultaneously adjusting the frictional resistance of said pointers.

2. In a navigation protractor, a boss, a transparent circular compass card, a transparent rectangular card, a plurality of pointer arms all centrally and revolubly mounted on said boss, means for adjusting the frictional resistance to rotation of said cards and independent means for adjusting the frictional resistance to rotation of said pointer arms.

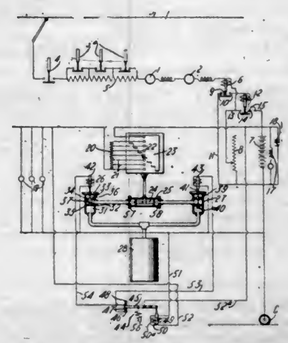


3. In a navigation protractor an outwardly threaded apertured boss flanged at its lower end and a transparent circular compass card, a transparent rectangular card superposed thereon, both pivotally and centrally mounted on said boss, a nut screwed on to the boss for adjusting the frictional contact between the two cards, three transparent pointer arms revolubly mounted on said boss above said nut, a plurality of washers separating the pointer arms, and a nut screwed on the upper end of the boss for locking and adjusting the frictional resistance to rotation of said pointer arms.

4. In a navigational protractor a central boss having an outwardly threaded portion, two cards, both pivotally and centrally mounted on said boss, a plurality of radial arms similarly mounted on said boss, and two nuts screwing on said boss, one for adjusting the resistance to rotation of the cards, and the other for similarly adjusting the resistance to rotation of the arms.

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1,226,142. VOLTAGE-REGULATING SYSTEM. NORMAN W. STORER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 7, 1914. Serial No. 810,790. (Cl. 171—229.)



1. In a voltage-regulating system, the combination with a supply circuit, translating means connected thereto, an energy-consuming device in circuit with said supply cir-

cuit, and a switching device for adjusting the circuit connections of said energy-consuming device, of power-operated means for actuating said switching device, a plurality of governing means associated with said actuating means, and means responsive to conditions of said supply circuit for causing the operation of both of said governing means to effect movements of said switching device in one direction, and for rendering one of said governing means inoperative to effect movements of said device in the opposite direction.

2. In a voltage-regulating system, the combination with a supply circuit, a resistance-governing switching device therein, and translating means connected to said circuit, of a power-operated device for actuating said switching device in opposite directions, a plurality of electro-magnetically controlled valves associated with said power device for governing its operation, and means responsive to electrical conditions of said supply circuit for normally energizing one of said valves, for deënergizing said valve for effecting movements of said switching device in one direction, and for energizing both of said valves for effecting movements thereof in the other direction.

3. In a voltage-regulating system, the combination with a supply circuit, a resistance-controlled switching device therein, and translating devices connected to said circuit, of a power actuated device for moving said switching device, a plurality of electro-magnetically controlled valves for governing the operation of said power device and electro-responsive means for energizing one of said valves under normal conditions of said supply circuit, for deënergizing said valve under other conditions of said circuit, and for energizing both of said valves under other conditions of said circuit.

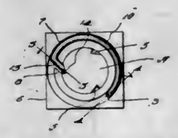
4. In a voltage-regulating system, the combination with a supply circuit, translating means connected thereto, a resistance-governing switching device associated with said supply circuit, and a power-actuated device mechanically associated with said switching device for effecting movements thereof, of a plurality of electro-magnetically controlled valves for governing the operation of said power device, one of which is biased to its open position and the other to its closed position when their respective electro-magnets are deënergized, and means responsive to electrical conditions of said supply circuit for controlling the operation of said valves to effect variations of said resistance in accordance with predetermined circuit conditions.

5. The combination with a resistance-controlling switching device, and a fluid-operated mechanism associated therewith for moving said switching device, of a plurality of valves for governing the operation of said fluid-operated mechanism, one of said valves being biased to open position and the other to closed position, means for opening the valve that is biased to closed position under normal conditions of an electric circuit, and means coöperating therewith for concurrently closing the other valve, under other predetermined conditions.

[Claims 6 and 7 not printed in the Gazette.]

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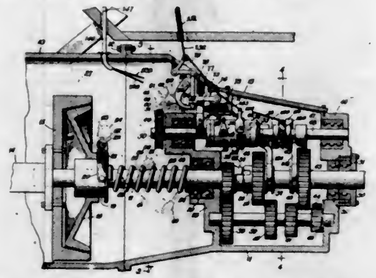
1,226,143. LOCK-NUT. CHARLIE C. STUBBLEFIELD and FRANK C. HAWKINS, Rogers, Ark. Filed Sept. 9, 1916. Serial No. 119,297. (Cl. 151—11.)



The combination with a bolt, having a threaded portion provided with longitudinally disposed grooves, of a nut adjustably mounted on the threaded portion of the bolt, and having an annular groove in its outer face concentrically of the bolt, and also provided with a socket and a cut away portion diametrically opposite each other, the cut away portion inter-secting the opening in the nut for the bolt, and said groove, a resilient semi-circular locking member seated within the groove, a right angular bifurcated terminal on said member, engaged in the socket, and an inwardly bent locking terminal on said member, and lying within the cut away portion to co-act with the grooves in the bolt.

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1,226,144. AUTOMATIC GEAR-SHIFTING MECHANISM. WALTER P. SULLIVAN, Horton, Kans. Filed Aug. 9, 1916. Serial No. 113,979. (Cl. 74—58.)



1. In gear shifting mechanisms for transmission gearings, the combination with a clutch through which power is transmitted to the transmission gearing and a transmission gearing including reciprocally mounted gear shifter rods, of power driven means operable to move either shifter rod in either direction, means controllable by a single hand lever governing the power operated means to select which rod shall be shifted and in which direction, and power driven means for throwing out the clutch and for subsequently releasing the clutch, said means operating in conjunction with the hand lever.

3. In gear shifting mechanisms for transmission gearings, the combination with a transmission gearing, means for shifting the gearing, and a clutch including a movable clutch element, of manually controlled power driven means for throwing out the clutch, said means including an engine driven shaft, a winding drum mounted upon the shaft, a clutch operating lever, means connected to the lever and windable about the drum to operate the lever, and means releasable manually for locking the winding drum to the shaft.

6. In gear shifting mechanism for transmission gearings, the combination with a transmission gearing including reciprocally mounted shifter rods, of an engine driven shaft, a shifting element fixed to turn with the shaft and having spaced annular shoulders formed at diametrically opposite sides with reversely arranged diagonally extending camways, members seating between the shoulders at opposite sides of the shaft and mounted upon the shifter rods for turning movement, and manually controlled means for turning such members to cause either member to selectively move through one or another of the camways.

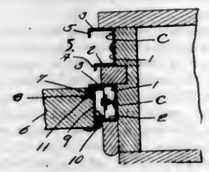
8. In gear shifting mechanisms, the combination with a clutch, and a transmission gearing, of means for selectively shifting the transmission gearing, power operated means for moving the clutch to inactive position during such shifting and for permitting its return to active position after such shifting, and a brake for checking the return movement of the clutch.

11. In gear shifting mechanisms, the combination with a clutch, of a lever for moving the clutch to inactive position, a constantly driven shaft, a winding drum loose upon the shaft, manually operable means for frictionally locking the winding drum to the shaft, connecting means for the lever and drum whereby rotation of the drum will swing the lever to release the clutch, and means for automatically disconnecting the winding drum from the shaft.

[Claims 2, 4, 5, 7, 9, 10, 12, and 13 not printed in the Gazette.]



1,226,145. WINDOW. AIKEN C. TAYLOR, Richmond, Va., assignor to Emanuel P. Summerfield, Norfolk, Va. Filed Jan. 20, 1916. Serial No. 73,194. (Cl. 20—42.)



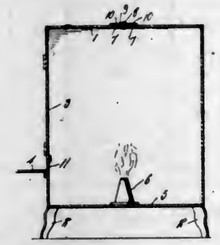
1. The combination with a window frame, of channeled guide strips located at the sides thereof, a vertically sliding window sash, and pivot cams secured to the lower ends of the sash and movable in the channels of said strips, the said cams having body portions substantially circular in formation and resilient fingers integral with the body portions and eccentric to the centers thereof, the said fingers being adapted to bind against the walls of the guide strips when the sash is swung to an inclined position.

2. The combination with a window frame having guide channels, of a sash mounted in the frame and having cams slidably and rotatably engaging the corresponding guides and of such dimensions as to insure movement of them into and out of contact with the sides of the channels, the contacting faces of the cams being in resilient relation to each other for yielding engagement with the sides of the channel.

3. The combination with a window frame having guides, of a sash mounted in the frame, cams carried by the sash in guiding relation to the guides and upon which the sash is slidable and rotatable with respect to the guides, links connected with the sash and having cams similar to the first named cams and in similar relation to the guides, the cams being movable into locking engagement with the guides when the sash is swung pivotally, said cams being constructed for resilient engagement with the guides, whereby engagement of all cams is insured.

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1,226,146. PROCESS OF REPAIRING ENAMELED LEATHER. ADELBERT M. TOWLE, Augusta, and GUY M. TOWLE, Hallowell, Me., assignors of one-third to Leontine B. Paquin, Augusta, Me. Filed Nov. 24, 1916. Serial No. 133,239. (Cl. 91—71.)



1. The process for repairing enameled leather and similar materials consisting in coating the outer surface or finish of the leather with a filler and then uniting the filler with the finish of the leather so as to form an integral coherent mass therewith by the direct application of fire.

2. A process for repairing enameled leather and similar materials consisting in coating the outer surface or finish of the leather with a filler and then subjecting this filler and the finish of the leather contiguous thereto to the direct action of fire.

3. A process for repairing enameled leather and similar materials consisting in coating the finish of the leather with a filler, painting the filler with an inflammable substance, and then igniting said inflammable substance so as to cause the filler to unite with the enameled finish of the leather so as to form a coherent mass therewith.

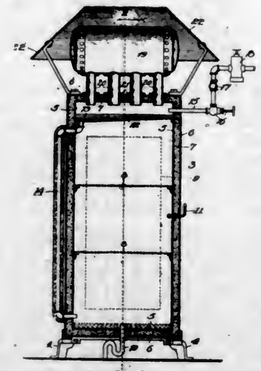
4. A process for repairing enameled leather and similar materials consisting in coating the enameled finish of the leather with a filler, painting the filler with an alcohol solution of sellac, and then igniting said solution so as to cause the filler to unite with the enameled finish of the leather so as to form a coherent mass therewith.

5. A process for repairing enameled leather and similar materials consisting in coating the material to be repaired with a filler, permitting the filler to set, and subjecting this filler to the direct action of flame.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,147. ART OF COOKING. CHARLES B. TRESCOTT, Chicago, Ill. Filed Oct. 7, 1916. Serial No. 124,252. (Cl. 99—11.)



1. In the art of low-temperature cooking with moisture-saturated hot air in the cooking-chamber, the process which consists in using live-steam as the primary source of heat and moisture, cooling the steam to reduce its temperature, and continuously introducing during the cooking operation the resultant hot condensate into said chamber to produce and maintain therein the predetermined cooking temperature and saturated condition of said air.

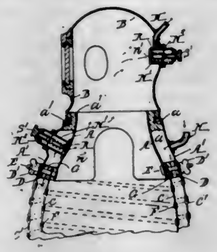
2. In the art of low-temperature cooking with moisture-saturated hot air in the cooking chamber, the process of directing live steam through said chamber to an extraneous cooling medium, thereby lowering the temperature of the steam, and continuously directing during the cooking operation the resultant hot condensate into said chamber to produce and maintain therein the predetermined cooking temperature and saturated condition of said air.

3. In the art of low-temperature cooking with moisture-saturated hot air in the cooking-chamber, the process of directing live steam through the upper part of said chamber into an elevated cooler to lower the temperature of the steam, and continuously passing, during the cooking operation, the resultant hot condensate downwardly into said chamber to produce and maintain therein the predetermined cooking temperature and saturated condition of said air.

4. In the art of low-temperature cooking with moisture-saturated hot air in the cooking-chamber, the process of directing live-steam under low pressure through the upper part of said chamber into an elevated cooler to lower the temperature of the steam, running the resultant hot condensate downwardly into said upper part of the chamber and there intercepting it, and introducing said condensate from the point of interception into the lower part

of said chamber to form a body of hot liquid therein and produce and maintain in the chamber the predetermined cooking temperature and saturated condition of its contained air.

1,226,148. DIVING-DRESS. FRANK WILLIAM WALTERS, Auckland, New Zealand. Filed May 3, 1916. Serial No. 95,061. (Cl. 61—7.)



1. A diving dress having an inner and an outer lining, an air supply inlet opening into the space between such linings, a spring controlled valve opening from such space into the inside of the dress, a spring controlled valve opening from the helmet and an air pipe leading from such latter valve, each of such valves being constructed to automatically vary the respective openings with the variations in the pressure around the dress, substantially as specified.

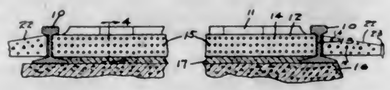
2. A diving dress having a double walled corselet and double walled body and limbs arranged with spaces between the respective walls in communication with each other, an air supply inlet leading into the space between the double walls of the corselet, an opening from such space to within the dress, a spring valve controlling such opening and constructed to automatically vary the amount of such opening with the variations in pressure around the dress, a helmet upon the dress, an outlet air valve in such helmet also constructed to automatically vary the area of the outlet with the variations in pressure around the dress and an air escape pipe leading from such valve, substantially as specified.

3. In diving dresses, the combination with a double walled dress having an air supply inlet leading into the space between the walls, of a valve adapted to control the passage of air from such space to the inside of the dress, such valve consisting of an inner and an outer chamber having a flexible diaphragm division between them the inside chamber communicating through openings respectively with such space and the inside of the dress, a stem valve mounted inside such chamber adapted to close the opening into the inside of the dress, a spring surrounding the stem and forcing it normally outward to open said opening and against the flexible diaphragm, a spring controlled plunger mounted in the outer chamber of the valve and bearing inward against the diaphragm and having means for adjusting its tension, and openings in the outer chamber communicating with the outside of the dress, substantially as specified.

4. In diving dresses, the combination with a double walled dress having an air supply pipe leading into the space between the walls and an air valve controlling the passage of air from such space to within the dress, of a helmet fitted on such dress having an air outlet valve mounted therein consisting of a chamber within the helmet and a chamber on the outside thereof separated from one another by a flexible diaphragm, an opening in the inner end of the inside chamber a stem valve mounted in such chamber and adapted to close such opening, a spring surrounding the stem and forcing it normally outward to open said opening and against the flexible diaphragm, an opening in the side of the inner chamber, a pipe leading from such opening to outside the helmet, a spring controlled plunger mounted in the outer chamber and bearing inward against the flexible diaphragm, means for adjusting the tension thereof, and openings in the wall of such outer chamber, substantially as and for the purposes specified.

5. In diving dresses, forming the body and limbs of the dress with double walls of flexible material each strengthened or reinforced by bands of metal encircling them at intervals apart and secured within or upon the material, having provision for the inlet of an air supply into the space between the walls and for the passage of the air from such space through a spring controlled valve into the inside of the dress, a helmet upon the dress and a spring controlled air outlet upon such helmet, substantially as and for the purposes specified.

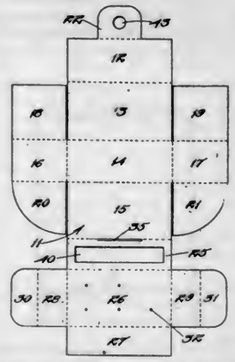
1,226,149. ANCHOR-STRIP FOR PAVING-BLOCKS. GEORGE W. WARMOTH, Indianapolis, Ind. Filed Aug. 16, 1915. Serial No. 45,722. (Cl. 94—1.)



1. In the combination with street railway tracks, of paving blocks laid between said tracks, a metal strip between each row of said blocks, means for engaging said blocks and holding them in their proper position, and means on each end of said strip for securing it in position.

2. In the combination with street railway tracks, of paving blocks laid between said tracks, a metal strip between each row of said blocks, means on said strip for engaging said blocks and holding them in their proper position, and flanges on each end of said strip adapted to fit snugly under the lip of said rails so as to be held securely in position by the head thereon.

1,226,150. PAPER BOX. PETER R. WARREN, Boston, Mass. Filed May 14, 1915. Serial No. 28,167. (Cl. 229—29.)



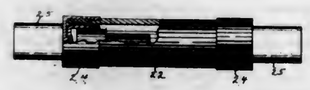
1. A receptacle for push pins or the like formed from a single blank of sheet cardboard, said receptacle consisting of an outer box and an inner box adapted to be inclosed within said outer box, one portion of said blank being folded to form the outer box and the remaining portion of said blank being folded to form the inner box, the front portion of said inner box being of less height than the front portion of said outer box, and having a longitudinal slot therein, a portion of the front of said outer box being adapted to lie adjacent the front of said inner box, and a tongue on the front portion of said outer box adapted to be received within the said slot to secure the said outer box together and to space the said inner box from the cover of the said outer box.

2. A receptacle for push pins or the like formed from a single blank of sheet cardboard, said receptacle consisting of an outer box and an inner box adapted to be inclosed within said outer box and having a base member which forms a common bottom for both of said boxes, one portion of said blank being folded to form the outer box and the remaining portion of said blank being folded to form the inner box, the front portion of said inner box being of less height than the front portion of said outer box and having a slot lengthwise thereof adjacent the bottom of said box, a portion of the front of said outer box being adapted to lie contiguous with the front of said inner box, and a tongue on the lower edge of said outer box adapted to be received within the said slot and rest on the said bottom to hold the said outer box together and to space the said inner box from the cover of said outer box.

3. A receptacle for push pins or the like formed from a single blank of sheet material, said receptacle consisting of an outer box and an inner box adapted to be inclosed within said outer box, and having a base member which forms a common bottom for both of said boxes, one portion of said blank being folded to form the outer box and the remaining portion of said blank being folded to form the inner box, the front portion of said inner box being of less height than the front portion of said outer box and having a longitudinal slot therein, a portion of the front of said outer box being adapted to lie adjacent the front of said inner box, a tongue on the front portion of said outer box adapted to be received within the said slot, and a back portion on said outer box having side members provided with segment shaped tucks adapted to be inserted within the side members of said inner box to enable the device to be used as a closed box or as a display holder.



1,226,151. REFILLABLE CARTRIDGE-FUSE. LOUIS E. WEINBERG, New York, N. Y., assignor to Star Fuse Co., Inc., New York, N. Y. Filed May 28, 1914. Serial No. 841,447. (Cl. 175—273.)

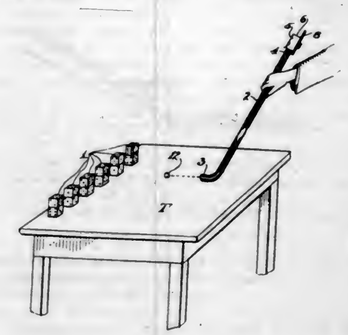


1. In a fuse, the combination of a glass tube, metallic end caps closing said tube at the ends thereof, and a film of solder intermediate the ends of said tube and said metallic end caps, said solder being quick-hardened by application of cold after insertion between said tube and said caps in its heated state, and connecting said tube and said end caps, said glass tube being provided with weakened areas at the tips thereof, and a fuse element within said tube and connected to said metallic end caps.

2. In a fuse, an outer casing, an inner glass tube having metallic end caps at the ends thereof, a film of solidified solder intermediate and connecting the ends of said inner tube and metallic end caps, a fuse element within said inner tube and connected to said metallic end caps, said metallic end caps having shoulders projecting therefrom, forming shields adapted to prevent coherence of melted solder with said casing, upon blowing out of said fuse, and adapted to center said tube in said casing.

3. In a fuse, an outer casing, an inner glass tube having metallic end caps at the ends thereof, a film of solidified solder intermediate and connecting the ends of said inner tube and metallic end caps, a fuse element within said inner tube and connected to said metallic end caps, said metallic end caps having shoulders projecting therefrom, forming shields adapted to prevent coherence of melted solder with said casing, upon blowing out of said fuse, and adapted to center said tube in said casing, said shoulders being of a size relative to said outer casing, and adapted to render it impossible to insert said inner tube into an outer casing having a size other than that relative to the size of said shoulders.

1,226,152. SHOOTING. CHARLES WESLOW, Jersey City, N. J. Filed Feb. 2, 1916. Serial No. 75,677. (Cl. 46—61.)



1. A combined projectile actuating and retrieving device comprising an elongated tube one end of which is to be used as the discharge end and the other end as the charging end, and a magnet secured to the charging end.

2. In a device of the class described, a rigid tube having at one end an extension extending at substantially a right angle to the main body of the tube by a curve connecting such extension with the main body of the tube; means for admitting a plurality of projectiles to the top end of the main standard of the tube, and means for retaining and for releasing such projectiles one by one so that they will by gravity pass down through the main standard of the tube and out of the angular open mouth thereof.

3. In a device of the class described, a tube adapted to be held in the hand to receive a plurality of projectiles; a projectile catch trigger mechanism located at the upper end of the tube adapted to retain such projectiles in the upper end of the tube, and to release them one by one; and a discharging end for the tube at an angle to the axis of the main body of the tube merging into the main body of the tube by a gradual curve, the axis of the discharge end being at an angle to the main body of the tube.

4. In a device of the class described, a rigid tube having at one end an extension extending at substantially a right angle to the main body of the tube by a curve connecting such extension with the main body of the tube; means for admitting a plurality of projectiles to the top end of the main standard of the tube, and retaining the same adjacent to the top; means for releasing such projectiles one by one so that they will by gravity pass down through the main standard of the tube and out of the angular open mouth thereof; a plurality of projectiles adapted to pass by gravity through the tube, such projectiles being of spheroidal form, formed of paramagnetic material; and a terminal magnet carried by the entrance end of the elongated tube for retrieving the porjectiles.

5. In a device of the class described, a tube adapted to be held in the hand and to receive a plurality of projectiles; a projectile catch trigger mechanism located at the upper end of the tube adapted to retain such projectiles in the upper end of the tube, and to release them one by one; and a discharging end for the tube at an agle to the axis of the main body of the tube merging into the main body of the tube by a gradual curve, the axis of the discharge end being at an angle to the main body of the tube; a plurality of projectiles adapted to pass by gravity through the tube, such projectiles being of spheroidal

form, formed of paramagnetic material; and a terminal magnet carried by the entrance end of the elongated tube for retrieving the projectiles.

[Claims 6 to 9 not printed in the Gazette.]

1,226,153. DUST-PAN. GEORGE WHEALE, Meadowbrook, Pa. Filed Jan. 12, 1915. Serial No. 1,835. (Cl. 65—20.)



1. In a dust pan, the combination of a body, a handle having an extension projecting beneath the body and pivotally connected thereto so that the handle may move in a horizontal plane, and a flange on the body to maintain the handle in its plane.

2. In a dust pan, the combination of a body provided with upturned edges, a handle provided with a plurality of recesses, an extension formed on the handle, said extension being pivoted beneath the body whereby the handle may move horizontally, and a flange on the body received in the recess to guide the handle in its movement.

1,226,154. CONTAINER. ERNEST O. WHEELOCK, Chicago, Ill. Filed July 14, 1915. Serial No. 39,869. (Cl. 229—47.)




1. A container comprising a body having an opening therein, a cap for said opening, one of said parts having an edge flange parallel to the edge portion of the other part, and a securing strip of soft, annealed metal bent over and compressed upon the flange and edge portion of said parts to secure said cap in place.

2. A container comprising a body having an opening therein, a cap for said opening, one of said parts having an edge flange parallel to the edge portion of the other part and one of said parts being formed of fibrous, yielding material, and a flexible strip of soft, non-elastic metal bent over and compressed upon the flange and edge portion of said parts to secure said cap in place and form a tight joint between the same and the body of said container.

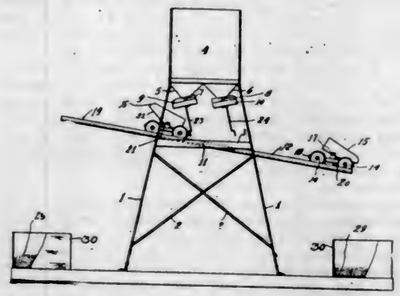
3. A container comprising a body having an opening therein, a cap for said opening, one of said parts having an edge flange parallel to the edge portion of the other part, and a flexible strip formed of soft, annealed metal and consisting of a series of connected loops bent over and compressed upon the flange and edge portion of said parts to secure said cap in place.

4. A container comprising a body having an opening therein, a cap for said opening, one of said parts having an edge flange parallel to the edge portion of the other part, and said parts being formed of yielding, fibrous material, and a flexible strip of soft, annealed metal and consisting of a series of connected loops bent over and compressed upon the flange and edge portion of said parts to secure said cap in place and form a tight joint between the same and the body of said container.

5. In closures, the combination of a body portion open at its end, a cap having an outturned flange fitting within said opening, and a securing strip formed of soft, non-elastic metal and consisting of a series of connected loops bent over and compressed upon said flange and the edge of said body portion.

[Claims 6 to 9 not printed in the Gazette.]

1,226,155. MECHANICAL TOY. JOSEPH WILHELM and CHARLES A. KAYS, McKees Rocks, Pa. Filed Aug. 26, 1916. Serial No. 117,005. (Cl. 46—37.)



1. A mechanical toy, comprising a supporting frame, a supply hopper mounted thereon, a two-car carrying runway pivotally connected in the said supporting frame, and car dumping devices actuated by the movement of the cars upon the said runway.

2. A mechanical toy, comprising a supporting frame, a supply hopper mounted thereon, a two-car carrying runway pivotally connected in the said supporting frame, and car loading devices actuated by the movement of the cars upon the said runway.

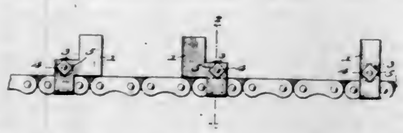
3. A mechanical toy comprising a supporting frame, a supply hopper mounted thereon, a balanced runway pivotally connected in the said supporting frame, two cars carried on said balanced runway, and means for loading one of said cars during the dumping operation of the other, substantially as described.

4. A mechanical toy comprising a supporting frame, a supply hopper mounted thereon, a balanced runway pivotally connected in said supporting frame, two cars carried on said balanced runway, and means for dumping one of the said cars during the loading operation of the other, substantially as described.

5. A mechanical toy comprising a supporting frame, a supply hopper mounted thereon, a balanced runway pivotally connected in said supporting frame, two cars carried on the said runway, and means arranged on said runway for dumping the said cars, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,226,156. CHAIN-LUG. J. PEARL WILSON, Jacksonville, Fla. Filed May 13, 1915. Serial No. 27,920. (Cl. 193—8.)

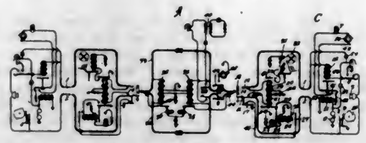


1. A chain-lug comprising two plates constructed and adapted to embrace a chain-link from opposite sides, a spacing-sleeve, approximately corresponding in length to the width of the link to which the lug is secured, inserted between the plates, and a bolt extending through the holes in the plates and the bore of the sleeve, and a nut screwed thereon for holding the plates composing the lug securely upon the link.

2. The combination with a chain, of a lug composed of two plates having flanged inner ends, which fit and embrace the inner edges of the link, a spacing-sleeve of a length approximately corresponding to the width of the link inserted between the plates in position to engage the outer edge of the link, and a fastening means extending through the sleeve and holes in the plates for securing the plates and sleeve together and the lug rigidly upon the link.



1,226,157. COMBINED TELEPHONE AND SIGNALING SYSTEM. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 1, 1913. Serial No. 792,710. (Cl. 179—5.)



1. A system of the character described having a central station and a plurality of substations each united with the central station by a line circuit, means at the central station for registering a code call, means at each substation for actuating said call receiving means, a line signal at the central station, a relay associated with the line circuit to partially control said line signal, a second relay controllable by said first relay to also control said line signal, said second relay having means to establish a locking circuit therethrough, and means at a substation for controlling the actuation of one of said relays.

2. A system of the character described having a central station and a plurality of substations each united with the central station by a line circuit, means at the central station for registering a code call, means at each substation for actuating said call receiving means, a line signal at the central station, a relay associated with the line circuit to partially control said line signal, a second relay controllable by said first relay to also control said line signal, said second relay having means to establish a locking circuit therethrough, a jack for said line circuit, and means associated with said jack to control the circuit through said second relay, and means at a substation for controlling the actuation of one of said relays.

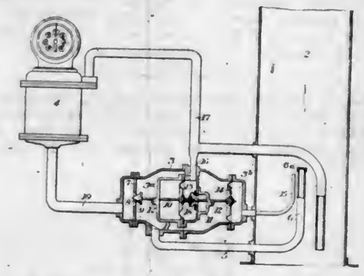
3. A system of the character described having a central station and a plurality of substations each united with the central station by a line circuit, means at the central station for registering a code call, means at each substation for actuating said call receiving means, a line signal at the central station, a relay associated with the line circuit to partially control said line signal, a second relay controllable by said first relay to also control said line signal, said second relay having means to establish a locking circuit therethrough, a jack for said line circuit and means associated with said jack to control the circuit through said second relay, means whereby said first relay controls said registering device, and means at a substation for controlling the actuation of one of said relays.

4. A system of the character described having a central station and a plurality of substations each united with the central station by a line circuit, means at the central station for registering a code call, means at each substation for actuating said call receiving means, a line signal at the central station, a relay associated with the line circuit to partially control said line signal, a second relay controllable by said first relay to also control said line signal, said second relay having means to establish a locking circuit therethrough, a jack for said line circuit and means associated with said jack to control the circuit through said second relay, means whereby said first relay controls said registering device, said first relay having two coils differentially wound, and means at a substation for controlling the actuation of one of said relays.

5. A system of the character described having a central station and substation united by a line circuit, means at the central station for registering a code call, means at the substation for actuating said call receiving means, a telephone set including a switch-hook at the substation, a locking relay at the substation responsive to signaling current transmitted from the central station, a signal at the substation, a local operating circuit for said signal under the control of said relay, and an electromagnet at the substation operated responsive to the switch-hook at the substation when answering the call for restoring the locking relay thereby opening the local operating circuit of said signal.

[Claims 6 not printed in the Gazette.]

1,226,158. PROPORTIONAL GAS-METER. THOMAS B. WYLIE, Pittsburgh, Pa. Filed Mar. 29, 1916. Serial No. 87,611. (Cl. 73—68.)



1. In a proportional meter, a tally meter, a controlling chamber having a constant area open proportional flow channel leading to a conduit containing the flowing fluid to be measured, and also having an outlet connection to the tally meter and a return connection from the tally meter, a valve controlling the said outlet, and two pressure plates in said chamber connected directly to the stem of said valve, both of said plates being exposed on one side to the intermediate pressure in said chamber, and one pressure plate being exposed on its other side to the high pressure, and the other pressure plate being exposed on its other side to the low or static pressure, substantially as described.

2. In a proportional meter, the combination with a flow conduit and a tally meter, of a control chamber exterior of said conduit and having a constantly open constant area proportional flow connection with the conduit and also having a connection with opposite sides of the tally meter, a valve controlling the flow from the control chamber to the tally meter, and two pressure plates in the control chamber and operatively connected to the valve, both of said plates being exposed to the intermediate pressure at one side, and one plate being exposed to the high pressure on its opposite side, and the other pressure plate being exposed to the low or static pressure at its opposite side, substantially as described.

3. In apparatus of the character described, the combination with a conduit having a constantly full-open flow passage for the unmeasured gas, a controlling chamber having a constantly full-open proportional flow passage connection with said conduit, a tally meter connected to the controlling chamber, a valve controlling the flow from the said chamber to the tally meter, and a pressure plate system connected to said valve and con-

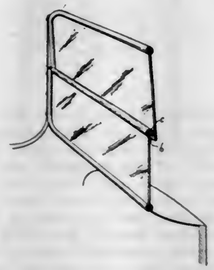
trolling its extent of opening in accordance with changes in the flow in said conduit, substantially as described.

4. A proportional meter comprising in combination with a main flow channel a tally meter, a controlling chamber having a connection with opposite sides of the tally meter and having a valve controlling the outlet connection from the chamber to said tally meter, two pressure plates in said chamber connected to said valve, a connection leading from the main flow channel into said chamber between said plates and terminating in a Pitot tube in said channel, and another Pitot tube in said channel connected with a space in said chamber behind one of said plates, and a static or low pressure connection leading from behind the other plate into the main flow channel, substantially as described.

5. In a proportional meter, the combination with a flow conduit and a tally meter, of a control chamber exterior of said conduit and having a constantly open constant area proportional flow connection with the conduit and also having a connection with the inlet side of the tally meter and a static or low pressure connection with said flow conduit, a valve controlling the flow from the control chamber to the tally meter, and two pressure plates in the control chamber and operatively connected to the valve, both of said plates being exposed to the intermediate pressure at one side, and one plate being exposed to the high pressure at one side, and the other plate being exposed at its opposite side to the low or static pressure, together with means whereby the area of the proportional flow channel while normally constant may be changed at will, substantially as described.

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1,226,159. WEATHER-STRIP. JOHN T. ALLMAND, Detroit, Mich., assignor, by mesne assignments, to Fisher Body Corporation, a Corporation of New York. Filed June 8. 1916. Serial No. 102,408. (Cl. 21—148.)



1. A weather strip for lapped windshield panels constructed of rubber or distortable material and having a W cross section forming a channel adapted to fit over the edge of one panel, and a sealing flange to engage the other panel of windshields having lapping panel edges.

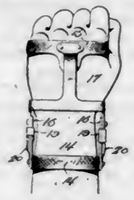
2. A weather strip for lapped windshield panels, comprising a strip constructed of rubber or other distortable material and having two channels side by side, one channel a constrictable channel by reason of the tendency of its walls inward and the other channel an expansible channel by reason of the tendency of its walls outward, the constrictable channel serving to fit over one edge of one windshield panel to cause the strip to cling thereto and the outside wall of the expansible channel serving as a sealing strip thrusting against the other windshield panel.

3. The combination with a windshield having panels whose meeting edges lap, of a rubber or other distortable material strip of roughly inverted W shape in which the walls of one channel tend together and the walls of the other channel tend to part, the first-mentioned channel being adapted to fit over the edge of one panel so as to secure the device thereto removably and the walls of the other channel tending to spread to bring the outside wall against the lapping panel for the purpose of excluding the weather.

[Claim 4 not printed in the Gazette.]

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1,226,160. ATHLETIC BRACE FOR LIMBS. LOUIS ALLIS, Milwaukee, Wis. Filed Mar. 28, 1916. Serial No. 87,208. (Cl. 128—52.)



1. A limb brace comprising a pair of encircling members adapted to be disposed one on each side of the joint of a limb, a pair of pivotally connected links, one being rigidly secured to each member, the pivoted end of one link being extended and adapted to engage the other, a locking loop of a cross sectional size and shape similar to the limb and slidable over the extended end of one and the adjacent portion of the other, and means for positively holding the loop against shifting on the links.

3. A limb brace comprising a pair of encircling members adapted to be disposed one on each side of a joint of a limb, a pair of pivotally connected links, one being rigidly secured to each member, the pivoted end of one link being extended and adapted to engage the other, a leaf spring fixed to said other link adjacent its connection with one of the members and adapted to extend longitudinally of the links, the free end of the spring being adjacent the end of said extended portion when the links are disposed longitudinally, and a locking loop slidable over said extended portion and the adjacent part of the other link, said loop being engaged by said spring and held against shifting on said links.

[Claim 2 not printed in the Gazette.]

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1,226,161. CONNECTOR. STANLEY ANTHONY, Boston, Mass. Filed Sept. 24, 1913. Serial No. 791,669. (Cl. 173—328.)



1. A connector for electrically and mechanically connecting conductors comprising two terminal members, each having a contact element adapted to engage that of the other member, a locking element extending from the end of one member and located entirely within the peripheral outline thereof, a yieldable coöperating locking element carried by the other member and positioned to engage automatically with the first-named locking element when the two terminal members are brought into operative position relative to each other, said locking elements being separate from the contact element and the engaging portions thereof being shaped to lock the terminal members together positively.

[Claims 2 to 11 not printed in the Gazette.]

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1,226,162. MECHANICAL BAIT-CASTING FISHING-ROD. FREDERIC ATTULA, Chicago, Ill. Filed Mar. 8, 1917. Serial No. 153,500. (Cl. 43—16.)

1. A mechanical bait casting instrument, comprising a tubular handle, the upper end of said handle being flattened to afford a head having parallel walls, a lever pivoted in said head, said lever having a short arm provided with a pin, and a long arm bored at its end, there being on said lever a laterally projecting arm, a dog pivoted in said head, said dog having two members, there being a series of notches in the edge of one of said members, a bell crank pivotally mounted in said head, one arm of said bell crank bearing against the other member of said dog, and a tensioned spring in said handle, one end of said spring being connected to the aforementioned pin, the other end of said spring being connected to the lower end of said tubular handle.

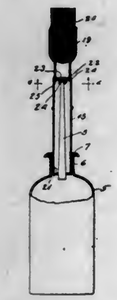


2. In combination with an instrument of the nature described in claim 1, of a rod removably connected to said instrument, said rod having at one end a fork to engage bait to be cast by said instrument, one member of said fork being resilient.

3. The combination, with an instrument of the nature set forth in claim 1, of means whereby the trigger in the instrument by which the bait casting mechanism is liberated, may be locked when in operative position to prevent accidental discharge of the bait.

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1,226,163. FOUNTAIN-BRUSH. JOHN AULD, Chicago, Ill. Filed July 17, 1916. Serial No. 109,768. (Cl. 15—51.)



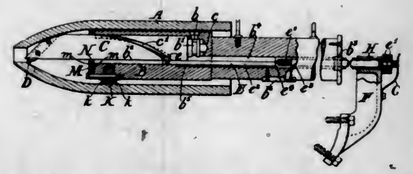
1. The combination with a fluid container having an outlet spout, of a brush holder comprising a tube adapted to receive the spout and to be secured at its inner end to the container, bristles at the outer end of said tube, a stopper within the tube engaging against the spout outlet, and a by-pass around said stopper for the flow of fluid to the bristles.

2. In a device of the class described, the combination of a fluid container having a neck, a spout extending at its lower end through said neck and open thereat to the container, a tubular holder adapted at its lower end for insertion in said neck, bristles at the upper end of said holder, and a stopper within the holder held against the spout outlet when the holder is fully inserted in said neck and released from the spout outlet when the holder is partially withdrawn from the neck, there being passageway around the stopper whereby the container contents will flow through the spout and through the holder to the bristles when the stopper is withdrawn from the spout.

3. In a device of the class described, the combination of a fluid container having a threaded neck, a cup-shaped plug having screw-threaded engagement in said neck, a spout secured to the bottom of said plug and extending outwardly therefrom, a tubular brush holder having threaded engagement at its inner end in said plug and having bristles at its outer end, and a stopper secured in said holder and normally engaging with the spout end, partial unscrewing of said holder causing the stopper to be withdrawn from the spout whereby the container contents may flow to the brush holder, there being by-passageway around said stopper whereby fluid may flow to the outer end of the brush holder and to the bristles.

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1,226,164. APPLIANCE FOR BORING METALS OR OTHER HARD SUBSTANCES. HERBERT AUSTIN, Bromsgrove, England. Filed Nov. 21, 1916. Serial No. 132,647. (Cl. 77—58.)



1. A boring appliance for boring a cavity of varying diameter in metal or other hard substance, comprising an endwise traversable substantially cylindrical holder provided in its forward portion with a longitudinal tubular socket parallel with and eccentric to the axis of the cavity to be bored, a cutter bar turnable in said socket, projecting in front of said holder and carrying a cutter in its projecting portion, and means for automatically turning said cutter bar continuously within said socket while a cavity is being bored to a continually varying diameter to shift said cutter toward or from the axis of the cavity and change the diameter of traverse of said cutter.

2. The combination, in an appliance for boring in metal or other hard substance a length of cavity which is required to vary in diameter, of a holder which travels endwise, a bar carried by said holder eccentrically of the cavity to be bored and provided with a groove within said bar, a cutter carried by said bar, and a key which is carried by said holder and engages with said groove and is stationary in relation to the holder, and said groove being shaped to insure that its interaction with the key will turn the bar as required for variations in the diameter of said length of cavity.

5. The combination, in an appliance for boring metal or other hard substance in which a cavity to be bored is parallel for a portion of its length and varies in diameter for another portion of its length, of a holder which travels endwise, a bar carried by said holder eccentrically of the cavity to be bored and provided with a groove within such bar, a cutter carried by said bar, a rod which is slidable in relation to the holder, a key which is carried by said rod and engages with said groove, said rod and key traveling with said holder while the cutter is boring said parallel portion of the cavity, a shoulder of said rod which, when said holder has reached the point of its travel when the bore of varying diameter is to commence, is against a fixed abutment and arrests the travel of said rod, and said groove being of such shape as to insure that its in-

teraction with the key, when the movement of the key has been arrested, will turn the bar as required for variations in the diameter of the cavity.

[Claims 3, 4, and 6 not printed in the Gazette.]

1,226,165. LUBRICANT. CYRUS F. AXTELL, New York, N. Y., assignor of one-half to Otto P. Amend, New York, N. Y. Filed July 19, 1916. Serial No. 110,064. (Cl. 87—9.)

1. A new composition of matter comprising a solution of calcium chlorid and a solid lubricant.

2. A new composition of matter comprising a solution of calcium chlorid, a solid lubricant and alcohol.

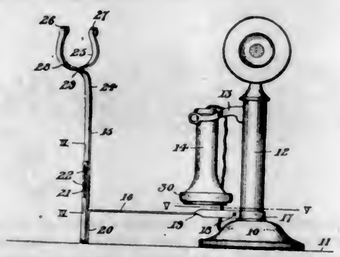
3. A new composition of matter comprising a solution of calcium chlorid and graphite.

4. A new composition of matter comprising a solution of calcium chlorid, graphite, and alcohol.

5. A lubricant capable of use in low temperature comprising about a thirty per cent. solution of calcium chlorid, and a solid lubricant in about the proportion specified.

[Claims 6 and 7 not printed in the Gazette.]

1,226,166. RECEIVER-SUPPORT FOR TELEPHONES. BERNARD BADANES, New York, N. Y. Filed July 15, 1916. Serial No. 109,457. (Cl. 179—148.)



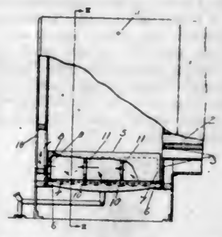
A receiver supporting attachment for telephones comprising two substantially equal length slightly resilient metallic strips, one of the same being adapted for horizontal positioning while in use having a half turn with one end portion bent in the form of a substantially circular clamp, a retaining bolt for the said clamp, the opposite end portion of the said strip having a right-angular bend therein, the strip being bent upon itself forming a foot of double thickness of the material, the adjacent free end of the horizontal strip having a longitudinal slot, the other of said strips being adapted for vertical arrangement having one end slidably overlapping the said slot, retaining screws positioned through the said slot in engagement with the said vertical strip, the said vertical strip having its free end portion bent in the form of a U-shaped socket centrally projecting from the adjacent portion of the strip, the material of the strip being bent back upon itself forming a loop at said bending point arranged at one side of the socket, the free end of the vertical strip being of looped formation at the opposite side of the said socket, the said vertical strip having a sidewise bend substantially centrally at the bottom of said socket and an edge-wise bend at a point slightly spaced therefrom.

1,226,167. FURNACE. FRANK E. BALDEN, Portland, Oreg. Filed Nov. 1, 1916. Serial No. 128,871. (Cl. 110—75.)

1. As a new article of manufacture, a super-heater comprising an open bottomed member provided with imperforate side and rear walls, and with a perforated front wall.

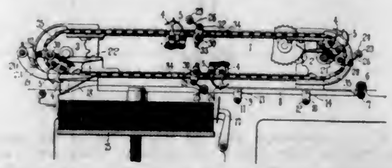
2. As a new article of manufacture, a super-heater comprising an open bottomed member provided with imperforate side and rear walls, and with perforated front and partition walls.

3. The combination with a furnace or the like and its grate, of a super-heater having an open bottom adapted



to rest upon the grate, and having imperforate side and rear walls, and a perforated front wall.

1,226,168. FLAT-SHEET-DELIVERY MECHANISM FOR PRINTING-PRESSES. HOWARD M. BARBER, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 21, 1915. Serial No. 51,788. (Cl. 101—31.)



1. A flat sheet delivery mechanism for printing presses including an endless delivery carrier, a sheet receiving table, a stationary sheet support, and means on the carrier coacting with said support for preventing the sagging and falling ahead of the sheet as it is being delivered onto the sheet receiving table.

2. A flat sheet delivery mechanism for printing presses including an endless delivery carrier, a stationary sheet support, and adjustable means on the carrier coacting with said support for preventing the sagging and falling ahead of the sheet as it is being delivered.

3. A flat sheet delivery mechanism for printing presses including an endless delivery carrier, a stationary sheet support, and yielding means on the carrier coacting with said support for preventing the sagging and falling ahead of the sheet as it is being delivered.

4. A flat sheet delivery mechanism for printing presses including an endless delivery carrier, a stationary sheet support, and adjustable yielding means on the carrier coacting with said support for preventing the sagging and falling ahead of the sheet as it is being delivered.

5. A flat sheet delivery mechanism for printing presses including an endless delivery carrier arranged to travel in partly circular and partly linear paths and having grippers for engaging the head end of the sheet and means on the carrier for deflecting the tail end of the sheet as its head end is released by said grippers.

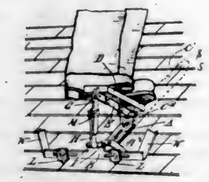
[Claims 6 to 25 not printed in the Gazette.]

1,226,169. ROOF-JACK. MARTIN BAUER, Cleveland, Ohio. Filed Dec. 21, 1914. Serial No. 878,437. (Cl. 20—86.)

1. In a roof jack, in combination, a T-shaped base plate, a thin flexible blade adjustably secured to the center arm of said base plate, said flexible blade having a hook in its edge, pointed dogs laterally adjustable upon the cross arm of said base plate, a plank supporting member pivoted in the outer end of said base plate, and a longitudinally adjustable arm having one end pivotally attached to said



cross arm and the other end to said plank supporting member.

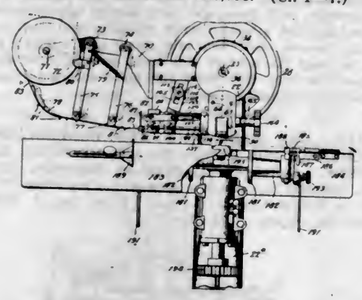


2. In a roof jack, in combination, a T-shaped base plate, a thin blade longitudinally adjustable upon the center arm of said base plate and having an inclined slot in one edge forming a retaining hook, laterally movable dogs adjustably secured in the cross arm of said base plate, a plank supporting member pivoted in the outer extremity of the long arm of said base plate, and a divided arm connecting said cross bar and outer end of said plank supporting member, engaging racks upon the portions of said divided arm and means for rigidly engaging said racks with each other.

3. In a roof jack, a T-shaped bed plate, a thin metal blade longitudinally adjustable upon the long arm of said bed plate, said blade provided with a nail engaging means, means for securing said blade and arm rigidly together, a plank supporting member pivoted in the long arm of said bed plate, and means for adjustably supporting the outer end of said plank supporting member upon said base plate.

4. In a roof jack, in combination, a T-shaped base plate, a thin metal blade longitudinally adjustable upon the long arm, means for securing the same in selected positions, means upon said blade for engaging a nail, a plank supporting member pivotally connected with said bed plate, means for adjustably supporting the front extremity of said plank supporting member upon said bed plate, and laterally movable gripping dogs adjustably secured in the cross bar of said bed plate.

1,226,170. WIRE-STITCHING MACHINE. GOTTFRIED P. BAUMANN, Chicago, Ill., assignor to Latham Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 27, 1914. Serial No. 858,796. (Cl. 1—7.)



1. In a machine of the class described, the combination with staple forming and driving mechanism, of an oscillating lever, means operated by said lever for feeding the wire, a cutter-block, means for shifting the position of said cutter-block relatively to said staple forming and driving mechanism, and means connected with said cutter-block shifting means and operable thereby for changing the effective length of said oscillating lever.

2. In a machine of the class described, the combination with staple forming and driving mechanism, of an oscillating lever, a pivot intermediate the length of said lever, means for adjusting said pivot axially of said lever, driving means for one end of said lever, and a wire-feeding device operatively connected to the other end of said lever.

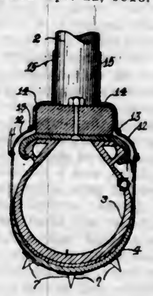
3. In a machine of the class described, the combination with staple forming and driving mechanism, of an oscillating lever, means for driving said lever, a pivot intermediate the length of said lever, means for adjusting said pivot axially of the lever, a wire-feeding device connected to and operated by said lever, a wire-cutter, and connections between said wire-cutter and the pivot of said lever, for simultaneously adjusting the two.

4. In a machine of the class described, the combination with staple forming and driving mechanism, of an oscillating lever, means for driving one end of said lever, a pivot intermediate the length of said lever and longitudinally adjustable therein, a wire-feeding mechanism operated by the other end of said lever, a cutter-block, means for shifting said cutter-block to alter its position with relation to said staple forming and driving mechanism, and connections between said cutter-block and said pivot for causing simultaneous movement of the two.

5. In a machine of the class described, a head-plate, staple forming and driving mechanism mounted on said head-plate, an oscillating lever mounted on said head-plate, a pivot for said lever intermediate its length, means for adjusting the pivot in the head-plate axially of the lever, a cutter-block mounted on said head-plate, and spaced from said staple forming and driving mechanism, means for shifting said cutter-block on said head-plate to alter its relation to said forming and driving mechanism, and mechanical connections between said cutter-block and the pivot of said lever for causing simultaneous movement of the two.

[Claims 6 to 18 not printed in the Gazette.]

1,226,171. ANTISKIDDING DEVICE. JAMES F. BAXA, Chicago, Ill. Filed Apr. 12, 1916. Serial No. 90,552. (Cl. 152—14.)

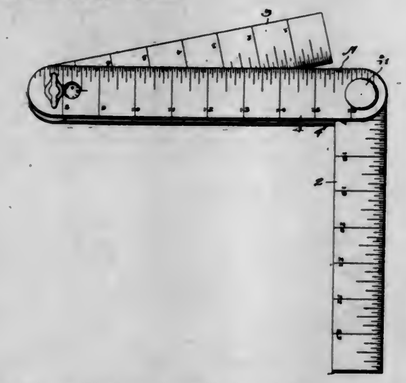


In a device of the class described, a U-shaped section, rim plates hingedly connected thereto, a curved felly plate connected to each of said plates, and clamping means integral with said felly plates and adapted to be secured removably to a spoke of a wheel to hold the device in position.

1,226,172. COMBINED CARPENTER'S SQUARE AND MITER-GAGE. CLARENCE FRANKLIN BENJAMIN, Milford, Conn. Filed Apr. 17, 1916. Serial No. 91,532. (Cl. 33—120.)

1. In an instrument of the character described, a body consisting of spaced plates and a sleeve interposed therebetween, a blade disposed loosely on the sleeve between the body plates for swinging movements, a circular series of teeth provided on the blade about the sleeve, the opposing face of the adjacent body plate being provided with a like series of notches to receive the teeth, a button having spaced pins slidable through the body plate specified and adapted to engage the blade at points within the circular series of teeth, and a bowed spring interposed between the other body plate and the blade to hold normally the teeth in engagement with the body notches.

2. In an instrument of the character described, a body consisting of spaced plates and a sleeve interposed therebetween, a blade disposed loosely on the sleeve between the body plates for swinging movements, a circular series of teeth provided on the blade about the sleeve, the opposing face of the adjacent body plate being provided with a like series of notches to receive the teeth, a button having spaced pins slidable through the body plate specified and adapted to engage the blade at points within the circular series of teeth, and a spring interposed between the other body plate and the blade, the apices of the teeth being flattened.



3. In an instrument of the character described, a body plate having an annular series of notches on one face and an opening within the series, a blade having pivotal connection with the body plate, a tooth on the blade adapted for meshing with the notches, resilient means normally holding the tooth in mesh with a notch, and means operable through the opening of the body plate for engaging with the blade to unseat the tooth from the notch.

4. In an instrument of the character described, a pair of spaced plates one of which is provided on its inner face with an annular series of notches, a pivoted toothed blade between said plates, and a rotatable screw threadedly engaging the notched plate while the other plate and the blade are freely pivoted around said screw, whereby the operation of the latter will effect the engagement and disengagement of the toothed blade and notched plate.

5. In an instrument of the character described, a body plate, a pivot pin therefor, said plate having a notch, a blade pivoted on the pin and having a tooth adapted to engage in the plate notch, said tooth being spaced radially from the pivot pin, and means engaging the blade between the path of the tooth and the pivot pin for disengaging the tooth from the plate notch.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,173. COMBINED CARPENTER'S SQUARE AND MITER-GAGE. CLARENCE F. BENJAMIN, Milford, Conn. Filed Oct. 21, 1916. Serial No. 126,948. (Cl. 33—120.)

1. In an instrument of the character described, a main body plate, a blade pivoted to one end of said plate, said pivotal connection consisting of a headed stud countersunk within said plate and having its end internally threaded, a headed screw engaged in the threaded end of the stud, and a bowed spring interposed between the screw head and the adjacent blade.

2. In an instrument of the character described, a main body plate, a blade pivoted to one end of said plate, said pivotal connection consisting of a headed stud countersunk within said plate and having its end internally threaded, a headed screw engaged in the threaded end of the stud, a bowed spring interposed between the screw head and the adjacent blade, and a second blade pivoted to the opposite end of the opposing face of said plate and adapted in closed position to engage over the head of the stud.



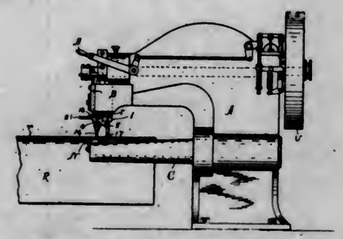
3. In an instrument of the character described, a main body plate, a blade pivoted to one end of said plate, said pivotal connection consisting of a headed stud countersunk within said plate and having its end internally threaded, a headed screw engaged in the threaded end of the stud, a bowed spring interposed between the screw head and the adjacent blade, a second blade pivoted to the opposite end of the opposing face of said plate and adapted in closed position to engage over the head of the stud, and means for locking the free end of the first blade to the main blade and constituting a pivotal connection between the latter and the second blade.

4. In an instrument of the character described, a main body plate having foldable blades pivoted to the opposite faces of said plate and at opposite ends thereof, the pivotal point of one of said blades consisting of a stud and an engaging screw having a head, said blade and plate having on their contacting faces circular series of concentric spaced interengaging teeth and notches, and a spring element interposed between said head and blade to effect the resilient engagement of said teeth and notches.

5. In an instrument of the character described, a main body plate, a blade, a stud countersunk within said plate and extending freely through said blade and acting as a pivot therefor, said blade and plate having interengaging teeth and notches, a headed screw engaging said stud, and a spring element encircling said screw and confined between the head thereof and said blade, whereby a friction is imposed between said blade and plate with said teeth and notches resiliently engaged.

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1,226,174. GAG OPERATING AND CONTROLLING MECHANISM FOR PUNCHING AND RIVETING MACHINES. LAWRENCE H. BERTSCH, Cambridge City, Ind., assignor to Bertsch & Company, Cambridge City, Ind., a Corporation of Indiana. Filed Jan. 3, 1916. Serial No. 69,895. (Cl. 78—51.)



1. In a punching and riveting machine having a plunger mounted in the head thereof, the combination of a block member secured to said plunger, a pair of tool members carried in said block member, a gag member mounted on said block member and adapted to alternately engage said tool members, a rod extending transversely through said gag member, a rack attached to and extending laterally from said block member, a handle bar adapted for engagement in said rack, a pair of arms connecting said handle bar and said rod whereby the gag member is given a reciprocatory motion, and means, actuated by said rod member, for raising and locking the tool members in operative position.

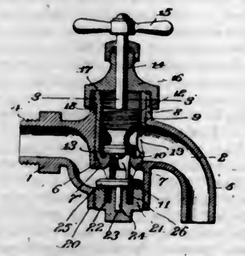
2. In a punching and riveting machine having a plunger mounted in the head thereof, the combination of a block member secured to said plunger and having transverse grooves formed at either end thereof, a pair of tool members, having elongated slots formed therein, of rods mounted in said grooves of the block member and adapted for engagement in the slots in said tool members, a gag member adapted to alternately force said tool members into operative position, a pair of cam members mounted in axial alinement at opposite sides of said block member, a plurality of roller bearings mounted on said rods and adapted for engagement with said cam members, and means for the dual operation of said gag member and said cam members, and for the locking of one of said tool members in an inoperative position.

3. In a punching and riveting machine having a plunger mounted in the head thereof, the combination of a tool support secured to said plunger, a pair of tool members mounted in said tool support, a gag member mounted on said tool support, means for the operation of said gag member whereby one of said tool members is placed in operative position, a pair of bell-shaped cam-members mounted for oscillatory movement at either side of said tool support and actuated by the first mentioned means, a rod connecting said cam-members and said gag member, means for alternately raising said tool members by said cam-members simultaneously with the operation of said gag member, and means for locking the raised tool member in an inoperative position.

4. In a punching and riveting machine having a plunger mounted in the head thereof, the combination of a block member secured to said plunger, a pair of tool members carried by said block member, a gag member mounted on said block member, means for the operation of said gag member whereby one of said tool members is placed in operative position, a pair of cam-members mounted on said block member and actuated by the first mentioned means whereby said tool members are alternately raised into inoperative position, and toes formed at the lower corners of said cam-members for locking the raised tool member in inoperative position.

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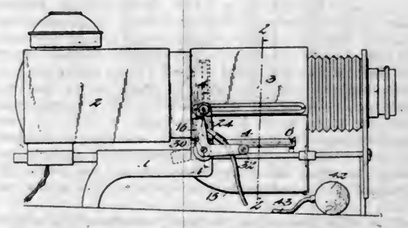
1,226,175. FAUCET. FRANCIS J. BIBLEHEISER, Jr., Baltimore, Md. Filed July 25, 1914. Serial No. 853,211. (Cl. 137—4.)



In a faucet, in combination a body having a fluid passage therethrough and formed with a connecting nipple at one end of said fluid passage, said body being formed on its inner surface across said passage with a vertical wall and a horizontal wall, the latter being spaced above the bottom of the faucet and having an opening the lower side of the wall surrounding the opening forming a conical valve seat, and the upper side of said wall forming a conical seat disposed in an opposite direction to the first seat, a nipple on said body coaxial with said opening, a cylindrical cage mounted in said nipple and engaging said vertical wall, said cage being held against rotation in said nipple, and having a plurality of depending fingers having inclined edges engaging against the second named seat but projecting below the first named seat, said cage also having a port for communication with said fluid passage, a valve adapted to close said port, a plug threaded into the bottom of said body opposite the lower seat and having a vertical bore, a rod slidable in said bore, a valve carried by said rod, a spring in said plug pressing the last named valve against said fingers, the latter holding said valve spaced from the first named valve seat, and a bonnet engaging said last named nipple and also said cage to hold said fingers against the second named seat, the last named valve having a conical surface urged by said spring to engage said first named seat when said cage is removed.

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1,226,176. SLIDE-SHIFTING DEVICE FOR PROJECTION APPARATUS. CHRISTOPHER H. BIERBAUM, Buffalo, N. Y. Filed Aug. 19, 1916. Serial No. 115,850. (Cl. 88—25.)



1. In a projection apparatus, the combination of a slide-carrier, motive means for moving the carrier from one position to another to change the slides, means under the control of the attendant for setting said motive means ready for action, and means under the control of the lecturer for throwing said motive means into action to move the carrier.

2. In a projection apparatus, the combination of a slide-carrier, motive means for moving the carrier from one position to another to change the slides, means under the control of the attendant for rendering said motive means effective, means for holding the carrier against movement by said motive means, and means under the control of the lecturer for releasing said holding means.

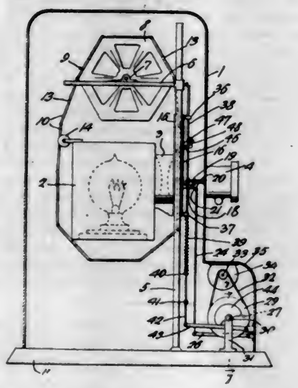
3. In a projection apparatus, the combination of a slide carrier, means for automatically moving the carrier from one position to another to change the slides, means for holding the carrier against movement by said automatic means, and means under the control of the lecturer for releasing said holding means to permit said automatic means to move the carrier.

4. In a projection apparatus, the combination of a slide carrier, means for automatically moving the carrier from one position to another to change the slides, means under the control of the attendant for rendering said automatic means effective, means for holding the carrier against movement by said automatic means, and means remote from the apparatus for releasing said holding means.

5. In a projection apparatus, the combination of a slide carrier, means for locking the carrier against movement from one position to another, a spring for moving the carrier to change the slides, means under the control of the attendant for tensioning said spring, and means under the control of the lecturer for releasing said locking means.

[Claims 6 to 13 not printed in the Gazette.]

1,226,177. SLIDE-PRESENTING MACHINE. DONALD UNDERWOOD BILLINGS, Topeka, Kans. Filed Aug. 30, 1916. Serial No. 117,740. (Cl. 88—28.)



1. A slide presenting machine embodying an endless chain mounted for circuitous movement and comprising hingedly connected slide-carrying frames having outstanding lugs at their side edges, a pair of plates between which the chain is movable, stops carried by one plate and normally projected into the path of said lugs to stop the chain, one plate having slots, slidable rods mounted adjacent said slots, pawls pivotally connected with the rods and working in said slots to engage said lugs, and means for reciprocating said rods to intermittently advance the chain, the stops being moved out of the way when the aforesaid means is brought into operation to advance the chain.

2. A slide presenting machine embodying an endless chain mounted for circuitous movement and comprising hingedly connected slide-carrying frames having lugs, a reciprocatory member, a pawl carried by said member engageable with said lugs, and means for deflecting said pawl away from a lug when the pawl passes said lug during the return movement thereof.

3. A slide presenting machine embodying an endless chain mounted for circuitous movement and comprising hingedly connected slide-carrying frames having lugs, a reciprocatory member, a pawl carried by said member engageable with said lugs, and a deflector for deflecting the pawl away from a lug when the pawl is returned past said lug, said deflector being movable out of the way when the pawl is advanced.

4. A slide presenting machine embodying an endless chain mounted for circuitous movement and comprising hingedly connected slide-carrying frames having lugs, a plate adjacent said chain having a slot, a reciprocatory rod adjacent said plate, a pawl carried by said rod working in said slot and engageable with said lugs, and a deflector pivoted to said plate and extending across said slot to deflect the pawl away from the lug when the pawl is returned past said lug, the deflector being swingable out of the way when the pawl is advanced.

5. A slide presenting machine embodying an endless chain mounted for circuitous movement and comprising hingedly connected slide-carrying frames having outstanding lugs at their side edges, a pair of vertical plates between which the chain is movable downwardly, said plates having light openings, stops carried by one plate and normally projecting into the paths of said lugs to stop the chain, one plate having vertical slots extending upwardly from said stops, vertical reciprocatory rods carried by said plate adjacent said slots, pawls pivoted to said reciprocatory rods and projecting through said slots to engage said lugs, means for reciprocating said reciprocatory rods, the stops being moved out of the way when the reciprocatory rods are started downwardly, and deflectors carried by said plate and normally projecting across said slots to deflect the pawls away from the lugs when the pawls are moved upwardly past said lugs, said deflectors being movable downwardly out of the way.

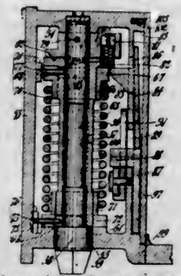
[Claim 6 not printed in the Gazette.]

1,226,178. PROCESS OF PRODUCING GLOSSY THREADS FROM VISCOSE. MARCO BIROLI, Pavia, Italy. Filed Nov. 18, 1916. Serial No. 132,108. (Cl. 18—54.)

1. The process of producing glossy threads from viscose which consists in passing the viscose threads into a bath of sodium bisulfate with the formation of xanthogenate, and then passing the resulting threads into a solution containing an organic acid radical.

2. The process of producing glossy threads from viscose which consists in passing the threads into a bath of sodium bisulfate with the formation of xanthogenate, and then passing the resulting threads into a bath of suitable salts and organic acids to cause the decomposition or fixation of the xanthogenate threads.

1,226,179. SPRING-HINGE. EMIL BOMMER, Brooklyn, N. Y. Filed July 23, 1915, Serial No. 41,470. Renewed Mar. 19, 1917. Serial No. 155,949. (Cl. 16—25.)



3. In a spring hinge of the character described, the combination with a frame mortised in the door, comprising spaced inner and outer walls, spaced upper and lower walls provided with bearings, and oppositely disposed stops at the upper and lower ends of said frame, of a stationary shaft journaled in said bearings, a sleeve on said shaft, rotatable means on the upper and lower ends of said sleeve, a spring disposed between said rotatable means, means on said sleeve adapted to permit movement of one of said rotatable means in one direction with respect thereto, means on said sleeve adapted to permit movement of the other of said rotatable means in the other direction, means on the said rotatable means adapted to be engaged by said oppositely disposed stops of the frame, to rotate one of said rotatable means during one direction of movement of the door, and to rotate the other of said means during the other direction of movement, and releasable means adapted to lock the said sleeve with respect to the said shaft.

4. In a spring hinge of the character described, the combination with a frame mortised in the door, comprising spaced inner and outer walls, spaced upper and lower walls provided with bearings, and oppositely disposed stops at the upper and lower ends of said frame, of a stationary shaft journaled in said bearings, a sleeve on said shaft provided at its upper end with a flanged rim, rotatable means on the upper and lower ends of said sleeve, a spring disposed between the said rotatable means, means on the said sleeve adapted to permit movement of one of said rotatable means in one direction with respect thereto, means on said sleeve adapted to permit movement of the other of said rotatable means in the other direction, means on said rotatable means adapted to be engaged by the said oppositely disposed stops of the frame,



to rotate one of said rotatable means during one direction of movement of the door, and to rotate the other of said means during the other direction of movement, locking means carried by the said shaft provided with means adapted to engage the said flange of the sleeve to lock the said sleeve with respect to the said shaft, and extraneous means adapted to disengage the said means from the said flange to permit independent movement of the sleeve.

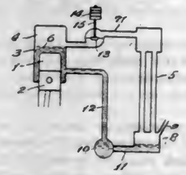
9. In a spring hinge, the combination with a spring actuated door closing member, and means adapted to be actuated to make the same inoperative, of means for actuating the said first-named means, comprising a divided slide plate adapted to be moved to engage the said first-named means.

10. In a spring hinge, the combination with a spring actuated door closing member, and means adapted to be actuated to make the same inoperative, of means for actuating the said first-named means, comprising a divided slide plate, one part thereof having a rocking motion forward upon the other part thereof, and adapted to be moved to engage the said first-named means.

12. In a spring hinge, the combination with a spring actuated door closing member, and means adapted to be actuated to make the same inoperative, of means for actuating the said first-named means, comprising a recessed member, the upper portion of said recess being tapered, a divided slide plate disposed in said recess, the upper portion of said slide plate being tapered to permit a forward rocking movement thereof upon the lower portion of the said slide plate, and adapted to engage the said first-named means.

[Claims 1, 2, 5 to 8, and 11 not printed in the Gazette.]

1,226,180. METHOD OF AND MEANS FOR MAINTAINING INTERNAL-COMBUSTION CHAMBERS AT AN EFFICIENT TEMPERATURE. EDWARD BOUTON, Jr., Los Angeles, Cal. Filed May 18, 1915. Serial No. 28,841. (Cl. 123—178.)



1. The method set forth of maintaining an internal combustion chamber at efficient temperature, consisting in applying to such chamber a vaporizable body of cooling medium, collecting vapors from said medium, condensing said vapors, collecting the condensate in a body having its top surface below the level of said body of cooling medium and returning the products of such condensation to said body of cooling medium.

2. The method set forth of maintaining an internal combustion chamber at efficient temperature, consisting in applying to such chamber a vaporizable body of cooling liquid medium, collecting vapors from said medium, condensing said vapors, collecting the condensate in a body having its top surface below the level of said body of cooling medium and returning the products of such condensation to said body of cooling medium.

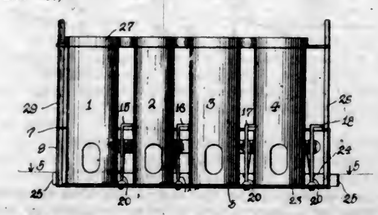
3. The method set forth of maintaining an internal combustion chamber at efficient temperature consisting in applying to such chamber a body of vaporizable cooling medium, maintaining said medium and the vapors or steam therefrom at a pressure in excess of atmospheric pressure, allowing vapors or steam to escape upon undue pressure, condensing the escaping vapors or steam and returning only the products of such condensation to the cooling body.

4. The method set forth of maintaining an internal combustion chamber at efficient temperature consisting in applying to such chamber a body of vaporizable cooling medium, maintaining said medium and the vapors or steam therefrom at a regulated pressure in excess of atmospheric pressure, allowing vapors to escape upon undue pressure, condensing the escaping vapors or steam and returning the products of condensation to the cooling body.

5. The means set forth for maintaining an internal combustion chamber at efficient temperature which comprises in combination with the combustion chamber, means for applying cooling medium to the walls of said chamber, means for collecting vapors or steam from said cooling medium, means for condensing the vapors or steam thus collected, and means for conducting the products of condensation to an isolated surface of condensate thus collected, and means for returning such condensate to the cooling chamber; said condensate returning means operating simultaneously with said collecting, condensing and conducting means.

[Claims 6 to 11 not printed in the Gazette.]

1,226,181. CHANGE-MAKER. MAX C. BRUHN, Chicago, Ill. Filed Dec. 24, 1915. Serial No. 68,550. (Cl. 133—5.)



1. In a device of the class described, a plurality of coin tubes, independently operatable ejecting mechanisms for the coins beneath each one of said tubes comprising a pivoted ejecting ring and a trigger pivoted adjacent thereto, a tail on said trigger slidably engaging a curved slot in said ring to actuate the same, and unitary means adapted to engage behind said trigger for locking all of said mechanisms from operation.

2. In a device of the class described, a plurality of coin tubes, ejecting means for each one thereof disposed in register therebeneath, means pivoted transversely about said ejecting means, a tail portion integral therewith slidably engaging a curved slot in said ejecting means to operate said ejecting means when said pivoted means is depressed, and unitary mechanism adapted to engage behind said tail portions for locking all of said ejecting means from operation.

3. In a device of the class described, a plurality of coin tubes, pivotal ejecting mechanism mounted beneath each one thereof, a stop on each of said mechanisms to limit inward movement thereof into registering position beneath said coin tubes, a trigger pivoted adjacent each of said ejecting mechanisms, and a tail portion on said trigger slidably engaging a curved slot in an ejecting mechanism whereby said ejecting mechanism is operated when said trigger is depressed.

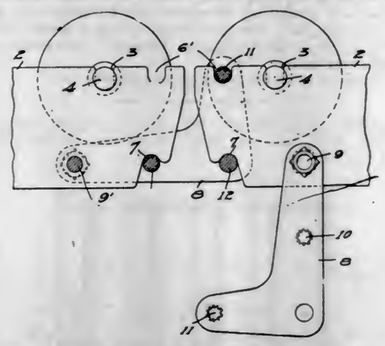
4. In a device of the class described, a plurality of coin tubes, independently operatable slotted ejecting mechanism for the coins beneath each one of said tubes comprising a pivoted ejecting ring, mechanism limiting the movement of said ring to a position only slightly out of register with the coin tubes to permit a coin to fall therefrom, mechanism to limit the inward movement of said ejecting mechanism into position registered beneath said coin tube, a trigger slidable in said slot for operating said ejecting mechanism, and resilient means associated with said trigger to resist depressing movements thereof and acting to restore said trigger and said ejecting mechanisms to normal position after each actuation thereof.

5. In a device of the class described, a plurality of coin tubes, ejecting rings mounted beneath each one thereof, a trigger pivoted adjacent each of said rings, said ejecting rings each having a curved slot therein, a tail por-

tion on said trigger engaging said curved slot acting when said trigger is depressed to transmit the movement to said ejecting ring to swing the same outwardly from beneath the coin tubes to permit a coin to fall therefrom, and resilient means associated with said trigger to return the same and said ejecting ring to normal position after each actuation thereof.

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1,226,182. GRAVITY-CARRIER. HERMAN J. BUCK, Ellwood City, Pa., assignor to Mathews Gravity Carrier Company, Ellwood City, Pa., a Corporation. Filed Feb. 3, 1914. Serial No. 816,141. (Cl. 189—36.)



1. In a gravity carrier, the combination with the abutting rails, of L-shaped links pivotally mounted on each end of each rail, and each rail having means at the end thereof, forming part of the rail itself, for interlocking with the short arm of the link on the adacent end of the abutting rail.

2. In a gravity carrier, the combination with the abutting rails, of L-shaped links pivotally mounted on each end of each rail, each link comprising plates in parallel relation to each other and spaced apart to straddle the ends of each pair of abutting rails, each rail having means, forming part of the rail itself, for interlocking with the short arm of the link on the adjacent end of the abutting rail.

3. In a gravity carrier, the combination with the abutting rails, each provided with notches in its upper and lower edges and near the end thereof, of coupling links pivotally connected on the end of each rail, pins to enter the notches in the lower edge of the rail to which each link is pivoted, each link also having pins to enter the notches in the upper and lower edges of the abutting rail.

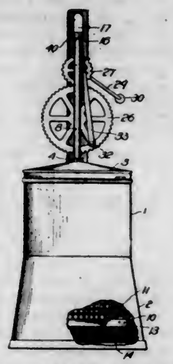
4. In a gravity carrier, the combination with abutting rails provided with notches in their upper and lower edges, of links pivotally mounted near the ends of said abutting rails, pins mounted in said links to enter respectively the notches in the lower edges of the rails to which said links are pivoted and the notches in the upper edges of the abutting rails and removable pins fitting within said links and the notches in the lower edges of the abutting rail.

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1,226,183. WASHING-MACHINE. HARRY BUDD, Independence, Kans. Filed Nov. 13, 1915. Serial No. 61,257. (Cl. 68—19.)

1. A washing machine comprising a housing having a flared lower end, a mesh container located within the housing, a plunger having a rod extending through the top of the container, an adjustable support, gearing mounted on the support, and means connecting the gearing with the plunger rod.

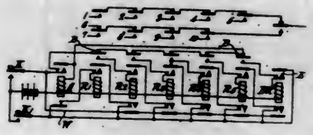
2. A washing machine comprising a housing, a cover on said housing, a standard on said cover having a slotted upper portion, a gear plate having guide members projected into the standard slot, a bolt extending through said slot, a nut for attaching the bolt to the standard, a gear wheel and pinion mounted on the plate and meshing with each other, a pitman on the gear wheel, connec-



tion between the pitman and the plunger rod, and a crank connected with the pinion, for the purpose set forth.

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1,226,184. ELECTRICAL SELECTOR. LEONARD CHARLES BYGRAVE, London, England, assignor to The Relay Automatic Telephone Company, Limited, London, England. Filed Feb. 8, 1916. Serial No. 76,955. (Cl. 177—353.)



1. A selector comprising a series of switching relays, an impulse circuit for energizing the relays in succession and means for deënergizing a previously energized relay on the interruption of the impulse energizing the next relay.

2. A selector comprising a series of switching relays, an impulse circuit for energizing the relays in succession, means whereby each relay on operating prepares the circuit of the next and means whereby each relay on deenergizing extends the impulse circuit to the next relay but one.

3. In an electrical selector, the combination of a starting relay, a plurality of switching relays, an impulse wire, means for transmitting electrical impulses to such wire, a back contact of each switching relay connected to a spring of the next succeeding relay, all such back contacts and springs being normally connected in series with the winding of the starting relay, a front contact of each switching relay being normally connected to the winding of the next succeeding relay, one of the springs of such next relay being adapted to break such connection and being connected to a front contact of the succeeding relay, springs of the relays connected to the impulse wire and adapted to coöperate with the last mentioned contacts and means for restoring the relays to normal.

4. A selector comprising a series of switching relays, an impulse circuit for energizing the relays in succession, means whereby each relay after having been operated is deënergized on the interruption of the impulse energizing the next relay, said means comprising a holding circuit for each relay and means for opening such circuit on the cessation of the impulse succeeding the impulse which caused such relay to be energized.

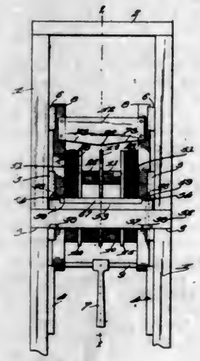
5. A selector comprising a series of switching relays, an impulse circuit for energizing the relays in succession, means whereby each relay, after having been operated, is deënergized on the interruption of the impulse energizing the next relay, said means comprising a holding circuit for each relay and means for branching such circuit to the impulse circuit on the operation of the next relay.

[Claims 6 to 8 not printed in the Gazette.]



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1,226,185. MACHINE FOR MAKING BOX-SPLINTS, VENEERS, SHINGLES, &c. SAMUEL CARLIN, Spokane, Wash., assignor of one-half to Ernest Morin, Spokane, Wash. Filed Dec. 4, 1916. Serial No. 134,921. (Cl. 144—162.)



1. In a splint, veneer or shingle forming machine, a table for supporting the stock to be sliced, a main reciprocating knife for slicing off from the stock a splint of the desired thickness, and knives moving with said main knife for scoring the stock to form a splint cut by said main knife of the desired length during the slicing stroke of said main knife, said scoring knives being movably mounted for retraction on the return stroke on engagement of said scoring knives with the stock, whereby feed pressure may be constantly applied to advance the stock toward said main knife, substantially as described.

8. In a wood scoring device of the class described, a mounting block provided with knife abutment, a knife bar pivoted to said block, a scoring knife secured to said knife bar and adapted for engagement with said abutment to thereby hold said knife to its work during scoring reciprocation, and means normally holding said knife bar in engagement with said abutment, substantially as described.

11. In combination, a reciprocating knife frame provided with a slicing knife, a table for the stock having a fixed base portion, a wood surface portion adjustably mounted on said base portion for movement toward or from said knife, the top of said surface portion having a grid-work of grooves formed therein, and a grid of Babbitt or like soft metal fitting in said grooves and being flush with the top of said surface portion, substantially as described.

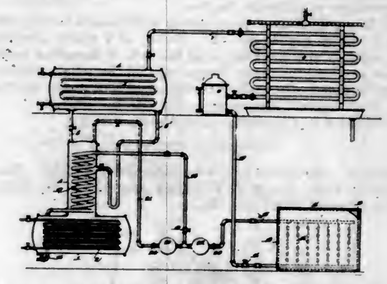
12. In a wood slicing machine, a table for the stock, a reciprocating knife frame movable past said table, and a knife carried by said frame and having a stock side concave from its cutting edge toward its base, substantially as described.

14. In a wood slicing machine, a table for supporting the stock, a slicing knife having a cutting edge and being concave on its stock side from its cutting edge toward its butt, whereby the knife may be reciprocated at a plane at right angles to the surface of the table, substantially as described.

[Claims 2 to 7, 9, 10, 13, and 15 not printed in the Gazette.]

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1,226,186. REFRIGERATING APPARATUS. THOMAS CARRIGAN, New York, N. Y., and ANDREW J. SWEENEY, Bayonne, N. J. Filed May 5, 1916. Serial No. 95,521. (Cl. 62—119.)



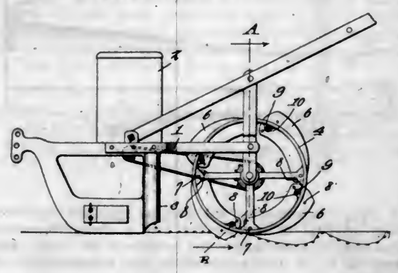
1. In an absorption refrigerating apparatus, the combination with a generator, a condenser and an evaporator, of a mechanical device for effecting a circulation of weak liquor from and strong liquor to the generator, and a mechanical device for imparting sufficient pressure to the gaseous refrigerant from the evaporator as to cause the same to be absorbed by the circulating liquor, without effecting a reduction in temperature thereof, substantially as set forth.

5. In an absorption refrigerating apparatus, the combination with a generator, a condenser and an evaporator, of a weak liquor pipe leading from the generator, a reducing valve therein, a rotary liquid pump having a plurality of stages connected with the weak liquor pipe, a strong liquor pipe leading from the discharge of said pump to the generator and a rotary gas pump for forcing the gaseous refrigerant from the evaporator under sufficient pressure as to be absorbed by the low pressure weak liquor, without effecting a reduction in temperature thereof, substantially as and for the purposes set forth.

[Claims 2 to 4 not printed in the Gazette.]

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1,226,187. PLANTER. EUGENE MACON COLE and ELISHA WORTH COLE, Charlotte, N. C. Filed June 27, 1916. Serial No. 106,196. (Cl. 111—6.)



1. In a planter, the combination with means for depositing a row of seeds upon the ground, of means for depressing the seeds to different depths below the surface of the ground.

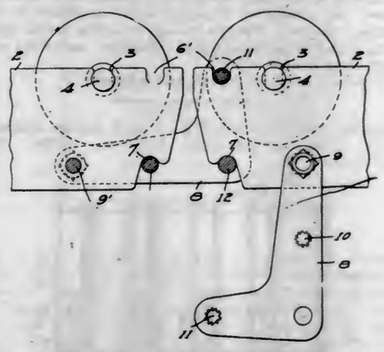
2. In a planter, the combination with means for depositing a row of seeds upon the ground, of separate means for successively engaging the row of seeds to depress the seeds to different depths below the surface of the ground.

3. In a planter, the combination with means for depositing a row of seeds upon the ground, of means for moving along the row of seeds to form a series of depressions of varying depths.

tion on said trigger engaging said curved slot acting when said trigger is depressed to transmit the movement to said ejecting ring to swing the same outwardly from beneath the coin tubes to permit a coin to fall therefrom, and resilient means associated with said trigger to return the same and said ejecting ring to normal position after each actuation thereof.

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1,226,182. GRAVITY-CARRIER. HERMAN J. BUCK, Ellwood City, Pa., assignor to Mathews Gravity Carrier Company, Ellwood City, Pa., a Corporation. Filed Feb. 3, 1914. Serial No. 816,141. (Cl. 189—36.)



1. In a gravity carrier, the combination with the abutting rails, of L-shaped links pivotally mounted on each end of each rail, and each rail having means at the end thereof, forming part of the rail itself, for interlocking with the short arm of the link on the adacent end of the abutting rail.

2. In a gravity carrier, the combination with the abutting rails, of L-shaped links pivotally mounted on each end of each rail, each link comprising plates in parallel relation to each other and spaced apart to straddle the ends of each pair of abutting rails, each rail having means, forming part of the rail itself, for interlocking with the short arm of the link on the adjacent end of the abutting rail.

3. In a gravity carrier, the combination with the abutting rails, each provided with notches in its upper and lower edges and near the end thereof, of coupling links pivotally connected on the end of each rail, pins to enter the notches in the lower edge of the rail to which each link is pivoted, each link also having pins to enter the notches in the upper and lower edges of the abutting rail.

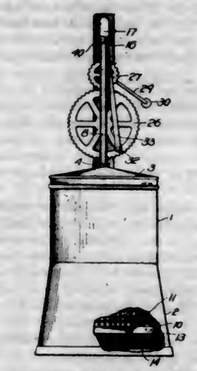
4. In a gravity carrier, the combination with abutting rails provided with notches in their upper and lower edges, of links pivotally mounted near the ends of said abutting rails, pins mounted in said links to enter respectively the notches in the lower edges of the rails to which said links are pivoted and the notches in the upper edges of the abutting rails and removable pins fitting within said links and the notches in the lower edges of the abutting rail.

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1,226,183. WASHING-MACHINE. HARRY BUDD, Independence, Kans. Filed Nov. 13, 1915. Serial No. 61,257. (Cl. 68—19.)

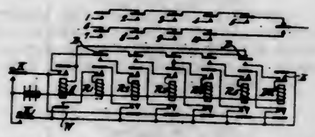
1. A washing machine comprising a housing having a flared lower end, a mesh container located within the housing, a plunger having a rod extending through the top of the container, an adjustable support, gearing mounted on the support, and means connecting the gearing with the plunger rod.

2. A washing machine comprising a housing, a cover on said housing, a standard on said cover having a slotted upper portion, a gear plate having guide members projected into the standard slot, a bolt extending through said slot, a nut for attaching the bolt to the standard, a gear wheel and pinion mounted on the plate and meshing with each other, a pitman on the gear wheel, connection between the pitman and the plunger rod, and a crank connected with the pinion, for the purpose set forth.



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1,226,184. ELECTRICAL SELECTOR. LEONARD CHARLES BYGRAVE, London, England, assignor to The Relay Automatic Telephone Company, Limited, London, England. Filed Feb. 8, 1916. Serial No. 76,955. (Cl. 177—353.)



1. A selector comprising a series of switching relays, an impulse circuit for energizing the relays in succession and means for deënergizing a previously energized relay on the interruption of the impulse energizing the next relay.

2. A selector comprising a series of switching relays, an impulse circuit for energizing the relays in succession, means whereby each relay on operating prepares the circuit of the next and means whereby each relay on deenergizing extends the impulse circuit to the next relay but one.

3. In an electrical selector, the combination of a starting relay, a plurality of switching relays, an impulse wire, means for transmitting electrical impulses to such wire, a back contact of each switching relay connected to a spring of the next succeeding relay, all such back contacts and springs being normally connected in series with the winding of the starting relay, a front contact of each switching relay being normally connected to the winding of the next succeeding relay, one of the springs of such next relay being adapted to break such connection and being connected to a front contact of the succeeding relay, springs of the relays connected to the impulse wire and adapted to coöperate with the last mentioned contacts and means for restoring the relays to normal.

4. A selector comprising a series of switching relays, an impulse circuit for energizing the relays in succession, means whereby each relay after having been operated is deënergized on the interruption of the impulse energizing the next relay, said means comprising a holding circuit for each relay and means for opening such circuit on the cessation of the impulse succeeding the impulse which caused such relay to be energized.

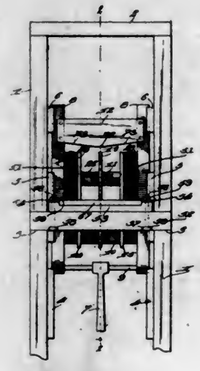
5. A selector comprising a series of switching relays, an impulse circuit for energizing the relays in succession, means whereby each relay, after having been operated, is deënergized on the interruption of the impulse energizing the next relay, said means comprising a holding circuit for each relay and means for branching such circuit to the impulse circuit on the operation of the next relay.

[Claims 6 to 8 not printed in the Gazette.]



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1,226,185. MACHINE FOR MAKING BOX-SPLINTS, VENEERS, SHINGLES, &c. SAMUEL CARLIN, Spokane, Wash., assignor of one-half to Ernest Morin, Spokane, Wash. Filed Dec. 4, 1916. Serial No. 134,921. (Cl. 144—162.)



1. In a splint, veneer or shingle forming machine, a table for supporting the stock to be sliced, a main reciprocating knife for slicing off from the stock a splint of the desired thickness, and knives moving with said main knife for scoring the stock to form a splint cut by said main knife of the desired length during the slicing stroke of said main knife, said scoring knives being movably mounted for retraction on the return stroke on engagement of said scoring knives with the stock, whereby feed pressure may be constantly applied to advance the stock toward said main knife, substantially as described.

8. In a wood scoring device of the class described, a mounting block provided with knife abutment, a knife bar pivoted to said block, a scoring knife secured to said knife bar and adapted for engagement with said abutment to thereby hold said knife to its work during scoring reciprocation, and means normally holding said knife bar in engagement with said abutment, substantially as described.

11. In combination, a reciprocating knife-frame provided with a slicing knife, a table for the stock having a fixed base portion, a wood surface portion adjustably mounted on said base portion for movement toward or from said knife, the top of said surface portion having a grid-work of grooves formed therein, and a grid of Babbitt or like soft metal fitting in said grooves and being flush with the top of said surface portion, substantially as described.

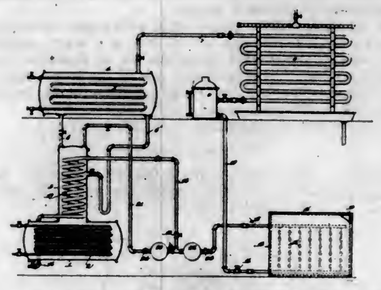
12. In a wood slicing machine, a table for the stock, a reciprocating knife frame movable past said table, and a knife carried by said frame and having a stock side concave from its cutting edge toward its base, substantially as described.

14. In a wood slicing machine, a table for supporting the stock, a slicing knife having a cutting edge and being concave on its stock side from its cutting edge toward its butt, whereby the knife may be reciprocated at a plane at right angles to the surface of the table, substantially as described.

[Claims 2 to 7, 9, 10, 13, and 15 not printed in the Gazette.]

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1,226,186. REFRIGERATING APPARATUS. THOMAS CARRIGAN, New York, N. Y., and ANDREW J. SWEENEY, Bayonne, N. J. Filed May 5, 1916. Serial No. 95,521. (Cl. 62—119.)



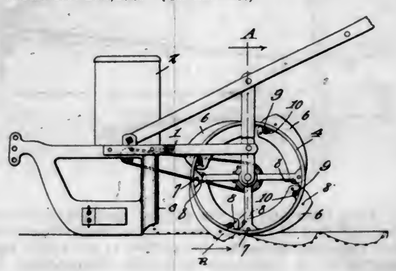
1. In an absorption refrigerating apparatus, the combination with a generator, a condenser and an evaporator, of a mechanical device for effecting a circulation of weak liquor from and strong liquor to the generator, and a mechanical device for imparting sufficient pressure to the gaseous refrigerant from the evaporator as to cause the same to be absorbed by the circulating liquor, without effecting a reduction in temperature thereof, substantially as set forth.

5. In an absorption refrigerating apparatus, the combination with a generator, a condenser and an evaporator, of a weak liquor pipe leading from the generator, a reducing valve therein, a rotary liquid pump having a plurality of stages connected with the weak liquor pipe, a strong liquor pipe leading from the discharge of said pump to the generator and a rotary gas pump for forcing the gaseous refrigerant from the evaporator under sufficient pressure as to be absorbed by the low pressure weak liquor, without effecting a reduction in temperature thereof, substantially as and for the purposes set forth.

[Claims 2 to 4 not printed in the Gazette.]

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1,226,187. PLANTER. EUGENE MACON COLE and ELISHA WORTH COLE, Charlotte, N. C. Filed June 27, 1916. Serial No. 106,196. (Cl. 111—6.)



1. In a planter, the combination with means for depositing a row of seeds upon the ground, of means for depressing the seeds to different depths below the surface of the ground.

2. In a planter, the combination with means for depositing a row of seeds upon the ground, of separate means for successively engaging the row of seeds to depress the seeds to different depths below the surface of the ground.

3. In a planter, the combination with means for depositing a row of seeds upon the ground, of means for moving along the row of seeds to form a series of depressions of varying depths.

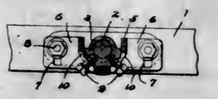
4. In a planter, the combination with means for depositing a row of seeds upon the ground, of means for moving along the row of seeds to form a series of depressions of varying depths, said means being adjustable to produce depressions of different depths.

5. In a planter, the combination with means for depositing a row of seeds upon the ground, of a wheel mounted for rotation and movable along the row of deposited seeds, shoes pivotally mounted in the rim of the wheel and adjustable angularly relative thereto, and means for holding the shoes against movement relative to the wheel.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,188. ROCK-SHAFT BEARING FOR LOOMS. ROBERT R. CORN, Union, S. C. Filed Aug. 11, 1916. Serial No. 114,476. (Cl. 64—55.)

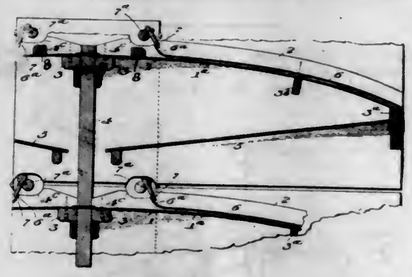


1. The combination with a rock shaft, its original bearing, and the parallel bar of a loom, of a supplemental bearing secured to a portion of the loom frame and receiving the original bearing, and means for limiting relative rocking movement between the two bearings.

2. The combination with the rock shaft and parallel bar of a loom, means connecting said shaft and bar, a bearing adapted to receive said connecting part, means for adjustably connecting said bearing to the loom frame, and means for limiting rocking movement of the said connecting part and the said bearing.

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1,226,189. GRAIN-SEPARATOR. JOHN B. CORNWALL, Moline, Ill., assignor to Barnard and Leas Manufacturing Company, Moline, Ill., a Corporation of Illinois. Filed Nov. 24, 1916. Serial No. 133,208. (Cl. 130—18.)



1. In a separator for the purpose specified a curved screen adapted to be vibrated and a similarly curved apron overlying the perforated portion of the screen and supported at its inner or receiving side independently of the screen.

2. In a grain separator a curved screen adapted to be vibrated; and a co-acting similarly curved and relatively stationary apron overlying the perforated portion of the screen and supported at its inner or receiving side independently of the screen.

3. In a separator the combination of a curved screen adapted to be reciprocated, an apron extending over the perforated surface of the screen and curved correspondingly to the screen; and a bar fixed to a stationary portion of the separator independent of the vibrating screen and adapted to support the apron at its inner or receiving side.

1,226,190. PROCESS FOR THE EXTRACTION AND RECOVERY OF COPPER. ARCHIBALD COX, Plainfield, N. J., and ARNOLD H. PETER, New York, N. Y. Filed Aug. 20, 1913. Serial No. 785,635. (Cl. 75—18.)

1. A process for extracting and recovering copper from ore, comprising converting the copper-content into copper-sulfid (or sulfids), dissolving the copper-sulfid in cyanid solution, and recovering the copper from the solution.

2. A process for extracting and recovering copper from ore, comprising converting the copper-content of the ore to copper-sulfid (or sulfids), dissolving the copper-sulfid, and recovering the copper from the solution.

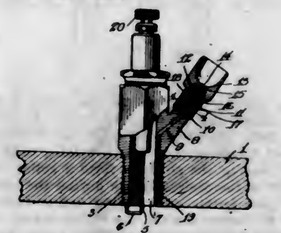
3. A process for extracting and recovering copper from ore, comprising treating the copper-content with a sulfur-yielding substance in solution, dissolving in cyanid solution, and recovering the copper from the solution.

4. A process for extracting and recovering copper from ore containing also other metals, comprising converting the metal-content of the ore to sulfids, dissolving the copper sulfid in a selective solution which does not readily dissolve the other sulfids and recovering the copper from the solution.

5. A process for bringing the copper content of ore into solution, comprising converting the copper content to copper sulfid (or sulfids), and dissolving the copper sulfid in a suitable solution.

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1,226,191. PRIMING DEVICE. IRVIN S. CREAMER, Pleasant Hall, Pa. Filed May 2, 1914. Serial No. 836,023. (Cl. 123—169.)



1. A priming device for internal combustion engines including a coupling adapted for connection to an engine cylinder, having an outer externally threaded end, and a longitudinal opening in communication at one end with the interior of the engine cylinder, having the other end of said opening disposed offset in the space of the threaded terminal, a valve casing having threaded engagement with said threaded terminal, and provided with a central bore, a lateral bore in said valve casing in communication with the central bore, adapted to have communication with the openings in the couplings, in one position of the valve casing, the valve casing when rotated being adapted to sever such communication, a priming cup on said valve casing having an opening in communication with the valve casing bore, a valve controlling the opening of the cup, and a spring for retaining the valve in normally closed position, said casing being provided with a lateral port in communication with the central bore and the atmosphere.

2. A priming device for internal combustion engines including a valve casing open to the engine cylinder and provided with an attenuated air passage way leading to said casing, a member connected with said valve casing and the explosion chamber of the engine cylinder, said member being provided with a longitudinal bore laterally offset with respect to said valve casing, a liquid cup connected with the valve casing to establish communication therewith, a valve located in said valve casing to be held normally closed and to be opened by the intake stroke of the engine piston to permit the liquid in the liquid cup to flow to the explosion chamber and the air introduced through said air passage way to comingle with the engine charge, substantially as described.



3. A priming device comprising a valve casing having a central bore therethrough, a member connecting said valve casing with the cylinder of an engine and provided with a passage offset from the line of the bore of the valve casing to establish communication between this bore and the explosion chamber of the engine, a liquid cup secured to the valve casing and provided with an opening to communicate with the bore of said casing, a valve located in the bore of the valve casing, and a spring received within the bore of the casing to bear against the valve and against the blank surface of said connecting member presented in the bore of the casing to hold the valve at a position to cut off communication from the liquid cup.

4. A priming device comprising a valve casing connected with the explosive chamber of the engine, a liquid cup connected with the valve casing and provided with an opening to establish communication with the casing, an air passage formed through the wall of the valve casing to connect the interior of said casing with the atmosphere, said passage way being of sufficient attenuation to prevent destruction of the vacuum on the intake stroke, and a valve in the valve casing to be normally seated to close the opening from the liquid cup and to be moved by the suction stroke of the engine to a position that the liquid is permitted to flow into the valve casing and co-mingle with the air drawn through the air passage to form an explosive mixture which is drawn into the explosive chamber of the engine.

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1,226,192. MILK-BOTTLE HOLDER. CHARLES M. DAVIS and MILTON J. LOOMIS, Battle Creek, Mich.; said Loomis assignor to said Davis. Filed Mar. 25, 1915. Serial No. 16,977. (Cl. 248—20.)



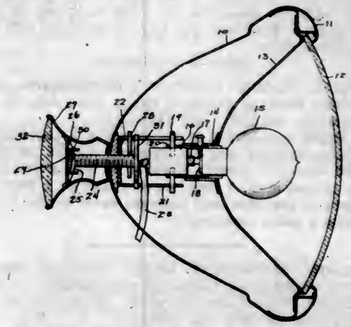
A receptacle of the class described formed from a sheet-metal blank, said blank comprising a top, extensions from said top forming ends and inturned portions of said ends forming end bottom portions to said receptacles; a longitudinal extension to said top forming a back between said ends and an inturned portion of said back forming an intermediate bottom spaced from said end bottom portions, and ledges to underlie and engage said end bottom portions; a narrowed extension of said top forming a front and engaging the intermediate bottom of said receptacle, and ears formed from integral portions of said back, the same comprising a hollow article having openings in the front and provided with a slotted bottom, the slots thereof flaring outwardly and registering with said front openings, substantially as set forth.

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1,226,193. SWITCH CONNECTION FOR ELECTRIC LAMPS. CHARLES L. DE MARTIN, Connersville, Ind., assignor to Indiana Lamp Co., Connersville, Ind., a Corporation. Filed Oct. 9, 1916. Serial No. 124,676. (Cl. 240—41.)

1. An electric switch connection including a socket, a lamp secured in said socket, having a contact point thereon, a removable insert in said socket, a contact on said insert in position to engage the contact on said lamp, a switch member adapted to engage and operate said removable insert, a lamp casing, an external switch handle, and means rigidly secured to said handle and extending through said casing for engaging and operating said switch member so as to make and break contact when said handle is operated.

2. An electric switch connection including a socket, a lamp secured in said socket, having double contact points, a removable insert in said socket, contacts on said insert adapted to engage said lamp, outwardly extending pins in said insert, a switch member adapted to engage said pins, a lamp casing, an external switch handle, and means rigidly secured to said handle and extending through said casing for engaging and operating said switch member so as to make and break contact with said contact points when said handle is operated.



3. An electric switch connection including a socket, a lamp in said socket having double contact points, means for making and breaking contact with said points, a switch member having a bifurcated arm adapted to engage said means, and a switch handle adapted to be rigidly secured to said member whereby said member will operate so as to make and break said contact when said handle is turned.

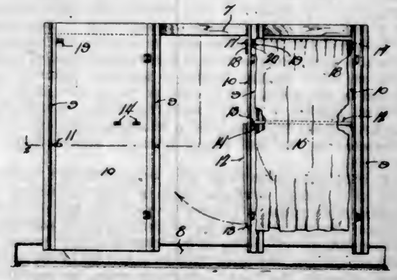
4. An electric switch connection including a socket, a lamp in said socket having double contact points, means for engaging and disengaging said contact points, a switch member having a bifurcated arm adapted to engage said means, a lamp casing, a switch handle on the outside of said casing, a screw secured to said handle and extending inwardly through said casing, and a pin extending through said screw and between the bifurcated portions of said member for causing the operation thereof for making and breaking contact with said lamp.

5. An electric switch connection including a socket, a lamp in said socket having a double contact thereon, means for making and breaking contact therewith, a switch member adapted to engage said means, a lamp casing, a switch handle on the outside of said casing, a screw having an enlarged head adapted to wedge in said handle, said screw extending through said casing and engaging said means, recesses on said head, and a disk adapted to be secured thereon having inwardly projecting portions for engaging said recesses so as to secure said screw within said handle.

[Claim 6 not printed in the Gazette.]

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1,226,194. COLLAPSIBLE VOTING-BOOTH. WILLIAM A. DE SMIDT, Cedar Grove, Wis., assignor of one-half to John H. De Smidt, Minneapolis, Minn. Filed Aug. 12, 1916. Serial No. 114,530. (Cl. 20—3.)



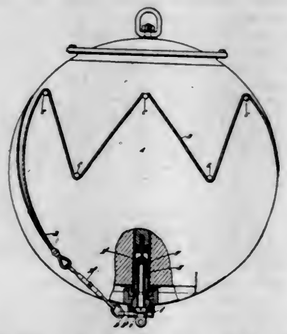
A collapsible voting booth comprising a supporting wall, a series of spaced stiles secured to said wall, a panel

hingedly connected to each of said stiles but one, means carried by each panel but one for detachably engaging an adjacent panel to hold them in parallel position at right angles to the wall and foldable against one panel, the proportionate thickness of the stiles being such that the panel with the means on its inner face may be swung to a position flush with the face of the stiles into inconspicuous position.

1,226,195. LIQUID COATING COMPOSITION. JAMES CARREL DOBBINS, Portland, Oreg. Filed Jan. 10, 1917. Serial No. 141,579. (Cl. 134—18.)

A sizing composition in the nature of a paste comprising approximately 100 lbs. Portland cement, 20 lbs. hydrated lime, 1 lb. plaster of Paris, 30 lbs. colored mortar, ½ lb. ground mica, 1 fluid ounce ammonia, 1 fluid ounce tincture of asafetida, and sufficient water to give the composition a pasty consistency.

1,226,196. SUBMARINE MINE. GIOVANNI EMANUELE ELIA, Westminster, London, England, assignor to Vickers Limited, Westminster, England. Filed Feb. 10, 1917. Serial No. 147,827. (Cl. 102—3.)



1. Submarine mine firing gear provided with a retaining or safety device for holding the firing gear inoperative, a flexible cable connected to the retaining device for holding it in a predetermined position, and means for supporting the cable under tension stored therein prior to launching the mine, whereby when a ship strikes the mine the tension on the flexible cable is relieved to permit the retaining device to be displaced and the mine fired; substantially as described.

2. Submarine mine firing gear comprising the combination of a casing, pegs or projections carried thereby, a cable supported under tension upon the pegs or projections, and a retaining or safety device connected to the cable whereby when a ship strikes the mine, one or more of the projections are displaced, thus releasing the cable so that it is no longer under tension; substantially as described.

3. Submarine mine firing gear comprising the combination of a mine casing, a ring or member composed of porcelain or other readily breakable material suitably connected to the casing, projections or bosses formed on the ring or member, a member supported under tension upon the projections or bosses, and a retaining or safety device connected to the last named member; substantially as described.

4. Submarine mine firing gear comprising the combination of a striker having a stem, a retaining device for holding the striker in inoperative position, and a tension member or cable to which the retaining device is connected, the retaining device being in the form of a plate having an inclined surface which coacts with a portion of the striker stem, whereby the plate is displaced when the tension on the member or cable is relieved by the impact of a ship with the mine; substantially as described.

5. A submarine mine comprising the combination of a casing, a flexible member or cable mounted upon the mine casing at a plurality of distributed points, firing gear for the mine and a retaining or safety member connected to the flexible member or cable and normally held thereby in a position for preventing operation of the firing gear; substantially as described.

[Claim 6 not printed in the Gazette.]

1,226,197. SUBMARINE MINE. GIOVANNI EMANUELE ELIA, Westminster, London, England, assignor to Vickers Limited, Westminster, England. Filed Feb. 23, 1917. Serial No. 150,435. (Cl. 102—3.)



1. Submarine mine firing gear comprising in combination a retaining device for normally holding said gear inoperative, said device being arranged within the mine casing, a tension member arranged within the mine casing and connected to said device, and means for relieving the tension on said member, when a ship strikes the mine, to release said retaining device.

2. A submarine mine comprising the combination of a mine casing, firing gear for the mine, a retaining device located within the casing for holding the firing gear inoperative, a plurality of supports within the casing, a flexible member positioned by the supports and connected to the retaining device, and means operated by engagement of a ship with the mine for displacing one or more of the supports so that the flexible member will no longer prevent movement of the retaining device.

3. Submarine mine firing gear comprising in combination a retaining device for normally holding said gear inoperative, said device being arranged within the mine casing, a tension member arranged within the mine casing and connected to said device, and means for mechanically relieving the tension on said member, when a ship strikes the mine, to release said retaining device.

4. Submarine mine firing gear comprising in combination a retaining device for normally holding said gear inoperative, said device being arranged within the mine casing, a tension cable arranged within the mine casing and connected to said device, a pulley by which said cable is supported, said pulley being normally connected to the mine casing and means for disconnecting said pulley from the mine casing when a ship strikes the mine.

5. Submarine mine firing gear comprising in combination a retaining device for normally holding said gear inoperative, said device being arranged within the mine casing, a tension cable arranged within the mine casing and connected to said device, a pulley by which said cable is supported, a spring controlled pin by which said pulley is normally supported on the mine casing and means for liberating said pin when a ship strikes the mine, for enabling the spring of the pin to displace the pin and disconnect the pulley from the mine casing.

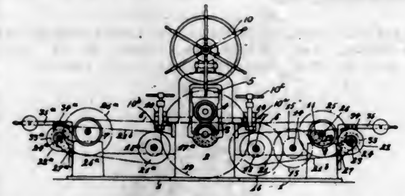
[Claim 6 not printed in the Gazette.]

1,226,198. ROLLING-MACHINE. WALTER ERBSLÖH, Barmen, Germany. Filed May 14, 1913. Serial No. 767,661. (Cl. 29—17.)

1. In a metal rolling machine, a frame, standards on the frame, pressing rolls carried by the standards, a drum at each end of the frame, gearing for operating the drums, clutch members for moving the drums into and out of operation, whereby the direction of rotation of the drums and rolls is reversed.

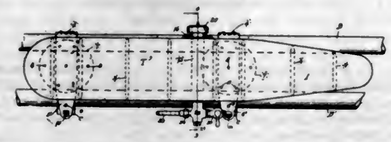


2. In a metal rolling machine, a frame, standards supported centrally of the frame, pressing rolls supported by the standards, a drum supported at each end of the frame,



and on the same horizontal plane with the pressing rolls, means for operating the drums, means for communicating movement of the drums to the pressing rolls, and clutch members for throwing the drums into and out of operation.

1,226,199. GASOLENE-TANK FOR MOTOR-CYCLES. LEIGH R. EVANS, Rochester, N. Y. Filed Aug. 26, 1916. Serial No. 117,073. (Cl. 21—90.)



1. A gasolene tank comprising two counterpart sections spaced apart, pairs of strips fastened to said sections and having their upper end portions fastened together in overlapping relation, the lower end portions of said strips projecting below the bottom of said sections, a block disposed between the lower projecting end portions of each pair of strips and having side faces disposed in converging planes in contact with said end portions, and means for drawing the lower projecting end portions of said pairs of strips toward each other.

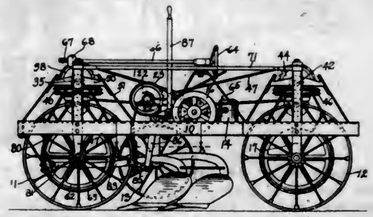
2. A gasolene tank comprising two counterpart sections spaced apart, pairs of strips connected to said sections and having their upper end portions fastened together, the lower end portions of said strips projecting below the bottom of said sections, a removable block disposed between said lower end portions of each pair of strips and having side faces disposed in converging planes and in contact with said end portions of said strips, said block having a concave groove in its upper face, the end faces of said block being parallel and spaced apart a distance substantially equal to the space between said sections, whereby said block may be placed between the end portions of each pair of strips in position to hold said end portions parallel, and clamping bolts passing through the lower end portions of each pair of strips.

3. A gasolene tank comprising two counterpart sections spaced apart, pairs of strips fastened to said sections and connecting said sections along their upper edges, the lower end portions of said strips being extended below the bottom edges of said sections, a removable block disposed between the lower end portions of each pair of strips, the side faces of said block being disposed in converging planes and the end faces of said block being parallel, whereby said block may be placed between the lower end portions of each pair of strips in position to maintain said end portions parallel or to permit said end portions to converge together downward, and clamping bolts passing through the lower end portions of each pair of strips below the corresponding block and serving to draw said end portions together.

4. A gasolene tank comprising two counterpart sections spaced apart, pairs of strips fastened to said sections and having their upper end portions fastened together in overlapping relation, the lower end portions of said strips projecting below the lower edges of said sections, a curved bendable pipe connected at its ends to the bottoms of said sections, and means for drawing the lower projecting end portions of said strips together.

5. A gasolene tank comprising two counterpart sections spaced apart, each section being formed of two members of sheet metal fastened together, one of said members forming the top, bottom and one side of a section, the other member forming the other side of the corresponding section, a curved bendable pipe connected at its ends to the bottom of said sections, and means for connecting said sections together.

1,226,200. AGRICULTURAL TRACTOR. HENLEY EVERSOLE, Newman, Ill. Filed May 31, 1912, Serial No. 700,679. Renewed Feb. 12, 1917. Serial No. 148,249. (Cl. 21—114.)



1. A tractor including a main frame, plows carried by said frame for plowing, supporting wheels, one of which is adapted to travel in the furrow in advance of a plow and another wheel adapted to travel in the furrow behind the plow, means for steering said furrow wheels, means for propelling said furrow wheels and a vertically adjustable swivel wheel at one side of the frame arranged as and for the purpose set forth.

2. A tractor including a main frame, supporting wheels therefor located at each end of the frame and said wheels mounted so that they can be turned simultaneously for steering, means for driving said wheels, means for steering them simultaneously in opposite directions, plows mounted in connection with said frame between said wheels so that one of said supporting wheels will travel in the furrow in advance of a plow and the other wheel will travel in the furrow behind a plow, and a vertically adjustable swivel wheel mounted in connection with the frame to one side of said supporting wheels so as to travel on the unplowed land.

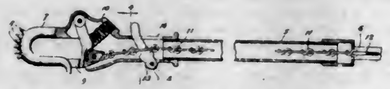
3. A tractor including a main frame, a supporting wheel therefor, a yoke carrying said wheel with an upward projection pivoted to said frame so that the yoke and wheel may oscillate, means connected with said yoke for steering the wheel, a double horizontal gear mounted on the projection of said yoke concentrically with the axis thereof, a power shaft mounted in said frame, a pinion thereon meshing with the upper bevel of said horizontal gear, a vertical gear mounted in said yoke meshing with the lower part of said double gear, means for transmitting power from said last-mentioned gear to the wheel so that it may be propelled while it is being steered and a vertically adjustable swivel wheel at one side of the frame arranged as and for the purpose set forth.

1,226,201. BULL-STAFF. HOWARD J. FERRIS, Harvard, Ill., assignor to Hunt-Helm-Ferris & Co., Harvard, Ill., a Corporation of Illinois. Filed Mar. 17, 1917. Serial No. 155,455. (Cl. 119—152.)

1. The herein described bull-staff, having in combination a hollow tubular portion, a handle at the rear thereof, a hook at the front thereof, a hook-closing pawl, a member running through the hollow tubular member to the handle and connected with the pawl opening the same, and a pawl-operating lever engaging the member adjacent to the hook.

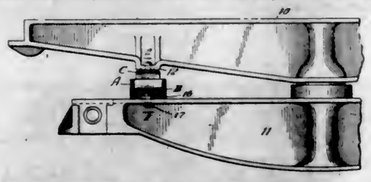
2. The herein described bull-staff, comprising a tubular member, a handle at one end, a hook at the other end.

a hook-closing pawl, a chain running through the tubular member from the pawl to the handle for opening the hook,



and an operating lever extended through a chain-link and projecting laterally from the staff adjacent to the hook for operating the pawl when grasped near its front end.

1,226,202. ROLLER SIDE BEARING. RAY E. FORDICE, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 15, 1916. Serial No. 109,453. (Cl. 64—64.)

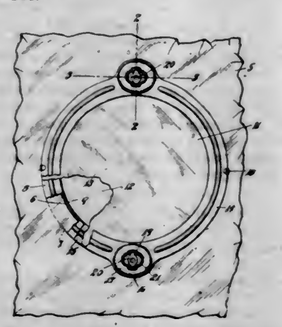


1. In a roller side bearing, the combination with a base member, of a roller bodily movably mounted within said base member, and spring means for returning the roller to central position after each actuation thereof, said spring means comprising bowed springs, each secured at one end to the roller and at the other end to the base member.

2. In a roller side bearing, the combination with a hollow box-like base casting, of a roller mounted within said base casting, the roller having extended centrally located bosses at each end thereof, and a spring extending from each of said bosses to the base casting and connected to both, the springs being adapted to return the roller to normal position after each actuation.

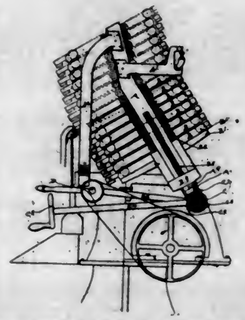
3. In a roller side bearing, the combination with a hollow box-like base casting, the side walls of which are provided with centrally located offsets, of a roller mounted within said base casting and having bosses extended from the ends thereof and working within said offset portions of the base casting, and a bowed spring at each end of the roller, each of said springs being connected at one end to one of said bosses and at its other end to the plate which sets in the base casting.

1,226,203. WIND-SHIELD. NAIMAN GOLDBERG, Hartford, Conn. Filed Jan. 17, 1916. Serial No. 72,477. (Cl. 21—148.)



A wind shield having a sight opening therein and a frame comprising rings located on opposite sides of the shield about said opening, one of said rings having an extension from the edge of the opening therein passing through said sight opening within the edge thereof, fingers spaced apart about the edge of said extension and projecting therefrom, said fingers being overturned against the face of the other ring, and a button rotatably secured to one of said rings.

1,226,204. TYPOGRAPHICAL OR LINE-CASTING MACHINE. JOHN W. GRAHAM, Hinton, W. Va. Filed May 20, 1915. Serial No. 29,347. (Cl. 199—7.)



1. In a typographical machine, in combination, a frame having a pair of spaced apart arms, a plurality of independent racks, removable magazines housed in said racks, and rollers on said racks adapted to guide their movement relative to said arms.

2. In a typographical machine, in combination, a frame having a pair of spaced apart arms, a plurality of independent racks, guide rollers on said racks coacting with said arms, and supporting rollers projecting above the plane of the rack on which they are mounted for supporting the rack next above out of contact with the magazine adapted to be carried thereby.

3. In a typographical machine, in combination, a frame having a pair of spaced apart arms, a plurality of independent racks mounted between said arms adapted to carry removable magazines, rollers on each rack adapted to support the rack thereabove out of contact with the magazine carried thereby, means associated with the frame adapted to keep the racks in line against lateral movement, and means associated with the upper parts of the arms adapted to direct the racks rearwardly from the operator.

4. In a typographical machine, in combination, a frame having a pair of spaced apart arms, a plurality of independent racks adapted to contain removable magazines, guide rollers associated with each rack, a frame on which the racks are movable, means adapted to prevent lateral movement of said racks, and roller means associated with each rack adapted to support the rack thereabove, that part of the frame with which the guide rollers coact comprising a pair of bent arms having a reduced width at the bend to permit the rollers to pass thereby.

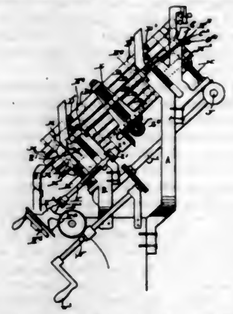
5. In a typographical machine, in combination, a frame having a pair of spaced apart arms, a plurality of independent racks adapted to contain removable magazines, guide rollers associated with each rack, vertically disposed arms with which said guide rollers coact having their upper parts bent rearwardly to carry the racks away from the operator, a base traveling on said arms to support said racks, a threaded member associated with said base, screw means engaging said threaded member, and means for actuating said screw means to move the base relatively to said arms.

[Claims 6 to 12 not printed in the Gazette.]

1,226,205. TYPOGRAPHICAL OR SLUG-CASTING MACHINE. JOHN W. GRAHAM, Hinton, W. Va. Filed July 19, 1915. Serial No. 40,804. (Cl. 199—7.)

1. In a typographical machine the combination of a plurality of removable magazines, racks therefor, guide rollers on said racks, arms to engage the guide rollers, there being notches in the said arms to receive the guide rollers of the magazine to be locked in operative position.





2. In a typographical machine the combination of a plurality of removable magazines, racks therefor; guide rollers for said racks, arms to receive the guide rollers, there being notches in the said arms for the purpose specified, and operating bars made with projections extending inward to engage the guide rollers of the magazines in operative position.

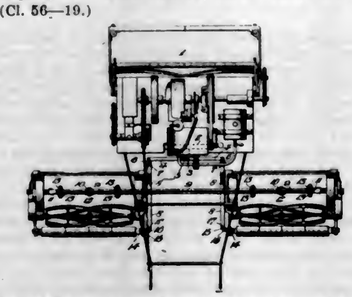
3. In a typographical machine the combination of a plurality of removable magazines, racks therefor, guide rollers for said racks, arms to receive the guide rollers, there being notches in said slotted arms, operating bars, projections on the said operating bars, rollers on the said operating bars, a screw mechanism passing up each side of the series of magazines, blocks on the said screws, rollers on the said blocks and means to engage the rollers on the bars with the rollers on the screws.

4. In a typographical machine the combination of a plurality of removable magazines, racks therefor, guide rollers on said racks, arms to receive the guide rollers, there being notches in the said arms, lock operating bars, projections on the said bars, a screw mechanism passing up each side of the series of magazines, and blocks movable up and down on said screws coöperating with the projections on said bars.

5. In a typographical machine the combination of a plurality of removable magazines, racks therefor, guide rollers on said racks, arms, there being notches in the said arms, lock operating bars, projections on the said bars, screws passing up the sides of the series of magazines, blocks movable up and down on said screws, and a roller affixed to each of the said blocks coöperating with the projections on said bars.

[Claims 6 to 14 not printed in the Gazette.]

1,226,206. LAWN-MOWER. WALTER E. GRAHAM, Philadelphia, Pa. Filed Dec. 18, 1915. Serial No. 67,531. (Cl. 56—19.)

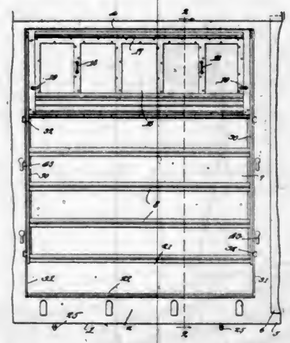


1. A lawn mower composed of a power lawn mower positively driven, trailer lawn mowers arranged in transverse alinement with each other and connected with the former and adapted to be drawn by the same, and independent oscillatory mountings for said trailer lawn mowers whereby the latter are adapted for indepedent vertical oscillatory movements.

7. A power lawn mower, a pivoted lever connected with the frame thereof to turn to the right and left, arms connected with said lever, means whereby said arms are adapted to be oscillated vertically, a beam connected with said arms, and trailer lawn mowers carried by said beam to the right and left rearward of said power lawn mower, the trailer lawn mowers having their frames pivotally connected independent of each other with said beam.

[Claims 2 to 6 not printed in the Gazette.]

1,226,207. FREIGHT-CAR DOOR. JOHN LAYTON GUERRANT, Sedalia, Mo. Filed Mar. 30, 1916. Serial No. 87,771. (Cl. 20—31.)



1. A door structure embodying a pair of plates having flanges, a door adapted to rest against said flanges and having T-members at its side edges providing opposite flanges certain of which are adapted to overlap the aforesaid flanges, and means for overlapping the other flanges of the door and moving said door toward and clamping it against the first mentioned flanges.

2. The combination with a door frame, of a pair of members at the inner side thereof at the opposite sides of the door way, a track, a door suspended from said track and slidable to and from the door way between the door frame and one of said members, the edge portions of the door being adapted to rest against said members, the door having a hinged portion adapted to be swung outwardly away from said members, and means for forcing said door including said portion thereof tightly against said members.

3. A door structure embodying a pair of members, a main door having a portion to rest against said members and movable outwardly through the door way, a secondary door adapted to rest against said members at one end of the main door and movable outwardly through the door way, and means for clamping both doors against said members and operable for first releasing the secondary door with the main door still held against said members and then releasing the main door for outward movement.

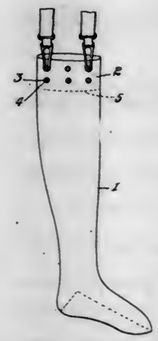
4. The combination with a door frame, of a pair of members at the opposite sides of the door way, a main door having a portion to rest against said members and movable outwardly through the doorway, the lower end of the main door being spaced from the sill of the frame to provide an opening, a secondary hinged door for closing said opening and adapted to rest against said members and to move outwardly through the door way, and means for clamping both doors against said members and operable for first releasing the secondary door for outward movement with the main door held in position and then releasing the main door for outward movement.

5. The combination with a door frame, of a pair of members at the inner side thereof at the opposite sides of the door way, a track, a main door suspended from said track and slidable to and from the door way, the main door having a hinged portion adapted to rest against said members and to swing outwardly through the door way, a secondary door adapted to rest against said members at one end of said hinged portion and movable outwardly through the door way, and means for clamping the hinged portion and secondary door against said members and operable for first releasing the secondary door for outward movement with the said portion in position and then releasing said portion for outward movement.

[Claim 6 not printed in the Gazette.]

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1,226,208. STOCKING. FRANCES POETZSCH HANDSCHUCK, New York, N. Y. Filed Aug. 26, 1913. Serial No. 786,698. (Cl. 2—23.)



1. A stocking formed above with a selvaged opening, said opening being furthermore button-hole-stitched for the useful purpose specified.

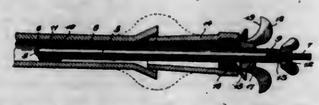
2. A stocking formed above with a double ply having registering selvaged openings, the edges of said openings being furthermore button-hole-stitched together, for the useful purpose specified.

3. A stocking having a two-ply band at the upper end, said ply being fashioned with selvaged openings adapted to register, and means for binding the edges of said openings together, for the useful purpose specified.

4. A stocking having its upper portion folded upon itself and provided with a plurality of selvaged openings in both body and fold portions, different pairs of openings in said body portion and fold respectively being adapted to register, each such registering pair of openings being button-hole-stitched together, for the useful purpose specified.

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1,226,209. PLUMBING APPLIANCE. HUGH H. HARRIS, Alexandria, Va. Filed Aug. 3, 1916. Serial No. 112,954. (Cl. 137—76.)



1. A device of the class described comprising relatively adjustable members, an expansible element controlled by said members and adapted to be inserted into a pipe whereby to plug the same, and means for alining a thimble and retaining the same alined with said pipe, whereby the longitudinal axes of said members, said pipe and said thimble will coincide.

2. A device of the class described comprising relatively adjustable members, an expansible element controlled by said members and adapted to be inserted into a pipe whereby to plug the same, and means carried by one of said adjustable members for alining a thimble and retaining the same alined with said pipe, whereby the longitudinal axes of said members, said pipe and said thimble will coincide.

3. A device of the class described comprising relatively adjustable members, an expansible element controlled by said members, and a frusto-conical plate adjustable longitudinally of said relatively adjustable members for alining and centering a thimble with a pipe to be repaired.

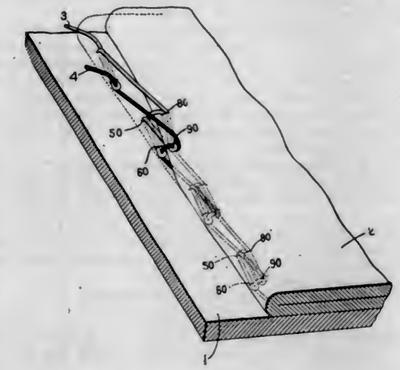
4. A device of the class described comprising relatively adjustable members, an expansible element controlled by said members, and a frusto-conical plate adjustable longitudinally of said relatively adjustable members for alining and centering a thimble with a pipe to be repaired and having a central opening for receiving said members.

5. A device of the class described comprising relatively adjustable members, an expansible element controlled by said members, means adjustable longitudinally of said relatively adjustable members for alining and centering a thimble with a pipe to be repaired, and means carried by one of said adjustable members for adjusting the first named means.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,210. SEAM FOR SEWED ARTICLES. THOMAS J. HAYES, Boston, Mass., assignor to Arbetter Felling Machine Company, Boston, Mass., a Corporation of Maine. Continuation in part of application Serial No. 667,467, filed Dec. 23, 1911. This application filed July 19, 1913. Serial No. 779,943. (Cl. 112—34.)



1. A seam for sewed articles comprising a main layer of fabric, a superimposed layer presenting an edge thereon, the said layers being fastened together by a thread presenting two rows of loops, the points of entrance and emergence of each loop of one row being located in the upper surface of the base layer beneath the superimposed layer, the points of entrance and emergence of each loop of the other row being located in that portion of the surface of the superimposed layer adjacent the base layer, and means for concatenating said loops.

2. A seam for sewed articles comprising a main layer of fabric, a superimposed layer presenting an edge thereon, the said layers being fastened together by a thread presenting two rows of loops, the points of entrance and emergence of each loop of one row being located in the upper surface of the base layer beneath the superimposed layer, the points of entrance and emergence of each loop of the other row being located in that portion of the surface of the superimposed layer adjacent the base layer, and a second thread locking the loops of the said two rows together.

3. A seam for sewed articles comprising a main layer of fabric, a superimposed layer presenting an edge thereon, the said layers being fastened together by a thread presenting two rows of loops, each loop of one row laid close to said edge and entering and emerging from the upper surface of the base layer, each loop of the other row laid beneath the upper surface of the superimposed layer and entering and emerging from the surface of the superimposed layer at or under the edge, and means for concatenating said loops.

4. A seam for sewed articles comprising a main layer of fabric, a superimposed layer presenting an edge thereon, the said layers being fastened together by a thread presenting two rows of loops, each loop of one row laid close to said edge and entering and emerging from the upper surface of the base layer, each loop of the other row laid beneath the upper surface of the superimposed layer and entering and emerging from the surface of the superimposed layer at or under the edge, and a second thread locking the loops of the said two rows together.

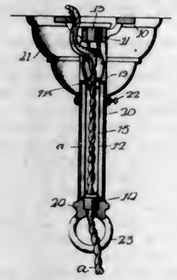
5. A seam for sewed articles comprising a main layer of fabric, a superimposed layer presenting an edge thereon, the said layers being fastened together by a thread presenting two rows of loops, each loop of one row laid close to said edge and entering and emerging from the upper surface of the base layer, each loop of the other row laid beneath the upper surface of the superimposed layer and entering and emerging from the surface of the superimposed layer at or under the edge, and a second thread passing through each of said loops and forming therewith a lock for said loops.

[Claims 6 to 8 not printed in the Gazette.]



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1,226,211. LIGHTING-FIXTURE. MAX HERSKOVITZ, Chicago, Ill., assignor to Peerless Light Company, Chicago, Ill., a Corporation of Illinois. Filed July 26, 1916. Serial No. 111,436. (Cl. 240—85.)



1. A new article of manufacture, comprising an insertible body portion, U-shaped in cross section throughout the greater portion of its length and having a screw threaded neck on one end, said body portion being adapted to be inserted in an inclosing shell, and the groove in the body portion being adapted for the reception of conductor cords.

2. A lighting fixture comprising an insertible body portion having a screw-threaded neck at each end, a shell surrounding said body portion, and means for securing said shell on said insertible body portion, there being a passageway within the shell for the reception of conductor cords.

3. A lighting fixture member, comprising an insertible body portion having a screw-threaded extension on one end, and a reduced body portion for the reception of a shell, there being a shoulder formed between the unreduced portion and the reduced portion against which a shell may bear, and there being a passageway for conductor cords extending lengthwise of the body portion, and means for securing a shell on said reduced portion in contact with said shoulder.

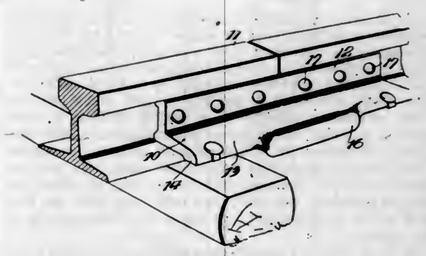
4. A lighting fixture member, comprising an insertible body portion having a screw-threaded extension at each end, and having a reduced body portion for the reception of a shell, there being a shoulder formed between the unreduced portion and reduced portion against which a shell may bear, and there being a passageway for conductor cords extending lengthwise throughout the greater extent of the body and opening out through the body portion at the threaded extension on the reduced portion thereof, and a member threaded on the threaded extension of the reduced portion and arranged to hold a shell in engagement with said shoulder.

5. A lighting fixture member, comprising an insertible body portion, having a screw-threaded neck on each end, and having a reduced body portion for the reception of a shell, there being a shoulder formed between the unreduced portion and reduced portion, against which a shell may bear, and there being a groove extending lengthwise of the body and lying on each side of said shoulder, and a screw-threaded member threaded on the screw-threaded neck of the reduced portion for holding a shell in contact with said shoulder.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,212. SPLICE-BAR. ADAM K. HEUSTON, Roaring Spring, Pa. Filed July 21, 1916. Serial No. 110,532. (Cl. 239—9.)



1. A splice bar including a body, a bearing flange carried by the said body for supporting the bar in active position, a chair flange projecting inwardly beneath the bar and adapted to receive the base flange of a rail, and a reinforcing member connecting the chair flange with the bearing flange and of a thickness greater than the combined thickness of the chair and bearing flanges.

2. A splice bar including a body having angularly disposed vertical and lateral flanges adapted to fit in the angle between the tread and base flange of a rail, a rail chair flange carried by said lateral flange, and a reinforcing member for the chair flange at the junction between the said last mentioned flanges, with the thickness of the said reinforcing member rising over the outer face of the said lateral flange.

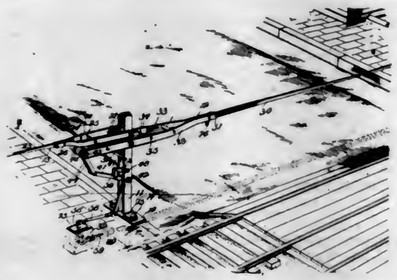
3. A splice bar including a body provided with a bearing flange adapted to support the body in active position, a chair flange integrally formed on the bearing flange to extend inwardly therebeneath for engagement with the base flange of a rail, and a thickened portion arranged at the junction between the said flanges to provide a reinforcing member for the chair flange with the said member extending laterally from the bearing flange and rising over the outer face thereof.

4. A splice bar including a body having angularly disposed vertical and lateral flanges, a chair flange integrally formed on the lower margin of the said lateral flange and adapted to engage beneath the base flanges of a pair of rails at the joint therebetween with the said vertical and

lateral flanges fitting in the angle between the treads and base flanges of the said rails to overlie the said joint and with the extremities of the lateral flange seating upon ties supporting the rail ends at opposite sides of the joint, and a reinforcing member for the chair flange formed integrally with the outer extremity thereof and the lower margin of the said lateral flange with the said reinforcing member providing a thickened portion rising over the outer face of the said lateral flange.

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1,226,213. RAILROAD-CROSSING GATE. LINDSAY L. HILL, Louisville, Ky. Filed Mar. 7, 1916. Serial No. 82,719. (Cl. 269—6.)



1. A gate for railway crossings including standards adapted to be positioned at opposite sides of a roadway, oppositely extending barriers swingingly mounted upon each standard, connecting means between the barriers of each standard, whereby movement of one will cause corresponding movement of the other, a bell crank lever on each standard connected to a barrier thereon, a lever pivoted adjacent one end near one standard, a lever pivoted intermediate its length adjacent the other standard, links connecting the free ends of the levers with the free ends of the bell crank levers, a connecting rod connecting the intermediate portion of the first lever with the free end of the second lever, and means for swinging one of the levers.

2. In a railway crossing gate, a standard adapted to be located adjacent the crossing and including spaced sides, a main barrier swingingly supported adjacent one end upon the standard, a supplemental oppositely extending barrier pivotally supported at one end upon the standard, bell crank levers pivotally supported upon the standard with one arm of one lever projecting in the opposite direction to the corresponding arm of the other and with their remaining arms extending parallel, a link connecting the free end of the parallel arm of one bell crank lever with the intermediate portion of the corresponding arm of the other, a link connecting the free end of the last arm of the bell crank lever with the free end of the main barrier, and a link connecting the free arm of the first bell crank lever with the intermediate portion of the supplemental barrier.

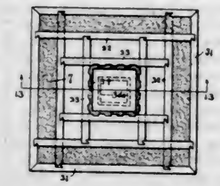
3. In a gate construction for railway crossings, a standard, main and supplemental barriers swingingly supported on the standard, bell crank levers swingingly supported on the standard, links connecting certain arms of the bell crank levers with the barriers, and a link connecting the free arm of one bell crank lever with the intermediate portion of that arm of the other bell crank lever which is connected to one of the barriers and means for swinging one of the bell crank levers.

4. In a gate construction for railway crossings, a standard adapted to be positioned adjacent a crossing and including spaced side members formed intermediate their height with alined openings, a sleeve seating at its ends in the openings, a barrier including a head having side portions projecting past the sides of the standard, a pivot bolt passed through the side portions of the barrier head and through the sleeve, and a plurality of roller bearings located in the sleeve and surrounding the pivot bolt and held against displacement by the side portions of the head of the barrier.

5. A gate for railway crossings including a standard, oppositely extending barriers swingingly mounted upon the standard one above the other, bell crank levers swingingly mounted upon the standard, links connecting one arm of each bell crank lever with the barriers, means connecting the free arm of one bell crank lever with the other bell crank lever, and means for operating said latter bell crank lever.

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1,226,214. BUILDING CONSTRUCTION. RALPH Z. HOPKINS, Detroit, Mich. Filed Feb. 26, 1914. Serial No. 821,145. (Cl. 72—29.)



1. A building structure comprising face blocks provided with a series of grooves in their inner faces and a series of tongues partly closing the grooves, a series of inner blocks, each block having notches formed in its edges corresponding in number and location to the grooves in the face blocks, and a series of transverse connecting blocks joining the inner blocks and the face blocks, each connecting block having a groove at each end which forms a tongue, said tongue and groove corresponding to a tongue and groove in the adjacent face block, and a series of notches in its edges corresponding in location to the inner blocks whereby the whole is rigidly secured together.

2. A building structure comprising face blocks provided with a series of grooves in their inner faces and a series of tongues partly closing the grooves, a series of inner blocks, each block having notches formed in its edges corresponding in number and location to the grooves in the face blocks, and a series of transverse connecting blocks joining the inner blocks and the face blocks, each connecting block having a groove at each end which forms a tongue, said tongue and groove corresponding to a tongue and groove in the adjacent face block, a series of notches in its edges corresponding in location to the inner blocks whereby the whole is rigidly secured together, and a filling of concrete between the face blocks and the adjacent inner blocks.

3. A building structure comprising longitudinal face blocks provided with a series of grooves in their inner faces and a series of tongues partly closing the grooves, a series of longitudinal spaced rows of inner blocks, each block having notches formed in its edges corresponding in number and location to the grooves in the face blocks, and a series of transverse connecting blocks joining the inner longitudinal blocks and face blocks, each connecting block having a groove at each end which forms a tongue, said tongue and groove corresponding to a tongue and groove in the adjacent face block, and a series of notches in its edges corresponding in location to the rows of inner blocks, whereby the rows of blocks are rigidly united, and a filling of concrete between some of the rows of blocks.

4. In a building structure, a series of face blocks in spaced pairs, one of the pairs being arranged at right angles to another pair, the opposite members of each pair being joined by connecting blocks, the connecting blocks that join one pair of face blocks being arranged to cross the connecting blocks that join another pair of face blocks and being reduced in cross-section at the intersecting points.

5. In a building structure, a series of face blocks in spaced pairs, one of the pairs being arranged at right angles to another pair, the opposite members of each pair being joined by connecting blocks, the connecting blocks that join one pair of face blocks being arranged to cross the connecting blocks that join another pair of face blocks and being reduced in cross-section at the intersecting points, and a concrete filling between the face blocks and the connecting blocks.

[Claims 6 to 11 not printed in the Gazette.]



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1,226,215. [WITHDRAWN.]

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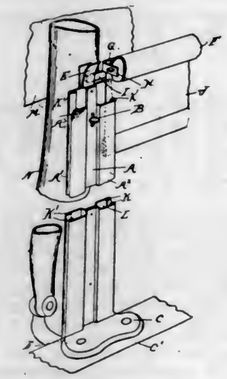
1,226,216. FOLD-COLLAR. HUBBARD F. HURD, Troy, N. Y., assignor to Cluett, Peabody & Co. Inc., Troy, N. Y., a Corporation of New York. Filed Sept. 1, 1916. Serial No. 118,028. (Cl. 2—67.)



A high fold-collar having a band and a folded-over top, the lower edge of the folded-over top being cut away at the sides to fit freely over the shoulders of the wearer, the middle and end portions of the top being of greater width than said cut-away portions.

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1,226,217. CURTAIN CONSTRUCTION FOR VEHICLES. JEREMIAH P. JOHNSON, Detroit, Mich. Filed May 16, 1914. Serial No. 838,997. (Cl. 21—62.)



1. In a top for vehicles, the combination with a canopy top, of grooved vertical guides demountably secured to the bows of said canopy top, a curtain roll frame detachably engaging the upper ends of said guides and having a sealing engagement with the depending flange of the canopy top, a curtain roll mounted in said frame, and a curtain on said roll having its edges engageable with the grooves of said guides to form a weather seal.

2. In a top for vehicles, a grooved guide, a draw curtain having a corded edge for engaging said grooved guide, and a roll on which said curtain is wound cut away at its end to provide clearance for the corded edge.

3. In a top for vehicles, vertical grooved guides, a draw curtain having its edges engageable with said guides to form a sealing joint, a roller on which said curtain is wound, and a frame for carrying said roller detachably engaging the upper ends of said guides and having a laterally-extending flange for forming a sealing engagement with the depending flange of the canopy.

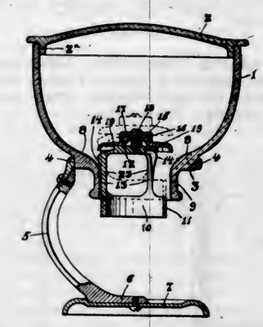
4. In a collapsible top for vehicles, a curtain roller, a draw curtain mounted thereupon, vertical guides grooved to receive the curtain edges to form a weather sealed joint therewith, and a bar having a lug at each end for supporting the roller, and a second pair of terminal lugs for detachably engaging the bar with said guides.

5. In a top for vehicles, a roller, a draw curtain mounted thereupon, a non-revoluble frame supporting the roller, and vertical guides formed at their upper ends to engage lugs projecting endwise from said frame and grooved to receive the curtain edges to form a weather sealed joint therewith.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,218. DISPENSING DEVICE. OTTO KARCHER, Canton, Ohio. Filed Feb. 3, 1915. Serial No. 5,811. (Cl. 65—59.)



1. A dispensing device comprising a containing receptacle provided with an aperture in the bottom thereof, an inverted dispensing cup slidably mounted within said aperture and a hinged cover provided upon the top of said dispensing cup said hinged cover being for the purpose of preventing breaking of any articles contained in said dispensing device which might extend beneath said cover when the dispensing cup drops to its normal position.

2. A dispensing device, comprising a containing receptacle provided with an aperture in the bottom thereof, an inverted dispensing cup slidably mounted within said aperture and a plurality of hinged covers provided upon the top of said dispensing cup.

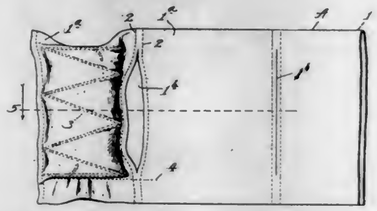
3. A dispensing device comprising a containing receptacle provided with an inclined bottom having an aperture located in the lowest point thereof, a downwardly disposed neck located around said aperture, an inverted dispensing cup slidably mounted within said neck, said cup provided with apertures, vertical ribs provided around the side wall of said cup, said ribs being outwardly flared at their upper extremities and a plurality of hinged segmental covers provided upon the top of said cup, said hinged segmental covers being for the purpose of preventing breaking of any of the articles contained in said dispensing device which might extend beneath said covers when the dispensing cup drops to its normal position.

4. A dispensing device comprising a containing receptacle provided with an inclined bottom having an aperture located in the lowest point thereof, a downwardly disposed neck located around said aperture, an inverted dispensing cup slidably mounted within said neck, said cup provided with apertures, vertical ribs provided around the side wall of said cup, said ribs being outwardly flared at their upper extremities and a plurality of hinged segmental covers provided upon the top of said cup, each of said segmental covers provided with a downwardly disposed flange around its outer edge, said hinged segmental covers being for the purpose of preventing breaking of any of the articles contained in said dispensing device which might extend beneath said covers when the dispensing cup drops to its normal position.

5. A dispensing device, comprising a containing receptacle provided with an inclined bottom having an aperture located in the lowest point therein, an inverted dispensing cup slidably mounted within said aperture, said cup provided with apertures in its side wall, a spaced plate connected at the top of said cup, a downwardly disposed peripheral annular flange provided upon said plate, the lower edge of said flange being spaced from the top of said cup, a series of segmental covers located upon the top of said cup, enlarged heads provided upon the inner ends of said segmental covers, inclined inner faces provided upon said heads, said heads being located beneath said spaced plate, said hinged segmental covers being for the purpose of preventing breaking of any of the articles contained in said dispensing device which might extend beneath said covers when the dispensing cup drops to its normal position.

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1,226,219. SPRING STRUCTURE. ISAAC KARPEN, Chicago, Ill., assignor to S. Karpen & Bros., Chicago, Ill., a Corporation of West Virginia. Filed Aug. 6, 1915. Serial No. 44,061. (Cl. 5—13.)



1. In a spring structure of the character set forth, the combination of a plurality of elongated flexible envelops, each containing a plurality of springs, and a plurality of flexible envelops extending through slits in said first named envelops and each containing a plurality of springs.

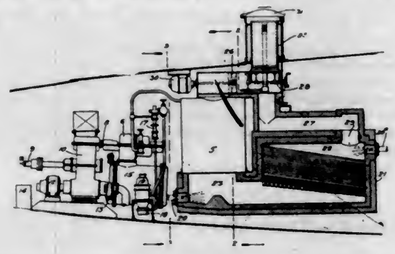
[Claims 2 to 6 not printed in the Gazette.]

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1,226,220. POWER-DEVELOPING APPARATUS. ALEXANDER T. KASLEY, Swissvale, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Sept. 22, 1915. Serial No. 52,042. (Cl. 60—3.)

1. In an organized apparatus of the character described, a power developing apparatus, refractory heat storing material in open communication with the power developing apparatus and means for creating a continuous flow of heat carrying fluid through the refractory material, the power developing apparatus, and back to the refractory material.

2. In an organized apparatus of the character described, a pressure generator, a furnace for delivering heat to said generator, a heat storing apparatus between the furnace and said generator, and means for creating a flow of gases from the furnace through the heat storing apparatus and to the generator.



3. In an organized power developing apparatus for submarines, a heat conserving device, a furnace for delivering heat to said device, a heat storing apparatus between the furnace and the device, means for creating a flow of the products of combustion from the furnace through the heat storing apparatus and to the device while the furnace is in operation and for creating a continuous flow of heat carrying fluid through the heat storing apparatus, the device, and back to the heat storing apparatus when the furnace is not in operation.

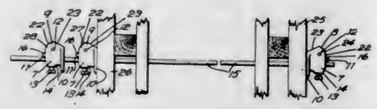
4. In a power developing apparatus for submarines, a fluid pressure generator, a furnace for delivering heat to said generator, a heat storing apparatus located between said furnace and said generator and means for creating a continuous flow of heat carrying fluid from said heat storing apparatus, to said generator, and back to said heat storing apparatus when said furnace is not in operation.

5. In a power plant for submarines, a fluid pressure generator, a furnace for delivering heat to said generator, a second furnace, and a heat storing apparatus between said second furnace and said generator, and through which the products of combustion from the second burner pass in passing to the generator.

[Claims 6 to 14 not printed in the Gazette.]

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1,226,221. ADJUSTABLE CLAMP. EDWARD O. KEATOR, Cincinnati, Ohio. Filed Sept. 11, 1916. Serial No. 119,364. (Cl. 24—134.)



1. An adjustable clamp comprising a body portion having a series of supporting faces extending in angular relation with one another and a passage extending through the body portion in alinement with the faces and spaced at varying distances from one face and its adjacent face, said passage being adapted to receive an object to be clamped, and means mounted in the body portion adapted to retain the object in the passage.

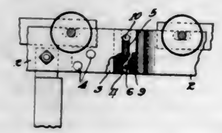
2. An adjustable clamp comprising a body portion having a series of supporting faces extending in angular relation with one another, a passage extending through the body portion in alinement with the faces and spaced at varying distances from one face and its adjacent face, and a second passage intercepting the first mentioned passage and extending through the body portion from one of the supporting faces, said passages being adapted to receive an object to be clamped, and means mounted in the body portion adapted to retain the object in its mounting passage.



3. An adjustable clamp comprising a body portion having a series of supporting faces extending in angular relation with one another and having a passage extending through the body portion from one of the supporting faces and another passage intercepting the first mentioned passage and extending transversely of the body portion, said second mentioned passage extending parallel with the supporting faces and spaced at a greater distance from one than from the adjacent supporting face, an eccentric rotatively mounted on the body portion and extending into the first mentioned passage, and means intercepting the passages, adapted to move an object located in the first mentioned passage into position to be engaged by the eccentric, and to secure an object located in the second mentioned passage against displacement therefrom.

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1,226,222. REVERSIBLE COUPLING FOR GRAVITY-CARRIERS. WINTHROP C. KELLOGG, Wilkinsburg, Pa., assignor to Mathews Gravity Carrier Company, Ellwood City, Pa., a Corporation of Pennsylvania. Filed Dec. 18, 1915. Serial No. 67,585. (Cl. 189—36.)

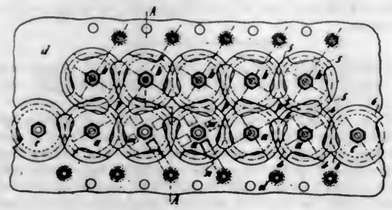


1. A coupling for gravity carriers, comprising a female member composed of bars arranged with a recess between them, a slot extending vertically through both of said bars, a bolt passing through said slots, and a male member having upper and lower recesses forming a T-head, either one of said recesses being arranged to engage the bolt extending through the slots in the female member, substantially as described.

2. A coupling for gravity carriers, comprising a female member having a vertical recess, a slot extending vertically through both walls of said recess, a bolt passing through said slots, and a male member arranged to project into said recess and having a T-head, either side of the head being arranged to engage the bolt extending through the slots in the female member, substantially as described.

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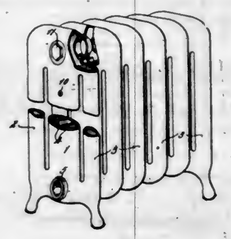
1,226,223. LACE-BRAIDING MACHINE. EMIL KRENZLER, Barmen, Germany. Filed Oct. 10, 1913. Serial No. 794,477. (Cl. 28—4.)



A lace braiding machine comprising a chain of main race circles having two-horned drivers, a chain of auxiliary race circles interposed in the chain of main race circles, said auxiliary race circles having four-horned drivers, a chain of race circles alongside said auxiliary race circles and having four-horned drivers coöperating with the drivers of the auxiliary race circles for moving a carrier, and means for locking the drivers of the auxiliary race circles after each quarter turn thereof.

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1,226,224. RADIATOR. HOWARD J. LAMBERT, Portland, Oreg., assignor of one-half to Herbert L. Frank, Portland, Oreg. Filed Sept. 9, 1915. Serial No. 49,771. (Cl. 237—72.)



1. In a radiator, a plurality of radiator sections adapted to be coupled together, with means for connecting the same to form a separate passageway through all of said radiator sections, each radiator section having integral portions therein forming a separate chamber in open communication at one end with said separate passageway through said radiator sections, each of said separate chambers being open at its other end within the radiator section, and each radiator section having water containing spaces adjacent the chamber formed therein, and means for supplying a heating medium to said separate passageway and said chambers within said radiator sections, whereby to cause a circulation of the water contained in each radiator section.

2. In a radiator, a plurality of radiator sections adapted to be coupled together, with means for connecting the same to form a separate passageway through all of said radiator sections, each radiator section having cast therein a separate chamber in open communication at one end with said separate passageway through said radiator sections, each of said chambers being open at its other end within the radiator section, and each radiator section having water containing spaces adjacent the chamber formed therein, means for supplying a heating medium to said separate passageway and said chambers within said radiator sections, whereby to cause a circulation of the water contained in each radiator section, and means connecting the opposite ends of said several radiator sections in open communication with each other.

3. In a radiator of the character referred to, a plurality of radiator sections, each section having a plurality of radiator columns, one of the radiator columns of each radiator section being partitioned with integrally formed partitions to form a separate chamber therein for a part of its length, means for connecting said radiator sections together to form a separate passageway through said several radiator sections, with said passageway in open communication only with the separate chamber in each of said radiator sections, and means for connecting a source of heating medium to said separate passageway through said radiator sections and said separate chambers, substantially as described.

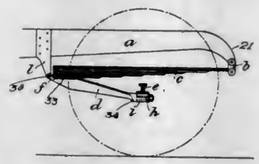
4. In a radiator of the character described, a radiator section having a plurality of radiator columns, one of said columns being integrally partitioned to form a separate chamber or passageway therein extending longitudinally thereof, and means forming a separate, transverse passageway through said radiator in open communication with said separate chamber, said chamber being open at its opposite end within said radiator section, substantially as described.

5. In a radiator, two radiator sections, each composed of a plurality of radiator columns, one column of each radiator section being integrally partitioned to form a separate chamber therein open at its upper end, and terminating at its lower end in a separate transverse passageway through said radiator sections, means connecting said radiator sections through their adjacent

walls at their upper ends, means connecting said radiator sections through their adjacent walls and through said transverse passageway at their lower ends, and means for connecting a source of heating medium into said transverse opening and said separate chambers, substantially as and for the purpose described.

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1,226,225. SPRING SUPPORTING DEVICE FOR VEHICLES. AXEL JULIUS LAURITS LASSEN, Copenhagen, Denmark. Filed Apr. 29, 1915. Serial No. 24,656. (Cl. 267—S.)



1. A spring support for a vehicle comprising an axle, a frame, a longitudinal lever having a stiff connection with said axle and a pivotal connection with said frame, and a longitudinal leaf spring disposed between said axle and said frame and having a pivotal connection with said frame and a rigid connection with said lever at a point between its said connections.

2. A spring support for a vehicle comprising an axle, a frame, a longitudinal lever having a stiff connection with said axle and a pivotal connection with said frame, and a longitudinal leaf spring disposed between said axle and said frame and having a pivotal connection with said frame and a rigid connection with said lever at a point adjacent to its connection with said frame.

3. A spring support for a vehicle comprising an axle, a frame, a longitudinal lever provided at one end with a longitudinal stud supported in a transverse bearing of said axle and at its other end with a pivotal connection with said frame, and a longitudinal leaf spring disposed between said axle and said frame and having a pivotal connection with said lever at a point between its said connections.

4. A spring support for a vehicle comprising an axle, a frame, a longitudinal lever having a stiff connection with said axle and a pivotal connection with said frame, and a longitudinal leaf spring having a pivotal connection with said frame and a rigid connection with said lever at a point between its said connections, said pivotal connections being disposed one in advance of said axle and the other in rear thereof.

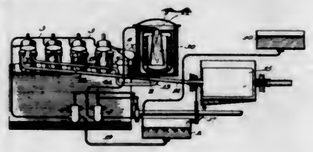
5. A spring support for a vehicle comprising an axle, a frame having a dependent projection forward of said axle and a dependent projection in rear thereof, a lever having a stiff connection with said axle and a pivotal connection with one of said dependent projections, and a leaf spring having a pivotal connection with the other dependent projection and a rigid connection with said lever between its said connections.

[Claims 6 to 9 not printed in the Gazette.]

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1,226,226. RECUPERATING-CYCLE FOR ENGINES. LOUIS JULES JEAN-BAPTISTE LE ROND, Paris, France. Filed Jan. 31, 1908. Serial No. 413,565. (Cl. 60—29.)

1. A method of operating a thermal motor which is driven by the expansion of aeriform fluids, which consists in driving said motor by means of a mixture of said aeriform fluids, said fluids being put into action to drive the motor at the same initial temperature, one of said fluids being condensable to the liquid state during the expansion thereof when its initial temperature is lowered, and the other of said fluids being non-condensable at the working temperatures and pressures of said motor, the initial pressure of said mixture of fluids when they are put into operation to drive said motor being such that said condensable fluid is in a state of saturation at said initial temperature, the fall in temperature of said condensable fluid being less than that of said non-condensable fluid for the same amount of adiabatic expansion, whereby, when said mixture of fluids expands, the non-condensable fluid abstracts the heat of vaporization of said condensable fluid, and causes said condensable fluid to liquefy as said expansion continues, the proportions of said condensable fluid in said mixture being such that it is substantially completely condensed at the completion of the expansion of said mixture of fluids.



2. A method of operating a thermal motor which is driven by the expansion of aeriform fluids, which consists in driving said motor by means of a mixture of said aeriform fluids, said fluids being put into action to drive the motor at the same initial temperature, one of said fluids being condensable to the liquid state during the expansion thereof when its initial temperature is lowered, and the other of said fluids being non-condensable at the working temperatures and pressures of said motor, the initial pressure of said mixture of fluids when they are put into operation to drive said motor being such that said condensable fluid is in a state of saturation at said initial temperature, the fall in temperature of said condensable fluid being less than that of said non-condensable fluid for the same amount of adiabatic expansion, whereby when said mixture of fluids expands, the non-condensable fluid abstracts the heat of vaporization of said condensable fluid, and causes said condensable fluid to liquefy as said expansion continues.

3. A method of operating a steam engine, which consists in operating it by means of a mixture of air and steam having a given initial temperature and pressure, said temperature being that of the saturation of steam at said pressure, the proportion of steam being such that said steam is substantially completely condensed at the completion of the expansion of said mixture, to drive said engine.

4. A method of operating a steam engine, which consists in operating it by means of a mixture of air and steam having a given initial temperature and pressure, said temperature being that of the saturation of steam at said pressure.

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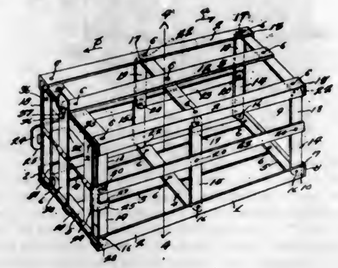
1,226,227. FOLDABLE CRATE. IRA LUCY, Long Pine, Nebr. Filed May 3, 1916. Serial No. 95,123. (Cl. 220—132.)

1. A collapsible crate comprising top and bottom sections having longitudinal side corner bars angular in cross section, side sections comprising link bars having their adjacent ends pivotally united, and their upper and lower ends pivotally connected to the side corner bars of the bottom and top sections, said link bars of the side sections having abutment stops to contact with the side corner bars of the top and bottom section, to prevent the link bars of the side sections from collapsing improperly, elongated bars pivotally connected to the adjacent ends of the link bars of the side sections, and end sections pivotally connected to the bottom section.

2. A collapsible crate comprising top and bottom sections having longitudinal side corner bars angular in cross section, side sections comprising link bars having their adjacent ends pivotally united, and their upper and lower



ends pivotally connected to the side corner bars of the bottom and top sections, said link bars of the side sections having abutment stops to contact with the side corner bars of the top and bottom section, to prevent the link bars of the side sections from collapsing improperly, elongated bars pivotally connected to the adjacent ends of the link bars of the side sections, and end sections pivotally connected to the bottom section, the elongated bars which connect the adjacent ends of the link bars of the side sections, each having one of its ends provided with a U-shaped part terminating in a lug to engage one edge of one of the link bars of the side section, thereby preventing the crate from collapsing in a direction opposite to the improper direction.



3. A collapsible crate comprising top and bottom sections having longitudinal side corner bars angular in cross section, side sections comprising link bars having their adjacent ends pivotally united, and their upper and lower ends pivotally connected to the side corner bars of the bottom and top sections, said link bars of the side sections having abutment stops to contact with the side corner bars of the top and bottom section, to prevent the link bars of the side sections from collapsing improperly, elongated bars pivotally connected to the adjacent ends of the link bars of the side sections, and end sections pivotally connected to the bottom section, said top and bottom sections having abutment means for one of the hinged end sections, the other hinged end section consisting of two parts, said parts comprising pivotally united bars, and means on the adjacent ends of the pivotally united bars of the two parts of the end section, to prevent the two parts of the end section from collapsing outwardly.

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1,226,228. WRENCH. MORTIMER MCKINZIE, New York, N. Y., assignor of one-third to Joseph Potter, New York, N. Y. Filed Aug. 9, 1916. Serial No. 113,940. (Cl. 81—119.)



1. In a wrench, having a shank, a head at one end of said shank having a longitudinal recess in one side thereof, a transverse opening communicating with said recess, and a transverse recess adjacent to said opening and communicating with and located at one side of said longitudinal recess.

2. In a wrench, having a shank, a head at one end of said shank having a longitudinal recess in one side thereof, a transverse opening communicating with said longitudinal recess, and transverse recesses adjacent to and upon both sides of said opening and communicating with and at both sides of said longitudinal recess.

1,226,229. METALLIC COMPOUND FOR INTERNAL ADMINISTRATION. WHARTON B. MCLAUGHLIN, New York, N. Y. Filed Aug. 5, 1916. Serial No. 113,316. (Cl. 167—7.)

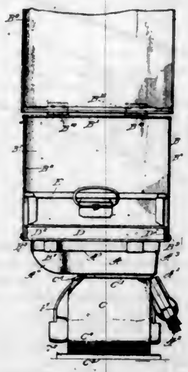
1. A metallic compound for internal administration consisting of an iron or calcium soap dissolved in a sufficient quantity of a solvent inert and non-injurious in its therapeutic effect.

2. A metallic compound for internal administration, consisting of a solution of a calcium or iron soap in a soap-forming acid.

3. A metallic compound for internal administration consisting of a solution of an iron soap in stearic acid.

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1,226,230. COMBINATION SAD-IRON AND HEATING UTENSIL. JEREMIAH B. MCLENE, Chicago, Ill. Filed Dec. 22, 1916. Serial No. 138,334. (Cl. 126—275.)



1. The combination of a sad iron and means for supporting said iron in an inverted or upturned position, and an oven adapted to contain the iron and holding means when not in use and having on its bottom a plurality of lugs adapted to interlock with the base of the iron to prevent the relative displacement of the iron and oven.

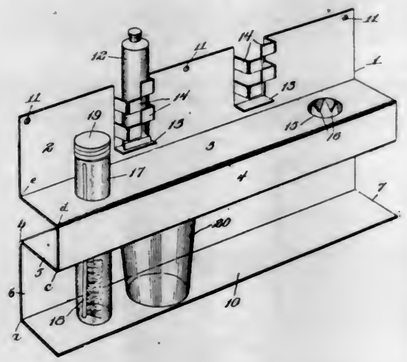
3. The combination of a sad iron, a U-shaped holder for supporting the iron in an inverted position with its handle between the sides of said holder, a base plate for said holder, an oven adapted to contain the iron in inverted position in its holder when not in use and having a series of latches on its bottom disposed on a line conformed to the contour of the bottom of the iron and adapted to interlock with the bottom of the iron to hold the oven and iron against relative displacement, and a hinged door for said oven adapted to be normally maintained closed by gravity.

5. The combination of a sad iron having a heated bottom member, a body portion and a handle on the body portion, a support for the iron comprising a base plate formed to contact with the surface upon which the holder is placed along the edges only and a U-shaped portion open at its ends and top and fastened to said base plate and arranged to support the body of the iron along its upper edges with the handle of the iron disposed between the sides of said U-portion, an oven having a hinged door as its front wall and adapted to contain the iron and its holder in their assembled relation when not in use, said oven having a plurality of under cut projections on its bottom disposed on a line conformed to the contour of the bottom member of the iron so as to interlock therewith to maintain the oven in place, a tray adapted to fit within the bottom of the oven when in use and to fit in inverted position over the bottom of the iron when not in use, and a removable grate having supports arranged to maintain it

spaced from the bottom of the oven when in use and being adapted to be positioned against the rear wall of the oven when the iron and holder are placed in said oven.

[Claims 2, 4, 6, and 7 not printed in the Gazette.]

1,226,231. HOLDER FOR TOILET ARTICLES. JAMES EDWARD MACK, Ray Brook, N. Y. Filed Mar. 13, 1916. Serial No. 83,916. (Cl. 248—63.)



1. A device of the character described comprising a back plate having upper and lower portions, a shelf projecting forwardly from the lower portion of the back plate, and a channeled offset portion connecting the upper and lower portions of the back plate and arranged above the shelf, said offset presenting top, bottom and front walls, said top and bottom walls having openings for the passage of articles to rest upon the shelf.

3. A holder of the character described comprising a body of sheet metal consisting of a back plate, a flange free shelf projecting forwardly from the lower portion of the back plate, a supporting member projecting forwardly from the back plate above the shelf and perforated to receive and support articles designed to rest upon the shelf the said supporting member having means for frictionally engaging the article, and struck out article supporting means upon the back plate above said supporting member.

9. A device of the character described including a sheet metal back plate having a slot of oblong rectangular shape formed therein, a shelf projecting from the base of said slot and formed by a portion of the metal displaced to form the same, and sets of retaining tongues arranged in spaced and superposed relation along the side walls of the slot and bent therefrom, said sets of tongues having forwardly projecting portions and inwardly projecting portions providing a cage-like receptacle, the opposite sets of tongues being arranged in staggered relation to each other.

[Claims 2 and 4 to 8 not printed in the Gazette.]

1,226,232. DENTAL CEMENT. JOSEPH EDGAR MAHAN, Swissvale, Pa., assignor to Lee S. Smith and Son Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 13, 1916. Serial No. 103,412. (Cl. 106—6.)

1. A dental cement containing copper silicate.

2. A dental cement containing metallic oxids and copper silicate.

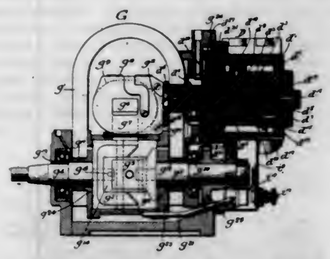
3. A dental cement containing about 2½ per cent. of copper silicate.

4. A dental cement containing metallic oxids with about 2½ per cent. of copper silicate.

5. A dental cement containing oxids of zinc, bismuth, magnesium, and manganese with copper silicate.

[Claim 6 not printed in the Gazette.]

1,226,233. IGNITION-DYNAMO. CHARLES THOMAS MASON, Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed June 19, 1915. Serial No. 35,155. (Cl. 123—149.)



10. A system for generation and distribution of electric currents among a plurality of translating devices in determinate order, comprising the following instrumentalities: a source of current, a trunk conductor connected thereto, and a distributer comprising a fixed shell and a driven rotor centered with respect to the shell, a plurality of sets of distributing terminals supported upon said shell in circles spaced apart from each other, a circular series of fixed terminals also supported on the shell and all connected to said trunk conductor, a plurality of insulated brush contacts on the rotor, each adapted to sweep over one determinate circle or arc of distributing terminals and no other, a corresponding number of insulated brush contacts angularly displaced from each other, but all arranged to sweep over the circle or arc of terminals connected to the trunk conductor, and means connecting said brush contacts in pairs, each pair adapted in the course of its travel with the rotor to connect the trunk conductor through one of its terminals to one or the other of the unit terminals in one of the distributing sets.

62. An apparatus for distributing ignition current from a trunk point to a plurality of spark devices including in combination, a plurality of receiving terminals each of which is adapted to be connected to the spark device of an internal combustion engine, said receiving terminals being arranged in a plurality of groups, a series of contacts mechanically separated but electrically connected together and to said trunk conductor, and means for simultaneously selecting one of said groups of receiving terminals at a time and connecting a unit terminal therein with an associated unit contact in said series of contacts connected to said trunk conductor.

[Claims 1 to 9, and 11 to 61 not printed in the Gazette.]

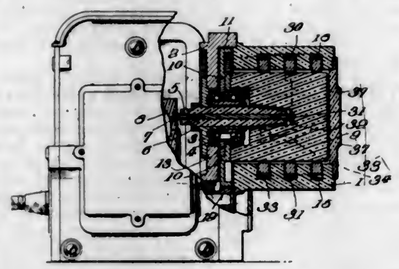
1,226,234. DISTRIBUTER FOR IGNITION DEVICES. CHARLES THOMAS MASON, Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Sept. 15, 1916. Serial No. 120,326. (Cl. 123—149.)

1. A distributer for ignition systems including in combination a trunk conductor adapted to be connected with a source of current, a casing having a plurality of contacts arranged in circular rows, means for connecting the contacts in one of said rows together and to the trunk conductor, cables connected with the remaining rows of contacts and adapted to be connected to translating devices, a plurality of pairs of traveling connected contacts arranged so that one contact of each pair will engage alternately the contacts connected to the trunk conductor while the other contacts of each pair engage respectively and alternately the contacts connected to the translating devices.

2. A distributer for ignition systems including in combination a trunk conductor adapted to be connected with a source of current, a casing having a plurality of contacts arranged in circular rows, means for connecting



the contacts in one of said rows together and to the trunk conductor, cables connected with the remaining rows of contacts and adapted to be connected to translating devices, a rotating part located within said casing and having a plurality of pairs of traveling connected contacts arranged so that one contact of each pair will engage alternately the contacts connected to the trunk conductor while the other contacts of each pair engage respectively and alternately the contacts connecfed with the translating devices.



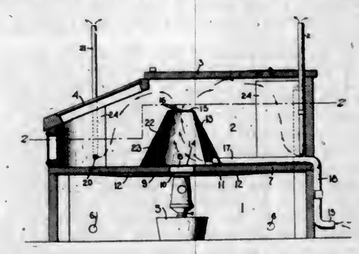
3. A distributer for ignition systems including in combination a trunk conductor adapted to be connected with a source of current, a casing having a plurality of contacts arranged in circular rows, means for connecting the contacts in one of said rows together and to the trunk conductor, cables connected with the remaining rows of contacts and adapted to be connected to translating devices, a rotating part located within said casing and having a plurality of pairs of traveling connected contacts arranged so that one contact of each pair will engage alternately the contacts connected to the trunk conductor while the other contacts of each pair engage respectively and alternately the contacts connected with the translating devices, a cap plate connected to said casing closing the end thereof and covering said rotating part.

4. A distributer for ignition systems including in combination a trunk conductor adapted to be connected with a source of current, a casing having a plurality of contacts arranged in three circular rows, a rotating part located within said casing, means for connecting the central rows of said contacts, means carried by the rotating part for connecting said central row of contacts to the trunk conductor, a plurality of pairs of contacts carried by said rotating part and arranged so that one contact of each pair will engage the central row of contacts on the casing while the other contacts of each pair engage respectively, and alternately the contacts on said casing.

5. A distributer including in combination a bearing sleeve, a bushing of insulating material extending through said sleeve, a trunk conductor extending through said bushing and having a yielding contact at its outer end, a part mounted to rotate upon said sleeve, a plate located centrally of the rotating part and adapted to be engaged by said yielding contact, a contact carried by the outer face of said rotating part electrically connected with said plate, an outer casing surrounding said rotating part, a plurality of circular rows of brushes carried by the outer casing and normally projecting slightly beyond the inner face thereof, means for connecting the brushes of the central row, cables connected to the brushes of the outer rows and adapted to be connected with translating devices respectively, said central row of brushes being adapted to engage the contact member on the rotating part whereby said brushes are continuously connected with the trunk conductor, pairs of contacts carried by the rotating part and disposed so that one contact in each pair is adapted to engage alternately the brushes in the central row, while the other contacts of each pair engage respectively and alternately the brushes in the outer rows.

[Claims 6 to 10 not printed in the Gazette.]

1,226,235. BROODER. FRANK X. MEILE, Boulder, Colo. Filed Nov. 2, 1914. Serial No. 869,719. (Cl. 119—32.)



1. In a brooder, the combination with a casing divided by a horizontal partition to present a lamp chamber and a brooding chamber, the central portion of said partition being made of heat-conducting material and constituting a heat-radiating member and the surrounding portion of the partition having heat-insulating properties, of a lamp in the lamp chamber to heat said heat-radiating member, a plate secured to the upper face of said partition and provided with an opening in line with said heat-radiating member, an inverted cup-shaped air-heating drum secured to said plate and inclosing the heat-radiating member, the upper end of said drum extending well toward the top of the brooding chamber, and having air delivery ports therein, an air inlet pipe leading to the lower end of said drum, a protective screen secured to the peripheral edge of said plate and inclosing the heating drum, and ventilating pipes communicating with the brooding chamber near its bottom below the air delivery ports of the drum.

[Claim 2 not printed in the Gazette.]

1,226,236. METHOD OF MANUFACTURING TIRES. ERWIN E. A. G. MEYER and GEORGE W. SEIBERLING, Detroit, Mich., assignors to Morgan & Wright, a Corporation of Michigan. Continuation of application Serial No. 868,031, filed Oct. 22, 1914. This application filed Jan. 22, 1916. Serial No. 73,540. (Cl. 18—53.)

1. The method of manufacturing tires which consists in making the carcass of thread or cord associated with rubber annular and substantially U-shaped in cross-section, subjecting such annular structure to the action of heat to cause the rubber component to soften and thereby lessen its function of holding the threads or cords, where by the threads or cords are free to adjust themselves with respect to conditions of tension and relationship with one another, and completing the process by vulcanization under the compacting pressure of rigid mold members.

2. In the manufacture of tires, the method which consists in assembling the fibrous parts with rubber upon a ring core, the rubber serving to hold the fibrous parts in their assembled positions, heating the structure thus formed until the rubber loses its effective hold leaving the fibrous parts free to readjust themselves, maintaining the heat at the vulcanizing temperature after the readjustment of the parts until the rubber is partly vulcanized to a sufficient extent to cushion the fibrous parts and to permanently maintain the readjustment, subjecting the structure to the action of rigid mold sections placed under a compacting pressure, and while thus subjected completing the vulcanization.

3. In the manufacture of tires, the method which consists in assembling the fibrous parts with rubber upon a ring core, the rubber serving to hold the fibrous parts in their assembled positions, simultaneously subjecting the structure thus formed to a fluid pressure and to heat until the rubber loses its effective hold leaving the fibrous parts free to readjust themselves, maintaining the heat at the vulcanizing temperature after the readjustment of the parts until the rubber is partially-vul-

canized to a sufficient extent to cushion the fibrous parts and to permanently maintain the readjustment, subjecting the structure to the action of rigid mold sections placed under compacting pressure, and while thus subjected completing the vulcanization.

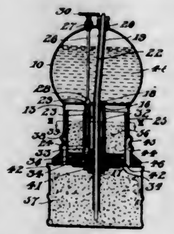
4. In the manufacture of tires, the method which consists in assembling the fibrous parts with rubber upon a ring core, the rubber serving to hold the fibrous parts in their assembled positions, simultaneously subjecting the structure thus formed to a fluid pressure and to heat until the rubber loses its effective hold leaving the fibrous parts free to readjust themselves, maintaining the heat at the vulcanizing temperature after the readjustment of the parts until the rubber is partially vulcanized to a sufficient extent to cushion the fibrous parts and to permanently maintain the readjustment, cooling the structure under pressure, subjecting the structure to the action of rigid mold sections placed under compacting pressure, and while thus subjected completing the vulcanization.

5. In the manufacture of tires, the method which consists in assembling the fibrous parts with rubber upon a ring core the rubber serving to hold the fibrous parts in their assembled positions, subjecting the structure thus formed to a preliminary heating below the vulcanizing point and then raising the temperature to the vulcanizing point thereby destroying the effective hold of the rubber on the fibrous parts and leaving said parts free to readjust themselves, maintaining the heat at the vulcanizing temperature after the readjustment of the parts until the rubber is partly vulcanized to a sufficient extent to cushion the fibrous parts and to permanently maintain the readjustment; subjecting the structure to the action of rigid mold sections placed under a compacting pressure, and while thus subjected completing the vulcanization.

[Claims 6 to 12 not printed in the Gazette.]

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1,226,237. ACETYLENE-LAMP. PETER MORA, Clinton, Ind. Filed Nov. 18, 1916. Serial No. 132,080. (Cl. 48—23.)



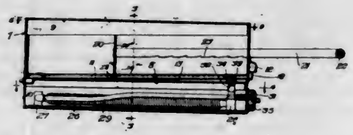
1. An acetylene gas lamp comprising a water receptacle, an inverted bowl-shaped casing arranged within the bottom of said receptacle, a sleeve axially arranged within said casing, a water supply pipe terminating within said sleeve communicating with said receptacle, a guide member having a tubular portion frictionally arranged over the said sleeve and having an outlet port communicating with the open end of the said pipe, an auxiliary container arranged within the said casing, a packing disk engaging the said container threaded into the said sleeve, a needle valve extending through the said receptacle having its lower end movably arranged within the said pipe, a turn knob upon the upper end of the said valve, a curved gas outlet tube carried by the said casing extending through the said receptacle projecting exteriorly thereof.

2. An acetylene gas lamp comprising a water receptacle, an inverted bowl-shaped casing arranged within the bottom of said receptacle, a sleeve axially arranged within said casing, a water supply pipe terminating within said sleeve communicating with said receptacle, a guide member having a tubular portion frictionally arranged over the said sleeve and having an outlet port communicating with the open end of the said pipe, an auxiliary container arranged within the said casing, a packing disk engaging the said container threaded into the said sleeve, a needle valve extending through the said receptacle having its lower end movably arranged within the said pipe, a turn knob upon the upper end of the said valve, a curved gas outlet tube carried by the said casing extending through the said receptacle projecting exteriorly thereof, a protecting annulus carried by the said receptacle surrounding the projecting free end of the burner tube, a main container positioned in axial alinement to the said casing removably secured to the latter, a valved gas communicating means between the said main container and said burner tube within the annulus, and water supply means for the said main container.

3. An acetylene gas lamp comprising a water receptacle, an inverted bowl-shaped casing arranged within the bottom of said receptacle, a sleeve axially arranged within said casing, a water supply pipe terminating within said sleeve communicating with said receptacle, a guide member having a tubular portion frictionally arranged over the said sleeve and having an outlet port communicating with the open end of the said pipe, an auxiliary container arranged within the said casing, a packing disk engaging the said container threaded into the said sleeve, a needle valve extending through the said receptacle having its lower end movably arranged within the said pipe, a turn knob upon the upper end of the said valve, a curved gas outlet tube carried by the said casing extending through the said receptacle projecting exteriorly thereof, a protecting annulus carried by the said receptacle surrounding the projecting free end of the burner tube, a main container positioned in axial alinement to the said casing removably secured to the latter, a valved gas communicating means between the said main container and said burner tube within the annulus, a water tube extending through the said sleeve terminating within the main container with its upper end forming a valve seat within the receptacle, a tubular valve threaded to the receptacle positioned upon the said seat when the valve is closed, and a flexible cleaning wire longitudinally shiftably arranged through the said tubular valve and water supply tube of the main container.

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1,226,238. ENVELOP-SEALING DEVICE. DOSIER H. MOSTELLER and CHARLES E. KENNEDY, Chicago, Ill. Filed May 4, 1914. Serial No. 836,333. (Cl. 120—6.)



1. The process of sealing envelops which consists in arranging a quantity of envelops with flaps folded upon the body in loosely stacked relation, in simultaneously treating the gummed flaps to a vapor bath to render the flaps sticky, and thereafter applying to the entire stack of envelops a pressure sufficient to cause the flap of each envelop to firmly adhere to its respective envelop body, substantially as described.

2. The process of sealing envelops which consists in first arranging within a suitable chamber a quantity of envelops in loosely stacked relation with the flapped edges thereof uniformly disposed in proximity to the envelop bodies, secondly, in diffusing for a brief interval through suitable means of communication a quantity of vapor along the flapped edges of the envelops, whereby the intervening spaces and flaps between the envelops are treated to a vapor bath, and, thirdly, in compressing the stack of envelops in a direction transversely of their length and width to cause a firm impingement of each envelop flap against its respective envelop body, substantially as described.



3. The process of sealing envelops which consists in first arranging within a suitable chamber a quantity of envelops in loosely stacked relation all resting on edges adjacent the flaps thereof, each flap being arranged in proximity to its respective envelop body, secondly, in diffusing for a brief interval through suitable means of communication a quantity of vapor along the lower flapped edges of the envelops, whereby the intervening spaces and flaps between the envelops are treated to a bath of vapor which tends to rise in the chamber, and, thirdly, in compressing the stack of envelops in a direction transversely of their length and width to cause a firm impingement of each envelop flap against its respective envelop, substantially as described.

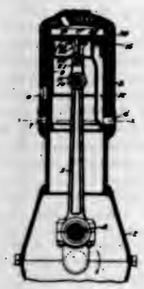
4. An envelop sealing device embodying a chamber within which gummed envelops may be stacked on edge, a trough provided within said chamber arranged adjacent to each of the envelops therein, means for admitting a quantity of steam through the trough into the chamber to soften the gummed flaps of the envelops, and means for applying pressure to each envelop to cause each envelop flap to be firmly compressed against its respective envelop, substantially as described.

5. An envelop sealing device embodying a chamber within which gummed envelops may be stacked on edge, the bottom of said chamber on which said envelops rest being provided with a non-hygroscopic surface, and means for admitting a quantity of steam into the chamber to be diffused therethrough, whereby the gummed envelop flaps are rendered sticky, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

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1,226,239. GAS-ENGINE. ROBERT W. MUIR, Hunter, N. D. Filed Dec. 16, 1912. Serial No. 737,056. (Cl. 123—47.)



1. An internal combustion engine of the four-cycle type comprising a cylinder having inlet and exhaust ports, a piston having passages extending substantially from end to end thereof and communicating continuously with said ports respectively throughout the stroke of said piston, a connecting rod, a valve mounted to revolve on the head of said piston and having a port arranged to register successively with said inlet and exhaust ports, and means actuated by the rocking of said connecting rod for operating said valve.

2. An internal combustion engine of the four-cycle type comprising a cylinder having inlet and exhaust ports and an auxiliary exhaust port, a piston having passages communicating with said ports respectively, a connecting rod for said piston, a valve mounted to revolve on the head of said piston and having a port arranged to communicate successively with the main exhaust port and said inlet port, said valve having a lip or flange that is adapted to cover said auxiliary exhaust port when said piston is at a predetermined point in its suction stroke, and means actuated by the rocking of said connecting rod for operating said valve.

3. An internal combustion engine of the four-cycle type comprising a cylinder having inlet and exhaust ports, a piston having passages therein communicating respectively with said ports, a valve mounted to revolve on the head of said piston and having a port arranged to communicate successively with said passages, a connecting rod for said piston, and arms mounted on said connecting rod and having means for engaging and operating said valve during the rocking movement of said rod.

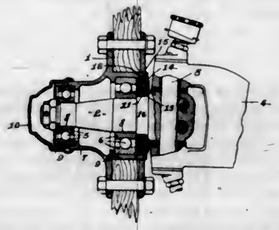
4. An internal combustion engine comprising a cylinder having inlet and exhaust ports, a piston having passages communicating with said ports respectively, a valve mounted to revolve on the head of said piston and having a port arranged to communicate successively with said passages, a connecting rod pivotally connected with said piston and having forked arms of varying length thereon, said valve having depending lugs and fingers of varying length in the path of said forked arms, for the purpose specified.

5. An internal combustion engine comprising a cylinder having inlet and exhaust ports, a piston having passages communicating with said ports respectively, a valve mounted to revolve on the head of said piston and having a port arranged to communicate successively with said passages, a connecting rod pivotally connected with said piston and having forked arms of varying length thereon, said valve having depending lugs and fingers of varying length in the path of said forked arms, one of said arms engaging a finger of said valve to actuate the same while the other arm engages a lug of said valve to prevent overthrow thereof, for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,240. DUST-PROOF CAP. RALPH MURPHY, Syracuse, N. Y., assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y., a Corporation of New York. Filed June 22, 1916. Serial No. 105,172. (Cl. 64—22.)



1. A dust-proof cap for bearings comprising a member, and inner and outer concentric pads supported by said member, and a second member having an annular flange between the pads, substantially as and for the purpose described.

2. The combination with two elements, one of which is rotatably mounted on the other, and antifriction bearings between said elements; of a dust-proof cap including members associated respectively with said elements, one member comprising a ring angular in cross-section and provided with inner and outer concentric annular pads carried in the angular portion thereof, and the other member having a flange extending between the pads, substantially as and for the purpose specified.

3. The combination with two elements, one of which is rotatably mounted on the other, and antifriction bearings between said elements; of a dust-proof cap including members associated respectively with said elements, one member having inner and outer concentric annular pads, and the other member being a ring in the form of a channel in cross-section with the channel facing laterally with one of the side walls of the channel extending into the space between the pads, and the opposite side wall thereof lapping the periphery of the outer pad, substantially as and for the purpose set forth.

4. The combination with two elements, one rotatably mounted on the other, and an antifriction bearing between the elements; of a dust-proof cap comprising mem-

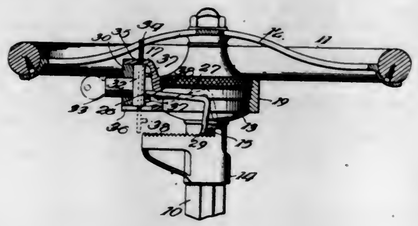
bers associated respectively with said elements, one member being in the form of a ring substantially L-shaped in cross-section and having inner and outer concentric pads, the inner pad being arranged in the angle of said L-shaped member, and the other member comprising a ring in the form of a channel with the open side of the channel facing laterally, the latter member being arranged to inclose the outer pad with one side wall of its channel extending between the pads, substantially as and for the purpose described.

5. The combination with an axle, a wheel having its hub mounted on the axle, and antifriction bearings located in the hub between the axle and said hub; of a dust-proof cap including a member mounted on the axle, and having inner and outer concentric pads, and a second member including a ring fixed to the hub and having a flange extending between the pads, substantially as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,241. LOCKING DEVICE FOR MOTOR-VEHICLES. ASA G. NEVILLE, Wellsburg, W. Va. Filed Nov. 8, 1916. Serial No. 130,212. (Cl. 70—126.)



1. A device of the character described including a body, a locking element carried thereby and shiftable to active position projecting laterally from the body, and a lock mounted upon the body for shifting the said element and provided with a bolt projectable to provide a locking member in the active position of the said element.

2. A device of the character described including a body, a locking element mounted to rock thereon in a plane at substantially right angles to the body, and a lock having a bolt projectable to active position and engaging the said element for simultaneously rocking the locking element to active position.

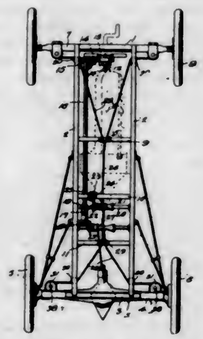
3. A device of the character described including a body, a locking element mounted thereon, and a lock carried by the body and removable at one end thereof, the lock being provided with a bolt projectable to lock the lock body upon the said first mentioned body and engaging said locking element for shifting the said element to active position upon the projection of the bolt.

4. A device of the character described including a hollow casing, an attaching member abutting one end of the casing, means for connecting the said attaching member with the casing and concealed in the casing, a locking element mounted within the casing, and a lock fitted in the opposite end of the casing and provided with a bolt projectable through the casing to active position and engaged with the said locking element for shifting the said element to active position upon the projection of the bolt.

5. A device of the character described including a hollow casing, a locking element mounted to rock therein and provided with spaced lugs, and a lock mounted upon the casing and provided with a bolt projectable to form a locking member and engaged with the said element for rocking the said element to active position upon the projection of the bolt with the said lugs each providing a stop member.

[Claims 6 to 14 not printed in the Gazette.]

1,226,242. LIFTING-JACK MECHANISM FOR MOTOR-VEHICLES. JOHN OBERDIER, Mount Gilead, Ohio. Filed Mar. 20, 1916. Serial No. 85,490. (Cl. 254—86.)



1. In a device of the class described, the combination of a frame comprising a pair of side beams, a plurality of transversely extending bars connected to said beams, axles carried by the ends of said beams, a stem carried by said frame, a spool rotatably carried upon said stem, a pinion connected to said spool, a pinion mounted upon one of said bars, a beveled gear keyed to said last-mentioned pinion, a shaft carried by a plurality of said bars, means for rotating said shaft, a sleeve slidably mounted upon said shaft and being keyed thereto, a beveled gear supported by said sleeve, said beveled gear being adapted to be moved into engagement with said first-mentioned beveled gear, whereby as said shaft is rotated rotary motion will be imparted by said beveled gears and pinions to said spool, housings carried by said axles, pulleys carried within said housings, jack stems connected to said pulleys, cables connecting said pulleys to said spool, whereby as rotary motion is imparted to said spool said cables will be wound thereon so as to operate said pulleys and thus cause said jack stems to be moved into an operative position for lifting and carrying said frame.

2. In a device of the class described, the combination of a frame comprising a pair of side beams, a plurality of transversely extending bars connected to said beams, axles carried by the ends of said beams, a stem carried by said frame, a spool rotatably carried by said stem, a pinion connected to said spool, a pinion mounted upon one of said bars, a bevel gear keyed to said last-mentioned pinion, a shaft carried by a plurality of said bars, means for rotating said shaft, a sleeve slidably mounted upon said shaft and being keyed thereto, a bevel gear supported by said sleeve, said bevel gear being adapted to be moved into engagement with said first-mentioned bevel gear, whereby as said shaft is rotated rotary movement will be imparted by said bevel gears and pinions to said spool, and jack means carried by said frame and coöperating with said spool, whereby said jack means may be moved downwardly into engagement with a support for supporting said frame.

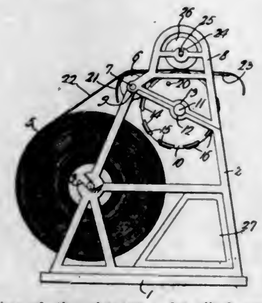
3. In a device of the class described, the combination of a frame comprising a pair of side beams, a plurality of transversely extending bars connected to said beams, axles carried by the ends of said beams, a stem carried by said frame, a spool rotatably carried by said stem, a pinion connected to said spool, a pinion mounted upon one of said bars, a bevel gear keyed to said last-mentioned pinion, a shaft carried by a plurality of said bars, means for rotating said shaft, a sleeve slidably mounted upon said shaft and being keyed thereto, a bevel gear supported by said sleeve, said bevel gear being adapted to be moved into engagement with said first-mentioned bevel gear, whereby as said shaft is rotated rotary movement will be imparted by said bevel gears and pinions to said spool, jack stems having casters carried by said frame, and means connecting said stems to said spool, whereby upon the movement of said spool said stems may be driven downwardly into engagement with a support for movably supporting said frame.

4. In a device of the class described, the combination of a frame comprising a pair of side beams, a plurality of transversely extending bars connected to said beams, axles carried by the ends of said beams, a stem carried by said frame, a spool rotatably carried by said stem, a pinion connected to said spool, a pinion mounted upon one of said bars, a bevel gear keyed to said last-mentioned pinion, a shaft carried by a plurality of said bars, means for rotating said shaft, a sleeve slidably mounted upon said shaft and being keyed thereto, a bevel gear supported by said sleeve, said bevel gear being adapted to be moved into engagement with said first-mentioned bevel gear, whereby as said shaft is rotated rotary movement will be imparted by said bevel gears and pinions to said spool, closed housings carried upon said axles, said housings having side openings, grooved pulleys carried entirely within said housings, jack stems passing through said housings and carried by said pulleys, cables connected to said spool and passing through the openings of said housings and being secured to said grooved pulleys and wound thereon, whereby upon the movement of said pulleys said cables will turn said pulleys so as to move said jack stems into engagement with a support for supporting said frame.

5. In a device of the class described, the combination of a frame comprising a pair of side beams, a plurality of transversely extending bars connected to said beams, axles carried by the ends of said beams, a stem carried by said frame, a spool rotatably carried by said stem, a pinion connected to said spool, a pinion mounted upon one of said bars, a bevel gear keyed to said last-mentioned pinion, a shaft carried by a plurality of said bars, means for rotating said shaft, a sleeve slidably mounted upon said shaft and being keyed thereto, a bevel gear supported by said sleeve, said bevel gear being adapted to be moved into engagement with said first-mentioned bevel gear, whereby as said shaft is rotated rotary movement will be imparted by said bevel gears and pinions to said spool, housings positioned upon said axles, each of said housings comprising an upper and lower section, said sections being clamped together so as to fix said housings upon said axles, said housings provided with alined vertical openings and with side openings, grooved pulleys positioned entirely within said housings, jack stems passing through said vertical alined openings and through said pulleys, cables connecting said cables to said spool, said cables passing through said side openings, whereby said spool may be rotated so as to cause said cables to turn said pulleys and thereby move the jack stems into engagement with a support for carrying said frame.

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1,226,243. PAPER-ROLL HOLDER AND PRINTING DEVICE. CHARLES HAZELTON O'CONNOR, Sault Ste. Marie, Ontario, Canada. Filed Feb. 14, 1916. Serial No. 78,237. (Cl. 101—219.)



1. A device of the character described embodying a frame having an upper hinged portion, and means below said portion for holding a roll of paper, a rotatable printing roll carried by the frame, said portion of the frame being swingable upwardly away from the printing roll, said portion of the frame having means for supporting the paper for movement over the printing roll in contact with the upper portion thereof, and means carried by said portion of the frame for holding the paper upon the printing roll.

2. A device of the character described embodying a frame having a lower portion and an upper portion hinged thereto, the lower portion of the frame having means for holding a roll of paper, and having seats, a printing roll having a shaft seatable in said seats, the upper portion of the frame swinging over said seats to hold the shaft therein, a pair of members carried by the upper portion of the frame over which the paper is adapted to pass from the roll, the upper portion of the printing roll being disposed between said members to contact with the under surface of the paper, and means carried by the upper portion of the frame for pressing the paper upon the printing roll.

3. A device of the character described comprising a frame having standards embodying lower and upper sections hingedly connected, the lower sections of the standards having means for holding a roll of paper and seats at their upper ends, the upper section being seatable upon the lower ones over said seats, a printing roll having a shaft seated in said seats, members carried by the upper sections of the standards over which the paper is movable from the paper roll, the upper portion of the printing roll being located between said members to contact with the under surface of the paper, and a roll carried by the upper sections of the standards to hold the paper upon the printing roll.

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1,226,244. FRICTION SPRING UNIT FOR DRAFT-RIGGINGS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 18, 1915. Serial No. 56,426. (Cl. 213—64.)

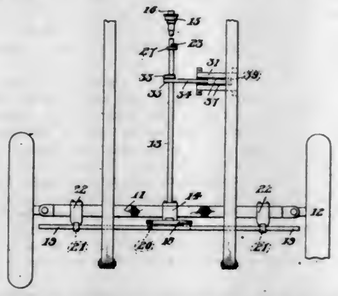


1. A shock absorbing device for draft riggings which comprises, a pair of followers having hollow extensions on their inner opposite faces, said extensions having the inner walls parallel to the axis of the device curved, sets of plate springs interposed between said followers and mounted within said recesses, and means for flexing said sets of plate springs transversely against said curved walls upon relative approach of the followers.

2. A shock absorbing device for draft riggings which comprises, a pair of followers having hollow extensions on their inner opposite faces, said extensions having curved inner walls, sets of plate springs interposed between said followers and mounted within said recesses, and means for flexing said sets of plate springs against said curved walls upon relative approach of the followers, said means including wedges carried by the followers and friction shoes coöperating therewith.

3. In a device of the character described, the combination with a pair of relatively movable followers, each of said followers having a recess on its inner face, opposite walls of said recesses being curved, of two sets of plate springs extending longitudinally between said followers and supported thereby, said plate springs normally bearing against said curved surfaces, and wedges carried by the inner faces of said followers and adapted to enter between said sets of springs, whereby, upon relative approach of said followers, the plate springs are flexed in a direction transverse to the line of movement of said followers against said curved faces.

1,226,245. AUTOMOBILE-BRAKE. JOSEPH OHELSKI, Parsons, Pa. Filed Nov. 17, 1916. Serial No. 131,930. (Cl. 21—8.)

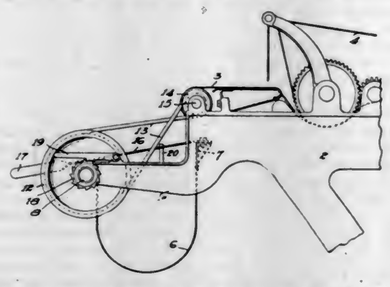


1. An attachment for vehicles comprising in combination with the front axle and forward wheels thereof, a bracket centrally mounted upon the said axle, an operating shaft longitudinally arranged beneath the vehicle journaled in the said bracket, a disk secured to the said shaft, engaging bars for the said wheels pivotally connected at their inner ends to the said disk and operating means for the said shaft.

3. An attachment for vehicles comprising in combination with the front axle and forward wheels thereof, a bracket centrally mounted upon the said axle, an operating shaft longitudinally arranged beneath the vehicle journaled in the said bracket, a disk secured to the said shaft, engaging bars for the said wheels pivotally connected at their inner ends to the said disk, a crank-arm secured to said shaft, a rod pivoted to said arm slidably extending through the floor of the vehicle, a pedal upon the free end of said rod, a return spring surrounding the said rod, retaining means for the rod when the latter is depressed with the spring under compression, a snap-lock carried by the vehicle, and a toggle bolt operatively connected to the said shaft adapted for engagement with the said lock when said bolt is projected with the said bars in their operative position.

[Claim 2 not printed in the Gazette.]

1,226,246. LAUNDRY-MANGLE FEED-HOPPER. FRANK M. OVERHOLT and ARTHUR G. GRANBOIS, Minneapolis, Minn., assignors of one-half to American Linen Company, Minneapolis, Minn., a Corporation. Filed June 1, 1915. Serial No. 31,446. (Cl. 68—9.)



1. The combination, with a laundry mangle, of a flexible hopper mounted in front of the same and means for winding up one side of said hopper to raise the lower portion thereof and lift the clothes.

2. The combination, with a laundry mangle, of a hopper mounted to extend transversely thereof and trough-shaped in form and adapted to contain clothing piled loosely therein, and means within control of an attendant for raising said hopper to elevate the clothes therein within convenient reaching distance as the pile in the hopper diminishes.

3. The combination, with a laundry mangle, of a hopper composed of flexible material supported at one edge over the mangle frame, a shaft whereon the other edge of the hopper is mounted, and means connecting said shaft with a moving portion of the mangle for raising the hopper and the clothes therein to a higher level.

4. The combination, with an ironing machine, of a hopper composed of flexible material supported at one end of the machine frame, a shaft whereon the other edge of the hopper is mounted, a driving connection between said shaft and a moving portion of the machine for raising the hopper and the clothes therein to a higher level, and a clutch mechanism within control of the attendant for rendering said driving connection operative or inoperative.

5. The combination, with a laundry mangle, of a hopper composed of flexible material and extending across the front of the mangle, a shaft mounted to wind up one edge of said flexible hopper thereon to elevate the clothes in the hopper, and mechanism within control of an attendant for revolving said shaft.

1,226,247. TREAD-SURFACE FOR BOOTS AND SHOES. JOHN D. PRINCE, New York, N. Y. Filed Dec. 20, 1913. Serial No. 807,949. (Cl. 36—35.)



1. A tread for boots and shoes comprising a layer of rubber, and a compound layer consisting of leather having certain of its surfaces impregnated with rubber, said surface and layer of rubber being vulcanized into a firmly bonded structure.

2. A tread for boots and shoes comprising layers of leather, each of said layers having certain of its surfaces roughened and impregnated with rubber, and a layer of rubber interposed between said rubber impregnated surfaces, the whole being vulcanized into a firmly bonded structure.

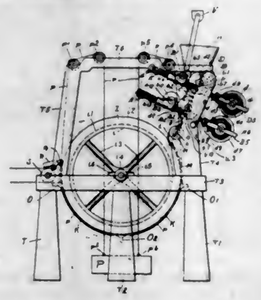
3. A tread for boots and shoes comprising layers of leather, each of said layers having certain of its surfaces roughened and impregnated with rubber, and a layer of perforated rubber interposed between said rubber impregnated surfaces, the whole being vulcanized into a firmly bonded structure.

1,226,248. MACHINE FOR MOLDING DOUGH AND THE LIKE. LOUIS CHARLES REESE, Saginaw, Mich., assignor to Werner & Pfleiderer Co., Saginaw, Mich. Filed Oct. 2, 1915. Serial No. 53,842. (Cl. 107—9.)

1. In a dough molding machine, in combination with rotary rollers adapted to roll out the dough to a sheet, a folding member curved on its surface toward the passing sheet of dough convex in its upper and concave in its lower part, and a folding roller rotating quicker than the sheeting rollers, both, the folding member and roller being so arranged underneath the sheeting rollers and in regard to each other, that the sheet of dough leaving the sheet rollers, meets on its nearly perpendicular downward passage the folding roller just above its center, is driven by same into the concavity of the folding member and thereby folded up into a roll which then drops by its own gravity from the folding roller into the molding channel of the machine.

2. In a dough molding machine, the combination with rotary rollers adapted to roll out the dough to a sheet, of means consisting of screw rods and bevel gearing for adjusting the distance between each pair of such rollers, resilient means consisting of adjustable springs pressing on the movable rollers for keeping this distance, a folding member curved on its surface turned toward the passing sheet of dough, convex in its upper and concave in its lower part, means consisting of screw studs, fixed to the said member and of slots provided in the framework of the machine for adjusting the position of the folding member, and a folding roller revolving toward the concavity of the folding member and quicker than the sheeting rollers, the folding member and the folding roller being so arranged underneath the latter and in regard to each other, that the sheet of dough leaving the sheeting rollers meets on its nearly perpendicular downward passage the folding rollers just above its center, is driven by same into the concavity of the folding member and thereby folded up into a roll.





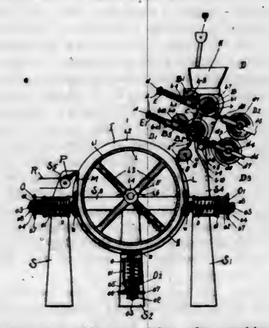
3. In a dough molding machine, the combination with a rotary reel of rims provided thereon, a non-revolving bottom plate fitting loosely into the space between the said rims of the said reel, following the lower half of its circumference and forming as bottom with same the molding channel, a stationary curved inlet plate fixed to the framework of the machine, convex in its upper part and following the circumference of the reel in its lower part, so as to facilitate the entrance of the rolled pieces of dough into the molding channel, a flexible, intermediate plate fixed at its lower end to the top of the bottom plate and moving at its upper part loosely between the lower edge of the inlet plate and a rod attached to the framework of the machine, thus forming at any position of the bottom plate a funnel-like entrance into the molding channel, means consisting of racks for adjusting the depth of this channel, and resilient means worked by a weight for keeping this depth.

4. In a dough molding machine, the combination with a rotary reel of rims provided thereon, and a non-revolving bottom plate fitting loosely into the space between the said rims of the said reel and forming as bottom with same the molding channel, a stationary curved inlet plate fixed to the framework of the machine and constructed so as to facilitate the entrance of the dough into the molding channel, a flexible, intermediate plate fixed at its lower end to the top of the bottom plate and moving at its upper part loosely between the lower edge of the stationary inlet plate and a rod attached to the framework of the machine, a flexible outlet plate fixed at its lower end to the upper part of the bottom plate opposite to the inlet plate, and provided with a turned-over top so as to facilitate the exit of the ready molded loaves of dough from the molding channel, a rod fixed across the back to the upper part of the outlet plate, the protruding ends of this rod moving in slots so arranged in the framework of the machine that the width of the outlet for the dough between the face of the rotating reel and the top of the outlet plate remains always the same at any position of the bottom plate, means consisting of racks for adjusting the depth of the molding channel and resilient means worked by a weight for keeping this depth.

5. In a dough molding machine comprising rotary adjacent rollers adapted to roll out the dough to a sheet, means consisting of screw rods with stops and bevel gearing for adjusting the distance between each pair of such rollers, resilient means consisting of adjustable springs for keeping this distance, a curved adjustable folding member, a folding roller revolving toward the concavity of the folding member and quicker than the sheeting rollers, and arranged so in regard to the latter and to the folding member that the sheet of dough coming from the former is driven into the concavity of the latter and thus rolled up, a rotary reel having sides, and a plate fitting loosely between the said sides of the reel and forming with its face and sides the molding channel, means consisting of racks for adjusting the distance of this plate from the face of the reel, and resilient means worked by a weight to keep this distance.

[Claims 6 to 21 not printed in the Gazette.]

1,226,249. MACHINE FOR MOLDING DOUGH AND THE LIKE. LOUIS CHARLES REESE, Saginaw, Mich., assignor to Werner & Pfleiderer Co., Saginaw, Mich. Original application filed Oct. 2, 1915, Serial No. 53,842. Divided and this application filed June 19, 1916. Serial No. 104,557. (Cl. 107—9.)



1. In a dough molding machine, the combination with a rotary reel of a non-revolving, adjustable bottom plate fitting loosely into the space between the rims of the said reel, following the lower half of its circumference and forming as bottom with same the molding channel, a stationary curved inlet plate fixed to the framework of the machine, convex in its upper part and following the circumference of the reel in its lower part, so as to facilitate the entrance of the rolled pieces of dough into the molding channel, a flexible intermediate plate fixed at its lower end to the top of the bottom plate and moving at its upper part loosely between the lower edge of the inlet plate and a rod attached to the framework of the machine, thus forming at any position of the bottom plate a funnel-like entrance into the molding channel, means consisting of racks for adjusting the depth of this channel, and resilient means consisting of adjustable springs for keeping this depth.

2. In a dough molding machine, the combination with a rotary reel of a non-revolving bottom plate fitting loosely into the space between the sides of the said reel and forming as bottom with same the molding channel, a stationary curved inlet plate fixed to the framework of the machine and constructed so as to facilitate the entrance of the dough into the molding channel, a flexible, intermediate plate fixed at its lower end to the top of the bottom plate and moving at its upper part loosely between the lower edge of the stationary inlet plate and a rod attached to the framework of the machine, a flexible outlet plate fixed at its lower end to the upper part of

the bottom plate opposite to the inlet plate, and provided with a turned-over top so as to facilitate the exit of the ready molded loaves of dough, a rod fixed across the back of the upper part of the outlet plate, the protruding ends of this rod moving in slots so arranged in the framework of the machine that the width of the outlet opening between the face of the rotating reel and the top of the outlet plate remains always the same at any position of the bottom plate, means consisting of racks for adjusting the depth of the molding channel and resilient means consisting of adjustable springs for keeping this depth.

3. In a dough molding machine comprising rotary adjustable rollers adapted to roll out the dough to a sheet, means consisting of screwrods with stops and bevel gearing for adjusting the distance between each pair of such rollers, resilient means consisting of adjustable springs for keeping this distance, a curved, adjustable folding member, a folding roller revolving toward the concavity of the folding member and quicker than the sheeting rollers, and arranged so in regard to the latter and to the folding member that the sheet of dough coming from the former is driven into the concavity of the latter and thus rolled up, a rotary reel, a plate fitting loosely between the sides of the reel and forming with its face and sides the molding channel, means consisting of racks for adjusting the distance of this plate from the face of the reel, and resilient means consisting of adjustable springs for keeping this distance.

4. In a dough molding machine, the combination with a rotary reel, of a bottom plate fitting loosely between the sides of the reel and thus forming the bottom of the molding channel, guide rods arranged at the said plate pointing outward and provided with stops, adjustable bars stationary while the machine is at work, provided with openings for the guide rods to slide in and so arranged in regard to the latter that those parts containing the openings are situated between the stops of the guide rods and the bottom-plate, racks sliding in guide blocks fixed to the framework of the machine, carrying the said bars and adapted simultaneously to adjust these bars and thereby the depth of the molding channel, and springs contained in stationary casings so arranged in regard to the bottom plate and so adapted that they press the stops of the guide rods against the bars in the openings of which these rods slide.

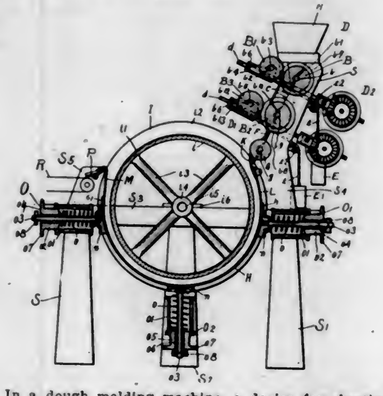
5. In a dough molding machine, the combination with a rotary reel, of a bottom plate fitting loosely between the sides thereof and thus forming the bottom of the molding channel, guide rods arranged at the said plate pointing outward and provided with stops, adjustable bars—stationary while the machine is at work—provided with openings for the guide rods to slide in and so arranged that those parts containing the openings are situated between the stops of the guide rods and the bottom plate, racks sliding in guide blocks fixed to the framework of the machine, carrying the said bars and adapted simultaneously to adjust these bars and thereby the depth of the molding channel, springs so arranged in regard to the latter and so adapted as to press the stops of the guide rods against the bars in the openings of which the rods slide, and casings containing the said springs and attached to the said bars.

[Claims 6 to 12 not printed in the Gazette.]

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1,226,250. MACHINE FOR MOLDING DOUGH AND THE LIKE. LOUIS CHARLES REESE, Saginaw, Mich., assignor to Werner & Pfleiderer Co., Saginaw, Mich. Original application filed Oct. 2, 1915, Serial No. 53,842. Divided and this application filed June 19, 1916. Serial No. 104,558. (Cl. 107—9.)

1. In a dough molding machine, the combination with a pair of rotary adjacent rollers, of a stationary frame carrying the axle of one roller, a movable block carrying the axle of the other roller, projections provided in the stationary framework at each side of the roller and containing female threads, guide rods at each side of the rollers and provided with threads fitting into the female threads of the projections, stops arranged at the guide rods between the stationary framework and the movable block, bevel wheels arranged at the ends of the guide rods protruding over the stationary frame opposite to the stops, bevel wheels meshing with these bevel wheels and attached to a common axle, a hand wheel working same, hooks arranged at the movable block, wires attached to the hooks and a weight carried by the wires, the weight and wires being so arranged as to press the movable block against the stops of the guide rods.



2. In a dough molding machine, a device for sheeting dough, consisting of a rotary roller the axle of which rotates in bearings fixed to the stationary framework of the machine, guides arranged at each side of the roller in this framework, means consisting of a screw arrangement for simultaneously adjusting the guide rods, a second rotary roller placed in alinement with the first roller between the said guide rods, a guide block sliding on the latter and carrying the bearings for the axle of the second roller, stops provided at the guide rods between the stationary frame and the movable block, a weight and wires connecting same to the movable block and arranged in such a way that the movable block is pressed against the said stops.

3. In a dough molding machine, the combination with rotary rollers adapted to roll out the dough to a sheet, of means consisting of screwrods and bevel gearing for adjusting the distance between each pair of such rollers, resilient means worked by weights pressing on the movable rollers for keeping this distance, a folding member curved on its surface turned toward the passing sheet of dough, convex in its upper and concave in its lower part, means consisting of screw studs fixed to the said member and of slots provided in the framework of the machine for adjusting the position of the folding member, and a folding roller revolving toward the concavity of the folding member and quicker than the sheeting rollers, the folding member and the folding roller being so arranged underneath the latter and in regard to each other, that the sheet of dough leaving the sheeting rollers meets on its nearly perpendicular downward passage the folding roller just above its center, is driven by same into the concavity of the folding member, and thereby, folded up into a roll.

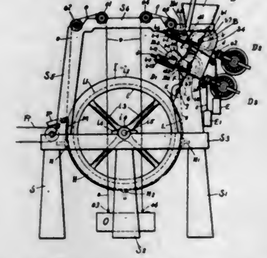
4. In a dough molding machine, comprising rotary adjustable rollers adapted to roll out the dough to a sheet, means consisting of screw rods with stops and bevel gearing for adjusting the distance between each pair of such rollers, resilient means consisting of weights for keeping this distance, a curved adjustable folding member, a folding roller revolving toward the concavity of the folding member and quicker than the sheeting rollers, and so arranged in regard to the latter and to the folding member that the sheet of dough coming from the former is driven into the concavity of the latter and thus rolled up, a rotary reel, a plate fitting loosely between the sides of the reel and forming with its face and sides the molding channel, means consisting of racks for adjusting the distance of this plate from the face of the reel, and resilient means consisting of adjustable springs for keeping this distance.

5. In a dough molding machine comprising adjustable and resilient rollers adapted to roll out the dough to a sheet, a curved plate, a roller rotating toward the concavity of this curved plate and arranged so that the dough sheet leaving the sheeting rollers meets it just above its center and is then thrown into the concavity of the curved plate and folded up, a rotary reel, a stationary resilient bottom plate fitting into the space between the sides of the reel and forming with same and its face the molding channel, a curved, unmovable inlet plate fixed to the framework of the machine and so constructed and arranged as to facilitate the entrance of the folded-up rolls of dough into the molding channel, a flexible intermediate plate fixed to the top of the bottom plate and connecting loosely the latter and the inlet plate, a flexible outlet plate fixed to the upper part of the bottom plate opposite to the inlet plate and provided with a turned-over top, means consisting of racks for adjusting the distance of the bottom plate from the face of the reel, adjustable springs for keeping this distance, and means for allowing the intermediate and the outlet plate to follow the movements of the bottom plate without the distance of the top of the intermediate and of the top of the outlet plate from the face of the reel being altered.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,251. MACHINE FOR MOLDING DOUGH AND THE LIKE. LOUIS CHARLES REESE, Saginaw, Mich., assignor to Werner & Pfleiderer Co., Saginaw, Mich. Original application filed Oct. 2, 1915, Serial No. 53,842. Divided and this application filed June 19, 1916. Serial No. 104,559. (Cl. 107—9.)



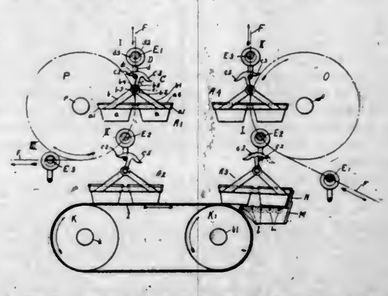
1. In a dough molding machine, comprising rotary adjustable rollers adapted to roll out the dough to a sheet, means consisting of screw rods with stops and bevel gearing for adjusting the distance between each pair of such rollers, resilient means consisting of weights for keeping this distance, a curved adjustable folding member, a folding roller revolving toward the concavity of the folding member and quicker than the sheeting rollers, and arranged so in regard to the latter and to the folding member that the sheet of dough coming from the former is driven into the concavity of the latter and thus rolled up, a rotary reel, a plate fitting loosely between the sides of the reel and forming with its face and sides the molding channel, means consisting of racks for adjusting the distance of this plate from the face of the reel, and resilient means consisting of weights for keeping this distance.

2. A dough molding machine, comprising a feed hopper, rotary rollers arranged in pairs and adapted to roll out the dough fed thereto into a sheet, a stationary frame carrying the lower set of rollers, movable blocks for each roller belonging to the upper set, guide rods adapted for these blocks to slide on and adjustably arranged at the said stationary frame, stops provided on the guide rods to hold the movable blocks, weights connected to these blocks and pressing them against the said stops, stationary plates leading the dough sheet from one pair of rollers to the successive one, a curved plate situated underneath the last pair of rollers, a roller adjacent to this plate and rotating toward its concavity and quicker than the sheeting rollers, thus folding up the sheet into a roll, a stationary curved plate adapted to lead the rolls of dough produced into the final molding channel, a rotary reel, a bottom plate fitting into the annular channel and, following the lower half of its circumference, forming with it the molding channel, a flexible plate fixed thereto and sliding behind the plate leading the dough into the channel, guide rods arranged at the bottom plate of the molding channel, pointing outward and provided with stops, bars provided with openings for the said guide rods to slide in, racks carrying the said bars, pinions working the racks, bevel gearing working the pinions simultaneously, a weight, wires carrying same, running along the outside of the bottom plate of the molding channel and so arranged as to press the stops of the said guide rods against the bars in the openings of which these rods slide, a flexible plate fixed to the bottom plate of the molding channel at its outlet end and having a turned over top, and a chute receiving the completely molded dough loaves from over the top of the latter plate and movably connected to same, both plates being provided with means to follow together the movements of the bottom plate of the molding channel.

3. A dough molding machine comprising the feed hopper A, the brake rollers B, $B_1$, $B_2$ and $B_3$, the bridge plate C, the adjustment devices D and $D_1$, the bevel gearings $D_2$ and $D_3$ working the said devices, the weight arrangements E and $E_1$, the folding member F, the folding roller G, the rotary reel I, the bottom plate H, the inlet plate K, the intermediate plate L, the outlet plate M, the rack adjustment devices N, $N_1$ and $N_2$, the weight arrangement O and the chute P, substantially as shown and described.

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1,226,252. CHARGING AND DISCHARGING OF AUTOMATIC OVENS, PROOFING-CHAMBERS, AND THE LIKE. LOUIS CHARLES REESE, Saginaw, Mich., assignor to Werner & Pfleiderer Co., Saginaw, Mich. Original application filed Feb. 28, 1916, Serial No. 81,008. Divided and this application filed Aug. 17, 1916. Serial No. 115,517. (Cl. 193—2.)



1. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of hooks attached to the trays and adapted to automatically engage with and disengage from rings suspended from cross rods rotatably mounted in and connecting the chains carrying the trays on the said rods through the apparatus, and conveyers arranged therein at points, where the hooks of the trays,

while on the said conveyers, are bound to engage with the said rings when traveling upward, and to disengage from the said rings when passing downward.

2. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of hooks attached to each narrow end of the trays and adapted to automatically engage with and disengage from rings rotatably suspended from cross rods connecting the chains carrying the trays on the rods through the apparatus, and conveyers arranged therein at points, where the hooks of the trays, when on the said conveyers, are bound to engage with the said rings when traveling upward, and to disengage from the said rings when passing by on the chains in a downward direction.

3. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of hooks attached to the trays and adapted to automatically engage with and disengage from rings rotatably mounted in and connecting the chains carrying the trays on the rods through the apparatus, and conveyers arranged therein at points, where the hooks of the trays, when on the said conveyers, are bound to engage with the said rings while traveling upward, and to disengage from the said rings while traveling downward.

4. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of hooks attached to the trays, of cross rods rotatably mounted in and connecting two parallel endless chains moving the trays through the apparatus, of rings suspended from said cross rods, of sprocket wheels propelling the chains, of means for supporting the trays at a point where the chains and their cross rods move upward leading the rings suspended therefrom to engage with the hooks of the trays on the support, of a sprocket wheel leading the cross rods in the said upward direction, of a conveyer removing the trays with the treated articles from the apparatus and so arranged therein that the hooks of the trays settling thereon disengage from the rings suspended from the cross rods passing by in a downward direction, and of a sprocket wheel leading the chains and cross rods in the said downward direction and away out of the reach of the trays on the conveyer.

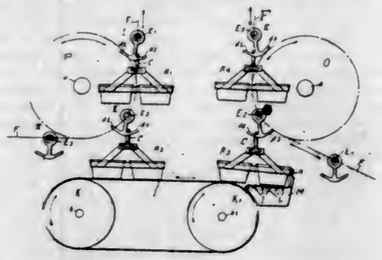
5. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of stays fixed to the trays, of double hooks having opposite downward-bent arms and movably mounted with their stems on the said stays, of stops arranged at the said stays in such a manner as to limit the play of the stems of the hooks to that necessary for keeping the trays in a horizontal position, may one or the other arm of the hook be used, of cross rods rotatably mounted in and connecting the chains carrying the trays through the apparatus, of rings suspended from these cross rods, and of conveyers arranged in the apparatus at points where the hooks of the trays, when on the said conveyers, are bound to slip into the said rings passing by in an upward direction, and to slip out of the said rings passing by in a downward direction.

[Claims 6 to 9 not printed in the Gazette.]

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1,226,253. CHARGING AND DISCHARGING OF AUTOMATIC OVENS, PROOFING-CHAMBERS, AND THE LIKE. LOUIS CHARLES REESE, Saginaw, Mich., assignor to Werner & Pfleiderer Co., Saginaw, Mich. Original application filed Feb. 28, 1916, Serial No. 81,008. Divided and this application filed Aug. 17, 1916. Serial No. 115,518. (Cl. 193—2.)

1. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of rings attached to the trays and adapted to automatically engage with and disengage from hooks suspended from cross rods rotatably mounted in and connecting the two chains carrying the trays on the said rods through the apparatus, and conveyers arranged therein at points, where the rings of the trays, while on the said conveyers, are bound to engage with the said hooks traveling upward, and to disengage from the said hooks traveling downward.



2. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of rings attached to each narrow end of the trays and adapted to automatically engage with and disengage from hooks rotatably suspended from cross rods connecting the chains carrying the trays on the rods through the apparatus, and conveyers arranged therein at points where the rings of the trays, when on the said conveyers, are bound to engage with the said hooks traveling upward, and to disengage from the said hooks traveling in a downward direction.

3. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of rings attached to the trays and adapted to automatically engage with and disengage from hooks rotatably suspended from cross rods rotatably mounted in and connecting the chains carrying the trays on the rods through the apparatus, and conveyers arranged therein at points, where the rings of the trays when on the said conveyers, are bound to engage with the said hooks traveling upward, and to disengage from the said hooks traveling downward.

4. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of rings attached to the trays, of cross rods rotatably mounted in and connecting two parallel endless chains moving the trays through the apparatus, of hooks suspended from said cross rods, of sprocket wheels propelling the chains, of means for supporting the trays at a point where the chains and their cross rods move upward leading the hooks suspended therefrom to engage with the rings of the trays on the support, of a sprocket wheel leading the cross rods in the said upward direction, of a conveyer removing the trays with the treated articles from the apparatus and so arranged therein that the rings of the trays settling thereon disengage from the hooks suspended from the cross rods passing by in a downward direction, and of a sprocket wheel leading the chains and cross rods in the said downward direction and away out of the reach of the trays on the conveyer.

5. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of rings fixed to the trays, of cross rods rotatably mounted in and connecting the chains carrying the trays through the apparatus, of double hooks suspended from these cross rods, and of conveyers arranged in the apparatus at points where the rings of the trays, when on the said conveyers, are bound to slip into the said hooks passing by in an upward direction, and to slip out of the said hooks passing by in a downward direction.

[Claims 6 to 9 not printed in the Gazette.]



1,226,254. NON-SKID TIRE. AMBROSE RICH, Stamford, Conn. Filed May 9, 1916. Serial No. 96,396. (Cl. 152—14.)



1. A non-skid tire comprising a body, a foundation strip extending around the body and being provided with slots, a chain arranged on said foundation with certain of its links engaged in said slots, a finishing ply over the foundation strip and supporting the remainder of the chain links, a stem carried by said foundation strip and projecting through one of the latter mentioned links, and a clamp on said stem for engagement with said link, substantially as described.

2. A non-skid tire comprising a body, a foundation strip extending around the body, a chain arranged on said foundation strip, stems projecting from said foundation strip through the intermediate links of said chain, a clamp removably secured on each stem and engaging said intermediate links, and knobs on said clamps projecting outwardly and terminating even with the outer extremities of the alternate links, substantially as described.

3. A non-skid tire comprising a body, a foundation strip extending around said body and being provided with slots, metallic plates secured to the outer face of said foundation strip between said slots, threaded stems projecting outwardly from said plates, a finishing ply arranged over said foundation strip and being provided with slots alined with those of said strip, a chain disposed around said body with its alternate links seated in and projecting from said slots, the intermediate links resting upon said finishing ply and inclosing said stems, a clamp on each stem engaging the adjacent intermediate link, and a nut on each stem for binding said clamps in place, substantially as described.

4. A non-skid tire comprising a body, a foundation strip extending around the body, plates arranged in spaced relation upon said strip on the exterior face thereof, a stem for each plate, heads on said stems, the said heads being secured between said plates and said strip and the said stems projecting radially from said tire, a chain arranged around said tire, the said stems projecting through certain of the links of said chain, and knobs removably attached to the outer ends of said stems.

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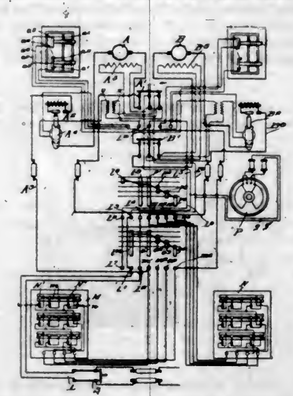
1,226,255. MOTOR-CONTROLLING DEVICE. JOHN RICHMOND, Rochester, N. Y., assignor to American Laundry Machinery Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 8, 1914. Serial No. 810,935. (Cl. 172—179.)

1. The combination with an electric motor, of a controller adapted to intermittently reverse the direction of operation thereof and automatic means acting to close the motor circuit when the controller reaches a predetermined position, to start the motor.

2. The comoination with a plurality of electric motors, of a controller adapted to intermittently reverse the direction of operation thereof, and automatic means acting to close the motor circuits when the controller reaches a predetermined position, to start the motors.

3. The combination with an electric motor of a controller adapted to intermittently reverse the direction of operation thereof, resistance in the motor circuit adapted to be inserted and gradually cut out at each change of direction of operation of the motor and automatic means acting to close the motor circuit, upon starting, when the controller is in position to include all of said resistance in the circuit.

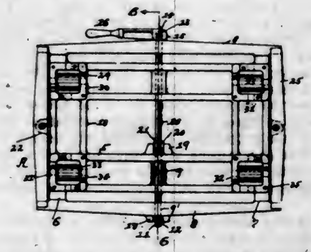
4. The combination with a plurality of electric motors, of a controller adapted to intermittently reverse the direction of operation of the motors, independent resistances in the motor circuits adapted to be inserted and gradually cut out at each change of direction of operation of the motors and automatic means acting to close the motor circuits, upon starting, when the controller is in such position as to include all of said resistances in the respective circuits.



5. The combination with an electric motor, of a controller adapted to intermittently reverse the direction of operation thereof, a normally open electro-magnetic switch in the motor circuit, a resistance in the circuit preventing the closing of the switch, means for cutting out said resistance to effect operation of the switch when the controller reaches a predetermined point, to start the motor, and means for actuating the controller.

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1,226,256. EQUALIZING-TABLE. ROBERT FRANKLIN RINGLE, Zelienople, Pa., assignor to Herman Pneumatic Machine Company, Zelienople, Pa., a Corporation of Pennsylvania. Filed Nov. 20, 1914. Serial No. 873,161. (Cl. 22—90.)



1. An equalizing table comprising a transportable body portion, parallel side beams pivoted to said body portion and adapted to conform to the surface against which the same come in contact, springs on said body portion and engaging with said beams for normally fixing the position of said side beams, friction pads on said body and beams, and means for locking said side beams in their assumed positions.

2. An equalizing table including a body member, parallel beams pivotally carried thereby, yieldable means terminally supporting said beams, means whereby said beams may be vertically adjusted, and means for locking said beams in adjusted position.

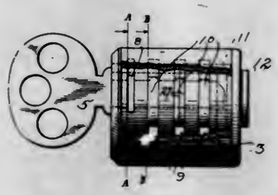
3. An equalizing table including a body member, rollers journaled at the corners thereof for transporting the table

on and off a molding machine, beams pivotally attached to the body member for vertical adjustment with respect thereto, yieldable means normally maintaining the beams in horizontal position, and means for locking said beams against both swinging and vertical movement.

4. An equalizing table including a body member, parallel beams extending longitudinally with respect to the body member, transverse spring members terminally supporting the beams, means pivotally connecting the beams to the body member, said body member being vertically adjustable on said means, and a locking member carried by said means for holding the beams in adjusted position.

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1,226,257. LOCK. ROBERT W. RITZERT, Dayton, Ohio. Filed May 24, 1916. Serial No. 99,682. (Cl. 70—46.)



1. In a device of the character described, a rotatable cylinder having a plurality of spaced locking shoulders formed upon the periphery thereof, a sleeve or barrel within which the cylinder is mounted, a plurality of pivoted detents supported upon the sleeve or barrel and each normally engaging one of said locking shoulders to prevent the rotation of said cylinder, and a key adapted to oscillate the detents to release the cylinder, the said detents being adapted when oscillated beyond a predetermined limit to engage a second locking shoulder in said cylinder.

2. In a device as described, a rotatable cylinder, a sleeve or barrel in which the cylinder is mounted, a plurality of detents pivoted to said sleeve or barrel each adapted when oscillated in either direction beyond a neutral position to engage the cylinder to prevent the rotation thereof, a spring for each detent normally oscillating the detent into engagement with the cylinder and a key adapted to oscillate the detents against the tension of their spring out of engagement with the cylinder.

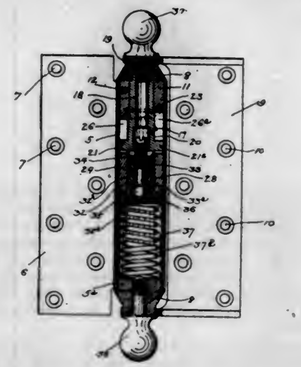
3. In a device of the character described, a rotatable core having a longitudinally disposed key way therein and also having spaced recesses therein for the engagement of a locking detent, a double detent either extremity of which may be engaged with one of the spaced recesses of the rotatable core to prevent the oscillation thereof, a spring normally tending to oscillate the detent in one direction into engagement with the core and a key insertible in said key way adapted to oscillate the detent out of engagement with the core against the tension of the spring.

4. In a device of the character described, a sleeve or barrel having a central bore and a plurality of transverse slots intersecting the bore, a rotatable core mounted within said bore, a plurality of pivoted detents mounted in said transverse slots and normally engaging the core, and a key adapted to oscillate the detents out of engagement with the core.

5. In a device of the character described, a rotatable cylindrical core having peripheral notches therein, a stationary sleeve within which the core rotates, a pivoted anchor escapement pawl mounted on said sleeve the pallets of which may be alternately engaged with the peripheral notches of the rotatable core by the oscillation of the detent to lock said cylindrical core against rotation, a spring tending to oscillate the detent into locking position and a key adapted to disengage the detent against the tension of the spring.

[Claims 6 to 8 not printed in the Gazette.]

1,226,258. DOOR-CHECK. CLARENCE T. ROGERS, New York, N. Y., assignor to Emil Bommer, Brooklyn, N. Y. Filed May 16, 1914. Serial No. 838,967. (Cl. 16—88.)



1. In a door-hinge including a plurality of leaves, the combination of a liquid container carried by one of said leaves, means partially located within said container and partially carried by the other leaf for causing the flow of said liquid from the lower part of said container to the upper part of said container upon a movement of one leaf relatively of the other upon a door-opening operation, and means for restricting the flow of said liquid, said means including a ball, a chamber for the ball within which the ball is adapted to travel vertically, a passage leading upwardly from said chamber, said passage having a lower mouth adapted to be restricted more and more as the ball approaches said mouth, and adjustable spacing means adapted to predeterminedly space said ball from said mouth at all times.

2. In a door-hinge including a plurality of leaves, the combination of a liquid container carried by one of said leaves, means partially located within said container and partially carried by the other leaf for causing the flow of said liquid from the lower part of said container to the upper part of said container upon a movement of one leaf relatively of the other upon a door-opening operation, and means for restricting the flow of said liquid, said means including a ball, a chamber for the ball within which the ball is adapted to travel vertically, a passage leading upwardly from said chamber, said passage having a lower mouth adapted to be restricted more and more as the ball approaches said mouth, and adjustable spacing means adapted to predeterminedly space said ball from said mouth at all times, said spacing member including a vertically arranged screw and a threaded support for said screw located above said passage.

3. In a door-hinge including a plurality of leaves, the combination of a liquid container carried by one of said leaves, means partially located within said container and partially carried by the other leaf for causing the flow of said liquid from the lower part of said container to the upper part of said container upon a movement of one leaf relatively of the other upon a door-opening operation, and means for restricting the flow of said liquid, said means including a ball, a chamber for the ball within which the ball is adapted to travel vertically, a passage leading upwardly from said chamber, said passage having a lower mouth adapted to be restricted more and more as the ball approaches said mouth, and adjustable spacing means adapted to predeterminedly space said ball from said mouth at all times, said spacing member including a vertically arranged screw located above said passage, said screw having a depending portion adjustable vertically of said mouth, and said depending portion being of smaller cross-sectional area than said passage whereby an annular space is provided between said passage and said portion.

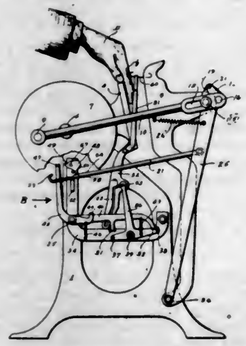


4. In a door-hinge including a plurality of leaves, the combination of a liquid container carried by one of said leaves, means partially located within said container and partially carried by the other leaf for causing the flow of said liquid from the lower part of said container to the upper part of said container upon a movement of one leaf relatively of the other upon a door-opening operation, and means for restricting the flow of said liquid, said means including a ball, a chamber for the ball within which the ball is adapted to travel vertically, a passage leading upwardly from said chamber, said passage having a lower mouth adapted to be restricted more and more as the ball approaches said mouth, and adjustable spacing means adapted to predeterminedly space said ball from said mouth at all times, said spacing means including a vertically arranged screw and a threaded support for said screw located above said passage, said screw having a depending portion adjustable vertically of said mouth, and said depending portion being of smaller cross-sectional area than said passage whereby an annular space is provided between said passage and said portion, and said passage having an outlet leading from said annular space to a portion of the container located above said support, said outlet being angularly offset from said passage.

[Claims 6 to 18 not printed in the Gazette.]

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1,226,259. COMBINED SAFETY AND THROW-OFF MECHANISM. CHARLES F. ROOT, Mansfield, Ohio, assignor of one-fourth to Byron O. Conn., Mansfield, Ohio. Filed Mar. 15, 1915, Serial No. 14,441. Renewed Feb. 5, 1917. Serial No. 146,846. (Cl. 74—46.)



1. In a combined safety and throw-off mechanism for machines having a movable work engaging element and an opposing element, driving means, means to connect the driving means to the work engaging element to directly and continuously drive and force same to complete its working movement toward the opposing element and exert a pressure upon work interposed between the elements, and automatic means to actuate the connecting means to prevent the work engaging element from completing its working movement, thereby leaving a gap between the elements, when an obstruction extraneous to the work is interposed between the elements.

3. In a combined safety and throw-off mechanism for machines having a movable work engaging element and an opposing element, driving means, means to connect the driving means to the work engaging element to directly and continuously drive and force same to complete its working movement under normal conditions, a controller pivotally mounted upon the opposing elements, means to hold the controller in a predetermined position alined with the space between both elements, and means to actuate the connecting means from the controller to render the connecting means inoperative when an obstruction extraneous to the work is encountered by the controller.

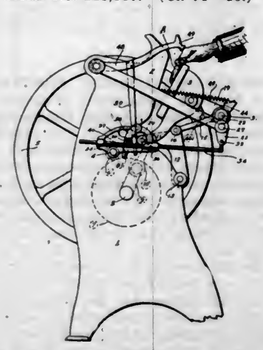
7. In a combined safety and throw-off mechanism attachable to printing presses and analogous machines, which are equipped with opposing coöperative pressure elements, means to continuously reciprocate one of said elements and force same to complete its cycle of movement under normal conditions, means whereby the reciprocating means is automatically operated to prevent the reciprocating element from completing its cycle of movement, thereby leaving an opening between the pressure elements when an obstruction extraneous to the work is interposed between the elements, and means to sustain the parts so as to continually prevent the element from completing its cycle of movement during continued operation of the reciprocating means.

12. In a safety mechanism for machines equipped with coöperating pressure members, means for moving one of said members toward the other to act upon work interposed therebetween, and automatic means operable by an extraneous obstruction for limiting and restricting a continued movement of said movable pressure member toward the other thereby leaving a gap between the pressure members.

[Claims 2, 4 to 6, 8 to 11, and 13 to 26 not printed in the Gazette.]

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1,226,260. COMBINED SAFETY AND THROW-OFF MECHANISM. CHARLES F. ROOT, Mansfield, Ohio, assignor of one-fourth to Byron O. Conn, Mansfield, Ohio. Filed Oct. 21, 1915, Serial No. 57,059. Renewed Feb. 5, 1917. Serial No. 146,847. (Cl. 74—46.)



1. In a combined safety and throw-off mechanism for machines equipped with coöperating pressure elements, draw-bars yieldingly connected to said elements, a toggle mechanism connected to one of said elements and to the draw-bars; said toggle mechanism being adapted

under normal conditions to impart a working movement to the element connected to it in the direction of and in juxtaposition with the opposing element, a controller mounted to swing between the elements which is automatically operable by pressure or resistance to permit actuation of the yielding connections of the draw-bars to prevent the movable element from completing its working movement toward the opposing element thereby leaving a safety zone or gap between the pressure elements.

2. In a combined safety and throw-off mechanism for machines equipped with coöperative pressure elements, draw-bars yieldingly connected to said elements, a toggle mechanism connected to one of said elements and to the draw-bars; said toggle mechanism being adapted under normal conditions to impart a working movement to the element connected to it in the direction of and in juxtaposition with the opposing element, a controller mounted to swing between the elements which is automatically operable by pressure or resistance to permit actuation of the yielding connections of the draw-bars to prevent the movable element from completing its working movement toward the opposing element thereby leaving a safety gap or zone between the pressure elements; said controller also being operable by hand manipulation to actuate the yielding connections of the draw-bars to throw-off the impression and at the same time leave a sufficient gap between the elements to prevent injury to the operator.

3. In a combined safety and throw-off mechanism for machines equipped with coöperating pressure elements, draw-bars, a toggle mechanism connected to one of the elements to impart movement thereto, auxiliary links connected to the draw-bars and to the toggle mechanism, means to interlock the auxiliary links to the draw-bars to force the movable element to complete its working movement under normal conditions, a controller mounted to pivot between the pressure elements operable by an obstruction in the path of the movable element to cause actuation of the auxiliary links which automatically prevents the movable element from completing its working movement thereby leaving a gap between the pressure elements.

7. In a combined safety and throw-off mechanism for machines having coöperative pressure elements, draw-bars, means to yieldingly connect the draw-bars to one element, means to impart a rocking movement to the yieldingly connected element, a controller located in the path of the pressure elements, means to force the yielding connections to coöperate with the draw-bars to impart complete working movement to the yieldingly connected element, and means operable by resistance upon the controller to actuate the yielding connections to prevent the draw-bars from imparting a complete working movement to the yieldingly connected element.

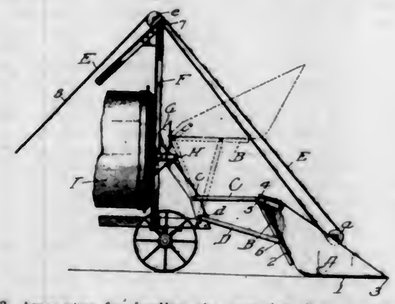
[Claims 4 to 6 and 8 to 15 not printed in the Gazette.]

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1,226,261. **DEVICE FOR LOADING CONCRETE-MIXERS.** NILS MATHIAS ROSENDAHL, Winthrop Harbor, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Mar. 25, 1916. Serial No. 86,616. (Cl. 214—3.)

1. Apparatus for loading the materials into a mixer, comprising a pan having opposite receiving and discharge ends and adapted to rest on the ground to receive the materials, a hoisting connection for raising the pan, and link mechanism for supporting and tilting said pan into carrying position while rising from the ground to the mixer, said mechanism having means for permitting said apparatus to tilt the pan into extreme dumping position without movement of said mechanism after it reaches the inlet of the mixer, so that said pan has one tilting motion while rising and a different tilting motion while dumping.

2. Apparatus for loading the materials into a mixer, comprising a pan having opposite receiving and discharge ends and adapted to rest on the ground to receive the materials, a hoisting connection for raising the pan, and link mechanism for supporting and tilting said pan into carrying position while rising to the mixer, said mechanism having means for permitting said apparatus to tilt the pan into extreme dumping position without movement of said mechanism after it reaches the inlet of the mixer, so that said pan has one tilting motion while rising and a different tilting motion while dumping, said means including a single pivotal connection between said pan and mechanism.



3. Apparatus for loading the materials into a mixer, comprising a pan having opposite receiving and discharge ends and adapted to rest on the ground to receive the materials, a hoisting connection for raising the pan, and link mechanism for supporting and tilting said pan into carrying position while rising to the mixer, said mechanism having means for permitting said apparatus to tilt the pan into extreme dumping position without movement of said mechanism after it reaches the inlet of the mixer, so that said pan has one tilting motion while rising and a different tilting motion while dumping, said means having a single pivot disposed at the discharge end of said pan and forming an axis which is stationary while said pan is tilting into dumping position.

4. Apparatus for loading the materials into a mixer, comprising a pan having opposite receiving and discharge ends and adapted to rest on the ground to receive the materials, a hoisting connection for raising the pan, and link mechanism for supporting and tilting said pan into carrying position while rising to the mixer, said mechanism having means for permitting said apparatus to tilt the pan into extreme dumping position without movement of said mechanism after it reaches the inlet of the mixer, so that said pan has one tilting motion while rising and a different tilting motion while dumping, said means including a support for engaging the bottom of said pan while the latter is rising in carrying position and a pivot between one end of said support and said pan to permit tilting of said pan into dumping position while said support remains stationary in horizontal position.

5. Apparatus for loading the materials into a mixer, comprising a pan having opposite receiving and discharge ends and adapted to rest on the ground to receive the materials, a hoisting connection for raising the pan, and link mechanism for tilting said pan into carrying position while rising to the mixer, said mechanism having means for permitting said apparatus to tilt the pan into extreme dumping position after it reaches the inlet of the mixer, and said mechanism including links pivoted a distance apart on the mixer and a pan-supporting member on which said links are pivoted a greater distance apart to bring said member into an inclined lower position for the loading of the pan and into a horizontal upper position in front of said inlet.

[Claims 6 to 9 not printed in the Gazette.]

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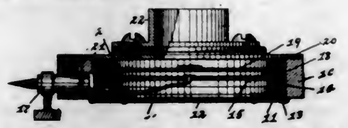
1,226,262. **SOUND-BOX FOR SOUND-REPRODUCING MACHINES.** PAUL RUDERT, Tarentum, Pa. Continuation of application Serial No. 26,020, filed May 5, 1915. This application filed Jan. 31, 1917. Serial No. 145,624. (Cl. 274—27.)

A sound box for talking machines or the like, comprising a cylindrical casing having a sound-exit opening disposed centrally of one end thereof, a diaphragm carried by said casing, means for transmitting vibrations to said diaphragm, said transmitting means being attached solely to the center of said diaphragm, a disk on the side of said diaphragm toward said opening, said disk being substantially parallel with said diaphragm and being spaced a material distance therefrom and from said end, and said disk being imperforate at and adjacent its center and being formed with apertures adjacent the periphery thereof.



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1,226,263. **PROCESS OF AND APPARATUS FOR SEPARATING COTTON-SEED HULLS AND MEATS.** RUFUS W. RUSTIN, Bishopville, S. C. Filed Nov. 6, 1916. Serial No. 129,783. (Cl. 130—17.)



1. The method of separating cotton seed hulls and meats, consisting in first, separating the fine meats from the mass, second, separating the coarse meats and fine hulls from the coarse hulls, and then separating the fine hulls from the coarse meats.

2. The method of separating cotton seed hulls and meats consisting in first separating the fine meats from the mass, second separating the coarse meats and fine hulls from the coarse hulls, and then pneumatically separating the fine hulls from the coarse meats.

4. In a separating apparatus, the combination with a shaker having an inclined screen over which the material flows, of a suction trunk having a contracted mouth or slot extending across and slightly above said screen, and lips projecting outwardly from opposite edges of said mouth and substantially parallel to the screen.

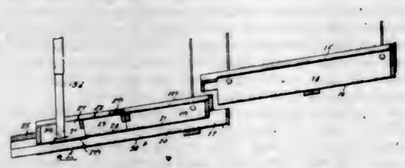
6. In a separating apparatus, the combination with a shaker having an inclined screen over which the material flows, of a suction trunk having an enlarged head with a contracted mouth extending across said screen and slightly above the same, the inner wall of said mouth being inclined upwardly and backwardly from the lower lip thereof in the general direction of the flow of said material.

8. The combination of a shaker comprising a frame having an upper section with a screen having coarse perforations, and a lower section with an upper plate receiving the coarse material from said screen and a lower plate receiving the material passing through said screen, said upper plate having an opening through the same, and the lower plate having a fine screen under said opening, and a suction trunk projecting through said opening into proximity to said fine screen.

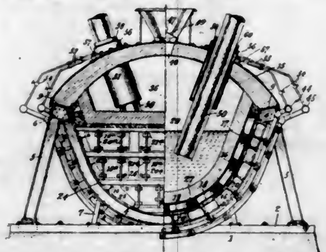
[Claims 3, 5, 7, 9, and 10 not printed in the Gazette.]

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1,226,264. **ELECTRIC FURNACE.** FRANK C. SCHMITZ, New York, N. Y. Filed Nov. 3, 1913. Serial No. 798,922. (Cl. 204—64.)



1. In a furnace, a slag-pot having a curved bottom and side walls, and having substantially vertical end walls, a plurality of substantially parallel bars extending longitudinally with the elements of said bottom and side walls, a plurality of substantially parallel bars at said end walls, said walls having cells or spaces formed therein between said bars, and a plurality of water-cooled units held in said spaces, said bars being partially embedded in said walls and having flanges exposed on the outer sides of said walls, and means for engaging said flanges to secure the said water-cooled units in said cells.



2. In an electric furnace, a pair of cradle-beams, reinforced concrete supports secured at their opposite ends to said beams, and cooling plates or units located between and supported by said concrete supports.

3. In an electric furnace, a pair of spaced cradle beams, spaced supports spanning said beams and secured thereto at their opposite ends, and cooling plates or units located between said supports.

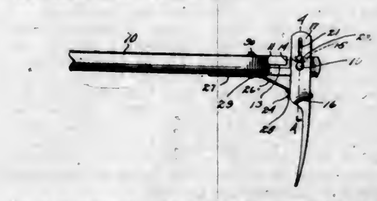
4. In an electric furnace, a pair of spaced cradle-beams, parallel supports arranged in spaced relation to each other and secured at their opposite ends to said beams, cooling plates or units located between said supports, and means for removably supporting said cooling plates or units.

5. In an electric furnace, a pair of spaced cradle-beams, parallel supports arranged in spaced relation to each other and secured at their opposite ends to said beams, cooling plates or units located between said supports, and means for removably supporting said cooling plates or units, said means resting upon the parallel supports.

[Claims 6 to 22 not printed in the Gazette.]

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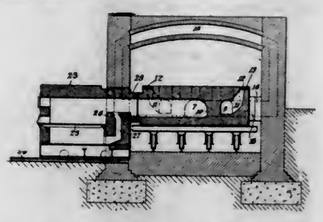
1,226,265. **CONVERTIBLE FORK AND RAKE.** IRA V. SKIPPER, Meridian, Miss. Filed Dec. 12, 1916. Serial No. 136,569. (Cl. 55—25.)



1. A convertible fork and rake comprising a handle member having one end reduced to form a stem, a head having a bifurcation straddling said stem and pivotally connected thereto for swinging movement and adapted to be secured longitudinally of the handle, and at an angle thereto, the bifurcation and the stem each being formed with a slot, a bolt carried by the bifurcation and extending through the slots, the handle slot having a vertical portion extending through the upper face of the stem, the stem being formed with a plurality of divergent notches for the reception of said bolt.

2. A convertible fork and rake including a handle having a reduced end portion formed with a bayonet slot opening through the upper edge portion thereof, and radiating notches formed in said edge portion adjacent the slot, a head pivotally mounted on the reduced portion and provided with a longitudinal slot, and a transverse bolt engaged in the slots and movable into and out of the bayonet slot, said bolt being also engageable in the said radiating notches.

1,226,266. FURNACE FOR HEATING OR ANNEALING. ALFRED SMALLWOOD, London, England, assignor to American Incandescent Heat Company, Portland, Me., a Corporation of Maine. Filed Sept. 21, 1914. Serial No. 862,753. (Cl. 263—40.)



1. In a furnace, a working chamber, a place for initial combustion, a heat reservoir having an extended surface for the absorption of heat, adapted to distribute heat to the working chamber both directly and by radiation, said heat reservoir comprising a main heat chamber in which combustion can continue and a heat-distributing chamber, a plurality of flues connecting such heat-distributing chamber and said working chamber, and means for controlling the passage of gases through said flues.

2. In a furnace, a working chamber, a place for initial combustion of fuel, a heat reservoir comprising a main heat chamber and a secondary heat chamber adapted to transmit heat to the working chamber by radiation, a plurality of flues leading from the secondary heat chamber to the working chamber, the arrangement of the heat reservoir and flues being such that the heated gases must pass in proximity to the working chamber for substantially the length of such chamber before entering such chamber through said flues.

3. In a furnace, a working chamber, a place for initial combustion of fuel, a heat reservoir comprising a main heat chamber and a secondary heat chamber adapted to transmit heat to the working chamber by radiation, a plurality of flues leading from the secondary heat chamber to the working chamber, said heat reservoir being so constructed as to supply an extended surface for the absorption of heat and to lengthen the flow of substantially all of the hot gases so that they may heat such extended surface before passing through said flues.

4. In a furnace, a working chamber, a place for initial combustion, a heat reservoir comprising a primary heat chamber in which combustion can be continued and a secondary heat chamber in proximity to said working chamber, adapted to transmit heat from said main heat chamber and distribute it in the working chamber both directly and by radiation, and having an extended surface to hold heat until absorbed in the working chamber, a plurality of flues leading from said secondary heat chamber to said working chamber, and means for controlling the passage of gases through said flues.

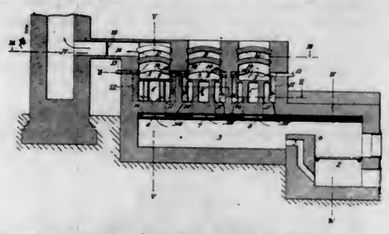
5. In a furnace, a working chamber, a place for initial combustion, a heat reservoir comprising a primary combustion chamber and a heat-distributing chamber, so arranged as to supply extended surfaces for the absorption of heat, and an extended passage for gases within which combustion can be substantially completed, said heat reservoir being adapted to give an even distribution of heat to the working chamber both directly and by radiation.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,267. FURNACE. ALFRED SMALLWOOD, London, England, assignor to American Incandescent Heat Company, Portland, Me., a Corporation of Maine. Filed June 19, 1915. Serial No. 35,061. (Cl. 263—36.)

1. In a furnace, a plurality of working chambers, a place for initial combustion, a common combustion chamber, a heat-distributing chamber for each of said working chambers, said heat distributing chambers having extended surfaces for the absorption of heat and being adapted to radiate heat to the working chambers, flues connecting such heat distributing chambers with the working chambers, and control dampers for said flues.

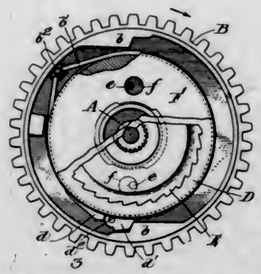


2. In a furnace, a plurality of working chambers, a place for initial combustion, a common combustion chamber, an intermediate combustion chamber for each working chamber, such intermediate combustion chambers having an extended surface for the absorption of heat and being adapted to give an even distribution of heat to each working chamber, both directly and by radiation.

3. In a furnace, a plurality of working chambers, a place for initial combustion, a heat reservoir comprising a main heat chamber in which combustion may be continued and from which only a relatively small amount of heat can pass by radiation and a plurality of radiating chambers, each one of which is adapted to radiate heat into one of said working chambers, flues connecting said radiating chambers with said working chambers, and dampers adapted to control the passage of gases through said flues.

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1,226,268. CLUTCH. GEORGE M. SMITH, Winooski, Vt. Filed June 13, 1916. Serial No. 103,546. (Cl. 192—6.)



1. A driving member, a driven member, a clutch therebetween, and a clutch controlling member, said clutch comprising an element fixed to the driving member moving in a fixed circular path and an element movable into and out of said path consisting of a toggle, one end of which is pivoted to the driven member and the other end of which is pivoted to said clutch controlling member, said clutch controlling member having a limited movement relative to said driven member adapted to move the elbow of said toggle into and out of the path of the clutch element fixed to the driving member.

2. A driving member, a driven member, a clutch therebetween, and a clutch controlling member, said clutch comprising an element fixed to the driving member moving in a fixed circular path and an element movable into and out of said path consisting of a toggle, one end of which is pivoted to the driven member and the other end of which is pivoted to said clutch controlling member, said clutch controlling member having a limited movement relative to the said driven member adapted when arrested to cause the elbow of the toggle to move out of the path of the clutch element fixed to the driving member, and means adapted when the clutch controlling member is released to cause the elbow of the toggle again to move into the path of the clutch element fixed to the driving member.

3. A driving member, a driven member, a clutch therebetween, and a clutch controlling member, said clutch comprising an element fixed to the driving member moving in a fixed circular path and an element movable into and out of said path, consisting of a toggle, one end of which is pivoted to the driven member and the other end of which is pivoted to said clutch controlling member, said clutch controlling member consisting of a ratchet wheel having a limited movement of rotation relative to said driven member, adapted when arrested to cause the elbow of the toggle to move out of the path of the clutch element fixed to the driving member, and means adapted when the ratchet wheel is released to cause the elbow of the toggle again to move into the path of the clutch element fixed to the driving member.

4. A driving member, a driven member, a clutch therebetween, and a clutch controlling member, said clutch comprising an element fixed to the driving member moving in a fixed circular path and an element movable into and out of said path consisting of a toggle, one end of which is pivoted to the driven member and the other end of which is pivoted to said clutch controlling member, said clutch controlling member having a limited movement relative the said driven member adapted when arrested to cause the elbow of the toggle to move out of the path of the clutch element fixed to the driving member, and frictional connection between the driving member and the clutch controlling member adapted, when the clutch controlling member is released, to rotate the clutch controlling member relatively to the driven member and thereby move the elbow of the toggle into the path of the clutch element fixed to the driving member.

5. A driving member, a driven member, a clutch therebetween and a clutch controlling member, said clutch comprising an element fixed to the driving member moving in a fixed circular path and an element movable into and out of said path consisting of a toggle, one end of which is pivoted to the driven member and the other end of which is pivoted to said clutch controlling member, said clutch controlling member having a limited movement of rotation relative to said driven member, adapted when arrested to cause the elbow of the toggle to move out of the path of the clutch element fixed to the driving member, a friction wheel connected to the clutch controlling member to turn therewith, and frictional connection between the friction wheel and the driving member adapted, when the clutch controlling member is released, to rotate said friction wheel and clutch controlling member relative to said driven member and thereby move the elbow of the toggle into the path of the clutch element fixed to the driving member.

[Claims 6 and 7 not printed in the Gazette.]

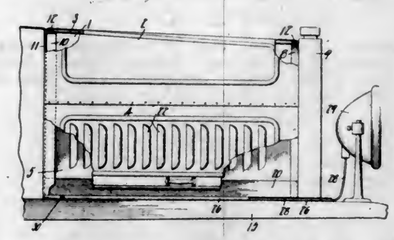
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1,226,269. HOOD CONSTRUCTION. LYLE K. SNELL, Detroit, Mich., assignor to Cadillac Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 8, 1915. Serial No. 20,068. (Cl. 21—90.)

1. In combination, a motor vehicle having a hood including a top section and a side section pivotally connected thereto and means for normally forming a narrow passage along the lower side edge of the side section through which heated air may escape.

2. In combination, a motor vehicle having a hood including a top section and a side section pivotally connected thereto and means for normally forming a narrow passage along the lower side edge of the side section through which heated air may escape, the exterior opening to said passage being entirely beneath the corresponding lower edge of the hood.

3. In combination, a motor vehicle including side bars and a hood having its lower edges arranged above said side bars, a plate carried by each of the side bars and extending upwardly therefrom, said plate being spaced apart and within the corresponding side of the hood, whereby a passage is formed for the escape of heated air from beneath the hood.



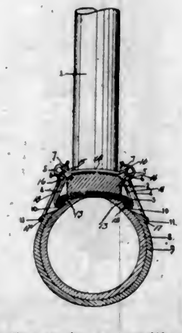
4. In combination, a motor vehicle including side bars and a hood, a plate carried by each of the side bars, said plate including a flange that extends horizontally beneath the corresponding edge of the hood in spaced relation thereto and a vertical flange that rises from the horizontal flange and is also spaced from the edge of the hood, whereby a passage is formed for the escape of heated air from beneath the hood.

5. In combination, a motor vehicle including side bars and a hood, a plate carried by each of the side bars, said plate including a flange that extends horizontally beneath the corresponding edge of the hood in spaced relation thereto and a vertical flange that rises from the horizontal flange and is also spaced from the edge of the hood, whereby a passage is formed for the escape of heated air from beneath the hood, one of the flanges being shaped to form a longitudinally extending conduit, a headlight, and a cable within said conduit for conducting electricity to said headlight.

[Claims 6 to 12 not printed in the Gazette.]

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1,226,270. TIRE-CLAMP. LAWRENCE E. SNIVELY, Jr., Glenside, Pa. Filed July 25, 1916. Serial No. 111,190. (Cl. 152—17.)



2. In a wheel tire, a rim, an auxiliary tire adapted to be seated over the tire proper, a clamp bridging the rim and having lateral portions, extensions of said lateral portions engageable with the rim, and means adjustable in said lateral portions for engagement with said auxiliary tire.

3. In a wheel tire, a rim, a resilient clamp bridging the rim, an auxiliary tire adapted to be seated over the tire proper, and resilient means carried by said clamp for engaging said rim and additional means carried by and arranged substantially parallel with the first-named means for engaging said auxiliary tire.

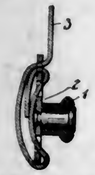
4. In a wheel tire, a rim, an auxiliary tire adapted to be seated over the tire proper, a clamp bridging the rim and having lateral portions, extensions of said lateral portions

terminating in hooks engageable with the rim, and means adjustable in said lateral portions for engagement with said auxiliary tire.

[Claims 1 and 5 not printed in the Gazette.]

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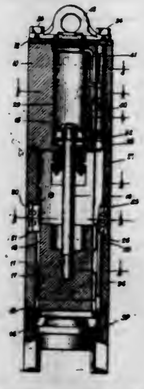
1,226,271. TAB END. HENRY J. STUART, Derby, Conn., assignor to The Robert N. Bassett Company, Derby, Conn., a Corporation of Connecticut. Filed June 10, 1914. Serial No. 844,162. (Cl. 24—245.)



In a tab end, a base plate, a button mounted thereon, two transverse slots in said plate above said button, one transverse slot in said plate below said button and a tape threaded through said slots as follows: through the uppermost slot from the front to the rear, thence down to and around the lower edge of the plate and up to and through the lowermost slot from the front to the rear, thence up to and through the intermediate slot above the button from the rear to the front, thence up to and again through the uppermost slot from the front to the rear, the tip end terminating between the uppermost and lowermost slots and at the back of the frame.

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1,226,272. PILE-HAMMER. THOMAS E. STURTEVANT, Dover, N. J. Filed Apr. 8, 1916. Serial No. 89,777. (Cl. 121—19.)



1. A power hammer comprising an engine having a cylinder, a piston, a valve casing and a cylindrical oscillatory valve therein, a guide adjacent to and connected with the cylinder, a hammer block connected to the piston adapted to reciprocate in the guide and formed to provide oppositely inclined external surfaces, and a solid one-piece cam rod forming a continuation of the cylindrical oscillatory valve and formed to provide an oscillatory bearing surface, and a pair of oppositely inclined bearing surfaces adjacent to the hammer block and coöperating with the cam surfaces thereof, whereby a reciprocatory movement of the hammer block effects an oscillatory movement of the valve.

2. A power hammer comprising an engine having a cylinder, a piston and a valve, a barrel externally continuous with the cylinder, and connected thereto, a hammer block connected to the piston, adapted to reciprocate in the barrel and provided with a pair of oppositely inclined external cam surfaces, and a solid one-piece semi-cylindrical cam rod directly connected to the valve at one end and formed to provide oppositely inclined cam surfaces to cooperate with the respective cam surfaces of the hammer block.

3. A hammer comprising a prismatic body having an engine cylinder, a barrel and tie rods for securing the parts of the body together, a piston for the engine, a hammer block connected to the piston and mounted to slide within the barrel, a valve for the engine and means dependent directly upon the movement of the hammer block, for operating the valve.

4. A hammer comprising a prismatic body having an engine cylinder, a barrel, an anvil block retainer and tie rods for securing the parts of the body together, a piston for the engine, a hammer block connected to the piston and mounted to slide within the barrel, a valve for the engine, an anvil block, and a cam rod substantially parallel to the movement of the hammer block and actuated thereby for operating the valve.

5. A hammer comprising a prismatic body having an engine cylinder, a barrel, an anvil block retainer and tie rods for securing the parts of the body together, a piston for the engine, a hammer block connected to the piston and mounted to slide within the barrel, an anvil block held by the retainer in position to be struck by the hammer block, an oscillatory valve for the engine and a cam rod in the barrel, said hammer block and cam rod having coöperating cam surfaces whereby the reciprocatory movement of the block produces an oscillatory movement of the valve rod.

[Claim 6 not printed in the Gazette.]

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1,226,273. TOY GUN. THOMAS ELWOOD MOON, Sabina, Ohio, assignor of one-half to Orland J. Moon, New Holland, Ohio. Filed Aug. 7, 1916. Serial No. 113,516. (Cl. 124—12.)



1. A toy gun having a barrel extending in a horizontal plane to adapt it to rest upon a level surface, a rearwardly extending, upwardly and downwardly curved handle elevated above the barrel so as to provide a clear space for the hand between said handle and said surface, a piston in said barrel, a spring behind the piston, and releasable means depending from said handle including a depending pivoted fulcrum-piece or lever provided with a series of notches therein and having a direct connection with said piston and a depending pivoted catch or trigger adapted to engage the notches in said lever whereby the spring may be compressed and held under different degrees of tension for varying the force exerted by the piston in impelling a ball.

2. In a toy gun, a stock having an arched handle elevated above the barrel, a barrel extending longitudinally therefrom in a plane substantially parallel with the horizon, said barrel having a spring-actuated piston therein protruding from its open end and a connecting rod secured thereto extending through the closed end of the barrel and pivoted to a notched fulcrumed lever, said lever being pivoted and depending from the handle of the gun, together with a catch adapted to engage the notches in said lever and hold said spring under tension.

3. A toy gun having a stock, a barrel, a piston in said barrel, a fulcrumed lever depending from the stock having notches therein, and detachably secured to a rod connected to said piston, a trigger having a catch thereon adapted to engage the notches in said lever, and means for impelling the piston when said trigger is released.

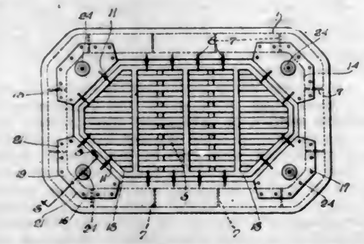


4. A toy gun comprising a barrel adapted to rest on a flat surface in line with an object lying on said surface, and a stock having a rearwardly extending handle elevated above the barrel, so as to give free action to the hand of the operator, and provided with a pivotally attached notched bar and trigger for engagement with said bar depending from its under side; said barrel having a reciprocating plunger therein, a spring adapted to be compressed by said plunger, and a rod connecting said plunger and notched bar.

5. A toy gun having a barrel extending in a horizontal plane to adapt it to rest upon a level surface, an arched handle elevated above the barrel so as to provide a clear space for the hand between said handle and said surface, a piston protruding from the muzzle end of said barrel, a spring behind the piston, releasable means depending from said handle having a direct connection with said piston for compressing and holding the spring under different degrees of tension as desired for heavy or light shots, and a trigger for retaining said releasable means in different adjusted positions.

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1,226,274. LIFE-RAFT. GEORGE F. SWEENEY, Boston, Mass.; Margaret Sweeney, Boston, Mass., administratrix of said George F. Sweeney, deceased. Filed May 24, 1915, Serial No. 30,013. Renewed Feb. 7, 1917. Serial No. 147,231. (Cl. 9—11.)



1. A life saving apparatus of the kind described, comprising a substantially oval shaped buoyant body adapted to be used in reversible position, a plurality of watertight receptacles carried by said body at spaced intervals, constituting a reinforcing and bracing portion of the buoyant body, and means permitting access into said receptacles from either side of the apparatus.

2. A life saving apparatus of the kind described, comprising a substantially oval shaped buoyant body adapted to be used in reversible position, a plurality of watertight receptacles carried by said body at spaced intervals, constituting a reinforcing and bracing portion of the buoyant body, and means comprising a plurality of openings and watertight covers for each opening, permitting access to said receptacles above the line of flotation in any floatable position of the apparatus.

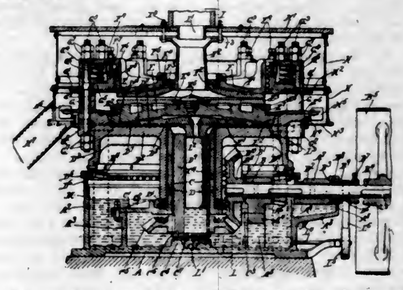
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1,226,275. CRUSHING-MACHINE. EDGAR B. SYMONS, Chicago, Ill. Filed Oct. 18, 1913. Serial No. 795,840. (Cl. 83—10.)

1. A crushing machine comprising a pair of opposed rotating crushing disks inclined one to the other and rotating in unison, the effective crushing surfaces of said disks being parallel along a radial line and means for changing the relative positions of the axes of said disks during rotation to move said radial line.

2. A crushing machine comprising a pair of opposed rotating crushing disks inclined one to the other and rotating in unison, the effective crushing surfaces of said disks being parallel along a radial line and means for constantly gyrating the axis of one of said disks about the axis of the other to give said radial line a uniform uninterrupted movement about a fixed center.

3. A crushing machine comprising a pair of opposed rotating crushing disks inclined one to the other and rotating in unison, the effective crushing surfaces of said disks being parallel only along a constantly progressing radial line.



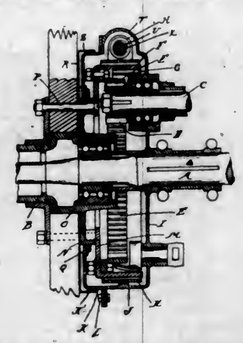
4. A crushing machine comprising a pair of opposed rotating crushing disks inclined one to the other and rotating in unison, the effective crushing surfaces of said disks being normally inclined each to the other but being parallel along a single constantly progressing radial line.

5. A crushing machine comprising a pair of opposed rotating crushing disks inclined one to the other and rotating in unison, the effective crushing surfaces of said disks being parallel only along a constantly progressing radial line and means for gyrating the axis of one of said disks about the axis of the other during rotation of the disks to move the position of said radial line of parallelism.

[Claims 6 to 74 not printed in the Gazette.]

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1,226,276. DRIVE-WHEEL CONSTRUCTION FOR MOTOR-VEHICLES. CECIL HAMELIN TAYLOR and BOUDEWIJN B. NEUTEBOOM, Detroit, Mich. Filed Mar. 8, 1915. Serial No. 12,953. (Cl. 21—90.)



1. The combination with an axle and a wheel journaled thereon, of a non-concentric drive mechanism for said wheel including a gear mounted upon the wheel and a coöperating pinion, a stationary housing for said drive mechanism having a portion extending from said axle on one side of said gear, and a detachable portion of said portion of said housing extending inward upon the opposite side of said gear to a point nearer the wheel axis, and a mud-guard member adjacent said detachable portion having a portion bearing on a peripheral portion thereof.

2. The combination with an axle and a wheel journaled thereon, of a non-concentric drive mechanism for said wheel, including an annular rack secured to the wheel and a coöperating pinion, a stationary housing mounted on said axle and extending outward therefrom on one side of said annular rack and about the periphery thereof, a

detachable complementary portion of said housing extending from said peripheral portion inward on the opposite side of said rack to a point nearer the wheel axis, and a member clamped to said wheel and having sealing contact with a portion of the periphery of said detachable complementary portion.

6. The combination with an axle and a wheel journaled thereon, of a non-concentric drive mechanism for said wheel, a brake-drum surrounding said non-concentric drive mechanism, a stationary housing for said non-concentric drive mechanism and brake-drum, a brake-strap surrounding said brake-drum and having outwardly-extending lugs at its opposite ends engaging a recess in said housing, an actuating rod for one end of said brake-strap passing through the lug thereof and outward from said housing a sleeve surrounding said rod for engaging the opposite lugs of the brake-strap, a spring sleeved on said rod intermediate said lug for expanding the strap, and mechanism without said housing for relatively moving said rod and sleeve while permitting freedom for joint movement thereof.

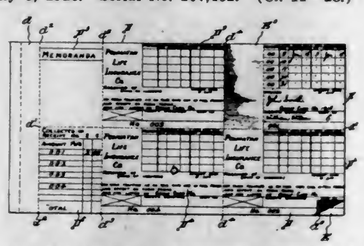
8. The combination with an axle and a wheel journaled thereon, a brake-drum secured to said wheel, a brake strap for coöperating with said brake-drum, actuating members for the opposite ends of said brake-strap, and means for relatively moving said actuating members while permitting freedom for joint movement thereof.

9. The combination with an axle and a wheel journaled thereon, of a non-concentric drive mechanism for said wheel, a stationary housing for said drive mechanism including an annular portion surrounding said gear and extending inward beyond said gear, and a revoluble member secured to said wheel and having a substantially sealing contact with said stationary housing.

[Claims 3 to 5 and 7 not printed in the Gazette.]

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1,226,277. DEVICE FOR USE IN INDUSTRIAL-LIFE-INSURANCE SYSTEMS. FREDERICK F. TAYLOR, Pelham, N. Y., assignor to Provident Systems Corporation, New York, N. Y., a Corporation of New York. Filed July 3, 1916. Serial No. 107,462. (Cl. 11—23.)




1. A device for use in accounting comprising a plurality of superposed sheets secured together at one edge and provided with a detachable stub provided with numbers, and a series of separate receipts detachably connected to said stub, and to each other, said receipts being numbered to correspond with numbers on said stub, and the stub being ruled so that the amount indicated by each of said receipts may be transferred to said stub, with means for transferring any memoranda written on the top sheet to the sheet beneath, in combination with a loose leaf provided with a series of spaces each dated, respectively, to correspond with the dates of required payments of premiums, said spaces being adapted, respectively, to receive one copy of each of said receipts when detached from its sheet, and to visually indicate the last date to which said premiums have been paid, substantially as described.

2. A device for use in accounting comprising a book composed of a series of sets of superposed sheets secured together at one edge and provided with a detachable stub provided with numbers, and with a series of separate receipts detachably connected to each stub, and to each other, said receipts being numbered to correspond with numbers on the corresponding stub, and the stub being ruled so that the amount indicated by each of said receipts may be transferred to said stub, with means for transferring any memoranda written on the top sheet to the sheet beneath, in combination with a series of loose leaves, each provided with a series of spaces each dated, respectively, to correspond with the dates of required payments of premiums, said spaces being adapted, respectively, to receive one copy of each of said receipts when detached from its sheet, and to visually indicate the last date to which said premiums have been paid, substantially as described.

3. A device for use in accounting in the business of life insurance comprising a pair of superposed sheets secured together at one edge and provided with two detachable stub members, and with a series of separate receipts detachably connected to said stub members, and to each other, one of each pair of stub members being provided with numbers, and said receipts being numbered to correspond with numbers on said stub members, and the stub member being ruled so that the amount indicated by each of said receipts may be transferred to said stub member, and the other stub member being left blank for memoranda, the upper sheet having its back coated with copying material, whereby any memoranda written on the top sheet will be transferred to the sheet beneath, in combination with a loose leaf provided with a series of spaces each dated, respectively, to correspond with the dates of required payments of premium, said spaces being adapted, respectively, to receive one copy of each of said receipts when detached from its sheet, and to visually indicate the last date to which said premiums have been paid, substantially as described.

4. A device for use in accounting comprising an upper and a lower sheet, with means for transferring any memoranda written on said upper sheet to said lower sheet, the upper sheet being provided with a plurality of receipt forms, and with lines of perforations whereby said sheet may be readily separated into a stub and a plurality of receipt segments, said stub being provided with numbers, and said receipt segments being numbered to correspond with numbers on said stub and said receipts having a limited portion only of their face ruled to receive autographic memoranda, and the lower sheet being correspondingly ruled to make a complete compact copy of the autographic memoranda on the upper sheet, and provided with lines of perforations whereby the copies of said receipts may be detached complete in form but in smaller segments than the receipt segments in the upper sheet, substantially as described.

5. A device for use in accounting comprising a book composed of a series of upper and lower sheets, with means for transferring any memoranda written on said upper sheet to said lower sheet, each upper sheet being provided with a plurality of receipt forms, and with lines of perforations whereby said sheet may be readily separated into a stub and a plurality of receipt segments, said stub being provided with numbers, and said receipt segments being numbered to correspond with numbers on said stub and said receipts having a limited portion only of their face ruled to receive autographic memoranda, and the lower sheet being correspondingly ruled to make a complete compact copy of the autographic memoranda on the upper sheet, and provided with lines of perforations whereby the copies of said receipts may be detached complete in form but in smaller segments than the receipt segments in the upper sheet, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

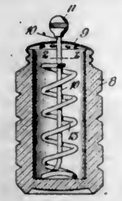
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1,226,278. SALT-SHAKER PULVERIZER. FREDERICK E. TEVES, Glen Cove, N. Y. Filed May 22, 1914. Serial No. 840,223. (Cl. 65—57.)

1. A salt shaker pulverizer comprising, a continuous wire, shaped to form adjacent one end, a straight shank; and a spiral body co-axial with said shank, the other end of said wire being inturned toward the axis of said spiral body and wrapped about the said shank.



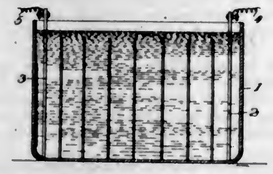
2. A salt shaker pulverizer comprising, a continuous wire, shaped to form adjacent one end, a straight shank; a spiral body co-axial with said shank, the other end of said wire being inturned toward the axis of said spiral



body and wrapped about the said shank; a shaker cap having a central preforation forming a guide for said shank; and a handle rigidly moutned on the end of said shank to maintain said cap in engaged relation to said pulverizer.

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1,226,279. PROCESS OF ELIMINATING AND RECOVERING ACIDS OR METALLIC SALTS. HAROLD E. TIFFANY, Newark, Del., assignor to The Continental Fibre Company, Newark, Del., a Corporation of Delaware. Filed Jan. 5, 1916. Serial No. 70,477. (Cl. 204—1.)



1. The improved method of washing and puring out fiber or similar substance containing metallic salts or acid, which consists in subjecting the material to electrolytic action.

2. The herein-described method or process of eliminating the metallic salts or acids used in the hardening of fiber, which consists in subjecting the material to electrolysis.

3. The herein-described method or process of eliminating the metallic salts or acids used in the hardening of fiber, which consists in subjecting the material to electrolytic action by placing the fiber saturated with the hardening material in an electrolyte and passing a current through it.

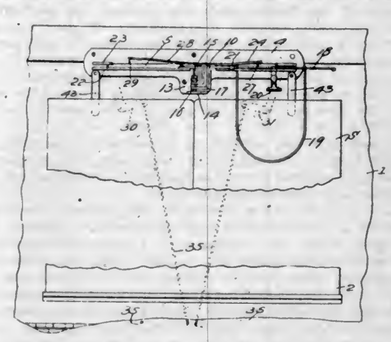
4. The herein-described method or process of eliminating the metallic salts or acids used in the hardening of fiber, which consists in subjecting the material to electrolytic action by placing the fiber saturated with the hardening material in an electrolyte, passing a current through it, and employing the fiber thus saturated as one of the electrodes.

5. The herein-described method or process of eliminating metallic salts or acids used in the treatment of certain fibrous materials and in recovering same, which consists in submerging the fibrous materials in a bath of acid or metallic salts, which gelatinizes or softens the cellulose therein, then subjecting the material under treatment to electrolytic action, whereby to remove and recover the acid or metallic salts, and finally drying the fibrous material treated, which then results in the hardening of the latter.

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1,226,280. MUSIC-LEAF TURNER. JOSEPH B. TURNER, Sulphur, La., assignor of forty one-hundredths to James A. Johnson, Sulphur, La. Filed May 10, 1916. Serial No. 96,670. (Cl. 84—17.)

The combination with a supporting structure having a transverse slot and a leaf carrying arm mounted for swinging movement upon the structure, of an inclined deflecting member within the slot, a conveying lever pivotally mounted in the slot adjacent the upper end of the deflecting member, yielding means for holding one arm of said lever normally positioned under the deflecting member and the other arm of the lever normally elevated,



a finger depending from said elevated arm of the lever and normally supported above the path of the leaf carrying arm, and means for shifting the lever out of its normal position to bring the finger carrying arm of the lever into position under the deflecting member to lower said finger into engagement with the leaf carrying arm.

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1,226,281. CLIP-TAG. ALBERT T. VAN ALSTYN, New York, N. Y. Filed Nov. 12, 1914. Serial No. 871,660. (Cl. 40—25.)



1. In a clip-tag, the combination with a pasteboard ticket folded over upon itself thereby forming two portions, there being perforations in one of said portions, of a wire clip composed of a single piece of wire, bent upon itself to form a tension arm, the end portions being bent outwardly at right angles from said tension arm in opposite directions to form shoulders, the arm and said shoulders forming the body of the clip, the wire at the outer ends of said shoulders being first bent to form arcuate bends looping outwardly away from the free end of said tension arm and then bent to form hook arms extending parallel to said tension arm, the ends of the wire at the free ends of said hook arms being bent into hooks, the points of said hooks lying substantially in the plane of said tension arm so that when a ticket portion is forced between said tension arm and said points the hook arms will be placed under tension, the hook arms when attached being disposed on the side of the portion of said ticket opposite that side thereof in which the perforations are formed, the tension arm being disposed between the two portions of the ticket, the arcuate bends largely neutralizing the strain created when the hook arms are flexed, and being disposed in the perforations and thereby spacing the shoulders from the adjacent parts of the hook arms so that the tension arm may lie snugly between the portions of said ticket, and the shoulders forming torsion rods when the hook arms are flexed to receive a fabric sheet.

2. In a clip tag, a symbol bearing element scored laterally to form face and back portions when doubled, the latter portion having perforations, and a wire clip comprising a single length of spring wire bent upon itself to form a tension arm, the ends being bent outward at substantially right angles from said arm in opposite directions to form shoulders, the tension arm and shoulders forming the body of the clip, the wire at the outer end

of each shoulder portion being curved around and extended to form hook arms, said arms being bent into a plane approximately parallel with said tension arm and having pointed hooked ends spaced from the latter a distance less than the thickness of said symbol bearing element, said clip and element being assembled with the hook arms of the former projecting through the perforation of the latter whereby the thickness of said element separates and thereby tensions the hook arms and causes said hook arms to be maintained under tension in the assembled clip tag, the face portion of said element being folded on the scoring line to a position adjacent the back of the back portion and secured in such position thereby locking the tension arm and shoulders of the wire clip between the two portions of said element, the point on each hook arm being turned toward the back portion of the said element to engage and hold goods inserted between said element and hook arms.

3. In a clip tag, a symbol bearing element scored laterally to form face and back portions when doubled, the former having perforations, and a wire clip comprising a single length of spring wire bent to form a tension arm and hook arms, the latter having hooked pointed ends, the major portion of said hook arms extending approximately parallel with said tension arm and spaced therefrom the hooks being normally spaced from said tension arm a distance considerably less than the thickness of said element, said clip and element being assembled together with the hook arms projecting through said perforations and with the back portion of said element disposed between the hook arms and tension arm to spring said hook arms away from said tension arm and cause the hooked points of the latter to forcibly engage the back of the back portion of said element whereby said clip tag automatically fastens itself to goods inserted between said hook arms and symbol bearing element.

4. In a clip tag, a symbol bearing element having perforations, and a wire clip comprising a single length of spring wire bent to form a tension arm and hook arms, the latter having hooked pointed ends, the major portion of said hook arms extending approximately parallel with said tension arm and spaced therefrom the hooks being normally spaced from said tension arm a distance considerably less than the thickness of said element, said clip and element being assembled together with the hook arms projecting through said perforations and with said element disposed between said hook arms and tension arm to spring said hook arms away from said tension arm and cause the hooked points of the latter to forcibly engage the back portion of said element whereby said clip tag automatically fastens itself to goods inserted between said hook arms and symbol bearing element.

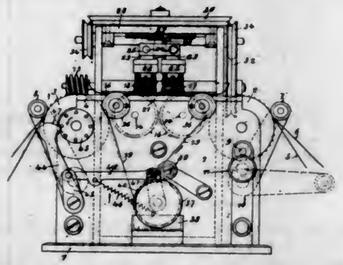
5. In a clip tag, a symbol bearing element, and a spring wire clip having a tension arm and hook arms in approximately parallel relation with the ends of said hook arms provided with points turned inwardly toward said tension arm, said clip and element being assembled together with said element disposed between said tension arm and hook arms to spring said hook arms away from said tension arm and cause the hook points of the hook arms to forcibly engage the side of said element adjacent thereto whereby said clip tag automatically fastens itself to goods inserted between said hook arms and symbol bearing element.

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1,226,282. COLORING-MACHINE FOR MOVING-PICTURE FILMS. MARCEL VANDAL, Paris, France. Filed June 7, 1912. Serial No. 702,331. (Cl. 101—121.)

1. A coloring machine for films comprising a table, means for guiding in a straight line on the said table a film and an open-work coloring film, the latter film being on the top of the former one, inking or coloring tapes arranged parallel to the path of the film, on both sides of such path, brushes located above the table, and so arranged as to convey the colors from the tapes to the open-work film, and means whereby to impart to the brushes both opposite reciprocatory movements and a general circular movement in the plane parallel to the table.

2. In a coloring machine for films, the film to be colored and the openwork film having the usual perforations, the combination of a table, a pair of spaced drums between which the films are extended over the table, two axes parallel to the table between the said drums, four toothed disks mounted in pairs on the said axes and of which the teeth are adapted to engage in the perforations of the films, all of said disks being loosely mounted in their said axes so as to slide and rotate upon their said axes separate from one another.

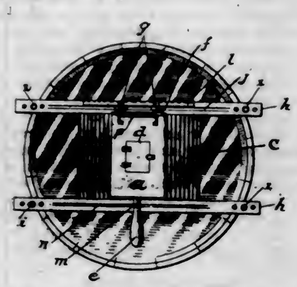


3. In a coloring machine for films, the combination of a table having guiding means for guiding a film and an open-work film, the latter film on the top of the former one, a main frame supporting such table, a plate hinged on the table, rotary plates mounted on the said plate, movable brushes carried by such plates, a grooved pulley mounted on the said plate and adapted to revolve or turn such plates, grooved rollers mounted on the main frame, and an endless cable passing around the said rollers and around the pulley to drive the pulley, the position of the pulley and of the rollers being such that the cable is taut when the plate is horizontal and slackened when the latter is upright.

4. In a coloring machine for films, the combination of means for supporting and moving the films to be colored, an endless inking or coloring tape, drums around which the said tape passes, a color container in which one of the said drums is partly submerged, means connected to the means for moving the films and arranged for imparting a forward movement to the tape, color brushes so arranged as to take the color from the tape and apply it to the films, and means whereby to impart to the brushes both opposite reciprocatory movements and a general circular movement.

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1,226,283. WASHING APPARATUS. JESSIE E. VIRDEN, Philadelphia, Pa. Filed Apr. 29, 1916. Serial No. 94,298. (Cl. 68—20.)



1. A washing apparatus comprising a washboard having a runway near one longitudinal edge thereof, an overhanging member extending along the same edge of the board, a carriage and means thereon engaging said runway and overhanging member, and a pad pivoted on the carriage on an axis extending parallel with said runway and adapted to be swung to and from the washboard.

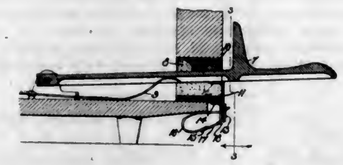
2. A washing apparatus comprising a washboard having runways adjacent to its opposite longitudinal edges, an overhanging member extending along one edge of the washboard, a carriage movable between one of the runways and said overhanging member, a pad pivoted on the carriage on an axis extending parallel to the last-named runway and adapted to be swung toward and from the washboard, and means on the free end of the pad adapted to movably engage the other runway.

3. A washing apparatus comprising a washboard having a runway near one longitudinal edge thereof, a piece secured along the same edge of the board having an overhanging member, a carriage, two rollers movable with the carriage, one engaging the runway and the other extending under said overhanging member, a pad pivoted on the carriage, and a handle on the pad whereby the latter may be reciprocated along the board.



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1,226,284. PEDAL-GATE FOR PIANOS. THEODORE W. VRANA, Newark, N. J. Filed June 17, 1916. Serial No. 104,250. (Cl. 84—24.)



A gate for the pedal openings of pianos, comprising a support having a rearwardly directed lateral flange at one end thereof, a rearwardly slanting tongue at the other end of said support, a gate member slidably mounted in the support, said gate member having a flange at the upper edge thereof for engaging the pedal, and a spring, one end of which is secured to said tongue, said support having a slot through which the other end of the spring projects to engage the gate member to maintain the gate member against the pedal across the opening.

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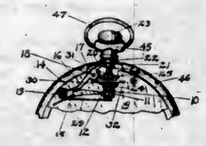
1,226,285. STEM-WINDING AND STEM-SETTING WATCH. FREDERICK WEHINGER, Waterbury, Conn., assignor to Waterbury Clock Co., Waterbury, Conn., a Corporation. Filed Aug. 30, 1916. Serial No. 117,628. (Cl. 58—63.)



In a stem-winding and stem-setting watch of the type in which the stem is pulled out for setting, the combination with the front and rear movement-plates thereof, of a bridge interposed directly between the upper edges of the said plates which it spaces apart and having the front face of one of its ends recessed, a winding-and-setting pinion journaled in the said bridge, a winding-and-setting stem mounted in the said pinion which it rotates, but in which it has longitudinal movement, a primary setting-lever interposed between the recessed front face of the bridge and the rear face of the said front movement-plate and pivotally mounted upon the screw employed for securing the recessed end of the bridge to the front movement-plate, means for securing the opposite end of the bridge to both of the movement-plates, a secondary setting-lever co-acting with the said primary setting-lever, and winding-and-setting means alternately brought into play by the action of the said levers.



1,226,286. STEM-WINDING AND STEM-SETTING WATCH. FREDERICK WEHINGER, Waterbury, Conn., assignor to Waterbury Clock Co., Waterbury, Conn., a Corporation. Filed Aug. 30, 1916. Serial No. 117,629. (Cl. 58—68.)

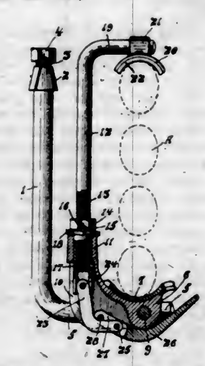


1. In a pull-out setting mechanism for stem-winding and stem-setting watches, the combination with a winding-and-setting stem organized with the watch-case, of a winding-and-setting shaft organized with the watch-movement and connected with the stem for rotation thereby, a primary setting-lever pivotally mounted upon the front movement-plate and having its outer end connected with the said stem for positive movement thereby in both directions, a secondary setting-lever pivotally mounted upon the said front movement-plate and connected with the said shaft for positively moving the same inward away from the said stem for converting the watch from winding to setting, the said levers co-acting directly with each other in being positively locked in their setting positions, and means for moving the said shaft outward for converting the watch from setting to winding when the levers are unlocked.

[Claims 2 and 3 not printed in the Gazette.]

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1,226,287. BOW REST AND CLAMPING DEVICE. HARRY B. WHITE, Canton, Ohio, assignor to The Gilliam Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed July 12, 1915. Serial No. 39,218. (Cl. 21—61.)



1. In a device of the character described, the combination of two members, one movable and the other stationary, arranged to support and clamp a set of bows between them, means for operating said movable member, the said means including a lever pivotally connected to said stationary member at one side of said movable member, and a link pivotally connected at its opposite ends to said lever and to the extremity of said movable member and a spring interposed between said members and arranged to be compressed when the lever is moved into operative position.

2. In a device of the character described, the combination of a bow rest member, a tubular member supported thereby, a clamping member arranged to coöperate with said rest member and having a post movably supported with relation to said rest member, a collar adjustably mounted upon said post, a sleeve coupling adjustably mounted upon said part and movable with said collar,

said sleeve coupling slidably mounted within said tubular member, a resilient member interposed between said collar and said tubular member and means for operating said clamping member, said means including a lever pivotally connected to said rest member and a link pivotally connected at its opposite ends to said lever and to the extremity of said movable member.

3. In a device of the character described, the combination of a bow rest member, a tubular member supported thereby, a clamping member arranged to coöperate with said rest member and having a post movably supported with relation to said rest member, a collar adjustably mounted upon said post, a sleeve coupling adjustably mounted upon said post and movable with said collar, said sleeve coupling slidably mounted within said tubular member, means for operating said clamping member, the said means including a lever pivotally connected to said rest member and a link pivotally connected at its opposite ends to said lever and to the extremity of said sleeve coupling and a spring interposed between said collar and said tubular portion and arranged to be compressed when the lever is moved into operative position.

4. In a device of the character described, the combination of a bow rest, a tubular member supported thereby, a clamping member arranged to coöperate with said rest member and having a post movably supported with relation to said rest member, said post being provided with a screw threaded extremity, an internally screw threaded collar mounted upon said screw threaded extremity, an internally screw threaded sleeve coupling mounted upon said screw threaded extremity and movable with said collar, said sleeve coupling slidably mounted within said tubular member and means for operating said clamping member, said means including a lever pivotally connected to said rest member and a link pivotally connected at its opposite ends to said lever and to said sleeve coupling and a spring interposed between said collar and said tubular member and arranged to be compressed when the lever is moved into operative position.

6. In a device of the character described, the combination of a bow rest member, a tubular member supported thereby, a clamping member arranged to coöperate with said rest member, and having a post movably supported with relation to said rest member, said post being provided with a screw threaded extremity, an internally screw threaded collar mounted upon said screw threaded extremity, an internally screw threaded sleeve coupling mounted upon said screw threaded extremity and movable with said collar, said sleeve coupling slidably mounted within said tubular member, and means for operating said movable member, the means including a lever pivotally connected to said stationary member at one side of said movable member, and a link pivotally connected at its opposite ends to said lever and to the extremity of said movable member and a spring interposed between said members and arranged to be compressed when the lever is moved into operative position.

[Claim 5 not printed in the Gazette.]

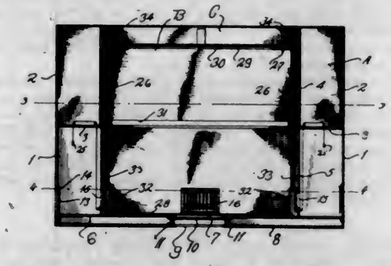
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1,226,288. TRAP. JAMES E. WHITE, Baltimore, Md. Filed Apr. 15, 1916. Serial No. 91,377. (Cl. 43—24.)

1. In a trap, a box member, a wall disposed within said box member and spaced from the walls of the latter, a roof portion connecting said wall with said box member, the said wall and box member being provided with openings, a door arranged adjacent each of the openings in said wall and being capable of swinging inwardly and upwardly, a cord attached to each door and extending through said roof portion, the extremity of said cord extending downwardly through said roof, and a weight on the end of said cord.

2. In a trap, inner and outer box members, a wall secured to the outer box member and snugly surrounding said inner box member, a roof portion connecting said wall with said outer box member, the said outer box member, wall and inner box member being provided with openings, and doors for closing all of said openings.

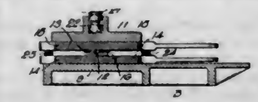
3. In a trap, an outer box, a wall arranged within said box and being spaced from the latter, a top connecting said wall and box, the said wall and box having openings, an inner box removably arranged within said wall and having openings alined with those of said wall, and doors closing said openings.



4. In a trap, an outer box having a foraminous upper portion, a wall arranged within said box, a roof connecting said wall with said box at the juncture of the foraminous portion therewith, the said wall and box having openings, doors closing said openings, an inner box removably arranged within said wall and being provided with openings alined with those of said wall, and a lid on said box.

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1,226,289. APPARATUS FOR MAKING RUBBER STAMPS. ROBERT WILDAY, New York, N. Y. Filed Nov. 13, 1915. Serial No. 61,308. (Cl. 18—17.)

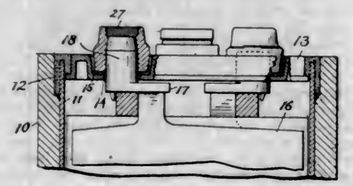


1. An apparatus for making rubber stamps, comprising a press with vulcanizing plates disposed therein and adapted to receive a mold and rubber piece between them, one plate having studs and the other apertures to engage the studs, and yielding means on the studs to normally hold the plates normally spaced apart a distance greater than the thickness of the mold and rubber piece, said plates having handles and the plates being arranged to register, with the handles thereof registering to permit the plates to be simultaneously inserted in or removed from the press.

[Claims 2 to 4 not printed in the Gazette.]

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1,226,290. STORAGE BATTERY. THEODORE A. WILLARD, Cleveland, Ohio, assignor to Willard Storage Battery Company, Cleveland, Ohio, a Corporation of West Virginia. Filed July 6, 1915. Serial No. 38,168. (Cl. 204—52.)



1. In a storage battery, a cover having an opening for a terminal post and having an offset portion extending about and forming a receptacle surrounding said opening, a terminal post extending upwardly through the opening, a connector on the post having a body portion which extends downwardly along the post substantially in contact therewith into the said receptacle and sealed therein.

2. In a storage battery, a cover having an opening for a terminal post and a receptacle in the form of a recess or depression surrounding the opening, a terminal post extending upwardly through the opening, a connector on the post having a body portion which extends downwardly along the post substantially in contact therewith into the said recess or depression and sealed therein.



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1,226,291. AIR-VALVE AND TRAP. BERT C. WILLIAMS, San Francisco, Cal., assignor of thirty one-hundredths to Fred B. Bain, San Francisco, Cal. Filed Mar. 25, 1916. Serial No. 86,659. (Cl. 137—122.)



1. In a pressure controlling trap of the character described, a vertical tubular chamber and a horizontal member extending from the center of one side, a valve opening from said member into the side of the first-named chamber, a valve controlling said opening and a thermostat located behind said valve, a float in the main chamber, a valve carried by the upper end of the float, and a controlled outlet at the bottom of the chamber.

2. An air and pressure controlling trap, consisting of vertical and horizontal tubular united chambers, the vertical chamber having an escape passage and valve seat at the top, a two-part float in said chamber and a valve carried by the upper end of the float, a valve controlled opening from the horizontal chamber to the vertical one, connection from the horizontal chamber to a radiator, and a thermostat located between said inlet and the valve.

3. An air and vapor pressure controlling trap, comprising a horizontal chamber connected at one end with the source of pressure, a guided valve closable upon a seat at the opposite end and a thermostat contacting with the base of the valve, a vertical chamber with the side of which the first named valve opening connects, a two part float having a valve at its upper end and a opening and valve seat, with which said valve co-acts, a controlled discharge passage at the bottom of the chamber, and guides formed in the sides of the chamber to control the movements of the float and its valve.

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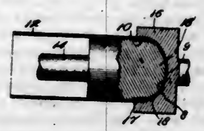
1,226,292. COMPOSITION FOR LITHIC BUILDING MATERIAL. WILLIAM L. WILLING and CADOHY B. WILLING, Bellevue, Ohio. Filed June 30, 1916. Serial No. 106,939. (Cl. 106—24.)

1. A substance for use as a building material consisting of porous granulated slag, crushed slag sand, and cement, in about the proportions specified.

2. A composition of matter comprising a mixture of porous granulated slag and cement in about the proportions specified.

3. A building material in the form of concrete lumber comprising planks or slabs made by mixing together Portland cement and porous granulated slag in about the proportions specified as preferred, the composition being moistened, molded to shape and then dried.

1,226,293. PAPER CONTAINER. WYLE T. WILSON, Philadelphia, Pa. Filed Feb. 24, 1916. Serial No. 80,213. (Cl. 229—13.)

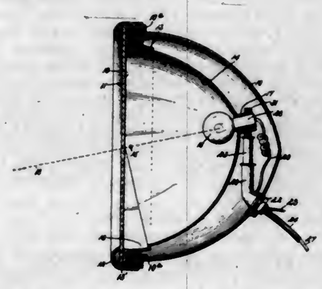


1. A container having a body portion of paper provided at one end with a tapered rim; and a spherical closure also of paper having a cylindrical extension located inside said rim and fitting the interior of said body portion, substantially as described.

2. In a container the combination of a cylindrical body portion of paper having one of its ends provided with a contracted tapered rim; and a closure of paper spherical in shape having a cylindrical extension fitting the interior of said body portion, substantially as described.

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1,226,294. AUTOMOBILE-LAMP. FRANK E. WOLCOTT, Hartford, Conn. Filed June 16, 1916. Serial No. 103,961. (Cl. 240—41.)



1. In a device of the character set forth, the combination of a stationary casing having at its front portion a rearwardly projecting inner flange, a lens secured against the front portion of the flange, a parabolic reflector within the casing and pivoted at its front edge on a horizontal axis to said flange, said reflector being so disposed that the front edge of its lower half is adapted to abut against the lens when the axis of the reflector is horizontal, and being beveled at its upper half so that it will abut against the upper portion of the lens when the axis of the reflector is tilted to cause the light to be projected in a beam downwardly in front of the lamp, and means projecting through the rear portion of the casing to conduct electricity to the lamp and control the position of the reflector.

2. In an automobile lamp, the combination of a casing having attached at its front an inner rearwardly projecting curved flange, a parabolic reflector within the casing pivoted on a horizontal axis to said flange, the upper and lower halves of the reflector having their front edges arranged in planes at an angle to each other and so disposed that said flange constitutes a continuation of the reflecting surface of the reflector according to the position of the reflector, a lamp fitted in the rear portion of the reflector in the focal center thereof, a stationary support fitted in the rear portion of the casing and extending thence upwardly between the reflector and the casing, a plunger slidable in said support and embracing a portion of the reflector, means acting upon the plunger to move it automatically in one direction, and other means acting in opposition to the automatic means to move the reflector in the opposite direction.

3. In an automobile lamp, the combination of a casing having a hole at the back portion, a stationary support

fitted rigidly in said hole and having a tubular lower end, the upper end of the support extending vertically, a plunger slidably fitted in the vertical end of the support, a spring acting upon the plunger to move it in one direction, manually controlled means acting upon the plunger to move it in the opposite direction, a yoke connected to the upper end of the plunger, a reflector pivoted on a horizontal axis at the front portion of the casing, a lamp carried by the rear portion of the reflector, said reflector including a socket for the lamp, said socket being embraced by said yoke, and means extending through the hollow lower end of the support to conduct electricity to the lamp.

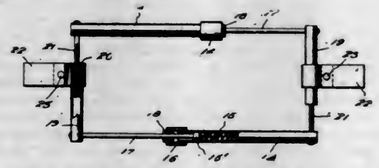
4. In an automobile lamp, the combination of a main support, a reflector pivoted at its front edge in said support and movable at its rear end vertically in the arc of a circle, said rear end including a rearwardly projecting extension, a lamp fitted in said extension, and means cooperating with said extension to control the pivotal movements of the reflector, said last mentioned means including a ring loosely embracing the extension and having spring contacts filling the space between the ring and the extension, said ring being movable vertically.

5. The combination of a stationary casing, a tubular support fixed in the rear portion of the casing, the lower end of the support being curved and the upper end of the support being straight and vertical, the curved portion of the support being provided with a lateral hole, a plunger telescopically connected with the upper end of the support, a spring acting upon the plunger to project it upwardly in a vertical line with respect to the support, a yoke secured to the upper end of the plunger, a reflector pivoted in the casing and having at its rear end a socket projecting rearwardly over the plunger and through the yoke, a lamp fitted in the socket, spring contacts between the yoke and the socket extension, and lamp wires leading through the lower end of the support and thence through the lateral hole to the lamp socket between the casing and the reflector.

[Claim 6 not printed in the Gazette.]

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1,226,295. SACK HOLDER AND SUPPORT. IRVIN ALSTROM, Galva, Ill. Filed May 26, 1916. Serial No. 100,041. (Cl. 83—26.)



1. In a device of the class described, a support having a plurality of extended slotted arms arranged in pairs, and a sack holder having extensible means to engage the slots of a pair of arms to retain the sack holders in position on said support between the pair of arms.

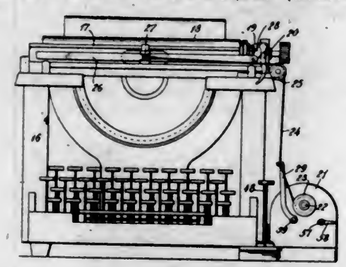
2. In a device of the class described, a support having a plurality of extended arms and a spring actuated substantially rectangular sack holder having studs to engage said arms to retain the sack holders between the arms of said support.

3. In a device of the class described, a sack holder comprising a substantially rectangular contractible frame formed of tubular end and side members, the side members having oppositely positioned plungers, and resilient means to engage each of said plungers to maintain said frame in one of its distended positions, and threaded elements to engage the end tubular members for changing the width of the frame.

4. In a device of the class described, a sack holder comprising a substantially rectangular contractible frame having extensible and contractible end members and extensible side members, the side members of said frame having a tubular section, and spring actuated plungers mounted thereon, one end of each of said plungers being secured to oppositely positioned end members of said frame to project the plungers in opposite directions.

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1,226,296. TYPE-WRITER CARRIAGE-RETURN MECHANISM. NEAL LARKIN ANDERSON, Winston-Salem, N. C. Filed Mar. 29, 1916. Serial No. 87,402. (Cl. 197—66.)



1. The combination of a typewriter having a carriage, means for moving the carriage to effect letter spacing, a motor independent of said means and permanently connected to the carriage so that advance and return movements of the carriage are accompanied by forward and reverse operation of the motor, and means for relieving the carriage of the drag of the motor when the carriage is moved to effect letter spacing; substantially as described.

2. The combination of a typewriter having a carriage, a spring for advancing the carriage to effect letter spacing, an electric motor adapted to operate in one direction to return the carriage, a connection from the motor to the carriage requiring operation of the motor in the other direction in correspondence with the advance movement of the carriage, and means for relieving the carriage of the drag of the motor when the carriage is moved by said spring; substantially as described.

3. The combination of a typewriter having a carriage, means for advancing the carriage to effect letter spacing, a motor adapted to operate in one direction to return the carriage, a connection from the motor to the carriage requiring operation of the motor in the other direction in correspondence with the advance movement of the carriage, and means for operating the motor automatically in correspondence with advance movements of the carriage; substantially as described.

4. The combination of a typewriter having a carriage, a motor adapted to operate in opposite directions, a connection from the motor to the carriage through which the motor effects the return of the carriage when the motor is operating in one direction, means independent of the motor for effecting advance movements of the carriage, and means for operating the motor in the opposite direction automatically to relieve said first named means from the drag of the motor during advance movements of the carriage; substantially as described.

5. The combination with a typewriter having a carriage, of a motor permanently connected to the carriage for effecting return movements of the carriage and adapted to operate in opposite directions as the carriage is moved in opposite directions, and means for effecting advance movements of the carriage unimpeded by the motor; substantially as described.

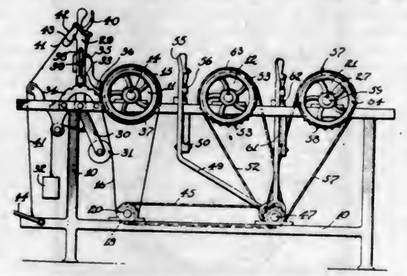
[Claims 6 to 45 not printed in the Gazette.]

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1,226,297. BELT-TIGHTENER AND BRAKE FOR SPONGING-MACHINES. LOUIS BAJETT, Plainfield, N. J. Filed Sept. 14, 1915. Serial No. 50,609. (Cl. 74—46.)

In an apparatus for sponging cloth, having a belt-driven sponging cylinder, and a wheel rigid with the cylinder, the combination of a lever pivotally mounted on the frame, having a downwardly extending arm, a pulley carried thereby and engaging the belt to tighten the same, said lever having a brake attached to its upper part in a position to engage the face of the wheel, and means for locking said lever in a position to hold the pulley against

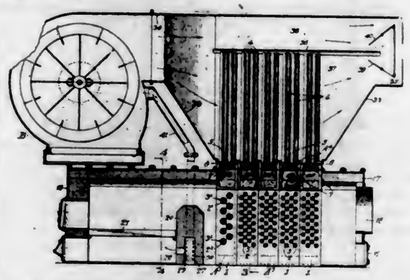




the belt and the brake out of contact with the wheel, and for holding the brake against the wheel and the pulley off of the belt, means tending to hold said lever in the last named position, and a treadle for releasing said locking means.

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1,226,298. HEATING APPARATUS. EDWIN M. BASSLER, Milwaukee, Wis., assignor to Bayley Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 3, 1914. Serial No. 859,997. (Cl. 126—101.)



1. The combination of a generator and radiator comprising a header, a partition which divides the interior thereof into compartments, pipes secured in said header the inner ends of which are in open communication with the interior of said header and the outer ends of which are closed, said pipes including generator and radiator pipes which communicate, respectively, with different compartments of said header, open-ended pipes secured in the partition wall and which extend into the pipes secured in said header, the attached ends of which are in open communication with the compartments of the header other than those with which the pipes into which they extend, respectively, communicate, a furnace setting for said header which incloses the generator pipes which communicate with one compartment of said header, and a casing which incloses the radiator pipes which communicate with the other compartment of the header, said casing being provided with an admission opening adapted for connection with a blower and with a discharge opening adapted for connection with a heating and ventilating system, substantially as described.

2. The combination of a generator and radiator comprising a header comprising a substantially vertical leg, and a substantially horizontal leg, a partition which divides the interior of said header into compartments, generator pipes secured in the vertical leg of said header and which extend beneath the horizontal leg thereof and which communicate with one compartment of said header, and radiator pipes secured in the horizontal section of said header, the inner ends of which communicate with the other compartment of said header and the outer ends of all of said pipes being closed, open-ended pipes secured in the partition wall and which extend into the pipes secured in said header and which communicate with the compartments of the header other than those with which the outer pipes into which they extend, respectively, communicate, a furnace setting for said header which incloses the generator pipes secured in the vertical leg or section of the header, and a casing which incloses the radiator pipes secured in the horizontal leg or section of the header, said casing being provided with an admission opening adapted for connection with a blower and with a discharge opening adapted for connection with a heating and ventilating system, substantially as described.

3. A combined generator and radiator comprising a header, a partition which divides the interior thereof into compartments, pipes secured in said header the inner ends of which are in open communication with the interior of said header and the outer ends of which are closed, said pipes including generator and radiator pipes which communicate, respectively, with different compartments of said header, and open-ended pipes secured in the partition wall and which extend into the pipes secured in said header, the attached ends of which are in open communication with the compartments of the header other than those with which the pipes into which they extend, respectively, communicate, substantially as described.

4. A combined generator and radiator comprising a header, a partition which divides the interior thereof into compartments, pipes secured in said header the inner ends of which are in open communication with the interior of said header and the outer ends of which are closed, said pipes including generator and radiator pipes which communicate, respectively, with different compartments of said header and open-ended pipes secured in the partition wall and which extend into the pipes secured in said header, the attached ends of which are in open communication with the compartments of the header other than those with which the pipes into which they extend, respectively, communicate, said generator pipes comprising a front series of relatively large pipes, substantially as described.

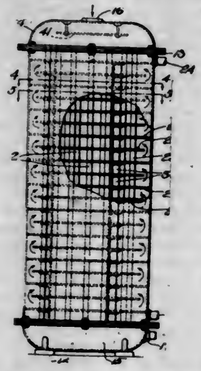
5. A combined generator and radiator comprising a header comprising a substantially vertical leg and a substantially horizontal leg, a partition which divides the interior of said header into compartments, generator pipes secured in said header and which extend beneath the horizontal leg or section thereof and which communicate with one compartment of said header and radiator pipes secured in the horizontal section of said header, the inner ends of which communicate with the other compartment of said header and the outer ends of all of said pipes being closed, and open-ended pipes secured in the partition wall and which extend into the pipes secured in said header and which communicate with the compartment of the header other than those with which the outer pipes into which they extend, respectively, communicate, substantially as described.

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1,226,299. HEAT-ECONOMIZING APPARATUS. FRED S. BOLTZ, Cambridge, Mass. Filed Aug. 9, 1916. Serial No. 113,909. (Cl. 257—224.)

1. An apparatus of the character stated, comprising a hollow body forming a conduit portion of large cross sectional area having a fluid inlet at one end and a fluid outlet at its opposite end, recessed heads attached to the ends of said body, the one head having a fluid inlet and the other head a fluid outlet, tube sheets between the said heads and the ends of the body, said heads and tube sheets forming chambers at the ends of the body, parallel tubes engaged with said tube sheets and extending through the body, a series of baffle plates apertured to receive and slide to place on said tubes and adapted to slide to place in said body, and means for supporting said plates in spaced relation to each other, the said chambers and tubes

constituting a ramified conduit adapted to conduct a heated fluid from one chamber to the other, and the said body, tube sheets and baffle plates forming a sinuous conduit

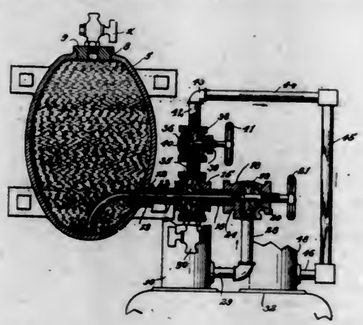


inclosing said tubes, adapted to receive a relatively cold fluid at its inlet, and conduct the fluid in a sinuous course crosswise of said tubes to its outlet.

[Claims 2 to 4 not printed in the Gazette.]

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1,226,300. APPARATUS FOR FEEDING SCALE-PREVENTIVE INTO BOILERS. WILLIAM W. BONFIELD, Cleveland, Ohio. Filed Dec. 12, 1913. Serial No. 806,246. (Cl. 210—19.)

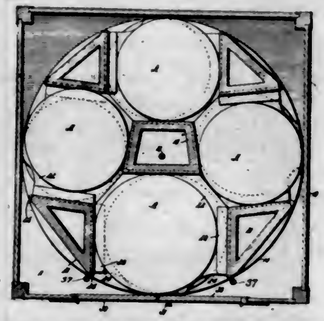


In an apparatus of the character described, the combination of a boiler, means for feeding liquid thereto having a high pressure and a low pressure side, a reservoir for a graphite mixture to be fed to the boiler, the reservoir having a dished bottom, an opening at the upper portion, a vent cock fitted into said opening, a second opening intermediate the top and bottom of the reservoir, a connection between said opening and the low pressure side of the feeding means, and a connection from the high pressure side of the feeding means having a pipe smaller in diameter than said opening and leading therethrough and terminating adjacent the dished bottom of the reservoir.

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1,226,301. RECORD-CABINET. ALEXANDER MAX BRENDORF, Carlisle, Pa. Filed Mar. 14, 1916. Serial No. 84,066. (Cl. 211—16.)

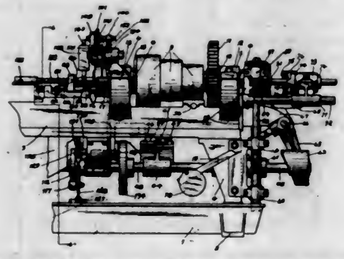
1. A record cabinet including a record holder mounted to turn on a vertical axis, a series of shelves on said holder, said shelves having cut-outs at opposite sides at the front of each shelf, and staggered spacing members between said shelves at the side edges thereof to position the records with edge portions alternately disposed at the respective cut-outs of the shelves.



2. A record cabinet including a vertical series of shelves and fixed members interposed between the shelves, alternately at opposite side edges thereof, thereby presenting between the shelves overlapping record-receiving spaces within the cabinet between the respective members and the opposite wall of the cabinet into and out of which spaces the records are movable between the said spacing members and the said opposite walls.

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1,226,302. MACHINE FOR MAKING NUT-BLANKS. LATHAM H. BRIGHTMAN, Columbus, Ohio. Filed Oct. 19, 1915. Serial No. 56,785. (Cl. 29—53.)



1. The herein described method of making nut blanks which consists in rotating the stock, feeding a cut off tool into said stock to cut the blanks therefrom, feeding a chamfering tool into said stock at the same time said cut off tool is being fed in, and withdrawing said chamfering tool before the cut off tool completes the severance of the blank.

2. A nut blank making machine comprising a rotatable chuck to hold the metal stock, a boring tool in alinement with said stock, a cut off tool, a chamfering tool, and means for feeding said tools into and away from the stock bar but withdrawing the chamfering tool out of contact with the work before the cut off tool has completed the severance of the blank, said means being such that both of said tools operate on said stock simultaneously.

3. A nut blank making machine comprising a rotatable chuck to hold the metal stock bar, a boring tool in alinement with said stock bar, means for feeding the stock bar through said chuck, a stop against which the end of the stock bar is fed, a cut off tool, means for feeding said tool into and away from said stock bar, and a finger arranged to be in a substantially stationary position in the direction of the withdrawing movement of said cut off tool and disposed in back of the end of the stock bar to be cut off to prevent the cut off tool drawing the severed blank back with it.



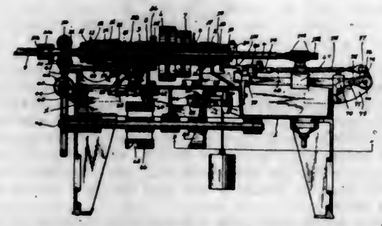
4. A nut blank making machine comprising a rotatable chuck to hold the metal stock bar, a boring tool in alinement with said stock bar, means for feeding the stock bar through said chuck, a stop against which the end of the stock bar is fed, a cut off tool, means for feeding said tool into and away from said stock bar, a chamfering tool and support disposed at substantially a right angle to said cut off tool, and a depending finger carried by said chamfering tool support and disposed in the rear of the end of said stock bar to be cut off to prevent the cut off tool drawing the severed blanks back with it.

5. A nut blank making machine comprising a rotatable chuck to hold the metal stock bar, a boring tool in alinement with said stock, means for feeding the stock bar through said chuck, and a longitudinally alining stop for limiting the forward movement of said stock bar formed through a portion of its length with a longitudinal bore for guiding said boring tool, said stop being open on its front under side to allow the escape of the shavings from said boring tool.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,303. AUTOMATIC CUT-OFF MACHINE. LATHAM H. BRIGHTMAN, Columbus, Ohio. Filed Feb. 7, 1916. Serial No. 76,814. (Cl. 82—2.)



1. A machine of the class described comprising a chuck to hold the metal stock bar, means for feeding the stock bar through said chuck, a stop against which the end of said stock bar is to abut, means for feeding said tool into and away from said stock bar, and means for withdrawing said stop in a longitudinal direction from its engaging contact with the end of said stock bar during the time the cut-off tool is being fed into the bar.

2. A machine of the class described comprising a main frame, a chuck to hold the metal stock bar, means for feeding the stock bar through said chuck, a cut-off tool, means for feeding said tool into and away from said stock bar, a slide bar slidably supported in said framework, a stop support adjustably mounted on said slide bar, a stop member adjustably supported in said member against which the end of the stock bar is fed, and means connected to said slide bar to move it in a longitudinal direction to withdraw said stop member from engagement with the end of said stock bar during the time said cut-off tool is fed into the bar, said separation being complete before the bar end is severed.

3. A machine of the class described comprising a chuck to hold the metal stock bar, means for feeding the stock bar through said chuck, a stop against which the end of the stock bar is fed, a cut-off tool, means for feeding said tool into and away from said stock bar, and means operable after the cut-off tool has started the cutting action for withdrawing the stop from engaging contact with the end of the stock bar to permit the free fall of the severed end and to be out of contact with the stock bar before the severance is completed.

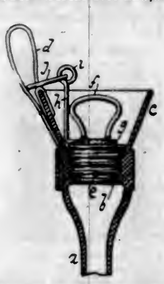
4. A machine of the class described comprising a chuck to hold the metal stock bar, means for feeding the stock bar through said chuck, a cut-off tool, means for feeding said tool into and away from said stock bar, a stop against which the end of the stock bar is fed, and an operative connection between said stop and said cut-off tool operable, when the cut-off tool is fed into the stock bar, to cause a withdrawing of the stop out of contacting engagement with the stock bar end.

5. In a machine of the class described a chuck to hold the metal stock bar, means whereby said chuck temporarily releases said stock bar, and means for feeding the stock bar through said chuck comprising a roll, means for rotating said roll, and means for bringing the rotating roll into engagement with the stock bar during the interval that it is released by said chuck.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,304. WATER-BAG STOPPER. HOWARD V. BRUMLEY, Plandome, N. Y., assignor to Whitall Tatum Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 14, 1916. Serial No. 125,565. (Cl. 215—1.)

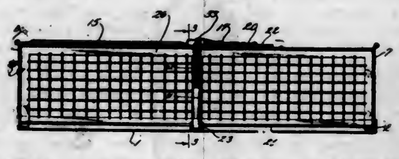


4. In a water bag the combination with a flexible handle and a stopper having a thumb member, of an inflexible connection formed of a single length of wire including an upwardly extending stem with an annular base member bent at right angles to the stem to loosely encircle the thumb member, the stem having an eye at its upper end, and a ring connected to the eye for slidingly embracing the handle.

[Claims 1 to 3 not printed in the Gazette.]

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1,226,305. FOLDING COOP. WILLIAM BUCKLEY and WILLIAM IVERSEN, Portage, Wis. Filed Mar. 17, 1916. Serial No. 84,938. (Cl. 220—132.)

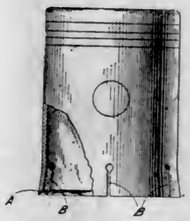


1. In a folding coop, a floor having upturned edges and overlapping corners, a brace extending transversely of said floor and having its ends bifurcated and bent upward from said floor, longitudinally extending rods journaled in the bifurcated ends of said brace and in the corners of said floor, folding sides carried by said rods, end pieces pivotally carried at the corners of said floor and adapted to fold inwardly upon said sides, coöperating roof sections hinged to said end pieces, one of said roof sections being provided with brace rods, a swinging door carried by the other roof section, a sliding latch carried by said door, and a jointed post carried by the said brace for coöperation with said roof sections and with said latch to retain said roof sections in operative position, and for coöperation with the said brace rods of the first mentioned roof section when said roof sections are in folded relation to retain them compactly in position.

2. In a folding coop, a floor having upturned edges and overlapping corners, a brace extending transversely of said floor and having its ends bifurcated and bent upward from said floor, longitudinally extending rods journaled in the bifurcated ends of said brace and in the corners of said

floor, folding sides carried by said rods, end pieces pivotally carried at the corners of said floor and adapted to fold inwardly upon said sides, coöperating roof sections hinged to said end pieces, a jointed post carried by the aforesaid brace for coöperation with said roof sections in operative or folded position, a sleeve encircling said post, flexible means carried by said post and engaging said sleeve for yieldingly retaining the same in engagement with the jointed portion of said post, and a manually operable latch for engagement with said post when the coop is in operative position.

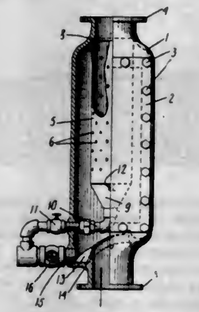
1,226,306. PISTON PARTICULARLY FOR INTERNAL-COMBUSTION ENGINES. FREDERICK T. BURGESS, Coventry, England, assignor of one-half to Humber Limited, Coventry, England. Filed Oct. 30, 1916. Serial No. 128,548. (Cl. 74—85.)



1. A piston having a resilient bell-mouthed lower portion, and a beveled edge to said bell-mouthed portion, substantially as set forth.

2. A piston having a resilient bell-mouthed lower portion, longitulinal slits in said portion, and a beveled edge to said bell-mouthed portion, substantially as set forth.

1,226,307. FILTRATION DEVICE FOR FLUID-DISTRIBUTING SYSTEMS. GUSTAVUS T. BUXTON and SIMEON A. ABBEY, Charlotte, N. C. Filed July 23, 1915. Serial No. 41,472. (Cl. 210—16.)



1. In a filter of the character described, the combination of a casing, a filter screen therein, depositories beneath said screen, one to receive substances that have not passed through the filter, the other to receive substances that have passed therethrough, and drains for said depositories, substantially as described.

2. In a filter, the combination of a casing, a filter screen located therein, a valve controlled outlet at the bottom of said filter screen and a valve controlled outlet at the bottom of the casing.

3. In a filter of the character described, the combination of a casing, a filter screen suspended concentrically therein, the lower extremity of said filter screen being provided with a discharge outlet leading exterior to the casing, an inclined depository at the lower extremity of said casing and a valve controlled communicating pipe leading therefrom to a point exterior of the casing.

1,226,308. CORSET. LORETA ASTARITA CIRILLO, New York, N. Y. Filed Dec. 8, 1916. Serial No. 135,779. (Cl. 2—73.)



1. A corset having in combination, a plurality of corset sections; lacing members therefor, said members embodying straps and string clusters, each operatively connected with one of said corset sections; an abdominal supporter permanently connected with said corset sections adjacent the median side line of each section; and means for operatively connecting said straps with said abdominal supporter adjacent the lower edge and the front median section thereof.

4. A corset comprising a plurality of corset body sections; an abdominal supporter embodying a plurality of elastic sections each permanently attached to one of said body sections at the median line thereof; and lacing members for adjusting said body sections in service, said lacing members being attached in service to said supporter sections at the lower meeting edges thereof for elevating the flesh of the abdomen.

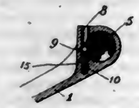
6. A corset comprising a plurality of corset body sections; an abdominal supporter embodying a plurality of elastic sections each permanently attached to one of said body sections at the median line thereof; lacing members for adjusting said body sections in service, said lacing members being attached in service to said supporter sections at the lower meeting edges thereof and to the upper regions of said body sections for elevating the flesh of the abdomen; brassière sections for confining the flesh when so elevated; and means for detachably securing said brassière sections to said corset, said means embodying a plurality of fasteners permanently mounted on said body sections adjacent the upper edge thereof, said brassière sections comprising unconnected separately constructed front and back sections, said sections having means for detachably connecting the same when in service.

[Claims 2, 3, and 5 not printed in the Gazette.]

1,226,309. BRUSH-HOLDER. ROBERT G. CLARK, New York, N. Y. Filed Mar. 6, 1916. Serial No. 82,319. (Cl. 200—24.)

1. In a brush holder, in combination, a brush holder frame adapted to hold a brush, a spring member adapted to operatively engage said brush, a supporting member upon which said spring member is mounted, said supporting member being rotatively mounted in said frame, and a locking device normally in position to lock said supporting member against rotation in one direction and to permit free rotation of said supporting member in an opposite direction, said locking device comprising a ball positioned in an opening in said frame and adapted to engage said supporting member.





2. In a brush holder, in combination, a brush holder frame adapted to hold a brush, a spring member adapted to operatively engage said brush, a supporting member upon which said spring member is mounted, said supporting member being provided with an annular recess having a roughened surface, and a spring pressed ball positioned in an opening in the frame and adapted to engage in said annular recess to lock the said supporting member against rotation in one direction only.

3. In a brush holder, in combination, a brush holder frame adapted to hold a brush, a spring member adapted to operatively engage said brush, a supporting member upon which said spring member in mounted, said supporting member being rotatively mounted in said frame, and means comprising a ball positioned in an opening in said frame and normally engaging said supporting member in a manner to permit rotation thereof in one direction and to prevent rotation thereof in the opposite direction to adjustably maintain said spring member under tension, said opening being provided with a shoulder to limit the movement of said ball.

4. In a brush holder, in combination, a brush holder frame adapted to hold a brush, a spring member adapted to operatively engage said brush, a supporting member upon which said spring member is mounted, said supporting member being rotatively mounted in said frame, and means comprising a ball and a spring positioned in an opening in said frame, said spring and ball being adapted and arranged so that said ball is caused to engage said supporting member and to permit rotation thereof in one direction but prevent rotation in the opposite direction whereby said spring member is adjustably maintained under tension.

1,226,310. FASTENING DEVICE. ROBERT G. CLARK, New York, N. Y. Filed Mar. 6, 1916. Serial No. 82,320. (Cl. 24—215.)



1. A stud member for a fastening device having a base portion provided with means whereby the fastener may be attached to a garment and coöperating U-shaped members having their respective legs adjacent one another at said base portion and diverging away from one another and from said base portion.

2. A stud member for a fastening device having a base portion provided with means whereby the fastener may be attached to a garment and coöperating U-shaped members having their respective legs adjacent one another at said base portion and diverging away from one another and from said base portion, each of said U-shaped members having its legs substantially parallel to one another.

3. The stud member for a fastening device comprising the attaching loops 6, 7 and 8 and the diverging U-shaped portions 9 and 10 each having its legs parallel to one another, substantially as described.

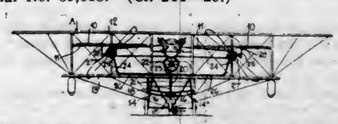
1,226,311. PLANT-RECEPTACLE. CHARLES W. CLIFFORD, Trenton, N. J. Filed Jan. 25, 1917. Serial No. 144,321. (Cl. 47—34.)

1. A plant receptacle formed of earthy material containing a plant fertilizing element, and strengthened by readily decomposable fibers distributed throughout its body.



2. A plant receptacle formed of earthy material containing a plant fertilizing element and a soluble binder, and strengthened by readily disintegrated vegetable fibers distributed throughout its body.

1,226,312. STABILIZER FOR FLYING-MACHINES. GEORGE W. CLINE, Albany, Oreg. Filed Dec. 31, 1915. Serial No. 69,618. (Cl. 244—29.)



1. The combination with a flying machine including lateral stabilizers, of means for automatically operating the stabilizers comprising a curved track extending transversely of the machine, a carriage having wheels engaging said track and movable therealong, a pivotally mounted lever, a collar through which the lever slides, bearings supporting the collar on the carriage for rotation in the plane of the lever, and operative connections between one end of the lever and the stabilizers.

2. The combination with a flying machine including lateral stabilizers, means for automatically operating the stabilizers comprising a curved track extending transversely to the machine, the middle of the track being relatively flat, a carriage having wheels engaging the said track and movable therealong, the centers of said wheels being spaced from each other a distance equal to the level portion of the track, a pivotally mounted lever, a collar rotatably mounted upon the carriage and through which collar the lever slides, and operative connections between one end of the lever and the stabilizers.

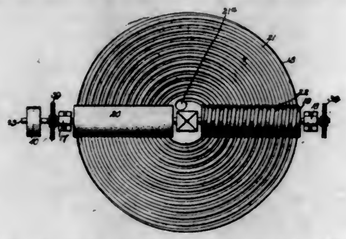
3. The combination with a flying machine including lateral stabilizers, means for automatically operating the stabilizers comprising a curved track extending transversely to the machine and including a pair of upper rails and a pair of lower rails, a carriage having wheels engaging the track and between the upper and lower rails and movable therealong and disposed between the rails, a pivotally mounted lever, a collar rotatably mounted on the carriage for rotation in the plane of the lever and through which collar the lever slidingly passes, and operative connections between the opposite end of the lever and the stabilizers.

4. The combination with a flying machine including main planes and stabilizing planes and a supporting carriage disposed below the main planes, means for operating the stabilizing planes comprising a downwardly bowed track having a relatively flat curvature, said track extending transversely of the machine and being mounted upon said supporting carriage, a gravity actuated carriage constituting a weight and movable along the track, a lever pivoted intermediate its ends having its lower end operatively connected to said last named carriage and its upper end operatively connected to the stabilizing planes, the distance between the fulcrum point of said lever and the carriage being less than the radius of the circle upon which said track is described, the path of movement of the lever being curved in the same direction.

1,226,313. MARBLE-MACHINE. GEORGE JOSEPH COOK, Fairmont, W. Va. Filed Mar. 15, 1917. Serial No. 154,945. (Cl. 25—5.)

8. In a marble machine, a frame, a plate rotatably mounted on the frame and having a central opening, a

vertical support disposed through the central opening in the plate, bearings in the support above the plate, bearings on the frame above the horizontal plane of the plate, two rollers disposed radially above the plate one at each side of the support and journaled in the bearings, means

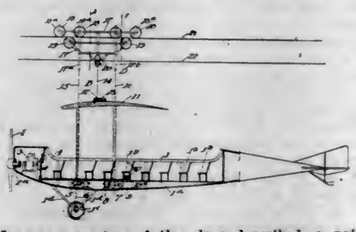


to rotate the plate and the rollers in opposite directions at neighboring points, there being a spiral groove in the plate and a spiral groove in one of the rollers disposed opposite each other at neighboring points.

[Claims 1 to 7 and 9 not printed in the Gazette.]

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1,226,314. CABLE-CONTROLLED CARRYING APPARATUS. ALPHONSO DAVINO, San Diego, Cal. Filed May 1, 1916. Serial No. 94,583. (Cl. 104—111.)



1. In an apparatus of the class described, a pair of electric circuit carrying cables, a carriage mounted on said cables, a carriage in the form of an aeroplane suspended from said first mentioned carriage by means of cables and drums upon which said cables are wound, secured to said last mentioned carriage, means for manually operating some of said drums and means for synchronizing other of said drums with said first mentioned drums.

2. In an apparatus of the class described, a pair of electric circuit carrying cables, a carriage mounted on said cables, a carriage in the form of an aeroplane suspended from said carriage by means of cables, drums upon which said cables are wound secured to said vehicle, means for manually operating some of said drums, means for synchronizing other of said drums with said first mentioned drums and a propeller mounted on said carriage for moving said carriage on said cables.

3. In an apparatus of the class described, a pair of electric circuit carrying cables, a carriage mounted on said cables, a vehicle in the form of an aeroplane suspended from said carriage by means of cables, drums upon which said cables are wound secured to said vehicle, means for manually operating some of said drums, means for synchronizing other of said drums with said first mentioned drums, a propeller mounted on said vehicle for moving said vehicle and said carriage on said cables, and means for locking said carriage on said cables.

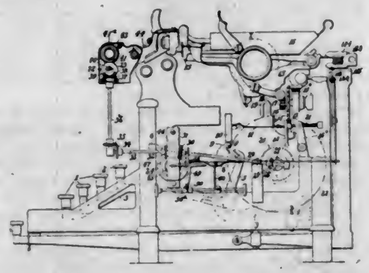
4. In an apparatus of the class described, the combination of a supporting cable, a carriage mounted thereon, a plurality of cables suspended from said carriage, a passenger carrying device, drums revolubly mounted with their bases secured to said passenger carrying device, the one adapted to be manually operated and the other operated by means of a gyroscope operating a rheostat, whereby said drums are synchronized and said passenger carrying device maintains its equilibrium when being raised and lowered by the winding of said cables on said drums.

5. In an apparatus of the class described, the combination of a supporting cable, a carriage mounted thereon, a plurality of cables suspended from said carriage, a passenger carrying device, drums revolubly mounted with their bases secured to said passenger carrying device, the one adapted to be manually operated and the other operated by means of a gyroscope operating a rheostat, whereby said drums are syncronized and said passenger carrying device maintains its equilibrium when being raised and lowered by the winding of said cables on said drums, and means for propelling said passenger carrying device.

[Claim 6 not printed in the Gazette.]

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1,226,315. COMBINED TYPE-WRITING AND COMPUTING MACHINE. GUSTAVE O. DEGENER, New York, N. Y., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed July 27, 1911. Serial No. 640,752. (Cl. 235—130.)



1. In a combined typewriting and computing machine, the combination with typewriter numeral keys and a traveling carriage, of an adjustable stop forming part of a tabulating mechanism for positioning said carriage, computing mechanism comprising indexing mechanism, connections between said indexing mechanism and said keys, means between said indexing mechanism and said keys for locking said keys, and connections whereby said locking means is controlled by said stop.

2. The combination with a carriage and a plurality of typewriter keys, of a computing mechanism controlled by said keys, a series of interfering members movable across a common path, so that each one when actuated will interfere with the movement of the rest of said members, said members being operatively connected to certain of said keys, so as to control the action of said certain keys, a plurality of trippers pivotally mounted, a bar having sockets therein adapted to be engaged by each of said trippers, a lever, and an interfering member connected to said lever, a link connection movable into the path of said first-mentioned interfering members, so as to prevent the movement of the computing mechanism by certain of said keys at certain times, and means for operating said trippers at predetermined intervals.

3. The combination with a computing mechanism, of a series of keys for controlling the action of said computing mechanism, a traveling member, stops for controlling the position of said member, and means operated by said stops for preventing the actuation of said computing mechanism by said keys.

4. In a combined typewriting and computing machine, the combination with a traveling typewriter carriage, of decimal tabulating mechanism for positioning said carriage, an adjustable stop forming part of said mechanism and adapted to arrest said carriage at any one of a plurality of columns determined by the position of the stop, typewriter numeral keys, computing devices under the control of said keys, and means whereby said stops are effective to lock said keys at a plurality of predetermined denominations in a column selected by said tabulating mechanism.

5. The combination with a computing mechanism, of numeral keys for actuating said computing mechanism, locking mechanism for said numeral keys, a series of trippers spaced apart at predetermined intervals, operative connections between said trippers and said locking mechanism whereby the former may control the latter, a traveling member, and stops for controlling the position of said traveling member, said stops being arranged to engage said trippers and thus actuate said locking mechanism at predetermined points in the travel of said member.

[Claims 6 to 15 not printed in the Gazette.]



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1,226,316. TAKE-UP DEVICE FOR WRIST-STRAPS FOR WATCHES. CHARLES L. DEPOLLIER, Brooklyn, N. Y. Filed July 19, 1916. Serial No. 110,075. (Cl. 24—178.)

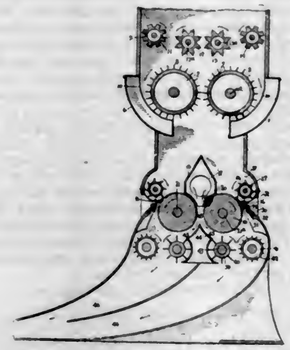


3. In combination with a wrist strap, connecting devices therefor including a take-up device which consists of a flat plate having a bar and two outer bars separated from the first named bar by spaces to permit the strap to be threaded through said bars and engage the same with a frictional grip, one of the outer bars being adapted to be engaged by the looped end of the strap and both of the outer bars being free from the first named bar at one end and movable means to bridge the spaces between the free ends of the outer bars and the first named bar to permit the strap to be disengaged from the take-up device.

[Claims 1 and 2 not printed in the Gazette.]

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1,226,317. COTTON-GIN. WILLIAM T. DODD, Brooklyn, N. Y., assignor to National Roller Gin Company, Phoenix, Ariz., a Corporation of Arizona. Filed Dec. 2, 1912, Serial No. 734,509. Renewed Oct. 20, 1916. Serial No. 126,799. (Cl. 13—7.)



1. In a cotton gin, two ginning rolls spaced apart, dividing members forming a conduit leading to the space between the ginning rolls, conduit members, spaced from the dividing members and coöperating with the ginning rolls to direct air from between the ginning rolls under the ginning rolls, fans disposed adjacent the conduit members and disposed under the ginning rolls, and beater rolls at the outer sides of the fans.

2. In a cotton gin, two ginning rolls spaced apart, dividing members forming a conduit leading to the space between the ginning rolls, conduit members spaced from the dividing members and coöperating with the ginning rolls to direct air from between the ginning rolls under the ginning rolls.

3. In a cotton gin, a casing having a side with a projection in which there is a recess, there being an opening at the bottom of the recess, a knocker roll rotatably mounted at the recess, a doctor blade projecting obliquely from without the casing to a position at the inner side of the casing adjacent the knocker roll, means below the projection at the outer side of the casing for adjusting the position of the doctor blade, and a ginning roll disposed at the inner side of the doctor blade and the knocker roll.

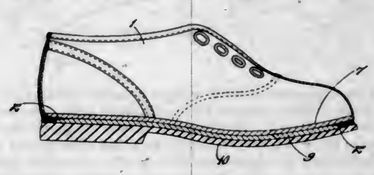
4. In a cotton gin, a ginning roll, a knocker roll disposed adjacent to the ginning roll, a doctor blade disposed for coöperating with the ginning and the knocker rolls, a beater roll disposed below the doctor blade, and a fan for directing an air blast at the side of the beater roll.

5. In a cotton gin, a ginning roll, a knocker roll having its axis at one side of the vertical plane of the axis of the ginning roll, a doctor blade for coöperating with the ginning and knocker rolls, a beater roll disposed below the horizontal plane of the axis of the ginning roll, and a fan for directing air from the other side of the vertical plane of the axis of the ginning roll down at the side of the beater roll.

[Claim 6 not printed in the Gazette.]

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1,226,318. RUBBER-SOLED SHOE. ERNEST W. DUNBAR, Hudson, Mass., assignor to Apsley Rubber Company, Hudson, Mass., a Corporation of Massachusetts. Filed Dec. 1, 1916. Serial No. 134,252. (Cl. 36—14.)



1. A rubber soled canvas shoe having a canvas top, a rubber outer sole, an inner sole, and a strip of rubberized cloth having one edge extending in between the inner and outer soles, the other edge being secured to the top along the lower edge of the top and forming an exposed bead between the top and the outer sole.

4. In a rubber soled canvas shoe, a cavas top, a rubber outer sole, an inner sole, a filling between the inner sole and the outer sole, and a strip of rubberized cloth folded over at one edge and secured by suitable fastenings through the fold to the outer face of said canvas top around the lower part thereof, the other edge of said rubberized strip extending in and being lasted between the said inner sole and outer sole, the said folded edge of the rubberized strip appearing in the finished shoe as a bead between the outer sole and the canvas upper.

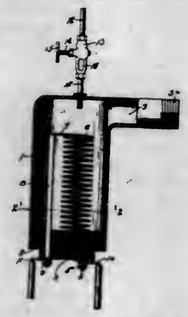
[Claims 2, 3, and 5 not printed in the Gazette.]

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1,226,319. OIL-VAPORIZER FOR EXPLOSIVE-ENGINES. CHARLIE W. DYER, Stratton, Me. Filed July 27, 1916. Serial No. 111,711. (Cl. 219—38.)

The combination of a closed cylinder adapted to be connected at its upper end to the intake of an internal combustion engine, a plug of insulating material secured in the lower end of the cylinder, an elongated solenoid coil carried by the plug, a binding post carried by the plug and electrically connected to one end of the coil, a rod carried

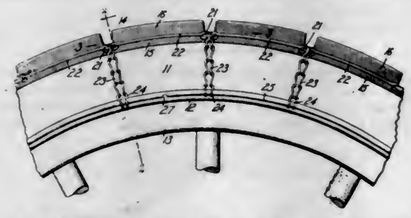
by the plug and electrically connected to the other end of the coil, a pipe threaded through the upper end of the



cylinder in vertical alinement with the coil, and a feed regulating valve interposed in the pipe.

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1,226,320. TIRE. THADDIOUS V. ELLIOTT, New York, N. Y., assignor to Elliott Rim Chain & Tread Corporation, Esopus, N. Y., a Corporation of New York. Filed Jan. 29, 1916. Serial No. 75,018. (Cl. 152—16.)

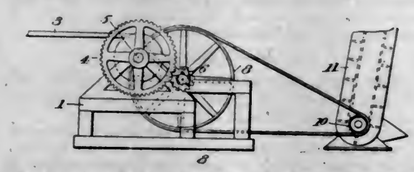


1. In a pneumatic tired wheel, a tread having eyes at its sides, chains having hooks at their ends, the hooks at the outer ends engaging the eyes, the hooks at the inner ends of the chains having enlarged ends, and a rim having longitudinal channel rings at its sides with which the said lower hooks engage, the channel rings being notched to permit the engagement of the said hooks with the rings.

2. In a pneumatic tired wheel, a tread, chains secured to the tread and provided at their inner ends with hooks having enlarged ends, and a rim having longitudinal channel rings at sides with which the hooks of the chains engage, the said rings being notched to permit the engagement of the hooks with the rings.

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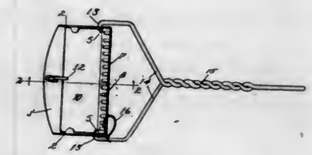
1,226,321. INTERMITTENT-GRIP DEVICE FOR CAPSTANS. GEORGE M. ELLIS, Mitchell, S. D., and GEORGE F. BROWN, Winnipeg, Manitoba, Canada; said Ellis assignor to said Brown. Filed Feb. 1, 1911. Serial No. 606,022. (Cl. 74—55.)



In a device of the class described, the combination of a supporting frame, an axle mounted thereon, a shaft journaled on the frame parallel with the axle and provided with a gear, a drum having end members rotatably mounted on said axle, one of the end members being provided with an extension having a gear to mesh with the shaft gear, means to engage the surface of the drum to move the same in one direction, clutch means carried by the shaft gear whereby the shaft is also rotated in one direction, and means within the drum to deliver automatically a reverse rotation of the drum, said clutch means precluding the reverse rotation of the shaft.

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1,226,322. SAFETY-RAZOR. CARL O. ENGSTROM, Sacramento, Cal. Filed Aug. 28, 1915. Serial No. 47,779. (Cl. 30—12.)



1. A safety razor comprising a blade holder, a blade for positioning therein, a guard in advance of the cutting edge of the blade and in spaced relation thereto, and a handle pivotally connected to said blade holder and permitting a movement of the holder independently of the handle when the holder is being drawn across the face, the pivotal axis of which is above the cutting edge of the blade and adjacent the front edge of the holder.

2. A safety razor comprising a blade holder, a blade for positioning therein, a guard for the blade, and an operating handle pivotally connected to said blade holder, the fulcrum point of which connection is located above the cutting edge of the blade holder, whereby the blade holder is permitted to have a movement independently of the handle to allow the same to follow the contour of the face.

3. A safety razor comprising a blade holder, a blade for positioning in the holder, a guard for the blade, means for adjusting the rear edge of the blade to vary the angle of the cutting edge thereof, and an operating handle fulcrumed to the blade holder at a point above the cutting edge of the blade and near the forward edge of the holder, permitting the blade holder to have a movement independently of the handle to allow the same to follow the contour of the face.

4. A safety razor comprising a blade holder, a blade for positioning therein, a guard for the blade, an operating handle fulcrumed to the blade holder above the cutting edge of the blade, said holder being capable of a movement independently of the handle whereby the blade follows the contour of the face, and means for normally maintaining said blade holder in a plane parallel with said handle.

5. A safety razor comprising a blade holder, a blade removably positioned therein, a guard for the blade, an operating handle extending in a plane at substantially right angles to the cutting edge of the blade and fulcrumed to the blade holder above the cutting edge of the blade and near the forward portion of the h lder, permitting a movement of the holder independently of the handle to allow the same to follow the contour of the face, and means for normally maintaining said blade holder in a plane parallel with said handle.

[Claims 6 to 17 not printed in the Gazette.]

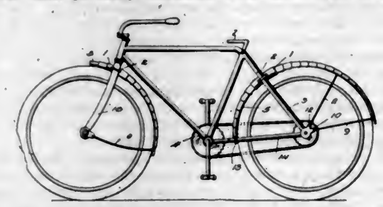
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1,226,323. BICYCLE MUD-GUARD. KAZIMIR A. FIALKOWSKI, Brooklyn, N. Y. Filed Mar. 23, 1916. Serial No. 86,206. (Cl. 208—144.)

The combination with a bicycle, of a mud guard for the same comprising a longitudinally and transversely bowed and open-ended casing mounted on the frame thereof, a plurality of like telescoping sections carried thereby, means for connecting one of the end sections with the



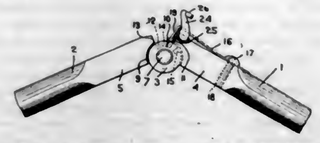
bicycle frame, a pair of supporting arms having their lower ends pivotally connected with the bicycle frame



and their upper ends connected with one of the telescoping sections adapted to be swung away from the bicycle frame when the sections are extended.

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1,226,324. HINGE-LOCK. SETH H. GAGE, Amesbury, Mass., assignor of one-half to Frederick H. Rowe, Lynn, Mass. Filed Feb. 10, 1915. Serial No. 7,361. (Cl. 21—60.)



1. A hinge lock comprising a pair of shouldered members having pivotally connected ears, coöperating locking means on each of said ears, and a resilient locking member adapted simultaneously to engage said locking means.

2. A hinge lock comprising a pair of shouldered members, one having a pair of separated cylindrical ears and the other member having a centrally disposed complementary ear adapted to be positioned between the separated cylindrical ears, said pair of ears having a plurality of peripheral alined slots and said centrally disposed ear being peripherally slotted, pivotal means connecting said ears whereby upon relative movement between the pair of ears and the central ear all slots may be alined, and locking means movable simultaneously to engage all slots when in alinement.

3. A hinge lock comprising a pair of members having pivotally connected ears, peripheral locking means on said ears, and a resilient locking member L-shaped in form having a shorter arm folded upon itself to reinforce and stiffen the same, said shorter arm being adapted simultaneously to engage said locking means whereby the hinge is locked.

4. A hinge lock comprising a pair of members having pivotally connected ears, peripheral locking means on said ears, a strip spring on one of said members having a bent stiffened portion adapted simultaneously to have tensioned locking engagement with said locking means.

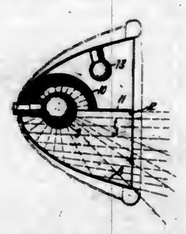
5. A hinge lock comprising a pair of members having pivotally connected ears, a leaf spring secured to one of said members, a latch segment formed by an integral bent portion of said spring and means on said ears adapted to receive said latch segment whereby said hinge members may be simultaneously engaged.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,325. PROJECTING-LAMP. HERCULES WALLACE GEROMANOS, Boston, Mass. Filed Feb. 11, 1916. Serial No. 77,625. (Cl. 240—41.)

1. In combination, a main reflector having the curvature of a conic section, a source of light substantially in the focus of said main reflector, a secondary semispherical reflector within the main reflector, and a plate at the edge of said secondary reflector dividing the main reflector into upper and lower horizontal halves, the center of curvature of said secondary reflector being substantially in the focus of the main reflector, said secondary reflector facing the lower half of the main reflector.



2. In combination, a main reflector having the curvature of a conic section, a plate substantially in the horizontal plane passing through the axis of said main reflector and dividing the same into lower and upper horizontal halves, a semispherical reflecting surface on said plate facing the lower half of the main reflector, the radius of curvature of said semispherical reflector being substantially that of the focal length of the main reflector, and a source of light substantially in the focus of the main reflector.

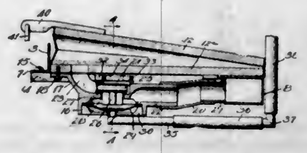
3. In combination, a main reflector having the curvature of a conic section, a plate in the horizontal plane of the main reflector passing through the axis thereof and dividing the main reflector into lower and upper halves, a secondary reflector carried by said plate and facing the lower half of the main reflector, the center of curvature of said secondary reflecting surface being substantially in the focus of the main reflector, and a source of light substantially in the focus.

4. In combination, a main reflector having the curvature of a conic section, a secondary semispherical reflector the edge of which is in the horizontal plane passing through the axis of the main reflector, the radius of curvature of said secondary reflector being substantially equal to the focal length of the main reflector, and the center of curvature of said secondary reflector being substantially in the focus of the main reflector, a source of light substantially in the focus of the main reflector, and a source of light within the main reflector and exterior of the secondary reflector.

5. In combination, a main reflector having the curvature of a conic section, a secondary reflecting surface within the main reflector, a plate at the edge of said secondary reflector dividing the main reflector into two parts, the focus of said secondary reflector being coaxial with the main reflector, and a source of light disposed between the focuses of the main and the secondary reflector.

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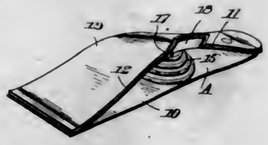
1,226,326. PNEUMATIC ACTION. CHARLES G. GILBERG, Rockford, Ill. Filed Aug. 17, 1914. Serial No. 857,013. (Cl. 84—178.)



2. The combination of a pneumatic, a valve casing arranged against the under side of the pneumatic, a wind trunk to which said valve casing is detachably connected, said valve casing being arranged near one end of said pneumatic, and said wind trunk being arranged at the opposite end of said pneumatic, and said wind trunk forming a support for one end of the pneumatic.

[Claims 1 and 3 to 20 not printed in the Gazette.]

1,226,327. ARCH-READJUSTER. WILLIAM GEORGE GRAY, St. John, New Brunswick, Canada. Filed July 31, 1916. Serial No. 112,324. (Cl. 36—71.)



1. An arch readjuster comprising a base plate, a pair of superimposed curvilinear plates, slidably engaging at their adjacent ends and operatively mounted on the base plate, and resilient means operatively supporting the said pair of plates from the base plate.

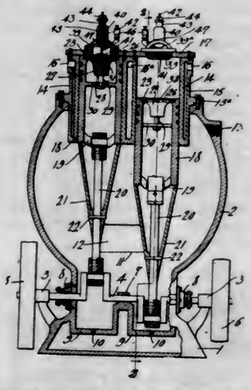
2. An arch readjuster comprising a base plate, a pair of curvilinear plates having their adjacent ends slidably engaging, the opposite ends being rigidly secured to the base plate, and a spring intermediate the said pair of plates and base plate.

3. An arch readjuster comprising a base plate, a pair of curvilinear plates mounted on the base plate, and slidably engaging at their adjacent ends, an angularly disposed flange integral with one of the plates, and resilient means supporting the said pair of plates from the base plate.

4. An arch readjuster comprising a base plate, a pair of curvilinear plates mounted on the base plate, and slidably engaging at their adjacent ends, resilient means supporting the said plates from the base plate, and an insole superimposed on the pair of plates and rigidly secured to one of the same.

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1,226,328. AIR-COMPRESSOR. VENABLE J. GUTHRIE, Cambria, Va., assignor of one-eighth to John C. Guthrie, Pearisburg, Va., and one-eighth to William C. Guthrie, one-eighth to Henry D. Jordan, and one-eighth to Frank Gordon, Dublin, Va. Filed June 22, 1916. Serial No. 105,226. (Cl. 230—27.)



1. A compressor embodying a compression chamber, a cylinder communicating therewith at one end and having an inlet at its other end, a valve for said inlet, a tubular piston slidable in said cylinder, a valve carried by the piston seatable toward the inlet, a crank shaft, a connecting rod connecting the crank shaft and piston, and a displacement cone upon the connecting rod having its larger end arranged adjacent to the piston, the chamber having an outlet.

2. A compressor embodying a compression chamber, a cylinder having one end communicating with said chamber and having an inlet at its other end, a valve for said inlet to prevent the outward flow of air therethrough, a tubular piston slidable in said cylinder having a valve seat at that end nearest said inlet and having a wrist pin at its other end offset away from said inlet, a crank shaft having a crank working within said chamber, a connecting rod connecting said crank and wrist pin, and a displacement cone having its apical portion secured upon the connecting rod, the larger end of the cone being open and cut at an obtuse angle to work adjacent the end of the piston, and said chamber having an outlet.

3. A compressor embodying a compression chamber having an outlet, a pair of cylinders having certain ends communicating with said chamber and having inlets at their other ends, valves for said inlets to prevent the flow of air outwardly therethrough, tubular pistons slidable in the cylinders, valves carried by the pistons seatable toward said inlets, means for reciprocating the pistons in opposite directions, and displacement cones associated and movable with the pistons and working within said chamber, the larger ends of the cones being arranged adjacent to the pistons and having portions spaced therefrom to provide openings.

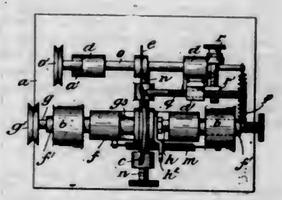
4. A compressor having a compression chamber having an outlet, a cylinder having one end communicating with said chamber and having an air inlet at its other end, a valve for closing said inlet, a piston slidable within the cylinder, the piston having a valve seat facing away from the inlet, a spring pressed valve seatable against said seat and having a chamber and air conducting means extending from the chamber to that portion which rests against said seat, the second mentioned valve having an opening communicating with said chamber and with that end of the cylinder having the inlet, and a spring seated valve carried by the second mentioned valve and seatable away from the first mentioned valve to close said opening.

5. A compressor embodying a compression chamber having an outlet, a cylinder having one end communicating with said chamber and having an air inlet at its other end, a valve for closing said inlet, a piston slidable within the cylinder and having a beveled valve seat facing away from the inlet, a spring pressed valve having a beveled portion seatable against said seat and having a chamber, the second mentioned valve having air conducting means extending from said chamber to said beveled portion and normally covered by said seat when the second mentioned valve is seated, the second mentioned valve having an opening communicating with said chamber, a third valve seatable to close said opening, the third mentioned valve being seatable away from the first mentioned valve, and spring means within said chamber for seating the third mentioned valve.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,329. MACHINE FOR GROOVING LENSES. MARINIUS HANSEN, Brooklyn, N. Y. Filed Sept. 27, 1916. Serial No. 122,334. (Cl. 51—3.)



1. A machine for grooving lenses comprising a movable supporting frame in which the lens is rotatably mounted, a rotary cutter, a fixed abutment to limit the movement of the lens in one direction with relation to the face of the cutter and means coöperating with the frame for automatically maintaining the lens in the position determined by the abutment.



2. A machine for grooving lenses comprising a movable supporting frame in which the lens is rotatably mounted, a rotary cutter, a fixed abutment to limit the movement of the lens in one direction with relation to the face of the cutter, and a spring coöperating with the frame for holding the frame yieldingly in the said position determined by the abutment.

3. A machine for grooving lenses comprising a movable supporting frame in which the lens is rotatably mounted, a rotary cutter, a fixed abutment to limit the movement of the lens in one direction with relation to the face of the cutter, means coöperating with the frame for holding the frame yieldingly in the said position determined by the abutment and means to hold the edge of the cutter and the edge of the lens in yielding operative engagement.

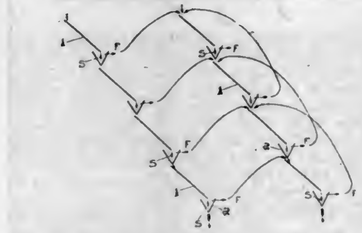
4. A machine for grooving lenses comprising a movable supporting frame in which the lens is rotatably mounted, a rotary cutter, an adjustable arm in fixed relation to the cutter and having an abutment to engage the face of the lens to position the cutting edge with respect thereto and means in operative engagement with the frame to move the same laterally and hold the face of the lens yieldingly against the abutment.

5. A machine for grooving lenses comprising a movable supporting frame in which the lens is rotatably mounted, a rotary cutter, an adjustable arm in fixed relation to the cutter and having an abutment to engage the face of the lens to position the cutting edge with respect thereto, means in operative engagement with the frame to move the same laterally and hold the face of the lens yieldingly against the arm, and means to adjust the said arm to vary the point of bearing of the abutment against the face of the lens.

[Claims 6 to 11 not printed in the Gazette.]

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1,226,330. PROCESS OF CONCENTRATING AND SEPARATING MINERALS BY FLOTATION. HERBERT E. T. HAULTAIN, Toronto, Ontario, Canada. Filed June 15, 1915. Serial No. 34,213. (Cl. 83—85.)



1. A process of concentrating and separating minerals by flotation which consists in pulping the ore; treating the same in a first stage by flotation in a series of steps in which the sinking products are successively re-treated to obtain a final sinking product substantially free of the most readily floatable constituent of the ore, re-treating the floating products of the first stage in a second stage by flotation in a series of steps in which the floating products of each step except the first are returned for re-treatment in a previous step to obtain a substantially clean final product of another constituent of the ore as a float from the first step.

2. A process of concentrating and separating minerals by flotation which consists in pulping the ore; treating the same in a first stage by flotation in a series of steps in which the sinking products are successively re-treated to obtain a final sinking product substantially free of the most readily floatable constituent of the ore, re-treating the floating products of the first stage in a second stage by flotation in a series of steps in which the floating products of each step except the first are returned for re-treatment in a previous step to obtain a substantially clean final product of another constituent of the ore as a float from the first step, the floating products of the first stage being introduced at different steps in the second stage according to the quality of the float.

3. A process of concentrating and separating minerals by flotation which consists in pulping the ore and treating the same by flotation in a multi-series of steps in which the floating products of each step except the first are returned for re-treatment in a previous step to obtain a final product substantially free of the most readily floatable constituent of the ore as a float from the first step.

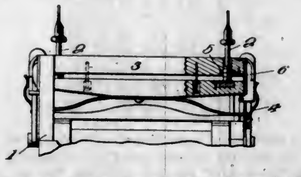
4. A process of concentrating and separating minerals by flotation which consists in pulping the ore and treating the same by flotation in a multi-series of steps and in which the floating products of the later steps are progressively moved up for re-treatment in earlier steps to obtain the cleanest final floating products at the earlier steps.

5. A process of concentrating and separating minerals by flotation which consists in pulping the ore; treating the same in a first stage by flotation in a series of steps in which the sinking products are successively re-treated to obtain a final sinking product substantially free of the most readily floatable constituent of the ore, re-treating the floating products of the first stage in a second stage by flotation in a multi-series of steps and in which the floating products of each step except the first are returned for re-treatment in a previous step to obtain a substantially clean final product of another constituent of the ore as a float from the first step.

[Claims 6 to 16 not printed in the Gazette.]

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1,226,331. CLOTHES-WRINGER. JOHN F. HEMENWAY, New York, N. Y. Filed Oct. 2, 1916. Serial No. 123,376. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a movably mounted top bar having means for adjusting said pressure means, a releasing mechanism for said top bar, a member extending outwardly from said top bar in a plane below the top thereof, and a stop carried by the side bars of said frame coöperating with said extension for limiting the upward movement of said top bar.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a movable top bar mounted in said frame, mechanism for holding said top bar in predetermined position therein, boxes carried by said top bar provided with extensions, pressure screws mounted in said boxes for adjusting said pressure means, and plates carried by the side bars having slots to receive said extensions for limiting the upward movement of said top bar.

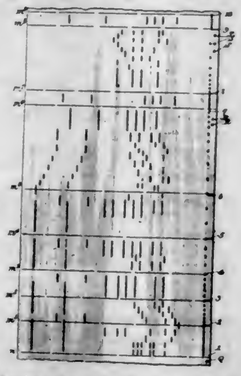
3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a top bar movably mounted in said frame having means for adjusting said pressure means, means for holding said top bar in predetermined position within said frame, a slotted plate secured to the side bar of said frame in a plane below the upper ends thereof, and a member extending outwardly from said top bar working in the slot of said plate for limiting the upward movement of said top bar.

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1,226,332. EXPRESSION-INDICATIONS FOR PERFORATED NOTE-SHEETS FOR PLAYER-PIANOS AND THE LIKE. FREDERICK HOPKINS, Buffalo, N. Y. Filed Sept. 18, 1916. Serial No. 120,876. (Cl. 84—162.)

1. In a perforated note sheet, a plurality of perforations which perform no automatic or mechanical function

in the operation of a playing machine, but are designed solely to be seen and followed by the eye, which perforations are located in some position on the note sheet not required for the production of the music, and where they may be readily observed and follow one another successively, forming a straight and continuous line which traverses the note sheet parallel to the sides thereof, said continuous line constituting an expression or dynamic line which indicates to the observer the dynamic conditions and changes appropriate to the music or to the operation of such sheet by means of the relative degrees and changes of degree of propinquity to one another of the perforations of which such line is made up, according to an arbitrary symbolism by which a certain assumed degree of propinquity indicates a certain dynamic degree, and another assumed degree of propinquity indicates another dynamic degree, and intermediate degrees and changes of degree of propinquity indicate corresponding intermediate dynamic degrees and changes of degree.



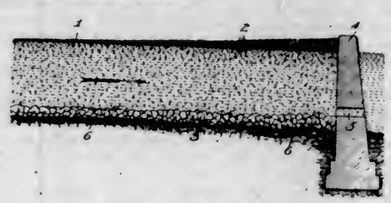
2. In a perforated note sheet, a plurality of perforations which perform no automatic or mechanical function in the operation of a playing machine, but are designed solely to be seen and followed by the eye, and are located in some position on the note sheet not required for the production of the music, where they may be readily observed, and which by their size and shape, and by their location and arrangement upon the note sheet, and by their combination and grouping and their degree of propinquity with respect to one another upon such sheet, constitute symbols, recognizable as such by the eye, and capable of receiving, embodying and representing separate and differentiated definitions, meanings, interpretations and instructions incident to the performance of the music and the operation of the sheet, and of transmitting the same to the observer.

3. In a perforated note sheet, a plurality of perforations which perform no automatic or mechanical function of a playing machine but are designed solely to be seen and followed by the eye, and are located in some position on the note sheet not required for the production of the music where they may be readily observed, said perforations being spaced with their degree of propinquity depending upon the dynamic degree with which the instrument should play the music from the note sheet.

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1,226,333. PROCESS OF SEPARATING SUSPENDED PULP. WILLIAM HOSKINS, Chicago, Ill. Filed Oct. 15, 1915. Serial No. 56,161. (Cl. 210—1.)

1. The method of separating from a liquid-body consisting of or containing in solution a chemically-active constituent, paper pulp suspended therein, which consists in bringing the liquid into contact with an immersed solid of a character which is acted upon by the said constituent to liberate gases, whereby the liberated gases rise from the immersed solid and in passing upwardly carry with them to the surface the said suspended pulp to form of the latter a scum or surface stratum, and removing the said scum or surface stratum.



2. The method of separating from an acid liquor paper pulp suspended therein, which consists in bringing the liquor into contact with an immersed carbonate which is attacked by the said acid to liberate carbon dioxid, whereby the carbon dioxid will rise through the liquor and carry to the surface thereof the suspended pulp, forming of the latter a surface stratum or scum, and removing the said scum.

3. The method of separating suspended pulp from sulfite waste-waters which consists in passing the said waters over immersed limestone, and removing the resultant pulp-carrying surface-stratum.

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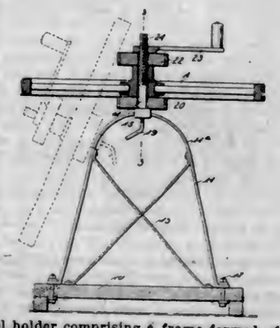
1,226,334. BATTEN-STRIP. MARTIN L. HUNKER, Wheeling, W. Va., assignor, by mesne assignments, to Whitaker-Glessner Company, Wheeling, W. Va., a Corporation of West Virginia. Filed Mar. 6, 1916. Serial No. 82,360. (Cl. 108—12.)



A batten strip composed of sheet-metal shaped to form a central longitudinal arch of inverted form, the crown of said arch being designed to rest upon adjacent boards at opposite sides of an intervening crack, inwardly inclined wings extending laterally from the extremities of the opposite side walls of said arch and joining the latter through a regular curve, and flat panels located laterally of said wings and disposed in the plane of the crown of said arch for seating upon said boards.

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1,226,335. WHEEL-HOLDER. HORACE EVERET JONES, Ebensburg, Pa. Filed Dec. 28, 1916. Serial No. 139,246. (Cl. 144—288.)



1. A wheel holder comprising a frame formed of a strip of metal in arched form, a spindle having a base embracing the said arched top and slidable thereon, a set screw

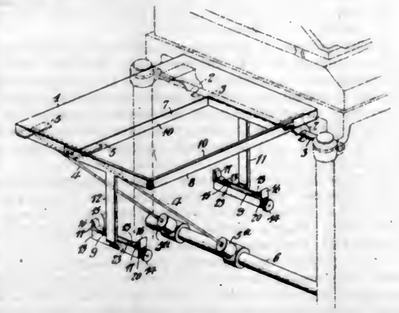


extending through the underside of the base to engage the said top, upper and lower clamp elements on the spindle adapted to hold a wheel therebetween, and a retaining device threaded on the spindle above the said upper clamp element.

2. A wheel holder comprising a frame presenting an arched top, a spindle having a base, said base extending laterally from the spindle at one side, then downwardly, thence laterally in the opposite direction from the first member, then beneath the arched top, and returned on itself in an upward direction above the arched top, a set screw extending through the lower member of the base and adapted to bind against the arched top and wheel holding means carried by the spindle.

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1,226,336. STAND OR SUPPORT FOR LOOSE-LEAF BOOKS, &c. ADOLPH G. KUPETZ, New York, N. Y., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Feb. 2, 1915. Serial No. 5,608. (Cl. 45—57.)



1. A stand or receptacle for a loose-leaf binder, for supporting therein binders of various thicknesses with their leaves in unlocked condition, in a manner to permit the ready withdrawal and restoration of any leaf in the binder, and to hold the binder open at the point where the leaf has been withdrawn, comprising a pocket or device for supporting on edge the back portion of the binder inserted in the pocket, said pocket having opposite chairs combining to form a saddle arranged to locate the back of the binder in central position in the pocket, said chairs being relatively adjustable to accommodate binder backs of different widths, and means to retain the chairs where adjusted, said receptacle constructed so that a binder of any width inserted in the pocket may be retained thereby nearly in closed condition with its upstanding covers and leaves tilted outwardly, whereby the leaves may remain tilted against either cover, and thereby keep the unlocked binder open at the point where a leaf is withdrawn.

2. A stand or support for a loose-leaf binder, comprising a pocket or frame provided with a device for mechanically centralizing the back of the loose-leaf binder in the pocket, and also comprising opposite chairs to form a saddle for said back, and means connecting said chairs for simultaneous equal adjustment toward or away from each other.

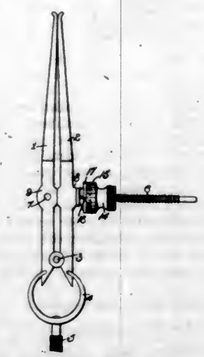
3. A stand or support for a loose-leaf binder, comprising a pocket or frame having bottom rests, means supporting said rests, opposing chairs on said rests, said chairs taken together forming a saddle for the back of the loose-leaf binder to hold it in central position, said chairs slidable to and from each other upon said rests, and means for relatively adjusting said chairs to expand or contract the saddle while keeping the saddle in central position in the pocket.

4. A stand or support for a loose-leaf binder, comprising a pocket or frame having bottom rests, two pairs of opposing chairs, one pair upon each rest, all of said chairs taken together forming a saddle for receiving the back of the loose-leaf binder, tongues on said chairs, and screws threaded through said tongues to adjust them to and from each other to expand or contract the saddle while keeping the saddle in central position in the pocket.

5. A device to support a loose-leaf binder in a slightly open position with its covers upstanding, said device comprising, in combination, supports for the covers of the binder, a saddle to support the back of the binder centrally with relation to said supports, said saddle comprising chairs arranged to hold the binder in such position that the covers thereof are maintained at equal angles to the vertical, and adjusting means for simultaneously shifting said chairs toward or from each other to fit them to binders of different thicknesses, said adjusting means comprising a rod having right and left-hand screw threads to engage, respectively, correspondingly threaded portions of the chairs, whereby the latter are simultaneously adjusted through equal distances but in opposite directions, while the saddle remains centrally located with reference to said supports.

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1,226,337. UNIVERSAL MICROMETER. PETER LACKNER, New Brunswick, N. J. Filed Sept. 15, 1916. Serial No. 120,235. (Cl. 33—154.)



1. In a measuring instrument of the character described, a pair of separable legs, each of said legs being formed with an enlargement intermediate its ends, each leg being provided with a socket, one of said sockets extending entirely through the leg on which it is arranged, a threaded bar extending through said last mentioned socket into the socket in the other leg, a pivotal member connecting said bar with said last mentioned leg, a rounded member for transmitting strain from said bar to one of said legs, and a nut on said threaded bar acting on said rounded member for limiting the opening movement of said legs.

2. In a micrometer of the character described, a caliper construction including legs and a threaded shaft, a scale arranged on said shaft for indicating the amount of opening of the calipers, a nut on said shaft for limiting the opening of the legs of the caliper, said nut being formed with graduations thereon for indicating the amount of turning of the nut so as to determine small fractional changes of distances between the points of the calipers, and means interposed between said nut and the legs coacting with the graduations on the nut for indicating the amount of turning of the nut.

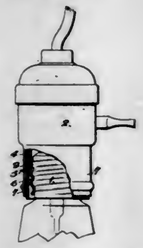
3. A micrometer of the character described, comprising a caliper construction including legs and the usual threaded bar and nut, a washer arranged between the legs of the caliper and said nut, and a threaded sleeve fitting into one of the legs of said caliper and engaging

said washer whereby upon unscrewing the sleeve to a predetermined extent wear on the parts of the micrometer may be taken up in order to maintain the micrometer accurate.

4. In a micrometer of the character described, a caliper construction including legs and a threaded tension bar and a nut, a washer surrounding said bar and engaged by said nut, said washer having an enlargement formed with a rounded end, and a sleeve threaded into one of said legs, said sleeve being formed with a socket fitting the enlargement on said washer whereby the parts automatically assume a correct position and by an adjustment of the sleeve the wear on the parts may be compensated.

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1,226,338. LAMP-SOCKET LOCK. HERBERT R. LAND, Little Rock, Ark. Filed Jan. 11, 1917. Serial No. 141,819. (Cl. 173—356.)



1. In combiantion with an incandescent lamp and socket or holder therefor; of an insulating sleeve mounted in the socket shell with its outer end flush with the outer surface of the said shell, a metallic hub fixedly held in the sleeve and including a head portion at the inner end that extends over the inner end of the insulating sleeve, the said hub having a threaded bore, a screw pin that engages the said bore, said pin having its inner end shaped for interlockably engaging the metal end rim of the lamp when the pin is screwed home, the outer end of the pin being shaped for receiving a suitable turning implement.

[Claim 2 not printed in the Gazette.]

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1,226,339. SOLVENT FOR ACETYL CELLULOSE. WILLIAM G. LINDSAY, Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y., a Corporation of New Jersey. Filed May 23, 1912. Serial No. 699,232. (Cl. 106—40.)

The combined solvent for acetyl cellulose of that variety which is freely soluble in acetone comprising a mixture of about 54 to 61 parts by weight of benzol about 46 to 39 parts by weight of methyl alcohol, and a water, said methyl alcohol being diluted to contain about 3½ to 7 per cent. of water.

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1,226,340. SOLVENT FOR ACETYL CELLULOSE. WILLIAM G. LINDSAY, Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y., a Corporation of New Jersey. Filed May 23, 1912. Serial No. 699,237. (Cl. 106—40.)

1. A solvent for acetyl cellulose of that variety which is freely soluble in acetone which comprises epichlorhydrin and a monohydric alcohol having not more than two carbon atoms, said substances being present in about equal proportions, substantially as described.

2. The solvent for acetyl cellulose of that variety which is freely soluble in acetone which comprises epichlorhydrin and methyl alcohol in about equal proportions substantially as described.

3. The composition of matter which comprises acetyl cellulose of that variety which is freely soluble in aceton, epichlorhydrin and a monohydric alcohol having not more than two carbon atoms, said substances being present in about equal proportions, said composition further comprising paraethyltoluolsulfonamid.

4. The composition of matter which comprises acetyl cellulose of that variety which is freely soluble in acetone, epichlorhydrin and a monohydric alcohol having not more than two carbon atoms, said substances being present in about equal proportions, said composition further comprising paraethyltoluolsulfonamid and triphenylphosphate.

5. The composition of matter which comprises acetyl cellulose of that variety which is freely soluble in acetone, epichlorhydrin and a monohydric alcohol having not more than two carbon atoms, and paraethyltoluolsulfonamid.

[Claim 6 not printed in the Gazette.]

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1,226,341. PROCESS OF MAKING ACETYL-CELLULOSE PLASTIC COMPOUNDS. WILLIAM G. LINDSAY, Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y., a Corporation of New Jersey. Original application filed May 23, 1912, Serial No. 699,232. Divided and this application filed July 10, 1915. Serial No. 39,188. (Cl. 106—40.)

1. The process of producing plastic compounds from acetyl cellulose of that variety which is freely soluble in acetone that consists in adding to such acetyl cellulose water, benzol, and methyl alcohol to produce a gelatinated mass at ordinary room temperature; adding paraethyltoluolsulfonamid to such gelatinated mass and mixing the ingredients; and subjecting the resulting product to manipulation.

2. The process of producing plastic compounds from acetyl cellulose which consists in treating acetyl cellulose of that variety which is freely soluble in acetone, with water, benzol, methyl alcohol and paraethyltoluolsulfonamid; and manipulating the mass.

3. The process of producing plastic compounds from acetyl cellulose of that variety which is freely soluble in acetone that consists in adding to such acetyl cellulose, water, benzol, and methyl alcohol to produce a gelatinated mass at ordinary room temperature; adding an alkylated aromatic sulfonamid to such gelatinated mass and mixing the ingredients; and subjecting the resulting product to manipulation.

4. The process of producing plastic compounds from acetyl cellulose which consists in treating acetyl cellulose of that variety which is freely soluble in acetone, with water, benzol, methyl alcohol and an alkylated aromatic sulfonamid, and manipulating the mass.

5. The process of producing plastic compounds from acetyl cellulose which consists in treating acetyl cellulose of that variety which is freely soluble in acetone, with a mixture of water, benzol and methyl alcohol, adapted to produce a gelatinated mass at room temperature; and incorporating with said mass a substance which produces a mass that can be rolled, pressed and molded and which prevents the loss of the solvent effect as the water, benzol and methyl alcohol evaporate during such manipulation.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,342. PROCESS OF MAKING ACETYL-CELLULOSE PLASTIC COMPOUNDS. WILLIAM G. LINDSAY, Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y., a Corporation of New Jersey. Original application filed May 23, 1912, Serial No. 699,236. Divided and this application filed July 10, 1915. Serial No. 39,191. (Cl. 106—40.)

1. The process of producing plastic compounds from acetyl cellulose of the variety which is freely soluble in acetone which consists in mixing the said acetyl cellulose with paraethyltoluolsulfonamid and adding thereto methyl acetate and ethyl alcohol, substantially as described.

2. The process of producing plastic compounds from acetyl cellulose which consists in mixing the said acetyl cellulose with paraethyltoluolsulfonamid and adding thereto methyl acetate and methyl alcohol, and subjecting the mass to heat and pressure, substantially as described.

3. The process of producing plastic compounds from acetyl cellulose of the variety which is freely soluble in acetone which consists in mixing the said acetyl cellulose with paraethyltoluolsulfonamid and triphenylphosphate; then adding to the mixture a solvent consisting of methyl acetate and methyl alcohol, substantially as described.

4. The process of producing plastic compounds from acetyl cellulose of the variety which is freely soluble in acetone which consists in mixing the said acetyl cellulose with paraethyltoluolsulfonamid and triphenylphosphate; then adding to the mixture a solvent consisting of methyl acetate and methyl alcohol, and subjecting the mass to heat and pressure, substantially as described.

5. The process of producing plastic compounds from acetyl cellulose of the variety which is freely soluble in acetone which consists in mixing the said acetyl cellulose with an alkylated aromatic sulfonamid and adding thereto methyl acetate and ethyl alcohol, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,343. PROCESS OF MAKING ACETYL-CELLULOSE PLASTIC COMPOUNDS. WILLIAM G. LINDSAY, Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y., a Corporation of New Jersey. Original application filed May 23, 1912, Serial No. 699,237. Divided and this application filed July 10, 1915. Serial No. 39,192. (Cl. 106—40.)

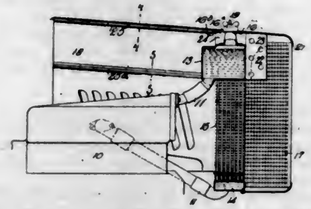
1. The process of making plastic compounds from that variety of acetyl cellulose which is freely soluble in acetone that consists in mixing acetyl cellulose which is freely soluble in acetone with paraethyltoluolsulfonamid; adding to this mixture a solvent composed of equal volumes of epichlorhydrin and a monohydric alcohol having not more than two carbon atoms, substantially as set forth.

8. The process of making plastic compounds from that variety of acetyl cellulose which is freely soluble in acetone that consists in mixing acetyl cellulose which is freely soluble in acetone with an alkylated aromatic sulfonamid and triphenylphosphate; adding to this mixture epichlorhydrin and methyl alcohol, substantially as set forth.

[Claims 2 to 7 not printed in the Gazette.]

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1,226,344. RADIATOR ATTACHMENT. D MCRA LIVINGSTON, New York, N. Y. Filed Nov. 17, 1915. Serial No. 61,994. (Cl. 257—132.)



1. In a radiator, a water tank, and means to mask and cool said tank, said means comprising a covering shell open at the front and back, and spaced from the said tank to form an air passage over the top of the tank and at the sides thereof between said tank and the said shell, said passage being in free communication with the open front of the shell, the said shell extending forwardly beyond the tank, a grid in said shell at the front, and spaced radiating elements on said tank at the front within said grid and at the top and sides of the tank in the said air passage, said shell and the said grid affording an entrance of air direct to and against the front of the tank.

2. In a radiator, a water tank, and means to mask and cool said tank, said means comprising a covering shell open at the front and back, and spaced from the said tank to form an air passage over the top of the tank and at the sides thereof between said tank and the said shell, said passage being in free communication with the open front of the shell, the said shell extending forwardly beyond the tank, and spaced radiating elements on said tank at the front at the top and sides of the tank in the said air passage formed by the tank and shell, said shell affording an entrance of air direct to and against the front of the tank.

3. In an apparatus of the class described including a water tank and a shell supported over the tank and spaced therefrom to form an air passage over the top of the tank and at the sides thereof, the said shell being open front and back in free communication with the said air passage and adapted to direct a current of air through the said passage; together with radiating elements on the tank and extending from the same forwardly toward the front opening of the shell, and extending upwardly approximately to the inner surface of the shell.

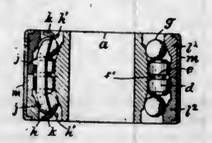
4. An apparatus of the class described including a radiator having a water tank at the top, a covering shell over said radiator and tank and spaced therefrom at the top and sides to form an air passage between the said shell and the said radiator and top tank, the shell being open front and rear in free communication with the said air passage to cause a current of air to pass therethrough, and a motor hood at the rear of the shell in line with the latter, said hood having support at its front end on the shell so that the one is complementary to the other, and the interior of the hood being in free communication with the said radiator and the said air passage.

5. The herein described combination hood and mask to conceal the motor, radiator and radiator casing of an automobile, the same including a front shell to constitute a radiator mask, means to secure the said shell on an automobile and spaced from the radiator and its casing to form a passage between the said mask and the radiator casing to conduct air over the exterior of the radiator tank, a rear hood section having support at its front end on the shell at the rear of the latter and in free communication with the interior of the said shell, the front of the shell being open for the entrance of air, the opening extending to a height to permit the entering air to strike the front of the radiator tank and force the received air to and through said passage over the radiator tank and to and through the said hood.

[Claims 6 to 9 not printed in the Gazette.]

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1,226,345. DOUBLE-THRUST BEARING. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed Nov. 14, 1916. Serial No. 131,217. (Cl. 64—62.)



1. In a double thrust roller bearing, the combination, with a hub having a cylindrical seat with conical seats connected to its opposite ends, of cylindrical rolls fitted to the cylindrical seat and having means to prevent longitudinal movement of these rolls, rolling members bearing upon the conical seats and contacting with the opposite ends of the cylindrical rolls, and a casing having cylindrical and conical seats fitted to the outer sides of the rolls and the rolling members.

2. In a double thrust roller bearing, the combination, with a hub having a cylindrical seat with conical seats

connected to its opposite ends, of cylindrical rolls fitted to the cylindrical seat and having means to prevent longitudinal movement of these rolls, rolling members bearing upon the conical seats and contacting with the opposite ends of the cylindrical rolls, and a casing having two annular sections with their outer portions fitted to the tapering rolls and their inner portions fitted to the opposite end portions of the cylindrical rolls, to facilitate the assembling of the rolls with the hub and casing.

3. In a double thrust roller bearing, the combination, with a hub having a cylindrical seat with conical seats connected to its opposite ends, of cylindrical rolls fitted to the cylindrical seat and having each a groove intermediate to its ends, tapering rolls bearing upon the conical seats and contacting with the opposite ends of the cylindrical rolls, and a casing having a middle section formed to engage the groove in each cylindrical roll, and having two outer sections fitted to opposite sides of the middle section and furnished with seats to bear upon the cylindrical roll and upon the tapering rolls.

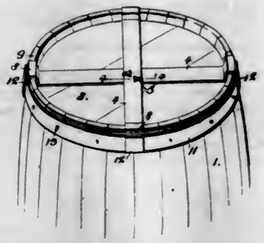
4. In a double thrust roller bearing, the combination, with a hub having a cylindrical seat with conical seats connected to its opposite ends, of cylindrical rolls fitted to the cylindrical seat and having means to prevent longitudinal movement of these rolls, rolling members bearing upon the conical seats and contacting with the opposite ends of the cylindrical rolls, a casing formed in annular sections fitted to the outer sides of the rolls and rolling members, and a shell embracing the exterior of the casing and overlapped upon its ends to retain all the parts in their working relation.

5. In a double thrust roller bearing, the combination, with a hub having a cylindrical seat with conical seats connected to its opposite ends, of cylindrical rolls fitted to the cylindrical seat, rolling members bearing upon the conical seats and contacting with the opposite ends of the cylindrical rolls, a casing fitted to the exteriors of the rolls and rolling members, and the cylindrical rolls having each a groove intermediate to its ends and means projected from at least one of the bearing seats of the rolls for engaging the groove in each roll and preventing longitudinal movement.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,346. KEG LINER AND CLEAT. CHARLES FRANCIS LOFE, Pittsburgh, Pa. Filed Nov. 22, 1916. Serial No. 132,841. (Cl. 217—89.)



1. In combination with a keg and its head and the hoop that embraces the staves adjacent the head; of a head retaining member including a strap lying across the outside face of the head and terminating in hooked portions that engage over the ends of the staves and project down between the staves and the hoop, the ends of which strap member being bent up over the hoop to be retained in place thereby.

3. As a new article of manufacture, a head securing device comprising a pair of strap members, one of which is provided with tongues and the other with slots, the tongues of one of the members passing through the slots of and being clenched over the other member to secure said members together in crossed relation, said members having hook ends to fit over the end of a keg and terminating in portions adapted to be located between the keg body and the hoop at the head end of the keg and adapted to be bent back over the hoop for securing purposes, said strap members adapted to lie on the outside face of the head whereby the same may be applied to the keg after the head is in place.

[Claim 2 not printed in the Gazette.]

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1,226,347. YEAST SUBSTITUTE. JOHN ODDY LUMSDEN, Seattle, Wash. Filed Dec. 4, 1916. Serial No. 134,880. (Cl. 99—10.)

1. A yeast substitute, which comprises water, flours of rice, corn and wheat, sugar and malted barley, in proportions substantially as specified, mixed and fermented, the resulting liquid forming a substitute for yeast.

2. A yeast substitute, which consists of the following ingredients, water, rice flour, white-corn flour, white-wheat flour, granulated sugar, and malted grain, in proportions substantially as specified, mixed and fermented, the resulting liquid forming the substitute for yeast.

3. A yeast substitute which consists of the following ingredients, water, flours of rice, corn and wheat, granulated sugar and grain, in proportions substantially as specified, mixed and fermented, the resulting liquid forming a substitute for yeast.

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1,226,348. SUBMARINE MINE AND PROPELLER-ENTANGLEMENT. ARTHUR N. MCGRAT, New York, N. Y. Filed Jan. 30, 1915. Serial No. 5,213. (Cl. 102—3.)



1. A submarine defense comprising a plurality of looped propeller entanglements, an anchoring cable, and a connection extending from the bottom of each loop to the cable, each loop having float means for coöperating with the cable to maintain the loops more or less upright, and the float means also serving to hold the loops open for entanglement with propellers, said loops being independent of each other and free to move laterally in all directions from the anchoring cable.

2. A submarine defense comprising a plurality of looped propeller entanglements, an anchoring cable, a connection extending from the bottom of each loop to the cable, each loop having float means for coöperating with the cable to maintain the loops more or less upright, and the float means also serving to hold the loops open for entanglement with propellers, and mines attached to the loops, said loops being independent of each other and free to move laterally in all directions from the anchoring cable.

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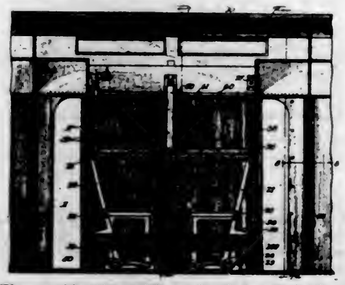
1,226,349. SLEEPING-CAR. JAMES A. MCNULTY, Minneapolis, NELS H. NELSON, Willmar, and JAMES JESSEN, Minneapolis, Minn. Filed Nov. 8, 1915. Serial No. 60,189. (Cl. 105—207.)

1. A sleeping car having sections, each section having alcoves at the ends thereof extending to the floor and in which the occupant may stand upright, seats within each section, said seats having parts thereof arranged to form upper and lower berths extending lengthwise of the car, one berth being accessible at one end from one alcove and the other berth accessible at one end from the other alcove when the berths are made up.

2. The combination with a sleeping car section, of a pair of seats within the section, each seat having a two part hinged back, the two parts of one seat back being adjustable to form an end wall and half of the upper berth and the two parts of the second seat back being adjustable to form the other half of the upper berth and an end wall for the lower berth.



3. The combination with a sleeping car section, of a pair of seats within the section, each seat having a two part hinged back, the two parts of one seat back being adjustable to form an end wall and half of the upper berth and the two parts of the second seat back being adjustable to form the other half of the upper berth and an end wall for the lower berth, said end wall of the upper berth being located at the opposite end of the section to said end wall of the lower berth.



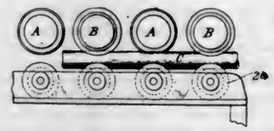
4. The combination with a sleeping car section, of a pair of seats within said section, said seats having backs hinged at their upper ends and movable to a horizontal position to form an upper berth, a vertical partition at one end of the upper berth, a vertical partition at the opposite end of the lower berth, said sections having alcoves at the ends thereof, one alcove communicating with the lower berth and the other alcove with the upper berth.

5. A sleeping car divided into sections by partitions extending transversely thereof and having a longitudinal central aisle, seats within each section, each section having alcoves at the ends thereof between the seats and said partitions, and collapsible storage closets at each end of each section, said closets being all collapsed when the berths are made up to thereby provide increased alcove space.

[Claims 6 to 18 not printed in the Gazette.]

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1,226,350. MECHANISM FOR WELDING PIPE BY ELECTRICITY. CLARENCE MARK and CARL OTTO BERGMAN, Evanston, Ill., assignors to Clayton Mark, Lake Forest, Ill. Filed Sept. 11, 1914. Serial No. 861,167. (Cl. 219—6.)




1. In apparatus for electrically welding pipe, a plurality of rotatable heads, each of said heads having two beveled contact faces insulated from each other and each of said heads being adapted to engage and transmit heat to one of the separated edges of the pipe blank through said contact faces, one of the contact faces on each head engaging one of the separated edges of the pipe blank and the other of said contact faces engaging the periphery of the pipe blank, in combination with means for forcing together and welding the edges of the pipe blank after they have been heated to the welding temperature.

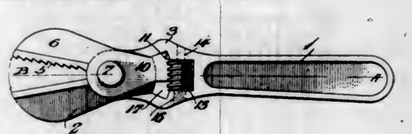
2. In apparatus for electrically welding pipe, two sets of heads, one set of heads being part of an electric circuit adapted to be closed by the interposition of one of two longitudinal and separated edges of the pipe blank, and the other set of heads being also a part of another electric circuit adapted to be closed by the interposition of the other longitudinal and separated edge of the pipe blank, each head having a pair of contact faces thereon insulated from each other, one of said contact faces engaging one of the said longitudinal edges, and the other engaging the periphery of the blank, and means for supporting the pipe blank in contact with said heads.

3. In apparatus for electrically welding pipe, the combination of two sets of rotatable heads, the heads of one set having a plurality of contact faces oppositely disposed to the contact faces of the heads of the other set, the contact faces on each set being insulated from each other and forming with the pipe blank a path for electric current.

4. In apparatus for electrically welding pipe, rotating heads, conductors leading to the rotating heads, one conductor being concentrically arranged within the other, the said arrangement being adapted to neutralize the self-inductive effect of the current passing through each conductor.

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1,226,351. ADJUSTABLE ALLIGATOR-WRENCH. LUTHER MARSH, Philadelphia, Pa. Filed Jan. 25, 1917. Serial No. 144,398. (Cl. 81—111.)



1. In a device of the character stated, a handle formed with and encircling a transverse slot, an opening formed as a continuation of said slot, a jaw formed integral with said handle, a separate jaw pivoted to said handle and having a rearwardly extending lever arm provided with rack teeth, the rack portion of said arm extending within said slot and adapted to abut either end of said slot to form a stop to limit the movement of said pivoted jaw and a worm leader nut mounted in said opening and meshing with said rack, whereby said pivoted jaw may be adjusted with respect to said fixed jaw.

2. In a device of the character stated, a handle formed with and encircling an opening, a jaw formed integral with said handle, a toothed jaw pivoted to said handle and having a lever arm provided with rack teeth, a portion of said lever arm projecting into said opening, a worm leader nut mounted in said opening and meshing with said rack teeth and means integral with said handle and located respectively at opposite sides of said lever arm and in the path of movement thereof to limit the movement of said pivoted jaw.

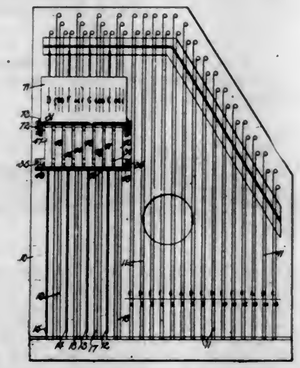
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1,226,352. ZITHER-ACTION. FREDERICK MENZENHAUER, Jersey City, N. J. Filed Sept. 27, 1916. Serial No. 122,362. (Cl. 84—116.)

1. A zither, comprising a body having strings, a support attached to the said body and provided with a stop bar having spaced notches on the top, spring-pressed hammers pivoted on the said support, the hammers having rigid shanks ranging in the direction of the length of the strings and passing into the said stop bar notches on swinging the hammers downward into lowermost position to sound the strings, and keys pivoted on the said support and having their free ends engaging the said hammer shanks immediately in front of the said hammers, the free ends of the keys being located above the stop bar and engaging the top of the said stop bar on pressing the keys to limit the downward swinging movement of the keys and to allow the hammers to swing farther down to sound the strings.

2. A zither, comprising a body having strings, a support attached to the said body and provided with a stop bar having spaced notches on the top, spring-pressed hammers pivoted on the said support, the hammers having rigid shanks ranging in the direction of the length of the strings and passing into the said stop bar notches on swinging the hammers downward into lowermost position

to sound the strings, keys pivoted on the said support and having their free ends engaging the said hammer shanks immediately in front of the said hammers, the free ends of the keys being located above the stop bar and engaging the top of the said stop bar on pressing the keys to limit the downward swinging movement of the keys and to allow the hammers to swing farther down to sound the strings, a plate having a felted stop strip for the free ends of the hammers to abut against when in uppermost position, and arms pivoted on the said support and on which the said stop plate is fulcrumed to swing up and down, the pivoted end of the stop plate extending directly above the free ends of the said keys to limit the upward swinging movement of the keys.



3. A zither, comprising a body having bass strings and sets of complementary chord strings, each set of chord strings being arranged adjacent the corresponding bass string, spring-pressed hammers, one for each bass string and one for each set of chord strings, the hammers having rigid shanks ranging in the direction of the length of the strings, the ends of the shanks being pivoted, pivoted keys engaging with their free ends the said shanks in advance of their fulcrums, and manually adjustable stopping and holding means located above the said hammers for stopping the return movement of the hammers, the said stopping and holding means being capable of holding the hammers depressed for shipping purposes.

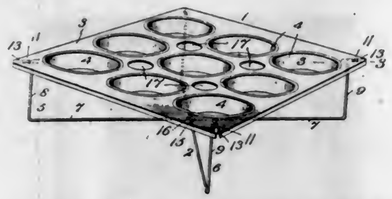
4. A zither, comprising a body having bass strings and sets of complementary chord strings, each set of chord strings being arranged adjacent the corresponding bass string, hammers, one for each bass string and one for each set of chord strings, each hammer having a rigid shank carrying a head at one end, each shank ranging lengthwise in the direction of the corresponding string and above the same, and each shank being pivoted at its other end, the said pivoted end being provided with an extension, a spring for each hammer and pressing the said extension to normally hold the hammer in raised position above the string, and keys fulcrumed at one end and having their free ends engaging the hammer shanks in advance of their fulcrums.

5. A zither, comprising a body having accompaniment strings, a support attached to the body and having a stop bar extending across the top of the said accompaniment strings, a transverse rod on the said support extending across the top of the strings in the rear of the said stop bar, hammers fulcrumed on the said rod and adapted to sound the said accompaniment strings, the said hammers having rearward extensions, springs attached at one end to the said support and pressing with their free ends on the said hammer extensions to normally hold the hammers in raised position, and keys fulcrumed at their rear ends on the said support and extending forwardly, the forward ends of the keys engaging the said hammers in advance of their fulcrums; the forward ends of the keys being located above the said bar to engage the latter on pressing the keys to limit the downward swinging movement of the keys.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,353. BAKE-PAN. NATHANIEL C. MERRILL, New York, N. Y. Filed May 9, 1916. Serial No. 96,282. (Cl. 53—6.)



1. A bake pan and means for supporting the pan above a heating surface and comprising a pair of transversely disposed U shaped bars pivotally connected at their central portion, said bars having their free ends bent outwardly to provide fingers for engaging with the pan.

2. A bake pan having air circulating openings formed therein and means for supporting the pan above a heating surface and comprising a pair of transversely disposed U shaped bars pivotally connected at their central portion, said bars having their free ends bent outwardly to provide fingers for engaging with the pan.

3. A bake pan provided with a plurality of sockets, and means for supporting the pan above a heating surface and comprising a pair of transversely disposed U shaped bars pivotally connected at their central portion, said bars having their free ends bent outwardly to provide fingers for engaging the sockets of the pan.

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1,226,354. NUT AND BOLT LOCK. GEORGE T. MILLER, Williams, Cal. Filed Dec. 20, 1915. Serial No. 67,793. (Cl. 151—30.)



1. A nut and bolt lock consisting of the combination of a flattened substantially U-shaped member, a plurality of teeth formed upon the edge of one of the arms of said U-shaped member, with the inner end of one of the arms of said member being formed with the knife edge.

2. A nut and bolt lock consisting of a flattened U-shaped member, the inner edge of one of the arms of said member being formed with a knife edge, and the other inner edge provided with a plurality of teeth, the said teeth and cutting surface meeting centrally of the throat of said U-shaped member, the teeth extending on the throat providing means for embodying and gripping a portion of the bolt for a purpose specified.

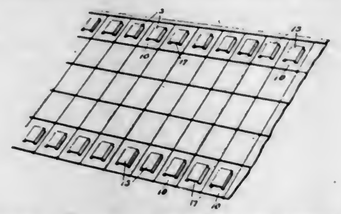
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1,226,355. SHINGLE. DANIEL W. MILLSAPS, Albemarle, N. C. Filed Mar. 30, 1915. Serial No. 18,135. (Cl. 108—17.)

1. A tile comprising a body portion having an opening adjacent its upper end and having a housing extending over the opening, said housing being closed at its upper end and sides and open at its lower end, and a baffle extending upward from the body between the openings and terminating short of the housing.

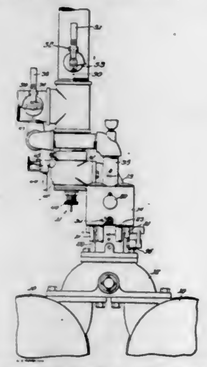
2. A tile comprising a body portion having an opening adjacent its upper end and having a housing extending over the opening, said housing being closed at its upper end and sides and open at its lower end, and a baffle extending upward from the body between the openings and terminating short of the housing, said baffle being concavely curved in the direction of the opening in the housing, means to protect the opening in the housing, said means comprising a lip extending downwardly from the lower edge of the top of said housing.





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1,226,356. CARBURETER. ALBERT F. MOHR, Milwaukee, Wis., assignor to International Harvester Corporation, a Corporation of New Jersey. Filed June 30, 1913. Serial No. 776,535. (Cl. 261—14.)



1. In a carbureter for internal combustion engines, the combination of a mixing chamber, a hot air connection thereto, fuel supply means in said hot air connection directed into said mixing chamber, a connection which is normally open and through which cold air is normally supplied to said mixing chamber, a valve in said hot air connection to control the passage of air therethrough, and control means for said cold air supply, said hot and cold air connections being connected at a point independent of the mixing chamber.

2. In a carbureter for internal combustion engines, the combination of a mixing chamber, fuel supply means directed thereinto, a primary air connection to said chamber, a secondary air connection to said chamber, said connections being connected at a point independent of the mixing chamber, and single means for controlling the supply of air through one or both of said connections.

3. In a carbureter for internal combustion engines, the combination of a mixing chamber, fuel supply means associated therewith, a hot air connection to said mixing chamber, a cold air connection to said chamber, and means in said hot air connection controlling the supply of hot air through both of said connections to said chamber.

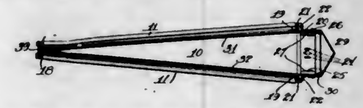
4. In a carbureter for internal combustion engines, the combination of a mixing chamber, fuel supply means associated therewith, a hot air connection to said chamber, a cold air connection to said chamber, and means in said hot air connection controlling the supply of hot air therethrough and also the supply of cold air through said hot air connection to said chamber.

5. In a carbureter for internal combustion engines, the combination of a mixing chamber, fuel supply means associated therewith, two air connections entering the mixing chamber separately, and means in one of said connections controlling the supply of air through both of said connections to said chamber.

[Claims 6 to 8 not printed in the Gazette:]

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1,226,357. SIGN. RICHARD J. MORGAN, Peoria, Ill. Filed Apr. 26, 1915. Serial No. 24,051. (Cl. 40—132.)



1. In a device of the character described, a sign box including a top and a bottom member, said top and bottom members tapering toward their forward extremities, bar members carried by each of said top and bottom members, other bar members having connection with said first mentioned bar members to space said top and bottom members in parallelism, a collar structure including an annular flange, said flange being secured to certain of said second mentioned bar members, an adjustable light supporting structure arranged in said collar structure, a detachable reflector member carried by said collar structure and a bracket secured to certain of said second mentioned bar members and said flange for supporting the entire structure substantially as described.

2. In a device of the character described, a sign box structure including a top and a bottom member, said top and bottom members tapering toward their forward ends, the longitudinal edges of said top and bottom members being bent to form flanges, bar members carried by each of said top and bottom members and engaging said flanges, other bar members having connection with said first mentioned bar members to space said top and bottom members in parallelism, a collar structure secured to certain of said second mentioned members, an adjustable light support coöperating with said collar structure, a reflector carried by said collar structure, substantially as described.

3. In a device of the character described, a sign box structure comprising a top and a bottom member, said top and bottom members tapering toward their forward ends, the longitudinal edges of each of said members being bent to form retaining flanges, angle bars in engagement with said retaining flanges and extending longitudinally of said top and bottom members, other angle bars secured to said first mentioned angle bars for spacing said top and bottom members in parallelism, sign plates in engagement with said angle bars, a collar structure including a collar flange, said collar flange being secured to certain of said second mentioned angle bars, an adjusted light support arranged in said collar structure, a reflector member carried by said collar structure, supporting brackets, one of said brackets secured to certain of said second mentioned bar members, the other of said brackets engaging said collar flange and said collar structure for the purpose specified.

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1,226,358. TIRE-TREAD. MABELLE NACE, Piedmont, Cal. Filed Nov. 29, 1915. Serial No. 63,943. (Cl. 152—16.)



1. The combination with a tire, of a plurality of connected plate members surrounding the tire, a tread member projecting outwardly through each plate and removable by inward movement, a cushion member interposed between each plate and the tire, and clips on each plate securing each cushion member against its respective tread member.

2. An applied tread for an automobile tire comprising a sectional ring or band to encircle the tire, each section of the ring or band having an opening, an insertible and readily removable tread member insertible through the opening of a section from the inside of the ring to present an outward tread portion, and said insert held against the tire by said encircling band or ring, and spring clips carried on the inside of the sections engaging the inner sides of the inserts.

3. A tire tread comprising, in its entirety, a sectional body, each section of which consists of a holder plate having an opening, a flanged outer tread member projecting through the opening with its flange abutting the plate, and an inner tread member arranged immediately next to the outer tread member in direct contacting relation therewith.

4. A tread section comprising a plate, a cushion member removably carried thereby, a spring clip hinged to one side of the plate for swinging across the cushion member to hold the latter to the plate, and a keeper on the opposite side of the plate with which the clip engages when operative.

5. In combination with a tire and an encircling tread band, of lateral clip-like spring arms carried by the band and embracing the sides of the tire, and roughened shoes carried by the terminals of the arms between the latter and the tire.

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1,226,359. RECEPTACLE OR CONTAINER. ISAAC NAYLOR, Los Angeles, and HENRY B. RUGGLES, Pasadena, Cal. Filed July 9, 1914. Serial No. 849,874. (Cl. 229—67.)



A barrel having an end of cylindrical form with longitudinally projecting teeth the side edges of which are inclined to provide inclined recesses, said teeth being in the plane of the body of the barrel, each terminating at the upper edge of the barrel and a head provided with a circumferential flange having spaced teeth alternating with those of the barrel and receivable in interlocking engagement within the recesses, the flange and barrel body being in longitudinal alinement.

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1,226,360. SPLICE-BAR FOR RAILROAD-RAILS. ANDREW J. NEAFIE, Mountain Lake, and CHARLES B. FRENCH, Dover, N. J., assignors to Lackawanna Steel Company, Lackawanna, N. Y., a Corporation of New York. Filed Oct. 31, 1916. Serial No. 128,666. (Cl. 239—9.)



1. A splice-bar for rail joints formed with a central depression on its upper edge to avoid contact with the rail ends.

2. A splice-bar for rail joints having the central portion of its upper edge slightly depressed and correspondingly thickened, to prevent contact with the ends of the rails, while preserving the full strength of the bar at the center.

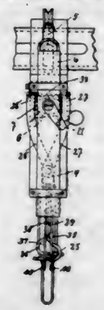
3. A splice-bar for rail joints formed to fit snugly in the "fishing angle" of the rail, and having a depression in its upper portion adapted to be arranged adjacent the rail ends to insure clearance between the bar and the corners on the under surface of the rail ends.

4. As a new article of manufacture, a splice-bar for rail-joints formed with an upper surface to engage the under side of the rail heads, and having a small depression formed in said upper surface and adapted to underlie the corners on the underside of the rail ends, substantially as shown.

5. The combination in a rail joint of the two rails having their ends arranged adjacent and a splice-bar bolted to said two ends to connect the two rails, said joint being formed to provide a clearance between the upper surface of the slice-bar and the under side of the rail heads adjacent their ends, substantially as described and shown.

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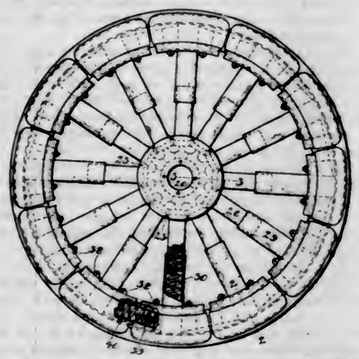
1,226,361. DEVICE FOR MAKING THE CUTTING-LISTS OF SLIT-UP FABRICS. VALENTIN NIEDERWERFER, Burkhardtsdorf, Germany, assignor to the Firm of Fiedler & Co., G. M. B. H., Burkhardtsdorf, Germany. Original application filed Apr. 21, 1914, Serial No. 833,492. Divided and this application filed June 19, 1915. Serial No. 35,183. (Cl. 139—84.)



In a device for making the cutting lists of slit-up fabrics, the combination of an up and down movable slide carrying straight eye-needles, two curved eye-needles movably arranged beside said slide in scissorlike manner and adapted to be moved toward one another upon one ascent of the slide and away from one another upon the other ascent of the slide, substantially as and for the purpose set forth.

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1,226,362. VEHICLE-WHEEL. MAURICE O'CONNOR, Fort Adams, R. I. Filed Mar. 1, 1916. Serial No. 81,518. (Cl. 152—31.)

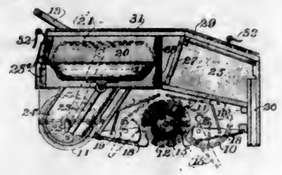


In a wheel of the class referred to, in combination with spring-relieved spokes, rim sections secured to the said spokes, springs located between and abutting said rim sections, a flanged tire support on the rim sections, bolts for clamping together the said tire support and rim section, and nuts screwed upon the said bolts; said nuts being located in the rim section and locked against accidental rotation when screwed home in the rim section.



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1,226,363. COMBINATION SWEEPER AND VACUUM-CLEANER. SHOZABURO OTANI, San Francisco, Cal. Filed Aug. 28, 1916. Serial No. 117,171. (Cl. 15—60.)



1. In a cleaner, a casing having inclined slots, a wheeled axle movably arranged in the slots, a pair of swinging arms pivoted at their upper ends to the respective sides of the casing, a brush-carrying axle journaled in the lower ends of the arms so as to swing with the latter, friction disks on the brush axle, coil springs connected to the arms between their ends and secured to the casing sides to move the arms and therewith the disks of the brush axle against the wheels, and dust pans for the brush.

2. In a cleaner, a casing, a rotatable brush carried by the casing, a dust pan pivoted adjacent the brush, and a wire spring for the pan, said spring being approximately L-shape and having one end connected to the pan in front of the pan pivot and having its other end secured to the casing above the pan and to the rear of the pan pivot whereby to retain the pan in either operative or dust-dumping positions.

3. In a cleaner, a casing, a rotatable brush carried by the casing, a dust pan pivoted adjacent each side of the brush, and independent yielding means for each pan connected thereto to hold same operative and to also enable same to be independently moved to and automatically held in dust-dumping position.

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1,226,364. PITMAN. CHARLES PEARSON, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Mar. 19, 1914. Serial No. 825,823. (Cl. 74—17.)



1. In a pitman connection, a pitman having jaws, means for clamping said jaws together including a controlling member, and a toggle operatively connected between said pitman and said controlling member.

2. In a pitman connection, a pitman having jaws, means for clamping said jaws together including a controlling member, and a spring-pressed toggle mechanism operatively connected between said pitman and said controlling member.

3. In a pitman connection, a pitman having resilient jaws, a member carried thereon having a shouldered portion projecting through one of said jaws, a wedge engageable with said shouldered portion, and a toggle operatively connected between said pitman and wedge.

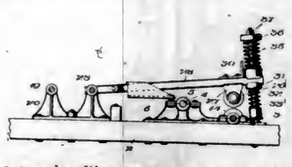
4. In a pitman connection, a pitman having resilient jaws, a slotted member projecting through said jaws, a wedge extending through the slot in said member and a toggle operatively connected between said pitman and wedge.

5. In a pitman connection, a pitman having resilient jaws, a slotted member carried by one of the same and projecting through the other thereof, a wedge extending through the slot in said member, and a toggle operatively connected between said pitman and said wedge.

[Claims 6 to 27 not printed in the Gazette.]

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1,226,365. CORN HUSKER AND SHREDDER. GEORGE L. PHELPS, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed June 29, 1912. Serial No. 706,632. (Cl. 130—5.)



1. In a corn handling machine, a frame, a snapping roll journaled thereon, a supplemental frame pivoted on said frame at one side of the axis of said roll, a coöperating roll journaled in said supplemental frame, resilient means intermediate said frame and said supplemental frame, and resilient means normally holding said first mentioned resilient means under compression.

2. In a corn handling machine, a frame, a snapping roll journaled thereon, a supplemental frame disposed in a plane above said roll and pivoted at one side of the axis thereof, a coöperating roll carried on said supplemental frame, and resilient means acting in opposition to each other on opposite sides of said supplemental frame positioning said movable roll in a predetermined position with respect to said first mentioned roll.

3. In a corn handling machine, a frame, a snapping roll journaled thereon, a standard carried on said frame, a supplemental frame pivoted thereon and protruding over said roll, a member pivoted on said main frame and protruding upward therefrom adjacent the end of said supplemental frame, a coöperating snapping roll carried on said supplemental frame, and resilient means carried on said pivoted member exerting opposite pressures upon opposite sides of said supplemental frame.

4. In a corn handling machine, a frame, a snapping roll journaled thereon, a supplemental frame disposed in a plane above said roll pivoted to said main frame at a point at one side of the axis of said roll, a coöperating roll carried on the movable end of said supplemental roll, an upstanding member pivoted on said frame adjacent said supplemental frame, a spring on said upstanding member intermediate said supplemental frame and said main frame, and a second spring on said member intermediate said supplemental frame and the free end of said member.

5. A corn husking machine including, in combination, a machine frame, a pair of coacting snapping rollers, one of said rollers being journaled in fixed bearings carried by said frame, the opposing roller being journaled in bearings movable toward or from the axis of the companion roller, pressure springs operative to yieldingly press the movable roller toward the fixed roller, and buffer springs operative in a manner to cushion the return movement of the movable roller toward the axis of the fixed roller.

[Claims 6 and 7 not printed in the Gazette.]

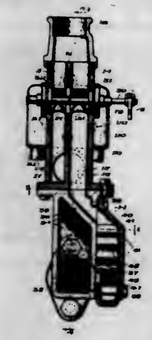
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1,226,366. CARBURETER FOR GAS-ENGINES. HENRY J. PODLEŠÁK, Chicago, Ill., assignor, by mesne assignments, to International Harvester Corporation, a Corporation of New Jersey. Filed Jan. 6, 1913. Serial No. 740,479. (Cl. 261—18.)

1. In a carbureter, the combination of a member having two parallel passageways side by side, one for air and fuel, the other for air and water, and means for heating the mixture of air and fuel before the same is mixed with the air and water from the second passageway.

2. In a carbureter, the combination of a member having two associated parallel passageways side by side, one for

air and fuel, the other for air and water, and a heater having a passageway forming a continuation of the air and fuel passageway.

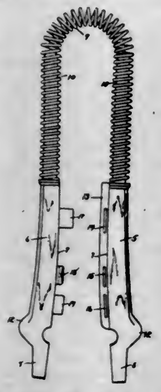


3. In a carbureter, the combination of a member having two parallel passageways side by side, one for air and fuel, the other for air and water, a mixing chamber, and a heater intermediate said air and fuel passageway and said mixing chamber in which the mixture of air and fuel is heated before mixing with the mixture of air and water from the second passageway.

4. In a carbureter, the combination of a member having two passageways side by side, means for supplying fuel and air to one of said passageways and water and air to the other, an independent exhaust member through which hot fluid passes, and means detachably secured to said member adapted to absorb heat therefrom and impart it to the fuel and air passing therethrough for vaporizing the fuel and air mixture before being mixed with said water.

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1,226,367. STOVE-LID LIFTER. TEODOSIO POTENZA, New Haven, Conn. Filed Jan. 27, 1917. Serial No. 144,894. (Cl. 126—323.)



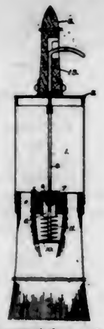
1. In a stove lid-lifter, the combination with two non-pivotal complementary rockers having their adjacent edges convexed to adapt them to rock directly upon each other, whereby lifting-fingers formed at the inner ends of the said rockers are spread apart for gripping a stove-lid; of a spring for normally holding the said lifting-fingers together, and integral interlocking means for holding the rockers together with freedom for rocking upon each other.

3. In a stove lid-lifter, the combination with two non-pivotal rockers having their adjacent edges convexed for rocking directly upon each other for moving lifting-fingers at their inner ends apart to grip a stove-lid, of an integral coupling-lug extending laterally between the rockers for coupling them together with capacity for rocking movement, integral guide-lugs extending laterally between the rockers on opposite sides of the lug, and a spring applied to the outer ends of the rockers for normally holding the said lifting-fingers in their closed positions.

[Claims 2 and 4 not printed in the Gazette.]

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1,226,368. PAINT-BRUSH. WILLIAM MCINTYRE RAEBURN, Toronto, Ontario, Canada. Filed Apr. 4, 1916. Serial No. 88,867. (Cl. 15—49.)



1. A paint brush comprising a handle, a brush head, a reservoir arranged thereon, a tube in the top of said brush head provided with a valve seat and a valve attached to a connecting rod operated by an arm arranged through the side of said brush handle, in combination with a spring adapted to hold said valve in closed position and a distributing disk at the lower end of said connecting rod.

2. A paint brush comprising a handle, a brush head, a reservoir arranged thereon, a tube in the top of said brush head provided with a valve seat and a valve attached to a connecting rod operated by an arm arranged through the side of said brush handle, in combination with a spring adapted to hold said valve in closed position, a distributing device carried by said connecting rod, and means provided in said handle for retaining the valve in open position so that paint may flow back into the reservoir when the brush is being used for overhead work.

3. A paint brush comprising a handle secured to the upper side of a removable cap, which latter is mounted on a reservoir connected to a brush head by a hollow tube provided with a valve seat, in combination with a connecting rod having an operating arm arranged through the brush handle, a valve mounted on said connecting rod which latter terminates in a notched distributing disk, said valve being held in closed position by means of a spring arranged around said connecting rod, and means provided in said handle for retaining the valve in open position.

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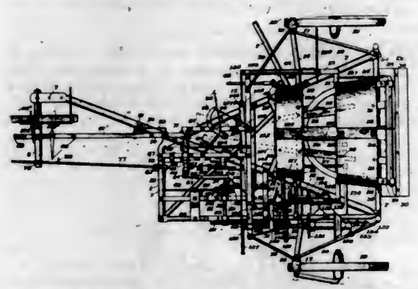
1,226,369. GRAIN-SHOCKER. CLEMMA R. RANEY, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Jan. 29, 1912. Serial No. 674,135. (Cl. 56—122.)

1. In a shocking machine, a prostrate shock receptacle, and means for building therein a prostrate shock in which the butts of the sheaves diverge and the heads overlap.

2. In a shocking machine, a prostrate shock receptacle, sheaf delivery means delivering sheaves thereto, and means operating upon said delivery means whereby the sheaves are so deposited as to weave their heads together.

3. In a shocking machine, a shock receptacle, sheaf delivery means delivering sheaves thereto, and means operating upon said delivery means whereby the sheaves are built up in the shock receptacle with their heads interwoven and their butts spaced apart.





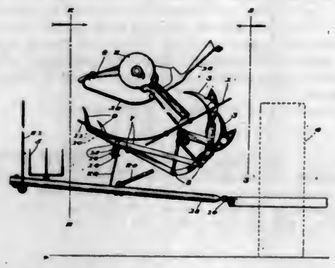
4. In a shocking machine, a frame, a sheaf receiving member reclining thereon and pivoted thereto at its extreme rear end, shock building mechanism for building up a prostrate shock therein in which the tops of the sheaves converge and the butts diverge, and automatic means set in operation by said mechanism for turning said receiving member substantially upright and setting the shock therein butt downward upon the ground.

5. In a shocking machine, a frame, a sheaf receiving member normally reclining thereon and pivoted thereto at its extreme rear end, shock delivering mechanism placing sheaves therein in successive substantially parallel layers and in such a manner that the sheaf tops converge, and automatic means set in operation by said mechanism for binding said sheaves into a shock and elevating said receiving member about it pivot.

[Claims 6 to 68 not printed in the Gazette.]

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1,226,370. HARVESTER ATTACHMENT. CLEMMA R. RANEY, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Dec. 30, 1912. Serial No. 739,259. (Cl. 56—126.)



1. In a harvester, a binder deck, a sheaf packing arm, and a sheaf ejecting member pivotally attached to said arm and resiliently supported on said deck.

2. In a harvester, sheaf packing arms, and a plurality of relatively movable resiliently supported sheaf ejecting members pivotally attached thereto.

3. In a harvester, sheaf packing arms, and means including a plurality of ejecting members each operable thereby to impart a series of forward impulses to the sheaf.

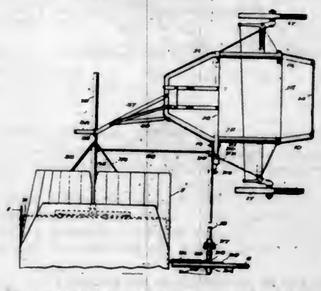
4. In a harvester, sheaf packing arms, and means operable thereby to impart a series of forward impulses to the sheaf at different points along its length.

5. In a harvester, sheaf forming and discharging mechanism, and auxiliary mechanism including a plurality of successively acting sheaf ejecting members for ejecting the sheaf and preventing angular movement thereof during the ejecting operation operatively connected with the moving parts of said sheaf forming mechanism.

[Claims 6 to 16 not printed in the Gazette.]

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1,226,371. GRAIN-SHOCKER. CLEMMA R. RANEY, Chicago, and ROBERT C. LIVESAY, Berwyn, Ill., assignors to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Jan. 6, 1913. Serial No. 740,483. (Cl. 56—121.)



1. In combination, a harvester, a shocker, draft connections between said hervester and said shocker, and means carried by and operable from the harvester for adjusting the shocker bodily at the will of the operator in a fore and aft direction relative to the line of draft of the machine.

2. In combination, a harvester, a shocker, draft connections between said harvester and said shocker, means operable while the harvester is moving forward whereby said shocker may be adjusted at the will of the operator in a fore and aft direction relative to the line of draft of the machine, and means operative to counterbalance the draft of the shocker.

3. In combination, a harvester, a shocker, draft connections between said harvester and said shocker, means operable from the harvester whereby said shocker may be adjusted at the will of the operator in a fore and aft direction relative to the line of draft of the machine, and resilient means operative to counterbalance the draft of said shocker.

4. In combination, a harvester, a shocker, draft connections between said harvester and said shocker, and means including a lever mechanism carried by said harvester and operative at the will of the operator and from the harvester to adjust said shocker in a fore and aft direction relative to the line of draft of the machine while the latter is moving forward.

5. In combination, a harvester, a shocker, draft connections between said harvester and said shocker, and means including a lever mechanism carried by said harvester and operative at the will of the operator while the machine is moving forward to adjust said shocker in a fore and aft direction relative to the line of draft of the machine, and a spring mechanism connected with said hand lever mechanism and operative to counterbalance the draft of said shocker.

[Claims 6 to 19 not printed in the Gazette.]

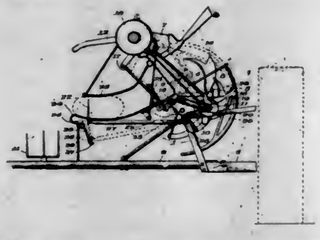
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1,226,372. HARVESTING-MACHINE ATTACHMENT. CLEMMA R. RANEY, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Feb. 3, 1913. Serial No. 745,838. (Cl. 56—126.)

1. In a harvester, sheaf binding mechanism, sheaf discharging mechanism, and sheaf discharge retarding means controlled by said binding mechanism.

2. In a harvester, sheaf binding and discharging mechanism, and sheaf discharge retarding means coöperating therewith and controlled by one of said mechanisms.

3. In a harvester, sheaf binding mechanism, sheaf discharging mechanism, and a sheaf discharge limiting member operatively connected to said binding mechanism and actuated thereby.



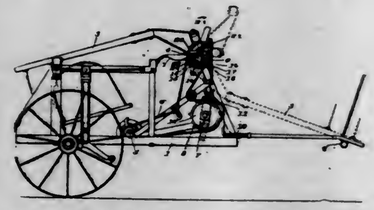
4. In a harvester, sheaf binding mechanism, sheaf discharging mechanism, and a plurality of supplemental discharge retarding sheaf piercing tines operatively connected to said binding mechanism.

5. In a harvester, sheaf binding mechanism, sheaf discharging mechanism and a sheaf retaining member successively operated by said binding mechanism after each binding operation to retard the discharge of the bound sheaves.

[Claims 6 to 20 not printed in the Gazette.]

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1,226,373. SHOCKING-MACHINE. CLEMMA R. RANEY, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Nov. 17, 1913. Serial No. 801,525. (Cl. 56—121.)



1. In a shocking machine, a frame, sheaf delivery mechanism including a movable sheaf delivery member intermittently engageable with said frame, and means including a constantly rotating drive member engageable with said sheaf delivery member during a portion of the cycle of movement thereof for preventing hammering of said member upon said frame.

2. In a shocking machine, a frame, sheaf delivery mechanism including a sheaf delivery member movable during a portion of its movement independently of its driving mechanism into engagement with said frame, and means for controlling the speed of said member during such independent movement.

3. In a shocking machine, a frame, a sheaf delivery member pivoted thereon, means whereby said member is normally caused to move at a variable speed, supplemental constant speed mechanism, and means for automatically connecting said member thereto during a portion of its movement.

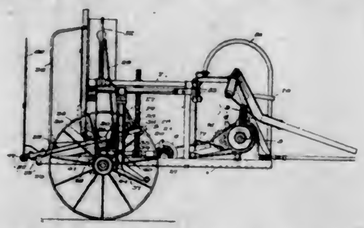
4. In a shocking machine, a frame, a sheaf delivery member pivoted thereon, operating mechanism for said member with respect to which the latter may move independently during a portion of its movement, and means for maintaining said member at a constant speed during such independent movement.

5. In a shocking machine, a frame, a sheaf delivery member pivoted thereon and movable in one direction of rotation over its center into engagement with said frame, operating mechanism for driving said member over its center, and means for preventing acceleration of said member as it moves downward into engagement with said frame.

[Claims 6 to 34 not printed in the Gazette.]

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1,226,374. GRAIN-SHOCKING MACHINE. CLEMMA R. RANEY, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Nov. 17, 1913. Serial No. 801,526. (Cl. 56—122.)



1. In a shocking machine, a frame, a prostrate dumping shock receptacle thereon, and an upstanding and independently movable tine carried on the bottom of said receptacle and intermediate the ends thereof adapted to engage with the heads of the upper sheaves therein.

2. In a shocking machine, a frame, a dumping shock receptacle thereon, and a normally upstanding tine pivotally mounted in the bottom of said receptacle and movable about its pivot as the receptacle is operated.

3. In a shocking machine, a frame, a dumping shock receptacle thereon, an upstanding head piercing tine pivoted on the bottom of said receptacle, and means for returning said tine to upstanding position after movement thereof about its pivot.

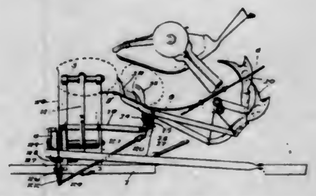
4. In a shocking machine, a frame, a dumping shock receptacle thereon, an upstanding head piercing tine pivoted on the bottom of said receptacle, and resilient means for returning said tine to upstanding position after movement thereof about its pivot.

5. In a shocking machine, a frame, a prostrate dumping shock receptacle thereon, a plurality of transversely spaced upstanding pivotally mounted tines in the bottom of said receptacle and so disposed with respect thereto as to pierce the upper sheaves therein at points adjacent their heads, and yieldable means for normally retaining said tines substantially perpendicular to the bottom of the receptacle.

[Claims 6 to 41 not printed in the Gazette.]

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1,226,375. AUTOMATIC TRIP FOR SHOCKING-MACHINES. CLEMMA R. RANEY, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Nov. 17, 1913. Serial No. 801,527. (Cl. 56—121.)



1. In combination, a binder, sheaf discharging mechanism thereon, a shocker frame operatively connected to said binder, a movable sheaf delivery member thereon, and means moving said member a substantial distance prior to the discharge of a sheaf into the plane of movement thereof.



2. In combination, a binder, a binder deck, sheaf discharging mechanism thereon, a shocker frame operatively connected to said binder, a sheaf delivery member pivotally mounted on said frame and normally disposed in a plane beneath said binder deck, operating mechanism therefor, and longitudinally extensible means for controlling the operation of said sheaf delivery member and setting the same in operation while a sheaf moves outward over said binder deck.

3. In combination, a binder, sheaf discharging mechanism thereon, a binder deck thereon, a shocker operatively connected to said binder, a pivoted sheaf delivery member carried thereon normally disposed beneath the plane of said binder deck, and automatic means for driving said sheaf delivery member upward through a substantial interval prior to the ejection of a discharged sheaf and into engagement with said sheaf as the latter occupies a position substantially opposite the edge of said binder deck.

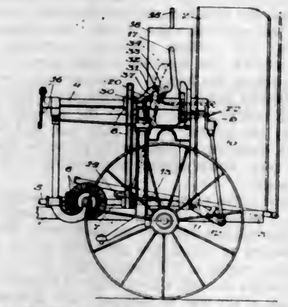
4. In combination, a binder, sheaf discharging mechanism thereon, a binder deck thereon, a shocker operatively connected to said binder, a pivoted sheaf delivering fork carried thereon normally disposed beneath the plane of said binder deck with its tines upstanding, and means for driving said fork upward through a substantial interval prior to the ejection of a discharged sheaf and embedding the tines thereof in said sheaf as the latter occupies a position substantially opposite the edge of said binder deck.

5. In combination, a binder, a binder deck thereon, sheaf discharging mechanism ejecting the sheaves from said binder deck in a substantially horizontal plane, a shocker, a movable sheaf delivery member mounted thereon and normally disposed in a plane a substantial distance beneath said binder deck, and means for driving said sheaf delivery member into engagement with a sheaf as the sheaf is opposite the edge of said binder deck.

[Claims 6 to 28 not printed in the Gazette.]

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1,226,376. BINDING MECHANISM. CLEMMA R. RANEY, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Nov. 19, 1913. Serial No. 801,889. (Cl. 56—83.)



1. In a shocking machine, a frame, a dumping shock receptacle thereon, means for dumping said shock receptacle, mechanism including a knotter for binding a shock therein, and means for stripping the twine from said knotter thereby preventing stripping of the band from the bound shock as said shock receptacle is dumped.

2. In a shocking machine, a frame, a dumping shock receptacle thereon, means for dumping said shock receptacle, mechanism including a knotter for binding a shock therein, and means for stripping the twine from the knotter as the shock is dumped thereby preventing rotation of the band upon the bound shock.

3. In a shocking machine, a frame, a dumping shock receptacle carried thereon, shock binding mechanism including a knotter carried on said frame, and means on said receptacle coöperating with said knotter to strip the twine therefrom as said receptacle moves toward dumping position.

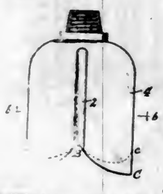
4. In a shocking machine, a frame, a dumping shock receptacle thereon, mechanism including a knotter for binding a shock therein, and means for stripping the twine from the knotter and thereby preventing stripping of the band from the bound shock or rotation of said band as said receptacle is dumped.

5. In a shocking machine, a frame, shock binding mechanism thereon including a knotter having a hook, a dumping shock receptacle carried on said frame, and supplemental means operating as said receptacle is moved to dumping position coöperating with said knotter to strip the twine from the knotter hook.

[Claims 6 to 29 not printed in the Gazette.]

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1,226,377. ROTARY DRILLING-BIT. LEROY L. RICHARD, Coalinga, Cal. Filed Aug. 15, 1916. Serial No. 115,014. (Cl. 255—61.)



1. A rotary drilling bit composed of a stock the lower edge of which is curved upwardly symmetrically from each side toward the middle, and the lower end from the middle to the sides being bent symmetrically in opposite directions to form the cutters, and said stock, throughout its length, being thicker at its sides, than the portion intermediate the sides.

2. A rotary drilling bit composed of a stock having on each face a central longitudinal depression, the lower edge of said stock being symmetrically curved from each side upwardly to said depressions and its lower end from said depressions to each side being symmetrically bent in opposite directions to form the cutters, and said stock throughout its length being thicker at its sides than the portion intermediate said sides.

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1,226,378. CUFF-LINK. CARLL A. RIEMER and BRANDON HENDRICKS, New York, N. Y. Filed Jan. 20, 1916. Serial No. 73,161. (Cl. 24—102.)



1. A cuff link, comprising a cylinder open at one end, a rod telescoped therein and provided with a head, a coil spring around said rod one end of which bears against said head and the other end of which bears against the cylinder at its open end, a button head carried by said cylinder at its closed end, and a button head carried by said rod at its outer end.

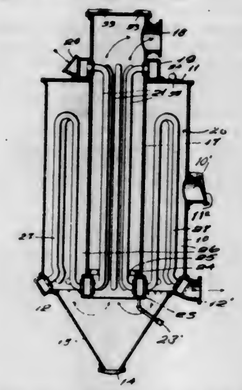
2. A cuff link comprising a cylinder having an eye at one end, a button head in pivotal connection with said eye, a rod extending into the cylinder and having a head at the end within the cylinder and an eye at the end outside of said cylinder, a button head in pivotal connection with the eye of the rod, and a coil spring surrounding the rod in the cylinder and having one end engaging the head of the rod and its other end engaging the end of the cylinder through which the rod extends.

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1,226,379. SUPERHEATER. LEWIS A. RILEY, 2d, White Plains, N. Y. Filed Oct. 9, 1915. Serial No. 54,973. (Cl. 257—225.)

1. In apparatus of the character described, an outer shell provided near one end with heating fluid inlet means; a tube extending longitudinally within the outer shell and having one end open and arranged near the opposite end of the outer shell, said tube extending beyond the first named end of the outer shell for a substantial

distance and provided with heating fluid outlet means discharging to the atmosphere exteriorly of the outer shell; and fluid heating apparatus arranged within the outer shell between it and the tube.



2. In apparatus of the character described; an outer shell having heating fluid inlet means; a tube extending longitudinally within the outer shell and provided with heating fluid outlet means; a header attached to one end of the tube; a supply conduit for fluid to be heated connected with the header; and pipes connected with the header and arranged within the space between the tube and the outer shell.

3. In apparatus of the character described; an outer shell having heating fluid inlet means arranged near one end thereof; a tube extending longitudinally within the outer shell and projecting outwardly beyond the end of the outer shell having at one end heating fluid inlet means and provided near the opposite end with heating fluid outlet means; a header attached to the inner end of the tube; a supply conduit for fluid to be heated connected with the header; and conduits connected with the header and arranged within the space between the tube and the outer shell.

4. In apparatus of the character described; an outer shell having fluid inlet means; a tube extending longitudinally within the outer shell and having fluid outlet means; a header attached to the tube; a supply conduit for fluid to be heated connected with the header; an outer header attached to the outer shell; and pipes connecting the first and second named headers.

5. In apparatus of the character described; an outer shell; an inner tube and header arranged therein; a supply conduit connected with the header; an outer header attached to the outer shell; and pipes connecting the first and second named headers.

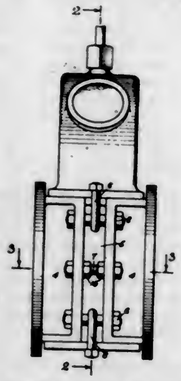
[Claims 6 to 9 not printed in the Gazette.]

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1,226,380. GATE-VALVE. RALPH JAMES RILEY, Livermore Falls, Me. Filed Jan. 18, 1917. Serial No. 143,052. (Cl. 137—5.)

1. In a gate valve, a main section formed of halves and each having a fluid passage, a substantially rectangular valve seat between the halves, said valve seat having a rectangular bore open at the top and bottom edges of the seat, said seat having a fluid passage adapted to register with the gate opening of the halves, bolts securing the valve seat to the halves and maintaining the passages of the halves and the seat in register, a bonnet, a bottom clean-out, and bolts for securing the bonnet and bottom clean-out to the halves, said bolts having apertured heads engaging the bolts which secure the halves and seat.

2. In a gate valve, a pair of sections each adapted to be secured to a conduit, a gate seat between the sections, bolts uniting the sections and locking the gate seat to the sections, a clean-out engaging the gate seat at the bottom thereof, means for securing the clean-out to the sections adapted to be anchored to some of the bolts, a bonnet surmounting the sections, and means securing the bonnet to the sections adapted to be anchored to some of the bolts.



3. In a gate valve, a pair of sections each adapted to be secured to a conduit, a gate seat spacing the sections, bolts securing the two sections together and locking the gate seat to the sections, a bonnet surmounting the sections, bolts for securing the bonnet to the sections adapted to be anchored to the bolts securing the sections together adjacent the bonnet, a clean-out associated with the bottom of the gate valve, and bolts for securing the clean-out having means whereby said bolts may be anchored to the bolts for securing the sections together in proximity of the clean-out.

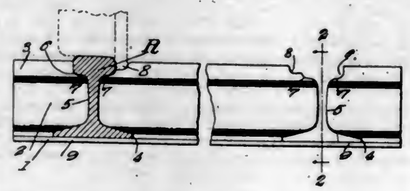
4. In a gate valve, a pair of sections each adapted to be secured to a conduit, a gate seat spacing the two sections, bolts securing the two sections together and locking the gate seat to the sections, some of said bolts having means for spreading said sections whereby the removal of the seat from between the sections is facilitated, a bonnet, bolts for securing the bonnet to the sections, said bolts having apertured heads for receiving the bolts in proximity of the bonnet which connect the sections, a clean-out engaging the bottom of the gate seat, and bolts for securing the clean-out having apertured heads adapted to engage the bolts which connect the sections in proximity of the clean-out.

5. In a gate valve a pair of sections each adapted to be secured to a conduit, a gate seat substantially rectangular in form spacing the two sections, bolts uniting the sections adapted to clamp the gate seat to the sections, said gate seat having a rectangular bore open at the top and bottom edges thereof, a gate adapted to move through the upper end of the bore of said gate seat, a bonnet, bolts for securing the bonnet to the sections, said bolts having apertured heads for engaging the bolts securing the sections in proximity of the bonnet, a clean-out adapted to engage the rectangular bore of the gate seat at the lower end thereof, bolts for securing said clean-out to the sections, said bolts having apertured heads for receiving the bolts which connect the sections in proximity of the clean-out, and means associated with the other bolts which connect the sections for spreading said sections apart to facilitate the removal from or introduction between the sections of the gate seat, substantially as and for the purpose set forth.

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1,226,381. RAIL-HOLDER. WILLIAM RIXTON, Pond Eddy, N. Y. Filed Feb. 28, 1917. Serial No. 151,508. (Cl. 238—5.)

A rail holder of rail-shaped cross section having a base, an upstanding web, and a head supported by the web, said holder having an upwardly opening slot whose lower end is closed and relatively wide in the upper portion of said base and lower portion of said web, the



intermediate portion of said slot being relatively narrow and extending from the lower portion of the web upwardly into said head, and the upper portion of the slot being relatively wide in the upper portion of said head.

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1,226,382. ARTIFICIAL-TOOTH PLATE. LUCIUS ROBERTSON, Cincinnati, Ohio. Filed Mar. 3, 1917. Serial No. 152,401. (Cl. 32—4.)

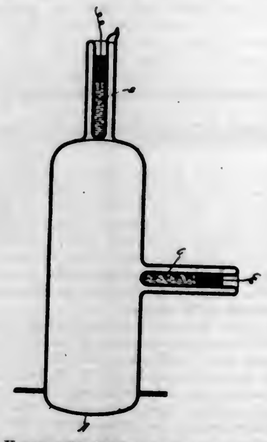


1. A dental plate for the lower jaw comprising a channel-shaped curved portion to cover the alveolar ridge and a set of false teeth fastened therein, said teeth set inside the alveolar ridge so as to be flush on the lingual side, and the labial side of the teeth being flush with the inner side of the alveolar ridge, said curved portion extending out materially on the labial side of the alveolar.

2. In artificial teeth, a plate made of a suitable material and capable of passing over the alveolar ridge, the teeth set back of the alveolar ridge on the lingual side thereof, and the labial side of the teeth being flush with the inner side of the alveolar ridge, said plate being materially enlarged on the labial side of the alveolar ridge so that the membranes of the mouth and cheeks will contact with the same and tend to hold it in normal position.

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1,226,383. X-RAY TUBE. WILLIAM ROBINSON, West Lynn, Mass. Filed July 18, 1916. Serial No. 109,885. (Cl. 250—35.)



1. An X ray tube having two metallic electrodes both on the outside of the vacuum chamber in contact with its walls, one being at the end of the tube and the other at an intermediate point of its body.

5. An X ray tube having no metallic parts within the vacuum, metallic electrodes on the outside wall, one at the end and the other at the side of the tube, and a window permeable to the rays at the free end.

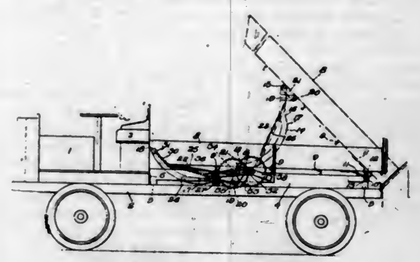
8. An X ray tube having reëntrant glass pockets formed in the walls of the tube, mercury electrodes sealed in the pockets, one in the end and the other in the side of the tube, and a window at the other end permeable to X rays.

9. A tube generating a ray having the photographic and therapeutic properties of the X ray inclosing a tenuous vacuum and provided with electrodes on its outer wall as terminals of high potential, high frequency electric charge and a window sealed in the glass tube in the cathode end permeable to X-rays, whereby the inside wall becomes a generatrix of rays of short wave length.

[Claims 2 to 4, 6, and 7 not printed in the Gazette.]

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1,226,384. DUMPING-VEHICLE HOIST. ROBERT W. ROSE, Marblehead, Mass. Filed Sept. 1, 1916. Serial No. 118,022. (Cl. 21—20.)



1. Apparatus of the kind described, comprising a vehicle truck, a body mounted thereon with provision for lifting at an inclination, mechanism to lift and incline said body with relation to the truck, said mechanism including a pair of hoisting levers arranged at each side of the body, a bearing for said levers intermediate their length over which said levers travel, flexible actuating means for said pair of levers attached to the outer ends of said levers and a bearing for the flexible winding means on said levers whereby the initial winding will exert a vertical lifting tension on the levers and said body, and then complete the lifting action by actuating said levers from their outer ends.

2. Apparatus of the kind described, comprising a vehicle truck, a body mounted thereon, with provision for lifting at an inclination, and hoisting mechanism, including a pair of hoisting levers pivoted to the body and having inclined surfaces to coöperate with an anti-friction roller during a portion of the hoisting action, and a bearing contour for said levers extending above the bottom of the body when in lowered position and adapted to also bear on said anti-friction roller during a portion of the hoisting action.

3. Apparatus of the kind described, comprising a vehicle truck, a body adapted to be inclined thereon, a pair of curved hoisting levers pivoted to the body and having cross braces extending adjacent each end across an arc of the levers, whereby a combined horizontal, vertical and torsional bracing is secured.

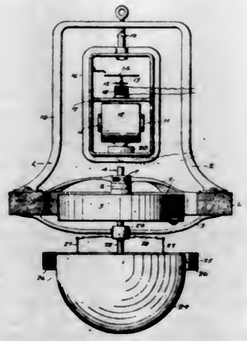
4. Apparatus of the kind described, comprising a vehicle truck, a body adapted to be inclined thereon, a pair of curved hoisting levers pivoted to said body at one end and having means to operate them secured to the opposite ends, anti-friction rollers carried by the truck for said levers to engage during the hoisting operation for the entire length of said levers and means permitting a further hoisting action to said levers after they have left the said rollers.

5. Apparatus of the kind described, comprising a vehicle truck, a body mounted thereon to be hoisted at an angle, hoisting mechanism therefor operating between the bottom of said body and the top of the truck, said mechanism including a pair of curved arm levers, each lever having one end pivoted to the body and the other end free, an anti-friction bearing on said truck for each lever, the outer end of said levers normally extending above the plane of said bearing, flexible means connected with the free ends of said levers and adapted to wind upon a shaft at the other side of said anti-friction bearings, a cross-bar on said curved levers normally below said anti-friction bearing and in position to be engaged by the flexible winding means at a distance below the winding shaft therefor, whereby the winding of said flexible means will first exert a substantially vertical lifting action on the hoisting levers and when the cross-bar is above the level of the winding shaft, will then transfer the lifting power of said flexible winding means to the outer ends of the hoisting levers to complete the hoisting action.

[Claim 6 not printed in the Gazette.]

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1,226,385. MERIDIAN-FINDER AND LATITUDE-INDICATOR. GEORGE A. ROSSITER, Brooklyn, N. Y., assignor to Frank G. Carrie, New York, N. Y. Filed Apr. 17, 1913. Serial No. 761,668. (Cl. 33—204.)



1. In an apparatus of the class described the combination of a frame; a vertically disposed shaft connected to said frame; a mass mounted to rotate in said frame on said shaft; a second frame mounted on said first frame; a second mass adapted to rotate on a vertical axis in said second frame; a third mass for supporting said frames and first and second masses and on which said vertical shaft pivots; and means for pivotally suspending said third mass, substantially as described.

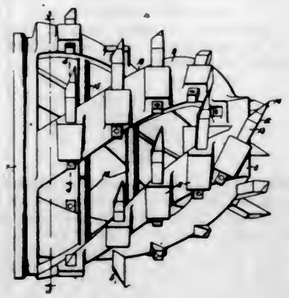
2. In an apparatus of the class described, the combination of a frame; a vertically disposed shaft connected to said frame; a mass mounted to rotate in said frame on said shaft; a second frame mounted on said first frame; a second mass adapted to rotate on a horizontal axis; a third frame pivoted on a vertical axis in said second frame for supporting said second mass; a third mass for supporting said frames and first and second masses and on which said vertical shaft pivots; and means for pivotally suspending said third mass, substantially as described.

3. In an apparatus of the class described the combination of a frame; a vertically disposed shaft connected to said frame; a mass mounted to rotate in said frame on said shaft; a second frame mounted on said first frame; a second mass adapted to rotate on a horizontal axis in said second frame; a third mass for supporting said frames and first and second masses, on which said vertical shaft pivots; spring connections between said shaft and said third mass; and means comprising gimbal rings for pivotally suspending said third mass, substantially as described.

4. In an apparatus of the class described the combination of a frame; a vertically disposed shaft connected to said frame; a mass mounted to rotate in said frame on said shaft; a second frame mounted on said first frame; a second mass adapted to rotate in said second frame; a rotating disk located within said second frame; latitude indicating means mounted on said rotating disk within said second frame; means to which said disk is rigidly connected for pivotally suspending said second mass in said second frame; a third mass for supporting said frames and first and second masses, on which said vertical shaft pivots; and means for pivotally suspending said third mass, substantially as described.

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1,226,386. CUTTER-HEAD FOR SUCTION-DREDGES. JOHN WARREN SACKETT, Jacksonville, Fla. Filed May 12, 1916. Serial No. 97,006. (Cl. 37—45.)



1. A cutter head for suction dredges having spaced cutting blades presenting a curved cutting edge, and removable teeth carried by each blade on the outer surface of the blade with their back surfaces in planes parallel to the axis of the head, said teeth projecting ahead of the corresponding cutting edge, and the extremities of the teeth on the same blade lying in a curvature substantially similar to the cutting edge of the blade.

2. A cutter head for suction dredges having curved cutting blades the cutting edges of which are developed on a surface of double curvature substantially that of the parabolic conoid, tooth sockets on said blades, and teeth removably associated with the sockets, the cutting edge of the blade under the teeth being cleared for the teeth, whereby the cutting edge of the blade is toothed.

3. A cutter head for suction dredges in the shape of a crown having curved blades, the cutting edges of which are developed substantially on a surface of double curvature, and teeth on the outer surface of each blade and removably associated with said blades, said teeth having their back surfaces in planes parallel to the axis of the head.

4. A cutter head for suction dredges having a rim, a nose co-axial with the rim and spaced therefrom, curved cutting blades from the rim to the nose, the curvature of the cutting edge of the blades being developed substantially on a parabolic conoid, teeth sockets on the outer surface of said blades, and teeth removably associated with said sockets, said teeth being so located on said blades that their back surfaces are in planes parallel with the axis of the head.

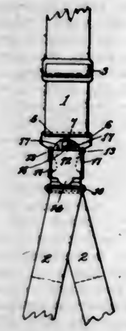
5. A cutter head for suction dredges comprising a rim, a nose co-axial therewith and spaced from the rim, curved blades from the rim to the nose each presenting a cutting edge of double curvature, teeth on the outer surface of the blades and detachably associated with said blades and having their extremities ahead of the cutting edge, the extremities of the teeth close to the nose being in front of the nose to clear the way for the nose, the extremities of the teeth on the same blade lying in a curvature substantially similar to the cutting edge of the blade.

[Claims 6 to 9 not printed in the Gazette.]



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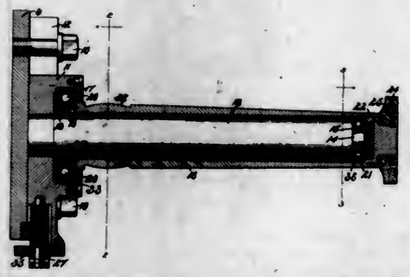
1,226,387. GARMENT-SUPPORTER. CLARENCE E. SCHAWNER, Cincinnati, Ohio. Filed Aug. 12, 1912. Serial No. 714,674. (Cl. 24—228.)



In a garment-supporter, a metallic cast-off or coupling member comprising a transversely-slotted plate provided with a forwardly-projecting headed-stud, a coupling buckle-member provided with a vertical slot or elongated opening pierced in its upper end and adapted to engage the said headed-stud, a pair of forwardly-projecting stops on the outer face of the buckle-member one at either side of said vertical slot, and a vertical clamp-plate pivotally-mounted at its upper end adjacent the said vertical slot and the said stops of the buckle-member and having an inwardly-projecting horizontal flange at its upper end that is adapted to engage both the head of said stud and the said stops when the stud is in full locking-engagement with said vertical slot.

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1,226,388. BORING AND GRINDING TOOL. CHARLES H. SCHOLER, Minneapolis, Minn. Filed Aug. 11, 1916. Serial No. 114,357. (Cl. 51—4.)



1. A tool as characterized comprising a base plate; a mandrel rotatably mounted thereon; a bearing for said mandrel, part of said bearing being permanent in said base plate and part of said bearing being permanent in said mandrel; means for applying power for rotating said mandrel, said means embodying an integral belt-engaging member, said member being disposed in juxtaposed relation to said bearing; and a second bearing for said mandrel, part of said bearing being permanently connected with said base plate by means of a structural member extending therefrom through said mandrel.

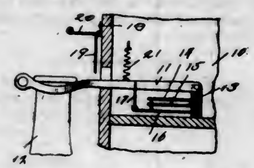
2. A tool as characterized comprising a face plate; a base movably mounted on said face plate; a bracket shaft rigidly mounted in said base for extension perpendicular to said face plate; a rotary mandrel circumfolding said shaft; bearings for said mandrel for supporting the opposite ends thereof, one of said bearings being mounted in said base and the other of said bearings being mounted in the outer end of said shaft; and means rigidly provided on said mandrel for revolving the same on said bearings, said means embodying a power-driven element rigidly mounted on said mandrel adjacent said base.

3. A tool as characterized comprising a face plate adapted for centering on a lathe head; a base mounted on said plate and laterally movable thereon to positions eccentric thereto; means for moving said base; a bracket shaft extending from said base in perpendicular relation to said face plate; a rotary mandrel circumfolding said shaft in spaced relation thereto, said mandrel having formed thereon adjacent said base a pulley member; and a plurality of bearings supporting the opposite ends of said mandrel, said bearings having each a rotary member and a stationary member, the stationary member of one of said bearings being permanently mounted in said base and the stationary member of the other of said bearings being permanently mounted on said shaft.

4. A tool as characterized comprising a face plate adapted for centering on a lathe head; a base mounted on said plate and laterally movable thereon to positions eccentric thereto; means for moving said base; a bracket shaft extending from said base in perpendicular relation to said face plate; a rotary mandrel circumfolding said shaft in spaced relation thereto, said mandrel having formed thereon adjacent said base a pulley member; a plurality of bearings supporting the opposite ends of said mandrel, said bearings having each a rotary member and a stationary member, the stationary member of one of said bearings being permanently mounted in said base and the stationary member of the other of said bearings being permanently mounted on said shaft; and means for locking said base and face plate in service relation.

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1,226,389. TRANSMITTER-CUT-OUT DEVICE. PAUL O. SCHULZ, Boyd, Minn. Filed Apr. 27, 1916. Serial No. 93,960. (Cl. 179—161.)



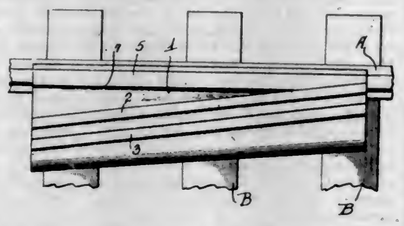
The combination with a telephone including a receiver, a receiver hook and a switch operated by the movement of the hook, of an arm pivotally mounted on the telephone and adapted in one position to be engaged by the hook when the receiver is removed therefrom to limit movement of the hook so that only the receiver spring of the switch will be engaged by the line spring of the switch, and an extension on said arm engageable by the receiver during removal of the latter from the hook to trip the arm to a position to permit full movement of the receiver hook as the receiver is removed.

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1,226,390. CAR-REPLACER. CHARLES M. SHEWMAKE, Castlerock, Wash. Filed Apr. 18, 1916. Serial No. 91,965. (Cl. 104—163.)

1. A car replacer comprising an inclined supporting plate having its upper end disposed slightly higher than the top of the rail, the raised end of the plate at one edge thereof being curved downwardly whereby the outer longitudinal edge of the said plate will rest upon the railway ties, the opposite edge of the said plate being bent to provide a lip contacting with the edge of the rail

head, and a pair of integrally formed raised rails extending longitudinal of the plate and at an angle to the rail.

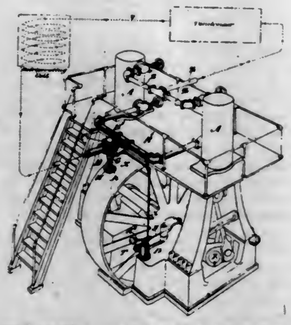



2. A car replacer comprising an inclined supporting plate having its upper end disposed slightly higher than the top of the rail, the raised end of the plate at one edge thereof being curved downwardly whereby the outer longitudinal edge of the said plate will rest upon the railway ties, the opposite edge of the said plate being bent to provide a lip contacting with the edge of the rail head; a pair of integrally formed raised rails extending longitudinal of the plate and at an angle to the rail, a supporting wall depending from one end of the said plate, one edge of the said wall being curved to conform to the curve of the raised end of the said plate.

3. A car replacer comprising an inclined supporting plate having its upper end disposed slightly higher than the top of the rail, the raised end of the plate at one edge thereof being curved downwardly whereby the outer longitudinal edge of the said plate will rest upon the railway ties, the opposite edge of the said plate being bent to provide a lip contacting with the edge of the rail head, a pair of integrally formed raised rails extending longitudinal of the plate and at an angle to the rail, a supporting wall depending from one end of the said plate, one edge of the said wall being curved to conform to the curve of the raised end of the said plate, a supporting wall integrally formed with the plate and depending therefrom, the said supporting wall being parallel with the railway rail engaged with the edge of the flange thereof, and an extension depending from both the supporting wall and the edge of the plate and provided with a pin for engagement with the proximate side of one of the said railway ties.

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1,226,391. REFRIGERATING OR ICE-MAKING APPARATUS. THOMAS SHIPLEY, York, Pa. Filed Sept. 28, 1916 Serial No. 122,655. (Cl. 62—115.)



1. In refrigerating or ice making apparatus, the combination with the compressor, the refrigerating coil, and the suction line including the refrigerating coil and leading to the suction side of the compressor, of a check valve interposed in the suction line between the refrigerating coil and the compressor, whose closing movement is in the direction of the flow of the fluid in the suction line, and means extraneous to, and independent of, the fluid circulating system in which the suction line is included, adapted and arranged to exert upon the check valve during the normal operation of the compressor a superior pressure in a direction to open it and hold it open against the pressure in the suction line, said check valve being automatically closed by the pressure in the suction line whenever the superior pressure exerted by said extraneous means is removed.

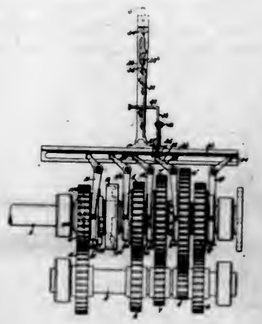
4. The combination with the compressor, refrigerating coil, suction line, and check valve interposed in the suction line between the refrigerating coil and the compressor, of the force pump, the pump line between said pump and the check valve, through which liquid under pressure is forced by the pump to open the check valve against the pressure in the suction line, and manually operable means adapted to lift and open the check valve independently of the pressure in the pump line.

5. The combination with the compressor, refrigerating coil, suction line, and check valve interposed in the suction line between the refrigerating coil and the compressor, of the pump; the pump line between the pump and the check valve, through which liquid under pressure is forced by the pump to open the check valve against the pressure in the suction line; a discharge opening in the pump line at a suitable point between the pump and the check valve; a control valve for said opening, closed by pressure in the pump line, and opened whenever said pressure falls below a predetermined limit; a housing for said control valve; a valve or cock-controlled outlet in said housing for escape of liquid passing from the pump line through said discharge opening; and a bleeder extending from the interior of the pump line through the control valve, and arranged and adapted to discharge through the outlet in the control valve housing.

[Claims 2, 3, and 6 not printed in the Gazette.]

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1,226,392. SPEED-TRANSMISSION MECHANISM. FITZROY KRABIEL SIMPSON, Kansas City, Mo. Filed May 23, 1916. Serial No. 99,303. (Cl. 74—59.)



1. A transmission mechanism comprising a driving shaft, a driven shaft, a countershaft, sets of constantly meshing gears on the counter and driven shafts, clutches between one shaft and the gears thereon, a lever for each clutch, a single cam element engaging all the levers, whereby only one lever can be in clutch-closed position at a time, means for actuating the cam bar, said cam bar having a movable cam portion, and means for moving the cam portion into and out of operative position, whereby the levers can be operated selectively.

2. A transmission mechanism comprising a driving shaft, a driven shaft in alinement therewith, a countershaft, gearing means between the driving and countershaft, a clutch for connecting the gearing means and driving shaft or disconnecting the same while connecting the driving shaft with the driven shaft directly, a lever for the said clutch, meshing gears on the driven and countershafts, clutches for connecting the driven shaft with the gears thereon, levers for the said clutches, a cam bar having a groove in which all the levers engage, and means for actuating the cam bar for causing a progressive gradation of speed by the movement of the cam bar.



3. A transmission mechanism comprising a driving shaft, a driven shaft in alinement therewith, a countershaft, gearing means between the driving and countershaft, a clutch for connecting the gearing means and driving shaft or disconnecting the same while connecting the driving shaft with the driven shaft directly, a lever for the said clutch, meshing gears on the driven and countershafts, clutches for connecting the driven shaft with the gears thereon, levers for the said clutches, a cam bar having a groove in which all the levers engage, means for actuating the cam bar for causing a progressive gradation of speed by the movement of the cam bar, said cam bar having a movable cam portion, and means for throwing the cam portion into or out of position for actuating the levers, whereby the gears can be operated selectively.

4. A transmission mechanism comprising a driving shaft, a driven shaft, a countershaft, a clutch means normally connecting the driving and countershafts and adjustable for disconnecting them and connecting the driving and driven shafts, intermeshing gears on the counter and driven shafts, clutches for connecting the driven shaft with the gears thereon, and a single lever control mechanism for actuating the clutches to produce a successive gradation of speed through a certain range of the movement of the control mechanism and a direct connection of the driving and driven shafts through the operation of the first-mentioned clutch by further movement of the said control mechanism, a reverse gear connection between the driving and countershafts, a clutch for the said connection, and means for operating the clutch by the movement of the said control mechanism in a direction from neutral position opposite from that by which the speed is increased.

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1,226,393. DRILL. SAMUEL T. SKEEN, Sandoval, Ill. Filed Sept. 30, 1915. Serial No. 53,391. (Cl. 255—69.)



1. A drill comprising a conveyer stem having its conveyer elements deflected and lapped at one end to produce a pair of oppositely disposed jaws which form continuations of said conveyer elements, and a cutting device secured between said jaws and extending therefrom so as to deflect the borings along said jaws.

2. A drill comprising a spiral conveyer stem having its spiral elements split and lapped at one end to produce a pair of opposing blade holding jaws which form continuations of said spiral elements, and blades secured between and extending from said jaws so as to deflect the borings along said jaws and onto the spiral elements.

3. A drill comprising a stem provided with a pair of jaws and a pair of transverse abutments, a pair of blades arranged between said jaws, each of said blades being provided with a slot, and a fastening device passing through the slots and also through said jaws, the inner portion of each of said blades being fitted to one of said transverse abutments, and the outer portion of one blade being offset to form an abutment which engages the other blade to prevent said blades from moving toward each other.

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1,226,394. IODIN COMPOUND AND METHOD OF PREPARING SAME. HARRY PERCIVAL SLATER, Cedar Rapids, Iowa. Filed Nov. 15, 1915. Serial No. 61,689. (Cl. 23—24.)

1. The process of producing addition products of hexa-methylene-tetra-amin and iodin, comprising effecting a reaction between hexa-methylene-tetra-amin and iodin thereby forming an addition product, and treating the same with ammonia, substantially as set forth.

2. The process of producing addition products of hexa-methylene-tetra-amin and iodin, comprising effecting a reaction between an aqueous solution of hexa-methylene-tetra-amin and a solution of iodin in a suitable solvent, thereby forming and precipitating an addition product, separating the same from the liquid, and treating the same with ammonia, substantially as set forth.

3. The process of producing a compound of hexa-methylene-tetra-amin and iodin, consisting in stirring together an aqueous solution of hexa-methylene-tetra-amin, potassium iodid and iodin, until precipitation of hexa-methylene-tetra-amin-periodid, washing the precipitate with water, and mixing the same with an aqueous solution of ammonia, washing the precipitate formed with water, and drying the same without addition of heat, substantially as set forth.

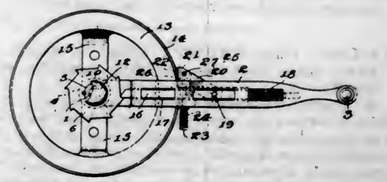
4. The process of producing a compound of hexa-methylene-tetra-amin and iodin, consisting in stirring together aqueous solutions of hexa-methylene-tetra-amin and iodin, at room temperature, to form an orange-yellow precipitate, washing the same with distilled water, and treating the same with ammonia, to form a finely-divided, red powder, substantially as set forth.

5. The process of producing a compound of hexa-methylene-tetra-amin and iodin, consisting in stirring together aqueous solutions of hexa-methylene-tetra-amin with iodin, at room temperature, to form an orange-yellow precipitate, and treating both the precipitate and the liquid in which the precipitate forms with ammonia, to form a finely-divided red powder, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,395. SAFETY ENGINE-CRANKING DEVICE. AUSTIN E. SLATTERY, Minneapolis, Minn. Filed Feb. 8, 1916. Serial No. 77,085. (Cl. 123—185.)

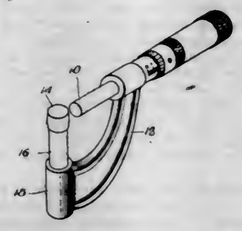


1. The combination of an engine starting shaft, a ratchet wheel connected to said shaft to rotate therewith, a starting crank journaled around said shaft as a center, a sliding latch member movable in a rectilinear path and carried by said starting crank, guiding means on said crank for said latch, a thrust spring for holding said latch normally in engagement with said ratchet wheel, a stationary annulus, and a latch retracting dog pivotally attached at one end to the latch and having a clutch face at its other end eccentric to the starting shaft and held against said annulus, said dog coacting with said annulus in one direction of movement of the starting crank to shift the latch out of engagement with said ratchet wheel.

2. The combination of an engine starting shaft, a ratchet wheel connected to said shaft to rotate therewith, a starting crank journaled around said shaft as a center, a sliding latch member carried by said starting crank, a thrust spring for holding said latch normally in engagement with said ratchet wheel, a stationary annulus, a latch retracting dog pivotally attached at one end to the latch and having a clutch face at its other end eccentric to the starting shaft and held against said annulus, said dog coacting with said annulus in one direction of movement of the starting crank to shift the latch out of engagement with said ratchet wheel, means for locking said dog in latch retracting position, said means embodying a catch pivotally carried by the starting crank, and a projection carried by the dog and adapted to be engaged by said catch.

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1,226,396. MICROMETER-GAGE. JOHN T. SLOCOMB, Providence, R. I., assignor to J. T. Slocomb Company, Providence, R. I., a Corporation of Rhode Island. Filed Jan. 4, 1916. Serial No. 70,112. (Cl. 33—164.)



1. A micrometer gage for measuring the thickness of tubing, having, in combination, a rigid, integrally-formed frame having a recess at each end thereof, a micrometer spindle adjustably mounted in one of said recesses, an anvil, a supporting stem for the anvil, both anvil and stem being circular in cross section with a common axis, the anvil being of greater diameter than the stem, and the end of the stem being normally held rigidly at right angles to the spindle in the other recess in the frame, and adjustable therein to bring a new surface on the anvil opposite the spindle.

3. A micrometer gage for measuring the thickness of tubing having, in combination, a frame, a micrometer spindle adjustable in the frame, an anvil having a spheroidal surface opposite the spindle, and a cylindrical supporting stem for the anvil rigidly mounted in the frame at right angles to the spindle and of less diameter than the anvil.

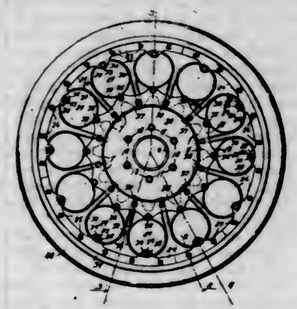
[Claims 2 and 4 not printed in the Gazette.]

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1,226,397. SPRING-WHEEL. CICERO G. SMITH, Palisades, Colo. Filed Dec. 14, 1915. Serial No. 66,713. (Cl. 152—50.)

1. A wheel comprising a hub and rim, circular springs located between the latter, each spring being composed of two approximately semi-circular spring members whose extremities are hingedly connected with each other and respectively hingedly connected with the hub and rim of the wheel, and spoke springs also located between said hub and rim and also having their extremities respectively hingedly connected therewith, the outer extremities of the spokes and circular springs being hinged about a common pivot.

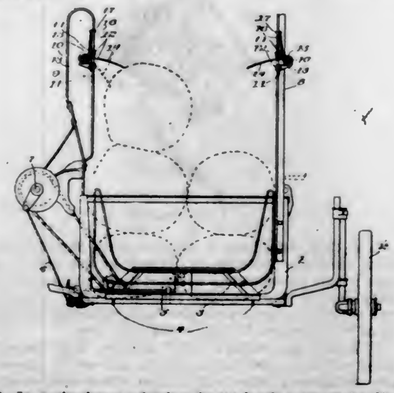
2. A wheel comprising a hub and rim, circular springs located between the latter, each spring being composed of two approximately semi-circular spring members whose extremities are hingedly connected with each other and respectively hingedly connected with the hub and rim of the wheel, and spoke springs also located between said hub and rim, their outer extremities being hingedly connected, the said connection surrounding the hinged connection of the circular springs, and their inner and outer extremities respectively hingedly connected with the hub and rim of the wheel.



3. A wheel comprising a hub and rim, plates secured to the opposite sides of the rim, and having perforations therein, plates secured to the opposite sides of the hub and also provided with perforations, bolts passed through the perforations in the hub and rim plates, circular springs located between the hub and rim, each spring composed of two approximately semi-circular spring members, one extremity of each of said members having an eye formed therein while its opposite extremity has two separated eyes formed therein, and the inner and outer extremities of these members being adapted to respectively surround bolts carried by the rim and hub plates in such a manner that the single eye portion upon the extremity of one member surrounds the bolt intermediate the spaced eye portions of the extremity of the other member, and spoke springs also located between the hub and rim of the wheel and having their extremities terminating in eyes, the outer extremities of the spoke springs being adapted to overlap the corresponding extremities of the semi-circular spring members and surround the same bolt, while their inner extremities engage bolts carried by the hub plates.

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1,226,398. SHOCKING-MACHINE FOR GRAIN AND LIKE. JOHN P. SMITH, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Jan. 29, 1914. Serial No 815,139. (Cl. 56—121.)



1. In a shocker, a shocker frame having an upstanding arm thereon, and a laterally extending sheaf holding member pivotally mounted upon said arm and movable downwardly and rearwardly with respect thereto.

2. In a shocker, a shocker frame having an upstanding arm thereon, a sheaf holding member pivotally mounted upon said arm and movable downwardly and rearwardly about its pivot, and means for retaining said member normally in laterally extending position.



3. In a shocker, a shocker frame having an upstanding arm thereon, a sheaf holding member pivotally mounted upon said arm and movable downwardly and rearwardly about its pivot, and resilient means for retaining said member normally in laterally extending position.

4. In a shocker, a sheaf receptacle, a frame supporting said sheaf receptacle and having standards located on the opposite sides thereof, a sheaf holding member mounted on a substantially horizontal pivot upon each of said standards above said receptacle, and means for normally retaining said members projecting laterally above said receptacle.

5. In a shocker, a sheaf receptacle, a frame carrying said receptacle and having standards thereon located at the opposite sides of said receptacle, a sheaf holding member mounted on a substantially horizontal pivot upon each of said standards above said receptacle, and resilient means for normally retaining said members projecting laterally above said receptacle.

[Claims 6 to 15 not printed in the Gazette.]

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1,226,399. SPARK-PLUG. JOSEPH JOHN SMITH, Jr., Benton Harbor, Mich. Filed Nov. 13, 1915. Serial No. 61,323. (Cl. 123—169.)

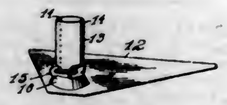


1. In a spark plug construction, a pair of opposed terminals, a tip for each terminal, said terminals being threaded at their ends and being provided with cut-away portions, each of said tips being threaded internally to engage the threaded end of the terminal and adapted to be compressed into the cut-away portion whereby the distortion will lock the tip to the terminal.

2. In a spark plug construction, a pair of opposed terminals, the ends of the said terminals extending in parallel directions, each of said ends being threaded, a sleeve for each terminal having a bore threaded internally and arranged eccentrically of the sleeve, whereby the sleeve or tip on adjacent terminals may be brought nearer together or farther apart by the rotation of either or both of said sleeves on said terminals.

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1,226,400. BAFFLE-PLATE FOR PROPELLER-WHEELS. SIDNEY A. SMITH, Jamestown, N. Y. Filed Sept. 9, 1916. Serial No. 119,275. (Cl. 115—42.)



1. A baffle plate for propeller wheels having a vertical incased drive comprising a flat plate, and means for removably and adjustably supporting said plate in a horizontal position from the shaft casing and over the propeller wheel to cut edgewise through the water.

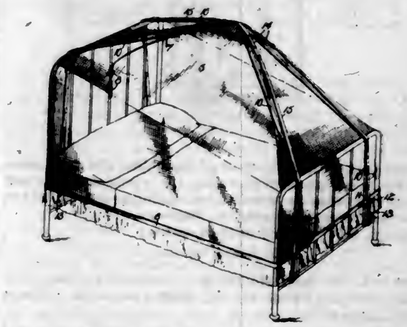
4. The combination with a propeller drive shaft casing and wheel of an out-board motor, of a flat triangular shaped plate, a split tube attached near the front point of said triangular plate, a screw band clamp to attach said split tube on said casing and hold said plate horizontally a spaced distance above said propeller wheel to prevent said wheel taking air in shallow water.

5. A baffle plate for propeller shafts composed of a flat perforated plate member, a vertical support received in the perforation of the plate, and means to adjustably lock the plate to said support.

[Claims 2, 3, 6 and 7 not printed in the Gazette.]

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1,226,401. MOSQUITO-BAR. VICTOR ALVIN SMITH, Rockport, Miss. Filed Aug. 17, 1916. Serial No. 115,355. (Cl. 5—14.)



1. A mosquito bar for beds comprising a yielding, normally straight rod one end of which is adapted to be secured to the head of the bed, a netting forming the bar, tape reinforcing the netting at the margin, tape connecting the free end of the yielding rod to the reinforcing tape, elastic members for securing the reinforcing tape to the bed whereby the bar is maintained in operative position, and elastic webbing for gathering the bar toward the free end of the rod when the bar is in inoperative position.

2. A mosquito bar for beds, comprising a yielding, normally straight rod one end of which is adapted to be secured to the bed, crossing, yielding, normally straight ribs secured at their crossing to the free end of the rod, a netting forming the mosquito bar, tape reinforcing the bar at the margin, tape connecting the free end of the yielding rod to the reinforcing tape at points of said reinforcing tape which are to be located at the corners of the bed, elastic members for securing the reinforcing tape to the bed whereby the mosquito bar is maintained in operative position on the bed, and elastic webbing connecting the ends of the yielding ribs to the tape, said elastic webbing being adapted to deflect the ribs and give shape to the bar when the same is in operative position and to gather the bar toward the free end of the rod when the bar is placed into inoperative position.

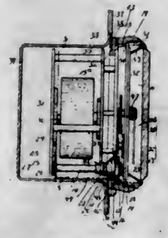
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1,226,402. KEYLESS CLOCK. WILLIAM J. SMITH, Waterbury, Conn., assignor to Waterbury Clock Co., Waterbury, Conn., a Corporation. Filed May 12, 1916. Serial No. 97,053. (Cl. 58—46.)

1. In a keyless clock, the combination with the winding-train and dial-work thereof, of a rotary winding-and-setting ring having an internal gear, means for connecting the internal gear of the said ring with the said winding-train and with the said dial-work, including a winding-arbor mounting a winding-pinion in mesh with a member of the said winding-train, a clutch mounted upon the said winding-arbor and having a sliding member co-acting with a member of the dial-work, and means for manually operating the said sliding-clutch member.

3. In a keyless clock, the combination with the winding-train and dial-work thereof, of a rotary winding-and-setting ring having an internal gear, connections between the said ring and winding-train and dial-work, including a rotary arbor, a cone slidably and rotatably mounted thereon and provided with winding-and-setting gear-teeth, a two-part clutch one member of which is carried by the

said cone and the other member of which is fixed to the said arbor for rotation therewith, and a spring for normally maintaining the said clutch-members in engagement, whereby the movement is maintained in adjustment for winding; and a manually operable converting-lever adapt-



ed to co-act with the said cone for sliding the same upon the said arbor so as to disengage the members of the said clutch and bring the winding-and-setting gear teeth of the cone into connection with the dial-work.

[Claim 2 not printed in the Gazette.]

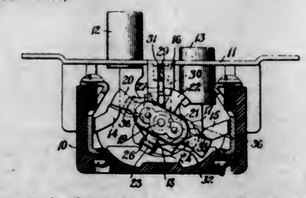
1,226,403. BUCKET-HANDLE. AUGUST Z. SNYDER, Turtle Creek, Pa. Filed Oct. 13, 1916. Serial No. 125,434. (Cl. 220—32.)



1. A detachable handle comprising a substantially cylindrical member having a longitudinal slot therein, and a permanently attached binding wire seated in grooves at each end of said member, said wire having its free ends turned downwardly into the longitudinal slot.

2. A detachable handle comprising a substantially cylindrical member having a longitudinal slot therein, binding wires partially surrounding said handle and spring retaining ends formed on said wires and extending within said slot.

1,226,404. SWITCH. ALEXANDER K. SUTHERLAND, New Britain, Conn., assignor to The Trumbull Electric Manufacturing Company, Plainville, Conn., a Corporation of Connecticut. Filed Oct. 28, 1916. Serial No. 128,321. (Cl. 175—293.)

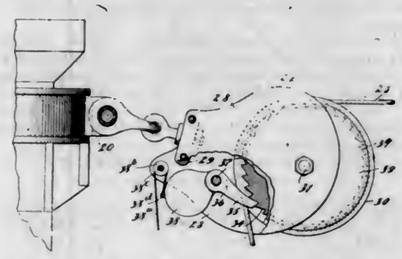


2. In a switch of the character set forth, a rocking contact carrying member, a detent for said contact carrying member, an operating rocker, a cam for freeing the detent from the contact carrying member supported by and movable with the rocker, and means for shifting said cam on the rocker to thereby impart a detent-freeing movement thereto in addition to the movement imparted thereto by the rocker.

3. In a switch of the character set forth, a rocking contact carrying member, a detent for said contact carrying member, an operating rocker, a cam for freeing the detent from the contact carrying member supported by and movable with the rocker, and means for shifting said cam on the rocker to thereby impart a detent-freeing movement thereto in addition to the movement imparted thereto by the rocker including an abutment disposed in the path of movement of the cam and arranged by engagement with said cam to produce a detent-freeing movement of the cam.

[Claims 1 and 4 to 9 not printed in the Gazette.]

1,226,405. CABLEWAY. ERVIN D. SWAN, Glen Ridge, N. J., assignor to Lidgerwood Manufacturing Company, New York, N. Y., a Corporation of New York. Filed June 7, 1913. Serial No. 772,253. (Cl. 212—89.)



1. In a cableway, in combination, a support, a cable supported thereby and exerting its load thereon, a winding drum upon which the cable is wound, and means whereby the load of the cable on the drum is less than the load of the cable on the support.

2. In a cableway, in combination, a support, a cable supported thereby, a friction holding means for connecting the main cable to said support but permitting passage of the cable in either direction, and a drum upon which the cable is wound.

3. Supporting means for one end of a cableway, comprising an elevated support, a rotatable member swiveled on said support and adapted to have a cable pass over the same, and means for locking said member against rotation in a direction taken by the cable in being paid out.

4. Supporting means for one end of a cableway, comprising an elevated support, a rotatable member supported on said support and adapted to have a cable pass over the same, and means for locking said member against rotation in a direction taken by the cable being paid out but permitting rotation of the member in the opposite direction said means comprising a weighted member normally in locking position.

5. In a cableway, in combination, a support, a rotatable member having swivel connection with said support, a winding drum, a cable passing over said rotatable member and wound on said drum, and means for locking the said rotatable member against rotation in a direction to pay out the cable.

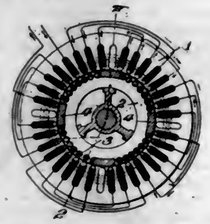
[Claims 6 to 11 not printed in the Gazette.]

1,226,406. ALTERNATING-CURRENT SYNCHRONOUS MOTOR. ROBERT W. SWIFT, Warren, Ohio, assignor to The Peerless Electric Company, Warren, Ohio, a Corporation of Ohio. Filed Dec. 4, 1914. Serial No. 875,448. (Cl. 172—120.)

1. In an induction motor, in combination, a stator and a rotor, one member having a polar field and the other an electrical path which is symmetrical with said field and a path which is unsymmetrical with said field.

2. In an induction motor, in combination, a stator and a rotor, one member having means for producing a given number of poles therein, and the other member having a number of conductors prime to said pole number, connected to provide a conducting path unsymmetrical to said poles, and also provided with an electrically conducting path symmetric thereto.

3. In an induction motor, in combination, a stator and a rotor, one member having an even number of polar windings and the other an odd or uneven number of plugs, a plurality of bars dividing said plugs, said plugs and bars forming two electrical paths one of which is symmetrical with said windings and the other unsymmetrical with said windings.

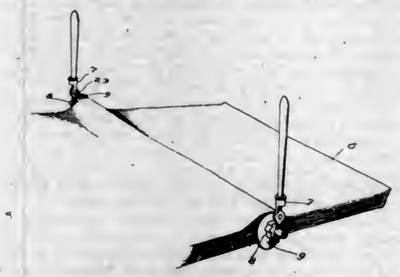


4. In an induction motor, in combination, a stator and a rotor, one member having an even number of polar windings and the other an odd or uneven number of plugs, a plurality of bars dividing said plugs, said plugs and bars forming two electrical paths, the conductivity of said bars being greater than that of said plugs.

5. In an induction motor, in combination, a stator having an even number of polar windings and a rotor having an odd or uneven number of plugs unsymmetrical with relation to said polar windings, and a plurality of bars equally spaced and separating said plugs into series, said bars being in symmetrical relation to said windings.

[Claim 6 not printed in the Gazette.]

1,226,407. DEVICE FOR ROLLING RUGS. CARL R. TAYLOR and MARK BRAYMES, Cleveland, Ohio. Filed May 8, 1916. Serial No. 96,183. (Cl. 242—85.)



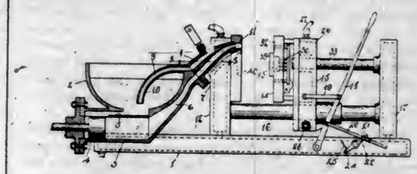
1. A rug rolling device comprising a roller having wheels fixed to the ends thereof, means to attach the end of a rug or the like to the roller and operating handles pivotally connected to the opposite ends of the roller and adapted to turn the roller, to wind the rug thereon, and also to roll the wheels along the floor.

2. A device for rolling rugs or the like, comprising a roller having wheels fixed to the ends thereof, means to attach a rug or the like to the roller, and means carried by each wheel to turn the same and the roller.

3. A device for rolling rugs or the like, comprising a roller having wheels fixed to the ends thereof, means to attach the end of a rug to the roller, a ratchet on each wheel, levers fulcrumed on the ends of the roller, and pawls carried by the lever and engaging the ratchets.

1,226,408. DIE-CASTING MACHINE. LOUIS P. TENÇA, Cleveland, Ohio. Filed Apr. 26, 1915. Serial No. 23,962. (Cl. 22—70.)

1. In a pressure casting apparatus, the combination of a metal reservoir, a nozzle adapted to be snugly inserted in a mold plate, means connected to said reservoir and said nozzle for supplying metal under pressure from the former into the latter, said nozzle being provided with separate metal supplying and air discharging passages arranged to discharge all of the air from such mold plate while the same is being filled with metal.



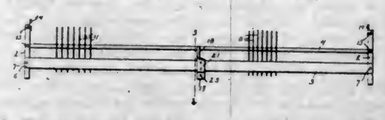
2. In a pressure casting apparatus, the combination of a metal reservoir, a nozzle adapted to be snugly inserted in a mold plate, means connected to said reservoir and said nozzle for supplying metal under pressure from the former into the latter, said nozzle being provided with separate metal supplying and air discharging passages, the terminal opening of such passage extending to a higher level than the terminal opening of such metal passage.

3. In a pressure casting apparatus, the combination of a metal reservoir, a nozzle adapted to be snugly inserted in a mold plate, means connected to said reservoir and said nozzle for supplying metal under pressure from the former into the latter, said nozzle being provided with separate metal supplying and air discharging passages, the terminal opening of such air passage extending to a higher level than the terminal opening of such metal passage and returning to discharge into said reservoir.

4. In a pressure casting apparatus, the combination of a metal reservoir, a nozzle adapted to be snugly inserted in a mold plate, means connected to said reservoir and said nozzle for supplying metal under pressure from the former into the latter, said nozzle having an extension extending beneath the level of the metal in said reservoir and being provided with separate passages, one such passage extending from the outer end of the nozzle to such pressure metal supplying means, and the other passage extending from the outer end of the nozzle to the end of such extension.

5. In a pressure casting apparatus, the combination of a metal reservoir, a nozzle adapted to be snugly inserted in a mold plate, means connected to said reservoir for supplying metal under pressure to said nozzle, the latter having passages connecting said means and the mold chamber in such mold plate and the latter and said reservoir, thereby forming a complete circuit through said reservoir, said nozzle, such mold chamber and said metal supplying means.

1,226,409. ADJUSTABLE WARP-STOP-MOTION DROP-WIRE RACK FOR LOOMS. WILLIAM T. THACKER and CHRISTOPHER C. GOSNELL, Greenville, S. C. Filed Apr. 7, 1916. Serial No. 89,703. (Cl. 139—92.)



1. A warp stop motion drop wire rack adapted to be placed on and removed from a loom bodily and including fixed lower rods adapted to pass through the upper slot of the drop wires and supporting means carried by the rack and coöperating with the fixed rods to hold the drop wires against vertical movement for holding the drop wires in an elevated position and for enabling the pattern to be tied with the drop wires in such position.

2. A warp stop motion drop wire rack including upper and lower longitudinal rods adapted to pass through the upper slot of the drop wires arranged to hold the latter against vertical movement, the lower rods being fixed, the upper rods being removable and supporting the drop wires

in an elevated position when the rack is removed from a loom.

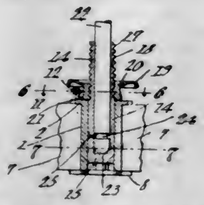
3. A warp stop motion drop wire rack for looms including spaced end plates, center and side longitudinal bars connecting the end plates and spaced apart to receive the lower portions of the drop wires and adapted to support the yarn to prevent the same from coming in contact with the lower ends of the drop wires, and rods carried by the end plates and arranged to extend through the upper slots of the drop wires and hold the latter against vertical movement.

4. A warp stop motion drop wire rack for looms including spaced end plates, center and side longitudinal bars connecting the end plates and spaced apart to receive the lower portions of the drop wires and adapted to support the yarn to prevent the same from coming in contact with the lower ends of the drop wires, and upper and lower rods supported by the end plates and adapted to pass through the upper slots of the drop wires and arranged to hold the latter against vertical movement, the upper rods being removable and serving to support the drop wires in an elevated position when the rack is not in use.

5. An adjustable warp stop motion drop wire rack for looms including vertical end plates, lower central and side bars connecting the end plates, the latter being provided above the said bars with perforations and upper and lower longitudinal rods arranged in the said perforations and adjustable on the end plates, said rods being arranged to hold the drop wires against vertical movement.

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1,226,410. CHAIR DETAIL. ERVIN R. THIEL, Sheboygan, Wis., assignor to Gilson Manufacturing Company, Port Washington, Wis. Filed Feb. 20, 1915. Serial No. 9,623. (Cl. 155—41.)



1. A chair iron comprising a base member having a bore provided with guide-slots paralleling its axis, an externally threaded sleeve socket, the same comprising a series of longitudinal slots defining ribs which form a shaft receiving bore of approximately the same size as the base bore, the ribs being slidable in the base guide slots, a threaded hub supported by the base engaging the threads of the sleeve socket, and a chair-supporting shaft mounted in said sleeve.

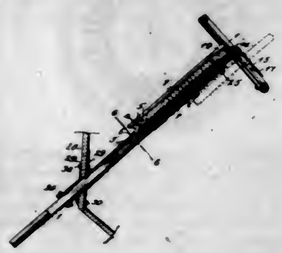
5. A chair-iron comprising a base member having a bore provided with guide slots paralleling its axis, a skeleton sleeve socket comprising a series of axially alined ribs forming a smooth shaft receiving bore of a size at least equal to the bore of the base the ribs being slidable in the guide-slots of said base, threads extending from the upper end of the sleeve socket throughout approximately half its length, a threaded hub supported upon the base engageable with the sleeve socket threads, and a chair supporting shaft journaled in the bore of the aforesaid sleeve socket and engageable with the bore of the base, the shaft being supported by said sleeve.

[Claims 2 to 4 and 6 not printed in the Gazette.]

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1,226,411. STEERING DEVICE. WILLIAM BAILEY THOMAS, Jacksonville, Fla. Filed June 30, 1916. Serial No. 106,862. (Cl. 74—39.)

1. A steering device for motor vehicles, comprising a steering column composed of telescoping sections, and a wheel pivoted to the uppermost section to swing into planes transverse to the axis of the column or parallel therewith, releasable latch mechanism for holding the wheel in either position, means for preventing downward movement of the upper section with respect to the lower section and controlled by the movement of the wheel into a plane transverse to the column, to lock the sections from downward movement and to release the said sections when the wheel is moved into a plane parallel with the axis of the column.



2. A steering device for motor vehicles, comprising a steering column composed of telescoping sections, and a wheel pivoted to the uppermost section to swing into planes transverse to the axis of the column or parallel therewith, releasable latch mechanism for holding the wheel in either position, means for preventing downward movement of the upper section with respect to the lower section and controlled by the swinging movement of the wheel.

3. A steering device for motor vehicles, comprising a steering column composed of telescoping sections, and a wheel pivoted to the uppermost section to swing into planes transverse to the axis of the column or parallel therewith, and means for preventing downward movement of the upper section with respect to the lower section and controlled by the swinging movement of the wheel.

4. A steering device for motor vehicles, comprising a collapsible steering column, and a wheel pivoted to the top of the column to swing into transverse planes to the axis of the column or parallel therewith, means for preventing the collapsing of the column and controlled by the swinging of the wheel, and collapsible control shafts supported by the column and movable therewith.

5. A steering device for motor vehicles, comprising a collapsible steering column, and a wheel pivoted to the top of the column to swing into planes transverse to the axis of the column or parallel therewith, means for preventing the collapsing of the column and controlled by the swinging of the wheel.

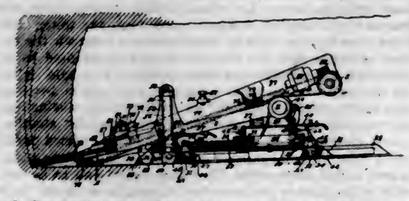
[Claims 6 to 11 not printed in the Gazette.]

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1,226,412. COAL-CUTTING MACHINE. WILLIAM M. THOMAS, New York, N. Y., assignor of fifty and one-half one-hundredths to Frank Oberkirch, New York, N. Y. Filed July 14, 1915. Serial No. 39,760. (Cl. 125—14.)

1. In a mining machine, the combination, with cutters arranged to cut a kerf in a substantially horizontal direction, of cutters arranged to cut in an upward direction from said horizontal kerf, a pair of separated side kerfs and a back kerf connecting said side kerfs, means for moving said last mentioned cutters upward during the cutting operation whereby a depending pillar of mineral is formed, and means for operating said cutters.

2. In a mining machine, the combination, with cutters arranged to cut a kerf in a substantially horizontal direction, of cutters arranged to cut in an upward direction from said horizontal kerf and simultaneously, a pair of separated side kerfs and a back kerf connecting said side kerfs, means for moving said last mentioned cutters upward during the cutting operation whereby a depending pillar of mineral is formed, and means for operating said cutters.



3. In a mining machine, the combination, with cutters arranged to cut a kerf in a substantially horizontal direction, of cutters arranged to cut in an upward direction from said horizontal kerf, a pair of separated side kerfs, and a back kerf connecting said side kerfs, an open frame carrying said last mentioned cutters and of such dimensions as to enter the upward kerfs, means for raising said frame into the upward kerfs during the cutting operation, whereby a depending pillar of mineral extending through the frame is formed, and means for operating said cutters.

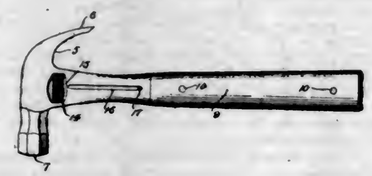
4. In a mining machine, the combination, with cutters arranged to cut a kerf in a substantially horizontal direction, of cutters arranged to cut in an upward direction from said horizontal kerf and simultaneously, a pair of separated side kerfs, and a back kerf connecting said side kerfs, an open frame carrying said last mentioned cutters and of such dimensions as to enter the upward kerfs, means for raising said frame into the upward kerfs during the cutting operation, whereby a depending pillar of mineral extending through the frame is formed, and means for operating said cutters.

5. In a mining machine, the combination, with an open frame, of two sets of cutters, carried by said frame, one set being arranged to cut a kerf into which the front portion of the frame can enter in generally horizontal direction and the other set being arranged to cut a kerf into which the front portion of the frame can enter in an upward direction, means for operating the cutters, means for moving the frame forward and means for moving the front portion of the frame upward.

[Claims 6 to 21 not printed in the Gazette.]

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1,226,413. TOOL. SCOTT THOMPSON, Potlatch, Idaho. Filed Oct. 5, 1916. Serial No. 123,958. (Cl. 254—26.)

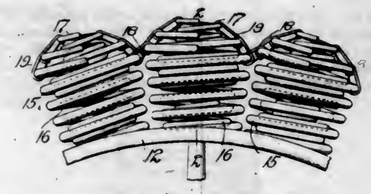


1. In a tool, a nail extracting element having a slideway opening through the outer end thereof, a fulcrum slide movable within the slideway and embodying a threaded slide having an enlarged end portion normally countersunk within the outer end of the head, a knurled nut operatively associated with the threaded slide at a point in its length whereby the turning of said nut will effect an adjustment of said slide, said nut being exposed at opposite sides of the head, and means for limiting the sliding movement of said slide.

2. In a tool, a nail extracting head having a slideway opening through the outer end thereof, a fulcrum slide movable within the slideway and embodying a threaded rod having an enlarged end portion normally countersunk in the outer end of the head, a nut mounted upon the rod at a point in its length and associated therewith to effect an adjustment of said rod upon rotation of the nut, said head being recessed at its opposite sides to expose said nut, one wall of the slideway being longitudinally slotted, and a pin carried by one end of the rod and movable within the slot to limit the adjustment of the rod.

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1,226,414. SPRING-TIRE. KAJA P. TOGSTAD, Maddock, N. D. Filed Oct. 30, 1916. Serial No. 128,539. (Cl. (152—8.)



The combination with a wheel having a rim; of a series of sets of springs, the springs in each set being nested one within the other and being graduated in strength from the outer spring inward, said springs further gradually increasing in length from the outer spring inward, the two outer springs having flattened sides, and means to link the flattened sides of each outer spring to the adjacent sides of adjoining springs.

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1,226,415. ADJUSTABLE SUPPORT FOR BEDS. ALFRED TONNELE and WILLIAM J. CURTIS, Wilmington, Del., assignors to National Adjustable Bed and Spring Company, Wilmington, Del. Filed Sept. 2, 1916. Serial No. 118,228. (Cl. 5—12.)



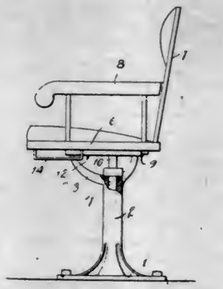
1. In combination, a bedstead comprising a main frame, an adjustable support having its side members pivotally connected to an end of said frame, said side members having their ends bent downwardly to form curved arms, locking mechanism for holding said support at adjusted positions consisting of substantially semicircular plates attached to the main frame, each of said plates having its lower edge portion bent to form a flange projecting inwardly beneath its coöperating curved arm, said flange having a series of apertures therein, a spring actuated locking member mounted on each arm and extending downwardly therethrough for engagement with the apertured flange, and manipulative means for lifting the pin to retract the same from its engaging position.

2. In combination, a bedstead comprising a main frame, an adjustable support having side members pivotally connected to an end of said frame, the ends of said side members curving downwardly beneath the pivot to provide depending arms, a locking pin carried by each arm and extending therethrough, each of said pins having an annular flange, an apertured guide member carried by each arm with which the pins coöperate, springs surrounding the pin and interposed between the guide members and annular flanges for normally holding the pin projected from the arm, a flanged plate attached to the frame adjacent to each of said arms for engagement by its coöperating pin aforesaid, and means for lifting said pin comprising bell crank levers connected to the pins and actuating means for said levers.

3. In combination, a bedstead comprising a main frame, an adjustable support secured to each end of said frame, the frame members of which are formed of angle plates secured together to provide a channeled frame construction, a locking plate secured to the main frame adjacent to each of said adjustable sections, locking means mounted in the channeled side members of said adjustable sections including a vertically arranged locking pin housed in the channeled frame of each adjustable section.

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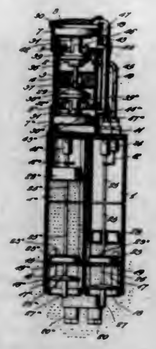
1,226,416. MOTION-PICTURE-THEATER CHAIR. MARGUERITE R. TOOLE and LUCIUS C. TOOLE, Indianapolis, Ind. Filed Mar. 16, 1916. Serial No. 84,644. (Cl. 155—13.)



In a chair, a standard, a chair bottom swivelly connected to the standard, an arm extending upwardly and forwardly from the upper end of the standard, a roller journaled in the upper end of the arm, an arcuate trough-shaped track secured to the under side of the chair bottom, the roller operating in the track, and walls at opposite ends of the track providing stops to limit the movement of the chair bottom.

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1,226,417. FLUID-PRESSURE PUMP. HOWARD W. TRUSCOTT, Portland, Oreg. Filed Feb. 14, 1916. Serial No. 78,213. (Cl. 103—8.)



1. A fluid pressure pump comprising a pair of chambers adapted to be successively filled with liquid and to be successively emptied, a valve casing having between its ends a transverse partition formed with a port opening through its opposite sides, a pressure inlet into said port, a pair of fluid pressure cylinders disposed one at each end of said casing, the inner ends of said cylinders having ports establishing communication with said casing and of greater size than the first named port, being alined with the latter, combined pressure supply and exhaust passages leading from the ends of the casing to the two chambers, exhaust passages leading from said chambers into the outer ends of the cylinders and having normally closed valves, means for opening said valves when the chambers are emptied, exhaust ports from the inner ends of the cylinders, pistons in said cylinders between the exhaust passages and the exhaust ports and adapted to be shifted by the entrance of fluid pressure into said cylinders through said exhaust passages, by-passes from the outer ends of the cylinders into the exhaust ports, and valves between and carried by said pistons for successively closing the opposite ends of the first named port and for simultaneously closing one or the other of the second named ports.

2. A fluid pressure pump comprising a pair of chambers adapted to be successively filled with liquid and to be successively emptied, a valve casing having between its ends a transverse partition formed with a port opening through its opposite sides, a pressure inlet into said port, a pair of fluid pressure cylinders disposed one at each end of said casing, the inner ends of said cylinders having ports establishing communication with said casing and of greater size than the first named port, being alined with the latter, combined pressure supply and exhaust passages leading from the ends of the casing to the two chambers, exhaust passages leading from said chambers into the outer ends of the cylinders and having normally closed valves, means for opening said valves when the chambers are emptied, exhaust ports from the inner ends of the cylinders, pistons in said cylinders between the exhaust passages and the exhaust ports and adapted to be shifted by the entrance of fluid pressure into said cylinders through said exhaust passages, a stem extending between the two pistons and passing loosely through the first and second named ports, and valves on said stem for successively closing the opposite ends of said first named port and for simultaneously closing one or the other of said second named ports.

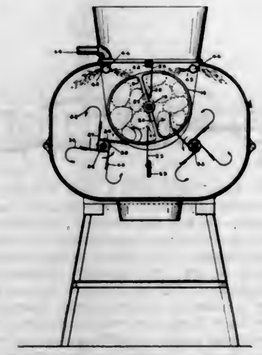
3. A fluid pressure pump comprising a pair of chambers adapted to be successively filled with liquid and to be successively emptied, a valve casing having between its ends a transverse partition formed with a port opening through its opposite sides, a pressure inlet into said port, a pair of fluid pressure cylinders disposed one at each end of said casing, the inner ends of said cylinders having ports establishing communication with said casing and of greater size than the first named port, being alined with the latter, combined pressure supply and exhaust passages leading from the ends of the casing to the two chambers, exhaust passages leading from said chambers into the other ends of the cylinders and having normally closed valves, means for opening said valves when the chambers are emptied, exhaust ports from the inner ends of the cylinders, pistons in said cylinders between the exhaust passages and the exhaust ports and adapted to be shifted by the entrance of fluid pressure into said cylinders through said exhaust passages, a stem extending between the two pistons and passing loosely through the first and second named ports, a pair of valves secured on said stem between said second named ports and the partition, said valves being adapted to successively close said ports, annular flanges extending endwise from said valves and received slidably into the last named ports, said flanges themselves having ports to allow the passage of air into the cylinders only when said flanges have been moved a predetermined amount by such movement of the valves, and additional valve means carried by the stem for successively closing the opposite ends of the first named port.

5. A fluid pressure pump comprising a pair of chambers adapted to be successively filled with liquid and to be successively emptied, a valve casing having between its ends a transverse partition formed with a port opening through its opposite sides, a pressure inlet into said port, a pair of fluid pressure cylinders disposed one at each end of said casing, the inner ends of said cylinders having ports establishing communication with said casing and of greater size than the first named port, being alined with the latter, combined pressure supply and exhaust passages leading from the ends of the casing to the two chambers, exhaust passages leading from said chambers into the outer ends of the cylinders and having normally closed valves, means for opening said valves when the chambers are emptied, exhaust ports from the inner ends of the cylinders, pistons in said cylinders between the exhaust passages and the exhaust ports and adapted to be shifted by the entrance of fluid pressure into said cylinders through said exhaust passages, a stem extending between the two pistons and consisting of a trio of alined yieldably connected sections, said stem passing loosely through the first and second named ports, a pair of valve members secured to the two end sections and adapted to successively close said second named ports, said members also serving to successively close the opposite ends of the first named port, and a spacing sleeve surrounding the intermediate section of the stem and retaining the two valve members in spaced relation.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,418. VEGETABLE AND FRUIT PEELING MACHINE. JOSEPHINE TRUST, Brooklyn, N. Y. Filed Oct. 31, 1914, Serial No. 869,513. Renewed Oct. 12, 1916. Serial No. 125,286. (Cl. 146—14.)



1. In an apparatus of the class described, the combination of a rotary feeding device, stationary stripping mechanism coöperating with said feeding device, said stripping mechanism including flexible arms adapted to coöperate with the vegetables, said arms having cutting portions adapted to catch the skin and tear the same from the vegetables, and means to operate said feeding device, said flexible arms provided with fingers of equal length and mounted so that said fingers engage the skin of said vegetables successively, and means in combination with said rotary feeding device for controlling the movement of said vegetables while passing therethrough and while being operated upon by said cutting portions.

2. In an apparatus of the class described, a conveyer comprising a series of rotatable rings through which the vegetables are adapted to be fed, and fixed resilient cutting members projecting between said rings adapted to operate upon said vegetables as the same are fed through said rings, and means in combination with the last of said rings for retarding the discharge of the vegetables therefrom.

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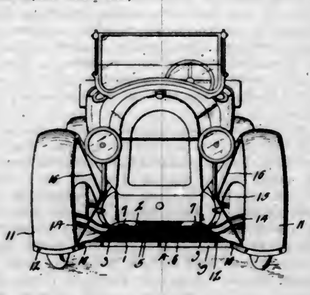
1,226,419. JOINT-CLAMP. JOSEPH PHILIP TURNER, Ridgway, Pa., assignor to Hyde-Murphy Company, Ridgway, Pa., a Corporation of Pennsylvania. Filed June 10, 1915. Serial No. 33,323. (Cl. 20—92.)



In a locking clamp for frame joints, the combination with two abutting frame members each having a groove cut into its face adjacent the meeting edges of said members, said grooves being convergently disposed, of a resilient metallic wedge-shaped plate adapted to span said edges, said plate having its ends provided with flanges for interlocking with said grooves and its intermediate body portion curved outwardly so as to be free from contact with the members when in assembled position, whereby a constant pressure is exerted on the abutting edges of the members and provision is made for swelling or shrinkage due to temperature or climatic changes.

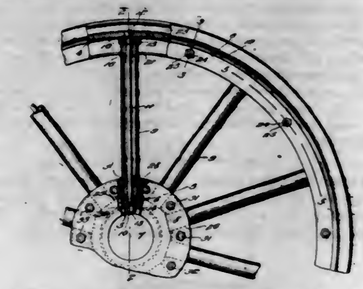
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1,226,420. AUTOMOBILE-FENDER. MARCELINO URIBE, San Antonio, Tex. Filed Mar. 13, 1917. Serial No. 154,511. (Cl. 105—38.)



The combination with a motor vehicle, of a fender comprising a substantially horizontal fender body having a stout marginal frame consisting of substantially parallel front and rear bars of unequal length, curvilinear side bars connecting the front and rear bars and diverging in a forward direction, means for securing the rear end of said frame to the front axle of the vehicle, a bumper having a portion thereof extending parallel thereto and in spaced relation to the front bar of the fender body and end portions extending in front of the front mud guards and in spaced relation thereto, yieldable means interposed between said bumper and fender body, other yieldable means interposed between the end portions of the bumper and the front mud guards, means connecting said bumper to the front mud guards and body of the fender to admit of a fore and aft yielding movement of the bumper in relation to the fender body and mud guards, and supporting stays connecting said bumper with the vehicle frame.

1,226,421. VEHICLE-WHEEL. CHARLES B. VAN HORN, Philadelphia, Pa. Filed May 19, 1916. Serial No. 98,583. (Cl. 21—69.)



1. A wheel comprising, in combination, a hub and a rim, embodying internal and external rings, spacing spokes situated between said rings, retaining bolts passing through said rings and spokes whereby said members are maintained in an assembled position, opposed felly plates provided with recesses for receiving said spokes, and fastening means extending through said felly plates to secure the same in position upon said external ring and aroundd said spokes.

2. A wheel comprising, in combination, a hub and a rim, embodying internal and external rings, spacing spokes situated between said rings, means for rigidly securing said rings and associated spokes, opposed annular felly plates clamped to said external rings and provided with alining recesses to receive said spokes, and tire retaining rims integrally formed with said felly plates.

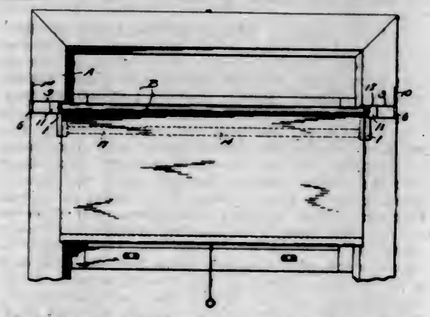
3. A wheel comprising, in combination, a hub and a rim, said hub and rim embodying internal and external rings, spacing sleeves confined between said internal and external rings, bolts passing through said rings and through said sleeves, means associated with the inner extremities of said bolts for rigidly retaining said rings and sleeves in an assembled position, opposed annular felly plates provided with annular recesses to receive said external ring and with alining recesses to receive said sleeves, and means extending horizontally through said felly plates to clamp the same in position about said ring and sleeves.

4. A wheel comprising, in combination, a hub and a rim, said hub and rim embodying internal and external rings, spacing sleeves confined between said internal and external rings, bolts passing through said rings and through said sleeves, clamping means associated with the inner extremities of said bolts, opposed annular felly plates provided with annular recesses to receive said external ring and with alining recesses to permit said felly plates to embrace said sleeves, fastening bolts passing transversely through said felly plates to retain the same in a clamped position relative to said external ring and the outer extremities of said sleeves, and tire securing rims integrally formed with said felly plates.

5. A wheel comprising, in combination, a hub and a rim, said hub and rim embodying internal and external rings, spokes situated between said internal and external rings, means passing through said spokes for rigidly retaining said rings and spokes in an assembled position, opposed annular felly plates embracing said external ring and provided with alining recesses to receive the outer extremities of said spokes, fastening bolts passing transversely through said felly plates, integral tire securing rims formed with said felly plates, and means admitting of the removal of one of said felly plates whereby said tire may be removed from said wheel.

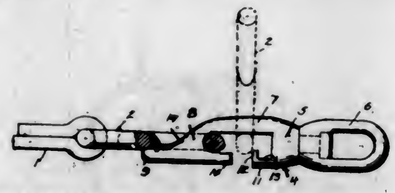
1,226,422. QUICKLY-MOUNTABLE SHADE AND CURTAIN SUPPORT. CHARLES WALKUSH, Ashland, Wis. Filed May 19, 1916. Serial No. 98,554. (Cl. 156—23.)

1. In a quickly mountable shade support, the combination of opposite bracket members each comprising plates hingedly connected to engage over the angular portion of a window frame, the upper plates having slotted portions, shade roller supporting members adjustably mounted in said slotted portions of the upper plates to adapt the device for use with rollers of different lengths, and a resiliently extensible fastening device comprising telescoping members one having a spiral spring arranged to press the other telescoping member outwardly to press against the opposite plates of the bracket members, to permit of quickly mounting and adjusting the device in a window frame.



2. In a quickly mountable shade and curtain support, the combination of opposite bracket members each comprising plates hingedly connected to engage over the angular portion of a window frame, the upper plates having slotted portions, shade roller supporting members adjustably engaging in said slotted portions of the upper plates, removable and angularly adjustable curtain supporting members having a lateral projection, slotted socket portions on the bracket plates to adjustably support the curtain pole supports, and a resiliently extensible fastening device adapted to engage opposite plates of the bracket members to quickly mount and adjust the device in a window frame, substantially as set forth.

1,226,423. WHIFFLETREE-HOOK. GROVER E. WALLER, Laverne, Okla. Filed Mar. 12, 1915. Serial No. 13,879. (Cl. 21—79.)



A whiffletree hook comprising a body, a reduced extension formed on the upper portion of said body, an angular projection formed on said extension, a forwardly extending arm and a rearwardly extending arm formed on the free end of said angular projection, a forwardly extending arm formed on the lower portion of said body and lying in parallel relation with the upper extension on said body, forming a chamber between said arms, said arm formed on the lower portion of said body lying in spaced relation to said rearwardly extending arm on said angular projection, thereby forming an entrance opening to said chamber, and an upwardly extending finger formed on the free end of said arm formed on the lower portion of said body, thereby providing a guide to said chamber, and a stop to limit the inward movement of a cockeye.

1,226,424. GAME. WILLIAM WATKINS, Monessen, Pa. Filed Dec. 1, 1916. Serial No. 134,407. (Cl. 46—61.)

1. A game including a playing surface, a plurality of target pieces arranged across an intermediate portion of the playing surface, a plurality of game pieces adapted to be projected from each end of the playing surface, the game pieces being projected from one end to be directed at certain of the target pieces distinct from the target pieces at which the game piece from the other end is to be directed, and means arranged on the playing surface at opposite sides of the target pieces between the latter and the ends of the board to guard the target pieces to be aimed at from one end of the board from the game pieces projected from the other end of the board at the other of said target pieces.

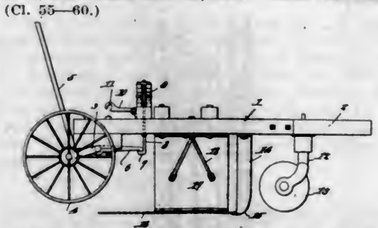


2. A game including a playing surface, a strip arranged transversely of the surface intermediate the ends thereof, a plurality of target pieces arranged in two sets and positioned on opposite sides of the center of the strip, a plurality of game pieces composed of two sets each set of which is adapted to be projected from the respective ends of the playing surface toward the set of target pieces arranged in substantial alinement therewith, and means mounted on the strip between the two sets of target pieces for guarding the set of target pieces arranged substantially diagonally to the game pieces to be subsequently projected.

5. A game including a playing surface, a strip arranged transversely of the surface intermediate the ends thereof and provided with a plurality of depressions therein, a plurality of target pieces arranged in two sets positioned in the depressions on the strip, a plurality of game pieces adapted to be projected at the target pieces which are arranged in substantial alinement therewith, a bar rotatably mounted on the strip intermediate the ends thereof, and guarding arms extending at angles and projecting in opposite directions from the respective ends of the bar to guard the set of target pieces arranged substantially diagonally to the game pieces subsequently projected.

[Claims 3, 4, 6, and 7 not printed in the Gazette.]

1,226,425. CLEARING-PLOW. HENRY C. WEBB, Bradentown, Fla. Filed Jan. 15, 1917. Serial No. 142,502. (Cl. 55—60.)

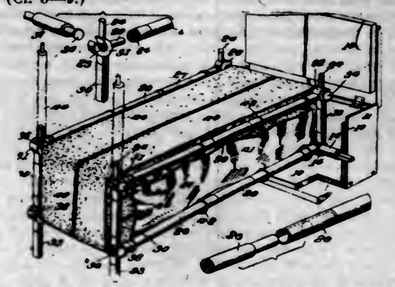


1. A clearing plow including a frame, a cutting blade carried thereby and movable therewith, a wheel supported arched axle connected to the frame and mounted for rotation, means for rotating the axle to raise and lower the frame, cushioning means carried by the frame, means upon the axle and coöperating with the cushioning means for limiting the rotation of the axle in one direction and the consequent lowering of the frame, and a latch member carried by the frame for engaging said means to hold the axle against rotation when the frame is elevated.

2. A clearing plow including a frame, a substantially horizontal cutting blade fixedly connected thereto and movable therewith, a wheel supported arched axle connected to and revoluble upon the frame, means for rotating the axle to raise and lower the frame, coöperating means upon the axle and frame for locking the frame in elevated position, a yieldingly supported stirrup connected to the frame, and means revoluble with the axle and movable against the stirrup to limit the downward movement of the frame and the rotation of the axle in one direction.



1,226,426. FOLDING BED FOR AUTOMOBILES. DELBERT M. WESTCOTT and HARRY M. VINCENT, San Luis Obispo, Cal. Filed Oct. 4, 1915. Serial No. 54,004. (Cl. 5—9.)



1. A device of the character described including a bed frame, and a flexible element looped around the frame to form upper and lower reaches respectively providing upper and lower bed surfaces.

2. A device of the character described including a casing, a drum arranged within the casing, a bed frame associated with the drum with the head posts of the bed frame supported by the drum, and a flexible element adapted to be wound upon the drum and looped about the frame to form a reach providing a bed surface.

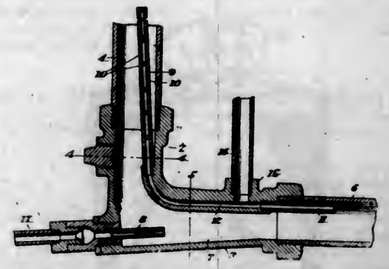
3. A device of the character described including a casing, a drum journaled in the casing, a collapsible bed frame adapted to be received within the casing and supported at one extremity upon the drum, and a flexible element carried by the drum and engaged with the bed frame to form a reach providing a bed surface.

4. A device of the character described including a bed frame having coacting upper and lower frame members, and a flexible element carried by one of said frame members and looped around the other of said frame members to form upper and lower reaches respectively providing upper and lower bed surfaces.

5. A device of the character described including a collapsible bed frame having head posts, foot posts, and side and end rails arranged to provide upper and lower bed levels, and a flexible element carried by the frame for holding the posts and rails thereof in assembled relation with the said flexible element forming upper and lower reaches respectively providing bed surfaces at the said levels.

[Claim 6 not printed in the Gazette.]

1,226,427. SAND-TRAP. WILLIAM H. WHITE, Roanoke, Va., assignor to White-American Locomotive Sander Company, Inc., Roanoke, Va., a Corporation of Virginia. Filed Nov. 15, 1916. Serial No. 131,576. (Cl. 105—263.)



1. A sand trap having a horizontal portion and a vertical portion, a duct extending longitudinally of the trap in the upper wall of said horizontal portion and partially into said vertical portion, blast elements connected with the opposite ends of said duct, and an air supply conductor leading into the duct between said blast devices.

2. A sand trap having a horizontal portion and a vertical portion, the upper wall of the horizontal portion being provided with a longitudinally extending duct, a blast pipe arranged within the vertical portion of the trap and communicating at its lower end with said duct, a blast device projecting horizontally beyond the delivery end of the horizontal portion of the trap and communicating at its inner end with said duct and an air supply conductor communicating with said duct between said blast devices.

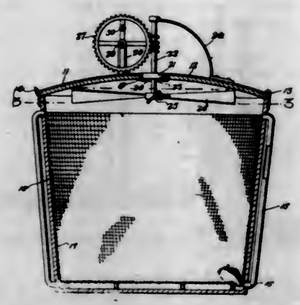
3. A sand trap having a horizontal portion and a vertical portion, a blast nozzle projecting into said trap at the angle of intersection of said portions, the upper wall of the horizontal portion being provided with a longitudinally extending duct projecting into said vertical portion above the plane of said nozzle, a blast device disposed within the vertical portion and communicating at its lower end with the adjacent end of said duct, a second blast device communicating with the opposite end of the duct and projecting horizontally beyond the delivery end of the horizontal portion of the trap, and an air supply conductor communicating with the duct at a point between said blast devices.

4. A sand trap having a horizontal portion and a vertical portion, said trap having the upper wall of its horizontal portion formed with a longitudinally extending duct, projecting at its rear end upwardly into the vertical portion, a blast nozzle projecting into said trap at the angle of intersection of said portions, a blast pipe extending at its lower end into the vertical portion of the trap and communicating with the adjacent end of the duct, a blast pipe projecting horizontally beyond the delivery end of the horizontal portion of the trap and communicating with the adjacent end of the duct, and an air supply conductor communicating with the duct between said blast pipes.

5. A sand trap having a horizontal portion and a vertical portion, the upper wall of said trap being provided with a longitudinally extending duct projecting at its rear end upwardly into the vertical portion of the trap, an air supply conductor communicating from above with the horizontal portion of said duct, a blast nozzle projecting into said trap at the angle of intersection of said portions and substantially in parallel relation to the bore of the horizontal portion, a blast pipe extending downwardly into the vertical portion of the trap and connected at its lower end at a point materially above the blast nozzle with the adjacent end of the duct, and a blast pipe extending longitudinally at the delivery end of the horizontal portion of the trap in parallel relation to and above the line of the axis of the blast nozzle and communicating with the adjacent end of the duct.

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1,226,428. DISH-WASHING MACHINE. LINCOLN WINTERS, Watauga, S. D. Filed July 25, 1916. Serial No. 111,229. (Cl. 141—9.)



A washing machine comprising a pail-like body having a lid hinged thereto, driving means rotatably supported on and movable with the lid, a fan wheel carried by the driving means and arranged immediately beneath the lid, vertical tubes arranged exteriorly of the body and each opening at the respective ends thereof into the body wholly below the fan area, and a reticulated basket within the body supported at its lower end above the tube inlets.

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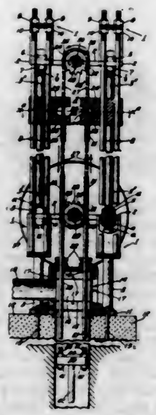
1,226,429. SIGNALING DEVICE. JACOB WOLFSON, Brooklyn, N. Y. Filed Apr. 5, 1916. Serial No. 89,191. (Cl. 116—31.)



In a signaling device, a casing, a lazy tongs having one end secured within the casing, said lazy tongs lying normally within the casing and adapted to be swung horizontally outwardly therefrom, means for swinging said lazy tongs to open position, a signal pivotally secured to the free end of a last link of the lazy tongs and normally resting in substantially vertical position, and a link independent of the lazy tongs structure having one end pivotally connected to one link of the lazy tongs and having the other end thereof pivotally connected to the signal at a point removed some distance from the pivot point of the signal and lazy tongs, whereby the signal will be caused to swing in the arc of a circle when the lazy tongs is moved to open position so as to lie in horizontal alinement therewith.

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1,226,430. MECHANICAL MOVEMENT FOR PUMP-HEADS. PRESTON K. WOOD, Los Angeles, Cal. Filed July 6, 1914. Serial No. 849,288. (Cl. 74—14.)



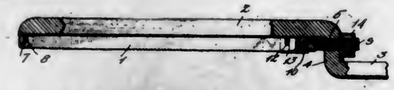
1. The combination with two fixed parallel guides and two parallel shafts transversely arranged between said guides, and widely spaced apart, of a bearing-block slidingly mounted on one guide, a second bearing-block slidingly mounted on the other guide, two sprocket chains and their sprockets connecting said shafts, a traveler connecting said sprocket chains and alternately engaging said bearing-blocks to carry the bearing-blocks to and fro past both of said shafts, pump mechanism connected to said bearing blocks, and means for driving one of said shafts.

2. The combination with two shafts; sprocket wheels on the shafts; chains trained around the sprocket wheel and constructed with links; and followers guided along said trains and provided with recesses; of a hollow traveler between the chains, three rollers upon which the hollow traveler is carried, pins upon which the rollers are mounted; said pins passing through corresponding adjacent links of the chain and through the roller, whereby the two end rollers roll around the intermediate one and around the inner cylindrical wall of the driver as the rollers are carried around the sprocket wheel, thus permitting the traveler to remain non-rotative when in contact with the recesses upon crossing over below and above the shafts respectively.

3. In a mechanical movement for pump heads, an upper pair of V-shaped members, flanges connecting the upper pair of members together, a lower pair of V-shaped members, flanges connecting the lower pair of members together, columns connecting the upper and lower members together, the open ends of the V's being toward each other, a shaft mounted horizontally between the upper ends of the columns, a second shaft mounted between the lower ends of the columns parallel with the first shaft, guides connecting the apexes of the V's on opposite sides of said shafts, two sprocket chains and their sprockets connecting said shafts, bearing-blocks slidingly mounted on the guides, a traveler connecting said sprocket chains and alternately engaging said bearing blocks, a pump mechanism connected to said bearing-blocks, and means for driving one of said shafts.

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1,226,431. PUMP-TOOL. ARTHUR J. WOODFORD, Worthington, Minn., assignor of one-fourth to Edward F. Buchan and one-fourth to William H. Buchan, Worthington, Minn. Filed June 13, 1916. Serial No. 103,457. (Cl. 145—33.)



A tool for the purpose specified consisting of a straight elongated shank and handle arranged in different but parallel plane and having a right angular offset connecting them integrally, a screw inserted through said offset and a nut applied thereto and seated against the back of the offset, and a saw of uniform width whose ends are connected with the said shank and screw respectively and whose back is seated against the shank throughout the length of the latter as described.

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1,226,432. BLACKING-DAUBER. WILLIAM I. YOUNG, Jamaica Plain, Mass. Filed May 12, 1916. Serial No. 97,195. (Cl. 206—56.)



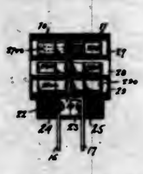
1. A blacking dauber comprising an outer tube, an inner tubular container formed of two ribbons of relatively soft and stiff material rolled upon each other, a charge of blacking in said container, and means for feeding the blacking forward in said container.

2. A blacking dauber comprising an outer tube, an inner tube formed of a textile ribbon and a paper ribbon rolled upon each other, a charge of blacking in the said inner tube, and means for feeding the blacking forward in said inner tube.

3. A blacking dauber comprising an outer tube, an inner tube formed of two ribbons of relatively soft and stiff material rolled upon each other and adjustably seated in the outer tube, and a charge of blacking in the inner tube; the inner tube, and blacking, being independently adjustable with respect to each other and with respect to the outer tube.

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1,226,433. CURRENT-TAP. WILLIAM R. YOUNG, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Jan. 30, 1917. Serial No. 145,431. (Cl. 173—334.)

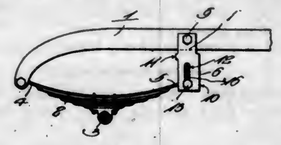


5. In a tap device, a jack, an integral terminal plate and jack-receiving terminals attached to the opposite faces of said plate.

[Claims 1 to 4 not printed in the Gazette.]

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1,226,434. SHOCK-ABSORBER. ARTHUR B. ZUMWALT, Fulton, Cal. Filed Nov. 9, 1916. Serial No. 130,404. (Cl. 267—19.)



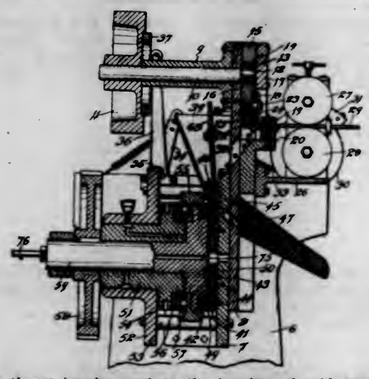
The combination with a leaf spring adapted to be connected intermediate its ends to an axle, one end of said spring being connected with one end of a vehicle frame, and a spring connection on the other end of the leaf spring adapted to be connected to the frame of a vehicle, said spring connection comprising a casing pivotally connected to said frame and having one side and its top open, the opposite sides of the casing having alined longitudinally extending slots therein, the end of the leaf spring adapted to be slidably positioned in said casing through its open side, an integral depending bearing on said spring with its ends alined with the slots in the sides of the casing, a bolt carried by said bearing with projecting ends positioned through said slots and adapted to slide therein, wire rings surrounding said ends and adapted to engage the sides of the slots, and a pair of coiled springs disposed one within the other in the casing and having one end resting on the end of the leaf spring and the other against the bottom of the frame.

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1,226,435. BALL-FORMING MACHINE. GEORGE E. ABBOTT, Hartford, Conn. Filed May 31, 1912, Serial No. 700,610. Renewed Jan. 31, 1917. Serial No. 145,812. (Cl. 80—21.)

1. In a ball forming machine, two former members shaped to provide an annular forming groove between them, one of said members being shaped with an inlet to said groove and an outlet therefrom, of a size sufficient to permit passage of a ball when the plates are in working position, said inlet and outlet being located at substantially the same distance from the center of the former members, means to prevent passage of a ball from the outlet to the inlet end of said groove, means for supporting said former members against the thrust of an article between them, and means for rotating one of said former members.

5. In a ball forming machine, a bracket, a plate supported on the bracket at a distance therefrom, a flanged sleeve adjustably mounted in said plate, a member support rotatably mounted in said sleeve and wholly supported thereby, means for rotating said support, a thrust bearing located between said support and said flange, said sleeve having oil passages extending therethrough to

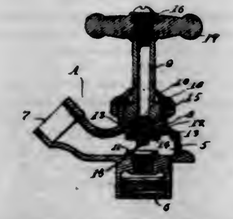


said thrust bearing and to the bearing of said support and wholly supported thereby, a former member mounted on said support, and a former member secured against rotation to the bracket, said former members having an annular forming groove between them.

[Claims 2 to 4 and 6 to 16 not printed in the Gazette.]

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1,226,436. FAUCET. WILLIAM F. ALBRECHT, Salt Lake City, Utah. Filed Jan. 12, 1916. Serial No. 71,771. (Cl. 137—4.)

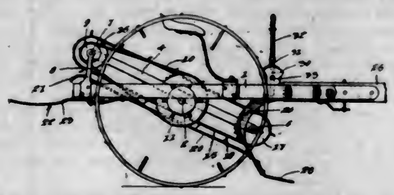


A faucet comprising a casing having an inlet and outlet, a valve seat formed at the juncture of said inlet and outlet, the inlet immediately in advance of the valve seat being screw threaded, a hollow extension rising from said casing in axial alinement with said inlet, a hollow valve stem arranged within said extension for reciprocatory movement, a main valve plug on the lower end thereof having an interiorly threaded bore communicating with the interior of the valve stem, an auxiliary valve plug threadedly secured within said bore and forming part of the valve, and said auxiliary plug having a transversely disposed groove at each end thereof to accommodate a suitable tool for transferring said plug from the main valve into threaded engagement with said inlet to temporarily cut off the flow of water for the purpose described.

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1,226,437. PEANUT-DIGGER. THOMAS E. AMOS and GEORGE J. ABERNATHY, Ambrose, Tex. Filed May 19, 1914. Serial No. 839,626. (Cl. 55—138.)

1. In a peanut digger, a substantially rectangular supporting frame having a tongue secured to its forward end, a pair of supporting braces secured to said tongue and curving downwardly therefrom, a substantially semi-circular shovel blade secured to the lower terminals of said supporting braces, a lever pivotally carried by said supporting frame, a crank link connected to the lower end of said lever, said crank link being connected to said supporting braces whereby oscillatory movement of the lever will raise or lower said semi-circular shovel blade.



2. In a peanut digger, a substantially rectangular supporting frame having a tongue secured to its forward end, a pair of supporting braces secured to said tongue and curving downwardly therefrom, a substantially semi-circular shovel blade secured to the lower terminals of said supporting braces, a lever pivotally carried by said supporting frame, a crank link connected to the lower end of said lever, said crank link being connected to said supporting braces whereby oscillatory movement of the lever will raise or lower said semi-circular shovel blade, a conveyer structure carried by said supporting frame for receiving peanuts from said uprooting shovel blade, a carrier carried by the rear end of said supporting frame for receiving the peanuts from said conveyer structure, said carrier including a plurality of pivotally supported rods for movement into or out of a supporting position.

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1,226,438. CHERRY-STONER. CHARLES W. ASBURY, Oak Lane, Pa., assignor to The Enterprise Manufacturing Company of Pennsylvania, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 4, 1917. Serial No. 159,653. (Cl. 146—5.)



1. The combination in a cherry stoner, of a hopper; two throat pieces forming a throat into which the cherries are fed; a disk; means for rotating the disk, said disk being located at the bottom of the hopper and in the throat between the two throat pieces; and means for simultaneously adjusting the throat pieces so that the width of the throat on each side of the disk will be the same.

2. The combination in a cherry stoner, of a hopper; a disk; means for turning the disk, said disk extending into the hopper; two throat pieces pivoted to the hopper located one on each side of the disk and forming the throat through which the cherries are fed, said throat pieces having curved throat sections at the disk; a spout forming a continuation of the throat and through which the stones pass; a projection on the spout; and an adjusting screw having right hand and left hand threads, the



throat pieces having threaded openings corresponding to the threads of the screw so that when the screw is turned in one direction the throat pieces are simultaneously separated and when turned in the opposite direction they are simultaneously moved toward each other.

3. The combination in a cherry stoner, of a frame; a hopper mounted on the frame and slotted; a disk extending through the slot in the hopper; means for turning the disk; two throat pieces, one pivoted on each side of the hopper, the throat pieces having curved throat sections on each side of the disk and each having an extension with a threaded opening; a spout forming a continuation of the throat and through which the stones are discharged; a hooked projection; a right hand thread on one end of the screw and a left hand thread on the other end of the screw, said screw having a head by which it is turned, the threaded portions of the screw being adapted to the threaded openings in the extensions of the throat pieces so that said throat pieces are simultaneously adjusted toward and from each other.

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1,226,439. BEVERAGE AND PROCESS OF MAKING SAME. JOHN ASHUS, Roxbury, Mass. Filed Feb. 5, 1917. Serial No. 146,838. (Cl. 99—11.)

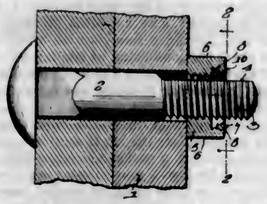
1. The herein described beverage comprising a liquid resulting from the fermentation of rye flour mixed with water, hops, sugar and yeast.

2. The herein described beverage comprising a liquid resulting from the fermentation of rye flour mixed with water and lemon juice, hops, sugar and yeast.

3. The herein described process of making a beverage including the mixing of a quantity of rye flour with water to form a dough, baking the dough, then drying and crumbling the same, placing the crumbs and a quantity of hops in heated water and straining the mixture, then adding sugar and yeast, and permitting the substance to ferment.

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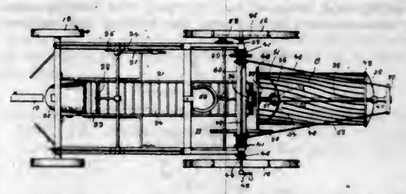
1,226,440. NUT-LOCK. ARTHUR ASPLET, Murphy, N. C., assignor of one-half to William H. Woodbury, Murphy, N. C. Filed Sept. 16, 1916. Serial No. 120,545. (Cl. 151—5.)



The combination with an externally threaded bolt having a longitudinally extending flat surface, of an internally threaded nut operatively engaging said bolt, the outer end of said nut being grooved parallel with its side edges and adjacent thereto, the outer side walls of said grooves being inclined toward the opening in said nut and terminating flush with the walls of said opening at the outer end of the nut, the inner side walls being straight and merging into the opening in said nut intermediate their ends, the bottoms of said grooves being flat and merging into said opening intermediate their ends, a key correspondingly shaped to the grooves and having a flat top adapted to be positioned in the groove parallel with the flat surface of the bolt to lock the nut in position, the flat side of said key engaging the flat surface of the bolt through the straight side of the groove to prevent mutilation of the threads on the bolt, and the inclined side and bottom of said key forming a wedge coacting with the inclined side and bottom of the groove to lock the key firmly in position and prevent the nut from turning, any additional movement of the nut serving to increase the wedging action.



1,226,441. POTATO-SEPARATOR. JOHN N. ATTERBURY, Laurel, Oreg. Filed Aug. 22, 1914. Serial No. 858,086. (Cl. 130—32.)

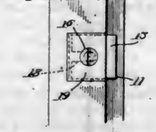


1. In a machine of the class described, a wheel supported carrying frame having a revolving axle, a friction disk on the axle, a tiltably supported shaft, a drum cage mounted slidably and rotatably on said shaft and having a friction rim in constant engagement with the friction disk, and means for effecting longitudinal adjustment of the drum cage on the shaft to vary the point of engagement of the friction rim with the friction disk, thereby varying the speed of rotation of the drum cage.

2. In a machine of the class described, a wheel supported carrying frame having a revolving axle, a friction disk on said axle, a pivotally supported tiltable shaft member, means for tilting said shaft member about the axis of its pivotal support and for sustaining it in adjusted position, a drum cage loosely mounted for rotation on the tiltable shaft member, said drum cage having a friction rim in constant engagement with the friction disk, and means for sliding the drum cage longitudinally of the shaft member.

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1,226,442. BUFFER FOR DOORS. SETH B. ATWOOD, Rockford, Ill. Filed Dec. 1, 1916. Serial No. 134,458. (Cl. 16—77.)



1. A door buffer comprising an elastically-yieldable buffer member, a casing embracing the buffer member and open throughout the back of the casing and one end thereof, said buffer member projecting through the open end of the casing and having a thickness exceeding the depth of the casing, and means for securing the device to a support with the buffer member clamped between the front of the casing and the support to which the device is applied, said means consisting of a fastening piercing the casing and the buffer member, and said buffer member having a slot receiving the fastening and permitting adjustment of the buffer member through the open edge of the casing.

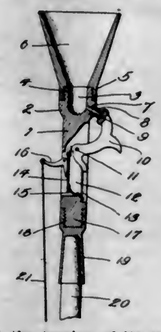
[Claim 2 not printed in the Gazette.]

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1,226,443. DRY-SPRAY GUN. ANDREW J. BAKER, Fort Wayne, Ind. Filed Nov. 23, 1916. Serial No. 133,031. (Cl. 43—14.)

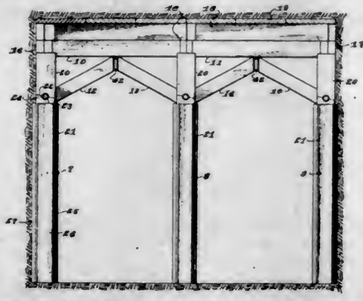
An insect powder gun comprising a vertically elongated body having its upper end enlarged in the form of a head, said head having in its upper end a cavity to receive an explosive powder, said end of the head being reduced and externally threaded, a short funnel-shaped barrel having at its lower contracted end an integral ferrule threaded on said reduced end of the head, said barrel being adapted to contain the insect powder, the aforesaid head being formed in its lower end with a port leading from the

cavity, and the body having a vertically elongated slot opening through its sides, a hammer mounted in said slot and adapted to strike and explode a percussion cap at the outer end of the port, a spring in said slot for operating said hammer, a spring projected locking member also mounted in said slot for holding the hammer



retracted against the tension of its spring, a trigger for releasing said locking member, an externally threaded boss on the lower end of the aforesaid body, a socket in which said boss is received, and a vertical staff carrying said socket on its upper end, said staff being of a length to position the barrel of the gun beneath the leaves of trees infested with the insects to be exterminated.

1,226,444. SET FOR TIMBERING MINES. HOMER M. BARBER, Goldfield, Nev. Filed May 1, 1916. Serial No. 94,606. (Cl. 72—79.)



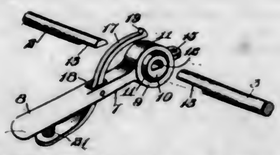
1. A set, comprising a combination of posts divided transversely by an oblique cut and having registering mortises in the faces of said cut, detachable tongues disposed in said mortises, transverse shoulders on said posts below the division, a cap disposed on and between said posts, and braces each having a toe disposed on one of said shoulders and the other toe disposed against said cap, said braces overlaying the cut in said post, thereby preventing slipping of the same.

2. A set, comprising a combination of posts divided transversely by an oblique cut and having registering mortises in the faces of said cut, detachable tongues disposed in said mortises, transverse shoulders on said posts, a cap disposed on and between said posts, braces each having a toe disposed on one of said shoulders and the other toe disposed against said cap, and wedges disposed adjacent the toes of said braces.

3. A set, comprising a combination of posts divided transversely by an oblique cut and having registering mortises in the faces of said cut, detachable tongues disposed in said mortises, bearing lags extending longitudinally of said posts with their upper ends adjacent said cut, a cap disposed on and between said posts, and braces each having a toe disposed upon a lag and the other toe thereof disposed against said cap.

4. A set, comprising a combination of posts divided transversely by an oblique cut and having registering mortises in the faces of said cut, detachable tongues disposed in said mortises, bearing lags extending longitudinally of said posts with their upper ends adjacent said cut, a cap disposed on and between said posts, braces each having a toe disposed upon a lag and the other toe thereof disposed against said cap, and wedges disposed between adjacent toes of said braces.

1,226,445. TRAFFIC-SIGNAL. THOMAS BEAVER, Sewell, N. J. Filed Apr. 15, 1916. Serial No. 91,359. (Cl. 116—31.)



1. A traffic signaling apparatus including operating shaft sections, an operating lever, and means carried by the lever to operatively engage either or both of the shaft sections at will.

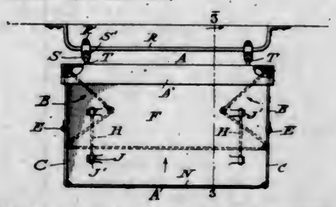
2. A traffic signaling apparatus including operating shaft sections, an operating lever, and means carried by the lever to operatively engage either or both of the shaft sections at will, and means for returning the lever to normally engage both shaft sections.

3. A traffic signal operator including operating shafts, a lever mounted intermediate the shaft sections and adapted for swinging movement, a socket piece pivotally mounted in the lever and having a non-circular axial opening, the ends of the shaft sections being of similar non-circular formation, and adapted to engage the axial opening of the socket piece.

4. A traffic signal operator including operating shafts, a lever mounted intermediate the shaft sections and adapted for swinging movement, a socket piece pivotally mounted in the lever and having a non-circular axial opening, the ends of the shaft sections being of similar non-circular formation, and adapted to engage the axial opening of the socket piece, and means for pivoting the lever for bodily swinging movement.

5. A traffic signal operator including operating shafts, a lever mounted intermediate the shaft sections and adapted for swinging movement, a socket piece pivotally mounted in the lever and having a non-circular axial opening, the ends of the shaft sections being of similar non-circular formation, and adapted to engage the axial opening of the socket piece, and means for pivoting the lever for bodily swinging movement, and means carried by the shaft sections to normally center the lever with respect to the sections.

1,226,446. LUGGAGE-CARRIER. CHRISTOPHER W. BECK, Canastota, S. D. Filed May 19, 1916. Serial No. 98,667. (Cl. 224—29.)

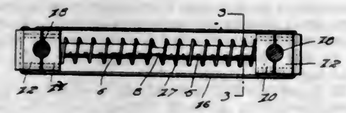


A luggage carrier comprising a back with flanges at the top and bottom, end sections pivoted together, one section



of each end pivoted to the back between said flanges, a bottom hinged to a flange of the back and a side hinged to the outer of the end sections and designed when the ends are folded, to be positioned between said flanges, resilient struck up portions in the bottom, bail-shaped members having ends frictionally held by said struck up portions, loops secured to the back, and means adapted to be fastened to a robe rail and engaging said loops.

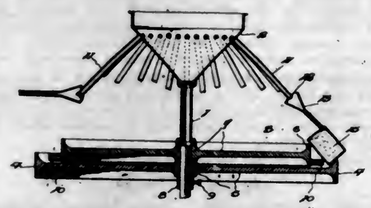
1,226,447. CONNECTING-ROD. CHARLES E. BEDRANO, Monument, Kans. Filed Sept. 9, 1916. Serial No. 119,259. (Cl. 74—17.)



4. A connecting rod including a pair of sections having telescoping inner ends, said inner ends being freely movable, said sections having bearing members at their outer ends, means normally tending to separate said sections, caps fitted over said bearing members, said caps having spaced lugs, said lugs having inclined outer surfaces and parallel inner surfaces, and an endless rectangular band confined between the lugs of the bearing caps and confining the latter.

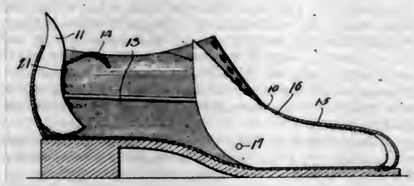
[Claims 1 to 3 and 5 not printed in the Gazette.]

1,226,448. CARTON-FILLING MACHINE. GRANT BILLS, Watkins, N. Y. Filed July 19, 1916. Serial No. 110,227. (Cl. 226—21.)



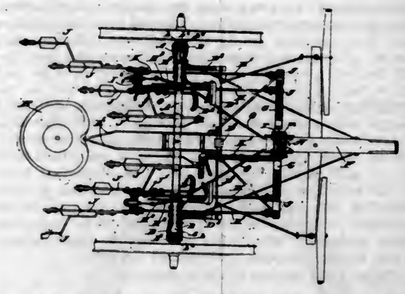
In a carton filling machine, the combination of a standard, a rotative carrier mounted on the standard, said carrier having means for holding cartons in inclined position, a hopper mounted above the carrier, a plurality of tubes extending from the hopper, a regulating spout pivoted at the outer end of each tube, said spouts acting to cut off the products passing from the tubes when in one position, and fitting in the open ends of the inclined cartons in the carrier when in another position, whereby to choke the spouts and stop the passage of the products when the cartons become filled.

1,226,449. SHOE STRETCHER AND FORMER. OTTO BINZEL, Wilmington, Del. Filed Nov. 4, 1916. Serial No. 129,564. (Cl. 12—128.)



A shoe stretcher and former embodying in combination with a sole and heel portion, an arch-shaped member secured to the sole portion and having spaced parallel rows of openings, a link pivoted upon the heel portion and provided with oppositely disposed lugs at its forward extremity for interchangeable engagement with the different pairs of alined openings, and hook-like projections extending from the rear edge of the arch-shaped member to receive the link and hold the latter horizontally disposed, to facilitate the application of the device in a shoe or the like.

1,226,450. CULTIVATOR. WILLIAM W. BIRNSTOCK, York, Pa., assignor to Hench & Dromgold Company, York, Pa. Filed Jan. 2, 1917. Serial No. 140,142. (Cl. 97—35.)



1. In a cultivator of the character described, the combination of a wheel standard; a pivot-axle standard; a vertical cone pivot on the lower portion of said pivot-axle standard; a cone socket in the lower end of the wheel standard which fits from above down upon the cone pivot on the pivot-axle standard; a cone socket in the upper end of the pivot-axle standard, in vertical axial alinement with the cone pivot in the lower end of said standard; a cone pivot which fits up from below into the last mentioned cone socket; and supporting means for said cone pivot secured to and vertically adjustable in a portion of the wheel standard above and overhanging the said cone socket, substantially as and for the purposes hereinbefore set forth.

3. In a cultivator of the character described, a wheel standard consisting of a hollow casting having an internal lower shelf in which is formed a cone socket, an internal upper shelf, and a screw threaded spindle passing through and engaging a screw threaded hole in said upper shelf, and having on its lower end below said shelf a cone pivot which is in vertical alinement with the cone socket in the lower shelf, and means for locking said spindle in its adjusted position, said hollow casting being longitudinally open on its outer face above the upper shelf, and on its inner face below the upper shelf, in combination with a pivot-axle standard carrying a stub-axle and having two laterally projecting brackets, the lower bracket formed with a cone pivot to engage the cone socket in the lower shelf of the wheel standard, the upper bracket formed with a cone socket to engage the cone pivot on the lower end of the screw threaded spindle adjustably supported in and extending below the upper shelf in the wheel standard, substantially as and for the purposes hereinbefore set forth.

4. The combination with the main frame, of a pair of parallel drag-bars, having each a ball and socket connection between its front end and the main frame; a cross head to which the rear end of each drag bar is connected by a vertical pivot, the distance between the pivotal connections of the rear ends of the drag-bars with the cross head being the same as the distance between the ball and socket pivotal connections of the front ends of the drag-bars with the main frame, and the drag-bars being of the same length between pivots; and shovel beams attached to and carried by the cross head, substantially as and for the purposes hereinbefore set forth.

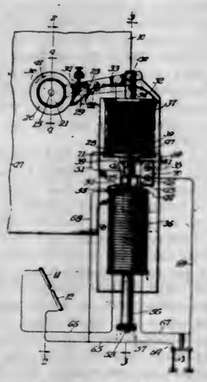
5. The combination with the main frame of two shovel gangs, each consisting of a pair of parallel drag-bars of equal length between pivots, having each a ball and socket connection between its front end and the main frame, and a vertical pivotal connection between its rear end and a cross head, the distance between the pivotal connections of the two drag-bars of the pair with the cross head being the same as their ball and socket pivotal connections with the main frame; shovel beams attached to and carried by said cross head; a single operating lever; and connections between each pair of drag-bars and said operating lever, substantially as and for the purposes hereinbefore set forth.

6. The combination with the main frame and the two shovel gangs capable of lateral movement in parallel planes toward and away from one another, of a horizontally pivoted hanger capable of fore and aft rocking movement, and provided on its free end with a hollow ball member of a ball and socket joint; an operating lever for said hanger; a vertical axial bolt extending through said hollow ball; eyebolts hung on said vertical bolt as an axis and extending thence outwardly in opposite directions through slots formed for their passage in said ball; cups or half sockets fitted on opposite sides of said ball and held in place thereon by said eyebolts, on which said cups or half sockets are swiveled; and connecting bars, one for each cup or half socket, rigidly fastened to their respective cups or half sockets and extending thence diagonally to the drag-bar portion of their respective shovel gangs, to which they are secured, substantially as and for the purposes hereinbefore set forth.

[Claim 2 not printed in the Gazette.]

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1,226,451. ELECTRIC CONTROLLING AND FEEDING APPARATUS. SIDNEY B. BLAKELY, Chicago, Ill. Filed Dec. 29, 1915. Serial No. 69,200. (Cl. 176—76.)



1. In apparatus for regulating electric power, the combination of an intermittently operable mechanical device for controlling said power, a normally deënergized helix for operating said device when said helix is energized, an electrically independent, normally inoperative limit relay for controlling the circuit of said helix, and a mechanical connection operative when actuated by the energizing of said helix to exert force on said relay tending to restore the latter to its normal inoperative state.

2. In apparatus for regulating electric power, the combination of an intermittently operable mechanical device for controlling the flow of current in a circuit, a normally deënergized solenoid provided with a core for operating said device to control said flow of current when said solenoid is energized, and having a relay-restoring element also operated by said solenoid when said solenoid is energized, an electrically independent, normally inoperative limit relay associated with the flow of current in the circuit to be regulated and for controlling the circuit of said solenoid, said relay normally maintaining the circuit of said solenoid open, and a mechanical connection extending from said relay to said relay-restoring element for exerting force in a direction tending to restore said relay to its normal inoperative condition.

3. In apparatus for maintaining a constant predetermined amount of flow of electrical energy in a circuit, the combination of magnetic means for regulating the current-consuming capacity of said circuit, said means being normally deënergized, a limiting relay normally energized from said circuit, said relay normally maintaining said magnetic means deënergized and adapted to close the connection upon change of the flow of current in said circuit, and a mechanical connection extending from said magnetic means to said relay for automatically applying force to said relay tending to restore the latter to its normal contact open position.

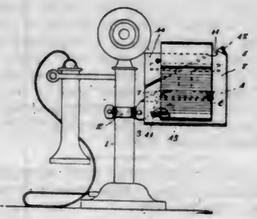
4. In apparatus for maintaining a constant flow of electrical energy in a circuit having a variable current capacity, the combination of an intermittently operable device for modifying the capacity of said circuit, a normally idle magnet for intermittently operating said device, said magnet also being provided with a local-circuit-opening mechanical connection extending to a relay, and a relay included in the circuit to be regulated normally energized from said circuit and controlling the circuit of said magnet, the circuit of said magnet being normally held open by said relay, which is adapted to close said circuit upon change of current in said main circuit.

5. The combination of an electric arc lamp, means for gradually moving together the carbons as the latter are consumed, a solenoid for operating said means when said solenoid is energized, a series wound solenoid normally energized by current flowing through said arc, contacts controlling the circuit of said first solenoid normally maintained open by said series solenoid when the current flowing through the latter is maintained at a predetermined amount, magnetic means associated with said solenoid and mechanically independent of the carbon-feeding means, and a mechanical connection extending from said last named element for restoring said series solenoid to its normal open contact position when the magnet is energized.

[Claims 6 to 13 not printed in the Gazette.]

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1,226,452. COPY-HOLDER. ALICE BOLTON, Spokane, Wash. Filed Jan. 22, 1917. Serial No. 143,719. (Cl. 120—28.)



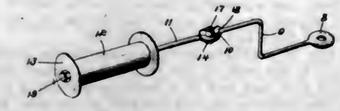
1. A device of the class described comprising a bracket having means for attachment to a support, a rectangular bed plate attached to said bracket and movable from an inclined upright position to an angular position thereto, a stop and a clip at diametrically opposite corners of said plate, and a movable extension at the remaining upper corner adapted to be extended when said plate is in its angular position.

2. A device of the class described comprising a bracket having means for attachment to a support, a rectangular bed plate attached to said bracket and movable from an inclined upright position to an angular position thereto, a clip at one of the lower corners of said plate, a stop at the diametrically opposite and one of the upper corners of the latter, and a triangular extension eccentrically mounted at the remaining upper corner of said plate and adapted to be extended when the latter is in its angular position.

3. A device of the class described comprising a bracket having means for attachment to a support and including a horizontally extending arm, a T-shaped member extending from the intermediate portion of one edge of said arm, a rectangular bed plate pivoted at one of its sides at a point between its ends to one end of said arm and movable from an inclined upright position to an angular position, means for fixing the other side of said plate to the other end of said arm, a stop and a clip at diametrically opposite corners of said plate, and a movable extension at the remaining upper corner of said plate adapted to be extended when the latter is in its angular position.

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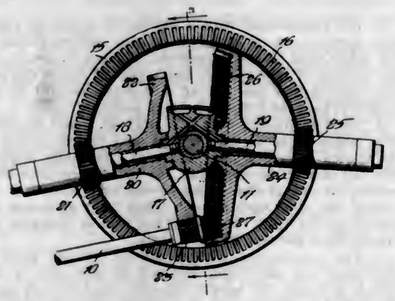
1,226,453. TOILET-PAPER HOLDER. JOHN R. BOYLE, Beloit, Wis. Filed Nov. 20, 1915. Serial No. 62,608. (Cl. 211—31.)



A toilet paper holder comprising a sectional arm adapted to be adjustably pivoted upon the seat post of the toilet seat, one of said sections comprising a horizontal portion, an integral vertical portion, a second integral horizontal portion, the second section comprising a horizontal portion pivoted to swing horizontally upon said first mentioned section and a cylinder carried by the opposite end of the second section.

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1,226,454. TRANSMISSION-GEARING FOR MOWING-MACHINES. LINCOLN BRADEN, Carbon, Cal. Filed June 28, 1916. Serial No. 106,349. (Cl. 74—7.)



1. In mowing machine gearing, the combination with a main shaft or axle, and the pitman shaft, of a master gear carried by the main shaft, a pair of transmission gears in connection with the pitman shaft and engaging the master gear at points upon relatively opposite sides of the vertical plane of the main shaft.

2. In mowing machine gearing, the combination with the main shaft or axle, and the pitman shaft, of a master gear carried by the main shaft, and a pair of intermediate gears engaging the said master gear at opposite sides of the vertical plane of its axis, each of which gears is in connection with the pitman shaft.

3. In mowing machine gearing, the combination with the main shaft or axle, and the pitman shaft, of a master gear carried by the main shaft, a pair of gear members carried by the pitman shaft, and intermediate transmission gears including a pair of gears engaging the master gear at points upon relatively opposite sides of the vertical plane of its axis, each of which latter gears is in engagement with one of the gears of the pitman shaft.

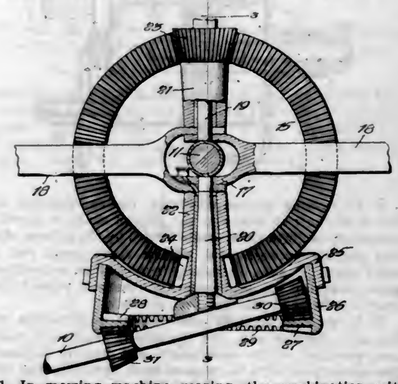
4. In mowing machine gearing, the combination with the main shaft or axle, and the pitman shaft, of a master gear carried by the main shaft, a pair of gear members carried by the pitman shaft, intermediate transmission gears including a pair of gears engaging the master gear at points upon relatively opposite sides of the vertical plane of its axis, and gear members rigid with the said gears engaging the master wheel, said last named gears engaging the gears of the pitman shaft.

5. In mowing machine gearing, the combination with the main shaft or axle, and the pitman shaft, of a pair of gears carried by the said pitman shaft, and connections between the said gears and the main shaft, including gears engaging the said pitman shaft gears at points diametrically opposite one another.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,455. TRANSMISSION-GEARING FOR MOWING-MACHINES. LINCOLN BRADEN, Carbon, Cal. Filed June 28, 1916. Serial No. 106,350. (Cl. 74—7.)



1. In mowing machine gearing, the combination with the main shaft or axle and the pitman shaft, of a pair of spaced oppositely inclined bevel gears carried by the pitman shaft, and gearing between the pitman shaft gears and the main shaft or axle, including a gear ring diametrically of which the pitman shaft extends, said gear ring having vertically spaced annularly toothed surfaces with which the said gears of the pitman shaft engage.

2. In mowing machine gearing, the combination with the main shaft or axle, and the pitman shaft, of a pair of oppositely inclined bevel gears carried by the pitman shaft and spaced thereon, and gearing between the pitman shaft gears and the main shaft or axle, including a horizontally disposed gear ring diametrically of which the pitman shaft projects, said gear ring having an internal annular flange, the upper and lower surfaces of which are toothed and respectively engaged by the gears of the pitman shaft.

3. In mowing machine gearing, the combination with the main shaft or axle, and the pitman shaft, of a master gear carried by the main shaft, a gear loosely disposed on the main shaft and opposing the master gear, intermediate gears connecting the said master gear and its opposed gear at diametrically opposite points, and gearing connections between one of said intermediate gears and the pitman shaft.

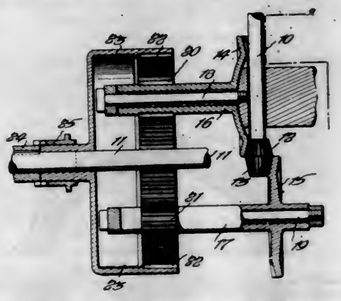
4. In mowing machine gearing, the combination with the main shaft or axle, and the pitman shaft, of a master gear carried by the main shaft, a gear loosely disposed on the main shaft and opposing the master gear, intermediate gears connecting the said master gear and its opposed gear at diametrically opposite points, and gearing connections between one of said intermediate gears and the pitman shaft, said last named means including a hori-

zontally disposed gear ring rigid with the respective intermediate gear.

5. In mowing machine gearing, the combination with the main shaft or axle, and the inclined pitman shaft, of opposed gears mounted on the main shaft, intermediate gears connecting said opposing gears at diametrically opposite points thereof, a gear ring rigid with one of said intermediate gears and diametrically of which the pitman shaft extends, and vertically spaced oppositely inclined gears engaging the said gear ring and carried by the pitman shaft, all for the purpose described.

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1,226,456. TRANSMISSION-GEARING FOR MOWING-MACHINES. LINCOLN BRADEN, Carbon, Cal. Filed June 28, 1916. Serial No. 106,351. (Cl. 74—7.)



1. In mowing machine gearing, the combination with the main shaft or axle, and the pitman shaft, of a pair of oppositely inclined bevel gears carried by the pitman shaft, and gearing between said pitman shaft gears and the main shaft or axle, including intermediate transmission gears engaging the said oppositely inclined pitman shaft gears at diametrically opposed points.

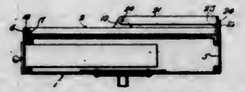
2. In mowing machine gearing, the combination with the main shaft or axle, and the pitman shaft, of a master gear mounted on the main shaft, and gearing connecting the master gear with the pitman shaft and including intermediate gears engaging the master gear at points upon relatively opposite sides of the vertical plane of the main shaft, and shafts parallel with the said main shaft and upon which the said intermediate gears are mounted.

3. In mowing machine gearing, the combination with the main shaft or axle, and the pitman shaft, of a pair of gears carried by the pitman shaft, a master gear carried by the main shaft or axle, a pair of intermediate shafts parallel with the main shaft or axle, and inner and outer gears supported by each of said intermediate shafts, the inner gears being in mesh with the master gear, and the outer gears being in mesh with the pitman shaft gears.

4. In mowing machine gearing, the combination with the main shaft or axle, and the pitman shaft, of a pair of gears carried by the pitman shaft, a master gear carried by the main shaft or axle, a pair of intermediate shafts parallel with the main shaft or axle, and inner and outer gears supported by each of said intermediate shafts, the inner gears being in mesh with the master gear, and the outer gears being in mesh with the pitman shaft gears, the said inner gears of the intermediate shaft engaging the master gear at points upon relatively opposite sides of the vertical plane of the main shaft.

5. In mowing machine gearing, the combination with the main shaft or axle, and the pitman shaft, of a pair of gears carried by the pitman shaft, a master gear carried by the main shaft or axle, a pair of intermediate shafts parallel with the main shaft or axle, and inner and outer gears supported by each of said intermediate shafts, the inner gears being in mesh with the master gear and the outer gears being in mesh with the pitman shaft gears, the said outer gears engaging the gears of the pitman shaft at diametrically opposed points.

1,226,457. DENTAL TRAY. EVAN A. BROWN, Tacoma, Wash. Filed Oct. 26, 1915. Serial No. 58,001. (Cl. 45—31.)



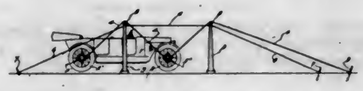
1. A tray of oval-form having a marginal vertical wall comprising a vertical flange, a horizontal rim portion projecting outwardly from the flange and an upstanding portion parallel with but offset from the plane of the flange and connected therewith by said horizontal rim portion, and a handle pivotally mounted upon said upstanding portion to fold down into the tray upon the inner side of said portion so as to overhang said horizontal rim portion.

2. A tray of oval-form having an upstanding marginal wall, a bail-shaped handle pivoted to said wall and of a form corresponding to the form of the wall at one side of the table, and supporting means upon the wall to hold the bail slightly elevated above the bottom of the tray when turned down to a horizontal position.

3. A tray of oval-form having an upstanding marginal wall, ears at the ends of the tray, a bail-shaped handle pivoted to said ears and of a form corresponding to the form of the marginal wall at one side of the tray, and a supporting member projecting upwardly from said wall to hold the bail slightly elevated above the bottom of the tray when turned down to a horizontal position.

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1,226,458. DEVICE FOR LIFTING AUTOMOBILES OUT OF MUD-HOLES. JAMES BROWN, Columbia, Mo. Filed July 3, 1916. Serial No. 107,252. (Cl. 254—166.)



1. The combination with a vehicle, of a pair of standards disposed one on each side of said vehicle, guides on the upper ends of said standards, winding drums on the rear wheels of said vehicle, and a pair of cables disposed over said guides, one end of each being secured to one of said drums, the other ends being anchored.

2. The combination with a vehicle, of a pair of standards disposed one on each side of said vehicle, drums on the wheels of said vehicle, and a pair of cables disposed over the ends of the standards, one end of each cable being secured to one of the drums on the rear wheels of the vehicle, the other ends of said cables being anchored, the drums on the front wheels of the vehicle engaging the intermediate portions of said cables.

3. The combination with a vehicle, of two pairs of standards, one pair being disposed on each side of said vehicle adjacent the wheels thereof, guides on the upper ends of the standards, a pair of cables disposed over the said guides, one end of each cable being attached to the vehicle, the other ends being anchored, and means for shortening said cables to raise the vehicle.

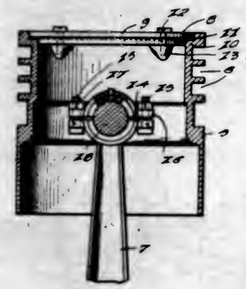
4. The combination with a vehicle, of two pairs of standards, one pair being disposed on each side of said vehicle adjacent the wheels thereof, guides on the ends of said standards, a drum on each wheel of said vehicle, a pair of cables disposed over said guides, one end of each cable being secured to the drums on the rear wheels, the other ends of the cables being anchored, the other drums being engaged with said cables intermediate the standards, and means for rotating the drums on said rear wheels.

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1,226,459. PISTON. JOHN F. BROWN, Providence, R. I. Filed Jan. 28, 1916. Serial No. 74,833. (Cl. 74—85.)

1. A piston including a hollow cylindrical body, a head plate detachably connected therewith, a wrist pin supported in said body, a connecting rod, a separable bearing connecting said connecting rod with said wrist pin and removable through the end of the body carrying said head plate.





2. A piston including a hollow cylindrical body, a head plate removably engaged in said body, means for removably securing said head in position in one end of said body, a wrist pin connected with said body, a connecting rod engaged with said wrist pin, a bearing member securing said connecting rod to said wrist pin and removable through the head end of said body.

3. A piston including a hollow cylindrical body, a wrist pin mounted in said body, means securing said wrist pin in position in said body, a connecting rod extending through one end of said body, a bearing carried by said connecting rod and engaged with said wrist pin removable through the opposite end of said body, and a removable head secured at one end to said body.

4. A piston including a hollow cylindrical body, a wrist pin secured diametrically within said body, a connecting rod projecting from one end of said body, a bearing carried by said connecting rod and positioned upon said wrist pin and removable through the opposite end of said body, a head plate engaged with the end of said body opposite said connecting rod, and means removably securing said head in position.

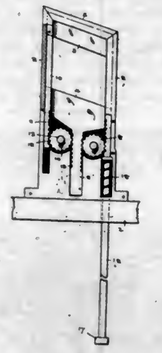
5. A piston including a hollow body having open ends, a wrist pin supported in said body, a connecting rod engaged with said wrist pin and projecting through one end of said hollow body, a bearing member detachably connected with said connecting rod and securing the latter in position on said wrist pin and removable through the opposite end of said hollow body, and a head plate detachably secured to the last mentioned end of said hollow body.

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1,226,460. HEEL-REMOVING MACHINE. PHILIP BRUNER, Boise, Idaho. Filed Sept. 5, 1916. Serial No. 118,537. (Cl. 164—47.)

1. A heel removing machine comprising a base, supporting standards projecting upwardly from the base, a pair of knives vertically movable in said standards, a rack bar depending from the upper knife, a shank projecting from the lower knife and provided in its opposite side edges with rack teeth, a pinion disposed between said shank and rack bar, another pinion meshing with the opposite side edge of the shank, and means for rotating said last-named pinion to cause said knives to reciprocate to and from each other.

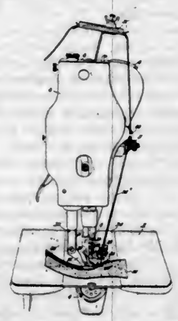
2. A heel removing machine comprising a base, standards projecting upwardly from the base, a pair of knives vertically movable in said standards, a rack bar depending from the upper knife, a shank depending from the lower knife and provided in its opposite side edges with rack teeth, a pinion interposed between said shank and rack bar, another rack bar disposed adjacent said shank, a pinion interposed between said last-named rack bar and the shank, the standard adjacent the last-named rack bar being provided with an elongated recess, a collar mounted upon said rack bar and movable in said recess, and an expansion spring mounted upon the rack bar between said



collar and the bottom of the recess, whereby the knives will be returned to their normal position after actuation.

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1,226,461. EDGE-FOLDING AND TAPE-GUIDING DEVICE FOR SEWING-MACHINES. HOWARD F. BUBIER, Lynn, Mass., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Nov. 1, 1913. Serial No. 798,632. (Cl. 270—33.)



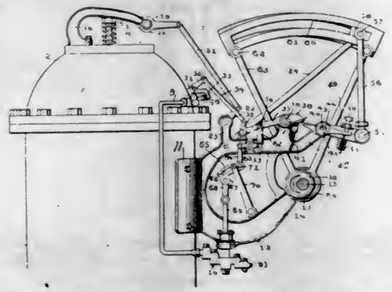
In an edge-folding and tape-guiding device for sewing machines for the manufacture of shoe-button and button-hole-flies comprising an outer ply of material and an inner lying tape, in combination, an edge-folder adjustable with respect to the stitch-forming mechanism, a tape-guide adjustable with respect to said edge-folder, the latter being positioned relatively to said tape-guide to fold the edge of the material in advance of the taping operation with its folded edge spaced from the stitched edge of said tape a distance sufficient to conceal the latter when the lining material, common to the manufacture of the present product, is applied.

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1,226,462. INTERNAL-COMBUSTION ENGINE. JAMES I. BURR, Fierro, N. Mex. Filed Mar. 24, 1916. Serial No. 86,406. (Cl. 123—41.)

1. A valve actuating means for internal combustion engines comprising an eccentric shaft, means to drive the eccentric shaft, rockers operated by the eccentric shaft, links connected to the rockers for actuating the intake and exhaust valves of the engine and an oil pump for injecting oil under high pressure into the engine, said pump being actuated upon the operation of the intake valve.

2. A valve actuating means for internal combustion engines having intake and exhaust valves comprising an eccentric shaft, rockers operated from the eccentric shaft, links for controlling the operation of the intake and exhaust valves, said links being connected to the rockers, an oil pump for injecting oil under high pressure into the engine when the intake valve is open, a link and lever mechanism for actuating said pump and means to control the length of the stroke of the pump plunger.



3. A valve actuating means for internal combustion engines including the combination with an internal combustion engine of the Diesel type having an air intake valve, an oil intake port and an exhaust valve, of an eccentric shaft, eccentrics mounted on said shaft, rockers operated by the eccentrics said rockers being adapted to be shifted to reverse the operation of the engine, links connected to the rockers for controlling the operation of the air intake and the exhaust valves, links actuated by the intake rocker for operating a pump, for injecting fuel under high pressure to the cylinder of the engine and means to control the length of the stroke of the pump plunger.

4. In an internal combustion engine having an air intake valve, an exhaust valve and a port for the admission of oil under pressure, an oil pump, a valve actuating means comprising a pair of rockers, one of said rockers being adapted to actuate the exhaust valve, links connected to the opposite rocker for operating the air intake valve, links connected to the intake operating links for controlling the operation of the pump and means for regulating the length of stroke of the pump.

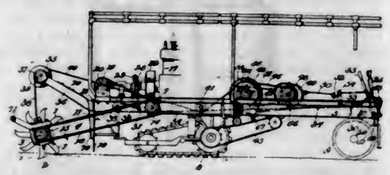
5. In an internal combustion engine having an air intake valve, an exhaust valve and a port for the admission of oil under pressure, an oil pump, a valve actuating means comprising a pair of rockers, one of said rockers being adapted to actuate the exhaust valve, links connected to the opposite rocker for operating the air intake valve, links connected to the intake operating links for controlling the operation of the pump, and a fulcrum lever for controlling the length of stroke of the pump piston.

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1,226,463. ROOT-GRUBBING MACHINE. CLARENCE B. BURROWS, Tampa, Fla., assignor, by mesne assignments, to Florida Soil Fertility Company, Tampa, Fla., a Corporation of Florida. Filed May 11, 1916. Serial No. 96,921. (Cl. 97—70.)

1. In a root grubbing machine, in combination, a transverse series of knives, a tractor, a pair of arms carrying the knives and movably connected to the tractor, a transverse shaft arranged above said knives, a pair of drums on said shaft, cables extending between said drums and said arms, a third drum on said shaft, a second transverse shaft, a windlass on said second shaft, a ratchet wheel on said second shaft, a cable extending between said third drum and said windlass, a pawl co-acting with said ratchet wheel, a motor, gearing between said motor and said second shaft including a clutch, means for operating said clutch including a lever and an actuating element for said pawl arranged in proximity to said lever.

2. In a root grubbing machine, in combination, a transverse series of knives, a tractor, a pair of arms carrying the knives and movably connected to the tractor, means for raising said knives or permitting their gravitating descent, a motor for operating said means, a clutch for controlling the operation of said means from said motor, a pawl co-acting with said means for holding said knives at any desired elevation, a brake co-acting with said means for controlling the operation thereof, means including a lever for operating said clutch and an operating element common to said pawl and brake arranged in proximity to said lever.



3. In a root grubbing machine, in combination, a transverse series of knives, a tractor, a pair of arms carrying the knives and movably connected to the tractor, a transverse shaft arranged above said knives, a pair of drums on said shaft, cables extending between said drums and said arms, a third drum on said shaft, a second transverse shaft, a windlass on said second shaft, a ratchet wheel on said second shaft, a cable extending between said third drum and said windlass, a pawl co-acting with said ratchet wheel, a brake-drum on said second shaft, a brake-band co-acting with said drum, a motor, gearing between said motor and said second shaft including a clutch, means for operating said clutch including a lever and an actuating element common to said pawl and brake-band arranged in proximity to said lever.

4. In a root grubbing machine, in combination, a transverse series of knives, a tractor, a pair of arms carrying the knives and pivoted to the tractor, said arms projecting forwardly from the tractor, a second pair of fixed arms projecting forwardly from the tractor, a transverse shaft journaled in said fixed arms, drums on said shaft, cables extending between said drums and said knife-carrying arms, a second motor driven transverse shaft located in the rear of said first shaft and operatively connected thereto to rotate the first shaft and effect raising of the knives or permit rotation of the first shaft and lowering of the knives, a ratchet wheel on the second shaft, a pawl co-acting with the ratchet wheel, a clutch controlling the operation of the second shaft, and juxtaposed devices for controlling said pawl and said clutch.

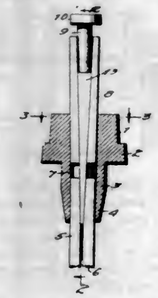
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1,226,464. SAW ATTACHMENT. ALONZO C. BUTTMAN and FRANK P. GABLE, Grandview, Iowa; said Buttman assignor to said Gable. Filed Nov. 1, 1915. Serial No. 59,142. (Cl. 79—16.)

1. In combination with a spindle having a tapering bore, a saw fitting the bore at one end, the saw being in the form of a split sleeve, of a split sleeve fitting the upper end of the spindle and spaced apart from the saw at the adjacent edges, said sleeve being frusto-conical or tapering to fit the bore of the spindle, a wedge between the side edges of the splits of the saw and sleeve, and a stem having at the end adjacent the saw a cylindrical enlargement fitting within the saw and adapted to extend from the teeth to and within the adjacent end of the spindle, said stem having a head at its opposite end, and beyond the adjacent end of the sleeve, and a tapering locking sleeve mounted to slide on the stem between the head and the enlargement for keying the saw and the sleeve in place in the spindle.

2. A saw keying attachment comprising in combination with a spindle having a tapering bore, a saw in the form of a split sleeve fitting the bore at one end, and a stem having an enlargement fitting within the saw, of a split tapering sleeve fitting within the other end of the spindle, and spaced from the saw, a tapering locking sleeve mounted to slide on the stem toward and from the enlargement for keying the saw and the sleeve in place in the spindle, and a wedge engaging the registering splits of the sleeve and saw.





3. A saw keying attachment comprising in combination with a spindle having a tapering bore, a saw in the form of a split sleeve fitting the bore at one end and a stem having an enlargement fitting within the saw, of a split tapering sleeve fitting within the other end of the spindle, and spaced from the saw, and a tapering locking sleeve mounted to slide on the stem toward and from the enlargement for keying the saw and the sleeve in place in the spindle.

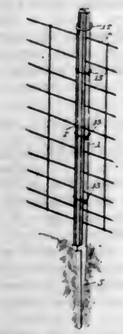
4. An attachment for keying saws in the form of split sleeves into hollow spindles, comprising in combination with a spindle for receiving the saws and a stem having an enlargement fitting within the saw, of a tapering sleeve mounted to slide on the stem toward and from the enlargement and adapted to engage within the inner end of the saw to key the same to the spindle.

5. A member having a bore, a cylindrical tool disposed within the bore and formed with a longitudinal split, a key arranged in the split and having its edges in contact with the edges thereof and its sides flush with the inner and outer walls of the tool, and a locking member disposed within the tool and clamping it and the key within the bore.

[Claim 6 not printed in the Gazette.]

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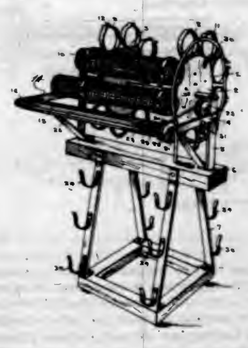
1,226,465. FENCE-POST. SILAS H. CAMPBELL, Portland, Me. Filed Sept. 30, 1916. Serial No. 123,140. (Cl. 256—52.)



A fence post comprising interlocking longitudinal sections, one of said sections having vertical and horizontal sockets therein, vertical and horizontal lugs carried by the other section for engagement with the sockets of the opposite section, opposed concave and convex faces for said sections, a longitudinal angular rib formed on the convexed faces for engagement with a correspondingly shaped groove formed in the concaved face of the post section, serrations formed on the said rib, tapered upper ends for both of said sections, a removable ring for clamping together said tapered ends, and binding wires for securing said sections together.

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1,226,466. COMBINED SCREEN-WIRE SUPPORT AND MEASURING DEVICE. CORNELIUS P. CARROLL, Columbia, La. Filed May 13, 1916. Serial No. 97,324. (Cl. 33—127.)



1. In a device of the class described, the combination with a core, the core supporting shaft, and means for supporting the opposite ends of a core shaft, of a measuring device comprising a spring-actuated coiled tape measure, a casing for said tape measure, means for supporting the casing, a handle connected to said core supporting shaft for rotating said shaft, a flange fixed on said handle, a disk loosely mounted on the handle against and of less diameter than said flange, means for attaching the outer free end of the tape measure to the periphery of said disk, said flange serving to guide the tape on the disk and prevent it from slipping off of the disk, and means for locking the disk and flange together.

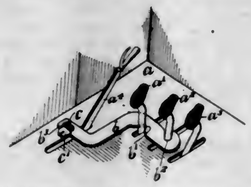
2. In a device of the class described, the combination with the core supporting shaft, and supporting arms, of a measuring device consisting of a spring-actuated coiled tape measure, a handle disposed through one of said arms and attached to said core shaft for rotation therewith, said handle having a shoulder bearing against the outer side of the adjacent supporting arm, a flange fixed on the inner end of the handle, a disk smaller than said flange loosely mounted on the handle between the flange and said adjacent supporting arm, means for securing the free end of the tape to the periphery of said disk, and means for locking the disk to said flange.

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1,226,467. AUTOMOBILE-LOCK. JOHN F. CARSON, Philadelphia, Pa., assignor to Essansee Lock Company, a Partnership Association composed of the said John F. Carson and Cecil H. Sherman, Philadelphia, Pa. Filed Dec. 29, 1916. Serial No. 139,536. (Cl. 70—126.)

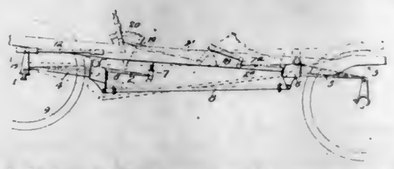
An automobile unit-locking device of substantially inverted Z-shape, in outline, one right angular portion having a notch and a recess, the angularity of the notch with respect to the recess differing from each other and the opposite right angular portion of said device provided with a slot for engaging the eye-bolt of a locking-means, the arrangement being such as to permit of the engagement of the respective notch and recess of said device with the high gear foot lever and reverse gear lever and

the emergency brake in the forward shifted position and said locking-means engaged with the eye-bolt of the car,



behind said emergency brake lever, substantially as and for the purposes described.

1,226,468. ROAD-VEHICLE SUSPENSION. WALTER GEORGE CHARLEY, Murrumbeena, Victoria, Australia. Filed Aug. 23, 1915. Serial No. 46,909. (Cl. 21—105.)



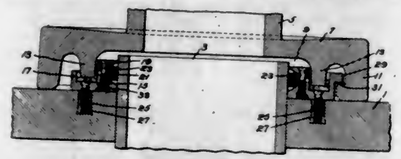
1. In a road-vehicle suspension, the combination of a pair of vehicle-supporting springs, one arranged in front of the other; a pair of members carried by the frame of the vehicle; a housing pivoted to each of said members, each housing having one of said springs extending therethrough; a pair of members, one for each spring, attached to said frame, and to which the extended inner ends of said springs are connected; a rod connecting the lower ends of the housings; and a radius rod for the front spring, pivoted at one end to the frame and having an extensible and contractible bearing at its other end to prevent axle torque and to maintain the wheel steering pivots substantially vertical.

2. In a road-vehicle suspension, the combination of a pair of vehicle-supporting springs, one arranged in front of the other; a pair of members carried by the frame of the vehicle; a housing pivoted to each of said members, each housing having one of said springs extending therethrough; a pair of members, one for each spring, attached to said frame, and to which the extended inner ends of said springs are connected; a rod connecting the lower ends of the housings; and a radius rod for the front spring, having a ball-and-socket connection both at its rear end with the frame and at its front end with the axle, said front connection having a pair of springs bearing at opposite sides against the socket member thereof, so as to permit the distance between the two ball members of the connection to vary in conformity with spring deflection.

3. In a road-vehicle suspension, the combination of a pair of vehicle-supporting springs, one arranged in front of the other; a pair of members carried by the frame of the vehicle; a housing pivoted to each of said members, each housing having one of said springs extending therethrough; a pair of members, one for each spring, attached to said frame, and to which the extended inner ends of said springs are connected; a rod connecting the lower ends of the housings; and a lever connected to deflect the rear spring, so as to level up the rear end of the frame and thus maintain the frame in a substantially normal plane with the road when unevenly loaded.

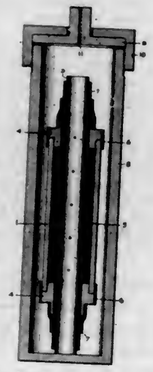
1,226,469. SANITARY CONNECTION. MAURICE B. COLEMAN, West Newton, Mass. Filed Dec. 3, 1914. Serial No. 875,359. (Cl. 137—94.)

The combination with a water-closet base 7 having a rim 11 forming a recess 9 in said base, of a soil pipe 3 projecting up into said base, a ring 13 depending from said base and spaced from said pipe to form a water-seal pocket between them, a flange 15 encircling said pipe having a channel 17 therein, a packing confined between said channel and ring to prevent leakage of water from said pocket between them, a member 19 adjustably connected to said flange, a packing 21 embracing said pipe and con-



fined between said member and flange to prevent leakage of water from said pocket along said pipe while permitting movement of said pipe relative to said flange, a packing 33 at the bottom of said flange, and means 25, 27 to connect said flange to a floor and press said packing 33 tightly against said floor to prevent water from flowing along the floor to said pipe.

1,226,470. REFRACTORY-METAL TUBE. WILLIAM D. COOLIDGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 20, 1915. Serial No. 9,532. (Cl. 29—148.)



The method of preparing tubular bodies of refractory metal which comprises filling a tubular mold with powdered metal, compressing the mass of powder by a uniform pressure in a radial direction applied to the inner wall of the mold and heating the mass thus compacted to partially sinter it before detaching from the outer wall of the mold.

1,226,471. REFRACTORY-METAL TUBE. WILLIAM D. COOLIDGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed Feb. 20, 1915, Serial No. 9,532. Divided and this application filed Feb. 5, 1916. Serial No. 76,351. (Cl. 219—63.)

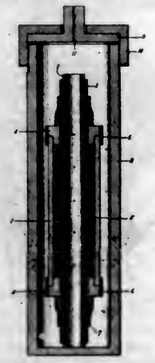
1. A homogeneous tubular mass of refractory metal having copper terminals autogenously united thereto.

2. A homogeneous mass of tungsten of tubular form having copper terminals autogeneously united thereto at each end.

3. A resistance element for an electric furnace consisting of a homogenous mass of tungsten of tubular form having copper terminals autogenously united thereto at each end.

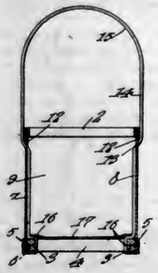


4. A heating element for an electric furnace consisting of a homogenous tubular mass of pressed and sintered



tungsten having copper terminals autogenously united thereto.

1,226,472. BASKET. FRANK C. DABNEY, Wichita, Kans. Filed May 18, 1916. Serial No. 98,356. (Cl. 217—122.)



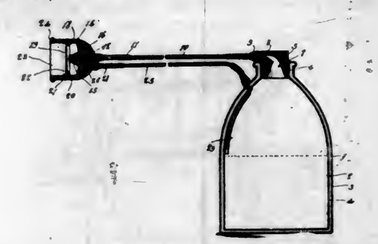
1. A device of the class described including an elongated strip adapted to be bent along transverse lines to form side and end walls, supporting strips secured along one edge thereof, a bail having its sides extended through the side walls and along the inner faces thereof, and means at the ends of the bail for engaging certain of the supporting strips, and a bottom adapted to rest upon said supporting strips.

2. A device of the class described including an elongated strip bent transversely to form side and end walls, supporting strips secured to the inner sides of said walls at the lower edges thereof, there being openings in opposed walls, a bail having its sides extended downwardly through the openings and along the inner sides of opposed walls, and means integral with the bail for engaging certain of the supporting strips, and a bottom mounted on the supporting strips.

3. A device of the class described including an elongated strip bent to form side and end walls, supporting strips secured along the inner sides of said walls at the lower edges thereof, a bottom mounted on the supporting strips, a bail having intermediate offset portions at the sides thereof extending through opposed walls, said sides being extended downwardly along the inner sides of the walls, and means at the lower ends of the sides of the bail for embracing opposed supporting strips and pressing outwardly thereagainst.

4. A device of the class described including an elongated strip bent to form side and end walls and an end flap lapping one of the walls, a bendable reinforcing channeled strip extending along the upper edges of the walls and flap, supporting strips extending along the lower edges of the walls and extending inwardly therefrom, a bottom mounted on said strips, a bail having its side portions extending downwardly outside of the reinforcing strip and thence inwardly through opposed walls and downwardly along the inner faces of the walls, and clips at the lower ends of the bail and embracing and pressing outwardly against opposed supporting strips.

1,226,473. STEAM-CUP. ALVA P. DANIEL, Commerce, Okla. Filed Aug. 3, 1916. Serial No. 112,999. (Cl. 128—28.)



1. In a device as set forth, the combination of a container having vacuum walls, and adapted for containing boiling water, of a body engaging cup, a flexible conduit communicating with said container and said body engaging cup for conveying steam from the container to the cup, a partition extending through said cup and dividing the interior of the same into two compartments.

2. In a device as set forth, the combination of a container having vacuum walls, and adapted for containing boiling water, of a body engaging cup, a flexible conduit communicating with said container and said body engaging cup for conveying steam from the container to the cup, a partition extending through said cup and dividing the interior of the same into two compartments, and a second flexible conduit communicating with said cup and said container for conveying condensed steam from the cup to the container.

3. In a device as set forth, the combination, of a container having vacuum walls, of a plug detachably seated in the mouth of said container, a body engaging cup, a diaphragm extending through said body engaging cup and dividing the same into compartments, a flexible conduit connected to said cup and to said plug, said plug provided with a centrally disposed opening for permitting the passage of steam from said container through the plug, said conduit and into one of the compartments of said cup for heating the air in the other compartment of the cup, and means for conveying the condensed steam from said body engaging cup to said container.

4. In a device as set forth, the combination of a container, a body engaging cup, a diaphragm extending through said cup and dividing it into a pair of compartments, flexible tubing connecting said container and said cup whereby steam from the container will be delivered to one of the compartments of said cup, a second flexible member communicating with said steam receiving compartment of said cup and the interior of said container for returning condensed steam to said container, a rigid tube positioned within said container and extending downwardly along one wall of the same, said rigid tube having connection with said second named flexible member for delivering the condensed steam into the container at a point below the point from which the steam passes from the container into the first named flexible member.

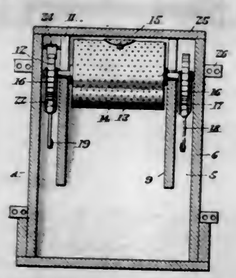
5. In a device as set forth, the combination, of a container having vacuum walls, a plug seated in the mouth of said container, a body engaging cup, a diaphragm extending through said body engaging cup and dividing the same into compartments, a flexible conduit connected to

said cup and to said plug, said plug provided with a centrally disposed opening for permitting the passage of steam from said container through the plug, said conduit and into one of the compartments of said cup for heating the air in the other compartment of the cup, a second flexible member communicating with the interior of the steam receiving compartment of said cup, a rigid tube positioned within said container and having one end connected to said second flexible tube for returning condensed steam from the cup into the container at a point below said plug.

[Claim 6 not printed in the Gazette.]

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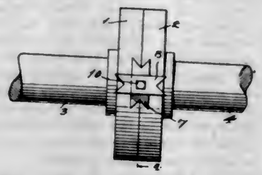
1,226,474. STOCK-FEEDER. EDWARD E. DAWSON, Petersburg, Ill. Filed Aug. 16, 1916. Serial No. 115,286. (Cl. 119—54.)



A device of the character described comprising a body having an opening in the front throughout the lower portion thereof, a trough carried by the body, a chute interiorly of the body, a reticulated drum rotatably mounted in the body, a displaceable board suspended within the body at the open front thereof and having connection with the drum for rotating the same on movement of the board in one direction for the discharge of a portion of the contents of the drum through the perforations in the chute.

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1,226,475. SHAFT-COUPLING. THOMAS I. DECK, Cantwell, Mo. Filed Aug. 5, 1915. Serial No. 43,835. (Cl. 64—13.)

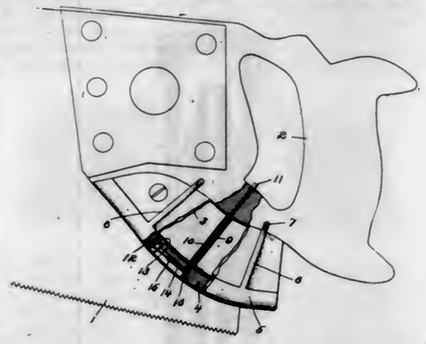


In a shaft coupling, the combination with adjacent shafts having abutting flanges thereon and the said flanges being provided in their adjacent faces with dove tailed grooves, a key member of a length equal to the diameters of said flanges adapted for insertion in said grooves, the said key being of double dove tailed construction to snugly engage within said opposing grooves, locking elements on the extremities of said key and being of equal size and shape as the ends of the key, and bolts for pivotally securing said locking elements to said key ends.

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1,226,476. DEVICE FOR OILING SAWS. MIRAH DELL, Hallandale, Fla. Filed Nov. 29, 1915. Serial No. 64,128. (Cl. 145—35.)

A saw blade oiling device comprising a tank having an upper wall shaped to fit against the lower side of a saw handle, said tank also having an oil cup on the lower side, a shield incasing the tank and having an opening in its lower side to receive the oil cup, a valve to control the supply of oil to the cup from the tank, means to



operate the valve, and an outer shield covering the lower side of the first-named shield, and also forming the bottom of the oil cup and provided with oil feeding openings.

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1,226,477. METAL BUILDING-PLATE. LIZZIE H. DICKELMAN, Forest, Ohio. Original application filed Oct. 13, 1914, Serial No. 866,435. Divided and this application filed July 3, 1915. Serial No. 37,976. (Cl. 189—85.)



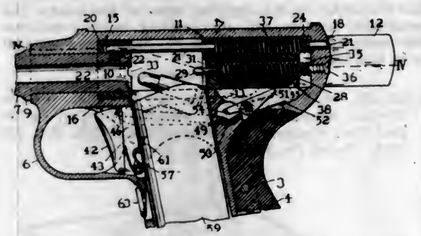
1. As an article of manufacture, a metal building plate comprising a metal sheet having a series of horizontal rows of ridges and depressions, said ridges being provided on their outer under sides with a series of rows of perforations, the edges of the perforations being substantially semi-circular, an integral downwardly and outwardly extending lip disposed above each of said perforations, and a substantially semi-circular trough or depression below each of the perforations, the ends of said trough being substantially in alinement with the end of said semi-circular perforation and the inner edges of the trough or depression intersecting the semi-circular perforation substantially at the ends of said perforations.

2. As an article of manufacture, a metal building plate having a series of horizontal rows of ridges and depressions, each of said ridges being provided with a plurality of perforations on the under side of the ridge, said perforations being of substantially semi-circular form, and each of said perforations being surmounted by an outwardly and downwardly inclined embossed lip, and a second lip underneath the edge of the perforation or opening, said second lip being outwardly and upwardly inclined.

3. As an article of manufacture, a metal building plate having a series of horizontal rows of ridges and depressions, each of said ridges being provided with a plurality of perforations on the under side of the ridge, said perforations being of substantially semi-circular form, and each of said perforations being surmounted by an outwardly and downwardly inclined embossed lip, a second lip underneath the edge of the perforation or opening, said second lip being outwardly and upwardly inclined, and a trough or depression immediately below said second named lip.



1,226,478. AUTOMATIC FIREARM. LUCIUS N. DIEHM, West Hartford, Conn., assignor, by direct and mesne assignments, of two-thirds to Berkley C. Stone, Middletown, Conn. Filed Aug. 6, 1915. Serial No. 43,916. (Cl. 42—3.)



1. In an automatic fire arm the combination of a trigger, a trigger-bar, a cam, and a sear, one end of the trigger-bar being pivotally connected with the trigger, the other end of the trigger-bar being provided with a dog for operating the sear, the sear being provided with a lug for engagement therewith, the cam being so positioned in respect to the trigger-bar that the dog on the trigger-bar in operation first engages the lug on the sear beneath the same and then passes over the said lug in returning to its normal position, substantially as described.

2. In an automatic fire arm the combination of a receiver, a trigger pivoted at the bottom thereto, a spring pressed trigger-bar pivotally connected with the upper portion of the trigger, a cam, and a sear, the trigger-bar being provided with a dog for operating the sear, the sear being provided with a lug for engagement therewith, the cam being so positioned in respect to the trigger-bar that the dog on the trigger-bar in operation first engages the lug on the sear beneath the same and then passes over the said lug in returning to its normal position, substantially as described.

3. In an automatic fire arm the combination of a receiver, a trigger pivoted at the bottom thereto, a spring pressed trigger-bar pivotally connected with the upper portion of the trigger and coöperating with the receiver to form a stop for the trigger, a cam and a sear, the trigger-bar being provided with a dog for operating the sear, the sear being provided with a lug for engagement therewith, the cam being so positioned in respect to the trigger-bar that the dog on the trigger-bar in operation first engages the lug on the sear beneath the same and then passes over the said lug in returning to its normal position, substantially as described.

4. In an automatic fire arm the combination of a receiver provided with an open sided chamber at the top thereof, a breech-bolt of unitary construction adapted for reciprocal movement in said chamber, a locking block removably secured in said chamber, and means coöperating therewith for maintaining the breech-bolt in said chamber, substantially as described.

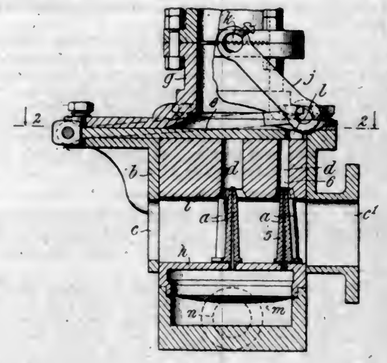
5. In an automatic fire arm the combination of a receiver provided with an open sided chamber at the top thereof, a breech-bolt of unitary construction adapted for reciprocal movement in the said chamber, a locking block removably secured in the said chamber, a guide pin and a locking pin, the locking block, guide pin, and locking pin coöperating to maintain the breech-bolt in said chamber, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,479. CARBURETER. THOMAS JOHN DISTURNAL, Belmont, Ireland. Filed Feb. 15, 1915. Serial No. 8,301. (Cl. 261—41.)

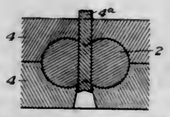
1. A carbureter comprising in combination a substantially rectangular casing provided with a circular extension, a throttle valve mounted in said extension, means for operating said throttle valve, a fuel chamber in said casing, a plurality of fuel supply nozzles communicating with said chamber and extending through the open part of said casing, the said nozzles being arranged in non-alining transverse series across the casing, a partition above said nozzles provided with a series of non-alining transverse openings adapted to aline with said nozzles and to coöperate therewith, a substantially rectangular plate slidably mounted above said partition and provided with a cut-out portion adapted to uncover a portion of one of said series of openings at all times, an ear on said plate, means pivotally connecting said ear and said throttle operating means whereby to successively uncover said openings by sliding the plate in conjunction with the operation of the throttle valve to uncover a greater or a lesser number of openings in order to regulate the mixture through the carbureter.



2. A carbureter comprising in combination a casing, a fuel reservoir in the casing, a plurality of openings formed in the casing, said openings being arranged in non-alining transverse series across said casing and communicating with a common air supply passage, a plurality of nozzles communicating with the fuel reservoir, the upper ends of the nozzles extending into the openings, the latter being of greater diameter than the diameter of the upper ends of the nozzles to form air passages, a flat slidable valve mounted snugly over the openings and provided with a cut out portion adapted to uncover a portion of one of said series of openings, means for mounting the valve to prevent the suction of the engine lifting said valve, whereby to seal the openings covered by the valve, means for operating the valve to successively uncover the openings to admit mixture through the openings, a pipe having a tapered mouth connected to the casing above the valve and the openings in the casing, and a throttle valve in said pipe.

3. A carbureter comprising in combination a casing, provided with a fuel chamber, said casing having a transverse air inlet passage extending therethrough and a plurality of vertical openings communicating with the air passage, said openings being arranged in non-alining transverse series across said casing, a plurality of nozzles communicating with the fuel chamber and mounted in the air passage and extending into the lower ends of the openings, a reciprocal flat valve snugly fitted over the openings and provided with a cut out portion adapted to uncover a portion of one of said series of openings at all times, means for mounting the valve to prevent the suction of the engine lifting said valve, whereby to insure the sealing of the openings when moved over the same, means for reciprocating the valve to successively uncover the openings; a pipe having a tapered mouth communicating with the casing directly above the valve and the openings in the casing, a throttle valve in said pipe, and means connecting the throttle valve and the flat valve to cause simultaneous movement of said valves.

1,226,480. METHOD OF MAKING STAY-BOLTS. ETHAN I. DODDS, Zelienople, Pa., assignor to Kerner Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 6, 1914. Serial No. 849,036. (Cl. 10—27.)



1. The method of making bolts, consisting in providing a blank having a reduced central portion, then removing a portion of the metal from the reduced central portion along the longitudinal axis, and then closing said opening and shaping the body and heads of said bolt; substantially as described.

2. The method of making stap bolts having enlarged heads from a blank whose cross sectional area is approximately equal to the cross sectional area of the enlarged heads, and which is of greater width than thickness, comprising the step of removing a portion of the metal from the thinnest dimension of the blank along the longitudinal axis thereof, to form a longitudinal opening therethrough, and then closing said opening and shaping the body and head of the bolt; substantially as described.

1,226,481. PROCESS FOR FORMING FABRIC-LINED RUBBER ARTICLES. JOHN W. DONNENWIRTH, Akron, Ohio. Filed Apr. 29, 1916. Serial No. 94,367. (Cl. 18—59.)

1. The process of manufacturing a molded rubber, fabric lined article which consists in applying to the fabric lining a thin coating of rubber, then placing the rubber coated fabric upon a core, then placing the core within a mold having sheets of rubber placed around the interior thereof and then applying pressure and heat to the mold.

2. The process of manufacturing a molded rubber, fabric lined article which consists in applying to the fabric lining a thin coating of rubber, then placing the rubber coated fabric upon a core, then placing sheets of rubber around the interior of a mold provided with an overflow channel then placing the core within the mold and then applying pressure and heat to the mold causing the sheets of rubber and the gum coating upon the fabric to melt and form a solid mass filling the mold, the superfluous rubber being forced into the overflow channel.

3. The process of manufacturing a molded rubber, fabric lined article which consists in applying to the fabric lining a thin coating of rubber, then placing the rubber coated fabric upon a cold core, the coated surface being placed upon the outside, then placing sheets of rubber around the interior of a mold provided with an overflow channel, then placing the core within the mold and then applying pressure and heat to the mold, causing the sheets of rubber and the gum coating upon the fabric to melt and form a solid mass, filling the mold, the superfluous rubber being forced into the overflow channel.

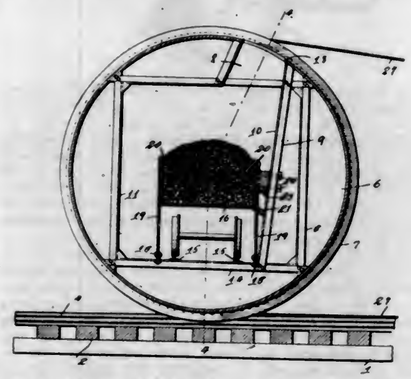
1,226,482. ROTARY TOOTH-BRUSH. WILLIAM J. DOSSEY, Glasgow, Ky. Filed Sept. 13, 1916. Serial No. 119,931. (Cl. 15—37.)



1. In a brush of the class described, a handle comprising a relatively fixed member and a removable member, a brush head mounted for oscillating movement and arranged with its bearings between the handle and the removable member, and an operating member mounted for reciprocating movement on the handle, said operating member and said brush head being provided with means to cause the brush head to be oscillated when said operating member is moved.

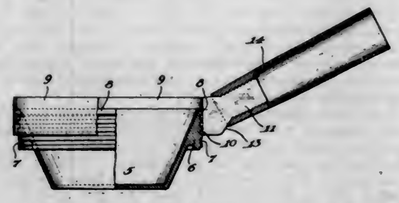
2. In a brush of the class described, a handle, a removable member for the handle, a brush head, a worm, a shaft connecting the brush head and worm, bearings for said shaft in the opposing sides of the handle and removable member, and an operating member mounted for reciprocating movement on the handle and engaged with said worm.

1,226,483. CAR-UNLOADING APPARATUS. EDWIN DUVALL, Sharonville, Ohio, assignor to The Duvall Coal Dock Company, Lewisburg, Ohio. Filed Feb. 23, 1916. Serial No. 80,023. (Cl. 214—11.)



In a car dumping machine, the combination with a main cylinder, a frame positioned within said main cylinder, a plurality of bracing bars secured to said main cylinder, an adjustable bracing beam secured to said bracing bars, a stationary socket plate secured to said bracing bars, and said socket plate adapted to engage the lower edge of a car body for bracing the same while dumping and assisting in holding said car body against displacement.

1,226,484. MEASURE. WILLIAM EHRLICH, Chicago, Ill., assignor to Case & Martin Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 8, 1916. Serial No. 89,847. (Cl. 73—165.)



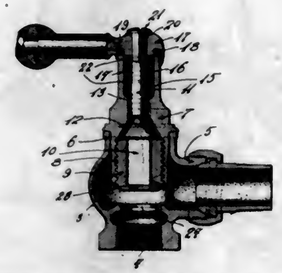
1. A measure comprising a bowl; an extension for said bowl in the form of a split ring embracing the same; and means for contracting said ring, substantially as described.

5. A member comprising a bowl; an extension embracing and threaded to the same, the thread on said bowl terminating below the top thereof and said bowl being provided with a stop flange adjacent its top, and the thread on said extension consisting of substantial single turn arranged immediately adjacent the bottom thereof; an externally threaded handle nipple at one side of said extension said nipple and ring being split, and said nipple being provided with a conical base; and a handle member threaded on said nipple, substantially as described.

[Claims 2 to 4 not printed in the Gazette.]

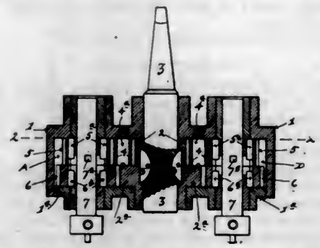


1,226,485. QUICK-OPENING PACKLESS VALVE. JOHN G. ENGELHART, Atlanta, Ga., assignor of one-half to Lewis F. Ostrander, St. Louis, Mo. Filed Aug. 5, 1912. Serial No. 713,394. (Cl. 137—4.)



An improved quick-opening valve, comprising a suitable body having the usual inlet and outlet and valve-seat; a valve-stem; a valve loose upon said stem so that it may move vertically thereon, but arranged to rotate therewith; a bonnet mounted upon said body; a threaded-connection between said valve and said bonnet; a cone on said stem above said valve; a seat for said cone, formed in said bonnet; a body of packing in said bonnet, above said cone; a handle secured to the upper end of said stem, and having an annular channel in its underside; a packing-ring located in said channel of the handle, and resting in contact with the upper end of said bonnet, with the walls of said channel embracing the upper end of said bonnet; a washer beneath said handle, within the upper end of said bonnet; and a coil spring surrounding the said valve-stem, and bearing down upon said packing, and bearing upward upon said handle washer, and tending to lift the handle off the bonnet.

1,226,486. MULTIPLE TAPPING DEVICE AND SIMILAR TOOL. FRANKLIN A. ERRINGTON, Stapleton, N. Y. Filed Sept. 23, 1914. Serial No. 863,200. (Cl. 10—130.)

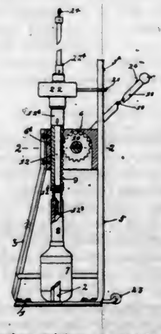


1. The combination with a non-rotary case having a double-depth main driving gear suitably journaled therein, a plurality of pinions meshing with the upper portion of said main driving gear and journaled upon a corresponding plurality of axles carried by said case, of a plurality of supplementary tapping units suitably supported by said case to rotate therein, each of said units having a supplementary driving gear and a supplementary reversing gear, the opposed faces of each of said gears being provided with a clutch adapted to engage an intermediate clutch carried by a reversible spindle, said spindle being journaled axially of said supplementary gears and movable longitudinally thereof to engage said clutches alternately, the supplementary driving gear of each of said units meshing with the adjacent one of said pinions to turn the supplementary driving gear in the same direction as the main driving gear, and the supplementary reversing gear of each of said units meshing directly with the lower portion of the main driving gear to turn the supplementary reversing gears in the direction opposite to that of the double-depth main driving gear, substantially as described.

2. The combination with a non-rotary case having a double depth main driving gear suitably journaled therein, the lower portion of said gear being of greater diameter than the upper portion thereof, a plurality of pinions meshing with the upper portion of said main driving gear and journaled upon a corresponding plurality of axles carried by said case, of a plurality of supplementary tapping units suitably supported by said case, each of said units consisting of a supplementary driving gear and a supplementary reversing gear, the opposed faces of each of said gears being provided with a clutch adapted to engage alternately with an intermediate clutch carried by a reversible spindle, said spindle being journaled axially of said supplementary gears and movable longitudinally thereof, the supplementary driving gear of each of said units meshing with the adjacent one of said pinions to turn the supplementary driving gear in the same direction as the main driving gear, and the supplementary reversing gear of each of said units meshing directly with the enlarged lower portion of said main driving gear to turn the supplementary reversing gears in a direction opposite to that of the main driving gear and at a greater velocity than their respective supplementary driving gears, substantially as described.

3. The combination with a non-rotary case having driving and reversing gears journaled therein and having their axes in line with each other, the driving-gear being of smaller diameter than the reversing-gear, a spindle journaled in said gears and movable longitudinally thereof, the opposing faces of said gears having clutches to engage an intermediate clutch carried by and adapted to connect said spindle alternately with either of said gears, and said case being provided with suitable mechanism to rotate said gears in opposite directions and the reversing-gear at a greater velocity than that of the driving-gear, substantially as described.

1,226,487. CEILING DRILL-PRESS. FRANKLIN A. ERRINGTON, Stapleton, N. Y. Filed Jan. 4, 1916. Serial No. 70,281. (Cl. 10—129.)



1. The combination with a portable base and a motor mounted thereon and provided with a rotary-driving sleeve, of a gear-box rigidly supported at a constant distance above said base and provided with a main bearing extending in line with said rotary-driving sleeve, a non-rotative rack-sleeve longitudinally movable in said main-bearing, its rack meshing with a feed-gear suitably journaled in said gear-box at right angles to the line of travel

of said rack-sleeve, means to rotate said feed-gear to move said rack-sleeve longitudinally in said main-bearing, and a rotary-driven longitudinally movable spindle extending in line with the axis of the motor, one portion of the spindle being suitably journaled in said rack-sleeve to move longitudinally in unison therewith along the main-bearing of the gear-box, the lower portion of the spindle being connected by a slip-joint with the rotary-driving sleeve to be driven thereby and longitudinally movable therealong, and the upper end of the spindle being adapted to receive a tool or tool-holder, substantially as described.

2. The combination with a portable base and a motor mounted thereon and provided with a rotary-driving sleeve, of a gear-box rigidly supported at a constant distance above said base and provided with a main-bearing extending in line with said rotary-driving sleeve, a non-rotative rack-sleeve longitudinally movable in said main-bearing, its rack meshing with a feed-gear connected to rotate with a feed-shaft journaled in said gear-box at right angles to the line of travel of said rack-sleeve, means to rotate said feed-gear to move said rack-sleeve down toward or up away from said base, a ratchet to check the downward movement while permitting the upward movement of said rack-sleeve, and a rotary-driven longitudinally movable spindle extending in line with the axis of the motor, one portion of the spindle being suitably journaled in said rack-sleeve to move longitudinally in unison therewith along the main-bearing of the gear-box, the lower portion of the spindle being connected by a slip-joint with the rotary-driving sleeve to be driven thereby and longitudinally movable therealong, the upper end of the spindle being adapted to receive a tool or tool-holder, substantially as described.

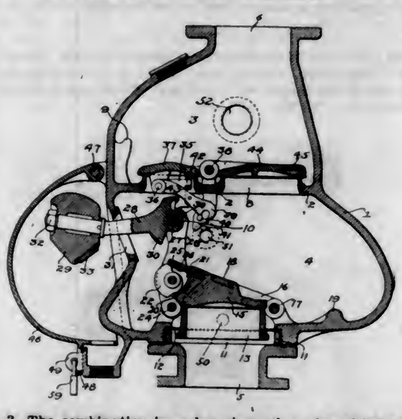
3. The combination with a portable base and a motor mounted thereon and provided with a rotary-driving sleeve, of a plurality of uprights extending above the base to rigidly support a gear-box at a constant distance thereabove, said gear-box being provided with a main-bearing in line with said rotary-driving sleeve, a non-rotative rack-sleeve longitudinally movable in the main-bearing, its rack meshing with a feed-gear mounted upon and connected to rotate with a feed-shaft journaled in the gear-box at right angles to the line of travel of the rack-sleeve, means to rotate the feed-gear to move the rack-sleeve along the main-bearing, and a rotary-driven longitudinally movable spindle extending in line with the axis of the motor, one portion of the spindle being suitably journaled in the rack-sleeve to move longitudinally in unison therewith along the main-bearing, the lower portion of the spindle being connected by a slip-joint with said rotary-driving sleeve to turn therewith and slide therealong, the upper end of the spindle being adapted to receive a tool or holder, one of said uprights being extended sufficiently above the gear-box to provide a supporting-column to receive the reverse-rod of a suitable reverse-gear box carried by said spindle, substantially as described.

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1,226,488. DRY-PIPE VALVE. POWELL EVANS, Philadelphia, Pa., assignor, by mesne assignments, to Globe Automatic Sprinkler Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 11, 1913. Serial No. 805,999. (Cl. 169—23.)

1. The combination in a dry pipe valve of a casing; a water valve; an air-controlled device; and mechanism operatively connecting said valve and said device including a lever having a member normally holding the valve shut; and a weighted arm projecting outside the casing and mounted on the lever in position to be operative on the air-controlled device to move the same; with a part integral with said weighted arm for closing the opening in the casing under predetermined conditions.

2. The combination in a dry pipe valve of a water valve; an air-controlled device; and mechanism operatively connecting said valve and said device including a lever having a member normally holding the valve shut; a weighted arm mounted on the lever and operative on the air-controlled device to tend to move the same independently of the valve and said lever; with means for causing said weighted arm to engage and turn the lever on its pivot under predetermined conditions.



3. The combination in a dry pipe valve of a yieldingly supported valve; an air-controlled device; and mechanism connecting said valve and device including a lever operative on the valve to keep it shut; said mechanism including a weighted arm mounted on said lever; with a member mounted on the air-controlled device and normally engaged by said weighted arm.

4. The combination in a dry pipe valve of a water valve; an air-controlled device; and mechanism operatively connecting said valve and said device, the same including a lever normally holding the water valve shut; with a weighted arm fulcrumed on said lever and operative on said valve, said arm having a projection placed to engage and turn the lever on its pivot under predetermined conditions.

5. The combination in a dry pipe valve of a water valve; a stud adjustably threaded into the top portion of said valve; an air controlled device; mechanism operatively connecting said valve and said device including a lever having a structure placed to detachably engage the water valve; a member connected to said lever and operative on the air controlled device; with a stop on the lever above its valve-engaging structure in position to engage the stud on the water valve to limit the movement of said lever toward said valve.

[Claims 6 to 21 not printed in the Gazette.]

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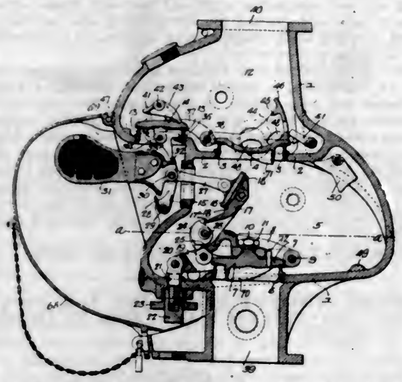
1,226,489. DRY-PIPE VALVE. POWELL EVANS, Philadelphia, Pa., assignor, by mesne assignments, to Globe Automatic Sprinkler Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 17, 1914. Serial No. 877,785. (Cl. 169—23.)

1. The combination in a dry pipe valve of a casing having a seat; a water valve coöperating with said seat; air controlled means including a lever for holding said valve closed; a member to which said lever is fulcrumed; and means for adjusting the position of said member to vary the position of the valve relatively to its seat.

2. The combination in a dry pipe valve of a casing having a valve seat; a water valve coöperating therewith; and air controlled means including a lever for normally holding said valve closed; a second lever mounted in the casing and serving as a fulcrum for the first lever; a threaded member connected to the second lever and extending outside of the casing; with a nut on said threaded member for adjusting the position of said second lever.

3. The combination in a dry pipe valve of a casing having two external openings respectively provided with valve seats; main air and water valves in the casing; an auxiliary air valve coacting with the seat of one of said openings of the casing; means connected with said auxiliary valve for holding the main water valve shut, said means including a lever fulcrumed outside of the casing, a weight movably mounted on said lever, a second lever in the casing and a link extending from the weight through the second opening and operatively connected to the second lever; with a valve for closing said second opening.





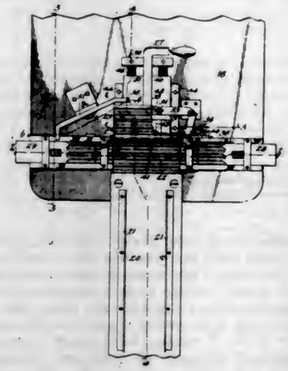
4. The combination in a dry pipe valve of a casing; main air and water valves in the casing; an auxiliary air valve normally closing an opening into the casing; a lever operative on said auxiliary air valve and fulcrumed on said auxiliary air valve; a weight fulcrumed outside of the casing and operative on said lever; with means connected to said weight and operative on the main water valve to normally hold it closed.

5. The combination in a dry pipe valve of a casing having a main water valve and an air controlled valve; a lever fulcrumed outside of the casing upon said air controlled valve; a weight operative on said lever; and means for operatively connecting the weight and the main water valve to hold the latter closed.

[Claims 6 to 18 not printed in the Gazette.]

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1,226,490. METAL-BENDING MACHINE. JOHN M. FEDDERS, Buffalo, N. Y., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y., a Corporation of New York. Filed Feb. 24, 1916. Serial No. 80,155. (Cl. 153—2.)



1. A metal bending machine comprising a lower fixed jaw, a vertically swinging upper jaw movable toward and from the lower jaw and adapted to bend a strip of metal between them so that two parts thereof are arranged side by side, and a mandrel adapted to support the parts of said strip on the inner sides thereof and comprising two sections which are movable laterally into and out of the space between said jaws from opposite sides thereof.

2. A metal bending machine comprising a lower fixed jaw, a vertically swinging upper jaw movable toward and from the lower jaw and adapted to bend a strip of metal between them so that two parts thereof are arranged side by side, and a mandrel adapted to support the parts of said strip on the inner sides thereof and comprising two sections which are movable laterally into and out of the spece between said jaws from opposite sides thereof and means for operating said mandrel sections simultaneously.

3. A metal bending machine comprising a lower fixed jaw, a vertically swinging upper jaw movable toward and from the lower jaw and adapted to bend a strip of metal between them so that two parts thereof are arranged side by side, and a mandrel adapted to support the parts of said strip on the inner sides thereof and comprising two sections which are movable laterally into and out of the space between said jaws from opposite sides thereof, and means for operating said mandrel sections simultaneously comprising elbow levers connected with said mandrel sections, a treadle connected with said levers, and a spring operating to lift said treadle and turn the levers in the direction for removing said mandrel sections from said jaws.

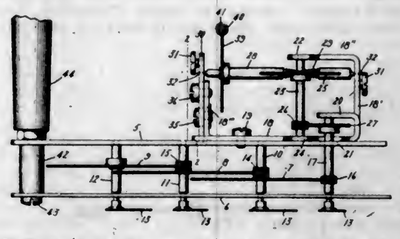
4. A metal bending machine comprising a pair of jaws which are relatively movable and adapted to bend a strip of metal so that two parts thereof are arranged side by side, a mandrel movable into and out of the space between said jaws and adapted to support the parts of said strip on the inner sides thereof while the outer sides of said parts are engaged by said jaws, and means for plaiting the strip in rear of said mandrel and jaws comprising a vertically swinging folding blade movable toward and from the rear ends of said mandrel and jaws.

5. A metal bending machine comprising a lower fixed jaw, a vertically swinging upper jaw movable toward and from the lower jaw and adapted to bend a strip of metal between them so that two parts thereof are arranged side by side, a mandrel movable into and out of the space between said jaws, a folding blade movable vertically in rear of said mandrel and jaws and adapted to form a plait in said strip, and a support for said strip below said blade.

[Claims 6 to 18 not printed in the Gazette.]

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1,226,491. ELECTRIC METER. ALEXANDER J. R. FIEGO, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Mar. 20, 1914. Serial No. 825,998. (Cl. 171—34.)



1. In an electric motor of the electric meter type, a rotatable shaft, a second shaft operatively geared to said rotatable shaft, a fixed bracket, a bearing member having a bearing for one end of said second shaft and having a hole therein, means for securing said bearing member to said bracket, and means including an eccentric cam positioned in said hole and rotatably mounted on said bracket for adjusting the position of said member with respect to the bracket whereby the operative engagement of the gearing between said two shafts is adjusted.

2. In an electric motor of the electric meter type, a rotatable shaft having a worm gear, a main supporting plate, a bracket secured to said plate, a bearing adjustably secured to said bracket, a second shaft journaled at one end in said bracket and at the other end in said bearing, a gear wheel on said second shaft meshing with the worm gear on said rotatable shaft, said second shaft also having a worm gear, a third shaft journaled at both ends in said bracket and carrying a gear wheel meshing with the worm gear on said second shaft, a fourth shaft journaled at one end in said bracket, and intermeshing gears connecting said third and fourth shafts.

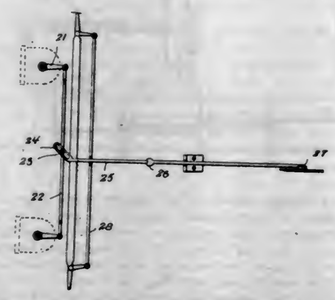
3. In an electric meter, a rotatable shaft, a second shaft operatively geared to said rotatable shaft, a fixed bracket, a bearing member having a bearing for one end of said second shaft and having a hole therein, an eccentric cam mounted on said bracket and positioned in the hole of said bearing member whereby the position of said member with respect to said bracket can be adjusted by turning said eccentric cam, a set-screw operatively engaging said bracket and adapted to secure the bearing member to the bracket in its adjusted position, a member to be driven by said rotatable shaft, and gearing operatively connecting said second shaft to said member.

4. In an electric motor meter, a rotatable meter shaft, a second shaft operatively geared to the meter shaft, a fixed bracket having a pivot hole in which one end of said shaft is journaled, a bearing member having a pivot hole in which the other end of said shaft is journaled, said bearing member also having a second hole therein, an eccentric cam mounted on said bracket and positioned in said second hole whereby the position of said member with respect to said bracket can be adjusted by turning said eccentric cam, a set-screw adapted to secure said member to said bracket in adjusted position, a meter register, and gearing operatively connecting said second shaft to the meter register.

5. In an electric motor meter, a rotatable meter shaft having a worm gear, a meter register comprising an integrating gear train and two parallel plates between which said gear train is suitably mounted, a bracket secured to one of said plates, a bearing adjustably secured to said bracket, a second shaft journaled at one end in the bracket and at the other end in said bearing, a gear wheel on said second shaft meshing with the worm gear on said meter shaft, said second shaft also having a worm gear, a third shaft journaled at both ends in said bracket and carrying a gear wheel meshing with the worm gear on said second shaft, a fourth shaft carrying the first gear of the integrating gear train and journaled at one end in said bracket and at the other end in one of said plates, and intermeshing gears connecting said third and fourth shafts.

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1,226,492. STEERING MECHANISM FOR AUTOMOBILE-LAMPS. GEORGE M. FIERO, Pittsburgh, Pa. Filed Aug. 9, 1916. Serial No. 113,965. (Cl. 240—61.)




1. In combination, a pair of head lamps, an arm connected to each lamp, a link connecting the arms together and a two part rod having a ball and socket connection with each other and one of the parts of said rod having a pin and slot connection with said link.

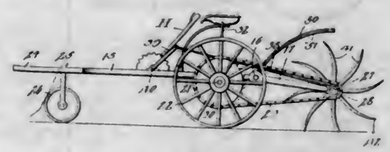
4. In combination with the head lamps and steering rod of an automobile, an arm connected to each lamp, a link connecting the arms together, a control rod consisting of a main part and an auxiliary part having a ball and socket connection with each other, said auxiliary part having a pin and slot connection with said link and means associated with said steering rod for swinging said auxiliary part, said slot being arranged at an angle to the movement of said link.

8. In combination with the head lamps and steering rod of an automobile, a pivotal connection including a link between said lamp, spaced projections mounted upon said steering rod and a two part control rod one part of which being arranged between said projections and having a pin and slot connection with said link, said slotted part of said rod being formed with an arch portion adapted to be moved in alinement with said projections, said slot being so constructed so as to allow movement of the pin when said arch portion is arranged in alinement with said projections.

[Claims 2, 3, and 5 to 7 not printed in the Gazette.]

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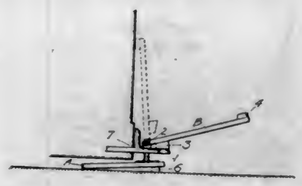
1,226,493. TILLING-MACHINE. JOHN FISH, Sunnyside, Utah. Filed Dec. 5, 1916. Serial No. 135,209. (Cl. 55—85.)



In a machine of the class described, a frame structure including a semi-circular angle bar and a diametrical cross bar connected therewith, a wheel carrying axle supporting the frame, brackets pivoted on the cross bar, a tooth carrying shaft rotatably supported by the brackets, and an upwardly curved shield secured on the cross bar and extending in the direction of the tooth carrying shaft, said shield having reinforcing angle bars at the ends thereof.

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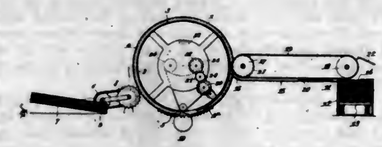
1,226,494. EXTENSION PIANO-PEDAL. RICHARD K. FOX, Colorado Springs, Colo. Filed Aug. 19, 1916. Serial No. 115,914. (Cl. 84—97.)




An extension piano pedal device comprising a flat base block, two metal posts mounted thereon, a bolt removably secured to the tops of said posts, extension pedals hinged on the bolt, a soft elastic block adjusted to the under side of each extension pedal near the hinge end the distance between the pedal operated upon and the extension pedal at the point of support on the pedal being greater than the distance between the pedal and the hinge for the extension pedal, thus elevating the free end of the extension pedal, a soft elastic tip on the upper side of the free end of each extension pedal, and a detachable adjusting strip under the end of the flat base block nearest the posts.



1,226,495. DUPLICATING AND ADDRESSING MACHINE. JOSEPH FRANK, New York, N. Y. Filed Apr. 14, 1916. Serial No. 91,153. (Cl. 101—1.)



1. A printing machine comprising, a revolving cylinder having an opening therein, printing mechanism contained within the cylinder and having an active printing surface exposed beyond the opening, and a set of feeding devices for respectively moving letter sheets and envelops into the presence of the opening to receive an impression of the active printing surface of the mechanism within said cylinder, said devices operating at different points about the cylinder as the latter revolves.

2. A printing machine comprising, a revolving cylinder having an opening therein, printing mechanism contained within the cylinder and having an active printing surface exposed beyond the opening, and a set of feeding devices for respectively moving letter sheets and envelops into the presence of the opening to receive an impression of the active printing surface of the mechanism within said cylinder, said devices operating at different points about the cylinder as the latter revolves, said printing mechanism consisting of companion rolls, a stencil tape adapted to be wound from one of said rolls on to the other, and gearing successively operating as the cylinder revolves to wind the tape from one roll to the other.

3. A printing machine comprising, a revolving cylinder having an opening therein, printing mechanism contained within the cylinder and having an active printing surface exposed beyond the opening, and a set of feeding devices for respectively moving letter sheets and envelops into the presence of the opening to receive an impression of the active printing surface of the mechanism within said cylinder, said devices operating at different points about the cylinder as the latter revolves, said printing device within the cylinder comprising, a set of rolls, power transmitting means for revolving the rolls, a flexible tape carrying a printing surface or design operatively connected with the rolls, and means disposed in the path of the power transmitting means for imparting successive movements thereto as the cylinder revolves.

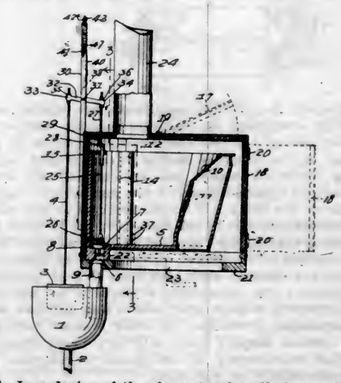
4. A printing machine comprising, a revolving cylinder having an opening therein, printing mechanism contained within the cylinder and having an active printing surface exposed beyond the opening, and a set of feeding devices for respectively moving letter sheets and envelops into the presence of the opening to receive an impression of the active printing surface of the mechanism within said cylinder, said devices operating at different points about the cylinder as the latter revolves, said printing device within the cylinder comprising, a set of rolls, power transmitting means for revolving the rolls, a flexible tape having a printing surface or design operatively connected with the rolls, and means disposed in the path of the power transmitting means for imparting successive movements thereto as the cylinder revolves, said second means comprising a toothed segment, the power transmitting means including a gear adapted to intermesh with said toothed segment.

5. A printing machine comprising a revolving cylinder having an external printing surface, internal printing mechanism in said cylinder having an active printing portion exposed exteriorly of the cylinder, means for advancing letter sheets successively to the exposed portion of the internal printing mechanism and to the printing surface of the cylinder, and means for singly conveying envelops to the exposed portion of the internal printing mechanism as the cylinder revolves.

[Claim 6 not printed in the gazette.]

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1,226,496. MELTING-POT. CHARLES A. FRASER and FRANK M. HENRY, Minneapolis, Minn., assignors of one-third to Criss K. Spears, Minneapolis, Minn. Filed Oct. 19, 1916. Serial No. 126,541. (Cl. 22—80.)



1. In a device of the character described, a melting pot, an auxiliary melting pot, heating means for the latter, a valve for controlling the flow from the auxiliary melting pot, a float, a rockingly mounted connection between the float and valve and a spring-pressed pivoted pendent member coöperable with said rocking connection to actuate the latter to give a quick snappy action to the valve.

2. In a device of the character described, a melting pot, an auxiliary melting pot, a valve within the latter for controlling the outlet therefrom, and a float in the first-named melting pot operatively connected to move in one direction as the valve moves in the opposite direction and a pendent pivoted member coöperable with the connection between the float and valve to give the latter a quick snappy action.

3. In a device of the character described, an auxiliary melting pot having flues, and a baffle plate bridging the space between two of said flues, said auxiliary melting pot having a discharge in its bottom and said baffle plate having openings near its lower end.

4. In a device of the character described, a melting pot, an auxiliary melting pot, a float in the former, a valve in the latter, rods connected with the float and valve, a cross arm connected with said rods and pivotally mounted between its ends, an upright member carried by the crossarm and having a notch, and a pendent swinging member pivoted above the upright member and having an end engaged in said notch and actuated by the movement of the float to give a quick snappy action to the valve.

5. In a device of the character described, a melting pot, an auxiliary melting pot, a float in the former, a valve in the latter, connections between the valve and float to cause them to move in unison in opposite directions, and a spring-actuated pendent swinging member constructed and arranged to give to the valve a quick action upon movement of the float.

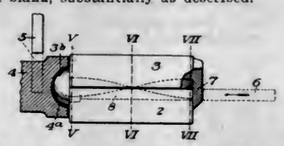
[Claim 6 not printed in the gazette.]

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1,226,497. APPARATUS FOR MAKING COMPOUND TWISTED BOLTS. JOSEPH A. FRAUENHEIM, Pittsburgh, Pa., assignor to Kerner Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 29, 1914. Serial No. 879,456. (Cl. 10—24.)

1. Apparatus for forming semi-blanks for twisted compound bolts, comprising die members movable relatively

to each other and in a transverse direction relative to the blank, one of the members having an arc-shaped recess extending across the entire face thereof and the other member having a helically curved face arranged to engage a flat face of the blank and rotate portions of the blank over the arc-shaped face of the other member to twist the blank, substantially as described.



2. Apparatus for forming semiblanks for twisted compound bolts, comprising die members movable relative to each other and in a transverse direction relative to the blank, one of the members having an arc-shaped recess extending across the entire face thereof and the other member having a helically curved face arranged to engage a flat face of the blank and rotate portions of the blank over the arc-shaped face of the other member to twist the blank, and a heading tool adapted to form one-half of a head on one end of the blanks, substantially as described.

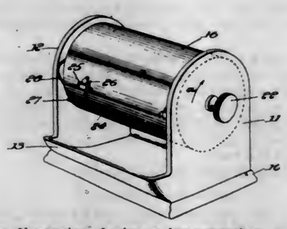
3. A die for shaping semi-cylindrical twisted members for compound bolts, comprising a plurality of members movable relatively to each other, one of said members having an arc-shaped recess and the other member having a helically curved shaping face, said face being approximately flat transversely at all points throughout its length, substantially as described.

4. A die for shaping members for twisted compound bolts, comprising a plurality of members movable relatively to each other, one of said members having an arc-shaped recess extending across the entire face thereof, and the other member having a helically curved shaping face, said face being approximately flat transversely at all points throughout its length, and a third die member having a head-forming recess arranged to be moved toward the other member to upset a head on the end of the blank, substantially as described.

5. A die for shaping members for twisted compound bolts, comprising a plurality of members movable relatively to each other, one of said members having an arc-shaped recess, and the other member having a helical shaping face curved about the center of the arc-shaped recess, and a third die member having a head-forming recess arranged to be moved toward the other member to upset a head on the end of the blank, and one of the first named members having a projection which coöperates with the head-forming recess to center the heading tool and to shape the head of the blank, substantially as described.

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1,226,498. DISPENSING DEVICE. WILLARD E. FREDERICK, Pasadena, Cal. Filed Apr. 10, 1916. Serial No. 90,195. (Cl. 206—21.)



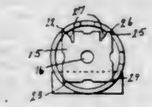
1. In a dispensing device, a base member, a cylindrical container rotatably mounted thereupon, a rectangular opening formed through the wall of the container and extending the longitudinal length thereof, and of a width approximately that of the width of an article to be dispensed therethrough, a movable closure over said opening, and means for moving said closure to emit an article from the container upon the rotation thereof.

2. In a dispensing device, a base member, a hollow cylindrical container mounted to rotate upon said base member, a longitudinally extending slot formed through the wall of the container, a hinged member adapted to normally close said slot, means for moving the hinged member out of register with the slot, and means formed upon said hinged member whereby a single article will be engaged and emitted therefrom upon the rotation of the cylindrical container.

3. In a dispensing device, a base member, uprights formed thereupon, a cylindrical container horizontally disposed and rotatably mounted upon and between said uprights, means for rotating said container, a slot through the wall of said container and extending substantially the longitudinal length thereof, said slot being formed with its longitudinally extending walls at an inwardly divergent angle to each other, a hinged closure mounted to rest over said opening, a shoulder formed upon the terminating edge of said hinged closure, said shoulder being adapted to rest against the outer wall of the container and form a receptacle in combination with the outer wall of the container whereby an object may be lodged, and means whereby rotation of said container will act to swing said hinged closure outwardly and away from the container and allow the article engaged thereby to be released therefrom.

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1,226,499. PRINTING-MATRIX. LEGRAND FRIEL, Los Angeles, Cal. Filed Apr. 30, 1914. Serial No. 835,423. (Cl. 199—12.)

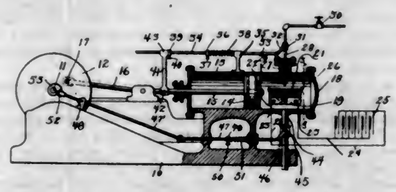


1. A matrix having a plurality of casting edges and selection notches in the edge and a central transverse hole: and a turning lug.

2. A matrix provided with casting edges and selecting notches and a turning lug in the edge and a central hole.

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1,226,500. WATER EXPLOSION-ENGINE. GUSTAV FUEHLER, Verdon, S. D. Filed Aug. 9, 1916. Serial No. 113,990. (Cl. 219—38.)

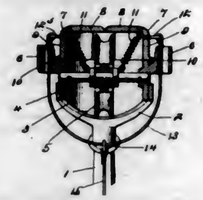


A flash unit for steam engine cylinders of the flash type comprising a pair of supports adapted to be secured opposite each other within a cylinder, a heating coil carrying member adapted to fit between said supports and be carried thereby, said member having a spiral groove extending therearound from one end to the other and being formed of a refractory insulating substance, a resistance wire wound on said member in said groove, and a flash plate supported on top of said member out of contact with the resistance wire and in juxtaposition therewith.

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1,226,501. TROLLEY-WHEEL. ELMER GABRIEL, Athens, Ohio. Filed June 30, 1916. Serial No. 106,943. (Cl. 191—80.)

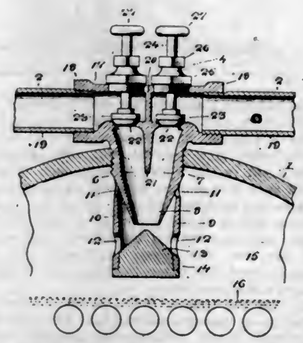
In a device for the purpose set forth, the combination with a trolley pole, of a ring member formed on the fork thereof and centrally provided with oppositely disposed upwardly extending lugs, each of said lugs having a central opening, an axle journaled transversely in the ring below the lugs, a trolley wheel upon the axle, guards comprising two substantially similar members having side flanges and each of said members being pivotally connect-



ed to the ring opposite the respective lugs on the ring, spring means between the sections of the guard and the axle for normally bringing the confronting edges of the guard members into engagement, and a flexible bail passing through the openings in the lugs and connected with the guards, and a trolley rope connected with the bail.

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1,226,502. FEED-WATER SYSTEM FOR STEAM-BOILERS. WILLIAM ASA GIBSON, Peoria, Ill., assignor of one-third to George B. Koontz and one-third to John C. Schleich, Peoria, Ill. Filed Mar. 10, 1916. Serial No. 83,404. (Cl. 122—438.)

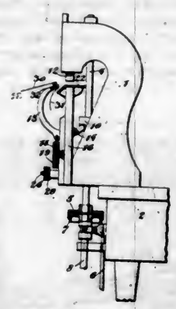


1. In a steam boiler feed water system, a nozzle open at its outer end and arranged to discharge in the steam space of a boiler and a structure extending in the same direction as the nozzle and providing a chamber around the discharge end of the nozzle, said structure having a steam inlet opening to said chamber at a point above the discharge end of the nozzle and also having a discharge opening leading from said chamber at a point below the discharge end of the nozzle, and a water spreading and speed accessory element arranged between the said discharge opening of the chamber and a point opposite and spaced from the discharge end of the nozzle.

2. In a steam boiler feed water system, a nozzle open at its outer end and arranged to discharge in the steam space of a boiler and a structure extending in the same direction as the nozzle and providing a chamber around the discharge end of the nozzle, said structure having a steam inlet opening to said chamber at a point above the discharge end of the nozzle and also having a discharge opening leading from said chamber at a point below the discharge end of the nozzle, and a water spreading and speed accessory cone arranged between the said discharge opening of the chamber and a point opposite and spaced from the discharge end of the nozzle.



1,226,503. BEADING-MACHINE. ROBERT D. GILLETTE, St. Charles, Mo. Filed July 22, 1916. Serial No. 110,760. (Cl. 12—53.)



1. A machine of the character described comprising a presser-foot, a bearing-plate disposed therebeneath, means for depressing said foot, devices for automatically retracting the same, and mechanism for vertically adjusting said plate relative to said foot.

2. A machine of the character described comprising a presser-foot, a bearing-plate disposed therebeneath, an arm, means for projecting an extremity thereof between said foot and plate, means for depressing said foot, and devices for automatically retracting the same.

3. A machine of the character described comprising a presser-foot, a bearing-plate disposed therebeneath, an arm, means for projecting an extremity thereof between said foot and plate, means for depressing said foot, devices for automatically retracting the same, and mechanism for vertically adjusting said plate relative to said foot.

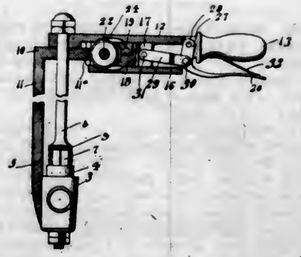
4. A machine of the character described comprising a presser-foot, a bearing-plate disposed therebeneath, a pin extending from said foot, a shaft, a cam-roller secured thereto adapted to depress said pin, and springs adapted to lift said foot upon release of said pin.

5. A machine of the character described comprising a presser-foot, a bearing-plate disposed therebeneath, a pin extending from said foot, a shaft, a cam-roller secured thereto adapted to depress said pin, springs adapted to lift said foot upon release of said pin, posts supporting said plate, and cams disposed beneath said posts adapted to raise the same.

[Claims 6 and 7 not printed in the Gazette.]

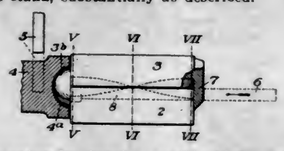
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1,226,504. FIRING-VALVE TO CONTROL THE FEED OF OIL IN FIRING OIL-BURNING LOCOMOTIVES. BENOIST P. GILMAN, Yoakum, Tex. Filed Nov. 15, 1915. Serial No. 61,632. (Cl. 137—7.)



In combination with a valve casing and a plug to control the passage of fuel oil therethrough, a stem connected to said plug and adapted to turn therewith, a bracket to which the valve casing is secured, said bracket having

to each other and in a transverse direction relative to the blank, one of the members having an arc-shaped recess extending across the entire face thereof and the other member having a helically curved face arranged to engage a flat face of the blank and rotate portions of the blank over the arc-shaped face of the other member to twist the blank, substantially as described.



2. Apparatus for forming semiblanks for twisted compound bolts, comprising die members movable relative to each other and in a transverse direction relative to the blank, one of the members having an arc-shaped recess extending across the entire face thereof and the other member having a helically curved face arranged to engage a flat face of the blank and rotate portions of the blank over the arc-shaped face of the other member to twist the blank, and a heading tool adapted to form one-half of a head on one end of the blanks, substantially as described.

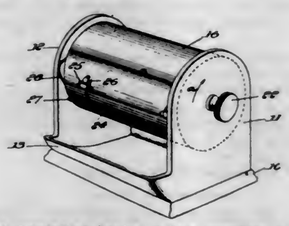
3. A die for shaping semi-cylindrical twisted members for compound bolts, comprising a plurality of members movable relatively to each other, one of said members having an arc-shaped recess and the other member having a helically curved shaping face, said face being approximately flat transversely at all points throughout its length, substantially as described.

4. A die for shaping members for twisted compound bolts, comprising a plurality of members movable relatively to each other, one of said members having an arc-shaped recess extending across the entire face thereof, and the other member having a helically curved shaping face, said face being approximately flat transversely at all points throughout its length, and a third die member having a head-forming recess arranged to be moved toward the other member to upset a head on the end of the blank, substantially as described.

5. A die for shaping members for twisted compound bolts, comprising a plurality of members movable relatively to each other, one of said members having an arc-shaped recess, and the other member having a helical shaping face curved about the center of the arc-shaped recess, and a third die member having a head-forming recess arranged to be moved toward the other member to upset a head on the end of the blank, and one of the first named members having a projection which coöperates with the head-forming recess to center the heading tool and to shape the head of the blank, substantially as described.

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1,226,498. DISPENSING DEVICE. WILLARD E. FREDERICK, Pasadena, Cal. Filed Apr. 10, 1916. Serial No. 90,195. (Cl. 206—21.)



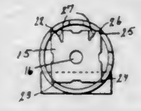
1. In a dispensing device, a base member, a cylindrical container rotatably mounted thereupon, a rectangular opening formed through the wall of the container and extending the longitudinal length thereof, and of a width approximately that of the width of an article to be dispensed therethrough, a movable closure over said opening, and means for moving said closure to emit an article from the container upon the rotation thereof.

2. In a dispensing device, a base member, a hollow cylindrical container mounted to rotate upon said base member, a longitudinally extending slot formed through the wall of the container, a hinged member adapted to normally close said slot, means for moving the hinged member out of register with the slot, and means formed upon said hinged member whereby a single article will be engaged and emitted therefrom upon the rotation of the cylindrical container.

3. In a dispensing device, a base member, uprights formed thereupon, a cylindrical container horizontally disposed and rotatably mounted upon and between said uprights, means for rotating said container, a slot through the wall of said container and extending substantially the longitudinal length thereof, said slot being formed with its longitudinally extending walls at an inwardly divergent angle to each other, a hinged closure mounted to rest over said opening, a shoulder formed upon the terminating edge of said hinged closure, said shoulder being adapted to rest against the outer wall of the container and form a receptacle in combination with the outer wall of the container whereby an object may be lodged, and means whereby rotation of said container will act to swing said hinged closure outwardly and away from the container and allow the article engaged thereby to be released therefrom.

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1,226,499. PRINTING-MATRIX. LEGRAND FRIEL, Los Angeles, Cal. Filed Apr. 30, 1914. Serial No. 835,423. (Cl. 199—12.)

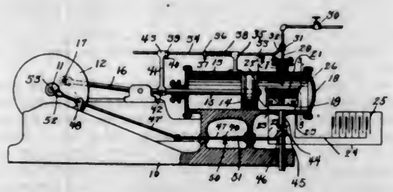


1. A matrix having a plurality of casting edges and selection notches in the edge and a central transverse hole: and a turning lug.

2. A matrix provided with casting edges and selecting notches and a turning lug in the edge and a central hole.

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1,226,500. WATER EXPLOSION-ENGINE. GUSTAV FUEHLER, Verdon, S. D. Filed Aug. 9, 1916. Serial No. 113,990. (Cl. 219—38.)

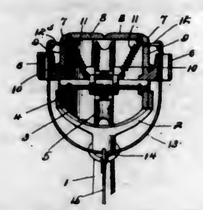


A flash unit for steam engine cylinders of the flash type comprising a pair of supports adapted to be secured opposite each other within a cylinder, a heating coil carrying member adapted to fit between said supports and be carried thereby, said member having a spiral groove extending therearound from one end to the other and being formed of a refractory insulating substance, a resistance wire wound on said member in said groove, and a flash plate supported on top of said member out of contact with the resistance wire and in juxtaposition therewith.

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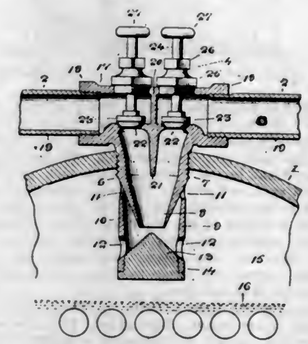
1,226,501. TROLLEY-WHEEL. ELMER GABRIEL, Athens, Ohio. Filed June 30, 1916. Serial No. 106,943. (Cl. 191—80.)

In a device for the purpose set forth, the combination with a trolley pole, of a ring member formed on the fork thereof and centrally provided with oppositely disposed upwardly extending lugs, each of said lugs having a central opening, an axle journaled transversely in the ring below the lugs, a trolley wheel upon the axle, guards comprising two substantially similar members having side flanges and each of said members being pivotally connected to the ring opposite the respective lugs on the ring, spring means between the sections of the guard and the axle for normally bringing the confronting edges of the guard members into engagement, and a flexible ball passing through the openings in the lugs and connected with the guards, and a trolley rope connected with the ball.



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1,226,502. FEED-WATER SYSTEM FOR STEAM-BOILERS. WILLIAM ASA GIBSON, Peoria, Ill., assignor of one-third to George B. Koontz and one-third to John C. Schleich, Peoria, Ill. Filed Mar. 10, 1916. Serial No. 83,404. (Cl. 122—438.)

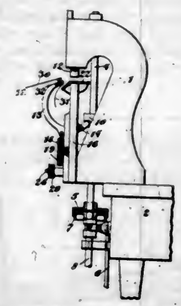


1. In a steam boiler feed water system, a nozzle open at its outer end and arranged to discharge in the steam space of a boiler and a structure extending in the same direction as the nozzle and providing a chamber around the discharge end of the nozzle, said structure having a steam inlet opening to said chamber at a point above the discharge end of the nozzle and also having a discharge opening leading from said chamber at a point below the discharge end of the nozzle, and a water spreading and speed accessory element arranged between the said discharge opening of the chamber and a point opposite and spaced from the discharge end of the nozzle.

2. In a steam boiler feed water system, a nozzle open at its outer end and arranged to discharge in the steam space of a boiler and a structure extending in the same direction as the nozzle and providing a chamber around the discharge end of the nozzle, said structure having a steam inlet opening to said chamber at a point above the discharge end of the nozzle and also having a discharge opening leading from said chamber at a point below the discharge end of the nozzle, and a water spreading and speed accessory cone arranged between the said discharge opening of the chamber and a point opposite and spaced from the discharge end of the nozzle.



1,226,503. BEADING-MACHINE. ROBERT D. GILLETTE, St. Charles, Mo. Filed July 22, 1916. Serial No. 110,760. (Cl. 12—53.)



1. A machine of the character described comprising a presser-foot, a bearing-plate disposed therebeneath, means for depressing said foot, devices for automatically retracting the same, and mechanism for vertically adjusting said plate relative to said foot.

2. A machine of the character described comprising a presser-foot, a bearing-plate disposed therebeneath, an arm, means for projecting an extremity thereof between said foot and plate, means for depressing said foot, and devices for automatically retracting the same.

3. A machine of the character described comprising a presser-foot, a bearing-plate disposed therebeneath, an arm, means for projecting an extremity thereof between said foot and plate, means for depressing said foot, devices for automatically retracting the same, and mechanism for vertically adjusting said plate relative to said foot.

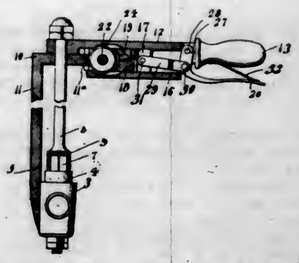
4. A machine of the character described comprising a presser-foot, a bearing-plate disposed therebeneath, a pin extending from said foot, a shaft, a cam-roller secured thereto adapted to depress said pin, and springs adapted to lift said foot upon release of said pin.

5. A machine of the character described comprising a presser-foot, a bearing-plate disposed therebeneath, a pin extending from said foot, a shaft, a cam-roller secured thereto adapted to depress said pin, springs adapted to lift said foot upon release of said pin, posts supporting said plate, and cams disposed beneath said posts adapted to raise the same.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,504. FIRING-VALVE TO CONTROL THE FEED OF OIL IN FIRING OIL-BURNING LOCOMOTIVES. BENOIST P. GILMAN, Yoakum, Tex. Filed Nov. 15, 1915. Serial No. 61,632. (Cl. 137—7.)

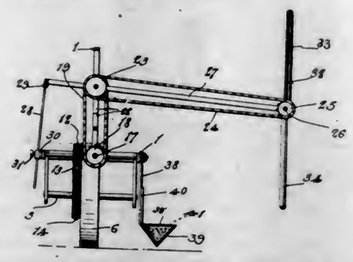


In combination with a valve casing and a plug to control the passage of fuel oil therethrough, a stem connected to said plug and adapted to turn therewith, a bracket to which the valve casing is secured, said bracket having

a segment arm provided with a segment rack, the upper portion of the said stem having a bearing in said segment arm, a lever attached to said stem and adapted to turn therewith and on the said arm, a block mounted in said lever for movement toward and from the segment arm, a worm having its bearings in said block and movable thereby into and out of engagement with the segment rack, an operating lever for the said block, and means to prevent the first-named lever from moving casually.

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1,226,505. BOLL-WEEVIL EXTERMINATOR. BENJAMIN F. GRAY, Blocton, Ala. Filed Aug. 19, 1916. Serial No. 115,803. (Cl. 43—1.)



1. In a boll weevil exterminator, a supporting frame, a pair of substantially horizontal arms pivotally carried by said frame for forming relatively long and short arms, a shaft rotatably carried by the end of the long arms, a reel mounted upon said shaft, means for rotating said reel, a rod pivotally connected to said short arms, a socket carried by said frame for receiving said rod, a set screw carried by said socket for engaging said rod for holding said reel in adjusted position, and a liquid retaining weevil receiving trough adjustably supported by said frame.

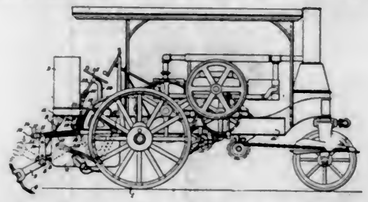
2. In a boll weevil exterminator, a supporting frame, a pair of substantially horizontal arms pivotally carried by said frame for forming relatively long and short arms, a shaft rotatably carried by the ends of the long arms, a reel mounted upon said shaft, means for rotating said reel, said reel being constructed of sheet metal and having a pair of oppositely extending wings, said wings having their edges rolled for providing rounded surfaces for engagement with plants, a rod pivotally connected to said short arms, a socket carried by said frame for receiving said rod, a set screw carried by said socket for engaging said rod for holding said reel in adjusted position, a liquid retaining weevil receiving trough adjustably supported by said frame, and a plurality of partitions placed within said trough for preventing splashing of liquid contained therein.

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1,226,506. SCARIFYING ATTACHMENT FOR ROAD-ENGINES. CHARLES M. GREINER and HENRY D. JONES, Springfield, Ohio, assignors to The Kelly-Springfield Road Roller Company, Springfield, Ohio, a Corporation of Ohio. Filed Mar. 4, 1915. Serial No. 12,045. (Cl. 37—50.)

1. In a scarifying attachment for road engines, scarifying devices movably attached to the rear of said engine, two lever members pivotally connected together, one of said lever members being pivotally connected with said engine and the other with said scarifying devices, a coil spring carried by one of said members for exerting spring pressure upon said scarifying devices, means for applying power to said lever members at a point intermediate the extreme pivotal points thereof, and a positive lock for said lever members when said lever members have been operated to a substantially straightened position.

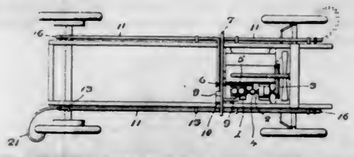
2. In a scarifying attachment for road engines, scarifying devices movably connected to the rear of said engine, two lever members pivotally connected together, one of said members having a pivotal connection with said engine and the other with said scarifying devices, gear teeth arranged upon one of said members, a worm in mesh with said gear teeth together with means for operating said worm, a support for said worm, the pivotal connection



between said members being at a point substantially in line with said gear teeth and the position of said support being such that when said lever members have been operated to a substantially straightened position said support will form a positive lock for the same in one direction.

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1,226,507. TIRE-INFLATING APPARATUS. LEARNER E. GUESS, Marion, Ky. Filed May 5, 1916. Serial No. 95,652. (Cl. 230—27.)



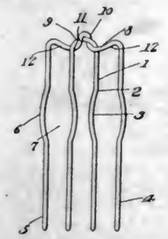
1. Tire inflating apparatus for motor vehicles comprising an air pump, means adapting said pump to be driven by the vehicle motor, a distributer box into which said pump discharges, pipes leading from said box and terminating adjacent to the vehicle wheels, each of said pipes having an open end and an internal annular shoulder, a flexible air tube movable into and out of the open end of said pipe, a fitting at the inner end of said flexible tube having an annular shoulder in opposed relation to said internal shoulder, and means for forcing one of said shoulders toward the other to form an air tight joint between said pipe and tube.

2. Tire inflating apparatus for motor vehicles comprising an air pump, means adapting said pump to be driven by the vehicle motor, a distributer box into which said pump discharges, pipes leading from said box and terminating adjacent to the vehicle wheels, each of said pipes having an open end and an internal annular shoulder, a flexible air tube movable into and out of the open end of said pipe, a fitting at the inner end of said flexible tube having an annular shoulder in opposed relation to said internal shoulder, means for forcing one of said shoulders toward the other to form an air tight joint between said pipe and tube, said distributer box being mounted on the dash, an air pressure gage connected with said box and mounted in rear of the dash, and means controlled in rear of the dash for throwing the pump into and out of operation.

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1,226,508. HAIR-PIN. TORSTEN ALFONSO GYLLSDORFF, Detroit, Mich. Filed Jan. 18, 1916. Serial No. 72,840. (Cl. 132—22.)

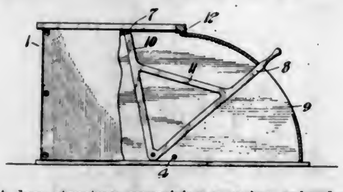
1. A hair pin comprising a U-shaped outer member having a centrally arranged loop in the portion connecting the sides thereof, a U-shaped inner member having a smooth and curved portion connecting the sides thereof, said smooth and curved portion passing between the sides of the loop and over the portion connecting the sides of the first mentioned member, an inwardly bowed portion between the ends of each of the sides of the inner member, and an outwardly bowed portion in each of the sides of the outer member.



2. A hair pin comprising a U-shaped outer member, a U-shaped inner member connected with the outer member and arranged between the sides thereof, said outer member having an outwardly bowed portion on each side thereof, and an inwardly bowed portion in each side of the inner member alining with the outer bowed portion in a side of the outer portion.

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1,226,509. CELLAR-DOOR. ZENO HABERMAN, Garden City, S. D. Filed June 6, 1916. Serial No. 102,059. (Cl. 94—7.)



1. A door structure comprising a casing, a hood pivotally mounted therein, said hood being weighted at one end, a lever fulcrumed upon the casing and means operatively connecting the lever with the hood whereby said lever when swung is adapted to move the weighted end portion of the hood from a position at one side of a vertical line passing through the pivot of the hood to the opposite side of the said line.

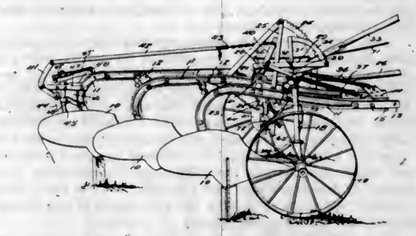
2. A door structure comprising a casing, a hood pivotally mounted in the casing and being weighted at one end, a lever fulcrumed upon the casing and disposed transversely thereof, a lever fulcrumed at the exterior of the casing and operatively connected with the first mentioned lever, a bar pivoted upon the casing and operatively connected with the first mentioned lever, and a cable connected at one end with the hood and adapted to engage the casing at its other end, the intermediate portion of the said cable engaging the said bar.

3. A door structure comprising a casing, a hood pivotally mounted therein and weighted at one end portion, a lever fulcrumed upon the casing and disposed transversely thereof, a lever fulcrumed at the exterior of the casing and operatively connected with the first mentioned lever, a bar pivoted to the casing and operatively connected with the first mentioned lever, a rod disposed under the casing and having an opening, pulleys journaled under the casing, a cable connected at one end with the hood and trained around the said pulleys and engaging the said bar, said cable passing through the opening in the rod and a weighted handle grip carried by the cable and adapted to engage the rod when the cable is moved longitudinally.

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1,226,510. PLOW. FREDERICK E. HAND, Evansville, Ind., assignor to The Vulcan Plow Company, Evansville, Ind. Filed Nov. 17, 1915. Serial No. 62,021. (Cl. 97—55.)

1. In a plow, a frame, a supporting wheel, a crank member having axial bearing on the frame, a hand lever having one end pivotally mounted on the upper horizontal part of the crank member, locking means for the hand lever, an axle for the wheel having rotatable connection with the lower end of the crank member on the frame and provided with a crank, means connecting the crank with the lever, a clutch device on the hub of the wheel, a complementary clutch device on the axle and connected thereby with the lever and means for effecting the engagement of the clutch devices.



3. In a plow, a frame, a supporting wheel and axle therefor, means for connecting the wheel and axle at will, a hand lever and its lock, a crank member having axial bearings on the frame and with its upper horizontal portion having pivotal connection with one end of the lever, said connection being in substantial alinement with the bearings on the frame, and the axle having rotatable connection with the lower end of the crank member, a crank arm on one end of the axle, and means connecting the crank arm with the lever.

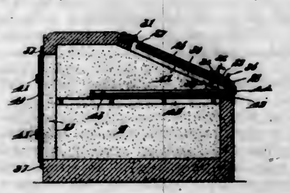
4. In a plow, a frame, a supporting wheel and axle therefor, a hand lever and its lock, a crank member having axial bearings on the frame, and with its upper horizontal portion having pivotal connection with one end of the lever, said connection being in substantial alinement with the bearings on the frame, and the axle having rotatable connection with the lower end of the crank member, a crank arm on one end of the axle, means connecting the crank arm with the lever, and clutch mechanism between the axle and wheel.

6. The combination with a plow embodying a frame, a plow bottom and a supporting wheel, of a crank having at its upper end a horizontal shaft on the frame, a stub-axle for said wheel carried parallelly and rotatably by the lower end of the crank and journaling the wheel thereon, a clutch to connect the stub-axle and wheel at will, manually controlled means on said crank-shaft controlling the clutch, a crank-arm carried by the stub-axle, and a hand lever having pivotal connection with the upper horizontal portions of the crank and having spring controlled connection with the crank arm on the stub shaft.

[Claims 2 and 5 not printed in the Gazette.]

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1,226,511. REFUSE-RECEPTACLE. FREDERICK HARPER, Chicago, Ill. Filed Oct. 9, 1915. Serial No. 54,926. (Cl. 220—115.)



1. A refuse receptacle having openings in the top and a side thereof; and two closures for each of said openings, one closure for each opening being foraminated and the other non-foraminated, substantially as described.

2. A refuse receptacle having openings in the top and a side thereof; two closures for each of said openings, each inner closure being foraminated and each outer closure being non-foraminated; and a removable ash sifter under the top opening, substantially as described.

3. A refuse receptacle having openings in the top and a side thereof; an inner foraminated upwardly swinging closure for the top opening; an upwardly swinging non-foraminated closure covering said inner closure; a detachable connection between said closures effecting simultaneous swinging thereof; and a closure for said side opening, substantially as described.

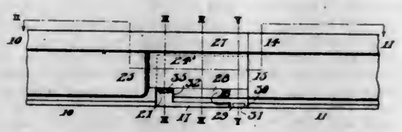
4. A refuse receptacle having openings in the top and a side thereof; an inner foraminated upwardly swinging closure for the top opening; an upwardly swinging non-foraminated closure covering said inner closure; a detachable connection between said closures effecting simultaneous swinging thereof; an inner foraminated horizontally swinging door for said side opening hinged to said receptacle; a latch for securing said door in closed position; an outer horizontally swinging non-foraminated door hinged to said inner door and arranged to close the foraminations therein; and a latch for securing said non-foraminated door closed, substantially as described.

5. A refuse receptacle having an opening therein; an inner foraminated swinging closure for said opening; a swinging non-foraminated closure covering said inner closure; and a detachable connection between said closures effecting simultaneous swinging thereof, substantially as described.

[Claim 6 not printed in the Gazette.]

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1,226,512. RAIL-JOINT. ANDY HAVRILLA, Senecaville, Ohio. Filed Nov. 13, 1916. Serial No. 131,025. (Cl. 239—8.)

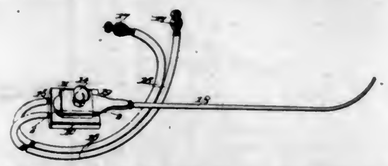


1. A rail joint comprising substantially complementally formed rail ends, one of said ends having an upper cut-away tread and web portion and opposite slots in the base flanges thereof, the other rail end having a longitudinal recess in the web thereof adapted for receiving the web portion of the adjacent rail, depending lugs upon the second-named rail end adjacent said socket adapted for fitting within the said slots.

2. A rail joint comprising the end of a rail having the tread and web broken away and opposite slots in the base flanges thereof with a dove-tailed groove in the web between the said slots, terminal ledges upon the said base flanges having downwardly flaring grooves in their upper faces and spaced from the adjacent web, the said web having a perforation therethrough in alinement with the said grooves, and a complementally formed rail end adapted for interfitting within the said cut-away portion and slots and between the said ledges and web, and locking slides for the said rail ends arranged through the said grooves and perforations.

3. A rail joint comprising a rail end having its web portion provided with a longitudinal socket and opposite interrupted portions in the base flanges thereof, and alining openings through the said web adjacent the said interrupted portions, depending terminal lugs upon the base flanges having flared seating grooves longitudinally arranged therein, and a complementally formed rail end having portions arranged within the said socket and interrupted portion when the rails are in their engaging position, and locking slides arranged through the said openings and grooves adapted for engagement with adjacent portions of the last-named rail end when the members are in operative arrangement.

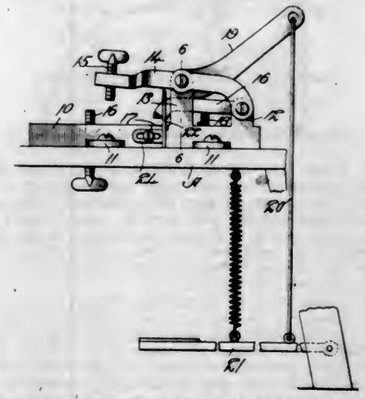
1,226,513. SURGICAL INSTRUMENT. MAXENCE B. HERMAN, Memphis, Tenn. Filed Mar. 11, 1916. Serial No. 83,525. (Cl. 128—28.)



An instrument of the character described comprising a rectangular sound box consisting of a pair of spaced flat walls opposing one another, and side walls connecting the edges of said flat opposed walls and forming therewith an enlarged shallow sound chamber, one of said side walls being provided with a pair of attaching tubes extending therefrom and communicating with the said sound chamber, ear tubes connected with said attaching tubes, implements introducible into the body regions of stones, each of a nature to produce sound upon contact with a stone, and clamping means carried by the said opposed walls of the sound box and disposed centrally of their outer faces, to firmly secure the said implements at one end to the sound box.

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1,226,514. SAW-SET. EVERETT L. HEWEY, East Dixfield, Me. Filed May 25, 1916. Serial No. 99,813. (Cl. 76—63.)



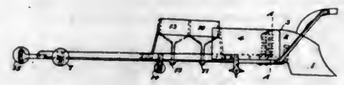
1. A saw set comprising a base, a gage arm secured to the base and having one end bifurcated, a gage screw threaded in the gage arm, a gage screw threaded in the base, a setting arm pivoted on the base, and a cam lever pivoted to the base and coöperating with the setting arm and movable between the furcations of the gage arm.

2. A saw set comprising a base, upstanding ears secured to one end of the base, upstanding ears secured to the base intermediate its ends, a gage arm having a bifurcated end the furcations of which embrace and are secured to said ears, a gage screw threaded in the gage arm, a gage screw threaded in the base, a setting arm pivoted between the first ears and movable between the second ears, and a cam lever between the second ears and coöperating with the setting arm.

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1,226,515. METHOD OF PLANTING. THOMAS W. HICKS, Minneapolis, Minn. Original application filed Aug. 21, 1916, Serial No. 116,147. Divided and this application filed Jan. 15, 1917. Serial No. 142,566. (Cl. 111—6.)

1. The method of seed planting comprising the lifting and pulverizing of a portion of the soil, returning the pulverized soil to the sub-soil in a shower and introducing seed during the act of the return of the soil to the sub-soil in a plane intermediate of the plane of the sub-soil and the upper surface of the completed seed bed.



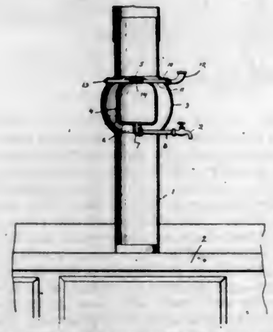
2. The method of seed planting, comprising the lifting of a portion of the soil, pulverizing the soil so lifted, returning the pulverized soil to the subsoil and introducing seed into the pulverized soil during the act of its being returned to the subsoil.

7. The method of seed planting, comprising the lifting and pulverizing of a portion of the soil, returning onto the subsoil the finer granules of pulverized soil forming thereby a root bed, introducing seed onto the root bed so formed, packing the root bed so formed and covering the packed and seeded root bed with the remainder of the pulverized soil.

[Claims 3 to 6 and 8 not printed in the Gazette.]

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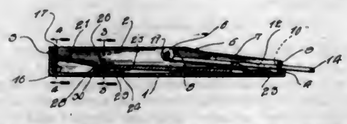
1,226,516. HOT-WATER DRUM. WALTER L. HILL, Kenna, N. Mex. Filed July 21, 1916. Serial No. 110,566. (Cl. 126—364.)



A device of the character set forth comprising a stove pipe having an enlarged portion therein, a drum located within said enlarged portion, means for draining water from the drum, a pair of oppositely disposed bosses positioned on the enlarged portion of the stove pipe, a pipe extending through said bosses and through the drum and having an opening therein located within the drum, and means for supplying the pipe with water to fill the drum.

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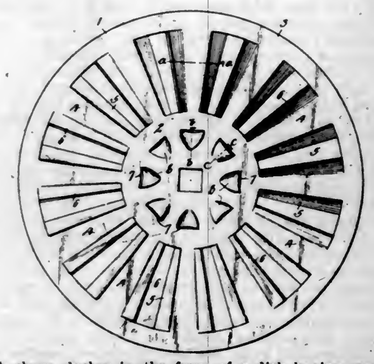
1,226,517. ANIMAL-TRAP. JOHN N. HOFFMAN, Forest Grove, Oreg. Filed Mar. 13, 1916. Serial No. 83,898. (Cl. 43—21.)



An animal trap comprising a rectangular shaped stationary metallic base having integral upturned side walls and a rear wall, a pair of spaced parallel longitudinally extending ears struck up from said base adjacent one end, a pivot bar extending transversely across said base and engaging the upper edges of said ears intermediate their ends, a longitudinally extending flat bait-holding trigger on the upper surface of said base disposed between said upstruck ears and of a width slightly less than the width between said ears, a portion of the trigger between the ears being bent substantially U-shaped with its outer surface adapted to rock upon the base and its inner surface surrounding the lower portion of the transversely extending bar above said ears which forms a guide for said portion when rocked by the depression of the trigger, a spring actuated jaw hinged between the side walls of said base, a pivoted member on the rear wall of said base adapted to engage said jaw when the same is under spring tension and movable to release the same, and a connection between said member and the trigger to move the member upon the depression of the trigger.

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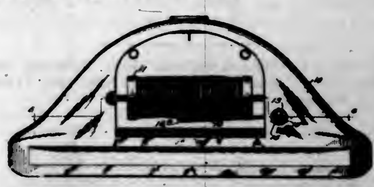
1,226,518. CHURN-DASHER. ARTEMAS E, F. HOLDEN, Centralia, W. Va. Filed Mar. 10, 1917. Serial No. 153,898. (Cl. 259—144.)



A churn dasher in the form of a disk having central peripheral and radially disposed portions lying in the same plane, there being provided at the edges of the said radially disposed portions blades which are disposed at acute angles with the said plane, some of the blades being extended above the plane and the others below the said plane and cone shaped hoods provided upon the central portion and disposed some above the plane thereof and the others below the plane thereof, the larger ends of said hoods being outwardly disposed and open.

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1,226,519. SHUTTLE TENSION DEVICE. ELBRIDGE R. HOLMES and SIMON DAVIS, Worcester, Mass., assignors to Crompton & Knowles Loom Works, Worcester, Mass., a Corporation of Massachusetts. Filed Nov. 17, 1915. Serial No. 62,022. (Cl. 139—46.)



1. In a loom, in combination, a shuttle, a weft bobbin rotatably mounted therein, and a bobbin tension device yieldingly engaging the weft on said bobbin, said device comprising a sleeve fixed in an opening extending through said shuttle near one end thereof and perpendicular to the axis of said bobbin and having fixed and movable heads in its opposite ends, a weft-engaging member pivoted in said heads, a spring connected at its opposite ends to said member and to said movable head, and means to secure said movable head in angularly adjusted position relatively to said sleeve, said movable head being normally held in

engagement with said securing means by said spring, and being movable axially toward said arm against the pressure of said spring, thereby disengaging said head from said securing means.

2. In a loom, in combination, a shuttle, a weft bobbin rotatably mounted therein, and a bobbin tension device yieldingly engaging the weft on said bobbin, said device comprising a sleeve fixed in an opening extending through said shuttle near one end thereof and perpendicular to the axis of said bobbin and having fixed and movable heads in its opposite ends, a weft-engaging member pivoted in said heads, a spring connected at its opposite ends to said member and to said movable head, and means to secure said movable head in angularly adjusted position relatively to said sleeve, said spring being effective to provide tension for said weft engaging device and also to maintain said head normally in engagement with said securing means.

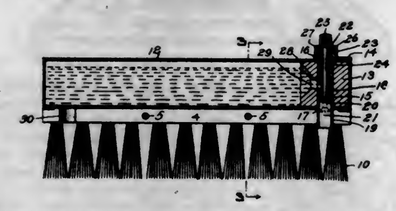
3. In a loom, in combination, a shuttle, a weft bobbin rotatably mounted therein, and a bobbin tension device yieldingly engaging the weft on said bobbin, said device comprising a sleeve fixed in an opening extending through said shuttle near one end thereof and perpendicular to the axis of said bobbin, and having fixed and movable heads in its opposite ends, a weft-engaging member pivoted in said heads, a spring connected at its opposite ends to said member and to said movable head, and means to secure said movable head in angularly adjusted position relatively to said sleeve, said head having provision for engagement with a tool by which said head may be pressed inwardly to cause disengagement from said securing means, and by which the head may also be turned to adjust the spring tension on said weft engaging device.

4. In a loom, in combination, a shuttle, a weft bobbin rotatably mounted therein, and a tension device yieldingly engaging the weft on said bobbin, said device comprising a sleeve fixed in an opening extending through said shuttle and having fixed and movable heads in its opposite ends, a weft-engaging member pivoted in said heads, a spring connected at its opposite ends to said member and to said movable head, and means to secure said movable head in angularly adjusted position relatively to said sleeve, said means comprising coöperating teeth and lugs on said sleeve and head adapted to engage each other in a plurality of positions and normally held in fixed engagement by said spring.

5. In a loom, in combination, a shuttle, a weft bobbin rotatably mounted therein, and a tension device yieldingly engaging the weft on said bobbin, said device comprising a sleeve fixed in an opening extending through said shuttle and having fixed and movable heads in its opposite ends, a weft-engaging member pivoted in said heads, a spring connected at its opposite ends to said member and to said movable head, and means to secure said movable head in adjusted position relatively to said sleeve, said means comprising inwardly extending lugs on said sleeve and notches in said movable head adapted to engage said lugs in any one of a plurality of relative angular positions.

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1,226,520. FOUNTAIN-BRUSH. PAUL HUETHER, Pittsburgh, Pa. Filed Aug. 3, 1916. Serial No. 112,924. (Cl. 15—46.)



1. In a fountain brush, the combination of a two-part expansible handle having bristles, a liquid-container held between said parts, said container having a valve-controlled opening whereby liquid may be discharged therefrom.

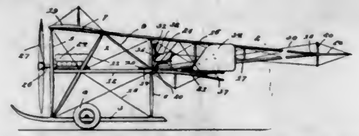
2. In a fountain brush, the combination of a handle having bristles formed of two parts forming a seat between the same, yielding connections between said parts, a liquid-container held between said parts, said container having a valve-controlled opening whereby liquid may be discharged therefrom.

3. In a fountain brush, the combination of a handle having bristles formed of two parts, bolts connecting said parts, and springs surrounding said bolts interposed between heads on said bolts and shoulders formed in said handle, a liquid-container held between said parts, said container having valve-controlled openings whereby said liquid may be discharged thereform.

4. In a fountain brush, the combination of a handle having bristles and having a cavity extending longitudinally thereof, a liquid container fitting within said cavity, a plug in said container having a passage extending through it, a rotary valve casing extending through said passage and through an opening formed for it in said handle, and a spring-controlled valve in said casing.

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1,226,521. FLYING-MACHINE. JOHN M. HUFF, San Francisco, Cal. Filed Feb. 25, 1914. Serial No. 820,969. (Cl. 244—14.)



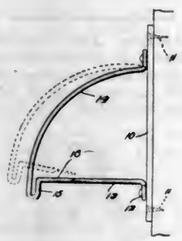
In a flying machine, the combination of a main frame, a tail frame projecting therefrom, an upper main supporting plane mounted upon the upper forward portion of the main frame in advance of the mean centers of gravity and pressure of the machine, a lower main supporting plane mounted upon the base of the tail frame at a point below and in rear of the upper main supporting plane and at or near the junction of the tail frame with the main frame, a motor mounted upon the main frame beneath the upper front supporting plane and mainly in advance of the centers of gravity and pressure of said plane, a tractor propeller driven by said motor, and an aviator's seat mounted above the lower rear supporting plane at a point in advance of the centers of gravity and pressure of said plane and between such centers of gravity and pressure and the mean centers of gravity and pressure of the machine the said tail frame being of skeleton form and forming an inclosure for the aviator's seat and extending therefrom rearwardly over and beyond the lower rear supporting plane, a horizontal rudder at the rear of the tail frame disposed in a horizontal plane between the horizontal planes of the said main supporting planes, vertical rudders supported upon the lower rear plane in rear of the centers of gravity and pressure thereof and on opposite sides of the tail frame, said rudders being connected for movement in unison, and means for adjusting the respective rudders.

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1,226,522. BILL-FILE. GIBBS HUNTLY, Caro, Mich. Filed July 10, 1916. Serial No. 108,452. (Cl. 129—8.)

1. A device of the class described comprising a support, a fixed member projecting therefrom, a relatively movable resilient member mounted upon the support and forming a continuation of the fixed member, and said movable member being provided with a depending finger engaging manipulating loop.

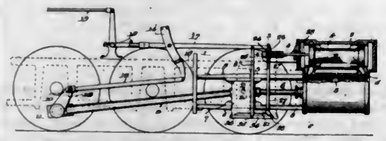
2. A device of the class described comprising a base, a standard rising therefrom, a sleeve rotatably mounted on said standard, a fixed member projecting horizontally from said sleeve, a relatively movable member constructed from resilient material carried by the sleeve and having its free end removably engaging said fixed member and forming a continuation thereof, and said movable member



being formed to provide a finger engaging manipulating portion for the purpose described.

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1,226,523. LOCOMOTIVE VALVE-GEAR. THOMAS JAMES, Jr., Philadelphia, Pa. Filed Feb. 21, 1917. Serial No. 150,101. (Cl. 121—99.)



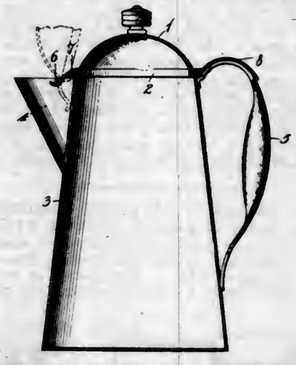
1. In valve gear of the class described, the combination with an engine including a reciprocating piston valve and crosshead, a plate secured to the crosshead, articulated links pivotally connected with said plate, an eccentric carried by the latter and having the positions thereof regulated by said links, of a lap and lead lever having the substantially lower extremities thereof provided with an opening for the reception of said eccentric, whereby said lever will be capable of moving in unison with said crosshead, a radius rod connected with the upper extremity of said lever, a stem protruding from the valve and having a block and slot connection with said lever, and a variable lead controlling arm connected with said radius rod and with said links at a position contiguous to said lever and adapted to maintain substantially parallel relation with the latter, irrespective of the positions of said crosshead.

2. In valve gear of the class described, the combination with a locomotive steam engine including a reciprocating crosshead and a steam-distribution valve, a plate secured to said crosshead, an eccentric carried by said plate, a lap and lead lever connected with said eccentric, a pin and slot connection provided contiguous to the upper extremity of said lever, and having connections with said distribution valve, a radius rod pivoted to said lever at a position above said pin and slot connection, and a variable lead arm connected with said radius rod and with said eccentric, and operable to regulate the substantially vertical positions of said lever.

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1,226,524. RECEPTACLE-CLOSURE. ADOLPHUS F. JEFFRIES, New York, N. Y. Filed Oct. 13, 1916. Serial No. 125,442. (Cl. 53—3.)

The combination with a coffee pot having a spout at one side of its open upper end and a handle at the other, and a pin extending transversely across the spout below the line of the upper end of the pot; of a cover, a handle extending rearward therefrom and overlying the handle of the pot when the cover is closed, and an arm extending forward and downward from the cover opposite its handle and having a tongue at its extremity adapted to engage beneath said pin when the cover is closed, the tongue resting against the front side of the pot and the arm behind



the pin when the cover is raised, and the forward edge of the cover at this time rests upon the top of the spout.

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1,226,525. TAKE-UP MECHANISM FOR LOOMS. LAWRENCE B. JENCKES, Worcester, Mass., assignor to Crompton & Knowles Loom Works, Worcester, Mass., a Corporation of Massachusetts. Filed May 17, 1916. Serial No. 98,201. (Cl. 139—60.)



1. In a loom, a take-up mechanism comprising a take-up roll, a cloth roll, a driving shaft, positive driving connections from said shaft to said take-up roll, and frictional driving connections from said shaft to said cloth roll, said latter connections including a pawl and ratchet mechanism whereby the driving shaft and take-up roll may be rotated in a backward direction independently of the cloth roll.

2. In a loom, a take-up mechanism comprising a take-up roll, a cloth roll, a driving shaft, positive driving connections from said shaft to said take-up roll, and frictional driving connections from said shaft to said cloth roll, said latter connections being effective to drive said cloth roll in the forward direction only.

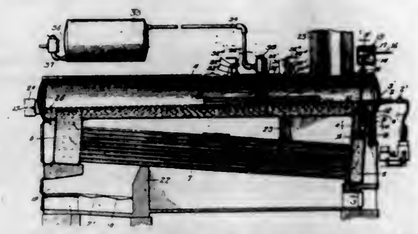
3. In a loom, a take-up mechanism comprising a take-up roll, a cloth roll, a driving shaft, positive driving connections from said shaft to said take-up roll, and frictional driving connections from said shaft to said cloth roll, said connections including a driving gear loose on the cloth roll shaft, a ratchet wheel fixed to said shaft, a friction drum rotatable relatively to said ratchet wheel

and having a pawl adapted to engage the ratchet teeth, a friction band encircling said drum, and connections from said driving gear to said band, whereby said drum may be frictionally driven in both directions, but said ratchet wheel and roll shaft may be driven in one direction only.

4. In a loom, a take-up mechanism comprising a take-up roll, a cloth roll, a driving shaft, positive driving connections from said shaft to said take-up roll, and frictional driving connections from said shaft to said cloth roll, said latter connections including a freely rotatable driving gear, a member fixed to the cloth roll shaft, and a ratchet mechanism through which said gear is effective to drive said member and shaft in one direction only.

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1,226,526. METHOD OF OBTAINING GASOLENE AND OTHER LIGHT OILS FROM HEAVIER HYDROCARBONS. ULYSSES S. JENKINS, Chicago, Ill., assignor, by mesne assignments, to Jenkins Petroleum Process Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed July 13, 1916. Serial No. 108,983. (Cl. 196—25.)



1. The method of obtaining light oil from heavier hydrocarbons which consists in heating said heavier hydrocarbons in a still, maintaining pressure in said still, permitting gases and vapors of greater average density than that of the lowest produced in said still, to escape at selective points below the top of the chamber, subsequently condensing said vapors and forcing fresh heavier hydrocarbons into said still to make up for that transformed into said vapors.

3. The method of obtaining gasolene and other light oils from heavier hydrocarbons consisting in pumping the hydrocarbons into a still, forcing the same through heated tubes inclined upwardly from the receiving to the delivery end thereof, and through a circulating chamber connecting the receiving and delivery ends of the tubes whereby the entire liquid contents of the still will be in constant circulation through the tubes and chamber and the vapors and gases will constantly be evolved from the liquid, then taking the vapors thus generated from a level above the liquid most conducive to a complete removal of the condensable vapors and below the top of the chamber, substantially as described.

[Claims 2 and 4 not printed in the Gazette.]

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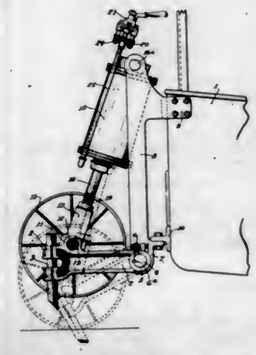
1,226,527. COMB. EDWARD MCGUIRE JONES, Winchester, Ky. Filed May 17, 1915. Serial No. 28,571. (Cl. 132—3.)



A comb comprising a hollow, elongated body portion having staggered openings, teeth arranged between said openings and having ducts therein, a coupling carried by said body portion medially the ends thereof, a flexible connection attached to said coupling for feeding air into said body portion and through said openings, a reservoir carried by said coupling and having a tube projecting into said body portion intermediate its ends, and a baffle plate arranged in said body portion below said tube, the ends of said plate terminating short of the ends of said body portion.

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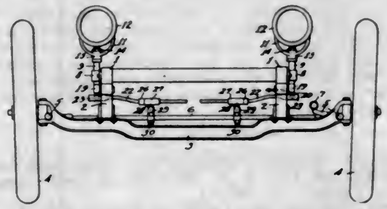
1,226,528. SCARIFYING ATTACHMENT FOR ROAD-ENGINES. HENRY D. JONES, Springfield, Ohio, assignor to The Kelly-Springfield Road Roller Company, Springfield, Ohio, a Corporation of Ohio. Filed June 23, 1915. Serial No. 35,839. (Cl. 37—50.)



In a scarifying apparatus, and in combination with a motor driven road engine, a scarifying attachment embodying a frame work detachably secured to the rear of the engine frame, a transverse shaft journaled in the lower end of said frame work, a series of scarifier tool holding bars rigidly mounted on said shaft and projecting rearwardly, scarifying tools removably mounted in the rear ends of said arms and projecting downwardly therefrom, a transverse shaft rigidly connecting said arms and located above the general plane of the bars whereby accumulations in front of the scarifying teeth may escape rearwardly between the bars, a motor cylinder and piston mounted in the upper portion of said frame-work, a rearwardly and downwardly extending piston rod, a yoke connected with said rod, connections intermediate the transverse shaft at the rear ends of the bars and the arms of said yoke, whereby downward pressure exerted through the piston and rod will be applied to said shaft at points spaced from each other, and manually operated elastic fluid controlling means for the cylinder.

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1,226,529. HEAD-LAMP CONTROL FOR MOTOR-VEHICLES. J ALBERT JONES, Marcellus, Mich. Filed Jan. 6, 1917. Serial No. 140,927. (Cl. 240—61.)



1. In a head-lamp control for motor vehicles, the combination with the cross connecting rod of the steering gear of the vehicle, of a pair of lamps spaced in alinement transversely of said vehicle and journaled thereon to turn each toward the other upon vertical axes, yieldable retracting means to retain said lamps in normal alinement, actuating members pivotally connected eccentrically to the axes of said lamps respectively and extending therefrom in adjacent parallel alinement with said connecting rod, and coupling members pivotally carried by said connecting rod slidably receiving said actuating members and operably engageable therewith respectively and alternately with movement of said rod in opposite directions for imparting movement to turn said lamps independently one toward the other and in a direction corresponding with the deflected course of the vehicle.

2. In a head-lamp control for motor vehicles, the combination with the cross connecting rod of the steering gear of the vehicle, of a pair of lamps spaced in alinement transversely of said vehicle and having vertically journaled stems respectively on which said lamps are adapted to turn toward each other, yieldable retracting members connected with said stems respectively to retain said lamps in normal alinement, actuating members pivotally connected eccentrically to said stems respectively and extending therefrom in opposed adjacent longitudinal alinement parallel with said connecting rod, stops on said actuating members, and coupling members pivotally carried by said connecting rod slidably embracing said actuating members respectively between said stops and engageable therewith correspondingly through movement of said connecting rod in opposite directions for imparting movement to turn said lamps alternately one toward the other and in a direction corresponding with the deflected course of the vehicle.

3. In a head-lamp control for motor vehicles, the combination with the cross connecting rod of the steering gear of the vehicle, of a pair of lamps spaced in alinement transversely of said vehicle and journaled thereon to turn toward each other upon vertical axes, yieldable retracting means coöperating with limiting stops to return and retain said lamps in normal alinement, actuating members pivotally connected eccentrically to the axes of said lamps respectively and extending therefrom in adjacent parallel alinement with said connecting rod, means pivotally and slidably coupling said connecting rod with said actuating members respectively and operably engageable therewith independently and correspondingly with movement of said rod in opposite directions for imparting movement to turn said lamps alternately one toward the other and in a direction corresponding with the deflected course of the vehicle, and manually operable means for actuating either of said lamps to turn it toward the other.

4. In a head lamp control for motor vehicles, the combination with the cross connecting rod of the steering gear of the vehicle, of a lamp journaled to turn upon a vertical stem supported upon one side of said vehicle, an arm on said stem, a limiting stop for said arm, retracting means to yieldably restrain said arm engaged with said stop to retain said lamp normally alined with said vehicle, an actuating rod pivotally connected to said arm and extending therefrom in adjacent parallel alinement with said connecting rod, a collar on said actuating rod, a coupling sleeve on said actuating rod pivotally connected with said connecting rod and engageable with said collar through the movement of said rod in one direction to impart movement to turn said lamp in a direction corresponding with the deflected course of the vehicle and inoperative to actuate said lamp through the movement of said connecting rod in an opposite direction, and manually operable means for imparting movement to swing said arm and turn said lamp toward the opposite side of said vehicle.

5. In a head-lamp control for motor vehicles, the combination with the cross connecting rod for turning the front wheels of the vehicle, of a pair of lamps spaced in alinement transversely of said vehicle and having vertically journaled stems respectively on which said lamps are supported to turn toward each other, means to retract and limit the return movement of said lamps respectively to normal alinement, actuating rods pivotally connected eccentrically to said stems respectively and extending toward each other parallel with and adjacent said connecting rod, and coupling members slidably and pivotally connecting said actuating rods independently operable with said connecting rod for receiving the movement thereof alternately with the turning of the wheels in opposite directions to turn said lamps correspondingly one toward the other and in the direction of the course of the vehicle.

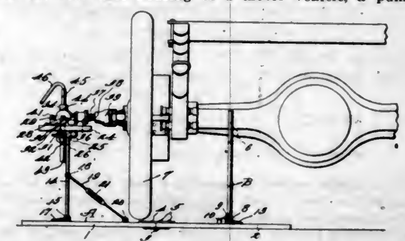
[Claim 6 not printed in the Gazette.]



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1,226,530. PUMP FOR MOTOR-VEHICLES. CHESTER A. KEARNS and PATRICK J. HARTIGAN, Paynesville, Minn. Filed Sept. 6, 1916. Serial No. 118,692. (Cl. 103—65.)

1. A pump mechanism adapted to be driven by one of the driving wheels of a motor vehicle, said pumping mechanism comprising a stand embodying supporting means for the rear axle housing of a motor vehicle, a pump-supporting bed, supporting means forming a part of the stand for said pump-supporting bed, a pump mechanism mounted on said bed and embodying a pump-operating crank shaft, and a socket head adapted to be interposed between said crank shaft and the adjacent driving wheel of the motor vehicle.



2. A pump mechanism adapted to be driven by one of the driving wheels of a motor vehicle, said pumping mechanism comprising a stand embodying supporting means for the rear axle housing of a motor vehicle, a pump-supporting bed, supporting means forming a part of the stand for said pump-supporting bed, a pump mechanism mounted on said bed and embodying a pump-operating crank shaft, and a socket head adapted to be interposed between said crank shaft and the adjacent driving wheel of the motor vehicle, said socket head being detachable from said crank shaft and vehicle wheel.

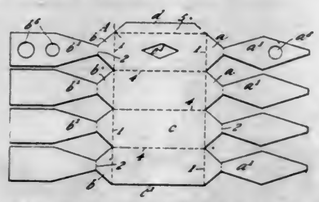
3. A pump mechanism adapted to be driven by one of the driving wheels of a motor vehicle, said pumping mechanism comprising a stand embodying supporting means for the rear axle housing of a motor vehicle, a pump-supporting bed, supporting means forming a part of the stand for said pump-supporting bed, a pump mechanism mounted on said bed and embodying a pump-operating crank shaft, and a socket head adapted to be interposed between said crank shaft and the adjacent driving wheel of the motor vehicle, the supporting means for the driving axle housing and the supporting means for the pump bed being pivotally connected to the base of the stand so as to fold into substantially parallel relation thereto.

4. A pump mechanism adapted to be driven by one of the driving wheels of a motor vehicle, said pumping mechanism comprising a stand embodying supporting means for the rear axle housing of a motor vehicle, a pump-supporting bed, supporting means forming a part of the stand for said pump-supporting bed, a pump mechanism mounted on said bed and embodying a pump-operating crank shaft, and a socket head adapted to be interposed between said crank shaft and the adjacent driving wheel of the motor vehicle, the base of the stand comprising sections hinged together, the supporting means for the driving axle housing being hinged to said base, and the pump bed-supporting means being also hinged to said base.

5. A pump mechanism adapted to be driven by one of the driving wheels of a motor vehicle, said pumping mechanism comprising a stand embodying supporting means for the rear axle housing of a motor vehicle, a pump-supporting bed, supporting means forming a part of the stand for

said pump-supporting bed, a pump mechanism mounted on said bed and embodying a pump-operating crank shaft, a socket head adapted to be interposed between said crank shaft and the adjacent driving wheel of the motor vehicle, the pump bed-supporting means being hinged to the base of the stand, and a longitudinally extensible brace connecting said pump bed-supporting means to the base and adapted to adjust the pump bed toward and away from the adjacent driving wheel of the vehicle.

1,226,531. FOLDING BOX. JOHN FALCONER KERRELL, London, England, assignor of one-half to Gustave George Gros, London, England. Filed Jan. 29, 1917. Serial No. 145,273. (Cl. 229—39.)

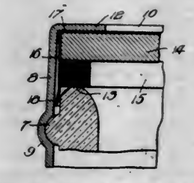


1. A holder or box comprising a body having a set of inturned tongues at each of its ends, each tongue comprising a complemental end closing portion for the body and a nest-forming portion beyond the end closing portion, the complemental end closing portions of the tongues being foldable into a position perpendicular to the length of the body whereby the complemental end closing portions of each set of tongues coöperate to close the respective ends of the body and the nest-forming portions of the tongues being foldable into diagonal positions within the body.

3. A holder or box comprising a body having a set of tongues along each end thereof, the set of tongues at one end of the body overlapping and coöperating directly with those at the other end of the body to retain the tongues in position to form a nest-like receptacle within the body.

[Claims 2, 4, and 5 not printed in the Gazette.]

1,226,532. RECEPTACLE-CLOSURE. CHARLES R. KEERAN, Chicago, Ill. Filed July 31, 1916. Serial No. 112,399. (Cl. 215—83.)

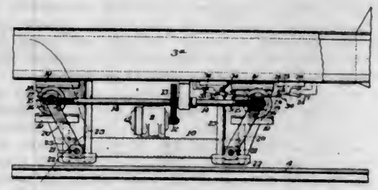


6. A closure for receptacles of the character described, comprising a disk, a gasket for the receptacle arranged to lie adjacent the disk, a holder within which the disk and gasket may be retained, and by which these elements may be alined with the receptacle neck in proper sealing position, the holder being in the form of a ring with one edge thereof inturned to form a retaining flange for the disk, and with its other edge outwardly flared to guide the holder and the parts therewithin into operative position, and a cap arranged to fasten upon the receptacle neck, there being a clearance between the cap and the receptacle neck within which the outwardly flared edge of the holder may freely lie, substantially as described.

[Claims 1 to 5 and 7 not printed in the Gazette.]

1,226,533. CRANE. DAVID KENDALL, Alliance, Ohio, assignor to The Alliance Machine Company, Alliance, Ohio, a Corporation of Ohio. Filed Nov. 13, 1913. Serial No. 800,757. (Cl. 188—47.)

1. A gauntree crane having a motor mounted thereon, a shaft driven by said motor, traveling nuts engaged by said shaft, substantially vertically movable track engagement brake shoes connected to said nuts, and guiding means for the brake shoes, substantially as described.

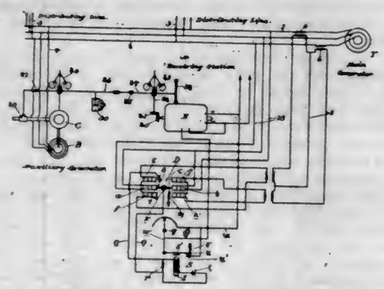


2. The combination with a guantree crane, of a motor mounted thereon, a shaft geared to said motor, traveling members engaged by said shaft, guiding means for said members, and friction locking devices connected to the traveling members and movable into and out of holding engagement with the crane runway; substantially as described.

3. A gauntree crane having a motor mounted thereon, a shaft geared to said motor, traveling nuts engaged by said shaft, guides for the said nuts, depending bars connected to the nuts, and brake shoes carried by the bars and movable toward and away from the crane runway and into and out of braking engagement therewith; substantially as described.

4. The combination with a gauntree crane having a propelling motor, of a safety locking device carried by the crane for locking it in stationary position on its runway, means for automatically limiting the movement of the locking device in one direction and means controlled by said device to automatically open the circuit of the propelling motor when the locking device is in operative position; substantially as described.

1,226,534. ELECTRIC LOAD-DISTRIBUTER. JESS E. KING, Syracuse, N. Y., assignor of one-half to W. C. Pearce, Syracuse, N. Y. Filed Apr. 29, 1916. Serial No. 94,499. (Cl. 171—312.)



1. The combination of a main source of supply, a generator operating in conjunction with said main source of supply for supplying power to the system, a prime mover for actuating said generator, a motor, devices operated by the armature shaft of said motor for controlling the power supply to the prime mover, and means responsive to the power delivered by the main source of supply for controlling the speed of the armature shaft of said motor.

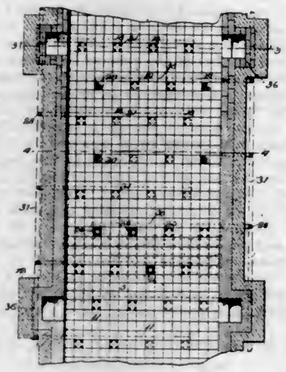
2. The combination of a main source of supply, a generator operating in conjunction with said main source of supply for supplying power to the system, a prime mover for actuating said generator, a motor, devices operated by the armature shaft for controlling the power supplied to the prime mover, devices for varying the resistance in the field circuit of the motor, and means responsive to the power delivered by the main source of supply for controlling said resistance varying means.



3. The combination of a main source of supply, a generator operating in conjunction with said main source of supply for supplying power to the system, a prime mover for actuating said generator, a motor, a load control rotated by said motor, devices whereby the load control operates upon the governor of the prime mover so that the power delivered to the prime mover is varied according to the speed of the armature shaft of the motor, and means responsive to the power delivered by said main source of supply for controlling the speed of the armature shaft of the motor.

4. The combination of a main source of supply, a generator operating in conjunction with said main source of supply for supplying power to the system, a prime mover for actuating said generator, a motor, a load control rotated by said motor, devices whereby the load control operates upon the governor of the prime mover so that the power delivered to the prime mover is varied according to the speed of the armature shaft of the motor, devices for varying the resistance in the field circuit of the motor, and means responsive to the power delivered by said main source of supply for controlling said resistance varying means.

1,226,535. WARE-KILN. ABRAHAM B. KLAY, Modesto, Cal. Filed May 31, 1916. Serial No. 100,932. (Cl. 25—138.)



1. In a kiln, a ware chamber having intercommunicating furnaces below the bottom thereof, the furnaces having openings through the bottom of the chamber arranged in successive series in staggered relation, and correspondingly arranged series of staggered flues in the top of the kiln at a distance from the chamber bottom and the respective series of openings disposed over the furnaces below for feeding the latter with fuel, there being a distinct flue for each opening.

2. In a kiln, a ware chamber having a plurality of furnaces below and opening through the floor thereof, stacks directly communicating with opposite sides of the chamber above the floor of said chamber, and means in the top of the chamber at a distance from the furnaces for feeding the latter with fuel.

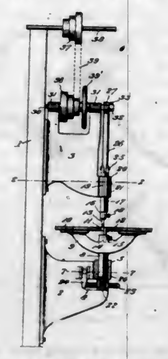
3. In a kiln, a ware chamber of continuous form having intermediate interior division wall means and a surrounding side wall, a plurality of stacks disposed throughout the full length of the chamber and having direct communication with the latter through the said intermediate wall means and surrounding side wall above the bottom of the chamber, and means located below the bottom of the chamber and opening into the latter for heating the said chamber.

4. In a kiln, a continuous ware chamber having intermediate interior dividing wall means and an outer surrounding side wall, a plurality of furnaces opening through the bottom of the chamber in series throughout the length of the said bottom, and a series of stacks arranged along the interior wall means and outer surrounding side wall and directly communicating with the chamber above the bottom.

5. In a kiln, a continuous ware chamber having an outer surrounding wall, a plurality of furnaces opening through the bottom thereof arranged in alternating series throughout the area of the bottom and provided with air ducts extending in alternation to the opposite portions of the said surrounding wall, and means connected to said ducts for supplying the furnaces with natural air or air under pressure.

[Claims 6 to 28 not printed in the Gazette.]

1,226,536. MACHINE FOR CUTTING SHEET METAL. JOHN L. L. KROOK, Proctor, Vt. Filed May 31, 1916. Serial No. 100,833. (Cl. 164—47.)



1. In a machine of the class described, the combination with relatively fixed and movable cutters, carriers for them, means for adjusting the carrier of the fixed cutter, a guide for the carrier of the movable cutter, a driving shaft having a reduced and cranked end and an annular groove whose bottom is curved throughout one portion thereof and provided with seats throughout the remaining portion, an eccentric collar revolubly mounted on said crank and extending over its groove, means for adjusting the position of the collar on the crank, said means engaging the groove, and operable connections between the exterior of the collar and the carrier for the movable cutter.

2. In a machine of the class described, the combination with fixed and movable tools, a carrier for the movable tool, and a pitman connected with the carrier and having an eye at one end; of a power shaft having a crank provided with an annular groove, an eccentric collar surrounding the crank and journaled within the eye of said pitman, and a set screw passing radially inward through the collar into said groove, for the purpose set forth.

3. In a machine of the class described, the combination with fixed and movable tools, a carrier for the movable tool, and a pitman connected with the carrier; of a power shaft having a crank provided with an annular groove, an eccentric collar surrounding said crank and extended at one end to overlie said groove, an adjustable fastening device in the extended end of the collar projecting into the groove and contacting with the bottom thereof, and a strap inclosing the other end of the collar and connected with said pitman.

4. In a cutting machine, the combination with an upper movable cutter, means for reciprocating it vertically, and means for adjusting the throw of the reciprocations; of a lower cutter, a table having a hole surrounding this cutter, a yoke beneath the table and having a holder for this

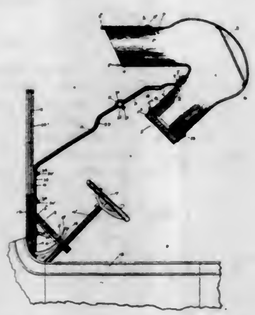
cutter, a post depending from the yoke and threaded at its lower end, an upright guide for the post, a nut on said threaded end below the guide and having a hand-wheel, and a wedge bearing against the hand wheel, for the purpose set forth.

5. In a machine for cutting sheet metal, the combination of a fixed cutter, a movable cutter mounted to reciprocate toward and from the fixed cutter, a driving shaft having an annular groove whose bottom is formed with a plurality of angular surfaces, an eccentric collar mounted for rotary adjustment on said shaft, a set screw carried by the collar for engagement with the groove and its tip with any of said angular surfaces, whereby to vary the position and throw of the collar, a strap actuated by said collar, and a working connection between said strap and the movable cutter for reciprocating the latter.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,537. REFLECTING APPARATUS. JAMES ISABURO KUMAUCHI, Seattle, Wash. Filed May 1, 1916. Serial No. 94,804. (Cl. 88—67.)



1. A periscope for moving machines consisting of a bent tube comprising a collecting arm, a projecting arm, and a reflector at the angle between said arms; means for supporting the tube with the mouth of its collecting arm directed forward, and a glass across the mouth of the projecting arm.

2. A periscope for moving machines consisting of a bent tube comprising a collecting arm, a projecting arm, and a reflector at the angle between said arms; means for supporting the tube with the mouth of its collecting arm directed forward, a glass across the mouth of the projecting arm, and a hinged closure for the front end of the collecting arm to close the latter when out of use.

3. In a periscope for moving machines, the combination with a bent tube comprising a collecting arm directed forward, a projecting arm standing at an angle to the collecting arm, a reflector within said angle, and a glass across the mouth of the projecting arm; of means on the machines for supporting said tube and adjusting its position, a display surface in line with the axis of said projecting arm, and an adjustable support for said surface.

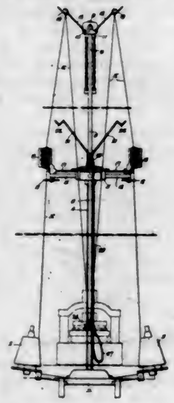
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1,226,538. THREADING ATTACHMENT FOR STOP-MOTIONS. WALTER LARKIN, Philadelphia, Pa., assignor to H. Brinton Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 2, 1916. Serial No. 134,619. (Cl. 66—7.)

1. The combination of a stop motion having a relatively elevated and inaccessible thread holding member; with a mechanical device movably mounted on said stop motion for carrying the thread from a lower position and delivering it to said member.

2. The combination of a stop motion having a relatively elevated sweep; with a guided member movable to deliver a thread to said sweep.

3. The combination of a stop motion including an elevated, relatively inaccessible thread receiving sweep; a movably mounted arm; and a holder on said arm placed to transfer thread carried thereby to the sweep when said arm is moved in a predetermined path.



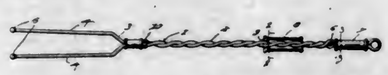
8. The combination of a stop motion including a vertically extending column and a sweep including a thread receiving hook having an inclined portion; with a member movably supported on said column and having a thread receiving structure formed to support a thread at two separated points; and means for actuating the member to cause the thread carried thereby to engage the inclined portion of the thread receiving hook and move above the same when said member is moved in one direction and thereafter cause said thread to be retained by said hook when the member is moved in the opposite direction.

10. The combination with a stop motion including a vertically extending structure and a sweep normally inclined upwardly, of a carrier slidably mounted on said structure; a member for moving the carrier; an arm on the carrier; and a hook for the arm having a substantially U-shaped thread supporting portion formed to receive said sweep between its side members to cause a thread carried thereby to be transferred to the sweep when the carrier is moved in a predetermined path upon the structure.

[Claims 4 to 7, 9, and 11 to 13 not printed in the Gazette.]

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1,226,539. CLOTHES-TONGS. LEONARD M. LARSON and CHARLES J. CARLSON, Tacoma, Wash. Filed Sept. 16, 1916. Serial No. 120,486. (Cl. 68—6.)



A device of the character set forth comprising a single length of wire being bent intermediate its ends to form a pair of relatively spaced eyes, a sleeve journaled between the eyes, the ends of said wire after forming the eyes being twisted about each other in spiral formation and diverge outwardly and parallel with each other to form a substantially U-shaped form, and a nut upon the spiral for rotating the fork.

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1,226,540. CLASP. NICHOLAS M. LAULETTA, Philadelphia, Pa. Filed Aug. 8, 1916. Serial No. 113,827. (Cl. 24—85.)

In a clasp, the combination of pivotally connected spring actuated jaw members, one of said jaw members being provided with an opening and having a slot extending from a portion of the periphery thereof, coöperating ears formed on said jaw members, a pin passing through openings formed in said ears and serving to pivotally unite said jaw members, a helical spring surrounding said pin and confined between said ears, offset extremities protruding from the coiled portion of said spring, one of said

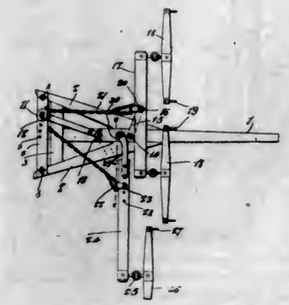




extremities being further extended to provide an attaching element, said element extending through the opening in the said jaw member and being located exteriorly of the clasp and provided with a pointed extremity, the said opening being of sufficient size to permit play therein of the said extended portion of the spring, which, is normally seated in the said slot and a keeper associated with said pointed extremity.

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1,226,541. DRAFT-EQUALIZER. LEWIS LEAVER, Armstrong, Iowa. Filed Nov. 26, 1915. Serial No. 63,592. (Cl. 21—76.)

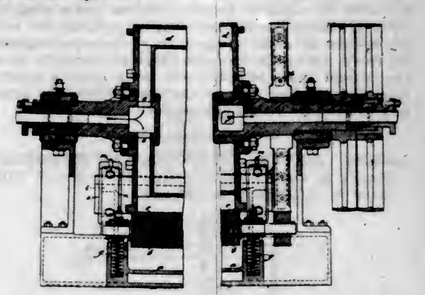


In a draft equalizer, the combination with an ordinary vehicle pole and braces attached to and diverging from the rear end of the pole, of a pair of vertically spaced strips attached to said braces, a pulley rotatably mounted between said strips, said strips provided with a plurality of openings to permit the adjusting of the position of said pulley with respect to said pole, a brace pivotally connected to said pole and the uppermost of said strips directly above said pulley, a link pivotally connected to said pole forwardly of said strips and extending outwardly and forwardly from the pole, a doubletree connected to the outer free end of said link, a bar pivotally connected to said pole rearwardly of said link and extending outwardly from the pole oppositely to the link, an equalizing bar connected to said bar, a brace connected to the under surface of equalizing bar and said pole, and a flexible member connected to said doubletree, extending about said pulley and adjustably connected to said equalizing bar intermediately of its ends.

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1,226,542. CHILLING MOLTEN MATERIAL AND OBTAINING THE SOLID IN A SUBDIVIDED STATE. JOHN W. LEITCH, Huddersfield, England. Filed Jan. 10, 1916. Serial No. 71,290. (Cl. 257—98.)

1. A machine for chilling molten material and obtaining it in the solid state, comprising a positively driven pattern cylinder revolving on its axis, a bath of molten material wherein the cylinder is partially immersed, a second positively driven cylinder revolving on its axis at the same peripheral speed as, in opposite direction to and in close peripheral contact with the pattern cylinder, means for cooling the peripheral surface of the second cylinder, and a scraper adapted to remove the solidified material from the second cylinder.

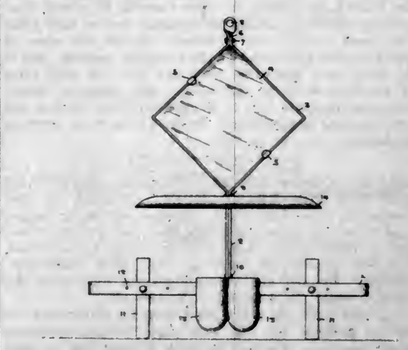


2. A machine for chilling molten material and obtaining it in the solid state, comprising a positively driven grooved cylinder revolving on its axis, a bath of molten material wherein the cylinder is partially immersed, a second positively driven cylinder revolving on its axis at the same peripheral speed as, in opposite direction to and in close peripheral contact with the grooved cylinder, means for cooling the peripheral surface of the second cylinder, and a scraper adapted to remove the solidified material from the second cylinder.

3. A machine for chilling molten material and obtaining it in the solid state, comprising a positively driven cylinder revolving on its axis, a bath of the molten material wherein the cylinder is partially immersed, a second positively driven cylinder revolving on its axis at the same peripheral speed as, in opposite direction to and with its periphery in close contact with that of the first cylinder, a jacket to the said second cylinder, which jacket constitutes the said periphery, passages for the inlet of cooling fluid into, and passages for the outlet of cooling fluid from, the said jacket so arranged relatively to each other that the fluid must flow around the cylinder, means for circulating cooling fluid through the said passages, and a scraper adapted to remove the solidified material from the said periphery.

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1,226,543. ARTICLE-SUPPORTING STAND. PETER LEPAK, Pittsburgh, Pa. Filed Aug. 13, 1915. Serial No. 45,384. (Cl. 211—14.)

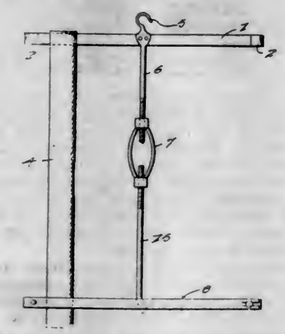


An article supporting device of the class described formed from a single flat band of metal bent into rectangular shape to form a frame, wires extending transversely of the frame, the ends of said band being given a quarter

turn and extended upwardly in parallel abutting relation to provide a standard, securing means extending through said standard, the upper ends of those portions of the band forming the standard diverging for a distance and then converging to form a mirror supporting frame, thence extending vertically in abutting relation, and a retaining screw extending through said abutting portions and serving to draw the upper end portions of the mirror supporting frame together to clamp and hold the mirror in place, one of said upper terminal ends being given a quarter twist and provided with an aperture whereby the device may be hung from a suitable support.

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1,226,544. NECKTIE STRETCHER AND SUPPORTER. MORRIS A. LOOMIS, Gallion, Ala. Filed June 9, 1916. Serial No. 102,722. (Cl. 223—19.)



1. A necktie stretcher and supporter comprising a supporting member having its ends bent rearwardly upon itself to prevent neckties from slipping therefrom, said member having its upper edge rounded to support neckties, a rod secured to said member, a hook secured to said member, a turb buckle threaded to said rod, a clamping member for receiving the ends of the neckties, a rod secured to the clamping member and to the turn buckle to operatively connect the clamping member to the supporting member whereby upon rotation of the turn buckle the clamping member will be moved away from the supporting member to stretch the neckties.

2. A necktie stretcher and supporter comprising a supporting member, a turn buckle connected to said supporting member, a clamping member being bent rearwardly upon itself intermediate its ends forming a pair of relatively spaced arms, means for securing one of said arms to the turn buckle, a rivet passed through the arms at a point adjacent the bend of the clamping member, one of said arms bent outwardly from the other of said arms and provided with its end forked, and clamping means carried by the other arm to be received by the forked end of the resilient arm to clamp the ends of neckties between said arms.

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1,226,545. COMBINED REINFORCING-PLATE AND KEY-LUG FOR BRAKE-SHOES. WILLIAM H. MCDONOUGH, New York, N. Y., assignor, by mesne assignments, to The American Brake Shoe and Foundry Company, Wilmington, Del., a Corporation of Delaware. Original application filed Apr. 25, 1916, Serial No. 93,362. Divided and this application filed Sept. 29, 1916. Serial No. 122,801. (Cl. 188—82.)

1. A back plate for brake shoes bent up transversely to form an integral key lug, said plate having outwardly pressed portions adjacent the sides of said lug, to form seats on its inner surface, and a tie plate received in said seats and spanning the throat of said lug, said tie plate having a portion thereof extending into the throat of the lug.

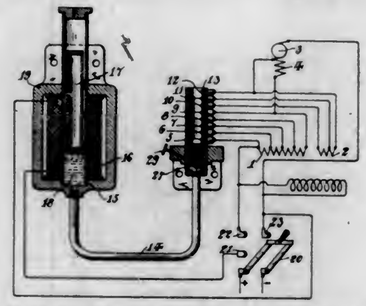
2. A back plate for brake shoes bent up transversely to form an integral key lug, said plate having outwardly pressed portions adjacent the sides of said lug, to form seats on its inner surface, and a tie plate received in said seats and spanning the throat of said lug, said tie plate having a central extension pressed outwardly from the body thereof and extending into the throat of said lug.



3. A back plate for brake shoes bent up transversely to form an integral key lug, a reinforcing plate extending across the throat of said lug, said reinforcing plate having a central extension pressed outwardly from the body thereof and extending into the throat of said lug.

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1,226,546. AUTOMATIC MOTOR-CONTROLLER. LEWIS J. MCDOWELL, Brooklyn, N. Y., assignor to Wheeler McDowell Elevator Company, New York, N. Y., a Corporation of New York. Filed Feb. 27, 1915. Serial No. 10,905. (Cl. 172—288.)



1. In an automatic controller for electric motors, the combination of a resistance; contacts connecting with the resistance at various points; a receiving cup for a conducting liquid in whose walls said contacts are fixed at intervals; a supply chamber for the conducting liquid connected with the receiving cup; means for causing the conducting liquid to flow from the supply chamber into the receiving cup to connect said contacts in turn and thereby cut out more or less of the resistance; and an automatic check valve near the bottom of the receiving cup to check the inflow of the conducting liquid while permitting free outflow thereof.

2. In an automatic controller for electric motors, the combination of a resistance; contacts connecting with the resistance at various points; a receiving cup for a conducting liquid in whose walls said contacts are fixed at intervals; a supply chamber for the conducting liquid connected with the receiving cup; a solenoid for causing the conducting liquid to flow from the supply chamber into the receiving cup to connect said contacts in turn and thereby cut out more or less of the resistance; and an automatic check valve near the bottom of the receiving cup to check the inflow of the conducting liquid, while permitting free outflow thereof.

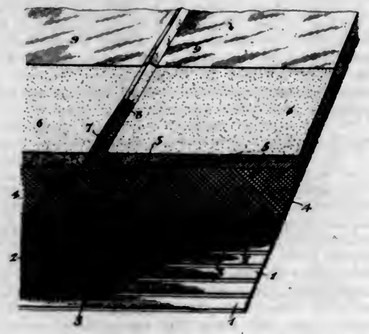
3. In an automatic controller for electric motors, the combination of a resistance; contacts connecting with the resistance at various points; a receiving cup for a conducting liquid in whose walls said contacts are fixed at intervals; a supply chamber for the conducting liquid connected with the receiving cup; means for causing the conducting liquid to flow from the supply chamber into the receiving cup to connect said contacts in turn and thereby cut out more or less of the resistance, a restricted passage being formed near the bottom of the receiving cup; an automatic check valve coöperating with said restricted passage and arranged to be moved to its seat by the inflow of said liquid and to be moved from its seat by the outflow thereof; and means to regulate the seating of the valve.

4. In an automatic controller for electric motors, the combination of a resistance; contacts connecting with the resistance at various points; a receiving cup for a conducting liquid in whose walls said contacts are fixed at intervals; a supply chamber for the conducting liquid connected with the receiving cup; means for causing the conducting liquid to flow from the supply chamber into the receiving cup to connect said contacts in turn and thereby cut out more or less of the resistance, said means comprising a solenoid having its coil surrounding the supply chamber and its core floating in the conducting liquid in said supply chamber; and an automatic check valve near the bottom of the receiving cup to check the inflow of the conducting liquid while permitting free outflow thereof.



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1,226,547. ROOFING. JOHN SIMEON MCGEHEE, Palmersville, Tenn., assignor of one-half to Albert H. Braun, Palmersville, Tenn. Filed May 12, 1916. Serial No. 97,167. (Cl. 106—24.)



1. A roofing composition comprising sand, cement, plaster of Paris, saltpeter, alum, sugar and sulfur.

2. A roofing composition, comprising sand, cement, plaster of Paris, saltpeter, alum, sugar and sulfur in substantially the parts of one hundred pounds of sand, one hundred pounds of cement, one pound each of plaster of Paris, sugar and sulfur, one ounce of saltpeter, one-half ounce of alum, coloring matter and water.

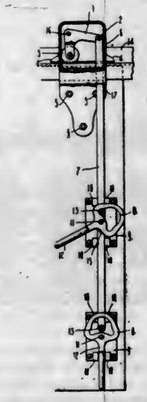
3. A roofing compound consisting of sand, cement, plaster of Paris, red oxid of iron, and yellow ocher mixed dry in substantially the proportions described, a solution of saltpeter, alum, sugar and sulfur substantially in the proportions described, and water in sufficient quantity to make the composition of the consistency of trowel mortar.

4. A compound comprising cement, saltpeter, alum, sugar, sulfur and water, in substantially the proportions described.

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1,226,548. DOOR-HANGER. ROBERT C. MCINTOSH, Plainfield, N. J. Filed July 22, 1915. Serial No. 41,318. (Cl. 16—157.)

1. The combination with a sliding door, hanger casing attached at the top thereof, of two operating levers pivotally connected to said door, of a handgrip at one end and rocker cam at other end of each of said operating levers, of a vertical connecting sliding bar, of two roller pins attached to said bar and operating within said rocker cams, of a bell crank pivoted at one end to said bar and carrying at other end the journal for one supporting roller, of a track, of one supporting roller adapted to travel thereon, of a pair of lugs rigidly fixed to said hanger casing; said lugs actuated by the lifting of said door to clear said track and by the lowering of said door to engage the top surface of said track, thereby permitting and preventing horizontal motion of the door; manually operated means for independently actuating said supporting roller from either the loading platform level or the track level whereby said supporting

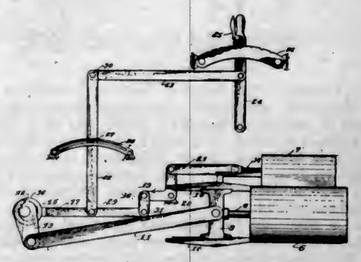


roller is depressed and caused to engage said track and whereby the hanger casing and lugs attached thereto are simultaneously lifted clear of said track; and means actuated by the lifting of the hanger casing and lugs from said track to permit of sliding motion and actuated by the lowering of the door by gravity for again holding the door against sliding motion on said track, all substantially as set forth, for the purpose specified.

[Claims 2 and 3 not printed in the Gazette.]

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1,226,549. VARIABLE VALVE-GEAR. CHARLES U. MCLAIN, East Bakersfield, Cal. Filed July 11, 1916. Serial No. 108,572. (Cl. 121—97.)



1. A valve gear, comprising in combination a reciprocating rod, a reach rod, a fulcrum rod pivotally secured adjacent one end to said reciprocating rod intermediate the ends of the latter and adjacent the other end thereof to said reach rod, means to guide said fulcrum rod intermediate its ends through an arc having its concave side turned toward said reciprocating rod.

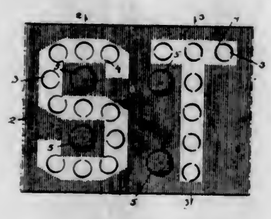
2. A valve gear, comprising in combination a reciprocating rod, a reach rod, a fulcrum rod pivotally secured adjacent one end to said reciprocating rod and adjacent the other end thereof to said reach rod, a rock lever

pivoted at a stationary point at one end and at the other end to said fulcrum rod intermediate the ends of the latter.

3. A valve gear, comprising in combination a reciprocating rod, a reach rod, a fulcrum rod pivotally secured adjacent one end to said reciprocating rod and adjacent the other end thereof to said reach rod, a rock lever pivoted at a stationary point at one end and at the other end to said fulcrum rod intermediate the ends of the latter, a valve rod, and means securing said valve rod to said reciprocating rod.

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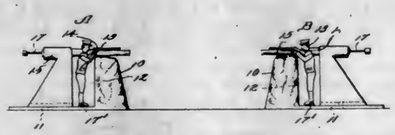
1,226,550. ILLUMINATED SIGN. CHARLES A. MCNEAL, Columbus, Ohio. Filed Feb. 4, 1916. Serial No. 76,122. (Cl. 40—133.)



In an illuminated sign, a face plate, a lamp, reflectors set in the outline of a letter or design and unequally distant from in rear of and grouped around said lamp, said reflectors having different inclinations with respect to said face plate toward and facing the lamp, the inclinations varying according to the distance of the reflector from the lamp and being decreased in those reflectors that are nearer the lamp to reflect the rays of light incident to corresponding portions of all of the reflectors outwardly in parallel lines.

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1,226,551. GAME APPARATUS. ALLAN R. MACPHERSON, Tacoma, Wash. Filed Dec. 22, 1916. Serial No. 138,482. (Cl. 46—59.)



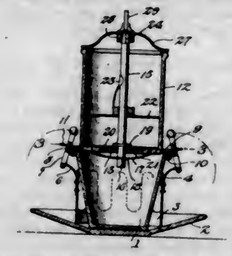
1. A game of the character described embodying a pair of identically constructed game pieces adapted to be disposed in spaced confronting relation, and each being indicative of a trench, a plurality of toy men individually pivoted behind said trench with their heads projecting above the latter, and a cannon mounted upon each trench and capable of horizontal swinging movement for the purpose specified.

2. A game of the character described embodying a pair of identically constructed game pieces adapted to be disposed in spaced confronting relation, each of said pieces embodying a substantially L-shaped body portion indicative of a trench, a plurality of toy men individually pivoted behind the vertical branch of said body portion with their heads projecting above the latter, and a cannon mounted upon each trench and capable of horizontal swinging movement for the purpose specified.

3. A device of the character described embodying a substantially L-shaped member indicative of a trench, a plurality of toy men individually pivoted behind the vertical branch of said body portion with their heads projecting above the latter, a cannon mounted for horizontal swinging movement, and means for detachably supporting the cannon upon the base of the trench.

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1,226,552. COFFEE-PERCOLATOR. EDWARD MANGISCH and ANTHONY REY, New York, N. Y. Filed Sept. 3, 1915. Serial No. 48,823. (Cl. 53—3.)



1. A coffee percolator adapted to be used in conjunction with a cup and saucer comprising a holder adapted to be positioned upon the saucer, clips carried by the holder for engaging the edge portion of the saucer, tongues provided upon the holder, said tongues adapted to snugly receive the cup and bear against the sides of the same, a ring adapted to fit over the cup, means carried by the holder for engaging the ring and a perforated receptacle detachably mounted upon the ring.

2. A percolator adapted to be used in conjunction with a cup and saucer comprising a holder adapted to be positioned upon the saucer, clips carried by the holder and engageable with the edge of the saucer, said holder having tongues adapted to snugly receive the cup, a ring adapted to rest upon the edges of the cup, spring arms carried by the holder, bars pivoted to the arms and provided with grooves engageable with the ring and a perforated receptacle detachably mounted on the ring.

3. A percolator comprising a ring, a receptacle detachably fitting in the ring, said receptacle being provided with openings located at its bottom, a shaft turnably mounted in the receptacle, a spring engaging the shaft and the receptacle for restraining the shaft against longitudinal movement with relation to the receptacle, a perforated plate carried by the shaft and provided at its underside with lugs, said lugs having one side disposed approximately at a right angle to the plane of the plate and their other sides disposed at acute angles with the plane of the said plate, said lugs adapted to enter the openings in the bottom of the receptacle.

4. A percolator comprising a ring, a receptacle detachably fitting in the ring and provided with openings located at the bottom thereof, a shaft turnably mounted in the receptacle, a spring member engaging the shaft and the receptacle, a perforated plate carried by the shaft and provided with lugs at its lower side adapted to enter the openings in the bottom of the receptacle, said receptable having at its bottom, depressions adapted at times to receive the lower ends of the said lugs, a diaphragm plate movably mounted upon the shaft, a cover for the receptacle and means turnably mounted on the cover for turning the shaft.

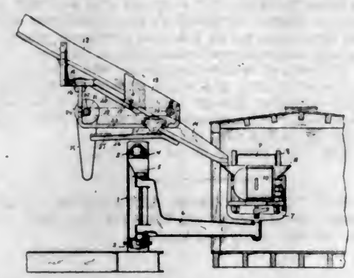
5. A percolator comprising a ring, a receptacle detachably fitting therein and provided with openings located at the bottom thereof, a shaft turnably mounted in the receptacle, a spring member engaging the shaft and the receptacle, and a perforated plate carried by the shaft and provided at its lower side with lugs adapted to enter the openings at the bottom of the receptacle, a perforated diaphragm plate slidably mounted upon the shaft, a cover for the receptacle, a socket member turnably mounted in the cover, said socket member adapted to receive the upper end of the shaft whereby the said shaft may be turned by turning the socket member.

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1,226,553. BOX-CAR-LOADING APPARATUS. GEORGE MANIERRE, Milwaukee, Wis. Filed Oct. 21, 1914. Serial No. 867,792. (Cl. 198—39.)

1. The combination with a chute of an extension revolubly supported therefrom by a bolt at one end, a curved track fixed to a suitable support, and means fixed to said extension and adapted to travel on said track to prevent the other end of the extension from being displaced to any material extent either up or down.

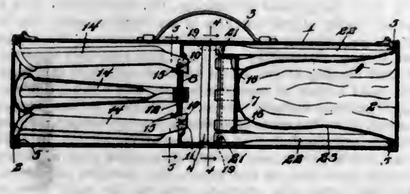




2. The combination with a chute of an extension revolubly supported therefrom by a bolt at one end, a curved track fixed to a suitable support, means fixed to said extension and adapted to engage with said track to prevent the other end of the said extension from being displaced to any material extent either up or down, track members secured to said extension, and a counterbalanced extension adapted to be moved back and forth on said track members.

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1,226,554. FOLDING STOOL. FERDINAND MANTE, Oakland, Cal. Filed June 6, 1916. Serial No. 102,000. (Cl. 155—32.)



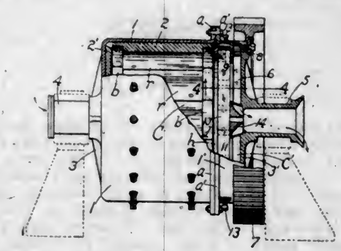
A folding stool comprising a tubular body, a disk slidably mounted in one end portion of the body and formed with an inwardly extending flange and an outwardly extending flange bearing against the inner surface of the body, said inwardly and outwardly extending flanges each being formed with radial slots spaced apart equal distances and said outwardly extending flange being formed with a wire receiving groove intersecting said slots, a wire in said groove, seat carrying arms having the inner ends thereof disposed in said slots respectively and pivotally connected to said wire, and capable of movement to open position when the disk is at the outer end of the body, a second disk slidably mounted in the other end portion of the body, and legs pivotally connected to the last mentioned disk and capable of movement to open position when the last mentioned disk is moved to the outer end of the body.

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1,226,555. TUBE-MILL. FRANK E. MARCY, Salt Lake City, Utah. Filed Jan. 18, 1917. Serial No. 143,077. (Cl. 83—9.)

1. In combination with a drum rotatable about a fixed axis and provided with a head having a central opening for the passage of the material, a series of radial blades or lifters disposed on the inner surface of said head around said opening, a grate, and a one-piece ring encompassing and having means for holding the grate and operating to maintain the same in proximity to the lifters.

3. In combination with the peripheral walls of a tube mill provided with suitable lugs extending toward the axis of the mill, a flanged one-piece grate-holding ring provided with peripheral recesses for engaging said lugs, thereby preventing rotary displacement of the ring.



4. In a mill of the character described, a suitable ring, a ledge or flange formed thereon, a series of grate-bars deposited on the flange, and means on the ring for driving the bars into firm frictional engagement with one another whereby the ring and bars may be handled as a unit.

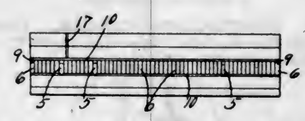
5. In a mill of the character described, a grate comprising a series of bars, spacing lugs on the bars for maintaining the bars fixed distances apart, a one-piece supporting member provided with means for frictionally holding the bars together, said member being insertible into the shell of the mill, and means on the shell for locking the member to the shell.

6. In a mill of the character described, a shell section provided with a head, radial lifters disposed on the inner face of the head, a ledge leading from the inner walls of the shell and forming the outer boundary of the lifters, a ring mounted in the shell-section in proximity to the lifters, means for locking the ring to the shell, and a grate carried by the ring and engaging the lifters and ledge aforesaid.

[Claim 2 not printed in the Gazette.]

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1,226,556. MATRIX MOLDING DEVICE. ANDREW E. MARKWELL, Fort Worth, Tex., assignor to A. D. Evans, Fort Worth, Tex. Filed Aug. 14, 1916. Serial No. 114,745. (Cl. 199—66.)

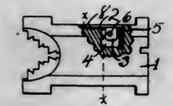


1. A matrix molding block having a groove therein, a slug-surface forming slide mounted therein having an angular cut-out and a stepped surface and having an angular groove in said stepped surface, spacing members mounted in said angular cut-out and having shank portions resting on the stepped portion of said slide, a bar for alining and locking said spacing members, and formers interposed between said spacing members and having shank portions resting on said stepped portion and having hole-forming tips projecting down in said groove.

5. Matrix molding devices comprising a block having a longitudinal groove therein, a slug-surface forming slide mounted in said groove and provided with an angular cut-out and an angular surface forming groove therein, spacing members having body portions mounted in said angular cut-out and shank portions extending to said groove and having alined perforations in said body portions, a rod running through said body portions, and formers pivotally mounted on said rod at selective intervals between said spacing members and having shank portions extending to said groove and hole-forming tips on said shank portions extending down into said groove.

[Claims 2 to 4 and 6 not printed in the Gazette.]

1,226,557. MATRIX MOLDING DEVICE. ANDREW E. MARKWELL, Fort Worth, Tex., assignor to A. D. Evans, Fort Worth, Tex. Filed Jan. 27, 1917. Serial No. 144,959. (Cl. 199—66.)



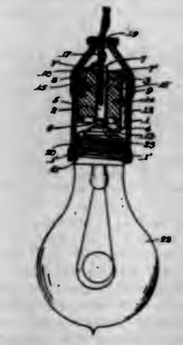
1. In a matrix provided with a cut-out and a cavity in said cut-out, a former mounted in said cut-out and having a pivotal connection projecting down in said cavity and having its upper surface flush with the upper surface of said matrix and co-extensive in width therewith, means for holding said former yieldingly in place, and a former tip on said former having under-cut beveled edges forming angular spaces to receive material for forming projections.

2. The combination with a matrix having a portion of the upper surface cut away and having a cavity formed therein, of a former mounted in the cut-out in said matrix and having its upper surface flush with the upper surface of said matrix, a bearing member integral with said former and projecting down into said cavity, a pivot bolt connecting said bearing member to said matrix, a former tip on said former having under cut edges forming angular spaces with said matrix to receive material for forming projections on slugs, and a spring for holding said former yieldingly in place and for restoring the former to working position.

3. The combination with a matrix having a portion of upper surface cut away for a former and having a cavity formed therein, of a former mounted in said matrix and having its upper surface flush with the upper surface of said matrix and co-extensive in width therewith, a bearing member integral with said former and projecting down into said cavity, a pivot bolt connecting said former to said matrix, a spring in said cavity for holding said former yieldingly in position and for restoring said former to working position, and a former tip on said former having under-cut beveled edges forming angular spaces with said matrix to receive material to form projections, said matrix having portions thereof cut away to form recesses for receiving material to form braces integral with the projections.

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1,226,558. ELECTRIC-LAMP HOLDER. VICTORINO MARTINEZ, Habana, Cuba. Filed Apr. 15, 1916. Serial No. 91,469. (Cl. 173—358.)



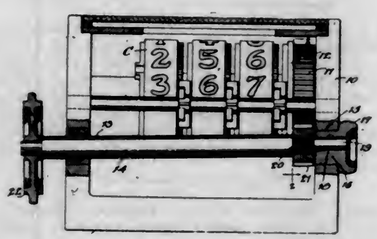
1. In combination with an electric lamp socket, a block of insulating material arranged therein, said block being provided with a central passage and with longitudinal recesses at its periphery, contact plates mounted in said peripheral recesses, a fusible wire interconnecting said contact plates, and a contact pin arranged within said central passage.

3. In combination with an electric lamp socket, a cylindrical block of insulating material arranged therein, said block being provided with a central bore and with longitudinal recesses at its periphery at diametrically opposite points interconnected by a helical peripheral groove, contact plates mounted in said longitudinal recesses, a fusible wire arranged in said helical groove and interconnecting said contact plates, and a pin slotted at its upper extremity extending through said central bore, one of said contact plates being extended and bent to form a spring adapted to contact with the lamp base.

[Claim 2 not printed in the Gazette.]

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1,226,559. CHANGE-GEAR MECHANISM. JOHN C. MASON, Salisbury, N. C. Filed Oct. 30, 1915. Serial No. 58,884. (Cl. 74—7.)



1. In a change gear mechanism, the combination with a frame having alined bearings in its opposite ends, and a driven gear having one side against one end of the frame and a flange at its other side; of a plug rotatably mounted in that bearing of the frame which is adjacent said gear and itself having an eccentric bearing and a head, a power shaft passing through the other bearing in the frame, reduced and threaded, and having a still further reduced smooth tip journaled in the eccentric bearing in said plug, and a power gear having a threaded bore of a size to pass over said tip and engage the threaded portion of said shaft, the gear standing between the inner face of the plug and the flange on said driven gear, for the purpose set forth.

2. In a change gear mechanism, the combination with a frame having bearings in its opposite ends, and a driven gear mounted in said frame; of a plug rotatably mounted in that bearing which is adjacent the driven gear and itself having an eccentric bearing, a shaft passing through the other bearing in the frame and having its tip reduced and journaled in the eccentric bearing in the plug, a power gear having a bore of a size to pass over said tip and engage the shaft adjacent thereto, and means for holding it removably in place thereon, for the purpose set forth.

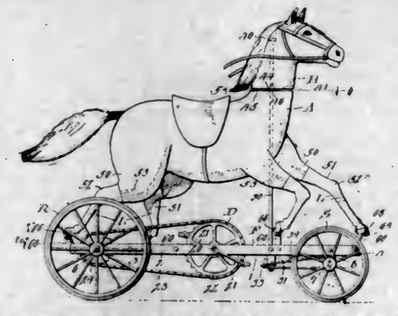
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1,226,560. FIGURE POLYCYCLE. TAICHIRO MASUDA, Marysville, Cal. Filed Mar. 2, 1917. Serial No. 152,065. (Cl. 208—42.)

1. In a figure polycycle, the combination with a running gear including a frame carrying driving wheels and steering wheels, the driving mechanism, and the steering mechanism; of an animal figure having four legs, each made in two parts swivelly connected with each other above the knee joint, and brackets connecting the hoofs with the frame of the running gear, as described.

2. In a figure toy, the combination with a running gear including a frame mounted on wheels; of a quadruped animal figure, and four brackets, each having an upright ear at its lower end, a horizontal ear at its upper end and an upright ear upstanding from one edge of said horizontal ear and all ears provided with slots, those in the lowermost ear for the reception of means adjustably attaching it to the frame and those in the other ears for



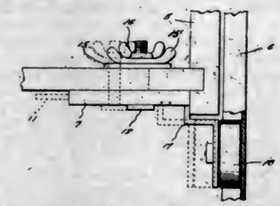


the reception of means adjustably attaching them to the hoofs of said figure.

[Claims 3 and 4 not printed in the Gazette.]

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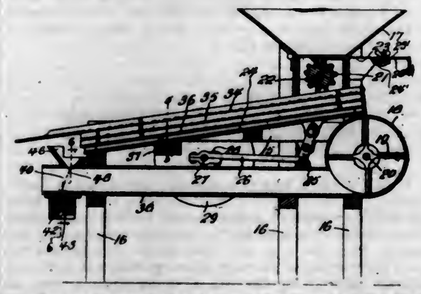
1,226,561. ROLLER FOR SLIDING DRAWERS. LEANDER M. MAYNE, Columbia, S. C. Filed May 16, 1916. Serial No. 97,827. (Cl. 45—77.)



In a device of the character described, an attaching plate having an elongated opening therethrough, and having two inturned flanges, one of said flanges being provided with rack teeth, a sliding plate mounted upon the first plate between the flanges thereof, a roller carried by the sliding plate, a rotatable shank carried by the sliding plate and projecting through the elongated slot of the attaching plate, and a gear fast to said shank and engaging the rack teeth, whereby the rotation of the shank imparts sliding movement to the sliding plate.

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1,226,562. GRITS-SEPARATOR. FOREST E. MILLER, Newberry, S. C. Filed Dec. 14, 1915. Serial No. 66,795. (Cl. 130—15.)



1. In a grits separator, a trunk having a longitudinal vertical partition whereby compartments are formed lying adjacent to each other with their bottom portions in the same plane, each compartment having an inlet in its top portion and an outlet in its bottom portion, the outlets being in vertical registry with the inlets and each inlet having a funnel, a shaking shoe having a bran sieve overhanging the wind trunk to discharge material in the path of the air current issuing therefrom, and sieves in the shaking shoe having deflectors to discharge material from the separate sieves to separate inlet funnels.

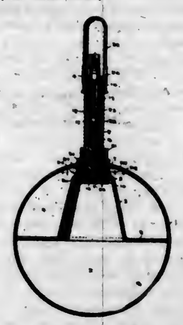
2. In a grits separator, a trunk having a longitudinal vertical partition whereby compartments are formed lying adjacent to each other with their bottom portions in the same plane, each compartment having an inlet in its top portion and an outlet in its bottom portion, the outlets being in vertical registry with the inlets and each inlet having a funnel, a shaking shoe having a bran sieve overhanging the wind trunk to discharge material in the path of the air current issuing therefrom, and sieves in the shaking shoe having deflectors to discharge material from the separate sieves to separate inlet funnels, said shaking shoe being provided with a meal outlet in the bottom intermediate the ends thereof.

3. In a grits separator, a wind trunk having a longitudinal vertical partition producing separate compartments, a shaking shoe having a bran sieve overhanging the discharge end of the wind trunk, sieves in the shaking shoe for the production of products of several grades, and means for conducting said products through the wind trunk in the path of the wind currents issuing through the compartments thereof.

4. In a device of the class described, a wind trunk having a longitudinal vertical partition producing separate compartments, a shaking shoe having a bran sieve overhanging the discharge end of the trunk, sieves in the shaking shoe for the production of several grades, hoppers for conducting said products through the wind trunk in the path of the air currents issuing through the compartments thereof, and lips extending from said hoppers within the compartment of the wind trunk.

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1,226,563. VALVE FOR PNEUMATIC TIRES. HERMAN F. MILLER, Rushville, Nebr. Filed May 3, 1916. Serial No. 95,170. (Cl. 152—12.)

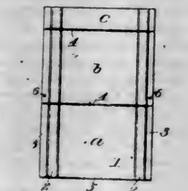


The combination with a multi-chambered pneumatic tire tube, of a valve comprising a valve stem having an upper reduced end to provide an annular shoulder, said stem formed centrally with a bore extending downwardly to a point adjacent the bottom thereof, said valve stem being further provided with bores in its opposite sides, one of said bores extending from the annular shoulder entirely through said stem and the other bore extending downwardly from the annular shoulder to a point adjacent the lower end of the valve stem, said valve stem being further formed with laterally extending ports, one of said ports connecting one of the side bores with the central bore, and the other port connecting the central bore, and the other side bore with the exterior of said stem, and a longitudinally movable valve rod disposed in each of said side bores and provided with a laterally extending and

accurately curved handle, whereby said laterally extend-ports may be opened or closed at will, said handle adapted to normally rest on the valve stem shoulder and snugly fit around said upper reduced end.

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1,226,564. SHINGLE. THOMAS DENTON MILLER, Catonsville, Md. Filed Nov. 18, 1915. Serial No. 62,111. (Cl. 108—17.)



1. A roof consisting of a series of horizontal rows of overlapping shingles, each shingle having a relatively wide, flat, central portion, and a pair of straight longitudinal ribs arranged one on each side and extending throughout the length thereof, the ribs of each shingle of an upper row overlapping those of two adjacent shingles of the next lower row, and each shingle of a lower row having one transverse ridge across the said central portion against which ridge the lower end of the shingle in the upper row second above it engages, and another transverse ridge in alinement with the lower edges of the two overlapping shingles of the next upper row immediately above it.

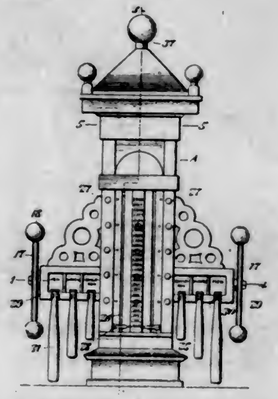
2. A roof consisting of a series of horizontal rows of overlapping shingles, the shingles of each row being spaced relatively far apart, and each shingle overlapping the sides of two adjacent shingles of the next lower row, and the upper end of the shingle immediately below it, each shingle having a transverse ridge and the lower edges of the shingles in one row being alined with the ridges of the shingles in the next lower row, whereby the appearance of continuous horizontal lines between the rows of shingles is produced.

3. A roof consisting of a series of horizontal rows of overlapping shingles, each shingle having a pair of longitudinal ribs extending throughout the length thereof, and arranged one on each side, said ribs being spaced from the side edges of the shingle to form lateral nailing flanges, each shingle of an upper row partially overlapping the said ribs and flanges of two adjacent shingles of the next lower row, and each shingle having two spaced transverse ridges extending across the same, the shingles being laid so that the lowermost ridge of each shingle in one row is in substantial alinement with the lower edges of the two overlapping shingles of the next upper row, each of said shingles being secured by two nails driven through said flanges at points between said ridges, said nails also passing through the two adjacent shingles of the next lower row above the upper transverse ridge of such shingles, whereby every nail head is covered by an overlapping shingle, and a transverse ridge extends between the two nails passing through each side of every shingle.

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1,226,565. AMUSEMENT DEVICE. CHARLES L. MOORE, Dallas, Tex. Filed June 24, 1916. Serial No. 105,653. (Cl. 265—22.)

1. An amusement device comprising a support, a shaft rotatably mounted thereon, a cable having one end connected with the shaft to be wound thereabout, a weight suspended from the opposite end of the cable, means for rotating the shaft to wind the cable thereon, guides for the cable, a friction clamp for engaging the cable to regulate the descent of the weight, and including a fixed member, a turn buckle pivotally mounted on said support, and a clamping member pivotally associated with said buckle and coöperating with said fixed member to regulate the fall of said weight.

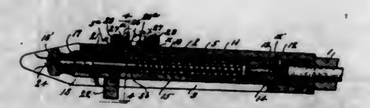


2. An amusement device comprising an elongated vertically disposed housing, laterally disposed extensions projecting from the opposite sides of the housing, a shaft positioned within each of said extensions and mounted for rotation, a right angularly disposed arm carried by the outer end of each shaft, a ball on each end of the shaft, a bat removably supported on said extension with which the ball on one end of the arm is adapted to be struck for rotating said shaft, a cable having one end fixed to the shaft, a weight suspended from the opposite end of the cable and movable within the housing, said weight being adjusted when the cable is wound about the shaft as the latter is rotated, an indicator carried by the weight and disposed exteriorly of the housing and operating in a vertical slot therein, and indicia arranged upon the front wall of the housing with which said indicator coöperates for determining the rise and fall of said weight.

3. An amusement device of the character described comprising a housing, a bearing arranged therein, a pair of axially alined shafts journaled in said housing, transversely thereof, the adjacent extremities of said shafts being mounted in said bearing, whereby said shafts are arranged for independent rotation, a cable for each of said shafts, said cable having one end wrapped about its respective shaft, a weight suspended from the opposite end of the cable, an arm secured to the outer extremity of each shaft, and adapted to be struck manually to rotate the shaft to wind the cable thereabout and elevate said weight.

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1,226,566. FIREARM. ROBERT A. MOORE, New York, N. Y., assignor to The Moore Rifle and Arms Company, Inc., New York, N. Y. Filed Feb. 1, 1916. Serial No. 75,551. (Cl. 42—18.)



1. In a firearm, breech mechanism comprising in combination, a receiver, a breech bolt operating therein, a firing pin and its operating means carried by said bolt, trigger controlled catch mechanism for said pin, an operating and locking lever for said bolt, and means intermediate the lever and the firing pin coöperative to hold the lever in a position maintaining the bolt in closed position with the firing pin operative, a second position in which the firing pin is held inoperative, and a third position in which the lever is locked against direct return to normal.



2. In a firearm, breech mechanism comprising in combination, a receiver, a breech bolt operating therein, a firing pin and its operating means carried by said bolt, trigger controlled catch mechanism for said pin, an operating and locking lever for said bolt, and means intermediate the lever and the firing pin coöperative to hold the lever in a position maintaining the bolt in closed position with the firing pin operative, and a second position in which the firing pin is held inoperative, and to lock the lever whereby to compel cocking movement of the firing pin previous to return of the lever to normal.

3. In a firearm, breech mechanism comprising in combination, a receiver, a breech bolt operating therein, a firing pin and its operating means carried by said bolt, a handle member on the firing pin, a locking sleeve on the bolt provided with an operating lever, trigger mechanism, a trigger catch on said handle member, an interlocking means intermediate the handle member and sleeve for holding the sleeve and lever against unauthorized movement at normal position with the breech closed, and also in a position rendering the firing pin inoperative and to lock the sleeve and lever so as to compel cocking movement of the firing pin prior to return of the sleeve to normal.

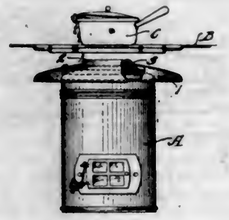
4. In breech mechanism for firearms, the combination with a sliding breech-bolt, of means for variably limiting the movement of the said bolt comprising spaced stops having portions adapted to coact with the bolt, actuating members coöperative with said stops to shift the same for said coaction, and coacting means between said actuating members for maintaining them in predetermined relation.

5. In breech mechanism for firearms, the combination with a sliding breech-bolt, of means for variably limiting the movement of the said bolt comprising rotative stops having portions adapted to coact with the bolt to variably limit its movement, a thumb-piece for actuating each stop, and means intermediate the thumb-pieces to hold the stops against unauthorized movement.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,567. STOVE ATTACHMENT. LUCY MORGAN, Peck, Kans. Filed Apr. 5, 1916. Serial No. 89,208. (Cl. 126—214.)

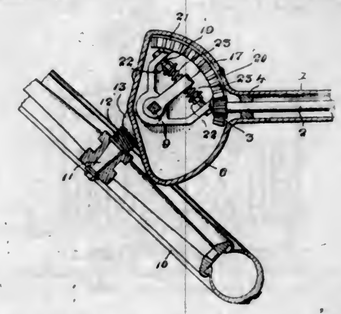


A guard member for attachment directly to a stove globe provided with a top opening comprising an inverted saucer-shaped deflector having a heat opening centrally thereof, the edge of said opening being formed with an approximately vertical downwardly extending flange with a slitted portion therein bent outwardly and then inwardly to form a resilient retaining member for engagement with the edges of the globe opening.

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1,226,568. STEERING-GEAR. WALTER A. MORKERT, Thompson Falls, Mont. Filed Sept. 19, 1916. Serial No. 120,999. (Cl. 21—196.)

1. The combination with the steering wheels of a vehicle, of a tubular axle for said wheels, steering knuckles pivotally connected to the end portions of said tubular axle, pivot pins having a fixed relation to said knuckles and passing through said tubular axle sector gears loose on said pivot pins, a pinion shaft within said tubular axle having pinions meshing with said sector gears, and yieldable cushioning means between said sector gears and pivot pins.

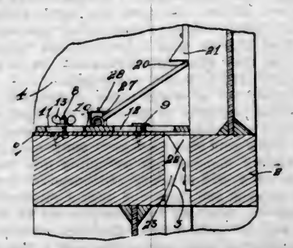


2. The combination with the steering wheels of a vehicle, of steering knuckles on which said wheels are mounted, a tubular axle having expanded end portions forming gear housings, pivot pins connecting said steering knuckles with said housings and passing through the latter, sector gears journaled on said pins, a pinion shaft arranged within said axle and having pinions fast thereon and engaging said sector gears, buffer arms fast on said pivot pins and having a fixed relation to the steering knuckles, and yieldable means interposed between each of said buffer arms and the adjacent sector gear.

3. The combination with the steering wheels of a vehicle, of steering knuckles on which said wheels are mounted, a tubular axle having expanded end portions forming gear housings, pivot pins connecting said steering knuckles with said housings and passing through the latter, sector gears journaled on said pins, a pinion shaft arranged within said axle and having pinions fast thereon and engaging said sector gears, buffer arms fast on said pivot pins and having a fixed relation to the steering knuckles, yieldable means interposed between each of said buffer arms and the adjacent sector gear, and means for adjusting the tension of said yieldable means.

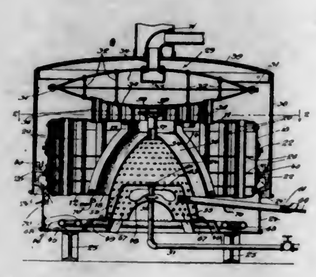
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1,226,569. WINDOW-SASH HOLDER. JOSEPH W. MORRIS, West Frankfort, Ill. Filed June 8, 1916. Serial No. 102,473. (Cl. 16—52.)



A window latch including, top and bottom sashes, and a window frame, of a base plate carried by the meeting rail of the bottom sash, a manipulating plate longitudinally slidably mounted on said base plate, a bolt member slidably mounted transversely on said plate, a laterally extending inturned portion provided on the end of said bolt, said window frame having recesses formed therein, hook members mounted in said recesses adapted to be engaged by said laterally inturned portion locking the window sashes relative to the window frame, and means associated with said sashes locking the same relative each other and the window frame.

**1,226,570. BURNER FOR STEAM BOILERS AND SUPERHEATERS.** AUGUST E. MUELLER, Chicago, Ill., assignor of one-third to Thomas J. Hruby and one-third to John O. Hruby, Jr., Chicago, Ill. Filed June 9, 1916. Serial No. 102,627. (Cl. 158—28.)



1. A burner for a steam boiler comprising a burner arch arranged to constitute the inner wall of the boiler and open at its top and bottom; a perforated fuel mixing chamber centrally below said arch; a perforated mixing and distributing dome surrounding the mixing chamber and extending into the arch to provide between said chamber and dome an annular passage and between the dome and arch a combustion chamber; means for directing liquid fuel and oxygen to the mixing chamber and for mixing the fuel constiutents therein; a burner pipe below the burner arch and communications between said burner pipe and said annular passage.

2. A burner for a steam boiler comprising a burner arch arranged to constitute the inner wall of the boiler and open at its top and bottom; a perforated fuel mixing chamber centrally below said arch; a perforated dome surrounding the fuel mixing chamber and extending into the arch, to provide between the same and said arch a combustion chamber; means for directing fuel constituents to the mixing chamber and for mixing the fuel constituents therein; a burner pipe below the arch around the mixing chamber with means to direct burning mixture thereto from the mixing chamber.

3. A burner for a steam boiler and superheater comprising a burner arch open at its top and bottom; a perforated fuel mixing chamber arranged centrally below said arch; a perforated dome surrounding the fuel mixing chamber and extending into the arch, with a combustion chamber between the dome and arch; means for directing fuel constituents to the mixing chamber and for mixing them therein, and a burner head extending upwardly from said dome and through the open upper end of the burner arch to heat a superheater.

4. A burner for a steam boiler comprising a burner arch arranged centrally of the boiler and open at its top and bottom; a perforated fuel mixing chamber arranged centrally below said arch; a perforated dome surrounding the fuel-mixing chamber and extending into the arch to provide between said chamber and dome an annular passage and between the dome and arch a combustion chamber; means for directing fuel constituents to the mixing chamber and for mixing them therein; a burner pipe or pipes surrounding said mixing chamber below the arch, and pipes connecting said burner pipes with the annular passage between the mixing chamber and said dome.

5. A burner for a steam boiler comprising a burner arch constituting the inner wall of the boiler and open at its bottom and at its top; a mixing chamber at the lower open end of said arch; a perforated dome surrounding said mixing chamber and extending into said arch; a liquid fuel supply pipe leading into the mixing chamber; an oxygen-bearing medium supply pipe leading also into said chamber, and means within the chamber for mixing the fuel constitutents.

[Claims 6 to 10 not printed in the Gazette.]

**1,226,571. RAIL-BRACE.** JOHN. G. MUELLER, Dayton, Ohio. Filed July 22, 1916. Serial No. 110,640. (Cl. 238—5.)



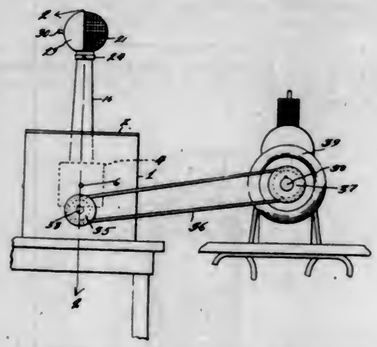
1. The combination, with a pair of rails, of a brace rod, pairs of clamp loosely mounted on said brace rod at the ends thereof, each pair of clamps embracing a rail, means on the ends of the brace rod for retaining the clamps thereon, and a single rotatable device interposed between the rails for varying the gage thereof.

2. The combination, with a pair of rails, of clamping devices engaging the rails, a rod connecting the clamping devices and an adjustable tube encircling the rod and engaging the adjacent clamping devices.

3. The combination, with a pair of rails, of clamping devices embracing each rail, a rod connecting said clamping devices, tubular sections embracing said rod and connected at their outer ends to the inner clamping devices and a sleeve mounted on the inner ends of said tubular sections for adjusting the gage.

4. The combination, with a pair of rails, of clamping devices for said rails, a rod provided with an adjusting device strung through said clamping devices connecting them together, tubular sections embracing the rod and connected at their outer ends to the inner clamping devices, and a sleeve having a screw-threaded engagement with the inner ends of said tubular sections.

**1,226,572. FAN FOR SEWING-MACHINES.** RANDOLPH MYERS and JOSEPH GRADY FAULKINBERRY, Ardmore, Tenn. Filed May 3, 1916. Serial No. 95,147. (Cl. 230—1.)



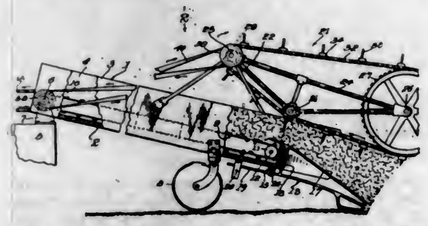
1. In combination with a fan driving mechanism, a vertical shaft having a fan upon its upper end, a cage inclosing the fan, a semi-spherical deflector corresponding in shape with and fitting the cage and being adjustably mounted for deflecting the air or breeze in different directions.

2. In a device as set forth, the combination of a casing having a fan-operating mechanism therein and provided with a vertical extension casing, a shaft driven by said mechanism mounted in said extension casing and having a fan upon its upper end, a sleeve cap fitted upon the upper end of the extension casing and provided with a spherical cage inclosing said fan, said sleeve cap having a reduced portion, and a spherical deflector having a circular band fitting the reduced portion adjustably, whereby the deflector may be adjusted in different positions to adjust the air or breeze in different directions.

3. In a device as set forth, the combination of a fan-driving mechanism having a driven fan shaft, and a casing in which said fan shaft is mounted, of a sleeve cap fitted upon the upper end of said casing provided with a reduced portion and an adjoining shoulder to prevent the cap from moving downwardly on the casing, a spherical cage carried by the cap, a circular band fitting the reduced portion of the cap and having an integrally connected semi-spherical deflector, the circular band being adjustable whereby the deflector may direct the air or breeze in different directions.



**1,226,573. BEAN-VINE-GATHERING APPARATUS.** NOAH C. NELSON, Imperial, Cal. Filed Jan. 8, 1916. Serial No. 70,996. (Cl. 56—1.)



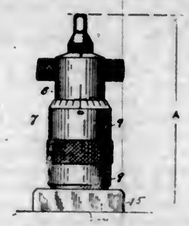
1. A bean gathering apparatus comprising a chute pivotally supported to the frame of a harvester, said chute extending downwardly and forwardly, a pair of casters mounted intermediate the ends of said chute for supporting the same above the ground, a conveyer mounted in said chute, a plurality of independently movable lifter arms pivoted to the forward end of said chute, the forward ends of said arms being otherwise unsupported and running upon the ground, a raking mechanism pivotally mounted to the rear and above said lifting arms, the weight of the free end of said raking mechanism resting upon the bean vines as they are drawn upon the lifting arms, said raking mechanism including an endless carrier having bean engaging fingers mounted thereon, said endless carrier moving during a portion of its travel substantially parallel to said conveyer and in advance thereof, thence at an abrupt angle upwardly and over the pivoted support of said carrier, and means for operating said conveyer and said raking mechanism.

2. A bean gathering apparatus comprising a chute pivotally supported to the frame of the harvester, said chute extending downwardly and forwardly, a conveyer mounted in said chute, a plurality of independently movable lifter arms pivoted to the forward end of said chute, the forward ends of said arms being otherwise unsupported and running upon the ground, a raking mechanism pivotally mounted to the rear and above said lifting arms, the weight of the free end of said raking mechanism resting upon the bean vines as they are drawn upon the lifting arms, said raking mechanism including an endless carrier having bean vine engaging means mounted thereon, and moving during a portion of its travel substantially parallel to said conveyer and in advance thereof, thence at an abrupt angle upwardly and over the pivoted support of said carrier, and means for operating said conveyer and said raking mechanism.

3. A bean gathering apparatus comprising a chute pivotally supported to the frame of the harvester, said chute extending downwardly and forwardly, a plurality of lifter arms pivoted to the forward end of said chute and running upon the ground, a raking mechanism pivotally mounted to the rear and above said lifting arms, the weight of the free end of said raking mechanism resting upon the bean vines as they are drawn upon the lifting arms, and means for operating said conveyer and said raking mechanism.

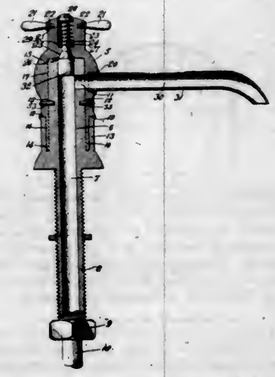
**1,226,574. MICROMETER-GAGE.** ANDREAS C. NIELSEN, Cleveland, Ohio. Filed Aug. 2, 1916. Serial No. 112,745. (Cl. 33—164.)

A convertible height and inside micrometer gage, comprising an outer thimble, a threaded post secured in one end of the thimble, and a gradnated sleeve mounted on the inner end of the post, within the thimble, the outer



end of the post having a threaded bore adapted for the attachment of either a base block or an anvil member.

**1,226,575. FAUCET.** JOSEPH A. NII, Sacramento, Cal. Filed Nov. 14, 1916. Serial No. 131,293. (Cl. 137—7.)



1. In a faucet, the combination with a casing having an inlet and an outlet opening, a cap rotatably mounted on said casing and having a side outlet opening, a spring pressed cock mounted in said cap for temporarily closing the outlet opening, and means for rotating said cap to bring the outlet opening thereof into or out of registration with the outlet opening of said casing, and a faucet threadedly connected in the side outlet opening of said cap.

2. In a faucet, the combination with a casing having an inlet and an outlet opening, a cap rotatably mounted on said casing and having a side outlet opening, a spring pressed cock mounted on said cap for temporarily closing the outlet opening, means for rotating said cap to bring the outlet opening thereof into or out of registration with the outlet opening of said casing, and means for preventing any accidental displacement of said cap from said casing, and a faucet threadedly connected in the side outlet opening of said cap.

3. In a faucet, the combination with a casing having an inlet and an outlet opening, a cap rotatably mounted on said casing and having a side outlet opening, a spring pressed cock mounted in said cap for temporarily closing the outlet opening, and means for rotating said cap to bring the outlet opening thereof into or out of registration with the outlet opening of said casing, and means carried by said cap and fitting within an annular groove formed in said casing for preventing any accidental displacement of the cap from said casing, and a faucet threadedly connected in the side outlet opening of said cap.

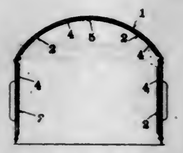
4. In a faucet, the combination with a casing having an inlet and an outlet opening, a collar formed integral with the casing and in spaced concentric relation therewith forming an annular groove, of a cap having an out-

let opening, an extension formed on said cap and fitting within the annular groove of said casing for rotatably supporting the cap on said casing, operating means for said cap, a spring pressed cutoff in said cap for temporarily closing the outlet opening, and a spigot connected to the outlet opening of said cap.

5. In a faucet, the combination with a casing having an inlet and an outlet opening, a collar formed integral with the casing and in spaced concentric relation therewith forming an annular groove, of a cap having an outlet opening, an extension formed on said cap, and fitting within the annular groove of said casing for rotatably supporting the cap on said casing, operating means for said cap, a spring pressed cutoff in said cap for temporarily closing the outlet opening, and means carried by said cap at a point above said extension and adapted to engage in a concentric groove of the casing for preventing any accidental displacement of the cap therefrom, and a spigot connected to the outlet opening of said cap.

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1,226,576. AUTOMOBILE-HOOD. LORENZO NORVELL, St. Louis, Mo. Filed Jan. 5, 1917. Serial No. 140,729. (Cl. 74—56.)



2. The combination of an automobile hood formed in sections, a separate section of insulating material for each hood section, a plurality of clamping members each attached to the lower portion of a hood section and extending upwardly to removably support the insulating sections adjacent to the inner sides of the hood sections.

[Claims 1, 3, and 4 not printed in the Gazette.]

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1,226,577. CUFF-LINK GUARD. JOHN L. NYE, Oelrichs, S. D. Filed June 6, 1916. Serial No. 101,990. (Cl. 24—90.5.)

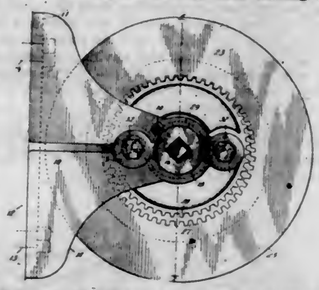


A cuff link guard comprising a substantially U-shaped clasp engaging the cuff at the button hole therein, means for locking said clasp to the cuff, a hook like arm integral with said clasp to receive the post of the link and extending across the button hole, and means on said first named means coöperating with said hook-like arm to close the clasp in the hook whereby accidental disconnection of the hook like arm from the post is prevented.

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1,226,578. HOISTING APPARATUS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Aug. 17, 1914. Serial No. 857,105. (Cl. 74—35.)

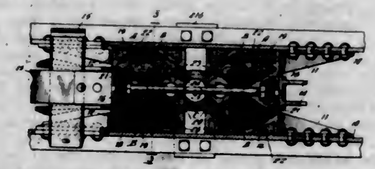
In mechanism of the character described, the combination with a supporting member having a pair of spaced, integral, outstanding arms, each arm having a bearing therein, of a winding drum mounted between said arms, said drum having internal gears at each end thereof and a centrally located bearing, pinions of lesser pitch diameter than said gears and coöperable therewith, said pinions being bodily movable but nonrotatable and relatively angularly displaced 180 degrees, eccentrics on which said pinions are mounted, an operating shaft removably extended through said bearings in said arms through said eccentrics, and through said bearing on the



drum, said eccentrics being rotatable with said shaft, and pins carried by said arms and extending into slots in the pinions for preventing rotation of the latter.

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1,226,579. FRICTION SPRING-GEAR. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 18, 1915. Serial No. 56,428. (Cl. 213—64.)



1. In a draft rigging, the combination with followers, and a centrally located, wedge block, of plate springs supported between said followers and adapted to be flexed between said followers and said block upon relative approach of said followers, said wedge being longitudinally movable relatively to both followers upon relative approach of the latter.

2. In a draft rigging, the combination with followers, and a centrally located, longitudinally movable wedge block, of plate springs supported between said followers and adapted to be flexed between said followers and said block upon relative approach of said followers, the block being movable relatively to the followers during said relative approach, said followers being provided with curved surfaces against which the springs are adapted to be flexed.

3. In a draft rigging, the combination with followers, and a centrally located wedge block, said wedge block being tapered toward each end thereof with the longest dimension of a cross section extending parallel to the axis of the gear, of sets of plate springs supported by said followers, said springs being adapted to be flexed between said followers and said block upon relative approach of the followers.

4. In a draft rigging, the combination with followers, and a centrally located wedge block, said wedge block being tapered toward each end thereof with the longest dimensions of a cross section extending parallel to the axis of the gear, of sets of plate springs supported by said followers, said springs being adapted to be flexed between said followers and said block upon relative approach of the followers, each of said followers having two opposed curved surfaces, inclined to the axis of the gear and against which said plate springs are adapted to be flexed.

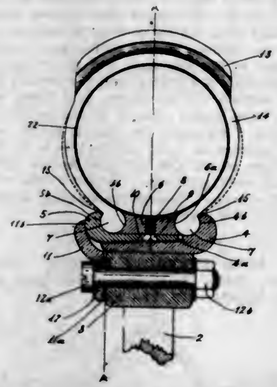
5. In a draft rigging, the combination with a pair of followers, each having a pair of curved surfaces, one on each side of a vertical plane passing through the center line of the gear, of a centrally located wedge supported by said followers, and sets of plate springs interposed



between said followers and said wedge, said springs being flexed against said curved surfaces upon relative approach of the followers, the action of the gear being limited by engagement of the followers with each other.

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1,226,580. TIRE. ERNEST J. OETTER, Denver, Colo. Filed Mar. 17, 1916. Serial No. 84,871. (Cl. 152—8.)



1. In combination, a tire having the side portions thereof formed in sections of resilient material adapted to spring independently of each other, said sections having ribs, and a rim having means for gripping said ribs frictionally while permitting the partial revolution of said ribs therewithin.

2. A tire composed of sections connected by transverse tongues and grooves at the tread but unconnected at the sides, the side portions being composed of resilient material.

3. A tire made up of sections composed of spring steel, the tread portions of said sections being jointed together by transverse tongues and grooves, but the side portions thereof being adapted to spring independently of each other.

4. A tire having the side portions thereof formed in sections, each being of a single thickness of resilient material adapted to spring independently of all others, each section having ribs substantially circular in section; combined with a rim having substantially circular recesses for said ribs permitting them to revolve therein.

5. A tire having the side portions thereof formed in sections adapted to yield laterally independently of each other, each section having ribs substantially circular in section; combined with a rim having substantially circular recesses for the revoluble mounting of said ribs therein, and means for gripping said ribs within said recesses.

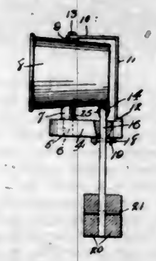
[Claims 6 to 9 not printed in the Gazette.]

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1,226,581. DIRIGIBLE HEADLIGHT. SABERT G. OGLESBY, Green Pond, Ala. Filed Jan. 18, 1915. Serial No. 2,955. (Cl. 240—62.)

1. A dirigible headlight including a supporting plate having a slot therein, a headlight rotatably mounted on the plate, a brace rigidly connected to the plate and associated with the headlight to facilitate the maintenance of the headlight in a vertical position, a pair of spaced ears integral with and depending from the headlight, a bar pivoted to the headlight between the ears and arranged through the slot and fulcrumed to the plate, and means associated with the lower end of the bar and controlled by movement of the vehicle for imparting a rotary movement to the headlight upon sidewise movement of the vehicle.

2. A dirigible headlight including a supporting plate having a slot therein, a headlight, vertical pivots projecting from the upper and lower surfaces of the headlight, the lower of which is rotatably associated with the plate, an angular brace having one end connected to the plate and the opposite end associated with the upper pivot for facilitating the supporting of the headlight, a pair of



spaced ears integral with and depending from the headlight and positioned above the slot, a bar insertible through the slot and pivoted between the ears, a pin associated with the under surface of the plate for fulcruming the bar to the plate and a weight associated with the lower end of the bar for imparting a rotary movement to the headlight upon sidewise movement of the vehicle.

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1,226,582. SHOE-BUCKLE. LOUIS OSTMANN, St. Charles, Mo. Filed Nov. 9, 1914. Serial No. 871,172. (Cl. 24—206.)



A shoe fastener comprising a flat plate, a slotted angular extension at one end of the plate, a reduced extension at the opposite end of the plate bent at an acute angle thereto and toward the slotted extension, and a tongue having one end slidably engaged through the slotted extension and provided with a series of openings interchangeably receiving said reduced extension, said tongue being disengageable from the plate by rocking the tongue outwardly from the plate on the slotted extension as a fulcrum to withdraw the reduced extension from the related opening.

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1,226,583. CLOTHES-LINE. EMILY V. PAGE, Brooklyn, N. Y. Filed Apr. 11, 1916. Serial No. 90,434. (Cl. 68—3.)



A clothes line support comprising a rod adapted to be attached to a support, a pulley block carried at the intermediate portion of the rod, other pulley blocks located adjacent the ends of the rod, an arm adapted to be attached to a support, pulley blocks located adjacent the ends of the arm, and lines trained about the pulley blocks at the ends of the rod and arm, and having their intermediate portion trained about the pulleys of the block located at the intermediate portion of the rod.

1,226,584. CUT-OUT. HENRY T. PAISTE, Philadelphia, Pa., assignor to H. T. Paiste Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 9, 1915. Serial No. 49,764. (Cl. 173—358.)



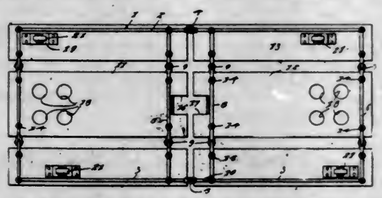
1. The combination of a metal shell having a tongue cut from its bottom and bent through an angle of substantially 180°; a metal piece extending into the lower part of said shell and projecting under said tongue; a contact in the shell but insulated from the same; and means for connecting a conductor to said contact.

2. The combination of a metal shell having a tongue cut from its bottom and bent through an angle of substantially 180°; a metal piece in engagement with a portion of the bottom of the shell and extending in contact with said tongue; means for connecting a conductor to the tongue and to said piece; and a central contact for said shell.

3. The combination of a threaded metal shell having a metal tongue cut from its bottom to form a slot and bent through an angle of substantially 180° so as to project to one side of said shell; a forked metal plate having its branches in engagement with the bottom of the shell on either side of the slot and having its body projecting in contact with the tongue; a binding screw passing through the tongue and threaded into said plate; with a central contact for said shell.

4. The combination of a metal shell having a tongue cut from its bottom and bent at an angle to the plane thereof; a metal piece in engagement with a portion of the bottom of the shell and in contact with said tongue; means for connecting a conductor to said tongue and to said piece; and a central contact for the shell.

1,226,585. FOLDING TRUCK. WILLIAM E. PARKER and WILLIAM BURNS, Ithaca, N. Y.; said Parker assignor of all of his right to John Burns, Ithaca, N. Y. Filed June 2, 1916. Serial No. 101,361. (Cl. 5—9.)

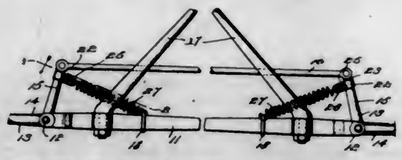


1. In a folding truck, a pair of central plates, corner plates hingedly connected beside the central plates, hinges connecting the adjacent edges of the corner plates, said hinges being offset, the central plates being formed with notches in their adjacent edges to receive the offset hinges and allow the same to project beyond the upper faces of the central plates when the device is in its folded position to allow the central plates to be folded against each other, and rollers carried by the corner plates.

2. A folding truck comprising a pair of central plates arranged in longitudinal alinement, corner plates hingedly connected to the side edges of the central plates, said corner plates being arranged in longitudinal alinement, hinges connecting the adjacent ends of the corner plates, said hinges being offset and positioned below the faces of the plates when the device is in its operative position, the central plates having recesses in their adjacent edges to receive the offset hinges when the corner plates are folded, the said offset hinges projecting through the notches and beyond the plane of the upper faces of the central plates to allow the upper faces of said central plates to be folded upon each other, the free ends of the central plates having openings therein and rollers on the corner plates adapted to project through the openings in the central plates when the device is in its folded position.

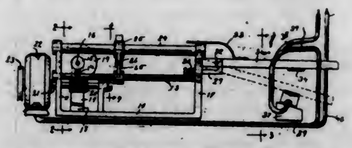
3. A truck comprising a frame, said frame consisting of side bars formed of two separate sections hinged together, the hinges of said sections being offset below the plane of the lower edges of the frame, end bars holding the side bars in spaced parallel relation, each of said end bars consisting of a central section having end sections hinged thereto, transversely extending bars arranged beside the hinges of the side bars, said transversely extending bars consisting of a central and end section hinged to the central section, the transverse bars being connected to the side bars, plates secured to the sections of the frame to form a platform, the central plates being provided with notches in their adjacent ends to accommodate the hinges of the side bars and having openings in their opposite ends, and rollers carried by the end plates and adapted to project through the openings when the device is in its folded position.

1,226,586. AUTO STEERING DEVICE. CHESTER J. PATTERSON, White Rock, Pa. Filed Nov. 23, 1915. Serial No. 63,024. (Cl. 21—200.)



The combination with the steering gear of a motor vehicle including an axle increasing in cross sectional dimensions from the center toward the outer ends, of clips surrounding said axle, and frictionally engaging the same and each comprising a vertical shank portion and laterally bent portions overlying the top and bottom of the axle and having the terminals thereof formed to provide gripping fingers engaging the top and bottom edges of the axle, substantially U-shaped clamps surrounding the respective spindle arms of the steering gear, bolts passed through the legs of the clamps and acting to hold the latter upon the arms, and springs each having one end secured to one of said clips and the other end fastened to the corresponding clamp, said springs acting to hold the spindles in horizontal alinement with the axle and to draw said clips toward the outer ends of the axle to create a binding action between the clips and the tapering portion of the axle.

1,226,587. MOTIVE-FORCE CONTROL FOR APPARATUS. SAMUEL J. PAUL, Los Angeles, Cal. Filed Oct. 31, 1914. Serial No. 869,536. (Cl. 74—46.)



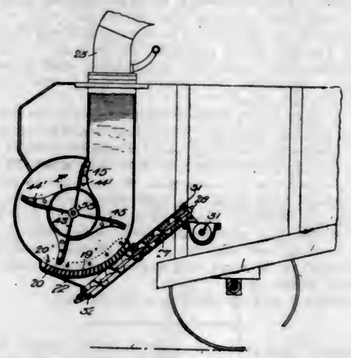
1. In a power actuated mechanism an electric motor; a circuit for operating said motor, said circuit having a gap therein; a pivoted lever of insulating material; a contact bar secured to said lever and adapted to close the gap in said motor circuit; a spring secured to said lever and adapted to normally hold the contact bar away from said gap; a trigger adapted to engage said lever when said lever is depressed and hold the same with the contact bar



closing said gap; and means operable by the motor to release said trigger when a predetermined amount of work has been done.

2. In an actuated mechanism; a driving force; means actuated by spring force to cut off said driving force; a trigger adapted to hold the cut off means inoperative; a screw driven by the motive force; and a releaser on said screw, said releaser being adapted to be driven by said screw into engagement with the trigger to cause the trigger to release the cut off means when a predetermined amount of work has been done by the actuated mechanism.

1,226,588. PNEUMATIC STRAW-STACKER. VICTOR N. PERRY, Batavia, N. Y. Filed Sept. 2, 1914. Serial No. 859,800. (Cl. 130—17.)



1. In an apparatus of the class described the combination of a hopper, a fan casing forming one end wall thereof and communicating therewith, a fan eccentrically disposed within said casing, an outlet spout communicating with said casing, a grate housing carried by and disposed at the lower portion of said fan casing, a grate disposed within said housing with the grate bars tilted in the direction of rotation of the fan, a conveyer carried by said housing disposed below said grate and receiving material therefrom, and a cylindrical screen forming the upper extremity of said conveyer.

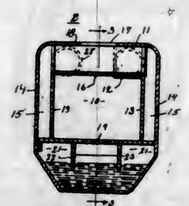
2. A straw stacker comprising a hopper with endwise conveying means disposed therein, a fan and casing disposed at one end of and communicating with said hopper, said fan casing provided with an outlet at its lower portion, an arcuate grate projecting across said opening and preserving the continuity of said fan casing with the bars thereof inclined in the direction of rotation of the fan, and a conveyer with perforated side walls disposed below and receiving material from said grate.

3. A separator and discharger for pneumatic stackers comprising a fan casing with a lower grain discharging outlet, a spout communicating with the upper portions thereof, a fan mounted eccentrically within said casing, a grate housing carried by and encompassing the outlet opening of said casing, a grate provided with bars inclined in the direction of rotation of the fan, disposed thereon and arranged along the arc of a circle preserving the continuity of the fan casing, the lower extremity of said grate housing provided with an opening extending therealong, and an open ended conveyer carried by said grate housing receiving material therefrom.

4. A grate housing for fan casings comprising spaced side members with arcuate grooves extending therealong, grate sections having inclined bars disposed within said grooves, the lower edges of said side members outwardly flared, and a conveyer trough with a flanged open top secured thereto.

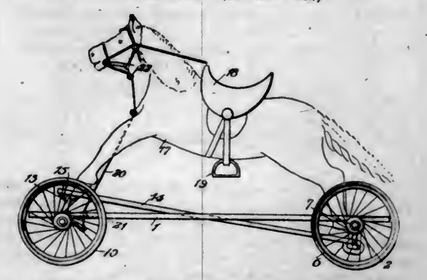
5. In a separator and discharger for pneumatic stackers, the combination of a fan casing having a discharge spout communicating therewith and having a grain discharge outlet located in the floor of the fan casing, means for feeding material directly into the fan casing, a fan mounted eccentrically within the fan casing, a grate housing carried by the fan casing and encompassing the grain discharge opening thereof, a grate carried by the housing immediately below the fan forming a portion of the floor of the casing and arranged along the arc of a circle preserving the continuity of the fan casing, the lower portion of said grate having an opening, and a conveyer secured to the grate housing, and including a casing having an opening registering with the opening in the grate housing.

1,226,589. DUST-SEPARATOR FOR STREET-SWEEPING MACHINES. JOHN R. POLLOCK, Los Angeles, Cal. Filed Sept. 12, 1916. Serial No. 119,649. (Cl. 183—30.)



In a separator for street sweeping machines, means to purify the air of dirt and dust comprising a body having an opening in the top wall at the rear end; a dirt chamber whose top wall except at the rear portion is formed by the top wall of the body, and the rear portion of said top wall sloping downwardly and rearwardly; expansion chambers at the sides of said dirt chamber the bottom wall of which chambers have ports therein at the front end and the top of said chambers connecting with the opening in the top wall; a water chamber below said dirt and expansion chambers; longitudinal deflectors depending from the top wall of said water chamber and projecting into the water when the machine is ready for use; in combination with means to cause the air to pass through the dirt and water chambers and out of the expansion chambers.

1,226,590. COMBINED VEHICLE AND HOBBY-HORSE. LURA D. POWELL, Swampscott, Mass. Filed Aug. 24, 1916. Serial No. 116,658. (Cl. 208—42.)



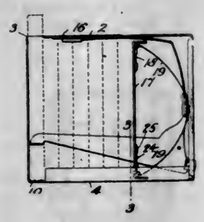
1. A device of the character described including a frame, a figure arranged to rock on the frame, a cranked rear axle for supporting one end of the figure and rotated by the figure, a crank shaft journaled in front of the said frame, and supporting member pivoted to the crank shaft, wheels for supporting the front end of the frame, other wheels arranged on the rear axle, and means for releasably clamping the wheels on the rear axle.

2. A device of the character described including a frame, a cranked rear axle journaled therein, front axles

pivotally mounted thereon, supporting wheels, crank shaft journaled in the front of said frame, a supporting member pivoted to the crank shaft, a figure mounted on the supporting member to enable a rocking movement being imparted thereto, a loose connection formed on the said supporting member for engagement with the cranked rear axle to provide means to assist in starting the vehicle, and means for releasably clamping the wheels on the rear axle.

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1,226,591. CIGARETTE-CASE. VINCENT PRIMAVERA and GIUSEPPE GALLO, New York, N. Y. Filed Jan. 18, 1916. Serial No. 72,816. (Cl. 206—41.)

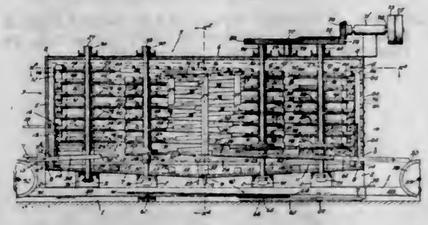


1. A package having a closure, an ejector arranged lengthwise of the package and including a long arm and a short arm, means for simultaneously moving the closure and ejector embodying a single spring wire having one terminal attached to the closure and its opposite terminal attached to the upper extremity of the short arm of the ejector.

2. A package having a closure, a rocking ejector including a long arm and a short arm, means for simultaneously moving the closure and ejector embodying a single spring wire having one terminal attached to the closure and its opposite terminal attached to the short arm of the ejector.

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1,226,592. CONTINUOUS EXHAUST-BOX FOR PRESERVE-CONTAINING CANS. HENRY CLAUDE PRIVETT, Long Beach, Cal. Filed May 13, 1914. Serial No. 838,393. (Cl. 126—272.)



1. A continuous exhauster comprising a steam chest, two winding guide-ways arranged one inside the other, sheaves at turns in the guide-ways, and a cable traveling on the sheaves along the guide-ways to carry cans, said guide-ways and sheaves being in the chest, and means to supply steam to the interior of the chest.

2. A continuous exhauster comprising a steam chest an ascending winding guide-way, a descending winding guide-way, said guide-ways forming one continuous path, a cable traveling along the guide-ways to carry cans along the guide-ways, and means for transferring cans from the ascending guide-way to the descending guide-way at their meeting ends, said means comprising an idler the upper face of which is engaged by the cans when leaving the ascending guide-way to pass onto the descending guide-way, said guide-ways and traveling means being in the chest, and means to supply steam to the interior of the chest.

3. A continuous exhauster comprising a steam chest an ascending winding guide-way, a descending winding guide-way arranged inside of the ascending winding guide-way, said guide-ways forming one continuous path, a cable traveling in the guide-ways to carry cans along the guide-ways, and means for transferring cans from the ascending guide-way inward to the descending guide-way, said means comprising an idler the upper face of which is engaged by the cans when leaving the ascending guide-way to pass onto the descending guide-way positioned inside of the ascending guide-way; said guide-ways and traveling means being in the chest, and means to supply stem to the interior of the chest.

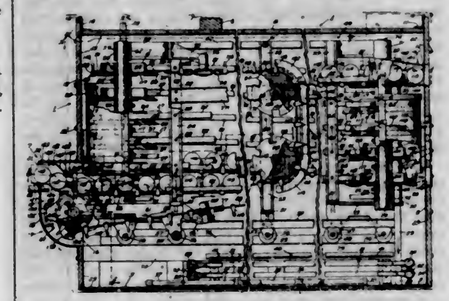
4. A continuous exhauster comprising a steam chest an outer winding guide-way, an inner winding guide-way, said guide-ways forming one continuous path, a cable traveling in the guide-ways to carry cans along the guide-ways, and means for switching off the cans at any predetermined point along the guide-ways; said guide-ways being in the chest, and means to supply steam to the interior of the chest.

5. A continuous exhauster comprising a steam chest an outer winding guide-way, an inner winding guide-way, said guide-ways forming one continuous path, a cable traveling in the guide-ways to carry cans along the guide-ways, and means for switching off the cans at any predetermined point along the guide-ways, said means comprising an auxiliary guide-way inserted into and at the turn of the outer winding guide-way, said auxiliary guide-way directing the cans out of the exhauster; said guide-ways being in the chest, and means to supply steam to the interior of the chest.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,593. CONTINUOUS AGITATING COOKER. HENRY CLAUDE PRIVETT, Los Angeles, Cal. Filed May 27, 1914. Serial No. 841,283. (Cl. 126—272.)



1. In a cooker, the combination with a heat-containing chest, of a frame-work adapted to be moved into said chest, steam coils secured in said chest, a conveyer operatively mounted on said frame-work to convey the substance to be cooked through said chest, plates secured in the chest below said frame-work, said plates forming three openings, one in the middle and one at each end of the chest, and means to draw the atmosphere in said chest down through said middle opening and underneath said plates, the atmosphere being permitted to rise through the end openings.

2. In a cooker, the combination with a heat-containing chest, of a winding endless conveyer for carrying cans through said chest, and pins extending upward from said conveyer to engage the cans carried on said conveyer and space them apart from one another, said pins being provided with means to prevent lateral and vertical movement of the conveyer.

3. In a cooker, the combination with a heat-containing chest, of a winding track comprising side rails spaced apart from one another, sheaves at the turns of said track, curved sheets connecting together the adjacent ends of adjacent rails, and an endless cable traveling between said side rails and around said sheaves for carrying cans through said cooker.

4. In a cooker, the combination with a heat-containing chest, of a winding track comprising side rails spaced apart from one another, curved sheets connecting together the adjacent ends of adjacent rails, sheaves at the turns of said track, said sheaves being provided with crowns to form continuations of the inner walls of the rails, an endless cable traveling between said rails and around said sheaves for carrying cans through said chest, and pins extending upward from said cable to engage the cans to move the same and space them apart from one another.

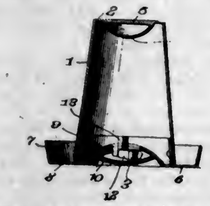
5. In a cooker, the combination with a heat-containing chest, of a winding track comprising side rails spaced apart from one another, sheaves at the turns of said track, said sheaves being provided with crowns to form continuations of the inner walls of the rails, an endless cable traveling between said rails and around said sheaves for carrying cans through said chest, and pins extending upward from said cable to engage the cans and space them apart from one another, there being notches in said sheaves spaced apart from one another to each admit a pin of said cable as the pins travel around said sheaves.

[Claims 6 to 12 not printed in the Gazette.]



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1,226,594. POULTRY DRINKING-FOUNTAIN. AUGUST J. E. PAUEFERT, East Aurora, N. Y. Filed Oct. 27, 1914. Serial No. 868,883. (Cl. 119—77.)

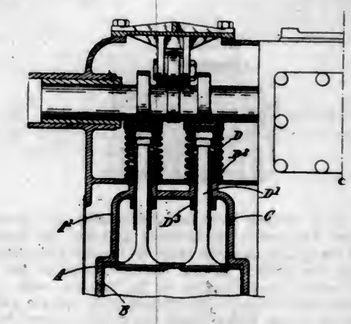


In a barometric drinking fountain, a tray including a bottom, a peripheral wall, and an upstanding frusto-conical collar having at intervals one element of a bayonet joint consisting of a horizontal slot through the collar at its lower edge and a lug pressed radially inward from one end of the strip above said slot; combined with a frusto-conical reservoir whose upper end is closed and whose lower end is open and of an internal diameter to fit closely around said collar when its lower edge stands slightly above the bottom of the tray, thereby leaving said slots partly open for passage of water, and complementary bayonet joint elements consisting of lugs pressed inward from the metal of the reservoir at points to register with those in said strips and of a size to permit them to be passed therethrough and then moved within the slots as the reservoir is turned with respect to the collar.

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1,226,595. ALUMINIUM OR OTHER LIGHT METAL CASTING FOR INTERNAL-COMBUSTION ENGINES. THOMAS CHARLES WILLIS PULLINGER, near Dumfries, Scotland, assignor, by direct and mesne assignments, to American B. H. P. Aero Engine Corporation, New York, N. Y., a Corporation of New York. Filed Sept. 5, 1916. Serial No. 118,332. (Cl. 123—173.)

1. In an internal-combustion engine, the combination of, a light-metal casting provided with a chamber communicating with the engine-cylinder by a port to be controlled by an exhaust-valve, a liner for said chamber which does not extend into the engine-cylinder and is made of material less easily corroded by exhaust gases than light metal, and a tubular guide for the stem of the exhaust-valve which guide extends through the liner and the wall of the valve-chamber and is secured by butting portions carried on it which butting portions clamp the wall and liner between them and thus secure the liner in place, substantially as set forth.



2. In an internal-combustion engine, the combination of, a light-metal casting provided with a chamber communicating with the engine-cylinder by a port to be controlled by an exhaust-valve, a liner for said chamber which does not extend into the engine-cylinder and is made of material less easily corroded by exhaust gases than light metal, a tubular guide for the stem of the exhaust-valve which guide extends through the liner and the wall of the valve-chamber, the said guide being shouldered to bear against one of these parts and screw-threaded at that end which projects from the shouldered portion through the said parts, and a nut on the screw-threaded end so that the liner is clamped against the wall of the chamber between the said shouldered portion and the nut, substantially as set forth.

3. In an internal-combustion engine, the combination with a light-metal casting provided with a domed chamber which communicates by a port opposite the domed end with the engine-cylinder which port is to be controlled by an exhaust-valve, a liner of material less easily corroded by the exhaust gases than the light metal, shaped to fit into the domed chamber, and a tubular guide for the stem of the exhaust-valve which guide extends through the domed end of the liner and valve-chamber and is secured by butting portions on the guide which butting portions clamp the wall of the chamber and the liner between them and thus secure the liner in place, substantially as set forth.

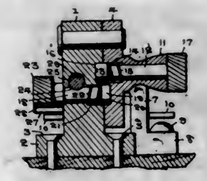
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1,226,596. PRESSURE-BAG FOR VULCANIZING PURPOSES. HENRY ERNEST RASMUSSEN, Fitchburg, Mass. Filed Jan. 18, 1916. Serial No. 72,664. (Cl. 18—45.)



The combination in a device of the class described, of an inflatable tube having a disk member in each end thereof adapted to provide closure means for the said tube, the end of said tube member extending over the outer edge and into engagement with the ends of said disk, a retaining ring right-angular in cross section clamping the tube to said disk member, an outer jacket, the said jacket being provided with closure plugs exteriorly threaded, a ring member interiorly threaded for engagement with the said plug and the outer periphery of the said ring in engagement with the outer jacket to provide means for sealing the end thereof in conjunction with a clamp for the purpose specified.

1,226,597. WINDOW-LOCK. ALFRED RE, New York, N. Y. Filed Nov. 21, 1916. Serial No. 132,598. (Cl. 16—146.)



1. In a window lock, the combination of a keeper, a bracket adapted to be mounted adjacent the keeper, a hook swingingly mounted upon the bracket and adapted to engage the keeper, locking means carried by the hook, and locking means carried by the bracket, both of said locking means adapted to automatically operate and lock the hook to the keeper, when the hook is moved into engagement with the keeper.

2. In a window lock, the combination of a keeper, a bracket designed to be mounted adjacent said keeper, a vertically disposed hook pivotally mounted on the bracket and designed to engage the keeper, said hook formed with a recess, a spring actuated plunger disposed transversely through the bracket and adapted to lockingly engage the recess of said hook, a thumb piece fixed to the outer end of said plunger and provided with a recess extending transversely through its edge, a pin projecting laterally from said bracket and within said transverse recess to prevent rotation of the plunger, and means to lock said plunger against longitudinal movement.

3. In a window lock, the combination of a keeper, a bracket designed to be mounted adjacent said keeper, a vertically disposed hook pivotally mounted on the bracket and designed to engage the keeper, said hook formed with a recess, a spring actuated plunger disposed transversely through the bracket and adapted to lockingly engage the recess of the hook, said plunger having a transverse concavity, a rotatable locking pin disposed through the bracket and the plunger concavity at right angles to said plunger and having a cut-away portion on one side to provide a flat surface, said locking pin adapted to be rotated so that the flat surface will be parallel to and adjacent the top of the plunger whereby the plunger may be moved longitudinally, and means to prevent rotation of said plunger.

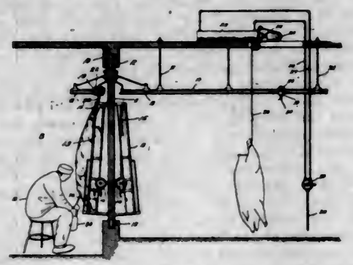
4. In a window lock, the combination of a keeper, a bracket designed to be mounted adjacent said keeper, a vertically disposed hook pivotally mounted on the bracket and designed to engage the keeper, said hook formed with a recess, a spring-actuated plunger disposed transversely through the bracket and adapted to lockingly engage the recess of said hook, means to prevent rotation of said plunger, and means to lock said plunger against longitudinal movement.

5. In a window lock, the combination of a keeper, a bracket designed to be mounted adjacent the keeper, a vertically disposed hook having a transverse recess therein swingingly mounted upon said bracket and designed to engage said keeper, a spring actuated plunger disposed transversely through the bracket and adapted to lockingly engage the transverse recess of said hook, and means cooperating with said spring actuated plunger to lock the plunger against movement.

[Claim 6 not printed in the Gazette.]

1,226,598. ANIMAL-BLEEDING APPARATUS. GEORGE H. ROBERTS, Indianapolis, Ind., assignor to Pitman-Moore Company, Indianapolis, Ind., a Corporation of Indiana. Filed July 29, 1916. Serial No. 112,148. (Cl. 17—30.)

1. An animal bleeding apparatus, comprising a wall having a door pivoted therein to swing about a vertical axis, and an animal-supporting table mounted on each side of said door so that by the swinging of the door either table may be brought to either side of said wall, said animal-supporting table being arranged to support the animal in vertical position for bleeding.



2. An animal bleeding apparatus, comprising a wall having a door pivoted therein, and an animal-supporting table mounted on each side of said door so that by the swinging of the door either table may be brought to either side of said wall, said animal-supporting table being arranged to support the animal in vertical position for bleeding.

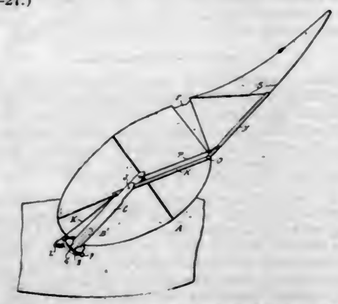
3. An animal bleeding apparatus, comprising a wall having a door pivoted therein to swing about a vertical axis, and an animal-supporting table mounted on said door so that by the swinging of the door said table may be brought to either side of said wall, said animal-supporting table being arranged to support the animal in vertical position for bleeding.

4. An animal bleeding apparatus, comprising a wall having a door pivoted therein, and an animal-supporting table mounted on said door so that by the swinging of the door said table may be brought to either side of said wall, said animal-supporting table being arranged to support the animal in vertical position for bleeding.

5. An animal bleeding apparatus, comprising a wall having a door pivoted therein to swing about a vertical axis, an animal-supporting table mounted on each side of said door so that by the swinging of the door either table may be brought to either side of said wall, said animal-supporting table being arranged to support the animal in vertical position for bleeding, and means on one side of the wall for bringing an animal into position to be attached to the table on that side of the door which at that time is on that side of the wall.

[Claims 6 to 16 not printed in the Gazette.]

1,226,599. AERIAL MACHINE. WILLIAM FREDERIC SAUNT, Lundy Island, via Instow, North Devon, England. Filed Nov. 7, 1916. Seiral No. 130,051. (Cl. 244—27.)



1. In an aerial machine, a body, a wing-plane comprising a hollow member adjacent to said body, a gimbal-frame directly connecting said hollow-member of the wing-plane to said body and serving to support said wing-plane on said body, a driving shaft rotatably mounted in said body, an extension of said driving shaft inclined relatively to the axis of rotation of said driving shaft, and bearings in said hollow member of the wing-plane for receiving said inclined shaft extension.

2. In an aerial machine, a body, a wing-plane comprising pivotally connected members, a universal joint connecting said wing-plane to said body, means for imparting a conical motion to the wing-plane-member or humerus adjacent to said body, an ulna-rod pivotally-mounted on the end of the humerus and a link which is pivotally connected to said ulna-rod at a suitable distance from its pivotal axis on the humerus and which is also pivotally connected to the body.

3. In an aerial machine, a body, a wing-plane comprising pivotally connected members, a universal joint connecting said wing-plane to said body, means for imparting a conical motion to the wing-member or humerus adjacent to said body, an ulna-rod pivotally-mounted on the end of the humerus, a link which is pivotally connected to said ulna-rod at a suitable distance from its pivotal axis on the humerus and is also pivotally connected to the body, and means for adjusting the position of the pivotal connection between said link and said body.

4. In an aerial machine, a body, a wing-plane comprising a hollow humerus, an ulna, and a hand pivotally connected together, a universal joint connecting said humerus and said body, a driving shaft rotatably mounted in said body, an extension of said driving shaft inclined relatively to the axis of rotation of said driving shaft, said shaft-extension turning in bearings in said humerus, a link pivotally connecting said body and said ulna at a suitable distance from its pivotal axis on the humerus, means for adjusting the position of the pivotal connection between said link and said body, and a link pivotally connecting said humerus and said hand.



1,226,600. FINISHING-WELT. ROBERT C. SCHEMMEL, Union City, Ind. Filed Feb. 7, 1917. Serial No. 147,204. (Cl. 155—43.)



1. As a new article of manufacture, a welt comprising a body, and longitudinal parallel beads superimposed on and connected with the body, the body being constructed and arranged to permit of the beads being spread apart and subsequently resuming their normal close-together positions, for the purpose set forth.

2. As a new article of manufacture, a welt comprising a body made up of layers of material or materials, and longitudinal parallel beads superimposed on and joined to the body, the said beads being formed of cords and coverings extending from layers of the body, and the body being constructed and arranged to permit of the beads being spread apart and subsequently maintained in their normal close-together positions.

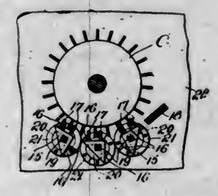
3. The combination of an article, a welt arranged against the same and comprising a body, and beads joined to the body and normally resting close together and constructed and arranged to be spread apart, and attaching means extending through the longitudinal central portion of the body and joining the same to the article; the said attaching means being normally hidden from view by the said beads in their closely arranged positions.

4. The combination of an article, a welt arranged against the same and comprising a body, and beads joined to the body and normally resting close together and constructed and arranged to be spread apart, and attaching means extending through the body and joining the same to the article; the said attaching means being normally hidden from view by the said beads in their closely arranged positions.

5. As a new article of manufacture, a welt comprising a body, and longitudinal parallel beads superimposed on and connected with the body and constructed and arranged to have a tendency when moved laterally outward to move inwardly toward each other and remain of themselves in the latter positions.

[Claim 6 not printed in the Gazette.]

1,226,601. CONCAVE FOR THRESHING-MACHINES. LEO J. SCHWARTZ, Winnetoon, Nebr. Filed Sept. 4, 1915. Serial No. 49,087. (Cl. 130—27.)



The combination with a toothed threshing cylinder, of a concave comprising a plurality of rocking bars spaced apart for the passage of grain therebetween, each bar having a plurality of faces which may be alternately exposed toward the cylinder, some faces of the several bars being provided with varying numbers of teeth arranged in rows on said faces, and other faces being left blank whereby, by rocking adjustment of the bars, the number of teeth exposed for coöperation with the teeth of the cylinder and the relative arrangement of said teeth may be greatly varied.

1,226,602. FENCE-POST. RICHARD A. SELWAY, Chicago, Ill. Filed Mar. 31, 1915. Serial No. 18,262. (Cl. 189—23.)



1. A fence post formed of sheet metal tapered from end to end and V shaped in horizontal cross section, the lateral edges thereof being rebent to form flat flanges, the sides of the V shaped body portion being at an acute angle to each other and said lateral flanges being at an acute angle to the adjacent sides of the body, substantially as described.

2. A metallic fence post substantially V-shaped in cross section, the angle of the V being substantially forty degrees and having back-turned lips at its edges making an angle of substantially eighty-nine degrees with the legs of the V, substantially as described.

3. A fence post formed of sheet metal tapered from end to end and V shaped in horizontal cross section, the free

edges of the sides of the V shaped body being rebent to form flanges at an acute angle to the adjacent sides of the body portion, there being a well rounded portion connecting each flange with its adjacent side and forming a seat for the fence fabric, substantially as described.

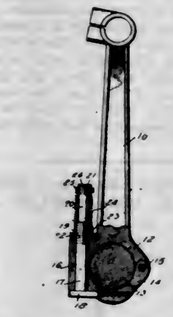
4. A fence post formed of sheet metal tapered from end to end and V shaped in horizontal cross section, the free edges of the sides of the V shaped body being rebent to form flanges at an acute angle to the adjacent sides of the body portion, there being a well rounded portion connecting each flange with its adjacent side and forming a seat for the fence fabric, and said flanges being provided with perforations beyond the said rounded portions to receive fastening means for the fence fabric, substantially as described.

5. A metallic fence post substantially V-shaped in cross section and having back-turned lips at its edges adapted to contact with the fence, there being fence securing means located on said lips beyond the points of contact with said fence, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,603. CONNECTING-ROD BEARING. HILDAR J. SHELDRUP and OLE O. MALAND, Pelican Rapids, Minn. Filed Jan. 29, 1917. Serial No. 145,195. (Cl. 64—55.)



1. A bearing of the character described, consisting of hingedly connected parts having their opposed free ends provided with alined openings transverse with respect to the axis of the bearing, a pin extending through said openings, having a head at one end and threads at its opposite end, and provided at said latter end with an extension also threaded and provided with a transverse opening, a nut for connection with the threads of said pin and for engagement against one of said bearing parts, a coiled spring around the said pin extension having its inner end secured to the said nut, a nut for connection with the threads of said extension, and to which the outer end of said spring is secured, said latter nut having openings to aline with the opening of said extension, and a locking pin for engagement with the alined openings, all substantially as described.

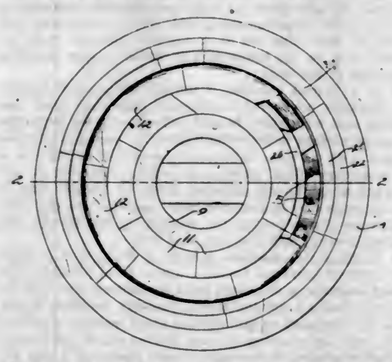
[Claims 2 to 4 not printed in the Gazette.]

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1,226,604. CORE-BOX FOR BLADED DIAPHRAGMS OF STEAM-TURBINES. WALTER SHERWOOD and LOVELL BALDWIN, Wellsville, N. Y. Filed Mar. 14, 1916. Serial No. 84,245. (Cl. 22—13.)

1. A core box of the kind described, comprising a base having associated therewith a series of removable ring members arranged to form between them an annular space, and means for positioning a series of diaphragm blades in a part of said annular space corresponding to the bladed portion or portions of a diaphragm, said means having provision for holding the blades at a definite angle and in predetermined relation to one another as the core is formed.

3. A core box, comprising a base having removable elements associated therewith for forming an annular core space to produce the body portion of a core and an annular space beneath said annular core space, removable elements adapted to be fitted in the last named space and formed to position and space a series of blades to occupy a port passage of a diaphragm in said underneath annular space with provision for forming a core rib extending from the core body through the spaces between said blades and therebeyond, said rib being transversely intermediate said blades for the purpose stated.



5. A core box of the kind described, comprising a base equipped with removable members forming an annular core space to produce the body of a core and an annular space thereunder, means for filling in certain parts of the last named annular space, and means for positioning a series of blades of a diaphragm in predetermined relation and angular position in the part of said annular space not filled in, said means consisting in inside and outside follower pieces formed to fit between adjacent blades when in correct relative position and leaving an intermediate space to form a core rib extending between the blades and transversely intermediate thereof.

6. A core box of the kind described, comprising a base equipped with removable members forming an annular core space to produce the body of a core and an annular space thereunder, and means for setting up a series of diaphragm blades in said lower annular space in predetermined angular position and relation to one another, consisting in a starting piece having provision to determine the angular setting of the first of a series of blades, and inside and outside follower pieces formed to fit the space between successive blades when in correct relation whereby each succeeding blade may be correctly positioned from the next preceding one, said inside and outside follower pieces being spaced apart to provide a core rib extending between the blades and transversely intermediate thereof to a point therebeyond for the purpose stated.

[Claims 2 and 4 not printed in the Gazette.]

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1,226,605. REINFORCED NOZZLE FOR SHEET-METAL CONTAINERS. GOTTHOLD BLOCH, Brooklyn, N. Y., assignor to National Enameling & Stamping Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 14, 1915. Serial No. 55,788. (Cl. 220—1.)



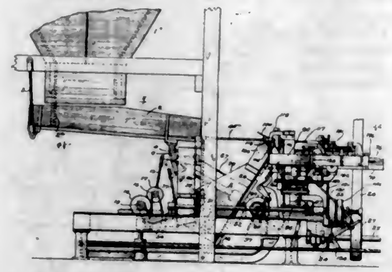
The combination with a sheet metal container having a circular opening in its wall and the metal of the wall about the opening being forced outwardly to form a nozzle that is smooth on both the interior and the exterior, and



on the inner side said receptacle-wall being pressed outwardly to form an annular interior recess around the opening, and a plate having an interior portion which seats in the interior recess of the receptacle wall and said plate being pressed outwardly from the said flange and through the nozzle,—the outer surface of the outwardly-pressed central portion of the plate being in close contact with the smooth interior of the nozzle portion of the receptacle wall and the inner surface of said outwardly-pressed portion of the plate having screw threads and the flange portion of the plate being permanently secured in the interior recess of the receptacle wall.

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1,226,606. BOBBIN-HANDLING APPARATUS. HOWARD D. COLMAN, Rockford, Ill., assignor to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Co-partners doing business as Barber-Colman Company, Rockford, Ill. Filed Feb. 1, 1915. Serial No. 5,564. (Cl. 242—44.)



1. In combination, a part on which a bobbin may lie loosely, a channel-shape member above said part, the bobbin extending lengthwise of and within said member, and means for turning said member to reverse the bobbin on said part.

2. In combination, a device for selectively reversing full bobbins to make similar ends of the bobbins extend in the same direction, and means for alining full bobbins end to end and for presenting the alined bobbins to said device.

3. The combination of a support for bobbins, bobbin-arranging means arranged to receive bobbins from said support, and mechanism controlled by the bobbins at said arranging means for regulating the discharge of bobbins from said support.

4. The combination of a container for bobbins, means for supplying bobbins thereto, and means including a part located in the container and adapted to bear against the bobbins held within said container for controlling the operation of said supplying means.

5. The combination of a bobbin conveyer, means for placing alined bobbins on the conveyer, and means for selectively reversing bobbins on the conveyer.

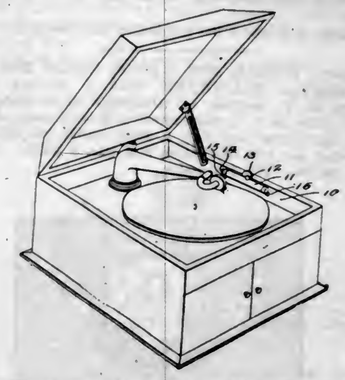
[Claims 6 to 80 not printed in the Gazette.]

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1,226,607. PHONOGRAPH-LAMP. PAUL GILLEN, Lynbrook, N. Y., assignor to Hudson Brass Works in the City of New York, Brooklyn, N. Y., a Corporation of New York. Filed Feb. 19, 1917. Serial No. 149,508. (Cl. 240—2.)

1. In a lamp, the combination of a cylindrical casing, dry batteries placed in series therein, an incandescent light secured within said casing between said batteries, a metallic ring connecting opposite terminals of said batteries and inclosing the socket of said lamp, and movable contact means for completing the circuit between said lamp and said batteries.

3. In a phonograph lamp, the combination of a cylindrical casing, dry batteries placed in series therein, an incandescent light secured within said casing between said batteries, a metallic ring connecting opposite terminals of said batteries and inclosing the socket of said lamp, spring contact means for completing the circuit between said lamp and said batteries, brackets secured to the ends of said cylindrical casing to permit same to



be positioned on a phonograph box and means for reflecting the light from said lamp on any portion of the phonograph record.

[Claim 2 not printed in the Gazette.]

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1,226,608. VALVE. JOHN LINES, Waterbury, Conn., assignor to The Scovill Mfg. Co., Waterbury, Conn. Filed Oct. 18, 1897. Serial No. 655,516. (Cl. 152—12.)



1. In a valve, the combination with a tubular casing formed with an internal shoulder, of a valve-seat bearing upon the said shoulder which locates it properly within the said casing, a plug inserted into the casing for holding the seat in place, a packing interposed between the valve-seat and plug, and a spring-actuated valve co-acting directly with the said valve-seat.

2. In a valve, the combination with a tubular valve casing formed with an internal shoulder, of a spring-actuated valve located within the said casing and provided with a valve-stem, a valve seat located within the casing and seated upon the said shoulder, an externally threaded plug located within the outer end of the casing, which is internally threaded for its reception, and a valve-seat packing introduced between the valve-seat and the plug, and compressed by the plug so as to be forced outward against the walls of the casing.

4. In a valve, the combination with a tubular valve-casing formed with an internal annular shoulder, of a valve-seat engaging directly with the said shoulder which locates it properly within the said casing, an exteriorly threaded plug located within the casing and having its outer end slotted for the reception of a screw-driver, a packing-washer interposed between the outer end of the valve-seat and the inner end of the plug, and a valve co-acting directly with the valve-seat and provided with a valve-stem which extends outward through the valve-seat and through the plug, and has its outer end upset for connecting the valve, valve-seat and plug together without interfering with their rotation independent of each other.

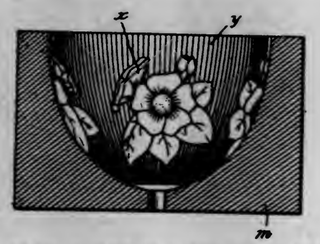
6. For tire and other valves a tubular screw threaded member, a tubular seat member, a ring of packing material, and a stem traversing said parts and connecting them together.

8. For tire and other valves, a tubular screw threaded plug, in combination with a tubular seat member separate therefrom, and rotative relative thereto, and a stem traversing said parts and connecting them loosely together.

[Claims 3, 5, and 7 not printed in the Gazette.]

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1,226,609. METHOD FOR MAKING MOLDS FOR ORNAMENTAL GLASSWARE. OTIS A. MYGATT, New York, N. Y., assignor to Holophane Glass Company, New York, N. Y., a Corporation of New Jersey. Original application filed July 1, 1909, Serial No. 505,438. Divided and this application filed Dec. 6, 1915. Serial No. 65,204. (Cl. 76—107.)

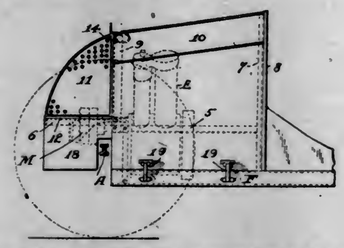



1. The method of preparing a mold for the manufacture of ornamental glass articles which consists in covering the surface of the mold with fine ribbings and then removing portions of the said ribbings so that there will be produced in the glass design upon an evenly ribbed background.

2. The method of preparing a mold for the manufacture of ornamental glass shades which consists in covering the surface of the mold with fine ribbings and then cutting away portions of the said ribbings in accordance with a predetermined design.

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1,226,610. HOOD FOR ENGINES OF MOTOR-VEHICLES. WILLARD IRVING TWOMBLY, New York, N. Y., assignor to Twombly Car Corporation, New York, N. Y., a Corporation of New York. Filed Dec. 18, 1913. Serial No. 807,411. (Cl. 74—56.)




1. In a motor vehicle, the combination of a hood to project forward from the dashboard consisting of longitudinally foldable sections, one end of which hood lies adjacent the dashboard, and foldable sections to close the other end of said hood, substantially as and for the purpose specified.

2. In a motor vehicle, the combination of a hood consisting of longitudinally hinged sections, one end of which hood lies adjacent the dashboard of the vehicle, and a pair of hinged sections for the front end of said hood, substantially as and for the purpose specified.

3. In a motor vehicle, a hood for the engine projecting forward from and with one end adjacent to the dashboard, and releasable sections to close the forward end of said hood, substantially as and for the purpose specified.

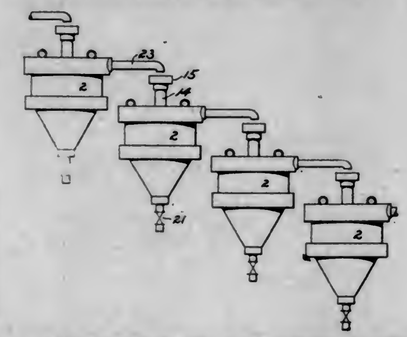
4. In a motor vehicle, a hood for the engine substantially semi-cylindrical in cross section projecting forward from and with one end adjacent to the dashboard, and a pair of hinged sections to close the forward end of the hood.

5. In a motor vehicle, a hood for the engine substantially semi-cylindrical in cross section projecting forward from and with one end adjacent to the dashboard; and releasable sections closing the forward end of said hood, comprising a pair of perforated hinged sections having a mating connection with the hood and one section having a portion mating with the other section and both converging to a common central point.

[Claims 6 to 15 not printed in the Gazette.]

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1,226,611. PRECIPITATION APPARATUS. ALBERT E. VANDERCOOK, Oakland, Cal., assignor to California Macvan Company, a Corporation of California. Filed Nov. 9, 1915. Serial No. 60,611. (Cl. 75—18.)




1. In a precipitating cone, a feed chamber, a precipitating chamber adapted to contain a precipitant, a perforated plate separating said chambers, and a perforated weight arranged in said precipitating chamber and adapted to compress said precipitant.

2. In an apparatus as described, a feed chamber, a precipitating chamber adapted to hold a quantity of shredded precipitant, a perforated plate lying between said chambers and means for compactly pressing said precipitant against said plate.

3. In an apparatus as described, a feed chamber, means for supplying said feed chamber, a precipitating chamber, a perforated plate separating said chambers, means for compacting the contents of the precipitating chamber and for discharging the precipitate through said perforated plate into said feed chamber, means for removing the precipitate from said feed chamber and means for conducting the overflow from the precipitating chamber.

4. In an apparatus of the character described, a conical feed chamber having an outlet at its lower end, a precipitating chamber arranged above said feed chamber, a perforated plate separating said chambers, a feed pipe attached to said plate and extending upwardly through the precipitating chamber and the precipitant therein, a perforated weight surrounding said pipe and resting on the precipitant and an overflow launder surrounding said precipitating chamber.

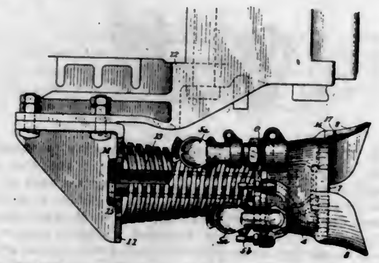
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1,226,612. AUTOMATIC TRAIN-LINE COUPLING. THOMAS R. BROWN, Sparkill, N. Y., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed July 14, 1914. Serial No. 850,988. (Cl. 188—13.)

1. In an automatic coupling of the butt type, the combination of a hanger plate adapted to be suspended from the draw bar, a coupler head having outwardly projecting arms, and a coiled spring formed integral with the hanger plate and a portion of the coupler head.

2. In an automatic coupling of the butt type, the combination of a hanger plate, a coiled spring formed integral with said hanger plate at one end, a flange formed integral with said spring at its other end, and a coupler head secured to said flange and having outwardly projecting arms.





3. In an automatic coupling of the butt type, the combination of a hanger plate, a coiled spring supported thereby, a flange plate supported by said spring, a coupler head secured to said flange, and a guide member extending from said flange through the hanger plate, said hanger plate, coiled spring, flange, and guide being formed in one integral structure.

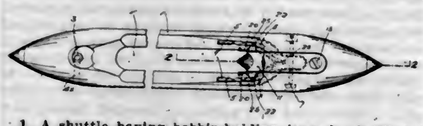
4. In an automatic coupling of the butt type, the combination of a hanger plate, a coiled spring rigidly secured thereto at one end, and a coupler head rigidly secured at the other end of said spring and having outwardly extending arms, said arms being formed to coöperate with corresponding arms of a counterpart coupler, to produce a relative rotary movement of said heads in the act of coupling.

5. In an automatic coupling of the butt type, the combination of a hanger plate, a coiled spring rigidly secured thereto at one end, a coupler head rigidly secured at the other end of said spring, means for producing a relative rotary movement of the counterpart heads in the act of coupling, and interlocking projections having inclined engaging surfaces for forcing said heads into close contact.

[Claim 6 not printed in the Gazette.]

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1,226,613. SHUTTLE. UBALD HEBERT, Manchester, N. H., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Feb. 5, 1916. Serial No. 76,270. (Cl. 139—27.)



1. A shuttle having bobbin-holding jaws for holding a bobbin in operative position therein, and a lug carried by the shuttle constructed and arranged to engage and support the base end of a bobbin as a fulcrum as the bobbin is turned about the lug into holding relation with the jaws.

2. A shuttle having bobbin-holding jaws, and a lug or projection secured to the shuttle between the jaws and adapted to engage and support the base portion of a bobbin as it is turned about said lug or projection as a fulcrum into operative position in the shuttle.

3. A shuttle having bobbin-holding jaws, a lug carried by the shuttle to support the base portion of a bobbin as a fulcrum while the bobbin is being turned into bobbin-holding relation with the jaws, and means for preventing longitudinal movement of the bobbin while it is being turned about said lug as a fulcrum.

4. In a shuttle, the combination of bobbin-holding jaws, a bobbin having a recessed base portion and holding rings or projections, a lug secured to the shuttle between the jaws to engage the recess in the base of the bobbin that the bobbin may be turned about said lug as a fulcrum and forced between the holding jaws.

5. A shuttle provided with bobbin-holding jaws having transverse bobbin-holding grooves, a fixed lug or projection secured to the shuttle between planes passing longitudinally of said jaws and a bobbin having a base portion provided with a recess to engage said fixed lug when the bobbin is inclined to the shuttle that the bobbin may be turned about said lug into position between the bobbin-holding jaws.

[Claims 6 to 12 not printed in the Gazette.]

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1,226,614. SAFETY-RAZOR. GEORGE M. HISKEY, Los Angeles, Cal. Filed Sept. 30, 1912. Serial No. 723,033. (Cl. 30—12.)



1. A safety razor, comprising a tubular body having a fixed slot extending longitudinally thereof, a razor blade mounted within said body with its forward cutting edge projecting through said slot and tangentially supported in relation to the internal periphery thereof, adjusting means for moving said blade in said slot in relation to said tubular body, and means to secure the blade in adjusted position.

2. A safety razor, comprising a tubular body having a spirally located slot on its peripheral surface, a flexible blade held within the tubular body with its edge projecting from said slot, and means to adjust said blade.

3. A safety razor, comprising a hollow cylindrical body having a series of grooves transversely disposed in its peripheral surface forming teeth, and provided with a longitudinally extending slot cutting said grooves, and a razor blade slidably supported internally thereto and in contact with the wall thereof and having its cutting edge projecting tangentially into said slot.

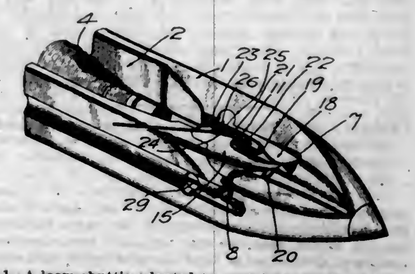
4. A safety razor, comprising a hollow cylindrical spirally slotted body, a cylindrical spiral slotted razor supporting sleeve closely fitting within and revolubly mounted in peripheral engagement with said body, and a razor blade mounted longitudinally and spirally between said sleeve and said body.

5. A safety razor, comprising a hollow cylindrical body having a slot formed in its wall in a plane inclined to its axial plane, a razor supporting sleeve having a shallow depression parallel with said slot slidably mounted in said body, and a razor blade seated in said depression adjacent said slot and held therein by said cylindrical body with its cutting edge projecting into said slot and protected by the walls forming said slot.

[Claims 6 to 12 not printed in the Gazette.]

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1,226,615. SHUTTLE. HENRY LUSSIER, Salem, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Feb. 5, 1916. Serial No. 76,233. (Cl. 139—46.)




1. A loom shuttle adapted to contain a supply of filling and having a delivery eye, a threading block having a longitudinal thread passage and an entrance thereto, a front leader and a rear leader extending from a side wall of the threading block over the thread passage and dis-

posed at different points longitudinally of the thread passage, and a guard overlying the end of one of said leaders to prevent a bight of filling being drawn past the underlying leader on the second pick of the shuttle when the latter has failed to be preliminarily threaded after replenishment.

2. A shuttle provided with a threading block having a longitudinal thread passage, two leaders extending from one side wall of the threading block above the thread passage and at different distances from the end of the shuttle, one of said leaders extending farther from the side wall than the other.

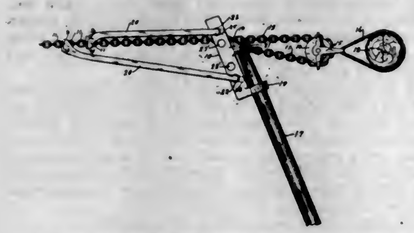
3. A shuttle provided with a threading block having a longitudinal thread passage, a front leader extending from one side wall of the block above the thread passage to engage the filling should the shuttle fail to be threaded on the second pick following replenishment, and a rear leader extending from a side wall to a greater distance than the other leader to catch the filling when it fails to be held by the front leader.

4. A shuttle provided with a threading block having a longitudinal thread passage, a front leader extending from one side wall of the block above the thread passage to catch the filling when it fails to be threaded on the second pick following replenishment, a rear leader extending from a side wall to a greater distance than the other leader, and a guard overhanging the end of the rear leader to catch the filling when it fails to be held by the front leader.

5. A shuttle having a threading block provided with a longitudinal thread passage, and a horn having a beak, a rear leader extending from one side wall of the threading block, a gunrd overhanging said leader, and a front leader between the rear leader and beak.

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1,226,616. STUMP-PULLER. GERHARD MOE, Ladysmith, Wis., and ALFRED J. KIRSTIN, Escanaba, Mich. Filed July 10, 1914. Serial No. 850,077. (Cl. 254—75.)

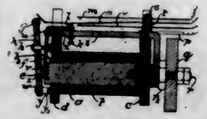


In a device of the described class, comprising a cable adapted to be connected at one end to a stationary object and at its opposite end to a stump or other movable object and a manually operated lever the combination with such manually operated lever of a pair of grab hooks, each grab hook being provided at its rear end with a downward and rearward bend, said bend being adapted to be inserted through apertures provided therefor in said lever, said grab hooks being each provided at its front end with a pair of vertical hooks adapted by their gravity to drop into engagement with the links of said cable.

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1,226,617. ELECTROMAGNET. FREDERICK R. PARKER, Chicago, Ill. Filed Feb. 19, 1904, Serial No. 194,392. Renewed Sept. 23, 1916. Serial No. 121,905. (Cl. 175—336.)

1. In an electromagnet, the combination of an open magnetic structure comprising a core and another magnetic member secured to one end of the core, a magnetizing coil wound upon the said core, and two superposed armatures mounted so as to be actuated by the said structure, one armature being mounted loosely upon a collar carried by the said magnetic member and the other armature being pivoted upon the other side of the core from the said collar, both said armatures being arranged to complete the magnetic circuit when attracted, one of the said armatures requiring a stronger magnetizing force to attract it than that required to attract the other armature.



2. In an electromagnet, the combination of a magnetic core, an insulating head for each end of the core and placed thereon, each end of the core being flattened at one side to prevent the said heads from turning, a winding placed upon the core between the said heads and adapted to magnetize the said core, a second magnetic member secured to one end of the core by a bolt which is also adapted for mounting the electromagnet, the said second magnetic member being bent so as to extend parallel with the said core and being secured to the said heads, an armature of thin magnetic material pivoted loosely upon the said second magnetic member and adapted to be attracted to one end of the core which is suitably cut away to accommodate the said armature, means for preventing the said armature from sticking to the core after the magnetism has been removed, a second armature of thick magnetic material pivoted loosely upon the opposite side of the core from the said second magnetic member and adapted to be attracted to the said core, this last-mentioned armature overlapping the other armature when attracted and both armatures helping to complete the magnetic circuit when attracted, suitable adjustments and stops for the said armatures, to limit their movement, the said armatures being adapted to be operated upon different strengths of magnetism, respectively, in the said core, thus allowing them to be operated separately or together, and an inclosing shell adapted to fit over the said insulating heads and thereby inclose the electromagnet, substantially as described.

3. In an electromagnet, the combination of a magnetic core, a head of insualting material for each end of the core and placed thereon, an energizing winding carried by the core between the said heads, a second magnetic member secured to one end of the core by a bolt adapted also for mounting the electromagnet to a suitable support, and extending substantially parallel with the core, the said second magnetic member secured to the said heads, an armature of thin magnetic material pivoted to the said second magnetic member so as to be attracted to the said core, a second armature of thicker magnetic material pivoted on the opposite side of the core from the said second magnetic member so as to be attracted to the said core, the said armature overlapping each other when attracted and both helping to complete the magnetic circuit when attracted, suitable adjustments and stops for the said armatures, the said armatures being adapted to be attracted upon respective degrees of energization of the device whereby they may be operated separately or together, and an inclosing shell adapted to fit over the said heads to inclose the device as a whole.

4. In an electromagnet, the combination of a substantially U-shaped magnetic structure comprising a core and another magnetic member secured to one end of the core, a magnetizing coil wound upon the core, and two armatures at one end of the core both arranged to substantially complete the magnetic circuit of the U-shaped structure when attracted, one of the said armatures being pivoted to the said magnetic member, the other armature being pivoted on the opposite side of the core from the said magnetic member, the said armatures requiring respective degrees of energization of the electromagnet to effect their attraction.

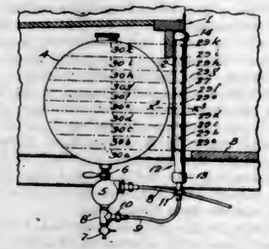
5. In an electromagnet, a magnetic core and energizing means therefor, an L-shaped magnetic member extending substantially parallel with the said core and secured to one end of the latter, and two armatures at the other end of the core pivoted on opposite sides thereof and arranged to substantially complete the magnetic circuit when attracted.

[Claims 6 to 21 not printed in the Gazette.]



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1,226,618. FUEL-GAGE FOR AUTOMOBILES. JARVIS A. BRITTON, Los Angeles, Cal., assignor to The National Motor Supply Company, Cleveland, Ohio, a Corporation. Filed July 6, 1914, Serial No. 849,286. Renewed Feb. 26, 1917. Serial No. 151,143. (Cl. 73—82.)



A gage comprising a transparent tube, lower and upper screw threaded caps at the respective ends of the tube, said upper cap having a vent, a cylindrical sheet metal slotted shell surrounding the tube, threaded portions fastened to the opposite ends of the shell and screwed into the caps, spacers between the tube and the shell and flush with the ends of the shell, and washers between the flush ends of the shell and spacers and the inside ends of the caps.

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1,226,619. ELECTRICAL SAFETY DEVICE FOR RAILROADS. GEORGE EDWARD CHARRON, Ottawa, Ontario, Canada. Filed Apr. 19, 1915. Serial No. 22,506. (Cl. 246—21.)



The combination with a rail joint, including a pair of abutting rails and a fish plate, of hollow boxes mounted on the rails and provided at one end with lugs, rods operatively mounted in the fish plates having one end embraced by the hollow boxes, a signal, a source of power, and means for closing a circuit including the signal, source of power and the said rods and boxes should the rails become displaced.

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1,226,620. PRODUCT OF HYDROGENATION. CARLETON ELLIS, Montclair, N. J. Original application filed Mar. 29, 1912, Serial No. 686,988. Divided and this application filed Feb. 9, 1917. Serial No. 147,554. (Cl. 23—28.)

1. As a new product, a suspension of a colloidal "non-noble metal" catalyst in a hydrogenated organic material.

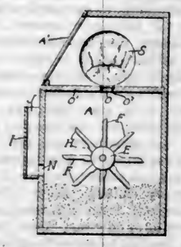
2. Colloidal nickel suspended in hydrogenated fatty material.

3. A "colloidal non-noble metal-containing catalyst" suspended in a hydrogenated organic material, and suitable for use as a catalyst in hydrogenation processes.

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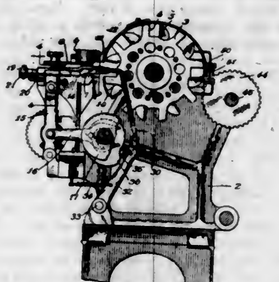
1,226,621. SAND-BLAST FOR SATIN-FINISHING METALS. EMIL GIBLAND, Charlotte, N. C. Filed Oct. 14, 1916. Serial No. 125,643. (Cl. 51—12.)

In a sand blast apparatus, a casing including an upper chamber and a lower sand containing chamber, a partition between the chambers and having a central opening therein, a wheel journaled within the sand containing chamber, said wheel being supported in a plane directly under the central opening, scoop-shaped members provided on the wheel, said scoop-shaped members adapted to scoop up sand and throw the same toward said opening, and means for rotating the wheel.



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1,226,622. WRAPPING-MACHINE. HENRY J. KEMPF, Springfield, Mass., assignor to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Filed June 3, 1915. Serial No. 31,890. (Cl. 93—5.)



1. In a machine of the character described a rotatable twister head, a spindle mounted to slide in said head and having a series of peripheral grooves, two shafts supported in said head on opposite sides of said spindle, and having teeth meshing with the grooves on said spindle, and a pair of U-shaped wire twisters crossing each other and supported, respectively, by said shafts, whereby the sliding movement of said spindle in one direction operates through said shafts to open the twisters and the movement of the spindle in the opposite direction closes the twisters.

2. In a machine of the character described, a rotatable twister head, a spindle mounted to slide in said head and having a series of peripheral grooves, two shafts supported in said head on opposite sides of said spindle, and having teeth meshing with the grooves on said spindle, a pair of U-shaped wire twisters crossing each other and supported, respectively, by said shafts, whereby the sliding movement of said spindle in one direction operates through said shafts to open the twisters and the movement of the spindle in the opposite direction closes the twisters, and intermittently acting means operating positively through said spindle to hold the twisters closed.

3. In a machine of the character described, a pair of oppositely disposed rotatable twister heads, each head carrying two shafts and a pair of U-shaped wire twisters supported, respectively, by said shafts and each twister being adjustable in its shaft whereby the two sets of twisters may be moved toward or from each other, means for opening said twisters, and means for positively closing said twisters.

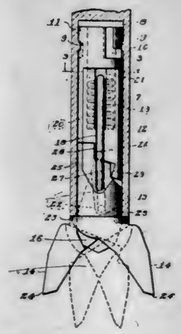
4. In a machine of the character described a rotatable twister head, two shafts supported in said head and spaced from each other, two twisters supported respectively by said shafts for movement into open or closed relationship with reference to each other, a spindle mounted in said head for sliding movement, and connections between said spindle and shafts whereby the sliding movement of the spindle opens or closes said twisters.

5. In a wrapping machine, the combination with a wrapping wheel and a reciprocating plunger operative to push articles one at a time into the pockets of said wheel, of a plate mounted under said plunger to slide substantially to the periphery of said wheel and back again away from the wheel in a path parallel to the path of movement of said plunger, whereby the plate serves to support each article as the plunger forces it into the pockets in said wheel, a spring arranged to move said plate in one direction, and connections between said plate and said plunger serving to move the plate in the opposite direction.

[Claims 6 to 12 not printed in the Gazette.]

# REISSUES.

14,301. COMBINATION BIT AND ROTARY UNDER-REAMER. LAWRENCE S. CAMPBELL, Los Angeles, and JOHN GRANT, Florence, Cal.; said Campbell assignor to said Grant. Filed Jan. 2, 1917. Serial No. 140,300. Original No. 1,169,922, dated Feb. 1, 1916, Serial No. 61,309, filed Nov. 13, 1915. (Cl. 255—75.)



1. A device for the purpose described, consisting of a shell having a concentric bore with a projection formed near the inner termination of the bore, a center-block inserted into the bore of the shell being hollow at the upper end and flattened at the lower end, said center-block having a recess formed on the outside of the upper end adapted to engage with the projection in the bore of the shell, cutters having shanks formed on the upper ends designed to fit in the nearly semi-circular spaces left on both sides of the center-block in the shell, a spring inserted into the hollow center-block, and operating rods with the lower ends turnably secured to the shanks of the cutters and the upper ends engaged with the spring in the center-block for holding the cutters in operating position.

2. A device for the purpose described, consisting of a hollow shell, a center-block removably secured in the shell, cutters slidingly mounted in the space formed between the center-block and the shell, and a well casing being cut out at the lower termination to fit over the cutters designed for rotary drilling and having grooves provided along the inside of the lower thicker end in the casing adapted to allow water to pass to the cutters.

3. A device for the purpose described, consisting of a hollow shell terminating in a circular ring, a round center-block removably secured in the shell being hollow at the upper end and flattened at the lower end, projections formed on the flattened part of the center-block, cutters having shanks formed on the upper ends slidingly fitting in the nearly semi-circular spaces formed on both sides of the flattened center-block in the shell and having shoulders to utilize the ring termination of the shell for a pounding surface, the cutters having cutting edges on the lower end concentric to the center of the device, said shanks having straight edges parallel to the center of the device opposite to the cutting edges, the edge of the shank opposite to the straight edge and on the same side with the cutting edges being formed to engage with projections on the center block to prevent the cutters from collapsing, and operating means secured to the cutters adapted to hold the cutters in operating position.

4. In a device for the purpose described, a hollow shell, a center-block removably secured in the shell being flattened at the lower end, cutters slidingly mounted in the spaces formed between the flattened center-block and the shell, said center block having lugs formed on the termination of the flattened end, and said cutters having recesses formed on the sides toward the center-block adapted to engage with the lugs on the center-block to prevent the cutters from falling out.

5. In a device for the purpose described, a hollow shell, a center-block removably secured in the shell being flattened at the lower end, cutters slidingly mounted in the spaces formed between the flattened center-block and the shell, said center-block terminating below the shell having means thereon to prevent the cutters from collapsing and also adapted to serve as a guide to bring the cutters into operating position, and operating means secured to the cutters, adapted to hold the cutters in operating position, all substantially as described.

6. In a device for the purpose described, the combination of a hollow shell, a center-block removably secured in the shell being flattened at the lower end, said center-block being also provided with a slot crosswise through the upper end, cutters slidingly mounted in the spaces formed between the flattened center block and the shell, operating means secured to the cutters and suitably supported by the center-block adapted to hold the cutters in operating position, and a locking key inserted through the slot in said center block adapted to prevent disengagement of said shell and center block.

7. In a device for the purpose described, the combination with a hollow shell and a center-block removably secured in the shell being flattened at the lower end, of cutters having shanks on the upper ends slidingly mounted in the nearly semi-circular spaces formed on both sides of the flattened center-block in the lower end of the shell and having cutting edges formed on the lower ends of the cutters projecting off the shell in right angles to the flat side of the nearly semi-circular shanks.

8. In a device of the class described, the combination with a hollow shell, of cutters slidingly mounted therein; and a cutter supporter normally fixed within said shell, said supporter comprising means slidingly and pivotally securing said cutters to said supporter so that said cutters may be collapsed on protraction of the latter, and means located so as to be interposed between said cutters to expand and prevent collapse of the latter when retracted.

9. In a device of the class described, the combination with a hollow shell, of cutters slidingly mounted therein; a cutter supporter normally fixed within said shell; said supporter comprising means slidingly and pivotally securing said cutters to said supporter so that said cutters may be collapsed on protraction of the latter, means located so as to be interposed between said cutters to expand and prevent collapse of the latter when retracted; and means tending to retract said cutters.

10. In a device of the class described, the combination with a hollow shell, of cutters slidingly mounted therein, said cutters having an off-set disposed to engage the lower face of said shell; and a cutter supporter normally fixed within said shell, said supporter comprising means slidingly and pivotally securing said cutters to said supporter so that said cutters may be collapsed on protraction of the latter, and means located so as to be interposed between said cutters to expand and prevent collapse of the latter when retracted.

11. In a device of the class described, the combination with a hollow shell, of cutters slidingly mounted therein, said cutters having an off-set disposed to engage the lower face of said shell; a cutter supporter normally fixed within said shell, said supporter comprising means slidingly and pivotally securing said cutters to said supporter, so that said cutters may be collapsed on protraction of the latter, means located so as to be interposed between said cutters to expand and prevent collapse of the latter when retracted; and means tending to retract said cutters.

12. In a device of the class described, the combination with a hollow shell, of cutters having shanks slidingly disposed within said shell and disposed to engage the wall of the bore of said shell, said cutters provided with off-sets disposed to engage the lower face of said shell and coöperate therewith to prevent tilting of the cutters outwardly; and a cutter supporter normally fixed within said shell, said supporter comprising means slidingly and pivotally securing said cutters to said supporter so that said cutters may be collapsed on protraction of the latter, and means located so as to be interposed between said cutters to expand and prevent collapse of the latter when retracted.

13. In a device of the class described, the combination with a hollow shell, of cutters having shanks slidingly disposed within said shell, said cutters provided with off-sets disposed to engage the lower face of said shell and coöperate therewith to prevent tilting of the cutters outwardly; a cutter supporter normally fixed within said shell, said supporter comprising means slidingly and pivotally securing said cutters to said supporter so that said cutters may be collapsed on protraction of the latter, means located so as to be interposed between said cutters to expand and prevent collapse of the latter when retracted; and means tending to retract said cutters.

14. In a device of the class described, the combination with a hollow shell, of cutters having shanks slidingly mounted within said shell, said cutters pivotally mounted with respect to one another, the near faces of said shanks being in planes at right angles to the cutting edges of said cutters, said shanks disposed to engage the wall of the bore of said shell, off-sets on said cutters disposed to engage the lower face of said shell and cooperate with said shanks to prevent tilting of the cutters outwardly, said shell being provided with means affixed thereto and interposed between said cutters to expand the latter on retraction of said cutters and to permit collapse of the cutters on protraction.

15. In a device of the class described, the combination with a hollow shell, of cutters having shanks slidingly mounted within said shell, said cutters pivotally mounted with respect to one another, the near faces of said shanks being in planes at right angles to the cutting edges of said cutters, said shanks disposed to engage the wall of the bore of said shell, off-sets on said cutters disposed to engage the lower face of said shell and coöperate with said shanks to prevent tilting of the cutters outwardly, said shell being provided with means affixed thereto and interposed between said cutters to expand the latter on retraction of said cutters and to permit collapse of the cutters on protraction, and means tending to retract said cutters.

16. In a device of the class described, the combination with a hollow shell, of a pair of collapsible cutters, a cutter supporter mounted in said shell, said cutters having nearly semi-cylindrical shanks, the planes of the near faces of said shanks being substantially at right angles to the cutting edges of said cutters, shoulders on said cutters disposed to engage the lower face of said shell forming a complete ring about the pair of cutters, and means to slidingly and pivotally support said cutters from said supporter.

17. In a device of the class described, the combination with a hollow shell, of a pair of collapsible cutters slidingly mounted in said shell, said cutters having nearly semi-cylindrical shanks, the planes of the near faces of said shanks being substantially at right angles to the cutting edges of said cutters, shoulders on said cutters disposed to engage the lower face of said shell forming a complete ring about the pair of cutters, means to slidingly and pivotally support said cutters from said shell, and means affixed to said shell disposed so as to be interposed between said cutters when expanded.

18. In a device of the class described, the combination with a hollow shell, of a pair of collapsible cutters slidingly mounted in said shell, said cutters having nearly semi-cylindrical shanks, the planes of the near faces of said shanks substantially at right angles to the cutting edges of said cutters, shoulders on said cutters disposed to engage the lower face of said shell forming a complete ring about the pair of cutters; and a cutter supporter affixed to said shell comprising means slidingly and pivotally supporting said cutters, and means disposed so as to be interposed between said cutters when expanded.

19. In a device of the class described, the combination with a hollow shell, of a pair of collapsible cutters, said cutters having nearly semi-cylindrical shanks, the planes of the near faces of said shanks being substantially at right angles to the cutting edges of said cutters, shoulders on said cutters disposed to engage the lower face of said shell forming a complete ring about the pair of cutters, means to slidingly and pivotally support said cutters from said shell, and means tending to retract said cutters.

20. In a device of the class described, the combination with a hollow shell, of a pair of collapsible cutters slidingly mounted in said shell, said cutters having nearly semi-cylindrical shanks, the planes of the near faces of said shanks being substantially at right angles to the cutting edges of said cutters, shoulders on said cutters disposed to engage the lower face of said shell forming a complete ring about the pair of cutters, means to slidingly and pivotally support said cutters from said shell, means affixed to said shell disposed so as to be interposed between said cutters when expanded, and means tending to retract said cutters.

21. In a device of the class described, the combination with a hollow shell, of a pair of collapsible cutters slidingly mounted in said shell, said cutters having nearly semi-cylindrical shanks, the planes of the near faces of said shanks substantially at right angles to the cutting edges of said cutters, shoulders on said cutters disposed to engage the lower face of said shell forming a complete ring about the pair of cutters; and a cutter supporter affixed to said shell comprising means slidingly and pivotally supporting said cutters, means disposed so as to be interposed between said cutters when expanded, and means tending to retract said cutters.

14,302. CONTROLLING APPARATUS FOR RAILWAY SWITCHES AND SIGNALS. HENRY W. GRIFFIN, New York, N. Y., assignor to The Union Switch and Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Aug. 22, 1914. Serial No. 858,126. Original No. 1,033,243, dated July 23, 1912, Serial No. 535,620, filed Dec. 30, 1909. (Cl. 246—53.)



1. In combination, a railway switch capable of normal and reverse positions, a controlling lever therefor capable of normal and reverse positions corresponding to the positions of the switch, a circuit controller operatively connected with the switch and a circuit controller operated by the lever, a relay, a circuit for said relay includ-

ing the two said circuit controllers, which circuit is closed only when the switch and the lever are both in normal or both in reverse positions, a signal governing traffic over said switch, and means for continuously controlling said signal by the relay whereby the signal cannot be cleared unless the switch and the lever are in corresponding extreme positions, and whereby the signal will be returned to its danger indication if either the switch or the lever is moved after the signal has been cleared.

2. In combination, a railway switch capable of normal and reverse positions, a controlling lever therefor capable of normal and reverse positions corresponding to the positions of the switch, a circuit controller operatively connected with the switch and a circuit controller operated by the lever, a circuit including said circuit controllers which circuit is closed only when the switch and the controlling lever are both in normal or both in reverse positions, and a signal governing traffic over said switch and continuously controlled by said circuit whereby the signal cannot be cleared unless the switch and the lever are in corresponding extreme positions, and whereby the signal will be returned to its danger indication if either the switch or the lever is moved after the signal has been cleared.

3. In combination, a railway switch capable of normal and reverse positions, a controlling lever for said switch capable also of normal and reverse positions corresponding to the positions of the switch, a common wire and two other conductors extending between the switch and the controlling lever, means controlled by the switch for connecting one end of the common wire with one of said conductors or the other according as the switch is in normal or reverse position, means controlled by the lever for connecting the other end of the common wire with one of said conductors or the other according as the lever is in normal or reverse position, the two ends of the common wire being connected with the same conductor when the switch and the lever occupy corresponding positions, a source of current included in said common wire, a signal governing traffic over said switch, and means included in said common wire for continuously controlling said signal whereby the signal cannot be cleared unless the switch and the lever are in corresponding extreme positions, and whereby the signal will be returned to its danger indication if either the switch or the lever is moved after the signal has been cleared.

4. In combination, a railway switch capable of normal and reverse positions, a controlling lever for said switch capable also of normal and reverse positions corresponding to the positions of the switch, a common wire and two other conductors extending between the switch and the controlling lever, means controlled by the switch for connecting one end of the common wire with one of said conductors or the other according as the switch is in normal or reverse position, means controlled by the lever for connecting the other end of the common wire with one of said conductors or the other according as the lever is in normal or reverse position, the two ends of the common wire being connected with different conductors when the switch and the lever are in corresponding positions, a source of current connected between said two conductors, a signal governing traffic over the switch, and means included in said common wire for controlling said signal.

5. In combination, a railway switch, a lever for the control thereof, indication means for governing said lever, circuits for said indication means, circuit controlling contacts operatively connected with said switch for controlling said circuits, translating means, circuits for said translating means including said switch controlled contacts and portions of the circuits for the indication means and contacts operated by said lever, said circuits requiring that the switch and the lever coincide in extreme positions to energize the translating means, a signal governing traffic over said switch, and means for controlling said signal by said translating means.

6. In combination, a railway switch, an interlocking machine comprising a lever for controlling said switch, indication means for governing said lever, circuits for said indication means, circuit controlling contacts operatively connected with said switch for controlling said circuits, translating means, circuits for said translating means including said switch contacts and portions of said indication circuits and contacts actuated by said lever, said circuits requiring that the switch and the lever coincide in extreme positions to energize the translating means, a signal governing traffic over said switch, a lever comprised also in said interlocking machine for controlling said signal, and means for also controlling said signal by said translating means.

7. In combination, a railway switch, an interlocking machine comprising a lever for the control of said switch, means for actuating said switch in response to partial movements of the lever, electrically controlled indication means for governing said lever, circuits for said indication means, circuit controlling contacts operatively connected with said switch for controlling said circuits to cause operation of said indication means to allow completion of the movement of the lever when the switch has fully responded to the partial movement of the lever, translating means, circuits for said translating means including said switch contacts and portions of said indication circuits and contacts actuated by said lever, said circuits requiring that the movement of the lever shall be completed to fully coincide in extreme position with the new position of the switch before the translating means can be energized, a signal governing traffic over said switch, a lever comprised also in said interlocking machine for controlling said signal, and means for also controlling said signal by said translating means.

8. In combination, a railway switch, an interlocking machine comprising a lever for the control of said switch, means for actuating said switch in response to partial movements of the lever, two electric locks for said lever one for preventing completion of the movement of the lever in each direction, a circuit for each lock, circuit controlling contacts operatively connected with the switch for closing one or the other of said lock circuits when the switch has completed its movement in response to the partial movement of the lever, translating means, circuits for said translating means including said switch contacts and portions of said lock circuits and contacts actuated by said lever, said circuits requiring that the movement of the lever shall be completed to fully coincide in extreme position with the new position of the switch before the translating means can be energized, a signal governing traffic over said switch, a lever comprised also in said interlocking machine for controlling said signal, and means for also controlling said signal by said translating means.

9. In combination, a railway switch, an interlocking machine comprising a lever for the control of said switch, means for actuating said switch in response to partial movements of the lever, two electric locks for said lever, one for preventing completion of the movement of the lever in each direction, a circuit for each lock, circuit controlling contacts operatively connected with the switch for closing one or the other of said lock circuits when the switch has completed its movement in response to the partial movement of the lever, a circuit controller operated by the lever for preventing closure of each lock circuit except when the lever occupies the partially completed position of movement from which it is to be released by the corresponding lock, a relay, a circuit therefor including said switch operated contacts and portions of the lock circuits and contacts actuated by the lever, said relay circuit requiring that the movement of the lever be completed to correspond to the new position of the switch before the relay can be energized, a signal governing traffic over said switch, a second lever comprised in said interlocking machine for controlling said signal, and means for also controlling said signal by said relay.

10. In combination, a railway switch, an interlocking machine comprising a lever for the control of said switch, means for actuating said switch in response to partial movements of the lever, two electric locks for said lever, one for preventing completion of the movement of the lever in each direction, a circuit for each lock, a circuit controller operatively connected with the switch for closing one or the other of said lock circuits when the switch has completed its movement in response to the partial movement of the lever, translating means, means operated by the lever upon the completion of a movement thereof for disconnecting from its circuit the lock which was energized to release the lever and connecting said translating means in the last-mentioned circuit, a signal governing traffic over said switch, a second lever comprised in said interlocking machine for controlling said signal, and means for also controlling said signal by said translating means.

11. In combination, a railway switch, an interlocking machine comprising a lever for controlling said switch, means for actuating the switch in response to partial movements of said lever, two electrically controlled locks for said lever one for preventing completion of the movement of the lever in one direction and the other for preventing completion of the lever in the other direction, circuits for said locks comprising a common wire and two individual wires one for each lock, circuit controlling contacts operatively connected with the switch for energizing one or the other of said lock circuits when the switch has completed its movement in response to the partial movement of the lever, translating means; circuits for said translating means comprising said common return wire, said switch actuated contacts, portions of said two individual wires and contacts operated by said lever, said circuits requiring that the switch and the lever occupy coincident extreme positions to energize the translating means; a signal governing traffic over said switch, a second lever comprised in said interlocking machine for controlling said signal, and means for controlling said signal by said translating means.

12. In combination, a railway switch, an interlocking machine comprising a lever for said switch, means for actuating said switch in response to partial movements of said lever, circuit controlling contacts one or another of which is closed according as the switch occupies one extreme position or the other, indication means controlled by said contacts for governing the movements of said lever, contacts actuated by said switch controlling lever, a signal governing traffic over said switch, a second lever comprised in said interlocking machine for controlling said signal, and means for also controlling said signal by said first mentioned contacts and by said second mentioned contacts, said two groups of contacts requiring that the switch and its controlling lever coincide in extreme positions in order that the signal may indicate clear.

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14,303. FASTENING DEVICE. DAVIS MARINSKY, New York, N. Y. Filed Mar. 20, 1917. Serial No. 156,217. Original No. 1,196,009, dated Aug. 29, 1916, Serial No. 52,345, filed Sept. 24, 1915. (Cl. 24—218.)



1. A garment fastener comprising a disk having a stud provided with a knob, and a socket member consisting of a back plate substantially concavo-convex in form and provided with an annular rim, the edge of which is folded inwardly upon itself and forms an annular shoulder within the socket member, a yoke-shaped locking spring removably secured in said socket member by said annular shoulder, and said back plate being also provided with a central aperture for the passage of the knob and with slots for the passage of the threads used in securing the socket member to the garment, said back plate also having inwardly depressed portions arranged between the slotted portions and the perimeter for receiving the attaching threads.

2. A garment fastener comprising a disk having a stud provided with a knob, and a socket member consisting of a plate provided with an annular rim, the edge of which is folded inwardly upon itself and forms an annular shoulder, and a yoke-shaped locking spring secured in said socket member by said annular shoulder, said socket member being also provided with a central aperture through which the knob of the disk may be passed from either side of said socket member in use and with slots for the passage of threads in securing said socket member to the garment.

3. A fastening device of the ball and socket type in which the socket member is reversible and the ball or knob member insertible from either side thereof and operable in either position.

4. A fastening device of the ball and socket type comprising a socket member and a ball member, said parts being reversible one upon the other and being operable in either position.

5. A fastening device of the ball and socket type, comprising two disk-shaped members one of which is provided with a central opening and the other with a knob adapted to be passed through said opening, and a U-shaped spring mounted in one side of said disk and the bottom end of which and the ends of the arms of which have a bearing at the perimeter of said disk, the knob of the other disk being adapted to be passed through said opening and between the arms of the U-shaped spring from either side of the first-named disk, whereby the positions of said disks are reversible one upon the other and whereby said disks are adapted to operate as a fastening device in either position.

6. A fastening device of the class described, comprising a socket member and a knob member, the socket member being concavo-convex in cross section and being provided with a central aperture and with a rim which is folded inwardly upon itself to form an annular shoulder, a yoke-shaped locking spring mounted in said socket member and the bow portion of which and the ends of the arms of which fit under and are retained in position by the said annular shoulder, the knob of the knob member being adapted to be passed through the aperture in the socket member from either side thereof and to be retained in operative position by said spring in either position of the knob member.

# DESIGNS.

50,771. CASKET-HANDLE LUG. GEORGE R. BAILEY, Brooklyn, N. Y., assignor to Sterling Casket Hardware Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 7, 1917. Serial No. 153,198. Term of patent 7 years.



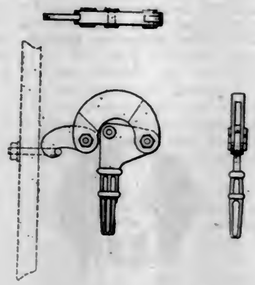
The ornamental design for a casket handle lug, as shown.

50,772. ORNAMENT FOR CASKETS. GEORGE R. BAILEY, Brooklyn, N. Y., assignor to Sterling Casket Hardware Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 7, 1917. Serial No. 153,199. Term of patent 7 years.



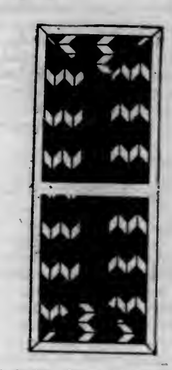
The ornamental design for an ornament for caskets as shown.

50,773. LOCK. JOSEPH BUCHEK, Oak Park, Ill. Filed Nov. 27, 1916. Serial No. 133,820. Term of patent 3½ years.



The ornamental design for a lock as shown.

50,774. PANEL FOR WOOD FURNITURE. PIETRO CERONE, Syracuse, N. Y., assignor to Samuel Bonn, Syracuse, N. Y. Filed Aug. 9, 1916. Serial No. 114,056. Term of patent 3½ years.



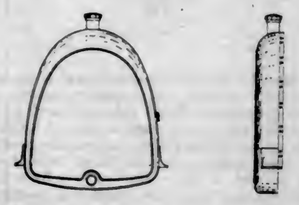
The ornamental design for a panel for wood furniture as shown.

50,775. TALKING-MACHINE CABINET. HOWARD D. DARLINGTON, Dayton, Ohio. Filed Feb. 23, 1915. Serial No. 150,588. Term of patent 7 years.



The ornamental design for a talking-machine cabinet as shown.

50,776. AUTOMOBILE-RADIATOR. VICTOR LEE EMERSON, Alexandria, Va., assignor to The Emerson Engineering Company, a Corporation of Delaware. Filed Feb. 10, 1916. Serial No. 77,536. Term of patent 14 years.



The ornamental design for an automobile radiator as shown.



50,777. SHADE. WALTER J. FENSTERER, Englewood, N. J. Filed Feb. 28, 1917. Serial No. 151,594. Term of patent 7 years.



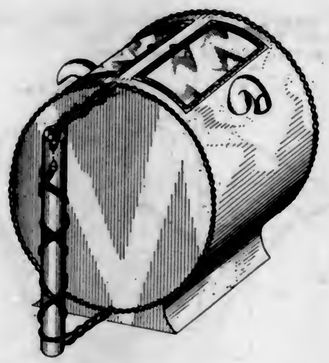
The ornamental design for a shade substantially as shown and described.

50,778. STATUETTE. CHARLES H. FORBELL, Woodhaven Junction, N. Y., assignor of one-half to James H. Kebler, New York, N. Y. Filed May 22, 1916. Serial No. 99,239. Term of patent 3½ years.



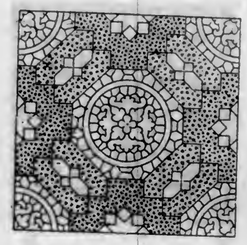
The ornamental design for a statuette as shown and described.

50,779. COMBINED COFFEE AND TEA POT. GEORGE GASPAR, Pinehill, Pa. Filed Feb. 26, 1917. Serial No. 151,134. Term of patent 14 years.



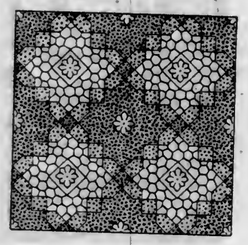
The ornamental design for a combined coffee and tea pot, as shown.

50,780. LINOLEUM, OIL-CLOTH, OR FLOOR-COVERING. HARRY HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 27, 1917. Serial No. 157,835. Term of patent 7 years.



The ornamental design for linoleum, oil cloth, or floor covering as shown.

50,781. LINOLEUM, OIL-CLOTH, OR FLOOR-COVERING. HARRY HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 27, 1917. Serial No. 157,836. Term of patent 7 years.



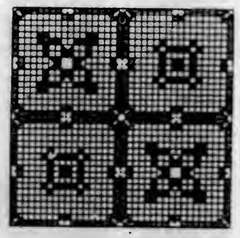
The ornamental design for linoleum, oil cloth, or floor covering as shown.

50,782. LINOLEUM, OIL-CLOTH, OR FLOOR-COVERING. HARRY HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 27, 1917. Serial No. 157,837. Term of patent 7 years.



The ornamental design for linoleum, oil cloth, or floor covering as shown.

50,783. LINOLEUM, OIL-CLOTH, OR FLOOR-COVERING. CHARLES F. HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 27, 1917. Serial No. 157,838. Term of patent 7 years.



The ornamental design for linoleum, oil cloth, or floor covering as shown.

50,784. LINOLEUM, OIL-CLOTH, OR FLOOR-COVERING. CHARLES F. HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 27, 1917. Serial No. 157,839. Term of patent 7 years.



The ornamental design for linoleum, oil cloth, or floor covering as shown.

50,785. LINOLEUM, OIL-CLOTH, OR FLOOR-COVERING. CHARLES F. HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 27, 1917. Serial No. 157,840. Term of patent 7 years.



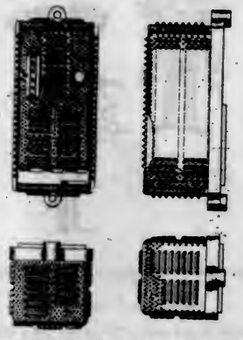
The ornamental design for linoleum, oil cloth, or floor covering as shown.

50,786. GOBLET OR SIMILAR ARTICLE. WILBUR E. HUNTER, Morgantown, W. Va. Filed Apr. 18, 1916. Serial No. 92,044. Term of patent 7 years.



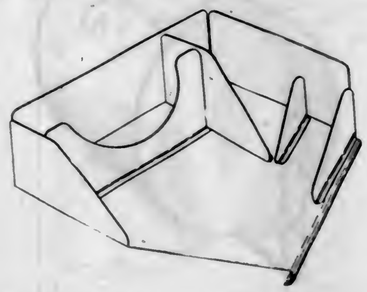
The ornamental design for a goblet or similar article as shown.

50,787. CASING FOR THERMOSTATS. ELLWOOD C. JOHNS, Jersey City, N. J., assignor to Gold Car Heating & Lighting Company, New York, N. Y., a Corporation of New York. Filed Mar. 2, 1917. Serial No. 152,133. Term of patent 14 years.



The ornamental design for a casing for thermostats, as shown.

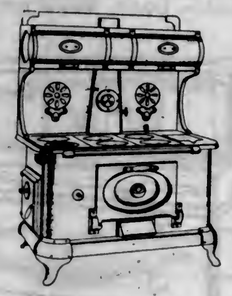
50,788. CHECK AND DEPOSIT-SLIP TRAY. ERNEST S. JOHNSON, Waterloo, Iowa. Filed Jan. 16, 1917. Serial No. 142,768. Term of patent 7 years.



The ornamental design for a check and deposit slip tray, as shown.

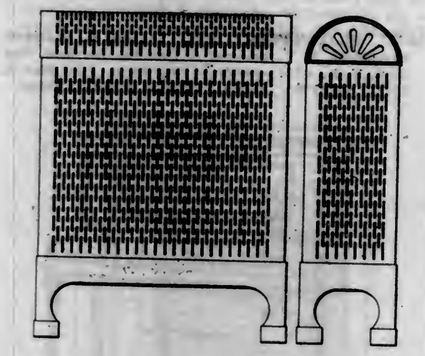


50,789. RANGE. JOHN JUNGERS, Grafton, Wis. Filed Jan. 11, 1917. Serial No. 141,900. Term of patent 14 years.



The ornamental design for a range as shown.

50,790. GAS-HEATER GRILL. DONALD H. MCCORKLE, Berkeley, Cal. Filed Jan. 31, 1917. Serial No. 145,801. Term of patent 14 years.



The ornamental design for a gas heater grill, as shown.

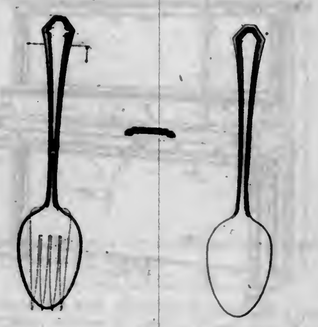
50,791. CANDY-BOX. MAUD A. MOFFATT, Dorchester, Mass. Filed Mar. 22, 1916. Serial No. 86,001. Term of patent 3½ years.



The ornamental design for a candy box, as shown.

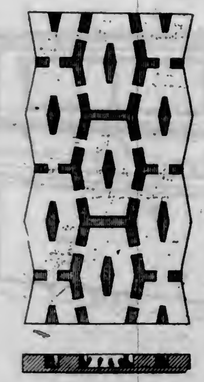


50,792. HANDLE FOR SPOONS OR ANALOGOUS ARTICLES. HAROLD EDWARD NOCK, Newburyport, Mass., assignor to Towle Manufacturing Company, Newburyport, Mass., a Corporation of Massachusetts. Filed Mar. 9, 1917. Serial No. 153,767. Term of patent 7 years.



The ornamental design for a handle for spoons or analogous articles substantially as shown, or any colorable imitation thereof.

50,793. TIRE. MARION F. OLIVER, Berkeley, Cal. Filed Mar. 29, 1917. Serial No. 158,480. Term of patent 3½ years.



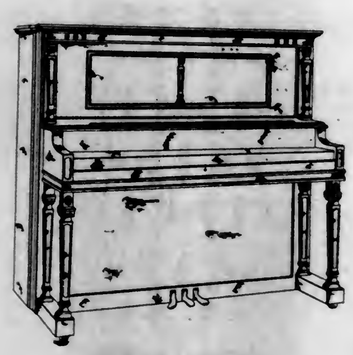
The ornamental design for a tire, as shown.

50,794. PIANO-CASE. WILLIAM M. PLAISTED, Larchmont, N. Y., assignor to Hazelton Brothers, New York, N. Y., a Corporation of New York. Filed Mar. 8, 1917. Serial No. 153,509. Term of patent 3½ years.



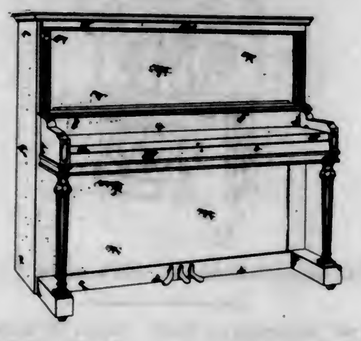
The ornamental design for a piano case as shown.

50,795. PLAYER-PIANO CASE. WILLIAM M. PLAISTED, Larchmont, N. Y., assignor to Hazelton Brothers, New York, N. Y., a Corporation of New York. Filed Mar. 8, 1917. Serial No. 153,510. Term of patent 3½ years.



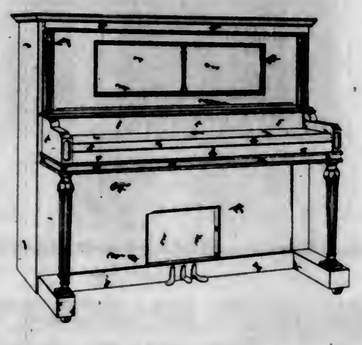
The ornamental design for a player piano case, as shown.

50,796. PIANO-CASE. WILLIAM M. PLAISTED, Larchmont, N. Y., assignor to Hazelton Brothers, New York, N. Y., a Corporation of New York. Filed Mar. 8, 1917. Serial No. 153,511. Term of patent 3½ years.



The ornamental design for a piano case as shown.

50,797. PLAYER-PIANO CASE. WILLIAM M. PLAISTED, Larchmont, N. Y., assignor to Hazelton Brothers, New York, N. Y., a Corporation of New York. Filed Mar. 8, 1917. Serial No. 153,512. Term of patent 3½ years.



The ornamental design for a player piano case as shown.

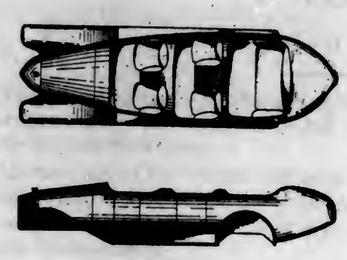
50,798. EMBLEM. ARTHUR EDWARD POHLMAN, Watertown, Wis. Filed Feb. 26, 1917. Serial No. 151,186. Term of patent 14 years.



The ornamental design for an emblem, as shown.



50,799. AUTOMOBILE-BODY. FRANÇOIS RICHARD, Cleveland, Ohio. Filed Mar. 10, 1917. Serial No. 154,049. Term of patent 14 years.



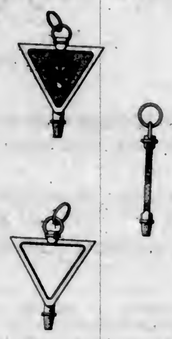
The ornamental design for an automobile body as shown.

50,800. RUG. HARRY ULMER, Philadelphia, Pa., assignor to Hardwick & Magee Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 24, 1917. Serial No. 157,280. Term of patent 3½ years.



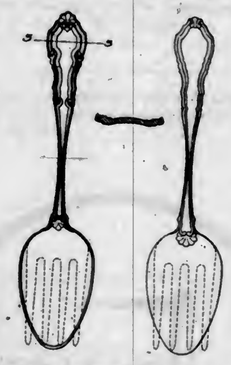
The ornamental design for a rug, substantially as shown.

50,801. KEY. KENNETH W. BROWN, Yonkers, N. Y., assignor to Eugene Quigley, as chancellor of Delta Theta Phi Law Fraternity. Filed Jan. 31, 1917. Serial No. 145,803. Term of patent 7 years.



The ornamental design for an emblematic key, substantially as shown in the drawings.

50,802. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. BARTON P. JENKS, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Apr. 3, 1917. Serial No. 159,529. Term of patent 14 years.



The ornamental design for a handle for spoons, forks, or similar articles, as shown.

# TRADE-MARKS

## PUBLISHED MAY 15, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 67,660. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) NEVERTEAR HOSE SUPPORTER CO., New York, N. Y. Filed Dec. 31, 1912.

NEVERTEAR

*Particular description of goods.*—Garter-Clasps.
*Claims use* since Dec. 1, 1912.

Ser. No. 78,916. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) CARSON, PIRIE, SCOTT & Co., Chicago, Ill. Filed June 9, 1914.

Carnation

*Particular description of goods.*—Braid, Tape, Tatting-Shuttles, and Toilet and Safety Pins.
*Claims use* since about April, 1912.

Ser. No. 85,507. (CLASS 38. PRINTS AND PUBLICATIONS.) THORNTON W. BURGESS, Springfield, Mass. Filed Mar. 29, 1915.

QUADDIES

Consisting of the word "Quaddies."
*Particular description of goods.*—Printed Books.
*Claims use* since Mar. 17, 1915.

Ser. No. 90,841. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PENNSYLVANIA CHOCOLATE COMPANY, Pittsburgh, Pa. Filed Nov. 22, 1915.

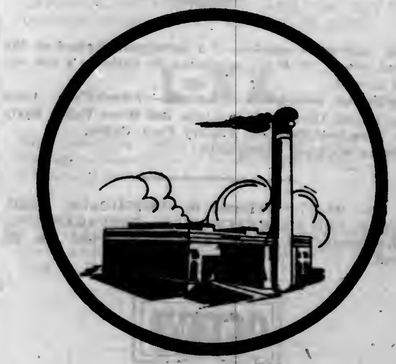
EATMORS

*Particular description of goods.*—Chocolate.
*Claims use* since about Sept. 30, 1907.

Ser. No. 91,496. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE ROEHEIMER-BROOKS STUDIOS COMPANY, Cleveland, Ohio. Filed Dec. 15, 1915.

*Particular description of goods.*—Beds, Cribs, Couches, Tables, Chairs, Cabinets, Stands, Bookcases, Sideboards, Taborets, Stools, Racks, and Mirrors.
*Claims use* since Feb. 1, 1910.

Ser. No. 91,712. (CLASS 38. PRINTS AND PUBLICATIONS.) F. W. BALLARD & COMPANY, Cleveland, Ohio. Filed Dec. 23, 1915.



The trade-mark consists in a building inclosed within a circle.

*Particular description of goods.*—Advertising and Descriptive Pamphlets; and Records and Reports Incident to a General Engineering and Architectural Business, Including the Designing and Construction of Lighting and Power Stations, Industrial Buildings, and Factory Plants of All Kinds, and Appraisals and Valuations of Public-Utility and Industrial Properties.
*Claims use* since Dec. 16, 1915.

Ser. No. 92,181. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE ARCO COMPANY, Cleveland, Ohio. Filed Jan. 17, 1916.

ARCO

*Particular description of goods.*—Ready-Mixed Paints and Varnishes.
*Claims use* since Dec. 1, 1915.

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Ser. No. 92,216. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHANDLER BROKERAGE CO., Atchison, Hiawatha, and Horton, Kans. Filed Jan. 18, 1916.

CBC

The trade-mark consists of a monogram formed of the capital letters "C B C" appearing in white on a red circular ground.
*Particular description of goods.*—Wheat-Flour, Corn Chop, Russet (Burbank) Potatoes, Red River Valley Early Ohio Pure Seed-Potatoes, Poultry Feed, Coffee.
*Claims use* since April, 1915.

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Ser. No. 92,477. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE OCTAVA CO., Lake Placid, N. Y. Filed Jan. 28, 1916.

OCTAVA

The lines are merely shading. Color does not form a feature of the mark.
*Particular description of goods.*—Toilet Preparations for the Skin.
*Claims use* since Mar. 15, 1915.

Ser. No. 92,793. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) UTAH FUEL COMPANY, Clear Creek and Salt Lake City, Utah. Filed Feb. 11, 1916.

CLEAR CREEK

Trade-mark is "Clear Creek," and the word "Coal" is disclaimed as part of the trade-mark.
*Particular description of goods.*—Coal.
*Claims use* since 1899.

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Ser. No. 93,331. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROY H. BROWNLEE, Pittsburgh, Pa. Filed Mar. 6, 1916.

A

*Particular description of goods.*—Hydrocarbons and Derivatives Thereof, as Toluol, Anilin, and Nitrobenzene.
*Claims use* since Feb. 25, 1916.

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Ser. No. 93,867. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) DETWILLER & STREET FIREWORKS MANUFACTURING COMPANY, New York, N. Y. Filed Mar. 25, 1916. Under ten-year proviso.

EXCELSIOR

*Particular description of goods.*—Fireworks.
*Claims use* since Jan. 1, 1870.

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Ser. No. 95,622. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GRAND DETOUR PLOW COMPANY, Dixon, Ill. Filed June 5, 1916. Under ten-year proviso.

GRAND DETOUR 1837

*Particular description of goods.*—Plows, Cultivators, Disk Harrows, and Listers.
*Claims use* since the year 1837.





Ser. No. 96,220. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) SAMPLE & COMPANY, New York, N. Y. Filed June 28, 1916.

Sir Walter

*Particular description of goods.*—Scotch Whisky.
*Claims use* since Sept. 14, 1915.

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Ser. No. 96,255. (CLASS 38. PRINTS AND PUBLICATIONS.) THE NEWSPAPER ENTERPRISE ASSOCIATION, Cleveland, Ohio. Filed June 30, 1916.

NEA

Trade-mark: "N E A" and the design shown.
*Particular description of goods.*—Newspaper Publications.
*Claims use* since the year 1904.

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Ser. No. 96,698. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PURITY BAKING COMPANY, St. Paul, Minn. Filed July 20, 1916.

IWANSUM

*Particular description of goods.*—Bread.
*Claims use* since June 7, 1916.

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Ser. No. 98,098. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WALTER RICHMAN, Atlantic City, N. J. Filed Sept. 19, 1916.



Drawing is a true portrait of myself.
*Particular description of goods.*—Liniment for the Treatment of Lumbago, Sore Throat, Stiff Neck, Headache, Muscular Rheumatism, Neuralgia, Sciatica, Bruises, Chilblains, and Mosquito-Bites on Man or Beast.
*Claims use* since Nov. 1, 1914.

Ser. No. 98,243. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GOULD STORAGE BATTERY CO., Depew and New York, N. Y. Filed Sept. 26, 1916.




No claim being made to the words "Tri-Reliance Battery Service."
*Particular description of goods.*—Electric Batteries.
*Claims use* since July 22, 1916.

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Ser. No. 98,565. (CLASS 33. GLASSWARE.) E. B. KINGMAN COMPANY, Leominster, Mass. Filed Oct. 11, 1916.

LITE-A-WAY

*Particular description of goods.*—Lenses for Electrically-Lighted Automobiles and Motor-Vehicles.
*Claims use* since Sept. 1, 1916.

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Ser. No. 98,796. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) ATLAS CRUCIBLE STEEL COMPANY, Dunkirk, N. Y. Filed Oct. 21, 1916.

L-XX

The trade-mark consists of the letters "L-XX."
*Particular description of goods.*—Tool-Steels.
*Claims use* since Jan. 1, 1908.

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Ser. No. 98,817. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) TURKELTAUB & LICHTER, New York, N. Y. Filed Oct. 21, 1916.



No claim is herein made to the words "Sterling Quality."
*Particular description of goods.*—Sewed-Through and Shank Buttons Used on Women's Wearing-Apparel and Made of Pearl, Ivory, Celluloid, Glass, Jet, and Cloth-Covered.
*Claims use* since Feb. 1, 1916.

Ser. No. 98,962. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Oct. 28, 1916.




*Particular description of goods.*—Snap-Fasteners of All Kinds, Snap-Fastener Tapes, Hair-Pins, Non-Ornamental Hat-Pins Made of Steel, Buttons of All Kinds Made of Non-Precious Metals and Used as Fastening Devices—Namely, Fancy Buttons Used for Ornamenting Ladies' Apparel, Trouser-Buttons, and Glove-Buttons—Collar-Buttons, Cuff-Buttons, and Necktie-Clasps Made of Non-Precious Metals, Trimming-Buttons Made of Non-Precious Metal Used as Ornamental Devices for Clothing Not Used for Fastening, Collar-Supporters, Dress-Shields, Steel Needles Used for Hand-Sewing, Brass Pins Used as Fastening Devices, Placket-Fasteners, Safety-Pins, Buckles Made of Non-Precious Metals Used as Fastening Devices for Clothing.
*Claims use* since Dec. 31, 1913.

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Ser. No. 99,109. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE ARCO COMPANY, Cleveland, Ohio. Filed Nov. 6, 1916.




*Particular description of goods.*—Ready-Mixed Paints, Varnishes, and Fillers.
*Claims use* since Aug. 25, 1915.

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Ser. No. 99,280. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALEXANDRO R. PURPURA, New York, N. Y. Filed Nov. 13, 1916.




No claim is made for any special coloring for the details of the trade-mark. No claim is made to the word "Brand."
*Particular description of goods.*—Tomato Sauce.
*Claims use* since July 1, 1914.

Ser. No. 99,422. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) OPTIMUS MANUFACTURING CO., Boston, Mass. Filed Nov. 20, 1916.



No claim being made to the words "Hood and Fender, Optimus, Restorer".
*Particular description of goods.*—Polishes for Automobile-Bodies.
*Claims use* since Aug. 15, 1916.

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Ser. No. 99,530. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE ARCO COMPANY, Cleveland, Ohio. Filed Nov. 25, 1916.

**ARCO-RAYS**
**"LENGTHENS YOUR DAYS"**

*Particular description of goods.*—Prepared Paints for Various Purposes.
*Claims use* since Oct. 31, 1916.

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Ser. No. 99,838. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CANADIAN ECONOMIC LUBRICANT COMPANY, LTD., Montreal, Canada. Filed Dec. 11, 1916.



Trade-mark consists of a circular red, white, and blue design and a colored bar therebelow. No claim is made to the words "It is unlucky for dirt."
*Particular description of goods.*—Soap Powder.
*Claims use* since Oct. 1, 1915.

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Ser. No. 99,958. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE GORDON-THORNE CO., Utica, N. Y. Filed Dec. 15, 1916.

**BABY**
**BUNTING**

*Particular description of goods.*—Toilet Soap.
*Claims use* since May 15, 1913.





Ser. No. 99,984. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) INTERNATIONAL-BILLIARD TABLE COMPANY, Kansas City, Mo. Filed Dec. 16, 1916.



No claim is made to the words "Originators," "Patentees," "Independent Designers & Builders," "Billiard Table Co.," or "Kansas City, Missouri, U. S. A."
*Particular description of goods.*—Billiard-Hall Furniture—Namely, Billiard-Tables, Ball-Racks, and Cue-Racks.
*Claims use* since Oct. 25, 1916.

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Ser. No. 100,011. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) JUBILEE MANUFACTURING COMPANY, Omaha, Nebr. Filed Dec. 18, 1916.




*Particular description of goods.*—Spark-Gaps for Spark-Plugs.
*Claims use* since May 1, 1914.

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Ser. No. 100,026. (CLASS 38. PRINTS AND PUBLICATIONS.) THE TULLOSS SCHOOL COMPANY, Springfield, Ohio. Filed Dec. 18, 1916.



The words appearing in the mark as illustrated by the drawing originally filed are hereby disclaimed.
*Particular description of goods.*—Lesson-Books, Lecture-Books, Advertising-Circulars, Testimonial-Sheets, and Catalogues.
*Claims use* since December, 1910.

Ser. No. 100,094. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) HAWKES & SON, London, England. Filed Dec. 22, 1916.



*Particular description of goods.*—Flutes, Piccolos, Drum-Belts, and Violin-Strings.
*Claims use* on flutes, piccolos, and drum-belts since 1907 and on violin-strings since November, 1915.

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Ser. No. 100,280. (CLASS 30. CROCKERY, EARTHENWARE, AND PORCELAIN.) THE CARROLLTON POTTERY COMPANY, Carrollton, Ohio. Filed Jan. 2, 1917.




No claim being made to the words "Carrollton" and "China."
*Particular description of goods.*—Semiporcelain Dinner Sets and Toilet Sets Manufactured from Domestic and Imported Kaolin or China Clays and Producing a Semi-vitreous White Body to Which a White Translucent Glaze is Applied, Producing Clear White Ware for Table-Service or Use, Consisting of Regular Line of Plates, Cups, Saucers, and Kindred Articles of Dinner-Service.
*Claims use* since Oct. 1, 1916.

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Ser. No. 100,282. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) FRANCISCO DEL CASTILLO, Santiago de Cuba, Cuba. Filed Jan. 2, 1917.



The lines extending diagonally of the background of the representation of the tower being produced alternately in red and in the same color in which the representation of the tower is produced.
*Particular description of goods.*—Rum, Cognac, Anise-Seed Spirit, and Fruit-Cream Liquors.
*Claims use* since Jan. 1, 1910.

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Ser. No. 100,336. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) HARRY W. PERLMAN, Brooklyn, N. Y. Filed Jan. 3, 1917.




No claim is made by me to the exclusive use of any of the printed matter originally appearing on the drawing submitted by me except the word "Pearltone."
*Particular description of goods.*—Pianos.
*Claims use* since June 1, 1916.

Ser. No. 100,504. (CLASS 38. PRINTS AND PUBLICATIONS.) TOEPFER & SCHROFF, INC., New York, N. Y. Filed Jan. 9, 1917.




*Particular description of goods.*—Decorative Prints.
*Claims use* since Dec. 9, 1916.

Ser. No. 100,552. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FOWLER PACKING CO., Portland, Me., and Kansas City, Kans. Filed Jan. 12, 1917.




*Particular description of goods.*—A Medicinal Preparation Used for Inoculating Swine as a Preventive Against Cholera.
*Claims use* since Sept. 1, 1914.

Ser. No. 100,555. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AVILA J. LE FAIVER, Clayton, N. Y. Filed Jan. 12, 1917.




*Particular description of goods.*—Remedy for Treating Asthma and Bronchial Trouble.
*Claims use* since Dec. 20, 1916.

Ser. No. 100,614. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) HERBERT E. DICKARD, Monroe, La. Filed Jan. 15, 1917.

STYX

*Particular description of goods.*—A Rubber Patch for Repairing Inner Tubes of Automobile-Tires.
*Claims use* since Nov. 1, 1916.

Ser. No. 100,662. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) BURNSTINE & NACHMAN, New York, N. Y. Filed Jan. 17, 1917.

VIOLA



*Particular description of goods.*—Dress-Fasteners, Snap-Buttons, and Snap-Fasteners.
*Claims use* since Dec. 1, 1916.

Ser. No. 100,943. (CLASS 15. OILS AND GREASES.) THE TEXAS COMPANY, Houston, Tex. Filed Jan. 25, 1917.

TEXACO



The star being printed in red and the letter "T" in green.
*Particular description of goods.*—Petroleum, Asphalt-Oils, (Distilled Crude Petroleum-Oils for Lubricating Purposes,) Benzin, Burning-Oils, Cutting-Oils, Cylinder-Oils, Crude Petroleum, Cup-Grease; Fuel-Oils, a Distillate of Crude Petroleum, and Crude Oil from Which Most Volatile Hydrocarbons Have Been Removed for Use in Internal-Combustion Engines, Gas-Oils, Gasolene, Lubricating-Greases, Kerosene, Naphtha, Petrol, Illuminating-Oils, Lubricating-Oils, Road-Oils; Solar Oils, a Petroleum Distillate for Lubricating Purposes, and Paraffin.
*Claims use* since Mar. 24, 1909.

Ser. No. 100,946. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARVEY VICKREY, Chicago, Ill. Filed Jan. 25, 1917.



The portrait shown being a likeness of applicant.
*Particular description of goods.*—An Antiseptic Oil for Use in Connection with Open Sores, a Liniment for External Use for the Remedy of Rheumatism and other Aches and Pains Which May be Treated Externally, and a Medicinal Compound for Reducing Fever in Such Cases as Lung-Fever, Bronchitis, Influenza, Laryngitis, Pharyngitis, Distemper.
*Claims use* since the year 1908.

Ser. No. 100,947. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WENATCHEE MILLING CO., Wenatchee, Wash. Filed Jan. 25, 1917.

CHERRY BLOSSOM

*Particular description of goods.*—Wheat-Flour.
*Claims use* since 1905.





Ser. No. 100,959. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) ALEXANDER WINK GRANT, Montreal, Canada. Filed Jan. 26, 1917.

WOD

*Particular description of goods.*—Mops, Window-Cleaners, Brushes for Household Cleaning and Dusting Purposes, Swab and Mop Squeezers.
*Claims use* since about Nov. 1, 1916.

Ser. No. 100,969. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE PHILADELPHIA LAWN MOWER COMPANY, Philadelphia, Pa. Filed Jan. 26, 1917.



*Particular description of goods.*—Lawn-Mowers.
*Claims use* since Nov. 1, 1899.

Ser. No. 100,972. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE PHILADELPHIA LAWN MOWER COMPANY, Philadelphia, Pa. Filed Jan. 26, 1917.



*Particular description of goods.*—Lawn-Mowers.
*Claims use* since about Nov. 1, 1900.

Ser. No. 100,975. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE PHILADELPHIA LAWN MOWER COMPANY, Philadelphia, Pa. Filed Jan. 26, 1917.



*Particular description of goods.*—Lawn-Mowers.
*Claims use* since about Nov. 1, 1908.

Ser. No. 100,985. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) FRANCISCO DEL CASTILLO, Santiago de Cuba, Cuba. Filed Jan. 27, 1917.

CARTA CASTILLO

Castillo



Said trade-mark consists of the words "Carta Castillo," the word "Castillo," two concentric circles, the representation of a tower within the inner circle, and a background for the tower, consisting of a plurality of lines extending diagonally of the tower.
*Particular description of goods.*—High-Class Rum.
*Claims use* since Jan. 1, 1916.

Ser. No. 101,078. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) ATLAS CRUCIBLE STEEL COMPANY, Dunkirk, N. Y. Filed Feb. 1, 1917.

E B-

Consists of the letters "E-B."
*Particular description of goods.*—Tool-Steels.
*Claims use* since July 1, 1915.

Ser. No. 101,083. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CABELL COMPANY, Baltimore, Md. Filed Feb. 1, 1917.



*Particular description of goods.*—Flavoring Extracts for Foods, Icing-Powder, Desiccated Egg, Eggad and Eggroyal, (Egg Substitutes,) Eggrowhite, (Egg-White Preparation in Powdered Form,) Donedo, (Prepared Doughnut Compound Flour,) Maltora, (Dry Malt Preparation to be Used in Connection with Yeast to Raise Bread-Dough,) Pie-Filler, Powdered Milk, Flavor-Color Icing-Cream, Spices, Rice-Flour, Creamad, (Preparation for Thickening and Smoothing Ice-Cream,) and Ajax Cream, (Marshmallow Icing Preparation.)
*Claims use* since May 1, 1916.

Ser. No. 101,113. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. B. WITTE, Trenton, N. J. Filed Feb. 1, 1917.

Hemo-Therapin

*Particular description of goods.*—Remedy for Intravenous Use (Injection into the Veins) in the Treatment of Erysipelas, Septicemia, Pyemia, the Acute Fevers, Puerperal Infection, Anemia, Furunculosis, Carbuncles, Indolent Ulcers, Malaria, Acute and Chronic Rheumatism, Pneumonia, and in Numerous other Ailments Resulting from or Characterized by a Deviation of the Blood from Its Normal Physiologic Standards.
*Claims use* since Oct. 1, 1916.

Ser. No. 101,259. (CLASS 39. CLOTHING.) CHURCHILL & ALDEN CO., Brockton, Mass. Filed Feb. 9, 1917.

Faunum

*Particular description of goods.*—Men's, Women's, and Children's Shoes Made of Leather, Canvas, Rubber, Cloth, and other Fabrics.
*Claims use* since Jan. 15, 1917.

Ser. No. 101,349. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KOVACS BROTHERS, Mount Pleasant, Pa. Filed Feb. 13, 1917.

VIN-KO

No claim is made to the words "The Strength Maker."
*Particular description of goods.*—Medicinal Tonics for Weak, Nervous, Anemic, Headachy, Old, and Run-Down People.
*Claims use* since Aug. 1, 1916.

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Ser. No. 101,367. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN S. HAWLEY, Jr., San Diego, Cal. Filed Feb. 14, 1917.

OCEANIAM

*Particular description of goods.*—Smoked Fish.
*Claims use* since Jan. 1, 1917.

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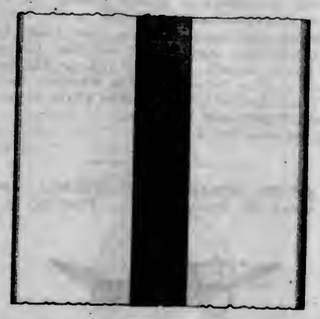
Ser. No. 101,380. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE CUSSINS & FEARN CO., Columbus, Ohio. Filed Feb. 15, 1917.

WHITE HOUSE

*Particular description of goods.*—Kitchen-Cabinets.
*Claims use* since about Jan. 10, 1915.

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Ser. No. 101,394. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio. Filed Feb. 15, 1917.



The band or stripe being in blue, no claim being made to the representation of the belt.
*Particular description of goods.*—Rubber Belting.
*Claims use* since July, 1914.

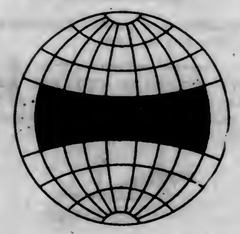
Ser. No. 101,396. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HENRICH BROS. BREWING CO., Seattle, Wash. Filed Feb. 15, 1917.




*Particular description of goods.*—Non-Alcoholic Beverages to be Sold as a Soft Drink.
*Claims use* since Apr. 1, 1916.

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Ser. No. 101,425. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. A. JONES, McGuffey, Ohio. Filed Feb. 16, 1917.



*Particular description of goods.*—Onions in Their Natural State.
*Claims use* since Aug. 1, 1916.

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Ser. No. 101,435. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE YALE LIGHT CO., Chicago, Ill. Filed Feb. 16, 1917.

Arco-Lite

*Particular description of goods.*—Gasolene and Oil Lamps and Lanterns.
*Claims use* since about Nov. 1, 1916.

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Ser. No. 101,470. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN CHICLE CO., New York, N. Y. Filed Feb. 19, 1917. Under ten-year proviso.

YUCATAN

*Particular description of goods.*—Chewing-Gum.
*Claims use* since about 1887.

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Ser. No. 101,492. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE HORTON MANUFACTURING CO., Bristol, Conn. Filed Feb. 19, 1917. Under ten-year proviso.

MEEK

*Particular description of goods.*—Reels for Fishing-Rods.
*Claims use* since Mar. 10, 1883.





Ser. No. 101,493. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE HORTON MANUFACTURING CO., Bristol, Conn. Filed Feb. 19, 1917.

BLUE GRASS

*Particular description of goods.*—Reels for Fishing-Rods.
*Claims use* since Aug. 14, 1902.

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Ser. No. 101,495. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) KANICHIRO KASAI, New York, N. Y. Filed Feb. 19, 1917.

ZIG-ZAG

*Particular description of goods.*—Tooth-Brushes, Nail-Brushes, Hair-Brushes, Clothes-Brushes, Bath-Brushes, Military Hair-Brushes, and Eyebrow-Brushes.
*Claims use* since Jan. 23, 1917.

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Ser. No. 101,512. (CLASS 48. MALT EXTRACTS AND LIQUORS.) A. SCHREIBER BREWING CO., Buffalo, N. Y. Filed Feb. 19, 1917.

Klester

No claim being made to the use of the word "Beer."
*Particular description of goods.*—Beer.
*Claims use* since Apr. 10, 1883.

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Ser. No. 101,521. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE UTLEY COMPANY, Holyoke, Mass. Filed Feb. 19, 1917.

Sanigenic

*Particular description of goods.*—Dolls.
*Claims use* since on or about Jan. 1, 1917.

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Ser. No. 101,545. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) J. HOLLANDER & CO. INC., Brooklyn, N. Y. Filed Feb. 20, 1917.

J.H. & Co. INC.

*Particular description of goods.*—Skins and Furs.
*Claims use* since Jan. 12, 1917.

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Ser. No. 101,595. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE BECKLEY-RALSTON CO., Chicago, Ill. Filed Feb. 23, 1917.

RED FEATHER



*Particular description of goods.*—Blow-Out Patches.
*Claims use* since Dec. 5, 1916.

Ser. No. 101,605. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE H. KORN BAKING CO., Clinton, Iowa. Filed Feb. 23, 1917.

Betsy Ross

*Particular description of goods.*—Bread.
*Claims use* since Feb. 19, 1917.

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Ser. No. 101,677. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLINTON-COPELAND COMPANY, Burlington, Iowa. Filed Feb. 26, 1917.

Evening Hour



HOLLY

*Particular description of goods.*—Candy.
*Claims use* since June, 1906.

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Ser. No. 101,696. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KEMPER-FAIR MILLING COMPANY, Tonganoxie, Kans. Filed Feb. 26, 1917.

DIXIE KING

*Particular description of goods.*—Wheat-Flour.
*Claims use* since about July 1, 1916.

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Ser. No. 101,727. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) B. BLUMENTHAL & CO., New York, N. Y. Filed Feb. 27, 1917.

IVANHORN

Comprising the word "Ivanhorn."
*Particular description of goods.*—Buttons for Attachment to Wearing-Apparel.
*Claims use* since Feb. 15, 1917.

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Ser. No. 101,779. (CLASS 37. PAPER AND STATIONERY.) CELESTINO FERNANDEZ & SONS, New York, N. Y. Filed Feb. 28, 1917.

"CERVANTES"

*Particular description of goods.*—Fountain-Pens.
*Claims use* since December, 1912.

Ser. No. 101,869. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) MILL REMNANTS COMPANY, New York, N. Y. Filed Mar. 3, 1917.

-MIRECO-

*Particular description of goods.*—Cotton Remnants and Cotton Waste.
*Claims use* since January, 1913.

Ser. No. 101,950. (CLASS 37. PAPER AND STATIONERY.) AMERICAN PAPETERIE COMPANY, Albany, N. Y. Filed Mar. 7, 1917.

Linois

*Particular description of goods.*—Printing and Writing Paper.
*Claims use* since Feb. 15, 1917.

Ser. No. 101,952. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CRAMER & CASPER, Okeene, Okla. Filed Mar. 7, 1917.

C. & C.



The portrait shown being fanciful.
*Particular description of goods.*—Preparation for Amenorrhea, Leucorrhea, Kidneys, Bladder, and Stomach.
*Claims use* since 1915.

Ser. No. 101,971. (CLASS 37. PAPER AND STATIONERY.) UNITED STATES ENVELOPE COMPANY, Springfield, Mass. Filed Mar. 7, 1917.

DOMINO

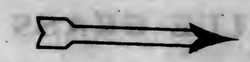
*Particular description of goods.*—Envelops.
*Claims use* since Aug. 15, 1912.

Ser. No. 101,975. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN CANDY MANUFACTURING CO., Selma, Ala. Filed Mar. 8, 1917.

BIG IKES

*Particular description of goods.*—Candy.
*Claims use* since July 1, 1915.

Ser. No. 102,006. (CLASS 32. FURNITURE AND UPHOLSTERY.) GREENPOINT METALLIC BED COMPANY, Brooklyn, N. Y. Filed Mar. 9, 1917.



*Particular description of goods.*—Beds and Cribs.
*Claims use* since about Aug. 19, 1913.

Ser. No. 102,007. (CLASS 32. FURNITURE AND UPHOLSTERY.) GREENPOINT METALLIC BED COMPANY, Brooklyn, N. Y. Filed Mar. 9, 1917.

HAN-D-FOLD

*Particular description of goods.*—Beds and Cribs.
*Claims use* since about May 16, 1916.

Ser. No. 102,037. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INTERNATIONAL PROVISION CO., Brooklyn, N. Y. Filed Mar. 10, 1917.

INTERNATIONAL

Comprising the word "International."
*Particular description of goods.*—Hams, Bacon, Pork-Heads, Mess-Pork, Pork-Plates, Short Clear Pork, and Fat-Back Pork.
*Claims use* since Jan. 1, 1888.

Ser. No. 102,038. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INTERNATIONAL PROVISION CO., Brooklyn, N. Y. Filed Mar. 10, 1917.

IPCO

Comprising the word "Ipco."
*Particular description of goods.*—Bacon.
*Claims use* since Feb. 17, 1916.

Ser. No. 102,047. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PLEASANT RIVER CANNING CO., Columbia Falls, Wash. Filed Mar. 10, 1917.

ROSEMARY

*Particular description of goods.*—Canned Blueberries.
*Claims use* since Jan. 19, 1917.

Ser. No. 102,055. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THARINGER MACARONI CO., Milwaukee, Wis. Filed Mar. 10, 1917.

TASTY BENDS

*Particular description of goods.*—Macaroni.
*Claims use* since Feb. 20, 1917.





Ser. No. 102,060. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE UNION PACIFIC TEA CO., New York, N. Y. Filed Mar. 10, 1917.

CAMEL



*Particular description of goods.*—Coffee.
*Claims use* since Feb. 1, 1890.

Ser. No. 102,063. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ABBOTT LABORATORIES, Chicago, Ill. Filed Mar. 12, 1917.

PARRESINE

*Particular description of goods.*—A Medicinal Preparation Used for Application to Burns, Frost-Bites, and Skin Abrasions Generally.
*Claims use* since Feb. 15, 1917.

Ser. No. 102,074. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WM. FILENE'S SONS COMPANY, Boston, Mass. Filed Mar. 12, 1917.

SCOTTIE

*Particular description of goods.*—Golf-Balls, Golf-Clubs, Golf-Bags.
*Claims use* since Mar. 6, 1917.

Ser. No. 102,083. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ABRAHAM M. MALOUF, Salt Lake City, Utah. Filed Mar. 12, 1917.

First National

*Particular description of goods.*—Razors, Pocket-Knives, Butcher-Knives, Table-Knives of Base Metal, Pitchforks, Axes, Hatchets, Hoes, Rakes, Picks, Hammers, Chisels, Planes, Crowbars.
*Claims use* since Jan. 3, 1916.

Ser. No. 102,084. (CLASS 43. THREAD AND YARN.) ABRAHAM M. MALOUF, Salt Lake City, Utah. Filed Mar. 12, 1917.

First National

*Particular description of goods.*—Silk, Cotton, or Wool Threads, Either Loose or on Spools, for Sewing or Embroidering; Yarn Made of Wool, Cotton, or Silk.
*Claims use* since Jan. 3, 1916.

Ser. No. 102,109. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) BEST & COMPANY, New York, N. Y. Filed Mar. 13, 1917.

Snuggles

*Particular description of goods.*—Dolls Made Out of Glass, Wood, Metal, Celluloid, Cotton, Wool, Wax, Bisque, China, or Rubber, or of Various Combinations of Said Materials or Compositions.
*Claims use* since Feb. 26, 1917.

Ser. No. 102,123. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) A. F. MEISSELBACH & BROTHER, Newark, N. J. Filed Mar. 13, 1917.

Rainbow

*Particular description of goods.*—Fishing-Reels.
*Claims use* since Sept. 15, 1916.

Ser. No. 102,158. (CLASS 43. THREAD AND YARN.) M. HEMINWAY & SONS SILK CO., Watertown, Conn. Filed Mar. 15, 1917.

PILGRIM

Comprising the word "Pilgrim."
*Particular description of goods.*—Pure and Artificial Silk Threads.
*Claims use* since Jan. 1, 1914.

Ser. No. 102,171. (CLASS 32. FURNITURE AND UPHOLSTERY.) TEXTILE PUBLISHING COMPANY, New York, N. Y. Filed Mar. 15, 1917.

GRAPHIC

*Particular description of goods.*—Display Frames and Boxes.
*Claims use* since July 31, 1915.

Ser. No. 102,178. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) THE BESTOL COMPANY, Boston, Mass. Filed Mar. 16, 1917.

BESTOL

*Particular description of goods.*—Tooth-Brushes.
*Claims use* since Nov. 15, 1904.

Ser. No. 102,248. (CLASS 37. PAPER AND STATIONERY.) GOODYEAR RUBBER COMPANY, St. Paul, Minn. Filed Mar. 19, 1917.

SQUARE DEAL

*Particular description of goods.*—Rubber Bands.
*Claims use* since March, 1913.

Ser. No. 102,267. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) WARNOLA MANUFACTURING COMPANY, INC., New York, N. Y. Filed Mar. 19, 1917.

WARNOLA

*Particular description of goods.*—Manually-Operable Automobile-Horns.
*Claims use* since Dec. 1, 1916.

Ser. No. 102,284. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE CUNNINGHAM PIANO COMPANY, Philadelphia, Pa. Filed Mar. 20, 1917.

REOSTYLE

*Particular description of goods.*—Pnuematic Player-Pianos.
*Claims use* since Oct. 2, 1916.

Ser. No. 102,320. (CLASS 32. FURNITURE AND UPHOLSTERY.) PERFECTION MANUFACTURING COMPANY, St. Louis, Mo. Filed Mar. 21, 1917.

Rock-A-Bye

*Particular description of goods.*—Swings and Beds.
*Claims use* since June, 1916.

Ser. No. 102,380. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM MACMASTER, New York, N. Y. Filed Mar. 23, 1917.

RET-SAM

*Particular description of goods.*—A Salve for Boils, Ulcers, and Wounds.
*Claims use* since Jan. 2, 1917.

Ser. No. 102,381. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM MACMASTER, New York, N. Y. Filed Mar. 23, 1917.

CH-RM-AS

*Particular description of goods.*—A Salve for Tired Feet, Corns, and Chilblains.
*Claims use* since Jan. 2, 1917.

Ser. No. 102,398. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LAWRENCE ALFORD, Leesville, La. Filed Mar. 24, 1917.



*Particular description of goods.*—A Mouth-Wash.
*Claims use* since August, 1916.

Ser. No. 102,407. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROSE M. DALY, Portland, Oreg. Filed Mar. 24, 1917.

ROM-I-DA

*Particular description of goods.*—Hair-Growing Preparations.
*Claims use* since Mar. 15, 1917.

Ser. No. 102,429. (CLASS 32. FURNITURE AND UPHOLSTERY.) WABASH SANITRAY COMPANY, Wabash, Ind. Filed Mar. 24, 1917.

Snilap

*Particular description of goods.*—Baby-Dressing Tables.
*Claims use* since Feb. 19, 1917.

Ser. No. 102,529. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) S. B. PENICK & COMPANY, INC., New York, N. Y. Filed Mar. 28, 1917.

"EIDERDOWN"

*Particular description of goods.*—Soap, and More Particularly Powdered Soap.
*Claims use* since on or about Jan. 1, 1915.





Ser. No. 102,567. (CLASS 37. PAPER AND STATIONERY.) MANHATTAN CARD & PAPER COMPANY, New York, N. Y. Filed Mar. 29, 1917.

COMPTROLLER

*Particular description of goods.*—Bond-Paper and Envelops.
*Claims use* since on or about Mar. 1, 1917.

Ser. No. 102,571. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) NEW ORLEANS BOTTLING CO., INC., New Orleans, La. Filed Mar. 29, 1917.

ELCO

*Particular description of goods.*—Non-Alcoholic Beverage, Comprising Non-Alcoholic Beverages Sold as Soft Drinks.
*Claims use* since Oct. 25, 1916.

Ser. No. 102,798. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) GEORGE BORGFELDT & Co., New York, N. Y. Filed Apr. 7, 1917.

BETSY ROSS

*Particular description of goods.*—Dolls, Toy Animals, Doll-Clothes, Doll-Beds, Doll-Jewelry of Base Metal, Doll Furniture, Doll-Houses, Toy Tea Sets, Toy Embroidery Sets, Toy Drawing and Painting Outfits, Holiday and Table Favors.
*Claims use* since Apr. 5, 1917.

Ser. No. 102,801. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) FITGER BREWING CO., Duluth, Minn. Filed Apr. 7, 1917.

Non-Alco

*Particular description of goods.*—A Non-Alcoholic Carbonated Beverage Sold as a Soft Drink.
*Claims use* since Dec. 1, 1915.

Ser. No. 102,802. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) FITGER BREWING CO., Duluth, Minn. Filed Apr. 7, 1917.

NO-AL-KO

*Particular description of goods.*—A Non-Alcoholic Carbonated Beverage Sold as a Soft Drink.
*Claims use* since Dec. 1, 1915.

Ser. No. 102,825. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BUCKHORN LITHIA WATER CO., Bullock, N. C. Filed Apr. 9, 1917.

BUCKHORN

*Particular description of goods.*—A Non-Alcoholic Carbonated Tonic Beverage to be Sold as a Soft Drink.
*Claims use* since Jan. 15, 1917.

Ser. No. 102,916. (CLASS 37. PAPER AND STATIONERY.) CHARLES E. WEYAND & Co. INC., New York, N. Y. Filed Apr. 12, 1917.

Pollyanna

*Particular description of goods.*—Writing-Paper and Envelops.
*Claims use* since Mar. 1, 1917.

Ser. No. 103,028. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ELLIOTT W. MAJOR, St. Louis, Mo. Filed Apr. 16, 1917.

Imakooler

*Particular description of goods.*—A Soft Drink.
*Claims use* since Apr. 9, 1917.

Ser. No. 103,128. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE PITTSBURGH TOY VEHICLE CO., Pittsburgh, Pa. Filed Apr. 19, 1917.

Buster Bike

*Particular description of goods.*—Children's Toy Vehicles.
*Claims use* since Feb. 3, 1917.

# TRADE-MARK REGISTRATIONS GRANTED

## MAY 15, 1917.

116,570. CERTAIN NAMED ARTICLES OF JEWELRY. THE C. M. ABBOTT COMPANY, Providence, R. I.
Filed September 22, 1916. Serial No. 98,151. PUBLISHED MARCH 13, 1917.

116,571. CHEWING-GUM. ADAMS BROTHERS, New York, N. Y.
Filed July 25, 1916. Serial No. 96,811. PUBLISHED MARCH 13, 1917.

116,572. TOILET-PAPER AND PAPER TOWELS. ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y.
Filed May 23, 1916. Serial No. 95,358. PUBLISHED MARCH 6, 1917.

116,573. TOILET-PAPER AND PAPER TOWELS. ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y.
Filed July 26, 1916. Serial No. 96,860. PUBLISHED MARCH 6, 1917.

116,574. CERTAIN NAMED PAINTS AND PAINTERS' MATERIALS. ATLANTIC DRIER & VARNISH CO., Philadelphia, Pa.
Filed December 27, 1916. Serial No. 100,192. PUBLISHED MARCH 6, 1917.

116,575. CERTAIN NAMED PAINTS AND PAINTERS' MATERIALS. ATLANTIC DRIER & VARNISH CO., Philadelphia, Pa.
Filed December 27, 1916. Serial No. 100,193. PUBLISHED MARCH 6, 1917.

116,576. PREPARED ASPHALT ROOFING. BALTIMORE ROOFING & ASBESTOS MANUFACTURING CO., Wilmington, Del., and Asbestos, Md.
Filed January 10, 1917. Serial No. 100,508. PUBLISHED MARCH 6, 1917.

116,577. PRESSURE-INDICATING DEVICES. BEAR & GLICK, Chicago, Ill.
Filed January 23, 1917. Serial No. 100,842. PUBLISHED MARCH 6, 1917.

116,578. TOY FIGURES AND DOLLS. THE BEAVER COMPANY, Buffalo, N. Y.
Filed January 9, 1917. Serial No. 100,466. PUBLISHED MARCH 6, 1917.

116,579. BATTERIES. ANDREW HALL BERRY, New York, N. Y.
Filed February 9, 1917. Serial No. 101,256. PUBLISHED MARCH 13, 1917.

116,580. TOOTH POWDER AND CREAM. ALEXANDRE BÉKUBÉ, Berlin, N. H.
Filed November 25, 1916. Serial No. 99,534. PUBLISHED JANUARY 30, 1917.

116,581. CERTAIN NAMED CLOTHING. BIRKENFELD STRAUSS & CO., New York, N. Y.
Filed January 27, 1917. Serial No. 100,984. PUBLISHED MARCH 13, 1917.

116,582. OVERALLS, WORK-SHIRTS, AND HOSIERY. BITTNER HUNSICKER & CO., Allentown, Pa.
Filed April 7, 1915. Serial No. 85,741. PUBLISHED OCTOBER 24, 1916.

116,583. REMEDY FOR CERTAIN NAMED DISEASES. KOSTAS G. BOUZOUKIS, Nashua, N. H.
Filed January 4, 1917. Serial No. 100,354. PUBLISHED MARCH 13, 1917.

116,584. SPARK-PLUGS AND PRIMING-PLUGS. E. A. BOWMAN CO., Detroit, Mich.
Filed January 12, 1917. Serial No. 100,543. PUBLISHED MARCH 6, 1917.

116,585. SPRING-ROLLERS FOR WINDOW-SHADES, AWNINGS, SLEEPING-PORCHES, MAPS, CARS, AUTOS, &c. CHARLES W. BRENEMAN, Cincinnati, Ohio.
Filed January 5, 1917. Serial No. 100,365. PUBLISHED MARCH 6, 1917.

116,586. COFFEE, TEA, SALTED PEANUTS, SUGAR PEANUTS, PEANUT-OIL, PEANUT-BUTTER, AND SUGAR. THE BRUNDAGE BROTHERS COMPANY, Toledo, Ohio.
Filed January 8, 1917. Serial No. 100,418. PUBLISHED FEBRUARY 27, 1917.

116,587. WATCHES. J. BULOVA COMPANY, New York, N. Y.
Filed January 2, 1917. Serial No. 100,279. PUBLISHED MARCH 6, 1917.

116,588. ABDOMINAL BELTS OR SUPPORTS. SAMUEL H. CAMP, Jackson, Mich.
Filed October 16, 1916. Serial No. 98,680. PUBLISHED JANUARY 9, 1917.

116,589. WHEAT-FLOUR. THE CANADIAN-AMERICAN CEREAL PRODUCTS CO., New York, N. Y.
Filed January 8, 1917. Serial No. 100,421. PUBLISHED MARCH 13, 1917.

116,590. OLEOMARGARIN. CAPITAL CITY DAIRY CO., Columbus, Ohio.
Filed January 31, 1917. Serial No. 101,055. PUBLISHED MARCH 13, 1917.

116,591. MEDICATED PREPARATION DESTRUCTIVE OR REPELLENT TO CERTAIN INSECTS, VERMIN, AND BACTERIA. CARPENTER-MORTON COMPANY, Boston, Mass.
Filed October 12, 1916. Serial No. 98,589. PUBLISHED MARCH 13, 1917.

116,592. WEIGHING-SCALES. JOHN CHATILLON & SONS, New York, N. Y.
Filed November 16, 1916. Serial No. 99,321. PUBLISHED MARCH 6, 1917.

116,593. WEIGHING-SCALES. JOHN CHATILLON & SONS, New York, N. Y.
Filed December 19, 1916. Serial No. 100,035. PUBLISHED MARCH 6, 1917.

116,594. WEIGHING-SCALES. JOHN CHATILLON & SONS, New York, N. Y.
Filed February 9, 1917. Serial No. 101,258. PUBLISHED MARCH 6, 1917.

116,595. AUTOMOBILES AND AUTOMOBILE-TRUCKS. CHICAGO PNEUMATIC TOOL COMPANY, Chicago, Ill.
Filed November 1, 1916. Serial No. 99,022. PUBLISHED DECEMBER 12, 1916.

116,596. GARBAGE-PAILS, GARBAGE-CANS, AND CANS USED IN MAKING ARTIFICIAL ICE. THE CINCINNATI GALVANIZING COMPANY, Cincinnati, Ohio.
Filed November 23, 1916. Serial No. 99,497. PUBLISHED MARCH 6, 1917.

116,597. CROCHET HOOKS OR NEEDLES. THE CLARK THREAD COMPANY, Newark, N. J.
Filed November 3, 1916. Serial No. 99,060. PUBLISHED MARCH 13, 1917.

116,598. TRUSSES. CHARLES CLUTHE, Sr., Cincinnati, Ohio.
Filed January 22, 1917. Serial No. 100,796. PUBLISHED MARCH 6, 1917.

116,599. IRON HEADS FOR GOLF-CLUBS. J. P. COCHRANE, Edinburgh, Scotland.
Filed August 31, 1916. Serial No. 97,729. PUBLISHED JANUARY 9, 1917.

116,600. BUTTER AND HONEY. COMMERCIAL CREAMERY COMPANY, Spokane, Wash.
Filed September 18, 1916. Serial No. 98,042. PUBLISHED DECEMBER 5, 1916.

116,601. PILLOW-TUBING, SHEETING, AND COTTON PIECE GOODS. THE CONTINENTAL MILLS, Lewiston, Me., and Boston, Mass.
Filed March 13, 1916. Serial No. 93,483. PUBLISHED MARCH 13, 1917.

116,602. PEBBLE PHOSPHATE. CORONET PHOSPHATE COMPANY, New York, N. Y.
Filed December 30, 1916. Serial No. 100,247. PUBLISHED FEBRUARY 27, 1917.

116,603. STOCK FEED AND COTTON-SEED MIXED FEED. THE COTTONSEED PRODUCTS CO., Roff, Okla.
Filed November 27, 1916. Serial No. 99,565. PUBLISHED MARCH 13, 1917.

116,604. FLOOR-DRAINS. CRAMPTON-FARLEY BRASS CO., Kansas City, Mo.
Filed January 23, 1917. Serial No. 100,848. PUBLISHED MARCH 13, 1917.

116,605. FIREWORKS. DETWILLER & STREET FIREWORKS MANUFACTURING COMPANY, New York, N. Y.
Filed December 29, 1916. Serial No. 100,234. PUBLISHED FEBRUARY 27, 1917.

116,606. FIREWORKS. DETWILLER & STREET FIREWORKS MANUFACTURING COMPANY, New York, N. Y.
Filed December 29, 1916. Serial No. 100,235. PUBLISHED FEBRUARY 27, 1917.

116,607. FIREWORKS. DETWILLER & STREET FIREWORKS MANUFACTURING COMPANY, New York, N. Y.
Filed December 29, 1916. Serial No. 100,236. PUBLISHED FEBRUARY 27, 1917.

116,608. FIREWORKS. DETWILLER & STREET FIREWORKS MANUFACTURING COMPANY, New York, N. Y.
Filed December 29, 1916. Serial No. 100,238. PUBLISHED FEBRUARY 27, 1917.

116,609. CROCHET-HOOKS. DIECKERHOFF, RAFFLOER & Co., New York, N. Y.
Filed January 19, 1917. Serial No. 100,739. PUBLISHED MARCH 6, 1917.

116,610. MEDICINAL PREPARATION FOR TREATMENT OF CERTAIN NAMED DISEASES. PATRICK DONOHUE, Columbus, Ohio.
Filed March 25, 1916. Serial No. 93,866. PUBLISHED JUNE 13, 1916.

116,611. SUBSTITUTE FOR COFFEE. WILLIAM J. H. DORAN, Denver, Colo.
Filed January 2, 1917. Serial No. 100,284. PUBLISHED MARCH 13, 1917.

116,612. PHOTOGRAPHIC PLATES. EASTMAN KODAK Co., Rochester, N. Y.
Filed February 1, 1917. Serial No. 101,089. PUBLISHED MARCH 6, 1917.

116,613. PHOTOGRAPHIC PAPER. EASTMAN KODAK Co., Rochester, N. Y.
Filed February 1, 1917. Serial No. 101,090. PUBLISHED MARCH 6, 1917.

116,614. PHOTOGRAPHIC PAPER. EASTMAN KODAK Co., Rochester, N. Y.
Filed February 5, 1917. Serial No. 101,167. PUBLISHED MARCH 6, 1917.

116,615. PHOTOGRAPHIC PLATES. EASTMAN KODAK Co., Rochester, N. Y.
Filed February 5, 1917. Serial No. 101,168. PUBLISHED MARCH 6, 1917.

116,616. CERTAIN NAMED ARTICLES MADE OF PRECIOUS MATERIALS — NAMELY, GOLD, ROLLED-GOLD PLATE, OR SILVER. ELGIN AMERICAN MANUFACTURING CO., Elgin, Ill.
Filed December 19, 1914. Serial No. 83,409. PUBLISHED MARCH 6, 1917.

116,617. GAMES. H. B. FITZPATRICK, Fort Wayne, Ind.
Filed December 15, 1916. Serial No. 99,956. PUBLISHED MARCH 6, 1917.

116,618. SELF-RISING WHEAT-FLOUR. C. A. GAMBRILL MFG. CO., Baltimore, Md.
Filed January 30, 1917. Serial No. 101,037. PUBLISHED MARCH 13, 1917.

116,619. SALVE AND COUGH MEDICINE FOR CERTAIN NAMED DISEASES. RENATA GEIS, Ross township, Allegheny county, Pa.
Filed February 3, 1917. Serial No. 101,145. PUBLISHED MARCH 13, 1917.

116,620. WHEEL-RIMS, TIRE-HOLDERS, SEAT-COVERS, BUMPERS, AND FENDERS. THE GIBSON COMPANY, Indianapolis, Ind.
Filed December 13, 1915. Serial No. 91,421. PUBLISHED FEBRUARY 27, 1917.

116,621. PEANUT-BUTTER AND HONEY FOOD COMPOUND. DILMAN C. GILHAM, Schuylkill Haven, Pa.
Filed January 22, 1917. Serial No. 100,800. PUBLISHED MARCH 13, 1917.

116,622. TABLES AND CHAIRS AS ARTICLES OF FURNITURE, BEDS, WARDROBES, SIDEBOARDS, DESKS, AND COUCHES. GOLDMAN BROS., St. Louis, Mo.
Filed October 18, 1916. Serial No. 98,749. PUBLISHED MARCH 13, 1917.

116,623. TABLES AND CHAIRS AS ARTICLES OF FURNITURE, BEDS, WARDROBES, SIDEBOARDS, DESKS, AND COUCHES. GOLDMAN BROS., St. Louis, Mo.
Filed October 18, 1916. Serial No. 98,750. PUBLISHED MARCH 13, 1917.

116,624. ELECTRICAL HOUSEHOLD DEVICES—NAMELY, ELECTRIC HEATING-PADS. THE GOODWILL ELECTRIC COMPANY, Chicago, Ill.
Filed January 13, 1917. Serial No. 100,581. PUBLISHED MARCH 6, 1917.

116,625. BOTTLED GRECIAN WHITE GIN. GRECIAN IMP. & TRADING CO. INC., New York, N. Y.
Filed January 31, 1916. Serial No. 92,558. PUBLISHED MARCH 13, 1917.

116,626. BOTTLED GRECIAN WHITE GIN. GRECIAN IMP. & TRADING CO. INC., New York, N. Y.
Filed January 31, 1916. Serial No. 92,559. PUBLISHED MARCH 13, 1917.

116,627. CEREAL BREAKFAST FOOD. RAYMOND M. GROFF, Lancaster, Pa.
Filed January 19, 1916. Serial No. 92,241. PUBLISHED FEBRUARY 27, 1917.

116,628. WHEAT-FLOUR. GULFPORT GROCERY CO., Gulfport, Miss.
Filed October 23, 1916. Serial No. 98,834. PUBLISHED JANUARY 23, 1917.

116,629. PAINT-BRUSHES. HANLON & GOODMAN CO., New York, N. Y.
Filed December 26, 1916. Serial No. 100,165. PUBLISHED MARCH 6, 1917.

116,630. FIRE-BRICK. HARRISON-WALKER REFRACTORIES COMPANY, Pittsburgh, Pa.
Filed December 22, 1916. Serial No. 100,097. PUBLISHED MARCH 6, 1917.

116,631. TABLETS FOR TREATMENT OF LA GRIPPE AND COLDS. SHERWIN L. HASELTINE, Springfield, Mo.
Filed January 29, 1917. Serial No. 101,008. PUBLISHED MARCH 13, 1917.



116,632. OVERCOATS. FREDERICK WILLIAM HAWCK, Omaha, Nebr.
Filed January 31, 1917. Serial No. 101,067. PUBLISHED MARCH 13, 1917.

116,633. CERTAIN NAMED FOODS. HEISIG & NORVELL, Beaumont, Tex.
Filed October 19, 1916. Serial No. 98,764. PUBLISHED MARCH 13, 1917.

116,634. LIME BLOWN GLASS. A. H. HEISEY & Co., Newark, Ohio.
Filed September 27, 1916. Serial No. 98,257. PUBLISHED JANUARY 2, 1917.

116,635. METAL SNAP-FASTENERS OR SNAP-FASTENING BUTTONS OR CLASPS. HERO SNAP FASTENER COMPANY, New York, N. Y.
Filed January 8, 1917. Serial No. 100,428. PUBLISHED MARCH 6, 1917.

116,636. MATCHES. THE LOUIS HILFER COMPANY, Chicago, Ill.
Filed December 29, 1916. Serial No. 100,240. PUBLISHED FEBRUARY 27, 1917.

116,637. CERTAIN NAMED SPORTING GOODS. HILLERICH & BRADSBY COMPANY, Louisville, Ky.
Filed January 2, 1917. Serial No. 100,292. PUBLISHED MARCH 6, 1917.

116,638. CONDENSED SKIMMED MILK. HOLLAND FOOD CORPORATION, New York, N. Y.
Filed December 18, 1915. Serial No. 91,573. PUBLISHED MAY 23, 1916.

116,639. VANISHING CREAM. THE HOME PRODUCTS COMPANY, Newburgh, N. Y.
Filed January 9, 1917. Serial No. 100,493. PUBLISHED MARCH 13, 1917.

116,640. RUBBER BOOTS AND SHOES, RUBBER OVERSHOES, AND RUBBER-SOLE CANVAS SHOES. HOOD RUBBER COMPANY, Watertown, Mass.
Filed January 12, 1917. Serial No. 100,547. PUBLISHED MARCH 13, 1917.

116,641. RUBBER BOOTS AND SHOES, RUBBER OVERSHOES, AND RUBBER-SOLE CANVAS SHOES. HOOD RUBBER COMPANY, Watertown, Mass.
Filed January 12, 1917. Serial No. 100,548. PUBLISHED MARCH 13, 1917.

116,642. RUBBER BOOTS AND SHOES, RUBBER OVERSHOES, AND RUBBER-SOLE CANVAS SHOES. HOOD RUBBER COMPANY, Watertown, Mass.
Filed January 12, 1917. Serial No. 100,549. PUBLISHED MARCH 13, 1917.

116,643. RUBBER BOOTS AND SHOES, RUBBER OVERSHOES, AND RUBBER-SOLE CANVAS SHOES. HOOD RUBBER COMPANY, Watertown, Mass.
Filed January 12, 1917. Serial No. 100,550. PUBLISHED MARCH 13, 1917.

116,644. HAIR-DRESSING. HOFFINGER & ROTH, St. Louis, Mo.
Filed September 5, 1916. Serial No. 97,791. PUBLISHED MARCH 13, 1917.

116,645. ICE-SKATES AND PARTS THEREOF. ERNEST HUNOLD, Providence, R. I.
Filed December 7, 1916. Serial No. 99,761. PUBLISHED FEBRUARY 27, 1917.

116,646. CERTAIN NAMED VAPORIZING DEVICE. THE HYDRAOAS CORPORATION, New York, N. Y.
Filed December 14, 1916. Serial No. 99,939. PUBLISHED MARCH 6, 1917.

116,647. ANTISEPTIC, ASTRINGENT, PROPHYLACTIC, AND REMEDIAL PREPARATION FOR TREATING DISEASES OF THE RESPIRATORY MUCOUS MEMBRANES. IRELAND CHEMICAL CO., Chicago, Ill.
Filed May 22, 1916. Serial No. 95,336. PUBLISHED MARCH 6, 1917.

116,648. POLISHING-OILS. WILBERT B. JACOBS, Emlenton, Pa.
Filed September 9, 1916. Serial No. 97,874. PUBLISHED MARCH 6, 1917.

116,649. PERFUMES, FACE-POWDERS, CREAMS, SACHET-POWDERS, TOILET WATERS. JAQUET & MAXWELL, New York, N. Y.
Filed December 9, 1916. Serial No. 99,822. PUBLISHED MARCH 13, 1917.

116,650. IRON-CEMENT. EDGAR W. JENKINS, Chicago, Ill.
Filed November 11, 1916. Serial No. 99,249. PUBLISHED MARCH 13, 1917.

116,651. INFANTS' FLAT AND KNITTED UNDERWEAR. WM. K. JONES, Wichita, Kans.
Filed January 9, 1917. Serial No. 100,496. PUBLISHED MARCH 13, 1917.

116,652. FURNITURE-POLISHES. MAX KAMMERLING, New York, N. Y.
Filed February 1, 1916. Serial No. 92,572. PUBLISHED JANUARY 9, 1917.

116,653. STAYING AND FASTENING MATERIAL—NAMELY, ADHESIVELY-COATED STRIPS OF PAPER AND TEXTILE MATERIAL. M. D. KNOWLTON COMPANY, Rochester, N. Y.
Filed December 8, 1916. Serial No. 99,794. PUBLISHED FEBRUARY 27, 1917.

116,654. WHEAT-FLOUR. THE LARABEE FLOUR MILLS CORPORATION, Hutchinson, Kans.
Filed January 8, 1917. Serial No. 100,434. PUBLISHED MARCH 13, 1917.

116,655. WHEAT-FLOUR. LOUIS LEVY GROCER CO., LTD., Baton Rouge, La.
Filed January 22, 1917. Serial No. 100,807. PUBLISHED MARCH 13, 1917.

116,656. CIGARS AND CIGARETTES. LILLY, DUNCAN & COMPANY, Baltimore, Md.
Filed December 11, 1916. Serial No. 99,850. PUBLISHED FEBRUARY 6, 1917.

116,657. SPARKLING WINES. LUIGI BOSCA & FIGLI, Canelli, Italy.
Filed February 14, 1917. Serial No. 101,352. PUBLISHED MARCH 13, 1917.

116,658. DISPLAY-STANDS FOR EXHIBITING PERFUMERY IN BOTTLES AND OTHER ARTICLES FOR SALE. LUNDBORG COMPANY, New York, N. Y.
Filed December 9, 1915. Serial No. 91,349. PUBLISHED FEBRUARY 27, 1917.

116,659. PIANO BENCHES AND STOOLS AND MUSIC-CABINETS. LYON & HEALY, Chicago, Ill.
Filed January 5, 1916. Serial No. 91,937. PUBLISHED FEBRUARY 27, 1917.

116,660. MINERAL WATERS. MACDONELL-CHOW CORP., New York, N. Y.
Filed January 26, 1917. Serial No. 100,964. PUBLISHED MARCH 13, 1917.

116,661. TOY PUSH-CARS. CHARLES J. MCKNIGHT, Greensburg, Pa.
Filed November 14, 1916. Serial No. 99,298. PUBLISHED MARCH 6, 1917.

116,662. CERTAIN NAMED ELECTRICALLY-OPERATED THERAPEUTIC APPARATUS AND APPLIANCES AND PARTS AND ATTACHMENTS THEREFOR. MANHATTAN ELECTRICAL SUPPLY COMPANY, Jersey City, N. J., and New York, N. Y.
Filed October 5, 1916. Serial No. 98,439. PUBLISHED FEBRUARY 27, 1917.

116,663. ORGANS AND PARTS THEREOF. MARR AND COLTON ORGAN CO., Warsaw, N. Y.
Filed December 18, 1916. Serial No. 100,015. PUBLISHED MARCH 6, 1917.

116,664. OPTICAL TOY. MARVEL MFG. CO., New Haven, Conn.
Filed April 26, 1916. Serial No. 94,725. PUBLISHED JANUARY 23, 1917.

116,665. TALKING-MACHINES, RECORDS, NEEDLES, AND PARTS THEREOF, EXCEPT HORNS. THE MASTER TALKING MACHINE COMPANY, Towanda, Pa.
Filed March 16, 1915. Serial No. 85,190. PUBLISHED JUNE 20, 1916.

116,666. TRACTORS. MAYER BROTHERS COMPANY, Mankato, Minn.
Filed February 26, 1916. Serial No. 93,128. PUBLISHED JULY 25, 1916.

116,667. FUEL-OILS. MEXICAN PETROLEUM CORPORATION, Los Angeles, Cal.
Filed January 17, 1917. Serial No. 100,676. PUBLISHED MARCH 6, 1917.

116,668. CORRUGATED AND FIBER BOARD USED IN THE MANUFACTURE OF BOXES AND PRODUCTS MADE FROM SAME. MID-WEST BOX COMPANY, Anderson and Kokomo, Ind.
Filed December 18, 1915. Serial No. 91,577. PUBLISHED MARCH 6, 1917.

116,669. BATHING AND GYMNASIUM SHOES MADE OF CANVAS, SATEEN, LEATHER, OR OTHER MATERIALS. THE MILBURY ATLANTIC MFG. CO., New York, N. Y.
Filed September 18, 1915. Serial No. 89,296. PUBLISHED MARCH 6, 1917.

116,670. TOY BALLOONS. THE MILLER RUBBER COMPANY, Akron, Ohio.
Filed November 10, 1916. Serial No. 99,213. PUBLISHED FEBRUARY 6, 1917.

116,671. HEMMED DIAPERS. THE MILLVILLE MANUFACTURING COMPANY, Philadelphia, Pa.
Filed October 3, 1914. Serial No. 81,642. PUBLISHED JUNE 6, 1916.

116,672. TEXTILE RUGS. MODEL MILLS COMPANY, Philadelphia, Pa.
Filed January 22, 1917. Serial No. 100,813. PUBLISHED MARCH 13, 1917.

116,673. FACE-CREAM, HAIR-TONIC, FACE-LOTION FOR USE AFTER SHAVE OR WHEN DESIRED. ARTHUR B. MOLER, Chicago, Ill.
Filed June 12, 1916. Serial No. 95,825. PUBLISHED MARCH 13, 1917.

116,674. MEAT PRODUCTS—NAMELY, BREAKFAST-BACON. JOHN MORRELL & CO., Ottumwa, Iowa.
Filed November 4, 1916. Serial No. 99,091. PUBLISHED DECEMBER 5, 1916.

116,675. PRINTING AND WRITING PAPERS. NATIONAL PAPETERIE COMPANY, Springfield, Mass.
Filed December 14, 1915. Serial No. 91,479. PUBLISHED MARCH 6, 1917.

116,676. ORANGES, GRAPE-FRUIT, LEMONS, AND ALL CITRUS FRUITS. NOCATEE CITRUS GROWERS' ASSOCIATION, Nocatee, Fla.
Filed September 28, 1916. Serial No. 98,298. PUBLISHED JANUARY 9, 1917.

116,677. PRINTING-INKS. F. E. OKIE COMPANY, Philadelphia, Pa.
Filed February 10, 1917. Serial No. 101,298. PUBLISHED MARCH 6, 1917.

116,678. WOOD-BLOCK PAVING. PACIFIC CREOSOTING CO., Seattle, Wash.
Filed September 25, 1916. Serial No. 98,220. PUBLISHED JANUARY 23, 1917.

116,679. COVER AND HANGER FOR HOT-WATER BAGS, &c. ELEANORE M. PETERS, Chicago, Ill.
Filed January 13, 1917. Serial No. 100,589. PUBLISHED MARCH 6, 1917.

116,680. CERTAIN NAMED MEDICINES AND PHARMACEUTICAL PREPARATIONS. PIERCE ABBOTT DIETRICH, Philadelphia, Pa.
Filed November 20, 1916. Serial No. 99,397. PUBLISHED FEBRUARY 6, 1917.

116,681. MINERAL WAX. PIERCE FORDYCE OIL ASSOCIATION, Dallas, Tex.
Filed August 11, 1916. Serial No. 97,278. PUBLISHED OCTOBER 24, 1916.

116,682. DOLLS. RITE SPECIALTY CO., New York, N. Y.
Filed December 27, 1916. Serial No. 100,210. PUBLISHED MARCH 6, 1917.

116,683. CERTAIN NAMED CLOTHING. J. M. ROBINSON, NORTON & CO., Louisville, Ky.
Filed January 29, 1917. Serial No. 101,019. PUBLISHED MARCH 13, 1917.

116,684. CANNED SALMON, CANNED COVE-OYSTERS, CANNED MINCED CLAMS, AND DRIED COD-FISH. ROUNDUP FISHERIES CO., Spokane, Wash.
Filed December 18, 1916. Serial No. 100,023. PUBLISHED MARCH 13, 1917.

116,685. NON-ALCOHOLIC BEVERAGE SOLD AS A SOFT DRINK. JOS. SCHLITZ BREWING CO., Milwaukee, Wis.
Filed February 1, 1917. Serial No. 101,104. PUBLISHED MARCH 13, 1917.

116,686. CEREAL BEVERAGES SOLD AS SOFT DRINKS. THE PETER SCHOENHOFEN BREWING COMPANY, Chicago, Ill.
Filed December 3, 1915. Serial No. 91,143. PUBLISHED JANUARY 25, 1916.

116,687. WATER-BOTTLES, FOUNTAIN-SYRINGES, COMBINATION-SYRINGES, FACE-BAGS, AND ICE-BAGS. THE SEAMLESS RUBBER COMPANY, New Haven, Conn.
Filed January 3, 1917. Serial No. 100,340. PUBLISHED MARCH 6, 1917.

116,688. RUBBER HEELS AND COMPOSITION SOLES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed February 2, 1917. Serial No. 101,133. PUBLISHED MARCH 6, 1917.

116,689. TUNA FISH, CRAB-MEAT. SEGGERMAN BROS. INC., New York, N. Y.
Filed December 27, 1915. Serial No. 91,789. PUBLISHED MARCH 13, 1917.

116,690. TALKING-MACHINES. SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 22, 1916. Serial No. 99,476. PUBLISHED MARCH 13, 1917.

116,691. STRETCHING-TOOL. SIGNODE SYSTEM, INC., Chicago, Ill.
Filed January 22, 1917. Serial No. 100,828. PUBLISHED MARCH 6, 1917.

116,692. SEALING-TOOL. SIGNODE SYSTEM, INC., Chicago, Ill.
Filed January 22, 1917. Serial No. 100,824. PUBLISHED MARCH 6, 1917.

116,693. ILLUMINATING, LUBRICATING, AND BURNING OILS AND GREASES MADE FROM PETROLEUM. SINCLAIR OIL & REFINING CORPORATION, Chicago, Ill.
Filed January 2, 1917. Serial No. 100,320. PUBLISHED MARCH 6, 1917.

116,694. CANNED FRUITS AND VEGETABLES. C. E. SLAUSON CO., Stamford, Conn.
Filed January 30, 1917. Serial No. 101,048. PUBLISHED MARCH 13, 1917.

116,695. CHEESE. SMITH LICHTY AND HILLMAN COMPANY, Waterloo, Iowa.
Filed January 22, 1917. Serial No. 100,828. PUBLISHED MARCH 13, 1917.



116,696. TEA. SPRAGUE, WARNER & COMPANY, Chicago, Ill.
Filed February 7, 1917. Serial No. 101,218. PUBLISHED MARCH 13, 1917.

116,697. READY-MIXED PAINT. STANDARD OIL COMPANY, Richmond, Cal.
Filed June 15, 1916. Serial No. 95,900. PUBLISHED SEPTEMBER 19, 1916.

116,698. PETROLEUM-OILS FOR LUBRICATING AND CUSHIONING PURPOSES. STANDARD OIL COMPANY, Richmond, Cal.
Filed January 23, 1917. Serial No. 100,861. PUBLISHED MARCH 6, 1917.

116,699. POLISH FOR PIANOS, FURNITURE, FLOORS, AUTOMOBILES, AND OTHER ARTICLES HAVING A VARNISHED SURFACE. CHARLES F. STEIN, Chicago, Ill.
Filed August 31, 1916. Serial No. 97,739. PUBLISHED JANUARY 9, 1917.

116,700. CATARRH REMEDY, PILE REMEDY, COUGH REMEDY, ANTISEPTIC POWDER, CATHARTIC PILLS, KIDNEY, LIVER, AND STOMACH REMEDY. DOC. STROCK REMEDY CO., Akron, Ohio.
Filed November 2, 1916. Serial No. 99,049. PUBLISHED MARCH 13, 1917.

116,701. CERTAIN NAMED FOODS. SUNSHINE POULTRY FARM, Shelby, Wis.
Filed January 25, 1915. Serial No. 84,099. PUBLISHED JANUARY 9, 1917.

116,702. CANDIES. COSTIS TAKIS, New York, N. Y.
Filed February 3, 1917. Serial No. 101,159. PUBLISHED MARCH 13, 1917.

116,703. WATERPROOFED PAPER. TATE ELECTROLYTIC WATERPROOFING COMPANY, INCORPORATED, New York, N. Y.
Filed August 10, 1916. Serial No. 97,243. PUBLISHED MARCH 6, 1917.

116,704. HATS. THE THISTLE HAT CO., New York, N. Y.
Filed November 10, 1916. Serial No. 99,217. PUBLISHED JANUARY 30, 1917.

116,705. PURE JUICE OF GRAPE-FRUIT OR POMELO. THE THOMAS ADVERTISING SERVICE, Jacksonville, Fla.
Filed November 17, 1916. Serial No. 99,362. PUBLISHED FEBRUARY 27, 1917.

116,706. BOOTS, SHOES, SLIPPERS, AND SANDALS MADE WHOLLY AND IN PART OF LEATHER AND CLOTH. TIMSON BROS. INC., Boston, Mass.
Filed January 18, 1917. Serial No. 100,725. PUBLISHED MARCH 13, 1917.

116,707. COTTON DRAPERY FABRICS. TITUS BLATTER & COMPANY, New York, N. Y.
Filed December 7, 1916. Serial No. 99,778. PUBLISHED MARCH 13, 1917.

116,708. DRAPERY FABRICS MADE OF COTTON AND OF COTTON AND SILK MIXTURES. TITUS BLATTER & COMPANY, New York, N. Y.
Filed December 7, 1916. Serial No. 99,779. PUBLISHED MARCH 13, 1917.

116,709. CERTAIN NAMED METAL TOOLS FOR CUTTING, FORMING, OR HOLDING. VICTOR F. J. TLACH, New York, N. Y.
Filed January 2, 1917. Serial No. 100,326. PUBLISHED MARCH 6, 1917.

116,710. WHEAT-FLOUR. THE TOPEKA FLOUR MILLS COMPANY, Topeka, Kans.
Filed January 15, 1917. Serial No. 100,602. PUBLISHED MARCH 13, 1917.

116,711. PHONOGRAPHS. STEPHEN J. TRAVIS, Chicago, Ill.
Filed November 6, 1916. Serial No. 99,138. PUBLISHED DECEMBER 12, 1916.

116,712. CERTAIN NAMED CLOTHING FOR MEN, MISSES, AND LADIES. A. L. TUSKA SON & CO., New York, N. Y.
Filed August 29, 1916. Serial No. 97,695. PUBLISHED MARCH 13, 1917.

116,713. CERTAIN NAMED CHILDREN'S PLAY-SUITS AND BOYS' OUTER GARMENTS. SIDNEY J. TWYMAN, Hamilton, Ohio.
Filed May 26, 1916. Serial No. 95,459. PUBLISHED JULY 18, 1916.

116,714. FOODSTUFFS FOR CATTLE AND OTHER ANIMALS, CONSISTING OF COTTON-SEED MEAL. UNION SEED & FERTILIZER COMPANY, Guttenberg, N. J.
Filed May 31, 1916. Serial No. 95,568. PUBLISHED MARCH 13, 1917.

116,715. CIGARS. UNITED CIGAR MANUFACTURERS COMPANY, New York, N. Y.
Filed October 17, 1916. Serial No. 98,724. PUBLISHED JANUARY 2, 1917.

116,716. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS FOR TREATING CERTAIN NAMED DISEASES. UNITED LIQUID SULPHUR CO., INC., New York, N. Y.
Filed January 9, 1917. Serial No. 100,505. PUBLISHED MARCH 13, 1917.

116,717. PHONOGRAPHS AND PHONOGRAPH-RECORDS. UNITED PHONOGRAPHS CORPORATION, Port Washington, Wis.
Filed January 5, 1917. Serial No. 100,387. PUBLISHED MARCH 6, 1917.

116,718. CERTAIN NAMED OPTICAL SUPPLIES. UNIVERSAL OPTICAL CORPORATION, Providence, R. I.
Filed February 3, 1917. Serial No. 101,161. PUBLISHED MARCH 6, 1917.

116,719. CERTAIN NAMED RACKS, REGISTERS, BULLETINS, AND THE LIKE. UNIVERSAL REGISTER CO., Chicago, Ill.
Filed September 28, 1916. Serial No. 98,305. PUBLISHED MARCH 6, 1917.

116,720. CHEWING-GUM AND MINTS. THE VANOLA COMPANY, Winston-Salem, N. C.
Filed October 14, 1916. Serial No. 98,673. PUBLISHED NOVEMBER 14, 1916.

116,721. CERTAIN NAMED RECEPTACLES. WANDERER-WERKE VORM. WINKLHOFER & JAENICKE-AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany.
Filed April 12, 1913. Serial No. 69,753. PUBLISHED MARCH 13, 1917.

116,722. CERTAIN NAMED FURNITURE. WANDERER-WERKE VORM. WINKLHOFER & JAENICKE AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany.
Filed April 12, 1913. Serial No. 69,756. PUBLISHED MARCH 13, 1917.

116,723. CERTAIN NAMED FURNITURE. WANDERER-WERKE VORM. WINKLHOFER & JAENICKE AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany.
Filed April 12, 1913. Serial No. 69,759. PUBLISHED MARCH 6, 1917.

116,724. WHEAT-FLOUR. WASHBURN CROSBY COMPANY, Minneapolis, Minn.
Filed February 1, 1917. Serial No. 101,111. PUBLISHED MARCH 13, 1917.

116,725. ABDOMINAL SURGICAL HEALTH-BELTS. THE WEIL CORSET COMPANY, New Haven, Conn.
Filed June 10, 1916. Serial No. 95,807. PUBLISHED SEPTEMBER 5, 1916.

116,726. CLOCKS AND WATCHES. WESTERN CLOCK CO., Peru, Ill.
Filed July 5, 1916. Serial No. 96,339. PUBLISHED MARCH 6, 1917.

116,727. DRY BATTERIES. WESTERN DRY BATTERY CO., Seattle, Wash.
Filed February 12, 1917. Serial No. 101,312. PUBLISHED MARCH 13, 1917.

116,728. CANNED SALMON. WHATCOM FISH PRODUCTS Co., Bellingham, Wash.
Filed January 19, 1917. Serial No. 100,763. PUBLISHED MARCH 13, 1917.

116,729. CANNED SALMON. WHATCOM FISH PRODUCTS Co., Bellingham, Wash.
Filed January 19, 1917. Serial No. 100,764. PUBLISHED MARCH 13, 1917.

116,730. CERTAIN NAMED PAINTS AND PAINTERS' MATERIALS. THE A. WILHELM COMPANY, Reading, Pa.
Filed July 10, 1916. Serial No. 96,479. PUBLISHED OCTOBER 24, 1916.

116,731. HOSIERY. THE WILMINGTON HOSIERY MILLS, INC., Wilmington, N. C.
Filed September 11, 1916. Serial No. 97,942. PUBLISHED MARCH 13, 1917.

116,732. CANDY. THE WINTERMINT CO., INC., Harrisburg, Pa.
Filed January 19, 1917. Serial No. 100,765. PUBLISHED MARCH 13, 1917.

116,733. COFFEE. THE WOOLSON SPICE COMPANY, Toledo, Ohio.
Filed January 29, 1917. Serial No. 101,029. PUBLISHED MARCH 13, 1917.

116,734. SUSPENDERS, BELTS, AND GARTERS. JOSEPH ZIFF, Detroit, Mich.
Filed January 19, 1917. Serial No. 100,766. PUBLISHED MARCH 6, 1917.

116,735. BLEACHING AND WATER-SOFTENING COMPOUND. ZIP CO., New York, N. Y.
Filed September 2, 1916. Serial No. 97,777. PUBLISHED MARCH 13, 1917.

# TRADE-MARK REGISTRATIONS RENEWED.

14,381. EARTHENWARE AND CHINA. DOULTON & Co., Lambeth, Surrey, and Burslem, Stafford, England; Doulton & Co., Ltd., successor.
Registered May 17, 1887. Renewed May 17, 1917.

14,415. RUBBER BELTING. REVERE RUBBER COMPANY, Boston, Mass.; Revere Rubber Company, a corporation of Rhode Island, assignee.
Registered May 17, 1887. Renewed May 17, 1917.

14,856 A FOOD PREPARATION FOR INFANTS AND INVALIDS. HORLICK'S FOOD COMPANY, Mount Pleasant and Racine, Wis.; Horlick's Malted Milk Company, successor.
Registered October 25, 1887. Renewed October 25, 1917.



# LABELS

## REGISTERED MAY 15, 1917.

20,093.—*Title:* "EXCELLO." (For Polish for Furniture.) EXCELLO POLISH CO., Portsmouth, Ohio. Filed December 16, 1916.

20,094.—*Title:* "GUTH CHOCOLATE FRUIT & NUT EASTER EGG." (For Candy.) GUTH CHOCOLATE COMPANY, Baltimore, Md. Filed March 19, 1917.

20,095.—*Title:* "SANS O DOR." (For Foot-Powders.) LYNN RUBBER MANUFACTURING COMPANY, Lynn, Mass. Filed April 30, 1917.

20,096.—*Title:* "DAN-D." (For Beverage.) HOWARD B. MINNICK, Louisville, Ky. Filed April 3, 1916.

20,097.—*Title:* "CREAMETTES." (For Macaroni.) MOTHER'S MACARONI COMPANY, Minneapolis, Minn. Filed July 10, 1916.

20,098.—*Title:* "ELECTRIC ENGINE BOLT STEEL." (For Steel.) OLD DOMINION IRON & NAIL WORKS Co., Richmond, Va. Filed March 30, 1917.

20,099.—*Title:* "SLICK-SHINE." (For Automobile-Body Polish.) ALBERT T. SCHLICHTING, Newark, N. J. Filed April 9, 1917.

20,100.—*Title:* "SCHREIBER'S KLOSTER BEER." (For Beer.) A. SCHREIBER BREWING Co., Buffalo, N. Y. Filed February 19, 1917.

20,101.—*Title:* "TIPPERARY." (For Dry Gin.) THE TRIACA COMPANY, Baltimore, Md. Filed April 28, 1917.

20,102.—*Title:* "TRUE BLUE." (For Compound of Camphor and Menthol Balm.) TRUE BLUE DRUG Co., Columbus, Ohio. Filed November 14, 1916.

# PRINTS

## REGISTERED MAY 15, 1917.

4,691.—*Title:* "LA BARLO." (For Cigars.) FRANCIS JAMES BARLOW, Chicago, Ill. Filed April 27, 1917.

4,692.—*Title:* "HOW TO CUT THE HIGH COST OF LIVING WITH CREAMETTES." (For Macaroni.) THE CREAMETTE COMPANY, Minneapolis, Minn. Filed April 9, 1917.

4,693.—*Title:* "OLD KING RUBBERSET." (For Brushes.) RUBBER & CELLULOID PRODUCTS COMPANY, Newark, N. J. Filed May 1, 1917.

# DECISIONS

OF THE

# COMMISSIONER OF PATENTS

AND OF

# UNITED STATES COURTS IN PATENT CASES.

## DECISIONS OF THE U. S. COURTS.

### Supreme Court of the United States.

EWING, COMMISSIONER OF PATENTS, *v.* THE UNITED STATES, *ex rel.* THE FOWLER CAR COMPANY.

*Decided May 7, 1917.*

1. PATENTS—INTERFERENCE—DETERMINATION OF THE EXISTENCE OF WITHIN THE DISCRETION OF THE COMMISSIONER OF PATENTS.

Section 4904 "commits to the opinion (judgment of the Commissioner the effect of an application upon a pending one—whether it will interfere with a pending one; something more, therefore, than the fact of two applications, something more than the mere assertion of a claim. The assertion must be, in the opinion of the Commissioner, an interference with another. And it is this other that is first in regard, not to be questioned except at the instance of the Commissioner by an exercise of judgment upon the circumstances."

2. SAME—SAME—SAME—MANDAMUS WILL NOT LIE TO CONTROL.

Where it appears that an applicant for patent did not conceive the invention until after another application disclosing the same invention was filed, *Held* that there was no question of priority to be determined and that mandamus will not lie to compel the Commissioner of Patents to declare an interference.

ON WRIT of certiorari to the Court of Appeals of the District of Columbia.

*The Solicitor-General*, with whom *Mr. Assistant Attorney-General Warren* and *Mr. Robert F. Whitehead* were on the brief, for the petitioner.

*Mr. George L. Wilkinson*, with whom *Mr. Melville Church* was on the brief, for the respondent.

STATEMENT OF THE CASE.

This writ is directed to a judgment of the Court of Appeals of the District of Columbia which affirmed a judgment of the Supreme Court of the District of Columbia in mandamus commanding the Commissioner of Patents—

to declare or direct to be declared an interference between the application of William E. Fowler, filed May 22, 1915, for improvements in car floor construction and the application for a similar invention—

of an unnamed applicant—

pursuant to the statute and rules in such cases made and provided.

The judgment was rendered upon motion of petitioner's attorney upon the petition, rule to show cause and answer. It was affirmed by the court of appeals. (45 App. D. C., —; 206 O. G., 700.)

As The Fowler Car Company and Ewing, Commissioner of Patents, were petitioner and respondent, respectively, in the court below, we shall so designate them here.

The facts as stated by the petition are as follows:

William E. Fowler, Sr., was the first and original inventor of certain new and useful improvements in car-floor construction.

On May 22, 1915, he applied for a patent in the usual form and manner and his application was accepted and became known and designated as application Serial No. 29,794.

On May 19, 1915, he duly assigned his right, title and interest in the invention to The Fowler Car Company, which company appointed Charles C. Linthicum its attorney.

On November 18, 1915, the Commissioner of Patents wrote to Linthicum stating that—

there is another application pending, claiming substantially the same invention as that defined—

in certain of the claims which were set out. He further stated:

In order to determine whether it is necessary to declare an interference you are requested to obtain a statement from Fowler setting forth when he conceived the invention defined in the above quoted claims, when he disclosed it to others, and when he reduced it to practice. This statement will not be made a part of the record and will be returned to you.

Fowler replied that he had conceived the subject-matter of the claim quoted in the Commissioner's letter on or about April 16, 1915, disclosed the same to others and made drawings on or about the same date but had not reduced the same to practice by constructing any full-sized devices.

On November 26, 1915, Linthicum filed an amendment to Fowler's application in which all of the claims suggested by the Commissioner were inserted. Of these claims Linthicum said:

It is thought that these claims appear in a co-pending application and they are inserted at this time with the request that, if such claims do appear in a co-pending application an interference be declared.

To this communication the Commissioner replied as follows:

SIR: Inclosed please find the statement of William E. Fowler, Sr., made in response to the request in my letter of November 18, 1915.

The dates of invention claimed by Fowler are subsequent by several months to the filing date of the application of the other party. The other party's case will be passed to issue as soon as possible and when patented will be cited as a reference against such claims in Fowler's application as it may be found to anticipate. An interference will not be declared.

Section 483, Revised Statutes, provides:

The Commissioner of Patents, subject to the approval of the Secretary of the Interior, may, from time to time, establish regulations, not inconsistent with law, for the conduct of proceedings in the Patent Office.

Pursuant to this authority regulations known as "Rules of Practice in the United States Patent Office" have been established by the Commissioner by and with the approval of the Secretary of the Interior and now govern the declaration of interferences between pending conflicting applications and have the force and effect of law, binding as well upon the Commissioner as upon the applicant for patents.

It is further alleged that it clearly appears from the correspondence recited and under the statute and rules that an interference exists between the Fowler application and that of the applicant unknown to petitioner, which applications disclose and claim the same patentable invention and it is the duty of the Commissioner to declare an interference and to call upon each applicant for the sworn preliminary statement required by Rule 110.

That if the unknown applicant receive a patent and thereafter petitioner's (Fowler's) application is put in interference with it and petitioner afterward be awarded priority over the unknown applicant and receive a patent, in order to get rid of the menace of the outstanding patent to such unknown applicant petitioner will have to file a bill in equity under the provisions of section 4918, Revised Statues, for the cancelation of such patent or the owner of the outstanding patent may file such bill against petitioner, all of which possibility of litigation may be prevented if the Commissioner be required to discharge his plain duty under the statute and rules and declare an interference when the rights of both parties are in the application stage and before either party receives a patent. That conduct of the Commissioner is a matter of public concern and for over a quarter of a century his predecessors have, without exception, regarded the interference rules as imposing upon them the legal duty of declaring an interference under the circumstances detailed. And petitioner is advised and believes that unless the Commissioner be restrained a patent in due course will be issued to the unknown applicant and petitioner is without remedy unless the court by writ of mandamus shall interpose in its behalf.

Mandamus was prayed.

A rule to show cause was issued and the Commissioner's action stayed until the determination of the cause.

The Commissioner in his answer admitted the filing of the applications as alleged and the correspondence with Linthicum, but denied the legal conclusion drawn by petitioner therefrom. He alleged that an interference as defined by the rules of the Patent Office is a proceeding for the purpose of determining the question of priority of invention and that when an applicant informs the Office that the invention shown in his application was made at a date which was subsequent to the date upon which another application for the same invention was filed, the statute does not require that an interference be established between his application and the prior application. That in asking the later applicant to inform the Office of the date of its invention the Commissioner was only asking for information upon which he might form, as required by section 4904, Revised Statutes, an opinion whether a situation existed where the statute required that the later application should be put into interference with the earlier application, and that the rules do not require or contemplate a declaration of interference where it is known that the later applicant made his invention subsequently to the filing of the earlier application; in other words, they do not contemplate the declaration of an interference except where there is a possible conflict in the dates of invention.

The answer further denied that petitioner had shown injury or threatened injury and alleged that the only injury averred in the petition was that if the application of petitioner be put in interference with the patent granted upon the other application, and if priority should be awarded to petitioner and a patent granted to it a bill in equity under section 4918, Revised Statutes, would be necessary to get rid of the menace of the outstanding patent. That the date of Fowler's invention being subsequent to the filing date of the other party, there would be no ground of awarding priority to Fowler. That even if interference should be declared—

> a litigation to be conducted between the application owned by the petitioner and the patent issued to the other party would be no longer or more expensive than a litigation to be conducted between the two applications. No suit could be brought under section 4918 of the Revised Statutes either by or against this petitioner, unless it were proved that Fowler was the first inventor and a patent issued to him; but, as above stated, the date upon which Fowler states he conceived the invention is subsequent to the date upon which the other application was filed.

There was detail of the business of the Patent Office and of the inconvenience to its administration if the right insisted upon by petitioner were allowed.

A discharge of the rule was prayed.

Mr. Justice McKENNA, after stating the case as above, delivered the opinion of the Court.

The case is not in broad compass. It depends upon a few simple elements. Section 4904, Revised Statutes, provides:

> Whenever an application is made for a patent which, *in the opinion* of the Commissioner, would interfere with any pending application, or with an unexpired patent, he shall give notice thereof to the applicants, or applicant and patentee, as the case may be, and shall direct the Primary Examiner to proceed to determine the question of the priority of invention. And the Commissioner may issue a patent to the party who is adjudged the prior inventor, unless the adverse party appeals from the decision of the Primary Examiner, or of the Board of Examiners-in-Chief, as the case may be, within such time, not less than twenty days, as the Commissioner shall prescribe.

The duty prescribed by this section and the other duties of the Commissioner, it was provided (sec. 483, R. S.), might be regulated by rules established by the Commissioner, subject to the approval of the Secretary of the Interior. And rules were established. They define an interference to be a proceeding instituted for the purpose of determining the question of priority of invention between two or more parties claiming the same patentable invention (Rule 93) and provide that an interference shall be declared between two or more original applications containing conflicting claims (Rule 94). Before the declaration of an interference all preliminary questions must be settled by the Primary Examiner, the issue clearly defined and the claims put in such condition that they will not require alteration (Rule 95). Whenever the claims of the copending applications differ in phraseology they must be brought to expression substantially in the same language and claims may be suggested to the applicants and if not followed the invention covered by them shall be considered as disclaimed. The declaration of an interference will not be delayed by the failure of a party to put his claim in condition for allowance (Rule 96). Each party to the interference will be required to file a concise statement, under oath, showing (1) the date of original conception of his invention, (2) the date upon which a drawing of it was made, (3) the date of its disclosure to others, (4) the date of its reduction to practice, (5) the extent of its use, and (6) the date and number of any foreign application. If a drawing has not been made or the invention has not been reduced to practice or disclosed to others or used to any extent, the statement must specifically disclose these facts (Rule 110).

Priority of invention is necessarily the essential thing, and to determine it interference proceedings are provided. But are they considered as a matter





of course on the mere assertion or appearance of a conflict? Upon the answer to the question the controversy here turns. The Commissioner contends for a negative answer and supports the contention by the language of section 4904 reinforced by the assertion that there is no necessity for proceedings to determine what is already apparent as in the pending case by the admission of respondent. The mere fact of asserted antagonism does not put the proceedings in motion, is the contention. There must be the precedent and superintending judgment of the Commissioner. The law requires, it is said, his opinion to be exercised upon the effect of a conflict in applications, and such indeed is the language of section 4904. It provides that—

> whenever an application is made for a patent which *in the opinion* of the Commissioner *would interfere with any pending application*. * * * he shall give notice thereof * * * and shall direct the Primary Examiner to proceed to determine the question of priority of invention.

In opposition to this view petitioner replies that the only fact upon which the Commissioner is to exercise an opinion is the fact of the conflict in the applications, and, that fact ascertained, the duty is imperative upon the Commissioner to declare an interference.

> Interference, it is said, is a question of fact; it exists or it does not exist. If it exists then priority must be determined in the way pointed out by the statute and rules.

Other conditions than priority in time determine priority of invention, it is insisted; that the rules of the Patent Office and the motions for which they provide contemplate such conditions, and that in twenty-five years of practice under them—

> The question of interference, in fact, the question of seniority of the parties, the patentability of the claim to one or the other, and a number of other questions became *inter partes*, and it often happens that the interference is dissolved because of mistake in declaring it or the burden of proof shifted on the ground that the senior party is not entitled to his original filing date as his effective date for the reason that he did not disclose the invention in his case as originally filed, or that his application discloses an inoperative embodiment of the invention, or that he was not entitled to make the claims, or that the junior party had an earlier filed case disclosing the invention, or that the issues as formed did not apply to the structures of the two parties.

The result of the practice is declared to be that it—

> prevents a judgment of record based solely upon an *ex parte* consideration by the Commissioner and affords each of the parties an opportunity to contest the right of the other party to a judgment.

If there are such possibilities in some interferences they are precluded in petitioner's case. Seven claims of a prior application were adduced by the Commissioner as making a conflict with the invention claimed by petitioner. The latter, through its attorney, adopted six of the claims and directed that they be inserted in its application. It did not intimate the existence of any circumstances which would overcome the priority of invention as determined by the difference in times of the conceptions of the contending applicants.

The conceptions were thus established to be identical and that that of Fowler did not come to him until some months after the filing of the other application. And it is to be observed that the priority was complete. There was not only the precedent conception but there was its expression in claims; and that it was practical, a useful gift to the world, petitioner concedes by adopting the claims. There were, therefore, all of the elements of a completed invention—one perfected before the filing of petitioner's application—all that the preliminary statement required by Rule 110 could disclose.

This, then, was the situation presented to the Commissioner. There was nothing shown to change it, there is nothing alleged in the petition for mandamus to change it, and there is only urged that an experience of twenty-five years has demonstrated that in interference proceedings circumstances may be shown that determine against the date of filing or the claim of invention.

If it could be conceded that there is antagonism between section 4904 and the rules, the former must prevail. (*Steinmetz* v. *Allen*, 192 U. S., 543, 565.) But there is no antagonism. The former provides that—

> whenever an application is made for a patent which, *in the opinion* of the Commissioner, would interfere with any pending application * * * he shall direct the Primary Examiner to proceed to determine the question of priority of invention.

The section, therefore, commits to the opinion (judgment) of the Commissioner the effect of an application upon a pending one—whether it will interfere with a pending one; something more, therefore, than the fact of two applications, something more than the mere assertion of a claim. The assertion must be, in the opinion of the Commissioner, an interference with another. And it is this other that is first in regard, not to be questioned except at the instance of the Commissioner by an exercise of judgment upon the circumstances. And there is no defeat of ultimate rights; there may be postponement of their assertion remitted to a suit in equity under section 4918.

But anterior to such relief petitioner contends that—

> there is a fundamental and basic right of opposition on the part of any applicant, whether junior or senior, to prevent the wrongful grant of a patent to his opponent.

It is further contended that the declaration of an interference and the motions which are permitted to be made under the rules—

> prevent a judgment of record based solely upon an *ex parte* consideration by the Commissioner and affords each of the parties an opportunity to contest the right of the other party to a judgment.

There indeed seems to be a less personal right claimed, the right of opposition in the interest of the public, displacing the superintendency of the Commissioner constituted by the law. It is to be remembered that the law gives the Commissioner both initial and final power. It is he who is to cause the examination of an asserted invention or discovery and to judge of its utility and importance;[1] it is he who is to judge (be of opinion) whether an application will interfere with a pending one;[2] and it is he who, after an interference is declared and proceedings had, is the final arbiter of its only controversy, priority of invention.[3]

The contentions of petitioner put these powers out of view, put out of view the fact that the so-

[1] Section 4893, Revised Statutes; *Butterworth* v. *Hoe*, (112 U. S., 50.)
[2] Section 4904.
[3] Section 4910.

called "judgment of record" is, as the action of the Commissioner may be said to be, but a matter of administration. A suit in equity may follow and be instituted by either party and even in it nothing can be determined but priority of invention.

There is but one issue of fact in an interference suit. That issue relates to the dates wherein the interfering matter was respectively invented by the interfering inventors. If the complainant's invention is the older, the defendant's interfering claim is void for want of novelty. And the complainant's interfering claim is void for want of novelty if the defendant's invention is found to antedate the other. (Walk. on Pats., sec. 317, 3d ed.)

Such suit, therefore, is the judicial remedy the law provides. Section 4904 concerns and regulates the administration of the Patent Office, and the utility of the discretion conferred upon the Commissioner is demonstrated by his answer in this case.

Judgment reversed and case remanded with instructions to reverse the judgment of the Supreme Court of the District of Columbia and direct it to discharge the rule and dismiss the petition.

## COMMISSIONER'S DECISIONS.

EX PARTE KRAMER.

*Decided May 2, 1917.*

1. APPLICATIONS SIGNED BY ATTORNEY—PATENT GRANTED ONLY ON APPLICATION SIGNED BY INVENTOR, IF LIVING.

When application as filed was signed by an attorney and accepted under war conditions prior to act of August 17, 1916, under practice outlined in the Commissioner's letter of September 15, 1914, (O. G. 223, p. 1007,) *Held* that the patent, under section 4888, Revised Statutes, can be granted only on an application executed by the inventor, if living.

2. SAME—PRACTICE.

The practice instituted to meet the emergency arising out of the European war (Commissioner's letter, *supra*) was not recommended to the profession and would not have been instituted if the act of August 17, 1916, had been passed at an early date.

ON PETITION.

PUMP.

*Mr. Albert G. Davis* for the applicant.

EWING, *Commissioner:*

This application as filed was signed and sworn to by Albert G. Davis as attorney for the applicant, who is a subject of the German Empire, residing at Charlottenburg, Germany. It was accepted pursuant to a practice instituted in September, 1914, and explained in a letter published in the *Scientific American* of September 26, 1914, (p. 246,) as follows, (copy taken from the Commissioner's Annual Report for the year 1915, p. 28:)

I am accepting two applications filed by you as attorneys to-day, wherein the inventor's name to the petition and specification is signed by you as attorneys and the oath is made by a member of your firm. The time for filing these applications expires under the convention to-morrow. Therefore, in filing these applications in the form in which you have presented them, you are doing all that you can to save your client's rights, and in permitting them to be filed and giving them a serial number and date of filing of to-day I am doing all I can with the same end in view. If this should not prove to be effective the loss must be attributed to the troubled conditions of Europe and not laid at your door or that of the Office.

It will be necessary before patents are granted that applications be filed executed by the inventor himself, as provided in section 4888. Whether the applications to be filed can be tied to the applications which you are filing to-day under the provisions of section 4887 is, of course, a matter which only a court of last resort can determine. *Ex parte Tropenas* (90 O. G., 749) to the contrary notwithstanding, I think it a possible construction of section 4887 that its requirements may be satisfied by the filing of applications executed by an attorney.

I hope, however, in case there are a number of applications executed by attorneys that Congress may be induced to validate patents granted or to be granted upon proceedings indicated above.

Since this practice was instituted, and on the 17th day of August, 1916, Congress passed an act, which for convenience is copied in full, as follows:

An act to extend temporarily the time for filing applications and fees and taking action in the United States Patent Office in favor of nations granting reciprocal rights to United States citizens.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That any applicant for Letters Patent or for the registration of any trade-mark, print, or label, being within the provisions of this act, if unable on account of the existing and continuing state of war to file any application or pay any official fee or take any required action within the period now limited by law, shall be granted an extension of nine months beyond the expiration of said period.

SEC. 2. That the provisions of this act shall be limited to citizens or subjects of countries which extend substantially similar privileges to the citizens of the United States, and no extension shall be granted under this act to the citizens or subjects of any country while said country is at war with the United States.

SEC. 3. That this act shall be operative to relieve from default under existing law occurring since August first, nineteen hundred and fourteen, and before the first day of January, nineteen hundred and eighteen, and all applications and Letters Patent and registrations in the filing or prosecution whereof default has occurred for which this act grants relief shall have the same force and effect as if said default had not occurred.

Approved August 17, 1916.

The Examiner on June 16, 1915, advised the applicant that the claims were allowable, but required formal papers signed by the inventor. This action was repeated on June 3, 1916. On April 16, 1917, the applicant wrote to the Office as follows:

*Hon. Commissioner of Patents.*

SIR: The official action of June 3, 1916, is received. As will appear from the affidavit of Alexander F. Macdonald attached, efforts have been made to get the formal papers and assignment executed by the applicant but without success to the present date. As soon as the papers are received from Mr. Kramer and the American consulate they will be filed in the Patent Office as requested. It is requested that action be temporarily suspended herein.

Respectfully submitted.

(Signed) ALBERT G. DAVIS,
*Attorney for Kramer.*

The Examiner on April 20, 1917, wrote as follows:

This application has been considered in view of applicant's letter to the Office filed Apr. 17, 1917.

The proper response to the previous Office action, if it is desired to save the application from abandonment, is a petition to the Commissioner either to be relieved of the requirement of filing formal papers or to have the time extended within which such formal papers may be filed. Petition should be made before June 3, 1917. Or, if the application becomes abandoned, petition may be made to the Commissioner to revive the application, in either case for reasons stated in the affidavit filed Apr. 17, 1917.

This petition was then filed, praying—

First—To relieve the said Kramer of the requirement to file formal papers herein executed by him, and to formally allow the application and cause a patent to issue upon the payment of the final Government fee, or

Second—To relieve the General Electric Company of the requirement to file formal papers herein executed by the said Kramer, and to formally allow the application and cause a patent to issue upon the payment of the final Government fee, or

Third—To suspend further action on this case for a reasonable time after peace has been declared to enable the General Electric Company to establish communication with said Kramer and have the formal papers executed and returned, or

Fourth—To grant such other relief in the premises as may be deemed wise or expedient to protect the interests of the General Electric Company as owner of the invention and any patent to issue thereon.

I think it clear that the application required by section 4888, Revised Statutes, to be filed before a patent can be granted must be executed by the inventor, if living, and therefore the first and second prayers of the petition must be denied.

As to the third and fourth prayers, if the application becomes abandoned by reason of circumstances beyond the control of the applicant or his assignee the right remains to revive the application under section 4894, Revised Statutes, upon proper showing.

The period of twenty-one months allowed by the act of August 17, 1916, has expired. Whether this act is to be taken as indicating the legislative intent respecting the relief to be granted to foreign applicants, and therefore as an implied disapproval of a practice which would permit the filing of formal applications more than twenty-one months after the filing of a foreign application where an application executed by an attorney has been filed within one year of the filing of the foreign application, has not yet come up for decision and is not presented by this petition. The point is therefore not passed upon.

It will be understood, however, that the practice instituted to meet the emergency arising out of the European war was not recommended to the profession and that it would not have been instituted if the act of August 17, 1916, had been passed at an early date.

The petition is denied.

## ADJUDICATED PATENTS.

(U. S. C. C. A.) The Aliano patent, No. 873,481, for a lock, claim 10 *Held* void for lack of invention in view of the prior art. *Aliano* v. *Eagle Lock Co.*, 239 Fed. Rep., 905.

(U. S. C. C. A.) The Baker patent, No. 753,820, for an antifriction-bearing for mounting and turning the front wheels of an automobile, claim 1 *Held* valid and infringed. *American Ball Bearing Co.* v. *Finch*, 239 Fed. Rep., 885.

(U. S. C. C. A.) The Dresner patent, No. 958,860, for a suitcase, *Held* not infringed. *Dresner* v. *Diamond*, 239 Fed. Rep., 882.

(U. S. C. C. A.) The Hinman and Hinman reissue patent, No. 13,876, (original No. 1,097,803,) for a cow-milking machine, *Held* valid and infringed. *Hinman* v. *Visible Milker Co.*, 239 Fed. Rep., 896.

(U. S. C. C. A.) The Hoffman patent, No. 671,136, for a mop-wringer, *Held* not infringed. *Eagle Woodenware Mfg. Co.* v. *Dana Mfg. Co.*, 239 Fed. Rep., 907.

(U. S. D. C.) The Jottrand patent, No. 831,078, for a method of cutting metal by an oxyhydrogen apparatus, *Held* void for anticipation and lack of invention. *Linde Air Products Co.* v. *Morse Dry Dock & Repair Co.*, 239 Fed. Rep., 909.

(U. S. C. C. A.) The McCann patent, No. 1,013,672, for an ice-cream freezer, *Held* valid and infringed. *Auto Vacuum Freezer Co.* v. *William A. Sexton Co.*, 239 Fed. Rep., 898.

(U. S. C. C. A.) The Reed patent, No. 981,111, for a concrete-mixer, claims 1, 2, and 11 *Held* valid and infringed; other claims *Held* not infringed. *Reed* v. *Cropp Concrete Machinery Co.*, 239 Fed. Rep., 869.

(U. S. C. C. A.) The Slater patent, No. 893,105, for an envelop-machine, *Held* not infringed. *Outlook Envelope Co.* v. *General Paper Goods Mfg. Co.*, 239 Fed. Rep., 877.

(U. S. C. C. A.) The Thompson patent, No. 1,070,080, for a car-lighting system, *Held* not infringed. *Safety Car Heating & Lighting Co.* v. *Gould Coupler Co.*, 239 Fed. Rep., 861.

(U. S. C. C. A.) The Woerheide patent, No. 973,902, for a cleat for securing prepared roofing, *Held* infringed. *Woerheide* v. *H. W. Johns-Manville Co.*, 239 Fed. Rep., 903.

### Changes in Classification.

(ORDER No. 2,321.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., April 23, 1917.*

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 24, Buckles, Buttons, Clasps, Etc., (Division XXXV,) establish the following subclass and definition:

114.5. Strap or cable buttons.

114.5. STRAP OR CABLE BUTTONS. Devices forming a part of or in the nature of an attachment to straps, chains, cables, or the like, constituting an enlargement thereof and designed for use as a trip or obstacle to the free passage of said strap, chain, or cable through other members.

The patents contained in this subclass have been taken for the most part from class 111, Seeders and Planters, hereinafter abolished.

In class 37, Excavating, (Division IV,) abolish subclass—

Excavators—
53. Pipe and cable laying.

The patents formerly contained in this subclass have been placed for the most part in class 111, Planting, subclass 5, Pipe or strand, hereinafter established.

In class 55, Harrows and Diggers, (Division I,) abolish subclasses—

Transplanters—
72. Wheel-machines—
121. Wheel-planters.

The patents formerly contained in these subclasses have been placed for the most part in class 111, Planting, subclasses 2, Plant-setting, and the subclasses indented thereunder, and 6, Liquid or gas, and the subclass indented thereunder, hereinafter established.

(Note.—Attention is called to the fact that the subclass title "Wheel-machines" still controls subclass 120, Tree-conveyers.)

In class 97, Plows, (Division I,) establish subclasses—

92. Furrow-formers.
85. Implement-frames—
86. Tool-adjusters—
88. Elevating and depressing—
90. Multiple tool,
89. Draft-operated.
87. Fore-and-aft shift.
82. Land-markers—
83. Machine attachments—
84. Slidably mounted.
Rotary earth-working elements—
91. Ridging.

The patents contained in these subclasses have been taken for the most part from subclasses in class 111, Seeders and Planters, hereinafter abolished.

In class 221, Dispensing, (Division XXXII,) establish subclasses—

118. Hopper-discharging—
127. Charge retaining and releasing,
125. Discharger wiping and clearing—
126. Sliding discharge-plate,
120. Discharging and agitating,
121. Discharging and guiding,
128. Endless-conveyer type,
119. Manually-operated implements,
122. Multiple discharging,
124. Pneumatic,
123. Revolving hopper,
130. Rotary—
138. Axial discharge—
139. Horizontally pivoted—
140. Variable,
141. Variable,
134. Centripetal sweep,
135. Charge-lifting,
Hopper-discharging—
Rotary—
131. Interchangeable,
132. Movable blade,
133. Picking,
136. Radial discharge—
137. Variable,
120. Screw-conveyer type,
142. Sliding discharge-plate—
143. Variable.

The patents contained in these subclasses have been taken for the most part from class 111, Seeders and Planters, hereinafter abolished.

In class 111, Seeders and Planters, (Division I,) change the title to read "Class 111, Planting," abolish the existing subclasses, and establish in lieu thereof the following subclasses and definitions:

| 111.—PLANTING. | PLANTING. | PLANTING. |
|---|---|---|
| 1. Miscellaneous. | Drilling— | Drilling— |
| 2. Plant-setting— | Hill-planting machines— | Frame and planting-element arrangement— |
| 3. Drilling-machines, | Depositing mechanisms— | Main and auxiliary frame— |
| 4. Manually-operated implements. | 36. Primarily axle-driven— | 68. With crank-axle lift, |
| 5. Pipe or strand. | 37. Intermittently controlled— | 69. With adjustable planter elements, |
| 6. Liquid or gas— | 38. Check-wire tripped— | 70. Rigid— |
| 7. Drilling-machines. | 39. Both feeder and valve, | 71. Single row— |
| 8. Drilling and broadcasting— | 40. With wire-actuated valve, | 72. Manually-operated depositing mechanism, |
| 9. Main and auxiliary frame machines. | 41. With wire-actuated valve, | 73. Multiple depositing, |
| 10. Broadcasting— | 42. Endless-belt tripped, | 74. Revolving hopper, |
| 11. Machines with scatterer— | 43. Line-wire driven— | 75. Vibrating hopper, |
| 12. Main and auxiliary frame, | 44. Reel-carried, | 76. Vibrating delivery-chute, |
| 13. Main and auxiliary frame machines. | 45. Check-wire tripped— | 77. Rotating dispenser— |
| 14. Drilling— | 46. Both feeder and valve, | Axle-mounted, |
| 15. Hill-planting machines— | 47. Trip-fork mechanisms, | 79. Single-row implements— |
| 16. Check-correcting— | 48. Guides, | 80. Multiple depositing, |
| 17. With automatic regulator, | 49. Wire-end-anchoring devices, | 81. Planter-element arrangement, |
| 18. Frame and planting-element arrangement— | 50. Manually operated, | 82. Hand-propelled, |
| 19. With tractive-belt feed-drive, | 51. Accumulators, | 83. Lister units, |
| 20. Sectional main frame— | 52. Frame and planting-element arrangement— | 84. Drag-bar units, |
| 21. Break-joint, | 53. Sectional main frame— | 85. Drill sets, |
| 22. Main and auxiliary frame— | 54. Flexible— | 86. Drill-teeth— |
| 23. Rotary-marker operator, | 55. With auxiliary frame, | 87. Rotary furrower— |
| 24. Hopper-carrying auxiliary, | 56. Break-joint, | 88. Multiple disk. |
| 25. Depositing and marking mechanisms— | 57. Extensible— | 89. Dibbling— |
| 26. Powder-marking, | 58. V-shaped, | 90. Revolving-hopper implements— |
| 27. Driving-marker— | 59. Main and auxiliary frame— | 91. Revolving-dibble-carrier implements, |
| 28. Revolving, | 60. Plurality of auxiliaries— | 92. Manually-operated implements— |
| 29. Driven marker— | 61. Unitarily controlled, | 93. Machine attached, |
| 30. Plunging— | 62. Floating auxiliary— | 94. Spacing in hill, |
| 31. Hill-covering, | 63. Hopper-carrying— | 95. Regulated discharge— |
| 32. Revolving, | 64. Detachable— | 96. Sliding-plunger control, |
| 33. Marking mechanisms, | 65. Single row, | 97. Multiple-staff control, |
| 34. Depositing mechanisms— | 66. Tool-bar type— | 98. Foot-plate control. |
| 35. Interchangeably operable, | 67. With lift and ungear, | |

Establish, in Division I, class 275, Scattering-Unloaders, with the following subclasses and definitions, the patents contained in this class having been taken for the most part from class 111, Seeders and Planters, hereinbefore abolished:

275.—SCATTERING-UNLOADERS.

1. Miscellaneous.
2. Traversing-machines—
3. Manure-spreader type—
4. Load-feeding—
5. Belt-conveyer type—
6. With scatterer,
7. With scatterer—
8. Rotary,
9. Discharger-operators.
10. Scattering.
11. Manually-operated implements—
12. Rotary scatterer,
13. Multiple discharging,
14. Stationary spreader,
15. Rotary scatterer.

THOMAS EWING,
*Commissioner.*

## Interference Notices

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., May 2, 1917.*

*American Farmer Company, a Corporation, its assigns or legal representatives, take notice:*

An interference having been declared by this Office between the application of American Farming Publishing Company, 537 South Dearborn street, Chicago, Ill., for registration of a trade-mark and trade-mark registered August 29, 1905, No. 45,754, to American Farmer Company, a Corporation, 38 South Pennsylvania street, Indianapolis, Ind., and a notice of such declaration sent by registered mail to said American Farmer Company, a Corporation, at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said American Farmer Company, a Corporation, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
*First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., April 21, 1917.*

*Warren E. Smith, his assigns or legal representatives, take notice:*

An interference having been declared by this Office between the application of Kling Bros. & Co., 411–415 South Fifth avenue, Chicago, Ill., for registration of a trade-mark and trade-mark registered February 28, 1893, No. 22,521, to Warren E. Smith, 49 Lafayette Place, New York, N. Y., and a notice of such declaration sent by registered mail to said Warren E. Smith at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Warren E. Smith, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
*First Assistant Commissioner.*





THE
# OFFICIAL GAZETTE
OF THE
# United States Patent Office.

Vol. 238—No. 4. TUESDAY, MAY 22, 1917. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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## Issue of May 22, 1917.

| | | | |
|---|---|---|---|
| Patents | 938—No. | 1,226,623 to No. | 1,227,560, inclusive. |
| Designs | 25—No. | 50,803 to No. | 50,827, inclusive. |
| Trade-Marks | 78—No. | 116,736 to No. | 116,813, inclusive. |
| Labels | 13—No. | 20,103 to No. | 20,115, inclusive. |
| Prints | 2—No. | 4,694 to No. | 4,695, inclusive. |
| Reissues | 2—No. | 14,304 to No. | 14,305, inclusive. |
| Total | 1058 | | |

## Adverse Decisions in Interference.

PATENT NO. 1,164,006.

On April 17, 1917, a decision was rendered that Chester B. Mills was not the first inventor of the subject-matter covered by claims 1, 2, 3, 4, and 5 of his Patent No. 1,164,006, subject, "Starting device for automobiles," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,174,495.

On April 6, 1917, a decision was rendered that Laura L. Harford was not the first inventor of the subject-matter covered by claims 1 and 2 of her Patent No. 1,174,495, subject, "Records," and no appeal having been taken within the time allowed such decision has become final.

## Interference Notice

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., May 2, 1917.*

*American Farmer Company, a Corporation, its assigns or legal representatives, take notice:*

An interference having been declared by this Office between the application of American Farming Publishing Company, 537 South Dearborn street, Chicago, Ill., for registration of a trade-mark and trade-mark registered August 29, 1905, No. 45,754, to American Farmer Company, a Corporation, 38 South Pennsylvania street, Indianapolis, Ind., and a notice of such declaration sent by registered mail to said American Farmer Company, a Corporation, at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said American Farmer Company, a Corporation, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
*First Assistant Commissioner.*

## Drawings.

PRECAUTIONS TO BE OBSERVED IN FORWARDING DRAWINGS TO THE UNITED STATES PATENT OFFICE.

Where drawings are to be filed in connection with an application for Letters Patent in the United States Patent Office, each sheet, before it can be accepted by the Office as a part of the application, must be signed in the name of the inventor at the lower right-hand corner, either by him or by an attorney whose written authorisation from the applicant is filed in connection with the application. The signatures should never be written on a line parallel with the longer edges of the sheet, one of the shorter edges being always regarded, for the purpose of locating the signatures, as the lower edge of the sheet. The signatures must all be within the margin-lines of the sheet and below the lines of the drawing. The title of the invention should be written with pencil on the back of each sheet of drawings.

*When there are filed on the same day two or more applications by the same inventor, each of the documents and drawings belonging to the same application should have placed thereon the same letter or number, which should be different from the letter or number placed upon those of any other of the applications.*

It is desirable that all parts of the complete application, including the drawings, be deposited in the Office at the same time. Should, however, the other parts of the application be filed before the drawings are sent, the latter when forwarded should be accompanied by a letter stating the number of sheets inclosed, and that the drawings are to be filed with the other parts of the application, giving the date at which such other parts were filed in the Office, the name of the inventor, and title of the invention. If the application has received a serial number, that should also be given, and it should be indorsed with pencil on the back of each sheet of drawings. The letter should also state, if such be the case, that the new drawings are to be substituted for those previously filed.

## Correction of Drawings.

RULE 72. * * * * *

The drawing may be withdrawn only for such corrections as cannot be made by the Office; but a drawing cannot be withdrawn unless a photographic copy has been filed and accepted by the Examiner as a part of the application. Permissible changes in the construction shown in any drawing may be made only within the Office and after an approved photographic copy has been filed. Substitute drawings will not be admitted in any case unless required by the Office.

# APPLICATIONS UNDER EXAMINATION.

*Condition at Close of Business May 18, 1917.*

| Room No. | Divisions and subjects of invention. | Oldest new application and oldest action by applicant awaiting office action. New. | Amended | No. of applications awaiting action. |
|---|---|---|---|---|
| 314 | 1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers. | Apr. 10 | Apr. 4 | 248 |
| 128 | 2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco. | Jan. 24 | Jan. 23 | 440 |
| 175 | 3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working. | Feb. 19 | Mar. 3 | 101 |
| 234 | 4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists. | Apr. 12 | May 1 | 205 |
| 167 | 5. Bookbinding; Harvesters; Jewelry; Music | Jan. 4 | Apr. 9 | 226 |
| 318 | 6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation. | Jan. 10 | Mar. 15 | 230 |
| 312 | 7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes | Jan. 26 | Jan. 8 | 672 |
| 131 | 8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports. | Jan. 2 | Mar. 29 | 963 |
| 142 | 9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps | Dec. 28 | Apr. 26 | 423 |
| 235 | 10. Carriages and Wagons | Jan. 2 | Apr. 23 | 527 |
| 154 | 11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus. | Apr. 11 | Apr. 17 | 187 |
| 334 | 12. Journal-Boxes, Pulleys, and Shafting; Machine Elements | Mar. 12 | Apr. 2 | 602 |
| 329 | 13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning. | Feb. 26 | Apr. 12 | 560 |
| 307 | 14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working. | Feb. 3 | Feb. 27 | 240 |
| 308 | 15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics. | Apr. 19 | Apr. 26 | 197 |
| 109 | 16. Electric Signaling; Radiant Energy; Telegraphy; Telephony | Dec. 2 | Feb. 9 | 609 |
| 303 | 17. Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting. | Mar. 1 | May 4 | 147 |
| 327 | 18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Lubrication; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves. | Mar. 6 | Apr. 17 | 237 |
| 236 | 19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels | Jan. 18 | Mar. 3 | 498 |
| 179 | 20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking. | May 1 | May 1 | 141 |
| 182 | 21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling. | Jan. 22 | Apr. 6 | 330 |
| 249 | 22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships. | Dec. 22 | Feb. 28 | ..... |
| 379 | 23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism. | Jan. 27 | Aug. 26 | 278 |
| 144 | 24. Apparel; Apparel Apparatus; Sewing-Machines; Garment Supporters | Feb. 5 | Apr. 4 | 319 |
| 315 | 25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation. | Apr. 17 | Apr. 26 | 105 |
| 105 | 26. Electricity, Generation; Motive Power | Dec. 1 | Feb. 28 | 553 |
| 375 | 27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus | Apr. 16 | Apr. 7 | 206 |
| 63 | 28. Internal-Combustion Engines | Jan. 10 | Mar. 22 | 361 |
| 147 | 29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools. | Jan. 17 | Mar. 1 | 360 |
| 152 | 30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines | Feb. 19 | Apr. 25 | 395 |
| 172 | 31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt. | Feb. 24 | Apr. 5 | 280 |
| 278 | 32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration. | Nov. 9 | Apr. 11 | 880 |
| 70 | 33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving. | Jan. 15 | Apr. 9 | 366 |
| 304 | 34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners. | Dec. 1 | Mar. 29 | 275 |
| 57 | 35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet | Feb. 7 | May 2 | 608 |
| 264 | 36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring | Feb. 20 | Apr. 28 | 500 |
| 107 | 37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications. | Dec. 18 | Mar. 30 | 606 |
| 378 | 38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells | Apr. 25 | Apr. 27 | 122 |
| 321 | 39. Water Distribution | Jan. 15 | Mar. 15 | 300 |
| 280 | 40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles. | Feb. 26 | May 1 | 462 |
| 125 | 41. Railway Draft Appliances; Resilient Tires and Wheels | Mar. 2 | Apr. 3 | 246 |
| 244 | 42. Electricity, Conductors; Railway Signaling; Electricity-Transmission to Vehicles | Dec. 22 | Apr. 21 | 322 |
| 382 | 43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification. | Mar. 28 | Mar. 10 | 173 |

Oldest new case, Nov. 9; oldest amended, Aug. 26.
Total number of applications awaiting action..... 16,946

| | | | | |
|---|---|---|---|---|
| 163 | TRADE-MARKS, DESIGNS, LABELS AND PRINTS: | | | |
| | Trade-Marks | Mar. 9 | Apr. 27 | 1088 |
| | Designs | Apr. 16 | May 2 | 275 |
| | Labels and Prints | May 7 | May 3 | 80 |



# PATENTS

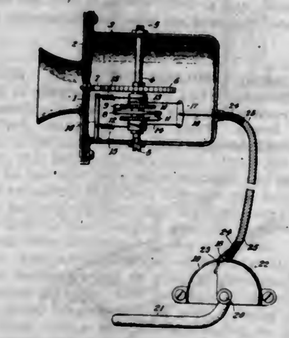
## GRANTED MAY 22, 1917.

1,226,623. ATTACHMENT FOR RIDING-SADDLES. BENTON C. ADAMS, Miles City, Mont. Filed May 12, 1916. Serial No. 97,078. (Cl. 54—46.)



An attachment for saddles comprising a flat metal member designed to be secured on the sides of a saddle and provided with a forward loop, and a rearward loop to receive saddle attaching straps that encircle the top bars of the loops, a bar dividing said loops and curved toward one loop to permit the stirrup strap to shift freely along the length of the other loop, said loops being designed to support girth straps on their bottom bars, a smaller girth strap loop below the lower end of said dividing bar, and a similar loop at the lower rear portion of said member, each of the two last mentioned loops also being adapted to receive a girth strap, when the securing rig for the saddle is to be changed.

1,226,624. SIGNAL DEVICE. EMANUEL AUFIERO, Brooklyn, N. Y. Filed Oct. 29, 1913. Serial No. 798,101. (Cl. 116—1.)



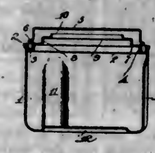
1. A signal-alarm device, comprising an acoustic diaphragm, a shaft having fast thereon a toothed-wheel adapted to vibrate said diaphragm, two drums loose on said shaft, alternately-working pawl-and-ratchet devices connecting the respective drums with said shaft, a spring-connected cable wound on each drum with the turns of said windings in opposite directions on the respective drums, and means within control of the atendant for drawing upon said cable-turns intermittently against the spring-tension, whereby said wheel is rotated continuously to vibrate said diaphragm during both movements of said cable.

3. A signal-alarm device, comprising an acoustic diaphragm and a rotor for vibrating the same, two drums with oppositely-wound cables secured resiliently at one end and connected at the other to an actuating-handle, and rotor-operating mechanism actuated thereby.

4. A signal-alarm device, comprising an acoustic diaphragm and a comparatively large rotor having circumferential teeth for vibrating the same, two pawl-and-ratchet devices alternately actuating said rotor, two comparatively small drums each having a cable oppositely wound thereon for actuating said devices, and a comparatively long lever-handle connected thereto, whereby comparatively short angular travel of the hand while upon said handle produces greater angular travel of said drums and still greater angular travel of said rotor.

[Claim 2 not printed in the Gazette.]

1,226,625. PORTABLE LAMP FOR BURNING SOLID FUEL. HENRY PRICE BALL, Brooklyn, N. Y., assignor to S. Sternau & Co., a Copartnership composed of Sigmund Sternau and Lionel Strassburger, Brooklyn, N. Y. Filed Jan. 11, 1916, Serial No. 71,404. Renewed Apr. 4, 1917. Serial No. 159,741. (Cl. 158—97.)



1. A lamp for use with solid fuel comprising a body, a rim thereon with an annular recess inside the edge of the body, a vertical wall inside the recess, there being a series of perforations inside the vertical wall, and a cover surrounding the wall and perforations and lying in the recess.

7. A lamp for use with solid fuel, comprising a body with a rim thereon, an annular recess inside the edge of the body, a vertical wall inside the recess, a plurality of perforated horizontal walls at different elevations, a centrally located annular lip, and a cover surrounding the vertical wall and engaging therewith.

[Claims 2 to 6 not printed in the Gazette.]

1,226,626. TYPE-WRITER PLATEN. CHARLES W. BARNABY, New York, N. Y. Continuation in part of application Serial No. 791,335, filed Sept. 23, 1913. This application filed May 5, 1916. Serial No. 95,612. (Cl. 197—114.)



1. In a machine of the character described, the combination of a platen provided with a journal on one end, said platen being open at its other end, and means for rotatably supporting the open end of said platen.

2. In a machine of the character described, the combination of a platen provided with a journal on one end, said platen being open at its other end, and means for

rotatably supporting the open end of said platen, said means comprising rollers journaled on fixed axes and in peripheral contact with said platen.

3. In a machine of the character described, the combination with a carriage provided with a bracket at one end, of a platen journaled at one end in said bracket, said platen being open at its other end, and paper holding means for rotatably supporting the open end of said platen.

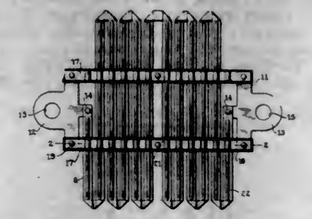
4. In a machine of the character described, the combination with a carriage provided with a bracket at one end, of a platen journaled at one end in said bracket, said platen being open at its other end, and paper holding means for rotatably supporting the open end of said platen, the journal of said platen having play within its bearing in said end bracket.

5. In a machine of the character described, a carriage, a platen journaled only at one end in a portion of said carriage, and rolls peripherally supporting and constraining said platen to rotate about the axis of its journal end.

[Claims 6 to 37 not printed in the Gazette.]

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1,226,627. RESISTANCE UNIT. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 11, 1914. Serial No. 837,832. (Cl. 219—69.)



1. A resistance unit including a relatively thin and flexible resistor strip folded into flat convoluted form and lineal supporting members therefor extending transversely of the convolutions of said strip and on opposite sides thereof to clamp said convolutions therebetween.

2. A resistance unit including a relatively thin and flexible resistor strip folded into flat convoluted form and supporting means for said resistor strip clamping the convolutions thereof lineally and transversely.

3. A resistance unit including a relatively thin resistor strip reflexed into flat convoluted form and beaded longitudinally of its convolutions and lineal clamping members for said resistor extending transversely of its convolutions, one of said members having a surface conforming with the beaded surface of said resistor strip.

4. A resistance unit including a relatively thin and flexible resistor strip reflexed into grid form, terminal lugs secured to the ends of said resistor strip and lineal clamping members for said resistor strip secured at their ends to said lugs, said members being insulated from said resistor strip and both of said lugs.

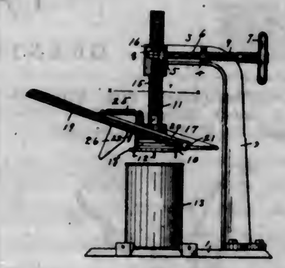
5. A resistance unit including a relatively thin and flexible resistor strip reflexed into flat convoluted form, a plurality of pairs of lineal clamping members for the convolutions of said resistor strip extending transversely of said convolutions and insulated therefrom and terminal lugs for said resistor strip fixed to the ends of said clamping members and insulated from all of the same.

[Claims 6 to 9 not printed in the Gazette.]

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1,226,628. CAN-OPENER. LAWRENCE E. BAUER, Havre de Grace, Md., assignor to The Bauer Manufacturing Company, a Corporation of Maryland. Filed Mar. 4, 1916. Serial No. 82,237. Renewed Oct. 10, 1916. Serial No. 124,899. (Cl. 30—3.)

1. A can opener comprising an upright, a head mounted in said upright and adapted to be raised and lowered therein, a block revolubly mounted above said head, a lever having one end slidably connected to said block, a cutting blade on the lower surface of said lever, and a guide on the lower surface of said lever having a beveled surface adjacent the cutting blade to automatically adjust the cutting blade as said lever is lowered.

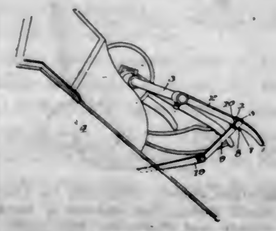


2. A can opener comprising an upright having its upper end bent at right angles, a head having a stem projecting through the upper end of said upright and adapted to be raised and lowered therein, a block revolubly mounted on said stem above the head and having grooves in its opposite sides, a bifurcated lever having its pronged ends mounted in the grooves of said block, means to hold the lever to its normal position, a cutting blade carried by said lever, and a guide on the lower surface of said lever adjacent the cutting blade to automatically adjust the cutting blade as the lever is forced down.

3. A can opener comprising an upright, a head having a stem projecting through said upright and adapted to be raised and lowered therein, a block revolubly mounted on said stem above the head and having grooves in its opposite sides, a bifurcated lever having its forked ends adapted to slide in said grooves, a cutting blade on the lower surface of said lever, a guide on the lower surface of said lever having a beveled surface adjacent the cutting blade to automatically adjust the cutting blade as said lever is lowered, and a coiled spring having one end connected to said lever and its other end connected to said block.

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1,226,629. HEAD - HOLDER FOR GRAIN - BINDERS. BERT R. BENJAMIN, Oak Park, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Apr. 11, 1914. Serial No. 831,104. (Cl. 56—126.)



1. In combination, a shaft, a rotatable member thereon, a head holder member, means for clamping said members together, and means on said clamping means coöperating with the side edges of said holder member for holding the same against angular movement with respect to said first mentioned member.

2. In combination, a shaft, a rotatable member thereon, a head holder member, means for clamping said members together, and means engageable by said holder member and disposed at one side of said clamping means for holding said holder member against any angular movement with respect to said first mentioned member.



3. In combination, a shaft, a rotatable member thereon, a head holder member, and operative connections between said holder member and said first mentioned member whereby said holder member may be adjusted longitudinally of said first mentioned member and locked against angular movement with respect thereto in each position of adjustment.

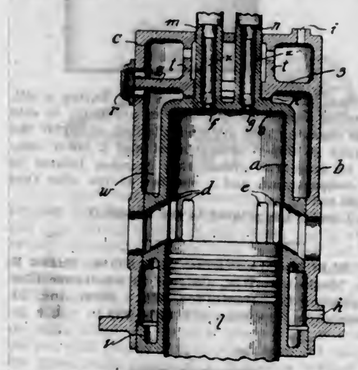
4. In combination, a shaft, a rotatable member thereon, a head holder member, a bracket on said first mentioned member having means holding said holder member against angular movement with respect thereto, and means for clamping said bracket and said holder member to said first mentioned member.

5. In combination, a knotter shaft, a head holder member, a bracket adjustable longitudinally of said first mentioned member, means for clamping said bracket and holder member to said first mentioned member, and means on said bracket coöperating with said clamping means preventing angular displacement of said holder member with respect to said first mentioned member.

[Claims 6 to 12 not printed in the Gazette.]

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1,226,630. ENGINE-CYLINDER. ALBERT BIE, Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 2, 1915. Serial No. 5,622. (Cl. 123—173.)



1. In an internal combustion engine cylinder, the combination of a jacket, a head united therewith, and a liner having an end wall with valve openings and parallel valve sockets extending therefrom through the head, said wall having bearing against the head adjacent said valve sockets and the liner member with the valve sockets being removable from the jacket at the crank side.

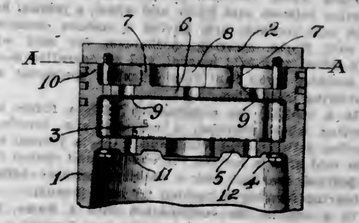
2. An internal combustion engine cylinder, comprising a jacket section having an integral chambered head with valve socket openings, said head having an outer end wall and an inner transverse wall with a water chamber between them, and a liner section having an integral end wall bearing against the inner wall of the head and integral parallel valve sockets received in the openings therefor, the liner section with its end wall being removable from the jacket at the crank side.

3. An internal combustion engine cylinder, comprising a jacket section having an integral chambered head, said head having an outer end wall and an inner transverse wall with an intervening water chamber, the said walls having valve socket openings toward their central portions, and a liner section having an integral end wall with integral parallel valve sockets received in said openings, the end wall of the liner section and the inner wall of the head having abutting raised seats surrounding and adjacent the valve sockets.

4. An internal combustion engine cylinder, comprising a jacket section having an integral chambered head, said head having an outer end wall and an inner transverse wall spaced therefrom, an encircling wall and ported internal walls connecting said inner and outer walls, and a liner section having an integral end wall with integral parallel valve sockets received in openings in the head and passing inside of said internal walls, the end wall of the liner section bearing against the inner wall of the head and the liner section with its end wall being removable from the jacket at the crank side.

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1,226,631. COMBUSTION-ENGINE PISTON. ALBERT BIE, Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 2, 1915. Serial No. 5,623. (Cl. 123—193.)



1. An internal combustion engine piston, comprising a hollow body of cylinder diameter containing a water-cooling space, and an end plate applied against the end of the body and closing said cooling space at the side adjacent the combustion space and means for detachably holding said plate in place.

2. A water-cooled internal combustion engine piston, comprising a hollow body of cylinder diameter open at the front and having one or more projections within its cooling space located inwardly of the peripheral wall, and a removable end plate secured to the body and bearing circumferentially against the peripheral wall of the same and inwardly of its circumference against said projections.

3. An internal combustion engine piston, comprising a hollow body having a transverse wall dividing the interior of the same into water-cooling spaces, the one nearest the combustion chamber being open and provided with interior projections extending from said wall, and a removable end plate supported against the periphery of the body and against said projections and closing off said water-cooling space from the combustion space.

4. An internal combustion engine piston, comprising a hollow body of cylinder diameter containing a water-cooling space and open at the end adjacent the combustion space, and a removable plate secured against said end with freedom for independent radial expansion relative to the body.

5. An internal combustion engine piston, comprising a hollow body of cylinder diameter having a transverse wall dividing the interior of the same in two water-cooling spaces each space having an independent inlet and outlet for the cooling water, and a removable end plate closing off said water-cooling spaces from the combustion space.

[Claims 6 and 7 not printed in the Gazette.]

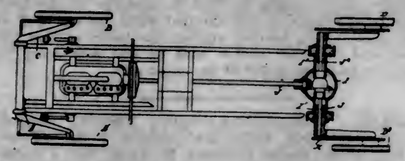
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1,226,632. MOTOR-VEHICLE. WILLIAM EMIL BOCK and HENRY L. BOCK, Toledo, Ohio; said Henry L. Bock assignor to said William Emil Bock. Filed July 11, 1913. Serial No. 778,495. (Cl. 21—90.)

1. In a vehicle, the combination with a frame of a supporting wheel therefor, a rockable crank arm independently pivotally connected to said frame and attached at its free end to said wheel, and a lateral cushion interposed between the pivot of said rockable arm and frame.

2. In a vehicle, the combination with a frame, of a supporting wheel therefor, a rockable arm forming a connection between said wheel and frame, a journal bearing

for said rockable arm having a lateral cushion connection with the frame, and a steering mechanism mounted on said frame having a flexible operating connection with said wheel.



3. In a vehicle, the combination with a frame of a supporting wheel therefor, a rockable arm forming a connection between said frame and wheel, a journal bearing for said rockable arm having a cushion connection with said frame, steering mechanism for said wheel axially alined with said journal, and an operating mechanism mounted upon said frame flexibly connected with said steering mechanism.

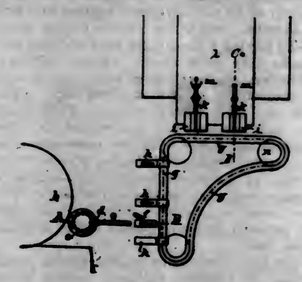
4. In a vehicle, the combination with a frame of a supporting wheel therefor, a rockable arm forming a connection between said wheel and frame, a journal bearing for said arm, a bearing surrounding and spaced from said journal bearing, and a resilient member between said bearing forming a cushion for said journal.

5. In a vehicle, the combination with a frame, of a supporting wheel therefor, a rockable arm forming a connection between said wheel and frame, a journal bearing for said rockable arm having a cushion connection with said frame, and a drive connection for said wheel passing axially through said cushion bearing.

[Claims 6 to 12 not printed in the Gazette.]

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1,226,633. APPARATUS FOR TRANSFERRING BOTTLES OR THE LIKE TO AN ANNEALING-OVEN. CARL BRAUER, Hostomitz, near Teplitz, Austria. Filed Apr. 17, 1914. Serial No. 832,436. (Cl. 49—47.)

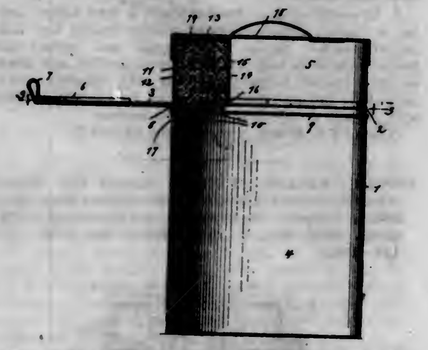


1. Automatic bottle transferring apparatus including an endless conveyer for receiving the bottles direct from the machine, an annealing oven provided with a movable sole, means for sliding the bottles bottom first including a chute, an open topped receiver in proximity to the annealing oven and adapted to receive the bottles from the chute erect, a pusher device for removing the bottles from the receiver to said movable sole, and a reciprocating frame forming a support for the chute, the receiver and the pusher device, the said frame being arranged transversely to the movement of the said sole for assembling the bottles in juxtaposition and the said receiver being mounted to rock about a fixed point of the carrier frame and thereby have its open top closed during the backward motion of the carrier frame.

2. Automatic bottle transferring apparatus including an endless conveyer for receiving the bottles direct from the machine, an annealing oven provided with a movable sole, means for sliding the bottles bottom first including a chute, an open-topped receiver in proximity to the annealing oven and adapted to receive the bottles from the chute erect, means for opening and closing the receiver, a pusher device for removing the bottles from the receiver to said movable sole, and lever arms projecting into the path of the endless conveyer and arranged to move the pusher device and the receiver opening and closing means at intervals corresponding to the arrival of successive bottles.

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1,226,634. GARBAGE-CAN. FREDERICK W. BRIESE, Jamaica, N. Y. Filed Dec. 27, 1916. Serial No. 139,177. (Cl. 220—115.)

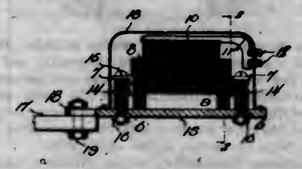


3. A garbage can comprising a can body having a slit, a rod extending across the can body in proximity to said slit, a slide engaging said slit and adapted to divide the can body into an upper compartment and a lower compartment, an apertured disinfecting chamber located in the upper compartment, and a member on the slide that engages said rod.

[Claims 1 and 2 not printed in the Gazette.]

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1,226,635. ELECTROMAGNETIC VIBRATOR. FRANK E. BRIXIUS, Manitowoc, Wis., assignor to Manitowoc Electric Implement Co., Manitowoc, Wis. Filed Aug. 21, 1916. Serial No. 115,973. (Cl. 175—338.)



1. A vibrating device comprising a magnetic plate having one end adapted for rigid securement to work material whereby said device may be supported by said work material, an electro-magnet loosely connected with the plate and resiliently urged therefrom, and said plate forming an armature for the magnet.

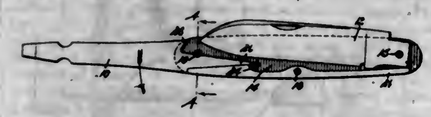
5. A vibrating device comprising a magnetic plate, an electro-magnet loosely connected with the magnetic plate and resiliently urged therefrom, a casing surrounding said electro-magnet and secured to the plate, a portion of the plate being extended past the casing, and means associated with said extended portion of the plate for rigidly securing the plate to work material.

[Claims 2 to 4 not printed in the Gazette.]

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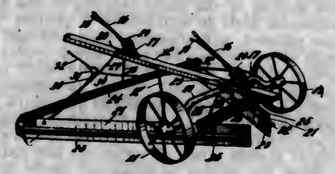
1,226,636. TOOL. WALLACE R. BROWN, Olean, N. Y. Filed May 20, 1916. Serial No. 98,751. (Cl. 7—11.)

A tool comprising a handle having parallel sides spaced apart for forming a blade-holding recess; an engaging member disposed in said recess adjacent the forward end thereof; a removable blade having a wedge-shaped shank, said shank having formed at one edge thereof a holding nick for engaging said member, the other edge of said shank being provided with an abutment for rocking said blade out of engagement with said member; and means mounted in said handle for holding said shank in engagement with said member, said means embodying a spring adapted to engage the inclined edge of said shank and to yield to permit the introduction of said shank between said member and said spring and the withdrawal of said shank from engagement with said member, said spring engaging said abutment to form a movable fulcrum whereon said blade may rock for removing said nick from said member.



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1,226,637. ROAD-SURFACER. WARD S. BUNKER, Waukesha, Wis. Filed Feb. 25, 1916. Serial No. 80,332. (Cl. 37—5.)



1. A road surfacer, comprising a rear axle, a reach thereon adapted for connection with a front axle, front and rear lifting means on the reach, and a rigid frame having converging scraper bars, the front and rear ends of said frame being connected to the front and rear lifting means respectively.

3. In a road surfacer, a rigid scraper frame comprising a pair of converging scraper bars, each consisting of an upper angle iron and a smaller angle iron secured thereto with its inner face offset from the inner face of the upper angle iron, and a removable scraper blade secured to the vertical flange of the lower angle iron and abutting against and flush with the inner face of the upper angle iron, angular brackets secured to the inner and outer faces of the upper angle iron, and cross bars secured to said brackets.

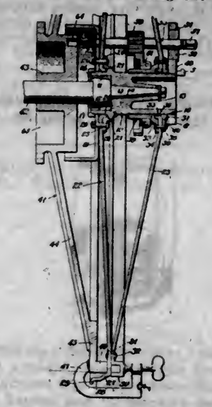
[Claims 2 and 4 not printed in the Gazette.]

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1,226,638. EXPANDER FOR WHEELS. HENRY C. CALHOUN, Detroit, Mich. Filed Sept. 20, 1916. Serial No. 121,242. (Cl. 29—174.)

2. The method of forming all-metal wheels, which consists in mounting a pair of disk-shaped inner and outer wheel forming members upon a hub, anchoring one of said members to the hub adjacent one end thereof, welding the members together adjacent their peripheral edges, and then forcing the central portion of the unanchored member outwardly and away from the corresponding portion of the anchored member.

4. The method of forming all-metal wheels, which consists in mounting a pair of disk-shaped inner and outer wheel forming members upon a hub, anchoring one of said members to the hub adjacent one end thereof, drilling a series of alined concentric rivet receiving openings through the members adjacent their peripheral edges and securing the members by bolts passed through such openings and provided with nuts as the openings are drilled, successively removing the bolts and replacing them by rivets, welding the members together adjacent their point of riveted connection, and then forcing the central portion

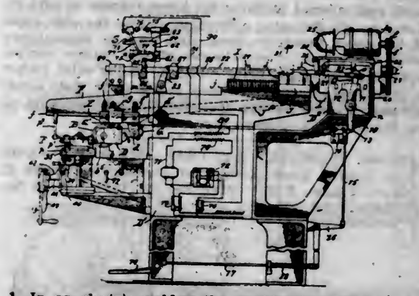


of the unanchored member outwardly and away from the corresponding portion of the anchored member.

[Claims 1, 3, 5 and 6 not printed in the Gazette.]

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1,226,639. ELECTRIC WELDING. SPENCER C. CARY, Brooklyn, N. Y. Filed Feb. 19, 1917. Serial No. 149,401. (Cl. 219—4.)



1. In an electric welder, the combination with a plurality of work holders, of means for trimming the marginal portions of thin metal to secure parallelism in the resulting edges, said trimming means being operable subsequently to the operation of positioning the thin metal in the work-holders, means for effecting a relative movement between said marginal portions whereby they are positioned in lapping contact, and means for electrically welding the marginal portions of said thin metal.

12. In an electric welder, the combination with a plurality of work holders for retaining the marginal portions of the work in definite relation to each other, of gaging means for initially determining the relative positions of the marginal portions, said gaging means being shiftable into and out of operative position with reference to the work holders, trimming means operable upon the marginal portions of the work for securing parallelism between the edges thereof, said trimming means being shiftable in unison with the gaging means, means for moving one work holder relatively to the other for effecting lapping contact between said trimmed marginal portions, and a traversing welding device operable for applying electrical heat and mechanical pressure to the lapped marginal portions and unite the same by a continuous seam.

35. In an electric welder, the combination with a stationary electrode, and a plurality of work holders, of a gage carrier hinged for movement on a horizontal axis,

a latch for retaining the gage carrier in a fixed relation to the work holders, and a gage member slidable upon the gage carrier and movable into contact with said electrode and to a position intermediate the work holders.

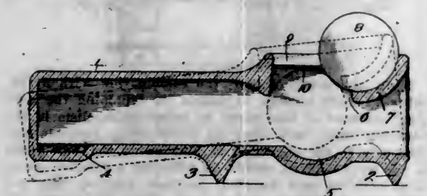
[Claims 2 to 11, 13 to 34, and 36 to 47 not printed in the Gazette.]

1,226,640. POCKET. ULYSSES G. CHARLES, Wichita, Kans. Filed Jan. 11, 1916. Serial No. 71,513. (Cl. 2—15.)



A safety apparel pocket comprising an outer pocket and an open bottomed internal pocket, shorter than and contained within said outer pocket, said internal pocket forming a safety flap attached to and around the hand entrance into the outer pocket and diverging in a slanting manner from both side edges of the outer pocket; and anchor straps attached at the opposite side edge portions of said internal pocket and near the bottom thereof and likewise attached to the opposite side edges of the outer pocket, said anchor straps being of the proper length to maintain the spaced diverging relationship above said straps between the corresponding edge portions of the outer and internal pockets; the lower corners of said internal pocket diverging still farther from the side edges of the outer pocket to form limp corners immediately below the points of attachment of said anchor straps, said straps causing articles contained in the outer pocket to swerve on either side thereof and prevent their entering and escaping through the open bottomed entrance to the hand opening of said apparel pocket.

1,226,641. SANITARY RAT-TRAP. WILLIAM H. CUSHING, Topeka, Kans., assignor of one-half to Charles E. Gault, Topeka, Kans. Filed Feb. 21, 1917. Serial No. 150,601. (Cl. 43—19.)

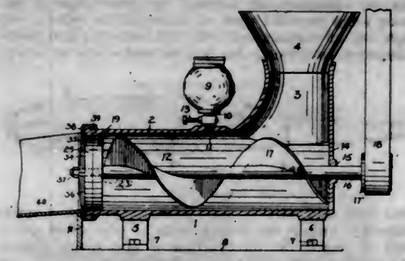


1. A hollow tilting trap, open at one end and closed at the other, and provided near its open end with an opening in its top wall, and a door supported upon the top wall and adapted to coöperate with the end of the trap forward of the tilting point thereof, in holding the rear end of the trap elevated, and to be dislodged when said end is depressed, and fall through the opening in the top wall and close the trap to the escape of an animal trapped between said closed door and the closed end of the trap.

4. A hollow trap, comprising a tubular portion closed at one end and open at the other and provided forward of its tilting point with an opening in its top wall and a recess in its bottom wall, the latter being vertically below the former, and a trap door to rest upon the top wall forward of said opening and to roll rearward and fall through said opening into said recess when the front end of the trap is overbalanced by a preponderating weight rearward of the fulcrum point.

[Claims 2 and 3 not printed in the Gazette.]

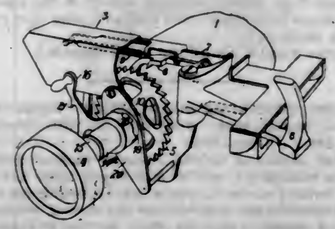
1,226,642. DOUGH-CUTTING MACHINE. JOHN DEMOVITSCH, Pittsburgh, Pa. Filed Sept. 20, 1916. Serial No. 121,114. (Cl. 107—14.)



2. A dough cutting machine comprising a conveyer chamber, a pair of opposed plates mounted at one end of said chamber and one having its edge provided with a notch and the other having its edge provided with a plurality of notches, means carried by the wall of the chamber and engaging in the notches of each of said plates to prevent the shifting thereof during the operation of the machine, that plate having a plurality of notches being adjustable relative to the other plate, and said means to prevent shifting of the plates engaging in the notch of the adjustable plate to maintain it in position when it has been adjusted, said adjustable plate arranged outwardly with respect to the other plate, means overlapping the adjustable plate to prevent outward movement thereof, a conveyer mounted in said chamber and including a shaft extending through and rotatable in said plates, each of said plates provided with a pair of oppositely disposed enlarged semi-circular openings, the openings of said plates associating to provide a pair of outlets for said chamber through which the batches of dough are forced by the conveyer, the adjusting of said adjustable plate regulating the size of said outlets, and a pair of cutters mounted on the conveyer shaft outwardly with respect to said adjustable plate for cutting the batches of dough into loaves as the batches pass through said outlets.

[Claim 1 not printed in the Gazette.]

1,226,643. TYPE-WRITING MACHINE. ADOLPHUS S. DENNIS, Lakewood, Ohio, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 19, 1913. Serial No. 762,180. (Cl. 197—123.)



1. In a typewriting machine, the combination of a platen frame, a platen axle, a platen fixed upon said axle, a bevel edged disk carried by the axle, a line-space wheel loose upon said axle and having a bevel edged depression in its side, a spring to move said line-space wheel axially onto said disk to lock the line-space wheel and platen together, a lever swinging transversely to the movement of the carriage, a series of cams on said lever, a second series of cams, and a support for said last-named cams, the two series of cams coöperating to control the action of said spring to lock or unlock said line-space wheel to or from said platen.



2. In a typewriting machine, the combination of a platen frame, a platen axle, a platen fixed upon said axle, a bevel edged disk carried by the axle, a line-space wheel loose upon said axle and having a bevel edged depression in its side, a spring to move said line-space wheel axially onto said disk to lock the line-space wheel and platen together, a lever swinging transversely to the movement of the carriage, a series of cams on said lever, a second series of cams, a support for said last-named cams, the two series of cams coöperating to control the action of said spring to lock or unlock said line-space wheel to or from said platen, and stops to limit the movement of said controlling lever.

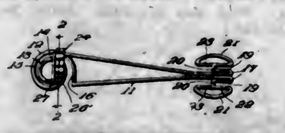
3. In a typewriter, the combination of a platen frame, a platen axle, a platen fixed upon said axle, a line-space wheel loose upon said axle, a clutch between said line-space wheel and platen, a lever having a hub mounted upon the platen axle and formed with a cam on the hub, a cam on the platen frame coöperating with the cam on the lever to thrust said lever endwise along the platen axle, and means operated by said movement of the lever along the axle to release the clutch.

4. The combination of a platen frame, of a rotatable platen supported thereby, a line feeding device for rotating said platen, releasable connecting means between said platen and said feeding device, a rotatable lever and a member mounted on the platen frame coöperating with said lever and causing said lever, by the rotation thereof with respect to the platen, to move longitudinally of the platen for disconnecting said platen from the line feeding device.

5. The combination with a platen frame, a platen axle journaled therein and a platen fixed to the axle, of a line-space wheel loose on the axle, a clutch device to connect the line-space wheel with the axle, a sleeve mounted on the axle and slidable longitudinally thereof to effect a clutching engagement between said wheel and clutch device, a spring to operate said sleeve in one direction, a lever mounted on said sleeve and bearing against a collar formed on said sleeve, and a cam between said lever and the platen frame for retracting said sleeve and compressing the spring when the lever is rotated.

[Claims 6 to 21 not printed in the Gazette.]

1,226,644. CUFF-HOLDER. FRED P. DE WILDE, Sheboygan, Wis. Filed Feb. 15, 1915. Serial No. 8,313. (Cl. 24—41.)



1. A cuff holder formed from a length of material and including coacting arms with the said length of material providing a connecting member between the said arms acting to normally urge the free extremities of the arms toward each other, and garment engaging members carried by the said arms for connection to the free ends of the cuff.

2. A cuff holder including coacting arms terminating at their inner extremities in legs extending in opposite directions in overlapping relation and joined by a yieldable connecting portion expanding for normally urging the free ends of the arms toward each other, and garment engaging members carried by the said arms.

3. A cuff holder formed from a single length of material bent intermediate its ends to provide a convolute portion terminating in legs and being thence continued to provide arms having their free extremities normally urged toward each other by the said portion with one of the said legs overlying the said portion to provide a support for the convolutions thereof, and garment engaging members carried by the said arms.

4. A cuff holder including coacting arms joined by a connecting portion expanding for normally urging the free ends of the arms toward each other, and garment engaging members carried by the said arms.

5. A cuff holder including coacting arms having their inner extremities arranged in overlapping relation and joined by a connecting portion normally urging the free extremities of the arms toward each other, the free ends of the arms being movable away from each other against the expansive force of said connecting portion, and garment engaging members carried by the arms.

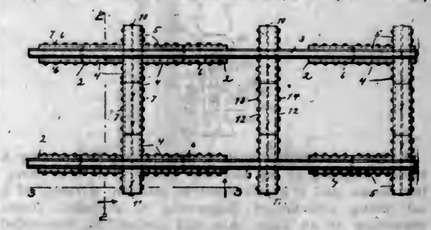
[Claims 6 to 10 not printed in the Gazette.]

1,226,645. TRUSS. JOSHUA DODGE, Detroit, Mich. Filed May 3, 1915. Serial No. 25,372. (Cl. 128—26.)



In a device of the character described, a pad comprising a relatively thick, solid, disk having an inner, smooth, flat, non-absorbent face and also having an annular recess formed at its inner peripheral edge and a ring removably seated in said recess of the disk and projecting beyond the inner face of the disk to form a relatively shallow recess, whereby the ring presses against the body around the rupture to prevent spreading of the strained parts and adheres to the body to prevent slipping of the pad and whereby said non-absorbent flat face evenly distributes the pressure against the rupture.

1,226,646. TIE FOR RAILROADS AND ROAD CONSTRUCTIONS. GEORGE W. DYARMAN, New York, N. Y. Filed Oct. 6, 1916. Serial No. 124,080. (Cl. 238—8.)



1. A tie composed of a series of alined wooden blocks having grooved sides, a pair of metal rods engaging said grooves, and bolts connecting said rods and extending through the blocks.

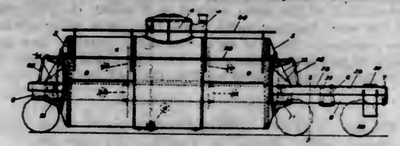
2. A tie composed of a series of alined grooved wooden blocks, grooved wooden wings extending at an angle to said blocks, a plurality of bent metal rods engaging the blocks and wings, and bolts connecting said rods.

3. A tie composed of a series of alined grooved wooden blocks, grooved wooden wings extending at right angles to said blocks, a plurality of U shaped metal rods, and a plurality of L shaped metal rods engaging said blocks and wings, and bolts connecting opposite rods.

1,226,647. TANK-CAR CONSTRUCTION. THOMAS W. ELDER, Jr., Avalon, Pa., assignor to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Sept. 23, 1914. Serial No. 863,159. (Cl. 105—264.)

1. In a tank car, the combination with a frame construction of a plurality of bolsters secured to said frame construction adapted to coöperate with trucks and a tank secured to said frame construction, the diametrical center line of said tank extending longitudinally of the car, the entire length of said tank extending between said bolsters, portions of said tank extending below said bolsters.

2. In a tank car, the combination of a plurality of bolsters adapted to coöperate with trucks, a tank, the entire length of said tank extending between and above and below the tops of said bolsters, the diametrical center line of said tank extending longitudinally of the car.



3. In a tank car, the combination of a plurality of trucks and a tank, the entire length of said tank extending between and below the tops of said trucks, the diametrical center line of said tank extending longitudinally of the car.

4. In a tank car, the combination of a plurality of bolsters, adapted to coöperate with trucks, and a tank, the entire length of said tank extending between and below the tops of said bolsters, and the diametrical center line of said tank extending longitudinally of the car.

5. In a tank car, the combination of a tank and a continuous frame construction extending through and secured to the head plates of said tank, said frame construction extending a substantial distance beyond the ends of said tank and forming platforms.

[Claims 6 to 38 not printed in the Gazette.]

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1,226,648. SELF-INKING DATING-STAMP. CHARLES S. ELLIS, Chicago, Ill. Continuation of application Serial No. 79,472, filed Feb. 19, 1916. This application filed Jan. 29, 1917. Serial No. 145,095. (Cl. 101—103.)



1. The combination with a hand stamp comprising a frame composed of top and side members, its type carrying means, and a handle fixed to said top member, of a self-inking attachment comprising a U-shaped frame consisting of an open base and upstanding free-ended arms, the latter arranged outside of and having guiding contact at their inner side faces with the outer side faces of the side members of the stamp frame; interlocking connections between the side members of the stamp and the free ends of said arms to hold said faces in guiding engagement; a spring-held swinging inking pad carrier pivoted to said arms, and connections between said carrier and stamp frame to swing the carrier away from the stamp when the stamp is depressed.

2. The combination with a hand stamp of that kind which is normally inked by hand comprising a frame, its type carrying members and a handle, of a self-inking attachment comprising a U-shaped frame consisting of an open base and upstanding arms, the latter free at their upper ends and arranged outside of and having guiding contact at their inner faces with the sides of the outer faces of the stamp frame throughout the principal height of said frame, means on the stamp and frame to hold said faces in guiding engagement, a spring-held swinging inking pad carrier pivoted to said arms, and link connections, exterior to said arms, to swing the carrier away from the stamp when the stamp is depressed.

3. A self-inking dating stamp comprising a stamp frame and its type-carrying members, an outer guide and an inking pad carrier frame provided with upstanding free-ended arms which are arranged exterior to and have guiding contact at their inner faces with the outer faces of the frame members by means permitting the stamp to be depressed relatively to the arms, said arms terminating below the top of said stamp frame; a swinging spring-held inking pad carrier arranged at one side of the stamp and provided with laterally directed arms which are pivotally connected to said guide arms, and links arranged at the outer sides of said guide arms and pivotally connected to the terminals of said carrier arms beyond said former pivots and also pivotally connected to the stamp frame.

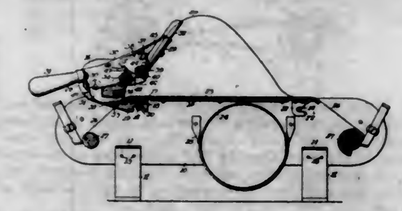
4. A self-inking dating stamp comprising a stamp frame and its type carrying members, the latter embracing a series of band wheels and a shaft therefor, the ends of which extend beyond the stamp frame, an outer inking pad carrier and guide frame provided with upstanding slotted guide arms which fit at their inner faces flat against the outer faces of the stamp frame, the ends of the shaft extending into the slots of the arms whereby the stamp is permitted to be depressed into said carrier frame, an inking pad carrier provided with arms which are arranged exterior to and are pivoted to said guide arms and provided beyond their pivots with inwardly directed terminals, means to normally press the carrier toward the type, and connections exterior to said arms between said terminals and the ends of said band wheel shaft.

5. A self-inking dating stamp comprising a stamp frame and its type carrying members, an outer inking pad carrier and guide frame provided with upstanding arms which fit at their inner faces flat against the outer faces of and are guidingly connected to the stamp frame by means permitting the stamp to be depressed relatively to the base member, a swinging inking pad carrier provided with laterally extending arms which exteriorly overlap the outer faces of said arms, a shaft extending through pivot openings in the overlapping parts of said arms, a spring encircling said shaft and connected at one of its ends to said carrier and at its other end to the outer frame, and connections between the carrier and stamp frame arranged exterior to the guide arms to swing the latter laterally away from the stamp upon the depression of the latter against the action of said spring.

[Claim 6 not printed in the Gazette.]

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1,226,649. MULTIPLE COPYING-MACHINE. JOHN J. FLANIGAN, Chicago, Ill., assignor to Duplicator Manufacturing Company, Chicago, Ill., a Corporation of West Virginia. Filed May 27, 1916. Serial No. 100,336. (Cl. 101—133.)



1. In a multiple copying machine, the combination with a printing surface and a support therefor, of an impression device movable over said printing surface and comprising a tiltable frame, a pair of rolls carried thereby, and spring means normally urging said rolls toward each other, and coöperating devices on said support and one of said rolls, respectively, serving to separate said rolls under a tilting movement of said frame.

2. In a multiple copying machine, the combination with a printing surface and a support therefor, of an impression device movable over said printing surface and comprising a tiltable frame, a pair of rolls carried thereby, and spring means normally urging said rolls toward each other, and coöperating devices on said support and one of said rolls, respectively, serving to separate said rolls under a tilting movement of said frame and hold the latter in tilted position for the introduction of a paper sheet between said separated rolls.

3. In a multiple copying machine, the combination with a printing surface and a support therefor, of an impression device movable over said printing surface and comprising a tiltable platen frame, a platen roll journaled in said frame, a gripping roll mounted for lateral movement in said frame, and spring means normally urging said gripping roll into contact with said platen roll, and coöperating devices on said support and said gripping roll, respectively, serving to separate said rolls under a tilting movement of said frame.

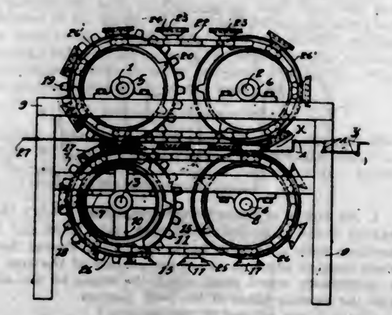
4. In a multiple copying machine, the combination with a printing surface and a support therefor, of an impression device movable over said printing surface and comprising a tiltable platen frame, a platen roll journaled in said frame, a gripping roll mounted for lateral movement in said frame and having spindle extensions beyond the ends of said frame, spring means normally urging said gripping roll into contact with said platen roll, and stationary members located at the opposite sides of the head end of said printing surface and formed with cam surfaces engaging the spindle extensions of said gripping roll to separate said rolls under a tilting movement of said frame.

5. In a multiple copying machine, the combination with a printing surface and a support therefor, of an impression device movable over said printing surface and comprising a tiltable platen frame, a platen roll journaled in said frame, a gripping roll mounted for lateral movement in said frame and having spindle extensions beyond the ends of said frame, spring means normally urging said gripping roll into contact with said platen roll, and stationary members located at the opposite sides of the head end of said printing surface and formed with cam surfaces engaging the spindle extensions of said gripping roll to separate said rolls under a tilting movement of said frame, and also formed with notches beyond said cam surfaces to seat said spindle extensions and hold said frame in tilted position with the rolls separated for the reception of a paper sheet between them.

[Claims 6 to 14 not printed in the Gazette.]

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1,226,650. MACHINE FOR MAKING LATH-BOARD. SILAS M. FORD, St. Paul, Minn. Filed Oct. 11, 1915. Serial No. 55,350. (Cl. 154—1.)



1. In a machine for making lath board of paper or other suitable material, the combination of rotatable means carrying thereon means for forming said material into a plaited form, and piercing means associated with said forming means adapted to pierce said material at regularly spaced intervals.

2. In a machine for making lath board of paper or other suitable material, two drums, cleats associated with each of said drums and so positioned as to press material fed therebetween into a plaited form, the cleats associated with each drum holding said material firmly against the other drum while it is being formed, and piercing means associated with said cleats adapted to pierce said material at regularly spaced intervals.

3. In a machine for making lath-board of paper or other suitable material, the combination of rotatable means carrying thereon means for forming said material into a plaited form, means associated with said rotatable means for holding said material firmly against said forming means during said operation and piercing means associated with said forming means adapted to pierce said material at regularly spaced distances.

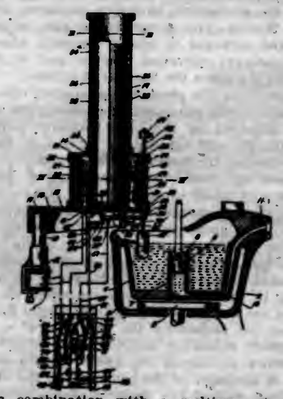
4. In a machine for making lath-board of paper or other suitable material, the combination of a sprocket wheel driving a sprocket chain, forming means carried by said sprocket chain adapted to form said material into the desired shape, and means associated with said forming means for piercing said material at regularly spaced intervals.

5. In a machine for making lath-board of paper or other suitable material, the combination of a pair of shafts, a sprocket wheel associated with each of said shafts, a sprocket chain coacting with said sprocket wheels, forming means carried by said sprocket chain adapted to force said material into a plaited shape, a drum associated with said forming means and said sprocket chain, and means associated therewith for holding the material firmly against said drum while it is being formed into said plaited shape.

[Claims 6 to 9 not printed in the Gazette.]

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1,226,651. MELTING-POT FEEDER. GEORGE L. FORT, Kansas City, Mo., assignor to Fort-lfied Manufacturing Company, Kansas City, Mo., a Corporation of Missouri. Filed Oct. 4, 1916. Serial No. 123,724. (Cl. 22—80.)



1. In combination with a melting pot, an auxiliary melting device comprising a container for metal pigs, means for electrically heating said container, and means automatically controllable by the varying level of metal in the melting pot for controlling the heating means.

2. In combination with a metal supply pot, an auxiliary melting device comprising a container for metal pigs, means for electrically heating said container, and means for delivering molten metal from the container to the metal supply pot, and means automatically controllable by the varying level of metal in the supply pot for controlling the heating means.

3. In combination with a metal supply pot, an auxiliary melting pot comprising a container for metal pigs, a heating coil surrounding said container, means for delivering molten metal from the container to the supply pot, and a float controllable by the varying level of the metal in the supply pot for closing or breaking a circuit through the heating coil.

4. In combination with a metal supply pot, an auxiliary melting pot comprising a container pivotally mounted

above said supply pot and having an opening therein at its base through which metal may be delivered to the supply pot, an electrically heated coil surrounding said container, a switch mechanism, and a float operable by the varying level of the metal in the supply pot for actuating the said switch mechanism for closing or breaking an electric current through the heating coil.

5. In combination with a metal supply pot, an auxiliary melting pot comprising a container for metal pigs, a heating coil surrounding said container, a housing of non-conductive material inclosing said heating coil, a float rod slidably carried in said housing, a float on said rod operable by the varying level of metal in the supply pot, a switch for closing or breaking a circuit through the heating coil and buttons adjustably carried on said float rod to actuate said switch, for the purpose set forth.

[Claims 2, 3, 6 to 8, and 10 not printed in the Gazette.]

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1,226,652. FUSE FOR PROJECTILES. EDWIN R. GILBERT, Chicago, Ill. Filed Nov. 29, 1916. Serial No. 134,049. (Cl. 102—39.)



1. A fuse for projectiles having a hammer, a firing pin mounted thereon, and a centrifugal arm carried by the hammer and arranged to project normally above the firing pin to prevent operation thereof and to retract below the firing pin when the hammer is rotated.

4. A hammer block for projectile percussion caps comprising a base, a firing pin mounted thereon, and a centrifugal arm mounted on the base normally projecting above the firing pin and adapted by centrifugal force to retract below the pin to uncover the firing pin.

5. A hammer for projectiles comprising a block, a firing pin centrally mounted on the block, a pair of centrifugal arms pivoted to the block, one on each side of the firing pin, and normally projecting above the firing pin to prevent engagement thereof with a cap, and a spring for holding the arms in such position, said arms being arranged to retract below the pin against the tension of the spring to uncover the firing pin when the block is rotated and the arms subjected to centrifugal force.

9. In a fuse for projectiles the provision of a casing having a chamber, a hammer longitudinally movable within the chamber, a percussion cap and firing pin therefor, one of which is mounted on the hammer and the other on the forward end wall of the chamber, and a centrifugal arm arranged when operated to move the hammer away from the said end wall of the chamber when the hammer is resting against the said wall of the chamber upon rotation of the projectile.

[Claims 2, 3, 6 to 8, and 10 not printed in the Gazette.]

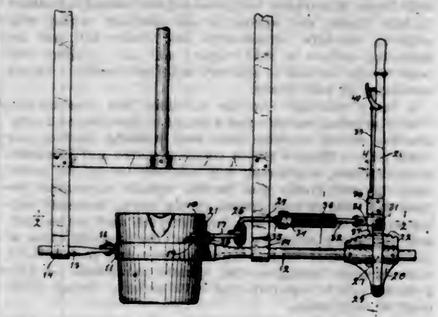
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1,226,653. CRUCIBLE-HOLDER. MAX W. GOLDBERG, Milwaukee, Wis. Filed June 26, 1916. Serial No. 105,845. (Cl. 22—82.)

1. A crucible holder comprising a plurality of jaws for clampingly engaging the crucible, supporting means for the jaws, and mechanical means movably connected to the jaws and movable with respect thereto for actuating said jaws.

2. A crucible holder comprising a clamping member having a crucible engaging portion, a clamping member pivotally secured to the first member, and mechanical means for moving said members with respect to each other to clampingly engage the crucible.

3. A crucible holder comprising a clamping member having handle portions and a crucible engaging portion, a clamping member pivotally secured to the first member, a pair of levers pivotally connected to said clamping members, and means for moving said levers to open and close the clamping members.



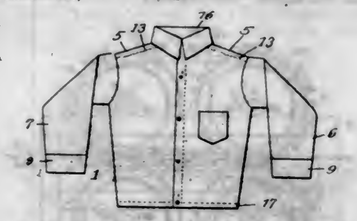
4. A crucible holder comprising a clamping member having handle portions and a crucible engaging portion, a clamping member pivotally secured to the first member, a pair of levers pivotally connected to said clamping members, and means including a movable operating lever and a yielding connection for moving said levers to open and close the clamping members.

5. A crucible holder comprising a clamping member having a crucible engaging portion, a clamping member pivotally secured to the first member, a pair of levers pivotally secured together and to said clamping members, means including a pivoted operating lever and a yielding connection for moving said levers to open and close the clamping members, and means for locking said operating lever in different positions.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,654. BOY'S BLOUSE. ALBERT H. GORDON, Brooklyn, N. Y. Filed Sept. 29, 1916. Serial No. 122,794. (Cl. 2—98.)



1. An article of manufacture comprising a boy's blouse having a one piece front and back, said front and back portions each extending up to the neck, sleeves having their meeting edges on the upper portion of the arm, and a continuous sewed seam along the edges of the sleeve and the meeting edges of the body portion.

[Claim 2 not printed in the Gazette.]

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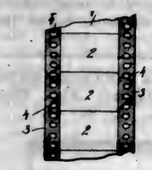
1,226,655. MOVING-PICTURE FILM. WILLIAM M. GROSVENOR, Ridgewood, N. J. Filed May 10, 1912. Serial No. 696,308. (Cl. 88—19.5.)

1. A film or strip of the class described having lubricating matter embodied in the body thereof at the portions of great wear and tear, whereby the life of the film is increased.

2. A moving picture film or strip having graphite incorporated in the body of the film at the portions of great wear and tear.



3. A perforated moving picture film having graphite incorporated in the body of the film at and about the perforations for the purpose of lubrication.



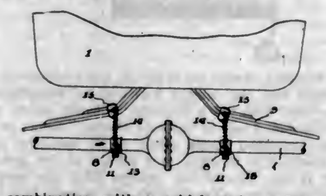
4. A moving picture film or strip, having perforations along its edges, and graphite incorporated in the body of the film at and about the perforations and having a graphite coating along its edges at and about the perforations on both sides of the film.

5. A moving picture film or strip, having graphite incorporated in the body of the film at the portions of greatest wear and having a graphite coating along said portions to increase the life of the film.

[Claims 6 to 15 not printed in the Gazette.]

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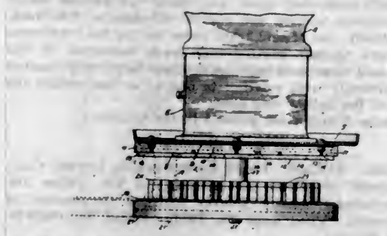
1,226,656. ATTACHMENT FOR MOTOR-CARS. LENNIE A. HANSON, Deering, N. D. Filed Apr. 12, 1916. Serial No. 90,702. (Cl. 267—19.)



The combination with a vehicle axle, and an elliptic spring disposed above and in the same vertical plane with the axle, of a box fitting over and against the front and rear sides of said spring, a keeper member engaging the lower edges of the sides of said box and passing beneath the spring to retain the box thereon, clamping members fitting closely around the axle, means at the top and bottom of said clamping members to secure them together and around the axle, lugs extending from the front and rear sides of the boxes, lugs extending from the front and rear sides of the clamping members, and tension springs extending between the lugs on the boxes and the lugs on the clamping members below the same and having their ends secured respectively to the said lugs.

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1,226,657. TOOL-HOLDER. FRANKLIN HARDINGE, Chicago, Ill., assignor to Hardinge Brothers, Chicago, Ill., a Corporation of Illinois. Filed July 24, 1916. Serial No. 110,894. (Cl. 82—34.)



1. A tool holder comprising a tramway adapted to be secured to the under side of a lathe, a downwardly extending post mounted on the tramway and arranged to ride thereon, and a tool holder rotatably mounted on the post under the tramway whereby the tool holder may be moved under the lathe or to a position where it projects outwardly from the lathe and whereby the holder may be rotated to provide free access to every portion thereof.

2. In a tool holder the combination of a tramway arranged to be attached to the underside of a lathe, a carriage movable thereon, and a tool holder rotatably mounted on the carriage, whereby the tool holder may be moved under the lathe or to a position where it projects outwardly from the lathe and whereby the tool holder may be rotated to provide free access to every portion thereof.

3. A tool holder comprising a tramway arranged to be secured to the under side of a lathe, a carriage provided with wheels arranged to ride on the tramway, a post extending downwardly from the carriage, and a tool holder rotatably mounted on the post under the tramway.

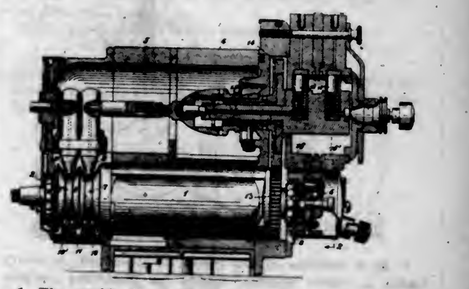
4. A tool holder comprising a pair of rails arranged to be attached to the underside of a lathe, a carriage provided with wheels mounted on the rails so as to ride thereon, a post extending downwardly from the carriage between the rails, and a tool holder rotatably mounted on the post under the rails.

5. A tool holder comprising a pair of rails arranged to be attached to the under side of a lathe, a carriage provided with wheels mounted on the rails so as to ride thereon, a post extending downwardly from the front end of the carriage and between the rails, and a tool holding disk rotatably mounted on the post under the rails.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,658. DISTRIBUTING MECHANISM FOR ELECTRICAL IGNITION SYSTEMS. OTTO HEINS, New York, and VICTOR W. KLIESRATH, Port Washington, N. Y., assignors to Bosch Magneto Company, New York, N. Y., a Corporation of New York. Filed Jan. 31, 1916. Serial No. 75,397. (Cl. 123—149.)



1. The combination with an internal combustion engine having grounded spark plugs, and a magneto having a secondary winding with insulated terminals, of distributing mechanism comprising a rotatable main distributer having contact segments electrically connected to the insulated electrodes of individual spark plugs, and a rotatable intermediate distributer which is electrically connected to the two terminals of the secondary winding, and which, at each period of ignition, conducts the ignition current to a single one of said contact segments.

2. The combination with an internal combustion engine having grounded spark plugs, and a magneto having a secondary winding with insulated terminals, of distributing mechanism comprising a rotatable main distributer having contact segments electrically connected to the insulated electrodes of individual spark plugs, and a rotatable intermediate distributer which, at each period of ignition, grounds one terminal of the secondary winding and completes the electrical connection from the other terminal of the secondary winding to a single one of said contact segments.

3. The combination with an internal combustion engine having grounded spark plugs, and a magneto having a secondary winding with insulated terminals, of distribut-

above said supply pot and having an opening therein at its base through which metal may be delivered to the supply pot, an electrically heated coil surrounding said container, a switch mechanism, and a float operable by the varying level of the metal in the supply pot for actuating the said switch mechanism for closing or breaking an electric current through the heating coil.

5. In combination with a metal supply pot, an auxiliary melting pot comprising a container for metal pigs, a heating coil surrounding said container, a housing of non-conductive material inclosing said heating coil, a float rod slidably carried in said housing, a float on said rod operable by the varying level of metal in the supply pot, a switch for closing or breaking a circuit through the heating coil and buttons adjustably carried on said float rod to actuate said switch, for the purpose set forth.

[Claims 2, 3, 6 to 8, and 10 not printed in the Gazette.]

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1,226,652. FUSE FOR PROJECTILES. EDWIN R. GILBERT, Chicago, Ill. Filed Nov. 29, 1916. Serial No. 134,049. (Cl. 102—39.)



1. A fuse for projectiles having a hammer, a firing pin mounted thereon, and a centrifugal arm carried by the hammer and arranged to project normally above the firing pin to prevent operation thereof and to retract below the firing pin when the hammer is rotated.

4. A hammer block for projectile percussion caps comprising a base, a firing pin mounted thereon, and a centrifugal arm mounted on the base normally projecting above the firing pin and adapted by centrifugal force to retract below the pin to uncover the firing pin.

5. A hammer for projectiles comprising a block, a firing pin centrally mounted on the block, a pair of centrifugal arms pivoted to the block, one on each side of the firing pin, and normally projecting above the firing pin to prevent engagement thereof with a cap, and a spring for holding the arms in such position, said arms being arranged to retract below the pin against the tension of the spring to uncover the firing pin when the block is rotated and the arms subjected to centrifugal force.

9. In a fuse for projectiles the provision of a casing having a chamber, a hammer longitudinally movable within the chamber, a percussion cap and firing pin therefor, one of which is mounted on the hammer and the other on the forward end wall of the chamber, and a centrifugal arm arranged when operated to move the hammer away from the said end wall of the chamber when the hammer is resting against the said wall of the chamber upon rotation of the projectile.

[Claims 2, 3, 6 to 8, and 10 not printed in the Gazette.]

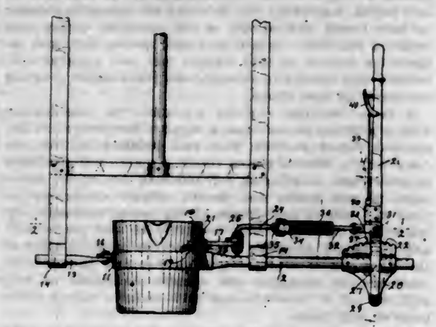
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1,226,653. CRUCIBLE-HOLDER. MAX W. GOLDBERG, Milwaukee, Wis. Filed June 26, 1916. Serial No. 105,845. (Cl. 22—82.)

1. A crucible holder comprising a plurality of jaws for clampingly engaging the crucible, supporting means for the jaws, and mechanical means movably connected to the jaws and movable with respect thereto for actuating said jaws.

2. A crucible holder comprising a clamping member having a crucible engaging portion, a clamping member pivotally secured to the first member, and mechanical means for moving said members with respect to each other to clampingly engage the crucible.

3. A crucible holder comprising a clamping member having handle portions and a crucible engaging portion, a clamping member pivotally secured to the first member, a pair of levers pivotally connected to said clamping members, and means for moving said levers to open and close the clamping members.



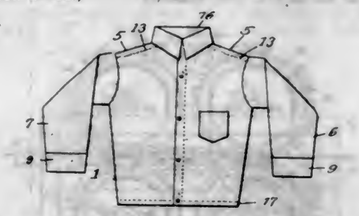
4. A crucible holder comprising a clamping member having handle portions and a crucible engaging portion, a clamping member pivotally secured to the first member, a pair of levers pivotally connected to said clamping members, and means including a movable operating lever and a yielding connection for moving said levers to open and close the clamping members.

5. A crucible holder comprising a clamping member having a crucible engaging portion, a clamping member pivotally secured to the first member, a pair of levers pivotally secured together and to said clamping members, means including a pivoted operating lever and a yielding connection for moving said levers to open and close the clamping members, and means for locking said operating lever in different positions.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,654. BOY'S BLOUSE. ALBERT H. GORDON, Brooklyn, N. Y. Filed Sept. 20, 1916. Serial No. 122,794. (Cl. 2—98.)



1. An article of manufacture comprising a boy's blouse having a one piece front and back, said front and back portions each extending up to the neck, sleeves having their meeting edges on the upper portion of the arm, and a continuous sewed seam along the edges of the sleeve and the meeting edges of the body portion.

[Claim 2 not printed in the Gazette.]

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1,226,655. MOVING-PICTURE FILM. WILLIAM M. GROSVENOR, Ridgewood, N. J. Filed May 10, 1912. Serial No. 696,308. (Cl. 88—19.5.)

1. A film or strip of the class described having lubricating matter embodied in the body thereof at the portions of great wear and tear, whereby the life of the film is increased.

2. A moving picture film or strip having graphite incorporated in the body of the film at the portions of great wear and tear.



3. A perforated moving picture film having graphite incorporated in the body of the film at and about the perforations for the purpose of lubrication.



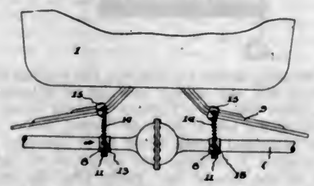
4. A moving picture film or strip, having perforations along its edges, and graphite incorporated in the body of the film at and about the perforations and having a graphite coating along its edges at and about the perforations on both sides of the film.

5. A moving picture film or strip, having graphite incorporated in the body of the film at the portions of greatest wear and having a graphite coating along said portions to increase the life of the film.

[Claims 6 to 15 not printed in the Gazette.]

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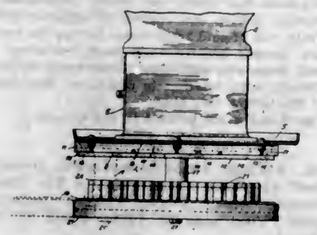
1,226,656. ATTACHMENT FOR MOTOR-CARS. LENNIE A. HANSON, Deering, N. D. Filed Apr. 12, 1916. Serial No. 90,702. (Cl. 267—19.)



The combination with a vehicle axle, and an elliptic spring disposed above and in the same vertical plane with the axle, of a box fitting over and against the front and rear sides of said spring, a keeper member engaging the lower edges of the sides of said box and passing beneath the spring to retain the box thereon, clamping members fitting closely around the axle, means at the top and bottom of said clamping members to secure them together and around the axle, lugs extending from the front and rear sides of the boxes, lugs extending from the front and rear sides of the clamping members, and tension springs extending between the lugs on the boxes and the lugs on the clamping members below the same and having their ends secured respectively to the said lugs.

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1,226,657. TOOL-HOLDER. FRANKLIN HARDINGE, Chicago, Ill., assignor to Hardinge Brothers, Chicago, Ill., a Corporation of Illinois. Filed July 24, 1916. Serial No. 110,894. (Cl. 82—34.)



1. A tool holder comprising a tramway adapted to be secured to the under side of a lathe, a downwardly extending post mounted on the tramway and arranged to ride thereon, and a tool holder rotatably mounted on the post under the tramway whereby the tool holder may be moved under the lathe or to a position where it projects outwardly from the lathe and whereby the holder may be rotated to provide free access to every portion thereof.

2. In a tool holder the combination of a tramway arranged to be attached to the underside of a lathe, a carriage movable thereon, and a tool holder rotatably mounted on the carriage, whereby the tool holder may be moved under the lathe or to a position where it projects outwardly from the lathe and whereby the tool holder may be rotated to provide free access to every portion thereof.

3. A tool holder comprising a tramway arranged to be secured to the under side of a lathe, a carriage provided with wheels arranged to ride on the tramway, a post extending downwardly from the carriage, and a tool holder rotatably mounted on the post under the tramway.

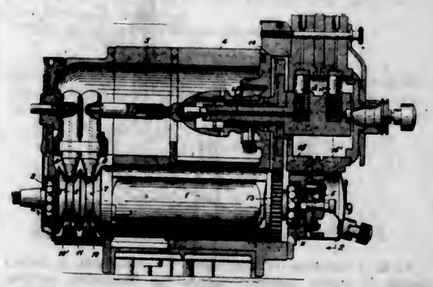
4. A tool holder comprising a pair of rails arranged to be attached to the underside of a lathe, a carriage provided with wheels mounted on the rails so as to ride thereon, a post extending downwardly from the carriage between the rails, and a tool holder rotatably mounted on the post under the rails.

5. A tool holder comprising a pair of rails arranged to be attached to the under side of a lathe, a carriage provided with wheels mounted on the rails so as to ride thereon, a post extending downwardly from the front end of the carriage and between the rails, and a tool holding disk rotatably mounted on the post under the rails.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,658. DISTRIBUTING MECHANISM FOR ELECTRICAL IGNITION SYSTEMS. OTTO HEINS, New York, and VICTOR W. KLIESRATH, Port Washington, N. Y., assignors to Bosch Magneto Company, New York, N. Y., a Corporation of New York. Filed Jan. 31, 1916. Serial No. 75,397. (Cl. 123—149.)



1. The combination with an internal combustion engine having grounded spark plugs, and a magneto having a secondary winding with insulated terminals, of distributing mechanism comprising a rotatable main distributer having contact segments electrically connected to the insulated electrodes of individual spark plugs, and a rotatable intermediate distributer which is electrically connected to the two terminals of the secondary winding, and which, at each period of ignition, conducts the ignition current to a single one of said contact segments.

2. The combination with an internal combustion engine having grounded spark plugs, and a magneto having a secondary winding with insulated terminals, of distributing mechanism comprising a rotatable main distributer having contact segments electrically connected to the insulated electrodes of individual spark plugs, and a rotatable intermediate distributer which, at each period of ignition, grounds one terminal of the secondary winding and completes the electrical connection from the other terminal of the secondary winding to a single one of said contact segments.

3. The combination with an internal combustion engine having grounded spark plugs, and a magneto having a secondary winding with insulated terminals, of distribut-

ing mechanism comprising a main distributer having stationary contact segments electrically connected to the insulated electrodes of the spark plugs, and rotatable brushes coöperative with the segments, and also comprising a rotatable intermediate distributer which is electrically connected to the two terminals of the secondary winding, and which, at each period of ignition, conducts the ignition current to a single one of said brushes.

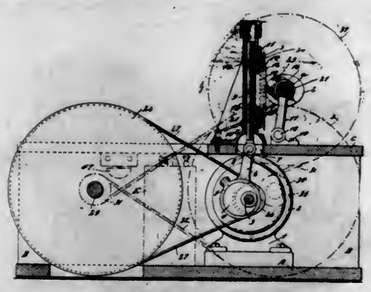
4. The combination with an internal combustion engine having grounded spark plugs, and a magneto having a secondary winding with insulated terminals, of distributing mechanism comprising a main distributer having stationary contact segments electrically connected to the insulated electrodes of the spark plugs, and rotatable brushes coöperative with the segments, and also comprising a rotatable intermediate distributer which, at each period of ignition, grounds one terminal of the secondary winding and completes the electrical connection from the other terminal of the secondary winding to a single one of said brushes.

5. The combination with an internal combustion engine having spark plugs, and a magneto having a generating winding, of distributing mechanism comprising a main distributer having contact segments electrically connected to the spark plugs, and brushes coöperative with the segments, and also comprising an intermediate distributer which is mounted on the rotor of the magneto, and which, at each period of ignition, completes the electrical connection from the winding to a single one of the brushes.

[Claims 6 to 20 not printed in the Gazette.]

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1,226,659. MACHINE FOR CUTTING GLASS. GERARDUS POST HERRICK, New York, N. Y. Filed Aug. 10, 1916. Serial No. 114,120. (Cl. 51—3.)



1. In a machine of the character described, a rotary clamp, a cutter member, means for imparting reciprocatory movements to said cutter member, and means for relatively moving the work clamp and cutter member transversely of the path of reciprocation of the latter.

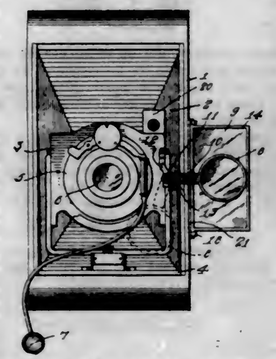
2. In a machine of the character described, a rotary work clamp, a cutter member, means for imparting reciprocatory movements to said cutter member, means for relatively moving the work clamp and cutter member transversely of the path of reciprocation of the latter, and means for automatically stopping said relative movement when a predetermined depth of cut is produced in the work.

3. In a machine of the character described, a reciprocatory cutter member and actuating means therefor, a work holder, means for rotating the work holder, and supporting means for the work holder permitting a movement of the latter transversely of the cutter member, said supporting means including a bracket formed with a bearing boss, a shaft slidably mounted in said bearing boss and spring-pressed toward the cutter member, and means for rigidly connecting the work holder to said shaft.

4. In a machine of the character described, a tubular bearing, a reciprocatory piston mounted in said tubular bearing, a cutter blade carried by said piston and projecting through a slot in the tubular bearing, actuating means for said piston, a work holder comprising separable members spring-impelled toward each other and rotatory in unison, means adapted to rotate the work holder, and means for moving the work holder transversely of the cutter blade.

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1,226,660. CAMERA FOCUSING DEVICE. RICHARD D. HERSCHEL, Birmingham, Ala. Filed May 8, 1915. Serial No. 26,822. (Cl. 95—44.)



In a focusing device for cameras, the combination with the camera box, the camera lens and an adjustable support for said lens, of a foldable focusing screen affixed to the mentioned box at one side thereof, means to maintain the mentioned screen either in an operative or in a folded position, a focusing lens affixed to the mentioned support at one side of the camera lens, the mentioned focusing lens being movable with the camera lens toward and from the screen, said lens being also movable into and out of a position in line with the mentioned screen, the lens when out of alinement with the mentioned screen being movable with the camera lens interiorly of the camera box, substantially as described.

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1,226,661. SPINNING-RING. ADELBERT P. HINE, Woodbury, Conn. Filed Dec. 31, 1914. Serial No. 879,875. (Cl. 118—59.)



1. A spinning ring comprising a hollow head having integrally-connected inner and outer track-zones which in transverse section are curved in opposite directions, respectively, one of said track-zones having the transverse curvature thereof greater than such curvature of the other said zone, and said track-zones being each located concentrically with relation to one axial line within the space of the hollow ring-head.

[Claims 2 and 3 not printed in the Gazette.]

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1,226,662. FLUME. LEROY RACE HINMAN, Denver, Colo., assignor, by mesne assignments, to The Flume Improvement Company, Denver, Colo., a Corporation of Colorado. Filed June 13, 1911. Serial No. 632,970. (Cl. 61—5.)

1. The combination with a plurality of hangers, of bars suspended from said hangers, a flume supported by said bars, said flume comprising a plurality of sheet-metal sections, the ends of said sections being provided with transversely-extending channels, the channel at the end of one section nesting in the channel at the end of the next adjacent section, said bars being thickened throughout their length, and having flanges extending from the sides thereof in spaced relation from each other so as to form channels, one of said channels in each of said sections extending into the channels in said bars and contracting therewith in three lines of contact, being spaced apart therefrom at other points, and a cleat extending into the other channel of each of said sections, so that said bars and said cleats will be located on opposite sides of each juncture between two sections, so as to grip the ends of the sections between them.





2. The combination with a plurality of hangers, of bars suspended from said hangers, a flume supported by said bars, said flume comprising a plurality of sheet-metal sections, the ends of said sections being provided with transversely-extending channels, the channel at the end of one section nesting in the channel at the end of the next adjacent section, said bars being enlarged throughout their length, so as to have a cylindrical cross section, and having flattened flanges extending from the cylindrical portion of the bars in spaced relation from each other so as to form a channel between them, one of said channels in each of said sections extending into the channels in said bars, said last-mentioned channel in said section contacting with said bar in three lines, and being spaced apart therefrom at other points, and a cleat extending into the other channel of each of said sections, so that a bar and a cleat will be located on opposite sides of each juncture between two sections, so as to grip the ends of the sections between them.

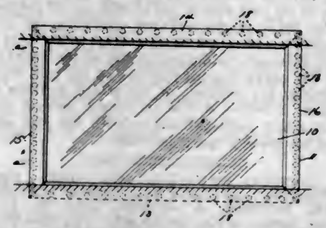
3. A supporting bar, comprising a curved cylindrical bar having on opposite sides parallel flanges forming a channel into which projects a portion of the bar to form a hump in the bottom of the channel.

4. A supporting bar, comprising a curved bar provided on opposite sides with parallel flanges forming a channel having a hump in its bottom, the flanges terminating short of the ends of the bar and the said ends being screw threaded.

5. A supporting bar, comprising a curved and channeled bar having a hump in the bottom of the channel.

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1,226,663. DEVICE FOR EXHIBITING MOVING PICTURES. FREDERICK W. HOCHSTETTER, New York, N. Y., assignor to H. P. Patents and Processes Company, Inc., a Corporation of New York. Filed Jan. 9, 1913. Serial No. 741,022. (Cl. 88—24.)



1. A device for exhibiting moving pictures, comprising a translucent curtain suitably supported whereby pictures may be projected thereon from one side thereof, and means located in proximity to the curtain for causing illumination thereof at spaced portions with colored lights in an opposite direction with respect to the direction of projection of the pictures, whereby colored tints are imparted to the pictures.

2. A device for exhibiting moving pictures, comprising a curtain of translucent material, a frame for said curtain, said frame being supported to permit the projection of pictures on the curtain, lighting means in the frame to the rear of the curtain, and means for controlling the lighting means for illuminating the curtain simultaneously with the projection of pictures thereon.

3. A device for exhibiting moving pictures, comprising a curtain of translucent material, a frame encompassing said curtain, said frame being suitably supported whereby pictures may be projected on the curtain, a plurality of lamps in said frame at the back of the curtain, and electrically operated means for controlling the lamps for illuminating the curtain simultaneously with the projection of the pictures thereon.

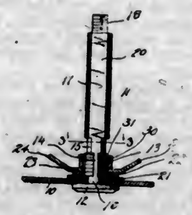
4. A device for exhibiting moving pictures, comprising a curtain of translucent material, a frame for said curtain suitably supporting the same whereby pictures may be projected thereon, a plurality of incandescent lamps mounted in the frame for projecting light on to adjacent portions of the curtain, and means for successively lighting one or more of the lamps simultaneously with the projection of pictures on the curtain.

5. A device for exhibiting moving pictures, comprising a curtain of translucent material, a frame for said curtain suitably supporting the same whereby pictures may be projected thereon, a plurality of incandescent lamps mounted in the frame for projecting light on to adjacent portions of the curtain, means for successively lighting one or more of the lamps simultaneously with the projection of pictures on the curtain, and a reflector within the frame for deflecting the rays of light from the lamps upon the curtain so as to tint the pictures being projected thereon.

[Claim 6 not printed in the Gazette.]

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1,226,664. AIR-VALVE. WALTER R. HOSE, New Ulm, Minn. Filed June 5, 1916. Serial No. 101,834. (Cl. 152—12.)



1. In a tire valve, a stem having a thread on its outer end and a head on its inner end, a second threaded portion on the stem near said head, and spaced from the outer threaded portion, a longitudinal slot extending from end to end of said second threaded portion, a washer and a clamping plate each having an opening therethrough to permit its sliding freely over the outer portion of the valve stem and having inwardly projecting lugs to engage said longitudinal slot, and a nut also sliding freely over the outer threaded portion of the stem but adapted to screw upon said second threaded portion and clamp said plate and washer against a tire.

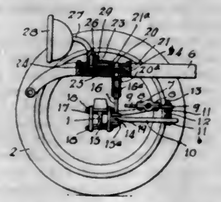
2. In a tire valve, a hollow stem having a head on one end and threaded for the greater portion of its length, said threaded portion having oppositely disposed flat surfaces on its sides and extending throughout its length, a second threaded portion between the outer portion and said head and spaced from both, a longitudinal slot being cut in said threaded portion from end to end, a washer and a clamping plate each having an inwardly projecting

lug to engage said slot and prevent rotation, and a nut having a central opening of a size to permit said nut passing freely over the outer threaded end of the stem but adapted to engage with the inner threaded portion to clamp said plate and washer in connection with said head upon a tire.

3. In a valve for tires, a stem having a head on one end and a threaded portion spaced a short distance from said head having a longitudinal slot formed therein and extending from end to end, a second threaded portion spaced from the first and continuing to the end of the valve stem, oppositely disposed flattened surfaces on the sides of the extended threaded portion, a washer and a clamping plate slidable freely over the threaded stem and each having a lug to engage said longitudinal slot to prevent their rotation, and a nut having an elongated slot therethrough adapted to slip freely over the outer portion of said stem and having threaded depressions in the opposite longer walls of said slot to engage the threaded portion of the stem near the head and lock said washer and clamping plate in position.

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1,226,665. DIRIGIBLE AUTOMOBILE-HEADLIGHT. CHARLES E. HOUSE, Eustis, Nebr. Filed Jan. 31, 1917. Serial No. 145,676. (Cl. 240—62.)



1. A dirigible headlight for motor vehicles, including a casing adapted to be mounted on the vehicle frame, a pair of vertical shafts journaled within the casing, a chain and sprocket connection between the vertical shafts, a headlight carried by one of the shafts, a bearing bracket adapted to be applied to the front axle, a vertical operating shaft journaled upon the bearing bracket and having a sliding and interlocking engagement with the other shaft of the casing, and an operative connection between the vertical operating shaft and the connecting rod of the vehicle steering gear.

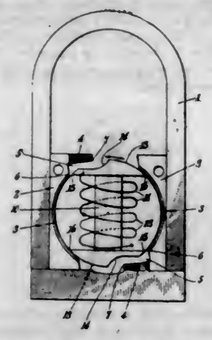
4. A dirigible headlight for motor vehicles, including a clamp adapted to be applied to the connecting rod of the steering gear and formed with rearwardly and forwardly projecting extensions, a bearing bracket adapted to be applied to the front axle, a vertical shaft journaled within the bearing bracket, a horizontal operating arm rigid with the vertical shaft, set collars applied to the operating arm and one of the extensions of the clamp, a pivot pin having swivel connections with the two set collars, and a headlight operatively connected with the vertical shaft.

[Claims 2 and 3 not printed in the Gazette.]

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1,226,666. MAGNETO-ELECTRIC MACHINE. FRANCIS R. HOYT, East Orange, N. J., assignor to The Simms Magneto Co., a Corporation of New York. Filed June 14, 1915. Serial No. 33,886. (Cl. 171—209.)

1. In a magneto electric machine, the combination with a magnet, of pole shoes therefor each having one extremity extended a greater distance in a direction around the armature than the other extremity, the inner face of each pole shoe being provided adjacent to the extended extremity thereof with a transversely extending recess and having an advance spark portion on one side of the recess and a retard spark portion on the other side of the recess on the extended extremity of the pole shoe, and a rotarily movable armature having a core provided with exterior curved surfaces each having a recess therein extending in a direction parallel to the axis of rotation of the armature, said recesses being so located that at the time the rear edges or tips of the armature are leaving the advance spark portions of the pole shoes the said recesses are adjacent to the retard portions of the pole shoe, and insure greater reluctance between the core and the extended ends of the pole shoes than between the core and the advance spark portions of the pole shoes.



2. In a magneto electric machine, the combination with a magnet, of pole shoes therefor each having one extremity extended a greater distance in a direction around the armature than the other extremity, the inner faces of each of said pole shoes being provided adjacent to the extended extremity thereof with separated retard spark portions and advance spark portions, and a rotarily movable armature having a core provided with separated exterior curved surfaces each having a recess therein extending in a direction parallel to the direction of the armature and located in advance of the rear edge or tip of said curved surface substantially equal to the distance between the advance spark and retard spark portions of the pole shoes, whereby when the rear tips of the curved portions of the armature core are leaving the advance spark portions of the pole shoes said recesses will be adjacent to the retard spark portions thereof and insure greater reluctance between the core and the pole shoes at such points, than between the rear tip and the advance spark portions.

3. In a magneto electric machine, the combination with a magnet, of pole shoes therefor each having an inner curved surface concentric with the axis of rotation of the armature and a portion at one end of the shoe extending a greater distance in the direction of rotation than the other end of the shoe, said pole shoes each having a retard spark portion at the extended end thereof at substantially the same distance from said axis as the curved portion, a recess extending parallel to said axis, and an advance spark portion at the inner edge of said recess, and a rotarily movable armature having its core provided with separated exterior curved surfaces concentric with the axis of rotation and each provided with a recess extending parallel to said axis, and located a distance in advance of the rear edge or tip of said curved portion substantially equal to the distance separating the advance spark portion and retard spark portion of the pole shoes, whereby when said rear edges or tips of the armature are leaving the advance spark portions of the pole shoes the said recesses are adjacent to the retard portions of the pole shoes, to insure greater reluctance between the core and said retard portions than between the rear edges or tips and the advance spark portions.

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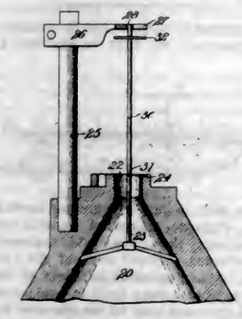
1,226,667. ELECTROMAGNETIC ELEMENT OR STRUCTURE. MATTHEW A. HUNTER, Troy, N. Y. Filed Oct. 28, 1915. Serial No. 58,487. (Cl. 75—49.)

An electro-magnetic element or structure of titanium treated iron substantially free from titanium and combined carbon, said element or structure having a hysteresis loss materially less than 0.015 joules per pound per cycle and having a permeability at 10,000 lines per square centimeter materially in excess of 5,000; substantially as described.

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1,226,668. APPARATUS FOR FORMING BLANKS OF CERAMIC MATERIAL. BENJAMIN A. JEFFERY, Detroit, Mich. Filed Apr. 19, 1913. Serial No. 762,440. (Cl. 25—11.)



1. An apparatus for forming blanks of ceramic material comprising a chamber for receiving the plastic material and provided with a die opening, means for forcing said plastic material through the die opening, and means for supporting a removable core member in a stationary position outside of said chamber and in alinement with the center of said die opening, whereby the outcoming plastic material is forced over the core member.

2. An apparatus for forming blanks of ceramic material comprising a chamber for receiving the plastic material and provided with a die opening, means for forcing said plastic material through the die opening, and means for supporting a removable core member in a stationary position outside of said chamber and in alinement with the center of said die opening, whereby the outcoming plastic material is forced over the core member, and a gage supported opposite said die opening and having a seat for said core member.

3. An apparatus for forming blanks of ceramic material comprising a chamber for receiving the plastic material and provided with a die-opening, means for forcing said material through said opening, means for forming a bore in the expressed material, a gage having a stop portion in alinement with said die-opening, and a removable core-member supported in alinement with said bore forming means.

4. An apparatus for forming blanks of ceramic material comprising a chamber for receiving the plastic material and provided with a die-opening, a core pin located in said die-opening and provided with a recess, means for forcing the material through said opening, and a removable core member having one end adapted to seat in said recess.

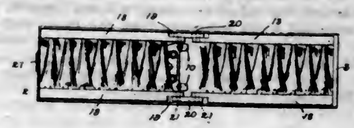
5. An apparatus for forming blanks of ceramic material comprising a chamber for receiving the plastic material and provided with a die-opening, a core pin located in said opening, a gage having a stop portion in alinement with said opening, means for forcing the material through said opening, and a removable core-member, said core pin and gage being provided with means for supporting said removable core member.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,669. COMBINATION TOILET ARTICLE. ALBIN J. JOHNSON, Duluth, Minn. Filed Dec. 4, 1916. Serial No. 134,824. (Cl. 132—32.)

1. A combination toilet article of the character described comprising a receptacle having a removable cover therefor, a longitudinally adjustable securing member within and upon the bottom of the receptacle and pivotally united brush carrying members coöperatively adjustable within the receptacle and held by the securing member.

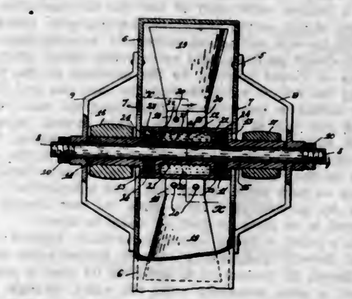


2. A combination toilet article of the character described comprising a receptacle having a separable cover therefor, an adjustable securing member, within the receptacle and foldable brush carrying members coöperatively adjustable within the receptacle and designed to be held by the securing member, substantially as and for the purpose described.

[Claims 3 and 4 not printed in the Gazette.]

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1,226,670. FAN. JOHN D. JONES, Walla Walla, Wash., assignor of one-half to Henry C. Baker, Walla Walla, Wash. Filed Apr. 28, 1914. Serial No. 834,910. (Cl. 230—11.)



1. A fan comprising a fixed shaft, a hollow hub casing having an outer sleeve at each of its ends and an inner sleeve rotatable upon said shaft, a packing chamber within the casing surrounding and open to the shaft and adjacent to each of said end sleeves, a lubricant chamber in said casing surrounding the inner sleeve between the packing chambers and communicating with each of said packing chambers, whereby said lubricant can feed to the packing to lubricate the shaft and sleeves, fan blades carried by said hub and means for rotating said hub.

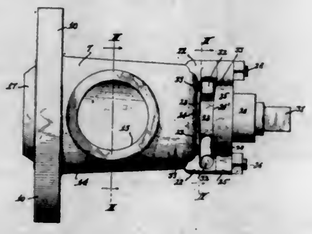
2. A fan comprising a fixed shaft, a hub casing rotatable thereon, means for rotating said hub upon the shaft, an outer sleeve formed upon each of the ends of the casing and engaging the shaft, an inner sleeve within the casing and engaging the shaft, said inner sleeve being spaced from the inner ends of the outer sleeves, webs connecting the ends of the inner sleeve with the interior of the hub casing and forming a continuous circular oil passage surrounding the shaft between said inner sleeve and inner side of the casing and webs, packings disposed between the inner ends of the outer sleeves and webs and engaging the shaft, whereby the oil or the like will be fed from the oil passage through the packings to the shaft between the inner and outer sleeves, said hub casing having an opening in communication with the oil passage, and a closure for said opening.

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1,226,671. VALVE. JOHN D. JONES, Walla Walla, Wash. Filed Feb. 1, 1915. Serial No. 5,459. (Cl. 137—7.)

1. A valve comprising a casing, a valve rotatable therein for movement to and from its open or closed position, said valve being seated when in its open or closed position and unseated during movement to or from its open or closed position, a cam formed upon one end and exteriorly

of the casing, a cam formed separately of and independently of the casing and arranged adjacent to the cam formed on the casing, a valve stem extending from said valve through the end of the casing, a sleeve keyed to the valve stem and a pin extending from the sleeve and engaging the cams formed independently of the casing, whereby upon the rotation of the valve stem, the valve will be moved from and to its seat during movement to and from its open or closed position.



2. A valve comprising a casing having an inlet and outlet, a hollow valve open at one end corresponding to the inlet of the casing and closed at the other end and rotatable in said casing for movement to and from its open or closed position, said valve being seated when in its open or closed position by the pressure of the fluid entering the hollow valve through its open end and inlet of the casing, a valve stem extending from said valve through the end of the casing, a cam formed integral on said valve casing, an independent cam section separable from the casing and arranged adjacent to the cam formed on the casing, a pin on said valve stem engaging the cam on said valve casing and said independent cam section for moving said valve from its seat during its movement to or from its open or closed position.

3. In a valve, a casing having a gradually tapered bore or seat therein, a gradually tapered hollow valve rotatable therein for movement to and from its open or closed position, a stem extending from the valve through one end of the casing, said valve being seated against the end of the casing when in its open or closed position, a cam provided upon one end of the casing exteriorly thereof, a spider secured to the casing adjacent the cam, and having a cam face corresponding to that on the casing, a bushing secured to the valve stem and journaled within the spider and a pin formed upon the bushing and engaging the cams formed upon the casing and spider, whereby upon the rotation of the valve stem and valve, the latter will be moved from and then to its seat.

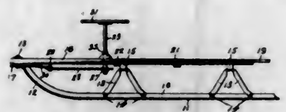
4. In a valve, a casing having a gradually tapered bore or seat therein, a gradually tapered hollow valve rotatable therein for movement to and from its open or closed position, a stem extending from the valve through one end of the casing, said valve being unseated against the end of the casing when in its open or closed positions, cam faces provided upon one end of the casing exteriorly thereof, a spider secured to the casing adjacent the cams, and having cam faces corresponding to those on the casing, a bushing secured to the valve stem and journaled within the spider and pins formed upon the bushing and engaging the cam faces formed upon the casing and spider, whereby upon the rotation of the valve stem and valve, the latter will be moved from and then to its seat.

5. In a valve, a casing having a bore or valve seat therein, a hollow valve open at one end and closed at the other and rotatable in the bore or seat in the casing for movement to and from its open or closed position, a thimble secured within one end of the casing and fitting within open end of the valve, said closed end of the valve being unseated from the adjacent end of the casing in its open and closed, or intermediate positions, a stem extending from the valve through one end of the casing, cams formed exterior of and upon one end of the casing, said cams being flattened at their ends, a bushing keyed to the valve stem, a spider secured to the casing exteriorly thereof, and forming a bearing for the bushing, said spider having cams upon the inner side thereof conforming with the cams on the casing, and pins formed upon the bushing and engaging the cams on the casing and spider and adapted upon the rotation of the valve to move said valve from and then to its seat either upon opening or closing the valve.

[Claim 6 not printed in the Gazette.]

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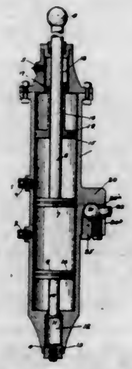
1,226,672. FLEXIBLE SLED. JAY B. JORDAN, Lock Berlin, N. Y. Filed Jan. 28, 1915. Serial No. 4,908. (Cl. 21—94.)



In a flexible sled, a pair of runners having upturned forward ends, supports connected to said runners and projecting upwardly therefrom, said supports being in rear of the upturned forward ends of the runner, cross braces secured to corresponding supports of the two runners, longitudinal brace bars fixed to said cross bars and to the forward upturned ends of the runners, a cross strip pivotally connected to said longitudinal braces and to the runners, a platform secured to the cross braces and terminating at its forward end in rear of the pivoted cross strip, a steering rod extending vertically through the longitudinal center of the platform, a two-part bracket supporting said steering rod, a bell crank lever rigidly connected to the lower end of the steering rod, the ends of said lever projecting toward the front ends of the sled and terminating laterally above the runners, and a rod connected to each end of said bell crank lever and extending across the sled to be pivotally connected to the forward end of the runner on the opposite side, the angle of such rods being such that upon turning the steering rod one of said cross rods will deflect a runner by pulling thereon while the other rod will cause a similar deflection in the same direction by pushing the same.

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1,226,673. PNEUMATIC CUSHIONING DEVICE. PETER W. KANE, Rochester, Wash., assignor of one-half to Edward N. Pearce, Rochester, Wash. Filed Sept. 30, 1915. Serial No. 53,279. (Cl. 21—105.)



1. In a device of the character described, a cylinder, a piston working therein, valve-controlled inlet openings for alternately admitting air to said cylinder at opposite sides of said piston as it is moved alternately in opposite directions, an auxiliary piston within said cylinder and



operating check at one side of said first piston, and a check valve-controlled opening in said second piston, whereby to permit air to be forced therethrough in one direction.

2. In a device of the character described, a cylinder with piston working therein, valve-controlled inlet openings for alternately admitting air to said cylinder at opposite sides of said piston as it is moved alternately in opposite directions, two auxiliary pistons within said cylinder at the opposite sides of said first piston, and a valve-controlled opening through each of said auxiliary pistons, whereby to permit air to be forced therethrough in one direction.

3. In a device of the character described, a cylinder with supporting means therefor, a piston with piston rod working therein and adapted to be connected to a relatively movable member, valve-controlled inlet openings for alternately admitting air to said cylinder at opposite sides of said piston as it is moved alternately in opposite directions, and one or more auxiliary pistons movably mounted within said cylinder and provided with valve-controlled openings therethrough, said auxiliary pistons being adapted to coöperate with said main piston for controlling the movement of said main piston within said cylinder.

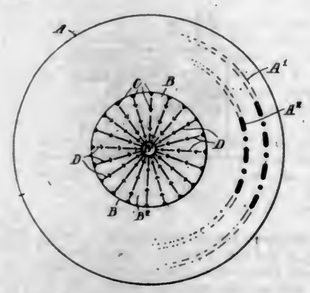
4. A device of the character described comprising a cylinder provided with means for movably supporting the same, a piston with piston rod therein, adapted to be connected with a member movable relative to said cylinder, said cylinder being provided with valve-controlled inlet and outlet openings, and one or more auxiliary pistons operating within said cylinder and adapted to be moved by said main piston, said auxiliary pistons being provided with valve-controlled openings therethrough, whereby to permit the passage of air therethrough in one direction, substantially as described.

5. A cushioning device of the character shown and described, comprising a cylinder provided with means for supporting the same, and having valve-controlled inlet openings spaced apart longitudinally thereof, and also having valve-controlled outlet openings at the opposite ends thereof, a piston and piston rod working in said cylinder and adapted to be connected with a member movable relative to said cylinder, and one or more auxiliary pistons within said cylinder and adapted to coöperate with said main piston, said auxiliary pistons having valve-controlled openings therethrough, whereby to permit air to pass therethrough in one direction, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,674. CENTERING-DIRECTOR FOR RECORD-DISKS. JOSEPH MOSES WARD KITCHIN, East Orange, N. J. Filed Mar. 6, 1916. Serial No. 82,335. (Cl. 274—39.)




1. The combination with a talking machine turn-table having a projecting axial shaft for centering a centrally perforated record-disk, of means for visually directing the centering and placing of record-disks on the projecting shaft, which means is located on the exposed upper surface of said turn-table in close juxtaposition to said shaft and leading thereto and pointing to the center of said shaft.

[Claims 2 to 4 not printed in the Gazette.]

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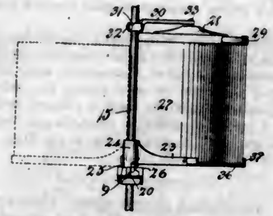
1,226,675. LAWN-MOWER SHARPENER. HENRY F. W. KOHLBACH, New Bedford, Mass. Filed May 27, 1916. Serial No. 100,261. (Cl. 76—82.)



A sharpening device for mowing machines, comprising in combination, a body provided with a sharpening surface and consisting of upper and lower plates adapted to embrace the upper and lower sides of the stationary blade of a mowing machine, said upper and lower plates carrying the sharpening surface, a web joining said plates, and an eccentric cam journaled in the lower plate and mounted to draw the upper plate into close contact with the upper face of said stationary blade, by direct action against the lower face of the latter.

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1,226,676. DISPLAY APPARATUS. HARALD KOREN, Cleveland, Ohio. Filed Nov. 19, 1910, Serial No. 593,154. Renewed Feb. 14, 1916. Serial No. 78,330. (Cl. 211—14.)



1. The combination, with a frame, of an upright in operative relation to said frame, an arm supported by said upright and adapted to project into the frame, said arm being adjustable in a horizontal plane, a cover carried by said arm, a shelf rotatably supported by said upright and arranged to be swung into the frame to a position beneath the cover and outside of the frame, and means whereby the shelf will be automatically moved in a vertical direction as it is swung on the upright.

2. The combination of a cover support, a cover carried by said support, a rotatably supported shelf arranged to be swung to a position beneath and away from the cover, and means whereby the shelf will be automatically moved in a vertical direction as it is swung on its support.

3. The combination, with a frame, of an upright supported in operative relation to said frame, a cover supported by said upright within said frame, a shelf rotatably supported on said upright, and means coöperating with the shelf support, whereby the shelf is automatically elevated when swinging into the frame and beneath the cover and is automatically lowered when swinging away from its position beneath the cover and away from the frame.

4. The combination, with an upright, of a cover support, a shelf having a sleeve mounted on the upright, and a collar carried by the upright and forming a bearing for the sleeve, the collar being provided with an inclined bearing surface and the sleeve having a rounded portion adapted to engage such bearing surface, whereby the shelf will be raised and lowered by its rotation on the upright.

5. The combination, with an upright, of a cover support, a cover carried thereby, a revoluble shelf having a sleeve mounted on said upright, the lower surface of the sleeve being provided with a downwardly extending rounded projection, a collar carried by said upright and

having on its upper surface an inclined track, a rounded projection carried by the sleeve and adapted to engage said track, stops carried by the collar, and a depending projection carried by the sleeve and adapted to be engaged by one of the stops.

[Claims 6 to 18 not printed in the Gazette.]

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1,226,677. PACKING-CASE. JOHN A. LAFORE, Ardmore, Pa. Filed Oct. 5, 1916. Serial No. 123,810. (Cl. 206—59.)



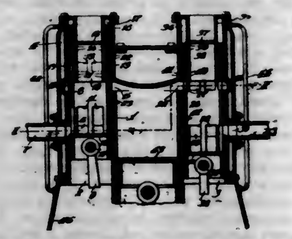
1. The combination with paper board tubes, of end closures therefor, spirally wound material inclosed and expanded within said tubes, a severable band attached to and bridging the adjacent ends of said tubes, the ends of said tubes being spaced apart to form a circumferential channel between said tubes and between said band and said material, and a string disposed in said channel for severing said band.

2. The combination with paper board tubes, of end closures therefor, means within said tubes supporting their adjacent end, a severable band attached to and bridging the adjacent ends of said tubes, the ends of said tubes being spaced apart to form a circumferential channel between said tubes and between said band and said means, and a string disposed in said channel for severing said band.

3. The combination with paper board tubes, of end closures therefor, spirally wound material inclosed and expanded within said tubes, a severable band attached to and bridging the ends of said tubes, the ends of said tubes being spaced apart to form a channel beneath said band, and a string disposed in said channel for severing said band, an end of said string protruding from the band and being unlooped.

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1,226,678. INTERNAL-COMBUSTION ENGINE. ELMER C. LONG, Hannibal, Mo. Filed Apr. 1, 1913. Serial No. 758,168. (Cl. 123—86.)



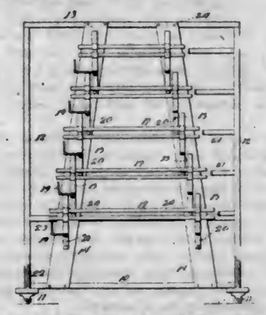
1. In an internal combustion engine, the combination of a valve chamber, and a crank chamber, a reciprocably mounted hollow valve located in said valve chamber, a depending cylinder head for said valve chamber, said cylinder head adapted to engage the interior of one end of said valve, an annular chamber formed between said depending cylinder head and said valve chamber, and a passageway leading from said crank chamber to said annular chamber.

2. In an internal combustion engine, the combination of a valve chamber, and a crank chamber, a reciprocably mounted hollow valve located in said valve chamber, a depending cylinder head for said valve chamber, a pocket formed in the depending end of said cylinder head, said cylinder head adapted to engage the interior of one end of said valve, an annular chamber formed between said depending cylinder head and said valve chamber, and a passageway leading from said crank chamber to said annular chamber, said pocket of said cylinder head being in communication with the interior of said valve.

3. In an internal combustion engine, a valve chamber, a reciprocally mounted valve open at one end located in said chamber, a cylinder head for said valve chamber, said cylinder head depending downwardly into the open end of said valve, a chamber formed in said cylinder head, said chamber being in communication with the open end of said valve, an annular chamber formed between said cylinder head and the wall of said valve, and a passageway leading from one end of said valve chamber adapted to form means of communication to the other end of said valve chamber.

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1,226,679. DISPLAY-RACK. WILLIAM J. MADOLE and CLEMENT V. KRIDER, Paris, Tenn. Filed Aug. 15, 1916. Serial No. 115,042. (Cl. 211—18.)

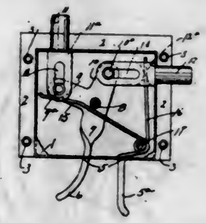


1. In a device of the class described, a support, a plurality of divided holders connected to said support, the terminals of each support being bent into a loop, a guide rod engaged in each loop and forming guides for the material in the holders, a stop for each of said holders, a brace device for each of said holders each connected at one end to said support, and a fastening device connecting the other end of each brace to one of the holders and to one of the stops.

2. In a device of the class described, a support, a plurality of divided holders arranged in pairs and connected to said support, the terminals of each support being bent into a loop, and a guide rod engaged in each opposite pair of said loops and forming guides for the material in the holders.

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1,226,680. WINDOW-LOCK. WILLIAM M. MANNING, Seattle, Wash. Filed Mar. 6, 1915. Serial No. 12,536. (Cl. 16—52.)

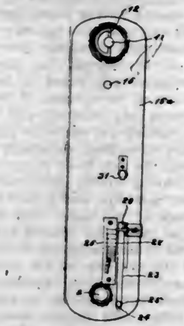


In a sash lock, the combination of a casing formed with openings in its side walls, a substantially T-shape lever pivoted in the casing, one member thereof projecting through one of the openings to provide a thumb piece, slidable bolts arranged at right angles to each other and each bolt having a slot in its inner portion, the outer end of each bolt being reduced to form a shoulder, the reduced ends extending through openings in the casing and the shoulders limiting the outward movement of said bolts, pivots extending through the slots in the bolts to connect same with right angle portions of the T-shape lever, springs mounted on a post in the casing, one of said springs engaging behind one of the bolts to normally project it outwardly, the other said spring engaging in a groove formed in the companion bolt to normally project same outwardly, and a finger piece extending from the casing in spaced relation to the thumb piece, whereby when the thumb and finger pieces are grasped, the bolts will be withdrawn against the tension of the springs.



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1,226,681. FILM-WINDER FOR CAMERAS. CLARENCE H. MANSFIELD, El Paso, Tex. Filed Apr. 6, 1916. Serial No. 89,407. (Cl. 242—71.)



1. In a film winding attachment, a spool upon which the exposed portions of the film are to be wound, a gear mechanism for driving said spool in one direction, a rack bar in mesh with one of the gears of said mechanism, an operating pin secured to the rack bar and projecting beyond the camera casing, a movable stop arranged to limit successive movements of the operating pin and rack bar and a scale in proximity to the movable stop, said scale indicating the successive positions of the stop.

2. In a film winding attachment for cameras, a spool for receiving the exposed films, a gear wheel controlling the movement of said spool, a rack and bar in mesh with said gear wheel, an operating pin secured to the rack bar and projecting beyond the camera casing, a slotted scale positioned adjacent to said pin and a movable indicator sliding on said scale and serving to limit the movement of the pin in said scale.

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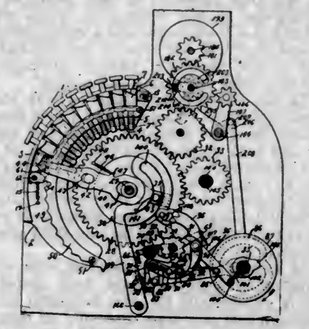
1,226,682. CASH-REGISTER. HAAKON A. MARTIN, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed June 7, 1913. Serial No. 772,226. (Cl. 235—2.)

1. In a machine of the class described, the combination with an accounting device; of an actuator therefor capable of moving to either side of normal position; a driving member for said actuator having a movement of invariable extent to either side of normal position; and manipulative means for determining the direction of movement of said driving member.

2. In a machine of the class described, the combination with an accounting device; of an actuator therefor, capable of moving differentially to either side of normal position; a driver for said actuator; and a key having connections to determine the direction of movement of said driver.

3. In a machine of the class described, the combination with a driven member, having a normal position and capable of differential movement to but one side or the other of normal position at each operation of operating means for driving said member; of a single key for determining the direction of movement of said member.

4. In a machine of the class described, the combination with a totalizer; of differential actuators therefor having a normal position and constructed to be moved in one direction from normal position to enter items on the totalizer and in the opposite direction from normal position to turn the totalizer to zero.

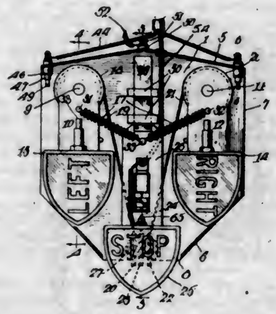


5. In a machine of the class described, the combination with a driven member capable of differential movement to either side of normal position; of operating means for driving said member; connecting means intermediate said member and said operating means for controlling the direction of movement of said driven member; and a single key for controlling said connecting means.

[Claims 6 to 72 not printed in the Gazette.]

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1,226,683. ANNUNCIATOR. ROBERT R. METZ, Chicago, Ill. Filed July 24, 1916. Serial No. 110,865. (Cl. 40—67.)




1. An annunciator comprising a casing, an annunciating member pivoted therein, a second annunciating member also pivoted therein, said annunciating members being movable in directions opposite to each other, means to cause said annunciating members to swing about their respective pivots and thereby become exposed, and a third annunciating member which is slidable within said casing, means being provided to slide said last-mentioned annunciating member, whereby to expose the same and during the exposure thereof, to positively hold said first and second mentioned annunciating members in retracted position.

2. An annunciator comprising a casing, an annunciating member pivoted therein, a second annunciating member also pivoted therein, said annunciating members being movable in directions opposite to each other, means to cause said annunciating members to swing about their respective pivots and thereby become exposed, a third annunciating member which is slidable within said casing, means being provided to slide said last-mentioned annunciating member, thereby to expose the same, and a spring connecting said first and second annunciators to the third,

whereby outward movement of said third annunciator positively retracts the other two annunciators.

3. In an annunciator the combination with right and left annunciating arms pivotally suspended, and means for swinging said arms outwardly on their pivots, of a third annunciating arm movable downwardly, means for drawing said third arm downwardly, and a spring connected to each of said right and left arms at one end and at the other end to said third arm whereby movement downwardly of said third arm tenses said springs.

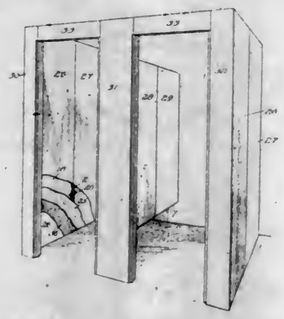
4. In an annunciator the combination with right and left annunciating arms suspended upon pivots disposed in substantially the same horizontal plane, and means for swinging said arms outwardly on their pivots, of a third slidable annunciating arm movable vertically, two springs joined to said third arm by one end and at their outer ends joined respectively to said right and left arms, said springs maintaining all three arms normally in retracted position, and means for sliding the said third arm whereby said springs are tensed.

5. In an annunciator the combination with right and left annunciating arms suspended from spaced pivots which lie in substantially the same horizontal plane, and means for swinging said arms outwardly on their pivots, of a third annunciating arm positioned between the right and left arms and slidably mounted for vertical reciprocation, a pair of springs each secured at one end to said third arm and secured at their outer ends respectively to said right and left arms at points above the point of connection with said third arm, said springs normally maintaining all three arms in retracted position, and means for sliding said third arm downwardly.

[Claim 6 not printed in the Gazette.]

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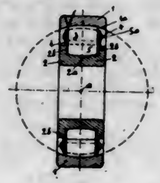
1,226,684. TOILET INCLOSURE OR BOOTH. GEORGE R. MEYERCORD, Chicago, Ill. Filed May 31, 1913. Serial No. 770,838. (Cl. 72—46.)



1. A booth or inclosure comprising four upright corner angle irons, intermediate uprights of structural iron, transverse members connecting the uprights together, plaster board of less thickness than the width of said angle irons arranged between and secured to corresponding flanges thereof to form a solid wall, plaster supports on opposite sides of said plaster board of a thickness sufficient only to conceal the metallic structure, and sanitary slabs or panels cemented on both sides of the walls and wholly concealing the plaster.

2. A booth or inclosure open at the top, comprising upright corner angle irons, intermediate uprights of structural iron, transverse members connecting the uprights together, plaster board of less thickness than the width of said angle irons arranged between and secured to corresponding flanges thereof to form solid walls having free upper edges, plaster on opposite sides of said plaster board of a thickness sufficient only to conceal the metal structure, and sanitary slabs or panels cemented on both sides of the walls and extending from the free top edge of the same to the bottom and wholly concealing the plaster.

1,226,685. ROLLER-BEARING. JOHANN H. MODLER, Schweinfurt, Germany. Filed Feb. 8, 1913. Serial No. 747,084. (Cl. 64—62.)



1. An oscillatory bearing having inner and outer rings provided with opposed raceways, the raceway of the outer ring being curved transversely on an arc described around the transverse axis of the bearing, the raceway of the inner ring being correspondingly curved but in a direction reverse to said curvature of the raceway of the outer ring, and rollers fitted between said raceways and being curved corresponding to the curvature of the outer ring, the inner ring having shoulders extending outwardly beyond its raceway and embracing the side faces of the rollers.

3. An oscillatory bearing having inner and outer rings provided with opposed raceways, and rollers between said raceways, the raceway of the outer ring being curved transversely on an arc described around the transverse axis of the bearing, the rollers being curved corresponding to the curvature of the raceway of the outer ring, the inner ring having parallel shoulders extending beyond its raceway, said shoulders being opposed to and embracing the side faces of the rollers, and ring-like members between said rings at the ends of said rollers, said members having their outer surfaces curved to correspond to the transverse curvature of the raceway of the outer ring and coactive therewith to permit said members to rock within the outer ring and to limit end thrust of said rollers within said rings.

6. A self-alining roller bearing comprising, in combination, an outer race having a concave inner surface; an inner race having its outer surface formed with a continuous, peripheral groove whose bottom wall is concaved reversely to the inner surface of the outer race, and with continuous, vertical flanges at the opposite edges of said groove; a series of substantially-barrel-shaped rollers interposed between said races and fitting in said groove, with their ends abutting against said flanges, whereby the latter will prevent endwise movement and resist end thrust of said rollers; and a cage wherein said rollers are housed.

[Claims 2, 4, and 5 not printed in the Gazette.]

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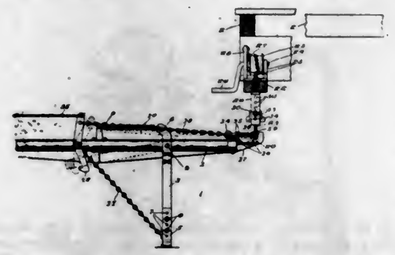
1,226,686. CUTTER-HEAD. CHARLES P. MORTON, Cincinnati, Ohio. Filed Nov. 4, 1916. Serial No. 129,414. (Cl. 144—219.)



A rotary cutter comprising a body portion having lugs projecting from its end, said lugs having opposed mounting faces spaced apart a distance equal to the thickness of the cutters, cup-shaped cutters with annular cutting edges the diameter of which is substantially equal to the length of the radius of the cutter head, and means for mounting the cutters upon the mounting faces in alinement with each other and with their inner walls in contact with each other.



1,226,687. HITCH FOR TRAILING VEHICLES. EDWARD MOWRY, Sterling, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Sept. 20, 1913. Serial No. 790,942. (Cl. 21—75.)



1. In combination, a plurality of trailing units, and a draft tongue carried on said trailing unit attached to the leading unit, a normally operative support pivoted on said tongue and normally disposed in substantially parallel relation therewith during transport, and means for releasing said tongue from said leading unit and said support from its elevated position in one operation.

2. In a draft connection, in combination, a plurality of movable units, a draft tongue on one of the same, a draft connection on the other thereof operatively connected thereto, a support pivoted on said tongue, and means normally attaching said tongue to said draft connection and supporting said support in a plane substantially parallel to said tongue operable from a remote point to release said tongue and support.

3. In a draft attachment, a draft tongue, a support for said tongue, a bracket carried on said tongue, a plunger reciprocably mounted in said bracket, a latch holding said support in elevated position, and operative connections between said plunger and latch actuating one of the same upon actuation of the other.

4. In a draft attachment, a draft tongue, a support pivoted thereon, resilient means normally tending to throw said support to operative position, a bracket carried on said tongue, a plunger reciprocably mounted in said bracket, releasable means for holding said support in elevated position, and operative connections between said plunger and means actuating one of the same upon actuation of the other.

5. In a draft attachment, a draft tongue, a support pivoted thereon adjacent the end of the same, resilient means connecting the pivoted end of said support and said tongue, a bracket carried on the end of said tongue, a plunger reciprocably mounted in said bracket, a latch holding said support in elevated position, and operative connections between said plunger and latch actuating one of the same upon actuation of the other.

[Claims 6 to 15 not printed in the Gazette.]

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1,226,688. UNIVERSAL JOINT. CHARLES L. NEDOMA, Detroit, Mich. Filed Mar. 17, 1916. Serial No. 84,769. (Cl. 74—19.)



1. A pivotal joint comprising two members, one of which is capable of swinging in respect to the other, each of the members being integral at the joint, one of the members having a pair of alined oppositely disposed perforations at the joint, and the other member having a pair of alined oppositely disposed projections thereon each of which is received in a corresponding perforation in the first mentioned member, the members being of such relative cross section as to be incapable of removal from one another, and bearings interposed between the projections and the walls of the perforations.

2. A pivotal joint comprising two members, one of which is capable of swinging in respect to the other, each of the members being integral at the joint, one of the members having a pair of alined oppositely disposed perforations at the joint, the other member having a pair of alined oppositely disposed projections thereon each of which is received in a corresponding perforation in the first mentioned member, bearings interposed between the projections and the walls of the perforations, means for closing the outer ends of the perforations, said joint also including means for supplying lubricant to the outer portions of the perforations from a common source.

3. A pivotal joint comprising two members, one of which is capable of swinging in respect to the other, each of the members being integral at the joint, one of the members having a pair of alined oppositely disposed perforations at the joint, the other member having a pair of alined oppositely disposed projections thereon each of which is received in a corresponding perforation in the first mentioned member, bearings interposed between the projections and the walls of the perforations, the members being of such relative cross-section as to be incapable of removal from one another, and means for closing the outer ends of the perforations.

4. A pivotal joint comprising two members, one of which is capable of swinging in respect to the other, each of the members being integral at the joint, one of the members having a pair of alined oppositely disposed perforations at the joint, the other member having a pair of alined oppositely disposed projections thereon each of which is received in a corresponding perforation in the first mentioned member, bearings interposed between the projections and the walls of the perforations, means for closing the outer ends of the perforations, one of the members including a storage passage for lubricant whereby the outer portions of the perforations are joined.

5. A pivotal joint comprising two members, one of which is capable of swinging in respect to the other, each of the members being integral at the joint, one of the members having a pair of alined oppositely disposed perforations at the joint, the other member having a pair of alined oppositely disposed projections thereon each of which is received in a corresponding perforation in the first mentioned member, the members being of such relative cross-section as to be incapable of removal from one another, and a plurality of bushings interposed between each of the projections and the wall of the corresponding perforation.

[Claims 6 to 18 not printed in the Gazette.]

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1,226,689. UNIVERSAL JOINT. CHARLES L. NEDOMA, Detroit, Mich. Original application filed Mar. 17, 1916, Serial No. 84,769. Divided and this application filed July 15, 1916. Serial No. 109,425. (Cl. 29—148.)



1. The process of forming pivotal joints which consists in casting the two members to be joined in one piece, separating the members from one another by cutting an annular groove in the casting, and inserting a bearing in the groove.

2. The process of forming pivotal joints between two members, one of which includes oppositely extending alined transverse projections and the other of which is perforated to receive the projections and is of such cross-section as to preclude the first member from being removed therefrom, which consists in casting the two members to be joined in one piece, separating the members by cutting alined annular grooves in the casting at points

corresponding to the location of the projections, and inserting bearings in the grooves.

3. The process of forming universal joints which consists in casting the driving and driven and connecting members to be joined in one piece, separating the members one from another by cutting annular grooves in the casting at points corresponding to the location of the joints between said members and inserting bearings in the grooves.

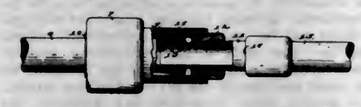
4. The process of forming universal joints which consists in casting the driving and driven and connecting members to be joined in one piece, separating the members one from another by cutting annular grooves in the casting at points corresponding to the location of the joints between said members, the joints of each member being in alinement in pairs and of such cross sections as to preclude the component members from being separated, and inserting bearings in said grooves.

5. The process of forming pivotal joints between two members, one of which includes oppositely extending alined transverse projections and the other of which is perforated to receive the projections and is of such cross-section as to preclude the first member from being removed therefrom, which consists in casting the two members to be joined in one piece, separating the members by cutting alined annular grooves in the casting at points corresponding to the location of the projections, inserting bearings in the grooves, and sealing the outer ends of the grooves.

[Claims 6 to 14 not printed in the Gazette.]

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1,226,690. PIPE-FITTING. MANNING L. NIX, Oklahoma, Okla. Filed Mar. 13, 1916. Serial No. 83,809. (Cl. 137—28.)



1. In a pipe joint, a tubular body portion having one of its ends slitted and adapted to receive a lead pipe, means for closing the slitted end of the body forcibly against the lead pipe, means at the opposite end of the tubular body for forcing a nipple connection into the end of the lead pipe, the nipple connection being adapted to attach to an iron pipe.

2. In a pipe joint, a tubular body portion having one of its ends slitted and adapted to receive a lead pipe, a nut or sleeve screw-threaded to the slitted end of the body portion and adapted to forcibly close it onto the lead pipe, a nipple connection screw-threaded into the opposite end of the body portion whereby it may be forced into the end of the lead pipe held by the slitted end of the body portion, the nipple connection being adapted to be joined to an iron pipe.

3. In a pipe joint, a tubular body portion adapted to be slipped onto the end of a lead pipe, means for clamping the body portion in place on the lead pipe, a nipple connection screwthreaded in the end of the body portion, said nipple connection having a tapered screwthreaded end adapted to be screwed into the end of the lead pipe in the body portion, the nipple connection being adapted to be joined to an iron pipe.

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1,226,691. DRIPLESS STRAINER. HAROLD E. NOCK, North Attleboro, Mass., assignor to Paye & Baker Manufacturing Company, North Attleboro, Mass., a Corporation of Massachusetts. Filed Sept. 9, 1915. Serial No. 49,790. (Cl. 210—16.)

1. In a strainer, the combination with a bowl formed with a spout at one end with a flange extending around its rim and along the sides of the spout, of a convex guard surmounting the top of the bowl and spout with its edge secured to the flanges thereof, a screen arranged within the bowl beneath the guard adjacent the spout, and a handle attached to the side of the bowl.

2. In a strainer, the combination with a bowl formed with a spout and a flange extending around the rim of the bowl and along the sides of the spout, of a cowl-like guard having its edge crimped around the flange on the rim of the bowl and the sides of the spout, a screen arranged within the bowl beneath the guard, and a handle projecting from the side of the bowl.



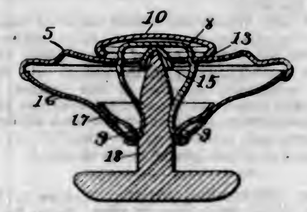
3. In a strainer, the combination with a bowl formed with a spout with a flange projecting from its rim and the sides of the spout, of a crowned guard surrounding the rim of the bowl and extending above the top of the spout with its edge crimped around the flange on the bowl and the sides of the spout, a screen sprung into place between the top of the guard and the bottom of the bowl with its edges abutting the side-walls thereof, and a handle on the side of the bowl.

4. As a new article of manufacture, a strainer formed with two main portions comprising a bowl-like vessel having a spout at one end, and a cowl-like guard extending around the rim of the bowl and over the top of the spout and secured thereto by fastening the edges of the parts together, said bowl and guard formed with projections on the side fastened together to provide a tube-like ferrule, a handle secured in said ferrule, and a screen held within the bowl beneath the guard and in front of the spout.

5. In a strainer, the combination with a bowl-like vessel formed with a spout at one end and a depression in its bottom, of a guard overhanging a portion of the interior of the vessel and formed with a shouldered recess on its underside, and a section of screen-cloth fitted to the interior of the vessel with its edges sprung into place in the depression in its bottom and the shouldered recess in the guard.

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1,226,692. BUTTON. JOHN VASHE PILCHER, Louisville, Ky. Filed Feb. 17, 1916. Serial No. 78,862. (Cl. 24—110.)



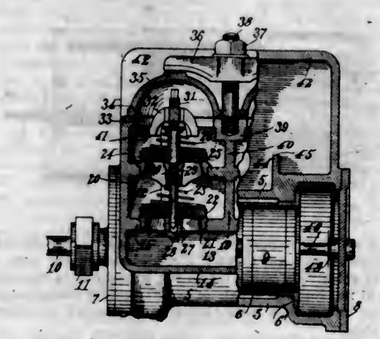

In a button, a head slotted through the top; a stud to enter the bottom; a key having two legs passing through the top to engage the stud, each leg of the key having a projecting hip near the under side of the top.

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1,226,693. WATER-BOX FOR PUMPS. AUGUSTINE J. POCOCK, Dayton, Ohio. Filed Apr. 14, 1916. Serial No. 91,233. (Cl. 103—76.)

1. In a pump of the type specified, a cylinder, a housing arranged along one side of said cylinder and having valve decks, division walls dividing the space therein into a suction chamber, pulsation chambers and discharge chambers, vertically alined suction and discharge valves cooperating with seats in said valve decks, means for maintaining said valves in proper position including a stem constructed of acid-resisting material penetrating said valves and disconnected therefrom, and semi-globular caps mounted on said housing above said valves adapted to permit access to be had to said valves and forming shock chambers for the liquid passing through the valves.





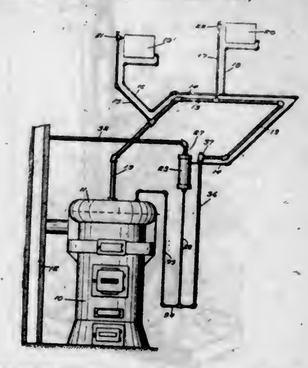

2. In a pump of the type specified, a cylinder, a housing arranged along the side of said cylinder and having valve decks, division walls dividing the space therein into a suction chamber, pulsation chambers and discharge chambers, openings in the top of said housing, valve seats mounted in said valve decks, valves coöperating with said seats, stems constructed of acid-resisting material upon which said valves are slidable, yokes adapted to hold said valve stems in position, and semi-globular caps mounted above the openings in the top of the housing and forming shock chambers for the water passing through the valves.

3. In a pump of the type specified, a cylinder, a housing mounted along one side of said cylinder having valve decks, division walls dividing the space within said housing into a suction chamber, pulsation chambers and discharge chambers, openings in the top of said housing, suction and discharge valve seats mounted in said valve decks, suction and discharge valves mounted on said seats, stems upon which said valves are freely movable, said stems being constructed of acid-resisting material, yokes within the openings in the top of the housing, said yokes having their ends formed to engage the edges surrounding the said openings, screws mounted in said yokes to hold said stems in position, and caps above said openings and forming shock chambers for the water passing through said valves.

4. In a pump of the type specified, a cylinder having its ends increased in diameter to form chambers thereat, one of said increased diameters forming an annular flange seat, a housing arranged at the side of said cylinder having a vertical division wall dividing the space therein into suction, pulsation and discharge chambers, the pulsation chamber being in communication with the cylinder chambers, a lining for said cylinder having one end flanged to fit the flange seat at one end of said cylinder, bolts engaging said flanges with their outer ends resting in apertured bosses in one of the cylinder heads, binding screws in said apertured bosses engaging said bolts, suction and discharge valves within said pulsation and discharge chambers, seats for said valves having axial apertured bosses, one of which has an annular shoulder at the entrance to the opening therein, a stem common to both valves and upon which said valves are slidably mounted, said stem extending through said bosses and having a shoulder which engages the annular shoulder in one of said bosses, a yoke spanning the upper portion of the discharge chamber and having its ends formed to engage the upper end of the housing, said yoke having a centrally disposed threaded opening, and a screw penetrating said opening and engaging the upper end of said stem to rigidly maintain the stem in position, substantially as described.

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1,226,694. HEATING SYSTEM. RAY S. PORTER, Minneapolis, Minn., assignor to Belden-Porter-Gray Company, Minneapolis, Minn., a Corporation. Filed Jan. 10, 1916. Serial No. 71,322. (Cl. 237—67.)



1. A heating system comprising a generator for steam or vapor, a system of feed and return pipes each opening into the top of the generator above the water line therein, and a water trap extending to a point below said water line with which both the feed and return flow pipes are connected and to which the condensate from both lines is discharged.

2. A heating system comprising a generator for steam or vapor, a system of feed and return pipes each opening into the top of the generator above the water line therein, and a water trap extending to a point below said water line with which both the feed and return flow pipes are connected, said feed and return flow pipes being severally connected with the trap at respectively different points.

3. A heating system comprising a generator for steam or vapor, a system of feed and return pipes each opening into the top of the generator above the water line therein, a water trap extending to a point below said water line with which both the feed and return flow pipes are connected, and a blow-off pipe connected with the trap and open to atmosphere.

4. A heating system comprising a generator for steam or vapor, a system of feed and return pipes each opening into the top of the generator above the water line therein, a water trap extending to a point below said water line with which both the feed and return flow pipes are connected, a blow-off pipe connected with the trap and open to atmosphere, and a chimney having a flue with which the waste pipe of the generator and the blow-off pipe connect.

5. A heating system comprising a generator for steam or vapor, a feed pipe opening from the top of said generator, and having branches communicating with the several radiators, a return pipe in communication with the several radiators, said return pipe also entering the generator at the top thereof, and a coil of said pipe being formed to extend below the water line of the generator and providing a water trap in said return pipe.

[Claims 6 to 10 not printed in the Gazette.]

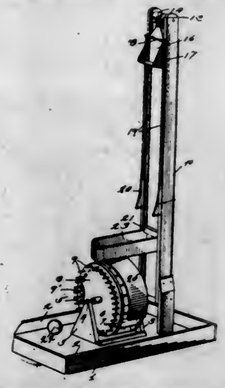
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1,226,695. GAME. ALBERT F. QUIRAM, Varna, Ill. Filed Nov. 6, 1916. Serial No. 129,818. (Cl. 46—56.)

1. A game comprising a base, a drum rotatably mounted thereon, a post rising from the base, a vertically movable weight controlled, carrier associated with the base for receiving a ball, said ball being dislodged from the carrier when said carrier is in its lowermost position, and means for directing the ball to the drum for rotating the drum.

2. A game comprising a base, a drum rotatably mounted therein, a post rising from the base, said post having a pair of grooves formed therein, a carrier slidably mounted in one of the grooves, a weight similarly mounted in the

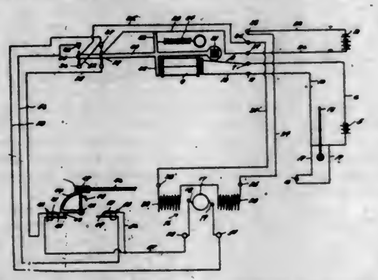
other groove, a cord connecting the carrier and weight, a drum rotatably mounted on the base, a trough overhanging the drum, means supported by the post for positively



causing the carrier to tilt to discharge a ball in the carrier and project the same into the trough, whereby the ball is directed to the drum to rotate the same, as and for the purpose set forth.

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**1,226,696. THERMOSTAT-OPERATED CIRCUIT.** WELLINGTON A. RAMSBUR, Gainesville, Ga. Filed Mar. 9, 1916. Serial No. 83,148. (Cl. 172—288.)

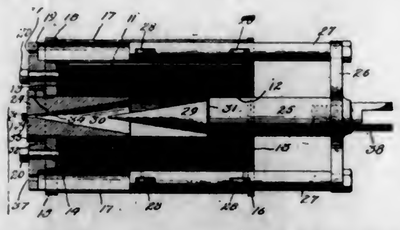


In apparatus of the character described, a source of current, a movable member, a pair of double actuating contacts carried by the movable member, means electrically connecting the pair of double acting contacts with the opposite poles of the source of current, a motor, a pair of stationary contacts arranged upon one side of the double actuating contacts and adapted to be engaged thereby, wires connecting the pair of stationary contacts with the opposite poles of the motor for supplying the current therethrough in opposite directions, a second pair of stationary contacts arranged upon the other side of the double acting contacts to engage therewith, means electrically connecting one contact of the second pair with one contact of the first pair, a wire connected with the other contact of the second pair and connected with one of the wires which is connected with the motor, switches connected in the last two named wires, a member driven by the motor to actuate the switches, and means to move the member in opposite directions.

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**1,226,697. SOLENOID FOR DRIVING ADDING-MACHINES.** FRANK C. RINSCHE, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 2, 1913. Serial No. 792,941. (Cl. 175—21.)

1. A solenoid comprising a coil, a movable core projecting into the said coil, a cross-head on said core, a pair of guide rods on opposite sides of the coil connected to said cross-head and tubular guides connected to the coil and receiving said rods.

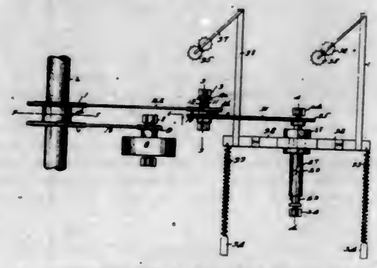


2. A solenoid comprising a coil, a movable core extending through one end thereof, a cross-head on the core, a pair of guide rods connected to the cross-head on opposite sides of the coil and a pair of tubular guides connected to the coil on opposite sides thereof, and adapted to receive said rods.

3. A solenoid comprising a coil, plates 15, 16 arranged at opposite ends of said coil, tubular guides 17—17 extending between and connected to said plates, guide rods 27 entering said guides, and a cross-head 26 connected to said movable core and guide rods.

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**1,226,698. MECHANISM FOR AUTOMATICALLY OPENING AND CLOSING CAR-DOORS.** ORVILLE E. SAHOLT, Fergus Falls, Minn. Filed Dec. 21, 1915. Serial No. 68,064. (Cl. 268—7.)



1. In combination with a car having a door, means for holding the door closed while the car is moving, including a rotatable pulley operable when said car is moving, a counter-shaft connected with said pulley, a clutch in said connection operable when the pulley is rotated, a door operating frame slidably mounted on the shaft adapted to close the door when operated in one direction by the pulley, and means for moving the same in the opposite direction when the pulley is stopped to open the door.

2. In combination with a car having a door, means for holding the door closed while the car is moving, including a pulley rotatable forward when the car is moving, a fly-wheel operatively connected with the pulley to impart additional limited forward motion thereto as the car stops, means for imparting a limited reverse movement to the pulley when the same closes its forward movement, a counter-shaft connected with said pulley, a clutch in said connection operable when the pulley is rotated forwardly and releasable when the movement is stopped and reversed, a door operating frame slidably mounted on the shaft, and adapted to close the door when operated in one direction by forward motion of the pulley, and means for moving the frame in the opposite direction when the pulley is stopped to open the door.

3. In combination with a car having a door and an axle, the axle provided with a slot extending partly around its periphery, a pulley mounted on said axle, a pin connecting the pulley with the axle through the slot, a fly-wheel connected to the pulley to impart motion to the same when the axle is stopped, means for imparting a limited reverse movement to the pulley when the same closes its forward movement, a counter-shaft connected with said pulley, a clutch in said connection operable when the pulley is rotated forwardly and releasable when said movement is stopped and reversed, a door operating frame slidably mounted on the shaft and adapted to close the door when operated in one direction by the pulley, and means for moving the frame in the opposite direction when the pulley is stopped to open the door.

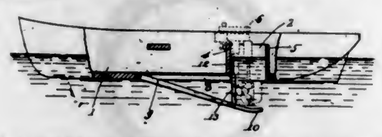
4. In combination with a car having a door, means for holding the door closed when the car is moving, said holding means including a clutch mechanism comprising an arbor having a spiral groove therein, a driving member engaging said arbor and groove and a driven member adapted to engage said driving member when the car is moving forward, a spring for disengaging said members as the car is stopped, a counter shaft connected with said driven member, a door operating frame slidably mounted on the shaft and adapted to move in one direction when the shaft is rotated by engagement between the driving and driven members, and means for moving the frame in the opposite direction when the members are disengaged.

[Claims 5 to 7 not printed in the Gazette.]



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**1,226,699. BOAT.** FREDERICK L. SAUNDERS, Green Bay, Wis. Filed Apr. 4, 1916. Serial No. 88,783. (Cl. 115—42.)



1. In combination with a boat, a V-shaped well with the apex toward the stern, said well being open at its upper and lower ends and adapted to receive a motor, a propeller guard pivotally secured to the boat, and means within said well for locking said guard in operative and inoperative position.

2. A boat having a V-shaped motor receiving well extending upward from the bottom thereof and having an opening in its bottom, a propeller guard pivotally secured to the keel of the boat and extending with an upwardly curved end past the middle of said well, and means within said well for locking said guard in operative and inoperative position respectively.

3. In combination with a boat, a motor receiving well open at its lower and upper ends, a propeller guard pivotally secured to the boat, a sliding bar within said well adapted to be adjusted in vertical direction, arms connecting said guard to said sliding bar, and means for locking said sliding bar in its upper and lower positions respectively.

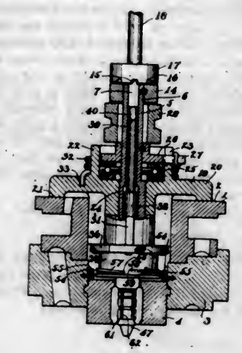
4. In combination with a boat, a motor receiving well open at its lower and upper ends; a propeller guard pivotally secured within a recess in the keel of the boat, said recess originating near the bow and opening into said well, and means for locking said guard in operative position and for securing said guard in a position where it is received within the recess in the keel.

5. In combination with a boat, a motor receiving well open at its upper and lower ends, a propeller guard pivotally secured in a recess provided at the under side of the boat, said guard extending past the center of said well and being adapted to enter said well with its free end when in the inoperative position, a sliding bar within said well adapted to be adjusted in vertical direction, means for guiding said sliding bar, arms connecting said sliding bar with said guard, and manually operative means for locking said sliding bar in its upper and lower position respectively.

[Claim 6 not printed in the Gazette.]

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**1,226,700. BOTTLE-NECK MOLD-ROLL APPARATUS.** SIGMUND SCHIFF, New York, N. Y. Filed Jan. 22, 1915. Serial No. 3,698. (Cl. 49—23.)



1. In a neck roll apparatus for conforming bottle necks, the combination with an adapter, a plunger disposed in said adapter, a neck mold bushing disposed at the lower end of said adapter, said plunger having an outer shaft, means for moving said outer shaft into an eccentric position relative to said adapter, an inner shaft disposed in said outer shaft, an internal gear substantially fixed relative to said adapter, an inner gear on said inner shaft in mesh with said internal gear whereby said inner shaft receives a positive rolling movement when said outer shaft is rotated in its eccentric position, and a mold roll fixed on the lower end of said inner shaft which is positioned in the neck of a bottle to roll around the inside of said neck to mold a design therein.

2. In a neck roll apparatus for conforming bottle necks, in combination with a support, a rotatable plunger disposed in said support, said plunger having an outer shaft, means for moving said outer shaft into an eccentric position relative to said support, an inner shaft disposed in said outer shaft, a mold roll on the lower end of said inner shaft which is positioned in the neck of a bottle being formed, and means for positively rotating said mold roll to roll around the inside of said neck to mold a design therein when said outer shaft is rotated in its eccentric position.

3. In a neck mold roll apparatus for conforming bottle necks, the combination with a support, a rotatable plunger disposed in said support, a mold roll secured to said plunger, means for moving said roll into position eccentric relative to said support, and means for positively rotating said mold roll to roll around the inside of a bottle neck to mold a design therein when said plunger is rotated.

4. In a neck mold roll apparatus for conforming bottle necks, the combination with a support, a plunger disposed to rotate in said support, said plunger comprising a mushroom having an eccentric opening, a shaft having an eccentric portion disposed in said eccentric opening so that the shaft may be moved into a position concentric with said mushroom, a mold roll at the lower end of said shaft, means for rotating said shaft into a position eccentric of said mushroom, and means for positively rotating said mold roll when said shaft in its eccentric position is rotated with said plunger.

5. In a neck mold roll apparatus for conforming bottle necks, the combination with a support, a plunger disposed to rotate in said support, said plunger comprising a mushroom having an eccentric opening, an outer shaft having an intermediate eccentric portion disposed in said opening so that said outer shaft may be moved into position con-

centric with said mushroom, an inner shaft disposed in said outer shaft, a mold roll at the lower end of said inner shaft, means for swinging said outer shaft into position eccentric of said mushroom, an enlarged portion at the lower end of said outer shaft eccentric both to said mushroom and to said intermediate eccentric portion, an internal gear loosely mounted on said enlarged portion so that said outer shaft can rotate inside of said internal gear, a gear casing locked to said support, there being a radially extending groove in said gear casing, a lug on said internal gear slidably mounted in said groove to permit swinging but prevent rotation of said internal gear, an inner shaft disposed in said outer shaft, a mold roll on the lower end of said inner shaft, an inner gear on said inner shaft in mesh with said internal gear so that said mold roll will be positively rotated in the opposite direction to the rotation of said outer shaft.

[Claims 6 to 15 not printed in the Gazette.]

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1,226,701. FISH BAIT OR LURE. HENRY H. SCHILLINGER, Paw Paw, Mich., assignor to Wise Sportsman's Supply Co., Chicago, Ill., a Corporation. Filed May 12, 1915. Serial No. 27,628. (Cl. 43—30.)



1. A fish bait or lure comprising a rearwardly tapered body having a flattened bottom and forwardly projecting spaced blades at the bottom, the front end of the body above the blades being rearwardly inclined and provided with a conical recess, the bottom of the recess in the vertical longitudinal plane of the body being rearwardly inclined, the blades having curved upper surfaces merging into the recess, a line attaching means disposed at the bottom of the recess and centrally of the body, and a suitable hook and hook attaching means.

2. A fish bait or lure comprising a rearwardly tapered body having forwardly projecting spaced blades at the bottom, the front end of the body above the blades being rearwardly inclined and provided with a conical recess, a line attaching means disposed in the recess, and a suitable hook and hook attaching means.

3. A fish bait or lure comprising a body having a forwardly projecting blade at the bottom, the front end of the body above the blade being rearwardly inclined and provided with a conical recess, the bottom of the recess in the vertical longitudinal plane of the body being rearwardly inclined, a line attaching means disposed in the recess, and a suitable hook and hook attaching means.

4. A fish bait or lure comprising a body having a forwardly projecting blade at the bottom, the front end of the body being provided with a conical recess, a line attaching means disposed at the bottom of the recess and centrally of the body, and a suitable hook and hook attaching means.

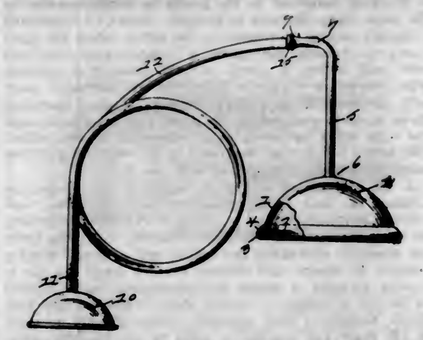
5. A fish bait or lure comprising a rearwardly tapered body having forwardly projecting spaced blades, the front end of the body above the blades being provided with a conical recess, a line attaching means disposed in the recess, and a suitable hook and hook attaching means.

[Claims 6 to 13 not printed in the Gazette.]

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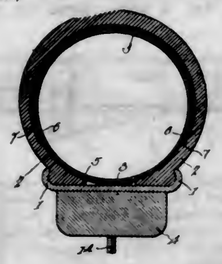
1,226,702. VACUUM MASSAGE DEVICE. JOHN G. SCHLENTER, Toledo, Ohio. Filed Apr. 7, 1913. Serial No. 759,436. (Cl. 230—5.)

In a massage device, a hollow shell of approximately semi-spherical formation, and having an open mouth, an elastic diaphragm disposed over and completely closing the mouth of the shell, said shell being formed with an outlet at a point farthest removed from the diaphragm, the full surface of the diaphragm being disposed for manual manipulation to expel any desired volume of air from the shell through the outlet.



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1,226,703. PNEUMATIC TIRE. KARL H. SCHMIDT, Chicago, Ill. Filed Oct. 28, 1915. Serial No. 58,311. (Cl. 152—18.)



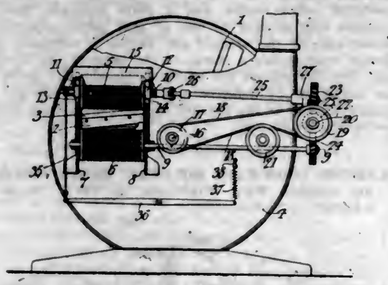
In a device of the class described, an outer casing, an inner tube, and a separate protecting inner casing interposed between the outer casing and the inner tube; said inner casing being composed of several long strip like layers of fabric secured together and having its side margins shrunk to cause it to naturally assume a concave form in cross section and curved form longitudinally; said inner casing being adapted to be wrapped transversely around the inner tube with its side margins in lapping position and its ends telescoped, and a projecting flap attached to the outer telescoping end to enable the inner casing to be pulled tightly around the tire in a circumferential direction.

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1,226,704. ENSILAGE-CUTTER. MARCUS P. SCHNECKENBURGER, Warsaw, N. Y. Filed Apr. 29, 1913. Serial No. 764,316. (Cl. 146—29.)

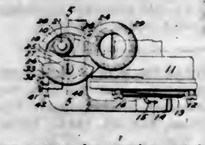
1. The combination with a pair of spaced feeding rolls having a relative bodily movement, of a worm, a pair of worm wheels engaging said worm, one for each of said rolls, driving connections between said worm wheels and said rolls, and means for mounting one of said worm wheels so as to enable it to swing about the axis of said worm as a center to allow for a relative movement between said rolls.

2. The combination with a floatingly mounted feed roll having several positions of adjustment, of a worm wheel, driving connections between said worm wheel and said feeding roll, a worm for driving said worm wheel, a shaft for said worm, a frame for supporting said worm wheel mounted to swing about said shaft as an axis to enable a bodily movement of said worm wheel relative to said worm while maintaining the driving connection between said worm and said worm wheel so as to allow for bodily movement of said feeding roll, and sleeves interposed between said frame and said shaft to prevent the rotation of said shaft from having any influence on the swinging movement of said frame and said worm wheel.



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1,226,705. RETAINING DEVICE. AUGUST R. SCHOENKY, Somerville, Mass., assignor to Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed May 25, 1914. Serial No. 840,749. (Cl. 112—22.)



1. Retaining means for sewing machine shuttles comprising, in combination with a retainer swingable between closed and open positions, a brace eccentrically and movably mounted upon the retainer in a manner to permit shifting thereof relatively to the retainer between blocked and unblocked position, and a permanently stationary blocking abutment adapted to block the brace and thereby prevent opening of the closed retainer.

2. Retaining means for sewing machine shuttles comprising, in combination with a retainer swingable between closed and open positions, a brace eccentrically and movably mounted upon the retainer in a manner to permit shifting thereof relatively to the retainer between blocked and unblocked position, and a blocking member normally disengaged from said brace and adapted to be engaged by and to block the brace when the retainer is closed, and the brace is in blocked position.

3. Retaining means for sewing machine shuttles comprising in combination with a retainer swingable between closed and open positions, a brace eccentrically and movably mounted upon the retainer in a manner to permit a limited shifting thereof relatively to the retainer, and a blocking abutment unconnected with said brace and adapted to be met by the brace and to block it against movement with the retainer, whereby to lock the retainer when the latter is closed, and a control handle so connected that one operative movement thereof unblocks the brace and thereupon opens the retainer.

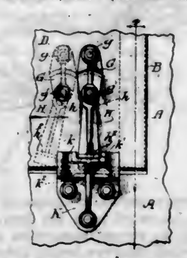
4. Retaining means for sewing machine shuttles comprising, in combination with the stationary parts of the machine, a fulcrumed retainer arm having an eccentric pivot rigid therewith, and a rigid brace piece swingably mounted on said pivot, said brace shaped for manipulation and constructed and arranged to be cramped against a stationary part when the retainer is closed, so as to block the brace against movement with the retainer.

5. Retaining means for sewing machine shuttles comprising, in combination with the stationary parts of the machine, a fulcrumed retainer arm having an eccentric pivot rigid therewith, and a rigid brace piece swingably mounted on said pivot, said brace shaped for manipulation and constructed and arranged to be cramped against a stationary part when the retainer is closed, so as to block the brace against movement with the retainer, and said brace and retainer being constructed so that when the brace is unblocked, its swinging will swing the retainer open or shut.

[Claims 6 to 11 not printed in the Gazette.]

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1,226,706. CAR-DOOR FASTENER. CHARLES A. SCHROYER, Oak Park, Ill., assignor to Q. & H. Company, Chicago, Ill., a Corporation of Maine. Filed Dec. 12, 1910. Serial No. 596,861. (Cl. 70—102.)



1. In fasteners for railway car doors, the combination with a car having a door opening and posts on opposite sides of said opening and a sliding door therefor, of L-shaped guide brackets for the lower edge of the door, said guide brackets being fixed to the car and having upturned flanges arranged to overlap the outer face of the car door, and locking devices arranged to fit between the upturned flanges of said brackets and the outer face of the door to hold the lower portion of the latter, in closed position, within the door opening and between said posts, substantially as described.

2. In fasteners for railway car doors, the combination with a car having a door opening and posts on opposite sides of said opening and a sliding door therefor, of L-shaped guide brackets for the lower portion of the door, said brackets being fixed to the car and having upturned flanges arranged to overlap the outer face of the car door, and locking bolts mounted on the outer face of the door near its lower edge, said locking bolts having slotted upper ends, pivot bolts extending through said slotted upper ends for connecting said locking bolts to the door, and said locking bolts having enlarged lower ends arranged to fit between the upturned flanges of said guide brackets and the outer face of the door to hold the lower portion of the door, in closed position, within the door opening and between said posts, substantially as described.

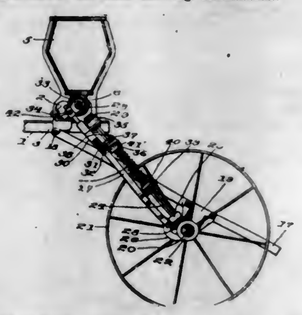
3. In fasteners for railway car doors, the combination with a car having a door opening and a sliding door therefor, of L-shaped guide brackets for the lower edge of the door fixed to the car and having upturned flanges arranged to overlap the outer face of the car door, and pivoted, vertically movable locking bolts mounted on the outer face of the door near its lower end and arranged to fit within said guide brackets to hold the lower portion of the door within the door opening in closed position, said locking bolts having outwardly projecting lugs and the outer, upturned flanges of said brackets having seats for said lugs, substantially as described.

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1,226,707. GRAIN-DRILL. DUNY A. SCHUTT, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Nov. 3, 1913. Serial No. 798,820. (Cl. 111—18.)

1. In combination, pivotally connected front and rear frames, a shaft journaled upon the front frame with its axis eccentric to the pivotal connection of the frames, a shaft journaled upon the rear frame, a driving connection of fixed length between said shafts, and an extensible supporting member for said driving connection.

2. In combination, pivotally connected front and rear frames, a shaft journaled upon the front frame with its axis eccentric to the pivotal connection of the frames, a shaft journaled upon the rear frame, a driving connection of fixed length between said shafts, and a contractile supporting member for said driving connection.



3. In combination, pivotally connected front and rear frames, a shaft journaled upon the front frame with its axis eccentric to the pivotal connection of the frames, a shaft journaled upon the rear frame, a driving connection of fixed length between said shafts, and an extensible and contractile supporting member for said driving connection.

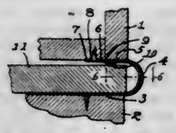
4. A grain drill comprising, in combination, front and rear frames having pivotal connection, a seed distributing shaft journaled upon the front frame and having its axis eccentric to that of the pivotal connection of the frames, a rotatable shaft journaled upon the rear frame, a longitudinally extensible and contractile supporting member connected to said shafts, and a driving shaft for said shafts journaled on said supporting member.

5. A grain drill comprising, in combination, front and rear frames having pivotal connection, a seed distributing shaft journaled upon the front frame and having its axis eccentric to that of the pivotal connection of the frames, a rotatable shaft journaled upon the rear frame, a longitudinally contractile and extensible supporting member having its opposite ends loosely mounted upon said shaft, gears on said shafts, and a gear driving member engaging said gears and journaled on said supporting member.

[Claims 6 to 15 not printed in the Gazette.]

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1,226,708. KITCHEN-CABINET. WILFRED SELLERS, Elwood, Ind. Filed Sept. 28, 1914. Serial No. 863,953. (Cl. 45—16.)

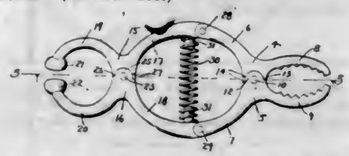


1. In a kitchen cabinet, in combination with the top and base parts thereof, a U-shaped bracket having a horizontal flange secured to one of said parts and having a horizontal flange bearing against the other part and spacing the top and base apart to provide a molding board recess, and a member separate from the bracket and carried by the part opposing the part to which the bracket is secured and having a flat free bearing throughout its length against said bracket to permit the separation of the parts by relative movement in a straight line longitudinally of the bracket, and said member having means to prevent realtive lateral and vertical movements of the top and base.

2. In a kitchen cabinet, in combination with the top and base parts thereof, a U-shaped bracket having upper and lower horizontal flanges extending under and above the top and base respectively and bearing thereon, said bracket spacing the said top and base apart to provide a molding board recess, and a plate separate from the bracket and secured to one of said parts adjacent the inner edge of the bracket and having a vertically offset flange overlapping a flange of the bracket and having a flat free bearing on the bracket, whereby the parts may be separated by relative movement in a straight line longitudinally of the bracket and prevented from vertical or lateral separation.

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1,226,709. COW-TAIL HOLDER. GEORGE SENFLEBEN, Jr., Colgate, Wis. Filed Jan. 10, 1917. Serial No. 141,562. (Cl. 119—105.)

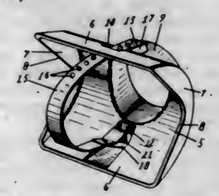


1. A cow tail holder comprising a pair of pivotally connected together tail engaging members, a pair of pivotally connected together leg engaging members, said pairs of members being pivotally connected together to permit of being simultaneously opened, and means for automatically moving said members to clamping position.

[Claim 2 not printed in the Gazette.]

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1,226,710. AIR-HEATER FOR CARBURETERS. WILLIAM SHAKESPEARE, Jr., and WILLIAM SCHMID, Kalamazoo, Mich., assignors to Shakespeare Company, Kalamazoo, Mich. Filed Mar. 17, 1916. Serial No. 84,853. (Cl. 257—241.)



1. In a structure of the class described, the combination of a hood having a curved side wall and end walls having V-shaped recesses adapted to receive a pipe, the side wall having an attaching collar for an air conduit and a slotted offset at one side of said collar and an opening at the other side, a pin disposed adjacent said opening, a strap having a series of pin engaging perforations at one end disposed through said side wall opening and engaged with said pin, the other end of the said strap being provided with a loop having a perforation therein, and a bolt disposed through said slot in said hood offset and said perforation in said strap loop, there being a nut disposed within said loop to coact with said bolt.

2. In a structure of the class described, the combination of a hood adapted to embrace the side of a pipe and having a conduit attaching collar and an offset at one side and an opening at the other, a pin disposed adjacent said opening, a strap having a series of pin engaging perforations at one end disposed through said wall opening and engaged with said pin, the other end of the said strap being provided with a loop having a perforation therein, and a bolt disposed through said offset and said perforation in said strap loop, there being a nut disposed within said loop to coact with said bolt.

3. In a structure of the class described, the combination of a hood adapted to embrace the side of a pipe and having an opening at one side and a pin disposed adjacent said opening, a strap having a perforation at one end disposed through said opening and engaged with said pin, the other end of the said strap being provided with a loop having a perforation therein, and a bolt disposed through said hood and said perforation in said strap loop, there being a nut disposed within said loop to coact with said bolt.

4. In a structure of the class described, the combination of a hood having a side wall and end walls recessed to receive an exhaust pipe, the side wall having an attaching collar for an air conduit and an offset at one side of said collar and an opening at the other side, a pin disposed adjacent said opening, a strap having a series of pin engaging perforations at one end disposed through said side wall opening and engaged with said pin, the other end of said strap being provided with a nut and a bolt disposed through said offset to engage said nut.

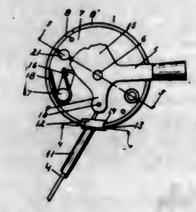
5. In a structure of the class described, the combination of a hood adapted to embrace the side of a pipe and having an opening at one side and a pin disposed adjacent said opening, a strap having a series of pin engaging perforations at one end disposed through said opening and engaged with said pin, and a bolt carried by said hood and operatively connected to the other end of said strap for clamping the strap upon the pipe.

[Claims 6 to 10 not printed in the Gazette.]



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1,226,711. CONTROL DEVICE. WILLIAM SHAKESPEARE, Jr., and WILLIAM SCHMID, Kalamazoo, Mich., assignors to Shakespeare Company, Kalamazoo, Mich. Original application filed Nov. 27, 1915, Serial No. 63,747. Divided and this application filed Apr. 10, 1916. Serial No. 90,242. (Cl. 74—39.)



1. In a structure of the class described, the combination of a housing comprising a side plate having a flange-like edge wall thereon having a lever slot therein at one side, said side plate having a screw hole opening and a key hole opening disposed oppositely, a coacting removable side plate, an attaching strap notched at one end to provide attaching lugs so that it may be inserted into said key hole opening and turned to engage the lugs, the other end of said strap being adapted to receive a screw disposed in said screw hole, a lever pivot supported by said side plates, a lever mounted on said pivot and disposed through said slot in said edge wall, and an operating rod connected to said lever.

2. In a structure of the class described, the combination of a housing comprising a side plate having a flange-like edge wall thereon having a lever slot therein at one side, a lever pivot supported by said side plates, a lever mounted on said pivot and disposed through said slot in said edge wall, said lever being provided with a notched stop segment, a spring pressed pawl mounted in said housing to coact with said segment, the notches of said segment being shaped to permit the pawl to pass into and out of engagement therewith without manual manipulation of the pawl and an operating rod connected to said lever.

3. In a structure of the class described, the combination of a housing having a lever slot at one side thereof, a lever pivoted within said housing and disposed through said slot, said lever being provided with a notched stop segment, a spring pressed pawl mounted in said housing to coact with said segment, the notches of said segment being shaped to permit the pawl to pass into and out of engagement therewith without manual manipulation of the pawl and an operating rod connected to said lever.

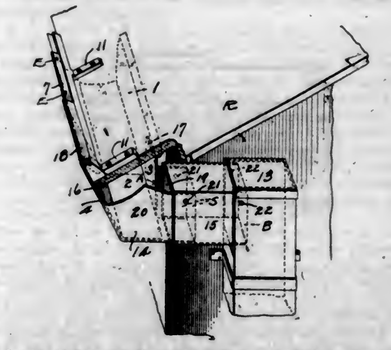
4. In a structure of the class described, a mounting comprising a side plate having a screw hole opening and a strap opening disposed oppositely, and an attaching strap notched at one end to provide attaching lugs so that it may be inserted into said strap opening and turned to engage the lugs, the other end of said strap being adapted to receive a screw disposed in said screw hole.

5. In a structure of the class described, a housing having a screw hole and a slot disposed oppositely, an attaching strap provided with means for adjustably securing one end in said slot, the other end of said strap being tapped to receive a screw disposed in said screw hole.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,712. COMBINED EAVES-TROUGH AND DOWN-SPOUT CONSTRUCTION. HARRISON L. SKILLMAN, Youngstown, Ohio. Filed Feb. 25, 1916. Serial No. 80,420. (Cl. 108—28.)



1. An eaves trough construction including in combination with the roof eaves, a supporting bar having a flange receiving seat and a plurality of attaching feet, said feet lying in a plane beneath the body of the bar to space the latter from and above the edge of the roof, an eaves trough having at its outer upper edge an angular attaching flange adapted to fit in said seat of the supporting bar, and an outlet member carried by said eaves trough.

2. An eaves-trough construction including in combination with the roof eaves, a supporting bar having an upwardly directed deflecting face and a rabbeted eaves-trough flange receiving seat, and also having a plurality of attaching feet, said feet lying in a plane beneath the body of the bar to space the latter above the edge of the trough, an eaves-trough having an attaching flange filling in said rabbeted seat of the supporting bar, and an outlet member telescopically fitting over one end of the eaves-trough.

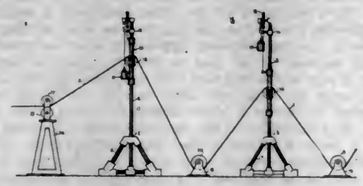
3. An eaves-trough construction including in combination with the roof eaves, a supporting bar secured to said roof eaves and spaced above the upper edge thereof, an eaves trough having opposite side walls one of which has a flange for engaging the said supporting bar, and the other of which may be secured to the under side of the roof eaves, and said latter wall having one end thereof cut away to provide an exit for the trough, and an L-shaped outlet member telescopically engaging the end of said eaves-trough and having a flange for engaging over the flange of the trough which engages the supporting bar.

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1,226,713. AUTOMATIC SLACK-TAKE-UP AND COOLING DEVICE. FREDERICK C. SMITH, Port Arthur, Tex. Filed May 28, 1913. Serial No. 770,309. (Cl. 242—75.)

In a device of the character described, a plurality of spaced supports, a frame mounted for vertical movement

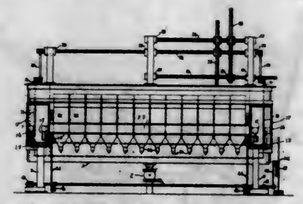
upon each of said supports, a supporting roller journaled in each of said frames, means carried by each frame for



counterweighing its roller, and a fixed guide roller located intermediate and at a substantial distance below said frames.

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1,226,714. FILLING-MACHINE. FREDERICK C. SMITH, Port Arthur, Tex. Filed Sept. 16, 1913. Serial No. 789,982. (Cl. 226—18.)



1. In a filling machine, a tank formed at its top with laterally extending flanges, a bearing-frame supported upon said flanges, a rotary shaft journaled in said frame and carrying spaced crank arms, a plurality of connected buckets, a plurality of links depending within the tank and pivotally connecting said crank arms with the buckets whereby the latter may be alternately raised and lowered, and means for tilting the buckets when they are raised to a predetermined height.

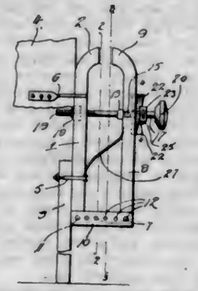
2. In a filling machine, the combination with a tank adapted to maintain therein a predetermined height of liquid and a plurality of connected buckets located therein of means for raising and lowering said buckets, a series of connected funnels communicating with the tank above the liquid therein, and means for raising and lowering the funnels, each of a plurality of said funnels being formed with an upwardly projecting shoulder which coacts with the inner wall of the tank to support and guide the funnels.

3. In a filling machine, a tank adapted to maintain therein a predetermined height of liquid, a plurality of buckets located in said tank and means for raising and lowering the same, a plurality of funnels communicating with the tank above the liquid therein, each of a plurality of said funnels being formed with an upwardly extending guiding projection, and means for supporting the funnels including a plurality of spaced cables, each cable being led over an idler pulley and carrying a counterweight, said idler pulley being located back of the said upwardly extending guiding projections and the cables being connected with the funnels below said projections, so that the latter are maintained in abutment with the inner wall of the tank.

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1,226,715. VISE. JOHN T. SMITHSON, Hopkinsville, Ky. Filed Apr. 22, 1916. Serial No. 92,929. (Cl. 81—25.)

1. A vise comprising an inner jaw carrying member, an outer jaw carrying member having transverse openings formed therein, an adjusting member engaged through said opening and threaded in the inner jaw carrying member, a pair of cam blocks secured upon said outer jaw carrying member and provided with curved side faces and oppositely beveled front faces, said cam blocks having teeth formed in the corners thereof connecting the side and front faces, means for securing said cam blocks in position, and a clamping handle mounted upon said adjusting member and movable over said cam blocks to tighten the outer jaw carrying member, the said clamping handle having means for engagement with said teeth to lock the handle in adjusted position.



2. A vise comprising an inner jaw carrying member, an outer jaw carrying member, means for supporting said outer jaw carrying member opposite said inner jaw carrying member, means for resiliently forcing said outer jaw carrying member away from said inner jaw carrying member, means for adjusting said outer jaw carrying member with respect to said inner jaw carrying member, cam blocks mounted upon said outer jaw carrying member, a clamping handle mounted upon said adjusting means and provided with oppositely extended beveled portions for engagement with said cam blocks, means pivoted to one side of said handle for locking the same in adjusted position upon said cam blocks, and an operating handle slidably mounted in the clamping handle.

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1,226,716. URINAL. JOHN STASZAK, Pulaski, Wis., assignor of one-half to Micheal Staszak, Pulaski, Wis. Filed July 24, 1916. Serial No. 110,965. (Cl. 4—12.)



1. In a device of the type set forth, a receptacle, a pipe leading into said receptacle, a push valve controlling the flow of water through said pipe, a tiltably mounted platform detachably secured, a rod pivotally secured to the platform, and a cup-shaped member secured to said rod and adapted to actuate said valve.

2. In a device of the type set forth, a receptacle, a pipe leading into said receptacle, a push valve controlling the flow of water through said pipe, a tiltably mounted platform detachably secured, a rod pivotally secured to the platform, and a cup-shaped member adjustably secured to said rod and adapted to actuate said valve.

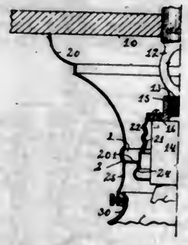
3. In a device of the kind set forth, a receptacle, a pipe leading into said receptacle, a push valve controlling the flow of water through said pipe, a tiltably mounted platform, resilient means for maintaining the platform in raised position, means for varying the range of movement



of said platform, a rod pivotally secured to the platform, and a cup-shaped member adjustably secured to said rod and adapted to actuate said valve, substantially as described.

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1,226,717. LIGHTING-FIXTURE. MERTON P. STEVENS, East Orange, N. J. Filed Apr. 22, 1915. Serial No. 23,033. (Cl. 240—78.)



1. A device of the character described comprising a support, a hub thereon adapted to carry a socket, a shell secured to said hub, a canopy holder adjustably secured to the shell, a canopy supported by the holder, a shade holder and means for carrying it from the canopy, including a coöperating bead and recess on the canopy and shade holder respectively.

2. A device of the character described comprising a support, a hub thereon adapted to carry a socket, a shell secured to said hub, a canopy holder adjustably secured to the shell, a canopy supported by the holder, a shade holder and means for carrying it from the canopy, including an inter-locking bead and recess on the canopy and shade holder respectively.

3. A lighting fixture including a support, a shell carried thereby, a canopy holder adjustably secured to the shell and provided with terminal means for supporting a canopy, consisting of an outwardly extending flange, a canopy provided with a coöperating inwardly extending flange and which canopy is also provided with a beading, and a shade holder provided with a member adapted to engage the beading of the canopy.

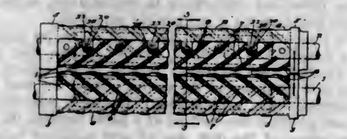
4. A device of the character described comprising a support, a hub thereon adapted to carry a socket, a flanged threaded shell secured to said hub, a canopy holder adjustably secured to the shell, a canopy supported by the holder and provided with a circular beading, a shade holder and means thereon to engage the circular beading on the canopy to support the said shade holder.

5. In a lighting fixture including a support, a shell carried thereby, a canopy holder secured to the shell and provided with means for supporting a canopy, a shade holder and means thereon to peripherally engage the canopy to directly support the said shade holder.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,718. CORN-HUSKER. JOHN A. STONE, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Mar. 9, 1914. Serial No. 823,620. (Cl. 130—5.)



1. A husking roll having spaced longitudinally extending rib members thereon, and a plurality of series of parallel spirally arranged toothed rib members between said longitudinally extending rib members, the longitudinally extending rib members projecting above said spiral rib members whereby the former may exert a positive thrust upon an ear of corn at definite intervals.

2. A pair of coacting corn husking rolls rotatable in opposite directions having continuous longitudinally arranged coacting parallel rib members forming a part of each roll, and coöperating oppositely disposed spirally arranged ribs between and in contact with said parallel rib members on each of said rolls.

3. A pair of coacting corn husking rolls rotatable in opposite directions having longitudinally arranged coacting parallel rib members forming part of each roll, and oppositely disposed spirally arranged rib members on each of said rolls leading rearward in the direction of rotation of the rolls and provided with husk engaging teeth upon their peripheries.

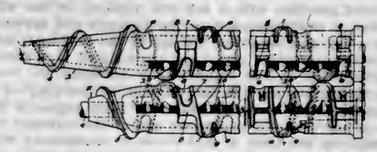
4. A pair of coacting corn husking rolls rotatable in opposite directions having longitudinally arranged coacting parallel rib members forming part of each roll, and oppositely disposed spirally arranged rib members on said rolls leading rearward in the direction of rotation of the rolls and having husk engaging teeth upon their edges, the spirally arranged ribs being of less radii than those arranged longitudinally.

5. A pair of coacting corn husking rolls rotatable in opposite directions having longitudinally arranged coacting parallel rib members forming part of each roll, oppositely disposed spirally arranged rib members leading rearward in the direction of rotation of the rolls and having husk engaging teeth upon their peripheries, the spirally arranged ribs being of less radii than those arranged longitudinally, and spaced husk engaging pegs disposed between the longitudinal ribs upon one of the rolls and extending beyond their peripheries into the channels between the spirally arranged ribs upon the opposing roll.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,719. SNAPPING-ROLLS FOR CORN HARVESTERS, HUSKERS, OR THE LIKE. JOHN A. STONE, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Mar. 9, 1914. Serial No. 823,621. (Cl. 130—5.)



1. A snapping roll having a plurality of longitudinally spaced spirally disposed channels in its periphery, and longitudinally extending corrugated corn engaging members intermediate certain of the same.

2. A snapping roll having a plurality of oppositely extending spirally disposed channels in its periphery having their opposite ends in juxtaposition, and longitudinally extending corn engaging toothed rib members extending between the same ends of alternate channels.

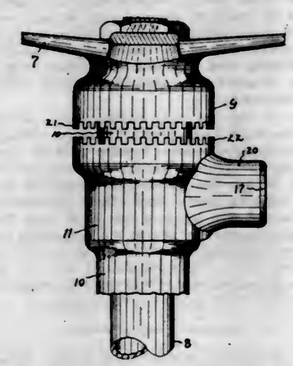
3. In a machine of the character described, opposing coacting snapping rolls rotatable in opposite directions, said rolls having cylindrical bodies and oppositely disposed spirally arranged channels therein leading rearward opposite the direction of rotation thereof, having their rear ends raised above the body of the roll, and longitudinally disposed corrugated rib members spanning the intervening spaces between certain of said channels.

4. In a machine of the character described, opposing coacting snapping rolls rotatable in opposite directions, said rolls having cylindrical bodies and oppositely disposed spirally arranged channels therein leading rearward opposite the direction of rotation thereof having their rear ends raised above the body of the rolls, and longitudinal corrugated ribs disposed parallel with the axes of the rolls and spanning the intervening spaces between certain of said channels.

5. In a machine of the character described, opposing coacting snapping rolls rotatable in opposite directions, said rolls having cylindrical bodies and oppositely disposed spirally arranged channels therein leading rearward opposite the direction of rotation thereof having their rear ends raised above the body of the roll, and longitudinally alined corrugated ribs disposed parallel with the axes of the rolls and spanning the intervening spaces between certain of said channels.

[Claims 6 to 8 not printed in the Gazette.]

1,226,720. LOCKING MEANS FOR VEHICLE STEERING-WHEELS. ARTHUR H. STURGES, Omaha, Nebr. Filed Aug. 29, 1916. Ser'al No. 117,414. (Cl. 70—129.)

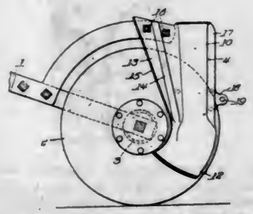


1. A locking means for the purpose described, comprising, in combination with the hub of a rotatable steering wheel, said hub being provided with teeth, a non-rotatable standard provided with a key and disposed in line with the hub, a sleeve mounted on the standard and provided with a key seat receiving the key of the standard, said sleeve being provided with teeth and adapted to be moved longitudinally of the standard for engaging its teeth with the teeth of the hub, and a detent member adapted to be moved in an arc substantially at right angles to the axis of the sleeve to engage the key of the standard for maintaining the teeth of said sleeve in engagement with the teeth of the hub.

2. A locking means for vehicle steering wheels, comprising, in combination with the hub of the rotatable steering wheel, said hub being provided with projections, a non-rotatable standard disposed in line with the axis of the hub and provided with an elongated key with a recess, a sleeve on the standard provided with a slot for receiving the key of said standard, said sleeve being provided with projections and adapted to be moved longitudinally of the standard for engaging its projections with the projections of the hub, and a detent member adapted to be moved into the recess of the key of the standard for maintaining the projections of the sleeve in engagement with the projections of the hub.

3. In combination with the hub of a normally rotatable steering wheel, said hub being provided with projections, a non-rotatable standard disposed in line with the longitudinal axis of the hub and provided with a key having a recess and a second recess, a sleeve on the standard provided with a slot for receiving the key of the standard, said sleeve being provided with projections and adapted to be reciprocated longitudinally of the standard for alternate engagements and disengagements of its projections with the projections of the hub, a detent member carried by the sleeve and adapted to be moved into the second recess of said key member after said sleeve has performed one of its longitudinal movements for maintaining the projections of the sleeve in engagement with the projections of the hub, and adapted to be moved into the first named recess of the key of said standard after the sleeve has performed a reverse longitudinal movement for maintaining the projections of the sleeve in disengaged relation with the projections of the hub.

1,226,721. GRAIN-DRILL. JOHN STURROCK, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Oct. 24, 1913. Serial No. 797,045. (Cl. 111—87.)



1. In combination, a disk furrow opener and a pressed sheet metal seed delivery boot comprising two separately formed integrally united members having registering depressed grain delivery portions therein, the inner member terminating intermediate the ends of the other and having a curved portion to direct the grain against the surface of the outer member, and the outer member in coaction with the convex surface of the disk forming the lower end of the delivery portion to discharge the seed rearwardly.

2. A pressed sheet metal seed delivery boot for grain drills comprising two separately formed members having corresponding longitudinally disposed depressed portions, one of said members being of greater length than the other and having the depression therein terminating in a widened portion at its lower end having a downwardly and rearwardly extending scraping surface, the shorter member having its lower end inwardly curved to direct the grain against the lower end of the longer member.

3. In a seed delivery boot for grain drills, in combination, a rotatable furrow opening disk, two separately formed boot members having corresponding longitudinally disposed semicircular depressed portions, one of said members being of greater length than the other and terminating gradually into a widened portion at its lower end that engages with said disk and is disposed between the axis and periphery thereof, the shorter member being tapered inwardly to deflect the seed against the lower end of the longer member.

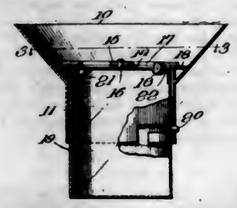
4. In a seed delivery boot for grain drills, in combination, a rotatable furrow opening disk, two separately formed boot members having corresponding longitudinally disposed semi-circular depressed portions, one of said members being of greater length than the other and terminating in a portion disposed between the axis and periphery of the disk and having the front and rear sides thereof substantially concentric to the axis of said disk and the lower end conforming to the adjacent surface of the disk and forming a scraper for said disk.

5. In a seed delivery boot for grain drills, in combination, a drag bar, a rotatable furrow opening disk journaled thereon, two separately formed boot members carried on said drag bar at the convex side of the disk having corresponding longitudinally disposed semi-circular depressed portions terminating at a point between the axis and periphery of the disk, one of said members being of greater length than the other and the shorter member being upon that side adjacent said disk and tapered inwardly to deflect the seed against the lower end of the longer member.

[Claims 6 to 16 not printed in the Gazette.]



1,226,722. MEASURING DEVICE. WILLIAM J. SULLIVAN, Bessemer, Ala. Filed Dec. 31, 1915. Serial No. 69,588. (Cl. 221—64.)



1. A device of the character described including a hopper provided with a partition wall having an opening therein, a valve carried by said wall and provided with an opening, the valve being movable to one position to close the opening in the partition wall and to another position with the said openings registering, means carried by the valve for limiting the valve in its movement in opposite directions, and a vessel arranged for engagement with said means for operating the valve.

2. A device of the character described including a hopper having a partition wall provided with an opening, a valve carried by said wall and provided with an opening, the valve being movable to one position to close the opening in said wall and to another position with the said openings registering, a lug depending from the valve to project through the opening in said wall for engagement with opposite edges thereof for limiting the valve in its movement in opposite directions, and a vessel arranged for engagement with said lug for operating the valve.

3. A device of the character described including a hopper provided with a wall having an opening therein, a shiftably mounted valve associated with said wall and provided with an opening, the valve being movable to one position to close the opening in the wall and to another position with the said openings in alinement, means carried by the valve and projecting through the opening in said wall for engagement with opposite edges thereof to limit the valve in its movement in opposite directions, and a vessel adapted for detachable connection to the hopper to engage said means for operating the valve.

4. A device of the character described including a hopper having a partition wall and provided with an opening, a valve carried by said partition wall and provided with an opening, the valve being movable to one position to close the opening in said wall and to another position with the said openings registering, a lug formed on the valve to depend therefrom at one edge of the opening in the valve with the said lug disposed for engagement with opposite edges of the opening in said partition wall for limiting the valve in its movement in opposite directions, a vessel, and a slotted ear carried by the vessel with the said slot receiving the said lug and with the cup operable for shifting the valve.

5. A device of the character described including a hopper provided with a partition wall having an opening therein, a valve carried by said wall and provided with an opening, the valve being movable to one position to close the opening in the partition wall and to another position with the said openings registering, means carried by the valve for limiting the valve in its movement in opposite directions, a spout carried by the hopper and provided with a bayonet slot, a vessel arranged for engagement with said means with the vessel operable within the spout for shifting the valve, and a lug carried by the vessel for engagement within said slot for locking the vessel upon the spout upon the movement of the valve to open position.

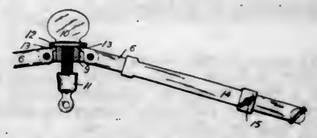
1,226,723. SHAVER'S CABINET. WILLIS A. TAYLOR, Presque Isle, Me. Filed May 22, 1916. Serial No. 99,204. (Cl. 132—32.)

1. A device of the character described comprising a cabinet having a rectangular configuration, and compartments arranged therein, a cover for closing said compartments, staples carried by one end of said cabinet, a pair of straps each having one end connected to said staples, an elastic webbing formed with the opposite ends of said straps, means for detachably connecting said elastic portions of said straps to the cabinet and one of said straps adapted to hold said cover in closed position substantially as and for the purpose specified.



2. A shaver's cabinet comprising a receptacle having a plurality of compartments formed therein, a cover for said receptacle, straps pivotally connected at one end to said receptacle, means for detachably connecting the opposite ends of said straps to the receptacle and means whereby said cover will be held in closed position by one of said straps for the purpose set forth.

1,226,724. LOCKING MEANS FOR TRIPODS. JOHN GEORGE TORR, Sydney, New South Wales, Australia. Filed May 12, 1916. Serial No. 97,171. (Cl. 248—43.)



1. As a new article of manufacture, a lock for the legs of tripods, comprising, a centrally threaded boss, arms pivoted to said boss and adapted to be moved in positions extending radially from said boss, projections at the pivoted ends of said arms, fastening members at the outer ends of said arms to be secured to the legs of the tripod, and a thumb screw threaded in said boss having a head thereon capable of engaging said projections to lock said arms against collapsing from their radially extended positions.

2. As a new article of manufacture, a lock for the legs of tripods, comprising, a centrally threaded boss, arms pivoted at one of their ends to said boss and adapted to be moved in positions extending radially from said boss, one or more of said arms being composed of extensible sections, rearwardly extended projections on the pivoted ends of said arms, fastening means at the outer ends of said arms to secure the latter to the legs of the tripod, and a thumb screw threaded in said boss and having a head thereon capable of engaging said projections to lock said arms against collapsing from their radially extended positions.

3. As a new article of manufacture, a lock for the legs of tripods, comprising, a centrally threaded boss, arms pivoted at one of their ends to said boss and adapted to be moved in positions radially extending therefrom, fastening means carried on the outer ends of said arms to secure the latter to the legs of the tripod, said fastening means being adjustable on said legs, and a thumb screw threaded in said boss and having a head thereon capable of engaging the inner ends of said arms to lock the latter against collapsing from their radially extended positions.

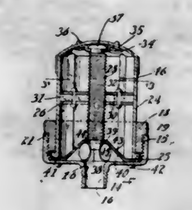
4. As a new article of manufacture, a lock for the legs of tripods, comprising, a centrally threaded boss, arms pivoted at one of their ends to said boss and adapted to be moved in positions radially extending therefrom, fastening means carried on the outer ends of said arms to secure the latter to the legs of the tripod, said fastening means being adjustable on said legs, a thumb screw threaded in said boss and having a head thereon capable of engaging the inner ends of said arms to lock the latter against collapsing from their radially extended positions,

and the free end of said thumb screw having an eyelet therein in which the cord of a plumb-bob may engage and depend.

5. As a new article of manufacture, a lock for the legs of tripods, comprising, a centrally threaded boss, arms pivoted at one of their ends to said boss and adapted to be moved in position radially extending from said boss, fastening members on the outer end of said arms for securing the latter to the legs of the tripod, a thumb screw threaded in said boss and having a head thereon to engage the inner ends of said arms to lock the latter against collapsing from their radially extended positions.

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1,226,725. GREASE-CUP. DANIEL H. TWAITS, Chicago, Ill. Filed Mar. 13, 1914. Serial No. 824,352. (Cl. 184—38.)



1. In a grease cup the combination of a base member, a cap member rotatably carried thereby, a plunger within the cap, a threaded member extending through and engaging the plunger, and means whereby the plunger may be moved upon the rotation of the cap.

2. In a grease cup the combination of a base, a cap, a member rotatably embracing the cap and removably secured to the base, a plunger member within the cap, a threaded member engaging the threads of the plunger member, means for rotating one of said members by the cap, and means for holding the other member against rotation whereby the plunger moves along its axis.

3. In a grease cup the combination of a base, a cap, a clamping ring rotatably connecting the cap to the base, a plunger member vertically movable within said cap, a threaded member engaging said plunger, means for holding one of said members against rotation, and means for rotating the other member by the cap whereby the plunger member is moved along its axis.

4. In a grease cup the combination of a base having a threaded portion, a cap carried by the base and having an annular shoulder, an annular member coöperating with the threads of the base and engaging said shoulder allowing the rotation of the cap, a plunger within the cap, and threaded means for moving the plunger consequent upon the rotation of the cap.

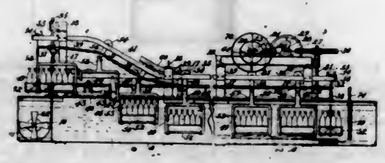
5. In a grease cup the combination of a base member having an upwardly extending wall, internal threads on said wall, a cap carried by the base, a bushing slidable over the exterior of the cap having threads coöperating with the threads of the base having an annular shoulder, a shoulder on the cap engaged thereby, a plunger member within the cap, a threaded member engaging said plunger, and means for holding one of said members against rotation while rotating the other with the cap to move the plunger along its axis.

[Claims 6 to 12 not printed in the Gazette.]

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1,226,726. APPARATUS FOR PASTEURIZING BOTTLED LIQUIDS. SIMON VOLZ, Milwaukee, Wis., assignor to The Twentieth Century Machinery Company, Milwaukee, Wis., a Corporation of Illinois. Filed Aug. 6, 1908. Serial No. 447,226. (Cl. 126—272.)

1. In an apparatus for pasteurizing bottled liquids, the combination of a tank having partitions dividing the interior thereof into longitudinally arranged and parallel compartments communicating with each other in series, each compartment containing a body of a pasteurizing agent, the initial body being warmed or heated, the intermediate body being heated to a higher degree sufficient for sterilizing purposes and the terminal body being cooler, a carrier for holding the liquid containing receptacle, means for moving the carrier through the communicating bodies of the pasteurizing agent without withdrawing the carriers from the agent, and means for maintaining a circulation of the agent around the intermediate body and in a direction to draw the portion of the agent into which the carrier is first submerged to the body from which the carrier finally emerges.



2. In an apparatus for pasteurizing bottled liquids, the combination of a tank having partitions dividing the interior thereof into longitudinally arranged and parallel compartments communicating with each other in series, each compartment containing a body of a pasteurizing agent, the initial body being warmed or heated, the intermediate body being heated to a higher degree sufficient for sterilizing purposes and the terminal body being cooler, a carrier for holding the liquid containing receptacle, means for moving the carrier through the communicating bodies of the pasteurizing agent, and means for maintaining a circulation of the agent around the intermediate body and in a direction to draw the portion of the agent into which the carrier is first submerged to the body from which the carrier finally emerges, means for inclosing the space above the agent in the several compartments to form communicating air-conduits, and means for causing a circulation of air from and through the outer compartments.

3. In an apparatus for pasteurizing bottled liquids, the combination of a tank having partitions dividing the interior thereof into longitudinally arranged and parallel compartments communicating with each other in series and comprising an initial, a terminal and an intermediate compartment, each of which contains a body of a pasteurizing agent, the agent in the initial compartment being warmed or heated, the agent in the intermediate compartment being heated to a higher degree sufficient for sterilizing purposes, and the agent in the terminal body being cooler, a carrier for holding the liquid containing receptacle, means for moving the carrier through the bodies of the agent, the initial and terminal compartments communicating at their ends for circulation of the agent, and means for preventing circulation from the initial and terminal compartments through the intermediate compartment.

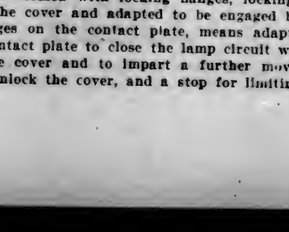
4. In an apparatus for pasteurizing bottled liquids, the combination of a closed tank for containing a pasteurizing agent, said tank provided in its top and at the forward portion thereof with elongated openings arranged parallel with the respective side edges of the top, and said top having a serpentine slot leading from one of said openings to the other, a trackway arranged above the tank and taking a serpentine course corresponding to the serpentine course of the slot, carriages traveling on the trackway, cages suspended from the carriages and carrying the liquid containing receptacles, said cages adapted, respectively, to pass through the initial opening of the top of the tank and enter the interior of said tank, and to finally pass out of the terminal opening, the serpentine slot accommodating the connecting medium between the cages and the carriages during the travel of the latter, and means for causing the travel of the carriages along the trackway.

5. In an apparatus for pasteurizing bottled liquids, the combination of a closed tank for containing a pasteurizing agent, said tank provided in its top and at the forward portion thereof with elongated openings arranged parallel with the respective sides edges of the top, and said top having a serpentine slot leading from one of said openings to the other, a trackway arranged above the tank and taking a serpentine course corresponding to the serpentine course of the slot, carriages traveling on the trackway, cages suspended from the carriages and carrying the liquid containing receptacles, said cages adapted, respectively, to pass through the initial opening of the top of the tank and enter the interior of the tank, and to finally pass out of the terminal opening, the serpentine slot accommodating the connecting medium between the cages and the carriages during the travel of the latter, and means for causing intermittent travel of the carriages along the trackway.

[Claims 6 to 24 not printed in the Gazette.]

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1,226,727. POCKET FLASH-LIGHT. CHARLES WACHTEL, Jamaica, N. Y. Filed Mar. 4, 1916. Serial No. 82,022. (Cl. 240—8.5.)



1. A flashlight comprising a casing composed of a body part, a cover hinged thereto, lamp terminals in the body part, a sliding contact plate, means exterior of the casing for moving the contact plate to make and break the lamp circuit, and means whereby the contact plate locks the cover in its closed position during the circuit making and breaking operations and holds the cover closed while the lamp is lighted.

2. A flashlight comprising a casing formed with a body part and a cover hinged to said body part, lamp terminals in the body part, a slidable contact plate within the body part adapted to open and close the lamp circuit and formed with a cover-locking flange, a lug on the cover adapted to be engaged by said flange to lock the cover closed, an operating device for shifting the contact plate operable from the exterior of the casing and rotatably secured to said plate, and coöperating stops on said rotatable device and the casing adapted to limit the sliding movement of the contact plate when the operating device is reciprocated while in one rotatably adjusted position to open and close the lamp circuit without releasing the cover.

3. A flashlight comprising a casing formed of a body part and a cover hinged to the body part, lamp terminals in the body part, a shiftable contact plate within the body part, interlocking devices carried by the cover and contact plate, an operating device for shifting the contact plate operable from the exterior of the casing and rotatably secured to said plate, and coöperating stops on said rotatable device and the casing adapted to limit the extent of movement of the contact plate when the operating device is actuated while in one rotatably adjusted position to open and close the lamp circuit without releasing the cover.

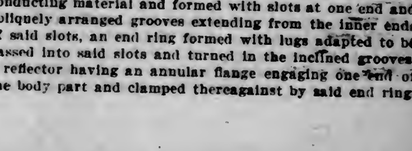
4. A flashlight comprising a casing formed of a body part and a cover part, lamp terminals in said casing, a contact plate formed with locking flanges, locking lugs formed on the cover and adapted to be engaged by the locking flanges on the contact plate, means adapted to move the contact plate to close the lamp circuit without releasing the cover and to impart a further movement thereto to unlock the cover, and a stop for limiting the movement of said means to circuit-closing position, said stop and contact-plate-moving means being relatively shiftable whereby said means may be operated to move the plate to unlocking position.

5. A flashlight comprising a casing formed with a body part and a cover, lamp terminals in said casing, a contact plate, a locking flange carried by said plate, a locking lug carried by the cover and adapted to be engaged by said locking flange, a rotatable button on the outer side of the casing and connected to the contact plate, means for limiting the movement of the contact plate when the button is in one position to complete the lamp circuit without releasing the cover, said contact plate being capable of a greater movement when the button is rotated to another position whereby the locking flange may be disconnected from the locking lugs to release the cover.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,728. POCKET FLASH-LIGHT. CHARLES WACHTEL, Jamaica, N. Y. Filed June 19, 1916. Serial No. 104,355. (Cl. 240—8.5.)



1. A pocket flashlight comprising a cylindrical body part formed of hard fibrous non-conducting material, a lens and reflector at one end thereof, means for securing said lens and reflector to the lamp body, a closure cap for the rear end of the lamp body formed with an annular flange adapted to fit within said body, outwardly extending locking lugs carried by said flange at diametrically opposite points and adapted to be passed into longitudinally extending recesses in the lamp body and to engage annular grooves formed in said body to lock the cap in position, a spring carried by said cap, a battery cell within the lamp body and adapted to be engaged by said spring, and an insulating disk carried by said end cap and adapted to engage the end of the body part of the lamp whereby said end cap will be entirely inclosed by insulating material.

2. A flashlight comprising a tubular body part of non-conducting material and formed with slots at one end and obliquely arranged grooves extending from the inner ends of said slots, an end ring formed with lugs adapted to be passed into said slots and turned in the inclined grooves, a reflector having an annular flange engaging one end of the body part and clamped thereagainst by said end ring, a lamp supported in said reflector, a battery cell in the body part having one terminal engaging one terminal of said lamp, the rear end of said body being formed with longitudinally extending recesses in its inner surface and annular grooves connected with said recesses, a closure cap for the rear end of said body part formed with an annular flange fitting within the body and outwardly extending locking lugs adapted to engage said interior grooves, a spring carried by said cap for electrically connecting the cap with the remaining terminal of said cell and maintaining the forward terminal of the cell in contact with its associated lamp terminal, a conductor within the body connecting the flange of the closure cap with the reflector flange, a switch interposed between the ends of said conductor, and an insulating cover secured to the exterior of said cap and engaging the adjacent end of the body part.

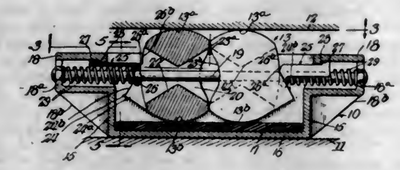
3. A flashlight comprising a tubular body part of non-conducting material and formed with slots at one end and obliquely arranged grooves extending from the inner ends of said slots, an end ring formed with lugs adapted to be passed into said slots and turned in the inclined grooves, a reflector having an annular flange engaging one end of the body part and clamped thereagainst by said end ring,

a lamp supported in said reflector, a battery cell in the body part having one terminal engaging one terminal of said lamp, the rear end of said body being formed with longitudinally extending recesses in its inner surface and annular grooves connected with said recesses, a conductor within the body and extending longitudinally thereof against the forward end of which the reflector flange is clamped by said end ring, the rear end of said conductor terminating within the body part, a closure cap for the rear end of said body part formed with an annular flange fitting within the body and outwardly extending locking lugs formed on said closure cap flange and adapted to engage said interior grooves to force the edge of said flange against the rear end of said conductor, a spring carried by said cap for electrically connecting the cap with the remaining terminal of said cell and maintaining the forward terminal of the cell in contact with its associated lamp terminal, and a switch interposed between the ends of said conductor.

4. A flashlight comprising a tubular body part of non-conducting material, an electric lamp mounted at one end of said body, a battery cell within the body having its forward terminal contacting with one terminal of the lamp, an electrical conductor secured within the body contacting at its forward end with the remaining terminal of said lamp and having its rear end terminating within the body, the rear end of said body being formed with longitudinally extending recesses in its inner wall and annular grooves connected with the inner ends of said recesses, a closure cap of conducting material for the rear end of the body formed with an annular flange adapted to fit within the body and provided with outwardly projecting locking lugs on said flange adapted to pass through the longitudinal recesses and engage in the annular grooves at the rear end of the body to force the edge of said flange against the rear end of said conductor, means interposed between the cap and cell to electrically connect the cap with the rear terminal of the cell, and a circuit closer adapted to make and break the circuit through said conducting means.

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**1,226,729. ANTIFRICTION-BEARING.** ARNOLD A. WEIGEL, Chicago, Ill., assignor to Albert G. Welch, Chicago, Ill., trustee of Edwin S. Woods, deceased. Filed June 8, 1914. Serial No. 843,686. (Cl. 64—65.)



1. An anti-friction bearing comprising a casing, a plurality of closely spaced anti-friction rockers in said casing having top and bottom bearing surfaces of a length adapted to provide for a predetermined amplitude of rocking movement of said rockers, each of said rockers having that side, which is adjacent to the next rocker, curved inwardly from the terminal lines of its bearing surfaces toward its vertical, diametric plane, and having an intermediate, joining, reversed-curved surface of the same radius whereby said rockers may rock in engaging relation through substantially the full predetermined amplitude of their rocking movement.

2. An antifriction bearing comprising a casing, a plurality of closely spaced antifriction rockers located in said casing and having top and bottom bearing surfaces of a length adapted to permit a rocking movement through a predetermined angle, each of said rockers having that side, which is adjacent to the next rocker, curved inwardly from the terminal lines of its bearing surfaces toward its vertical, diametric plane, and having an intermediate, joining, reversed-curved surface of the same radius whereby said elements are permitted to rock together through substantially the full angle determined by their bearing surfaces, but which are adapted to lock said elements against further rocking movement when the limit of said angle of rocking movement is reached.

3. An antifriction bearing comprising a casing, a plurality of closely spaced antifriction elements located in said casing and having top and bottom bearing surfaces of a length adapted to permit a rocking movement through a predetermined angle, each of said rockers having that side which is adjacent to the next rocker, curved inwardly from the terminal lines of its bearing surface toward its vertical, diametric plane, and having an intermediate, joining, reversed-curved surface of the same radius, whereby the side of one element may bear against the proximate side of the adjacent element throughout a rocking movement through the full angle determined by the length of their bearing surfaces.

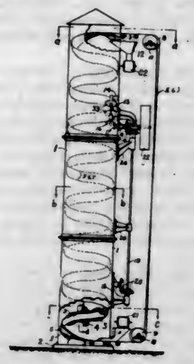
4. An antifriction bearing comprising a casing, a plurality of closely spaced antifriction rockers located in said casing and having top and bottom bearing surfaces of a length adapted to permit rocking movement through a predetermined angle, each of said rockers having that side which is adjacent to the next rocker, curved inwardly from the terminal lines of its bearing surface toward its vertical, diametric plane, and having an intermediate, joining, reversed-curved surface of the same radius, whereby the side of one element may bear against the proximate side of the adjacent element throughout a rocking movement through the full angle determined by the length of their bearing surfaces and acts to stop the further movement of said element when the same has been rocked through its predetermined limit of movement.

5. An antifriction bearing comprising a casing, a plurality of closely spaced rocking antifriction elements located in said casing and having top and bottom bearing surfaces of a length adapted to permit a rocking movement through a predetermined angle, each of said rockers having that side which is adjacent to the next rocker, curved inwardly from the terminal lines of its bearing surface toward its vertical, diametric plane, and having an intermediate, joining, reversed-curved surface of the same radius, whereby the side of one element may bear against the proximate side of the adjacent element throughout a rocking movement through the full angle determined by the length of their bearing surfaces, and means for returning said antifriction element to a vertical position when released.

[Claims 6 to 9 not printed in the Gazette.]

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**1,226,730. BELT CONVEYER.** MILTON T. WESTON, New York, N. Y. Filed June 13, 1912. Serial No. 703,434. (Cl. 198—4.)



1. In a conveyor of the type described the combination of a suitable support, of carrying idlers arranged in two spiral rows thereon, each of said spiral rows having one or more complete convolutions and a conveying means carried by said idlers.

2. In a conveyer of the type described the combination of a suitable support having carrying idlers mounted in double spiral order thereon, the axes of said carrying idlers being elements of a cylindrical surface, of conveying means adapted to travel on said carrying idlers and a driving means engaging the conveying means to cause same to travel on the carrying idlers.

3. In a conveyer of the type described the combination of a driving means, of a conveying means driven by said driving means and supporting means which cause the conveying means to travel in a spiral path with its carrying surface in a vertical position.

4. In a conveyer of the type described the combination of a conveying means, of a cylindrical support, of carrying idlers mounted on the inner surface of said support in such a manner as to cause the conveying means to change from a horizontal to a vertical position, transversely, and also to travel in a spiral direction within the support and a plural driving means engaging the conveying means to cause same to travel on the carrying idlers.

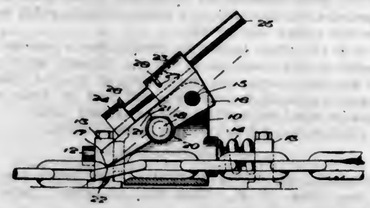
5. In a conveyer the combination of a suitable support having two rows of carrying idlers arranged in parallel spiral order thereon, the axes of said carrying idlers being elements of a cylindrical surface, of a conveying belt having suitable edges for engaging said carrying idlers and a driving means engaging the edges of the conveying belt to cause same to travel on the carrying idlers.

[Claims 6 to 10 not printed in the Gazette.]



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**1,226,731. TRIP RIDING-PAWL.** WILLIAM J. WHEELER, Patchogue, N. Y. Filed Mar. 31, 1917. Serial No. 158,859. (Cl. 114—200.)



2. A trip pawl for chain stoppers pivoted at one end and adapted to engage a cable at its free end, and comprising two parts hingedly connected, and means for locking said parts in extended or alined position.

10. A trip pawl for chain stoppers comprising a pivoted first part, a second part hingedly connected to said first part, an ear on each of said parts, openings in said ears which are in alinement when the parts are in extended position, said ear of the first part having a longitudinal slot terminating in a peripheral slot, a rod adapted to engage in the alined openings of said ears to lock the parts in extended position, a pin on said rod adapted to move through said longitudinal slot and engage in said peripheral slot to prevent withdrawal of the slot from locking position, and a pin on said rod between said ears.

[Claims 1 and 3 to 9 not printed in the Gazette.]

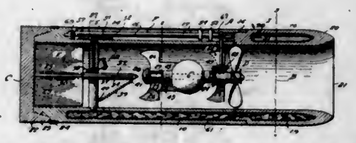
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**1,226,732. PROJECTILE.** CLARENCE WILBUR WHITE, Chicago, Ill. Filed Mar. 20, 1916. Serial No. 85,320. (Cl. 102—2.)

1. A projectile comprising in combination, a shell, water in said shell, a fluid-operated wheel carried by said shell, and means operated by said wheel for converting said water into explosive gases by electrolysis.

2. A projectile comprising in combination, a shell, water in said shell, a fluid-operated wheel carried by said shell, and electro-means operable by said wheel for converting said water into gas.

3. A projectile comprising in combination, a shell, water in said shell, a fluid-operated wheel carried by said shell, electro-means operable by said wheel for converting said water into gas, and time mechanism for setting off said gas.



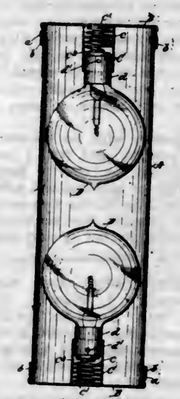
4. A projectile comprising in combination, a shell, water in said shell, a fluid-operated wheel carried by said shell, electro-means operable by said wheel for converting said water into gas, and time mechanism operable by said wheel for setting off said gas.

5. A projectile comprising in combination, a cylindrical shell, the wall of which is hollow and its axial way open to the atmosphere, means in the hollow of said wall of said shell from which a charge may be made, and means operable by fluid passing through the said way of said shell at a high rate of speed, acting upon said last-mentioned means to make the charge.

[Claims 6 to 14 not printed in the Gazette.]

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**1,226,733. LAMP-CONTAINER.** HORACE E. WHITNEY, Cambridge, Mass., assignor to Dover Stamping and Manufacturing Company, Portland, Me., a Corporation of Maine. Filed May 25, 1915. Serial No. 30,426. (Cl. 206—1.)



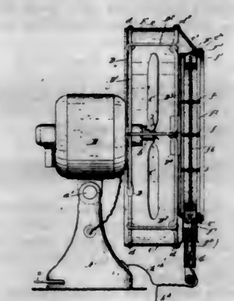
An electric lamp container comprising a rigid tube having a cover removably attached to each end thereof, each cover having a socket containing a spiral spring and adapted to receive the neck piece of a lamp, means comprising a bayonet joint to hold said lamp in said socket, said spring being adapted to prevent said bayonet joint from working loose when said container is in use.

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**1,226,734. ELECTRIC-FAN ATTACHMENT.** WILLIS I. WORK, Boston, Mass., assignor to Walworth Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 5, 1914. Serial No. 875,706. (Cl. 219—39.)

1. The combination with an electric fan, of a wire guard cage surrounding said fan and comprising two separated circular wires, a sheet-metal casing having circular grooves arranged to register with said wires and adapted to be sprung into place over said wires, and thus to be frictionally and removably supported in place, and an

electric heater supported on said casing in front of said fan.



2. The combiantion with an electric fan, of a wire guard cage surrounding said fan, a casing surrounding said cage and having a frusto-conical front portion, and an electric heater supported in and surrounded by said frusto-conical portion of said casing.

3. The combination with an electric fan, of a wire guard cage surrounding said fan, a casing surrounding said cage, and having a frusto-conical front portion, and an electric heater frictionally and removably supported in and surrounded by said frusto-conical portion of said casing.

4. The combination with an electric fan, of a wire guard cage surrounding said fan, a casing surrounding said cage and having a frusto-conical front portion, and an electric heater frictionally and removably supported in and surrounded by said frusto-conical portion of said casing, said heater having a circular frame provided at its front edge with a flange to engage the front edge of said frusto-conical portion of said casing and thus serve as a stop when said heater is being inserted in said casing.

5. The combination with an electric fan, of a wire guard cage surrounding said fan, a casing surrounding said wire guard cage, an electric heater supported by said casing in front of said fan and provided with terminals, a removable plug having two pairs of spring contacts adapted to engage said terminals, and electrical connections between the fan circuit and said plug.

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1,226,735. INK-REMOVING AND BLEACHING COMPOUND. ISABELLA J. WRIGHT, Kalamazoo, Mich. Filed June 29, 1916. Serial No. 106,635. (Cl. 92—14.)

1. An ink remover for paper stock comprising sodium carbonate, 4 pounds; chlorid of lime, ½ pound; kerosene, 1 gallon; soap, 6 pounds; combined with water substantially as described.

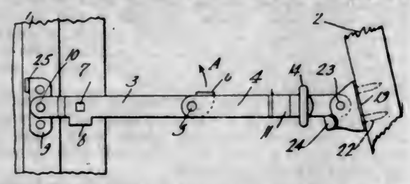
2. A solution for the treatment of paper stock comprising sodium carbonate, chlorid of lime, kerosene, soap, and water, combined substantially as specified.

3. A solution for the treatment of paper stock including sodium carbonate, chlorid of lime, a hydrocarbon, and water combined substantially as specified.

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1,226,736. SASH-FASTENER. JOHN S. YOGERST and WALTER M. WENCK, St. Cloud, Minn., assignors, by direct and mesne assignments, of one-half to said John S. Yogerst and one-half to John Yogerst, St. Cloud, Minn. Filed June 10, 1916. Serial No. 102,997. (Cl. 16—22.)

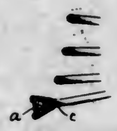
In a device of the class described, a frame-engaging foot plate having an outstanding shoulder; an inner arm pivoted at one end to the foot plate and provided with an opening located within the contour of the arm, the arm having a laterally inclined lip disposed adjacent the opening; a barrier-carried hanger; an outer arm pivoted at one end to the hanger and pivoted at its other end to the inner arm; and a spring advanced latch carried by the outer arm and operating transversely thereof, one end of the latch projecting beyond the outer arm; the arms being foldable into alinement and into engagement



with the shoulder, the lip serving to engage the projecting end of the latch thereby to retract the latch, as the arms move toward alinement, and the said end of the latch engaging automatically in the opening when the arms are in alinement.

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1,226,737. RIM-STRIP. LEONARD A. YOUNG, Highland Park, Mich. Filed Aug. 31, 1916. Serial No. 117,948. (Cl. 155—22.)



2. A rim strip, having in combination a channel facing outwardly and an opening in the rear wall giving access to the space between the side walls of the channel, said opening being provided with adjacent stock which may be pinched over a coil of wire.

4. A rim strip, having in combination a channel strip provided with a slot cut in the rear through which a coil of wire may enter, the stock adjacent the slot being arranged to be pinched over the coil, and the front of the channel being arranged to carry a tacking strip.

[Claims 1 and 3 not printed in the Gazette.]

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1,226,738. ROOFING MATERIAL. HERBERT ABRAHAM, New York, N. Y. Filed Feb. 27, 1917. Serial No. 151,170. (Cl. 154—51.)

1. A prepared roofing comprising a felt containing sea grass waterproofed with bituminous substances.

2. A prepared roofing comprising a felt composed of a mixture of rags and sea grass fibers waterproofed with bituminous substances.

3. A prepared roofing comprising a felt composed of a mixture of rags, paper and sea grass fibers waterproofed with bituminous substances.

[Claims 4 and 5 not printed in the Gazette.]

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1,226,739. CEMENTATION COMPOUND. JAMES M. ALLEN and JOSEPH C. CHRISTEN, St. Louis, Mo.; said Christen assignor to Orion S. Miller, St. Louis, Mo. Filed Sept. 15, 1916. Serial No. 120,250. (Cl. 148—23.)

1. The herein described composition of matter to be used for the treatment of steel and iron by the cementation method or process comprising substantially equal parts of pulverized anthracite coal, pulverized animal bones, pulverized carbonized vegetable material and a comparatively small portion of pulverized manganese.

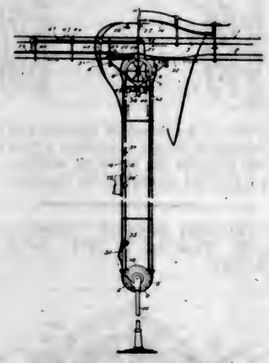
2. The herein described composition of matter to be used for the treatment of steel and iron by the cementation method or process comprising from 30 to 32 per cent. pulverized anthracite coal, from 30 to 32 per cent. pulverized animal bones, from 30 to 32 per cent. pulverized carbonized vegetable material, and from 4 to 10 per cent. pulverized manganese.



3. The herein described composition of matter to be used for the treatment of steel and iron by the cementation method or process comprising from 30 to 32 per cent. pulverized anthracite coal, from 30 to 32 per cent. pulverized animal bones, from 30 to 32 per cent. pulverized carbonized potatoes, and from 4 to 10 per cent pulverized manganese.

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1,226,740. CABLE-CARRIER APPARATUS. GEORGE A. AMSDEN, Littleton, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Dec. 26, 1913. Serial No. 808,713. (Cl. 186—14.)



1. Cable carrier apparatus comprising, a main track, and a drop-station having a pulley adjacent said main track and an auxiliary track leading around said pulley to said main track, said auxiliary track having the rails thereof bent to substantially the same radius, around said pulley and thereby adapted to support carriers flatwise thereupon when said carriers are passing around said pulley, and means for propelling carriers along said main and auxiliary tracks, said auxiliary track having means to permit of the emplacement of a carrier thereupon from an outer side of said drop-station.

2. Cable carrier apparatus comprising a way, a carrier to travel along said way and separable therefrom, said way having means for receiving parts of said carrier to permit of the emplacement of said carrier upon and its removal from said way, a station along said way, pulleys at said station, and an endless cable for propelling carriers from said station at least to said way, said cable at said station being guided by said pulleys, said pulleys being mounted upon but two axes of rotation and each portion of said cable successively passing over each of said pulleys.

3. Cable carrier apparatus comprising a way, a station along said way, three pulleys at said station, and a cable for propelling carriers from the station proper at least to said way, said cable at said station being guided by said pulleys, two of said three pulleys being mounted upon a common axis of rotation disposed adjacent said way.

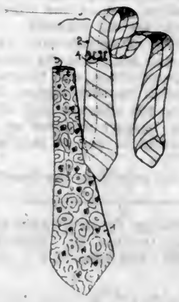
4. Cable carrier apparatus comprising a way, a station along said way, three pulleys at said station, and a cable for propelling carriers from a despatching part of said station at least to said way, said cable at said station being guided by said pulleys, two of said three pulleys being mounted upon a common axis of rotation disposed adjacent said way and substantially directly above the axis of the third pulley.

5. Cable carrier apparatus comprising a way, a station along said way, pulleys at said station, and a cable for propelling carriers from a despatching part of said station at least to said way, said cable extending down from the way, around one of said pulleys and back to the way in substantially the form of a flattened O.

[Claims 6 to 20 not printed in the Gazette.]

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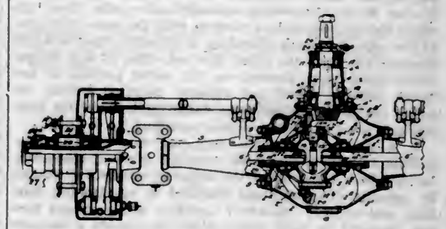
1,226,741. NECKTIE. DAVID D. BAILEY, Coffeyville, Kans. Filed Jan. 13, 1917. Serial No. 142,249. (Cl. 2—11.)



As a new article of manufacture, the herein described cravat, comprising a tie-end provided at one end with a sheath, and a complete string tie insertible at one end in said sheath, the sheath being unpadded, and separable fasteners attached to said sheath at one end thereof and the string tie at a distance from one end of the latter, whereby that portion of the string tie between said fasteners and the adjacent end of the string tie, lying within the sheath, will constitute a padding for the tie-end.

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1,226,742. POWER-TRANSMITTING MECHANISM. WALTER C. BAKER, Cleveland, Ohio, assignor to The American Ball Bearing Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 15, 1915. Serial No. 40,090. (Cl. 74—56.)



1. In power transmission mechanism, in combination, a gear case comprising a pair of sections detachably connected together in a transverse vertical plane, each section having a frusto conical inward extension, sleeves each fitted into one of said extensions and having an inward projection, and a rotatable gear support mounted at either end on the inward projection of the adjacent one of said sleeves.

2. In power transmission mechanism, in combination, a gear case comprising a pair of sections detachably connected together in a transverse vertical plane, each section having a frusto conical inward extension, sleeves each having intermediate its ends a flange, each said sleeve being supported by one of said extensions with its flange abutting thereagainst, and a gear support at either end rotatably mounted on the adjacent end of one of said sleeves.

3. As a new article of manufacture, an axle housing comprising an enlarged gear receiving section and a pair of axle incasing tubes, each detachably connected at its inner end to the adjacent end of said enlarged section, either end of said enlarged section being the base of an inwardly tapering, integrally formed bearing support, and a gear support mounted at either end on the adjacent inner end of one of said tapering bearing supports.

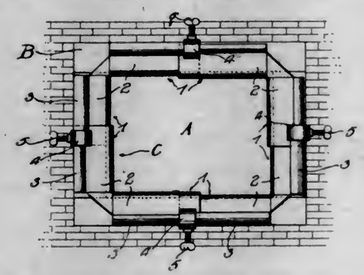
4. As a new article of manufacture, an axle housing comprising an enlarged gear receiving section, having extending inwardly from either end thereof an inwardly tapering frusto conical bearing support, and a gear support mounted at either end on the adjacent inner end of one of said conical bearing supports.

5. As a new article of manufacture, an axle housing comprising an enlarged gear receiving section having extending inwardly from either end thereof an inwardly tapering frusto conical bearing support integrally connected at its base to the adjacent wall of said enlarged section, and a gear support mounted at either end on the adjacent inner end of one of said conical bearing supports.

[Claims 6 to 19 not printed in the Gazette.]

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1,226,743. WINDOW OR DOOR FRAME SHIELD. WILLIAM F. BOWMAN, Decatur, Ill. Filed Aug. 24, 1916. Serial No. 116,693. (Cl. 189—46.)



1. A device of the class described comprising an open rectangular frame composed of four right angular strips having flanges extending laterally outwardly from the edges thereof and formed integral with the same, the arms of the adjacent strips extending in opposite directions and disposed one upon the other, the free edges of said flanges being rolled upon themselves, the rolled portion of one flange being received and slidably mounted within the rolled portion of the adjacent flange, and means for locking said arms in their adjusted positions.

2. A detachable window and door frame shield comprising an adjustable frame composed of four right angular members, the arms of the adjacent members extending in opposite directions and disposed in overlapping relation, and slidably connected together, said members having channels in their outer edges to provide a window and door frame receiving channel extending completely around the outer edge of the frame, and means for locking the arms of said members in their relatively adjusted positions.

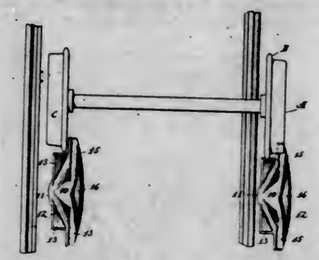
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1,226,744. RERAILER. WARREN L. BOYER, Longmeadow, Mass., assignor to Bemis Car Truck Company, Springfield, Mass., a Corporation of Delaware. Filed Jan. 26, 1917. Serial No. 144,613. (Cl. 104—163.)

1. A rerailer consisting of a transversely sloping throw-off nose, an upwardly and transversely sloping incline connected to said throw-off nose, a plate-like projection connected to said incline, and an upwardly sloping arm connected to the throw-off nose, to the upper edge of said incline, and projecting beyond the extremity of said plate-like projection.

2. A rerailer consisting of a transversely sloping throw-off nose, an upwardly and transversely sloping incline connected to said throw-off nose, a plate-like projection connected to said incline, and a tread-engaging arm connected to the upper edge of said incline and to the said throw-off nose.

7. A rerailer consisting of a shed-like body having a substantially centrally located transversely sloping throw-off surface, flat plate-like projections connected to, and extending to the sides of, the said throw-off surface and merging into the same by upwardly and transversely-extending inclines, tread-engaging arms projecting beyond the edges of the said flat projections and connected to the

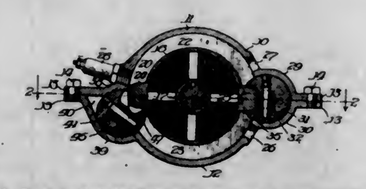


upper portions of the throw-off surface, and obliquely extending upstanding flanges projecting across the tread-engaging arms, adjacent the throw-off surface.

[Claims 3 to 6 not printed in the Gazette.]

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1,226,745. ROTARY ENGINE. FREDERICK A. BROOKS, Urbana, Ill. Filed Oct. 19, 1914. Serial No. 867,321. (Cl. 123—13.)



1. In a rotary engine construction of the character described, with suitable intake, exhaust, and ignition, the combination of a casing provided with a compression chamber, a rotor revoluble in said casing and having an annular compartment facing the casing, a partition wall on said rotor dividing the compartment into chambers, a valve in said casing coöperating with the rotor compartment to cause the compression of the gas charge ahead of said compression wall, deliver it axially of the valve into the compression chamber, and transfer a charge axially of the valve from said compression chamber to the rear of the partition wall for ignition and explosion, substantially as described.

2. In a rotary engine construction of the character described, with suitable intake, exhaust, and ignition, the combination of a casing provided with a compression chamber, a rotor revoluble in said casing and having a compartment facing the casing and a partition wall dividing the compartment into chambers, a recessed rotary valve in said casing projecting into the compartment and dividing the same into chambers and adapted to establish and break sidewise communication between the compartment and said compression chamber and adapted by the entering of the partition wall into its recess to permit the passage of said wall past the valve, and means to rotate said valve whereby to cause the compression of a gas charge ahead of said partition-wall, deliver such charge axially of the valve into the compression chamber, and discharge a charge axially of the valve from said compression chamber to the rear of said partition wall for ignition and explosion, substantially as described.

3. In a rotary engine construction of the character described, the combination of a casing provided with suitable intake-port, exhaust-port, ignition and a compression chamber, a rotor revoluble in said casing and having a compartment facing said casing divided by partition walls into chambers, a valve in said casing between the



intake and exhaust ports and projecting into said compartment, dividing it into chambers, a second valve in said casing projecting into said compartment and dividing it into chambers, and adapted to establish and break communication axially of the valve between said rotor compartment and compression chamber, and means to operate said valves to permit the passage of the partition walls past the same, whereby a charge of gas is drawn in behind one of said walls, is compressed between another of said walls and said second valve, is delivered by said second valve axially of the valve into the compression chamber, and a charge from the latter is delivered by said second valve axially thereof to the rear of said wall for ignition and explosion, substantially as described.

4. In a rotary engine construction of the character described, the combination of a casing provided with suitable intake-port, exhaust-port, ignition, and a compression chamber, a rotor revoluble in said casing and having a compartment facing said casing divided by partition-walls into chambers, a recessed rotary valve in said casing between the intake and exhaust ports and projecting into said compartment dividing it into chambers, a second recessed rotary valve in said casing projecting into said compartment and dividing it into chambers, and constructed to establish and break communication axially of the valve between said rotor compartment and compression chamber, the recesses of said valves being adapted to temporarily accommodate said partition walls and permit their passage past the valves, and means to revolve said valves, whereby a charge of gas is drawn in behind one of said walls, is compressed between another of said walls and said second valve, is delivered by said second valve axially thereof into the compression chamber, and a charge from the latter is delivered by said second valve axially thereof to the rear of said wall for ignition and explosion, substantially as described.

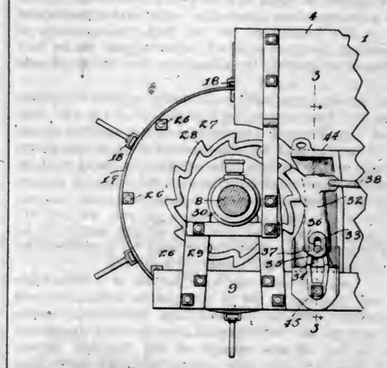
5. In a rotary engine construction of the character described, the combination of a casing provided with suitable intake-ports, exhaust-ports, ignition, and a compression chamber, a rotor revoluble in said casing and having a plurality of compartments facing said casing, each compartment being divided by partition walls into chambers, a recessed rotary valve in said casing for each of the rotor compartments between the corresponding intake and exhaust ports and projecting into the compartment, dividing it into chambers, and adapted to establish and break communication between the corresponding rotor compartment and said compression chamber, the recesses of said valves being adapted to temporarily accommodate said partition walls and permit their passage past the valves, and means to rotate said valves, whereby a charge of gas is drawn in behind one of the partition walls of each compartment, is compressed between another of the partition walls of said compartment and the corresponding second valve, is delivered by said second valve axially thereof into the compression chamber and a charge from the latter is delivered by said second valve to the compartment rearwardly of said wall for ignition and explosion, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

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1,226,746. MANURE-SPREADER. THEOPHILUS BROWN, Moline, Ill., assignor to Marseilles Company, East Moline, Ill., a Corporation. Filed Apr. 26, 1912. Serial No. 693,430. Renewed Oct. 12, 1916. Serial No. 125,287. (Cl. 111—40.)

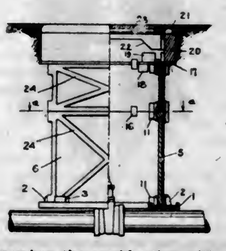
1. The combination of the vehicle body, the rotary beater, feeding means adapted to maintain a substantially constant load on the beater, a power transmitter for rotating the beater comprising two constantly-engaging toothed gear elements of which one is a continuously rotating primary driver and the other is a secondary power-receiving element connected with the beater by devices adapted to transmit power thereto, both the primary and the secondary elements being adapted to be idle relative to the driving of the beater while the primary element is rotating, and a yielding stop for the secondary element, said parts being arranged substantially as described, whereby the beater is started at an initially slow speed and is caused to rotate with an increasing speed after its rotation commences.



2. The combination of the vehicle body, the rotary beater, means for advancing the load against the beater, a power transmitter for driving the beater comprising a constantly-rotating primary drive element, a power-receiving element rigidly connected with the beater, an intermediate power-transmitting element, power-transmitting means which constantly connect said intermediate element with both of the aforesaid elements, the intermediate element being adapted to normally rotate bodily with the primary drive element while the beater is stationary, and optionally-controlled means adapted to positively engage with the intermediate element and yieldingly retard and stop it from rotating bodily.

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1,226,747. ROADWAY-BOX. ALVIN BUOBEE, Trenton, N. J. Filed Apr. 29, 1913. Serial No. 764,327. (Cl. 137—13.)



1. In a roadway-box the combination with a base plate, of a plurality of rectangular plates forming a set, and means for interlocking said plates consisting of a male member located at each corner of the upper and lower edges of one or more of said plates and a corresponding female member located at each corner of the upper and lower edges of one or more of the other plates of said set, adapted to interlock with the male members whereby the plates may be positioned with movement corresponding to the height of said corner-members.

2. The combination with a roadway box comprising a base plate and a top plate, a plurality of sets of side plates, and interlocking means for said side plates consisting of lugs forming dovetailed recesses located at the corners of the top and bottom edges of some of said side plates of a set, and of prismatic lugs adapted to enter said recesses and located at the corners of the top and bottom edges of the remaining side plates of a set, whereby the plates may be positioned by moving the same only the height of said lugs.

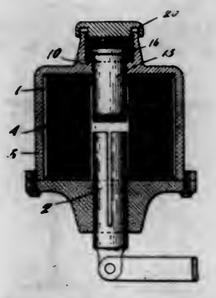
3. The combination with a plurality of plates forming a set, of means for interlocking said plates consisting of lugs forming dovetailed recesses located at the corners of the top and bottom edges of a number of the plates of said set, and prismatic lugs adapted to enter said recesses and located at the corners of the top and bottom edges of the remaining plates of said set, whereby said plates may be positioned by moving the same only the height of said lugs.

4. The combination with a plurality of sets of plates, of means for interlocking said plates of a set and consisting of lugs forming dovetailed recesses located at the corners of the top and bottom edges of some of the plates of said set, and prismatic lugs adapted to enter said recesses and located at the corners of the top and bottom edges of the remaining plates of said set, said lugs extending over the edge of the plates of one set and are adapted to be engaged by the lugs of the plates of an abutting set, whereby said plates may be positioned by moving the same only the height of said lugs.

5. In a roadway-box, the combination of a base-plate having lugs thereon, a set of side plates resting on said base-plate and positioned by said lugs, interlocking means for said side plates consisting of lugs forming dovetailed recesses located at the corners of the top and bottom edges of some of said side plates, and prismatic lugs adapted to enter said recesses and located at the corners of the top and bottom edges of the remaining side plates, lugs on the upper edges of said plates, and a second set of side plates superposed and resting on said first set of side plates and positioned by the lugs on the upper edges of the first set, whereby the plates may be positioned by moving the same only the height of said lugs.

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1,226,748. SOLENOID. GEORGE A. BURNHAM, Saugus, Mass., assignor to Sears B. Condit, Jr., Brookline, Mass. Filed July 1, 1915. Serial No. 37,605. (Cl. 175—21.)




1. The combination with an alternating current solenoid and its movable core-piece, of a stop held stationarily at the upper end of the solenoid in the path of movement of said core-piece and isolated from the frame-structure by sound deadening means.

2. The combination with an alternating current solenoid and its movable core-piece, of a stop and means to hold said stop stationarily in the path of movement of said core-piece, the holding means for the stop including sound-deadening means and isolated from the frame structure.

3. The combination with an alternating current solenoid and its movable core-piece, of a stop held stationarily in the path of movement of said core-piece, the holding means including sound-deadening material inclosing said stop and arranged to isolate it from the frame-structure.

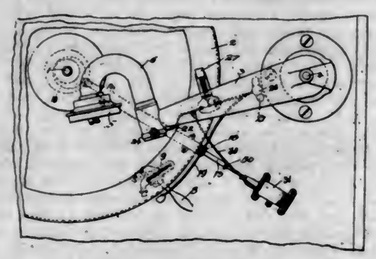
4. The combination with an alternating current solenoid and its movable core-piece, of a stop held stationarily in the path of movement of said core-piece, the holding means including sound-deadening material inclosing said stop and arranged to isolate it from the frame-structure, and sound-deadening material arranged on the end of the stop to receive the rapid impacts of the core-piece due to the alternations of the current.

5. The combination with an alternating current solenoid and its movable core-piece, of a stop adapted to be held stationarily in the path of movement of the core-piece, said stop having a shoulder arranged above the end of the tubular opening in the solenoid, sound-deadening material arranged between said shoulder and the end of said tubular opening and a screw cap arranged to exert pressure on the stop and hold it stationarily.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,749. AUTOMATIC STOPPING DEVICE FOR GRAPHOPHONES. CLARENCE CATE, Chicago, Ill., assignor to Frank F. Akerly, Chicago, Ill. Filed Apr. 5, 1915. Serial No. 19,121. (Cl. 74—46.)



1. In a stopping mechanism for a graphophone, the combination with a traveling arm and a member movable relatively thereto, of a controller movable in unison with the said arm, an actuator for said controller, and means driven by the aforesaid member for moving said actuator during normal running of the machine at the same speed and in the same direction as the controller is carried by the said arm while the latter is advancing.

2. In a stopping mechanism for a graphophone, the combination with a traveling arm and a member movable relatively thereto, of a controlling lever mounted on and movable with the said arm, an actuator for said lever, and means driven by the aforesaid member for moving the actuator at the same speed and in the same direction as that in which the lever is being carried by the said arm while the latter is advancing.

3. In a stopping mechanism for a graphophone, the combination with a traveling arm and a member movable relatively thereto, of a device mounted on and movable with the said arm, a driving element for said device movable back and forth, means associated with the aforesaid member for actuating said driving element, and selective clutch mechanism for automatically connecting said element to the aforesaid device and moving the latter relatively to said arm.

4. In a stopping mechanism for a graphophone, the combination with a traveling arm and a member movable relatively thereto, of a device movable in unison with the said arm, a gear wheel, an actuator for said device in the form of a rack bar adapted to mesh with said gear wheel, and means associated with the aforesaid member for driving said gear wheel at such a speed as to move the rack bar forward at the same speed that the aforesaid device is carried by the said arm while the latter is advancing.

5. In a stopping mechanism for a graphophone, the combination with a traveling arm and a member movable relatively thereto, of a lever movable in unison with the said arm, a gear wheel, a rack bar connected at one end to said lever and adapted to mesh with said gear wheel, and means actuated by the aforesaid member for turning the gear wheel at such a rate as to move the rack forward at the same speed as that at which the lever travels while the said arm is advancing.

[Claims 6 to 12 not printed in the Gazette.]



1,226,750. MANUFACTURE OF REFRACTORY BODIES. HOWARD F. CHAPPELL, New York, N. Y., assignor to Mineral Products Corporation, New York, N. Y., a Corporation of Maine. Filed Nov. 15, 1916. Serial No. 131,395. (Cl. 106—10.)

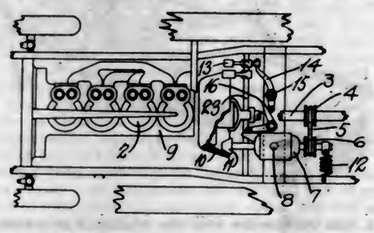
1. The method of producing refractory bodies, which comprises calcining alunite, leaching the calcine, molding the leached product into the desired form, and heating it to such a high temperature as to cause the bonding cohesion of the particles of the molded mass; substantially as described.

4. A refractory body, comprising leached calcined alunite, in combination with fire-clay intimately admixed therewith, the particles of the compound mass having been brought, by heating, into bonding cohesion throughout; substantially as described.

[Claims 2 and 3 not printed in the Gazette.]

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1,226,751. ENGINE-STARTING SYSTEM. WILLIAM A. CHRYST, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Company, a Corporation of Ohio. Filed June 12, 1915. Serial No. 33,812. (Cl. 74—26.)




1. In an engine starting device, the combination with an engine, of a motor-generator pivotally supported adjacent to the engine; a plurality of means for connecting the engine and the motor-generator together, each of said means having different mechanical advantages; and means for shifting the position of the motor-generator on its pivotal support to connect the engine and motor-generator together through the different connections.

2. In an engine starting device, the combination with an engine, of a motor-generator having a shaft adapted to connect with the engine when the motor-generator is to operate as a motor for starting purposes; and a flexible connection between the engine and motor-generator, adapted to drive the motor-generator as a generator when the engine becomes self-actuating; means for pivotally supporting the motor-generator; and means for shifting the motor-generator on its pivotal support, whereby the motor-generator shaft will be moved into driving connection with the engine and the flexible connection will be so loosened as to discontinue its driving effect.

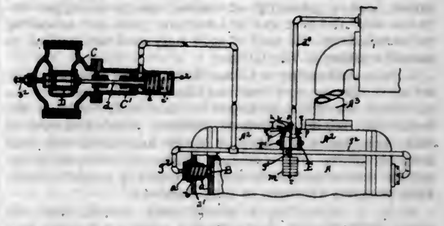
3. In an engine starting device, the combination with an engine having a flywheel; of a motor-generator pivotally supported adjacent to the engine, said motor-generator having a shaft adapted to be brought into contact with the engine flywheel when the motor-generator is to operate as a motor for starting purposes; a belt connection between the motor-generator and the engine and adapted to drive the motor-generator as a generator when the engine becomes self-actuating; and means for turning the motor-generator on its pivotal support to loosen the belt connection and to bring its shaft connection into engagement with the engine flywheel for starting purposes.

4. In an engine starting device, the combination with an engine having a flywheel; of a motor-generator pivotally supported adjacent to said engine, said motor-generator having a shaft adapted to be brought into engagement with the flywheel of the engine, when the motor-generator is to operate as a motor for starting purposes; a belt connection between the engine and the motor-generator for driving the motor-generator as a generator when the engine becomes self-actuating; an operating element; and connections between the operating element and the motor-generator, whereby said motor-generator may be shifted to loosen the belt connection between the engine and the motor-generator and to bring the shaft of the motor-generator into engagement with the flywheel for starting purposes.

5. In an engine starting device, the combination with an engine, of a motor-generator pivotally mounted adjacent to said engine; means for connecting the motor-generator to the engine when the motor-generator is to operate as a motor for cranking purposes; flexible means for connecting the motor-generator to the engine when the motor-generator is to operate as a generator; and an operating element for shifting the motor-generator on its pivotal mounting to make the connection between the motor-generator and the engine for cranking purposes.

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1,226,752. PUMP-REGULATING MECHANISM. RUDOLPH CONRADER, Erie, Pa. Filed Apr. 9, 1913. Serial No. 760,017. (Cl. 230—24.)



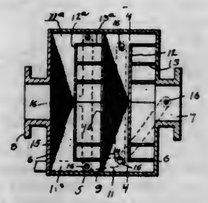
1. In a pump regulating mechanism, the combination of a relief device adapted to act on the discharge of the pump to unload the pump; a controlling valve for the pump motor; and controlling means for said valve opening and closing said valve as the relief device operates, said means being subjected to pressures varying as the discharge pressure varies and varying the opening of the valve as the discharge pressure varies.

2. In a pump regulating mechanism, the combination of a relief device adapted to act on the discharge of the pump to unload the pump; a controlling valve for the compressor motor; a valve motor actuating said valve, said valve motor being subjected through the relief device to discharge pressure and acting under said pressure to open the valve and being relieved of said pressure by the relief device to permit the closing of the valve; and a spring opposing the opening action of the motor, said spring varying in resistance to vary the opening of the valve as the discharge pressure varies.

3. In a pump regulating mechanism, the combination of a pump cylinder; discharge valves therefor; discharge connections leading to said valves for subjecting them normally to discharge pressure; a relief device subjected to discharge pressure and adapted when actuated to cut off said discharge connections; a motor valve; a valve motor actuating said motor valve, said valve motor being subjected through the relief device to discharge pressure to open the valve and relieved of receiver pressure by the relief device to permit the closing of the valve; and means exerting pressure to close the valve and said pressure offering a varying resistance to the movement of the motor opening the valve to make the opening of the valve follow the discharge pressure.

4. In a pump regulating mechanism, the combination of a relief device adapted to act on the discharge of the pump to unload the pump; a controlling valve for the pump motor; a valve motor actuating said valve, said valve motor being subjected through the relief device to discharge pressure and acting under said pressure to open the valve and being relieved of said pressure by the relief device to permit the closing of the valve; and means exerting a varying resistance opposing the opening action of the motor whereby the valve opens gradually with the increase of discharge pressure from below normal.

1,226,753. CARBURETER. BENJAMIN P. CRITCHLOW, Ogden, Utah. Filed Apr. 7, 1916. Serial No. 89,615. (Cl. 261—79.)



1. In a carbureter, a hollow cylindrical body having an air inlet port in one end thereof, a deflector plate arranged within said body and in spaced relation to the side wall thereof, a fuel nozzle secured in the side wall of said body having its open end directed toward the axis of the latter, and a plurality of curved blades arranged between said inlet port and said deflector plate and extending outwardly from the axis of said body and terminating in spaced relation to the latter.

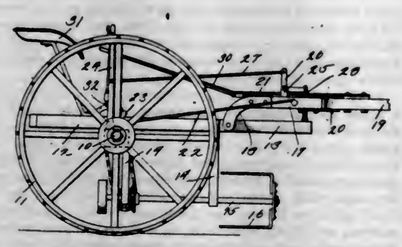
2. In a carbureter, a hollow body having inlet and outlet ports therein, fuel nozzles extending into said body, an apertured partition arranged in said body dividing the latter into mixing chambers, deflector plates arranged in said chambers, a plurality of blades associated with said deflector plates and extending outwardly from the longitudinal axis of said body, and substantially conical foraminous members arranged in said chambers.

3. In a carbureter, a hollow body having inlet and outlet ports therein, fuel spraying nozzles extending into said body, a partition arranged centrally within said body and having a central opening therethrough, deflector plates arranged on opposite sides of said partition, curved blades associated with said deflector plates and extending outwardly from the longitudinal axis of said body, substantially conical screens arranged in said body on opposite sides of said partition.

4. In a carbureter, a hollow body, fuel nozzles extending into said body, deflector plates arranged in said body, curved blades arranged in said body and associated with said deflector plates, said body having auxiliary air ports in the side wall thereof, pivoted valves for controlling the passage of air through said auxiliary air ports, and having the free ends overlapped and slotted, an actuating rod, and a head positioned laterally of said actuating rod and extending through said slots.

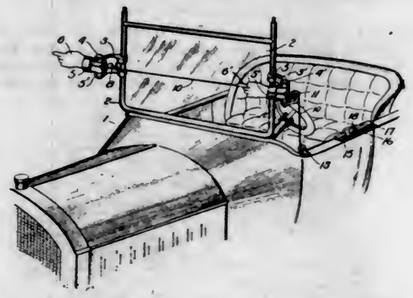
5. In a carbureter, a hollow body having an internal mixing chamber, fuel nozzles extending into said body, a deflector plate arranged in said body, curved blades arranged in said body and associated with said deflector plate, said body having auxiliary air ports in the side wall thereof, and means for controlling the passage of air through said auxiliary air ports.

1,226,754. COTTON-CHOPPER. LEWIS M. CROMWELL, Gracemont, Okla. Filed June 12, 1916. Serial No. 103,234. (Cl. 97—46.)



In a cotton chopper, the combination with a wheeled frame having a reach member forming a part of the frame and extending forwardly therefrom, a pole having rearwardly and downwardly curved members on its rear end and pivotally connected to the reach member for vertical movement with relation thereto, said pole having its rear end divided and pivotally connected for horizontal swinging movement, means for adjutably moving the forward portion of the pole, an angle arm pivotally mounted on the rear portion of the pole, means for rocking the arm, and a vertical link passing through the rear portion of the pole and pivotally connected to one end of the arm and to the forward end of the reach member.

1,226,755. SIGNALING DEVICE. PARMER DORSEY, Hutchinson, Kans. Filed Sept. 3, 1915. Serial No. 48,908. (Cl. 116—31.)



1. The combination with the windshield of a motor vehicle, of brackets mounted at the opposite side edges of the windshield and curved outwardly and forwardly therefrom, indicating devices pivotally mounted on vertical axes at the outer ends of said brackets, a spring connected with one of said brackets and with one of the indicating devices, to urge said device outwardly, connection between said devices, an operating mechanism connected with the other device, whereby both of the devices may be moved to neutral or a second indicating position against the tension of said yielding means.

2. The combination with the windshield of a motor vehicle, of a bracket mounted at each side edge of the windshield and curved laterally and forwardly therefrom, an indicating device mounted on each bracket, a spring connected with one of the brackets and with the adjacent indicating device, and arranged to urge said device to an indicating position at the side of the vehicle, connection between said devices, whereby the devices are moved synchronously and in the same direction, an operating mechanism including a flexible member, connected with the second indicating device, whereby both of the devices may be moved against the tension of said spring.

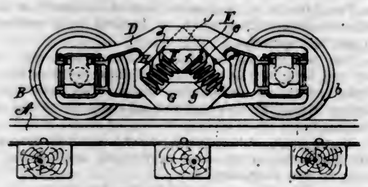
3. The combination with a windshield of a motor vehicle, of a bracket mounted at each side of the windshield, and extended laterally and forwardly therefrom, indicating devices mounted on vertical axis at the outer end of the bracket, connection between said indicating devices, a spring connected with all of the devices and arranged to urge both of the devices to one position transversely of the vehicle, whereby one of the devices extends laterally from the edge of the windshield, and the other extends in front of the windshield, an operating mechanism including guide pulleys mounted on the vehicle and one of the brackets and a flexible member run over said pulleys and connected with one of the indicating devices, whereby both of the indicating devices may be moved against the tension of said spring.

4. The combination with the windshield of a motor vehicle, of a bracket mounted at each side of the windshield, an indicating device pivotally mounted at the outer end of each bracket, a spring connected with one of the indicating devices, and arranged to urge the same laterally to indicating position, a flexible member run through the



other device and attached thereto and to the device having the spring connection, and guide pulleys on one of the brackets and on the vehicle, for the purpose set forth.

1,226,756. RAILWAY-CAR TRUCK. OWEN THOMAS DOUGHERTY, St. Paul, Minn. Filed Sept. 27, 1916. Serial No. 122,520. (Cl. 105—243.)



1. In a car truck, the combination with a frame, the said frame having an opening, of springs arranged in the said opening and inclined upwardly and toward each other, a bolster having a head arranged in the said opening, the said head being supported by the said springs, the said frame having a portion provided with converging sides, and the said bolster having a portion arranged between the said converging sides and constructed to slide thereon during the progress of the car.

2. In a car truck, the combination with a frame, the said frame having an opening, of springs arranged in the said opening and inclined upwardly and toward each other, a bolster having a head arranged in the said opening, the said head being supported by the said springs, the said frame having a portion formed on the inner side thereof provided with upwardly converging sides, and the said bolster having a portion arranged between the said converging sides and constructed to slide thereon during the progress of the car.

3. In a car truck, the combination with a frame having a middle opening, of springs arranged in the said opening and inclined upwardly and toward each other, a bolster having a head supported by the said springs, the said head having downwardly converging sides, the said springs bearing movably upon the said sides of the head, the said frame having a portion provided with converging sides, and the said bolster having a portion arranged between the said converging sides and constructed to slide thereon during the progress of the car.

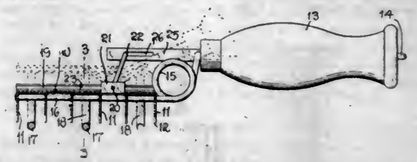
4. In a car truck, the combination with a frame having a middle opening, of springs arranged in the said opening and inclined upwardly toward each other, a bolster having a head supported by the said springs, the said head having downwardly converging sides, the said springs bearing movably upon the said sides of the head, the said frame having a portion formed on the inner side thereof provided with upwardly converging sides, and the said bolster having a portion arranged between the said converging sides of the frame and constructed to slide thereon during the progress of the car.

5. In a car truck, the combination with a frame, of springs supported by the frame and inclined upwardly and toward each other, a bolster having a portion supported by the said springs, the said frame having a portion provided with converging sides, and the said bolster having a portion arranged between the said converging sides of the frame and constructed to slide thereon during the progress of the car.

[Claims 6 and 7 not printed in the Gazette.]

1,226,757. SELF-CLEANING CURRYCOMB. PHILIP F. DUERR, Alvo, Nebr. Filed Mar. 6, 1917. Serial No. 152,784. (Cl. 119—88.)

1. A curry comb having a body formed with a plurality of rows of downwardly projecting teeth, cleaning members disposed between said rows and movable outward or inward relative to the teeth, a handle resiliently connected to the body whereby the handle and body may be shifted into angular relation under pressure, and means for automatically causing the retraction of the cleaning members when the handle and body are shifted into angular relation.



2. A curry comb having a body formed with a plurality of rows of downwardly projecting teeth, cleaning members disposed between said rows and movable outward or inward relative to the teeth, a handle resiliently connected to the body whereby the body and handle may be forced into angular relation, a crank shaft mounted upon the body and operatively engaged with said cleaning members, and means carried by the handle acting to rotate said crank shaft in a direction to retract the cleaning members when the handle and body are disposed in angular relation.

3. In a curry comb, a body having a plurality of transversely extending teeth, a plurality of cleaning members disposed between the teeth and extending through to the back of the body, a handle, a resilient connection between the handle and the body normally holding the body and handle in parallel relation but permitting the handle and body to be forcibly disposed in angular relation, and means for automatically causing the projection of the cleaning members when the handle and body are in parallel relation and the retraction of the cleaning members when the handle and body are in angular relation.

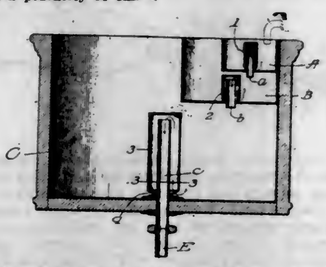
4. In a curry comb, a body having a plurality of transversely extending teeth, a plurality of cleaning members disposed between the teeth and extending through to the back of the body, a handle, a resilient connection between the handle and the body normally holding the body and handle in parallel relation but permitting the handle and body to be forcibly disposed in angular relation, and means for automatically causing the projection of the cleaning members when the handle and body are in parallel relation and the retraction of the cleaning members when the handle and body are in angular relation, said means comprising a crank shaft mounted upon the body and operatively connected to the cleaning members, and a blade rigidly attached to the handle and projecting therefrom and operatively engaging the crank shaft.

5. A curry comb having a body formed with a plurality of transversely extending teeth, a plurality of cleaning members disposed between the teeth and having members extending through the body to the back thereof, transversely extending bars on the back of the body to which said members are connected, a handle resiliently connected to the body, the handle and body being normally held in parallel relation but being relatively shiftable into angular relation, a crank shaft mounted upon the body and having cranked ends engaging the said cross bars, the middle of said shaft having a cranked portion, and a blade extending from the handle having a slot through which said last named cranked portion extends.

1,226,758. FLUSH-TANK. ARTHUR DUFFY, La Fayette, Ind. Filed Aug. 30, 1916. Serial No. 117,605. (Cl. 4—5.)

1. A flush-tank comprising a plurality of water-compartments, means for siphoning from one compartment into another, and a device to slowly supply water to the first compartment, said compartments being three in number, the first compartment being relatively small, and the second compartment being larger than said first compartment, the first compartment being disposed within the second compartment, and the second compartment being disposed within the third compartment, said means comprising a siphon for the first compartment and a siphon for the second compartment, so that the first compartment discharges a plurality of times into the second compartment before the second compartment discharges into the third, and a siphon for the third compartment of such

a size that the water in this third compartment is not discharged until after the second compartment has discharged a plurality of times.

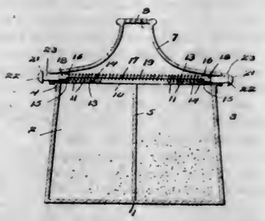


2. A flush-tank comprising a plurality of water-compartments of progressively increasing size, means for siphoning from one compartment into another, and a device to slowly supply water to the first compartment, said means comprising a plurality of siphons of increasing size and so arranged that one compartment does not discharge its contents until after the next previous or smaller compartment has discharged a plurality of times.

3. A flush-tank comprising a plurality of water-compartments, means for siphoning from one compartment into another, and a device to slowly supply water to the first compartment, said means comprising a plurality of siphons of different sizes, whereby the water is discharged by a relatively small siphon into a compartment from which the water is thereafter discharged by a relatively large siphon.

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1,226,759. CONDIMENT-HOLDER. JOHN EDWARDS, Flagstaff, Ariz. Filed Oct. 7, 1916. Serial No. 124,238. (Cl. 65—45.)



A condiment holder comprising a plurality of open-mouth containers, a top frame for connecting said containers, a dome-shaped cover hinged to said frame provided with a central discharge opening, a perforated plate carried by said cover overlying the mouths of the containers, a pair of perforated plates having upturned flanges slidably mounted upon said first-mentioned plate, a rod connecting said sliding plates, a coil spring on said rod bearing at its ends against the upturned flanges on said sliding plates and normally holding the plates in position to obstruct the openings in the first-mentioned plate, and push buttons on the opposite ends of said rod and engaging the flanges on the sliding plates for moving same to uncover the openings in the perforated plate.

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1,226,760. PROCESS OF MAKING VARNISH-BASES. CARLETON ELLIS and LOUIS RABINOVITZ, Montclair, N. J., assignors, by mesne assignments, of four-tenths to Ellis-Foster Company, a Corporation of New Jersey, and six-tenths to Indestructible Paint Company, Ltd., London, England, a Corporation. Filed Dec. 29, 1914. Serial No. 879,557. (Cl. 134—26.)

1. The process of making a varnish material which comprises forming the anhydrid of rosin and heating such anhydrid with glycerin under substantially ordinary atmospheric pressure; whereby the rosin ester of glycerin is obtained.

2. The process of making a varnish material which comprises forming the anhydrid of rosin and heating such anhydrid with an organic hydroxy body under substantially ordinary atmospheric pressure; whereby the rosin ester is obtained.

3. The process of making a varnish composition which comprises dehydrating rosin by heating and passing an acid gas therethrough.

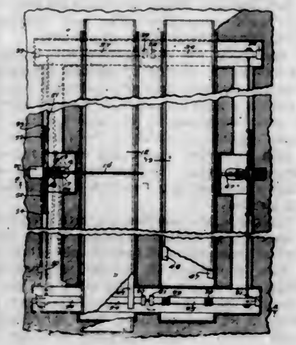
4. The process of making a varnish material which comprises forming the anhydrid of rosin and heating such anhydrid with an esterifying body under substantially ordinary atmospheric pressure; whereby the rosin ester is obtained.

5. The process of making a varnish composition which comprises dehydrating rosin by heating and passing carbonic acid gas therethrough.

[Claims 6 to 27 not printed in the Gazette.]

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1,226,761. AUTOMATICALLY-ACTUATED GATE. ELIAS K. ENEBO, Minneapolis, Minn. Filed Oct. 18, 1915. Serial No. 56,441. (Cl. 39—56.)



1. In combination with a support normally tilted in the plane of a gate opening, a gate mounted thereon for swinging movement in a horizontal direction, means to tilt the support to one side of said plane to cause the gate to swing under the influence of gravity in a direction opposite to that in which the support is tilted and spring operated means for restoring the support to normal position.

2. In combination with a housing, a support, a gate adapted to swing freely thereon, means within the housing to cause the gate to swing under the influence of gravity, a locking means for said gate comprising a pivoted lever secured to said housing and operative in one plane having a portion normally clasping the lower bar of the gate, a slide for oscillating said lever, and a cam operated from the gate-moving means for actuating the slide.

3. In combination with a support normally tilted in the plane of a gate opening, a gate mounted thereon for swinging movement in a horizontal direction, a platform in the roadway in front of the gate normally positioned above the surface of the roadway and having connections for tilting the bottom of the support toward the vehicle when it passes on the platform, means for holding said platform inoperative against direct vertical thrust but capable of responding to the horizontal force applied when the wheels of the vehicle strike the raised edge of the platform, means controlled by operation of the platform for holding the gate in normal closed position and for releasing the gate when the support is operated, and a spring for restoring said platform and holding means



to initial position after the vehicle has passed off of the platform.

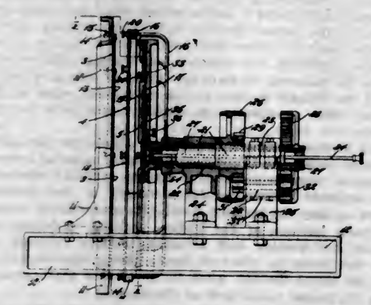
4. In combination with a gate post, a platform substantially on the level with the ground and spaced from said post, supporting means for said platform below the same, a support normally tilted in the plane of the gate opening pivoted to said gate post and extending below the level of the ground and platform between the post and platform, a gate mounted to swing on said support under the influence of gravity, and means below the level of the platform and the ground associated with the platform supporting means for shifting the gate support to cause the gate to operate.

5. In combination with a support, a gate adapted to swing freely thereon and means to cause the gate to swing under the influence of gravity, a locking means for said gate comprising a pivoted lever in the plane of the gate and having a portion normally clasping the lower bar of the gate, a slide for oscillating said lever, and a cam operated from the gate-moving means for actuating the slide.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,762. METHOD OF AND APPARATUS FOR MEASURING THE STRINGING OF SHOT. SIDNEY W. FARNHAM, Chicago, and FRANKLIN W. OLIN, Alton, Ill., assignors to Western Cartridge Company, East Alton, Ill., a Corporation of New Jersey. Filed Aug. 10, 1914. Serial No. 856,103. (Cl. 73—51.)



1. The method of determining the stringing of a load of shot when discharged which consists in causing each shot to pass through a stationary target and a target moving at a known speed, and measuring the time intervals between successive shot by the respective distances through which the moving target moves during the intervals between the passage of said successive shot.

2. The method of determining the stringing of a load of shot when discharged which consists in causing each shot to pass through a stationary target and two targets moving at known velocities in opposite directions, and measuring the time intervals between successive shot by the average of the two distances through which the moving targets move respectively during each interval between the passage of said successive shot.

3. The method of determining the stringing of a load of shot when discharged which consists in causing each shot to pass through two targets spaced apart and moving in opposite directions at the same velocity, ascertaining the velocity of said targets, measuring the relative movement of said moving targets in the interval between the instants of passage of said shot through said targets respectively, and calculating the time interval required for each shot to cross the space between said targets from said velocities and measurements.

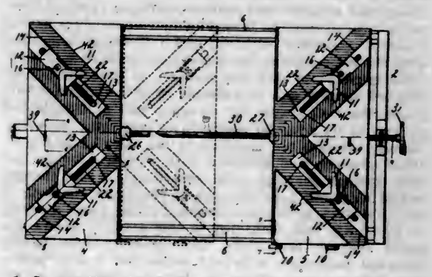
4. The method of determining the stringing of a load of shot when discharged which consists in causing each shot to pass through a stationary target and two targets moving in opposite directions at known velocities, and measuring the time intervals between successive shot by the average of the two distances through which the moving targets move respectively during each interval between the passage of said successive shot, and the linear velocity of each shot by measuring the distance through which the second moving target moves during the passage of said shot across the space between the moving targets, whereby the linear spaces between successive shot in the load may be computed.

5. In apparatus of the character described, a stationary target and a moving target arranged in alinement, one of said targets being made of a material easily pierced by shot, means for identifying the holes made by the respective pellets on each of said targets, and means for maintaining a constant velocity for said moving target during the passage of a load of shot.

[Claims 6 to 9 not printed in the Gazette.]

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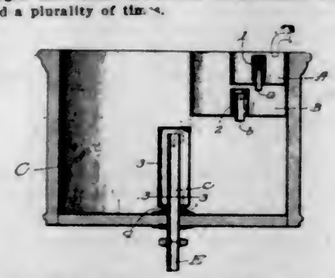
1,226,763. MITER-CLAMP. DANIEL F. FERNEY, Grand Rapids, Mich., assignor to Grand Rapids School Equipment Co., Grand Rapids, Mich. Filed Oct. 9, 1916. Serial No. 124,566. (Cl. 144—292.)



1. In a miter clamp, the combination of a frame provided with bed rails, a pair of bed members one of which is mounted on said rails for adjustment relative to the other, each bed member being provided with outwardly diverging jaw ways disposed at right angles to each other and comprising channels in the upper and under sides of said bed members, there being slots longitudinally of said channels, actuating members provided with double racks, ways for said actuating members disposed longitudinally of said bed members and centrally between their said jaw ways, a connecting rod for said actuating members having a swivel connection with one and a threaded connection with the other, means for detachably securing said actuating members to said bed members so that the adjustable bed member may be adjusted by the rotation of said connecting rod, means for securing said adjustable bed member in its adjusted positions on said rails, an actuating lever provided with a segment, one of said actuating members having a rack coacting with said segment, eccentrics disposed on said bed members at the sides of said actuating members and provided with eccentric straps and with pinions coacting with said double racks thereof, angled clamping jaws disposed in the upper channels of said jaw ways, pivot plates disposed in the under channels of said ways and connected to said jaws by pivots disposed through said slots, and eccentric rods having threaded connection with said plates and swivel connection with eccentric straps so that the jaws may be adjusted by the rotation of said rods.

2. In a miter clamp, the combination of a pair of bed members one of which is adjustable relative to the other, each bed member being provided with outwardly diverging jaw ways disposed at right angles to each other and comprising channels in the upper and under sides of said bed members, there being slots longitudinally of said channels, actuating members provided with double racks, ways for said actuating members disposed longitudinally of said bed members and centrally between their said jaw ways, a connecting rod for said actuating members

a size that the water in this third compartment is not discharged until after the second compartment has discharged a plurality of times.

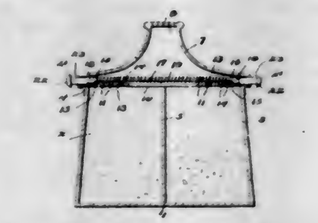


2. A flush-tank comprising a plurality of water-compartments of progressively increasing size, means for siphoning from one compartment into another, and a device to slowly supply water to the first compartment, said means comprising a plurality of siphons of increasing size and so arranged that one compartment does not discharge its contents until after the next previous or smaller compartment has discharged a plurality of times.

3. A flush-tank comprising a plurality of water-compartments, means for siphoning from one compartment into another, and a device to slowly supply water to the first compartment, said means comprising a plurality of siphons of different sizes, whereby the water is discharged by a relatively small siphon into a compartment from which the water is thereafter discharged by a relatively large siphon.

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1,226,759. CONDIMENT-HOLDER. JOHN EDWARDS, Flagstaff, Ariz. Filed Oct. 7, 1916. Serial No. 124,238. (Cl. 65—45.)



A condiment holder comprising a plurality of open-mouth containers, a top frame for connecting said containers, a dome-shaped cover hinged to said frame provided with a central discharge opening, a perforated plate carried by said cover overlying the mouths of the containers, a pair of perforated plates having upturned flanges slidably mounted upon said first-mentioned plate, a rod connecting said sliding plates, a coil spring on said rod bearing at its ends against the upturned flanges on said sliding plates and normally holding the plates in position to obstruct the openings in the first-mentioned plate, and push buttons on the opposite ends of said rod and engaging the flanges on the sliding plates for moving same to uncover the openings in the perforated plate.

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1,226,760. PROCESS OF MAKING VARNISH-BASES. CARLETON ELLIS and LOUIS RABINOVITZ, Montclair, N. J., assignors, by mesne assignments, of four-tenths to Ellis-Foster Company, a Corporation of New Jersey, and six-tenths to Indestructible Paint Company, Ltd., London, England, a Corporation. Filed Dec. 29, 1914. Serial No. 879,557. (Cl. 134—26.)

1. The process of making a varnish material which comprises forming the anhydrid of rosin and heating such anhydrid with glycerin under substantially ordinary atmospheric pressure; whereby the rosin ester of glycerin is obtained.

2. The process of making a varnish material which comprises forming the anhydrid of rosin and heating such anhydrid with an organic hydroxy body under substantially ordinary atmospheric pressure; whereby the rosin ester is obtained.

3. The process of making a varnish composition which comprises dehydrating rosin by heating and passing an acid gas therethrough.

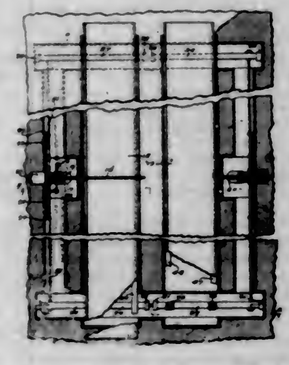
4. The process of making a varnish material which comprises forming the anhydrid of rosin and heating such anhydrid with an esterifying body under substantially ordinary atmospheric pressure; whereby the rosin ester is obtained.

5. The process of making a varnish composition which comprises dehydrating rosin by heating and passing carbonic acid gas therethrough.

[Claims 6 to 27 not printed in the Gazette.]

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1,226,761. AUTOMATICALLY-ACTUATED GATE. ELIAS K. ENEBO, Minneapolis, Minn. Filed Oct. 18, 1915. Serial No. 56,441. (Cl. 39—56.)



1. In combination with a support normally tilted in the plane of a gate opening, a gate mounted thereon for swinging movement in a horizontal direction, means to tilt the support to one side of said plane to cause the gate to swing under the influence of gravity in a direction opposite to that in which the support is tilted and spring operated means for restoring the support to normal position.

2. In combination with a housing, a support, a gate adapted to swing freely thereon, means within the housing to cause the gate to swing under the influence of gravity, a locking means for said gate comprising a pivoted lever secured to said housing and operative in one plane having a portion normally clasping the lower bar of the gate, a slide for oscillating said lever, and a cam operated from the gate-moving means for actuating the slide.

3. In combination with a support normally tilted in the plane of a gate opening, a gate mounted thereon for swinging movement in a horizontal direction, a platform in the roadway in front of the gate normally positioned above the surface of the roadway and having connections for tilting the bottom of the support toward the vehicle when it passes on the platform, means for holding said platform inoperative against direct vertical thrust but capable of responding to the horizontal force applied when the wheels of the vehicle strike the raised edge of the platform, means controlled by operation of the platform for holding the gate in normal closed position and for releasing the gate when the support is operated, and a spring for restoring said platform and holding means



to initial position after the vehicle has passed off of the platform.

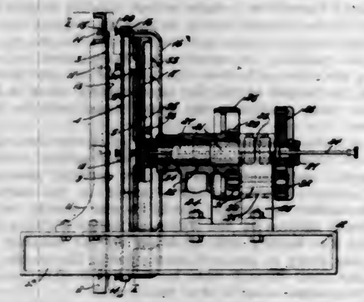
4. In combination with a gate post, a platform substantially on the level with the ground and spaced from said post, supporting means for said platform below the same, a support normally tilted in the plane of the gate opening pivoted to said gate post and extending below the level of the ground and platform between the post and platform, a gate mounted to swing on said support under the influence of gravity, and means below the level of the platform and the ground associated with the platform supporting means for shifting the gate support to cause the gate to operate.

5. In combination with a support, a gate adapted to swing freely thereon and means to cause the gate to swing under the influence of gravity, a locking means for said gate comprising a pivoted lever in the plane of the gate and having a portion normally clasping the lower bar of the gate, a slide for oscillating said lever, and a cam operated from the gate-moving means for actuating the slide.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,762. METHOD OF AND APPARATUS FOR MEASURING THE STRINGING OF SHOT. SIDNEY W. FARNHAM, Chicago, and FRANKLIN W. OLIN, Alton, Ill., assignors to Western Cartridge Company, East Alton, Ill., a Corporation of New Jersey. Filed Aug. 10, 1914. Serial No. 856,103. (Cl. 73—51.)



1. The method of determining the stringing of a load of shot when discharged which consists in causing each shot to pass through a stationary target and a target moving at a known speed, and measuring the time intervals between successive shot by the respective distances through which the moving target moves during the intervals between the passage of said successive shot.

2. The method of determining the stringing of a load of shot when discharged which consists in causing each shot to pass through a stationary target and two targets moving at known velocities in opposite directions, and measuring the time intervals between successive shot by the average of the two distances through which the moving targets move respectively during each interval between the passage of said successive shot.

3. The method of determining the stringing of a load of shot when discharged which consists in causing each shot to pass through two targets spaced apart and moving in opposite directions at the same velocity, ascertaining the velocity of said targets, measuring the relative movement of said moving targets in the interval between the instants of passage of said shot through said targets respectively, and calculating the time interval required for each shot to cross the space between said targets from said velocities and measurements.

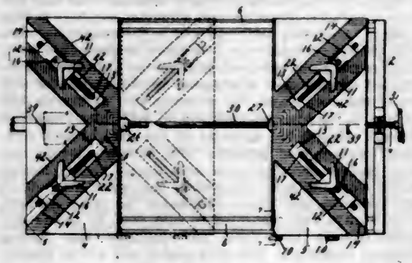
4. The method of determining the stringing of a load of shot when discharged which consists in causing each shot to pass through a stationary target and two targets moving in opposite directions at known velocities, and measuring the time intervals between successive shot by the average of the two distances through which the moving targets move respectively during each interval between the passage of said successive shot, and the linear velocity of each shot by measuring the distance through which the second moving target moves during the passage of said shot across the space between the moving targets, whereby the linear spaces between successive shot in the load may be computed.

5. In apparatus of the character described, a stationary target and a moving target arranged in alinement, one of said targets being made of a material easily pierced by shot, means for identifying the holes made by the respective pellets on each of said targets, and means for maintaining a constant velocity for said moving target during the passage of a load of shot.

[Claims 6 to 9 not printed in the Gazette.]

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1,226,763. MITER-CLAMP. DANIEL F. FEANEY, Grand Rapids, Mich., assignor to Grand Rapids School Equipment Co., Grand Rapids, Mich. Filed Oct. 9, 1916. Serial No. 124,566. (Cl. 144—292.)



1. In a miter clamp, the combination of a frame provided with bed rails, a pair of bed members one of which is mounted on said rails for adjustment relative to the other, each bed member being provided with outwardly diverging jaw ways disposed at right angles to each other and comprising channels in the upper and under sides of said bed members, there being slots longitudinally of said channels, actuating members provided with double racks, ways for said actuating members disposed longitudinally of said bed members and centrally between their said jaw ways, a connecting rod for said actuating members having a swivel connection with one and a threaded connection with the other, means for detachably securing said actuating members to said bed members so that the adjustable bed member may be adjusted by the rotation of said connecting rod, means for securing said adjustable bed member in its adjusted positions on said rails, an actuating lever provided with a segment, one of said actuating members having a rack coacting with said segment, eccentrics disposed on said bed members at the sides of said actuating members and provided with eccentric straps and with pinions coacting with said double racks thereof, angled clamping jaws disposed in the upper channels of said jaw ways, pivot plates disposed in the under channels of said ways and connected to said jaws by pivots disposed through said slots, and eccentric rods having threaded connection with said plates and swivel connection with eccentric straps so that the jaws may be adjusted by the rotation of said rods.

2. In a miter clamp, the combination of a pair of bed members one of which is adjustable relative to the other, each bed member being provided with outwardly diverging jaw ways disposed at right angles to each other and comprising channels in the upper and under sides of said bed members, there being slots longitudinally of said channels, actuating members provided with double racks, ways for said actuating members disposed longitudinally of said bed members and centrally between their said jaw ways, a connecting rod for said actuating members

having a swivel connection with one and a threaded connection with the other, means for detachably securing said actuating members to said bed members so that the adjustable bed member may be adjusted by the rotation of said connecting rod, an actuating lever provided with a segment, one of said actuating members having a rack coacting with said segment, eccentrics provided with eccentric straps and with pinions coacting with said double racks, clamping jaws disposed in the under channels of said ways and connected to said jaws by pivots disposed through said slots, and eccentric rods having threaded connection with said plates and swivel connection with eccentric straps so that the jaws may be adjusted by the rotation of said rods.

3. In a miter clamp, the combination of a frame provided with bed rails, a pair of bed members one of which is mounted on said rails for adjustment relative to the other, each bed member being provided with outwardly diverging jaw ways disposed at right angles to each other and comprising channels in the upper and under sides of said bed members, there being slots longitudinally of said channels, actuating members provided with double racks, ways for said actuating members disposed longitudinally of said bed members and centrally between their said jaw ways, a connecting rod for said actuating members having a swivel connection with one and a threaded connection with the other, means for detachably securing said actuating members to said bed members so that the adjustable bed member may be adjusted by the rotation of said connecting rod, means for securing said adjustable bed member in its adjusted positions on said rails, eccentrics disposed on said bed members at the sides of said actuating members and provided with eccentric straps and with pinions coacting with said double racks thereof, angled clamping jaws disposed in the upper channels of said jaw ways, pivot plates disposed in the under channels of said ways and connected to said jaws by pivots disposed through said slots, and eccentric rods having threaded connection with said plates and swivel connection with eccentric straps so that the jaws may be adjusted by the rotation of said rods.

4. In a miter clamp, the combination of a pair of bed members one of which is adjustable relative to the other, each bed member being provided with outwardly diverging jaw ways disposed at right angles to each other and comprising channels in the upper and under sides of said bed members, there being slots longitudinally of said channels, actuating members provided with double racks, ways for said actuating members disposed longitudinally of said bed members and centrally between their said jaw ways, a connecting rod for said actuating members having a swivel connection with one and a threaded connection with the other, means for detachably securing said actuating members to said bed members so that the adjustable bed member may be adjusted by the rotation of said connecting rod, eccentrics provided with eccentric straps and with pinions coacting with said double racks, clamping jaws disposed in the upper channels of said jaw ways, pivot plates disposed in the under channels of said ways and connected to said jaws by pivots disposed through said slots, and eccentric rods having threaded connection with said plates and swivel connection with eccentric straps so that the jaws may be adjusted by the rotation of said rods.

5. In a miter clamp, the combination of a pair of bed members adjustable relative to each other, each bed member being provided with outwardly diverging jaw ways disposed at right angles to each other and comprising channels in the upper and under sides of said bed members, there being slots longitudinally of said channels, actuating members provided with double racks, means for simultaneously actuating said actuating members, eccentrics provided with eccentric straps and with pinions coacting with said adjusting member racks, clamping jaws disposed in the upper channels of said jaw ways, pivot plates disposed in the under channels of said ways and connected to said jaws by pivots disposed through said slots, and eccentric rods having threaded connection with said plates and swivel connection with eccentric straps so that the jaws may be adjusted by the rotation of said rods.

[Claims 6 to 19 not printed in the Gazette.]

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1,226,764. ELECTRIC INDUCTION-FURNACE. JAKOB FUNCK, Charlottenburg, Germany, assignor to The Grondal Kjellin Company, Limited, London, England. Filed Feb. 2, 1916. Serial No. 75,880. (Cl. 266—43.)



1. A method of lining the hearths of electric induction furnaces, consisting in placing the lining material around a templet in the furnace hearth, utilizing the templet for heating and consolidating the material to form the lining *in situ* and finally fusing the templet.

2. A method of lining the hearths of electric induction furnaces, consisting in placing the lining material around a templet in the furnace hearth so that the templet closely fits and entirely covers the inner surface of the lining material utilizing the templet for heating and consolidating the material to form the lining *in situ* and finally fusing the templet to form the first charge for the furnace.

3. A method of lining the hearths of electric induction furnaces, consisting in placing the lining material around a templet comprising a single hollow metallic element arranged in the furnace hearth so that the templet closely fits and entirely covers the inner surface of the lining material, utilizing the templet for heating and consolidating the material to form the lining *in situ* and finally fusing the templet so that the metal thereof, when in the molten state, constitutes the initial metal bath for the furnace.

4. A method of lining the hearths of electric induction furnaces, consisting in placing the lining material around a templet comprising several hollow metallic elements with suitable reinforcements arranged in the furnace hearth so that the templet closely fits and entirely covers the inner surface of the lining material, utilizing the templet for heating and consolidating the material to form the lining *in situ* and finally fusing the templet so that the metal thereof, when in the molten state, constitutes the initial metal bath of the furnace.

5. A method of lining the hearths of electric induction furnaces, consisting in placing the lining material around a metal templet which is provided with an enveloping sheath of asbestos or similar material, utilizing the templet for heating and consolidating the material to form the lining *in situ* and finally fusing the templet.

[Claim 6 not printed in the Gazette.]

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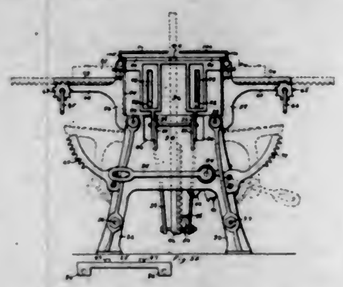
1,226,765. MULTIMOLDING CONCRETE-BLOCK MACHINE. FRANK H. FOLDEN, Des Moines, Iowa. Filed July 22, 1916. Serial No. 110,718. (Cl. 25—41.)

1. A machine of the class described, comprising a frame, mold heads oppositely arranged thereon and pivoted for movement in opposite directions, a center board mounted for vertical movement between said mold heads, mold carrying members pivoted at opposite ends of said mold heads and movable in opposite directions, a rock shaft journaled in the frame, and connections between said rock shaft and said movable members.

2. A machine of the class described, comprising a frame, mold heads oppositely arranged thereon and pivoted for movement in opposite directions, a center board mounted for vertical movement between said mold heads, mold carrying members pivoted at opposite ends of said mold heads and movable in opposite directions, means on end portions of said mold heads for engagement with said mold carrying members, a rock shaft journaled in the frame, and operative connections between said rock shaft and said movable members.



3. A machine of the class described, comprising spaced machine heads, mold heads pivoted to the tops thereof, a center board vertically movable between central portions of said mold heads, mold-carrying members pivoted between end portions of said machine heads and adapted to oscillate toward and away from said center board, a rock shaft journaled in said machine heads, gears on said rock shaft, and means connected with said mold heads and also with said center board for moving said members when said shaft is rocked.



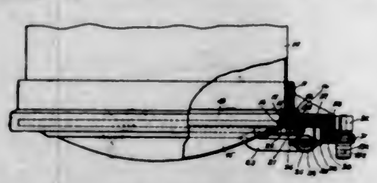
4. A machine of the class described, comprising spaced machine heads, mold heads pivoted to said machine heads for movement in opposite directions, a center board vertically movable between central portions of said mold heads, mold carrying members pivoted between end portions of said machine heads and adapted to be oscillated away from said center board, a rock shaft journaled in said machine heads, gears on said rock shaft, and means connected with said mold heads and also with said center board and mold-carrying members for moving said members at different times when said rock shaft is oscillated.

5. A machine of the class described, comprising a frame, mold heads pivoted thereon and movable in opposite directions, a center board vertically movable and mounted between said mold heads, mold-carrying members pivoted at opposite sides of said frame and movable away from said center board, a rock shaft journaled in the frame, toggle arms connecting said mold heads, means connected with said rock shaft for operating said toggle to oscillate said mold heads, and means connected with said rock shaft for moving said center board subsequent to oscillation of said mold heads.

[Claims 6 to 14 not printed in the Gazette.]

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1,226,766. DOOR-MOUNTING FOR HEATERS. JOHN R. GAMMETER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Feb. 16, 1917. Serial No. 148,980. (Cl. 18—7.)



1. The combination of a heater-body and a hinged door thereon having members which interlock by an angular movement of the door in the plane of the latter, and a hinge connecting said door and body and angularly movable with the door.

2. The combination of a heater-body having a circular door opening, a circular door adapted to close said opening, a hinge carrying said door and mounted to slide concentrically of the door axis to lock and unlock the latter, and complemental locking members on the door and heater body engaged and disengaged by said sliding movement of the door hinge.

3. The combination of a heater-body having a circular door opening and door therefor provided with complemental locking members engaged and disengaged by an angular movement of the door in its own plane, a hinge connecting said door and body and angularly movable with the door to produce the locking and unlocking movements thereof, and gearing for effecting such angular movements of the door hinge.

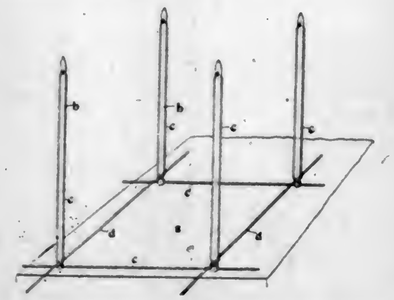
4. A door structure for heaters comprising an annular door frame and a circular door having complemental locking members engaged and disengaged by angular movements of the door in its own plane, said door having a hinge member, a segmental guide on the door frame concentric therewith, and a carrier plate mounted in said guide and provided with a hinge member pivotally connected with the hinge member on the door.

5. A door structure for heaters comprising an annular door frame provided with a concentric guide, a carrier plate slidably mounted in said guide and provided with a gear member engaging a gear which is journaled on said frame, said plate having a hinge member, a door having a complemental hinge member pivoted to the first-said hinge member, and interlocking members on said door and frame engaged and disengaged by angular movements of the door produced by sliding said carrier plate in its guide.

[Claim 6 not printed in the Gazette.]

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1,226,767. METHOD OF MANUFACTURING PADDING FOR USE IN MAKING BULLET-PROOF CLOTHING, ARMOR, SHIELDS, AND THE LIKE. ARTHUR GOWER, London, England. Filed Oct. 30, 1916. Serial No. 128,472. (Cl. 154—2.)



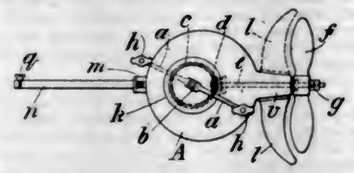
A method of manufacture of puncture resisting pads or linings from layers of fiber impregnated with resin by first forming the layers of fiber into the final shape and passing the quilting or binding threads through the respective layers and successively impregnating the said layers with resin after the quilting or binding threads have been passed through them.

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1,226,768. MACHINE FOR EFFECTING THE RAPID PROPULSION OF THE HUMAN BODY IN WATER. THOMAS SMITH HARAN, Wishaw, Scotland. Filed Nov. 29, 1916. Serial No. 134,107. (Cl. 9—18.)

1. A machine for effecting the rapid propulsion of the human body in water comprising, in combination, a hollow self-buoyant body of circular formation, a propeller shaft carried thereby, a propeller on said shaft, gearing within the hollow body for rotating said shaft and pedal means for driving said gear.

2. A machine for effecting the rapid propulsion of the human body in water comprising, in combination, a hollow self-buoyant body with rearward extension, a propeller shaft extending partly through the hollow body and partly through the extension and out at the end thereof, a propeller on said shaft, gearing within the hollow body for rotating said shaft and pedal means for driving said gear.




3. A machine for effecting the rapid propulsion of the human body in water comprising, in combination, a hollow self-buoyant body of circular formation with flattened sides, a propeller shaft carried thereby, a propeller on said shaft, gearing within the hollow body for rotating said shaft and pedal means for driving said gear.

4. A machine for effecting the rapid propulsion of the human body in water comprising, in combination, a hollow self-buoyant body with means at its forward end whereby it can be attached to a person in the water, a propeller shaft carried by the hollow body, a propeller on said shaft, gearing within the hollow body for rotating said shaft and pedal means for driving said gear.

5. A machine for effecting the rapid propulsion of the human body in water comprising, in combination, a self-floatable body constituted by a hollow chamber of circular formation, a propeller shaft carried thereby, a propeller on said shaft, gearing within the hollow body for rotating said shaft, pedal means for driving said gear and a water tight door for giving access to the interior of the hollow body.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,769. CLUTCH MECHANISM. WILLIAM T. HENSLEY, Boundbrook, N. J., assignor to American Engine and Electric Company, Middlesex, N. J., a Corporation of Delaware. Filed July 24, 1914. Serial No. 852,845. Renewed Oct. 6, 1916. Serial No. 124,203. (Cl. 192—20.)



1. A clutch mechanism comprising two rotary members for alternately communicating power to each other, a ratchet by which one member communicates power to the other member, and friction means by which power is communicated from said other member to the one member, said members rotating in the same direction for both transmissions of power, and said ratchet having sliding pawls which are operated by gravity and automatically held in disengaged position by centrifugal force when the rotation attains a predetermined speed.

2. A clutch mechanism comprising two rotary members for alternately communicating power to each other, a ratchet by which one member communicates power to the other member, and friction means by which power is communicated from said other member to the one member, said members rotating in the same direction for both transmissions of power, and said ratchet being arranged concentrically within said means, said ratchet having radial sliding pawls operated by gravity and automatically held in disengaged position by centrifugal force when the rotation attains a predetermined speed.

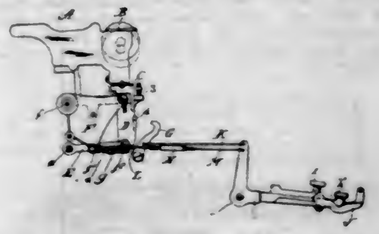
3. A clutch mechanism comprising two rotary members for alternately communicating power to each other, a ratchet by which one member communicates power to the other member, and friction means by which power is communicated from said other member to the one member, said members rotating in the same direction for both transmissions of power, and said ratchet including teeth extending outwardly away from the axis of rotation, and radial sliding pawls for engaging said teeth, said other member having radial slots for said pawls.

4. A clutch mechanism comprising two rotary members for alternately communicating power to each other, a ratchet by which one member communicates power to the other member, and friction means by which power is communicated from said other member to the one member, said members rotating in the same direction for both transmissions of power, said ratchet including a plurality of radially arranged and sliding pawls, a series of ratchet teeth for engagement with said pawls, and springs for holding said pawls in engagement with said teeth, said springs being adapted to yield readily when the pawls are thrown outward by centrifugal force.

5. A clutch mechanism comprising two rotary members for alternately communicating power to each other, a ratchet by which one member communicates power to the other member, and friction means by which power is communicated from said other member to the one member, said members rotating in the same direction for both transmissions of power, said ratchet including a toothed ring which is removably separately and by itself from the clutch, and one or more pawls for engaging the teeth of said ring.

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1,226,770. SHIFT-KEY MECHANISM FOR TYPE-WRITING MACHINES. EDWARD B. HESS, Brooklyn, N. Y., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Aug. 24, 1916. Serial No. 116,604. (Cl. 197—73.)



1. In case-shifting mechanism for type-writing machines, a stop for limiting the movement of the part to be shifted, a pivotally mounted shift key lever, and connections between the lever and the part to be shifted in which are interposed, between the part to be shifted and the lever, yielding means adjusted to be normally ineffective during the initial movement of the lever but which yield in order to cushion the movement of the lever after the shifted part has been moved to its full extent against its stop.

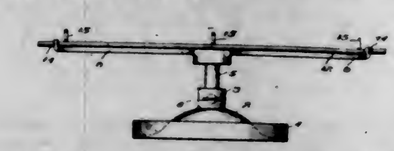


5. The combination with a shift key and a shift rail of a typewriting machine, of a rod connected with the shift key, a tube to which said rod is adjustably connected, a sleeve within said tube, a rod adjustably connected with said sleeve and operatively connected with the shift rail, and a spring within the tube for holding said sleeve yieldingly therein.

[Claims 2 to 4 not printed in the Gazette.]

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1,226,771. COOKING DEVICE. WILLIAM H. HUTCHINSON, Rochester, N. Y. Filed Sept. 25, 1913. Serial No. 791,681. (Cl. 53—5.)

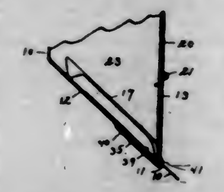


1. The combination with a base embodying a socket, of a support adjustably arranged in the socket and embodying a plurality of spring arms, and a grid held frictionally in a horizontal position by said spring arms.

2. The combination with a base embodying a socket, of a support adjustably arranged in the socket and embodying pairs of oppositely disposed spring arms, and a grid held frictionally in a horizontal position by said spring arms and removable from the support.

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1,226,772. CUP - DISPENSER. BERTHOLD JAHN, New Britain, Conn., assignor to The B. Jahn Manufacturing Company, New Britain, Conn., a Corporation. Filed Apr. 1, 1915. Serial No. 18,425. (Cl. 211—29.)

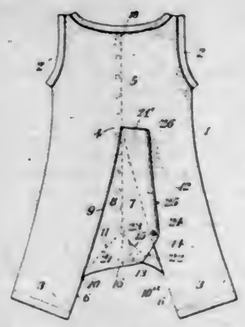


1. A cup dispenser comprising a box-like structure having a delivery slot at the lower front corner, between the opposed edges of the bottom and front wall, the said bottom serving as a support for a supply of cups, the said opposed edges having each a finger notch at the middle, a pair of springs supported by the said bottom, positioned one on each side of the said notches, and having the free end portions extended through the said slot and held in resilient engagement with the said edge of the front wall, the said bottom having depressed channels suitable for housing the said springs, and the said springs being secured by their upper ends to the bottom wall of the said channels, whereby the body portion of the said springs bridge the said slot and will be depressed into the said channels during the passage of a cup through the said slot, and the movement of the said springs will be positively limited by the said lower edge of the front wall on the upper side and the said bottom wall of the channels on the lower side.

2. A cup dispenser comprising a box-like structure having the bottom inclined form the rear forwardly and downwardly, a vertical front wall, the lower edge of the said front wall being flared outwardly and separated from the opposed edge of the bottom by a space, suitably to form a generally V-shaped delivery slot, the said edges having each a finegr recess opening into the said slot, the bottom having a pair of channels in the form of depressions adjacent its front edge, springs secured by one end in the said channels, and the free end portions of the said springs bridging the said slot, and terminating flush with the said flared edge of the front wall.

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1,226,773. CLOSED - CROTCH UNDERWEAR. RALPH R. JANES, Brooklyn, N. Y., assignor to Standard Knitting Mills Company, a Corporation of New York. Filed Nov. 8, 1913. Serial No. 799,860. (Cl. 2—144.)

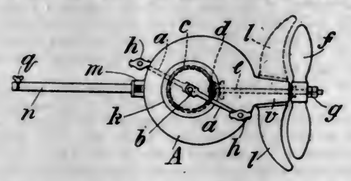


1. A garment of the kind described formed of a tubular member severed in the front on a straight line from the top to the bottom and in the rear from the bottom to about the waist, the lower ends of the severed edges being sewed together thus forming the legs, while the outer edges of the tubular member are left unsevered, the severed portions of the tube at the back of the garment forming a posterior opening extending from the point where the edges are sewed together to form the legs to a point substantially at the waist of the garment, and a gusset inserted in one of said leg seams extending over and covering the aforesaid posterior opening.

2. A garment of the kind described formed of a tubular member severed on a straight line at the front and rear at about the vertical center of the tube to form two separate members on opposite sides of said central line, the front being severed from the top to the bottom and the rear from the bottom to about the waist, the lower severed edges of each of said two separate members being sewed together to form leg portions, the severed portions at the back of the garment being free from each other from the point where the legs are sewed together to a point at substantially the waist of the garment thereby forming a posterior opening, and a gusset sewed to one of the leg seams independent of the other leg seam and extending a short distance below the crotch and having its free portion sewed to the opposite edge of the same leg member, said gusset forming a flap which extends over said posterior opening.

3. A garment of the kind described, formed of a tubular member, the front wall of which is cut on a centrally disposed vertical line extending from the yoke to the lower end of the tubular member and the rear wall of which is severed on a centrally disposed vertical line extending from the lower end of the garment to a point located a substantial distance above the crotch of the finished garment, legs formed by joining the edges of the front and rear walls of the tube, a main gusset and seat closure piece extending down the back of the garment and looped around the crotch, said gusset member comprising a flap adapted to substantially close the seat or rear opening, and a relatively small gusset member substantially triangular in shape located in the seam of one leg substantially below the crotch and adapted to coöperate with the main gusset member and complete the closure of the crotch, substantially as described.

2. A machine for effecting the rapid propulsion of the human body in water comprising, in combination, a hollow self-buoyant body with rearward extension, a propeller shaft extending partly through the hollow body and partly through the extension and out at the end thereof, a propeller on said shaft, gearing within the hollow body for rotating said shaft and pedal means for driving said gear.




3. A machine for effecting the rapid propulsion of the human body in water comprising, in combination, a hollow self-buoyant body of circular formation with flattened sides, a propeller shaft carried thereby, a propeller on said shaft, gearing within the hollow body for rotating said shaft and pedal means for driving said gear.

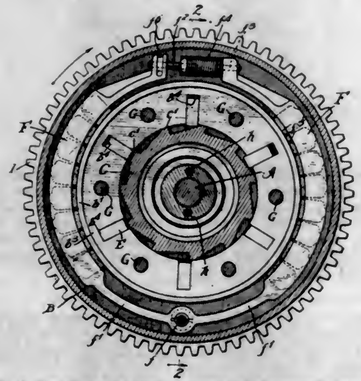
4. A machine for effecting the rapid propulsion of the human body in water comprising, in combination, a hollow self-buoyant body with means at its forward end whereby it can be attached to a person in the water, a propeller shaft carried by the hollow body, a propeller on said shaft, gearing within the hollow body for rotating said shaft and pedal means for driving said gear.

5. A machine for effecting the rapid propulsion of the human body in water comprising, in combination, a self-floatable body constituted by a hollow chamber of circular formation, a propeller shaft carried thereby, a propeller on said shaft, gearing within the hollow body for rotating said shaft, pedal means for driving said gear and a water tight door for giving access to the interior of the hollow body.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,769. CLUTCH MECHANISM. WILLIAM T. HENSLEY, Boundbrook, N. J., assignor to American Engine and Electric Company, Middlesex, N. J., a Corporation of Delaware. Filed July 24, 1914, Serial No. 852,845. Renewed Oct. 6, 1916. Serial No. 124,203. (Cl. 192—20.)



1. A clutch mechanism comprising two rotary members for alternately communicating power to each other, a ratchet by which one member communicates power to the other member, and friction means by which power is communicated from said other member to the one member, said members rotating in the same direction for both transmissions of power, and said ratchet having sliding pawls which are operated by gravity and automatically held in disengaged position by centrifugal force when the rotation attains a predetermined speed.

2. A clutch mechanism comprising two rotary members for alternately communicating power to each other, a ratchet by which one member communicates power to the other member, and friction means by which power is communicated from said other member to the one member, said members rotating in the same direction for both transmissions of power, and said ratchet being arranged concentrically within said means, said ratchet having radial sliding pawls operated by gravity and automatically held in disengaged position by centrifugal force when the rotation attains a predetermined speed.

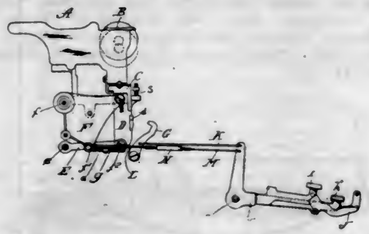
3. A clutch mechanism comprising two rotary members for alternately communicating power to each other, a ratchet by which one member communicates power to the other member, and friction means by which power is communicated from said other member to the one member, said members rotating in the same direction for both transmissions of power, and said ratchet including teeth extending outwardly away from the axis of rotation, and radial sliding pawls for engaging said teeth, said other member having radial slots for said pawls.

4. A clutch mechanism comprising two rotary members for alternately communicating power to each other, a ratchet by which one member communicates power to the other member, and friction means by which power is communicated from said other member to the one member, said members rotating in the same direction for both transmissions of power, said ratchet including a plurality of radially arranged and sliding pawls, a series of ratchet teeth for engagement with said pawls, and springs for holding said pawls in engagement with said teeth, said springs being adapted to yield readily when the pawls are thrown outward by centrifugal force.

5. A clutch mechanism comprising two rotary members for alternately communicating power to each other, a ratchet by which one member communicates power to the other member, and friction means by which power is communicated from said other member to the one member, said members rotating in the same direction for both transmissions of power, said ratchet including a toothed ring which is removably separately and by itself from the clutch, and one or more pawls for engaging the teeth of said ring.

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1,226,770. SHIFT-KEY MECHANISM FOR TYPE-WRITING MACHINES. EDWARD B. HESS, Brooklyn, N. Y., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Aug. 24, 1916. Serial No. 116,604. (Cl. 197—73.)



1. In case-shifting mechanism for type-writing machines, a stop for limiting the movement of the part to be shifted, a pivotally mounted shift key lever, and connections between the lever and the part to be shifted in which are interposed, between the part to be shifted and the lever, yielding means adjusted to be normally ineffective during the initial movement of the lever but which yield in order to cushion the movement of the lever after the shifted part has been moved to its full extent against its stop.

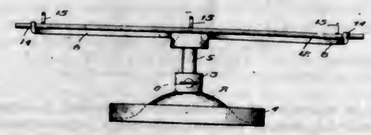


5. The combination with a shift key and a shift rail of a typewriting machine, of a rod connected with the shift key, a tube to which said rod is adjustably connected, a sleeve within said tube, a rod adjustably connected with said sleeve and operatively connected with the shift rail, and a spring within the tube for holding said sleeve yieldingly therein.

[Claims 2 to 4 not printed in the Gazette.]

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1,226,771. COOKING DEVICE. WILLIAM H. HUTCHINSON, Rochester, N. Y. Filed Sept. 25, 1913. Serial No. 791,681. (Cl. 53—5.)

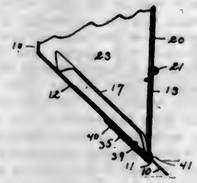


1. The combination with a base embodying a socket, of a support adjustably arranged in the socket and embodying a plurality of spring arms, and a grid held frictionally in a horizontal position by said spring arms.

2. The combination with a base embodying a socket, of a support adjustably arranged in the socket and embodying pairs of oppositely disposed spring arms, and a grid held frictionally in a horizontal position by said spring arms and removable from the support.

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1,226,772. CUP - DISPENSER. BERTHOLD JAHN, New Britain, Conn,, assignor to The B. Jahn Manufacturing Company, New Britain, Conn., a Corporation. Filed Apr. 1, 1915. Serial No. 18,425. (Cl. 211—29.)

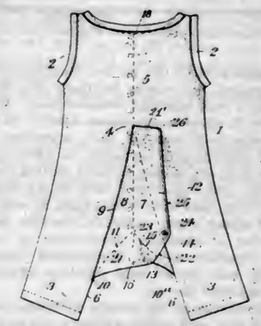


1. A cup dispenser comprising a box-like structure having a delivery slot at the lower front corner, between the opposed edges of the bottom and front wall, the said bottom serving as a support for a supply of cups, the said opposed edges having each a finger notch at the middle, a pair of springs supported by the said bottom, positioned one on each side of the said notches, and having the free end portions extended through the said slot and held in resilient engagement with the said edge of the front wall, the said bottom having depressed channels suitable for housing the said springs, and the said springs being secured by their upper ends to the bottom wall of the said channels, whereby the body portion of the said springs bridge the said slot and will be depressed into the said channels during the passage of a cup through the said slot, and the movement of the said springs will be positively limited by the said lower edge of the front wall on the upper side and the said bottom wall of the channels on the lower side.

2. A cup dispenser comprising a box-like structure having the bottom inclined form the rear forwardly and downwardly, a vertical front wall, the lower edge of the said front wall being flared outwardly and separated from the opposed edge of the bottom by a space, suitably to form a generally V-shaped delivery slot, the said edges having each a finegr recess opening into the said slot, the bottom having a pair of channels in the form of depressions adjacent its front edge, springs secured by one end in the said channels, and the free end portions of the said springs bridging the said slot, and terminating flush with the said flared edge of the front wall.

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1,226,773. CLOSED - CROTCH UNDERWEAR. RALPH R. JANES, Brooklyn, N. Y., assignor to Standard Knitting Mills Company, a Corporation of New York. Filed Nov. 8, 1913. Serial No. 799,860. (Cl. 2—144.)

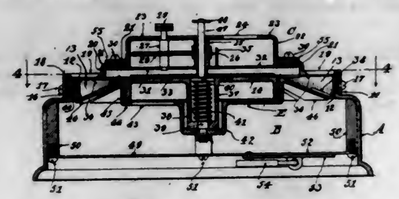


1. A garment of the kind described formed of a tubular member severed in the front on a straight line from the top to the bottom and in the rear from the bottom to about the waist, the lower ends of the severed edges being sewed together thus forming the legs, while the outer edges of the tubular member are left unsevered, the severed portions of the tube at the back of the garment forming a posterior opening extending from the point where the edges are sewed together to form the legs to a point substantially at the waist of the garment, and a gusset inserted in one of said leg seams extending over and covering the aforesaid posterior opening.

2. A garment of the kind described formed of a tubular member severed on a straight line at the front and rear at about the vertical center of the tube to form two separate members on opposite sides of said central line, the front being severed from the top to the bottom and the rear from the bottom to about the waist, the lower severed edges of each of said two separate members being sewed together to form leg portions, the severed portions at the back of the garment being free from each other from the point where the legs are sewed together to a point at substantially the waist of the garment thereby forming a posterior opening, and a gusset sewed to one of the leg seams independent of the other leg seam and extending a short distance below the crotch and having its free portion sewed to the opposite edge of the same leg member, said gusset forming a flap which extends over said posterior opening.

3. A garment of the kind described, formed of a tubular member, the front wall of which is cut on a centrally disposed vertical line extending from the yoke to the lower end of the tubular member and the rear wall of which is severed on a centrally disposed vertical line extending from the lower end of the garment to a point located a substantial distance above the crotch of the finished garment, legs formed by joining the edges of the front and rear walls of the tube, a main gusset and seat closure piece extending down the back of the garment and looped around the crotch, said gusset member comprising a flap adapted to substantially close the seat or rear opening, and a relatively small gusset member substantially triangular in shape located in the seam of one leg substantially below the crotch and adapted to coöperate with the main gusset member and complete the closure of the crotch, substantially as described.

1,226,774. VENDING APPARATUS. GEORGE KERN, Peru, Ill. Filed Oct. 12, 1916. Serial No. 125,203. (Cl. 46—56.)



1. In an apparatus of the nature described, the combination, of a casing, said casing having a top, there being in said casing a coin-receiving compartment, said casing having a reduced, tubular, extension, a series of inwardly-radiating, horizontally-disposed bars extending from the inner wall of said tubular extension to afford spaces between said bars, a cup-shaped member located centrally in said extension, said cup-shaped member having a vertically disposed rim, said bars terminating in said rim, and a spider, said spider being vertically movable, said spider having a series of members constructed to enter said spaces, said members having downwardly inclined portions entering said spaces, said portions affording movable bottoms for said spaces.

2. In an apparatus of the nature described, the combination, of a casing, said casing having a top and a bottom affording a coin depository, there being on the casing a reduced tubular extension, a series of bars radiating inwardly, and horizontally from the interior wall of said extension, to afford spaces between said bars, a cup-shaped member located centrally in said extension, said cup-shaped member having a downwardly-extending rim, said bars terminating in said rim, and a spider, said spider being vertically movable, said spider having a series of members constructed to enter said spaces, said members having downwardly inclined portions, said portions affording bottoms for said spaces, and means for depressing said spider.

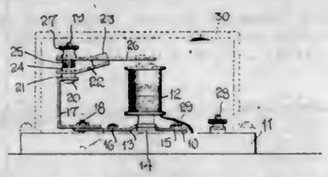
3. In an apparatus of the nature described, the combination, of a casing, said casing having a coin receiving compartment, said casing having at its upper end a reduced, tubular extension, a cover for said casing, said cover being a rim constructed to embrace said extension and a horizontally disposed flange, there being in said flange a series of openings, a transparent, plane, ring located on the upper margin of said extension and underlying said flange, and an index-carrying member for each of said openings.

4. In an apparatus of the nature described, the combination, of a casing, said casing having a coin-receiving chamber, said casing having in its top a series of inwardly-extending, horizontally disposed bars, said bars affording open spaces therebetween, a centrally located, inverted, cup-shaped member, said member having a downwardly extending rim, said bars terminating in said rim, said member having a downwardly extending, centrally-located, tubular boss, a bolt in said downwardly extending tubular boss, said bolt having a head, a spiral spring surrounding said bolt, said spider comprising a tubular boss surrounding said downwardly extending tubular boss, a series of spokes radiating from said tubular boss, a rim in which said spokes terminate, a series of vertically disposed walls rising from said rim, said vertically disposed walls terminating in downwardly inclined plates, said plates being constructed to enter the spaces between said bars and affording bottoms for said spaces, and means for depressing said spider.

5. In an apparatus of the nature described, the combination, of a casing, said casing having a coin receiving compartment, there being on said casing a top, there being in said top a series of openings, a movable bottom in each of said openings, a cover for said casing, said cover having a series of openings registering with the openings in said casing, a transparent, plane, ring underlying said cover, and a ring on said cover, said ring having a series in indicia registering with the openings in said cover.

[Claim 6 not printed in the Gazette.]

1,226,775. TELEGRAPH-SOUNDER. RALPH KOENIG, Newburg, Wis. Filed Aug. 14, 1916. Serial No. 114,819. (Cl. 175—345.)

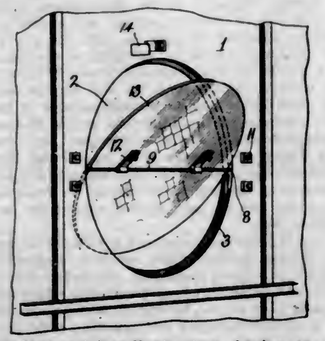


1. In a device of the character described, a support formed of a strip of resilient material, a screw extending upward from the support, springs surrounding the screw, a member mounted on the screw and bearing against the spring, and a nut mounted on the screw and bearing against said member and adapted when turned in one direction to compress the spring.

2. In a device of the character described, a support formed of a strip of resilient material, a screw extending upward from the support, springs surrounding the screw, a member mounted on the screw and bearing against the spring, a nut mounted on the screw and bearing against said member and adapted when turned in one direction to compress the spring, and an arm mounted on said screw extending upward beneath the member and having wings embracing the side edges of the member.

3. A sounder including a base, a magnet mounted on the base, a supporting member consisting of a strip of resilient material mounted upon the base extending upward therefrom and angularly bent at its outer extremity, a screw extending from said angular extremity, a pair of nuts mounted on the screw, an arm disposed between the nuts and extending toward the magnet and having lateral wings at its extremity, a coiled spring surrounding the screw bearing against one of the nuts, an armature through one end of which the screw loosely passes, the armature coacting with the magnets, the wings on said arm extending on each side of the armature, and the end of the armature bearing against said spring, and a thumb nut mounted upon the screw and bearing against the armature whereby the tension of the spring may be increased or decreased.

1,226,776. WINDOW-FRAME. ANDREW A. KRAMER, Kansas City, Kans. Filed Mar. 3, 1916. Serial No. 81,834. (Cl. 189—60.)



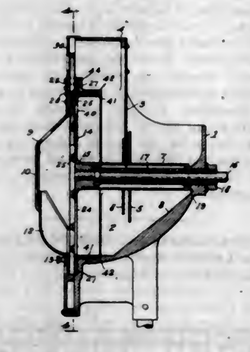
1. A sheet metal wall structure, having an opening therein and having an outturned flange integral therewith at the edge of the opening, the said flange having an inturned lip at one side of the center of the opening, a rod mounted in said flange at the center of the opening and extending thereacross and a window pane on said rod adapted for inward movement through the unlipped portion of the flange and for abutment against the said instanding lip.

2. A sheet metal wall structure having an opening therein and having an outturned flange integral therewith at the edge of the opening, the said flange having an inturned lip at one side of the center of the opening, a rod mounted in said flange at the center of the opening and extending thereacross, a window pane on the said rod adapted for abutment against the said inturned lip, and a stop on said wall member adapted for movement into the path of the window frame to prevent movement of the pane to open position.

3. A sheet metal wall comprising a circular opening and having a flange integral therewith extended outwardly from the opening, an inturned lip on the flange above the horizontal center of the opening, forming an inwardly opening seat, a back turned lip on the flange below the horizontal center of the opening having an inturned lip forming an outwardly facing seat, and a window pivotally mounted in said opening and adapted for seating in said seats substantially as set forth.



1,226,777. SELECTING MECHANISM. NORBERT M. LA PORTE, Baltimore, Md., assignor to The Crown Cork and Seal Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed July 31, 1911. Serial No. 641,462. (Cl. 113—114.)



1. In a selecting mechanism, the combination with a cage in which the articles are tumbled, of a selector to which the cage delivers, a delivery channel to which the selector delivers, a receptacle for receiving the articles in a mass, said receptacle being arranged to discharge the articles by gravity directly into the cage, and a cut-off device arranged to prevent the passage of articles from the receptacle to the cage, said cut-off being constructed to intermittently allow such passage.

2. In a selecting mechanism, the combination with a receptacle for receiving the articles in a mass, said receptacle having an inclined passage surface, of a rotary cage in which the articles are tumbled, said cage having one wall adjacent to the receptacle and provided with an opening which in its lowest position permits the passage of articles from the receptacle to the cage, a selector to which the cage delivers, and a delivery channel to which the selector delivers.

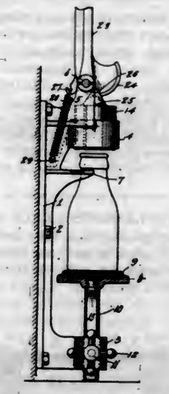
3. In a selecting mechanism, the combination with a rotary cage in which the articles are tumbled, of a selector to which the cage delivers, a delivery channel to which the selector delivers, a receptacle for receiving the articles in a mass and from which the articles pass by gravity, a cut-off which permits an intermittent flow of the articles from the receptacle, and means for controlling the amount of flow permitted by the cut-off.

4. In a selecting mechanism, the combination with a rotary cage in which the articles are tumbled, of a rotary selector to which the cage delivers, a delivery channel to which the selector delivers, a receptacle for receiving the articles in a mass and from which the articles pass by gravity, a cut-off which permits an intermittent flow of the articles from the receptacle, and means for controlling the amount of flow permitted by the cut-off.

5. In a selecting mechanism, the combination with a rotary cage having a controlling pocket, of a rotary selector to which the cage delivers, a delivery channel to which the selector delivers, a receptacle for receiving the articles in a mass and from which the articles pass by gravity to said cage, and a cut-off between the receptacle and the controlling pocket.

[Claims 6 to 20 not printed in the Gazette.]

1,226,778. CAPPING-MACHINE. NORBERT M. LA PORTE, Baltimore, Md., assignor to The Crown Cork and Seal Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed May 18, 1914. Serial No. 839,290. (Cl. 113—2.)



1. In a capping machine, the combination, with a bottle support, of a capping head having a chamber to receive the upper end of the bottle, said chamber having a cap-bending surface of circular cross-section arranged to come into contact with the outer edge of the skirt of the cap and bend the same down into contact with the bottle, said chamber also having, above the cap-bending portion, a frusto-conical cap-setting portion, the maximum and minimum diameters of the frusto-conical portion being such that the upper edge of the skirt will contact with an intermediate diameter of the frusto-conical portion, whereby the cap is set, and means for producing a relative motion of the bottle support and capping head.

2. In a capping machine, the combination, with a bottle support, of a capping head having a chamber to receive the upper end of the article to be capped, said chamber comprising a cap-setting portion with downward-sloping working-faces, a cap-bending portion below the cap-setting portion and having its walls separated to a greater extent than are the working-faces of the cap-setting portion, and an enlarged portion between the cap-bending and the cap-setting portions of the chamber, and means for producing a relative motion of the bottle support and the capping head.

3. In a capping machine, the combination, with a bottle support, of a capping head having a chamber to receive the upper end of the bottle, said chamber having a cap-bending portion arranged to come into engagement with the outer edge of the skirt of the cap and bend the same

down entirely around its circumference, said chamber also having above the cap-bending portion a cap-setting portion having a conical surface, an intermediate part of which is arranged to come in contact with the skirt near its upper edge only, and force the same downward, whereby the cap is set, and means for producing a relative motion of the bottle support and capping head.

4. In a capping machine, the combination with a bottle support, of a capping head having a chamber to receive the upper end of the bottle, said chamber having a cap-bending surface of circular cross-section arranged to come into contact with the outer edge of the skirt of the cap and bend the same down into contact with the bottle, said chamber also having, above the cap-bending portion, a frusto-conical cap-setting portion, the maximum and minimum diameters of the frusto-conical portion being such that the upper edge of the skirt will contact with an intermediate diameter of the frusto-conical portion, whereby the cap is set, a permanent magnet movable with relation to said capping head, a presser foot carried by said permanent magnet and located within the chamber of the capping head, a spring tending to move the permanent magnet in a direction toward the bottle head, and means for producing a relative motion of the bottle support and the capping head.

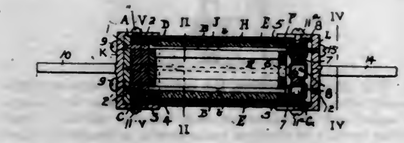
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1,226,779. COMPOSITION OF MATTER FOR MAKING FIREPROOF AND WATERPROOF BOARDS. JAMES E. LAPPEN, Winona, Minn., assignor to Union Fibre Company, Winona, Minn., a Corporation of Minnesota. Filed Apr. 23, 1913. Serial No. 763,042. (Cl. 106—24.)

A composition of matter for making fibrous fireproof boards consisting of thirty parts of separated asbestos fibers, six hundred parts of hydraulic cement, two hundred parts of mineral wool added after the separation of the asbestos fibers, and seven parts of alum.

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1,226,780. MULTIPLE REFILLABLE FUSE. FREMONT J. CLEAVER, Carnegie borough, Pa., assignor of one-third to Samuel L. H. Morris and one-third to Herbert W. Hodgdon, Pittsburgh, Pa. Filed Oct. 5, 1915. Serial No. 54,281. (Cl. 175—278.)



1. In a multiple, refillable fuse, the combination of a pair of end members of conductive material adapted to be electrically connected to opposing line terminals, a plurality of fusible members having their one ends fixed to one of said end members and extending toward the second end member, an insulating member adjacent to the second end member, a plurality of socket members of conductive material carried by said insulating member and insulated from each other, the end of each of said fusible members being held in one of said socket members, and a movable conductive element adapted to establish electrical connection between any one of said socket members and the second end member, for the purpose described.

2. In a multiple, refillable fuse, the combination of a pair of end members of conductive material adapted to be electrically connected to opposing line terminals, a plurality of fusible members having their one ends fixed to one of said end members and extending toward the second end member, an insulating member adjacent to the second end member, a plurality of socket members of conductive material carried by said insulating member and insulated from each other, the end of each of said fusible members being held in one of said socket members, a movable conductive element adapted to establish electrical connection between any one of said socket members and the second end member, and an insulating cylinder interposed between said end members to inclose said fusible members, for the purpose described.

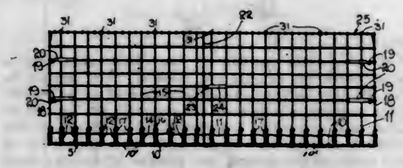
3. In a multiple, refillable fuse, the combination of a pair of end members of conductive material adapted to be connected to opposing line terminals, a plurality of fusible members having their one ends fixed to one of said end members and extending toward the second end member, an insulating member adjacent to the second end member, a plurality of socket members of conductive material carried by said insulating member and insulated from each other, the end of each of said fusible members being held in one of said socket members and said socket members being provided with outer threaded bores, and a conductive screw member adapted to be inserted through the second end member and screwed into the bore of any one of said socket members, for the purposes described.

4. In a multiple, refillable fuse, the combination of a pair of end members of conductive material adapted to be connected to opposing line terminals, a plurality of fusible members having their one ends fixed to one of said end members and extending toward the second end member, an insulating member adjacent to the second end member, a plurality of socket members of conductive material carried by said insulating member and insulated from each other, the end of each of said fusible members being held in one of said socket members and said socket members being provided with outer threaded bores, a conductive screw member adapted to be inserted through the second end members and screwed into the bore of any one of said socket members, and an insulating cylinder interposed between said end members to inclose said fusible members, for the purpose described.

5. In a multiple, refillable fuse, the combination of a pair of conductive end members adapted to be electrically connected to opposing line terminals, a plurality of fusible members individually connected electrically to one of said end members, means for electrically connecting said fusible members individually to the second end member, an individual insulating envelop for each of said fusible members split along one of its sides from end to end to open for the escape of the gas of fusion, and an insulating shell interposed between said end members and inclosing said fusible members and their envelops for the purpose described.

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1,226,781. COLLAPSIBLE CHICKEN CRATE OR COOP. CURTIS D. LEISTER, Paris, Ark. Filed Oct. 16, 1916. Serial No. 125,951. (Cl. 220—132.)



1. A crate including a bottom plate, spaced wires extending over the upper and lower surfaces of the bottom plate at right angles to each other and tied together at their points of intersection, and side, end and top sections mounted and connected for relative folding movement upon said bottom.

2. A crate including a bottom plate, a plurality of spaced wires extending over the upper and lower surfaces of said plate at right angles to each other and connected at their points of intersection by means extending through said bottom plate, and side, end and top sections mounted for relative folding movement upon said bottom plate.

3. A crate including a bottom plate having a plurality of equidistantly spaced openings therein, a series of wires extending across the bottom face of the plate and having eyes extending upwardly through the openings in said plate, a second series of wires extending over the upper surface of said plate and through the corresponding eyes in the first series of wires whereby the two series of wires are locked together upon opposite sides of the base plate against relative movement, and side, end and top sections mounted for relative folding movement upon the crate bottom.

4. A crate including a bottom plate, reinforcing wires extending at right angles to each other across the upper and lower surfaces of said plate and projecting beyond the edges thereof, a marginal frame wire disposed in spaced relation to the edges of said plate to which the terminals of the reinforcing wires are connected, and side, end and top sections supported upon the frame for relative folding movement upon the crate bottom.

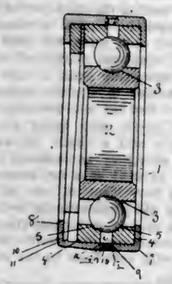
5. A crate including a bottom plate, reinforcing wires extending over the upper and lower surfaces of said plate, and means extending through the bottom plate and tying the reinforcing wires on the upper and lower surfaces thereof together, and side, end and top sections mounted upon the crate bottom for relative folding movement.

[Claims 6 to 8 not printed in the Gazette.]



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1,226,782. BALL-BEARING. ALPHONSE E. LEMIEUX, Portland, Me. Filed Mar. 28, 1917. Serial No. 157,880. (Cl. 64—36.)



1. In a device of the character described, an inner ring and an outer ring comprising two members spaced apart, said rings being provided with ball races in their adjacent faces, a housing and means for adjusting the members of the outer ring comprising two wedged-shaped rings interposed between the ball rings and the housing.

2. In a device of the character described, an inner ring and an outer ring comprised of two members spaced apart, said rings being provided with ball races in their adjacent faces, a housing and means for adjusting the ball rings comprising two segmental wedge-shaped rings interposed between the ball rings and the housing.

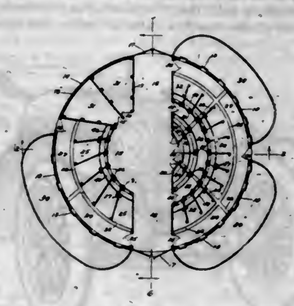
3. In a device of the character described, a housing, an inner ring and an outer ring comprising two members spaced apart, said rings being provided with ball races in their adjacent faces and means for adjusting the ball rings comprising two wedge-shaped rings interposed between the ball rings and the housing and means for locking the adjusting rings together in any given position.

[Claims 4 and 5 not printed in the Gazette.]

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1,226,783. BARN. HERBERT JOSEPH LEY, Lawrenceburg, Tenn. Filed Feb. 4, 1916. Serial No. 76,125. (Cl. 119—16.)

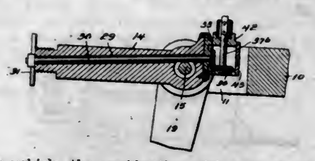
An improved barn comprising a circular outer wall, a driveway extending diametrically through the barn, curved walks contiguous to the wall, a plurality of sets of concentric semi-circular groups of stalls between said driveway and one of said walks, one group opening onto the walk and the other group opening into the drive-way, a walk between the groups, and a sector shaped group of stalls and a correspondingly shaped group of granaries



arranged in a semi-circle on the opposite side of said drive-way and between the drive-way and the other walk.

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1,226,784. SPEEDOMETER DRIVING MECHANISM. ALLEN LOOMIS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Original application filed May 19, 1909, Serial No. 497,047. Divided and this application filed July 3, 1912. Serial No. 707,540. (Cl. 235—96.)



1. In a vehicle, the combination with a steering knuckle having a spindle and a road wheel mounted on the spindle, of an indicator driving mechanism mounted upon the knuckle and having a shaft extending through the spindle, a connection between the shaft and the hub of the wheel, and a casing for the driving mechanism removably secured to the knuckle.

2. In a vehicle, the combination with a steering knuckle having a spindle and a road wheel mounted on the spindle, of an indicator driving mechanism, a removable housing supporting the indicator driving mechanism and secured to the knuckle, and an operative connection between said mechanism and the wheel.

3. In a vehicle, the combination with a steering knuckle having a spindle and a road wheel mounted on the spindle, of an indicator driving mechanism including a driving and a driven shaft, a pair of intermeshing gears on said shafts, a removable housing for said gears supporting the shafts, and a detachable operative connection between the driving shaft and the wheel.

4. In a vehicle, the combination with the axle and the steering spindle, of an indicator driving mechanism having a shaft extending through the spindle, and a pivotal connection for said spindle to said axle having its axis offset from the axis of said shaft.

5. In a vehicle, the combination with the axle and the steering spindle, of an indicator driving mechanism comprising a shaft extending through the spindle, a connection from the shaft to the vehicle wheel, and intermeshing gears at the inner end of the shaft, and a pivotal connection for said spindle to said axle having its axis offset from the axis of said shaft.

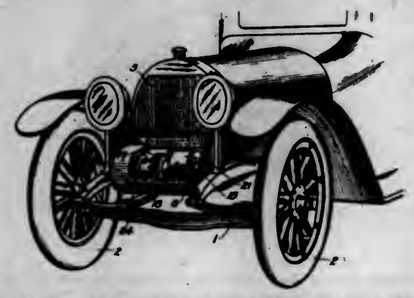
[Claims 6 to 10 not printed in the Gazette.]

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1,226,785. VEHICLE-MOTOR POWER. LORREN B. MCCARGAR, North Kansas City, Mo. Filed Mar. 6, 1916. Serial No. 82,384. (Cl. 21—90.)

The combination with a vehicle frame, of a plate arranged vertically at the front of the frame, arms extending

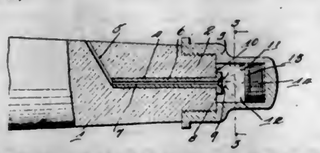
upwardly and forwardly from the plate and provided with bearings, a transverse shaft rotatable in the bearings, a worm wheel on said shaft between the bearings, a pulley on one end of the shaft, a cable drum on the opposite end



of the shaft, an auxiliary shaft rotatably mounted in said plate and extending longitudinally with the vehicle, and a worm drive wheel on the auxiliary shaft, meshing with the worm wheel on the transverse shaft.

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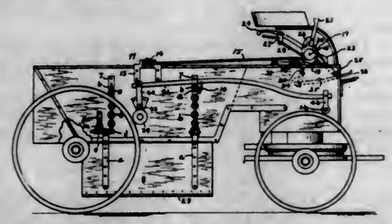
1,226,786. GREASE-CUP. JOHN S. MCCOY, Scarbro, W. Va. Filed May 10, 1916. Serial No. 96,625. (Cl. 64—27.)



As a new article of manufacture, an axle spindle provided with a longitudinally extending aperture, said spindle provided with an upwardly inclined aperture communicating with said longitudinally extending aperture and the outer face of said spindle, a lubricant feeding screw threaded within said longitudinally extending aperture and provided with an elongated longitudinally extending channel communicating with said upwardly inclined aperture, a nut threaded upon the outer end of said spindle, said nut provided with a lubricant receiving pocket, a plunger positioned within said pocket of the same diameter as the inner face of said pocket, a spring for urging said plunger toward said lubricant feeding screw for automatically feeding lubricant through said lubricant feeding screw, and said lubricant feeding screw provided with an enlarged head for limiting the inward movement of said plunger with respect to said spindle.

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1,226,787. DUMP-WAGON. ALEXANDER MACDONALD, Omaha, Nebr. Filed July 25, 1916. Serial No. 111,152. (Cl. 21—20.)



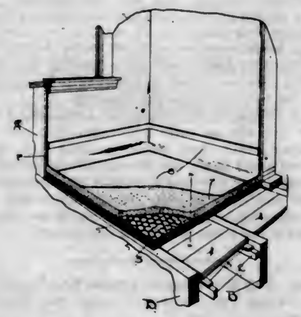
1. The combination of a wagon box having an opening in its bottom, chains arranged in pairs, the chains of each pair having their upper ends mounted on the sides and at longitudinal intervals of the box, a pair of coupling-pins each having a pivotal mounting upon a side to permit swinging movements thereof in a plane parallel with a side of the box for a loose connection with a rearmost chain, a pair of doors each being pivotally connected near its rear end with a coupling-pin and being connected near its front end with a chain, means to cause simultaneous, upward swinging movements of the doors for making a closure of said opening, and means for causing an upward swinging movement of one of the doors in a limited arc before the simultaneous movements of the doors.

2. In combination with a wagon box having an opening in its bottom, chains arranged in pairs, the chains of each pair having their upper ends mounted on the sides and at longitudinal intervals of the box, a pair of coupling-pins each being connected with a rearmost chain and having a pivotal mounting upon a side to permit swinging movements thereof in a plane parallel with the side of the box, a pair of doors each being pivotally connected with a coupling-pin and a chain, means to cause simultaneous upward swinging movements of the doors for making a closure of said opening, means for causing an upward swinging movement of one of the doors in a limited arc before the simultaneous swinging movements of the doors, and a pair of detent-members, each being mounted on the side of the box for engaging a chain to maintain the front end of a door in an elevated position.

3. The combination of a wagon box having an opening in its bottom and having its sides provided at longitudinal intervals with brackets, chains arranged in pairs and having their upper ends provided with eye-bolts for a mounting in said brackets, a pair of coupling-pins each having a pivotal mounting upon a side to permit swinging movements thereof in a plane substantially parallel with a side of the box for a connection with a rearmost chain, a pair of doors each being pivotally connected with a coupling-pin and a chain, means to cause simultaneous upward swinging movements of the doors for making a closure of said opening, means for causing an upward swinging movement of one of the doors in a limited arc before the simultaneous swinging movements of the doors, and means to adjust the mounting of the eye-bolts for maintaining the chains in an elevated or lowered position with reference to the sides of the box.

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1,226,788. INSULATING FLOOR CONSTRUCTION. WALTER D. MACLEITH, St. Paul, Minn., assignor of one-third to Union Fibre Company, Winona, Minn., a Corporation of Minnesota. Filed Dec. 7, 1914. Serial No. 875,874. (Cl. 72—63.)



1. A floor construction of the class described comprising floor supporting joists, flooring arranged between said joists with its upper face standing above the upper faces of the joists, a resilient insulating sheet positioned upon said flooring leaving an air space above the joists, and a composition layer upon said insulating sheet, said composition layer being relatively hard adjacent to the insulating sheet and relatively resilient at the top.

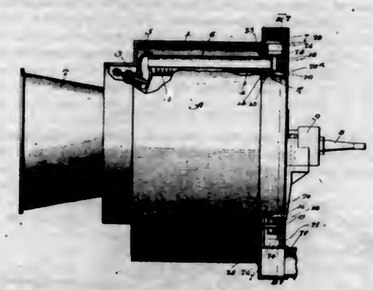
2. A floor construction of the class described comprising floor supporting joists, flooring arranged between said joists with its upper face standing above the upper faces of the joists, a resilient insulating sheet positioned upon said flooring leaving an air space above the joists, a composition layer upon said insulating sheet, said composition layer being relatively hard adjacent to the insulating sheet and relatively resilient at the top, and anchoring expanded metal embedded in the lower half of said composition.

3. A floor construction of the class described comprising floor supporting joists, flooring arranged between said joists, with its upper face standing above the upper faces of said joists, a resilient insulating sheet positioned upon said flooring leaving a space above said joists, and a composition layer upon said insulating sheet, said composition layer containing relatively heavy materials which will settle to the lower portion of said composition and make the same firm and hard and containing materials which will leave the upper portion of said composition material relatively yielding.

4. A floor construction of the class described comprising floor supporting joists, flooring arranged between said joists, with its upper face standing above the upper faces of said joists, a resilient insulating sheet positioned upon said flooring leaving a space above said joists, a composition layer upon said insulating sheet, said composition layer containing relatively heavy materials which will settle to the lower portion of said composition and make the same firm and hard and containing materials which will leave the upper portion of said composition material relatively yielding, and openwork metal embedded in the lower relatively harder portion of said composition material for the purpose set forth.

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1,226,789. MUFFLER. WALTER G. MACOMBER, Los Angeles, Cal., assignor to Macomber Motors Company, Los Angeles, Cal., a Corporation of California. Original application filed Apr. 27, 1915, Serial No. 24,196. Divided and this application filed Jan. 31, 1916. Serial No. 75,306. (Cl. 121—116.)



1. In a muffler the combination with an internal combustion engine including a casing surrounding the engine and having communication with the atmosphere, of a rotary muffler operatively associated with the engine, a casing for the muffler communicating with the engine casing and having an exhaust, and fan blades carried by the muffler to produce a draft of air through the engine and muffler casing.

2. In a muffler the combination with an internal combustion engine including a casing having communication with the atmosphere, a rotary muffler operatively associated with the engine, a casing for the muffler having an exhaust port and communicating with the engine casing, and fan blades carried by the muffler, said muffler having exhaust orifices opening between the fan blades.

3. In a muffler the combination with a rotary internal combustion engine including a casing, said casing communicating with the atmosphere, of a rotary muffler operatively associated with the engine, a casing for the muffler having communication with the engine casing and an exhaust port, exhaust tubes connected with the engine and muffler, said muffler comprising a series of compartments having outlet orifices, and a fan carried by the muffler.

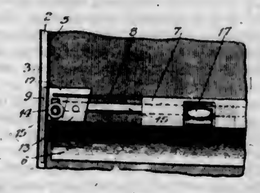
4. In a muffler the combination with a rotary internal combustion engine including a drive shaft, a rotary muffler journaled from the drive shaft and connected for rotation with the engine, said muffler comprising a ring having a series of compartments therein, said compartments communicating with each other, said ring having orifices in its periphery, a casing for the muffler having an exhaust port, and fan blades carried on the periphery of the ring to force the exhaust gases out of the exhaust port in the muffler casing.

5. In a muffler, an engine shaft, a hollow ring mounted for rotation upon said shaft and having intake ports therein, a plurality of radially mounted segmental muffler plates mounted within the ring in staggered spaced relation to each other, said plates having orifices therein, said ring having exhaust ports in its peripheral wall, a casing for the muffler having an exhaust port, and curved fan blades mounted upon the peripheral wall of the muffler.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,790. FOLLOWER FOR FILING-TRAYS. FRED L. MANNY, Benton Harbor, Mich., assignor, by mesne assignments, to Baker-Vawter Company, Benton Harbor, Mich., a Corporation of Michigan. Filed May 29, 1916. Serial No. 100,438. (Cl. 129—30.)



1. In combination with a tray provided with a slideway and a roller track, a follower equipped with a slide member adapted to run in said way, a roller housing carried by said follower and formed with a wedging surface, and a spring-pressed roller coöperating with said track and said wedging surface.

2. In combination with a tray provided at its sides with opposite slideways and opposite roller tracks, a follower equipped with a pair of slides adapted to run in said ways, a pair of roller housings at the opposite sides of said follower formed with wedging surfaces, a pair of spring-pressed rollers arranged to coöperate respectively with said tracks and wedging surfaces, and releasing means common to both rollers.

3. In combination with a tray having slideways adjacent the upper edges of its sides, said slideways including retaining flanges constituting a roller track adjacent each slideway, a follower equipped with a pair of slides adapted to run in said ways, a pair of roller housings adjacent said slides formed with wedging surfaces, a pair of spring-pressed rollers arranged to coöperate respectively with said tracks and wedging surfaces, and releasing means common to said rollers.

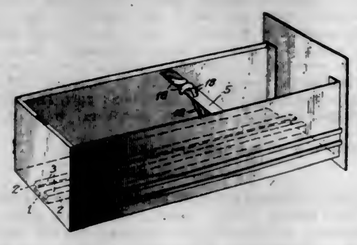
4. In combination with a tray provided at its sides with opposite slideways and opposite roller tracks, a follower equipped with a pair of slides adapted to run in said ways, a pair of roller housings at the opposite sides of said follower formed with wedging surfaces, a pair of annular rollers arranged to coöperate with said tracks and wedging surfaces, and a reciprocating releasing member having its ends formed to engage the openings in said rollers.

5. In combination with a tray provided at its sides with opposite slideways and opposite roller tracks, a follower equipped with a pair of slides adapted to run in said ways, a pair of roller housings at the opposite sides of said follower formed with wedging surfaces, a pair of rollers arranged to coöperate with said tracks and wedging surfaces, and a rock shaft formed with cranks at its ends connected with said rollers and arranged to shift them simultaneously.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,791. FOLLOWER FOR FILING-TRAYS. FRED L. MANNY, Benton Harbor, Mich., assignor, by mesne assignments, to Baker-Vawter Company, Benton Harbor, Mich., a Corporation of Michigan. Filed May 29, 1916. Serial No. 100,439. (129—30.)



1. In combination with a tray provided with a central bottom slideway, a follower equipped with a slide member adapted to run in said slideway and formed with an inclined wedging surface, a roller arranged to coöperate with the wedging surface of the slide and with the slideway, and means for shifting the roller out of coöperative relation.

2. In combination with a tray provided with a central bottom slideway, a follower equipped with a slide member adapted to run in said slideway and formed with an inclined wedging surface, a spring-pressed roller arranged to normally yieldingly engage the wedging surface of the slide and the bottom of the slideway, and manually operable means for shifting the roller out of coöperative relation with said wedging surface and said slideway.

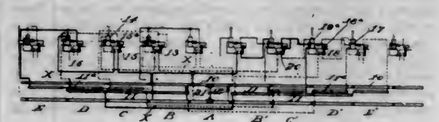
3. In combination with a tray provided with a central bottom slideway, a follower equipped with a slide member adapted to run in said slideway and formed with an inclined wedging surface, a spring-pressed roller arranged to normally yieldingly engage the wedging surface of the slide and the bottom of the slideway, and a pair of manually operable spring-pressed pivoted rods equipped with cams arranged to engage said roller and shift it out of cooperative relation with said wedging surface and said slideway.

4. In combination with a tray provided with a central bottom slideway having a bottom and side faces and overhanging retaining flanges, a follower including a sliding member formed with downwardly turned flanges, said flanges being formed with opposite recesses having wedging faces, and a roller extending between the side faces of the slideway and arranged to coöperate with the wedging faces of the flange recesses and the bottom of the slideway.

5. In combination with a tray provided with a central bottom slideway having a bottom and side faces and overhanging retaining flanges, a follower including a sliding member formed with downwardly turned flanges, said flanges being formed with opposite recesses having wedging faces, a spring-pressed roller extending between the side faces of the slideway and arranged to yieldingly engage the wedging faces of the flange recesses and the bottom of the slideway, and manually operable means for disengaging the roller.

[Claims 6 to 9 not printed in the Gazette.]

1,226,792. TRAIN-CONTROL SYSTEM. ALFRED MINNICK, Newark, N. J. Filed Oct. 10, 1916. Serial No. 124,821. (Cl. 246—26.)



1. A train signal and control system having a track-circuit adapted to be grounded by rolling stock and having included therein stationary track magnets in series extending substantially throughout a different block from that in which the ground may be effected, in combination with a traveling train-carried armature disposed in the field of said magnets.

2. A train signal and control system having a normally-closed track-circuit adapted to be grounded by rolling stock and having included therein stationary track magnets arranged in series extending substantially throughout one block, and track rails in another block, in combination with a traveling train-carried armature disposed in the field of said magnets.

3. A train signal and control system having a track-circuit adapted to be grounded by rolling stock, and having included therein stationary track magnets in series in a different block from that in which the ground may be effected, in combination with a traveling train-carried armature disposed continuously in the field of one or more of said magnets.

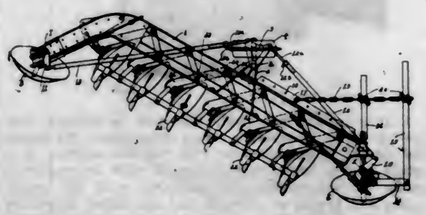
4. A train signal and control system having a track-circuit adapted to be grounded by rolling stock, and having included therein stationary track magnets arranged in parallel series in successive blocks separated from that in which the ground may be effected, in combination with traveling train-carried armatures disposed in the fields respectively of said series of magnets.

5. A train signal and control system having a track-circuit adapted to be grounded by rolling stock, and having included therein stationary track magnets arranged in series in a different block from that in which the ground may be effected, in combination with a traveling train-carried armature disposed in the field of said magnets, and of a length at least equal to the interval between the fields of adjacent magnets.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,793. DISK PLOW. JOHN W. MORGAN, Marysville, Cal. Filed Apr. 10, 1916. Serial No. 90,104. (Cl. 97—74.)



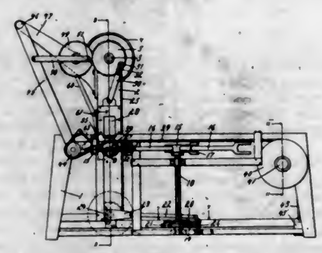
1. A plow comprising a supporting frame, plowing devices carried by the frame, a draw bar on the frame, a steering strut fixed to the front of the frame at right angles to the direction of the movement of the plow, a flexible draft member connected with the draw bar and to the steering strut, furrow wheels and a land wheel supporting the frame and arranged for lateral turning movement and connected together in such a manner as to cause them to turn as a unit, a steering arm fixed to the foremost wheel spindle and a steering rod connected with the steering arm and normally extending parallel to the steering strut, the draft member being secured to the steering arm.

2. A plow comprising a supporting frame, plowing devices carried by the frame, a draw bar fixed to the frame at an acute angle to the direction of the movement of the plow, a steering strut fixed to the front end of the frame at right angles to the direction of the movement of the plow, a flexible draft member adjustably connected to the draw bar and the steering strut whereby the point of drag of the plow may be altered, furrow wheels and a land wheel supporting the frame and arranged for lateral turning movement and connected together in such a manner as to cause them to turn as a unit, a steering arm fixed to the foremost wheel spindle and a steering rod connected with the steering arm and extending parallel to the steering strut, the draft member being adjustably secured to the steering arm.



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1,226,794. BAG-TYING MACHINE. LEWIS D. NELSON, Union City, Mich. Filed June 24, 1916. Serial No. 105,615. (Cl. 140—93.)



2. In a bag tying machine, the combination of a frame, a driving shaft, spaced bag and wire guides, a holder disposed at the rear of and in a speced relation to said guides, means for forcing the tops of bags into the bights of the wires and with the wires into the holder, means for actuating said forcing means with a step-by-step movement, a wire twister having spaced wire-engaging slots therein, a twister carriage mounted to reciprocate between said guides and holder, and means for actuating said carriage and said twister.

9. In a bag tying machine, the combination of spaced bag and wire guides, a holder disposed at the rear of and in a spaced relation to said guides, a feed reel having arms forked to swing over said guides and holder and adapted to carry the bags into the bights of the wires and with the wires into the holder and to discharge the tied bags from the holder, means for actuating said feed reel with a step-by-step movement, and a wire twister mounted to engage the wires between said holder and guides.

12. In a bag tying machine, the combination of spaced combined bag and wire guides, a holder disposed at the rear of and in a spaced relation to said guides, means for forcing the tops of bags into the bights of the wires and with the wires into the holder, means for actuating said forcing means with a step-by-step movement, and a wire twister adapted to engage and twist the wires between said guides and holder.

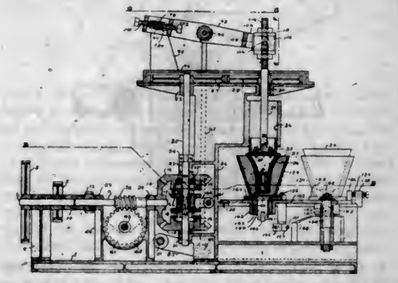
15. In a bag tying machine, the combination of spaced wire guides forming guides for the top of a bag, a wire twister having spaced wire-engaging slots therein, a reciprocating twister carriage, means for actuating said twister, means for actuating said carriage permitting it to rest during the actuation of the twister, and means for severing the wires between the twists formed therein.

21. In a bag tying machine, the combination of a frame, a wire twister, a sprocket on said twister, means for actuating said twister comprising a sprocket chain coacting with said twister sprocket, an oscillating arm, a sprocket carried by said arm, said chain being passed over said sprocket and connected to said frame, means for actuating said arm, and means for severing the wire between the twists.

[Claims 1, 3 to 8, 10, 11, 13, 14, and 16 to 20 not printed in the Gazette.]

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1,226,795. INSULATOR-PRESS. WILLIAM NEWBY, Youngstown, Ohio, assignor to William I. Lourie, Youngstown, Ohio. Filed Mar. 25, 1913. Serial No. 756,699. (Cl. 25—3.)



1. In an insulator press, the combination of a supporting base, a mold table thereon provided with a mold, a vertically movable rotatable former adapted to coöperate with said mold, means for lowering and raising the former, and means embodying gearing and cam mechanism for rotating it at varying speeds.

2. In an insulator press, the combination of a supporting base, a mold table thereon provided with a mold, a vertically movable rotatable former adapted to coöperate with said mold, means for lowering and raising the former, and means embodying gearing and cam mechanism for rotating the former at a diminishing speed on lowering and at an increasing speed on raising.

3. In an insulator press, the combination of a supporting base, a mold table thereon provided with a mold, a vertically movable rotatable former adapted to coöperate with said mold, means for lowering and raising the former embodying screw mechanism for lowering and raising the former within the mold at slow speed and cam-actuated lever mechanism for lowering and raising it at an increased speed into and out of the mold, and means for rotating the former.

4. In an insulator press, the combination of a supporting base, a mold table thereon provided with a mold, a vertically movable rotatable former adapted to coöperate with said mold, means for lowering and raising the former embodying screw mechanism for lowering and raising the former within the mold at slow speed and cam-actuated lever mechanism for lowering and raising it at an increased speed into and out of the mold, means for varying the leverage of said lever mechanism, and means for rotating the former.

5. In an insulator press, the combination of a supporting base, a mold table thereon provided with a mold, a vertically movable rotatable former adapted to coöperate with said mold, means embodying cam mechanism for lowering the former at a maximum speed into the former and for decreasing its speed within the former, means for reversing the movement of the former on withdrawal and for slowly raising the former within the mold and for increasing its speed of removal therefrom, and means for rotating the former.

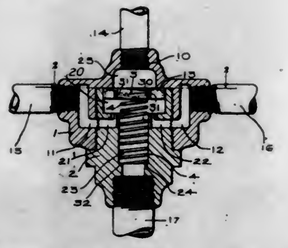
[Claims 6 to 14 not printed in the Gazette.]

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1,226,796. AUTOMATIC DRAIN-VALVE. CHARLES W. NEWCOMBE, Tacoma, Wash. Filed July 10, 1916. Serial No. 108,523. (Cl. 137—103.)

1. In a drain valve, in combination, an outer casing member having a high pressure port in its head and low

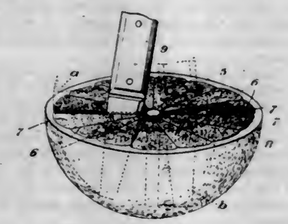
pressure port in its sides, a plug or closing inner member having a piston chamber recessed into its inner end and a discharge port extending from said piston chamber to the outer end of the plug, and also having low pressure ports extending from the bottom face of said piston chamber to connections with the low pressure ports of the casing, a piston in said chamber having by-pass ports extending across its periphery from face to face and extending thence toward the center of its face which is toward the high pressure port, and a spring acting to force the piston toward the high pressure port.



2. In a drain valve, in combination, an outer casing cylindrically bored from one end, and having a high pressure port in its head and low pressure ports at its sides, an inner member fitting the bore in the casing and having its inner end bored to form a piston-receiving chamber and having a discharge port extending from the bottom of said chamber to its outer end and low pressure ports extending from the bottom of said chamber and communicating with the low pressure ports in the casing, a piston valve fitting said chamber and having by-press channels in its periphery extending from face to face and communicating channels in high pressure face extending toward the center, and a spring seated in the discharge port and acting to hold the piston away from the bottom of the chamber.

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1,226,797. FRUIT-KNIFE. RUTLEDGE H. NEWMAN, Chicago, Ill. Filed Mar. 7, 1917. Serial No. 152,975. (Cl. 146—7.)



1. A fruit knife consisting of two substantially parallel blades having an intervening space slightly greater than the thickness of a grape fruit partition and connected at their outer ends to form a cutting element for separating the partition from the adjacent fruit cells and from the rind.

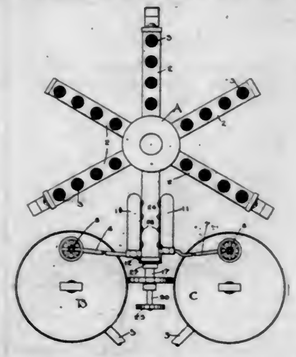
2. A fruit knife consisting of two substantially parallel blades having an intervening space slightly greater than the thickness of a grape fruit partition and a third blade at the outer ends of said pair of blades whereby the blades form a cutting element for separating the partition from the adjacent fruit cells and from the rind, the cutting edge of the third blade being disposed behind the cutting edges of the first mentioned blades.

3. A fruit knife consisting of two substantially parallel blades having a space slightly greater than the thickness of a grape fruit partition intervening between the blades for separating the partition from the adjacent fruit cells, and a third blade disposed at the outer ends of the said pair of blades substantially at right angles to the blades and projecting outwardly away from the blades for detaching the core of the fruit from the rind.

4. A fruit knife consisting of two substantially parallel blades having an intervening space slightly greater than the thickness of a grape fruit partition for separating the partition from the adjacent fruit cells, and a third blade at the outer ends of said pair of blades for separating the partition from the rind.

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1,226,798. COMBINED GENERATOR AND BURNER. MAGNUS NORMAN, St. Paul, Minn. Filed Dec. 16, 1913. Serial No. 807,042. (Cl. 158—56.)



1. An oil burner comprising oil and water reservoirs, conduits connected thereto, retorts forming parts of said conduits, a valve casing connected to the oil conduit, a tubular valve within the casing having communication with the water conduit, a controlling valve within the tubular valve, a burner proper, a mixing chamber connecting said valve casing and burner proper, and sub-flame burners connected to said burner proper for heating said retorts.

2. An oil burner comprising oil and water reservoirs, a pair of retorts, conduits separately connecting said reservoirs with said retorts, a mixing conduit or pipe, conduits connecting said retorts with said mixing conduit, a main burner chamber, said mixing conduit being formed with a jet opening directed into said burner chamber, valve mechanism inclosed within said mixing conduit for regulating the passage of gas and water vapor therethrough, and sub-flame burners fed from said main burner chamber and arranged in position to heat said retorts.

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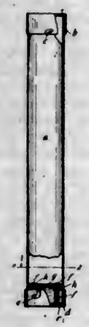
1,226,799. SANITARY TOOTH-BRUSH HOLDER. HAROLD G. OLENA, Brooklyn, N. Y. Filed July 19, 1916. Serial No. 110,246. (Cl. 248—63.)

1. A sanitary brush holder comprising a tubular container closed at the bottom end, means adapted to cause a spray of liquid contained in the container and of substantially the same cross-section as that of the container to be ejected into the body of the latter, said means including a transversely arranged perforated depressible member, and means normally supporting said member at the top of the liquid contained in the bottom of the container.

2. A sanitary brush holder comprising a tubular container closed at the bottom end, a plate made with a plurality of perforations, yielding means depressibly supporting such plate transversely in and spaced from the bottom end of the container, whereby a spray of liquid contained in the container may be caused to be projected through said plate into the body of the latter by pushing the brush against said plate.



3. In an article of the character described, the combination of a tubular container, a removable closure for the bottom end of said container, said closure adapted for holding liquid, means for securing said closure in place, and a depressible spring-seated perforated plate in said bottom closure.

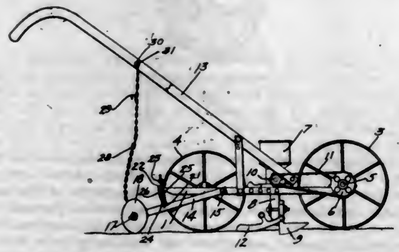


4. In an article of the character described, the combination of a tubular container, a cap for the upper end thereof, a cup-like closure removably inserted in the bottom end of said container, means for securing said closure in place, and a depressible spring-seated perforated plate in said bottom closure.

5. A sanitary brush holder comprising a tubular container closed at the bottom end, means adapted to cause a spray of liquid contained in the container and of substantially the same cross section as that of the container to be ejected into the body of the latter, said means including a transversely arranged, perforated depressible member, means normally supporting said member at the top of the liquid contained in the bottom of the container, and means for guiding the movement of said depressible member.

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1,226,800. GARDEN-SEEDER. FLETCHER OLSON, Robbinsdale, Minn. Filed Jan. 13, 1915. Serial No. 1,941. (Cl. 111—32.)

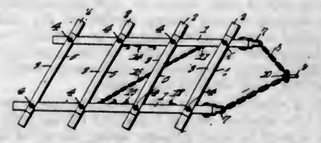


1. In a seeding machine, the combination with a furrow former, of a seeding device delivering at the rear of said furrow former, a covering device working at the rear of said seeding device, a packing wheel working at the rear of said covering device, and an auxiliary covering device working directly at the rear of said wheel and serving to deposit a loose ridge of dirt on top of the packed surface formed by the said wheel.

2. In a seeding machine, the combination with two wheels located, one ahead of the other, of a furrow forming shoe immediately at the rear of said front wheel, a seeding device delivering at the rear of said shoe, a covering device at the rear of said seeding device but in front of the rear wheel, and an auxiliary covering device working immediately at the rear of said rear wheel and serving to deposit a loose ridge of dirt on top of the packed surface formed by the said rear wheel.

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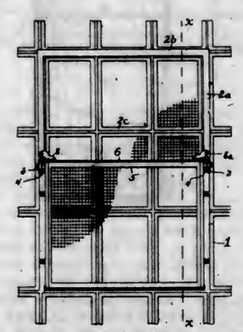
1,226,801. ROAD-DRAG. JOSEPH S. OLSON, Henriette, Minn. Filed Nov. 3, 1916. Serial No. 129,368. (Cl. 37—5.)



A road drag comprising parallel longitudinal sills; transverse scrapers pivoted to the sills; holding elements carried by the sills and spaced apart longitudinally of the sills; and a diagonal tension element of fixed length having its extreme ends engaged with certain of the holding elements of the respective sills, both ends of the tension element being shiftable from one sill to the other to change the direction of lateral discharge of the scrapers, and one end of the flexible element being shiftable longitudinally of either sill to vary the angle between the scrapers and the draft line.

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1,226,802. WINDOW-SCREEN. JOHN E. ORR, Portland, Me., assignor to The E. T. Burrowes Company, Portland, Me., a Corporation of Maine. Filed Mar. 30, 1914. Serial No. 828,168. (Cl. 156—14.)



1. In a window of the character described, the combination of a window casing, a pivoted tilting sash, a lower screen secured to said window casing inside of said sash and below the pivoting points thereof, a filling strip secured to the inside of the sash and making a close joint with the top of said screen, a vertically movable upper screen secured to said casing outside of the sash and a filling strip secured to the outside of said sash and making a close joint with the lower edge of the upper screen.

2. In a window of the character described the combination of a window casing, a pivoted tilting sash, a lower screen secured to said window casing inside of said sash and below the pivoting points thereof, a filling strip secured to the inside of the sash substantially in line with the pivoting points and making a close joint with the top of the said screen, a vertically movable upper screen secured to the casing outside of the sash and a filling strip secured to the outside of the sash and making a close joint with the lower edge of the upper screen.

3. In a window of the character described, the combination of a window casing, a pivoted tilting sash, a lower screen secured to said window casing inside of said sash and below the pivoting points thereof, a filling strip secured to the inside of the sash substantially in line with

the pivoting points and making a close joint with the top of the said screen said filling strip having an angular recess for embracing the upper edge of said screen.

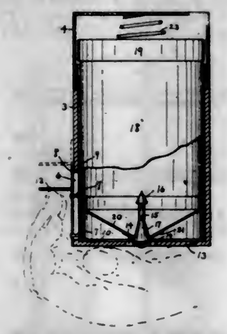
4. In a window of the character described, the combination of a window casing, a pivoted tilting sash, a lower screen secured to said window casing inside of said sash and below the pivoting points thereof, a filling strip secured to the inside of the sash and making a close joint with the top of said screen, a vertically movable upper screen secured to said casing outside of the sash and a filling strip secured to the outside of said sash making a close joint with the lower edge of the upper screen, the last named filling strip having an angular recess for embracing the lower edge of the screen.

5. In a window of the character described, the combination of a window casing, a pivoted tilting sash, a lower screen secured to said window casing inside of said sash and below the pivoting points thereof, a filling strip secured to the inside of the sash and making a close joint with the top of said screen, a vertically movable upper screen secured to said casing outside of the sash, a filling strip secured to the outside of said sash and making a close joint with the lower edge of the upper screen, and resilient means for holding the upper screen in contact with the casing and the filling piece.

[Claims 6 to 20 not printed in the Gazette.]

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1,226,803. SOAP-POWDER DISPENSER. FRANCIS C. OSBORN, Detroit, Mich. Filed Mar. 1, 1912. Serial No. 680,842. (Cl. 221—62.)



1. In a dispenser, a receptacle having a discharge opening in its bottom and also having an opening in its upper end, a container mounted therein having a discharge opening in its bottom, said receptacle including a closure arranged to normally close the last mentioned discharge opening, manually operable means for elevating the container to a position in which the closure no longer closes the discharge opening in the container whereupon the contents of the latter are discharged through the opening in the bottom of the receptacle, the container being freely removable through the upper end of the receptacle without interference with the closure.

2. In a dispenser, the combination of a cylindrical receptacle having a bottom, a stud projecting upward from the center of the bottom and having a pointed end and an enlarged portion next to the bottom, a container within the receptacle and having an orifice in its lower head normally closed by the enlarged portion of the stud, said bottom of the receptacle having an opening adjacent said stud, and manually operable means for raising said container to withdraw the stud from the orifice and permit the escape of the contents of the container through the orifice and the opening in the bottom of the receptacle.

3. As a new article of manufacture, a container for powdered substances comprising a cylindrical body and end closures, one of said end closures sloping outwardly to a discharge opening, an easily perforated membrane closing said opening, a dispensing receptacle adapted to secure said container and dispense its contents and having means extending into said discharge opening to close the same, and manually actuated means for simultaneously establishing a free passage through the opening and causing the discharge of the contents.

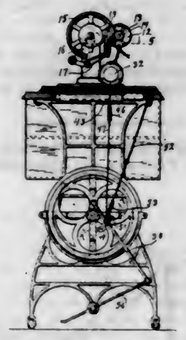
4. In a dispenser, the combination of a receptacle having a bottom, a stud projecting upward from the bottom and having an enlarged end and an enlarged portion next to the bottom, a container within the receptacle and having an orifice in its lower head normally closed by the enlarged portion of the stud that is next to the bottom, said bottom of the receptacle having an opening adjacent said stud, and manually operable means for moving the container in respect to the stud to withdraw the stud from the orifice and permit the escape of the contents of the container through the orifice and the opening in the bottom of the receptacle.

5. A dispensing apparatus comprising a receptacle having an opening in its lower portion, a stud carried by and projecting into the receptacle, a support in the receptacle and a package thereon, said package being arranged to be pierced by said stud, said support and said receptacle constituting members, and manually operable means for imparting movement to one of the members in respect to the other to withdraw the stud from the package and allow the contents of the latter to be discharged through the hole therein and through the opening in the receptacle.

[Claims 6 to 9 not printed in the Gazette.]

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1,226,804. DRIVING MECHANISM FOR TREADLE-OPERATED MACHINES. FREDERICK J. OBITS, Racine, Wis. Filed Jan. 8, 1915. Serial No. 1,078. (Cl. 172—179.)



1. The combination, with a machine having a wheel to be driven, of an electric motor including a frame and a driving wheel, a support secured to the frame of the machine and having an upstanding projection thereon, a sleeve on the motor-frame surrounding said projection to swingingly mount said motor on said support to bring said drive wheel into driving engagement wth said driven wheel, and a spring connected to said sleeve and to said support to yieldingly maintain said wheels in driving relation.

2. The combination, with a machine having a wheel to be driven, of a support secured to the frame of the machine, an electric motor provided with a drive wheel and mounted on said support to move in a substantially horizontal plane to bring said drive wheel into frictional driving engagement with said driven wheel, and a spring secured to said motor and adjustably secured to said support for yieldingly maintaining said wheels in driving relation.

3. The combination, with a machine having a wheel to be driven, of a support secured to the frame of the machine, an electric motor provided with a drive wheel and swingingly mounted on said support to bring said drive wheel into frictional engagement with said driven wheel, a spring for yieldingly maintaining said wheels in driving relation, and means on said support for securing said spring in different positions of adjustment.

4. The combination, with a machine having a wheel to be driven, of a support secured to the machine, an electric motor provided with a drive wheel and revolubly mounted on said support to bring said drive wheel into frictional engagement with said driven wheel, and a spring secured at one end to the motor for yieldingly maintaining said wheels in driving relation, said support having a plurality of locking recesses therein, the other end of said spring being adapted to be held in any of said locking recesses.

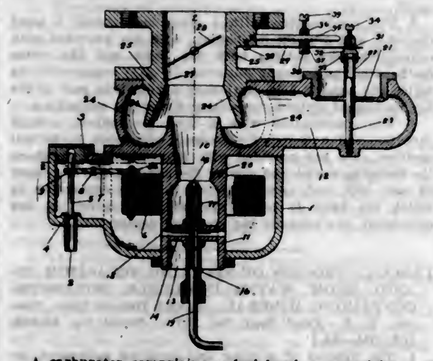
5. The combination, with a machine having a wheel to be driven, of a support, means comprising a band for removably clamping said support to the machine, an electric motor swingingly mounted on said support and provided with a drive wheel for frictional engagement with said driven wheel, and means for yieldingly maintaining said wheels in driving relation.

[Claims 6 and 7 not printed in the Gazette.]



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1,226,805. CARBURETER. HARRY R. PATTERSON, Columbus, Ohio, assignor of one-half to B. Wycliffe Twyman, Columbus, Ohio. Filed Mar. 12, 1914. Serial No. 824,178. (Cl. 261—63.)



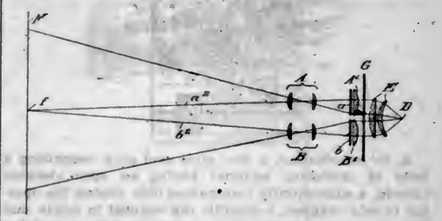
A carbureter comprising a fuel bowl, a vaporizing unit having a primary air inlet, a spray nozzle structure in said unit and in communication with said bowl, a venturi in said unit encircling said structure, an auxiliary air intake valve, an air chamber leading from said valve and formed in said unit concentric with the upper open end of said venturi, a second venturi in said unit whose throat portion is substantially level with the top wall of said concentric air chamber, and a downwardly and outwardly flaring apron forming the lower end of said second named venturi and extending downwardly into said chamber and below the top edge of said first named venturi in spaced relation therewith.

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1,226,806. SCENE-SHIFTING DEVICE FOR PROJECTION APPARATUS. WILLIAM L. PATTERSON, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 1, 1913. Serial No. 782,400. (Cl. 88—26.)

1. In a scene shifting device for projection apparatus, the combination with a source of parallel light ray illumination, of two separate systems of projection lenses arranged together as a unit, said unit and source of illumination being movable relatively to each other to illuminate one or the other of the separate lens systems, said parts being disposed to illuminate areas of both projection systems during said movement.

18. In a scene shifter for projection apparatus, the combination with an illuminating system, and a projection system comprising two adjacent and substantially parallel projection devices, of means for mounting said

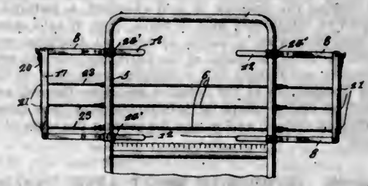


systems to permit shifting thereof transversely of the optical axis, said systems being so disposed that complementary areas of the fields of the two projection devices are illuminated during the shifting movement.

[Claims 2 to 12 and 14 not printed in the Gazette.]

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1,226,807. BEDCLOTHES - CLAMP. WILLIAM J. PENDRY, Patterson, Cal. Filed Jan. 21, 1915. Serial No. 3,570. (Cl. 5—27.)



1. A bed clothes clamp including frames engaged with the head and foot of the bed and equipped with means to independently engage each piece of bed clothes for holding the latter taut in spaced relation, said frames being foldable to snugly engage the bed clothes.

2. A bed clothes clamp including frames to engage a permanent part of the bed and extending laterally therebeyond, means carried by the laterally extending portions of said frames and engaged with the bed clothes, to hold the latter from displacement, said frames being collapsible to snugly engage the bed clothes, and said means being flexible to hold the lateral margins of the bed clothes in parallelism with the opposite sides of the bed.

3. A bed clothes clamp including frames detachably mounted upon a permanent part of the bed, parts thereof being laterally adjustable to engage bed clothes of different sizes, flexible straps carried by said frames and engaged with the bed clothes to hold the latter from displacement, the laterally movable portions of said frames being collapsible to snugly engage the bed clothes.

4. A bed clothes clamp including a plurality of frames for engagement with the head and foot of the bedstead and being vertically and laterally adjustable thereon, clamp members detachably associated with said frames for holding the various pieces of covering in spaced relation to permit a circulation of air therebetween, said frames being partially collapsible to permit snug engagement of the various pieces of bed covering, at times.

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1,226,808. SEALABLE FUSE-PLUG. CLARENCE D. PLATT, Bridgeport, Conn. Filed Feb. 29, 1916. Serial No. 81,245. (Cl. 175—277.)

1. A fuse plug of the character described comprising, in combination with a body of insulating material having an open chamber therein, a substantially transparent disk closing the opening to said chamber, and a metallic cap adapted to retain said disk in place, said cap being provided with an integral bridging strap struck out from the metal of the outer face thereof, whereby an eyelet is

formed for the reception and retention of a sealing strand of flexible material.

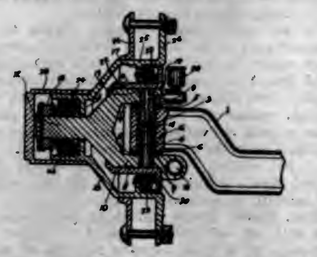


2. In combination, a fuse plug, said plug comprising a body of insulating material having an open chamber therein, a substantially transparent disk closing the opening to said chamber, a metallic cap adapted to retain said disk in place, said cap being provided with a bridging strap struck out from the metal of the outer face thereof whereby an eyelet is formed, a strand of flexible material passing through said eyelet and thus engaging said cap, another body through which said strand is directed to engage the same, and means for sealing the ends of said strand.

3. In combination, a plurality of fuse plugs, each plug comprising a chambered body of insulating material having an open chamber therein, a substantially transparent disk closing the opening to said chamber, a metallic cap adapted to retain said disk in place, each of said caps being provided with a series of integral bridging straps struck out from the metal of the outer face thereof whereby eyelets are formed and contiguous caps may be interlaced irrespective of the rotative positions thereof, and a strand of flexible material interlacing said caps through contiguous eyelets, and means for sealing the ends of said strand.

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1,226,809. AUTOMOBILE FRONT AXLE. SAMUEL R. RAMSAY, New Westminster, British Columbia, Canada, assignor of one-eighth to Leonard Wilson, New Westminster, British Columbia, Canada. Filed July 28, 1916. Serial No. 111,903. (Cl. 21—142.)



The combination with an axle having a vertical opening near its outer end, of a yoke member mounted on said axle to turn about a vertical axis, said yoke having openings at diametrically opposite points concentric with the axle opening and with the axis about which it turns, a plain pin disposed in said openings, said pin being fixed in the yoke openings and rotatable in the axle opening, and a tight fitting sleeve mounted on the periphery of the said yoke member and frictionally held thereon, said sleeve extending the entire length of the peripheral portion of the yoke member and being flared outwardly at its inner end to form a flange and flared inwardly at its outer end to bear on the end of the yoke member.

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1,226,810. CLOCK. CASPER L. REDFIELD and TORRY ROSS, Chicago, Ill. Filed Apr. 30, 1914. Serial No. 835,364. (Cl. 58—16.)

1. In a clock mechanism, a key for winding and setting the mechanism, a bell and hammer, a cam secured to the key and serving to raise the hammer from the bell, and a slipping connection between the key and the mechanism so arranged that the first part of a manual movement of the key serves to raise the hammer and further movement of the key serves to wind and set the mechanism.



2. In a clock mechanism, a central spindle, a key for turning the spindle, said key having a slipping connection so arranged that the key may have a small movement independent of the spindle, a motor spring connected to the key and operating through the slipping connection to drive the clock mechanism, a strike mechanism, means by which the clock mechanism is held stationary during the initial part of the key movement and is set for a desired period of time during the final part of the key movement, and connections for setting the strike mechanism during the initial part of the key movement.

3. The combination with a clock mechanism, a hand therefor, and a strike mechanism, of a key provided with connections for setting both the hand and the strike mechanism, and means inserted in said connection by which the hand is held stationary during that part of the key movement utilized for setting the strike mechanism.

4. The combination with a clock mechanism, a hand therefor, and a device for stopping the clock at normal position, of a key provided with connections for releasing the stopping device and setting the hand by the movement of said key, and means inserted in said connection by which the hand is held stationary until after the key movement has released the stopping device.

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1,226,811. PROCESS OF SECURING POTASSIUM CYANID FROM WATER-INSOLUBLE POTASSIUM-CONTAINING MINERAL. JAMES HENRY REID, Newark, N. J. Filed Sept. 30, 1915. Serial No. 53,302. (Cl. 204—64.)

1. The process of making and securing potassium cyanid from water-insoluble potassium containing mineral, which comprises exposing the potassium containing mineral with a carbid and nitrogen capable of reacting and forming potassium cyanid thereto, and exposing the ingredients to the action of an electric current of sufficient volume and intensity to induce reaction and volatilize the product.

2. The process of making and securing potassium cyanid from water-insoluble potassium containing mineral, which comprises exposing the potassium containing mineral with a carbid and nitrogen capable of reacting and forming potassium cyanid, to the action of an electric current of sufficient volume and intensity to induce reaction and volatilize the product, and finally collecting the volatilizable potassium compound from the associated gaseous vehicle by electro-condensation.

3. The process of making and securing potassium cyanid from potassium silicate containing mineral, which comprises mixing the potassium silicate containing mineral with a carbid and nitrogen capable of reacting and forming potassium cyanid thereto, and exposing the ingredients to the action of an electric current of sufficient volume and intensity to induce reaction and volatilize the product.

4. The process of making and securing potassium cyanid from potassium silicate containing mineral, which comprises mixing the potassium silicate containing mineral with a carbid and nitrogen capable of reacting and forming potassium cyanid thereto, and exposing the ingredients to the action of an electric current of sufficient volume and intensity to induce reaction and volatilize the product, and finally collecting the volatilizable potassium compound from the associated gaseous vehicle by electro-condensation.

5. The process of making and securing potassium cyanid from feldspar, which comprises mixing the feldspar with a carbid and supplying nitrogen capable of reacting and forming potassium cyanid thereto, and exposing the ingredients to the action of an electric current of sufficient volume and intensity to induce reaction and volatilize the product.

[Claims 6 to 16 not printed in the Gazette.]



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1,226,812. PROCESS OF SECURING WATER-SOLUBLE POTASSIUM COMPOUNDS FROM WATER-INSOLUBLE POTASSIUM-CONTAINING MINERAL. JAMES HENRY REID, Newark, N. J. Filed Sept. 30, 1915. Serial No. 53,303. (Cl. 204—64.)

1. The process of securing water-soluble potassium compounds from water-insoluble potassium containing mineral, which comprises exposing the potassium containing mineral, while associated with a chlorid, capable of reacting and forming volatilizable potassium chlorid, to the internal action of an electric current of sufficient volume and intensity passed therethrough to induce reaction, volatilize, and drive out the product.

2. The process of securing water-soluble potassium compounds from potassium silicate containing mineral, which comprises exposing the potassium silicate containing mineral, while associated with a chlorid capable of reacting and forming volatilizable potassium chlorid, to the internal action of an electric current of sufficient volume and intensity passed therethrough to induce reaction, volatilize, and drive out the product.

3. The process of securing water-soluble potassium compounds from feldspar, which comprises exposing the feldspar, while associated with a chlorid capable of reacting and forming volatilizable potassium chlorid, to the internal action of an electric current of sufficient volume and intensity passed therethrough to induce re-action, volatilize, and drive out the product.

4. The process of securing water-soluble potassium compounds from orthoclase, which comprises exposing the orthoclase, while associated with a chlorid capable of reacting and forming volatilizable potassium chlorid, to the internal action of an electric current of sufficient volume and intensity passed therethrough to induce reaction, volatilize, and drive out the product.

5. The process of securing water-soluble potassium chlorid from water-insoluble potassium containing mineral, which comprises exposing the potassium containing mineral, while associated with a calcium chlorid, to the internal action of an electric current of sufficient volume and intensity passed therethrough to induce reaction, volatilize, and drive out the product.

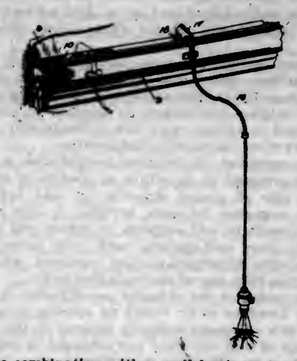
[Claims 6 to 10 not printed in the Gazette.]

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1,226,813. ELECTRIC-WIRING CONNECTION. HAROLD ROWNTREE, Kenilworth, Ill. Filed Dec. 3, 1914. Serial No. 875,280. (Cl. 247—4.)

1. The combination with a wall having a molding or bead, and wires having switches located at short intervals apart, said wires and switches being positioned behind said molding or bead to be concealed from view thereby, of a readily removable connection projecting over said molding or bead and downwardly therefrom, and having terminals to coöperate with said switches and movable into coöperative relation thereto.

2. The combination with a molding adapted to be attached to a wall, the upper edge of the molding being offset from the wall to form a concealing space therebetween, and switches located within said concealing space, of a movable connection to engage over the upper edge of the molding and to bear against the outer surface thereof and having coöperating terminals for insertion in any one of said switches.



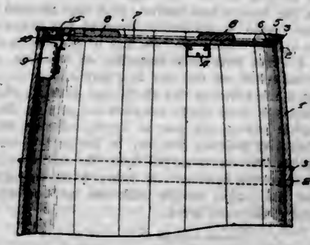
3. The combination with a wall having a bead or molding, of conductor wires positioned behind said bead or molding and having switches at short intervals apart, said molding serving to completely conceal said wires and switches from view, and a connection removably engaging over the upper edge of said molding or bead and bearing against the outer surface thereof and having terminals to coöperatively engage in any of said switches.

4. The combination with a wall having a bead or molding, of conductors having switch sockets spaced at short intervals apart, said conductors and sockets located behind and concealed from view by said bead or molding, and a movable bracket formed with a seat to removably engage over said bead or molding, to be supported by the outer face thereof and to project downwardly therefrom, and having a plug terminal to coöperate with any of said sockets to complete circuit connection therebetween.

5. The combination with a molding adapted to be applied to a wall, and having its upper edge off-set from the wall to form a space between them, a switch located in said space and concealed from view by the off-set upper edge of the molding, and a ready removable terminal connection having means to engage over and to be supported by the outer surface of the molding, said terminal connection extending into coöperation with said switch.

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1,226,814. SHIPPING-BARREL. WILLIAM J. RUFF, Quincy, Ill. Filed Mar. 8, 1916. Serial No. 82,809. (Cl. 217—76.)



1. In combination, a barrel having one end thereof open, a closure for said barrel of a size to pass freely into and out of the opening in the end thereof while said opening is maintained at its normal contracted size, and means permanently secured to said barrel for retaining said closure in position to close said opening, said means being operable to permit removal of said closure while remaining attached to said barrel.

2. In combination, a barrel having one end thereof open, a closure for said barrel of a size to pass freely into

and out of position to close the opening in the end thereof while said opening is maintained at its normal contracted size, means for holding said closure in position to close the opening in the end of said barrel, and means for automatically locking said closure when moved into closed position.

3. In combination, a barrel having one end thereof open, a unitary closure for said opening of a size and shape to pass freely into and out of said opening, supports for holding said closure in position to close said opening, and a spring catch for automatically locking said closure when moved into said position.

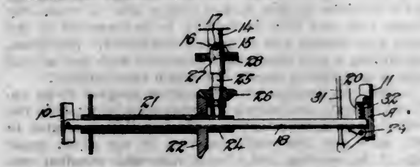
4. In a container for shipping merchandise, a removable cover arranged to fit within an opening in said container, a pair of spaced supports for said cover, and means for engaging the outer surfaces of said cover at points intermediate said supports, to retain said cover in position to close said opening, said cover being free to move inwardly intermediate said supports when said cover is freed from one of said engaging means.

5. In a container for shipping merchandise, a removable cover arranged to fit within an opening in said container, a pair of spaced supports secured to the interior of the walls of said container and arranged to engage the inner surface of said cover to hold said cover in closed position, a retainer for said cover secured to said container and arranged to engage the outer surface of said cover at a point intermediate said supports, and a latch for engaging said cover at a point opposite said retainer to hold said cover in closed position.

[Claims 6 to 17 not printed in the Gazette.]

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1,226,815. PULLING DEVICE FOR MOTOR-VEHICLES. WILLIAM SARTAIN, Haskell, Okla. Filed Apr. 20, 1916. Serial No. 92,571. (Cl. 254—166.)



1. In a pulling device for motor vehicles, the combination with the frame and motor, of a bar pivoted on the frame, a drum rotatable on the bar, a normally inactive clutch device between the drum and motor adapted to connect the drum and motor when the bar is swung in one direction, and means for swinging the bar to throw in the clutch device.

2. In a pulling device for motor vehicles, the combination with the frame and motor, of a bar pivoted to one side of the frame, a bracket secured to the other side of the frame and in which the free end of the bar is slidably engaged, a drum rotatably mounted on the bar, a shaft rotatably mounted on the bar at right angles to the latter, connections between the shaft and drum, a clutch device included in said shaft adapted to connect the latter to the motor when the bar is swung in one direction, means normally holding the bar in position to maintain the clutch device disconnected from the motor, a cam lever pivoted on the bracket and operable to swing the bar to connect the clutch device with the motor, and means for actuating the cam lever.

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1,226,816. PRIMARY BATTERY. CHARLES B. SCHOENMEHL and MARTIN L. MARTUS, Waterbury, Conn., assignors to The Waterbury Battery Company, Waterbury, Conn., a Corporation of Connecticut. Filed May 15, 1916. Serial No. 97,461. (Cl. 204—38.)

1. In an assembled element form of primary battery, the combination with a hanger, of an insulating block carried thereby and having oppositely disposed flange portions, and plate electrodes attached to and supported beneath said flanged portions of the side of the block.

5. In an assembled element form of primary battery, the combination of a hanger, a single suspending rod for the same, flat forms of positive and negative electrodes carried by the hanger, an insulating block arranged between the positive and negative electrodes and having a depending V shaped edge upon its under side.

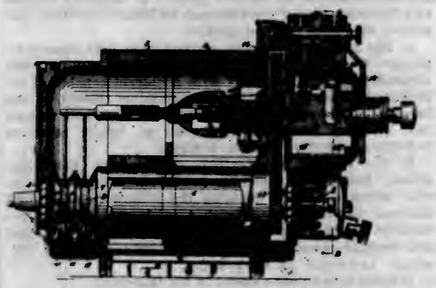


9. An insulating block for assembled primary battery elements, adapted to have electrodes attached thereto and having outwardly extended portions that cover the top edge of the plate electrodes when attached to the opposite side of the block.

[Claims 2 to 4, 6 to 8, and 10 not printed in the Gazette.]

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1,226,817. DISTRIBUTING MECHANISM FOR ELECTRICAL IGNITION SYSTEMS. WOLFGANG E. SCHWARZMANN, Springfield, Mass., assignor to Bosch Magneto Company, New York, N. Y., a Corporation of New York. Filed Feb. 15, 1916. Serial No. 78,489. (Cl. 123—149.)



1. The combination with an internal combustion engine having spark plugs, and a magneto having an autotransformer winding, of distributing mechanism comprising a rotatable main distributer having contact segments electrically connected to individual spark plugs, and an intermediate distributer which is mounted on the rotor of the magneto and which, at each period of ignition, conducts the ignition current from said winding to a single one of said contact segments.

2. The combination with an internal combustion engine having grounded spark plugs, of a magneto having a grounded autotransformer winding, of distributing mechanism comprising a rotatable main distributer having contact segments electrically connected to the insulated electrodes of individual spark plugs, and an intermediate distributer which is mounted on the rotor of the magneto and which, at each period of ignition, conducts ignition current from said winding to a single one of said contact segments.



3. The combination with an internal combustion engine having grounded spark plugs, and a magneto having a secondary winding with one terminal grounded and the other terminal insulated, of distributing mechanism comprising a rotatable main distributer having contact segments electrically connected to the insulated electrodes of individual spark plugs, and an intermediate distributer which is mounted on the rotor of the magneto and which, at each period of ignition, completes the electrical connection from the insulated terminal of said winding to a single one of said contact segments.

4. The combination with an internal combustion engine having spark plugs, and a magneto having an autotransformer winding, of distributing mechanism comprising a rotatable main distributer having contact segments electrically connected to individual spark plugs, and brushes coöperative with the segments, and also comprising an intermediate distributer which is mounted on the rotor of the magneto and which at each period of ignition, conducts the ignition current from said winding to a single one of said brushes.

5. The combination with an internal combustion engine having grounded spark plugs, and a magneto having a secondary winding with one terminal grounded and the other terminal insulated, of distributing mechanism comprising a rotatable main distributer having stationary contact segments electrically connected to the insulated electrodes of individual spark plugs, and rotatable brushes coöperative with the segments, and also comprising an intermediate distributer which is mounted on the rotor of the magneto and which, at each period of ignition, completes the electrical connection from the insulated terminal of said winding to a single one of said brushes.

[Claims 6 to 19 not printed in the Gazette.]

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1,226,818. FLUID-PRESSURE SUCTION APPARATUS. JOHN R. SCHRADER, New York, N. Y., assignor of one-half to Philip Gerst, Buffalo, N. Y. Filed Apr. 17, 1913. Serial No. 761,679. (Cl. 261—76.)



1. A fluid pressure suction apparatus comprising a tubular body-portion having a nozzle extending thereinto and having an air inlet in operative relation to said nozzle, and an air breaker in the path of the water at a point beyond said nozzle comprising a hub portion and a plurality of arms extending from said hub portion to the wall of said body-portion, said air breaker preventing the admission of air above the same.

2. A fluid pressure suction apparatus comprising a tubular body portion having a nozzle threaded into its upper end, a pair of suction tubes having a common inlet and being curved to meet at a common point, said tubes being arranged at an angle to said body portion to permit of attaching said nozzle to a faucet, and a tube connected to said suction tubes at said common point.

3. A fluid pressure suction apparatus comprising a tubular body portion having a nozzle threaded into one end, a circular tubular member connected to said tubular body portion at opposite sides of said nozzle and having an air inlet at a point diametrically opposite said nozzle, and an air breaker in said tubular body portion below said nozzle.

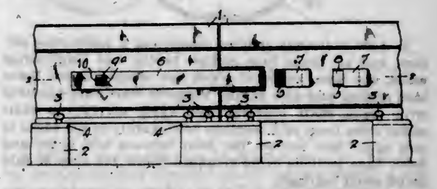
4. A fluid pressure suction apparatus comprising a hollow body portion having a pressure nozzle and a hollow circular member connected to said body portion at opposite sides of said nozzle, said hollow circular member having an inlet at a point diametrically opposite said nozzle and said hollow body portion having a restricted passage adjacent said pressure nozzle through which the fluid from said pressure nozzle is directed, and an air breaker in said body portion below said nozzle.

5. A fluid pressure suction apparatus comprising a hollow body portion having a pressure nozzle entering its upper end and a supply tube connected to the outer end of said pressure nozzle, said supply tube, pressure nozzle and hollow body portion having their axes coincident, and a hollow circular member arranged at an angle to said body portion and having connection therewith at opposite sides of said pressure nozzle, said hollow circular member having an air inlet at a point diametrically opposite said pressure nozzle.

[Claim 6 not printed in the Gazette.]

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1,226,819. RAIL-JOINT. MITCHELL SHARP, Dunmore, W. Va. Filed Jan. 31, 1917. Serial No. 145,664. (Cl. 239—8.)



1. A rail joint including the abutting ends of a pair of rails, said rail ends being provided with slots, a laterally offset extension projecting longitudinally from each rail and fitting against the side of the other rail, an L-shaped lug carried by each extension and interlocking with the slot of the other rail, and locking means for holding the L-shaped lugs in operative position.

2. A rail joint including the abutting ends of a pair of rails, said rails being provided with slots, a laterally offset extension projecting longitudinally from each rail and fitting against the side of the other rail, an L-shaped lug carried by each extension and adapted to be inserted through the longitudinal slot of the other rail and moved longitudinally into an interlocking engagement with one end thereof, and locking blocks inserted in the slots of the rails back of the L-shaped lugs for holding the latter in operative position.

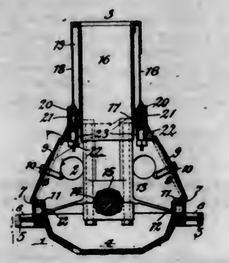
3. A rail joint including the abutting ends of a pair of rails, said rails being provided in the webs thereof with longitudinal slots, a lateral offset extension projecting longitudinally from each rail end and fitting against the side of the other rail, an L-shaped lug carried by each extension and adapted to be inserted through the longitudinal slot of the other rail and moved longitudinally into engagement with one end of the slot, the extension being provided with an opening adjacent the back of the L-shaped lug, locking blocks insertible within the longitudinal slots of the rails back of the L-shaped lugs for holding the latter in operative position, and spring arms carried by the locking blocks and insertible through the openings of the extensions to hold the locking blocks in operative position.

4. A rail joint including the abutting ends of a pair of rails, said rails having longitudinally extending slots in the webs thereof, a laterally offset extension projecting longitudinally from the web of each rail end and arranged in alinement with the slots, L-shaped lugs carried by each extension and arranged to be inserted through the longi-

tudinal slots of the other rail and brought into an interlocking engagement with the ends of the slots by a longitudinal movement of the rail ends, said extensions being provided at points adjacent the back of certain of the L-shaped lugs with openings, locking bolts insertible within certain of the slots back of the L-shaped lugs to hold the latter in operative position, and a pair of spring arms projecting from each of the locking blocks for engagement with the before mentioned openings of the extensions to hold the locking blocks in operative position.

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1,226,820. GAS-ENGINE BODY OR FRAME. ALBERT B. SHULTZ, Buffalo, N. Y. Filed Feb. 26, 1915. Serial No. 10,659. (Cl. 121—105.)

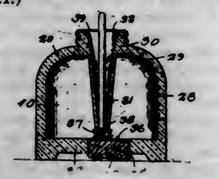


1. A body for gas engines comprising a lower base section, and an upper base section having two longitudinal walls, the lower edges of which are secured to the lower base section and also having supports which are provided with crank shaft bearings and which diverge on their under sides from said bearings downwardly to the edges of said upper base section, the joint between said upper and lower base sections being arranged below the axes of said crank shaft bearings.

2. A crank case, comprising a body portion including sides and webs adjacent the opposite ends of said sides extending substantially the entire height of said sides and having segmental crank shaft bearings formed in their bottom faces, said bottom faces slanting downwardly from said bearings to said sides.

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1,226,821. MUCILAGE-BOTTLE. CHARLES M. SIEVER, Holton, Kans. Filed July 9, 1915. Serial No. 38,915. (Cl. 91—67.1.)

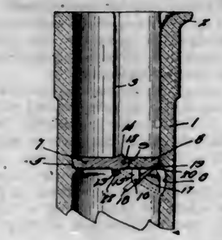


A mucilage well comprising a chambered body having an opening at the top, a well element carried within the body extending downwardly from said opening, said well element stopping short of the bottom of the chamber and being open at the top and bottom, and a resilient element engaged on the lower end of the well forming a virtual continuation thereof yieldably engaged with the bottom of the chamber, and adapted to yield to passage of a brush thereunder.

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1,226,822. NON-REFILLABLE BOTTLE. ADELAIDE C. SMITH, St. Mary's, Ontario, Canada. Filed Sept. 6, 1916. Serial No. 118,775. (Cl. 215—62.)

1. A valve to be inserted in the neck of a bottle comprising, a substantially flat disk member consisting of two complemental sections hingedly connected together, means carried by one of the sections to lock the same in the neck of a bottle and to constantly hold it in a substantially transverse position relative to the passage in the bottle neck, the other section being free to move and to open when the bottle is tilted.

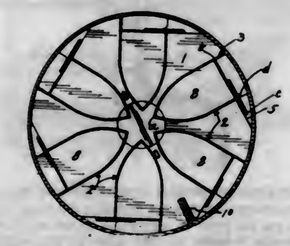


2. A device of the character described including in combination with a bottle neck, a sectional disk-valve to close the passage in the neck, means for anchoring one section stationarily in the neck, the other section being movable to permit of liquid passing thereby when the neck is tilted, and a weight pivoted to the movable section for returning the movable section to a closed position when the neck is placed in a normal position.

3. A device of the character described including in combination with a bottle neck having oppositely arranged grooves therein, and further provided with sockets at the terminals of the grooves, an annular shoulder integral with the neck and arranged slightly above the sockets, of a sectional disk valve, means for anchoring one section of the valve in the neck and on the shoulder, a straight shoulder integral with the upper surface of the stationary section of the valve, the other section being pivoted to the stationary section and movable to engage the shoulder when liquid passes through the neck, and a weight pivoted to the undersurface of the movable section and operable in the recess in the neck for returning the movable section to a closed position when the neck is arranged in a normal position.

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1,226,823. EGG-SHIPPING CASE. JOHN H. SPANGLER, Minneapolis, Minn., assignor of one-half to John A. Nelson, Minneapolis, Minn. Filed May 5, 1916. Serial No. 95,611. (Cl. 217—33.)



1. A shipping case of the kind described, comprising partition plates and trough-forming plates interconnected with the said partition plates and extending outward in different directions to form a plurality of egg receiving troughs divided into compartments by said partitions, the said trough-forming plates having integral outer portions serving as lids to close the troughs.

2. A shipping case of the kind described, comprising partition plates and trough-forming plates interconnected with the said partition plates and extending outward in different directions to form a plurality of egg receiving troughs divided into compartments by said partitions, the said trough-forming plates having integral outer portions serving as lids to close the troughs, and the said lid forming portions having integral folds arranged for interlocking engagement with said partition plates.

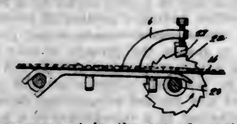
3. A shipping case of the kind described, comprising partition plates and trough-forming plates interconnected with the said partition plates and extending outward in different directions to form a plurality of egg receiving troughs divided into compartments by said partitions, the said trough-forming plates having integral outer portions serving as lids to close the troughs, and the said lid forming portions having over-turned free edge portions, and the said partition having lock slits for receiving the latter to lock said lids.

4. A shipping case of the kind described, comprising partition plates and trough-forming plates interconnected with the said partition plates and extending outward in different directions to form a plurality of egg receiving troughs divided into compartments by said partitions, the said trough-forming plates having integral outer portions serving as lids to close the troughs, and an outer casing inclosing the filler made up of the said partitions and trough-forming plates.

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1,226,824. METHOD AND APPARATUS FOR COATING CHOCOLATES. DALE G. STEELY, Cambridge, Mass. Filed Oct. 30, 1916. Serial No. 128,377. (Cl. 91—3.)



1. That improvement in the art of coating chocolates and other goods, which consists in blowing back onto the chocolates any tails which are formed thereon upon leaving the conveyer.

2. That improvement in the art of coating chocolates and other goods, which consists in blowing back onto the chocolates leaving the conveyer excess portions of coating material thereon.

3. A machine for coating chocolates or other goods, having in combination, a conveyer for the chocolates which have a coating material thereon, and pneumatic means arranged to deliver a current of air against the bottoms of the chocolates, beyond but closely adjacent to the end of the conveyer.

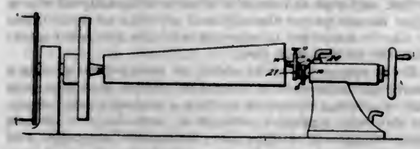
4. A machine for coating chocolates or other goods, having in combination, a conveyer for the chocolates which have a coating material thereon, and pneumatic means arranged to deliver a current of air in an upward direction against the bottoms of the chocolates beyond but closely adjacent to the end of the conveyer.

5. A machine for coating chocolates or other goods, having in combination, a conveyer for the chocolates which have a coating material thereon, and pneumatic means arranged to deliver a current of air against the bottoms of the chocolates at the end of the conveyer to blow back upon the chocolates the excess coating material so that the coated chocolates will be devoid of tails.

[Claims 6 to 15 not printed in the Gazette.]

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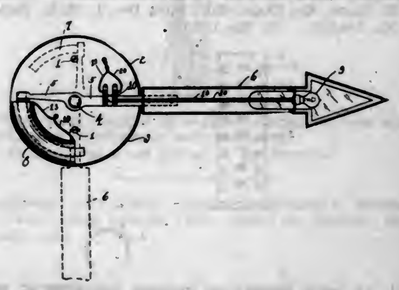
1,226,825. TAPER-CUTTING ATTACHMENT FOR LATHES. HARRY D. STEWART, Gilman, Iowa. Filed May 14, 1915. Serial No. 27,999. (Cl. 82—15.)



In a taper attachment for lathes, embodying a bearing plate-like member formed for clamping onto the tail stock of a lathe, a vertically disposed plate longitudinally slotted and arranged in front of said member and in spaced relation thereto, horizontal bolts connected to the plate and member to support the plate from the member, sleeves on the bolts abutting the plate and member to space same, a threaded shaft mounted for rotation in the slot and having its upper end projecting through the top of the plate and having a head thereon to permit of turning of the shaft, a dead center member having a shank extending through the slot of the plate and having a threaded opening in the shank receiving said shaft, and a nut on the dead center member to clamp against the rear face of the plate to hold the dead center member locked, said connecting bolts between the plate and member being disposed so that the clamping nut of the dead center member may move into and be operated in the space between the plate and member.

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1,226,826. DIRECTION-SIGNAL FOR MOTOR-VEHICLES. KING E. STOKER, Stockton, Cal. Filed June 2, 1916. Serial No. 101,261. (Cl. 177—339.)



A signal mechanism comprising an annular casing, a central transversely disposed pin within the casing, a signal lever turnable on the pin, said lever projecting on each side of the pin, a curved armature on the inner end of the lever, a signal arm on the other end of said lever, the casing being provided with a quarter circular slot in its circumference through which the signal arm projects, the ends of the slot acting as stops to limit the movement of the signal arm in either direction, a curved solenoid adapted when energized to act on said armature to move the signal arm in one direction, such signal arm being adapted to drop in the opposite direction by gravity when the solenoid is deënergized, and means for energizing and deënergizing the solenoid.

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1,226,827. DISLODGING-TOOL. OLOF N. TEVANDER, Chicago, Ill. Filed Apr. 14, 1915. Serial No. 21,394. (Cl. 65—46.)



1. A dislodging tool in the form of a fork having two branches which are oppositely deflected with respect to each other, each branch having a longitudinal cutting edge, these cutting edges being disposed on opposite sides of the tool.

2. A dislodging tool in the form of a fork having two branches which are oppositely deflected with respect to each other, each branch having a longitudinal cutting edge, these cutting edges being disposed on opposite sides

of the tool, one of these branches being in the form of a hook inturned toward the other branch.

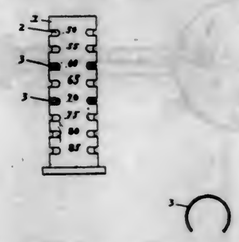
3. A dislodging tool in the form of a fork having two branches which are oppositely deflected with respect to each other, each branch having a longitudinal cutting edge, these cutting edges being disposed on opposite sides of the tool, each of these branches being in the form of a hook inturned toward the other branch.

4. A dislodging tool in the form of a fork having two branches, each branch having a longitudinal cutting edge, these cutting edges being disposed on opposite sides of the tool, one of these branches being in the form of a hook inturned toward the other branch.

5. A dislodging tool in the form of a fork having two branches, each branch having a longitudinal cutting edge, these cutting edges being disposed on opposite sides of the tool, each of these branches being in the form of a hook inturned toward the other branch.

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1,226,828. INDEX FOR PRESSURE-GAGES. GEORGE E. TRAUB, San Diego, Cal. Filed Dec. 1, 1916. Serial No. 134,333. (Cl. 73—111.)

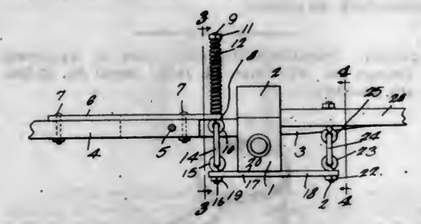


1. An index member for pressure indicators of the class described comprising a tube having graduations thereon and a series of horizontal grooves therein extending from one side of said graduations around said tube to the opposite side of said graduations but not across them; and removable elastic open rings in selected grooves of said series; for the purpose of facilitating the reading of said graduations.

[Claim 2 not printed in the Gazette.]

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1,226,829. WAGON-TONGUE SUPPORT. JAMES W. WADDELL and GEORGE C. MORROW, Clinton, Ark. Filed Dec. 26, 1916. Serial No. 138,841. (Cl. 21—63.)



1. In a device of the class described, an axle; a reach assembled with the axle; a tongue; a pivot element carrying the tongue for vertical swinging movement with respect to the axle; a bar bearing intermediate its ends on the lower edge of the axle; means for pivotally connecting the rear end of the bar with the reach for vertical swinging movement; and means for pivotally connecting the forward end of the bar with the tongue, to the rear of the pivot element.

2. In a device of the class described, an axle; a reach assembled with the axle; a tongue; a pivot element carrying the tongue for vertical swinging movement with respect to the axle; a bar bearing intermediate its ends on the lower edge of the axle; means for pivotally connecting the rear end of the bar with the reach for vertical swinging movement; a spring; means for connecting the spring with the forward end of the bar; and means for connecting the spring with the tongue to the rear of the pivot element, whereby the spring will support the tongue.

3. In a device of the class described, a vehicle frame including an axle; a tongue; a pivot element carrying the tongue for vertical swinging movement with respect to the axle; a bar bearing intermediate its ends on the lower edge of the axle; means for pivotally connecting the forward end of the bar with the tongue, to the rear of the pivot element; and means for pivotally connecting the rear end of the bar with the vehicle frame, to the rear of the axle.

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1,226,830. TURNBUCKLE. EDWIN WALKER, Erie, Pa. Filed May 10, 1916. Serial No. 96,560. (Cl. 85—36.5.)



1. The combination in a turn-buckle of a non-rotatable tubular end portion having a portion of its internal wall provided with raised screw-threads, a rod provided with screw-threads to engage the threads in said tubular end portion, and a guide on the end of said rod adapted to fit and move in the plain interior of said end portion, substantially as and for the purpose set forth.

2. The combination in a turn-buckle of a non-rotatable end portion having a longitudinal opening therethrough, in which there are provided internal screw-threads of less internal diameter than the unthreaded portion of said opening, a rotatable rod having screw-threads adapted to engage said internal threads, and a guide on said rod of a diameter at least equal to the outside diameter of the threads on said rod, substantially as and for the purpose set forth.

3. The combination in a turn-buckle of non-rotatable end portions having longitudinal openings therethrough having in the adjacent ends of said openings internal right and left screw-threads of less inside diameter than the diameter of the unthreaded portions thereof, a rotatable rod provided with right and left screw-threads to engage the threads in said end portions, and means on the ends of said rod to engage the unthreaded internal surfaces of said longitudinal openings to prevent lateral movement of said threaded parts, substantially as set forth.

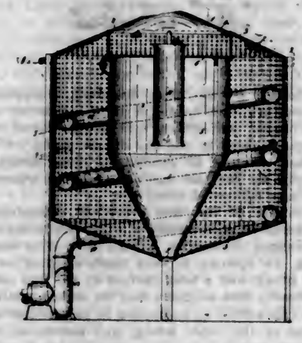
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1,226,831. APPARATUS FOR TREATING COCOA AND OTHER PULVERULENT MATERIAL. JOHN WALKER, Boston, Mass., assignor to Massachusetts Chocolate Company, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 27, 1915. Serial No. 47,594. (Cl. 183—83.)

1. An apparatus of the character specified comprising a centrifugal separator, a pipe of considerable extension and diameter coiled about said separator and connections therewith, and means for inducing a current of air with material therein to be treated to pass through said pipe and afterward develop a cyclonic action within said separator, said pipe and associated parts being adapted whereby as the air passes through said pipe the material therein may be subjected to attritive influence through contact with the wall of said pipe.

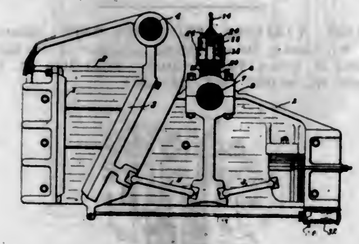
2. An apparatus of the character specified comprising a centrifugal separator, a receptacle outside said separator and connecting therewith to form a pressure relief chamber for said separator between it and the wall of said outer receptacle, a pipe of considerable extension and diameter extending from without said outer receptacle and coiled within said chamber about said separator, said pipe connecting with the separator, and means for inducing a current of air with material therein to be treated to pass through said pipe and afterward develop a cyclonic action within said separator, said pipe and associated parts being adapted whereby as the air passes through said pipe the material therein may be subjected to attritive influence through contact with the wall of said pipe.





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1,226,832. PNEUMATIC PITMAN-BALANCE FOR SWING-JAW ROCK AND ORE CRUSHERS. FRED M. WEBBER, Joplin, Mo. Filed Aug. 9, 1916. Serial No. 113,886. (Cl. 74—71.)



1. The combination with the pitman of a stone or ore crusher, of an air-cylinder, a movable part connected to said cylinder, and a connection between said movable part and said pitman, to support the weight of the latter during its movements.

2. The combination with the pitman of a stone or ore crusher, of a beam supported above said pitman, and an air-cushion connected to said pitman and to said beam, to support the weight of the pitman during movement of the latter.

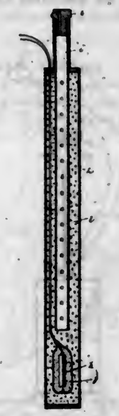
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1,226,833. BLASTING-CARTRIDGE. WILHELM WEBER, Hayingen, Germany. Filed Oct. 1, 1915. Serial No. 53,479. (Cl. 102—6.)

1. A blasting cartridge adapted to be saturated with liquid air and ignited by means of a primer, comprising, in combination, a combustible organic substance, and a mixture of combustible metallic powders disposed separately from said combustible organic substance.

3. A blasting cartridge adapted to be saturated with liquid air and ignited by means of a primer, comprising, in combination, a combustible organic absorbent for liquid air, and a mixture of combustible metallic powders with an organic substance, said mixture being inclosed so as to be separated from said combustible organic absorbent.

5. A blasting cartridge adapted to be saturated with liquid air and ignited by means of a primer, comprising, in combination, a carbonized organic substance adapted to act as an absorbent for liquid air, and a mixture of metallic powders with a carbonized organic substance, said

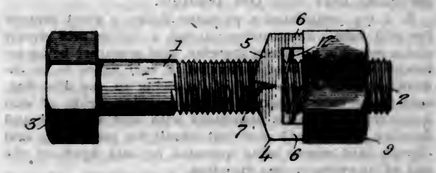


mixture being wrapped up so as to be separated from said first-named carbonized organic substance.

[Claims 2 and 4 not printed in the Gazette.]

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1,226,834. NUT-LOCK. AUGUST J. WESTMAN, Monroe, Wash. Filed Apr. 24, 1916. Serial No. 93,210. (Cl. 151—15.)



1. The combination with a bolt, of a nut for threaded engagement therewith, said nut including a body portion having arms extending therefrom, an inherently resilient locking member arranged between said arms, and a second nut for engagement with said arms, said nut having means to be engaged by the locking member to prevent turning movement of the second nut.

2. The combination with a bolt, of a nut for threaded engagement therewith, said nut having a slot formed therein, arms extending from the nut, a locking member interposed between the arms, means to prevent turning movement of the locking member relatively to the nut, a second nut for engagement with the first nut, means on said second nut to be engaged by the locking member.

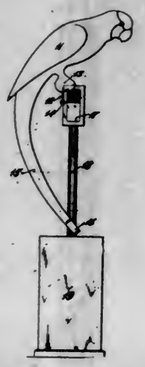
3. The combination with a bolt, of a nut threaded thereon, said nut having a slot formed therein, spaced arms formed on said nut, a locking member arranged between said arms, said locking member being split and provided with straight edges for engagement with the arms, a second nut for engagement with the first nut, ratchet teeth formed on said second nut to be engaged by the locking member, and a tongue on said locking member.

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1,226,835. ELECTRICAL TOY. ALLEN B. WILDER, St. Louis, Mo., assignor to Wilder Patents Company, St. Louis, Mo., a Corporation of Missouri. Filed Oct. 11, 1915. Serial No. 55,274. (Cl. 46—49.)

1. A motor for swinging bodies comprising a pivotal support for the body, a movable armature mounted in the path of movement of said body to be engaged and moved thereby at the end of its swing in one direction, an elec-

tric coil for returning said armature to normal position, and means actuated by the engagement of said body and armature to complete an electrical circuit through said coil.



2. In combination, in a motor for an oscillating body, an electrical circuit, a coil in said circuit, an armature for said coil adapted to be moved in one direction when said coil is energized, said oscillating body being adapted to engage said armature and move it in the direction opposite to that in which said coil is adapted to move it, and means for completing an electrical circuit through said armature and coil upon the engagement of said oscillating body with said armature.

3. A toy comprising a swinging figure, a pivot support for said figure, an electrical circuit, a coil in said circuit and a movable armature therefor, said armature being arranged in the path of movement of said figure to be engaged thereby at the end of its swing in one direction, said figure being returned by the working stroke of said armature, and means associated with said armature and forming part of said electrical circuit for completing said circuit, said means being actuated by said figure at the end of its swing in one direction.

4. A toy comprising a swinging figure, a pivot support for said figure, an electrical circuit, a coil in said circuit and a movable armature therefor, said armature being arranged in the path of movement of said figure to be engaged thereby at the end of its swing in one direction, said figure being returned by the working stroke of said armature, means associated with said armature and forming part of said electrical circuit for completing said circuit, said means being actuated by said figure at the end of its swing in one direction, and means for breaking said circuit when said armature has completed its working stroke.

5. A toy comprising a stand, an electric battery in said stand, a support, a swinging figure pivoted on said support, an electrical device for maintaining the swinging movement of said figure, said device being supplied with electricity from said battery, and means operated by said swinging figure for momentarily closing the circuit to actuate said device at the end of each oscillation of said figure, said means comprising a movable armature comprised in said circuit.

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1,226,836. HAT-PIN. MICHAEL J. WILLIAMS, Buffalo, N. Y. Filed Feb. 15, 1916. Serial No. 78,472. (Cl. 132—25.)

1. An article of the class described comprising correlated members, each of said members having a sinuous prong, said prongs being coextensive, one of said members being turnably related to the other of said members.

2. An article of the class described comprising turnably correlated members, each having a prong consisting of alternately arranged convexities, said prongs being co-extensive.



3. An article of the class described, comprising correlated members, each having a prong consisting of alternately arranged convexities, said prongs being co-extensive, a head secured to one end of one prong, an opening in said head adapted to receive the other prong, and a head carried by the last mentioned prong whereby said members may be turned relatively.

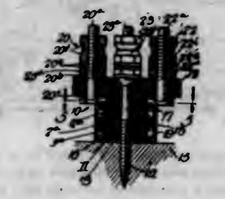
4. An article of the class described, comprising independent members, each having a prong consisting of alternately arranged convexities, a head secured to one end of one prong, an opening in said head, adapted to receive the other prong, and a head carried by the last mentioned prong, whereby said members may be turned relatively, to bring the convexities of one prong in parallelism with the convexities of the other prong, and points on the free ends of said prongs.

5. An article of the class described, comprising independent members, each having a prong consisting of alternately arranged convexities, a head secured to one end of one prong, an opening in said head, adapted to receive the other prong, and a head carried by the last mentioned prong, whereby said members may be turned relatively, to bring the convexities of one prong to oppose the convexities of the other prong to define loops.

[Claim 6 not printed in the Gazette.]

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1,226,837. VARIABLE-RESISTANCE UNIT. BENJAMIN F. WILLISTON, Detroit, Mich., assignor of one-half to Rufus E. Green, Detroit, Mich. Filed May 17, 1916. Serial No. 98,001. (Cl. 219—55.)



1. A resistance unit comprising, a body of insulating material having a core and a head overhanging said core, a plurality of binding posts fixed to said head, and a single length of resistance wire wound upon the core to provide a plurality of coils of different lengths, said wire being looped at intervals about said binding posts to connect each coil to the adjacent binding posts.

2. A resistance unit comprising, a body of insulating material having a core and a head overhanging said core, a plurality of binding posts fixed to said head, a single length of resistance wire wound upon the core to provide a plurality of coils of different lengths, said wire being looped at intervals about said binding posts to connect each coil to the adjacent binding posts, in combination with means for attaching said unit to a support, said means providing for rotative movement of the said unit about the axis of its core.

3. A resistance unit comprising a body of insulating material having a core and a head overhanging said core, said core being provided with spaced radial flanges, a plurality of binding posts fixed to said head, a single length of resistance wire wound upon the core between the said flanges to provide a plurality of coils of different lengths, said wire being looped at intervals about said binding posts to connect each coil to the adjacent binding posts, and an insulating sleeve engaged upon said flanges and inclosing said coils.

4. A resistance unit comprising a body of insulating material having a core and a head overhanging said core, said core being provided with spaced radial flanges, a plurality of binding posts fixed to said head, a single length of resistance wire wound upon the core between the said flanges to provide a plurality of coils of different lengths, said wire being looped at intervals about said binding posts to connect each coil to the adjacent binding posts, and means for attaching said unit to a support, said means providing for rotative movement of the unit about the axis of its core.

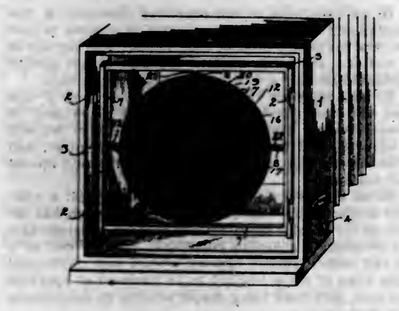
5. A resistance unit comprising a body of insulating material having a core and a head overhanging said core, said core being provided with a radial flange at the bottom and with a similar radial flange spaced somewhat below the head, a plurality of binding posts fixed to said head, a single length of resistance wire wound upon the core between the said flanges to provide a plurality of coils of different lengths, said wire being looped at intervals about said binding posts to connect each coil to the adjacent binding posts, and an insulating sleeve engaged upon said flanges and inclosing said coils.

[Claims 6 not printed in the Gazette.]



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1,226,838. PHOTOGRAPHIC SCREEN. ARTHUR F. WOLBER, Dayton, Ohio. Filed Apr. 18, 1916. Serial No. 91,994. (Cl. 95—36.)



1. In a photographic apparatus, a transparent screen through which a limited area of the plate may be exposed, and a movable carrier for the screen adapted to successively present the screen in registry with different portions of the photographic plate.

2. In a photographic apparatus, a screen of less area than the photographic plate operated upon, a mask for that portion of the plate not covered by the screen, the plate and the mask being relatively movable whereby the screen will be successively presented in registry with those portions of the plate uncovered by the relative movement of the mask and plate.

3. In a photographic apparatus, a screen of less area than the photographic plate operated upon, and a support for said screen, the screen and photographic plate being relatively movable whereby the screen may be successively presented in registry with different portions of the plate, substantially as specified.

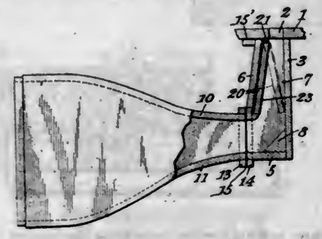
4. In a photographic apparatus, a screen through which photographic exposures are made, and a rotatable support therefor by the rotation of which the screen may be presented in different radial positions in relation with the photographic plate operated upon.

5. In a photographic apparatus, a mask for a photographic plate adapted to expose a limited portion of the plate, a screen attached to the mask through which the unmasked portion of the plate is exposed, the mask with its attached screen and the plate being relatively rotatable in relation one with the other whereby different portions of the plate may be successively exposed through said screen.

[Claims 6 to 14 not printed in Gazette.]

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1,226,839. SOUND-CONVEYER AND TONE-MODULATOR. CLINTON E. WOODS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed July 17, 1915. Serial No. 40,491. (Cl. 181—27.)



1. In a talking-machine, a sound-conveyer having an elongated recess at one side of the passageway therethrough, a flap-valve located normally within said recess and hinged at the end nearer the origin of the sound-waves, and means within control of the operator for moving said valve to close said passageway to any desired extent, the face of said valve lying at all times at an acute angle to the outward path of said sound-waves.

2. A tone-modulator for talking-machines, consisting of the combination of a sound-passage having no opening in the side thereof, and a flat flap-valve located within said sound-passage and pivoted at its inner end so that in every position of adjustment it will lie at an acute angle to the direction of passage of the sound-waves, whereby closing of said valve prevents the passage of said sound-waves into the open air.

3. In a talking machine, the combination of a sound conduit provided with angularly-related sections, a plane reflecting surface for reflecting into a succeeding section all of the sound-waves passing through the preceding section, and an elongated valve member within the preceding section and pivoted adjacent its extremity remote from said reflecting surface, said valve member being operable to optionally vary the area of sound-wave projection on said surface.

4. In a talking machine, the combination of a sound conduit provided with angularly-related sections rectangular in cross section, a plane reflecting surface for reflecting into a succeeding section all of the sound-waves passing through the preceding sections, and an elongated rectangular valve member within the preceding section and pivoted adjacent its extremity remote from said reflecting surface, said valve member being operable to entirely close said preceding section or to optionally vary the area of sound-wave projection on said surface.

5. In a talking machine, in combination with a sound conduit, an elongated valve member therein and adapted to entirely close said conduit or to optionally vary the passage of sound-waves therethrough, said valve member being pivoted adjacent its extremity nearer the source of sound-waves and being materially longer than the transverse dimension of said conduit whereby said valve member swings through a relatively small angle in passing through its maximum range of movement.

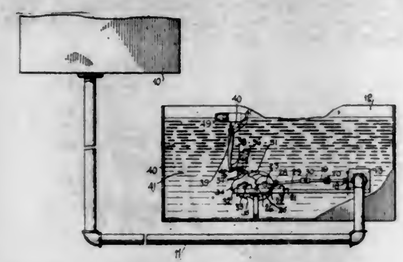
[Claim 6 not printed in the Gazette.]

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1,226,840. FLOAT-CONTROLLED VALVE FOR WATER SYSTEMS. JAMES MADISON YATER, Nevada, Mo. Filed Apr. 15, 1916. Serial No. 91,457. (Cl. 137—104.)

1. A float operated valve controlling mechanism including a valve chamber having an inlet and an outlet port, a valve normally held to its seat by the pressure of water

within the chamber and shiftable across the inlet port, a shaft, an eccentric thereon, an eccentric ring operatively connected to the valve and mounted on the eccentric, a float arm operatively connected to the shaft, and a float thereon, the eccentric having its major axis extending in alinement with the axis of the valve when the valve is closed and the float is raised to its full height and the float arm is approximately vertical.



2. A float operated valve controlling mechanism including a valve chamber having an outlet opening at one end and an inlet opening at right angles to the outlet opening, a piston valve therein seating against the outlet opening and shiftable across the inlet opening whereby the valve will be normally held to its seat by the pressure of water within the valve chamber, a shaft extending at right angles to the direction of movement of the valve, an eccentric thereon disposed in alinement with the axis of the valve and operatively connected to the valve, a second shaft, a float arm operatively connected to the second named shaft, a float thereon, and gearing between the second named shaft and the first named shaft, the eccentric having its major axis extending in alinement with the axis of the valve when the valve is closed and the float is raised to its full height and the float arm is approximately vertical.

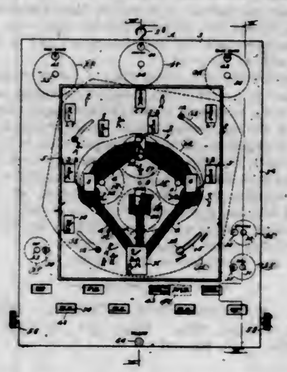
3. A float operated valve controlling mechanism including a valve chamber having an outlet port and an inlet port at right angles to the outlet port, a valve longitudinally shiftable through the chamber and moving across the inlet port whereby the pressure of water will normally urge the valve to its seat, a shaft, an eccentric mounted on the shaft, an eccentric ring mounted on the eccentric and operatively connected to the valve, a sector gear on the shaft, a sector gear meshing with the first named sector gear, and a float supporting arm attached to the second named sector gear at a point approximately diametrically opposite to the middle of the toothed face of the sector gear and carrying a float at its extremity.

4. A float operated valve controlling mechanism including a valve chamber having an outlet port and an inlet port at right angles to the outlet port, a valve longitudinally shiftable through the chamber and moving across the inlet port whereby the pressure of water will normally urge the valve to its seat, a shaft, an eccentric mounted on the shaft, an eccentric ring mounted on the eccentric and operatively connected to the valve, a sector gear on the shaft, a sector gear meshing with the first named sector gear, an arm attached to the second named sector gear, a float arm having an angular extension connected at its end to the arm attached to the sector gear, and a float pivotally connected to the float arm.

5. A float operated valve controlling mechanism including a valve chamber having an outlet port and an inlet port at right angles to the outlet port, a valve longitudinally shiftable through the chamber and moving across the inlet port whereby the pressure of water will normally urge the valve to its seat, a shaft, an eccentric mounted on the shaft, an eccentric ring mounted on the eccentric and operatively connected to the valve, a sector gear on the shaft, a sector gear meshing with the first named sector gear, an arm attached to the second named sector gear, a float arm having an angular extension connected at its end to the arm attached to the sector gear, and a float pivotally connected to the float arm, the angular extremity of the float arm having adjustable connection with the arm of the sector gear whereby to increase or decrease the leverage of the float.

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1,226,841. GAME. STEPHEN A. AKINS, Kansas City, Mo. Filed Oct. 18, 1915. Serial No. 56,418. (Cl. 46—63.)



1. In an apparatus of the character described, a case consisting of two sections one of which is adapted to telescope into the other, interior longitudinal ribs on one of said sections, and posts fixed to the wall of one section and adapted to abut a wall of the companion section.

2. In an apparatus of the character described, a case having openings through which different plays may be disclosed, endless aprons arranged in the case beneath said openings and bearing the names of the plays, and interior ribs on the rear wall of the case for said aprons to rub against.

3. In an apparatus of the character described, a case, rollers journaled in said case and one of which has recesses spaced around the periphery thereof, a detent having a terminal adapted to enter said recesses one at a time, and endless aprons running around said rollers and bearing rows of plays adapted to be disclosed at openings in the case, said rows being spaced relative to the recesses in one of the rollers.

4. In an apparatus of the character described, a case, rollers journaled in said case and one of which has recesses spaced around the periphery thereof, a detent having a terminal adapted to enter any of said recesses, resilient means tending to force said terminal into the recesses, knobs on the roller containing the recesses so that it may be rotated, endless aprons running around the rollers and bearing rows of plays to be displayed at openings in the case, said rows being spaced relative to the recesses in one of the rollers.

5. In an apparatus of the character described, a case, rollers journaled in said case, endless aprons running around said rollers and bearing the names of different plays to be displayed at openings in the case, a sustaining plate having slots therein and adapted to support the aprons close to the openings in the case, and buttons fixed to the interior of the case to receive the slotted portions of said sustaining plate.

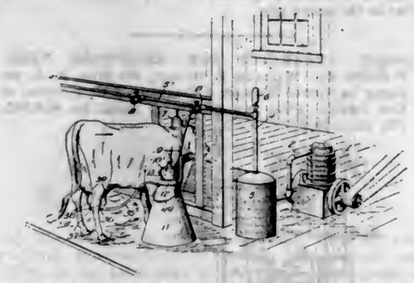
[Claim 6 not printed in the Gazette.]

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1,226,842. MILKING APPARATUS. AUSTIN E. ANDERSON, East Randolph, N. Y. Filed Mar. 28, 1916. Serial No. 87,248. (Cl. No. 31—99.)

1. In a milking apparatus, a suction device comprising a casing, a diaphragm separating said casing into suction and working chambers, milk inlet and outlet connections communicating solely with said suction chamber, and means associated with the working chamber for actuating the diaphragm for forming a vacuum in said suction chamber.





2. In a milking apparatus, a source of compressed air supply, a pump chamber, a movable diaphragm separating said chamber into non-communicating suction and working sides, the suction side forming a milk conduit having inlet and outlet passages, and means on the working side coöperating with the source of compressed air supply for actuating said diaphragm.

3. In a milking apparatus, a pump chamber, a diaphragm separating the same into non-communicating suction and working sides, said suction side having a milk inlet and a milk discharge outlet, spring means for imparting motion to the diaphragm in one direction, and compressed air means for applying motion to the diaphragm in the opposite direction.

4. In a milking apparatus, a pump casing, a diaphragm separating the same into non-communicating suction and working sides, the suction side having a milk inlet and a milk outlet, means for actuating said diaphragm, and automatic means for connecting the suction side with the atmosphere upon the formation of an excessive degree of vacuum therein.

5. In a milking apparatus a pump casing, a diaphragm separating the same into non-communicating suction and working sides, the suction side having a milk inlet and a milk outlet, means on the working side for actuating the diaphragm, and a suction valve controlling said milk outlet.

[Claims 6 to 18 not printed in the Gazette.]

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1,226,843. SASH-BALANCE. FREELING W. ARVINE, Rochester, N. Y. Filed June 26, 1916. Serial No. 106,016. (Cl. 16—115.)

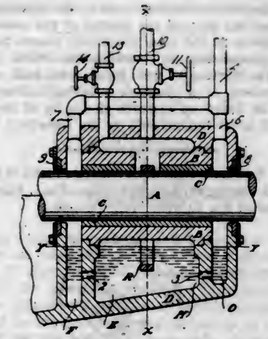


1. A window sash having a pocket with a transverse hole in the walls thereof, a scroll spring located in said pocket, an arbor inserted in said hole and extended through the center of the spring for suspending the latter and for winding it in place to adjust the tension upon the sash and the jamb of the window frame, and means detachably securing said arbor in position, said arbor having a toothed end, and means acting as a ratchet therewith, the upper wall of the pocket serving as a friction surface against which the upper coil of the spring is drawn by virtue of its tension.

2. A window sash having a pocket, an arbor mounted therein with its inner end formed with projecting teeth with a passage between them, the sash being provided with a tapered notch to receive said teeth, a spring connected at one end with the arbor and arranged in said pocket, and means in the sash at an angle to said arbor for engaging one wall of the said passage to prevent turning of the arbor.

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1,226,844. BEARING LUBRICATION. LEONCE L. BATTU, New York, N. Y., assignor to Rateau Battu Smoot Company, New York, N. Y., a Corporation of New York. Filed May 19, 1916. Serial No. 98,518. (Cl. 184—55.)



2. In a bearing, a cavity adapted to contain a lubricant divided into three chambers, means to subject the surfaces of the lubricant in the outer chambers to a gas pressure higher than the gas pressure in the central chamber.

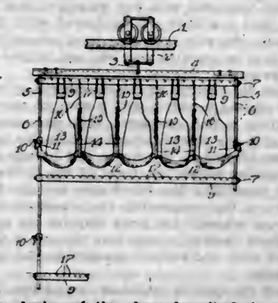
7. In a bearing, a cavity adapted to contain a lubricant divided into three chambers, means to allow the lubricant to flow from one chamber to the other, a blower, means to apply the pressures of the gas at different points of its passage through said blower, one to the surface of the lubricant in one of said chambers and the other to the surface of the lubricant in another chamber.

10. In a bearing, a cavity adapted to contain a lubricant divided into a plurality of chambers, a shaft intersecting said chamber and having its lower portion located at or above the normal level of the lubricant, a source of gas pressure and means controlled by said pressure adapted to raise the lubricant level in one of said chambers in such a manner as to immerse a portion of said shaft in said lubricant.

[Claims 1, 3 to 6, 8, and 9 not printed in the Gazette.]

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1,226,845. MEAT-SMOKING TROLLEY. ALONZO NEWTON BENN, Chicago, Ill. Filed Oct. 16, 1916. Serial No. 125,967. (Cl. 99—2.)



1. In a device of the class described, in combination with the ordinary means for hanging meats from the shanks thereof, a cloth extending under the butts of the meat and held in engagement therewith in a manner to protect the butts and partially mold them to desired shape.

2. In combination with the ordinary means for hanging meats from the shanks, a cloth extending under the butts of the meat and held in contact therewith by elastic means.

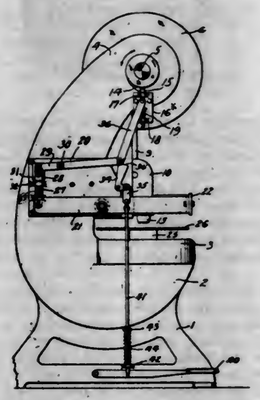
3. In a device of the class described, means for hanging meats from their shanks; with protecting and shaping means extending underneath the butts and supporting a part of the weight of the meat.

4. In a device of the class described, means for hanging meats by suspension in combination with supporting and protecting means extending under the bottoms of the meat and bearing part of the weight of the meat.

5. In a device of the class described, means for hanging meats by suspension in combination with supporting means at the bottom of the pieces and said supporting means composed of a cloth or yielding contact member adapted to be flexed underneath the butts of the meat.

[Claims 6 to 21 not printed in the Gazette.]

1,226,846. SAFETY-GUARD FOR CUTTING-MACHINES. GEORGE E. BENNETT, San Francisco, Cal. Filed Jan. 13, 1916. Serial No. 71,875. (Cl. 74—46.)

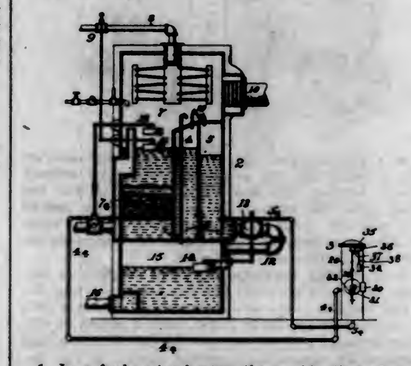


1. A guard for cutting machines comprising the combination of a cutting machine, with a stop for preventing it from operating, a guard extending across the cutting dies, a lever connected with said guard, a foot pedal for depressing the front portion of the guard, suitable levers for operating the stop and thereby releasing the machine to permit it to operate, a secondary lock for one of said stop levers, a link connected with the secondary lock and with the guard, and a slotted rod connected with the guard lever and with the stop operating lever whereby the stop operating lever is operated near the end of the stroke of the guard lever.

2. A guard for cutting machines comprising the combination of a cutting machine, with a stop for preventing it from operating, a link connected with said stop, a lever connected with the link, a secondary lock for said lever, a guard arm pivoted to the frame and having a portion thereof extending across the front of the cutting dies, a slotted rod connecting the guard arm and the first mentioned lever, a link connecting the secondary lock with the guard arm whereby the main stop for the machine is prevented from operating until near the end of the stroke of the guard arm, and suitable connections for depressing the guard arm.

3. A guard for cutting machines comprising the combination with a cutting machine, of a movable stop for preventing it from operating, a link connecting with said movable stop and with a lever pivoted at the side of the machine, a bell crank lock to prevent the operation of said lever, a guard arm pivoted to the machine and having a slotted link connected with said lever, another link connecting the bell crank lock and guard arm and adapted to release the first lever near the end of the stroke of the guard arm, and an adjustable guard plate carried on the front of the guard arm.

1,226,847. APPARATUS FOR MEASURING FEED-WATER, &c. WILLIAM F. BILTZU, Riverton, N. J., assignor to Warren Webster & Company, a Corporation of New Jersey. Filed Jan. 21, 1914. Serial No. 813,385. (Cl. 261—19.)



1. In a feed water heater, the combination of a reservoir compartment at the bottom, a heating compartment at the top, head and tail compartments having communication with each other through a submerged orifice and the "head" compartment communicating at its lower part with the heating compartment, a valve communication between the lower part of the "tail" compartment and the reservoir compartment, and means for registering the amount of flow from the "head" compartment to the "tail" compartment through the submerged orifice in a given time.

5. In a feed water heater, the combination of a reservoir compartment at the bottom, a heating compartment at the top, head and tail compartments at an intermediate level between the reservoir compartment and the heating compartment and having communication with each other through a submerged orifice presenting constant area to the flowing water, said head compartment having communication at its lower part with the heater chamber and said tail compartment having communication with the reservoir compartment, automatic means for controlling the discharge of water from the tail compartment to the reservoir compartment controlled by the level of water in the reservoir compartment, and a registering mechanism operated by the differential in the static heads of the head and tail compartments for registering the amount of water passing between them through the submerged orifice.

[Claims 2 to 4 not printed in the Gazette.]

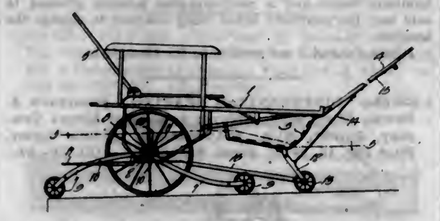
1,226,848. CURB-WHEEL ATTACHMENT FOR BABIES' SULKIES. CLARENCE J. BLACK, Argenta, Ark. Filed Oct. 9, 1916. Serial No. 124,584. (Cl. 21—12.)

1. The combination with a baby's sulky, of front and rear vertically movable arms on opposite sides thereof and hingedly connected for a limited amount of relative movement, said arms extending beyond the sulky wheels, and rollers on the outer ends of said arms.

3. The combination with a baby's sulky, front and rear vertically movable arms on opposite sides thereof, and rollers on the outer ends of said arms; of means for preventing tilting of the sulky in respect to said arms.

4. The combination with a baby's sulky, front and rear vertically movable arms on opposite sides thereof, and rollers on the outer ends of said arms; of one or more laterally swinging stop members carried by the sulky to swing over one or more of the arms to prevent tilting of the sulky in respect to said arms.



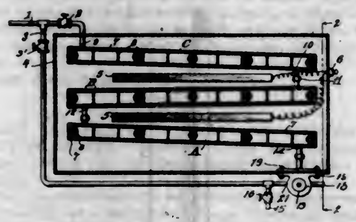


5. The combination with a baby's sulky, front and rear vertically movable arms on opposite sides thereof, and rollers on the outer ends of said arms; of a vertically swinging member carried by the front of the sulky and having a supporting wheel, one or more stop members carried by the sulky for overlying one or both of the rear arms to prevent rearward tilting of the sulky, and means operatively connecting said stop member with said vertically swinging member for applying the former when the latter is swung downwardly.

6. The combination with a baby's sulky, front and rear vertically movable arms on opposite sides thereof, and rollers on the outer ends of said arms; of a vertically swinging member carried by the front end of the sulky and having a supporting wheel, one or more laterally swinging stop members carried by said sulky to overlie the rear arm or arms to prevent rearward tilting of the sulky, and one or more links operatively connecting said vertically swinging member with said stop member or members for disposing the latter to operative position when the former is swung downwardly.

[Claim 2 not printed in the Gazette.]

1,226,849. ELECTRIC WATER-HEATER. JOSEPH B. BOOKMAN, Manhattan, Nev. Filed June 5, 1916. Serial No. 102,805. (Cl. 219—39.)

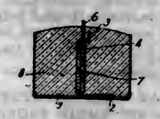


1. In a device of the class described, the combination of a main casing, a plurality of communicating circulators in said casing, a supply conduit communicating with the first of said circulators, an outlet conduit, a double-way valve to connect said outlet conduit with an outlet pipe, said valve being adapted to connect said outlet conduit with said inlet conduit to shunt the liquid around said circulators.

2. In a device of the class described, the combination with a main casing, an inlet conduit, an outlet conduit, and a branch conduit, a valve to control communication between said conduits, of a circulator composed of a flat rectangular body having a plurality of alternately arranged partitions therein, the front wall of said body being removable, screw members for retaining in position angularly disposed members adapted to be assembled in series whereby liquid will flow from one to the other of said members in its path of travel during the heating process.

3. In a device of the class described, the combination of a casing having a plurality of relatively angularly disposed circulating devices therein, said circulating devices being in communication with a source of liquid supply, a branch pipe shunting the liquid around said circulators, a safety valve for controlling the outlet of liquid, said safety valve being adapted to connect the branch pipe with the outlet portions of said circulators whereby when no liquid is being withdrawn from the heater the same is caused to circulate in contact with the colder liquid being supplied so as to prevent overheating.

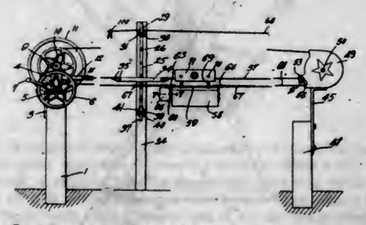
1,226,850. WICK-HOLDER. STANLEY SEPTIMUS BOOTY, London, England. Filed Oct. 22, 1915. Serial No. 57,332. (Cl. 67—21.)



1. A wick-holder comprising a flat strip of metal bent horizontally at one end to form a base and bent at the other end to form a head through which the wick is passed, with an upwardly extending lug formed in said head at one side of said wick, substantially as described.

2. A wick-holder comprising a flat strip of metal bent horizontally at one end to form a base and bent at the other end to form a head through which the wick is passed, the head terminating in an upwardly projecting lug integral therewith and adapted to be heated by the lighted wick, substantially as described.

1,226,851. MAIL-CARRIER. WILLIAM E. BORDEN, Hillsboro, Ohio. Filed Sept. 27, 1916. Serial No. 122,492. (Cl. 104—146.)



1. In a device of the class described, an inner support; an outer support; a track connecting the supports; a receptacle; a yoke carried by the receptacle; means assembled with the yoke for engaging the track slidably; upper and lower bearings carried by the yoke; a signal mounted in the bearings; a flexible track; wheels on the supports; a flexible element trained around the wheels; a spring connecting one end of the flexible element with the upper bearing; and means for connecting the other end of the flexible element with the yoke.

2. In a device of the class described, an inner support; an outer support; wheels on the supports; a flexible element trained about the wheels; a receptacle; a yoke connected with the receptacle; springs connected at their inner ends with the yoke, and having their outer ends connected with the ends of the flexible element; a track connecting the supports; and means carried by the yoke for engaging the track slidably.

3. In a device of the class described, an inner support; an outer support; an intermediate support; a track connecting the supports; wheels journaled on the supports; a flexible element engaged around the wheels; a receptacle; means for connecting the receptacle with the lower run of the flexible element; a bracket carried by the intermediate support; a sheave journaled on the upper end

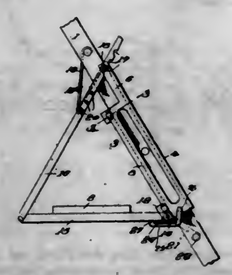
of the bracket and receiving the upper run of the flexible element; and a sheave journaled on the lower portion of the bracket and adapted to receive the lower run of the flexible element when the same is slackened, the bracket including oppositely slanting members located upon opposite sides of the last specified sheave and constituting means for directing the lower run of the flexible element onto said sheave.

4. In a device of the class described, an outer support; a wheel carried by the outer support; an inner support; a base carried by the inner support; standards fixed to and rising from the base; a shaft journaled in the standards; a wheel carried by the shaft; a flexible element trained about the wheels; a receptacle connected with the flexible element; a holder projecting horizontally from the standards; a shaft journaled in the holder; means for preventing a reverse rotation of the last specified shaft; and a flexible track extended between the last specified shaft and the outer support, the receptacle being provided with means for engaging the track slidably.

1,226,852. PREPARATION OF POTATO-PEELINGS FOR THE PURPOSE OF THEIR INDUSTRIAL UTILIZATION. EDELMIRO BORRÁS, Barcelona, Spain. Filed June 17, 1916. Serial No. 104,240. (Cl. 99—5.)

A process for the preparation of potato peelings for the purpose of their industrial utilization consisting essentially in treating the peelings by cooking them and then drying the treated peelings in stoves to obtain a product having a degree of hardness and brittleness which permits of its being pulverized for utilization in the manufacture of glucose, alcohol and various other industrial products, substantially as described.

1,226,853. LADDER-JACK. LEON N. BOURDEAU, Rock Island, Ill. Filed Oct. 14, 1915. Serial No. 55,852. (Cl. 20—84.)



1. In a ladder jack, a stile-engaging bracket, a platform supporting arm pivoted to the lower end of said bracket, a bracing bar at the opposite end of said arm, said bar engaging the upper end of said bracket, and a rung-engaging member pivoted to said bracing bar.

2. In a ladder jack, a stile-engaging bracket comprising separable sections, a platform supporting arm pivoted to the lower end of said bracket, a bracing bar at the opposite end of said arm, said bar engaging the upper end of said bracket, and a rung-engaging member pivoted to said bracing bar.

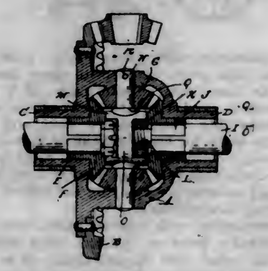
3. In a ladder jack, a stile-engaging bracket having a platform supporting means, a rung engaging arm pivoted to the lower end of said bracket and having an extension thereon, and a handle also pivoted to the lower end of said bracket and designed to engage said extension.

4. In a ladder jack, a stile-engaging bracket, a platform supporting arm pivoted to the lower end of said bracket, a bracing bar at the opposite end of said arm, said bar engaging the upper end of said bracket, a rung engaging member pivoted to said bracing bar, and a handle pivoted to said bracket and designed to lift said platform supporting arm to disengage said rung engaging member.

5. In a ladder jack, a stile engaging bracket, a platform supporting arm pivotally mounted on said bracket, a bracing bar connected to said arm, said bar being mounted with means for adjustably engaging the bracket, an auxiliary brace and a rung-engaging member pivoted to said bar, the auxiliary brace being adapted to engage the bracket.

[Claims 6 and 7 not printed in the Gazette.]

1,226,854. DIFFERENTIAL GEARING. FERDINAND A. BOWER, Flint, Mich., assignor to General Motors Company, Detroit, Mich., a Corporation of New Jersey. Filed Dec. 15, 1916. Serial No. 137,216. (Cl. 74—84.)



6. In a differential gearing, a casing for receiving the gears and intermediate pinions, means for securing said gears upon their shafts and a spacer between said gears comprising a member having thrust bearings at its opposite ends therefor, the wall of one side of said spacer being cut away to form entrance slots for engaging said securing means.

[Claims 1 to 5 not printed in the Gazette.]

1,226,855. MEASURING DEVICE. PAUL A. BOYNTON, Palatine, Ill. Filed Oct. 20, 1915. Serial No. 56,902. (Cl. 33—112.)



1. A measuring device comprising a graduated measuring blade, and a cross bar on one end of the blade, said cross bar having on one side of the blade an open recess extending parallel to the blade, and adapted to receive the end portion of the part to be measured.

2. A measuring device comprising a graduated measuring blade, a cross bar on one end of the blade, said cross bar having on one side of the blade an open recess extending parallel to the blade, and adapted to receive the end portion of the part to be measured, and an adjustable abutment in said recess engageable by said end portion.

3. A measuring device comprising a graduated measuring blade, a cross bar on one end of the blade, said cross bar having on one side of the blade an open recess extending parallel to the blade, and adapted to receive the end portion of the part to be measured, and an abutment screw carried by the cross bar and extending into the recess, and engageable by said end portion.



1,226,856. HANGER. FRANKLIN F. BRADLEY, Chicago, Ill., assignor to Bradley & Vrooman Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 5, 1916. Serial No. 123,828. (Cl. 91—60.)



1. A hanger for hollow objects including a suspending bar; an object supporting hook extending from one side of the suspending bar, the plane of this hook being angular to the suspending bar; a second object supporting hook whose free end projects toward the first hook and which free end carries a conical closure plug for hollow objects and tapering toward the first hook.

2. A hanger for hollow objects including a suspending bar; an object supporting hook extending from one end of the suspending bar, the plane of this hook being angular to the suspending bar; a second object supporting hook whose free end projects toward the first hook and which free end carries a closure plug for hollow objects and tapering toward the first hook.

3. A hanger for hollow objects including a suspending bar; an object supporting hook extending from one side of the suspending bar, the plane of this hook being angular to the suspending bar; a second object supporting hook whose free end projects toward the first hook and which free end carries a closure plug for hollow objects.

4. A hanger for hollow objects including a suspending bar; an object supporting hook extending from one end of the suspending bar, the plane of this hook being angular to the suspending bar; a second object supporting hook whose free end projects toward the first hook and which free end carries a closure for hollow objects.

5. A hanger for hollow objects including a suspending bar; object supporting hooks, one at each end of the bar; and a closure plug for hollow objects carried by one of the hooks.

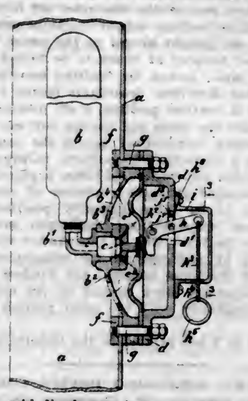
[Claim 6 not printed in the Gazette.]

1,226,857. APPARATUS FOR INFLATING LIFE-PRESERVING BELTS. WILLIAM GOULD BROKAW, Paris, France. Filed Oct. 14, 1916. Serial No. 125,759. (Cl. 9—19.)

1. The combination with an inflatable life-preserver or similar device, of a flexible diaphragm closing an opening therein, a cartridge containing a gaseous inflating medium inclosed within the life-preserver and in communication with one side of said diaphragm, a passage permitting escape of the inflating medium from the cartridge into the life preserver, a valve controlling said passage and attached to the diaphragm, and means for depressing the diaphragm to open said valve.

5. The combination with an inflatable life-preserver or similar device, of a flexible diaphragm hermetically sealing an opening therein, a cartridge containing a gaseous inflating medium inclosed within the life-preserver and in communication with one side of said diaphragm, a passage permitting escape of the inflating medium from the cartridge into the life-preserver, a valve controlling said passage and attached to the diaphragm, a casing covering said diaphragm, a lever pivotally held in said casing, and a second casing secured to said first casing and inclosing the long arm of said lever.

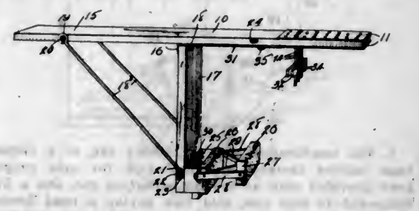
9. In combination with a life-preserver, a cartridge contained therein having a gaseous inflating medium, a disk-like holder, a conduit connecting said cartridge with said holder, a valve in the hub of said holder and attached to a diaphragm, a casing covering said diaphragm, means



for clamping said diaphragm between said casing and said holder and to said life-preserver, and means for depressing the diaphragm to open said valve.

[Claims 2 to 4 and 6 to 8 not printed in the Gazette.]

1,226,858. EXTERIOR SEAT FOR WINDOWS. OLIVER J. BURRELL, San Francisco, Cal. Filed Feb. 16, 1915. Serial No. 8,657. (Cl. 20—87.)



1. A window seat of the character set forth including a top piece extending outwardly transversely of the window sill, a vertical portion connected thereto, a block carried by said vertical portion for binding engagement with the outer wall of the house, and a second block hingedly connected to said first block for wedging contact with the under portion of the outer window sill.

2. A window seat of the character set forth including a top piece extending outwardly transversely of the window sill, a vertical portion connected thereto, a block carried by said vertical portion for binding engagement with an outer wall of the house, an extension block connected to the first-mentioned block, said extension block being capable of assuming different positions, and means maintaining said extension block in either of its positions.

3. A window seat of the character set forth including a top piece extending outwardly transversely of the window sill, a vertical portion connected thereto, a block carried by said vertical portion for binding engagement with an outer wall of the house, a second block hingedly connected to the first mentioned block for wedging contact with the under portion of the outer window sill, and means for contact with the inner window sill.

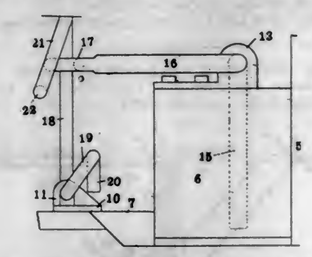
4. A window seat of the character set forth including a top piece extending outwardly transversely of the window sill, a vertical portion connected thereto, a block carried by said vertical portion for binding engagement with an outer wall of the house, an extension block hingedly connected to the first mentioned block, and, said extension block being capable of assuming different posi-

tions to act as an auxiliary support, means maintaining said extension block in either of its positions, and means for contact with the inner window sill.

5. A window seat of the character set forth including a top piece extending outwardly transversely of the window sill, an upright hinged to the under face of said top piece and adapted at times to be folded to position against the same, means for limiting movement of said upright in one direction, detachable means for retaining said upright in vertical position, a sill protecting member carried by said top piece and having bolt accommodating straps extending transversely across the same, said top piece having a plurality of apertures to provide a selection of positions for transverse bolts, a plurality of bolts removably engaged through a number of said apertures and adapted to be interchangeably positioned in said straps, means removably engaged upon said bolts for contact with the inner side of the window-sill, a covered block carried by said upright for engagement with the outer wall of the house adjacent the window sill, and an adjustable extension block carried by the first-mentioned block for engagement with the outer portion of the window sill.

[Claims 6 to 8 not printed in the Gazette.]

1,226,859. RELEASING DEVICE FOR CAR-COUPLINGS. STERLING H. CAMPBELL, St. Louis, Mo. Filed Jan. 7, 1916. Serial No. 70,782. (Cl. 213—59.)



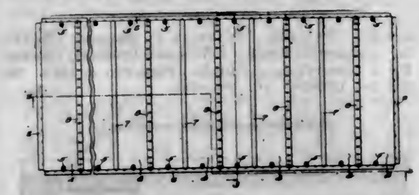

1. The combination with a railway car, of a coupler head carried thereby, a knuckle-lock for said coupler head provided with an eye, an actuating rod, and a link connected to said rod, said link having a bend formed in its lower part, the end of said bend being extended to form a complete loop open for the reception of the eye of the knuckle-lock, and the smallest over-all dimensions of the loop being greater than any dimension of the eye, whereby said link can only be engaged with the eye of the knuckle-lock by a pivotal movement about an axis substantially perpendicular to the plane of the loop.

3. The combination with a railway car, of a coupler head carried thereby, a knuckle-lock for said coupler head provided with an eye, an actuating rod, a link provided at its upper part with an elongated and complete loop open to receive the eye of the actuating rod, the lower part of the said link being provided with a bend, the end of said bend being extended to form a complete loop open to receive the eye of the knuckle-lock, and the smallest over-all dimension of the loop being greater than any dimension of the eye, whereby said link can only be engaged with the eye of the knuckle-lock by a pivotal movement around an axis substantially perpendicular to the plane of the loop.

4. In a device of the class described, the combination of a coupler, a locking-pin therefor provided with an eye, a pin-actuating member, and a link for connecting the said member to the locking-pin, said link having an open loop at its lower end to receive and engage with the eye of the pin, said loop portion being provided with an extension so positioned and dimensioned that a pivotal movement of the link with relation to the eye of the pin as the center of such movement is necessary to remove the loop from the eye.

[Claims 2, 5, and 6 not printed in the Gazette.]

1,226,860. CAR STRUCTURE. LEWIS T. CANFIELD, Chicago, Ill., assignor to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed Mar. 9, 1914. Serial No. 823,339. (Cl. 108—5.4.)



1. A car frame having side plates, a roof supported by said frame and comprising sheet metal sections, said sections being spaced above said side plates at the eaves and having portions thereof depressed to bear upon the tops of said side plates, and flanges on the ends of said sections projecting over the eaves, said flanges being secured together to form eaves guards and longitudinal stiffeners for the roof between said depressions.

2. A car frame having side plates, a roof supported by said side plates and consisting solely of sheet metal sections, said sections extending from eaves to eaves and having their longitudinal side margins overlapped and riveted together, said sections being spaced above said side plates at the eaves and having portions thereof depressed to bear upon the tops of said side plates, and flanges on the ends of said sections projecting over the eaves, said flanges being overlapped and secured together to form eaves guards and longitudinal stiffeners for the roof between said depressions.

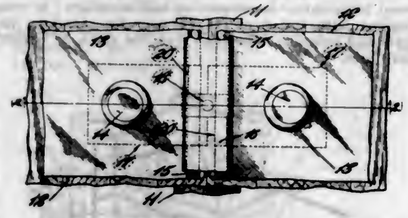
3. A car frame having side plates, a roof supported on said frame and consisting solely of sheet metal sections, said sections extending from eaves to eaves and having along their longitudinal edges upstanding flanges substantially inverted U shape in cross-section, the flanges of adjacent sections being overlapped and riveted together to constitute carlines, said flanges decreasing in depth near the eaves and merging into the plane of said sections short of the ends thereof, the end portions of said sections extending downwardly outside of said side plates and being overlapped and riveted together to constitute eaves guards and stiffeners secured to the upright faces of said side plates at and between the ends of said carlines.

4. A car frame having side plates, a roof formed of sheet metal sections spanning the car from side plate to side plate, said sections being arched upward crosswise of the car and having a plurality of upstanding ribs of arched shape formed therein, the ends of said plates and ribs being bent down alongside of said side plates and riveted thereto, portions of the ends of said sections between said ribs being depressed to rest upon said side plates to support the arched portions of said sections and ribs above said side plates and out of contact therewith during the operation of assembling the sections and riveting them in place.

5. A car frame having side plates, a roof formed of sheet metal sections spanning the car from side plate to side plate, said sections being arched upward crosswise of the car and having upstanding ribs of arched shape formed therein, the ends of said plates and ribs being bent down in continuous end flanges alongside of said side plates and riveted thereto to form eaves stiffeners crosswise of said ribs, portions of the ends of said sections being depressed to rest upon said side plates to support the arched portions of said sections and ribs above said side plates and out of contact therewith during the operation of assembling the sections and riveting them in place.

1,226,861. ANCHOR FOR ROOF-SHEETS. JOHN T. CRALLEY, Chicago, Ill., assignor to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed Oct. 21, 1916. Serial No. 126,842. (Cl. 108—5.)

1. An anchor strip for pivotally securing a roof sheet, said anchor strip having a pivot for the roof sheet to turn on and said anchor strip also having means formed integral therewith for securing said anchor strip to the roof sheet.



2. An anchor strip for pivotally securing a roof sheet, said anchor strip having a pivot for the roof sheet to turn on and a flange adapted to hook over the edge of the roof sheet for securing said anchor strip to the roof sheet.

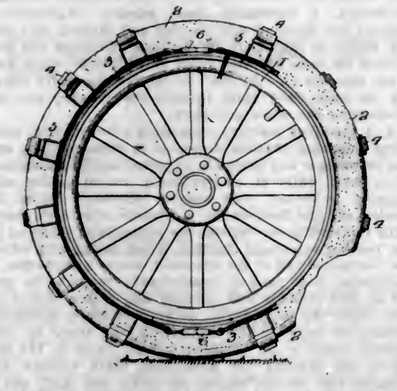
3. An anchor strip for pivotally securing a roof sheet, said anchor strip having a pivot boss formed up in it for the roof sheet to turn on and means at one edge for hooking over the edge of the roof sheet for holding said roof sheet on said pivot boss.

4. An anchor strip for pivotally securing a roof sheet, said anchor strip having a pivot for the roof sheet to turn on, in combination with means for pivotally securing said anchor strip to the car, and means for securing said anchor strip to the roof sheet.

5. An anchor strip for pivotally securing a roof sheet, said anchor strip having a pivot for the roof sheet to turn on, in combination with means for pivotally securing said anchor strip to the car, and means for securing said anchor strip to the roof sheets, said securing means being located at the ridge of the car, and a ridge cap for covering said securing means.

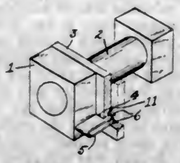
[Claim 6 not printed in the Gazette.]

1,226,862. ANTISLIPPING ARMORED PNEUMATIC TIRE. CHARLES L. CROW, Alexander City, Ala. Filed Nov. 10, 1914. Serial No. 871,320. (Cl. 152—14.)



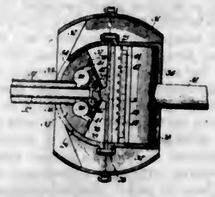
An anti-slipping device for resilient tires comprising a plurality of shoes arranged at intervals on the tire, a single lug formed on each of the said shoes adapted to substantially span the tread surface of the tire, said lug consisting of a cross cleat having a long arm extending longitudinally of the tread surface of the tire, and oppositely arranged short arms positioned transversely of the tread surface of the tire and angularly disposed with relation to the long arm, and means for securing the said shoes on the tire.

1,226,863. NUT-LOCK. JOHN F. CUNNINGHAM, San Francisco, Cal. Filed June 13, 1916. Serial No. 103,400. (Cl. 151—57.)




A nut-lock comprising a U-shaped locking member lying in the path of rotation of the nut to be locked said member having resiliency normally expanding its legs, and each leg terminating in an outwardly projecting lip; and a non-rotatable plate lying under the nut to be locked, said plate having a single through aperture with one dimension adapted to admit the width of the locking member and a transverse dimension adapted to admit the end lips of the locking member only when its legs are pressed together, whereby said lips when passed through said aperture under squeezing compression of the member will, when relieved, normally expand to engagement with the inner surface of the plate.

1,226,864. ROTARY MACHINE. HENRY T. CYPHERS and FRANK E. HOLMES, Torrance, Cal. Filed July 17, 1916. Serial No. 109,817. (Cl. 230—29.)



1. A rotary machine comprising a diaphragm; a pair of cylinder members secured on either side of said diaphragm and forming with said diaphragm two semi-cylindrical cavities, one on either side of said diaphragm, said members having elongated slots in the cylindrical walls thereof; a pair of pistons each located in one of said semi-cylindrical cavities, each of said pistons being formed of a sector of a cylinder and fitting in gas tight relationship with the end and side walls of said semi-cylindrical cavity; means for forming a slidable gas tight joint between the apex of said sector and the center line of said diaphragm; a driving shaft secured to each of said pistons and projecting through said elongated slot; bearing means for supporting said shafts in angular relationship with each other; and valve means for controlling the flow of a fluid to and from the spaces inside said cavities not filled by said pistons.

2. A rotary machine comprising a diaphragm; a pair of cylinder members secured on either side of said diaphragm and forming with said diaphragm two semi-cylindrical cavities, one on either side of said diaphragm, said members having elongated slots in the cylindrical walls thereof; a pair of pistons, each located in one of said semi-cylindrical cavities, each of said pistons being formed of a sector of a cylinder and fitting in gas tight relationship with the end and side walls of said semi-cylindrical cavity; two center pivots located at right angles to each other, formed on opposite sides of said diaphragm and so shaped as to form a slidable gas tight joint with the apex

of said piston; a driving shaft secured to each of said pistons and projecting through said elongated slot; bearing means for supporting said shafts in angular relationship with each other; and valve means for controlling the flow of a fluid to and from the spaces inside said cavities not filled by said pistons.

3. A rotary machine comprising a diaphragm; a pair of cylinder members secured on either side of said diaphragm and forming with said diaphragm two semi-cylindrical cavities, one on either side of said diaphragm, said members having elongated slots in the cylindrical walls thereof; a pair of pistons, each located in one of said semi-cylindrical cavities, each of said pistons being formed of a sector of a cylinder and fitting in gas tight relationship with the end and side walls of said semi-cylindrical cavity; means for forming a slidable gas tight joint between the apex of said sector and the center line of said diaphragm; a driving shaft secured to each of said pistons and projecting through said elongated slot; stationary bearing means for supporting one of said shafts; movable bearing means for supporting the other of said shafts; means for adjusting said movable bearing means to vary the angle included between said shaft; and valve means for controlling the flow of a fluid to and from the spaces inside said cavities not filled by said pistons.

4. A rotary machine comprising a diaphragm; a pair of cylinder members secured on either side of said diaphragm and forming with said diaphragm two semi-cylindrical cavities, one on either side of said diaphragm, said members having elongated slots in the cylindrical walls thereof; a pair of pistons, each located in one of said semi-cylindrical cavities, each of said pistons being formed of a sector of a cylinder and fitting in gas tight relationship with the end and side walls of said semi-cylindrical cavity; two center pivots located at right angles to each other, formed on opposite sides of said diaphragm and so shaped as to form a slidable gas tight joint with the apex of said piston; a driving shaft secured to each of said pistons and projecting through said elongated slot; stationary bearing means for supporting one of said shafts; movable bearing means for supporting the other of said shafts; means for adjusting said movable bearing means to vary the angle included between said shafts; and valve means for controlling the flow of a fluid to and from the spaces inside said cavities not filled by said pistons.

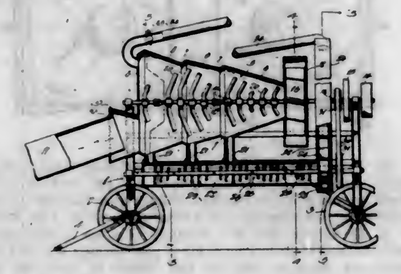
5. A rotary machine comprising a diaphragm; a pair of cylinder members secured on either side of said diaphragm and forming with said diaphragm two semi-cylindrical cavities, one on either side of said diaphragm, said members having elongated slots in the cylindrical walls thereof; an inclosing casing surrounding said diaphragm and said cylinder members and so placed that some space is left between the inner surface of said casing and the outer surface of said diaphragm and said cylinder members; ventilating vanes in said space secured to said cylinder members and turning freely inside said casing; a pair of pistons, each located in one of said semi-cylindrical cavities, each of said pistons being formed of a sector of a cylinder and fitting in gas-tight relationship with the end and side walls of said semi-cylindrical cavity; means for forming a slidable gas-tight joint between the apex of said sector and the center line of said diaphragm; a driving shaft secured to each of said pistons and projecting through said elongated slot; bearing means for supporting said shafts in angular relationship with each other; and valve means for controlling the flow of a fluid to and from the spaces inside said cavities not filled by said pistons.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,865. THRESHING-MACHINE. MONROE DAVIS, Enid, Okla., assignor of one-twelfth to George D. Wilson, Enid, Okla. Filed Oct. 2, 1916. Serial No. 123,412. (Cl. 130—27.)

1. A threshing machine comprising a horizontally elongated imperforate threshing chamber having in one end an unthreshed grain inlet and in its other end a straw and chaff outlet, said chamber having a plurality of longitudinally spaced circumferential shoulders on its interior and being decreased in diameter from each shoulder to the next succeeding shoulder, said chamber having in its lower side a plurality of threshed grain outlets disposed immediately in advance of said shoulders; in combination with means in the chamber for threshing the grain and separating the same from the straw by centrifugal force.



2. A threshing machine comprising a horizontally elongated imperforate threshing chamber consisting of a plurality of axially alined frusto-cone shaped sections with their larger ends disposed in one direction and contracted to form annular internal shoulders to which the smaller ends of adjacent sections are united, said chamber having at opposite ends an unthreshed grain inlet and a straw and chaff outlet and having in its lower side a plurality of threshed grain outlets disposed immediately in advance of said shoulders; in combination with means in said chamber for threshing the grain and separating the same from the straw by centrifugal force.

3. A threshing machine comprising a horizontally elongated imperforate threshing chamber decreased in diameter from one end to its other and having in its larger end an unthreshed grain inlet while at longitudinally spaced points said chamber is formed with annular shoulders facing its smaller end and immediately in advance of said shoulders with threshed grain outlets, the latter being disposed in the lower side of said chamber, a fan casing into which the contracted end of the aforesaid chamber discharges, a horizontal shaft passing longitudinally through the center of said chamber and through said casing, means on said shaft for threshing the grain and separating the same from the straw by centrifugal force, and a fan mounted on said shaft in the fan casing for drawing the unthreshed grain through the chamber and for discharging the straw and chaff.

4. A threshing machine comprising a horizontally elongated threshing chamber decreased in diameter from one end to its other and having in its larger end an unthreshed grain inlet while at longitudinally spaced points said chamber is formed with annular shoulders facing its smaller end and immediately in advance of said shoulders with threshed grain outlets, the latter being disposed in the lower side of said chamber, a fan casing into which the contracted end of the aforesaid chamber discharges, a horizontal shaft passing longitudinally through the center of said chamber and through said casing, means on said shaft for moving the unthreshed grain circumferentially to separate the grain from the straw by centrifugal force, a fan mounted on said shaft in the fan casing for drawing the unthreshed grain through the chamber and for discharging the straw and chaff, and a horizontal conveyer conduit into which the threshed grain is deposited from the aforesaid outlets.

5. A threshing machine comprising a threshing chamber and means for creating a strong air current therethrough to carry the unthreshed grain through said chamber and discharge the straw therefrom, means for receiving the threshed grain from the threshing chamber, a conveyer conduit for carrying said grain from said means, and a suction pipe leading from said conduit to the threshing chamber, whereby suction will be created through said pipe to draw all chaff and dust from the threshed grain.

[Claims 6 to 10 not printed in the Gazette.]



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1,226,866. SANITARY TRAY. CHARLES H. DE FREHN, Johnstown, Pa. Filed Oct. 31, 1916. Serial No. 128,768. (Cl. 155—12.)



1. In a device of the class described, supports; a tray disposed between the supports and in the form of a trough which is open at its ends, the supports constituting closures for the ends of the tray; means for pivoting the tray adjacent one of its edges to the supports; and stop means coacting with the tray to hold the same between the supports, whereby the supports will constitute closures for the ends of the tray.

3. In a device of the class described, supports; a tray disposed between the supports; means for pivoting the tray adjacent one of its edges to the supports; a rod connecting the supports, the opposite edge of the tray resting on the rod; and a tightening device on the rod and engaging one support, to cause the supports to bind against the ends of the tray.

4. In a device of the class described, supports; a tray disposed between the supports; pivot elements connecting the tray adjacent one of its edges with the supports; a rod connecting the supports and coacting with the opposite edge of the tray to uphold the tray; and side strips interposed between the supports and the ends of the tray, the side strips being carried by the pivot elements and the rod.

[Claims 2 and 5 not printed in the Gazette.]

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1,226,867. WAGON. WILLIAM L. DEMPSEY, Somerville, Mass. Filed Nov. 12, 1914. Serial No. 871,828. (Cl. 21—5.)



1. A low wagon comprising crank axles having skeins of relatively large diameter, integral arms depending respectively from said skeins and thimbles of greater cross sectional area than that of said skeins integral with said arms, said thimbles being longitudinally apertured to receive the ends of the axle and presenting angularly disposed walls adapted to engage the faces of the axle and to prevent rotation thereof.

2. A low wagon comprising crank axles having skeins of relatively large diameter, integral arms depending respectively from said skeins, and thimbles of greater cross sectional area than that of said skeins integral with said arms and extending beyond said arms well beneath the mid-lengths of said skeins, said thimbles being longitudinally apertured throughout their length to receive the ends of an axle and presenting angularly disposed walls adapted to engage the faces of the axle and to prevent rotation thereof.

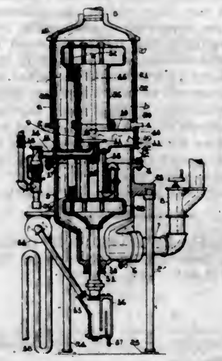
3. In a low wagon, a crank axle comprising a skein of relatively large diameter, an integral arm depending therefrom and a thimble having a longitudinal aperture presenting angularly disposed walls to receive the end of the axle, said thimble being of greater cross sectional area than that of the skein whereby a relatively large axle may be employed.

4. In a low wagon, a wooden axle having ends presenting angular faces, thimbles provided with longitudinal apertures corresponding in form to the ends of said axle tightly secured upon the same, arms integral with and extending vertically from said thimble and skeins extending outwardly from the upper ends of said arm in parallel axial alinement with the axis of said thimbles, each of said skeins being provided with an internal recess forming a lubricant receptacle; a duct leading from said grease receptacle to the surface of said skein, means operable from the inner end of the skein for forcing the lubricant through the duct and means for securing wheels upon said skeins.

5. An axle arm for a low drop wagon comprising a thimble having a longitudinal aperture angular in cross section, an integral arm rising from said thimble intermediate of its ends, a skein extending laterally from the upper end of said arm integral therewith, said skein being centrally bored from its inner end and screw threaded to form a lubricant receptacle, a duct leading from said receptacle to the surface of the skein, and a screw threaded plunger having means adapted to be engaged by a rotating member sustained in said lubricant receptacle and adapted to force the lubricant through said duct.

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1,226,868. HEATER. HARRY S. DODD, Toronto, Ontario, Canada. Filed May 19, 1916. Serial No. 98,689. (Cl. 122—131.)



1. In a heater the combination of a tubular closed combustion chamber; a gas burner located adjacent one end of the chamber; a closed expansion chamber or header of greater cross sectional area than the combustion chamber and into which the other end of the combustion chamber opens; means for supplying a combustible mixture to the burner; a plurality of fire tubes connected to the expansion chamber and substantially paralleling the combustion chamber; a header to which said tubes are connected; an exhaust flue connected to said header; and an air pump connected with the exhaust flue.

2. In a heater the combination of a tubular closed combustion chamber; a gas burner located adjacent one end of the chamber; a closed expansion chamber or header of greater cross sectional area than the combustion cham-

ber and into which the other end of the combustion chamber opens; means for supplying a combustible mixture to the burner; a plurality of fire tubes connected to the expansion chamber and substantially paralleling the combustion chamber; a header to which said tubes are connected; tubes for the passage of a fluid to be heated extending through the fire tubes to the outer surfaces of the expansion chamber and header; an exhaust flue connected to said header; and an air pump connected with the exhaust flue.

3. In a heater the combination of a tubular closed combustion chamber; a gas burner located adjacent one end of the chamber; a closed expansion chamber or header of greater cross sectional area than the combustion chamber and into which the other end of the combustion chamber opens; means for supplying a combustible mixture to the burner; a plurality of fire tubes connected to the expansion chamber and substantially paralleling the combustion chamber; a header to which said tubes are connected; an exhaust flue connected to said header; a trapped pipe for water of condensation leading from the bottom of the combustion chamber to the interior of said header; and an air pump connected with the exhaust flue.

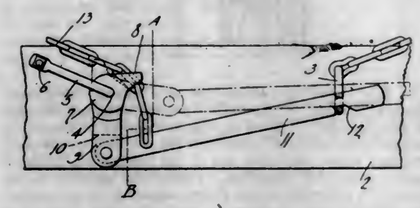
4. In a heater the combination of a tubular closed combustion chamber; a gas burner located adjacent one end of the chamber; a closed expansion chamber or header of greater cross sectional area than the combustion chamber and into which the other end of the combustion chamber opens; means for supplying a combustible mixture to the burner; a plurality of fire tubes connected to the expansion chamber and substantially paralleling the combustion chamber; a header to which said tubes are connected; an exhaust flue connected to said header; a condensation chamber with which said exhaust flue connects; a trapped liquid outlet therefrom; and an air pump connected with the exhaust flue.

5. In a heater the combination of a tubular closed combustion chamber; a gas burner located adjacent one end of the chamber; a closed expansion chamber or header of greater cross sectional area than the combustion chamber and into which the other end of the combustion chamber opens; means for supplying a combustible mixture to the burner; a plurality of fire tubes connected to the expansion chamber and substantially paralleling the combustion chamber; a header to which said tubes are connected; an exhaust flue connected to said header; a trapped pipe for water of condensation leading from the bottom of the combustion chamber to the interior of said header; a condensation chamber with which said exhaust flue connects; a trapped liquid outlet therefrom; and an air pump connected with the exhaust flue.

[Claims 6 to 14 not printed in the Gazette.]

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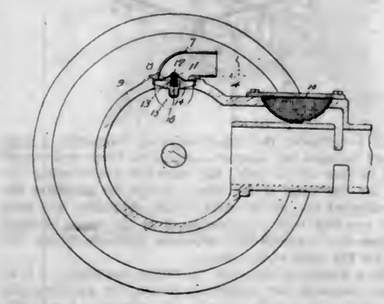
1,226,869. CHAIN-RELEASE FOR LOGGING-CARS. JOHN DODD, Port Arthur, Tex. Filed Oct. 14, 1916. Serial No. 125,661. (Cl. 214—5.)



The combination with a car sill, and a holding loop outstanding from one side thereof adjacent one end, of a pivot bolt outstanding from said side adjacent the other end, an upwardly and outwardly inclined brace integral with the outer end of the pivot bolt and secured to the sill, a dog pivotally mounted upon said bolt and having a forked upper end extended normally in a horizontal direction inwardly from the bolt, a bar pivotally connected to the lower portion of the dog and mounted for sliding movement in the holding loop, said bar having a notch for the reception of the loop to hold the dog against swinging movement in one direction, and a chain secured at one end to the loop and adapted to engage the forked portion of the dog.

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1,226,870. INTERNAL-COMBUSTION ENGINE. CHARLES E. DURYEA, Saginaw, Mich. Original application filed Apr. 28, 1910, Serial No. 558,235. Divided and this application filed Feb. 23, 1912. Serial No. 679,375. (Cl. 103—66.)



1. In a high speed gas engine, a rockingly-mounted large, light sheet metal valve of approximately conoidal shape with its apex above its seat, said valve having its rocking support at the apex of the cone, said valve having flanges in a plane to insure accuracy of seating.

2. In a high speed gas engine, a rockingly-mounted large, light sheet metal valve of approximately conoidal shape with flanges in a plane to insure accuracy of seating, the conoid head being hardened with the apex of the cone above the valve seat, said valve having its rocking support at said apex.

3. In a gas engine, a rockingly-mounted large, light sheet metal valve having a conoid head with depression, said valve having the apex of the cone above the valve seat, and the rocking support of said valve being at said apex, a hollow stem separate from said valve and having an end conforming to and engaged in said depression, a guide for said stem, and a spring extending into said guide and stem.

4. In a gas engine, a rockingly-mounted large, light sheet metal valve having conoidal head and lateral flanges, a stem therefor supporting said valve and forming a rocking rest therefor, said valve having the apex of the cone above the valve seat, and the rocking support of said valve being at said apex, said stem being tubular and independent of the valve, a relatively fixed spider with tubular guide for said stem and within which it is received, and a spring in said stem and guide and bearing against the ends thereof.

5. In a gas engine, a rockingly-mounted large, light sheet metal valve having conoidal head and lateral flanges, a stem therefor supporting said valve and forming a rocking rest therefor, said valve having the apex of the cone above the valve seat, and the rocking support of said valve being at said apex, said stem being tubular and independent of the valve, a relatively fixed spider with tubular guide for said stem and within which it is received, and a spring in said stem and guide and bearing against the ends thereof, said spider bore having an axial vent to allow of the escape of oil and to insure free action of the valve stem.

[Claim 6 not printed in the Gazette.]



1,226,871. LIQUID-FUEL BURNER. CHARLES T. EDMONDS, Drumright, Okla., assignor of one-half to Robert L. Cochran, Drumright, Okla. Filed Jan. 8, 1916, Serial No. 71,046. Renewed Mar. 15, 1917. Serial No. 155,091. (Cl. 158—56.)

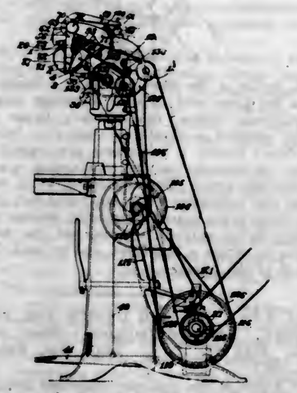


1. A burner comprising a perforated shell, a baffle cap upon the inner end thereof, a mixing tube screw-threaded upon the outer end of the said shell and extending axially therein and having an open inner end spaced from the said cap, a steam jacket provided with a nozzle screw-threaded within the outer end of the said tube and terminating in a contracted discharge opening within the said tube, a steam supply pipe communicating with the said jacket, and an oil supply pipe tapped into the outer end of the said jacket.

2. A burner comprising a perforated shell, a baffle cap upon the inner end thereof, a mixing tube screw-threaded upon the outer end of said shell and extending axially therein and having an open inner end spaced from the said cap, a steam jacket provided with a nozzle screw-threaded within the outer end of the said tube and terminating in a contracted discharge opening within the said tube, a steam supply pipe communicating with the said jacket, a nipple axially positioned within the said jacket and nozzle and having a contracted outlet and positioned within the said nozzle and spaced from the nozzle outlet, a lock nut connecting the said nipple and jacket, the said nozzle having a curved enlarged outer end, and an oil supply pipe connected to the said enlarged end of the nipple.

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1,226,872. INSEAM-TRIMMING MACHINE. ANDREW EPPLER, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 23, 1916. Serial No. 86,207. (Cl. 12—82.)



1. An inseam trimming machine, having in combination, a rotary trimming knife, work guiding and feeding members coöperating with the knife, and mechanism for supporting the knife having provision for adjustment in a direction inclined to the axis of the knife and in a direction substantially parallel to the axis of the knife.

2. An inseam trimming machine, having in combination, a rotary trimming knife, a feed roll, a guide roll coöperating with the feed roll, a head supporting the guide roll, an actuating lever, and connections between the head and actuating lever having provision for adjustment to vary the angular position of the head with relation to the lever.

3. An inseam trimming machine, comprising a rotary trimming knife, a presser roll engaging beneath the welt, a lever supporting the presser roll, a treadle rod, and an intermediate lever connecting the treadle rod and presser roll lever to actuate the latter upon a depression of the treadle rod.

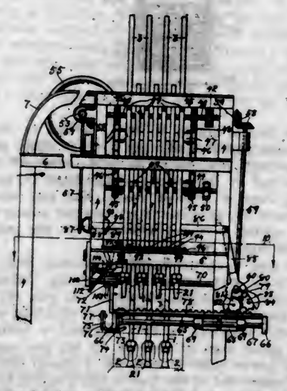
4. An inseam trimming machine, comprising, a rotary trimming knife, a feed roll, a presser roll coöperating therewith, a guide roll engaging in the channel of the shoe, a treadle rod, an actuating lever connecting the treadle rod and guide roll, a pivoted lever carrying the presser roll upon one end, and connections between the presser roll lever and treadle rod to swing the lever about its fulcrum and cause a movement of separation of the presser roll lever and guide roll upon a depression of the treadle rod.

5. An inseam trimming machine, comprising, a rotary trimming knife, a grinding disk supported in operative relation to the knife, means for rotating the grinding disk, and mechanism operated thereby for imparting a reciprocatory movement to the disk.

[Claims 6 to 18 not printed in the Gazette.]

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1,226,873. CONCRETE-BLOCK MACHINE. FRANK H. FOLDEN, Des Moines, Iowa. Filed Sept. 3, 1915. Serial No. 48,835. (Cl. 25—41.)



1. In mechanism of the kind described, the combination of two rows of vertically acting tamper bars disposed in laterally-spaced relation, detent bars disposed across the space, each detent bar athwart a pair of tamper bars one of the pair being in each row, and an inclined topped lug on the side of each tamper bar adjacent to the detent bars.

2. In mechanism of the kind described, the combination of two rows of tamper bars disposed in spaced relation and the bars spaced in the rows, detent bars disposed across, each athwart a pair of tamper bars, one in each row, guide rods disposed transversely through the detent bars, fixed collars mounted on the guide rods intermediately of the detent bars, coil springs interposed on the guide rods between the collars and the detent bars, and downwardly hooked lugs on the tamper bars to engage the detent bars.

3. In mechanism of the kind described, the combination with vertically disposed and reciprocating tamper bars

having engagement lugs, of horizontal detent bars disposed athwart the tamper bars and laterally shiftable out of and into the paths of the lugs, longitudinally-reciprocating guide rods disposed transversely through the detent bars, a yielding connection of the detent bars to the guide rods and a head-bar connected to the guide rods.

4. In mechanism of the kind described, the combination of two rows of vertically-endwise reciprocating tamper bars disposed in laterally spaced relation, each row consisting of two series of tamper bars, the individual bars of each series disposed alternately with the bars of the other series in spaced relation throughout the row, and tamper butts on the tamper bars of each series, peculiar to the service of that series and different from the butts on the bars of the other series in the row, support lugs on the tamper bars, a series of horizontal detent bars each bar disposed across the space between the rows of tamper bars and its ends set to engage the lugs of corresponding tamper bars in like series of opposite rows and this series of detent bars connected to simultaneously detain or release all the tamper bars of like series in both rows, and a like series of detent bars of the same construction and connection disposed to detain or release all the tamper bars of the other series in both rows.

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1,226,874. HAND-STAMP. HARRY S. FOLGER and TOREY ROSS, Chicago, Ill. Filed Oct. 23, 1914. Serial No. 868,149. (Cl. 101—103.)



1. An ink pad, a stamp, a spring acting to normally hold the stamp and pad adjacent to each other and out of inking contact, said spring being so arranged that it will be deflected by the weight of the hand to permit a brief inking contact between stamp and pad when the stamp is picked up, and manually operated means for deflecting the spring a second time to move the pad laterally from the face of the stamp.

2. A pad and a stamp having a pivotal and sliding connection with each other, and a spring action upon both the pivotal and sliding movements to hold the stamp and pad in line with each other and out of inking contact.

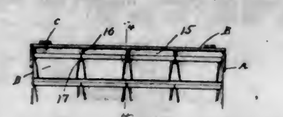
3. A frame consisting of two legs and a bridge connecting the upper ends of the legs, an ink pad supported between the lower ends of the legs, a stamp pivoted in slots in the upper end of the frame, and a spring acting to hold the printing face of the stamp adjacent to but slightly removed from the face of the ink pad.

4. A frame consisting of two legs and a bridge connecting the upper ends of the legs, a box secured between the lower ends of the legs, an ink pad in the box, a stamp pivoted in the upper end of the frame, a spring acting to turn the stamp on its pivots, a stop for limiting such movement so that the stamp will be normally held over the pad and out of inking contact therewith, and means by which the stamp may be manually moved to inking contact with said pad.

5. The combination with a stamp and a handle therefor, of pivots secured to the stamp by the handle, a frame providing bearings for the pivots, an ink pad supported in the frame, and means by which the stamp is normally held adjacent to the pad but out of inking contact therewith.

[Claims 6 and 7 not printed in the Gazette.]

1,226,875. FRUIT-PROTECTING DEVICE FOR BERRY-CRATES. HARRY C. FOOKS, Salisbury, Md. Filed Apr. 29, 1916. Serial No. 94,380. (Cl. 217—40.)



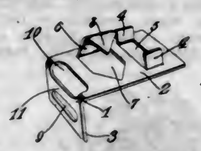
1. A fruit crate having a hinged lid, and berry receptacles stacked in said crate, in combination with a fruit protective frame comprising a bar of a length equal to the length of the crate, interior measurement, said bar having cross pieces connected therewith, equidistantly spaced and of a length equal to the width of the crate, interior measurement, said frame being disposed above the top layer of fruit containers with the lower faces of the bar and cross pieces in engagement with the top edges of the containers, the top edges of the bar and cross pieces being directly engaged by the lid when the latter is closed.

2. A fruit crate having a hinged lid, and berry receptacles stacked in said crate, in combination with a fruit protective frame comprising a bar of a length equal to the length of the crate, interior measurement, said bar having cross pieces connected therewith, equidistantly spaced and of a length equal to the width of the crate, interior measurement, said frame being disposed above the top layer of fruit containers with the lower faces of the bar and cross pieces in engagement with the top edges of the containers, the top edges of the bar and cross pieces being directly engaged by the lid when the latter is closed; the cross pieces being provided adjacent to the ends thereof with downwardly extending pins constituting guides adapted to enter the spaces between the fruit containers.

3. A frame constituting a fruit protector for berry crates, said frame comprising a longitudinally disposed center bar and a plurality of cross pieces connected therewith and forming laterally extending arms, said arms being provided adjacent to the ends thereof with downwardly extending pins constituting guide members.

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1,226,876. BALING-TIE BUCKLE. GEORGE W. FURTH, Cleveland, Ohio. Filed Mar. 31, 1914. Serial No. 828,601. (Cl. 24—23.)



In a device of the class described, a buckle fashioned from a flat plate bent to form angularly disposed main and auxiliary flanges, the auxiliary flange having an aperture adapted to retain one end of a bale-band, the main flange having a transverse arm struck therefrom to define an opening, the arm terminating in a depending band-piercing prong extending downwardly through the opening and projecting below the lower face of the main flange, there being spaced upstanding fingers struck from the main flange adjacent its free end, the fingers being bendable to retain a bale-band, and to hold the band in the path of the prong.

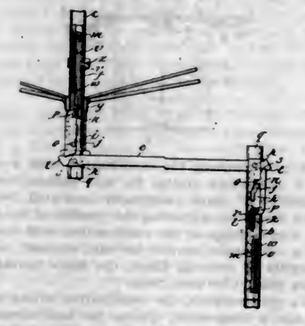
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1,226,877. FOLDING DEVICE FOR UMBRELLA-STICKS. HEINRICH GAUTSCHI, Basel, Switzerland. Filed June 22, 1914. Serial No. 846,561. (Cl. 135—46.)

In a device of the character described the combination of a stick consisting of two hollow connected sections, a connection for both sections, sliding pieces in the adjacent



ends of the sections, an adjusting tongue in each sliding piece, grooves in said pieces and pins on said tongues sliding in said grooves, longitudinally and transversely acting springs for controlling said tongues, a slit in each section of said stick and a notch in the connection of both sections adapted to receive said tongues under the action of said longitudinally acting springs when the



umbrella is opened, projecting portions on said tongues whereby the tongues may be pushed inwardly against said transversely acting springs for allowing the other end to be swung out of the notch of the connecting part for allowing the closure of the umbrella, substantially as described.

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1,226,878. MEANS FOR SECURING SHIPS' HATCH-COVERINGS. JOSEPH LUNT GORDON, Liverpool, England. Filed Apr. 24, 1916. Serial No. 93,344. (Cl. 114—203.)



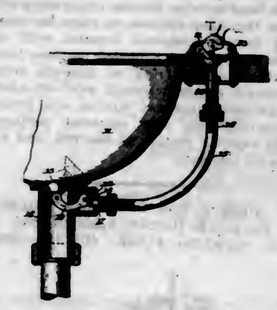
1. Apparatus for securing ships' hatch coverings comprising, in combination, a hatch coaming, a series of vertically movable bar elements extending around the hatch coaming, a series of links pivoted to the coaming and adapted to move the bar elements, movable rods coupling the links together, an overhanging flange or abutment on the coaming, a flexible cover, and screw mechanisms carried on the bar elements controlling the movement of the rods.

2. In an apparatus for securing ship hatches, a hatch coaming having a horizontally extending flange formed adjacent its upper end, clamping bars disposed under the coaming, pivotal links for connecting the clamping bars to the hatch coaming, means for moving the clamping bars vertically, and means for preventing lateral movement of the clamping bars.

3. A securing device for securing flexible ship hatch coverings, a flanged hatch coaming, clamping bars having elongated slots, pivoted connecting links for connecting the clamping bars to the coaming, each link having a pin adapted to ride in the respective slots, means for operating the clamping bars, and means for causing said bars to move vertically into clamped engagement with the flange of the hatch coaming.

4. In a hatch covering securing means, in combination with a hatch coaming having a flange adjacent its upper end, clamping bars, pivotal links for connecting the clamping bars to the hatch coaming, means for operating the clamping bars, depending arms carried by the clamping bars, and means on the hatch coaming through which the arms pass for causing the clamping bars to move vertically when the clamping bars are operated.

1,226,879. WASHSTAND. WILLIAM S. HAMM, Hubbard Woods, and THOMAS A. LEGGE and NELS KROHN, Chicago, Ill., assignors to The Adams & Westlake Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 19, 1914. Serial No. 813,028. (Cl. 4—24.)



1. In combination, a wash bowl having a waste opening and pipe, a valve loosely seating downwardly in the opening, a curved arm pivoted within a lateral recess in the waste pipe, its free arm being pivotally attached to the valve, a shoulder on the end below its pivot for engagement by a push rod, a tube leading to the valve casing, and a coiled shaft reciprocable in the tube and having a plunger engageable with the shoulder.

2. In a washstand, in combination, a table, a bowl having a waste pipe, a valve seated in the receiving end of the pipe and openable upwardly, a lever pivoted in a lateral extension of the pipe and bearing upwardly on the valve and having a shoulder, a tube leading through the table to the lateral extension, a flexible shaft slidable in the tube and withdrawable therefrom and having engageable relation with the lever shoulder, a removable cap covering the upper end of the tube, a hand lever pivoted in the cap, and a link connecting the lever with the shaft.

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1,226,880. RIM AND TIRE FOR WHEELS. JOHN S. HARRIS, St. Louis, Mo. Filed Apr. 19, 1915. Serial No. 22,393. (Cl. 152—8.)



1. A combined tire and rim, comprising a rim including an annular portion and a circumferential flange, in combination with a tire comprising a series of resilient elements independently attached to said flange and each composed of a section of resilient material formed to provide a semi-circular portion coöperating with similar portions on the other sections to form the complete tire, radial extensions integral with each semi-circular portion, parallel extended portions integral with said radial extensions attached to opposite sides of said flange, and a cover for said series of elements.

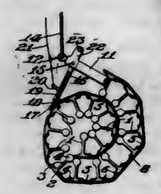
2. A combined tire and rim, comprising a rim including an annular portion and a circumferential flange, in combination with a tire comprising a series of resilient elements each composed of a section of resilient material including a semi-circular portion coöperating with similar portions on the other sections to form the complete tire, converging radial extensions integral with each semi-circular portion, parallel extended portions integral with said radial extensions and bearing against opposite sides of said flange, devices passing through said extended

portions and through said flange and binding said parts together, and a cover for said series of elements.

3. A combined tire and rim, comprising a rim including an annular portion and a circumferential flange, in combination with a tire comprising a series of resilient elements each composed of a section of resilient material including a semi-circular portion coöperating with similar portions on the other sections to form the complete tire, converging radial extensions integral with each semi-circular portion, parallel extended portions integral with said radial extensions lying on opposite sides of said flange, elements passing through said extended portions and through said flange and binding said parts together, lateral extensions on said extended portions bearing against the annular portion of the rim, and a cover for said series of elements.

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1,226,881. DEVICE FOR COVERING HOLES IN VESSELS. THOMAS R. HAYTON, Appleton, Wis. Filed July 26, 1915. Serial No. 41,822. (Cl. 114—229.)



1. A device of the class described comprising a series of parallel ribs having flanged bases, and flexible strips secured to the upper sides of adjacent flanges and uniting them in spaced relation.

2. A device of the class described comprising a series of parallel ribs having flanged bases connected in spaced relation by flexible metallic strips, an engaging member secured to said device, an arm also secured thereto and having a releasable catch adapted to coöperate with said engaging member when said device is rolled upon itself, and a line operatively connected to said catch and adapted to be pulled for releasing the engagement fo said catch with said engaging member to permit said device to unroll.

3. In a device of the class described, an apron comprising a series of parallel bulb steel ribs having flanged bases, and flexible metallic strips secured at their edges to opposing flanges.

4. In a device of the class described, an apron comprising a series of parallel ribs having flanged bases, flexible strips connected at their edges to opposing flanges and maintaining them in separated relation, and strips of packing material interposed between said flexible strips and the surface of said flanges.

5. In a device of the class described, in combination with a flexible apron comprising flexibly-connected ribs having flanged bases and outwardly-projecting webs provided with circular heads, releasable means for holding said apron roller upon itself with the headed ends of its ribs extending inward, and an inflatable pipe secured on the operating face of said apron extending around the edge thereof and provided with an extension for permitting its inflation.

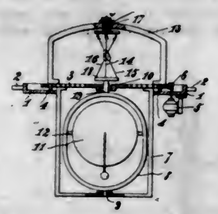
[Claims 6 to 8 not printed in the Gazette.]

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1,226,882. GYRO-COMPASS. JAMES BLACKLOCK HENDERSON, Lee, England. Filed Jan. 22, 1917. Serial No. 143,681. (Cl. 74—78.)

1. A suspension system for the sensitive element of a gyro-compass comprising at least one element giving torsional stability to the sensitive element about its vertical axis, another system of elements giving torsional instability to the sensitive element about its vertical axis, and means for adjusting the relative stability or instability.

2. In a gyro-compass the combination with a sensitive element of a suspension system for said element consisting of at least one vertical filar and a plurality of filars inclined to the vertical.



5. In a gyro-compass, the combination with a sensitive element, a suspension system for said element consisting of a plurality of filars electrically insulated from each other, and means for adjusting the tension of the filars.

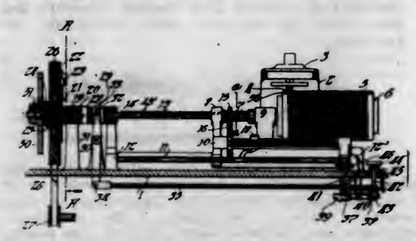
11. In a gyro-compass, the combination with a sensitive element, a suspension system for said element consisting of a plurality of crossing filars, the filars having means preventing contact between them.

13. In a gyro-compass, the combination with a sensitive element and a suspension system for said element consisting of a plurality of filars electrically insulated from each other.

[Claims 3, 4, 6 to 10, and 12 not printed in the Gazette.]

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1,226,883. COMBINED PHONOGRAPH AND MOVING-PICTURE APPARATUS. DANIEL HIGHAM, New York, N. Y. Filed May 17, 1912. Serial No. 697,839. (Cl. 88—16.2.)



1. In a device of the class described, the combination of a rotatable support, driving means, power transmitting means connected with said driving means and comprising a plurality of yieldably connected members, and means for operatively connecting said power transmitting means to or for disconnecting the same from said support, substantially as described.

2. In a device of the class described, the combination of a rotatable record support, a shaft connected therewith for rotating the same, driving means, power transmitting means connected with said driving means and comprising a plurality of yieldably connected members, and means for operatively connecting said power transmitting means to or for disconnecting the same from said shaft, substantially as described.

3. In a device of the class described, the combination of a rotatable record support, a shaft connected therewith for rotating the same driving means including a pivoted member, power transmitting means connected with said driving means and comprising a plurality of yieldingly and frictionally connected members, and means for operatively connecting said power transmitting means to or for disconnecting the same from said shaft, substantially as described.

4. In a device of the class described, the combination of a rotatable record support, a shaft connected therewith for rotating the same, driving means, power transmitting means connected with said driving means and comprising a plurality of yieldably connected members, and a clutch for operatively connecting said power transmitting means to or for disconnecting the same from said shaft, substantially as described.

5. In a device of the class described, the combination of a rotatable record support, a shaft connected therewith for rotating the same, driving means, power transmitting means connected with said driving means and comprising a plurality of yieldably and frictionally connected members, and a clutch for operatively connecting said power transmitting means to or for disconnecting the same from said shaft, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]



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1,226,884. INK AND PROCESS FOR PRODUCING SAME. ROBERT HOCHSTETTER, Cincinnati, Ohio, assignor to The Ault & Wiborg Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 11, 1914. Serial No. 871,464. (Cl. 134—28.)

1. An ink for mimeographs and the like, comprising, a pigment, a sulfonated oil and glycerin and a gum varnish, substantially in the proportions described.

2. An ink for mimeographs and the like comprising a pigment, a sulfonated oil and glycerin, to which is added a gum varnish, the varnish being thoroughly mixed with and ground into the other ingredients of the ink, the ingredients being substantially in the proportions described.

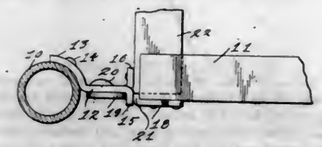
3. An ink for mimeographs and the like consisting of an ink of the kind described comprising a pigment, a sulfonated oil and glycerin, substantially in the proportions described, to which has been added about 5% by weight of a gum varnish, the gum varnish being thoroughly ground into and mixed with the ink.

4. An ink for mimeographs and the like consisting of an emulsion of gum varnish and a mimeograph ink of the kind described containing a pigment, a sulfonated oil and glycerin, the ingredients of the ink being substantially in the proportions described.

5. The process of producing an ink for mimeographs and the like which consists in grinding a pigment, a sulfonated oil and glycerin, then mixing therewith a gum varnish, all substantially in the proportions described, then grinding the gum varnish thoroughly into the ingredients of the ink to form an emulsion.

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1,226,885. CORNER-FASTENER FOR IRON BEDS. ALEXANDER E. HOENE, Tacoma, Wash. Filed May 12, 1915. Serial No. 27,650. (Cl. 5—55.)

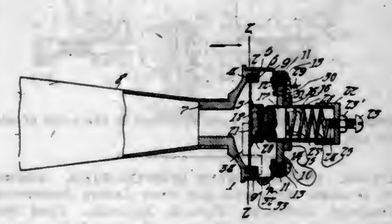


A corner fastening for the side rail of a metal bed comprising a plate secured to one of the head posts of the bed and having an inclined wedge slot formed vertically therein, and oppositely directed lateral lugs on the free vertical edge thereof, and a rail carried plate having a pair of lateral lugs directed on the same side of the free vertical edge of the plate and arranged to engage with certain of the lugs of the first plate, and an off set head having a headed pin for engagement in the inclined slot, the remaining lug of the first plate being secured to the transverse rail of the head of the bed.

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1,226,886. TELEPHONE-TRANSMITTER. NEWMAN H. HOLLAND, West Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed May 13, 1913. Serial No. 767,261. (Cl. 179—124.)

1. In a microphone transmitter, the combination of an electrode arranged to vibrate in accordance with pulsations transmitted thereto, a second electrode movable relatively to said first named electrode, granular conductive material between said electrodes, means pressing said second electrode toward said first named electrode to compress said material between said electrodes, and pneumatic means tending to prevent vibration of said second electrode upon the vibration of said first named electrode, substantially as described.



2. In a microphone transmitter, the combination of an electrode arranged to vibrate in accordance with pulsations transmitted thereto, a second electrode movable relatively to said first named electrode, granular conductive material between said electrodes, means pressing said second electrode toward said first named electrode to compress said material between said electrodes, and means coacting with said second electrode to form a pneumatic dash pot tending to prevent vibration of said second electrode by the vibration of said first electrode, substantially as described.

3. In a microphone transmitter, the combination of an electrode arranged to vibrate in accordance with sound waves, a second electrode movable toward and away from said first named electrode, granular conductive material between said electrodes, and pneumatic means for preventing vibrations of said second electrode by the vibration of said first named electrode, substantially as described.

4. In a microphone transmitter, the combination of an electrode arranged to vibrate in accordance with pulsations transmitted thereto, a second electrode movable relatively to said first named electrode, and means coacting with said second electrode to form a pneumatic dash pot for preventing vibration of said second electrode by the vibration of said first named electrode, substantially as described.

5. In a microphone transmitter, the combination of an electrode arranged to vibrate in accordance with pulsations transmitted thereto, a second electrode movable relatively to said first named electrode, one of said electrodes having a pocket or cell extending close to the other electrode, granular conductive material filling said pocket or cell, means coacting with said electrodes to prevent individual movement of the particles of said material upon the vibration of said first electrode, and pneumatic means tending to prevent vibration of said second electrode by the vibration of the first electrode, substantially as described.

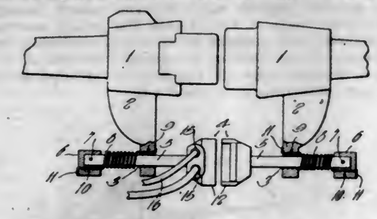
[Claims 6 to 15 not printed in the Gazette.]

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1,226,887. COMBINED CAR AND PIPE COUPLING. MILAN HRNICH, Conemaugh, Pa., assignor of one-half to Rafoelo Goyssovich, Conemaugh, Pa. Filed Oct. 9, 1916. Serial No. 124,591. (Cl. 188—13.)

The combination with a pair of car coupling heads; of rigid arms depending from said heads and having circular guide openings formed therethrough, a pair of coupling heads spaced outwardly from said arms in advance of the openings thereof, cylindrical shanks for said heads extending slidably and rotatably through the aforesaid openings to points spaced in rear of said arms, caps secured to the inner ends of said shanks and having bores parallel therewith, the lower ends of said arms also hav-

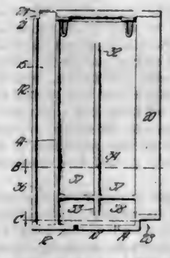
ing bores parallel with said shanks, and coiled springs surrounding said shanks between the arms and caps, said



springs having straight ends anchored in the bores of said arms and caps.

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1,226,888. INTERLOCKING ROOFING-TILE. GODFREY P. HUGHES, Melbourne, and JOHN LESLIE ARMSTRONG, Caulfield, Melbourne, Victoria, Australia. Filed Mar. 6, 1917. Serial No. 152,859. (Cl. 108—10.)



1. An improved interlocking roofing tile, having a plain uninterrupted upper face splayed or inclined upwardly from the top portion to the bottom of the tile where it terminates flush with a plain uninterrupted horizontal nosing, in combination with means for interlocking the tile to adjacent tiles.

4. An improved interlocking roofing tile, having a plain uninterrupted upper face splayed or inclined upwardly from the top portion to the bottom of the tile where it terminates flush with a plain uninterrupted horizontal nosing, the underneath face of the tile being splayed parallel with the upper face, the said underneath face having a central longitudinal reinforcing rib, the upper and lower ends of which are flush with the lower face of the tile and an outset to said longitudinal reinforcing rib forming an obtuse angle, said outset being provided with means to accommodate tie wires in combination with means for interlocking the tile to adjacent tiles.

[Claims 2 and 3 not printed in the Gazette.]

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1,226,889. PAINT AND PROCESS OF MAKING SAME. JACQUES JACOBS, Maastricht, Netherlands. Filed Mar. 7, 1916. Serial No. 82,552. (Cl. 134—51.)

1. A process for the manufacture of a preservative covering, which process consists in mixing air-slaked shell-lime with a dry bituminous binding material and a solvent, substantially in the proportions described.

2. A process for the manufacture of a preservative covering, which process consists in mixing 2–24 parts by weight of air-slaked shell-lime with 20–90 parts by weight of a dry bituminous binding material and a solvent.

3. A process for the manufacture of a preservative covering, which process consists in first exposing shell-lime to air in a covered space until it is slaked, and then mixing 2–24 parts by weight thereof with 20–90 parts by weight of a bituminous material not containing any water and with a solvent.

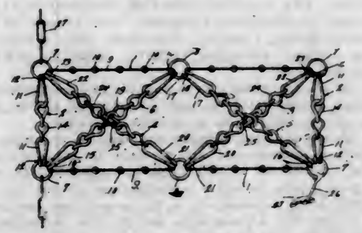
4. A process for the manufacture of a preservative covering, which process consists in first exposing shell-lime to air in a covered space until it is nearly slaked, and then mixing 2–24 parts by weight thereof with 20–90 parts by weight of a bituminous material not containing any water and with a solvent.

5. As a new article of manufacture, a preservative covering composed of air-slaked shell-lime, a bituminous binding material, and a solvent, substantially in the proportions described.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,890. NON-SKID AUTO-CHAIN. THOMAS MARVIN JARRELL, High Point, N. C., assignor of one-half to William D. Simmons, High Point, N. C. Filed Oct. 28, 1916. Serial No. 128,245. (Cl. 152—14.)



1. A tire protector embodying side chains; tie chains connecting the side chains at intervals and disposed substantially at right angles to the side chains; and crossed chains connecting the side chains between the tie chains, one of the crossed chains embodying twisted links, the other of the crossed chains including twisted links and a flat loop-shaped link connecting the said twisted links, the flat loop-shaped link passing through one of the twisted links of the first specified crossed chain.

[Claims 2 and 3 not printed in the Gazette.]

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1,226,891. MEANS FOR ATTACHING BAITS TO LINES. JAMES WILLIAM JAY, Philadelphia, Pa. Filed Sept. 2, 1916. Serial No. 118,259. (Cl. 43—7.)



1. A device of the character described, comprising a shank and an eye carried thereby, said eye including a looped portion, and the material out of which the shank is formed being continued across and around the shank from the looped portion and extending within the latter.

2. A device of the character described, comprising a shank and an eye carried thereby, said eye including a looped portion, and the material out of which the shank is formed being continued across and around the shank from the looped portion and terminating within the latter with the extremity protruding through and beyond the looped portion.

3. A device of the character described, comprising a shank and an eye carried thereby, the eye including a looped portion and the substance out of which the same is formed being continued past the loop on one side of the shank, thence around the shank, and turning transversely with the extremity extended into the looped portion.

4. A device of the character described, comprising a shank and an eye carried thereby, the eye including a looped portion and the substance out of which the same is formed being continued past the loop on one side of the shank, thence around the shank, and turning transversely with the extremity extended into the looped portion, all



of said parts being spaced from and out of contact with each other, as and for the purpose set forth.

5. A device of the character described, comprising a shank, the metal out of which the shank is formed being returned upon itself at one end to form a loop, and extended across the shank at one side thereof, thence around the shank and finally terminating with a curved end extending substantially at right angles to the plane of the loop and with its extremity mounted within and protruding beyond the loop, as and for the purpose set forth.

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1,226,892. METHOD OF MAKING ABRASIVE MATERIAL. HERBERT T. KALMUS, Brookline, Mass., assignor to The Exolon Company, Cambridge, Mass., a Corporation of Massachusetts. Filed May 7, 1915. Serial No. 26,626. (Cl. 204—64.)

1. The method of making abrasive material which consists in fusing the substance of extremely high melting point or substances from which the abrasive material is to be formed and cooling the fused substance by pouring it in a slender stream and solidifying it in layers of small ratio of mass to superficial area.

2. The method of making abrasive material which consists in fusing aluminous material and cooling the fused material by pouring it in a slender stream and solidifying it in layers of small ratio of mass to superficial area.

3. The method of making abrasive material which consists in fusing the substance of extremely high melting point o rsubstances from which the material is to be formed and cooling the fused substance by pouring it in layers and allowing it to cool layer by layer.

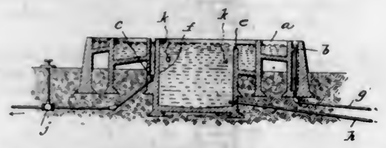
4. The method of making abrasive material which consists in fusing aluminous material and cooling the fused material by pouring it in layers and allowing it to cool layer by layer.

5. The method of making abrasive material which comprises fusing the substance or substances from which the material is to be formed in an electric furnace, and in cooling the material upon a cooling receiver by pouring the material from the furnace upon the receiver and relatively moving the furnace and the receiver during the pouring operation to distribute the material in a thin layer.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,893. SEDIMENTATION-BASIN. FRED W. KEENEY and JOSEPH M. PERKINS, Oklahoma, Okla. Filed Dec. 12, 1916. Serial No. 136,448. (Cl. 210—5.)



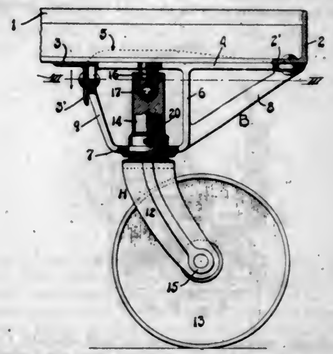
1. In an apparatus of the class set forth, a sedimentation channel having an overflow or discharge point and being spirally arranged and increasing in width and depth as well as inclining downwardly from its inlet end to its overflow or discharge point.

[Claims 2 to 4 not printed in the Gazette.]

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1,226,894. TRUCK-BEARING. FRANK G. KOEHLER, St. Louis, Mo. Filed Mar. 16, 1916. Serial No. 84,604. (Cl. 21—65.)

1. A device of the character described comprising a wheel holder, a wheel carried by said wheel holder, a stem extending upwardly from said wheel holder, a bearing frame having a lower bearing through which said stem extends and a downwardly extending thrust member at a point above said lower bearing, the upper end of said stem being provided with a pocket for the reception of said thrust member, and said stem being rotatably fitted to said lower bearing and thrust member, and a ball arranged in said pocket between the lower end of said thrust member and a portion of said stem, both of the last mentioned parts being fitted to said ball.



2. A device of the character described comprising a wheel holder, a wheel carried by said wheel holder, a stem extending upwardly from said wheel holder, and a bearing device having a lower bearing through which said stem extends and a downwardly extending thrust pin at a point above said lower bearing, the upper end of said stem being provided with a pocket for the reception of said downwardly extending thrust pin, and said stem being rotatably fitted to said lower bearing and thrust pin.

3. A device of the character described comprising a wheel holder, a wheel carried by said wheel holder, a stem extending upwardly from said wheel holder; and a bearing frame having an upper frame member provided with a thrust bearing, a lower bearing member below said upper frame member, said stem being rotatably fitted to said lower bearing member and thrust bearing, and thrust arms extending upwardly from opposite sides of said lower bearing member to the upper frame member to provide for the transmission of stresses to said upper frame member.

4. A device of the character described comprising a wheel holder, a wheel carried by said wheel holder, a stem extending upwardly from said wheel holder; and a bearing frame in the form of a single casting having an upper frame member provided with a thrust bearing, a lower bearing member below said upper frame member, said stem being rotatably fitted to said lower bearing member and thrust bearing, a front thrust arm extending upwardly from the front of said lower bearing member to said upper frame member, and a rear thrust arm extending upwardly from the rear of said lower bearing member to said upper frame member, said thrust arms being formed integral with said lower bearing member and upper frame member.

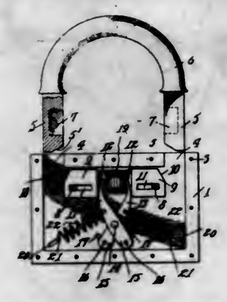
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1,226,895. KEYLESS PADLOCK. JAMES LANDEEN, Sidney, Ohio. Filed Sept. 12, 1916. Serial No. 119,681. (Cl. 70—108.)

1. A lock of the character described comprising, a casing having a plurality of obliquely disposed slots formed in its side walls, a shackle having each of its ends disposed within the casing, means for locking the said ends of the shackle within the casing, and operating means arranged upon the exterior of the casing and including pins extended through some of the said slots and connected to the said locking means, other of said slots carrying pins having buttons fastened thereto ostensibly for the purpose of operating the said lock.

4. A lock of the character described comprising a casing, a shackle having its ends projected into the casing, a pair of latches slidably mounted and adapted to engage

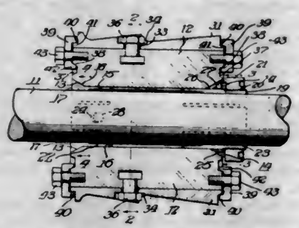
the ends of the said shackle, the said latches having keepers carried by their proximate ends, operating means pivotally mounted and adapted to coöperate with the said keepers for moving the latches toward or away from each other whereby they will disengage or engage the ends of the said shackle, and means for holding the said latches in engagement with the said ends and including a



pair of coil springs connected to said operating means, and a plurality of buttons mounted upon the casing, some of said buttons being connected to the operating means and the other buttons joined to the opposite terminals of the said coil springs, ostensibly for the purpose of forming a part of the operating means.

[Claims 2 and 3 not printed in the Gazette.]

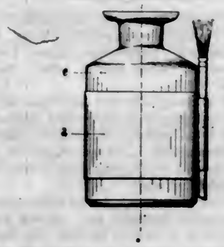
1,226,896. PROFILE CUTTER-HEAD. FRANKLIN L. LANE, Beloit, Wis., assignor to P. B. Yates Machine Company, Beloit, Wis., a Corporation of Wisconsin. Filed Sept. 20, 1915. Serial No. 51,540. (Cl. 74—8.)



1. The combination with a shaft and a body to be clamped thereon, said body having a central bore with a beveled approach at each end, and a sleeve adapted for insertion within the bore about the shaft and having one end enlarged with a beveled face to coöperate with the beveled approach at that end of the bore and threaded at the other end, a collar encircling the threaded end of the sleeve and having a beveled face to coöperate with the beveled approach at that end of the bore, the sleeve and collar being longitudinally slotted to lend contractibility, and a nut threaded on the sleeve exterior to the collar, the nut serving to force the beveled faces of the collar and sleeve toward each other and into coöperative engagement with the beveled approaches to the bore, whereby to contract the sleeve upon the shaft.

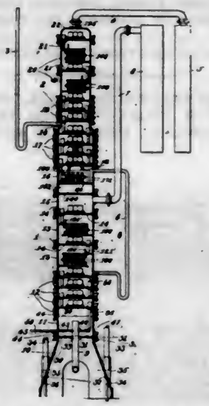
2. The combination with a shaft and a body to be clamped thereon, said body having a central bore with a beveled approach at each end, and a sleeve adapted for insertion within the bore about the shaft and having one end enlarged with a beveled face to coöperate with the beveled approach at that end of the bore and threaded at the other end, a collar encircling the threaded end of the sleeve and having a beveled face to coöperate with the beveled approach at that end of the bore, and a nut threaded on the sleeve exterior to the collar, the sleeve being slotted at its end to lend contractibility and the collar likewise being slotted, and a stud on the collar arranged to engage within a slot in the beveled approach to the bore to prevent relative rotation of the body and collar.

1,226,897. LABEL FOR BOTTLES AND OTHER RECEPTACLES. AUGUSTE JEAN BAPTISTE LAUSSEDAT, Paris, France, assignor to La Société "La Cellophane," Paris, France. Filed Mar. 16, 1916. Serial No. 84,741. (Cl. 40—4.)



A label for bottles and other receptacles, comprising a strip or band of sheet material provided at one end with a tongue, and having a transverse slit formed in it close to said tongue, through which slit the tongue is inserted so as to roll up the portion of the strip between the tongue and slit and thereby form a permanent, tubular, transversely-disposed case or holder for carrying an implement to be used in connection with the contents of the bottle; said strip, with its case or holder, adapted to be wound around and pasted flat against the said bottle.

1,226,898. COLUMN FOR DISTILLATION AND THE LIKE. WALTER E. LUMMUS, Lynn, Mass. Filed Aug. 19, 1911. Serial No. 644,927. (Cl. 195—13.)



1. A unit or section for a column or tower of the character described having its upper face planed straight across to leave an upwardly projecting nib on either side of the planed area and having its lower face planed straight across at an angle to the direction of the line of planing of the upper face to leave a downwardly projecting nib on either side of the planed area, whereby when a similarly formed section is placed on the top thereof the two sections are prevented from sliding on one another in any direction.

2. A unit or section for a column or tower of the character described having its upper face planed straight across to leave an upwardly projecting nib on either side of the planed area and having its lower face planed straight across in a direction at right angles to the direction of the plane of the upper face to leave a downwardly projecting nib at either side of the planed area, whereby when a similarly formed section is placed on the top thereof the two sections are prevented from sliding on one another in any direction.



3. A column or unit of the character described having, in combination, a plurality of chambered units of parallelogrammic horizontal cross section placed one above the other to form a series of communicating chambers, each unit having upwardly projecting nibs at the outer edges of two of its opposite sides and having its upper face between said nibs planed straight across in a direction parallel to the sides upon which the nibs are located to form a smooth packing surface, and having downwardly projecting nibs at the outer edges of two of the opposite sides of its lower face and having its lower face between said nibs planed straight across in a direction parallel to the sides upon which the nibs are located to form a smooth packing surface, the sides upon which the downwardly projecting nibs are located being sides adjacent in the parallelogram of cross section to the sides upon which the upwardly projecting nibs are located, packing material placed between the units, said nibs acting both to aline the sections and to retain the packing in place, and bolt holding lugs formed on the units projecting outwardly beyond the outer edges of the flanges for receiving bolts for bolting together adjacent units of the column.

4. A unit or section of parallelogrammic cross section for a column or tower of the character described having its upper and lower faces planed straight across in directions parallel respectively to two of the adjacent sides of the parallelogram of cross section to leave upwardly and downwardly projecting nibs on each of the two opposite sides of the upper and lower faces respectively which lie at the sides of the planed area.

5. A column or tower of the character described having, in combination, a plurality of chambered units or sections placed one above the other to form a series of communicating chambers, each unit having an upwardly projecting nib on each of two opposite sides of its upper face and having its upper face between said nibs planed straight across to form a smooth packing surface, and having a downwardly projecting nib on each of two opposite sides of the lower face and having its lower face between said nibs planed straight across to form a smooth packing surface, packing material placed between the several units and retained in place by the nibs, and means for holding the units assembled in the column.

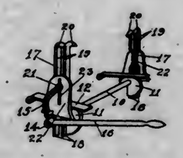
[Claims 6 and 7 not printed in the Gazette.]

1,226,899. TIRE. LEMUEL MCKINNON, Salt Lake City, Utah. Filed May 26, 1916. Serial No. 100,067. (Cl. 152—5.)



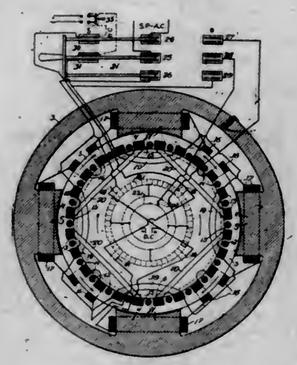
A tire filler comprising a circumscribing strip; and resilient disks through which the strip passes, the disks comprising outer blocks and inner blocks alined radially with the outer blocks, the outer blocks being provided on their inner edges with notches defining lugs and the inner blocks being provided upon their outer edges with notches defining lugs, the notches in the blocks coöperating to form an opening in which the strip is received and secured, the lugs of the inner and outer blocks abutting against each other and being secured together, beyond the lateral edges of the strip.

1,226,900. SHINGLE-BINDING DEVICE. HUGH MCLEAN, Bathurst, New Brunswick, Canada. Filed Feb. 19, 1916. Serial No. 79,422. (Cl. 100—32.)



In a shingle binding device, a frame having a rigid back and hinged face and base formed of longitudinal and cross beams, said longitudinal beams being formed of inner and outer pairs, guide plates having vertical slots and secured to said outer beams, a shaft journaled in said frame, pressure bars having lower legs straddling said shaft and gripping feet at the top ends of the upper legs and pivot pins projecting through said vertical slots, cranks mounted on said shafts, curved links connecting said cranks and said pivot pins, cams mounted on said shaft, cam plates pivotally secured at one end and reaching over said cams and lifter thereby, and a lever secured to one end of said shaft and projecting upwardly therefrom.

1,226,901. SYNCHRONOUS DYNAMO-ELECTRIC MACHINE. SAMUEL H. MARTIN, Chicago, Ill. Filed June 2, 1913. Serial No. 771,172. (Cl. 171—228.)



1. In a device of the class described, an annular magnetic screen comprising a laminated core, in combination with a pair of electrically conductive annular clamping rings disposed on opposite sides of said screen and electrically conductive clamping bars for binding the laminations together between said plates, the laminations and plates being formed with a peripheral series of alternately arranged slots and perforated teeth substantially uniformly distributed, form windings spaced symmetrically on said screen in certain of said slots and connected in series, ring windings disposed in certain of said slots between the first mentioned windings, and closed form windings disposed in certain of said slots on opposite sides of said ring windings, and symmetrically overlap-

ping the first mentioned windings, said bars being housed in said perforated teeth.

2. In a device of the class described, a field system of unitary character comprising a magnetic yoke, pole pieces thereon, and an annular magnetic screen having a peripheral series of closely spaced and substantially uniformly distributed slots and perforated teeth alternately arranged, in combination with electric windings disposed in said slots and teeth respectively.

3. In a device of the class described, a field system of unitary character comprising an annular magnetic screen having a peripheral series of uniformly spaced and transversely disposed slots of like character formed around its inner surface, in combination with a series of windings disposed in said slots.

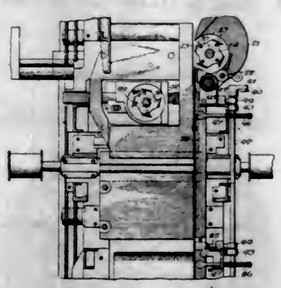
4. In a device of the class described, an annular magnetic screen formed with an inner peripheral series of alternately disposed like teeth and like slots, in combination with damper windings and supplementary magnetizing coils symmetrically disposed within said slots.

5. In a device of the class described, a stationary frame formed with a peripheral yoke having inwardly projecting field poles thereon, an armature journaled concentrically within said poles, and a continuous magnetic screen disposed between said poles and said armature with a suitable air gap for clearance of the armature, said screen being formed with an inner peripheral series of uniformly spaced and alternately arranged teeth and slots, substantially as and for the purpose set forth.

[Claims 6 to 16 not printed in the Gazette.]

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1,226,902. TOOL AND GUIDE ADJUSTMENT. HARRISON J. MITCHELL, Beloit, Wis., assignor to P. B. Yates Machine Company, Beloit, Wis., a Corporation of Wisconsin. Original application filed June 25, 1915, Serial No. 36,167. Divided and this application filed Sept. 25, 1915. Serial No. 52,584. (Cl. 144—130.)



1. In a machine for surfacing material fed thereto, the combination with a laterally supporting guide, of a cutter head provided with tools for acting upon the material, a pivoted bracket bearing for the cutter head shaft arranged to allow the cutter head to swing toward and from the material, yielding means to press the bracket away from the material, manually operable means to adjustably force the bracket toward the material in opposition to the yielding means, and means to adjust the bearing bracket vertically to vary the relation of the cutters to the face of the material.

2. In a machine for surfacing material fed thereto, the combination with a laterally supporting guide, of a cutter head provided with tools for acting upon the material, a pivoted bracket bearing for the cutter head shaft arranged to allow the cutter head to swing toward and from the material, yielding means to press the bracket away from the material, manually operable means to adjustably force the bracket toward the material in opposition to the yielding means, a cam shaft underlying the bracket, a cam on said shaft bearing upwardly against the bracket, and means to rock the shaft whereby to vertically adjust the bracket and cutter head.

3. In a machine for surfacing material fed thereto, the combination with a laterally supporting guide, of a cutter head provided with tools for acting upon the material, a pivoted bracket bearing for the cutter head shaft arranged to allow the cutter head to swing toward and from the material, a spring pressed plunger acting against the inner face of the bracket to yieldingly press the same away from the material, a cam shaft, a cam on said shaft arranged to bear against the bracket, means for rocking said shaft whereby to adjustably force the bracket toward the material in opposition to the spring pressed plunger, a cam shaft underlying the bearing bracket, a cam on said shaft bearing upwardly against the bracket, and means to rock the shaft whereby to vertically adjust the bracket and cutter head.

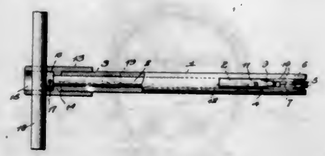
4. In a machine for surfacing material fed thereto, the combination with a laterally supporting guide, of a cutter head provided with tools for acting upon the material, a pivoted bracket bearing for the cutter head shaft arranged to allow the cutter head to swing toward and from the material, yielding means to press the bracket away from the material, manually operable means to adjustably force the bracket toward the material in opposition to the yielding means, a pivotally mounted swinging housing for the cutter head, a coöperating latch and keeper connected with the housing, a collar on said latch, and a spring interposed between the collar and keeper whereby to yieldingly resist the opening movement of the housing.

5. In a machine for surfacing material fed thereto, the combination with a laterally supporting guide, of a cutter head provided with tools for acting upon the material, a pivoted bracket bearing for the cutter head shaft arranged to allow the cutter head to swing toward and from the material, a spring pressed plunger acting against the inner face of the bracket to yieldingly press the same away from the material, a cam shaft, a cam on said shaft arranged to bear against the bracket, means for rocking said shaft whereby to adjustably force the bracket toward the material in opposition to the spring pressed plunger, a cam shaft underlying the bearing bracket, a cam on said shaft bearing upwardly against the bracket, means to rock the shaft whereby to vertically adjust the cutter head, a pivotally mounted swinging housing for the cutter head, a coöperating latch and keeper connected with the housing, a collar on said latch and keeper connected with the housing, a collar on said latch, and a spring interposed between the collar and keeper whereby to yieldingly resist the opening movement of the housing.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,903. EXPANSIBLE TOOL FOR CLEANING COMBUSTION-CYLINDERS. WILLIAM MOISTER, Corona, N. Y., assignor to Brewster & Co., New York, N. Y., a Corporation of New York. Filed Mar. 17, 1917. Serial No. 155,569. (Cl. 83—64.)



1. A carbon scraping tool comprising a tubular shaft, an operating rod slidably disposed therein, one end of the shaft being slotted and the opposite end screw threaded, a pair of scraping blades pivoted in the slotted ends of the shaft for folding into the slot, a pair of links pivotally connecting the operating rod to the blades, a transversely extending pin carried by the operating rod for abutting the inner wall of the slot to limit the folding movement of said blades, a nut threaded on the opposite end of the shaft and provided with an internal annular shoulder through which the operating rod extends, a collar fixed on the protruding end of the rod and seating on the shoulder, said nut being provided with an outer socketed end in which the collar seats and the walls of said socketed end provided with diametrically opposite openings, and a handle extending transversely of the nut through the openings of the latter and in abutting relation with the collar.

2. A carbon scraping tool comprising a tubular shaft having one end slotted and the opposite end screw threaded, an operating rod slidable in the shaft and projecting into the slot thereof, a plurality of scraping blades pivoted in the slot for folding therein, links connecting the blades to the rod, a nut threaded on the opposite end of the shaft having an internal shoulder through which the rod extends, a collar fixed on the extended end of the rod and seating on the shoulder, and a removable handle extending transversely through the nut and holding the collar seated on the nut shoulder.

3. A carbon scraping tool comprising a tubular shaft having one end slotted, an operating rod slidable in the shaft, a pair of scraping blades pivoted in the slotted end of the shaft for folding into the slot, a pair of links pivotally connecting the operating rod to the blades, and a sleeve-like operating head movable longitudinally over the opposite end of the shaft and provided with an inwardly extending annular shoulder through which the operating rod extends, said shoulder being movable toward and away from the adjacent end of the shaft and connected to the rod for moving lengthwise in unison with the latter.

4. A carbon scraping tool comprising a tubular shaft having one end slotted and the opposite end screw threaded, an operating rod slidable in the shaft and projecting into the slot thereof, a plurality of scraping blades pivoted in the slot for folding therein, links connecting the blades to the rod, a nut threaded on the opposite end of the shaft and secured to said rod whereby the advancing and retracting of the nut will effect the movements of the rod to open and fold said blades, and means for arresting the forward sliding of the rod to determine the operative position of said blades.

5. In a carbon scraping tool, a shaft having a longitudinal slot therein, a pair of scraping blades each pivoted at one end in the outer end of the shaft slot for swinging its free opposite end backwardly into the slot, a blade operating member movably supported by the shaft, and a connection between each blade and said member joined to the blade intermediate its ends whereby the free end may be used for scraping, said blades and connections being foldable within the slot of the shaft.

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1,226,904. ROOFING. RICHARD C. NEPTUNE, St. Louis, Mo. Filed May 24, 1916. Serial No. 99,511. (Cl. 154—51.)



1. As a new article of manufacture, roofing consisting of a meshwork foundation embedded in a plastic body comprising Chinese wood oil and fiber.





2. As a new article of manufacture, roofing consisting of a meshwork foundation embedded in a plastic body comprising Chinese wood oil, gum or oil residue, and fiber.

3. As a new article of manufacture, roofing consisting of a meshwork foundation embedded in a plastic body having a superficial tough waterproof and airproof film and a pasty interior comprising a mixture of oil and fiber.

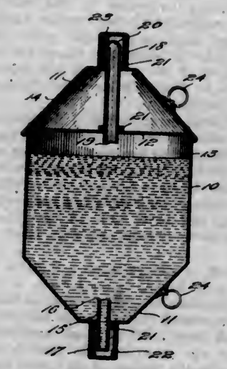
4. A flexible sheet material consisting of a waterproof body having hard, tough outer surfaces, formed from it by exposure to the air and meshwork embedded in said body, said body being plastic between said surfaces about said meshwork.

5. A waterproof sheet material consisting of a metallic meshwork embedded in a homogeneous plastic body having a hard, tough surface and a pasty interior.

[Claim 6 not printed in the Gazette.]

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1,226,905. OIL-DISTRIBUTER. JOHN NEUMANN, Philadelphia, Pa. Filed May 16, 1916. Serial No. 97,924. (Cl. 9—8.5.)



1. An oil distributer comprising a receptacle, a partition arranged within the receptacle and defining an air chamber and an oil containing chamber, and frangible inlet and outlet tubes having open inner extremities communicating with the oil containing chamber, said tubes projecting exteriorly of the receptacle and being normally sealed at their outer ends.

2. An oil distributer comprising a receptacle, for the oil, frangible inlet and outlet tubes communicating with the interior of the receptacle and projecting exteriorly thereof, said tubes being normally sealed at their outer ends, and caps for normally inclosing and projecting the sealed ends of said tubes.

3. An oil distributer comprising a receptacle, providing an air chamber and an oil containing chamber, and inlet and outlet tubes communicating with the oil chamber and having normally sealed ends projecting exteriorly of the receptacle, the sealed ends of said tubes being adapted to be broken to permit the inflow of water into the oil chamber and the outflow of oil therefrom.

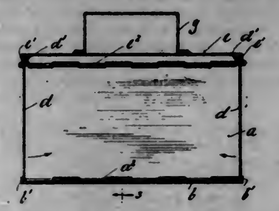
4. An oil distributer comprising a receptacle, providing an air chamber and an oil containing chamber, inlet and outlet tubes communicating with the oil chamber and having normally sealed ends projecting exteriorly of the receptacle, the sealed ends of said tubes being adapted to be broken to permit the inflow of water into the oil chamber and the outflow of oil therefrom, and caps normally covering the projecting sealed ends of the tubes.

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1,226,906. FOLDABLE BOX. MAX NEUMEKEL, Madison, Conn. Filed May 11, 1916. Serial No. 96,792. (Cl. 220—17.)

1. As an article of manufacture, a foldable box having front and rear walls pivotally connected to the bottom, a

lid pivotally connected to the rear wall, and end walls pivotally suspended at their upper edges and free to swing on their axes to clear the space between the unfolded front and rear walls, said lid being in form of a shallow receptacle to accommodate in itself the folded walls.



2. As an article of manufacture, a foldable box having front and rear walls pivotally connected to the bottom, a lid pivotally connected to the rear wall, end walls pivotally suspended at their upper edges and free to swing on their axes to clear the space between the unfolded front and rear walls, and means for limiting the swinging movement of the said front and rear walls, said lid being in form of a shallow receptacle to accommodate in itself the folded walls.

3. As an article of manufacture, a foldable box having front and rear walls pivotally connected to the bottom, a lid pivotally connected to the rear wall, end walls pivotally suspended at their upper edges and free to swing on their axes to clear the space between the unfolded rear and front walls and means for restricting the swinging movement of the said end walls, said lid being in form of a shallow receptacle to accommodate in itself the folded walls.

4. As an article of manufacture, a foldable box having front and rear walls hinged to the bottom, a lid hinged to the rear wall, members interposed between said front and rear walls and rotatably borne therein and end walls pivotally suspended from said members and free to swing thereon to clear the space between said front and rear walls and to enable the folding of the latter, said lid being in form of a shallow receptacle to accommodate in itself the folded walls.

5. As an article of manufacture, a foldable box, having front and rear walls pivotally connected to the bottom, a lid pivotally connected to the rear wall, end walls pivotally suspended at their upper edges between the front and rear walls and capable of swinging on their axes, and a lock serving to hold the lid in closed position when the box is unfolded and to hold the parts in folded position on the said lid.

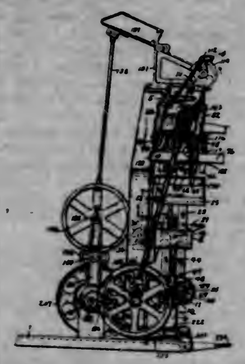
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1,226,907. BOX-NAILING MACHINE. ELMER C. NORTHRUP, San Francisco, Cal., assignor, by mesne assignments, to Savings Union Bank and Trust Company, San Francisco, Cal., a Corporation of California. Filed May 28, 1915. Serial No. 30,982. (Cl. 1—10.)

1. A box nailing machine comprising a frame, a vertically adjustable table, box supports carried by said table and adjustable across the same, pivoted box supports adjustable toward and away from the first mentioned box supports, means to move the latter box supports over and away from the first mentioned box supports, and means to lower said table the thickness of one box side after two of the nailing operations have been completed.

2. A nailing machine comprising a frame, a vertically adjustable table carried thereby, a slidable head provided with nail chucks and nail drivers, a secondary work support, means to raise and lower said support, and means to bring said secondary support over the vertically adjustable table after the first driving operation on said table.

3. A box nailing machine comprising a frame, a vertically adjustable table carried thereby, a vertically adjustable secondary work support, a slidable head, nail chucks and nail drivers supported from said head, means to feed the nails to the nail chucks in three different series, and means to move the secondary support over the vertically adjustable table after the first nailing operation on said table.



4. In a nailing machine, a frame, a vertically adjustable table carried thereby, a secondary work support pivotally and adjustably mounted on the frame, a slidable head, nail chucks and nail drivers supported from said slidable head, means to feed the nails to the nail chucks in three series, means to lower the adjustable table the thickness of one box side after one nailing operation thereon, and means to bring the secondary support over said table after the first nailing operation on the table.

5. A box nailing machine comprising a frame, a vertically adjustable table slidable therein, automatic means to shift said table to two levels, a slidable nail driver head, nail drivers carried thereby, a series of nail chucks, pivoted work holding arms adapted to hold a box at any desired level with respect to the adjustable table, means to feed the nails to the chucks in three separate series, and means to reciprocate the driver head to drive the nails.

[Claims 6 to 9 not printed in the Gazette.]

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1,226,908. BATH-TUB ATTACHMENT. WILLIAM E. PACK and JOSEPH W. PENNINGTON, Steubenville, Ohio. Filed Feb. 17, 1916. Serial No. 78,973. (Cl. 45—28.)



1. An attachment for bath tubs comprising a vertical bar, diverging arms formed upon its lower end, said arms having their lower ends provided with movable and fixed jaws for clampingly engaging the flange of a bath tub, a plate having its upper end fixed to the bar and its lower end to the jaws, said plate having fixed thereto receptacles for holding toilet articles.

2. An attachment for bath tubs comprising a bar, the upper end of which terminates in a horizontal towel supporting bar while the lower end thereof terminates in divergingly arranged arms, said arms having their lower ends provided with jaws for clampingly engaging the flange of a bath tub, a forwardly inclined plate having its upper end fixed to the lower end of the first named bar and its lower end fixed to said jaws and covering the arms, and means carried by the plate for supporting toilet articles.

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1,226,909. BLOW-OUT PATCH FOR PNEUMATIC TIRES. BENJAMIN H. PRATT, Milwaukee, Wis., assignor to The Federal Rubber Company, Cudahy, Wis., a Corporation of Massachusetts. Filed Jan. 31, 1917. Serial No. 145,748. (Cl. 152—24.)



1. A blow-out patch for pneumatic tires having a series of eyelets along each edge portion, an inner flap associated with one side of the patch, and a series of hooks carried by said flap.

2. A blow-out patch for pneumatic tires having means whereby the patch may be laced upon the tire, an inner flap associated with one side of the patch, and a series of hooks carried by said flap.

4. A blow-out patch for pneumatic tires having means whereby the patch may be laced upon the tire, a flap associated with one side of the patch, and means whereby said flap may be fixedly held near the bottom of the tire.

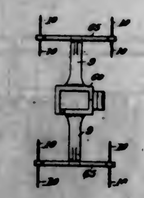
6. A blow-out patch for pneumatic tires having means for fixedly holding one side of the patch near the bottom of the tire, and means for adjustably connecting the opposite side of the patch to that side of the patch which is fixedly held.

9. A blow-out patch for pneumatic tires having means for fixedly hooking one side of the patch so that it will be in close engagement with one side of the tire adjacent to the rim and means for adjustably fastening the patch upon the tire.

[Claims 3, 5, 7, 8, 10, and 11 not printed in the Gazette.]

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1,226,910. CAKE-HOLDER FOR COATING-MACHINES. LYMAN C. REED and OWEN P. SMITH, New Orleans, La. Filed May 27, 1916. Serial No. 100,281. (Cl. 193—2.)

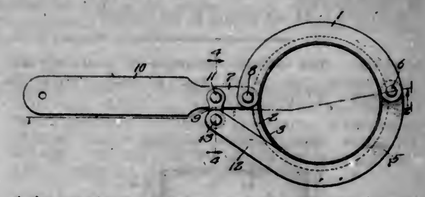


1. A cake holder for coating machines comprising a casting having a body portion adapted to form one link of a chain; a pair of integral arms symmetrically arranged one on each side of said body portion; an upright member integral with the extreme outer end of each of said arms; and a plurality of pins upon which cakes are adapted to impinge secured to said upright members, substantially as described.

2. In a cake holder for coating machines the combination of a body portion adapted to form one link of a chain and having an opening for engagement with a sprocket tooth; a pair of arms integral with said body portion; extending symmetrically from opposite sides thereof; an upright secured to the outer end of each of said arms; a cross bar attached to each of said uprights; and a plurality of pins secured to each end of said cross bars, upon which cakes are adapted to impinge, substantially as described.

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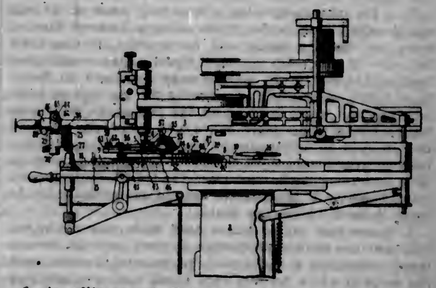
1,226,911. JAR-OPENING WRENCH. FRANK W. RISSENBERG, Chicago, Ill. Filed June 4, 1914. Serial No. 842,836. (Cl. 65—26.)



A jar opening wrench including two integral jaws in hinged connection with each other, these jaws being beveled on their inner sides to form narrow jar cover engaging edges; a handle lever directly pivotally connected with one of the jaws; and a link connecting the handle lever with the other jaw and having connection with the handle lever between the free end of the handle lever and the connection of the said lever with the first jaw, said link lying between the planes of the handle lever and the second jaw to permit the end of the second jaw that is connected with the link to overlie the handle lever.

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1,226,912. ELLIPSOGRAPH ATTACHMENT FOR ROUTING-MACHINES. VERNON ROYLE and VERNON E. ROYLE, Paterson, N. J. Filed Oct. 16, 1912. Serial No. 726,069. (Cl. 33—31.)



1. An ellipsograph lining machine comprising a base frame, a table rotatively mounted thereon, provided with dove tailed grooves arranged at intervals, plate clamps engaging said grooves and thumb screws having setting points depending therefrom for engaging a plate mounted on said table, a tool-holder carried by said base frame, and means for directing the rotary movement of the table in different elliptical paths beneath the tool-holder.

2. In an ellipsograph lining machine, a plate clamp for holding a plate in position to be operated upon, said clamp being provided with a setting point adjustable in said clamp toward and away from the plate for piercing the plate to provide for accurate replacement of the plate.

3. In an ellipsograph lining machine, a plate clamp for holding the plate in position to be operated upon, said clamp including a screw provided with a setting scribing point depending therefrom in position to pierce the plate when the screw is turned to clamp and to score the

plate when the screw is loosened and clamp withdrawn, for accurately replacing the plate.

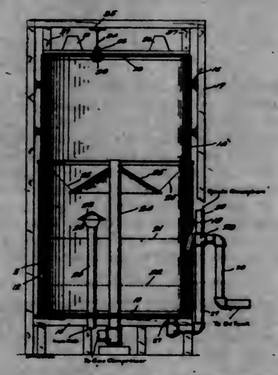
4. An ellipsograph lining machine comprising a base frame, a table rotatively mounted thereon, a tool-holder carried by said base frame, a tongue sliding in said base frame, a disk secured to said tongue and mechanism cooperating with said tongue and disk whereby the table may be rotated in an elliptical path.

5. An ellipsograph lining machine comprising a base frame, a table rotatively mounted thereon, a tool-holder carried by said base frame, a tongue sliding in said base frame, a disk secured to said tongue, a slot in said disk, a bolt engaging said slot, and mechanism coöperating with said tongue and disk whereby the table may be rotated in an elliptical path.

[Claims 6 to 14 not printed in the Gazette.]

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1,226,913. GAS-TRAP. CHARLES C. SCHARPENBERG, Bakersfield, Cal. Filed Aug. 2, 1916. Serial No. 112,673. (Cl. 183—43.)



1. A gas trap, comprising a fixed tank open at the top and provided with double walls forming between them a space containing a liquid seal, an inverted floating tank the walls of which dip into such liquid seal, a supply pipe leading into said lower tank to supply gas and oil thereto, and two outlet pipes respectively for gas and oil leading from the space inclosed by the two tanks and opening thereinto respectively above and below the oil level therein, said oil outlet pipe extending upward outside the tank to a no-pressure oil level and there being provided with an atmospheric connection, and said floating tank being weighted to produce the desired gas pressure in the space inclosed by the two tanks.

2. A gas trap, comprising a fixed tank open at the top and provided with double walls forming between them a space containing a liquid seal, an inverted floating tank the walls of which dip into such liquid seal, a supply pipe leading into said lower tank to supply gas and oil thereto, and two outlet pipes respectively for gas and oil leading from the space inclosed by the two tanks and opening thereinto respectively above and below the oil level therein, said oil outlet pipe extending upward outside the tank to a no-pressure oil level and there being provided with an atmospheric connection, and said floating tank being weighted to produce the desired gas pressure in the space inclosed by the two tanks, said supply pipe and said two outlet pipes being fixed in the fixed tank.

3. A gas trap, comprising a fixed tank open at the top and provided with double walls forming between them a space containing a liquid seal, an inverted floating tank the walls of which dip into such liquid seal, a supply pipe leading into said lower tank to supply gas and oil thereto, and two outlet pipes respectively for gas and oil leading from the space inclosed by the two tanks and opening thereinto respectively above and below the oil level therein, said oil outlet pipe extending upward outside the tank to a non-pressure oil level and there being provided with an atmospheric connection, and said floating tank being weighted to produce the desired gas pressure in the space inclosed by the two tanks, said gas outlet pipe being fixed in such fixed tank and projecting upward therein, and said floating tank being provided with a closing plate which closes the upper end of said gas outlet pipe when the float tank reaches its lower limit of movement.

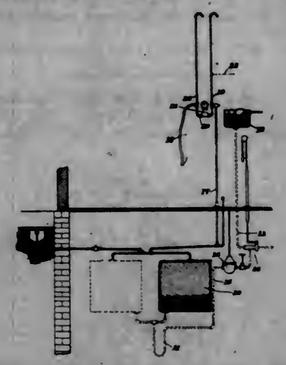
4. A gas trap, comprising a fixed tank open at the top and provided with double walls forming between them a space containing a liquid seal, an inverted floating tank the walls of which dip into such liquid seal, a supply pipe leading into said lower tank to supply gas and oil thereto, and two outlet pipes respectively for gas and oil leading from the space inclosed by the two tanks and opening thereinto respectively above and below the oil level therein, said oil outlet pipe extending upward outside the tank to a no-pressure oil level and there being provided with an atmospheric connection, and said floating tank being weighted to produce the desired gas pressure in the space inclosed by the two tanks, said floating tank being provided with a relief valve which is normally closed but which is opened upon the movement of the floating tank to its upper limit of movement.

5. A gas trap, comprising a fixed tank open at the top and provided with double walls forming between them a space containing a liquid seal, an inverted floating tank the walls of which dip into such liquid seal, a supply pipe leading into said lower tank to supply gas and oil thereto, two outlet pipes respectively for gas and oil leading from the space inclosed by the two tanks and opening thereinto respectively above and below the oil level therein, said oil outlet pipe extending upward outside the tank to a no-pressure oil level and there being provided with an atmospheric connection, and said floating tank being weighted to produce the desired gas pressure in the space inclosed by the two tanks, and means operated by the movement of the floating tank for closing the gas outlet pipe upon the movement of said floating tank to its lower limit of movement.

[Claim 6 not printed in the Gazette.]

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1,226,914. OIL STORAGE AND DELIVERY APPARATUS. FLOYD W. SCHOCH, Jersey City, N. J. Filed Mar. 10, 1915. Serial No. 13,473. (Cl. 221—67.)



1. An oil measuring system comprising a delivery pipe, a vertical U shaped conduit, an oil meter disposed in the base of the latter, a connection between the delivery pipe and an intermediate point in the height of one of the arms of the U, and a discharge pipe leading from an intermediate point in the height of the other arm of the U, the upper extremities of the arms being open to the atmosphere to constitute air vents on either side of the meter.

2. In combination with an oil storage tank and water tank of a hydraulic oil storage and delivery system, of a delivery pipe extending from the storage tank, a U shaped conduit having arms opening to the atmosphere above the hydrostatic level to which the oil would rise under the influence of the hydrostatic head of the water tank, an oil meter disposed in the base of the U shaped conduit, a connection between the delivery pipe and an intermediate point in the height of one of the arms of the U, and a discharge pipe leading from an intermediate point in the height of the other arm of the U, the upper extremities of the arms being open to the atmosphere to constitute air vents on either side of the meter.

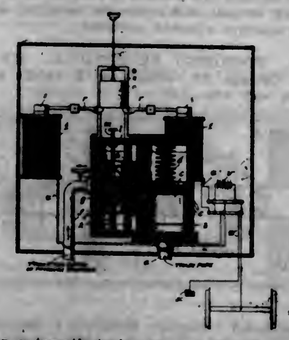
3. In combination with the delivery pipe of an oil storage delivery system, of a U shaped conduit, an oil meter disposed in the base of the U, a connection between the oil delivery pipe and one of the arms of the U, a discharge pipe connected with the other arm of the U, the upper ends of the arms being open to the atmosphere.

4. An oil storage and delivery system comprising an oil storage tank, a water tank situated above the storage tank, means for supplying water to the water tank, connections between the water tank and oil tank to communicate the hydraulic head of the water tank to the oil tank, a delivery pipe leading from the oil tank, means for accurately measuring the amount of oil delivered from the oil tank comprising a U shaped conduit, an oil meter disposed in the base of the U, a connection between the oil delivery pipe and one of the arms of the U, and a discharge pipe connected with the other arm of the U, the upper ends of the arms being open to the atmosphere.

5. An oil storage and delivery system comprising an oil storage tank, a water tank situated above the storage tank, means for supplying water to the water tank, connections between the water tank and oil tank to communicate the hydraulic head of the water tank to the oil tank, a valve in said connections for turning on and off the water from the water tank to the bottom of the oil tank, a delivery pipe leading from the oil tank, means for accurately measuring the amount of oil delivered from the oil tank comprising a U shaped conduit having arms extending above the level to which the oil would be raised by the hydraulic head of the water in the water tank, an oil meter disposed in the base of the U, a connection between the oil delivery pipe and one of the arms of the U intermediate the ends thereof, and a discharge pipe connected with the other arm of the U intermediate the ends thereof, the upper ends of the arms being open to the atmosphere.

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1,226,915. AUTOMATIC TRAIN-STOP. HIRAM G. SEDGWICK, Mill Valley, Cal., assignor to The National Safety Appliance Company, a Corporation of California. Filed Oct. 24, 1908, Serial No. 459,358. Renewed Oct. 14, 1916. Serial No. 125,704. (Cl. 246—58.)



1. In an automatic train stop, a vent valve and means for opening the same, magnetic devices normally holding said opening means inoperative, these devices including a closed circuit and said opening means embodying, a pilot valve, a weight which when freed will deliver an impact or hammer blow to said pilot valve and thus operate it, and devices under control of the magnetic devices for holding said weight out of action.

2. In a train stop, the combination with a fluid pressure air brake system, a vent valve for the train pipe and means for normally holding it closed, and a fluid pressure pilot valve for actuating said vent valve, said pilot valve being provided with a projecting stem, and means for opening the pilot valve by impact or hammer blow, said means consisting of a weight tending to move toward the stem of said pilot valve, and electromagnetic means for holding the weight against said tendency and for releasing the weight to permit it to strike the stem with a hammer blow.

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1,226,916. TRAIN-CONTROL APPARATUS. HIRAM G. SEDGWICK, Mill Valley, Cal., assignor to The National Safety Appliance Company, a Corporation of California. Original application filed May 14, 1910, Serial No. 561,486. Divided and this application filed Apr. 29, 1913. Serial No. 764,406. (Cl. 246—34.)



1. In a road bed block-system for railway signaling and stopping, an electric motor for operating the road bed appliances, train controlled electromagnetic devices in the adjacent block for closing the motor circuit by a train going in one direction, adjacent means on the road bed for preventing a train going in the opposite direction from actuating the same, means within the circuit for holding it closed during actuation of the motor, means operated by the motor for opening the motor circuit when the motor has completed its operation, and restoring mechanism connected with the next block.

2. In a road bed block-system for railway signaling and stopping, an electric motor for operating the road bed appliances, means actuated by the motor for opening the motor circuit when the motor has completed its actuation, means connected with the adjacent block for closing the motor circuit upon the passage of a railway vehicle, means connected with the adjacent block at a point farther from the end of the block than the aforesaid means for holding open the motor circuit when it is broken by the motor itself these means embodying devices which upon the passage of a train toward the end of the block will again close the motor circuit, for the purpose set forth.

3. In a mechanism for actuating a road bed appliance, an electric motor, a pivotally depending frame carrying the motor, and means whereby when the motor is actuated said depending frame will be swung upwardly until the motor circuit is broken.

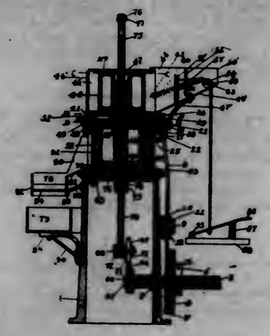
4. In the means for operating railway road bed appliances, a pendant swinging frame carrying an electric motor, means whereby the actuation of the motor swings said frame upwardly on its pivot and thus actuates the road bed appliances, means whereby at a predetermined point in its upward swing the motor circuit is broken and the motor carrying frame is permitted to swing back to its normal position.

5. In means for actuating road bed appliances, a pendant pivotal frame carrying an electric motor, means whereby the upward swing of said frame actuates the said road bed appliances, means whereby the actuation of the motor swings said frame upwardly toward a horizontal position, means whereby the railway appliances

are locked after actuation and the motor circuit is broken, whereby the roadbed appliances are locked in their adjusted positions and the motor carrying frame is allowed to swing downwardly to normal position.

[Claim 6 not printed in the Gazette.]

1,226,917. SORTING AND GAGING APPARATUS. WILLIAM SHAW, Lakewood, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Feb. 24, 1913. Serial No. 750,142. (Cl. 83—92.)



1. In apparatus for sorting articles, a plurality of dies consisting of circular openings of successively increasing size for passing cylindrical articles therethrough, a carrying member having a plurality of relatively long recesses adapted to be placed in alinement with the die openings, means for feeding articles into the recesses, and means for producing relative movement between the dies and carrying member.

2. In apparatus for sorting articles, a plurality of circular dies of successively increasing size, for passing cylindrical articles therethrough, a vertical drum having a plurality of grooves on its cylindrical surface, said grooves being adapted to be placed in alinement with the die openings, means for depositing the articles in the dies when the grooves are in alinement therewith, means for fitting the articles in the grooves and means for producing relative movement between the dies and the drum.

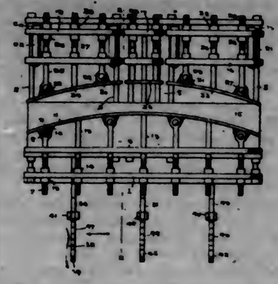
3. In apparatus for sorting articles, a plurality of circular dies of successively increasing size for passing cylindrical articles therethrough, a vertical drum having a plurality of grooves on its cylindrical surface, said grooves being adapted to be placed simultaneously in alinement with the die openings, means for depositing articles in the dies when the grooves are in alinement therewith, a hopper, means for moving the articles from the hopper into the grooves, and means for producing relative movement between the dies and the drum.

4. In apparatus for sorting articles, a plurality of dies of varying sizes, a movable member for carrying the articles to the dies and depositing them therein, means for removing the articles from the dies and depositing them in the movable member when they fail to pass through the dies, and means for feeding the articles into said movable member.

5. In apparatus for sorting articles, a plurality of dies of successively increasing size, means for carrying articles successively to said dies comprising a movable member having a plurality of recesses adapted to be placed in alinement with the dies, means for depositing them in the smallest die, means for removing the article and depositing it into the movable member whereby it is deposited into a die of larger size if it fails to pass through the smaller die.

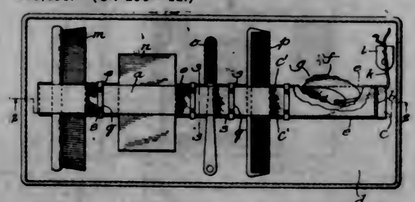
[Claims 6 to 29 not printed in the Gazette.]

1,226,918. MEANS FOR BENDING SPRINGS. CONRAD SITTNER and HENRY SITTNER, Ritzville, Wash. Filed Jan. 28, 1916. Serial No. 74,813. (Cl. 153—51.)



In a spring bending device, the combination with a support consisting of a front frame and a rear frame connected together by a plurality of upper and lower rods, said upper connecting rods also providing guide rods, a guide bar secured upon said guide rods in proximity to said front frame, a platform also upon said guide rods rearwardly of said guide bar, a stationary jaw member above said platform provided with ears upon its front side, bolts slidably mounted through said guide bar and having bifurcated ends pivotally connected to said ears and having their opposite ends threaded and projecting through the upper portion of said front frame, stud bolts slidably mounted through said guide bar and positioned between said bolts and having one of their ends contacting with the front side of said stationary jaw member and their opposite ends screw threaded and projected through the upper portion of said front frame, nuts upon the threaded ends of said bolts and said stud bolts at either side of the upper portion of said front frame, whereby to adjust the same for regulating the curvature of said stationary jaw member, a plurality of sliding frames having depending ears for slidably engaging the rearward portions of said guide rods, the outermost of said sliding frames having adjustably mounted therein screw bolts having bifurcated ends pivotally connected to ears upon the rear side of the movable jaw sections carried by said outer frames, stud bolts also adjustably mounted in the outermost of said sliding frames and having their forward ends contacting with the rear side of said sectional movable jaws between the ears thereof, screw bolts adjustably mounted in the central sliding frame and having their forward ends secured to the rear side of the intermediate movable jaw sections, whereby to regulate the curvature of said movable jaw sections, a connecting rod for each of said sliding frames, a lever connected to each of said connecting rods, whereby to move said movable jaw sections toward and from said stationary jaw member, and means for retaining said levers in their respective adjusted position.

1,226,919. POCKETED RECEPTACLE. WILLIAM B. SMITH, Chicago, Ill. Filed Sept. 5, 1916. Serial No. 118,488. (Cl. 190—41.)

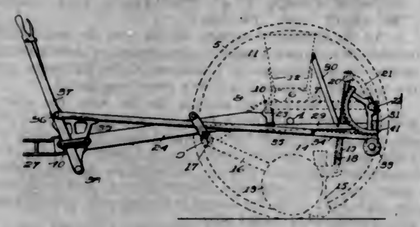


1. A pocketed receptacle including a backing having overhanging longitudinal edge portions; a longitudinally adjustable pocket forming strip acting in conjunction with the backing to form pockets; a plurality of pressure exerting clamping screws; carriers for these screws having inturned ends projecting beneath said overhanging portions of the backing so as to be adjustable longitudinally of the backing, said screws having threaded engagement with said carriers and being in position to engage the pocket forming strip to force this strip against the backing and to press the inturned ends of the carriers against the backing.

[Claims 2 and 3 not printed in the Gazette.]



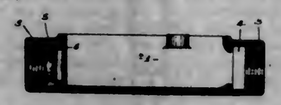
1,226,920. AGRICULTURAL IMPLEMENT. BENJAMIN M. STEELE, Peoria, Ill., assignor to Peoria Drill and Seeder Co., Peoria, Ill., a Corporation of Illinois. Filed Oct. 29, 1915. Serial No. 58,550. (Cl. 111—18.)



1. In combination, in a grain drill, means for attaching the drill to a tractor, means for raising and lowering the soil engaging elements of the drill, mechanism for operating said raising and lowering means, including means having a rigid operative connection for holding the soil engaging elements to their work, and including also approximately horizontally disposed rigid elements which extend from a position in the rear of said soil engaging elements to a position considerably forward of said soil engaging elements, and means for operating said last mentioned elements and for holding the same in adjusted positions, said operating means being located to be actuated by the tractor operator.

2. In combination, in a grain drill, a tongue having a length sufficient to permit the drill to be attached to a tractor without interference between the drill and tractor, when turning, means for raising and lowering the soil engaging elements of the drill, rigid elements disposed approximately horizontally of the drill and extending from front to rear thereof, operating connections between said rigid elements and said raising and lowering means, said last mentioned connections being of a rigid character to hold the soil engaging elements to their work, a lever and locking means therefor in operative connection with the forward portions of said horizontally disposed rigid elements for operating the same and for locking the same in adjusted positions, said lever being located to be actuated by the tractor operator.

1,226,921. CONNECTION FOR ELECTRIC CONDUITS. GEORGE L. STEWART, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed July 2, 1912. Serial No. 707,159. (Cl. 247—1.)

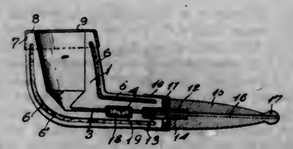


1. In a connection for conduits, the combination of two conduit members, one being formed with a threaded passage and an enlarged recess at the inner end of said passage and also with a shoulder at the inner end of the recess, the shoulder being of less diameter than the threaded passage, and the other member being a pipe threading in the passage, and a gasket of yielding material in the form of a ring arranged in the recess and being of different cross sectional form from that of the recess, the internal diameter of said ring being less than the diameter of the threaded passage, the ring having an internal, inclined annular face arranged to be engaged by the advance threaded end of the pipe and by the annular end face of the pipe, whereby the gasket is forced against said shoulder and distorted to conform to the recess, substantially as and for the purpose described.

2. In a connection for conduits, the combination of two conduit members, one being formed with a threaded passage and an enlarged annular recess at the inner end of said passage and also with an annular abutment at the inner side of the recesses, the abutment being of less diameter than that of the threaded passage, and the other member being a pipe threading in said passage, and a gasket of yielding material in the form of a ring arranged partly in the recess and having its inner diameter less than the diameter of the threaded passage, the ring being rounding in cross section and having its inner diameter less than the diameter of the passage and also having a receding inner inclined annular face arranged to be engaged by the threaded end of the pipe and also by the annular edge face of the pipe whereby the advance threaded end of the pipe engages the inclined internal face of the ring as said pipe is being turned in the passage and the annular end edge face of the pipe forces the gasket against said abutment so that the gasket is distorted to conform to the recess, and said recess being of different cross sectional form from the gasket, substantially as and for the purpose specified.

3. In a connection for electric conduits, the combination of two conduit members, one being formed with a threaded passage, and an enlarged annular recess at the inner end of said passage, the recess being substantially rectangular in cross section and the other member being a pipe threading in such passage, and a gasket of yielding material in the form of a ring arranged in the recess, the ring being elliptical in cross section and arranged with the longer diameter of the ellipse parallel to the axis of the gasket and the internal diameter of the gasket being less than the external diameter of the pipe whereby the advance end of the pipe engages the curved internal face of the gasket as such pipe is being turned into the passage and thereby causes the gasket to conform without tearing to the contour of the recess and the threaded periphery of the pipe, substantially as and for the purpose set forth.

1,226,922. SMOKING-PIPE. WALTER H. STRAW, Bridgeport, Conn. Filed Oct. 13, 1915. Serial No. 55,726. (Cl. 131—12.)



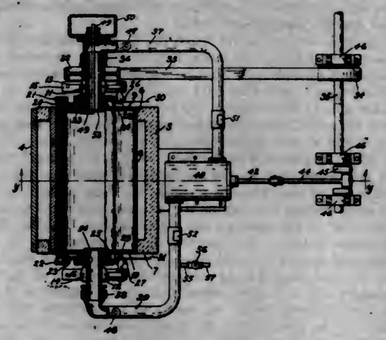
1. In a pipe, the combination with the tapered complemental stem sections having semi-circular threaded recesses communicating with smoke channels, of a tapered ferrule adapted to engage the tapered ends of the stem sections when closed, a threaded nipple adapted to be screwed into the screw recesses and projected beyond the ferrule, and a mouth piece adapted to be screwed on the said projecting ends into engagement with the ferrule to cause a clamping of the complemental pipe sections together.

2. In a pipe, the combination with the complemental stem sections having a chamber communicating with smoke channels at each end, of an absorbent cartridge comprising a rigid body portion having an absorbent covering, said cartridge being adapted to rest in the chamber, a mouth piece for the pipe, and means actuated by the mouth

piece for clamping the complemental pipe sections together and securing the absorbent cartridge in position, said cartridge thereby forming a packing and a smoke filter.

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1,226,923. APPARATUS FOR ROASTING ORES. GOTTWERTH L. TANZER, Seattle, Wash. Filed Mar. 25, 1915. Serial No. 16,873. (Cl. 263—21.)

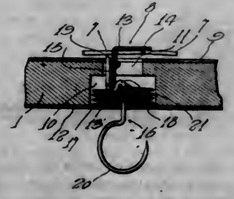


1. The combination with a rotary furnace having hollow trunnions; of means for reciprocating fluid from end to end of the furnace comprising a reciprocating pump having its opposite ends in constant free and uninterrupted communication with the hollow trunnions, said pump having a solid piston reciprocable intermediate its ends, and means to operate the pump and rotate the furnace simultaneously.

2. The combination with a rotary furnace having hollow trunnions; of means for reciprocating fluid from end to end of the furnace, comprising a reciprocatory pump including a cylinder, a pipe having free connection to one end of the cylinder and having swiveled connection to one trunnion, a second pipe having free connection to the remaining end of the cylinder and having swiveled connection to the remaining trunnion, said pump having a solid piston reciprocable intermediate its ends, and means to operate the pump and rotate the furnace simultaneously.

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1,226,924. TRAP. PAUL C. THAYER, Quincy, Cal. Filed Feb. 12, 1917. Serial No. 148,162. (Cl. 43—23.)



1. A trap comprising a jaw and means for impelling it to operative position, a support having a guide, a keeper mounted on said support for holding the jaw in set position, and a trigger mounted slidably in said guide and having a depressed seat opening toward one of its ends and normally receiving a part of said keeper to hold the latter in operative position; in combination with means for coöperation with said jaw in trapping the prey.

3. A trap comprising a jaw and means for impelling it to operative position, a support having a guide, an abutment adjacent said guide, a pivoted keeper for holding the jaw in set position, said keeper having a portion to swing against said abutment, a trigger formed of a single length of wire having one of its ends bent toward its other to form a spring seat and then bent in the opposite direction to form another seat, the portion of the wire beyond the open side of the last named seat being slidably received in said guide while the other end portion of said wire constitutes a bait support, said last named seat being adapted to receive therein the abutment and said portion of the keeper to retain the latter in operative position, and a coiled spring having a portion received in the aforesaid spring seat, said spring operating to yieldably hold the trigger in set position; in combination with means for coöperation with said jaw in trapping the prey.

[Claim 2 not printed in the Gazette.]

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1,226,925. DUCTILE FILAMENT. ORLANDO M. THOWLESS, Newark, N. J., assignor of one-half to Arthur J. Thowless, Newark, N. J. Filed Aug. 9, 1915. Serial No. 44,512. (Cl. 176—132.)

1. In the method of making ductile wire the step which consists in sintering a mass of compressed refractory metal powder in the presence of a mixture of dry hydrogen and the vapor of a halogen salt of a refractory metal.

2. In the method of making ductile wire the steps, which consist in heating a mass of refractory metal powder to a high temperature, bringing into contact with it, while in such heated condition, a mixture of dry hydrogen and the vapor of a salt of tungsten, causing flashed tungsten to unite with the powdered metal, and maintaining such heat until the united materials are consolidated into a structurally solid body.

3. In the method of making ductile filaments, the steps, which consist in uniting flashed refractory metal with powdered refractory metal in a manner to form a mixture of the two and at the same time consolidating the entire mass into a structurally solid body.

4. The method of making ductile filaments, which consists in uniting flashed refractory material with powdered refractory material in a manner to form a mixture of the two, at the same time consolidating the entire mass into a structurally solid body, working this body into a fibrous structure and reducing it to a filamentary diameter.

5. In the method of making ductile filaments the step which consists in sintering a body of refractory metal powder in an atmosphere of reducing gas and the vapor of a halogen salt of a refractory metal to the extent of causing the metal contained in the halogen vapor to permeate and fill up the spaces existing between the particles of metal powder composing the body, thereby producing a structurally solid body.

[Claims 6 to 11 not printed in the Gazette.]

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1,226,926. ELECTRIC FLASH-LIGHT. JOSEPH TISCIONE, New York, N. Y. Filed July 1, 1915. Serial No. 37,519. (Cl. 240—8.5.)

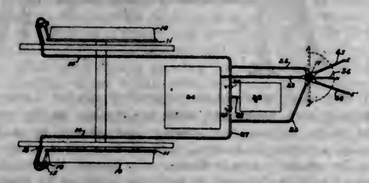


The combination with a cylindrical casing, a lamp carried by and having one terminal grounded in the casing, a cap on the casing, of a battery carried in, but insulated from the casing and cap, means for mechanically and electrically engaging the battery with the lamp and mechanically with the casing, a bodily movable switch within the cap, said cap having an opening through which the end of the switch projects, a foot on the switch engaging both sides of the casing, a projection on the foot, and means on the switch whereby the projection may be brought into electrical engagement with the end of the battery opposite the lamp..



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1,226,927. FLANGE-OILER. ZACHRIAH TISHER, Spokane, Wash. Filed Oct. 3, 1916. Serial No. 123,504. (Cl. 184—3.)



1. A flange oiler comprising an air tank, an oil tank, a valve mounted above the oil tank, an oiler appliance, conduits leading downwardly from the oil tank and connecting with the oiler appliance, a conduit leading from the air tank to the valve and conduits leading from the valve to the conduits leading from the oil tank, and means for manually operating said valve to apply the air to force the oil through said conduits leading downwardly from the oil tank to and through said oiler appliance.

2. A flange oiler comprising an air tank, an oil tank, a valve mounted above the oil tank, an oiler appliance, conduits leading downwardly from the oil tank and connecting with the oiler appliance, a conduit leading from the air tank to the valve and conduits leading from the valve to the conduits leading from the oil tank, and means for manually operating said valve to apply the air to force the oil through said conduits leading downwardly from the oil tank to and through said oiler appliance so as to apply oil to the flanges of the wheels on one side of the truck at a time.

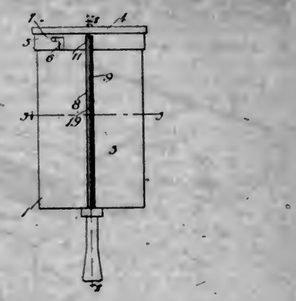
3. A flange oiler comprising an air tank, an oil tank, a valve mounted above the oil tank, an oiler appliance, a pipe leading downwardly from the oil tank and connected with a transversely arranged conduit having a swinging check-valve therein on each side of said pipe, a conduit leading from each end of said transversely arranged conduit each connected with said oiler appliance, a conduit leading from said air tank to said valve, conduits leading from said valve to said transversely arranged conduit and connected therewith, one on each side of said check-valves and means for operating said first named valve to make an open passage from the air tank to the conduits leading to the said oiler appliance and means in said valve for closing said passageway and for exhausting the air from said conduits leading to the oiler appliance.

4. A flange oiler comprising an air tank, an oil tank, a valve mounted above the oil tank, an oiler appliance, conduits leading downwardly from the oil tank and having oiler appliances at their outer extremities with oiler heads thereon, a conduit leading from the air tank to the valve, conduits leading from the valve to the conduits leading from the oil tank, means in said valve for manually opening a passage from said air tank to the conduits leading from the oil tank, means for automatically throwing said oiler head into close proximity with the flange of a wheel simultaneously with the opening up of said air passage and for automatically returning the same to normal position with the closing of said air passage.

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1,226,928. PAPER-DISPENSING DEVICE. FRANK L. UPDIKE, Sapulpa, Okla. Filed Feb. 17, 1916. Serial No. 78,944. (Cl. 211—31.)

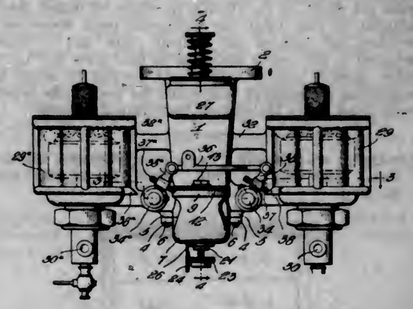
In a device of the class described, the combination of a cylindrical container having one end thereof open, the opposite end being closed, the peripheral wall of said container having an elongated slot therein, a closure for the open end of the cylinder having a slot therein registering with first said slot, said closures having openings concentrically thereof, a tube member adapted to receive



a roll of paper thereon rotatably mounted in said openings, the paper being adapted to be withdrawn through said slots, a staff member extending axially of the tube throughout its length, and an enlargement formed on said staff providing supporting means for the cylinder.

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1,226,929. CARBURETER. JOHN VAN DEN BOS, Grand Rapids, Mich. Filed Dec. 30, 1915. Serial No. 69,436. (Cl. 261—18.)

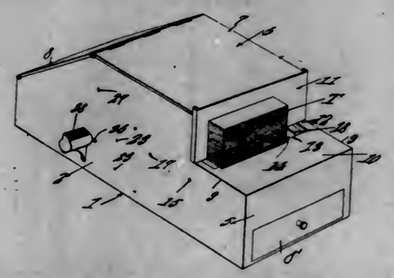


1. A carbureter comprising a vertically disposed passage member to be connected at its upper end with an intake manifold, a pair of necks extending horizontally in diametrically opposite directions from the lower end of said passage member and having reservoirs at their outer ends for supplying different fuels to the passage member, an air inlet neck extending horizontally from the lower end of the passage member at right angles to the other necks, an auxiliary air inlet neck extending horizontally from the upper end of said passage member in the same direction as the aforesaid air inlet neck, these two necks being of substantially the same length, a pair of rocking valves extending through the fuel supply necks, parallel operating arms rising from said valves, and a horizontal operating link connecting said arms for simultaneous movement and disposed between the two air inlet necks.

2. In a two-fuel carbureter, a vertical passage member to be connected at its upper end with an intake manifold, said passage member having at its lower end a pair of horizontal fuel supply necks extending in opposite directions and fuel reservoirs on the outer ends of said necks; in combination with valves for said necks having vertically extending operating arms connected for simultaneous movement, stops formed integrally with the lower ends of said reservoirs in the outward paths of said arms, and

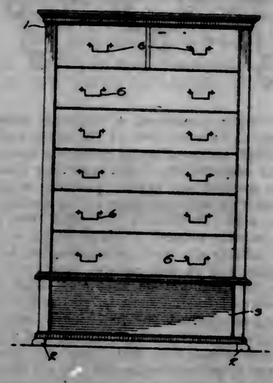
other stops carried by said arms and arranged to strike those of the reservoirs to limit the movement of the valves.

1,226,930. TICKET-SEPARATING MACHINE. OTTO N. VERENIUS, Sioux City, Iowa. Filed Nov. 1, 1915. Serial No. 59,121. (Cl. 101—39.)



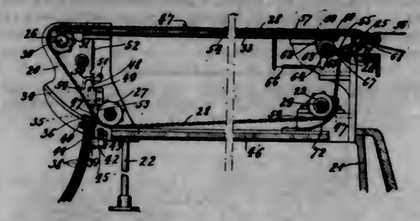
A machine of the character described embodying a casing having a horizontal plate to support a stack of tickets, a vertical plate carried by the casing above the horizontal plate for vertical adjustment, the vertical plate having its lower edge spaced above the horizontal plate, the horizontal plate having an opening below the vertical plate, the width of the opening between the vertical plate and remote edge of the opening being less than the width of the tickets, the stack of tickets being adapted to seat upon the horizontal plate above said opening and against the vertical plate, and a roller mounted in the casing below the vertical plate having its upper portion located within said opening to assist in supporting the stack of tickets and for moving the lowermost ticket under the vertical plate into the casing.

1,226,931. WARDROBE. CHARLES F. VOLLMER, Denver, Colo. Filed May 11, 1915. Serial No. 27,398. (Cl. 45—37.)



A wardrobe including a casing provided with a plurality of hinged walls, each of which is adapted to receive a garment support thereon, one of the walls of said casing being stationary and adapted to receive a movable garment supporting element thereon, and means mounted in the bottom of said casing for coöperation with the supporting element of the stationary wall, to limit the movement of the supporting element.

1,226,932. FEEDING OR CONVEYING MECHANISM. GEORGE WHITE, Jersey City, N. J., assignor to Panayiotis Panoulias, Jersey City, N. J. Filed July 19, 1913. Serial No. 779,987. (Cl. 193—2.)



1. A feeding mechanism comprising parallel chains each provided with hooks and with projections in the rear of said hooks, means for causing said chains to move in unison, a guide for feeding carriers to a point where they may be caught by said hooks, and means, located in the path of said projections so as to be operated by them, for separating that carrier which is in position to be engaged by the hooks, from the other carriers.

2. A feeding mechanism comprising an endless chain conveyer provided with means for catching and transporting carriers, and with projections at a distance from said means, a guide for feeding carriers to a point where they may be caught by said means, and a device extending into the path of the conveyer projections, for separating that carrier which is in operative relation to the conveyer, from the other carriers.

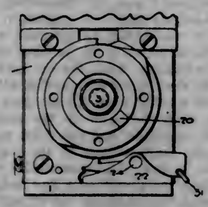
3. A feeding mechanism comprising a guide for conducting carriers to a predetermined point, an endless conveyer having means for engaging and transporting said carriers, and also having projections, and a device extending into the path of said projections, for separating that carrier which is in operative relation to the conveyer, from the other carriers.

4. A feeding mechanism comprising an endless conveyer, a guide, located adjacent to said conveyer, for directing carriers thereto, and means on the conveyer for engaging the carriers while on said guide and taking them one by one from said guide.

5. A feeding mechanism comprising a conveyer, a guide for holding carriers and directing them to said conveyer, and means on the conveyer for engaging the carriers while on said guide and taking them from said guide.

[Claims 6 to 20 not printed in the Gazette.]

1,226,933. STARTER-COUPLING. FRED B. WILLIAMS, Highland Park, Ill., assignor to Splitdorf Electrical Company, Newark, N. J. Filed Nov. 24, 1915. Serial No. 63,209. (Cl. 123—149.)



1. In a device of the character described, the combination of a driven member having radially spaced outer and inner flanges, a driving member having radially spaced outer and inner flanges adapted to coöperate with said flanges on said driven member, a recess in said driven member, yielding means circumferentially arranged between the flanges of the driven member but drivingly associated with said driving member, means for arresting the movement of the driven member, means for releasing said driven member after a predetermined displacement of the driving member and yielding means within said driven member to receive the impact between the driving and driven members when said driven member is released.

2. In a starter coupling, a driving member, a driven member, an annular recess in said driven member, a stud fixed in position in said annular recess, a recess in said driving member and a stud fastened thereto in said recess, yieldingly driving means mounted within the recess of said driven member and having its ends normally resting against each of said studs, means for arresting the movement of said driven member, means for releasing said driven member and means positioned within the annular recess of said driven member and between said studs for absorbing the noise and shock of said driving and driven members when said driven member suddenly advances to normal position after being released from its arrested position.

3. In a starter coupling, a driving member having cam surfaces thereon, a driven member having an annular recess, a driving spring adapted to fit into said recess, a buffer spring adapted to fit into said recess, a stud mounted within said recess to separate said two springs at one end thereof, a stud mounted on said driving member and separating said springs at the other end, a notch in the outer surfaces of said driven member, a pawl associated with said member and adapted to engage said notch to retard the movement of the driven member, said pawl adapted to be released from said notch by the cams on said driving member whereby said driven member is caused to move rapidly forward under the control of the driving spring until said forward movement is stopped by said buffer spring, for the purpose described.

4. In a device of the character described, the combination of a driven member having an annular recess therein, a stud mounted on said driven member and forming a bridge across said annular recess, a driving spring and a buffer spring reposing in said recess and resting against the opposite faces of said stud, a hole passing radially through the rim of the driven member into said annular recess, a driving member having a recess and a stud attached to said driving member within said recess, and a pin applicable to said hole in the driven member and adapted to separate the ends of the driving and buffer springs leaving a space therebetween, whereby when the driving and driven members are assembled said stud on the driving member passes freely into said space between the driving and buffer springs of the driven member.

5. In a starter coupling, a driven member yieldingly connected to a driving member, a notch on the surface of said driven member, a pawl adapted to engage said notch to hold the driven member from moving until a predetermined displacement of the driving member has taken place, cam surfaces on said driving member adapted to engage said pawl to push the same out of engagement with said notch whereby the driven member will move rapidly forward to its normal position, said notch having its engaging edge depressed below the line of the outer edge of the driven member so the said pawl will not engage the notch after a predetermined speed is reached, and means whereby the pawl is locked in an inoperative position when the speed has reached a value greater than said predetermined speed.

[Claims 6 to 8 not printed in the Gazette.]

1,226,934. PAINT COMPOSITION. WALTER E. WRIGHT, Cleveland, Ohio. Filed Aug. 26, 1916. Serial No. 117,006. (Cl. 134—39.)

1. A flat finish paint-composition comprising a lead pigment and a vehicle which comprises a semi-drying vegetable oil, tung oil and a drying vegetable oil other than tung oil, said vehicle and the pigment being substantially in the proportion, by weight, of not over about ten parts of the vehicle to one hundred parts of the pigment, the third-mentioned oil of the vehicle composing, by weight, about one-half of the vehicle, and the tung oil and the semi-drying vegetable oil being in the proportion, by weight, of about two parts of the semi-drying oil to one part of tung oil.

2. A flat finish paint-composition comprising a lead pigment and a vehicle which comprises a semi-drying vegetable oil, tung oil and a drying vegetable oil other than tung oil, said vehicle and the pigment being substantially in the proportion, by weight, of not over about ten parts of the vehicle to one hundred parts of the pigment, the third-mentioned oil of the vehicle composing, by weight, not less than about one-fifth of the vehicle, and the tung oil and the semi-drying vegetable oil being in the proportion, by weight, of about two parts of the semi-drying oil to one part of tung oil.

3. A flat finish paint-composition comprising a lead pigment and a vehicle which comprises a semi-drying vegetable oil, tung oil and a drying vegetable oil other than tung oil, said vehicle and the pigment being substantially in the proportion, by weight, of not over about ten parts of the vehicle to one hundred parts of the pigment, the third-mentioned oil of the vehicle composing, by weight, not more than about four-fifths of the vehicle, and the tung oil and the semi-drying vegetable oil being in the proportion, by weight, of about two parts of the semi-drying oil to one part of tung oil.

4. A flat finish paint-composition comprising a lead pigment and a vehicle which comprises linseed oil, a semi-drying vegetable oil and tung oil, said vehicle and the pigment being substantially in the proportion, by weight, of not over about ten parts of the vehicle to one hundred parts of the pigment, the linseed oil composing, by weight, about one-half of the vehicle, and the tung oil and the semi-drying vegetable oil being in the proportion by weight, of about two parts of the semi-drying oil to one part of the tung oil.

5. A flat finish paint-composition comprising a lead pigment and a vehicle which comprises linseed oil, a semi-drying vegetable oil and tung oil, said vehicle and the pigment being substantially in the proportion, by weight, of not over about ten parts of the vehicle to one hundred parts of the pigment, the linseed oil composing, by weight, not less than about one-fifth of the vehicle, and the tung oil and the semi-drying vegetable oil being in the proportion, by weight, of about two parts of the semi-drying oil to one part of tung oil.

[Claims 6 to 8 not printed in the Gazette.]

1,226,935. SIGHTING OF SMALL-ARMS. WILLIAM YOULTEN, Hove, England. Filed Sept. 10, 1915. Serial No. 50,071. (Cl. 88—2.2.)



In an attachment for sighting small arms from under cover, the combination with a small arm provided with front and rear sights and a butt, of a band detachably clamped to said butt, an arm pivoted to said band, and a casing containing a single prism adjustably connected to said arm, and located in the line of sight, substantially as described.

1,226,936. SIGHTING OF GUNS. WILLIAM YOULTEN, Hove, England. Filed Sept. 10, 1915. Serial No. 50,072. (Cl. 88—2.2.)

1. In a sight for guns the combination with an arm carried by the gun, in rear of but slightly to one side of the line of sight, a prism casing adjustably and detachably connected to said arm at the side thereof, said prism casing being provided with apertures to permit the passage of light therethrough, and with hinged doors adapted to close said apertures when said prism is not in use, substantially as described.

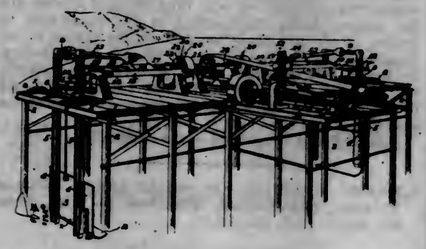
2. A prism attachment for use in sighting guns comprising a casing with means for attaching said casing to the gun, said casing being provided with apertures to permit the admission and the emergence of the light rays coming in the direction of the line of sight, with doors hinged to said casing and adapted to close said apertures, when desired, and a prism mounted in said casing, and adapted to reflect the light rays from the line of sight, at an angle downwardly in rear of the gun, substantially as described.



3. A prism attachment for use in sighting guns comprising a casing in the form of a right triangle in longitudinal cross section and provided with an opening at one of the perpendicular sides of said triangular casing and another opening in the hypotenuse of said triangular casing, with doors hinged to said casing and adapted to close said openings when the attachment is not in use, and to form, when the attachment is in use, a guard for the eyes of the marksman and a screen for the light, with a triangular prism mounted in said casing having one or more of its surfaces coated with light reflecting material, substantially as described.

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1,226,937. OCEAN-POWER. NILS S. ABRAHAMSON, Los Angeles, Cal. Filed July 27, 1914. Serial No. 853,471. (Cl. 253—6.)



1. The combination with oscillating paddles, of horizontally reciprocating cross-head members actuated by the paddles and having longitudinal bores, opposed cams projecting in the interior of the reciprocating members, spiral grooved horizontal shafts actuated by the reciprocating members, the said cams engaging with the said grooves, and the said spiral grooved shafts having an alternating rotary movement, a countershaft actuated by the said spiral grooved shafts, and clutch means for converting the alternating rotary movement of the spiral grooved shafts into a continuous rotary movement of the countershaft.

2. In an ocean power generator the combination with oscillating paddles actuated by the waves, of means for converting the motion of the paddles into mechanical power comprising horizontally reciprocating crosshead elements actuated by the paddles, spirally grooved shafts actuated by the reciprocating crosshead elements, a countershaft driven by the spirally grooved shafts, a power shaft actuated by the countershaft, and the power shaft having governing means actuated by constant and non-reversible friction means in order to secure a uniform speed of rotation.

3. The combination with oscillating paddles actuated by the waves, of a reciprocating element actuated by the swinging paddles, horizontal ways for the reciprocating elements, spiral grooved shafts rotatively mounted between said ways and actuated by the reciprocating elements, an intermediate shaft in alinement with said spiral grooved shafts, and ratchet means co-acting with said shafts.

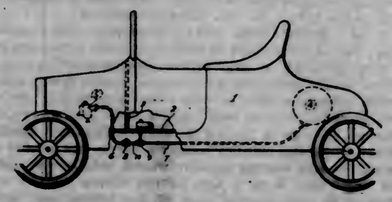
4. The combination with oscillating paddles actuated by the waves and reciprocating members actuated by the paddles, of spiral grooved shafts rotated alternately in opposite directions by the reciprocating members, an intermediate shaft in alinement with the spiral grooved shafts, friction ratchets in connection with said shafts rotating the intermediate shaft continuously in a constant direction, and a momentum retainer in connection therewith.

5. The combination with oscillating paddles actuated by the waves and a rotating momentum retainer and speed governor therefor, of means for transmitting motion from the paddles to the momentum retainer, comprising reciprocating members actuated by the paddles, spiral grooved shafts actuated by the reciprocating members, an intermediate shaft alined with the spiral grooved shafts, friction ratchet means in connection with the spiral grooved shafts and the intermediate shaft, a counter shaft, a friction driving belt connecting the intermediate shaft and the counter shaft, and friction pulleys transmitting motion from the counter shaft to the momentum retainer.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,938. MEANS FOR OPERATING AND LOCKING VALVES. WILLIAM BAKER, Barberton, Ohio, assignor of one-half to Edward A. Baker, Mansfield, Ohio. Filed Feb. 26, 1917. Serial No. 150,886. (Cl. 137—7.)



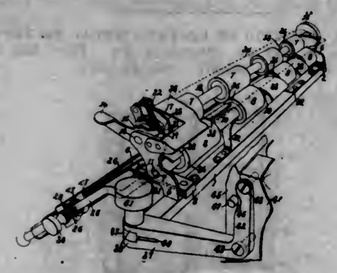
1. In a locking and operating means for valves, a valve connected to the fuel feed pipe of a motor car equipped with an internal combustion engine, fuel feed pipes connected to the valve, carbureter and a fuel supply tank, a sleeve fitted to an aperture in the floor of the motor car, a valve stem connected at one end to said valve and having its opposite free end engaging said sleeve and projecting above the floor of the car, a lever handle secured to the free end of the valve stem; said stem being operable by the foot or hand of the driver, means to regulate the movement of the lever handle and stop same when the valve is operated to full open or closed position and means to lock said valve in closed position.

2. A locking and operating means for valves connected to the fuel feed pipe of a motor car, a valve, a valve stem connected to said valve, a sleeve secured to the floor of the car to receive the free end of the valve stem, a lever handle secured to the free end of said valve stem rotatable above the floor of the car for operating the valve by foot or hand of the driver to prevent or permit the passage of fuel through the feed pipe to the motor, and means to lock the valve in closed position.

3. In a locking and operating means for valves, a valve connected to the fuel feed pipe of a motor car, equipped with an internal combustion engine, fuel feed pipes connected to the valve, a carbureter and a fuel supply tank, a sleeve fitted to an aperture in the floor of the motor car, a valve stem connected at one end to said valve and having its opposite free end engaging said sleeve and projecting above the floor of the car, a lever handle secured to the free end of said valve stem, said lever being operable by the foot or hand of the driver, and means to regulate the movement of the lever handle and stop same when the valve is operated to full open or closed position.



1,226,939. COPY-HOLDER. WALTER E. BARNARD, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 30, 1911. Serial No. 657,409. (Cl. 120—32.)



1. In combination, in a copy holder, a suspension bar, brackets on said bar, feeding means on said brackets, a table, a table-bearing bracket, a small bracket beneath said table-bearing bracket, a rod adjustable in said small bracket, and an eye guide mounted on said rod and over said table.

2. In combination, in a copy holder, a suspension bar, brackets on said bar, feeding rolls on said brackets, a forwardly and downwardly extending table, a bracket extending horizontally from said table and secured to said suspension bar, a small bracket attached to the underside of said horizontal bracket, a flat-sided rod sliding in said small bracket, a right-angled extension to said rod, and an eye-guide adjustably mounted in said extension over said table.

3. In combination, in a copy holder, a suspension bar, brackets on said bar, rolls mounted yieldingly in said brackets, means for imparting rearward feed to said rolls, a downwardly and forwardly extending copy supporting table arranged in line with the bight of said rolls, a bracket for supporting said table, attached to said suspension bar, a rod carried by said last named bracket, and an eye-guide carried by said rod.

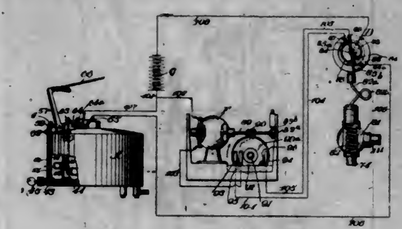
4. In a copy holder, a frame, a copy table, rolls to feed copy across said table, a shaft supported in the frame carrying said rolls, a knob for turning said shaft, a ratchet wheel for turning said shaft in one direction, a spring operated pawl pivoted on an idle wheel on said shaft, a stop on the frame, coöperating stops on the idle wheel to engage said first stop to limit the throw in both directions of said idle wheel, and a handle on said idle wheel to rotate it to move said shaft by said pawl, said pawl having a cam face to engage said stop on the frame to disengage said pawl from said ratchet when said handle is at a limit of its throw.

5. In a copy holder, a table, rolls fixed on a shaft above said table, means pivoted on the said shaft whereby said rolls may be fed backward, rolls extending to the surface of said table loose on a shaft below said table, spacing means for said rolls, elongated bearings for said shaft, and springs pressing upon said lower shaft in the spacing provided between its rolls, to press said rolls against said upper shaft.

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1,226,940. FUEL-SUPPLYING DEVICE FOR INTERNAL-COMBUSTION ENGINES. WILLIAM K. BASSFORD, Perth Amboy, N. J., assignor to Universal Oil Converter Company, Long Island City, N. Y., a Corporation of New York. Filed Feb. 3, 1912. Serial No. 675,274. (Cl. 261—18.)

1. In a fuel supply system for internal combustion engines, separate chambers for fuels of different specific qualities, valves for controlling the flow of said fuels from their chambers, and mechanism for alternately opening and closing the valves to shift from one fuel to the other under predetermined conditions, said mechanism including a fulcrumed arm having fingers respectively connected with the valves, means for preventing movement of the shifting arm, and means for withdrawing the latter means from its operative relation with the shifting lever when change from one fuel to the other is desired.



2. In a fuel supply system for internal combustion engines, separate chambers for fuels of different specific qualities, valves for controlling the flow of the fuels from their chambers, mechanism for alternately opening and closing the valves to shift from one fuel to the other, means for heating the fuel in its passage to the engine, means operable to prevent the operation of the valve-operating mechanism, so as to hold the valves in predetermined positions, and means whereby the means for preventing operation of the valve-operating mechanism is adjusted out of operative relation with the latter under control of the temperature of the fuel after the latter has been heated.

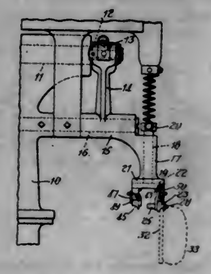
3. In a fuel supply system for internal combustion engines, separate chambers for fuels of different specific qualities, valves for controlling the flow of said fuels from their chambers, mechanism for alternately opening and closing the valves to shift from one fuel to the other, means for heating the fuel in its passage to the engine, the valve-shifting mechanism including a fulcrumed lever having arms respectively connected with the valves, a stop adapted to be interposed in the path of operation of the lever, a magnet adapted when energized to withdraw the stop from its operative relation with the lever-shifting mechanism, and means whereby the magnet is energized when the temperature of the heated fuel reaches a predetermined point.

4. In a fuel supply system for internal combustion engines, separate chambers for fuels of different specific qualities, valves for controlling the flow of said fuels from their chambers, mechanism for alternately opening and closing the valves to shift from one fuel to the other, means for heating the fuel in its passage to the engine, the valve-shifting mechanism including a fulcrumed lever having arms respectively connected with the valves, a stop adapted to be interposed in the path of operation of the lever, a magnet adapted when energized to withdraw the stop from its operative relation with the lever-shifting mechanism, a circuit maker and breaker for closing and opening the circuit to said magnet, said circuit maker and breaker comprising an actuating means which is subject to and operable under control of the temperature of the heated fuel.

5. In a fuel supply system for internal combustion engines, a carbureter comprising separate chambers for fuels of different specific qualities, a mixing chamber, a spraying nozzle in said mixing chamber and adapted to be alternately connected with each of said fuel chambers, and valve mechanism for controlling the supply of fuel to said spraying nozzle; a conduit through which fluid may flow to the engine; a thermo responsive device associated with said conduit and past which the fluid flowing to the engine flows; and means dependent for operation upon said thermo responsive device for controlling said valve mechanism to thereby determine which of said fuels shall be used at a given time.

[Claims 6 to 14 not printed in the Gazette.]

1,226,941. MACHINE FOR BURNISHING THE EDGES OF THE SOLES OF BOOTS AND SHOES. ZOTIQUE BEAUDRY, Lynn, Mass. Filed Feb. 26, 1912. Serial No. 679,929. (Cl. 12—32.)



1. A machine for burnishing the edges of the soles of boots and shoes having, in combination, a burnishing iron, a holder on which said burnishing iron is pivoted, a carrier on which said holder is pivoted, mechanism adapted to impart a reciprocatory motion to said carrier, the pivotal axial line of said burnishing iron extending transversely of the path of travel of said carrier and the pivotal axial lines of said holder and iron extending substantially at right angles to each other and a beading wheel rotatably mounted on said burnishing iron.

2. A machine for burnishing the edges of the soles of boots and shoes having, in combination, a burnishing iron, a holder on which said burnishing iron is pivoted, a carrier on which said holder is pivoted, mechanism adapted to impart a reciprocatory motion to said carrier, the pivotal axial line of said burnishing iron extending transversely of the path of travel of said carrier and the pivotal axial lines of said holder and iron extending substantially at right angles to each other and a beading wheel rotatably mounted on said burnishing iron, the median axial lines of said burnishing iron and beading wheel disposed at an acute angle to each other.

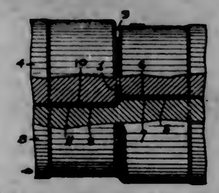
3. A machine for burnishing the edges of the soles of boots and shoes having, in combination, a burnishing iron, a holder on which said burnishing iron is pivoted, a carrier on which said holder is pivoted, mechanism adapted to impart a reciprocatory motion to said carrier, the pivotal axial line of said burnishing iron extending transversely of the path of travel of said carrier and the pivotal axial lines of said holder and iron extending substantially at right angles to each other and a beading wheel rotatably mounted on said burnishing iron, the median axial lines of said burnishing iron and beading wheel disposed at an acute angle to each other and lying in the same plane.

4. A machine for burnishing the edges of the soles of boots and shoes having, in combination, a burnishing iron, a holder on which said burnishing iron is pivoted, a carrier on which said holder is pivoted, mechanism adapted to impart a reciprocatory motion to said carrier, the pivotal axial line of said burnishing iron extending transversely of the path of travel of said carrier and the pivotal axial lines of said holder and iron extending substantially at right angles to each other and a beading wheel rotatably mounted on said burnishing iron, the median axial lines of said burnishing iron and beading wheel intersecting each other.

5. A machine for burnishing the edges of the soles of boots and shoes having, in combination, a burnishing iron, a holder on which said burnishing iron is pivoted, a carrier on which said holder is pivoted, mechanism adapted to impart a reciprocatory motion to said carrier, the pivotal axial line of said burnishing iron extending transversely of the path of travel of said carrier and the pivotal axial lines of said holder and iron intersecting each other and a beading wheel rotatably mounted on said burnishing iron.

[Claims 6 to 14 not printed in the Gazette.]

1,226,942. METHOD OF ROLLING METAL SECTIONS. SAMUEL A. BENNER, Pittsburgh, Pa. Filed May 20, 1914. Serial No. 839,872. (Cl. 80—66.)



1. The method of manufacturing wrought integral metal sections which consists in rolling a section, comprising a flange with a web at an angle thereto on each side thereof, one web joined into the side of the flange, and the other web joined into the base of the flange by means of a turn in said latter web, and then bending the latter web at the turn thereof by a flattening operation.

2. The method of manufacturing wrought integral metal sections which consists in rolling a section comprising a plurality of flanges with a web on each side of each of said flanges and at an angle thereto, certain of said webs being joined into the sides of said flanges, respectively, and certain of said webs being joined into the bases of said flanges, respectively, by means of a turn in each of said latter webs and then bending the latter webs at the turns thereof, respectively, by a flattening operation.

3. The method of manufacturing wrought integral metal sections which consists in rolling a plurality of flanges, each flange having a web at an angle thereto on each side thereof, the web between the flanges being joined to the latter into the bases thereof by means of turns in said web, and then bending each web having the turn therein, at the turn, by a flattening operation.

4. The method of manufacturing wrought integral metal sections, which consists in rolling a section comprising a flange with a web at an angle thereto on each side thereof, one web joined into the side of the flange, and the other web joined into the base of the flange by means of a turn in said latter web, and then bending the latter web at the turn thereof by a flattening operation, one or both of said webs having a flange at its outer edge.

5. The method of manufacturing wrought integral metal sections which consists in rolling a section comprising a flange with a web at an angle thereto on each side thereof, one web joined into the side of the flange, and the other web joined into the base of the flange by means of a turn in said latter web, and then bending the latter web at the turn thereof by a flattening operation, one or both of said webs having a flange intermediate its edges.

[Claims 6 to 8 not printed in the Gazette.]

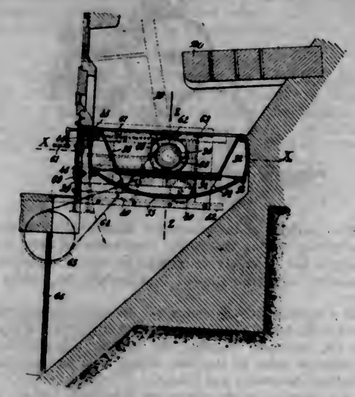
1,226,943. REFUSE-DESTRUCTOR. ARTHUR BRÉCHOT, Paris, France, assignor to Compagnie d'Incineration Industrielle, Paris, France. Filed June 4, 1913. Serial No. 771,634. (Cl. 110—17.)

1. A hearth comprising a fire-box, and a grate carried thereby, a hearth-pan disposed outwardly of such fire-box and connected to the upper edge thereof, there being an air chamber between the fire-box and hearth-pan, trunnions for pivotally supporting said hearth, and means for supplying air to the said air chamber while the hearth is in its normal and in its dumped positions.

2. A hearth comprising a fire-box, and a grate carried thereby, a hearth-pan disposed outwardly of such fire-box and connected to the upper edge thereof, there being



an air chamber between the fire-box and hearth-pan, trunnions for pivotally supporting said hearth, means for supplying air to the said air chamber while the hearth is in its normal and in its dumped positions, and mechanism for turning the hearth on its pivots for dumping the same.



3. A hearth comprising a fire-box, and a grate carried thereby, a hearth-pan disposed outwardly of such fire-box and connected to the upper edge thereof, there being an air chamber between the fire-box and hearth-pan, trunnions for pivotally supporting said hearth, and means for tilting the hearth for dumping the same, an ash-pit door and mechanism for operating the same controlled by the hearth tilting mechanism.

4. The combination with a furnace, provided with a hearth chamber and rails located upon the respective sides thereof, of a carriage having wheels adapted to run upon said rails, and a hearth pivotally mounted upon the carriage and disposed between the said wheels and constructed and adapted to be tilted upon the carriage while the carriage is in position in the hearth chamber.

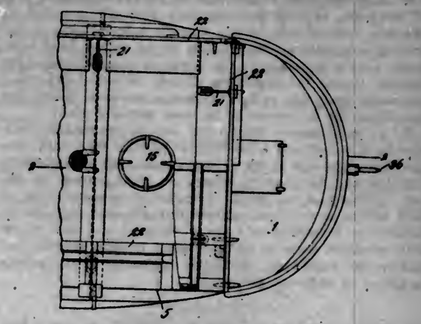
5. The combination with a furnace, of a hearth comprising a fire-box, a grate carried thereby, a hearth pan surrounding the fire-box and grate, mechanism for mechanically dumping the hearth, and means for supplying a current of air to the outside of the fire-box while the grate is in its normal and in its dumped position.

[Claim 6 not printed in the Gazette.]

1,226,944. LIFE-BOAT AND THE LIKE. HARRY W. BROADY, Bayside, N. Y., assignor to Welin Marine Equipment Company, a Corporation of New York. Filed June 19, 1913. Serial No. 774,518. (Cl. 9—4.)

1. A metallic nestable life-boat embodying a rigid shell having a well polygonal in conformation to permit immediate loading and a superstructure formed of rigid side and end members adapted to be raised and lowered relatively to the shell, means for automatically locking such side and end members when the same are moved into vertical position and an independent lock for aliining the meeting edges of such side and end members and securely locking the same together.

2. A metallic nestable life-boat embodying a rigid shell having a well polygonal in conformation to permit immediate loading and a superstructure formed of rigid side and end members adapted to be raised and lowered relatively to the shell, means for automatically locking such side and end members when the same are moved into vertical position, an independent lock for connecting such meeting side and end members together at the corners when in vertical position, comprising a bearing plate connected to one member and provided with a groove, a bolt pivoted to said bearing member adapted to have a portion of its shank seated in said groove and a groove



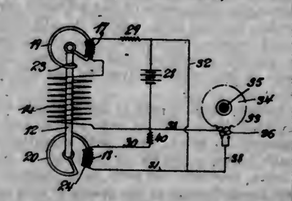
and socket plate on the opposing member adapted to receive and permit the seating of the remaining portion of said bolt to aline and lock the members together.

1,226,945. PROCESS OF MAKING A NICKEL CATALYST. JOHN J. BURCHENAL, Cincinnati, Ohio, assignor, by mesne assignments, to The Hydrogenation Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 28, 1912. Serial No. 679,536. (Cl. 23—28.)

1. The process of making a nickel catalyzer, which consists in preparing a chemically-precipitated nickel compound free from inert components by reaction between a dissolved nickel salt and a soluble carbonate, calcining the precipitate, and thereafter reducing the calcined product, while free from admixture with non-reducible materials, whereby a catalyzer of high and uniform activity is produced.

[Claim 2 not printed in the Gazette.]

1,226,946. SPEEDOMETER. ALLEN A. CANTON, New York, N. Y., assignor to The Device Testing Company, a Corporation of Connecticut. Filed July 1, 1914. Serial No. 848,349. (Cl. 175—183.)



1. A speedometer comprising a pair of solenoids of different magnetic strength, an electromagnet consisting of a fixed coil of wire and a movable core, said core having pole pieces at its opposite ends arranged to move in response to the difference in magnetic strength of the said two solenoids and means for supplying electric current to the said coil of wire and the said solenoids.

2. A speedometer comprising an electromagnet consisting of a fixed coil of wire and a movable core, said core having pole pieces at the opposite ends thereof and arranged, at right angles to the axis of the core, a pair of solenoids for operating said core, each of said solenoids mounted to influence one of the said pole pieces of the core and means for supplying current to the said coil of wire and the said solenoids.

3. A speedometer comprising an electromagnet, a core in the latter, circularly shaped pole pieces arranged at opposite ends of said core, a solenoid mounted at opposite ends of said electro-magnet and surrounding the said

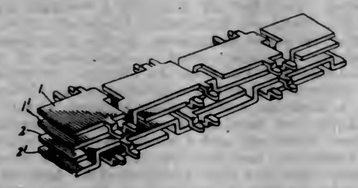
pole pieces and means for supplying electric current to said electro-magnet and the said solenoids.

4. A speedometer comprising an electro-magnet, a pair of solenoids of different magnetic strength mounted at opposite ends of said electro-magnet, a core in the latter having pole pieces arranged to move within said solenoids and in response to the different magnetic strength thereof, means for supplying electric current to the said solenoids and the said electro-magnet and means for indicating the movement of the said movable core.

5. A speedometer comprising an electro-magnet consisting of a coil and a movably supported core, said core having pole pieces at its opposite ends bent substantially circular and in parallel planes at right angles to the axis of the core, solenoids mounted at opposite ends of said electro-magnet and surrounding the said pole pieces, means for supplying said electro-magnet and one of the said solenoids with an uninterrupted electric current and means for supplying the other solenoid with current impulses at different frequencies.

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1,226,947. TERMINAL BANK. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Dec. 28, 1915. Serial No. 69,089. (Cl. 175—306.)



1. In a contact bank, a pair of flat terminal strips, and notches and offsets in said strips, the offset portion of each strip being received by the notch of the companion strip.

2. In a contact bank, pairs of terminal strips, and a series of notches and offsets in each strip, the offset portions of each of said strips being received by the notches of its companion strip.

3. In a contact bank, pairs of flat terminal strips, a series of notches in each strip, offsets in said strips at the points of said notches respectively, said offsets being alternately in opposite directions and the offset portions of each of said strips being received by the notches of its companion strip.

4. In a contact bank, a pair of flat terminal strips, contacts projecting from each of said strips, said contacts being arranged in pairs, each pair comprising a contact of each strip, a series of notches in each strip, a notch being provided between each contact and the next, offsets in said strips at the points of said notches respectively, said offsets being alternately in opposite directions and the offset portions of each of said strips being received by the corresponding notches in its companion strip.

5. In a contact bank, a pair of terminal strips, contacts projecting from each of said strips, said contacts being arranged in pairs, each pair of contacts being arranged reversely to the contacts of the adjacent pairs.

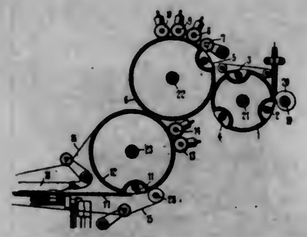
[Claims 6 to 10 not printed in the Gazette.]

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1,226,948. FOLDING-MACHINE. EDGAR H. COTTRELL, Westerly, R. I., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed July 17, 1915. Serial No. 40,512. (Cl. 270—47.)

1. In a machine of the character described, a sheet folding device for folding the sheets lengthwise of their travel and means for reversely creasing the sheets adjacent to and parallel with the line of fold.

2. In a machine of the character described, a sheet folding device for folding the sheets lengthwise of their travel and means for reversely creasing the sheets adjacent to and upon opposite sides of the line of fold and parallel therewith.



3. In a machine of the character described, a sheet folding device for folding the sheets lengthwise of their travel and means for reversely creasing the sheets adjacent to and parallel with the line of fold before the sheets are folded.

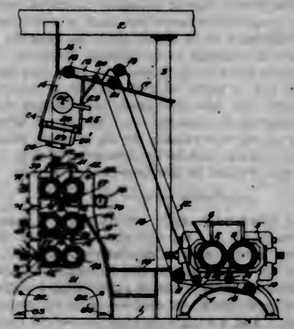
4. In a machine of the character described, a sheet folding device for folding the sheets lengthwise of their travel, means for reversely creasing the sheets adjacent to and upon opposite sides of the line of fold and parallel there with before the sheets are folded.

5. In a machine of the character described, a sheet folding device and means for creasing the sheets along the line of fold and for reversely creasing the sheets adjacent to the line of fold and parallel therewith.

[Claims 6 to 20 not printed in the Gazette.]

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1,226,949. MACHINE FOR TREATING SHEET-RUBBER. MYRON H. CLARK, Hastings-upon-Hudson, N. Y., assignor to The Goodyear's Metallic Rubber Shoe Company, a Corporation of Connecticut. Filed Dec. 24, 1914. Serial No. 878,936. (Cl. 18—9.)



1. In a machine for treating sheet rubber, in combination, a calender, feed means to prepare and convey stock to said calender, and means to inclose said stock during its passage from said feed means to said calender.

2. In a machine for treating sheet rubber, in combination, a calender, feed means for preparing stock for said calender, comprising a conveyer including a plurality of belts having their surfaces spaced apart a distance equal approximately to the thickness of the material supplied by said feed means and adapted to receive said material therebetween.

3. In a machine for treating sheet rubber, in combination, a calender, and feed mechanism for supplying stock thereto, comprising a device for forming a sheet of stock, and a device for decreasing the width of the sheet without cutting the same.



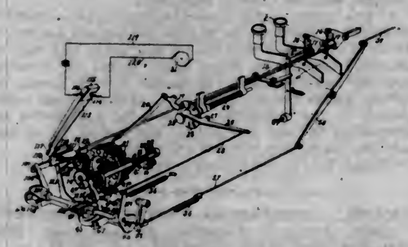
4. In a machine for treating sheet rubber, in combination, a calender, and feed mechanism for supplying stock thereto comprising a device for forming a sheet of stock and a device for decreasing the width of the sheet including a mechanism for superposing one part of the sheet on another part thereof.

5. In a machine for treating sheet rubber, in combination, a calender, and feed mechanism for supplying stock thereto comprising a device for forming a sheet of stock and a device for holding the so-formed sheet.

[Claims 6 to 13 not printed in the Gazette.]

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1,226,950. COMBINED TYPE-WRITING AND COMPUTING MACHINE. GUSTAVE O. DEGENER, New York, N. Y., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed May 17, 1911. Serial No. 627,669. (Cl. 235—62.)



1. In a computing machine, the combination with computing mechanism, of a pinion for driving said computing mechanism, a motor normally in driving relation with said pinion, numeral keys, and devices settable by any one of said numeral keys for determining how far said computing pinion shall be driven by said motor and means for interrupting the driving relation between said motor and said computing pinion during the setting of said devices.

4. A computing machine having computing mechanism, a computing pinion for driving the same, and an electric motor for controlling said pinion, said motor having a normally open circuit; and comprising in combination, normally effective connections between the motor and said computing pinion, and means controlled by a numeral key on its down-stroke for closing the motor circuit and determining how far said computing pinion shall be driven and making said connections ineffective, said key on its up-stroke controlling the restoration of said connections for effecting a drive of the computing pinion by the motor.

6. In a computing machine, the combination with a system of computing wheels and a driving means for turning them, of numeral keys for controlling said driving means, a motor having a normally open circuit, a clutch between said motor and said master wheel normally closed, means controlled by the keys for closing the motor circuit, opening the clutch, and limiting the movement of the driving means, means for subsequently closing the clutch, means dependent upon the movement of the driving means and independent of the clutch, for disconnecting the driving means from said motor at the completion of a movement of the driving means, and means for opening said circuit upon the disconnection of said driving means from said motor.

8. The combination with a computation gear including a series of movable pins, of means for mutilating said gear by projecting any of said pins, a driving pinion to mesh with said gear, an electrical circuit including a motor to operate said pinion, said circuit being normally open, means controlled by the keys to close said circuit and project a pin to variably mutilate said gear thereby to disconnect the pinion from the same at the point of mutilation and means dependent upon the projected pin reaching a definite position during the movement of said gear for opening said circuit.

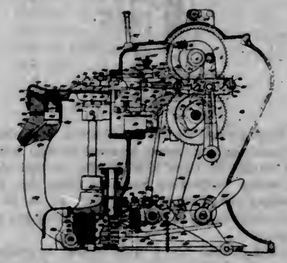


14. A computing machine having computing mechanism and a normally idle motor for driving said computing mechanism, and comprising in combination numeral keys for determining how far said computing wheels shall be turned, connections between said motor and said computing wheels, a normally closed clutch in said connections, and means for starting said motor and opening said clutch on the down-stroke of a key, and for closing said clutch to drive said computing mechanism on the up-stroke of a key.

[Claims, 2, 3, 5, 7, 9 to 13, and 15 to 31 not printed in the Gazette.]

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1,226,951. SEWING-MACHINE. ALBERT H. DE VOE, Westfield, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 18, 1913. Serial No. 795,841. (Cl. 112—36.)



1. In a sewing machine, the combination with a rotary feed-wheel, a plurality of clutch-elements operatively connected therewith, a plurality of clutch-dogs adapted for operative engagement with said clutch-elements, a reciprocatory member carrying said clutch-dogs, actuating means for said clutch-dogs, connections between said actuating means and said member for imparting to the latter a constant amplitude of movement for all of said clutch-elements, and means for selectively establishing operative engagement of any one of said clutch-dogs with its respective clutch-element while the others are maintained disengaged therefrom.

2. In a sewing machine, the combination with a rotary feed-wheel, of a plurality of clutch-elements operatively connected therewith, a plurality of clutch-dogs adapted for operative engagement with said clutch-elements, a reciprocatory member carrying said clutch-dogs, actuating means for said clutch-dogs, connections between said actuating means and said member for imparting to the latter a constant amplitude of movement for all of said clutch-elements, and means rotatable upon a fixed axis for maintaining a portion of said clutch-dogs disengaged from their respective clutch-elements while another of said clutch-dogs is permitted to assume operative engagement with its clutch-element.

3. In a sewing machine, the combination with a rotary feed-wheel, of a plurality of ratchet-wheels of different sizes operatively connected therewith, an operating lever carrying a plurality of pawls each adapted for engagement with its respective ratchet-wheel, actuating means for said lever, and means for maintaining a portion of said pawls disengaged from their respective ratchet-wheels while another remains in operative relation with its ratchet-wheel.

4. In a sewing machine, the combination with a rotary feed-wheel, of a plurality of ratchet-wheels of different sizes operatively connected therewith, an operating lever carrying a plurality of pawls each adapted for engagement with its respective ratchet-wheel, actuating means for said lever, and means sustained independently of said lever for maintaining a portion of said pawls disengaged from their respective ratchet-wheels while another remains in operative relation with its ratchet-wheel.

5. In a sewing machine, the combination with a rotary feed-wheel, of a plurality of ratchet-wheels of different sizes operatively connected therewith, an operating lever carrying a plurality of pawls each adapted for engagement with its respective ratchet-wheel, a fulcrum-pin for said lever provided with pawl-controlling means, independent connections between each of said pawls and said fulcrum-pin, and actuating means for said lever.

[Claims 6 to 16 not printed in the Gazette.]

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1,226,952. GUN-SIGHT. THOMAS C. DYER, Blanchard, Okla. Filed Aug. 20, 1915. Serial No. 46,436. (Cl. 33—47.)



1. Sighting means for a gun barrel, including a centrally disposed sight member, in combination with a series of spaced wings on each side of the central sight member, said wings projecting radially from the gun barrel and extending longitudinally thereon so as to admit of the central sight member being quickly brought into sighting position.

2. Sighting means for a gun barrel including a centrally disposed sight member, a removable sleeve fitted upon the gun barrel, and a series of spaced wings carried by the sleeve on each side of the centrally disposed sight member, said wings projecting radially from the gun barrel and extending longitudinally thereon so that the channels between the wings have the same direction as the line of sight and facilitate bringing the centrally disposed sight member into sighting position.

3. Sighting means for a gun barrel, including a centrally disposed sight member, a split sleeve removably fitted upon the gun barrel and provided with loops at the edges thereof, lacing engaging the loops to hold the split sleeve in position, and a series of spaced wings projecting from the sleeve on each side of the centrally disposed sight member, said wings projecting radially from the gun barrel and extending longitudinally thereon so that the channels between the wings have the same direction as the line of sight and facilitate the bringing of the centrally disposed sight member into sighting position.

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1,226,953. CALLING DEVICE. ALFRED H. DYSON, Montclair, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 8, 1915. Serial No. 12,809. (Cl. 179—90.)



1. In a calling device, a movable dial, an impulse transmitting mechanism arranged for operation responsive to the movement of said dial, a single power means for successively restoring said dial and actuating said mechanism, and means for locking said dial against movement during the actuation of said mechanism.

2. In a calling device, a movable dial, an impulse transmitting mechanism arranged for operation responsive to the movement of said dial, a motor spring wound up in response to the adjustment of said mechanism, and means controlled by the wound-up motor spring for restoring said dial and for operating thereafter said impulse transmitting mechanism.

3. In a calling device, a movable dial, an impulse transmitting mechanism set responsive to the movement of said dial, means for restoring said dial and mechanism, and means for operating said impulse transmitting mechanism during a part of its restoring movement in accordance with the set position of said dial.

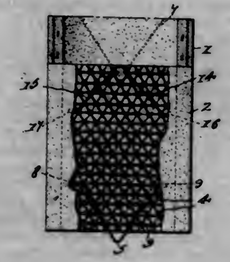
4. In a calling device, a movable dial, a series of finger holds for actuating said dial, an impulse transmitting mechanism adapted to be arranged for operation in response to the movement of said dial, coöperating contacts, a single power means for restoring said dial and for operating said mechanism, and means operative after the restoration of said dial to actuate said contacts in accordance with the selected finger hold.

5. In a calling device, a movable dial having a plurality of operating positions, an impulse mechanism adapted to be set in accordance with the set position of said dial, cooperating contacts, a single power means for restoring said dial and said impulse mechanism to their normal positions, means for actuating said contact springs subsequently to the restoration of said dial and during the restoration of said mechanism, and means for locking said dial while said contacts are coöperating.

[Claims 6 to 14 not printed in the Gazette.]

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1,226,954. REINFORCED CONCRETE CONSTRUCTION. PHILIP S. EASTERDAY, Portland, Oreg. Filed May 24, 1916. Serial No. 99,643. (Cl. 72—53.)



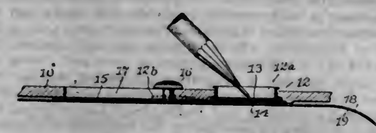
1. The combination with a plurality of concrete sections provided with a wire mesh reinforcement, of a series of rods bent in substantially U-shaped form and having hooked ends engaging said wire reinforcement, said rods being embedded in said concrete section, the loop of one of said rods projecting beyond the face of the concrete section, and the loop of the other of said rods being screened in the opposite end of the concrete section, each of said loops being adapted to register with the loop of the adjacent section, and a resilient coupling pin formed of a single rod bent in the form of a series of continuous U's closed at the top and adapted to project into the loops of the coupling rods and couple the same together in resilient relation, substantially as described.

2. The combination with a plurality of concrete sections provided with a wire mesh reinforcement, of a series of rods bent in substantially U-shaped form and having hooked ends engaging said wire reinforcement, said rods being embedded in said concrete sections, the loop of one of said rods projecting beyond the face of the concrete section, and the loop of the other of said rods being screened in the opposite end of the concrete section and being in the form of a closed elliptical spiral, each of said loops being adapted to register with the loop of the adjacent section, and a resilient coupling pin formed of a single rod bent in the form of a series of continuous U's closed at the top to project into the loops of the coupling rods and couple same together in resilient relation, substantially as described.

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1,226,955. CAMERA. CHARLES H. ECKERSON, Closter, N. J., assignor of one-half to Gordon J. Scott, Englewood, N. J. Filed Apr. 5, 1916. Serial No. 88,993. Cl. 95—1.1.)

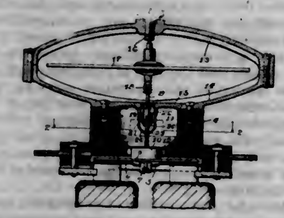


1. A camera having an opening in position to permit light to strike through the same to a suitable portion of the film, an inwardly and outwardly movable piece of celluloid arranged in said opening and having its outer surface ground or frosted, a sliding opaque shutter of stiff material arranged underneath the celluloid and normally holding the same in its outer position, and spring means carrying the celluloid and urging the same inwardly, whereby to press the celluloid into close proximity to the film when the shutter is withdrawn.

[Claim 2 not printed in the Gazette.]

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1,226,956. MERCURY MOTOR-METER. ALBERT L. EMENS, Springfield, Ill., assignor to Sangamo Electric Company, Springfield, Ill., a Corporation of Illinois. Filed May 3, 1915. Serial No. 25,517. (Cl. 171—265.)



1. A mercury motor meter, comprising a mercury chamber, an armature, an armature shaft rising through the mercury chamber, a mercury chamber cover through which said shaft passes, a nipple connected with the cover and extending down around said shaft, and means coöperating with said nipple to form a chamber which extends below the lower end of said nipple, said shaft passing through the latter chamber.

2. A mercury motor meter, comprising a mercury chamber, an armature, an armature shaft rising through the mercury chamber, a mercury chamber cover through which said shaft passes, a nipple connected with the cover and extending down around said shaft, and a shield having a contracted opening for the passage of said shaft therethrough, said shield being disposed between said mercury chamber and the lower end of said nipple.

3. A mercury motor meter, comprising a mercury chamber, an armature, an armature shaft rising through the mercury chamber, a cover for the upper portion of the mercury chamber through which said shaft passes, and inner and outer nipples extending downwardly into the mercury chamber and forming between them a chamber surrounding the armature shaft, the outer nipple extending below the inner one.

4. A mercury motor meter, comprising a mercury chamber, an armature, an armature shaft rising through the mercury chamber, a cover for the upper portion of the mercury chamber through which said shaft passes, and inner and outer nipples coöperating to form a chamber through which said shaft passes, said nipples being connected with said cover and projecting downwardly into the mercury chamber, the outer nipple extending below the inner one and the lower end portions of said nipples being contracted.

5. A mercury motor meter, comprising a mercury chamber, an armature, an armature shaft rising through the mercury chamber, a cover for the upper portion of the mercury chamber through which said shaft passes, and a plurality of nipples through which said shaft passes, said nipples being connected with said cover and projecting downwardly to different levels in the mercury chamber, the lower end portions of said nipples being contracted.

[Claims 6 to 13 not printed in the Gazette.]

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1,226,957. METHOD OF DECORATING GLASSWARE. HOWARD S. EVANS, Pittsburgh, Pa., assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 25, 1914. Serial No. 858,443. (Cl. 41—38.)



1. The method of producing sanded or ground glassware decorated in colors, which consists in placing upon the articles colored bands, leaving the remainder of the glass uncolored, burning the colors to fix them upon the glass, placing upon the bands protecting covers of the designs to be produced, treating the articles so that the surfaces thereof with the exception of that which is protected are roughened, and the coloring matter is removed from the unprotected portions of the bands, and finally removing the said protecting coverings.

2. The method of producing sanded or ground glassware decorated in colors, which consists in placing upon the articles colored bands, leaving the rest of the articles uncolored, placing over the bands protecting coverings of the designs to be produced, treating the articles so that the surfaces thereof with the exception of that which is protected are roughened, and the coloring matter is removed from the unprotected portions of the bands, and finally removing the protecting coverings.

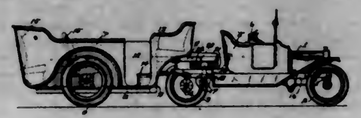
3. The method of producing sanded or ground glassware decorated in colors, which consists in rotating the articles about their axes and applying colors in bands to the articles as they are rotated, placing over the bands of color produced protecting coverings of the designs to be produced, treating the articles so that the surfaces thereof with the exception of that which is protected are roughened and the coloring matter removed from the unprotected portions, and finally removing the protecting coverings.

4. The method of producing sanded or ground glassware decorated in colors, which consists in coloring portions of the outer surfaces of the articles leaving the remainder of the outer surface of the glass uncolored, burning the colors to fix them upon the glass, placing upon the colored portions protecting coverings of the designs to be produced, treating the articles so that the surfaces thereof with the exception of that which is pro-

tected is roughened, and the coloring matter is removed from the unprotected parts of the colored portions, and finally removing the said protecting coverings.

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1,226,958. FLEXIBLE VEHICLE. ROLLIE B. FAGEOL, Oakland, Cal. Filed Jan. 3, 1916. Serial No. 69,935. (Cl. 21—90.)



1. In combination with a passenger carrying vehicle trailer member comprising a body, the floor of which is adapted to be reached by a single step from the road surface, a supporting frame therefor extending substantially parallel with the road surface with the rear end in close proximity therewith, a single pair of supporting wheels adjacent the rear end thereof, the forward end of said frame extending substantially parallel with the rear thereof and in a plane above the same to provide a raised substantially horizontal portion adapted for projecting over and resting on a coöperating self propelled vehicle, said body provided at one side and at a point immediately in the rear of said substantially horizontal raised portion with an entrance and exit passage, and a passenger seat extending transversely within the body above and resting on said substantially horizontal raised portion of the frame, an independent wheeled motor member to which said passenger carrying vehicle member is pivotally connected, and an intersteering connection interposed between said members whereby the trailer member is caused to track with the motor member.

2. A passenger carrying vehicle comprising a motor member having steering and supporting wheels and a body for carrying an operator, a passenger carrying member detachably secured thereto through a pivotal connection, said passenger carrying member comprising a body, the floor of which, is adapted to be reached by a single step from the road surface, a supporting frame therefor and extending substantially parallel with the road surface with the rear end in close proximity therewith, a single pair of supporting wheels adjacent the rear end of said frame, the forward end of said frame extending substantially parallel with the rear thereof and in a plane above the same to provide a raised substantially horizontal portion adapted for projecting over and resting on the rear of the motor member, said body provided at one side and at a point immediately in rear of the substantially horizontal raised portion with an entrance and exit passage enabling passengers entering the said passenger carrying member or alighting therefrom, to readily pass their fare to the vehicle operator while passing through said entrance or exit passage, and an inter-steering connection between the motor and the passenger carrying members, whereby the passenger carrying member is caused to travel in the path of the motor member.

3. A vehicle comprising a motor member having steering and supporting wheels and a passenger carrying member associated therewith, said passenger carrying member comprising a body member provided with seats and an entrance opening, a supporting frame therefor, a single pair of supporting wheels adjacent one end thereof, the forward end of said frame projecting over and resting on the motor member, a yieldable supporting connection between the motor and passenger carrying members, and a transversely extending steering link connecting the motor and passenger carrying members.

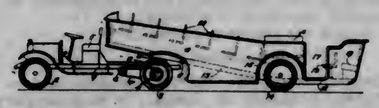
4. A vehicle comprising a motor member having steering and supporting wheels and a passenger carrying member associated therewith, said passenger carrying member comprising a body member provided with seats and an entrance opening, a supporting frame therefor, a single pair of supporting wheels adjacent one end thereof, the forward end of said frame projecting over and resting on the motor member, a pivot member projecting upwardly from the motor member and slidable transversely thereof, a bearing block carried by said frame and movable longitudinally thereof for receiving said pivot member, a tension spring on each side of said bearing block and a transversely extending pivoted link connecting said frame and the motor member in rear of said pivot member.

5. A vehicle comprising a motor member having steering and supporting wheels and a passenger carrying member associated therewith, said passenger carrying member comprising a body member provided with seats and an entrance opening, a supporting frame therefor, a single pair of supporting wheels adjacent one end thereof, the forward end of said frame projecting over and resting on the motor member, a supporting connection between the motor and passenger carrying members, said connection permitting transverse and longitudinal movement of the relative overlapping portions of the two vehicle members, and a transversely disposed steering link pivotally connected to both vehicle members in rear of said supporting connection.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,959. VEHICLE. ROLLIE B. FAGEOL, Oakland, Cal. Filed Jan. 3, 1916. Serial No. 69,936. (Cl. 21—90.)



1. A vehicle train comprising a motor car having front and rear supporting wheels and capable of being steered in any desired direction, a passenger carrying vehicle provided adjacent one end with a pair of supporting wheels and at its opposite end overhanging and resting on the motor vehicle, a pivotal supporting connection between the motor vehicle and the end of said passenger carrying vehicle, the portion of said passenger carrying vehicle in rear of said supporting wheels being provided at one side with an entrance opening and being disposed substantially parallel with the road surface and in close proximity therewith, and the portion thereof in advance of said supporting wheels and overhanging said motor car being upwardly inclined.

2. A vehicle for the carrying of passengers, comprising a motor member having front and rear supporting wheels and capable of being steered in any direction, a passenger carrying member having a plurality of passenger carrying seats and provided adjacent one end with a pair of supporting wheels, and at its opposite end inclined upwardly, overhanging and resting on the motor member, a pivotal supporting connection between the motor and passenger carrying members, the portion of said passenger carrying vehicle in rear of said supporting wheels being disposed substantially parallel with the road surface and in close proximity thereto, and provided in one side with a passage for the entrance and exit of passengers and provided in rear of said passage and across the rear of said vehicle with a passenger carrying seat.

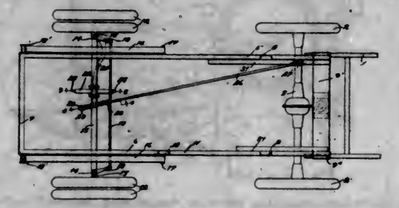
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1,226,960. VEHICLE. ROLLIE B. FAGEOL, Oakland, Cal. Filed May 3, 1916. Serial No. 95,131. (Cl. 21—137.)

1. In combination with a wheeled propelling vehicle, a trailer pivotally connected thereto, and supported at one end thereby, a pair of wheels for supporting the other end of said trailer and capable of pivotal movement on a vertical axis, a steering connection extended from said propelling vehicle and coöperating with said trailer supporting wheels to cause the same to track in the path of the propelling vehicle, means for limiting the pivotal movement of said trailer supporting wheels and means associated with said steering connection for permitting movement thereof after the pivotal movement of said wheels has been limited.



2. In combination with a wheeled propelling vehicle, a trailer pivotally connected thereto and supported at one end thereby, a supporting axle carried by the trailer adjacent its opposite end, wheel supporting spindles carrying wheels attached to the opposite ends of said axle and capable of pivotal movement relatively thereto on a vertical axis, a tie rod pivotally connected at its opposite ends to said spindles, and a steering connection extended from said propelling vehicle and directly connected to one of said spindles to cause said wheels to steer in the path of the wheels of said propelling vehicle said connection capable of a limited free movement in excess of the pivotal movement of said spindles.



3. In combination with a wheeled propelling vehicle, a trailer connected thereto by a vertical pivot and supported at one end thereby, a supporting axle carried by said trailer adjacent its opposite end, wheel supporting spindles carried by said axle and connected thereto by a vertical pivot, a rod pivotally connecting said spindles, a lever arm carried by one of said spindles, a steering rod pivotally connected at one end to said propelling vehicle at a point to one side of the pivotal connection of said propelling vehicle and trailer and yieldably connected at its opposite end to said lever arm.

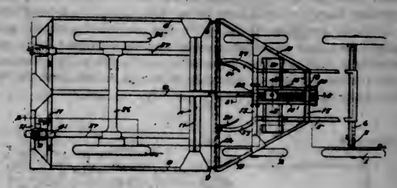
4. In combination with a wheeled propelling vehicle, a trailer connected thereto by a vertical pivot and supported at one end thereby, a supporting axle carried by said trailer adjacent its opposite end, wheel supporting spindles carried by said axle and connected thereto by a vertical pivot, a rod pivotally connecting said spindles, a lever arm carried by one of said spindles, means for limiting the movement of said arm, a steering rod pivotally connected at one end to said propelling vehicle at a point to one side of the pivotal connection of said propelling vehicle and trailer, a tubular member pivotally connected to said lever arm and in which said steering rod is slidably mounted, and spring tension means carried by said rod on each side of said sleeve and contacting therewith.

5. In combination with a wheeled propelling vehicle, a trailer pivotally connected thereto and supported at one end thereby, a pair of wheels for supporting the other end of said trailer and capable of simultaneous pivotal movement on a vertical axis, means for limiting the pivotal movement of said wheels, a steering connection extended from said propelling vehicle and coöperating with said wheels to cause the same to pivot within the confines of said limiting means and to track in the path of the wheels of said propelling vehicle, and means coöperating with said steering connection for permitting a movement thereof after the pivotal movement of said wheels has been arrested.

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1,226,961. INTERSTEERING CONNECTION FOR FLEXIBLE VEHICLES. ROLLIE B. FAGEOL, Oakland, Cal. Filed May 3, 1916. Serial No. 95,132. (Cl. 21—90.)

1. A vehicle comprising a motor member having steering and supporting wheels and a trailer member having a single pair of supporting wheels adjacent one end thereof, the other end projecting over the motor member, means for connecting said vehicle members including a guide extending transversely of the motor member, a pivotal connection carried by the trailer member and coöperating with said guide, and coöperating devices carried by the motor and trailer members for causing a transverse movement of the forward end of the trailer member over the motor member when said vehicle members are traveling in a curved path.



2. A vehicle comprising a motor member having steering and supporting wheels and a trailer member having a single pair of supporting wheels adjacent one end thereof, the other end projecting over the motor member, means for connecting said vehicle members and permitting transverse and longitudinal movement of the overlapping portions of the two vehicle members, and coöperating devices carried by the motor and trailer members for causing a transverse and longitudinal movement of the overlapping portions of the two vehicle members when said vehicle members are traveling in a curved path.

3. A vehicle comprising a motor member having steering and supporting wheels and a trailer member having a single pair of supporting wheels adjacent one end thereof the other end projecting over the motor member, a guide carried by each of said overlapping portions of the two vehicle members, said guides arranged at substantially right angles to each other, a block slidably mounted in each of said guides, a pivotal connection between said blocks, spring tension means coöperating with one of said blocks, and coöperating devices carried by the motor and trailer members for causing a transverse and longitudinal movement of the overlapping portions of the two vehicle members when the same are traveling in a curved path.

4. A vehicle comprising a motor member having steering and supporting wheels and a trailer member having a single pair of supporting wheels adjacent one end thereof and the other end projecting over the motor member, a pivoted connection between the overlapping portions of the two vehicle members, said connection permitting of a transverse and longitudinal movement of the overlapping portions of the two vehicle members, a pair of traction levers carried by the motor member, a pair of shoes carried by the trailer member and with which said levers coöperate for causing a transverse and longitudinal movement of the overlapping portions of the two vehicle members when the same are traveling in a curved path, and spring tension means for drawing said motor and trailer members together.

5. A vehicle comprising a motor member having steering and supporting wheels and a trailer member having a single pair of supporting wheels adjacent one end thereof the other end projecting over the motor member, a guide carried by each of said overlapping portions of the two vehicle members, said guides arranged at substantially right angles to each other, a block slidably mounted in each of said guides, a pivotal connection between said blocks, spring tension means coöperating with one of said blocks, coöperating devices carried by the motor and trailer members for causing a transverse and longitudinal movement of the overlapping portions of the two vehicle members when the same are traveling in a curved path, and spring tension means for drawing said motor and trailer members together.

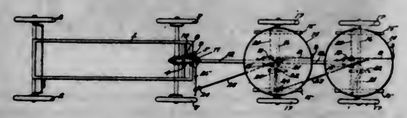
[Claims 6 to 8 not printed in the Gazette.]

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1,226,962. FLEXIBLE ROAD-TRAIN. ROLLIE B. FAGEOL, Oakland, Cal. Filed July 25, 1916. Serial No. 111,156. (Cl. 21—137.)

1. In a road train comprising a tractor vehicle and a plurality of trailer vehicles, a fixed tongue extending for-

wardly from each trailer vehicle, a coupling member flexibly connected to said tongue and adapted for separable connection with the preceding vehicle, a transversely disposed arm fixed to and extending horizontally from said coupling member, said arm being adapted to be moved into a vertical position to support the forward end of said tongue and said coupling member when detached from the preceding vehicle, and means for automatically steering each trailer vehicle to cause it to track in the path of the preceding vehicle.



2. In a road train comprising a tractor vehicle and a plurality of trailer vehicles, a fixed tongue extending forwardly from each trailer vehicle, a coupling member rotatably and pivotally connected with said tongue and adapted for separable connection with the preceding vehicle, a transversely disposed arm fixed to and extending horizontally from said coupling member, said arm being adapted to be moved into a vertical position to support the forward end of said tongue and said coupling member when detached from the preceding vehicle, locking means for retaining said arm in said vertical position, and means for automatically steering each trailer vehicle to cause it to track in the path of the preceding vehicle.

3. In a road train comprising a tractor vehicle and a plurality of trailer vehicles, each trailer vehicle having an axle, a steering spindle pivotally connected with each end of said axle, a supporting wheel mounted upon each steering spindle, a forwardly extending tongue fixed to said trailer vehicle, a coupling member rotatably and pivotally connected with said tongue and adapted for separable connection with the preceding vehicle, a transversely disposed arm fixed to and extending horizontally from said coupling member, said arm being adapted to be moved into a vertical position to support the forward end of said tongue and said coupling member when detached from the preceding vehicle, and a system of steering rods and levers connecting said transverse arm with said steering spindles to steer the trailer vehicle in the track of the preceding vehicle.

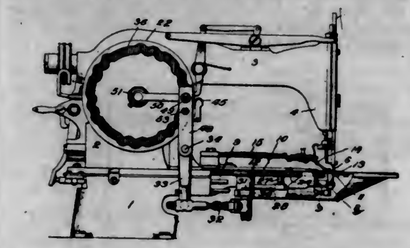
4. In a road train comprising a tractor vehicle and a plurality of trailer vehicles, a socket member carried by each vehicle, a coupling member adapted for separable connection with said socket member, locking means for retaining said coupling member within said socket member, a forwardly extending tongue fixed to each trailer vehicle, the forward end of said tongue having universal pivotal connection with said coupling member, a transversely disposed arm fixed to and extending horizontally from said coupling member, said arm being adapted to be moved into a vertical position to support the forward end of said tongue and said coupling member when detached from said socket member, and means for automatically steering each trailer vehicle to cause it to follow in the track of the preceding vehicle.

5. In a road train comprising a tractor vehicle and a plurality of trailer vehicles, each trailer vehicle having an axle and a pair of supporting wheels mounted thereon, said wheels being capable of swinging movement in a horizontal plane relative to the vehicle, a socket member carried by each vehicle, a coupling member adapted for separable connection with said socket member, means for retaining said coupling member within said socket member, a forwardly extending tongue fixed to each trailer vehicle and having universal pivotal connection with said coupling member, a transversely disposed arm fixed to and extending horizontally from said coupling member, said arm being adapted to be moved into a vertical position to support the forward end of said tongue and said coupling member when detached from said socket member, and a steering rod extending rearwardly from said transverse arm and connected with the wheels of said trailer vehicle to steer the same in the track of the preceding vehicle.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,963. SEWING-MACHINE. ALBERT F. FIFIELD, Newark, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 31, 1916. Serial No. 100,804. (Cl. 112—32.)



1. A button-sewing machine comprising, in combination, a reciprocating needle, a work-holder, means for producing jogging movements of said work-holder laterally of said needle, said means including an actuating element and a follower normally actuated by said actuating element, a stationary stop, and means for shifting said follower out of engagement with said actuating element and into engagement with said stop.

2. A button-sewing machine, comprising, in combination, a reciprocating needle, a work-holder, means for producing jogging movements of said work-holder laterally of said needle, said means including an actuating element and a follower normally actuated by said actuating element, a stationary stop, and means for shifting said follower out of engagement with said actuating element and into engagement with said stop in a direction transverse to its normal direction of movement as produced by said actuating element.

3. A button-sewing machine comprising, in combination, a reciprocating needle, a work-holder, means for jogging the work-holder, said means comprising independently acting mechanisms operating on the work-holder in mutually transverse directions, one of said mechanisms including an actuating element, a follower normally moved to-and-fro by said actuating element, and means for shifting said follower into or out of engagement with said actuating element.

4. A button-sewing machine comprising, in combination, a reciprocating needle, a work-holder, means for jogging the work-holder, said means comprising independently acting mechanisms operating on the work-holder in mutually transverse directions, one of said mechanisms including an actuating element, a follower normally moved to-and-fro by said actuating element, a stationary stop, and means for shifting said follower out of engagement with said actuating element and into engagement with said stop.

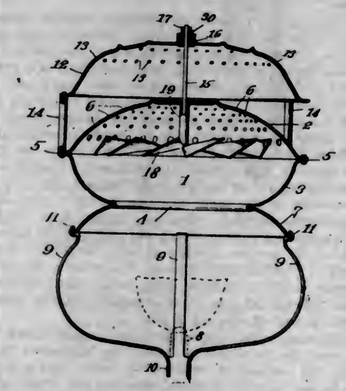
5. Work-holder mechanism for sewing machines, comprising, in combination, a work-holder, means for jogging the work-holder, said means comprising independently acting mechanisms operating on the work-holder in mutually transverse directions, one of said mechanisms including an actuating cam, a cam-follower normally moved to-and-fro by said actuating cam, and means for shifting said follower into or out of engagement with said actuating cam.

[Claims 6 to 16 not printed in the Gazette.]

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1,226,964. GAS-HEATER. WILLIAM C. FISCHER, New York, N. Y., assignor to The Compound Heater Mfg. Company, Inc., a Corporation of New York. Filed Jan. 19, 1916. Serial No. 72,902. (Cl. 126—248.)

1. A gas heater comprising a perforated heat radiating chamber, a fan freely suspended in said chamber from an overhead support and adapted to be rotated by the ascending currents of heated air and thereby throw the heated air against the walls of said chamber and through the perforations thereof, a perforated dome-shaped radiating plate supported above said chamber and a flaring skirt depending from said chamber to collect the heated currents of air and direct them to said fan.



2. A gas-heater comprising a perforated heat-radiating chamber, a heat-radiating plate concentric with the upper surface of said chamber and supported thereby, a fan within said chamber adapted to be rotated by the currents of heated air, a shaft suspended from the upper heat-radiating plate and to which said fan is secured, a sleeve on said shaft adapted to prevent vertical movement of said fan and a skirt depending from the bottom of said chamber to collect the heated air and direct it to said fan.

3. A gas heater comprising a perforated chamber having an opening in the bottom, an outwardly flaring skirt depending from said opening, a dome-shaped radiating plate spaced above the said chamber, posts rising from said chamber and supporting said plate, a freely mounted shaft suspended from said dome-shaped plate and projecting into said chamber, a fan secured to said shaft within said chamber and adapted to be rotated by currents of heated air and means on said shaft to prevent said fan rising vertically.

4. A gas-heater comprising a perforated chamber having an opening in the bottom and adapted to be supported above a gas flame, a dome-shaped radiating plate supported above the top of said chamber, a freely mounted shaft suspended from said dome-shaped radiating plate and projecting into said chamber, a fan secured to the end of said shaft within said chamber and adapted to be rotated by currents of heated air from the gas flame, a ball-race on which said shaft is supported and a sleeve or collar on said shaft to prevent said fan rising vertically.

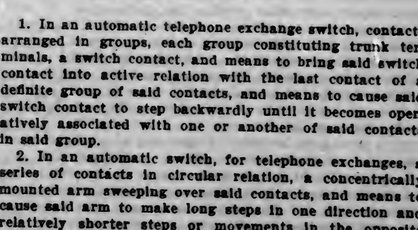
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1,226,965. ATTACHMENT TO PLOW-STOCK. ROY GORDON FULCHER and JOHN STIRLING, Carson, La. Filed Nov. 27, 1914. Serial No. 874,336. (Cl. 97—26.)

1. A device of the class described comprising a blade, a threaded shank thereon, a supporting yoke having clamping arms constructed for engagement with a plow stock, said shank being slidably engaged through one arm and threaded in the other, and a clamping nut on the shank outwardly of the first mentioned arm of the yoke.

2. A device of the class described comprising a blade, a shank thereon extended diagonally from the blade, a support therefor, said shank being revoluble in the support on an axis inclined downwardly to the rear and means to adjust the shank longitudinally in the support.

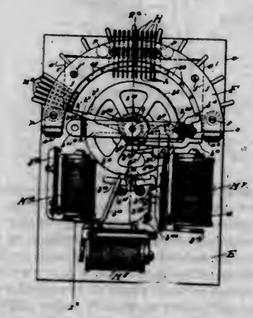
3. A device of the class described comprising a blade member, a shank, means for attaching the shank to a plow for positioning of the blade as described, said blade having a sharp lower edge for engagement in the ground to guide and steady a plow in its forward movement against abrupt lateral diversions and for supporting the plow in erect position, and having also flattened upper edges, said blade being revoluble for inversion at times, and means to secure the shank in adjusted positions.



4. A device of the class described comprising a blade member, a shank extended diagonally from the blade, said blade extending more beyond one side of the shank than the other, means for attaching the shank revolubly to a plow on an inclined axis for positioning of the blade as described, said blade having a sharp edge for engagement in the ground to guide and steady a plow in its forward movement against abrupt lateral divisions and for supporting the plow in erect position.

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1,226,966. TELEPHONE SYSTEM AND APPARATUS. CHARLES L. GOODRUM, Urbana, Ohio, assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Original application filed Apr. 1, 1905, Serial No. 253,227. Divided and this application filed Feb. 3, 1910. Serial No. 541,811. (Cl. 179—27.5.)



1. In an automatic telephone exchange switch, contacts arranged in groups, each group constituting trunk terminals, a switch contact, and means to bring said switch contact into active relation with the last contact of a definite group of said contacts, and means to cause said switch contact to step backwardly until it becomes operatively associated with one or another of said contacts in said group.

2. In an automatic switch, for telephone exchanges, a series of contacts in circular relation, a concentrically mounted arm sweeping over said contacts, and means to cause said arm to make long steps in one direction and relatively shorter steps or movements in the opposite direction.

3. In an automatic switch for telephone exchanges, a spindle, two wheels on said spindle, and two pawls co-operating with said wheels, one to set the wheels forward

by long steps, and the other to move the wheels rearwardly by short steps.

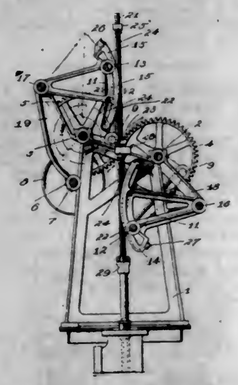
4. A switch for automatic telephone exchanges comprising a base having a stationary portion and a relatively movable part thereon, a bank of circularly-arranged terminal contacts mounted on the stationary part, and a concentrically mounted element on the movable part of the base and coöperating with the contacts, means for operating said element in long steps and separate means for operating said elements in relatively shorter steps, electromagnetic devices for controlling the respective stepping means, said stepping means being supported on the movable part of said base.

5. In a switching mechanism, a plurality of terminal contacts arranged in an arc shaped row and an underlying base or support provided with parallel ways, a base plate detachably connected to the support and fitted in said ways, a revoluble element journaled on the plate to cooperate with said contacts and mechanism for operating said element comprising two sets of stepping devices, one for long and one for short steps which mechanism is also carried on the movable plate.

[Claims 6 to 14 not printed in the Gazette.]

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1,226,967. DRIVE-GEAR FOR DEEP-WELL PUMPS. ALBERT A. GROSSARTH, Chicago, Ill. Filed Mar. 17, 1915. Serial No. 15,015. (Cl. 103—82.)



1. A drive gear for pumps comprising a rocking member having a wrist pin and operatively connected with and adapted to impart reciprocal movement to the piston rod, a rotatable crank, a connecting rod connecting said crank and wrist pin, the axis of rotation of said crank and the axis of oscillation of said rocking member relatively disposed to cause the vertical plane of the crank-pin and the vertical plane of the wrist pin to move simultaneously away from each other during the down-stroke of said rocking member, and to move simultaneously toward each other during a part of the up-stroke thereof and to move simultaneously in the same direction during a portion of said up-stroke, whereby a constant variation in relative speed of movement of the crank-pin and rocking member throughout the greater portion of each revolution of the crank-pin is attained.

2. A drive gear for pumps comprising a rocking member having a wrist pin and operatively connected with and adapted to impart reciprocal movement to the piston rod, a rotatable crank, a connecting rod connecting said crank and wrist pin, the axis of rotation of said crank and the axis of oscillation of said rocking member relatively disposed to cause the vertical plane of the crank-pin and the vertical plane of the wrist pin to move simultaneously away from each other during the down-stroke of said rocking member, and to move simultaneously toward each other during a part of the up-stroke thereof and to move simultaneously in the same direction during a portion of said up-stroke, whereby a constant variation in relative speed of movement of the crank-pin and rocking member throughout the greater portion of each revolution of the crank-pin is attained and whereby the relative speeds of movement of the crank-pin and wrist are practically identical through an appreciable arc of movement of said crank-pin.

3. A drive gear for pumps comprising a rocking member having a wrist pin and operatively connected with and adapted to impart reciprocal movement to the piston rod, a rotatable crank, a connecting rod connecting said crank and wrist pin, the axis of rotation of said crank and the axis of oscillation of said rocking member relatively disposed to cause the vertical plane of the crank-pin and the vertical plane of the wrist pin to move simultaneously away from each other during the down-stroke of said rocking member, and to move simultaneously toward each other during a part of the up-stroke thereof and to move simultaneously in the same direction during a portion of said up-stroke, whereby a constant variation in relative speed of movement of the crank-pin and rocking member throughout the greater portion of each revolution of the crank-pin is attained and whereby the relative speeds of movement of the crank-pin and wrist are practically identical through an arc of substantially ninety degrees in the movement of said crank-pin.

4. A drive gear for pumps including an oscillating sector, a rotatable crank-pin, a connection interposed therebetween, and connection between the sector and a piston rod to be reciprocated thereby, whereby the latter is reciprocated in a plane through which the face of said sector oscillates, the axis of rotation of said crank pin lying in a vertical plane between the similar parallel planes of the axis of oscillation of the sector and pivotal connection between the latter and said connecting rod whereby during one part of the rotation of the crank-pin, the latter and the pivotal connection of the sector with the connecting rod will move simultaneously laterally away from the piston rod and will thereafter move simultaneously in respectively opposite directions relatively to said piston rod, to vary the relative speeds of travel of said piston rod in opposite directions through two successive equal arcs of movement of said crank-pin.

5. A drive gear for pumps including an oscillating sector, a rotatable crank-pin, a connection interposed therebetween, and connection between the sector and a piston rod to be reciprocated thereby, whereby the latter is reciprocated in a plane through which the face of said sector oscillates, the axis of rotation of said crank pin disposed relatively to the axis of oscillation of said sector and the pivotal axis of the connection between the latter and said connecting rod to cause the last-named axis to describe an arc of appreciably different length than the diameter of the circle described by said crank-pin.

[Claims 6 to 8 not printed in the Gazette.]

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1,226,968. WALL-BRACKET FOR SUPPORTING FIRE-EXTINGUISHERS. DAVID S. GUENTHER, Dayton, Ohio. Filed May 4, 1916. Serial No. 95,309. (Cl. 248—20.)

1. A bracket for the purpose specified, comprising a back plate having a cup-shaped supporting part at one end adapted to receive the lower end of a hand fire extinguisher, a two-part clamp on the upper part of said plate one member of which is hinged, a bolt one end of which terminates in a cross pin and the other end in a handle, the cross arm being adapted to lock the clamp and to release it, and a spring on said bolt controlling the clamp when in a locked position.

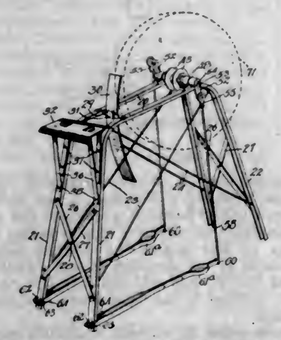
2. A bracket, comprising a back plate having a supporting cup on its lower end and an arm extending from its upper end, a clamp consisting of two members one member being fixed to the upper part of said bracket and the other member being hinged to the fixed member, said clamp members having their free ends extended parallel with each other and provided with registering apertures, one of said clamp members having a transverse surface recess crossing the aperture therein, and a spring-pressed T-bolt penetrating the apertures in said clamp extensions



and coöperating with the apertures and recess therein in securing said clamp members and in releasing them.

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1,226,969. FRAME FOR GRINDSTONES. GEORGE G. GUY, Batavia, Ill., assignor to Aurora Door Hanger & Specialty Company, Aurora, Ill., a Corporation of Illinois. Filed Sept. 26, 1914. Serial No. 863,613. (Cl. 51—7.)



1. In a collapsible grindstone-frame, the combination with a pair of side pieces each comprising a horizontal top and two legs, of a pair of crossed brace pieces at each end forming the only connections between the legs of the side pieces pivoted to each other and each detachably secured at one end to one of the side pieces and forming the only connections between the legs of the two side pieces, and detachable connections between the tops of said side pieces, which when detached, permit the side pieces being collapsed toward each other without changing their shape.

2. In a collapsible grindstone-frame, the combination with a pair of side pieces each comprising a horizontal top and two legs, of a pair of detachable brace pieces at each end, and detachable connections between the tops of the side pieces, which when detached, permit the side pieces being collapsed toward each other without changing their shape, said detachable connections including a detachable seat.

3. In a collapsible grindstone-frame, the combination with a pair of side pieces, of a pair of detachable brace pieces at each end, and detachable connections between the tops of the side pieces, said detachable connections including a detachable seat, consisting of a piece of sheet metal having tongues struck downward therefrom, and brackets permanently secured to the side pieces with which the tongues coöperate.

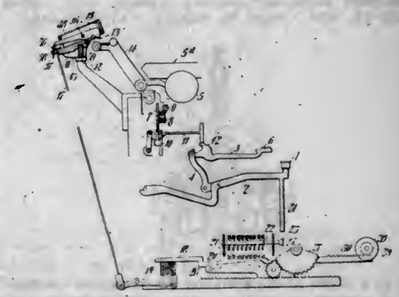
4. In a collapsible grindstone-frame, the combination with a pair of side pieces each comprising a horizontal top and two legs, of a pair of detachable brace pieces at each end forming the only connections between the legs of the side pieces, and detachable connections between the tops of the side pieces which when detached, permit the side pieces being collapsed toward each other without changing their shape, said detachable connections including an axle for the stone, extensions of said axle, bearings in the side pieces through which the extensions pass and in which they are permanently held, and a bolt for securing said extensions to the axle.

5. In a collapsible grindstone-frame, the combination with a pair of side pieces, of a pair of detachable brace pieces at each end, and detachable connections between the tops of the side pieces, said detachable connections including a brace detachably connected at one end to the top of one side, and a splashboard having a tongue struck up therefrom coöperating with the brace to detachably secure the board thereto.

[Claims 6 to 11 not printed in the Gazette.]

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1,226,970. COMBINED TYPE-WRITING AND COMPUTING MACHINE. HANS HANSON, Hartford, Conn., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Sept. 25, 1912. Serial No. 722,223. (Cl. 235—59.)



1. In a computing machine, the combination with a series of jacks and denominational selecting rods operated thereby, of a frame in which said jacks are pivoted, guides on the end of the frame for said rods, and a comb forming guides for said jacks adjacent said rod guides.

2. The combination with a series of jacks pivotally mounted to vibrate about an axis, of means for vibrating said jacks, and guiding means engaging the ends of said jacks which are engaged by said vibrating means adapted to confine the movement of said jacks to their normal direction of vibration about their axis.

3. The combination with a series of jacks pivotally mounted to vibrate about an axis, of means for vibrating said jacks, a series of rods, one for each of said jacks, said jacks contacting freely with their accordant rods, guiding means for said rods, guiding means for said jacks to hold them to their planes of vibration, and guiding means for the ends of said jacks contacting with said rods, said last-mentioned guiding means corresponding with the guiding means for said rods so as to maintain said jacks in register with said rods.

4. The combination with a series of pivotally-mounted jacks adapted to vibrate about a common axis, of means to vibrate said jacks, a series of rods arranged to be actuated by said jacks, there being one of said rods for each of said jacks, said rods and said jacks contacting freely, guiding means engaging the ends of said jacks which are engaged by said vibrating means so as to hold said jacks against movement transverse to the plane of vibration of said jacks by said vibrating means when said vibrating means engages said jacks, guiding

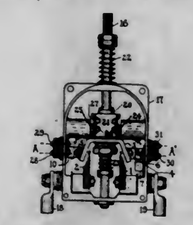
means for said rods, and guiding means for the ends of said jacks engaging said rods, said last-mentioned guiding means and the guiding means for said rods being dentated and corresponding one with the other, so that the ends of said jacks contacting with said rods will always be maintained in register with said rods.

5. The combination with a series of pivotally-mounted jacks adapted to vibrate about a common axis, of means to vibrate said jacks, a series of rods arranged to be actuated by said jacks, there being one of said rods for each of said jacks, said rods and said jacks contacting freely, guiding means engaging the ends of said jacks which are engaged by said vibrating means so as to hold said jacks against movement transverse to the plane of vibration of said jacks by said vibrating means when said vibrating means engages said jacks, guiding means for said rods, guiding means for the ends of said jacks engaging said rods, said last-mentioned guiding means and the guiding means for said rods being dentated and corresponding one with the other so that the ends of said jacks contacting with said rods will always be maintained in register with said rods, and means for limiting the pivotal movements of said jacks.

[Claims 6 to 18 not printed in the Gazette.]

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1,226,971. COMBINED STARTING AND IGNITION SWITCHING DEVICE AND CIRCUITS THEREFOR. WILLIAM J. HART, Mount Vernon, N. Y., assignor to Splitdorf Electrical Company, Newark, N. J. Filed July 21, 1914. Serial No. 852,209. (Cl. 123—148.)



1. In a device of the character described, the combination of a battery, a starting motor, a switch for connecting said battery to said motor, a magneto having a circuit breaker and circuits therefor, said magneto operating said circuit breaker in one of said circuits when said switch connects battery to the starting motor and operating said circuit breaker in another circuit when said switch is in its normal position.

2. In combination, a starter circuit, a battery circuit and a magneto circuit, a switch member manually movable in one direction to close the starter circuit and automatically movable in the opposite direction to break such circuit, other switch members manually movable to break the magneto circuit and close the battery circuit and automatically operable to break the battery circuit and to close the magneto circuit, the battery circuit closing movements of said other members being dependent on starter circuit closing movements of said first switch member.

3. In a device of the character described, the combination of a battery, a starting motor, a switching mechanism connecting said battery to said motor and a housing for said mechanism, a magneto, an induction coil, circuits for both magneto and induction coil, said circuits being controlled within said housing by said motor switching mechanism, substantially as and for the purpose described.

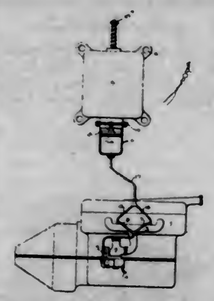
4. In a device of the character described, the combination of a battery, a starting motor, a switch for closing the circuit of the battery to said motor, a magneto, an induction coil, said switch also closing the circuit of battery to the induction coil, at the same time that it closes the starting motor circuit, said switch also at this time opening the magneto circuit, means for returning the switch to its normal position, thereby opening the battery circuit to the motor and induction coil and closing the magneto circuit, substantially as and for the purpose described.

5. In a device of the character described, the combination of a battery, a starting motor, means for closing the circuit of the battery to said motor, ignition apparatus and circuits therefor, means carried by said first means for controlling the said ignition circuits, whereby an operative ignition circuit is closed, when said first mentioned means is in its normal position, substantially as and for the purpose described.

[Claims 6 to 13 not printed in the Gazette.]

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1,226,972. AUXILIARY STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. WILLIAM J. HART, Mount Vernon, N. Y., assignor to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 27, 1915. Serial No. 4,634. (Cl. 123—179.)



1. In combination, an internal combustion engine having an intake manifold, a carbureter, a pipe leading from the carbureter to said manifold, a source of fuel connected to said carbureter, an auxiliary pipe extending from the fuel supply to said manifold, a starting switch, and means operated by the operation of said starting switch for drawing fuel through said auxiliary pipe and mixing it with air adjacent to the point where said pipe enters said manifold.

2. In combination, an internal combustion engine having an intake manifold, a carbureter connected to said manifold and regularly feeding fuel thereto, a switch for starting the engine, an air compressor operated by said switch, said air compressor having a direct connection with said manifold, and an auxiliary connection between said carbureter and manifold, whereby when said switch is actuated air is forced from said compressor and fuel is drawn through said auxiliary connection to mix with each other and enter said manifold.

3. In combination, an internal combustion engine, a carbureter having a main connection thereto, a switch for starting said engine, an air compressor operated by said switch, a pipe leading from said air compressor to said engine and an auxiliary pipe leading from said carbureter into the first mentioned pipe at a point near where said pipe enters said engine.

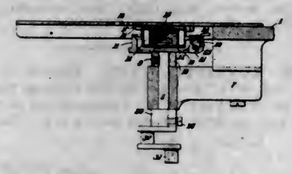
4. In combination, an internal combustion engine, having an intake manifold, a carbureter connected to said manifold and to a source of fuel supply, a switch for operating electrical circuits for starting said engine, an air compressor operated by said switch, a pipe leading from said air compressor to said manifold and an auxiliary pipe leading from the fuel supply into the first mentioned pipe near said manifold.

5. In combination, an internal combustion engine, having an intake manifold, a carbureter regularly feeding fuel to said engine manifold, a switch having a push rod for controlling the electrical circuits used in starting said motor, an air compression chamber attached to said switch, a piston within said chamber and mounted on the end of said push rod, an air pipe extending from said chamber to said manifold and an auxiliary pipe in shunt to said carbureter terminating in the first mentioned pipe near said manifold for the purpose described.



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1,226,973. ROTARY-HOOK SEWING-MACHINE. MARTIN HEMLEB, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Aug. 21, 1914. Serial No. 857,811. (Cl. 112—22.)



1. A sewing machine loop-taker comprising a rotary loop-seizing member, a thread-case formed with a thread-cavity and journaled in said member in which it is restrained from rotary movement, and a bobbin-ejector sustained by said loop-seizing member independently of the thread-case and adapted to enter said thread-cavity.

2. A sewing machine loop-taker comprising a cup-shaped loop-seizing member, a thread-case formed with a thread-cavity and journaled in said member in which it is restrained from rotary movement, and a bobbin-ejector comprising an angle-lever journaled in the rim of the loop-seizing member and having a radially extending arm adapted to enter said thread-cavity.

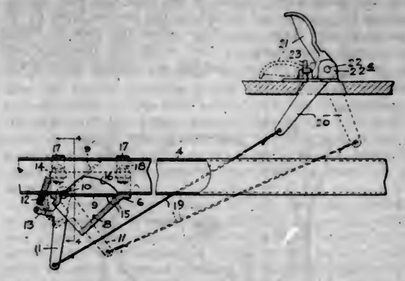
3. A sewing machine loop-taker comprising a cup-shaped loop-seizing member formed at one side with a radial slot passing through its wall, a thread-case formed with a thread-cavity and journaled in said member in which it is restrained from rotary movement, a fulcrum-pin extending across said slot of the loop-seizing member, a bobbin-ejector comprising an angle-lever formed at the edges with spaced parallel ears entered by said fulcrum-pin and having one arm extended radially and adapted to enter the thread-cavity and another arm disposed mainly exterior to the loop-seizing member and provided with a finger-piece, and a spring surrounding said fulcrum-pin intermediate said ears of the bobbin-ejecting angle-lever and connected at opposite ends respectively with the latter and the loop-seizing member.

4. A sewing machine loop-taker mechanism comprising a driving shaft, a rotary loop-seizing member mounted on said shaft, a thread-case formed with a thread-cavity and journaled in said member in which it is restrained from rotary movement, and a bobbin ejector sustained by said loop-seizing member independently of the thread-case an dadapted to enter said thread-cavity.

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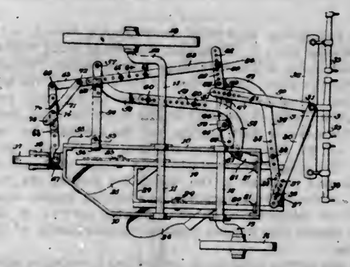
1,226,974. CUT-OUT FOR GAS-ENGINES. AUGUST H. JAHN, Pittsburgh, Pa. Filed June 6, 1916. Serial No. 101,897. (Cl. 137—26.)

In a cut-out for internal combustion engines, the combination of an exhaust-pipe and muffler, said exhaust-pipe having an elliptical-shaped opening formed therein intermediate the muffler and the engine, a valve-body adapted to be secured to said pipe, a valve-opening formed in said body in register with said first opening and having a valve-seat substantially flush with the exterior of said pipe, a flap-valve carried by said valve-body, said valve being so disposed as to form a bottom wall substantially flush with the interior of said pipe above said valve-opening when in engagement with said seat, and adapted when raised to seat against the edges of the said first-mentioned opening and the interior of the exhaust pipe to entirely close off communication to the muffler.



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1,226,975. DRAFT-EQUALIZER. PETER O. KARTRUDE, Luverne, Minn. Filed Sept. 18, 1916. Serial No. 120,746. (Cl. 97—4.)



4. The combination with a plow including a supporting frame and a trailer wheel and its frame, of an equalizing appliance including a bar adapted to be coupled to the supporting frame at its forward portion and to which the drawing force is adapted to be applied, a lever device formed of coacting members having laterally directed terminals and adjustably coupled to each other by the same, an evener device pivoted intermediate its ends to one of said coacting members, means for coupling said evener device at one end to said bar, means for coupling said evener device at the other end to the plow frame near its rear portion, and means for coupling the lever device to the trailer wheel frame.

[Claims 1 to 3 and 5 to 8 not printed in the Gazette.]

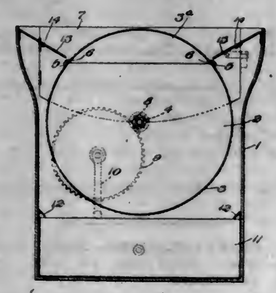
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1,226,976. ASH-SIFTING APPARATUS. HYMAN KOPPEL, Boston, Mass. Filed Nov. 11, 1916. Serial No. 130,923. (Cl. 83—60.)

1. An ash sifting apparatus comprising a casing, a drum-like sieve rotatably mounted in the casing with its axis disposed approximately horizontally, one peripheral side of the sieve having an opning for transferring ashes to and from the sieve, guides disposed longitudinally of the drum on opposite sides of the opening, a cover for said opening slidably mounted in the longitudinal guides, and a door in one end of the casing, the door being in alinement with the guides when the opening side of the sieve is approximately in uppermost position with respect to said horizontal axis so that said cover may be inserted or removed through the doorway without disturbing the contents of the sieve.

3. An ash sifting apparatus comprising a casing, a rotary drum-like sieve journaled in the casing having a removable section, a door in the upper part of one end wall of the casing, a split bearing for one end of the sieve, one

section of the bearing being in the lower edge of the door and the other section in the upper edge of the adjacent wall, and coöperating means on the door and wall for automatically locking and unlocking the two sections of the bearing to and from each other when the door is closed and opened respectively so that when the door is closed the two sections of the bearing are rigidly secured together.



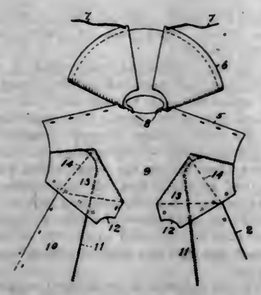
5. An ash sifting apparatus comprising a casing, a rotary drum-like sieve in the casing, the casing being divided at one end along a line extending approximately through the axis of the sieve, the portion of the casing on one side of said line being movable with relation to the other portion longitudinally of the axis of the sieve, an axial journal on the sieve, a split bearing for the journal, the two sections of the bearing being disposed on the said portions of the casing, respectively, and means disposed on the respective portions of the casing for locking the two sections of the bearing together, the locking means being arranged to telescope when the movable portion of the casing is moved into normal position longitudinally of the sieve axis.

7. An ash sifting apparatus comprising a casing, a sieve rotatably mounted in the casing, the sieve having a peripheral opening through which ashes may be dumped when the sieve is rotated into the position wherein the opening is disposed upwardly, and ledges on the inside of the casing extending inwardly and downwardly from the walls of the casing to the opening in the sieve, the ledges at least in part being pivotally mounted so that they may be swung outwardly in such manner as to permit the sieve to be passed therebetween.

[Claims 2, 4, and 6 not printed in the Gazette.]

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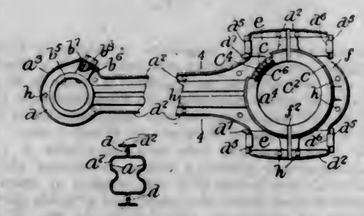
1,226,977. GARMENT. MADELEINE KUSTERKO, Yonkers, N. Y. Filed Nov. 2, 1915. Serial No. 59,177. (Cl. 2—60.)



A coat or cloak, including a body comprising a T-shaped back-piece having a lateral extension projecting from each side at one end, and providing the rear halves of a pair of sleeves, said back-piece having a recess with a curved edge in said end between said extensions, and a pair of inverted L-shaped front-pieces permanently secured to the side edges of the back-piece, and having portions forming the forward halves of the sleeves, permanently secured to the adjacent edges of the extensions so that the halves of each sleeve will be connected along their lower edges, said L-shaped pieces having cut-away corners to combine with said recess to provide a neck opening, means for detachably securing the said portions to the opposite edges of said extensions, so that the coat or cloak can be opened along the top of said sleeves from their outer ends up to said recess, and a collar to be fastened to the back-piece and having its opposite ends unsecured to be capable of being turned up to uncover the sleeves, or down to overlie the sleeves, said collar then extending breadthwise nearly to the outer ends of the sleeves.

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1,226,978. CONNECTING-ROD. HEBRON B. LAYMAN, New York, N. Y., assignor to The Layman Pressed Rod Co., Inc., New York, N. Y., a Corporation of New York. Filed Apr. 28, 1915. Serial No. 24,481. (Cl. 74—17.)



1. A connecting rod composed of parts abutting in a plane at right angles to the crank axis and having flanges around the crank shaft aperture.

2. A connecting rod composed of parts which abut around the crank shaft aperture and are provided with circumferential flanges in planes at right angles to said aperture.

3. A connecting rod formed of flanged parts abutting in a plane at right angles to the crank axis and having flanges around the piston pin aperture.

4. A connecting rod composed of a plurality of sheet metal parts which abut in a plane at an angle to the crank shaft axis and which are provided with radial flanges around the crank shaft aperture and approximately centrally thereof axially.

5. A connecting rod including a body portion and a cap portion, each of said portions being composed of sheet metal parts, the body portion having a piston pin aperture, the body and cap portions coöperating to provide a crank pin aperture; said portions being provided at their ends with strengthening and heat-radiating annular flanges.

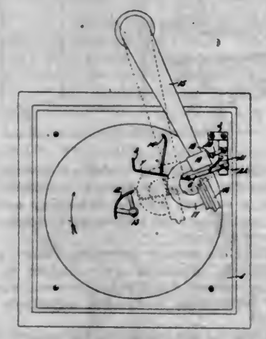
[Claims 6 to 48 not printed in the Gazette.]

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1,226,979. REPEATER FOR TALKING-MACHINES. WALLACE LUCIUS LIGHTFOOT, Brooklyn, N. Y. Filed Apr. 15, 1916. Serial No. 91,322. (Cl. 274—15.)

1. The combination with a talking machine having a revoluble record, a swinging sound arm movable in a plane parallel with the record, a goose neck swinging in the arm to and from the record, a reproducer carried by the goose neck to engage the record,—of a repeating device comprising an arm mounted to swing in a plane parallel to the record, an arm extension adapted to be disposed below the goose neck and hinged to the arm to swing to and from the record, a rider carried by the arm, a cam near the central part of the record mounted to rotate with the record and adapted to engage the rider, said arm extension and arm having means limiting the swinging movement of the arm extension toward the record, an upward extension from said arm extension adapted to be engaged by the sound arm when the sound arm moves toward the center of the record, whereby the rider is brought into the path of the cam, the engagement of the cam with the rider raising the arm extension on its hinge from the record, whereby the goose neck is swung from the record, the inclination of said arm extension causing the sound arm to swing toward the margin of the record, whereby the goose neck is allowed to swing toward the record, bringing the reproducer into engagement therewith at the margin, means for stopping the sound arm at the margin, and means for restoring the arm of the repeating device to its normal position.





2. The combination with a talking machine having a revoluble record, a sound arm mounted to swing in a plane parallel with the record, a gravitationally operable goose neck associated with the sound arm, a reproducer carried by the goose neck to engage the record,—of a repeater mechanism comprising a bracket, an arm pivotally mounted on said bracket to swing in a plane parallel with the record, a gravitationally-operable arm extension carried by said arm and adapted to be disposed below the goose neck, a rider extending from said arm extension, a cam mounted to participate in the movement of the record and adapted to engage the rider, said arm extension having means adapted to be engaged by the sound arm when said sound arm is moved toward the center of the record, whereby the rider is brought into the path of the cam, the engagement of the cam with the rider inclining the arm extension toward the margin of the record, whereby the goose neck is caused to swing from the record thereby disengaging the reproducer from the record, the inclination of the arm extension causing the sound arm to swing to the margin, a buffer for engaging the arm at the margin, whereby said arm is stopped at a predetermined position to bring the record carried by the goose neck into engagement with the record at a predetermined place, and resilient means for restoring the arm of the repeating device to its normal position.

3. In combination with a talking machine having a revoluble disk record, a sound arm movable across the record, and a gravitationally-operable reproducer carried by the sound arm,—a cam detachably associated with the record and adapted to participate in the rotary movement of the record, an articulated arm mounted to swing across the record and having the articulated portion disposed under the reproducer, means on said arm lying in the path of travel of the sound arm whereby said articulated arm is moved into the path of the cam, said cam adapted to raise the articulated portion of the arm whereby the reproducer is raised from the disk, the raised articulated portion of the arm being adapted to present an inclined plane which causes the force of gravity acting upon the reproducer to swing the sound arm to the margin of the disk, and a buffer for stopping the sound arm at a predetermined position.

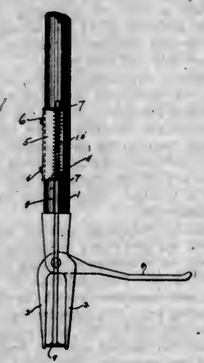
4. An attachment for talking machines comprising a cam, including means for detachably securing it to a record to participate in the movement thereof, an arm, including means whereby the same may be mounted to swing across the sound record, a gravitationally-operable arm extension hinged to the arm, means associated with the extension adapted to lie in the path of travel of the sound arm of the machine whereby the arm is moved from its normal position across the record to bring the arm extension in the path of the cam, the engagement of the cam with the arm extension raising the extension to form an incline toward the arm, resilient means for restoring said arm to its normal position, and a buffer for engaging the sound arm at the starting point of the record.

5. In combination with a talking machine having a revoluble record, a sound arm movable across the record, and a gravitationally-operable reproducer carried by the sound arm,—a cam operable by the record, an arm mounted to swing in a plane parallel to the record and articulate in a plane at right angles thereto, said arm having means lying in the path of travel of the sound arm for bringing said articulated arm into the path of the cam, whereby said arm is articulated to engage the reproducer to raise the same from the record and cause said sound arm to move toward the margin of the record.

[Claims 6 and 7 not printed in the Gazette.]

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1,226,980. WEEDER. BENJAMIN F. LINSE, Seattle, Wash. Filed Oct. 17, 1916. Serial No. 126,216. (Cl. 55—148.)



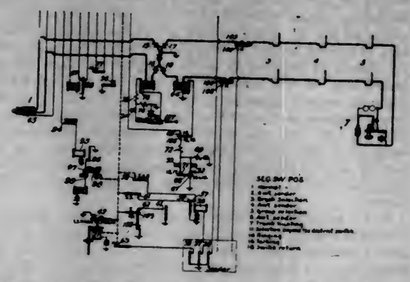
The combination with a pronged weed puller of removably attachable automatic prong cleaning means, whereby when the digger has been withdrawn from the ground the weed is ejected from the prongs of the digger; said means including a yoke removably attached to the staff of the digger, rods slidably mounted in lugs which are integral with the said yoke, a cleaner attached to the lower ends of said rods and interposed between the said prongs, and coil springs wound about and attached to the said rods and reacting against the said yoke, whereby the cleaner is normally retained at a position adjacent the tips of the prongs.

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1,226,981. TELEPHONE-CALL-REGISTERING SYSTEM. ALBEN E. LUNDELL, New York, N. Y., and HERBERT G. EDDY, Bayonne, N. J., assignors, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Jan. 4, 1915. Serial No. 357. (Cl. 179—27.)

1. In a telephone exchange system, the combination with a calling line, adjustable means for listening-in and listening-out, a call register, controlling apparatus for said register operable when said means is adjusted to

listen in, and mechanism responding to the act of registering a call for adjusting said means to listen out.



2. In a telephone exchange system, the combination with a calling line, adjustable means for listening-in and listening-out, a call register, controlling apparatus for said register operable when said means is adjusted to listen in, and apparatus responding to the act of registering a call for adjusting said means to listen out for rendering said controlling apparatus ineffective a second time for that call.

3. In a telephone exchange system, the combination with a calling line, an operator's listening-in and listening-out switch, call register controlling mechanism operable when the operator has listened in and thereafter until the call is registered, and means responding to the act of registering a call for adjusting said switch to listen out if the operator is at the moment listening in and for rendering said register controlling mechanism ineffective a second time for that call.

4. In a telephone exchange system, calling line answering means, an operator's sequence switch having a plurality of resting positions, means for advancing said switch to a listening-in position when the operator answers a call, call registering mechanism operable when said switch is in said listening-in position, and means responding to the act of registering a call for advancing said switch to a position wherein the said registering mechanism is ineffective.

5. In a telephone exchange system, the combination with calling lines, an operator's telephone and call registering mechanism, of a sequence switch adapted to control the connection and disconnection of said telephone with said lines, said sequence switch having a listening-in, a first listening-out, call registering, and a second listening-out position, means for advancing said sequence switch out of said listening-in position and said listening-out position and for operating said call registering mechanism when it reaches said call registering position, and means for advancing said sequence switch to said second listening-out position and for rendering said call registering mechanism ineffective therein.

[Claims 6 to 11 not printed in the Gazette.]

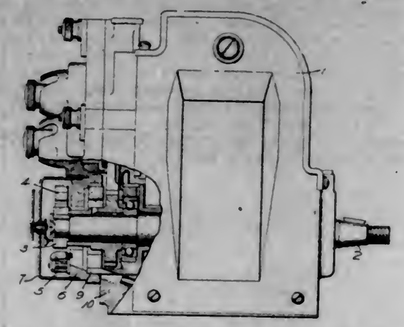
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1,226,982. ADJUSTABLE INTERRUPTER FOR IGNITION-DYNAMOS. CARL THOMAS MASON, Newark, N. J., assignor to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed May 16, 1916. Serial No. 97,817. (Cl. 123—166.)

1. An electric generator including a rotor, a set of pole pieces adjacent thereto, a member connected to said pole pieces, and interrupter mechanism including contact points adjustably secured to said member.

2. An electric generator including a rotor, a set of pole pieces adjacent said rotor, a member connected to said pole pieces and forming a bearing support, and interrupter mechanism including contact points adjustably secured to said member.

3. An electric generator including a rotor, a set of pole pieces adjacent said rotor, a member connected to said pole pieces and forming a bearing support having a laterally extending portion, interrupter mechanism, and a support for said mechanism adjustably secured to the laterally extending portion of said member, substantially as described.



4. An electric generator including a rotor, a bearing support therefor having an annular extension, interrupter mechanism, a support therefor adjustably secured to said extension, and means for locking said interrupter mechanism support in place.

5. An electric generator including a rotor, a set of pole pieces angularly adjustable with relation to said rotor, a member connected to said pole pieces and movable therewith, and interrupter mechanism adjustably secured to said member.

[Claims 6 to 12 not printed in the Gazette.]

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1,226,983. PROCESS OF DIGESTING AND CONCENTRATING PROTEIN IN ANY FORM BY DISSOLVING IT IN GRAPE-JUICE. EUDO MONTI, Turin, Italy. Original application filed Mar. 5, 1914, Serial No. 822,763. Divided and this application filed May 26, 1915. Serial No. 30,649. (Cl. 99—11.)

1. A process of digesting and concentrating protein as occurring in egg, milk, blood, meat and the like, consisting in first dissolving the protein, in juice from berries, such as grapes and the like, at a temperature between 35° and 40° C., and thereupon concentrating the product.

2. A process of digesting and concentrating protein as occurring in egg, milk, blood, meat and the like, consisting in first dissolving the protein, in juice from berries, such as grapes and the like, and thereupon concentrating the product while keeping it at lukewarm temperature.

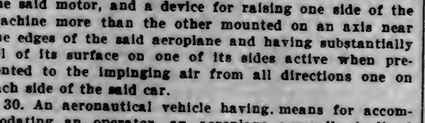
3. A process of digesting and concentrating protein as occurring in egg, milk, blood, meat and the like, consisting in first dissolving the protein, in juice from berries, such as grapes and the like, and thereupon concentrating the product while keeping it at lukewarm temperature until it contains no more than one-third of its weight of moisture.

4. A process of digesting and concentrating protein as occurring in egg, milk, blood, meat and the like, consisting in first dissolving under continuous stirring the protein, in juice from berries, such as grapes and the like at a temperature between 35° and 40° C., and thereupon concentrating the product while keeping it at lukewarm temperature until it contains no more than one-third of its weight of moisture.

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1,226,984. RUBBER-COVERED ROLLER. JABEZ MUSKETT, Pendleton, Manchester, England. Filed Oct. 18, 1916. Serial No. 126,396. (Cl. 91—67.8.)

1. A rubber covered roller having a metal core with end collars and journals and rubber tubing wrapped spirally around the metal core between the end collars, covered with a wrapping of canvas and an outer rubber envelop, means for inflating the rubber tubing, and means for securing the wrapping of canvas to each end collar consisting of the end collar $a$ formed with a taper surface and reduced screwed extension, a shell $j$ with corresponding internal taper and an internal oppositely arranged taper, a ring $k$ to screw upon the collar $a$ and formed with a taper surface the canvas being clamped between the two oppositely arranged tapered surfaces provided by the end collar, shell, and ring substantially as described.

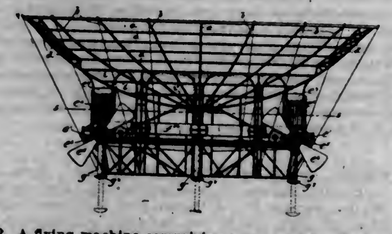


2. In a rubber covered roller having rubber tubing wrapped spirally around a metal core the means for preventing the coils of tubing from creeping longitudinally consisting of an inserted copper or like wire $m$ which binds the tubing securely upon the metal core substantially as described.

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1,226,985. FLYING-MACHINE. GEORGE FRANCIS MYERS, Columbus, Ohio. Filed Sept. 20, 1905. Serial No. 279,281. (Cl. 244—15.)



2. A flying machine comprising a car, an aeroplane normally inclined to the horizontal, a plurality of stabilizers mounted one on each side of the said car and normally out of action, means for placing the said stabilizers in action, and direct connections comprising a cord between the said stabilizers whereby the same may be operated simultaneously.

10. A flying machine comprising a car, an inclined aeroplane with a substantially free periphery extending on each side of the said car to a width at least equal to the depth of the said aeroplane and having its forward portion attached near to the forward portion of the said car and the retreating sides thereof having a substantially unobstructed space between the same into which the said car extends, a motor, a propeller mounted on the said motor, and a device for raising one side of the machine more than the other mounted on an axis near the edges of the said aeroplane and having substantially all of its surface on one of its sides active when presented to the impinging air from all directions one on each side of the said car.

30. An aeronautical vehicle having means for accommodating an operator, an aeroplane normally inclined to the horizontal and extending on each side of the horizontal center line of the vehicle, a second aeroplane also extending on each side of the said center line with its advancing edge forward of the advancing edge of the said first mentioned aeroplane, openly spaced uprights rigidly connecting the same, means for raising one side of the machine more than the other mounted so as to receiving the impinging air on substantially the whole of one of its surfaces when active, means for tilting the machine front and rear, means for turning the machine to the right and left, and means for operating all of the above mentioned means.

[Claims 1, 3 to 9, and 11 to 29 not printed in the Gazette.]

1,226,986. RACKET-PRESS. CHARLES M. NESS and CHARLES T. THOMPSON, Philadelphia, Pa. Filed Apr. 27, 1916. Serial No. 93,822. (Cl. 46—24.)



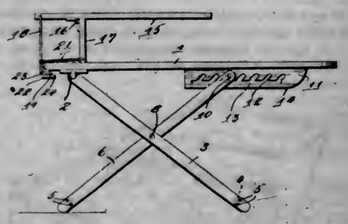
1. In a racket press, the combination of opposed clamping members; a pin connecting said clamping members centrally; means for attaching and detaching one end of said pin to or from one of said clamping members; and means interposed between the other end of said pin and the other of said clamping members, whereby the distance between the clamping members may be adjusted and means whereby tension is exerted through said pin to draw the clamping members together.

2. In a racket press, the combination of clamping members; a pin centrally uniting said clamping members, capable of passing through the mesh of the racket strings; means for adjusting said clamping members in relation to said pin, and a cam lever whereby pressure may be exerted through said pin to draw said clamping members together.

3. In a racket press, clamping members united centrally by a pin capable of passing through the mesh of the racket strings; a sleeve adjustably set on one end of the pin; a lever pivoted to one clamping member and having a cam surface engaging said sleeve, whereby pressure may be exerted by throwing said lever to draw said clamping members together to an extent determined by the adjustment of the sleeve on the pin.

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1,226,987. IRONING-BOARD. MAHLON P. NICHOLS, Leetonia, Ohio. Filed May 13, 1916. Serial No. 97,862. (Cl. 68—10.)



1. In a device of the class described, the combination of a sleeve board, a block hingedly mounted upon said sleeve board, said block being adapted to be carried upon a support for holding said sleeve board above the support, a link pivotally mounted upon the rear end of said sleeve board, said link having lateral extensions at its outer end, a bridge connecting said extensions, said bridge being adapted to fit under the support, whereby said sleeve board will be removably held in a horisontal plane.

2. In a device of the class described, the combination of a sleeve board, a block hingedly mounted upon said sleeve board, said block being adapted to be carried upon a support for holding said sleeve board above the support, a link pivotally mounted upon the rear end of said sleeve board, said link having lateral extensions at its outer end, a bridge connecting said extensions, said bridge being adapted to fit under the support, whereby said sleeve board will be removably held in a horizontal plane, and means for holding said block from accidentally collapsing when in use.

3. In a device of the class described, the combination of a sleeve board, a block hingedly mounted upon said sleeve board, said block being adapted to be carried upon a support for holding said sleeve board above the support, a link pivotally mounted upon the rear end of said sleeve board, said link having lateral extensions at its outer end, a bridge connecting said extensions, said bridge being adapted to fit under the support, whereby said sleeve board will be removably held in a horizontal plane, means for holding said block from accidentally collapsing, and means for releasably holding said link from accidentally disengaging the support, whereby said sleeve board will be supported in a horizontal plane above the support.

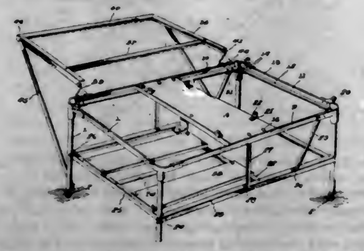
4. In a device of the class described, the combination of a sleeve board, a block hingedly mounted upon said sleeve board, said block being adapted to be carried upon a support for holding said sleeve board above the support, a link pivotally mounted upon the rear end of said sleeve board, said link having lateral extensions at its outer end, a bridge connecting said extensions, said bridge being adapted to fit under the support, whereby said sleeve board will be removably held in a horizontal plane, and a loop pivotally mounted upon said block, said loop being adapted to bear against the inner portions of said link for holding said block in a set-up position, whereby said sleeve board will be removably held in a horizontal plane above the support.

5. In a device of the class described, the combination of a sleeve board, a block hingedly mounted upon said sleeve board, said block being adapted to be carried upon a support for holding said sleeve board above the support, a link pivotally mounted upon the rear end of said sleeve board, said link having lateral extensions at its outer end, a bridge connecting said extensions, said bridge being adapted to fit under the support, whereby said sleeve board will be removably held in a horizontal plane, a loop pivotally mounted upon said block, said loop being adapted to bear against the inner portions of said link for holding said block in a set-up position, and means for holding said link from accidentally disengaging the support, whereby said sleeve board will be removably held in a horizontal plane above the support.

[Claim 6 not printed in the Gazette.]

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1,226,988. SUPPORTING-FRAME FOR WASHING-MACHINES. HARRY L. OGG, Newton, Iowa, assignor to Automatic Electric Washer Company, Newton, Iowa. Filed May 6, 1916. Serial No. 95,888. (Cl. 68—35.)



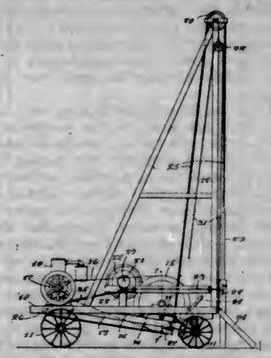
1. In a supporting frame structure of the class described, supporting standards, corner pieces mounted at the upper ends of the standards and each having a horizontal wing and an upstanding wing, side and end frame members disposed and secured at their ends within the angles between the said wings of the corner pieces, a supporting board extending between the front and rear members of the top of the frame and supported thereby, and tub securing elements upon the said board and upon each of the said corner pieces.

2. In a supporting frame structure of the class described, a corner piece including a horizontally disposed wing and an upstanding wing, and a socket member projecting downwardly from the underside of the horizontal wing and designed to receive the end of a supporting leg, the upstanding wing being formed at its upper edge with an integral extension bent to extend laterally outwardly from the plane of the wing to form a horizontally disposed supporting portion and thence bent upwardly to form a securing ear upstanding from the said supporting portion and having an opening for the passage of a securing element, the said supporting portion occupying substantially the same plane as the upper edge of the upstanding wing of the said corner piece.

3. In a supporting frame structure of the class described, a corner piece including relatively angularly extending portions having integrally connected horizontal supporting wings and integrally connected upstanding securing wings each provided with an opening for the passage of a securing element, a socket member projecting downwardly from the first-mentioned wings at their juncture and designed to receive the end of a supporting leg, and an extension integral with the upper edge of one of the upstanding wings bent to extend laterally outwardly from the plane thereof to form a supporting portion parallel to and located above the plane of the corresponding horizontal wing and thence bent upwardly to form an upstanding securing ear having an aperture for the passage of a securing element.

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1,226,989. WELL-SINKING APPARATUS. BENJAMIN L. PALMER, Aurora, Ill., assignor to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed June 12, 1914. Serial No. 844,641. (Cl. 255—11.)



1. The combination of a walking beam, a second beam pivotally connected with said walking beam, a crank adapted by its rotation to oscillate said second beam, a latch adapted to be actuated without checking the rotation of the crank for connecting said two beams to oscillate together and for disconnecting them from each other, and swinging means adapted to be moved into a past-center locking engagement with said walking beam for holding it against movement when it is disconnected from said second beam.

2. The combination of a walking beam, a second beam pivotally connected with said walking beam, a crank adapted by its rotation to oscillate said second beam, a latch adapted to be actuated without checking the rotation of the crank for connecting said two beams to oscillate together and for disconnecting them from each other, means for moving said latch out of operative latching position, and means serving automatically to maintain said latch-moving means in operative position for holding the latch out of operative position.

3. The combination of a walking beam, a second beam pivotally connected with said walking beam, a crank adapted by its rotation to oscillate said second beam, a latch adapted to be actuated without checking the rotation of the crank for connecting said two beams to oscillate together and for disconnecting them from each other, a lever by an operative stroke of which said latch is moved out of operative latching position, and means serving automatically to hold said lever in latch-engaging position.

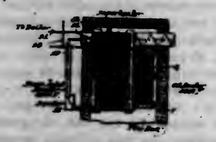
4. The combination of a walking beam, a second beam pivotally connected with said walking beam, a crank adapted by its rotation to oscillate said second beam, a latch adapted to be actuated without checking the rotation of the crank for connecting said two beams to oscillate together and for disconnecting them from each other, a lever by an operative stroke of which said latch is moved out of operative latching position, and means carried by said lever adapted upon an operative stroke thereof to engage said walking beam for holding it against movement, said lever being yieldingly held by its engagement with said walking beam against withdrawal from its operative latch-engaging position.

5. The combination of a walking beam, a second beam pivotally connected with said walking beam, a crank adapted by its rotation to oscillate said second beam, a latch pivotally mounted on one of said beams adapted to engage the other beam for connecting said beams to oscillate together, a lever pivotally mounted adjacent to the path of movement of said walking beam, said lever being adapted to be given an operative stroke to throw said latch out of operative engagement to disconnect said two beams, and arms carried by the lever adapted upon said operative stroke of the lever to be brought into engagement with the walking beam to hold it against movement.

[Claim 6 not printed in the Gazette.]

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1,226,990. PROCESS FOR REFINING OILS. WILLIAM M. PARKER, Oklahoma, Okla., assignor, by mesne assignments, to Parker Process Company, a Corporation of Delaware. Filed Apr. 4, 1916. Serial No. 88,922. (Cl. 196—25.)



1. The herein described method of treating oil which includes the step of vaporizing oil at a temperature of approximately 1000° F. and simultaneously causing said oil to traverse a helical path at the rate of not less than approximately 100 feet a second.

2. The herein described method of treating oil which consists in the steps of heating the oil to approximately 400° F., mixing the same with a small per cent. of steam at high pressure and subsequently exposing the mixture to a temperature in the neighborhood of 1000° F. while being simultaneously subjected to a whirling and rectilinear movement at a rate of speed not less than approximately one hundred feet per second.

3. The herein described method of treating oil which consists in the steps of heating the oil to approximately 400° F., mixing the same with a small per cent. of steam, exposing the mixture to a temperature in the neighborhood of 1000° F. and simultaneously subjecting the mixture to a rotative rectilinear movement under high pressure whereby the mixture travels through a helical rectilinear path at not less than approximately 100 feet a second.

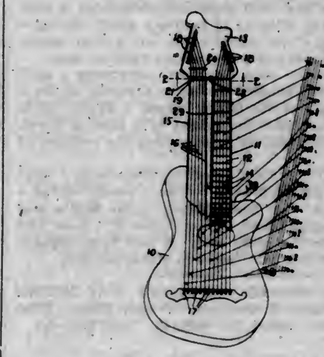
4. The herein described method of treating oil which consists in the steps of forcing oil under relatively high pressure rapidly through a coil heated to approximately 400° F., subsequently increasing the temperature of the oil to approximately 1000° F. and while still under great pressure, forcing the oil vaporized at that temperature through an elongated helical drum at a rate of speed not less than approximately one hundred feet per second.

5. The herein described method of treating oil which consists in forcing the oil rapidly through a coil heated to approximately 400° F. and subsequently increasing the temperature to above 1000° F. to vaporize the oil and simultaneously forcing oil vapor in a helical rectilinear path at not less than approximately 100 feet a second, allowing the oil vapor to cool and settle prior to a reheating at a temperature of approximately 350° F., at which point the volatilizable and non-volatilizable oils are separated.

[Claims 6 to 9 not printed in the Gazette.]

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1,226,991. CHROMATIC-BASE GUITAR. DOMINICK A. PASSARELLI, Danbury, Conn. Filed Aug. 4, 1915. Serial No. 43,577. (Cl. 84—134.)



1. In a guitar, the combination, with the usual fretted neck and the strings carried thereby, of supplemental strings and means for carrying the same, means for stopping said supplemental strings, means located contiguous to said neck and manually operable at substantially any point throughout the length thereof for actuating said stopping means, and means for yieldingly retaining said stopping means in normally inoperative position and said actuating means in position to be operated.

2. In a guitar, the combination, with the usual fretted neck and the strings carried thereby, of supplemental strings and means for carrying the same, means for stopping said supplemental strings, a bar longitudinally socketed in said neck and being laterally movable in its socket, and connecting means between said stopping means and said bar to operate the former.

3. In a guitar, the combination, with the usual fretted neck and the strings carried thereby, of supplemental strings and means for carrying the same, means for stopping said supplemental strings, a bar longitudinally socketed in said neck and being laterally movable in its socket, connecting means between said stopping means and said bar to operate the former, and means for yieldingly retaining said stopping means in normally inoperative position and said bar in position to be operated.

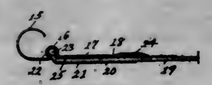
4. In a guitar, the combination, with the usual fretted neck and the strings carried thereby, of a supplemental neck carrying supplemental strings, a fret on said supplemental neck, a stop-bar associated with said fret, means for operating said stop-bar, and means located contiguous

to said first-mentioned neck for actuating said operating means.

5. In a guitar, the combination, with the usual fretted neck and the strings carried thereby, of a supplemental neck carrying supplemental strings, a fret on said supplemental neck, a stop-bar associated with said fret, means for operating said stop-bar, and means located contiguous to said first-mentioned neck, and manually operable from substantially any point throughout the length thereof for actuating said operating means.

[Claims 6 to 9 not printed in the Gazette.]

1,226,992. PENCIL-HOLDER. GEORGE W. PAULUS, Grand Rapids, Wis. Filed Apr. 4, 1916. Serial No. 88,941. (Cl. 24—66.)



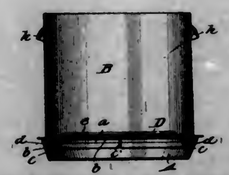
1. A device of the class described, comprising a split cylindrical member, adapted to receive a pencil, having a split bead at one of its lateral edges, and means within said bead for securing said device to a back or cover.

2. A device of the class described, comprising a split cylindrical member, adapted to receive a pencil, having a split bead at one of its lateral edges, and a filler within said bead for securing said device to a back or cover.

3. A device of the class described, comprising a split cylindrical member, adapted to receive a pencil, having a split bead at one of its lateral edges, a flexible strip looped within said bead and pasted to a book or cover, and a filler within said bead preventing the removal of said strip.

4. A device of the class described, comprising a split cylindrical member, adapted to receive a pencil, having a split bead at one of its lateral edges, means within said bead for securing said device to one cover of a book, and means secured to the other cover of said book engaged by said pencil to lock said covers in closed position.

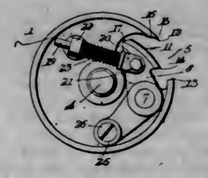
1,226,993. DEVICE FOR CLEANSING AND DRYING DISHES. ALBERT E. PERKINS, Wooster, Ohio. Filed Sept. 25, 1914. Serial No. 863,549. (Cl. 167—3.)



A device for cleansing and drying dishes, comprising in combination, a dish-pan having a circumferential groove formed in its sides between its top and bottom, draining means for said groove, a cage for dishes having an open top and perforated bottom, a rim projected from said cage below said bottom adapted to seat within said groove, a dish mounting ring removably mounted on said bottom, cross-rods within said rim underneath said bottom having projections normally engaging inwardly of the inner wall of the groove and adapted to support said cage when removed from said pan, and a cover for said cage.

1,226,994. AUTOMATICALLY-OPERATING CLOSED-GAP BLANK-GUMMING CYLINDER. MELVILLE E. PETERS, GEORGE H. FATH, and ALBERT F. MILLER, Denver, Colo. Filed Dec. 22, 1915. Serial No. 68,272. (Cl. 91—62.)

1. A hollow blank gumming cylinder provided with a gap extending throughout its length, and with flanged end portions adapted to axially support a shaft, a shaft secured in said end portions, a segment plate of the same circumferential peripheral curve as said cylinder fitting closely enough into said gap to tightly fill and close the same, a rock shaft mounted within said cylinder parallel to said cylinder's supporting shaft, said segment plate being mounted on said shaft to swing reciprocally from the interior of said cylinder and close or open said gap, a roller provided lever on said plate and its supporting shaft, means including a grooved cam surrounding said roller for moving said segment into the interior of said cylinder to open said gap, and means including resilient means for moving said segment plate to normally close said gap after said gap has been opened a predetermined period of time.



2. In a blank gumming cylinder, the combination with the side frames provided with bearings, of a shaft rotatively mounted on said bearings, a hollow blank gumming cylinder comprising a shell and shaft supporting end flanges secured on said shaft, means for rotating said cylinder, cams secured to said side frames adjacent to the opposite ends of said cylinder, a gap extending across said cylinder, a segment plate curved to register with the same curvature of said cylinder, and provided at one end portion with an arm, a hub portion on each arm intermediate of its ends, hub bearings formed on said shaft supporting ends of said gapped cylinder, a shaft extending through and secured to the hubs of said segment plates and pivotally journaled in the hubs of said cylinder's shaft supporting members and extending across said cylinder and segment plate, and a roller at the end of said arm in engagement with the adjacent cam of said supporting frame.

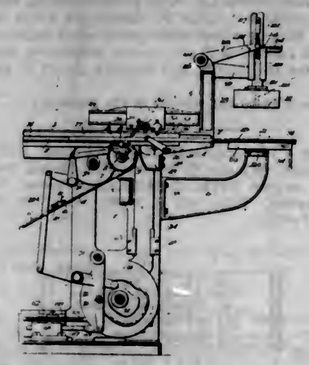
3. In a blank gumming cylinder, the combination of the rotatable gapped blank gumming cylinder provided with flanged end portions at its opposite end portions, the segment plate closely fitting in and fitting said gap, said segment plate being provided with rock arm members at its opposite end portions pivotally secured in axial alinement with said cylinder's longitudinal axis, the cylinder supporting shaft, the pivotal shaft pivotally connecting said segment to the interior of said cylinder to reciprocally move said segment plate to open and close said gap at predetermined points in each of said cylinder's revolutions, the spring supporting pin pivotally connected to said segment at one end, the guide clip in which said pin is reciprocally and slidably mounted, the coiled expansive spring mounted on said pin and cam actuated means including a roller mounted on the end of said rock arm whereby said segment is moved into said cylinder to open said gap and said spring moves said segment to close said gap.

1,226,995. BOX AND PLUNGER AND BLANK REGISTERING MECHANISM. MELVILLE E. PETERS, GEORGE H. FATH, and ALBERT F. MILLER, Denver, Colo. Filed Apr. 28, 1916. Serial No. 94,202. (Cl. 93—54.)

1. A blank delivery table for blank gumming machines, comprising in combination with a box guiding plunger, a variable stroke reciprocating table, means for delivering a blank on said table, and means for gripping the blank to and for releasing it from said table, and means for moving said plunger to register said box against said blank.

2. In a combined blank delivery table and a box delivering plunger for blank gumming machines, arranged to register boxes against the blanks on the blank gumming machine, a blank gumming and transferring mechanism, a flat reciprocating variable stroke table member, and means for gripping and holding the blank for a predetermined period of time on said table member, and means including a cam actuated mechanism for operating the plunger to register the box and glue it to said blank.





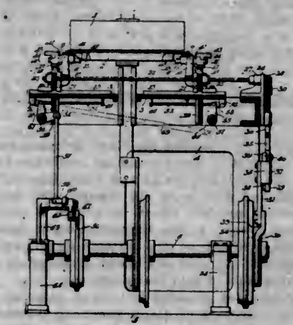
3. The combination in a gummed blank and box registering mechanism, comprising blank gumming and conveying mechanism, with a table arranged to receive and hold the blank in a predetermined position, means including a cam actuated box supporting plunger provided with a box stripping mechanism for guiding a box centrally against the gummed side of the blank, comprising a gummed blank conveying mechanism, a table arranged to receive the blanks from said conveyer mechanism, a plurality of air suction air inlet apertures in said table connected to operative air suction force producing mechanism for holding said blanks on said table in a predetermined position, and adjustable box end and side engaging clips arranged over said table to guide the boxes centrally onto the blanks on said table.

4. The combination in a gummed blank and box registering mechanism comprising operative blank gumming mechanism, a blank receiving and gripping table, and blank conveying means for moving the blanks one at a time from said blank gumming means to a predetermined position on said table, said conveyer including an endless conveyer arranged to feed the blanks from said gumming mechanism, a set of air suction tubes for receiving said blanks from said conveyer mechanism, and delivering them on said table, a box receiving plunger reciprocally mounted above said table and arranged to move and press the boxes against the blanks on said table, and a fixed abutment support under said table arranged to receive the pressure of said plunger.

5. In a gummed blank and unwrapped box registering table, and plunger mechanism, the combination with operative blank gumming and conveying mechanism, comprising an operative blank feeding roller and a gumming cylinder and an endless conveyer, said conveyer being provided with blank gripping and holding means, and with a stopping station, of a plurality of air suction blank gripping tubes arranged to engage said conveyer at its stopping station and grip and raise a blank therefrom, a table reciprocally mounted adjacent to said blank gripping and lifting tubes, means for reciprocally moving said tubes over said table, means for lowering said tubes to deposit the blank on said table in a predetermined position, means including an air suction force connected with said table for gripping the blanks as they are deposited on its surface by said air suction tubes, means including gearing and a two part bar one part of which is adjustable on the other for lengthening or shortening the forward stroke of said table, into predetermined positions, a box supporting plunger on said machine above said table, means including cam actuated rock arm mechanism for moving said plunger to register a box centrally on and to press them against the blank on said table whereby said box is glued to said blank and a fixed support on said machine projecting under said table arranged to receive the pressure of said plunger against said blank and table.

[Claims 6 to 13 not printed in the Gazette.]

1,226,996. EXTENSION-EDGE-BOX-BLANK-WRAPPING MECHANISM. MELVILLE E. PETERS, GEORGE H. FATH, and ALBERT F. MILLER, Denver, Colo. Filed Apr. 28, 1916. Serial No. 94,205. (Cl. 93—54.)



1. A mechanism for wrapping a gummed blank around an extension edge box, comprising a blank presser blade, a blank wiper movable with said blade into blank wiping relation to said box and then movable independent of said blade, and means for operating said blade and wiper to wrap the blank first around said extension edge and then against the adjacent surface of said box.

2. In an extension edge box and blank wrapping mechanism, the combination of a support for the box and its extension edge, the tilting presser blade carrying block, the wiper head and wiper slidably mounted therein, and means including a reciprocating rack bar for moving said presser blades and wipers to wrap the blank on the extension edge and the adjacent surface of the box.

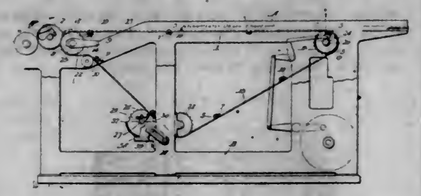
3. A box bottom extension edge and gummed blank wrapping mechanism, comprising a support for the box and its extension edge, a blade carrying block pivotally supported to swing a predetermined distance over and into the extension edge of the box, a wiper supporting head reciprocally mounted in said block, a reciprocating rack bar arranged to engage and tilt said block so that its blade and said wiper fold said blank over and against the extension edge of said box and against its adjacent surface above said extension edge, and means whereby said rack bar holds said blade and blank down against the top surface of said extension edge and at the same time moves said surface wiper upwardly and wraps and glues the blank against the surface of said box above its extension edge to the top edge of said box, and means for reciprocating said rack bar.

4. A mechanism for wrapping the extension edge boxes with gummed blanks, comprising a yoke-shaped bracket, a presser blade supporting block pivotally mounted to swing in said bracket, and means including a cam actuated reciprocating rack bar for moving said block to cause its blade to fold said blank over and against the top surface of the extension edge of said box.

5. A mechanism for wrapping the extension edge boxes with gummed blanks, comprising a yoke-shaped bracket, a presser blade supporting block pivotally mounted to swing in said bracket, a box end wiper device reciprocally mounted in said block and arranged to fold the blank against the end of the box, and means including a cam actuated reciprocating rack bar for moving said block to cause its blade to fold said blank over and against the top surface of the extension edge of said box.

[Claims 6 to 12 not printed in the Gazette.]

1,226,997. MECHANISM FOR CLEANING THE ENDS OF INTERMITTENT ENDLESS-CONVEYER GUMMED-BLANK GRIPPERS. MELVILLE E. PETERS, GEORGE H. FATH, and ALBERT F. MILLER, Denver, Colo. Filed Apr. 28, 1916. Serial No. 94,206. (Cl. 193—2.)



1. In a device for cleaning the blank gripping fingers of the apron conveyers of blank gumming machines, the combination of the conveyer chains and the grippers that engage the gummed surface of the blanks, with a pair of shaft supported sprocket wheels arranged in mesh with said conveyer chains, a pan supported below said shaft provided with a supply of any suitable liquid, and wiper members mounted on said shaft and arranged to engage the gum coated ends of said blank grippers.

2. In a device for cleaning the blank gripping fingers of the apron conveyers of blank gumming machines, the combination of the conveyer chains and the grippers that engage the gummed surface of the blanks, with a pair of shaft supported sprocket wheels arranged in mesh with said conveyer chains, a pan supported below said shaft provided with a supply of any suitable liquid, and wiper members mounted on said shaft and arranged to engage the gum coated ends of said blank grippers, said shaft being provided with a plurality of grippers and said wipers being each arranged to engage an individual gripper.

3. In a device for cleaning the blank gripping fingers of the apron conveyers of blank gumming machines, the combination of the conveyer chains and the grippers that engage the gummed surface of the blanks, with a pair of shaft supported sprocket wheels arranged in mesh with said conveyer chains, a pan supported below said shaft provided with a supply of any suitable liquid, and wiper members mounted on said shaft and arranged to engage the gum coated ends of said blank grippers, said shaft being provided with a plurality of grippers and said wipers being each arranged to engage an individual gripper, each of said wipers comprising an arm secured to said shaft and provided at its end with a water or other liquid solution absorbing material adapted to take up a supply of water and rubbingly apply it to the gum coated surfaces of said grippers.

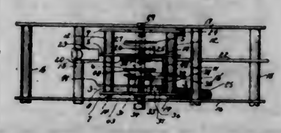
4. In a device as specified, the combination with the intermittently stopping conveyer provided with sprocket chain links and the blank grippers, of the shaft and the sprocket wheels, said sprocket wheels being arranged in mesh with the links of said sprocket chain, the water absorbing and distributing wipers on said shaft arranged to engage said grippers and the water holding pan provided with a body of water arranged to permit said wipers as they are rotated by said sprocket wheels and the carrying chains to absorb water, and means whereby said wet wipers engage each set of wipers at a predetermined point in the length of said conveyer at their intermittently stopping periods.

5. In a device as specified for an intermittent gummed blank transmitting conveyer, the combination with the sprocket chain links and the gummed blank gripping grippers of the conveyer, of the shaft supported sprocket wheels rotatably mounted below said conveyer, arms secured on said shaft each of which is provided with a wiper comprising a suitable water absorbing fabric at its end, one of each of said arms being positioned to engage one of said grippers as they arrive at and stop in the rotative path of said wipers as they are rotated by the endless intermittent traveling movement of said conveyer, a pan below said shaft provided with a supply of water and arranged to receive and wet the wipers of each arm as they rotate through the water in said pan, said wipers being arranged and positioned to engage each set of grippers at some convenient point in its traveling movement between where it receives the blanks and where they are removed from it, where each row of blank grippers stops and rests against said gum coated surfaces of said grippers during the intermittent stopping period of said conveyer.

[Claims 6 to 10 not printed in the Gazette.]

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1,226,998. DEVICE FOR REGULATING BALANCE-WHEELS. WILSON E. PORTER, New Haven, Conn., assignor to New Haven Clock Co., New Haven, Conn., a Corporation. Filed Oct. 9, 1916. Serial No. 124,562. (Cl. 73—51.)



1. In a device for adjusting the balance-wheels of clocks and watches, the combination with a rocking balance-wheel carrier mounting the master balance-wheel and the balance-wheel to be adjusted with their axes in line, and means for rocking the said carrier to simultaneously start the said wheels in oscillation.

2. In a device for adjusting the balance-wheels of clocks and watches, the combination with a rocking balance-wheel carrier mounting the master balance-wheel and the balance-wheel to be adjusted with their axes in line, means for rocking the said carrier for simultaneously starting the said wheels in oscillation, and means for limiting the return rocking movement of the carrier, whereby the same is positioned for the adjustment of the hair-spring of the wheel to be adjusted.

3. In a device for adjusting the balance-wheels of clocks and watches, the combination with a frame, of a rocking balance-wheel carrier journaled therein and constructed to mount the master balance-wheel and the balance wheel to be adjusted, and a rack-and-pinion for rocking the carrier.

4. In an apparatus for adjusting the balance-wheels of clocks and watches, the combination with a frame, of a rocking balance-wheel carrier journaled therein and comprising three plates spaced apart and secured together, means for rocking the said carrier and normally maintaining it in its upright position, means mounted in the said carrier for journaling therein a master balance-wheel and the balance-wheel to be regulated, and means for frictionally holding the outer end of the hair-spring of the balance-wheel to be adjusted.

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1,226,999. PROCESS FOR DESICCATING EGGS. THUSNELDA C. PRIMAVESE, Corona, N. Y. Filed Mar. 12, 1917. Serial No. 154,090. (Cl. 99—5.)

1. The method of desiccating eggs, comprising mixing the same with lemon juice and drying the resulting compound at a temperature of from 75 to 80° F.

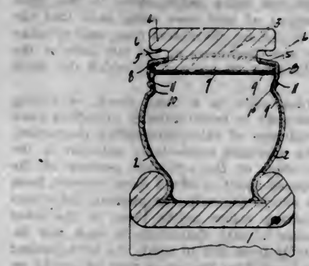
[Claims 2 to 10 not printed in the Gazette.]

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1,227,000. TIRE. WILLIAM E. PUGH, Seattle, Wash. Filed Oct. 18, 1915. Serial No. 56,363. (Cl. 152—10.)

In a device of the class described, the combination of a metallic outer casing having tread block openings in its face and inwardly extending rims, radially channeled tread blocks mounted on metallic plates, said plates being normally retained by said rims, annular internal shoulders on said rims and spring catches in said rims, whereby when the said plates are depressed radially beyond a predetermined point they engage said shoulders and are retained by said catches.





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1,227,001. DRAWER-STOP. HERMAN P. RANDALL, Pasadena, Cal., assignor to Kemp Manufacturing Co., Los Angeles, Cal., a Corporation of California. Filed Feb. 8, 1916. Serial No. 77,004. (Cl. 45—7.)



1. A drawer stop for use in a drawer structure to guide and stop a drawer, comprising two strips of metal secured in said drawer structure, one at each side thereof, said strips each comprising a stop portion extending upwardly inside the drawer below the bottom of said drawer in such a position as to be struck by the front of the drawer with the drawer in the closed position, a side portion formed on said strip in such a position as to guide the side of said drawer, and a bottom guide portion formed on said strip in such a position as to provide a support and a guide for the bottom of the side of said drawer, said metal members being so located that the front of the drawer is stopped in proper alinement with the drawer structure when in said closed position.

2. A drawer stop for use in a drawer structure to guide and stop a drawer, comprising two strips of metal secured in said drawer structure, one at each side thereof, said strips each comprising a stop portion extending upwardly inside the drawer below the bottom of said drawer in such a position as to be struck by the front of the drawer with the drawer in the closed position, a convex side portion formed on said strip in such a position as to guide the side of said drawer, and a convex bottom guide portion formed on said strip in such a position as to provide a support and a guide for the bottom of the side of said drawer, said metal members being so located that the front of the drawer is stopped in proper alinement with the drawer structure when in said closed position.

3. A drawer stop for use in a drawer structure to guide and stop a drawer, comprising two strips of metal secured in said drawer structure, one at each side thereof, said strips each comprising a stop portion extending upwardly inside the drawer below the bottom of said drawer in such a position as to be struck by the front of the drawer with the drawer in the closed position, a convex side portion formed on said strip in such a position as to guide the side of said drawer, side prongs formed on said side portion in such a location that they can be driven into the side of said drawer structure, and a convex bottom guide portion formed on said strip in such a position as to provide a support and a guide for the bottom of the side of said drawer, said metal members being so located that the front of the drawer is stopped in proper alinement with the drawer structure when in said closed position.

1,227,002. ART OF PUFFING CEREAL GRAINS. ARTHUR J. RHOADES, Philadelphia, Pa. Filed Apr. 9, 1914. Serial No. 830,836. (Cl. 99—10.)

1. A container for cereal grains having a fluid tight jacket, provided with an inlet and an outlet oppositely disposed in transverse relation to the longitudinal axis of said container for admission and discharge of heated fluid, and having means interposed between said inlet and outlet for directing said fluid longitudinally therethrough in opposite directions.

2. A container for cereal grains having means for introducing steam under pressure, a fluid tight jacket for the circulation of a heated fluid around said container, and having means for directing said fluid longitudinally therethrough, and means rotatable in the container for agitating the contents of said container.

3. A container for cereal grains, having means for introducing steam under pressure, a fluid tight jacket for the circulation of a heated fluid around said container, means rotatable in said container for agitating the contents thereof, and means tiltably supporting said container upon an axis transverse to the axis of the agitating means, and affording an inlet and an outlet for said heated fluid.

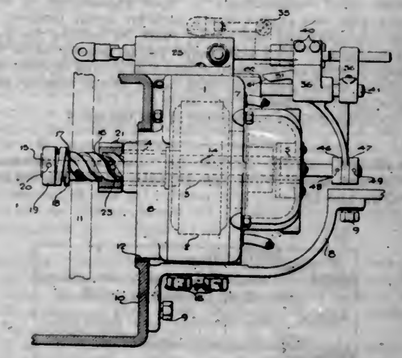
4. A container for cereal grains, comprising a tubular body having means for introducing steam under pressure into the grain chamber, a jacket forming a chamber surrounding said body for the circulation of a heated fluid, and tubular supports upon which said container may be tilted in the plane of its longitudinal axis and providing means for introducing a heated fluid into said jacket.

5. A container for cereal grains, comprising a tubular body having means for introducing steam under pressure into the grain chamber, a quick opening valve for suddenly releasing said pressure and for discharging the treated grains, a fluid tight jacket forming a chamber surrounding said body for the circulation of a heated fluid, and a support for said container, having hollow trunnions forming an inlet and an outlet for the jacketed chamber, and upon which said container is arranged to be tilted longitudinally.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,003. ENGINE-STARTER. JULIUS H. RICHARDS, Essex, N. J., assignor to Splitdorf Electrical Company, Newark, N. J. Filed July 21, 1915. Serial No. 41,203. (Cl. 172—239.)



1. In an apparatus of the class described, the combination of an engine, a rotatable member driven by said engine, an electric motor having its armature in a substantially fixed axial position, a source of power, means for applying said source of power to said motor, a hollow shaft for said motor armature having an extension at one end, a gear wheel mounted on said extension and means passing through said hollow shaft and operated by the

said power applying means for causing said gear wheel to engage with said engine rotatable member.

2. In an apparatus of the class described, in combination, an engine, a member driven by said engine, a source of power, a rotatable armature and means for applying the source of power thereto, a hollow shaft for supporting said armature and bearings therefor, said shaft having an extension at one end, a gear wheel mounted on said extension, an inner shaft within the hollow shaft and means associated with the inner shaft and operated by the said power applying means to cause said gear to engage said engine driven member, when said inner shaft is operated.

3. In an apparatus of the class described, in combination, an engine, a member driven by said engine, a source of power, a rotatable armature and means for applying the source of power thereto, a hollow shaft for supporting said armature and bearings therefor, said shaft having an extension at one end, spiral splines on said shaft extension, a gear wheel adapted to move rotatably and longitudinally on said splines, an inner shaft within the hollow shaft, a slot in said shaft extension substantially parallel to said splines and means passing through said slot for fastening said gear wheel to said inner shaft and means for operating said inner shaft to cause said gear to engage with said engine driven member.

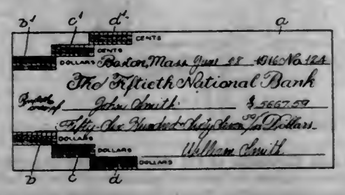
4. In an apparatus of the class described, in combination, an engine, a member driven by said engine, a source of power, a rotatable armature and means for applying the source of power thereto, a hollow shaft for supporting said armature and bearings therefor, said shaft having an extension at one end, spiral splines on said shaft extension, a slot in said hollow shaft between two of said splines, a gear wheel mounted on said shaft extension, a shaft within said hollow shaft, a pin passing through said gear and inner shaft and adapted to move in said slot, means for moving said inner shaft to carry said gear into engagement with said engine driven member and means on the end of said hollow shaft for absorbing the shock of said gear as it engages with said engine driven member.

5. In an apparatus of the class described, in combination, an engine, a member driven by said engine, a source of power, a rotatable armature and means for applying the source of power therto, a hollow shaft for supporting said armature and bearings therefor, said shaft having an extension at one end, a gear wheel mounted on said extension, a shaft within said hollow shaft, means connecting said gear to said inner shaft, means for moving said inner shaft longitudinally to cause engagement of said gear with said engine driven member, means common to both the gear and said hollow shaft for holding the gear in engagement with said engine driven member while the same is being rotated, said means also serving to effect the release of said gear from said engine driven member at a predetermined speed of the latter.

[Claims 6 to 24 not printed in the Gazette.]

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1,227,004. BANK-CHECK, &c. CECILIA K. SCHMIDT, Boston, Mass. Filed June 30, 1916. Serial No. 106,914. (Cl. 11—13.)

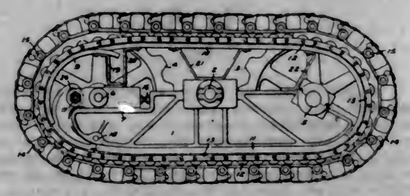



1. A money order, such as a bank check, having rows of value-designating characters forming stepped columns, said columns being arranged adjacent to the upper and lower edges of the left-hand portion of the check, said columns being spaced apart to afford room between them for indicia of the check, the values of said characters in each row decreasing progressively from left to right, and the values in each row being unlike those in the other rows, the arrangement of said rows being such that the check may be cut to remove characters from said columns so that thereafter the characters at the left ends of the rows collectively indicate the amount for which the check is drawn.

2. A money order, such as a bank check, of oblong form, having a plurality of longitudinally extending rows forming stepped columns of value-designating characters, said columns being arranged respectively adjacent to the upper and lower edges of the left-hand portion of the check and being spaced apart to afford room between them for indicia of the check, the value-designating characters of each row indicating values unlike those in the other rows, and the values of said characters in each row decreasing progressively from left to right, the arrangement of said rows being such that the check may be cut to remove characters from the left-hand ends of said rows so that the characters at the extreme left of the rows thereafter collectively indicate the amount for which the check is drawn.

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1,227,005. TRACTOR. CHARLES EDWIN SEARCH, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Nov. 29, 1915. Serial No. 64,575. (Cl. 21—150.)



1. In combination, a frame, a rollway carried by said frame, said rollway comprising an adjustable rigid portion, rollers engageable at said rigid portion with said rollway, a traction belt engageable with said rollers, and means for adjusting the tension of said belt, said rigid rollway portion being adjustable independently of said tension adjustment.

2. In combination, a frame, a rollway carried by said frame, said rollway comprising an adjustable rigid portion located at the leanding end of said frame, rollers engageable at said rigid portion with said rollway, a traction belt engageable with said rollers, and means for adjusting the tension of said belt, said rigid rollway portion being adjustable independently of said tension adjustment.

3. In combination, a frame, a rollway carried by said frame, said rollway comprising a substantially horizontally adjustable rigid portion located at the leading end of said frame, rollers engageable at said rigid portion with said rollway, a traction belt engageable with said rollers, and means for adjusting the tension of said belt, said rigid rollway portion being adjustable independently of said tension adjustment.

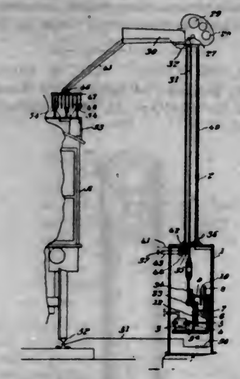
5. In combination, a frame, a rollway carried by said frame, said rollway comprising a rigid link having one end pivoted to said frame and having its opposite end adjustable, rollers engageable with said rollway, and a traction belt engageable with said rollers.

8. In combination, a frame, a rollway carried by said frame, said rollway comprising a rigid link having one end pivoted to the lower portion of the leading end of said frame and having its opposite end adjustable toward and away from the leading end of said frame and a yieldable portion continuous with said rigid portion, rollers engageable with said rollway, and a traction belt engageable with said rollers.

[Claims 4, 6, and 7 not printed in the Gazette.]



1,227,006. ELECTRICALLY-CONTROLLED MECHANISM. LLOYD SEEGER, Navarre, and JAMES F. MCGUIRE, Massillon, Ohio. Filed Nov. 17, 1916. Serial No. 131,935. (Cl. 246—58.)

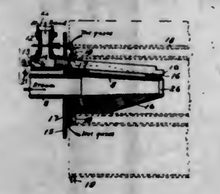


1. The combination with a line of way, of electrically operated mechanism for automatically controlling the power and brake of a vehicle on said line of way, a plurality of contact rails carried by the vehicle, means for connecting said contact rails and the truck of said vehicle with said electrically operated mechanism, a standard located along said line of way, an arm pivotally connected to said standard, a link connected to said arm, gearing arranged to reciprocate said link, a motor arranged to operate said gearing, a circuit breaker operated by said gearing arranged to automatically stop said motor at a predetermined time, a plurality of flexible fingers carried by said arm, a normally open electric circuit connected with said flexible fingers and with a rail of said line of way and a battery located in said normally open circuit, said contact rails arranged to contact with said flexible fingers.

[Claim 2 not printed in the Gazette.]

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1,227,007. STEAM-BLAST CLEANER FOR BOILER-FLUES. JOHN M. SHEA, Sioux City, Iowa. Filed Aug. 4, 1916. Serial No. 113,075. (Cl. 230—38.)



1. A blast nozzle provided with centering means and having an extended air shield at its rear end for the purpose set forth.

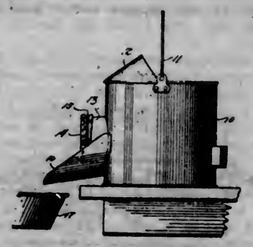
2. A blast nozzle provided with centering wings and having an extended air shield at its rear end and spacing ribs on said shield for the purpose specified.

3. A blast nozzle for cleaning the flues of steam boilers consisting of a central tube, an extended flange at the rear end of said tube forming an air shield for the purpose specified, centering means for the nozzle, spacing ribs on the inner face of said shield, a sand supply pipe secured in said shield and provided with valve-controlled air inlet and with a sand valve.

4. A foot valve for a sand blast nozzle consisting of a pipe open at its lower end and provided with a lateral opening near said end and an air duct leading along the side of said pipe to said lateral opening for the purpose set forth.

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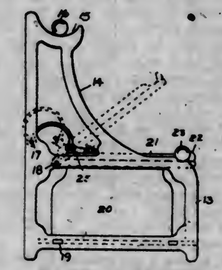
1,227,008. STRAINING-RECEPTACLE. FRANK SHEPHERD, Forest Green, Mo. Filed Aug. 21, 1916. Serial No. 116,134. (Cl. 210—16.)



In a straining device, a receptacle, a discharge pipe located in the side of the receptacle and adjacent the bottom thereof, a straining means mounted on the outer end of the pipe, and a downwardly and outwardly extending chute located below the pipe and extending below the bottom of the receptacle, whereby the contents of the receptacle will flow therefrom without the necessity of tilting the receptacle.

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1,227,009. INKSTAND. THOMAS K. SMITH, Pittsburgh, Pa. Filed Nov. 22, 1916. Serial No. 132,777. (Cl. 120—5.)



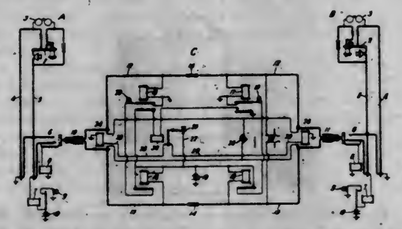
An ink well comprising a pair of side frames, a bottom member connecting the lower ends of said frames together and providing a support for an ink well, a bar connecting said frames together intermediate the top and bottom thereof, a lid hinged to said bar and provided with a seat to receive a pen holder to maintain the lid in closed position, a bar connecting said frames together at a point above the first mentioned bar and rearwardly with respect thereto, a pair of spaced lugs carried by the lid, a pin connected to the lugs, and a curved spring connected at one end of said pin between said lugs and at its other end to the last mentioned bar for automatically raising the lid when the pen-holder is removed therefrom.

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1,227,010. TELEPHONE-EXCHANGE SYSTEM. EDWIN H. SMYTHE, Chicago, Ill., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 8, 1915. Serial No. 32,844. (Cl. 179—73.)

1. In a telephone connecting cord circuit, the combination with a device normally associated with one end of said cord circuit, of an electromagnetic switch for associating said device with the other end of said cord circuit, a key for controlling the energization of said electromagnetic switch, calling and answering supervisory relays connected with said connecting cord circuit, and contacts of said relays jointly participating in the control of said electromagnetic switch.

3. In a telephone connecting cord circuit having an answering and a calling supervisory relay, a source of ringing current normally adapted for application to the calling end of said collecting circuit, an electromagnetic ringing key adapted when operated to apply ringing current from said source to the answering end of said connecting circuit, a manually operated switch and an energizing circuit for said electromagnetic ringing key controlled jointly by said manual switch and said supervisory relays.

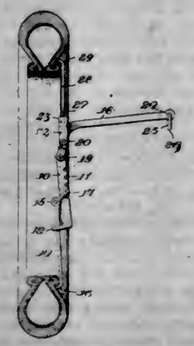


5. In a telephone connecting cord circuit having an answering and a calling supervisory relay, a source of ringing current, an answering and a calling electromagnetic ringing key, each of said keys being adapted when operated to apply ringing current from said source to its respective end of said connecting circuit, a controlling key, an electromagnetic switch having an energizing circuit including normally open contacts of said calling supervisory relay and normally closed contacts of said answering supervisory relay, and an energizing circuit for said electromagnetic ringing keys, said energizing circuit having a branch closed through said calling electromagnetic ringing key in contacts of said electromagnetic switch closed when said switch is inert, a branch closed through said answering electromagnetic ringing key in contacts of said electromagnetic switch when said switch is energized, and having a common portion closed in contacts of said controlling key when said key is operated.

7. In a telephone connecting cord circuit having an answering and a calling supervisory relay, a source of calling current, an electromagnetic ringing key for each end of said connecting cord circuit, an operator's key, and an energizing circuit for each of said electromagnetic ringing keys controlled jointly by said operator's key and said supervisory relays.

[Claims 2, 4, and 6 not printed in the Gazette.]

1,227,011. TIRE-RIM DETACHER. THOMAS R. SNYDER, Barberton, Ohio, assignor of one-fourth to William H. Werley, Barberton, Ohio. Filed Dec. 4, 1916. Serial No. 135,011. (Cl. 157—1.)



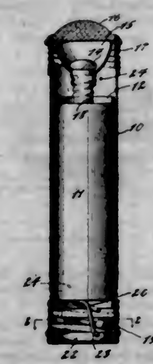
An implement of the class described, comprising a stock having a lateral guide and a plurality of spaced notches, a pulling member slidable through said guide and having a rim engaging device, a link carried by said pulling member and engaging said notches one at a time to adjustably couple said pulling member to the stock, a lever arm pivoted to said stock, and another pulling member coupled to said lever arm and carrying a rim engaging device.

1,227,012. FLASH-LIGHT. MAX H. SPIELMAN, New York, N. Y., assignor of one-half to Joseph Corcos, Brooklyn, N. Y. Filed Apr. 11, 1916. Serial No. 90,356. (Cl. 240—8.5.)



An electric flash light having a casing, a light and lens rigid at one end thereof, a battery in the casing in permanent contact with the light, a cap movably mounted on the opposite end of the casing and capable of movement in a direction longitudinally thereof, said cap having a part struck inward to form a protuberance capable of contacting with the battery and close the lamp circuit upon said longitudinal movement of the cap on the casing and a spring bearing between the battery and cap to hold the battery permanently in contact with the light.

1,227,013. FLASH-LIGHT OR ELECTRIC TORCH. MAX H. SPIELMAN, New York, N. Y., assignor of one-half to Joseph Corcos, Brooklyn, N. Y. Filed May 27, 1916. Serial No. 100,197. (Cl. 240—8.5.)

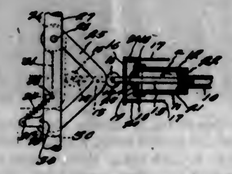


1. An electric flash light having an exterior case for the battery and lamp, one leg of the circuit passing through said case, a cap on one end of the case, a spiral spring mounted in the cap, in contact with the battery, one end of which is bent toward the base of the cap so that the circuit is closed by the turning of the cap and the contact of the cap and bent spring.

2. An electric flash light having an exterior case for the battery and lamp, one leg of the circuit passing through said case, a cap on one end of the case to close the same and adapted to have a motion longitudinally of the case upon the turning of the cap and the contact of the cap to engage the battery and close the circuit upon the said turning of the cap, said contact being formed by a spiral spring in the cap, the base of which is insulated and the end of which is bent toward the base of the cap to close the circuit when the cap is turned.



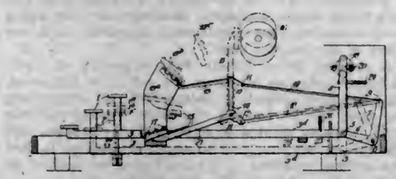
1,227,014. WATER-ELEVATOR. WALTER FRANKLIN STEGALL, Concord, N. C. Filed Feb. 9, 1916. Serial No. 77,178. (Cl. 103—62.)



1. In combination with a system for elevating water from a well including an air pressure reservoir, a pump having a spring tensioned piston to force air into the reservoir, a reciprocating rod having an angular cam member to actuate the spring tensioned piston of said pump, and a connection between the air reservoir and the pump including a check valve to open by the action of the air thereon to allow the air to enter the reservoir and closed by the back pressure of the air.

2. In combination with a system for elevating water from a well including an air pressure reservoir, a pump having a spring tensioned piston to force air into the reservoir, a reciprocating rod having a pivotally movable angular cam member including spring means to hold the cam member in operative position to actuate the spring tensioned piston of said pump, a connection between the air reservoir and the pump including a check valve, said spring means of the piston combined with the excess pressure of air between said valve and said piston when the reservoir is filled overcoming the spring means of the cam member to prevent actuation of said piston, and a pin on the cam member to contact with the reciprocating rod to limit the cam member in operative position.

1,227,015. TYPE-WRITING MACHINE. BURNHAM C. STICKNEY, Elizabeth, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 4, 1914. Serial No. 854,920. (Cl. 197—22.)



1. In a type-bar action for typewriting machines, in combination, a rearwardly-striking type-bar, a key lever having a free arm extending forwardly from its fulcrum and provided at its forward end with a key, said lever depressible throughout its length in nearly parallel planes, actuating means for said type-bar, operating means between said key lever and type-bar-actuating means, and means whereby said key lever is given a forwardly accentuating oscillatory movement about its fulcrum when its key is depressed, whereby the speed of the key relative to the speed of the type-bar is modified, to ease the intial and final portions of its stroke.

2. In a type-bar action for typewriting machines, in combination, a rearwardly-striking type-bar, a key lever having a free arm extending forwardly from its fulcrum and provided at its forward end with a key, said lever depressible throughout its length in nearly parallel planes, actuating means for said type-bar, operating means between said key lever and actuating means, and means connected with said key lever whereby the latter, when the key is depressed, is given a forwardly accentuating oscillatory movement about its fulcrum, whereby the speed of the key relative to the speed of the type-bar is modified, to ease the initial and final portions of its stroke.

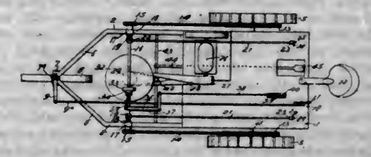
3. In a type-bar action for typewriting machines, in combination, a rearwardly-striking type-bar, a key lever, means to guide the key lever and cause it to be depressed throughout its length in nearly parallel planes, the fulcrum of the lever being carried downward as the lever is depressed, actuating means for said type-bar, operating means between said key lever and type-bar-actuating means, a vertical extension for said key lever, and a link pivoted to said extension and having a fixed fulcrum, said link arranged to impart a forwardly accentuating oscillatory movement to said lever about its fulcrum during said first-mentioned movement of the lever, to ease the initial and final portions of the lever's stroke.

4. In a type-bar action for typewriting machines, in combination, a swinging type-bar, a horizontal key lever depressible throughout its length, actuating means between said lever and type-bar for operating the latter by the downward movement of the lever at its point of connection with said means, and means for oscillating said lever about said point of connection as a fulcrum coincidently with said depression of the lever, to accelerate the speed of movement of said type-bar toward the end of its stroke relatively to the speed of movement of said lever.

5. In a type-bar action for typewriting machines, in combination, a swinging type-bar, a horizontal key lever depressed throughout its length as the key is depressed, a bell-crank pivoted to said lever to support and guide the latter, a link connecting said bell-crank and type-bar to actuate the latter by the former, and means to impart to the key lever, during its depression, an additional tilting movement about its point of pivotal connection with the bell-crank as a fulcrum.

[Claims 6 to 28 not printed in the Gazette.]

1,227,016. TRACTOR. JAMES CLINTON STURM, Grafton, W. Va. Filed May 25, 1916. Serial No. 99,868. (Cl. 21—114.)



A tractor embodying a frame, a pair of traction wheels supporting it, a transverse jack shaft carried by the frame and having its ends connected with the traction wheels, a friction wheel slidable upon the jack shaft, means for shifting said friction wheel, a vertical shaft mounted for rotary and sliding movements below the jack shaft, a horizontal friction disk carried by the upper end of the vertical shaft to engage said friction wheel, a prime mover carried by the frame and operatively connected with the vertical shaft, and a lever carried by the frame and having a thrust bearing supporting said vertical shaft, said lever being operable for raising the vertical shaft.

1,227,017. METHOD OF MAKING OPEN-FACE ENVELOPS. GEORGE W. SWIFT, Jr., Bordentown, N. J. Filed Aug. 21, 1915. Serial No. 46,653. (Cl. 93—61.)

The method of making open face envelops which consists in progressing a web of transparent material, pro-

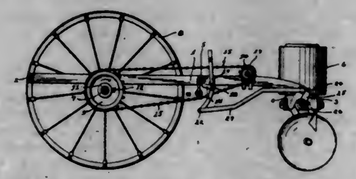
viding said web with a succession of imprints of adhesive material in such spaced relation that said web may be subsequently divided to form individual patches, each having one of said imprints, severing said patches



from said web, continuously progressing said severed patches at a uniform rate and presenting individual envelop blanks, each having an opening, to said traveling patch in such timed relation thereto that the opening therein is covered by said patch.

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1,227,018. PLANTER. JOHN E. TAYLOR, Camden, Ohio, assignor of one-half to J. F. Knepper, Whitewater, Ind. Filed Sept. 30, 1916. Serial No. 123,152. (Cl. 111—6.)



2. In a planter, a framework, wheels supporting said framework, a seed feeder, a sprocket rotatable with said wheels, an idle sprocket, a chain passing over said sprockets, a trip lever pivoted to the framework, an operative connection between said lever and said feeder, means carried by said chain for periodically tripping said lever, a marker, a shaft upon which said marker is mounted, and means carried by said shaft and lying in the path of movement of said lever whereby said marker is actuated each time said lever is tripped, and means for returning said shaft to normal position.

4. In a planter, a framework, wheels supporting said framework, a seed feeder, a sprocket rotatable with said wheels, an idle sprocket, a chain passing over said sprockets, a trip lever pivoted to the framework, an operative connection between said lever and said feeder, means carried by said chain for periodically tripping said lever, a shaft extending longitudinally of the planter, an arm carried by said shaft, a marker on said shaft, said arm being located in the path of movement of said trip lever when the same is operated by said chain to cause said shaft to oscillate to bring said marker into scoring engagement with the ground, a second lever on said shaft, and a star wheel operated by the movement of said supporting wheels to return said longitudinal shaft to normal position after each marking action.

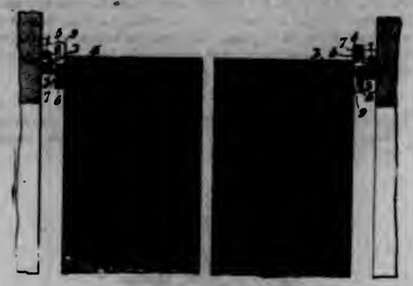
[Claims 1 and 3 not printed in the Gazette.]

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1,227,019. END-SUPPORT FOR RODS. CHARLES T. THOMPSON, Philadelphia, Pa. Filed June 14, 1916. Serial No. 103,623. (Cl. 156—22.)

1. An end-support for a rod, comprising a socket piece with a flanged socket slotted upon one side, and a similarly slotted pierced cap piece embracing the flange of the socket piece and rotating eccentrically thereupon.

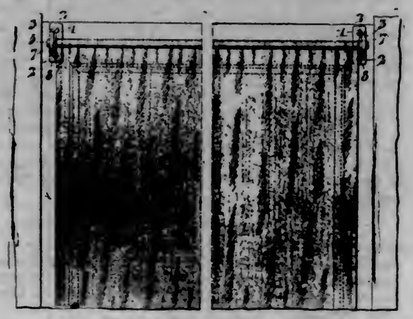
2. An end-support for a rod, comprising a stationary socket piece having a slot adapted to engage the rod to be supported; a cap piece rotatably mounted on said socket piece, also having a slot adapted to engage said rod, said cap piece being eccentrically mounted on said socket piece, so that the rotation of the cap piece causes the edges of the slot to exert a binding action on said rod.



3. An end-support for a curtain rod, composed of two members, namely, a socket piece, provided with the socket 2, and the flange 4, both being slotted upon one side, and a centrally pierced cap piece comprising the disk 6, and the overhanging flange 7, both being similarly slotted upon one side, the overhanging flange of the cap piece embracing the flange 4, of the socket piece, the contacting edges of these flanges being in eccentric relation in the axis of the socket piece, whereby a binding action is obtained by the rotation of said cap piece.

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1,227,020. SUPPORT FOR RODS. CHARLES T. THOMPSON, Philadelphia, Pa. Filed June 14, 1916. Serial No. 103,624. (Cl. 156—22.)



1. A support for a rod comprising a bracket piece provided with an aperture adapted to receive the rod, and a rotating clamping ring eccentrically associated with the aperture of the bracket piece.

2. A support for a curtain rod comprising an apertured bracket adapted to engage the rod to be supported, a ring piece also adapted to engage said rod, coöperating flanges upon the bracket and ring piece, whereby the ring piece is rotatably secured in relation to the bracket, and an aperture in the ring piece eccentrically related to that of the bracket, whereby a binding action is secured on said rod by the rotation of the ring piece.

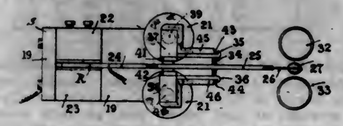
3. A support for a rod, comprising a fixed member, having an aperture adapted to engage the rod to be supported; a rotary fixed member, and also having an aperture adapted to engage said rod, but said aperture being in eccentric relation to the first mentioned aperture, whereby a binding action is secured on the rod by the rotation of said rotatable member.

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1,227,021. ACTUATING SIGNALS ON AND COMMUNICATING WITH TRAINS. HENRY ARTHUR THOMPSON, Withington, Manchester, England. Filed June 22, 1915. Serial No. 35,530. (Cl. 177—7.)

1. In a railway inductive signaling or control system a polarized reed relay possessing a tongue composed of a relatively flexible part fixed at one end and a comparatively rigid portion fixed to said flexible part, such components forming a whole which is set in vibratory motion by the action of magnetic forces of predetermined periodicity applied near the junction of said parts, a pair of flanking contact springs so disposed as to make contact with said reed when in vibration; such combination being so characterised that when the reed is set in motion its contact with the flanking springs brings the vibrations of the reed into synchronism with the periodicity of said magnetic forces, current impulses being sent through a local circuit of which the reed and flanking springs form a part.



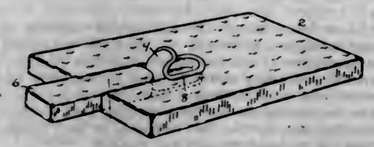


2. In a railway inductive signaling or control system a combined polarized reed relay and acoustic device possessing a tongue composed of a relatively flexible part fixed at one end, a comparatively rigid part fixed to said flexible part, and a short hammer-carrying flexible extension attached to said rigid portion, such components forming a whole which is set in vibratory motion by the action of magnetic forces of pre-determined periodicity applied near the junction of said parts, a pair of flanking contact springs and a sounding attachment so disposed as to be capable of making contact with said reed; such combination being so characterized that when the reed is set in motion its contact with the flanking springs and sounding attachment brings the vibrations of the reed into synchronism with the periodicity of said magnetic forces, current impulses being sent through a local circuit of which said reed and flanking springs form a part and an audible signal being given by the contact of the hammer with said sounding attachment.

3. In a railway inductive signaling or control system a polarized reed relay possessing a vibratory armature, two hooked flanking contact springs making electrical connection with said armature when in vibration, stationary elements capable of engaging the hooked extensions of said springs and thereby preventing their inward deflection; such combination being so characterized that a local circuit controlled by said armature and flanking springs receives long current impulses at regular intervals.

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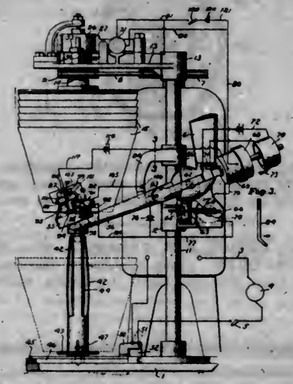
1,227,022. MATTRESS. WALTER THOMPSON, Engle, N. Mex. Filed Sept. 22, 1915. Serial No. 52,103. (Cl. 5—13.)



A reversible mattress, having a recess entirely open at the top and at its outer end and closed at its inner end, a single bottom ticking for the mattress extending across and closing said recess at the bottom, and a plug of substantially the same thickness as that of and packed closer than is the mattress, said plug fitting neatly and sliding in said recess, being of an area in cross-section greater than that of said recess, having its top ticking in the same plane as that of the top ticking of the mattress and forming a continuous uninterrupted surface therewith and its bottom ticking in contact with the bottom ticking of the mattress, whereby the mattress may be handled and reversed as an ordinary mattress, and the slidable plug is adapted to hold the bed pan securely in position, being itself securely held.

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1,227,023. PHONOGRAPH. GEORGE H. UNDERHILL, Boston, Mass. Filed Nov. 14, 1910. Serial No. 592,179. (Cl. 274—18.)



1. In a multiple record phonograph the combination with reproducing means of a rotatable record support for holding a plurality of records in co-axial relation, means for causing engagement therewith of the reproducing means, and means for thereafter automatically effecting the transfer of said records each to another position on the said rotary support.

2. In a multiple record phonograph, the combination with a rotatable record support on which the record is mounted in co-axial relation thereto while being played of means for effecting the shifting of the record from the playing position on said support to another position on the same support.

3. In a multiple record phonograph, the combination with reproducing means of a rotary magazine support on which the records are held in co-axial relation thereto, means for automatically applying the reproducing means to the records in succession and withdrawing the same after the record has been reproduced and means for shifting a record from its position on the support after it has been reproduced, the record remaining on the said support while being reproduced.

4. In a multiple record phonograph, the combination with reproducing means of a support on which the records are held stacked one against another, means for automatically applying the reproducing means to the records in succession and for withdrawing the reproducing means after the record has been reproduced and means for shifting a record from its position on the support after it has been reproduced, the record remaining on the said support while being reproduced.

5. In a multiple record phonograph, the combination with a rotatable record support for holding a plurality of records in coaxial relation, a reproducer, means for moving the reproducer initially into contact with a record to reproduce the same, means for withdrawing the reproducer on the completion of its reproduction, and means to effect the shifting of the record on and relatively to the said support to permit the application of the reproducer to the next adjacent record on the rotatable support.

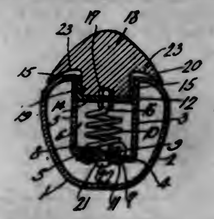
[Claims 6 to 18 not printed in the Gazette.]

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1,227,024. RUBBER SPRING-TIRE. MATTHEW A. WALKER and CHARLES C. MOORE, Elephant Butte, N. Mex. Filed July 21, 1916. Serial No. 110,569. (Cl. 152—37.)

In a device of the class described, a rim of curvilinear outline and provided with inwardly projecting flanges

forming a tread groove, the flanges being equipped with extensions which project toward each other, in overlapped relation; a spring, one end of which is bound between the



extensions; means for connecting the extensions; a tread mounted to reciprocate in the tread groove; and means for securing the outer ends of the springs to the tread.

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1,227,025. DEVICE FOR TRIMMING THE TIPS OF BILLIARD-CUES. CECIL C. ABBOTT, Harbor Springs, Mich. Filed Mar. 25, 1916. Serial No. 86,763. (Cl. 51—1.)



1. A device for trimming cue tips comprising a tubular body having an opening in one end of less diameter than the interior of the body through which the cue tip may be inserted and supported, and an abrasive lining within the body, the body being adapted to be reciprocated and rotated relative to the cue tip.

2. A device for trimming cue tips comprising a tubular body, an abrasive lining removably fitted within the body, and means for retaining the lining in the body, the body being provided at one end with an opening through which the cue tip may be inserted and being adapted for reciprocatory and rotary movement relative to the cue tip.

3. A device for trimming cue tips comprising a tubular body, and a roll of abrasive material removably fitted within the body and lining the same, the body having an opening in one end axially alined therewith and of less diameter than the bore of the body.

4. A device for trimming cue tips comprising a tubular body provided at one end with an opening axially alined with the body, a roll of abrasive material removably disposed within the body and lining the same, said roll being removable through one end of the body, and means removably fitted upon the said end of the body for closing the same and retaining the lining therein.

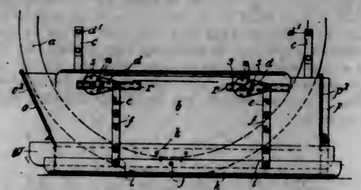
5. A device for trimming cue tips comprising a tubular body provided at one end with an opening of less diameter than the body, a roll of abrasive material removably disposed within the body and lining the same, said roll being removable through an end of the body, and a cap removably fitted upon said end of the body and closing the same, the said cap retaining the lining within the body and being provided with an opening.

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1,227,026. MUD-GUARD FOR MOTOR AND OTHER VEHICLES. ALFRED CHARLES ADAMS, Peckham, London, England. Filed Mar. 4, 1916. Serial No. 82,133. (Cl. 21—23.)

1. A mudguard for motor and other vehicles comprising in combination, a main guard-plate, relatively fixed bosses on said main guard plate, adjustable arms mounted on the said bosses, links pivotally connected at their upper ends to said adjustable arms, and an auxiliary guard plate suspended from the adjustable arms by the said links, substantially as described.

2. A mudguard for motor and other vehicles comprising in combination, a main guard plate, relatively fixed bosses on said main guard plate, adjustable arms mounted on said bosses, links pivotally connected at their upper ends to said adjustable arms, and a plurality of auxiliary guard plates suspended from the adjustable arms by said links, substantially as described.

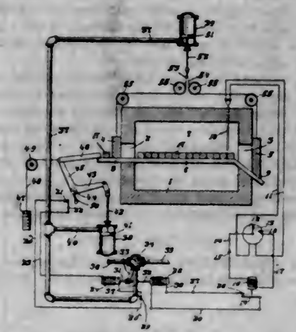


3. A mudguard for motor and other vehicles comprising in combination, a main guard plate, longitudinally adjustable bosses on said guard plate, rotatably adjustable arms mounted on said bosses, links pivotally connected at their upper ends to said adjustable arms, and an auxiliary guard plate suspended from the adjustable arms by the said links, substantially as described.

4. A mud guard for motor and other vehicles, comprising a main guard plate, a plurality of auxiliary guard plates adjustably connected to the main guard plate and located in the same vertical plane thereof, and front and rear guard plates normally located at right angles to the main guard plate and pivoted thereto.

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1,227,027. HEAT-TREATING FURNACE. THADDEUS F. BAILY and FRANK T. COPE, Alliance, Ohio, assignors to The Electric Furnace Company, Alliance, Ohio, a Corporation of Ohio. Filed May 13, 1915. Serial No. 27,795. (Cl. 263—6.)



1. A furnace, means for moving the material to be heated through said furnace, a thermally controlled device controlled by the temperature of said furnace, and electrical controlling means forming an operative connection between said thermally controlled device and said means for moving the material through said furnace and controlling the starting and stopping of said means for moving the material through the furnace.

5. In a heat treating furnace, a heating chamber having an inlet opening at one end and an outlet opening at the other end thereof, a door provided to normally cover each of said openings, a temperature measuring device located in said heating chamber, mechanical means for passing material to be treated through said heating chamber, mechanical means for opening and closing said doors and electrical controlling means forming an operative connection between said temperature measuring device and both of said mechanical means.

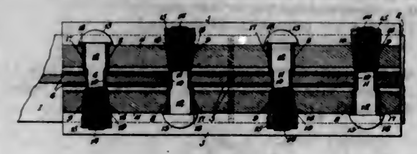
13. In a heat treating furnace, a heating chamber, a temperature measuring device located in said chamber, mechanical means for passing material to be treated through said heating chamber, and electrical controlling means forming an operative connection between said temperature measuring device and said mechanical means.

[Claims 2 to 4, 6 to 12, and 14 to 16 not printed in the Gazette.]



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1,227,028. INSULATED RAIL-JOINT. CHARLES E. BALLOU, Roanoke, Va. Filed Aug. 11, 1916. Serial No. 114,429. (Cl. 239—5.)



1. An insulated rail joint, comprising fish plates having bolt passages therethrough, certain of the passages being of taper form, nuts for the bolts having axially extended taper shanks adapted to the taper passages through the fish plates, insulation between the fish plates and the rails, insulation between the head ends of the bolts and the corresponding fish plates, and conical insulating sleeves between the conical shanks of the nuts and the corresponding fish plates.

2. An insulated rail joint, comprising fish plates having bolt passages therethrough, certain of the passages being of taper form, nuts for the bolts having axially extended taper shanks adapted to the taper passages through the fish plates, insulation between the fish plates and the rails, insulation between the head ends of the bolts and the corresponding fish plates, and conical insulating sleeves between the conical shanks of the nuts and the corresponding fish plates, the conical sleeves being of greater length than the thickness of the fish plates where traversed by them.

3. An insulated rail joint, comprising fish plates having bolt passages therethrough, certain of the passages being of taper form, nuts for the bolts having axially extended taper shanks adapted to the taper passages through the fish plates, insulation between the fish plates and the rails, insulation between the head ends of the bolts and the corresponding fish plates, and conical insulating sleeves between the conical shanks of the nuts and the corresponding fish plates, the conical sleeves being of greater length than the thickness of the fish plates where traversed by them, and said conical sleeves being of one piece construction each with a longitudinal slit to permit contraction of the sleeve.

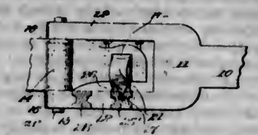
4. An insulated rail joint provided with fish plates insulated from the rail, and bolts traversing the fish plates and insulated therefrom, each bolt having a nut with an axially extended long-taper shank and the fish plate where traversed by the nut being correspondingly tapered and the insulation between the bolt and fish plate where traversed by the taper nut being interposed between the outer taper face of the nut shank and the inner taper face of the passage traversed by the insulation, the insulation between the taper shank and the passage through which it extends being of conical form and of a length to project beyond both ends of the passage in which it is lodged.

5. An insulated rail joint, comprising fish plates each having alternating elliptical and conical passages, with the elliptical passage of one fish plate registering with the conical passage of the other fish plate, bolts with elliptical portions adapted to the elliptical passages and threaded portions of a length to extend through and beyond the conical passages, nuts with taper axially extended shanks adapted to the conical passages and of a length to extend through them, and insulation interposed between the fish plates and the rail, between the elliptical portions of the bolts and the passage in the fish plates through which they extend, and between the taper shanks of the nuts and the taper passages in the fish plates.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,029. AUTOMOBILE-AXLE. FRANK JAMES BALLWEG, Mobile, Ala. Filed Jan. 30, 1913. Serial No. 745,242. (Cl. 21—139.)



1. The combination with a main axle, an arcuate track thereon, and a subordinate axle pivoted to the main axle, of a pintle, a roller rotatably mounted on the pintle and contacting with the track, and means adjustably mounted in the subordinate axle and having the pintle journaled therein whereby to adjust the roller when either the roller or the track has become worn.

2. The combination with a main axle, an arcuate track thereon, and a subordinate axle pivoted to the main axle, of blocks slidably mounted adjacent the inner end of the subordinate axle, a roller rotatably associated with the blocks and contacting with the track, and bolts adjustably engageable in the subordinate axle and associated with the blocks for adjusting the blocks when either the roller or the track has become worn.

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1,227,030. HAND-AUDIPHONE. FRED A. BARBER, Boston, Mass., assignor to Globe Ear-Phone Co., Boston, Mass., a Corporation of Massachusetts. Filed Oct. 7, 1913. Serial No. 793,952. (Cl. 179—107.)



1. A portable telephone comprising a hollow handle adapted to receive and hold a removable battery, a rigid member extending from one end of the handle, a receiver carried by said member at a point on said member spaced from the handle, a transmitter yieldingly connected to said member at a point spaced from the handle, said yielding connection permitting the relative independent operation of both receiver and transmitter, while carried by the same rigid member and adjacent each other.

2. A portable telephone, having a handle and a battery contained therein, a receiving instrument and a transmitting instrument positioned adjacent to each other at the same end of the handle, pivoted means to support said instruments on the handle, and insulating means between the instruments and said support permitting both to be swung on said pivot and each to operate without obscuring the sound transmitting action of the other.

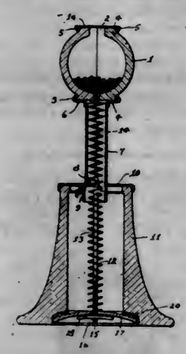
3. A portable telephone, having a handle and a battery contained therein, a receiving instrument and a transmitting instrument positioned adjacent to each other at the same end of the handle, pivoted means to support said instruments on the handle, and insulating means between the instruments and said support permitting both

to appear as a single device, said insulating means being adapted to prevent either transmitter or receiver affecting the sound transmitting operation of the other, while held in said adjacent position.

4. A portable telephone comprising a hollow cylindrical handle adapted to contain a removable battery, a cover for one end of said handle having a spring bearing between said cover and the battery contained therein, a cover for the other end of said handle having contact means to engage the terminals of the battery and contact therewith under the tension of said spring, a rigid member extending from the center of said last named cover, a telephone receiver attached to said member at a distance from the cover, a telephone transmitter having a yielding portion and studs projecting from said member at a distance from the handle engaging said yielding portion of the transmitter, whereby said receiver is rigidly supported by the member and the transmitter is yieldingly supported thereby.

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1,227,031. TOOTHPICK-HOLDER. THOMAS BARTHOLOMEW, Columbus, Ohio. Filed June 5, 1916. Serial No. 101,704. (Cl. 206—23.)



1. A tooth pick holder comprising a receptacle, a hollow base structure having an apertured closure at its top, a stem projecting through said aperture and carrying said receptacle at its upper end, spring means interposed between said receptacle and said base structure, means carried by the lower end of said stem and coöperating with said closure for limiting the upward movement of said receptacle, and a selector carried by said base structure and slidable through said receptacle.

2. A tooth pick holder comprising a receptacle, a hollow base structure having an apertured closure at its top, a hollow stem projecting through said aperture and carrying said receptacle at its upper end, a spring bearing at its lower end in said base structure and confined at its upper end within said hollow stem, means carried by the lower end of said stem for engaging said closure to limit the upward movement of said receptacle, and spaced selector prongs extending upward from said base on opposite sides of said stem and slidable through said receptacle.

3. A tooth pick holder comprising a receptacle, a hollow base structure, an apertured cap closure for the top of said base, a hollow stem attached to said receptacle and passing through said apertured cap, a selector structure comprising a pair of spaced prongs located on opposite sides of said stem and an upwardly projecting stem centrally located between said prongs, a spring centered at its lower end around said last named stem and at its upper end within said first named stem, means for limiting the upward movement of said receptacle, and means for attaching said selector structure to said base.

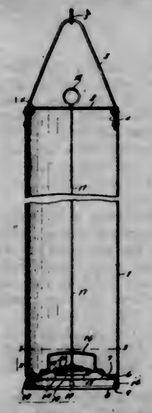
4. In a tooth pick holder, a hollow receptacle having a restricted opening formed in longitudinal halves, a pair of slotted plates shaped to grip the top and bottom of said halves to lock them together, the base of each half having a notched-out portion, and a selector structure movable through said coöperating notched-out portions and the slot in said bottom plate.

5. In a tooth pick holder, a hollow receptacle having a restricted opening and formed in longitudinal halves, the base of each half having a notched-out portion, a boss on the bottom of each half shaped to coöperate to form a lock in holding said halves together, a slotted plate whose edges are shaped to grip said bosses in locking the halves together, a supporting structure attached to said plate, and a selector structure movable through said notched-out portions and the slot in said plate.

[Claim 6 not printed in the Gazette.]

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1,227,032. BUCKET BOTTOM AND LIFT. ARTHUR L. BECKETT, Stigler, Okla. Filed June 29, 1915. Serial No. 37,103. (Cl. 103—35.)



A well bucket comprising a casing, a one piece bottom secured thereto, said bottom provided with a straight upwardly inclined side wall terminating in a horizontally extending platform provided with a centrally located discharge aperture having a depending flange extending around the periphery thereof, a flexible valve adapted to sit upon said horizontally extending platform of said bottom and adapted to be cupped by downward movement of the valve for sweeping obstructions from said horizontally extending portion when a load is applied to said valve.

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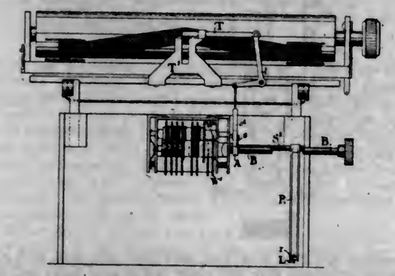
1,227,033. CALCULATING-MACHINE. HENRY SHEPLEY BOOTH, Manchester, England, assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed May 2, 1912. Serial No. 694,742. (Cl. 235—59.)

1. In a calculating machine adapted as a type-writing machine, the combination, with the numeral type bars and the totalizer, of an auxiliary type bar to print a distinctive mark simultaneously with the numeral, and means for automatically moving the auxiliary type bar into the path of the numeral type bars when the totalizer is set for calculating operation of a given character, substantially as described.

2. In a calculating machine adapted as a type-writing machine, the combination, with a totalizer, of apparatus to print a distinctive mark when the totalizer is at zero, and to print a distinctive mark simultaneously with the numeral when the mechanism is set to either subtract or to add, substantially as described and shown.

3. In a computing machine, the combination with computing mechanism, of a state-indicating printing sign, numeral printing keys for printing the number computed and for controlling said computing mechanism, means to set said state-indicating sign to printing position and to change the control of the computing mechanism by said keys to print the totals standing on the computing mechanism and thereby clear the same, a clearance printing sign, and means for causing the positioned state-indicating sign to print by the action of said numeral keys as an incident to the printing of a total thereby, said keys also acting to enable said clearance sign to print at the conclusion of the printing of the total and the clearing of the computing mechanism.





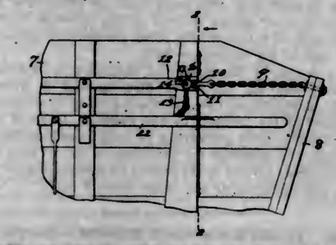
4. In a computing machine, the combination with computing mechanism, of numeral printing keys for controlling said computing mechanism, a state-indicating sign, a clearance sign, a lock for said clearance sign normally effective to prevent printing by said clearance sign, means for positioning said state-indicating sign to printing position and for changing the control of said computing mechanism by said keys to cause a change of state of said computing mechanism, and means to cause said positioned state-indicating sign to print, as said numeral keys are operated to print the digits corresponding to the total standing on said computing mechanism and to clear said computing mechanism, said numeral printing keys while thus printing the total acting through the medium of said computing mechanism to release said lock to enable said clearance sign to be printed.

5. In a combined typewriting and computing machine having a computing mechanism, numeral types, and numeral keys controlling said numeral types to print the numbers run up on said computing mechanism; the combination of a special printing type, the printing action of said type being under the joint control of the computing mechanism and one of said numeral keys.

[Claims 6 to 18 not printed in the Gazette.]

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1,227,034. LATCH. ERIC EDWARD BOYUM, Hamakuapoko, Hawaii. Filed Aug. 18, 1916. Serial No. 115,601. (Cl. 105—15.)



1. The combination with a chain and a stud for holding a door in closed position; of a latch comprising a rotatable head, means thereon for normally imprisoning said chain on said stud, and means for forcing said chain from said stud in the rotation of said head.

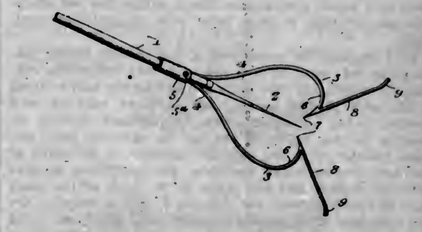
2. The combination with a chain and a stud for holding a door in closed position; of a latch comprising a rotatable head, a lip on the front and to one side thereof normally overlying the stud end of said chain to imprison the same on said stud, and a helically surfaced flange adapted to pass behind and force said chain from said stud in the rotation of said head, said lip being moved from chain imprisoning position.

3. As an article of manufacture, for use with a chain and stud for holding a door in closed position, a latch comprising a head having a segmental lip at the front and to one side thereof, and having a helically surfaced flange at the rear and to the opposite side thereof.

4. As an article of manufacture, for use with a chain and stud for holding a door in closed position, a latch comprising a head having a bore for a pivot, having a segmental lip provided with a periphery concentric with said bore at the front and to one side thereof, having a flange at the rear and to the other side thereof provided with an inclined surface facing said lip and also concentric with said bore, and having a handle for rotating the same.

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1,227,035. FISH GAFF OR SPEAR. JEREMIAH J. BOUDREAU, Tomahawk, Wis. Filed July 21, 1914, Serial No. 852,211. Renewed Oct. 30, 1916. Serial No. 128,635. (Cl. 43—6.)



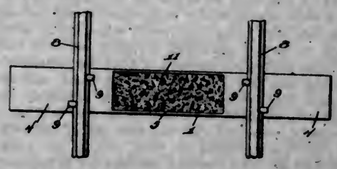
1. A fish gaff or spear comprising a handle, a spear projecting forwardly therefrom, spring hooks on opposite sides of the spear provided with terminal barbs, and guide arms leading from the barbs of the hooks.

2. A fish spear or gaff comprising a handle, a spear projecting forwardly therefrom, longitudinally curved hooks secured at one end of the handle and having inturned barbs at their opposite ends disposed in proximity to each other and to the point of the spear, and guide arms connected at one end with the barbs of the hooks, and projecting outwardly and forwardly therefrom in divergent relation.

3. A fish gaff or spear comprising a handle, a spear projecting forwardly therefrom, hooks secured at one end to the handle and having inturned barbs at their opposite ends disposed in proximity to each other and to the spear point, divergent guide arms projecting from said barbs, and means for clamping the shanks of the hooks to the handle.

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1,227,036. RAILROAD CROSS-TIE. EMERSON S. BROOKS, Morgantown, N. C. Filed Sept. 7, 1916. Serial No. 118,886. (Cl. 238—5.)



1. A railway tie comprising a hollow oblong rectangular body having a central chamber and end chambers, said central chamber being open at its top and in communication with the end chambers and said end chambers being

provided with spike receiving openings in their top walls, and wooden fillers within the end chambers arranged to be engaged by the spikes driven through said openings.

2. A railway tie comprising a hollow oblong rectangular body open at each end and having a central ballast receiving chamber and end filler receiving chambers, said central chamber being open at its top and said end chambers being provided with top walls forming rail supporting seats and having spike receiving openings therein, said end chambers being in open communication at the top with the central chamber and separated at the bottom therefrom by vertical transverse partitions forming abutment walls, and wooden fillers within the end chambers and abutting at their inner ends against said partitions.

3. A railway tie comprising a hollow oblong rectangular body open at each end and having a central ballast receiving chamber and end filler receiving chambers, said central chamber being open at its top and said end chambers being provided with top walls forming rail supporting seats and having spike receiving openings therein, said end chambers being in open communication at the top with the central chamber and separated at the bottom therefrom by vertical transverse partitions forming abutment walls, and a water collection basin at the base of said central chamber, the bottom wall of the said central chamber being provided with drain outlets for the discharge of water from said basin, and wooden fillers within the end chambers and abutting at their inner ends against said partitions.

4. A railway tie comprising a cast hollow oblong rectangular body open at each end, said body comprising continuous bottom and side walls and having top wall sections at the ends thereof forming rail supports, said top wall sections being separated by an intermediate opening extending the full width of the tie, the said top plate sections forming with the adjacent portions of the walls of the body end receiving chambers, and partitions integral with the bottom and side walls of the body at the inner ends of said chambers and forming a central chamber for the reception of ballasting material, said partitions being arranged to leave openings above the same at the inner ends of the end chambers, and filler blocks within the end chambers and abutting against said partitions and exposed in part within the central chamber.

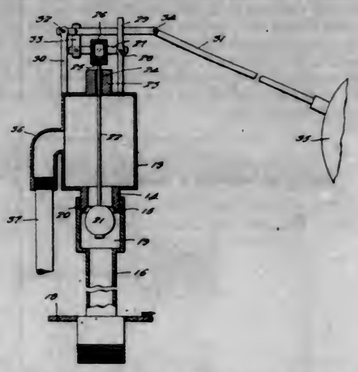
5. A cast metal tie comprising a hollow oblong rectangular body having continuous bottom and side walls, end top wall sections provided with spike openings and spaced to leave an intermediate opening at the center of the tie extending the full width thereof, and forming end chambers and a central chamber, and partitions between the central and end chambers integral with and extending fully between the bottom and side walls of the tie body.

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1,227,037. FLUSH-TANK VALVE. RUDOLPH K. CHASE, Syracuse, N. Y. Filed Nov. 20, 1916. Serial No. 132,435. (Cl. 137—104.)

1. A valve comprising a body having an expansion chamber, said chamber being provided with a valve seat on the lower end thereof, a conduit connecting the lower end of said chamber with a source of liquid supply, a concentric projection having an aperture therein provided on said chamber, a rod operable through said chamber and aperture having a valve on the lower end thereof to engage said seat, a standard mounted on the upper end of said casing, a rock arm pivotally connected to said rod midway its ends, one end being in pivoted engagement with said standard, a second standard mounted on said chamber opposite the first said standard, a float, an adjustable float rod having one end connected to the float and the opposite end connected to the second standard, and a link pivotally engaged with said float arm and the other end pivotally connected with the free end of the rock arm.

2. A valve comprising a body having an expansion chamber and an inlet opening through its lower end, said chamber being provided with a flange surrounding said opening having a valve seat, a conduit connecting said flange with a source of liquid supply, a valve rod operable vertically through said chamber and having a ball on the lower end thereof to engage said seat, a float rod and float, said rod being pivoted upon the upper end of said chamber, a rock arm pivoted to the chamber, a link con-



necting said rock arm with said float rod, said rock arm being connected with the upper end of said valve rod, and an outlet for said chamber.

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1,227,038. RESISTANCE UNIT FOR ELECTRIC CIRCUITS. WILLIAM A. CHRYST, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Company, a Corporation of Ohio. Filed Aug. 4, 1913. Serial No. 782,886. (Cl. 219—63.)



1. In a device of the character described, the combination with an insulated disk having a peripheral groove and a resistance unit adapted to be positioned in said groove and so arranged that the edge portions of the disk will extend beyond the resistance unit; and contact plates on the opposite faces of said disk and adapted to be electrically connected with the opposite ends of the resistance unit.

2. In a device of the character described, the combination with a disk of insulating material; a resistance unit mounted on the periphery of said disk; insulating members extending beyond said resistance unit for protective purposes; and contact plates secured to the opposite faces of said disk, each of said contacts being electrically connected with one end of the resistance unit.

3. In a device of the character described, a resistance unit comprising an insulated disk having a grooved periphery; a resistance element positioned in said groove; and contact plates secured to the opposite faces of said disk and having arms projecting through openings formed in said disk, the openings for the arms of one of said contact plates being spaced apart from and independent of the openings for the arms of the other contact plate.

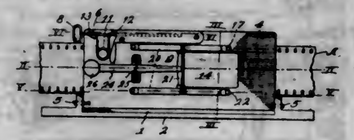
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1,227,039. FILM-TENSIONING DEVICE. SAMUEL M. COFFMAN, Kansas City, Mo., assignor, by mesne assignments, to Photo Motion Company, a Corporation of Missouri. Filed July 19, 1915. Serial No. 40,701. (Cl. 88—17.)

1. A film tensioning device consisting of a fixed aperture plate, a movable aperture plate adjacent said fixed aperture plate, shoes located between said aperture plates



to coact with the fixed aperture plate in retaining a film in position during its passage past the last-mentioned plate, a presser frame mounting said shoes, a lever for exerting pressure on said presser frame, and means for adjusting said lever to cause it to exert more or less pressure on said presser frame.

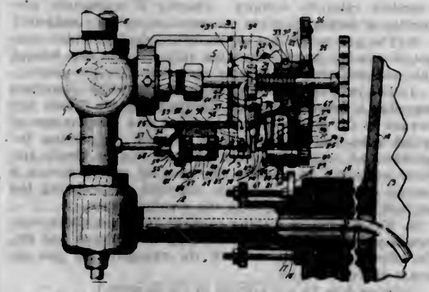


2. A film tensioning device consisting of a fixed aperture plate, a movable aperture plate adjacent said fixed aperture plate, shoes located between said aperture plates to coact with the fixed aperture plate in retaining a film in position during its passage past the last-mentioned plate, a presser frame mounting said shoes, a lever for exerting pressure on said presser frame, a screw for adjusting said lever to cause it to exert more or less pressure on said presser frame, and a resilient abutment against which said screw bears.

3. In a device of the character described, a presser frame consisting of two parallel bars, and a spindle connecting said bars intermediate their ends; and shoes loosely connected to the ends of said parallel bars.

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1,227,040. VALVE MECHANISM FOR STEAM-HEATED ROTARY CYLINDERS. MARTIN H. COLLOM, Denver, Colo. Filed Mar. 31, 1916. Serial No. 88,018. (Cl. 137—140.)



1. In valve mechanism for controlling the passage of fluid to rotary receptacles, the combination of a valve piece having a rotary stem provided with a threaded portion, a nut having threads coöperating with the threads of the said stem, the nut being journaled to prevent travel longitudinally on the stem, means for locking the stem against rotation in one direction, and an operative connection between the rotary receptacle and the nut for rotating the latter in the opposite direction.

2. The combination with a hollow rotary member, of a valve provided with a rotary stem having a threaded portion, a nut threaded to receive the threaded portion of the stem and journaled to prevent travel longitudinally on the stem, means to prevent rotation of the stem in one direction, and an operative connection between the rotary member and the nut to rotate the latter in the opposite direction to move the valve and its stem in the direction of the latter's axis.

3. The combination with a rotary drum, of a valve for controlling the supply of fluid thereto, said valve having a rotary stem, means for locking the stem against rotary movement in a direction to open the valve, a nut in which the valve stem is threaded, the nut being journaled to prevent travel in the direction of the axis of the stem, and an operative connection between the nut and the drum, whereby as the latter is rotated the nut will be actuated to move the valve and its stem in the valve-opening direction.

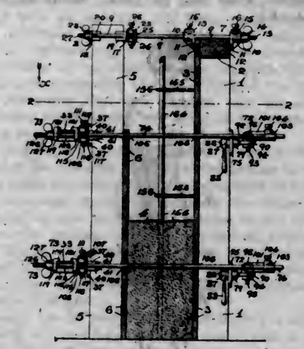
4. The combination with a hollow rotary drum, of a valve for controlling the supply of steam thereto, the valve having a stem mounted to rotate, and provided with a threaded portion, a nut which the threaded portion of the stem engages, the nut being journaled to prevent travel in the direction of the axis of the stem, means for preventing the stem when the valve is closed from rotating in a direction to turn on the steam, and an operative connection between the nut and the drum to impart a step-by-step rotary movement to the nut as the drum rotates.

5. The combination with a hollow rotary drum, of a valve for controlling the supply of steam thereto, the valve having a stem mounted to rotate, and provided with a threaded portion, a nut which the threaded portion of the stem engages, the nut being journaled to prevent travel in the direction of the axis of the stem, means for preventing the stem when the valve is closed from rotating in a direction to turn on the steam, an operative connection between the nut and the drum to impart a step-by-step rotary movement to the nut as the drum rotates, and means for automatically releasing the means for locking the valve stem against rotation.

[Claims 6 to 56 not printed in the Gazette.]

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1,227,041. MOLDING APPARATUS. SAMUEL S. COLT, Orange, N. J. Filed Jan. 23, 1917. Serial No. 143,903. (Cl. 25—131.)



1. A knock-down form or cribbing for use in the erection of concrete and similar structures, comprising a series of form-section retaining elements, fixing devices connected with some of said retaining elements, spanning members, retaining clamping means connecting said spanning members with some of said form-section retaining elements, and clamping devices, connected with said spanning members and some of said form-section retaining elements for the adjustment of the said elements with relation to the width of the form in which the structure is to be produced.

16. In combination with a member of a knock-down form or cribbing for use in the erection of concrete and similar structures, a fixing means comprising a rod, a pair of plate-like elements mounted upon said rod, embracing members extending from said plate-like elements, a tightening bolt connected with said plate-like elements, and means upon said rod and said bolt for securing said plate-like elements in clamped positions upon the form or cribbing-member.

17. In combination with a retaining member of a knock-down form or cribbing for use in the erection of concrete and similar structures, a spanning member, and retaining clamping means comprising a securing clamp consisting of a body-portion having a screw-threaded hole, a pair of bearing members and perforated ears ex-

tending from said body-portion, pivot-pins connected with said ears, a clamping member pivotally connected with each pivot-pin, each clamping member having a biting jaw and a hole, a tightening bolt mounted in the holes of said clamping members, and means on said tightening bolt for bringing said clamping members into clamped relation with the form or cribbing-member, a screw-threaded rod screwed into the screw-threaded hole of said body-portion, and a clamping means mounted upon said screw-threaded rod adapted to be brought into clamped relation with said spanning member.

20. In combination with a retaining member of a knock-down form or cribbing for use in the erection of concrete and similar structures, a clamping device, means for clamping said clamping device upon said retaining-member, a rod, and means connected with said clamping device and said rod for securing said rod in angular relation to said retaining member.

27. In combination with a retaining member of a knock-down form or cribbing for use in the erection of concrete and similar structures, a spanning member, a pair of perforated clamping plates located upon opposite portions of said spanning member, a rod extending through the perforations in said clamping plates, and means upon said rod for bringing said clamping plates into clamped relation with said spanning member.

[Claims 2 to 15, 18, 19, 21, to 26, and 28 to 34 not printed in the Gazette.]

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1,227,042. HOSE-SUPPORTER. ELLEN M. CRUMRINE, Lima, Ohio. Filed May 25, 1914. Serial No. 840,818. (Cl. 241—1.)

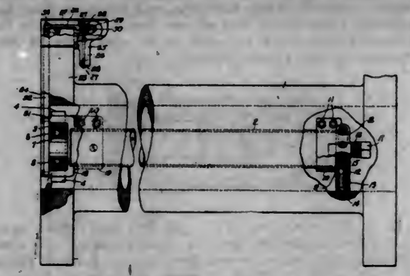


In a device of the class described, a slide adapted to be carried by a band and having a depending resilient tongue integral with the upper portion thereof, said tongue being adapted to receive a connecting member and curving inwardly toward the body of the slide so as to engage the outer surface of the band and thus prevent withdrawal of the connecting member from the tongue, the terminal of said tongue being outwardly directed to permit ready insertion of the connecting member in the tongue, said terminal being of relatively greater width than the opening through the connecting member with which it engages to hold the slide and member against accidental displacement.

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1,227,043. APPARATUS FOR MEASURING THE TWIST OF SHAFTS. HENRY H. CUMMINGS, Newton Highlands, Mass., assignor of one-half to Howland R. Gary, Alexandria, Va. Filed Nov. 22, 1911. Serial No. 661,796. (Cl. 265—4.)

An apparatus of the kind described, comprising a hollow power shaft section, a recording device mounted thereon adjacent one end thereof, and a connection for operating said recording device for the purpose stated, including a member mounted within said shaft section remote from said recording device with radially expansible anchor pins for biting into the shaft section, and a central expander for operating the same.



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1,227,044. PROCESS OF MAKING SULFURIC ANHYDRID. CARLETON ELLIS, Montclair, N. J., assignor to Ellis-Foster Company, a Corporation of New Jersey. Filed June 13, 1916. Serial No. 103,566. (Cl. 23—1.)

1. The process of making sulfuric anhydrid which comprises passing a gaseous mixture containing sulfur dioxid and oxygen into contact with a compound of tin and chromic acid.

2. The process of making sulfuric anhydrid which comprises passing a mixture of sulfur dioxid and oxygen containing gas into contact with a compound containing tin and chromium at a temperature at which such compound exercises catalytic activity; whereby a substantial proportion of sulfur dioxid is converted to sulfuric anhydrid.

3. The process of making sulfuric anhydrid which comprises passing gases containing sulfur dioxid and oxygen into contact with a catalyser comprising tin chromate.

4. The process of making sulfuric acid which comprises exposing a gaseous current containing sulfur dioxid and oxygen to the action of tin chromate at a temperature at which said chormate acts as a catalyst, in passing the products of reaction through sulfuric acid to absorb sulfuric anhydrid, in passing the residual gases through a second mass of tin chromate material in removing the sulfuric anhydrid formed in the residual gases.

5. The process of making sulfuric anhydrid which comprises passing a mixture containing free oxygen and sulfur dioxid into contact with tin chromate, in the absence of fixed alkalis.

[Claims 6 to 15 not printed in the Gazette.]

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1,227,045. COMBINED CHAIN AND LOCK STITCH. HENRY H. FEWELL, Dayton, Ohio. Filed Mar. 9, 1916. Serial No. 83,121. (Cl. 112—34.)



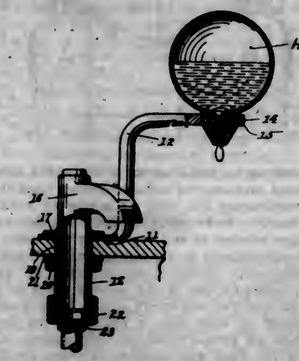
1. The method of forming a combined chain and lock stitch consisting in simultaneously passing a long loop of thread and a short loop of another thread through the material to be stitched, in carrying the short loop through the long loop, in then simultaneously passing a second long loop of the first thread and a second short loop of the second thread through the material, in passing said second short loop through the first short loop simultaneously with the last named operation, and in then carrying said second short loop through the second long loop.



2. In a combined chain and lock stitch, the combination of a piece of material, a thread having interengaging loops passing through said material, and a second thread having locking loops passing through the material and around the exposed portions of the first named loops, substantially midway the ends thereof.

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1,227,046. SOAP-HOLDER SUPPORT. BALTUCE W. FERGUSON, Jersey City, N. J., assignor of one-fourth to William B. Rodman and one-fourth to Sheldon B. Ferguson, Jersey City, N. J., and one-fourth to Alexander Ferguson, Syracuse, N. Y. Filed June 22, 1915. Serial No. 35,720. (Cl. 248—20.)

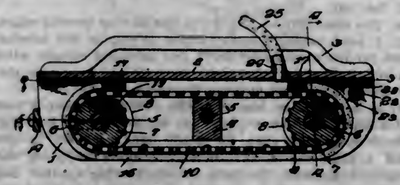


1. In a soap holder support, the combination of a faucet or other permanent plumbing fixture having a shouldered base and a support for a soap holder comprising a flat ring adapted to be held in place under said shouldered base, an arm supported by said ring, and means on said arm for supporting a soap holder, substantially as set forth.

2. In a soap holder support, the combination of a permanently held plumbing fixture having a shouldered base and an attaching stem extending therefrom, with a support for a soap holder comprising a member adapted to be received on said stem and under said shoulder, an arm integral with said member, and means on the said arm for affording a support for a soap holder, substantially as set forth.

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1,227,047. BRUSH. WILLIAM P. GRAY, Campbellton, New Brunswick, Canada. Filed June 13, 1916. Serial No. 103,528. (Cl. 15—14.)

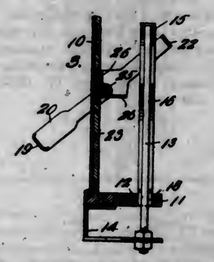


A brush comprising a frame, a rubbing apron mounted for travel within the same, a beater disposed within the frame to bear upon the said apron, and means for causing the opposed adjacent surfaces of the beater and the apron to travel in opposite directions.

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1,227,048. LOCK FOR AUTOMOBILE-HOODS. LAWRENCE W. GUSTAFSON, Smolan, Kans. Filed Jan. 10, 1917. Serial No. 141,660. (Cl. 70—3.)

1. A lock for an automobile hood having an inwardly extending base flange having a slot formed therein, comprising a standard, a locking element formed from a strip of resilient material bent to provide arms extending in spaced relation, the strip being connected intermediate its length with the upper portion of said standard, and having its arms extending in diverging relation upon the upper portion of the standard and being then bent outwardly to provide cam faces and having its end portions extended parallel and bent at their ends to provide inwardly extending abutment shoulders engaging the upper face of the base flange and fingers extending into the openings when in a locking position, and means carried by the hood for moving the arms of the locking element toward each other for permitting raising of the hood with the locking device passing through the opening of the flange.



2. A lock for an automobile hood having a base flange provided with an opening, said lock comprising a standard, a U-shaped latch carried by said standard and formed of resilient material having arms extending upon opposite sides of the standard and terminating in abutment shoulders engaging the upper face of the flange and fingers extending into the opening, and means carried by the hood for engaging the arms of the latch to move the arms toward said standard.

3. A lock for an automobile hood having a flange provided with an opening, said lock comprising a standard, latching arms extending from said standard and terminating in abutment shoulders engaging the flange and fingers extending into the opening formed in the flange, and a handle for raising the hood extending through slots formed therein and pivotally mounted and provided at its inner end portion with a yoke for engaging the latching arms to move the same to an inoperative position when the handle is raised.

4. A lock for an automobile hood having a flange provided with an opening, said lock comprising a standard extending through the opening, latching arms extending from the standard and engaging the flange and extending through the opening, a handle having arms extending through openings formed in the hood, a cross bar connecting the inner ends of said arms, a pivot pin engaging said arms within the hood to pivotally mount the handle, and means for limiting the swinging movement of the handle when moving the handle to bring the same into and out of engagement with the latching arms.

5. A lock for an automobile hood having a flange provided with a slot, said lock comprising a latching element including resilient engaging arms for engaging the flange and passing through openings thereof, and a handle for raising the hood having side arms extending through openings formed in the hood and pivotally mounted within the hood, the side arms being extended upon opposite sides of the latching element, and means for limiting swinging movement of the handle.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,049. MANUFACTURE OF HYPOCHLOROUS ACID. WALTER NORMAN HAWORTH and JAMES COLQUHOUN IRVINE, St. Andrews, Scotland. Filed Feb. 19, 1916. Serial No. 79,433. (Cl. 23—1.)

1. Manufacture of hypochlorous acid by the interaction of chlorin with water in presence of a small quantity

of a metal halogen compound as catalyst the higher chlorid of which metal is insoluble in ether, so that the liquid may be extracted subsequently with ether without removing any of the catalyst.

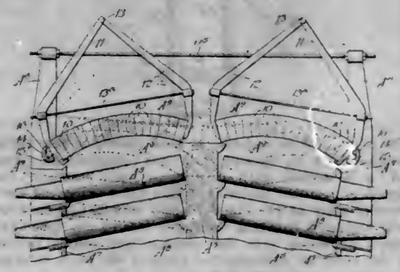
2. Manufacture of hypochlorous acid by the interaction of chlorin with water and copper oxychlorid as catalyst the amount of said catalyst being of the order of about 0.6%.

3. Manufacture of hypochlorous acid by the interaction of chlorin with water in the presence of a copper compound containing chlorin as catalyst.

4. Manufacture of hypochlorous acid by the interaction of chlorin with water and copper oxychlorid as catalyst.

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1,227,050. ZINC-SMELTING FURNACE. JULIUS W. HEGELER, Danville, and HERMAN HEGELER, deceased, Danville, Ill., by Louise S. Hegeler, executrix; assignors to The Hegeler Zinc Company, Danville, Ill., a Corporation of Illinois. Filed Nov. 17, 1913. Serial No. 801,333. (Cl. 263—46.)



1. A roof for a smelting furnace of the type comprising walls, one having a frame-work which is practically non-contractible by heat, and the other of which contracts excessively and permanently under heat, said roof comprising sections supported by the framework of said non-contractible wall and by said contractible wall and having tilting engagement with one thereof and sliding engagement with the other, substantially as described.

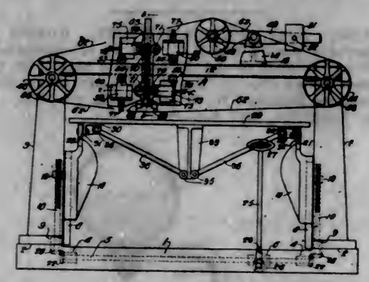
2. A roof for a smelting furnace of the type comprising walls, one having a framework which is practically non-contractible by heat, and the other of which contracts excessively and permanently under heat, said roof comprising sections supported by the framework of said non-contractible wall and by said contractible wall, and having tilting engagement with one said framework and sliding engagement with said contractible wall, substantially as described.

3. A roof for a smelting furnace of the type comprising walls, one having a framework comprising upright metal supports and transverse metal bars supported by and which extend between said supports, and a wall made of fire clay which contracts excessively and permanently under heat, said roof comprising sections supported by transverse members of said framework and by said fire clay wall, and having sliding engagement with said fire clay wall, substantially as described.

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1,227,051. SURFACING-MACHINE. CHRISTIAN F. HEINKEL and WILLIAM G. LUETERS, Cleveland, Ohio. Filed Sept. 19, 1913. Serial No. 790,793. (Cl. 51—13.)

1. In a surfacing machine, the combination of a housing, two rotatable shafts on the housing, a pulley on the front end of each shaft, an abrasive belt over the pulleys, means for taking up the slack in the belt, a guide bar with beveled edges secured to and connecting the housing near the top, a head to travel lengthwise on the bar, four rollers mounted in the head and having a V shaped circumference, each roller engaging two of the beveled edges to prevent lost motion of the head both transversely and vertically, a matrix mounted in the head and adapted to press the abrasive belt upon the work, a table, means for operating the table, and means for operating the abrasive belt.



2. A surfacing machine having a bed and a housing, a table mounted thereon, two arms projecting from the housing and overhanging the table to permit of work longer than the machine to be operated upon, a guide bar with beveled edges secured to and connecting the arms, a head to travel longitudinally on the guide bar, four rollers with a V shaped outer circumference mounted in the head, each roller engaging two of the beveled edges to prevent vertical and traverse movement of the head, a rotatable shaft mounted on each arm, a pulley on the front end of each shaft, an abrasive belt over the pulleys, a matrix mounted in the head and adapted to press the abrasive belt upon the work, means for taking up the slack in the belt, and means for operating the belt and the table.

3. A surfacing machine having a bed and housing, a table mounted thereon, two arms projecting from the housing and overhanging the table to permit of work longer than the machine to be operated upon, a guide bar with beveled edges secured to and connecting the arms, a head to travel longitudinally of the guide bar, four rollers with V shaped outer circumference mounted in the head, each roller engaging two of the beveled edges to prevent vertical and traverse movement of the head, a second set of four rollers with V shaped outer circumferences mounted in the head, a spindle with four flat and longitudinal surfaces between the last mentioned rollers, each roller engaging two of the flat surfaces to hold the spindle in alinement and prevent rotation thereof, a matrix on the end of the spindle, a rotatable shaft on each arm, a pulley on the front end of each shaft, an abrasive belt over the pulleys and the matrix, means for taking up the slack of the belt, and means for operating the matrix and the table and the belt.

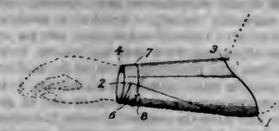
4. The combination of a guide bar having beveled edges with a head having rollers formed to engage the beveled edges for the purpose set forth and having a spindle with flat longitudinal surfaces and rollers formed to engage the flat surfaces for the purpose set forth.

5. In a surfacing machine, the combination of a bed and housing thereon, a guide bar secured to the housing, a head suspended upon the guide bar, a spindle in the head, a plurality of flat surfaces longitudinally on the spindle, a plurality of guide rollers bearing against the spindle, the outer circumference of each guide roller formed to engage two of the flat and longitudinal surfaces on the spindle, the inner circumference of each guide roller forming the outer race for a series of rolls, a stud for each guide roller mounted in the head and forming the inner race for the rolls, a series of rolls between the inner and outer races, a matrix on the spindle, means for operating the spindle, an abrasive belt passing over the aforesaid pulleys and over the matrix, a source of power to operate the belt, a movable table, and means for operating the table.

[Claims 6 to 8 not printed in the Gazette.]



1,227,052. SLEEVE-PROTECTOR AND ADVERTISING DEVICE. THOMAS L. HOGAN, New York, N. Y. Filed Dec. 21, 1916. Serial No. 138,251. (Cl. 2—95.)



1. A sleeve protector consisting of suitable material provided with an elongated portion having the edges pasted together and adjustable to the arm of the wearer by folding and resting beneath such arm and thereby strengthening the protector when in use, and an unbroken shorter portion adapted to rest on the upper side of the arm of the wearer.

[Claim 2 not printed in the Gazette.]

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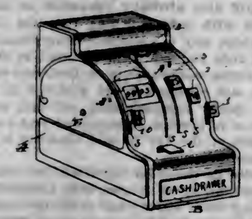
1,227,053. CONNECTING MEANS FOR FABRIC STRIPS. CHARLES I. HOOPLE, Oakland, Cal. Filed May 12, 1915. Serial No. 27,552. (Cl. 24—265.)



A device for connecting overlapping parts, including a clenching strip for securing the parts together, and a finishing strip formed independent of the clenching strip and having two sides and ends encircling said parts and disposed over the clenching strip, said finishing strip being of greater width than that of the clenching strip and having each of its four side edges bent inwardly toward said parts and over the side edges of the clenching strip so as to completely conceal the latter and to secure the two parts together, said finishing strip extending over the points of overlapping of said parts so as to completely conceal said points.

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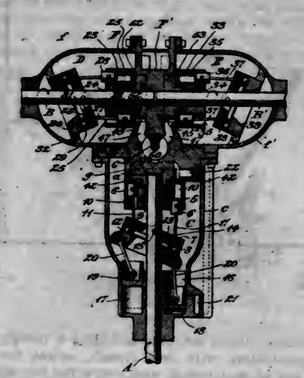
1,227,054. TOY CASH-REGISTER. ARTHUR E. JACOBS, Cleveland, Ohio. Filed May 24, 1913. Serial No. 769,629. (Cl. 235—12.)




The combination with a case and a shaft mounted therein said case provided with reading openings, a dollar wheel and a cents wheel mounted on said shaft, and provided with an equal number of marginal spaces, the spaces on the dollar wheel progressing one unit at a time in value, and the spaces on the cents wheel progressing five units at a time, and arranged thereon in two equal series of a total value of one dollar each, an annular plate rotatable upon said shaft within said case, and about said wheels, and provided with a reading opening, a series of projections upon said cents wheel, a spring pawl upon said plate adapted to engage therewith, a series of finger operated keys pivoted on said shaft, and engaging shoulders on said plate, said shoulders set at spaced distances thereon, and engaged by said respective keys, whereby said keys when pressed upon will rotate said plate through predetermined different angles, and stops for said keys in said casing.

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1,227,055. DIFFERENTIAL GEAR. CHARLES SNOW KELLOGG, Montclair, N. J. Filed Feb. 20, 1908, Serial No. 416,828. Renewed Aug. 2, 1912. Serial No. 713,005. (Cl. 138—22.)



1. In a differential gear, a two-part shaft, a driving element, a reversible pump operated by said driving element, a power transmitting device intermediate said pump and the parts of said shaft, and means whereby said power transmitting devices are controllable for applying power on either part of said shaft substantially to the exclusion of the other part thereof, or whereby said two-part shaft may be driven in one direction or the other by reversing the pump.

3. In a differential gear, a driving element, a two-part shaft, a fluid circulating pump, fluid operated motors associated with the parts of said shaft, a fluid circuit intermediate the pump and said motors, and a single valve located in said circuit for directing the fluid to either of said motors substantially to the exclusion of the other motor.

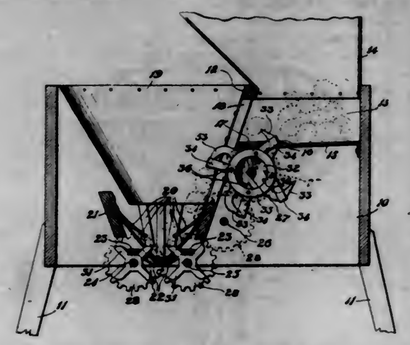
4. In a differential gear, the combination of a driving shaft, a two-part driven shaft, a liquid circulating pump having associated therewith an adjustable element operable to vary the capacity and to reverse the action of the pump pistons, fluid operated motors of substantially equal capacity coöperating with the respective parts of said two-part shaft, a fluid circuit intermediate said liquid circulating pump and said fluid operated motors, and valve mechanism for controlling the liquid circulated by the pump whereby the power of the fluid circulated by the pump may be concentrated upon one of said motors and one part of said driven shaft substantially to the exclusion of the other motor and the other part of said driven shaft.

5. In a differential gear, a driving element, a pump operated thereby, a two-part shaft, separate motors of equal capacity coöperating with the respective parts of said shaft, a casing having fluid passages adapted to supply a fluid to said motors, and a valve in said passage for cutting off the fluid from one motor and directing the same into the other motor, or vice versa.

16. The combination of a drive shaft, a pump driven thereby, and comprising a rotary cylinder barrel and pistons reciprocating in said barrel lengthwise of its axis of rotation, adjusting mechanism for varying the stroke of the said reciprocating pistons and thereby the volume of fluid propelled by the pump per revolution of the barrel, a chamber arranged to receive all the fluid propelled by said pump, and a plurality of motors having individual connections to said chamber and arranged to receive, and to be driven by, the fluid propelled by said pump, each of said motors comprising a rotary cylinder barrel and pistons reciprocating in said barrel lengthwise of its axis of rotation.

[Claims 2, 6 to 15, and 17 not printed in the Gazette.]

1,227,056. POTATO-CUTTER. MICHAEL S. KING, Blackfoot, Idaho. Filed June 29, 1916. Serial No. 106,691. (Cl. 146—11.)

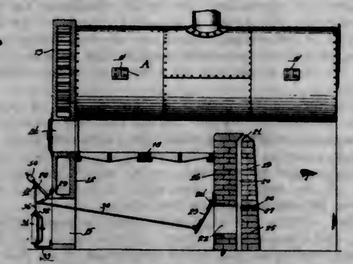


1. A potato cutting machine including a trough, a hopper communicating with said trough, means for lifting potatoes out of said trough and conveying the same into said hopper, and means carried by said lifting means for detaching potatoes from said lifting means after being conveyed into said hopper.

2. A potato cutting machine including a hopper, a trough communicating with said hopper, rotatably mounted conveying means provided with arms moving through said trough and into said hopper as said conveying means rotates, said arms engaging potatoes and lifting the same into said hopper, and detaching means movably connected with said conveyer and having movement toward the free ends of the arms to detach potatoes from the arms within said hopper.

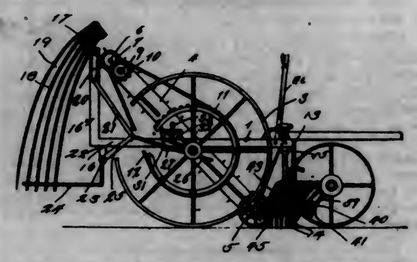
3. A potato cutting machine including a hopper and a trough communicating with said hopper, a disk rotatably mounted beneath said trough, arms extending from said disk and having sharpened end portions, strikers pivotally connected with said disk and extending toward the free ends of said arms, and means for limiting the pivotal movement of said strikers toward the free ends of said arms.

1,227,057. SMOKE-PREVENTER. HENRY G. KOSEL, New York, N. Y. Filed June 7, 1915. Serial No. 32,713. (Cl. 110—55.)



In a furnace having an ash-pit with an opening in its front wall and a bridge wall spaced rearwardly therefrom and provided with an air passage opening into the ash-pit, the openings in said bridge wall and ash-pit being substantially in longitudinal alinement; of an outwardly and upwardly swinging closure for said bridge wall opening, a bell crank fulcrumed to swing in a vertical plane outside said furnace above said ash-pit opening, a rod connecting the lower free end of said closure with the free end of the lower arm of said bell crank, said rod being of a length to open said closure when the bell crank is swung upwardly and to close it on the downward movement of said bell crank forming a positive opening and closing device for the closure and by means of which the closure is held firmly seated over said opening until the bell crank is manually raised, a bracket extending from the front wall of said furnace below said ash pit opening and in vertical alinement with said bell crank, a cylinder closed at both ends and pivotally mounted on said bracket, a piston operable in said cylinder and having a rod extending through its upper end, the outer end of said rod being pivotally and directly connected with the upper arm of said bell crank at a point between the ends thereof, a weight adjustable on said bell crank upper arm in advance of its pivotal connection with said rod to automatically move said piston into said cylinder, and means in said cylinder for retarding the movement of said piston in one direction and permitting it to move freely in the opposite direction to provide for the free opening of said closure by the lifting of said bell crank and its automatic gradual closing, said cylinder being pivoted on said bracket to adapt it to take up rotary motion incident to the direct connection between its piston rod and said lever.

1,227,058. HAY-BUNCHING MACHINE. CARRY S. MCCLURE, Dayton, Wyo. Filed Oct. 16, 1916. Serial No. 125,949. (Cl. 56—68.)



1. In a device of the class described, the combination of a main frame, an elevator associated therewith, bunching rods having their upper ends pivotally connected to said frame and extending in a downward and rearward direction, a grid also pivotally connected to said frame and associated with said bunching rods for forming a chamber in which hay is collected, connections between said bunching rods and said grid operated by the weight of the hay to swing said elements on their pivots to dump the hay from said chamber, a rod attached to said connections and means engaging said rod and exerting a pressure thereon to prevent operation of said connections until the weight of the hay in said chamber is sufficient to overcome said pressure.

2. In a device of the class described, the combination of a main frame, an elevator associated therewith, bunching rods having their upper ends pivotally connected to said frame and extending in a downward and rearward direction, a grid also pivotally connected to said frame and associated with said bunching rods for forming a chamber in which hay is collected, connections between said bunching rods and said grid operated by the weight of the hay to swing said elements on their pivots to dump the hay from said chamber, a rod attached to said connections, a beveled member carried by said rod, an element carried by the frame and engaging said beveled member to retard the movement of said rod in one direction, and means engaging said rod and exerting a pressure thereon to retain said beveled member in engagement with said element until the weight of the hay in said chamber is sufficient to overcome said pressure.

3. In a device of the class described, the combination of a main frame, an elevator associated therewith, bunching rods having their upper ends pivotally connected to said frame and extending in a downward and rearward direction, a grid also pivotally connected to said frame and associated with said bunching rods for forming a chamber in which hay is collected, connections between said bunching rods and said grid operated by the weight of the hay to swing said elements on their pivots to dump the hay from said chamber, a rod attached to said connections, means engaging said rod and exerting a pressure thereon to prevent operation of said connections until the weight of the hay in said chamber is sufficient to overcome said pressure, and means carried by said frame and engaging the first named means for regulating the pressure exerted thereby on said rod.

4. A device of the class described comprising a wheeled supporting frame, an endless elevator supported by the frame, bunching rods pivotally connected with the frame, a rock shaft supported by the frame, a grid supported by the rock shaft and coöperating with said bunching rods, a bracket supported by the frame, a spring arm carried by the bracket, means for regulating the tension of the arm, a rod, links each having one of their ends pivotally connected to the rod, the other ends of said links being connected with the rock shaft and bunching rods respectively, a plate carried by the rod and having beveled edges, a roller supported by the frame for engaging one of the beveled edges to hold the cages in their operative position, said edge riding over the roller when a predetermined amount of hay has been deposited on the lower cage, the weight of the upper cage serving to move the rod forwardly to cause the rear beveled edge to again engage the roller to hold the cages in their operative positions.



1,227,059. SEED-CORN STRINGER. JESSE M. MARRINGTON, Nemaha, Iowa. Filed Feb. 7, 1916. Serial No. 76,840. (Cl. 139—82.)



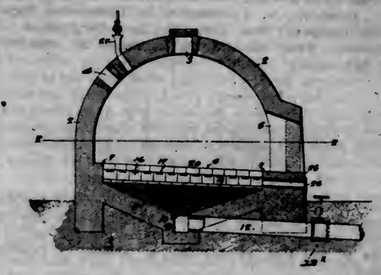
1. In a corn stringer, a support, spaced L-shaped arms pivotally mounted upon the support, a horizontal bar connecting the arms, flexible elements having their ends detachably engaged in the L-shaped arms, and adapted for crossing relation upon the pivotal movement of the arms, and means connected with the horizontal bar whereby to swing the arms to arrange the flexible element in crossing relation.

[Claims 2 and 3 not printed in the Gazette.]

1,227,060. COKING-OVEN. MATTHEW MARSHALL, Sr., Vancouver, British Columbia, Canada. Filed Dec. 18, 1916. Serial No. 136,612. (Cl. 202—3.)

1. A coke oven having a charging aperture in the crown, an uptake flue and a doorway through which the charge of coke may be withdrawn, said oven having a floor of fire-brick with uniformly distributed interspaces between the bricks, a space beneath the floor, a permeable filling in said space forming support for the fire-bricks, and means for connecting said space beneath the floor bricks to a pipe delivering to the condensers.

2. A coke oven of the class described having a sub-floor which is depressed toward a central aperture delivering to the condensers, a grating over the central aperture, a permeable filling within the depression, a floor of fire-brick supported on the permeable filling, said floor having interspaces between the bricks through which the volatile constituents of the coal given off during coking may be induced to flow and pass through the permeable filling to the condensers.



3. A coke oven of the class described having a sub-floor which is depressed toward a central aperture delivering to the condensers, a grating over the central aperture, a permeable filling within the depression, a floor of fire-brick supported on the permeable filling, the bricks of said floor being arranged in parallel rows toward the front of the oven and provided with interspaces between the bricks of each row, said floor having also trap channels beneath each row of interspaces, which channels are produced toward the front of the oven and are closable at the front end with cover plates, the walls of said channels being provided with passages in their upper part through which the volatile elements given off by the coal during coking may be induced to pass from the channels through the permeable filling to the condensers.

4. A coke oven of the class described having a sub-floor which is sloped from adjacent the walls to a central aperture delivering to the condensers, a grating over the central aperture, a permeable filling within the sloped depression of the sub-floor, fire-brick tiles resting on the permeable filling and arranged in parallel rows directed toward the front of the oven with an interspace between each row, each row of said tiles having two parallel channels which are connected to ducts which pass through the front of the oven and are closable at the front end with cover plates, the outer wall of each channel being provided with passages connecting it with the interspace between the rows of tiles, and a floor of fire-brick arranged in rows and supported on the walls of the channels with interspaces between the rows immediately over the channels whereby the volatile constituents of the coal given off during coking may be induced to flow through the interspaces of the main floor into the channels and therefrom into the interspaces between the rows of floor-supporting tiles and through the permeable filling to the central delivery outlet to the condensers.

5. In a coke oven of the class described having a sub-floor that is depressed from adjacent the walls of the oven to a central aperture delivering to the condensers, a grating over the central aperture, a permeable filling within the depression adapted to support the main floor of the oven, rows of fire-brick tiles supported on the permeable filling of the depression in parallel rows toward the front of the oven with an interspace between each row, a row of fire-bricks along the edges of each row of tiles and a row of fire-brick along the middle of each row of tiles forming two channels along each row, which channels join together and are produced as a duct through the front of the oven and are closable at the front end with cover plates, the fire-bricks along the edges of each row of tiles being checked across the upper surface to connect the channels to the interspaces between their supporting tiles,

and a floor of fire-brick arranged in rows to correspond with those of the supporting bricks and having interspaces between the rows over the channels whereby the volatile constituents of the coal given off during coking may pass through the interspaces of the floor into the channels and therefrom through the permeable filling to the central aperture delivering to the condensers.

1,227,061. TYPE-WRITING MACHINE. OTTO A. MARTINI, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Dec. 28, 1916. Serial No. 139,303. (Cl. 197—104.)



1. The combination with a key, of a reversible cap for said key, and a perpetual indicator having a sign thereon reversing with said cap while maintaining the upright position of the sign on the key in obverse or reverse positions.

2. The combination with a key stem, of an indicator on said key stem having a sign thereon and turning to reverse the position of the indicator, and compensating means for automatically correcting the inversion of the sign, so as to maintain the same in an upright position in either position of adjustment on the key stem.

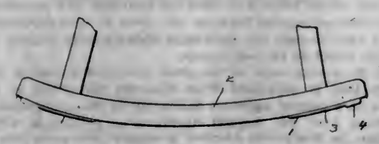
3. The combination with a key stem, of a character on said key stem, a shutter shiftable to alternately disclose and conceal said character, a second character moving with said shutter, and means for maintaining the second character in erect position in either position of the shutter.

4. The combination with a key stem, of a disk on said key stem having two signs thereon, a shutter for alternately disclosing and concealing said signs separately, and an indicator having a sign thereon moving as said shutter moves and relative thereto, to assume in each position of said shutter a position corresponding to an upright showing of the sign on the indicator.

5. The combination with a key stem, of a disk on said key stem having signs thereon, a shutter for alternately disclosing and concealing said signs, a stationary gear, a gear moving with the movement of said shutter, and an indicator adjusted by said gears, so that a sign thereon will be maintained in a justified position in different positions of said shutter and indicator.

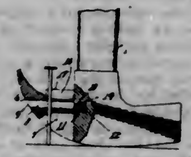
[Claims 6 to 12 not printed in the Gazette.]

1,227,062. ROCKER ATTACHMENT. PAUL H. MEINHART, Marion, Ohio. Filed Dec. 23, 1913. Serial No. 808,404. (Cl. 155—33.)



In combination, a rocker, a pair of elongated cushion members secured to the opposite ends of the tread of the rocker in spaced relation to the point of normal contact of the tread with the floor, each cushion including an elongated body tapering from its inner to its outer end and having an enlarged circular head formed on the under side of its outer end, the inner end of each of said cushioning members being at a point spaced from the normal contact of the tread with the floor thus permitting the chair to be moved about over the floor without lifting the same bodily therefrom, said enlarged outer ends of each gripping member permitting the elasticity of the cushioning action to be gradually developed when rocking the chair and also serving to limit the rocking motion of the chair in either direction to prevent the same from being tilted over.

1,227,063. NAIL-EXTRACTOR. EDWIN J. MINNICH, Salem, Oreg. Filed Aug. 11, 1916. Serial No. 114,425. (Cl. 254—26.)



1. A nail extractor comprising a hammer having a pair of curved claws, one of the claws provided with a groove disposed at right angles to the longitudinal center line of the hammer socket whereby the groove will be disposed in a horizontal plane when the hammer is set in operative position for extracting a nail, and gripping means rotatably mounted within the groove and adapted to grip a nail independently of the corresponding claw, the said means including a gripping pawl adapted to extend over the space between the said claws and provided with a longitudinally sharpened edge.

2. A nail extractor including a hammer head provided with a socket and a pair of claws, one of the claws having a groove disposed at right angles to the longitudinal center line of the hammer-socket and communicating with the space between the said claws, a cylinder rotatably mounted in the groove, and gripping means carried by the cylinder and adapted to grip a nail independently of the adjacent corresponding claw.

3. A nail extractor including a hammer head provided with a pair of claws, one of said claws being of a greater thickness than the other claw, the said thicker claw being provided with a groove extending toward the main portion of the hammer head and communicating with the space between the said claws, a cylindrical bolt mounted in the groove for rotary movement, gripping means carried by the bolt, and means for limiting the rotary movement of said bolt.

4. A nail extractor including a hammer head provided with a pair of claws, one of said claws being of a greater thickness than the other claw, the said thicker claw being provided with a groove extending toward the main portion of the hammer head and communicating with the space between the said claws, a cylindrical bolt mounted in the groove for rotary movement, gripping means carried by the bolt, one end of the said bolt being reduced in diameter to provide a trunnion, the said hammer head having a recess in alinement with the said groove for receiving the said trunnion, and means for preventing the displacement of the trunnion from said recess.

5. A nail extractor including a hammer head provided with a pair of claws, one of said claws being of a greater thickness than the other claw, the said thicker claws being provided with a groove extending toward the main portion of the hammer head and communicating with the space between the said claws, a cylindrical bolt mounted in the groove for rotary movement, gripping means carried by the bolt, one end of the said bolt being reduced in diameter to provide a trunnion, the said hammer head having a recess in alinement with the said groove for receiving the said trunnion, the said hammer head having an aperture extending at right angles to and communicating with the said recess, a retaining pin extending through the aperture and coöperating with the said trunnion, the said trunnion having an annular groove for preventing the displacement of the trunnion from said recess.

[Claims 6 to 8 not printed in the Gazette.]

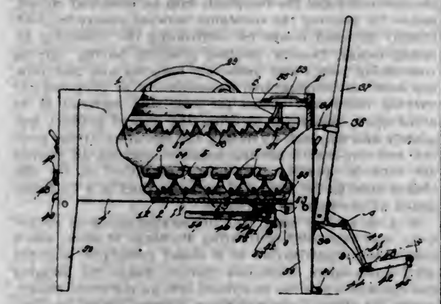


1,227,064. LIFTING-JACK. ROBERT S. NOAH, Annapolis, Md., assignor, by direct and mesne assignments, of one-third to Andrew H. Wilson, one-third to John F. Martin, and one-third to George L. Carson, Annapolis, Md. Filed Feb. 23, 1916. Serial No. 79,825. (Cl. 254—95.)



In a lifting jack, a lifting bar provided with a rack on one side, a support having spaced extensions provided with recesses in their top edges, a pinion mounted between said extensions in mesh with said rack, a cross-pin normally seated in said recesses of the support extensions and extending from one to the other in the path of the pinion teeth to prevent the turning of the pinion in one direction, and a longitudinally adjustable lever formed with two separate rigid means one of which is adapted to engage said crosspin to release it from engagement with the pinion, and the other being adapted to engage said pinion to raise and lower said lifting bar.

1,227,065. WASHING-MACHINE. HARRY NOICE, Portland, Oreg. Filed Oct. 21, 1915. Serial No. 57,091. (Cl. 68—20.)



1. In a washing machine, a container for the clothes, a plurality of rubbing bars pivotally mounted to support the clothes above the bottom of said container, the lower portions of said bars having faces converging to a lower linear edge and the pivotal mounting of said bars being adjacent the linear edges of said bars, the upper portions of said bars being reduced in cross section with respect to the lower portions and having longitudinally disposed upwardly projecting rubbing ribs, the rib of the central bar being upright and the ribs of the adjacent bars laterally of the central bar being inclined away from the central bar, substantially as described.

2. In a washing machine, a container for the clothes, a plurality of rubbing bars pivotally mounted to support the clothes above the bottom of said container, the lower portions of said bars having faces converging to a lower linear edge and the pivotal mounting of said bars being adjacent the linear edges of said bars, the upper portions of said bars being reduced in cross section with respect to the lower portions and having longitudinally disposed upwardly projecting rubbing ribs, substantially as described.

3. In a washing machine, a container for the clothes, a plurality of rubbing bars pivotally mounted to support the clothes above the bottom of the container, said bars having sides converging to a bottom linear edge, the pivots of said bars being disposed below the centers thereof, the converging sides of said bars and the disposition of the pivots thereof maintaining the intervening spaces substantially uniform irrespective of the position of said bars, substantially as described.

4. In a washing machine, a container, a plurality of rubbing bars pivotally mounted therein and having convex sides with the sides of adjacent bars diverging from each other from their points of nearest proximity thereby forming intervening water spaces between said bars and the bottom of said container and below such points of nearest proximity whereby rocking movement of said bars will reduce said spaces and force the wash water upwardly between said bars, substantially as described.

5. In a washing machine, a container for the clothes, and a plurality of rocking rubbing bars having lower portions provided with converging sides, means pivoting said bars below their upper portions for rocking movement in said container to form intervening water spaces between said bars when the latter are in upright positions whereby said spaces will be reduced in area when said bars are rocked into tilted positions, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,227,066. SHEET-METAL DOOR. OTHO M. OTTE, Jamestown, N. Y. Filed Sept. 11, 1916. Serial No. 119,338. (Cl. 189—53.)



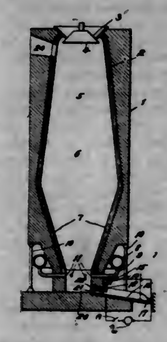
1. In a sheet metal structure, a plate, molding having inturned edge portions engaged with the plate leaving space between the body of the molding and the plate, said molding having a longitudinal part in its body depressed to extend inwardly to engage the plate at points between said inturned edges of the molding, and means to secure said inwardly extended part of the molding to the plate.

2. In a sheet metal structure, a plate, molding having inturned edge portions engaged with the plate leaving space between the body of the molding and the plate, said molding having a longitudinal part in its body depressed to extend inwardly to engage the plate at points between said inturned edges of the molding, and said inwardly extending depressed part of the molding being welded in spots to the plate at spaced intervals throughout the length of the depressed part.

3. In a sheet metal structure, a tubular rail having inturned abutting flanged edges, a plate engaged with one of the flanges, molding having inturned edges engaged with the other flange and with the adjacent face of the plate, and second molding engaged with the opposite face of the plate, each molding having a lengthwise depressed part which engages the opposite faces of the plate at points opposite to each other and at points between the molding edges, and means to secure said lengthwise parts simultaneously to the plate.

4. In a sheet metal structure, a plate, and oppositely disposed moldings on the plate, said moldings having inturned edges which seat on the plate and having depressed lengthwise parts which contact with the plate on the opposite side faces of the latter, and means to secure said depressed parts simultaneously to the plate.

**1,227,067. MEANS FOR PROMOTING THE DISCHARGE OF MOLTEN PRODUCTS FROM A FURNACE OR OTHER APPARATUS.** JAMES HENRY REID, Newark, N. J., assignor to Patents Process Company, a Corporation of Maine. Filed Dec. 28, 1914. Serial No. 879,246. (Cl. 266—38.)



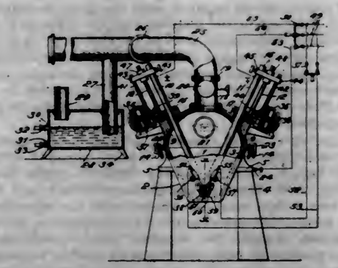
1. In a furnace, the combination of a discharge duct forming a tap-hole thereof, a trough extending from said duct, an electrode situated within the furnace, another electrode situated in the trough exterior of the furnace, whereby the molten material in the tap-hole while flowing therethrough completes the electrical circuit.

2. In a furnace, the combination of a discharge duct forming a tap-hole thereof, a trough extending in a line of the duct, an electrode situated entirely within the furnace, and another electrode situated in the trough and exteriorly of the furnace wall, whereby the molten material in the tap-hole while flowing therethrough completes the electrical circuit.

3. In a furnace, the combination of a discharge duct forming a tap-hole thereof, a trough extending from said duct in a line therewith, opposite electrodes so disposed with reference to the tap-hole and the trough that an electrical circuit will be completed between the electrodes by means of molten material while flowing through the tap-hole.

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**1,227,068. FURNACE OR APPARATUS FOR MAKING PRODUCTS ELECTRICALLY AND MEANS FOR FACILITATING DISCHARGE OF SAME.** JAMES HENRY REID, Newark, N. J., assignor to Patents Process Company, a Corporation of Maine. Filed Aug. 12, 1915. Serial No. 45,126. (Cl. 204—64.)



1. A furnace or apparatus for making products electrically and means for facilitating discharge of same, which comprises a combination of a closed receptacle provided with a condenser, electrodes therein, means for bringing the electrodes and the receptacle into an electrical circuit, means for altering the resistance between electrodes, electrically actuated means for controlling the resistance altering means, thereby yielding products having varying volatilising points, means for securing the desired product separately and successively during the operation of the process, and fore-hearth heating means comprising an electric arc between opposite electrodes independent of the discharge opening for maintaining the product in a fluid condition at the point of discharge.

2. A furnace or apparatus for making products electrically, and means for facilitating discharge of same, which comprises the combination of a closed receptacle with a condenser, electrodes therein, means for bringing the electrodes and the receptacle into an electrical circuit, means for altering the resistance between electrodes, electrically actuated means for controlling the resistance altering means, thereby yielding products having varying volatilising points and uniformly inducing and maintaining selective temperatures in substances of progressively varying resistance, means for securing the desired product separately and successively during the operation of the process, and fore-hearth heating means comprising an electric arc between opposite electrodes independent of the discharge opening for maintaining the product in a fluid condition at the point of discharge.

3. A furnace or apparatus for making products electrically, and means for facilitating discharge of same, which comprises the combination of a closed receptacle provided with a condenser, electrodes therein, means for bringing the electrodes and the receptacle into an electrical circuit, means for altering the resistance between electrodes, electrically actuated means for controlling the resistance altering means, thereby yielding products having varying volatilising points, means for supplying material to be acted upon, means for securing the desired product separately and successively during the operation of the process, and fore-hearth heating means comprising an electric arc between opposite electrodes independent of the discharge opening for maintaining the product in a fluid condition at the point of discharge.

4. A furnace or apparatus for making products electrically, and means for facilitating discharge of same, which comprises a combination of a closed receptacle provided with a condenser, electrodes therein, means for bringing the electrodes and the receptacle into an electrical circuit, means for altering the resistance between electrodes, electrically actuated means for controlling the resistance altering means, thereby yielding products having varying volatilising points and uniformly inducing and maintaining selective temperatures in substances of progressively varying resistance, means for supplying material to be acted upon, means for securing the desired product separately and successively during the operation of the process, and fore-hearth heating means comprising an electric arc between opposite electrodes independent of the discharge opening for maintaining the product in a fluid condition at the point of discharge.

5. A furnace or apparatus for making products electrically, and means for facilitating discharge of same, which comprises a combination of a closed receptacle provided with a condenser, electrodes therein, means for bringing the electrodes and the receptacle into an electrical circuit, means for altering the resistance between electrodes, electrically actuated means for controlling the resistance altering means, thereby yielding products having varying volatilising points, a product separator, means for securing the desired product separately and successively during the operation of the process, and fore-hearth heating means comprising an electric arc between opposite electrodes independent of the discharge opening for maintaining the product in a fluid condition at the point of discharge.

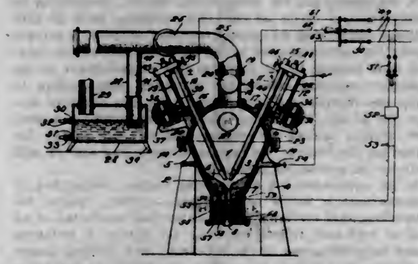
[Claims 6 to 16 not printed in the Gazette.]

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**1,227,069. FURNACE OR APPARATUS FOR ELECTRICALLY MAKING PRODUCTS AND MEANS FOR HEATING DISCHARGING PRODUCTS.** JAMES HENRY REID, Newark, N. J., assignor to Patents Process Company, a Corporation of Maine. Filed Aug. 12, 1915. Serial No. 45,127. (Cl. 204—64.)

1. An apparatus for producing and securing fluid products from solid carbonaceous substances, which comprises a combination of a closed receptacle provided with a condenser, electrodes therein, means for bringing the electrodes and the receptacle into an electrical circuit, means for altering the resistance between electrodes, means for controlling the resistance actuating means, thereby yielding products having varying volatilising points, means for securing the desired product separately and successively during the operation of the process, and induction means comprising an induced or secondary current for maintaining the product in a fluid condition at the point of discharge.





2. An apparatus for producing and securing fluid products from solid carbonaceous substances, which comprises a combination of a closed receptacle provided with a condenser, electrodes therein, means for bringing the electrodes and the receptacle into an electrical circuit, means for altering the resistance between electrodes, means for controlling the resistance actuating means, thereby yielding products having varying volatilising points and uniformly inducing and maintaining selective temperatures in substances of progressively varying resistance, means for securing the desired product separately and successively during the operation of the process, and induction means comprising an induced or secondary current for maintaining the product in a fluid condition at the point of discharge.

3. An apparatus for producing and securing fluid products from solid carbonaceous substances, which comprises a combination of a closed receptacle provided with a condenser, electrodes therein, means for bringing the electrodes and the receptacle into an electrical circuit, means for altering the resistance between electrodes, means for controlling the resistance actuating means, thereby yielding products having varying volatilising points, means for supplying material to be acted upon, means for securing the desired product separately and successively during the operation of the process, and induction means comprising an induced or secondary current for maintaining the product in a fluid condition at the point of discharge.

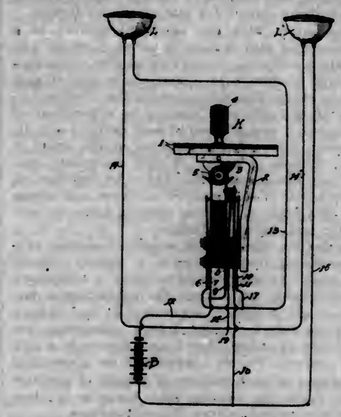
4. An apparatus for producing and securing fluid products from solid carbonaceous substances, which comprises a combination of a closed receptacle provided with a condenser, electrodes therein, means for bringing the electrodes and the receptacle into an electrical circuit, means for altering the resistance between electrodes, means for controlling the resistance actuating means, thereby yielding products having varying volatilising points and uniformly inducing and maintaining selective temperatures in substances of progressively varying resistance, means for supplying material to be acted upon, means for securing the desired product separately and successively during the operation of the process, and induction means comprising an induced or secondary current for maintaining the product in a fluid condition at the point of discharge.

5. An apparatus for producing and securing fluid products from solid carbonaceous substances, which comprises a combination of a closed receptacle provided with a condenser, electrodes therein, means for bringing the electrodes and the receptacle into an electrical circuit, means for altering the resistance between electrodes, means for controlling the resistance actuating means, thereby yielding products having varying volatilising points, a product separator, means for securing the desired product separately and successively during the operation of the process, and induction means comprising an induced or secondary current for maintaining the product in a fluid condition at the point of discharge.

[Claims 6 to 14 not printed in the Gazette.]

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**1,227,070. LAMP-CONTROLLED CIRCUITS.** WILLIAM REID, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed May 6, 1914. Serial No. 836,594. (Cl. 171—97.)



1. The combination with two electrical devices, a conductor connecting them in series, a battery, a multiposition switch device provided with movable and relatively stationary contacts, a conductor extending from said first conductor to a stationary one of said switch contacts, a conductor extending from one of said electrical devices to a pair of said stationary contacts, a conductor extending from the other of said electrical devices to a movable one of said contacts and to one pole of said battery, a conductor extending from the other pole of said battery to a pair of said movable contacts, means for operating said switch device in one direction to cause a movable and a stationary one of said contacts to contact thereby closing a series circuit through said electrical devices, and means for moving the said switch device in another direction to cause a pair of said movable contacts to contact with a pair of stationary contacts thereby closing a multiple energizing circuit through said electrical devices.

2. The combination with a pair of electrical devices, of a battery, a two position switch device provided with movable and relatively stationary springs, a conductor connected to a terminal of each of said electrical devices and connected to a stationary one of said springs, a conductor extending from one of said devices to one of said movable springs and to one pole of said battery, a third conductor extending from the other of said electrical devices to a pair of said stationary springs, a fourth conductor extending from the other pole of said battery to a pair of movable ones of said springs, means for moving said switch device in one direction thereby operating certain of said switch springs to close a series circuit for said devices, and means for moving said switch device in another direction for operating other of said springs thereby closing a multiple circuit for said devices.

3. In an electrical installation the combination with a pair of electrical devices, a two pole battery, a switch device provided with two operating positions, movable and relatively stationary springs controllable by said switch device, an electrical conductor extending from one pole of said battery to a pair of said movable springs, a second

conductor extending from a terminal of each of said electrical devices to a stationary one of said springs, a third conductor extending from the other terminal of one of said electrical devices to a pair of stationary ones of said springs, a fourth electrical conductor extending from a terminal of the other of said electrical devices to a movable one of said springs and to the other pole of said battery, means for moving said switch device to one of its operating positions to close contact between a movable and stationary one of said springs thereby closing a series circuit for said electrical devices, and means for moving said switch device to the other of its said operating positions for moving a pair of said movable springs into contact with a pair of said stationary springs thereby closing a multiple energising circuit for said electrical devices.

4. The combination with two electrical devices, of a conductor connecting said devices in series, movable and stationary switch contacts, connecting means connecting one end of said conductor to a stationary one of said switch contacts, connecting means connecting another terminal of one of said electrical devices to a terminal of said battery and to a movable one of said switch contacts, connecting means connecting a terminal of the other of said electrical devices to a pair of said stationary contacts, connecting means connecting the other terminal of said battery to a pair of said movable contacts, and means for operating said contacts to close either a series or multiple circuit for said electrical devices.

5. The combination of a pair of electrical devices, of a conductor connecting them in series, a battery, circuit connections connecting said conductor with a stationary switch contact, circuit connections for connecting a terminal of one of said devices to a terminal of said battery and to a movable switch contact, circuit connections for connecting a terminal of the other of said devices to a pair of stationary contacts, circuit connections for connecting the other terminal of said battery to a pair of movable contacts, and means for moving said contacts to close either a series or a multiple circuit for said devices.

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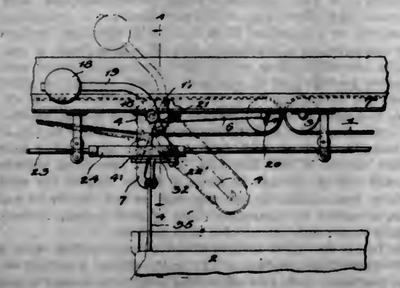
1,227,071. PAINT FOR COATING METALLIC SURFACES SUBJECT TO HIGH TEMPERATURES. GEORGE E. RIECK, Bremerton, Wash. Filed Apr. 7, 1915. Serial No. 19,772. (Cl. 134—50.)

1. A paint for coating metallic surfaces subject to high temperatures comprising the reaction products of japan, powdered aluminum, and clabber resulting from soured milk.

[Claim 2 not printed in the Gazette.]

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1,227,072. APPARATUS FOR DISTRIBUTING COTTON OR OTHER MATERIALS. CHARLES E. RILEY, Newton, Mass., and CHARLES ROBINSON, Pawtucket, R. I., assignors to H. & B. American Machine Company, Pawtucket, R. I., a Corporation of Maine. Filed June 26, 1916. Serial No. 105,902. (Cl. 193—4.)



1. An apparatus for distributing cotton, comprising in combination, a series of conveyer belts placed in alinement to form a continuous bed, each of said sections being carried and driven by a set of rollers, means for depressing the roller at the forward end of the conveyer sections to dump cotton therefrom.

2. An apparatus for distributing cotton comprising in combination, a series of conveyer sections, each comprising an endless belt and supporting rollers, frames movable with relation to said conveyer sections carrying a forward roller of each section, a driving means common to all of said movable frames, and means for connecting any one of said frames to said driving means to depress the end of a section.

3. An apparatus for distributing cotton, comprising in combination, a series of conveyer sections, each of said sections comprising an endless belt and supporting rollers, means for carrying some of said rollers in movable relation with respect to the common line of movement of the conveyer sections, means for actuating said rollers to carry the thereby supported portion of the conveyer section out of the line of movement of the sections, a common driving means for engagement by said means for actuating the rollers, and means for selecting any of said sections for automatic operation.

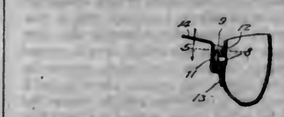
4. An apparatus for distributing cotton, comprising in combination, a series of conveyer sections, means for supporting said sections, and each section consisting of an endless belt and rollers carrying the latter, a swinging frame supporting one of the rollers of each section, means to engage said frame to actuate the latter at intervals, and means to determine the intervals of such engagement.

5. An apparatus for distributing cotton, comprising in combination, a series of conveyer sections, means for supporting said sections, and each section consisting of an endless belt and rollers carrying the latter, a swinging frame supporting one of the rollers of each section, means to counterbalance said swinging frame, means to tension said belts, means to engage said frame to actuate the latter at intervals, and means to determine the intervals of such engagement.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,073. ANCHOR FOR DENTAL PLATES AND THE LIKE. FINIS E. ROACH, Chicago, Ill. Filed Sept. 27, 1916. Serial No. 122,350. (Cl. 32—12.)



1. The hereindescribed attachment for plates and the like consisting of two members, a male member adapted to be carried by the pillar-tooth, and provided with an enlarged head, a female member in the form of a slotted tube slidable over the head of the male member, and oscillatable thereon, and a projection integral with the female member and adapted to bear against the pillar-tooth of that side of the head farthest from the jaw to prevent the oscillation of the female member on the head in one direction.

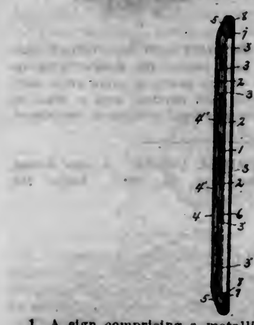
2. The hereindescribed attachment for plates and the like, comprising a male member adapted to be attached to the pillar-tooth and provided with a flattened head, a female part formed of sheet-metal and adapted for attachment to the plate or the like, said female member comprising a flattened tube slotted on the side adjacent to the pillar-tooth to receive the male member, said flattened tube having an integral ear adapted to engage the pillar-tooth to prevent oscillation of the female member on the male member in one direction while permitting such oscillation in another direction.

3. The hereindescribed attachment for plates and the like, comprising a female member adapted for attachment to the plate and comprising a central portion, ears recurved toward the same to form a flattened tube slotted on one side, and a portion closing the end of said tube and extended to form the integral ear substantially in the plane of the slotted face of the flattened tube, and a male member in the form of a pin provided with a flattened and slightly rounded head to enter the female member through the slot, for the purpose aforesaid.



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1,227,074. ADVERTISING-SIGN. RICHARD ROEHM, Newark, N. J., assignor to The Whitehead & Hoag Company, a Corporation of New Jersey. Filed Sept. 11, 1916. Serial No. 119,476. (Cl. 40—135.)



1. A sign comprising a metallic member having raised portions in the form of a character or design, a facing member having opaque portions registering with said raised portions and translucent portions surrounding the opaque portions, and means for rigidly connecting the metallic member and the facing member.

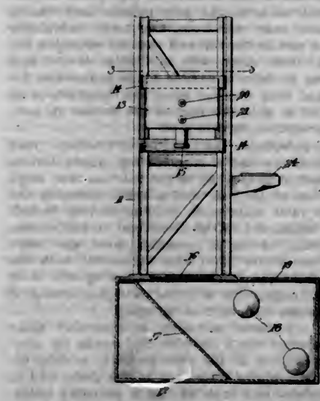
5. A sign comprising a metallic member having indicia raised thereon, said raised indicia formed with top portions and inclined side walls, a translucent facing member having opaque portions registering with the top portions of the raised indicia.

6. A sign comprising a metallic member having raised portions in the form of a character or design surrounded by a multiplicity of relatively small depressions, and a translucent facing member having opaque portions partially covering the raised portions on the metallic member.

[Claims 2 to 4 and 7 to 9 not printed in the Gazette.]

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1,227,075. APPARATUS FOR AND METHOD OF TAKING TRICK AND ADVERTISING MOVING PICTURES. CARL B. ROWNTREE, Atlanta, Ga. Filed Apr. 29, 1915. Serial No. 24,765. (Cl. 88—16.)



1. The combination with a camera facing in a downward direction, of a translucent or transparent plate extending in a substantially horizontal direction and adapted to support on its surface objects to be photographed the said plate being in line with said camera and on which it is adapted to be focused, a source of light, means for uniformly diffusing and directing rays of light through said plate toward said camera, the camera being of the moving picture type for taking in rapid succession a series of pictures and being provided with a trick operating shaft adapting it to the taking of a single picture when desired.

2. In a device of the class described for making shadowgraph pictures, the combination with a camera, of an extended translucent support on which the objects to be photographed may be arranged in different positions, means for focusing the camera on said support, and means for directing uniformly diffused rays of light through said support past said objects toward said camera.

3. In a device of the class described for making shadowgraph pictures, the combination of a camera directed downward, of a translucent extended supporting plate on which the camera is focused and which is adapted to support objects to be photographed on any part of its surface in different positions, and means for uniformly illuminating the space beneath said plate whereby light will be uniformly diffused through said plate from beneath.

4. The combination with a camera facing in a downward direction, of a translucent or transparent exposed and accessible plate extending in a substantially horizontal direction and adapted to support and maintain in position by gravity on its surface a number of objects to be photographed, the said plate being in line with said camera and on which it is adapted to be focused, a source of light, and means for uniformly diffusing and directing rays of light from said source through said plate toward said camera.

5. The method of making a photographic strip of trick pictures in proper related succession to produce when projected in succession on a screen the illusion of moving and changing objects which consists in arranging the objects to be photographed on an extended translucent support on which they rest and maintain their position by gravity, projecting light through said support past said objects toward the photographic means while taking one or more pictures, making a related succession of changes in said objects on said support, and taking one or more pictures after each selected change or rearrangement.

[Claim 6 not printed in the Gazette.]

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1,227,076. EDGE-BINDER. ELIAS RUBINSTEIN, New York, N. Y. Filed Dec. 23, 1916. Serial No. 138,644. (Cl. 270—35.)



1. In a binder attachment for sewing machines, the combination with a tubular main folder section having a slot and inwardly turned flanges along the margins of the slot, of a detachable folder section constituting an extension of the folder and having its inner end formed to correspond in shape and fit in the main folder section, the outer end of said detachable folder section being flat to receive the binding strip.

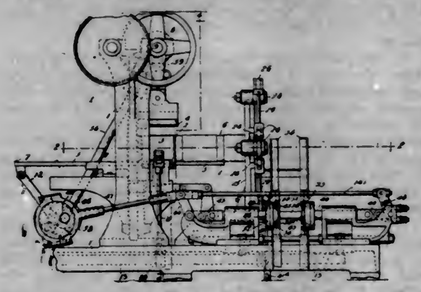
2. In a binder attachment for sewing machines, the combination with a tubular main folder section having a slot

and inwardly turned flanges along the margins of the slot, of a detachable folder section having its inner end formed into a shallow channel corresponding in shape to the main folder section and adapted to be arranged in the inner end of said main folder section, the intermediate portion of the detachable folder section having inwardly turned flanges corresponding to and adapted to fit the outer end of the main folder section, the outer end of said detachable folder section being flat to receive the binding strip.

3. In a binder attachment for sewing machines, the combination with a main folder section, of a detachable folder section to fit in the main folder section, the outer end portion of the detachable folder sections having overlapping flanges, and a confining metal strip around said overlapped flanges.

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1,227,077. CAN-BODY-MAKING MACHINE. FRANK RUDOLPHI, New York, N. Y., and OLAF OSTLIN, Maywood, Ill., assignors to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 9, 1911. Serial No. 601,542. (Cl. 113—7.)



1. In a can body machine, the combination with a can body former horn having an extension, of a conveyer for moving the can bodies along said extension and a plurality of opening and closing external necking-in dies movable in a plane perpendicular to the axis of the horn extension, substantially as specified.

2. In a can body machine, the combination with a can body former horn having a stationary extension, of a conveyer for moving the can bodies along said extension and a plurality of external necking-in dies, means for positively opening and closing the same and a coöperating internal necking-in die on the end of said horn extension, substantially as specified.

3. In a can body machine, the combination with a can body former horn having an extension, of a conveyer for moving the can bodies along said extension, a plurality of opening and closing external necking-in dies, a coöperating internal necking-in die on the end of said horn extension, and a plurality of expanding beading dies mounted on the end of said horn extension, substantially as specified.

4. In a can body machine, the combination with a can body former horn having an extension, of a conveyer for moving the can bodies along said extension, a plurality of opening and closing external necking-in dies and a plurality of movable beading dies, substantially as specified.

5. In a can body making machine, the combination with a body former horn having a stationary extension, of an internal necking-in die on the end of said horn extension and a plurality of opening and closing necking-in dies or jaws, substantially as specified.

[Claims 6 to 18 not printed in the Gazette.]

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1,227,078. VALVE. ARNOLD O. RUTZ, Milwaukee, Wis. Filed Mar. 3, 1915. Serial No. 11,931. (Cl. 137—4.)

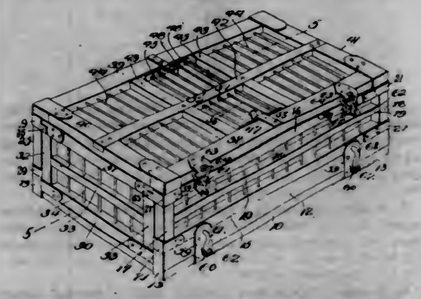
A valve of the class described comprising a body provided with a uniformly cylindrical well bore and further provided with ports communicating with said well bore at points spaced longitudinally of the bore, a valve sleeve engaged into the bore and terminating short of the inner port and provided in its periphery with an annular



recess registering with the other port and further provided with openings at said recess, the sleeve being reduced in bore outwardly of the ports, a valve stem movable through said reduced bore portion, and a head on the stem coacting with the inner end portion of the sleeve.

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1,227,079. COLLAPSIBLE CRATE. JAMES SCARR, Randsburg, Cal. Filed Nov. 23, 1915. Serial No. 63,059. (Cl. 217—47.)



1. A folding receptacle including interfoldable front rear and end members and a movable top, guide devices swingingly connected at one end to the rear member, and loops carried by the top and slidably engaging the guide devices at their other ends, said guide devices and loops coöperating to form a flexible hinge connection between the top and back member when the receptacle is in open position and to hold the rear of the bottom in position when the receptacle is collapsed.

2. A folding receptacle including interfoldable front rear and end members and a movable top, guide devices connected at their ends to the rear member and spaced intermediate their ends therefrom, and loops swingingly connected at one end to the top and slidably engaging the guide devices, at their other ends, said guide devices and loops coöperating to form a flexible hinge connection between the top and back member when the receptacle is in open position and to hold the rear of the bottom in position when the receptacle is collapsed.

3. A folding receptacle including interfoldable front rear and end members and a movable top, guide devices swingingly connected at one end to the rear member, loops carried by the top at its rear and slidably engaging the guide devices at their other ends, holding devices, including base plates connected to the front and to the bottom members, and each having a swinging catch and loops carried by the top at its front and engageable with the fastening devices of the front when the receptacle is in open position and engageable with the swinging catches of the bottom when the receptacle is collapsed.

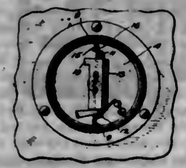
4. A folding receptacle including interfoldable front rear and end members and a movable top, means for movably connecting the top to the rear member, holding devices including base plates connected to the front and to the bottom members and each having a swinging catch, and loops carried by the top at its front and engageable with the swinging catches of the front when the receptacle is in open position and engageable with the swinging catches of the bottom when the receptacle is collapsed.

5. A folding receptacle including interfoldable front rear and end members and a movable top, means for movably connecting the top to the rear member, catch devices mounted to swing relative to said bottom and front, and loops carried by said top and adapted to be engaged with the catch devices of the top when the receptacle is in open position and adapted to be engaged with the catch devices of the bottom when the receptacle is collapsed.

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1,227,080. PRESSURE-INDICATOR. ALBERT SCHINKEZ, Charlotte, Mich., assignor to Harry W. Hancock, Charlotte, Mich. Filed July 31, 1916. Serial No. 112,386. (Cl. 40—39.)



1. A pressure indicator having, in combination, a case comprising a front wall, a rear wall and an intermediate partition, said partition having an opening therethrough, an indicator member pivotally supported in the space between the front wall and the partition, said member having arms extending from opposite sides of the axis of said member, a spring arm secured to the partition, the free end of said arm being arranged to bear against either of the first mentioned arms, a diaphragm in the space between the rear wall and the partition, and a stud between the diaphragm and the spring arm, said stud extending through the opening in the partition, the front wall having an opening through which a portion of the indicator member is visible.

2. A pressure indicator having, in combination, a case, a sheet-metal indicator member within said case, said member comprising two alined pivots, two arms extending in one direction from said pivots, an indication-bearing plate connected to said arms, and a third arm extending in the opposite direction from one of the first mentioned arms, a spring arm secured in the case, the free end of said arm being arranged to bear against either the third arm or one of the first mentioned arms, and a diaphragm in said case arranged to move said spring arm from the third arm to one of said first mentioned arms.

3. A pressure indicator having, in combination, a case, a pivot, two arms extending in opposite directions from said pivot, an arm secured in the case, the free end of said arm being arranged to bear against either of the first mentioned arms, a diaphragm in said case arranged to move said arm from one to another of said first mentioned arms, and an indicating device operable by the first mentioned arms.

4. A pressure indicator having, in combination, a pivotally-supported indicator member having arms extending from opposite sides of the axis of said member, a spring arm arranged to bear against either of said first mentioned arms, and a pressure-responsive member arranged to move said spring arm from one of the first mentioned arms to the other.

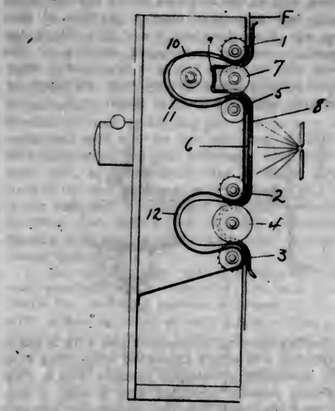
5. A pressure indicator having, in combination, two oppositely-extending arms, a spring arm arranged to bear against either of said first mentioned arms, a pressure-responsive member arranged to move said spring arm from one of the first mentioned arms to the other, and an indicating device operable by said arms.

[Claim 6 not printed in the Gazette.]

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1,227,081. THREADING DEVICE FOR MOVING-PICTURE MACHINES. MICHAEL SMOEL, New York, N. Y. Filed June 18, 1913. Serial No. 774,304. (Cl. 88—17.)

1. In a motion picture machine or the like, an arrangement to thread a film automatically consisting of an uppermost continuously driven roller, an interiorly curved cage between said roller and an aperture, adapted to deliver a film from the continuously driven roller in the form of a loop to the aperture automatically.




2. In a motion picture machine, or the like, an arrangement consisting of curved guides and rollers for threading and leading a film over continuously and intermittently rotating rollers past an aperture automatically and creating loops in said film of proper size.

3. In a motion picture machine having an upper continuously driven roller and an aperture, a device consisting of rollers and curved guides arranged to form a loop in a film between said upper continuously driven roller and said aperture automatically.

4. In a motion picture machine or the like, an upper continuously driven feed roller, an aperture plate below said continuously driven feed roller, an intermittently driven feed roller below said aperture plate, a continuously driven feed roller below said intermittently driven roller, guides forming a loop pocket interposed between the uppermost continuously driven roller and the lowest continuously driven roller for the purpose of guiding a film for automatic threading from the uppermost feed roller to the lowest feed roller.

5. In a motion picture machine, or the like, an uppermost feed roller above the aperture, an intermittently driven feed roller below the aperture, a continuously driven feed roller below said intermittently driven feed roller, guides forming a loop pocket interposed between said uppermost feed roller and said lowest feed roller to advance a film automatically from said uppermost feed roller to said lowest feed roller and to create a loop between said uppermost feed roller and said intermittent feed roller, and to create a loop between said intermittently driven feed roller and said lowest feed roller automatically.

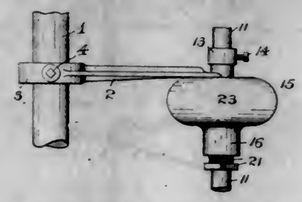
[Claims 6 to 13 not printed in the Gazette.]

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1,227,082. SELF-OILING BEARING. JAMES M. SEYMOUR, Jr., Newark, N. J. Filed Apr. 19, 1916. Serial No. 92,072. (Cl. 64—56.)

1. In a self-oiling bearing, in combination with a shaft, a hanger, a bearing comprising movably related members, one of said members being connected with and supported upon a portion of said hanger and the other member being fixed upon and rotating with said shaft, and a container adapted to receive a lubricant into which a portion of said hanger projects and in which the said bearing is disposed and is completely immersed in the lubricant, said container being also fixed upon and rotating with said shaft.

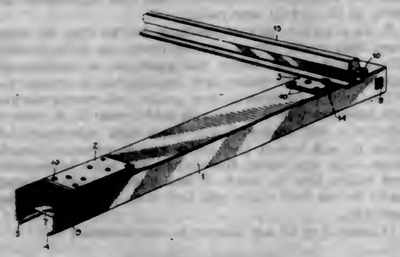
5. In a self-oiling bearing, in combination with a shaft, a hanger comprising a laterally extending supporting arm, a downwardly extending arc-shaped member, and a ring-shaped supporting member provided with a seat, a ball-bearing upon said seat, said bearing comprising movably related members, one of the members of the bearing being connected with and supported upon a portion of said shaft, and an oil or lubricant-container into which the said downwardly extending arc-shaped member of the hanger projects and in which the said ring-shaped member and the ball-bearing are arranged, said container being fixed upon and rotating with said shaft.



8. In a self-oiling bearing, in combination with a shaft, a hanger comprising a laterally extending supporting arm, a downwardly extending arc-shaped member, and a ring-shaped supporting member provided with a seat, a ball-bearing upon said seat, said bearing comprising movably related members, one of the members of the bearing being connected with and supported upon a portion of said shaft, and an oil or lubricant-container into which the said downwardly extending arc-shaped member of the hanger projects and in which the said ring-shaped member and the ball-bearing are arranged, said container being fixed upon said shaft, and a stuffing box connected with said container and also fixed upon said shaft, said container and stuffing box rotating with said shaft, and an oil or lubricant-deflecting element within said container and connected with and extending from the said downwardly projecting arc-shaped member of the hanger.

[Claims 2 to 4, 6, and 7 not printed in the Gazette.]

1,227,083. RAILWAY-TIE AND FASTENER. JOHN G. SNYDER, New York, N. Y. Filed July 22, 1916. Serial No. 110,645. (Cl. 238—5.)



1. A rail tie and fastener comprising a metallic shell having apertures therein adjacent the end, a fastener plate adjacent each end of the tie, said fastener plates being formed with depending members extending into the openings of said shell, and securing means engaging a rail on said fastener, said securing means passing through the fastener plate and the extensions thereon.

2. In a rail tie and fastener, a metallic shell provided with apertures therein, a fastener plate having projections extending into said apertures, an insulating plate having sleeves surrounding said projections, said insulating plate being arranged between the fastener plate and the shell, said fastener plate having apertures which extend through said projections, and rail fastening means passing through said apertures.

3. A rail tie and fastener, comprising a metallic shell having openings therein, a metallic plate provided with projections extending into said openings, an insulating plate arranged between said metallic plate and said shell, said insulating plate having sleeves surrounding said projections, fastening means extending through said plate and projections for securing a rail on said plate, rivets for rigidly securing said plate to said shell, and insulating means for insulating said rivets from said plate.

4. A rail tie and fastener, comprising a metallic shell, a filling therefor, said shell having a plurality of apertures arranged adjacent each end, a fastener plate arranged adjacent each end, each of said fastener plates being formed with a depending lug extending into said apertures, threaded openings extending through said plates and said lugs, and lag screws fitting into said threaded openings and extending into the filling of said shell.

5. A rail tie and fastener, comprising a metallic shell having apertures adjacent each end, a fastener plate at each end of the shell formed with projections fitting in said apertures, said fastener plates having a passageway extending through the plates and through the projections, rail securing means extending through said passageways, an insulating plate having sleeves surrounding said projections so as to insulate the projections from the shell, and means for rigidly securing said fastener plate to said shell.

[Claims 6 to 22 not printed in the Gazette.]

1,227,084. SIGNAL. WILLIAM SPARKS, Jackson, Mich., assignor to The Sparks-Withington Company, Jackson, Mich., a Corporation of Michigan. Filed Oct. 8, 1915. Serial No. 54,735. (Cl. 177—7.)



1. In a signal, a diaphragm, an electric motor having its armature shaft presented endwise toward the diaphragm, a rotor mounted upon said shaft adjacent the diaphragm, and an end-thrust bearing for the armature shaft for positively moving said shaft toward and from the diaphragm independently of the body of the motor.

2. In a signal, a diaphragm, an electric motor having its armature shaft presented endwise toward the diaphragm, a rotor mounted upon said shaft adjacent the diaphragm, an adjustable sleeve, and an end-thrust bearing for said motor having an adjustable relation with said sleeve for positively holding the motor shaft in a predetermined position relatively to said sleeve.

3. In a signal, a diaphragm having a wear-piece associated therewith, an electric motor having its armature shaft presented endwise toward the diaphragm, a rotor carried by said motor shaft for contact with said wear-piece, a transverse bar at the rear of the motor, said bar having a tubular boss, a sleeve adjustable through said loss, said sleeve having an inwardly projecting radial shoulder, the armature shaft provided with a stepped member for engagement with said shoulder, and an adjustable set screw for holding said stepped member in substantial contact with said shoulder.

4. In a signal, a diaphragm, an electric motor, a rotor mounted upon the armature shaft of said motor, and an end-thrust bearing for the armature shaft for positively reciprocating said shaft independently of the body of the motor.

5. In a signal, a diaphragm having a wear-piece associated therewith, an electric motor having its armature shaft presented endwise toward the diaphragm, a rotor mounted upon said shaft for contact with said wear-piece, a sleeve adjustable toward and from the diaphragm, and adjustable means associated with the sleeve for causing the motor shaft to move in conjunction with the sleeve.

[Claims 6 and 7 not printed in the Gazette.]



1,227,085. SIGNAL. WILLIAM SPARKS, Jackson, Mich., assignor to The Sparks-Withington Company, Jackson, Mich., a Corporation of Michigan. Filed Oct. 8, 1915. Serial No. 54,736. (Cl. 64—52.)



1. In a signal, a case, a bar within and extending longitudinally of the case, one of said members provided with a slot, the other member carrying a bolt seated in said slot, a shaft having a bearing in said bar, and an adjusting member engaged with the case and interlocked with said bar.

2. In a signal, a casing, a shaft having bearings within the casing, one of said bearings formed in a bar having an elongated slot, a bolt engaged with the casing and having a portion extending through said slot, means adjustable on the bolt for holding the bar in any predetermined position with respect to the bolt, and means operable exteriorly of the casing and adjustable through the casing for moving said bar with respect to said bolt.

1,227,086. GAS-BURNER. JESSE G. STEENSON, Minneapolis, Minn. Filed Mar. 29, 1915. Serial No. 17,687. (Cl. 67—116.)



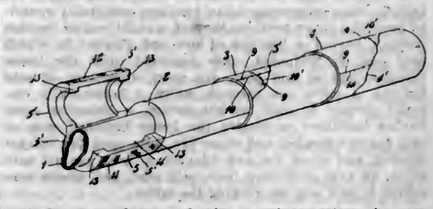
1. The combination, with a gas burner having a valve and a lever therefor, of an arm mounted for simultaneous movement with said lever when said valve is opened, said lever being free to move and close said valve independently of said arm, a spring put under tension by the opening of said valve for returning said lever and arm to their normal position when said valve is open and released and the gas unlighted, and a thermostatic bar comprising an upright member secured to said burner and having a loop formed therein at its upper end adjacent to the burner tip and provided with a depending portion for engaging said arm and temporarily locking it against the tension of said spring, said bar, when contracted, releasing said arm to permit it to return to its normal position and close said valve.

2. The combination, with a burner, of a thermostatic bar comprising an upright member secured to said burner and positioned at one side thereof and having a loop formed at its upper end adjacent to the burner tip, said loop having a depending member terminating in a horizontal end portion, a valve for said burner, an operating lever therefor, an arm having means in the path of said lever for operating said arm when said lever is moved to an open position, a spring put under tension by the movement of said lever to an open position for normally returning said arm and lever to their closed position when released, and said arm being positioned to be engaged by the horizontal portion of said thermostatic bar and temporarily locked when said bar is expanded and released automatically when said bar is contracted.

3. The combination, with a gas burner having a valve and an operating lever therefor, of an arm loosely mounted on the stem of said valve in a plane parallel substantially with said lever, said arm having a lug formed thereon projecting into the path of said lever for actuating said arm by the movement of said lever in one direction, a spring for yieldingly resisting movement of said arm, a thermostatic bar mounted adjacent to the burner tip and having a part to engage and lock said arm when said bar is expanded and said lever is in its open position, the contraction of said thermostatic bar releasing said arm to return said lever automatically to its closed position.

4. The combination, with a burner and its valve, of a spring-actuated arm connected with said valve, a thermostatic bar having a portion arranged at an angle to said arm, means mounted on said angle portion and adjustable thereon and normally positioned adjacent to said arm to move into the path of the same upon the expansion of said bar, a stop for checking the movement of said means away from said arm when said bar contracts, and said bar having freedom of expansion and contraction independently of said arm-engaging means.

1,227,087. UNDERGROUND-PIPE-COVERING SYSTEM. WALTER L. STEFFENS, Cincinnati, Ohio, assignor to The Philip Carey Manufacturing Company, Lockland, Ohio, a Corporation of Ohio. Filed Aug. 7, 1915. Serial No. 44,344. (Cl. 154—44.)



1. In an underground pipe-covering system, in combination with a pipe, an insulating covering therefor and a separate and distinct protective structure around said insulating covering, in the form of resilient cylindrical shells, each longitudinally separated on one side and sprung over said insulating covering and suitably secured together therearound.

2. In an underground pipe-covering system, in combination with the pipe, a friable insulating covering therefor, and a separate and distinct protective structure around said insulating covering, made up of layers of a fibrous material and a bitulithic substance intimately associated and brought into a resilient condition, in the form of longitudinally succeeding cylindrical shells, each longitudinally separated on one side and sprung over said insulating covering and suitably secured together thereabout.

3. In an underground pipe-covering system, in combination with the pipe, a friable insulating covering therefor, and a separate and distinct protective structure around said insulating covering, made up of layers of a fibrous material and impregnated and coated with a bitulithic substance and brought into a resilient condition, in the form of longitudinally succeeding cylindrical shells, each longitudinally separated on one side and sprung over said insulating covering and suitably secured together thereabout.

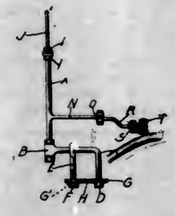
4. In an underground pipe-covering system, in combination with the pipe, and an insulating covering therefor, a protective structure around said insulating cover, said protective covering being in the form of longitudinally succeeding cylindrical shells, each longitudinally separated on one side and sprung over said insulating covering and seamed together therearound along its separation, and with the ends of said shells abutting.

5. In an underground pipe-covering system, in combination with the pipe, and an insulating covering therefor, a protective structure around said insulating cover, said protective covering being in the form of longitudinally succeeding cylindrical shells, each longitudinally separated on one side and sprung over said insulating covering and seamed together therearound along its separation, and with the ends of said shells abutting, said shells being coated with a waterproofing material.

[Claims 6 to 11 not printed in the Gazette.]

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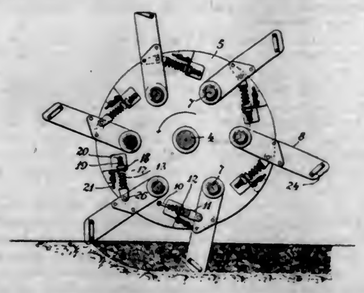
1,227,088. AUTOMATIC DIRIGIBLE LIGHT. ROY M. SWAIN, Princeton, Ind. Filed Aug. 7, 1916. Serial No. 113,595. (Cl. 240—62.)



A dirigible light for automobiles comprising axially rotatable, lamp supporting posts, brackets adjustably mounted upon the upper portions thereof, a right angled bracket member having a bearing at one end thereof in which said post is journaled, nuts mounted upon the lower threaded end of said post, one upon either side of said bearing, a screw eye through which a horizontally disposed portion of said bracket passes, a clamping plate having apertures to receive the lower threaded ends of said bracket member and screw eye, nuts upon the bracket member and screw eye and adapted to bear against said plate, an arm projecting from said post, and means connected to said arm for rocking the latter.

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1,227,089. GROUND-CULTIVATOR. JOSEF TANCZER, Budapest, Hungary. Filed June 18, 1913. Serial No. 774,297. (Cl. 97—63.)



1. In ground cultivators, a rotatable hoe-drum, a plurality of hoes pivotally mounted on said drum and capable of swinging independent of each other about their pivots, springs for holding the hoes in their normal radial position and adapted to be compressed upon the hoes entering the ground and adjustable stops on the drum for limiting the backward movement of the hoes compressing their springs.

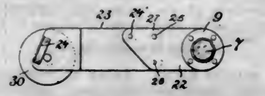
2. In ground cultivators, a rotatable hoe-drum, a plurality of hoes pivotally mounted on said drum and capable of swinging independent of each other about their pivots, bolts pivotally connected with said hoes, guides fixed on said drum for said bolts and springs surrounding said bolts and adapted to be compressed upon a backward movement of the hoes when entering the ground.

3. In ground cultivators, a rotatable hoe-drum, a plurality of hoes pivotally mounted on said drum and capable of swinging independent of each other about their pivots, bars arranged on said drum and forming stops for limiting the backward movement of the said hoes when entering the ground, bolts pivotally connected to said hoes and guided in bores of said bars, springs surrounding said bolts for holding the hoes in their normal radial position and adapted to be compressed by the hoes when entering the ground.

4. In ground cultivators, a rotatable hoe-drum, a plurality of hoes pivotally mounted on said drum and capable of swinging independent of each other about their pivots, bolts pivotally connected with said hoes, guides arranged on said drum for said bolts and springs surrounding said bolts and adapted to be compressed upon a backward movement of the hoes when entering the ground and buffer-springs on said bolts for absorbing the shock upon the sudden return of the hoes to their normal position.

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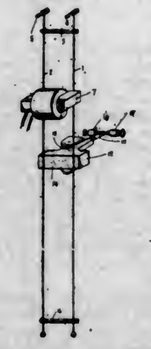
1,227,090. HOE FOR CULTIVATING-MACHINES. JOSEF TANCZER, Budapest, Hungary. Original application filed June 18, 1913, Serial No. 774,297. Divided and this application filed July 6, 1914. Serial No. 849,105. (Cl. 97—62.)



A hoe for rotary cultivating machines comprising a rigid stem formed of a pair of spaced plates, a laterally resilient member mounted between the plates and carrying hoeing elements, a pivot pin connecting the member to the plates, and releasable means normally restraining the member against rotation of the pivot pin.

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1,227,091. SPEED-REGULATING APPARATUS. JOHN B. TAYLOR, Schenectady, N. Y. Filed Dec. 1, 1914. Serial No. 875,010. (Cl. 171—229.)



1. The combination of a motor subject to variations from its predetermined speed, a pair of vibrating elements having different natural vibratory periods, means for vibrating said elements at a frequency corresponding with the speed of the motor, and means responsive to the differential action of said vibrating elements and tending to hold said motor at substantially its predetermined speed.



2. The combination of an electric motor subject to variations for a predetermined speed, a pair of vibrating elements having different natural vibratory periods, means responsive to the predetermined speed of said motor for vibrating said elements at a frequency intermediate their respective natural frequencies, and means responsive to the differential action of said vibrating elements for varying the excitation of said motor.

3. The combination of an electric motor subject to variations from a predetermined speed, a pair of stretched wires differently tuned, means responsive to the predetermined speed of the motor for vibrating said wires at a frequency intermediate their natural frequencies, and means responsive to differences in amplitude of said vibrating wires for varying the excitation of said motor.

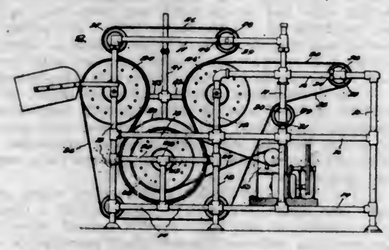
4. The combination of a pair of vibrating elements tuned respectively to high and low frequency, means for normally vibrating said elements at an intermediate frequency and control mechanism responsive to the difference in vibratory amplitude of said elements.

5. The combination of a motor subject to variations from a normal speed, a pair of stretched wires having different normal vibratory frequencies, electromagnetic means responsive to the predetermined speed of said motor for vibrating said wires at an intermediate frequency, a swinging element responsive to the difference in amplitude of vibration of said wires, and means controlled by said swinging element for varying the excitation of said motor to hold it at substantially normal speed.

[Claims 6 to 14 not printed in the Gazette.]

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1,227,092. APPARATUS FOR DRYING PHOTOGRAPHIC PRINTS OR THE LIKE. VALENTIN CONSTANT TENEAU, New York, N. Y. Filed Aug. 14, 1916. Serial No. 114,848. (Cl. 34—4.)



1. A drying apparatus for sheet materials comprising a frame, a plurality of heating drums carried by said frame, burners extending through each of said drums and supported from said frame, means for regulating the fuel supply to said burners, means for regulating the temperature of said drums, endless webs trained over said drums and contacting each other for a portion of their length, means for tensioning said webs, and means for rotating said drums for the actuation of said webs to convey the sheets to be dried over the heated surfaces of said drums.

2. A drying apparatus for sheet materials comprising a frame, a plurality of heating drums carried by said frame, burners extending through each of said drums and supported from said frame at their opposite ends, said burners forming bearings for said heating drums, means for regulating the temperature of said heating drums, endless web conveyers trained over said heating drums and contacting each other for a portion of their length, means for tensioning said web conveyers, and power means for the rotation of said heating drums for the actuation of said conveyer webs and the sheets carried thereby.

3. A drying apparatus for sheet materials comprising a frame, a main heating drum, a pair of smaller heating drums disposed in a plane immediately above said main heating drum and offset to either side thereof, burners extending through said heating drums and supported from said frame at their opposite ends, said burners forming bearings for said drums, means for regulating the temperature of said heating drums, endless web conveyers trained over said heating drums and contacting each other for a portion of their length, means for tensioning said web conveyers, and power means for the rotation of said heating drums for the actuation of said web conveyers and the sheets carried thereby.

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1,227,093. SAFETY APPLIANCE FOR SHIPS. ALOYSIUS S. TERHAAR, San Diego, Cal. Filed Mar. 30, 1916. Serial No. 87,670. (Cl. 114—148.)



1. In a safety appliance for ships, of the class described, in combination; two parallel horizontally disposed beams adapted to be mounted in a tube mounted in the keel of a ship; a horizontally disposed shaft journaled in said beams; a propeller mounted on said shaft between said beams; and gears mounted on said shaft and disposed within said beams; for the purposes set forth.

2. In a safety appliance of the class described, in combination; two horizontally disposed beams adapted to be mounted in a tube, said tube being mounted in the keel of a ship; a propeller mounted on a shaft journaled in said beams; gears mounted on said shaft and disposed within said beams; and chains mounted upon said gears and disposed longitudinally within said beams; for the purposes set forth.

3. In a safety appliance of the class described; the combination of two horizontally disposed beams mounted in a tube mounted in the keel of a ship transversely thereof; a horizontally disposed shaft journaled in said beams and having a propeller mounted thereon between said beams; gears mounted on said shaft within said beams; chains disposed longitudinally within said beams and mounted on said gears; for the purposes set forth.

4. A safety appliance of the class described comprising a tube mounted transversely in the keel of a ship; two horizontally disposed beams mounted in said tube longitudinally of the ship; a propeller mounted on a shaft journaled in said beams; gears disposed within said beams and mounted on said shaft; chains disposed longitudinally within said beams and mounted on said gears, said chains extending into the ship and being mounted on an actuating means disposed within said ship; for the purpose of turning said ship's bow.

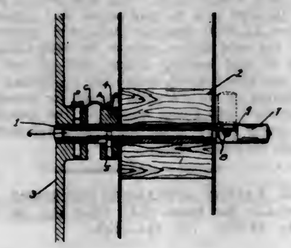
5. A safety appliance for ships, comprising a tube mounted transversely in the keel of a ship; two horizontally disposed wedge beams having their ends secured to the sides of said tube and having longitudinally disposed chambers therein adapted to receive chains; gears mounted on a horizontally disposed shaft within said beams; chains disposed within said chambers and mounted on said gears, said chains being connected with an actuating means disposed within said ship; and a propeller mounted on said shaft between said beams; for the purpose of guiding said ship.

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1,227,094. FILM-REEL SHAFT. CHARLES UEBELMESSE, New York, N. Y., assignor to Cru Patents Corporation, a Corporation of New York. Filed July 20, 1915. Serial No. 40,987. (Cl. 242—70.)

1. A film roll support, consisting of a lever pivotally mounted in a tubular shaft, a movable collar on said shaft, a tension spring on said shaft holding the collar in position a sliding bar in said shaft connected with said collar, and the pivotally mounted lever.

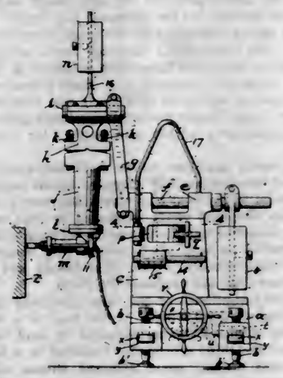
2. A film roll support, a slidable collar on said support, a pivotally mounted lever on the end of the support, a



connection bar in the support and connected with the collar and the pivotally mounted lever and adapted to be operable by moving the collar or the lever aforesaid.

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1,227,095. STONE-DRESSING MACHINE. WILBER H. VAN SICKEL, Langhorne, Pa., assignor to Thos. H. Dallett Co., a Corporation of New Jersey. Filed June 10, 1916. Serial No. 102,829. (Cl. 125—6.)



1. The combination with a horizontally movable pedestal, of an arm and a counter-balancing weight pivotally mounted on the pedestal on a horizontal axis, a tool-carrying frame and a counter-balancing weight pivotally mounted on the arm on an axis parallel to the first axis, and a head on the frame arranged to support a pneumatic tool in a position to cause its reciprocable member to operate parallel to said axes

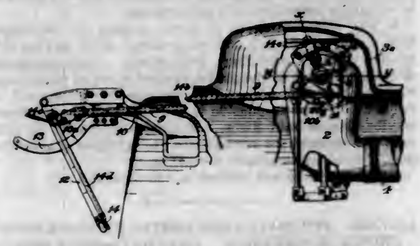
2. In a surfacing machine, the combination with a pedestal, of a head turnable on a vertical axis on the pedestal, an arm and a counter-balancing weight mounted on a horizontal axis on the head, a tool-carrying frame and a counter-balancing weight mounted on a horizontal axis on the arm, and a surfacing tool support carried by the frame.

3. In a surfacing machine, the combination with a base, of a pedestal adjustable horizontally thereon, a head turnable on a vertical axis on the pedestal, a horizontal shaft turnable on the head, an arm and a counter-balancing weight carried by the shaft on opposite sides of the pedestal, a tool-carrying frame and a counter-balancing weight mounted on the arm on an axis parallel to said shaft, and a surfacing tool support carried by the frame whereby the tool may be held in angular relation to the frame.

4. In a machine for dressing vertically extending surfaces, the combination with a base, of a pedestal supported on the base and movable horizontally thereon to regulate the distance between the pedestal and the surface to be dressed, a head turnable in a vertical axis on the pedestal to bring the parts carried by the head in proper angular relation to the surface to be dressed, an arm pivotally supported on the head on a horizontal axis, a counter-balanced tool-carrying frame pivotally supported on the arm on an axis parallel to the axis on which the arm is supported, a weight counter-balancing the arm and the counter-balanced tool-carrying frame carried thereby, and a surfacing tool support carried by said frame and positioned to support the tool to cause the latter to extend in a direction parallel to said horizontal axes, thus enabling the tool to operate on a vertical surface by movement in a vertical plane throughout a radius equaling the combined lengths of the said arm and frame and to be properly counter-balanced in any position within its range of movement.

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1,227,096. THROTTLE-VALVE MECHANISM FOR LOCOMOTIVES. HARRY S. VINCENT, Ridgewood, and WILLIAM P. STEELE, Palisade, N. J. Filed Dec. 8, 1916. Serial No. 135,871. (Cl. 137—139.)



2. The combination, with a locomotive boiler, of a throttle valve; a throttle lever; connections, positively coupled throughout their length, interposed between the throttle valve and throttle lever, said connections extending longitudinally exterior to the boiler; and means for locking said throttle valve in adjusted position and permitting movement of the throttle lever and connections, relatively to the throttle valve, when said valve is locked.

4. The combination, with a locomotive boiler, of an internal throttle valve; a throttle lever; longitudinally extending connections interposed between said throttle valve and throttle lever; and a locking mechanism located and operating adjacent to the throttle valve end of said connections.

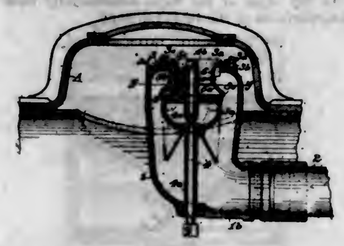
7. The combination, with a locomotive boiler, of a stand pipe supported in a steam dome thereof; a throttle valve controlling said pipe; a shaft support secured to the dome; an oscillatory throttle shaft journaled in said support and extending to the exterior of the dome; connections coupling said shaft to the throttle valve; a lever support located exterior to the boiler and separated by a longitudinal space from the stand pipe; a throttle lever pivoted to said support; a tubular connection interposed between said lever and the throttle shaft; a peripherally toothed or notched locking segment secured to the shaft support; a latch adapted to engage said segment; a latch handle pivoted to the throttle lever; bell crank levers journaled at opposite ends of the tubular connection and coupled to the latch and latch handle, respectively; and a rod extending through the tubular connection and coupled, at its ends, to said bell crank levers.

[Claims 1, 3, 5, and 6 not printed in the Gazette.]

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1,227,097. THROTTLE-VALVE. HARRY S. VINCENT, Ridgewood, N. J. Filed Dec. 8, 1916. Serial No. 135,872. (Cl. 137—4.)

1. The combination of an open topped stand pipe, a balancing ring fitted in the top opening thereof, and a double puppet throttle valve, having oppositely inclined faces which seat, respectively, on oppositely inclined faces, of approximately equal area, on the balancing ring and on a subjacent seat in the stand pipe.



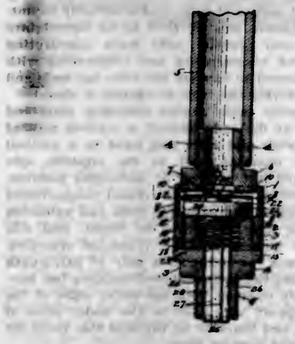
3. The combination of an open topped standpipe, having an internal bowl shaped chamber; a double puppet throttle valve fitting seats at the tops of the stand pipe and chamber, respectively; a disk fitting said chamber; and a valve stem on which said valve and disk are secured.

4. The combination of an open topped stand pipe, having an internal bowl shaped chamber; a double puppet throttle valve comprising two abutting sections, the upper of which is adapted to seat at the top of the stand pipe and the lower at the top of the chamber; a disk fitting said chamber; a valve stem on which said valve and disk are secured; and an open ended pipe surrounding the valve stem and extending from the chamber to the exterior of the stand pipe.

[Claim 2 not printed in the Gazette.]

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1,227,098. DRAIN-VALVE. LOUIS N. VINCENT, Prescott, Ariz. Filed Oct. 3, 1916. Serial No. 123,517. (Cl. 137—103.)



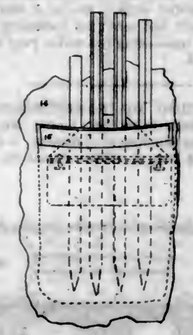
1. A drain valve comprising a member provided with a chamber and an inlet thereto, by-pass ports of substantially uniform cross-section in said chamber, a second member provided with an outlet and having a free end terminating at substantially one end of the by-pass ports and providing a valve seat, a valve member having an imperforate disk head coöperating with said seat, and a solid guiding stem in said outlet, and means for retaining said valve in a normally open position.

2. In a drain valve, an outer member, an inner member, a valve mounted in the inner member and provided with a plurality of substantially straight grooves and straight cutting edges between said grooves, said valve adapted to be positively rotated to remove any foreign matter which may accumulate in the inner member.

3. A drain valve comprising a member provided with a chamber and an inlet thereto, by-pass ports of substantially uniform cross-section in said chamber, a second member provided with an outlet and having a free upper end terminating at substantially the lower end of the by-pass ports and providing a valve seat substantially in alinement with the end of said ports, a valve member having an imperforate disk head coöperating with said seat, and an elongated solid guiding stem in said outlet provided with longitudinally extending external grooves and means for retaining said valve in a normally open position contained within said inner member.

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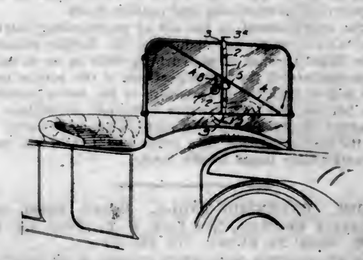
1,227,099. PENCIL-HOLDER. MARCUS A. WALDEN, San Francisco, Cal., assignor of one-half to (Mrs.) D. M. Brunkhorst, San Francisco, Cal. Filed Feb. 1, 1917. Serial No. 146,008. (Cl. 24—12.



A pencil holder comprising a piece of soft rubber having therein a series of holes sufficiently large to receive a pencil therethrough and sufficiently small to retain the pencil therein, holder members of comparative rigid material extending on opposite sides of the sheet of rubber and each having therein a corresponding series of larger holes registering with each other and with the holes in the rubber, means for clamping the rubber sheet between the holder members, and means for attaching the holder to a garment of the user.

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1,227,100. WIND-SHIELD CLEANER. ORMOND E. WALL, Honolulu, Hawaii. Filed June 2, 1916. Serial No. 101,366. (Cl. 15—59.)



1. A wind shield cleaning apparatus comprising a bar secured vertically to the windshield frame, a lever pivoted on said bar adjacent to the wind-shield and provided with a wiper at its extremity, a rotatable device supported on the bar, and a rod connecting said device with the lever for oscillating the latter, as described.

2. A wind-shield cleaner comprising a bar adapted to be secured to a wind-shield frame, a wiper lever pivoted

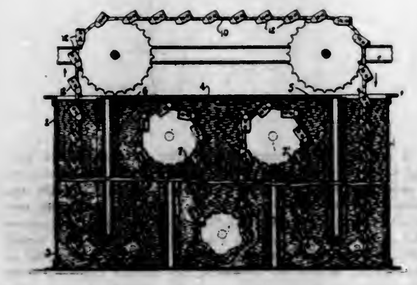
thereon and arranged parallel to the wind-shield, a rotary motor supported on the aforesaid bar, and means operatively connecting it with the lever for oscillating the same, as described.

3. A wind-shield cleaner comprising a bar adapted to be clamped on the top and bottom of a wind shield, a wiper lever pivoted on said bar in a plane parallel to the wind-shield, a motor and a gear supported on the bar, the gear being operatively connected with the lever, as described.

4. A wind-shield cleaning apparatus comprising an extensible bar made in adjustable sections, the outer ones being adapted for engagement with the wind-shield frame, means for clamping the sections to each other in any desired adjustment, a wiper pivoted on the bar and adapted to oscillate in a plane parallel with that of the latter, an electric motor fixed on the bar and having an extended shaft provided with a worm, a worm gear meshing with said worm and mounted rotatably on the motor casing, and a rod connecting the worm gear with the wiper lever, as described.

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1,227,101. METHOD OF PASTEURIZING LIQUIDS. ALFRED H. WEHMILLER, St. Louis, Mo., assignor to Barry-Wehmiller Machinery Company, a Corporation of Missouri. Filed Feb. 7, 1916. Serial No. 76,616. (Cl. 99—15.)



1. The improvement in the art of pasteurizing liquids in containers which comprises conducting the containers through an attemperating fluid, then through a pasteurizing fluid, thereafter through a cooling fluid, and causing a thermic circulation of the liquid in the containers by turning said containers while they are submerged in the attemperating, pasteurizing and cooling fluids.

2. The improvement in the art of pasteurizing bottled liquids which comprises conducting the bottles containing the liquid through a pasteurizing fluid so as to raise the temperature of the upper portions of the bottles to a higher degree than the temperature of the lower portions of the bottles, and then causing a thermic circulation of the bottled liquid by turning each bottle sufficiently to place its hottest portion in a lower plane than the comparatively cooler liquid in the bottle.

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1,227,102. EXTENSION-TABLE. HENRY AMSEL and BENJAMIN REICHARD, New York, N. Y. Filed Apr. 15, 1916. Serial No. 91,293. (Cl. 45—9.)

1. In an extension table which includes a leg-structure upon which is fixed an elongated base-member and which includes also rail-bars fixed laterally on the base-member, extension-bars slidably connected with the rail-bars and table-top ends rigidly connected with the extension-bars; upstanding elements connecting the table-top ends and the extension-bars and spacing the table-top ends above the extension-bars to establish a compartment for containing a plurality of extension leaves with said leaves resting upon the extension-bars and extending laterally thereof, a plurality of extension leaves independent of each other, and a plurality of upstanding walls permanently connected to the base-member at its opposite ends with the top edges of the walls substantially flush with the undersurfaces of the table-top ends.



5. In an extension table which includes a leg-structure upon which is fixed an elongated base-member and which includes also rail-bars fixed laterally on the base member, extension-bars slidably connected with the rail-bars and table-top ends rigidly connected with the extension-bars; upstanding elements connecting the table-top ends and the extension-bars and spacing the table-top ends above the extension-bars to establish a compartment for containing a plurality of extension leaves with said leaves resting upon the extension bars and extending laterally thereof, a plurality of extension leaves independent of each other, a plurality of upstanding walls permanently connected to the base-member at its opposite ends with the top edges of the walls substantially flush with the undersurface of the table-top, and a pair of rods extending parallel with the upstanding walls and each located adjacent to one of the walls, and both fixed to the underside of one of the table top ends and projecting below the other table-top end when the table is closed.

8. In an extension table having extension rails and upstanding blocks at the ends thereof, a fixed vertical wall at one side parallel with said rails, and a movably mounted wall at the opposite side adapted to be moved into vertical or horizontal position, said walls constituting portions of a closed compartment and coöperating with said blocks and adapted to support the table top ends and extension leaves whether the table be opened or closed.

11. In an extension table having extension rails and upstanding blocks at the ends thereof, a vertical wall at one side parallel with said rails and fixed in a vertical plane, a movably mounted wall at the opposite side adapted to be moved into vertical or horizontal position, said walls constituting portions of a closed compartment and adapted to support the table top ends and extension leaves whether the table be opened or closed, said side walls being in the form of inverted truncated triangles, extension leaves each consisting of a pair of half-length leaves, a central longitudinally disposed coupling bar having its ends slidably engaged with the under sides of the table top ends, support bars fixed to the under sides of the table top ends, and brackets on the said side walls for coöperation with said support bars.

[Claims 2 to 4, 6, 7, 9, and 10 not printed in the Gazette.]

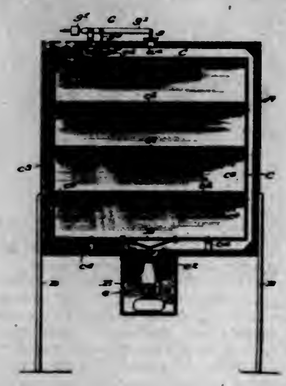
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1,227,103. BREAD RAISING AND WARMING CABINET. WILLIE G. ASKEW, Morgan City, La. Filed July 24, 1916. Serial No. 110,975. (Cl. 126—282.)

2. A bread raising and warming cabinet comprising a metallic-lined wooden casing having an air inlet opening in its bottom and an air exit opening at its top, a closed sheet-metal oven within said casing spaced therefrom on all sides and at top and bottom to permit the air to circulate around it and having a series of shelves supported therein, a heat producing device at the bottom of the casing in communication with said inlet, and a thermostat for actuating a valve controlling the escape of air through said exit, whereby a uniform temperature may be maintained within the casing.



4. A bread raising and warming cabinet comprising a casing, a spaced interior receptacle, means for constantly

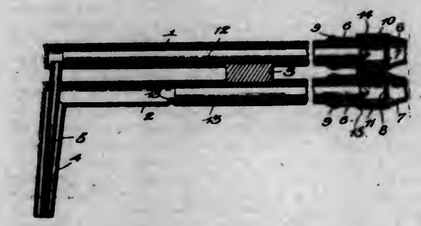


heating said space and thermostatically controlled means for admitting air to or excluding air from said space.

[Claims 1, 3, and 5 not printed in the Gazette.]

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1,227,104. BLOWPIPE. JAMES AGLIN, Providence, R. I. Filed Feb. 15, 1917. Serial No. 148,768. (Cl. 158—27.4.)



3. In a blow pipe, air and gas pipes having discharge nozzles, a valve seat in each pipe, stops between the nozzles and valve seats, and relatively long heavy rods slidable in said pipes and having valves formed on one end to engage in said valve seats and having their opposite ends engageable with said stops.

5. In a blow pipe, an air pipe having a nozzle, a gas pipe arranged alongside of the air pipe, telescoping nozzles borne by the respective pipes, and independent gravity valves in the respective pipe for simultaneously controlling the supply of air and gas thereto.

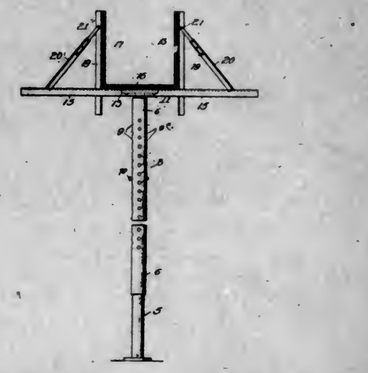
7. In a blow pipe, air and gas pipes, and a gravity controlled relatively long and heavy single rod in the gas pipe having a valve formed on one end for controlling the supply of gas thereto.

[Claims 1, 2, 4 and 6 not printed in the Gazette.]

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1,227,105. ADJUSTABLE SUPPORTING DEVICE. LEW A. BARNES, Chicago, Ill. Original application filed Feb. 1, 1916, Serial No. 75,529. Divided and this application filed July 22, 1916. Serial No. 110,670. (Cl. 248—2.)

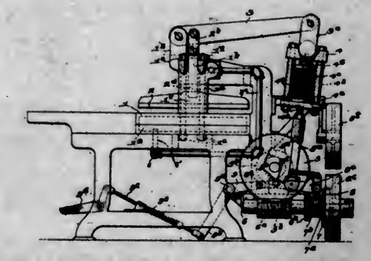
1. Supporting means for the purpose set forth, comprising telescoping members having a base, one of said members containing openings for receiving a pin to engage the other of said members and hold these members in relatively adjusted position, a bearing member supported on the one of said telescoping members which is supported on said pin, said last-referred-to telescoping member being rotatably supported relative to the other of said members and a single threaded adjustable connection between said bearing member and the one of the telescoping members on which it is directly supported.



2. Supporting means for the purpose set forth, comprising telescoping members, one of said members containing openings of different diameters arranged in series, with the edges of diametrically opposed openings in a plane at a right-angle to the median line of the member containing them, said openings being provided for receiving a pin to engage the other of said members and hold these members in relatively adjusted position, a tapered pin extending into a large and a small one of said openings and holding said members in relatively adjusted position, and a bearing surface on the upper end of the uppermost one of said members, for the purpose set forth.

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1,227,106. STEAM-TABLE. HENRY F. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed Oct. 12, 1914. Serial No. 866,296. (Cl. 34—16.)



1. In a steam table the combination of a hollow steam heated table, a hollow steam heated yoke mounted upon said table, a platen supported by said yoke, and platen operating devices.

2. In a steam table the combination of a hollow table, a hollow yoke mounted upon said table, a platen supported by said yoke, and platen operating devices; with means for supplying steam to the chambers in the table and in the yoke to heat the same uniformly, as and for the purpose specified.

3. In a compressor, the combination of a steam table, a hollow steam heated yoke thereon, a pair of side by side platens operatively suspended from said yoke, and

means for operating said platens independently, said platens being adapted to cooperate upon a large matrix, or to operate separately upon smaller matrices, and means for supplying steam to the table and yoke.

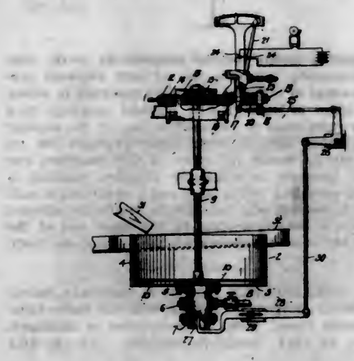
4. In a mechanical compressor steam table, the combination of a steam heated table, a steam heated yoke fastened to said table, a pair of side by side platens operatively suspended from said yoke, and means for operating said platens independently, said platens being adapted to simultaneously operate upon a double page matrix or to operate separately upon single page matrices.

5. In a steam table, the combination of a hollow table, a hollow yoke bolted to said table, a pair of side by side platens operatively suspended from said yoke adapted to simultaneously operate upon a double page matrix or to operate separately upon single page matrices, means for operating said platens independently, and means for conducting steam to the chambers of the yoke and table to heat the latter uniformly, as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,107. SETTLING APPARATUS. ALFRED L. BLOMFIELD, Denver, Colo. Filed Apr. 21, 1916. Serial No. 92,771. (Cl. 83—82.)



1. In combination, a container having an opening for the outflow of settling matter, a valve controlling the flow through said opening, an element for moving settling matter toward said opening, and mechanism for the adjustment of said valve, adapted to be actuated by a determinate resistance to the movement of said element.

3. In combination, a container having an opening for the outflow of settling matter, a valve controlling the flow through said opening, mechanism for the adjustment of said valve, adapted to be actuated by an excess of settling matter on the bottom of the container, and means operatively associated with said mechanism, for indicating the extent of the movement of the valve, exteriorly of the container.

6. In combination, a container having an opening for the outflow of settling matter, a valve controlling the flow through said opening, a driven element for moving settling matter toward said opening, a driving element capable of displacement by a resistance to the movement of the driven element, mechanism for the adjustment of said valve, adapted to be operated by said displacement, and a spring to resiliently oppose the operation of said mechanism.

7. In combination, a container having an opening for the outflow of settling matter, a device for moving settling matter toward said outlet, and mechanism for regulating the flow through said opening, adapted to be actuated by determinate resistance to the movement of said device.

[Claims 2, 4, 5, and 8 not printed in the Gazette.]

1,227,108. INNER TUBE FOR PNEUMATIC TIRES. HAMILTON CLAYTON BOGGS, Decatur, Ala. Filed July 8, 1916. Serial No. 107,423. (Cl. 152—13.)



1. In a tire, the combination with a rim and a shoe connected thereto, of a continuous annular inner tube mounted in said shoe, said tube being made of soft rubber with comparatively thick walls, and reinforced with one or more layers of canvas embedded therein, near the exterior thereof, said tube being substantially heart-shaped in cross section when deflated, and the walls of said tube being of greater thickness at the outer periphery than at the inner periphery, said tube being provided with annular grooves in its sides and outer periphery, forming with the shoe when the tube is deflated, annular spaces, lenticular in cross section, whereby when the tube is inflated the walls of the tube are forced outward compressing the inner layers of rubber thereof, and filling up said lenticular spaces, and whereby, when the tire is collapsed, a yielding cushion is provided between the tread of the tire and the rim, substantially as described.

2. In a pneumatic tire, the combination with a casing of an inner tube therefor composed of a thick annular shell of soft rubber, made thicker on its outer than on its inner periphery and molded to a set form with one or more layers of canvas inserted in the body and near the outer periphery thereof, said tube being provided with a wide depression in the outer periphery thereof, and with oppositely disposed similar depressions in the sides thereof, said depressions being separated by uninterrupted curved annular outwardly-projecting looped portions, adapted to engage and to have rolling contact with the interior of said casing, when deflated, the whole inner tube being adapted, when inflated, to form a continuous, thick, elastic lining, held under compression by, and with its tread and side portions fitting snugly throughout against, the inner walls of said casing, substantially as described.

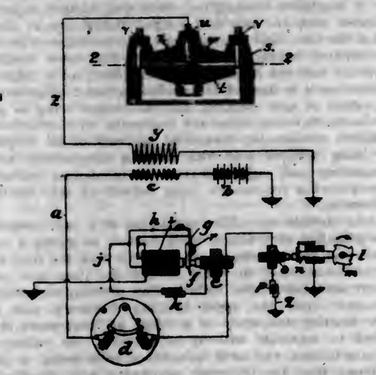
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1,227,109. IGNITION SYSTEM FOR INTERNAL-COMBUSTION ENGINES. WILLIAM C. BRINTON, Jr., Kennett Square, Pa., assignor to Philips-Brinton Company, Kennett Square, Pa., a Corporation of Pennsylvania. Filed Nov. 10, 1915. Serial No. 60,646. (Cl. 123—148.)

1. In an ignition system for internal combustion engines, in combination, a primary circuit, a vibrator in said circuit, said vibrator including a vibratory member and an electro-magnet separate from the primary coil hereinafter specified, a contact maker and interrupter in said circuit, a switch controlling the passage of current through said circuit, a device adapted to be moved into position to hold open the circuit through the vibrator, a secondary circuit, a primary coil and a secondary coil in the respective circuits and in operative relation with each other, a contact in the secondary circuit, a plurality of contacts adapted for connection with the spark plugs of the several engine cylinders, a shaft, means operated thereby to control the operation of the contact maker and interrupter, and a distributer operated by said shaft and adapted to close the circuit through the first contact and the other contacts successively.

2. In an ignition system for internal combustion engines, in combination, a primary circuit, a vibrator in said circuit, said vibrator including a vibratory member and an electro-magnet separate from the primary coil hereinafter specified, a switch adapted to close the circuit through the vibrator and thereby cause the electro-magnet to effect the continuous operation of the vibratory member, a secondary circuit, a primary coil and a secondary coil in the respective circuits and in operative relation with each other, and a distributer in the secondary circuit.





3. In an ignition system for internal combustion engines, in combination, a primary circuit, a vibrator in said circuit, a contact maker and interrupter in said circuit, a switch controlling the passage of current through said circuit, a device adapted to be moved either into position to hold open the circuit through the vibrator or into position to allow the continuous operation thereof, a secondary circuit, a shaft, means operated thereby to control the operation of the contact maker and interrupter, and a distributer in the secondary circuit operated by said shaft.

4. In an ignition system for internal combustion engines, in combination, a primary circuit, a vibrator in said circuit, a switch adapted to close the circuit through the vibrator and effect the continuous operation thereof, a secondary circuit, a series of contacts arranged at equal distances apart along a circle and adapted for connection with the spark plugs of the several engine cylinders, and a distributer plate electrically connected with the secondary circuit and rotatable on an axis coincident with the center of said circle, the length of the outer edge of the distributer plate approximating the distance between adjacent contacts.

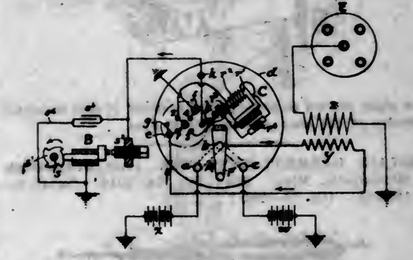
5. In an ignition for internal combustion engines, in combination, a primary circuit, a vibrator in said circuit, a contact maker and interrupter in said circuit, a switch controlling the passage of current through said circuit, a device adapted to be moved either into position to hold open the circuit through the vibrator or into position to allow the continuous operation thereof, a secondary circuit, a rotatable distributer plate electrically connected with the secondary circuit, a shaft adapted to effect the operation of the contact maker and interrupter and the rotation of the distributer plate, and a series of contacts at equal distances apart and at equal distances radially from the axis of rotation of the distributer plate, the length of the outer edge of the distributer plate approximating the distance between adjacent contacts.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,110. IGNITION SYSTEM FOR INTERNAL-COMBUSTION ENGINES. WILLIAM C. BRINTON, Jr., Kennett Square, Pa., assignor to Philips-Brinton Company, Kennett Square, Pa., a Corporation of Pennsylvania. Filed Mar. 23, 1916. Serial No. 86,236. (Cl. 123—148.)

1. In an ignition system for internal combustion engines, in combination, a primary circuit, a secondary circuit, primary and secondary coils in the respective circuits in operative correlation, a vibrator and a contact maker and interrupter arranged in parallel in the primary circuit, said vibrator comprising an electro-magnet separate from said coils and a vibrating member, a distributer in the secondary circuit, a cam shaft adapted to operate the distributer and control the operation of the contact maker and interrupter, and switching means adapted to close the circuit through the vibrator and effect its continuous operation and open the circuit through the contact maker and interrupter and vice versa.



2. In an ignition system for internal combustion engines, in combination, a primary circuit, a secondary circuit, primary and secondary coils in the respective circuits in operative correlation, a vibrator in one branch of the primary circuit, said vibrator comprising an electro-magnet separate from said coils and a vibrating member, a contact maker and interrupter in another branch of the primary circuit, a switch interposed in the primary circuit and adapted to close the circuit through one of said elements and open it through the other and vice versa, a plurality of independent sources of current supply, a second switch adapted to open and close said circuit through either source of current supply, a distributer in the secondary circuit, and a cam shaft to operate the distributer and control the operation of the contact maker and interrupter.

3. In an ignition system for internal combustion engines, in combination, an electric circuit, a vibrator in one branch of the circuit, a contact maker and interrupter in another branch of the circuit, and switching means adapted to close the circuit through the vibrator in either of two opposite directions and open the circuit through the contact maker and interrupter and vice versa.

4. In an ignition system for internal combustion engines, in combination, an electric circuit, a vibrator in one branch of the circuit, a contact maker and interrupter in another branch of the circuit, and a switch adapted, in two different positions, to cause the current to flow through the vibrator in opposite directions and adapted, in another position, to close the circuit through the contact maker and interrupter.

5. In an ignition system for internal combustion engines, in combination, an electric circuit, a vibrator in one branch of the circuit, a contact maker and interrupter in another branch of the circuit, and a switch turnable in one direction only and adapted to close the circuit alternately through the said two elements, said switch including means to reverse the polarity of the circuit through the vibrator.

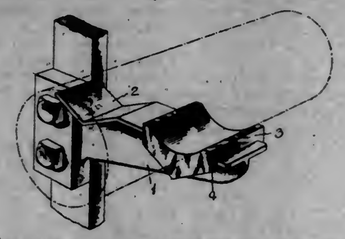
[Claims 6 to 12 not printed in the Gazette.]

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1,227,111. INSULATOR-BLOCK CABLE BRACKET-HANGER. ELLSWORTH J. BUNDICK, Detroit, Mich. Filed June 4, 1915. Serial No. 32,068. (Cl. 173—28.)

A cable support, comprising an arm having the upper edge thereof provided with a seat portion having separated transverse seats, each being V-shaped, an insulator adapted for supporting a cable and having the bottom thereof provided with inclined walls corresponding in area to the inclined walls of the seat and adapted to rest there-

on, said insulator having flanges on the end thereof depending below the seat portion of said arm and engaging



the edges thereof to prevent displacement of said insulator relative to the seat portion of said arm.

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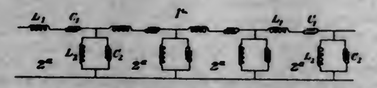
1,227,112. GARMENT-SUPPORTER. JOHN BURMEISTER, Minneapolis, Minn. Filed July 14, 1916. Serial No. 109,881. (Cl. 24—260.)



A garment supporter comprising an integral resilient metallic strip being bent upon itself to provide a pair of adjacent resilient arms, one of which is slightly longer than the other, the arms at their free end portions being materially widened and having down-turned flanges along each side and across the edge to form cup-shaped jaws, one adapted to receive the other and crimp therebetween a portion of a garment, and means for drawing said cup-shaped ends together comprising a slidable continuous member encompassing the arms and having frictional contact therewith, said member being provided with relatively long forwardly extending inclined lip portions each projecting a substantial distance from the body thereof, and engaging the surfaces of the arms, substantially as described.

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1,227,113. ELECTRIC WAVE-FILTER. GEORGE A. CAMPBELL, Montclair, N. J., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed July 15, 1915. Serial No. 40,057. (Cl. 179—80.)



1. An electric wave-filter consisting of a connecting line of negligible attenuation containing lumped impedance in series with the line and lumped impedance in shunt across the line, said impedances having precomputed values dependent upon the upper limiting frequency and the lower limiting frequency of a range of frequencies it is desired to transmit without attenuation, the values of said series and shunt impedances being so proportioned that the structure transmits with practically negligible attenuation sinusoidal currents of all frequencies lying between said two limiting frequencies, while attenuating and approximately extinguishing currents neighboring frequencies lying outside of said limiting frequencies.

2. An electric wave-filter consisting of a connecting line of negligible attenuation composed of a plurality of sections, each section including a capacity element and an inductance element, one of said elements of each section being in series with the line and the other in shunt across the line, said capacity and inductance elements having precomputed values dependent upon the upper limiting frequency and the lower limiting frequency of a range of frequencies it is desired to transmit without attenuation, the values of said capacity and inductance elements being so proportioned that the structure transmits with practically negligible attenuation sinusoidal currents of all frequencies lying between said two limiting frequencies, while attenuating and approximately extinguishing currents of neighboring frequencies lying outside of said limiting frequencies.

3. An electric wave-filter consisting of a connecting line of negligible attenuation containing lumped capacity in series with the line and lumped inductance in shunt across the line, said capacity and said inductance having precomputed values dependent upon the upper limiting frequency and the lower limiting frequency of a range of frequencies it is desired to transmit without attenuation, the values of said capacity and inductance being so proportioned that the structure transmits with practically negligible attenuation sinusoidal currents of all frequencies lying between said two limiting frequencies, while attenuating and approximately extinguishing currents of neighboring frequencies lying outside of said limiting frequencies.

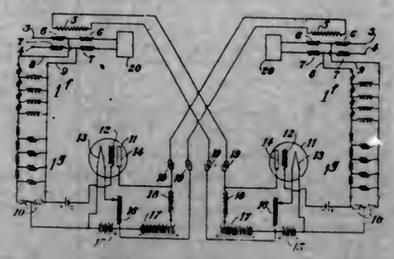
4. An electric wave-filter consisting of a line composed of a plurality of sections, each section including a condenser and an inductance coil in series with the line, and an inductance coil in shunt across the line, said condensers and inductance coils having precomputed values dependent upon the upper limiting frequency and the lower limiting frequency of a range of frequencies it is desired to transmit without attenuation, the values of said condensers and said inductance coils being so proportioned that the structure transmits with practically negligible attenuation sinusoidal currents of all frequencies lying between said two limiting frequencies, while attenuating and approximately extinguishing currents of neighboring frequencies lying outside of said limiting frequencies.

5. An electric wave-filter consisting of a line composed of a plurality of sections, each section including a condenser in series with the line and an inductance coil and a condenser in parallel in shunt across the line, said condensers and inductance coils having precomputed values dependent upon the upper limiting frequency and the lower limiting frequency of a range of frequencies it is desired to transmit without attenuation, the values of said condensers and said coils being so proportioned that the structure transmits with practically negligible attenuation sinusoidal currents of all frequencies lying between said two limiting frequencies while attenuating and approximately extinguishing currents of neighboring frequencies lying outside of said limiting frequencies.

[Claim 6 not printed in the Gazette.]

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1,227,114. ELECTRICAL RECEIVING, TRANSLATING, OR REPEATING CIRCUIT. GEORGE A. CAMPBELL, Montclair, N. J., assignor to American Telephone and Telegraph Company, a Corporation of New York. Original application filed July 15, 1915, Serial No. 40,057. Divided and this application filed June 5, 1916. Serial No. 101,845. (Cl. 179—170.)



1. The combination with a signaling circuit and a repeater therefor, of a wave filter inserted in circuit between said signaling circuit and said repeater for transmitting, with practically uniformly negligible attenuation, between said signaling circuit and repeater, sinusoidal currents of all frequencies between an upper pre-assigned limiting frequency and a lower pre-assigned limiting frequency of a predetermined range of frequencies, while attenuating and approximately extinguishing currents of neighboring frequencies lying outside of said range.

2. The combination with a transmission line, of an artificial line, a repeater, and a wave-filter adapted to transmit with negligible attenuation a definite range of frequencies inserted in circuit between said line and said repeater for prescribing the range of frequencies to be transmitted by said repeater, substantially as described.

3. The combination with a telephone line, of a vacuum tube repeater, a wave-filter for limiting the range of frequencies transmitted by said repeater, and an artificial line simulating the impedance characteristics of said telephone line only over said limited range of frequencies, substantially as described.

4. The combination with a telephone line and a vacuum tube repeater coöperating therewith, of an electric wave-filter inserted in circuit between said line and the input side of said repeater, said filter consisting of a connecting line composed of a plurality of sections, each section including a capacity element and an inductance element, one of said elements of each section being in series with said connecting line and the other in shunt across said connecting line, said capacity and inductance elements having precomputed values dependent upon the upper limiting frequency and the lower limiting frequency of a range of frequencies necessary for telephonic transmission of intelligible speech, the values of said capacity and inductance elements being so proportioned that said connecting line transmits with practically negligible attenuation, from the telephone line to said vacuum repeater, sinusoidal currents of all frequencies within said range of frequencies, while attenuating and approximately extinguishing currents of neighboring frequencies lying outside of said range.

5. The combination with a signaling circuit and a translating device therefor, of a wave filter inserted in circuit between said signaling circuit and said translating device, said filter including impedances having values depending upon the upper limiting frequency and the lower limiting frequency of a prescribed range of frequencies, the values of said impedances being so proportioned that said filter transmits with practically uniformly negligible attenuation, between said signaling circuit and translating device, sinusoidal currents of all frequencies within said range of frequencies, while attenuating and approximately extinguishing currents of neighboring frequencies lying outside of said range.

[Claims 2, 4, 6, 9, and 10 not printed in the Gazette.]

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1,227,115. BELT-BUCKLE. JOSEPH CHABOT, North Attleboro, Mass., assignor to Geo. L. Paine Company, North Attleboro, Mass., a Corporation of Rhode Island. Filed Nov. 4, 1916. Serial No. 129,609. (Cl. 24—194.)



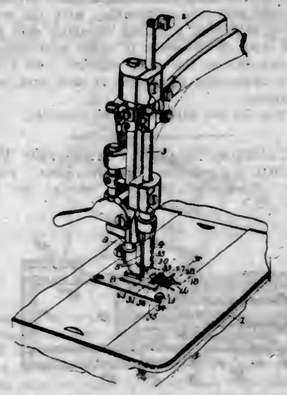
3. In a belt buckle, a casing, a clamp, means to connect the clamp at one end thereof to the casing so that the clamp may bodily slide and have oscillatory movement at its opposite end, means to force the clamp into belt clamping position upon sliding thereof in one direction, and means to oscillate said opposite end of the clamp to move same out of belt clamping position upon sliding of the clamp in the opposite direction.

5. A belt buckle including a casing, a clamp, means to pivotally and slidably connect the clamp to the casing so as to cause same to have an inclined relation thereto, means to automatically rock the clamp so as to move same completely out of belt clamping position upon movement of the clamp in one direction, and means engaging the inclined part of the clamp to wedge same to clamp the belt upon movement of the clamp in the opposite direction.

[Claims 1, 2, and 4 not printed in the Gazette.]

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1,227,116. TUCK-FORMING MECHANISM FOR SEWING-MACHINES. JOHN E. CHALMAN, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed June 11, 1915. Serial No. 33,458. (Cl. 270—90.)



1. The combination of a work support, a feeding mechanism including a feed dog located beneath the work support, a presser foot coöperating with said feed dog, said work support having spaced ribs thereon and the presser foot having grooves coöperating with said ribs to form tucks in the fabric, stitching mechanism for stitching the tucks, and means yieldingly engaging the material in advance of the presser foot for holding the same continuously on the work support in advance of the presser foot.

2. The combination of a work support, a feeding mechanism including a feed dog located beneath the work support, a presser foot coöperating with said feed dog, said work support having spaced ribs thereon extending in front of the presser foot, grooves coöperating with said ribs to form tucks in the material, stitching mechanism for stitching the tucks, means carried by the presser foot and engaging the material in advance thereof for holding the material on said tuck forming ribs, and devices for yieldingly pressing said means on the work support when the presser foot is raised through the action of the feed dog.

3. The combination of a work support, a feeding mechanism including a feed dog located beneath the work support, a presser foot coöperating with said feed dog, said work support having spaced ribs thereon extending in front of the presser foot, said presser foot having grooves coöperating with said ribs to form tucks in the material, stitching mechanism for stitching said tucks, a pivoted arm carried by the presser foot and extending forwardly therefrom, a roller pivotally supported by said arm and cooperating with the work support between said ribs, and means for yieldingly depressing said arm.

4. The combination of a work support, a feeding mechanism including a feed dog located beneath the work support, a presser foot coöperating with said feed dog, said work support having spaced ribs thereon extending in front of the presser foot, said foot having grooves cooperating with said ribs to form tucks in the material, stitching mechanism for stitching said tucks, a pivoted arm carried by the presser foot and extending forwardly therefrom, a roller pivotally supported by said arm and cooperating with the work support between said ribs, a

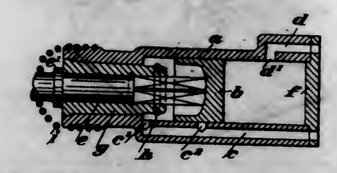
spring engaging said arm and forcing the same downwardly to cause said roller to engage the material on the work support, and a stop for limiting the downward movement of said arm.

5. The combination of a work support, a feeding mechanism including a feed dog located beneath the work support, a presser foot coöperating with said feed dog and having grooves formed in its under face, said work support having spaced ribs thereon extending in front of the presser foot, said grooves coöperating with said ribs to form tucks in the material, stitching mechanism for stitching said tucks, a pivoted arm carried by the presser foot and extending forwardly therefrom, a roller pivotally supported by said arm and coöperating with the work support between said ribs, a spring engaging said arm and forcing the same downwardly to cause said roller to engage the material on the work support, and a stop for limiting the downward movement of said arm, said stop being adjustable.

[Claims 6 to 10 not printed in the Gazette.]

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1,227,117. PNEUMATICALLY-OPERATED PERCUSSION-TOOL. HEINRICH CHRISTIANSEN, Pinneberg, Germany. Filed Oct. 26, 1916. Serial No. 127,830. (Cl. 255—42.)



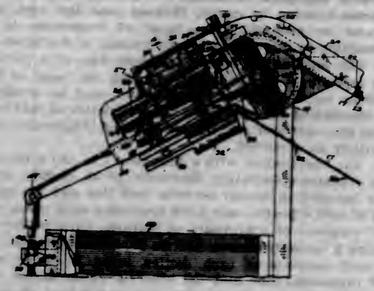
1. A pneumatic percussion implement comprising a cylinder closed at its rear end, a hammer-piston within said cylinder, a tool and means for guiding it in the forward end of said cylinder, said cylinder having a port opening a short distance from the rear end thereof for the admission of fluid to drive the hammer-piston toward the tool and to produce an air-cushion on the return stroke of the hammer-piston, and a port having one opening in the cylinder at the front thereof and also another opening in the cylinder at a distance behind the front end of the cylinder slightly greater than the length of the hammer-piston, whereby the two cylinder ports are put into communication behind said piston, and the piston is rendered inoperative whenever the tool is not pressed against the work so as to oppose a resistance to the free forward movement of said tool and the piston.

2. A pneumatic percussion implement comprising a cylinder closed at its rear end, a hammer-piston within said cylinder, a tool and means for guiding it in the forward end of said cylinder, said cylinder having a port opening a short distance from the rear end thereof for the admission of fluid to drive the hammer-piston toward the tool, a port having one opening in the cylinder at the front thereof and also another opening in the cylinder at a distance behind the front end of the cylinder slightly greater than the length of the hammer-piston, whereby the two cylinder ports are put into communication behind said piston, and the piston is rendered inoperative whenever the tool is not pressed against the work so as to oppose a resistance to the free forward movement of said tool and the piston, spring means for preventing the ejection of the tool from the cylinder, and means for holding the hammer-piston in its forward inoperative position so long as the tool is not pressed into contact with the work.

3. A pneumatic percussion implement comprising a cylinder having means for the admission and outflow of the operating fluid, a tool guide mounted in the forward end of the cylinder, a tool mounted in said guide, a hammer-piston mounted for reciprocation in said cylinder, spring means on said guide for holding the piston in its forward inoperative position when the tool is not pressed back by the work, and by-passing means from one of the ports, said by-passing means being so arranged that the operating fluid can pass through the cylinder without operating the piston when the piston is held in the inoperative position.

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1,227,118. BOBBIN-SORTER. HOWARD D. COLMAN, Rockford, Ill., assignor to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners doing business as Barber-Colman Company, Rockford, Ill. Filed Oct. 18, 1915. Serial No. 56,542. (Cl. 83—60.)



1. A bobbin sorter having, in combination, an endless series of trough-like bobbin-receiving elements, each of said elements having an interior surface to which yarn will cling, said elements being inclined to permit the sliding of empty bobbins, means for longitudinally discharging bobbins into said elements, a receptacle located in position to receive bobbins which slide from said elements, means for causing the series of elements to move, and a receptacle located in position to receive bobbins discharged by said elements.

2. A bobbin sorter having, in combination, an endless movable series of trough-like bobbin-receiving elements, each of said elements having an interior surface to which yarn will cling, said elements being supported in an inclined position, and means for longitudinally discharging bobbins into said elements.

3. A bobbin sorter having, in combination, an inclined part having a surface to which yarn will cling, means for longitudinally discharging bobbins onto said surface, a stop at the lower end of said surface, and means for moving said inclined part to carry the bobbin away from said stop.

4. A bobbin sorter having, in combination, a bobbin-receiving element provided with a surface to which yarn will cling, said element being inclined to permit the sliding of an empty bobbin, means for placing bobbins on said element with their axes extending in the direction of inclination of said element, a receptacle located in position to receive a bobbin which may slide from said element, a second receptacle, and means for moving said element in position to discharge a bobbin into the second receptacle.

5. A bobbin sorter having, in combination, an endless series of bobbin-receiving elements, each element having a surface to which yarn will cling, said elements being inclined to permit the sliding of empty bobbins, a receptacle located in position to receive bobbins which slide from said elements, means for causing the series of elements to move, and a receptacle located in position to receive bobbins discharged by said elements.

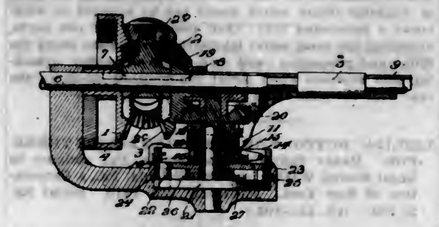
[Claims 6 to 15 not printed in the Gazette.]

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1,227,119. SEWING-MACHINE. ROBERT CORNELY, Paris, France. Filed June 6, 1913. Serial No. 772,099. (Cl. 112—7.)

1. In a machine of the character described, a fabric feeding member adapted to be displaced laterally to the direction of feed, means for operating said member to feed the fabric, and means controlled by the lateral displacement of said feeding member and controlling the feed operating means to vary the feed inversely as the lateral displacement.





2. In a machine of the character described, a fabric feeding roller adapted to be displaced laterally to the direction of feed, a differential gear train for driving said roller comprising a drive gear, a driven gear and a feed regulating gear, and means responding to the lateral movements of said feed roller for imparting rotation to said feed regulating gear.

3. In a machine of the character described, a fabric feeding roller adapted to be displaced laterally to the direction of feed, a differential gear train for driving said roller, and means responding to the lateral movements of said feed roller for controlling the movements of one member of said gear train.

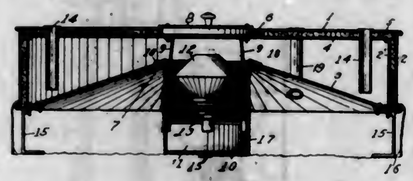
4. In a machine of the character described, a fabric feeding roller adapted to be displaced laterally to the direction of feed, a differential gear train for driving said roller comprising a drive gear, a driven gear and a feed regulating gear, means operated by the lateral movements of said roller for driving said feed regulating gear in one direction, and brake means for retarding the rotation of the regulating gear when the resistance offered by the driven gear exceeds that offered by the regulating gear.

5. In a machine of the character described, a fabric feeding roller adapted to be displaced laterally to the direction of feed, a differential gear train for rotating said roller and including a feed controlling gear, driving means for said gear comprising a shaft operatively connected to said gear, a clutch wheel secured to said shaft, a pair of pinions mounted loosely on said shaft and having yielding clutch connections with said wheel, and racks reciprocating with said roller engaging said pinions to drive said wheel and gear in one direction.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,120. HOVER. GEORGE CROTSER, Springfield, Ohio, assignor to The Buckeye Incubator Company, Springfield, Ohio, a Corporation of Ohio. Filed Apr. 10, 1916. Serial No. 90,242. (Cl. 119—32.)

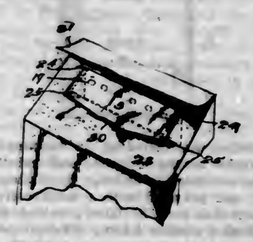


1. In a device of the character described, a circular heat chamber having a flat top, a vertical outer side wall and a bottom which is inclined upwardly from the lower edge of said side wall toward the top, legs secured to the outer edge of said inclined bottom to support said heat chamber above the ground line to form a hovering chamber beneath the same, a curtain suspended from the outer lower edge of said chamber to inclose said hovering space, said heat chamber having slined circularly arranged openings through its top and bottom, a cover for the top opening and a heater including a flue suspended from said cover and located in said hovering space with all portions thereof exposed to the air in said hovering space, said flue being spaced away from the edges of the opening through the bottom of said heat chamber so as to permit a circulation of air about all portions of the same, said heat chamber being provided with a continuous passageway leading to the interior of the same between the edges of the top and bottom openings, and a flue suspended from the top of said heat chamber and extending to a point in proximity to the bottom thereof near the side wall of said chamber.

[Claim 2 not printed in the Gazette.]

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1,227,121. SIFTING ATTACHMENT FOR BOXES. EMMA O. DE VRIES, Chicago, Ill. Filed Dec. 14, 1915. Serial No. 66,870. (Cl. 221—62.)



1. A device of the character described comprising a trough-shaped member adapted to have a pivotal connection with a box, said member comprising two portions arranged at an angle to each other, one of said portions operating to close an opening in the box when the device is not in use and the other portion operating to close said opening when the member is swung into a position for discharging the contents of the box, the last-mentioned portion being provided with openings through which the contents are discharged when the device is in the said discharging position, and lateral wings closing the ends of the said member.

2. A device of the character described comprising a trough-shaped member adapted to have a pivotal connection with a box, said member comprising two portions arranged at an angle to each other, one of said portions operating to close an opening in the box when the device is not in use and the other portion operating to close said opening when the member is swung into a position for discharging the contents of the box, the last-mentioned portion being provided with openings through which the contents are discharged when the device is in the said discharging position, and wing portions connecting the beforementioned angularly-arranged portions and arranged to leave the ends of the latter projecting beyond the said wings.

3. A blank for use as described comprising the integral portions 2, 3, said portion 2 being provided with openings, the wings 5 integral with the portion 3 and having curved edges 6, and the tabs 9 integral with the wings, said blank being provided with notches 16 on opposite sides at points on the line of juncture of the portions 2, 3.

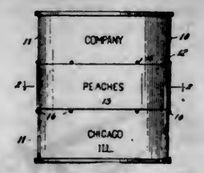
4. The combination with a box provided in its top with an opening and slits 24, 25, at the corners of said opening, of a sifting attachment comprising a trough-shaped member composed of portions 2, 3, arranged at an angle, the said portion 2 being provided with discharge openings, wings 5 joining the portions 2, 3, the length of the opening in the box corresponding to the distance between said wings and being of less depth than that of the portion 2, said wings being arranged to leave the ends of portions 2, 3, projecting beyond the wings and adapted to have a swinging movement in the slits 25, and the ends of portion 3 projecting within the slits 24 and adapted to have a pivotal movement upon the upper face of the box.

5. The combination with a box having an opening in its top, and slits 24, 25, at the corners of said opening, of a

sifting attachment provided with discharge openings and having a pivotal bearing upon the upper face of the box and adapted to close over said opening when not in use and to be swung into a position to permit the contents to be discharged through the said discharge openings, said attachment having lateral extensions adapted to be passed through the slits 24, and lateral wings projecting within the slits 25.

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1,227,122. CAN AND ATTACHABLE METALLIC LABEL THEREFOR. FELIX EBERHART, Newark, N. J., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 9, 1912. Serial No. 719,366. (Cl. 40—21.)



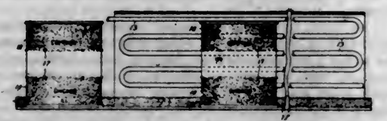

1. A labeled can including, in combination: a sheet metal container having a printed and embellished surface adapted to successfully undergo processing without discoloration, and provided with a label-receiving space; a separate attached metallic label provided with a printed and embellished surface having different properties from said surface of the container and which would be injuriously affected by processing; and attaching means whereby the said label may be applied to and retained on said space of the container.

2. A lithographed and labeled sheet metal can the body of which is in colors adapted to withstand a processing heat, combined with a separate attached label in colors which are different from those on said body and are not adapted to withstand a processing heat.

3. A sheet metal can the body of which is formed with rows of outstanding embossments forming a space, and which outside of said space is in colors adapted to withstand a processing heat, combined with a separate sheet metal label which is in colors which are different from those on said body and are not adapted to withstand a processing heat, said label being arranged in said space on the body and having its ends attached and being held in place by said embossments.

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1,227,123. PROCESS OF MANUFACTURING LITHOGRAPHED CANS. FELIX EBERHART, Newark, N. J., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 9, 1914. Serial No. 817,721. (Cl. 41—18.)



1. The process of manufacturing lithographed cans, which consists: in first lithographing the sheet metal parts of which the cans are to be made in colors adapted to withstand a processing heat, and preparing separate labels adapted to be attached to the said cans and lithographing the same in colors which would not be adapted to withstand a processing heat; then assembling the can parts, excepting the labels, to provide cans ready for filling and processing; and attaching said separate labels to the cans after processing.

2. The process of manufacturing lithographed cans, which consists: in first lithographing the sheet metal parts of which the can bodies are to be made in colors adapted to withstand a processing heat leaving a blank space over which the label is to be attached after processing, and preparing separate sheet metal labels adapted to be attached to the said cans and lithographing the same in desirable colors which would not be adapted to withstand a processing heat; then assembling the can parts, excepting the sheet metal labels, to provide cans ready for filling and processing; and then, after processing, attaching said separate sheet metal lithographed labels to the cans over the said blank space.

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1,227,124. BUTTON AND FASTENING DEVICE THEREFOR. HARRY EDELSON, Philadelphia, Pa., assignor to Regal Button Works, Inc., Philadelphia, Pa., a Corporation of New York. Filed Sept. 21, 1915. Serial No. 51,739. (Cl. 24—103.)



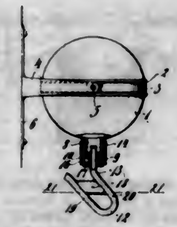
1. The combination with a button, of a support comprising a plate having means to engage the button and its sides laterally deflected to form guide grooves, and a locking member comprising a resilient strip deflected to form side members slidable in said grooves and terminating in portions to engage the garment, one of said side members forming a locking means, and one of said grooves having an aperture in its side wall to receive said locking means.

2. The combination with a button, of a support connected therewith and provided with guide grooves, one of which has an aperture in its wall intermediate its ends, and a locking member consisting of a resilient strip deflected upon itself to form side walls at one end and hooks at its free ends, and having one of its side walls provided with means to interlock with said aperture when the locking member is in its closed position and be retained in locked position by the resiliency of said strip.

3. The combination with a button, of a support connected therewith and provided with guide grooves, each of which has intermediate its ends a lug receiving portion, and a locking member consisting of a resilient strip deflected upon itself to form side walls slidable in said grooves and having its free ends forming hooks, each of said side walls having a lug to resiliently interlock with its respective lug receiving portion, said lugs being disengaged from said lug receiving portions by moving the free ends of the locking member toward each other.

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1,227,125. VESSEL FOR DISPENSING LIQUIDS. WILHELM ELSNER, Zurich, Switzerland. Filed May 12, 1914. Serial No. 838,080. (Cl. 221—98.)

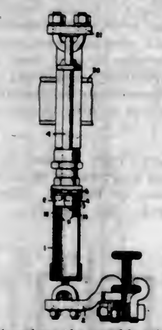


A device of the character described, comprising in combination, an air-tight vessel having a circular groove, a valveless vertical outlet tube projecting from said vessel, and a ring in said groove in which the vessel is pivotally supported, a bracket and pins with which said ring is pivotally mounted in said bracket, shanks on said outlet tube in a plane perpendicular to the axis of suspension passing through said pins, and a hollow cross-piece communicating with one of said shanks but closed against the other, substantially as described and for the purpose set forth.

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1,227,126. SHOCK-ABSORBER. ERNST FLENTJE, Cambridge, Mass. Filed Jan. 22, 1917. Serial No. 143,574. (Cl. 21—105.)

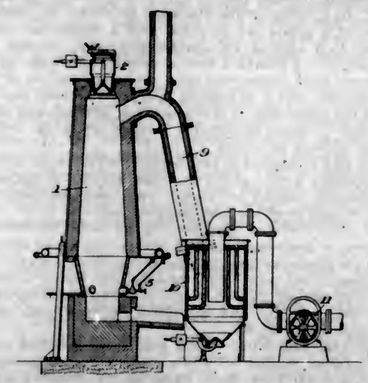


1. In a shock absorber, the combination with a cylinder, of a piston therein provided with ports, a valve for closing said ports, valve-retaining pins secured to the valve and extending through the piston, said pins operating to limit the opening movement of the valve, and guiding pins secured to the valve and occupying apertures in the piston, said guiding pins serving to prevent the valve from having any canting movement due to looseness of the valve-retaining pins in their apertures.

2. In a shock absorber, the combination with a cylinder, of a piston therein provided with ports, a valve for closing said ports, valve-retaining pins secured to the valve and extending through the piston, said pins operating to limit the opening movement of the valve, guiding pins secured to the valve and occupying apertures in the piston, said guiding pins serving to prevent the valve from having any canting movement due to looseness of the valve-retaining pins in their apertures, and a cushioning spring encircling each guiding pin and cushioning the movement of the valve toward the piston.

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1,227,127. PROCESS OF REDUCING METAL-BEARING SUBSTANCES. GEORGE L. FOGLER, Pittsburgh, Pa. Filed Mar. 30, 1912. Serial No. 687,345. (Cl. 75—17.)



1. The process of reducing metal bearing substances consisting in heating the metal bearing substance with a flux and in the presence of carbon and thereby partially reducing the metal and dissolving it in molten slag and forming a carbon free mass with the partially reduced metal distributed therein, and heating said mass in a carbon surface container and thereby fully reducing the metal and causing it to coalesce and precipitate in the fused condition from the slag.

2. The process of reducing metal bearing substances, consisting in partially reducing the metal bearing substance in the presence of carbon and dissolving the partially reduced product in molten slag, thereby forming a spongy mass, and heating the spongy mass in a carbon lined container and thereby fully reducing it and causing the free metal to coalesce and precipitate in the fused condition from the slag.

3. The process of reducing iron from its ores or other iron bearing substances, consisting in partially reducing the iron bearing substance in one furnace in the presence of carbon and in said furnace dissolving the partially reduced substance in molten slag, thereby forming a spongy mass, and heating the spongy mass with carbon in a second furnace and thereby fully reducing the iron and causing it to coalesce and precipitate in the fused condition from the slag.

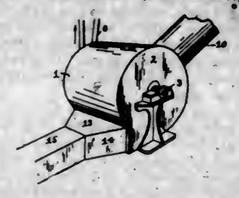
4. The process of reducing iron from its ores or other iron bearing substances, consisting in partially reducing the iron bearing substance in a furnace in the presence of carbon and feldspar and dissolving the partially reduced substance in the molten slag, thereby forming a spongy mass, and in a second furnace heating the spongy mass with carbon and thereby fully reducing the iron and causing it to coalesce and precipitate in the fused condition from the slag.

5. The process of reducing metal bearing substances, consisting in partially reducing the metal bearing substance in a furnace in the presence of a flux and insufficient carbon to complete the reduction and thereby partially reducing the metal and dissolving it in molten slag and forming a carbon free mass with the partially reduced metal distributed therein, and heating said mass in a carbon surfaced container and thereby reducing the metal and causing it to coalesce and precipitate in the fused condition from the slag.

[Claim 6 not printed in the Gazette.]

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1,227,128. CONVEYING MECHANISM. WILLIAM JAMES FOSTER, Cleveland, Ohio, assignor to The Ohio Blower Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 9, 1912, Serial No. 730,374. Renewed Nov. 6, 1916. Serial No. 129,892. (Cl. 198—10.)



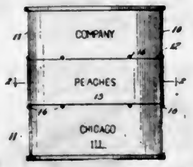
1. In conveyer mechanism, the combination of a fan casing, a pair of laterally spaced fans in said casing having their axes in substantially the same line and having, on the same side of such axis, an inlet and an outlet opening, the inlet opening being interposed between the fans, and a conveyer conduit comprising an inlet pipe projecting into the casing through the inlet opening toward the outlet opening and arranged at one side of the axis of the fan and an exhaust pipe extending from the outlet opening.

2. In conveyer mechanism, the combination of a fan casing, a pair of laterally spaced fans therein having their axes in substantially the same straight line, the casing having an inlet and an outlet opening at one side of the axes of the fans, the inlet opening being interposed between the fans, and a conveyer conduit comprising an

sifting attachment provided with discharge openings and having a pivotal bearing upon the upper face of the box and adapted to close over said opening when not in use and to be swung into a position to permit the contents to be discharged through the said discharge openings, said attachment having lateral extensions adapted to be passed through the slits 24, and lateral wings projecting within the slits 25.

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1,227,122. CAN AND ATTACHABLE METALLIC LABEL THEREFOR. FELIX EBERHART, Newark, N. J., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 9, 1912. Serial No. 719,366. (Cl. 40—21.)



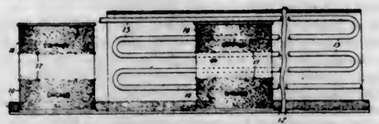

1. A labeled can including, in combination: a sheet metal container having a printed and embellished surface adapted to successfully undergo processing without discoloration, and provided with a label-receiving space; a separate attached metallic label provided with a printed and embellished surface having different properties from said surface of the container and which would be injuriously affected by processing; and attaching means whereby the said label may be applied to and retained on said space of the container.

2. A lithographed and labeled sheet metal can the body of which is in colors adapted to withstand a processing heat, combined with a separate attached label in colors which are different from those on said body and are not adapted to withstand a processing heat.

3. A sheet metal can the body of which is formed with rows of outstanding embossments forming a space, and which outside of said space is in colors adapted to withstand a processing heat, combined with a separate sheet metal label which is in colors which are different from those on said body and are not adapted to withstand a processing heat, said label being arranged in said space on the body and having its ends attached and being held in place by said embossments.

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1,227,123. PROCESS OF MANUFACTURING LITHOGRAPHED CANS. FELIX EBERHART, Newark, N. J., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 9, 1914. Serial No. 817,721. (Cl. 41—18.)



1. The process of manufacturing lithographed cans, which consists: in first lithographing the sheet metal parts of which the cans are to be made in colors adapted to withstand a processing heat, and preparing separate labels adapted to be attached to the said cans and lithographing the same in colors which would not be adapted to withstand a processing heat; then assembling the can parts, excepting the labels, to provide cans ready for filling and processing; and attaching said separate labels to the cans after processing.

2. The process of manufacturing lithographed cans, which consists: in first lithographing the sheet metal parts of which the can bodies are to be made in colors adapted to withstand a processing heat leaving a blank space over which the label is to be attached after processing, and preparing separate sheet metal labels adapted to be attached to the said cans and lithographing the same in desirable colors which would not be adapted to withstand a processing heat; then assembling the can parts, excepting the sheet metal labels, to provide cans ready for filling and processing; and then, after processing, attaching said separate sheet metal lithographed labels to the cans over the said blank space.

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1,227,124. BUTTON AND FASTENING DEVICE THEREFOR. HARRY EDELSON, Philadelphia, Pa., assignor to Regal Button Works, Inc., Philadelphia, Pa., a Corporation of New York. Filed Sept. 21, 1915. Serial No. 51,739. (Cl. 24—103.)



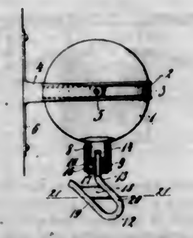
1. The combination with a button, of a support comprising a plate having means to engage the button and its sides laterally deflected to form guide grooves, and a locking member comprising a resilient strip deflected to form side members slidable in said grooves and terminating in portions to engage the garment, one of said side members forming a locking means, and one of said grooves having an aperture in its side wall to receive said locking means.

2. The combination with a button, of a support connected therewith and provided with guide grooves, one of which has an aperture in its wall intermediate its ends, and a locking member consisting of a resilient strip deflected upon itself to form side walls at one end and hooks at its free ends, and having one of its side walls provided with means to interlock with said aperture when the locking member is in its closed position and be retained in locked position by the resiliency of said strip.

3. The combination with a button, of a support connected therewith and provided with guide grooves, each of which has intermediate its ends a lug receiving portion, and a locking member consisting of a resilient strip deflected upon itself to form side walls slidable in said grooves and having its free ends forming hooks, each of said side walls having a lug to resiliently interlock with its respective lug receiving portion, said lugs being disengaged from said lug receiving portions by moving the free ends of the locking member toward each other.

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1,227,125. VESSEL FOR DISPENSING LIQUIDS. WILHELM ELSNER, Zurich, Switzerland. Filed May 12, 1914. Serial No. 838,080. (Cl. 221—98.)



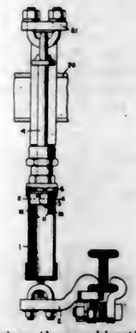
A device of the character described, comprising in combination, an air-tight vessel having a circular groove, a valveless vertical outlet tube projecting from said vessel, and a ring in said groove in which the vessel is pivotally supported, a bracket and pins with which said ring is pivotally mounted in said bracket, shanks on said outlet tube in a plane perpendicular to the axis of suspension



passing through said pins, and a hollow cross-piece communicating with one of said shanks but closed against the other, substantially as described and for the purpose set forth.

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1,227,126. SHOCK-ABSORBER. ERNST FLENTJE, Cambridge, Mass. Filed Jan. 22, 1917. Serial No. 143,574. (Cl. 21—105.)

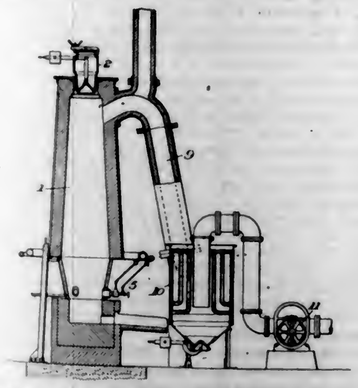


1. In a shock absorber, the combination with a cylinder, of a piston therein provided with ports, a valve for closing said ports, valve-retaining pins secured to the valve and extending through the piston, said pins operating to limit the opening movement of the valve, and guiding pins secured to the valve and occupying apertures in the piston, said guiding pins serving to prevent the valve from having any canting movement due to looseness of the valve-retaining pins in their apertures.

2. In a shock absorber, the combination with a cylinder, of a piston therein provided with ports, a valve for closing said ports, valve-retaining pins secured to the valve and extending through the piston, said pins operating to limit the opening movement of the valve, guiding pins secured to the valve and occupying apertures in the piston, said guiding pins serving to prevent the valve from having any canting movement due to looseness of the valve-retaining pins in their apertures, and a cushioning spring encircling each guiding pin and cushioning the movement of the valve toward the piston.

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1,227,127. PROCESS OF REDUCING METAL-BEARING SUBSTANCES. GEORGE L. FOGLER, Pittsburgh, Pa. Filed Mar. 30, 1912. Serial No. 687,845. (Cl. 75—17.)



1. The process of reducing metal bearing substances consisting in heating the metal bearing substance with a flux and in the presence of carbon and thereby partially reducing the metal and dissolving it in molten slag and forming a carbon free mass with the partially reduced metal distributed therein, and heating said mass in a carbon surface container and thereby fully reducing the metal and causing it to coalesce and precipitate in the fused condition from the slag.

2. The process of reducing metal bearing substances, consisting in partially reducing the metal bearing substance in the presence of carbon and dissolving the partially reduced product in molten slag, thereby forming a spongy mass, and heating the spongy mass in a carbon lined container and thereby fully reducing it and causing the free metal to coalesce and precipitate in the fused condition from the slag.

3. The process of reducing iron from its ores or other iron bearing substances, consisting in partially reducing the iron bearing substance in one furnace in the presence of carbon and in said furnace dissolving the partially reduced substance in molten slag, thereby forming a spongy mass, and heating the spongy mass with carbon in a second furnace and thereby fully reducing the iron and causing it to coalesce and precipitate in the fused condition from the slag.

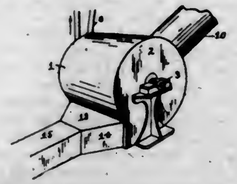
4. The process of reducing iron from its ores or other iron bearing substances, consisting in partially reducing the iron bearing substance in a furnace in the presence of carbon and feldspar and dissolving the partially reduced substance in the molten slag, thereby forming a spongy mass, and in a second furnace heating the spongy mass with carbon and thereby fully reducing the iron and causing it to coalesce and precipitate in the fused condition from the slag.

5. The process of reducing metal bearing substances, consisting in partially reducing the metal bearing substance in a furnace in the presence of a flux and insufficient carbon to complete the reduction and thereby partially reducing the metal and dissolving it in molten slag and forming a carbon free mass with the partially reduced metal distributed therein, and heating said mass in a carbon surfaced container and thereby reducing the metal and causing it to coalesce and precipitate in the fused condition from the slag.

[Claim 6 not printed in the Gazette.]

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1,227,128. CONVEYING MECHANISM. WILLIAM JAMES FOSTER, Cleveland, Ohio, assignor to The Ohio Blower Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 9, 1912, Serial No. 730,374. Renewed Nov. 6, 1916. Serial No. 129,892. (Cl. 193—10.)



1. In conveyer mechanism, the combination of a fan casing, a pair of laterally spaced fans in said casing having their axes in substantially the same line and having, on the same side of such axis, an inlet and an outlet opening, the inlet opening being interposed between the fans, and a conveyer conduit comprising an inlet pipe projecting into the casing through the inlet opening toward the outlet opening and arranged at one side of the axis of the fan and an exhaust pipe extending from the outlet opening.

2. In conveyer mechanism, the combination of a fan casing, a pair of laterally spaced fans therein having their axes in substantially the same straight line, the casing having an inlet and an outlet opening at one side of the axes of the fans, the inlet opening being interposed between the fans, and a conveyer conduit comprising an

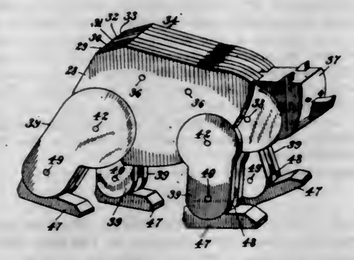
inlet pipe projecting through the inlet opening into the casing substantially as far as and at one side of the axes of the fans and an exhaust pipe communicating with the outlet opening, the fans being arranged to produce a suction upon the discharge end of the inlet pipe acting in opposite lateral directions and the fan casing being closed except for the inlet and outlet openings.

3. In a conveyer mechanism, the combination of a casing spiral in cross section, a pair of laterally spaced fans in said casing having their axes coincident with the axis of the casing, said casing having a tangential discharge opening at the bottom thereof and an inlet opening, a conveyer conduit comprising an inlet pipe projecting through the inlet opening of the casing toward the outlet opening and projecting as far as the axis of the casing with its discharge opening below said axis and an exhaust pipe extending from the outlet opening.

4. In conveyer mechanism, the combination of a casing spiral in cross section and having a tangential discharge outlet, a pair of fans having their centers located in the axis of the spiral casing, said fans being spaced apart and arranged to produce a lateral movement of fluid in opposite directions, and a conveyer conduit comprising an inlet pipe entering the casing and projecting substantially as far as the centers of the fans and having its discharge opening directed toward the discharge outlet and an exhaust pipe communicating with said outlet, said casing being closed except for the inlet and outlet.

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1,227,129. TOY ANIMAL. ALFRED J. FRUEH, New York, N. Y. Filed July 18, 1916. Serial No. 109,880. (Cl. 46—40.)



1. A toy having the form of an animal comprising a plurality of body sections assembled to form the body of the animal, said body sections having perforations formed therein adapted to register with on another when said body sections are assembled, and means extending through said registering perforations and frictionally engaging the walls thereof to hold said body sections assembled, substantially as specified.

2. A toy having the form of an animal comprising a plurality of body sections assembled to form the body of the animal, said body sections having perforations formed therein adapted to register with one another when said body sections are assembled, and removable means extending through said registering perforations and frictionally engaging the walls thereof to hold said body sections assembled, substantially as specified.

3. A toy having the form of an animal comprising a plurality of body sections assembled to form the body of the animal, said body sections having perforations formed therein adapted to register with one another when said body sections are assembled, and pins extending through said registering perforations frictionally engaging the walls thereof to hold said body sections assembled, the length of said pins being equal to the combined thickness of said plurality of body sections, whereby the ends of said pins will be flush with the outer side surfaces of the outer body sections, substantially as specified.

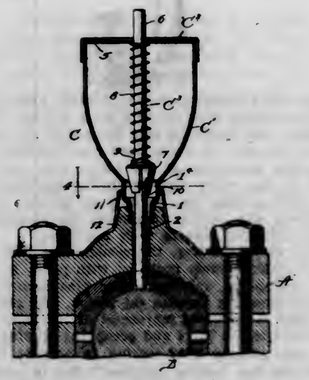
4. A toy having the form of an animal comprising a body provided with a recess having a rounded inner end, a head section provided with a projection extending within said recess, said projection having a rounded end coacting with the rounded inner end of said recess to form a rotatable joint, and means rotatably supporting said head section upon said body, substantially as described.

5. A toy having the form of an animal comprising a plurality of longitudinal body sections assembled to form the body of the animal, means to hold said body sections assembled, one of said body sections being provided with a rounded recess, others of said body sections being provided with projections extending beyond said recess, a head section having a rounded projection co-acting with said recess to form a rotatable joint, and means extending through the projections of said head section and said body sections for rotatably supporting said head section upon said body, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,130. GREASE-CUP. ALBERT C. GRUNWALD, Chicago, Ill., assignor to Precision Metal Workers, Chicago, Ill., a Corporation of Illinois. Filed Nov. 14, 1916. Serial No. 131,193. (Cl. 184—69.)



1. In a device of the character set forth, the combination with a grease-cup, of a cap therefor provided with a downturned flange and a leaf-spring connected with said cap and bearing on the upper edge of said grease-cup, said spring having a central perforation, bayonet-joint connections between the flange of said cap and the upper portion of said grease-cup, and an agitator having a stem extending through the central opening in said spring.

2. In a device of the character set forth, the combination of a grease-cup provided with a nipple for attachment to a bearing, an agitator protruding through said nipple, a cap provided with a downturned flange having bayonet-joint connections with the upper portion of said grease-cup, and a leaf-spring interposed between said cap and the upper edge of said grease-cup, said cap and spring having a central perforation through which the stem of said agitator protrudes.

3. In a grease-cup of the character set forth, an agitator comprising a rod, and a feed-head thereon comprising a segmental member of conical form equipped with perforate ears receiving and engaging said rod.

4. In a device of the character set forth, the combination of a grease-cup provided with a nipple and equipped with a rigidly secured detachable top, of an agitator comprising a rod protruding through said nipple, a hollow conical member secured to said rod, and a coil-spring encircling said rod and interposed between said conical member and said cap.

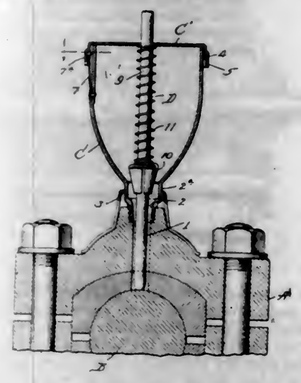
5. The combination with a journal-box provided with a perforation having a threaded portion, of a grease-cup having a threaded nipple engaging the threaded portion of said perforation and provided with an angular portion, an agitator in said grease-cup depending into said perforation, and a retainer having an angular opening engaging the angular portion of said nipple and an arm engaging the journal-box.

[Claim 6 not printed in the Gazette.]



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1,227,131. GREASE-CUP. ALBERT C. GRUNWALD, Chicago, Ill., assignor to Precision Metal Workers, Chicago, Ill., a Corporation of Illinois. Filed Nov. 14, 1916. Serial No. 131,194. (Cl. 184—69.)



1. In a device of the character set forth, the combination of a grease-cup, a cap provided with a down-turned flange having bayonet-joint connections with the upper portion of said grease-cup, and a spring adapted to interlock between said cup and the flange of said cap and thereby maintain said bayonet-joint connections in interlocked relation.

2. In a device of the character set forth, the combination of a grease-cup equipped externally with a vertically disposed spring, and a cap provided with a down-turned flange having bayonet-joint connections with the upper portion of said grease-cup, the flange of said cap having a shoulder adapted to interlockingly engage said spring and maintain said bayonet-joint connections in interlocked relation.

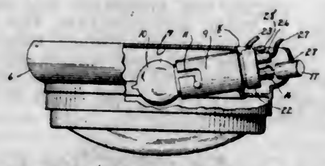
3. In a device of the character set forth, the combination of a grease-cup equipped with a laterally projecting stud and adjacent thereto with a depression in the external surface of the cup, a spring secured to the cup and adapted to be accommodated by said depression, and a cap provided with a flange having an outwardly-struck wall affording a bayonet-slot, said bayonet-slot adapted to be interlockingly engaged by said spring and having an offset shoulder adapted to interlockingly engage said stud.

4. In means of the character set forth, the combination of a grease-cup having a nipple adapted for connection with a journal-box, a cap detachably secured to said grease-cup and having an upwardly-struck central embossment, a guide-member carried by said cap and having a centrally-disposed guide opening, and an agitator in said grease-cup having a rod with its lower end protruding through said nipple and its upper end projecting through said guide-member into said embossment.

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1,227,132. SWITCH FOR ELECTRIC LIGHTS. FRANKLIN H. HART, New Haven, Conn., assignor to C. Cowles & Co., New Haven, Conn., a Corporation. Filed Mar. 19, 1917. Serial No. 155,801. (Cl. 240—7.)

1. A switch for electric lights for the purpose specified comprising a lamp socket, a plug mounted in said socket and projecting beyond the outer end thereof, a ring connected with the projecting end of the said plug, a cup mounted in said plug and projecting beyond the said ring, a switch-plate pivotally connected with the outer end of the cup and adapted to be turned into and out of engagement with the ring, whereby the circuit is opened or closed through the lamp socket.

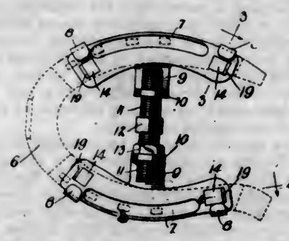


3. The combination with a shell, of a reflector mounted in said shell, a lamp socket mounted in said reflector and adapted to have an incandescent lamp connected with it, a plug in said shell and projecting beyond the end thereof, a ring connected with the outer end of said plug, a cup in said plug projecting beyond the edge of the said ring, a switch plate mounted in said cup and adapted to be turned into and out of engagement with said ring, and electric connection through the cup and the lamp, whereby when the plate is thrown into engagement with the ring the circuit through the lamp will be closed.

[Claim 2 not printed in the Gazette.]

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1,227,133. HORSESHOE. EDWARD H. HAZEN and SAMUEL L. LEVI, New York, N. Y. Filed Nov. 12, 1913. Serial No. 800,567. (Cl. 168—30.)



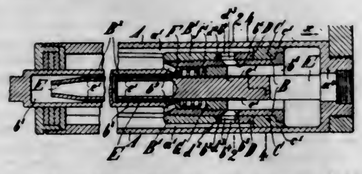
1. In a device of the kind described, in combination, a calk-carrying member having an opening extending therethrough, a calk having a shank adapted to be inserted upwardly into said opening, and a wedge piece adapted to be inserted downwardly into said opening between the wall of the opening and the calk shank, said wedge piece having a length not greater than the distance from one side of said opening to the other, and when in wedging relation with the calk shank extending substantially to the outer end of said opening and not beyond the same.

2. In a device of the kind described, in combination, a calk-carrying member having an opening extending therethrough, a calk having a shank adapted to be inserted upwardly into said opening, and a wedge piece adapted to be inserted downwardly into said opening between the wall of the opening and the calk shank, said wedge piece having a length not greater than the distance from one side of said opening to the other, and when in wedging relation with the calk shank extending substantially to the outer end of said opening and not beyond the same, said calk being cut away to afford access to the outer end of the wedge piece.

3. In a device of the kind described, in combination, a calk-carrying member having an opening extending therethrough, a calk having a shank adapted to be inserted upwardly into said opening, and a wedge piece adapted to be inserted downwardly into said opening between the wall of the opening and the calk shank, said wedge piece having a length not greater than the distance from one side of said opening to the other, and when in wedging relation with the calk shank extending substantially to the outer end of said opening and not beyond the same, said calk being cut away to afford access to the outer end

of the wedge piece, the portions of the calk about said cut-out portion bearing against the said member beyond said opening.

1,227,134. DEVICE FOR ADJUSTING THE RECOIL LENGTH IN FLUID RECOIL-BRAKES FOR GUNS. WALTER HEILEMANN and OTTO BEHNKE, Essen-on-the-Ruhr, and NORBERT KOCH, Essen-on-the-Rellinghausen, Germany, assignors to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Mar. 5, 1914. Serial No. 822,656. (Cl. 89—43.)



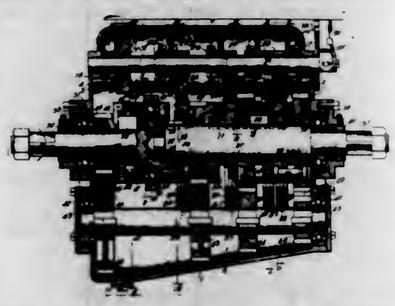
1. A device for adjusting the recoil length in fluid recoil brakes, comprising a stationary member and a recoiling member, one of said members being provided with a by-pass for the brake fluid, means for gradually closing said by-pass during recoil, said by-pass and said means being adjustable by relative displacement for different lengths of recoil, and secondary means on said member, provided with said by-pass, constructed to partially cover that portion of said by-pass which is in operation toward the end of the longest recoil when the brake has been adjusted for short recoil, said secondary means maintaining its position relative to the member provided with said by-pass, during recoil, the position of said secondary means being adjusted by relative displacement between said by-pass and said means for gradually closing said by-pass by which displacement the brake is adjusted, at the same time, for different lengths of recoil.

2. A device for adjusting the recoil length in fluid recoil brakes, having a brake cylinder and a piston, means for transferring the fluid from one side of the piston to the other, comprising curved grooves in said cylinder and radial apertures in said piston, and a slide mounted on said piston and partially covering that portion of said apertures which is in operation toward the end of the longest recoil when the brake has been adjusted for short recoil by relative turning of said cylinder and said piston, said slide maintaining its position relative to the piston during recoil.

3. A device for adjusting the recoil length in fluid recoil brakes, having a brake cylinder, a piston and a piston rod, means for transferring the fluid from one side of the piston to the other, comprising curved grooves in said cylinder and apertures in said piston, and a valve mounted on the piston and partially covering during short recoil that portion of said apertures which is in operation toward the end of the longest recoil, said valve maintaining its position relative to the piston during recoil, the position of said valve being adjusted by relative circumferential displacement between the piston and the cylinder by which displacement said parts are adjusted, at the same time, for different lengths of recoil; a hollow chamber provided in said piston rod, passages permitting the entrance of fluid into said hollow chamber on recoil, a throttling rod entering said chamber for checking the flow of fluid during counter-recoil; a passage in said valve, a corresponding passage in the piston, said passages registering with each other and said chamber, when the device has been adjusted for short recoil, for emitting fluid from said chamber during counter-recoil, and means adapted to close said valve passage before the end of the counter-recoil.

1,227,135. TRANSMISSION-GEAR. WILLIAM J. HERRICK, Chicago, Ill. Filed Apr. 14, 1915. Serial No. 21,233. (Cl. 74—59.)

1. In a device of the class described, a drive shaft, a driven shaft, a clutch to couple and uncouple said shafts, a lay shaft, selective connections between the lay shaft and driven shaft to drive the latter at different speeds, a clutch between the lay shaft and the drive shaft, a clutch-selecting device, a cam controlled by said selecting device to hold said latch in operative position, and slides controlled by said selecting device to hold said first clutch in inoperative position.



2. In a device of the class described, a drive shaft, a driven shaft, a clutch to couple and uncouple said shafts, a lay shaft, selective connections between the lay shaft and driven shaft to drive the latter at different speeds, a clutch between the lay shaft and the drive shaft, a clutch-selecting device, means controlled by said selecting device to hold said second clutch in operative position, and slides controlled by said selecting device to hold said first clutch in inoperative position.

3. In a device of the class described, a drive shaft, a driven shaft, a clutch to couple and uncouple said shafts comprising a pivoted latch, a lay shaft, selective connections between the lay shaft and driven shaft to drive the latter at different speeds, a clutch between the lay shaft and the drive shaft, a clutch-selecting device, means controlled by said selecting device to hold said second clutch in operative position, and slides controlled by said selecting device to hold said latch in inoperative position.

4. In a device of the class described, a drive shaft, a driven shaft, a clutch to couple and uncouple said shafts comprising a pivoted latch, a lay shaft, selective connections between the lay shaft and driven shaft to drive the latter at different speeds, a clutch between the lay shaft and the drive shaft, a clutch-selecting device, means controlled by said selecting device to hold said second clutch in operative position, radially movable slides to hold the latch in its uncoupling position, and means operated by the selecting device to move the slides to uncouple the latch.

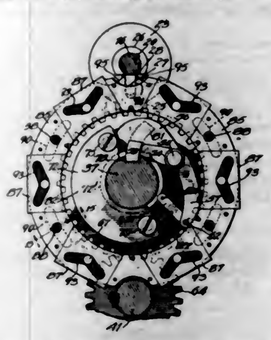
5. In a device of the class described, a drive shaft, a driven shaft, a clutch to couple and uncouple said shafts comprising a pivoted latch, a lay shaft, selective connections between the lay shaft and driven shaft to drive the latter at different speeds, a clutch between the lay shaft and the drive shaft, a clutch-selecting device, means controlled by said selecting device to hold said second clutch in operative position, radially movable slides to hold the latch in its uncoupling position, said slides having diagonal slots, a cam-ring having pins in said slots, and means controlled by said selective device to actuate the ring.

[Claims 6 to 26 not printed in the Gazette.]

1,227,136. CLUTCH. WILLIAM J. HERRICK, Chicago, Ill. Original application filed Apr. 14, 1915, Serial No. 21,233. Divided and this application filed Nov. 25, 1916. Serial No. 133,507. (Cl. 192—6.)

1. In a device of the class described, a shaft having a key-way, a housing loose on the shaft and having an opening registering with the key-way at each revolution of the housing on the shaft, a latch pivoted in the housing and movable toward and away from the shaft and having a key extending through the opening, and means to operate the latch to cause the key to engage the way.





2. In a device of the class described, a shaft having a key-way, a housing loose on the shaft and having a guideway, a latch pivoted on the housing and movable toward and away from the shaft and having a lateral key extending into the guideway, and means to operate the latch to cause the key to engage the key-way.

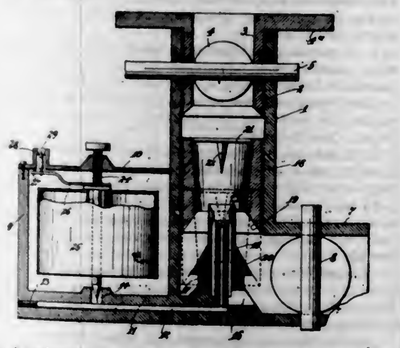
3. In a device of the class described, a shaft having a key-way, a housing loose on the shaft and having guides in its walls, a latch pivoted in the housing and movable toward and away from the shaft and having a lateral key extending into the guides, and means to cause the latch to engage and disengage the key-way.

4. In a device of the class described, a shaft having a key-way, a housing loose on the shaft and having guides in its walls, a latch pivoted in the housing and movable toward and away from the shaft and having a lateral key in the guides, and selective means to move the latch to cause its key to engage and disengage the key-way.

5. In a device of the class described, a shaft having a key-way, a housing loose on the shaft and having an opening registering with the key-way at each revolution of the housing on the shaft, guides in the housing, a latch pivoted in the housing and movable toward and away from the shaft and having a key in the guides, and means to move the latch to cause the key to pass through the opening and engage the key-way.

[Claims 6 to 12 not printed in the Gazette.]

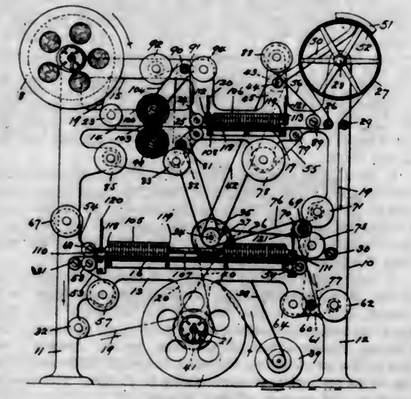
1,227,137. CARBURETER. CLARE W. HESS, Flint, Mich., assignor of one-half to George L. Adams, Fowlerville, Mich. Filed Apr. 14, 1916. Serial No. 91,022. (Cl. 261—48.)



1. A carbureter comprising a body having the lower end thereof provided with an air intake connection, a float chamber at the lower end of said body, a float in said chamber, a standpipe in the lower end of said body in communication with said float chamber, a high speed needle valve axially of said float and float chamber operable independent of said float controlling the supply of gasolene to said standpipe, a Venturi tube in the lower end of said body surrounding said standpipe, a slide valve in said body adapted to seat on said Venturi tube and shut off the main supply of air to said carbureter body, and a valve forming part of said slide valve and adapted to coöperate with the upper end of said standpipe in controlling the supply of gasolene to said carbureter body.

2. A carbureter comprising a body, a float chamber, a Venturi tube in said body communicating with said chamber and the atmosphere and adapted to discharge an explosive mixture into said body, a float in said chamber, an inlet valve controlled thereby, a high speed needle valve extending through said float and controlling the communication between said chamber and said Venturi tube independent of said inlet valve, and a slide valve in said body coöperating with said tube in providing a variable annular opening adapted to discharge air upwardly against said tube.

1,227,138. APPARATUS FOR RESTORING BLEMISHED MOVING-PICTURE FILMS. FREDERICK W. HOCHSTETTER, New York, N. Y., assignor to Paul M. Pierson, Scarborough-on-the-Hudson, N. Y. Filed Sept. 22, 1914. Serial No. 862,925. (Cl. 15—8.)



1. In a machine for cleaning moving picture films, the combination with a storage reel and a receiving reel, of a cleaning web carried thereby, of means for moving said web, and means for intermittently transmitting a film in frictional contact with said moving web.

2. In a machine for cleaning moving picture films, the combination with a plurality of storage and receiving reels, of a plurality of cleaning webs carried thereby, means for bringing successive portions of said webs into juxtaposed position, and means for transmitting a film longitudinally of and in frictional contact with the juxtaposed portions of said webs.

3. In a machine for cleaning moving picture films, the combination with a plurality of storage and receiving reels, of a plurality of cleaning webs carried thereby, means for moving said webs in opposite directions and bringing successive portions thereof into juxtaposed position, and means for transmitting a film in frictional contact with said oppositely moving webs.

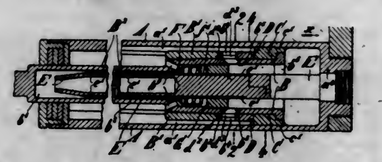
4. In a machine for cleaning moving picture films, the combination with a cleaning strip, of means for transmitting a film in frictional contact therewith, and gravity controlled means for maintaining the strip in yielding engagement with the film.

5. In a machine for cleaning moving picture films, the combination with a cleaning strip, of means for transmitting a film in frictional contact therewith, and means

of the wedge piece, the portions of the calk about said cut-out portion bearing against the said member beyond said opening.

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1,227,134. DEVICE FOR ADJUSTING THE RECOIL LENGTH IN FLUID RECOIL-BRAKES FOR GUNS. WALTER HEILEMANN and OTTO BEHNKE, Essen-on-the-Ruhr, and NORBERT KOCH, Essen-on-the-Rellinghausen, Germany, assignors to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Mar. 5, 1914. Serial No. 822,656. (Cl. 89—43.)



1. A device for adjusting the recoil length in fluid recoil brakes, comprising a stationary member and a recoiling member, one of said members being provided with a by-pass for the brake fluid, means for gradually closing said by-pass during recoil, said by-pass and said means being adjustable by relative displacement for different lengths of recoil, and secondary means on said member, provided with said by-pass, constructed to partially cover that portion of said by-pass which is in operation toward the end of the longest recoil when the brake has been adjusted for short recoil, said secondary means maintaining its position relative to the member provided with said by-pass, during recoil, the position of said secondary means being adjusted by relative displacement between said by-pass and said means for gradually closing said by-pass by which displacement the brake is adjusted, at the same time, for different lengths of recoil.

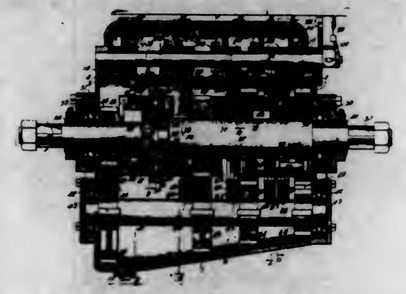
2. A device for adjusting the recoil length in fluid recoil brakes, having a brake cylinder and a piston, means for transferring the fluid from one side of the piston to the other, comprising curved grooves in said cylinder and radial apertures in said piston, and a slide mounted on said piston and partially covering that portion of said apertures which is in operation toward the end of the longest recoil when the brake has been adjusted for short recoil by relative turning of said cylinder and said piston, said slide maintaining its position relative to the piston during recoil.

3. A device for adjusting the recoil length in fluid recoil brakes, having a brake cylinder, a piston and a piston rod, means for transferring the fluid from one side of the piston to the other, comprising curved grooves in said cylinder and apertures in said piston, and a valve mounted on the piston and partially covering during short recoil that portion of said apertures which is in operation toward the end of the longest recoil, said valve maintaining its position relative to the piston during recoil, the position of said valve being adjusted by relative circumferential displacement between the piston and the cylinder by which displacement said parts are adjusted, at the same time, for different lengths of recoil; a hollow chamber provided in said piston rod, passages permitting the entrance of fluid into said hollow chamber on recoil, a throttling rod entering said chamber for checking the flow of fluid during counter-recoil; a passage in said valve, a corresponding passage in the piston, said passages registering with each other and said chamber, when the device has been adjusted for short recoil, for emitting fluid from said chamber during counter-recoil, and means adapted to close said valve passage before the end of the counter-recoil.

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1,227,135. TRANSMISSION-GEAR. WILLIAM J. HERRICK, Chicago, Ill. Filed Apr. 14, 1915. Serial No. 21,233. (Cl. 74—59.)

1. In a device of the class described, a drive shaft, a driven shaft, a clutch to couple and uncouple said shafts, a lay shaft, selective connections between the lay shaft and driven shaft to drive the latter at different speeds, a clutch between the lay shaft and the drive shaft comprising a pivoted latch, a clutch-selecting device, a cam controlled by said selecting device to hold said latch in operative position, and slides controlled by said selecting device to hold said first clutch in inoperative position.



2. In a device of the class described, a drive shaft, a driven shaft, a clutch to couple and uncouple said shafts, a lay-shaft, selective connections between the lay shaft and driven shaft to drive the latter at different speeds, a clutch between the lay shaft and the drive shaft, a clutch-selecting device, means controlled by said selecting device to hold said second clutch in operative position, and slides controlled by said selecting device to hold said first clutch in inoperative position.

3. In a device of the class described, a drive shaft, a driven shaft, a clutch to couple and uncouple said shafts comprising a pivoted latch, a lay shaft, selective connections between the lay shaft and driven shaft to drive the latter at different speeds, a clutch between the lay shaft and the drive shaft, a clutch-selecting device, means controlled by said selecting device to hold said second clutch in operative position, and slides controlled by said selecting device to hold said latch in inoperative position.

4. In a device of the class described, a drive shaft, a driven shaft, a clutch to couple and uncouple said shafts comprising a pivoted latch, a lay shaft, selective connections between the lay shaft and driven shaft to drive the latter at different speeds, a clutch between the lay shaft and the drive shaft, a clutch-selecting device, means controlled by said selecting device to hold said second clutch in operative position, radially movable slides to hold the latch in its uncoupling position, and means operated by the selecting device to move the slides to uncouple the latch.

5. In a device of the class described, a drive shaft, a driven shaft, a clutch to couple and uncouple said shafts comprising a pivoted latch, a lay shaft, selective connections between the lay shaft and driven shaft to drive the latter at different speeds, a clutch between the lay shaft and the drive shaft, a clutch-selecting device, means controlled by said selecting device to hold said second clutch in operative position, radially movable slides to hold the latch in its uncoupling position, said slides having diagonal slots, a cam-ring having pins in said slots, and means controlled by said selective device to actuate the ring.

[Claims 6 to 26 not printed in the Gazette.]

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1,227,136. CLUTCH. WILLIAM J. HERRICK, Chicago, Ill. Original application filed Apr. 14, 1915, Serial No. 21,233. Divided and this application filed Nov. 25, 1916. Serial No. 133,507. (Cl. 192—6.)

1. In a device of the class described, a shaft having a way, a housing loose on the shaft and having an opening registering with the way at each revolution of the housing on the shaft, a latch pivoted in the housing and movable toward and away from the shaft and having a key extending through the opening, and means to operate the latch to cause the key to engage the way.





2. In a device of the class described, a shaft having a key-way, a housing loose on the shaft and having a guideway, a latch pivoted on the housing and movable toward and away from the shaft and having a lateral key extending into the guideway, and means to operate the latch to cause the key to engage the key-way.

3. In a device of the class described, a shaft having a key-way, a housing loose on the shaft and having guides in its walls, a latch pivoted in the housing and movable toward and away from the shaft and having a lateral key extending into the guides, and means to cause the latch to engage and disengage the key-way.

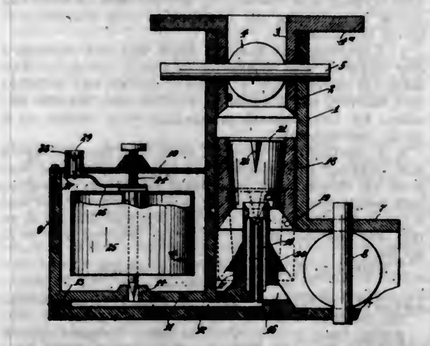
4. In a device of the class described, a shaft having a key-way, a housing loose on the shaft and having guides in its walls, a latch pivoted in the housing and movable toward and away from the shaft and having a lateral key in the guides, and selective means to move the latch to cause its key to engage and disengage the key-way.

5. In a device of the class described, a shaft having a key-way, a housing loose on the shaft and having an opening registering with the key-way at each revolution of the housing on the shaft, guides in the housing, a latch pivoted in the housing and movable toward and away from the shaft and having a key in the guides, and means to move the latch to cause the key to pass through the opening and engage the key-way.

[Claims 6 to 12 not printed in the Gazette.]

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1,227,137. CARBURETER. CLARE W. HASS, Flint, Mich., assignor of one-half to George L. Adams, Fowlerville, Mich. Filed Apr. 14, 1916. Serial No. 91,022. (Cl. 261—48.)

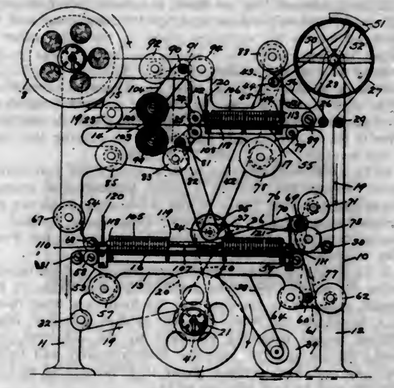


1. A carbureter comprising a body having the lower end thereof provided with an air intake connection, a float chamber at the lower end of said body, a float in said chamber, a standpipe in the lower end of said body in communication with said float chamber, a high speed needle valve axially of said float and float chamber operable independent of said float controlling the supply of gasolene to said standpipe, a Venturi tube in the lower end of said body surrounding said standpipe, a slide valve in said body adapted to seat on said Venturi tube and shut off the main supply of air to said carbureter body, and a valve forming part of said slide valve and adapted to coöperate with the upper end of said standpipe in controlling the supply of gasolene to said carbureter body.

2. A carbureter comprising a body, a float chamber, a Venturi tube in said body communicating with said chamber and the atmosphere and adapted to discharge an explosive mixture into said body, a float in said chamber, an inlet valve controlled thereby, a high speed needle valve extending through said float and controlling the communication between said chamber and said Venturi tube independent of said inlet valve, and a slide valve in said body coöperating with said tube in providing a variable annular opening adapted to discharge air upwardly against said tube.

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1,227,138. APPARATUS FOR RESTORING BLEMISHED MOVING-PICTURE FILMS. FREDERICK W. HOCHSTETTER, New York, N. Y., assignor to Paul M. Pierson, Scarborough-on-the-Hudson, N. Y. Filed Sept. 22, 1914. Serial No. 862,925. (Cl. 15—8.)



1. In a machine for cleaning moving picture films, the combination with a storage reel and a receiving reel, of a cleaning web carried thereby, of means for moving said web, and means for intermittently transmitting a film in frictional contact with said moving web.

2. In a machine for cleaning moving picture films, the combination with a plurality of storage and receiving reels, of a plurality of cleaning webs carried thereby, means for bringing successive portions of said webs into juxtaposed position, and means for transmitting a film longitudinally of and in frictional contact with the juxtaposed portions of said webs.

3. In a machine for cleaning moving picture films, the combination with a plurality of storage and receiving reels, of a plurality of cleaning webs carried thereby, means for moving said webs in opposite directions and bringing successive portions thereof into juxtaposed position, and means for transmitting a film in frictional contact with said oppositely moving webs.

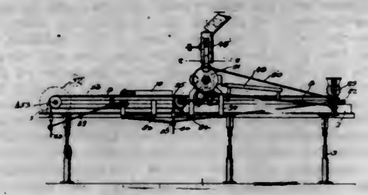
4. In a machine for cleaning moving picture films, the combination with a cleaning strip, of means for transmitting a film in frictional contact therewith, and gravity controlled means for maintaining the strip in yielding engagement with the film.

5. In a machine for cleaning moving picture films, the combination with a cleaning strip, of means for transmitting a film in frictional contact therewith, and means

for maintaining the strip in yielding engagement with the film, said last mentioned means comprising a vertically movable weight.

[Claims 6 to 11 not printed in the Gazette.]

1,227,139. LABELING-MACHINE. GEORGE HOEPNER, Chicago, Ill. Filed June 7, 1915. Serial No. 32,515. (Cl. 216—9.)



1. In a label-affixing machine, an elongated trough for containing water, an endless conveyer extending lengthwise of the trough and having the lower half lying in the trough, means on the conveyer for holding a label thereon while it is being carried through said trough, and means for removing the labels from the conveyer after they leave the trough and applying them to the work to be labeled.

2. In a label-affixing machine, a receptacle for containing water, means for passing a label through the said receptacle, means for applying paste to the label after it leaves the receptacle, and means for affixing the paste-covered label to the work.

3. In a label-affixing machine, an elongated trough for containing water, means for passing a label lengthwise through the trough, means for applying paste to the label after it leaves the trough, and means for affixing the label to the work.

4. In a label-affixing machine, a trough for containing water, means for passing a label through the trough, means for applying paste to the label after it leaves the trough, means for bringing the work to be labeled in proximity to the paste-covered label, and means for wrapping the label about the work.

5. In a label-affixing machine, a trough for containing water, an endless conveyer having a portion lying in the trough, grippers on the conveyer for holding a label thereto, a receptacle for labels adjacent to said conveyer, label-affixing means arranged adjacent to the conveyer, and means for moving the conveyer intermittently and bringing it to rest with grippers lying in proximity to said receptacle and to said affixing means.

[Claims 6 to 20 not printed in the Gazette.]

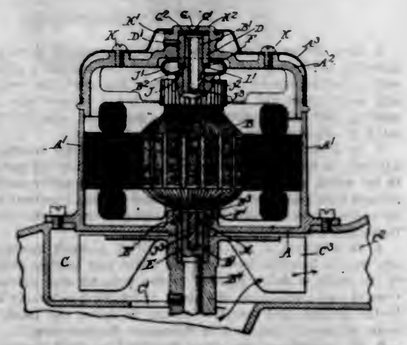
1,227,140. BATH-TUB. LOUIS M. HOOPER, Rutherford, N. J. Filed Apr. 5, 1915. Serial No. 19,139. (Cl. 4—27.)



1. In combination, a tub having at its base a depending lug formed with substantially parallel inclined faces, and a leg having an upwardly projecting extension adapted to engage the side of the tub and also having an extension adapted to project beneath the tub and formed with an opening extending therethrough to receive said lug.

2. In combination, a tub having at its base a depending lug formed with substantially parallel inclined faces, a leg having an upwardly projecting extension adapted to engage the side of the tub and also having an extension adapted to project beneath the tub and formed with an opening extending therethrough to receive said lug, a wall of said opening having a recess therein, and a wedge in said recess and coacting with the opposite wall of said opening to exert a compressional force upon the lug on a line below and substantially parallel with the base of the tub.

1,227,141. LUBRICATING SYSTEM. HOWARD EARL HOOVER, Chicago, Ill. Filed July 14, 1916. Serial No. 109,286. (Cl. 64—56.)



1. A rotating part having a shaft with two bearings, a dust chamber with means for driving a current of dust laden air therethrough, a lubricant conduit way including the lower of said bearings and discharging into the dust chamber, and means for retarding the lubricant in such conduit as it moves therethrough.

2. A rotating part having a shaft with two bearings, a dust chamber with means for driving a current of dust laden air therethrough, a lubricant conduit way including both bearings and discharging into the dust chamber.

3. A rotating part having a shaft with two bearings, a dust chamber with means for driving a current of dust laden air therethrough, a lubricant conduit way including both bearings and discharging into the dust chamber and means for retaining the lubricant in such conduit as it moves therealong.

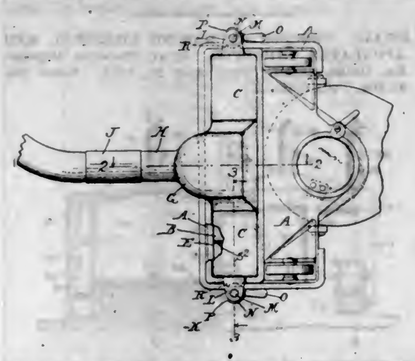
4. A rotating part having a shaft with two bearings, a dust chamber with means for driving a current of dust laden air therethrough, a lubricant conduit way including both bearings and discharging into the dust chamber and means for retarding the lubricant in such conduit as it moves therethrough.

5. A rotating part having a shaft with two bearings, a dust chamber with means for driving a current of dust laden air therethrough, a lubricant conduit way including both bearings and discharging into the dust chamber and a cup surrounding one of said bearings and adapted to retain the lubricant therein when the rotating part is in motion.

[Claims 6 to 13 not printed in the Gazette.]

1,227,142. CLEANER. HOWARD EARL HOOVER, Chicago, Ill., assignor to Hoover Suction Sweeper Company, New Berlin, Ohio, a Corporation of Ohio. Original application filed May 20, 1916, Serial No. 98,784. Divided and this application filed Oct. 9, 1916. Serial No. 124,546. (Cl. 15—60.)

1. In a suction sweeper the combination of an open mounted hood having end projections with a converter device having centering pieces adapted to be received within the hood and ends projecting beyond the hood, and with interlocking devices mounted on said ends and adapted to engage said projections.



2. In a suction sweeper the combination of an open mouthed hood with a converter provided with a downwardly projecting portion, a hose connection arising from the downwardly projecting portion at one side of the hood and from a point above the bottom of the downwardly projecting portion, and means for detachably connecting the converter to the hood mouth.



1,227,143. BUNG-SEAL. JOHN M. HOTHERSALL, Brooklyn, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 15, 1915. Serial No. 21,575. (Cl. 70—100.)



1. A bung seal comprising a metal member having its edge recessed at intervals and formed between said intervals with edges to be driven into the material of the barrel, said member being weakened along lines joining said recesses, said lines extending behind said edges and forming with said recesses a continuous weakening about the center of said member.

2. A sheet metal bung seal consisting of a central disk having inwardly extending recesses formed at intervals about its periphery, and formed between said recesses with narrowly separated downwardly bent and vertically corrugated penetrating edges, said edges being formed with penetrating tongues, said disk being weakened on lines extending fron one recess to the next, behind said edges.

1,227,144. ILLUMINATING DEVICE FOR ELECTRIC FIXTURES. RALPH E. HOUGHTON and MICHAEL J. HANLON, Cliftondale, Mass. Filed Aug. 22, 1916. Serial No. 116,863. (Cl. 240—1.)

1. An illuminating attachment of the class described including a cylindrical tubular core adapted to receive a pulling medium, means associated with the core to connect the same with a pulling medium, a coating of luminous material on said core, cylindrical glass elements in a circular series about the said coated core, tangent thereto, and heads on the core having conical flanges clamping the said cylindrical elements in position.

2. An attachment of the class described including a cylindrical core, heads on the core, an exterior coating of luminous material on the core, circular series of glass elements about the coated core, means to clamp said elements at their ends, and means to connect the attachment with a fixture.



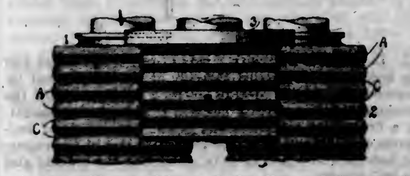
8. An attachment of the class described including a core, luminous material on said core, and a series of glass elements about said luminous material.

4. An attachment of the class described including a core, luminous material on said core, a series of glass elements about said luminous material, and heads on the said core having flanges clamping the said elements.

5. An attachment of the class described, including a tubular core having a bore of a diameter to receive a pull-chain, a hollow plug fitting one end of the core and slotted at a side thereof for receiving a chain link, the interior of the plug accommodating a relatively larger member of the chain than the said slot, luminous material about the core, and glass elements about the said luminous material.

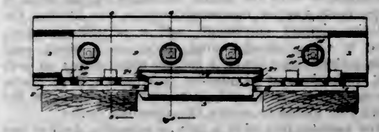
[Claims 6 and 7 not printed in the Gazette.]

1,227,145. SUGAR-CANE MILL. PETER F. HUGHES, Perth Amboy, N. J., assignor to The Cuban-American Sugar Company, a Corporation of New Jersey. Filed Sept. 15, 1915. Serial No. 50,744. (Cl. 100—47.)



A cane mill comprising a feed roller, a delivery roller and a pressure roller, each of said rollers having crown sections arched longitudinally of the roller, the crown sections of the pressure roller being arranged between the crown sections of the other rollers and the feed roller and delivery rollers being provided with annular grooves located between the crown sections thereon.

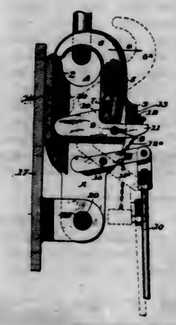
1,227,146. COMBINED RAIL-JOINT AND TIE-PLATE. JACOB A. HYLE, Chicago, Ill., assignor of one-half to John F. Sweeney, Chicago, Ill. Filed Oct. 26, 1916. Serial No. 127,813. (Cl. 239—6.)



The combination with the track-rails and cross-ties, of a tie-plate having a central reduced section provided with a plurality of solid integral depending strengthening ribs, and two broad end sections each having a plurality of upward projections formed at each side of the plate with inclined upper surfaces and a spike hole formed therethrough, the inner edge of each projection terminating in alinement and contact with each outer edge of the rail base and the outer edge of each projection terminating in alinement with the outer side edge of the tie-plate, and

two fish-plates clamping against the opposite sides of the rail, each fish-plate being inclined inward and upward from its base, the central portion of each fish-plate having a downwardly inclined depending portion adapted to embrace the outer edge of the rail base and tie plate and terminating beneath in contact with the lower surface of the central reduced section of the tie-plate, each fish-plate having a laterally extended reinforcing shoulder formed at each side of its lower embracing portion, and an excess of metal constituting a strengthening portion surrounding each of the bolt openings in each of the fish plates and adapted to form a vertical face thereon around each bolt opening.

1,227,147. RELEASING DEVICE. JAMES IRWIN, South San Francisco, Cal., assignor to H. J. Mahony Co., San Francisco, Cal., a Corporation of California. Filed Feb. 19, 1916. Serial No. 79,352. (Cl. 9—23.)



1. The combination with a pair of releasing devices and the locking levers carried thereby, of a releasing rod interposed between the locking levers, a frame in which the releasing rod is vertically positioned and slidably mounted, a bracket on the lower end of the rod, a pair of bell-cranks each connected with a respective one of the releasing devices, and a pair of rods connecting the bracket and the bell cranks.

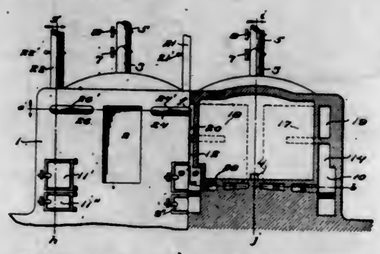
2. A releasing device comprising a pair of spaced connected plates, a hook member pivotally mounted between the plates having a shank extension on one side of the pivot, a cam lever pivotally mounted between the plates and engageable with the shank extension on the hook to lock the hook against movement, a locking lever movable independently of and engageable with the cam lever, and means for locking the locking lever against movement.

5. A releasing device comprising a pair of spaced connected plates, a hook member pivotally mounted between the plates having a shank extension on one side of the pivot, a cam lever pivotally mounted between the plates and engageable with the shank extension on the hook to lock the hook against movement, means for locking the cam lever against movement, and a securing member adapted to carry the releasing device as a whole, said member comprising a plate, a pair of lugs formed on each end of the plate and adapted to embrace the side plates of the releasing device, and bolts extending through the lugs and side plates to secure the releasing device.

7. The combination with a pair of releasing devices and the locking levers carried thereby, of a releasing rod interposed between the locking levers, a frame in which the releasing rod is vertically positioned and slidably mounted, cranks and links connecting the lower end of the releasing rod with the locking levers to transmit movement from the releasing rod to rock the locking levers simultaneously into releasing or locking position, a pair of wing extensions on the releasing rod and slots in the frame with which said wing extensions are adapted to register, and means for turning the releasing rod to bring the wing extensions out of register with the slots and to lock the rod against sliding movement when the locking levers are in locking position.

[Claims 3, 4, and 6 not printed in the Gazette.]

1,227,148. PROCESS OF MAKING CHARCOAL AND APPARATUS THEREFOR. SUMU IWAMOTO, Higashi-Ku, Osaka, Japan. Filed Aug. 28, 1915. Serial No. 47,864. (Cl. 202—2.)



1. The process of making charcoal which comprises carbonizing wood by indirect heating, then further heating the carbonized wood by direct flame, and finally cooling the resultant charcoal.

2. The process of making charcoal which comprises carbonizing wood by indirect heating and recovering distillation products, then further heating the carbonized wood by effecting partial combustion thereof, and finally cooling the resultant charcoal.

3. The process of making charcoal which comprises distilling and carbonizing wood in a suitable kiln by indirect heating, then admitting air to the retort to effect combustion of a part of the carbonized wood and to densify the remainder, removing the charcoal from the kiln while still highly heated, and cooling the charcoal quickly.

4. A charcoal kiln comprising a wood-charring retort, means for heating said retort indirectly, means for leading off distillation products from said retort to a place of recovery, means for admitting air to said retort for combustion purposes, and means for leading off combustion products therefrom.

5. A charcoal kiln comprising a wood-charring retort, a system of heating flues in a wall of the retort, a combustion chamber arranged to supply heat to such flue system, a conduit for leading off distillation products from said retort, a conduit affording communication between said flue system and the interior of the retort, a conduit for leading off combustion products from the retort, and controlling dampers for the several conduits.

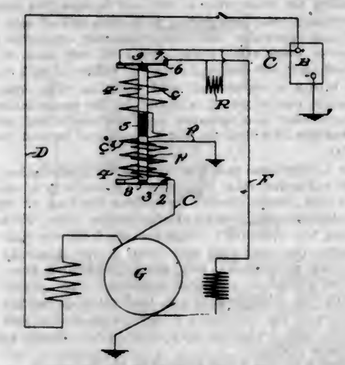
[Claim 6 not printed in the Gazette.]

1,227,149. METHOD OF CHARGING SECONDARY BATTERIES. EDWARD B. JACOBSON, Pittsfield, Mass., assignor to Hendee Manufacturing Company, Springfield, Mass., a Corporation of Massachusetts. Filed Dec. 3, 1913. Serial No. 804,530. (Cl. 171—314.)

1. The method of charging and maintaining charged a storage battery which consists in applying to said battery for an indeterminate time and irrespective of the condition of charge, a charging current of pulsating character, the maximum of which is of a determinate substantially uniform value and unaffected by the condition of charge of the battery, the total of said current for any given period of time being of such small quantity that the temperature of the battery is not raised above normal when the charging current is continued after the battery has become fully charged.

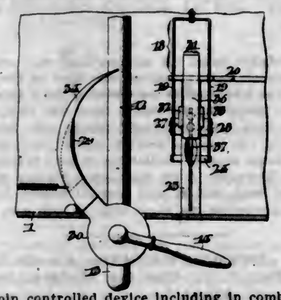
2. The method of charging secondary batteries and maintaining the same charged which consists in applying for an indeterminate period of time and irrespective of the condition of charge, a charging current of a pulsating character, the maximum of which is of a determinate substantially uniform value unaffected by the condition of charge of the battery, the total quantity of such current in any given period being such that gasing at the negative electrodes is not produced when the current is continued after the battery has become fully charged.





3. The method of charging secondary batteries and maintaining the same in charged condition, which consists in applying for an indeterminate period of time irrespective of the condition of charge of the battery charging current of a pulsating character, the pulses of which are separated by an appreciable interval of time, and the total quantity of which in any given period of time is insufficient to produce harmful effect upon the battery when the current is continued after the battery has become fully charged.

1,227,150. COIN-CONTROLLED DEVICE. OTTO JACOBS, Norristown, Pa. Filed Apr. 11, 1913. Serial No. 760,382. (Cl. 194—82.)



1. A coin controlled device including in combination, a reciprocating member, a manually operated arm, said reciprocating member being normally out of the path of movement of said arm, a second reciprocating member, manually controlled means for reciprocating said second member, and devices whereby a coin may be engaged by said second reciprocating member and move said first reciprocating member so as to bring the same into the path of the manually controlled arm.

2. A coin controlled device including in combination, a reciprocating carriage, a manually operated plate, a curved arm carried thereby, a roller mounted on said carriage and normally out of the path of movement of said curved arm, a second carriage, a roller carried thereby, a second curved arm connected to said plate for engaging said roller on said second carriage, and devices whereby a coin may be engaged by said second-named carriage and move said first-named carriage so that the roller carried thereby is brought into the path of movement of the first-named curved arm carried by said manually operated plate.

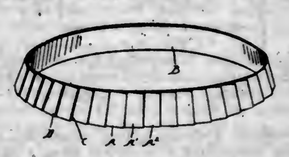
3. A coin controlled device including in combination, a reciprocating carriage, a manually operated plate, a curved arm carried thereby, a roller mounted on said carriage and normally out of the path of movement of said curved arm, a second carriage, a roller carried thereby, a second curved arm connected to said plate for engaging said roller on said second carriage, and devices whereby a coin may be engaged by said second-named carriage and move said first-named carriage so that the roller carried thereby is brought into the path of movement of the first-named curved arm carried by said manually operated plate, and springs for returning said carriages to their normal positions when the manually operated plate is released.

4. A coin controlled device including in combination, a reciprocating carriage, a second reciprocating carriage, a coin chute, supporting plates for the coin for supporting a coin between said carriages whereby a movement of the last-named carriage will move the first-named carriage, a swinging plate, curved arms carried thereby, a device on the second carriage adapted to be engaged by one of said curved arms, a device on the first carriage adapted to be actuated by the other curved arm only when said first-named carriage is moved forward through the action of the coin, and means whereby the coin may be discharged from said plate when the first-named carriage is connected with its operating arm.

5. A coin controlled device including in combination, a reciprocating carriage, a second reciprocating carriage, a coin chute, supporting plates for the coin for supporting a coin between said carriages whereby a movement of the last-named carriage will move the first-named carriage, a swinging plate, curved arms carried thereby, a device on the second carriage adapted to be engaged by one of said curved arms, a device on the first carriage adapted to be actuated by the other curved arm only when said first-named carriage is moved forward through the action of the coin, and means whereby the coin may be discharged from said plate when the first-named carriage is connected with its operating arm, and springs for returning said carriages to their normal positions.

[Claim 6 not printed in the Gazette.]

1,227,151. LEATHER FACING FOR CONE-CLUTCHES. RUDOLPH C. JENSEN, Springwells, Mich. Filed June 26, 1916. Serial No. 105,951. (Cl. 192—1.)



1. A clutch facing, comprising an annulus formed of a series of small sections of leather overlapping and secured to each other.

2. A clutch facing, comprising an annulus formed of a series of small sections of leather assembled in overlapping relation and cemented to each other.

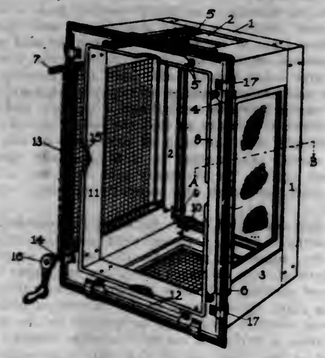
3. A clutch facing, comprising an annulus formed of a series of small sections of leather assembled in overlapping relation and secured to each other, the successive sections being in slightly angular relation to produce a curve in the strip and a coning of the annulus.

4. A clutch facing, comprising an annulus formed of a series of small sections of leather assembled in overlapping relation, forming a notched surface constituting a yieldable friction face.

1,227,152. EXTENSIBLE WINDOW-FRAME. CARL SEVERIN JOHANSON, Montclair, N. J. Filed Nov. 9, 1916. Serial No. 130,441. (Cl. 20—40.)

1. A window frame comprising four angle corner blocks provided with an exterior circumscribing band securing

said blocks in their respective corner positions to form a unit, substantially as described.

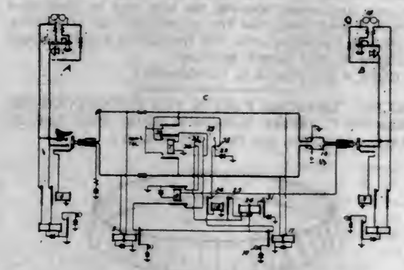


6. A window frame including corner blocks, provided each with one edge parallel and adjacent to a similar edge on the adjacent block on each side of said frame, a groove in each said edge and an open slot beneath each groove opening into the same adapted to retain a rod introduced endwise into said slot, substantially as described.

[Claims 2 to 5 and 7 to 13 not printed in the Gazette.]

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1,227,153. TELEPHONE-EXCHANGE SYSTEM. LEWIS HOWES JOHNSON, Bloomfield, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 7, 1915. Serial No. 49,231. (Cl. 179—73.)



1. A telephone exchange system comprising two telephone lines terminating at a central office, a link circuit connecting the lines together, an operator's telephone set normally disconnected from the link circuit, a listening relay for connecting the operator's telephone set with the link circuit, a relay in the link circuit controlled over one of the connected lines, and an operator-controlled switch when actuated coöperating with the second mentioned relay when energized to cause the operation of the listening relay.

3. In a telephone exchange system, in combination subscribers' lines terminating at a central office, a link circuit thereat interconnecting said lines, an operator's telephone set normally disconnected from said link circuit forming a portion of an established connection, a listening relay controlling the connection of said set to said link circuit, a supervisory relay associated with said link circuit controlled from the connected substation, a relay associated with said link circuit energized upon the deënergization of said supervisory relay, the energization of said relay conditioning said listening relay for operation, and operator controlled switching means actuated to cause the operation of said conditional listening relay.

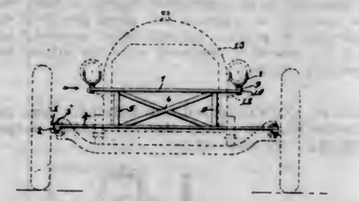
6. In a telephone exchange system, in combination subscribers' lines terminating at a central office, a link circuit thereat interconnecting said lines, an operator's telephone set normally disconnected from said link circuit forming a portion of an established connection, a listening relay controlling the connection of said set to said link circuit, a supervisory relay associated with each end of said link circuit and controlled from the respective connected substations, a third relay associated with said link circuit energized upon the deënergization of either of said supervisory relays, a circuit for said listening relay open at two points, one of which is closed by the energization of said third relay, and operator controlled switching means, the actuation of which completes the circuit of said listening relay.

7. In a telephone exchange system, in combination line circuits extending from subscribers' stations to a central office, a link circuit thereat connecting the line, an operator's telephone set, means at the central office normally excluding the operator's telephone set from the link circuit while the connected line circuits are closed at the subscribers' substations, and means controlled from the subscriber's station of either connected line circuit for rendering the excluding means ineffective to permit the connection of the operator's telephone set to the link circuit while the connected line circuits are closed at the subscribers' stations.

[Claims 2, 4, and 5 not printed in the Gazette.]

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1,227,154. AUTOMATIC DIRIGIBLE LIGHT-SUPPORT. JAMES P. KENDRICK, Fayette, Mo. Filed Aug. 20, 1914. Serial No. 857,721. (Cl. 240—62.)



In a dirigible lamp for automobiles, the combination with a forward axle, pivots at the sides of the axle for mounting the wheels of an automobile, and a hood for the automobile projecting forwardly from the axle, of arms extending forwardly from said pivots and beyond the front line of the hood, a bracket carried on each side of the hood, lamp holders oscillatable in said brackets, arms extending forwardly from said lamp holders along the side of the hood, and a rigid vertical braced framework pivotally connecting the front ends of both sets of arms.

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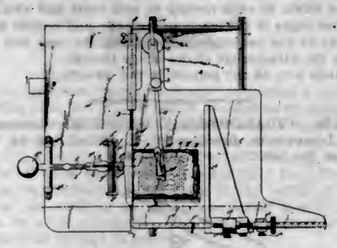
1,227,155. TRIMMING-MACHINE. ANDREW R. KOEHLER, Buffalo, N. Y. Filed Oct. 28, 1914. Serial No. 869,061. (Cl. 143—168.)

1. The combination in a trimming machine having a cutter and a table on which the work can be held and which is movable relatively to the cutter, of a gage in operative relation to said table for indicating the line on which the work is to be cut, and a second gage adapted to extend over the work beyond the line of cut and having a part with which the work can be alined to position the same in the desired relation to the first mentioned gage.

2. The combination in a trimming machine having a cutter and a work supporting table, of a gage in operative relation to said table for indicating the line on which the cutter operates, and a gage adapted to extend over the work beyond the line of cut and having a part with which the work can be alined to position the same in the desired relation to the cutter, said gages being mounted to be moved together into and out of operative relation to the work.



3. The combination in a trimming machine having a cutter and a work supporting table, of a gage having a part adapted to extend over the work beyond the line of cut and with which the work can be alined to position the same in the desired relation to the cutter.



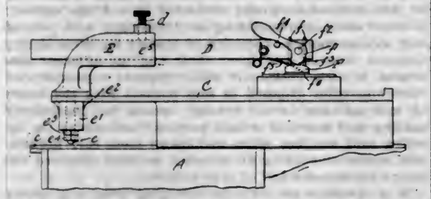
4. The combination in a trimming machine having a cutter and a work supporting table, of a gage adapted to be placed over said table and having a plurality of members arranged at intervals with open spaces between the members through which the work can be seen and extending parallel to the line on which said cutter operates.

5. The combination in a trimming machine having a cutter and a work supporting table, of a gage adapted to be placed over said table and to be moved out of operative relation to the table and having a plurality of members spaced at intervals and extending parallel to the line on which said cutter operates, said gage being slidably mounted on the machine and adapted to move over said table so that said spaced members remain parallel to the line of cut.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,156. WORK-HOLDER FOR MACHINES FOR TRIMMING ELECTROTYPE-BLOCKS OR THE LIKE. ANDREW R. KOEHLER, Buffalo, N. Y. Original application filed Oct. 28, 1914, Serial No. 869,061. Divided and this application filed Aug. 18, 1915. Serial No. 46,131. (Cl. 144—278.)



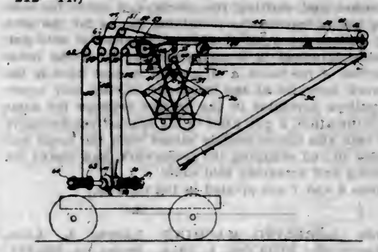
1. In a trimming machine, the combination of a work supporting table, a member pivoted on said table to swing in a plane substantially parallel with the table and having a part provided with a hole extending substantially parallel with the table, an arm slidably arranged in said hole, and clamping means on the outer portion of said arm for holding the work on the table while being operated upon, the pressure of said clamping means against the work also clamping said arm in said hole to secure the same against movement relatively to said pivoted member.

2. In a trimming machine, the combination of a work supporting table, a member pivoted on said table to swing in a plane substantially parallel with the table and having an elongated part provided with a longitudinal hole extending substantially parallel with the table, an arm slidably arranged in said hole, a presser foot slidably mounted on the outer portion of said arm and movable toward and from said table, and a cam for moving said presser foot toward the table, the pressure of the presser foot against the work also clamping said arm in said hole to secure the same against movement.

3. In a trimming machine, the combination of a work supporting table, a member pivoted on said table to swing in a plane substantially parallel to said table, an arm slidable with regard to said member, a presser foot arranged on the outer end of said arm and having a sliding connection with said arm to enable the presser foot to move toward and from said table, a spring for yieldingly moving said presser foot away from said table, and a cam engaging said arm and said presser foot for pressing said presser foot toward said table for holding the work thereon.

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1,227,157. CONVEYER APPARATUS. PHILIP A. KOEHRING, Milwaukee, Wis., assignor to Koehring Machine Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 6, 1914. Serial No. 865,335. (Cl. 212—44.)



1. In a conveyer, the combination with a framework, of a boom pivotally mounted therein, a carriage movable along the boom, a grab bucket releasably sustained by the carriage, cables for shifting the carriage and for actuating the grab bucket, a cable for controlling the carriage sustaining means for the grab bucket, a shaft common to all of said cables, means for operating the same, and cable control means associated with the shaft.

2. In a conveyer, the combination with a framework, of a boom pivotally mounted therein, a carriage movable along the boom, a grab bucket releasably sustained by the carriage, cables for shifting the carriage and for acuating the grab bucket, a cable for controlling the carriage sustaining means for the grab bucket, a shaft common to the cables and the boom, means for operating the same, control means carried by the shaft for controlling said cables, and means actuated by the shaft for swinging the boom on its pivot.

3. In a conveyer, the combination with a framework, and a boom pivotally mounted therein, of a carriage shiftable along the boom, a grab bucket adapted to be detachably sustained by the carriage, a cable for shifting the carriage outwardly along the boom fixed to the carriage and extending to the outer portion of the boom and having a return portion, a pulley journaled at the outer portion of the boom and engaged by said cable, cable guiding pulleys for the return portion of said cable for directing the same downwardly into the framework, a grab bucket actuating and carriage return cable connected to said carriage and engaging the grab bucket for actuating the same and extending inwardly from the carriage, a guiding pulley on the carriage for the last named cable, guiding pulleys sustained by the framework for the last named cable for directing the same downwardly in the framework, releasing means for the grab bucket sustaining means, a cable for controlling and actuating said releasing means engaging the same substantially at the carriage and extending outwardly to the outer portion of the boom and having a return portion, a pulley journaled at the outer portion of the boom for guiding the cable of the releasing means, the said return portion of the cable extending inwardly substantially to the inner end of the boom and thence downwardly into the frame work and again upwardly to the boom and outwardly to the releasing means, pulleys guiding the portions of said cable, and means for actuating and controlling all of said cables.

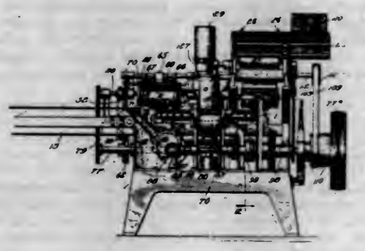
4. In a conveyer, the combination with a framework and a boom pivotally mounted therein, of a carriage shiftable along the boom, a grab bucket adapted to be releasably sustained by the carriage, cables for controlling the grab bucket and shifting the carriage, a cable for controlling and actuating the sustaining means for the grab bucket, pulleys for guiding said cables, some of said pulleys being arranged in a superposed series at the inner end portion of the boom, a bifurcated bracket fixed to the framework laterally of the boom and having said superposed pulleys journaled in the bracket between the arms of the bifurcation, and means for controlling and actuating said cables.

5. In a conveyer, the combination with a framework and a boom pivotally mounted therein, of a carriage shiftable along the boom, a grab bucket adapted to be releasably sustained by the carriage, cables for controlling the grab bucket and shifting the carriage, a cable for controlling and actuating the sustaining means for the grab bucket, pulleys for guiding said cables, some of said pulleys being arranged in a superposed series at the inner end portion of the boom, a bifurcated bracket fixed to the framework laterally of the boom and having said superposed pulleys journaled in the bracket between the arms of the bifurcation, a guy fixed to the bracket substantially in the rear and approximately alined with the boom and extending to and engaging the framework, and means for controlling and actuating said cable.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,158. LABELING-MACHINE. LESTER L. LADD, Lockport, Ill. Filed Dec. 1, 1913. Serial No. 803,881. (Cl. 216—9.)



1. In combination, mechanism for delivering a paste-covered label and partially attaching it to a can along a narrow strip at one end of the label, means for thereafter holding the main portion of the label out of contact with the can for an interval of time sufficient to permit the moisture in the paste to impregnate the label, and means for completing the attachment of the label to the can at the end of said interval of time.

2. In combination, mechanism for delivering a paste-covered label and partially attaching it to a can along a narrow strip at one end of the label, mechanism for acting on the can and label to complete the attachment of the label, and means for actuating said mechanisms with a sufficient time interval between the partial attaching of the label and the completing of the attachment to permit the moisture in the paste to impregnate the label.

3. In combination, means for delivering a paste covered label and attaching it at one end only to a can, a conveyer for carrying the can from the aforesaid means and retaining it a sufficient time to permit the moisture in the paste to soak into the label, and means for receiving the can from the conveyer and completing the attachment of the label thereto.

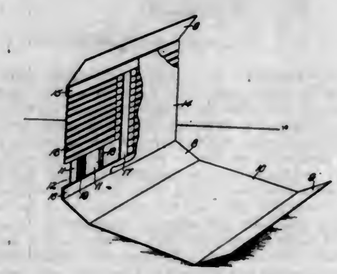
4. In combination, a conveyer, separated can seats on the conveyer, an apron extending rearwardly from each seat, means adjacent to the conveyer for delivering paste-covered labels to cans resting in said seats and attaching the front edges of the labels to the cans, and additional means at a remote point adjacent to the conveyer for completing the attachment of the labels to the cans.

5. In combination, a conveyer, separated can seats on the conveyer, an apron extending rearwardly from each seat, means adjacent to the conveyer for delivering paste-covered labels to cans resting in said seats and attaching the front edges of the labels to the cans, and remote means adjacent to the conveyer for receiving the cans and completing the attachment of the labels thereto.

[Claims 6 to 36 not printed in the Gazette.]

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1,227,159. CIGARETTE-BOX WRAPPER. GEORGE ERVIN LAMBERSON, Brooklyn, N. Y. Filed July 14, 1916. Serial No. 109,271. (Cl. 206—48.)



1. A wrapper as characterized comprising a plurality of side sections integrally connected by a hinge section; a cover sheet corresponding in dimensions with one of said side sections; a plurality of spacing members rigidly disposed between said cover sheet and the adjacent side section to form pockets in said wrappers; a plurality of carded matches disposed in said pockets with the heads of said matches turned inward; and means for temporarily holding said matches in said pockets.

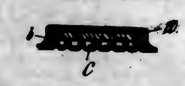
2. A wrapper as characterized comprising a plurality of side sections integrally connected by a hinge section; a cover sheet corresponding in dimensions with one of said side sections; a plurality of spacing members rigidly disposed between said cover sheet and the adjacent side section to form pockets in said wrapper; a plurality of carded matches disposed in said pockets with the heads of said matches turned inward; means for temporarily holding said matches in said pockets; and means for igniting said matches when withdrawn from said pockets, said means embodying an abrasive material disposed adjacent the exposed end of said pockets.

3. A wrapper as characterized comprising a plurality of side sections integrally connected by a hinge section; a cover sheet corresponding in dimensions with one of said side sections; a plurality of spacing members rigidly disposed between said cover sheet and the adjacent side section to form pockets in said wrapper; a plurality of carded matches disposed in said pockets with the heads of said matches turned inward; means for temporarily holding said matches in said pockets; and a plurality of oppositely-disposed abrasive strips secured one to said cover sheet and one to the adjacent side section of the wrapper, said strips being spaced apart a distance less than the heads of said matches.

4. A wrapper as characterized comprising a plurality of side sections integrally connected by a hinge section; a cover sheet corresponding in dimensions with one of said side sections; a plurality of spacing members rigidly disposed between said cover sheet and the adjacent side section to form pockets in said wrapper; a plurality of carded matches disposed in said pockets with the heads of said matches turned inward; and a plurality of strips of adhesive for engaging said matches for holding the same within said pockets.



1,227,160. PROCESS OF MAKING CLOSURES. NORBERT M. LA PORTE, Baltimore, Md., assignor to The Crown Cork and Seal Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Aug. 2, 1913. Serial No. 782,573. (Cl. 113—80.)

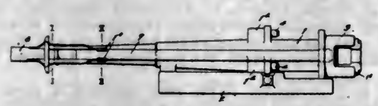


1. In the art of making closures comprising a shell and a sealing disk, the process which consists in charging each side of a carrier of fibrous material with a fusible filler while leaving the interior of said carrier porous, coating each side of said charged carrier with a sticking material capable of being set by heat, forming disks from the coated material, subjecting said disks to the action of a solvent of the sticking material, interposing said disks between the shell and sealing disk, and subjecting the sticking material to heat to set it.

2. In the art of making closures comprising a shell and a sealing disk, the process which consists in coating paper with a sticking material comprising an albuminous substance, forming a disk from said paper, subjecting said disk to moisture to render the sticking material adhesive, subjecting the moist-coated paper disk to pressure between a shell and a sealing disk, and subjecting said sticking material to the action of heat to coagulate such albuminous substance.

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1,227,161. RECOIL-REDUCING MEANS FOR GUNS. HERMANN LEHMANN and FRITZ HOHNBERG, Magdeburg, Germany. Filed Apr. 14, 1914. Serial No. 831,802. (Cl. 89—42.)



1. A recoil checking device for guns having a cradle wherein the gun is mounted to slide, a weight mounted to slide on the gun and means for driving said weight in the opposite direction to the gun during the recoil in order to impact against the gun after the gun has traveled a portion of its recoil length, thus obstructing the remainder of the recoil movement of the gun.

2. A recoil checking device for guns having a cradle wherein the gun is mounted to slide, a weight mounted to slide on the gun and means for driving said weight in the opposite direction to the gun during the recoil, an abutment on the gun against which said weight strikes after the gun has traveled a portion of the recoil length, thus partly checking the recoil, said means comprising a screen positioned in front of the muzzle of the gun, said screen having rigid connections with said weight and constructed to obstruct the free passage of the escaping powder gases.

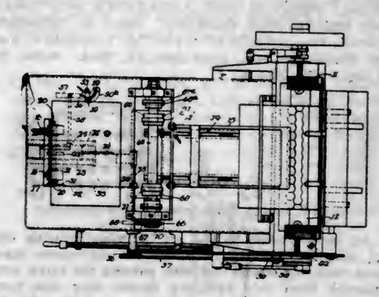
3. A recoil checking device for guns having a cradle wherein the gun is mounted to slide, a weight mounted to slide on the gun and means for driving said weight in the opposite direction to the gun during the recoil, an abutment on the gun against which said weight strikes after the gun has traveled a portion of the recoil length, thus partly checking the recoil, said means comprising a screen positioned in front of the muzzle of the gun, said screen having rigid connections with said weight and constructed to obstruct the free passage of the escaping powder gases, said abutment being provided with shock absorbing buffers.

4. A recoil checking device for guns having a cradle wherein the gun is mounted to slide, a weight mounted to slide on the gun and means for driving said weight in the opposite direction to the gun during the recoil, an abutment on the gun against which said weight strikes after the gun has traveled a portion of the recoil length, thus partly checking the recoil, said means comprising a screen positioned in front of the muzzle of the gun, said screen having rigid connections with said weight and constructed to obstruct the free passage of the escaping powder gases, said abutment being provided with shock absorbing buffers, an accumulator in the cradle for partly absorbing the energy of the forward running weight, said accumulator returning said weight into its initial position at the end of the counter recoil of the gun.

5. A recoil checking device for guns having a cradle wherein the gun is mounted to slide, a weight mounted to slide on the gun and means for driving said weight in the opposite direction to the gun during the recoil, an abutment on the gun against which said weight strikes after the gun has traveled a portion of the recoil length, thus partly checking the recoil, said means comprising a screen positioned in front of the muzzle of the gun, said screen having rigid connections with said weight and constructed to obstruct the free passage of the escaping powder gases, a spring acting between said weight and said cradle to resist the forward movement of said weight and return it to its initial position at the end of the counter recoil of the gun.

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1,227,162. METAL-SHEARING MACHINE. CHARLES D. MCDONALD, Chicago, Ill., assignor to McDonald Machine Co., Chicago, Ill., a Corporation of Illinois. Filed July 12, 1916. Serial No. 108,841. (Cl. 164—48.)



1. In a machine of the class described, the combination of shearing mechanism, means for feeding the work into position to be acted upon by said shearing mechanism, means for positioning the work previous to the feeding operation, means for gripping and carrying the work forward in such position to a point where it is acted upon by the feeding mechanism, and means for locking the movement of the mechanism for carrying the work to the feeding means at other than a predetermined time, substantially as described.

2. In a machine of the class described, the combination of shearing mechanism, means for feeding the work in position to be acted upon by the shearing mechanism, centering members for positioning the work previous to the feeding operation, means for carrying the work forward in such centered condition into position to be acted upon by the feeding mechanism, tension mechanism for operating said work carrying means in one direction, and means for locking the work carrying means against movement at other than a predetermined time, substantially as described.

3. In a machine of the class described, the combination of shearing mechanism, means for feeding the work in position to be acted upon by the shearing mechanism, centering members for positioning the work previous to the feeding operation, means for carrying the work forward in such centered condition into position to be acted upon by the feeding mechanism, tension mechanism for operating said work carrying means in one direction, means for locking the work carrying means against movement at other than a predetermined time, and cam mechanism controlling the operation of said locking means, substantially as described.

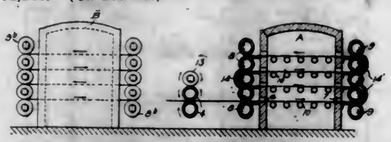
4. In a machine of the class described, the combination of a fixed table, cutting mechanism supported by the table, means movable with respect to the table for carrying the work into position to be operated upon by the cutting mechanism, centering means on the table, centering means on the carrying means, said work being abutted against said centering means previous to the carrying operation and centered thereby previous to movement of the carrying means, and means for moving the centering means on the table out from the path of travel of the work when the carrying member begins its movement and maintaining said centering means out of contact with the work during the entire carrying movement, substantially as described.

5. In a machine of the class described, the combination of a fixed table, cutting mechanism on the table, means movable with respect to the table for carrying the work into position to be operated upon by the cutting mechanism, gage members on the carrying means for the rear end of the work, a gage member for one side edge of the work mounted in the table, said work being abutted against said gage members previous to the carrying operation, and means for moving the gage for the side edge of the work out of the path of travel of the work at the commencement of the carrying movement and maintaining it out of engagement with the work during the entire carrying movement, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

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1,227,163. PROCESS AND APPARATUS FOR HEATING METAL FOR ROLLING. JOHN B. MCKIBBIN, Crafton, Pa., assignor of one-half to Edmonds J. Sugden, Pittsburgh, Pa. Filed Nov. 13, 1915. Serial No. 61,244. (Cl. 263—3.)



1. An improvement in the art of manufacturing thin metal shapes consisting in passing a continuous blank through reducing means and then passing the blank after it emerges from said reducing means back and forth through a heating furnace at different levels and at different lateral positions to re-heat the blank before it is again passed through additional reducing means.

2. An improvement in the art of manufacturing thin metal shapes consisting in passing a continuous blank through reducing means and then passing the blank after it emerges from said reducing means back and forth through a heating furnace at different levels and at different lateral positions to re-heat the blank before it is again passed through additional reducing means, and repeating said reheating and reducing operations successively.

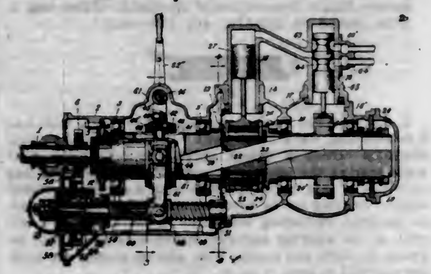
3. An improvement in the art of heating metals consisting in passing a blank back and forth through the same heating furnace at series of different successively higher and lower levels and at varying lateral positions therein, and in changing the lateral position of the blank at the termination of each series of levels.

4. A heating furnace of the character described comprising inclosing walls and an interior heating chamber, means at one side of said furnace for introducing a blank therethrough, means at the opposite side for re-introducing the blank at a different level, and means coincident with the uppermost and lowermost level at each side for deflecting the blank laterally during its re-introduction.

5. A heating furnace of the character described comprising inclosing walls and an interior heating chamber, means at one side of said furnace for introducing a blank therethrough, guiding means at the opposite side for re-introducing the blank at a different level, provided with an annular diagonally arranged pass for deflecting the blank laterally in its passage through the furnace.

[Claims 6 and 7 not printed in the Gazette.]

1,227,164. VARIABLE-STROKE PUMP. CHARLES M. MANLY, Freeport, N. Y. Filed Apr. 24, 1913. Serial No. 763,221. (Cl. 103—85.)



1. In a variable stroke pump, the combination of a cylinder, a piston therein, a crank for reciprocating said piston comprising a crank pin adjustable in a radial line, and means for balancing the centrifugal moment of said crank pin in different positions of adjustment thereof.

2. In a variable capacity pump, the combination of a cylinder, a piston therefor, a crank shaft for operating said piston having a crank pin adjustable in a radial line, and means for balancing the centrifugal moment of said crank pin in different positions of adjustment comprising a rotatably adjustable counterweight.

3. In a variable capacity pump, the combination of a cylinder, a piston therefor, a crank shaft for operating said piston having a crank pin adjustable in a radial line, means for balancing the centrifugal moment of said crank pin in different positions of adjustment comprising a rotatably adjustable counterweight, and connections between said crank pin and counterweight whereby the adjustment of said crank pin effects the proportionate movement of said counterweight.

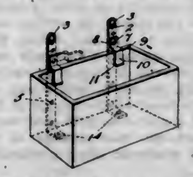
4. In a mechanism of the class described, a variable stroke crank shaft comprising an axially slidable part, a crank pin radially adjustable by the axial movement of said part, and a movable counterweight for said crank pin adjustable by the movement of said crank pin to balance the centrifugal moment of said crank pin in different positions of adjustment.

5. In a mechanism of the class described, a variable stroke crank shaft comprising an axially slidable part, a crank pin radially adjustable by the axial movement of said part, a movable counterweight for said crank pin adjustable by the movement of said crank pin to balance the centrifugal movement of said crank pin in different positions of adjustment, and power operated means driven from said crank shaft for adjusting said axially movable part.

[Claims 6 to 14 not printed in the Gazette.]

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1,227,165. BRACKET. WILLIAM MARIN, New York, N. Y. Filed Sept. 24, 1915. Serial No. 52,476. (Cl. 248—30.)



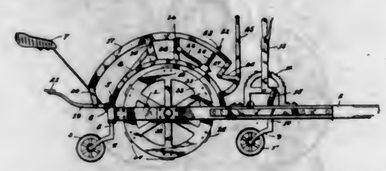
A bracket for flushing tanks comprising a bar provided with a rigid angular rest to support the base of the tank, a clamp pivoted at the opposite end of the bar for swinging movement parallel with the bar and at a right angle to the rest and adapted to be extended over the rear wall of the tank and provided with a flange adapted to come against the inner surface of the rear wall so as to hold the latter



in contact with the bar approximately throughout the length thereof, said clamp being adjustable longitudinally of the bar and means for holding the clamp at an adjusted position on the bar.

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1,227,166. ROTARY WEEDER AND CULTIVATOR. JAMES MATNEY, Livingston, Mont., assignor of one-half to E. Roberts, Livingston, Mont. Filed Aug. 2, 1916. Serial No. 112,867. (Cl. 55—60.)



1. A weeder comprising a wheel mounted frame, spaced blades carried by the same and arranged to rotate about an axis, an arch structure mounted upon the frame, a latch bar pivoted upon the arch structure, spring means for holding a portion of the latch bar in the path of movement of the blades and an arm pivoted upon the arch structure and having a shoulder engageable with the said latch bar.

2. A weeder comprising a wheel mounted frame, spaced blades carried by the frame and arranged to rotate about an axis, an arch structure mounted upon the frame, a latch bar pivoted upon the arch structure, spring means for normally holding a portion of the latch bar in the path of movement of the blades, an arm pivoted upon the arch structure and having a shoulder which normally engages the end of the latch bar and spring means for holding the arm at a normal position.

3. A weeder comprising a wheel mounted frame, a series of spaced blades carried by the frame and arranged to rotate about an axis, an arch structure mounted upon the frame, a spring actuated latch bar pivoted upon the arch structure and having a portion normally held in the path of movement of the blade, an arm pivoted upon the arch structure and having a shoulder which normally engages the end of the latch bar, spring means for holding the arm at a normal position and a lever fulcrumed upon the arch structure and operatively connected with the said arm.

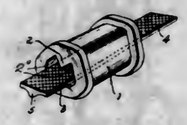
4. A weeder comprising a wheel mounted frame, a series of spaced blades carried by the frame and arranged to rotate about an axis, an arch structure mounted upon the frame, a latch bar pivoted upon the arch structure, spring means for holding a portion of the latch bar in the path of movement of the blades, an arm pivoted upon the arch structure and having a shoulder adapted to engage the end of the said latch bar, spring means for holding the arm at a normal position, and levers pivoted one at the forward portion of the arch structure and one at the rear portion of the said structure, the said levers being operatively connected with the adjacent ends of the said arm.

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1,227,167. ROPE-CLAMP. CLAUDE L. MATTHEWS, St. Louis, Mo., assignor to W. N. Matthews and Brother, Incorporated, St. Louis, Mo., a Corporation of New Mexico. Filed June 16, 1911. Serial No. 633,623. (Cl. 24—136.)

1. In a rope clamp, the combination of a member provided with longitudinally disposed grooves adapted to receive strands of rope, a frictionally retained clamping member for forcing the strands of said rope into said grooves, and means permitting rocking engagement between said member and said clamping member to permit automatic adjustment of the latter.

2. In a rope clamp the combination of a member provided with seats for a plurality of strands of rope, a wedge coöperating with said member to force strands of rope into said seats, and means intermediate said wedge and said member for permitting rocking adjustment of said wedge to accommodate irregularities in said ropes.



3. In a rope clamp the combination of a member having a plurality of seats for strands of rope, a wedge provided with a roughened face adapted to coöperate with said member for gripping said strands of rope, and a longitudinal rib arranged upon said wedge opposite to its roughened face for permitting rocking adjustment of said wedge.

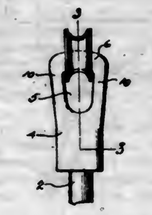
4. A clamp comprising in combination a hollow member having seats for a plurality of strands and a wedge member adapted to be frictionally retained within said hollow member and having rocking engagement therewith.

5. A clamp comprising in combination, a member provided with seats for a plurality of strands and a wedge engaging wall, and a wedge insertible within said member and having rocking engagement with said wall and adapted to retain strands in said seats by virtue of frictional engagement with said strands and said wall.

[Claim 6 not printed in the Gazette.]

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1,227,168. EYE FOR GUY ATTACHMENTS. CLAUDE L. MATTHEWS, St. Louis, Mo., assignor to W. N. Matthews and Brother, Inc., St. Louis, Mo., a Corporation of New Mexico. Filed July 30, 1915. Serial No. 42,855. (Cl. 24—115.)



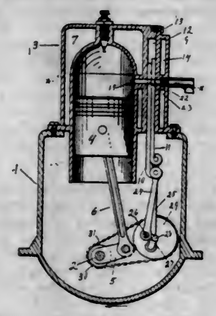
An attachment for flexible guys comprising an eye member provided with an aperture and having a bearing member at its extremity formed with an arcuate bearing face, a ring member passing through said aperture and revoluble about said bearing member, said ring member having a circular inner face shaped to have surface contact with the bearing member and being formed with a circular perimetrical seat and a retaining flange at each side of the seat, the eye member being formed with side parts adapted to center the ring member on the bearing member.

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1,227,169. INTERNAL-COMBUSTION MOTOR. DANIEL B. MEDANICH, Buechel, Ky., assignor to himself, Pendleton J. B. Parenteau, John R. Wright, and Oliver H. Kelsall, Louisville, Ky., a Partnership. Filed July 13, 1914. Serial No. 850,584. (Cl. 123—75.)

In an internal combustion motor, the combination of a cylinder having exhaust and inlet ports located side by side, a valve casing covering said ports, a pair of valves in the form of bifurcated super-imposed plates operable in said casing, a septum dividing said casing and entering the bifurcation in said valves, each of said plates having an opening in each branch thereof, the openings in one plate being in lateral alinement, while those in the other

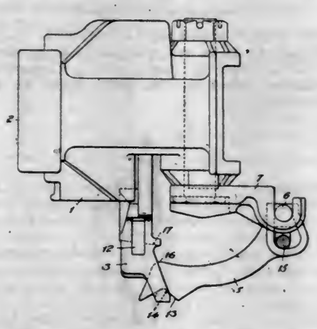
plate are not in lateral alinement, and means for reciprocating said valves to aline the respective openings there-



through with each other and with the exhaust and intake ports.

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1,227,170. CAR-COUPLING. ISAAC H. MILLIKEN, Aspinwall, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 4, 1916. Serial No. 129,437. (Cl. 213—59.)



1. A coupler lock having a plurality of intersecting openings extending at an angle to each other, each of said openings being adapted to receive means for moving said lock to unlocked position.

4. A coupler having on one side a projection adapted to engage a knuckle opening lever, and being provided adjacent said projection with a slot opening through the said lock to receive a lock-set member and permit it to extend beyond the same face of said lock from which said projection extends.

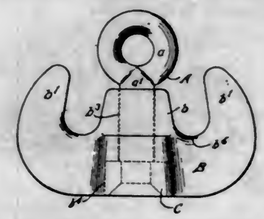
[Claims 2, 3, and 5 not printed in the Gazette.]

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1,227,171. LOAD-HOOK. EDWARD Y. MOORE, Cleveland, Ohio. Filed Apr. 10, 1915. Serial No. 20,392. (Cl. 57—127.)

1. In a load hook, the combination, with a supporting member having a top eye and a vertical shank, of a block swiveled on said shank and provided with an upwardly projecting central boss freely surrounding the shank, and a pair of upwardly projecting hooks on opposite sides of the boss and spaced therefrom, the central under portion of said block having a recess, and a collar on the shank comprised within said recess, whereby the block is supported by the shank, and said collar on the one side and the overhang of the eye on the other locks the supporting member within the block.

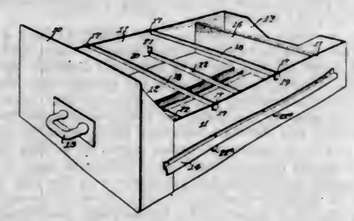
2. The combination of an eye having a shank with a reduced lower portion, a block having a continuous lower body portion and a central upwardly extending boss and a pair of upwardly extending hooks on diametrically opposite sides of the boss, said block having a cylindrical opening through said boss surrounding the shank and having a recess of larger bore beneath the opening and extending therefrom to the lower face of the block, and a



collar surrounding the reduced portion of the supporting shank and contained within the recess in the block and clamped in place on the shank and in the recess by means of the shank being upset beneath the collar, the eye at the upper end of the shank closely overhanging the top of the boss and preventing downward movement of the shank with reference to the block.

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1,227,172. INDEX-DRAWER. SAMUEL EDWARD MOORE, Harrisburg, Pa., assignor of one-fourth to James McKirdy, Carlisle, Pa., and one-fourth to Frank M. Eastman, Harrisburg, Pa. Filed Aug. 12, 1916. Serial No. 114,576. (Cl. 129—16.)



1. The combination with a filing drawer including a pair of sides, of a relatively narrow spacing member extending across the drawer, adjacent the top thereof, said member comprising a bar having its ends bent to form locking lugs, said bar being removably associated with said sides and locked against accidental lengthwise or sidewise movement.

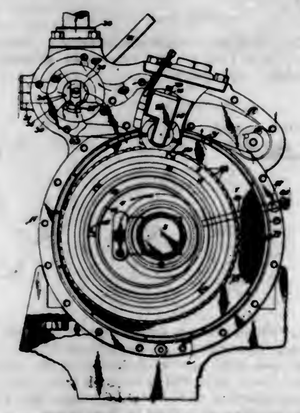
2. The combination with a filing drawer including a pair of sides, of a relatively narrow spacing member extending across the drawer, adjacent the top thereof, said member comprising U-shaped bar removably mounted in sockets formed in said sides, the sides of said U-shaped bar being adapted to abut the external surface of said drawer sides to prevent sidewise movement.

3. The combination with a filing drawer including a pair of sides, of a relatively narrow spacing member extending across the drawer, adjacent the top thereof, said member being removably associated with said sides, and a second spacing member below said first-named member and removably associated with said sides.

4. The combination with a filing drawer, including a pair of sides having oppositely disposed slots in the top edges thereof, and having oppositely disposed sockets below said slots, of a relatively narrow spacing member extending across said drawer and engaging said slots, and a second spacing member extending across said drawer and engaging said sockets.



1,227,173. ROTARY ENGINE. GEORGE FREDERICK MOORE, Owensboro, Ky., assignor to The Reciproto Engine Co., a Corporation of Delaware. Filed Mar. 19, 1917. Serial No. 155,746. (Cl. 121—94.)



1. In a rotary engine, a cylinder, a piston in said cylinder, an abutment connected to said piston and adapted to partake of movement in response to movement of said piston, compressible packing members carried by said abutment, means for compressing said packing members, and means for adjusting said packing members toward the walls of the cylinder in which said abutment operates.

7. In a rotary engine, a cylinder, a piston operable in said cylinder, said piston having circular grooves in its side faces, the walls of said grooves nearest the periphery of the piston being beveled, an expansible packing ring in each groove having a beveled face contacting with the beveled face of said groove, and means for expanding said packing ring to cause it to ride laterally on the beveled wall of said groove.

19. In a rotary engine, a cylinder having a lubricant passageway leading through its wall and having a well in which the lubricant delivered through said passageway may collect, and a piston in said cylinder having a lubricant passageway therein in communication with said well.

21. In a rotary engine, a cylinder having a piston compartment, a piston in said compartment, and packing rings in the sides of said piston, said cylinder being provided with drain ducts leading from the sides of said piston through which water of condensation may be withdrawn.

[Claims 2 to 6, 8 to 18, and 20 not printed in the Gazette.]

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1,227,174. ALUMINUM ALLOY AND IN ARTICLES MADE THEREFROM. ALBERT W. MORRIS, Springfield, Mass. Filed Nov. 26, 1915. Serial No. 63,475. (Cl. 75—1.)

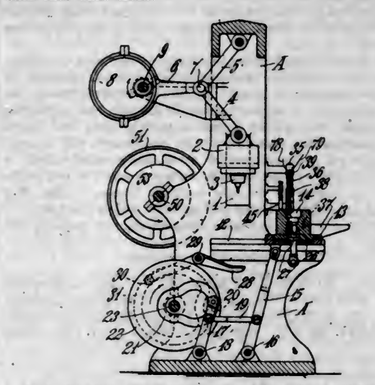
An alloy containing aluminum, iron, and one or more other hardening metals, such as nickel, the proportion of aluminum being not less than 70% and the proportion of iron from 1% to 6% of the whole.

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1,227,175. AUTOMATIC FORGING APPARATUS. ALBERT W. MORRIS, Springfield, Mass. Filed Jan. 8, 1916. Serial No. 70,944. (Cl. 22—67.)

1. A forging apparatus, comprising, in combination, a mold to receive liquid metal to be forged, a ram, and means automatically operable when the metal is at a predetermined temperature to actuate the ram to strike the metal in the mold.

2. A forging apparatus, comprising, in combination, a mold to receive liquid metal to be forged, a ram adapted to be forced into said mold, and means automatically operable when the metal in the mold reaches a predetermined temperature on falling temperature to force the ram into said mold.



3. A forging apparatus, comprising, in combination, a mold to receive liquid metal to be forged, a ram adapted to be forced into said mold, means automatically operable when the metal reaches a predetermined temperature to actuate said ram to strike the metal in the mold, and a device to skim the dross from the metal in the mold automatically operable shortly before the metal is struck by said ram.

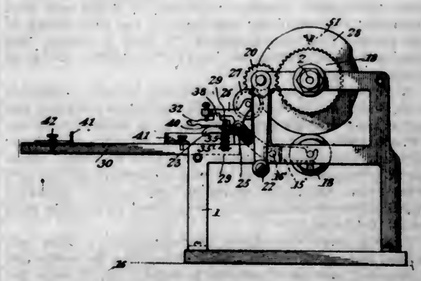
4. A forging apparatus, comprising, in combination, a depressible ram, a mold to receive liquid metal to be forged arranged normally out of the path of said ram, devices to position the mold in the path of said ram, mechanism to depress the latter to strike the metal in the mold, and means automatically operable when the metal in the mold reaches a predetermined temperature, on falling temperature, to actuate said devices and mechanism.

5. A forging apparatus, comprising, in combination, a depressible ram, a mold to receive liquid metal to be forged arranged normally out of the path of said ram, devices to position the mold in the path of the ram, mechanism to depress the latter to strike the metal in the mold, a skimmer arranged to remove the dross from the metal in the mold, and means automatically operable when the metal reaches a predetermined temperature on falling temperature to actuate said devices, mechanism, and skimmer.

[Claims 6 to 16 not printed in the Gazette.]

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1,227,176. ROTARY DUPLICATING-MACHINE. CLARENCE E. MORRISON, Albany, N. Y. Filed July 3, 1916. Serial No. 107,337. (Cl. 101—132.)



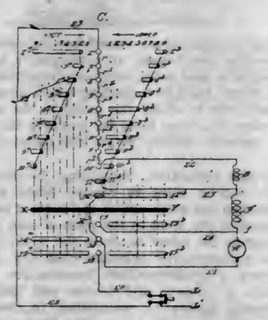
1. A rotary duplicating machine comprising a frame, a rotatable detachable cylinder mounted therein and upon which an impression sheet is adapted to be held, a rocking frame, an impression roller carried thereby and held yieldingly against the surface of the cylinder, a cam disk

rotating with the cylinder, a lever pivotally mounted upon the rocking frame, a pulley pivotally mounted upon said lever and frictionally engaging the cam disk, a set screw carried by the arm of said lever, and a lever pivoted upon the rocking frame and against which said set screw is adapted to bear.

2. A rotary duplicating machine comprising a frame, a rotatable cylinder mounted thereon and adapted to carry an impression sheet thereon, a rocking frame, an impression roll pivotally mounted thereon, an adjusting screw upon the rocking frame, a spring upon said screw for regulating the pressure of the impression roll against said cylinder, a lever pivoted upon the rocking frame, a grooved pulley carried by said lever, means for adjusting the latter relatively to said rocking frame, a cam disk rotating with the cylinder and against which the pulley is adapted to contact, and gear mechanism for rotating the cylinder.

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1,227,177. MOTOR-CONTROLLER. NIELS L. MORTENSEN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 15, 1911. Serial No. 660,387. (Cl. 172—179.)



1. The method of controlling an electric motor, consisting in connecting the motor armature, and series field winding in parallel to supply lines with a common resistance in series with both the armature and field winding and then inserting additional resistance in the field circuit without variation of resistance between the armature and the supply lines.

4. The method of reversing and varying the speed of an electric motor having a series field winding consisting in establishing a closed loop across the terminals of the motor armature including the series field winding, establishing a circuit from points of said loop between the armature and field winding to connect the same in parallel and reverse the flow of current through one of the same and connecting a common resistance in series with both branches, then inserting resistance in the field branch of the circuit, and then enlarging the loop to include said first mentioned resistance, thereby excluding the same from the armature branch.

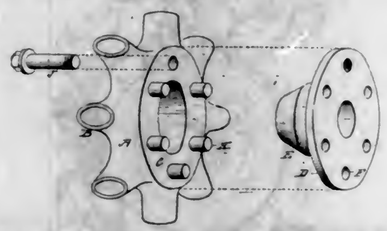
6. A controller for reversing electric motors, comprising resistances, means for connecting the motor armature and series field winding across the lines in parallel with one of said resistances in the armature branch and another of said resistances in series with both branches, subsequently including another of said resistances in the field branch and thereafter excluding said second mentioned resistance from the armature branch but leaving the same in the field branch.

9. In a motor controller, in combination, a brake coil, a fixed resistance and means for connecting the motor and brake coil and resistance to a supply circuit with the motor armature and said resistance in parallel with the field winding and said brake coil and thereafter varying the circuit connections to vary the speed of the motor, said means including means insuring a reduction of the current in the field and brake coil circuit upon initial operation of said means and after establishing said first-mentioned connections and without variation of the resistance between the motor armature and the lines.

[Claims 2, 3, 5, 7, 8, 10, and 11 not printed in the Gazette.]

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1,227,178. METAL VEHICLE-WHEEL. THOMAS E. MURRAY, New York, N. Y. Filed Mar. 8, 1916. Serial No. 82,812. (Cl. 21—31.)



1. A cylindrical hub, a flange on the rear end of said hub having openings, a hollow metal wheel nave received on said hub, pins extending through openings in the walls of said nave and projecting from the rear wall thereof and entering said flange openings, and releasable means for securing said nave to said flange.

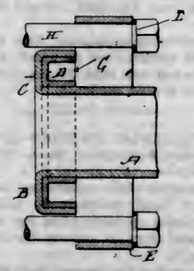
2. A cylindrical hub, a flange on the rear end of said hub having openings, a hollow metal wheel nave received on said hub, the said nave having in its front wall countersunk recesses, pins having heads seated in said recesses and extending through openings in the walls of said nave and projecting from the rear wall thereof and entering said flange openings, and releasable means for securing said nave to said hub flange.

3. A cylindrical hub, a flange on the rear end of said hub having openings, a hollow metal wheel nave received on said hub, the said nave having in its front wall counter-sunk recesses, pins having heads seated in said recesses and extending through openings in the walls of said nave and projecting from the rear wall thereof and entering said flange openings, and releasable means for securing said nave to said hub flange, and a headed bolt extending through openings in the walls of said nave and threaded at its end to engage in a threaded opening in said flange.

4. A cylindrical hub, a flange on the rear end of said hub having openings, a hollow metal wheel nave received on said hub, the said nave having in its front wall countersunk recesses and in its rear wall threaded openings, pins having heads seated in said recesses and threaded to engage the threads in said rear wall openings and projecting beyond said rear wall and entering said flange openings, and releasable means for securing said nave to said hub flange.

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1,227,179. COUPLING FOR FLANGED TUBES OR PIPES. THOMAS E. MURRAY, New York, N. Y. Filed Jan. 24, 1917. Serial No. 144,132. (Cl. 137—28.)



1. A tube, a flange on the end thereof, and a plurality of metal loops disposed radially around said tube with their ends in contact therewith and having their corresponding side edges homogeneously united to said flange.

3. A tube, a flange on the end thereof, a ring on said tube homogeneously united to said flange, a plurality of metal loops disposed radially around the tube with their ends in contact therewith and having their corresponding edges homogeneously united to said ring, and a ring also on said tube and homogeneously united to the opposite edges of said loops.

[Claim 2 not printed in the Gazette.]



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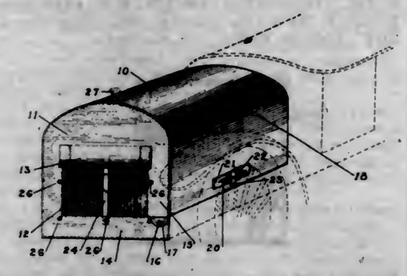
1,227,180. WATER-ELEVATOR. SAMUEL MURTA, St. Louis, Mo. Filed July 14, 1913. Serial No. 778,893. (Cl. 162—1.)



In a water elevator, the combination of an ejector, a discharge pipe leading therefrom, a pressure pipe leading thereto, a return pipe in communication with the ejector, an air supply pipe, a check valve in said air supply pipe, a relief device whereby the air in the pressure pipe may be exhausted when the ejector is not in operation, a reservoir located beneath the outlet end of the discharge pipe, a pipe communicating between the reservoir and the return pipe, and a check valve in said pipe, whereby the pressure pipe may be recharged with water as the air is exhausted from the pressure pipe and the elevator be started with a water charge impelled by air under pressure and its operation continued without interruption by air under pressure.

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1,227,181. AUTOMOBILE-HOOD COVER. EDWIN B. NATHAN, New York, N. Y. Filed Mar. 22, 1916. Serial No. 86,021. (Cl. 257—132.)



1. A cover for automobile hoods comprising a body member having a front portion cut out to form an opening for the radiator, a curtain to close said opening, said front portion comprising two angularly disposed ribbons detachably secured together, and a side flap attached to the vertical ribbon, said side flap being adapted to lift with the side of the hood when the latter is opened without removing the cover from the hood.

2. A cover for automobile hoods comprising a body member having a front portion cut out to form an opening for the radiator, a curtain to close said opening, said front portion being formed at the bottom with a tongue having a free end, the adjacent side of the cover forming a flap detachably secured to said free end, said side flap when detached being adapted to lift with the side of the hood when the latter is opened without removing the cover from the hood.

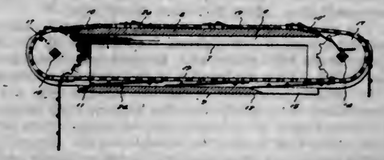
3. A cover for automobile hoods comprising a body member having a front portion cut out to form an opening for the radiator, a curtain to close said opening, said front portion being formed at the bottom with a tongue having a free end, the adjacent side of the cover forming a flap detachably secured to said free end, and means for supporting said tongue intermediate its ends.

4. A cover for automobile hoods comprising a body member having a front portion cut out to form an opening for the radiator, a curtain to close said opening, said front portion being formed at the bottom with a tongue having a free end, the adjacent side of the cover forming a flap detachably secured to said free end, and a strap spanning said opening in the front and attached to the tongue intermediate its ends.

5. A cover for automobile hoods comprising a body member having a front portion cut out to form an opening for the radiator, a curtain for closing the opening, said front being formed with two tongues or ribbons framing the opening, one of said tongues being formed with a tab overlapping the other tongue and detachably secured thereto, and a side flap attached to the vertical tongue, said side flap, when the fastening is undone, being movable with the side of the hood when the latter is opened without removing the cover from the hood.

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1,227,182. CONVEYING MECHANISM. RICHARD O. NEAL, Albany, Okla. Filed July 27, 1916. Serial No. 111,644. (Cl. 193—2.)



1. A dish conveyer comprising two side walls, one of which is provided with a dish introducing opening, top and bottom plates connected to the side walls, sprocket carrying shafts journaled in the opposite ends of the side walls, two sprocket chains trained around said shafts and passing above the bottom between the side walls and over the top wall, and a plurality of flexible conveying members connected to the sprocket chains, each of said conveying members consisting of a plurality of flexibly connected plates, one of said plates being hingedly connected to the sprocket chains with the extreme section free.

2. A dish conveyer comprising two side walls, one of which is provided with a dish introducing opening, top and bottom plates connected to the side walls, sprocket carrying shafts journaled in the opposite ends of the side walls, two sprocket chains trained around said shafts and passing above the bottom between the side walls and over the top wall, a plurality of flexible conveying members connected to the sprocket chains, each of said conveying members consisting of a retaining plate connecting the chains and having a hinging member, and a plurality of hingedly connected sections, the inner member of which is provided with a hinging member for coöperation with the hinging member of the plate.

1,227,183. JAR-WRENCH. JOHN L. NEEDHAM, Chicago, Ill., assignor to The Boye Needle Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 8, 1916. Serial No. 119,111. (Cl. 65—26.)



2. A jar-wrench comprising a pair of pivotally-connected sheet-metal levers having the lateral outer edge-portions of the levers curved downwardly to afford closure-gripping lugs and curved at the handle-portions of the levers to afford handle-grips, said closure-gripping lugs being spaced to admit the closure between them.

4. A jar-wrench comprising a sheet-metal lever having a laterally-projecting pivot-lug at one end and having the outer lateral edge-portion of the metal bent downwardly to afford closure-gripping lugs and a handle-grip, space being left between the closure-gripping lugs to admit the closure, and a companion sheet-metal lever having one end pivotally connected with said pivot-lug and having the outer edge-portion of the metal bent downwardly to afford a pivot-gripping lug and having the metal curved downwardly and under to afford a handle-grip.

[Claims 1 and 3 not printed in the Gazette.]

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1,227,184. PROCESS OF MAKING MALT SYRUP. HENRY T. NEIDLINGER, Oswego, N. Y. Filed Sept. 6, 1912. Serial No. 718,834. (Cl. 127—10.)

1. The process of preparing malt syrup which consists in making a wort or extract from malted grain by digesting said grain with water at a temperature of substantially 149° F., subsequently slowly and gradually increasing the temperature until it reaches substantially 171° F., separating the extract from the residual solid matter and evaporating it to a consistency of substantially 36° Baumé, and then separating it from the albuminous and other constituents which may have precipitated.

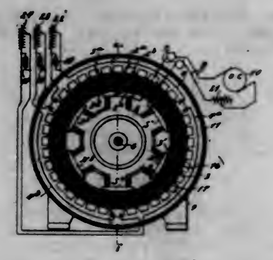
2. The process of preparing malt syrup which consists in making a wort or extract from malted grain by digesting said grain with water at a temperature of substantially 149° F., subsequently slowly and gradually increasing the temperature until it reaches substantially 171° F., separating the extract from the residual solid matter, and evaporating it to a consistency of substantially 36° Baumé, separating it from the albuminous and other constituents which may have precipitated, then quickly cooling said extract to a comparatively low temperature whereby the residual albuminous and glutinous ingredients are precipitated, and then separating the resulting extract or syrup from said precipitated material.

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1,227,185. INDUCTION DEVICE. ALFONS H. NEULAND, New York, N. Y. Filed Sept. 1, 1915. Serial No. 48,467. (Cl. 172—239.)

1. An induction device comprising a stationary member having a plurality of spaced magnetic conductors, a movable member having a plurality of spaced magnetic conductors coöperative with those of the stationary member to form at least one section having portions in which the conductors of the two members are alined, partly off-set in one direction, fully off-set, and partly off-set in the opposite direction, an induced winding surrounding the section, and a progressive magnetic field traversing the section and acting on the induced winding.

3. An induction power transmission device comprising a stationary member having a plurality of circularly arranged spaced magnetic conductors, a rotatable member having a plurality of circularly arranged spaced magnetic conductors coöperative with those of the stationary member to complete a rotative flux path as the rotatable member rotates, the conductors of the two members coöperating to form at least one circumferential section having successive portions in which the conductors of the two members are respectively alined, partly off-set in one direction, fully off-set, and partly off-set in the opposite direction, an induced winding surrounding the section, and a revolving magnetic field traversing the section and acting on the induced winding and having its poles of opposite polarity spaced the distance between the alined and fully off-set portions.



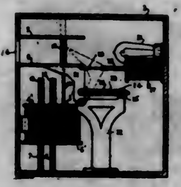
18. An induction device comprising a stationary member having a plurality of circularly arranged spaced magnetic conductors, a rotatable member having a plurality of circularly arranged spaced magnetic conductors coöperative with those of the stationary member to complete a rotative flux path as the rotatable member rotates, the conductors of the two members coöperating to form at least one circumferential section having portions in which the conductors of the two members are alined, partly off-set in one direction, fully off-set, and partly off-set in the opposite direction, an induced winding surrounding the sections, means for producing a leading magnetizing current in the induced circuit, and a revolving magnetic field traversing the stationary and rotatable members and acting on the induced winding.

30. A dynamo electric machine comprising a rotatable member and a coöperative stationary member, the coöperative faces of the two members being shaped to form two progressive partially closed flux paths between the members as the rotative member rotates, a progressive magnetic field traversing the two members, the two paths being so formed that the magnetic flux traversing them produces opposing magnetic pulls on the rotatable member, and an induced circuit acted on by the progressing magnetic field and so arranged that the secondary magnetic field thereby induced strengthens the flux traversing one path and weakens the flux traversing the other path.

[Claims 2, 4 to 17, 19 to 29, and 31 not printed in the Gazette.]

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1,227,186. INDICATING DEVICE FOR VEHICLES. ROBERT M. NICHOLSON, Houston, Tex. Filed Dec. 4, 1915. Serial No. 65,028. (Cl. 40—52.)



1. A device of the character described including a pair of solenoids, each having a slidable core, a casing, wherein said solenoids are mounted, having a window opening, a plate supported by the core of one of said solenoids whereby said plate may be elevated into alinement with said opening when said solenoid is energized, a catch arranged to engage under said plate when elevated and hold it in elevated position, said catch being connected to the core of the other solenoid, and thereby withdrawn from under the plates when its solenoid is energized, a light arranged opposite the window opening and electrical connection arranged to contact said solenoids and light with and disconnect them from a source of electrical supply.

2. A device of the character described, including a pair of solenoids, each having a slidable core, a casing wherein said solenoids are mounted having a window opening, an electric light arranged opposite said opening, a plate having designation characters cut therethrough supported by the core of one of said solenoids whereby said plate may be elevated into alinement with said light and opening, a yieldably mounted catch which permits the elevation of said plate but which engages thereunder when elevated and holds it in its elevated position, said catch being connected to the core of the other solenoid whereby it may be withdrawn from under said plate, and electrical connections arranged to connect said solenoids and light with and disconnect them from a source of electrical supply.

3. A device of the character described including a casing having a window opening, transverse partitions in the casing one above the other below said opening, said partitions extending from end to end of the casing, and from the rear thereof only part of the way to the front, a pair of solenoids in the casing each having a slidable core, a plate supported by the core of one of said solenoids and adapted to be elevated by said core through alined slots in said partitions into alinement with said window opening, a catch pivoted at one end and whose other end is free and normally extends over the plates, said free end having its under side beveled upwardly, said catch being yieldably mounted so as to permit the elevation of said plate and to engage thereunder when the plate is in elevated position, said catch being connected to the core of the other solenoid whereby it may be withdrawn from under said plate, and electrical connection arranged to connect said solenoids with and disconnect them from a source of electrical supply.

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1,227,187. CULVERT-JOINT. HERBERT RENNO OLCOTT, Portland, Oreg., assignor to John S. Beall, Portland, Oreg. Filed Nov. 29, 1915. Serial No. 63,958. (Cl. 61—9.)



1. A culvert comprising a pair of full cylindrical culvert sections arranged end to end and a joint comprising a strip corrugated throughout its length surrounding the adjacent ends of the sections and overlapped upon itself whereby said overlapped portions form a substantially watertight joint, and means to maintain said joint in gripping relation with the culvert sections.

2. A culvert comprising a pair of corrugated culvert sections arranged end to end, and a split culvert section corrugated throughout its entire length larger than said first mentioned culvert sections arranged in overlapping registering and gripping relation upon both adjacent ends, and means to maintain said gripping relation.

3. A culvert comprising a pair of corrugated culvert sections butt-ended, a split corrugated ring having a bar substantially removed from one circumferential end and secured to the ring, a malleable strip secured upon the other circumferential end, said ring being clamped upon said butt-ended adjacent culvert ends and secured by said malleable strip and bar.



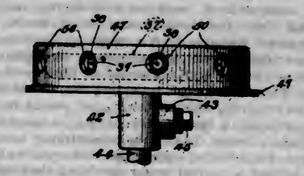
1,227,188. SHAFT-DRIVING MECHANISM. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 3, 1910. Serial No. 590,580. (Cl. 74—38.)



A power transmitting mechanism comprising a shaft having a plurality of cranks intermediate its ends, said cranks being arranged adjacent to each other and angularly disposed to each other, said shaft and cranks being formed of soft tempered metal, a two-part case-hardened bearing secured to each crank, and means for preventing the bearings from turning on the cranks.

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1,227,189. GAS-BURNER. LEWIS F. OSTRANDER, St. Louis, Mo., assignor of one-half to J. F. Esperon, Indianapolis, Ind. Filed July 13, 1916. Serial No. 109,115. (Cl. 158—106.)



1. The hereindescribed gas burner comprising a hollow burner ring provided with jet openings, a gas supply pipe leading to said hollow member, an annular hood removably positioned over the hollow ring, the body of which hood is of substantially inverted U-shape in cross section, the walls of said hood being spaced apart from said ring, and there being openings formed in the outer wall of the hood directly opposite the jet openings.

2. The hereindescribed gas burner comprising a hollow member provided with jet openings, means for supplying gaseous fuel to said hollow member, an annular hood positioned over said hollow member, the body of which hood is of substantially inverted U-shape in cross section, adjustable means seated in said hollow member for supporting said hood, and there being openings formed in the outer wall of the hood directly opposite the jet openings in the hollow member.

3. In a burner of the class described, a hollow member provided with jet openings, a tubular member connecting opposite sides of said hollow member, flanges on said tubular member, a hood positioned over the hollow member, the inner wall of which hood rests upon the tubular member and the flanges thereof, and there being openings formed in the outer wall of the hood directly opposite the jet openings in the hollow member.

4. In a burner of the class described, a hollow member provided with jet openings, a tubular member connecting opposite sides of said hollow member, flanges on said tubular member, a hood positioned over the hollow member, the inner wall of which hood rests upon the tubular member and the flanges thereof, there being openings formed in the outer wall of the hood directly opposite the jet openings in the hollow member, and adjustable means seated in the hollow member for supporting said hood.

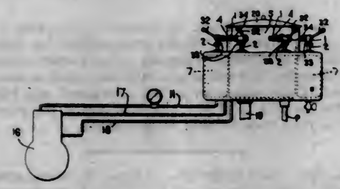
5. The combination with a burner ring having a gas inlet and a series of jet openings, of an annular hood for said burner ring, the body of which hood is substantially of inverted U-shape in cross section with both of its walls extending downward to the sides of the burner ring so as to provide an air chamber above and on both

sides of the burner ring when the parts are assembled, and there being openings formed in the outer wall of the hood directly opposite the jet openings in the burner ring.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,190. HUMIDIFYING APPARATUS. FREDERICK W. PARKS, Fitchburg, Mass., assignor to The G. M. Parks Company, Fitchburg, Mass., a Corporation of Massachusetts. Filed Aug. 29, 1913. Serial No. 787,382. (Cl. 137—67.)



1. In a humidifying apparatus, the combination with a tank having a central water-receiving compartment and a separate closed compartment encircling the water-receiving compartment, said water-receiving compartment extending above the closed compartment, means to maintain air under pressure in the closed compartment, a self-contained compressed-air-actuated humidifying head mounted on top of and connected to the closed compartment, a water inlet pipe extending from said head into the water-receiving compartment, and means to maintain the water level in the water-receiving compartment at a point slightly below that of the humidifying head.

4. In a humidifying apparatus, the combination with a tank having a central water-receiving chamber and an exterior concentric closed compartment for receiving compressed air, of a plurality of self-contained compressed-air-actuated humidifying heads sustained by said tank and communicating with the closed compartment, water inlet pipes communicating with said heads and leading into the water-receiving compartment, a jacketed pump for maintaining the air pressure in the closed compartment and two circulating pipes connecting the jacket of said pump to the water-receiving compartment, whereby a circulation of water from said compartment to the jacket and back to the compartment again will be established.

5. In a humidifying apparatus, the combination with a tank divided to present a water-receiving compartment and a compressed air compartment, of means to maintain water at a predetermined level in the water-receiving compartment, means to maintain air under pressure in the compressed air compartment, a plurality of independent self-contained compressed-air-actuated humidifying heads, means supporting each head on the tank, which means permits the position of said head to be adjusted angularly and provides a communication between the head and each compartment in the tank, and a valve for each head whereby said heads may be controlled independently.

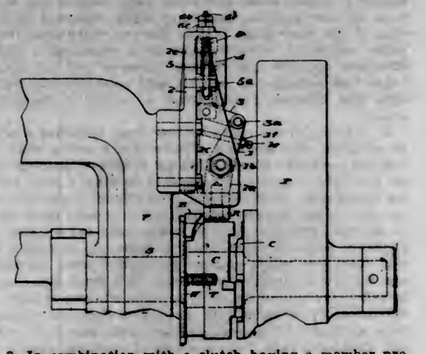
[Claims 2 and 3 not printed in the Gazette.]

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1,227,191. CLUTCH. ISAAC PATRICK, Hastings, Mich., assignor to Consolidated Press Company, Hastings, Mich., a Corporation of Michigan. Filed Apr. 15, 1916. Serial No. 91,319. (Cl. 74—46.)

1. In combination a clutch member, an abutment adjacent said clutch member and adapted to be oscillated into and out of position to contact with said clutch member, means adapted to hold the abutment normally in position to engage said clutch member and cause disengagement of the clutch, and means for oscillating said abutment to permit the engagement of the clutch.

2. In combination with a clutch member, an abutment, pivoted adjacent the clutch, and adapted to be oscillated into and out of position to contact with said clutch member, a slidable member adapted in normal position to hold said abutment in position to cause disengagement of the clutch, and means for moving said member to permit engagement of the clutch.



3. In combination with a clutch having a member provided with a cam, an abutment pivoted adjacent the clutch and adapted to be oscillated into and out of position to contact with said cam to cause disengagement of the clutch when in contact with said cam, a slidable member adapted to oscillate the abutment and to hold it in normal position to cause disengagement of the clutch member, and means for operating said slidable member.

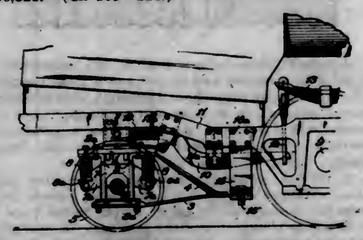
4. In combination with a clutch member, a lever, pivoted beside the clutch and having its inner end adapted to be oscillated into and out of position to contact with said clutch member to disengage the clutch, when in contact with said member, means adapted to hold the outer end of the lever and cause disengagement of the clutch, and means for shifting said holding means to permit engagement of the clutch.

5. In combination with a clutch member, a lever, pivoted adjacent the clutch member and having its inner end adapted to be oscillated into and out of position to contact with said clutch member to disengage the clutch when in contact therewith, a slidable member adjacent the other end of the lever and adapted in one position to hold said lever in such position as to cause disengagement of the clutch, and means for withdrawing said member to permit engagement of the clutch.

[Claims 6 to 19 not printed in the Gazette.]

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1,227,192. LOCOMOTIVE-TRUCK. JOHN S. PAYNE, Wortendyke, N. J. Filed Mar. 22, 1917. Serial No. 156,521. (Cl. 105—226.)



1. In a locomotive engine, the combination of a main frame; a radial truck pivoted thereto; and an equalizing system interposed between the supporting wheels of the main and truck frames and comprising equalizing levers which are pivotally connected to the main frame and supported on the truck frame free from connection thereto.

2. In a locomotive engine, the combination of a main frame; a radial truck pivoted thereto; and an equalizing system interposed between the supporting wheels of the main and truck frames and comprising equalizing levers which are pivotally connected to the main frame and mounted on the truck frame with the capacity of free transverse movement thereof, relatively to the equalizing levers.

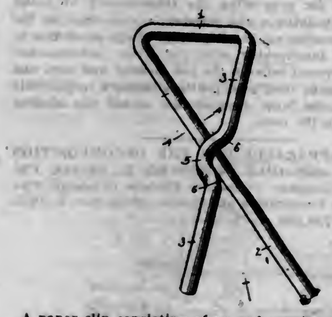
3. In a locomotive engine, the combination of a main frame; a radial truck pivoted thereto; and an equalizing system interposed between the supporting wheels of the main and truck frames and comprising equalizing levers which are pivotally connected to the main frame, and a bolster coupled to said levers and supported freely on the truck frame.

[Claims 4 to 8 not printed in the Gazette.]



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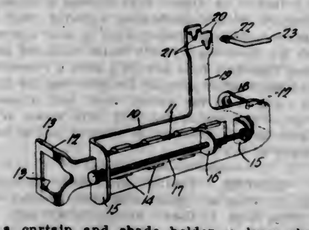
1,227,193. PAPER-CLIP. WALTER F. PEET, Philadelphia, Pa., assignor of one-half to Edward B. Peet, Philadelphia, Pa. Original application filed Oct. 19, 1915, Serial No. 62,329. Divided and this application filed Feb. 6, 1917. Serial No. 146,893. (Cl. 24—261.)



A paper clip consisting of an end member and legs projecting diagonally from opposite ends of the same toward, and at a pronounced angle to, each other and crossing between their ends, one of said legs being straight, the other leg having formed therein, where it crosses the straight leg, a crimp which embraces the latter, those portions of the crimped leg on opposite sides of the crimp lying in substantially the same plane as the straight leg, the straight leg acting as a guide to cause the clip to slide into engagement with the paper in a direction substantially in line with the direction of extension of said straight leg and to position the arch of the crimp transversely to the direction of the sliding movement, thus crimping the paper about the straight leg with a minimum distortion of the legs away from the common plane which they normally occupy.

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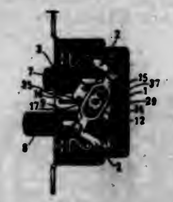
1,227,194. CURTAIN AND SHADE HOLDER. SAMUEL PETERSON, Iron River, Mich. Filed Aug. 11, 1915. Serial No. 44,966. (Cl. 156—24.)



In a curtain and shade holder, a base plate having spaced lugs extending from its face to provide a guideway, having ears extending outwardly at the opposite ends of said guideway, and provided with a rearwardly extending clamping jaw having an extension to support a shade roller, a slide plate mounted in said guideway having one end bent into a clamping jaw and the other end bent laterally to provide an ear formed with a threaded opening therein, and a screw rod swiveled in the ears of said base plate and engaging the threaded opening of the ear of the slide plate.

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1,227,195. PUSH-BUTTON SWITCH. CLARENCE D. PLATT, Bridgeport, Conn. Filed Mar. 17, 1914. Serial No. 825,221. (Cl. 175—293.)



1. In a push button switch, a supporting plate having dependent parallel members provided with stop lugs, a switch blade yoke embracing said members, a slot formed in one of said dependent members, a slide plate extending between said members from one to the other and guided thereby and having a lug projecting beyond one of said dependent members, a spring intermediate said actuator and switch blade yoke and a pivotal connection intermediate the actuator and slide plate for reciprocating the latter.

2. In a push button switch having a supporting plate with parallel dependent members, a slot formed through one of said members, a slide plate extending between the dependent members of the supporting plate and with an arm formed integral therewith and resting against one of said members, an oscillatory actuator pivotally connected with said arm, a lug extending from the slide plate through the slot of the dependent member and a switch blade yoke controlled by said lug.

3. In a push button switch having a supporting plate with parallel depending members, a reciprocating slide plate located between said members and extending across from one to the other so as to have supporting bearing against each, a locking and release lug carried by the said plate, and an oscillatory actuator for the said plate.

4. In a push button switch having a supporting plate with parallel dependent members, a slide plate extending between the dependent members of the supporting plate and bearing against both of said members and having an arm resting against one of said members and extending to an actuating member, an oscillatory actuating member having a pivotal connection with said arm, a lug extending from the slide plate, and a switch blade yoke having stop lugs engaging the extended lug of the slide plate.

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1,227,196. WATER-GAGE. FRANCIS A. POCOCK, Philadelphia, Pa. Filed June 22, 1914. Serial No. 846,456. (Cl. 73—54.)

1. In a device of the character stated a slotted casing, a recessed body provided with bushings carrying nipples, and removably contained within said casing, a transparent member lying between the body and one of the walls of the casing, means carried by the casing for holding the parts together, and caps frictionally engaging the ends of the casing for closing the same.

2. A water gage comprising a slotted casing, a recessed body removably contained within said casing, a transparent member lying between the casing and body, means carried by the casing for holding the parts together, a bushing carried by each end of the body, each of said bushings being provided with a valve seat and acting as a housing for a valve, a ball valve situated within each of said bushings, a nipple threaded in each of said bushings for limiting the outward movement of the ball valve and means for normally holding said ball valves unseated.

3. A water gage comprising a slotted casing, a recessed body removably contained within said casing, a transparent member lying between the casing and body, means carried by the casing for holding the parts together, a bushing carried by each end of the body, each of said bushings being provided with a valve seat and acting as a housing for a valve, a ball valve situated within each of said bushings, a nipple threaded in each of said bushings, the inner end of said nipples being slotted transversely, and means for normally holding the ball valve unseated and against the inner ends of said nipples.



4. A water gage comprising a slotted casing, a recessed body removably contained within said casing, a transparent member lying between the casing and body, means carried by the casing for holding the parts together, a bushing carried by each end of the body, each of said bushings being provided with a valve seat and acting as a housing for a valve, a ball valve situated within each of said bushings, a nipple threaded in each of said bushings, the inner end of said nipples being slotted transversely, and a spring situated within each of the bushings and engaging the ball valve for normally holding the latter unseated and in contact with the slotted ends of the nipples.

5. A water gage comprising a rectangular casing provided with a slot in one of its sides, a recessed body situated within said casing with the recess toward the slot, a sight glass situated between the body and the slotted side of the casing and disposed across the recess and slot, set screws passing through the wall of the casing opposite the slot and arranged to engage the back of the body for holding the parts in position, bushings carried by the ends of the body, each of said bushings having a valve seat and a spring chamber therein, said valve seats being situated toward the inner ends of the bushings a ball valve within each of the bushings, springs for normally forcing said valves outward away from their seats and nipples threaded in said bushings, the inner ends of said nipples limiting the movements of the ball valves.

[Claims 6 and 7 not printed in the Gazette.]

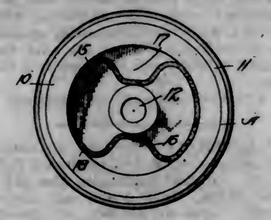
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1,227,197. WHEEL. JOHN N. POWERS, Washington, D. C., assignor to United States Ordnance Co., Washington, D. C., a Corporation of Virginia. Filed Sept. 19, 1916. Serial No. 120,915. (Cl. 105—181.)

1. A wheel for preventing the transmission of sound vibrations embodying a rim member, a core including a circular portion concentric with the rim member and having a diameter equal to the maximum diameter of the core, lugs on the rim member interlocking with the core, and non-resonant material interposed between the rim member and core.

2. A wheel for preventing the transmission of sound vibrations embodying a rim member, a core including a circular portion concentric with the rim member and having a diameter equal to the maximum diameter of the core, lugs on the rim member bearing against the outer face of the circular portion and interlocking with the core, and non-resonant material interposed between the rim member and core.

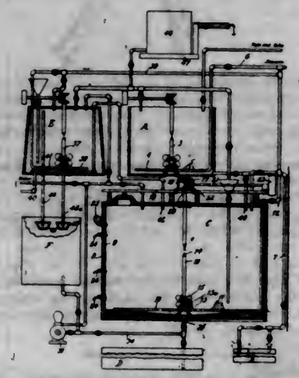
3. A wheel for preventing the transmission of sound vibrations embodying a rim member, a core having a circular portion concentric with the rim member; an extension on the outer face of the circular portion having opposite recesses, lugs on the rim member engaged in respective recesses, and non-resonant material interposed between the rim member and core.



4. A wheel for preventing the transmission of sound vibrations embodying a rim member, a core, lugs on the rim member bearing against a portion of the outer face of the core and interlocking with the latter, non-resonant material interposed between the rim member and core, and face plates having their edge portions engaged respectively in grooves in the inner circular face of the rim member and grooves in the core.

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1,227,198. APPARATUS FOR THE DECOMPOSITION OF FATS AND OILS. BALTHASAR E. REUTER, Chicago, Ill., assignor to Reuter Process Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 7, 1913. Serial No. 799,699. (Cl. 87—4.)



As a means for decomposing fats or oils, the combination of an open tank having a steam jet coil for heating the contents thereof, a closed tank having a steam jet coil and provided with a mechanical agitator, said tank receiving fats or oils previously heated in said first tank, a third tank for receiving glycerin water from the second tank, a closed bleaching tank provided with a closed heating coil and a mechanical agitator for receiving the decomposed fatty acids from the second tank, and means for filling the top of the last-named tank with steam at substantially atmospheric pressure to prevent access of air to the contents of the tank.

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1,227,199. GARTER. HENRY AUGUSTUS RODRIGUEZ, Wood Brook, Port of Spain, Trinidad, British West Indies. Filed Sept. 1, 1916. Serial No. 118,052. (Cl. 241—6.)

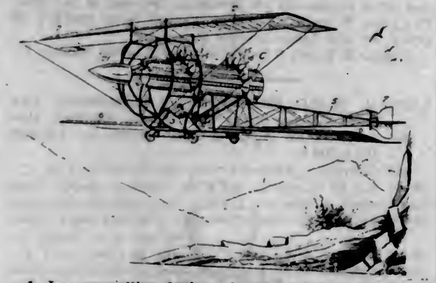
A garter comprising a band having at one end a flat metal piece provided with a hook, a cord attached to the other end of said band, and a thin metal slide having two opposed slots through which the cord passes and in which it is held adjustably by friction, said slide having a third



slot for reception and engagement of the aforesaid hook, as shown and described.

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1,227,200. PROPELLING DEVICE. HARRY E. ROSE, Spokane, Wash. Filed June 17, 1916. Serial No. 104,194. (Cl. 244—25.)



1. In a propelling device a hollow cylinder, a series of wings or vanes movably mounted on said cylinder and arranged to travel from one end of the cylinder to the other on the inside thereof and back on the outside, said vanes being one behind the other when on the inside of the cylinder, and being spread out when on the outside of the cylinder.

2. A propelling device comprising a hollow cylinder, a series of endless chains carried by the cylinder, means for driving said chains, and a series of wings or vanes projecting laterally from the chains, said wings being carried by the chains out of one end of the cylinder and into the other end of the cylinder by the movement of the endless chains.

3. A propelling device comprising a hollow cylinder, a series of endless chains extending longitudinally of the cylinder, each of said endless chains having a portion inside the cylinder and a portion outside the cylinder and portions encircling the end of the cylinder, a series of wings or vanes carried by each endless chain, and means for causing the travel of the chains.

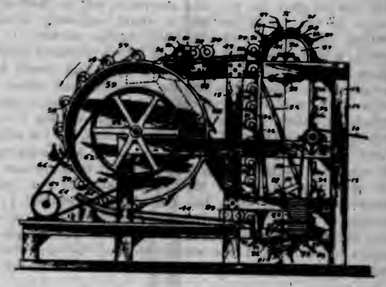
4. A propelling device for aeroplanes, comprising a hollow cylinder, a series of endless chains disposed longitudinally of the cylinder, a portion of each chain being on the inside of the cylinder and a portion on the outside, a series of wings or vanes carried by each endless chain, the wings of one chain being slightly out of alinement with the wings of the adjacent chain on either side thereof, and means for causing the simultaneous travel of the chains.

5. In a propelling device for aeroplanes, a cylinder, a plurality of endless chains carried by the cylinder, said endless chains being disposed longitudinally with respect to the cylinder and having portions on the inside and outside of the cylinder, a series of wings or vanes carried by each of said longitudinally extending chains, the wings of one chain being out of alinement with the wings of the adjacent chains on either side thereof, and means for causing the movement of the chains from one end of the cylinder to the other at a uniform speed for all the chains.

[Claims 6 to 8 not printed in the Gazette.]

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1,227,201. WAVE-MOTOR. RICHARD ROUNTREE, San Francisco, Cal. Filed Oct. 12, 1914. Serial No. 866,396. (Cl. 253—11.)



1. A wave motor comprising a suitable frame-work; a wheel having pockets on the periphery thereof and rotatably mounted within the frame-work; a series of weights adapted to engage the pockets; an upper incline arranged to deliver weights to the top of the wheel and into the pockets thereon; an endless conveyer adapted to convey weights to the upper incline; a lower incline arranged to convey weights from the bottom of the wheel to the bottom of the conveyer; suitable bell-cranks pivotally mounted upon the endless conveyer and adapted to convey the weights on the said conveyer and to deliver the same to the upper incline; a shaft rotatably mounted within the frame-work; parallel beams secured to the shaft; a pair of parallel operating levers pivotally mounted upon the ends of the beams, said operating levers being arranged to engage the endless conveyer and move that side of the said conveyer containing the weights upward when the said arms move upward and to release the said conveyer when the said arms move downward; and a suitable float operatively connected to the shaft and adapted to be operated by the action of waves and to move one pair of operating arms and the weight side of the endless conveyer upward when the said float is lowered by the action of waves.

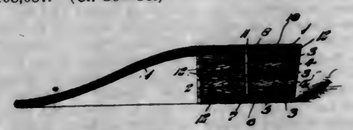
2. A wave motor comprising a suitable frame-work; a wheel having pockets on the periphery thereof and rotatably mounted within the frame-work; a series of weights adapted to engage the pockets; an upper incline arranged to deliver weights to the top of the wheel and into the pockets thereon; an endless conveyer adapted to convey weights to the upper incline; a lower incline arranged to convey weights from the bottom of the wheel to the bottom of the conveyer; suitable bell-cranks pivotally mounted upon the endless conveyer and adapted to convey the weights on the said conveyer and to deliver the same to the upper incline; a shaft rotatably mounted within the frame-work; parallel beams secured to the shaft; a pair of parallel operating levers pivotally mounted upon the ends of the beams, said operating levers being arranged to engage the endless conveyer and move that side of the said conveyer containing the weights upward when the said arms move upward and to release the said conveyer when the said arms move downward; a suitable float operatively connected to the shaft and adapted to be operated by the action of waves and to move one pair of operating arms and the weight side of the endless conveyer upward when the said float is lowered by the

action of waves; and means secured to the shaft and adapted to move the other pair of parallel operating arms and the weight side of the endless conveyer upward when the float is raised by the action of waves.

3. A wave motor comprising a suitable frame-work; a wheel having pockets on the periphery thereof and rotatably mounted within the frame-work; a series of weights adapted to engage the pockets; an upper incline arranged to deliver weights to the top of the wheel and into the pockets thereon; an endless conveyer adapted to convey weights to the upper incline; a lower incline arranged to convey weights from the bottom of the wheel to the bottom of the conveyer; suitable bell-cranks pivotally mounted upon the endless conveyer and adapted to convey the weights on the said conveyer and to deliver the same to the upper incline; a shaft rotatably mounted within the frame-work; parallel beams secured to the shaft; a pair of parallel operating levers pivotally mounted upon the ends of the beams, said operating levers being arranged to engage the endless conveyer and move that side of the said conveyer containing the weights upward when the said arms move upward and to release the said conveyer when the said arms move downward; a suitable float operatively connected to the shaft and adapted to be operated by the action of waves and to move one pair of operating arms and the weight side of the endless conveyer upward when the said float is lowered by the action of waves; and suitable counterweights secured to the shaft and adapted to move the other pair of parallel operating arms and the weight side of the conveyer upward when the float is raised by the action of waves.

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1,227,202. HEEL FOR SHOES. PASQUALE RUGGIERO, Philadelphia, Pa. Filed July 8, 1916. Serial No. 108,087. (Cl. 36—34.)



In a device of the character stated the combination of a shoe sole, a heel formed of a plurality of sections arranged in superposed relation, the grain of one section being crosswise with respect to the grain of the next section, auxiliary fastening means for holding said sections together to form a complete unitary heel, a plate adapted to seat upon said sole on the opposite side from said heel, said plate having a plurality of prongs adapted to pass through said sole into said heel to prevent relative turning movement, a substantially centrally disposed rivet pin passing through said plate, sole and heel to clamp the parts together and a washer forming a bearing for the upset end of said rivet.

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1,227,203. PHOTOGRAPHIC-PLATE HOLDER. ALFRED A. RUTTAN and CHARLES E. HUTCHINGS, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 24, 1916. Serial No. 133,115. (Cl. 95—66.)

1. In a sheet metal plate holder, the combination with a forwardly flanged back plate, of an inner plate disposed against the back plate and having flanges on all four sides forming a plate seat, said flanges proceeding forwardly and thence laterally to abut at their edges the flanges of the back plate, and a front cover frame coöperating with the back plate.

4. In a sheet metal plate holder, the combination with a forwardly flanged back plate, of an inner plate disposed against the back plate and having flanges forming a plate seat, said flanges proceeding forwardly and thence laterally to abut at their edges the flanges of the back plate, a light seal mounted on one of the laterally turned inner plate flanges, a front cover frame coöperating with the back plate and having a light seal on its rear side disposed opposite to that on the inner plate and a shutter slide movable between the light seals and in rear of the front frame to protect the plate seat in the inner plate.

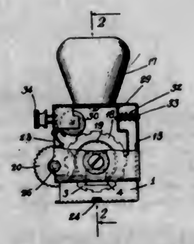


5. In a plate holder, the combination with a back plate, of an inner plate disposed against the back plate and forming a plate seat, one side of which seat is constituted by a flange proceeding forwardly and thence outwardly, and latch mechanism for retaining the edge of the sensitive plate in the seat, said mechanism being confined between the said flange and the back plate.

[Claims 2, 3, and 6 to 10 not printed in the Gazette.]

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1,227,204. HAND-STAMP. RALPH R. SANDHAM, Harlan, Iowa, assignor of one-half to John Sandham, Harlan, Iowa. Filed Nov. 1, 1916. Serial No. 128,928. (Cl. 101—106.)



1. In a printing device of the class described, the combination of a base-frame having the opposite sides provided with vertical guide-slots, a vertically reciprocating type-wheel carrying casing spring-mounted on the exterior of said base-frame, reciprocating bushings sliding in said guide-slots and being detachably connected with said casing and moving in response thereto, and a type-wheel shaft mounted in said reciprocating bushings.

4. In a printing device of the class described, the combination of a base-frame, and a type-wheel carrying casing spring mounted on said base-frame and having capacity of vertical reciprocation thereon, the opposite sides of the base-frame being provided with vertical guides, sliding bushings mounted upon opposite ends of the type-wheel shaft and fitting within the respective guides of said base-frame, the said bushings being operatively connected with the reciprocating casing and moving in response to the same, the said base-frame being formed of sheet metal with the lower side cut so as to form two inwardly projecting tongues or flanges and such parts being bent upwardly upon the interior of the base part so as to form spring receiving pockets, and springs interposed between said pockets and bushings, respectively.



9. In a printing device of the class described, the combination of a base-frame, and a type-wheel carrying casing spring mounted on said base-frame and having capacity of vertical reciprocation thereon, the opposite sides of the base-frame being provided with vertical guides, sliding bushings having parallel vertical sides mounted upon opposite ends of the type-wheel shaft and fitting within the respective guides of said base-frame, the said bushings being operatively connected with the reciprocating casing and moving in response to the same.

[Claims 2, 3, 5 to 8, and 10 not printed in the Gazette.]

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1,227,205. SELF-CLEANING BLACKBOARD. JACK D. SARTAKOFF, New York, N. Y. Filed Apr. 13, 1917. Serial No. 161,730. (Cl. 35—15.)



1. In a device of the class described, a movable blackboard, means operable upon the movement of the blackboard for automatically cleaning the surface thereof, and means simultaneously operable to wet the surface of the blackboard to be cleaned.

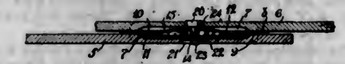
6. In a device of the class described, a movable blackboard, means for washing the blackboard, means for rubbing the same while wet, and means for subsequently removing superfluous liquid from the blackboard.

7. In a device of the class described, a movable blackboard, means for imparting movement to said blackboard, and means for automatically washing said blackboard when the same is moved.

[Claims 2 to 5 and 8 not printed in the Gazette.]

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1,227,206. JOINT FOR FOLDING RULES. EDMUND A. SCHADE, New Britain, Conn., assignor to The Stanley Rule & Level Company, New Britain, Conn., a Corporation of Connecticut. Filed Dec. 30, 1916. Serial No. 139,766. (Cl. 33—120.)



1. A rule joint comprising a pair of hinge plates, a stud pivotally connecting said plates and a spring holding said plates in frictional engagement, said spring being relatively narrow at its opposite ends and wider intermediate its ends and provided further with an opening through said intermediate wider portion through which the pivot stud passes.

5. A rule joint comprising a pair of hinge plates, a stud pivotally connecting said plates and a spring holding said plates in frictional engagement, said spring having a perforation for the pivot stud intermediate the ends thereof and being of greatest width about said perforation, said spring being furthermore bossed up about said pivot opening and the pivot stud having a head bearing on the raised seat thus provided by the bossed up portion of the spring.

[Claims 2 to 4 not printed in the Gazette.]

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1,227,207. DENTAL TOOL. OTTO SCHWALB, Jersey City, N. J., assignor to Robert H. Lieberthal, New York, N. Y. Filed July 22, 1915. Serial No. 41,320. (Cl. 32—10.)



1. The combination of a handle having a flattened surface, a collar rotatably carried by said handle, members secured to said collar and extending beyond said handle, a flattened surface on one of said members adapted to cooperate with the flattened surface of said handle to prevent a rotation of said collar whereby said members are maintained in a predetermined position, pulleys on said members, a driving pulley on said handle, an endless band passing over said pulleys and means for operating said driving pulley whereby said band is actuated.

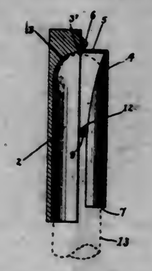
2. The combination of a handle having a pair of flattened surfaces converging outwardly, a collar rotatably carried by said handle below said surfaces, arms secured to said collar and extending beyond said handle, a yoke connecting said arms at an intermediate point and adapted to engage said converging surfaces to prevent a rotation of said collar, an endless band carried by said arms and means for actuating said band relatively to said arms.

3. The combination of a handle, a collar detachably and rotatably secured thereon, members carried by said collar and extending beyond said handle, means connected with said members and engaging coöperating portions of said handle to prevent a rotation of said collar about its axis, a driving pulley carried by said handle, pulleys located at the free ends of said members, an endless band passing over said pulleys, and means for operating said driving pulley whereby said band is actuated.

4. The combination of a tubular handle, a sleeve connected therewith, a casing detachably connected with said sleeve, a driving shaft extending through said sleeve into said handle, a pinion in said casing connected with said shaft, a tubular member rotatably mounted in said casing and having its axis at an angle to the axis of said driving shaft, a pinion on said tubular member in mesh with the pinion on said driving shaft, a counter shaft in said tubular member, means for connecting said member and counter-shaft together to rotate in unison, releasable means for preventing a lengthwise movement of said counter-shaft in said tubular member, a driving pulley carried by said counter-shaft, normally diverging flexible arms extending beyond an end of said handle and in line with said driving pulley, a pulley located at the free end of each arm and an endless band passing over said pulley and maintained under tension by said arms.

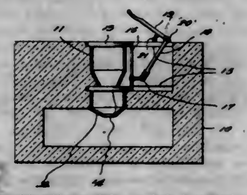
1,227,208. BROOM-HOLDER. CARL SELVINE, Lake Park, Minn. Filed June 29, 1914. Serial No. 848,054. (Cl. 24—259.)

A broom holder, including a base having a longitudinally extending recess therein, a retaining member associated therewith comprising a strip of resilient metal substantially arcuate in cross section disposed in proximity to said recess and having one end thereof rigidly mounted on the base, said strip having a plurality of lugs later-



ally extending therefrom, and a plurality of resilient elements carried by the base and having engagement with said lugs to maintain said retaining member in a predetermined position.

1,227,209. INK-BOTTLE. ERNEST C. SMAW, Chesapeake, Va. Filed Sept. 15, 1916. Serial No. 120,286. (Cl. 120—72.)



1. The combination with an ink bottle having an auxiliary reservoir arranged therein and communicating therewith, of a pair of spaced parallel slides controlling access to the bottle and said reservoir, and manually operable means for simultaneously operating said slides to move the latter to an opened position.

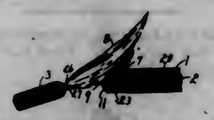
2. The combination with an ink bottle having an auxiliary reservoir arranged therein and communicating therewith, of a pair of spaced parallel slides controlling access to the bottle and said reservoir, manually operable means for simultaneously operating said slides to move the latter to an opened position, and means for automatically returning the slides to their normal closed position upon release of the first mentioned means.

3. An ink bottle including a tube depending therein from the mouth thereof, an auxiliary reservoir positioned within the bottle and communicating with the latter and said tube, a slide controlling access to said tube, a second slide controlling the communication between the tube and said reservoir, manually operable means positioned adjacent the mouth of the bottle for simultaneously moving said slides to an opened position, and means for automatically returning the slides to their normal closed position upon release of the first mentioned means.

1,227,210. METHOD OF OPERATING FLAMING-ARC LIGHTS FOR PROJECTORS. ELMER A. SPERRY, Brooklyn, N. Y. Filed June 28, 1915. Serial No. 36,615. (Cl. 176—54.)

3. The method of operating flaming arc lamps for projectors under conditions producing a two flame arc, which consists in rotating the positive electrode, and directing the negative flame of such arc past the positive at such an angle as to confine the positive flame substantially in its entirety to the positive crater.

4. The method of operating flaming arc lamps for projectors in which the negative electrode coutains a core of more rapidly burning material than the shell, which consists in employing sufficient current to produce two distinct flames and directing the high velocity negative flame at such an angle to the positive electrode as to confine the positive flame substantially in its entirety to the positive crater.



5. The method of operating flaming arc electrodes of carbonaceous material for projectors, which consists in rotating the positive electrode, directing the negative flame at such an angle thereto and employing such a current density in the positive electrode that a deep, symmetrical crater is formed therein and a protective layer of graphite deposited on its periphery.

7. The method of operating flaming arc lamps for projectors in which the negative electrode contains a core of more rapidly burning material than the shell, which consists in employing sufficient current density in the positive to produce a distinct positive flame, and in employing sufficient current to produce a high velocity negative flame to which sufficient directive force is imparted by reason of the core to be substantially undeflected by the pressure of the positive flame.

[Claims 1, 2, and 6 not printed in the Gazette.]

1,227,211. MEANS FOR PREVENTING CURRENT LEAKAGE IN ELECTRIC CABLES. SEVERN D. SPRONG and WALTER E. MCCOY, New York, N. Y. Filed Dec. 12, 1916. Serial No. 136,402. (Cl. 173—268.)



1. An electric cable, comprising an inclosing tube of insulating material, two jointed line conductors therein, a filling of insulating material in said inclosing tube, and inner tubes of insulating material of greater dielectric strength than said filling embedded in said filling and respectively inclosing said conductors, each of said inner tubes having a flat side, and the said flat sides being in contact, and each of said tubes having a longitudinal gap in its wall opposite its flat side.

[Claims 2 and 3 not printed in the Gazette.]

1,227,212. MUFFLER CUT-OUT. IRVING STANLEY, New York, N. Y. Filed July 19, 1916. Serial No. 110,173. (Cl. 137—26.)

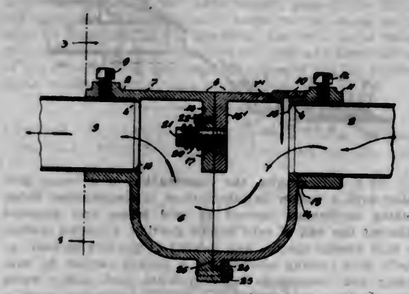
1. The combination with an exhaust pipe having a pair of spaced ends, of a muffler cutout comprising a two-part casing having one part fixed relatively to one of said ends and the other part rotatable relatively to the other end and to said fixed part thereby to open or close communication between said ends.

2. The combination with an exhaust pipe having a pair of spaced ends, of a muffler cutout comprising a two-part casing having one part fixed relatively to one of said ends and the other part rotatable relatively to the other end and to said fixed part thereby to open or close communication between said ends, means for rotating said rotatable part, and means for returning it to its normal position.

3. The combination with an exhaust pipe having a pair of spaced ends, of a muffler cutout comprising a two-part casing having one part fixed relatively to one of said ends



and the other part rotatable relatively to the other end and to said fixed part thereby to open or close communication between said ends, means for rotating said rotatable part, and means for returning it to its normal position, said last means comprising a spring.

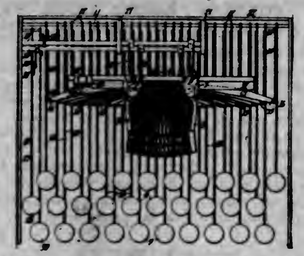


4. The combination with an exhaust pipe having a pair of spaced ends, of a muffler cutout comprising a two-part casing having one part fixed relatively to one of said ends and the other part rotatable relatively to the other end and to said fixed part thereby to open or close communication between said ends, means for rotating said rotatable part, and means for returning it to its normal position, said last means comprising a spring connected with said casing parts.

5. The combination with an exhaust pipe having a pair of spaced ends, of a muffler cutout comprising a two-part casing having one part fixed relatively to one of said ends and the other part rotatable relatively to the other end and to said fixed part thereby to open or close communication between said ends, means for rotating one of said parts relatively to the other, means for returning said rotatable part to its normal position, and means for wedging the said parts in closed position relatively to each other.

[Claims 6 to 31 not printed in the Gazette.]

1,227,213. TYPE-WRITING MACHINE. BURNHAM C. STICKNEY, Elizabeth, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Dec. 19, 1914. Serial No. 878,021. (Cl. 197—22.)



1. In a type-action for typewriting machines, the combination with a rearwardly striking type-bar, of a sub-lever extending laterally therefrom and operatively connected at its inner end to the type-bar, a key-lever having a depressible key, said key-lever fulcrumed in rear of the sub-lever and having a portion depending from its pivot and moved rearwardly as the key is depressed, and a link connected to said depending portion and extending forwardly and connected at its forward end to the sub-lever at a point substantially in the plane in which the key-lever swings, said sub-lever at its point of connection with the link having a rearward movement as the key is depressed.

2. In a typewriting machine, the combination of a type-bar arranged to swing rearwardly through an angle of more than ninety degrees to the printing point, a sub-lever, said type-bar and sub-lever having intermeshing gear teeth for causing the sub-lever to swing the type-bar, a key-lever comprising a depressible key, the key-lever and sub-lever each comprising a portion depending from its pivot and having a rearward movement when the key is depressed, and a link forming a connection between said depending portions of the key-lever and sub-lever.

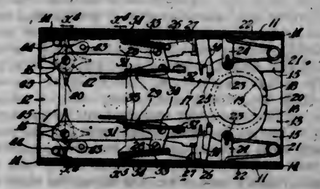
3. In a typewriting machine, the combination with a set of key-levers extending forwardly and rearwardly and having at their rear ends upwardly-extending fulcrum arms and keys at their forward ends, a set of type-bars overlying the key-levers and occupying the space between said fulcrum arms and said levers, and extending transversely only a fraction of the transverse distance across the set of key-levers, sub-levers pivoted intermediate their ends and having connection at their inner ends with the type-bars for swinging the latter, said sub-levers fanned outwardly from the type-bars so that the outer end of each sub-lever extends laterally a distance determined by the position of its key-lever, and means operated by the key-levers and forming connections between the key-levers and the outer ends of the sub-levers for actuating the latter, the points of connection between each connecting means and its key-lever and sub-lever being substantially in the vertical plane of the connected key-lever.

4. In a typewriting machine, the combination with a set of type-bars arranged to swing rearwardly to a common printing center, of a system of key-levers having at their rear ends upwardly-extending fulcrum arms and keys at their forward ends, the outlying levers of which are located laterally at a distance beyond the outlying type-bars, and a set of sub-levers pivoted intermediate their ends and connected at their inner ends to actuate the type-bars and fanned out from the type-bars to bring their outer ends into alinement with the corresponding key-levers, the outer ends of the sub-levers having a forward and rearward movement, said key-levers comprising portions also having a forward and rearward movement and connected to the outer ends of the sub-levers through forwardly and rearwardly extending links, said type-bars, sub-levers and links occupying the space between said fulcrum arms and said keys.

5. In a typewriting machine, the combination with a set of type-bars arranged to swing upwardly and rearwardly to a common printing center, of a set of key-levers each comprising a rearwardly extending portion and an arm extending upwardly at the rear end of said portion, said arms located in rear of the type-bars, the outlying key-levers being located laterally beyond the corresponding type-bars, sub-levers each pivoted intermediate its ends and connected at one end to operate a type-bar, the other ends of the sub-levers extending laterally, and links extending forwardly from the lower ends of said upwardly extending key-lever arms, said links connected at their forward ends to the outer ends of the sub-levers.

[Claims 6 to 23 not printed in the Gazette.]

1,227,214. MILK-BOTTLE CONTAINER. WALTER STURGES, Los Angeles, Cal., assignor to Milon J. Trumble, Los Angeles, Cal. Filed Oct. 9, 1915. Serial No. 55,076. (Cl. 232—41.)



1. In a milk bottle container, a case having a central opening large enough to allow a milk bottle to pass there-

through, gripping levers located on either side of said opening and so arranged that they will grip a milk bottle near the exit of said opening, catches for locking said gripping levers in the grip position, and means by which said catches are released by a second bottle entering said opening.

2. In a milk bottle container, a case having a central opening large enough to allow a milk bottle to pass therethrough, gripping levers located on either side of said opening and so arranged that they will grip a milk bottle near the exit of said opening, catches for locking said gripping levers in the grip position, means by which said catches are released by a second bottle entering said opening, and means for preventing said second bottle from being withdrawn from said opening.

3. In a milk bottle container, a case having a central opening large enough to allow a milk bottle to pass therethrough, gripping levers located on either side of said opening and so arranged that they will grip a milk bottle near the exit of said opening, catches for locking said gripping levers in the grip position, means by which said catches are released by a second bottle entering said opening, star wheels located on either side of the entrance to said opening and of such a size and shape that they engage said second bottle as it enters said opening, and means for locking said star wheels so as to prevent a bottle from being withdrawn through the entrance to said opening.

4. In a bottle holding and locking device comprising a casing having a bottle slot therein, said slot being just wide enough to allow the neck of a bottle to slide therethrough; a grip plate pivoted to said casing and so shaped and placed that it will engage and restrain the neck of a bottle which is directed into engagement with said grip plate by said slot; and means by which a second bottle upon entering said slot will cause said grip plate to release said first named bottle.

5. A bottle holding and locking device comprising a casing having a bottle slot therein, said slot being just wide enough to allow the neck of a bottle to slide therethrough; a grip plate pivoted to said casing and so shaped and placed that it will engage and restrain the neck of a bottle which is directed into engagement with said grip plate by said slot; means by which a second bottle upon entering said slot will cause said grip plate to release said first named bottle, and means for preventing the withdrawal of said second bottle from said slot.

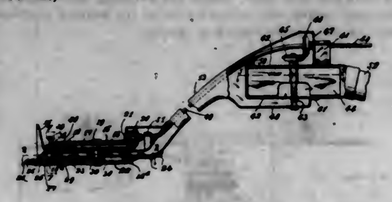
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1,227,215. ENVELOP. MASAO TANAKA, New York, N. Y. Filed Mar. 16, 1916. Serial No. 84,526. (Cl. 229—86.)



In a device of the character described, the combination of an envelop body provided with a sealing flap and with a row of perforations, a ripping cord secured at one of its ends within said envelop body and normally lying adjacent said row of perforations, said ripping cord protruding from said envelop body in order to enable the operator to rip open the envelop body along the row of perforations by pulling upon said ripping cord, and an inner flap secured at one of its edges within said envelop body and bent back upon itself in order to maintain separation between said ripping cord and the contents of said envelop body, said ripping cord extending along the outer surface of said inner flap and free to move away from said inner flap without mutilating the same.

1,227,216. HAIR-CLIPPER. MASAO TANAKA, New York, N. Y. Filed Mar. 29, 1916. Serial No. 87,660. (Cl. 30—1.)



1. In a hair clipper, the combination of a frame provided with a hollow handle portion of longitudinal form, cutting mechanism carried by said frame and disposed adjacent one end of said handle portion, a casing carried by said handle portion and located at the end thereof opposite said cutting mechanism, a pocket carried by said casing and communicating therewith, said pocket being separate from said casing and located below the same, a revoluble fan mounted within said casing and located immediately above said pocket in order to facilitate the travel of cuttings of hair from said handle portion and thence through said fan, driving mechanism for actuating said cutting mechanism and said fan, and a receptacle connected with said casing for receiving said cuttings as discharged by said fan.

2. In a hair clipper, the combination of a handle of tubular form, a casing mounted upon one end of said handle and provided with a flat hollow portion, cutting mechanism located within said flat hollow portion and arranged to deliver cuttings of hair into said handle, a casing plate carried by said casing and spaced slightly therefrom, a shaft connected to said cutting mechanism for the purpose of actuating the same, said shaft being journaled at one of its ends to said casing plate and extending through the space between said casing and said casing plate, a gear wheel mounted upon said shaft and located within said space between said casing and said casing plate, a pinion engaging said gear wheel for the purpose of actuating the same, a flexible shaft connected to said pinion and extending through said handle, and a suction fan located at the end of said hollow handle opposite said first-mentioned casing for receiving and discharging the cuttings severed by said cutting mechanism.

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1,227,217. STOCKING. HARRY A. TAYLOR, New York, N. Y. Filed Aug. 28, 1915. Serial No. 47,742. (Cl. 66—4.)



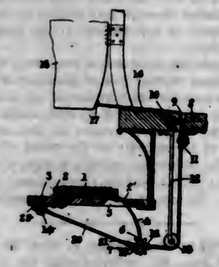
1. A stocking the leg and upper foot portion of which is cut to shape from flat warp piece goods, and a full fashioned lower foot part made by the chain stitch upon a hosiery knitting machine, the two parts being united and the back edges of the leg portion being brought together and stitched.

2. A stocking the leg and upper foot portion of which is cut to shape from flat warp knitted piece goods and a full fashioned lower foot part made by the chain stitch upon a hosiery knitting machine, the two parts being stitched together at the sides of the foot and interknitted at the toe and heel, and the back edges of the leg portion being brought together and stitched.



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1,227,218. CARRIAGE-STEP. EDWARD TERRY, Brixton, England. Filed Oct. 2, 1915. Serial No. 53,743. (Cl. 21—55.)



1. The combination with a vehicle, of a support, a casing hinged to said support, a mat mounted in said casing, an arm secured to said casing, a flexible member connecting said arm with the door of the vehicle, and a spring controlled flexible member secured to said arm and to said support.

2. The combination with a vehicle, of a support, a casing hinged to said support, a mat mounted in said casing, an arm secured to said casing, a flexible member connecting said arm with the door of the vehicle, a spring controlled flexible member secured to said arm and to said support, and means for guiding said flexible members.

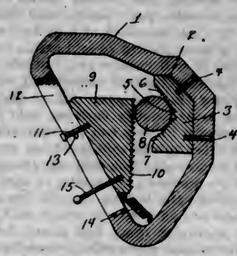
3. The combination with a vehicle, of a support, a casing hinged to said support, a mat mounted in said casing, an arm secured to said casing, a flexible member connecting said arm with the door of the vehicle, a spring controlled flexible member secured to said arm and to said support, and means for adjusting and guiding said flexible members.

4. In combination with a vehicle having a door, of a support, a casing hinged to said support and adapted to hold a mat, a curved arm secured to said casing, a flexible connection between said arm and the door of the vehicle, a swiveling guide pulley in the floor of the vehicle, a bracket mounted on the underside of the vehicle floor guide pulleys carried by said bracket and the floor of the vehicle, a flexible connection between the aforesaid curved arm and said support, a guide pulley on said support for guiding said flexible connection and a spring connecting said flexible connection with said support and means carried by said curved arm for adjusting said flexible connections.

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1,227,219. LATHE-DOG. CLIFFORD A. THYSELL, Rockford, Ill. Filed Oct. 11, 1916. Serial No. 125,063. (Cl. 82—42.)

1. A lathe dog comprising a frame, a rigid jaw mounted on the frame, a portion of the frame extending at an angle inclined relative to the gripping face of the jaw, said jaw having a substantially flat surface having a recess therein with its walls serrated with teeth, a movable jaw slidably mounted on the inclined portion of the frame and having a serrated gripping face arranged and adapted to remain at all times in parallelism with the said flat surface of the rigid jaw, and means normally tending to move said movable jaw on said inclined face toward said rigid jaw to coöperate therewith.



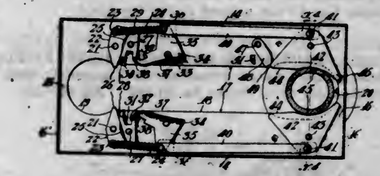
3. A lathe dog including a substantially triangular frame one side of which is provided with a longitudinal slot, a rigid jaw mounted within the frame and opposite the slot a triangular jaw, means passing through the slot for slidably connecting the movable jaw to the frame, resilient means for automatically drawing the movable jaw into engagement with a piece of work adapted to be previously mounted in the rigid jaw, and means for disengaging the movable jaw.

5. A lathe dog including a substantially triangular frame, a rigid jaw mounted within the frame and provided with a V-shaped recess, teeth on the sides of the recess, the teeth on one side projecting toward the opposite side and the teeth on the outer side projecting toward the outer end of the recess, a movable jaw slidably mounted in the frame and coöperating with the rigid jaw for clamping a piece of work, a plurality of teeth on the outer edge of the movable jaw and projecting toward the first mentioned teeth, and resilient means connected to the frame and to the movable jaw for automatically drawing the movable jaw into adjustment for engaging a piece of work.

[Claims 2 and 4 not printed in the Gazette.]

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1,227,220. BOTTLE HOLDING AND LOCKING DEVICE. MILON J. TRUMBLE, Alhambra, Cal. Filed May 24, 1916. Serial No. 99,708. (Cl. 232—41.)



1. A bottle holding and locking device comprising a casing having a bottle slot therein, said slot being just wide enough to allow the neck of a bottle to slide therethrough; a grip plate pivoted to said casing and so shaped and placed that it will engage and restrain the neck of a bottle which is directed into engagement with said grip plate by said slot; an operating cam so placed as to be actuated by a second bottle entering said slot; means by which said operating cam causes said grip plate to release said first named bottle; and means for preventing the withdrawal of said second bottle from said slot.

2. A bottle holding and locking device comprising a casing having a bottle slot therein, said slot being just wide enough to allow the neck of a bottle to slide therethrough; a grip plate pivoted to said casing and so shaped and placed that it will engage and restrain the neck of a bottle which is directed into engagement with said grip plate by said slot; an operating cam so placed as to be actuated by a second bottle entering said slot; a connecting bar pivoted at one end on said grip plate and pivoted at the other end on said operating cam; and means for

preventing the withdrawal of said second bottle from said slot.

3. A bottle holding and locking device comprising a casing having a bottle slot therein, said slot being just wide enough to allow the neck of a bottle to slide therethrough; a grip plate pivoted to said casing and so shaped and placed that it will engage and restrain the neck of a bottle which is directed into engagement with said grip plate by said slot; an operating cam so placed as to be actuated by a second bottle entering said slot; a connecting bar pivoted at one end on said grip plate and pivoted at the other end on said operating cam; a locking cam arranged to normally lock said operating cam in such a position as to prevent any release of said grip plate; means formed on said locking cam so placed as to be engaged by said second bottle by which said locking cam releases said operating cam; and means for preventing the withdrawal of said second bottle from said slot.

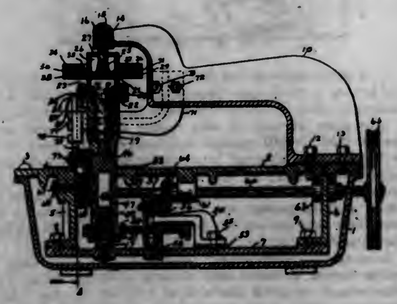
4. A bottle holding and locking device comprising a casing having a bottle slot therein, said slot being just wide enough to allow the neck of a bottle to slide therethrough; a grip plate pivoted to said casing and so shaped and placed that it will engage and restrain the neck of a bottle which is directed into engagement with said grip plate by said slot; an operating cam so placed as to be actuated by a second bottle entering said slot; a connecting bar pivoted at one end on said grip plate and pivoted at the other end on said operating cam; a locking cam arranged to normally lock said operating cam in such a position as to prevent any release of said grip plate; means formed on said locking cam so placed as to be engaged by said second bottle by which said locking cam releases said operating cam; a primary dog so placed as to have its end thrown into said slot to prevent the withdrawal of said second bottle therefrom; and means by which said locking cam causes said primary dog to be so thrown.

5. A bottle holding and locking device comprising a casing having a bottle slot therein, said slot being just wide enough to allow the neck of a bottle to slide therethrough; a grip plate pivoted to said casing and so shaped and placed that it will engage and restrain the neck of a bottle which is directed into engagement with said grip plate by said slot; a secondary dog pivoted to said casing and so placed as to have its end thrown into said slot when said grip plate is released; and means by which a second bottle upon entering said slot will cause said grip plate to release said first named bottle.

[Claims 6 to 10 not printed in the Gazette.]

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1,227,221. BURNISHING-MACHINE. LOUIS J. VAN GUELPEN and WILLIAM STUBBING, Jr., Cincinnati, Ohio. Filed Jan. 10, 1916. Serial No. 71,262. (Cl. 69—1.)



1. In a burnishing machine, a revolving burnishing tool, combined with heating means, said heating means revolving with said tool, said burnishing tool having a peripheral groove constructed and arranged to receive the edge of the material to be burnished, and means for feeding the material through said groove.

2. In a burnishing machine, a revolving burnishing tool, a hollow portion in said burnishing tool, a heating device fitting in said hollow portion and revolving with said burnishing tool, said burnishing tool having a peripheral groove constructed and arranged to receive the edge of the material to be burnished, and means for feeding the material to and through said groove.

3. In a burnishing machine, a spindle carrying within it means for heating the same and revolving with said means, said spindle having a peripheral groove constructed and arranged to receive the edge of the material to be burnished, and means for feeding the material through said groove while the spindle is revolving.

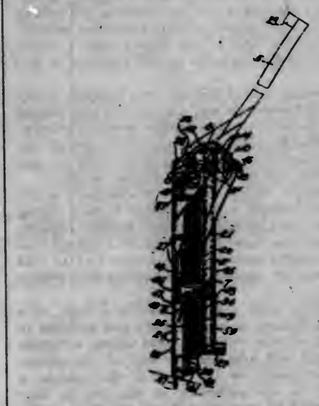
4. In a burnishing machine, a revolving spindle carrying heating means within it and provided with a peripheral groove constructed and arranged to receive the edge of the material to be burnished, and feeding means for moving the material through said groove in the same direction as the surface of the spindle at the point of contact with the material.

5. In a burnishing machine, a revolving spindle carrying heating means within it and provided with a peripheral groove constructed and arranged to receive the edge of the material to be burnished, and means for feeding the material through said groove in the same direction as the surface of the spindle at the point of contact with the material, the revolving spindle having a surface speed faster than that of the feeding mechanism.

[Claims 6 to 12 not printed in the Gazette.]

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1,227,222. CATAPULT. GARRY P. VAN WYE, New York, N. Y. Filed Jan. 24, 1917. Serial No. 144,148. (Cl. 124—1.)



1. A catapult comprising an elongated member adapted to be manually supported with one end resting on the ground and the other end in an elevated position, a throwing member pivotally mounted in the end adapted to be elevated of said first member, and means to swing said throwing member.

7. A catapult comprising a non-swinging, elongated member and a swinging member pivotally mounted on an end of the non-swinging member, said catapult being adapted to be operated with one end of the non-swinging member on the ground and the end carrying the swinging member elevated, said ground-engaging end being without means to hold the catapult in operable position whereby a support is required for the elevated end.

9. A catapult comprising two members of substantially the same length pivotally connected together in a manner whereby they may lie substantially parallel with each other, means to hold the end of one member on the ground and the other end in an elevated position with the other member free to swing, and means to swing the last-named member.

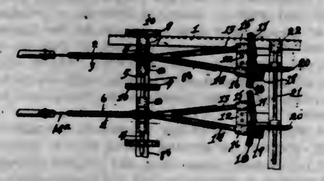
25. In a catapult, a member composed of two strips of steel bolted together with a spacing and strengthening object intervening between said strips, said member having a braced frame mounted on one end thereof.

26. The herein described catapult comprising two members one of which is composed of two strips of steel bolted together with an intervening spacing and strengthening strip, and carries a braced frame on one end thereof, a second member composed of two strips of steel secured together with two intervening spacing and strengthening strips, said member being pivotally mounted in said braced frame and adapted to swing therein in the same vertical plane and carrying a grooved segment, a spring adjustably mounted on said first-named member intermediate of said strips, a cord passing around said segment and connecting said spring and swinging member, a handle on the non-swinging member whereby one end thereof may be held in an elevated position, a prong adjustably mounted on the other end of said non-swinging member, and a trigger arrangement adapted to hold the members adjacent to each other against the action of said spring.

[Claims 2 to 6, 8, and 10 to 24 not printed in the Gazette.]

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1,227,223. COTTON-PICKING SPINDLE AND STRIPPER THEREFOR. CHARLES VOLKMANN, Chicago, Ill. Filed Mar. 6, 1911. Serial No. 612,445. (Cl. 56—118.)



1. A cotton picking spindle and stripper therefor comprising a pair of rotating flexible disks, a picking spindle operating between the flexible disks, said flexible disks being rotated past the picking spindle and pressing against each other, substantially half of the surface of one side of the disks.

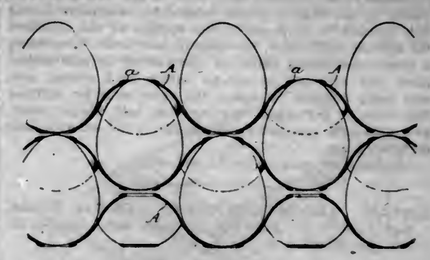
2. A stripper for cotton pickers, comprising the combination of a pair of rotating flexible disks, shafts on which said flexible disks are mounted, means to rotate said shafts, a spreader located between the flexible disks, said spreader adapted to spread the flexible disks apart substantially half the surfaces thereof, and to force the opposite halves of the disks together.

3. A stripper for cotton pickers, comprising the combination of a pair of rotating flexible disks having crimped edges, shafts on which said flexible disks are mounted, means to rotate said shaft, a spreader located between the flexible disks, said spreader adapted to spread the flexible disks apart substantially half the surfaces thereof and to force the opposite halves of the disks together.

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1,227,224. DIVISION-PLATE FOR EGG-CASES. CLARENCE J. VOORHORST, Portland, Oreg. Filed Jan. 16, 1914, Serial No. 812,426. Renewed Oct. 25, 1916. Serial No. 127,532. (Cl. 217—27.)

1. As an improved article of manufacture, a pocketed division plate for use in the storage and transportation of uniformly shaped objects, having its pockets projecting alternately from its opposite faces and having the curvature of its pockets united each with the adjacent pockets by gradual even surfaces which curve in all directions on lines merging with the curvature of the pockets and in which no flat surface meets a curved surface throughout the pocketed area of the plate, the said pockets being provided with central apertures through which the said objects may partially project and by which the plates are saddled on the objects and the latter maintained in a uniform position, and the edges of the said pockets surrounding their said apertures being reinforced, all for the purpose set forth.



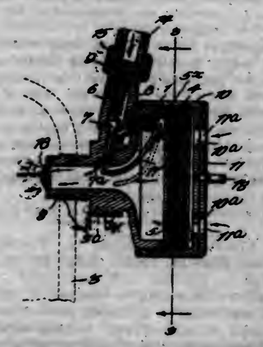
2. As an improved article of manufacture, a pocketed division plate for use in the storage and transportation of uniformly shaped objects, having its pockets projecting alternately from its opposite faces and having the curvature of its pockets united each with the adjacent pockets by gradual even surfaces which curve in all directions on lines merging with the curvature of the pockets and in which no flat surface meets a curved surface throughout the pocketed area of the plate, the said pockets being provided with central apertures through which the said objects may partially project and by which the plates are saddled on the objects and the latter maintained in a uniform position to support the several objects out of contact with one another.

3. A pocketed division plate having pockets projecting to both sides of an intermediate plane and having each of said pockets provided with a central aperture through which objects held in the pockets may be partially projected in order to saddle the plates and maintain the objects in uniform position out of contact with one another.

4. As an improved article of manufacture, a perforate division plate having oppositely opening pockets and apertures in the bases of the pockets to receive through its opposite faces, objects disposed in the pockets, to project partially through the said apertures, whereby to maintain the objects in uniform position, out of contact with one another, and thus permit of saddling the plates on the objects in a stack.

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1,227,225. AUTOMATIC ATOMIZER FOR INTERNAL-COMBUSTION ENGINES. EMILE WALDMEIER, Gulfport, Miss. Filed June 16, 1916. Serial No. 104,006. (Cl. 261—50.)



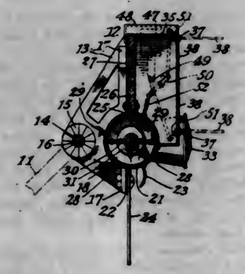
1. An automatic atomizing device for internal combustion engines comprising a hollow casing, means for attaching said casing to the intake manifold and to establish communication between the intake manifold and the interior of the casing, a valve casing communicating with

said main casing and carried thereby, a valve within the valve casing, means including a pipe for establishing communication between said valve casing and the water jacket of the engine, means carried by said main casing and movable in response to the suction of the cylinders for opening said valve, said last named means comprising a perforated hinged plate, an arm carried by said hinged plate and arranged to extend within said casing, said arm being adapted to engage the valve stem for shifting the valve, a perforated cap covering said hinged plate, and means for regulating the amount of air entering said perforated cap.

[Claim 2 not printed in the Gazette.]

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1,227,226. AUTOMOBILE-SIGNAL. VINCENT WALSH, New York, N. Y. Filed Oct. 5, 1915. Serial No. 54,153. (Cl. 40—52.)



1. A signal for automobiles and the like, comprising a lamp house and a hood, provided with swinging shutters arranged in vertical pairs, electrical means for opening one pair of shutters or both simultaneously to display a signal and mechanical means for closing the same as described.

2. In a signal for automobiles and the like, a lamp house, having a glass panel mounted thereon, a divided hood, inclosing said panel, and provided with hinged shutters arranged in vertical pairs, electrical means to open the shutters to display a signal and mechanical means for closing the same as shown and described.

3. In a signal for automobiles a frame, a lamp house, secured thereto, and having longitudinal slots at the top and bottom thereof for the passage of light, a glass panel, mounted over the top slot, a divided hood, inclosing the panel, and provided with hinged shutters arranged in pairs, means for opening the shutters and for illuminating the panel to display a signal.

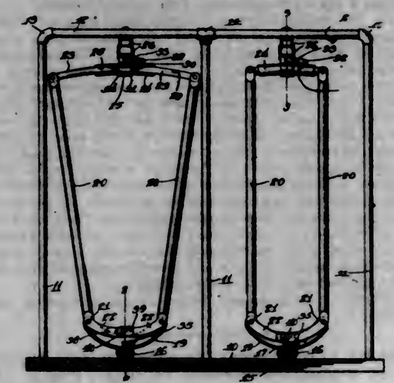
4. In a signal for automobiles, a lamp house, having a plurality of lamps therein, and being slotted at the top and bottom for the passage of light, a license plate arranged at one side of the bottom slot, and a curved reflector plate at the other, a glass panel arranged to register with the top slot and having a double arrow figure formed therein to provide a prismatic surface, a hood, inclosing the panel and provided with hinged shutters and means for opening the shutters and for simultaneously illuminating the panel to display a signal.

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1,227,227. STANCHION. ALLEN E. WESTCOTT, Ilion, N. Y. Filed June 29, 1915. Serial No. 37,108. (Cl. 119—150.)

1. A stanchion including a support, a pin slidably mounted on said support, a stirrup pivoted on said pin, uprights hinged on said stirrup, locking means for the free ends of the extremities of said uprights, and means on one of said uprights to engage said pin when the uprights are in open position to lock the stanchion against rotation.

2. A stanchion including hinged uprights, a locking extremity pivotally connected to the free end of each of said uprights, a socket open at both ends to receive said extremities, a stirrup to which said uprights are hinged, a slidably supported pin pivotally carrying said stirrup, and means carried by one of said uprights when in open position to lock said stanchion against rotation.



3. A stanchion including a support, hinged uprights rotatably and slidably mounted thereon, a locking sleeve open at its opposite ends supported at the upper end of said stanchion, locking extremities pivoted to said uprights and adapted to enter the open ends of said sleeve, and a keeper adapted to engage a notch in each of said extremities when the stanchion is closed and lock said uprights.

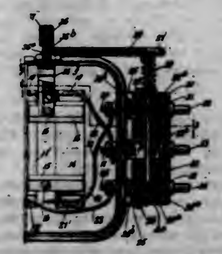
4. A stanchion including a support, uprights pivoted to said support, a pivoted extremity on each upright, means for slidably connecting the pivoted extremities of said uprights, a keeper to lock said extremities and uprights in one of their extreme positions, and means for rotatably and slidably mounting said support.

5. A stanchion including a support, a member slidable upon said support, uprights pivoted to said member, a locking extremity pivoted to each upright, a sleeve to support said extremities and means on said sleeve for simultaneously engaging and locking such extremities.

[Claims 6 to 13 not printed in the Gazette.]

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1,227,228. CUT-OUT FOR ELECTRIC STERILIZERS. WILLIAM L. WOHANKA, New York, N. Y., assignor to The Prometheus Electric Company, a Corporation of New York. Filed Jan. 13, 1915. Serial No. 1,915. (Cl. 219—38.)



1. In an apparatus of the character described, the combination of a receptacle, and a heater thereon, with means for controlling the supply of energy to said heater, a support on said heater, a fusible member mounted in said support for maintaining said controlling means normally in operative relation, and to release said controlling means to discontinue the supply of energy when the apparatus attains an abnormal temperature, substantially as specified.

2. In an apparatus of the character described, the combination of a receptacle, and an electric heater thereon, with means for controlling the supply of energy to said heater, means for operating said controlling means, a support secured to said heater, and a fusible member mounted in said support for maintaining the means for operating said controlling means normally in operative relation and to release said operating means to discontinue the supply of energy when the apparatus attains an abnormal temperature, substantially as specified.

3. In an apparatus of the character described, the combination of a receptacle, and an electric heater secured thereto below the base thereof, with a support secured to said heater, a fusible member mounted in said support, a circuit closer mounted upon said receptacle comprising a fixed element and a movable element, a shaft, means upon said shaft adapted to engage said movable element and to move the same into engagement with said fixed element, and an operating member for said shaft having one end free and engaged by said fusible member, whereby to hold said operating member normally in position to maintain said circuit closer operative to close said circuit, and to open said circuit closer and discontinue the supply of energy when the apparatus attains an abnormal temperature, substantially as specified.

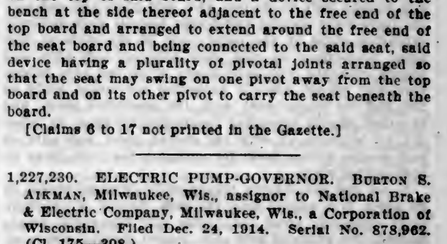
4. In an apparatus of the character described, the combination of a receptacle, and an electric heater secured thereto and arranged below the base thereof, with a support secured to said electric heater, a fusible member in said support, a circuit closer comprising a base, a fixed contact member, a movable contact member, a shaft mounted in said babe, a cam thereon serving to move said movable contact member into engagement with said fixed contact member, an arm on said shaft having its free end normally supported upon said fusible member whereby to maintain said circuit closer operative to permit of the flow of energy to said heater, and spring means to actuate said shaft and cam to break the engagement of said contact members whereby to discontinue the supply of energy when the apparatus attains an abnormal temperature, substantially as specified.

5. In an apparatus of the character described, the combination of a receptacle, and an electric heater comprising a plurality of elements secured thereto and arranged below the base of said receptacle, with a support secured to said heater and extending laterally therefrom, a fusible member mounted in said support, a circuit controller comprising a base secured to said receptacle, a fixed contact member connected with one terminal of each of said heater elements, a fixed contact member connected with the opposite terminals of certain of said heater elements, and a fixed contact member connected with the opposite terminals of the others of said heating elements, movable contact members secured to said base adapted to engage with the fixed contacts connected with the two series of opposite terminals of said heating elements, a shaft mounted in said base, cams on said shaft adapted to engage said movable contact members and move the same into engagement with their respective fixed contact members, an arm on said shaft having its free end normally supported upon said fusible member whereby to maintain said cams in position to hold said movable contact members in engagement with their respective fixed contact members whereby to permit of the flow of energy to said heater elements, and to discontinue the supply of said energy when the apparatus attains an abnormal temperature, substantially as specified.

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1,227,229. PIANO BENCH AND CABINET. ALFRED C. ABRAMSON, Rockford, Ill. Filed Mar. 28, 1916. Serial No. 87,207. (Cl. 155—22.)

1. A piano bench comprising a stand constructed to provide an open-top music compartment, a seat board covering said compartment and hinged to the stand, a supplemental seat resting on the top of the seat board, and means pivotally securing the supplemental seat to the stand at the side thereof adjacent to the outer edge of the seat board and constructed so that said supplemental seat may be swung on said means out of the path of the seat board permitting the same to be swung to upright position and the supplemental seat to be swung into the inclosure of the stand beneath the seat board so that the latter may be swung back to normal position.



2. A piano bench comprising a stand constructed to provide an open-top music compartment, a seat board covering said compartment and hinged to the stand, a supplemental seat resting on the top of the seat board, and means pivotally securing the supplemental seat to an element of the bench and constructed so that said supplemental seat may be swung away from the top of the seat board and around the outer edge thereof allowing the seat board to be swung to an upright position, and the supplemental seat thence swung into the music compartment, whereupon the seat board may be lowered to normal position in which to conceal the supplemental seat within and close said music compartment.

3. The combination with a piano bench having an open-top music compartment covered by a seat board, of a supplemental seat adapted to rest on the top of the seat board, and means pivotally securing the supplemental seat to the bench in such manner that the said supplemental seat may be swung on said pivotal means from said position above the seat board to a position beneath the same and within the music compartment without disturbing the mounting of said seat board.

4. A piano bench having a seat board hingedly mounted on a fixed pivot at one side of the bench, a supplemental seat adapted to rest on the top of said seat board, and means independent of the seat board pivotally connecting the supplemental seat to the bench in such manner that the supplemental seat may be moved upon said pivotal connecting means from said position above to one beneath the seat board and within the music compartment.

5. The combination with a piano bench having an open-top compartment covered by a top board hingedly connected at one side to the bench, of a seat adapted to rest on the top of said board, and a device secured to the bench at the side thereof adjacent to the free end of the top board and arranged to extend around the free end of the seat board and being connected to the said seat, said device having a plurality of pivotal joints arranged so that the seat may swing on one pivot away from the top board and on its other pivot to carry the seat beneath the board.

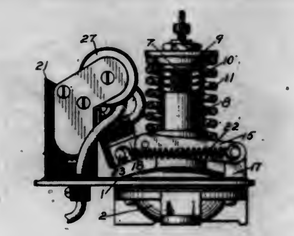
[Claims 6 to 17 not printed in the Gazette.]

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1,227,230. ELECTRIC PUMP-GOVERNOR. BURTON S. AIKMAN, Milwaukee, Wis., assignor to National Brake & Electric Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Dec. 24, 1914. Serial No. 878,962. (Cl. 175—308.)

1. An electric pump governor comprising an arm, a switch contact carried at the extreme end of said arm, stops for engaging and limiting the movement of said contact, a member supported at one end by a fixed pivot and having a pivoted connection with said arm, springs connecting the remote ends of the arm and member, and a

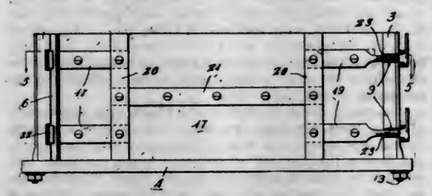
movable diaphragm operated according to the opposing pressures of the pump and a spring for shifting the pivotal connection of the arm across the axes of the springs with the contact fulcrumed on one of the stops, to thereby cause the springs to throw the arm and the switch contact into engagement with the other stop.



2. An electric pump governor comprising a movable switch contact, an arm carrying said contact, fixed stops for engaging and limiting the movement of said contact, one of which constitutes the fixed contact, links pivotally supported at one end and having a pivotal connection with said arm, strained springs connecting the remote ends of the links and said arm, and a movable abutment subject to the pressure of fluid compressed by the pump and operatively connected to said links for effecting the movement of the pivotal connection of the arm across the spring axes with one of the stops acting as a fulcrum.

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1,227,231. END-GATE FASTENER. HANS J. ANDERSON, Lakemills, Wis. Filed May 8, 1916. Serial No. 96,226. (Cl. 21—21.)

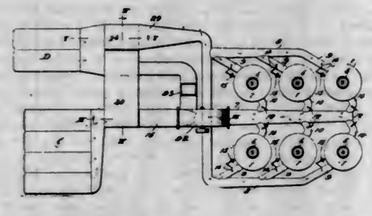


1. The combination with a wagon body having upright sides, a metal plate secured to the inner face at the rear end of one side with its rear edge rolled and provided with vertically spaced apertures adjacent said rolled portion, said side having recesses arranged opposite the apertures in said plate, a plate secured to the outer face of the other side of said body at its rear end, said plate and end having rearwardly opening registering keyhole slots, laterally extending stops at the outer ends of the slots of said plate, projections on said plate adjacent said slots and spaced inwardly from said stops; of an end gate having vertically spaced laterally extending out-turned hooks at one end for engagement with the apertured plate, and threaded shanks extending longitudinally from its other end for engagement with the slotted plate, and nuts on said shanks having teeth for engaging the projections on said slotted plate.

2. An end gate having transversely arranged straps on its outer face spaced from the ends thereof, a longitudinally extending strap connecting said transverse straps midway the width of said gate, spaced parallel straps extending longitudinally from each of said transverse straps toward the respective ends of said gate, the longitudinal straps at one end of said gate having outturned hooks at their outer ends, the longitudinal straps at the other end of the gate having threaded longitudinal extensions at their outer ends projecting beyond said gate end; in combination with a wagon body having openings in the rear end of one of its sides to receive the hooks carried by one end of said end gate, the other side of said body having notches to receive the threaded extensions at the other end of said gate, and nuts on said extensions for locking said gate to said body.

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1,227,232. APPARATUS FOR TREATING GARBAGE. JAMES A. ANDERSON, New York, N. Y. Filed Apr. 5, 1916. Serial No. 89,092. (Cl. 257—2.)



1. An apparatus for treating garbage comprising an inner garbage-holding tank, an inclosing tank forming a heating space around the inner tank, an air flue having its ends connected to the inclosing tank, an air heating means interposed in said flue, and an air forcing means adapted to create a continuous flow of air through the heating means to the inclosing tank and back through the heating means.

2. An apparatus for treating garbage comprising an inner garbage-holding tank, an inclosing tank forming a heating space around the inner tank, an air flue having its ends connected to the inclosing tank, an air heating means interposed in said flue, an air forcing means adapted to create a continuous flow of air through the heating means to the inclosing tank and back through the heating means, and an automatically operated temperature-controlled means for regulating the admission of air to the heating space.

3. An apparatus for treating garbage comprising an inner garbage-holding tank an inclosing tank forming a heating space around the inner tank, an air flue having its ends connected to the inclosing tank, an air heating means interposed in said flue, an air forcing means adapted to create a continuous flow of air through the heating means to the inclosing tank and back through the heating means, and a valve in the return portion of the flue for regulating the withdrawal of air from the heating space.

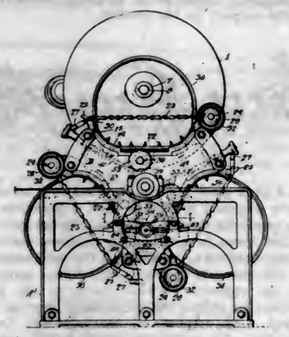
4. An apparatus for treating garbage comprising an inner garbage-holding tank, an inclosing tank forming a heating space around the inner tank, an air flue having its ends connected to the inclosing tank, an air-heating means interposed in said flue, an air forcing means in said flue adapted to create a continuous flow of air through the heating means to the inclosing tank and back through the heating means, a valve in the supply portion of said flue for regulating the admission of air to the heating space, temperature-controlled means for operating said valve, and a valve in the return portion of the flue for regulating the withdrawal of air from said heating space.

5. An apparatus for treating garbage comprising a series of inner tanks, an inclosing tank around each of said inner tanks to form a heating space, an exhaust flue connected to the heating space around each of said tanks, a supply flue connected to the heating space around each of said tanks, a valve controlling the exhaust of air from each of said heating spaces, an automatically operating temperature-controlled valve for controlling the supply of air to each of said tanks, an air heating means interposed between the supply flue and the exhaust flue, and means for causing a circulation of the hot air from the heating means to the tanks and from the tanks back to the heating means.

[Claims 6 to 10 not printed in the Gazette.]



1,227,233. MEAT-SLICING MACHINE. PEHR M. ANDERSON, Chicago, Ill. Filed Aug. 13, 1915. Serial No. 45,294. (Cl. 17—24.)



1. In a meat slicing machine, the combination of a frame, a rotary cutter mounted thereon, a carriage supporting frame mounted in said machine frame and rotatable upon a horizontal axis, a meat carriage slidably mounted on said carriage supporting frame, means for securing the meat to be sliced upon said meat carriage, means for imparting rotation to said carriage supporting frame continuously in one direction, and means for feeding said meat carriage a fractional part of its full travel at each rotation of said carriage supporting frame, substantially as described.

2. In a meat slicing machine, the combination of a frame, a rotary cutter mounted thereon, a carriage supporting frame mounted in said machine frame and rotatable upon a horizontal axis, a meat carriage slidably mounted on said carriage supporting frame, means for securing the meat to be sliced upon said meat carriage, means for imparting rotation to said carriage supporting frame continuously in one direction, and feeding means for said meat carriage operatively controlled by rotation of said carriage supporting frame, substantially as described.

3. In a meat slicing machine, the combination of a frame, a rotary cutter mounted thereon, a carriage supporting frame mounted in said machine frame and rotatable upon a horizontal axis, a meat carriage slidably mounted on said carriage supporting frame, means for securing the meat to be sliced upon said meat carriage, means for imparting rotation to said carriage supporting frame continuously in one direction, feeding means for said meat carriage, and manually controlled means for throwing said feeding means in and out, substantially as described.

4. In a meat slicing machine, the combination of a frame, a rotary cutter mounted thereon, a carriage supporting frame mounted in said machine frame and rotatable upon a horizontal axis, a meat carriage slidably mounted on said carriage supporting frame, means for securing the meat to be sliced upon said meat carriage, means for imparting rotation to said carriage supporting frame continuously in one direction, feeding means for said meat carriage, manually controlled means for throwing said feeding means in and out, and means for varying the feed, substantially as described.

5. In a meat slicing machine, the combination of a frame, a rotary cutter mounted on said frame, a carriage supporting frame mounted in said machine frame and rotatable upon a horizontal axis, a plurality of meat carriages slidably mounted on said carriage supporting frame said carriage supporting frame and the arrangement of said carriages being symmetrical about the axis of rotation of said carriage supporting frame, whereby a substantially balanced structure is produced, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

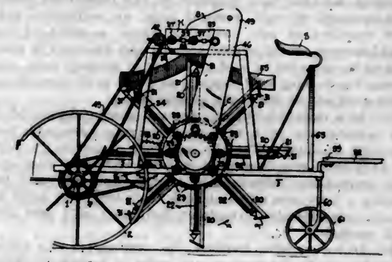
1,227,234. BREAD-KNIFE. BYRON R. BACON, North Chili, N. Y., assignor of one-half to William J. Burden, Rochester, N. Y. Filed Aug. 11, 1916. Serial No. 114,866. (Cl. 30—9.)



A bread knife comprising a handle and a blade having a longitudinal edge ground and tapered from both sides and divided by right angle slots of uniform width into a series of cutting sections, the transverse margins of which are also tapered or ground from both sides to form cutting edges lying in the same plane with the first named edge and in the median plane of the blade the taper of the cutting sections being gradual and continuous from their first named edges to their bases.

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1,227,235. CORN-HARVESTER. SOLOMON V. BARNETT and JOHN W. HOLLOWAY, Prague, Okla. Filed Apr. 1, 1916. Serial No. 88,347. (Cl. 56—113.)



1. A corn harvester comprising a frame, a trough, a member revolving around the trough, ear stripping members radiating from the revolving member and adapted to discharge within the trough when in substantially a vertical position, and means for rotating the revolving member.

2. A corn harvester comprising a frame, a trough supported thereby, said trough being provided with annular portions in predetermined spaced relation longitudinally of the trough, a revolving member rotatably engaged with the annular portions of the trough and bridging the space between said annular portions, ear stripping members radiating from the revolving member and discharging within the trough, and means for rotating the revolving member.

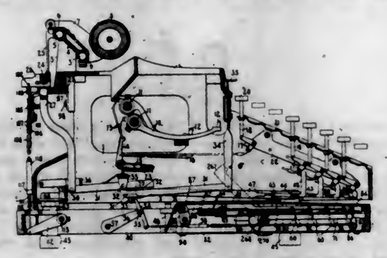
3. A corn harvester comprising a frame, a trough, a member revolving around the trough, ear stripping members radiating from the revolving member and adapted to discharge within the trough when in substantially a vertical position, means for rotating the revolving member, and a conveyer within the trough discharging at one side of the frame.

4. A corn harvester comprising a frame, a trough, a member revolving around the trough, ear stripping members radiating from the revolving member and adapted to discharge within the trough when in substantially a vertical position, and means for rotating the revolving member upward and backward.

5. A corn harvester comprising a frame, a trough, a member revolving around the trough, ear stripping members radiating from the revolving member and adapted to discharge within the trough when in substantially a vertical position, means for rotating the revolving member, said stripping members including a plurality of pairs of coacting rollers, and guide members coacting with the outer ends of the rollers.

[Claims 6 to 10 not printed in the Gazette.]

1,227,236. TYPE-WRITING AND COMPUTING MACHINE. GLENN J. BARRETT, Grand Rapids, Mich., assignor, by mesne assignments, to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Dec. 14, 1910. Serial No. 597,354. (Cl. 235—60.)



1. In a combined typewriting and computing machine, the combination of a computer frame, a typewriter frame mounted on said computer frame, a series of printing keys in said typewriter frame including numeral keys, horizontally movable bars mounted in the typewriter frame and operated by said numeral keys, an oscillatory support mounted in said computer frame, a series of key connections mounted in said support and normally in position to be operated by said horizontally movable bars, and means for rocking said support to move said connections downward out of the paths of said bars.

11. In a combined typewriting and computing machine, the combination of a typewriter carriage, denomination selecting mechanism for the computer comprising a part to be moved step-by-step in unison with said carriage, and connections between said carriage and said part including a lever-arm adjustable as to its length in order to regulate the relative extents of motion of said part and said carriage.

63. In a computing machine, the combination of a series of racks, means for setting said racks in accordance with a number to be registered, a series of register wheels, a pivoted frame for said register wheels, a series of pivoted stops for arresting said register wheels at zero but normally in inoperative position, a yoke frame pivoted coaxially with said frame and having a bar in position to operate said stops and said yoke frame being adapted by a further motion to move said frame to bring the register wheels into gear with the racks, and means for operating said yoke frame and releasing said racks.

72. In a computing machine, the combination of a series of denominational devices, a group of keys common to said denominational devices, denomination selecting mechanism including a part that moves step-by-step as the keys are operated, a lock for said keys, yielding means for holding said lock out of operation, means whereby any of said denominational devices when operated releases the lock from said yielding means, a flange on said step-by-step moving part arranged to hold said lock out of operation until said part has completed its series of stepping movements, and means for causing said step-by-step moving part to return to initial position without releasing said lock.

[Claims 2 to 10, 12 to 62, 64 to 71, and 73 to 94 not printed in the Gazette.]

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1,227,237. GANG-PLOW. JOHN B. BARTHOLOMEW, Peoria, Ill., assignor to Avery Company, Peoria, Ill., a Corporation of Illinois. Filed May 15, 1913, Serial No. 767,923. Renewed Oct. 12, 1916. Serial No. 125,288. (Cl. 97—59.)

1. In a gang plow, the combination of a frame having a diagonally disposed rear edge part, a plurality of furrow forming elements fixedly connected to the said rear edge part of the frame in a diagonally disposed series, movably connected wheels at the ends of the said series for supporting the rear edge parts of the frame, means for supporting the opposite forward parts of the frame, and power actuated means acting automatically to move the said wheels successively downward with respect to the adjacent frame parts whereby the said parts are lifted with respect to the ground.



2. In a gang plow, the combination of a frame having a diagonally disposed rear edge part, a plurality of furrow forming elements fixedly connected to the said rear edge part of the frame in a diagonally disposed series, movably connected wheels at the ends of the said series for supporting the rear edge parts of the frame, means for supporting the opposite forward parts of the frame, and power actuated means for successively moving the wheels downward with respect to the adjacent frame parts whereby the said parts are lifted with respect to the ground and for successively releasing the said wheels from the frame parts to permit the said parts to return to plowing positions.

3. In a gang plow, the combination of a frame having a diagonally disposed rear edge part, a plurality of furrow forming elements fixedly connected to the said rear edge part of the frame in a diagonally disposed series, movably connected wheels at the ends of the said series for supporting the rear edge parts of the frame, a ground wheel for supporting the opposite forward parts of the said frame, and means connected with the said forward ground wheel for successively moving the other wheels downward with respect to the adjacent frame parts whereby the said parts are lifted with respect to the ground.

4. In a gang plow, the combination of a plurality of frame sections flexibly connected together and each having a diagonally disposed rear edge part, a plurality of groups of furrow forming elements, the elements of each group being fixedly connected in a diagonally disposed series to the rear edge part of one section, wheels for supporting the rear edge part of the frame sections, the said wheels being positioned respectively at the ends of the said groups of furrow forming elements, means for supporting the opposite forward parts of the said frame sections, and power actuated means acting automatically to move the said wheels successively downward with respect to the adjacent frame parts whereby the said parts are lifted with respect to the ground.

5. In a gang plow, the combination of a plurality of frame sections flexibly connected together and each having a diagonally disposed rear edge part, a plurality of groups of furrow forming elements, the elements of each group being fixedly connected in a diagonally disposed series to the rear edge part of one section, wheels for supporting the rear edge part of the frame sections, the said wheels being positioned respectively at the ends of the said groups of furrow forming elements, means for supporting the opposite forward parts of the said frame sections, and power actuated means for successively moving the wheels downward with respect to the adjacent frame parts whereby the said parts are lifted with respect to the ground and for successively releasing the said wheels from the frame parts to permit the said parts to return to plowing positions.

[Claim 6 not printed in the Gazette.]

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1,227,238. HAT-PIN SHIELD. EMMA I. BATES, Park River, N. D. Filed Jan. 5, 1916. Serial No. 70,484. (Cl. 24—155.)

A device of the character described including a pin having one end flattened and pointed and the flattened portion provided with a plurality of uniformly spaced openings, a cylindrical protecting shield arranged about



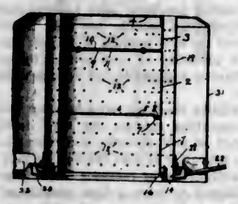
the flattened pointed end, a V-shaped resilient locking member, pivot projections extending in opposite directions from the free ends of the member and pivotally mounted within the inner surface of the cylinder so that the sides



of the member contact with the inner surface, the vertex of the member being curved toward the center of the cylinder and projecting beyond the outer edge, and a knob integral with the vertex for adjustably engaging one of the openings in the pin.

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1,227,239. HYDROCARBON-BURNER. WILLIAM J. BEST, Detroit, Mich., assignor to Gas Oil Stove Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 8, 1915. Serial No. 65,654. (Cl. 158—87.)



1. In a hydro-carbon burner, the combination of perforated outer and inner chimneys and a trough integral with the inner chimney and supporting the outer chimney, means to feed fuel to the trough, an annular cover for said trough having a flange at its inner edge extending up around the outer chimney, and a cowl secured to the outer chimney and extending down over said flange but spaced therefrom, said outer chimney having holes between the flange and the cowl to permit air to enter the space between the chimneys.

2. In a hydro-carbon burner, the combination of perforated outer and inner chimneys and a trough integral with the inner chimney and supporting the outer chimney, means to feed fuel to the trough, an annular cover for said trough having a flange at its inner edge extending up around the outer chimney, a cowl secured to the outer chimney and extending down over said flange but spaced therefrom, said outer chimney having holes between the flange and the cowl to permit air to enter the space between the chimneys, and holes below the flange to permit fuel gas to enter said space from the trough.

3. In a hydro-carbon burner, an inner chimney consisting of a plurality of sections, two of the sections having integral heads secured together and perforated to permit the passage of air.

4. In a hydro-carbon burner, an inner chimney consisting of three sections, the upper and intermediate sections having heads secured together and perforated to permit the passage of air, a cover for the upper section, the lower section having an annular flange to support the other sections.

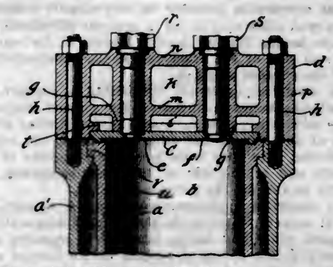
5. In a hydro-carbon burner, an inner chimney consisting of three sections, the upper and intermediate sections having integral heads secured together and perforated to permit the passage of air, the lower section having an annular flange to support the other sections.

[Claim 6 not printed in the Gazette.]

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1,227,240. ENGINE-CYLINDER. ALBERT BIE, Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 2, 1915. Serial No. 5,621. (Cl. 123—193.)

1. In an internal combustion engine having a cylinder head containing a cooling space and formed with a side wall encircling the same, a separate removable part at the inner side of said head bearing against the encircling wall of the head and thereby closing off said cooling space from the combustion space.



2. In an internal combustion engine cylinder, the combination with a head member hollow for the circulation of cooling water and open at its inner side, the said head member being formed with an encircling side wall having an internal rabbet, of a separate plate seated at its outer portion in said rabbet and covering said inner side of the head member and separating the cooling space therein from the combustion space.

3. In an internal combustion engine cylinder, the combination with a cylinder body and a separate cylinder head secured to the cylinder body, the head and body being formed to inclose between them an internal annular recess, the latter being hollow for the circulation of cooling water, of a part interposed between said body and head and closing off the interior of the head from the combustion space, the said part being of smaller diameter than the head and received at its circumferential portion in said recess.

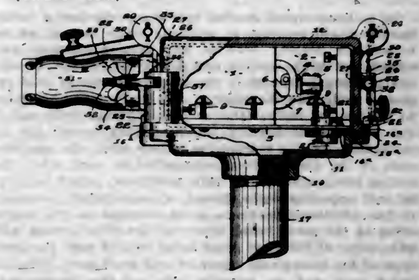
4. In an internal combustion engine, a cylinder body and a cylinder head member containing a cooling space open at its inner side, in combination with a separate part closing the inner side of said head member and held adjacent its circumference between the same and the cylinder body, the head member having projections in its cooling space affording shoulders against which said part bears inwardly of its circumference.

5. In an internal combustion engine cylinder, the combination with a head formed with a cooling space and valve sockets extending through said cooling space, of a plate closing said cooling space off from the combustion space and having bearing against the inner projecting ends of said valve sockets.

[Claims 6 to 14 not printed in the Gazette.]

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1,227,241. ELECTRICAL APPLIANCE. CARL H. BISSELL and ELDA G. SMITH, Syracuse, N. Y., assignors to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed Aug. 7, 1914. Serial No. 855,546. (Cl. 173—338.)



1. An electrical appliance comprising a support, and electrical receptacles mounted on the support diagonally

opposite each other, each receptacle having binding devices located at one side of the other receptacle, substantially as and for the purpose described.

2. An electrical appliance comprising a support, and electrical receptacles mounted on the support diagonally opposite each other and facing in opposite directions, each receptacle having binding devices located at its rear end and at one side of the other receptacle, substantially as and for the purpose specified.

3. An electrical appliance comprising a support, and electrical receptacles mounted on the support diagonally opposite each other, each receptacle having binding devices located at one side of the other receptacle, the support being formed with wire holes located at the rear of each receptacle and at the side of the other receptacle, substantially as and for the purpose set forth.

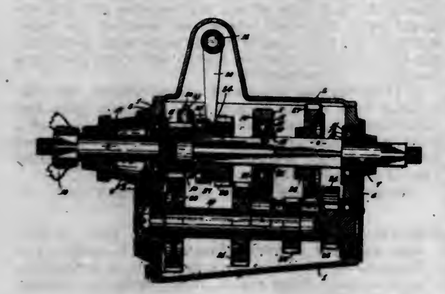
4. An electrical appliance comprising a support, and electrical sockets mounted on the support diagonally opposite each other and facing laterally in opposite directions, each socket having a binding device located at its rear end and arranged at one side of the other socket, the base being formed with wire openings in the rear of each socket, substantially as and for the purpose described.

5. An electrical appliance comprising a support in the form of a plate, receptacles mounted on the plate diagonally opposite each other and facing laterally in opposite directions, the receptacles having binding devices at their rear ends, the binding devices of each receptacle being located at the side of the other receptacle, and a housing inclosing the receptacles and including a section having entrance openings alined with the front ends of the receptacles, substantially as and for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

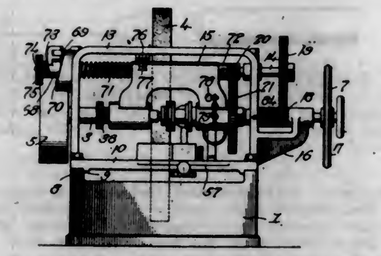
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1,227,242. GEARING. ALEXANDER T. BROWN, Syracuse, N. Y., assignor to Brown-Lipe Gear Company, Syracuse, N. Y., a Corporation of New York. Filed Jan. 6, 1910. Serial No. 536,602. (Cl. 74—58.)



In a change speed gearing and in combination, a casing having alined bearings in opposing walls thereof, an intermediate bearing between the former bearings and alined therewith, driving and driven shafts, one of said shafts being journaled in the bearing in one of said opposing walls, and the other of said shafts being journaled in the bearing in the other of said opposing walls and in the intermediate bearing and projecting beyond the intermediate bearing toward the former shaft, the opposing ends of the shafts being unsupported by each other, the casing being also formed with additional alined bearings in said opposing walls thereof, a countershaft journaled in the additional bearings, gears mounted on the shafts, some of the gears being fixed and the others being slidable, some of the fixed gears being located near the bearings of the casing and others of said fixed gears being located near and on opposite sides of the intermediate bearing, and the shiftable gears being located on opposite sides of the intermediate bearing, substantially as and for the purpose described.

1,227,243. EDGING-MACHINE. LUCIAN WILLIS BUGBEE, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed June 4, 1915. Serial No. 32,072. (Cl. 51—3.)



1. In an edging machine, lens holding means, grinding means, an operating spindle for said holding means, a sleeve mounted on said spindle, a former plate carried on said sleeve, a plurality of pins carried by said sleeve and a lens pad having a plurality of recesses for engagement on said pins.

3. In an edging machine, lens holding means, grinding means, an operating spindle for said holding means, a sleeve mounted on said spindle, a former plate carried on said sleeve, a plurality of pins carried on said sleeve, a lens pad having a plurality of recesses for engagement on said pins, and adapted to have a lens positioned thereagainst and a second pad for engagement with the opposite face of the lens for clamping the same against movement, and means for shifting said second pad into and out of clamping position.

5. In an edging machine, a base, a grinding wheel, a frame on said base, a rotatable shaft journaled in said frame, lens holding means loosely mounted on said shaft, a cam on said frame, a sleeve on said shaft having notches formed therein, a member threaded on said shaft, projections formed on said member for engagement with said notches whereby the member is locked to the sleeve, a cam engaging roller carried by the sleeve, a collar on said shaft to limit movement of the lens holding means in one direction and a spring for holding said holding means against said collar when the cam and roller coöperate to reciprocate the shaft.

6. In a machine of the character described, the combination with a lens clamp spindle, of an attachment therefor comprising a sleeve having a portion for engagement with the spindle, said sleeve having former engaging means formed at one end thereof and lens clamp positioning means formed at the opposite end thereof, whereby when a former and clamp pad are applied to the sleeve and machine the said former and pad will always occupy a predetermined relation one to the other, substantially as described.

8. In a lens edging machine, the combination with a lens holding carriage including a driven spindle, said spindle terminating in a reduced shouldered portion having a projecting tang, of a sleeve or clamp member adapted for engagement upon the tang, centering devices projecting from said member in the direction of the spindle and adapted to receive a former to position the former relative to the said member, whereby as the clamp member is secured on the reduced tang the former will be clamped between said member and the shoulder of the spindle, and means for detachably engaging a lens clamp pad at the opposite end of the member to secure the pad in predetermined relation to the former.

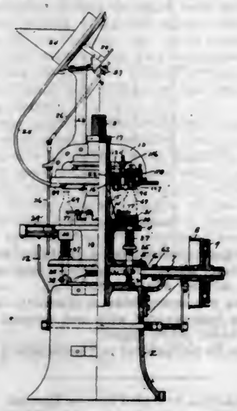
[Claims 2, 4, 7, and 9 not printed in the Gazette.]

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1,227,244. CLOSING-MACHINE. WILLIAM C. BUHLER, Alameda, Cal., assignor to Aluminum Seal Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 10, 1915. Serial No. 13,368. (Cl. 113—5.)

1. The combination with a movable rotatable element adapted to receive upright receptacles, of means for holding a closure, means operative by the presence of a receptacle on said element for placing a closure in said holding means, means for placing the closure on said receptacle, means for securing said closure to said receptacle, and means for rotating the closure in contact with said securing means.





2. The combination with a movable rotatable element adapted to receive an upright receptacle, of means for holding a closure, means operative by the presence of a receptacle on said element for placing a closure in said holding means, means for placing the closure on said receptacle, tools for securing the closure to the receptacle and means for rotating the receptacle and closure in contact with said tools.

3. The combination with a movable table, of a turntable on said table adapted to receive an upright receptacle, closure feeding means, closure holding means on said table, means operative by the presence of a receptacle on said turn-table for feeding a closure to said holding means, means for placing the closure on said receptacle, and means for securing the closure to the receptacle.

4. The combination with a movable table adapted to receive upright receptacles, of means operative by the presence of a receptacle on said table and in time with the movement of said table for placing a closure in position above the receptacle, and means operative by and in time with the movement of said table for moving the receptacle into engagement with said closure and securing the closure to the receptacle.

5. The combination with a movable table, of an independently rotatable turn-table on said table adapted to receive a receptacle, a closure feed, means operative by the presence of a receptacle on said turn-table for feeding a closure into position above said receptacle, means for raising said receptacle into engagement with said closure, means for rotating said closure and receptacle, and means for securing the closure to the receptacle.

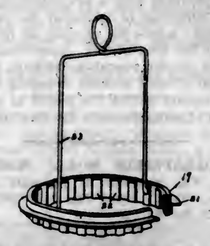
[Claims 6 to 39 not printed in the Gazette.]

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1,227,245. IGNITER FOR LIQUID-FUEL BURNERS. NATHAN C. CHAPMAN, Detroit, Mich., assignor to Gas Oil Stove Company, Detroit, Mich., a Corporation of Michigan. Filed June 17, 1916. Serial No. 104,157. (Cl. 158—90.)

1. In an igniter for oil burners, the combiantion of a wick-reinforcing member comprising a ring and fingers connected thereto and extending downward therefrom and then inward and upward, a cylindrical wick held between the bent portions of said fingers and extending up above said ring, and a bail extending upward from said igniter.

2. In an igniter for oil burners, the combination of a wick-reinforcing member comprising a ring and fingers connected thereto and extending downward therefrom and then inward and upward, a cylindrical wick held between the bent portions of said fingers and extending up above said ring, and a bail extending upward from said igniter, said bail consisting of a wire rod bent to form a top and parallel sides whose lower ends are attached to said reinforcing member.



3. In a reinforcing and transporting device for the wicks of oil stoves, the combination of a cylindrical ring and fingers connected thereto and extending down and then up to securely grip a cylindrical wick, and a bail secured to two of said fingers and extending upward therefrom, said ring being positioned approximately midway the ends of the wick.

4. In an igniter for oil burners having inner and outer perforated chimneys, the combination of an annular wick, a metal ring to hold the wick, and a bail connected to the metal ring and consisting of a wire having its middle portion extending across the inner chimney and having its ends extending down between the chimneys and connected to the metal ring.

5. An igniter for oil burners having concentric chimneys, an annular wick normally at the bottom of the space between the chimneys, a metal reinforcement for the wick, and a lifter connected to the reinforcement and extending up between the chimneys and so far above them that the lifter may be manually grasped to lift the wick out above the chimneys.

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1,227,246. STORE-SERVICE APPARATUS. LOUIS W. CHISM, Springfield, Mass., assignor, by mesne assignments, to The Rowe Ring-Point Company, Hartford, Conn., a Corporation of Connecticut. Filed June 10, 1914. Serial No. 844,359. (Cl. 186—14.)



1. A store service apparatus comprising, in combination, a carrier; carrier propelling means; means for causing an interruption and reëstablishment of the driving connection between the carrier and the carrier propelling means, and means for propelling the carrier during a period commencing before such interruption and ending after such reëstablishment.

2. A store service apparatus comprising, in combination, a carrier; a plurality of guideways for the carrier; a plurality of carrier propelling means; means to cause the transfer of the carrier from one guideway to another; means to cause the transfer of the carrier from driving relation with one propelling means to another; and means to propel the carrier during such transfer.

3. A store service apparatus comprising, in combination, a carrier; carrier propelling means; means for causing an interruption and reëstablishment of the driving connection between the carrier and the carrier propelling means; and means including a helical driving member engaging said carrier to propel the same during the period of interruption.

4. A store service apparatus comprising, in combination, a carrier; carrier propelling means; means for caus-

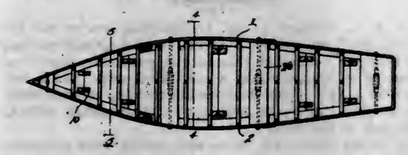
ing an interruption and reëstablishment of the driving connection between the carrier and the carrier propelling means; and means including a flexible helical driving member engaging said carrier to propel the same during the period of interruption.

5. A store service apparatus comprising, in combination a carrier provided with a projection extending transversely of the direction of travel of the carrier; carrier propelling means; means for causing an interruption and reëstablishment of the driving connection between the carrier and the carrier propelling means; and means including a helical driving member engaging said projection to propel said carrier during the period of interruption.

[Claims 6 to 13 not printed in the Gazette.]

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1,227,247. COLLAPSIBLE BOAT. WILLIAM H. COX, Portsmouth, Va., assignor of one-half to Charles C. Brick, Salem, Ohio. Filed Jan. 24, 1917. Serial No. 144,238. (Cl. 9—2.)



1. A collapsible boat including separate side and bottom portions, braces to be fitted between said bottom and side portions, and means to draw the side portions in against the braces and hold the same in the proper mounting.

2. A collapsible boat including a foldable bottom portion, foldable side portions, braces to be fitted between said bottom and side portions, and means to draw the side portions in against the braces and hold the same in the proper mounting.

3. A collapsible boat including side portions, strips mounted adjacent the lower edges of the side portions and spaced to form ways therebetween, a bottom portion to be fitted at its edges within the ways, and means to secure the side portions in the fitted position in respect to the bottom portion.

4. A collapsible boat including side portions, strips mounted adjacent the lower edges of the side portions and spaced to form ways therebetween, a bottom portion to be fitted at its edges within the ways, means to secure the side portions in the fitted position in respect to the bottom portion, and means to establish a water tight connection between said bottom and side portions.

5. A collapsible boat including a foldable bottom portion, foldable side portions provided with ways on their inner sides adjacent the lower edges, means to secure the bottom and side portions in an assembled mounting, and means within the ways to establish a water tight connection between the bottom and side portions.

[Claims 6 to 10 not printed in the Gazette.]

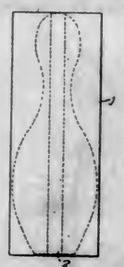
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1,227,248. BOWLING-PIN AND METHOD OF MAKING SAME. FRANK G. CRANE, West Collingsworth, N. J., assignor of one-half to Julius Balke, Chicago, Ill. Filed Jan. 5, 1916. Serial No. 70,358. (Cl. 46—66.)

1. A method of making bowling pins, comprising impregnating a strip of unsized paper with concentrated waste sulfite liquor, winding said paper to form a substantially cylindrical blank, and forming a pin from said blank.

2. A method of making bowling pins, comprising impregnating a strip of paper with a suitable adhesive material, winding said paper on a mandrel to form a substantially cylindrical blank, removing said mandrel and allowing the paper to dry, and forming a pin from said blank.

3. A method of making bowling pins, comprising impregnating a strip of paper with a suitable adhesive material, winding said paper on a mandrel to form a substantially cylindrical blank, removing said mandrel and allowing said paper to dry, forming a pin from said blank, and coating said pin with an elastic waterproof material.



4. A bowling pin, comprising a plurality of concentric layers of unsized paper impregnated with and secured together by a suitable adhesive material.

5. A bowling pin, comprising a plurality of concentric layers of paper impregnated with and secured together by concentrated waste sulfite liquor.

[Claims 6 to 10 not printed in the Gazette.]

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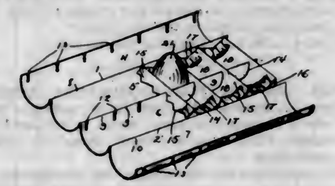
1,227,249. GAME APPARATUS. WALTER F. DAVEY, Somerville, Mass. Filed June 12, 1916. Serial No. 103,091. (Cl. 46—59.)



In game apparatus, a target comprising a body portion containing a plunger, a support for the body portion resiliently pivoted thereto, a wire spring having a portion coiled around the pivot pin and having its ends abutting the body portion and support respectively, a latch engaged by said plunger and having a hook end for retaining the end of the first named spring abutting the support and adapted to be released by impact upon the plunger.

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1,227,250. EGG-CARRIER. LOUIS A. DEGGINGER, Covington, Ky., assignor to The No-Break Egg Carrier Co., Cincinnati, Ohio, a Corporation of Ohio. Filed June 17, 1914, Serial No. 845,739. Renewed Dec. 6, 1916. Serial No. 135,486. (Cl. 217—34.)



1. In an egg carrier of the class described, a body portion made of a series of elongated half sections, joined together and capable of being folded together, an egg carrying tray, said egg carrying tray provided with a series of central elongated slots, which slots fit over, when the tray is folded, the meeting edges of the two middle halves enabling the tray to be suspended and supported in the body portion so that a space will be provided between the tray and the bottom.

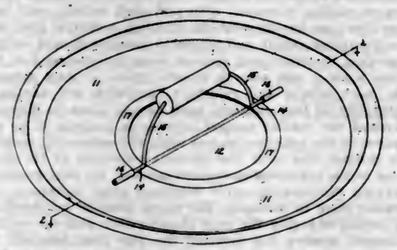
2. In an egg carrier of the class described, a body portion made of a series of elongated half sections, joined together, capable of being folded together, the meeting edges of the inner halves provided with recesses, an egg carrying tray having elongated central slots and folded together to fit the recesses, the slots enabling the tray to straddle the inner halves, and held thereby in a suspended position so that the bottom of said egg carrying tray will not reach the bottom of the body portion and thus leave a space.

3. In an egg carrier of the class described, a body portion made of a series of elongated half sections, joined together, capable of being folded together, the meeting edges of the inner halves provided with recesses, an egg carrying tray having elongated central slots and folded together to fit the recesses, fingers at the edge of said egg tray, the slots enabling the tray to straddle the inner halves, and held thereby in a suspended position so that the bottom of said egg carrying tray, will be suspended above the bottom of the body portion and leave a space therebetween.



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1,227,251. LID FOR COOKING UTENSILS. RICHIE DE LAN, Philadelphia, Pa. Filed Mar. 24, 1916. Serial No. 86,358. (Cl. 53—8.)



1. A cooking utensil lid having an opening therein, a cover for said opening, a handle having a bail with laterally projecting ends and bearings in which said projecting ends can turn so as to serve as pivots for the handle, portions of said laterally projecting ends coincident with the pivotal axis of the bail overlapping and bearing upon said cover whereby they serve to retain the latter in position upon the lid in all positions of adjustment of the handle.

2. A cooking utensil lid having an opening therein, a cover for said opening, a handle having a bail with elastic arms whose lower ends project laterally outward, bearings on the lid in which said outwardly projecting ends of the bail can swing so as to serve as pivots for the handle, said laterally projecting portions of the bail extending inwardly over the edges of the cover for the opening in the lid, and said bail being elastic so that its laterally projecting ends can be sprung inwardly to free them from said bearings and to permit removal of the handle and freeing of said cover.

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1,227,252. METHOD OF SEPARATING BENZENEDISULFONIC ACID FROM SULFURIC ACID AND OF CONVERTING THE BENZENEDISULFONIC ACID INTO A SALT. LOUIS M. DENNIS, Ithaca, N. Y. Filed July 14, 1916. Serial No. 109,214. (Cl. 23—24.)

1. A method of separating benzenedisulfonic acid from sulfuric acid consisting in treating a mixture of the acids with a solvent which dissolves but one of them

2. A method of separating benzenedisulfonic acid from sulfuric acid consisting in treating a mixture of the acid with a solvent which dissolves the benzenedisulfonic acid but not the sulfuric acid.

3. A method of separating benzenedisulfonic acid from sulfuric acid consisting in treating a mixture of the acids with an organic solvent which dissolves the benzenedisulfonic acid but not the sulfuric acid.

4. A method of separating benzenedisulfonic acid from sulfuric acid consisting in treating a mixture of the acids with benzene.

5. A method of making a salt of benzenedisulfonic acid consisting in dissolving the benzenedisulfonic acid in a solvent in which the salt is relatively insoluble and treating the solution with a suitable compound to form the salt.

[Claims 6 to 22 not printed in the Gazette.]

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1,227,253. BELT HOOK OR STAPLE. JAMES K. DIAMOND, Grand Rapids, Mich., assignor to Clipper Belt Lacer Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Mar. 4, 1916. Serial No. 82,221. (Cl. 24—33.)



1. In a belt hook having arms to embrace the end of a belt and prongs at the free ends of the arms adapted to be driven into opposite sides of a belt, shoulders projecting laterally from the prongs near the ends thereof and positioned to be forced into the belt and prevent bending of the prongs on the occurrence of longitudinal strain on the arm.

2. A belt hook comprising connected arms adapted to embrace the end of a belt, prongs projecting inward from the arms adapted to be oppositely inserted in a belt, and shoulders extending from the prongs near the ends and on the outer sides thereof to retain the prongs in the belt.

3. A belt hook comprising a wire bent in U-shape to embrace the end of a belt, the free ends of the same being bent inward at an acute angle to provide attaching prongs each having a shoulder near its end projecting oppositely to the connecting portion of the wire.

4. A belt hook comprising connected spaced apart arms, said arms being adapted to engage opposite sides of a belt and with the connecting portion adapted to extend beyond the end of the belt, a prong at the free end of each arm bent at an acute angle thereto and extending toward the opposite arm, said prongs adapted to be inserted into a belt from opposite sides, and an outwardly projecting shoulder adjacent the end of each prong which on any attempted increase of the angle between a prong and the arm from which it is bent, due to a longitudinal pull on the arm, engages against the belt material and prevents such angular increase and resultant withdrawal of the prong from the belt.

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1,227,254. EXHAUST-VALVE FOR HYDROCARBON-ENGINES. HENRY R. DUKE, Mobile, Ala., assignor of one-half to A. O. Thayer, Mobile, Ala. Filed July 28, 1916. Serial No. 111,850. (Cl. 123—188.)



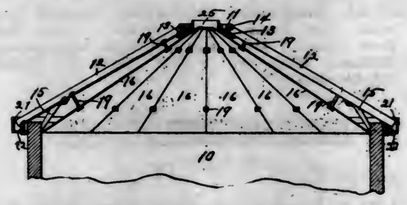
2. The combination of the cylinder and valve casing of a hydrocarbon engine, a puppet valve in the casing, an im-

perforate cap fitted in the casing to slidingly receive the valve, the casing having an exhaust passage and the valve having a port to connect the exhaust passage with the interior of the cap, said valve also having a stem extending therefrom in a direction away from the cap.

[Claims 1 and 3 not printed in the Gazette.]

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1,227,255. REINFORCED-ROOF FORM. ROBERT J. ELDREDGE, Waverly, Iowa. Filed Feb. 1, 1915, Serial No. 5,425. Renewed Feb. 20, 1917. Serial No. 149,939. (Cl. 25—124.)



1. A reinforced roof form comprising a central ring, rafters secured to and crossing said ring and adapted to be supported at their outer ends on a circular wall, and removable plates of truncated sector form adapted to be suspended from and in spaced relations to said ring and rafters, said plates overlapping each other.

2. A reinforced roof form comprising a central ring, rafters crossing beneath and radiating from said ring and adapted to be supported at their outer ends on a circular wall, lugs connecting said rafters and ring, lugs on the outer ends of said rafters adapted to engage the inner surface of said wall, and truncated sector plates adapted to be suspended from and beneath said rafters whereby said ring, lugs and rafters may be inclosed in plastic material.

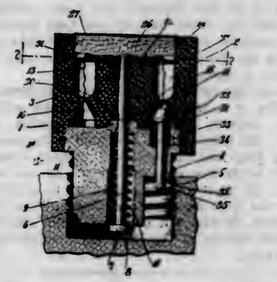
3. A roof form comprising a ring, rafters secured to and radiating from said ring and adapted to be supported at their outer ends on a circular wall, form plates of truncated-sector shape suspended from said rafters and extending within said ring, a loose ring on the inner ends of said form plates and arcuate forms suspended from the outer ends of said rafters.

4. A roof form comprising a ring, rafters radiating from said ring across and adapted to be supported on a circular wall, overlapping sector plates suspended from said rafters within said wall, and arcuate forms, angular in cross-section, suspended at the outer ends of said rafters and engaging the outer face of said wall.

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1,227,256. MULTIPLE-FUSE PLUG. FREDERICK A. FELDKAMP, Newark, N. J., JOSEPH P. PAYOR, New York, N. Y., and HAROLD PAYSON, Short Hills, N. J., assignors to The Six-in-One Fuse Company, New York, N. Y., a Corporation of New York. Filed Jan. 18, 1916. Serial No. 72,681. (Cl. 175—278.)

1. In a device of the character described, the combination of two plug members, one a base member having a shell plug contact and also having a central opening, a central plug contact member axially and rotatably movable in said central opening and having a contacting part at its lower end, the other plug member being superimposed on the base member and secured to said central contact member to move axially and rotatably therewith, a spring engaging the base plug member and the central contact member for pressing the two plug members together, said plug members having interlocking parts requiring a predetermined axial movement between them to disengage the upper member for rotation, one of said plug members carrying a selective contact adjacent the other plug member and connected to one of the plug contact members, the other plug member carrying a plurality of separated and protected fuse elements connected at one end to the plug contact member to which the selective contact is not connected, and at their other ends having fuse contacts arranged about the central plug contact member so as to be engaged by the selective contact when the upper plug member is rotated, and a spring pressing the selective contact into engagement with the fuse contact in alinement therewith, whereby the circuit through the plug is maintained at the fuse contact until broken at the central contact member.



2. In a device of the character described, the combination of two plug members, one a base member having a shell plug contact and also having a selective contact at its upper surface connected with said shell contact, said base member also having a central opening, a central plug contact member axially and rotatably movable in said central opening, the other plug member being superimposed on the base member and secured to said central contact member to move axially and rotatably therewith and having a plurality of fuse elements each having contacts disposed around the central contact member in position to be engaged by the selective contact when the upper plug member is rotated, and each fuse element connected at its other end to the central plug contact member, the plug members having interlocking parts requiring axial movement between them to disengage the upper member for rotation, a spring engaging the base plug member and the central contact member for pressing the two plug members together, and a spring pressing the selective contact into engagement with the fuse contact in alinement therewith, whereby the circuit through the plug is maintained at the fuse contact until broken at the central contact member so as to prevent arcing at the fuse contacts when the upper member is rotated.

3. In a device of the character described, the combination of two plug members, one a base member having a shell plug contact and a central plug contact member each adapted to engage a contact of a plug socket, the other plug member being rotatable and axially displaceable relative to the base member, the central plug contact member extending freely upwardly through the base member to the other plug member to which it is secured, a spring for normally holding said plug members together with the lower end of the central plug contact member in position to engage one of the socket contacts but permitting said central contact member to be lifted out of engagement when the upper plug member is lifted, a plurality of fuse elements carried by one of said plug members and connected at one end to one of said plug contacts and at their other end being provided with individual contacts spaced about the central contact member, a selective contact carried by the other plug member and connected to the plug contact to which the fuses are not connected and adapted to engage *seriatim* said fuse contacts when the rotatable member is rotated relative to the base member, the contact engagement between the selective contact and the fuse contacts being yieldable so as to permit a continuation of the contact engagement at the fuse contacts until after the circuit is broken at the central contact.

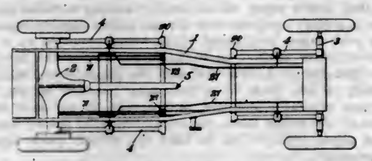
4. In a device of the character described, the combination of two plug members, one a base member having a shell plug contact and a central plug contact member, the other plug member being rotatable and axially displaceable relative to the base member, the central contact member having a contacting part at which a circuit through the plug is opened by the axial movement of the movable plug member, one of said plug members having a plurality of fuse elements each having one end arranged about the central contact member and adjacent the other plug member, and said other plug member having a selective contact adapted to engage the different adjacent fuse ends when the movable plug member is rotated, the said circuit including the central plug contact member, a fuse, the selective contact in engagement therewith, and the shell plug contact, said circuit having means for maintaining it at the selective contact when the movable plug member is moved axially until the circuit is broken at the contacting part of the central contact member.

5. In a device of the character described, the combination of two plug members, one a base member and the other a superimposed member, one being rotatable and axially displaceable relatively to the other, the base member having two plug contacts adapted to engage socket contacts, one of said plug members having a plurality of fuse elements protected therein one from the other, means connecting said fuse elements at one end to one of the plug contacts, said fuse elements having contacts at their other ends arranged to be successively engaged by a contact on the other plug member when one member is rotated relatively to the other, a selective contact on the plug member not carrying the fuses, adapted to successively engage the fuse contacts when relative rotation is produced, said contact engagement being yieldable to permit some axial displacement of the plug members without breaking the contact, said selective contact being electrically connected to the other plug contact not connected to the fuses, the circuit from the socket contacts including a fuse, being adapted to be first broken within one of the plug members before it is broken at the yieldable contact, whereby arcing at the yieldable contact is prevented.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,257. VEHICLE. JOSEPH B. FERGUSON, New York, N. Y. Filed Aug. 25, 1916. Serial No. 116,869. (Cl. 267—1.)



1. In a device of the class described, a laminated spring, a source of lubricant supply for the laminations thereof and means the operation of which is dependent upon the flexure of said spring for controlling said supply.

2. In a device of the class described, parts to be resiliently spaced, a laminated spring coöperating with and spacing said parts, and a lubricant circulating system, the laminations of said spring comprising the section of said system extending from one of said parts to another.

3. In a device of the class described, parts to be resiliently spaced, a laminated spring coöperating with and spacing said parts, a bearing on one of said parts, and a source of lubricant supply, the laminations of said spring being arranged to conduct lubricant to said bearing from said supply.

4. In a device of the class described, a spring, a bearing therefor having an opening for the passage of lubricant, means coöperating with said opening and dependent upon flexure of said spring to control the flow of lubricant through said opening.

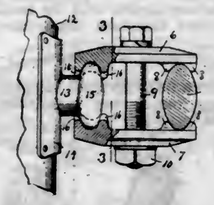
5. In a device of the class described, a spring having a bearing member, a bearing member coöperating with said first mentioned bearing member, one of said bearing members having an opening therein for the passage of lubricant and leading to the bearing face thereof at a point where the face of the coöperating bearing member is substantially unbroken, whereby the flow of lubricant is controlled by the movement of said spring.

[Claims 6 to 34 not printed in the Gazette.]

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1,227,258. LAMP-MOUNTING. CHARLES E. GODLEY, Detroit, Mich., assignor to Edmunds and Jones Corporation, Detroit, Mich., a Corporation of New York. Filed Nov. 27, 1916. Serial No. 133,570. (Cl. 240—57.)



1. In a lamp mounting, the combination of a pair of clamping members and a lamp having a projecting post and a knob on the end of the post of larger diameter than the post, said clamping members having seats to receive and permit rotation of the knob which is bounded by any surface of revolution other than a sphere, the seats extending around the knob to engage its sides and preventing the knob from turning on more than one axis, and a bolt to draw the clamping members against the knob.

[Claim 2 not printed in the Gazette.]

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1,227,259. PRODUCTION OF SELF-LIGHTING GAS-MANTLES. JOHN G. GOTTY, Jacksonville, Fla., assignor to Gotty Gas Lighting Company, a Corporation of Florida. Filed Aug. 29, 1916. Serial No. 117,480. (Cl. 67—99.)

1. A composition of matter for the purpose specified comprising platinum black, particles of metallic platinum, and a dissolvent comprising alcohol, glycerin, and dextrose.

2. A composition of matter for the purpose specified comprising a catalytic agent, and a dissolvent comprising alcohol, glycerin, and dextrose.

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1,227,260. GAS-MANTLE RING. JOHN G. GOTTY, Jacksonville, Fla., assignor to Gotty Gas Lighting Company, a Corporation of Florida. Filed Aug. 29, 1916. Serial No. 117,481. (Cl. 67—103.)



1. The combination with an externally grooved supporting annulus of a mantle having its edge overlapping the same, and a ring having a tongue and slot formed upon opposite ends thereof, and adapted to be placed around the same annulus with the said tongue engaging the said slot to adjustably clamp the above mentioned mantle to the said annulus, the said ring being adapted to bend laterally to conform to the contour of the outer surface of the said annulus.

2. The combination with a supporting annulus of a mantle having its edge overlapping the same, and a fas-

tening ring having a tongue and slot formed upon opposite ends thereof, and adapted to be placed around the said annulus with the said tongue engaging the said slot to adjustably clamp the above mentioned mantle to the said annulus.

3. The combination with an externally grooved supporting annulus of a mantle overlapping the same, a ring adapted to be placed around the said annulus, the said ring being adapted to bend laterally to conform to the contour of the outer surface of the said annulus, and bendable ears formed at intervals on the uppermost edge of said ring for engagement with the annulus at the top thereof to prevent downward displacement of the ring thereon.

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1,227,261. COVER-PREVENTING SHIELD. JOHN GRAUMANN, Granite, Okla. Filed Dec. 7, 1914. Serial No. 875,940. (Cl. 119—97.)



1. In a copulation-preventing device, a frame, an apron secured thereto, a flexible surcingle section connected to the apron adjacent its top, a flexible surcingle, flexible sections connected to said surcingle and surcingle section and to said apron, a flexible section connected to said surcingle and to said frame, and flexible means extending laterally on opposite sides of the last mentioned flexible section being fastened thereto and to the frame.

2. In a copulation-preventing device for a fowl, a shield disposed relatively close to the legs intermediate the legs and the tail, harness means for the shield including a suspending device to engage the body intermediate the legs and tail and a suspending device to engage the body at the breast, a connector section connected to the second mentioned suspending device and extending from the shield, and a flexible section connected to the connector section and widening from the front toward the rear.

3. In a copulation-preventing device for a fowl, a surcingle to surround the tapering neck whereby the surcingle is anchored against undue movement toward the tail, a suspending member straddling the body and engaging the feathers intermediate the legs and the tail being prevented by the feathers from moving unduly toward the surcingle, an apron intermediate the legs and tail suspended by said member, and means connected to the surcingle to maintain said apron relatively close to the legs.

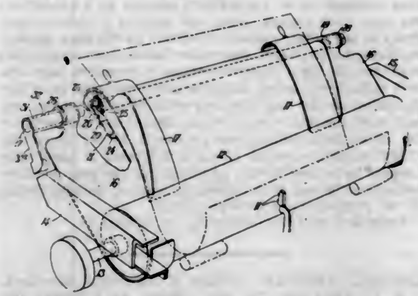
4. In a copulation-preventing device for a fowl, a surcingle to surround the tapering neck whereby the surcingle is anchored against undue movement toward the tail, an apron intermediate the legs and tail, a suspending member connected to the apron at its upper ends straddling the body and together with the upper ends of the apron engaging the feathers intermediate the legs and the tail and both the member and upper edge of the apron being prevented by the feathers from moving unduly toward the surcingle, said suspending means mounting the apron a distance in the rear of the legs against movement toward the legs at the upper end of the apron but for movement toward the legs at the lower end of the apron, and means engaging the surcingle and apron to maintain the lower end of the apron in rear of and relatively close to the legs.

5. In a copulation-preventing device for a fowl, a surcingle to surround the tapering neck whereby the surcingle is anchored against undue movement toward the tail, an apron intermediate the legs and tail, a suspending member connected to the apron at its upper ends straddling the body and together with the upper ends of the apron engaging the feathers intermediate the legs and the tail and both the member and upper edge of the apron being prevented by the feathers from moving unduly toward the surcingle, said suspending means mounting the apron a distance in the rear of the legs against movement toward the legs at the lower end of the apron, and means engaging the surcingle and apron to maintain the lower end of the apron in rear of and relatively close to the legs, said means consisting of a connecting device disposed intermediate the legs, and said connecting device being adjustable to control the position of the lower end of the apron relatively to the legs.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,262. TYPE-WRITING MACHINE. WILLIAM L. GUMPRECHT, Hartford, Conn., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Mar. 20, 1916. Serial No. 85,254. (Cl. 197—142.)



1. In a typewriting machine, the combination with a platen and a paper table therefor having a rolled rim at its rearmost portion, of a lateral guide slidably mounted on said paper table, said guide being mounted on a clip which bears against an invisible portion of the machine, so that the guide will not mar the paper table, said clip being in the form of a normally inactive spring, and means pivotally mounted in bearings in the said rolled rim of the paper table, for expanding said spring against the paper table, so as to hold the lateral guide against movement.

2. In a typewriting machine, the combination with a platen and a paper table therefor having a rolled rim at its rearmost portion, of a lateral guide slidably mounted on said paper table, said guide being mounted on a clip which bears against an invisible portion of the machine, so that the guide will not mar the paper table, said clip being in the form of a normally inactive spring, and means pivotally mounted in bearings in the said rolled rim of the paper table, for expanding said spring against the paper table, so as to hold the lateral guide against movement, said means being mounted so as to permit the clip to be freed from the paper table.

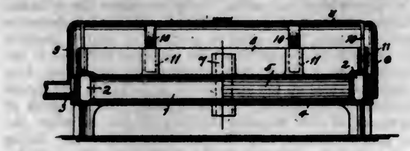
3. In a typewriting machine, the combination with a table or support, of a plurality of guides independently adjustable along the support, and a clamping rod extending along said support and having releasable means for clamping and releasing said guides simultaneously.

[Claims 4 to 16 not printed in the Gazette.]

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1,227,263. HEATER AND RADIATOR. ROBERT W. HARDIE, Hartsdale, N. Y. Filed Oct. 6, 1916. Serial No. 124,191. (Cl. 237—78.)

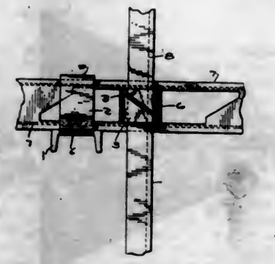
In a heater and radiator, an open-topped receptacle, the interior surface of its bottom being formed with transverse chambers at the ends of the receptacle and with a plurality of longitudinal conduits communicating with



said chambers, one of said chambers being provided with an inlet aperture.

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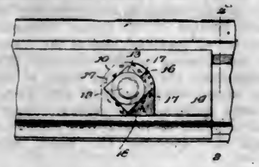
1,227,264. FURRING AND PARTITION CHANNEL. WILBERT D. HENDERSON, San Francisco, Cal. Filed Apr. 21, 1915. Serial No. 22,971. (Cl. 189—36.)



A furring and partition channel having opposed rectangular tongues with complementary tapered ends upset from the web thereof; a second channel arranged between the tongues and transversely to the first mentioned channel, said tongues engaging the sides of the second channel and thereby rigidly retaining the same against the first mentioned channel, the rectangular portions of the tongues being arranged on two sides of the embraced channel and the complementary tapered ends projecting beyond each other in the same plane and on the farther side of the second channel.

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1,227,265. NUT-LOCKING WASHER. BENJAMIN F. HILDEBRAND, Agnew, Cal. Filed May 17, 1916. Serial No. 98,129. (Cl. 151—35.)

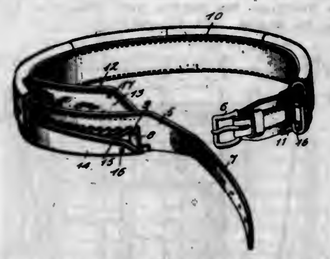


1. A nut locking washer comprising a flat body portion having a bolt receiving opening and provided with a cleft extending from the outer edge of the body portion to said bolt receiving opening, the walls of the cleft being undercut and the body portion at each side of said cleft being bent in opposite directions, and a plurality of nut engaging pins extending laterally from one side of the body portion around the bolt receiving opening and inclined with respect to said side, all of the pins being inclined in the same direction and provided with pointed terminals.

2. A nut locking washer comprising a flat body portion provided with a bolt receiving opening and having one end thereof flat and its other end curved, said body portion being provided with a diagonal cleft extending from the bolt receiving opening to the outer edge of the body portion at the curved end thereof, the walls of the cleft being undercut and the body portion at each side of the cleft being bent in opposite directions, and a plurality of nut engaging pins arranged in concentric rows around the bolt receiving opening on one side of the body portion and inclined with respect to said side, the pins of one row being disposed in staggered relation with respect to the pins of an adjacent row and all of said pins being provided with conical terminals inclined in the same direction.

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1,227,266. CARTRIDGE-BELT. FRANK G. HIMELSPACH, Trinidad, Colo. Filed June 26, 1916. Serial No. 105,954. (Cl. 224—23.)



1. A cartridge belt consisting of a strap, means for adjusting it about the body of a person, a series of cartridge receiving loops extending around the strap on the outside thereof and along its lower portion, said loops being lined with protective material and being formed of strips of material laid face to face and then looped and stitched to the strap, a lining for the strap consisting of a strip of material secured at its lower edge to the strap on the outside of the latter and below the loops, and then turned over the lower edge of the strap and brought up against the inner face thereof, a plurality of flaps arranged end to end around the strap being secured at their upper edges to the inner side of the said strap near its upper edge, and being then turned over the upper edge of the strap and extended downwardly, the said strap lining extending over the upper edges of the flaps, a continuous folder strip secured at its lower edge against the strap and being then doubled and extended upwardly against the said loops, said folder strip and flaps being lined, means for detachably connecting the flaps to the folder strip, and a strip of heavy leather secured to the strap beneath the loops and forming a closure for the lower ends of the latter.

2. A cartridge belt consisting of a strap, means for adjusting it about the body of a person, a series of cartridge receiving loops extending around the outside of the strap along its lower portion, a strip of heavy material secured to the strap below the loops and forming a closure for the lower ends of the latter, a folder strip secured to the said strap below the loops and extending upwardly outside of the loops for protecting the latter, a plurality of flaps secured to the strap adjacent its upper edge and being arranged end to end and depending downwardly to form a cover and protector for the upper portions of the loops, and means detachably and individually connecting the flaps with the folder strip.

3. A cartridge belt consisting of a flexible strap, a series of cartridge receiving loops secured thereagainst, a strip of material secured against the strap forming a closure for the lower ends of the loops, a continuous folder strip connected with the strap below the loops and folded up against the latter, a plurality of cover flaps connected with the strap, and means detachably and individually connecting the cover flaps with the folder strip.

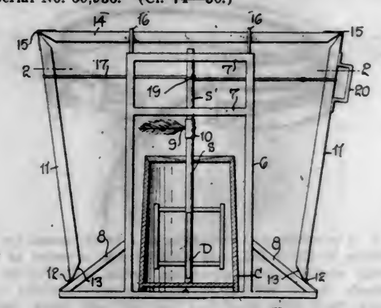
4. A cartridge belt consisting of a strap, a series of cartridge receiving loops arranged around the same, a strip of material secured to the strap forming a closure for the lower ends of the loops, means connected with the strap for overlying the loops on the outside for protecting them, a plurality of cover flaps connected with the strap and extending over the loops, and means for de-

tachably connecting the cover flaps with the first said means.

5. A cartridge belt consisting of a strap, a series of cartridge receiving loops extending around the strap, means secured to the strap forming a closure for the lower ends of the loops, a folder strip arranged around the outside of the loops for protecting them, and means connected with the strap and adapted to be detachably connected with the folder strip for housing the upper portions of the loops.

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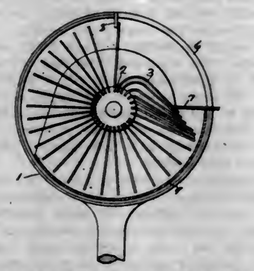
1,227,267. OPERATING MECHANISM FOR CHURNS. JOHN HOFMANN, Bee Branch, Ark. Filed Nov. 11, 1915. Serial No. 60,936. (Cl. 74—50.)



The combination with a frame including a base, spaced vertical uprights and diagonal braces between the uprights and the base, of an operating shaft rotatably mounted in said frame, vertical bars hingedly mounted upon the braces for oscillating movement and having beveled ends opposed to the braces, a hand grasp carried by the outer face of one of the vertical bars below the upper end thereof, a horizontal bar hingedly connected to the upper ends of the vertical oscillatory bars, spaced guide loops fixed in the frame through which said horizontal bar is adapted to reciprocate, a flexible operating member connected at its ends to said oscillatory bars and movable through openings in the uprights, said flexible member having a single turn therein engaged upon the operating shaft, and means for coupling said operating shaft to a dasher shaft.

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1,227,268. TOY. WILLIAM H. HULTGREN, Roselle Park, N. J. Filed June 29, 1916. Serial No. 106,571. (Cl. 88—19.)



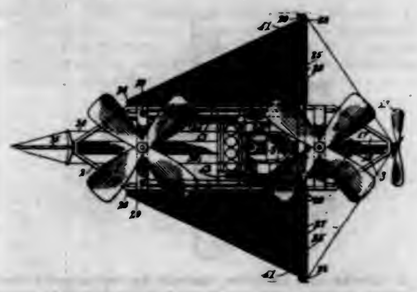
1. In apparatus of the class described, the combination of a hollow circular casing, a rotatable cylinder within the casing, means to rotate the cylinder, members secured to and radially disposed about said cylinder and rotating therewith, an arc shaped hollow member within said casing open at one end and partially closed at the other, the partially closed end projecting into the path of the members secured to the cylinder to momentarily retard each member as it is being rotated.

4. In apparatus of the class described, the combination of a hollow casing having an opening in its periphery, a cylinder within the casing, means to rotate the cylinder, members secured to and rotatable with said cylinder, a member within the casing a portion of which projects into the path of movement of the members attached to the cylinder, the member being adapted to be moved into position to close up the aperture in said casing, and means attached to the casing and projecting into the path of movement of the members secured to the cylinder, the last named means and the member within the casing causing the speed of the members attached to the cylinder when being rotated to be varied.

[Claims 2, 3, 5, and 6 not printed in the Gazette.]

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1,227,269. FLYING-MACHINE. CHARLES M. HUNSICKER, Dayton, Ohio. Filed July 12, 1916. Serial No. 108,774. (Cl. 244—15.)



1. In a flying machine, the combination of front and rear lifting and sustaining propellers mounted on vertical shafts, a forward driving propeller mounted horizontally, a motor, a transmission shaft geared to the shaft of the rear lifting and sustaining propeller, a transmission shaft geared to the forward driving propeller, a chain drive connecting the motor shaft with the transmission shaft of the rear lifting and sustaining propeller, a chain drive connecting the shaft of the rear lifting and sustaining propeller with the shaft of the front lifting and sustaining propeller, and a chain drive connecting the motor shaft with the shaft of the forward driving propeller, substantially as described.

2. In a flying machine, a main frame, forward and rearward lifting and sustaining porpellers, a forward driving propeller, wing spars extending laterally from the forward portion of the frame, triangular sustaining wings mounted at opposite sides of the frame and extending from the forward to the rearward lifting and sustaining propellers, the forward edges of said traingular sustaining wings being provided with pockets which receive the wing spars and are thereby supported in a position to be extended or reefed, and cables connected with said wings for opearting the same, substantially as specified.

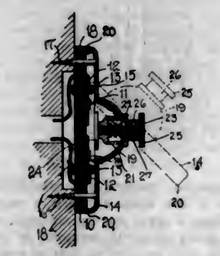
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1,227,270. CIRCUIT-CLOSING PUSH-BUTTON. ROBERT J. JACKSON, Philadelphia, Pa., assignor of one-half to Wrisdon H. Jenkins, Philadelphia, Pa. Filed Apr. 17, 1916. Serial No. 91,738. (200—27.)

1. A switch of the character described comprising an insulating base, contact members mounted upon the base, binding screws electrically connected thereto, a covering member disposed upon the base and having an upwardly extending central portion extending over the contact members, a cylindrical housing having a contracted neck and removably inserted in and housed by the upwardly extending portion of the covering member, a plunger extending through the cylindrical housing and having a conductive disk at its lower end adapted when depressed to bridge the gap between the contact members, said plunger extending upward through the cylindrical housing and



having a head at its upper end, a cylindrical housing member attached to the head and fitting within the first-named cylindrical housing member, and a coil spring disposed within said housing members surrounding the plunger and bearing upward upon the head.



2. A switch of the character described comprising an insulating base, a covering member formed in two sections hinged to each other, both of said sections being detachably connected to the base, contact member disposed upon the face of the base in spaced relation, there being openings through the base for the insertion of wires into engagement with the contact members, the middle portion of one of said sections of the covering member being outwardly protuberant and having a central opening, a housing member detachably disposed in said opening and extending toward said base, the housing member having a contracted neck at its inner end and having its outer end outwardly flanged to bear against the edge wall of said opening, a plunger extending through the housing member and carrying a contact at its inner end adapted to engage the contacts on the base, a button carried upon the outer end of the plunger, a sleeve attached to the button and having telescopic engagement with the housing member, and a spring disposed within the housing member surrounding the plunger and bearing against the button.

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1,227,271. FISH-JOINT. ALFRED JAMES JOHNSEN, Illovo River, and HENRY E. JOHNSEN, Durban, Natal, South Africa. Filed June 30, 1916. Serial No. 106,951. (Cl. 239—11.)



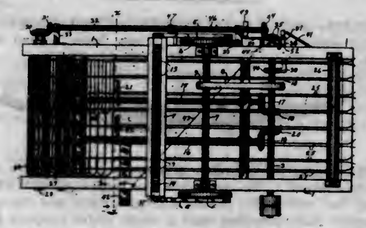
1. In a fish joint the combination with slotted rails or girders to be joined, of a fishplate with a plurality of projections thereon adapted to pass through the slots in the webs of said rails, and to rest on the bases of the rails on the farther side thereof, and of a taper key member adapted to be inserted between the tops of said projections and the undersides of the top flanges of said rails, and to act as a wedge between the same, pressing the bottoms of said projections upon the rail bases, and drawing said fishplate tightly against the rail faces at the other side of the web.

2. A fish joint device comprising a fishplate with a plurality of projections thereon each adapted to pass through a slot in the web of one of the elements to be joined, said fishplate having head and base portions adapted to bear internally against the head and base portions of the elements to be joined, and said projections having base portions adapted to rest upon the bases of the elements to be joined beyond the webs thereof, and a taper key of wedge-shaped section adapted to interlock between the heads of said projections and the heads of the elements to be joined.

3. In a fish joint for rails, the combination with the two rail ends to be joined, each having a slot in its web portion, of a fishplate having two projections adapted to pass through said slots, said fishplate having head and base portions adapted to bear against the heads and bases of said rail ends internally, and an extension lying above the rail heads at the joint, and said projections having foot portions adapted to rest on the rail bases beyond the webs, while their top surfaces form together with the under sides of the rail heads a wedge-shaped groove, and of a tapered and wedge-shaped key member adapted to fit between the tops of said projections and the rail heads, and to draw the bearing surfaces between the fishplates and their projections into close contact simultaneously with the rail heads and rail bases.

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1,227,272. WIRE-FENCE MACHINE. TOM KAVALAS and EVANS KAVALAS, Rock Falls, Ill. Filed Dec. 6, 1916. Serial No. 135,315. (Cl. 140—29.)



1. A device of the class described, comprising a frame, a cross-beam slidably mounted thereon; a plurality of spindles rotatably supported by said cross-beam and each provided with perforations for the passage of a pair of wires; gear-pinions fixed to said spindles; a gear-rack slidably mounted in said cross-beam, in mesh with said spindles; means for imparting to said cross-beam a reciprocating movement; and means for suitably operating said gear-rack.

3. A device of the class described, comprising a suitably mounted frame; a main drive-shaft mounted therein; a drum rotatably mounted in one end of said frame, and adapted to draw a plurality of wires therethrough; gearing operatively connecting said drum with said drive-shaft; a cross-beam slidably mounted on said frame and provided with a longitudinal channel; a cross-shaft journaled on said frame and actuated by said drive-shaft; crank-wheels on the end of said cross-shaft operatively connected with said cross-beam, to impart a reciprocating movement thereto; wire-twisting mechanism carried by said cross-beam; and means for suitably actuating said mechanism.

7. A device of the class described, comprising a suitably mounted frame; a main drive-shaft mounted therein; wire conveying devices operatively connected with said drive shaft; a cross-beam slidable on said frame and provided with a longitudinal channel; a plurality of spindles mounted in said channel; gear-pinions fixed on said spindles; a rack-bar in engagement with said pinions and provided with a downwardly projecting arm: a pair of longitudinal shafts operatively connected with said drive-shaft so as to turn in opposite directions; means for suitably reciprocating said cross-beam; and a pair of cams on said longitudinal shafts adapted to alternately engage the arm of said rack-bar when said cross-beam is at the end of its outer movement.

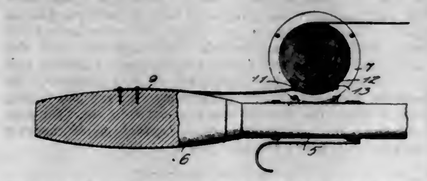
[Claims 2 and 4 to 6 not printed in the Gazette.]

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1,227,273. REEL-BRAKE FOR FISHING-RODS. ROSWELL BAYARD KING, Pensacola, Fla. Filed Mar. 10, 1916. Serial No. 83,324. (Cl. 242—84.5.)

1. The combination with a fishing rod and a reel mounted thereon, of a braking device including a resilient shank having at one end a reel seat positioned between the reel and the rod and affording a concaved portion frictionally bearing against the line on the reel, and means

affixing the opposite end of the shank to the rod, said braking device being so positioned on the rod that the



braking effect may be controlled by the hand which grasps the rod.

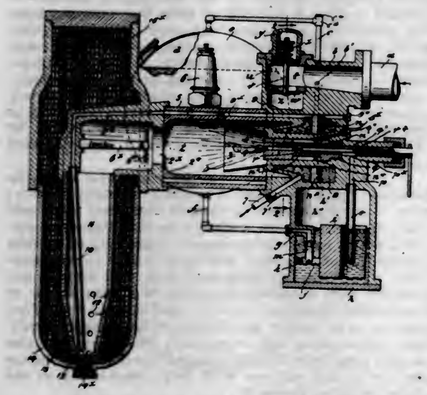
[Claim 2 not printed in the Gazette.]

1,227,274. SKIRT-BAND FASTENING. NICHOLAS KLAUS and EDWARD W. BOOKHART, Breda, Iowa. Filed Sept. 8, 1916. Serial No. 119,090. (Cl. 24—206.)



The improved skirt-band fastener comprising two rigid plates adapted to be secured to the respective ends of the band, the outer plate having a terminal slot and the other or outer plate provided with a catch which projects from its rearward end, and is bent inward to adapt it to engage in the said slot, and a plate spring rigidly secured to the first-named plate and underlying the slot, and its free end projecting beyond the latter and bearing against the catch, as shown and described.

1,227,275. APPARATUS FOR THE PRODUCTION OF WORKING FLUIDS. OTTO KRAUS, New York, N. Y., assignor to Kraus Engine Company, New York, N. Y., a Corporation of New York. Filed Nov. 17, 1915. Serial No. 61,933. (Cl. 60—31.)

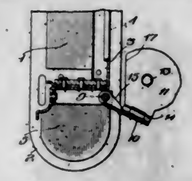


1. An apparatus of the character described including a water-jacketed combustion chamber; and a water-jacketed fuel-atomizing device in communication therewith; the water-jacket about said device being separate from but in communication with the water-jacket around said combustion chamber and the water flowing from the first-named water-jacket to the last-named water-jacket.

4. An apparatus of the character described including a horizontally-disposed combustion chamber; a downwardly-extending steam-generator; and chain-links in the latter.

[Claims 2, 3, and 5 not printed in the Gazette.]

1,227,276. SPOOL-HOLDER FOR FILM-CAMERAS. ROBERT KROMBEL, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 3, 1916. Serial No. 69,710. (Cl. 242—71.)

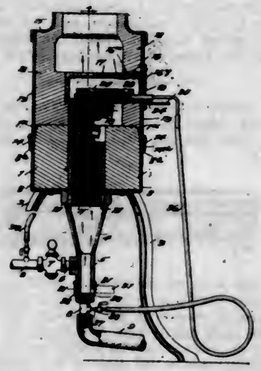


2. In a photographic camera, the combination with a film chamber, of a film spool supporting member in the chamber comprising a plate having a spool center thereon, the member being pivotally mounted to swing out of the chamber on an axis parallel to that of a spool turning on the said center, and a displaceable back for the camera operating to close the film chamber and to maintain the spool supporting member in operative position therein by coöperating with the edges of the plate.

3. In a photographic camera comprising an exposure opening and a film spool chamber arranged adjacent thereto, the combination with a film guide arranged between the exposure opening and the film spool chamber, of a film spool support pivoted on the film guide to swing into and out of the chamber.

[Claim 1 not printed in the Gazette.]

1,227,277. BURNER FOR DENTAL FURNACES. CHARLES H. LAND, Detroit, Mich. Filed Apr. 22, 1914. Serial No. 833,672. (Cl. 158—99.)



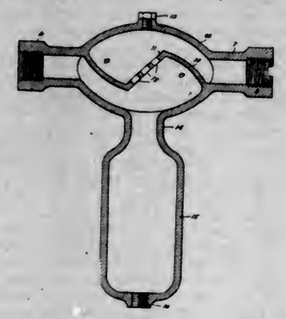
1. In a furnace, a mixing chamber, a combustion chamber, and means for conducting gaseous fuel from said mixing chamber into said combustion chamber and for preventing the ignition of the charge in the mixing chamber by the heat from the combustion chamber, said means comprising a block of highly refractory material having a plurality of passages extending therethrough, the length of the block being such that the temperature of the end of the block adjacent the mixing chamber is never above the kindling point of the gases within the mixing chamber.

2. In a furnace, a combustion chamber, a mixing chamber, a highly refractory block disposed between said mixing chamber and said combustion chamber, said block being provided with a plurality of passages for establishing communication between the mixing chamber and the combustion chamber, each of said passages being relatively small in diameter, and said block being comparatively long so as to prevent conduction of heat from said combustion chamber to said mixing chamber, means for introducing gas into said mixing chamber, an air pipe for introducing air into said mixing chamber, said air pipe being provided with a lateral opening communicating with the atmosphere, and means for covering said lateral opening at will.

3. In a furnace, a mixing chamber, a combustion chamber, and means conducting gaseous fuel from said mixing chamber into said combustion chamber and for preventing the ignition of the charge in the mixing chamber by heat from the combustion chamber, said means comprising a block of carborundum having a plurality of passages extending therethrough of relatively small diameter, the length of the block being such that the temperature of the end of the block adjacent to the mixing chamber is never above the kindling point of the gases within the mixing chamber.



1,227,278. STEAM-SEPARATOR. JOHN T. LINDSTROM, Allentown, Pa. Filed Apr. 2, 1917. Serial No. 159,214. (Cl. 183—112.)



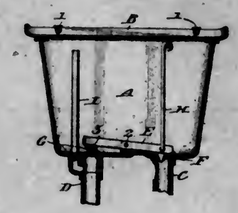
1. A steam separator comprising a hollow casing having an inlet at one end and an outlet at the other end, and a diaphragm extending completely across said casing between the inlet and the outlet, said diaphragm being inclined downwardly from a connection at one end with the casing above the inlet, to a connection at its other end with the casing below the outlet, the middle part of said diaphragm being inclined upwardly toward the outlet end and having ports for the passage of steam from the lower part of the casing to the upper.

2. A steam separator comprising a hollow casing having a diaphragm extending across within the same from a connection with the casing above the inlet to a connection therewith below the outlet, the end portions of said diaphragm being inclined in one direction, and the middle portion thereof being inclined at an angle to said direction and having ports, said casing having an outlet for condensation at the bottom thereof.

3. A steam separator comprising a hollow body having an inlet at one side and an outlet at the other, and a diaphragm extending across said body between the inlet and the outlet, said diaphragm comprising reversely curved segmental portions at the opposite ends and an inclined perforated portion therebetween, said body having an outlet for condensation at the bottom thereof.

1,227,279. SANITARY DRINKING-BOWL FOR STOCK. THOMAS LOUDEN, Fairfield, Iowa. Filed Apr. 9, 1914. Serial No. 830,832. (Cl. 119—75.)

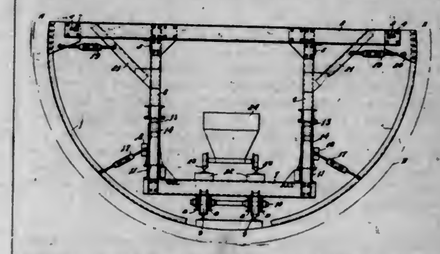
3. A sanitary drinking bowl having a hinged lip extended beyond one edge of the bowl, inlet and outlet conduit pipes attached to the bottom of the bowl valves to open and close said conduit pipes, and a connection between the lid and the valves, whereby the opening of the lid will open the valve of the inlet pipe and close the valve of the outlet pipe, and the closing of the lid will close



the valve of the inlet pipe and open the valve of the outlet pipe.

[Claims 1, 2, and 4 to 6 not printed in the Gazette.]

1,227,280. MOLD-FORM. HOWARD B. LOXTERMAN, Pittsburgh, Pa., assignor to Blaw Steel Construction Company, Hoboken, Pa., a Corporation of New Jersey. Filed Feb. 5, 1916. Serial No. 76,344. (Cl. 25—131.6.)



1. In combination, a mold form, a truck, vertical standards carried by the truck at each side thereof, a frame for supporting the mold form having downwardly extending vertical standards adapted to slidably engage the vertical standards on the truck, and means for holding the frame in various adjusted positions with respect to the truck.

2. In combination, a mold form, a truck, vertical standards carried by the truck at each side thereof, a frame for supporting the mold form having downwardly extending vertical standards adapted to telescopically engage the vertical standards on the truck, and means whereby the frame may be moved vertically with respect to the truck.

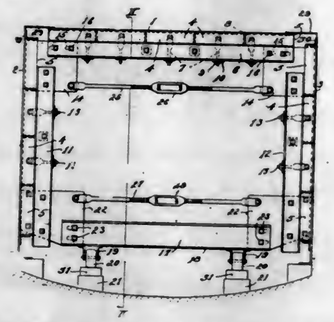
3. In combination, a truck, a mold form, spaced hollow vertical standards carried by the truck at each side thereof, a frame for supporting the mold form having downwardly extending vertical standards adapted to telescope within the vertical standards carried by the truck, and means whereby the frame may be vertically adjusted with respect to the truck.

4. In combination, a truck, a mold form, a rigid frame for supporting the mold form, and a plurality of telescoping columns having their ends rigidly connected to the truck and the frame for adjustably supporting the frame above the truck, and means whereby the frame may be adjusted vertically with respect to the truck.

1,227,281. TUNNEL-FORM. HOWARD B. LOXTERMAN, Pittsburgh, Pa., assignor to Blaw Steel Construction Company, Hoboken, Pa., a Corporation of New Jersey. Filed Feb. 5, 1916. Serial No. 76,346. (Cl. 25—131.6.)

1. A mold form comprising, a ceiling form, a pair of side forms, a frame member for supporting the ceiling form, a pair of vertical frame members for supporting the side forms adjustably attached to the ceiling form sup-

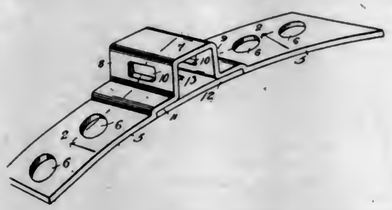
port, a truck adjustably attached to the lower ends of the side mold supports and adapted to support them, means attached to the upper and lower ends of the side form supports for moving the side forms toward each other, and a plate carried by the side forms adapted to slidably engage the ceiling form and to constitute a part of the ceiling form.



2. A mold form comprising, a ceiling form built up of a plurality of abutting panel forms, a pair of side forms built up of a plurality of panel forms, a frame member for supporting the ceiling panel forms, a pair of vertical frame members for supporting the panels of the side forms, means for securing the panels to the frame member, means for adjustably securing the frame support for the ceiling forms to the vertical frame members, and a corner plate carried by the side form adapted to slidably engage the ceiling form and to constitute a part of the ceiling form.

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1,227,282. COMBINED REINFORCING-PLATE AND KEY-LUG FOR BRAKE-SHOES. WILLIAM H. McDONOUGH, New York, N. Y., assignor, by mesne assignments, to The American Brake Shoe and Foundry Company, Wilmington, Del., a Corporation of Delaware. Filed Apr. 25, 1916. Serial No. 93,362. (Cl. 188—82.)



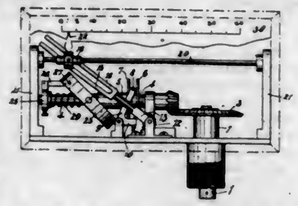
1. A back plate for brake shoes bent up transversely to form an integral key lug, said plate having outwardly pressed portions adjacent the sides of said lug to form seats on its inner surface, and a tie plate received in said seats and spanning the throat of said lug.

[Claims 2 and 3 not printed in the Gazette.]

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1,227,283. APPARATUS FOR INDICATING SPEED. DAVID MCNEILL, Watford, England, assignor of one-fourth to Harry George Shoring, Cricklewood, England; one-fourth to George Leonard Waterfield and one-fourth to Thomas Waterfield, Highgate, England. Filed Jan. 19, 1916. Serial No. 73,038. (Cl. 264—20.)

1. In a speed indicating apparatus of the class described, a dial plate having a rectilinear scale, a slide mounted for rectilinear movement in a path parallel to the dial scale, an indicating hand carried by the slide and adapted to traverse the scale, a lever having sliding connection with the slide, a spindle, and speed-controlled means for transmitting motion from the spindle to the said lever.



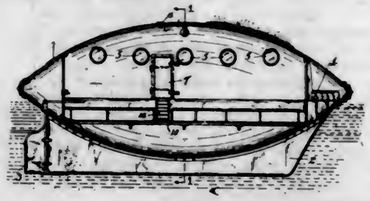
2. In a speed indicating apparatus of the class described, a rotary spindle, a sleeve slidably mounted on the said spindle, a centrifugal governing body supported by the sleeve and having its medial portion connected directly thereto, means for connecting the governing body at its periphery with the spindle for rotation therewith, an indicator, and means actuated by axial displacement of the sleeve on the spindle for transmitting motion to the indicator.

3. In a speed indicating apparatus of the class described, a rotary spindle, a sleeve slidably mounted on the said spindle, a centrifugal governing body supported by the sleeve and having its medial portion connected directly thereto, means for connecting the governing body at its periphery with the spindle for rotation therewith, an indicator, and speed-multiplying means actuated by axial displacement of the sleeve on the spindle for transmitting motion to the indicator.

4. In a speed indicating apparatus of the class described, a rotary spindle, a sleeve slidably mounted on the said spindle, a centrifugal governing body supported by the sleeve and having its medial portion connected directly thereto, a link connecting the governing body at its periphery with the spindle for rotation therewith, an indicator, and means actuated by axial displacement of the sleeve on the spindle for transmitting motion to the indicator.

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1,227,284. LIFE-SAVING BOAT. THOMAS MCWATTERS, Chestnut Ridge, Pa. Filed July 27, 1914. Serial No. 853,343. (Cl. 9—4.)



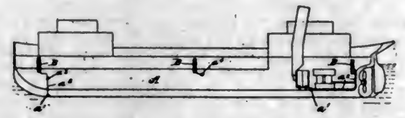
The herein described life saving vessel, including an elongated cigar-shaped shell which is heavier at the bottom thereof than at the top, a keel extending longitudinally of the shell and projecting downwardly therefrom, a floor arranged within the shell at an intermediate point between the horizontal axis of the shell and the bottom thereof, benches extending around the periphery of the floor, a horizontal series of windows extending around the shell at an intermediate point between the horizontal axis of the shell and the top thereof, and a door in one side of the shell.

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1,227,285. DRAFT-INDICATOR. JOHN MAHER, Cleveland, Ohio, assignor of one-fifth to Eugene Quigley and one-fifth to John J. McKee, Cleveland, Ohio. Filed Jan. 31, 1914. Serial No. 815,689. (Cl. 177—351.)

1. A draft indicator comprising the combination with a vessel, of a scale having graduated indicia corresponding with the depth of the hull, a member supported adjacent said scale and provided with openings spaced as said indicia, and a water gage communicating through said hull, said gage carrying projections adapted to coöperate with different pairs of such openings whereby an adjustment in the direction of alinement of said graduations may be effected.





2. A draft indicator comprising the combination with a vessel, of an upright member having graduations coinciding with the draft of the vessel, a water gage extending alongside of said member and adjustable in the direction of alinement of said graduations, means for fixing said gage in various positions, a sea-cock for controlling communication through the hull of the vessel, said gage adapted to communicate with the water through said cock, and a valve positioned intermediately of said sea-cock and gage and adapted to throttle such communication.

3. A draft indicator comprising the combination of the hull of a vessel, a member having graduations coinciding with the draft of such hull, a bar extending alongside said member and having openings spaced as said graduations, a water gage in open communication through said hull and having laterally projecting portions at opposite ends, and means for securing said portions in various positions in different pairs of said openings whereby the middle of said gage assumes a predetermined position.

4. A draft indicator comprising the combination of the hull of a vessel, a plate having graduations coinciding with the true draft of such hull, a bar extending alongside said member and provided with openings definitely spaced with respect to said graduations, a water gage in open communication through said hull and having laterally projecting brackets, such brackets being spaced as said openings, and thumb-screws for securing said brackets at different pairs of said openings.

5. A draft indicator comprising the combination with a hull, of an electric circuit including in series, a source of energy, a signal, a manually operable switch, a water container in communication through such hull and provided with a column of superposed terminals, and a float adapted to contact laterally with all of said terminals, and weighting means carried by said float and bodily movable with it past said terminals whereby the float is tilted against some particular terminal.

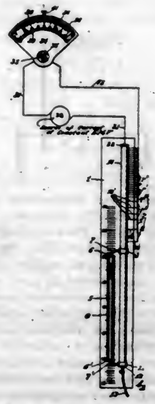
[Claims 6 to 12 not printed in the Gazette.]

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1,227,286. DRAFT-INDICATOR. JOHN MAHER, Cleveland, Ohio. Filed July 6, 1914. Serial No. 849,362. (Cl. 177—351.)

1. A draft indicator comprising the combination with a vessel, of an electric circuit including a source of energy, a wire, a scale in one part of said circuit and having divisions corresponding with graduated draft indicia of the vessel respectively, a second scale superposed in a row in another part of said circuit and having terminals corresponding with said divisions respectively and serially connected in said circuit, a member adapted to move over one of said scales, a switch member adapted to play over said terminals, and automatically operating means controlled by the draft of the vessel and adapted simultaneously to move said switch along said row and wire whereby to actuate said member together with it over corresponding divisions and terminals for the useful purpose specified.

2. A draft indicator comprising the combination with a vessel, of an electric circuit including a source of energy, an indicating device provided with graduations corresponding with the draft of the vessel and a movable pointer, a water container having open communication through the vessel and provided with a plurality of terminals corresponding with certain of said graduations respectively, said terminals having varying resistance elements connected in series, and an automatically operating switch controlled by the draft of the vessel and adapted to engage said terminals whereby the extent of movement of said pointer is controlled in accordance with the resistance factor.



3. A draft indicator comprising the combination with a vessel, of an electric circuit including in series; a source of energy, a signal, a tube in communication through such vessel and provided with a terminal, a float in said tube, a hollow member carried by said float and provided with a spring finger adapted to engage said terminal, a wire loosely extending into said hollow member, and a catch upon the latter adapted to frictionally engage said wire.

4. A draft indicator comprising the combination with a vessel, of an electric circuit including in series; an ammeter, a source of energy, a signal, a water container adapted to have open communication through the vessel, and provided with a pair of terminals, said terminals being connected by a resistance element likewise serially connected, and means including a float in said container for automatically effecting contact with one or the other of said terminals whereby to vary the resistance and automatically control the reading of said ammeter.

5. A draft indicator comprising the combination with a vessel, of an electric circuit including in series; a wire connected with one pole thereof, a source of energy, an ammeter calibrated to read in inches, a water container inclosing the end of said wire having communication through the vessel, said container being provided with terminals corresponding with inch draft graduations of the vessel, equal resistance elements connecting said terminals in series, a float in said container and a duplex device carried by said float and adapted frictionally to engage said terminals and wire whereby to actuate said ammeter.

[Claims 6 to 9 not printed in the Gazette.]

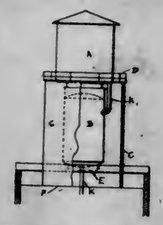
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1,227,287. SPRINKLER TANK EQUIPMENT. ROYAL J. MANSFIELD, New York, N. Y. Filed Aug. 27, 1915. Serial No. 47,643. (Cl. 137—21.)

1. A tank equipment for two-source sprinkler systems comprising in combination, a pressure tank adapted to contain liquid under more than atmospheric pressure, a frost-resisting inclosure surrounding the pressure tank, a gravity tank located above said pressure tank and forming part of said inclosure, and conduits connecting said tanks with the pipes of the sprinkler system.

2. A tank equipment for two-source sprinkler systems comprising in combination, a pressure tank adapted to contain liquid under more than atmospheric pressure, a

frost-resisting inclosure surrounding the pressure tank and spaced apart therefrom, a gravity tank located above said pressure tank, said gravity tank forming part of said inclosure, and conduits within said inclosure, said conduits connecting the pressure tank and the gravity tank with the pipes of the sprinkler system.



3. A tank equipment for two-source sprinkler systems comprising in combination, a pressure tank adapted to contain liquid under more than atmospheric pressure, a frost-resisting inclosure surrounding the pressure tank, a gravity tank located above and supported by said pressure tank, said gravity tank forming part of said inclosure, and conduits connecting the pressure tank and the gravity tank with the pipes of the sprinkler system.

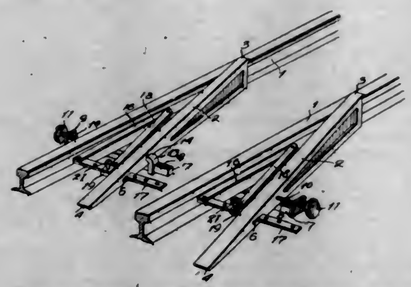
4. A tank equipment for two-source sprinkler systems comprising in combination, a pressure tank adapted to contain liquid under more than atmospheric pressure, a gravity tank located above and in proximity to said pressure tank, the pressure tank supporting said gravity tank, an inclosure around said pressure tank, and piping within the inclosure connecting said tanks with the sprinkler system.

5. A tank equipment for two-source sprinkler systems comprising in combination, a vertically disposed pressure tank adapted to contain liquid under more than atmospheric pressure, a gravity tank located above said pressure tank, the weight of said gravity tank supported by the shell of said pressure tank, whereby the compressive stresses produced in the shell of the pressure tank by the weight of the gravity tank and its contents are offset in part by tensile stresses produced in the shell of the pressure tank by the pressure within it, and conduits adapted to connect either the pressure tank or the gravity tank with the pipes of the sprinkler system

[Claim 6 not printed in the Gazette.]

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1,227,288. CAR-REPLACER. EUGENE J. MARCOTTE, Salina, Kans. Filed Nov. 3, 1915. Serial No. 59,440. (Cl. 104—163.)



1. A car replacer comprising an inclined rail, and an adjustable wedge for spacing the inclined rail from the track-rail.

2. A car replacer comprising an inclined rail, and an adjustable wedge for spacing the inclined rail from the track-rail, said wedge provided with an extension adapted to pass through the inclined rail.

3. A car replacer comprising an inclined rail, and an adjustable wedge for spacing the inclined rail from the track-rail, said wedge comprising a bar adapted to engage the track-rail, a perforated bar secured to the first-mentioned bar and adapted to pass through the inclined rail, a second bar pivotally connected to the first bar and adapted to overlie the perforated bar, and a pin adapted to pass through the perforated bar and overlying bar.

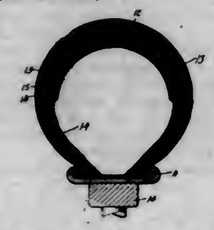
4. A car replacer comprising an inclined rail, and a wedge for spacing the inclined rail from the track-rail, said wedge comprising a bar adapted to engage the web of the track-rail, a perforated bar pivotally connected to one end of the first-mentioned bar, a bar pivotally connected to the opposite end of the first-mentioned bar, a loop formed on the end of the last-mentioned bar and adapted to receive the perforated bar, and a pin adapted to pass through the loop and perforated bar.

5. A car replacer comprising an inclined rail having an elongated opening therein, an adjustable wedge for spacing the inclined rail from the track-rail, said wedge comprising a bar adapted to engage the web of the track-rail, a perforated bar connected to one end thereof and adapted to pass through the opening in the inclined rail, a second bar pivotally connected to the opposite end of the bar engaging the rail-web, and a clamp for securing the inclined rail to the track-rail, said clamp comprising a serrated bar extending beneath the rail, a plate adjustable upon the serrated bar, and a rod adjustably connected to the serrated bar for engagement with the track-rail.

[Claim 6 not printed in the Gazette.]

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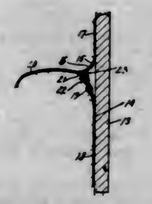
1,227,289. TIRE-PROTECTOR. BERTHA MERMELSTEIN, New York, N. Y. Filed June 24, 1916. Serial No. 105,577. (Cl. 152—18.)



A protecting lining for a pneumatic tire, consisting of a plurality of short connected substantially oblong sections curved transversely to fit the inner face of the shoe of a pneumatic tire, each section being provided all around with a curved flange projecting toward and into contact with the shoe, the flange portions on opposite boundary lines of each section being curved in opposite directions and their free edges being spaced from the body portion of the section and projecting toward the center thereof.

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1,227,290. AUTOMOBILE-BODY CONSTRUCTION. ROBERT MERY, New York, N. Y. Filed Oct. 14, 1916. Serial No. 125,611. (Cl. 21—23.)



1. An automobile body including a sheathing provided upon each side of the body with an outwardly extending projection, each projection being curved longitudinally into substantially parallel relation to part of the periphery of the automobile wheel adjacent the same and laterally so as to present a concaved upper surface, and a mud-guard attached to each side of the body to form laterally a continuation of the projection thereof.

2. An automobile body including a sheathing provided upon each side of the body with an outwardly extending projection, each projection being curved longitudinally into substantially parallel relation to part of the periphery of the automobile wheel adjacent the same and laterally so as to present a concaved upper surface, and a mud-guard detachably fastened to each side of the body to form laterally a continuation of the projection thereof.

3. An automobile body including a sheathing provided upon each side of the body with an outwardly extending projection, each projection being curved longitudinally into substantially parallel relation to part of the periphery of the automobile wheel adjacent the same and laterally so as to present a concaved upper surface, and a mud-guard attached to said sheathing on each side of the body to form laterally a continuation of the projection thereof.

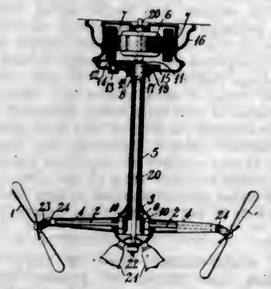
4. An automobile body including a sheathing provided upon each side of the body with an outwardly extending projection, each projection being curved longitudinally into substantially parallel relation to part of the periphery of the automobile wheel adjacent the same and laterally so as to present a concaved upper surface, and a longitudinally and laterally bent mud-guard attached to each side of the body to form laterally a continuation of the projection thereof, the longitudinal curvature of each mud-guard corresponding to that of its respective projection.

5. An automobile body including a sheathing provided upon each side of the body with an outwardly extending projection, each projection being curved longitudinally into substantially parallel relation to part of the periphery of the automobile wheel adjacent the same and laterally so as to present a concaved upper surface, and a longitudinally and laterally bent mud-guard attached to the sheathing on each side of the body to form laterally a continuation of the projection thereof, the longitudinal curvature of each mud-guard corresponding to that of its respective projection.

[Claims 6 to 15 not printed in the Gazette.]

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1,227,291. GYRATORY FAN. FREDERICK H. MILLER, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 11, 1914. Serial No. 837,728. (Cl. 230—1.)

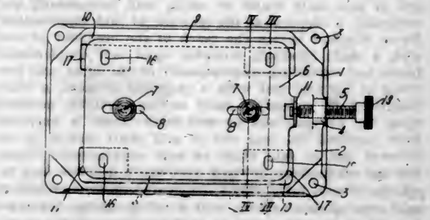


1. A gyratory fan comprising a plurality of sets of fan blades, an electric motor provided with an extended armature shaft operatively connected to said fan blades, reduction gearing connected to said motor shaft, a casing inclosing said motor and said gearing, a cylindrical casing axially alined with said armature shaft and comprising arms for supporting said fan blades, a gear member carried by said cylindrical casing and meshing with said reduction gearing and means interposed between said gear member and the bottom of said motor casing for rotatably supporting said cylindrical casing.

2. A gyratory mechanism for fans comprising a motor, reduction gearing connected to the shaft of said motor, a casing inclosing said motor and said gearing, a cylindrical casing axially alined with said motor shaft, a gear member carried by said casing and meshing with said reduction gearing and a plurality of balls circumferentially arranged between said gear member and said motor casing for rotatably supporting said cylindrical casing.

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1,227,292. BED-PLATE. CHESTER B. MILLS, East McKeesport, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 2, 1913. Serial No. 782,748. (Cl. 248—30.)



1. The combination with a stationary member, of a relatively movable resilient member mounted thereon and in adjustable frictional engagement therewith, and means for adjusting the relative positions of said members.

2. The combination with a stationary member, of an inherently resilient plate member in frictional engagement therewith, and means coacting with said stationary member for shifting the plate member.

3. The combination with a stationary member, of a resilient plate member in frictional engagement therewith, and means coacting with said stationary member for adjusting the tension of said plate member, whereby the degree of said frictional engagement may be varied.

4. The combination with a stationary member, of a resilient plate member slidably mounted thereon, means for adjusting the tension of said plate member, and means for shifting said plate member.

5. The combination with a stationary base member, of a resident plate member slidably mounted thereon, means for adjusting the tension of said plate member, means for shifting said plate member, and means alined with said shifting means for guiding the movements of said plate member.

[Claims 6 to 10 not printed in the Gazette.]

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1,227,293. SAFETY-CATCH FOR CUFF-BUTTONS. CHARLES H. MORISON, Newark, N. J. Filed Apr. 10, 1914. Serial No. 830,963. (Cl. 24—90.5.)



As a new article of manufacture, a safety catch for link cuff buttons, comprising a sectional bar, the opposing faces of the sections having coincident recesses to provide a link receiving opening when the sections are closed one upon the other, a pivot connecting the sections at one end of the bar, the free ends of the sections being reduced and threaded and of unequal length, the longer end having a lug overlying the terminal of the shorter end when the sections are closed, and a threaded ring carried by said longer end to be adjusted thereon into threaded engagement with the shorter end when the sections are closed.

1,227,294. COTTON-CHOPPER. ROBERT B. MORRIS, Harrisonville, Mo., assignor of one-third to Walter O. Holcomb and one-third to Franklyn S. Freeman, Harrisonville, Mo. Filed Jan. 8, 1917. Serial No. 141,220. (Cl. 97—46.)

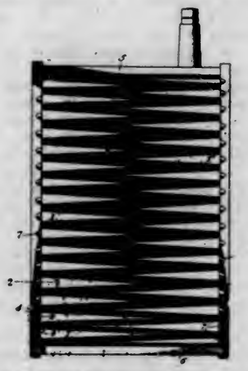


1. A device of the class described comprising an open rectangular wheeled main frame, a seat mounted upon said main frame near the rear end thereof, a small supplemental frame pivoted at its forward end to the forward end of said main frame to swing both horizontally and vertically, a foot rest at the rear end of said supplemental frame disposed within the reach of the occupant of said seat, a shaft revolubly mounted upon said supplemental frame and extending longitudinally of the same, and provided at its rear end with a chopping element, a short longitudinally extending shaft section revolubly mounted upon the forward end of said main frame, a universal joint coupling the rear end of said shaft section to the forward end of said shaft on said supplemental frame, driving connections between said shaft sections and the wheels of said main frame, cultivator shovels carried by said supplemental frame, and a coiled spring connected to said main frame and to said supplemental frame for yieldably holding the rear end of the latter in its uppermost position.

2. A device of the class described comprising an open rectangular wheeled main frame, a seat mounted upon said main frame near the rear end thereof, a smaller open rectangular supplemental frame pivoted at its forward end to the forward end of said main frame midway of the width thereof to swing both horizontally and vertically, a pair of arms extending rearwardly from the rear end of said supplemental frame and being in outwardly offset relation with respect to the sides of the same, a pair of longitudinally spaced cross bars disposed between said arms and forming a foot rest for the occupant of said seat, a shaft revolubly mounted upon said supplemental frame and extending longitudinally of the same, and provided at its rear end with a chopping element, the latter being disposed in the rear of said supplemental frame and between said arms, a short longitudinally extending shaft section revolubly mounted upon the forward end of said main frame midway of the width thereof, a universal joint coupling the rear end of said shaft section to the forward end of said shaft on said supplemental frame, driving connections between said shaft section and the wheels of said main frame, cultivator shovels fixed to the forwardmost cross bar on opposite sides of the vertical plane passing through the shaft of said supplemental frame, and a coiled spring connected to said main frame and to said supplemental frame for yieldably holding the rear end of the latter in its uppermost position.

3. A device of the class described comprising an open rectangular main frame having a pair of driving wheels at its rear end and a pair of steering wheels at the forward end thereof, a seat mounted upon said main frame near the rear end thereof, a supplemental frame pivoted at its forward end to the forward end bar of said main frame and provided at its rear end with a foot rest disposed within the reach of the occupant of said seat, a longitudinally extending shaft revolubly mounted upon said supplemental frame and provided at its rear end with a chopping element, a short longitudinally extending shaft section revolubly mounted upon the forward end bar of said main frame, a link flexibly coupled by means of universal joints to the rear end of said shaft section and the forward end of the shaft of said supplemental frame, a transverse shaft revolubly mounted upon the forward end bar of said main frame, bevel gears on the adjacent ends of said transverse shaft and said shaft section, a longitudinal shaft revolubly mounted along one side of said main frame and having a clutched driving connection with said driving wheels at its rear end, the forward end of the last named longitudinal shaft being disposed adjacent the outer end of said transverse shaft, and additional bevel gears on the adjacent ends of the last named longitudinal shaft and said transverse shaft.

1,227,295. STORAGE-BATTERY ELECTRODE OR GRID. WILLIAM MORRISON, Des Moines, Iowa. Filed Aug. 8, 1913. Serial No. 783,829. (Cl. 204—29.)



1. A storage battery electrode or grid, consisting of folded strips of metal, end-pieces to support said folded strips, trough-shaped side-pieces inclosing the ends of the folded strips and the extremities of the end-pieces, said folded strips, end pieces and side-pieces integrally united to each other.

2. A storage battery electrode or grid, consisting of folded strips of metal, end-pieces to support said folded strips, and trough-like side-pieces inclosing the ends of the folded strips and the extremities of the end-pieces.

3. A storage battery electrode or grid, consisting of a plurality of strips of metal, folded into serpentine folds, having squared ends, end-pieces to support said folded strips, and side-pieces inclosing the folded ends of the strips and the extremities of the end-pieces.

4. A storage battery electrode or grid, consisting of a plurality of strips of metal, folded into serpentine folds, end-pieces to support said folded strips, trough-shaped side-pieces inclosing the folded ends of the strips and the extremities of the end-pieces, said folded strips, side-pieces and end-pieces integrally united to each other.

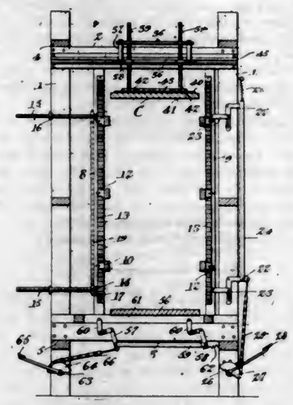
5. A storage battery electrode or grid, comprising a plurality of strips of metal folded into serpentine folds, the inner sides of said folds being separated, trough-like side-pieces inclosing the ends of said folds and having an extended surface contact therewith, the edges of said side-pieces having crimped or depressed portions to mechanically clamp the inner sides of the folds of the strips, said folded strips integrally united to said side-pieces.

[Claims 6 to 11 not printed in the Gazette.]

1,227,296. CASE-CLAMP. LEVI W. NACE, GEORGE W. ALEXANDER, and MILTON H. BROWN, Hanover, Pa. Filed Dec. 1, 1915. Serial No. 64,553. (Cl. 144—291.)

1. In a case clamp, a rectangular frame including corner posts, upper and lower cross pieces connecting said posts, tracks carried by said cross pieces, horizontally adjustable pressure members slidably mounted between said tracks, vertically adjustable pressure members arranged at the opposite ends of the frame, means for adjusting the latter, means for adjusting one of said horizontally movable members and holding the latter in a fixed position, and means for adjusting the other of said members, said means including a yieldable element operating to automatically return this member to normal position upon release of its adjusting means.





2. In a case clamp, a rectangular frame including corner posts, upper and lower cross pieces connecting said posts, tracks carried by said cross pieces, horizontally adjustable pressure members slidably mounted between the tracks, vertically adjustable pressure members arranged at the opposite ends of the frame, means for adjusting one of the horizontally movable members and holding the latter in a fixed position, bell crank levers pivoted upon the corner posts at one side of the frame, a connection between the remaining horizontally movable pressure member and one branch of said levers, a rod connecting the remaining branches of said levers, and means for operating said levers whereby the last mentioned member is adjusted toward its coöperating member, said means including a yieldable element for automatically returning its associated pressure member to normal position upon release of said means.

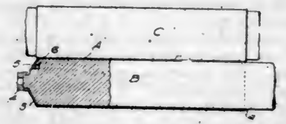
3. In a case clamp, a frame-like structure, including upper and lower transverse elements, tracks carried by said elements, horizontally adjustable pressure members slidable between said tracks, each member comprising spaced vertical standards, and transverse sections connecting said standards, said transverse sections being associated with said standards for vertical adjustment, means for adjusting one of said horizontally disposed members and holding the latter in a fixed position, means for adjusting the other of said members, and including a yieldable element for automatically returning this member to normal position upon release of said means, vertically adjustable pressure members arranged at the opposite ends of the frame, and means for adjusting the latter toward and away from each other.

4. In a case clamp, a frame-like structure including transverse elements, tracks carried by said elements, horizontally adjustable pressure members slidable between said tracks, a plurality of threaded elements operatively connected with one of said members and threaded through bearings on said frame, sprockets on each of said threaded elements, a chain trained over said sprockets whereby all of said elements are rotated in unison upon manual rotation of one of said elements to adjust said movable member, means for adjusting the other of said members, and including a yieldable element for automatically returning said member to normal position upon release of said means, vertically adjustable members arranged at the opposite ends of the frame, and means for adjusting the latter.

5. In a case clamp, a frame, horizontally adjustable pressure members supported thereby, means for adjusting said members independently toward and away from each other, vertically adjustable members arranged at the opposite ends of the frame, means for adjusting one of said members and holding the latter in a given position, and means for adjusting the other of said members and including a yieldable element automatically returning said member to normal position upon release of said means.

[Claim 6 not printed in the Gazette.]

1,227,297. COLLAPSIBLE TUBE FOR PASTE. GEORGE HOWARD NEIDLINGER, East Orange, N. J., assignor to Peerless Tube Co., New York, N. Y., a Corporation of New York. Filed Sept. 16, 1915. Serial No. 50,979. (Cl. 221—60.)

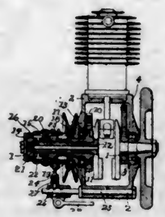


1. A collapsible paste-holding tube having on the inner surface of its head means for interlocking with the mandrel of a printing machine to insure registering of successive impressions printed on the tube.

2. A collapsible tube for holding paste, comprising a body, a head on one end thereof, a discharge nozzle at the center of the head, and a lug on the internal surface of the head for engaging a mandrel of a printing machine to insure registering of impressions successively applied to the external surface of the body.

3. A collapsible tube for holding paste or the like, comprising a tubular body of round cross-section, a head at one end of the body, a discharge opening at the center of the head, and integral means on the internal surface of the head for interlocking with a mandrel of a printing machine for insuring registering of successive impressions.

1,227,298. CHANGE-SPEED GEAR FOR MOTORS. ARTHUR GEORGE LLOYD NEIGHBOUR, Beaumaris, Victoria, Australia. Filed Mar. 1, 1916. Serial No. 81,527. (Cl. 74—59.)



1. In an internal combustion engine of the inclosed crank type, in combination, a crank-shaft, a camshaft carrying valve operating cams arranged parallel to said crankshaft, and driven at one-half the speed thereof by suitably inclosed gearing arranged at one end of the said shafts; suitably inclosed gearing arranged at the other end of the said shafts adapted to drive a sleeve concentrically mounted upon the crankshaft, said sleeve projecting through and being supported by the main bearing and being associated with the crankshaft and adapted to revolve in the same direction as the said crankshaft but at a lower speed depending on the ratio of the said gearing, and transmission means adapted to be connected either to a portion of the crank shaft or to the sleeve.

2. In an internal combustion engine of the inclosed crank type, in combination, a crank shaft, a cam shaft having valve operating means and arranged parallel to the crank shaft, intermeshing gear devices carried by the crank shaft and cam shaft for driving the cam shaft at one-half the speed of the crankshaft, a transmission element having a sleeve rotatable about the crank shaft and connected to the cam shaft, and a second transmission element adapted to be connected either to the shaft extension or the sleeve.

3. In an internal combustion engine of the inclosed crank type, in combination, a crank shaft having an extension, a sleeve loosely mounted on the extension of the crank shaft, the crank shaft and sleeve being provided with clutch means, a transmission element carrying clutch means to coöperate with the clutch means of the crank shaft and sleeve, valve operating means having gear devices, and gear devices on the crank shaft and sleeve having a meshing association with those of the cam operating means.

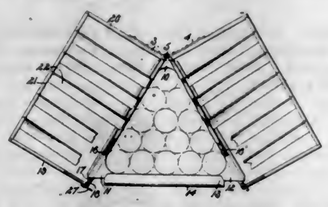
4. In an internal combustion engine of the inclosed crank type, the combination of a crank shaft, a cam shaft having valve operating means associated therewith, a sleeve loosely mounted on a portion of the crank shaft and connected to the cam shaft, intermeshing gear devices respectively carried by the crank shaft, sleeve and cam shaft, and clutch means connectible either to the sleeve or to a portion of the crank shaft.

5. In an internal combustion engine of the class specified, a crank shaft having an extension with a sleeve rotatably mounted thereon, the crank shaft carrying a gear device, valve operating means carrying gearing in part operated by the gear device of the crank shaft, the sleeve also having a gear device in operative relation to the remaining part of the gears of the valve operating means, and adjustably mounted transmission means connectible either to the sleeve or the crank shaft whereby different speeds or a neutral condition may be obtained.

[Claims 6 to 8 not printed in the Gazette.]

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1,227,299. POOL-BALL RACK AND TRIANGLE. JOHN E. NITKEY, Harrison, Idaho. Filed June 3, 1916. Serial No. 101,465. (Cl. 46—6.)



1. In a device of the character described, a rack formed into two parts, a triangular member, and a single member for pivotally connecting said parts together and to said triangular member.

2. In a device of the character described, a rack provided with a pair of hinged sections, a triangular member arranged with the sides between the sides of said sections whereby the sides of the triangle limit the opening movement of the sections, and means for pivotally connecting said sections together.

3. In a combined rack and triangle, a pair of rack sections hinged together at one end, each of said sections being provided with slats for acting as supports for balls, and a triangular member connected with said rack and arranged so that the transverse bar thereof slidingly fits in two adjacent sides of said sections, whereby whenever said sections are pulled apart the triangle will be disclosed and the balls from their slats will be permitted to roll into the triangle.

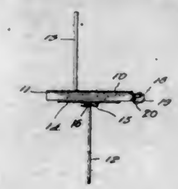
4. In a combined rack and triangle, a pair of rack sections, the adjacent sides of said sections having a slot cut in each end, a hinge member for connecting said sections together, said hinge member being arranged at one end of the sections, a triangle arranged with its sides interiorly of the adjacent sides of said sections, the cross bar of the triangle extending through one pair of slots while the apex of the triangle extends through the other of said slots, and means extending from the triangle engaging the pintle of the hinge connecting said sections together, whereby when said sections are separated a triangular space will be formed of the proper size for receiving the balls from their sections.

5. In a device of the character described, a triangle provided with a transverse bar having an edge extending upwardly an appreciable distance for acting as a guide for guiding balls into the triangle at the apex, said rack being formed with inclined slots for directing the balls to said triangle, and means for holding said sections together when the same are used as a rack.

[Claims 6 to 8 not printed in the Gazette.]

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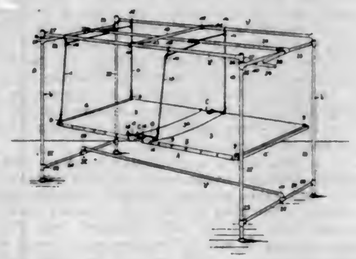
1,227,300. FISH-LINE GUIDE. CARL I. OBERG, Brownville, Me. Filed July 24, 1916. Serial No. 111,006. (Cl. 43—9.)



In a fish line guide, a board float, a pair of plates secured to the under face of said board float near its ends and having opposed ears cut therefrom and bent outwardly and inwardly toward each other to form cleats, a keel plate having lugs extending from one edge at right angles thereto beyond opposite sides for slidably detachable engagement in the cleats, and a leaf spring catch on the board float for locking with the plate to hold the lugs engaged in the cleats.

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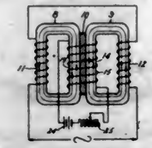
1,227,301. INVALID-CARRIER. WILLIAM CLARK OGDEN, Binghamton, N. Y. Filed Jan. 6, 1915. Serial No. 738. (Cl. 5—44.)



In an appliance of the class described, a supporting structure comprising end frames each formed of legs and upper and lower connecting bars, the legs being provided at their upper ends with studs above the connecting bar and in alinement with the legs and the lower cross bars each with a socket at its center, a pair of longitudinally extending rods having sockets at their ends receiving the said studs, and a rod having at its ends studs entering the sockets of the cross bars.



1,227,302. MEANS FOR CONTROLLING ALTERNATING CURRENTS. MENDEL OSNOS, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed July 8, 1915. Serial No. 38,690. (Cl. 171—242.)



1. The combination with a winding supplied by a source of direct current, said winding consisting of a plurality of portions each of which comprises less than one-half of the entire winding, of means for producing two separate alternating magnetic fluxes and means whereby the alternating fluxes thereby produced thread alternate portions of the direct current winding in opposite directions.

2. The combination of two closed magnetic cores having portions which are adjacent to each other but magnetically separate, means for producing alternating magnectic fluxes in said cores which are opposite in direction in the adjacent portions thereof and a winding surrounding said adjacent portions and connected to a source of direct current.

3. The combination of a winding supplied by a source of direct current, said winding consisting of a plurality of portions each of which comprises less than one-half of the entire winding, and means whereby portions of said winding which are electrically adjacent are threaded by opposing alternating magnetic fluxes.

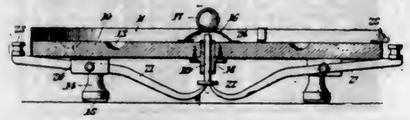
4. The combination of a winding supplied by a source of direct current and means whereby a portion of each turn in said winding is threaded by an alternating magnetic flux in one direction and another portion is at the same time threaded by an alternating magnetic flux in the opposite direction.

5. The combination of two closed magnetic cores, means for producing alternating magnetic fluxes in said cores and a winding supplied by a source of direct current so arranged that portions thereof which are electrically adjacent are threaded by said alternating magnetic fluxes in opposite directions, each of said portions comprising less than one-half of the entire winding.

[Claim 6 not printed in the Gazette.]

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1,227,303. GAME. ROBERT A. PEACOCK, Delaware City, Del. Filed June 30, 1916. Serial No. 106,892. (Cl. 46—61.)



1. A game apparatus embodying a playing board having a plurality of pockets of given values, a projectile adapted to be arranged centrally of the board, a support therefor, an actuating element slidably mounted beneath the support, and adapted to unseat the projectile to pocket the same, and a lever for operating said element.

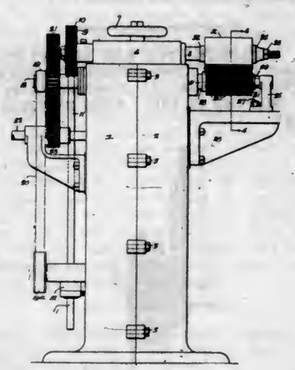
2. A game apparatus embodying a playing board having a plurality of pockets of given values, a projectile adapted to be seated in the center of the board, an actuating element arranged beneath the projectile for vertical movement, a lever operable to elevate the element whereby said projectile is unseated, said element adapted to gravitate to normal position, and means for limiting the return movement of said element.

3. A game apparatus comprising a playing board having a plurality of pockets of given values, a projectile adapted to be seated in the center of the board, an actuating element disposed beneath the projectile for vertical movement, a lever pivoted beneath the board and having one end normally engaging the adjacent end of the element, and its opposite end disposed beyond the outer edge of the board, and said lever operating to elevate the actuating element and unseat the projectile.

4. A game apparatus embodying a playing board marked off in sections, each section having a plurality of pockets of given values, a projectile adapted to be seated in the center of the board, an actuating element arranged beneath the projectile for sliding movement, a lever for each section and pivotally mounted therebeneath, said levers having their inner ends normally engaging the adjacent end of the actuating element, and their opposite ends disposed beyond the outer edge of the board, and said levers being independently operable to elevate said element to unseat the projectile.

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1,227,304. RING-CUTTING MACHINE. HOWARD A. PEDRICK, Bala, Pa., assignor to Pedrick Tool and Machine Company, Philadelphia, Pa., a Firm consisting of Albert D. Pedrick and Howard A. Pedrick. Filed Jan. 24, 1917. Serial No. 144,206. (Cl. 29—70.)

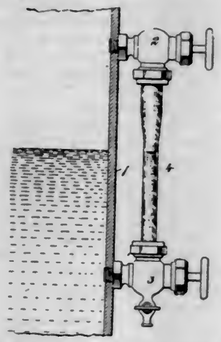


1. The combination of a hollow frame having an internal guideway; a carriage projecting into said frame and slidable on the guideway; two substantially parallel shafts respectively supported by the carriage and the frame; means for rotating said shafts; a plurality of substantially parallel cutters on one of the shafts; and means on the other shaft for supporting a tubular blank in position to be engaged by said cutters simultaneously.

3. The combination of a hollow frame having an internal guideway; a carriage projecting into the frame and slidable on the guideway; a bracket having a threaded opening and mounted within the hollow of the frame in position to project adjacent the carriage; a manually adjustable threaded spindle on the carriage extended within the threaded opening of said bracket; two substantially parallel shafts respectively supported by the carriage and the frame; means for rotating said shafts; a plurality of substantially parallel cutters on one of the shafts; and means on the other shaft for supporting a tubular blank in position to be engaged by said cutters simultaneously.

[Claims 2 and 4 to 7 not printed in the Gazette.]

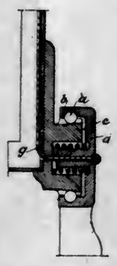
1,227,305. GAGE-GLASS FOR STEAM-BOILERS. THEODORE L. PETERSON, Brooklyn, N. Y. Filed Nov. 21, 1916. Serial No. 132,581. (Cl. 73—54.)



1. A water level gage for steam boilers, comprising a glass tube, the wall of which at the upper extremity of the tube is of greater thickness than the wall at the intermediate portion, the bore of the tube being of uniform internal diameter.

[Claim 2 not printed in the Gazette.]

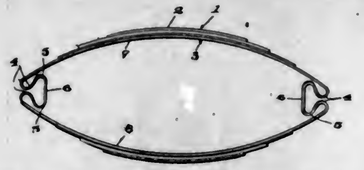
1,227,306. APPARATUS FOR USE AS A CLUTCHING, COUPLING, OR LOCKING DEVICE AND THE LIKE. EMILE PEUCH, Bourges, and ALPHONSE ARBEY, Beure, France. Filed July 17, 1913. Serial No. 779,534. (Cl. 21—148.)



The combination of a movable frame, a trunnion associated with the frame and provided with inclined cavities, balls in said cavities, a hub surrounding the trunnion and having circular ball-bearings for said balls, a spring tending to move the hub axially of the trunnion, and a cable adapted to move the hub against the action of the spring.

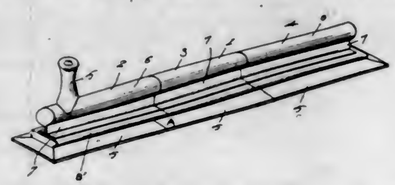
1,227,307. VEHICLE-SPRING. SAMUEL K. PLANK, Houston, Tex. Filed June 17, 1916. Serial No. 104,275. (Cl. 267—27.)

In an elliptical vehicle spring structure, an innermost leaf formed of a single piece of spring steel having its ends connected, the portions of said innermost leaf forming the end of the elliptical spring being curved inwardly into the ellipse formed by the spring, said curved portions being spaced from each other for engagement upon compression of the spring for retarding the compressing movement of the spring, the said portions of said inner leaf being further bent to form a loop positioned inwardly of the ellipse formed by the spring, whereby one section of the elliptical spring will be permitted a limited longitudinal movement independent of the other section, the ends of said looped portions adapted for engagement with



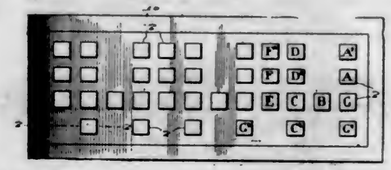
portions of the inner surface of the innermost leaf for further retarding the compressing action of the spring.

1,227,308. DARBY. SAMUEL K. PLANK, Houston, Tex. Filed June 17, 1916. Serial No. 104,276. (Cl. 72—128.)



In a plasterer's darby, a center section, and end sections, said center and end sections comprising plates, ridges connected to said plates and being hollow, tubes carried by the ridges of the end sections and telescopically mounted in the ridge of the center section for detachably connecting the end sections to the center section, blades carried by each of said sections, the inner ends of the blades of said end sections stopping short of the ridges carried thereby, clamping plates for clamping said ridges to said blades, the portions of said clamping plates facing the ends of said center section extending beyond the ends of the blades of the end sections for gripping the protruding end of the blade of the intermediate section, the end of the blade of said intermediate section projecting outwardly from the end of the ridge and clamping plates carried thereby.

1,227,309. FOOT-ACTUATED MUSICAL INSTRUMENT. ALFRED C. POPE, New York, N. Y. Filed Oct. 21, 1916. Serial No. 126,876. (Cl. 84—31.)

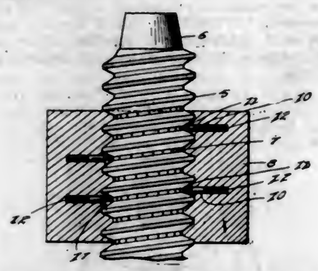


2. In a musical instrument adapted to be operated by the feet, the combination of a casing, a plurality of musical tone producers within said casing, comprising a plurality of groups, the producers in each group corresponding in number to the notes of an octave, each producer tuned to produce one of the notes of one of said octaves, a depressible key on top of said casing related to each producer, the keys in each octave group being arranged in four parallel rows, the keys being of such size and so located that two or more keys in adjacent rows may be simultaneously depressed by the foot of the operator, and means actuated by the related key when depressed to sound said tone producer.

[Claims 1 and 3 not printed in the Gazette.]



1,227,310. NUT-LOCK. ELONZY W. QUICK, Centralia, Fla. Filed Mar. 4, 1916. Serial No. 82,165. (Cl. 151—10.)



1. A nut lock including a bolt having external screw threads, ratchet teeth formed in the groove defined by the screw threads of the bolt, a nut fitted upon said bolt, spring pressed pins slidably mounted in the nut adapted to engage said ratchet teeth to lock the nut against rotational movement in one direction with relation to the bolt, and a reduced frusto-conical extension carried by the end of the bolt adapted, during its insertion in the bed, to deflect the pins.

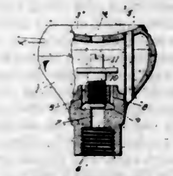
2. A nut lock including a bolt having external screw threads, ratchet teeth formed in the groove defined by the screw threads of the bolt, a nut having an internally screw threaded bore, receiving said bolt, and pairs of diametrically opposed recesses formed in the wall of the bore, the recesses of one pair being arranged in staggered relation to the recesses of the other pair, and spring pressed pins arranged in said recesses and adapted to engage the ratchet teeth to lock the nut against rotational movement in one direction with relation to the bolt.

3. A nut lock including a bolt having external screw threads, ratchet teeth formed in the groove defined by said screw threads of the bolt, a nut having an internally screw threaded bore receiving said bolt and having pairs of diametrically opposed recesses in the wall of the bore thereof, the recesses of one pair being arranged in staggered relation to the recesses of the other pair, spring actuated locking pins slidably mounted in said recesses, and a reduced frusto-conical extension carried by one end of the bolt adapted, during insertion of the bolt within the nut, to deflect the pins outwardly to facilitate application of the nut to the bolt.

4. A nut lock including a bolt having external screw threads, ratchet teeth formed in the groove defined by the screw threads, a nut having an internally screw threaded bore receiving said bolt and provided with internal polygonal recesses, heads non-rotatably fitted in said recesses, pins carried by said heads having beveled inner terminals engaging the ratchet teeth of the bolt, and means normally retaining the beveled terminals of the pins in engagement with the ratchet teeth to prevent rotary movement of the bolt in one direction with relation to the nut.

1,227,311. BUBBLING DRINKING-CUP. MARTIN L. RAHNER, Portland, Oreg., assignor to Oregon Brass Works, Portland, Oreg. Continuation in part of application Serial No. 785,221, filed Aug. 18, 1913. This application filed Jan. 18, 1915. Serial No. 2,806. (Cl. 137—110.)

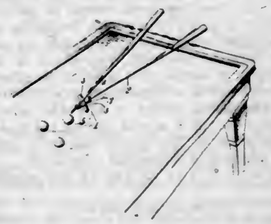
1. A bubbling cup comprising a globular-shaped body having a concaved top with a discharge opening therein, one or more non-squirt tubes from said concaved top through the body of said cup, means for attaching said cup to a source of water supply, with one or more inlet openings or ports into the interior of said cup, and an imperforate deflector member therein directly over said inlet openings, or ports, and against which inflowing water is discharged, whereby to make it necessary for said cup to be filled before water is discharged from the discharge opening in said concaved top.



2. A bubbling drinking cup of the character shown and described, comprising a body of globular form having a concaved top with central discharge opening therein, and adapted at its other end to be attached to a source of water supply, with one or more inlet ports into the interior of said cup, an imperforate deflector adjustably mounted within said cup directly over said inlet ports and in alinement with said central discharge opening in said concaved top, said deflector being adapted at its upper end to be engaged by an instrument inserted through said central discharge opening for adjusting said deflector, and one or more non-squirt tubes from said concaved top through the body of said cup, whereby to provide a way of escape for the water when the hand is placed over the top of said cup.

3. A bubbling drinking cup of the character shown and described comprising a body of globular form having a shallow concaved top with a central discharge opening therein, one or more non-squirt tubes extending through the body of said cup and communicating at their upper ends with the concaved surface thereof and at their lower ends discharging through the outside wall of the cup, said cup being adapted at its lower end to be connected with a source of water supply, with inlet supply openings to the inside of said cup, and an imperforate buffer-like deflector member adjustably disposed within said cup directly above the inlet openings into the interior thereof, whereby the water discharged into the interior of said cup strikes said deflector, whereby the interior of the cup must be filled before water can be forced from the central discharge opening thereof, said deflector member being adapted at its lower end to cut off the supply of water to the interior of said cup, and being accessible only by means of an instrument through said central opening in said concaved top, substantially as described.

1,227,312. CUE-REST. DOUGLAS JACKSON REAR, Durban, South Africa. Filed Aug. 2, 1916. Serial No. 112,877. (Cl. 46—6.)



1. In a device for the purpose set forth, a handle member having a square head, a spindle extending centrally from each of the sides of the head, a roller member journaled on each of the spindles and said rollers being of a thickness approximately equaling the width of each of the sides of the head.

2. In a device of the class set forth, a handle member having a head at one of the ends thereof, a spindle extending from each of the sides of the head, a roller member journaled on each of the spindles, and means for securing the rollers to the spindles.

3. In a device for the purpose set forth, a handle member having a square head, a spindle extending centrally from each of the sides of the head, a roller journaled on each of the spindles, and each of the rollers being approximately of a diameter equaling the width of the sides of the head, each of said rollers having its bore provided with a transverse continuous groove, anti-frictional members in the groove and contacting with the spindles, and members connected with the spindles and arranged in the bore of the rollers and engaging with the anti-frictional members for retaining the same in the raceways.

4. A cue rest having a head provided with right angular rollers whereby two of the rollers are disposed to provide a support for the rest and the two remaining rollers provide a guide for the cue.

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1,227,313. TARGET-PRACTICE ROD. ROBERT EDWIN REARDON, Ottawa, Ontario, Canada. Filed Feb. 24, 1917. Serial No. 150,842. (Cl. 124—15.5.)



1. A target practice rod comprising a tube adapted to extend longitudinally on the interior of the barrel of a fire arm and from end to end of the same, a reciprocable rod in the tube of relatively much smaller diameter than the tube, a guiding bushing in the tube forming a bearing for the rod and means on the interior of the tube adapted to prevent turning of the rod with respect to the tube, said means comprising a longitudinal groove extending from the end of the tube and forming a rib on the underside and a plug on the rod having a groove to fit the rib.

2. A target practice rod comprising a relatively thin metal tube having a longitudinal groove pressed therein forming a rib on the interior, a reciprocable striking rod in the tube, and a guide member on the rod grooved to fit the rib.

5. In combination a socket having a longitudinal rib on the inside formed with a clearance space at one point, a rod adapted to fit the socket, a rotatable sleeve on the rod adapted to fit the socket and having a groove to receive the rib on the socket and a head on the rod adapted to fit the clearance space and being formed at one part with a groove adapted to register with the groove in the sleeve when being inserted, but adapted to be moved out of registration when it is desired to lock the rod and socket together, and a spring detent device between the sleeve and the rod, said spring detent device on the sleeve adapted to engage a corresponding recess formed in the rod.

8. In a target practice rod, a tube, a striking rod therein, and an adjustable end piece adapted to be placed and held in two different positions, the length of the entire rod being shorter in one position than in the other.

14. The combination with a target practice rod including a tube adapted to extend in the rifle barrel, and a spring actuated rod, of a muzzle clip having means to engage opposite sides of the end of the tube, and having other means adapted to engage the rifle barrel.

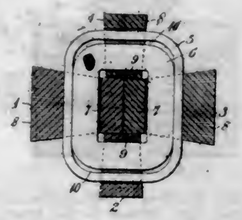
[Claims 3, 4, 6, 7, 9 to 13, and 15 not printed in the Gazette.]

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1,227,314. TRANSFORMER. EMERSON G. REED, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 5, 1913. Serial No. 799,274. (Cl. 175—35.6.)

1. In a shell-type transformer, the combination with nested coils provided with spaced ventilating ducts, of a core comprising relatively narrow and relatively wide members, the relatively narrow members embracing the said coils and ducts, and the relatively wide members embracing the coils only.

2. In a shell-type transformer, the combination with a nest of substantially rectangular coils provided with ventilating ducts extending along the shorter sides only thereof, of a core comprising relatively narrow and relatively wide members, the relatively narrow members embracing the said ducts and the shorter sides of the coils, and the relatively wide members embracing the longer sides only of the coils.



3. In a shell-type transformer, the combination with a plurality of nested coils having spaced ventilating ducts positioned intermediate thereof, of a core comprising a plurality of unlike members, the larger ones of which embrace unspaced portions only of the said coils.

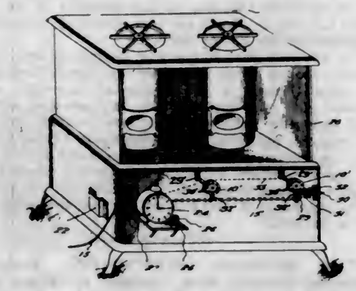
4. In a shell-type transformer, the combination with a plurality of substantially rectangular coils which are nested and provided with spaced ventilating ducts intermediate two opposite sides thereof, of a core comprising a plurality of relatively narrow and relatively wide members, the relatively narrow members embracing the coils and ventilating ducts, and the relatively wide members embracing only the coils.

5. In a shell-type transformer, the combination with a nest of substantially rectangular coils provided with ventilating ducts extending along the shorter sides only thereof, of a core comprising unlike members some of which embrace the shorter sides of said coils and ducts, and others of which embrace the longer sides of said coils only.

[Claim 6 not printed in the Gazette.]

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1,227,315. OIL-BURNER. WILLIAM J. REID, Dobson, N. C., assignor to W. Eugene Reid, Dobson, N. C. Filed Feb. 28, 1916. Serial No. 81,020. (Cl. 67—65.)

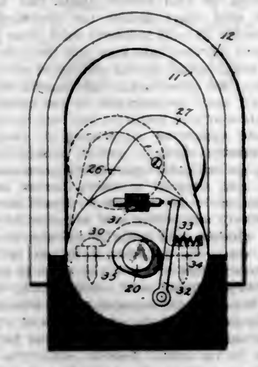


In a device of the kind described, in combination, a stove body, a plurality of slidable wick carriers, stems for operating said wick carriers projecting from said body, disks secured to the outer ends of said stems, each of said disks being formed with a series of circumferentially disposed openings, guide members projecting outwardly from said stove body, an eye bolt adjustably threaded in one of said members and having an integral ring, a series of short chains secured at one end to openings of said disks and serving as cranks for turning the latter, a longer chain secured at one end to said ring of said eye bolt, said short chains being secured to said longer chain, and means connected to the opposite end of said longer chain for periodically operating said shorter chains, said eye bolt allowing said disks to have a varied cycle of rotation.



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1,227,316. METHOD OF GENERATING AND TIMING IGNITION-CURRENTS. BENJAMIN P. REMY and FRANK I. REMY, Anderson, Ind., assignors, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Original application filed Feb. 17, 1910, Serial No. 544,402. Divided and this application filed Dec. 30, 1913. Serial No. 809,574. (Cl. 123—149.)

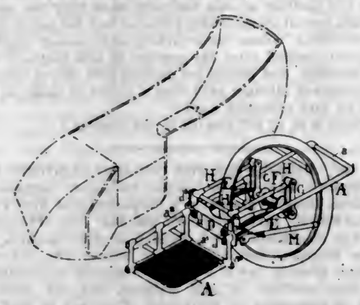


1. The method of producing ignition current which is constant in tension and volume through all angles of advance and retard, which consists in creating a constant magneto motive force constituting a fixed magnetic field, intermittently completing and reversing the path of the flux through a flux-receiving circuit having a normally stationary ignition current generating coil, and advancing or retarding the occurrence of the peak E. M. F. in the current generating coil to correspond with the advance or retard of the spark for ignition.

[Claim 2 not printed in the Gazette.]

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1,227,317. SPRING SUSPENSION FOR THE WHEELS OF SIDE CARS FOR MOTOR-CYCLES. GEORGE EDWIN RIGBY, Manchester, England. Filed Sept. 7, 1916. Serial No. 118,809. (Cl. 208—45.)



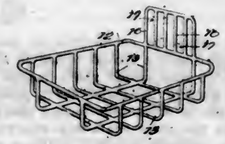
1. A spring suspension for the wheel of a side car, comprising a chassis, frame members extending laterally to the side of the car, a transverse housing bracket carried by the frame members and provided with sockets and lugs, a pair of springs each having one end secured in one of the sockets of said housing bracket and having a loop at its free end, a fork pivoted to the lugs of said bracket, axle bearings mounted in the loops at the ends of the springs, and links connecting the axle bearings with the free ends of the fork.

2. In a spring suspension for the wheels of side cars, a pair of springs, means carried by the chassis of the side car for supporting one end of each of said springs, a fork pivotally mounted on said spring supporting means, an axle bearing carried by the free end of each of the springs, each of said bearings having a side cheek on each side of its spring, an axle extending through said bearings, a bearing carried by each of the free ends of the fork, each of said bearings having a side cheek at each side of that end of the fork by which it is carried, and a pair of links at each end of the axle, one on each side of each of said springs, said links connecting the axle bearings to the bearings at the ends of said forks.

3. In a side car, supporting means extending from one side of the chassis, a pair of springs each having one end secured to said supporting means and its opposite end adapted to support one end of the wheel axle, a wheel axle, a fork pivotally mounted on said supporting means, and links, connecting the axle adjacent its opposite ends to the free ends of said forks respectively.

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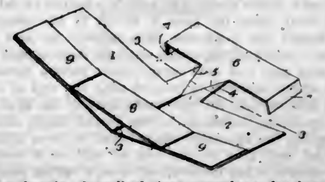
1,227,318. SOAP-DISH. DAVID RIKER, Newark, N. J. Filed Apr. 12, 1916. Serial No. 90,693. (Cl. 45—28.)



A receptacle having a vertical extension at one side adapted to bear against a fixed support and provided with a plurality of vertically directed openings spaced apart and extending in parallel relation, each of said openings being bridged at its upper extremity, a holding device including terminals in spaced relation and adapted to span a fixed support and extend through a pair of openings in the extension, and fastening devices engaging said terminals and bearing against the extension.

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1,227,319. ADVERTISING TOY. LEON C. ROBBINS, Loveland, Colo. Filed Mar. 20, 1917. Serial No. 156,073. (Cl. 244—12.)



1. The herein described toy aeroplane having at its front portion a pair of wings standing at a slight angle to each other, at its rear portion a flat tail plane, and at its intermediate portion a shank integrally connecting the wings with the plane, and a truss connecting said wings on their upper sides and holding them in proper relative position.

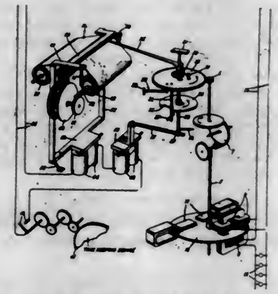
4. The herein described toy aeroplane having at its front portion a pair of wings standing at a slight angle to each other, at its rear portion a flat tail plane, and at its intermediate portion a shank integrally connecting the wings with the plane, the fold line between the wings along the center of the toy diverging in two fold lines extending through said shank to points where the side edges of the shank unite with the front edges of the tail whereby the latter and the space between the diverging fold lines stand in one plane, and means for holding the wings at

an angle to each other so that each wing and that portion of the shank forward of one of said diverging lines stands in a single plane and out of the plane of the tail.

[Claims 2 and 3 not printed in the Gazette.]

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1,227,320. DEMAND APPARATUS. LEWIS T. ROBINSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 29, 1916. Serial No. 122,923. (Cl. 234—5.5.)



1. A demand apparatus comprising an electric meter having a rotatable shaft, a second rotatable shaft, a gear loosely mounted on said second shaft, means operatively connecting said gear to the meter shaft, means whereby said gear operates to drive said second shaft when the gear is driven by the meter shaft and whereby said gear can move in the opposite direction without moving said second shaft, means for interrupting the operative engagement between said meter shaft and said gear at the end of each of a number of predetermined equal intervals of time, means for returning said gear to its initial position when the operative engagement between the gear and the meter shaft is interrupted, means for returning said second shaft to its initial position after said gear has returned to its initial position, and means for obtaining an indication of the maximum movement of said second shaft.

2. A demand apparatus comprising an electric meter having a rotatable shaft, a second rotatable shaft, a gear loosely mounted on said second shaft, means operatively connecting said gear to the meter shaft, a disk secured to said second shaft and having a peripheral slot, a pin secured to said gear and extending through the peripheral slot in said disk whereby the gear is adapted to drive said second shaft when the gear is driven by the meter shaft and whereby the gear can turn loosely on said second shaft in a backward direction without moving said second shaft, said gear and said second shaft having initial position in which said pin is located near one end of the slot in said disk so that forward movement of the gear causes a corresponding movement of the second shaft, means for interrupting the operative engagement between said meter shaft and said gear at the end of each of a number of predetermined equal intervals of time, a spring adapted to turn said gear in a backward direction when the operative engagement between the gear and the meter shaft is interrupted whereby the gear is returned to its initial position, a spiral spring connected at one end to said gear and at the other end to said second shaft whereby said second shaft is returned to its initial position when said gear is returned to its initial position, and means for obtaining an indication of the maximum movement of said second shaft.

3. A demand apparatus comprising an electric meter having a rotatable shaft, a second rotatable shaft, a gear loosely mounted on said second shaft, means operatively connecting said gear to the meter shaft, a disk secured to said second shaft and having a peripheral slot, a pin secured to said gear and extending through the peripheral slot in said disk whereby said gear is adapted to drive said second shaft when the gear is driven by the meter shaft and whereby the gear can turn loosely on said second shaft in a backward direction without moving said second shaft, said gear and said second shaft having initial positions in which said pin is located near one end of the slot in said disk so that forward movement of the gear causes a corresponding movement of the second shaft, means for interrupting the operative engagement between said meter shaft and said gear at the end of each of a number of predetermined equal intervals of time, a spring adapted to turn said gear in a backward direction when the operative engagement between the gear and the meter shaft is interrupted whereby the gear is returned to its initial position, a record chart, an indicator operatively connected to said second shaft and adapted to sweep across said chart, means for recording on said chart the position of said indicator each time the operative engagement between said gear and the meter shaft is interrupted, and a spiral spring connected at one end to said gear and at the other end to said second shaft whereby said second shaft is returned to its initial position after the position of said indicator has been recorded.

4. A demand apparatus comprising an electric meter having a rotatable shaft, a second rotatable shaft, a record chart, an indicator operatively connected to said second shaft and adapted to sweep across said record chart, an actuator loosely mounted on said second shaft, means operatively connecting said actuator to the meter shaft, means whereby said actuator operates to drive said second shaft when the actuator is driven by the meter shaft and whereby said actuator can move in a backward direction without moving said second shaft, means for interrupting the operative engagement between said meter shaft and said actuator at the end of each of a number of predetermined equal intervals of time, means for returning said actuator to its initial position when the operative engagement between the actuator and the meter shaft is interrupted, means for recording on said chart the position of said indicator each time the operative engagement between said actuator and the meter shaft is interrupted, and means for returning said shaft to its initial position after the position of said indicator has been recorded.

5. A demand apparatus comprising an electric meter having a rotatable shaft, a second rotatable shaft, a record chart, an indicator operatively connected to said second shaft and adapted to sweep across said record chart, means operatively connecting said second shaft to said meter shaft whereby the second shaft is driven by the meter shaft and whereby the second shaft can move in a backward direction without moving the meter shaft, means for interrupting the operative engagement between said two shafts at the end of each of a number of predetermined equal intervals of time, means for recording on said chart the position of said indicator each time the operative engagement between said actuator and the meter shaft is interrupted, means for returning said second shaft to its initial position after the position of said indicator has been recorded, and means for moving said record chart a predetermined distance each time a record is made on the chart by said recording means.

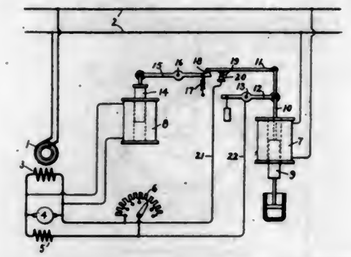
[Claims 6 to 10 not printed in the Gazette.]

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1,227,321. REGULATOR FOR DYNAMO-ELECTRIC MACHINES. PAUL ROSE, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 20, 1911. Serial No. 609,545. (Cl. 171—229.)

1. The combination of a dynamo-electric machine, an exciter therefor, and a regulator having two coacting magnetic systems, one of which is responsive to variations in a line condition of said machine, and the other of which is responsive to variations of voltage of said exciter, a lever controlled by each of said magnetic systems, said levers mechanically engaging each other, a fixed contact and a movable contact coacting therewith, said movable contact being governed by the resultant action of the levers.

2. An electrical regulator comprising coöperating contacts, a member actuating one of said contacts, a lever providing a fulcrum for said member, a winding for actuating said lever and member to cause the contacts to engage and disengage, means for actuating the contact-actuating member to vary the distance between the contacts, and a winding for actuating said means.



3. In combination, a dynamo-electric machine, a regulator therefor comprising coöperating contacts, a member carrying one of said contacts, a lever upon which said member is fulcrumed, a winding for actuating said lever and member, means for energizing said winding to cause the contacts to engage and disengage, another member for actuating the contact-carrying member, and a winding for actuating said latter member in response to variations of an electrical condition of the dynamo-electric machine.

4. In combination, a dynamo-electric machine and a regulator for controlling the excitation of said machine, said regulator comprising coöperating contacts, a member carrying one of said contacts, means for moving said member in response to variations of an electrical condition of said machine, and other means comprising an independently pivoted member for modifying the movement of said contact-carrying member.

5. The combination of an electric generator and a regulator therefor, said regulator comprising coöperating contacts arranged to control the excitation of said generator, a member carrying one of said contacts, means for moving said member in response to the voltage of said generator, an independently pivoted lever serving as a fulcrum for said contact-carrying member and thereby modifying the movement of the latter, and a winding controlling the movement of said lever.

[Claims 6 and 7 not printed in the Gazette.]

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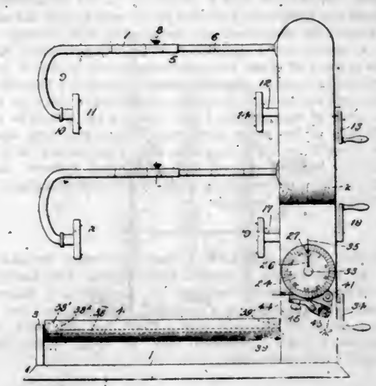
1,227,322. CLOTH MEASURING AND DISPENSING MACHINE. LOUIS ROSENFELD and JOHN W. THOMPSON, Tuscaloosa, Ala. Filed Oct. 16, 1915. Serial No. 56,265. (Cl. 33—135.)

1. In a cloth measuring and dispensing machine, means for holding a bolt of cloth for rotary movement, rolls between which the cloth may be drawn to be dispensed, means operable from said rolls to indicate the amount of cloth removed from the bolt, said rolls being formed with radial slots adapted to register with each other, and a knife movable through said slots to sever the cloth.

2. In a cloth measuring and dispensing machine, means for holding a bolt of cloth for rotary movement, rolls between which the cloth may be drawn to be dispensed, said rolls being formed with radial slots adapted to be registered with each other, a knife movable through said slots to sever the cloth, a worm driven by said rolls, a shaft mounted for rotation and for longitudinal movement, means for moving said shaft longitudinally, a worm gear mounted on said shaft and adapted to engage said worm, spring means for retaining said shaft in a position to engage said worm gear with said worm, and a dial mounted on said shaft.

3. In a cloth measuring and dispensing machine, means for holding a bolt of cloth for rotary movement, rolls between which the cloth may be drawn to be dispensed, said rolls being formed with radial slots adapted to be registered with each other, a knife movable through said slots to sever the cloth, a worm driven by said rolls, a shaft mounted for rotation and for longitudinal movement, means for moving said shaft longitudinally, a worm gear mounted on said shaft and adapted to engage said worm,

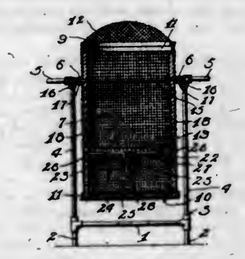




spring means for retaining said shaft in a position to engage said worm, a dial mounted on said shaft, a pin mounted on said dial, and a signal adapted to be actuated by said pin when said dial reaches a predetermined position.

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1,227,323. DISPLAY AND SELLING DEVICE. FRANKLIN H. RUSSELL, Hollandale, Miss. Filed Oct. 21, 1915. Serial No. 57,088. (Cl. 211—6.)



1. In a device of the class described, the combination of an upright supporting stand, a receptacle open at both ends, means for pivotally supporting said receptacle in said stand on a transverse pivotal axis arranged adjacent to one of the open ends of said receptacle, a swinging cover mounted on the end of said receptacle nearest to said pivotal axis, and a bottom member for said receptacle adjustable longitudinally therein from one of its open ends to a point adjacent to the other end, whereby when the cover is in closed position and the receptacle inverted said bottom may be adjusted downwardly into contact with the contents of the receptacle and when thus adjusted and the receptacle restored to its normal position said bottom will hold the contents of the receptacle in its upper portion and immediately beneath said cover.

2. In a device of the class described, the combination of an upright supporting stand, provided at opposite points nearest its top with bearings, a cylindrical receptacle made of woven wire and having open ends reinforced by annular bands, bars arranged at diametrically opposite points on the inner face of the woven wire body of the receptacle and having their ends united to said bands to

reinforce the body, said bars being formed at a point adjacent one end with alined pivot openings and upon their inner faces with longitudinal series of seats, a bottom for the receptacle movable longitudinally therein and carrying movable projections to engage said seats to adjustably position the bottom, and a pivot rod passed transversely through the receptacle and said pivot openings in the bars and having its ends rotatably mounted in said bearings.

3. A device of the class described comprising a base frame formed of pipes and connections and having a pair of vertically upright pipes projecting upwardly therefrom at its opposite sides, outwardly projecting elbows on the upper ends of said upright pipes, handles positioned in the outer ends of the same, said elbows having alining apertures therein to form bearings, and a container with a horizontal bearing rod or axle positioned between said pipes and having projecting ends on the axle adapted for positioning in the bearings.

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1,227,324. AIR-HEATER. PERCY RUSSELL, Brooklyn, N. Y., and FRANK J. SEPAS, Philadelphia, and EDWARD B. WILFORD, Merion borough, Pa., assignors to Electro Dental Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 30, 1914, Serial No. 815,507. Renewed Nov. 17, 1915. Serial No. 62,075. (Cl. 219—39.)



1. The combination in an air heater of a casing having an inlet; an outlet conduit; a heating unit in the casing connected to receive air from the inlet and deliver it to the outlet conduit; with a non-conducting sheath removably connecting the casing and the outlet conduit, and extending over that part of said conduit adjacent the casing.

2. The combination in an air heater of a casing having an inlet; an outlet conduit; a heating unit in the casing connected to receive air from the inlet and deliver it to the outlet conduit; a socket carried by the casing; a ball member attached to the outlet conduit and operative in the socket; and a spring in said socket operative upon the ball structure to cause the latter to make a tight joint with said socket.

3. The combination in an air heater of a casing having an inlet; an outlet conduit; a heating unit in the casing connected to receive air from the inlet and deliver it to the outlet conduit; with a ball and socket joint connecting the casing and the outlet conduit and including a heat insulating sheath.

4. The combination in an air heater of a casing having an inlet and an outlet; a heating unit consisting of a tube detachably screwed into said casing and communicating with said inlet and outlet; and a heating coil suspended in said tube.

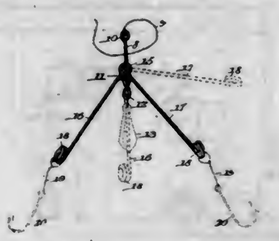
5. The combination in an air heater of a casing; a handle having two electric conductors, of which one is an air conduit; a tube in the casing; an electric conductor in the tube having one end electrically connected thereto and its other end electrically connected to said air conduit; and an inner casing electrically connected to said tube and to the second electric conductor.

[Claims 6 to 19 not printed in the Gazette.]

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1,227,325. ANGLE-SPREADER AND SWIVEL. HENRY A. SCHILLING, Brooklyn, N. Y. Filed June 17, 1916. Serial No. 104,348. (Cl. 43—7.)

1. An apparatus as characterized comprising a spreader having a centrally disposed eyelet and a plurality of legs outwardly spread therefrom, said eyelet being arranged in a plane angularly disposed to the plane incorporating said legs; and a swivel pivotally connected with said spreader by means of said eyelet, said swivel having a straight bar portion and a portion arranged in a plane angularly disposed to said straight bar portion.



2. An apparatus as characterized comprising a spreader having a centrally disposed eyelet and a plurality of legs outwardly spread therefrom, said eyelet being arranged in a plane angularly disposed to the plane incorporating said legs, and a swivel pivotally connected with said spreader by means of said eyelet, said swivel having a straight bar portion and an eyelet at the extremity thereof arranged in a plane angularly disposed to said straight bar portion.

3. An apparatus as characterized comprising a swivel having a straight bar portion and eyelets at both ends thereof, one of said eyelets being disposed in a plane incorporating said straight bar portion and the other of said eyelets being arranged in a plane angularly disposed to a plane incorporating said straight bar portion, the point of deflection of said last-mentioned eyelet being approximately the junction of said eyelet and said straight bar portion.

4. An apparatus as characterized comprising a swivel having a straight bar portion and eyelets at both ends thereof, one of said eyelets being disposed in a plane incorporating said straight bar portion and the other of said eyelets being arranged in a plane angularly disposed to a plane incorporating said straight bar portion, the point of deflection of said last-mentioned eyelet being approximately the junction of said eyelet and said straight bar portion; in combination with a spreader having legs disposed in paired relation and flared from a centrally disposed integrally formed eyelet, said eyelet being arranged in a plane angularly disposed to a plane incorporating said legs.

5. An apparatus as characterized comprising a swivel having a straight bar portion and eyelets at both ends thereof, one of said eyelets being disposed in a plane incorporating said straight bar portion and the other of said eyelets being arranged in a plane angularly disposed to a plane incorporating said straight bar portion, the point of deflection of said last-mentioned eyelet being approximately the junction of said eyelet and said straight bar portion; in combination with a spreader having legs in paired relation and flared from a centrally disposed integrally formed eyelet, said eyelet being arranged in a plane angularly disposed to a plane incorporating said legs; and a link operatively connected with the angularly disposed eyelet of said swivel.

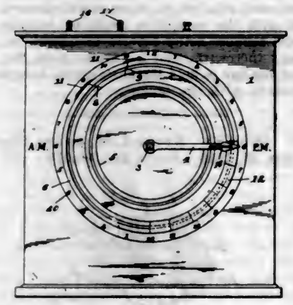
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1,227,326. ELECTRIC TIME-SWITCH. GEORGE E. SCHINDLER, Ashland, Wis. Filed Aug. 9, 1916. Serial No. 114,081. (Cl. 200—14.)

1. In a time switch, a casing having a circular scale, a circular track mounted on said casing within said scale and formed with a T-shaped slot, an arm, and contacts shaped to slidably engage the walls of the slot in said track and adapted to engage said arm.

2. In a time switch, a casing having a circular scale, a circular track mounted on said casing within said scale and formed with a T-shaped slot, an arm, and contacts shaped to slidably engage the walls of the slot in said track and adapted to engage said arm, a second track, and





a contact carried by said arm and continuously engaging the walls of a slot in said second track.

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1,227,327. EGG AND CREAM BEATER. JOHN ELMER SHEAFFER, Washington, D. C. Filed Apr. 4, 1916. Serial No. 88,914. (Cl. 259—132.)



1. A beater comprising a plurality of disks each having a series of agitators which are concentrically arranged, all of the corresponding active points of all of the agitators lying in the same plane.

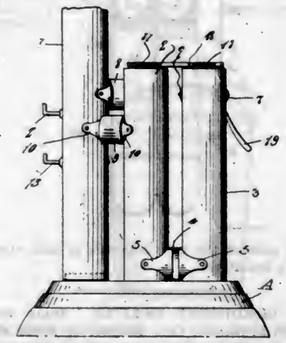
2. A beater comprising upper and lower disks, agitators carried by the disks, the agitators of the lower disks bearing against the under surface of the upper disk.

3. A beater comprising a handle, a shaft journaled in the handle, arms turnably mounted with relation to the shaft and handle, means mounted upon the handle for turning the shaft and arms, disks of different diameters mounted upon the shaft and arms, said disks having their edge portions lying in the same plane and agitators carried at the peripheral portions of the disks.

4. A beater comprising a handle, a shaft journaled in the handle arms turnably mounted with relation to the handle, means mounted upon the handle for turning the shaft and arms, disks carried by the arms and shaft, coil members carried at the peripheral portions of the disks, the convolutions of the coil members carried by the disks which is mounted upon the shaft bearing against the underside of the disk which is carried by the arms.



1,227,328. ATTACHMENT FOR HEATING-STOVES. GEORGE C. SHEPPERD, Miami Station, Mo., assignor of one-half to Robert P. Leach, Miami Station, Mo. Filed Mar. 29, 1916. Serial No. 87,486. (Cl. 257—177.)



The combination with a plurality of intercommunicating heating drums having scraping members located therein, each of the scraping members having one end extending through one end of the adjacent drum, of gears carried by the extended ends of the scraping members, rack bars engaging the gears, and an operating lever pivotally located between certain adjacent drums and having connection with the rack bars.

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1,227,329. NECKTIE-FORMER. ALBERT LEMUEL SIMPSON, San Diego, Cal. Filed July 29, 1914. Serial No. 853,864. (Cl. 2—84.)



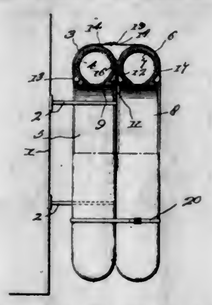
A necktie former consisting of a single piece of sheet material curved longitudinally to provide a hollow body portion including front and rear walls having overlapped longitudinal edges, the upper portion of the edge of the rear wall being rounded and spaced a substantial distance from the front wall to facilitate insertion of the edge of a necktie and having the lower portion of said edge of the rear wall turned inwardly and substantially engaged with the front wall, whereby, as the necktie is moved longitudinally between the overlapped edges of the hollow body it is guided or gathered into said body.

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1,227,330. AUTOMOBILE-TIRE-FASTENING DEVICE. GEORGE SKARIE, Albert Lea, Minn. Filed Jan. 23, 1917. Serial No. 143,964. (Cl. 224—29.)

A vehicle tire fastening device of the character described including a hook adapted to engage the rim of a tire support, and a strap having a bight attached to said hook forming two branches adapted to pass together beneath and over the tire support and the tire mounted thereon,

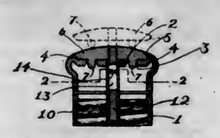
and one of said branches being adapted to pass beneath and over a second tire, with means for adjustably con-



necting the ends of the two branches of said strap, substantially as described.

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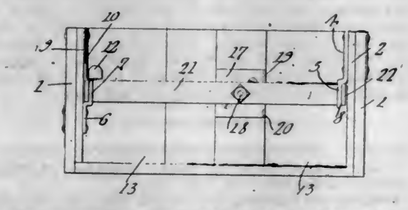
1,227,331. CONDIMENT-HOLDER. ISAAC SHERMAN SLADE, San Francisco, Cal., assignor to Slade Manufacturing Company, San Francisco, Cal., a Corporation of California. Filed Sept. 26, 1914. Serial No. 863,686. (Cl. 65—45.)



The combination with a condiment holder, of a stopper therefor, said stopper including a cylindrical shell having a perforated top, which top is recessed, said recess having a plane bottom wall and upwardly and outwardly inclined side walls, a closure provided with a plane inner face and upwardly and outwardly inclined side walls, lugs secured to and depending from the under side of said plane inner face and having a length greater than the depth of said perforations in said top, and means adapted to permit said closure to move in a vertical plane into and out of said recess by the inverting of the condiment holder, said lugs adapted to clear said perforations of the contents of the condiment holder when the closure moves into said recess, said inclined edges of the closure having frictional engagement with the inclined side walls of the recess when in a closed position thus preventing the contents of the condiment holder from becoming wet or the entering of foreign matter therein.

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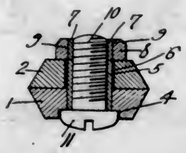
1,227,332. END-GATE FOR WAGONS. CHARLES D. SMITH, Paris, Ill. Filed Dec. 8, 1915. Serial No. 65,723. (Cl. 21—21.)



The combination with a vehicle body having oppositely extending retaining tongues secured to the opposed walls thereof, of an end gate including hingedly connected sections, an attaching plate secured to one of the sections adjacent the hinge thereof, a stud outstanding from the plate, upper and lower stop ears extending from the plate adjacent one edge thereof, a locking bar pivotally mounted on the stud and limited in its swinging movement by the stop ears, ears extending at right angles from the ends of the bar and adapted to move simultaneously into engagement with the respective retaining tongues, the free ends of the tongues being beveled to deflect the ears into engagement therewith, and a gravity latch for engaging one end of the bar to hold the bar against movement while in engagement with the tongues.

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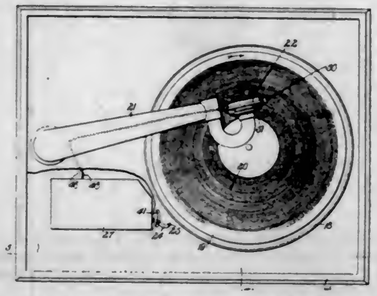
1,227,333. SHEARS. HENRY A. W. SMITH, Chatham, Va. Filed May 26, 1916. Serial No. 100,079. (Cl. 30—13.)



An implement embodying a pair of blades, one having a sleeve projecting therefrom, the other blade being mounted for rotation upon said sleeve, the free end of the sleeve being substantially flush with the outer face of the second mentioned blade and having a plurality of lugs projecting therefrom, a nut bearing against the outer face of the second mentioned blade and having a plurality of notches at its aperture receiving said lugs to hold and center the nut, and a bolt extending snugly through said sleeve and threadedly engaging the nut between the lugs.

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1,227,334. AUTOMATIC STOP FOR PHONOGRAPHS. JAMES EDWARD SOONS, New York, N. Y., assignor of sixty one-hundredths to Edward Caterson, New York, N. Y. Filed Oct. 16, 1916. Serial No. 125,823. (Cl. 74—46.)



1. In an automatic stop for phonographs, the combination with a needle holder, a brake, and power means to set the brake, said power means including a normally open electric circuit, of a pair of normally spaced contacts in said circuit carried by the needle holder, the movable contact aforesaid being mounted for free vertical endwise slidable movement and positioned by gravity in spaced relation to the fixed contact and being tiltable laterally into engagement with the fixed contact when the end of the record is reached.

2. In an automatic stop for phonographs, the combination of a brake, power means tending to set the brake, electric devices tending to initiate the action of the power means aforesaid, an electric circuit associated with the electric devices, said circuit including a pair of relatively fixed and movable normally spaced contacts, the movable contact comprising a straight metal bar supported for free endwise up and down movements and adapted for lateral tilting to engage the fixed contact irrespective



of its relative vertical position in its support, said contact devices being adapted to be inverted and to meet when they are so inverted.

3. The herein described means for automatically setting a brake, the same comprising an electric circuit, a vertical tubular contact support, a contact fixed to the support, a relatively movable contact carried within the support and movable freely therein in endwise directions and also laterally with respect to the fixed contact, said movable contact being adapted to drop by gravity into position spaced from the fixed contact but being movable laterally by normal operation of the machine into position to engage the fixed contact.

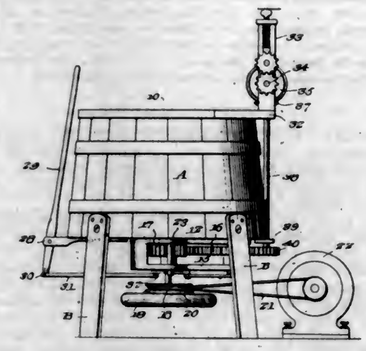
4. The herein described means for automatically applying a brake, the same including an electric circuit, a contact support for the circuit, one branch of the circuit leading directly to the support, a fixed contact carried by the support to which the other branch of the circuit leads, a relatively movable contact carried within the support and having electric connection therewith, said movable contact being freely movable endwise in the support and adapted to assume a position automatically when starting the machine in spaced relation to the fixed contact but movable automatically by the normal operation of the machine into engagement with the fixed contact at the end of the record, and means carried by the contact support to limit the endwise movements of the movable contact therein.

5. In an automatic stop for phonographs, the combination of a tubular contact support, means to secure said support in a vertical position to a reproducer, an electric circuit, relatively fixed and movable contacts carried by the contact support, the fixed contact being adjacent the lower end of the support, the movable contact being slidable freely endwise within the support by the action of gravity, spaced means within the upper portion of the support coöperating with the upper end of the movable contact to limit the movements of the movable contact and serving thereby to determine the position of the movable contact with respect to the fixed contact, and brake devices set into operation by the closing of the circuit.

[Claims 6 to 9 not printed in the Gazette.]

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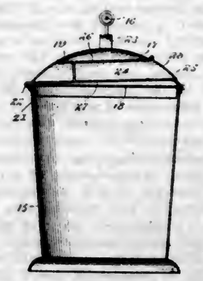
1,227,335. GEARING FOR WASHING-MACHINES. JACOB D. SPANGLER, Meyersdale, Pa. Filed Apr. 28, 1916. Serial No. 94,218. (Cl. 74—50.)



A washing machine gearing comprising a bracket support adapted to be fixed to the bottom of the tub and including a plate arranged in spaced parallel relation to and below said tub bottom, an agitator spindle mounted in said plate, intermeshing gears mounted in the bracket above the plate, a power connection for one of the gears, a crank operated by the other of said gears, an arm extending from the spindle, a link connecting said arm and crank to drive the spindle by means of the gears, and a manually operable member adapted for connection with the arm, said arm, link, crank, and manually operable connection being disposed below the plate of the bracket.

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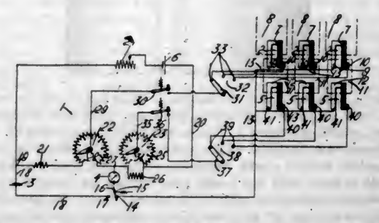
1,227,336. TOILET-PAIL. SALLY M. SPENCER, Flagstaff, Ariz. Filed Aug. 28, 1915. Serial No. 47,793. (Cl. 220—55.)



A toilet pail including a body, and a closure for said body, said closure comprising a metallic sheet, the margin of which is formed to provide an annular flange for snug engagement with the upper inner periphery of the body, a circumferential flange pressed in said sheet immediately above the annular flange to limit the movement of the closure in the body, and a flat disk or bottom member supported by said circumferential flange, the intermediate portion of the sheet being bulged to provide a casing adapted to receive toilet articles, a door being hinged on said casing to afford access to the contents.

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1,227,337. TEMPERATURE-MEASURING INSTRUMENT. THOMAS SPOONER, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 28, 1913. Serial No. 770,476. (Cl. 73—32.)



1. A temperature-measuring instrument comprising two thermo-couples and a potentiometer operatively connected to the thermo-couples and adapted to determine the difference in temperature between the hot and cold junctions thereof and to indicate the sum of said temperature differences.

2. A measuring instrument comprising a main and an auxiliary thermo-couple, a receptacle containing the cold junction of the main and the hot junction of the auxiliary thermo-couple, a potentiometer operatively connected to the thermo-couples for determining the difference in temperature between the junctions of the main thermo couple, and means operatively connected to the auxiliary thermo-couple for increasing this indication an amount proportional to the difference in temperature between the junctions of the auxiliary thermo-couple.

3. In a temperature-measuring instrument, the combination with a main thermo-couple, of a receptacle containing the cold junction of said thermo-couple, a second thermo-couple having its hot junction also in said receptacle and in close proximity to the cold junction of said main thermo-couple, means connected to said main thermo

couple for measuring the difference in temperature between its hot and cold junctions, means connected with said second thermo-couple for measuring the difference in temperature of the cold junction of said main thermo-couple and the temperature of the room, and means for indicating the temperature of the hot junction of said main thermo-couple.

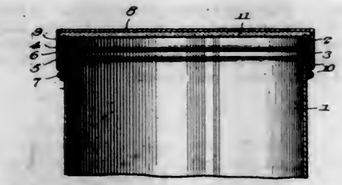
4. In a temperature-measuring instrument, the combination with a main thermo-couple, of a receptacle containing the cold junction of said thermo-couple, a second thermo-couple having its hot junction also in the said receptacle and in close proximity to the cold junction of the main thermo-couple, and potentiometer circuits operatively connected to the thermo-couples for determining the temperature differences of the junction of the thermo-couples and for measuring thereby directly the temperature of the hot junction of the main thermo-couple.

5. In a temperature-measuring instrument, the combination with a main thermo-couple, of a receptacle containing the cold junction of said thermo couple, a second thermo-couple having its hot junction also in said receptacle and in close proximity to the cold junction of said main thermo-couple, potentiometer circuits comprising a source of electromotive force, a standard cell, a galvanometer, a plurality of resistances, and a plurality of circuit interrupters for determining the difference in temperature between the hot and cold junctions of said main thermo-couple, and means for increasing this indication an amount proportional to the difference in temperature between the hot and cold junctions of said second thermo-couple.

[Claims 6 to 9 not printed in the Gazette.]

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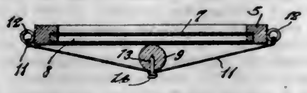
1,227,338. CONTAINER. FRANK STEFFAN, Riverside, Cal. Filed July 3, 1915. Serial No. 37,859. (Cl. 220—80.)



In a container, a body having a cylindrical wall around its neck or mouth provided with an exteriorly arranged bead which presents a ridge, an upper cam surface and a lower cam surface which merge into said ridge, in combination with a cover having a cylindrical wall adapted to fit around said bead and also having an inwardly and upwardly extending elastic clenching flange on the inner and lower side of said wall and normally spaced at its inner edge therefrom and adapted to ride over the bead of the container body and by spring action engage its inner, free edge against and co-act with the lower camming surface of said body bead to closely and tightly hold the cover in place.

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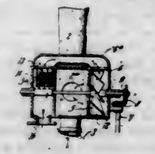
1,227,339. BILL-HOLDER. SAMUEL J. STONE, Tippecanoe City, Ohio. Filed Feb. 8, 1915. Serial No. 6,907. (Cl. 40—145.)



In combination, a post, a flat frame positioned against said post and including vertical and horizontal members, eye-bolts secured to the vertical members of said frame, a headed fastener secured in said post behind said frame, fastening wires coiled about said fastener and positioned under the head thereof and having the outer ends secured to said eye-bolts to prevent swinging movement of the frame, and means positioned through the horizontal members of the frame and the post to rigidly hold the frame against vertical movement thereon.

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1,227,340. DRAFT-INDUCING, SPARK-DESTROYING, AND FUME-CONVEYING APPARATUS FOR LOCOMOTIVES AND THE LIKE. WILLIAM THOMAS STOW, Coolamon, New South Wales, Australia. Filed Mar. 18, 1915. Serial No. 15,312. (Cl. 183—77.)



1. A spark arresting apparatus comprising in combination a chamber for the products of combustion, a spark beating device, a fan in said chamber to draw products of combustion and force them to a space containing said spark beating device, said device having arms to rotate past other arms substantially as described.

2. A spark arresting apparatus comprising in combination a casing adapted to be arranged in communication with a smoke-box, a chamber in each end of the casing, a fan in one chamber, fixed arms in the second chamber, and a plurality of revoluble arms operatively mounted in the second chamber, substantially as described.

3. A spark arresting apparatus comprising in combination a chamber to receive the products of combustion, a fan chamber in one end and a beater chamber on the opposite end of said first-mentioned chamber, an opening between the first mentioned chamber and the fan chamber, a passage leading from the fan chamber to the beater chamber, and an outlet from the beater chamber for the products of combustion, substantially as described.

4. A spark arresting apparatus comprising in combination a chamber to receive the products of combustion, a fan chamber in one end and a beater chamber on the opposite end of said first-mentioned chamber, an opening between the first mentioned chamber and the fan chamber, a passage leading from the fan chamber to the beater chamber, an outlet from the beater chamber, a spindle passing through the three chambers and fitted with a fan and beaters to operate in their respective chambers, fixed arms in the beater chamber, and gearing for conveying motion to said spindle, substantially as described.

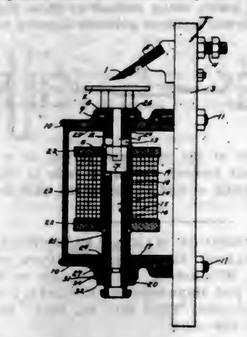
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1,227,341. ELECTROMAGNETIC DEVICE. HARRY F. STRATTON, Cleveland, Ohio, assignor to The Electric Controller & Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 22, 1915. Serial No. 68,219. (Cl. 175—281.)

1. In an electromagnetic device, a winding, a magnetic circuit including a stationary part, a movable core-member, and a pole-piece, all energized by current in the winding, the core-member having a reduced extension reciprocable in the pole-piece, means for establishing an operating gap between the core-member and the stationary part of the magnetic circuit and a lock-out gap between the unreduced portion of the core-member and the pole-piece, and a non-magnetic spacing means disposed between the stationary part of the magnetic circuit and the pole-piece.

2. In an electromagnetic device, a winding, a magnetic circuit including a stationary part, a movable core-member, and a pole-piece, all energized by current in the winding, the core-member having a reduced extension reciprocable in the pole-piece, means for establishing an operating gap between the core-member and the stationary part of the magnetic circuit and a lock-out gap between the unreduced portion of the core-member and the pole-piece, and a non-magnetic sleeve surrounding the pole-piece and

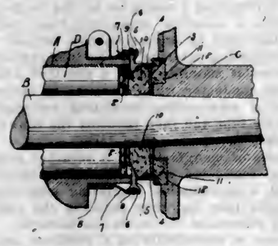




spacing the latter from the stationary part of the magnetic circuit.

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1,227,342. AXLE OR SHAFTING GUARD. PEARL E. TARLTON, Long Beach, Cal. Filed July 14, 1916. Serial No. 109,320. (Cl. 64—22.)



1. The combination with an axle and a casing therefor, and a wheel carried by the axle, of a hollow body located at one end of the casing and encircling the axle, a packing body secured within the hollow body and engaging the axle, and a flexible connection between the body and the casing, for the purpose specified.

2. The combination with an axle and a casing therefor and a wheel carried by the axle, of a hollow movable body located at one end of the casing and encircling the axle, a packing body secured within the hollow body and engaging the axle, and a body carried by the inner face of the hub of the wheel and formed of comparatively soft material and engaging the outer end of the hollow body, for the purpose specified.

3. The combination with an axle and a casing therefor, and a packing carrying hollow body encircling the axle and located at one end of the casing, of a circular flange carried by the body and having a groove, a flexible element having one end secured to the casing and its opposite end received by the groove in the flange, and a retaining ring fitted within the groove and engaging the adjacent end of the flexible element.

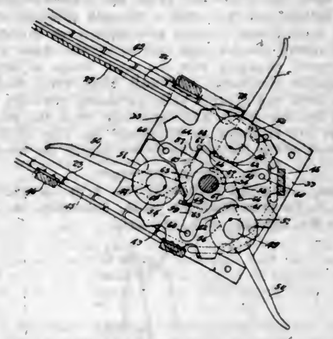
4. The combination with an axle and a casing therefor and a packing carrying body located at one end of the hollow body and surrounding the axle, of a hollow body formed of flexible material having one end connected to the packing carrying body and its opposite end receiving the adjacent end of the casing, and a clamping ring detachably connecting the hollow body to the casing.

5. The combination with an axle and a casing therefor, of a packing carrying hollow body encircling the axle and located at one end of the casing, a flange formed at one end of the hollow body and provided with a groove, a second hollow body formed of flexible material having one end secured to the casing and its opposite end engaging over the flange on the first-mentioned hollow body and extending into the groove in the flange, and fastening means positioned within the groove in the flange and engaging the adjacent end of the second mentioned hollow body.

[Claim 6 not printed in the Gazette.]

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1,227,343. SHEAF-LOADER. EARL EDMUND THOMPSON, Winnipeg, Manitoba, Canada. Filed June 29, 1916. Serial No. 106,667. (Cl. 214—2.)



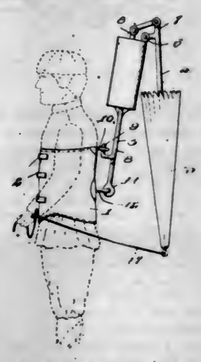
1. A sheaf loader pick up, in combination with an endless conveyer and chain wheels comprising a sheaf loader pick up comprising a pair of chain wheels, spaced cross shafts rotatably mounted in the pair of chain wheels, a set of prongs extending from each of the cross shafts, similar rollers secured to the ends of the cross shafts, an adjacent conveyer, tracks carried by the lower end of the conveyer frame and engageable with the rollers and adapted to rotate the rollers, one in the forward direction and the other in the reverse direction and means for locking the shafts against rotation during the interval that the rollers are disengaged from the tracks.

2. A sheaf loader pick up in combination with an endless conveyer including a frame, and chain wheels for the conveyer, comprising a sheaf loader pick up comprising a pair of chain wheels, spaced cross shafts rotatably mounted in the pair of chain wheels, a set of prongs extending from each of the cross shafts, similar rollers secured to the ends of the cross shafts, an adjacent conveyer, side plates permanently secured to the lower end of the conveyer frame, short length roller tracks extending inwardly from the side plates and disposed at different radii and adapted in the rotation of the chain wheels to engage with the rollers and effect, one a reverse rotation of the rollers and the other the forward rotation of the rollers and means for locking the shafts against rotation during the interval that the rollers are clear of the tracks.

3. A sheaf loader pick up in combination with an endless conveyer including a frame, and chain wheels for the conveyer, comprising a sheaf loader pick up comprising a pair of chain wheels, spaced cross shafts rotatably mounted in the pair of chain wheels, a set of prongs extending from each of the cross shafts, similar rollers secured to the ends of the cross shafts, an adjacent conveyer, side plates permanently secured to the lower end of the conveyer frame, short length roller tracks extending inwardly from the side plates and disposed at different radii and adapted in the rotation of the chain wheels to engage with the rollers and effect, one a reverse rotation of the rollers and the other a forward rotation of the rollers, catch blocks secured permanently to the shafts, pivoted spring pressed dogs carried by the chain wheels and normally engaging with the catch blocks to lock the same against movement and means for tripping the dogs to release the catch blocks at the instant the rollers engage the roller tracks.

4. A sheaf loader pick up in combination with an endless conveyer including a frame, and chain wheels for the conveyer, comprising a sheaf loader pick up comprising a pair of chain wheels, spaced cross shafts rotatably mounted in the pair of chain wheels, a set of prongs extending from each of the cross shafts, similar rollers secured to the ends of the cross shafts, an adjacent conveyer, side plates permanently secured to the lower end of the conveyer frame, short length roller tracks extending inwardly from the side plates and disposed at different radii and adapted in the rotation of the chain wheels to engage with the rollers and effect, one a reverse rotation of the rollers and the other a forward rotation of the rollers, catch blocks secured permanently to the shafts, pivoted spring pressed dogs carried by the chain wheels and normally engaging with the catch blocks to lock the same against movement, said dogs being fitted with extending heels and a catch piece extending inwardly from each of the side plates and engageable with the heels of the dogs and designed to disengage the dogs from the catch block at the instant the rollers engage the tracks.

1,227,344. SAFETY-PARACHUTE FOR AVIATORS. KAJA P. TOGSTAD, Maddock, N. D. Filed Feb. 21, 1917. Serial No. 150,105. (Cl. 244—21.)



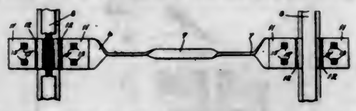
1. A safety parachute attachment for aviators comprising a belt adapted to be secured to the person of the aviator, a staff section swiveled to the belt, a second staff section pivotally connected with the first-named staff section, a parachute body carried by the second staff section, means for normally connecting the first-named staff section with the belt to hold said staff section in an erect position, and means for simultaneously releasing said holding means and throwing the pivoted staff section and parachute body into position for action.

3. A safety parachute attachment for aviators comprising a belt adapted to be worn by the aviator, a keeper member upon said belt, a lower staff section, an upper staff section pivotally mounted upon the lower staff section, a parachute body carried thereby, a rod slidably mounted in the lower staff section and pivotally connected to the upper staff section, a pivotal connection between said rod and the belt, a latch carried by the rod to engage the keeper on the belt to hold the lower staff member in an upright position, and a spring acting upon the rod for moving the same to release said latch member and swing the upper staff member and parachute body to an upright operative position.

[Claim 2 not printed in the Gazette.]

1,227,345. RAILROAD-TIE. ALEXANDER W. TONN, Milwaukee, Wis. Filed Mar. 9, 1915. Serial No. 13,164. (Cl. 238—6.)

A railway tie comprising end blocks having transverse grooves in their upper surfaces, a connecting plate having downwardly directed off-sets seated in the grooves, rail holding plates disposed on the opposite sides of the rails engaged in the off-sets, means for attaching the plates to the blocks, said plates being formed at their inner ends with upwardly bowed resilient portions adapted to engage



under the treads of the rails and permit of a limited vertical movement thereof, the inner ends of the bowed portions terminating at and engaging the base flanges of the rails.

1,227,346. METHOD OF MAKING ELECTRICAL CONDUCTORS. SAMUEL TROOD, Edgewood Park, and GUSTAVE CHOVAN, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 28, 1913. Serial No. 757,357. (Cl. 205—18.)



1. The method of manufacturing electrical conductors that consists in disposing a conductor having an insulating covering within a seamless conducting tube and then reducing the tube only by successive steps until it closely engages the insulating covering of the said conductor.

2. The process of manufacturing a sheathed and insulated electrical conductor which consists in inclosing a conductor and a surrounding insulating material in a seamless metallic tube and then reducing the tube until it closely surrounds the insulating material.

3. The process of manufacturing a sheathed and insulated electrical conductor which consists in inclosing a conductor and a surrounding insulating material in a seamless metallic tube and then reducing the tube only until it closely surrounds the insulating material.

4. The process of manufacturing a sheathed and insulated electrical conductor which consists in inclosing a conductor and a surrounding insulating material in a seamless metallic tube of relatively large diameter and then reducing, by successive steps the tube only until it closely surrounds the insulating material.

1,227,347. PAJAMAS. JOHN PEASE VAN KIRK, Bradley Beach, N. J., assignor to Steiner & Son, Asbury Park, N. J. Filed May 4, 1915. Serial No. 25,711. (Cl. 2—144.)

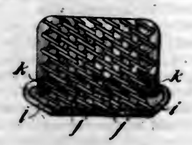


2. Pajamas comprising a coat and trousers, said trousers having a front fly, side seams, a rear drop flap and a waistband at the upper end, the drop flap being entirely free between the side seams, the trousers being permanently secured at the waistline to the inside of the coat from the side seams forwardly to a point located at each side of the front center of the trousers, guide loops secured to the waistband of the trousers, straps at the free upper end of the drop flap adapted to pass through the aforesaid guide loops and be fastened at the front of the trousers, the coat overhanging the trousers and drop flap thereof.

[Claim 1 not printed in the Gazette.]



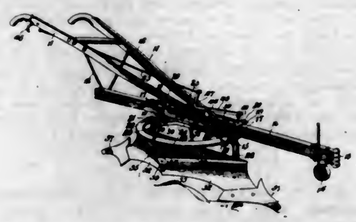
1,227,348. TIRE. ALFRED EDMUND WALE, Coleshill, England. Filed Mar. 4, 1914. Serial No. 822,430. (Cl. 152—2.)



1. The combination with a rim of a tire mounted thereon and comprising in combination a body, a base of interlaced wire helices arranged circumferentially of said rim, said rim having apertured portions rigid therewith to which said helices are connected, a second set of interlaced wire helices arranged substantially radially in said body, said radial wire helices being threaded at their ends nearest the said rim into the interlaced helices of said base.

2. The combination with the rim of a wheel of a tire mounted thereon and comprising a body, a base of interlaced wire helices arranged circumferentially of said rim, said rim having portions rigid therewith to which said helices are connected, a second set of wire helices arranged substantially radially in said body, said radial wire helices being threaded at their ends nearest the said rim with the interlaced helices of said base.

1,227,349. REVERSIBLE PLOW. FRANCISCO DRALVERADO WALLACE, Westfield, N. Y., assignor of one-third to Alvin Gifford and one-third to Reuben W. Gifford, Cleveland, Ohio. Filed May 6, 1916. Serial No. 95,861. (Cl. 97—27.)



1. In a reversible plow, a turntable, a double land-side arranged beneath the turntable, a pair of mold boards carried by the turntable adjacent each end of the land-side and connected thereto and extending backwardly and flaring outwardly therefrom, the inner ends of said mold-boards abutting in laterally spaced relation from the land-side, and a post depending from the side of the turntable above the meeting ends of said mold-boards and secured at its lower end to the meeting ends of the mold-boards.

2. In a reversible plow, a turntable, diametrically arranged standards depending from the turntable, a double land-side arranged below the turntable and having connection with said depending standards, mold-boards also connected to said standards and extending backwardly and flaring outwardly from the land-side, and a post connected to the inner ends of said mold-boards for joining the same, said post extending upwardly and connected with the turntable to brace the mold-boards.

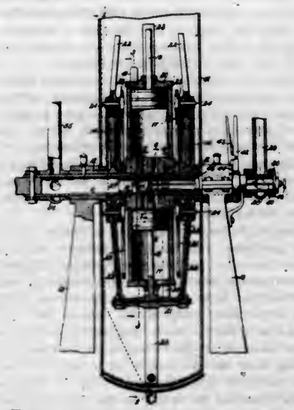
3. In a reversible plow, a turntable, diametrically arranged standards depending from the turntable, a double land-side extending diametrically across and beyond the under side of the turntable, a pivot bolt carried by the turntable and extending downwardly and having rigid connection with the intermediate portion of the land-side, a pair of mold-boards each carried by a respective standard and extending backwardly and flaring outwardly from the land-side, the rear ends of said mold-boards meeting, and a post connecting the meeting ends of the mold-boards and extending upwardly and connected with the turntable.

4. In a reversible plow, a turntable, a double land-side, a pair of mold-boards, means for connecting the ends of the land-side and the mold-boards together, said mold-boards having their inner ends abutting in spaced relation from the intermediate portion of the land-side, diametrically arranged standards depending from the turntable and connected to the adjacent ends of the land-side and the mold-boards, a post connecting the abutting ends of the mold-boards and having its upper end secured to the turntable, and a pivot bolt depending centrally through the turntable and secured at its lower end to the intermediate portion of the land-side, said standards, post, and pivot bolt providing four points of support and connection for the land-side and mold-boards with the turntable.

5. In a reversible plow, a substantially circular turntable, a double plow point structure arranged beneath the turntable, a plow beam, arcuate guides each provided with circumferentially spaced means embracing the turntable, means for mounting the guides rigidly to the under side of the plow beam and in spaced-apart relation so as to engage the turntable at diametrically opposite points, said arcuate guides extending laterally from the opposite sides of the plow beam and conforming in curvature to the turntable so as to retain the same from lateral displacement, and means for pivotally connecting the plow structure to the beam.

[Claims 6 and 7 not printed in the Gazette.]

1,227,350. ROTARY ENGINE. AXELL WATTERBERG, Sanish, N. D. Filed Oct. 23, 1916. Serial No. 127,157. (Cl. 121—64.)



1. In a rotary engine, a tubular shaft, a plurality of cylinders mounted to rotate with the shaft, means for supplying motive fluid to the shaft, means for distributing the fluid to the cylinders, a piston in each cylinder, a rod for each piston, a stationary eccentric for said

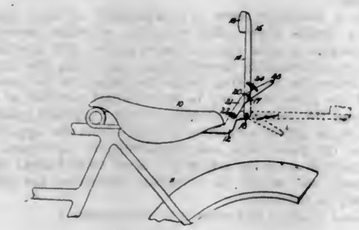
shaft, an eccentric strap, a connecting rod from each piston to the strap, and means revoluble with the cylinders for guiding the movement of the connecting rods at the strap, and means for distributing the fluid to the cylinders including means for controlling the exhaust from the cylinders through the shaft.

7. In a rotary engine, a tubular shaft, a valve casing mounted to revolve with the shaft, cylinders on the casing to revolve therewith, a tubular valve in the casing projecting out of the tubular shaft, said valve having admission and exhaust ports, said casing having passages to both ends of each cylinder, said passages adapted to register with the ports of the valve when the casing is rotated, means for supplying motive fluid to the valve, a secondary valve in the first valve, said secondary valve having admission ports registering with the admission ports of the main valve, means for revolving said secondary valve within the main valve whereby the size of the ports in the main valve may be varied, yielding means carried by the secondary valve for engaging the main valve whereby the two valves may be frictionally locked, a piston in each cylinder, and motion-transmission means from the pistons to the shaft to transform the reciprocating motion of the piston into rotary motion of the shaft.

[Claims 2 to 6 and 8 to 10 not printed in the Gazette.]

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1,227,351. FOLDING BACK. HOWARD W. WEED, Stamford, Conn. Filed Jan. 4, 1917. Serial No. 140,592. (Cl. 208—138.)



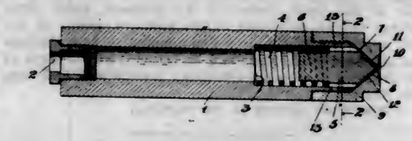
1. A folding back for the saddle of a motor cycle, bicycle and like machine, comprising a support held on the saddle, a back mounted to swing on the said support from upright to horizontal position and vice versa, the back having a notch, a combined catch and releasing lever fulcrumed on the said support and having a handle, and a pin on the said lever and adapted to engage the said notch to lock the back in upright position.

2. A folding back for the saddle of a motor cycle, bicycle and like machine, comprising a support held on the saddle, a back mounted to swing on the said support from upright to horizontal position and vice versa, the back having a notch, a combined catch and releasing lever fulcrumed on the said support and having a handle, a pin on the said lever and adapted to engage the said notch to lock the back in upright position, and a spring connecting the said back with the said lever.

3. A folding back for the saddle of a motor cycle, bicycle and like machine, comprising a support held on the saddle, a back mounted to swing in the said support from upright to horizontal postion and vice versa, a combined catch and releasing lever fulcrumed on the said support and having a handle, coöperating means on the said lever and back to lock the back in upright position, and a spring for holding the coöperating means in engagement.

4. A folding back for the saddle of a motor cycle, bicycle and like machine, comprising a support held on the saddle, a back mounted to swing on the said support from upright to horizontal position and vice versa, a combined catch and releasing lever fulcrumed on the said support and having a handle, coöperating means on the said lever and back to lock the back in upright position, and a spring connecting the said back with the said lever.

1,227,352. ATOMIZER. WILLIAM ALBERT WHITE, New York, N. Y. Filed Nov. 15, 1913. Serial No. 801,122. (Cl. 137—86.)



1. An atomizer consisting of a tube with a cap fitting removably thereover, said cap having a central orifice of diameter greater than its axial depth, a plug in said tube comprising a cylindrical portion and a frusto-conical portion, said cylindrical portion having longitudinal peripheral grooves and said frusto-conical portion having tangential grooves in its face which communicate with said longitudinal grooves, and a diminishing cone continuing from said frusto-conical portion, in fixed relation therewith, toward said orifice; said cap forming a conical chamber anterior to said orifice, the wall of said chamber providing a seat for said frusto-conical portion, and providing a space surrounding said diminished cone to form a permanent passage between said tangential grooves and said orifice, whereby fluid enters said passage at an obtuse angle from the grooves, follows therefrom in the same conical zone into the aforesaid conical chamber, and forms therein a whirling film centering at the orifice for lateral dispersal upon emission from said orifice, and a spring seating in said tube and bearing against said plug, to firmly hold its frusto-conical portion against said conical chamber wall.

2. An atomizer consisting of a tube with a cap fitting removably thereover, said cap having a central orifice of diameter greater than its axial depth, a plug in said tube comprising a cylindrical portion and a frusto-conical portion, said cylindrical portion having longitudinal peripheral grooves and said frusto-conical portion having tangential grooves in its face which communicate with said longitudinal grooves, and a diminishing cone continuing from said frusto-conical portion in fixed relation therewith, toward said orifice, the rearward portion of said plug being of reduced diameter to provide a clearance between it and the tube; said cap forming a conical chamber anterior to said orifice, the wall of said chamber providing a seat for said frusto-conical portion, and providing a space surrounding said diminished cone to form a permanent passage between, said tangential grooves and said orifice, whereby fluid enters said passage at an obtuse angle from the grooves, follows therefrom in the same conical zone into the aforesaid conical chamber, and forms therein a whirling film centering at the orifice for lateral dispersal upon emission from said orifice, and a spring seating in said tube and bearing against said plug, within the aforesaid clearance, to firmly hold its frusto-conical portion against said conical chamber wall.

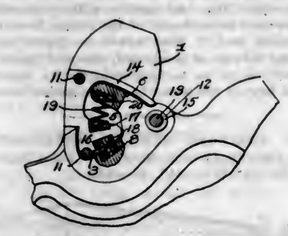
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1,227,353. SPROCKET-WHEEL. WILLIAM W. WILLSON, Gahanna, Ohio. Filed Oct. 11, 1916. Serial No. 124,953. (Cl. 74—31.)

1. A sprocket wheel having its periphery divided into segments by gaps to receive devices on an element engaging said wheel, the operative end of each segment being recessed to leave an undercut arm at the periphery, in combination with a tooth having a lug working in said recess, a spring operating on one of the faces of said lug and the opposing face of said recess to actuate said tooth in a plane at right angles to the axis of said wheel, and means for pivotally securing said tooth on the wheel.

2. A sprocket wheel having its periphery divided into segments, one end of each segment being recessed to leave an undercut arm at the periphery and provided with a hole, in combination with a section tooth provided with a lug, means passing through said tooth and through said hole for pivotally securing said tooth to the wheel, and a spring bearing on one of the faces of said lug and the opposing face of said recess to actuate said tooth.





3. A sprocket wheel having its periphery divided into segments, one end of each segment being recessed to leave an undercut arm at the periphery and provided with a hole, in combination with a tooth having a lug working in said recess, means passing through said tooth and said hole to pivotally secure said tooth to said wheel, both faces of said lug and of said recess being recessed, and a spring having its ends in two of the latter recesses to actuate said tooth.

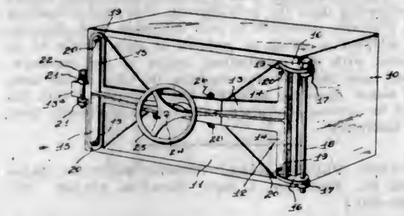
4. A sprocket wheel having its periphery divided into segments, one end of each segment being recessed to leave an undercut arm, and provided with a hole, in combination with a tooth composed of two identical sections and having a lug working in said recess, means passing through said tooth and through said hole for pivotally securing said tooth to the wheel, and a spring bearing on one of the faces of said lug and the opposing face of said recess to actuate said tooth.

5. A sprocket wheel having its periphery divided into segments, one end of each segment being recessed to leave an arm, and provided with a hole, in combination with a tooth having a lug working in said recess, means passing through said tooth and hole for pivotally securing said tooth to said wheel, and an actuating spring, the faces of said lug and the walls of said recess being arcuately recessed on a common arc of a circle struck from the axis of said means, and the ends of said spring fitting in two of said arcuate recesses to actuate said tooth.

[Claim 6 not printed in the Gazette.]

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1,227,354. STEAMER. JOHN H. WOLTERSTORFF, St. Paul, Minn. Filed Jan. 10, 1916. Serial No. 71,194. (Cl. 220—124.)



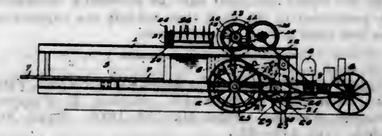
1. In a device of the class described, a housing having an opening in one side thereof, a hanger hinged on said housing, means for detachably securing the free end of the hanger, a door carried upon the hanger and adapted to close said opening, a screw to press the door against the housing and release it therefrom, said screw being threaded in the hanger and having a central swiveled connection at its inner end with said door, and devices adapted to slidably support the door upon the hanger and hold said door against rotation about the axis of the screw.

2. In a device of the class described, a housing having an opening in one side thereof, a hanger hinged on said housing, means for detachably securing the free end of the hanger, a door for said opening carried upon the hanger and formed with a central depression therein, a block in said depression, straps to secure said block in said depression, a screw to press the door against the housing and release it therefrom, said screw being threaded in the hanger and swiveled at one end in said block, and devices adapted to slidably support the door upon the hanger and hold said door against rotation about the axis of the screw.

3. In a device of the class described, a housing having an opening in one side thereof with lugs at one end and eyes at the other end of the rim of said opening, a hanger consisting of a horizontal bar having a pair of opposed vertical branches at one end thereof and a similar pair of branches near its other end, lugs on one pair of branches pivotally secured to the lugs on said housing, a pin in said eyes adapted to secure the free end of said hanger, a door having pins therein slidably mounted in the branches of said hanger and adapted to close the opening in said housing and means on said bar for moving the door with respect to the hanger, whereby said door may be firmly pressed against the housing or withdrawn therefrom.

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1,227,355. TRACTION BALING-MACHINE. ADRIAN P. WRIGHT, Valley Center, Kans. Filed Nov. 6, 1915. Serial No. 60,032. (Cl. 100—65.)

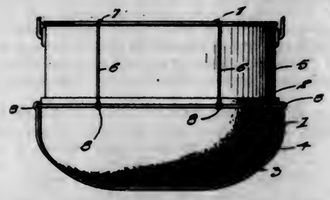


1. A traction baling press comprising a wheel mounted frame, an engine mounted upon the frame for driving the wheels, a press mounted upon the frame, means for operating the press from the engine, a gathering and elevating means located at each side of the frame, means for operating the gathering and elevating means from the engine, conveying means located behind the gathering and elevating means adapted to deliver material to the press, means for operating the said conveying means from the engine, and ejector fingers mounted for movement above the said conveying means and operated from the said conveying means.

2. A traction baling machine comprising a wheel mounted frame, an engine mounted upon the frame and adapted to operate the wheels, a press mounted upon the frame, means for operating the press from the engine, a hay gathering and elevating means pivotally mounted at the side of the frame, a gage wheel attached to said elevating and gathering means and adapted to travel along the ground, means for operating the gathering and elevating means from the engine, a conveying means located behind the gathering and elevating means and adapted to receive the hay from the gathering and elevating means and deliver the same to the press, means for scattering the hay as it is delivered to the press, means for operating the conveying means from the engine, and means for interrupting the operation of the said conveying means while the other elements are operating.

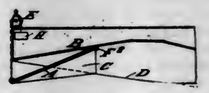
3. A traction baling machine comprising a wheel mounted frame, an engine adapted to operate the wheels, a press mounted upon the frame, means for operating the press from the engine, a hay gathering and elevating means mounted at the side of the frame, means for operating the gathering and elevating means from the engine, a conveying means located behind the elevating and gathering means and adapted to deliver material to the press, means for operating said conveying means from the engine, a shaft journaled for rotation above the delivery end of the conveying means, means for rotating the shaft from the said conveying means, and outstanding fingers carried by the shaft and adapted to engage the material and throw the same into the press.

1,227,356. POT-PROTECTOR. ANNA E. T. YAROSCAK, Chisholm, Minn. Filed Jan. 5, 1915. Serial No. 640. (Cl. 53—8.)



A cooking utensil protector comprising a supporting structure formed of wire, said supporting structure including a main ring circular in shape and arranged in a horizontal plane, a plurality of cross braces semi-circular in shape and secured by their ends to the horizontal ring at diametrically opposite points defining a frame, a semi-circular shell formed of insulating material positioned in said frame, its upper edge projecting beyond the horizontal ring, a plurality of vertically arranged rods having one of their ends curved upon themselves to form hooks, their opposite ends secured at spaced intervals about the length of a horizontal ring, said hook ends adapted to engage the upper marginal edge of a cooking receptacle when positioned in the shell thus holding the supporting frame and shell around the receptacle.

1,227,357. PROPELLER CHAMBER OR TUNNEL FOR SHALLOW-DRAFT VESSELS. HAROLD E. YARROW, Glasgow, Scotland. Filed May 12, 1916. Serial No. 97,083. (Cl. 114—57.)



1. A propeller tunnel for a shallow draft vessel, comprising a roof sloping downward both toward the bow and the stern, a hinged flap terminating at the rearward slope near the water line, and curtain plates extending vertically downward at each side of the tunnel from the top of the rearward end of the tunnel to approximately the level of the bottom of the vessel.

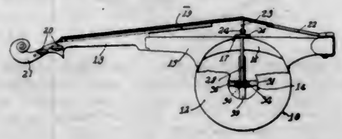
2. A propeller tunnel for a shallow draft vessel, comprising a roof sloping downward both toward the bow and the stern, a hinged flap terminating at the rearward slope near the water line, and curtain plates extending vertically downward at each side of the tunnel from the top of the rearward end of the tunnel to approximately the level of the bottom of the vessel; in combination with means for raising the said curtain plates in order to lessen the resistance to movement through the water.

3. A propeller tunnel for a shallow draft vessel, comprising a roof sloping downward both toward the bow and the stern, a hinged flap terminating at the rearward slope near the water line, and curtain plates extending vertically downward at each side of the tunnel from the top of the rearward end of the tunnel to approximately the level of the bottom of the vessel; in combination with means for raising the said curtain plates about horizontal hinges, so that they lie against the bottom of the vessel.

4. A propeller tunnel for a shallow draft vessel, comprising a roof sloping downward both toward the bow and the stern, a hinged flap terminating at the rearward slope near the water line, and curtain plates extending vertically downward at each side of the tunnel from the top of the rearward end of the tunnel to approximately the level of the bottom of the vessel; in combination with means for raising and lowering together the curtain plates and the hinged flap.

5. A propeller tunnel for a shallow draft vessel, comprising a roof sloping downward both toward the bow and the stern, a hinged flap terminating at the rearward slope near the water line, and curtain plates extending vertically downward at each side of the tunnel from the top of the rearward end of the tunnel to approximately the level of the bottom of the vessel, the said plates and flap being balanced so as to be automatically raised by the sternward flow of the water in the propeller tunnel.

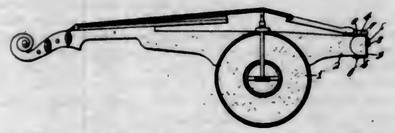
1,227,358. STRINGED MUSICAL INSTRUMENT. ROBERT L. YEAKEY, Cave in Rock, Ill. Filed Sept. 1, 1916. Serial No. 118,113. (Cl. 84—44.)



1. A stringed musical instrument having a round body with opposed side boards, one of which constitutes a sound board, a finger board connected to the body, a bridge-supporting bar having a heel, a member on the body and engaged by the heel, a rod engaging the toe of said bridge bar, a lever in the body and engaging one end of the rod, and a link connection between said lever and the sound board.

[Claims 2 to 4 not printed in the Gazette.]

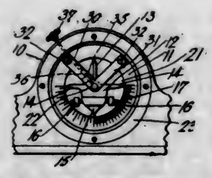
1,227,359. VIOLIN CHIN-REST. ROBERT L. YEAKEY, Cave in Rock, Ill. Filed Oct. 7, 1916. Serial No. 124,331. (Cl. 84—74.)



1. The combination with a musical instrument having an extension upon the body thereof, of a plate straddling and pivotally connected to said extension, said plate being adapted to swing to position at right angles to or parallel with the longitudinal center of the extension, and means upon the plate for engaging the chin of the user.

2. The combination with a musical instrument having an extension upon the body thereof, of a plate straddling and pivotally connected to said extension, said plate being adapted to swing to position at right angles to or parallel with the longitudinal center of the extension, means upon the plate for engaging the chin of the user, and means upon the extension and coöperating with the plate for locking said plate while extended laterally from the instrument.

1,227,360. PLUMB-LEVEL. RANSOME B. YOUNG, Hazleton, Pa. Filed Sept. 5, 1916. Serial No. 118,546. (Cl. 33—221.)



In a plumb level, coöperating elements comprising a stock having an opening, and a scale ring in the opening;



V-shaped hangers depending from the scale ring and including diverging arms; a pendulum including a shaft mounted to rock in the hangers adjacent the point of juncture of the arms of the hangers; and a set screw threaded into one of said coöperating elements and adapted to bear at its inner end on the shaft, the set screw extending substantially parallel to one arm of one hanger, and the other arm of the same hanger acting as a brace preventing a shifting of the axis of rotation of the shaft, when the screw is moved.

1,227,361. PROCESS OF RENDERING TEXTILE FABRICS ANTIQUE. MOSES B. ADOM, White Plains, N. Y. Filed June 28, 1915. Serial No. 36,750. (Cl. 8—2.)

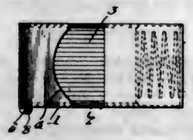
1. The process of rendering textile fabrics antique which consists in subjecting the fabric to a bath formed of sodium hydroxid, sodium bisulfite and sodium peroxid until the colors of the fabric have been subdued to the desired point; then washing the fabric in a bath of chlorinated water; then washing the fabric with hot water and soap, and then passing the so treated fabric through a bath containing acid violet.

2. The process of rendering textile fabrics antique which consists in subduing the colors of the fabric by a hot bath consisting of the reaction products of sodium hydroxid, sodium bisulfite and sodium peroxid; then washing the fabric so treated, with hot water and soap to eliminate therefrom the ingredients that may have adhered to the fabric from the previous treatment; then subjecting the fabric to an acidulated bath.

3. The process of rendering textile fabrics antique which consists in subjecting the fabric to a hot bath consisting of the reaction products of reducing and oxidizing agents adapted to reduce the brightness of the colors and bleach the colors in suspension in the bath; then treating the fabric with a bleaching agent to clear the whites of the same; then washing the fabric with hot water and potassium soap, and then treating the fabric in an acidulated bluing bath.

4. The process of rendering textile fabrics antique which consists in subjecting the fabric to a hot bath of substantially 140 degrees Fahrenheit and which consists of the reaction products of caustic soda, sodium bisulfite and sodium peroxid in the proportions as specified; then treating the fabric in a bath containing chlorid of lime in the proportions specified; then washing the fabric with hot water and potassium soap, and then treating the fabric in an acidulated bath containing acid violet as specified.

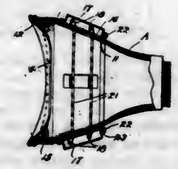
1,227,362. MATCH-BOX. JOSEPH T. ANKERS, Charlottesville, Va. Filed July 28, 1916. Serial No. 111,920. (Cl. 206—28.)



1. A match box comprising an outer receptacle having a restricted extraction opening, a sliding drawer mounted within said receptacle and having an open side facing said extraction opening, means for holding the drawer normally in a position so that the ends of a body of matches contained in the drawer will project beyond opposite walls of the extraction opening to prevent extraction of said matches, and means for adjusting the drawer to a position to admit of the matches being tilted and drawn outward through the extraction opening.

2. A match box of the character described comprising an oblong rectangular outer casing having an extraction opening of restricted size in the top wall thereof, a drawer slidably mounted within said casing and having an open side facing the aforesaid side of the casing, said drawer being adapted to contain a body of matches extending longitudinally of the receptacle, means for normally and yieldingly holding the drawer slid in one direction to dispose the matches so that their ends project beyond opposite walls of the extraction opening whereby removal of the matches is prevented, and means for sliding the drawer in the reverse direction against the resistance of the aforesaid means, whereby to bring the forward ends of the matches into such relation to the extraction opening as to admit of said matches being tilted and drawn outward through the opening.

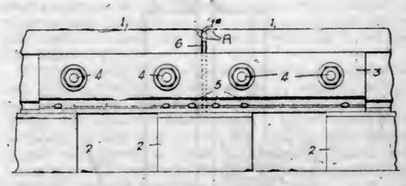
1,227,363. VOICE-SILENCER. GEORGE H. BAIRD, Winnipeg, Manitoba, Canada. Filed July 25, 1916. Serial No. 111,326. (Cl. 179—188.)



1. A voice silencer for telephones embodying a hollow body adapted to be attached to the mouth piece thereof, a perforated top for said body, a plurality of perforated diaphragms arranged within the body to be vibrated by the sound waves to intensify such waves, and a disinfectant holding means positioned immediately beneath said top.

2. A voice silencer for telephones embodying a hollow body adapted to be attached to the mouth piece of the telephone, and a plurality of perforated diaphragms arranged within the body in spaced relation, and means yieldably supporting the respective diaphragms for vibratory movement to intensify the sound waves passing therethrough.

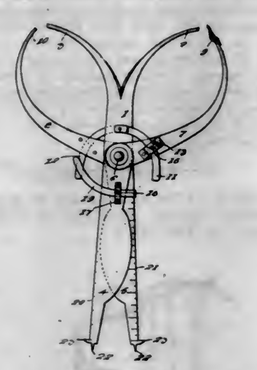
1,227,364. RAIL-JOINT. WILLIAM E. BAKER, Waco, Tex. Filed Feb. 21, 1917. Serial No. 150,118. (Cl. 239—13.)



1. A rail-joint including the adjacent ends of a pair of rails, splice bars applied thereto, and a thin spacing plate interposed between the rail ends and terminating below the treads thereof so as to provide a solid abutment between the lower portions of the rail ends and hold the tread portions thereof in a spaced relation, said spacing plate being provided with means for engaging the splice bars to hold it against vertical movement.

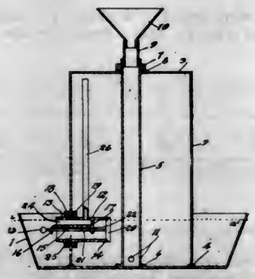
2. A rail joint including the adjacent ends of a pair of rails, splice bars applied thereto, and a thin spacing plate interposed between the rail ends and terminating below the treads thereof to provide a solid abutment between the lower portions of the rail ends and hold the tread portions thereof in a spaced relation, said spacing plate being formed with upper and lower sets of laterally projecting flanges which engage the splice bars to hold the plate against vertical movement.

1,227,365. CALIPERS. JAMES W. H. BALES, Sanford, Fla., assignor of one-third to William B. Buchanan, Sanford, Fla. Filed Sept. 3, 1915. Serial No. 48,844. (Cl. 33—149.)



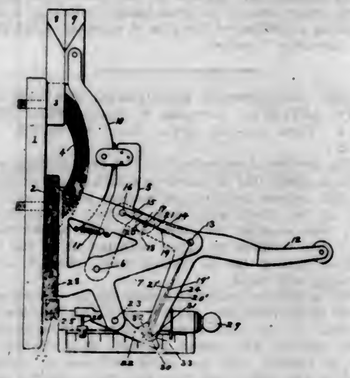
In a caliper structure, a body, a pair of legs pivotally connected to said body and extending longitudinally from one end of the body, an arcuate guiding strap having one end bent to form a substantially U-shaped loop, said loop being secured to the under surface of one of the pivotal legs and extending upwardly across the edge of the leg, a guide strap carried by the leg which is free from connection with the arcuate guiding bar, a set screw carried by said guide strap for engagement with said bar for holding the legs in adjusted pivotal position, and the bight portion of said loop adapted to engage the edge of the pivoted arm which is free from connection with the strap for limiting the pivotal movement of the arm in one direction.

1,227,366. DRINKING-FOUNTAIN. NAZAIRE BAZINET, Winnipeg, Manitoba, Canada. Filed Jan. 8, 1917. Serial No. 141,321. (Cl. 119—77.)



The combination with a drinking pan, a closed liquid storage tank mounted in the pan and a filling tube passing through the tank and opening to the interior thereof at the bottom, of a combined air and water pipe located in the side of the tank and below the top level of the pan and having a cross partition therein providing a top air passage and a lower water passage, an air tube communicating with the air passage and terminating adjacent the top of the storage tank, a valve seated on the inner end of the combined air and water pipe, a lug located on the lower side of the partition, a down turned lip provided at the forward end of the partition and a valve rod having the inner end secured to the valve, the body portion thereof slidably mounted in the lip and lug and the outer end thereof terminating in a knob projecting into the pan.

1,227,367. LATCHING AND TRIPPING MECHANISM. VICTOR S. BEAM, Maplewood, and ERNEST C. OTTO, Elizabeth, N. J., assignors to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 2, 1913. Serial No. 792,963. (Cl. 175—268.)



1. In a circuit breaker, a contact carrying arm, an operating lever for the said arm, a toggle joint between the said lever and the said arm for forcing the said arm into either of two positions for latching, a latching device for holding it in either position when it is off its dead-center position.

2. In a circuit breaker, a contact carrying arm, an operating lever for said arm, a toggle mechanism between the said arm and the said lever for forcing the breaker closed, and a latching device for holding the breaker closed when it is overset and underset with respect to its dead-center position.

3. In an automatic circuit breaker, a contact-carrying arm, an operating lever operatively connected to the said arm by means of a toggle mechanism that is adapted to pass beyond its dead-center position, a latch for holding the breaker in either the overset or underset position of the toggle, and means for tripping the said latch.

4. A latching device for a toggle operated circuit interrupter comprising a pin carried by the toggle mechanism, and a latch for engaging the said pin in either its under or overset position.

5. In a compression or energy-storing device in which the potential energy is produced by the operation of a toggle mechanism, a single means for latching the same whether the operating mechanism is overset or underset.

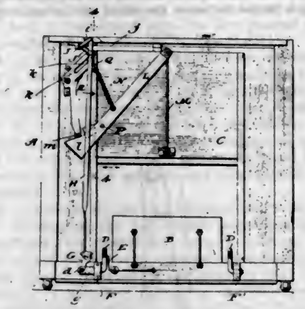
[Claims 6 to 14 not printed in the Gazette.]

1,227,368. PLAYER-PIANO. JOSEPH H. BECK and GEORGE BEDFORD, Brooklyn, N. Y. Filed Feb. 17, 1915, Serial No. 8,800. Renewed Jan. 30, 1917. Serial No. 145,569. (Cl. 84—169.)

1. In combination with pedals and a shaft and connections for extending and withdrawing said pedals, a door arranged to open before such extension and close after such withdrawal, a part carried by said shaft, means attached to and moving with said door to operate the same and a movable device provided with an open ended slot for separable engagement with the part carried by said shaft, said device being interposed between the latter and said means to actuate the latter.

2. In combination with pedals and a rock-shaft and connections for extending said pedals into operative position and withdrawing them therefrom, a sliding automatically closing door, a hook carried by said shaft, a lever for opening said door and pivotally mounted means interposed between said hook and lever and provided with an open ended slot for separable engagement with said hook to transmit motion therefrom to said lever during a part of the movement of the former.





3. In combination with pedals and a rock-shaft and connections for extending said pedals into operative position and withdrawing them therefrom, a sliding automatically closing door, a hook connected to said shaft, a lever for opening said door, and a bell-crank lever bearing with one arm on said lever and having its other arm bifurcated to slidably and separably receive said hook which moves from the bifurcations of said arm when the door is in its raised position, to disconnect the pedal operating mechanism from the door operating mechanism.

4. A rock-shaft, pedals, connections for extending and withdrawing said pedals and an automatically closing door, in combination with a bell-crank lever having a bifurcated arm, a part carried by said shaft engaging said arm between the bifurcations thereof, a lever acted on by the other arm of said bell-crank lever to open said door, said part disengaging with the bifurcated arm when the door has been completely opened, and stops limiting the movement of said bell-crank lever in either direction.

5. In combination with pedals and means for extending and withdrawing them, a sliding door arranged to open before such extension and close after such withdrawal, a lever connected to and moving with said door, a movable part actuated by said means and bearing on one arm of said lever by traveling contact and arranged to free said lever on reaching a certain point thereof, said lever being provided with an inclined concave face continuous with the remainder of the top or upper face of this lever up which said part will travel in moving toward the end of said arm of said lever, for the purpose of preserving continuous contact between said parts and preventing jar and the reverse movement of the door.

[Claims 6 to 10 not printed in the Gazette.]

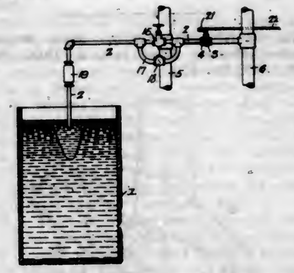
1,227,369. ICE-MAKING APPARATUS. JOHN H. BELL, Haddonfield, N. J. Filed June 19, 1915. Serial No. 35,044. (Cl. 259—2.)

1. The combination in ice making apparatus of exhaust and pressure lines; a conduit leading to a container for liquid to be frozen; and means for alternately connecting said conduit to said lines.

2. The combination in ice making apparatus of exhaust and pressure lines; a conduit leading to a container for liquid to be frozen; and means for alternately connecting said conduit to said lines; said means including a device for venting said conduit previous to each of its connections with the exhaust and pressure lines.

3. The combination in ice making apparatus of exhaust and pressure lines; a conduit leading to a container for liquid to be frozen; and means for alternately connecting said means to said lines; said means including a device for venting said conduit after each of its connections to the pressure line.

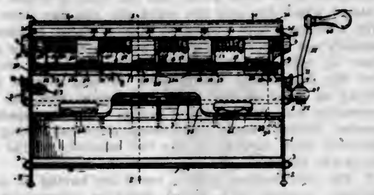
4. The combination in ice making apparatus of exhaust and pressure lines; a conduit leading to a container for liquid to be frozen; means for alternately connecting said conduit to said lines; with means for limiting the amount of liquid drawn into the conduit when it is connected to the exhaust line.



5. The combination in ice making apparatus of exhaust and pressure lines; a conduit leading to a container for liquid to be frozen; means for alternately connecting said conduits to said lines; and means in the conduit for throttling the flow of fluid therethrough.

[Claims 6 to 10 not printed in the Gazette.]

1,227,370. CURRENCY-SLITTER. EUGENE A. BIRCHER, Rochester, N. Y. Filed May 26, 1911. Serial No. 629,742. (Cl. 164—61.)



1. In a paper cutting machine, the combination of a feed roll, ledger blades or cutting edges formed thereon, a shaft mounted to rotate parallel thereto, disk cutting blades mounted on said shaft and coöperating with cutting edges on said feed roll, gearing between said feed roll and said shaft to cause said disk blades to rotate faster than said ledger blades.

2. The combination in a paper cutting machine of a feed roll, gripping fingers mounted inside of said roll and projecting through slots in the periphery of said roll, a spring for pressing said gripping fingers against the periphery of said roll, a cam for drawing said gripping fingers back into the roll, said gripping fingers being released on the rotation of said roll and caused by said spring to grip the periphery of said roll.

3. The combination in a paper cutting machine of a feed roll, a feeding table mounted tangentially to said roll, a stationary gage fastened at the outer edge of said feed table to position a standard size sheet of paper on said feed table with reference to said feed roll, automatically operating gripping fingers mounted on said feed roll to grip the forward edge of the sheet of paper held in position by said gage.

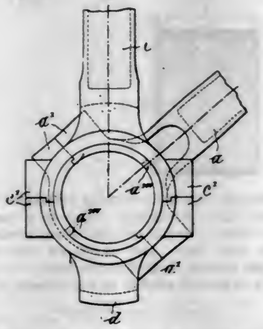
4. The combination in a paper cutting machine of a feed roll, a feed table placed tangentially thereto and sloping away therefrom, a stationary gage mounted on the outer edge of said feed table for positioning a sheet of paper thereon, automatically operating gripping fingers mounted on said feed roll to grip the forward edge of the sheet of paper held in position by said gage.

5. The combination in a paper cutting machine of a feed roll, a feed table placed tangentially thereto and sloping

away therefrom, a gage mounted on the outer edge of said feed table for positioning a sheet of paper thereon, a re-entrant recess cut in the outer edge of said feeding table, exposing a portion of the under side of the sheet of paper laid thereon.

[Claims 6 to 9 not printed in the Gazette.]

1,227,371. CONNECTING-ROD. MARC BIRKIGT, Bois Colombes, France. Filed Jan. 4, 1916. Serial No. 70,257. (Cl. 74—17.)



1. The combination, with a crank-pin; of a pair of connecting rods associated therewith and arranged for movement in the same plane, one rod being provided with a sleeve which fits over the crank-pin, and the other rod with a transversely-bifurcated sleeve whose component members are disposed in spaced parallel relation to each other on opposite sides of the first-named rod and fit over the first-named sleeve; each of said sleeves comprising an inner section which is integral with the corresponding rod, and an outer section which is separably fastened thereto; and a rigid bridge-piece connecting the separable outer sections of the two members of the second-named sleeve.

2. The combination, with a crank-pin having an axial lubricant conduit and radial passages communicating therewith; of a pair of connecting rods associated with said crank-pin and arranged for movement in the same plane, one rod being provided with a laterally-extending sleeve which fits over the crank-pin and is formed with openings in its walls in register with said passages, and the other rod being provided with a transversely bifurcated sleeve whose component members are disposed in spaced parallel relation to each other on opposite sides of the first-named rod and fit over the first-named sleeve; and a rigid bridge-piece connecting the outer end portions of the two members of the second-named sleeve.

1,227,372. WRENCH. YANCY M. BLEDSOE, Bonham, Tex. Filed Oct. 6, 1916. Serial No. 124,174. (Cl. 81—83.)

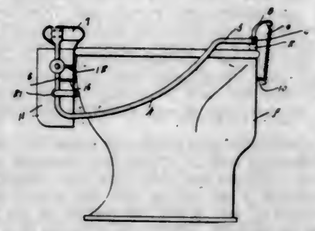
1. In a wrench or the like, two members having lapping body portions, a headed pintle connecting the members and passing through an angular slot in one of the members, a plate pivotally connected to the outer face of one of the said members by the said pintle, said plate being centrally provided with a substantially B-shaped opening and having its free end provided with an outturned knob, one of the slots of the B-shaped opening being of a greater depth than the other and the member provided with the plate having a headed stud received in the said B-shaped slot, as and for the purpose set forth.

2. In a wrench or the like, two members having lapping body portions, a headed pintle connecting the members and passing through an angular slot in one of the members, a plate pivotally connected to the outer face of one of said members by the said pintle, said plate being shaped to correspond with the body portion of the member to which it is connected and having its free end upon its outer face provided with an outturned knob and being provided with a projection upon its inner face opposite the said knob, said plate having a B-shaped opening, providing a finger between the slots in the said opening,



one of the transverse slots of which is of a greater depth than the other and the finger between the slots terminating a distance from the longitudinal wall provided by the opening, and the member provided with the plate having a headed stud received in the said B-shaped slot, as and for the purpose set forth.

1,227,373. TOILET-SEAT. WILHELM A. BOHM and WILHELM A. BOHM, Jr., Baltimore, Md. Filed Aug. 18, 1916. Serial No. 115,582. (Cl. 4—18.)



1. The combination with a toilet bowl, of a pair of levers associated with the bowl, a seat carried by the levers, a housing carried by the levers and disposed below the seat, and a paper web extended from the housing and operable across the seat, for the purpose specified.

2. The combination with a toilet bowl, of a pair of supporting elements lying on opposite sides of the bowl and having their forward ends extended beyond the forward end of the bowl and extended upwardly and terminally lying above the bowl, a seat disposed above the forward edge of the bowl and supported by the upwardly extended end of the supporting element, a roller operatively supported by the upwardly extending ends of the supporting element and disposed below the seat, and a paper web carried by the roller and extended across the seat.

1,227,374. PROCESS FOR TREATING AMYLACEOUS SUBSTANCES. AUGUSTE BOIDIN, Seclin, France, and JEAN EFFRONT, Brussels, Belgium. Filed Nov. 6, 1913. Serial No. 799,490. (Cl. 195—32.)

1. A process of treating amylaceous substances consisting in steeping the amylaceous substance at a temperature slightly lower than the gelatinizing point of the starch of this substance and in liquefying this steeped substance in alkaline water at a temperature of at least 80° C., under the action of bacterial enzyms having a great liquefying power.

2. A process of treating amylaceous substances consisting in steeping the amylaceous substance in hot water, and in liquefying this steeped substance in alkaline water under the action of bacterial enzyms, these enzyms being obtained by the repeated culture of common liquefying bacilli on highly nitrogenized media in veils and in thin layers under the influence of a current of air, the supply of which is diminished when the development of the bacilli is complete.

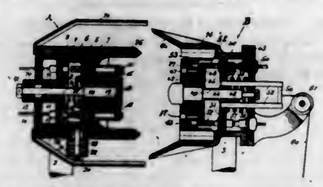
3. A process of treating amylaceous substances consisting in soaking the amylaceous substance in hot water for from four to eight hours, separating the water in excess, grinding the steeped substance in a moist condition, mixing the crushed substance with hot water to which is added a little alkaline salt and liquefying enzyms, leaving the resulting substance to become liquid under the influence of the said enzyms, and neutralizing the solution obtained.

4. A process of treating amylaceous substances consisting of steeping the amylaceous substance in hot water, liquefying this steeped substance in alkaline water under the action of bacterial enzyms, at a temperature of at least 80° C., neutralizing the obtained mash and saccharifying it by means of liquefying enzyms transformed into saccharifying enzyms by the addition of salts and nonfermented nitrogenous raw material.

5. A process of treating amylaceous substances consisting in steeping the amylaceous substance in hot water for from four to eight hours separating the water in excess, liquefying this steeped substance in alkaline water, at a temperature of at least 80° C., under the action of bacterial enzyms and neutralizing the wort thus obtained by the addition of spent wash or of the acid and aqueous extract obtained by the steeping of the amylaceous substance.



1,227,375. ELECTRIC CONNECTION FOR RAILWAY-VEHICLES. LOUIS BOIRAULT, Paris, France. Filed July 25, 1913. Serial No. 781,213. (Cl. 173—332.)



1. The combination of an automatic coupling for railway and other similar vehicles with two heads of electric connections, studs and sockets carried thereby, each head comprising a casing mounted on the said coupling and a bearing in such casing for the studs or sockets, one of said casings being yieldingly mounted on the coupling and the respective bearing forming a ball and socket joint with such casing, and yielding means whereby to hold the latter casing and respective bearing in an average position in relation to the coupling, substantially as described.

2. In a head of electric connections of the stud and socket type, the combination of a casing, a bearing mounted in the casing, a plate of insulating material secured in such bearing, a plate of insulating material axially movable in said bearing, contact members on these two plates, a spring between the plates, the contact members on the movable plate, projecting outside of the latter, and a block of insulating material yieldingly mounted on the outwardly projecting parts of the said contact members, substantially as described.

3. In a head of electric connections of the stud and socket type, the combination of a hollow casing, a fixed plate secured in such casing, contact pieces on such plate, a bolt slidable through the said plate, a movable plate secured to the inner end of such bolt, contact members on such movable plate, a spring pushing the said movable plate inwardly, a second fixed plate secured in the said hollow casing, contact members on this second fixed plate, a second bolt slidable, through such second fixed plate, a second movable plate secured to the inner end of the said second bolt, a spring pushing this latter bolt outwardly, the contact members of these two latter plates being in contact with one another and means actuated from without whereby to pull outwardly or release the first named bolt, the outer head of the second named bolt extending outwardly beyond the second fixed plate, substantially as described.

4. The combination of an automatic coupling, a head of connections of the stud and socket type having a rear connector plate, a front connector plate, both of said plates being movable, said front plate being moved when the coupling is joined with an opposite similar coupling, means for holding the rear connector plate in disconnected position relative to the front connector plate when the automatic coupling is in uncoupled position, and for releasing the said rear plate, when the coupling is in coupled position, and a spring adapted to move the rear connector plate when released to position for connecting engagement with the front connector plate.

5. In a head of electric connections of the stud and socket type, the combination of a hollow bearing, a plate secured to such bearing, sockets inserted in the said fixed plate, a plate movable within the hollow bearing, studs on such plate slidable in the said sockets, a bolt united to the said movable plate and passing through the said fixed plate, a spring pushing the said bolt outwardly, the outer head of such bolt projecting outwardly from the fixed plate, substantially as described.

[Claim 6 not printed in the Gazette.]

1,227,376. PROCESS OF MAKING BRAKE-SHOES AND PRODUCT THEREOF. GEORGE T. BOND, Huntington, W. Va. Filed Feb. 15, 1917. Serial No. 148,870. (Cl. 188—28.)



1. A process of forming brake-shoes that includes the pressing of the rear face of a brake-shoe having a keeper extending therefrom into abutment with the contact-face of another brake-shoe having a mortise opening to said face and at the same time by the same action pressing said keeper into and causing it to conform to said mortise.

2. A process of forming brake-shoes that includes the pressing of the rear face of a brake-shoe having malleable keepers extending therefrom into abutment with the contacting of another brake-shoe having mortises disposed in the same relative positions as said keepers, and by the same action pressing the keepers into and causing them to conform to said mortises.

3. A process of forming brake-shoes that includes the formation of a shoe-body with a mortise opening to the contact face thereof, and thereafter taking a brake-shoe having a rearwardly-extending malleable keeper and pressing the rear face of said shoe into abutment with the contact face of said body and by the same action pressing said keeper into and causing it to conform to said mortise.

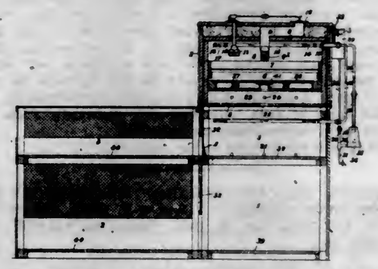
4. A process of forming brake-shoes that includes placing a shoe-body having a mortise opening to the contact

face thereof in fixed position in a press, placing a brake-shoe having a keeper on a ram of the press with its keeper in alinement with and extending toward said mortise, and then causing said ram to press said brake-shoe into abutment with said body and thereby pressing the keeper into and causing it to conform to said mortise.

5. A process of forming brake-shoes that includes the pressing of the rear face of a brake-shoe, having a fixed bendable keeper extending therefrom into abutment with the contact face of another brake-shoe having a mortise of less depth than the keeper opening to said face, and at the same time by the same action pressing and bending said keeper into and thereby causing it to conform approximately to the shape of said mortise.

[Claims 6 to 8 not printed in the Gazette.]

1,227,377. INCUBATING AND CHICKEN-RAISING APPARATUS. LEONARD BOND, Glossop, England. Filed May 23, 1914. Serial No. 840,491. (Cl. 119—30.)



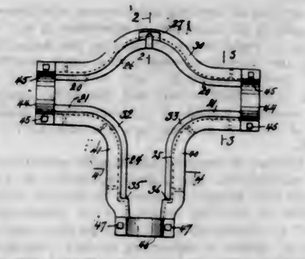
1. A combined incubating and chicken-raising apparatus, comprising in combination a nursery chamber; an incubating chamber mounted thereon; an egg-tray located in said incubating chamber, said chamber having air ventilating inlets or openings at the lower portion thereof one or more of said openings communicating with the nursery chamber; a hot-water circulator at the upper part of each chamber; an evaporating pan resting on supports below the egg tray in but above the bottom of the incubating chamber; and a stand-pipe passing through the pan and having a baffle at the top, whereby warm air which rises from the nursery chamber through the opening formed therein will pass into the space below the evaporating pan, thence through said stand-pipe, and be deflected downwardly by the baffle into the evaporating pan.

7. In a combined incubator and chicken-raising apparatus, the combination with a nursery chamber, an incubating chamber mounted thereon, an egg tray located in said incubating chamber, an evaporating pan also located in the incubating chamber below the egg tray, and a stand-pipe passing through the pan in open communication at its lower end with the nursery chamber; of an exit ventilating shaft in the roof of said incubating chamber, and a perforated, telescopically-arranged extension thereof, the upper end whereof is open, projecting into said chamber, said perforated extension being adjustable so that if slid downward toward the egg tray such extension will baffle the outflow of the upper stratum of warm air to a certain extent, whereby the heat will be more completely diffused throughout the chamber, while if moved upwardly into the raised position, the upper, hot-air stratum will more readily find a vent and the heat will be less completely diffused in the chamber.

[Claims 2 to 6 not printed in the Gazette.]

1,227,378. DIFFERENTIAL HOUSING-TRUSS. FRANK T. BRADY, Bayonne, N. J. Filed June 24, 1916. Serial No. 105,568. (Cl. 21—90.)

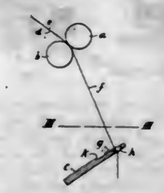
1. A truss of the character described comprising two pairs of concaved parallel arms, the corresponding arms of said pairs of arms in line with each other, curved connecting braces for each pair of arms, a connecting portion for one of the arms of each pair, a third pair of concaved parallel arms at right angles to the other arms, a curved concaved connecting portion between each of the third pair of arms and one of the members of the first and second pair of arms, a curved connecting brace for the third pair of arms, and a detachable cap for each pair of arms.



2. In a truss of the character described the combination of two pairs of arms, a cap for each pair of arms to connect them to the axle tubes of a vehicle, a thirrd pair of arms in the truss at right angles to the other arms and a cap for the latter arms to connect them to the shaft tube of a vehicle.

3. In a truss of the character described the combination of two pairs of arms, a connecting portion for one of the arms of each pair, a third pair of arms at right angles to the other arms, connecting portions between the latter arms and one of each of the pairs of other arms, the connecting portions curved to support a housing, and a cap for each pair of arms, to connect the first two pairs of arms to the axle tubes of a vehicle and to connect the latter pair of arms to the shaft tube of said vehicle.

1,227,379. SPINNING-FRAME STOP-MOTION. ETHELBERT BROOKSBANK, Bradford, England, assignor to Brooksbank Limited, Bradford, England. Filed Mar. 30, 1916. Serial No. 87,777. (Cl. 19—25.)



1. A multifold yarn spinning frame stop motion comprising a frame, a wire or thread board thereon, and free, loose, weighted collars supported by the multifold yarn passing therethrough and adapted to sever the remaining ends of said multifold yarn when an end breaks.

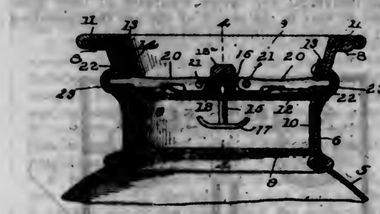
2. A multifold yarn spinning frame stop motion comprising a frame, a wire or thread board thereon, and U-shaped collar weights supported by the multifold yarn passing therethrough and adapted to sever the remaining ends of said multifold yarn when an end breaks.

3. A multifold yarn spinning frame stop motion comprising a frame, a wire or thread board thereon, and bent wire weights detachable from but supported by the multifold yarn passing therethrough and adapted to sever the remaining ends of said multifold yarn when an end breaks.

1,227,380. FASTENER FOR CAN-CLOSURES. JOHN W. BURGESS, Topeka, Kans., assignor of two-thirds to Beecher A. Hawk and Homer B. Jenkins, Topeka, Kans. Filed Apr. 23, 1915. Serial No. 23,399. (Cl. 70—81.)

1. A fastener for a can closure, a U-shaped strap secured diametrically of said closure, a rod slidable through centrally of said strap, a pair of locking bars pivotally connected with said rod, and means connected centrally with the rod and engaging said locking bars for normally retaining said locking bars in extended position.





2. A fastener for a can closure, a U-shaped strap secured diametrically of said closure, a rod slidable centrally through of said strap, a pair of locking bars pivotally connected to said rod, and a bow spring arranged centrally on said rod and interposed between said strap and said locking bars for normally retaining the latter in extended position within said recesses.

3. A fastener for a can closure, a U-shaped strap secured diametrically of said closure and having a central aperture, a rod slidable in said aperture and having a shoulder adjacent its upper end, a pair of locking bars pivotally connecting with said rod, and a bow spring arranged centrally on said rod and resting upon said shoulder and engaging opposite ends with said locking bars, to normally extend the same.

1,227,381. WHEEL STRUCTURE. HENRY C. CALHOUN, Detroit, Mich. Filed Sept. 20, 1916. Serial No. 121,243. (Cl. 21—69.)

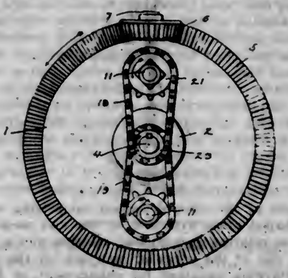


1. An all metal wheel including inner and outer wheel forming portions each having a central spoke ring formed with a hub receiving opening surrounded by an inwardly directed annular flange, a hub adapted to engage in the openings, a flange formed upon the hub and having an undercut channel to seat the flange of one of the wheel forming portions, and rings threaded upon the hub upon opposite sides of the other wheel forming portion, one of the latter rings having a channel to seat the flange of the adjacent wheel forming portion.

3. In an all metal wheel, inner and outer disk-shaped body members of sheet metal stamped and formed to provide hub receiving rings having inwardly directed annular flanges an inner and outer series of spokes and a rim receiving felly, a hub engaging through the rings and having an integral flange connected to the flange of one ring, and means adjustable longitudinally of the hub for clamping engagement with the other ring, said means being capable of spreading the hub receiving rings away from each other.

[Claims 2 and 4 to 7 not printed in the Gazette.]

1,227,382. DIFFERENTIAL GEARING FOR AUTOMOBILES, &c. JOSEPH P. P. CARDIN, Sorel, Quebec, Canada. Filed May 16, 1916. Serial No. 97,863. (Cl. 74—34.)



1. Differential gearing including a sectional driving shaft or axle, a main gear wheel arranged on the adjacent ends of the driving shaft or axle, centrally arranged sprocket wheels fixed to the sections of the driving shaft or axle, side sprocket wheels carried by the main gear wheel and sprocket chains arranged on the side sprocket wheels and meshing with the central sprocket wheels.

2. The combination with a sectional driving axle or shaft, of a main gear wheel arranged on the adjacent ends of the sections of the shaft or axle, central sprocket wheels fixed to the said sections of the driving shaft or axle, side sprocket-wheels carried by the main gear, a continuous sprocket chain arranged on the sprocket wheels at one side of the main gear and meshing with the central sprocket wheel and a pair of sprocket chains located at the opposite side of the main gear and arranged on the side gears and the central gear.

3. Differential gearing including a main gear wheel, side sprocket wheels mounted on the main gear wheel, a centrally arranged sprocket wheel designed to be connected with a shaft or axle and a continuous sprocket chain arranged on and meshing with the side sprocket gears and having both sides or flights located at the same side of the central sprocket gear and one side or flight meshing with the central sprocket gear.

4. Differential gearing including a main gear wheel having opposite openings, eccentrically arranged sleeves mounted in the said openings, transverse shafts carried by the eccentric sleeves, sprocket gears mounted on the transverse shafts, a central sprocket gear and a sprocket chain connecting the said sprocket gears.

5. Differential gearing including a main gear wheel provided with opposite bearing openings, eccentric sleeves mounted in the said openings and having eccentric apertures, shafts extending through the eccentric apertures of the said sleeves, the latter being provided with toothed flanges, pawls or dogs engaging the toothed flanges and securing the eccentric sleeves in their adjustment, side sprocket wheels mounted on the said transverse shafts, central sprocket wheels designed to be mounted on the sections of a driving shaft or axle, and sprocket chains connecting the said sprocket wheels and located at opposite sides of the main gear wheel.

1,227,383. CATTLE-YOKE. EUGENE R. CARPENTER, Chattanooga, Tenn. Filed July 10, 1916. Serial No. 108,502. (Cl. 119—138.)

1. A yoke of the class described comprising a pair of end members each having outwardly converging sides and a curved portion connecting the inner ends of the sides together, and wires connecting said end members to-

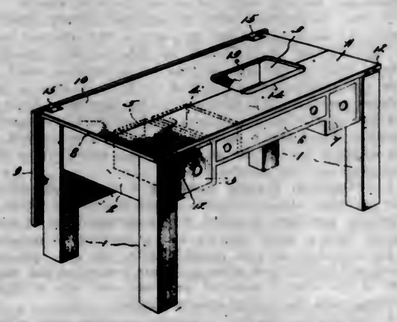
gether, said wires passing through openings at the inner corners of the end members and being attached to the side of said end members.



2. A yoke of the class described comprising end members, U-shaped arms attached to the end members and arranged in relative over-lapping relation and a plate attached to one of the wires at each side of the yoke and having attaching openings for engagement by the other wire and thereby causing the wires to adjustably connect the end members together.

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1,227,384. SEWING-MACHINE TABLE. BOURDON CARY, Norfolk, Va. Filed Nov. 25, 1916. Serial No. 133,465. (Cl. 45—27.)



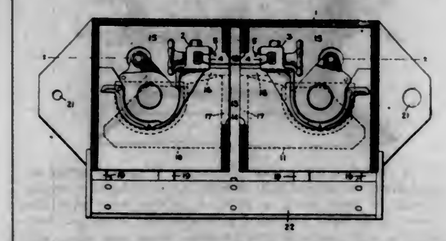
An article of furniture of the class described comprising a frame having a compartment for a drop head sewing machine and also provided with an inner top and an outer top, said inner top comprising a rear member and a hinged front member, the hinges of the said front member being at the front side thereof, and said members being provided with recesses in their opposing sides to clear the machine when said hinged member is in closed position, said outer top being also hinged and having its hinges arranged at the rear side of the rear member of the inner top so that the outer top is adapted to be arranged either in vertical position at the rear of the article of furniture to uncover the inner top or in horizontal position to cover said article of furniture and the inner top.

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1,227,385. CIRCUIT-INTERRUPTING MEANS. FRANK E. CASE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 29, 1914. Serial No. 847,892. (Cl. 175—273.)

1. The combination of terminals for an electric fuse conductor, means for deflecting and breaking any arc formed when the fuse conductor is ruptured, and separate insulating means inclosing and supporting the respective terminals and affording only a circuitous creepage path between them and between their respective current connections.

2. The combination of terminals, means for deflecting and breaking any arc formed between them, and insulating means inclosing the respective terminals and forming for them individual arc chutes separated at their adjacent sides so that in the region of the arc the insulating material is nowhere continuous between them.



3. The combination of terminals, electro-magnetic means for deflecting and breaking any arc from them, and insulating means inclosing the respective terminals and forming for them individual arc-chutes separated by an intervening air space.

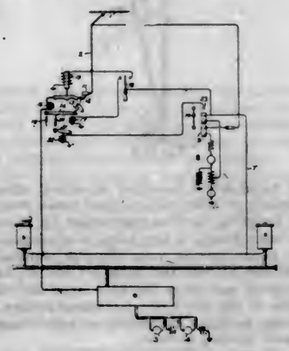
4. The combination of terminals, electro-magnetic blow-out coil means associated with said terminals, pole piece means for said coil means arranged to deflect and break any arc from said terminals, and a pair of refractory insulating walls associated with each terminal and forming for it an arc chute, the walls of each pair being so separated from those of the other pair that only a circuitous creepage path exists between the chutes.

5. The combination of terminals, electro-magnetic blow-out coils associated with said terminals, pole pieces for said coils associated in pairs with the respective terminals and arranged to deflect and break between them any arc from said terminals, refractory insulating walls arranged in pairs between the pole pieces of each pair and forming individual arc chutes for the terminals, the walls of the respective pairs being so separated that there is an air space between the chutes at their adjacent sides.

[Claim 6 not printed in the Gazette.]

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1,227,386. TWO-VOLTAGE CIRCUIT-BREAKER. FRANK E. CASE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 16, 1914. Serial No. 861,958. (Cl. 172—179.)



1. The combination with a circuit breaker for a main electric circuit operating on high and low voltage, of suitable translating devices, a control circuit therefor, and a switch controlling the voltage impressed on said control circuit and simultaneously varying the tripping point of the circuit breaker.



2. The combination with a circuit breaker for a main electric circuit operating on high and low voltage of suitable translating devices, a control circuit therefor, electromagnetic means for varying the tripping point of the circuit breaker and a switch for controlling the translating devices and the electromagnetic means.

3. The combination with a circuit breaker for a main electric circuit operating on high and low voltages, of suitable translating devices, a control circuit therefor adapted for low voltages, a switch controlling the voltage impressed on said control circuit, an auxiliary electromagnet controlled by said switch and acting to increase the amount of current required for operating the tripping magnet when the main circuit voltage is low.

4. The combination with a circuit breaker for an electric railway car operating on high and low voltages, of a control circuit for connecting the motors in series for high voltage and in parallel for low voltage, a switch insuring a constant supply of low voltage current for said control circuit, and an auxiliary electromagnet controlled by said switch and acting to increase the amount of current required for operating the tripping magnet of the circuit breaker when the main circuit voltage is low.

5. The combination with a circuit breaker for a main electric circuit operating on high and low voltages, of suitable translating devices, a control circuit therefor adapted for low voltage, a switch controlling the voltage impressed on said control circuit, an auxiliary calibrating spring for the circuit breaker, and an electromagnet controlled by said switch and acting to put tension on said spring when the main circuit voltage is low.

[Claim 6 not printed in the Gazette.]

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1,227,387. SAFETY SIGNALING. HAROLD N. C. CHRISTIE, Point Pleasant, N. J. Filed Nov. 9, 1915. Serial No. 60,594. (Cl. 40—52.)



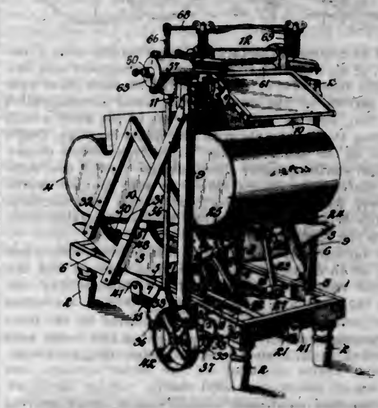

1. A signaling device for vehicles, comprising a housing, translucent members upon said housing, a casing upon said housing, illuminating means within said casing in registration with said translucent members, a plurality of signaling devices rotatably mounted within said housing, clasps within said housing for engaging said signaling devices for normally retaining the same in vertical position within said housing, and means for actuating said signaling devices for releasing the same from said clasps for displaying said signaling devices.

2. A signaling device for vehicles, comprising a housing, translucent members arranged within said housing, a plurality of signaling devices rotatably mounted within said housing each comprising an opaque body and a translucent body, means for actuating said signaling devices for positioning said opaque body thereof exterior of said housing and said translucent body thereof in registration with said translucent members, a casing upon one side of said housing and provided with an open bottom, and illuminating means within said casing for projecting rays of light through said translucent members of said housing and said translucent members of said signaling devices and simultaneously projecting rays of light through the open bottom of said casing upon the license tag of the vehicle.

3. A signaling device for vehicles, comprising a housing, translucent members arranged in said housing, a plurality of transversely alined signaling devices pivotally mounted within said housing, each of said signaling devices comprising an opaque body at one side of its pivotal point and having designating characters thereon, and a frame at the opposite side of its pivotal point and provided with a translucent member therein having designating characters thereon, said frame and translucent member being heavier than said opaque body for returning said signaling devices to inoperative position within said housing, a plurality of electromagnets and armatures within said housing, connections between said armatures and said signaling devices for operatively displaying said signaling devices upon the energization of said magnets, and retractile spring supports for said armatures for aiding the translucent members to return said signaling devices to normal inoperative position upon the deënergization of said magnets.

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1,227,388. POWER ATTACHMENT FOR WASHING-MACHINES. FRANK B. CHURCHILL, La Harpe, Ill. Filed Nov. 10, 1913. Serial No. 800,182. (Cl. 74—14.)



1. In combination with an active mechanism including a vibratory member, a walking beam pivotally mounted below the vibratory member, means for connecting one arm of the walking beam with one end of the vibratory member, yieldable means for connecting the other arm of the walking beam with the other end of the said member, and means for oscillating the walking beam.

2. In combination with an active mechanism including a vibratory member, a walking beam or lever pivotally mounted at an intermediate point, a link connecting one arm of the walking beam or lever with one end of the vibratory member, yieldable means for connecting the other arm of the walking beam or lever with the other end of the said member, and gearing for oscillating the walking beam or lever.

3. In combination with an active mechanism including a vibratory member, a walking beam or lever fulcrumed at an intermediate point beneath the said member, a link connecting one arm of the walking beam or lever with one end of the member, a coiled spring connecting the other arm of the walking beam or lever with the other end of the said member, and gearing connected with the walking beam or lever for oscillating the same.

4. In combination with an active mechanism including a vibratory member, a walking beam or lever fulcrumed at an intermediate point, a link connecting one arm of

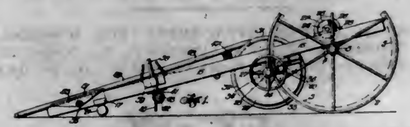
the walking beam or lever with one end of the said member, yieldable means for connecting the other arm of the walking beam or lever with the other end of the member, a crank element, a pitman connecting the crank element with the walking beam or lever, and gearing for rotating the crank element.

5. In combination with an active mechanism including a vibratory member having supporting rockers, a walking beam or lever pivoted at a point intermediate of its ends and provided at the pivotal point with a projecting arm, a link connecting one end of the walking beam or lever with one end of the said member, yieldable means for connecting the other end of the walking beam or lever with the other end of the member, a crank element, a pitman extending from the crank element to the said arm of the walking beam or lever, and gearing for rotating the crank element.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,389. AGRICULTURAL TRACTOR. MICHAEL D. COCK, Powlett River, Victoria, Australia. Filed May 11, 1916. Serial No. 96,919. (Cl. 21—114.)



1. In agricultural tractors, the combination with a motor car, of an under-carriage adapted to support said car, a movable front axle, a cup carried by the said front axle, a ball carried by the under-carriage and accommodated by the cup, steering means connected to the axle, a stay connecting the front axle with the under-carriage, shafts mounted on the under carriage, tire driven wheels mounted on said shafts, counter shafts driven by said first mentioned shafts, rear wheels driven by said counter shafts, wheelways leading from the front of the under-carriage to the tire driven wheels, and idle wheels adjustable in relation to the tire driven wheels.

2. In agricultural tractors, the combination with a motor car, of an under-carriage adapted to support said car, a movable front axle to said under-carriage, a stay connecting the front axle with the under-carriage, a steering shaft adjacent the front axle, hooks carried by the front axle, steering ropes or chains connecting the hooks with the steering shaft, a steering handle operating said steering shaft, shafts mounted on the under-carriage, tire driven wheels mounted on said shafts, counter shafts adjacent the first mentioned shafts, change speed gearing carried by the first mentioned shafts and the counter shafts, driving pinions carried by the counter shafts, rear wheels mounted on the under-carriage, internally toothed rings carried by the rear wheels, said rings engaging the driving pinions, wheelways leading from the front of the under-carriage to the tire-driven wheels, slide plates in said wheelways, idle wheels movable to and from the tire driven wheels and adjustable flanges carried by the tire driven wheels and the idle wheels.

3. In agricultural tractors, the combination with a motor car, of an under-carriage supporting said car, tire driven wheels carried by the under-carriage, wheel-ways leading from the front of the under-carriage to the tire driven wheels, idle wheels movable to and from the tire driven wheels, a flange mounted on the periphery of each tire driven wheel, means for laterally adjusting each of said flanges, a flange mounted on the periphery of each idle wheel, and means for laterally adjusting each of said flanges on the idle wheels.

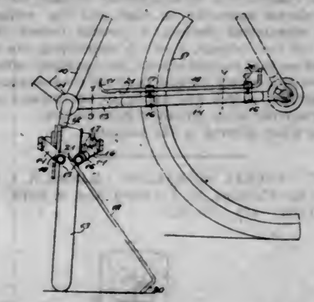
4. In an under-carriage for the purpose described, the combination of a frame, front and rear wheels supporting said frame, gears mounted on the rear wheels, alined horisontal shafts mounted on the frame, a flanged friction wheel mounted on each shaft, a counter shaft mounted in advance of each rear wheel, a gear on each counter shaft meshing with the gears on the rear wheels, gearing between the respective horizontal shafts and the respective counter shafts, flanged idle wheels in rear of and in alinement with the friction wheels, guideways extending forwardly from the friction wheels, and means for steering the front wheels.

5. In an under-carriage for the purpose described, the combination of a frame, front and rear wheels supporting the frame, a pair of longitudinal guides on the frame, a pair of horisontal alined shafts mounted on the frame, a flanged wheel on each shaft, gearing between the horisontal shafts and the rear wheels, an idle flanged wheel on the frame in longitudinal alinement with the first mentioned flanged wheels, means for longitudinally adjusting the idle wheels, a slide extending across each guide-way near the front end thereof, means for adjusting each slide and holding same in adjusted position.

[Claim 6 not printed in the Gazette.]

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1,227,390. BICYCLE ATTACHMENT. GEORGE F. COOK, East Washington, N. H. Filed Oct. 20, 1913, Serial No. 796,142. Renewed Jan. 22, 1917. Serial No. 143,845. (Cl. 208—156.)



1. A bicycle-supporting strut comprising a bar having a transverse recess near its upper end to receive the under portion of one of the rigid arms of the rear fork of a bicycle, the contiguous extremity of said bar being curved in a direction away from said recess to pass over and removably engage the upper portion of the other arm of said fork.

2. A bicycle-supporting strut comprising a bar having a transverse recess near its upper end to receive the under portion of one of the rigid arms of the rear fork of a bicycle, the contiguous extremity of said bar being curved in a direction away from said recess to pass over and removably engage the upper portion of the other arm of said fork, the other end of said bar being bent at an angle to form a foot.

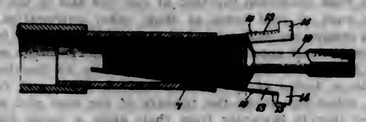
3. A bicycle-supporting strut comprising a bar having a transverse recess near its upper end to receive the under portion of one of the rigid arms of the rear fork of a bicycle, the contiguous extremity of said bar being curved in a direction away from said recess to pass over and removably engage the upper portion of the other arm of said fork, the other end of said bar being bent at an angle to form a foot, said foot and said curved end being offset from the body of said bar in the same direction.

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1,227,391. PIPE-REMOVER. HENRY A. COOPER, Peebles, Ohio. Filed Dec. 22, 1916. Serial No. 138,479. (Cl. 81—72.)

1. Means for removing a broken pipe section from a connection, including a shank having a threaded portion adapted to be screwed into the pipe section, said threaded portion being provided with a longitudinally extending groove, and a wedge-shaped element slidably fitted in the groove and adapted to be driven forwardly into engagement with the pipe section subsequent to the screwing of the shank into said section, whereby said pipe section is removed from its connection when the shank is rotated in the direction opposite its initial rotation.





2. Means for removing a broken pipe section from an associated element, including a shank having a threaded portion adapted to be screwed into the pipe section, said threaded portion having a longitudinally disposed groove, a wedge-shaped element slidably fitted in said groove, the outer face of said element being inclined transversely throughout its length whereby one edge of said element will cut into the pipe section when the element is driven forwardly in the groove, to obtain an effective purchase upon the pipe section, whereby said pipe section will be removed from its associated element upon rotation of the shank in a direction opposite the initial rotation of the shank.

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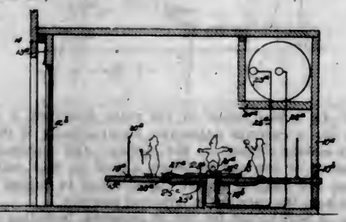
1,227,392. WEAR-PLATE FOR SHOE-HEELS. JAMES HENRY COOPER, Wheeling, W. Va. Filed July 11, 1916. Serial No. 108,643. (Cl. 36—75.)



The combination with a shoe heel consisting of a plurality of lifts, of a solid wear member having an equilateral cross section, said wear member movably fitting in a groove formed in the upper surface of the lower lift and having a cross section similar to that of the member, the disposition of the groove lift holding the wear member with one of its sides approximately coincident with the upper surface of the lift and with an apex of such member lying in the lower surface of the lift.

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1,227,393. TOY. WAYNE EVANS CRESSMAN, Gwynedd Valley, Pa. Filed Jan. 12, 1917. Serial No. 141,978. (Cl. 46—40.)

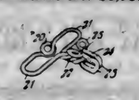


1. A toy of the class described including a box-like structure, provided with a screen, a support mounted in said structure and turnable from the exterior thereof, said support being adapted to carry miniature objects, the images of which are to be thrown upon the screen, an electric circuit, an electric lamp in said circuit rearward of the screen, the turning of the support serving to bring the objects thereon in succession to a position between the lamp and the screen, and make and break means for the electric circuit, said last-mentioned means being controlled by the turning of the support to close the circuit when an object on the support is in said position between the lamp and the screen.

2. The combination with a box-like structure provided with a screen, of a platform mounted to turn on a vertical axis, an electric lamp in fixed position in the said structure approximately at the axis of rotation of the platform, means on the platform to receive a series of miniature objects, the images of which are to be thrown upon the screen, the platform being optionally movable to bring the images in succession to a position between the lamp and the screen, and an electric circuit in which the lamp is included, said circuit including also a contact element disposed in a plane adjacent to the plane of rotation of the platform, and an annular series of contact elements disposed at intervals on a face of the platform and adapted successively to engage said first contact element to close the lamp circuit as an object is positioned between the screen and lamp.

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1,227,394. PACKAGE-TIE. JOHN W. CURRY, Kane, Pa. Filed Apr. 4, 1916. Serial No. 88,931. (Cl. 24—131.)

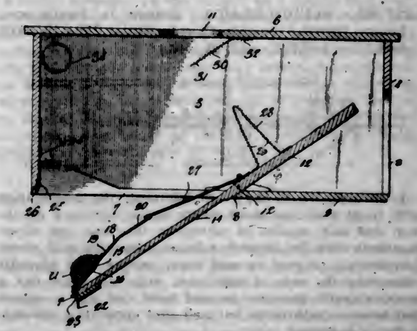


1. A package tie formed from a single strand of wire having a looped portion intermediate the ends thereof to provide an eye for engagement with the tying element, the said ends extending in diametrically opposite directions after crossing each other, wing members formed by bending the said ends to prevent over-turning of the package tie, the free ends thereof being twisted and then bent upon themselves to form a pair of divergent spring arms opposite the said eye portion, eyes formed on the free ends of the said arms to provide a guiding and gripping means for a flexible tying element whereby to guide the tying element into the gripping position.

2. A package tie of the class described including a strand of wire having a looped portion intermediate the ends thereof to provide an eye for engagement with the tying element, wing portions associated with said wire adjacent the loop to prevent the tie from over-turning, the free ends of said wire being intimately associated in parallel spaced relation and bent back upon themselves, and eyes formed on the extremities of said ends whereby the tying element may be guided into a gripping position.

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1,227,395. TRAP. WALLACE B. CURTIS, Hamburg, N. Y. Filed Aug. 29, 1916. Serial No. 117,512. (Cl. 43—24.)



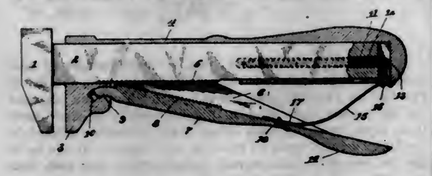
1. A trap comprising a body, a platform mountpd to turn in said body, a pin extending beyond an end on said platform, a latch member carried by the body and having an end provided with an opening to receive said pin, supporting members connected with the platform upon opposite sides of said pin, a supplemental tread carried by the supporting members and arranged in spaced relation with the platform, means carried by the platform and operable to depress the supplemental tread against the influence

of the supporting members, and a tongue on said tread interposed between the end on the latch member and the end of the platform and having a slot thereon receiving said pin.

2. A trap comprising a body, a platform mounted to turn therein, a latch normally engaged with said platform to lock the same against turning movement, resilient arms overlying said platform and connected with an end thereof, a supplemental tread above said platform having connection with said arms and operable under the weight of an animal to release the latch from engagement with the platform, baffles on said platform and body spaced from said supplemental tread, and a primary tread supported in an inclined position on said platform by the supplemental tread and in the rear of said baffles and operable under the weight of an animal to operate the supplemental tread.

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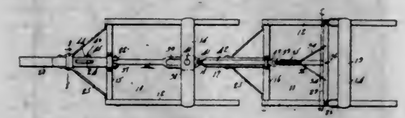
1,227,396. WRENCH. DELL C. DAVISON, Bethlehem, Pa. Filed Oct. 14, 1916. Serial No. 125,660. (Cl. 81—135.)



In a wrench, an outer jaw having an angular toothed shank, an inner jaw having a hollow handle receiving the shank and having an opening in the sides and in one of the edges thereof to disclose the teeth of the shank, spring means between the handle and shank for normally moving the jaws toward each other, a lever having side flanges and being provided with teeth disposed between the flanges, a rounded tongue upon one of the ends of the lever, the inner jaw having an arcuate depression disposed to loosely receive the tongue of the lever, a flat spring having one of its ends screwed to the handle and its other end provided with a slot, a headed member passing through the slot and engaging with the lever whereby to normally swing the lever to bring the teeth thereof out of engagement with the teeth of the shank and to limit such swinging movement of the lever.

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1,227,397. SLEIGH-BRAKE. JOSEPH O. DESCHAMPS, Lumby, British Columbia, Canada. Filed June 29, 1916. Serial No. 106,720. (Cl. 21—46.)



1. In a device of the class described, the combination with front and rear sleds, brake shoes, arranged on the rear sled and capable of movement into and out of engagement with the ground, a beam connecting said shoes, a brake bar pivoted to said beam, evener bars hingedly connecting the ends of said beam with said brake bar, a movable draft apparatus on said front sled, and a connection between said brake bar and said apparatus, substantially as described.

2. In a device of the class described, front and rear sleds, brake shoes arranged on the rear sled, and capable of movement toward and away from the ground, a brake beam attached to said shoes, a brake bar, a resilient connection between the beam and the bar, a movable draft apparatus, and a connection between said brake bar and said apparatus, substantially as described.

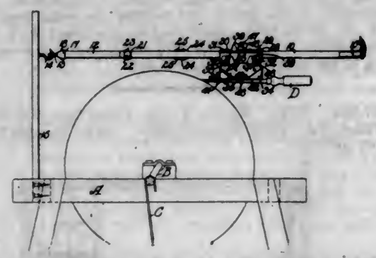
3. In a device of the class described, front and rear sleds, brake shoes pivoted to the runners of the rear sled and adapted to move into and out of engagement with the ground, a brake beam connecting said shoes, a brake bar, evener rods connected together at one end and to the opposite ends of said beam at their other extremities, a spring connecting said connected ends with said brake bar, a movable draft apparatus, and a connection between said brake bar and said apparatus, substantially as described.

4. In a device of the class described, front and rear sleds, yokes straddling the runners of the rear sled and pivoted thereto inwardly from their ends, a brake beam connecting the upper ends of said yokes, a brake bar pivoted to said beam intermediate the ends of the latter, evener rods connected together at one end and being pivoted at their opposite ends to said beam adjacent the opposite ends of the latter, a spring connecting said connected ends with said brake bar, a sliding draft tongue, and a connection between said brake bar and said tongue, substantially as described.

5. In a device of the class described, the combination with front and rear sleds, of brake yokes straddling the runners of said rear sled and pivoted thereto inwardly from their ends and adapted to move into and out of engagement with the ground, a brake beam connecting said shoes, a brake bar pivoted intermediate the ends of said beam and extending forwardly therefrom, evener bars connected at one end to the extremities of said beam, a resilient connection between the opposite ends of said rods and said brake bar, a slidable draft pole on said front sled, means for limiting the forward and rearward movement of said pole, a connecting bar hinged at one end to the rear of said pole, the opposite end of said bar being provided with a slot, the said end extending through the bunk beam of said front sled, a pin extending through said beam and slot, and a link hingedly connecting the rear end of said connecting bar and the forward end of said brake bar, substantially as described.

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1,227,398. TOOL-HOLDER. ALBERTO PÉREZ DE VILLAAMIL, Cienfuegos, Cuba. Filed Nov. 28, 1916. Serial No. 133,901. (Cl. 51—7.)



1. In a tool holder of the class described, a supporting bar, a carriage adjustable longitudinally of the bar, a tool seating element on the carriage, and clamping means adapted at one end to secure a tool on said seating element and adapted at the opposite end to engage the bar and hold the carriage in adjusted position.

2. A tool holder for use in grinding, including a bar, a device swiveled on the bar at the front end and adapted for engagement with a supporting element, spring-pressed means opposing frictional resistance to the turning of said device on the bar, and tool-carrying means on said bar.

3. A tool holder for use in grinding, including a bar, a carriage longitudinally slidable on the bar between the ends thereof, a tool seating element disposed at the under side of said bar, and supported on said carriage, and means to hold a tool on said element and clamp the carriage to the bar.

4. A tool holder of the class described, including a supporting bar having a longitudinal slot therein, a carriage slidable on the bar, a clamp having a shank extending through the slot of the bar and through the carriage to move with the carriage longitudinally of the bar, a tool seating element on the carriage at the under side, said shank having means at its lower end to hold a tool against said seating element, and means to clamp the shank to the bar to secure the carriage against movement on the bar.

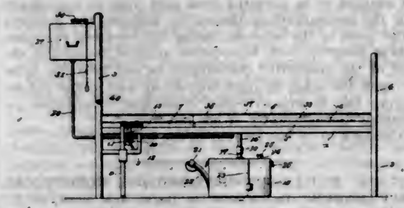
5. A tool holder for use in grinding, including a bar, a carriage on said bar, a tool seating element adjustably supported on said carriage, to be tilted forwardly or backwardly, and a clamp to hold a tool on said seating element at the under side thereof, said clamp including means to engage the bar and secure the carriage in adjusted position thereon.

[Claims 6 to 13 not printed in the Gazette.]



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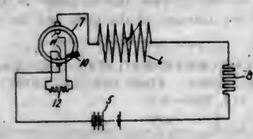
1,227,399. INVALID-BED. WILLIAM C. DE WENDT, Chicago, Ill. Filed Sept. 2, 1914. Serial No. 859,839. (Cl. 5—12.)



In a device of the kind described, in combination a bed frame, a mattress bridged across said frame and held against movement upon said bed frame, said mattress having an opening, a head section on said bed frame, a flushing tank hooked over the top of said head section, a bowl fitting into said opening, a receiving tank under said mattress, a sectional pipe extending upwardly from said receiving tank, a pipe extending below said flushing tank and having a pipe section connected to said bowl, so that said flushing tank is held against swinging, and a coupling connecting the sections of said sectional pipe to permit the receiving tank to be removed.

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1,227,400. ELECTRIC MOTOR. MICHAEL DOLIVO-DOBROWOLSKY, Wilmersdorf, Germany, assignor to General Electric Company, a Corporation of New York. Filed Mar. 25, 1914. Serial No. 827,081. (Cl. 171—228.)



1. The combination with an electric motor and a source of electric energy therefor, of means whereby the field of the motor is substantially proportional to the voltage of said source, and means associated with the rotor of the motor and within the influence of the motor field for producing a damping action on the rotor approximately proportional to the square of the voltage of said source whereby the revolutions of the motor are substantially independent of voltage fluctuations of said source.

2. The combination with an electric motor and a source of electric energy therefor, of means whereby the field of the motor is substantially proportional to the voltage of said source, and means associated with the rotor of the motor and within the influence of the motor field for producing by the rotation of the rotor in the motor field a generator action of such a character that the revolutions of the rotor are substantially independent of voltage fluctuations of said source.

3. The combination with an electric motor adapted in normal operation to perform little external work and a source of electric energy therefor, of means whereby the field of the motor is substantially proportional to the voltage of said source, and means associated with the rotor of the motor whereby the rotation of the rotor in the motor field causes a load to be placed on the motor approximately proportional to the square of the voltage of said source whereby the revolutions of the motor are substantially independent of voltage fluctuations.

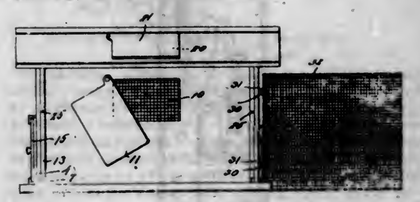
4. The combination with a direct current motor adapted for operation at constant speed and substantially without load and a source of electric energy therefor, of means whereby the field of the motor is substantially proportional to the voltage of said source, and means operatively related to the rotor of the motor whereby the rotation of the motor causes a load to be placed thereon of such a character that fluctuations in the voltage of said source produce substantially corresponding and balancing variations in the motor torque and in said load.

5. The combination with an electric motor adapted in normal operation to perform little external work and a source of electric energy therefor, of means whereby the exciting field of the motor is substantially proportional to the voltage of said source, and a locally short-circuited auxiliary armature winding mounted within the influence of the exciting field of the motor and adapted to impose a load on the motor approximately proportional to the square of the voltage of said source whereby the revolutions of the motor are substantially independent of voltage fluctuations of said source.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,401. HOVER. MARSHALL D. DRAKE, Crestwood, Ky. Filed June 16, 1916. Serial No. 104,028. (Cl. 217—12.)



In a knockdown hover, the combination of a rectangular bottom wall, two spaced upstanding projections fixed to and rising from the upper side of said bottom wall adjacent to each of the four corners thereof, upright end walls removably arranged on the bottom wall and having their ends opposed to certain of the projections and their outer sides opposed to the other projections, and also having vertical keepers on their inner sides, adjacent to their ends, upright side walls removably arranged on the bottom wall with their ends in said keepers of the end walls, and a removable top constructed and arranged to rest on the side walls and having transverse walls that depend below the upper edges of the end walls and rest snug against the outer sides of the same.

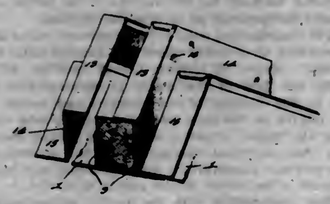
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1,227,402. METALLIC ROOF. DAVID F. DRAPER, Georgetown, Tex. Filed Jan. 18, 1915. Serial No. 2,842. (Cl. 108—19.)

1. In a ridge roof construction, the combination with a ridge-pole, rafters, and roof plates having flanges along the sides of the rafters, of retaining means therefor comprising a pair of cover sections having the marginal edges formed with oppositely and laterally extending rafter and roof flanges, said sections having the rafter flanges thereof arranged in over-lapping relation on the rafters and the body portions thereof engaging the flanges of the roof plates.

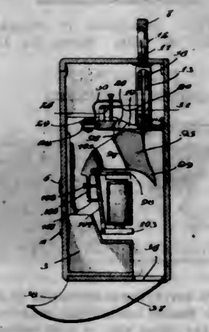
2. In a ridge roof construction, the combination with a ridge pole, rafters, and roof plates having flanges along the sides of the rafters, with a pair of interfitting cover plates comprising, a sheet of metal having the top and bottom marginal edges thereof bent at right angles in op-

posite directions to the body portion, the upper marginal edges being adapted to engage each other in adjusting overlapping relation providing means for accommodating the cover members to rafters of different widths, the bottom marginal edge extending over the edges of the roof plates, the body portion of said cover plates being provided with openings, said openings providing fastening means for the cover members to the rafters.



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1,227,403. COIN-COLLECTING APPARATUS. HARRY A. DREW, West New York, and GEORGE M. MAZZA, Weehawken, N. J., assignors to Coin Device & Signal Co. Inc., a Corporation of New York. Filed Apr. 2, 1915. Serial No. 18,730. (Cl. 194—1.)



1. In money collecting apparatus, a receiver adapted to receive coins of various denominations, variable signal mechanism under the control of the coins in said receiver and adapted to be actuated from said coins in accordance with the denominations thereof to indicate the presence of the coin in the receiver, means for releasing the coins from said receiver, coin receptacles adapted to receive the coins of the respective denominations from the receiver, and means for delivering coins from said receptacles respectively independently of one another.

2. In money collecting apparatus, a receiver adapted to receive coins of different values and capable of movements to release the coins therefrom, means for moving said receiver to release the lowermost coins, means for holding the remaining coins in the receiver in the movement thereof, registering devices corresponding to the respective values of the coins, electro-responsive devices controlling said registering devices respectively, and means operable from the lowermost coins in the movement of said receiver to effect the energization of said electro-responsive devices.

3. In money collecting apparatus, a receiver adapted to receive coins of various denominations and capable of swinging movement, variable signal mechanism under the control of the coins in said receiver and adapted to be actuated from such coins in accordance with the denominations thereof to indicate the presence of the coins in the receiver, means for swinging said receiver to release the coins therefrom, coin receptacles adapted to receive the coins of the respective denominations from said receiver, and means for delivering coins from said receptacles, respectively, independently of one another.

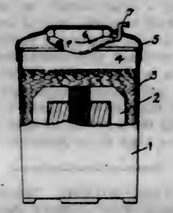
4. In money collecting apparatus, a receiver capable of swinging movement and adapted to receive coins of different denominations and hold the coins of each denomination, one above the other, and in edge to edge contact, means for moving said receiver after the coins have been deposited therein to discharge the lowermost coins therefrom, means for holding the remaining coins in said receiver during the discharge of the lower coins, and variable signal mechanism under the control of said lower coins and operable therefrom in accordance with the denomination thereof to indicate the presence of the coins in the receiver.

5. In money collecting apparatus, a receiver adapted to receive coins of various denominations, variable signal mechanism under the control of the coins in said receiver and adapted to be actuated from said coins in accordance with the denominations thereof to indicate the presence of the coins in the receiver, means for releasing the coins in said receiver, coin receptacles adapted to receive the coins of the respective denominations and hold the coins one upon the other in stack formation, and means for delivering the lowermost coins from said receptacles respectively independently of one another.

[Claims 6 to 10 not printed in the Gazette.]

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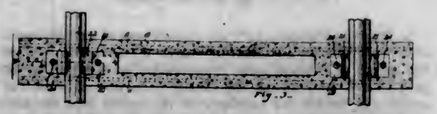
1,227,404. EXPANSION-CHAMBER FOR ELECTRICAL APPARATUS. DELAVIELD DU BOIS, New York, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 1, 1913. Serial No. 798,715. (Cl. 175—361.)



The combination with a tank, oil therein and electrical apparatus submerged in the oil, of a flexible bag-like member subject on its interior and exterior to the opposing pressures of the interior of the tank and the atmosphere.

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1,227,405. CONCRETE RAILWAY-TIE. LEANDER DUNCAN, Butte, Mont. Filed Oct. 11, 1916. Serial No. 125,011. (Cl. 238—3.)



1. The herein described reinforced concrete railway tie, the same comprising a body portion of concrete from one end of the tie to the other, the reinforcement means comprising a plurality of rods coextensive in length with the tie, said tie having adjacent each end rail attachment means comprising a metal casing, the opposite end portions of which are interlocked with the concrete reinforcement means, a cushion supported upon the bottom of the casing, and a pillow block secured upon the upper surface of the cushion.

2. The herein described cross tie for railways comprising a body structure of concrete having longitudinal reinforcement rods extending therethrough from one end to the other, a sheet metal casing secured in each end of the body portion of the tie, a portion of said rods passing through both ends of the casing and locking the same in position, a cushion supported upon the bottom of the casing and lying between said locking rods, and a pillow block anchored upon the upper surface of the cushion.

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1,227,406. PROCESS FOR PRODUCING FAST TINTS ON ANIMAL FIBERS. GADIENT ENGI, ARMIN GROB, and FRITZ STRAUB, Basel, Switzerland, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Filed Nov. 27, 1915. Serial No. 63,827. (Cl. 8—5.)

The described process for producing fast tints on animal fibers, consisting in dyeing the same in an acid bath with chromium compounds of azo dyestuffs containing groups able to combine with chromium and which have been combined with chromium.

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1,227,407. CHROMIUM COMPOUNDS OF THE GALLOCYANIN SERIES AND A PROCESS OF MAKING SAME. GADIENT ENGI, ARMIN GROB, and JAKOB WÜRGLER, Basel, Switzerland, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Filed Nov. 27, 1915. Serial No. 63,828. (Cl. 8—1.)

1. The described process for the manufacture of chromium compounds of the gallocyanin series, consisting in treating the dyestuffs of the gallocyanin series in an aqueous solution with chromium salts and isolating the thus obtained chromium compounds.

2. The described process for the manufacture of chromium compounds of the gallocyanin series, consisting in treating the dyestuffs of the gallocyanin series in an aqueous solution with chromium salts and reducing the thus obtained chromium compounds.

3. As new products the described chromium compounds of gallocyanin dyestuffs constituting deep colored powders dissolving in water with violet to blue and green colorations, in concentrated sulfuric acid with characteristic colorations and giving in calico-, wool- and silk-printing without mordant vivid prints of excellent fastness.

4. As new products the described leuco derivatives of chromium compounds of gallocyanin dyestuffs, constituting green-yellow to olive-colored powders, dissolving in concentrated sulfuric acid to dirty colored solutions and in water to feebly colored solutions which oxidize in the air to intense violet to blue and green colored solutions, and giving in calico-, wool- and silk-printing without mordant vivid tints of excellent fastness.

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1,227,408. BOX-CAR CONSTRUCTION. CHARLES F. EWING, Johnstown, Pa. Filed Mar. 15, 1917. Serial No. 155,120. (Cl. 105—78.)



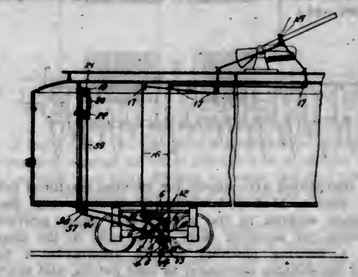
1. In combination, a box car having an open top, plates upon the upper edges of the car projecting over the sides of the car and provided with openings, a removable roof for the car including channeled plates having their inner flanges contacting with the inner sides of the car and their outer flanges contacting with the outer edges of the referred to plates, slotted studs upon the channeled members passing through the referred to openings in the mentioned plates, and locking means upon the sides of the car including bolt members designed to pass through the slots in the studs.

3. In combination, a box car having an open top, angle plates secured to the upper edge of the top, and projecting beyond the sides of the car, and said plates having spaced openings, an arch-shaped metallic roof constructed in sections, flanged arch-shaped end plates for the roof, channeled plates secured to the edges of the roof and adapted to receive the angle plates of the car, angle ribs arranged transversely of the roof, one of the roof sections having its end provided with a continuous offset portion, the confronting end of the other roof section having a continuous pocket to receive the said offset end of the first mentioned section, swiveled rings on the roof sections, slotted studs depending from the channeled members and passing through the openings in the angle plates of the car, slidable bars upon the sides of the car, offset members comprising bolts upon the bars, levers pivotally secured to the ends of the car and pivotally connected to the ends of the bar and adapted, when actuated to bring the bolts through the slots in the stud, keepers for the levers, and locking means for the keepers.

[Claim 2 not printed in the Gazette.]

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1,227,409. MEANS FOR OPERATING CHANGEABLE EXHIBITORS. PETER FANDEL, Gibson, La. Filed Sept. 15, 1916. Serial No. 120,398. (Cl. 40—48.)



1. Operating mechanism for changeable exhibitors comprising a shaft, driving mechanism between said shaft and the exhibitor whereby the latter may be actuated from the shaft, a ratchet wheel fixed upon said shaft, arms radiating from the shaft at one side of the ratchet wheel thereon and loosely mounted upon the shaft, reversely disposed pawls on the outer ends of the said arms, respectively, adapted to engage said ratchet wheel, means movable between the ratchet wheel and each of the pawls to relieve the ratchet wheel of the influence of such pawl, whereby the ratchet wheel may be rotated in one direction under the action of the other pawl, and means for revolving said arms around the shaft to actuate the ratchet wheel.

2. Operating mechanism for changeable exhibitors comprising a shaft mounted for rotary movement, driving mechanism between said shaft and the exhibitor, a ratchet wheel fixed upon said shaft, arms loosely mounted upon said shaft and radiating therefrom, reversely disposed pawls on the outer ends of the said arms adapted to engage the ratchet wheel, cam shoes each movable between the ratchet wheel and a given pawl, whereby the remaining pawl may engage the ratchet wheel to turn the latter in one direction, and means for actuating said arms to impart rotary movement to said ratchet wheel.

4. Operating mechanism for changeable exhibitors comprising a shaft mounted for rotary movement, driving mechanism between said shaft and the exhibitor, a ratchet wheel fixed upon said shaft, arms loosely mounted upon said shaft and radiating therefrom, reversely disposed pawls on the outer ends of the said arms adapted to engage the ratchet wheel, cam shoes each movable between the ratchet wheel and a given pawl, whereby the remaining pawls may engage the ratchet wheel to turn the latter in one direction, means for actuating said arms to impart rotary movement to said ratchet wheel, and arms rotatably mounted upon said shaft and radiating therefrom and carrying said cam shoes.

6. Operating mechanism for car carried station indicators comprising a shaft, driving mechanism between said shaft and the exhibitor whereby the latter may be actuated from the shaft, a ratchet wheel fixed upon said

shaft, arms radiating from the shaft at one side of the ratchet wheel thereon and loosely mounted upon the shaft, reversely disposed pawls on the outer ends of the said arms, respectively, adapted to engage said ratchet wheel, shoes, each movable between the ratchet wheel and a given pawl to relieve the ratchet wheel of the influence of such pawl, whereby the ratchet wheel may be rotated in one direction under the action of the other pawl, means for revolving said arms around the shaft to actuate the ratchet wheel, and means controlled by the movements of the trolley pole to reverse the positions of said shoes so that the said shaft may be rotated in one direction or the other according to the direction of travel of the car.

[Claims 3 and 5 not printed in the Gazette.]

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1,227,410. SHARPENING ATTACHMENT FOR MOWING-MACHINES. CHARLES HERBERT FARNSWORTH, Briceland, Cal., assignor of one-half to Tosten Bros., Briceland, Cal. Filed Nov. 13, 1915. Serial No. 61,349. (Cl. 56—44.)



1. A sharpening attachment for mowing machines comprising guides, U-shaped resilient yokes having their upper ends secured to the guides, said yokes provided with means for securing their lower ends to the finger bar of a mowing machine cutting apparatus, a bar mounted for slidable movement in said guides, and sharpening stones carried by the last named bar and adapted to bear either on the cutter plates or on the guard fingers according to the adjustment of the last named bar.

2. A sharpening attachment for mowing machines comprising guides, U-shaped resilient yokes having their upper ends secured to said guides, said yokes provided with means for securing their lower ends to the finger bar of a mowing machine cutting apparatus, a bar mounted for slidable movement in said guides, sharpening stones carried by the last named bar and adapted to bear either on the cutter plates or on the guard fingers according to the adjustment of the last named bar, and means to secure the last named bar in adjusted position.

3. A sharpening attachment for mowing machines comprising guides, U-shaped resilient yokes having their upper ends secured to the guides said yokes provided with means for securing their lower ends to the finger bar of a mowing machine cutting apparatus, a bar mounted for slidable movement in said guides, sharpening stones carried by the last named bar and adapted to bear either on the cutter plates or on the guard fingers according to the adjustment of the last named bar, and means to impart vertical oscillatory movement to the last named bar and the sharpening stones to carry the stones over the points of the cutter plates.

4. In combination with the finger bar and cutter bar of a mowing machine, a cam on the cutter bar for reciprocating movement therewith, U-shaped resilient yokes attached to the finger bar and extending rearwardly therefrom and upwardly thereover and provided at their upper ends with guides, a bar arranged for endwise movement in said guides and provided with an operating arm for engagement with said cam to lift said arm when the last named bar is moved in one direction and lower said arm when the last named bar is moved in the reverse direction and stone carrying arms also secured to the last named bar.

5. In combination with the finger bar and cutter bar of a mowing machine a cam on the cutter bar for reciprocating movement therewith, U-shaped resilient yokes attached to the finger bar and extending rearwardly therefrom and upwardly thereover and provided at their upper ends with guides, a bar arranged in said guides and provided with an operating arm for engagement with said cam, stone carrying arms also secured to the last named bar, each of said stone carrying arms having a V-shaped notch in its outer end and a notch in its lower side at its outer end communicating with said notch, and each of the stones carried by said arms having a head adapted to fit in the notch and the body portion adapted to fit in the groove.

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1,227,411. SPRING FASTENING DEVICE. NEVILLE ALEXANDER THOMAS NIX FEARY, Peterborough, England, assignor to Frederick Sage & Company, Limited, London, England. Filed Aug. 29, 1916. Serial No. 117,418. (Cl. 24—230.)



4. A separable fastening device comprising a pair of separable elements, an engaging member rigidly secured to one of said elements, a movable engaging member in a cavity in the other of said elements, said members having convexly curved surfaces, an abutment, a spring tending to press said movable member against said abutment, said cavity having a passage extending therefrom, which passage is of such shape and size as to receive and guide the engaging member on the other element of the device so that the rigidly mounted engaging member may pass between the abutment and the spring-controlled member and lie on the farther side thereof against the abutment and with the curved surfaces of the members in contact so that they have a common tangent whereby when the separating strain is normal to the tangent it will be ineffective to separate the members, and means whereby the movable member may be moved from its abutment to such position that a separating force on the members will cause the rigid member to move the movable member farther away from the abutment.

[Claims 1 to 3 and 5 to 8 not printed in the Gazette.]

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1,227,412. TOOTH-BRUSH. ADAM E. FENDRICH, Weehawken, N. J. Filed Oct. 30, 1915. Serial No. 58,840. (Cl. 15—39.)



A tooth brush including a tubular handle provided with a shell or casing of substantially semi-cylindrical form, a rod circular in cross section and mounted for rotary movement in the tubular handle, said rod or bar extending into the shell or casing, bristles covering a portion of the surface of the rod extending into said shell, said rod being provided with a terminal recess forming opposite shoulders and a stop carried by the shell or casing and arranged to be engaged by said shoulders for limiting the rotary movement of the rod.

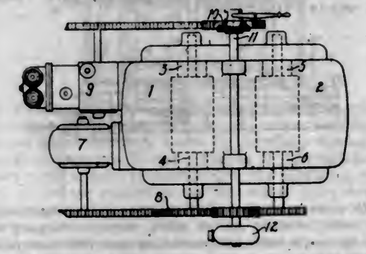
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1,227,413. SYSTEM OF CONTROL. RALPH E. FERRIS, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 4, 1914. Serial No. 829,427. (Cl. 171—313.)

1. A control system comprising a supply circuit, a plurality of mechanically associated dynamo-electric machines fed therefrom, means for varying the load upon said machines by a predetermined amount, another dynamo-electric machine driven by said first machines, and means for maintaining the voltage of said last machine substantially constant, as the said load varies.



2. A control system, comprising a supply circuit, a plurality of mechanically associated driving dynamo-electric machines fed therefrom, a driven apparatus adapted to vary the load upon said machines by a predetermined amount, a generating dynamo-electric machine driven by said first machines, and means dependent upon the load variations for varying the electrical conditions in said generating machine to maintain the voltage thereof substantially constant, as the said load varies.



3. A control system comprising a supply circuit, a plurality of mechanically associated electric motors connected in series-relation across said circuit, a fluid compressing apparatus adapted to be mechanically connected to said motors, a generator driven by said motors, and switching means dependent upon the mechanical connection and disconnection of said apparatus for varying the exciting field current of said generator to maintain the voltage thereof substantially constant, as the load varies.

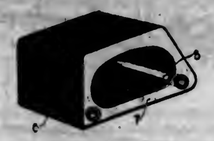
4. In a control system, the combination with a supply circuit of relatively high voltage, of a plurality of mechanically associated dynamo-electric machines fed therefrom, means for varying the load upon said machines by a predetermined amount, another dynamo-electric machine driven by said first machines, a receiving circuit of relatively low voltage connected to said last machine, and means for maintaining the voltage of said receiving circuit substantially constant, as the said load varies.

5. In a control system, the combination with a supply circuit of relatively high voltage, of a plurality of mechanically associated driving dynamo-electric machines fed therefrom, a driven apparatus adapted to vary the load upon said machines by a predetermined amount, a generating dynamo-electric machine driven by said first machines, a receiving circuit of relatively low voltage connected across said last machine, and means dependent upon the load variations for varying the electrical conditions in said generating machine to maintain the voltage thereof substantially constant, as the said load varies.

[Claims 6 to 12 not printed in the Gazette.]

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1,227,414. DYNAMO-ELECTRIC MACHINE. ALLAN BERTRAM FIELD, London, England, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 31, 1913. Serial No. 809,596. (Cl. 171—252.)

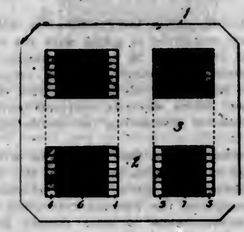


1. A coil-retaining wedge for dynamo-electric machines comprising a plurality of similar substantially trapezoidal laminations having registering apertures and a plurality of arcuate slots located in the base portions of said laminations and a plurality of tubular rivets disposed in said slots for securing said laminations together.

2. A coil-retaining wedge for dynamo-electric machines comprising a plurality of similar substantially trapezoidal laminations of magnetizable material having registering apertures and a plurality of arcuate slots located in the base portions of said laminations, a pair of apertured end-plates of non-magnetizable material and a plurality of tubular rivets of non-magnetizable material disposed in said slots for clamping said laminations and said end-plates together.

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1,227,415. TRANSFORMER. CHARLES LE G. FORTESCUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 7, 1911. Serial No. 642,876. (Cl. 175—356.)



1. A three-phase T-connected transformer comprising a core member having an outer portion and a central cruciform portion, and coils divided between the two parts of one of the cruciform core legs substantially in the ratio of 8:10.

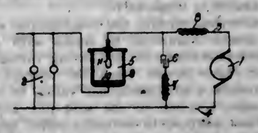
2. A three-phase T-connected transformer comprising an outer rectangular core portion and a cruciform inner portion, the cross sectional area of one of the legs of the cruciform portion being substantially twice that of the outer portion, and the cross sectional area of the other leg being substantially one and four tenths that of the outer portion, and coils mounted on two parts of one of the core legs.

3. A three-phase T-connected transformer comprising an outer rectangular core portion and a cruciform inner portion, the cross sectional area of one of the legs of the cruciform portion being substantially twice that of the outer portion, and the cross sectional area of the other leg being substantially one and four tenths that of the outer portion, and coils divided between the two parts of one of the cruciform core legs substantially in the ratio of 8:10.

4. A three-phase transformer comprising a core member having an outer rectangular portion and a central cruciform portion, one leg of the cruciform portion dividing the other substantially in the ratio of 8:10 and the cross sectional area of one of the cruciform core legs being substantially twice that of the outer portion, and the cross sectional area of the other leg being substantially one and four tenths that of the outer portion, and coils located on the parts of the core which are divided in the ratio of 8:10, the turns of the coils bearing substantially the same ratio to each other as the parts of the core on which they are located.

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1,227,416. CIRCUIT-INTERRUPTING DEVICE. CHARLES LE G. FORTESCUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 13, 1914. Serial No. 850,744. (Cl. 175—268.)



1. In an electrical circuit, the combination with a mercury-vapor device, of means for impressing an oscillating

voltage upon said mercury-vapor device when the current traversing the circuit exceeds a predetermined value to thereby interrupt the circuit.

2. In an electrical circuit, the combination with a mercury-vapor device connected in series with the circuit, of means for impressing an oscillating voltage upon the said mercury-vapor device when the current traversing the same exceeds a predetermined value only.

3. In an electrical circuit, the combination with a mercury-vapor device connected in series with the circuit, of electrical means connected in parallel relation to said circuit for inducing a high-frequency oscillating voltage in said circuit when the potential of the circuit quickly changes because of a short circuit or a ground thereon only.

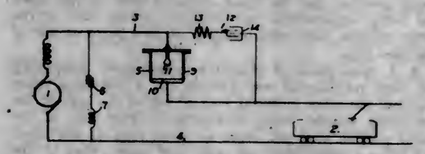
4. In an electrical circuit, the combination with a mercury-vapor device connected in series with the circuit, of electrical means connected in parallel relation to said circuit for automatically inducing a high-frequency oscillating voltage in said circuit to extinguish the arc of the mercury-vapor device when an overload traverses the circuit, and means for dissipating the oscillating current thus set up.

5. In an electrical circuit, the combination with a mercury-vapor device connected in series with the circuit, of an electrical means connected in parallel relation to the circuit for interrupting the current traversing the said mercury-vapor device when a shirt circuit or ground occurs upon the circuit.

[Claims 6 to 14 not printed in the Gazette.]

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1,227,417. CIRCUIT-INTERRUPTING DEVICE. CHARLES LE G. FORTESCUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 30, 1915. Serial No. 37,258. (Cl. 175—268.)



1. In an electrical circuit, the combination with a vacuum-electric apparatus and means for impressing an oscillating voltage upon the said apparatus when the current traversing the circuit exceeds a predetermined value, of a path connected in shunt relation to the vacuum-electric apparatus to constitute a critically damped circuit therewith under normal conditions of operation.

2. In an electrical circuit, the combination with a vacuum-electric apparatus and means for impressing an oscillating voltage upon the said apparatus when the current traversing the same exceeds a predetermined value, of a normally critically damped path connected in shunt relation to the vacuum-electric apparatus for dissipating the kinetic energy of the circuit when the arc in the vacuum-electric apparatus is interrupted.

3. In an electrical circuit, the combination with a vacuum-electric apparatus and a condenser for impressing an oscillating voltage upon the said vacuum-electric apparatus when the current traversing the same exceeds a predetermined value, of a critically damped path connected in shunt relation to the vacuum-electric apparatus for dissipating the energy of the circuit when the vacuum-electric apparatus is inoperative.

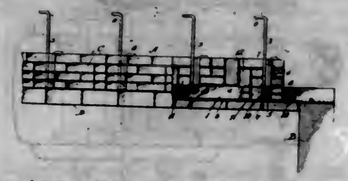
4. In an electrical circuit, the combination with a mercury-vapor device connected in series with the circuit and means for impressing an oscillating voltage upon the said mercury-vapor device when the current traversing the same exceeds a predetermined value, of means connected in shunt relation to the said mercury-vapor device that is not adapted to normally affect the operation of the same and to effectively dissipate the energy of the circuit when the mercury-vapor device is inoperative.

5. In an electric circuit, the combination with an asymmetric resistor connected in series relation to the circuit, a condenser connected in shunt relation to the circuit, and a critically damped path connected in shunt relation to the asymmetric resistor.

[Claims 6 to 10 not printed in the Gazette.]

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1,227,418. MASONRY BEAM. WILLIAM PINCKNEY FRANCIS, Atlanta, Ga. Filed May 11, 1916. Serial No. 96,814. (Cl. 72—59.)



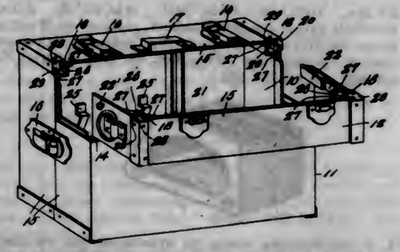
1. In a beam, a metal reinforce comprising longitudinal angle irons laterally spaced apart, stirrups disposed between the angle irons and extending upwardly therefrom, washers interposed between both sides of the stirrups and the angle irons, and said washers having extensions engaging with the stirrups to firmly support the same upright, and bolts passing through the angle irons and through the washers and stirrups.

2. In a beam, a metal reinforce comprising a pair of angle irons spaced apart, bolts passing through the angle irons, stirrups formed of doubled rods, the doubled extremities being lowermost and disposed between the angle irons and engaged under the bolts, and washers interposed between the stirrups and angle irons and fastened in place by the bolts, said washers having upper and lower extensions arranged in a common plane to provide flat faces, said washers being positioned with the said flat faces vertical and flush with the stirrups at one side.

3. In a beam, a metal reinforce comprising a pair of angle irons spaced apart, bolts passing through the angle irons, stirrups formed of doubled rods, the doubled extremities being lowermost and disposed between the angle irons and engaged under the bolts, washers interposed between the stirrups and angle irons and fastened in place by the bolts, said washers having upper and lower extensions arranged in a common plane to provide flat faces, said washers being positioned with the said flat faces vertical and flush with the stirrups at one side, and masonry work built on the angle irons and around the stirrups and washers.

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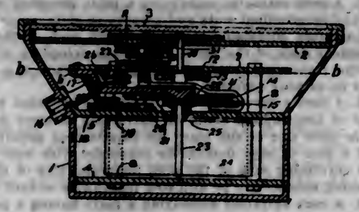
1,227,419. FOLDING CAMP-KIT. ACEL H. FROOM, Santa Maria, Cal. Filed Apr. 21, 1916. Serial No. 92,764. (Cl. 190—12.)



A combined lunch box and table including hinged sections each comprising metallic side and top plates, grooved corner members receiving the ends of the plates, certain of said corner members being formed with angular leg receiving sockets, and longitudinally extending leaf springs secured within said sockets and frictionally bearing against the legs to hold them within the sockets.



1,227,420. SPEEDOMETER. EUGENE M. GILBS, Peoria, Ill. Filed Dec. 11, 1911. Serial No. 665,043. (Cl. 264—10.)



1. In a device of the class described, the combination of an oscillating structure, an indicating means operated by the oscillating structure, means for yieldingly holding the oscillating structure at one extremity of its oscillation, a rotary drive member concentric with the oscillating structure, means for supporting the said rotary drive member independently of the oscillating structure, a rotary driven member pivoted eccentrically on the oscillating structure, and a resistance element operated by the driven member.

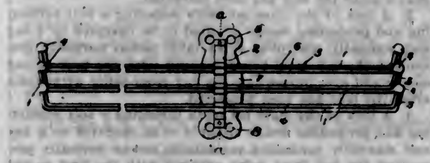
4. In a device of the class described, the combination of an oscillating part, a stationary hub extending axially of the oscillating part, means for operating the oscillating part comprising a driven member depending from the oscillating part at a distance from the axis so as to swing about said stationary hub, a drive member mounted on said stationary hub and extending laterally from the said stationary hub so as to cooperate with the said depending driven member on the oscillating part, an air compartment provided with escapement means for providing a slippage in the transmission of power to the oscillating part for regulating the amount of oscillation, means for yieldingly holding the oscillating part at one extremity of its oscillation, and indicating means movable with the oscillating part.

6. In a speed responsible device, a frame structure, an indicator shaft journaled thereon, an oscillatory frame fixed to and extending on opposite sides of the shaft, one end of said oscillatory frame being weighted and the opposite end formed to provide opposing portions, a pair of connected gears journaled in said opposing frame portions, a gear freely rotatable on the frame structure and meshing with one of said connected gears, a resistance element journaled in the frame structure, a gear fixed to the resistance element in superposed relation with the third gear and meshing with the other of said connected gears, and means for driving the third gear.

[Claims 2, 3, 5, and 7 not printed in the Gazette.]

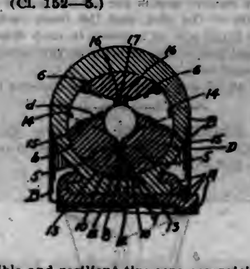
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1,227,421. TOWEL-RACK. MARIA A. GILLILAND, Adrian, Mich. Filed Sept. 24, 1915. Serial No. 52,445. (Cl. 45—32.)



An individual sanitary towel rack comprising a bracket having an inclined arm made of a single strip of material and provided with outstanding doubled portions forming non-circular bearings, towel supporting bars non-circular in cross-section and arranged in said bearings and held thereby and by said inclined arm in spaced relation, at different elevations and also in different vertical planes, and clamping means securing the doubled portions of said inclined arm together and in mutual contact and also securing the supporting bars in said bearings.

1,227,422. CORE FOR RESILIENT WHEEL-TIRES. GEORGE E. GILMORE, Cleveland, and FREDERICK V. ROSSE, Akron, Ohio. Filed Jan. 22, 1917. Serial No. 143,634. (Cl. 152—5.)



1. A flexible and resilient tire-core comprising an elastic and compressible non-inflatable body having a central chamber and provided in each side thereof with an outer row and an inner row of laterally extending recesses arranged substantially horizontally between said chamber and the exterior of the core, the outer end-portion of each recess of the inner row of recesses in each side of the core extending into the outer half of the core, and the outer end-portion of each recess of the outer row of recesses in each side of the core extending into the inner half of the core.

2. A flexible and resilient tire-core comprising an elastic and compressible non-inflatable body having a central chamber and provided in each side thereof with an outer row and an inner row of laterally extending recesses arranged substantially horizontally between said chamber and the exterior of the core, each recess in each side of the core being arranged in line endwise with a recess in the opposite side of the core, the inner ends of the recesses of the outer row of recesses in each side of the core being arranged nearer the outer circumference of the core than the aforesaid chamber, and the body of the core having an imperforate portion which is arranged between the inner end of each outer recess in one side of the core and the opposite outer recess in the other side of the core and which forms end walls for portions of said recesses.

3. A flexible and resilient tire-core comprising an elastic and compressible non-inflatable body having a central chamber and provided in each side thereof with an outer row and an inner row of laterally extending recesses arranged substantially horizontally between said chamber and the exterior of the core, the recesses of the outer row of recesses in each side of the core extending at their outer ends into the inner half of the core and having their inner ends arranged nearer the outer circumference of the core than the aforesaid chamber.

4. A flexible and resilient tire-core comprising an elastic and compressible non-inflatable body having a central chamber and provided in each side thereof with an outer row and an inner row of laterally extending recesses arranged substantially horizontally between said chamber and the exterior of the core, said body having an imperforate portion extending circumferentially of said chamber between the outer rows of recesses and being provided with a slot which is arranged diametrically opposite said imperforate portion and extends along the aforesaid chamber and from said chamber to the exterior of the core, said slot being adapted to receive means for holding apart and bracing the side walls of said slot.

5. A flexible and resilient tire-core comprising an elastic and compressible non-inflatable body having a central chamber and provided in each side thereof with an outer row and an inner row of laterally extending recesses arranged substantially horizontally between said chamber and the exterior of the core, the inner ends of the recesses of the outer row of recesses in each side of the core being arranged nearer the outer circumference of the core than the aforesaid chamber, the aforesaid body having an imperforate portion which extends circumferentially of said chamber between the outer rows of recesses and provided

with a slot which is arranged diametrically opposite said imperforate portion and extends along the aforesaid chamber and from said chamber to the exterior of the core and is adapted to receive means for holding apart and bracing the side walls of the slot, and the inner ends of the recesses of the inner row of recesses in each side of the core being arranged nearer the exterior of the core than the inner edge of said slot.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,423. DRINKING-CUP. FRANK GLASNER and GEORGE ELLISON, Hinton, Iowa. Filed June 23, 1916. Serial No. 105,482. (Cl. 65—58.)

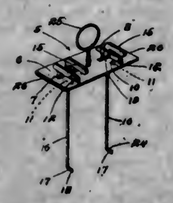


1. In a device for the purpose set forth, a tube which is slitted from one of its ends to adjacent its other end and which is provided with a slot extending longitudinally therethrough and disposed diametrically opposite one of the slits, a member within the tube having a stud normally arranged in the slot, substantially V-shaped springs arranged one at a right angle to the other and connected at their central portions to the said member, and a textile body secured to the arms of the springs and to the movable member, all as and for the purpose set forth.

2. In a device for the purpose set forth, a slitted tube, a member movable within the tube, a textile body secured to the member, spring means connected with the member and with the body and adapted when the movable member is slid longitudinally of the tube in one direction, to permit of the expansion of the springs and to bring the textile body to cup formation, the said body adapted to be received in the slits of the tube when the movable member is moved in an opposite direction to bring the body within the tube, said movable member being rotatable upon the tube, and a protective sleeve for the body and for the tube, and said sleeve having a spring clip.

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1,227,424. CORK-EXTRACTOR. LAWRENCE GLENN, Sparta, Ill. Filed Apr. 8, 1916. Serial No. 89,872. (Cl. 65—47.)



1. A cork extractor embodying a plate, a pair of extracting members carried by said plate and having sharpened angular ends, said extractors being rotatably supported by said plate to permit of the angular ends of the extractors being engaged with the cork.

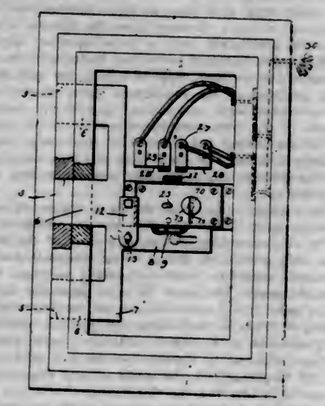
2. A cork extractor embodying a plate provided with a pair of longitudinal slots and transverse slots, an extracting member adjustably mounted within each of the longitudinal slots of the plate, and means extending in each of the transverse slots for holding the extracting members in various adjusted positions.

3. A cork extractor embodying a plate provided with a pair of longitudinal slots, an extracting member mounted in each slot of the plate for longitudinal adjustment, and a pair of keys detachably connected with said plate and traversing each of the slots for permitting of the extracting members to be adjusted lengthwise of said plate.

4. A cork extractor embodying a plate having a pair of longitudinal slots, an extracting member mounted in each slot of the plate for longitudinal adjustment and provided with a grooved shank, the groove of the shank of said extracting members rotatably mounting each of the extracting members within the slots of the plate, substantially as and for the purpose specified.

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1,227,425. LOCK. MANOEL E. GONSALVES, New Amsterdam, British Guiana. Filed May 31, 1916. Serial No. 100,836. (Cl. 70—14.)



1. A lock of the class set forth including a bolt retracting and projecting means adapted to be operated by a key and manually controlled retractable means normally preventing the key from being engaged with the first named means and also preventing the key from being withdrawn after the bolt has been retracted.

2. A lock of the class set forth including a bolt retracting and projecting means adapted to be operated by a key and manually controlled retractable means normally preventing the key from being engaged with the first named means and also preventing the key from being withdrawn after the bolt has been projected.

3. A lock of the class set forth including a bolt retracting and projecting means adapted to be operated by a key and manually controlled retractable means normally preventing the key from being engaged with the first named means and also preventing the key from being withdrawn after the bolt has been retracted or projected.

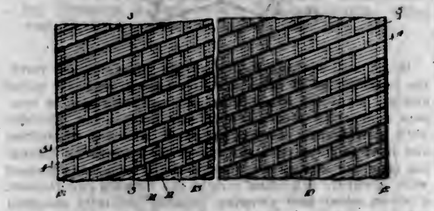
4. A lock of the class set forth including a bolt retracting and projecting means adapted to be operated by a key, manually controlled retractable means normally preventing the key from being engaged with the first named means, said manually controlled retractable means also preventing the key from being withdrawn after the bolt has been retracted or projected and independent manually controlled means for releasing the retractable means.



5. A lock of the class set forth including a bolt retracting and projecting means adapted to be operated by a key, manually controlled retractable means normally preventing the key from being engaged with the first named means, said manually controlled retractable means also preventing the key from being withdrawn after the bolt has been retracted or projected and a manually released latch for releasing said retractable means.

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1,227,426. TIRE-CASING. HANS E. GRABAU, Long Island City, and A CHARLES SCHWARTZ, New York, N. Y.; said Grabau assignor to said Schwartz. Filed Feb. 8, 1917. Serial No. 147,369. (Cl. 152—13.)



1. A vehicle tire casing including a strip of fabric extending from bead to bead and forming a complete annulus, said strip consisting of transverse flat strands made up of a plurality of straight threads disposed parallel to each other in superposed layers, said flat strands being interwoven with a series of longitudinal threads spaced apart.

2. A vehicle tire casing including a strip of fabric extending from bead to bead and forming a complete annulus, said strip consisting of transverse flat strands made up of a plurality of straight threads disposed parallel to each other in superposed layers with interposed longitudinal straight threads, said flat strands being interwoven with a series of longitudinal threads spaced apart.

4. A vehicle tire casing including a strip of fabric extending from bead to bead and forming a complete annulus, said strip consisting of transverse flat strands made up solely of a plurality of straight threads disposed parallel to each other in superposed layers, said flat strands being interwoven with a series of longitudinal threads spaced apart.

7. A vehicle tire casing including an annular strip of fabric extending from bead to bead, said strip having oblique transverse strands arranged side by side and connected by longitudinal threads, each strand consisting of a plurality of substantially parallel members extending throughout the width of the strip and about the edges thereof.

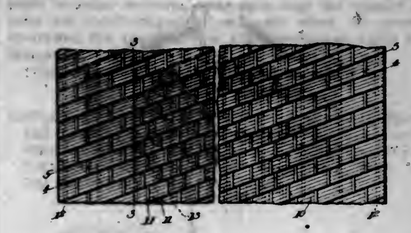
10. A vehicle tire casing including an annular strip of fabric extending from bead to bead, said strip having transverse strands arranged side by side, a series of longitudinal threads interwoven with the strands, a longitudinal thread at each edge of the strip, each of said strands comprising a thread extending across the strip and about the longitudinal edge threads a plurality of times.

[Claims 3, 5, 6, 8, 9, and 11 not printed in the Gazette.]

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1,227,427. METHOD OF MAKING TIRE-CASINGS. HANS E. GRABAU, Long Island City, and A CHARLES SCHWARTZ, New York, N. Y.; said Grabau assignor to said Schwartz. Filed Feb. 8, 1917. Serial No. 147,370. (Cl. 91—68.)

1. The method of making a strip of tire casing fabric having longitudinal threads and transverse strands extending obliquely with respect to the longitudinal threads and connected by the latter, which consists in forming the fabric with the strands and longitudinal threads extending substantially at right angles, causing the strands to assume positions oblique to the longitudinal threads, and



finally treating the fabric with a substance to maintain the strands and threads in said oblique relation.

[Claims 2 to 4 not printed in the Gazette.]

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1,227,428. PROTECTIVE LINING FOR GARMENTS. MAX I. GREENBERG, Great Neck, N. Y. Filed Feb. 4, 1916. Serial No. 76,156. (Cl. 2—81.)



1. A protective throw-away lining embodying normally exposed indicative means for temporary attachment on the inside of a garment.

2. A lining as characterized embodying normally exposed means for temporary attachment of said lining to the inside of a garment, a portion of said lining being extended for display on the outer side of the garment.

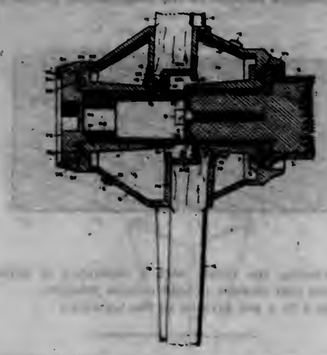
3. The combination of a garment; a medicated detachable auxiliary protective lining therefor, said lining being shaped in correspondence with the bodice of said garment; and means for attaching said lining to said garment, said means being destroyed in the operation of detaching the lining from said garment.

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1,227,429. WHEEL-HUB. JAMES HENRY GRESSOM, Hudson, Wis. Filed Apr. 27, 1916. Serial No. 93,992. (Cl. 64—26.)

In a self lubricating hub, an outer shell, a boxing disposed through said shell and provided circumferentially and intermediate its ends with a series of oil outlet openings, the space between said outer shell and boxing serving as an oil well, a series of spoke sockets arranged circumferentially and intermediate the ends of the outer shell, said spoke sockets extending radially inwardly into engagement with the boxing, each of said spoke sockets formed with an oil chamber in its inner end which

registers with one of said boxing outlet openings, said oil chambers being each provided with an inlet opening



whereby oil can feed from the oil well through the boxing.

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1,227,430. COLLAPSIBLE TUBE. FREDERICK WILLIAM GRIES, Watervliet, N. Y. Filed Aug. 16, 1916. Serial No. 115,291. (Cl. 221—60.)



1. A device of the class described embodying a cylindrical hollow body portion provided with an exteriorly threaded neck formed with an outlet slot, a perpendicular member formed contiguous with the upper end of the neck, a member threadedly mounted upon the neck and slidably mounted upon the perpendicular member for closing said cap.

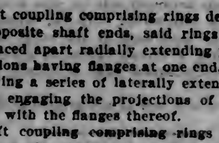
2. A device of the class described embodying a hollow cylindrical body portion provided at its upper end with an annular counter-sunk portion, a layer of cork inserted in the counter-sunk portion of the tube, an exteriorly threaded neck rising centrally from said counter-sunk portion, a cap threadedly mounted on said neck, said cap when in closed position adapted to bear against said layer of cork and establishing a liquid tight connection between the cap and tube.

4. A device of the class described embodying a hollow cylindrical body portion provided at its upper end with an annular counter-sunk portion, a layer of cork inserted in the counter-sunk portion of the tube, an exteriorly threaded neck rising centrally from said counter-sunk portion, a cap threadedly mounted on said neck, said cap when in closed position adapted to bear against said layer of cork and establishing a liquid tight connection between said cap and tube, and a guide post rising from the neck and having an enlarged upper end, the enlarged upper end of said post preventing any accidental displacement of the cap from the container upon the raising of the former to an open position.

[Claim 3 not printed in the Gazette.]

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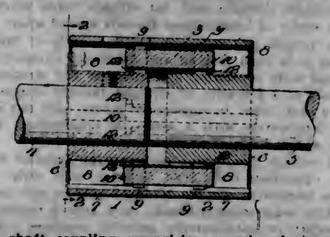
1,227,431. ANTISLIPPING DEVICE. DAVID GRIEVE, Needham Heights, Mass. Filed Apr. 26, 1916. Serial No. 93,688. (Cl. 36—64.)



In an anti-slipping device of the character set forth, the combination of three arms stamped from sheet metal and all connected together by and radiating from a common connecting pivot, two of said arms being provided with downwardly projecting barbs punched therefrom and bent to form terminal fingers with inwardly extending spur like extremities, the remaining arm being formed with upwardly extending ears at the forward end thereof, a sheet metal heel gripping member pivotally mounted between said ears and having heel engaging spurs, and a sheet metal two-armed lever also pivotally mounted between said ears and adapted to engage the outer face of said pivotally mounted heel gripping member and having its forward end deflected to form a stop for engagement with the sole of a shoe or boot in advance of the heel thereof.

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1,227,432. SHAFT-COUPLING. THADDEUS S. GRIMES, Columbus, Ga., assignor to Lummus Cotton Gin Company, Columbus, Ga., a Corporation of Georgia. Filed July 26, 1916. Serial No. 111,419. (Cl. 64—13.)



1. A shaft coupling comprising a pair of rings each having a series of spaced apart radially extending projections, and a coupling sleeve having a series of laterally extending tongues for engaging the projections of said rings.

2. A shaft coupling comprising rings designed to be secured to opposite shaft ends, said rings each having a series of spaced apart radially extending projections, and said projections having flanges at one end, and a coupling member having a series of laterally extending shouldered tongues for engaging the projections of said rings and interlocking with the flanges thereof.

3. A shaft coupling comprising rings designed to be secured to opposite shaft ends, said rings each having a hub and a rim and radially extending members connecting said hub and rim, and a coupling member having a bore to receive portions of the hub of each of said rings and means for engaging the radially extending members of said rings.

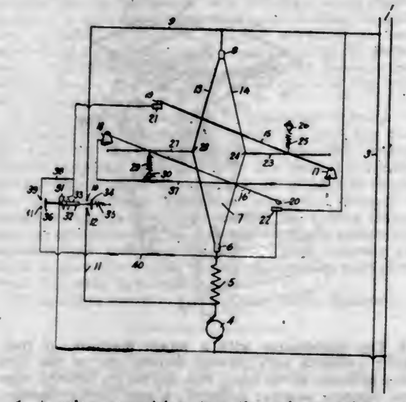
4. A shaft coupling comprising rings designed to be secured to opposite shaft ends, said rings each having a hub and a rim and radially extending members connecting said hub and rim, said radially extending members each having oppositely extending flanges at one end, and a coupling member having a series of laterally extending shouldered tongues for engaging said radially extending members of said rings.

5. A shaft coupling comprising rings designed to be secured to opposite shaft ends, one of said rings being fast on one shaft and the other free to slide longitudinally of the opposite shaft, said rings each having a series of spaced apart radially extending projections, and a coupling member having a bore to receive a portion of each of said rings and a series of laterally extending tongues for engaging the projections of said rings.

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1,227,433. RELAY. MAX HABTENHEIM, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 10, 1915. Serial No. 44,743. (Cl. 175—324.)



1. A relay comprising two thermal-responsive members adapted to be heated equally and to have different thermal inertia, contact devices adapted to be actuated by the movement of the said thermal-responsive members, one of said contact devices being adapted to be normally open and the other to be normally closed.

2. A relay for an electric circuit comprising two conductors, stationary contact members, and movable contact members adapted to be actuated by the expansion and contraction of the conductors when currents traverse the same, the time of expansion and contraction of one of the conductors being so different from that of the other that the contact members are adapted to be engaged simultaneously only when the current traversing the conductors is decreasing and of a predetermined value.

3. A relay comprising two parallel-connected conductors of different cross-sectional areas, stationary contact members, and movable contact members operatively connected to the parallel-connected conductors, the contact member that is connected to the conductor having the smaller cross-sectional area being normally in engagement with its stationary contact member and the other contact members being normally disengaged, the first-mentioned contact member being adapted to operate relatively more quickly than the other contact member.

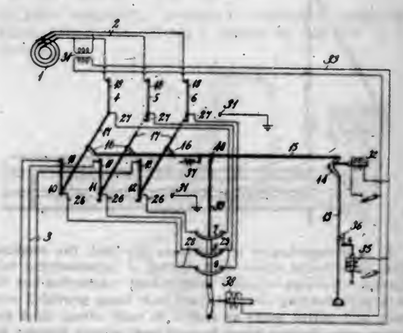
4. A relay comprising two conductors having relatively different cross-sectional areas, contact devices adapted to be actuated by the expansion and contraction of the conductors, the contact device that is actuated by the conductor having the smaller cross-sectional area being normally closed and the other being normally open.

5. A relay comprising two conductors having different thermal inertia, a normally open contact device adapted to be actuated by the movement of one conductor when current traverses the same, and a normally closed contact device adapted to be actuated by the movement of the other conductor when current traverses the same, the relative movements of the said conductors, when traversed by equal currents, being such that the contact devices are simultaneously closed only when the current traversing the conductors is a predetermined value and decreasing.

[Claims 6 to 14 not printed in the Gazette.]

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1,227,434. SWITCHING DEVICE. STEPHEN Q. HAYES and CHARLES McL. MOSS, Pittsburgh, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 1, 1913. Serial No. 764,845. (Cl. 175—268.)



1. In an electrical circuit, the combination with a circuit breaker, of a disconnecting switch, for electrically isolating said circuit breaker, and means coöperating with the said switch for grounding both poles of the circuit breaker when the same is isolated.

2. In an electrical circuit, the combination with a circuit breaker, of pillar-type disconnecting switches for electrically disconnecting said circuit breaker, and means coöperating with the said switches for grounding both poles of the circuit breaker when it is disconnected.

3. In an electrical circuit, the combination with a circuit breaker, of pillar-type disconnecting switches, means for operating said switches manually to disconnect said circuit breaker electrically from said circuit, and means coöperating with said switches to ground both sides of said circuit breaker.

4. In an electrical circuit, the combination with a circuit breaker, of pillar-type disconnecting switches, means for manually operating said switches, means for electrically operating said switches, and means coöperating with said switches to ground both sides of said circuit breaker.

5. In an electrical circuit, the combination with a circuit breaker, of disconnecting switches having blades pivoted to swing in the same plane, a plurality of rods and bell crank levers for manually operating said switches, means for electrically operating said switches, means for tripping said switches automatically under abnormal operating conditions, means for interlocking said breakers and said disconnecting switches, and means coöperating with said switches to ground both sides of the circuit breaker.

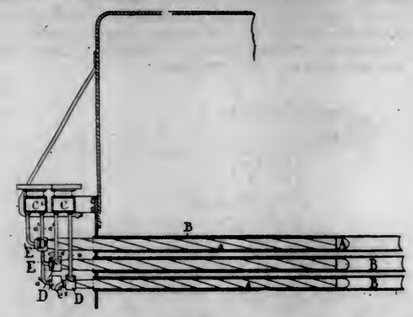
[Claims 6 to 20 not printed in the Gazette.]

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1,227,435. SUPERHEATER FOR LOCOMOTIVE, MARINE, AND OTHER TUBULAR BOILERS. JOHN NELSON DUNDAS HEENAN, Chapel Walks, Manchester, England, assignor to Heenan & Froude Limited, Manchester, England. Filed May 12, 1916. Serial No. 97,160. (Cl. 122—462.)

1. In a superheater of the class specified, the combination with boiler tubes, of superheater tubes extending into the boiler tubes and of less diameter than the latter, and an independent connection box for each superheater tube,

each connection box being constructed with a through longitudinal passage and interior annular chamber provided with an inlet port communicating with the annular chamber in planes at right angles to the superheater tube and also provided with an outlet port, inlet and outlet pipes having terminals fitted over the inlet and outlet ports, and securing devices loosely surrounding and engaging the terminals of the inlet and outlet pipes and connected to the box.

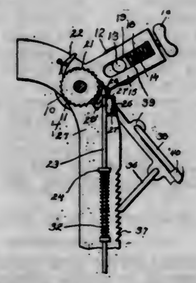


2. In a superheater of the class specified, the combination with boiler tubes each having a superheating tube therein, of a separate and independent connection box for each superheating element, said box being provided with inlet and outlet ports at angles to each other, inlet and outlet pipes having inner flanged ends placed against the connection box over the inlet and outlet ports, and plates loosely surrounding the inlet and outlet pipes and engaging the flanges of the said pipes, the said plates being secured to the connection box.

3. In a superheater of the class specified, the combination with boiler tubes, superheater tubes mounted therein and inlet and outlet steam headers, of separate and independent connection boxes for the superheater tubes, each tube being connected to a box, the connection boxes having passages therethrough and inlet and outlet ports opening into different portions of these passages, and independent inlet and outlet pipe connections between the inlet and outlet headers and each box.

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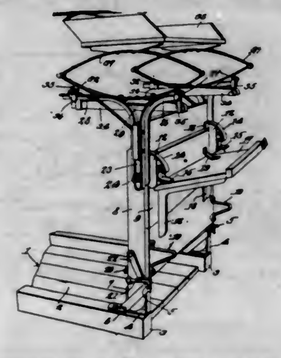
**1,227,436. COPY-HOLDER FOR TYPE-WRITERS.** HIRAM E. HENDRIX, Victoria, British Columbia, Canada. Filed Feb. 25, 1914. Serial No. 820,922. (Cl. 120—32.)



In a copy holder, a frame including a pair of vertical spaced standards, a roller journaled between said standards, adjacent the upper end thereof, a spring actuated roller coacting with the first mentioned roller, a ratchet wheel secured on said shaft, a pair of spaced guides secured to one of said standards, a rod vertically movable in said guides, and extending from the lower portion of said standards to said ratchet wheel, the upper end of said rod being bifurcated and positioned adjacent said ratchet wheel, a pawl pivoted in said bifurcated portion of said rod and engaging said ratchet wheel, a lug formed on said rod adjacent the upper end thereof, a spring bearing against said lug and said pawl to normally hold said pawl in engagement with said ratchet wheel, a spring around said rod and positioned between said guides, and having the lower end thereof secured to said rod and the opposite ends of said upper guide to normally hold said rod downward, and means to move said rod upward against the tension of the spring for the purpose specified.

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**1,227,437. VEHICLE-SEAT.** ALBERT C. HERTZFELDT, Independence, Wis. Filed Feb. 12, 1917. Serial No. 148,151. (Cl. 21—42.)



1. The combination with a wagon platform, of rearwardly swinging bars pivoted thereto, one of the bars being provided at its upper end and on its forward edge with separate sockets; supports; a seat carried thereby; means for connecting the supports with the bars for swinging movement and for sliding movement in the direction of the length of the supports; and means carried by one support for engaging the sockets selectively, at the will of an operator.

3. The combination with a wagon platform, of rearwardly swinging bars pivoted thereto; supports; a seat carried by the supports; means for connecting the supports with the bars for swinging movement and for movement in the direction of the lengths of the supports; and interengaging elements on one of the supports and on one of the bars for holding the supports alined with the bars and at right angles to the bars, at different times.

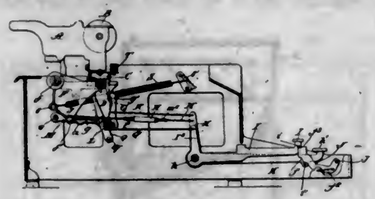
5. The combination with a wagon platform, of bars mounted to swing thereon and adapted to rest on the platform; means for holding the bars in upright positions with respect to the platform; separate sockets carried at the upper ends of the bars and on the forward edges of the bars; supports; a seat carried thereby; means for connecting the supports with the bars for swinging movement and for sliding movement in the direction of the length of the supports; and means carried by one of the supports for engaging the sockets at different times.

[Claims 2 and 4 not printed in the Gazette.]

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**1,227,438. TYPE-WRITING MACHINE.** EDWARD B. HESS, Brooklyn, N. Y., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Dec. 9, 1916. Serial No. 135,958. (Cl. 197—79.)

1. A case-shifting mechanism for typewriting machines comprising means for moving the part to be shifted to shifted position, cushioning means therefor, means for locking the mechanism in shifted position, a device for rigidly sustaining the shifted part when held by the tension of the cushioning device, and means for moving said locking means for the shift mechanism into and out of operative position.



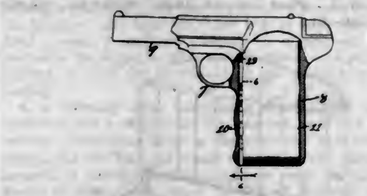
4. A case-shifting mechanism for typewriting machines comprising a shift key, connections between the shift key and the part to be shifted provided with yielding devices whereby the shifted part is held yieldingly in its shifted position, a shift key locking device for holding the shift key in shifted position, a lever for operating the shift key locking device, a device for rigidly holding the shifted part in shifted position, and connections between said holding device and the lever which operates the shift key locking device.

8. The combination with a typewriter carriage of mechanism for supporting and raising it, a shift key lever for actuating the carriage raising mechanism, locking devices operating upon the shift key lever for holding the carriage in raised position, a latch adapted to engage the carriage raising mechanism when the carriage is raised, a locking lever for actuating the locking devices and for also actuating the shift key lever, and connections between said locking lever and the latch whereby the latch is moved to engage the carriage raising mechanism when the latter is raised.

[Claims 2, 3, and 5 to 7 not printed in the Gazette.]

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**1,227,439. CARTRIDGE-MAGAZINE.** LOUIS WESLEY HILGENDORF, Fountain, Colo. Filed Jan. 4, 1917. Serial No. 140,530. (Cl. 42—50.)



1. In a firearm having a magazine receiving space and a groove at one end of said space; a magazine divided into a plurality of cartridge compartments, a pivotal mount therefor, means engaged in said groove for bringing one of said compartments into cartridge feeding position, and automatic means operable upon the exhaustion of said last named compartment for bringing the other compartment into cartridge feeding position.

3. In a firearm having a magazine receiving space and a groove at one end of said space; a rockable magazine divided into two cartridge compartments, means controlled by the cartridges in one compartment and operable in said groove for bringing said compartment into cartridge feeding position, and automatic means operable upon the exhaustion of said last named compartment for bringing the other compartment into cartridge feeding position.

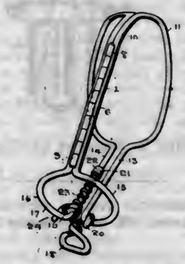
5. In a firearm having a magazine receiving space and a groove at one end thereof; a rockable magazine divided into compartments, a spring bar in one compartment, a button thereon, said button being forced outwardly of said magazine to engagement with said groove upon the insertion of cartridges into said compartment and held in such position until said compartment is emptied of cartridges to permit said bar to retract said button, and a laterally operable spring for rocking said magazine to bring the other compartment into cartridge feeding position upon the retraction of said button.

6. As an article of manufacture, for use in a firearm, a two compartment magazine, a support therefor, a pivotal connection therefor, a spring controlled follower in each compartment, a spring bar secured in one compartment adapted to be forced toward the end of said compartment upon the depression of the respective follower by the introduction of cartridges, and a button on said bar held outwardly of said magazine while said last named compartment contains a cartridge.

[Claims 2 and 4 not printed in the Gazette.]

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**1,227,440. HALTER.** AUBREY F. HOFFMAN, Longford, Kans. Filed Sept. 15, 1916. Serial No. 120,840. (Cl. 54—24.)



1. A halter consisting of a pair of hinged coöperating sections, and means to lock the free edges of said sections together.

2. A halter consisting of a pair of coöperating halter sections, each section being formed from a single piece of material, means to hingedly secure said sections together, and additional means to lock said sections against hinging movement.

3. A halter consisting of a pair of sections, comprising parallel face bars, means to hingedly secure said face bars together, a pair of parallel jaw bars below said face bars, outwardly bowed portions connecting the face bars and jaw bars at their opposed ends, one set of bowed portions forming a neck ring, and the opposite bowed portions a nose loop, and means to hold said sections against hinging movement.

4. A halter consisting of the combination with a pair of hinged sections, of a latch structure slidably attached to one of the sections, a hook on said latch structure adapted to engage the other section, and yielding means to normally hold the hook in engagement with its respective sections.

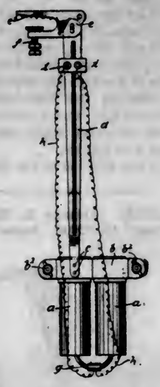
5. A halter consisting of the combination with a pair of hinged sections, of a latch structure slidably attached to one of the sections, a hook on said latch structure adapted to engage the other section, yielding means to normally hold the hook in engagement with its respective sections, and a stop lug carried by the slidably mounted end of the latch structure and adapted to engage beneath the outer portion of one of said hinged sections to prevent the latch structure from swinging when disengaged from the opposite section.

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**1,227,441. ILLUMINATING DEVICE FOR USE ON AIR-CRAFT.** HAROLD EDWARD SHERWIN HOLT, Farnborough, England. Filed Jan. 4, 1916. Serial No. 70,316. (Cl. 240—1.)

In an apparatus for facilitating the landing of air-craft at night, in combination, a clamp adapted to be clamped to the edge of the wings or planes of the air-craft, a suspending strip attached with one of its ends to said clamp, a double clamp secured to the other, forked end of said strip, a plurality of Bengal light cylinders, means for securing said cylinders between the two members of the

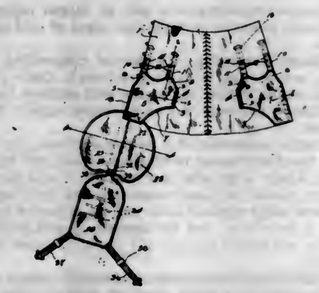
clamp, a fuse at the outer end of said cylinders, and electrical connections allowing a lighting of said fuse and



light, substantially as described and for the purpose set forth.

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1,227,442. CORSET. IVY D. HOWELL, Ballston Spa, N. Y. Filed Oct. 29, 1915. Serial No. 58,597. (Cl. 2—73.)

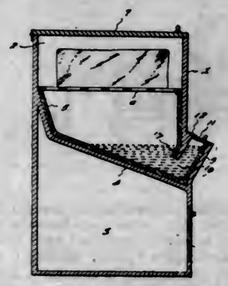


1. In a corset structure, the combination with a corset, of a pair of abdominal engaging and supporting members detachably carried by the corset, means attached to the upper ends of said abdominal supporting members for adjustably connecting them to the corset, a leg strap connected to the lower edge of said supporting member, a back pad connected to said leg strap, elastic waist encircling members attached to said back pad, said back pad and leg-strap holding the lower edges of said abdominal supporting members against upward creeping movement.

3. The combination with an ordinary corset having a plurality of slits formed therein a short distance below its upper edge, of a pair of abdominal supporting members detachably connected to said corset, straps connected to said abdominal supporting members and extending upwardly through said slits, said straps having their outer ends positioned upon the outer surface of the corset, means carried by the outer surface of the corset for engaging said straps for holding the straps and said abdominal supporting members in various adjusted positions, a leg strap connected to the lower edge of said support, a back pad connected to said leg strap, and elastic waist encircling members attached to said back pad, said back pad and leg strap holding the lower edges of said abdominal supporting members against upward creeping movement.

[Claim 2 not printed in the Gazette.]

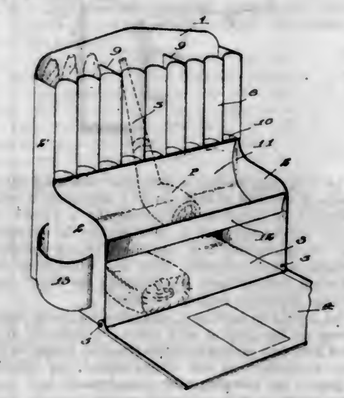
1,227,443. ICE-BOX. WILLIAM E. JAMES, Prichard, Ala. Filed Aug. 14, 1915. Serial No. 45,558. (Cl. 62—84.)



A refrigerator box of the class described comprising a bottom wall, side and end walls and a hinged top wall, a partition wall secured interiorly within and to the side, end front and rear walls dividing the same into upper and lower chambers, said partition wall inclined downwardly and outwardly from the rear wall to its point of connection with the front wall, a coating of suitable waterproof material secured to the upper face of the partition wall, an ice rack arranged in the upper chamber above the inclined face of the partition wall, said front wall of the box inclined forwardly and outwardly to provide a series of compartments which communicate at their lower end with the upper chamber, means for draining the water from the upper chamber, and a hinged door in the front wall to provide access to the lower chamber, said compartments adapted to receive various kinds of articles therein for holding the same within the water contained within the upper compartment thus preventing the contents of the articles from spoiling.

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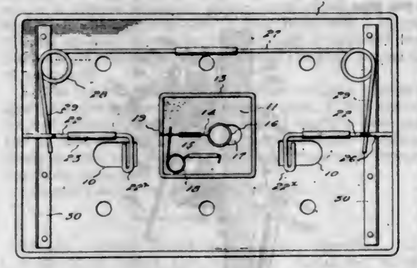
1,227,444. SMOKER'S KIT. JOSEPH F. JECKERT, Garfield, N. J. Filed Nov. 10, 1916. Serial No. 130,662. (Cl. 131—51.)



The herein described smoker's kit including an upright flat back and ends, the latter being reduced in width at their upper portions, a corrugated panel connecting the front edges of said ends, the corrugations providing upright channels in front and in rear of the panel, a shelf between said ends extending forward from the back beneath the panel and closing the lower ends of all channels, the shelf being bent downward and thence forward into a tray, and an upright flange at the front edge of said tray, the whole as and for the purposes described.



1,227,445. FOLDABLE CRATE. LUTHER VEACH JENKINS and WILLIAM KENDALL BAILEY, Sadieville, Ky. Filed Aug. 27, 1915. Serial No. 47,630. (Cl. 220—17.)



1. In a foldable crate, a top member having a plurality of oppositely positioned plungers, the ends of which are adapted to extend simultaneously through two overlapping members of the crate, each plunger being in the form of a bar which is bent rearwardly to form a seat for a resilient member, and thence forwardly to provide a crate engaging end, and a resilient element positioned adjacent the plunger and having an end of the resilient element bearing against the seat of the plunger to direct the plunger outwardly to engage the crate members.

2. In a foldable crate, a top member having an aperture, a locking plunger comprising a rod bent to form an arm to extend across said aperture to facilitate the actuation of the plunger, and said plunger rod being bent near its other end to form a seat, and a resilient element adapted to engage said seat to maintain the plunger in its locking position.

3. In a foldable crate, a top member having a depending flange at its sides and ends, a guide plate secured to the top member substantially parallel with the end flange sections, a locking plunger mounted on the top member comprising a rod bent near one end to form means to actuate the plunger, and near its other end so bent that it will form a seat, a resilient element to engage said seat to maintain the flange in its locking position, said guide plate serving to limit the movement of the plunger in one direction.

4. A foldable crate comprising pivoted side and end members and a removable top member, said top member having a depending flange at the sides and ends thereof to engage the side and end members of the crate, guide plates secured to the top members parallel with the depending flange to receive the upper portion of the end members between said flange and said guide plates, a plurality of plunger rods bent near one end to form a combined seat and abutment, said plunger rods being so mounted on the top that their movement in one direction will be limited by said abutments engaging said guide plates, and a resilient element common to a plurality of said plunger rods.

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1,227,446. DRAFT-RELEASING DEVICE. PETER JENSEN, Colton, Oreg. Filed Sept. 7, 1916. Serial No. 118,876. (Cl. 21—75.)



1. A draft releasing device comprising a casing, an expansive releasing member disposed in said casing and projecting slightly therefrom, said member being frictionally engaged to prevent displacement from the casing under normal conditions, and adjustable means intermediate a wall of the casing and said releasing member for controlling the frictional engagement aforesaid and thereby the extent of stress required to displace the releasing member from said casing.

2. A draft releasing device comprising a casing tapering toward one end, a resilient releasing member therein bent intermediate its length to substantially conform to the taper of the casing, the side portions of the member contacting with the walls of the casing substantially throughout their length, said member being adapted for withdrawal from the casing upon application of stress overcoming the expansive force of the releasing member, and means to control said contacting engagement.

3. A draft releasing device comprising a hollow relatively stationary member, the inner walls of which converge toward one end, and a releasing member normally arranged therein subject to withdrawal upon application of a predetermined amount of draft stress and consisting of a V-shaped flat spring the free ends of which are arranged in the stationary member and adapted for compression toward each other to permit of release from the constricted opening of the stationary member.

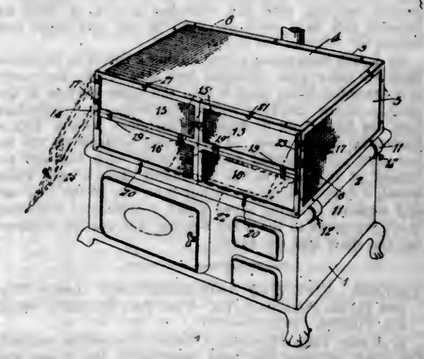
4. A draft releasing device comprising a casing having a relatively large opening at one end and a relatively small opening at the other end, and a compressible releasing member adapted to be introduced through the large opening aforesaid and bent intermediate its length, the bent portion lying at the smaller of said openings, and means intermediate the ends of the member tending to prevent compression thereof and withdrawal from the casing incident to such compression.

5. A draft releasing device comprising a casing having a relatively large opening at one end and a relatively small opening at the other end, a compressible releasing member adapted to be introduced through the large opening aforesaid and bent intermediate its length, the bent portion lying at the smaller of said openings, and a spring arranged interemediate the ends of the member tending to hold the ends against withdrawal from the casing through the smaller of the openings.

[Claims 6 to 10 not printed in the Gazette.]

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1,227,447. STOVE-TOP PROTECTOR. CHARLES T. JOHNSON, Mossville, La. Filed Mar. 27, 1916. Serial No. 87,003. (Cl. 126—1.)



1. In a stove protector, a body comprising a screened top, rear and side portions, front closure portions formed in double sections hinged to each other and to the end sections of the body, and latching means for said closures.

2. In a protector of the class described, a body comprising top, side and end portions provided with screens, closures for the front of said body comprising sections

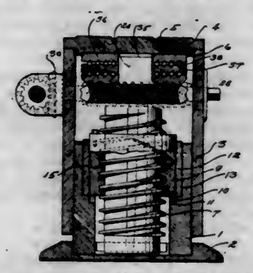
hinged together and to the end portions of said body, latching means therefor, and means for retaining said body on a stove.

3. In a stove top protector, a body having a screened top, rear, side and end walls, closure frames hingedly connected, the uppermost of the frames being hinged to the end walls of said body, and the lower frames being adapted for movement into horizontal position to form shelves.

4. The combination with a cooking stove having the usual openings in the top thereof, of a stove protector including a body, said body having the top, side, and end portions thereof provided with screens, closure means for the front of said body, curved arms mounted on the bottom frame providing attaching means for the said stove protector to the top of said stove.

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1,227,448. JACK. JESSE W. JONES, Birmingham, Ala. Filed June 6, 1914. Serial No. 843,527. (Cl. 254—103.)



1. A jack including an inner shell, a collar fixed within said shell and having interior screw threads and provided in the upper faces of the threads with a spiral V-shaped groove, said collar having an exterior ball race consisting of a groove extending downwardly from the upper portion of the collar to the lower portion of the same in a curved inclined plane substantially half way around the collar and communicating at its ends with the said groove of the threads, said collar having segmental openings at the top and bottom of said ball race, said ball race segmental block detachably secured in said openings, a screw mounted in the collar and engaging the threads thereof and provided in the lower face of its threads with a spiral groove coacting with the V-shaped groove to form an interior ball race, balls arranged in the said races and means for rotating the screw.

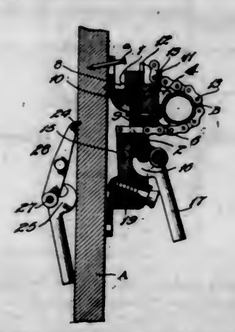
2. A jack comprising a base having a recess in its upper face, an inner shell threaded into said recess, an interiorly threaded collar fixed within the upper portion of the shell, a screw mounted within the collar and extending into the recess and provided at its upper portion with a horizontal worm wheel, an outer shell slidable on the inner shell and provided on its exterior with bearings arranged at an angle in the horizontal plane of the worm wheel, a horizontal worm mounted on one of the bearings and meshing with the worm wheel, a horizontal operating shaft journaled in the other bearing, and gearing connecting the shaft and the worm.

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1,227,449. PIPE-VISE AND MOUNTING. LOUIS WILSON JONES, Pittsburgh, Pa. Filed July 22, 1916. Serial No. 110,674. (Cl. 81—19.)

1. A pipe vise comprising a frame, a separable supporting block carrying pipe jaws mounted in the frame, and provided with an abutment, a chain adapted to encircle the pipe and hold it clamped against the jaws, and the free end of which is adapted to be made to engage with the said abutment, and means for applying stress to the end of the chain opposite that engaging the abutment.

2. A pipe vise comprising a frame having a grooved face, a separable block carrying pipe-engaging jaws seated in the said groove in the frame, the block being arranged to hook over the end of the frame, and being provided with an abutment, a chain for encircling the pipe and holding it against the jaws, the free end of which is adapted to be brought into engagement with the said abutment, and means for applying stress to the chain to cause it to clamp the pipe.



3. A pipe vise comprising jaws adapted to engage with the pipe, a chain arranged to encircle the pipe and hold it against the jaws, a lever connected with one end of the chain, means bearing upon the lever to put stress upon the chain, and an adjusting screw for moving the fulcrum of the lever relative to the said stress-applying means.

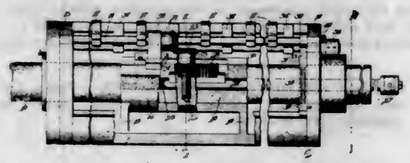
4. The combination with a vise, of means for temporarily securing it to a support, comprising a chain adapted to be connected with the vise and encircle the support, a movable tubular member through which the chain passes, means carrying the said tubular member arranged to bear against the support on the side opposite the vise, and means for adjusting the tubular member in a direction away from the vise to put stress upon the chain.

5. The combination with a vise, of means for temporarily securing it to a support, comprising a chain adapted to engage with the vise and to encircle the support to which the vise is to be secured, a lever frame one end of which is adapted to engage with the support on the side thereof opposite that engaged by the vise, with which frame, and between its ends, engages the said encircling chain, and means for forcing the end of the frame opposite that engaging the support away from the latter, whereby stress is applied to the chain.

[Claim 6 not printed in the Gazette.]

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1,227,450. PRINTING-PRESS. WILLIAM M. KELLY, Jersey City, N. J., assignor to American Type Founders Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 9, 1915. Serial No. 38,919. (Cl. 101—409.)



1. The combination of an impression cylinder, a gripper shaft, a gripper actuator, gearing connecting said actuator with said shaft, and spring means opposing the gripping movement of said shaft operable on a member driven by the gearing and whereby a positive connection with said actuator is maintained.

2. The combination of an impression cylinder, a gripper shaft, an axially movable gripper actuator arranged at the axis of the cylinder, gearing connecting said actuator with said shaft, and spring means acting directly on said shaft and opposing rotative movement thereof in one direction.



3. The combination of an impression cylinder, a gripper shaft, a gripper actuator, gearing connecting said actuator with said shaft, an arm on said shaft, and a spring-pressed member coöperating with said arm and opposing gripping movement of the shaft.

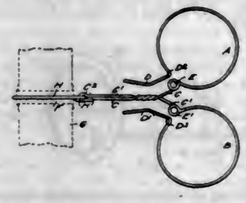
4. The combination of an impression cylinder, a gripper shaft, a gripper actuator, gearing connecting said actuator with said shaft, an arm on said shaft, and a spring-pressed member carried by the end wall of said cylinder and engaging said arm and opposing gripping movement of said shaft.

5. The combination of an impression cylinder, a gripper shaft, an axially movable gripper actuator, a rack carried by said actuator, a bevel gear on said shaft, a stud carried by said cylinder, and gears rotatable on said stud and meshing with said rack and said bevel gear and forming a driving connection therebetween.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,451. BOTTLE-HOLDER. HENRY KENNELL, New York, N. Y. Filed Apr. 11, 1916. Serial No. 90,383. (Cl. 232—41.)



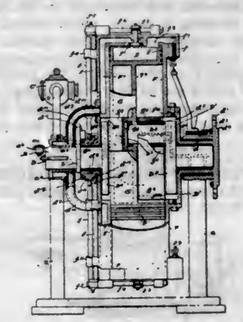
1. A bottle holder, comprising two normally open loops each adapted to engage the neck of a bottle, one end of each loop terminating in a shank and the shanks of the two loops being twisted together and terminating in an eye, the other end of each loop terminating in a closing arm, the said shanks being adapted to pass through a hole in a door and the said closing arms being adapted to pass into the hole, and a retaining member having an eye near one end and engaging the eye on the said shank.

2. A bottle holder, comprising two normally open loops each adapted to engage the neck of a bottle, one end of each loop terminating in a shank and the shanks of the two loops being twisted together and terminating in an eye, the other end of each loop terminating in a closing arm, the said shanks being adapted to pass through a hole in a door and the said closing arms being adapted to pass into the hole, each of the said shanks being provided adjacent the loop with a coil and each of the said closing arms being provided adjacent the coil with an offset adapted to engage the corresponding coil to hold each loop locked when in closed position, and a retaining member having an eye near one end and engaging the eye on the said shank.

3. A bottle holder comprising an open loop adapted to engage the neck of a bottle, one end of the loop terminating in a shank and the other in a closing arm the said shank being adapted to extend through a hole in a support and the said closing arm being adapted to pass into the hole, means for holding the loop in closed position, and a retaining and unlocking member pivotally connected to the terminal of the shank near one end of the said retaining and locking member, the other end of the said retaining and locking member having an angular offset spaced from the pivotal connection a distance corresponding approximately to the length of the hole in the support, the said retaining and unlocking member in one position extending vertically at an angle to the shank at the inner face of the support and the said retaining and unlocking member in another position being in alinement with the shank and with the said angular offset abutting against the inner face of the support to hold the device against removal from the support and to allow of opening the loop for the removal or insertion of a bottle.

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1,227,452. ROTATING-CYLINDER GAS-ENGINE. BERTRAM C. KENYON, Mishawaka, Ind., assignor of one-half to Dodge Manufacturing Company, Mishawaka, Ind., a Corporation of Indiana. Filed Mar. 14, 1914. Serial No. 824,776. (Cl. 123—44.)



1. In gas engines, a plurality of pairs of rotatable cylinders revoluble in the same plane, a two-part support in common for all the cylinders, a pair of heads integrally formed and constituting a piston and operable in one pair of cylinders, and having bearing in the cylinders substantially throughout the length of the piston, another piston similarly operable in another pair of cylinders, a rectangular enlargement to each piston, a segmental prism joining each pair of heads and an enlargement forming lengthwise recesses of segmental shape between the heads extending to the flat face of each prism whereby a pair of pistons may slide adjacent each other within a space equal to the diameter of the cylinders, rectangular slots in the enlargements, a block slidable simultaneously in all the slots, a stationary crank shaft having its crank pin within said block, bearings for the shaft in the cylinder support, and suitable means for holding the shaft against rotation.

2. In gas engines, a separable crank casing, a plurality of pairs of cylinders secured thereon opposing cylinders being in axial alinement with each other, a crank shaft, a suitable support, means for holding said shaft against rotation in the support, integrally connected piston heads comprising a central rectangular frame having a slot formed therein and joined to the heads by segmental prisms, each pair of heads forming a piston unit which is operable in a pair of said cylinders, and having bearing throughout the length of the piston, and means common to all the pistons and within the slots connecting the pistons to the crank shaft.

3. In gas engines, a suitable axially divided base, a crank shaft supported thereby and held from rotation, a plurality of diametrically opposed cylinders rotatable around the shaft, a rectangular frame having a slot therein, segmental prisms integral with the frame, rounded ends forming heads integral with the prisms and constituting a piston adapted to be slidable so as to have bearing throughout the length of the piston in diametrically opposed cylinders, another pair of cylinders, a similar prism-piston slidable therein, a crank pin, a block engaging said pin in common for all the slots, and means for holding two pairs of cylinders together as a unit group at an angle to each other whereby the prisms will be slidable face to face with their axes similarly disposed while moving on the same plane of rotation as the cylinders.

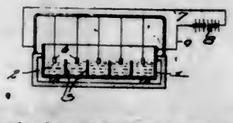
4. In gas engines, a suitable two-part casing comprising separate cylinders and a portion of an angular crank case to each part, means for holding the parts together to provide pairs of oppositely positioned cylinders in axial alinement with each other, rectangular frames having slots slidable in the crank casing, integrally formed segmental prisms projecting diametrically opposite each other from the frames and terminating in heads having the same radius as the arcs of the segmental prisms, a block slidable in a pair of slots simultaneously, a crank

pin in the block, crank disks placed outside the inner face of the cylinder walls, a crank shaft connected therewith, and means for holding the same against rotation.

5. In gas engines, a suitable support, an inclosed angular crank casing, a plurality of rotatable cylinders secured thereon, a crank shaft held stationary in the support, connected heads forming a double ended piston slidable in two oppositely positioned cylinders, another group of cylinders and a piston therefor, and rectangular enlargements about midway of the length of the pistons the same being held in alinement by the crank casing and joined to the heads by segmental prisms integral therewith, a pair of prisms equaling the diameter of the pistons.

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1,227,453. PROCESS OF MAKING CAUSTIC SODA. HERMAN B. KIPPER, Solvay, N. Y. Filed Mar. 31, 1915. Serial No. 18,383. (Cl. 204—58.)



1. The herein described method of purifying caustic soda solutions of metallic impurities, which comprises subjecting such solutions, during concentration thereof, to electrolysis to liberate and remove oxygen directly therefrom and precipitate the metal.

3. The herein described method of purifying caustic soda solutions of metallic impurities, which comprises subjecting such solution to electrolytic action and confining the oxygen generated at the anode by the current to the immediate zone of the anode to prevent such oxygen entering the body of the solution.

5. The herein described improvement in the art of purifying caustic soda solutions of metallic impurities, which comprises subjecting such solution to electrolysis with a steel cathode, excluding from the solution metal flaking off the walls of the vessel, and withdrawing the oxygen formed at the anode by the current without entering the body of the solution.

6. The herein described method of purifying from metallic impurities, solutions of caustic soda containing from 50% to 60% sodium oxid at temperatures of from 80° to 175° C. which comprises subjecting such a solution to electrolysis, liberating the oxygen at the anode and removing such oxygen directly from the solution, and causing precipitation of the metal composing the impurities.

[Claims 2 and 4 not printed in the Gazette.]

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1,227,454. BACTERIA AND FUNGI EXTERMINATOR. WILLIAM RENATUS KLECKNER, Cowell, Cal. Filed Sept. 6, 1916. Serial No. 118,650. (Cl. 167—6.)

1. A bacteria and fungi exterminator, consisting of a mixture of equal quantities of double salts of potassium cyanid; a mixture of ingredients adapted to liberate formaldehyde when injected into a plant; a mixture of triphenylmethane dyes and potassium xanthate in proportions as specified; and a mixture of extracts of flavoring spices, oxalic acid, and gelatin in proportions substantially as specified.

2. A bacteria and fungi exterminator, consisting of a mixture of equal quantities of potassium ferrocyanid, potassium ferricyanid and potassium sulfocyanid; a mixture of ingredients adapted to liberate formaldehyde when injected into the plant in proportions substantially as specified; a mixture of triphenylmethane dyes and potassium xanthate in proportions as specified; and a mixture of extracts of flavoring spices, oxalic acid, and gelatin in proportions substantially as specified.

3. A bacteria and fungi exterminator, consisting of a mixture of equal quantities of potassium ferrocyanid, potassium ferricyanid and potassium sulfocyanid; a mixture of urotropin and an alkali cyanid in proportions as specified; a mixture of triphenylmethane dyes and potassium xanthate in proportions as specified; and a mixture of flavoring spices, oxalic acid, and gelatin in proportions substantially as specified.

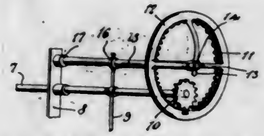
4. A bacteria and fungi exterminator, consisting of a mixture of equal quantities of double salts of potassium cyanid; a mixture of urotropin and ammonium cyanid substantially in the proportions specified; a mixture of triphenylmethane dyes and potassium xanthate in proportions as specified; and a mixture of extracts of flavoring spices, oxalic acid, and gelatin in proportions substantially as specified.

5. A bacteria and fungi exterminator, consisting of a mixture of equal quantities of double salts of potassium cyanid; a mixture adapted to liberate formaldehyde when injected into a plant; a mixture in equal proportions of methylene blue, methyl violet, malachite green, and potassium xanthate; and a mixture of the extracts of flavoring spices, oxalic acid, and gelatin in proportions substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,455. STEERING DEVICE FOR TRACTORS. CHARLES A. KRUGH, Monroe, and JIM. A. HENDRICKS, Decatur, Ind. Filed Dec. 19, 1916. Serial No. 137,784. (Cl. 74—79.)



1. In a steering structure, the combination of a steering post, a pinion mounted upon one end of said steering post, an auxiliary steering post, a hand wheel carried by said auxiliary steering post, gear teeth formed about the inner surface of said hand wheel and meshing with said pinion for rotating said steering post at a greater rate of speed than the rotation of said auxiliary steering post upon rotation of said hand wheel.

[Claim 2 not printed in the Gazette.]

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1,227,456. TRANSMISSION MECHANISM. THEODORE LAFITTE, Paris, France. Filed Feb. 11, 1914. Serial No. 818,068. (Cl. 74—59.)



1. The combination of a rotary engine having a rotatable crank shaft and cylinders rotatable around such shaft, means whereby to brake the said shaft and the said cylinders separately, two concentric transmission shafts located in the prolongation of the axis of the crank shaft, a differential of which the axis is placed perpendicularly to such shafts, the differential comprising two bevel wheels and bevel pinions fixed on the said transmission shafts and meshing respectively with the bevel wheels and means whereby to couple each of the said transmission shafts alternately with the crank shaft and with the rotary cylinders.

2. The combination of a main frame consisting of a frame, of a tubular prolongation extending outside such frame, and of a casing at the end of such prolongation the said frame having journals located on a line perpendicular to the said tubular prolongation, a rotary engine comprising a crank shaft mounted in such frame on the axis of such tubular prolongation, rotary cylinders mounted on the said frame around the said crank shaft, a differential in such casing, means whereby to stop alternately such shaft and the said cylinder and means whereby to connect operatively the differential alternately with the crank shaft or with the cylinders and with both at the same time.

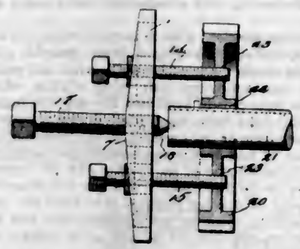
8. The combination of a rotary engine having a rotatable crank shaft and cylinders rotatable around such shaft, means for braking alternatively the said shaft and the said cylinders, a differential the axis of which is perpendicular to the shaft, the differential comprising two bevel wheels, two concentric transmission shafts located on the prolongation of the crank shaft, two bevel pinions on such transmission shafts and meshing with such wheels respectively, two sleeves having clutch-teeth associated respectively with the crank shaft and with the cylinders, sleeves having clutch-teeth slidable respectively on both said transmission shafts and means whereby to bring the said slidable sleeves in mesh with the first said sleeves, the clutch-teeth of such sleeves being arranged in such a manner that the inner shaft can be coupled alternatively with the crank shaft and with the cylinders, and that the outer shaft can be coupled with the cylinders.

4. The combination of a four cycle rotary engine comprising a rotatable crank shaft, cylinders rotatable around such shaft, a distribution shaft revolving at a speed different from that of the cylinders with regard to the crank shaft, a train of planetary wheels operatively connected with the said distribution shaft, and having a wheel concentric with the crank shaft, a differential, and means whereby to operatively connect such differential alternatively with the said crank shaft or with the said cylinders, or with the said wheel of the planetary train, such means allowing also the connection of the said differential at the same time with both such members, that is to say the crank shaft, the cylinders and wheel, and means to brake alternatively the said crank shaft and the said cylinders.

5. The combination of a rotary engine having a rotary crank shaft and cylinders rotatable around the said shaft, a differential, means whereby to brake alternatively the shaft and the cylinders and means for connecting operatively the differential alternatively with the said shaft and with the said cylinders, such latter means allowing also the connection of the said differential with both the shaft and cylinders.

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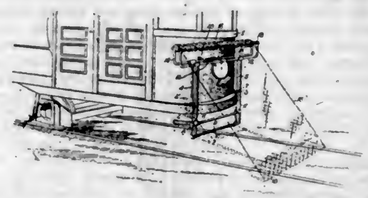
1,227,457. GEAR-PULLER. GEORGE R. LANGAN, New York, N. Y. Filed Feb. 16, 1915. Serial No. 8,699. (Cl. 29—85.)



Means for pulling a gear from its shaft, said gear being provided at opposite sides of the hub with threaded openings, consisting of a body plate having a central threaded opening and provided at opposite sides thereof with longitudinal slots, said body plate being recessed at its outer face at opposite sides of the slots to form longitudinal shoulders, rectangular blocks fitting the slots, and slidable therein and provided at their outer ends with opposite flanges engaging the shoulders of the body plate in the recessed portions thereof, said blocks being also provided with threaded openings, side screws mounted in the threaded openings of the blocks and carried by the latter, said side screws being adapted to be engaged with the threaded openings of the gear to connect the latter with the body plate, and a central screw arranged in the central opening of the body plate and adapted to engage the end of the shaft and to be operated to pull the gear from the said shaft.

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1,227,458. CAR SAFETY-FENDER. ALBERT LEIBNER, New York, N. Y. Filed Nov. 7, 1916. Serial No. 129,990. (Cl. 105—252.)



1. A fender for cars comprising a fixed section designed to be secured to the car, a movable section pivotally connected with the lower part of the fixed section, a net having one end connected with the movable section and the opposite end with the fixed section, means for holding the movable section in a folded position, means for holding the movable section in an open position, and a flexible member for connecting the net with the movable section, said flexible member acting as a bumper when the fender strikes an object.

2. In a fender of the character described, a fixed fender arranged in vertical position, a movable fender hinged to the lower part of the fixed fender, a hook for normally holding the movable fender folded against the fixed fender, a spring for forcing the movable fender downwardly to an open position when the hook has been released, and a net connected at one end to the fixed fender and the opposite end to the movable fender, whereby when the movable fender is moved down to an open position the net will be spread ready for receiving the object struck.

3. A fender for cars comprising a fixed frame having a pair of uprights, a lower cross bar and an upper substantially U-shaped cross bar, sleeves fitting around the uprights for connecting the uprights with a car, a movable frame arranged on the lower cross bar, a roller mounted on said U-shaped upper bar, a net connected to said roller and to said movable frame, and means for normally holding the movable frame in a foldable position against the fixed frame.

4. A fender for cars comprising a fixed frame formed with a pair of uprights normally vertically positioned, a horizontal lower cross bar and a horizontal upper cross bar, the upper cross bar being formed with upstanding ends, a spring-actuated roller mounted on said ends, a movable frame pivotally mounted on the lower cross bar of the fixed frame, said movable frame having a transverse upper bar, a net secured to said roller and to said transverse upper bar whereby when the movable frame is swung down to the lowered position the net will be unwound from said roller and the spring in the roller will be brought under tension for causing a rewinding of the net when the movable frame is brought back to its first position, means for normally holding the movable frame adjacent the fixed frame, and a spring for quickly moving the movable frame when released.

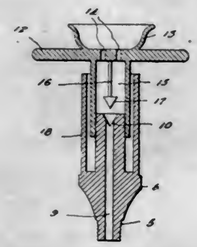
5. A fender comprising a fixed upright frame, a movable frame hinged at the lower part of the upright frame, a hook for normally holding the upper part of the movable frame adjacent the upper part of the fixed frame, a roller arranged on the fixed frame, a net normally wound on said roller, said net having one end connected to the roller and the opposite end connected to the upper part of the movable frame, a spring for moving the movable frame downwardly and unwinding said net, and a pivotally mounted locking member carried by the movable

frame for engaging the fixed frame for locking the movable frame in its lowered position when moved to such position.

[Claim 6 not printed in the Gazette.]

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1,227,459. PRIMING-CUP FOR MOTORS. WALTER J. LIDDLE, Milwaukee, Wis. Filed Apr. 5, 1916. Serial No. 89,178. (Cl. 137—4.)

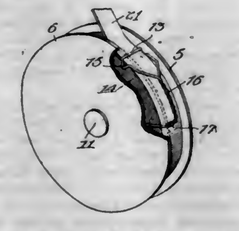


1. A priming cup including a nipple, a boss on one end thereof, the nipple and the boss being provided with a longitudinal port, a closure cap adjustably engageable with the upper end of the boss forming a chamber between the cap and boss and also provided with means whereby liquid may flow into the chamber, valve means depending from the cap for controlling the flow of liquid through the port, and means on the nipple for protecting the lower part of the cap and the boss and for limiting the downward movement of the cap to consequently prevent distortion of the valve means subsequent to the seating of the valve means.

2. A priming cup including a nipple, a boss arranged concentric to and integral with the upper end thereof, the nipple and the boss being provided with a longitudinal port the upper end of which is enlarged to provide a valve seat, a protecting sleeve integral with the upper end of the nipple and surrounding and extending above the upper edge of the boss, a shell adjustably engageable with the upper end of the boss, an operating wheel integral with the upper edge of the shell, a cup arranged on the upper surface of the wheel and provided with openings in the bottom thereof to establish communication with the chamber, provided between the shell, wheel and boss, a valve stem depending from the under surface of the wheel, a valve on the stem for engagement with the valve seat to control the flow through the port, and the outer edge of the wheel extending beyond the protecting sleeve and engageable with the upper edge of the sleeve whereby to limit the downward movement of the shell and prevent distortion of the valve stem.

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1,227,460. RIBBON-REEL. WILLIAM LOHRER, River Forest, Ill. Filed Nov. 1, 1916. Serial No. 128,955. (Cl. 206—54.)



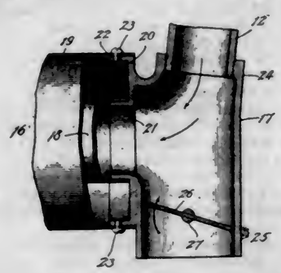
1. A ribbon-reel comprising, in combination, a pair of disks, a core interposed therebetween and rigid with one of said disks and rotatable with relation to the other of said disks, and a presser-device carried by said last-named disk and adapted to press yieldingly against the periphery of the roll of ribbon wound on said disk.

3. A ribbon-reel comprising in combination, a pair of disks, a core interposed therebetween, means for rigidly securing one of said disks to said core and rendering the other of said disks rotatable with relation to said core, including a member which extends through said core, a presser-device carried by said last-named disk and adapted to press yieldingly against the periphery of the roll of ribbon wound on said core, and means engaging said presser-device for rigidly holding it to said last-named disk, the end of said device opposite that which engages the ribbon operatively engaging said member to aid in the holding of said presser-device rigidly to the disk carrying it.

[Claims 2 and 4 not printed in the Gazette.]

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1,227,461. MUFFLER CUT-OUT. JOSEPH S. LOBBS, Hebron, Ill. Filed Aug. 16, 1915. Serial No. 45,782. (Cl. 121—116.)



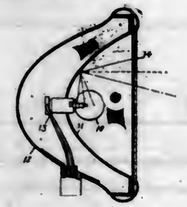
1. The combination with a muffler-casing, of a hollow member forming a head therefor and in open communication intermediate its ends with said muffler-casing, the ends of said hollow member being open and in line with each other, one of said ends being adapted for connection with the exhaust-pipe of an engine, and the opposite end being larger in cross-sectional area than said exhaust-pipe-connected end, whereby said member acts as an ejector for said muffler-casing, and a valve for closing said enlarged end.

2. The combination with a muffler-casing, of a hollow open-ended member forming a head therefor and communicating through one of its walls with said muffler-casing, said communicating wall being slightly offset relative to the ends of said head and the opposite imperforate wall of said head being unobstructed and arranged at an angle to the axis of the opening in the muffler-casing, one of the ends of said head being adapted for communication with the exhaust-pipe of an engine, and the opposite end being open to the atmosphere, whereby the gases from the exhaust pipe discharged through said head are caused to exert a suction through the muffler-casing and to cause said head-forming member to act as an ejector for said muffler-casing.

3. In combination, a horizontally arranged exhaust manifold, an exhaust pipe leading downwardly from the said manifold, a T-member having one arm connected to the lower end of said exhaust pipe and the opposite arm opening to the atmosphere, a valve for closing said atmospheric opening, a horizontally arranged muffler connected to the third arm of said T-member, an operating member for said valve passing upwardly from the valve along the exhaust pipe and from a point intermediate the length of the latter outwardly at an angle thereto, and means carried by the pipe for supporting the bend of said operating member.



1,227,462. NO-GLARE DEVICE. MATT LUCKIESH, Cleveland, Ohio, assignor to General Electric Company, a Corporation of New York. Filed Nov. 3, 1915. Serial No. 59,368. (Cl. 240—48.4.)



1. In a lamp for vehicles, the combination of a light source and a reflector which reflects the light rays both below and above the horizontal, with a light modifying means allowing the transmission of the greater portion of the rays reflected below the horizontal and a small portion of the rays above the horizontal which more nearly approach the vertical, but obstructing the greater portion of the rays above the horizontal which more nearly approach the horizontal.

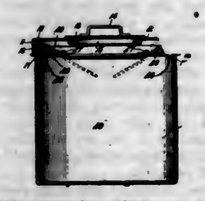
2. In a lamp, the combination of a light source and a screen disposed in front of said source, said screen being provided on one face thereof with a series of light obstructing bands with intermediate clear spaces, and means upon the opposite face of said screen coöperating therewith for allowing the transmission of the greater portion of the rays below the horizontal but obstructing the greater portion of the rays above the horizontal.

3. In a lamp, the combination of a light source and a screen of a transparent material mounted in front of said light source, said screen being provided upon the inside and outside thereof with series of substantially horizontal light obstructing bands with intermediate clear spaces upon the outside of said screen being so disposed relatively to those on the inside thereof that a line connecting the lower edge of a band upon the inside with the lower edge of the next higher band on the outside will make a greater angle with the horizontal than a line connecting the said lower edge of the inside band with the lower edge of the next outside band therebelow.

4. In a lamp, the combination of a light source and a screen of transparent material mounted in front of said light source, said screen being provided with series of substantially horizontal bands upon the inside and outside faces thereof with intermediate clear spaces, the spaces upon the outside face being opposite bands upon the inside face, and vice versa, and each space upon the outside face being relatively closer to the upper edge of the opposite band than it is to the lower edge thereof.

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1,227,463. COVER FOR REFUSE-CANS. AMALIE FREDERIKE LUYTIES, New York, N. Y. Filed Apr. 6, 1916. Serial No. 89,330. (Cl. 220—115.)



1. A removable cover for refuse cans comprising a flat top provided with a depending flange and having a central opening, an auxiliary cover removably closing the said central opening, a bottom attached to the flange and extending approximately parallel to the said top, the said bottom having a central opening in register with the said cover opening, and self-closing means mounted on the said bottom and normally closing the opening thereof, the said self-closing means when closed extending approximately horizontally being adapted to open in a downward direction by the weight of the refuse dropped onto the self-closing means by way of the said cover opening.

2. A removable cover for refuse cans comprising a flat top provided with a depending flange and having a central opening, an auxiliary cover removably closing the said central opening, a bottom attached to the flange and extending approximately parallel to the said top, the said bottom having a central opening in register with the said cover opening, the said cover flange and bottom forming a seat for engagement with the upper edge of a refuse can, and self-closing means mounted on the said bottom and normally closing the opening thereof, the said self-closing means when closed extending approximately horizontally being adapted to open in a downward direction by the weight of the refuse dropped onto the self-closing means by way of the said cover opening.

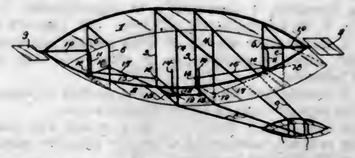
3. A cover for refuse cans having a central opening and a depending flange, an apertured bottom having an upwardly extending flange attached at its upper end to the inner side of the cover flange and forming with the latter a seat for engagement with the end of a refuse can, an auxiliary cover removably engaging the said central opening, and self-closing doors pivoted on the said bottom and normally closing the opening thereof, the doors being located below the said central opening of the cover.

4. A cover for refuse cans having a central opening and a depending flange, an apertured bottom having an upwardly extending flange attached at its upper end to the inner side of the cover flange and forming with the latter a seat for engagement with the end of a refuse can, an auxiliary cover removably engaging the said central opening, and self-closing doors pivoted on the said bottom and normally closing the opening thereof, the doors being located below the said central opening of the cover and normally completely closing the aperture in the said bottom.

5. A cover for refuse cans having a central opening and a depending flange, an apertured bottom having an upwardly extending flange attached at its upper end to the inner side of the cover flange and forming with the latter a seat for engagement with the end of a refuse can, an auxiliary cover removably engaging the said central opening and self-closing doors pivoted on the said bottom and normally closing the opening thereof, the doors being located below the said central opening of the cover, the doors being adapted to abut at their sides against the sides of the bottom to limit the return or upward swinging movement of the doors.

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1,227,464. AERONAUTICS. IRA EMMETT MCCABE, Lexington, Nebr. Filed Apr. 11, 1913. Serial No. 760,396. (Cl. 244—29.)



1. In an aeroplane, rigid main supporting planes joined at their outer edges to form an ellipse, a following and steadying plane rigidly secured to the main planes, and a single control for the lateral, horizontal and vertical movements of the aeroplane comprising two separately operable coacting control planes mounted on shafts having a common axis at right angles to the direction of flight, said control planes being arranged equidistant on each side of the center of the main planes and forward of the center of gravity of the aeroplane.

2. In an aeroplane, rigid main supporting planes, a following and steadying plane comprising upper and lower plane surfaces brought together at their ends presenting

an open ellipse to the direction of travel rigidly secured to the main planes, and a single control for the lateral, horizontal and vertical movements of the aeroplane comprising two separately operable coacting control planes mounted on shafts having a common axis at right angles to the direction of flight, said control planes being arranged equidistant on each side of the center of the main planes and forward of the center of gravity of the aeroplane.

3. In an aeroplane, rigid main supporting planes, a following and steadying plane rigidly secured thereto of such relation that in horizontal flight the centers of pressure and gravity of the aeroplane are at the same point, and a single control for the lateral, horizontal and vertical movements of the aeroplane comprising two control planes mounted on shafts having a common axis at right angles to the direction of flight arranged equidistant at each side of the center and exterior of the sides of the main planes and forward of the center of gravity of the aeroplane, said main and supporting planes comprising a plurality of members joined to form an ellipse open to the direction of travel, and separate means for operating the control planes independently of each other to cause them to coact in controlling the movement of the aeroplane.

4. In an aeroplane, upper and lower main plane surfaces brought together at their ends presenting an open ellipse to the direction of travel, and a following and steadying plane of similar construction rigidly secured thereto of such relation to the main plane that in horizontal flight the centers of pressure and gravity of the aeroplane coincide, control planes arranged equidistant on each side of the center of the main planes and forward of the said center of gravity, and separate means for operating each control plane independently of the other for solely controlling the lateral, horizontal and vertical movements of the aeroplane.

5. In an aeroplane, upper and lower main plane surfaces brought together at their ends presenting an open ellipse to the direction of travel and a following and steadying plane of similar construction rigidly secured thereto of such relation that in horizontal flight the centers of pressure and gravity of the aeroplane coincide, a control plane on each side exterior of the meeting edge of the main plane centrally mounted upon a horizontal shaft passing through the forward end of each meeting edge of the main plane, a bearing for the inner end of each shaft arranged intermediate the entering edges of the main plane, an actuating member upon each shaft, an operating lever for each control plane, and a means of connection between each lever and the adjacent control plane whereby all movements of the aeroplane during flight are controlled by said levers.

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1,227,465. MOLDING MATERIAL AND PROCESS OF MAKING THE SAME. JAMES P. A. MCCOY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 3, 1914. Serial No. 848,806. (Cl. 106—12.)

1. A composition capable of being molded containing a varnish adhesive precipitated in admixture with a metallic tannate.

2. A composition capable of being molded containing a varnish adhesive and an alkali-metal tannate.

3. A composition capable of being molded and comprising an intimate mixture of a varnish-adhesive substance and an alkali-metal tannate.

4. A composition capable of being molded and comprising a resin precipitated in admixture with a metallic tannate.

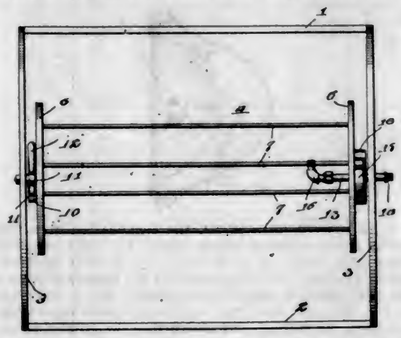
5. A composition capable of being molded containing shellac and a metallic tannate.

[Claims 6 to 13 not printed in the Gazette.]

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1,227,466. SELF-WINDING HOSE-REEL. CANTELLA DELL MCDOWELL, Pontiac, Mich. Filed Feb. 29, 1916. Serial No. 81,226. (Cl. 137—31.)

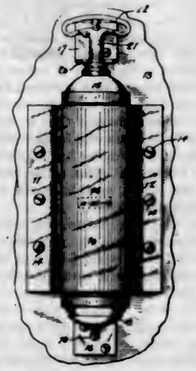
In combination with a hose reel mounted for rotation and a fixed tubular axle on which one end of the reel turns, means to connect one end of the tubular axle to a supply hose, an L swivelly connected to the inner end of the tubular axle for rotation thereon with the reel and arranged for the attachment of a hose thereto and a



coiled spring to rotate the reel in one direction the inner end of said spring being attached to said fixed tubular axle and the outer end of the spring being connected to the reel.

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1,227,467. FRANGIBLE PROTECTIVE HOOD. JAMES A. MCKEEVER and JAMES S. GRIFFIN, New York, N. Y. Filed Jan. 19, 1917. Serial No. 143,287. (Cl. 169—13.)



1. The combination with an exposed device, of a frangible hood incasing the body of said device to prevent removal or manipulation thereof, but leaving a portion of said device exposed for manual hold thereof, said hood being so arranged as to be unavoidably broken by the impingement against the inner face thereof of the device on the manipulation or removal of the latter.

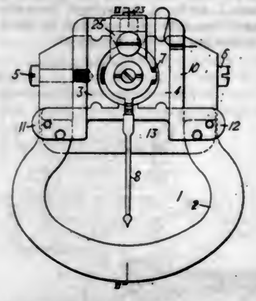
4. The combination with a body having an operating handle at one end thereof and a support at the opposite end thereof on which said body is pivotally carried, of a frangible hood incasing said body to prevent removal or operation thereof but leaving the handle accessible for the removal of the body from its support, said hood being so arranged as to be unavoidably broken by said body on its pivotal displacement from said support during the operation of removal.

6. A protective device of the type described, comprising an elongated frangible hood open at its ends and having base flanges on opposite sides thereof, together with means engaging said base flanges for securing the hood in position, said flanges being of greater strength than the body of the hood.

[Claims 2, 3, 5, and 7 not printed in the Gazette.]



1,227,468. ELECTRICAL MEASURING INSTRUMENT. PAUL MACGAHAN, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 1, 1913. Serial No. 764,867. (Cl. 171—95.)



1. In an electrical measuring instrument, the combination with an armature and field-magnet pole pieces, of a non-magnetic housing disposed around all sides thereof except the sides adjacent the armature and the sides opposite thereto, a magnetizable core member having a non-magnetic supporting member on one side thereof, and means for removably attaching said supporting member to the housing.

2. In an electrical measuring instrument, the combination with an armature and accurately centered field-magnet pole pieces, of a non-magnetic housing disposed around all sides thereof except the sides adjacent the armature and the sides opposite thereto, a magnetizable core member, a supporting member secured to the core member, and a single means for centering the core member with respect to the field-magnet pole pieces.

3. In an electrical measuring instrument, the combination with an armature and accurately centered field-magnet pole pieces, of a non-magnetic housing disposed around all sides thereof except the sides adjacent the armature and the sides opposite thereto, and a magnetizable core member removably attached at one side to said housing.

4. In an electrical measuring instrument, the combination with an armature, pole pieces having concave surfaces adjacent the armature, and a permanent field magnet, of a housing disposed around all sides of the pole pieces except the concave surfaces and the sides opposite thereto, and means for removably securing the permanent magnet to the sides of the pole pieces opposite to the concave surfaces.

5. In an electrical measuring instrument, the combination with accurately centered field-magnet pole-pieces having substantially plane outer faces, and a permanent magnet operatively secured to the plane outer faces thereof, of a non-magnetic housing secured to all sides of said pole-pieces except the outer faces and the sides opposite thereto, a magnetizable core member, a supporting member secured to said core member, and means for centering the core member with respect to the pole-pieces.

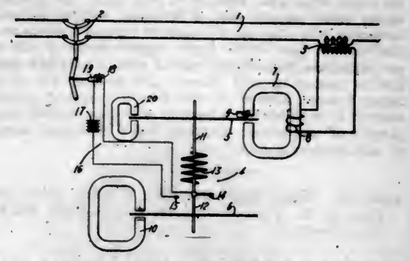
[Claims 6 and 7 not printed in the Gazette.]

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1,227,469. RELAY. PAUL MACGAHAN, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 11, 1915. Serial No. 33,489. (Cl. 175—270.)

1. A relay for an electric circuit comprising an actuated member, a retarded member and means connected therebetween whereby the retarded member is adapted to operate in a time that varies substantially inversely as the current traversing the circuit up to a predetermined value of current and in a definite time for all values of current above the predetermined value.

2. A relay for an electric circuit comprising an actuated member, a retarded member and a resilient means connected therebetween whereby the retarded member is adapted to operate in a time that varies substantially inversely as the current traversing the circuit up to a predetermined value of current and in a definite time for all values of current above the predetermined value.



3. A relay for an electric circuit comprising an actuated member, a retarded member and a spring operatively connected therebetween whereby the retarded member is adapted to operate in a time inversely as the current traversing the circuit up to a predetermined value of current and in a definite time for all values of current above the predetermined value.

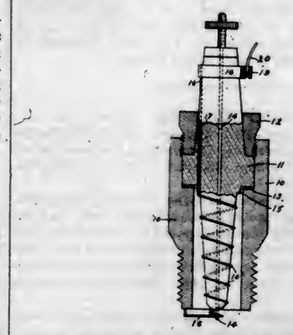
4. A relay comprising a movable member, means for actuating the same, a retarded member and a spring operatively connected between the said movable and retarded members, said spring being so proportioned that it causes the retarded member to be actuated in accordance with the movement of the movable member under predetermined conditions and to be actuated disproportionately to the movement of the movable member under other conditions.

5. A relay for an electric circuit comprising a main and an auxiliary armature, means for actuating the main armature in accordance with the current traversing the circuit, means for retarding the operation of the auxiliary armature and means for so connecting the two armatures that the auxiliary armature is adapted to move in accordance with the main armature up to a predetermined value of current traversing the circuit and to move with a substantially constant speed for all other values of current.

[Claims 6 to 8 not printed in the Gazette.]

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1,227,470. SPARK-PLUG. OTTO B. MACK, Des Moines, Iowa, assignor to All-Weather Spark Plug Company, Des Moines, Iowa, a Corporation of Arizona. Filed Nov. 22, 1915. Serial No. 62,730. (Cl. 123—169.)

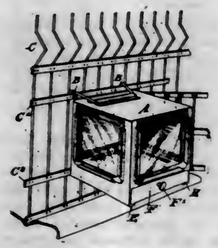


A spark plug, comprising a shell formed with a chamber, an insulated barrel fitted in its central portion to said shell and tapered both above and below said central portion, an electrode extending longitudinally of said barrel and projecting at its lower end therefrom, a coil

mounted around and exposed throughout the length of the tapered lower end portion of said barrel and also encircling but spaced and separated from the projecting lower end of said electrode, with which said coil coöperates as a second electrode, the lower end of said second electrode being also secured to said shell, the insulated barrel being formed with a straight channel extending upwardly from the top of its lower tapered portion to an intermediate part of its upper tapered portion, said coil or second electrode being formed with a straight upper portion seated in said channel and passing out of the upper tapered portion of said barrel, a contact member secured to said barrel in contact with the exposed upper portion of said second electrode, and a conductor secured to said contact member.

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1,227,471. BIRD BATH-HOUSE. WILLIAM MACK, New York, N. Y. Filed June 2, 1914. Serial No. 842,350. (Cl. 119—18.)



1. A bird bath house for removable attachment to a bird cage, comprising a housing in the form of a box open at one side to register with the door opening of the bird cage, the said housing being closed at the top and at the other sides, means on the top of the housing for removably attaching the same to the bird cage, the wall of the housing at the bottom of the opening in said open side being curved to form a perch, and a bath tub removably mounted in said housing and forming the bottom thereof.

2. The combination with a bird cage provided with a door opening having top and bottom transverse bars, of a bird bath house, comprising a rectangular housing having an open end adapted to register with the door opening of the bird cage, the housing being closed at the top and at the other ends, a projecting perch at the bottom of said end opening in the housing, hooks pivoted on the closed top of said housing and adapted to be swung downward into engagement with the said top bar of the door opening, the lower portion of said housing below the projecting perch being adapted to abut against the bottom bar of said door opening, and a bath tub removably mounted in said housing and forming the bottom thereof.

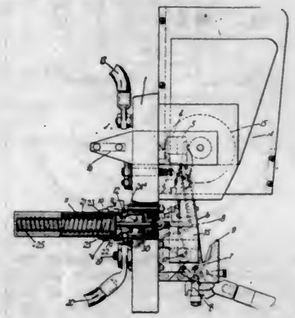
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1,227,472. CIRCUIT-INTERRUPTER. JOSEPH N. MAHONEY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 28, 1912. Serial No. 722,970. (Cl. 175—282.

1. A circuit interrupter comprising an insulating panel, coöperating relatively movable contact members, and restraining and releasing means disposed at one side of said insulating panel, and a single means disposed at the other side of said panel for successively accelerating and retarding the movable contact members during the opening operation.

2. A circuit interrupter comprising an insulating panel, coöperating relatively movable contact members, and restraining and releasing means disposed at one side of said panel, and a single coöperating actuating and retarding means disposed at the other side of said panel and operatively associated with said movable contact member throughout its operation.

3. In a circuit interrupter, the combination with movable and stationary contact members, a pivotally mounted supporting arm for the movable contact member, and a latching device for the supporting arm, of an actuating spring disposed at substantially right angles to the supporting arm and adapted to accelerate the movement of the same, and a dash-pot interposed between the spring and the supporting arm and adapted to retard the same during the latter part of its movement.



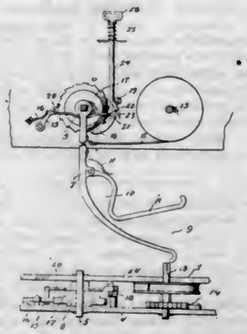
4. In a circuit interrupter, the combination with relatively movable coöperating contact members, a pivotally mounted supporting arm for the movable contact member, and means for restraining and releasing said supporting arm, of a heavy actuating spring disposed at substantially right angles to said supporting arm and adapted to accelerate movement of the same, and a dash-pot interposed between said spring and said supporting arm and adapted to retard movement of the same under predetermined conditions.

5. In a circuit interrupter, the combination with an insulating panel, a stationary contact member, a pivotally mounted coöperating movable contact member, and means disposed at one side of said panel for restraining and releasing said movable member, of a single means disposed at the other side thereof and substantially at right angles thereto and embodying an actuating spring and a dash pot having its piston disposed between the spring and the said pivotally mounted contact member.

[Claims 6 to 11 not printed in the Gazette.]

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1,227,473. MAIL-CATCHER. GEORGE R. MARSHALL, Hunkers, Pa. Filed Dec. 19, 1916. Serial No. 137,855. (Cl. 258—22.)



1. A mail bag catcher comprising an arm, a catch resiliently supported by the arm, a shaft supporting the arm for rotation, resilient means for holding the arm in an operative position, mechanical means associated with said shaft for rigidly holding the arm in an inoperative position, and manually operated means for rendering said mechanical means inoperative and braking the movement of said shaft.

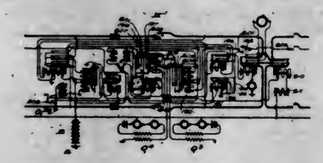
3. A mail bag catcher comprising an arm, a catcher arm, a shaft supporting the arm for rotation, a coil spring mounted to yieldably hold the arm in an operative position, a ratchet wheel secured to the shaft, a pawl associated with the ratchet and manually operated means for retracting said pawl and braking the movement of said arm; said means including a shoe adapted to move into engagement with a portion of the ratchet wheel and pivotally connected to said pawl whereby said shoe and pawl will move in unison.

[Claim 2 not printed in the Gazette.]



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1,227,474. TELEPHONE SYSTEM. TALBOT G. MARTIN, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 11, 1913. Serial No. 784,097. (Cl. 179—27.)



1. In a telephone system, a called line, a connector switch for seizing said line, a plurality of means for extending a connection to said connector switch, a second connector switch, and means for giving a discriminating busy test for indicating the means employed for extending the connection to said first connector switch when said first connector switch has seized said line and said second connector switch attempts to make connection therewith.

2. In a telephone system, a calling manual line, a calling automatic line, a called automatic line, an automatic connector switch for seizing said called line, means for extending a connection from said manual line to said connector switch, means for extending a connection from said calling automatic line to said connector switch, means for operating said connector to seize said called line, and a discriminating busy test for indicating which line is connected with said connector switch.

3. In a telephone system, a plurality of calling lines, a called line, an automatic connector switch for seizing said called line, means for extending a connection from one of said calling lines to said connector switch, means for operating said connector to seize said called line, independent means for extending a connection from another of said calling lines to said switch, and a discriminating busy test for indicating the calling line with which said connector switch is connected when an attempt is made to connect with said busy called line.

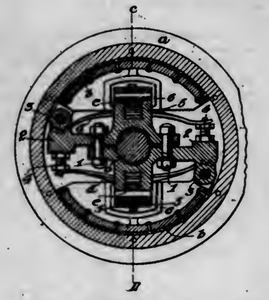
4. In a telephone system, a pair of calling lines, a called line, an automatic connector switch, means including a selector switch for extending a connection from one of said calling lines to said connector switch, means including another selector switch for extending a connection from the second of said calling lines to said connector switch, means for operating said connector to seize said called line, and means for placing a discriminating busy test on the multiple contacts of said called line to indicate which of said calling lines is connected with said connector.

5. In a telephone system, a pair of calling lines, a called line, an automatic connector switch, means including a selector switch for extending a connection from one of said calling lines to said connector switch, means including another selector switch for extending a connection from the second of said calling lines to said connector switch, means for operating said connector to seize said called line, a pair of busy signaling machines, and means for connecting one or the other of said busy signaling machines with the multiple contacts of said called line, depending upon which of said calling lines is connected with said connector.

[Claims 6 to 129 not printed in the Gazette.]

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1,227,475. FRICTION-CLUTCH. WALTERUS THEODORUS MATHEEUWISSEN, Rotterdam, Netherlands, assignor of one-half to Willem Tom, Katwykaan-Zee, Netherlands. Filed July 8, 1916. Serial No. 108,244. (Cl. 192—11.)



1. A clutch comprising a driving drum, clutch shoes adapted to engage the inner periphery of said drum, a driven shaft, a hub carried thereby, radially extending arms carried by said hub, one end of each of said clutch shoes being pivotally connected to one of said arms, leaf springs carried by said arms, means carried by the medial portion of said shoes for resting upon said springs whereby the shoes will normally be held in contact with said drum and means for acting against the tension of said springs whereby said clutch shoes may be gradually withdrawn from contact with said drum.

2. A clutch comprising a driving drum, clutch shoes adapted to engage said drum, a driven shaft, a hub carried by said shaft, oppositely extending arms carried by said hub, leaf springs adjustably mounted upon said arms, a loop carried by the medial portion of each of said shoes, one of said loops adapted to normally rest upon the medial portion of each of said springs, and a loose connection between said loops and said hub.

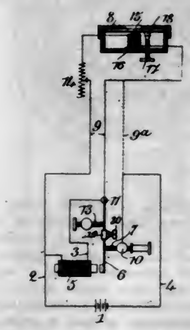
3. A clutch comprising a driving drum, clutch shoes adapted to engage said drum, a driven shaft, a hub carried by said shaft, a pair of diametrically extending arms carried by said hub, one end of each of said shoes being pivotally connected to one of said arms, an inwardly projecting loop carried by each of said shoes, means for loosely connecting said loops to said hub and adjustable springs carried by said hub for normally engaging said loops substantially as and for the purpose set forth.

4. A clutch comprising a driving drum, clutch shoes adapted to engage said drum, a driven shaft, a sectional hub adapted to be connected to said shaft, an arm extending from each section of said hub, one end of each of said clutch shoes being pivotally connected to one of said arms, leaf springs each having one end connected to said arms and the opposite ends of said leaf springs being adjustably secured to the opposite arms to which they have one end connected, extensions carried by said hub, an inwardly projecting loop carried by each of said shoes and loosely connected to said extensions, and said leaf springs adapted to normally engage said loops substantially as and for the purpose specified.

5. A clutch comprising a driving drum, clutch shoes adapted to engage the inner periphery of said drum, a driven shaft, a sectional hub adapted to be detachably connected to said shaft, an arm extending from each section of the hub, one end of each of said clutch shoes being pivotally connected to the outer ends of said arms, a pair of oppositely arranged leaf springs supported by said arms, one end of each of said leaf springs being adjust

ably connected to said arms, extensions carried by each section of the hub, inwardly projecting loops carried by the medial portions of said clutch shoes and adapted to be loosely connected to said extensions, the inner ends of said loops adapted to rest upon the medial portion of said leaf springs whereby said clutch shoes will be normally held in contact with the inner periphery of said driving drum, a pair of pivotally mounted levers, one end of each of said levers adapted to rest within said loops and a slidable member adapted to engage the opposite ends of said levers whereby the said levers may cause said clutch shoes to be gradually withdrawn from contact with said driving drum.

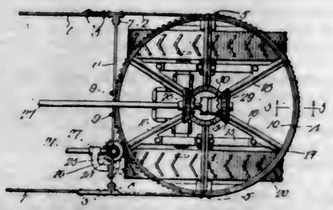
1,227,476. APPARATUS FOR REËDUCATING AND IMPROVING HEARING. ALBERT MAURICE, Paris, France. Filed Oct. 22, 1912. Serial No. 727,162. (Cl. 128—10.)



1. An apparatus for improving hearing comprising an electric-circuit, a battery and a quick switch inserted in such circuit, a by-circuit mounted in shunt in regard to such switch, a rheostat and a telephone receiver inserted in such shunt circuit, such receiver comprising a casing, an electro-magnet, a vibrating membrane on the aperture of such casing, a screw traversing the bottom of the said casing, and a pad of soft material on the inner end of such screw, such pad being arranged to stop such membrane on the latter being attracted toward the electro-magnet.

2. In an apparatus for increasing the hearing, a receiver comprising a casing having an opening therein, an electromagnet and a membrane vibrating over said opening, a screw passing through the bottom of the casing, and a pad of soft material on the end of said screw and arranged to stop said membrane when the membrane is attracted toward the electro-magnet.

1,227,477. VEHICLE. ERNST MEIS, Peru, Ill. Filed Mar. 29, 1916. Serial No. 87,396. (Cl. 21—114.)



1. In a vehicle, a frame having a stationary annulus, and steering unit, having a top wheel journaled in the annulus, hangers depending from the top wheel and arranged in spaced pairs and a supporting wheel supported between the hangers of each pair.

2. In a vehicle, a frame having a stationary horizontal annulus at one end thereof, a steering wheel mounted in said annulus and adapted to turn therein, hangers depending from said wheel and arranged in alluement and in spaced pairs, a short shaft extending between the hangers of each pair and a supporting wheel mounted on said shaft.

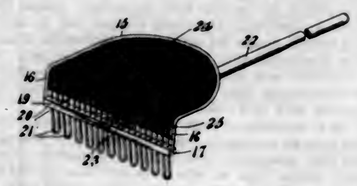
3. In a vehicle, a frame having a stationary horizontal annulus at one end thereof, a steering wheel mounted in said annulus and adapted to turn therein; said wheel having a lower outwardly extending toothed flange, means coöperating with said toothed flange to turn the wheel, hangers depending from said wheel and arranged in alinement and in pairs spaced from the axis of said steering wheel, a short shaft extending between the hangers of each pair and a supporting wheel mounted on said shaft.

4. In a vehicle, a frame having a stationary annulus, and a steering unit comprising supporting wheels, hangers and a top wheel mounted in the stationary annulus so as to turn therein, and power transmitting mechanism including a vertical shaft centralized with the top wheel and mechanism operatively connecting said vertical shaft to the supporting wheels, said supporting wheels being on opposite sides of and remote from the axis of said top wheel.

5. In a vehicle, a frame having a stationary annulus, and a steering unit comprising supporting wheels, hangers and a top wheel mounted in the stationary annulus so as to turn therein, and power transmitting mechanism including a vertical shaft mounted in bearings centered with respect to the top wheel and connected to a source of power, and mechanism between said supporting wheels operatively connecting said vertical shaft to the supporting wheels, said supporting wheels being on opposite sides of and remote from the axis of said top wheel.

[Claims 6 to 10 not printed in the Gazette.]

1,227,478. RAKE. LUDWIG MEULER, Oconomowoc, Wis. Filed Nov. 23, 1915. Serial No. 63,085. (Cl. 55—10.)



1. The combination with a rake having a handle of a swingingly supported bunching attachment having its free end extended above and adapted to be supported on the handle.

2. The combination with a rake of a bunching attachment pivotally connected with the rake head and extending above the handle of the rake so as to yield to the upward pressure of material that is being gathered.

3. The combination with a rake of a bunching attachment pivotally connected with the rake head, said attachment comprising a frame and material stretched thereon for gravitational engagement with material gathered by the rake.

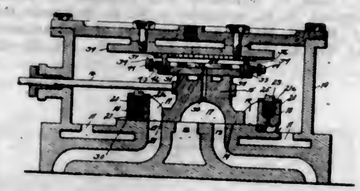
4. The combination with a rake, the head of which is provided with sockets in the ends thereof, of a bunching attachment comprising a rod bent to form a yoke having limbs provided with downwardly extending arms, said arms having laterally extending spindles for engagement with the sockets in the rake head, and cover material mounted on said yoke and arms to present a wall having a downwardly extending flange.

5. The combination with a rake head having sockets in the ends thereof of a swingingly supported bunching attachment consisting of a frame having arms provided with



spindles pivotally engaging the bearings, the frame being covered with material to present an obstructing wall, said wall having a flange at substantially right angles thereto.

1,227,479. VALVE FOR ENGINES. RICHARD W. MEWES, Des Moines, Iowa. Filed Jan. 3, 1916. Serial No. 69,832. (Cl. 136—1.)



1. In a D valve, a valve seat having ports, a valve mounted thereon having a central body portion with a recess in its lower surface, opposite laterally extending members on said valve adapted to slide on said seat, provided with ports, the members of said valve beyond said ports being provided with recesses in their upper surfaces, and with passages from the bottoms of said recesses to their lower surfaces, oil collecting, holding and distributing material mounted in said recesses, said valves being so constructed that said last passages never register with the ports in said valve seat.

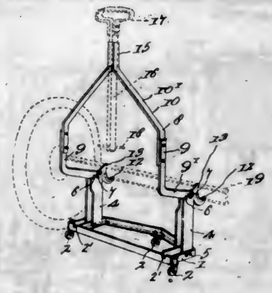
2. In a D valve, a valve seat having ports, a sliding valve mounted thereon having a central body portion with a recess in its lower surface, opposite laterally extending members on said valve adapted to slide on said seat provided with passages, the members of said valve beyond said passages being provided with recesses in their upper surfaces to hold lubricant collecting means, and with restricted passages from the bottoms of said recesses to their lower surfaces for carrying lubricant.

3. In a D valve, a valve seat having ports, a sliding valve, mounted thereon having a central body portion with a recess in its lower surface, opposite laterally extending members on said valve adapted to slide on said seat, provided with passages, the members of said valve beyond said passage being provided with recesses in their upper surfaces, and with passages from the b[illegible] of said recesses to their lower surfaces, oil collecting, holding and distributing material mounted in said recesses in said laterally extending members, and means for holding said material in said last named recesses.

4. In a D valve, a valve seat having ports, a sliding valve mounted thereon having a central body portion with a recess in its lower surface, opposite laterally extending members on said valve adapted to slide on said seat, provided with passages, the members of said valve beyond said passages being provided with recesses in their upper surfaces, and with passages from the bottoms of said recesses to their lower surfaces, oil collecting, holding and distributing material mounted in said recesses in said laterally extending members, a screen over said material, and means for holding said screen in position.

1,227,480. LIFTING-JACK FOR AUTOMOBILES OR OTHER VEHICLES. WILBUR G. MILLER, Grand Forks, N. D. Filed Mar. 25, 1916. Serial No. 86,697. (Cl. 254—8.)

1. In a lifting device, in combination, a truck, a jack mounted on said truck, comprising a bent lifting lever, said lever having on its lifting end a hook and a retaining part, the hook being curved whereby during lifting the truck and the load may approach, the one the other, pins on said lever, and a support adapted to receive the pins, said support being channel shaped, and adapted to receive within the channel, the portion of the lever between the bend and the pivot, whereby the load may, by a thrust, be carried beyond the center of support into locking position, the front edge of the load carrying portion being adapted to be carried beyond the pivot.



2. In a lifting jack for motor cars, in combination, a truck, supporting channel iron posts on said truck, notches on the upper ends of said posts, a lifting lever, pins mounted on said lever adapted to enter said notches, said lever having parts at right angles to another part, and hooks on the weight end of said lever, whereby when the power end is depressed the weight end of the lever with its load is lifted and the ends of said lever are thrust into the channel-iron supports where the final act of the lever is to carry the load into locking position behind the pivots.

3. In a lifting jack for motor cars, in combination, a lifting lever, a truck carrying supports for said lever, curved hooks on the lifting end of said lever, and curved friction reducing saddles fitting on said hooks whereby when the lever is operated the load may slide easily on said hooks.

4. In a lifting jack for motor cars, a Y-shaped lever provided in each of its branches with a right-angle bend, a lifting hook on the end of each of said branches, a pivot pin near said lifting hook, and channel-shaped supports for said pins, the supports opening toward the lever end whereby the bends of the levers may be carried into the supports and be stopped by the backs thereof.

5. In a lifting jack for motor cars, Y-shaped lever provided in each of its branches with a right-angle bend, a lifting hook on the end of each of said branches, a load supporting saddle for each hook, a pivot pin near said lifting hook, and channel-shaped supports for said pin, the supports opening toward the lever end whereby the bends of the levers may be carried into the supports and be stopped by the backs thereof.

[Claim 6 not printed in the Gazette.]

1,227,481. LUBRICATING MECHANISM. WILLIAM L. MORRIS, Fort Wayne, Ind. Filed Dec. 19, 1912. Serial No. 737,633. (Cl. 184—6.)

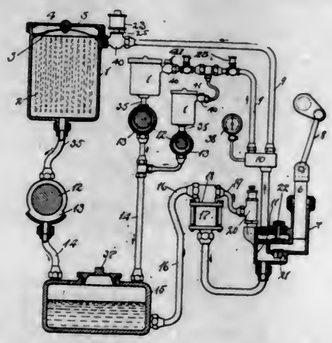
1. In mechanism of the class described, the combination of circulating means, a plurality of conduits connected thereto, and a flow-impeding element in the form of a filter interposed in each of said conduits and adapted to regulate the flow therethrough.

2. In mechanism of the class described, the combination of circulating means, a plurality of conduits connected thereto, and flow-impeding elements in each of said conduits, said elements being adapted to maintain their relative resistant capacities while increasing their individual resistance capacities.

3. In mechanism of the class described, the combination of circulating means, a plurality of conduits connected thereto; a flow-impeding filter of known resistance interposed in each of said conduits and adapted to regulate the flow therethrough; and pressure-indicating means adapted to indicate the pressure upon said filters.

4. In mechanism of the class described, the combination of circulating means, a plurality of conduits connected thereto; flow-impeding filters of known resistance inter-

posed in said conduits and adapted to regulate the flow in each, said filters being adapted to maintain their relative resistance capacities while increasing their individual resistance capacities.

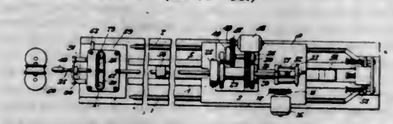


5. In mechanism of the class described, the combination of pump mechanism; a plurality of tubes connected thereto and to bearing surfaces to be lubricated; a drain chamber connected to each of such bearing surfaces and adapted to receive the excess lubricant; a tube connecting said drain chamber with said pump; a sight feed device connected to said tube; and pressure-regulating means connected to said sight feed device and to said tubes extending from said pump.

[Claims 6 to 11 not printed in the Gazette.]

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1,227,482. METAL-TUBING MACHINE. ANDREW MURF and STEFAN BECK, Etna, Pa. Filed Sept. 1, 1916. Serial No. 118,106. (Cl. 78—88.)



1. In a tube-forming machine, the combination with the welding rolls, a mandrel in axial alinement with the tube opening between the welding rolls, a carrier for said mandrel, means for imparting movement to said carrier toward and away from the welding rolls after the mandrel has traveled a predetermined distance in a forward and rearward direction, a carriage for the mandrel and means for locking said mandrel against longitudinal movement with relation to the carriage.

7. A mandrel holder comprising a receiving tube, a socket member having threaded connection with said tube, and adapted to receive a mandrel, means for adjusting the socket member with relation to the tube, and means for rotating said tube, said means comprising gearing, one member of which is yieldingly connected to the other.

10. In a tube-forming machine the combination with the welding rolls, of a mandrel cooling chamber alining therewith, means for reciprocating the mandrel through the cooling chamber, a mandrel supporting rod in the cooling chamber and means for raising and lowering said roller.

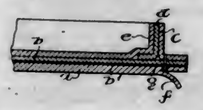
13. In a tube-forming machine the combination with welding rolls, of a mandrel cooling chamber in line therewith, alining openings in the walls of said chamber and longitudinally sliding gates for closing said openings, said gates being provided with receiving holes.

14. In a tube-forming machine, a mandrel, tube-welding rolls, a mandrel holder, means for rotating the mandrel holder, means for feeding the mandrel toward aud away from the welding rolls. an arrow head on said means a rotating disk support lining with the arrow head and having an elongated slot for receiving said arrow head and means for rotating said disk.

[Claims 2 to 6, 8, 9, 11, and 12 not printed in the Gazette.]

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1,227,483. INNERSOLE. FRANCIS P. MURPHY, Newport, and JAMES P. MCKEEVER and HERBERT E. PETERS, Claremont, N. H., assignors to W. H. McElwain Company, Boston, Mass., a Corporation of Massachusetts. Filed May 8, 1915. Serial No. 26,907. (Cl. 36—22.)



1. An inner sole comprising a body layer, a stiffening layer adhesively secured thereto, the said body layer being channeled inwardly from its edge, a strip forming a component part of a stitch-receiving rib united to the sole by stitches passing through the base portion of said strip and through said stiffening and body layers into the said channel, and being covered by the flap of said channel, an upright reinforcing strip lying against the inner side of said first-named strip, and having a flange lying against the said stiffening layer, and a reinforcing layer overlying said stiffening layer and the flange of the second-named strip and having its edges turned up and bearing against the inner side of the said second-named strip.

2. An inner sole comprising a flat body portion and a stitch-receiving rib formed in part of an outer strip stitched to the body portion, an inner strip lying against the inner side of the outer strip, and a reinforcing layer overlying the surface of the sole within the rib and having its edges turned up against the inner face of the second strip.

3. An inner sole comprising a body layer of leather, a stiffening fabric layer adhesively secured to the body layer and overlying one entire side thereof, said leather layer having a channel at its edge, and a stitch-receiving rib formed of a longitudinally folded strip sewed to the body of the sole by means of stitches passing through the strip close to the fold thereof, and also through the stiffening layer and the body layer, lying in the channel of said body layer and being covered by the flap of such channel.

4. An inner sole comprising a channeled body portion and a composite rib composed in part of an upstanding strip stitched to the body portion with the stitches lying in the channel thereof, and in part of a reinforcing layer lying against the body within the space inclosed by said strip and having its edges turned up adjacent to the inner side of the strip.

5. An innersole body comprising a plurality of layers, of which the layer forming one face of said body has a channel and a covering flap, a rib having a base flange lying against the layer forming the opposite face of the body, and stitches passing through said base flange and the layers into the channel of the first layer, connecting the rib and layers together and being covered by the flap of said channel.

[Claims 6 to 8 not printed in the Gazette.]

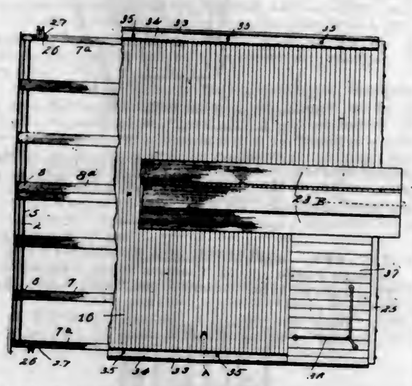
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1,227,484. CAR-ROOF. WALTER P. MURPHY, Chicago, Ill., assignor to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed Nov. 17, 1913. Serial No. 801,462. (Cl. 108—5.4.)

1. A car roof including a skeleton frame, corrugated roof sheets spanning the open spaces of the frame, the corrugations extending the full length of the sheet, and an eaves member comprising a flat strip secured on top of the roof sheets, said sheets being secured against movement longitudinally of said strip, and an apron extending from the strip down past the eaves end of the roof sheets, said apron being spaced from the car throughout its length.



2. A car roof including a skeleton frame, a series of load sustaining corrugated roofing sheets spanning the open spaces of the frame, the corrugations of the roofing sheets permitting free ventilation over the sides of the car beneath the roof sheets, a combined eaves cap and fascia comprising a horizontal body arranged across the caves ends of the roofing sheets and fastened to the top of the car to secure them in place, and a vertical apron forming a fascia depending down alongside of the car with its lower edge free and spaced from the car, said apron extending down past the eaves ends of the roofing sheets and spaced therefrom to permit such ventilation of the undersides of the sheets.



3. A car roof including a skeleton frame, corrugated roof sheets spanning the open spaces of the frame, the corrugations extending the full length of the sheets, said sheets overlapping at their side marginal portions, an eaves flashing and securing means comprising a flat strip secured on top of the roof sheets along their eaves ends, said sheets being secured against movement longitudinally of said strip, and an apron extending from the strip down past the eaves end of the roof sheets, said apron being spaced from the car throughout its length, and securing means passing through the flat strip and roof sheets at the overlapped joints thereof; said eaves flashing strip acting to hold the roof sheets to the car between the said fastening means and to prevent the sheets from buckling between the fastening means due to the upward pressure exerted by air currents on the under face of the said sheets.

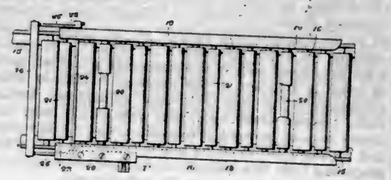
4. A car roof comprising a skeleton frame, load sustaining metallic roofing sheets spanning the open spaces of said frame and supported thereon and secured thereto, said sheets having corrugations extending lengthwise thereof at their side marginal edges, the corrugations of adjacent sheets overlapping, an eaves member secured to the side plate beneath the overlapping corners of said sheets and extending inwardly in a corrugation of the overlapped joint between the sheets, and a bolt anchored to said eaves member and passing upwardly through the overlapped side marginal edges securing them together and to the eaves member.

5. A car roof comprising a skeleton frame, load sustaining metallic roofing sheets spanning the open spaces of said frame and supported thereon and secured thereto, said sheets having corrugations extending lengthwise thereof at their side marginal edges, the corrugations of adjacent sheets overlapping, an eaves member secured to the side plate and extending inwardly in a corrugation of the overlapped joint between the sheets, a bolt anchored to said eaves member and passing upwardly through the overlapped side marginal edges securing them together and to the eaves member, said member having a water shed extending from said bolt to the eaves of the car.

[Claims 6 to 20 not printed in the Gazette.]

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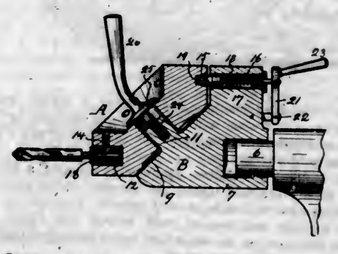
1,227,485. COUNTING DEVICE. HENRY F. MYERS, Lake Linden, Mich. Filed Jan. 17, 1916. Serial No. 72,525. (Cl. 235—98.)



The combination with a gravity conveyer, of a tallying device adapted to be detachably mounted on the frame of such conveyer, said tallying device comprising a frame adapted to be supported on the conveyer frame, means whereby the tallier frame will be raised with respect to the conveyer frame at the discharge end thereof, rollers mounted in the tallier frame and adapted to receive an object from the conveyer and to carry such object over a portion of the conveyer and in an upward direction with respect thereto, such object being free to drop over the raised end of the tallier frame, a mechanical counting device carried by the tallier frame, and means for actuating said counting device including a member extending in the path of an object dropping from the raised end of the tallier frame to receive the impact thereof.

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1,227,486. LATHE ATTACHMENT. SAMUEL NEWMAN and HENRY R. BOTHWELL, Cincinnati, Ohio, assignors to said Newman. Filed Sept. 11, 1916. Serial No. 119,347. (Cl. 29—49.)

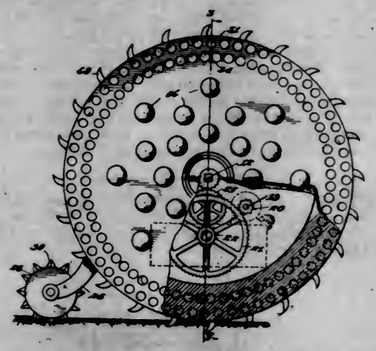


1. In a tool-holding lathe-attachment, the combination of a bracket comprising a split clamping shank having laterally projecting clamping flanges, a clamping screw seated in these flanges, the outer end of this shank presenting a flat surface of circular outline and inclined to the axis of the shank, a boss projecting integrally from the center of this surface and at right angles thereto and provided with a screw threaded socket in its outer end, a tool-holder having tool sockets and fitted to the inclined surface mentioned which forms a seat for it and to which it is held for rotary adjustment by the boss on said surface, an indexing device provided on the bracket and serving to position the tool holder in any particular adjustment, a locking screw seated in the socket in the boss having a locking flange adapted to engage the tool-holder and a handle projecting outwardly from this flange and serving for manipulation to cause said flange to clamp the tool-holder to its seat to hold it in its adjusted position.

2. In a tool-holding attachment for lathes, the combination of a bracket which comprises a clamping shank adapted for attachment to the tail-stock of a lathe, the outer end of this shank presenting a flat surface inclined to its axis and having an integral boss projecting from it, a tool-holder substantially hub-shaped mounted on this boss and fitted to said inclined surface which forms a seat for it, the circular side of this tool-holder presenting two substantially conical surfaces meeting at their largest

diameters and of which one surface is adjacent to the seat of the tool-holder and provided with spaced index openings, the other surface having correspondingly spaced tool-sockets, an extension projecting upwardly from the clamping shank containing a housing and so positioned as to be opposite that surface of the tool-holder which contains the index openings, a pin fitted to this housing, a spring sleeved onto it and imparting a normal tendency to impel it into one of the openings mentioned when in juxtaposition for any particular adjustment, means to clamp the tool holder to its seat when so adjusted, a lever linked to said upward extension on the clamping shank and to which the indexing pin is connected and a handle projecting from this lever so as to extend rearwardly above the tail-stock to manipulate the indexing pin.

1,227,487. ENFILADING-MACHINE. WILLIAM H. NORFOLK, San Pedro, Cal. Filed Feb. 23, 1916. Serial No. 79,977. (Cl. 102—2.)



1. An enfilading machine, comprising a frame, wheels supporting said frame, explosive charges carried by said wheels, and means controlled by the rotation of the wheels for firing said charges.

4. An enfilading machine, comprising a frame, a pair of wheels supporting said frame, an annular row of explosive charges carried by each of said wheels, and means controlled by the rotation of said wheels for firing said charges, the charges on one wheel being arranged opposite the charges on the other wheel.

9. An enfilading machine, comprising a shaft, a pair of wheels rigidly mounted thereon, a frame carried by said shaft, explosive charges carried by said wheels, electric ignition caps for firing said charges, electrical means for firing said caps, and means actuated by rotation of the shaft controlling the electrical cap firing means.

[Claims 2, 3, and 5 to 8 not printed in the Gazette.]

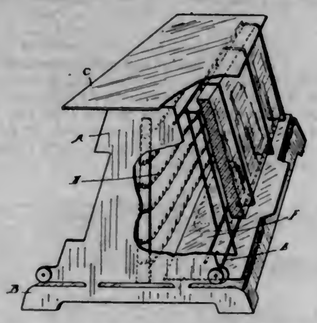
1,227,488. ELECTRIC COOKER. STANLEY B. OAKES, Flint, Mich. Filed Jan. 17, 1916. Serial No. 72,429. (Cl. 219—19.)

1. In a cooker, the combination with a heat-radiating element and means for supporting the work opposite the same, of a mirror arranged for the observation of the reflection of the inner face of the work.

2. In a cooker, the combination with a heat-radiating surface and means for supporting the work opposite said surface, of a mirror for observing the inner face of the work, arranged out of the path of the heat rays which impinge upon the work.

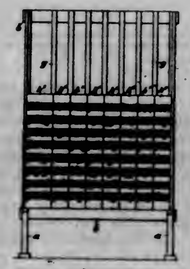
3. The combination with a heat-radiating surface and means for supporting the work in substantial parallelism thereto, of a mirror observable through the space between said radiating surface and work and showing the reflection of the latter.

4. The combination with a heat-radiating surface and means for supporting the work opposite said surface to



conceal the same, of a mirror arranged at an angle to the inner surface of the work and reflecting the same to a convenient point of observation.

1,227,489. APPLIANCE FOR TEACHING MUSIC. GEORGES PANTILLON, La Chaux-de-Fonds, Switzerland. Filed Sept. 23, 1913. Serial No. 791,328. (Cl. 35—12.)



1. In an appliance for teaching music, a frame, parallel guided sliding boards, placed side by side in said frame, a longitudinal series of melody fragments or groups of notes on each of said boards, removable handles on said boards for manipulating and simultaneously guiding them in the frame, the sliding boards being so arranged in said frame that they are not only adjustable relatively to one another, but also interchangeable among themselves after removal of said handles.

2. An appliance for teaching music comprising, on the one hand, a frame having a front and a rear wall, the former provided with an elongated horizontal sight aperture, and, on the other hand, a number of adjusting boards slidably placed side by side in said frame between its front and rear walls and provided on their front side with melody fragments or groups of notes, designed to be rendered visible through said sight aperture, while on the rear side they carry operating knobs guided through vertical slots arranged in the rear frame wall, for allowing of the relative adjustment of said sliding boards, automatic spring locks being provided on the sliding boards for locking them in their different adjusted positions.

1,227,490. NEWSPAPER-HOLDER. JOSEPH RICHTER, Austin, Tex. Filed May 5, 1916. Serial No. 95,567. (Cl. 129—36.)

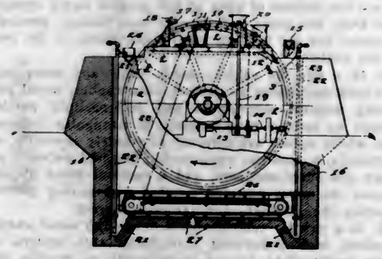
1. A newspaper holder of the class described, including a pair of hingedly connected arms, said arms being inherently resilient for gripping engagement with an object inserted therebetween, and spring means rotatably carried by one of the rods and provided with jaw means for engagement with the other rod to retain said rod in gripping engagement with an object to be held.



2. A newspaper holder of the class described including hingedly connected rods, a handle carried by one of said rods, said rods being adapted to grippingly engage a paper or the like, a retaining means comprising a spring loop member having rotatable engagement with one of the rods, a free end of said loop member being provided with a gripping jaw for engagement with the other rod whereby to retain said rod in frictional engagement with an object to be held.

3. A newspaper holder of the class described, including a pair of hingedly connected arms of different lengths, a handle formed on the longer arm, a bracket formed on the said longer arm, the shorter arm being pivotally connected to the other arm by means of said bracket, the longer arm having a reduced portion, and the said reduced portion having a spring means rotatably mounted thereon and provided with jaw means for engagement with the other rod to retain said rod in gripping engagement with an object to be held.

1,227,491. DEHYDRATOR. CYRUS ROBINSON, Mount Vernon, N. Y., assignor to Metallurgical Engineering & Process Corporation, a Corporation of New York. Filed July 21, 1913, Serial No. 780,347. Renewed Oct. 10, 1916. Serial No. 124,901. (Cl. 210—14.)



1. In a dehydrating machine, the combination of a rotating filtering drum, a receptacle partly inclosing the drum, means for feeding to the receptacle ore pulp to be treated, means near the top of the drum for removing material from the surface thereof, and means for raising material from the bottom of the receptacle and feeding it directly onto the drum.

2. In a dehydrating machine, the combination of a rotating filtering drum, a receptacle partly inclosing the drum, means for feeding to the receptacle ore pulp to be treated, means near the top of the drum for removing material from the surface thereof, and an air lift for raising material from the bottom of the receptacle and feeding it directly onto the drum.

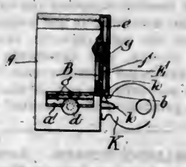
3. In a dehydrating machine, the combination of a rotating filtering drum, a receptacle partly inclosing the drum, means for feeding to the receptacle ore pulp to be treated, means near the top of the drum for removing material from the surface thereof, and means for raising material from the bottom of the receptacle at the descending side of the drum and feeding it directly onto the drum.

4. In a dehydrating machine, the combination of a rotating filtering drum, a receptacle partly inclosing the drum, means for feeding to the receptacle ore pulp to be treated, means near the top of the drum for removing material from the surface thereof, and means for raising material from the bottom of the receptacle at the ascending side of the drum and feeding it directly onto the drum.

5. In a dehydrating machine, the combination of a rotating filtering drum, a receptacle partly inclosing the drum, means for feeding to the receptacle ore pulp to be treated, means near the top of the drum for removing material from the surface thereof, means for raising material from the bottom of the receptacle at the descending side of the drum and feeding it directly onto the drum, and means for raising material from the bottom of the receptacle at the ascending side of the drum and feeding it directly onto the drum.

[Claims 6 to 8 not printed in the Gazette.]

1,227,492. KEY-GAGE. JOHN COWAN ROSS, Boston, Mass. Filed May 31, 1916. Serial No. 100,849. (Cl. 33—174.)



1. A key gage of the character described comprising a frame having a key-way, and a latch carried by the frame in proximity to one end of the key-way opening, adapted to engage the shoulder of a key in the key-way.

2. A key gage of the character described comprising a frame having a key-way, a latch carried by the frame in proximity to one end of the key-way opening, adapted to engage the shoulder of a key in the key-way, and a spring normally pressing said latch forward, said latch being beveled on both its outer side and its inner side to yield to the movement of the key in either direction.

3. A key gage of the character described comprising a frame having a key-way, an adjustable key stop adapted to determine the penetration of the key into the key-way, and a latch carried by the frame adapted yieldingly to hold said adjustable key stop in any one of its several adjusted positions.

4. A key gage of the character described comprising a frame having a key-way, an adjustable key-stop adapted to determine the penetration of the key into the key-way, and a latch carried by the frame in proximity to one end of the key-way opening, adapted both to engage the shoulder of a key in the key-way and to hold said adjustable key-stop in any one of its several adjusted positions.

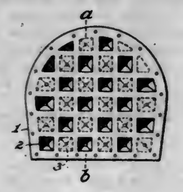
5. A key gage of the character described comprising a frame having a key-way, a rotary barrel at one side of the key-way adapted to adjust gage pins, and a latch carried by the frame adapted yieldingly to hold said barrel in any one of its several adjusted positions.

[Claims 6 to 9 not printed in the Gazette.]

1,227,493. RESILIENT HEEL FOR BOOTS OR SHOES. ARTHUR L. RUNYAN, Waterloo, Iowa, assignor to Runyan Cushion Wheel Company, Omaha, Nebr., a Corporation. Filed June 7, 1916. Serial No. 102,278. (Cl. 36—35.)

1. In a heel for shoes, a tread member, a resilient cushion interposed between said tread member and the rear end of the sole of the shoe, said cushion member having inner and outer series of relatively small outwardly tapering, air containing cavities therein, one series of cavities opening out through the inner face of the cushion member and having their opposite ends terminating short of the outer face of the cushion member, the other series of cavities opening out through the outer face of the cushion member and terminating short of the inner face of the cushion member, all of the cavities being so arranged that one series of cavities overlap

the cavities of the other series throughout the greater portion of the length of the latter, and being so constructed that the side walls of each series of cavities under compression are gradually thickened and caused to flow into the cavities to reduce the volume of each of the cavities under compression from the inner ends of




the cavities and thereby compress the air in the cavities under compression according to the weights placed on the cushion member, the outer face of said tread member having sockets therein, and fastenings passed through the sockets of the tread member and the edges of the cushion member and into the sole of the shoe.

[Claim 2 not printed in the Gazette.]

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1,227,494. RESILIENT WHEEL. ARTHUR L. RUNYAN, Omaha, Nebr., assignor to Runyan Cushion Wheel Company, Omaha, Nebr., a Corporation. Filed Oct. 7, 1916. Serial No. 124,416. (Cl. 152—36.)



1. In a vehicle-wheel, the combination with a felly, a resilient tread, a metal rim carrying said tread, and a cushion-body disposed between said rim and the wheel-felly, of a reinforcing-ring for said metal rim disposed within the same and comprising a relatively thin annular metal plate formed transversely to inclose a series of annular cells of triangular cross-section, and means for securing the ring and cushion-body against lateral displacement.

3. In a vehicle-wheel, the combination with a resilient tread and its rim and a wheel including its rim, of a resilient member interposed between the tread rim and the wheel rim provided with an inner and an outer series of tapering air containing pockets, said pockets arranged whereby the side walls of each of the pockets under compression are gradually thickened and caused to flow into said pocket to reduce the volume of each of the pockets from the inner ends thereof to gradually compress the air in such pockets according to the loads placed on the vehicle.

5. In a vehicle-wheel, the combination with a felly, and a resilient cushioning-body disposed around the peripheral part thereof, of a metal ring disposed around said cushioning-body so as to normally engage the outer surface thereof, said ring having at its lateral edges flanges forming the sides of annular recesses of substantially triangular cross-section, side-rings of resilient material arranged at the lateral edges of the cushioning-body, means for connecting the inner edges of said side-rings to the felly, said side-rings having at their outer edges head-portions adapted to fit in the annular recesses of the metal ring, and means for clamping the flanges of said ring against said head-portions to retain the same in said recesses.

[Claims 2, 4, and 6 to 8 not printed in the Gazette.]

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1,227,495. RESILIENT TIRE. ARTHUR L. RUNYAN, Omaha, Nebr., assignor to Runyan Cushion Wheel Company, Omaha, Nebr., a Corporation. Filed Nov. 3, 1916. Serial No. 129,287. (Cl. 152—36.)



1. In a demountable tire for vehicle wheels, a resilient tread, a rigid tread rim on which said tread is mounted, a base ring disposed within and spaced from said tread rim, a resilient cushion ring interposed between said rim and base ring, said cushion ring having outwardly tapering air containing pockets arranged whereby the side walls of each of the pockets under compression are gradually thickened and caused to flow into each pocket to reduce the volume of each of the pockets under compression from the inner ends thereof and thereby gradually compress the air in such pockets according to the loads on the vehicle.

3. In a tire for vehicle-wheels, inner and outer members each comprising a relatively thin annular metal plate having vertical side-flanges and intermediate portions formed to inclose annular cells of triangular cross-section whose apices are directed alternately inwardly and outwardly, a resilient cushion-ring disposed between said inner and outer members, and a resilient tread disposed around the outer annular member and having portions entering the alternate annular cells thereof.

4. In a tire for vehicle-wheels, inner and outer annular members each comprising a relatively thin integral annular metal plate formed transversely to provide side-flanges, radially spaced horizontal portions, and diagonal portions connecting said horizontal portions serially and forming the sides of annular spaces of triangular cross section; a resilient tread disposed around the outer annular member; a resilient cushion-ring disposed between the inner and outer annular members, resilient side-rings disposed at the lateral edges of the cushion-ring, the inner and outer edges of the side-rings fitting within the annular spaces of said annular members adjoining the side-flanges thereof, and transversely extending connecting means between the side-flanges of each annular member.

[Claims 2 and 5 not printed in the Gazette.]

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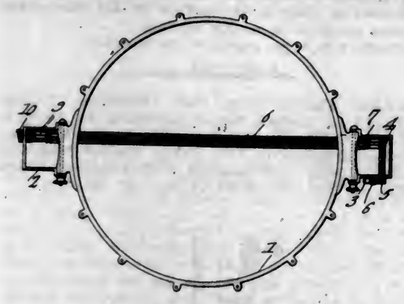
1,227,496. DRUM-SNARE. ISAAC HUDSON SAPP, Cheyenne, Wyo. Filed July 21, 1913, Serial No. 780,352. Renewed Oct. 25, 1916. Serial No. 127,688. (Cl. 84—127.)

1. A drum head, and a snare having reduced terminals bent back over the marginal portion of the head and holding the snare in contacting relation with the head, and attaching means engaging the terminals of the snare.

2. The combination with a drum, opposed snare fastening means thereon, and a drum head, of a snare having reduced terminals bent abruptly over the margin of the head and engaged by the fastening means.



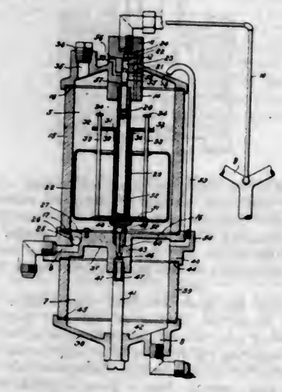
3. The combination with a drum head and opposed fastening devices adjacent the head, of a snare extending



across the head and having reduced terminal portions connected to the fastening devices for holding the snare in contacting relation with the head.

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1,227,497. VACUUM SYSTEM. WILLIAM SCOTT, Medford, Mass. Filed Sept. 11, 1916. Serial No. 119,475. (Cl. 158—36.)



1. A vacuum system for maintaining a substantially uniform head on flowing fluids, having, in combination, an intake chamber, an inlet passage thereto, a discharge passage therefrom, means for vacuumizing the chamber, a vacuum passage leading into the chamber through which it is vacuumized, an air passage connected with the atmosphere and with the intake chamber normally closed, means for closing the vacuum passage when a predetermined amount of fluid has been brought into the chamber, and means actuated by the vacuumizing means upon the closing of the vacuum passage for opening the air passage to permit the chamber to be under atmospheric pressure.

2. A vacuum system having, in combination, an intake chamber, an inlet passage through which fluid is drawn into the chamber, a discharge passage from the chamber normally closed, a vacuum passage, means for vacuumizing the chamber through the vacuum passage, an air passage connected with the atmosphere and with the chamber normally closed, means controlled by the amount of fluid in the chamber for closing the vacuum passage, and means controlled by the vacuumizing means for opening the air passage and simultaneously therewith the discharge passage.

3. A vacuum system for maintaining a substantially uniform head on flowing fluids having, in combination, an intake chamber provided with intake and discharge passages, a vacuum passage leading into the chamber through which it may be vacuumized, means for vacuumizing the chamber, a normally closed air passage leading from the atmosphere into the chamber, a float, a valve actuated by the float to close the vacuum passage when a predetermined amount of fluid has been drawn into the chamber, and a valve normally closing the air passage actuated by the vacuumizing means upon the closing of the vacuum passage to open the air passage.

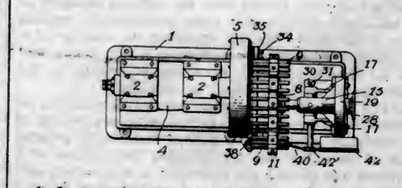
4. A vacuum system having, in combination, an intake chamber provided with an inlet passage through which fluid is drawn into the chamber, a discharge passage through which the fluid is discharged from the chamber, means for vacuumizing the chamber, a normally closed air passage connected with the atmosphere and with the chamber, means for closing the vacuum passage when a predetermined amount of fluid has been brought into the chamber, and means disconnected from the vacuum valve and acting independently thereof controlled by the vacuumizing means for opening the air passage when the vacuum passage is closed.

5. A vacuum system having, in combination, an intake chamber, a plate forming the bottom of said chamber, an inlet passage in said plate through which fluid is drawn into the chamber, a discharge passage in said plate through which the fluid is discharged from the chamber, a cap forming the top of said chamber, a vacuum passage in said cap through which the chamber is vacuumized, an air passage in said cap connected with the atmosphere and with the intake chamber, a guideway crossing the air passage, a valve for normally closing the air passage adapted to slide in the guideway and having a reduced portion, vacuumizing means connected with the vacuum passage and with the guideway for vacuumizing the chamber, a hollow rod connecting the cap with the plate, a discharge valve adapted to slide in said rod for normally closing the discharge passage, a valve stem connecting the discharge valve with the first named valve, a float adapted to be guided by the hollow rod for controlling the amount of fluid to be received into the chamber, and a vacuum valve loosely connected with the float for closing the vacuum passage when a predetermined amount of fluid has been drawn into the chamber, said air passage valve being adapted to be actuated by the vacuumizing means to bring its reduced portion opposite the air passage and simultaneously therewith to actuate the discharge valve.

[Claims 6 to 10 not printed in the Gazette.]

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1,227,498. MACHINE FOR GRINDING SPRINGS. FRANK H. SLEEPER, Worcester, Mass., assignor to Sleeper & Hartley, Inc., Worcester, Mass., a Corporation of Massachusetts. Filed May 1, 1916. Serial No. 94,596. (Cl. 51—12.)



1. In a spring grinding machine, a grinding element, and means for successively presenting the ends of the springs to said element, comprising a series of fixed arbors on which said springs are strung.

2. In a spring grinding machine, a series of arbors for supporting the springs to be ground, means for fixing said arbors to correspond to the lengths of the springs, and means for adjusting said arbors to correspond to the lengths of the springs.

3. In a spring grinding machine, a work carrying element providing a series of arbors for supporting the springs to be ground, and means for detachably securing

said arbors to said work carrying means, said means being adjustable for arbors of different diameters.

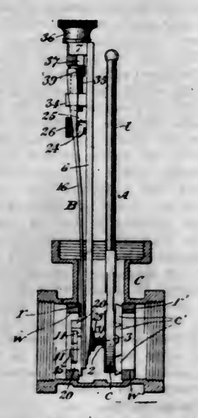
4. In a grinding machine, a work carrying element providing a plurality of peripheral notches, a work supporting arbor adapted to seat in each notch, and adjustable means for clamping said arbors in operative position.

5. In a grinding machine, a work carrying element providing a plurality of peripheral notches, a work supporting arbor adapted to seat in each notch, and a plurality of adjustable clamps, each operative with respect to two of said arbors, for securing the same to said work carrying element.

[Claims 6 to 21 not printed in the Gazette.]

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1,227,499. FACING-TOOL FOR DRESSING VALVE-SEATS, &c. FRANK L. SMITH, Chicago, Ill., and THOMAS B. WILLIAMS, Orange, Mass., assignors to The Leavitt Machine Company, Orange, Mass., a Corporation of Massachusetts. Filed Feb. 11, 1916. Serial No. 77,632. (Cl. 90—12.5.)



1. A tool of the class described, comprising a cutter, an associated cutter-bar having near the cutter a plurality of parts relatively movable in a plane substantially parallel to that of the cutter bar for engaging the interior of a valve-casing and holding the cutter-bar to said casing, and means for effecting relative movement of said parts.

2. A tool of the class described, comprising a cutter, an associated cutter-bar having near the cutter a plurality of parts relatively movable in a plane substantially parallel to that of the cutter bar for engaging the interior of a valve-casing and holding the cutter-bar to said casing, and means for effecting relative movement of said parts and for maintaining the adjustment so obtained.

3. A tool of the class described, comprising a cutter, an associated cutter-bar having near the cutter a plurality of parts relatively movable in a plane substantially parallel to that of the cutter bar for engaging the interior of a valve-casing and holding the cutter-bar to said casing, and means carried by the cutter-bar and operable from a point outside the valve-casing for effecting relative movement of said parts.

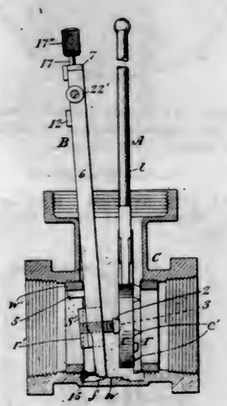
4. A tool of the class described, comprising two main members one of which is a cutter and the other an associated cutter-bar, means for wedging said tool in place between a pair of separated surfaces of a valve-casing, and adjustable means near the cutter for holding said cutter-bar to the interior of said valve-casing against movement in another direction.

5. A tool of the class described, comprising two main members one of which is a cutter and the other an associated cutter-bar, means for wedging said tool in place between a pair of separated surfaces of a valve-casing, and adjustable means near the cutter for wedging said cutter-bar in place in the interior of said valve-casing against movement in another direction.

[Claims 6 to 36 not printed in the Gazette.]

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1,227,500. FACING-TOOL FOR DRESSING VALVE-SEATS, &c. JAMES A. STUARD, Harrisburg, Pa., FRANK L. SMITH, Chicago, Ill., and THOMAS B. WILLIAMS, Orange, Mass., assignors to The Leavitt Machine Company, Orange, Mass., a Corporation of Massachusetts. Filed Feb. 11, 1916. Serial No. 77,631. (Cl. 90—12.5.)



1. A tool of the class described, comprising a cutter, an associated cutter-bar having at different points in the length thereof near the cutter a pair of relatively movable parts for engaging the interior of a valve-casing and holding the cutter-bar to said casing, and means for effecting a relative movement of said parts lengthwise of the cutter-bar.

2. A tool of the class described, comprising a cutter, an associated cutter-bar having at different points in the length thereof near the cutter a pair of relatively movable parts for engaging the interior of a valve-casing and holding the cutter-bar to said casing, and means carried by the cutter-bar and operable from a point adjacent to the end of the cutter-bar and remote from the cutter for effecting a relative movement of said parts lengthwise of the cutter-bar.

3. A tool of the class described, comprising a cutter, an associated cutter-bar having at different points in the length thereof near the cutter a pair of relatively movable parts for engaging the interior of a valve-casing and holding the cutter-bar to said casing one of said parts being carried by a slide movable lengthwise of said cutter-bar, and means for shifting said slide to and maintaining it in any one of a plurality of different adjusted positions.

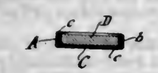
4. A tool of the class described, comprising a cutter, an associated cutter-bar, and a movable element on the cutter-bar and shiftable lengthwise thereof and coöperative with the end of the cutter-bar nearest the cutter for engaging the interior of a valve-casing at two different points and holding the cutter-bar to said casing.

5. A tool of the class described, comprising two main members one of which is a cutter and the other an associated cutter-bar, means for holding said tool in place between a pair of separated surfaces of a valve-casing, and means near the cutter for holding said cutter-bar to the interior of said valve-casing against movement in both directions lengthwise of the cutter-bar.

[Claims 6 to 33 not printed in the Gazette.]



1,227,501. TRIMMING-BUTTON. JOSEPH H. STYLES, New York, N. Y., assignor to Defiance Button Machine Co., New York, N. Y., a Corporation of New York. Filed Feb. 18, 1916. Serial No. 79,012. (Cl. 24—92.)



1. A garment trimming element the rear of which is free from a sew-on protuberance and comprising an imperforate flat-back metal shell, a fabric cover incasing the shell and the marginal portions being infolded within said shell, and a filling member composed of stiff material fitted tightly within said shell and in contact with said infolded marginal portions of the fabric cover, that part of the fabric cover which conceals the rear of the shell being free from direct attachment thereto and affording means whereby the garment trimming element may as an entirety be sewed to a dress fabric, or the like, by stitches which pass through said fabric cover and lie in a direction generally parallel to the plane of the back part of said shell.

2. A garment trimming element the rear of which is free from a sew-on protuberance and comprising an imperforate flat-back metal shell, a fabric cover incasing said shell and the marginal portions of which are infolded within the shell, a stiff filling member fitted tightly within the shell and in frictional contact with said infolded marginal portions of the fabric cover, and a front member fitted to the metal shell, that part of the fabric cover which conceals the rear of said shell being free from direct attachment thereto and affording means for sewing the garment trimming element to a dress fabric, or the like, by stitches which pass through said fabric cover and lie in a direction generally parallel to the plane of the flat back part of said shell.

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1,227,502. ART OF FILLING SHOES. ANDREW THOMA, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y., a Corporation of Maine. Filed Apr. 1, 1912. Serial No. 687,937. (Cl. 18—48.)

1. The art of filling shoes, which consists of providing a shoe-filler amenable to a softening filler-element and to heat and having a firm-setting component in solution with a solvent capable of being driven off by heat, softening said filler and rendering the same pliable by a softening filler-element, and applying the filler in a layer to the shoe-bottom cavity in the presence of heat sufficient to drive off at least a portion of the solvent in the process of laying the filler.

2. The art of filling shoes, which consists of providing a shoe-filler amenable to a softening filler-element and to heat and having a firm-setting component in solution with a solvent capable of being driven off by heat, softening said filler and rendering the same pliable by a softening filler-element united with the filler, and applying the filler in a layer to the shoe-bottom cavity in the presence of heat sufficient to drive off at least a portion of the solvent in the process of laying the filler.

3. The art of filling shoes, which consists of providing a shoe-filler, amenable to a softening filler-element and to heat and having a firm-setting component in solution with a solvent capable of being driven off by heat, softening said filler and rendering the same pliable by introducing a softening element into the filler at the time of laying the filler, and applying the filler in a layer to the shoe-bottom cavity in the presence of heat sufficient to volatilize the solvent and thereby hasten the setting of the firm-setting component.

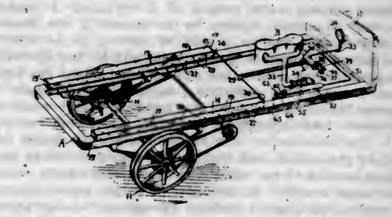
4. The art of filling shoes, consisting of applying in a thin layer a setting filler in a plastic condition to a shoe-bottom, and then immediately stiffening the top of the laid filler by direct application to said top of means capable of coöperating with the filler to cause the top of the latter to become set more quickly than the rest of the layer.

5. The art of filling shoes, consisting of applying a plastic, setting filler to a shoe-bottom, and then immediately applying to the top of the laid filler a setting and water-proofing treatment to cause the top to become thoroughly waterproof next the outsole.

[Claims 6 to 25 not printed in the Gazette.]

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1,227,503. LOAD-INDICATOR FOR MOTOR-VEHICLES AND THE LIKE. FREDERICK J. TROLL, Baltimore, Md., assignor to The Loadometer Company, Baltimore, Md., a Corporation of Delaware. Filed Dec. 14, 1914. Serial No. 877,226. (Cl. 265—40.)



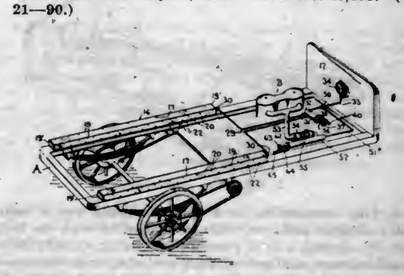
1. The combination with a chassis and a vehicle-body, of a load indicator comprising fluid-operated indicating means and fluid containing, compressible, operating, members interposed between the chassis and the body, said members having walls formed of a thickness to support the body in spaced relation to the chassis in the absence of fluid in said members.

32. The combination with a chassis and a vehicle body, of an indicating means including a device to indicate when the weight capacity of the vehicle has been reached, a device to indicate the total weight carried by the vehicle and a device to indicate the number of times the vehicle is overloaded, and a fluid containing, compressible member interposed between the chassis and body to operate said indicating means.

[Claims 2 to 31 and 33 to 43 not printed in the Gazette.]

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1,227,504. LOAD-CONTROLLER FOR MOTOR-VEHICLES. FREDERICK J. TROLL, Baltimore, Md., assignor to The Loadometer Company, Baltimore, Md., a Corporation of Delaware. Original application filed Dec. 14, 1914, Serial No. 877,226. Divided and this application filed July 17, 1915. Serial No. 40,493. (Cl. 21—90.)



1. The combination of a vehicle chassis, a body mounted thereon, driving means for the vehicle, fluid pressure means carried by the vehicle to indicate when a predetermined load capacity has been reached, and means operable by said fluid pressure means to cut off the driving power of the vehicle when the predetermined load capacity has been reached.

2. The combination of a vehicle chassis, a body on the chassis, an engine including a manifold intake pipe, means carried by the vehicle to indicate when a predetermined

load capacity of the vehicle has been reached, a cylinder carried by the vehicle, a valve disposed in said manifold intake, and means mounted in said cylinder and having operative connection with said valve and said indicating means to operate the valve and close said manifold intake when the predetermined load capacity of the vehicle has been reached.

3. The combination of a vehicle chassis, a body on the chassis, and an engine including a manifold intake pipe, of means to cut off the supply of operating fluid to the engine when the maximum load capacity of the vehicle has been reached comprising a valve disposed in the manifold intake, a fluid containing, compressible, operating member interposed between the chassis and the body, said member having walls formed of a thickness to support the body in spaced relation to the chassis in the absence of fluid in said member, a cylinder carried by the vehicle, and means mounted in said cylinder and having operative connection with said valve and operable under the influence of said fluid containing, compressible, element to operate the valve and close said manifold intake when the maximum load capacity of the vehicle has been reached.

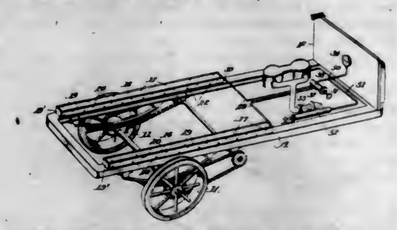
4. The combination of a vehicle chassis, an engine carried by the chassis and including a manifold intake pipe, a gage carried by the vehicle, means carried by the vehicle and operable under the influence of weight placed thereon to actuate the gage to indicate the amount of load placed on the vehicle, a valve in the intake pipe of the engine, and means operatively connected to the gage actuating means and the valve to automatically actuate said valve to cut off the supply of driving medium to the engine through said manifold intake pipe and thereby prevent driving the vehicle when the same has been overloaded.

5. The combination of a motor driven vehicle including the engine for driving the same and the intake pipe of the engine, of means carried by the vehicle to indicate the weight of loads placed thereon, a valve in the intake pipe of the engine, a cylinder carried by the vehicle, and means confined within said cylinder and having operative connection with said valve to operate the latter to cut off the supply of driving medium through said intake pipe when the predetermined load capacity of the vehicle has been reached.

[Claims 6 to 36 not printed in the Gazette.]

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1,227,505. LOAD-INDICATOR FOR VEHICLES. FREDERICK J. TROLL, Baltimore, Md., assignor to The Loadometer Company, Baltimore, Md. Filed Mar. 8, 1916. Serial No. 82,979. (Cl. 265—42.)



1. The combination of a vehicle chassis and a body, pairs of upper and lower sills interposed between the body and the chassis, a fluid pressure containing element interposed between each pair of sills, sets of springs interposed between each pair of sills on opposite sides of the respective fluid containing elements, the latter and the springs being compressible under the influence of weight placed on the body, a gage carried by the vehicle, and connections between said fluid containing elements and the gage whereby the weight placed on the body may be indicated on the gage.

2. The combination of a vehicle chassis and a body, pairs of upper and lower sills interposed between the body and the chassis, a fluid pressure containing element interposed between each pair of sills, yieldable means between each pair of sills on opposite sides of the respective fluid pressure containing elements, the latter and said yieldable means being compressible under the influence of weight placed on the body, a gage carried by the vehicle, and connections between the fluid containing elements and the gage whereby the weight placed on the body may be indicated on the gage.

3. The combination of a vehicle chassis and a body, pairs of upper and lower longitudinally disposed sills interposed between the body and the chassis on opposite sides thereof, a fluid pressure containing element interposed between each pair of sills and which are compressible under the influence of weight placed on the body, springs between each pair of sills, a gage carried by the vehicle, and connections between the fluid containing elements and the gage whereby the weight placed on the body may be indicated on the gage.

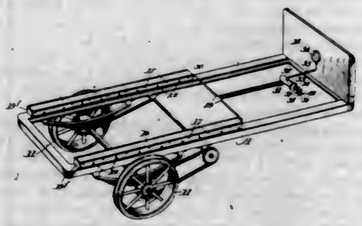
4. The combination of a vehicle chassis and a body, pairs of upper and lower longitudinally disposed sills interposed between the body and the chassis on opposite sides thereof, a fluid pressure containing element interposed between each pair of sills and which are compressible under the influence of weight placed on the body, yieldable means separate from the fluid containing elements between the sills, a gage carried by the vehicle, and connections between the fluid containing elements and the gage whereby the weight placed on the body may be indicated in the gage.

5. The combination of a vehicle chassis and a body, pairs of upper and lower longitudinally disposed sills interposed between the body and the chassis on opposite sides thereof, a fluid pressure containing element interposed between each pair of sills and which are compressible under the influence of weight placed on the body, means between the sills to reinforce the fluid containing elements in the support of the body, a gage carried by the vehicle, and connections between the fluid containing elements and the gage whereby the weight placed on the body may be indicated on the gage.

[Claims 6 to 36 not printed in the Gazette.]

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1,227,506. LOAD-INDICATOR FOR VEHICLES. FREDERICK J. TROLL, Baltimore, Md., assignor to The Loadometer Company, Baltimore, Md. Filed Mar. 8, 1916. Serial No. 82,980. (Cl. 73—23.)



1. The combination of a vehicle chassis and a body, pairs of upper and lower sills interposed between the body and the chassis, a fluid pressure containing element interposed between each pair of sills, sets of springs interposed between each pair of sills on opposite sides of the respective fluid containing elements, the latter and the springs being compressible under the influence of weight placed on the body, a yieldable longitudinally split sleeve embracing each fluid pressure containing element, a gage carried by the vehicle, and connections between said fluid containing elements and the gage whereby the weight placed on the body may be indicated on the gage.

2. The combination of a vehicle chassis and a body, pairs of upper and lower sills interposed between the body and the chassis, a fluid pressure containing element interposed between each pair of sills, sets of springs interposed between each pair of sills on opposite sides of the respective fluid pressure containing elements, the latter and said yieldable means being compressible under the influence of weight placed on the body, a yieldable longitudinally split sleeve embracing each fluid pressure containing element, a gage carried by the vehicle, and connections between the fluid containing elements and the gage whereby the weight placed on the body may be indicated on the gage.

3. The combination of a vehicle chassis and a body, pairs of upper and lower longitudinally disposed sills interposed between the body and the chassis on opposite sides thereof, a fluid pressure containing element interposed between each pair of sills and which is compressible under the influence of weight placed on the body, a yieldable longitudinally split sleeve embracing each fluid pressure containing element, springs between each pair of sills, a gage carried by the vehicle, and connections between the fluid containing elements and the gage whereby the weight placed on the body may be indicated on the gage.

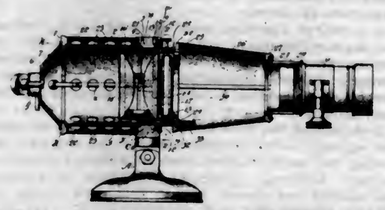
4. The combination of a vehicle chassis and a body, pairs of upper and lower longitudinally disposed sills interposed between the bpdy and the chassis on opposite sides thereof, a fluid pressure containing element interposed between each pair of sills and which is compressible under the influence of weight placed on the body, yieldable means separate from the fluid containing elements between the sills, a yieldable longitudinally split sleeve embracing each fluid pressure containing element, a gage carried by the vehicle, and connections between the fluid containing elements and the gage whereby the weight placed on the body may be indicated on the gage.

5. The combination of a vehicle chassis and a body, pairs of upper and lower longitudinally disposed sills interposed between the body and the chassis on opposite sides thereof, a fluid pressure containing element interposed between each pair of sills and which is compressible under the influence of weight placed on the body, means between the sills to reinforce the fluid containing elements in the support of the body, a yieldable longitudinally split sleeve embracing each fluid pressure containing element, a gage carried by the vehicle, and connections between the fluid containing elements and the gage whereby the weight placed on the body may be indicated on the gage.

[Claims 6 to 43 not printed in the Gazette.]

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1,227,507. STEREOPTICON. ALEXANDER FERDINAND VICTOR, Davenport, Iowa, assignor to Victor Animatograph Company, Davenport, Iowa, a Corporation of Iowa. Filed Feb. 26, 1914. Serial No. 821,121. (Cl. 88—26.)



1. In a device of the class described, a housing consisting of concentric inner and outer perforated shells, a tapering head closing the rear end of the housing, a lamp supported by the tapering head, a frame having lugs secured to the forward end of the housing for securing the frame and housing together, a slide-holder secured in said frame, a cradle in the housing in the rear of the slide-holder, and condensing lenses in said cradle.

2. In a device of the class described, a housing consisting of concentric inner and outer perforated shells, a tapering head closing the rear end of the housing, a lamp supported by the tapering head, a frame having lugs secured to the forward end of the housing for securing the frame and housing together, a slide-holder secured in said frame, a cradle in the housing in the rear of the slide-holder, a pair of condensing lenses in said cradle, and a plurality of springs supported by the cradle and disposed relatively to the lenses.

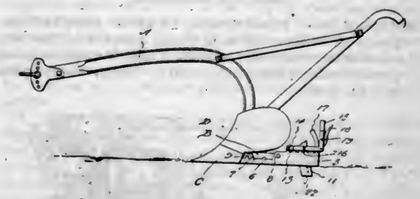
3. In a device of the class described, a housing consisting of concentric inner and outer perforated shells, a tapering head closing the rear end of the housing, a lamp supported by the tapering head, a frame having lugs secured to the forward end of the housing for securing the frame and housing together, a slide holder secured in said frame, a cradle in the housing in the rear of the slide-holder, a pair of condensing lenses in said cradle, and a plurality of springs supported by the cradle and disposed relatively to the lenses; one of said springs being flat and others being curved.

4. In a device of the class described, a housing consisting of concentric inner and outer perforated shells, a tapering head closing the rear end of the housing, a lamp supported by the tapering head, a frame having lugs secured to the forward end of the housing for securing the frame and housing together, a slide-holder secured in said frame, condensing lenses and a cradle for holding said lenses consisting of frames in which the lenses are seated, and a web connecting said frames.

5. In a device of the class described, a housing consisting of concentric inner and outer perforated shells, a tapering head closing the rear end of the housing, a lamp supported by the tapering head, a frame having lugs secured to the forward end of the housing for securing the frame and housing together, a slide-holder secured in said frame, condensing lenses and a cradle for holding said lenses consisting of frames in which the lenses are seated, a web connecting said frames, a separating spring attached to the web, and curved lens supporting-springs also attached to the web.

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1,227,508. PLOW ATTACHMENT. ACHILLE C. VIDRINE, Deshotels, La. Filed Oct. 26, 1916. Serial No. 127,851. (Cl. 97—26.)



A guide attachment for a plow comprising a runner bar for positioning at the heel of the plow, a guide plate slidable through the runner bar and having a series of holes arranged in a longitudinal row, a bearing on the bar, a lever pivotally connected to the bearing, means on the lever and engageable in any one of the holes for adjustably connecting the plate thereto, a stationary rack on the bar, and a dog pivotally connected to the lever and engageable with the rack to hold said lever in adjusted position.

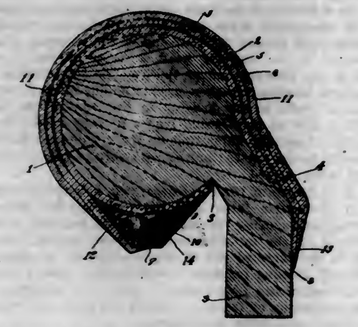
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1,227,509. MANDREL. HARRY B. WALLACE, St. Louis, Mo. Filed Nov. 9, 1916. Serial No. 130,443. (Cl. 154—9.)

1. A mandrel for the formation of tires composed of a ring circular in cross-section except at the point of projection therefrom of an arm, the said arm projecting from the entire circumference of the said ring at one lateral face thereof and being adapted to serve as a holding and working surface for part of the said tire in making.

4. A mandrel for the formation of tires composed of a ring circular in cross-section except at the point of projection therefrom of an arm, the said arm projecting from the entire circumference of the said ring at one side thereof and being adapted to serve as a holding and working surface for part of the said tire in making, the said arm

having a plurality of shoulders to act as stops for the material used in making the said tire.



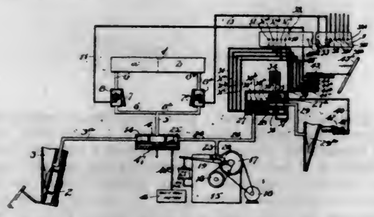
6. A mandrel for the formation of tires or tubes composed of a ring having a flange projecting therefrom, the said flange being adapted to serve as a holding and working surface for part of the said tire or tube in making, and there being on the interior of the said ring a countersink for the reception of part of a valve to be united with the said tire or tube while the same is being formed on the said mandrel.

8. A mandrel for the formation of tires composed of a ring circular in cross section having an arm projecting from one side of the said ring, there being a notch at the intersection of the inner circumference of the said ring and the said arm and the said arm being adapted to serve as a holding and working surface for part of the said tire in making.

[Claims 2, 3, 5, 7, and 9 not printed in the Gazette.]

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1,227,510. PNEUMATIC PLAYER MECHANISM. FRANK C. WHITE, Meriden, Conn., assignor to The Wilcox & White Company, Meriden, Conn., a Corporation of Connecticut. Filed Jan. 5, 1914. Serial No. 810,290. (Cl. 84—168.)



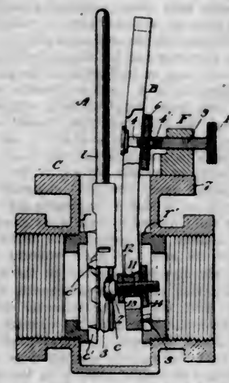
3. In a pneumatic player mechanism, action mechanism from which air is to be exhausted, a power exhauster in communication therewith and arranged to operate at substantially uniform speed, means for varying the effective tension within the exhaust chamber without substantially varying the speed of the power exhauster, said means comprising a leak passage from atmosphere into the exhaust chamber, with means for partially or entirely closing said leak passage and an equalizer in communication with said exhaust chamber through said leak passage.

4. In a pneumatic player mechanism, action mechanism from which air is to be exhausted, a power exhauster in communication therewith and arranged to operate at substantially uniform speed, means for varying the effective tension within the exhaust chamber without substantially varying the speed of the power exhauster, said means comprising a leak passage from atmosphere into the exhaust chamber, with means for partially or entirely closing said leak passage, an equalizer normally in communication with said exhaust chamber through said leak passage, with means for shutting off communication between said equalizer and said chamber.

[Claims 1, 2, and 5 not printed in the Gazette.]

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1,227,511. FACING-TOOL FOR DRESSING VALVE-SEATS, &c. THOMAS B. WILLIAMS, Orange, Mass., and FRANK L. SMITH, Chicago, Ill., assignors to The Leavitt Machine Company, Orange, Mass., a Corporation of Massachusetts. Filed Jan. 23, 1915. Serial No. 3,897. (Cl. 90—125.)



1. A valve reseating tool comprising a facing cutter and a cutter support, the former of which is mounted on one side only of the cutter support to have a turning movement relative thereto and is freely separable therefrom by relative movement of the engaging surfaces, and means on the cutter for operating the same.

2. A valve reseating tool comprising two elements having a universal connection, one of which elements is a cutter support and the other of which is a facing cutter, and means on the cutter for operating the same.

3. A tool of the class described constructed to engage and work between two opposed resistance points outside the tool and including a cutter and a cutter support, a pivotal connection between the cutter and cutter support which permits the pivotal movement of the former on the latter and the bodily movement of the same toward and away from the latter.

4. A tool of the class described constructed to engage two opposed resistance points outside the tool and comprising two main members—one of which is a cutter—having a universal connection one element of which is movable in a direction to vary the distance between said main members.

5. A tool of the class described constructed to engage two opposed resistance points outside the tool and comprising two main members—one of which is a cutter—having a universal connection, and means for adjusting and holding one element of said connection to vary the distance between said main members.

[Claims 6 to 42 not printed in the Gazette.]

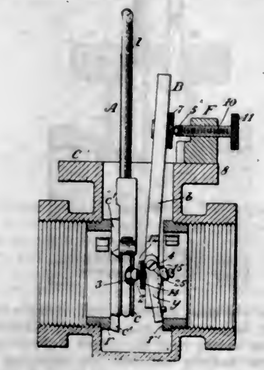
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1,227,512. FACING-TOOL FOR DRESSING VALVE-SEATS, &c. THOMAS B. WILLIAMS, Orange, Mass., and FRANK L. SMITH, Chicago, Ill., assignors to The Leavitt Machine Company, Orange, Mass., a Corporation of Massachusetts. Filed Jan. 23, 1915. Serial No. 3,898. (Cl. 90—12.5.)

1. A tool of the class described constructed to engage, and work between, two opposed resistance points outside the tool and comprising a rotary cutter, a cutter-bar jointed to vary the general direction of its inner face to that of said cutter, and a universal connection between said cutter and cutter-bar.



2. A tool of the class described constructed to engage, and work between, two opposed resistance surfaces outside the tool and comprising a rotary cutter, a cutter-bar having a main section associated with said cutter and an auxiliary section pivoted to and extending beyond the main section, and means for shifting said auxiliary section to and maintaining it in one of a plurality of adjusted positions relative to the main section and corresponding to different positions of said resistance surfaces.



3. A tool of the class described constructed to engage, and work between, two opposed resistance points outside the tool and comprising a rotary cutter, a cutter-bar having a main section and an auxiliary section pivoted to and extending beyond the main section and shiftable to different angular positions relative thereto, a universal connection between said cutter and the main section of the cutter-bar, and cutter-feeding means coöperative with said main section of the cutter-bar.

4. A tool of the class described constructed to engage, and work between, two opposed resistance points outside the tool and comprising a rotary cutter and a cutter-bar having a main section associated with said cutter for relative movement substantially in the direction of the cutting axis and also having an auxiliary section pivoted to the main section and shiftable to different angular positions relative thereto and also shiftable with said main section in the direction of said axis.

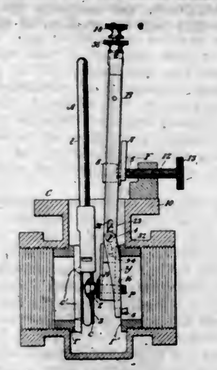
5. A tool of the class described constructed to engage, and work between, two opposed resistance points outside the tool and comprising a rotary cutter, a cutter-bar having a main section and an auxiliary section pivoted to the main section and shiftable to different angular positions relative thereto, a universal connection between said cutter and the main section of the cutter-bar, and means for adjusting and holding one element of said universal connection to vary the distance between said cutter and the main section of the cutter-bar.

[Claims 6 to 41 not printed in the Gazette.]

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1,227,513. FACING-TOOL FOR DRESSING VALVE-SEATS, &c. THOMAS B. WILLIAMS, Orange, Mass., and FRANK L. SMITH, Chicago, Ill., assignors to The Leavitt Machine Company, Orange, Mass., a Corporation of Massachusetts. Filed Jan. 23, 1915. Serial No. 3,899. (Cl. 90—12.5.)

1. A tool of the class described, comprising two main elements, one of which is a cutter and its operating means, and the other of which is an associated cutter-bar having connected main and auxiliary sections shiftable to different relative angular positions, said cutter-bar having means extending lengthwise of said main section from a point outside the work for shifting the auxiliary section relatively to the main section.



3. A tool of the class described, comprising two main elements, one of which is a cutter and its operating means, and the other of which is an associated cutter-bar having connected main and auxiliary sections shiftable to different relative angular positions, said cutter-bar having means extending from said auxiliary section to a point on the main section outside the work for shifting said auxiliary section relatively to the main section, said means embodying a slide.

4. A tool of the class described, comprising two main elements, one of which is a cutter and its operating means, and the other of which is an associated cutter-bar having connected main and auxiliary sections shiftable to different relative angular positions, said cutter bar having a screw-feed device extending to a point outside the work for shifting said auxiliary section relatively to said main section.

5. A tool of the class described, comprising two main elements, one of which is a cutter and its operating means, and the other of which is an associated cutter-bar having connected main and auxiliary sections the latter of which is shiftable to different positions crosswise of the cutter-bar, said cutter-bar having means on the main section and extending outside the zone of the work for shifting said auxiliary section to said positions.

[Claims 6 to 47 not printed in the Gazette.]

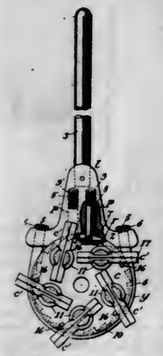
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1,227,514. ROTARY CUTTER. THOMAS B. WILLIAMS, Orange, Mass., and FRANK L. SMITH, Chicago, Ill., assignors to The Leavitt Machine Company, Orange, Mass., a Corporation of Massachusetts. Filed Jan. 23, 1915. Serial No. 3,900. (Cl. 90—12.5.)

1. A tool of the class described, comprising a rotary cutter-head having at its axial center an element of a universal connection for attaching it to a bearing outside the tool for rotation, a cutter-carrier extending from said cutter in the plane thereof, and a feed connection between said cutter-head and cutter-carrier, the maximum thickness of said tool being less than half the diameter of the cutter-head.

2. A tool of the class described, comprising a rotary cutter-head having at its axial center an element of a ball-and-socket joint for attaching it to a bearing outside the tool for rotation, a cutter-carrier extending from said cutter in the plane thereof, and a feed connection between said cutter-head and cutter-carrier, the maximum thickness of said tool being less than half the diameter of the cutter-head.

3. A tool of the class described, comprising a rotary disk cutter-head having a circuit of cutters at one side thereof, an element of a ball-and-socket joint at the axial center of the other side thereof for attaching it to a bearing outside the tool for rotation, and a circuit of ratchet-teeth between the sides of said cutter-head, a cutter-carrying lever, and a feed-pawl on said lever coöperative with said ratchet-teeth, the maximum thickness of said tool being less than half the diameter of the cutter-head.



4. A tool of the class described comprising a rotary cutter head, a carrier therefor having means for turning said cutter head, and a circuit of adjustable cutters at one face of said cutter head, said cutters having their cutting edges in a common plane and adapted to be adjusted to make various angles with each other.

5. In a tool of the class described, the combination with a rotary cutter-head having means for holding a cutter in place in any one of a plurality of positions, of a cutter having a plurality of cutting edges one of which is serrated and adapted to be turned and set with any one of its faces in working position.

[Claims 6 to 13 not printed in the Gazette.]

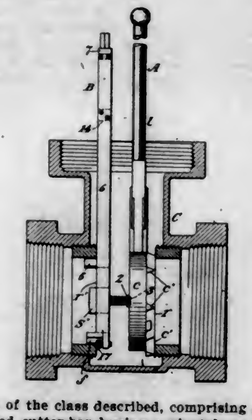
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1,227,515. FACING-TOOL FOR DRESSING VALVE-SEATS, &c. THOMAS B. WILLIAMS and FRED A. DEXTER, Orange, Mass., and FRANK L. SMITH, Chicago, Ill., assignors to The Leavitt Machine Company, Orange, Mass., a Corporation of Massachusetts. Filed May 27, 1916. Serial No. 100,220. (Cl. 90—12.5.)

1. A tool of the class described, comprising a cutter and an associated cutter-bar having a pivotal connection, said cutter-bar also having near the cutter a plurality of relatively movable elements for engaging a valve-casing and holding the cutter-bar to said casing, and means carried by the cutter-bar to effect relative movement of said holding elements and also simultaneous movement of the pivotal element carried by the cutter-bar relative to said holding elements.

2. A tool of the class described, comprising a cutter and an associated cutter-bar having a pivotal connection, said cutter-bar also having near the cutter a plurality of relatively movable elements for engaging the interior of a valve-casing and holding the cutter-bar to said casing, and means carried by the cutter-bar to effect relative movement of said holding elements and also simultaneous movement of the pivotal element carried by the cutter-bar relative to said holding elements.

3. A tool of the class described, comprising a cutter and an associated cutter-bar, having a pivotal connection, said cutter-bar also having near the cutter a plurality of relatively movable holding elements for engaging a valve-casing and holding the cutter-bar to said casing, and means carried by the cutter-bar to effect a relative movement of said holding elements and to also simultaneously move the pivotal element carried by the cutter-bar relatively to said holding elements in all positions of the latter to center the pivotal element.



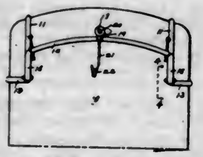
4. A tool of the class described, comprising a cutter and an associated cutter-bar having a pivotal connection, said cutter-bar also having near the cutter a plurality of relatively movable holding elements for engaging a valve-casing and holding the cutter-bar to said casing, and means carried by the cutter-bar and operable from a point outside the valve-casing to simultaneously effect relative movement between said holding elements and relative movement of a predetermined ratio between the pivotal element carried by the cutter-bar and one of said holding elements in all positions of the latter.

5. A tool of the class described, comprising a cutter and an associated cutter-bar having a pivotal connection, said cutter-bar also having near the cutter a plurality of relatively movable holding elements for engaging a valve-casing and holding the cutter-bar to said casing, and means carried by the cutter-bar and operable from a point outside the valve-casing to simultaneously effect relative movement between said holding elements and relative movement at a two-to-one ratio between the pivotal element carried by the cutter-bar and one of said holding elements in all positions of the latter.

[Claims 6 to 29 not printed in the Gazette.]

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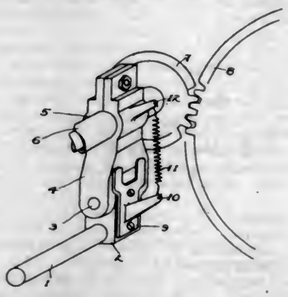
1,227,516. DETACHABLE CLOTHES-RACK FOR OPERA-CHAIRS. EMIL E. YELINEK, Clutier, Iowa. Filed Jan. 25, 1915. Serial No. 4,368. (Cl. 155—26.)



In a device of the class described, brackets provided with resilient hooks adapted to engage the top and side edges respectively, of a chair back near the upper corners thereof, a ring loosely pivoted in each bracket to allow said bracket to be adjusted to the shape of the chair back, a transverse rack member having its ends curved from a central point toward the chair and having its ends bent to extend in parallel relation toward the chair back, the ends of said extensions having openings therein adapted to rotatably receive said rings, and means for limiting the pivotal movement of the extensions with relation to the brackets.



1,227,517. SPEEDOMETER-PINION BRACKET. ANTHONY A. YOCUM, North St. Paul, Minn. Filed Dec. 1, 1916. Serial No. 134,498. (Cl. 74—7.)



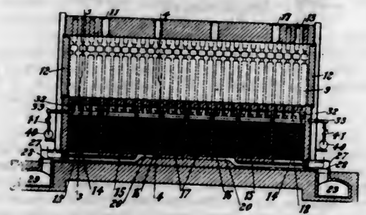
1. In a speedometer pinion bracket, the combination of a support, a reversible fork hinged to said support and terminating in a pinion mounting, and a spring between said support and said fork for holding the pinion carried in said fork in mesh with the gear with which it operates.

2. In a speedometer pinion bracket, the combination of a support, a hinged member carried thereon adapted to support a speedometer pinion, a stop on said support for limiting the motion of said fork in one direction, and spring means between said fork and said support for normally maintaining said fork against said stop.

3. In a speedometer pinion bracket, the combination of a support, a fork hinged thereto and adapted to carry in a journal connection a speedometer pinion, a stop limiting the motion of the hinged connection between said support and said fork and adapted to be mounted on either side of said support, and spring means adapted to hold said fork against said stop.

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1,227,518. COKE-OVEN. ELMER J. CROSSEN, Joliet, Ill. Filed Sept. 25, 1915. Serial No. 52,591. (Cl. 202—9.)



1. A coke producing structure, comprising a long narrow coke oven, a regenerator heater of substantially the same length as and located directly beneath the oven, a row of combustion chambers vertically arranged along the two longitudinal side walls of the oven, ports extending laterally in both directions from the upper part of the regenerator into the lower ends of the combustion chambers, means for periodically supplying gaseous fuel to all of the combustion chambers at both sides of the oven and means for controlling supply of air to and through the regenerator to all of the combustion chambers.

2. A coke producing structure, comprising a long narrow coke oven, a regenerator heater of substantially the same length as and located directly beneath the oven and divided into individual sections by transverse walls, said sections diminishing in size from the outer to the other end of the regenerator, an independent air passage for each of the sections, a valve box at the outer end of the regenerator to which all of the air passages connect affording direct communication of each passage to the atmosphere, a row of combustion chambers vertically arranged along the two longitudinal side walls of the oven, ports connecting each section of the regenerator to some of the combustion chambers at both sides of the oven and means for supplying gaseous fuel simultaneously to all of the combustion chambers.

3. A coke producing structure, comprising a long narrow coke oven, a regenerator heater of substantially the same length as and located directly beneath the oven and divided into two parts by a centrally located transverse wall, each part being divided into sections of decreasing capacity from the outer to the inner ends, a valve box at each outer end of the regenerator and adapted to be opened to the atmosphere, an independent passage extending from the valve boxes to each of the regenerator sections, combustion chambers arranged along the two longitudinal side walls of the oven, ports connecting the regenerator to all of the combustion chambers and means for supplying a gaseous fuel simultaneously to all of the combustion chambers.

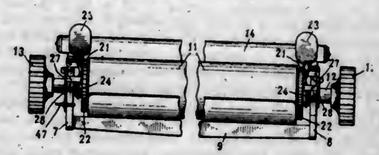
4. A coke producing structure, comprising long narrow coke ovens arranged in parallel order, a regenerator heater the same length as and located directly beneath each oven, and divided into individual sections by transverse walls, an individual air passage for each section, a valve box at the outer end of each regenerator and adapted to be opened to the atmosphere, separate air passages for the sections of the regenerators connecting the sections of each regenerator to its valve box, combustion chambers arranged along the two sides of the ovens, ports connecting the upper part of each regenerator to the combustion chambers of its superimposed oven and means for periodically supplying a gaseous fuel to all of the combustion chambers of alternate ovens.

5. A coke producing structure, comprising a long narrow regenerator divided into individual sections by transverse walls, a separate passage adapted to be opened to the atmosphere for each section of the regenerator, a coke oven located above the regenerator, a series of combustion chambers at each side of the oven and ports connecting each section of the regenerator to some of the combustion chambers.

[Claim 6 not printed in the Gazette.]

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1,227,519. TYPE-WRITING-MACHINE LINE-SPACING MECHANISM. JESSE ALEXANDER, New York, N. Y. Original application filed May 22, 1912, Serial No. 698,879. Divided and this application filed Mar. 20, 1915. Serial No. 15,754. (Cl. 197—114.)



1. In a typewriter line spacing device, a carriage end plate, a platen shaft rotatable therein, a platen mounted on said shaft, a spring pressed spacing lever pivoted at one side of the carriage plate, an adjusting lever pivoted at the opposite side of the carriage plate, a ratchet secured on the end of the platen, a spring pressed pawl pivotally mounted on the spacing lever for engagement with said ratchet and provided with an extension projecting across to the opposite side of the carriage plate into the plane of the adjusting lever thereat and stops limiting the extent of movement of the spacing lever.

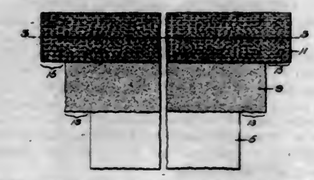
2. In a typewriter line spacing device, a carriage end plate, a platen shaft rotatable therein, a platen mounted on said shaft, a spring pressed spacing lever pivoted at one side of the carriage plate, an adjusting lever pivoted at the opposite side of the carriage plate, a ratchet secured on the end of the platen, a spring pressed pawl pivotally mounted on the spacing lever for engagement with said ratchet and provided with an extension projecting across to the opposite side of the carriage plate into the

plane of the adjusting lever thereat, a stop lug on the spacing lever extending across the top of the carriage plate and shoulders on said carriage plate arranged for engagement by said lug to limit the movement of the spacing lever.

3. In a typewriter line spacing device, a carriage end plate, a platen shaft rotatable therein, a platen on said shaft, a ratchet on the end of said platen, a spacing lever pivoted at the inside of the carriage plate along side said ratchet, a spring pressed pawl pivoted on said spacing lever having a tooth extending laterally into engagement with the teeth of the ratchet and an angular portion extending across the top of the carriage plate and an adjusting lever pivotally supported at the outside of the carriage plate having a portion extending above the top of the carriage plate and into the path of movement of the angularly extending portion of the spring pressed pawl.

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1,227,520. COMPOSITE SHEET. EDWARD H. ANGIER, Quincy, Mass. Filed Mar. 1, 1912. Serial No. 680,845. (Cl. 154—50.)



1. A composite sheet comprising a sheet-like layer having an adhesive coating on one face thereof; a waterproof layer on the opposite face thereof; and an outer woven fabric layer for protecting said water-proof layer, all of said layers being secured together and said waterproof layer and said fabric layer being extended beyond said sheet-like layer to provide a water-proof edge protective margin exposed beyond said sheet-like layer.

2. A composite sheet comprising a sheet-like layer having an adhesive coating on one face thereof and a waterproof layer on the opposite face thereof; and a textile protective layer for said water-proof layer, all of said layers being secured together and said textile layer being extended beyond said other layers and presenting both surfaces exposed to provide a protective margin.

3. A composite sheet comprising a sheet-like layer 5 having an outer adhesive coating 7 on a face thereof; a waterproof layer 9 on the opposite face thereof; and an outer textile layer 11 for protecting said waterproof layer, all of said layers being secured together and one of said layers being extended beyond the others to provide an edge protective margin having an exposed surface.

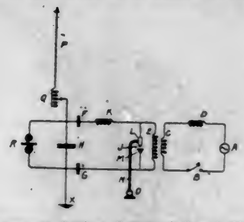
4. A composite sheet comprising a sheet-like layer having an outer adhesive layer on one face thereof; a waterproof layer on the opposite face thereof; and an outer textile layer for protecting said waterproof layer, all of said layers being secured together, two of said layers being extended beyond the other to provide an edge-protective margin having an exposed surface.

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1,227,521. WIRELESS-TELEGRAPH TRANSMITTER. JOHN GROEME BALSILLIE, Melbourne, Victoria, Australia. Filed Sept. 12, 1913. Serial No. 789,568. (Cl. 250—17.)

4. In a wireless telegraph transmitter an exciting circuit containing a plurality of condensers and a radiator connected thereto through one of said condensers, means for maintaining zero potential in the radiator during the charging period, and means for discharging the exciting circuit instantaneously through the radiator.

8. In a wireless telegraph transmitter an exciting circuit containing a plurality of condensers in series and a radiator connected thereto electrostatically through one of the said condensers the capacity of which is greater than the capacity of the other condensers of the series, means for charging said exciting circuit, means for discharging said exciting circuit through the radiator intermittently, and for rendering it passive in relation to the

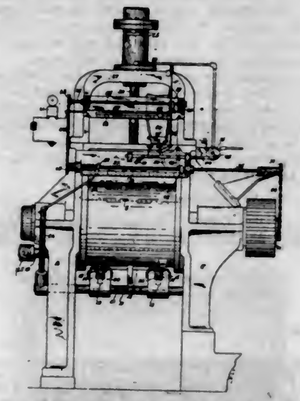


radiator frequency during the periods of discharge, and means for maintaining the radiator at zero potential during the charging periods.

[Claims 1 to 3, 5 to 7, and 9 to 14 not printed in the Gazette.]

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1,227,522. MACHINE FOR TREATING RUBBER AND OTHER HEAVY PLASTIC MATERIAL. FERNLEY H. BANBURY, Ansonia, Conn., assignor to Birmingham Iron Foundry, Derby, Conn., a Corporation. Filed Nov. 18, 1916. Serial No. 132,011. (Cl. 18—2.)



1. In a machine of the class described, the combination with a double cylindrical chamber, a weight entering the top of the said chamber, a rotary blade in each side of the chamber, an opening in the bottom of the chamber between the blades, a door adapted to close said opening, and means for holding the door in the closed position.

2. In a machine of the class described, the combination with a double cylindrical chamber, a weight entering the top of the chamber, a rotary blade in each side of the chamber, an opening in the bottom of the chamber between the blades, a door adapted to close said opening, the inner face of the said door formed to conform to the curvature of the said chambers, and means for holding the door in the closed position.

3. In a machine of the class described, comprising a double cylindrical chamber, a rotary blade in each chamber, an opening in the chamber between said blades, a door adapted to close said opening, said door provided with an arm pivoted in position to throw the door into the said opening, a lug on the outer face of the door, a shaft, yokes mounted on said shaft, rollers mounted in said yokes and adapted to co-act with said lugs to lock the door in closed position.

4. In a machine of the class described, comprising a double cylindrical chamber, a rotary blade in each chamber, an opening in the chamber between said blades, a door adapted to close said opening, said door provided with an arm pivoted in position to throw the door into the said opening, a lug on the outer face of the door, a shaft, yokes mounted on said shaft, rollers mounted in said yokes and adapted to co-act with said lugs to lock the door in closed position, and means for turning said shaft.

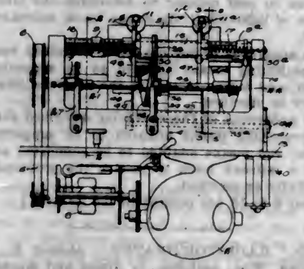
5. In a machine of the class described, comprising a double cylindrical chamber, a rotary blade in each chamber, an opening in the chamber between said blades, a counterbalanced door adapted to close said opening, said door provided with an arm pivoted in position to throw the door into the said opening, a lug on the outer face of the door, a shaft, yokes mounted on said shaft, rollers mounted in said yokes and adapted to co-act with said lugs to lock the door in closed position.

[Claims 6 to 10 not printed in the Gazette.]



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1,227,523. PHONOGRAPHIC TIME-ANNOUNCER. JOHN G. BLESSING, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed July 7, 1913. Serial No. 777,677. (Cl. 179—6.)



1. In a telephone system, subscribers' lines, an automatic announcer, and automatic progressively movable means controlled by a calling subscriber for establishing connection between any of said subscribers' lines and said announcer.

2. In a telephone system, subscribers' lines, automatic progressively movable switches associated with said lines, a phonographic announcer, and means under the control of a calling subscriber for operating said switches to establish connection with said announcer.

3. In a telephone system, subscribers' lines, a phonographic announcer, an automatic connector switch, means for establishing connection from any one of said lines to said connector, and means controlled by a calling subscriber for then operating said connector to establish connection with said announcer.

4. In a telephone system, subscribers' lines, a phonographic announcer, an automatic connector switch, means for establishing connection from any one of said lines to said connector switch, bank contacts with which said connector is adapted to establish a connection, connections from certain of said contacts to the subscribers' lines, and connections from other of said contacts to said announcer.

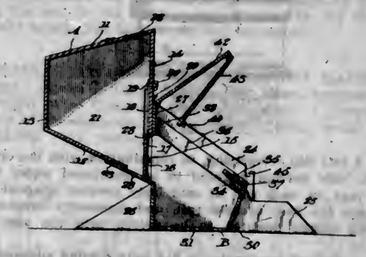
5. In a telephone system, subscribers' lines, a phonographic announcer, an automatic connector switch, means for establishing connection from any one of said lines to said connector switch, bank contacts with which said connector is adapted to establish a connection, connections from certain of said contacts to the subscribers' lines, connections from other of said contacts to said announcer, a source of ringing current, a ringing relay for said connector for automatically connecting said ringing current to a subscriber's line when said connector makes connection with one of said lines, and means for breaking the circuit of said ringing relay when said connector makes connection with said announcer.

[Claims 6 to 13 not printed in the Gazette.]



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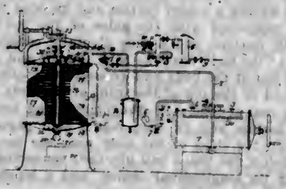
1,227,524. FEED-TROUGH. ELSA BLOOM and FRANK BARTH, Upper Sandusky, Ohio. Filed Nov. 21, 1916. Serial No. 132,710. (Cl. 119—53.)



A feed trough comprising a feeding unit, provided with a longitudinal opening in the rear wall, a transverse partition for dividing the said unit into separate compartments, detachable sectional supporting racks for each of the said compartments, a feed supply hopper provided with a longitudinal opening, adapted to register with the opening in the feeding unit, an inclined shelf provided upon the rear wall of the feeding unit adjacent the opening therein, for the purpose of supporting the feed supply hopper and means for detachably holding the feed supply hopper to the feeding unit.

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1,227,525. PROCESS OF MANUFACTURING DIASTASES AND TOXINS BY OXIDIZING FERMENTS. AUGUSTE BOIDIN, Seclin, France, and JEAN EFFRONT, Brussels, Belgium. Filed July 6, 1914. Serial No. 849,151. (Cl. 167—7.)



1. A process for the manufacture of diastases and toxins by oxidizing ferments which consists in using as a nutritive medium a wort containing at least one part of assimilable nitrogenous materials to fifteen parts of carbohydrates, and cultivating bacteria at the surface of the said wort in thin layers.

2. A process for the manufacture of diastases and toxins by oxidizing ferments consisting in using as a nutritive medium a wort containing at least one part of assimilable nitrogenous materials to fifteen parts of carbohydrates, and in cultivating bacteria at the surface of the said wort in layers, the thickness of which is not more than eight millimeters.

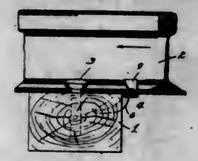
3. A process for the manufacture of diastases and toxins by oxidizing ferments consisting in cultivating bacteria at the surface of a wort containing assimilable nitrogenous materials, and subjecting said wort to a slight agitation, said agitation being sufficient to break the associations of bacteria arranged in chain-like lines.

4. A process for the manufacture of diastases and toxins by oxidizing ferments consisting in cultivating bacteria at the surface of a wort containing nitrogenous materials spread in thin layers on horizontal plates.

5. A process for the manufacture of diastases and toxins by oxidizing ferments consisting in cultivating bacteria at the surface of a wort containing nitrogenous materials in an atmosphere which is ventilated less and less as the bacteria produce less and less carbonic dioxid.

[Claim 6 not printed in the Gazette.]

1,227,526. RAIL-CLIP. HARRY L. BOYLE, Oakland, Cal. Filed Feb. 8, 1917. Serial No. 147,487. (Cl. 238—4.)



1. A rail clip comprising, in combination with the cross tie, a body portion adapted to be positioned under the rail, lugs on each end of said body portion adapted to embrace the base of said rail, and forwardly extending holding means adapted to be driven into the side of the tie.

4. A rail clip comprising a flat body portion adapted to be positioned under the rail, a tapered spike and a rail embracing clip formed integrally on each end of said body by means of a diagonal cut, said spike being bent downwardly and then forwardly of said body portion to engage the cross tie and said clips being bent upwardly to engage the flanges of the rail.

[Claims 2 and 3 not printed in the Gazette.]

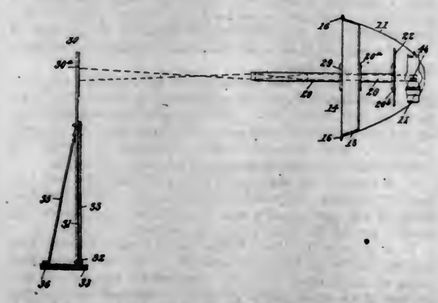
1,227,527. COAL-SCUTTLE. ALBERT H. BROWN, Grand Rapids, Mich. Filed Dec. 13, 1915. Serial No. 66,641. (Cl. 220—35.)



1. In a coal scuttle, a thin, broad, rectangular oblong body having a closed bottom and an open top, a bail pivotally connected with the sides of the body slightly above their centers, and a door pivotally connected with the sides of the body near the back thereof and somewhat below the top of the body and arranged to incline upward and forward to the top of the front of the body.

2. In a coal scuttle, a rectangular oblong body having a closed bottom and an open top, a door pivotally connected with the sides of the body near the back a short distance below the top, a bail pivotally connected with the body near its longitudinal center, and a handle on one side of the body near the lower end.

1,227,528. FOCUSING APPARATUS FOR HEADLIGHTS. JOSEPH CHIDLEY, Cleveland, Ohio, assignor to The Dressel Railway Lamp Works, a Corporation of New York. Filed Sept. 23, 1915. Serial No. 52,250. (Cl. 88—14.)



1. The combination of a headlight adjustably mounted upon a locomotive, with an indicating member adapted to be positioned in front of said headlight, and means adapted to be supported by said headlight and movable therewith to direct a beam of light therefrom, whereby said headlight may be adjusted to cause the said beam of light to register with said indicating member to determine the direction of the beam of light, substantially as specified.

2. The combination of a headlight adjustably mounted upon a locomotive, with a member adapted to be supported above the rails of a railroad track and having indicating means thereon, and means adapted to be supported by said headlight and movable therewith to direct a beam of light therefrom, whereby said headlight may be adjusted to cause the said beam of light to register with the indicating means on said member to determine the direction of the beam of light relatively to the track, substantially as specified.

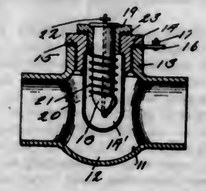
3. The combination of a headlight adjustably mounted upon a locomotive, with a member adapted to be supported above the rails of a railroad track and having indicating means thereon to indicate the center of the track, and means adapted to be supported by said headlight and movable therewith to direct a beam of light therefrom, whereby said headlight may be adjusted to cause the said beam of light to register with the indicating means on said member to determine the direction of the beam of light relatively to the track, substantially as specified.

4. An apparatus of the character described comprising image projecting means adapted to be supported by a headlight, and means to receive the projected image, substantially as specified.

5. An apparatus of the character described comprising image projecting means adapted to be supported by a headlight, and means adapted to be supported above the rails of a railroad track to receive the projected image, substantially as specified.

[Claims 6 to 18 not printed in the Gazette.]

1,227,529. RADIATOR-HEATER. ALBERT R. CLARKE, Sheridan, Wyo., assignor, by direct and mesne assignments, to Clarke Electric Heater Company, a Corporation of Wyoming. Filed Feb. 21, 1916. Serial No. 79,761. (Cl. 219—38.)



1. A heating device comprising in combination, a tubular member adapted for insertion in a fluid passage, supporting means integral with said tubular member, a bushing detachably secured in said supporting means, a thin shell secured to said bushing to project into said tubular member, a closing member detachably inserted within the outer end of said bushing, an insulating core secured within said shell and spaced from the walls thereof, a coil surrounding said core and having one end connected to said closing member and having its opposite end extending through said core, and means for connecting said coil in a circuit.

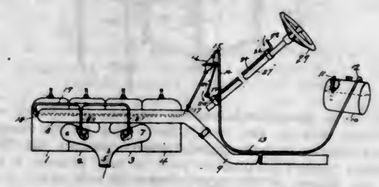
2. In a device of the class described, a tubular member adapted for insertion in the cooling system of a combustion engine, a nipple on said tubular member, a bushing detachably secured in said nipple, a porcelain shell secured to said bushing to project into said tubular member, a screw member inserted within the outer end of said bushing, a core secured to nest within said shell and to be spaced from the walls thereof, a coil surrounding said core and having one end connected to said screw member, the opposite end of said coil projecting beyond said core,



a binding screw in connection with said latter named end, a gasket between said nipple and bushing and a binding screw on said gasket, the said binding screws being adapted for connection with the wires of a source of electrical energy, substantially as described.

3. A heating device comprising in combination, a tubular member adapted for insertion in a fluid passage, supporting means integral with said tubular member, a bushing detachably secured in said supporting means, a thin shell supported by said bushing to project into said tubular member, a closing member detachably inserted within the outer end of the bushing, an insulating core secured within said shell and spaced from the walls thereof, a coil surrounding said core and having one end connected to said closing member and having its opposite end extending through said core, and means for connecting said coil in a circuit.

1,227,530. MEANS FOR CARBURATION. WILLIAM G. DAVIS, Granite City, Ill. Filed Oct. 26, 1916. Serial No. 127,776. (Cl. 123—122.)



1. The combination with a gasolene engine, its supply tank and intake manifold, of a pipe leading from above the gasolene in said supply tank to and into the intake manifold,—the discharge end of said pipe being located so as to point directly into and opposite to the stream of carbureter charge entering said manifold,—and means to regulate the flow through said pipe.

[Claim 2 not printed in the Gazette.]

1,227,531. SAFETY-LOCK FOR FIREARMS. PROSPERO DONADIO, Brooklyn, N. Y., assignor to Fred Biffar, Chicago, Ill. Filed May 29, 1916. Serial No. 100,655. (Cl. 42—70.)

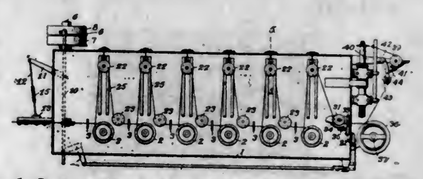


1. In a device of the class described, a spring pressed hammer, a pin about which the hammer swings as a pivot mounted to slide longitudinally and means rigidly connected to said pin to lock the hammer against movement about its pivot.

2. In a device of the class described, a spring pressed hammer, a pin about which the hammer swings as a pivot mounted to have longitudinal movement with its ends protruding on each side of the frame and a locking element for the hammer arranged to move in unison with the pin.

3. In a device of the class described, a spring pressed hammer provided with a slot, a pin about which the hammer swings as a pivot mounted in the frame to have longitudinal movement with its ends protruding on each side of the frame, the frame provided with a slot, and a lateral extension on the hammer pin arranged to enter both the slot in the hammer and the slot in the frame thereby locking the hammer against movement.

1,227,532. CONTINUOUS WIRE-DRAWING MACHINERY. JAMES P. DOOLEY, Worcester, Mass., assignor to Wright Wire Company, Worcester, Mass., a Corporation of Massachusetts. Filed Aug. 27, 1914. Serial No. 858,991. (Cl. 205—14.)



1. In a continuous wire drawing machine, the combination with a series of drawing dies, and a corresponding series of drawing drums rotatable at predetermined relatively constant peripheral speeds, of a tension compensating device interposed between each drum and the next succeeding drawing die of the series, and comprising a sheave movable in response to tension on the wire, resilient means for resisting the initial movement of said sheave, and means brought into action after the initial movement of said sheave, for resisting its further movement.

2. In a continuous wire drawing machine, the combination with a series of drawing dies, and a corresponding series of drawing drums rotatable at predetermined relatively constant peripheral speeds, of a tension compensating device interposed between each drum and the next succeeding drawing die of the series, and comprising a sheave movable in response to tension on the wire, a weight hung from said sheave, and a spring interposed between said sheave and said weight, and adapted to yield in advance of the movement of said weight.

3. In a continuous wire drawing machine, the combination with a series of drawing dies and a series of drawing drums, of a stop mechanism operated in response to strain on the wire in advance of the drawing operation, said stop mechanism having means for permitting the continued rotation of the drawing drums under their own momentum after disconnection of the same from the source of power.

4. In a wire drawing machine, the combination with a drawing drum and a drawing die, of a tension compensating device interposed between said drum and die, and comprising a sheave over which the wire passes, and movable in response to tension on the wire, resilient means for resisting the initial movement of said sheave, and means brought into action after said initial movement, for resisting its further movement.

1,227,533. HOLLOW MILL. OTTO EBERT, Cleveland, Ohio. Filed Nov. 6, 1916. Serial No. 129,747. (Cl. 29—105.)

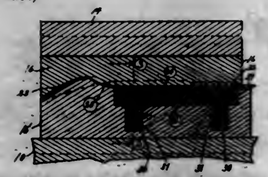


1. A hollow mill comprising a shank, a head having inclined grooves and an externally threaded shoulder behind the head, cutters in the grooves, a clamping ring extending around the cutters at the front end of the head, and a clamping nut screwed at its rear end on said shoulder and engaging said ring at its front end and adapted to draw said ring rearwardly against the cutters.

2. A hollow mill comprising a shank, a conical externally grooved head, cutters in the grooves, a clamping ring with a conical longitudinally grooved recess, fitting around the head, with the cutters engaged in the grooves, and a clamping nut screwed on the head and bearing against the ring to clamp the same on the cutters.

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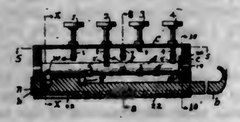
1,227,534. MEANS FOR MAKING PAPER SPOONS. ALEXANDER J. FRANKLAND, Tropico, Cal., assignor, by direct and mesne assignments, to Leo D. Jacoby, Los Angeles, Cal. Filed May 9, 1916. Serial No. 96,447. (Cl. 18—19.)



In means for making paper spoons, dies adapted to coact to form from a blank of paper a spoon having a grooved shank connecting the handle to the bowl of the spoon, one of said dies being provided with a slot therein, springs arranged in the slot, and a block having a groove therein and fitted in the slot and supported by the springs so as to normally extend beyond the slot, and the other of said dies being provided with a rounded projection adapted to fit in said groove and form the grooved shank of the paper spoon, said block being adapted to yield when said projection strikes the portion of paper blank on the block, and the formation of the groove in said shank being fully completed when said block is pressed down into said slot, substantially as described.

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1,227,535. PERMUTATION-LOCK. LOUIS M. GREIF, West Park, Ohio. Filed July 14, 1916. Serial No. 109,242. (Cl. 70—54.)



1. A bolt locking mechanism as described comprising a casing and a slidable bolt therein, a shaft provided with a wing adapted to make locking engagement with said bolt, and a series of depressible individual key members in said casing, said shaft having lateral projections adapted to be engaged by said key members and to rotate said shaft in one direction or the other according to their position in the casing.

2. A device as described comprising a casing and a bolt slidable within limits therein, a shaft rotatably mounted in said casing above said bolt and provided with a wing adapted to engage the bolt at different points and lock the same against movement, and means to rotate said shaft in a step-by-step movement in opposite directions.

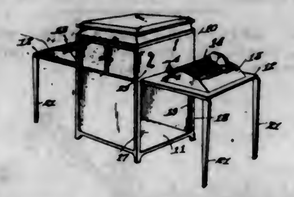
3. A bolt locking device comprising a casing and a slidable bolt therein having shouldered recesses in its top and a shaft having a wing adapted to engage in said recesses and a plurality of lateral projections between its ends, in combination with a plurality of depressible key members mounted in said casing relatively on opposite sides of said shaft and adapted to engage said projections and rotate said shaft limited distances to one side or the other according to their location.

4. A slidable bolt and a casing therefor, a rotatable shaft in said casing over the said bolt provided with a wing adapted to engage and lock the bolt and having a series of scattered projections between its ends, and depressible key members provided with stems extending into said casing on opposite sides of said shaft and adapted each to engage one of said projections and rotate the shaft according to the position thereof in the casing.

5. A casing and a slidable bolt therein having a plurality of recesses in its top, a rotatable shaft in said casing over said bolt and having a wing adapted to engage in said recesses, means to rotate said shaft in a step-by-step operation, and a collar fixed on the said shaft and constructed to make frictional engagement with the inside of said casing and hold the shaft to exact rotations.

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1,227,536. PHONOGRAPH-CABINET. STEPHEN L. HARTMAN, Fillmore, Cal. Filed Feb. 24, 1916. Serial No. 80,183. (Cl. 211—16.)



1. In a phonograph cabinet having side walls with vertical grooves, the combination of a record chamber comprising a slidable panel, lateral pins at the lower corners thereof adapted to slide in said grooves, a pair of legs hinged to the upper corners of said panel, a record container mounted on the inner face of said panel, and means for locking said panel in closed and open positions.

2. A phonograph cabinet having side walls with vertical grooves, the combination of a record chamber comprising a slidable panel, lateral pins at the lower corners thereof adapted to slide in said grooves, a pair of legs hinged to the upper corners of said panel and adapted when the record chamber is closed, to lie flat and parallel against said side walls, a record container provided with a plurality of parallel slots mounted on the inner face of said panel, and means for automatically locking said panel in closed and open positions.

3. In a phonograph cabinet having side walls, the combination of a record chamber comprising a slidable panel, means at the lower corners thereof in permanent connection with said side walls and adapted to move vertically along said side walls, a pair of legs hinged to the upper corners of said panel, a record container mounted on the inner face of said panel, and means for locking said panel in open position.

4. In a phonograph cabinet having side walls, the combination of a record chamber comprising a vertical panel, means mounted thereon in permanent connection with said side walls and vertically movable thereon, a pair of legs hinged to the upper corners of said panel, and a record container mounted on the inner face of said panel, whereby, when said panel is moved into open position, said container will be on the upper face of said panel.

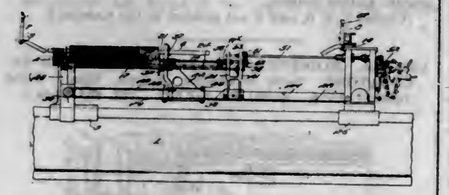
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1,227,537. TEXTILE-MACHINE. EDGAR F. HATHAWAY and CHARLES LEA, Boston, Mass., assignors to American Warp Drawing Machine Company, a Corporation of Maine. Filed May 12, 1910. Serial No. 560,802. (Cl. 139—94.)

1. In a machine for selecting and positioning detached, thread-receiving loom elements, the combination with a fixed guiding member for a series of such elements of a support for said series movable relatively to said fixed member.

2. In a machine for selecting and positioning detached, thread-receiving loom elements, the combination with a holding device of a facing device for facing the individual elements and a drawing-in device acting between the holding device and the facing device.





3. In a machine for selecting and positioning detached, thread-receiving loom elements, the combination with a holding device of a conveying worm and a drawing-in needle and means for reciprocating the needle in a path located between the holding device and the worm.

4. In a machine for selecting and positioning detached, thread-receiving loom elements, the combination with means for holding a series of such loom elements, and a releasing device, such releasing device acting as a support for the series.

5. In a machine for selecting and positioning detached, thread-receiving loom elements, the combination with means for holding a series of such loom elements, a releasing device, such releasing device acting as a support for the series, and an additional auxiliary underlying support for the series.

[Claims 6 to 39 not printed in the Gazette.]

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1,227,538. FLEXIBLE ELECTRICAL CONDUIT. COURTNEY HYDE, Brooklyn, N. Y., assignor to Russel Dart, New York, N. Y., Courtney Hyde, Brooklyn, N. Y., and Joseph T. Monell, Jersey City, N. J., Copartners doing business as Alphaduct Company, Jersey City, N. J. Filed Mar. 15, 1916. Serial No. 84,298. (Cl. 247—4.)



1. A conduit embodying a longitudinally folded layer of flat fabric composed of longitudinally extending flexible elements interwoven with transversely arranged semi-flexible elements.

2. A conduit embodying a lining of folded fabric composed of interwoven transversely arranged semi-flexible and longitudinally extending flexible elements, said semi-flexible elements being bent inwardly near their extremities.

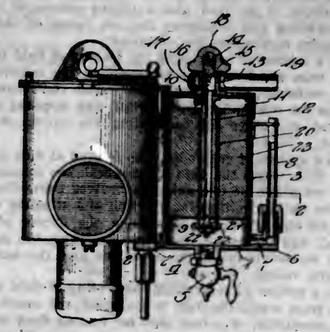
3. A conduit embodying a tube composed of a series of rings of semi-flexible material interwoven with longitudinal members of flexible material.

4. In an electrical conduit, the combination of an inner tube consisting of a longitudinal folded layer of flat fabric composed of longitudinally extending flexible elements interwoven with transversely arranged semi-flexible elements, a layer of compound applied to the outer surface thereof, a jacket of textile fabric covering the same and an outer coating of compound.

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1,227,539. LIQUID-LEVEL-REGULATING DEVICE. FRANK P. ILLSLEY, Detroit, Mich. Filed Nov. 7, 1914. Serial No. 870,762. (Cl. 137—104.)

1. A liquid level regulating device comprising a compartment, an inlet pipe depending from the top thereof, to a point substantially at the desired level of the liquid, a float guided by said inlet pipe, there being provided between said pipe and float a longitudinal channel for the gravitation of sediment, and a valve carried by said float and adapted to extend into and seat in the outlet of said inlet pipe.



2. A liquid level regulating device comprising a compartment, an inlet pipe of angular cross section depending from the top thereof a float guided by said pipe and a valve carried by said float and adapted to seat in the outlet of said inlet pipe.

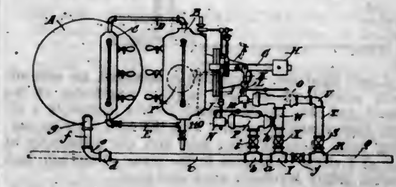
3. A liquid regulating device comprising a compartment, an inlet pipe depending from the top thereof, a float surrounding and guided by said inlet pipe said float and pipe constructed to provide longitudinal channels therebetween and a valve carried by said float and adapted to seat in the outlet of the inlet pipe.

4. A liquid level regulating device comprising a compartment, an inlet pipe depending from the top thereof, a float surrounding and guided by said inlet pipe and a valve carried by said float and adapted to seat in the outlet of the inlet pipe, said inlet pipe being of angular cross section to provide channels between the outer surface thereof and the said float.

5. A fluid level regulating device comprising a compartment, an inlet pipe depending from the top thereof, a tube telescopically engaging said pipe, there being provided between said tube and pipe longitudinal approximating surfaces and channels therebetween, a valve carried by said tube adapted to seat in the outlet of said inlet pipe, and a float mounted on said tube.

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1,227,540. SYSTEM FOR CONTROLLING THE LEVELS OF LIQUIDS. OWEN MARSHALL JONES, New York, N. Y. Filed May 2, 1913. Serial No. 765,177. (Cl. 137—101.)



1. In a system of controlling the feeding of fluid to containers from which the fluid is consumed, the combination with a container, of means for automatically controlling the starting and stopping of the feed, manual means for controlling the amount of feed located between the container and the automatic means for starting and stopping the feed, and auxiliary automatic means for controlling and delivering fluid in excess of the normal amount required in the container.

2. In a system of controlling the feeding of fluid to containers from which the fluid is consumed, the combination with a container, of means for automatically controlling the starting and stopping of the feed, means for restricting

the flow to the container located between the container and the means for automatically controlling the starting and stopping of the feed, and auxiliary automatic means for controlling and delivering fluid in excess of the normal amount required in the container.

3. In a system of controlling the feeding of fluid to containers from which the fluid is consumed, the combination with a container, of two automatic valves controlling the feed, one for controlling the starting and stopping of the feed, and the other for controlling the excess of fluid required.

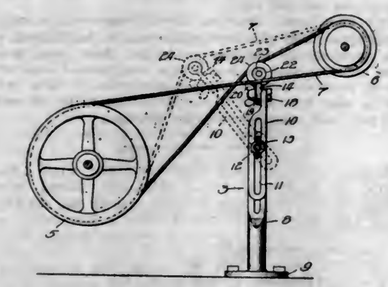
4. In a system of controlling the feeding of fluid to containers from which the fluid is consumed, the combination with a container, of two automatic valves controlling the feed, one for controlling the starting and stopping of the feed, and the other for controlling the excess of fluid required, and manual means for controlling the amount of feed located between the container and the said two automatic valves.

5. In a system of controlling the feeding of fluid to containers from which the fluid is consumed, the combination with a container, of a feed pipe for feeding fluid directly to the container, a by-pass from one point of the feed pipe to another succeeding point in the feed pipe, an automatically operated valve located in the by-pass to control the starting and stopping of the feed when the passage through the direct feed pipe is cut off between the points at which the by-pass connects with the direct feed pipe, and manual means located in the said by-pass between the container and the automatic means for starting and stopping the feed for regulating the amount of feed through the by-pass.

[Claims 6 to 16 not printed in the Gazette.]

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**1,227,541. BELT TIGHTENER AND SPREADER.** JACOB KAPLAN, Chicago, Ill., assignor to A. C. K. Belting Co., Chicago, Ill., a Corporation of Illinois. Filed Jan. 4, 1917. Serial No. 140,493. (Cl. 64—5.)



2. A belt tightener, comprising a standard, an arm adjustably carried thereby, and movable lengthwise of the standard, and also angularly with respect thereto in a direction approximately parallel with the belt, a pulley supporting head, mounted upon said arm and adjustable in an arc of a circle transverse to the plane of the belt, and a grooved pulley journaled upon said head.

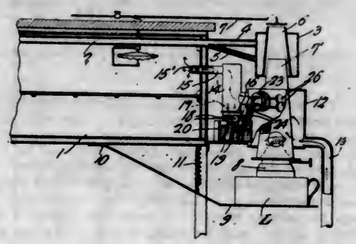
4. A belt tightener, comprising a standard, an adjustable arm secured to said standard, and movable in an arc of a circle parallel with the belt, a pulley carrying head having a slot formed therein, and movable in an arc of a circle transverse to the plane of movement of said arm, clamping means extending through said arm and slot of the head for holding said head in any position of adjustment, and a grooved pulley journaled in said head on an axis transverse to the belt.

6. A belt tightener, comprising a support formed with a pair of lugs projecting from one face thereof, a pulley carrying head, having a segmental slot formed therein and arranged for the reception of said lugs, clamping means for clamping said head to said support in any position of adjustment, and a grooved pulley journaled upon said head and rotating in a plane at right angles to said segmental slotted portion.

[Claims 1, 3, 5, and 7 not printed in the Gazette.]

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**1,227,542. MOISTURE-SUPPLYING DEVICE FOR INCUBATORS.** DAVE O. LAGER, Helena, Mont. Filed June 22, 1914. Serial No. 846,653. (Cl. 261—104.)



1. The combination with a lamp and a lamp chimney, of means for humidifying the heated air passing about the chimney, including a drum surrounding and carried by the chimney, said drum having a lower inlet port and an upper outlet port, said ports being disposed upon opposite sides of the drum, a pipe connected to the outlet port and extending radially from the drum, a water receptacle attached to the drum, said drum being further provided with a port in its wall adjacent the connection of the pipe at the outlet opening thereof, and a wick carrying member insertible in said port and carrying a wick for disposition within the water receptacle.

2. The combination with a lamp and a lamp chimney, of means for humidifying the heated air passing about the chimney, including a drum surrounding and carried by the chimney, said drum having a lower inlet port and an upper outlet port, said ports being disposed upon opposite sides of the drum, a pipe connected to the outlet port and extending radially from the drum, a water receptacle attached to the drum, said drum being further provided with a port in its wall adjacent the connection of the pipe at the outlet opening thereof, a rim surrounding said last port and projecting exteriorly of the drum, a cap fitting upon said rim and sealing the port, and a wick mounted in said cap for projection within the drum, the outer end of said wick being submerged within the water-receptacle.

3. The combination with a lamp and a lamp-chimney, of means for humidifying the heated air passing about the chimney, including a drum surrounding and carried by the chimney, said drum having a lower inlet port and an upper outlet port, a pipe connected to and leading from the outlet port of the drum, a water receptacle exteriorly of the drum, said drum being provided with another port in the wall thereof, and a wick carrying member insertible in the last port and carrying a wick for disposition within the water receptacle.

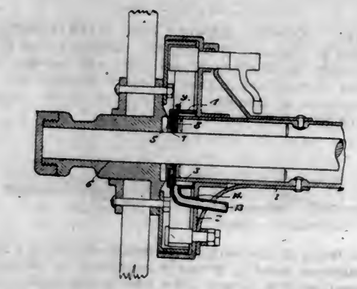
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**1,227,543. GREASE-CUP.** RUFUS H. LIMPP and URLESS WINELAND, King City, Mo. Filed Dec. 20, 1916. Serial No. 138,121. (Cl. 64—22.)

1. In a device for the purpose set forth, a flanged cap having a central opening, a compressible gasket in the cap and having an opening alining with the opening of the cap, a metallic washer contacting with the gasket, adjustable means upon the flange of the cap and engaging with the washer for regulating the frictional contact of the washer with the gasket, and an outlet spout for the cap.

2. In a device for the purpose set forth, a flanged cap having a central opening in the face thereof, a compressible gasket in the cap, a metallic washer contacting with the gasket, the flange of the cap having threaded openings, threaded elements passing through the openings and having cone-shaped ends engaging with the outer face of the washer, the flange of the cap, at the lower portion

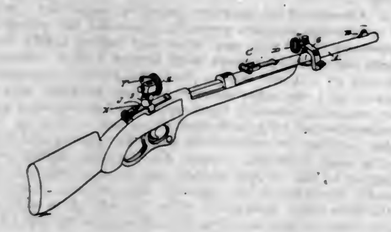




thereof being provided with an opening, and an angularly disposed spout connected with the said flange and surrounding the opening.

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**1,227,544. GUN-SIGHT.** BURR LOBDELL, Detroit, Mich. Filed Jan. 31, 1916. Serial No. 75,366. (Cl. 88—2.2.)



1. In a gun, the combination with alinable sights, of a pair of counter-reflectors for increasing the visual distance between said sights and the eye, and a peep-sight through which the reflection is observable.

2. In a gun, the combination with alinable sights, of a pair of counter-reflectors for increasing the visual distance between said sights and the eye, the forward reflector being clamped to the gun barrel independently of the rear reflector and laterally offset from the line of said sights, and both reflectors being angularly adjustable for proper alinement.

3. In a gun, the combination with a pair of alinable sights, of coöperating counter-reflectors for increasing the visual distance between said sights and the eye, the forward reflector being laterally offset from the line of said sights, a clamp for adjustably securing said forward reflector to the gun barrel, an adjustable mounting for the rear reflector, and a peep-sight secured to said mounting adjacent to said rear sight.

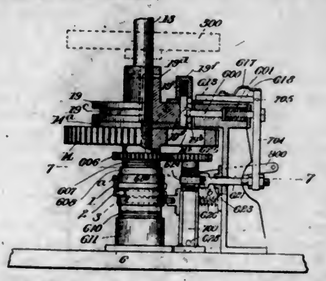
4. In a gun, the combination with alinable sights, of a pair of counter-reflectors for increasing the visual distance between said sights and the eye, one of said reflectors being mounted upon the barrel of the gun and being adjustable about a substantially vertical axis.

5. In a gun, the combination with alinable sights, of a pair of counter-reflectors for increasing the visual distance between said sights and the eye, the forward reflectors being mounted upon the barrel and adjustable longitudinally thereof independently of the rear reflector.

[Claim 6 not printed in the Gazette.]

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**1,227,545. CLUTCH-TIMING MECHANISM.** CARL RANKIN, Wellsburg, W. Va., assignor to Jefferson Glass Company, Follansbee, W. Va., a Corporation. Original application filed Feb. 11, 1916, Serial No. 77,566. Divided and this application filed Sept. 23, 1916. Serial No. 121,865. (Cl. 74—46.)



1. The combination with a clutch including driving and driven members, of a timing mechanism controlling the clutch and including a clutch controlling cam, gearing between said cams and the driving member, and a timing cam operated by the said driven member and controlling the operation of said gearing.

3. The combination with a clutch including driving and driven members, of a timing mechanism controlling the clutch, said timing mechanism including a clutch-disengaging device arranged to disengage the clutch, a releasing cam controlling said device and adapted to operate the same to permit reëngagement of the clutch, and gearing between the driving member of the clutch and said cam.

7. The combination with a clutch including driving and driven members, and a releasing pin normally in position to disengage the clutch, of a timing mechanism adapted to operate said pin and allow the clutch to reëngage, said timing mechanism including a releasing cam adapted to retract said pin from said position, gearing between said cam and the driving member of the clutch, one of the gears being shiftable into and out of engagement with another, and a timing cam operated by the driving member of the clutch, said timing cam being operatively connected to the movable gear, and having a rise adapted to disengage said gear for a certain period, and a drop adapted to permit the reëngagement of said gear for another period.

[Claims 2, 4 to 6, and 8 to 11 not printed in the Gazette.]

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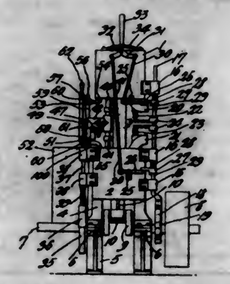
**1,227,546. CHARGE-FORMING DEVICE.** FREDERICK E. RUPRIGHT, Interlochen, Mich., assignor of one-half to Willis Pennington, Interlochen, Mich. Original application filed Feb. 17, 1913, Serial No. 749,041. Divided and this application filed Apr. 13, 1914. Serial No. 831,598. (Cl. 123—123.)

1. In an internal combustion engine, a frame; a shaft journaled in the frame; an expansible wheel carried by the shaft; a movably mounted plunger coacting with the expansible wheel; a mixing chamber; an air supply for the mixing chamber; a fuel supply for the mixing chamber; valves controlling the air supply and the fuel supply; and means for operatively connecting the valves with the plunger.

2. In an internal combustion engine, a frame; a shaft journaled for rotation in the frame; an expansible wheel mounted on the shaft; a movably supported plunger coacting with the expansible wheel; a mixing chamber; a rotary fuel controlling valve journaled in the mixing chamber; a rotary air controlling valve coacting with the mixing chamber; and means for connecting the valves with the plunger.

3. In an internal combustion engine, connected cylinders; a piston structure operating in the cylinder; a pipe

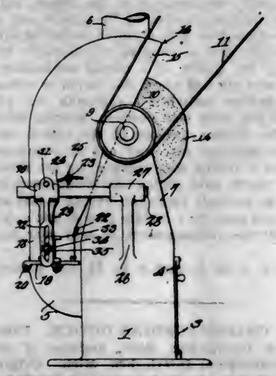
extended between the cylinders; a casing interposed in the pipe; an air supply for the casing; a fuel supply for the casing; valves controlling the air supply and the fuel supply; a bracket on one cylinder; a rod slidable in the bracket and having a shoe; a spring interposed between



the bracket and the shoe; means for connecting the rod with the valves; a shaft operatively connected with the piston structure; and an expansible wheel on the shaft and coacting with the shoe.

[Claim 4 not printed in the Gazette.]

1,227,547. GRINDING-WHEEL STAND. ELMER P. ALEXANDER, Lewistown, Pa., assignor to James H. Mann Company, Lewistown, Pa. Filed Apr. 27, 1916. Serial No. 93,956. (Cl. 51—7.)



1. A grinding wheel stand including a hollow base provided at one side with an inlet; a hood carried by the inlet; a grinding wheel journaled on the stand and shielded by the hood; an upstanding deflector hinged at its lower end to the hood and adapted at its upper end to coöperate with the periphery of the wheel, the deflector being movable at its upper end toward and away from the periphery of the wheel; and means coöperating with the deflector and with the hood for holding the upper end of the deflector in adjusted positions with respect to the periphery of the grinding wheel.

2. In a device of the class described, a stand; a grinding wheel journaled thereon; a hood hinged to the stand for swinging movement toward and away from the wheel in a direction parallel to the plane in which the wheel rotates; and a tool rest mounted to swing on the stand into and out of operative relation to the wheel in a direction substantially at right angles to the plane in which the wheel rotates and adapted to coöperate with the wheel when the hood is swung backwardly away from the wheel, the hood constituting a stop engaging the rest to prevent the rest from swinging against the wheel when the hood is swung upwardly into operative relation to the wheel, and the hood constituting a receptacle for material detached from the wheel by the tool on the rest, when the hood is swung backwardly away from the wheel.

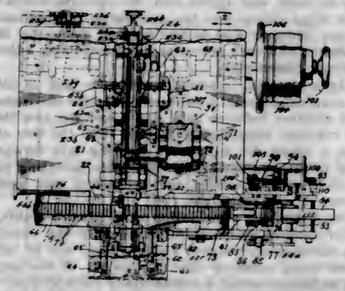
1,227,548. SAFETY-RAZOR AND HAIR-CUTTER. GEORGE J. CARLISLE, Chicago, Ill., assignor of one-half to Carver W. Barber, Chicago, Ill., and one-half to Utility Development & Sales Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 21, 1916. Serial No. 79,741. (Cl. 30—12.)



1. A device of the character described comprising a pair of companion members pivotally connected for swinging movement relative to each other and having handle portions, one of said members being formed with a V-shaped opening at a point remote from the pivotal connection thereof with the other member and also provided with a slot extending laterally from one wall of the opening and communicating with said opening and a lug carried by the other member for registration with the opening and having a hook forming a keeper for insertion within said opening to lock within the slot on the movement of the handle portions of the members into lateral alinement with each other.

2. A device of the character described comprising a pair of companion members pivotally connected for swinging movement relative to each other and having handle portions, one of said members being formed with a V-shaped opening at a point remote from the pivotal connection thereof with the other member and also provided with a slot extending laterally from one wall of the opening and communicating with said opening, a lug carried by the other member for registration with the opening and having a hook forming a keeper for insertion within said opening to lock within the slot on the movement of the handle portions of the members into lateral alinement with each other, and guard teeth cut into edges adjacent each other of the members for exposing a cutting blade when clamped between said members.

1,227,549. CIGARETTE-MACHINE. LAWRENCE M. GILLIAM, San Francisco, Cal., assignor to Liggett & Myers Tobacco Company, St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 18, 1914. Serial No. 825,509. (Cl. 131—5.)



1. In a machine of the class described, in combination, a tobacco hopper having a slot in the bottom thereof, a mold open at one end and having separated mold parts, a belt having a continuous variable movement longitudinally at said slot in the direction of the open end of said mold, a roller adjacent said mold around which said belt passes, a second roller disposed over said first roller for compressing the tobacco in the form of a ribbon and directing the ribbon into the open end of the mold, a movable mold part, means for reciprocating said movable mold part between said separated mold parts, said movable part operating to shear a length of tobacco from the ribbon and condense the same across the flat side of the ribbon and coöperating with one or the other of said separated mold parts to compress the tobacco into a rod, means for holding the cigarette cases to be filled, and means for ejecting the compressed tobacco from the mold into the cases.

2. In a cigarette machine, in combination, a pair of mold parts, a movable mold part, means for moving said movable mold part to coöperate with said first named mold parts alternately and compress a portion of the tobacco, feeding mechanism for uninterruptedly feeding the tobacco into the mold, said feeding mechanism having means for increasing the velocity of the feed when said movable mold part is pressing the tobacco against one of said pair of mold parts.

3. In a cigarette machine, in combination, a mold comprising a pair of mold parts and a movable mold part, means for moving said movable mold part to coöperate with said first named mold parts alternately to compress a portion of the tobacco, feeding mechanism for feeding the tobacco into the mold, said feeding mechanism having means for increasing the velocity of the feed when said movable mold part is pressing the tobacco against one of said pair of mold parts.

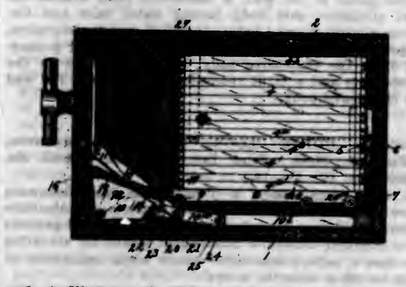
4. In a cigarette machine, in combination, a mold including a movable mold part, means for moving said movable mold part to coöperate with said first named mold parts alternately to compress a portion of the tobacco, feeding mechanism for feeding the tobacco into the mold, said tobacco feeding mechanism including a pair of constantly rotating rollers adjacent the said mold between which the tobacco passes, and means for varying the speed of rotation of said rollers.

5. In a cigarette machine, in combination, a pair of rollers for pressing and advancing the tobacco into the mold, means for constantly rotating said rollers, including elliptical gears for driving said rollers alternately at a high speed of rotation and a slow speed of rotation, and a movable mold part, moving transversely to the direction of the tobacco moving into the mold, for compressing the tobacco in the mold, and means for moving said movable mold part across the path of tobacco when said rollers are moving at their slow speed of rotation.

[Claims 6 to 14 not printed in the Gazette.]



1,227,550. FILING APPLIANCE. HARRY J. HICK, Alliance, Ohio. Filed July 23, 1914. Serial No. 852,600. (Cl. 45—2.)



1. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends depending from a pivotal connection with the rear end of the cover section, and means for supporting and guiding the free ends of the holders upward and forward from within the base section over the forward rim thereof including spring supported tracks having their forward ends pivoted to the base section and their rear ends adapted to rest upon the bottom thereof.

2. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends depending from a pivotal connection with the rear end of the cover section, and means for supporting and guiding the free ends of the holders upward and forward from within the base section over the forward rim thereof including spring supported jointed tracks having their forward ends pivoted to the base section and their rear ends adapted to rest upon the bottom thereof.

3. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends depending from a pivotal connection with the rear end of the cover section, a frame having its rear end pivoted to the rear end of the lower holder, and means for supporting and guiding the free end of the frame upward and forward from within the base section over the forward rim thereof including spring supported tracks having their forward ends pivoted to the base section and the rear ends adapted to rest upon the bottom thereof.

4. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends depending from a pivotal connection with the rear end of the cover section, a frame having its rear end pivoted to the rear end of the lower holder, and means for supporting and guiding the free end of the frame upward and forward from within the base section over the forward rim thereof including spring supported jointed tracks having their forward ends pivoted to the base section and the rear ends adapted to rest upon the bottom thereof.

5. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends depending from a pivotal connection with the rear end of the cover section, means for supporting and guiding the free ends of the holders upward and forward from within the base section over the forward rim thereof including tracks having their forward ends pivoted to the base section, and means for thrusting the tracks upward for elevating and sustaining the hinged ends of the holders.

[Claims 6 to 17 not printed in the Gazette.]

1,227,551. INTERNAL-COMBUSTION ENGINE. HAROLD EDGAR MONTAGUE, Philadelphia, Pa., assignor of fifty-five one-hundredths to David Kraus, New York, N. Y. Filed Sept. 29, 1916. Serial No. 122,811. (Cl. 123—52.)

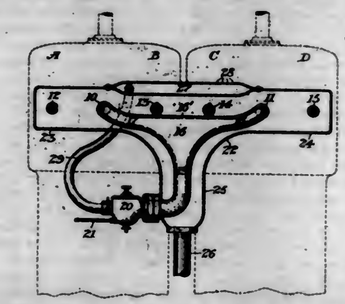
1. The combination of an internal combustion engine, a carbureter, and a heat transformer, the heat transformer being so constructed as to raise the temperature of the carbureted air to the cracking point.

2. The combination of an internal combustion engine, a carbureter, and a heat transformer, the heat transformer being so constructed as to raise the temperature of the carbureted air to the cracking point, which is accomplished at approximately a temperature of 1000 degrees Fahrenheit.

3. In an internal combustion engine and in combination with the cylinders thereof, a carbureter, a heater for the mixture produced in said carbureter, said heater consisting of an elongated chamber communicating with the carbureter and inclosed within the exhaust compartment and means to discharge the exhaust gases from the engine into said compartment at a plurality of ports distributed along the chamber.

4. In an internal combustion engine and in combination with the cylinders thereof, an intake manifold having

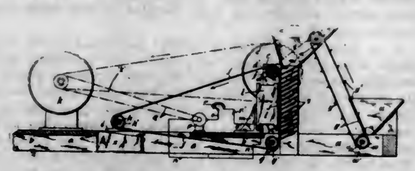
branches connected to the inlet ports of the cylinders and a downward extension, an exhaust manifold having branches surrounding the said branches of the intake manifold and embracing the discharge ports of the said cylinders and also a downward extension surrounding the downward extension of the intake manifold and termi-



nating in a discharge adjacent the inlet to the downward extension of the intake manifold, a carbureter connected to the extension of the intake manifold exteriorly of the extension of the exhaust manifold, a fuel feed pipe for the carbureter, a hot air chamber in the upper portion of the exhaust manifold, and a connection between the hot air chamber and the inlet side of the carbureter.

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1,227,552. ORE-SEPARATOR. JOSEPH S. MORRISON, Wallport, Oreg. Filed Sept. 9, 1915. Serial No. 49,831. (Cl. 83—71.)



1. In a device of the character described, the combination of a hopper, a housing located under the hopper, a vertically stacked series of baffle plates spaced apart in said housing, an endless carrier-belt having a portion disposed to extend vertically along the inner edges of said stack of baffle plates, the latter being inclined so as to discharge against said vertical portion of the belt, an electromagnet located adjacent the inner side of said vertical portion of said belt, means for energizing the electromagnet, and means for driving said belt, so arranged as to cause said vertical portion of the belt to travel upward.

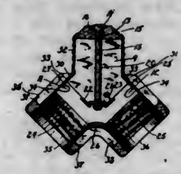
2. In a device of the character described, the combination of a vertically stacked series of baffle plates spaced apart, an endless carrier-belt having a portion disposed to extend vertically along the inner edges of said stack of baffle plates, the latter being inclined so as to discharge against said vertical portion of the belt, an electromagnet located adjacent the inner side of said vertical portion of said belt, means for energizing the electromagnet, and means for driving said belt, so arranged as to cause said vertical portion of the belt to travel upward.

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1,227,553. PLURAL LAMP-SOCKET. ADOLPH C. RECKER, Oakville, Conn., assignor to Waterbury M'F'G Co., Waterbury, Conn., a Corporation. Filed Mar. 2, 1917. Serial No. 151,960. (Cl. 173—335.)

1. A plural lamp-socket having an axially divided body made in two half-parts each having a stem and two corresponding chambers, and means for securing the said parts together.

5. In a plural lamp-socket, the combination with a chambered body therefor, of a screw-plug shell, and two lamp-receptacle screw-shells standing at an angle with respect to each other, and adapted to be located within

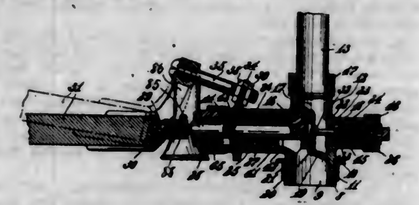


the said chambered body and made integral with each other and each furnished at a point opposite their integral connection with integral arms for their connection with the said screw-plug shell.

[Claims 2 to 4, 6 and 7 not printed in the Gazette.]

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1,227,554. FLUSHING DEVICE. JOSEPH W. SHARP, Jr., Berwyn, and ALBERT E. BACON, Germantown, Pa., assignors to Haines, Jones & Cadbury Incorporated, a Corporation of Pennsylvania. Filed Feb. 24, 1910. Serial No. 545,569. (Cl. 4—28.)



1. In combination with a water closet bowl and a hinged seat, hinge posts adapted to maintain the hinge axis at a point a substantial distance above the horizontal plane of the seat, a chambered body having water inlet and discharge apertures and a valve-controlled port therebetween, a spring-actuated seat actuating valev-controlling rod projecting from the chambered body, above the top of the bowl, and a strut engaged between the hinge posts and the chambered body, as and for the purpose specified.

2. In combination with a water closet bowl and a hinged seat, hinge posts supported on the bowl structure, said posts adapted to maintain the hinge axis above the horizontal plane of the seat, a chambered body outside the bowl structure, said body having water inlet and discharge apertures and a valve-controlled port therebetween, a spring-controlled valve and seat actuating rod projecting from the chambered body, a cross-rod between the hince posts and a strut connected between said rod and the chambered body.

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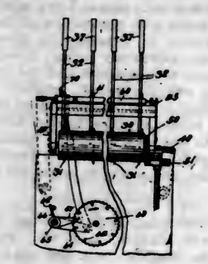
1,227,555. CHIME-CLOCK. THOMAS W. SHEPHERD, Waltham, Mass. Filed Dec. 10, 1913. Serial No. 805,842. (Cl. 58—13.)

1. In a chime clock, a plurality of tubes, hammers therefor, actuating levers for the hammers, an adjustable means providing in each adjusted position independent lever engaging elements, independent means for actuating the levers, said independent means being adjustable to vary its effect upon the levers.

2. In a chime-clock, the combination with a plurality of tubes and hammers therefor, and pivoted actuating-levers connected with said hammers, of a rock-shaft bearing projections for engaging said actuating-levers, a link loosely connected with said rock-shaft, a pivoted arm to which said link is pivotally connected, a tappet-arm connected with said arm and a gear-wheel having pins for engaging said tappet-arm, substantially as described.



3. In a chime-clock, the combination of a plurality of tubes and hammers therefor, pivoted actuating-levers connected with said hammers, a rotatable cylinder having projections for engaging said actuating-levers below their pivots and a rock-shaft bearing projections arranged to engage said actuating-levers above their pivots, and means to rock said shaft, substantially as described.

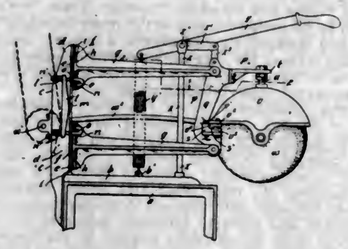


4. In a chime clock, a plurality of tubes, hammers therefor, actuating levers for the hammers, means operated by the clock gears for actuating the levers, and independent means actuated by the clock gear for also actuating the levers.

5. In a chime clock, a plurality of tubes, hammers therefor, actuating levers for the hammers, means operated by the clock gears for actuating the levers, and independent means actuated by the clock gear for also actuating the levers, each of said means being manually adjustable to vary the effect of the lever actuation.

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1,227,556. ROCKER-FRAME FOR GRINDING-WHEELS AND THE LIKE. EDWARD P. ARMSTRONG, Portland, Oreg. Filed Sept. 9, 1915. Serial No. 49,830. (Cl. 76—40.)



1. In a device of the character described, a supporting member, co-planar rocker arms each having a segmental portion rockably supported at one end from said supporting member, a supporting head pivoted to the outer ends of said rocker arms at the center of curvature of the latter.

2. In a device of the character described, a supporting member, co-planar rocker arms each having a segmental portion rockably supported at one end from said supporting member, a supporting head pivoted to the outer ends of said rocker arms at the center of curvature of the latter, a wheel bearing carried by said supporting head.

3. In a device of the character described, a supporting member, co-planar rocker arms each having a segmental portion rockably supported at one end from said supporting member, a supporting head pivoted to the outer ends of said rocker arms at the center of curvature of the latter, and means for rocking said arms in unison.

4. In a device of the character described, the combination of a supporting member, a rockable frame comprising, co-planar rocker arms each having a segmental portion arranged in pairs rockably supported at one end from said supporting member, a supporting head pivoted to the outer ends of said rocker arms at the center of curvature of the latter, a wheel bearing carried by said supporting head, and means for rocking said frame.

5. In a device of the character described, the combination of a supporting member, a rockable frame comprising, co-planar arms each having a segmental portion rockably supported at one end on said supporting member, a supporting head pivoted to the outer ends of said rocker arms at the center of curvature of the latter, an adjustable wheel bearing carried by said supporting head, and means for rocking said frame.

[Claims 6 to 10 not printed in the Gazette.]

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1,227,557. MAKE-READY OF IMPRESSION-CYLINDERS OF PRINTING-PRESSES. ALBERT W. COCHRAN and FRED M. YOUNGS, Portland, Oreg. Filed Aug. 7, 1916. Serial No. 113,676. (Cl. 154—54.5.)



1. A "make ready" for impression cylinders consisting of a strip of substantial thickness made wholly of comminuted material having resilient properties similar to cork held in mass by a suitable binding agent, and including other material adapted to hold the mass against pulling apart, said "make ready" being made of a thickness adapted for imprinting directly thereon.

2. A "make ready" for impression cylinders consisting of a strip of substantial thickness made wholly of comminuted material having resilient properties similar to cork held in mass by a suitable binding agent, and mounted on a base strip adapted to hold the mass against pulling apart, said "make ready" being made of a thickness adapted for imprinting directly thereon.

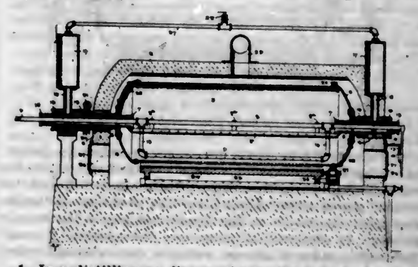
3. A "make ready" for impression cylinders consisting of a strip of substantial thickness made wholly of comminuted cork held in mass by a suitable binding agent, and mounted on a base strip adapted to hold the mass against pulling apart, said "make ready" being made of a thickness for imprinting directly thereon.

4. The combination with an impression cylinder, of a "make ready" consisting of a circumferential coating of substantial thickness made wholly of comminuted cork and held in mass by a suitable binding agent.

5. The combination with an impression cylinder, of a "make ready" consisting of a strip of substantial thickness made wholly of comminuted cork held in mass by a suitable binding agent and mounted on a base strip adapted to hold the mass against pulling apart, and a draw sheet holding said strip flexed about the cylinder, said "make ready" being made of a thickness adapted for impressing directly thereon.

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1,227,558. DISTILLATION OF OIL. SAMUEL M. HERBER, Inza, Mo. Filed Aug. 7, 1915. Serial No. 44,299. (Cl. 196—20.)



1. In a distilling appliance, the herein described rotatable retort consisting of the cylindrical body proper having hollow trunnions, provided with a suitable support

and bearings therefor; separating domes; a pipe connection between each dome and one of said hollow trunnions, said trunnions and bearings having registering apertures to communicate with said pipe connections; a housing for the retort; means to rotate the retort, and additional means to introduce into the retort the substance to be treated and permit the gaseous products to escape therefrom.

2. The herein described distilling appliance consisting of a suitable housing; a retort within said housing and supported by hollow trunnions, bearings in a contiguous part of the housing for said trunnions, means to rotate said retort, inwardly directed extensions of said hollow trunnions provided with a flared terminal, a feed pipe mounted within the hollow trunnions and extending throughout the retort, a controlling handle for the free protruding end of said feed pipe, a perforated trough like member supported upon said feed pipe within the retort whereby said trough like member will receive at each end the liquefied heavier distillates.

3. In a distilling appliance, a retort having separatory domes; means to rotatably mount the retort; a condenser; pipe connections between the retort, the condenser and the separatory domes, said pipe connections being adapted to introduce oil into the retort and permit the gaseous products of distillation to pass freely into said domes and the heavier particles carried into the dome to return to the retort, and suitable means to freely rotate the retort in either direction.

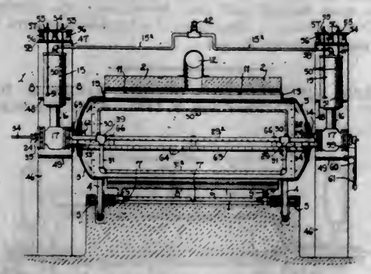
4. In a distillation apparatus; a rotatable retort; means to operatively mount the same in position; suitable means to apply heat to the retort; hollow trunnions extending from each end of the retort; domes for receiving the products of distillation; suitable connections between the retort and said domes whereby the lighter products of distillation will pass out of the upper portions of the domes and the heavier particles will be again returned to the retort.

5. In a distillation apparatus; a rotatable retort; a suitable housing therefor; means to supply the desired degree of heat; means to rotate the retort; means to independently introduce oil and steam into the retort; receiving domes for the products of distillation and pipe connections for said domes adapted to deliver at any desired point the finished products of distillation and return to the retort all unfinished products.

[Claim 6 not printed in the Gazette.]

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1,227,559. APPARATUS FOR OIL DISTILLATION. SAMUEL M. HERBER, Inza, Mo. Filed Apr. 5, 1916. Serial No. 89,035. (Cl. 196—12.)



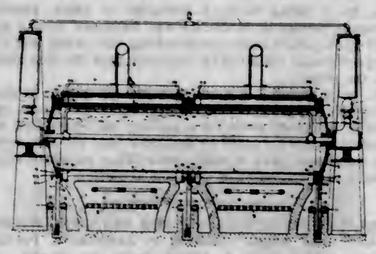
1. In a distilling appliance, a retort rotatably mounted; independent means to introduce oil and steam into the retort; coöperating domes operatively connected with the retort; means adapted to deliver the products of distillation from the retort to the domes and return the heavier products to the retort; means to independently mount the domes, and a condenser and pipe connections between the dome and the condenser.

2. In a distilling appliance, a rotatable retort; a housing for the retort; suitable means to apply the desired quantity of heat to the retort; means to introduce oil to be treated into the retort; additional separating means to permit the escape of the gaseous products from the retort and arrest the unfinished products and return the latter to the retort, and resilient means to support said separating means.

3. A rotatable retort and means to mount the same in ts operative position, said means being adapted to compensate for expansion and contraction of the retort incident to use; means to introduce oil into the retort, while being rotated; separatory domes; a condenser; pipe connections between the condenser and the domes and between the domes and the retort, whereby the heavier products of distillation will be arrested by the dome and returned to the retort and the lighter products passed from the domes to the condenser; and resilient means to support the domes to compensate for vibration of the retort incident to use, and means to rotate the retort.

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1,227,560. REVOLUBLE RETORT FOR DISTILLING OIL. SAMUEL M. HERBER, Inza, Mo. Filed Sept. 26, 1916. Serial No. 122,236. (Cl. 196—12.)



1. The herein-described revoluble oil distilling retort having carrying rings, said rings having inwardly directed flanges and outwardly directed flanges, means attached to the peripheral face of the retort for engagement with said inwardly directed flanges, a housing, means interposed between the outwardly extending flanges and the housing to form a sealed joint, for the purpose specified, and means for supporting said rings.

4. The combination with a rotatable oil distilling retort, of carrying rings surrounding said retort and concentric thereto, said rings being formed at one side edge with outwardly extending flanges, a housing, lips connected to said outwardly extending flanges and engaging said housing, the rings being also formed intermediate of their side edges with inwardly extending flanges, means connecting said inwardly extending flanges to the retort with the rings in concentric relation to the retort, the rings being formed intermediate of their side edges and on their outer peripheries with ribs, grooved carrying wheels in which said ribs are received, and a sprocket connected to the side edge of one of said rings opposite to the edge where the outwardly directed flange of said ring is formed.

[Claims 2, 3, and 5 to 9 not printed in the Gazette.]

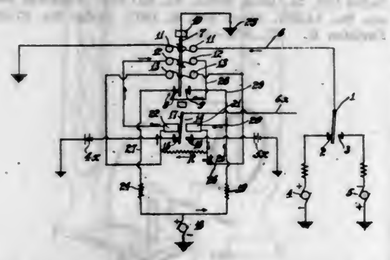
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# REISSUES.

14,304. RELAY AND REPEATER. WILLIAM FINN, Bloomfield, N. J., assignor to The Western Union Telegraph Company, New York, N. Y., a Corporation of New York. Filed Oct. 19, 1916. Serial No. 126,630. Original No. 1,164,273, dated Dec. 14, 1915, Serial No. 878,403, filed Dec. 21, 1914. (Cl. 178—88.)

1. A polarized relay or like electric instrument adapted for actuation by reversal of polarity in a main circuit to which it may be connected, and comprising a movable polarized armature and opposing contacts therefor, main-circuit electro-magnetic means arranged to influence said armature, auxiliary electro-magnetic means likewise arranged to influence such armature, and entirely local circuit means and current supply means for such auxiliary means, controlled by said armature and its contacts and arranged to cause such auxiliary means normally to oppose as to said armature the influence of the main circuit electro-magnetic means and comprising also capacity arranged to cause such auxiliary means to influence the armature to carry it across once motion of that armature is started, current potential of the same sign being applied to both said contacts, and a secondary instrument included in such local circuit means and arranged to be actuated upon movement of such armature.





2. A polarized relay or like electric instrument adapted for actuation by reversal of polarity in a main circuit to which it may be connected, and comprising a movable polarized armature and opposing contacts therefor, main-circuit electro-magnetic means arranged to influence said armature, auxiliary electro-magnetic means likewise arranged to influence such armature, and entirely local circuit means and current supply means for such auxiliary means, controlled by said armature and its contacts and arranged to cause such auxiliary means normally to oppose as to said armature the influence of the main circuit electro-magnetic means and comprising also capacity arranged to cause such auxiliary means to influence the armature to carry it across once motion of that armature is started, current potential of the same sign being applied to both said contacts, and a secondary instrument included in such local circuit means and arranged to be actuated upon movement of such armature.

3. A polarized relay or like electric instrument adapted for actuation by reversal of polarity in a main circuit to which it may be connected, and comprising a movable polarized armature and opposing contacts therefor, main-circuit electro-magnetic means arranged to influence said armature, auxiliary electro-magnetic means likewise arranged to influence such armature, and entirely local circuit means and current supply means for such auxiliary means, controlled by said armature and its contacts and arranged to cause such auxiliary means normally to oppose as to said armature the influence of the main circuit electro-magnetic means and comprising also capacity arranged to cause such auxiliary means to influence the armature to carry it across once motion of that armature is started, current potential of the same sign being applied to both said contacts, and a secondary instrument included in such local circuit means and arranged to be actuated by discharge of such capacity.

4. A polarized relay or like electric instrument adapted for actuation by reversal of polarity in a main circuit to which it may be connected, and comprising a movable polarized armature, main-circuit electro-magnetic means arranged to influence said armature, auxiliary electro-magnetic means likewise arranged to influence such armature, and entirely local circuit means and current supply means for such auxiliary means, arranged to cause such auxiliary means normally to oppose as to said armature the influence of the main circuit electro-magnetic means and comprising also capacity arranged by its discharge to cause such auxiliary means to influence the armature to carry it across once motion of that armature is started, and a transmitter included in such local circuit means and arranged to be actuated upon movement of such armature.

5. A polarized relay or like electric instrument adapted for actuation by reversal of polarity in a main circuit to which it may be connected, and comprising a movable polarized armature and opposing contacts therefor, main circuit electro-magnetic means arranged to influence such armature, opposing electro-magnetic means and accelerating electro-magnetic means each likewise arranged to influence such armature, and entirely local circuit means and current supply means for such opposing and accelerating means, controlled by said armature and its contacts and arranged to cause such opposing means normally to oppose as to said armature the influence of the main circuit electro-magnetic means, and comprising also means to cause such accelerating means to influence the armature to carry it across once motion of that armature is started, current potential of the same sign being applied to both said contacts.

6. A polarized relay or like electric instrument adapted for actuation by reversal of polarity in a main circuit to which it may be connected, and comprising a movable polarized armature and opposing contacts therefor, main-circuit electro-magnetic means arranged to influence such armature, opposing electro-magnetic means and accelerating electro-magnetic means each likewise arranged to influence such armature, and entirely local circuit means and current supply means for such opposing and accelerating means, controlled by said armature and its contacts and arranged to cause such opposing means normally to oppose as to said armature the influence of the main circuit electro-magnetic means, and comprising also capacity arranged by its discharge to cause such accelerating means to influence the armature to carry it across once motion of that armature is started, current potential of the same sign being applied to both said contacts.

7. A combination relay or like electric instrument comprising two relays, one controlled by the other, the first of said relays having a polarized armature and main circuit electro-magnetic means arranged to influence said armature, and having also auxiliary electro-magnetic means likewise arranged to influence such armature and circuit means therefor whereby said armature is caused to move to reverse its position upon diminution of the main line current to a predetermined degree, and in advance of establishment of such main line current in an opposite direction, the second of said relays arranged to be operated to reverse position of its armature upon beginning of movement of the armature of the first mentioned relay and in advance of completion of the reversal of the armature of such first mentioned relay.

8. A polarized relay or like electric instrument adapted for actuation by reversal of polarity in a main circuit to which it may be connected, and comprising a movable polarized armature, main-circuit electro-magnetic means arranged to influence said armature, opposing contacts with which such armature will contact in opposite positions, a source of current supply, two circuit branches connecting one pole of such source of current supply, the one to the one said contact and the other to the other said contact, each of such circuit branches containing resistance, auxiliary electro-magnetic means likewise arranged to influence said armature, a circuit branch containing said auxiliary means and bridged across the two contacts, and a condenser and a resistance shunt therefor, both included in such bridged circuit branch.

9. A polarized relay or like electric instrument adapted for actuation by reversal of polarity in a main circuit to which it may be connected, and comprising a movable polarized armature, main-circuit electro-magnetic means arranged to influence said armature, opposing contacts with which such armature will contact in opposite positions, a source of current supply, two circuit branches connecting one pole of such source of current supply, the one to the one said contact and the other to the other said contact, each of such circuit branches containing resistance, opposing and accelerating electro-magnetic means likewise arranged to influence said armature, a

circuit branch containing said opposing and accelerating means and bridged across the two contacts, the said bridged circuit branch connected to said opposing and accelerating means to cause them to influence the armature oppositely, a condenser included in said bridged circuit branch, and a resistance shunt around such condenser and accelerating means.

10. A polarized relay or like electric instrument adapted for actuation by reversal polarity in a main circuit to which it may be connected, and comprising a movable polarized armature, main-circuit electro-magnetic means arranged to influence said armature, opposing contacts with which such armature will contact in opposite positions, a source of current supply, two circuit branches connecting one pole of such source of current supply, the one to the one said contact and the other to the other said contact, each of such circuit branches containing resistance, auxiliary electro-magnetic means likewise arranged to influence said armature, a circuit branch containing said auxiliary means and bridged across the two contacts, a condenser and a resistance shunt therefor, both included in such bridged circuit branch, and a secondary electric instrument having controlling magnet coils in said bridged circuit branch and arranged to be energized by current passing therethrough.

11. A polarized relay or like electric instrument adapted for actuation by reversal of polarity in a main circuit to which it may be connected, and comprising a movable polarized armature, main-circuit electro-magnetic means arranged to influence said armature, opposing contacts with which such armature will contact in opposite positions, a source of current supply, two circuit branches connecting one pole of such source of current supply, the one to the one said contact and the other to the other said contact, each of such circuit branches containing resistance, auxiliary electro-magnetic means likewise arranged to influence said armature, a circuit branch containing said auxiliary means and bridged across the two contacts, a condenser and a resistance shunt therefor, both included in such bridged circuit branch, and a transmitting relay having controlling magnet coils in said bridged circuit branch and arranged to be energized by current passing therethrough.

12. A polarized relay or like electric instrument adapted for actuation by reversal of polarity in a main circuit to which it may be connected, and comprising a movable polarized armature, main-circuit electro-magnetic means arranged to influence such armature, opposing contacts with which such armature will contact in opposite positions, opposing and accelerating electro-magnetic means likewise arranged to influence such armature, and a circuit therefor including a source of current supply and a condenser, such circuit connected to said contact points in such manner that current potential of the same sign is applied to both contact points, the circuit arrangement being such that the opposing electro-magnetic means normally opposes, as to the armature, the influence of the main circuit electro-magnetic means, the direction of influence of the opposing electro-magnetic means and the polarity of the charge of the condenser being reversed by a reversal of position of the armature, and that the accelerating means is energized by discharge of the condenser consequent upon breaking of contact by said armature with either of its said contacts.

13. A polarized relay or like electric instrument adapted for actuation by reversal of polarity in a main circuit to which it may be connected, and comprising a movable polarized armature, main-circuit electro-magnetic means arranged to influence said armature, opposing contacts with which such armature will contact in opposite positions, a source of current supply, two circuit branches connecting one pole of such source of current supply, the one to the said contact and the other to the other said contact, each of such circuit branches containing resistance, auxiliary electro-magnetic means likewise arranged to influence said armature, a circuit branch containing said auxiliary means and bridged across the two contacts, a condenser and a resistance shunt therefor, both included in such bridged circuit branch, and a transmitting relay included in such bridged circuit and arranged to be actuated by the condenser discharge.

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14,305. TONE-ARM MOUNTING FOR SOUND-REPRODUCING MACHINES. HENRY C. MILLER, Waterford, N. Y., assignor to Victor Talking Machine Company, Camden, N. J., a Corporation of New Jersey. Filed Oct. 20, 1915. Serial No. 57,004. Original No. 1,076,385, dated Oct. 21, 1913, Serial No. 321,014. Original Reissue No. 14,257, dated Feb. 6, 1917, Serial No. 57,003. Division B. (Cl. 274—33.)



1. In a sound reproducing machine, the combination with a sound conveyer having a sound box attached to one end, and a coupling at the opposite end of the sound conveyer, said coupling comprising a support provided with a pivot, and a bearing fitting freely over the pivot and pivoted to the sound conveyer, and an amplifier communicating with the sound conveyer, whereby said conveyer and pivoted bearing may be freely removed from said pivot and support and amplifier.

[Claims 2 to 5 not printed in the Gazette.]

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# DESIGNS.

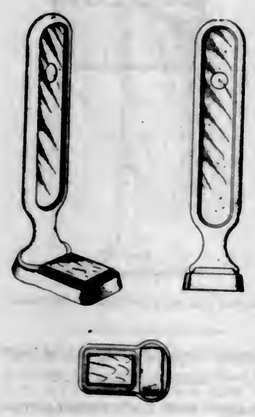
50,803. BADGE. GEORGE W. BAKER, Rheems, Pa. Filed Nov. 2, 1916. Serial No. 129,242. Term of patent 7 years.



The ornamental design for a badge, as shown.



50,804. WEIGHING-SCALE. ARTHUR W. BARNARD, Newton, and JOHN W. MCMILLAN, Marshfield, Mass., assignors to Colonial Scale Company, a Corporation of Massachusetts. Filed Feb. 28, 1917. Serial No. 151,570. Term of patent 7 years.



The ornamental design for a weighing scale as shown.

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50,805. WALL-PLATE FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Co., Inc., New York, N. Y., a Corporation of New York. Filed Nov. 27, 1916. Serial No. 133,792. Term of patent 7 years.



The ornamental design for a wall plate for lighting fixtures, as shown.

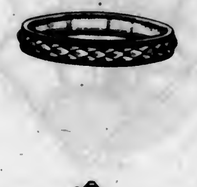
50,806. WALL-PLATE FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Co., Inc., New York, N. Y., a Corporation of New York. Filed Nov. 27, 1916. Serial No. 133,793. Term of patent 7 years.



The ornamental design for a wall plate for lighting fixtures, as shown.

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50,807. RING OR SIMILAR ARTICLE. MARTIN L. BOWDEN and MARTIN L. BOWDEN, Jr., Brooklyn, N. Y. Filed Mar. 10, 1917. Serial No. 154,045. Term of patent 7 years.



The ornamental design for a ring or similar article, as shown.

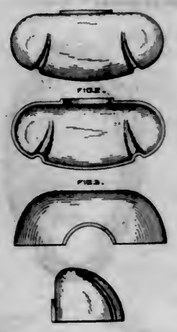
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50,808. RING OR SIMILAR ARTICLE. LOREN M. DARLING, Des Moines, Iowa. Filed Jan. 6, 1917. Serial No. 141,038. Term of patent 14 years.



The ornamental design for a ring or similar article, as shown.

50,809. LAMP-SHADE. FRANK YOKEL, Pittsburgh, Pa., assignor to Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Feb. 19, 1917. Serial No. 149,688. Term of patent 7 years.



The ornamental design for a lamp shade, as shown.

50,810. PAN-BISCUIT. GEORGE V. GEIS, Dayton, Ohio. Filed Feb. 26, 1916. Serial No. 80,745. Term of patent 7 years.



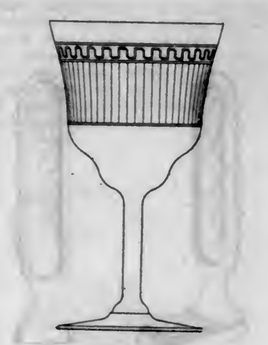
The ornamental design for a pan biscuit substantially as shown.

50,811. HEEL-PLATE FOR SKATES. ERNEST HUNOLD, Providence, R. I. Filed Feb. 21, 1917. Serial No. 150,275. Term of patent 14 years.



The ornamental design for a heel plate for skates, as shown.

50,812. GOBLET. WILBER E. HUNTER, Morgantown, W. Va. Filed Jan. 3, 1917. Serial No. 140,465. Term of patent 7 years.



The ornamental design for a goblet, as shown.

50,813. CLAMP FOR LIGHT-REFLECTING BOWLS. CHARLES ERNEST JONES, Chicago, Ill. Filed Feb. 26, 1917. Serial No. 151,130. Term of patent 3½ years.



The ornamental design for a clamp for light reflecting bowls, as shown.

50,814. CLAMP FOR LIGHT-REFLECTING BOWLS. CHARLES ERNEST JONES, Chicago, Ill. Filed Feb. 26, 1917. Serial No. 151,131. Term of patent 3½ years.



The ornamental design for a clamp for light reflecting bowls, as shown.



50,815. POISON-BOTTLE. HERBERT LEE, Carthage, S. D. Filed Feb. 9, 1917. Serial No. 147,716. Term of patent 7 years.



The ornamental design for a poison bottle, as shown.

50,816. BANK-NOTE. ALFRED S. MAJOR, New York, N. Y., assignor to American Bank Note Company, New York, N. Y., a Corporation of New York. Filed Mar. 15, 1917. Serial No. 155,376. Term of patent 14 years.



The ornamental design for a bank-note, as shown.

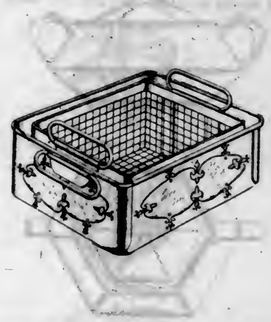
50,817. BANK-NOTE. ALFRED S. MAJOR, New York, N. Y., assignor to American Bank Note Company, New York, N. Y., a Corporation of New York. Filed Mar. 16, 1917. Serial No. 155,377. Term of patent 14 years.



The ornamental design for a bank-note, as shown.



50,818. DISH-SCALDING DEVICE. JENNIE MILLER, Austin, Tex. Filed Mar. 31, 1917. Serial No. 159,040. Term of patent 14 years.



The ornamental design for a dish scalding device, as shown.

50,819. BUTTON. MABEL DRAKE NEKARDA, New York, N. Y. Filed Apr. 12, 1917. Serial No. 161,664. Term of patent 3½ years.



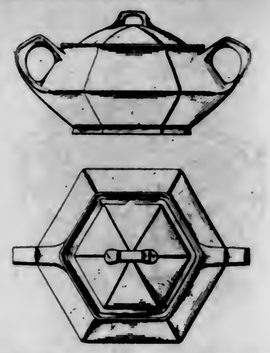

The ornamental design for a button as shown.

50,820. TOY FIGURE. CHARLES J. ROSS, Oakland, Cal. Filed Mar. 6, 1917. Serial No. 152,953. Term of patent 7 years.



The ornamental design for a toy figure, as shown.

50,821. SUGAR-BOWL OR SIMILAR ARTICLE. OLIVER H. SEBRING, Sebring, Ohio. Filed Mar. 4, 1916. Serial No. 82,248. Term of patent 7 years.



The ornamental design for a sugar bowl or similar article as shown.

50,822. SHADE-BRACKET. ALOIS JOSEPH STEPHENS, Plainfield, N. J. Filed Feb. 14, 1917. Serial No. 148,639. Term of patent 7 years.



The ornamental design for a shade bracket, as shown.

50,823. DISPLAY-STAND. JOHN P. STETSON, New York, N. Y., assignor to American Lead Pencil Company, New York, N. Y., a Corporation of New York. Filed Mar. 31, 1917. Serial No. 159,029. Term of patent 14 years.



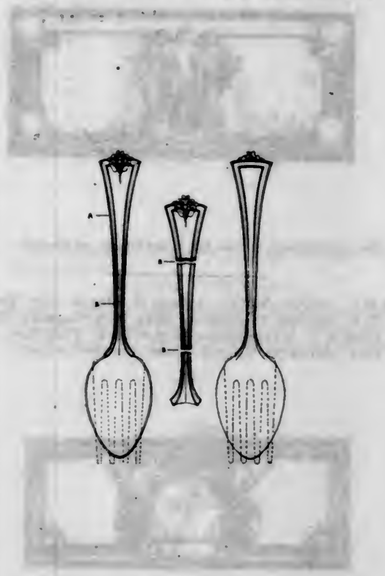
The ornamental design for a display stand, substantially as shown.

50,824. FOB. WILLIAM THIEDE, New Britain, Conn. Filed Jan. 16, 1917. Serial No. 142,774. Term of patent 3½ years.



The ornamental design for a fob, as shown.

50,825. SPOON, FORK, OR SIMILAR ARTICLE. GEORGE P. TILTON, Attleboro, Mass. Filed Mar. 20, 1917. Serial No. 156,207. Term of patent 14 years.



The ornamental design for a spoon, fork or similar article as shown.



50,826. PLATE. JOHN TORAK, Moline, Ill. Filed Mar. 24, 1917. Serial No. 157,277. Term of patent 7 years.



The ornamental design for a plate, as shown.

50,827. LOAF OF BISCUIT. ASHLEY F. WARD, Boston, Mass., assignor to The A. F. Ward Machinery Co., Boston, Mass., a Corporation of Massachusetts. Filed Nov. 25, 1914. Serial No. 874,086. Term of patent 14 years.



The ornamental design for a loaf of biscuit, substantially as shown.

# TRADE-MARKS

## PUBLISHED MAY 22, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 85,254. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) CONTINENTAL PIANO COMPANY, Chicago, Ill. Filed Mar. 19, 1915.

CONTINENTAL

*Particular description of goods.*—Pianos.
*Claims use* since Mar. 9, 1912.

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Ser. No. 86,469. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BERDAN AND COMPANY, Toledo, Ohio. Filed May 8, 1915.

CHEF



*Particular description of goods.*—Cereal Foods, Alimentary Paste Products, Nuts, Bread, Biscuits, Cakes, Wafers, Pies, Pastry Cones, Candy, Chewing-Gum, Jams, Fruit Preserves, Jellies, Fruit Puddings, Fruit Butters, Mince-Meat, Soups, Yeast, Fruit-Powders, Jelly-Powders, Custard-Powders, Icings, Gelatin, Blanc-Mange, Honey, Sugar, Table and Cooking Syrup, Molasses, Stock-Conditioning Feed, Bird and Chicken Feed, Cocoa, Chocolate, Oleomargarin, Catsup, Chilli, Prepared Mustard, Pimento, Pickles; Citron, Lemon, and Orange Peel; Dried, Canned, and Bottled Vegetables; Fruits, Shell-Fish, Milk, Cheese; Dried, Canned, Smoked, and Salted Sardines; Herring, Tuna, Mackerel, Caviar, Bloaters, Cod, White Fish, Halibut.
*Claims use* since Apr. 1, 1902.

Ser. No. 89,661. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) RALPH H. DICK, Marietta, Ohio. Filed Oct. 5, 1915.

GRENADITE

*Particular description of goods.*—Explosives for Use in Bombs.
*Claims use* since Sept. 11, 1915.

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Ser. No. 89,904. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE STEVENS-WILEY MANFG. CO., INC., Philadelphia, Pa. Filed Oct. 12, 1915.

REXBLU SWEET

No claim being made to the exclusive use of the words "Sweet," "Clean," and "Laundry Tablets." The picture shown is that of Master William G. Wiley.

*Particular description of goods.*—Bleaching, Bluing, and Starching Agent in Cake Form for Use in Washing Clothes.
*Claims use* since July 10, 1915.

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Ser. No. 93,381. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) WIRT COMPANY, Germantown, Pa. Filed Mar. 7, 1916.

DIM-A-LITE

*Particular description of goods.*—Rheostats.
*Claims use* since Mar. 2, 1916.

Ser. No. 93,541. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) B. A. RAILTON CO., Chicago, Ill. Filed Mar. 14, 1916.



*Particular description of goods.*—Apple and Raspberry Jelly, Apple and Strawberry Preserves, Prepared Mustard, India Relish, Salad-Dressing, Chilli Sauce, Cane and Maple Syrup, Yellow Cling-Peaches, Mince-Meat, Asparagus-Tips, Pork and Beans, Sauer-Kraut, and Red Kidney-Beans.
*Claims use* since Feb. 1, 1914.

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Ser. No. 94,329. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) INTERNATIONAL UNION OF JOURNEYMEN HORSESHOERS OF THE UNITED STATES AND CANADA, Cincinnati, Ohio. Filed Apr. 11, 1916.

JHU

*Particular description of goods.*—Horseshoes.
*Claims use* since May 18, 1892.

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Ser. No. 94,645. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) ALFRED B. HELLER, Hamburg, Pa. Filed Apr. 22, 1916.




*Particular description of goods.*—Brooms.
*Claims use* since Apr. 18, 1906.

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Ser. No. 94,714. (CLASS 2. RECEPTACLES.) PARSONS & HIGGINS, Denver, Colo. Filed Apr. 25, 1916.




Consists of the picture of a squirrel and the word "Squirrel."
*Particular description of goods.*—Wooden Nut and Fruit Bowls.
*Claims use* since May 1, 1912.

Ser. No. 95,497. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING CO. INC., New York, N. Y., and Kansas City, Mo. Filed May 27, 1916.



*Particular description of goods.*—Wheat-Flour, Rye-Flour, Self-Rising and Prepared Flour.
*Claims use* since October, 1915.

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Ser. No. 96,713. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HERMANN J. KOHL, New York, N. Y. Filed July 21, 1916.

SHINEX

*Particular description of goods.*—A Spot-Remover in the Nature of a Soap.
*Claims use* since July 6, 1916.

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Ser. No. 97,367. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AMERICAN ALCOHOL CO., INC., New York, N. Y. Filed Aug. 16, 1916.

AMERICAN ALCOHOL CO.
EAGLE

No claim being made to the exclusive use of the word "Brand" apart from the mark shown in the specimens.
*Particular description of goods.*—Alcohols other than Ethyl.
*Claims use* since Mar. 15, 1916.

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Ser. No. 97,384. (CLASS 15. OILS AND GREASES.) MOTOR SALES GARAGE COMPANY, East Orange, N. J. Filed Aug. 17, 1916.

MO-SA-GA

No claim being made to the words "Motor Oil."
*Particular description of goods.*—Lubricating Motor-Oil.
*Claims use* since the 20th day of May, 1916.

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Ser. No. 98,378. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) VEGOLA SPECIALTY COMPANY, INC., Buffalo, N. Y. Filed Oct. 2, 1916.

VEGOLA

*Particular description of goods.*—Cleansing Fluid.
*Claims use* since about the year 1885.





Ser. No. 98,381. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CELLULOID STARCH COMPANY, New York, N. Y., and New Haven, Conn. Filed Oct. 3, 1916.



The words "Maid's Favorite" are hereby disclaimed for the purposes of registration.
*Particular description of goods.*—Scouring-Powder.
*Claims use* since Sept. 19, 1916.

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Ser. No. 98,486. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) YOURS TRULY BISCUIT CO. INC., Seattle, Wash. Filed Oct. 6, 1916.

Yours Truly

*Particular description of goods.*—Cakes, Crackers, and Biscuits.
*Claims use* since Aug. 31, 1916.

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Ser. No. 98,748. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) MAX GERBER, M. D., Denver, Colo. Filed Oct. 18, 1916.

MEL-TONA

*Particular description of goods.*—Soft Drinks and Consisting of Herbs and other Allied Compounds.
*Claims use* since Sept. 1, 1916.

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Ser. No. 98,982. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE KOHLER-LIEBICH CO., Chicago, Ill. Filed Oct. 30, 1916.




*Particular description of goods.*—Musical Chimes and Musical Bells.
*Claims use* since July 1, 1916.

Ser. No. 99,601. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE W. HELME, Greenwich, Conn. Filed Nov. 28, 1916.




No claim being made to the exclusive use of the word "Squab" apart from the mark as shown in the specimens.
*Particular description of goods.*—Squabs.
*Claims use* since Jan. 1, 1916.

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Ser. No. 99,809. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ECONOMY FOOD PRODUCTS CO., Cambridge, Mass. Filed Dec. 9, 1916.

PRISCILLA

*Particular description of goods.*—Doughnuts.
*Claims use* since Sept. 4, 1913.

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Ser. No. 99,829. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WAUSAU ABRASIVES COMPANY, Chicago, Ill. Filed Dec. 9, 1916.

WAUSITE

*Particular description of goods.*—Abrasive Material—Namely, Plates and Disks—and Foundation-Sheets of Flexible Material, Such as Cloth or other Suitable Material, Coated with Particles of Artificially-Produced Abrasive Material.
*Claims use* since about August, 1914.

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Ser. No. 100,018. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN C. NOURSE, Kansas City, Mo. Filed Dec. 18, 1916.

NEATSLENE

*Particular description of goods.*—Harness-Oil.
*Claims use* since 1907.

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Ser. No. 100,231. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN H. RANSON, New York, N. Y. Filed Dec. 29, 1916.



*Particular description of goods.*—Pork Sausage.
*Claims use* since Oct. 14, 1916.

Ser. No. 100,359. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) READING TOY MANUFACTURING CO. INC., Reading, Pa. Filed Jan. 4, 1917.

TOITY

*Particular description of goods.*—Wooden Figure Toys.
*Claims use* since June 2, 1916.

Ser. No. 100,372. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAMES T. MCLAIN, Geneva, Fla. Filed Jan. 5, 1917.

PRIDE of INDIAN RIVER

No claim being made to the representation of the oranges or grape-fruits.
*Particular description of goods.*—Oranges, Grape-Fruit, and Tangerines.
*Claims use* since Nov. 15, 1915.

Ser. No. 100,534. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE E-ZE PRODUCTS CO. INC., New York, N. Y. Filed Jan. 11, 1917.

Good Night

*Particular description of goods.*—A Detergent Paste for Cleaning the Human Skin, Textile Fabrics, Leather, and Imitation Leather.
*Claims use* since Jan. 6, 1917.

Ser. No. 100,616. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE DENTAL AND TOILET PRODUCTS CORPORATION, New York, N. Y. Filed Jan. 10, 1917.




The exclusive use of the words "The Prophylactic Dental Cream Endorsed By The Dental Profession, The Dental and Toilet Products Corporation, New York City" being disclaimed.
*Particular description of goods.*—A Tooth-Paste.
*Claims use* since Dec. 1, 1916.

Ser. No. 100,805. (CLASS 33. GLASSWARE.) KIMBLE GLASS CO., Chicago, Ill. Filed Jan. 22, 1917.

K

*Particular description of goods.*—Beakers, Flasks, and other Glass Containers.
*Claims use* since Nov. 16, 1916.

Ser. No. 100,806. (CLASS 33. GLASSWARE.) KIMBLE GLASS CO., Chicago, Ill. Filed Jan. 22, 1917.

P

*Particular description of goods.*—Beakers, Flasks, and other Glass Containers.
*Claims use* since Nov. 22, 1916.

Ser. No. 101,079. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SHELDON M. BOOTH, Chicago, Ill. Filed Feb. 1, 1917.

RITE-WAY

*Particular description of goods.*—A Cleaner Used to Clean White Shoes of Kid, Calf, Duck, Canvas, Buckskin Shoes and Gloves.
*Claims use* since Sept. 1, 1916.

Ser. No. 101,186. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) QUIDO VALLASTER, Jersey City, N. J. Filed Feb. 5, 1917.

QUIDO

*Particular description of goods.*—Salve for Blood-Poisoning, Boils, Abscesses, Hives, Running Sores, and Piles.
*Claims use* since January, 1916.

Ser. No. 101,194. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN H. NIEMAN, Clay Center, Nebr. Filed Feb. 6, 1917.

EGITO

*Particular description of goods.*—A Balm for External Use for the Alleviation of Affections of the Skin.
*Claims use* since Jan. 1, 1916.





Ser. No. 101,211. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) FLINTKOTE MANUFACTURING COMPANY, Boston, Mass. Filed Feb. 7, 1917.



The picture of the boy being fanciful.
*Particular description of goods.*—Roofing-Paints and Preservative Paints.
*Claims use* since on or about Dec. 28, 1915.

Ser. No. 101,309. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) WHEELER CONDENSER AND ENGINEERING CO., Carteret, N. J. Filed Feb. 12, 1917.

CRESCENT



*Particular description of goods.*—Tubes and Pipes of Seamless Drawn Brass for Steam-Condensers.
*Claims use* since Dec. 1, 1912.

Ser. No. 101,341. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE TIRE STORE, Greensburg, Pa. Filed Feb. 12, 1917.



*Particular description of goods.*—Automobiles, Motor-Cycles, Bicycles, and Automotor-Cycles.
*Claims use* since July 1, 1914.

Ser. No. 101,442. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) JACK J. FELSENFELD & CO., New York, N. Y. Filed Feb. 17, 1917.

Natalina

*Particular description of goods.*—Pearls, Real and Imitation, Loose and Mounted.
*Claims use* since Feb. 1, 1917.

Ser. No. 101,450. (CLASS 31. FILTERS AND REFRIGERATORS.) A. KREAMER, INC., Brooklyn, N. Y. Filed Feb. 17, 1917. Under ten-year proviso.

KREAMERWARE

*Particular description of goods.*—Wine-Coolers and Nursery-Refrigerators.
*Claims use* since Jan. 1, 1886.

Ser. No. 101,526. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MANFRED WAHL, Philadelphia, Pa. Filed Feb. 19, 1917.




*Particular description of goods.*—Lactic-Acid Culture.
*Claims use* since Jan. 25, 1917.

Ser. No. 101,547. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE H. D. LEE MERCANTILE CO., Salina, Kans., and Kansas City, Mo. Filed Feb. 20, 1917.




*Particular description of goods.*—Canned Salmon.
*Claims use* since 1902.

Ser. No. 101,636. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE ARMAND COMPANY, Des Moines, Iowa. Filed Feb. 24, 1917.



*Particular description of goods.*—Toilet Soaps.
*Claims use* since July 27, 1916.

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Ser. No. 101,654. (CLASS 12. CONSTRUCTION MATERIALS.) EDWARD F. KELLIE, Springfield, Ill. Filed Feb. 24, 1917.

## CEMITE

Comprising the word "Cemite."
*Particular description of goods.*—Cement and Mortar.
*Claims use* since January, 1915.

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Ser. No. 101,676. (CLASS 5. ADHESIVES.) THE COMMERCIAL PASTE CO., Columbus, Ohio. Filed Feb. 26, 1917.

## Copasco

*Particular description of goods.*—Film-Cement.
*Claims use* since about Jan. 10, 1917.

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Ser. No. 101,709. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SMITH, KLINE & FRENCH COMPANY, Philadelphia, Pa. Filed Feb. 26, 1917.



*Particular description of goods.*—Talcum Powder, Sachet-Powder, Face-Powder, and Perfumes.
*Claims use* since Dec. 1, 1916.

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Ser. No. 101,749. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MCKESSON & ROBBINS, INCORPORATED, New York, N. Y. Filed Feb. 27, 1917.

## BIOMIN

*Particular description of goods.*—Medicinal Preparations for Internal Use, Said Preparations Comprising a Metabolic Stimulant and Cell-Activating Agent Particularly Useful in the Treatment of Diseases Due to Deficiency in Diet.
*Claims use* since Feb. 1, 1917.

Ser. No. 101,753. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE PEERLESS THINNER COMPANY, Baltimore, Md. Filed Feb. 27, 1917.

## WIL - MAN - CO.

*Particular description of goods.*—Painters' Materials Consisting of Thinners for Paints, Varnishes, and the Like.
*Claims use* since Aug. 10, 1916.

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Ser. No. 101,809. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) VICSONIA MFG. CO. INC., New York, N. Y. Filed Feb. 28, 1917.

## Vicsonia

Comprising the word "Vicsonia."
*Particular description of goods.*—Phonographs and Parts Thereof.
*Claims use* since Oct. 1, 1915.

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Ser. No. 101,878. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NUT PRODUCTS CO., New Haven, Conn. Filed Mar. 3, 1917.

## Licious

No claim is made to the word "Nut" as a part of the trade-mark.
*Particular description of goods.*—Ice-Cream, Sundaes, Filling for Cakes, Dressing for Ice-Cream, and Ices.
*Claims use* since Feb. 1, 1917.

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Ser. No. 101,883. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARY L. SULLIVAN, New York, N. Y. Filed Mar. 3, 1917.




Which is not a portrait of any living individual, but merely an imaginary picture.
*Particular description of goods.*—Cleansing-Cream, Tissue-Cream, Astringent Lotion, Complexion-Powder, and Liquid Rouge.
*Claims use* since Feb. 1, 1910.

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Ser. No. 101,909. (CLASS 6. CHEMICALS, MEDICINES AND PHARMACEUTICAL PREPARATIONS.) IRVIN N. GLOVER, Bailey, N. C. Filed Mar. 6, 1917.



The portrait being that of the applicant.
*Particular description of goods.*—Medicated Salt Cake for Stock.
*Claims use* since Jan. 1, 1917.





Ser. No. 101,932. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) YASUTARO KAWAKAMI, Seattle, Wash. Filed Mar. 6, 1917.




*Particular description of goods.*—A Table Sauce to be Used with Meats, Cutlets, Shell-Fish, Soups, Sauces, Salads.
*Claims use* since Dec. 1, 1916.

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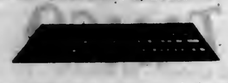
Ser. No. 101,967. (CLASS 10. FERTILIZERS.) SOUTHERN FERTILIZER & CHEMICAL COMPANY, Savannah, Ga. Filed Mar. 7, 1917.




*Particular description of goods.*—Fertilizers and Acid Phosphate.
*Claims use* since Dec. 1, 1916.

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Ser. No. 102,013. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) NEWELL & BRO., San Francisco, Cal. Filed Mar. 9, 1917.



*Particular description of goods.*—Scouring-Soap.
*Claims use* since the year 1879.

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Ser. No. 102,014. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) NEWELL & BRO., San Francisco, Cal. Filed Mar. 9, 1917.




*Particular description of goods.*—Kitchen and Laundry Soap.
*Claims use* since the year 1889.

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Ser. No. 102,015. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) NEWELL & BRO., San Francisco, Cal. Filed Mar. 9, 1917. Under ten-year proviso.

## STRYKER'S

*Particular description of goods.*—Scouring-Soap.
*Claims use* since June, 1888.

Ser. No. 102,080. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE KEROSENE MOTOR CO., Peoria, Ill. Filed Mar. 12, 1917.




*Particular description of goods.*—Manifolds, Carburetors, Air-Filters, and Internal-Combustion Motors.
*Claims use* since Nov. 1, 1916.

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Ser. No. 102,115. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROBERT H. HAMILTON, Millinocket, Me. Filed Mar. 13, 1917.



The same being a portrait of Robert H. Hamilton.
*Particular description of goods.*—A Gall Remedy.
*Claims use* since Nov. 1, 1916.

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Ser. No. 102,131. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN BANKING MACHINE CORPORATION, Dover, Del., and Saginaw, Mich. Filed Mar. 14, 1917.

## RECEIVING TELLER

*Particular description of goods.*—Stamp-Vending Machines.
*Claims use* since Oct. 15, 1916.

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Ser. No. 102,132. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ALBANY COCA-COLA BOTTLING COMPANY, Albany, Ga. Filed Mar. 14, 1917.

## FLINT ROCK

*Particular description of goods.*—Ginger-Ale, Grape-Juice, Root-Beer, and Soda-Waters.
*Claims use* since June 11, 1904.

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Ser. No. 102,135. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CURRY CHEMICAL COMPANY, Atlanta, Ga. Filed Mar. 14, 1917.



*Particular description of goods.*—Tooth-Lotions.
*Claims use* since Oct. 1, 1916.

Ser. No. 102,136. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CREEDOLIN CO., Philadelphia, Pa. Filed Mar. 14, 1917.

THE CREEDOLIN CO. CREEDOLIN

No claim being made to the words "Philadelphia, Pa." and "Trade Mark."

*Particular description of goods.*—A Substitute for Glycerin in the Manufacture of Glazed Kid.

*Claims use* since about July 1, 1916.

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Ser. No. 102,147. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LAPIN AND CALHUFF, Philadelphia, Pa. Filed Mar. 14, 1917.

"COLFAB"

*Particular description of goods.*—Powdered Substance for Removing Various Varieties of Stains from Fabrics; Grease-Remover; Remover of Perspiration from Articles of Wearing-Apparel; Nap-Reviver for Cloth and the Like; Straw-Hat Cleaner; Straw-Hat Dye; Cleaner for Kid; and Like Preparation for Cleaning and Renovating Articles of Apparel.

*Claims use* since about Sept. 1, 1916.

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Ser. No. 102,148. (CLASS 33. GLASSWARE.) MCKEE GLASS COMPANY, Jeannette, Pa. Filed Mar. 14, 1917.

GLASBAK

*Particular description of goods.*—Glass Baking-Dishes.

*Claims use* since Jan. 2, 1917.

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Ser. No. 102,165. (CLASS 33. GLASSWARE.) THE MARIETTA GLASS MFG. CO., Indianapolis, Ind. Filed Mar. 15, 1917.

*Particular description of goods.*—Glass Used in Counters, Soda-Fountains, Table-Tops, Panels, and Stools.

*Claims use* since April, 1912.

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Ser. No. 102,205. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JAMES H. WILY, South Bethlehem, Pa. Filed Mar. 16, 1917.

BIG - BANG

*Particular description of goods.*—Toy Gas-Cannons.

*Claims use* since Sept. 1, 1915.

Ser. No. 102,207. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE E. C. BROWN CO., Rochester, N. Y. Filed Mar. 17, 1917.

Auto Spray

No claim being made to the exclusive use of the word "Spray" apart from the mark shown.

*Particular description of goods.*—Spraying Apparatus.

*Claims use* since June, 1900.

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Ser. No. 102,234. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WOOD, PUTNAM & WOOD CO., Boston, MASS. Filed Mar. 17, 1917.

DEAD SURE

*Particular description of goods.*—A Poison for Rodents.

*Claims use* since Sept. 5, 1916.

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Ser. No. 102,276. (CLASS 17. TOBACCO PRODUCTS.) THE ALTON MERCANTILE COMPANY, Enid, Okla. Filed Mar. 20, 1917.

TAMCO

*Particular description of goods.*—Cigars.

*Claims use* since June 12, A. D. 1913.

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Ser. No. 102,314. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HERMAN HELLER, New York, N. Y. Filed Mar. 21, 1917.

Znora

*Particular description of goods.*—A Liquid Preparation to be Applied to and for the Relief of Tired, Aching, Swollen, and Excessively-Perspiring Feet, Chilblains, and Frost-Bites.

*Claims use* since Mar. 7, 1916.

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Ser. No. 102,321. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed Mar. 21, 1917.

ROOKIE

*Particular description of goods.*—Toilet-Paper.

*Claims use* since Mar. 14, 1917.





Ser. No. 102,372. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE COUNCIL TOOL COMPANY, Wananish, N. C. Filed Mar. 23, 1917.

DIXIE

*Particular description of goods.*—Automobile-Trailers.

*Claims use* since Aug. 1, 1916.

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Ser. No. 102,387. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PARIS FASHION COMPANY, Chicago, Ill. Filed Mar. 23, 1917.

Coconol

Consisting of the coined word "Coconol."

*Particular description of goods.*—Shampoos.

*Claims use* since about Mar. 10, 1917.

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Ser. No. 102,455. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE MILLER RUBBER COMPANY, Akron, Ohio. Filed Mar. 26, 1917.

BEE-QEE-BOO

*Particular description of goods.*—Balloons.

*Claims use* since Jan. 30, 1917.

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Ser. No. 102,471. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMSTRONG PACKING COMPANY, Dallas, Tex. Filed Mar. 27, 1917.

Yellow Bird

*Particular description of goods.*—Cooking-Oil.

*Claims use* since May, 1908.

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Ser. No. 102,474. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMSTRONG PACKING COMPANY, Dallas, Tex. Filed Mar. 27, 1917.

PLOVER

EMERALD

*Particular description of goods.*—Salad-Oil.

*Claims use* since Oct. 30, 1913.

Ser. No. 102,486. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) P. E. HARRIS & CO., Seattle, Wash. Filed Mar. 27, 1917.

PERISCOPE

*Particular description of goods.*—Canned Salmon.

*Claims use* since the year A. D. 1916.

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Ser. No. 102,488. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ERNST KIRSTEN, Oakland, Cal. Filed Mar. 27, 1917.

EL-MAR

*Particular description of goods.*—Canned Sardines.

*Claims use since* July 31, 1916.

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Ser. No. 102,491. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MUELLER-KELLER CANDY CO., St. Joseph, Mo. Filed Mar. 27, 1917.

E. E. E. E.

*Particular description of goods.*—Candy.

*Claims use* since Jan. 12, 1917.

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Ser. No. 102,499. (CLASS 17. TOBACCO PRODUCTS.) TESTA CIGAR CO., San Francisco, Cal. Filed Mar. 27, 1917.

EL RIO

*Particular description of goods.*—Cigars.

*Claims use* since Mar. 10, 1917.

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Ser. No. 102,500. (CLASS 17. TOBACCO PRODUCTS.) TESTA CIGAR CO., San Francisco, Cal. Filed Mar. 27, 1917.

ADELPHIA

*Particular description of goods.*—Cigars.

*Claims use* since Mar. 10, 1917.

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Ser. No. 102,510. (CLASS 31. FILTERS AND REFRIGERATORS.) BERNARD GLOEKLER COMPANY, Pittsburgh, Pa. Filed Mar. 28, 1917. Under ten-year proviso.

GLOEKLER

*Particular description of goods.*—Refrigerators and Ice-Boxes.

*Claims use* since the year 1881.

Ser. No. 102,608. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE AROMINT COMPANY, Cincinnati, Ohio. Filed Mar. 31, 1917.



*Particular description of goods.*—Candy.
*Claims use* since on or about July 15, 1915.

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Ser. No. 102,648. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FARRELL & Co., Omaha, Nebr. Filed Apr. 2, 1917.




*Particular description of goods.*—Peanut-Butter.
*Claims use* since Feb. 1, 1917.

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Ser. No. 102,691. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) NICHOLAS KOUTROULOS, New York, N. Y. Filed Apr. 3, 1917.

BYRON

The word "Byron," constituting said trade-mark, being printed in red color.
*Particular description of goods.*—Brandies.
*Claims use* since Feb. 15, 1917.

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Ser. No. 102,699. (CLASS 17. TOBACCO PRODUCTS.) REYNALDO CIGAR COMPANY, INC., Philadelphia, Pa. Filed Apr. 3, 1917.

Reynaldo

*Particular description of goods.*—Cigars, Cheroots, and Little Cigars.
*Claims use* since October, 1916.

Ser. No. 102,763. (CLASS 17. TOBACCO PRODUCTS.) THE BEAU-SITE COMPANY, New York, N. Y. Filed Apr. 6, 1917.




*Particular description of goods.*—Cigars and Cigarettes.
*Claims use* since Mar. 3, 1917.

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Ser. No. 102,796. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SCHUSTER COMPANY, Cleveland, Ohio. Filed Apr. 7, 1917.




*Particular description of goods.*—Flavoring Extracts for Confectioners', Bakers', Ice-Cream-Manufacturers', and Household Use.
*Claims use* since Dec. 8, 1914.

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Ser. No. 102,812. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) RICHARD KELLY, New York, N. Y. Filed Apr. 7, 1917.

KELOID

*Particular description of goods.*—Oil-Paints, Ready-Mixed Paints, Cold-Water Paints, Dry Paints, Varnishes, and Paint-Oils.
*Claims use* since May, 1916.

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Ser. No. 102,821. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEO E. SCHOENFELD, Chicago, Ill. Filed Apr. 7, 1917.

*Domino*

*Particular description of goods.*—Olive-Oil.
*Claims use* since Mar. 29, 1917.





Ser. No. 102,828. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAMUEL GOLDBERG, Los Angeles, Cal. Filed Apr. 9, 1917.

BUTTER NUGGETS

*Particular description of goods.*—Candies.
*Claims use* since Jan. 1, 1913.

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Ser. No. 102,843. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ALVATONE LABORATORIES, East Orange, N. J. Filed Apr. 10, 1917.

ALVATONE

*Particular description of goods.*—Astringent Bactericide.
*Claims use* since July 1, 1915.

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Ser. No. 102,895. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) TEMPERANCE BEVERAGE COMPANY, Chicago, Ill. Filed Apr. 11, 1917.




*Particular description of goods.*—A Non-Intoxicating Cereal Beverage.
*Claims use* since December, 1915.

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Ser. No. 102,936. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM B. FINK, New York, N. Y. Filed Apr. 13, 1917.

BANQUET

*Particular description of goods.*—Ice-Cream.
*Claims use* since Apr. 20, 1914.

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Ser. No. 102,940. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG CO., Green Bay, Wis. Filed Apr. 13, 1917.

SIBERIAN BELLE

*Particular description of goods.*—Toilet-Paper.
*Claims use* since July 7, 1915.

Ser. No. 102,965. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAN FERNANDO LEMON ASSOCIATION, near San Fernando and Los Angeles, Cal. Filed Apr. 13, 1917.

ARISTOCRAT

*Particular description of goods.*—Lemons.
*Claims use* since Nov. 5, 1915.

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Ser. No. 102,969. (CLASS 17. TOBACCO PRODUCTS.) TESTA CIGAR CO., San Francisco, Cal. Filed Apr. 13, 1917.

EL BOY-TAN

*Particular description of goods.*—Cigars, Cigarettes, and Smoking-Tobacco.
*Claims use* since Aug. 28, 1916.

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Ser. No. 102,971. (CLASS 17. TOBACCO PRODUCTS.) TESTA CIGAR CO., San Francisco, Cal. Filed Apr. 13, 1917.

EL TITAN

*Particular description of goods.*—Cigars, Cigarettes, and Smoking-Tobacco.
*Claims use* since Dec. 2, 1916.

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Ser. No. 102,973. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TUSTIN HILLS CITRUS ASSOCIATION, Tustin, Cal. Filed Apr. 13, 1917.

ADVANCE

*Particular description of goods.*—Oranges.
*Claims use* since Nov. 1, 1909.

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Ser. No. 102,974. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TUSTIN HILLS CITRUS ASSOCIATION, Tustin, Cal. Filed Apr. 13, 1917.

LA VISTA

*Particular description of goods.*—Oranges.
*Claims use* since Nov. 1, A. D. 1909.

Ser. No. 102,990. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) LEONARD MARKELS, New York, N. Y. Filed Apr. 14, 1917.




*Particular description of goods.*—Phonographs, Mechanical Phonograph-Motors, and Phonograph Parts.
*Claims use* since Apr. 1, 1917.

Ser. No. 103,019. (CLASS 48. MALT EXTRACTS AND LIQUORS.) EVANSVILLE BREWING ASSN., Evansville, Ind. Filed Apr. 16, 1917.



*Particular description of goods.*—A Brewed Malt Non-Intoxicating Beverage.
*Claims use* since the year 1894.

Ser. No. 103,127. (CLASS 17. TOBACCO PRODUCTS.) Y. PENDAS & ALVAREZ, New York, N. Y. Filed Apr. 19, 1917.




*Particular description of goods.*—Cigars and Tobacco.
*Claims use* since about December, 1880.

Ser. No. 103,133. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE TEBBETTS AND GARLAND STORE, Chicago, Ill. Filed Apr. 19, 1917.

Lady Clementine

*Particular description of goods.*—Sarsaparilla, Ginger-Ale, Root-Beer, Birch-Beer, Grape-Juice, and Loganberry-Juice.
*Claims use* since May 1, 1916.

Ser. No. 103,145. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOSERO CO., Green Bay, Wis. Filed Apr. 20, 1917.



*Particular description of goods.*—Toilet-Paper.
*Claims use* since Apr. 27, 1914.

Ser. No. 103,212. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LAMBERT PHARMACAL COMPANY, St. Louis, Mo. Filed Apr. 23, 1917.

LISTERINE

*Particular description of goods.*—Toilet Creams.
*Claims use* since Jan. 10, 1917.

Ser. No. 103,296. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALBERT GEOFFROY, Erath, La. Filed Apr. 25, 1917.



The trade-mark is a reproduction of a photograph of myself.
*Particular description of goods.*—Medicine for External Use in the Treatment of Charbon, Lump-Jaw, Weak Back, and Rheumatism.
*Claims use* since June 1, 1915.





# TRADE-MARK REGISTRATIONS GRANTED

## MAY 22, 1917.

116,736. LEATHER AND CLOTH SHOES. BOYD-WELSH SHOE COMPANY, St. Louis, Mo.
Filed November 3, 1916. Serial No. 99,056. PUBLISHED JANUARY 23, 1917.

116,737. LEATHER. CARL E. SCHMIDT & CO., INC., Detroit, Mich.
Filed December 7, 1916. Serial No. 99,775. PUBLISHED FEBRUARY 6, 1917.

116,738. CERTAIN NAMED FOODS. ACME PACKING CO., Chicago, Ill.
Filed December 6, 1915. Serial No. 91,193. PUBLISHED FEBRUARY 13, 1917.

116,739. ELECTRIC LAMPS AND PARTS THEREOF. THE ADAMS-BAGNALL ELECTRIC CO., Cleveland, Ohio.
Filed January 8, 1917. Serial No. 100,413. PUBLISHED MARCH 20, 1917.

116,740. CHEWING-GUM. ADAMS BROTHERS, New York, N. Y.
Filed July 25, 1916. Serial No. 96,810. PUBLISHED MARCH 13, 1917.

116,741. TOILET-PAPER AND PAPER TOWELS. ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y.
Filed May 23, 1916. Serial No. 95,360. PUBLISHED MARCH 20, 1917.

116,742. TOILET-PAPER AND PAPER TOWELS. ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y.
Filed July 26, 1916. Serial No. 96,859. PUBLISHED MARCH 20, 1917.

116,743. PRINTED FOLDERS AND MAGAZINES ISSUED MONTHLY. MISHA APPELBAUM, New York, N. Y.
Filed December 2, 1916. Serial No. 99,672. PUBLISHED FEBRUARY 27, 1917.

116,744. INNERSOLING FOR SHOES. ARMSTRONG CORK COMPANY, Pittsburgh, Pa.
Filed November 21, 1916. Serial No. 99,427. PUBLISHED MARCH 6, 1917.

116,745. VARNISH; PAINT, DRY, PASTE, RED-MIXED, AND CERAMIC; SHELLAC VARNISH, JAPAN, ENAMEL, STAINS, AND FILLERS. CHICAGO VARNISH COMPANY, Chicago, Ill.
Filed October 28, 1916. Serial No. 98,940. PUBLISHED MARCH 20, 1917.

116,746. RUBBER BELTING, DUCK BELTING, RUBBER HOSE, DUCK HOSE, RUBBER, FLAX, AND ASBESTOS MACHINERY PACKING. THE CINCINNATI RUBBER MANUFACTURING COMPANY, Norwood, Ohio.
Filed August 21, 1916. Serial No. 97,498. PUBLISHED MARCH 6, 1917.

116,747. CIGARS. COONY BAYER CIGAR CO., Fort Wayne, Ind.
Filed June 26, 1916. Serial No. 96,186. PUBLISHED MARCH 13, 1917.

116,748. RUBBER BELTING AND RUBBER HOSE. CRANDALL PACKING COMPANY, Palmyra, N. Y., and Birmingham, Ala.
Filed December 26, 1916. Serial No. 100,160. PUBLISHED MARCH 13, 1917.

116,749. WIRE FENCING. THE CUSSINS & FEARN CO., Columbus, Ohio.
Filed February 15, 1917. Serial No. 101,379. PUBLISHED MARCH 20, 1917.

116,750. SALTED, SMOKED, AND PICKLED FISH, FRESH FISH, AND CANNED FISH. FRED L. DAVIS, Gloucester, Mass.
Filed February 2, 1917. Serial No. 101,122. PUBLISHED MARCH 13, 1917.

116,751. CHEWING-TOBACCO IN PLUG AND OTHER FORMS AND SMOKING-TOBACCO. JOSEPH G. DILL, INC., Richmond, Va.
Filed December 20, 1916. Serial No. 100,055. PUBLISHED MARCH 6, 1917.

116,752. FOUNDRY-FACINGS OF ALL SORTS. STANLEY DOGGETT, New York, N. Y.
Filed December 11, 1916. Serial No. 99,841. PUBLISHED MARCH 6, 1917.

116,753. LIQUID OR PASTE DETERGENT FOR THE HANDS, FABRICS, MACHINERY, LEATHER-DRESSING, AND A LUBRICANT. E. Y. B. ENGELMAN, Noxen, Pa.
Filed December 28, 1916. Serial No. 100,215. PUBLISHED MARCH 13, 1917.

116,754. TOY MOVING-PICTURE MACHINES. ARTHUR S. FERGUSON, Springfield, Mo.
Filed December 9, 1916. Serial No. 99,811. PUBLISHED MARCH 20, 1917.

116,755. ELECTRIC SUCTION-CLEANERS. MARSHALL FIELD & COMPANY, Chicago, Ill.
Filed April 11, 1916. Serial No. 94,322. PUBLISHED MARCH 20, 1917.

116,756. RUBBER TIRES. THE FISK RUBBER COMPANY, Chicopee Falls, Mass.
Filed January 31, 1917. Serial No. 101,063. PUBLISHED MARCH 6, 1917.

116,757. PAINTS, ESPECIALLY SHINGLE-PAINT. HENRY A. GARDNER, Washington, D. C.
Filed November 21, 1916. Serial No. 99,443. PUBLISHED DECEMBER 26, 1916.

116,758. SPARK-PLUGS. EMIL GROSSMAN MANUFACTURING CORPORATION, Brooklyn, N. Y.
Filed February 14, 1917. Serial No. 101,363. PUBLISHED MARCH 20, 1917.

116,759. FITTINGS FOR TRAVELING-BAGS, TRUNKS, &c., PARTICULARLY FOR PROTECTING FOOTWEAR AND THE LIKE CARRIED THEREIN. WM. GREILICH & SONS, Brooklyn, N. Y.
Filed April 7, 1915. Serial No. 85,746. PUBLISHED MARCH 13, 1917.

116,760. SMOKING-TOBACCO. GEORGE GUND, Cleveland, Ohio.
Filed January 19, 1917. Serial No. 100,741. PUBLISHED FEBRUARY 27, 1917.

116,761. NATURAL AND ARTIFICIAL MINERAL WATER. JOHN C. HAGAN, Richmond, Va.
Filed February 17, 1917. Serial No. 101,444. PUBLISHED MARCH 20, 1917.

116,762. MANUFACTURED GLASS—NAMELY, LENSES FOR LANTERNS. F. A. HARDY & Co., Chicago, Ill.
Filed December 26, 1914. Serial No. 83,532. PUBLISHED FEBRUARY 27, 1917.

116,763. PUNCHES AND PINCERS. CARL C. HARRIS, Orange, Mass.
Filed January 17, 1916. Serial No. 92,194. PUBLISHED MARCH 20, 1917.

116,764. SUBSTITUTE FOR LEATHER AND RUBBER. ANDREW L. HATFIELD, Hillside, N. J.
Filed December 30, 1916. Serial No. 100,260. PUBLISHED MARCH 6, 1917.

116,765. POLISH FOR VEHICLE-BODIES AND THE LIKE. B. HELLER & Co., Chicago, Ill.
Filed February 26, 1916. Serial No. 93,121. PUBLISHED FEBRUARY 6, 1917.

116,766. PEANUT-BAGS. HOLCOMB & HOKE MFG. CO., Indianapolis, Ind.
Filed December 26, 1916. Serial No. 100,169. PUBLISHED MARCH 20, 1917.

116,767. HARD-RUBBER ACID-CONDUCTING PIPES. INDIA RUBBER COMPANY, New Brunswick, N. J., and New York, N. Y.
Filed January 15, 1917. Serial No. 100,624. PUBLISHED MARCH 6, 1917.

116,768. DOLLS. JANE GRAY CO., New York, N. Y.
Filed December 11, 1916. Serial No. 99,844. PUBLISHED MARCH 20, 1917.

116,769. INNER TUBES, LINERS AND PATCHES FOR THE SAME. KEYSTONE RUBBER MANUFACTURING COMPANY, Erie, Pa.
Filed January 25, 1917. Serial No. 100,926. PUBLISHED MARCH 13, 1917.

116,770. CERTAIN NAMED TOILET PREPARATIONS. HAROLD KORN, New York, N. Y.
Filed December 14, 1916. Serial No. 99,941. PUBLISHED MARCH 20, 1917.

116,771. BUTTER. GEORGE R. LINN, Chicago, Ill.
Filed January 26, 1917. Serial No. 100,961. PUBLISHED MARCH 13, 1917.

116,772. CERTAIN NAMED FURNACES AND BOILERS AND PARTS AND DEVICES FOR SAME. LOCOMOTIVE PULVERIZED FUEL COMPANY, New York, N. Y.
Filed September 25, 1916. Serial No. 98,215. PUBLISHED MARCH 6, 1917.

116,773. PLASTIC OR PASTE COMPOSITION FOR CLEANING THE HANDS, WOOD, METAL, EARTHENWARE AND ENAMELED WARE. NORMAN R. MCAFEE, Pittsburgh, Pa.
Filed December 9, 1915. Serial No. 91,354. PUBLISHED MARCH 13, 1917.

116,774. PERIODICAL OR JOURNAL PUBLISHED MONTHLY. FRANKLIN MACVEAGH & COMPANY, Chicago, Ill.
Filed December 29, 1916. Serial No. 100,241. PUBLISHED MARCH 6, 1917.

116,775. ARC-LAMPS, ELECTRIC LAMPS, THEIR ACCESSORIES AND SUPPLIES. KÖRTING & MATHIESEN AKTIENGESELLSCHAFT, Leutzsch, near Leipzig, Germany.
Filed June 22, 1915. Serial No. 87,499. PUBLISHED MARCH 20, 1917.

116,776. HOSE MADE PARTLY OF RUBBER AND PARTLY OF COTTON. THE MANHATTAN RUBBER MFG. CO., New York, N. Y.
Filed July 25, 1916. Serial No. 96,833. PUBLISHED MARCH 6, 1917.

116,777. MACHINERY PACKING MADE PARTLY OF RUBBER AND PARTLY OF ASBESTOS. THE MANHATTAN RUBBER MFG. CO., New York, N. Y.
Filed July 25, 1916. Serial No. 96,844. PUBLISHED FEBRUARY 27, 1917.

116,778. RUBBER COMPOSITION IN SHEET FORM. THE MANHATTAN RUBBER MFG. CO., New York, N. Y.
Filed October 23, 1916. Serial No. 98,839. PUBLISHED FEBRUARY 27, 1917.

116,779. ARTIFICIAL LURES—VIZ., SPOONS, WABBLERS, AND SPINNERS. MIN-NIX COMPANY, Rochester, N. Y.
Filed January 11, 1917. Serial No. 100,536. PUBLISHED MARCH 20, 1917.

116,780. SMOKING-PIPES. MOCHA PIPE COMPANY, Newark, N. J.
Filed September 9, 1916. Serial No. 97,878. PUBLISHED MARCH 6, 1917.

116,781. HOT-AIR FURNACES. THE MONITOR STOVE & RANGE CO., Cincinnati, Ohio.
Filed January 5, 1917. Serial No. 100,371. PUBLISHED MARCH 6, 1917.

116,782. FLOOR DRESSINGS AND POLISHES. NATIONAL PAPER PRODUCTS COMPANY, San Francisco, Cal.
Filed January 2, 1917. Serial No. 100,303. PUBLISHED MARCH 20, 1917.

116,783. FOOD PRODUCT CONSISTING OF PREPARED ANIMAL MILK. NIANA PURE FOOD COMPANY, Waukesha, Wis.
Filed December 27, 1916. Serial No. 100,204. PUBLISHED MARCH 13, 1917.

116,784. MINERAL WATERS. A/S. NORSKE MINERALKILDER, Larvik, Norway.
Filed October 10, 1916. Serial No. 98,543. PUBLISHED JANUARY 23, 1917.

116,785. GEOGRAPHICAL MAPS. PAUL PARNITZKY, New York, N. Y.
Filed January 6, 1917. Serial No. 100,402. PUBLISHED MARCH 6, 1917.

116,786. SOLE-LEATHER. J. PASKUS & SON, INC., New York, N. Y.
Filed October 12, 1916. Serial No. 98,606. PUBLISHED DECEMBER 5, 1916.

116,787. NEWSPAPER-SUPPLEMENTS. THE PICTURE PRESS, INC., New York, N. Y.
Filed January 8, 1917. Serial No. 100,447. PUBLISHED MARCH 6, 1917.

116,788. TOOTH-PASTE AND BEAUTY-POWDER—VIZ., FACE AND TOILET POWDER. THE POMPEIAN MFG. CO., Cleveland, Ohio.
Filed January 31, 1917. Serial No. 101,069. PUBLISHED MARCH 20, 1917.

116,789. TOY DRESSMAKING OUTFIT. KATHERINE A. RAUSER, Chicago, Ill.
Filed September 20, 1916. Serial No. 98,123. PUBLISHED MARCH 20, 1917.

116,790. DISINFECTANTS. ISIDORE REBSLER, Detroit, Mich.
Filed October 9, 1916. Serial No. 98,527. PUBLISHED OCTOBER 31, 1916.

116,791. ALLOY FOR BEARINGS, IN INGOTS, CASTINGS, OR FORGINGS. RALPH E. RICH, Chicago, Ill.
Filed February 8, 1917. Serial No. 101,242. PUBLISHED MARCH 13, 1917.

116,792. WATER-TUBE BOILERS. THE ROBERTS SAFETY WATER TUBE BOILER CO., Red Bank, N. J.
Filed March 25, 1916. Serial No. 93,878. PUBLISHED MARCH 6, 1917.

116,793. NEWSPAPER-SUPPLEMENTS. ROTOFOTOS, INC., New York, N. Y.
Filed January 8, 1917. Serial No. 100,451. PUBLISHED MARCH 6, 1917.

116,794. DRESS-FASTENERS AND SNAP-FASTENERS. SAMSTAG & HILDER BROS., New York, N. Y.
Filed January 19, 1917. Serial No. 100,755. PUBLISHED MARCH 20, 1917.

116,795. ELECTROLYTE. ISAIAH C. SCUDDER, New York, N. Y.
Filed November 22, 1916. Serial No. 99,477. PUBLISHED JANUARY 30, 1917.

116,796. ANTISEPTIC LINIMENT FOR SPRAINS, STIFF JOINTS, BRUISES, RHEUMATISM, NEURALGIA, AND SIMILAR AILMENTS. SENGER DRUG CO., Danville, Ill.
Filed November 6, 1916. Serial No. 99,137. PUBLISHED MARCH 20, 1917.



116,797. DOLLS. HENRY SIEBEN, Kansas City, Mo.
Filed February 6, 1917. Serial No. 101,195. PUBLISHED MARCH 20, 1917.

116,798. NURSERS, NURSING-BOTTLES, AND RUBBER NIPPLES. DEWANE B. SMITH, Utica, N. Y.
Filed December 23, 1916. Serial No. 100,143. PUBLISHED MARCH 20, 1917.

116,799. METALLIC ROTARY SUCTION-VALVES AND METALLIC ROTARY CHECK-VALVES. THE M. SMOLENSKY MANUFACTURING CO., Cleveland, Ohio.
Filed October 23, 1916. Serial No. 98,849. PUBLISHED MARCH 20, 1917.

116,800. ALL SAWS, CHISELS, HATCHETS, FILES, AXES, AND ADZES. SOUTHERN RAILWAY SUPPLY AND EQUIPMENT CO., St. Louis, Mo.
Filed January 25, 1917. Serial No. 100,939. PUBLISHED MARCH 20, 1917.

116,801. CIGARS. SIDNEY S. SPEIER, Louisville, Ky.
Filed February 28, 1916. Serial No. 93,158. PUBLISHED MARCH 13, 1917.

116,802. INNER TUBES. THE STANDARD TIRE AND RUBBER MANUFACTURING COMPANY, Cleveland, Ohio.
Filed January 29, 1917. Serial No. 101,024. PUBLISHED MARCH 6, 1917.

116,803. RUBBER MATTING. STANDARD WOVEN FABRIC COMPANY, Walpole, Mass.
Filed December 20, 1916. Serial No. 100,073. PUBLISHED FEBRUARY 27, 1917.

116,804. NEWSPAPER-SECTION. STAR COMPANY, New York, N. Y.
Filed February 18, 1916. Serial No. 92,954. PUBLISHED FEBRUARY 27, 1917.

116,805. WHISKY. THE TEBBETTS & GARLAND STORE, Chicago, Ill.
Filed February 15, 1917. Serial No. 101,410. PUBLISHED MARCH 20, 1917.

116,806. TOILET SOAPS, LAUNDRY SOAPS, SCOURING-SOAPS, WASHING-POWDER, WASHING-TABLETS, AND SILVER-POLISH. UNION PACIFIC TEA COMPANY, New York, N. Y.
Filed February 4, 1916. Serial No. 92,643. PUBLISHED MARCH 13, 1917.

116,807. CIGARS. UNITED CIGAR MANUFACTURERS COMPANY, New York, N. Y.
Filed January 15, 1917. Serial No. 100,601. PUBLISHED FEBRUARY 27, 1917.

116,808. RUBBER NIPPLES. UNITED DRUG COMPANY, Boston, Mass.
Filed November 20, 1914. Serial No. 82,721. PUBLISHED NOVEMBER 14, 1916.

116,809. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF. WANDERER-WERKE VORM. WINKLHOFER & JAENICKE AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany.
Filed April 12, 1913. Serial No. 69,761. PUBLISHED MARCH 20, 1917.

116,810. NUTS. WESTERN SCREW & LOCK-NUT CO., San Francisco, Cal.
Filed February 15, 1917. Serial No. 101,417. PUBLISHED MARCH 20, 1917.

116,811. CERTAIN NAMED PAINTS AND PAINTERS' SUPPLIES. THE A. WILHELM COMPANY, Reading, Pa.
Filed July 10, 1916. Serial No. 96,478. PUBLISHED OCTOBER 24, 1916.

116,812. CORN-SOLVENT, DANDRUFF REMEDY, AND HEADACHE-TABLETS. WILLIAM C. YOUNG, Buffalo, N. Y.
Filed June 7, 1916. Serial No. 95,688. PUBLISHED MARCH 20, 1917.

116,813. OYZO, KONIAK, MATIKA, AND ARAK. S. F. ZALOOM & CO., New York, N. Y.
Filed February 8, 1917. Serial No. 101,249. PUBLISHED MARCH 13, 1917.

## TRADE-MARK REGISTRATIONS CANCELED.

113,739. GLASS. INTERNATIONAL GLASS COMPANY, Millville, N. J., and Philadelphia, Pa.
Registered October 5, 1916. Canceled April 27, 1917.

# LABELS

## REGISTERED MAY 22, 1917.

20,103.—*Title:* "AUNT JEMIMA." (For Pancake, Buckwheat, Corn, and Wheat Flours.) AUNT JEMIMA MILLS COMPANY, St. Joseph, Mo. Filed April 27, 1917.

20,104.—*Title:* "THE FACE VEIL." (For Veils.) N. B. COHEN, Scranton, Pa. Filed May 8, 1917.

20,105.—*Title:* "GOULED EMBROIDERED INITIALS." (For Embroidered Initials.) GOULED EMBROIDERY WORKS, Union Hill, N. J. Filed May 3, 1917.

20,106.—*Title:* "KA-DENE." (For Ointment.) THE KU-RALL MEDICINE CO., Nashville, Tenn. Filed April 23, 1917.

20,107.—*Title:* "R. E. MAIER'S VERIBEST." (For a Polishing and Cleaning Compound.) R. E. MAIER & Co., Chicago, Ill. Filed December 11, 1916.

20,108.—*Title:* "STOP." (For Hair-Tonic.) GEORGE MELCHES, Chicago, Ill. Filed March 24, 1917.

20,109.—*Title:* "REACH WHIPPET GOLF BALLS." (For Golf-Balls.) A. J. REACH CO., Philadelphia, Pa. Filed April 9, 1917.

20,110.—*Title:* "REACH PARAMOUNT GOLF BALLS." (For Golf-Balls.) A. J. REACH CO., Philadelphia, Pa. Filed April 9, 1917.

20,111.—*Title:* "REACH METEOR GOLF BALLS." (For Golf-Balls.) A. J. REACH CO., Philadelphia, Pa. Filed April 9, 1917.

20,112.—*Title:* "REACH NEW SCOTTY GOLF BALLS." (For Golf-Balls.) A. J. REACH CO., Philadelphia, Pa. Filed April 9, 1917.

20,113.—*Title:* "HONOR BRAND." (For Crape-Tissue.) SAUQUOIT TOILET PAPER CO., New Hartford, N. Y. Filed March 7, 1917.

20,114.—*Title:* "WHITE KING SQUAB SOUP." (For Squab Soup.) WHITE KING SQUAB PRODUCTS CO., Vineland, N. J. Filed April 6, 1917.

20,115.—*Title:* "FRENCH RHEUMATISM CURE." (For a Cure for Rheumatism.) EMMA HAZELL, Philadelphia, Pa. Filed September 19, 1916.

# PRINTS

## REGISTERED MAY 22, 1917.

4,694.—*Title:* "THERE'S A REASON." (For Postum Cereal.) POSTUM CEREAL COMPANY, Battle Creek, Mich. Filed May 3, 1917.

4,695.—*Title:* "ADVISOR." (For Hosiery.) DAVID WEIL'S SONS LITHOGRAPHIC CO., Brooklyn, N. Y. Filed May 7, 1917.



# DECISIONS

OF THE

# COMMISSIONER OF PATENTS

AND OF

# UNITED STATES COURTS IN PATENT CASES.

## COMMISSIONER'S DECISIONS.

### EX PARTE KIRBY.

*Decided July 1, 1916.*

PATENTABILITY—HANDLE—CONVENIENCE OF OPERATION.

**The combination, with the handle of a vacuum-cleaner having an upper curved and hollow end containing the motor-switch, of a rotatable cap upon the end of the handle to control the switch, presents a compact and convenient arrangement by which the movement of the cleaner and the position of the switch can be controlled by one hand and is patentable.**

[This application has resulted in Patent No. 1,195,363.]

APPEAL from Examiners-in-Chief.

HANDLE-SWITCH FOR SUCTION-CLEANERS.

*Messrs. Hull & Smith* for the applicant.

WHITEHEAD, *Assistant Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the decision of the Primary Examiner in finally rejecting claims 2 to 8, inclusive, and 12 to 14, inclusive, of which the following will serve as examples:

2. In an electrically operated suction cleaner of the type wherein a casing containing a motor and a suction device is arranged to be pushed along the floor by means of a handle secured thereto, the combination with the handle, of a hollow casing receiving and rigidly connected to the end of said handle, said casing having an integral portion deflected downwardly at an oblique angle, an electrical switch in said casing and operatively connected to said motor, and a rotatable member carried by said deflected portion and arranged with its axis parallel with said deflected portion and operatively connected to said switch.

5. A switch casing for cleaner handles comprising a hollow shell having its end portions disposed at an angle to each other, one of said portions being adapted to receive the end of the handle and the other having a rotatable cap fitted to the end thereof, and switch mechanism in said casing and operatively connected to said cap.

13. In a device of the character described, the combination, with an operating handle, of a switch casing comprising a hollow shell and having one end secured to said handle, switch mechanism in said shell and having a rotatable stud axial with the other end thereof, and a rotatable cap having a cylindrical portion overlapping the end of said shell and having a convex terminal portion forming a rounded continuation of said shell, said cap being operatively connected to said stud and having its portion adjacent to said shell of greater diameter than said shell and exteriorly roughened.

The references are: Latta, 391,900, October 30, 1888; Dickerson, 666,956, January 29, 1901; Batcheller, 703,369, July 1, 1902; Perkins, 756,979, April 12, 1904; Hafemeister, 940,311, November 16, 1909; Kirby, design, 44,173, June 10, 1913.

The Examiner rejected all of the claims except claim 9; but no appeal was taken from the decision of the Examiners-in-Chief affirming the rejection of claims 1 and 11, and claim 10 was allowed by them.

The application shows a vacuum-cleaner the upper end of the handle of which is curved and contains a switch for controlling the motor, the end of the curved portion being closed by a rotatable cap operably connected to the switch. It is stated that by this construction the switch can be operated by the same hand that is used in moving the cleaner.

Claim 1, as to which no appeal was taken, was rejected on the ground that it provides merely for the placing of a switch in one of the two angularly-related portions of the handle. There would clearly be nothing patentable in merely curving the end of the handle of a vacuum-cleaner in order that it may be more readily grasped by the hand of the operator; nor would there be any invention in the mere placing of a switch therein.

By placing the rotatable cap upon the end of the handle applicant has made a compact and convenient arrangement by which the movement of the cleaner and the switch can be controlled by one hand. Claims 5, 6, and 7 define this construction; but they seem to be substantially the same. Applicant is entitled to any one of these claims, but not to all three.

Claims 2, 3, and 4 do not define the patentable novelty. Claim 2 merely specifies that one member is rotatable, claim 3, which includes a rotatable cap, does not state that it is connected to the switch, and claim 4 specifies merely that the hollow shell is made of two portions of different diameters, the switch being placed in the larger portion. It would appear to be a mere matter of choice whether the two portions of the shell were made of the same diameter or not.

Claim 8 does not properly describe applicant's construction for the reasons fully pointed out in the decision of the Examiners-in-Chief.

Claims 12 and 13 are regarded as allowable. Claim 14 is not patentable over Dickerson.

The decision of the Examiners-in-Chief is affirmed as to claims 2, 3, 4, 8, and 14 and reversed as to the remaining claims, subject to the holding that the applicant is entitled to only one of the claims, 5, 6, and 7.

## EX PARTE HUSTED.

*Decided July 25, 1916.*

INVENTION—NEW RESULT—COMMUNION-TRAY.

A communion-tray having a series of small openings to receive full cups and hold them in an elevated position, each opening closely contiguous to a larger opening by which the empty cup may be held in a lower position, *Held* to present patentable invention over a reference showing a large group of small openings surrounded by a single ring of larger perforations, where it appears that the novel arrangement not only accomplishes the desired end in a manner not contemplated in the reference, but accomplishes additional results.

[This application has resulted in Patent No. 1,199,987.]

ON APPEAL from Examiners-in-Chief.

COMMUNION-TRAY.

*Mr. Richard B. Owen* for the applicant.

CLAY, *Assistant Commissioner:*

Applicant appeals from the action of the Board of Examiners-in-Chief in sustaining the Primary Examiner's rejection of applicant's claim for a patent upon certain improvements in communion-trays, defined by the applicant in his appealed claim as follows:

A tray having a plurality of openings formed therein, certain of said openings being larger in diameter than the remaining openings, the smaller of said openings arranged between the larger of said openings, the smaller of said openings adapted to receive filled receptacles, the other of said openings adapted to receive the receptacles when emptied, the receptacle when supported by the smaller of said openings being elevated above the plane of the receptacles supported by the larger of said openings whereby receptacles in the smaller of said openings will be so positioned that access can be had thereto by means of their spaced apart relation and their elevation above receptacles in the larger of said openings.

The ground of rejection is that applicant's structure is an obvious modification of the structure shown in the reference patent to Thomas, No. 1,061,026, of May 6, 1913, for a communion-service tray, and does not amount to invention.

Applicant's invention is in the structure of a tray for holding the individual conical cups or glasses employed in church communion service. Its essence seems to be the arrangement of apertures in the top of the tray for holding these cups in a particular manner for several particular purposes—namely, that the filled cups will stand in elevated and separated position, ready of access, that each cup stands closely contiguous to a larger opening which is obviously to receive the cup after it has ben used and to hold it in such position that it is not liable to be again used. The perforations are shown arranged in continuous series with alternate large and small openings.

The reference patent to Thomas presents incidentally a tray-top perforated to hold the cups, having a large group of thirty-four small perforations surrounded by a single ring of seventeen perforations of larger size—

intended to receive empty glasses that are handed back by the communicants.

The view of the Primary Examiner, apparently adopted by the Board, though expressed at some length in his statement, does not seem to attach sufficient importance to the real functions of applicant's improvement. This is partly because applicant's own statement of the functions performed by his device was not full or accurate.

If applicant has succeeded, by however simple a change, in avoiding the use of the same communion cup by more than one person, in lessening the danger of contamination by inserting the fingers in other cups, and in making the ceremony of taking communion more quiet and private, it is not a light matter to deny him the quality of invention. The Thomas patent is entirely directed at the form of the tray-body itself, which is designed for the purpose of nesting several trays together and holding them securely. Nowhere is there any point made of the arrangement of apertures for holding the cups, and it is doubtful whether it was the intention of the patentee to have the cups replaced in the tray by the individual user at all. There is apparently no suggestion even of the advisability of preventing a person from taking up one of the used cups. On the contrary, it is quite likely that this would happen because there is every invitation to put the used cup back in the same aperture from which it has been removed, and there is, in fact, not enough room in the larger apertures for placing all of the used cups even if it were desired to be done. Nothing in the patent suggests that the filled cups are to stand higher than the used cups, although it will of course happen that the empty cups will stand at a lower level in the larger outside openings 12 *if* they are conical in form, *if* the padding 13 does not interfere, and *when* there is only one cup in each aperture.

So far as the language at page 1, line 79, referred to by the Board, is concerned, it is not obvious what the patentee means, and it is quite possible that the word "however" refers to the previous statement that the group of inner apertures are smaller than the outer apertures, the suggestion being that the larger apertures might be put in the middle instead of around the periphery of the tray.

It is necessary not only to regard the functions of applicant's device, but to consider the circumstances of its use. The taking of communion is a quiet and solemn ceremony, in which the communicant is often in an emotional state, desirous of the greatest privacy and yet surrounded by strangers. Sometimes he merely touches the wine to his lips, leaving the cup full, and this it may not be agreeable to have observed. Under such circumstances he is apt to take hold of the first accessible cup and after use to put it back in the first opening he can find. The obvious invitation to place it out of sight in the large opening immediately contiguous to the one from which he took it seems to insure that it will be placed where it cannot be used again; also, the fact that the unused cups stand in elevated and separated position, with ample open space all around them, makes it easy to get an unused cup quietly and unlikely that the fingers will be dipped into other cups.

A brief examination of the file of the reference patent to Thomas disclosed that it was prosecuted vigorously and extensively without there having even been any mention either by the patentee or the Office of the arrangement of apertures in the tray or any function therefor. It appears also that holders for individual communion-cups have been the subject of invention and patent for a period of some dozen of years, at least, before Thomas and the present applicant and that the only suggestion of arranging the apertures for any of applicant's purposes (Patent No. 697,247, April 8, 1902, to Harris) was the use of several circumferential terraces of holes at different elevations in order to better the access to the cups. It is unsafe to say that an improvement, however simple, is obvious, when, as a matter of fact, it has been looked for and not found. The question is what does the invention do? (*General Electric Co.* v. *Hill-Wright*, 174 Fed. Rep., 996 to bottom 998.)

A novel arrangement which accomplishes the applicant's several desired ends presents invention enough to support a patent, and the action of the Board is overruled.

In substance both of the claims submitted by the applicant should be allowed; but it is suggested that they might well be put in better form.* It is also suggested (what appears to have escaped the attention both of the applicant and the Examiner) that the specification, even if not the claim, should specify that the cups are of tapered or conical form, since otherwise the desired function of the different-sized apertures would not be attained. Proper amendment should be required within thirty days.

*A communion-tray for supporting tapered cups, comprising a top having a series of alternately-arranged large and small openings adapted to support the cups in elevated position in the small openings and in substantially depressed position in the larger openings, substantially as and for the purpose described.





## DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

### ENGLE v. MANCHESTER AND SPOONER.

*Decided March 6, 1917.*

1. SERVICE OF PROCESS—EXEMPTION FROM SERVICE—EXTENT.

The exemption from service of civil process while in attendance upon a hearing before a judicial tribunal and for a reasonable time in going and returning extends to all forms of process of a civil character.

2. SAME—SAME—DURING INTERFERENCE PROCEEDINGS.

Non-residents present in the District of Columbia solely for attendance on the taking of testimony in interference proceedings in the Patent Office between themselves and a rival inventor are exempt from service of subpœna in a suit brought by such rival against them in the courts of the District.

3. SAME—PRIVILEGE—PRACTICE—MOTION TO DISMISS.

When in a motion to vacate service the question of privilege, involving facts not apparent from the record, was raised by motion to dismiss, *Held* the better practice would require the filing of a plea in abatement.

*Mr. Henry E. Davis* and *Mr. A. L. Newmyer* for the appellant.

*Mr. W. C. Sullivan* for the appellees.

SHEPARD, *C. J.:*

June 1, 1916, George S. Engle filed his bill in the Supreme Court of the District of Columbia against Manchester and Spooner in which it was alleged that for many years plaintiff had been engaged in making and perfecting a certain invention of a primary electrical battery, which he describes, and that for eleven years past he had prosecuted his invention in the State of Rhode Island and the District of Columbia, spending large sums of money in experimental work, maintenance of a shop, etc.; that during five or more years up to, to wit, December, 1912, he employed the defendants, Manchester and Spooner, to help him set up and demonstrate parts of said battery, which work they performed entirely under direction of plaintiff; that they were paid for their services by said Engle, which were wholly confined to the developing of the original idea of said plaintiff, and entirely ancillary and auxiliary to the development of his said inventions; that said inventions are of great value, and for the purpose of protecting his rights said plaintiff on October 8, 1912, filed in the United States Patent Office applications for Letters Patent thereon, which applications are now pending in said Office. He further avers that thereafter the defendants fraudulently, intending to reap for themselves the benefit of said invention, and to rob and defraud the said Engle of his inventions, and to claim them for themselves, on, to wit, February 1, 1913, made application jointly for joint patents on the plaintiff's said inventions for the domain of Great Britain, which said patent was accepted November 13, 1913, and for the Republic of France on March 13, 1913, which said French Letters Patent were delivered May 26, 1913, and published August 2, 1913.

Plaintiff avers that said French and British patents were procured through false oaths and fraud on the part of the said defendants in claiming to be the real inventors of said inventions, when they knew that plaintiff was the real inventor thereof, and that they were his employees learning secrets in his employ, and attempting to claim them as their own, and when they knew that he had applied for Letters Patent on the same in the United States Patent Office.

That by reason of the fact that plaintiff is the inventor and owner of said patents, and is entitled to the protection of patents for said invention, not only in the United States, but in foreign countries, by process of law he is entitled to have the said patents so fraudulently and falsely issued to the defendants in France and Great Britain assigned to him as the real owner thereof. He is informed that said British and French patents are in the names of said defendants and have not been assigned by them, and even so, cannot deprive him of his right in the premises, and further, that he is entitled to have the benefits of any pecuniary profit, contracts, or licenses, which the said defendants may have sought to execute or grant by virtue of said patents.

He prays for a restraining order to the defendants from conveying or attempting to convey the aforesaid British and French patents, or any interest therein, or any rights thereunder, except to the plaintiff or his assigns, and that upon a final hearing

## EX PARTE HUSTED.

*Decided July 25, 1916.*

INVENTION—NEW RESULT—COMMUNION-TRAY.

A communion-tray having a series of small openings to receive full cups and hold them in an elevated position, each opening closely contiguous to a larger opening by which the empty cup may be held in a lower position, *Held* to present patentable invention over a reference showing a large group of small openings surrounded by a single ring of larger perforations, where it appears that the novel arrangement not only accomplishes the desired end in a manner not contemplated in the reference, but accomplishes additional results. [This application has resulted in Patent No. 1,199,987.]

ON APPEAL from Examiners-in-Chief.

COMMUNION-TRAY.

*Mr. Richard B. Owen* for the applicant.

CLAY, *Assistant Commissioner:*

Applicant appeals from the action of the Board of Examiners-in-Chief in sustaining the Primary Examiner's rejection of applicant's claim for a patent upon certain improvements in communion-trays, defined by the applicant in his appealed claim as follows:

A tray having a plurality of openings formed therein, certain of said openings being larger in diameter than the remaining openings, the smaller of said openings arranged between the larger of said openings, the smaller of said openings adapted to receive filled receptacles, the other of said openings adapted to receive the receptacles when emptied, the receptacle when supported by the smaller of said openings being elevated above the plane of the receptacles supported by the larger of said openings whereby receptacles in the smaller of said openings will be so positioned that access can be had thereto by means of their spaced apart relation and their elevation above receptacles in the larger of said openings.

The ground of rejection is that applicant's structure is an obvious modification of the structure shown in the reference patent to Thomas, No. 1,061,026, of May 6, 1913, for a communion-service tray, and does not amount to invention.

Applicant's invention is in the structure of a tray for holding the individual conical cups or glasses employed in church communion service. Its essence seems to be the arrangement of apertures in the top of the tray for holding these cups in a particular manner for several particular purposes—namely, that the filled cups will stand in elevated and separated position, ready of access, that each cup stands closely contiguous to a larger opening which is obviously to receive the cup after it has ben used and to hold it in such position that it is not liable to be again used. The perforations are shown arranged in continuous series with alternate large and small openings.

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The view of the Primary Examiner, apparently adopted by the Board, though expressed at some length in his statement, does not seem to attach sufficient importance to the real functions of applicant's improvement. This is partly because applicant's own statement of the functions performed by his device was not full or accurate.

If applicant has succeeded, by however simple a change, in avoiding the use of the same communion cup by more than one person, in lessening the danger of contamination by inserting the fingers in other cups, and in making the ceremony of taking communion more quiet and private, it is not a light matter to deny him the quality of invention. The Thomas patent is entirely directed at the form of the tray-body itself, which is designed for the purpose of nesting several trays together and holding them securely. Nowhere is there any point made of the arrangement of apertures for holding the cups, and it is doubtful whether it was the intention of the patentee to have the cups replaced in the tray by the individual user at all. There is apparently no suggestion even of the advisability of preventing a person from taking up one of the used cups. On the contrary, it is quite likely that this would happen because there is every invitation to put the used cup back in the same aperture from which it has been removed, and there is, in fact, not enough room in the larger apertures for placing all of the used cups even if it were desired to be done. Nothing in the patent suggests that the filled cups are to stand higher than the used cups, although it will of course happen that the empty cups will stand at a lower level in the larger outside openings 12 *if* they are conical in form, *if* the padding 13 does not interfere, and *when* there is only one cup in each aperture.

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## DECISIONS OF THE U. S. COURTS.

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3. SAME—PRIVILEGE—PRACTICE—MOTION TO DISMISS.

When in a motion to vacate service the question of privilege, involving facts not apparent from the record, was raised by motion to dismiss, *Held* the better practice would require the filing of a plea in abatement.

*Mr. Henry E. Davis* and *Mr. A. L. Newmyer* for the appellant.

*Mr. W. C. Sullivan* for the appellees.

SHEPARD, *C. J.:*

June 1, 1916, George S. Engle filed his bill in the Supreme Court of the District of Columbia against Manchester and Spooner in which it was alleged that for many years plaintiff had been engaged in making and perfecting a certain invention of a primary electrical battery, which he describes, and that for eleven years past he had prosecuted his invention in the State of Rhode Island and the District of Columbia, spending large sums of money in experimental work, maintenance of a shop, etc.; that during five or more years up to, to wit, December, 1912, he employed the defendants, Manchester and Spooner, to help him set up and demonstrate parts of said battery, which work they performed entirely under direction of plaintiff; that they were paid for their services by said Engle, which were wholly confined to the developing of the original idea of said plaintiff, and entirely ancillary and auxiliary to the development of his said inventions; that said inventions are of great value, and for the purpose of protecting his rights said plaintiff on October 8, 1912, filed in the United States Patent Office applications for Letters Patent thereon, which applications are now pending in said Office. He further avers that thereafter the defendants fraudulently, intending to reap for themselves the benefit of said invention, and to rob and defraud the said Engle of his inventions, and to claim them for themselves, on, to wit, February 1, 1913, made application jointly for joint patents on the plaintiff's said inventions for the domain of Great Britain, which said patent was accepted November 13, 1913, and for the Republic of France on March 13, 1913, which said French Letters Patent were delivered May 26, 1913, and published August 2, 1913.

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That by reason of the fact that plaintiff is the inventor and owner of said patents, and is entitled to the protection of patents for said invention, not only in the United States, but in foreign countries, by process of law he is entitled to have the said patents so fraudulently and falsely issued to the defendants in France and Great Britain assigned to him as the real owner thereof. He is informed that said British and French patents are in the names of said defendants and have not been assigned by them, and even so, cannot deprive him of his right in the premises, and further, that he is entitled to have the benefits of any pecuniary profit, contracts, or licenses, which the said defendants may have sought to execute or grant by virtue of said patents.

He prays for a restraining order to the defendants from conveying or attempting to convey the aforesaid British and French patents, or any interest therein, or any rights thereunder, except to the plaintiff or his assigns, and that upon a final hearing

the said temporary restraining order be made permanent.

Second, that the said defendants, their agents and assigns, be required to assign to the plaintiff all rights to and under the aforesaid French and British patents, and all interest therein or therefrom.

Third, that the defendants be required to account to the plaintiff for all proceeds received under or by reason of said patents, and be required to turn over and deliver to the plaintiff all effects thereto appertaining, and that a personal decree be rendered against said defendants for any deficiency by reason of said patents.

Subpœnas were served on defendants personally June 1, 1916, by the marshal of the District of Columbia.

June 9th, 1916, defendants filed motions to vacate said process, and filed affidavits, from which it appears that defendants are non-residents of the District and residents of the State of Rhode Island; that on the 1st day of June, 1916, they were present in the city of Washington as parties to certain interference proceedings between themselves, on one hand, and George S. Engle, named as plaintiff in the above-entitled cause, on the other, then pending in the United States Patent Office; that they were, at the time aforesaid, as well as now, non-residents of the District of Columbia, and were, on the said date, in the city of Washington for the sole purpose of the taking of the testimony on behalf of the said George S. Engle in the said interference proceedings; that while actually in attendance upon the taking of the said testimony, and while said Engle was on the witness stand, and under cross-examination by counsel for the said Manchester, a deputy United States marshal entered the room where the said testimony was then and there being taken and attempted to serve upon the defendants a subpœna in the above-entitled cause by handing a copy of the same to them, which is hereto annexed.

A further affidavit sets out the interference proceedings in the Patent Office between plaintiff and defendants, and further avers that they came to Washington upon a telegram from their attorneys advising them of the taking of testimony in the city of Washington by the plaintiff and that it was essential to the proper protection of their interests in said interference proceedings that they be present during the taking of said testimony, and that they went to Washington for that purpose only.

On the hearing of the motion to vacate certain testimony was introduced, being a copy of the depositions of George E. Engle, from which it appears that he directed the preparation of the bill some time before service, and that when the parties appeared in the proceedings in this District he directed his attorneys to finish up the bill and institute suit, and to have the subpœnas served, and that they were served during the hearing before the notary in said interference case.

He further said that he directed the suit months ago, but supposed it had been delayed until the parties voluntarily appeared within the jurisdiction of the court; that he told his attorneys that they were here and to finish up and institute the suit and have the subpœnas served.

On June 26, 1916, the court granted said motion and ordered that the service of process upon the said defendants be vacated, set aside, and for naught held.

Plaintiff has appealed from this decree.

The question involved in this case is the privilege of the party who was served with civil process while in voluntary attendance upon a judicial hearing wherein his interests were involved. Plaintiff and defendants jointly were rival applicants for a patent for the invention described in the bill, and the interference had been duly declared in the Patent Office between them. The defendants, residing in Rhode Island, were in attendance upon the taking of the testimony of the plaintiff before an Examiner at the time of the service of this process in the city of Washington. Plaintiff was testifying at the time when the process was served and defendants had come to the place of hearing upon the advice of counsel that their attendance was important to them in the depending interference.

This question of privilege of a party to exemption from service of civil process while in attendance upon a hearing has been the subject of discussion in very many American cases. The following afford examples: *Netograph Mfg. Co.* v. *Scrugham*, (197 N. Y., 377;) *Parker* v. *Marco*, (136 N. Y., 585;) *Powell* v. *Pangborn*, (161 N. Y., App. Div., 458;) *Rix* v. *Sprague Co.*, (157 Wis., 572;) *Watson* v. *Judge*, (40 Mich., 729;) *Mitchell* v. *Huron*, (53 Mich., 541;) *Mulhearn* v. *Press Pub'g. Co.*, (53 N. J. L., 153;) *Bank* v. *Ames*, (39 Minn., 179;) *Breon* v. *Lumber Co.*, (83 S. C., 221;) *Bishop* v. *Vose*, (27 Conn., 1;) *Greer* v. *Young*, (120 Ill., 184;) *Tiedemann* v. *Tiedemann*, (35 Nev., 259.) These cases are not all in agreement as to the extent of the privilege. The Federal courts are in substantial agreement. (See *Larned* v. *Griffin*, 12 Fed., 590; *Nichols* v. *Horton*, 14 Fed., 327; *Kinne* v. *Lant*, 68 Fed., 436; *Hale* v. *Wharton*, 73 Fed., 739; *Central Trust Co.* v. *Milwaukee Railway Co.*, 74 Fed., 442; *Roschynialski* v. *Hale*, 201 Fed., 1017; *Stratton* v. *Hughes*, 211 Fed., 557; *Feister* v. *Hulick*, 228 Fed., 821.) There has been a division of opinion in the State courts upon whether the privilege is limited to actual arrest upon civil process without extending to exemption from ordinary civil process, but the tendency has been constantly to enlarge the right of privilege so as to afford full protection to suitors and witnesses from all forms of process of a civil character during their attendance before any judicial tribunal, and for a reasonable time in going and returning. This doctrine seems to be established by the weight of authority.

The question of privilege was raised by motion to dismiss, instead of by plea in abatement; but no exception was taken to the form of the pleading at the time although that point is made in the argument of counsel for the appellant. It is true that where a question involves matters of fact which are not apparent upon the record, the better practice would require the filing of a plea in abatement. (*Fischer* v. *Munsey Trust Co.*, 44 App. D. C., 212–216.) But the point is immaterial at this time because the facts involved are undisputed and it would serve no useful purpose to remand the cause for trial on this ground.

Public policy, the due administration of justice, and protection to the parties and witnesses alike demand the extension of this privilege, and whether the suit has been commenced by arrest or by mere summons of subpœna is immaterial. No one should be deterred from attending the place of trial by reason of liability to be sued in a foreign or distant jurisdiction. The proceeding in this case while one of interference in the Patent Office is judicial in its nature involving important private and public interests. The taking of testimony was proceeding in due order and the defendants having been advised of the importance of their attendance were within the protection of the privilege. The court was right in setting aside the process and its judgment is affirmed with costs.

Affirmed.





THE
# OFFICIAL GAZETTE
OF THE
# United States Patent Office.

Vol. 238—No. 5. TUESDAY, MAY 29, 1917. Price—$5 per year.

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| Patents | 323 | No. 1,227,561 to No. 1,228,382, | inclusive. |
| Designs | 28 | No. 50,838 to No. 50,899, | inclusive. |
| Trade-Marks | 55 | No. 116,814 to No. 116,871, | inclusive. |
| Labels | 30 | No. 23,116 to No. 23,134, | inclusive. |
| Prints | 6 | No. 4,695 to No. 4,701, | inclusive. |
| Reissues | 3 | No. 14,305 to No. 14,308, | inclusive. |
| Total | 941 | | |

## Notice—Trading with the Enemy.

On the 24th instant the President issued a proclamation permitting the payment by citizens of the United States of taxes, annuities, and fees required under the laws of the German Empire to keep alive patents granted to citizens of other countries.

A bill numbered H. R. 4704 was introduced on the 25th instant by Mr. Adamson, to define, regulate, and punish trading with the enemy, which contains numerous provisions authorizing and regulating payment of fees and filing of applications for patent by our citizens abroad and by enemies in this country and the granting of licenses and the bringing of suits under enemy-owned patents.

## Changes in Classification.

(Order No. 2,326.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., May 15, 1917.*

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 217, Wooden Receptacles, (Division XL,) establish the following subclasses and definitions:

Boxes—
Cells—
25.5. Block.
Plate—
26.5. Cupped.

25.5. BOXES, CELLS, BLOCK. The cells formed by depressions in a block of substantial depth.

Note.—Compare this class, subclasses 21, 26, 26.5, and 27.

26.5. BOXES, CELLS, PLATE, CUPPED. Plate-cells having cups as means for receiving the objects supported.

The patents contained in these subclasses have been taken for the most part from class 217, Wooden Receptacles, subclasses 26, Boxes, Cells, Plate, and 27, Boxes, Cells, Plate, Cushioned.

In same class, in subclasses 18, Boxes, Cells, and 26, Boxes, Cells, Plate, abolish the existing definitions and establish in lieu thereof the following definitions:

18. BOXES, CELLS. Boxes fitted with a series of compartments identical or similar in form, each for holding a single article—as an egg, fruit, bottle, etc.—of which the commercial egg-case is typical; also the structure of such a series of compartments irrespective of the means for supporting them in the receptacle.

Note.—This group of subclasses also includes means for holding a single article when such means is similar structurally to those covered by the subclass definitions.

Note.—Compare class 206, SPECIAL RECEPTACLES AND PACKAGES, subclass 65, Packages, Multiple article, Nested, stayed, or interbraced.

26. BOXES, CELLS, PLATE. The articles supported by relatively thin plates so disposed that the plane of the plate lies intermediate the planes defined by the ends of the objects supported.

Note.—Compare class 206, SPECIAL RECEPTACLES AND PACKAGES, subclass 9, Receptacles, Hat and headwear, Racks, frames, and rings.

THOMAS EWING,
*Commissioner.*

## Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., May 19, 1917.*

*Louis Kuntscher, his assigns or legal representatives, take notice:*

An interference having been declared by this Office between the application of The Favorita Co., of New York, N. Y., for registration of a trade-mark and trade-mark registered May 31, 1910, No. 78,166, to Louis Kuntscher, of Tarpon, Tex., and a notice of such declaration sent by registered mail to said Louis Kuntscher at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Louis Kuntscher, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
*First Assistant Commissioner.*

# APPLICATIONS UNDER EXAMINATION.

*Condition at Close of Business May 25, 1917.*

| Room No. | Divisions and subjects of invention. | Oldest new application and oldest action by applicant awaiting office action. New. | Amended | No. of applications awaiting action. |
|---|---|---|---|---|
| 314 | 1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers. | Apr. 17 | Apr. 20 | 242 |
| 128 | 2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco. | Jan. 24 | Jan. 28 | 437 |
| 175 | 3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working. | May 14 | Mar. 3 | 102 |
| 234 | 4. Conveyors; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists. | Apr. 23 | May 11 | 190 |
| 167 | 5. Bookbinding; Harvesters; Jewelry; Music | Feb. 14 | Apr. 23 | 216 |
| 318 | 6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation. | Oct. 9 | Mar. 17 | 338 |
| 312 | 7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes | Feb. 5 | Feb. 19 | 658 |
| 131 | 8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports. | Jan. 10 | Apr. 6 | 956 |
| 142 | 9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps | Jan. 2 | Apr. 28 | 406 |
| 235 | 10. Carriages and Wagons | Jan. 10 | Apr. 30 | 806 |
| 154 | 11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus. | Apr. 16 | Apr. 27 | 154 |
| 324 | 12. Journal-Boxes, Pulleys, and Shafting; Machine Elements | Mar. 14 | Apr. 12 | 592 |
| 329 | 13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning. | Mar. 6 | Apr. 27 | 513 |
| 307 | 14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working. | Feb. 7 | Mar. 16 | 239 |
| 308 | 15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics. | May 2 | May 9 | 188 |
| 109 | 16. Electric Signaling; Radiant Energy; Telegraphy; Telephony | Dec. 8 | Mar. 6 | 604 |
| 303 | 17. Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting. | Mar. 8 | May 4 | 141 |
| 327 | 18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Lubrication; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves. | Mar. 16 | Apr. 19 | 344 |
| 236 | 19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels | Feb. 1 | Mar. 12 | 491 |
| 179 | 20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking. | May 15 | May 9 | 139 |
| 182 | 21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling. | Feb. 6 | Apr. 6 | 350 |
| 240 | 22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships. | Dec. 22 | Mar. 6 | 672 |
| 379 | 23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism. | Jan. 27 | Aug. 26 | 314 |
| 144 | 24. Apparel; Apparel Apparatus; Sewing-Machines; Garment Supporters | Feb. 15 | Apr. 25 | 295 |
| 315 | 25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation. | Apr. 30 | May 7 | 109 |
| 105 | 26. Electricity, Generation; Motive Power | Dec. 12 | Feb. 28 | 544 |
| 375 | 27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus | Apr. 23 | Apr. 27 | 208 |
| 63 | 28. Internal-Combustion Engines | Apr. 3 | Apr. 3 | 345 |
| 147 | 29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools. | Jan. 17 | Apr. 6 | 386 |
| 132 | 30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines | Feb. 20 | May 7 | 387 |
| 172 | 31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt. | Mar. 31 | Apr. 17 | 267 |
| 273 | 32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration. | Dec. 2 | Apr. 17 | 940 |
| 70 | 33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving. | Feb. 12 | Apr. 9 | 268 |
| 304 | 34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners. | Dec. 6 | Apr. 16 | 280 |
| 57 | 35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet | Feb. 16 | May 3 | 576 |
| 264 | 36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring | Feb. 20 | May 4 | 398 |
| 107 | 37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications. | Jan. 2 | Mar. 31 | 681 |
| 378 | 38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationary; Stone-Working; Wells | May 3 | May 5 | 122 |
| 321 | 39. Water Distribution | Jan. 24 | Mar. 15 | 298 |
| 280 | 40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles. | Feb. 26 | Mar. 21 | 482 |
| 125 | 41. Railway Draft Appliances; Resilient Tires and Wheels | Mar. 2 | Apr. 11 | 265 |
| 244 | 42. Electricity, Conductors; Railway Signaling; Electricity-Transmission to Vehicles | Dec. 20 | Apr. 28 | 226 |
| 382 | 43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification. | Mar. 26 | Apr. 16 | 156 |

Oldest new case, Oct. 9; oldest amended, Aug. 26.
Total number of applications awaiting action..... 16,540

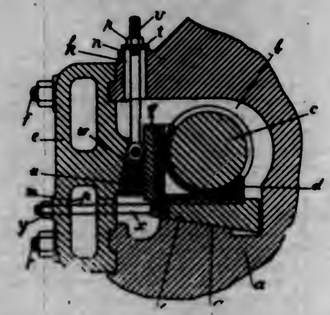
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|---|---|---|---|---|
| 163 | TRADE-MARKS, DESIGNS, LABELS AND PRINTS: | Mar. 9 | May 1 | 1161 |
| | Trade-Marks | Apr. 13 | May 3 | 288 |
| | Designs | May 14 | May 19 | 40 |
| | Labels and Prints | | | |



# PATENTS

## GRANTED MAY 29, 1917.

1,227,561. ROLLER-ADJUSTING MEANS FOR SUGAR-CANE MILLS. HUGH WALLACE AITKEN, Glasgow, Scotland. Original application filed Mar. 16, 1915, Serial No. 14,674. Divided and this application filed Feb. 18, 1916. Serial No. 79,070. (Cl. 64—52.)



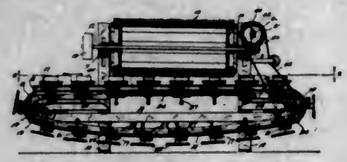
1. In a mill adapted for the crushing of sugar cane, a headstock having a recess, a bearing in said recess for the journal of a side crushing roller, a wedge block adapted to slide on the bottom of said recess and to support said bearing, a threaded rod adapted to operate said wedge block to raise or lower said bearing, a second wedge block at the side of said bearing, and a threaded rod adapted to raise and lower said second wedge block to move said bearing laterally.

2. In a mill adapted for the crushing of sugar cane, a headstock having a recess, a bearing in said recess for the journal of a side crushing roller, a cap closing in said recess, a wedge block adapted to slide on the bottom of said recess and to support said bearing, a threaded rod adapted to operate said wedge block to raise or lower said bearing, said rod being provided with a nut engaging with said cap, a second wedge block arranged vertically between said bearing and said cap, and a threaded rod adapted to raise and lower said second wedge block to move said bearing laterally.

3. In a mill adapted for the crushing of sugar cane, a headstock having a recess, a bearing in said recess for the journal of a side crushing roller, a cap closing in said recess, a wedge block adapted to slide on the bottom of said recess and to support said bearing, a threaded rod adapted to operate said wedge block to raise or lower said bearing, said rod being provided with a nut engaging with said cap, a bolster block arranged vertically at the side of said bearing and between said bearing and said cap, a second wedge block between said bolster block and the inside of said cap and bearing on said bolster block and said cap, and a vertical threaded rod adapted to raise and lower said second wedge block to move said bearing laterally.

1,227,562. BRUSH-MAKING MACHINE. WILLIAM E. ALEXANDER, Haselrigg, Ind. Filed July 31, 1916. Serial No. 112,228. (Cl. 15—2.)

4. A brush making machine comprising a rotary raker member, a guide arranged lengthwise of said raker member and at a slight angle thereto, a cross head arranged to traverse said guide, an endless belt carrying said cross head, a block clamp journaled upon the cross head upon an axis substantially at right angles to the guide plane, block clamping members movably mounted upon said head, a plunger mounted in said head, means arranged between said plunger and the clamping members whereby reciprocation of the plunger will control the clamping members, and cams arranged in the path of transportation of said plunger to shift the plunger.

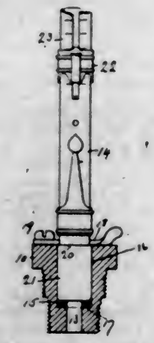


7. A brush making machine comprising a raker member, a block-holding member, and means for relatively rotatively shifting said members and for causing one to approach the other and for causing the raker member to laterally traverse the block-holding member during the relative rotative movement, whereby portions of the material operated upon will be removed at successively greater depths.

9. A brush-making machine comprising a block-clamping member, means for rotating the same, a raking member movable transversely of the axis of rotation of the block-clamping member, and means for causing the raking member to gradually dig deeper into the material carried by the block-carrying member during rotation of said block-carrying member.

[Claims 1 to 3, 5, 6, 8, 10, and 11 not printed in the Gazette.]

1,227,563. PRESSURE-GAGE ATTACHMENT. WILLIAM A. ALLEN, Yonkers, N. Y., assignor to A. Schrader's Son, Incorporated, New York, N. Y., a Corporation of New York. Filed Nov. 25, 1911, Serial No. 662,287. Renewed Nov. 6, 1916. Serial No. 129,893. (Cl. 137—28.)



1. The combination of a pressure gage having a thimble at its attaching end, with a nut exteriorly threaded to form a screw connection with a threaded aperture in the

# APPLICATIONS UNDER EXAMINATION.

*Condition at Close of Business May 25, 1917.*

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| 128 | 2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco. | Jan. 24 | Jan. 28 | 437 |
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| 379 | 23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism. | Jan. 27 | Aug. 26 | 314 |
| 144 | 24. Apparel; Apparel Apparatus; Sewing-Machines; Garment Supporters | Feb. 15 | Apr. 25 | 295 |
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| 278 | 32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration. | Dec. 2 | Apr. 17 | 540 |
| 70 | 33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving. | Feb. 12 | Apr. 9 | 363 |
| 304 | 34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners. | Dec. 6 | Apr. 16 | 280 |
| 57 | 35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet | Feb. 16 | May 3 | 676 |
| 264 | 36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring | Feb. 20 | May 4 | 568 |
| 107 | 37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications. | Jan. 2 | Mar. 31 | 631 |
| 378 | 38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells | May 3 | May 5 | 122 |
| 321 | 39. Water Distribution | Jan. 24 | Mar. 15 | 396 |
| 280 | 40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles. | Feb. 26 | Mar. 21 | 482 |
| 125 | 41. Railway Draft Appliances; Resilient Tires and Wheels | Mar. 2 | Apr. 11 | 265 |
| 244 | 42. Electricity, Conductors; Railway Signaling; Electricity-Transmission to Vehicles | Dec. 30 | Apr. 28 | 338 |
| 382 | 43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification. | Mar. 28 | Apr. 16 | 156 |

Oldest new case, Oct. 9; oldest amended, Aug. 26.
Total number of applications awaiting action..... 16,640

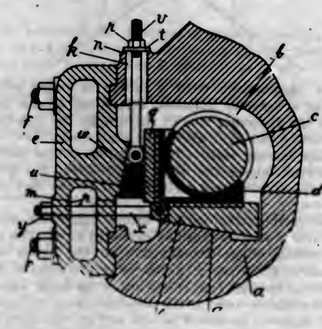
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|---|---|---|---|---|
| 163 | TRADE-MARKS, DESIGNS, LABELS AND PRINTS: | | | |
| | Trade-Marks | Mar. 9 | May 1 | 1101 |
| | Designs | Apr. 13 | May 3 | 286 |
| | Labels and Prints | May 14 | May 19 | 49 |



# PATENTS

## GRANTED MAY 29, 1917.

1,227,561. ROLLER-ADJUSTING MEANS FOR SUGAR-CANE MILLS. HUGH WALLACE AITKEN, Glasgow, Scotland. Original application filed Mar. 16, 1915, Serial No. 14,674. Divided and this application filed Feb. 18, 1916. Serial No. 79,070. (Cl. 64—52.)



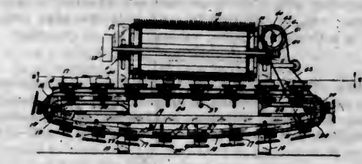
1. In a mill adapted for the crushing of sugar cane, a headstock having a recess, a bearing in said recess for the journal of a side crushing roller, a wedge block adapted to slide on the bottom of said recess and to support said bearing, a threaded rod adapted to operate said wedge block to raise or lower said bearing, a second wedge block at the side of said bearing, and a threaded rod adapted to raise and lower said second wedge block to move said bearing laterally.

2. In a mill adapted for the crushing of sugar cane, a headstock having a recess, a bearing in said recess for the journal of a side crushing roller, a cap closing in said recess, a wedge block adapted to slide on the bottom of said recess and to support said bearing, a threaded rod adapted to operate said wedge block to raise or lower said bearing, said rod being provided with a nut engaging with said cap, a second wedge block arranged vertically between said bearing and said cap, and a threaded rod adapted to raise and lower said second wedge block to move said bearing laterally.

3. In a mill adapted for the crushing of sugar cane, a headstock having a recess, a bearing in said recess for the journal of a side crushing roller, a cap closing in said recess, a wedge block adapted to slide on the bottom of said recess and to support said bearing, a threaded rod adapted to operate said wedge block to raise or lower said bearing, said rod being provided with a nut engaging with said cap, a bolster block arranged vertically at the side of said bearing and between said bearing and said cap, a second wedge block between said bolster block and the inside of said cap and bearing on said bolster block and said cap, and a vertical threaded rod adapted to raise and lower said second wedge block to move said bearing laterally.

1,227,562. BRUSH-MAKING MACHINE. WILLIAM E. ALEXANDER, Haselrigg, Ind. Filed July 31, 1916. Serial No. 112,228. (Cl. 13—2.)

4. A brush making machine comprising a rotary raker member, a guide arranged lengthwise of said raker member and at a slight angle thereto, a cross head arranged to traverse said guide, an endless belt carrying said cross head, a block clamp journaled upon the cross head upon an axis substantially at right angles to the guide plane, block clamping members movably mounted upon said head, a plunger mounted in said head, means arranged between said plunger and the clamping members whereby reciprocation of the plunger will control the clamping members, and cams arranged in the path of transportation of said plunger to shift the plunger.

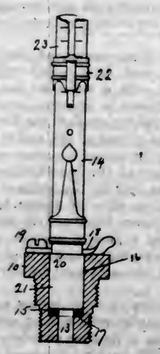


7. A brush making machine comprising a raker member, a block-holding member, and means for relatively rotatively shifting said members and for causing one to approach the other and for causing the raker member to laterally traverse the block-holding member during the relative rotative movement, whereby portions of the material operated upon will be removed at successively greater depths.

9. A brush-making machine comprising a block-clamping member, means for rotating the same, a raking member movable transversely of the axis of rotation of the block-clamping member, and means for causing the raking member to gradually dig deeper into the material carried by the block-carrying member during rotation of said block-carrying member.

[Claims 1 to 3, 5, 6, 8, 10, and 11 not printed in the Gazette.]

1,227,563. PRESSURE-GAGE ATTACHMENT. WILLIAM A. ALLEN, Yonkers, N. Y., assignor to A. Schrader's Son, Incorporated, New York, N. Y., a Corporation of New York. Filed Nov. 25, 1911, Serial No. 662,287. Renewed Nov. 6, 1916. Serial No. 129,893. (Cl. 137—28.)



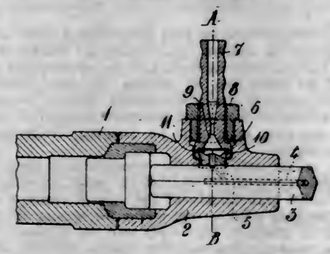
1. The combination of a pressure gage having a thimble at its attaching end, with a nut exteriorly threaded to form a screw connection with a threaded aperture in the

cylinder of an explosion engine, said nut being longitudinally perforated and having an internal shoulder to receive a compressible washer, in combination with a washer on said shoulder against which the lower end of the gage is pressed when the upper edge of the thimble is flush with the upper surface of the nut, and a latch pivoted on the upper face of the nut adapted to be swung into engagement with the upper end of the thimble to hold the gage temporarily in adjusted position, substantially as described.

2. For use in combination with a pressure gage having a thimble at its attaching end, a new article of manufacture comprising a nut exteriorly threaded to form a screw connection with a threaded aperture in the cylinder of an explosion engine, said nut being longitudinally perforated and internally shouldered to receive a compressible washer, in combination with a washer on said shoulder against which the lower end of the gage is pressed when the thimble is flush with the upper surface of the nut, together with a latch on said nut adapted to engage the upper end of the thimble and hold the gage temporarily in adjusted position, substantially as described.

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1,227,564. ROCK-DRILLING ENGINE. GUSTAF ANDERSSON, Stockholm, Sweden, assignor to Nya Aktiebolaget Atlas, Stockholm, Sweden, a Corporation of Sweden. Filed Mar. 2, 1916. Serial No. 81,726. (Cl. 137—28.)




1. The combination of a bit holder having a recess, a nozzle secured and having a limited endwise movement in said recess; said nozzle being provided with a recess in its inner end, and apertured packing arranged in the latter recess and having a cupped side opposed to the bore of the nozzle.

2. In a rock drilling engine of the kind set forth, a nozzle loosely disposed in a recess in the bit holder and formed with a recess at the inner end, means for retaining the nozzle in the first mentioned recess, and a packing fitting tightly against the bit and also against the wall of the said recess of the nozzle, substantially as and for the purpose set forth.

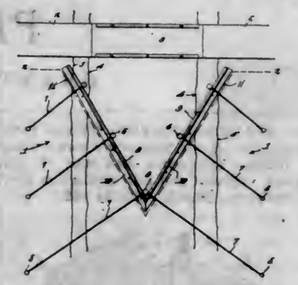
3. In a rock drilling engine of the kind set forth a nozzle loosely disposed in a recess or boring in the bit holder and formed with a recess at the inner end, means for retaining the nozzle in the first mentioned recess, and a packing fitting tightly against the bit and also against the wall of the said recess of the nozzle and being of substantially uniform cross-section area counted in a direction at right angles to the longitudinal direction of the bit, substantially as and for the purpose set forth.

4. The combination of a bit holder having a bit-receiving socket and a recess intersecting said socket, a nozzle secured and having a limited endwise movement in said recess, and an apertured packing held to the inner portion of the nozzle and arranged to contact with a bit in said socket.

5. The combination of a bit holder having a bit-receiving socket and a recess intersecting said socket, a nozzle secured and having a limited endwise movement in said recess, and apertured packing disposed in said recess and at the inner end of the bore in the nozzle and adapted to contact with a bit in said socket.

[Claim 6 not printed in the Gazette.]

1,227,565. BRIDGE-PROTECTOR. WILLIAM E. ASHLEY, Greensboro, N. C. Filed Nov. 25, 1916. Serial No. 133,440. (Cl. 14—76.)

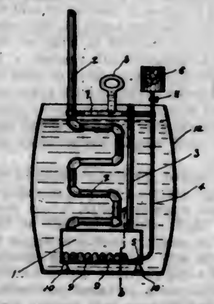


1. The combination with a bridge extended across a stream, of a deflector extended across the stream and located on the upstream side of the bridge, the deflector being upwardly extended above the high water level of the stream and having both of its ends disposed on the banks of the stream above the high water mark, the deflector being angularly disposed with respect to the flow line of the stream.

2. The combination with a bridge extending across a stream, of a V-shaped deflector extended across the stream and including wings prolonged onto the banks of the stream above the level of the water in the stream, the deflector being upwardly extended above the high water line of the stream, the apex of the deflector being disposed upstream; supports mounted in the bed of the stream and carrying the deflector; anchors mounted in the banks of the stream, and guys connecting the anchors with the supports, the guys extending upstream from the support to the anchors.

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1,227,566. WATER-HEATER. JOHN AYLING, Vancouver, British Columbia, Canada, assignor of one-half to William James Carmichael, Ladysmith, British Columbia, Canada. Filed Sept. 28, 1916. Serial No. 122,701. (Cl. 126—360.)

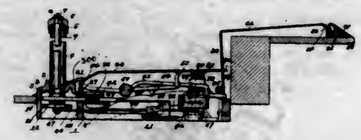


A new article of manufacture, a water-tight box substantially rectangular in formation having a flat bottom and a smoke outlet opening in its top, porous bricks arranged transversely in parallel rows on said bottom, each of said bricks being of slightly less width than the box and adapted to be passed through the smoke outlet opening into the box and having its upper edges beveled, a straight air inlet pipe extending from the top of the box, a smoke pipe extending from said smoke outlet opening, said pipe being adapted for connection thereto after the said bricks are placed in the box, an elevated fuel tank, a fuel pipe connection between said tank and said box, a bar extending between the smoke pipe, the air inlet pipe, and the fuel pipe and connecting same together, and a handle secured to said bar and disposed to carry evenly the weight of said article.



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1,227,567. REGISTERING MECHANISM. CHARLES S. AYRES, Cleveland, Ohio. Filed Apr. 15, 1911. Serial No. 621,198. (Cl. 235—93.)



1. In a device for registering persons passing a given point, the combination with a registering device, of a pivoted plate member and a movable arm member mounted above the plate member and moving in a substantially horizontal plane, mechanisms operatively connecting the pivoted plate member and the movable arm member with the registering device, said members being successively engaged by the person passing said point, the movement of one of said members setting the said mechanism in position to operate the registering device when the other of said members is operated.

2. In a device for registering persons passing a given point, the combination with a registering device, of a pivoted plate and a swinging arm mounted in front of said plate, said arm and plate being successively engaged by a person passing said point, mechanism operatively connecting the pivoted plate and the swinging arm with the registering device, the movement of the said swinging arm setting the said mechanism in position to operate the registering device when the pivoted plate is operated.

3. In a device for registering persons passing a given point, the combination with a registering device, of a pivoted plate upon which the persons to be registered step, and a swinging arm supported in front of and above the pivoted plate which the said persons must swing before stepping upon the plate, mechanism operatively connecting the pivoted plate and swinging arm with the registering device, the movement of the swinging arm setting the said mechanism in position to operate the registering device when the pivoted member is operated.

4. In a device for registering persons passing a given point, the combination with a registering device, of a pivoted member and a swinging member, said members being adapted to be successively engaged by a person passing said point, mechanism operatively connecting the registering device with the pivoted and swinging members, the movement of the swinging member in one direction and the subsequent depression of the pivoted member causing the registering device to operate, but the depression of the pivoted member in the first instance and subsequent movement of the swinging member being without effect upon the registering device.

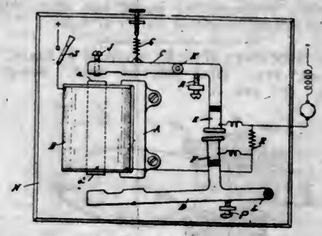
5. In a device of the character described, the combination with a registering device, of a pivoted member and a swinging member, a rotatable member, a fixed pivot upon which said rotatable member is mounted and along which it may slide, operative connection between the rotatable member and a swinging member, mechanism for operating the registering device, said mechanism being in operative position when the rotatable member has been turned by the pivoted member, the said mechanism being operated by the depression of the pivoted member.

[Claims 6 to 14 not printed in the Gazette.]

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1,227,568. ELECTRIC SWITCH. FLOYD N. BARBER, Crafton, Pa., assignor, by mesne assignments, to The Electric Controller & Manufacturing Company, a Corporation of Ohio. Filed Apr. 21, 1913. Serial No. 762,642. (Cl. 175—281.)

1. In a magnetically-operated device, a winding, a pair of magnetizable arms adapted to be moved by said winding with unequal facility, a contact on each arm, normally separated from each other, the said arms having portions attracted by the winding to maintain the said contacts separated when both arms are moved by the winding and to cause said contacts to engage each other when only one arm is moved by the winding.



2. In a magnetically-operated device, a winding, a pair of magnetizable arms adapted to be moved by said winding with unequal facility, a contact on each arm, normally separated from each other, the said arms having portions attracted by the winding to maintain said contacts separated when both arms are moved by the winding and to cause said contacts to engage each other when the current in the winding is reduced.

3. In a magnetically-operated device, a winding, a pair of magnetizable arms adapted to be moved by the winding with unequal facility, a contact carried by each arm, the contacts being separated before the winding is energized, and the said arms having portions attracted by the winding to maintain the contacts separated when both arms are moved by the winding, and to cause the contacts to be engaged when only one of the arms is moved by the winding, and to cause the winding to move both arms when the current in the winding is above a certain value and to release one arm when the current reaches the said value.

4. In a magnetically-operated device, a winding, a pair of magnetizable arms adapted to be moved by the winding with unequal facility, a contact carried by each arm, the contacts being separated before the winding is energized, and the said arms having portions attracted by the winding to maintain the contacts separated when both arms are moved by the winding, and to cause the contacts to be engaged when only one of the arms is moved by the winding, and to cause the winding to move both arms when the current in the winding is above a certain value and to cause one of the arms to move its contact into engagement with the contact on the other arm when the said current is reduced to the said value.

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1,227,569. GERMAN-SILVER-ALLOY PRODUCTS AND MANUFACTURE OF SAME. RASMUS BECK, Düren, Germany, assignor to the Firm of Dürener Metallwerke Aktien-Gesellschaft, Düren, Germany. Filed June 27, 1914. Serial No. 847,694. (Cl. 29—181.)

1. The method of forming articles from a German silver alloy consisting of 40–50% of zinc, 5–15% of white metal in which nickel largely preponderates and the residue of copper, which consists in heating the alloy to red heat and working it while hot into the desired shape.

2. The method of forming articles from a German silver alloy consisting of from 40–50 per cent. zinc, approximately 10 per cent. of nickel, and the residue of copper, which consists in heating the alloy to about red heat and working it while hot into the desired shape.

3. Rolled, drawn, extruded, stamped, forged, and similar products of German silver alloy containing 40–50 per cent. of zinc, and 5 to 15 per cent. of other white coloring metals, the residue consisting mainly of copper.

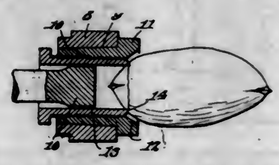
4. Rolled, drawn, extruded, stamped, forged and similar products of German silver alloy containing 40–50 per cent. of zinc and 5 to 15 per cent. of other white coloring

metals in which nickel largely predominates, the residue consisting mainly of copper.

5. Rolled, drawn, extruded, stamped, forged, and similar products of German silver alloy containing 40–50 per cent. of zinc, and 5 to 15 per cent. of nickel and at least one of the following white coloring metals: cobalt, manganese, iron, aluminum, tin, magnesium, and lead, the nickel largely predominating among said white coloring metals, the residue consisting mainly of copper.

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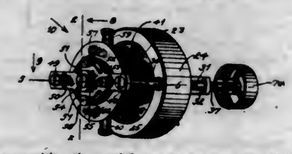
1,227,570. PECAN-CRACKER. WILLIAM L. BLACK, Fort McKavett, Tex. Filed Feb. 13, 1917. Serial No. 148,380. (Cl. 146—3.)



A nut cracker embodying a crushing head provided with a hole to receive the end of a nut, a flared beveled portion at and surrounding one end of the hole, and a cutting edge adjacent to and projecting within said beveled portion and beveled reversely thereto to provide a grooved seat for the edge of a shell when cut.

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1,227,571. ELECTRIC MOTOR. GUSTAV BLUMBERG and JOHN A. BUTKUS, Baltimore, Md. Filed Oct. 13, 1915. Serial No. 55,685. (Cl. 172—276.)



1. The combination with an armature provided with a winding, of arcuate unwound field magnets disposed around said armature, the adjacent faces of said magnets being parallel and disposed at an angle to the axis of said armature.

2. The combination with an armature provided with a winding and a commutator, of a plurality of brushes bearing on said commutator and arcuate unwound field magnets disposed around said armature, said field magnets being of uniform radial depth.

3. The combination with an armature provided with a winding and a commutator, of a plurality of brushes bearing on said commutator, arcuate unwound field magnets having adjacent faces forming acute angles with the axis of said armature.

4. The combination with an armature provided with a winding, of arcuate unwound field magnets disposed around said armature, a diamagnetic conducting casing disposed around said field magnets and diamagnetic conducting end rings overlying the ends of said field magnets, and supporting said field magnets, said casing and rings being in electrical connection with said field magnets.

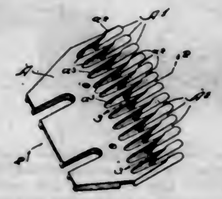
5. The combination with an armature provided with a winding having an odd number of sections, of a commutator having an odd number of segments connected to said sections, brushes even in number bearing upon said segments and arcuate unwound field magnets even in number disposed around said armature.

[Claims 6 to 8 not printed in the Gazette.]

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1,227,572. COMB FOR SHEEP-SHEAR. JOHN M. BODENE, Chicago, Ill., assignor to Chicago Flexible Shaft Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 3, 1916. Serial No. 88,457. (Cl. 30—1.)

1. A comb for sheep shears, comprising a plate having integrally-formed comb fingers at the forward edge tapered in width from their points backward, the proximate sides of adjacent fingers being curved concave toward each other and meeting at acute angles, and the plate having upwardly-concave furrows extending at considerable length from the rear ends of the notches between the fingers, said furrows sloping very gradually in depth diminishing back from the ends of the notches to the bottom surface of the plate.



3. A comb for sheep shears, comprising a plate having integrally-formed comb fingers at the forward edge, said fingers having their dimension in the direction of the thickness of the plate back from the shearing plane at a minor forward portion of the length of the shearing edge greater than the thickness of the remainder of the plate.

[Claim 2 not printed in the Gazette.]

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1,227,573. METHOD OF MAKING CASTINGS. WILLIAM A. BOLE, Pittsburgh, Pa. Filed Sept. 25, 1912, Serial No. 722,218. Renewed Apr. 12, 1917. Serial No. 161,671. (Cl. 22—200.)

1. The method of preventing the absorption of oxygen by molten metal during the operation of casting the metal, which consists in filling the mold space with an excess of relatively heavy dry gaseous products of combustion, in submerging the pouring hole of the mold with dry gaseous products of combustion, and then pouring the molten metal to be cast through the gaseous atmosphere above the mold and into the mold.

2. The method of preventing absorption of oxygen during the operation of casting, which consists in filling the mold with an excess of inert dry gaseous products of combustion in such quantities that the pouring hole communicating with the upper end of the mold is maintained submerged by the inert gas, and then in pouring the metal to be cast into the mold through the pouring hole.

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1,227,574. VALVE. ERNEST J. BOLT, Allentown, Pa. Filed Oct. 6, 1916. Serial No. 124,143. (Cl. 137—7.)



In a valve, a casing provided with inlet and outlet ports and having an elongated recess at its upper edge, and further provided with a bolt receiving opening, a rotatable valve mounted in the casing provided with a port adapted to register with the ports in the casing, and further provided with a transversely extending substantially rectangular opening which communicates with the elongated recess, a pin carried by the valve and projecting within the elongated recess and adapted to abut the end walls of the same to limit the movement of the valve, a T-shaped bolt slidable in the rectangular recess, an expansible spring mounted in the latter recess and bearing against the inner face of the casing and the slidable bolt beneath the horizontal bar of the same and normally urging the bolt to a position to engage the horizontal bar in the bolt receiving opening and the vertical bar against the casing, the pin engaging the end wall nearest the bolt receiving opening of the elongated recess simultaneously with the projection of the slidable bolt into the bolt receiving recess, and means for retracting the bolt.

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1,227,575. WORK-SUPPORT. WILLIAM H. BORDEN, Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 24, 1914. Serial No. 863,362. (Cl. 12—126.)



1. In a jack, a frame comprising two oppositely extending arms, a track supported in horizontal position on each of said arms, a cradle, the opposite ends of which engage the respective tracks, and a last supporting spindle adjustably mounted on the cradle intermediate between its ends, said cradle and said last supporting spindle being movable over said tracks and tiltable on said tracks transversely thereof.

2. In a jack, a frame comprising two oppositely extending horizontal arms, a track supported in horizontal position on each of said arms, a cradle suspended at each end from said tracks, rollers carried by said cradle and bearing upon said track in such manner that said cradle may move freely over said track and may tilt about said track, an upwardly extending jack spindle mounted on said cradle and means for effecting a vertical adjustment of said spindle.

3. In a jack, a frame comprising two horizontal arms extending in opposite directions along the line of the feed of the work, a track supported in horizontal position on each of the respective arms, a cradle suspended at each end from said tracks, said cradle being movable over the tracks and tiltable thereon and an adjustable last supporting spindle mounted on said cradle.

4. In a jack, a frame, tracks supported by said frame, a cradle supported by and movable over said tracks, said cradle being tiltable about said tracks, and a last supporting spindle adjustably mounted on said cradle.

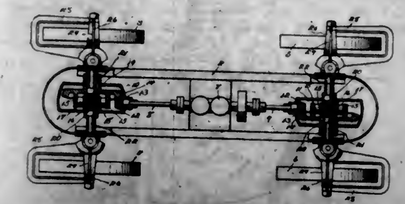
5. In a jack, a frame, tracks horizontally supported by said frame, a cradle suspended from said tracks, said cradle being movable over the tracks and tiltable about the the tracks and a last supporting spindle mounted on said cradle.

[Claims 6 to 8 not printed in the Gazette.]

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1,227,576. UNIVERSAL TRACTOR. OSCAR D. BOWLES, Terre Haute, Ind. Filed Jan. 19, 1912. Serial No. 672,099. (Cl. 21—90.)

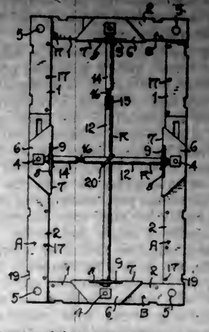
1. A device of the character described, including wheel axles, carriers for said wheel axles, each carrier comprising dual U-shaped members, one of which members is disposed vertically and the other horizontally with relation to the said axles in such a manner as to provide wheel guards in the direction of movement of the device, each wheel axle carrier being provided with a socket forming extension, which extensions are provided with pivoting studs for pivotally supporting the said wheel axle carriers, motor driven shafts, universal joints between said wheel axles and said shafts, the outer member of each of said universal joints being provided with a semispherical enlargement to be received in one of said socket forming extensions, the whole arranged in such manner that the said socket forming extensions provide bearings for the said outer members of the universal joints and further prevent outward endwise movement of said outer members of said universal joints substantially as described and for the purposes set forth.



2. A device of the character described, including wheel axle carriers, each carrier being provided with a socket forming extension, said extensions being provided with pivoting studs for pivotally supporting the said carriers, motor driven shafts, wheel axles, the inner end of each wheel axle being provided with an enlargement and forming one member of the universal joint, the other member of the universal joint being formed on the outer end of each motor driven shaft, the said enlargement of each of the said axles forming the outer member of each universal joint being closely received in the said socket forming extension to provide a bearing therefor and to prevent outward endwise movement of the wheel axle and its universal joint member formed thereon.

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1,227,577. FRAME. JOHN H. BROWNE, Louisville, Ky. Filed Oct. 28, 1916. Serial No. 128,816. (Cl. 189—36.)



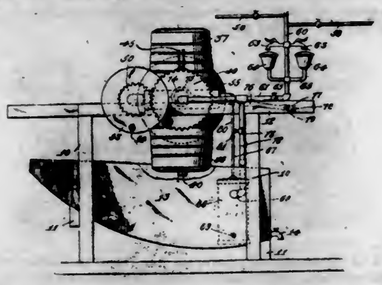
1. A frame comprising members, brackets secured to said members intermediate the lengths thereof, brace rods connected to opposed brackets, said members and brace rods being longitudinally adjustable, and clamping means for holding the members in their adjusted position, said clamping means also serving to hold the brackets in applied position upon the members.

2. A frame comprising members, brace members interposed between opposed members of the frame, the intermediate portion of said brace members being in overlying relation, and a tie member coacting with the overlying portions of the brace members.

3. A frame comprising members, brackets secured to said members intermediate the lengths thereof, brace rods in swiveled connection with opposed brackets, said mem-

sers and brace rods being longitudinally adjustable, and clamping means for holding the members in their adjusted position, said clamping means also serving to hold the brackets in applied position upon the members.

1,227,578. WASHING-MACHINE. FREDERICK I. BUCKNER, Douglas, Ariz., assignor of one-half to Celso G. Soriano, Douglas, Ariz. Filed Oct. 20, 1915. Serial No. 56,955. (Cl. 259—50.)



1. A washing machine comprising a supporting structure, a carrying frame rotatably mounted thereon, a tumbler, hollow trunnions carried by said frame and loosely supporting said tumbler, thereby rendering said tumbler bodily rotatable with said frame and adapted for independent oscillatory movement, and means to introduce into and withdraw a fluid from said tumbler by way of said trunnions.

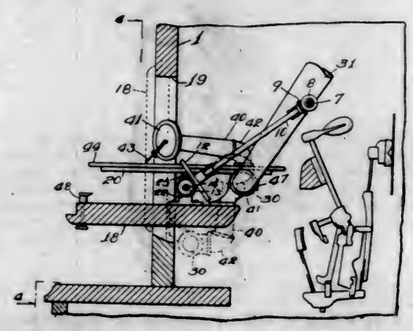
2. A washing machine comprising a supporting structure, a carrying frame, hollow gudgeons positioned at the ends of said frame and loosely connected with said supporting structure, thereby adapting said frame for rotative movement, a tumbler, hollow trunnions carried by the intermediate portion of said frame and loosely supporting said tumbler, thereby adapting said tumbler for independent oscillatory movement with respect to said frame, means to introduce into and withdraw a fluid from said tumbler by way of said gudgeons and said trunnions, and means to rotate said frame.

3. A washing machine comprising a supporting structure, a carrying frame, hollow gudgeons positioned at the ends of said frame, bearings on said supporting structure loosely supporting said gudgeons, a tumbler, hollow trunnions positioned intermediate the ends of said frame, said trunnions being loosely connected with and open to the interior of said tumbler, pipes connecting one of said gudgeons and one of said trunnions, other pipes connecting the other of said gudgeons with the other of said trunnions, a fluid intake pipe discharging into one of said gudgeons, and an outlet pipe open to the other of said gudgeons, and means to rotate said frame.

4. In a washing machine including a supporting structure, the combination with a fluid storage tank carried by said structure, of a frame, hollow gudgeons positioned at the ends of said frame, bearings on said supporting structure loosely supporting said gudgeons, a tumbler, hollow trunnions positioned intermediate the ends of said frame, means loosely connecting said trunnions with said tumbler, pipes connecting said gudgeons and said trunnions, an inlet pipe open at one end to the interior of said storage tank and having its other end open to one of said gudgeons, means to force the fluid from said storage tank through said inlet pipe, an outlet pipe open to the other of said gudgeons and discharging into said storage tank, and means to rotate said frame and operate said force feed means simultaneously.

5. A washing machine comprising in combination with a fluid storage tank, a supporting structure, a carrying frame, hollow gudgeons positioned at the ends of said frame and loosely connected with said supporting structure, a tumbler, hollow trunnions carried by said frame and loosely supporting said tumbler, fluid conducting means connecting said gudgeons and said trunnions, an inlet pipe open at one end to said storage tank and the other end to one of said gudgeons, an outlet pipe open at one end to said storage tank and at its other end to the other of said gudgeons, means to cause a continuous flow of said fluid from said storage tank through said tumbler and means to rotate said frame.

1,227,579. COMBINED PIANO AND PHONOGRAPH. CHARLES S. BURTON, Oak Park, Ill., assignor to Melville Clark Piano Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 13, 1916. Serial No. 131,035. (Cl. 84—193.)



3. In combination with a musical instrument case having an aperture in its forward wall, a support pivoted to the case for swinging in a vertical fore-and-aft plane from an upstanding toward a horizontal position protruding out through said aperture; a phonograph mechanism mounted on the support at the side thereof which is innermost at the upstanding position of the support and adapted to protrude out through the aperture when the support approaches horizontal position; a horn mounted at a fixed position within the case, having its intake mouth opening in a vertical fore-and-aft plane at right angles to the pivotal axis of the support; a sound conduit mounted on said support in communication with the sound-reproducing devices of the phonograph, having its exit or discharge mouth in the same plane as the intake of the horn, and positioned for registration with said intake at the position of maximum protrusion of the support.

5. In a combination with a piano having a case and automatic playing devices in said case comprising a motor for operating the playing devices, said case having an aperture in its forward wall; a support pivoted to the case for swinging in a vertical fore-and-aft plane from an upstanding position to a fore-and-aft extending position protruding out through said aperture; a phonograph mechanism mounted on the support at the side thereof which is innermost at the upstanding position of the support adapted to protrude out through said aperture at the fore-and-aft extending position of the support; said mechanism comprising a drive shaft whose axis is coincident with the pivotal axis of the support, and driving connections to said shaft from the motor of the automatic playing mechanism; a horn mounted fixedly within the piano case, the phonograph comprising a sound conduit mounted fixedly on said support and having its exit end positioned for registering with the intake of the horn at the fore-and-aft extending position of the support.

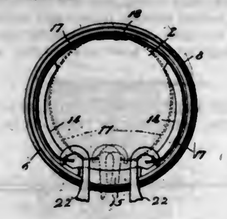
[Claims 1, 2, 4, and 6 not printed in the Gazette.]

1,227,580. SAVINGS-BANK. JOHN B. CARROLL, Chicago, Ill. Filed Apr. 23, 1915. Serial No. 23,348. (Cl. 232—4.)

1. A structure of the class described, comprising, in combination, a case composed of separable counterpart



sections adapted to be united in a predetermined plane between the end walls, locking flanges upon said sections adapted to rest against each other in parallel relation when the sections are joined, and an expansible locking ring having slots therein adapted to receive counterpart locking flanges therein when said ring is expanded to lock said sections together.



2. A structure of the class described, comprising, in combination, a case composed of separable counterpart sections adapted to be united in a given plane between the end walls, in which plane is located a coin-slot, locking flanges upon said sections adapted to contact in parallel relation when the sections are joined, an expansible locking ring having slots therein for engaging said flanges to hold them in locked relation when said ring is expanded, said ring being provided with key-engaging means at its ends in operable proximity to said coin-slot to enable said ring to be contracted to release its engagement with said locking flanges.

3. A structure of the class described, comprising, in combination, separate case sections having permanent end walls, circumferential wall portions extending laterally therefrom to form a junction with each other, inturned locking flanges upon each of said circumferential wall portions, said flanges being arranged to contact with each other in parallel relation, a coin-slot being formed in said wall portions and an expansible locking ring located within said circumferential wall portions, the free ends of which are adjacent to said coin-slot, said ring being provided with longitudinal slots therein for receiving said locking flanges and holding them in locked relation when said ring is expanded.

4. A structure of the character specified, comprising separable case-sections with a coin-slot therein, said sections having counterpart circumferential wall portions provided with inturned locking flanges formed to contact with each other in parallel planes, an expansible locking-ring located within said circumferential wall portions, said ring being provided with longitudinal slots for receiving said locking flanges to hold them in locked relation when said ring is expanded and means for attaching said ring substantially midway between its ends to one of said sections.

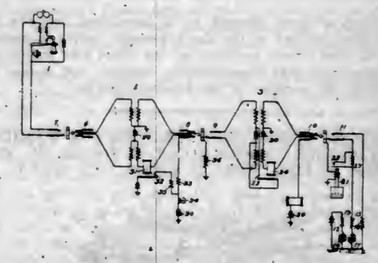
1,227,581. LOCOMOTIVE BRAKE-SHOE. JACOB V. C. T. CHRISTENSEN, Wichita Falls, Tex. Original application filed June 2, 1915, Serial No. 31,694. Divided and this application filed Jan. 27, 1916. Serial No. 74,670. (Cl. 188—82.)



1. A brake shoe comprising a body portion of cast metal, a wrought iron stiffening rod embedded in said body portion and extending longitudinally thereof, a lug integral with the said body portion, and a reinforcing member embedded in the body and extending inwardly of the body portion beyond the said stiffening rod and outwardly toward the outer edges of the bearing surface of the shoe, said reinforcing member being wholly surrounded by the material of the body and lug.

2. A brake shoe comprising a body portion of cast metal, a longitudinal reinforcing member or back stiffener, secured integrally to the body in casting, a key lug also integral with the said body, and a central transverse reinforcing member embedded in said lug and body, extending inwardly of the body on opposite sides of said longitudinal reinforcing member, with its ends spaced laterally away from said member.

1,227,582. TELEPHONE-EXCHANGE SYSTEM. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Dec. 27, 1915. Serial No. 68,820. (Cl. 179—50.)



1. In a telephone exchange system, a link circuit, a signaling device, a busy back circuit, a source of current for said busy back circuit, a circuit-interrupting means for said busy back circuit to interrupt the circuit of an included link circuit, and a retarder circuit-controlling means for controlling the operative association of said circuit-interrupting means and said signaling device when the link circuit is included with the busy back circuit.

2. In a telephone exchange system, a link circuit, a signaling device, a busy back circuit including a source of signaling current, an interrupter, and a slow-operating relay operating upon connection of the link circuit with the busy back circuit to operatively associate, after a predetermined time, the interrupter and the signaling device.

3. In a telephone exchange system, a link circuit, a signaling device, a busy back circuit including a source of signaling current, apparatus in the busy back circuit for controlling the operation of said signaling device, and a slow-operating relay operating upon connection of the link circuit with the busy back circuit to operatively associate, after a predetermined time, said apparatus and said signaling device.

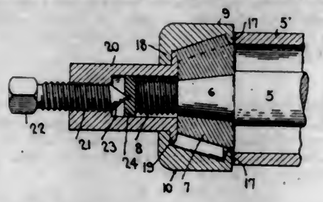
5. In a telephone exchange system, a link circuit, a signaling device, a busy back circuit including a source of signaling current, an interrupter associated with the busy back circuit for controlling the operation of the signaling device, means associated with the busy back circuit preventing the operative association of the interrupter and the signaling device upon the connection of the link circuit with the busy back circuit, and a slow-operating relay operating upon such connection to operatively associate the interrupter and the signaling device after a predetermined time.

[Claims 4 and 6 not printed in the Gazette.]

1,227,583. BEVEL-GEAR PULLER. WILLIAM E. CONNERTON, Fall River, Mass. Filed Mar. 3, 1916. Serial No. 81,881. (Cl. 29—85.)

1. A gear removing device comprising a housing having a flange adjacent each end thereof, a drawing element having a flange coöperating with one of the flanges of the housing, said drawing element having a threaded opening and a central bore, a threaded bolt extending through said opening, and a guard member supported in the bore for engaging the end of said bolt.

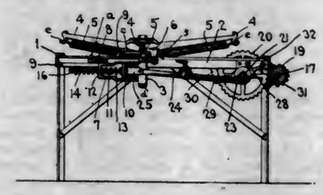
2. In combination with a shaft and a gear supported thereon, a gear removing device comprising a sectional housing adapted to embrace said gear, a drawing element, a threaded bolt extending through the drawing element,



a guard member adapted to be interposed between the bolt and one end of the shaft whereby rotary movement of the bolt exerts pressure on the shaft and moves the housing and gear longitudinally thereof, and means for holding the sections of the housing together.

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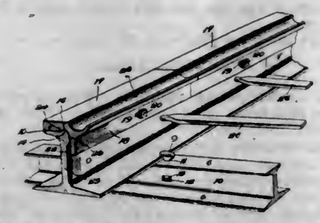
1,227,584. OPERATING MECHANISM FOR WASHING-MACHINES. ARTHUR B. COOLING, Sterling, Ill. Filed Sept. 25, 1914. Serial No. 863,449. (Cl. 74—7.)



A device of the class described, comprising a main frame; operative mechanism mounted therein so as to oscillate; a U-shaped frame supported from said first-named frame so as to be capable of oscillation, and pivotally connected with said operative mechanism; a block slidable in said U-shaped frame; a pin secured to said block and projected through the end of said frame; a compression spring on said pin, between said frame and block, to yieldingly resist the movement of said parts toward each other; a compression spring on said pin outside of said frame to yieldingly resist the movement of said block and frame away from each other; a drive-shaft mounted in said main frame and provided at one of its ends with a crank-head; and a pitman connected at one of its ends with said crank-head, and at the opposite end swivelly connected with said slide-block.

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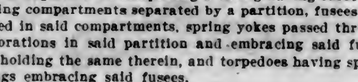
1,227,585. STREET-RAILWAY SYSTEM. JOHN W. COOPER, deceased, Buffalo, N. Y., by Charles H. Cooper, administrator, Buffalo, N. Y., assignor to The Trumpfheller Manufacturing Corporation, Buffalo, N. Y., a Corporation of South Dakota. Filed Sept. 13, 1916. Serial No. 119,941. (Cl. 239—16.)



A railway rail including a stringer having its upper portion provided with a longitudinal retaining rib defining a laterally extending supporting flange, the side walls of the rib being inclined in opposite directions and the inner face of the stringer curved inwardly and downwardly to form a stop shoulder, a head resting on the supporting flange and provided with a correspondingly shaped seating groove for the reception of the rib, the inner edge of said head being provided with a depending flange having a curved surface for contact with the curved surface of the stringer, and fastening devices extending through the flange of the head and bearing against said shoulder.

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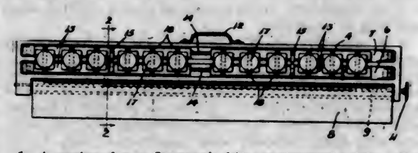
1,227,586. PORTABLE COUCH. SILVESTER E. COUCH, Clearwater, Fla. Filed Aug. 9, 1915. Serial No. 44,561. (Cl. 5—8.)



A bed spring comprising a frame of longitudinally and relatively movable telescoping end sections and an intermediate section, the end sections being of substantially U-shaped formation, means on one of the end section terminals for locking engagement with one of the intermediate section terminals when said sections are extended, rack teeth formed on the other terminals of the intermediate section, toothed segments pivoted to the terminals of the other end section for meshing engagement with the rack teeth when the said sections are extended, levers formed on the segments, a bar connecting the ends of the levers for simultaneous movement, concatenate material within the frame and connected to the end sections by a plurality of resilient elements whereby when the bar is moved in one direction the end and intermediate sections are separated and the material placed under strain, and hooked elements for engaging the bar to retain the same in such position.

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1,227,587. FLAGMAN'S SIGNALING KIT. ELAM CURE, St. Paul, Minn. Filed Aug. 26, 1916. Serial No. 116,946. (Cl. 116—12.)



1. A casing for a flagman's kit constructed with a flag containing compartment open at one side thereof and parallel therewith, with laterally spaced longitudinally extended fusee containing compartments separated by a partition having perforations through which spring yokes may be passed to secure fusees in position therein.

2. A flagman's kit comprising a casing having fusee containing compartments separated by a partition, fusees contained in said compartments, and spring yokes passed through perforations in said partition and embracing said fusees and holding the same therein.

3. A flagman's kit comprising a casing having fusee containing compartments separated by a partition, fusees contained in said compartments, spring yokes passed through perforations in said partition and embracing said fusees and holding the same therein, and torpedoes having spring prongs embracing said fusees.

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1,227,588. ELECTRICAL CONNECTOR. JOHN CUTHBERT, Chicago, Ill. Filed Mar. 8, 1916. Serial No. 82,792. (Cl. 173—360.)

1. In an electrical connector plug the combination of a cylindrical body part of insulating material having a transverse opening therein, a pair of oppositely positioned contact members slidably positioned in said opening, one of said members having a width less than the width of the opening for passage therethrough, the other having a portion wider than the opening to overlie the edges thereof and the exposed surfaces of said members having screw threads formed thereon, a contact positioned at the inner end of the plug and axially movable with respect thereto, and a block of insulating material positioned within the opening and engaged by all the contact members for transmitting movement of the axially movable contact to the slidable contacts.



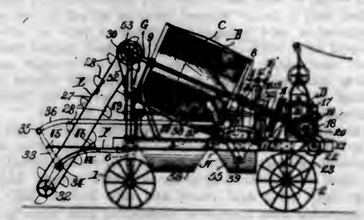


2. In an electrical connector plug the combination of a cylindrical body part of insulating material having a transverse opening extending therethrough, a pair of oppositely positioned contact members each having an inturned base portion for sliding contact with a wall of the transverse opening and an inturned angularly disposed wing, a contact positioned at the inner end of the plug and axially movable with respect thereto, and a block of insulating material positioned within the opening for axial movement with the central contact, said block having angularly disposed slots for engagement with the angularly disposed wings of the contacts.

3. In an electrical connector plug the combination of a relatively fixed cylindrical body part of insulating material having a transverse opening therein, a pair of oppositely positioned contact members each having an inturned base portion and an angularly disposed top portion slidable transversely of the axis of the plug in said opening, a block of axially movable insulating material positioned within the opening and engaging the contact members to move the same radially when the block is moved axially and a pin carried by the block and extending axially through the plug to the inner end thereof and having a head formed on its inner end to provide a central contact.

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1,227,589. SAND CUTTING AND SCREENING MACHINE. JOSEPH H. DALTON, St. Paul, Minn. Filed Oct. 13, 1916. Serial No. 125,374. (Cl. 83—56.)



1. A self propelled sand cutting and screening machine comprising, a supporting frame, a rotatable riddle carried by said frame, wheels for carrying said frame, means for holding said riddle with the area of its sand receiving end free of any obstructions, a deflector axially held in the rear of said riddle and an elevator adapted to feed sand into the receiving end of said riddle when said screening machine is operated, substantially as described.

2. In a self propelled sand cutting and screening machine, comprising, a supporting frame, a riddle rotatably mounted upon said frame, wheels by which the frame is carried, an elevator frame mounted on the forward end of said supporting frame to hold the elevator in close proximity to the floor over which the machine is passed, said riddle being axially supported by a shaft which extends a short distance into said riddle, a deflector secured to the end of said shaft and held axially in the end of said riddle so that when sand is elevated by said elevator and deposited in said deflector it will freely slide out of said deflector to the surface of said riddle, thereby preventing the sand from passing through said riddle without being screened.

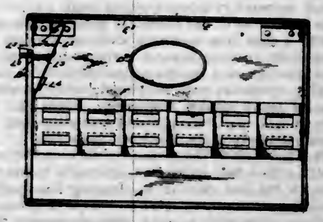
3. In a device of the class described having a supporting frame, wheels for carrying said frame, a screen mounted on said frame adapted to screen sand deposited therein, a sand conducting elevator having its upper end immovably mounted on said frame adjacent the receiving end of said screen, and means pivoted on said frame for raising or lowering the lower end of said elevator, substantially as described.

4. In a self propelled sand cutting and screening machine adapted for use on a molder's floor, comprising, a supporting frame driving wheels by which said frame is carried, a riddle mounted to be rotatable on said frame, an elevator to conduct the material being treated from the floor and feed it to said riddle, said riddle being open on both ends and mounted to a driving shaft on one end, with its receiving end completely open and clear of any obstructions so as to freely receive the material from said elevator, a receptacle extending across said frame directly below the rear end of said riddle so that the waste material only will fall directly from the rear end of said riddle into said receptacle and means for operating said riddle and for propelling said machine.

5. A self-propelled sand cutting and screening machine comprising a supporting frame, a rotatable riddle carried by said frame, wheels on which said frame is mounted, a conical deflector axially supported by its apex in said riddle, said deflector and riddle having an open receiving end free of any obstructions, an elevator to conduct sand from the floor and feed it into said deflector, means for simultaneously operating said riddle and elevator while said machine is being propelled whereby sand is deposited into said deflector by said conductor and is free to be spread from the surface of said deflector to the surface of said riddle, substantially as described.

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1,227,590. BOX-FASTENER. JOHN ALBERT DEINDOERFER, Jr., Defiance, Ohio. Filed May 14, 1915. Serial No. 28,081. (Cl. 70—3.)



A case having an opening in its front wall and provided with a keeper on its inner face at a distance from its free edge, a catch in the form of a spring having its lower end secured to the inner face of the case, the spring inclining inwardly and upwardly and having its free end bent outwardly and downwardly to form a hook shaped member for engaging the keeper, a push button secured to the catch and having its outer end reduced forming a shoulder thereon, the reduced end extending out through the opening of the case and the shoulder abutting against the inner face of the casing and limiting the outward movement of the catch, and a stop on the inner face of the casing and limiting the inward movement of the said catch.

1,227,591. TAKE-UP DEVICE FOR WRIST-STRAPS FOR WATCHES. CHARLES L. DEPOLLIER, Brooklyn, N. Y. Filed July 19, 1916. Serial No. 110,074. (Cl. 24—178.)



1. In combination with a wrist strap, connecting devices therefor including a take-up device which consists of three substantially parallel members, each of the outer members being connected to the middle member at one end and free at the other end, the middle member having means to engage the free end of each outer member, the wrist strap being threaded loosely between one of the outer members and the middle member for frictional sliding engagement therewith and having its end secured to the other of the outer members.

2. In combination with a wrist strap, connecting devices therefor including a take-up device which consists of three substantially parallel members, each of the outer members being connected to the middle member at one end and free at other end, the middle member having means to engage the free end of each outer member, the wrist strip being threaded loosely between one of the outer members and the middle member for frictional sliding engagement therewith and having its end secured to the other of said outer members, the first named outer member having a bend toward the middle member to press upon the strap when it is in place between said two members.

1,227,592. FEED-TUBE. BURT E. DOHNER and ALBERT J. HUFF, Dayton, Ohio. Filed Feb. 15, 1916. Serial No. 78,415. (Cl. 29—62.)



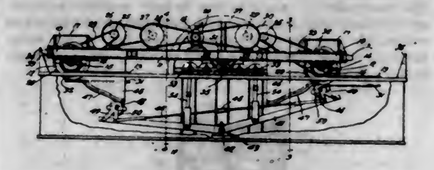
1. In a machine of the character specified, the combination with a feed tube, of an adjusting head mounted in the end of said feed tube, and a clamping head for holding the stock mounted in said adjusting head.

2. In a machine of the character specified, the combination with a feed tube having a shell on the end thereof provided with an inner tapered surface and screw-threads adjacent thereto, of a clamping head for holding the stock adjustably connected with said shell, said clamping head having its outer surface tapered to engage the tapered surface of said shell whereby said clamping head may be adjusted relatively to its hold upon the stock.

3. In a machine of the character specified, the combination with a feed tube having an internally tapered socket portion on the end thereof, a clamping head adjustably inserted in said tapered socket portion and having a corresponding outwardly tapered surface engaged thereby, said clamping head being extended in clamping jaws between which the stock is held.

1,227,593. POWER MECHANISM. SALVADOR DOMINGUEZ, San Antonio, Tex., assignor to Mexica Power-Increasing Machine Co., San Antonio, Tex. Filed Jan. 9, 1917. Serial No. 141,430. (Cl. 74—14.)

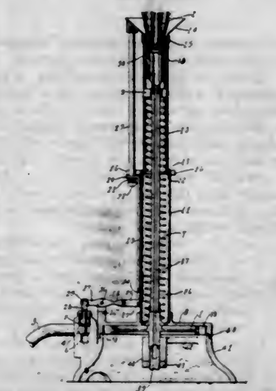
2. A power mechanism having a motor and a reciprocatory member, said motor having means for imparting reciprocatory movement to said member, a driven element, a rocker connected operably with said driven element, a rocker actuator fixedly attached to each end portion of the reciprocatory member, and friction reducing means engaged by the respective actuators and mounted on the end portions of the rocker, each of said actuators having



a longitudinally grooved shoe for engagement with the friction reducing means.

[Claims 1, 3, and 4 not printed in the Gazette.]

1,227,594. BOTTLE-WASHER. JOHN R. DOSTAL, Milwaukee, Wis. Filed Oct. 4, 1915. Serial No. 53,889. (Cl. 141—7.)



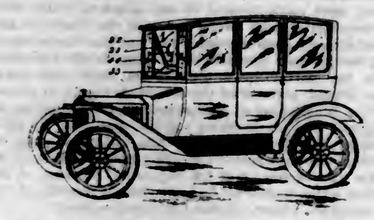
1. In a device of the described class, the combination of a water wheel, a hollow shaft connected at one end to said wheel and at its opposite end to a brush, a brush, a water duct communicating from a water supply under pressure with said wheel, and a separate duct communicating with said hollow shaft, a plurality of telescoping tubes inclosing said hollow shaft, means for simultaneously leading water to both said wheel and hollow shaft, a wheel inclosing case, a funnel shaped member affixed to the upper member of said telescoping tubing, a pair of valves of unequal area connected with said funnel shaped member for controlling the passage of water through said valves to said wheel and hollow shaft, and means cooperating with said valves connected with said funnel shaped member for permitting said valves to close.

2. In a device of the described class, the combination of a water wheel, a brush, a hollow shaft connected at one end to said wheel and at its opposite end to said brush, a water duct communicating from a water supply under pressure both with said wheel and said hollow shaft, a wheel inclosing case, the lower member of said telescoping tubing being supported from said wheel inclosing casing, a funnel shaped member affixed to the upper member of said tubing, a pair of balanced valves of unequal area cooperating with said funnel shaped member for controlling the passage of water to said wheel and hollow shaft, such valves being opened as soon as downward pressure is applied to the upper of said telescoping tubes, and means connected with the upper member of said telescoping tubes for permitting the opening and closing of said water controlling valves.



3. In a device of the described class, the combination of a water wheel, a hollow shaft connected at one end with said wheel and at its opposite end with a brush, a brush, a water duct communicating from a water supply under pressure both with said wheel and hollow shaft, a wheel inclosing casing, the lower end of said hollow shaft being supported from said wheel inclosing casing, telescoping tubing a funnel shaped member affixed to the upper member of said telescoping tubing, water controlling valves for controlling the passage of water both to said wheel and hollow shaft, means connected with the upper end of said tubing for permitting the opening and closing of said water controlling valves, a spiral spring inclosed between the members of said tubing and adapted by its recoil to automatically extend said tubing and close said water controlling valves as soon as pressure is removed from said funnel shaped member.

1,227,595. WIND-SHIELD. MARIA DOUJAK, New York, N. Y., assignor of part interest to Carl Heller, New York, N. Y. Filed June 21, 1916. Serial No. 105,090. (Cl. 21—148.)



In a wind-shield, the combination with a fixed frame, of a pair of vertical bars dividing said frame into sections, transparent panels secured between the outer elements of said frame and said bars, a central transparent panel hinged at its top to the upper member of said frame, a plate removably engageable with the lower member of said frame, means for engaging said plate to said central panel at one edge thereof, means for engaging said plate to the lower element of said frame, a pair of triangular transparent unyielding plates suited to fill the opening between said central panel and said vertical bars when said panel is in an angular position, and means for engaging said triangular plates with said vertical bars.

1,227,596. LAP-SEAM CAN. FELIX EBERHART, Newark, N. J., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 17, 1915. Serial No. 21,978. (Cl. 220—98.)



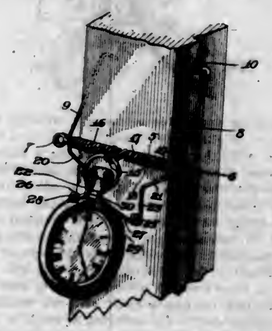
1. A container comprising a body formed of a sheet of suitable material secured along its edges in a lap seam and provided with a protective coating on its inner face, the inner edge of the sheet in said seam being bent back upon itself and in contact with the outer edge of said seam, and the outer edge of the sheet being applied flat on the outer surface of the container beyond said bent-back edge.

2. A container comprising a body formed of a sheet provided with a protective coating on the side of the sheet forming the internal surface of said container, the edges of said sheet being secured together in a lap seam, the inner of said edges being bent back upon itself and closed within the seam, and the outer edge of the sheet being applied flat on the outer surface of the container beyond said bent-back edge.

3. A container comprising a sheet of metal secured along its edges in a lap seam, the inner of said edges being folded back upon itself against the portion of the sheet adjacent the outer of said edges, and the outer edge of the sheet being applied flat on the outer surface of the container beyond said bent-back edge.

4. A container of the lap seam type and of material provided with a protective coating applied previously to the formation of the container, the inner of the lapped portions having an outwardly doubled edge and said coating being continuous within the finished can.

1,227,597. WATCH-CARRIER. FRANK J. ELLIS, Philadelphia, Pa., assignor of one-half to Wilbert N. Browning, Philadelphia, Pa. Filed Jan. 29, 1917. Serial No. 145,136. (Cl. 224—4.)



1. A watch carrier of the character described comprising two members pivotally united to each other, one of said members having means adapted to engage the structure to which the device is to be attached, and the other of said members having a hook adapted to engage the ring of the watch, a coil spring extending from said hook, depending portions one of which extends from said coil spring, and arms extending forward and upward from said depending portions adapted to engage the case of the watch adjacent the stem.

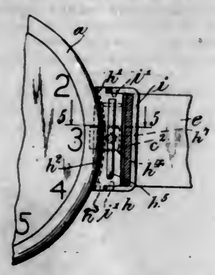
11. A watch carrier of the character described comprising two members pivotally united to each other, one of said members adapted to engage the structure to which the device is to be attached and the other of said members adapted to support and hold a watch or similar time piece, the member adapted to engage the structure comprising a straight bar, spring coils at each end thereof, arms extending from said spring coils, in-turned portions at the respective ends of said arms, and said in-turned portions having sharpened points adapted to bite into and engage the structure to which the device is to be attached, and the member adapted to engage and hold the watch comprising a hook adapted to engage the ring of the watch, a coil spring mounted on the bar of the attaching member and connected at one end with said hook, depending portions one of which extends from the other end of said coil spring and the other of which is provided with a coiled portion mounted on the bar of the attaching member, spring coils at the lower ends of said depending portions, arms extending forward and upward from said spring coils, said arms being bent over at their forward ends to engage the watch case adjacent the stem and united at their forward ends by an integral U-shaped portion adapted to extend around the rear of the watch stem.

[Claims 2 to 10 not printed in the Gazette.]

1,227,598. SECURING DEVICE FOR WRIST-WATCHES. FRED S. ELLIS, Brooklyn, N. Y., assignor to Dubois Watch Case Company, Brooklyn, N. Y., a Corporation of New York. Filed June 28, 1916. Serial No. 106,331. (Cl. 224—4.)

1. A securing device for securing a wristlet to a watch which has an extended eye, comprising a block adapted

for engagement with the wristlet and having a recess or opening to receive the extended eye of the watch, and means carried by the block to engage the eye and retain the block in fixed relation with the watch.



2. A securing device for securing a wristlet to a watch which has an extended eye, comprising a block adapted for engagement with the wristlet and having a recess or opening to receive the extended eye of the watch and a latch carried by the block and adapted to enter the eye and retain the block in fixed relation with the watch.

3. A securing device for securing a wristlet to a watch which has an extended eye, comprising a block having a recess or opening to receive the extended eye of the watch, means carried by the block to engage the eye and retain the block in fixed relation with the watch, and a ball carried by the block for engagement with the wristlet.

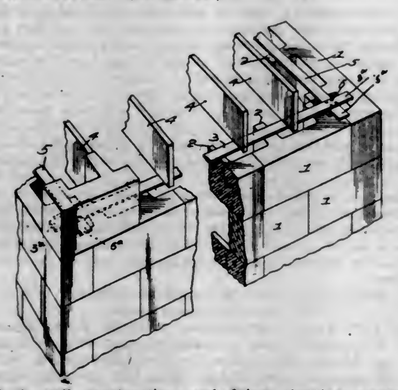
4. A securing device for securing a wristlet to a watch which has an extended eye, comprising a block formed on one face to fit against the watch and having a recess or opening to receive the extended eye of the watch, and means carried by the block to engage the eye and retain the block in fixed relation with the watch.

5. A securing device for securing a wristlet to a watch which has an extended eye, comprising a block adapted for engagement with the wristlet and having a recess or opening adapted to receive the extended eye of the watch, and a transverse opening through the walls of the recess, and a latch pivoted on the block and having a stud to enter the transverse opening and the eye of the watch.

[Claim 6 not printed in the Gazette.]

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1,227,599. FIREPROOF WALL CONSTRUCTION. JOHN A. FERGUSON, Denver, Colo., assignor to The Ferguson Synstone Co., Denver, Colo. Filed May 23, 1916. Serial No. 99,445. (Cl. 72—39.)

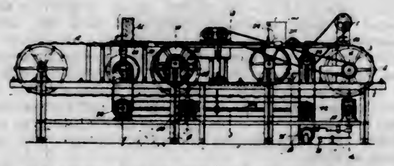


1. A wall construction, embodying abutting corner forming walls, composed of courses of blocks having a base portion and a lateral supporting web, in combination with a tie-beam, extending longitudinally of each of said walls, in spaced relation to the base portion thereof, and mounted directly upon the supporting webs, respectively, of the blocks in the same course, the said tie-beams overlapping within the interior angle formed by the abutting walls, with their overlapped ends projecting and seating directly upon the upper face of a block in its opposed wall and firmly embedded within the mortar space between an upper and lower course thereof; and means for securing said tie-beams together positively, at their overlapped positions, their projecting embedded ends coöperating with said positive securing means to provide a reinforcing truss for the corner sections of the abutting walls, substantially as described.

2. A wall construction, embodying abutting corner forming walls, composed of courses of blocks having base body portions and integral lateral supporting webs, in combination with a series of sets of tie-beams, extending longitudinally of each of said walls, in spaced relation to the base portion thereof, and mounted directly upon the supporting webs, respectively, of the blocks in the same course, at proper distances relative to the height of the structure, the said sets of tie-beams overlapping within the interior open angle formed by the abutting walls, with their overlapped ends projecting into the plane of and seating directly upon the upper faces of the base portions of blocks in their opposed wall, being firmly embedded within the mortar space between an upper and lower course thereof, and one of the sets of tie-beams, at proper intervals, functioning as joist supports; and means for securing said sets of tie-beams together positively at their overlapped position, their projecting embedded ends cooperating with said positive securing means to provide an internal reinforcing truss for the corner sections of the abutting walls, anchored from a position outside of the wall structure proper, substantially as described.

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1,227,600. CIGARETTE-PACKING MACHINE. GEORGE B. FLAGG, New York, N. Y. Filed Dec. 12, 1914. Serial No. 876,792. (Cl. 93—3.)



1. In a cigarette boxing machine, the combination of a boxholding member and automatic means for positively successively feeding a plurality of cigarettes, one at a time, into said box.

2. In a cigarette boxing machine, the combination of a boxholding device and means for feeding a plurality of cigarettes into said box and holding them against rotative or bodily displacement.

3. In a cigarette boxing machine, the combination of means forming a box part, means for successively feeding a plurality of cigarettes one by one into said box part, and means for completing said box.

4. In a cigarette packing machine, the combination of means for forming a wrapper to receive the cigarettes, means for feeding a plurality of cigarettes one by one into said wrapper, and means for holding the projecting portions of said wrapper over the cigarettes.

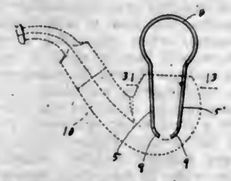
5. In a machine for packing cigarettes of non-circular cross section, the combination of a box-holding device, means for feeding a plurality of cigarettes into said box and maintaining them in the same relative position.

[Claims 6 to 21 not printed in the Gazette.]

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1,227,601. PIPE-BOWL CLEANER. BENJAMIN F. FLEGEL, Racine, Wis., and LOUIS S. DARLING, Ellington, Conn. Filed Oct. 28, 1912. Serial No. 728,041. (Cl. 131—13.)

A pipe bowl cleaner, comprising a loop-shaped handle, a pair of cutting members spaced apart and straight in cross section projecting therefrom in approximately parallel planes so that they are substantially parallel both transversely and longitudinally, the said handle and cutting members being formed of a singe strip of spring metal of substantially the same width throughout except at the ends of the cutting members which are tapered and bent inwardly, the said cutting members being adapted to be sprung toward each other to fit within a pipe bowl with their edges engaging the walls of the pipe bowl the full



length of said pipe bowl and being held firmly thereagainst by the spring pressure of the loop-shaped handle portion and adapted to be turned within the pipe bowl by means of the handle portion and having their forward edges beveled on the inner faces thereof, whereby they form parallel knives with their cutting edges diametrically opposite for planing or reaming the interior of the pipe bowl.

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1,227,602. ARTIFICIAL TEETH. ERNEST FOGO, Newcastle-upon-Tyne, England. Filed Oct. 31, 1914. Serial No. 869,562. (Cl. 32—4.)



1. The process of making dentures which consists in forming a foundation, then temporarily attaching a gum-facing to the foundation, then attaching teeth to the foundation, then removing said gum-facing, then permanently fixing the teeth in position, and then replacing and permanently fixing the gum-facing in position.

2. As a new article of manufacture, a gum-facing for dentures composed of a thin metal plate covered with enamel.

3. A denture comprising a foundation, teeth fixed to the foundation, and a gum-facing fixed to the foundation independently of the teeth.

4. A denture comprising a foundation, teeth fixed to the foundation, and a gum facing composed of a thin metal plate covered with enamel fixed to the foundation, the foundation being preformed by the gum facing to receive the same.

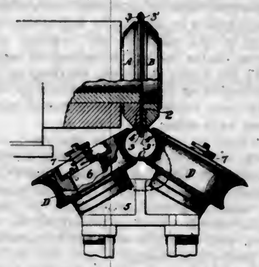
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1,227,603. METHOD AND APPARATUS FOR ELECTRICALLY HEATING PIPE-BLANKS. GORDON FOX, Chicago, Ill., assignor to Clayton Mark and Anson Mark, doing business under the name of The Mark Manufacturing Company, Chicago, Ill. Filed Oct. 10, 1914. Serial No. 865,993. (Cl. 219—6.)

1. An improvement in the art of electrically heating pipe blanks, which consists in successively heating the separated edges of a pipe blank by passing an electric current simultaneously at a plurality of separated stations through both edges of the blank, and in progressively diminishing the contact pressure at successive stations to prevent the edges of the blanks from collapsing as they approach the welding heat.

2. An improvement in the art of electrically heating pipe blanks, which consists in successively heating the separated edges of a pipe blank by passing electric current in series through such separated edges simultaneously at a plurality of separated stations along the length of the blank, and in maintaining uniform heating at the various stations by a uniform current flow.

3. An improvement in the art of heating pipe blanks, which consists in a plurality of sets of rotatable disks, one disk of a set being in contact with an edge of the blank and the other disk of the set being in contact with the other edge of the blank, insulating means therebetween, the circuit being completed by a plurality of rolls and a contacting bridge, whereby electric current, in passing from one disk to the other, passes through the separated edges of the blank in series.



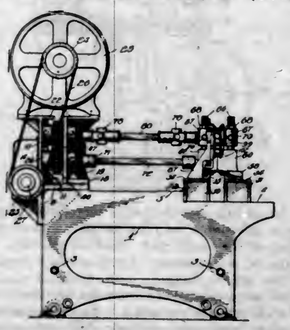
4. In apparatus for electrically heating pipe blanks, a plurality of pairs of contact heads, insulating material separating the heads of each pair, each head having a projection adapted to enter the separated edges of a pipe blank and engage one such edge, connected supporting rolls forming with the edges of the blank a path in parallel with that through the pipe for the electric current from one head to the other of each pair.

5. In apparatus for electrically heating pipe blanks, a plurality of contact heads, each head having two separated contact faces, each face being adapted to engage one of the separated edges of a pipe blank, the pipe blank being supported by a plurality of sets of rolls, each set of rolls being mounted on a connecting bridge, one edge of the pipe, the rolls, the body of the pipe, the bridge and the other edge of the pipe forming a path for the passage of current from one contact face to the other.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,604. METAL-FORMING MACHINE. JOHN A. FRASER, Niles, Mich., assignor to Kawneer Manufacturing Company, Niles, Mich., a Corporation of Michigan. Filed Jan. 21, 1914. Serial No. 813,600. (Cl. 153—54.)



1. In a metal forming machine, a frame, a rear base member extending longitudinally of the frame and movable at right angles to the length thereof by means of slidable connections therewith, a front base member spaced from the rear base member and similarly mounted upon the frame, an intermediate plate adjustably mounted upon each of the base members, a lower bearing plate adjustably mounted upon each of the intermediate plates, said lower base plates being rigidly adjustably connected at their extremities, bearings in said lower bearing plates, rollers in said bearings.

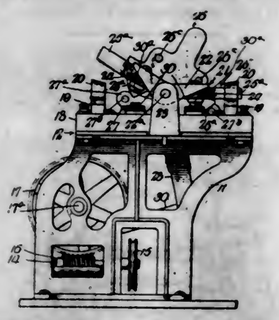
2. In a metal forming machine, a frame, a rear base member extending longitudinally of the frame and movable at right angles to the length thereof by means of slidable connections therewith, a front base member spaced from the rear base member and similarly mounted upon the frame, an intermediate plate adjustably mounted upon each of the base members, a lower bearing plate adjustably mounted upon each of the intermediate plates, said lower base plates being rigidly adjustably connected, upper bearing blocks mounted for vertical adjustment upon the lower plates, rollers journaled in said bearing blocks whereby the upper and lower bearings of the rollers may be moved apart or together and whereby the axes of the upper and lower rollers may be adjusted relatively toward and from each other.

3. In a machine of the character described, comprising a support, base members mounted thereupon, slide plates adjustably mounted upon said base members, bearing plates adjustably supported upon the slide plates, means for rigidly connecting the extremities of the bearing plates, bearing blocks vertically adjustable upon the bearing plates, and metal forming rolls journaled within said bearing plates and blocks.

4. In a metal forming machine comprising a support, a pair of base members carried by the support, slide plates extending parallel with and arranged upon the base members, a pair of bearing plates laterally adjustable upon the slide plates, means for rigidly connecting the ends of the bearing plates, a plurality of vertical pins detachably secured to the bearing plates, bearing blocks adjustably mounted upon said pins, means for locking the bearing blocks upon the pins, and metal forming rolls journaled within the bearing blocks and plates for the purpose specified.

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1,227,605. ELECTRIC SWITCH. JOHN FAHS, Chicago, Ill., assignor to Thos. Cusack Company, Chicago, Ill., a Corporation of New Jersey. Filed Nov. 2, 1914. Serial No. 869,741. (Cl. 175—287.)



1. An automatic switch device comprising fixed contact members, a fulcrum, a rocking switch member having contacts adapted to make and break connection with said fixed contacts, said rocking switch member being mounted on said fulcrum, a swinging arm mounted coaxially with said switch member, a rocker pivoted vertically below said fulcrum and directly actuated by said swinging arm, a second rocker fulcrumed coaxially with said rocking switch member, said second rocker being provided with lost motion devices for engagement with said rocking switch member and the first mentioned rocker also being provided with lost motion devices for engagement with the second rocker, and elastic means connecting said second rocker at a point above its rocking axis with said swinging arm at a point below its axis.

2. An automatic switch device comprising a base, fixed contact members on said base, a fulcrum, a rocking switch member mounted on said fulcrum, a swinging arm also mounted on said fulcrum, a rocker fulcrumed on said base in a plane spaced from the said fulcrum, a second rocker mounted on said fulcrum, means operatively connecting said swinging arm with the first mentioned rocker, devices on said rocker adapted to actuate said second rocker but with lost motion between them, means on said second rocker adapted for operative engagement with said rocking switch member after said second rocker has moved through a predetermined distance, a spring connecting said second rocker at a point spaced outwardly from said fulcrum with said swinging arm intermediate its ends and means for imparting movement to said swinging arm.

3. An automatic switch comprising a base, contact members fixed on said base, a shaft, a rocking switch member having contacts adapted for engagement with said fixed contacts, fulcrumed on said shaft, a swinging arm mounted on said shaft, a rocker having a slot fulcrumed on said base in a plane below said shaft, a stud on said swinging arm operatively engaged in the slot in said rocker, a second rocker fulcrumed coaxially with said shaft, said first rocker having studs adapted to actuate said second rocker after said first rocker has traveled through a part of its movement, means on said second rocker adapted for operative engagement with said rocking switch member after said rocker has moved through a predetermined distance, and a spring connecting said second rocker at a point above its fulcrum to said swinging arm at a point intermediate its ends.

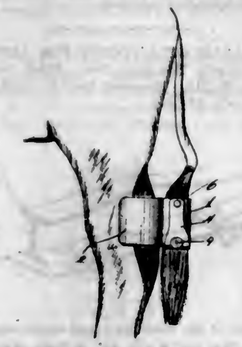
4. An automatic switch comprising a base, contact members fixed on said base, a shaft, a rocking switch member having contacts adapted for engngement with said fixed contacts, fulcrumed on said shaft, a swinging arm mounted on said shaft, a rocker having a slot fulcrumed on said base in a plane below said shaft, a stud on said swinging arm operatively engaged in the slot in said rocker arm, a second rocker fulcrumed coaxially with said shaft, said first rocker having studs adapted to actuate said second rocker after said first rocker has traveled through a part of its movement, means on said second rocker adapted for operative engagement with said rocking switch member after said rocker has moved through a predetermined distance, a spring connecting said second rocker at a point above its fulcrum to said swinging arm at a point intermediate its ends, and cushioning means on said base adapted to be engaged by said rocking switch member.

5. An automatic switch device comprising a base having fixed contacts and a movable contact member mounted on said base and adapted to periodically make and break connection with said fixed contact, a rocker adapted for operating said movable switch member and having parts for engagement with said movable switch member to bring it into electrical connection with the said fixed contacts on said base, an auxiliary rocker pivotally mounted on said base below the fulcrum of said rocking switch member, said rocker having fixed parts adapted for engagement with said operating member for movement of the same when said movable switch member is being removed from engagement with said fixed contacts, a reciprocatory swinging arm fulcrumed coaxially with said rocking switch, a pin carried by said swinging arm and operatively connected to said auxiliary rocker, and a spring fixed to said rocker above its fulcrum and to said swinging arm below its fulcrum.

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1,227,606. COW-TAIL HOLDER. FREDERICK C. GIESKER, Elmwood, Wis. Filed Mar. 18, 1916. Serial No. 85,087. (Cl. 119—105.)

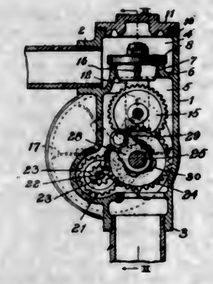
A cow tail holder of the class described, comprising a sleeve having spaced side portions, gripping jaws extending from said side portions, inwardly extending teeth formed upon a portion of said sleeve, a spring clamp carried by said sleeve, a spring clamp comprising a straight body portion, means passing through one end of said clamp for fixedly retaining the same in engagement with said sleeve, a lip extending at right angles to said clamp, said lip having teeth upon its forward edge, means carried by said clamp for facilitating the pulling or moving of one end of said clamp from said sleeve, whereby a cow's tail may be passed into said sleeve, at which time the clamp may be released so as to spring to its normal



position for allowing the teeth of said lip to engage the tail and to hold the same in engagement with the teeth of said sleeve.

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1,227,607. METRIC VALVE. HENRY R. GILSON, Baden, Pa. Filed Aug. 31, 1914. Serial No. 859,449. (Cl. 137—93.)



1. In a metric valve, the combination of a casing, a single valve therein for controlling flow therethrough, means for effecting an initial incomplete opening of said valve, and mechanically operable means for effecting a further opening and subsequent closing of said valve.

2. In a metric valve, the combination of a main valve, means for effecting an initial tilting thereof, and a mechanically operated means for effecting a further opening and subsequent closing of said valve.

3. In a metric valve, the combination of a main valve, manually operable means for effecting an initial incomplete opening thereof, and mechanically operable means impelled by fluid passing through said valve for effecting a further opening and subsequent closing thereof.

4. In a metric valve, the combination of a main valve comprising an orifice and a stem-provided closure seated thereon, a rotatable member operatively connected to said stem and adapted when passing through one revolution to positively open and close said valve, and means impelled by fluid passing through the valve for continuously rotating said member.

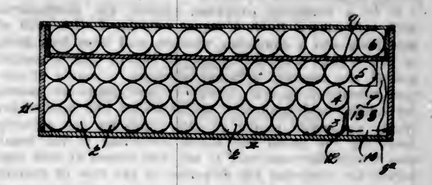
5. In a metric valve, the combination of a main valve comprising an orifice and a closure seated thereon, said closure having a stem secured to it, a rotatable member operatively connected to said stem and adapted when passing through one revolution to open and close said valve, manually operable means for effecting an initial rotation of said member, and fluid-impelled means for effecting a further complete rotation of said member.

[Claims 6 to 10 not printed in the Gazette.]





1,227,608. CIGAR-BOX. RICHARD W. GODFREY, New York, N. Y. Filed Apr. 11, 1916. Serial No. 90,314. (Cl. 131—11.)

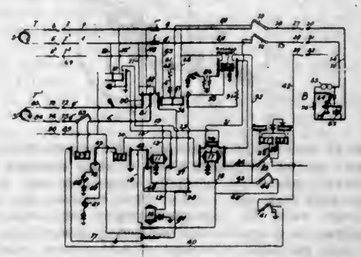


1. In combination with a cigar box and a tray set into the top of the same for exhibiting the upper row of cigars, a pair of removable upright supports set into the ends of the interior of said box for supporting said tray and a removable block within said box arranged against one of said supports and equal in height with the latter, to aid in sustaining said tray, the said block being also recessed at the top, forming a ledge to receive and support the nearer cigar of the row next under the tray and being of sufficient thickness below said ledge to hold the rows of cigars in position, corresponding cigars of the several rows being directly above or below each other.

2. In combination with a cigar box and a tray set into the same for exhibiting the upper row of cigars, a block serving as a support for said tray and adapted to fit into the end of said box, the said block consisting of a thicker lower portion and a thinner upper portion, the former portion being adapted to hold in position a plurality of layers of cigars with those of each upper layer resting directly on the corresponding cigars of each lower layer, the thin upper part of said block allowing space for an additional cigar of an upper row, but holding in place the remaining cigars in exact superposed arrangement.

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1,227,609. TELEPHONE-EXCHANGE SYSTEM. CHARLES L. GOODRUM, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed July 23, 1915. Serial No. 41,478. (Cl. 179—18.)



1. In a telephone exchange system, the combination with subscribers' lines, a signal associated with each line, an automatic switch wherein said lines terminate, and means for causing said switch to select a line, of means automatically operated by the setting of the switch on one of said lines for operating the signal thereof variably.

2. In a telephone exchange system, the combination with subscribers' lines, a signal associated with each of said lines, a connector wherein said lines terminate, and selectors, of two trunks terminating at one end in said connector and at the other in different selectors, means for setting said connector on said lines over either trunk, and means at said connector automatically operated incident to setting said connector on the called line over one

of said trunks to operate said signal in one manner, and automatically operated incident to setting said connector on said called line over the other trunk to operate said signal in a different manner.

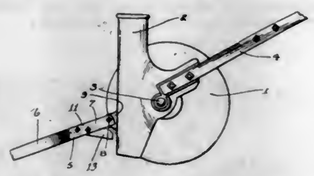
3. In a telephone exchange system, the combination with subscribers' lines, a signal associated with each of said lines and a connector wherein said lines terminate, of two trunks terminating at one end in said connector and at the other in different selectors, a source of current connected to said trunks at said connector, means for setting said connector on the called line over either trunk, automatic means at said connector for variably operating the called line signal according to the trunk over which the connector is set, and means at said connector for reversing the direction of the flow of current from said source when said connector is set over one of said trunks for signaling over the connected trunk.

4. In a telephone exchange system, the combination with subscribers' lines and a connector wherein said lines terminate, of two trunks terminating in one end in said connector and at the other end in different selectors, means for setting said connector on said lines over either trunk, a test circuit associated with said connector, and a relay at said connector adapted to be automatically operated if the connector is set over one of said trunks to render said test circuit inoperative.

5. In a telephone exchange system, the combination with subscribers' lines, a signal associated with each line and a connector wherein said lines terminate, of two trunks terminating at one end in said connector and at the other end in different selectors, means for setting said connector on said lines over either trunk, a test circuit associated with said connector, a relay at said connector adapted to be operated when the connector is set over one of said trunks to render said test circuit inoperative, and sources of signaling current of different character controlled by said relay.

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1,227,610. PLANTING-MACHINE. GEORGE W. GOSS, Baltimore, Ohio, assignor of one-half to Charles E. Goss, Baltimore, Ohio. Filed Oct. 28, 1915. Serial No. 58,482. (Cl. 111—11.)



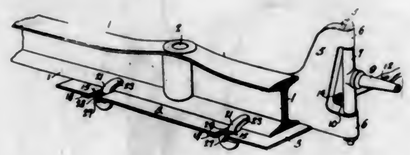
1. In combination with a seed planter and its boot, of a seed coverer comprising a pair of strap elements bolted together, means for pivotally supporting said coverer from said boot, and a spacer block between said straps through which the bolt passes which holds said straps together, said spacer also projecting toward said boot to limit the down movement of said coverer when said boot is elevated by contact therewith.

2. The combination with a seed planter and its boot, of a seed coverer comprising a pair of strap elements bolted together, means for pivotally bolting said coverer to said boot so that the coverer will be permitted a perceptible lateral movement, and a spacer block between said straps through which the bolt passes which holds said straps together, said spacer also projecting toward said boot to limit the down movement of the coverer when said boot is elevated by contact therewith.

3. In combination with a disk seed planter and its boot, a seed coverer comprising a pair of semi-oval shaped strap elements pivoted to said boot in a manner to permit them lateral movement, said straps being shaped to leave an open space at the rear when assembled, and a finger carried by said straps so arranged to engage said boot to prevent the downward movement of said straps to prevent their dragging when the disk mechanism is elevated to its normal inoperative position.

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1,227,611. AXLE ATTACHMENT FOR AUTOMOBILES. JOHAN HANSEN, Tonopah, Nev. Filed Dec. 10, 1915, Serial No. 66,115. Renewed Nov. 2, 1916. Serial No. 129,231. (Cl. 21—5.)



1. A device of the class described comprising an L body formed of a base and a side web section, said base having transverse slots, axle grippers movable in said slots and projecting below the base, a screw device for drawing said grippers together to clamp the base to the axle, a spindle bracket projecting from the web and having bearings, a spindle having a sleeve mounted between said bearings, a spindle bolt passing through said bearings and sleeve and an arm connected with said sleeve for attachment to the steering gear.

2. A device of the class described comprising an L body formed of a base and a side web section, said base having transverse slots, axle grippers movable in said slots and projecting below the base, a screw device for drawing said grippers together to clamp the base to the axle, a spindle bracket projecting from the web and having bearings, a spindle having a sleeve mounted between said bearings, a spindle bolt passing through said bearings and sleeve, an arm connected with said sleeve for attachment to the steering gear, said base having an elongated slot extending in the length of the base.

3. A device of the class described comprising an L body formed of a base and a side web section, said base having transverse slots, axle grippers movable in said slots and projecting below the base, a screw device for drawing said grippers together to clamp the base to the axle, a spindle bracket projecting from the web and having bearings, a spindle having a sleeve mounted between said bearings, a spindle bolt passing through said bearings and sleeve, an arm connected with said sleeve for attachment to the steering gear, and a spacer plate inserted between said base and said clamp members, said spacer plate having slots corresponding to the base slot.

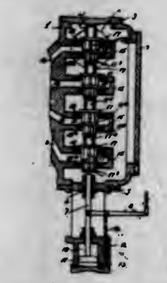
4. A device of the class described comprising an L body formed of a base and a side web section, said base having transverse slots, axle grippers movable in said slots and projecting below the base, a screw device for drawing said grippers together to clamp the base to the axle, a spindle bracket projecting from the web and having bearings, a spindle having a sleeve mounted between said bearings, a spindle bolt passing through said bearings and sleeve, an arm connected with said sleeve for attachment to the steering gear, said base having an elongated slot extending in the length of the base, and a spacer plate inserted between said base and said clamp members, said spacer plate having slots corresponding to the base slot.

5. In a device of the character described, a base plate and a side plate extending upwardly from the same, a spindle bracket projecting from said side plate at one end thereof, a spindle mounted in said bracket, said base plate having transverse slots, said side plate having slots registering with those of the base plate, and clamp members for securing said base plate to the axle, said clamp members comprising flat portions opposing the base plate, fingers extending up from said base portion and adapted to extend over the base flange of the axle, ears dependent from said base portions of said clamp members and apertured, a clamp bolt passed through said apertured ears, a nut on said bolt, one of said clamp members having a shoulder to engage the bolt head and hold it from turning.



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1,227,612. VALVE AND VALVE-GEAR FOR ELASTIC-FLUID TURBINES. HENRY J. HANZLIK, Trenton, N. J., assignor to De Laval Steam Turbine Company, Trenton, N. J., a Corporation of New Jersey. Filed Nov. 18, 1914. Serial No. 872,761. (Cl. 137—144.)



1. A valve arrangement for fluid pressure motors comprising a pressure chamber having a plurality of ducts leading therefrom and valve seat orifices, one for each such duct, and a series of valves, one for each such valve seat orifice, such valves each free for movement with respect to the others and each arranged when moved from its seat to engage another valve of the series and move the latter from its seat, in combination with means for moving one valve of the series from its seat.

2. A valve arrangement for fluid pressure motors comprising a pressure chamber having a plurality of ducts leading therefrom and valve seat orifices, one for each such duct, and a series of valves, one for each such valve seat orifice, such valves each free for movement with respect to the others and each arranged when moved from its seat to engage another valve of the series and move the latter from its seat, in combination with means for moving one valve of the series from its seat, and means for returning such valves individually to their seats when such return is permitted.

3. A valve arrangement for fluid pressure motors comprising a pressure chamber having a plurality of ducts leading therefrom and two valve seat orifices for each such duct, and a series of double seat valves, one for each pair of valve seat orifices, such valves each free for movement with respect to the others and each arranged when moved from its seat to engage another valve of the series and move the latter from its seat, in combination with means for moving one valve of the series from its seat.

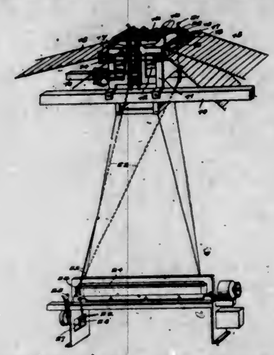
4. A valve arrangement for fluid pressure motors comprising a pressure chamber having a plurality of ducts leading therefrom and valve seat orifices, one for each such duct, and a series of valves, one for each such valve seat orifice, such valves each free for movement with respect to the others and each arranged when moved from its seat to engage another valve of the series and move the latter from its seat, in combination with means, disconnected from the valves, for moving one valve of the series from its seat.

5. A valve arrangement for fluid pressure motors comprising a pressure chamber having a plurality of ducts leading therefrom and valve seat orifices, one for each such duct, and a series of valves, one for each such valve seat orifice, such valves each free for movement with respect to the others and each arranged when moved from its seat to engage another valve of the series and move the latter from its seat, in combination with means, disconnected from the valves, for moving one valve of the series from its seat, and means for returning such valves individually to their seats when such return is permitted.

[Claims 6 to 15 not printed in the Gazette.]

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1,227,613. CARD-FEELER STOP-MOTION. JONAH L. HARTSELL and WILLIAM J. WEST, Concord, N. C., assignors to Young-Hartsell Mills Company, Concord, N. C., a Corporation of North Carolina. Filed Nov. 6, 1915. Serial No. 59,971. (Cl. 139—62.)



1. In combination with a loom, and a jacquard head controlling the loom and having the usual card cylinder and griff bars, of a card feeler mounted upon the jacquard head and normally resting upon the top of the card cylinder, a jacquard hook having connection with said card feeler and adapted to be drawn into alinement with one of said griff bars on the lifting of the card feeler, and a connection between said jacquard hook and the shipper lever of said loom, to release the shipper lever upon the engagement of the jacquard hook with the griff bar.

2. A card feeler stop motion for looms comprising a pivoted bar, a plurality of fingers outstanding from the bar adapted to rest upon the top of a card cylinder, an inwardly extending arm carried upon the bar, a jacquard hook connected to the inner end of the arm and adapted to be drawn laterally upon the lifting of said fingers, and a shipper lever connection having attachment to said jacquard hook and adapted to be actuated upon movement of the jacquard hook by said fingers.

3. In a card feeler stop motion for looms, a pivoted card feeler normally resting against a card cylinder, and adapted to be tilted upon the misplacement of a card on the cylinder, a jacquard hook having connection with said card feeler to be actuated by the tilting thereof, and means connecting said jacquard hook to the shipper lever of a loom.

4. In a card feeler stop motion for looms, a pivoted card feeler adapted to normally rest on the top of a card cylinder and having an inwardly extending arm, a jacquard hook connected to said arm adapted to be adjusted into operative position by the tilting of the card feeler, and a connection between the jacquard hook and the shipper lever of a loom whereby to release the latter upon the operation of the jacquard hook.

5. A card feeler stop motion for looms, comprising a pivoted bar, a plurality of fingers outstanding from the bar adapted to rest upon the top of a card cylinder, an inwardly extending arm carried upon the bar, a jacquard hook connected to the inner end of the arm and adapted to be drawn laterally upon the lifting of said fingers, a shipper lever for controlling the loom, a bell crank mounted on the loom having one end connected to said shipper lever, and a flexible connection between the opposite end of said bell crank and the lower end of said jacquard hook whereby upon the lifting of the jacquard hook to release said shipper lever.

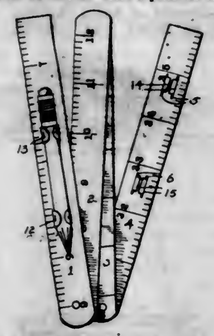
[Claim 6 not printed in the Gazette.]

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1,227,614. PENCIL ATTACHMENT FOR SECTIONAL RULES. HERMAN HAUPTMAN, Pittsburgh, Pa. Filed Sept. 30, 1916. Serial No. 123,036. (Cl. 24—259.)

A pencil attachment for rules comprising an elongated flat body portion provided near each end with a pair of

oppositely disposed projections capable of being bent outwardly to provide clamping means, said body portion further provided at each end with a pair of laterally project-



ing oppositely disposed lugs capable of being bent inwardly to extend through a rule for securing said body portion therewith the lugs at the ends of the body portion spaced from the other lugs.

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1,227,615. TREATMENT OF ORES. ARTHUR HOWARD HIGGINS, London, England, assignor to Minerals Separation Limited, London, England. Filed Nov. 14, 1913. Serial No. 800,966. (Cl. 75—18.)

1. A process for the concentration of ores which consists in treating an ore pulp conjointly with a mineral frothing agent for the separation of metalliferous constituents by flotation and with a chemical agent that facilitates the separation of some metalliferous constituents by flotation and dissolves other constituents.

2. A process for the concentration of ores which consists in agitating the ore with water containing a mineral-frothing agent and also a chemical agent that facilitates the separation of some metalliferous constituents by flotation and dissolves certain other constituents.

3. A process for the concentration of ores which consists in first roasting the ore and thereafter agitating it with water containing a mineral-frothing agent and also a chemical agent that facilitates the separation of some metalliferous constituents by flotation and dissolves certain other constituents.

4. A process for the concentration of ores which consists in agitating the ore with water containing a mineral-frothing agent and also a chemical agent that facilitates the separation of some metalliferous constituents by flotation and dissolves certain other constituents and thereafter precipitating the dissolved metal from solution in such a manner as to regenerate the chemical agent.

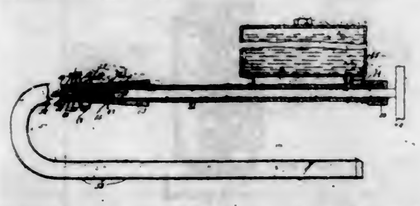
5. A process for the concentration of ores which consists in first roasting the ore and thereafter agitating it with water containing a mineral frothing agent and also a chemical agent that facilitates the separation of some metalliferous constituents by flotation and dissolves certain other constituents and thereafter precipitating the dissolved metal in such a manner as to regenerdte the chemical agent.

[Claims 6 to 11 not printed in the Gazette.]

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1,227,616. FUEL-VALVE. JOHN W. HOBING, Cincinnati, Ohio. Filed Sept. 25, 1916. Serial No. 121,980. (Cl. 158—120.)

1. A fuel-valve comprising a shut-off valve and a regulating valve having a fuel-passage therebetween, said valves comprising a casing having a valve-seat for said shut-off valve and a cylindrical bore for said regulating valve, and a valve-stem having thereon a valve-closure for said shut-off valve and a regulating shank, said regulating shank comprising a cylindrical portion in said fuel-passage from which cylindrical portion a slightly tapering portion extends outwardly through said cylindrical bore, the proximate ends of said cylindrical portion and slightly tapering portion of said regulating shank being normally at the junction between the outer end of said fuel-passage and the inner end of said cylindrical bore, said slightly tapering portion of said regulating shank terminating in an end face forming a sharpt angle with said slightly tapering portion outside said cylindrical bore, and said casing provided with an annular bead received about and extending lengthwise of said casing a greater distance than the distance of projection of said regulating shank outside said bore.



2. In a fuel-valve, the combination of a supply-pipe, a valve at one end thereof, said valve comprising a shut-off valve and a regulating valve having a fuel-passage therebetween, said regulating valve comprising a discharge bore, a regulating shank therein provided with a slightly tapering portion in said cylindrical discharge-bore and an outer end-face having a diameter proximate to the diameter of said regulating shank and forming a sharp angle with said slightly tapering face of said slightly tapering portion, said end-face located outside said bore during discharge of the fuel therefrom, a valve-stem on which said regulating shank is located, said valve-stem extending through the other end of said supply-pipe, and turning means on said valve-stem outside said supply-pipe, the wall of said supply-pipe and said valve-stem having a fuel-passage therebetween communicating with said shut-off valve.

3. In a fuel-valve, the combination of a cylindrical supply-pipe, a valve at one end thereof, said valve comprising a shut-off valve and a regulating valve having a fuel passage therebetween, said regulating valve comprising a discharge-bore and a regulating shank therein, a valve-stem on which said regulating shank is located, turning means on said valve-stem, said cylindrical supply-pipe surrounding said valve-stem and located between said valve and said turning means, the wall of said supply-pipe and said valve-stem having a fuel-passage therebetween communicating with said shut-off valve, said supply-pipe provided with a supply-passage communicating with said fuel-passage at a point distanced from the respective ends of said supply-pipe.

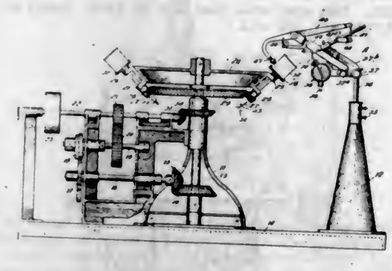
4. In a fuel-valve, the combination of a shut-off valve and a regulating valve having a fuel-passage therebetween, said regulating valve comprising a casing having a cylindrical discharge-bore and a slightly tapering regulating shank received through said bore, said regulating shank terminating in an outer end-face extending across a substantial part of said regulating shank and forming a sharp angle with the slightly tapering face of said slightly tapering regulating shank, and adjusting means for said valves comprising a valve-stem provided with external threads, and coacting internal threads, said external threads and internal threads having their proximate walls spaced apart for forming a fuel-passage communicating with said shut-off valve.

5. In a fuel-valve, the combination of a shut-off valve and a regulating valve having a fuel-passage therebetween, said regulating valve comprising a casing having a discharge-bore and a slightly tapering regulating shank received through said bore, said regulating shank terminating in an end wall of considerable cross-sectional diameter with relation to the diameter of said regulating shank, said end wall forming a sharp angle with said tapering portion, and adjusting means for said valves comprising a valve-stem provided with external threads, and coacting internal threads, said external threads and internal threads having their proximate walls spaced apart for forming a fuel-passage communicating with said shut-off valve, and said valve-stem shiftable for locating said fuel-passage at opposite sides of said threads.

[Claim 6 not printed in the Gazette.]

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1,227,617. SPRAYING-MACHINE. JOHN G. HODGSON, Maywood, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New York. Filed May 5, 1913. Serial No. 765,570. (Cl. 91—45.)



1. A spraying machine for cans and other articles including, in combination: a carrier rotatable about an axis and having a plurality of rotatable chucks mounted thereon; a spraying device to which the articles are brought successively by the movement of the carrier and its chucks; a spray controlling valve having means whereby it is actuated by the articles as the latter arrive opposite to the spraying device, and holding means on the chucks whereby the said articles are removably fixed thereon and enabled to operate said valve actuating means.

2. A spraying machine of the character described including, in combination: a carrier intermittently rotatable about a vertical axis; a plurality of rotatable chucks on inclined axes carried by said carrier; and a stationary spraying device located adjacent the carrier and to which articles carried by said chucks are presented successively; substantially as specified.

3. A spraying machine of the character described including, in combination: a carrier rotatable about a vertical axis; a plurality of rotatable chucks carried by said carrier, each chuck being magnetized and constantly inclined relatively to the vertical; and a stationary spraying device to which the articles carried by said chucks, are adapted to be presented, substantially as specified.

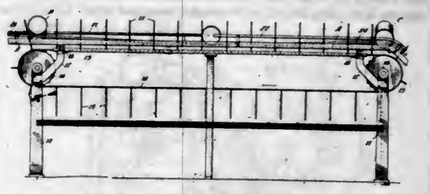
4. A spraying machine of the character described including, in combination: a carrier rotatable about a vertical axis and having a plurality of rotatable chucks mounted thereon each having means for securely and removably holding a can in place and enabling the same to actuate the spraying device; a stationary spraying device, to which the articles are brought successively by the chucks on the carrier; and a can-governed means controlling the operation of said spraying device, substantially as specified.

5. A spraying machine of the character described including, in combination: a carrier intermittently rotatable about a vertical axis; a plurality of rotatable chucks carried by said carrier each having means for securely and removably holding a can in place to actuate the spraying device; a stationary spraying device located adjacent the carrier and to which articles carried by said chucks are presented successively; and can-governed means controlling the operation of said spraying device, substantially as specified.

[Claims 6 to 10 not printed in the Gazette.]



1,227,618. APPARATUS FOR SPREADING LACQUER OVER THE INTERIOR WALLS OF CANS. JOHN G. HODGSON, Maywood, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed May 5, 1913. Serial No. 765,571. (Cl. 91—18.)



1. A machine for spreading a coating of lacquer or the like over the interior walls of cans comprising, in combination: a conveyer having upright flights for advancing successive cans and adapted to rotate the same, the can being adapted to slide endwise and vertically on said flights as may be required; and means for tilting the can simultaneously with the rotation thereof.

2. A machine for spreading a coating of lacquer or the like over the interior walls of cans comprising, in combination: a supporting track at one end of which one side is higher than the other and at the other end of which the opposite side is higher than the first named side; and a conveyer having narrow central flights, arranged to be free from engagement with the end flanges of the cans, for rolling cans along said track; substantially as specified.

3. A machine for spreading a coating of lacquer or the like over the interior walls of cans comprising, in combination: a track having two rails, each rail having an inclined portion and a horizontal portion, the inclined portions being arranged alongside the horizontal portions; a conveyer having a plurality of flights thereon adapted to engage and roll cans along said track, and end guards for engaging the end surfaces of the cams, against which guards the cans slide longitudinally as they are conveyed; substantially as specified.

4. A machine for spreading a coating of lacquer or the like over the interior walls of flanged cans comprising, in combination: a supporting track of gradually changing inclinations; a continuously movable conveyer having a plurality of flights for propelling and rolling cans along said track; and guards alongside and parallel with the depressed portions of said track engaging the end faces of the depressed ends of the cans; substantially as specified.

5. In a can coating machine, an endless chain conveyer having upright flights thereon extending up to the normal level of the centers of the cans adapted to engage the sides of cans and roll and propel them with the conveyer, on which flights the bodies of the cans slide vertically and from side to side during their travel, and means which cooperate with said conveyer whereby the ends of the cans are alternately elevated while the cans are being so advanced and rolled.

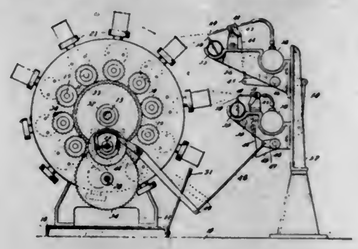
[Claims 6 and 7 not printed in the Gazette.]

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1,227,619. CAN-LACQUERING MACHINE. JOHN G. HODGSON, Maywood, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New York. Filed May 5, 1913. Serial No. 765,574. (Cl. 91—45.)

1. A machine of the character described including, in combination: a carrier rotatable about a horizontal axis; radially directed can holding chucks bodily movable with said carrier and rotatable thereon; means for continuously rotating said chucks; a spraying device stationary relatively to said carrier and automatically operable to spray a coating of lacquer on cans carried by said chucks; and means for automatically operating said spraying device when, by the movement of the can, the axis of the can is inclined and the spraying device is directed into its open end and against its interior side surface.

2. A lacquering machine including, in combination: a carrier rotatable about a horizontal axis; a plurality of radially directed can-holding chucks rotatably mounted on said carrier and bodily movable therewith; means for continuously rotating said chucks; and two sets of spraying devices arranged adjacent said carrier, one set above the other, in front of which the articles carried by said chucks are adapted to be brought successively.



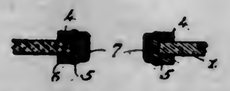
3. A lacquering machine including, in combination: a carrier rotatable about a horizontal axis; a plurality of sets of radially extending chucks rotatably mounted on said carrier and bodily movable therewith, each set of chucks including a plurality of chucks arranged longitudinally of the carrier; shafts 15 arranged longitudinally of the carrier and each operatively connected with the chucks of one of said sets; means for rotating said shafts to cause the rotation of the chucks; and a series of spraying devices extending longitudinally of the carrier and stationary relatively thereto, the number of said spraying devices corresponding to the number of chucks in each set.

4. A can lacquering machine including, in combination: a carrier rotatable about a horizontal axis; a plurality of sets of radially arranged can holding chucks carried by said carrier and rotatable thereon, each set including a plurality of chucks arranged longitudinally of the carrier; shafts 15 arranged longitudinally of the carrier and each operatively connected with the chucks of one of said sets; means for rotating said shafts to cause the rotation of the chucks; two series of spraying devices located adjacent the carrier, one series being arranged above the other, the number of spraying devices in each series corresponding to the number of chucks in each set; and means for operating each upper spraying device simultaneously with each lower spraying device.

5. A can lacquering machine including, in combination: a carrier intermittently rotatable about a horizontal axis; a plurality of radially extending, rotatable magnetized and flanged can holding chucks mounted on said carrier; shafts 15 arranged longitudinally of the carrier and each operatively connected with the chucks of one of said sets; means for rotating said shafts to cause the rotation of the chucks; and a spraying device, automatically controlled, to which the articles are brought successively by said chucks.

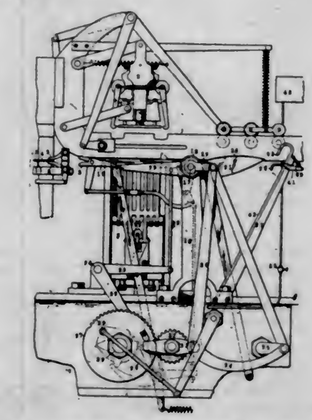
[Claims 6 to 12 not printed in the Gazette.]

1,227,620. OPHTHALMIC MOUNTING. HENRY E. HOLLEY, Otisville, N. Y. Filed Dec. 30, 1915. Serial No. 69,433. (Cl. 88—41.)



An ophthalmic mounting including lenses, a bridge having a pair of clip ears projecting laterally from either end, said clip ears having rounded edges, the main portions of said clip ears being directed toward one another and then extended in parallel relation, thereby providing a pocket of increased width at its inner portion between each pair of clip ears, a pair of flat cushion members positioned in each pair of clip ears and engaging the inner faces thereof, said cushion members having clamping engagement with opposite sides of the lenses, said clips being adapted to be adjusted with respect to one another to accommodate lenses of different thicknesses, and cushion members on the inner sides of the ends of said bridge to serve as cushion pads and cover the ends of the bridge.

1,227,621. SHEARING MECHANISM. CARLOS HOLLY, Lockport, N. Y., assignor to F. N. Burt Company, Limited, Toronto, Canada, a Corporation of Canada. Continuation in part of application Serial No. 705,512, filed June 24, 1912. Patent No. 1,201,822, dated Oct. 17, 1916. This application filed May 16, 1916. Serial No. 97,772. (Cl. 164—3.4.)



1. In an apparatus of the character described, in combination, a pair of coöperative shear blades, a scraper adapted to coöperate with one of said blades to remove particles adhering thereto, and yielding means adapted to cause pressure between said scraper and its coöperative blade during the scraping operation.

2. Shearing mechanism comprising, in combination, an intermittently rotatable shear blade, and a scraper adapted to coöperate with said blade during an interval of rest of the latter to remove particles therefrom.

3. Shearing mechanism comprising in combination, an intermittently rotatable shear blade, a scraper adapted to coöperate with said blade during an interval of rest of the latter to remove particles therefrom, and yielding means adapted to cause pressure between said scraper and said blade during the scraping operation.

4. Shearing mechanism comprising, in combination, an intermittently rotatable shear blade, a scraper, a carrier for said scraper, and means adapted to cause said carrier to dispose said scraper on said blade at a predetermined point and thereafter move the same longitudinally thereof.

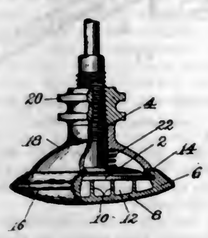
5. Shearing mechanism comprising, in combination, an intermittently rotatable shear blade, a scraper, a carrier for said scraper, means adapted to cause said carrier to dispose said scraper on said blade at a predetermined point and thereafter move the same longitudinally thereof, and a spring connected to said scraper to press the same toward said blade.

[Claims 6 to 20 not printed in the Gazette.]

1,227,622. FINISHING-MACHINE. ERNEST HOPE, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 7, 1911. Serial No. 642,763. (Cl. 51—17.)

1. In a machine of the character described, the combination with a disk-shaped head having an outer supporting face, of a pad comprising a circular facing of rubber molded to a convex shape, its outer surface affording a continuous support for a work rubbing member of sheet material, said facing being of greater diameter than said head and having integral ribs projecting from its inner surface with their edges bearing against the supporting face of said head, said ribs being formed to intersect each other to provide air pockets extending continuously from the inner surface of said facing to said supporting face, a marginal flange formed about the periphery of said facing and extending inwardly over the edge of said head, and means for clamping said flange against said head.





2. A pad of the character described, comprising a circular facing of rubber affording a continuous support for a work rubbing member of sheet material, said facing having integral ribs projecting from its inner surface, said ribs intersecting each other to form air pockets extending continuously from the inner surface of said facing to the inner edges of the ribs, and a marginal attaching flange integral with said facing and ribs and extending inwardly from the periphery of said pad toward the axis of the pad.

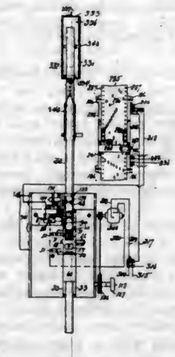
3. A buffing machine for boots and shoes, having, in combination, a rotary spindle, a head carried thereby, a rubber pad having a continuous convex facing and supporting ribs integral therewith, said ribs being constructed to form in conjunction with said head air pockets extending from the inner surface of said facing to the under surface of said head, an abrasive cover stretched over said pad, and means for clamping said pad and cover to said head.

4. A pad for supporting an abrasive cover comprising a facing of rubber affording a continuous support for a work rubbing member of sheet material, said facing having integral ribs projecting from its inner surface, said ribs intersecting each other to form air pockets extending continuously from the inner surface of said facing to the inner edges of the ribs, and a marginal attaching flange integral with said facing and ribs.

1,227,623. AUTOMATIC LIGHT-CONTROLLED FILM-PRINTING APPARATUS. DAVID HORSLEY, Bayonne, N. J. Filed June 5, 1915. Serial No. 32,420. (Cl. 177—350.)

1. In an apparatus of the character described the combination of a movable notched film, a source of light, an electric resistance coil in the apparatus in electric circuit with the source of light, an index card coacting with said coil to vary the amount of resistance in said coil, means coacting with the notches of the film to move said card, to vary the resistance of said coil and thereby vary the intensity of the source of light.

2. In an apparatus of the character described the combination of a notched film, means to move said film, an electric lamp in the apparatus, an electric switch for the lamp controlled by the notches of said film, a light regulating device in the apparatus, a solenoid connected to the latter device and in electric circuit with said switch, an index card having perforations across its face, gripping fingers in the apparatus for the index card, connections between the solenoid and said gripping fingers to move said card, electric resistance coils in the apparatus, contact plates for said coils, a brush for each of said plates, the electric circuit of the apparatus connecting the lamp, said coils and brushes, the said index card interposed between said brushes and plates, the openings in the card closing the electric circuit between the brushes and contact plates when under the former, thereby regulating the number of coils in the electric circuit and controlling the intensity of the electric lamp.



3. In an apparatus of the character described the combination of an index card having perforations in the face thereof and perforations adjacent to the edges thereof, sprocket wheels journaled in the apparatus, a solenoid, connections between the solenoid and said sprocket wheels to cause the latter to engage the perforations adjacent to the edges of the index card and thereby move the latter, resistance coils in the apparatus, contact plates in electric circuit with said coils, brushes for the contact plates, the index card interposed between the brushes and the contact plates, the holes in the face of the index cards permitting contact between said brushes and contact plates when under said brushes, a lamp in electric circuit with said plates and brushes to vary the intensity of said lamp with various of said coils in the electric circuit, a switch in circuit with said solenoid, and a notched moving film controlling said switch.

4. In an apparatus of the character described the combination of a lamp house, an electric lamp for the lamp house, a movable film with notches in one of the edges thereof for the lamp house, an electric switch in the apparatus controlled by the notches of said film, a light regulating device for an index card having perforations across its face, a solenoid for said device, means actuated by the solenoid to move said card, an electric circuit between the switch and solenoid to operate the latter, resistance coils and brushes in eelctric circuit with the lamp, the perforations in the index card controlling the number of resistance coils and thereby regulating the intensity of the light of the electric lamp.

5. In an apparatus of the character described the combination of an electric lamp, a movable notched film for the apparatus, a switch crank having a pair of legs pivoted in the apparatus, a contact plug coacting with one of said legs, a roller journaled in the other leg coacting with the notches in the film, a solenoid for the apparatus, an electric circuit between said solenoid and switch, the latter normally maintained open by the edge of the film and closed by the coaction of said roller and said notches, a light controlling device, an index card having perforations across its face, means coacting with the solenoid to move said card, resistance coils in the light controlling device controlled by the perforations in said card and an electric circuit between said coils and said lamp to regulate the intensity of the light of the latter.

1,227,624. SILVER COMPOUND OF THE ACRIDIN SERIES AND A PROCESS OF MAKING SAME. PAUL HÜSSY and MAX HARTMANN, Basel, Switzerland, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Filed Jan. 23, 1917. Serial No. 144,081. (Cl. 23—24.)

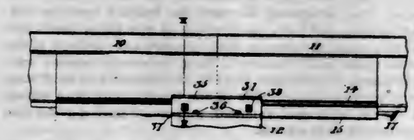
1. The herein described process for the manufacture of valuable disinfectants, consisting in acting on an acridin dyestuff with a soluble silver salt in presence of a solvent.

2. The herein described process for the manufacture of valuable disinfectants of the acridin series, consisting in acting on an acridin dyestuff alkylated at the acridin nitrogen with a soluble silver salt, in presence of a solvent.

3. As new products, the herein described disinfectants of the acridin series, constituting red to black powders, which dissolve in water with red to green colorations, in alcohol, acetic ether, glacial acetic acid and acetone with strong fluorescences and in concentrated sulfuric acid with yellow to red colorations, and acting still, when in solutions of great dilution, strongly growth checking on bacteria and especially on streptococcus and splenitis bacilli.

4. As a new article of manufacture the herein described silver compound of the 2 : 7-dimethyl-3 : 6-diamidoacridin methylated at the acridin nitrogen, which constitutes a brown red powder dissolving in water with a red-orange coloration, in alcohol with an orange-yellow coloration and a strong fluorescence, in acetone, acetic ether and glacial acetic acid with yellow-green fluorescences and in concentrated sulfuric acid with a pure yellow coloration and which acts still, when in solutions of great dilution, strongly growth checking on bacteria and especially on streptococcus and splenitis bacilli.

1,227,625. RAIL-JOINT. ANTON JANSA, Cleveland, Ohio, assignor of one-half to John Por, Cleveland, Ohio. Filed Mar. 14, 1917. Serial No. 154,710. (Cl. 239—6.)

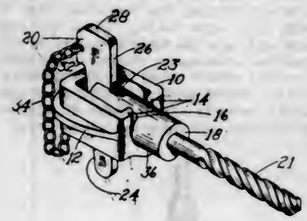


1. A connector for railway rails comprising a base adapted for seating upon a tie and having a box-shaped receiving portion, the material of which said base is formed being bent upon itself providing an inwardly-extending longitudinal lip, transverse ribs upon the bottom of the said receiving portion, and a frame carried by said rails and removably positioned within the said receiving portion of the base beneath the said lip.

3. A connector for railway rails comprising a base adapted for seating upon a tie and having a box-shaped receiving portion, the material of which said base is formed being bent upon itself providing an inwardly-extending longitudinal lip, transverse ribs upon the bottom of the said receiving portion, a frame having an inverted T-shaped slot therethrough adapted for the longitudinal reception of the free ends of said rails, the opposite sides of said frame being cut-away adapted for accommodating the frame within the said receiving portion of the base, the said frame having transverse grooves adapted for overlying the said ribs, a tie upon which the said base is mounted, outwardly projecting bolts carried by the said base at the opposite side thereof from the said lip, a Z-shaped locking plate seated upon said tie and mounted upon said bolts with its upper portion overlying the adjacent portion of said frame opposite the said lip, and retaining means for the said plate engaging the said bolts and tie.

[Claim 2 not printed in the Gazette.]

1,227,626. DEVICE FOR USE WITH COLLETS. PAUL J. KELLEY, Beverly, Mass. Filed May 28, 1915. Serial No. 30,962. (Cl. 29—84.)



1. A device for use with collets, having, in combination, a collet holder comprising parts, which are immovable relatively to each other, for engaging a collet and for restraining the collet from longitudinal movement relatively to the holder, and means, arranged to be placed between the holder and a tool in the collet, for moving the tool relatively to the collet.

2. A device for use with collets, having, in combination, a collet holder provided with means for engaging a collet and restraining it from movement relatively to the holder in all directions except one, and a tapered member, arranged to be driven between the holder and a tool in the collet.

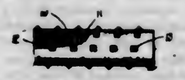
3. A device for use with collets, having, in combination, a collet holder comprising parts, which are immovable relatively to each other, for engaging a collet and for restraining it from movement relatively to the holder in all directions except one, and means, arranged to be placed between the holder and a tool in the collet, for moving the tool relatively to the collet.

4. A device for use in removing tools from collets, having, in combination, a yoke-shaped collet holder provided with a projection for engaging a groove on a collet, and a tapered member, arranged to be driven between the holder and a tool in the collet, to loosen the tool in the collet.

5. A device for use in removing tools from collets, having, in combination, a collet holder provided with means for engaging a collet and restraining it from movement relatively to the holder in all directions except one, a tapered member, arranged to be driven between the holder and a tool in the collet, to loosen the tool in the collet, flexible means connecting the tapered member with the holder and a stop upon the tapered member, said stop being constructed to engage the holder to prevent the tapered member from being driven through the holder.

[Claims 6 and 7 not printed in the Gazette.]

1,227,627. WALL-SOCKET. JOSEPH KENNEDY, New York, N. Y., assignor to The Clements Company, New York, N. Y., a Corporation of New York. Filed June 19, 1914. Serial No. 846,093. (Cl. 72—105.)



1. A wall socket comprising a hollow circumferentially continuous sleeve, and means within said sleeve for receiving the threads of a bolt, and external projections spaced about the outer surface of said sleeve on a helical line, the pitch of said helical line being opposite in direction to the pitch of the bolt threads.

2. A bolt anchor comprising a hollow shell, means within said shell for receiving the threads of a bolt, and a plurality of holding members projecting from the outer surface of the shell and lying in lines diagonal to the axis of the shell in a direction opposite to the pitch lines of the bolt threads.



3. A bolt anchor comprising a hollow shell, means within said shell for receiving the threads of a bolt, a plurality of parallel holding members projecting from the outer surface of the shell and lying in spiral lines with the axis of the shell as the axis of the spiral, the pitch of the spiral being opposite to the bolt threads.

4. A bolt anchor comprising a hollow shell, means within said shell for receiving the threads of a bolt of one pitch direction, a plurality of parallel holding members projecting from the outer surface of the shell and lying in spiral lines having a pitch direction opposite to the bolt threads, whereby a backing out or unscrewing movement of the bolt tends to screw the anchor inwardly.

5. A bolt anchor comprising a hollow shell internally threaded with a pitch of one direction to receive the threads of a bolt and provided with external means adapted to constitute screw threads having a pitch of opposite direction, whereby a backing out or unscrewing movement of the bolt tends to screw the anchor inwardly.

1,227,628. FILLING APPARATUS. KARL KIEFER, Cincinnati, Ohio. Filed Aug. 31, 1915. Serial No. 48,373. (Cl. 226—12.)



1. In filling apparatus, in combination with supporting element that is movable up and down, a filling tube and liquid supply means mounted upon and movable up and down with said element, a flexible connection between said tube and said means, and clamping means acting on said flexible connection to close it.

2. In filling apparatus, in combination with a supporting element that is movable up and down, a filling tube and a vent or overflow tube and means having an inlet passage and an overflow passage mounted upon and movable up and down with said element, flexible tubes connecting the filling tube and the vent or overflow tube with said inlet passage and said overflow passage, respectively, and clamping means acting upon said flexible tubes to close them.

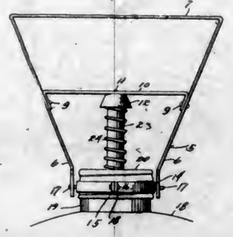
3. In filling apparatus, in combination with supporting element that is movable up and down, a filling tube and liquid supply means mounted upon and movable up and down with said element, a flexible connection between said tube and said means, clamping means acting on said flexible connection to close it, and a detachable connection between said filling tube and said clamping means.

4. In filling apparatus, in combination with supporting element that is movable up and down, a filling tube and liquid supply means, mounted upon and movable up and down with said element, a flexible connection between said tube and said means, clamping means acting on said flexible connection to close it, and means acting to remove the action of said clamping means from said flexible connection when said filling tube is connected with a container to be filled therefrom.

5. In filling apparatus, in combination with a supporting element that is movable up and down, a filling tube and a vent or overflow tube and means having an inlet passage and an overflow passage mounted upon and movable up and down with said element, flexible tubes connecting the filling tube and the vent or overflow tube with said inlet passage and said overflow passage, respectively, clamping means acting upon said flexible tubes to close them, and means acting to remove the action of said clamping means from said flexible tubes when said filling tube and said vent or overflow tube are connected with a container to be filled from said filling tube.

[Claims 6 to 16 not printed in the Gazette.]

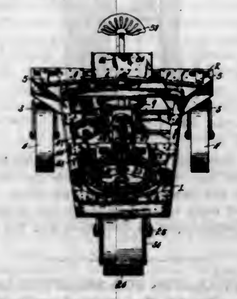
1,227,629. ATTACHMENT FOR OIL-FOUNTS. FRED H. KLOEPPER, Lancaster, Kans. Filed Dec. 18, 1916. Serial No. 137,657. (Cl. 220—22.)



1. A combined carrier and wrench for receptacles having threaded closures provided with a spring pressed valve including a stem projecting outwardly from the closure; consisting of a member forming a carrying handle and provided with means for detachable engagement with the threaded closure of a receptacle, said member further having means to engage the stem of the valve in such manner that the spring thereof will maintain the member detachably applied to the closure.

2. The combination with a threaded can closure having a valve provided with a spring forcing the valve outwardly to its seat, said valve being further provided with an outwardly projecting stem; of a combined carrier and wrench for said closure comprising a bail forming a carrying handle and having legs provided with means for detachable engagement with the closure, said carrier further having means to engage the stem and compress the spring during the application and removal of the carrier to and from the closure.

1,227,630. AGRICULTURAL TRACTOR. ROBERT D. KOHNE, Toledo, Ohio. Filed Jan. 29, 1915. Serial No. 5,037. (Cl. 21—114.)



A tractor of the class described having a single front tractor wheel and caster wheels mounted for horizontal turning movements, and separate means for imparting horizontal turning movements to said tractor and caster wheels in the same or different directions and for maintaining said wheels in any position of adjustment whereby

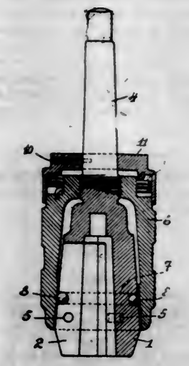
the tractor may be turned in either direction or may have a straight ahead movement with the wheels traveling in straight parallel lines and with the tractor wheel offset in one direction or another from a line extending centrally between the caster wheels and parallel with the direction of movement thereof.

1,227,631. SURVEYOR'S TARGET. PERCY A. KOLESCH, Brooklyn, N. Y. Filed Mar. 15, 1913. Serial No. 754,538. (Cl. 33—74.)



A disk having a centrally disposed lozenge shaped opening and means for holding a plumb line coincident with the longest axis of such opening.

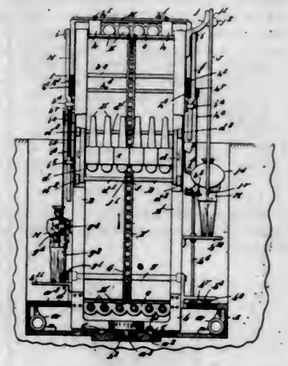
1,227,632. SOCKET FOR DRILLS WITH CONICAL SHAFTS. PER GUSTAF LAGERBÄCK, Sattsjö-Dufnäs, Sweden. Filed Apr. 12, 1917. Serial No. 161,647. (Cl. 29—120.)



In a socket for drills with conical shafts the combination of laminæ, one or more of which are free, a sleeve for tightening the laminæ around the shaft of the drill and one row of balls located between the laminæ and the said sleeve, substantially as described and for the purpose set forth.

1,227,633. APPARATUS FOR SIGHTING AND LEVELING GUNS. MOSES M. LAHUE, Lowell, Mass. Filed Jan. 14, 1916. Serial No. 72,168. (Cl. 89—41.)

1. In an apparatus for sighting and leveling guns, the combination of a frame adapted to be arranged in a protected space and to project upward therefrom and provided with tracks, a series of gun-carriages running on said tracks, a lock to hold said guns in firing position, two mirrors rigidly secured to a swinging frame at right angles to each other, one of said mirrors being above and the other below the top of said protected space, said swinging frame being arranged to move parallel with the path of said carriages and the lower mirror having an index finger, and a scale on which said finger indicates the elevation of the target reflected in said mirror.



2. In an apparatus for sighting and leveling guns, the combination of a frame adapted to be arranged in a protected space and to project upward therefrom and provided with tracks, a series of gun-carriages running on said tracks, a lock to hold said guns in firing position, two mirrors rigidly secured to a swinging frame at right angles to each other, one of said mirrors being above and the other below the top of said protected space, said swinging frame being arranged to move parallel with the path of said carriages and the lower mirror having an index finger, a scale on which said finger indicates the elevation of the target reflected in said mirror, a lock for leveling said guns and holding them in firing position and another index finger movable with said lock and another scale on which said last named index finger indicates the elevation of the guns on said carriages.

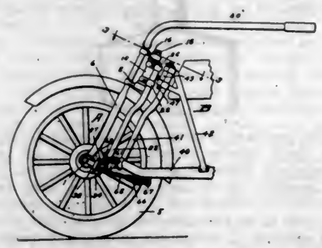
3. In an apparatus for sighting and leveling guns, the combination of a frame adapted to be arranged in a protected space and to project upward therefrom and provided with tracks, a series of gun-carriages running on said tracks, a lock to hold said guns in firing position, two mirrors rigidly secured to a swinging frame at right angles with each other, one of said mirrors being convex and arranged above and the other mirror being plane and arranged below the top of said protected space, said swinging frame being arranged to move parallel with the path of said carriages and the lower mirror having an index finger, and a scale on which said finger indicates the elevation of the target reflected in said mirror.

4. In an apparatus for sighting and leveling guns, the combination of a frame adapted to be arranged in a protected space and to project upward therefrom and provided with tracks, a series of gun-carriages running on said tracks, two mirrors rigidly secured to a swinging frame at a fixed angle with each other, one of said mirrors being above and the other below the top of said space, said swinging frame being arranged to move parallel with the path of said carriages and the lower mirror having an index finger, and a scale on which said finger indicates the elevation of the target reflected in said mirror.

1,227,634. VEHICLE. JOHN L. LAKE, Cleveland, Ohio, assignor to Andrew S. Grant, Toronto, Canada. Filed Aug. 14, 1915. Serial No. 45,446. (Cl. 208—94.)

1. In a vehicle, the combination of a supporting and a supported structure, a link having its opposed ends pivoted respectively to adjacent parts of the aforesaid structures, means hingedly connecting portions of the structures remote from the aforesaid link, said means being slidable with respect to one structure, a leaf spring secured to one structure, and a bearing carried by the other structure for coöperation with the free end of the spring.





2. In a vehicle, the combination of a supporting and a supported structure, a link having its opposed ends pivoted to adjacent parts of the aforesaid structures, means hingedly connecting portions of the structures remote from the aforesaid link, said means being slidable with respect to one structure, a leaf spring secured to one structure, and a roller carried by the other structure for coöperation with the free end of the spring.

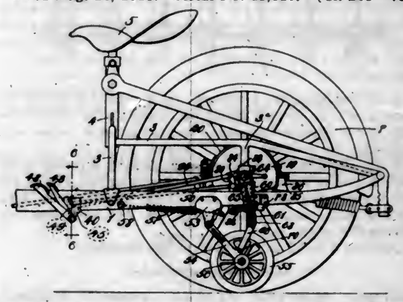
3. In a vehicle, the combination with a supporting structure comprising a head and a track that are rigidly connected, a steering wheel that is journaled upon a member slidable upon said track, and means supported by the head for sliding said member; and a supported structure comprising a frame having a head that is located adjacent the head of the supporting structure, of means hingedly connecting the heads of the two structures, said means being slidable with respect to one head, a pair of links having their corresponding opposed ends pivoted respectively to adjacent parts of the structures in the vicinity of the aforesaid track, a bearing carried by the supporting structure on opposite sides of the steering wheel, and a leaf spring secured to each side of the frame of the supported structure, the free end whereof bears upon one of the aforesaid bearings.

4. In a vehicle, the combination with a supporting structure comprising a head and a track that are rigidly connected, a steering wheel that is journaled upon a member slidable upon said track, and means journaled within the head for sliding said member; and a supported structure comprising a frame having a head that is located adjacent the head of the supporting structure, of means hingedly connecting the heads of the two structures, said means being slidable with respect to one head, a pair of links having their corresponding opposed ends pivoted respectively to adjacent parts of the structures in the vicinity of the aforesaid track, antifriction bearings suspended below portions of the aforesaid track on opposite sides of the steering wheel, and a leaf spring secured to each side of the frame of the supported structure, the free end whereof bears upon one of the aforesaid antifriction bearings.

5. In a vehicle, the combination with a supporting and a supported structure, the former structure comprising a head and a curved track that are rigidly connected together, a steering wheel journaled upon a member that is slidable upon said track, and a steering mechanism journaled within the aforesaid head and rigidly connected to the supporting member of the steering wheel; and the latter structure comprising a frame having a head, of a vertical pin carried by the last mentioned head, a hinge member slidable upon said pin, a second hinge member secured to the head of the supporting structure and pivotally connected to the first mentioned hinge member, links having each their opposed ends pivoted respectively to adjacent portions of the supporting and supported structures in the vicinity of the aforesaid track, a U-shaped clip secured to each end of the track and having opposed branches which depend therefrom, a roller pivoted between the branches of each clip, a leaf spring having one of its ends secured to the frame of the supported structure and its opposite end bearing upon one of the aforesaid rollers, and a plurality of auxiliary spring leaves for reinforcing each of the first mentioned springs.

[Claims 6 to 10 not printed in the Gazette.]

1,227,635. STABILIZING MECHANISM FOR MOTORCYCLES AND THE LIKE. JOHN L. LAKE, Cleveland, Ohio, assignor to Andrew S. Grant, Toronto, Canada. Filed Aug. 14, 1915. Serial No. 45,447. (Cl. 208—78.)



1. In stabilizing mechanism for vehicles of the class set forth, the combination of a brace member pivotally connected to one side of the vehicle frame, means tending to elevate the brace member, and further means for yieldingly retaining the brace member in effective position in opposition to the first mentioned means.

2. In stabilizing mechanism for vehicles of the class set forth, the combination of a brace member pivotally connected to one side of the vehicle frame, means for elevating the brace member, and further means for lowering the brace member and for yieldingly retaining said member in effective position.

3. In stabilizing mechanism for vehicles of the class set forth, the combination of an auxiliary wheel mounted in a hanger pivotally attached to one side of the vehicle frame, means for elevating the hanger thereby to remove the wheel from the road, and further means for moving the hanger to and for yieldingly retaining it in a position to hold the wheel in contact with the road.

4. In stabilizing mechanism for vehicles of the class set forth, the combination of an auxiliary wheel mounted in a hanger pivotally attached to one side of the vehicle frame, means for elevating the wheel, and a two-link toggle connection between the hanger and the frame for retaining the wheel in operative relation to the road, one link of the toggle comprising telescoping members, and a compression spring interposed between said members.

5. In stabilizing mechanism for vehicles of the class set forth, the combination of a brace member pivotally connected to one side of the vehicle frame, means for elevating the brace member, further means tending to retain the brace member in elevated position against accidental displacement, and mechanism for lowering the brace member and retaining it in operative relation to the road.

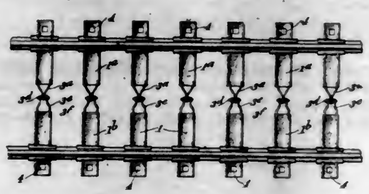
[Claims 6 to 14 not printed in the Gazette.]

1,227,636. RAILROAD-TIE AND RAIL-GRIP. JEREMIAH E. LANGFORD, Salt Lake City, Utah. Filed June 3, 1916. Serial No. 101,469. (Cl. 238—5.)

1. The combination of a channel shaped railroad tie having recesses in its sides to receive a rail, with a reinforcing member conforming to the recesses and extending between the latter, said member being permanently fixed to the tie.

2. In combination, a railroad tie having a recess to receive a rail and a reinforcing means located at said recess, and following the contour of said recess.

3. In combination, a railroad tie having a recess to receive a rail, a tapering clamping means at the side of the rail, and a reinforcing means located at said recess, and extending longitudinally of the rail.



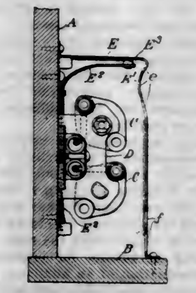
4. In combination, a railroad tie having a recess to receive a rail, a tapering clamping means at the side of the rail, and a reinforcing means located at said recess, and following the contour of said recess.

5. In combination, a railroad tie having a recess to receive a rail, a tapering clamping means at the side of the rail, comprising an inner and outer plate, and a reinforcing means located at said recess, and extending longitudinally of the rail.

[Claims 6 to 39 not printed in the Gazette.]

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1,227,637. ELECTRIC HEATER. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed Aug. 18, 1913. Serial No. 785,407. (Cl. 219—34.)



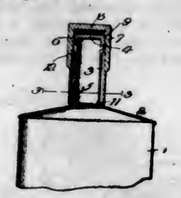
1. In an electric heater the combination with a heating element provided with means whereby it may be attached to a support, of a casing having a top wall, a front wall and end walls, said casing being open at the top and bottom, the rear edge of the top wall and the bottom edge of the front wall having means whereby the casing may be attached to angularly disposed supports in a position to inclose said heating element, and means for providing a circulation through said casing.

[Claim 2 not printed in the Gazette.]

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1,227,638. CLOSURE FOR DISPENSING PASTE-TUBES. JOHN A. MAKER, Duluth, Minn. Filed Dec. 10, 1915. Serial No. 66,134. (Cl. 221—60.)

1. The combination with a container of a discharge spout therefor provided in its side with a discharge orifice and exteriorly threaded at its outer end, the outer end of the spout being closed, a closure cap interiorly threaded at its outer end and fitted upon the said spout and arranged to have its threads coöperate with the threads upon the spout when the cap is in closed position and to disengage from the said threads upon the spout as the cap is moved to open position outwardly upon the spout, and means upon the cap arranged to coöperate with the threads upon the spout to limit the outward movement of the cap after disengagement of its threads from the threads upon the spout.

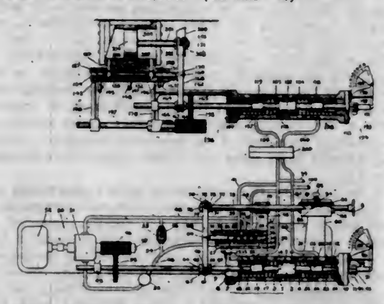


2. The combination with a container, of a tubular discharge spout therefor completely closed at its outer end and exteriorly threaded at its said outer end, the said spout inwardly of its threaded portion being exteriorly cylindrical and smooth and the spout being provided relatively close to its juncture with the container with a discharge opening, a closure cap interiorly threaded at its outer end and arranged to have its threads to coöperate with the threads upon the spout when the cap is in closed position and to disengage from the threads upon the spout when the cap is moved to open position outwardly upon the spout, the said cap inwardly of its threaded portion being interiorly smooth and being provided at its inner end with an inturned annular flange the edge of which is designed to rotatably and slidably contact the exterior surface of the spout inwardly of the threaded portion of the said spout.

3. The combination with a container, of a tubular discharge spout therefor completely closed at its outer end and at its said outer end exteriorly threaded and being provided at the inner end of its threaded portion with a circumscribing shoulder, the spout being exteriorly reduced in diameter between its said shoulder and the point of junction with the container, the said reduced portion of the spout at its inner end being formed with an orifice and the cap for the spout being closed at its outer end and interiorly threaded at its said outer end to coact with the threaded outer end of the spout, the said cap at its inner end being formed with an inwardly projecting annular flange arranged to coöperate with the said shoulder to limit the outward movement of the cap from the spout, the inner edge of the said flange contacting the surface of the reduced portion of the spout.

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1,227,639. DISTANT CONTROL APPARATUS. CHARLES MATTHEWS MANLY, Brooklyn, N. Y. Filed July 16, 1909. Serial No. 508,057. (Cl. 188—2.)



1. A control mechanism comprising an element movable by power to any position within its range of movement, a source of hydraulic power, a manually movable element having no mechanical connection thereto but controlling the movements of the said power movable element and means for causing said hydraulic power to operate said power movable element to move in exact synchronism with the movements of said manually movable element.



2. The combination of a primary control mechanism comprising a manually operatable element and a power operatable element, a source of hydraulic power for operating said element, a secondary control mechanism comprising a power operatable element, and means for causing both the said power operatable elements to be moved in synchronism with the movements of the manually operatable element.

3. The combination of a source of hydraulic power, a primary control mechanism embodying a manually operatable control element and a member operated by said source of power under control of said element, means for causing said member to move in exact synchronism with said manually operatable control element, a secondary control mechanism also operated by said source of power under control of said primary control mechanism, and means for causing said secondary control mechanism to also move in exact synchronism with said manually operatable control element.

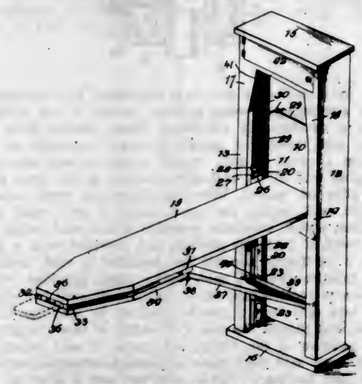
4. The combination of a primary control mechanism comprising a manually operatable element, a source of hydraulic power and a power operatable element operating in synchronism with said manually operatable element, a secondary control mechanism operating in synchronism with said power operatable element and means for maintaining synchronism of operation between the said primary and said secondary mechanisms while either one is bodily moved with reference to the other.

5. The combination of a primary control mechanism comprising a manually operatable element, a source of hydraulic power, and means for causing the said manually operatable element to control the power from said source by infinitesimal gradients or without intervening steps, with a secondary control mechanism operated by power from the said source under control of and in exact synchronism with the said manually operable element.

[Claims 6 to 11 not printed in the Gazette.]

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1,227,640. IRONING-BOARD. LOUIS H. MARQUARDT, Genoa, Nebr. Filed Jan. 12, 1917. Serial No. 142,063. (Cl. 68—10.)



1. In an apparatus of the class described, supporting devices each including a vertical guideway and upper and lower sockets communicating with the guideway, an ironing board having pivot members adapted to engage the upper sockets and movable in the guideways, and a brace device movably connected relative to the ironing board and having pivot devices adapted to engage the lower sockets and movable in the guideways.

2. In an apparatus of the class described, an inclosure having an opening in the front, an ironing board, a member attached to one portion of the ironing board and conforming in outline to one portion of the inclosure opening, a brace member swingingly united to said attached member and conforming in outline to the remainder of the inclosure opening, means for swingingly connecting the ironing board at one end within the inclosure, and means for swingingly connecting the brace device at one end within the inclosure, said attached member and said brace device closing the opening in the inclosure when disposed in alined relation.

6. In an apparatus of the class described, base members adapted to be attached to supports and each having a vertical guideway and sockets communicating with the guideway, a pivot casing adapted to be attached to an ironing board, a pivot device in said casing and engaging in said guideways and one set of said sockets, a pivot casing adapted to be attached to a brace member, a pivot device in said last mentioned pivot casing and engaging in said guideways and another set of said sockets, locking members slidable in said guideways and operating to close said sockets, and means for simultaneously actuating said locking members.

[Claims 3 to 5 not printed in the Gazette.]

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1,227,641. SAFETY-RAZOR. ALEXANDER MASZCZYK, Milwaukee, Wis. Filed Dec. 8, 1913. Serial No. 805,201. (Cl. 30—12.)



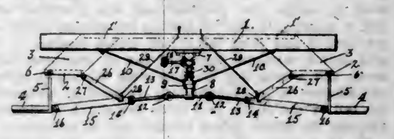
1. In a safety razor of the described class, a heavy V-shaped blade provided with a longitudinal aperture formed through the thick side of said blade, a pair of end members, means for detachably connecting said end members at right angles to the respective ends of said blade, an operating handle, and means for adjustably connecting said handle nearer to or farther from either end of said blade.

2. In a safety razor of the described class, a heavy V-shaped blade provided with a longitudinal aperture formed through the thick side of said blade, a pair of end members respectively detachably connected with the respective ends of said blade, a rod extending through the thick portion of said blade, a handle, and means for adjustably connecting said handle nearer to or farther from one of said side members.

3. In a safety razor of the described class, a heavy V-shaped blade provided with a longitudinal aperture formed through the thick side thereof, a rod located in said longitudinal aperture, said blade being provided with a plurality of recesses located at its respective ends for the reception of a pair of retaining pins, a pair of end members each provided with pins adapted to enter the apertures located in the ends of said blade, and an operating handle.

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1,227,642. AUTOMATIC EXTENSION CAR-STEP. DOUGLAS RANDOLPH MAYHEW, Shingle Springs, Cal. Filed Mar. 6, 1917. Serial No. 152,512. (Cl. 105—86.)



1. In a railway car having a brake operating mechanism, a movable step adapted to be extended to and retracted from its operative position, and a connection between said step and said brake operating mechanism for operating said step automatically by the movement of said brake mechanism.

3. In a railway car having a brake operating mechanism, a movable step adapted to be extended to and retracted from its operative position, a connection between said step and said brake mechanism whereby the former

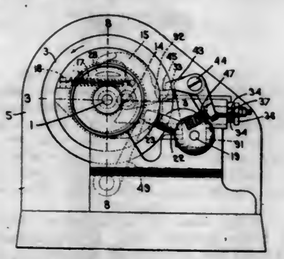
is automatically extended by the operation of the latter, and means for retaining said step in extended position.

7. In a railway car having a brake operating mechanism and a platform having fixed steps at the sides thereof, an extension step movably carried below said fixed steps, upon each side; a vertical shaft rotatably carried below said platform and between said steps; a system of levers and links connecting said shaft with said steps, whereby said steps are extended and retracted by the rotation of said shaft; a system of levers and links connecting said shaft with said brake mechanism, whereby said steps are extended when said brake mechanism is operated to stop the car; latch members for retaining said steps in extended position; means for controlling said latch members independently of the brake mechanism; and a spring for retracting said steps upon the release of said latch members.

[Claims 2, 4 to 6, and 8 not printed in the Gazette.]

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1,227,643. COMBINED CLUTCH AND STOP MOTION. ALFRED S. MELLO, Cambridge, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Feb. 1, 1917. Serial No. 146,012. (Cl. 74—46.)



6. In a device of the class described, the combination with a driving and a driven clutch member movable toward and from each other, the driving clutch member having a clutch shoulder, of a clutch dog pivoted to the driven clutch member and adapted to have positive clutching engagement with said shoulder when said two members are in relative clutching position, means to prevent relative movement of said members into clutching position except when they are in a predetermined angular relative position different from their relative angular positions when the dog has clutching engagement with said shoulder, and means operative while the clutch members are turning relatively from their initial to their final clutching position to provide sufficient frictional engagement to cause the driven clutch member to be started in rotation.

11. In a device of the class described, the combination with a driving and a driven clutch member, the driving clutch member having a clutch shoulder, of a clutch dog pivoted to the driven clutch member and provided with a nose to engage said shoulder and also provided with a tail, a clutch actuator for moving the driving clutch member toward and from the driven clutch member to bring said clutch members into and out of clutching engagement, and a stop dog movable with the clutch actuator and adapted to be brought into the path of movement of the tail of the clutch dog when the clutch is disengaged whereby the driven clutch member will be brought to rest.

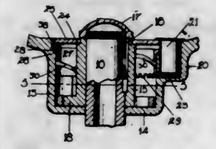
13. In a device of the class described, the combination with a driving and a driven clutch member, the driving clutch member having a clutch shoulder, of a clutch dog pivoted to the driven clutch member and provided with a nose to engage said shoulder and also provided with a tail, a clutch actuator movable in a diretcion parallel to the axis of rotation of said clutch members to move the driving clutch member into and out of clutching engagement with the driven clutch member, a clutch dog movable with the clutch actuator and adapted to be brought into the path of movement of the tail of the clutch dog by the uncluching movement of said actuator whereby the driven clutch member will be brought to rest, and means controlling the unclutching movement of said clutch actuator which permits said actuator to have its unclutching movement only when the driven clutch member is in a predetermined angular position.

15. In a device of the class described, the combination with a driving and a driven clutch member, the driving clutch member having a clutch shoulder, of a clutch dog pivoted to the driven clutch member and provided with a nose to engage said shoulder and also provided with a tail, a clutch actuator movable in a direction parallel to the axis of rotation of said clutch members to move the driving clutch member into and out of clutching engagement with the driven clutch member, a clutch dog movable with the clutch actuator and adapted to be brought into the path of movement of the tail of the clutch dog by the uncluching movement of said actuator whereby the driven clutch member will be brought to rest, means controlling the unclutching movement of said clutch actuator which permits said actuator to have its unclutching movement only when the driven clutch member is in a predetermined angular position which is different from that in which the tail of the clutch dog engages the stop dog, and means to apply a friction brake to the driven clutch member after the clutch member has been moved into unclutching position and before the tail of the clutch dog engages the stop dog.

[Claims 1 to 5, 7 to 10, 12, and 14 not printed in the Gazette.]

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1,227,644. STEERING-WHEEL LOCK FOR AUTOMOBILES. CLAUDE E. MENTZER, Des Moines, Iowa, assignor of one-third to Carl B. Smith and one-third to Samuel G. Mattheis, Des Moines, Iowa. Filed Apr. 5, 1917. Serial No. 160,004. (Cl. 70—90.)



1. In a device of the class described, the combination of a steering post with a wheel having a hub provided with a downwardly extending flange spaced from said post, and forming a casing, a sleeve mounted on said casing, a cover on said casing, a cap on said post overhanging said cover, said sleeve having at its lower end a plurality of spaced, laterally projecting teeth received within said casing, the upper parts of said teeth being beveled, a shell rotatably mounted within said casing having teeth at its lower portion, and provided with a spiral slot, a vertically, slidable bar mounted in said casing on the interior thereof, said casing being provided with a groove to receive said bar, a member on said bar extending into said slot, a member carried by said bar at the lower end thereof, having a plurality of teeth adapted in one position of the sliding movement of said member to mesh with said first teeth, a locking device mounted in said slot having a rotary member, and a gear on said rotary member adapted to mesh with the teeth on said shell.

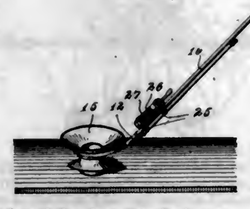
2. In a device of the class described, the combination of a post with a steering wheel having a hub provided with a casing member spaced from said post, a member fixed on said post having laterally extending teeth, a member slidably but non-rotatably mounted having teeth adapted in one position to mesh with said first teeth, a shell rotatably mounted within said casing and operatively connected with said last described member for raising and lowering said last described member when said shell is rotated, a locking device having a rotary member, and coacting devices, whereupon the rotation of said rotary member imparts rotation to said shell.



3. In a device of the class described, the combination of a post with a steering wheel having a casing thereon, a member fixed on said post having laterally extending teeth, a shell rotatably mounted in said casing, means aadpted to be moved upwardly or downwardly when said shell is rotated, said means carrying teeth adapted in one position to mesh with said first teeth, a locking device having a rotary member, said shell being provided with teeth, said rotary member having a pinion adapted to mesh with said last described teeth.

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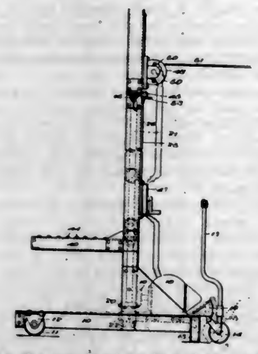
1,227,645. CUSPIDOR IMPLEMENT. HERBERT MENZEL, Germania, Wyo. Filed Feb. 3, 1916. Serial No. 75,889. (Cl. 57—111.)



In a device of the class described, the combination with a rigid handle bar, of a pair of resilient arms adapted to completely surround the body of a vessel, said arms being hingedly engaged to said handle bar at one end thereof, a helical spring connecting directly between said arms near the joint thereof adapted to hold the same in a normally closed position, a flexible cord engaged with each of said arms at a point beyond said spring, said cords being united and extending alongside of said handle bar, and an operating means combined with said cord near the opposite end of said handle bar.

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1,227,646. ELEVATOR-TRUCK. WALTER R. METZ, Washington, D. C., assignor of one-half to George M. Drexelius, Baltimore, Md. Filed Feb. 2, 1916. Serial No. 75,676. (Cl. 187—9.)



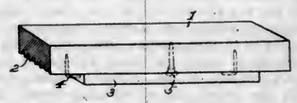
1. In an elevator truck, a base frame, an upright elevator frame having an upper hinged portion adapted to be turned down into lowered position, a vertically movable platform carried by said elevator frame, an electric motor for raising and lowering said platform, a take-up reel mounted on the upper hinged portion of said elevator frame and above the height of the workmen, connections between said take-up reel and said electric motor, and a flexible connection mound upon said take-up reel.

2. In an elevator truck, a base frame, an elevator frame having an upper hinged portion adapted to be turned down into lowered position, a vertically movable platform carried by said elevator frame, an electric motor for raising and lowering said platform, a take-up reel on the upper hinged portion of said elevator frame and above the height of the workmen, connections between said take-up reel and said electric motor, a flexible connection adapted to be wound upon said take-up reel, and stops on said elevator frame to prevent injury to said reel when said hinged portion is in lowered position.

3. In an elevator truck, a base frame formed of angle iron, an elevator frame comprising opposed channeled upright members secured at their lower ends to said base frame, means for connecting said upright members, a hinged portion on the upper end of said elevator frame adapted to be turned down into lowered position, a vertically movable platform frame formed of channel iron and having a horizontal bed section to receive articles to be elevated and a vertical section operating in said elevator frame, rollers on said bed-section, rollers on the side of the vertical section of said platform frame engaging between the flanges of the channels of the upright members of the elevator frame, a screw-shaft located centrally between the upright members of the elevator frame, an anti-friction bearing on said base frame for receiving the lower end of said screw-shaft, and a bearing adjacent the top of said elevator frame for receiving the upper end of said screw-shaft, an electric motor on said base frame, and a connection between said electric motor and screw-shaft for rotating the screw-shaft to move the platform frame vertically.

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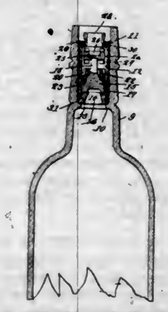
1,227,647. POULTRY-ROOST. HERMAN MEYER, Denver, Iowa. Filed Jan. 22, 1917. Serial No. 143,860. (Cl. 119—25.)



A poultry roost, comprising an invertible bar, said bar being provided in its under surface with a plurality of longitudinal parallel grooves, a closure-plate medially pivoted to the under surface of the bar so as to cover the width thereof when closed and adapted to be rocked to uncover the grooves, and angularly-bent clips mounted on said bar at both ends of the closure-plate and having parts directed toward each other adapted to receive and frictionally hold removably the ends of said closure-plate when the latter is rocked into its closed position.

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1,227,648. NON-REFILLABLE BOTTLE. SOLOMON NARUNSKY, Baltimore, Md. Filed June 21, 1916. Serial No. 105,031. (Cl. 215—62.)

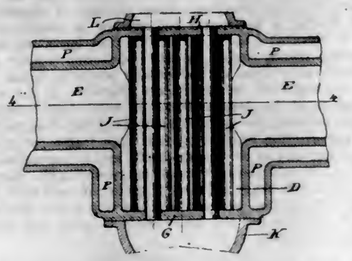


The combination with the neck of a bottle, of a pouring tube having open ends and a contracted upper end forming an external shoulder, a valve-seat plug having a central aperture detachably connected to the lower end of said tube, a valve in the tube adapted to engage said valve-seat and provided with a rigid upwardly extending stem,

a weight on said valve encircling said stem, a valve-guard loosely seated on the top of the end of said stem below said contracted end of the tube and provided with vertical ribs on its outer side and which project above the body-portion of said guard, and a clamping means engaging said external shoulder on the tube and the interior of the bottle neck for locking the tube in position.

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1,227,649. VAPORIZER. JOSEPH A. NICKELSON and JOHN FREDRIKSON, New York, N. Y., assignors to said Nickelson. Filed May 6, 1916. Serial No. 95,846. (Cl. 123—122.)



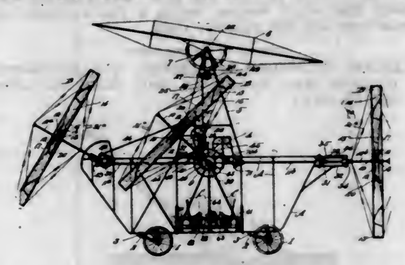
1. A vaporizer for heavy liquid hydrocarbon fuels, comprising in combination with a combustion engine and its horizontal exhaust pipe, of upper and lower cylindrical headers in the top and bottom of said exhaust pipe, forming a cylindrical vaporizing chamber, vaporizing tubes inserted vertically in said headers and lying within the vaporizing chamber, upper and lower bell-shaped caps over each of said headers, a fuel conduit communicating centrally with the lower one of said bell-shaped caps and leading to the carbureter of the engine, and the intake pipe or pipes of the engine communicating centrally with the upper one of said bell-shaped caps, whereby the fuel to be vaporized passes freely through the heated vaporizing tubes, and the hot exhaust gases pass around the tubes, and a water jacket surrounding both the exhaust pipe and the sides of the said cylindrical vaporizer chamber, to prevent the temperature of the vaporizing chamber from increasing beyond a predetermined degree.

2. A vaporizer for heavy liquid hydrocarbon fuels, comprising in combination with a combustion engine and its exhaust pipe, of a vaporizing chamber formed in said exhaust pipe and having walls extending at substantially right angles outwardly from the walls of said pipe, headers covering the outer ends of said vaporizing chamber, vaporizing tubes inserted in said headers and lying within the vaporizing chamber, caps over each of said headers, a fuel conduit communicating with one of said caps and leading to the carbureter of the engine, and the other cap communicating with the engine manifold, whereby the fuel to be vaporized passes through the header vaporizing tubes and the hot exhaust gases pass around the tubes, and an outer wall forming a water jacket around the exhaust pipe, said wall also being extended outwardly at an angle adjacent the walls of the vaporizing chamber to form a water jacket partially surrounding the said vaporizing chamber, to cool the exhaust gases and prevent the temperature of the vaporizing chamber from increasing beyond a predetermined limit.

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1,227,650. AIRSHIP. JOHN W. OMAN, Houston, Tex. Filed Jan. 23, 1912, Serial No. 672,982. Renewed Oct. 21, 1916. Serial No. 127,036. (Cl. 244—15.)

1. An airship, comprising a frame, motors mounted in said frame, a vertical power transmission shaft mounted in said frame and driven by said motors, a transverse shaft mounted in the upper part of said frame and driven by said vertical shaft, horizontal transmission shafts driven by said transverse shaft, propellers driven by said transmission shafts, friction wheels mounted on said transmission shafts, a friction disk splined on said transverse shaft and movable longitudinally thereon into and out of engagement with said friction wheels, means for moving said friction disk into contact with said friction wheels to drive said transmission shafts, and means for moving said friction wheels toward and away from the axis of said disk to vary the speed of rotation of said friction wheels.



2. An airship, comprising a frame, motors mounted in said frame, a vertical power transmission shaft mounted in said frame and driven by said motors, a transverse shaft mounted in the upper part of said frame and driven by said vertical shaft, horizontal transmission shafts driven by said transverse shaft, propellers driven by said transmission shafts, friction wheels mounted on said transmission shafts, a friction disk splined on said transverse shaft and movable longitudinally thereon into and out of engagement with said friction wheels, means for moving said friction disk into contact with said friction wheels to drive said transmission shafts, and independent manipulative means for controlling the speed of rotation of said friction wheels.

3. In an airship, a frame, a motor carried by said frame, a power shaft driven by said motor, lateral extensions supported by said frame, an adjustable shaft mounted near the outer extremity of each of said extensions, a propeller carried by each of said shafts, means for moving said shafts to various adjustments, a drive shaft for said side propeller shafts, a shaft mounted at the front end of said frame, a propeller on said front shaft, independent means for moving said front shaft to different adjustments, a drive shaft for the front propeller shaft, a steering propeller supported at the rear end of said frame, means for moving said propeller laterally in either direction, a drive shaft for said steering propeller and power connections between said power shaft and said driving shafts, whereby the driving shafts for the front and rear propeller may be driven at varying rates of speed with respect to said driving shafts for the side propeller, substantially as specified.

4. An airship comprising a frame, a motor mounted on said frame, a power shaft driven by said motor, a transverse shaft driven by said power shaft, a revoluble support adjacent to each end of said shaft, a rack on each of said supports, a worm engaging each of said racks for moving said supports, a manually rotatable shaft operatively connected to each of said worms, a shaft journaled in each of said supports, propellers on said last-named shafts, a front propeller driven by said transverse shaft and power connections between said front propeller shaft and said transverse shaft whereby said front propeller may be driven at varying ratios of speed with respect to said transverse shaft, substantially as specified.

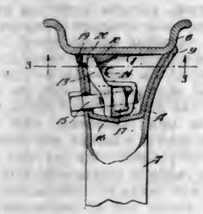
5. In an airship, a frame, motors located in said frame, a shaft mounted transversely of said frame and driven by said motors, an adjustable support mounted adjacent to each of said transverse shafts, propeller shafts mounted in said supports and geared to said transverse shaft, means for varying the angle of said propeller shafts with respect to the axis of said transverse shaft, a rear propeller mounted at the rear end of said frame, means for moving said rear propeller in either direction with respect to said frame, a driving shaft for said rear propeller and power connections between said transverse shaft and said power shaft whereby said power shaft may be rotated at varying ratios of speed with respect to said transverse shaft, substantially as specified.

[Claims 6 to 10 not printed in the Gazette.]



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1,227,651. WHEEL FOR VEHICLES. ORREL A. PARKER, Cleveland, Ohio. Filed Jan. 3, 1916. Serial No. 69,712. (Cl. 21—69.)

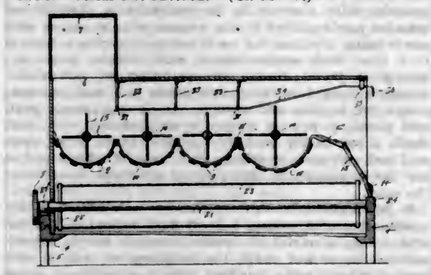


1. In a wheel, the combination of a rim, spokes each having a hollow outer end, a movable rim-engaging member within each spoke end, and means on the rim to close the joint between the same and the end of the spoke.

[Claims 2 to 8 not printed in the Gazette.]

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1,227,652. COTTON-THRESHING MACHINE. WARREN A. PATTERSON, Wichita Falls, Tex., assignor of one-half to Joseph A. Kemp, Wichita Falls, Tex. Filed Oct. 24, 1916. Serial No. 127,402. (Cl. 19—9.)



1. In a threshing machine for the purpose of separating cotton from stalks, the combination of a plurality of slatted cradles, of a revolving beater journaled in close relation with each cradle, of a plurality of revolving stirrers arranged beneath the cradles and transversely thereto, and means for feeding unpicked cotton into said machine.

2. In a cotton threshing machine, the combination with a housing, of a battery of revolving stirrers longitudinally arranged in the lower portion of the housing, and a plurality of slotted threshing cradles located within the housing and above and transversely to the revolving stirrers.

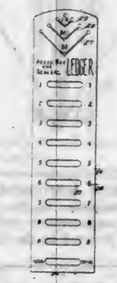
3. In a cotton threshing machine, the combination with a housing, of a slotted floor formed in the lower portion of the housing and one end of said floor being slightly lower than the other, one of the side walls of the housing being provided with a substantially large discharge opening adjacent to the rear extremity of said housing, a battery of revolving stirrers comprising a plurality of revolving members adapted to run in an opposite direction arranged adjacent to the slotted floor, a plurality of slatted threshing cradles arranged in the housing transversely to the battery of revolving stirrers, a revolving beater comprising arms radiating from a shaft journaled in the housing adapted to revolve in close relation with each slotted thresher cradle, and provision had for receiving cotton stalks into the battery of threshing cradles.



4. In a cotton threshing machine, the combination with the housing, of a number of receiving and threshing cradles arranged in a continuously extended structure from one extremity of the machine to the other, a revolving agitator comprising a plurality of revolving arms adapted to work in close relation to each threshing cradle, a battery of revolving stirrers comprising a plurality of longitudinally arranged shafts with radiating arms with taut wires stretched therebetween transversely arranged in the lower portion of the machine and beneath the threshing cradle.

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1,227,653. ACCOUNTING RECORD-SHEET. JAMES WILLIAM PENNEWILL, Silver City, N. Mex. Filed Oct. 5, 1915. Serial No. 54,157. (Cl. 11—19.)



1. In a sheet of the character described, a plurality of sets of horizontal rulings arranged so as to produce independent sets of horizontal spaces, a guide formed with notches adjacent the upper end corresponding to each set of spaces, and a plurality of apertures in the body of the guide corresponding to said notches, whereby one of the sets of horizontal rulings will be disclosed through said apertures when one of said notches engages the upper edge of said sheet and when the other notches engage with the upper end of the sheet other sets of horizontal rulings will be disclosed to view, thus allowing a vertical addition of numbers on said sets of horizontal rulings.

2. In an accounting sheet of the character described, a plurality of horizontal distinctive spaces extending across said sheet, said horizontal spaces being arranged in groups for producing a central distinctive space for receiving a balance, and distinctive spaces on each side of said central space for receiving debits and credits of particular accounts, and a guide formed with spaced apertures adapted to disclose any one set of horizontal spaces of each of the groups and three notches at the upper end adapted to limit the movement of the guide in a downward direction, said notches corresponding to said spaces whereby when one notch is used the apertures in the guide will disclose the horizontal spaces for receiving the balance and when the other notches are used said apertures will disclose the debits and credits according to the particular aperture used, thus allowing a quick and accurate addition of any of the items desired.

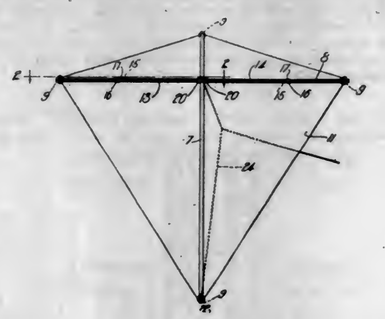
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1,227,654. KITE. SAMUEL F. PERKINS, Boston, Mass. Filed Nov. 29, 1916. Serial No. 134,184. (Cl. 244—22.)

1. A kite having, in combination, a pair of sticks disposed substantially at right angles to each other, a reinforcing stick arranged alongside of one of said pair of sticks, means constructed and arranged to separate the central portions of said reinforcing stick and the stick alongside thereof to form a pocket adapted to receive the stick disposed at right angles thereto, and means for maintaining the ends of said reinforcing stick in slidable engagement with the stick alongside thereof.

4. A kite having, in combination, a pair of sticks disposed substantially at right angles to each other, means

extending from one end of one of said sticks to the opposite end thereof adapted to bow said stick, a substantially straight reinforcing stick arranged alongside of said bowed stick, means for separating said bowed stick and said reinforcing stick, said means adapted to engage

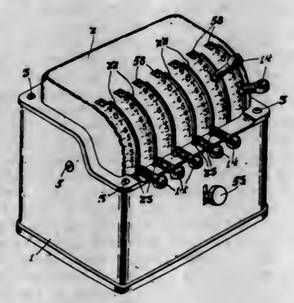


opposite sides of the stick disposed at right angles thereto and to position the same longitudinally of said bowed stick, and means for maintaining the ends of said reinforcing stick in sliding engagement with said bowed stick.

[Claims 2 and 3 not printed in the Gazette.]

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1,227,655. ADDING-MACHINE. FREDOLF J. PETERSON, Alliance, Ohio. Filed June 17, 1915. Serial No. 34,620. (Cl. 235—82.)



1. In an adding machine of the character described, the combination of a casing, a shaft fixed to and carried by said casing, a series of number wheels loosely mounted upon said shaft, each of said number wheels being provided with a hub, a ratchet wheel fixedly mounted upon the hub of each number wheel and spaced from said number wheel, a disk provided with an elongated aperture mounted upon the hub of each number wheel between said number wheel and said ratchet wheel, an operating key rigidly connected to each disk and a tapered lug carried by each operating key and arranged to engage the accompanying ratchet wheel.

2. An adding machine comprising a series of number wheels, manually controlled means for turning the number wheels independent one of the other, a ratchet wheel for each number wheel, sidewise projecting pawls carried by the number wheels and arranged to engage the ratchet wheel of the next following number wheel in the series, fixed disks arranged between and concentric with the number wheels, each disk normally holding the corresponding pawls out of engagement with the next following ratchet wheel, the disks having a notch for allowing the pawls to move into engagement with the ratchet wheels, a rock bar located adjacent said number wheels, spring fingers carried by said rock bar and arranged to normally hold said pawls in engagement with the peripheries of said disks and means for rocking said rock bar to move said spring fingers out of engagement with said pawls.

3. An adding machine comprising a series of number wheels, manually controlled means for turning the number wheels independent one of the other, a ratchet wheel for each number wheel, sidewise projecting pawls carried by the number wheels and arranged to engage the ratchet wheel of the next following number wheel in the series, fixed disks arranged between and concentric with the number wheels each disk normally holding the corresponding pawls out of engagement with the next following ratchet wheel, the disks having a notch for allowing the pawls to move into engagement with the ratchet wheels, a rock bar located adjacent said number wheels, spring fingers carried by said rock bar and arranged to normally hold said pawls in engagement with the peripheries of said disks and means for rocking said rock bar to move said spring fingers out of engagement with said pawls, and means for moving all of said number wheels for the purpose of clearing the machine.

4. In an adding machine of the character described, the combination of a casing, a shaft fixed to and carried by said casing, a series of toothed number wheels loosely mounted upon said shaft, the periphery of each of said number wheels being provided with a plurality of series of figures from 0 to 9, a cover provided with slots, said cover also provided with figures near the edges of said slots, a series of disks located between said number wheels and fixedly mounted upon said shaft, each of said disks provided with a notch in its periphery, a plurality of transfer pawls carried by the number wheels, one of said pawls being provided for each series of numbers from 0 to 9 upon each number wheel, said transfer pawls arranged to travel around the periphery of said disks, springs arranged to throw said pawls into said recesses, means for moving said springs out of engagement with said pawls, a pair of slotted arms mounted upon said shaft, a rod fixedly connected to said arms, hooks upon said rod arranged to engage said number wheels and a key bar connected to said rod and arranged to oscillate the same.

5. In an adding machine of the character described, the combination of a casing, a shaft fixed to and carried by said casing, a series of toothed number wheels loosely mounted upon said shaft, the periphery of each of said number wheels being provided with a plurality of series of figures from 0 to 9, a cover provided with slots, said cover also provided with figures near the edges of said slots, a series of disks located between said number wheels and fixedly mounted upon said shaft, each of said disks provided with a notch in its periphery, a plurality of transfer pawls carried by the number wheels, one of said pawls being provided for each series of numbers from 0 to 9 upon each number wheel, said transfer pawls arranged to travel around the periphery of said disks, springs arranged to throw said pawls into said recesses, means for moving said springs out of engagement with said pawls, a pair of slotted arms mounted upon said shaft, a rod fixedly connected to said arms, hooks upon said rod arranged to engage said number wheels and a key bar connected to said rod and arranged to oscillate the same and curved ribs located upon the side walls of said casing and eccentric to said shaft, said ribs being for the purpose of guiding said rod.

[Claim 6 not printed in the Gazette.]

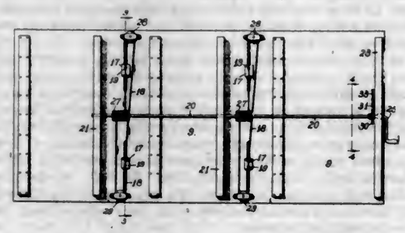
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1,227,656. CASKET-HOLDING MEANS FOR HEARSES. WILLIAM H. PFEIFFER, Omaha, Nebr. Filed Feb. 20, 1917. Serial No. 150,267. (Cl. 21—26.)

1. In a casket-holding mechanism for hearses, a floor, clamp-members movable in transverse slots in said floor,



means including a longitudinal shaft and flexible members disposed beneath the floor and connected with said clamp-members for actuating them simultaneously either toward or away from the longitudinal center-line of the floor, yielding means in connection with said shaft for retarding rotation thereof and retaining the clamp-members in casket-holding position, and a hand-crank for turning the shaft in opposition to said rotation-retarding means.



2. Casket-holding means for hearses, comprising a floor having pairs of transverse slots therein, pairs of clamp-members having casket-engaging heads above the floor and stem-portions extending through the slots and slidable therein, a longitudinal shaft journaled beneath the floor, means for rotating the same, means for retarding rotation thereof, drums secured on said shaft adjacent to each pair of clamp-members, a flexible member for each drum, said member having its ends secured to the drum and intermediate portions secured to the pair of clamp-members, and guiding means for said flexible member whereby the pair of clamp-members are movable in opposite directions by unidirectional rotation of the shaft.

3. Casket-holding means for hearses, comprising the combination with a suitable body, of transversely movable clamp-heads, a longitudinal actuating-shaft, flexible connecting means between the shaft and clamp-heads for actuating the latter toward and away from each other according to the direction of rotation of the shaft, a hand-crank attachable to the shaft, and means for differentially retarding rotation of the shaft.

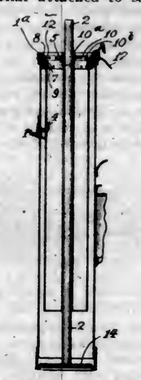
4. Casket-holding means for hearses, comprising the combination with a floor having pairs of transverse slots therein, of clamp-members extending through said slots and having casket-engaging heads thereon above the floor, a longitudinal shaft journaled beneath the floor, means for actuating said shaft, means for retarding rotation thereof differentially, flexible means connecting the clamp-members in pairs, guiding means for said flexible means, and a drum on the shaft connected with said flexible means and adapted to unwind a part thereof and wind another part of the same thereon simultaneously.

5. In a casket-holding mechanism for hearses, a floor having pairs of transverse slots disposed on opposite sides of its longitudinal center-line, clamp-members slidably disposed in said slots, a longitudinal actuating-shaft, a drum secured on said shaft between each pair of slots and clamp-members, a pulley arranged near the outer end of each slot, and a cable connected with the drum and extending therefrom to the clamp-member at one side, thence to the pulley at said side, thence to the opposite clamp-member, thence to the pulley at the latter side, and thence returning to the drum and being connected therewith.

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1,227,657. GOLF-BAG. GEORGE L. PIERCE, Brooklyn, N. Y., assignor to A. G. Spalding & Bros., New York, N. Y., a Corporation of New Jersey. Filed Apr. 1, 1912. Serial No. 687,557. (Cl. 224—45.)

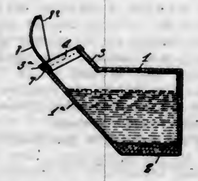
In combination with a golf-bag having an inwardly extending annular shoulder at its mouth, a rod adapted to be received centrally in said bag, a plurality of separating members forming pockets between said rod and said bag, and a retaining collar attached to said rod and adapted



to fit snugly the mouth of the bag and under the said inwardly extending shoulder.

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1,227,658. CONTAINER FOR MUCILAGE. ANTHONY J. PRENOSIL, Dwight, Nebr., assignor of one-half to Frank J. Maixner, Dwight, Nebr. Filed Oct. 7, 1916. Serial No. 124,387. (Cl. 91—67.1.)



1. In containers, a body having an upwardly and outwardly inclined neck and front wall, and a concaved supplemental container mounted at the upper edge of the front wall of the body and forming a continuation thereof whereby, when the body is tilted inward the contents thereof will flow into said supplemental container, and when the body is returned to its normal position the contents of said supplemental container will drain back into the said body.

2. In containers, a body having an upwardly and outwardly inclined neck and front wall, a concaved supplemental container mounted at the upper edge of said front wall and forming approximately a continuation thereof, said supplemental cantainer being adapted to fit snugly about the neck and front wall of the body, and means for detachably securing the supplemental container in operative position adjacent the upper edge of the front wall of said body.

3. In a container of the character described, the combination of a body having an outwardly inclined neck and a similarly inclined front wall, a U-strip secured about the upper edges of the said neck and the inclined front wall of the body, and a concave closure member secured at its lower edge to the said U strip, said cover member being adapted to fit snugly about the said neck so as to effect a tight closure therewith.

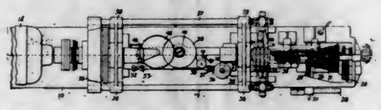
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1,227,659. WIRE-COILING APPARATUS. CLEVELAND H. QUACKENBUSH and JAMES C. SMEDLEY, Cleveland, Ohio, assignors to General Electric Company, a Corporation of New York. Filed Mar. 9, 1915. Serial No. 13,247. Renewed Oct. 18, 1916. Serial No. 126,455. (Cl. 153—64.)

1. In a coiling machine, a mandrel wire and a coil wire carrier, means for rotating one of the same with reference

to the other, means for measuring the coil wire and for feeding it to the mandrel wire, and means automatically controlled by said feeding and measuring means for interrupting said relative movement at predetermined intervals.

2. In a coiling machine, a mandrel wire and a coil wire carrier, means for rotating one of the same with reference to the other, means for measuring the coil wire and for feeding it to the mandrel wire, and means automatically controlled by said feeding and measuring means for interrupting said relative movement at predetermined intervals and for predetermined periods.



3. In a coiling machine, a mandrel wire and a coil wire carrier, means for rotating one of the same with reference to the other, means for measuring the coil wire and for feeding it to the mandrel wire, an electrical means automatically controlled by said feeding and measuring means for interrupting said relative movement at predetermined intervals.

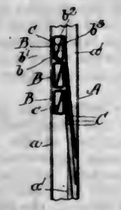
4. In a coiling machine, a mandrel wire and a coil wire carrier, means for rotating one of the same relatively to the other and means for measuring said coil wire and for feeding it to said mandrel wire, said means comprising a measuring disk around which the coil wire passes.

5. In a coiling machine, a mandrel wire and a coil wire carrier, means for rotating one of the same relatively to the other, means for measuring said coil wire and for feeding it to said mandrel wire, said means comprising a measuring disk around which the coil wire passes, and means controlled by the rotation of said disk for automatically interrupting the aforesaid relative movement at predetermined intervals.

[Claims 6 to 14 not printed in the Gazette.]

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1,227,660. CARD-INDEX. JAMES H. RAND, North Tonawanda, N. Y. Filed June 21, 1916. Serial No. 104,914. (Cl. 129—16.)



1. An index comprising a frame having inwardly facing guide channels, a series of card carriers having their ends in said guide channels and slidable lengthwise thereof, and a series of cards attached to the several card carriers and extending flatwise of the frame behind the adjoining card carriers and the cards attached thereto, whereby the card carriers may be arranged in juxtaposition one to another to form the face of the index with the attached cards covered, and whereby any card may be exposed to view by separating its card carrier and the next adjoining overlying card carrier.

2. An index comprising a frame having inwardly facing guide channels, a series of card carriers having their ends in said guide channels and slidable lengthwise thereof, and a series of cards attached to the several card carriers and extending from the rear side of said carriers flatwise of the frame behind the adjoining card carriers and the cards attached thereto, whereby the card carriers may be arranged edge to edge in juxtaposition one to another to form the face of the index with the attached cards covered, and whereby any card may be exposed to view by separating its card carrier and the next adjoining overlying card carrier.

3. An index comprising a frame having inwardly facing guide channels, a series of card carriers having their ends in said guide channels and slidable lengthwise thereof, each formed of transparent resilient material having a closed front face and rearwardly bent retaining lips, and a series of cards attached to the several card carriers, each having a folded margin held by said retaining lips, the body of the card extending between said retaining lips and lying flatwise of the frame behind the adjoining card carriers and the cards attached thereto.

4. An index comprising a frame having inwardly facing guide channels, a series of card carriers having their ends in said guide channels and slidable lengthwise thereof, each formed of transparent resilient material having a closed front face and rearwardly and inwardly bent retaining lips one overlapping the other, and a series of cards attached to the several card carriers each having a folded margin held by said retaining lips, the body of the card extending between said retaining lips and lying flatwise of the frame behind the adjoining card carriers and the cards attached thereto.

5. An index comprising a frame having inwardly facing guide channels, a series of card carriers having their ends in said guide channels and slidable lengthwise thereof, each formed of transparent resilient material having a closed front face and rearwardly bent retaining lips, and a series of cards attached to the several card carriers, each having a folded margin held by said retaining lips, the body of the card extending between said retaining lips and lying flatwise of the frame behind the adjoining card carriers and the cards attached thereto, said retaining lips being adapted to exert a spring grip upon the card extending therebetween.

[Claims 6 to 17 not printed in the Gazette.]

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1,227,661. CARD-INDEX. JAMES H. RAND, North Tonawanda, N. Y. Filed June 21, 1916. Serial No. 104,916. (Cl. 40—65.)



1. An index comprising a frame having inwardly facing guide channels, and a series of index slip holders having their ends in said guide channels and slidable lengthwise thereof, said holders being made of transparent resilient sheet material, each comprising a closed front face, a pair of rearwardly bent lips adapted to hold an index slip, and a flap extending from the rear of the sheath flatwise of the frame underneath the adjoining sheath or sheaths.

2. An index comprising a frame having inwardly facing guide channels, a pair of spaced guide rails between and parallel to said channels, and a series of index slip holders having their ends in said guide channels and slidable lengthwise thereof, said holders being made of transparent resilient sheet material, each comprising a closed front face, a pair of rearwardly bent lips adapted to hold an index slip, and a flap extending from the rear of the sheath flatwise of the frame between said guide rails and underneath the adjoining sheath or sheaths.

3. An index comprising a frame having inwardly facing guide channels, and a series of index slip holders having their ends in said guide channels and slidable lengthwise thereof, said holders being made of transparent resilient sheet material, each comprising a closed front face, and a pair of rearwardly and inwardly bent lips adapted to hold an index slip, one lip overlapping the other and being materially broader than the face of the sheath thereby forming a flap extending from the rear of the sheath flatwise of the frame underneath the adjoining sheath or sheaths.

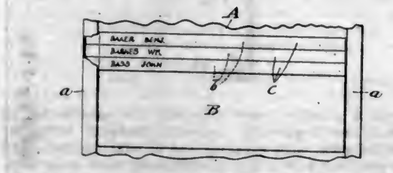
4. An index comprising a frame having inwardly facing guide channels, and a series of index slip holders having their ends in said guide channels and slidable lengthwise thereof, said holders being made of transparent resilient sheet material, each comprising a closed front face, and a pair of rearwardly and inwardly bent lips adapted to hold an index slip, one lip overlapping the other and being materially broader than the face of the sheath thereby forming a flap extending from the rear of the sheath flatwise of the frame underneath the adjoining sheath or sheaths, said flap terminating short of the ends of the index slip holder.

5. An index comprising a frame having inwardly facing guide channels, a pair of spaced guide rails between and parallel to said channels, and a series of index slip holders having their ends in said guide channels and slidable lengthwise thereof, said holders being made of transparent resilient sheet material, each comprising a closed front face and a pair of rearwardly and inwardly bent lips adapted to hold an index slip, one lip overlapping the other and being materially broader than the face of the sheath, forming a flap extending from the rear of the sheath flatwise of the frame underneath the adjoining sheath or sheaths, said flaps being of a length corresponding to the distance between said guide rails and being rearwardly bent to extend therebetween.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,662. INDEX DEVICE. JAMES H. RAND, North Tonawanda, N. Y. Filed July 17, 1916. Serial No. 109,765. (Cl. 129—16.)



1. An index device comprising a sheath having retaining lips, and a card having two parallel and opposite folds near one margin, forming an indicator section the front face of which is formed of the front face of the card, and an intermediate section by which the indicator section is connected to and offset from the body of the card, the indicator section being removably held within the sheath, and the body of the card extending outward from the sheath through the space between the retaining lips.

2. An index device comprising a sheath having retaining lips, and a card having two parallel and opposite folds near one margin, forming an indicator section the front face of which is formed of the front face of the card, and an intermediate section by which the indicator section is connected to and offset from the body of the card, the indicator section being removably held within the sheath near the front thereof, and the body of the card extending outward from the sheath through the space at the rear of the sheath between the retaining lips.

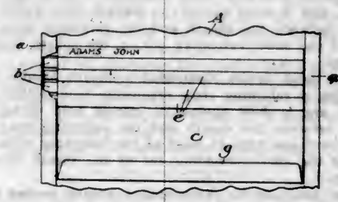
3. An index device comprising a sheath having retaining lips, one overlapping the other at the rear side of the sheath, and a card having two parallel and opposite folds near one margin, forming an indicator section the front face of which is formed of the front face of the card, and an intermediate section by which the indicator section is connected to and offset from the body of the card, the indicator section being removably held within the sheath near the front thereof and the body of the card extending outward from the sheath through the space at the rear of the sheath between the retaining lips.

4. An index device comprising a sheath having retaining lips, and a card having two parallel and opposite folds near one margin, forming an indicator section the front face of which is formed of the front face of the card, and an intermediate section by which the indicator section is connected to and offset from the body of the card, said two sections being of substantially the same breadth, the indicator section being removably held within the sheath and the body of the card extending outward from the sheath through the space between the retaining lips.

5. An index device comprising a sheath having inturned retaining lips lying substantially parallel and overlapping each other, and a card having two parallel and opposite folds near one margin, forming an indicator section the front face of which is formed of the front face of the card, and an intermediate section by which said indicator section is connected to and offset from the body of the card, said two sections being of substantially the same breadth and being both held in the space between the front face of the sheath and the forward inturned lip, and the body of the card extending outward from the sheath through the space between the two lips.

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1,227,663. INDEX DEVICE. JAMES H. RAND, North Tonawanda, N. Y. Filed July 18, 1916. Serial No. 109,975. (Cl. 129—16.)



1. An index comprising a frame having inwardly facing guide channels, a series of card supporting bars having their ends held within the guide channels and slidable lengthwise thereof, cards supported in the frame by said bars, and a sheath of transparent resilient material on each supporting bar terminating short of the guide channels.

2. An index comprising a frame having inwardly facing guide channels, a series of card supporting bars having their ends held within the guide channels and slidable lengthwise thereof, cards supported in the frame by said bars, a sheath of transparent resilient material on each supporting bar having a closed front face forming a slideway in front of the bar and terminating short of the guide channels, whereby the entrance of the slideway is outside of the guide channels, and a removable indicator strip in said slideway.

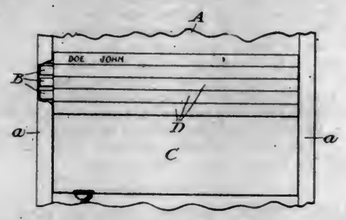
3. An index comprising a frame having inwardly facing guide channels, a series of card supporting bars having their ends held within the guide channels and slidable lengthwise thereof, cards supported in the frame by said bars, and a sheath of transparent resilient material on each supporting bar having a closed front face and inturned retaining lips embracing the opposite edges of the bar, said sheath terminating short of the guide channels.

4. An index comprising a frame having inwardly facing guide channels, a series of card supporting bars having their ends held within the guide channels and slidable lengthwise thereof, cards supported in the frame by said bars, a sheath of transparent resilient material on each supporting bar having a closed front face and inturned retaining lips embracing the opposite edges of the bar, said sheath terminating short of the guide channels and said closed front face forming a slideway between it and the bar whose entrance is outside of the guide channels, and a removable indicator strip in said slideway.

5. An index comprising a frame having inwardly facing guide channels, and a series of sheaths of transparent resilient material supported in said frame between the guide channels, each sheath constituting a slideway adapted to receive and hold a removable indicator strip and having an entrance opening for such indicator strip located out-

side of the guide channels, whereby a strip may be inserted or removed without removing the sheath from the frame.

1,227,664. INDEX DEVICE. JAMES H. RAND, North Tonawanda, N. Y. Filed July 19, 1916. Serial No. 110,206. (Cl. 129—16.)




1. An index device comprising a sheath having bent-over lips, a retaining strip removably held within said sheath, and a sheet having its margin held within the sheath between the sheath and the retaining strip, the body of the sheet extending out of the sheath between said lips.

2. An index device comprising a sheath having bent-over lips, a retaining strip removably held within said sheath, and a sheet having its margin held within the sheath between the sheath and the retaining strip and folded over one edge at least of the retaining strip, the body of the sheet extending out of the sheath between said lips.

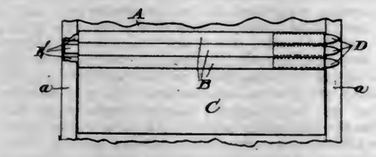
3. An index device comprising a sheath having bent-over lips, a retaining strip removably held within said sheath, and a sheet having its margin folded part way at least around said retaining strip and held within said sheath without other securement, the body of the sheet extending out of the sheath between said lips.

4. An index device comprising a sheath having bent-over lips, a retaining strip removably held within said sheath, and a sheet having its margin extending completely across the front face of the retaining strip to form an indicator surface and being folded over one edge at least of the retaining strip and held within said sheath without other securement, the body of the sheet extending out of the sheath between said lips.

5. An index device comprising a sheath having bent-over lips, a retaining strip removably held within said sheath, and an indicator sheet extending across one face of the retaining strip and folded part way at least around the retaining strip, and held within the sheath without other securement.

[Claim 6 not printed in the Gazette.]

1,227,665. INDEX DEVICE. JAMES H. RAND, North Tonawanda, N. Y. Filed July 20, 1916. Serial No. 110,386. (Cl. 129—16.)




1. An index device comprising a strip of stiff resilient material, a sheath permanently secured to said strip extending lengthwise thereof, forming an index compartment in front of said strip, and an indicator member removably held in said compartment.

2. An index device comprising a strip of stiff resilient material, a sheath secured to said strip extending lengthwise and terminating short of the ends thereof, forming an index compartment in front of said strip, and an indicator member removably held in said compartment.

3. An index device comprising a strip of stiff resilient material, a sheath having inturned overlapping lips between which said strip is secured, the inner lip and the face of the sheath forming an index compartment, and an indicator member removably held in said compartment.

4. An index device comprising a strip of stiff resilient material, a sheath terminating short of said strip and having inturned overlapping lips between which said strip is secured, the inner lip and the face of the sheath forming an index compartment, and an indicator member removably held in said compartment.

5. An index device comprising a strip of stiff resilient material, a sheath having inturned overlapping lips between which said strip is secured, the inner lip and the face of the sheath forming an index compartment, and an indicator member doubled upon itself on a lengthwise crease which is folded around the edge of the inner lip of the sheath, the front fold of the indicator being held in said index compartment and the rear fold being in the space between the inner lip and said strip.

[Claims 6 to 12 not printed in the Gazette.]

1,227,666. ATTACHMENT OF CORRUGATED SHEETS TO FRAME STRUCTURES. STANLEY L. RAU, New Brighton, Pa. Filed Feb. 17, 1915. Serial No. 8,904. (Cl. 189—35.)




1. In a metallic frame structure, the combination of flanged sheet-supporting members, elongate strips of bendable metal each engaging one of said members, and each provided with a hole, rivets having their bases abutting against said members and extending through such holes, said rivets being provided at their bases with laterally extending flanges and with transversely disposed shoulders at a distance from the bases, and corrugated metal sheets supported at their ridges by said rivet shoulders and engaged by the upset outer ends of the rivets.

2. In a metallic roof construction, the combination of flanged purlins, elongate strips of bendable sheet metal each engaging two flanges of a purlin, and each provided with a hole, rivets resting on the top flanges of the purlins and extending through such holes, said rivets being provided at their bases with laterally extending flanges and with transversely disposed shoulders at a distance from the bases, and corrugated metal sheets supported at their ridges by said rivet shoulders and clamped by the upset outer ends of the rivets between pairs of soft metal washers.

3. In a metallic roof construction, the combination of flanged purlins, elongate strips of bendable metal each engaging two flanges of a purlin, and each provided with a hole, rivets resting on the top flanges of the purlins and extending through such holes, said rivets being provided at their bases with laterally extending flanges and with transversely disposed shoulders at a distance from the bases, and corrugated metal sheets supported at their ridges by said rivet shoulders and engaged by the upset outer ends of the rivets.

1,227,667. CARBON-REMOVER. FRED R. REED, Highland Park, Mich. Filed Mar. 18, 1916. Serial No. 85,049. (Cl. 87—5.)

1. A compound for use in removing carbon, comprising powdered zinc and a base therefor formed of wax.



2. A compound for use in removing carbon comprising a paraffin wax body or base and more than 30% of powdered zinc.

3. A compound for use in removing carbon, comprising powdered zinc, paraffin wax and stearin.

4. A compound for use in removing carbon, comprising the following ingredients in substantially the proportions given:

| | |
|---|---|
| Powdered zinc | 60% |
| Paraffin wax | 25% |
| Stearin | 10% |
| Naphthalene (with coloring matter) | 5% |

1,227,668. FIREARM. EUGENE G. REISING, Hartford, Conn. Filed Mar. 27, 1914. Serial No. 827,607. (Cl. 42—3.)



1. In a firearm, in combination with the breech-bolt actuating lever, a lever detent, mounts for said lever and said detent arranged to cause the detent to exert its greatest resistance to the movement of the lever when the latter is in its closed position and a separate member to return the detent to its position of rest.

2. In a firearm, in combination with a breech-bolt actuating lever, a lever detent, mounts for said lever and detent arranged to cause the detent to exert its greatest resistance to the movement of the lever when the latter is in its closed position, and to gradually reduce the resistance as the lever moves from its closed position and a separate member to return the detent to its position of rest.

3. In a firearm, in combination with a breech-bolt actuating lever, a lever detent pivotally mounted to engage the breech-bolt actuating lever at a distance from its pivot and to move toward said pivot as the breech-bolt actuating lever moves from its closed position and a separate member to return the detent to its position of rest.

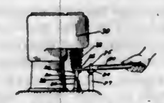
4. In a firearm, in combination with a pivotally mounted breech-bolt actuating lever having an edge at one end to engage a breech-bolt and the opposite end arranged at an angle to said engaging edge, a pivotally mounted lever detent positioned to engage said angularly disposed end on the breech-bolt actuating lever, and to move toward the pivot of the breech-bolt actuating lever as the latter moves from its closed position and means to return the detent to its position of rest.

5. In a firearm, in combination with a pivotally mounted breech-bolt actuating lever, a pivotally mounted lever detent, said lever and detent being constructed and their pivots being disposed to cause a radial line through the arm of the detent engaging said actuating lever to pass close to but just at one side of the "dead center" point of application of power between the detent and actuating lever.

[Claims 6 to 30 not printed in the Gazette.]

1,227,669. TOOL FOR COMPRESSING VALVE-SPRINGS. JOHN C. REYNOLDS, Stamford, Conn. Filed Apr. 12, 1916. Serial No. 90,535. (Cl. 29—87.1.)

1. A tool of the character described comprising a lever having a U-shaped head to engage a valve stem and notches in its under side, a fulcrum having a lug to engage either of the notches and a threaded shank, and a standard having a threaded socket engaged by the shank.



2. A tool of the character described comprising a standard, a fulcrum having a shank carried by said standard and adjustable vertically therein, and a longitudinally adjustable valve-engaging lever positioned to engage the fulcrum, said fulcrum having means for guiding said lever.

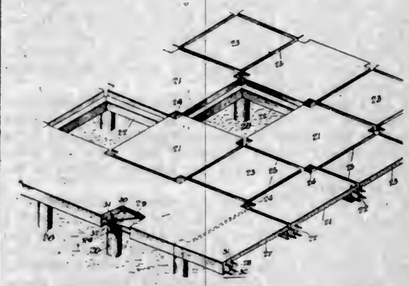
3. A tool of the character described comprising a lever having means for engaging a valve stem and notches in its under side, a fulcrum having a lug to engage either of the notches, an eye through which the lever may be passed freely and a threaded shank, and a standard with which the shank has threaded engagement.

4. A tool of the character described comprising a valve-engaging lever provided with notches in its underside, a fulcrum having a lug to engage either of said notches, said fulcrum having a threaded shank and a guide for said lever, a standard with which the shank has threaded engagement, and a slidable extension sleeve having a pin and slot connection with said lever.

5. A tool of the character described comprising a standard, a fulcrum carried thereby, a lever engaging said fulcrum to swing in one plane, and a U-shaped head pivoted to one end of said lever to swing in a plane at right angles to the movement of the lever.

[Claims 6 and 7 not printed in the Gazette.]

1,227,670. DOCK CONSTRUCTION. JOHN W. RIPLEY, Flushing, N. Y. Filed July 20, 1909, Serial No. 508,666. Renewed Aug. 20, 1914. Serial No. 857,769. (Cl. 61—8.)



1. A structure of the character described, comprising in combination a system of piling, a plurality of reinforced concrete units having diagonal rods embedded therein, with looped ends projecting beyond the concrete, the looped ends of adjacent units being adapted to be brought into registry with each other, and a pin passing through the registering looped ends of said diagonal rods connecting them to each other and to the piling.

2. A structure of the character described, comprising in combination a system of piling accurately spaced, reinforced concrete units having diagonal rods with looped ends projecting beyond the concrete, with the looped ends of adjacent units adapted to register with each other, a pin passing through the registering looped ends of the diagonal rods and connecting them to each other and to the piling, and bonding material inclosing such looped ends and the connection thus formed.

3. A structure of the character described, comprising in combination a plurality of piles having wooden cores with reinforced concrete wrappers extending above the wooden cores, reinforced concrete units having diagonal rods, means for connecting the diagonal rods to each other and

to the piles, and bonding material inclosing the connection thus formed and filling in the wrappers above the cores.

4. A structure of the character described, comprising in combination a plurality of piles having wooden cores with reinforced concrete wrappers extending above the wooden cores, reinforced concrete units having diagonal rods embedded therein, means for connecting the reinforcements of the several units to each other, means for connecting the diagonal rods to each other and to the piles, and bonding material inclosing the connections thus formed and filling in the wrappers above the cores.

5. A structure of the character described, comprising in combination a plurality of piles having wooden cores with reinforced concrete wrappers extending above the cores, reinforced concrete units having diagonal rods embedded therein with looped ends projecting beyond the concrete, the projecting looped ends of adjacent units being adapted to register with each other, means for connecting the reinforcements of the several units to each other and a pin passing through the registering looped ends of the diagonal spacing and bracing rods and thereby connecting the diagonal rods to each other and to the piles.

[Claims 6 to 10 not printed in the Gazette.]

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1,227,671. FOOD AND BEVERAGE MIXER. WILLIAM P. ROBERTSON, New York, N. Y., assignor to Borden's Condensed Milk Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 21, 1915. Serial No. 67,964. (Cl. 259—135.)



1. In a device of the class described, the combination with an agitator comprising a shaft and an agitating member, of tubular propelling means adapted to engage said shaft and drive said agitating member, said tubular propelling means and said agitator being so constructed that said agitating member may be inserted therethrough and withdrawn therefrom.

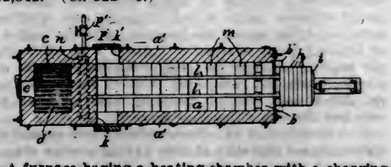
4. In a device of the class described the combination of a standard, an electric motor secured thereto, gears driven by said motor, a removable agitator adapted to be inserted in and rotated by one of said gears and withdrawn therefrom, and expansible members secured to the tip of said agitator.

8. In a device of the class described the combination of a standard, an electric motor secured to said standard, a hollow shaft, means driven by said motor for rotating said hollow shaft, agitating means comprising a shaft and agitating members attached thereto that may be inserted in or withdrawn through said hollow shaft, and means whereby said agitating means will be driven from said hollow shaft.

[Claims 2, 3, and 5 to 7 not printed in the Gazette.]

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1,227,672. FURNACE CHILL AND FLOOR-PIPE. WALTER S. ROCKWELL, New York, N. Y., assignor to W. S. Rockwell Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 15, 1917. Serial No. 142,342. (Cl. 122—6.)



1. A furnace having a heating-chamber with a charging-door at one end connecting with the floor of said chamber, a chill located within the chamber opposite to the charging-door and extended above the level of the floor and having tap holes therein at the floor-level, and straight floor-pipes extended from the said door directly into the chill and screwed therein so that they can be released from the chill by mere rotation.

3. A furnace having means at one end for heating the chamber, with a bridge-wall adjacent to such end and a chill within such bridge-wall, a charging-door at the opposite end of the furnace, and straight rotatable floor-pipes extended from the door directly into such chill and connected detachably thereto to facilitate renewal of the pipes.

7. A furnace having a heating-chamber with a door at one end, means at the other end for heating the furnace-chamber, and a bridge-wall adjacent to such other end; a hollow water-chill built within the bridge-wall and its ends extended into the side-walls of the furnace to support the bridge-wall more rigidly, and straight rotatable floor-pipes extended from the door to the said chill, and water circulated through both the chill and the pipes.

[Claims 2 and 4 to 6 not printed in the Gazette.]

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1,227,673. ARMORED LINER FOR PNEUMATIC TIRES. SEYMOUR A. ROUSE, Chicago, Ill. Filed June 1, 1915. Serial No. 31,562. (Cl. 152—18.)



1. As a new article of manufacture, an armor for pneumatic tires comprising a plurality of metal disks, and integral connections securing the disks together in strip formation, the outermost disks in said strip being free from connection longitudinally of the strip, said connections being pliable to permit the strip to be bent to conform to the configuration of a tire so it may be embedded therein.

2. As a new article of manufacture, an armor for pneumatic tires comprising a plurality of metal disks arranged in a strip, connections formed integrally with the inner disks and connecting them longitudinally of the strip, and connections formed integrally with the outer disks and connecting them laterally of the strip and to said longitudinally connected disks, said outer disks being free from connection longitudinally of the strip.

3. As a new article of manufacture, a puncture preventing strip for pneumatic tires comprising a plurality of disks arranged in rows longitudinally with and laterally of the strip, means connecting the central row of disks longitudinally of the strip, means connecting the lateral rows of disks laterally of the strip and to the central row, the outermost disks in said lateral rows being free from connection longitudinally of the strip.

4. As a new article of manufacture, a puncture preventing strip for pneumatic tires comprising a plurality of pliable metal disks, pliable tongues formed integral with the longitudinal central disks of said strip and uniting them in a row longitudinally of the strip and laterally extending pliable tongues connecting the side disks of said strip in rows laterally of the strip and to said central disks.

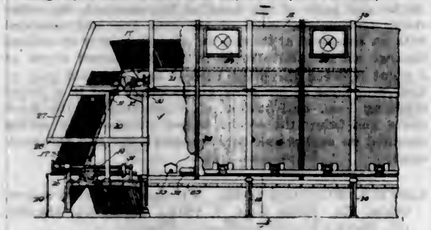
5. As a new article of manufacture, a puncture preventing strip for pneumatic tires comprising a plurality of pliable metal disks, pliable tongues formed integral with the longitudinal central disks of said strip and uniting them in a row longitudinally of the strip, laterally extending pliable tongues formed integral with and uniting the side disks of said strip in rows laterally of the strip and to said central disks, the disks in the edge rows being narrower than the disks in the central and intermediate rows.

[Claims 6 to 10 not printed in the Gazette.]



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1,227,674. DRYING APPARATUS. FRANKLIN RUDOLPH, Winnetka, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 5, 1915. Serial No. 43,765. (Cl. 34—12.)



1. In an apparatus of the character described, the combination of a casing and a conveyer movable therein for conveying the sheets to be dried through the casing, a dry heating means, and a relatively damp heating means disposed in said casing.

2. In an apparatus of the character described, the combination of a casing, a conveyer for moving sheets to be dried through said casing, dry heating means, relatively wet or damp heating means, and means for regulating said heating means to control the degree of heat and its humidity.

3. In an apparatus of the character described, the combination of a casing, a conveyer in said casing for conveying sheets to be dried through said casing, gas burners and steam coils mounted within the casing and coöperating to provide a drying temperature of proper humidity.

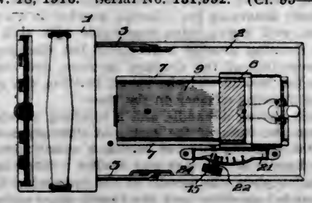
4. In an apparatus of the character described, the combination of a casing, a conveyer movable therein for conveying sheets through said casing in a standing position for drying, and heating means located a sufficient distance beneath the operative travel of said conveyer to insure a substantially even heat at the top and bottom edges of said sheets, said heating means comprising steam pipes and flame burners provided with heat distributing hoods.

5. In an apparatus of the character described, the combination of an elongated relatively deep casing, a conveyer movable through said casing near its top, and heating means located within the casing at a substantial distance beneath said conveyer whereby to provide a substantially even temperature at the tops and bottoms of the sheets being dried, said casing and heating means being relatively arranged to heat the sheets less during the first part of their travel and materially more during the latter part of their travel through said casing.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,675. FOCUSING MECHANISM FOR CAMERAS. ALFRED A. RUTTAN and CHARLES E. HUTCHINGS, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 18, 1916. Serial No. 131,992. (Cl. 95—45.)

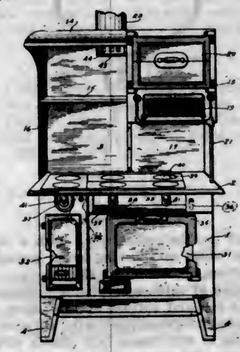


1. In a focusing device for cameras, the combination with a main bed having an opening therein forming a bearing, of a lever journaled in the bearing and having a toothed sector above the same and a finger portion accessible at the side of the bed and an extension bed guided on the main bed and having an opening receiving the toothed sector on the lever, there being teeth at the margin of the opening meshing with those on the sector.

[Claims 2 to 4 not printed in the Gazette.]

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1,227,676. STOVE. HENRY H. SANFORD, Mansfield, Ohio, assignor to New Method Stove Company, Mansfield, Ohio, a Partnership composed of Henry H. Sanford, Bernhard R. Ahrendt, Edwin D. Baxter, and Berry A. Baxter. Filed Mar. 29, 1916. Serial No. 87,640. (Cl. 126—36.)



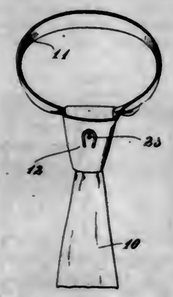
1. A combined gas and solid fuel stove including a stove body having a vertical partition terminating below the top of the body to provide a communication between the spaces on opposite sides of the partition, an oven arranged in one space and having its top wall coincident with the height of the partition and engaging therewith, the top, sides and bottom of the oven being spaced from the similar portions of the body and partition to provide a flue about the oven, the connection of the top wall of the oven and the partition breaking the continuity of the flue, an escape flue arranged beyond the body and disposed above and below the top wall of the oven, the body wall being formed with independent openings to establish communication between said flue above the oven, and the escape flue immediately adjacent and on opposite sides of the top wall of the oven at its juncture with the partition, a canopy rising from the stove body and having a cut out portion, and an oven arranged in such cut out portion and projecting rearwardly of the canopy to form therewith angularly related portions and receive the escape flue.

2. A combined gas and solid fuel stove including a stove body having an upright back, an oven arranged in a cut out portion of the back and projecting rearwardly of the same to cause one side wall of the oven to form with the back angularly related meeting surfaces, and an escape flue in communication with the stove body and secured in the angle of such meeting surfaces.

3. A combined gas and solid fuel stove, including a stove body having a vertical partition terminating below the top of the body to provide open communication between the spaces on opposite sides of the partition, a grate arranged in one of said spaces, an oven arranged in the other of said spaces and having its top wall coincident with the height of and connected to the partition, the top, sides, and bottom of the oven being spaced from the stove body to provide a flue about the oven, the connection of the top wall of the oven and the partition breaking the continuity of the flue, an escape flue communicating with the flue about the oven immediately adjacent and both above and below the junction of the top wall of the oven and the partition, a damper controlling the communication above the oven wall, the stove body in horizontal alinement with the space above the oven being formed on each

side of the partition with openings having closures and removable gas burners adapted to be inserted through said openings to rest respectively above the grate and above the oven, whereby the heat products from the fuel in the grate or from the gas burners may be directed about the oven or to the flue independently of the oven.

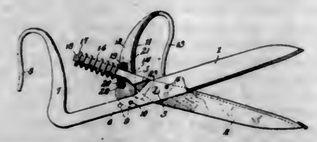
1,227,677. SCARF AND NECKTIE. ANNA SCHLOERB, Weehawken, N. J. Filed May 26, 1916. Serial No. 99,934. (Cl. 2—83.)




1. In a scarf tie, the combination with a band adapted to encircle the collar and having broad pendant ends extending therefrom, of a conical shaped clasp adapted to engage exteriorly of said ends, pliable stiffening elements secured on the top and bottom of said clasp and similar pliable elements extending vertically between the upper and lower edges of said clasp, said pliable elements being adapted to retain the shape given to the clasp.

2. In a scarf tie, clasp, the combination with a fabric covering having hemmed upper and lower edges, pliable metallic elements inserted in the hems of said edges, means for securing said covering adapted to form a hollow cone, and pliable stiffening elements disposed longitudinally between said upper and lower stiffening elements whereby a given shape may be maintained.

1,227,678. HANDLE FOR SHEARS, PLIERS, AND LIKE IMPLEMENTS. FREDERICK CHARLES SCOTT, Detroit, Mich. Filed Aug. 26, 1916. Serial No. 117,002. (Cl. 7—6.)

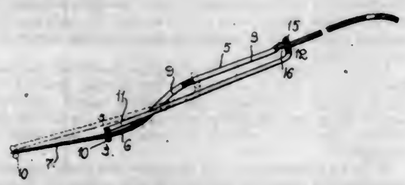


1. A device for the purpose described, comprising a pair of crossed working members, pivoted for rocking movement one upon the other, and each having a shank extended beyond the pivot, a thumb-engaging member or loop carried by the one shank and extending substantially at right angles thereto, the other shank terminating short of the thumb-engaging member and carrying a compression spring, an actuating lever bearing against the spring and having a finger engaging loop or bend, said lever being pivoted to the first-named shank and having means for engaging the second-named shank and bearing against said spring for causing an oscillation of the lever about its pivot, and the manipulation of the working members.

2. A device for the purpose described comprising a pair of longitudinally disposed active members arranged in crossed relation to each other and pivoted at the point of crossing, the said members being provided with shanks at one side of the pivot, one of the shanks being provided with a thumb-engaging loop or arm, the other shank terminating short of said loop or arm, an actuating lever adjustably pivoted to the first-named shank between the loop or arm and the pivot thereof and having a passageway for the short shank, and a compression spring mounted on the latter between the end thereof and the actuating lever.

3. A device for the purpose described comprising a pair of pivoted blades terminating on one side of the pivot in shanks, the shank of one member being provided with an upwardly extending loop or arm for engagement by the thumb and palm of the hand of the operator, the other shank terminating short of the said arm and provided with an abutment at its end, an actuating lever straddling the two shanks and pivoted to the first-named shank at a point between the pivot thereof and the said loop or arm, said lever terminating at its upper end in a finger engaging loop, anti-friction rolls mounted on the lever above and below the second named shank, and a spring mounted on said shank between said lever and the abutment.

1,227,679. KITCHEN-FORK. WILLIAM AUGUSTUS SCOTT, Ocala, Fla. Filed Sept. 7, 1916. Serial No. 118,895. (Cl. 30—5.)




1. A fork having a handle, the handle being longitudinally slotted, and a cleaning member coacting with the tines of the fork and slidingly mounted thereon, the cleaning member being formed of a loop of wire having a shank extending in parallel relation to and beneath the handle, the extremity of the shank being bent to form a thumb piece projected laterally beyond the side edge of the handle of the fork, said thumb piece embracing the fork handle and having sliding engagement in the slot.

2. A fork and a cleaning member coacting with the tines thereof and slidingly mounted thereon, the cleaning member having a shank extending along the handle of the fork and having a thumb piece projecting laterally beyond the side edge of the handle, the fork handle and the shank having coacting means engageable with each other when the cleaning member is in a retracted position to hold said cleaning member in said retracted position but disengageable upon the projection of the cleaning member, and coacting means limiting the projection of the cleaning member on the tines.

3. A fork having a handle longitudinally slotted and a cleaning member coacting with the tines of the fork and slidingly mounted thereon and having a shank extending through said slot to the under side of the fork and extending along parallel to the under face of the handle and formed at its end with a laterally projecting thumb piece, said thumb piece having sliding engagement with the handle, coacting means on the shank and fork handle for yieldingly detaining the cleaning member in a retracted position, said means being engageable with each other when the cleaning member is retracted but disengageable upon a projection of the cleaning member, and coacting means on the handle and the shank limiting the projection of the cleaning member on the tines.

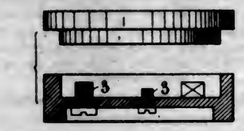
4. A fork having a handle and a cleaning member coacting with the tines of the fork and slidingly mounted thereon, the cleaning member having a shank extending along the handle of the fork and having a laterally projecting thumb piece, the handle of the fork being formed with a rounded shoulder and the thumb piece embracing the fork and yieldingly engaging said shoulder when the cleaning member is in its fully retracted position.



5. The combination with a fork having a slot in its shank portion, of a cleaning member, including a loop embracing the fork tines and shiftable thereon, and a rod extended from said loop in parallel relation to the shank, said rod being angularly offset and slidably engaged in the slot, the end of the rod being bent away from the shank of the fork and bearing upon the top thereof, said end of the rod being then bent upon itself to form a spring handle in the bend away from said fork shank, and the terminal thereof exerting a spring pressure against the underside of the fork shank.

[Claims 6 and 7 not printed in the Gazette.]

1,227,680. METHOD OF SCREW-THREADING ARTICLES MADE OF HORN. MARIO SEGRE, Vercelli, Italy. Filed Aug. 13, 1915. Serial No. 45,355. (Cl. 18—48.)

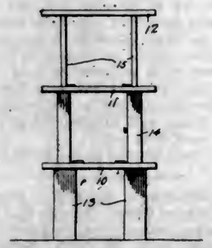


1. A method of producing articles of animal horn or hoof provided with screw threads by stamping the material in a mold, consisting in inserting the matrix of the screw thread in the fixed part of the mold, introducing the blank of material in the mold and compressing it, and finally removing said matrix simultaneously from the mold and the finished article.

2. A method of producing articles of animal horn or hoof provided with a screw threaded hole by stamping the material in a mold, consisting in screwing into the wall of the mold from the outer side thereof a screw so that the same projects into the interior of the mold and constitutes the matrix of the screw thread, introducing the blank of material in the mold and compressing it, and finally unscrewing the screw from the mold and from the finished article.

3. A method of producing articles of animal horn or hoof provided with a plurality of screw threaded holes by stamping the material in a mold, consisting in screwing into the walls of the mold from the outer side thereof a corresponding number of screws so that they project into the interior of the mold, each screw forming the matrix for a screw threaded hole, introducing the blank of material in the mold and compressing it, and then unscrewing the screws from the mold and from the finished article.

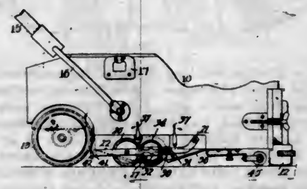
1,227,681. MULTIPLE TABLE. WILLIAM SIMMS, Elgin, Ill. Filed Feb. 23, 1916. Serial No. 80,044. (Cl. 45—31.)




1. A table comprising a plurality of sections, each section comprising a top portion and a plurality of legs, all of said sections with the exception of the uppermost one provided with hollow legs adapted to open through the top portions thereof so as to receive the legs of an adjacent section, gates secured to the upper end of said hollow legs and adapted to swing over the same for constituting a smooth surface on the top of each section, and pockets formed adjacent said legs for receiving the gates of their respective lower sections when the gates are in an open position.

2. A table comprising a plurality of sections, each section comprising a top portion and a plurality of legs, all of said legs with the exception of those on the top section being hollow and adapted to open through the top portion of their respective sections so as to receive the legs of an adjacent section, gates secured to the upper ends of said hollow legs, cut-away portions formed adjacent said hollow legs at the hinged side of said gates, recesses formed adjacent the opposite side of said hollow legs, said cut-away portions and said recesses being substantially the same depth as the depth of said gate and adapted to receive said gate when in a closed position whereby the same will be flush with the top portion when closed.

1,227,682. CLEANING DEVICE. ARTHUR H. SMITH and MALCOLM BLANCH, Worcester, Mass., assignors to Domestic Vacuum Cleaner Company, Worcester, Mass., a Corporation of Massachusetts. Filed Sept. 3, 1913. Serial No. 788,026. (Cl. 15—60.)




1. The combination with a supporting frame, and rollers for supporting the end of the frame, of a complete brush sweeper located close to said rollers under the bottom of the frame, and comprising a rotary brush, rollers for operating the brush located between the brush and the first named rollers, and means for adjusting the brush rollers into and out of contact with the surface to be cleaned.

2. The combination with a main casing, and rollers for supporting one end thereof, of an auxiliary casing located under said main casing near said rollers, a brush carried by said auxiliary casing, a roll on each end of the brush, and a pair of rollers supported from said auxiliary casing between the brush and first named rollers, and adapted to engage the surface to be cleaned and also to engage said rolls, for the purpose of operating the brush.

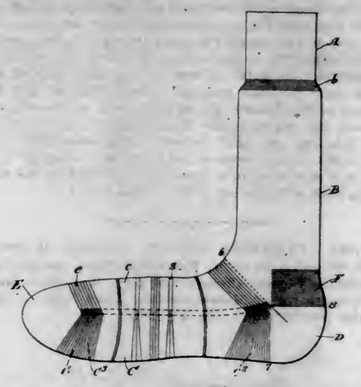
3. The combination with a casing having a support at one end and supporting rollers at the other, of a frame pivoted on the bottom of said casing between the support and rollers and having its free end adjacent to said rollers, a second pair of rollers journaled on said frame, a brush operated by said second pair of rollers, and means for holding the free end of said frame in two positions to adjust the height of the second pair of rollers and brush.

4. The combination with a casing having a support, and rollers arranged at opposite ends, of a frame pivoted transversely between the support and rollers, means for holding the free end of said frame in two positions at different elevations, a brush carried by said frame and having rolls thereon, a pair of rollers journaled on said frame for operating the rolls and brush, and springs on the frame for holding said rolls yieldingly in contact with the rollers.

5. The combination of a frame comprising a pair of said arms, a transverse rod connecting the ends of said arms, a pair of longitudinal pieces parallel with said arms and spaced from them connected with said transverse rod at one end and with the arms at the other end, said pieces and arms having journals thereon, a pair of rollers, one journaled between each of said pieces and the adjacent arm, a brush carried by said frame, and means for driving said brush from the rollers.

[Claims 6 to 9 not printed in the Gazette.]

1,227,683. CIRCULAR-KNITTING MACHINE. WILLIAM E. SMITH, Milltown, N. J., assignor to Kilbourn Manufacturing Corporation, New Brunswick, N. J., a Corporation of New Jersey. Filed July 6, 1916. Serial No. 107,737. (Cl. 66—24.)



1. In a circular knitting machine, the combination with a circular series of needles, stitch forming mechanism for actuating each needle once during circular work to produce plain knitting, and means coöperating therewith for feeding a main knitting thread circularly to all of said needles to produce successive circular contiguous courses of single thread plain knitting, of means normally out of operative position, and capable of being thrown into operation for a partial course only, for separately feeding an extra thread to a group of consecutive needles, and auxiliary stitch forming mechanism normally out of operative position for operating the needles of said group of needles only, a second time during the formation of a single circular course of stitches with the main thread, to simultaneously form a partial course of plain knit stitches between said circular course and the next adjacent circular course.

2. In a circular knitting machine, the combination with a circular series of needles, stitch forming mechanism for actuating each needle once during circular work to produce plain knitting, and means coöperating therewith for feeding a main knitting thread circularly to all of said needles to produce successive circular contiguous courses of single thread plain knitting, of means normally out of operative position, and capable of being thrown into operation for a partial course only, for separately feeding an extra thread to a group of consecutive needles, and auxiliary stitch forming mechanism normally out of operative position for operating the needles of said group of needles only, a second time during the formation of a single circular course of stitches with the main thread, to simultaneously form a partial course of plain knit stitches between said circular course and the next adjacent circular course, and means for throwing said auxiliary stitch forming mechanism and the said means for feeding the extra thread into and out of operative position.

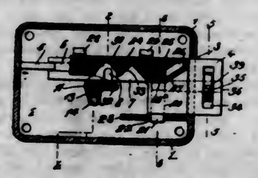
3. In a circular knitting machine the combination with a circular series of needles, stitch forming cam mechanism for actuating the same during circular work and means coöperating therewith for feeding a main knitting thread to all of said needles, auxiliary stitch forming mechanism for imparting a second operation to a group of consecutive needles, during the formation of a single circular course of stitches with the main thread, and means for feeding a separate thread to the needles of said group, and to adjacent needles located on opposite sides of said group.

4. In a circular knitting machine the combination with a circular series of needles, stitch forming cam mechanism for actuating the same during circular work and means coöperating therewith for feeding a main knitting thread to all of said needles, auxiliary stitch forming mechanism for imparting a second operation to a group of consecutive needles, during the formation of a single circular course of stitches with the main knitting thread, and means for feeding a separate thread to the needles of said group, and to adjacent needles located on opposite sides of said group, and means for elevating said adjacent needles in advance of the intervening needles not comprised in said group of needles, to facilitate feeding of said extra thread thereto.

5. In a circular knitting machine the combination with a circular series of needles, stitch forming mechanism comprising two cams for actuating a group of said needles twice in succession in each revolution of the machine, separate stitch forming cam mechanism for operating the other needles of the series once in each revolution of the machine, means for feeding a main knitting thread to all of the needles during circular work, associated with said separate cam, and with one of the cams for said group of needles, and auxiliary means for feeding an extra thread to the needles of said group, during a revolution of the machine, associated with the other cam for said group of needles.

[Claims 6 to 15 not printed in the Gazette.]

1,227,684. DOOR-LOCK. JACOB SOKOLOV, New York, N. Y. Filed Apr. 28, 1916. Serial No. 94,133. (Cl. 70—14.)



1. A door lock comprising a slide bolt adapted to cooperate with a keeper, a member adapted to be projected laterally from the bolt head to prevent withdrawal thereof through the keeper, a detent adapted to hold said bolt in thrown position, said detent and said member being connected to operate in unison, means for locking said detent and member against forcing and tumbler devices for positively operating the bolt, said detent and said locking means in sequence.

2. A door lock comprising a slide bolt, a cross bolt mounted in the end of the slide bolt and adapted to be projected laterally therefrom, a movable detent for holding said slide bolt in locked position, and means connecting said cross bolt and the detent to operate in unison whereby when the detent is in position to hold the slide bolt against retraction, the cross bolt is projected therefrom.

3. A door lock comprising a slide bolt, a cross bolt mounted in the end of the slide bolt and adapted to be projected laterally therefrom, a movable detent for holding said slide bolt in locked position, means connecting said cross bolt and the detent to operate in unison whereby when the detent is in position to hold the slide bolt against retraction, the cross bolt is projected therefrom, and tumbler devices adapted in unlocking said lock to first lift said detent and withdraw said cross bolt and then withdraw said slide bolt.

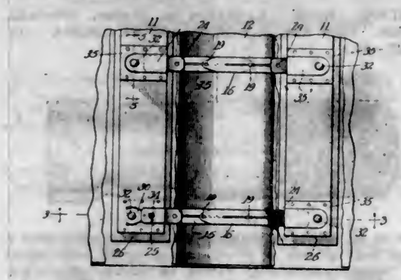
[Claims 4 to 7 not printed in the Gazette.]

1,227,685. LOOSE-LEAF BINDER. ISIDORE SPINNER and GEORGE ELLIOT PERRY, Chicago, Ill.; said Perry assignor, by mesne assignments, to James H. Rook, Chicago, Ill. Filed Sept. 22, 1915. Serial No. 51,911. (Cl. 129—41.)

1. In combination with the cover members of a book, of a removable binding member comprising a flexible, axially extensible structure having attaching members at its terminal ends and coöperating attaching members carried by the book covers near their hinged edges for rigidly gripping the terminal ends of said extensible structure.



2. In combination with the cover members of a book, of a removable binding member comprising a flexible, axially extensible structure, having a perforation near each of its terminals and coöperating, attaching members comprising a spring latch to engage said perforations and a guide for said ends adapted to be carried by the book covers near their hinged edges.



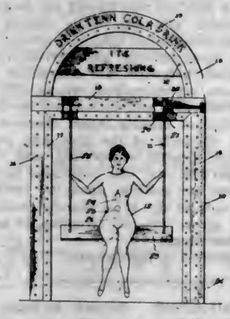
3. In combination with the cover members of a book, of a removable flexible, axially extensible binding member, comprising two flat thin members slidably secured together; reinforced terminals bent at an angle to the body part and coöperating attaching clips secured to said covers near the hinged portions thereof for rigidly securing the terminals of the covers.

4. A binding member for a loose leaf binding book comprising two relatively narrow thin strips of spring metal slidably secured together; the outer end of each strip being bent at an angle to its body part and perforated to provide a latching member.

5. The combination with hingedly connected covers and back of a book, of a plurality of flexible axially extensible binding members, a plurality of latch members carried on the inner face of each cover near its hinge connection with the back for individual coöperation with the ends of the binding members, each said latch member being individually releasable.

[Claims 6 and 7 not printed in the Gazette.]

1,227,686. ELECTRIC SIGN. JOHN R. STARK and MEADE S. HARWELL, Nashville, Tenn. Filed Apr. 25, 1916. Serial No. 93,470. (Cl. 46—40.)

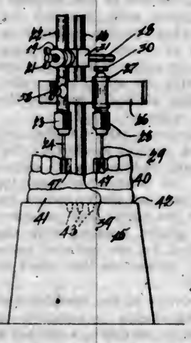



1. In a sign, a sign frame of hollow construction, a shaft mounted for rotation within the frame, means for driving the shaft, rods swingingly supported by the frame and extending between the side portions thereof, a swing seat connecting the rods, means coacting between the shaft and one of the rods for oscillating such rod and consequently the swing seat, and a figure supported upon the swing seat, said figure being of non-opaque material whereby it may be illumined by light bulbs disposed therewithin.

2. In a sign, a sign frame of hollow construction, a shaft mounted for rotation within the frame, means for driving the shaft, rods swingingly supported by the frame and extending between the side portions thereof, a swing seat connecting the rods, means coacting between the shaft and one of the rods for oscillating such rod and consequently the swing seat, and a non-opaque figure supported upon the swing seat, said figure being costumed and its costume being of non-opaque material, and light bulbs of different colors mounted within the figure in independent circuits whereby the figure may be variously lighted to give its costume different colors.

3. In a sign, a sign body including an open frame, lamps on the frame, rods depending through slots in the top of the frame and pivotally supported at their upper ends within the top of the frame, a swing seat carried by the rods, a non-opaque figure supported upon the seat, differently colored lamps within the figure, means for energizing the lamps in the figure, means for energizing the lamps on the frame, and means acting on one of the rods to oscillate the seat and figure.

1,227,687. DENTAL TOOL. VICTOR STOLL, Brooklyn, N. Y. Filed Sept. 6, 1916. Serial No. 118,622. (Cl. 32—10.)



1. In a dental tool, in combination with a vertical post a non-rotary horizontal arm adjustably secured to said post and vertical paralleling rods adjustably connected to said horizontal arm for varying the interval between said rods.

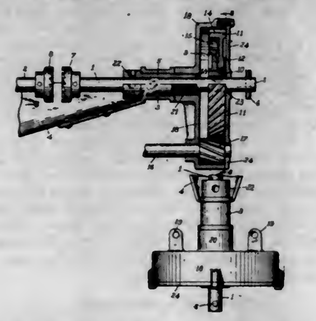
2. In a dental tool, an arm and a pair of paralleling rods, one of which is adjustable toward or from the other on said arm, in combination with means for suspending said arm and rods and means for adjusting the position of said rods vertically, horizontally and to various angles in a horizontal plane, for insuring the accurate presentation of what is carried by said paralleling rods.

3. In a dental tool, a retainer for a cast, a vertical post supported over the same for vertical adjustment, it being also provided with means for its horizontal adjustment about a fixed point of support, a horizontal arm slidable through said post and provided with means for clamping said arms at any point of such adjustment, a device slidable on said bar and adapted to be clamped at any desired point, said post and device each carrying a paralleling rod.

4. In a dental tool, a pair of transversely slotted paralleling devices, in combination with an arm slidable through the slots of said devices, clamping means operating on said arm to hold said devices at any desired interval from each other, and means for suuporting said arm and paralleling devices for the purpose set forth.

5. In a dental tool, a pair of paralleling devices, in combination with an arm, means for adjusting the interval between said devices on said arm, and means for supporting said arm and paralleling devices and adjusting them to any required position over a cast.

1,227,688. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. ARTHUR L. STRAHLE, Benson, and HILAND B. NOYES, Omaha, Nebr. Filed Nov. 20, 1916. Serial No. 132,260. (Cl. 74—7.)



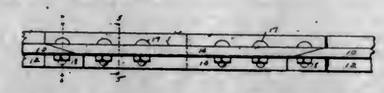
1. A starting device of the specified class, comprising a crankshaft of an engine; a cranking shaft, movable both rotarily and endwise in its bearings; an independently rotatable spiral gear, mounted on the cranking shaft; a ratchet-wheel fixedly mounted on the cranking shaft; a plurality of elastic pawls between the gear and the ratchet wheel; a motor-driven shaft carrying a spiral pinion meshing with the spiral gear; and means, operated by the cranking shaft, for coupling that shaft to the crankshaft of the engine.

4. A starting device of the specified class, comprising a crankshaft of an engine; a cranking shaft, adapted to be rotated and slid endwise in its bearings by a terminal hand crank; an independently rotatable spiral gear mounted on the cranking shaft; means for rotating the cranking shaft by the spiral gear; a power-driven shaft carrying a spiral pinion meshing with the spiral gear; and means operated by the endwise movements of the cranking shaft for connecting that shaft with the crankshaft of the engine.

10. A starting device of the specified class, comprising a crankshaft of an engine; a rotatable cranking shaft, slidable endwise in its bearings; a ratchet-wheel having a hub keyed fixedly on the cranking shaft; an independently rotatable spiral and hollow gear wheel, mounted on the hub of the ratchet-wheel; a plurality of arcuate spring pawls, secured to the inside of the hollow gear wheel; a power shaft carrying a spiral pinion meshing with the spiral gear; and means for operatively connecting the cranking shaft with the crankshaft of the engine.

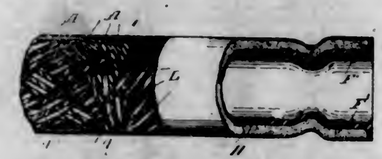
[Claims 2, 3, and 5 to 9 not printed in the Gazette.]

1,227,689. RAILROAD-RAIL JOINT. IRA STRONG, Petrol, N. D., assignor of one-half to Howard J. Wright, Des Moines, Iowa. Filed July 31, 1916. Serial No. 112,428. (Cl. 239—3.)



A railway rail joint comprising rails placed end to end, the webs and bases of said webs projecting beyond the balls thereof, the ends of said balls being beveled, a connecting joint member comprising a ball portion having its ends beveled to fit the beveled ends of the balls of the rails, a downwardly opening channel-shaped member receiving the webs of the rails, laterally and outwardly extending flanges at the lower edges of the walls of said channel-shaped portions designed to rest on the bases of the rails, the ends of the walls of the channel shaped member extending from each end of said member on opposite sides thereof, respectively, to the beginning and the extreme ends of the beveled portion of the ball of the connecting rail member, and an angle iron secured to each rail adjacent to the short end of the wall of the channel-shaped member and adapted to engage the web of the rail and support the thin portion of the beveled part of the ball of the rail.

1,227,690. HOSE. LAWRENCE A. SUBERS, Cleveland, Ohio. Filed Nov. 3, 1913. Serial No. 798,964. (Cl. 137—90.)



1. As an article of manufacture, a hose comprising a fabric body portion of predetermined length longitudinal and lateral expansibility having an annular groove adjacent to each end, that portion of the hose lying between each groove and the outer extremity of the hose, having a larger internal diameter than the internal diameter of the body of the hose.

2. In a rubbered fabric hose pipe a main body portion composed of substantially nonexpansible material and having a central opening of predetermined diameter and an integral extremity therefor having an opening of larger diameter, the opening in said extremity separated from the opening in said body portion by an annular groove.

3. In a hose a body portion having an opening of predetermined diameter, said hose formed of rubbered fabric of predetermined length expansibility and extremities therefor integrally connected therewith, said extremities having openings of larger diameter and centrally located, the openings in said extremities separated from the opening in said body portion by annular grooves.

4. In a hose, a body portion having an opening of predetermined diameter, said hose formed of rubber fabric having a predetermined minimum amount of lateral and longitudinal expansibility, and extremities therefor integrally connected therewith, said extremities having openings of larger diameter and centrally located with respect to the openings in said body portion, said extremities being separated from said body portion by annular grooves.

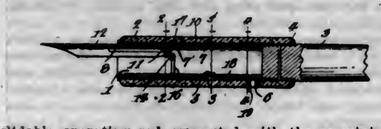
5. In a hose, a body portion having an opening of predetermined diameter, said hose being formed of rubber fabric having a predetermined minimum amount of lateral and longitudinal expansibility, and extremities therefor integrally connected therewith, said extremities being likewise of a minimum predetermined expansibility both laterally and longitudinally, said extremities having a cylindrical inner surface of slightly larger diameter than the opening through the body of the hose, and an inwardly projecting portion directly connecting said extremities with said body portion, said last mentioned portion being adapted to reverse its position upon the insertion of a nipple into the ends of the hose, thereby forming an internal recess or groove for the reception of an annular enlargement on the nipple.

[Claim 6 not printed in the Gazette.]

1,227,691. PENHOLDER. ROBERT RUSSELL SYMONS, Dodgeville, Wis. Filed June 29, 1915. Serial No. 37,109. (Cl. 120—101.)

1. A releasing pen holder, including a tubular shank, a clamping member, said clamping member comprising a single piece of spring metal offset intermediate its length, a bell crank lever, means connected with said bell crank lever to the clamping member, and actuating means for said lever.

2. A releasing pen holder, including a tubular shank, a pen clamping and retaining member arranged within said shank and formed from a single piece of spring metal offset intermediate its length, a bell crank lever pivotally mounted interiorly of the shank and connected with the free end of said clamping and retaining member, and a



slidable operating rod connected with the remaining end of the bell crank lever and extending exteriorly of the shank, whereby, the clamping and retaining member can be disengaged from a pen.



1,227,692. CAMERA. TOKUMATSU TAMURA, Reno, Nev. Filed Apr. 3, 1916. Serial No. 88,568. (Cl. 95—32.)



1. In a camera, a body portion, a removable back having a sight opening, a semitransparent member closing said sight opening on which the object to be photographed is adapted to be focused, and a closure for said sight opening hinged to said removable back.

2. In a camera, a body portion having a sight opening in the back thereof, a focusing screen over the sight opening upon which the object to be photographed is focused, and a pair of oppositely swinging doors hinged to said back and constituting a closure for said sight opening.

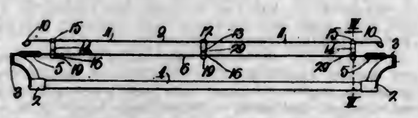
3. In a camera, a body portion having spool receiving chambers, a removable back, a sight opening in said removable back, a focusing screen over said sight opening, a pair of oppositely swinging doors secured to said removable back and constituting a closure for said sight opening, and means for retaining said doors in closed position.

4. In a camera, a body portion having a central chamber, a spool-receiving chamber on either side of said central chamber, a back, and a hinged end portion constituting the wall of one of said spool-receiving chambers.

5. In a camera, a body portion having spool receiving chambers at its opposite ends, a removable back, a hinged end portion constituting the wall of one of said chambers, and means for retaining said hinged portion in closed position.

[Claims 6 to 21 not printed in the Gazette.]

1,227,693. BED-SPRING COVER. JOHN L. TANDY, Kansas City, Mo. Filed Jan. 21, 1915. Serial No. 3,552. (Cl. 5—39.)



1. The combination with a bed spring of a series of brackets secured to the side portions of the spring, and rail sections above the spring and pivotally linked together at their inner ends and supported by one of said brackets and slidingly carried at their outer ends by the remaining brackets.

2. The combination with a rectangular frame, a mattress fabric stretched over said frame and secured at its ends to the ends of said frame, central devices attached to the side margins of said mattress fabric and projecting upwardly therefrom, devices attached to the side margins of the mattress fabric at opposite sides of said central devices and projecting upwardly like the latter, rails substantially paralleling and disposed above the side margins of the mattress fabric and secured at their inner ends to the upwardly projecting portions of said central devices and fitting slidingly in the said devices disposed at opposite sides of said central devices, and a cover spread upon the mattress fabric and looped over and draped downwardly at the outer sides of said rails and the sides of said frame and also draped over the ends of said frame.

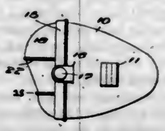
3. The combination with a rectangular frame, a mattress fabric stretched over said frame and secured at its ends to the ends of said frame, central devices attached to the side margins of said mattress fabric and projecting upwardly therefrom, devices attached to the side margins of the mattress fabric at opposite sides of said central devices and projecting upwardly like the latter, rails substantially paralleling and disposed above the side margins of the mattress fabric and secured at their inner ends to the upwardly projecting portions of said central devices and fitting slidingly in the said devices disposed at opposite sides of said central devices, a cover spread upon the mattress fabric and looped over and draped downwardly at the outer sides of said rails and the sides of said frame and also draped over the ends of said frame, and means attached to the draped portions of said cover to secure the draped end portions of the cover against the ends of said frame.

4. The combination with a rectangular frame and a bed spring secured at its ends to the ends of said frame, of elevated side rails for said bed spring, and a cover resting upon the latter and composed of two longitudinally-extending sections overlapping at their inner margins and at their outer margins looped over the said rails, and elastic connections between said sections to hold them in overlapped relation.

5. The combination with a bed spring of rails above the side portion of the springs, means for supporting said rails at different points along the length of the bed spring and for maintaining the rails substantially parallel with the said side portions of the bed spring regardless of whether the latter is straight or bent, means for securing the side rails different distances apart to accommodate mattresses of different width, and a cover resting on the bed spring and looped over and secured in fixed relation to said rails and consisting of two sections which are overlapped at their inner edges.

[Claim 6 not printed in the Gazette.]

1,227,694. LAMP. RICHARD H. TATLOW, Jr., Denver, Colo. Filed Dec. 3, 1915. Serial No. 64,878. (Cl. 240—41.)



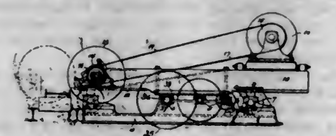
1. In a lamp, a main reflecting surface, a source of light at the focal center of said surface, a downwardly bent portion on the front of the lamp adapted to intercept all rays projected upwardly at a given angle to the focal axis of the lamp, an upwardly bent portion on the front of the light for intercepting those rays which are projected directly from the source of light at a given angle downwardly to the focal axis of the lamp, and a light opening between said portions comprising a horizontally disposed elongated slot, said portions being so constructed that more upwardly extending rays are intercepted by the downwardly bent portion than downwardly extending rays by the upwardly bent portion, so as to eliminate glare and permit some of the rays to be projected downwardly in front of the lamp.

2. In a lamp, a reflecting surface, a source of light, a downwardly bent portion, an upwardly bent portion, and a light opening between said portions, said downwardly bent portion being extended over the edge of said upwardly bent portion to intercept most of the rays extending upwardly at an angle to the focal axis of the lamp and to project some of the rays downwardly in front of the lamp.

3. In a lamp, a reflecting surface, a source of light, a downwardly bent portion on the front of the lamp and having a reflecting surface, an upwardly bent reflecting portion on the front of the lamp for intercepting those rays which are projected directly from the source of light at a given angle downwardly to the focal axis of the lamp, a light opening between said portions comprising a slot, and a flange along the upper edge of said upwardly bent portion extending inwardly of the lamp for intercepting those rays which are reflected upwardly at an angle to the focal axis of the lamp by the reflecting surface which lies substantially below said flange.

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1,227,695. MACHINE FOR SAWING METAL. CLARENCE L. TAYLOR, Alliance, Ohio, assignor to The Morgan Engineering Company, Alliance, Ohio. Filed June 12, 1916. Serial No. 103,177. (Cl. 29—69.)



1. In a machine for sawing metal, the combination of a base, a table mounted to reciprocate on said base, a motor, a shaft driven by said motor, a second shaft, gearing connecting the last mentioned shaft and table for actuating the latter, differential gearing connecting said two shafts, means for actuating the differential gearing whereby the speed of feed may be varied, a saw shaft and saw journaled in bearings on the table and means for rotating the saw.

2. In a machine for sawing metal, the combination of a base, a table mounted to reciprocate thereon, a motor, a shaft driven by said motor, a second shaft in line with said motor driven shaft, gearing connecting the last mentioned shaft and table for actuating the latter, differential gearing connecting said two shafts, means for actuating the differential gearing, whereby the speed of feed of the table may be varied from the speed transmitted to the driven shaft by the main drive motor, a saw shaft on the table and a motor also carried by the table for rotating the saw shaft.

3. In a machine for sawing metal, the combination of a base, a table mounted to reciprocate thereon, a main motor, a shaft driven by said motor, a second shaft in line with said motor driven shaft, gearing connecting said last mentioned shaft and table for actuating the latter, differential gearing connecting said two shafts, an auxiliary motor driven gear connected with the auxiliary motor for regulating and controlling the differential gear whereby the speed of movement of the table may be varied from the speed transmitted to the driven shaft by the main motor, a saw shaft and motor carried on the table and means connecting said saw shaft and its motor.

4. In a machine for sawing metal, the combination of a base, a table mounted to reciprocate thereon, a main motor, a shaft driven by said motor, a second shaft in line with said motor driven shaft, gearing connecting said last mentioned shaft and table for reciprocating the latter, differential gearing connecting said two shafts, an auxiliary motor, a slip gear, a shaft connected with said auxiliary motor by said slip gear, a brake on said shaft, and a pinion also on said shaft and meshing with a gear on the differential gearing for rotating the latter, a saw shaft on the table and a motor also carried by the table and belted to the saw shaft.

1,227,696. SHOE-FILLER. ANDREW THOMA, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y., a Corporation of Maine. Original application filed May 11, 1908, Serial No. 432,083. Divided and this application filed July 1, 1912. Serial No. 707,018. (Cl. 106—3.)

1. A shoe filler, comprising a body-material and a binder united to a moldable consistency, at least at the moment of application in a thin layer in the shoe-bottom, and then coherent, sticky, permanently pliable, and adherent to leather, said binder consisting at least in part of a casein solution.

2. A shoe filler, comprising a body-material and a binder united to a moldable consistency, at least at the moment of application in a thin layer in the shoe-bottom, and then coherent, sticky, permanently pliable, and adherent to leather, said binder consisting at least in part of a casein solution and a softening ingredient.

3. A shoe filler, comprising a body-material and a binder united to a moldable consistency, at least at the moment of application in a thin layer in the shoe-bottom, and then coherent, sticky, permanently pliable, and adherent to leather, said binder consisting at least in part of a casein solution and wax tailings.

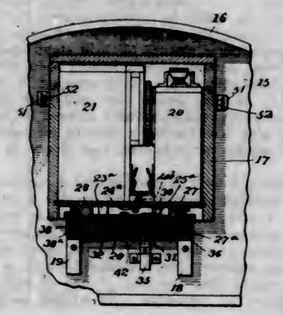
4. A shoe filler comprising casein, wax tailings, and comminuted filler-body material for a shoe filler.

5. A shoe filler comprising an albuminoid and wax tailings.

[Claims 6 to 26 not printed in the Gazette.]

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1,227,697. IGNITION APPARATUS FOR HYDROCARBON-ENGINES. MILTON TIBBETTS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 19, 1910. Serial No. 544,822. (Cl. 247—12.)



1. In a motor vehicle, the combination with the dash and ignition apparatus, of a receptacle for the ignition apparatus, and means including a pivot for supporting said receptacle and constructed to permit it to be tilted from an upright to an inclined position, said supporting means being constructed so that the center of gravity of said receptacle will fall forwardly and rearwardly of said pivot when said receptacle is in operative and inoperative positions respectively.

2. In a motor vehicle, the combination with the dash and ignition apparatus, of a receptacle for the ignition apparatus, means for supporting said receptacle, said means being constructed to permit said receptacle to be moved rearwardly from the dash, and electrical connections for said apparatus made through said supporting means.

3. In a motor vehicle, the combination with the dash and ignition apparatus, of a receptacle for the ignition apparatus, means for supporting said receptacle, said means being constructed to permit said receptacle to be moved rearwardly from the dash, and high tension electrical connections for said apparatus made through said supporting means.



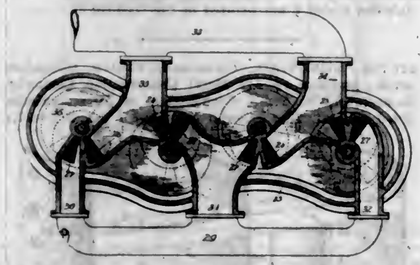
4. In a motor vehicle, the combination with the dash and ignition apparatus, of a receptacle for the ignition apparatus, a bracket for supporting said receptacle, said bracket being constructed to permit said receptacle to be moved rearwardly from the dash, and electrical connections for said apparatus supported by said bracket.

5. In a motor vehicle, the combination with the dash and ignition apparatus, of a receptacle for the ignition apparatus, a bracket for supporting said receptacle, said bracket being constructed to permit said receptacle to be moved rearwardly from the dash, and high tension electrical connections for said apparatus supported by said bracket.

[Claims 6 to 33 not printed in the Gazette.]

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1,227,698. HYDROCARBON-MOTOR. MILTON TIBBETTS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed June 22, 1911. Serial No. 634,776. (Cl. 123—59.)



1. In a multi-cylinder hydrocarbon motor, the combination with the alined cylinders, of a single inlet and exhaust valve for each cylinder offset from the cylinder and set in staggered relation to the valves of adjacent cylinders.

2. In a multi-cylinder hydrocarbon motor, the combination with the alined cylinders, of offset rotary valves for the cylinders set in staggered relation, and means extending along the tops of the cylinders for rotating said valves.

3. In a multi-cylinder hydrocarbon motor, the combination with the alined cylinders, of an offset valve for each cylinder of greater diameter than the cylinder set in staggered relation to the valves of adjacent cylinders, and a shaft extending along the tops of the cylinders substantially in the plane of their axes for operating all of said valves.

4. In a multi-cylinder hydrocarbon motor, the combination with the alined cylinders, of an offset valve for each cylinder of greater diameter than the cylinder set in staggered relation to the valves of adjacent cylinders.

5. In a multi-cylinder hydrocarbon motor, the combination with the cylinders, each having its intake and exhaust ports adjacent each other and formed in one side of the cylinder head and the ports of each alternate cylinder being arranged on the side opposite to that in which the ports of the other cylinders are arranged, of valves controlling said ports, and means for operating said valves.

[Claims 6 to 12 not printed in the Gazette.]

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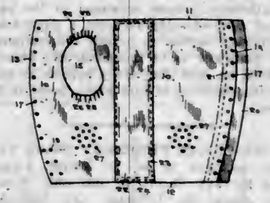
1,227,699. SPARK-PLUG. JOSEPH E. TRAHAN, Detroit, Mich. Filed Sept. 5, 1916. Serial No. 118,322. (Cl. 123—169.)

In a spark plug, a spark plug body provided with an electrode, a body of insulation carried by said spark plug body and having a cylindrical bore therethrough, an exteriorly screwthreaded stem mounted on said body of insulation and having a bore alining with the bore of the body of insulation, an electrode in the bore of said body of insulation extending into the bore of said stem and rectangular in cross section to provide air passages between said electrode and said body of insulation and said stem, a dome shaped valve seat member screwed on said stem and provided with an air intake port and a valve seat around the inner end of said port, a jam nut on said stem to hold said valve seat member in an adjusted position, an automatic valve in said valve seat member, and a valve rod of less cross-sectional area than said electrode carried by said valve and having an end thereof below said valve extending into the bore of said stem to rest on the electrode extending into said stem and the opposite end of said rod above said valve extending through the air intake port of said valve seat member and loose therein to permit of manual adjustment of said valve between the upper end of said stem and the valve seat.



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1,227,700. HAND-BRACE AND WRIST-SUPPORT. HAMILTON W. TUCKER, Washington, D. C. Filed July 22, 1914. Serial No. 852,334. (Cl. 128—3.)



1. A device of the character described comprising a main body or sheet adapted to inclose the wrist and hand, and means for drawing the edges of said body together to exert binding pressure upon the wrist and also upon the hand beyond the thumb, an opening being provided for the protrusion of the thumb.

2. A device of the character described comprising a main body or sheet adapted to inclose the wrist and hand, and means for drawing the edges of said body together to exert binding pressure upon the wrist and also upon the hand beyond the thumb, an opening being provided for the protrusion of the thumb, and the edges of said opening being slitted to leave flexible tongues to bear against the thumb.

3. A device of the character described comprising a main body or sheet adapted to inclose the wrist and hand, and means for drawing the edges of said body together to exert binding pressure upon the wrist and also upon the hand beyond the thumb, an opening being provided for the protrusion of the thumb, and a longitudinal stiffener secured to the center of the main body.

4. A device of the character described comprising a comparatively stiff flexible body or sheet adapted to inclose the wrist and hand, a flap secured to the inner side of one edge of the body and having its edges thinned,

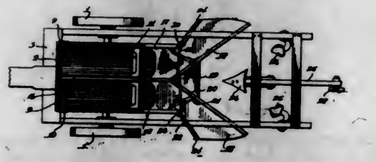
and means for drawing together and securing the edges of the body to brace the hand and support the wrist, the body being provided with an opening to permit of the passage of the thumb.

5. A device of the character described comprising a comparatively stiff flexible body or sheet adapted to inclose the wrist and hand, a flap secured to the inner side of one edge of the body and having its edges thinned, and means for drawing together and securing the edges of the body to brace the hand and support the wrist, the body being provided with an opening to permit of the passage of the thumb, the edges of said opening being slitted to leave flexible tongues to contact with the thumb.

[Claim 6 not printed in the Gazette.]

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1,227,701. FERTILIZER-DISTRIBUTER. MAXIE DIXSON TURBEVILLE, Lake City, S. C., assignor of one-half to Ashton H. Williams, Lake City, S. C. Filed Mar. 11, 1916. Serial No. 83,603. (Cl. 275—2.)

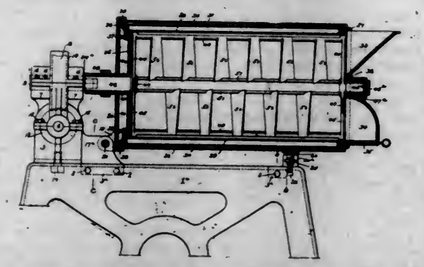


1. In a fertilizer distributer, a wheeled frame, a container for the fertilizer, discharge chutes leading from said container and extending beyond the respective sides of the frame, said chutes having their discharge terminals approximately midway the frame sides, and means operating in each chute to permit either central or lateral discharge of the fertilizer.

2. A fertilizer distributer including a wheeled frame, equipped with a multi-part container, the bottom of each part being independently movable by traction of the frame, a stationary bottom arranged in the path of the outlet ends of said movable bottoms, a partition mounted on said stationary bottom to permit the contents of each part of the container to be independently dispensed, and means mounted on said stationary bottom to permit commingling of the contents of said parts, prior to dispensing said contents.

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1,227,702. ICE-CREAM FREEZER. FRANK TYSON, Canton, Ohio, assignor to M. W. Miller, Canton, Ohio. Filed July 8, 1911, Serial No. 637,439. Renewed Oct. 16, 1916. Serial No. 126,043. (Cl. 257—84.)



1. The combination, in an ice cream freezer, of a supporting member, a swinging carrier pivotally mounted on said supporting member, a freezing vessel detachably mounted upon said carrier but free to swing therewith, and a removable head at that end of said freezing vessel which is mounted upon the carrier.

2. The combination, in an ice cream freezer, of a supporting member, a swinging carrier pivotally mounted thereon, a freezing vessel detachably mounted upon said carrier, and a removable head at that end of the vessel which is mounted upon the carrier, said head being within the limits of the end of the vessel whereby the mounting is effected.

3. The combination, in an ice cream freezer, of a freezing vessel having a rear ring, a head seated in said ring, and a carrier to which said ring is detachably connected and from which it can be removed in order to permit access to said head.

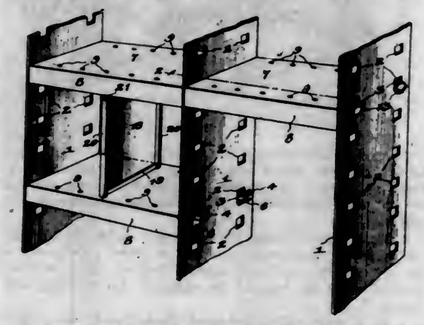
4. The combination, in an ice cream freezer, of a freezing vessel having a ring at its rear end, a head seated in said ring, and a carrier to which the ring is detachably connected, said carrier having means for bearing upon the head and maintaining the same upon its seat in the ring.

5. In an ice cream freezer, the combination of a freezer having a ring at one end, a head arranged to engage said ring, and a member to which said ring is detachably connected to permit access to said head.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,703. SHELVING. CHARLES B. ULRICH, Houghton, Mich., assignor to Art Metal Construction Company, Jamestown, N. Y., a Corporation of Massachusetts. Filed Jan. 11, 1915. Serial No. 1,593. (Cl. 211—27.)



1. The combination of a pair of uprights having corresponding openings therein, shelf-supporting brackets detachably engaged in the openings of the uprights and each provided with an upstanding ear spaced from the upright, and a shelf provided at opposite edges with depending flanges having seats therein receiving the respective brackets and provided with inwardly extending projections to engage the inner sides of the respective ears.

2. The combination of a pair of uprights having corresponding openings, of shelf-supporting brackets detachably engaged with the openings and provided with upstanding ears, and a shelf provided with depending flanges having ears struck up and extending inwardly from the flanges, said ears lying on the brackets at the inner sides of the ears thereon, and the edges of the openings in the flanges produced by the formation of the ears lying at opposite sides of the brackets.

3. The combination of a plurality of uprights having corresponding openings therein, shelf-supporting brackets, each bracket lying in an opening and projecting at opposite sides of the upright and provided at its opposite ends with upstanding ears and also provided with depending webs at opposite sides of the upright, and shelves, each shelf having opposite depending flanges provided with seats receiving projecting bracket portions and provided with ears lying at the inner sides of the ears of the brackets.

4. A shelf-supporting bracket formed of a single blank of metal and including a body having upstanding transverse ears at its opposite ends and opposite depending longitudinal flanges provided with corresponding bifurcations.

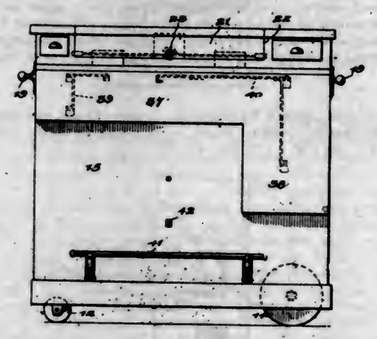


5. A shelf formed from a single blank of metal having opposite edges formed into substantially tubular ribs and provided with corresponding openings in the tops and bottoms of the ribs.

[Claims 6 to 8 not printed in the Gazette.]

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1,227,704. FILING-CABINET. CHARLES B. ULRICH, Houghton, Mich., assignor to Art Metal Construction Company, Jamestown, N. Y., a Corporation of Massachusetts. Filed Apr. 6, 1915. Serial No. 19,590. (Cl. 45—3.)



1. A device of the character specified comprising a cabinet having an opening in the top and a cut-out portion in the upper edge of the front thereof, a cover hinged to the back and adapted to extend over the top of the cabinet and provided at its front edge with a depending flange to enter the cut-out portion in the front of the cabinet, a shelf hinged to the front of the cabinet immediately below and adjacent the cut-out portion thereof and adapted to swing downward against said front, a wheel mounted within the cabinet and rotatable in a plane parallel with the front and back thereof, and a plurality of receptacles mounted upon the wheel and disposed to be brought into upright position opposite the openings in the front and the top of the cabinet and opposite the said shelf when extended into horizontal position.

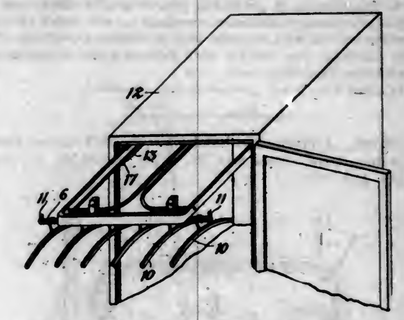
2. A filing device comprising a cabinet having an opening, a wheel disposed within the cabinet and comprising arms, receptacles mounted between the arms and adapted to maintain a given position, and a spring catch attached to the inside of a wall of the cabinet and concealed thereby, said catch having an intermediate depression with inclined spring terminals at opposite sides of and leading to the depression and in the path of the arms to engage the same and hold the wheel in desired adjusted position.

3. A portable filing device comprising a skeleton frame and embodying corner uprights, upper and lower transverse and longitudinal bars, intermediate longitudinal bars, and braces extending from the lower ends of the uprights to the intermediate longitudinal bars and connected centrally thereto, bearings at the upper ends of the braces, inclosing elements attached to the frame members, the top element having an opening which is closed by a cover, a shelf hinged to the structure adjacent the opening in the top thereof, a wheel arranged within the structure and mounted upon the said bearings, and receptacles removably mounted upon the wheel.

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1,227,705. GARMENT-HANGER. CHARLES B. ULRICH, Jamestown, N. Y., assignor to Art Metal Construction Company, Jamestown, N. Y., a Corporation of Massachusetts. Filed Aug. 23, 1915. Serial No. 46,937. (Cl. 211—16.)

1. A garment hanger comprising a supporting frame, a guideway extending from the rear toward the front of the frame, guideway branches forming continuations of the guideway and extending transversely in opposite directions from the front of the guideway, a hanger bar, and slides traveling upon the guideway and pivotally connected to the hanger bar, each slide also traveling upon its respective guideway branch.

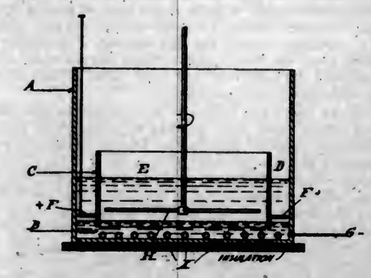


2. A garment hanger comprising a supporting frame, spaced track members extending forwardly from the rear of the frame in substantial parallelism and diverging at the front of the frame, a hanger bar, and a pair of roller brackets pivotally connected to the bar and mounted to travel upon the respective track members.

3. The combination of a case or cabinet having an open side, a guideway therein leading to the open side of the cabinet, a frame mounted in said guideway and capable of being projected through the open side of the cabinet, a guideway on the frame and extending from the rear toward the front thereof and provided with branches forming continuations of the guideway and extending transversely in opposite directions from the front of the guideway, a hanger bar, and slides pivotally carried by the hanger bar and traveling on the guideway and the branches thereof.

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1,227,706. PROCESS OF MAKING GLYOXYLIC ACID OR ITS COMPOUNDS. MOOSHEGH VAYGOUNY, Berkeley, Cal., assignor to Royal Baking Powder Company, a Corporation of New Jersey. Filed July 23, 1910. Serial No. 573,545. (Cl. 204—9.)



1. A process of making glyoxylates, comprising the reduction of oxalic acid or its compounds by means of the reaction of an amalgam in dilute form on a hydrogen-containing substance.

2. A process of making glyoxylates, comprising the reduction of oxalic acid or its compounds by means of the reaction of an amalgam on a solution thereof comprising a hydrogen-containing substance and not exceeding 25 grams of oxalic acid or oxalate (calculated as anhydrous oxalic acid) per 100 cc.

3. A process of making glyoxylates, comprising the reduction of potassium oxalates in a solution containing water, in the presence of sulfuric acid, by means of an amalgam.

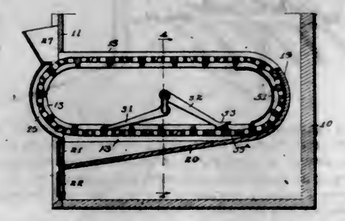
4. A process of producing glyoxylic acid and glyoxylates which comprises producing an amalgam of an alkali metal by the action of an electric current and continuously transferring portions of said amalgam into contact with an acid aqueous solution containing dissolved oxalic acid.

5. The process of producing glyoxylic acid which comprises producing a potassium amalgam by the action of an electric current and continuously transferring portions of said amalgam into contact with an acid aqueous solution containing dissolved oxalic acid.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,707. AUTOMATIC STOKER. FELIX VIGGERS, Des Moines, Iowa. Filed Mar. 27, 1916. Serial No. 87,121. (Cl. 110—40.)



1. In an automatic stoker, a furnace having side walls, a back and a front wall, parallel elliptical guide grooves spaced from each other, a grate comprising sections provided with pairs of rollers at their ends traveling in said grooves, each of said sections having on one side a transverse rib, a transverse shaft extending across the interior of said furnace between the upper and lower stretch of the grate having cranks, an arm pivoted to one of said cranks and extending downwardly and forwardly to the lower stretch of the grate, an arm pivoted to another of said cranks and extending downwardly and rearwardly to the lower stretch of the grate having hook members with beveled rear surfaces, and means for rotating said shaft.

2. In an automatic stoker, a furnace wall, having a back, sides and a front, a pair of parallel guide grooves on the interior of the opposite walls, a stoker comprising sections each having at each end a pair of spaced rollers mounted in said guides, a curved wall at the rear of said grate extending around the end thereof, a partition extending from the lower part of said curved wall downwardly and forwardly to the front wall, a door in the front wall above said partition.

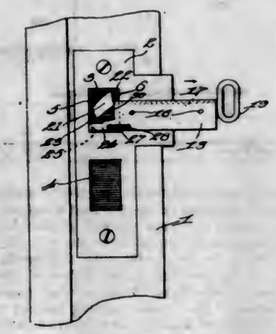
3. In an automatic stoker, a furnace having side walls, a back and a front wall, parallel elliptical guide grooves on opposite sides of the interior of the furnace, a grate comprising sections provided with pairs of rollers at their ends traveling in said grooves, each of said sections having on one side a transverse rib, a transverse shaft extending across the interior of said furnace between the upper and lower stretch of the grate having cranks, arms pivoted to said cranks and extending respectively forwardly and rearwardly and downwardly to the lower stretch of the grate, means for rotating said shaft, said means comprising a ratchet wheel on said shaft, a bar pivotally mounted on said shaft, pawls pivoted to said bar and adapted to coact with said ratchet wheel, and means for oscillating said bar.

4. In an automatic stoker, a furnace having side walls, a back and a front wall, parallel elliptical guide grooves spaced from each other, a grate comprising sections provided with pairs of rollers at their ends traveling in said grooves, each of said sections having on one side a transverse rib, a transverse shaft extending across the interior of said furnace between the upper and lower stretches of the grate having cranks, an arm pivoted to one of said cranks and extending downwardly and forwardly to the lower stretch of the grate, an arm pivoted to another of said cranks extending downwardly and rearwardly to the lower stretch of the grate having at its end a hook member with a beveled rear surface, means for rotating said shaft, said means comprising a ratchet wheel on said shaft, a bar pivotally mounted on said shaft, pawls pivoted to said bar and adapted to coact with said ratchet wheel, and a plate pivotally mounted on said shaft having cam faces adapted to coact with said pawls for determining at what points in the stroke of the pawls said pawls shall engage the ratchet wheel.

5. In an automatic stoker, a furnace with walls, a substantially elliptical grate made in sections adapted to travel, said sections having transverse ribs, a shaft having a plurality of cranks within said grate, a plurality of arms mounted on said cranks and arranged when the shaft is rotated to engage said ribs for causing said grate to travel.

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1,227,708. DOOR-FASTENER. PETER VOGEL and HENRY SCHUTTE, Spokane, Wash. Filed June 19, 1916. Serial No. 104,378. (Cl. 16—8.)



1. A door fastener comprising in combination, a frame provided with means for attachment thereof while the door is open with said means in position to lie between the door and jamb after the door is closed, and a device carried by the frame for coaction with the door and the jamb and between the same to fasten the door in a closed position, substantially as described.

2. A door fastener comprising in combination, a frame provided with spring means for frictional attachment of said frame between the door and the jamb, and a device carried by said frame for coaction with the door and the jamb to fasten the former in a closed position, substantially as described.

3. A door fastener comprising in combination, a normally free and portable frame provided with means for removable attachment of said frame to a strike plate of the jamb, and a device journaled in said frame for coaction with the door and the strike plate to fasten the former in a closed position, substantially as described.

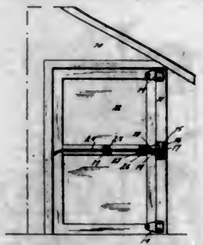
4. A door fastener comprising in combination, a frame having relatively actuated lugs for projection into the latch opening of a strike plate for engagement with the walls thereof to support said frame against the door jamb, and a locking device for said frame coacting with the door jamb and door to fasten the former in a closed position, substantially as described.

5. A door fastener comprising in combination, a frame having relatively actuated lugs for projection into the latch opening of a strike plate to engage the walls thereof to support said frame against the door jamb, said frame extending in housing relation to said lugs to cover the same when they are in said opening, and a locking device on said frame for coaction with the door and jamb to fasten the former in a closed position, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]



1,227,709. DOOR-LATCH. ALVA E. WAGNER, Des Moines, Iowa. Filed Nov. 11, 1915. Serial No. 60,960. (Cl. 16—6.)



1. A door latch, comprising a rod pivotally mounted between its ends to swing in a vertical plane, parallel with the vertical plane of a door, means for limiting the swinging movement of said rod, a transverse member on one end of said rod, a pair of keepers designed to be mounted on the frame of a building adjacent to the hinged edge of a door, and adjacent to said transverse member, one of said keepers having a beveled edge, the parts being so arranged that when the door is swung from closed to open position, said transverse member will strike said beveled edge and be moved upwardly to position for clearing said last named keeper and will then drop behind said keepers with the said rod received between the keepers.

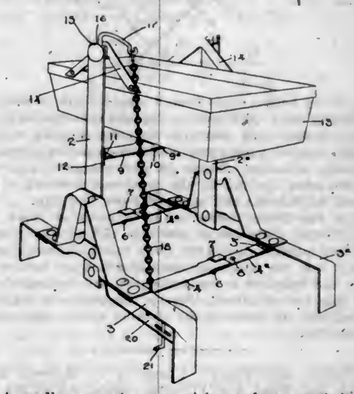
2. A door latch, comprising a rod pivotally mounted between its ends to swing in a vertical plane parallel with the vertical plane of a door, a transverse horizontal member on said rod, a pair of keepers designed to be mounted on the frame of a building adjacent to the hinged edge of a door, and adjacent to said transverse member, one of said keepers having a beveled edge, the parts being so arranged that when the door is swung from closed to open position, said transverse member will strike said beveled edge and be moved upwardly to position for clearing said keeper and will then drop behind said keepers with said rod received between the keepers, means for limiting the swinging movement of said rod, comprising a bracket designed to be mounted on a door and having a vertically elongated slot for receiving said rod.

3. A door latch, comprising a rod pivotally mounted between its ends to swing in a vertical plane, parallel with the vertical plane of a door, said rod being arranged with its heavier end on the side of its pivotal point adjacent to the hinged edge of the door, means for limiting the swinging movement of said rod, a transverse horizontal member on said rod, a pair of keepers designed to be mounted on the frame of a building adjacent to the hinged side of a door, and adjacent to said transverse member, one of said keepers having a beveled edge, the parts being so arranged that when the door is swung from closed to open position, said transverse member will strike said beveled edge and be moved upwardly to position for clearing said keeper and will then drop behind said keepers with the said rod received between the keepers, said limiting means comprising a bracket designed to be mounted on a door and having a vertically elongated slot for receiving said rod, and having a movable member extending below said rod and a portion designed to extend through a door.

4. A door latch, comprising a rod pivotally mounted between its ends to swing in a vertical plane, parallel with the vertical plane of a door, means for limiting the swinging movement of said rod, a transverse horizontal member on said rod, a support designed to be adjustably mounted on the frame of a building adjacent to the hinged edge of a door, and adjacent to the transverse member, a pair of keepers on said support, one of said keepers having a beveled edge, the parts being so arranged that when the door is swung from closed to open position, said transverse member will strike said beveled keeper and be moved upwardly to position for clearing said keeper and will then drop behind said keepers with the said rod received between the keepers.

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1,227,710. CRADLE APPARATUS. WILLIAM F. WALSH, St. Paul, Minn., assignor of one-half to Henry F. Meyer, St. Paul, Minn. Filed May 31, 1913. Serial No. 770,877. (Cl. 5—59.)



1. A cradle apparatus comprising a frame-work including a pair of upright standards having shaft bearings in their upper ends, a cradle arranged between the standards and provided with oppositely extending bearing pins journaling in the shaft bearings of the standard, a forwardly extending angular arm fixed on one of the bearing pins and terminating in a hook, an underlying treadle pivoted to the framework and guided in its movement, and a flexible connection between the hooked terminal of the arm and the treadle.

2. A cradle apparatus, comprising a framework consisting of a pair of side base members, standards rising therefrom, a guide rod depending from one of said members and having an angular lower end, a treadle pivoted to one of the standards and provided with a slot through which the rod extends for guiding the treadle in its movement, a cradle swingingly supported by the standards, and means connecting the treadle to the cradle.

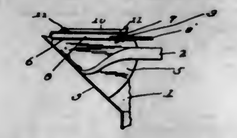
3. A cradle apparatus comprising a pair of side bars having downturned ends supporting the bars, folding bars for bracing the side bars apart, said folding bars each comprising hingedly connected sections hinged to the side bars and one section of each folding bar overlapping the companion section at its inner end to prevent downward breaking of the bar, a standard rising from each side bar, one standard extending below its supporting bar and both standards having shaft bearings in their upper end portions, a folding bar bracing the standards apart and comprising sections overlapping at their inner ends and having their outer ends downturned to abut the standards, a clip pivoted to one section of each folding bar for swinging over the overlapping inner ends thereof to lock the sections against folding, a cradle journaled in the shaft bearings of the standards, an arm extending from one of the cradle bearings and fixed thereto for rocking the cradle, a treadle pivoted to the aforesaid downward extension of said standard, and a connection between the arm and the treadle.

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1,227,711. TAG-HOLDER. HARRY C. WABASIER, Virginia, Minn. Filed Apr. 5, 1916. Serial No. 89,084. (Cl. 40—14.)

1. A tag holder consisting of a horizontal platform, a flap formed thereon and parallel therewith, said platform and flap forming a tag receiver, vertical supports depending from the platform, attaching flanges on said supports,

and a retaining device for engaging and securing the tag in the holder consisting of a yoke shaped member having its inner end pivoted to said flap and its outer free ends formed with hooks adapted to pass through openings in said flap and platform and engage the tag.

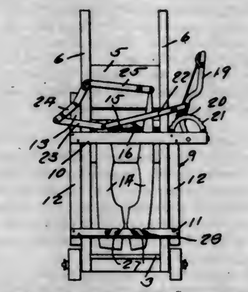


2. A tag holder made from a single blank of metal and consisting of a platform, a flap parallel therewith, the space between said platform and flap forming a tag receiver, vertical supporting members depending from said platform, attaching flanges on said supports, and means for retaining the tag in the receiver consisting of arms formed with hooks and stamped from said flap.

3. A tag holder comprised of a strip of sheet metal formed with a horizontal platform and an overlying parallel flap integral therewith, and a retaining device pivoted to said flap, the free outer ends of which are bent in hook form and adapted to pass through suitable openings in said flap and platform, thereby engaging and tightly securing the tag between the parallel strips, substantially as described.

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1,227,712. HOG-TRAP. CLARENCE C. WATSON, Waterman, Ill. Filed Aug. 11, 1915. Serial No. 44,971. (Cl. 119—99.)

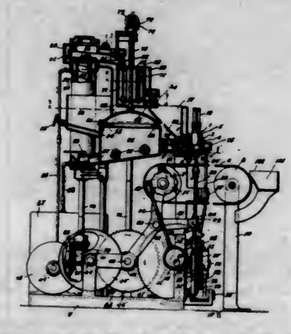


A hog trap including sides, a bottom, a closure for the rear end of said sides, uprights engaging said bottom, a frame slidably associated with said uprights and including upper and lower horizontal bars, vertical bars connecting the first named bars and arranged on the outer side edges of said uprights, said lower bars having slots communicating with the upper edges thereof, neck engaging members having pins for selective engagement with said slots whereby to pivot said members to said lower bars and adjust said members relative to each other, and means supported by said frame and connected to the upper portions of said neck engaging members for adjusting said upper portions relative to each other.

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1,227,713. PREPARING AND DEPOSITING APPARATUS FOR CONFECTIONERY. EDWARD H. WAUGH and WILLIAM J. SWARTZ, Seattle, Wash., assignors to Automatic Candy Machine Company, Seattle, Wash., a Corporation of Washington. Filed Jan. 20, 1913. Serial No. 743,118. (Cl. 107—29.)

1. In apparatus of the character set forth, the combination with a chamber, of means for supplying material to the chamber, and means for permitting its discharge therefrom, a plunger movable in the chamber to discharge the material therefrom, said chamber and plunger being together bodily movable in a direction transverse to the ejecting movement of the plunger, to carry said chamber alternately into and out of coaction with the supplying and discharge-permitting means.



2. In apparatus of the character set forth, the combination with a chamber, of means for supplying material to the chamber, and means for permitting its discharge therefrom, a plunger movable in the chamber to discharge the material therefrom, said chamber and plunger having a reciprocatory bodily movement together in a direction transverse to the ejecting movement of the plunger, to carry said chamber alternately into and out of coaction with the supplying and discharge-permitting means.

3. In apparatus of the character set forth, the combination with a slide having a plurality of chambers, of means for supplying material to the chambers, and means permitting its discharge therefrom, plungers movable in the different chambers, and means for moving the slide and the plungers bodily in a direction transverse to the ejecting movement of the plungers, to carry said chamber alternately into and out of coaction with the supplying and discharge-permitting means.

4. In apparatus of the character set forth, the combination with a slide having a plurality of chambers, of means for supplying material to the chambers through the sides thereof, and means permitting its discharge therefrom through the bottoms, plungers movable in the upper portions of the chambers, said supplying and discharge-permitting means being out of alinement, and means for moving the slide and plungers bodily in a direction transverse to the ejecting movement of the plungers, to carry the chambers alternately into and out of coaction with the supplying and discharge-permitting means.

5. In apparatus of the character set forth, the combination with a chamber, of means for supplying material thereto and means for permitting its discharge therefrom, means associated with the chamber for effecting said discharge, an actuating device for the discharging means movable toward and from the chamber, and means for moving the chamber bodily in a direction transverse to the direction of movement of the actuating device, to alternately move the chamber into coaction with the supplying means and discharge-permitting means.

[Claims 6 to 19 not printed in the Gazette.]

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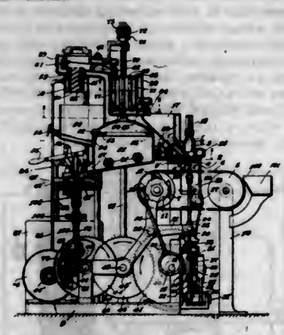
1,227,714. PREPARING APPARATUS FOR CONFECTIONERY. EDWARD H. WAUGH and WILLIAM J. SWARTZ, Seattle, Wash., assignors to Automatic Candy Machine Company, a Corporation of Washington. Filed Mar. 13, 1914. Serial No. 824,479. (Cl. 107—4.)

1. In apparatus of the character set forth, the combination with a pair of chambers, of means for heating one, means for conducting heated fluid from the heated chamber to the other chamber to initially heat the material therein, means for controlling said conducting means, and means for delivering the initially heated material from the second chamber into the heated chamber.

2. In apparatus of the character described, a pair of chambers, a port for establishing communication between



said chambers, a heating means for one of said chambers, and a valve for said port automatically controlled for opening movement.



3. In apparatus of the character set forth, the combination with a pair of chambers, of means for heating one, means for conducting heated vapor from the upper portion of the heated chamber to the other chamber, to initially heat the material in the latter, automatic means for controlling said conducting means, and means for delivering the initially heated material from the lower portion of the second chamber into the heated chamber.

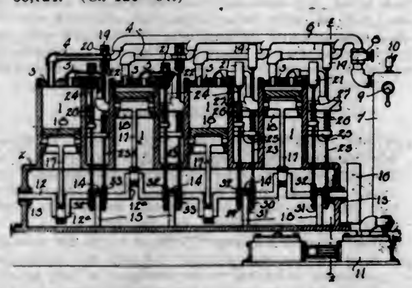
4. In apparatus of the character described, a pair of chambers, a catch trough for water of condensation in one of said chambers, a heating means for said last named chamber, and a port leading from said trough to the other of said chambers.

5. In apparatus of the character described, a pair of chambers, a catch trough for water of condensation in one of said chambers, a heating means for said last named chamber, a port leading from said trough to the other of said chambers, and a valve for said port.

[Claims 6 to 20 not printed in the Gazette.]

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1,227,715. COMPRESSED-AIR ENGINE. AARON B. WEBB, Streator, Ill. Filed Oct. 13, 1915. Serial No. 55,724. (Cl. 121—97.)



In a device of the character described, the combination with a compressed air engine comprising a cylinder, a piston within the cylinder, a crank shaft, a piston rod connecting the piston to the crank shaft, a crank case inclosing the crank shaft and provided at the sides thereof with inwardly extending stops, inlet and exhaust valves for the cylinder, of arms projecting into the crank case, a pair of transversely extending valve levers pivoted at one end upon the said arms and arranged to have their swinging movements limited by engagement with the before mentioned stops projecting from the crank case, valve rods connecting the swinging ends of the respective valve levers with the inlet and exhaust valves, springs acting upon the valve rods to normally hold the valves in a closed position, and oppositely offset cams applied to the crank shaft and provided with annular grooves to receive the valve levers and prevent lateral movement thereof, the said cams oscillating the valve levers to alternately open the inlet and exhaust valves at the proper intervals of time.

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1,227,716. PROCESS OF PIECING WARP-THREADS. MAX WENZEL, Spremberg, Germany. Filed Aug. 10, 1912. Serial No. 714,446. (Cl. 139—95.)



1. A process for piecing together the threads of warps, said process consisting in disposing the warp threads in an approximately parallel intersecting relation; drawing together the intersecting threads at points remote from said intersection and bringing them into parallelism; supporting said threads in contact in said parallelism at said remote points and whipping a third thread back and forth in a plurality of times continuously between said remote points; and cutting off the whipping thread and the surplus ends of said warp threads.

2. A process for piecing together the threads of warps, said process consisting in supporting at two widely separated points a pair of limp warp threads in parallel contact; and whipping a third thread around said threads continuously between said points.

3. The hereindescribed process of piecing together the ends of warp threads, said process consisting in holding together the warp threads side by side and overlapping each other; and whipping a third thread, as is customary when piecing together ropes, consisting of the end piece of one of the warp threads, around the overlapping portion.

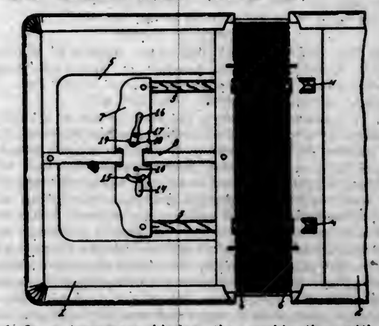
4. The hereindescribed process of piecing together the ends of warp threads, said process consisting in overlapping the threads and holding them, at two remote points, side by side, and whipping a thread around the overlapping portion between said points.

5. A process for piecing together threads of warps said process consisting in holding the end portions of the thread to be pieced side-by-side; and then while the pieces are held in this position, winding a thread around said portions, as is customary when piecing together ropes.

[Claims 6 to 10 not printed in the Gazette.]

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1,227,717. TEMPORARY BINDER. GEORGE P. WIGGINTON, Kalamazoo, Mich., assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Filed Feb. 10, 1916. Serial No. 77,493. (Cl. 129—41.)



1. In a temporary binder, the combination with the cover, of a binding member, a rack bar carried by said cover, an adjusting member for said binding member slidably mounted on said bar, means for holding said adjusting member in its adjusted positions on said bar, a lever

pivotally mounted on the upper side of said adjusting member, a pawl pivot carried by said lever, said adjusting member being slotted to receive said pivot, a pawl mounted on said pivot on the under side of said adjusting member to coact with said bar, a spring mounted on said adjusting member to actuate said pawl to engaging position, said spring being also adapted to return said lever to its initial position, and a stop on said adjusting member adapted to disengage said lever pawl from said bar when said lever is in its initial position.

2. In a temporary binder, the combination with the cover, of a binding member, a rack bar carried by said cover, an adjusting member for said binding member slidably mounted on said bar, means for holding said adjusting member in its adjusted position on said bar, a lever pivotally mounted on the upper side of said adjusting member, a pawl pivot carried by said lever, said adjusting member being slotted to receive said pivot, a pawl mounted on said pivot on the under side of said adjusting member to coact with said bar, and means for disengaging said pawl from said bar.

3. In a temporary binder, the combination with the cover, of a binding member, a rack bar carried by said cover, an adjusting member to which said binding member is connected mounted on said bar, means for holding said adjusting member in its adjusted positions on said bar, a lever pivotally mounted on said adjusting member, a pawl mounted on said lever to coact with said bar, a spring mounted on said adjusting member to actuate said pawl to bar engaging position, said spring being also adapted to return said lever to its initial position, and a stop on said adjusting member adapted to disengage said lever pawl from said bar when said lever is in its initial position.

4. In a temporary binder, the combination with the cover, of a binding member, a rack bar carried by said cover, an adjusting member to which said binding member is connected slidably mounted on said bar, a holding pawl mounted on said adjusting member to coact with said bar, means for holding said pawl in an inoperative position, a lever mounted on said adjusting member, a pawl pivotally mounted on said lever to coact with said bar, a spring for returning said lever to its initial position, and a stop on said adjusting member adapted to disengage said lever pawl from said bar when said lever is in its initial position.

5. In a temporary binder, the combination with the cover, of a binding member, a bar carried by said cover, an adjusting member to which said binding member is connected, a holding pawl mounted on said adjusting member to coact with said bar, means for releasing said pawl, a lever mounted on said adjusting member, a pawl mounted on said lever to coact with said bar, and means for automatically disengaging said lever pawl from said bar when said lever is in its initial position.

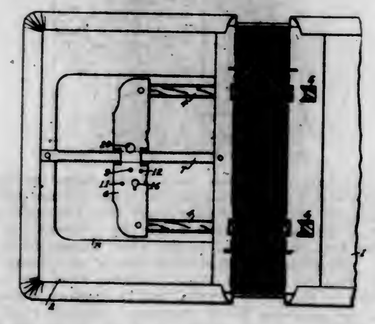
[Claims 6 to 10 not printed in the Gazette.]

1,227,718. TEMPORARY BINDER. GEORGE P. WIGGINTON, Kalamazoo, Mich., assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Filed Feb. 10, 1916. Serial No. 77,494. (Cl. 129—41.)

1. In a temporary binder, the combination of a binding member, a rack bar, an adjusting member for said binding member slidably mounted on said bar, a pawl mounted on the inner side of said adjusting member to coact with said bar, a spring adapted to hold said pawl yieldingly in its operative and inoperative positions, a stop for said pawl when in inoperative position, and a key for adjusting said pawl to its operative and inoperative positions, said adjusting member having an opening therein for said key.

2. In a temporary binder, the combination of a binding member, a rack bar, an adjusting member for said binding member slidably mounted on said bar, a pawl mounted on the inner side of said adjusting member to coact with said bar, a spring adapted to hold said pawl yieldingly in its operative and inoperative positions, and a key for adjusting said pawl to its operative and inoperative positions, said adjusting member having an opening therein for said key.

3. In a temporary binder, the combination of a binding member, a rack bar, an adjusting member for said binding member slidably mounted on said bar, a pawl mounted on the inner side of said adjusting member to coact with said bar, a spring adapted to hold said pawl yieldingly in its operative position, a key for adjusting said pawl to its operative and inoperative positions, said adjusting member being slotted to receive said key, and an adjusting key provided with pinion teeth adapted to coact with the teeth of said rack, said adjusting member being provided with an opening positioned to support said key in rotative engagement with said rack.



4. In a temporary binder, the combination of a binding member, a rack bar, an adjusting member for said binding member slidably mounted on said bar, a pawl for retaining said adjusting member in its adjusted positions on said bar, mounted on the inner side of said adjusting member, a removable key for releasing said pawl, and an adjusting key provided with pinion teeth adapted to coact with the teeth of said rack, said adjusting member being provided with an opening positioned to support said key in rotative engagement with said rack.

5. In a temporary binder, the combination of a binding member, a rack bar, an adjusting member for said binding member slidably mounted on said bar, means for retaining said adjusting member in its adjusted positions on said bar, and a removable adjusting pinion adapted to coact with the teeth of said rack, said adjusting member being provided with an opening through which said adjusting pinion may be inserted and removed positioned to support said pinion in rotative engagement with said rack.

[Claims 6 to 10 not printed in the Gazette.]

1,227,719. SLIP OR BILL HOLDER. JOSEPH E. WILDMAN, Landover, Md., assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914.) Alliance, Ohio, a Corporation of Ohio. Filed Oct. 29, 1908. Serial No. 460,138. Renewed Oct. 26, 1916. Serial No. 127,969. (Cl. 24—66.)

1. The combination with a leaf, of a clip for holding papers or slips against said leaf, the said clip comprising a transversely extending device arranged to hold papers or slips in place, and means for movably supporting the opposite ends of said clip, the said means requiring the clip to slide without rotating to a predetermined position and then permitting it to swing outwardly relative to said leaf.

2. In a device of the character described, the combination with a back, of a clip formed from a section of resilient wire for holding papers or slips against said back, means for slidingly and non-rotatably supporting the opposite ends of said clip, means for raising and lowering said clip, means permitting the clip to swing outwardly when in raised position, and means for maintaining the clip in the outwardly swung position.

3. The combination with a back, of a pair of ribs carried by the back and arranged parallel to each other, and formed with alined slots, a clip formed from a section of resilient wire and comprising a bar extending at right angles to said ribs and laterally bent members the free ends of which are slidably mounted in said slots, the walls of one of said slots coöperating with the free end of the adjacent laterally bent member to prevent rotation of the clip during sliding movement and the last mentioned slot having an enlarged portion which permits the rotation of the clip when the free end of the adjacent laterally bent member is moved into it, whereby the bar can be swung outwardly.



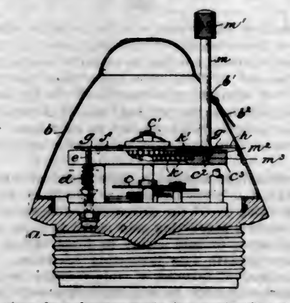


4. The combination with a back, of a clip formed from a section of resilient wire and comprising a slip engaging member and laterally bent members, ribs or strips carried by the back and formed with inclined slots in which the opposite ends of the laterally bent members are slidably mounted to support the clip at different distances from the back, one end of said section of wire being flattened and coöperating with the walls of the adjacent slot to prevent rotation of the clip.

5. The combination with a back, of ribs secured to said back and formed with slots, and a U-shaped clip formed from a section of resilient wire and arranged to removably support slips on said back, the opposite ends of said section of wire being slidingly mounted in said slots and one of said ends being flattened and coöperating with the walls of the adjacent slot to prevent swinging of the clip, the slot in which said flattened end is mounted being enlarged at one end, whereby the clip can swing outwardly when the said ends of the section of wire are moved to a predetermined position.

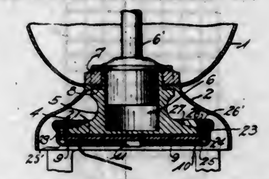
[Claims 6 to 17 not printed in the Gazette.]

1,227,720. TIME-FUSE FOR EXPLOSIVE PROJECTILES. WALTER M. WILHELM, Swarthmore, and KENNETH RUSHTON, Wynnewood, Pa. Filed Aug. 16, 1916. Serial No. 115,161. (Cl. 102—36.)



In a time fuse for an explosive projectile, the combination of a base, a cap rotatable on the base, a firing mechanism, and a clock movement to control the release of the firing mechanism, and comprising a driving spring and a winding gear therefor, and provided with a seat for a winding pinion, the cap being provided with an aperture to be brought into alinement with said pinion seat to permit the introduction of a winding pinion for engagement with the winding gear.

1,227,721. ELECTRICALLY-HEATED UTENSIL. LOUIS H. WILKINSON and WALTER G. BARKER, Meriden, Conn., assignors to Manning, Bowman & Company, Meriden, Conn., a Corporation of Connecticut. Filed Dec. 11, 1916. Serial No. 136,162. (Cl. 219—44.)



1. In an electrically heated utensil, the combination of a container, a heating unit and spring means holding said heating unit in contact with the bottom of said container, said spring means consisting of a clamp ring, having at one edge a bearing surface, and at the other an internal undercut recess, and an expanding spring ring within said undercut recess.

3. In an electrically heated utensil a combination of a container having a flanged bottom, provided with peripheral notches; a heating unit having a metallic base plate provided with upward extensions entering said notches, and holes for the passage of the resistance terminals of said heater unit, and means for holding said heating unit to said flanged bottom.

6. In an electrically heated utensil, the combination of a container, a heating unit and spring means holding said heating unit in contact with the bottom of said container, said spring means consisting of a clamp ring, having at one edge a bearing surface, and at the other an internal undercut recess, and an expanding spring ring within said undercut recess, said heating unit having a metallic bottom plate and said bearing surface engaging the bottom surface of said bottom plate only at points removed from the periphery of said bottom plate.

[Claims 2, 4, and 5 not printed in the Gazette.]

1,227,722. MEANS FOR ATTACHING HEELS. ARTHUR J. WILLS, Brookfield, Mass. Filed Mar. 29, 1916. Serial No. 87,651. (Cl. 36—35.)

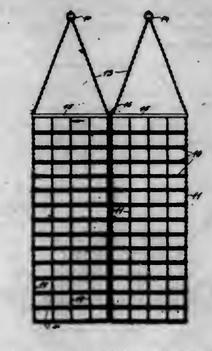


1. The nail above described having a head with one or more flexible prongs extending downwardly therefrom, the ends of said prongs projecting outwardly.

2. The nail above described having a head with one or more flexible prongs extending downwardly therefrom, the ends of said prongs projecting outwardly, in combination with an article having a recess the lower surface of which is adapted to engage the outwardly-projecting ends of said prongs and flatten them out, whereby they will be driven laterally into said article when the nail is driven therethrough.

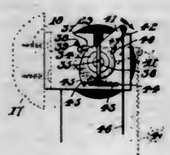
3. In combination, a rubber heel, a shoe, and a nail passing through said heel and into said shoe and clenched at its point, said nail having a head with prongs projecting at right angles thereto into the interior of said heel, whereby said heel will be attached to said shoe by said prongs and said clenched point.

1,227,723. HANGING SHELVES. LOUIS T. WILSON, Bisbee, Ariz. Filed Apr. 12, 1915. Serial No. 20,784. (Cl. 45—55.)



The combination of a series of shelves arranged in vertically spaced relation, flexible connections between the shelves at the rear and at the front and rear corners of the side edges thereof, and a plurality of flexible diagonal braces extending between the top shelf and the connections at the front corners of the shelves, and between the connections at the rear corners of the shelves and the bottom shelf, and also between the connections at the front and rear corners of the shelves and crossing the ends of the latter.

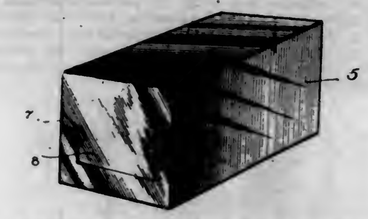
1,227,724. WINDOW-SHADE SPRING-TIGHTENER AND LOCKING BRACKET. CHARLES H. WISE, Ithaca, N. Y. Filed July 3, 1916. Serial No. 107,330. (Cl. 156—36.)



1. An article of manufacture comprising an arm having a journal opening therein provided with an entrance slot, a mounting hub having a boss portion journaled in the said opening and having a base disk arranged inwardly of the said arm, the said hub having a radial slot extending through the said boss and disk adapted for receivingly positioning in the same plane as the said arm slot, a shoulder and an axle upon the said hub, a ratchet wheel upon the said shoulder, an operating lever journaled upon the said axle, a dog for the said ratchet wheel carried by the said lever and a pawl for the said wheel mounted upon the said arm.

2. An article of manufacture comprising an arm having a journal opening therein provided with an entrance slot, a mounting hub having a boss portion journaled in the said opening and having a base disk arranged inwardly of the said arm, the said hub having a radial slot extending through the said boss and disk adapted for receivingly positioning in the same plane as the said arm slot, a shoulder and an axle upon the said hub, a ratchet wheel upon the said shoulder, an operating lever journaled upon the said axle, a dog for the said ratchet wheel carried by the said lever and a pawl for the said wheel mounted upon the said arm, a return spring for the said lever, a depending pull cord attached to the free end of the said lever and a handle carried lock nut for the said lever, wheel and hub mounted upon the hub outwardly of the said axle.

1,227,725. PACKAGING ICE-CREAM AND THE LIKE. FREDERICK P. WOOD, Oak Park, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed July 23, 1915. Serial No. 41,431. (Cl. 99—14.)



1. A package containing a frozen substance comprising, a carton entirely inclosing said frozen substance, and an exterior coating of material impervious to water and salt solutions, closing the interstices of said carton and adapting the same to be subjected to a cooling medium.

2. A package containing a frozen substance comprising, a carton entirely inclosing said frozen substance and having flaps which are interlocked together, and an exterior coating of material impervious to water and salt solutions, closing the interstices of said interlocked flaps.

3. The process of packaging ice cream and frozen substances, which consists in placing said substance in a suitable carton, then coating the carton with a fluid sealing medium and closing the interstices of the carton, and then inclosing the carton in a cooling medium and maintaining the carton and its contained substance at a substantially freezing temperature.

1,227,726. CABLE-TERMINAL. DANIEL WOODHEAD, Chicago, Ill., assignor to Central Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 3, 1916. Serial No. 112,920. (Cl. 173—353.)



1. The method of forming a cable terminal which consists in first removing the insulation from the end of an insulated cable, then molding a metallic connecting terminal to the end of this cable, permitting the metal to cool, and then applying pressure to the metal surrounding the end portion of the terminal in such a manner as to form one or more circular grooves in said metal to thus force the same into close connection with said insulated cable.

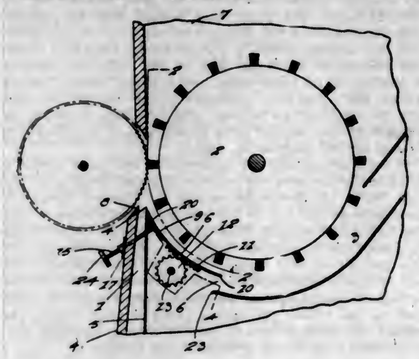
2. The method of forming a cable terminal which consists in taking a cable having an acid-proof insulating covering, molding about the end of the same an acid-proof metallic terminal, permitting said metal to cool, and then applying pressure to said metal to force the same into close connection with said insulating covering.

3. The method of forming a cable terminal which consists in taking a cable having an acid-proof insulating covering, molding about the end of the same an acid-proof metallic terminal, permitting said metal to cool, and in



then forming by pressure one or more circular grooves in said metal to force same into close connection with said insulating covering.

1,227,727. MOTE-BOARD FOR COTTON-GINS. JAMES L. WOOLDRIDGE, Decatur, Tex. Filed May 21, 1915. Serial No. 29,660. (Cl. 13—9.)

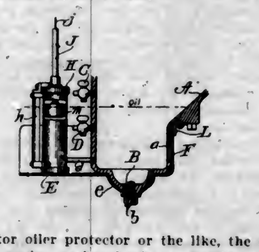


1. A cotton gin of the class described including a saw, a rotary brush, a curved conduit wall located beneath the brush in spaced relation with the same, an outer relatively fixed wall extending downwardly from the saw adjacent to the inner edge thereof, an inner adjustable wall spaced from the outer wall to form a dust passage and having its upper edge arranged adjacent to the upper edge of the said outer wall and spaced from the brush, an inclined mote board extending downwardly from and connected with the upper edge of the inner wall and arranged in spaced relation with the brush to form a passage, the lower edge of the mote board being arranged in adjustable overlapping relation with the adjacent edge of the conduit wall, and the said inner wall being carried by the mote board.

2. A cotton gin of the class described including a saw, a rotary brush, a curved conduit wall located beneath the brush in spaced relation with the same, an outer relatively fixed wall extending downwardly from the saw adjacent to the inner edge thereof, an inner adjustable wall spaced from the outer wall to form a dust passage and having its upper edge arranged adjacent to the upper edge of the said outer wall and spaced from the brush, an inclined mote board extending downwardly from and connected with the upper edge of the inner wall and arranged in spaced relation with the brush to form a passage, the lower edge of the mote board being arranged in adjustable overlapping relation with the adjacent edge of the conduit wall, and the said inner wall being carried by the mote board, adjusting means located between the mote board and the inner wall for adjusting the said mote board upwardly and downwardly and separate adjusting means mounted on the relatively fixed wall and extending through the inner wall and connected with the mote board at the upper edge thereof for moving the upper portion of the mote board inwardly and outwardly.

3. A cotton gin of the class described including a saw, a rotary brush, a curved conduit wall located beneath the brush in spaced relation with the same, an outer relatively fixed wall extending downwardly from the saw adjacent to the inner edge thereof, an inner adjustable wall spaced from the outer wall to form a dust passage and having its upper edge arranged adjacent to the upper edge of the said outer wall and spaced from the brush, an inclined mote board extending downwardly from and connected with the upper edge of the inner wall and arranged in spaced relation with the brush to form a passage, the lower edge of the mote board being arranged in adjustable overlapping relation with the adjacent edge of the conduit wall, and the said inner wall being carried by the mote board, means for adjusting the mote board upwardly and downwardly, an inclined adjusting screw mounted on the fixed wall and extending through the inner adjustable wall and having a head at its upper end, an inclined plate secured to the mote board and having a longitudinal slot receiving the head of the screw, whereby the latter is slidably and rotatably connected with the mote board, said inner wall having a slot for the passage of the said screw.

1,227,728. MOTOR-OILER PROTECTOR. NOAH S. WRIGHT, East Worcester, N. Y. Filed Feb. 23, 1916. Serial No. 79,883. (Cl. 73—54.)



1. In a motor oiler protector or the like, the combination with an engine casing having a portion extending downwardly lower than the remainder of the casing, a pan passing contiguously beneath the said portion of the casing, the said pan having a front wall extending upwardly in front of and adjacent to the said downwardly extending portion of the casing, the said pan having side walls, and means for securing the pan in place.

2. In a motor oiler protector or the like, the combination with an engine casing having a portion extending downwardly lower than the remainder of the casing, a pan passing contiguously beneath the said portion of the casing, the said pan having a front wall extending upwardly in front of and adjacent to the said downwardly extending portion of the casing, the said pan having side walls, an oil receptacle arranged upon the pan and having an oil gage, and means for securing the pan in place.

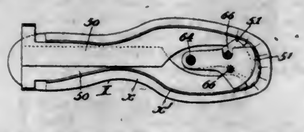
3. In a motor oiler protector or the like, the combination with an engine casing, of a pan arranged below the lowest portion of the casing, means for securing the pan to the casing, an oil receptacle arranged upon the pan, an oil indicator connected with the said receptacle, the said casing having a dropped cupped portion provided with a removable closure, the said pan having front and side walls and a rearwardly extending portion, the said pan having likewise a depressed or cupped portion constructed to externally fit the said cupped portion of the casing, the said depressed portion of the pan having an opening, and the said closure being arranged accessible through the said opening.

4. In a motor oiler protector or the like, the combination with an engine casing, of a pan arranged below the casing, the said pan having front and side walls and a rearwardly extending portion, an oil receptacle arranged upon the pan, an oil indicator connected with the said receptacle, the said casing having a lower portion provided with a removable member, and the said pan having an opening the edge portions whereof are arranged between the said member and the said casing whereby the pan is secured to the casing by the said member.

5. In a motor oiler protector or the like, the combination with an engine casing having an enlarged portion extending downwardly lower than the remainder of the casing, a pan passed contiguously beneath the said portion of the casing, the said pan having a front wall extending upwardly in front of and adjacent to the said portion of the casing, the said pan having side walls corresponding in shape with and arranged next to the sides of the said portion of the casing, and means for securing the said pan in place.

[Claim 6 not printed in the Gazette.]

1,227,729. MACHINE FOR MAKING COMPOSITE INSOLES. FRANK ZALESKI, West Roxbury, Mass., assignor to Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Mar. 10, 1917. Serial No. 153,794. (Cl. 12—22.)

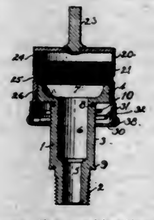


1. Means for making insoles from sheet material comprising a support for the sheet material, a die or forming member adapted to be positioned over the material on the support and provided with a lip-forming portion and a collapsible templet having shape-giving edges, and folding members for infolding the material margin over said templet members and against the lip-forming portion of the die member, thereby forming said margin into a feather edge and lip.

12. A machine for making shoe insoles (of the type having feather edge and lip) from leather or analogous sheet material, including, in combination, a work support having a substantially stationary position in the machine frame, a die fitted to descend upon a blank on the support and to rise therefrom, and having an upstanding lip-forming abutment portion, and a thin plate-like fold-defining portion extending laterally beyond the abutment, infolders fitted to lift and move inwardly to infold the leather margins over the die plate edges and form the same into a lip against the abutment, such infolders having their top side at a level whereby they may be used as gages in trimming the insole lip to the proper height.

[Claims 2 to 11 and 13 not printed in the Gazette.]

1,227,730. GREASE-CUP. OSCAR ZERK, Cleveland, Ohio, assignor, by mesne assignments, to George W. Bowen, Auburn, N. Y. Filed Nov. 12, 1912. Serial No. 730,900. (Cl. 184—48.)



1. In a grease cup, the combination of a base having a head, a cap screwing on the base, a collar slidable on the base below the head and having an annular flange, a ring located within the flange of the collar and coacting with the lower end of the cap, and a spring located within the collar and connected thereto and to the base and acting to move the collar toward the cap, substantially as and for the purpose described.

2. In a grease cup, the combination of a base having a head, a cap screwing on the base, a collar slidable on the base below the head and having an annular flange, a ring located within the flange of the collar and coacting with the lower end of the cap, and a spring located within the collar and connected thereto and to the base and acting to move the collar toward the cap, the coil at one end of the spring extending under the ring, substantially as and for the purpose specified.

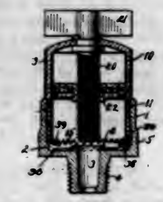
3. In a grease cup, the combination of a base having a head, a cap threading on the head, a non-rotatable collar slidable on the base below the head and having an annular flange, the collar being formed with an annular internal groove at the juncture of the body of the collar and the annular flange, means associated with the collar for coacting with the cap to hold the cap from rotation, and a coiled spring located within the collar and connected at one end to the base and having the coil at its other end lying in the groove, substantially as and for the purpose set forth.

4. In a grease cup, the combination of a base having a head, a cap threading on the head, a non-rotatable collar slidable on the base below the head and having an annular flange, the collar being formed with an annular internal groove at the juncture of the body of the collar and the annular flange, a ring located within the flange and resting on the major part of the collar and having a passage in its lower edge, and a coiled spring located within the collar and connected at one end to the base and having a coil at its other end extending through the passage in the ring and lying in said groove, substantially as and for the purpose described.

5. In a grease cup, the combination of a base having a head, a cap screwing on the base, a collar slidable on the base below the head and having an annular flange extending over the wall of the cap, and a part fitted within the flange and located below the upper edge of the flange in position to be opposed to the edge of the lower part of the cap fitting said flange, said part coacting with the cap to hold the same from turning, and a coiled tension spring connected at one end to the base and at its other end to the collar, the spring being located within the collar, substantially as and for the purpose specified.

[Claims 6 to 14 not printed in the Gazette.]

1,227,731. GREASE-CUP. OSCAR ZERK, Cleveland, Ohio, assignor, by mesne assignments, to George W. Bowen, Auburn, N. Y. Filed Apr. 10, 1913. Serial No. 760,244. (Cl. 184—38.)



1. In a grease cup and in combination, a base having a flange, a cap having its open end fitting within the flange, said flange and cap being provided with parts interlocking by the relative rotation of the base and the cap, and a member for resisting such relative rotation, the member being fixed to the base and provided with an arm ratcheting with the wall of the open end of the cap, a portion of the arm being substantially concentric with said wall, said portion being fixed at one end and having its other end free and coacting with the open end of the cap, substantially as and for the purpose described.

2. In a grease cup and in combination, a base having a flange, a cap having its open end fitting within the flange and notched on its lower edge, said flange and cap being provided with parts interlocking by the relative rotation of the base and the cap, and a member for resisting such relative rotation, the member being fixed to the base and provided with an arm underlying the notched edge of the cap and ratcheting therewith, a portion of the arm being substantially concentric with said notched edge, said portion being fixed at one end and having its other end free and coacting with the open end of the cap, substantially as and for the purpose specified.

3. In a grease cup and in combination, two elements, one a base having a flange, and the other a cap having its open end fitting within the flange, said flange and cap being provided with parts interlocking by the relative rotation of the base and the cap, and a member for resisting such relative rotation, the member being fixed to one of the elements and provided with a substantially radial arm, and a second arm projecting laterally from the first-mentioned arm and ratcheting with the other element, substantially as and for the purpose set forth.

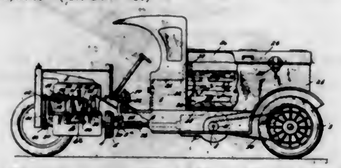
4. In a grease cup and in combination, two elements, one a base having a flange, and the other a cap having its open end fitting within the flange, said flange and cap being provided with parts interlocking by the relative rotation of the base and the cap, and a member for resisting such relative rotation, the member having a part thereof arranged substantially radial with the flange and fixed to one of the elements, and provided with an arm projecting from such part and ratcheting with the other element, substantially as and for the purpose specified.

5. In a grease cup and in combination, two elements, one a base having a flange, and the other a cap having its open end fitting within the flange, said flange and cap being provided with parts interlocking by the relative rotation of the base and the cap, and a member for resisting such relative rotation, the member having a part thereof arranged substantially radial with the flange and fixed to one of the elements and provided with an arm also arranged substantially concentric with the flange and having one end fixed relatively to said part and its other end ratcheting with the other element, substantially as and for the purpose set forth.

[Claims 6 to 13 not printed in the Gazette.]



1,227,732. FISH-CONVEYING AUTO. OSCAR ZISTEL, Sandusky, Ohio. Filed Sept. 5, 1914. Serial No. 860,336. (Cl. 119—5.)



1. Apparatus for transporting live fish comprising, in combination, a vehicle and a water tank carried thereby, a motor and vehicle propelling mechanism also carried by the vehicle, separable connections between the motor and said mechanism, a pump that is operatively connected to the motor, and means for conducting air from the pump to the water within the tank.

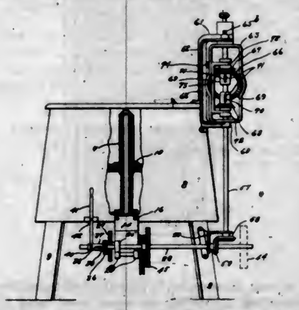
2. Apparatus for transporting live fish comprising, in combination, a vehicle and a water tank carried thereby, a motor and vehicle propelling mechanism also carried by the vehicle, separable connections between the motor and said mechanism, a pump that is operatively connected to the motor, mechanism whereby the relative speeds of the pump and the motor may be varied, and means for conducting air from the pump to the water within the tank.

3. Apparatus for transporting live fish comprising, in combination, a vehicle and a water tank carried thereby, a motor and vehicle propelling mechanism also carried by the vehicle, separable connections between the motor and said mechanism, a pump, means for conducting air from the pump to the water within the tank, and governor controlled driving connections between the pump and the motor shaft for maintaining a constant speed of the pump regardless of the variations in the speed of the motor.

1,227,733. DRIVING MECHANISM. ALPHEUS W. ALTORFER, Roanoke, Ill., assignor to Power Washing Machine Co., Peoria, Ill., a Corporation of Illinois. Filed Feb. 24, 1913. Serial No. 750,294. (Cl. 74—50.)

1. In a driving mechanism, in combination, a machine, an operating shaft disposed vertically and centrally of said machine, a pinion on the lower end of said shaft, a rack-bar in mesh with said pinion, a driving shaft, a gear wheel slidably keyed on said shaft, a second gear wheel with which said gear wheel on the driving shaft may be moved into and out of meshing relation, and a pitman connected at one end with said second gear wheel and having its opposite end connected with said rack-bar.

2. In a driving mechanism, in combination, a machine, an operating shaft disposed vertically and centrally of said machine, a pinion on the lower end of said shaft, a rack-bar in mesh with said pinion, a driving shaft, a gear wheel slidably keyed on said shaft, a lever for moving said gear wheel, a second shaft, a gear wheel thereon with which said gear wheel on the driving shaft may be moved into and out of meshing relation, and a pitman connected at one end with said second gear wheel and having its opposite end connected with said rack-bar.



3. In a driving mechanism, in combination, a machine, an operating shaft disposed vertically and centrally of said machine, a pinion on the lower end of said shaft, a rack-bar in mesh with said pinion, a driving shaft, a gear wheel slidably keyed on said shaft, a second gear wheel with which said gear wheel on the driving shaft may be moved into and out of meshing relation, a pitman connected at one end with said second gear wheel and having its opposite end connected with said rack-bar, and operating connections for said driving shaft, including a sprocket wheel on the driving shaft, a sprocket pinion and a sprocket chain connection between said sprocket wheel and said sprocket pinion, and means for operating said sprocket pinion.

4. In a driving mechanism, in combination, a machine, an operating shaft vertically arranged in said machine, a gear wheel on the lower end of said shaft, a driving shaft, a gear wheel slidably keyed on said shaft, and having a grooved hub, a lever pivoted on said machine and engaging in the groove of the hub of said gear wheel, a second shaft, a gear wheel on said second shaft with which the gear wheel on the driving shaft may be moved into and out of meshing relation, a rack-bar meshing in said gear wheel on the operating shaft, a pitman connected at one end with said second gear wheel and having its opposite end connected with said rack-bar, and a guiding support for said rack-bar.

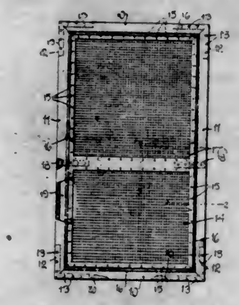
5. In a driving mechanism, in combination, a machine body, legs supporting said machine body, a frame support comprising a main portion and extensions therefrom, one end of said main portion secured to said machine body and said extensions secured to certain of said legs, an operating shaft journaled through the bottom of said machine body and its lower end having a bearing in said main portion of said frame support, a driving shaft, and mechanism for operating said operating shaft from said driving shaft, said mechanism including a shiftable element for cutting said mechanism out of operating relation with said driving shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,227,734. DOOR AND WINDOW SCREEN. OTTO V. ANDERSON, Loxley, Ala. Filed Aug. 19, 1916. Serial No. 115,888. (Cl. 156—14.)

1. A screen frame formed of a plurality of metallic sections, each section being formed of a strip of sheet metal folded longitudinally upon itself to thereby provide

two side walls, the sections having miter joints at their intersections, angle irons disposed at the angles of the screen frame and between said side walls holding the sections in rectangular arrangement and riveted thereto through said side walls, a screen having its margin embraced by said sections, and detatchable pins passing through the sections, through the meshes of the screen and holding said screen detachably in place.

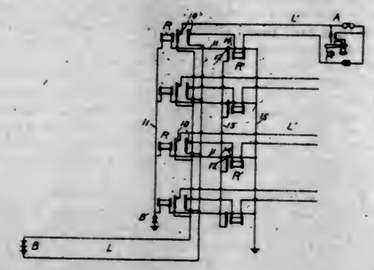


2. A screen formed of a plurality of metallic sections, each consisting of a strip of metal bent upon itself along a longitudinal median line, the sections being operatively jointed to each other at their intersections, packing of sound deadening material disposed within the folded strips forming the screen frame, a screen having its margin disposed between the folded strips forming the sections, and detatchable means engaging the screen with said sections.

[Claim 3 not printed in the Gazette.]

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1,227,735. SYSTEM FOR CONNECTING TELEPHONE-STATIONS. LEON D. BARROWS, New York, N. Y., and HARRY P. CHARLESWORTH, East Orange, N. J., assignors to American Telephone and Telegraph Company, a Corporation of New York. Filed Dec. 20, 1915. Serial No. 67,863. (Cl. 179—32.)



1. A plurality of associated telephone stations, a line for connecting said stations to another station, an electro-mechanism belonging to each of the associated stations and being adapted to vary the connection of such stations to the line, and another electro-mechanism for each associated station in the path of the talking currents controlling the operation of all the connection varying electro-mechanisms.

3. In a telephone system, a plurality of substations, a trunk line for connecting the substations to another station, and a circuit independent of said trunk line, an electro-mechanism for each substation operable over said circiut to disconnect said substation from the trunk, and another electro-mechanism for each substation operable by current over the line to energize the disconnecting electro-mechanisms of the associated substations and to render its companion disconnecting electro-mechanism ineffective.

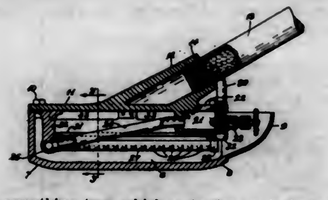
4. A plurality of associated telephone stations, a line for connecting said stations to another station, a connection varying electro-mechanism for each station, an electro-mechanism belonging to each of the associated stations energized over the line, and a circuit controlled by the last named electro-mechanism for all the connection varying electro-mechanisms of the associated stations, said last-named mechanism being energized over said circuit independently of said line.

9. A plurality of substations, a distant station, a trunk line connecting the stations, a relay for each substation acting when energized to disconnect it from the trunk, a relay for each substation having its winding connected to the trunk, an energizing circuit independent of said line for the disconnecting relays including the front contact of one trunk relay and the back contacts of the remaining trunk relays in parallel, and a pair of talking conductors furnishing the sole connection between each of the associated stations and its relays.

[Claims 2 and 5 to 8 not printed in the Gazette.]

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1,227,736. SMOOTHING-IRON. FRANK BEATTY, Seattle, Wash. Filed Feb. 21, 1916. Serial No. 79,775. (Cl. 158—28.)



1. A smoothing iron which embodies an inclosing case that is provided with a surface that is adapted to engage with a surface that is to be smoothed; a metal cover removably secured in a position to cover the top of said inclosing case; a pocket whose walls are integral with the under side of said cover and disposed to project downwardly into the space within said inclosing case; a passageway for air disposed to extend through said cover into said pocket; a burner tip secured to the under side of said cover; a pipe disposed to connect the interior of said pocket with said burner tip; a valve secured in a position to project its delivery end through a wall of said pocket; a hollow handle one end of which is attached to the top of said cover so that it may project obliquely upward therefrom, said handle being of tubular form and adapted to contain fluid fuel and air under pressure; a tube disposed to condnct fluid fuel from the interior of the lower portion of said handle into said valve; a bushing secured in the other end of said handle; and a check-valve removably secured in said bushing, the inlet end of said check-valve being adapted to be connected with a nipple of a hose through which compressed air may be forced to enter said handle through said check-valve.

2. A smoothing iron including a case, a cover removably secured in position on said case, a mixing chamber formed integral with the under side of said cover and adapted to project downwardly into the space within said case, an air conduit disposed to extend through said cover into said mixing chamber, a burner tip secured to the under side of said cover, a pipe extending between the mixing chamber and said burner tip, a needle valve carried by the mixing chamber, a hollow handle connected to said cover, said handle adapted to contain fluid fuel and compressed air, means forming communication between the handle and valve, and a check valve removably secured in the handle, the inlet end of said check valve being adapted to be connected with a nipple of a hose from which compressed air may be forced to enter said handle through said check valve.



1,227,737. CAN-OPENER. LEWIS A. BELLIS and WALTER A. BLEECKER, Somerville, N. J. Filed May 12, 1916. Serial No. 97,131. (Cl. 30—3.)



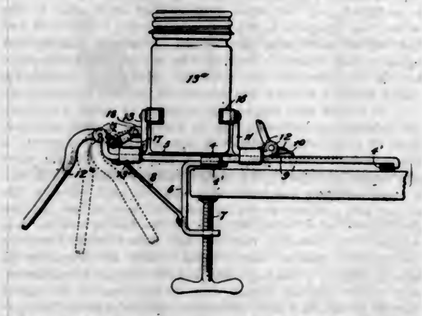
1. An implement of the character described comprising a handle, a cutting blade carried thereby, an extension projecting from the handle and twisted at its outer end and bent downwardly, forming a corrugattion in the extension at the angle portion thereof, the downwardly bent portion of the extension constituting a bearing for the implement during the rocking thereof and engaging the edge of the can in advance of the cut in the top, substantially as described.

3. An implement of the character described comprising a handle, a cutting blade carried thereby and disposed beneath the handle, an extension of the handle projecting to the outer edge of the blade and thence twisted and bent downwardly whereby its edge constitutes a relatively wide bearing for the implement engaging the wall of the can in advance of the top thereof, and a vertical side guide formed as a continuation of the downturned edge of the extension projecting well below the cutting edge of the blade, substantially as described.

[Claim 2 not printed in the Gazette.]

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1,227,738. JAR-VISE. LEWIS A. BELLIS and WALTER A. BLEECKER, Somerville, N. J. Filed May 12, 1916. Serial No. 97,132. (Cl. 65—26.)



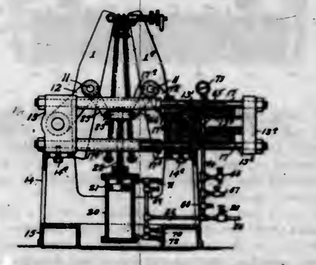
1. In a jar vise, the combination with a jar support, of a clamping jaw normally set to engage a jar and prevent its movement in one direction, of a complemental jaw capable of a substantial adjustment for engaging the opposite side of the jar, means for holding said latter jaw in its adjusted position firmly against the jar and the jar against the first mentioned jaw, means for imparting a limited definite movement to the first mentioned jaw for clamping the jar in position, and a yieldable member adapted to compensate for said limited movement of said first mentioned jaw whereby the jar is tightly clamped upon the adjustment of the first mentioned jaw, but crushing thereof prevented.

2. In a jar vise, the combination with a jar support, of a clamping jaw normally set to engage a jar and prevent its movement in one direction, a complemental jaw capable of a substantial adjustment adapted to firmly engage the other side of the jar, means for holding said latter jaw in its adjusted position against the jar and the jar against the first mentioned jaw, a yieldable member carried by one of said jaws and contacting with the jar, means for imparting a definite adjustment to the first mentioned jaw to permit the jar to be tightly clamped, said adjustment being the same regardless of the size of the jar and the compressibility of the yieldable member compensating for the adjustment of the first mentioned jaw to prevent the crushing of the jar.

3. In a jar vise, the combination with a jar support, of a clamping jaw normally set to engage the jar and prevent its movement in one direction, of a complemental jaw for engaging the opposite sides of the jar, a yieldable jar engaging member carried by one of said jaws, means for adjusting and holding the last mentioned jaw into position against the jar and the jar against the first mentioned jaw, a link adjusting means for said first mentioned jaw adapted to impart a definite limited movement to the jaw after the adjustment of the latter jaw to tightly clamp the jar in position, the extent of adjustment of said first mentioned jaw being substantially proportionate to the compressibility of the yieldable jar engaging member.

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1,227,739. PRESS. JOHN J. BERRIGAN, Orange, N. J., assignor to Henry R. Worthington, a Corporation of New Jersey. Filed May 25, 1915. Serial No. 30,306. (Cl. 100—50.)



1. In a pressing apparatus, the combination with a pair of fulcrum devices and a pair of thrust members angularly movable with relation to said fulcrum devices, of a pair of coöperating pressing members pivotally connected to the respective thrust members, and fluid pressure means for controlling the distance apart of the said pressing members at any position of said members, said fluid pressure means including rams and cylinders therefor and means for supplying fluid under pressure to each ram cylinder.

2. In a pressing apparatus, the combination, with a pair of fulcrum devices, and a pair of thrust members angularly movable with relation to said fulcrum devices, of a pair of coöperating pressing members pivotally connected to the respective thrust members and fluid pressure means arranged to control the distance apart of said fulcrum devices, said fluid pressure means including rams and cylinders therefor and means for supplying fluid under pressure to each ram cylinder.

3. In a pressing apparatus, the combination, with a pair of fulcrum devices, and a pair of thrust members angularly movable with relation to said fulcrum devices, of a pair of coöperating pressing members pivotally connected to the respective thrust members, and fluid pressure means arranged to determine the distance apart of the points of pivotal connection of the respective thrust members to the corresponding pressing members, said fluid pressure means including rams and cylinders therefor and means for supplying fluid under pressure to each ram cylinder.

4. In a pressing apparatus, the combination, with a pair of fulcrum devices, and a pair of thrust members, angularly movable with relation to said fulcrum devices, of a pair of coöperating pressing members pivotally connected to the respective thrust members, fluid pressure means for controlling the distance apart of said pressing members, and pressure limiting means for limiting the pressure on said controlling means.

5. In a pressing apparatus, the combination, with fulcrum devices arranged in pairs, the fulcrum devices of each pair being relatively movable toward and from each other, of fluid pressure means for moving one fulcrum device of each pair with relation to the corresponding opposite fulcrum device of the pair, said fluid pressure means including rams and cylinders therefor and means for supplying fluid under pressure to each ram cylinder, levers fulcrumed in the respective fulcrum devices, and cooperating pressing members carried by the corresponding levers.

[Claims 6 to 8 not printed in the Gazette.]

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1,227,740. LOOSE-LEAF BINDER. CARL H. BISSELL and FRANCIS WARE CLARY, Syracuse, N. Y. Filed July 16, 1915. Serial No. 40,166. (Cl. 129—4.)



1. A loose leaf binder comprising a back, a post carried by the back, a clamping member movable lengthwise of the post, and means for moving the clamping member, said means extending lengthwise of the post and being accessible at one end of the post, substantially as and for the purpose specified.

2. A loose leaf binder comprising a back, a hollow post supported by the back, a clamping member movable lengthwise of the post, and means for operating the clamping member, said means extending lengthwise of the post within the same and being exposed at one end of the post, substantially as and for the purpose set forth.

3. A loose leaf binder comprising a back, a hollow post supported by the back, a clamping member movable lengthwise of the post, and a screw extending lengthwise of the post and threading into the clamping member and having a head exposed at one end of the post, the screw being held from axial movement, substantially as and for the purpose described.

4. A loose leaf binder comprising a back, a post supported by the back, said post being hollow and formed with a lengthwise slot, a clamping member having a tongue extending through the slot and slidable along the interior of the post, and a body on the outside of the post, and means extending lengthwise of the post for operating the clamping member, substantially as and for the purpose specified.

5. A loose leaf binder comprising a back, a post supported by the back, said post being hollow and formed with a lengthwise slot, a clamping member having a tongue extending through the slot and slidable along the interior of the post, and a body on the outside of the post, and means extending lengthwise of the post for operating the clamping member, said means comprising a screw threading into the tongue, the screw having a head exposed at one end of the post, substantially as and for the purpose set forth.

[Claims 6 to 14 not printed in the Gazette.]

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1,227,741. PEDAL. THEODORE G. BRATSCH, Orange, Cal., assignor of three-fourths to Joel B. Handy, Orange, Cal. Filed Mar. 8, 1915. Serial No. 12,850. (Cl. 74—5.)

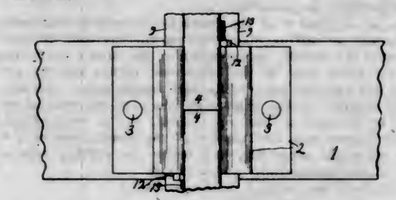
The combination with the floor of an automobile, of a notched member mounted on said floor, a lever extending through said floor and pivoted to swing lengthwise of the notched member, and a foot plate pivoted a substantial distance forward of its mid length to the upper end of the lever and having its forward end upturned and having its rear end downturned to form a pawl adapted to engage the



notched member so that the driver's foot can be readily slid from the floor onto the foot plate.

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1,227,742. RAIL-JOINT. ALLEN B. BROWN, Portland, Oreg. Filed Sept. 13, 1916. Serial No. 120,581. (Cl. 239—6.)



1. A socket and means for securing it upon a railway tie, said socket having a gap in which to receive adjacent ends of two rails and in each side of the gap a recess, a bolt having its head end fitted in said recess and its other end extended beyond the socket and provided with a nut, a wedge-shaped fish-plate arranged at each side in the socket and adapted to fill between the web of the rail and the bolt so as to keep the bolt in the recess and to bear against the recessed face of the socket, said fish-plate having its thickest end provided with an extension in which there is a notch for the nut on the bolt to engage in.

2. A socket and means for securing it upon a railway tie, said socket having a gap in which to receive adjacent ends of two rails and in each side of the gap a recess, a bolt having its head end fitted in said recess and its other end extended beyond the socket and provided with a nut, a wedge-shaped fish-plate arranged at each side in the socket and adapted to fill between the web of the rail and the bolt so as to keep the bolt in the recess and to bear against the recessed face of the socket, said fish-plate having its thickest end provided with an extension in which there is a notch for the nut on the bolt to engage in, said socket having in each side at the base of the gap a lateral recess and each fish-plate having a lateral rib engaging in said recesses.

3. A socket and means for securing it upon a railway tie, said socket having a gap in which to receive adjacent ends of two rails and in each side of the gap a recess, a bolt having its head end fitted in said recess and its other end extended beyond the socket and provided with a nut, a wedge-shaped fish-plate arranged at each side in the socket and adapted to fill between the web of the rail and the bolt so as to keep the bolt in the recess and to bear against the recessed face of the socket, said fish-plate having its thickest end provided with an extension in which there is a notch for the nut on the bolt to engage and a web adjacent the nut, said bolt being so arranged as to spring its nut into contact with the side of the web and thereby prevent accidental rotation of the nut.

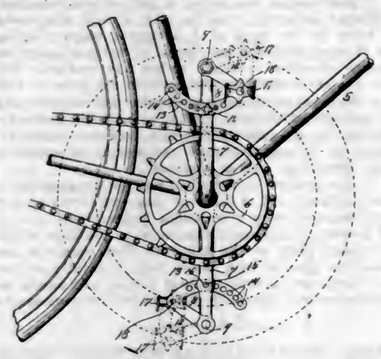
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1,227,743. ATTACHMENT FOR CRANK-ARMS. RAYMOND N. BURGEDORFF, Denver, Colo. Filed May 29, 1916. Serial No. 100,522. (Cl. 208—69.)

In combination, a crank arm and bracket pivotally connected at the outer extremity to the crank arm, said bracket comprising a relatively short arm fitting a curved



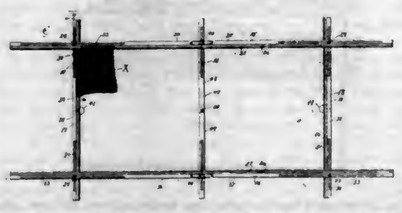
quadrant extension, the curve of said extension coinciding with an arc struck from the pivotal point between the bracket and the crank arm as a center, a pedal mounted on said bracket at the junction of the short arm and ex-



tension, the extension being provided with a series of perforations, and means adapted to be inserted through said perforations and engage the crank arm at a point near the outer end of said crank arm for adjustably securing the bracket in place.

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1,227,744. CURTAIN-STRETCHER. ERNEST J. BURQUIST, Chicago, Ill. Filed Apr. 4, 1916. Serial No. 88,843. (Cl. 45—24.)



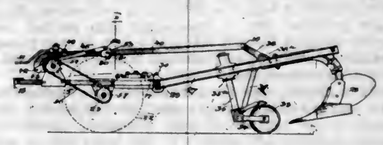
1. In a curtain stretcher, in combination, a pair of folding side members each comprising a pair of longitudinally grooved sections of like length and a hinge permanently connecting the sections end to end, a stay sliding in the groove of one section of each of the said side members, each stay being movable into the groove of the other section of the corresponding side member when the side members are extended, a pair of folding end members half the length of the said side members and each comprising a pair of sections of like length and a hinge permanently connecting the sections end to end, a pivot permanently connecting each section of each side member and a section of one of the end members, an intermediate brace comprising two sections of like length with the sections of the end members, a pivot permanently connecting each of the said stays and a section of the said intermediate brace and means for detachably connecting the two sections of the intermediate brace end to end.

2. A folding curtain stretcher frame comprising, in combination, side and end members each comprising a pair of rigid sections of like length, the end members being of less length than the side members, a hinge permanently connecting the two sections of each of said members end to end, the side member hinges being constructed to permit folding of each of the side members in a plane which is perpendicular to the plane of the extended frame and the end member hinges being constructed to permit folding of each of the end members outwardly in the plane of the extended frame and to prevent folding of the end members inwardly in said plane, and sliding pivots permanently connecting the side and end members, the sliding of said pivots being such as to permit the outer end of each end section being brought to a point on the adjacent side section which is removed from the outer end of the said side section a distance equal to the length of the corresponding end section whereby folding of the frame to half the length of the side members without disconnecting the parts is permitted.

3. A folding curtain stretcher frame, comprising, in combination, side and end members, each of the said end members comprising two sections, a hinge connecting the sections of each end member end to end for relative swinging movement in the plane of the extended frame, a supporting leg permanently pivoted to one of the sections of each end member adjacent the corresponding hinge to swing in a plane which is perpendicular to the plane of the extended frame and a socket on the other section of each end member for receiving the corresponding leg when extended whereby the said legs serve as locks to prevent folding of the end members when the legs are extended for service.

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1,227,745. PLOW. WILLIAM W. CAMERON, La Crosse, Wis., assignor to La Crosse Plow Co., La Crosse, Wis., a Corporation of Wisconsin. Filed Sept. 25, 1913. Serial No. 791,708. (Cl. 97—70.)



1. In a plow, the combination with a frame, carrying wheels and a plow beam, of a power operated lift connection for the beam, a depth regulating device comprising coöperating members whereby the lowering movement of the connection will be limited, both of said members being mounted on and shifted by said connection in lowering the beam, and means for locking one of the members of the regulating device to the lifting connection to hold the plow on the beam out of the ground.

2. In a plow, the combination with a frame, carrying-wheels, and a plow-beam, of a power-operated lifting-connection, a depth-regulating device comprising coöperating members for limiting the movement of the connection in lowering the beam, means for locking one of said members of the regulating-device to the shifting-mechanism to hold the plow raised, and a shaft provided with means for operating said connection, the shaft and means thereon being rotatable without operating the connection when the regulating-device is locked to said connection.

3. In a plow, the combination with a frame, carrying-wheels, and a plow-beam, of a power-operated lifting-connection, a depth-regulating device comprising coöperating members for limiting the movement of the connection in lowering the beam comprising two stop-members, means for locking one of said members of the regulating device to the shifting-mechanism to hold the plow raised, and a shaft provided with means for operating said connection, said shaft being rotatable without operating the connection when the regulating-device is locked to said connection.

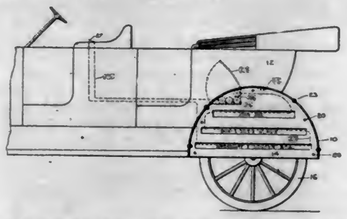
4. In a plow, the combination with a frame, carrying wheels and a plow beam, of a lifting connection comprising a link, power operated mechanism for operating said connection and a depth regulating device comprising a link, an adjustable stop screw mounted on one of said links and a coöperating member connected to the other of said links, said screw being adjustable by rotation to vary the movement of the connection.

5. In a plow, the combination with a frame, carrying-wheels, and a plow-beam, of a power-operated lifting-connection comprising a link, a depth-regulating device com-

prising a link and two stop-members on the links respectively, and a screw for adjusting the movement of the connection.

[Claims 6 to 27 not printed in the Gazette.]

1,227,746. DISPLAY-SIGN FOR AUTOMOBILES. EDWARD A. CAMPBELL, St. Louis, Mo. Filed Dec. 20, 1915. Serial No. 67,861. (Cl. 40—129.)



1. In a display sign for automobiles the combination of a mud-guard, a fender conforming to the contour thereof and movably mounted beneath said guard and having a translucent sign portion, and means for illuminating said translucent sign.

2. In a display sign for automobiles the combination of a mud-guard, a fender conforming to the contour thereof and provided with a translucent sign portion and hingedly mounted beneath said mud-guard, so that it may be swung outwardly therefrom, and means for illuminating said translucent sign.

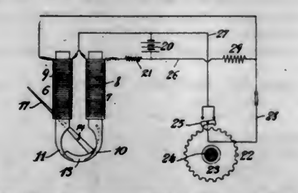
3. In a display sign for automobiles, the combination with a mud-guard thereof, of a sign carrying member conforming to the contour of said mud-guard, means for hingedly securing said member to the under side of said mud-guard, whereby access may be had to the wheel of the vehicle by swinging said member outwardly, and means for securing said member against movement.

4. In a display sign for automobiles the combination with a mud-guard thereof, of a sign carrying member conforming to the contour of said mud-guard and fitting therewithin, said member being provided with a flange, means secured to said flange and to said mud-guard to permit a swinging movement of said member, and means for securing said member against swinging movement.

5. In a display sign for automobiles, the combination with a mud-guard thereof, of a sign carrying member conforming to the contour of said mud-guard and provided with a translucent portion, means for hingedly securing said member to the under side of said mud-guard whereby access may be had to the wheel of the vehicle by swinging said member outwardly, display matter carried by said translucent portion, and illuminating means mounted behind said translucent portion.

[Claim 6 not printed in the Gazette.]

1,227,747. SPEEDOMETER. ALLEN A. CANTON, New York, N. Y., assignor to The Device Testing Company, a Corporation of Connecticut. Filed June 27, 1914. Serial No. 847,669. (Cl. 175—183.)

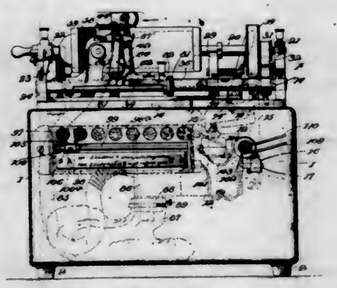


1. A speedometer comprising a pair of electromagnets of different magnetic strength, means for supplying a constant electric current to the one electromagnet, means for supplying an intermittent electric current to the other electromagnet to increase its magnetic strength, an armature mounted to move in response to the difference in electric strength of the said two electromagnets and means for indicating the movement of the said armature.

2. A speedometer comprising a pair of electromagnets of different magnetic strength, each of said electromagnets being in the form of a horseshoe magnet having poles of equal polarity and spaced a distance apart, an armature mounted to move within the magnetic field of the two electromagnets and between the poles of each one of the same and in response to the difference in magnetic strength of the said two electromagnets, means for indicating the movement of the said armature, means for limiting the movement thereof and means for supplying electric current to the two magnets.

3. A speedometer comprising two electromagnets of opposite polarity and of different magnetic strength, each of said magnets being a horseshoe magnet with poles of equal polarity, an armature mounted to oscillate within the magnetic field of the said two electromagnets and between the poles of each one of them, a pointer secured to said armature, a scale for said pointer and means for supplying electric current to the said two electromagnets.

1,227,748. SHAVING-MACHINE FOR SOUND-RECORD TABLETS. FRANK L. CAPPS and JOHN J. SCULLY, Bridgeport, Conn., assignors to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Oct. 14, 1915. Serial No. 55,913. (Cl. 82—1.1.)



1. In a machine for shaving sound-record tablets, the combination of a tablet-carrying mandrel, a carriage movable along a tablet on the mandrel from one end to the other, a knife on the carriage, and knife-advancing means automatically operable on the termination of each cut by a longitudinal movement of the carriage.

2. In a machine for shaving sound-record tablets, the combination of a tablet-carrying mandrel, a carriage movable along a tablet on the mandrel and capable of being lifted away therefrom, a knife on the carriage, and knife-advancing means automatically operable by a lifting movement of the carriage.

3. In a machine for shaving sound-record tablets, the combination of a tablet-carrying mandrel, a carriage movable along a tablet on the mandrel and capable of being lifted away therefrom, a knife on the carriage, and knife-advancing means automatically operable by a lifting movement of the carriage or by a longitudinal movement thereof.

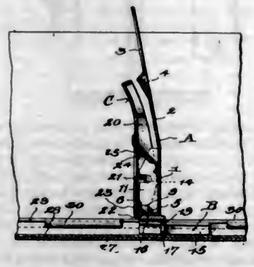
4. In a machine for shaving sound-record tablets, the combination of a tablet-carrying mandrel, a carriage, a guide or way for said carriage on which the carriage is capable of both longitudinal movement and turning movement, a knife supported on the carriage, mechanism for adjusting the knife with relation to a tablet on the mandrel, and means operable on the termination of each cut to actuate said mechanism when the carriage is turned about said guide or way.

5. In a machine for shaving sound-record tablets, the combination of a tablet-carrying mandrel, a carriage, a guide or way for said carriage on which the carriage is capable of both longitudinal movement and turning movement, a knife supported on the carriage, mechanism for adjusting the knife with relation to a tablet on the mandrel, and means operable on the termination of each cut to actuate said mechanism upon longitudinal movement of the carriage on said guide or way.

[Claims 6 to 55 not printed in the Gazette.]



1,227,749. FOLLOWER FOR FILING-CABINETS. DAVID A. CARLSON, RALPH F. UNDERWOOD, and CHARLES D. JADERSTROM, Jamestown, N. Y., assignors to Art Metal Construction Company, Jamestown, N. Y., a Corporation of Massachusetts. Filed Aug. 17, 1915. Serial No. 46,019. (Cl. 129—30.)



1. A follower comprising a slide or carriage, a sheet metal follower body rising from the carriage and provided with a pair of ears bent therefrom, each ear having an integral pivot bent therefrom and extending transversely thereof, and a locking dog having side flanges lapping the ears and provided with openings receiving the respective pivots and pivotally connecting the dog to the ears.

2. A follower comprising a slide or carriage and a follower body supported thereon, the carriage having spaced side members, a cross bar connecting the side members and integral therewith, and a flange integral with the cross head and depending therefrom between the side bars.

3. A follower comprising a follower body and a slide or carriage therefor, said slide or carriage having spaced side bars, a cross head connecting the side bars and integral therewith and bent into an offset position above the side bars, the cross head having a depending integral flange provided with reduced terminals engaging the respective side bars.

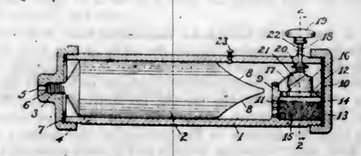
1,227,750. FOOT-DRESS. MARY A. CLARKE, Trenton, N. J. Filed Feb. 1, 1917. Serial No. 146,019. (Cl. 36—6.)



1. A foot-dress adapted to inclose a shod foot, having a sole shorter than the sole of the shoe to be covered thereby, and having an upper portion divided vertically and terminating in two complementary flaps adapted to lap, one of said flaps terminating in a strap of sufficient length to partially encircle the ankle of the wearer, and the other of said flaps also terminating in a strap, and adjustable means for connecting said straps to hold the toe of the foot-dress to the toe of the shoe covered thereby.

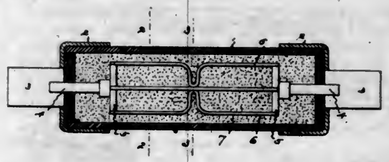
2. A foot-dress adapted to inclose a shod foot, having a sole shorter than the sole of the shoe to be covered thereby, and having an upper portion terminating rearwardly in two complementary flaps, one of said flaps being narrowed outwardly from the upper portion into a strap adapted to partially encircle the ankle of the wearer, and the other of said flaps having its upper and lower edges extended beyond the main part of its middle portion, and an outwardly extending strap located between its upper and lower edges, and means for adjustably connecting said straps to hold the toe of the foot-dress to the toe of the shoe to be covered thereby.

1,227,751. FIRE-EXTINGUISHER. RICHARD H. COBB, Cleveland, Ohio. Filed Apr. 28, 1916. Serial No. 94,096. (Cl. 169—12.)



The combination of a casing, a collapsible tube within the casing and of a corresponding size in cross section, the tube having a nozzle at its forward end, the rear end of the tube being flattened at opposite sides, the tube containing a liquid, and means for generating gas within the casing to act upon said flattened sides of the tube for compressing the tube to expel the liquid, substantially as described.

1,227,752. FUSIBLE ELEMENT FOR INCLOSED ELECTRICAL FUSES. ROBERT C. COLE, Hartford, Conn., assignor to The Johns-Pratt Company, Hartford, Conn., a Corporation of Connecticut. Filed Oct. 27, 1916. Serial No. 127,990. (Cl. 175—273.)



1. A fusible element for an inclosed fuse consisting of a plural number of fusible links of compact cross section spaced apart at their ends and brought into proximity with each other at the middle of their length.

2. A fusible element for an inclosed fuse consisting of a plural number of fusible links of round cross section spaced apart at their ends and brought together intermediate the ends.

3. A fusible element for an inclosed fuse consisting of a plural number of fusible links of compact cross section held in proximity with each other at the middle and spaced apart at the ends, conducting frames holding the ends of the links apart, and terminals extending from the conducting frames.

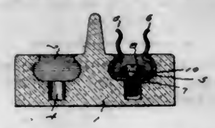
4. A fusible element for an inclosed fuse consisting of a plural number of round fusible wires, said wires being closer together at the middle than at their ends, disks holding the ends of the wires apart, and terminals extending from the disks.

5. A fusible element for an inclosed fuse consisting of a plural number of round fusible wires brought together at the middle and held spaced apart at the ends.

1,227,753. FUSE-BLOCK. ROBERT C. COLE, Hartford, Conn., assignor to The Johns-Pratt Company, Hartford, Conn., a Corporation of Connecticut. Filed Oct. 27, 1916. Serial No. 127,991. (Cl. 175—273.)

1. A fuse block having an insulating base with undercut pockets that open toward the ends of the base in its upper face and sockets in the bottom of the pockets, fuse clips with their lower portions shaped to loosely fit the

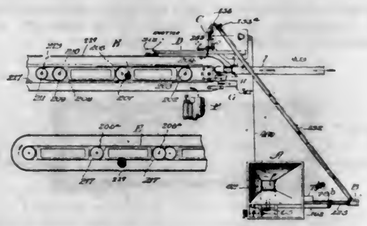
walls of the pockets and having threaded perforations in their bottoms, and screws turning in said threaded perforations into the sockets in the bottom of the pockets when the clips are in operative position so as to retain the clips from movement endwise out of the pockets.



2. A fuse block having an insulating base with undercut pockets that open toward the ends of the base in its upper face and sockets in the bottom of the pockets, fuse clips with their lower portions shaped to loosely fit the walls of the pockets and having threaded perforations in their bottoms, screws turning in said threaded perforations into the sockets in the bottom of the pockets, and lugs with wire receiving sockets and forked ends that are adapted to be thrust beneath the heads of the screws and to be bound thereby closely to the bottom of the clips by the screws which retain the clips in the pockets.

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1,227,754. WINDER. HOWARD D. COLMAN, Rockford, Ill., assignor to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners doing business as Barber-Colman Company, Rockford, Ill. Filed Oct. 31, 1908. Serial No. 460,523. (Cl. 242—44.)



1. A spooler having in combination, a spooler frame having a plurality of traveling bobbin holders; spool carrying spindles movable with said bobbin holders; means for causing the bobbin holders and spool-spindles to travel; means for rotating spools mounted on said spindles; and means for automatically feeding bobbins to said bobbin holders.

2. A spooler having, in combination, a spooler frame; a plurality of traveling bobbin-holders on said spooling frame; means for rotatably carrying a spool opposite each bobbin holder; means for causing the bobbin holders and spool-carrying means to travel; means for rotating spools mounted on said carrying means; means for automatically feeding bobbins to said bobbin holders; and means for automatically removing said bobbins at a determined point with respect to said frame.

3. A spooler having, in combination, a frame; spool spindles on said frame; means for rotating the spools on said spindles; a bobbin holder in which a bobbin may lie loose, there being one bobbin holder opposite each spool spindle; and means for feeding bobbins to said bobbin holders.

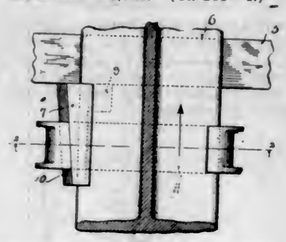
4. A spooler having, in combination, a frame, an endless chain on said frame; means for imparting movement to said chain; bobbin holders carried by said chain; spool supporting spindles carried by said chain; friction devices for contact with the spools to rotate them; and means for automatically feeding bobbins to said bobbin holders.

5. A spooler having, in combination, a frame, an endless chain on said frame; means for imparting movement to said chain; bobbin holders carried by said chain; spool supporting spindles carried by said chain; means for feeding bobbins to said bobbin holders; and means for feeding spools to said spindles.

[Claims 6 to 196 not printed in the Gazette.]

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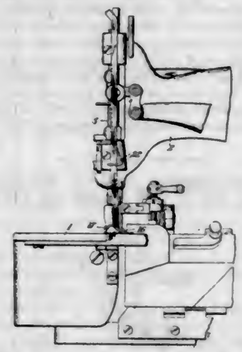
1,227,755. ANTICREEPING DEVICE FOR RAILS. DENNIS E. CROWLEY, Milwaukee, Wis. Filed Aug. 19, 1916. Serial No. 115,742. (Cl. 238—4.)



An anticreeping device for rails comprising a bar having one end portion formed to embrace one side of the base flange of a rail, the other end portion of the bar being directed upwardly to form a flat bearing face at its inner side disposed at a right angle to the plane of the bar, said other end portion being directed inwardly at its free extremity to form an inclined flat bearing face, a tie abutting wedge shaped block having one side grooved to receive the base flange of a rail and its other side formed to provide bearings faces corresponding to the bearing faces of the bar, and said bar having its adjacent portion cut away to receive the lower portion of the wedge block.

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1,227,756. OVERSEAMING-MACHINE. HARRY J. DAHL, Philadelphia, Pa., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 6, 1910. Serial No. 585,611. (Cl. 112—24.)



1. A sewing machine including in combination, feeding mechanism, overedge stitch forming mechanism for joining and covering the edges of fabric sections, a trimming mechanism including trimming blades located in advance of the overedge stitch forming mechanism, a folder in rear of the trimming blades, said folder extending across the edges of the fabric sections and onto one face of said sections, whereby the edges of said fabric sections are folded within the limits of the width of the overedge stitches, said folder being so positioned relative to the overedge stitch forming mechanism that the stitches are laid over said folder and are fed off from the same into the folded edges of the material.

2. A sewing machine including in combination, feeding mechanism, overedge stitch forming mechanism for joining and covering the edges of fabric sections, a trimming mechanism including trimming blades located in advance of the overedge stitch forming mechanism, a folder in rear of the trimming blade, said folder extending across the edges of the fabric sections and onto one face of said sections, whereby the edges of said fabric sections are folded within the limits of the width of the overedge stitches, and a tape guide for guiding a tape to said folder, whereby said tape is partly inclosed by said folded edges of the fabric sections.

3. A sewing machine including in combination, feeding mechanism, overedge stitch forming mechanism for joining and covering the edges of fabric sections, a trimming mechanism including trimming blades located in advance of the overedge stitch forming mechanism, a folder in rear of the trimming blades, said folder extending across the edges of the fabric sections and onto one face of said sections, whereby the edges of said fabric sections are folded substantially to and within the limits of the width of the overedge stitches, said folder being so positioned relative to the overedge stitch forming mechanism that the stitches are laid over said folder and are fed off from the same on to the folded edge of the material, and a stitch finger extending in rear of said folder.

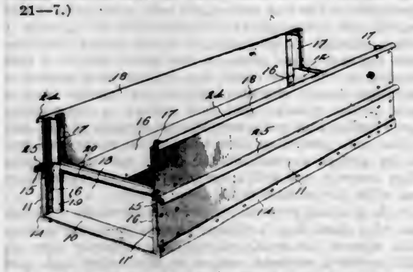
4. A sewing machine including in combination, a work support, feeding mechanism, overedge stitching mechanism, a folder for folding an edge of a material, and over which the stitches are laid, trimming mechanism in front of said folder for trimming the edge of the material before it is folded, said trimming mechanism including a lower trimmer blade having its cutting edge extending above the work support, said blade being tapered from its cutting point downwardly toward the work support, and also downwardly toward the front of the machine, whereby the edge of the material being trimmed is given a preliminary bend as it enters the folder.

5. A sewing machine including in combination, overedge stitch forming mechanism for joining and covering the edges of fabric sections, a presser foot, a trimming mechanism including trimming blades located in advance of the overedge stitch forming mechanism, a throat plate, a folder mounted on said throat plate and located in rear of the trimming blades, said folder extending above and overlying the trimmed edges of the fabric sections for folding said edges substantially to and within the limits of the overedge stitches, said presser foot having a cut out portion for said folder, a stitch finger carried by said folder and extending rearwardly therefrom, said folder being so disposed relative to said overedge stitch forming mechanism that the stitches are laid over the folder and are fed off from said folder on to the stitch finger and the folded edges of the fabric sections.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,757. WAGON-BODY. JULIAN L. DAHLEN, Borup, Minn. Filed May 9, 1916. Serial No. 96,405. (Cl. 21—7.)

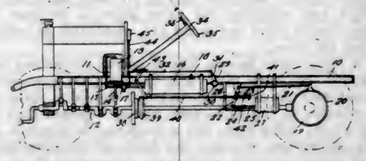


1. A wagon body including a bottom, side walls connected with said bottom and including outer plates having their upper end portions extended upwardly above the side walls and curved outwardly to provide supporting flanges, upper sections resting upon the side walls and engaging the inner faces of the outer plates and provided with outwardly extending supporting ledges engaging the flanges of the plates of the lower walls, and end gates positioned between said side walls and held against longitudinal movement.

2. A wagon body including side walls, a track secured to said side walls, and upper and lower end gates positioned between said side walls, the lower end gate being provided with inner and outer arms engaging said track and having its upper end provided with a trough, and the upper end gate having its end portions provided with arms for engaging the track and having its lower end portion rolled to provide a bead for fitting into the trough of the lower end gate.

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1,227,758. BRAKE AND CLUTCH MECHANISM. FORREST ELLIOTT DAVIS, Whitingham, Vt. Filed May 19, 1916. Serial No. 98,649. (Cl. 188—3.)



1. The combination with a motor mechanism including a clutch and a brake; of a fluid pressure brake cylinder and piston and rod therefor, a brake lever connected to the rod and brake, a clutch releasing rod connected to the clutch and having an end extending slidably through the lever and a compression spring mounted upon the projecting end of the rod and yieldably connecting the rod and lever.

2. The combination with a motor mechanism including a clutch and a brake; of a fluid pressure brake cylinder and piston and rod therefor, a brake lever connected to the rod and brake, a clutch releasing rod connected to the clutch and having an end extending slidably through the lever, a compression spring mounted upon the projecting end of the rod and yieldably connecting the rod and lever, and means for effecting release movement of the clutch independently of the brake lever.

3. The combination with a motor mechanism including a clutch and a brake; of a fluid pressure brake cylinder and piston and rod therefor, a brake lever connected to the rod and brake, a clutch releasing rod connected to the clutch and having an end extending slidably through the lever, a fluid pressure reservoir, a valve controlled connection between the reservoir and cylinder, a finger lever adjacent the hand of the operator, and a linkage connecting the valve and finger lever.

4. The combination with a motor mechanism including a clutch and a brake; of a fluid pressure brake cylinder and piston and rod therefor, a brake lever connected to the rod and brake, a clutch releasing rod connected to the clutch and having an end extending slidably through the lever, a compression spring mounted upon the projecting end of the rod and yieldably connecting the rod and lever, a fluid pressure reservoir, a valve controlled connection between the reservoir and cylinder, a finger lever adjacent the hand of the operator, and a linkage connecting the valve and finger lever.

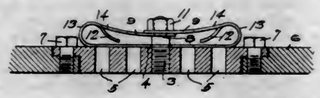
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1,227,759. PLATE-VALVE. RODNEY D. DAY, Pittsburgh, Pa. Filed Apr. 20, 1914. Serial No. 833,110. (Cl. 103—66.)

1. A plate valve having a plurality of lateral spring extensions overlying said valve and fixed with relation to the valve seat, said spring extensions being so constructed and disposed as to exert a change-in-scale upon the valve plate as the latter rises from the seat and also being adapted to act as a stop for the valve plate.

2. A plate valve having a plurality of lateral spring extensions overlying said valve and fixed with relation to the valve seat, said spring extensions being so disposed

as to exert a change-in-scale upon the valve plate as the latter rises from the seat and also being adapted to act as a stop of the valve plate, and a plurality of auxiliary spring members adapted to increase the change-in-scale effect of the main springs and to act as a cushion stop for the valve plate.



3. A plate valve having a plurality of lateral spring extensions bent to overlie the valve plate and having their extremities fixed with relation to the valve seat whereby said extensions may act as a stop for the valve plate and may exert a change-in-scale effect upon said plate and auxiliary spring members carried by said main spring members and overlying the valve plate to increase the change-in-scale effect and to act as a cushioning or cushion stop for the plate.

4. A plate valve having lateral spring extensions bent to overlie the valve plate and having their extremities fixed opposite the geometric center of the valve plate and with relation to the valve seat, and so disposed that the rising of the valve plate has a tendency to lengthen the spring extensions, whereby the fixity of the extremities of said spring members produces a change-in-scale in the operative effect of said spring members.

5. A plate valve having lateral spring extensions bent to overlie the valve plate and having their extremities fixed opposite the geometric center of the valve plate and with relation to the valve seat, and so disposed that the rising of the valve plate has a tendency to lengthen the spring extensions, whereby the fixity of the extremities of said spring members produces a change-in-scale in the operative effect of said spring members, certain of said spring members carrying auxiliary spring members symmetrically disposed over the valve plate to increase the change-in-scale effect and act as a cushion stop for the valve plate.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,760. THERMOREGULATOR. ACHILLES DE KHOTINSKY, Chicago, Ill., assignor to Central Scientific Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 29, 1916. Serial No. 94,511. (Cl. 200—82.)



1. A thermoregulator comprising a tube adapted to support a thermo-sensitive current-conducting fluid, a member adjustable relatively to said tube and provided with a tapered opening, a second member provided with a tapered opening and spaced from said first member, a glass tube having tapered ends fitting snugly in said tapered openings and a relatively small bore, and a contact member supported by said second member and extending into said bore.

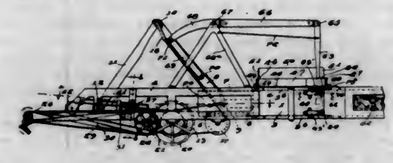
2. A thermoregulator comprising a tube adapted to support a thermo-sensitive current-conducting fluid, a member adjustable relatively to said tube and provided with a tapered opening, means for locking said member in adjusted position, a second member provided with a tapered opening and spaced from said first member, a glass tube having tapered ends fitting snugly in said tapered openings and a relatively small bore, and a contact member supported by said second member and extending into said bore.

3. A thermoregulator comprising a tube adapted to support a thermo-sensitive current-conducting fluid, a member adjustable relatively to said tube and provided with a tapered opening, a second member provided with a tapered opening and spaced from said first member, a glass tube having tapered ends fitting snugly in said tapered openings and a relatively small bore, and an adjustable contact member supported by said second member and extending into said bore.

4. A thermoregulator comprising a tube adapted to support a thermo-sensitive current-conducting fluid, a member adjustable relatively to said tube and provided with a tapered opening, a second member provided with a tapered opening and spaced from said first member, a glass tube having tapered ends fitting snugly in said tapered openings and relatively small bore, an adjustable contact member supported by said second member and extending into said bore, and means for locking said contact member in adjusted position.

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1,227,761. HAY-PRESS. JAMES A. DICKEL, Ottumwa, Iowa, assignor of one-half to Frank A. Dickel, Ottumwa, Iowa. Filed Feb. 23, 1916. Serial No. 79,993. (Cl. 100—9.)



1. In a press of the class described, a press box, a plunger, toggle jointed levers, one pivotally connected to the plunger and the other having a fixed pivot, a drum, a chain partly wound on the drum and having its ends connected respectively to the plunger and to the pivotally connected end of the lever, and means to rotate the drum first in one direction and then in the reverse direction.

2. In a baling press, the combination of a press box, a plunger, operating means for the plunger including a drum, an endless belt operated by the drum and having a tappet element, a reversing bar mounted for reciprocating movement and having arms at its ends in the path of said tappet, said reversing bar being provided with a rack, a pinion engaged by said rack, a second pinion revoluble with the first-named pinion, a belt shifter having a rack engaged by the second pinion, a counter shaft geared to the drum, a pair of pulleys fast to the counter shaft, a loose pulley between said fast pulleys, a longitudinal power pulley and belts respectively engaged by the belt shifter and connecting said longitudinal pulley and two of the pulleys on the counter shaft, one of said belts being crossed, each belt being adapted to be shifted from one of the fast pulleys to the loose pulley.

3. In a baling press of the class described the combination of a press box, a plunger, means including a revoluble element, to operate the plunger, a pulley loose on said revoluble element, means to alternately lock said pulley to said revoluble element for partial rotation therewith and to then release said pulley therefrom, a feed table, feeders movable on said table toward and from the press box, springs to move said feeders outwardly on the said feed table and operating cords connecting the feeders to said pulley and coacting with the pulley to move the feeders toward the press box while the same is revolving with said revoluble element.

4. In a baling press of the class described, a feed table, feeders mounted on the feed table for movement toward and from the press and means to operate said feeders simultaneously with the press, the feed table being provided with slots which converge toward the press and the feeders being arranged in overlapping relation and having guide means operating in said slots to move the feeders toward each other while they are moving toward the press.

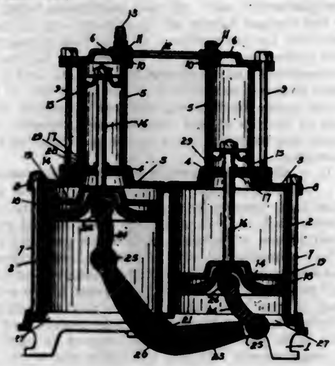
5. In a baling press of the class described, a press box, a plunger, a rocking element connected to and operating with the plunger, a tamper operated by the rocking lever, a feed table at one side of the press box, feeders mounted on the feed table for movement toward and from the press box, operating means for the feeders, and block carrying means on one of the feeders, said tamper having means to engage the block and arrange the same in the press box.

[Claims 6 to 12 not printed in the Gazette.]



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1,227,762. AIR-PUMP. HARLEY M. DUNLAP, Battle Creek, Mich. Filed Oct. 17, 1916. Serial No. 126,130. (Cl. 230—32.)



1. In a structure of the class described, the combination of a base having openings therein, a pair of low pressure cylinders open at their lower ends seated on said base above its said openings, a pair of high pressure cylinders of substantially less diameter than said low pressure cylinders, heads for said low pressure cylinders having seats therein for said high pressure cylinders and constituting bases therefor, heads for said high pressure cylinders having delivery passages therein provided with valves, a coupling pipe connecting said delivery passages at the rear of their valves, one of said passages being provided with a delivery connection, bolts extending from said low pressure cylinder heads to said base and from said high pressure cylinder heads to said low pressure cylinder heads, pairs of high and low pressure cylinder pistons, connecting rods for said pairs of pistons disposed through said low pressure cylinders disposed in said seats to surround said connecting rod and constitute packing glands therefor and packing gaskets for said high pressure cylinder seats, a rocker arm pivotally mounted on said base centrally below said low pressure cylinders and having upwardly projecting arms which swing through said base openings into said cylinders as the rocker arm is oscillated, and links connecting said arms to said low pressure pistons, the pivots connecting said links to said arms being so disposed relative to the axis of the rocker arm that they approach a straight line as the pistons near the ends of their work stroke.

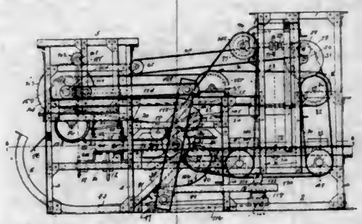
3. In a structure of the class described, the combination of a base, a pair of low pressure cylinders open at their lower ends mounted on said base, a pair of high pressure cylinders of substantially less diameter than said low pressure cylinders, heads for said low pressure cylinders having seats therein for said high pressure cylinders and constituting bases therefor, heads for said high pressure cylinders having delivery connections, pairs of high and low pressure cylinder pistons, connecting rods for said pairs of pistons disposed through said low pressure cylinder heads, disk valves for said high pressure cylinders disposed in said seats to surround said connecting rod and constitute packing glands therefor and packing gaskets for said high pressure cylinder seats, a rocker arm pivotally mounted on said base, and links connecting said arms to said low pressure pistons, the pivots connecting said links to said pistons and to said arms being so disposed relative to the axis of the rocker arm that they approach a straight line as the pistons near the ends of their work stroke.

5. In a structure of the class described, the combination of a base, a pair of low pressure cylinders open at their lower ends mounted on said base, a pair of high pressure cylinders of substantially less diameter than said low pressure cylinders, heads for said low pressure cylinders having seats therein for said high pressure cylinders and constituting bases therefor, heads for said high pressure cylinders having delivery connections, pairs of high and low pressure cylinder pistons, connecting rods for said pairs of pistons disposed through said low pressure cylinder heads, disk valves for said high pressure cylinders disposed in said seats to surround said connecting rod and constitute packing glands therefor and packing gaskets for said high pressure cylinder seats, a rocker arm pivotally mounted on said base, and links connecting said arms to said low pressure pistons.

[Claims 2, 4, and 6 to 8 not printed in the Gazette.]

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1,227,763. MOLD-DUMPING MACHINE. ARTHUR O. DUPUY, Cleveland, Ohio, assignor to The C. O. Bartlett & Snow Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 20, 1912. Serial No. 737,781. (Cl. 25—2.)



1. In a device of the character described, the combination of an intermittently operating mold inverting mechanism adapted to receive and invert a mold; an intermittently operating conveying mechanism adapted to remove such mold from said inverting mechanism when the same is at rest; means mounted above a portion of said conveying mechanism and adapted to bump said mold and thereby loosen the brick therefrom, said means being timed to operate upon the coming to rest of said intermittent conveying mechanism; and lifting means also mounted above a portion of said conveyer and adapted to lift said mold from the brick following such bumping operation.

2. In a machine of the character described, the combination of a mold inverting mechanism adapted to receive molds at either of two elevations; a feeder adapted to supply filled molds to said mechanism at the lower of such two elevations; a conveyer adapted to remove molds from said inverting mechanism; bumping means adapted to bump said molds when upon said conveyer, thereby loosening them from the brick; and means adapted to lift said mold from the brick and return them into said inverting mechanism at such second elevation.

3. In a machine of the character described, the combination of a mold inverting mechanism adapted to receive molds at either of two elevations; a feeder adapted to supply filled molds to said mechanism at the lower of such two elevations; a conveyer adapted to remove molds from said inverting mechanism; bumping means adapted to bump said molds when upon said conveyer, thereby loosening them from the brick; a sanding mechanism disposed beneath said inverting mechanism; and means adapted to lift said mold from the brick and return them to said inverting mechanism, the latter being adapted to discharge such emptied mold into said sanding mechanism.

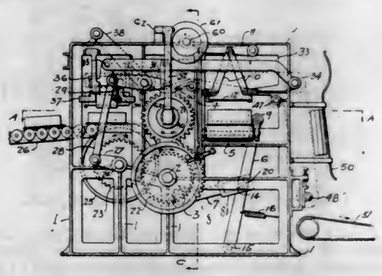
4. In a device of the character described, the combination of an intermittently operating mold inverting mechanism adapted to receive and invert a mold; a conveying mechanism adapted to supply a mold to said inverting mechanism; a second conveying mechanism adapted to remove the inverted mold from said inverting mechanism; means for removing such mold from the bricks therein; and other means for returning such empty mold in the same vertical path traveled by such filled mold.

5. In a device of the character described, the combination of an intermittently operating mold inverting mechanism adapted to receive and invert a mold; a conveying mechanism adapted to supply a mold to said inverting mechanism; a second conveying mechanism adapted to remove the inverted mold from said inverting mechanism; means for removing such mold from the bricks therein; sanding mechanism disposed on the side of said inverting mechanism adjacent said first named inverter; and other means for returning such empty molds to said sanding mechanism in the same vertical path traveled by such filled mold.

[Claims 6 to 11 not printed in the Gazette.]

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1,227,764. MOLD-DUMPING MACHINE. ARTHUR O. DUPUY, Cleveland, Ohio, assignor to The C. O. Bartlett & Snow Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 23, 1915. Serial No. 16,371. (Cl. 25—2.)



1. In a mold dumping machine the combination of a mold inverting mechanism, and means adapted to bump a mold when held therein.

2. In a mold dumping machine the combination of intermittently operated mold inverting mechanism; and bumping means adapted to bump a mold when held therein, said bumping means being timed to operate when said inverting mechanism is at rest.

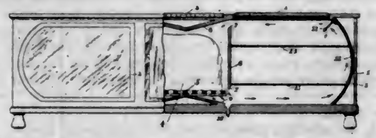
3. In a mold dumping machine the combination of a mold inverting mechanism; and means adapted to bump a mold longitudinally when held therein.

4. In a mold dumping machine the combination of a mold inverting mechanism; and bumping means adapted to bump a mold therein at either end.

5. In a mold dumping machine the combination of a laterally open, rotatable receptacle adapted to receive and invert a mold; and bumping means adapted to bump such mold at either end.

[Claims 6 to 48 not printed in the Gazette.]

1,227,765. REFRIGERATOR DISPLAY-COUNTER. ALBERT H. EHRLICH, St. Joseph, Mo. Filed Feb. 2, 1916. Serial No. 75,661. (Cl. 62—37.)



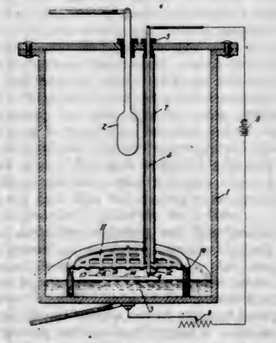
1. In a display refrigerator counter, the combination, with a case, of partitions disposed in said case to form food compartments and an intermediate ice compartment, said partitions being arranged to permit air currents to flow from the upper and lower portions of the compartments, a curved member disposed in the end of each of the food compartments and extending from the bottom to the top of the latter, and a perforated baffle transversely disposed in the food compartments adjacent the upper end of the curved member.

2. In a display refrigerator counter, the combination, with a casing, of vertical partitions spaced from the ends of the case to form food compartments and an intermediate ice compartment, each of said partitions being spaced from the top and bottom of the case to form air passages between the ice compartment and the food compartments, apexed deflectors disposed in the top and bottom of the ice compartment adjacent said air passages, and a curved member disposed transversely in the outer end of each of the food compartments, said member extending from the bottom to the top of said compartments, whereby the air currents may be guided and assisted in circulating through the chambers.

3. In a display refrigerator counter, the combination, with a case, of partitions spaced from the ends of the case to form food compartments and an intermediate ice compartment, each of said partitions being spaced from the top and bottom of the case to form air passages between the ice compartment and the food compartments, V shaped deflectors disposed in the ice compartment adjacent the air passages, a curved plate disposed in the outer end of each of the food compartments and extending from the bottom to the top of said compartments, and a perforated baffle plate transversely disposed in each of the food compartments adjacent the upper end of the curved plate.

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1,227,766. SUSTAINING DEVICE FOR VAPOR-CONVERTERS. SIDNEY W. FARNSWORTH, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 14, 1915. Serial No. 39,796. (Cl. 175—354.)



1. In a vapor electric device, the combination with a cathode, of a keep-alive anode substantially coextensive with the active surface thereof, said keep-alive anode being provided with openings for the passage of the converting arc to any part of the cathode surface.



2. In a vapor electric device, the combination with a cathode, of a keep-alive anode extending over substantially the entire active surface thereof, but so perforated as to exert substantially no shielding action thereupon.

3. In a vapor electric device, the combination with a cathode, of a keep-alive anode extending over substantially the entire active surface thereof and equally spaced therefrom throughout its area, said anode being provided with a plurality of perforations therethrough to minimize the shielding action thereof.

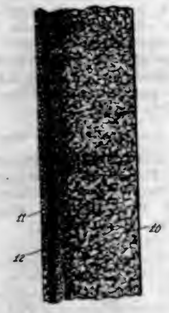
4. In a vapor electric device, the combination with a cathode having an extended active surface, of a reticulated keep-alive anode provided with portions extending in proximity to all portions of said cathode surface.

5. In a vapor electric device, the combination with a liquid cathode having an extended active surface, of a reticulated conducting plate adjacent, substantially parallel to and coextensive with, said cathode surface, and connections from said plate to a keep-alive circuit, whereby said plate is adapted to operate as a keep-alive anode.

[Claims 6 to 8 not printed in the Gazette.]

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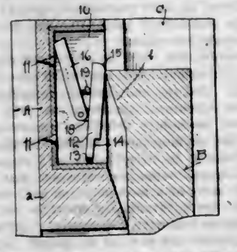
1,227,767. BUILDING-BOARD. JOHN FEIGEN, Indianapolis, Ind. Filed Jan. 16, 1915. Serial No. 2,671. (Cl. 72—36.)



A building board having its main portion consisting of mineral wool with a relatively small amount of cement therein so that said portion will maintain its shape and yet be resilient, a coating of cement on one surface of said mineral wool portion and adhering thereto, and crushed stone secured on said cement to form a hard external surface for said board, substantially as set forth.

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1,227,768. WINDOW-LATCH. WILLIAM S. FELL, New Orleans, La. Filed Jan. 27, 1917. Serial No. 144,943. (Cl. 16—58.)



1. A sash fastener comprising a casing having a tongue pivoted within and at the bottom of the casing and normally disposed in a horizontal plane and projecting out of the casing, but movable in a vertical plane to a position within the casing, and a locking member hingedly mounted on the upper face of the tongue and urging the tongue by gravity to a horizontal position, said locking member when the tongue is in a horizontal position being upwardly and rearwardly inclined and bearing against the rear face of the casing, there being means for preventing the outer end of the tongue from being moved inward to a vertical plane intersecting the pivotal center of the tongue to thereby cause the tongue to be constantly urged by gravity to a horizontal position.

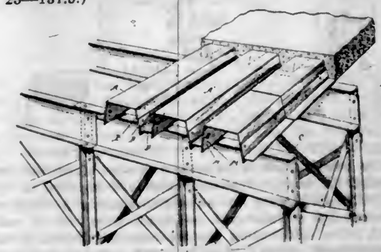
4. The combination with an upper sash and a lower sash having meeting rails, of a rectangular casing disposed within one of the rails of the upper sash and resting upon the meeting rail thereof, a tongue pivoted at its rear end to the bottom of said casing, inward of the forward edge of the casing and normally disposed in a horizontal position over the upper face of the meeting rail of the lower sash, a locking member hinged to the upper face of the tongue intermediate the ends of the tongue and said locking member when the tongue is in a horizontal position extending rearward and slightly upward and bearing against the rear wall of the casing, the end of the locking member being beveled to bear flat against said rear wall, said locking member at all times urging said tongue to a horizontal position and the end of the locking member having wedging engagement with the rear wall of the casing when the tongue is in a horizontal position, and a stud on the locking member whereby it may be manually lifted from its locking position, said stud preventing the tongue from being shifted so far into the casing as to prevent the dropping of the tongue to its horizontal position by gravity.

5. A sash fastener comprising a supporting member having a tongue pivoted to it, and normally disposed in horizontal plane and adapted to overlie the lower sash of a window, said tongue being movable in a vertical plane to an approximately vertical position, and a locking member hingedly mounted on the outward face of the tongue intermediate of its ends and urging the tongue by gravity to a horizontal position, said locking member when the tongue is in a horizontal position being upwardly and rearwardly inclined and bearing against said supporting member, the tongue being formed with upwardly extending parallel guard flanges on each side of the locking member, preventing the insertion of an implement beneath the locking member.

[Claims 2, 3, and 6 to 8 not printed in the Gazette.]

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1,227,769. ADJUSTABLE FORM FOR MOLDING CONCRETE STRUCTURES. ALBERT C. FITCH, Detroit, Mich. Filed Oct. 8, 1914. Serial No. 865,656. (Cl. 25—131.5.)



2. An adjustable form for molding cement structures, comprising a plurality of channel sections, angle sections having flanges adjustably secured to the flanges of said channel sections and oppositely-extending flanges adjustably overlapping each other.

4. An adjustable form for molding cement structures, comprising a plurality of parallel inverted channel sections having flaring sides, angle sections between said channel sections, each having one flange adjustably se-

cured to the flaring side of said channel section, the other flange adjustably overlapping the corresponding flange of the angle section of the adjacent channel section.

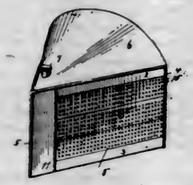
5. An adjustable form for molding cement structures, comprising a plurality of inverted channel sections, angle sections secured to the sides thereof, having flanges between said channel sections adjustable in position to vary the depth of space therebetween.

7. An adjustable form for molding cement structures, comprising a plurality of parallel inverted channel sections adjustable to varying distances between centers, and angle sections adjustably secured to and projecting from the adjacent channel sections overlapping each other in the space therebetween, permitting of the adjustments to varying distances between centers of said channel sections while still overlapping each other.

[Claims 1, 3, 6, and 8 not printed in the Gazette.]

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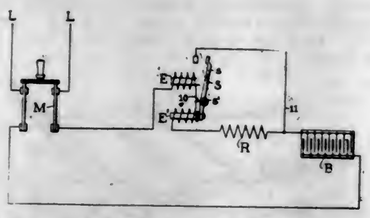
1,227,770. AUTOMOBILE-RADIATOR. ISIDOR FLEISCHMANN, Brooklyn, N. Y. Filed Aug. 16, 1916. Serial No. 115,140. (Cl. 257—128.)



An automobile radiator composed of a pair of converging upper water chambers, a pair of converging lower water chambers, and cooling members interposed between said chambers, each cooling member being formed of a rear plate, a front plate projecting a distance beyond the rear plate, and a plurality of air tubes set into the plates, the forwardly projecting ends of the front plates forming an upright water chamber at the nose of the radiator.

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1,227,771. BATTERY-CHARGING EQUIPMENT. EDWARD T. FOOTE, Montclair, N. J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 19, 1916. Serial No. 79,435. (Cl. 171—314.)




1. In combination, a battery, a source of current for charging the same, a resistance normally included in circuit with said battery and an electro-responsive switch to automatically exclude said resistance from circuit, said switch being self locking against response thereof under predetermined current conditions and being subjected to control by the current of the battery circuit.

2. In combination, a battery, a source of current for charging the same, a resistance, means to connect said battery to said source of current through said resistance and an electro-responsive switch self locking against response thereof under certain current conditions and subjected to the current of the battery circuit for timing of its response, said switch upon responding acting to shunt said resistance and being subject to deënergization upon disconnection of said battery from said source of current thereby insuring inclusion of said resistance upon subsequent initial connection of said battery to said source of current.

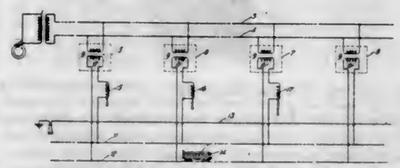
3. In combination, a battery, a source of current for charging the same, a resistance, a shunting switch for said resistance having an operating winding and a lockout winding, the latter winding being provided for series connection with said battery and means to connect said battery to said source of current through said resistance and said lockout winding of said switch and to further complete the circuit of the operating winding of said switch whereby said switch is rendered effective under certain current conditions to automatically shunt said resistance.

4. In a battery charging equipment, in combination, a line for supplying current, a battery connected thereto, a resistance included in series with said battery for limiting the initial surge of current therethrough, and an electro-responsive switch for excluding said resistance from said circuit, said switch having two windings included in series with said battery, one to actuate the same and the other to hold it against actuation while the current in the battery exceeds a predetermined value.

5. In a battery charging equipment, in combination, a current supplying line, a battery connected thereacross, a resistance included in series with said battery, and an electro-responsive switch biased to open position, said switch having two windings connected in series with said battery and with each other for exerting opposite pulls upon said switch, one of said windings predominating during excessive current conditions to maintain said switch open thereby maintaining said resistance in circuit, and the other of said windings predominating during normal current conditions to close said switch and exclude both said resistance and said first mentioned winding from the battery circuit.

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1,227,772. ELECTRIC DISTRIBUTING SYSTEM. CHARLES LE G. FORTESCUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 6, 1915. Serial No. 26,434. (Cl. 171—97.)



1. The combination with a source of current supply, transmission line conductors connected thereto, a common power supply circuit, and spaced transformers having their primary windings connected to said transmission line and their secondary windings connected at spaced intervals to the common power supply circuit, of reactance elements connected in circuit with said transformers, the reactance offered by said reactance elements progressively decreasing in amount as their distance from the source of current supply increases.

2. The combination with a source of current supply, transmission line conductors connected thereto, a common power supply circuit, and spaced transformers having their primary windings connected to said transmission line and their secondary windings connected at spaced intervals to the common power supply circuit, of reactance elements connected in circuit with said transformers, the reactance elements being so adjusted that the ampere-miles on both sides of a load point on said common power supply circuit are substantially equal in value.

3. The combination with a source of current supply and feeders connected thereto, of a power supply system, transformers for connecting at spaced intervals said power supply system to said feeders, and reactance elements connected in circuit with said transformers, said reactance elements being so adjusted that the reactance offered thereby progressively varies in amount as their distance from the source of current supply varies.



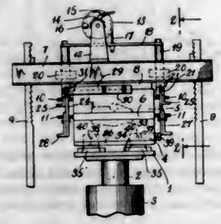
4. The combination with a source of current supply and feeders connected thereto, of a power supply system, transformers for connecting at spaced intervals said power supply system to said feeders, and reactance elements connected in circuit with said transformers, the reactance elements being so adjusted that the ampere-miles on both sides of a moving load point on said power supply system are substantially equal in value.

5. The combination with a source of current supply and feeders connected thereto, of a railway system comprising a trolley conductor, transformers for connecting at spaced intervals said trolley conductor to said feeders, and reactance elements connected in circuit with said transformers to offer impedance to the currents supplied to said trolley, said reactance elements being so adjusted that the reactance offered thereby progressively varies in amount as the distance from the source of current supply varies.

[Claim 6 not printed in the Gazette.]

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1,227,773. MOLDING-MACHINE. JEROME N. FRANTZ, Newark, N. J., assignor to The Foundry Appliance Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 15, 1916. Serial No. 114,960. (Cl. 22—25.)



1. In a molding machine the combination of a vertically movable support, adapted to receive a flask having a cope and drag with a pattern between the same, means for raising and lowering the support, a frame, a pressing plate carried thereby above the position occupied by the cope, adapted to press against the sand in the top of the cope when the support is raised, and a member mounted on said frame having supporting projections adapted to engage under lugs on the cope, and projections positioned to engage under lugs on the pattern when the latter and the drag are lowered partway beneath the suspended cope, said member being mounted to permit lateral movement thereof, to position said projections beneath the lugs and to remove them from beneath the same, substantially as set forth.

2. In a molding machine the combination of a support, a flask having a cope and drag with a pattern between the same adapted to be supported on said support, said cope and pattern having laterally-extending lugs thereon, a frame, a pressing plate carried thereby above the cope, means for causing relative movement between said support and plate, to increase and decrease the distance between the same, and a member mounted relatively to said plate, having supporting projections adapted to engage under lugs on the cope, and projections positioned to engage under lugs on the pattern after separating movement between said support and plate has separated the suspended cope from the pattern and drag, said member being supported to permit lateral movement thereof, to position said projections beneath the lugs and to remove them from beneath the same, substantially as set forth.

3. In a molding machine the combination of a frame, a vertical support thereon, a pair of horizontally extending members suspended from said support by pin and slot connections, adapted to permit lengthwise movement of said members and pivotal movement thereof, a support adapted to receive a flask having a cope and drag with pattern between the same, said members positioned to extend on opposite sides of the flask, and vertical extensions on said members having portions adapted to extend under lugs on the cope, and also on the pattern, said members being lengthwise movable sufficiently to remove said portions from under said lugs, substantially as set forth.

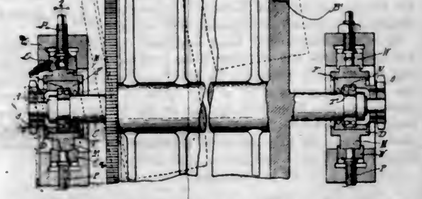
4. In a molding machine the combination of a frame, a vertical support thereon, a pair of horizontally extending members suspended from said support by pin and slot connections, adapted to permit lengthwise movement of said members and pivotal movement thereof, a support adapted to receive a flask having a cope and drag with pattern between the same, said members positioned to extend on opposite sides of the flask, vertical extensions on said members having arms adapted to extend under a pair of lugs on each side of the cope, brackets adapted to be secured to said extensions having arms adapted to extend under a pair of lugs on each side of the pattern, and means for securing said brackets in desired adjusted positions on said extensions, said members being movable lengthwise sufficiently to remove all said arms from under said lugs, substantially as set forth.

5. In a molding machine having a support, adapted to support a flask having a cope and drag with a pattern between the same, the combination of a cross member positioned to extend above the flask, a sheave thereon, a flexible connection about the sheave, and extending downwardly therefrom, a frame comprising a pair of horizontally extending members positioned to extend, one on each side the flask, suspended from said connection, said frame having a handle in front and vertically spaced portions adapted to extend under lugs on the cope and pattern, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

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1,227,774. CYLINDER-MOUNTING FOR PRINTING-PRESSES. GUSTAV A. FRIESS, Chicago, Ill. Filed Apr. 4, 1916. Serial No. 88,823. (Cl. 101—282.)



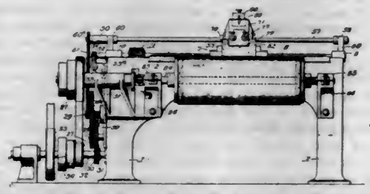
1. In a printing press having a cylinder adapted to receive removable printing jackets, a bearing for a trunnion of said cylinder mounted to rock on an axis transverse to the axis of rotation of said cylinder, the trunnion of said cylinder journaled in said bearing being engaged against longitudinal movement relatively thereto, a bearing for the other trunnion of said cylinder removably mounted in a housing and adapted to be lifted out of the same as the cylinder is tilted for mounting and demounting the printing jacket thereof.

2. In a printing press having a cylinder adapted to receive removable printing jackets, a housing for the bearing for one trunnion of said cylinder having parallel side walls between which said bearing is held against lateral movement, an adjustable support for said bearing in the bottom of said housing, an adjustable member in the top of said housing coacting with the adjustable support to hold said bearing against vertical movement, the opposed faces of said support and said member and the coöperating faces of said bearing engaged thereby having a curvature

of the radius of the distance of said faces from the axis of rotation of said cylinder to permit the latter to be tilted on an axis transverse to its axis of rotation.

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1,227,775. CYLINDER-GRINDING MACHINE. GUSTAV A. FRIESS, Chicago, Ill. Filed Nov. 23, 1916. Serial No. 133,048. (Cl. 51—4.)



1. A machine of the kind specified, including a rotatable support for the cylinder to be ground, means for rotating the same, a grinding element, mechanism for moving the same longitudinally of the cylinder while in contact therewith and from end to end of the latter, and mechanism for reciprocating said element during its said movement.

2. A machine of the kind specified, including a rotatable support for the cylinder to be ground, means for rotating the same, a grinding element, mechanism for moving the same longitudinally of the cylinder while in contact therewith and from end to end of the latter, and mechanism for reciprocating said element in said direction during its said movement.

3. A machine of the kind specified, including a rotatable support for the cylinder to be ground, means for rotating the same, a grinding element, mechanism for moving the same longitudinally of the cylinder while in contact therewith and from end to end of the latter, and mechanism for imparting rapid reciprocal movement of relatively short stroke to said element in said direction during its said movement.

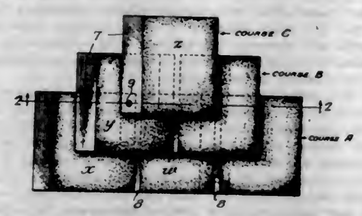
4. A machine of the kind specified, including a rotatable support for the cylinder to be ground, means for rotating the same, a grinding element, mechanism for moving the same longitudinally of the cylinder while in contact therewith and from end to end of the latter, and mechanism for reciprocating said element transversely of its general direction of travel and during the latter.

5. A machine of the kind specified, including a rotatable support for the cylinder to be ground, means for rotating the same, a grinding element, mechanism for moving the same longitudinally of the cylinder while in contact therewith and from end to end of the latter, and mechanism for imparting rapid reciprocal movement of relatively short stroke to said element transversely of its general direction of travel and during the latter.

[Claims 6 to 18 not printed in the Gazette.]

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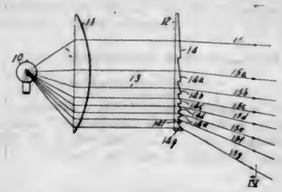
1,227,776. ROOFING-SHINGLE AND METHOD OF LAYING SAME. WILLIAM H. GAROSA, Rutherford, N. J. Filed Oct. 16, 1916. Serial No. 125,881. (Cl. 108—9.)




A shingle roof comprising a series of courses, the shingles in each course each having a reduced edge portion at one side lapped by the next shingle on that side, the shingles of each other course breaking joint with those of the next course and each third course lapping lengthwise two preceding courses, and fastening means through the lapped portions near the upper end of each two shingles in any course passing also through the mediate parts both as to length and breadth of a shingle of the next course above, and through the lower end of the reduced overlapped part of a shingle of a third course and its head lapped by the next shingle in that course.

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1,227,777. SIGNAL. ROBERT M. GILSON, Pittsburgh, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Jan. 20, 1914. Serial No. 813,157. (Cl. 240—48.4.)



1. A signal adapted for use on a railway curve and comprising a source of light, means for projecting from said source a beam of substantially parallel rays, and a glass screen located in said beam and comprising a series of vertically disposed prisms increasing in angle and decreasing in area from one side of the beam toward the other, said beam-projecting means and said screen being so placed that the portion of the beam which is deflected through the greatest angle is directed toward one end of the curve and the portion of the beam which is deflected through the least angle is directed toward the other end of the curve.

2. A signal adapted for use on a railway curve and comprising a source of light, means for projecting from said source a beam of substantially parallel rays, and a glass screen located in said beam and comprising a series of vertically disposed prisms increasing progressively in angle from one side of the beam toward the other, said beam-projecting means and said screen being so placed that the portion of the beam which is deflected through the greatest angle is directed toward one end of the curve and the portion of the beam which is deflected through the least angle is directed toward the other end of the curve.

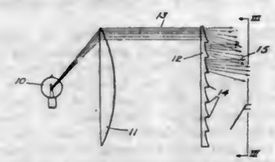
3. A signal adapted for use on a railway curve and comprising a source of light, means for projecting from said source a beam of substantially parallel rays, and a glass screen located in said beam and comprising a series of vertically disposed prisms increasing progressively in angle from one side of the beam toward the other, said prisms also decreasing progressively in area from one side of the beam toward the other, said beam projecting means and said screen being so placed that the portion of the beam having the greatest intensity is directed toward the far end of the curve and the portion of the beam having the lowest intensity is directed toward the part of the curve nearest the signal.

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1,227,778. SIGNAL. ROBERT M. GILSON, Pittsburgh, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Original application filed Jan. 20, 1914, Serial No. 813,157. Divided and this application filed Jan. 18, 1917. Serial No. 143,091. (Cl. 240—48.4.)

3. A signal comprising a source of light, means for projecting from said source a beam of substantially parallel rays and a glass screen located in said beam and comprising a series of vertically disposed prisms the angle of refraction of each of which prisms increases progressively



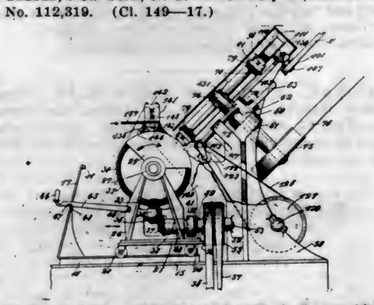


from a minimum value adjacent one side of the prism to a maximum value adjacent the other side.

[Claims 1, 2, and 4 not printed in the Gazette.]

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1,227,779. HIDE-WORKING MACHINE. CHARLES JOHN GLASEL, New York, N. Y. Filed July 31, 1916. Serial No. 112,319. (Cl. 149—17.)



1. In a machine of the class described, the combination with a base, standards rising therefrom and a plurality of knives mounted operatively on said standards, of a track on said base in front of said standards, a carriage movable on said track, a work cylinder revoluble in said carriage, a clutch device for operatively engaging said cylinder, a fixed guard plate in front of said track, and means for moving said carriage between said guard plate and its operative point.

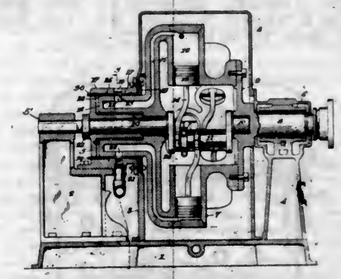
7. In a machine of the class described, the combination with a base, a carriage movable thereon, a work cylinder rotatably mounted upon said carriage, of means for rotating said cylinder in either direction, of means for gradually engaging said cylinder with said rotating means, means for gradually disengaging said cylinder from said rotating means, of means for adjustably securing hides or parts thereof to said cylinder, a plurality of adjustable spring controlled knives movable lengthwise of said cylinder, means for grinding said knives, an adjustable and rotatable helically bladed roll longitudinally disposed to said cylinder, and means for causing either said knives or said roll, or both to engage with or disengage from said working cylinder.

[Claims 2 to 6 not printed in the Gazette.]

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1,227,780. ROTARY ENGINE. JOHN GRAVES, Milwaukee, Wis., assignor of seventy-five one-hundredths to Joseph H. Rapel and twenty-five one-hundredths to Jesse E. Matteson, Milwaukee, Wis. Filed Dec. 16, 1915. Serial No. 67,129. (Cl. 121—64.)

1. In a steam motor of the described class, the combination of a rotor, a revoluble extension formed integral therewith projecting laterally from one side thereof, a stationary shaft, a stationary housing inclosing said extension on three sides, to-wit: above, below and at its outer end, said housing also inclosing one end of said shaft, a portion of said housing being interposed between said extension and said shaft, radial inlet and exhaust steam ports leading through the exterior wall of said housing to the steam ports within said extension, the steam pressure within said housing in any direction being adapted to counterbalance and neutralize the pressure in the opposite direction, whereby all lateral pressure of steam within said rotatable extension has no tendency to produce an end thrust in any direction.

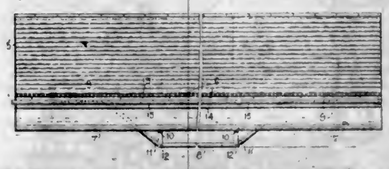


2. In a steam motor of the described class, the combination of a rotor provided with a revoluble extension closed at its outer end and projecting laterally from the side thereof, a stationary shaft, a housing, a portion of said housing being interposed between said extension and said shaft, said shaft extending horizontally through said housing and rotor, radial inlet and exhaust ports leading through the exterior wall of said housing to the steam ports within said revoluble extension, the steam pressure within said extension in any one direction being counterbalanced and neutralized by the pressure in the opposite direction, and a stationary casing secured to the supporting base of said rotor.

3. In a steam motor of the described class, the combination of a rotor provided with a revoluble extension projecting laterally from one side thereof and closed at its outer end, a stationary shaft, a stationary housing supporting one end of said shaft, radial inlet and exhaust ports leading through the exterior wall of said housing to the steam ports within said revoluble extension, standards for supporting said stationary shaft, said housing being secured to one of said standards surrounding one end of said stationary shaft, and inclosing said revoluble extension at its outer end and upon its interior and exterior sides.

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1,227,781. PROCESS FOR RECOVERING POTASSIUM SALTS FROM ORGANIC CARBONACEOUS MATERIALS. FRANKLIN C. GRIMES, Idaho Falls, Idaho. Filed Aug. 19, 1916. Serial No. 115,864. (Cl. 23—22.)



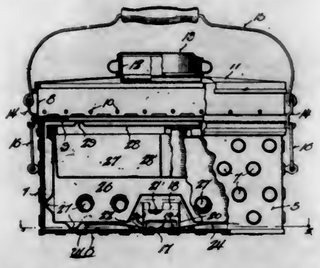
1. The process of recovering potassium salts from organic carbonaceous materials which consists in placing the material in an open chamber and incinerating the same, and adding a material which, under the action of heat, will liberate sulfur oxid gases to convert the potassium chlorid in the material into potassium sulfate.

2. The process of recovering potassium salts from organic carbonaceous materials which consists in incinerating the same in an open chamber and under a forced draft, and adding sulfur to liberate sulfur oxid gases which penetrate the material during the burning and convert the potassium chlorid existing therein into potassium sulfate.

3. The process of recovering potassium salts from organic carbonaceous materials which consists in burning the material in an open-top chamber and under a forced draft and adding sulfur to the burning material to liberate

sulfur oxid gases which penetrate the material and convert the potassium chlorid in the material into potassium sulfate, and finally sifting the residuary ash.

1,227,782. HEATED RECEPTACLE FOR MEALS. JULIUS E. HEIMERL, Milwaukee, Wis. Filed June 26, 1916. Serial No. 105,836. (Cl. 126—267.)

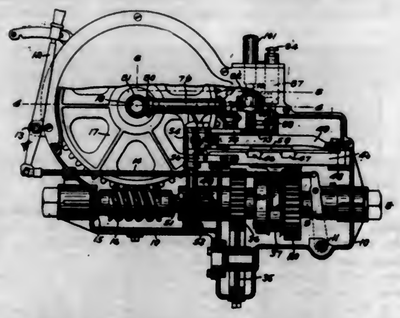


1. A heated receptacle for meals comprising an outer casing, a burner detachably seated on the bottom of the casing and provided with recesses, projections on the bottom engageable in said recesses, a removable container in the casing, and springs carried by the burner and engageable by the container to hold said recesses and projections in engagement.

2. A heated receptacle for meals comprising an outer casing, a burner in the bottom of the casing, a main container in the casing having its bottom inwardly offset to receive said burner, outwardly struck projections on the main container engaging the casing to hold the container spaced therefrom and a second container mounted in the upper portion of the main container.

3. In a heated receptacle for meals, a casing, a pan shaped plate detachably engageable with the bottom of the casing, upstanding wall portions on said plate apertured in their lower portion, and inwardly struck projections on the walls and the portions of the plate bounded thereby.

1,227,783. REVERSING MECHANISM. FRITZ W. A. HENRICI, Dorchester, Mass., assignor to Louis F. Buff, Jamaica Plain, Mass. Filed Jan. 13, 1913. Serial No. 741,752. (Cl. 74—50.)



1. Reversing mechanism comprising, in combination, a driving shaft, a driven shaft, gears connecting the same, and a clutch on each shaft actuated by the driving shaft to lock and unlock certain of said gears to and from the shafts to reverse the motion of the driven shaft.

2. Reversing mechanism comprising, in combination, a driving shaft, a driven shaft, gears connecting the same, a clutch on each shaft to lock and unlock certain of said gears to and from the shafts, and automatically acting clutch actuating means operated from the driving shaft to actuate said clutches to reverse the motion of the driven shaft.

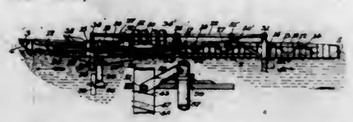
3. Reversing mechanism comprising, in combination, a driving shaft, a driven shaft, gears connecting the same, and clutches actuated by the driving shaft and controlled, as to time of actuation, by the driven member to lock and unlock certain of said gears to and from the shafts.

4. Reversing mechanism comprising, in combination, a driving shaft, a driven shaft, gears connecting the same, clutches to lock and unlock certain of said gears to and from the shafts, and automatically acting clutch actuating means operated from the driving shaft and controlled, as to time of actuation, by the driven member to lock said unlock certain of said gears to and from the shafts.

5. Reversing mechanism comprising, in combination, a driving shaft, a driven shaft, gears connecting the same, clutches to lock and unlock certain of said gears to and from the shafts, clutch actuating means, and clutch controlling and rotation balancing means for the clutch actuating means to control the action of said clutches.

[Claims 6 to 59 not printed in the Gazette.]

1,227,784. HIGH-SPEED MOTOR-CRAFT. PETER COOPER HEWITT, Passaic, N. J. Original application filed Nov. 12, 1906, Serial No. 343,060. Divided and this application filed Dec. 16, 1913. Serial No. 807,054. (Cl. 114—66.5.)



1. In a craft of the class described, a normally submerged deflecting plate pivotally mounted to turn about an axis forward of the center of reaction, in combination with means tending to maintain said plate at a suitable deflecting angle.

6. In a craft of the class described, a normally submerged deflecting plate pivotally mounted to turn about an axis, located substantially in the plane of its deflecting surface, forward of its center of reaction, in combination with an adjustable spring tending to maintain said plate at a suitable deflecting angle.

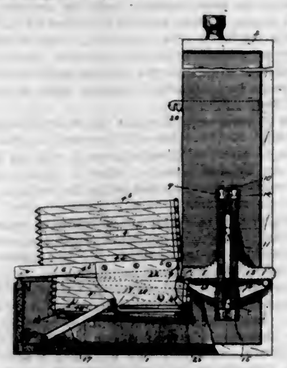
[Claims 2 to 5, 7, and 8 not printed in the Gazette.]

1,227,785. FILING APPLIANCE. HARRY J. HICK, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed June 8, 1914. Serial No. 843,602. (Cl. 45—2.)

1. A filing case including two similar sections hinged together, a bearing bracket pivotally connected with one section, a slide bracket pivoted to the other section, slide rods carried by the bearing bracket on opposite sides of its axis and operating in and through the slide bracket, and compression springs on the slide rods between the brackets for counterbalancing one section on the other.

2. A filing case including two sections hinged together, a pendent bracket pivoted to one section, a cross head pivoted to the pendent bracket, a slide bracket pivoted to the other section, slide rods fixed to the cross head on opposite sides of its axis and operating in and through the slide bracket, and compression springs on the slide rods between the brackets for counterbalancing one section on the other.

3. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, a bearing bracket pivotally connected with the base section and a slide bracket pivoted to the cover section, slide rods carried by the bearing bracket on opposite sides of its axis, and operating in and through the slide bracket, and compression springs on the rods between the brackets for counterbalancing the cover section.

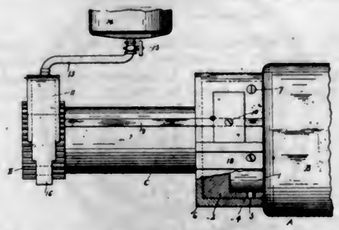


4. A filing case including similar base and cover sections, with guiding hinge connections for swinging and shifting the cover section upon the base section, a pendent bracket pivoted to the base section, a cross head pivoted to the pendent bracket, a slide bracket pivoted to the cover section, slide rods fixed to the cross head on opposite sides of its axis and operating in and through the slide bracket, and compression springs on the rods between the cross head and the slide bracket for counterbalancing the cover section.

5. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, a series of hinged holders and a frame mounted in the case, one end holder of the series and the frame being pivoted to the rear end of the cover section, links pivoted in the forward end of the base section, a tray pivoted to the links and having lateral pivots on its rear end, pendent bearings on the frame for engaging the lateral pivots to swing the tray upon the links by a rotation of the frame, and a second series of hinged holders having one end holder pivoted to the rear end of the swinging tray.

[Claims 6 to 17 not printed in the Gazette.]

1,227,786. WETTING ATTACHMENT FOR TRIMMING-MACHINES. LAWSON D. HILTZ, Marysville, New Brunswick, Canada. Filed Sept. 11, 1916. Serial No. 119,421. (Cl. 12—1.)



1. The combination with a trimming machine of a casing mounted thereon, a moistener carried by said casing, and means whereby said casing may be oscillated for the purpose set forth.

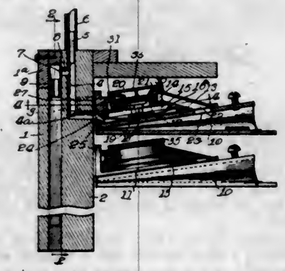
2. The combination with a trimming machine, of a casing arranged thereupon, means for oscillating said casing, an arm extending from said casing, and a moistener carried by the outer end of said arm for the purpose set forth.

3. The combination with a trimming machine having a bearing, a shaft journaled within said bearing and a cutter carried by the outer end of said shaft, of a sleeve detachably secured to said bearing, a casing arranged to oscillate upon said sleeve, an arm extending from said casing, a moistener carried by the outer end of said arm, and means for oscillating said casing.

4. The combination with a trimming machine having a bearing, a shaft journaled in said bearing and a cutter carried by the outer end of said shaft, of a sleeve detachably secured to said bearing, a casing mounted upon said sleeve, an arm projecting from said casing, a moistener carried by said arm, a supply tank, and a flexible connection between said supply tank and said moistener for the purpose set forth.

5. The combination with a trimming machine comprising a bearing having a shaft journaled therein and a cutter carried by the outer end of said shaft, of a projection carried by said bearing, a sleeve detachably connected to said projection, a casing mounted upon said sleeve, slot and pin connections between said casing and said sleeve for permitting the casing to oscillate upon said sleeve, a weight carried by said casing for causing the casing to turn in one direction, an arm carried by said casing, a moistener carried by said arm, and means connected to said casing for causing the same to turn in an opposite direction to that in which the weight is adapted to cause the casing to turn substantially as and for the purpose specified.

1,227,787. PNEUMATIC ACTION FOR PLAYER-PIANOS. EMORY C. HISCOCK, Chicago, Ill., assignor to John C. Farwell, Chicago, Ill. Filed July 15, 1914. Serial No. 851,027. (Cl. 84—178.)



1. In a pneumatic player action, the combination with a wind chest, of a power pneumatic, and a valve housing for said power pneumatic having a supporting tenon fitted into a vertical wall of said wind chest and also having a vertical flange abutting against said vertical wall, and one or more attaching screws passed through said flange and into said vertical wall.

2. In a pneumatic player action, the combination with a wind chest, of a power pneumatic, and a valve housing for said power pneumatic formed with a pair of supporting tenons on opposite sides respectively of the longitudinal median line thereof and fitted into a wall of said wind chest.

3. In a pneumatic player action, the combination with a wind chest, of a power pneumatic, and a valve housing for said power pneumatic formed on one end thereof with a pair of hollow tenons fitted into a wall of said wind chest, said hollow tenons affording a communication between the interior of said wind chest and the diaphragm chamber of said valve housing.

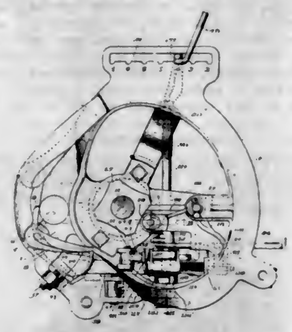
4. In a pneumatic player action, the combination with a wind chest, of a power pneumatic, and a controlling valve housing to which said power pneumatic is secured, said housing being formed as an integral metal casting and provided with a pair of integral hollow tenons on opposite sides respectively of the longitudinal median line thereof fitted into a vertical wall of said wind chest and forming the principal support of said casting on said wind chest and said hollow tenons affording a communication between the interior of said wind chest and the diaphragm chamber of said valve housing.

5. In a pneumatic player action, the combination with a wind chest provided with a pair of counter-sunk holes extending through a vertical wall thereof, of a controlling valve housing, formed with a pair of integral hollow tenons fitted into the countersunk ends of said holes, said holes and the bores of said tenons forming parts of a pair of ducts of uniform diameter leading from the wind chest chamber to the diaphragm chamber of said valve housing, and a power pneumatic secured to and wholly supported by said valve housing.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,788. SWITCH-CONTROLLING MECHANISM FOR SELF-RAKE REAPERS. LUD HOLLAND-LETZ, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Jan. 2, 1912. Serial No. 669,025. (Cl. 56—94.)



1. In a reaper switch, a rake controlling cam, a pivoted switch forming a part thereof, and means whereby the range of movement of said switch may be regulated.

2. In a reaper switch, a rake controlling cam, a pivoted switch forming a part thereof, and means carried by said cam whereby the range of movement of said switch may be regulated.

3. In a reaper switch, a rake controlling cam, a pivoted switch forming a part thereof, and a member adjustably mounted on said cam and engaging said switch whereby the range of movement thereof may be regulated.

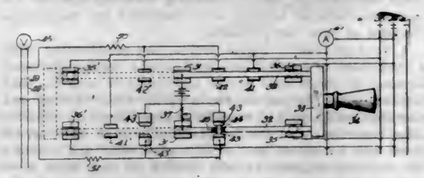
4. In a reaper switch, a frame, a sector pivoted on said frame, a holding pawl for said sector pivoted on said frame, and means whereby the range of movement of said holding pawl may be regulated.

5. In a reaper switch, a frame, a sector pivoted on said frame, a holding pawl for said sector pivoted on said frame, and independent means pivoted on the pivot of said sector and engageable with said holding pawl whereby the range of movement thereof may be regulated.

[Claims 6 to 30 not printed in the Gazette.]

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1,227,789. ELECTRIC SWITCH. ALBERT J. HORTON, White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 21, 1913. Serial No. 762,581. (Cl. 171—314.)



1. The combination with a switch having a pair of stationary contact members, a pair of movable contact members adapted to coöperate therewith to open and close a circuit, and a pair of auxiliary contacts, of a voltmeter connected across said auxiliary contacts, and an ammeter connected to one of said auxiliary contacts and to one of said switch contacts, said auxiliary contacts being normally out of contact with said movable contact member when the latter are in circuit closing position, but being mounted so as to be engaged thereby when moved to another position.

2. In an electric switch, a pair of blades pivoted at one end, a handle at the other end common to both blades, and a pair of stationary contacts each adapted to be engaged by one of said blades to close a circuit, a pair of auxiliary contacts so disposed as to be engaged by said blades during movement thereof either to open or close said circuit, one of said stationary contacts remaining in contact with its coöperating blade during movement between the circuit closing position and the position of engagement with said auxiliary contacts.

3. The combination with a storage battery, of a charging circuit, battery testing apparatus, and a switch having pivoted knife blades, contacts to be engaged by said blades to connect said battery to one or both sides of said charging circuit selectively and auxiliary contacts to be engaged by said blades for connecting said battery to said testing apparatus but only in a position of said blades to interrupt circuit between said battery and one side of said charging circuit.

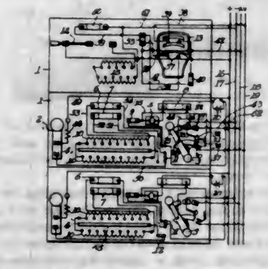
4. In an electric switch, main contacts, movable circuit closing elements adapted to be moved into and out of engagement therewith and auxiliary ammeter and voltmeter contacts, said contacts being so disposed that the voltmeter circuit may be established independently of the remaining circuits by movement of said elements to one position, the voltmeter and ammeter circuits may be established simultaneously by movement to a different position and the main circuit alone may be established by movement to a third position.

5. The combination with a storage battery, of a charging circuit, battery testing apparatus, and a switch having a pair of pivoted knife blades, clips to be engaged by said blades to connect said battery to said charging circuit, one of said clips being shorter than another for interruption of the connection between said battery and one side of said charging circuit while maintaining the connection between said battery and the opposite side of said circuit and auxiliary clips to be engaged by said blades to connect said battery to said testing apparatus, said auxiliary clips being engaged by said blades in the position of the latter to establish connection between said battery and one side only of said charging circuit and to be disengaged thereby when moved to connect said battery to both sides of said charging circuit.

[Claims 6 to 8 not printed in the Gazette.]

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1,227,790. CONTROL-PANEL. ALBERT J. HORTON, White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed June 30, 1913. Serial No. 776,579. (Cl. 171—314.)



1. Battery charging means including a charging circuit, separate switches for opposite sides of said circuit, one of said switches being biased to open position and provided with means under the control of the other of said switches to releasably retain it in closed position, a regulating rheostat for said circuit and interlocking means between said rheostat and said biased switch to insure a given condition of the former upon closure of the latter.

2. Battery charging means including a charging circuit, a switch in one side of said circuit biased to open position, a magnet in said circuit for holding said switch in closed position, a switch in the opposite side of said circuit controlling said magnet to effect release of said former switch, a rheostat in said charging circuit and means interlocking said rheostat and said first mentioned switch to insure a given condition of the former as a pre-requisite to closure of the latter.

3. Battery charging means including a charging circuit, a meter circuit and a common control switch therefor, said switch having a centered position for completion of said charging circuit and being movable in one direction from said position to complete said meter circuit and in a reverse direction from said position to interrupt both said charging circuit and said meter circuit.

4. In combination, a pair of switches, each adapted to close one side of a circuit, one of said switches having auxiliary voltmeter contacts whereby the circuit conditions may be tested with said switch prior to the closing of the other switch, said first switch having also a magnetic blowout.

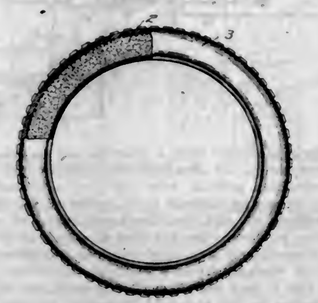
5. Battery charging means including a charging circuit, a meter circuit, a common control switch for one side of said charging circuit and for said meter circuit, said switch having a closed position with respect to said charging circuit and being movable therefrom to selectively close said meter circuit or open both of said circuits, a second switch for the other of said charging circuits, said second switch being biased to open position, a magnet under the control of said first switch to retain said second switch closed subject to release upon opening of said first switch, a rheostat in said charging circuit and means interlocking said rheostat and said second switch to prevent closure of the latter except under given conditions of the former.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,791. TIRE FOR VEHICLES AND METHOD OF MAKING THE SAME. JOSEF HUEBNER, Milwaukee, Wis., assignor to Pan-American Rubber Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Aug. 10, 1916. Serial No. 114,247. (Cl. 154—12.)



1. A tire for vehicles comprising an inner tire or core of a solid material having a multiplicity of closed cells and a wear resisting tire casing of rubber vulcanized thereto.

2. A tire for vehicles comprising an inner tire or core of vulcanized rubber compound having a multiplicity of closed cells and a wear resisting tire casing of rubber vulcanized thereto.

3. A tire for vehicles comprising an inner tire or core of vulcanized rubber, embodying a preservative agent and having a multiplicity of closed cells containing a gaseous medium, and a wear resisting tire casing of rubber vulcanized to said core.

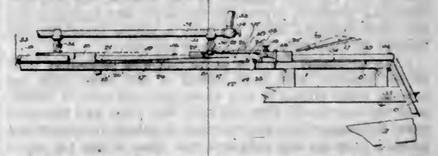
4. A method of making vehicle tires which comprises incorporating a volatile ingredient with a vulcanizable rubber compound, forming an elongated cylindrical core therefrom, surrounding said core with a casing of vulcanizable rubber compound connecting the ends of said core to form an annulus, subjecting said annulus in a suitable mold to successively increased temperatures, and maintaining said mold at a vulcanizing temperature for a period sufficient to vulcanize said core and casing.

5. A method of making vehicle tires which comprises incorporating volatile and preservative ingredients with a vulcanizable rubber compound, forming an elongated cylindrical core therefrom, surrounding said core with a casing of vulcanizable rubber compound, connecting the ends of said core to form an annulus, subjecting said annulus in a suitable mold to successively increased temperatures, and maintaining said mold at a vulcanizing temperature for a period sufficient to vulcanize said core and casing.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,792. CONCENTRATOR. JOHN F. ISBELL, Los Angeles, Cal., assignor, by mesne assignments, to George L. Knight, Los Angeles, Cal. Filed Dec. 17, 1912. Serial No. 737,313. (Cl. 83—88.)



1. In a concentrator, a table, means for longitudinally reciprocating said table, means for supplying water and material at one end of said table, riffles extending obliquely on said table from one side thereof to a concentrating line extending longitudinally of the table, and separators having walls continuous with the riffles and having outlet means through which the material is guided by said riffles and walls, said outlet means being vertically adjustable to control the height of the discharge therethrough.

2. In a concentrator, a table, means for longitudinally reciprocating said table, means for supplying water and material at one end of said table, riffles extending obliquely on said table from one side thereof to a concentrating line extending longitudinally of the table, and separators having walls continuous with the riffles, said riffles having flanges extending from the tops of the riffles inwardly over the space between the riffles, and said separators having top portions extending between the separator walls and having portions abutting the inner ends of the flanges on said riffles.

3. In a concentrator, a table, means for longitudinally reciprocating said table, means for supplying water and material at one end of said table, riffles extending obliquely on said table from one side thereof to a concentrating line extending longitudinally of the table, and separator boxes having walls continuous with the riffles, a top plate for each separator box, each separator box being provided with a water chamber above said top plate having an outlet into the separator chamber at the rear of said top plate, and parting strips at opposite sides of said water chamber and spaced therefrom to form a central passage between said parting strips.

4. In a concentrator, a table, means for longitudinally reciprocating said table, feed means at one end of the table, riffles extending obliquely on said table, separator boxes having side walls continuous with said riffles, and parting strips extending above and at each side of said separator boxes.

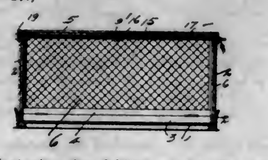
5. In a concentrator, a table, means for longitudinally reciprocating said table, feed means at one end of the

table, riffles extending obliquely on said table, separator boxes having side walls continuous with said riffles, means for supplying wash water to the separator boxes, said boxes being open at the rear for receiving ore and for discharge of wash water, outlet means in each separator box, and parting strips extending above and at each side of said separator boxes, forming a clear water channel adjacent the separator boxes.

[Claims 6 to 13 not printed in the Gazette.]

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1,227,793. FOLDING CRATE. ROBERT T. JANES, Comanche, Tex. Filed Dec. 20, 1915. Serial No. 67,726. (Cl. 217—47.)

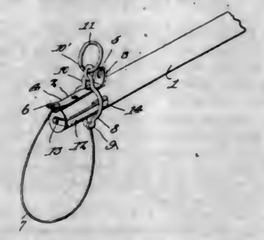


1. In a fastening for folding crates, the combination with folding ends and sides mounted on a bottom and a top correlated with the ends and sides, of an elongated fastening rod extending from one end to the opposite end of the crate, means for fastening the top to the rod carried by the top and engaged by the ends of the rod, and fastening members pivoted to the sides and engaging the rod from opposite sides, whereby a single fastening rod fastens all four sides and the top together.

2. In a folding crate, a bottom having fastening clips at its opposite ends, ends hinged to fold down onto the bottom, sides hinged to fold down onto the ends, a removable top correlated with the ends and sides and provided with fastening clips at each end, a single fastening rod passing through the ends and the clips of the top when the crate is set up and passing through the clips of both the top and bottom when the crate is folded, and links pivoted to the side members and engaging the rod when the crate is set up.

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1,227,794. HOG CATCHER AND HOLDER. ARLEY M. JOHNSON, Belle Center, Ohio. Filed Mar. 28, 1917. Serial No. 157,989. (Cl. 119—153.



1. In a hog holder, the combination with a handle, of an animal engaging member connected therewith, means normally embracing said handle for securing said animal engaging member upon an animal, and means for normally holding said member upon said handle.

2. In a hog holder, the combination with a handle, of an animal engaging loop, means secured to the loop for normally embracing said handle, and a member on said handle for holding said means normally at rest upon said handle.

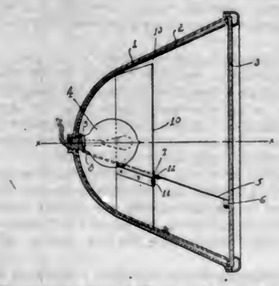
4. In a hog holder, the combination with a handle, of an animal engaging loop, one end thereof being connected with said handle, a member slidably embracing said handle for securing the other end of said loop, resilient means for holding said member normally at rest upon said handle, and a hand engaging element carried by said member.

5. In a device of the class described, a handle, an attaching plate secured thereto and having a yielding terminal, a member slidably mounted on the handle and plate, a hand engaging portion attached to said member, and a loop secured at its ends to said member and the yielding terminal of the plate, respectively.

[Claim 3 not printed in the Gazette.]

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1,227,795. DIMMER FOR MOTOR-VEHICLES. HANS O. JOHNSON, Sacramento, Cal., assignor of one-half to Alex E. Noack, Sacramento, Cal. Filed June 6, 1916. Serial No. 101,904. (Cl. 240—48.2.)

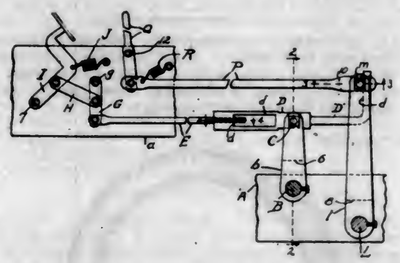


1. The combination with a reflector and a lamp centered therein, of a dull plate extending transversely across the forward end of the reflector, and a vertical frosted translucent envelop fitted against the plate and extending over the lamp.

2. The combination with a reflector and a lamp, of a frosted translucent envelop disposed in front of the lamp, and a dull plate set within the reflector in advance of the envelop.

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1,227,796. SHAFT-OPERATING MECHANISM. HENRY JOSEPHSON, Cleveland, Ohio. Filed Dec. 4, 1916. Serial No. 134,885. (Cl. 74—81.)



1. The combination with a shaft having an arm, a rod operatively connected with said arm, another shaft which is substantially parallel with the first-mentioned shaft and having an arm adapted to be rocked in one direction independently of said first-mentioned shaft, of a rigid projecting member connected and arranged at an angle to the aforesaid rod and extending into proximity to the arm of the second-mentioned shaft, and a member carried by the arm of said second-mentioned shaft and arranged to be pushed by the aforesaid projecting member during the actuation of said rod endwise in the required direction.

2. The combination with a shaft having an arm, a rod operatively connected with said arm, another shaft which is substantially parallel with and spaced laterally of the first-mentioned shaft and having an arm, and a lever operatively connected with said arm of the second-mentioned shaft for actuating said arm in the direction of the first-mentioned shaft, of a rigid projecting member connected and arranged at an angle to the aforesaid rod and extending into proximity to the arm of the second-mentioned shaft, and a member carried by the arm of said second-mentioned shaft and arranged to be pushed by the aforesaid projecting member during the actuation of said rod endwise in the required direction.

3. The combination, with a rock-shaft having an arm, a member carried by said arm and substantially parallel with said shaft, and another shaft which is substantially parallel with the first-mentioned shaft and having an arm, of an endwise shiftable rod operatively connected with the last-mentioned arm, and a rigid member connected to said rod and extending transversely of the aforesaid member of the first-mentioned arm and arranged to push said member of said first-mentioned arm during movement of said rod endwise in the required direction.

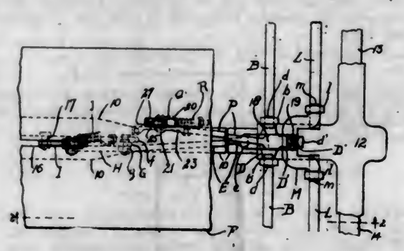
4. The combination, with a rock-shaft having an arm, a pivotal member carried by said arm and substantially parallel with said shaft, an endwise shiftable rod loosely embracing said pivotal member, and another shaft which is substantially parallel with and arranged at one side of the first-mentioned shaft and has an arm, of an endwise shiftable rod operatively connected with the last-mentioned arm, and a rigid member connected to the last-mentioned rod and extending transversely of and in contact with the aforesaid pivotal member.

5. The combination, with a substantially horizontally arranged rock-shaft having an upwardly projecting arm, a pivotal member which is substantially parallel with said shaft and carried by said arm, an endwise shiftable rod loosely embracing said pivotal member and provided with a slot extending vertically through said rod, and another shaft which is substantially parallel with and arranged at one side of the first-mentioned shaft and has an upwardly projecting arm, of an endwise shiftable rod operatively connected with the last-mentioned arm, and a rigid projecting member connected to the last-mentioned rod and extending transversely of the aforesaid pivoted member and into the aforesaid slot.

[Claim 6 not printed in the Gazette.]

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1,227,797. BRAKE-SHAFT-OPERATING MECHANISM FOR AUTOMOBILES. HENRY JOSEPHSON, Cleveland, Ohio. Filed Dec. 18, 1916. Serial No. 137,558. (Cl. 74—39.)



1. In brake-shaft-operating mechanism for an automobile, two brake-operating rock-shafts arranged transversely of the automobile and substantially in line endwise and each having an arm, a foot-lever operatively connected with the arms of said shafts for effecting the brake-applying movement of the shafts, two other brake-operating rock-shafts arranged transversely of the automobile and substantially in line endwise and each having an arm and having their arms adapted to be actuated in the direction required to effect the brake-applying movement of said second-mentioned shafts independently of the first-mentioned shafts, a hand-lever operatively connected with said arms of the second-mentioned shafts, and means independent of the hand-lever for actuating the arms of the second-mentioned shafts in the aforesaid direction simultaneously with and during the brake-applying movement of the first-mentioned shafts by the foot-lever.



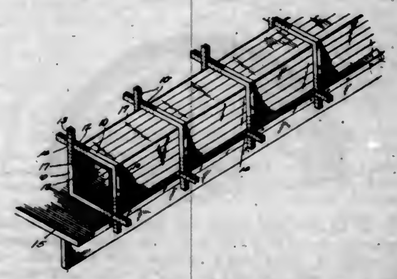
5. In brake-shaft-operating mechanism for an automobile, two brake-operating shafts which are substantially in line endwise and each provided at its inner end with an arm and having their arms projecting in the same direction, an equalizing bar extending between and connecting together said arms, a hand-lever operatively connected with and spaced forwardly from said bar, two other brake-operating shafts having each an arm, a foot-lever operatively connected with the arms of the second-mentioned shafts for effecting the brake-applying movement of said second-mentioned shafts, and means whereby the aforesaid equalizing bar is actuated in the direction required to effect the brake-applying movement of the first-mentioned shafts during the brake-applying movement of the second-mentioned shafts by the foot-lever.

11. In brake-shaft-operating mechanism for an automobile, two brake-operating shafts arranged transversely of the automobile and substantially in line endwise and each provided at its inner end with an arm and having their arms projecting in the same direction, an equalizing bar extending between and connecting together the arms of said shafts, two other brake-operating shafts substantially parallel with the first-mentioned shafts and arranged substantially in line endwise and each provided at its inner end with an arm and having their arms projecting in the same direction, an equalizing bar extending between and connecting together the arms of the second-mentioned shafts, a foot-lever spaced forwardly from the second-mentioned bar, and a rod operatively connected at one end with said foot-lever and at its other end with said second-mentioned bar, one of the equalizing bars having an arm which extends transversely of the other equalizing bar.

[Claims 2 to 4, 6 to 10, and 12 to 19 not printed in the Gazette.]

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1,227,798. COLUMN-FORM CLAMP. HENRY P. JUNGCLAUS, Indianapolis, Ind. Filed June 26, 1916. Serial No. 105,783. (Cl. 25—131.)



1. A form clamp comprising a pair of divergent arms each formed upon its inner face to receive and retain a nailing strip of wood and each formed at its end to be detachably connected to the end of a similar arm.

2. A form clamp comprising a pair of divergent arms each bifurcated at its end for interdigitation with a similar arm and each formed upon its inner face to receive and retain wooden nailing strips.

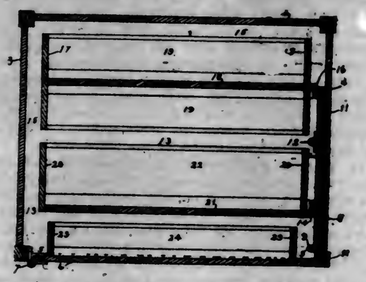
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1,227,799. CABINET. ARTHUR D. KAUB, Mongo, Ind. Filed Sept. 20, 1915. Serial No. 51,509. (Cl. 45—95.)

1. The combination with a cabinet body, of a bracket pivotally mounted within the cabinet; a shelf bearing member pivotally mounted upon said bracket and having its mount spaced from the wall of the cabinet; a second bracket pivotally mounted upon said first mentioned bracket adjacent the end thereof; and a shelf bearing member pivotally carried by said last mentioned bracket adjacent its outer end.

2. The combination with a cabinet body provided with a door, of a bracket pivotally mounted within the cabinet; a shelf bearing member pivotally mounted upon said

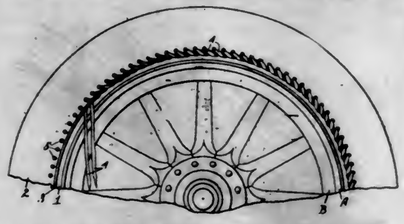
bracket; a second bracket pivotally mounted upon the first mentioned bracket; and a shelf bearing member pivotally mounted upon the last mentioned bracket, said shelf bearing members adapted to be swung back and forth through the cabinet door upon said brackets.



3. The combination with a cabinet or inclosure provided with a door, of a bracket pivotally mounted on the cabinet and arranged within same; a shelf bearing member pivotally mounted upon said bracket intermediate its extremities; a second bracket pivotally mounted upon and adjacent the extremity of the first mentioned bracket; and a shelf bearing member pivotally mounted upon and adjacent the extremity of said second bracket, said shelf bearing members adapted to be swung back and forth through the cabinet door upon said brackets.

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1,227,800. FASTENING DEVICE FOR OVERSHOES FOR TIRES. PERRY E. KENT, New York, N. Y. Filed Feb. 28, 1916. Serial No. 80,875. (Cl. 152—17.)



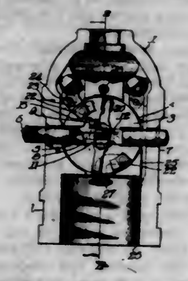
1. In an auxiliary casing for automobile tires, a non-expansible metal ring attached to the inner edges thereof by means of lacing which extends from holes near the edge of the casing around the ring to other holes therein, encircling the casing, thus limiting the expansion of the inner edges of the casing and holding it firmly against the inflated shoe.

2. In a retaining device for the edges of an outer covering for automobile tires, restraining rims bound to either edge of said outer covering by means of strands of binding material wrapped around said restraining rims running from apertures near the edge of said casing thence around said restraining rims in a diagonal manner to alternating apertures in said casing thereby permitting the use of several strands of binding material to complete the wrapping.

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1,227,801. ELECTRIC SWITCH. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 2, 1911. Serial No. 652,424. (Cl. 173—355.)

1. In an electric switch, in combination, two movable members, one a contact member and the other an actuating, member, said members being relatively movable in parallel planes, a rigid projection on one of said members, a rigid cam on the other of said members, and resilient means holding said projection and said cam in constant yielding engagement.



2. In an electric switch, in combination, a rotatable contact member, a movable actuating member therefor, said members being oppositely movable in parallel planes and having rigid engaging parts, and resilient means holding said parts in constant yielding engagement.

3. In an electric switch, in combination, a rotatable contact member, a reciprocable operating member therefor, an operative connection between said members comprising a rotatable peaked cam movable with one and a projection movable with the other, and resilient means holding said cam and said projection in constant yieldable engagement.

4. In an electric switch, in combination, an oscillating contact actuating member, a reciprocating operating member therefor, and an operative connection between the same for imparting a snap movement to the former upon reciprocation of the latter comprising an oscillating peaked cam connected to one of said members, and one or more rigid projections on the other member having rounded surfaces to engage said cam, and means resiliently holding said cam and said projection or projections in engagement.

5. In an electric switch, in combination, an oscillating contact, rigid projections thereon having rounded surfaces, a second oscillating member having a peaked cam surface, a spring holding said oscillating cam in engagement with said projection on said contact member, and a reciprocating member connected to said cam to oscillate the same.

[Claim 6 not printed in the Gazette.]

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1,227,802. PAPER PACKAGE. DENNIS L. KOONTZ, Fort Atkinson, Wis. Filed Aug. 16, 1915. Serial No. 45,723. (Cl. 229—12.)



1. A paper package including a body portion formed of a coiled sheet of paper with the inner end of said sheet of paper inclined transversely of the sheet of paper, the outer end of the sheet of paper being secured to prevent the sheet of paper from uncoiling, and end members wedging tightly in the ends of the coiled body portion of the package, the corners of the inner end of the coiled sheet of paper being beveled so as to be tapering and said beveled corners extending to points within the package beyond said end members.

2. A paper package including a body portion formed of a coiled sheet of paper with the inner end of said sheet of paper inclined transversely of the sheet of paper, the outer end of the sheet of paper being secured to prevent the sheet of paper from uncoiling, and end members wedging tightly in the ends of the coiled body portion of the package, the corners of the inner end of the coiled sheet of paper being torn away so as to be tapering and said torn away corners extending to points within the chamber beyond said end members.

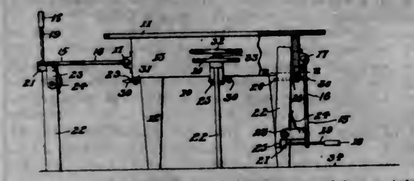
3. A paper package including a body portion formed of a coiled sheet of paper with the inner end of said sheet of paper inclined transversely of the sheet of paper, the outer end of the sheet of paper being secured to prevent the sheet of paper from uncoiling, end members formed of cup-shaped paper, and a tapering reinforcing ring inserted in said cup-shaped paper having an external diameter substantially the same as the internal diameter of the chamber so that said end member will flare outwardly to a greater external diameter than the internal diameter of the package and will make a tight joint when wedged in the package.

4. A paper package including a body portion formed of a coiled sheet of paper with both the inner and outer ends of said sheet inclined transversely of the sheet, a staple for securing the outer end to said body portion after it is formed, said staples being located near the end of said body portion, and an end piece insertible in the end of the body portion so as to cover the inner ends of said staple and protect the contents of the package from the staple.

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1,227,803. FOLDING CHAIR FOR TABLES OR THE LIKE. TAM KOTTUS, Cleveland, Ohio. Filed Aug. 4, 1916. Serial No. 113,145. (Cl. 155—22.)

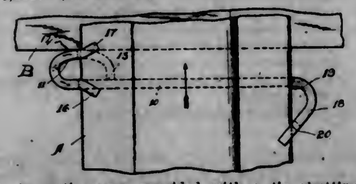


5. A device of the class described comprising a table having a top and a side rail therebeneath, a seat hinged to the outer face of the said rail, a supporting leg hinged beneath the said seat, a chair back slidably arranged through the said seat, a locking block carried by the said back beneath the said seat, the said leg being provided with a receiving notch adjacent the said block, the said block being seated within the said notch with the chair back shiftably positioned partially through the said seat when the said seat and leg are foldably arranged substantially vertically beneath the table top with the said back in a horizontal position.

[Claims 1, 2, and 4 not printed in the Gazette.]

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1,227,804. ANTICREEPER. EDWARD LAAB, Chicago, Ill., assignor, by mesne assignments, to Otto R. Barnett, Chicago, Ill. Filed May 19, 1916. Serial No. 98,488. (Cl. 238—4.)



1. An anti-creeper provided with a tie abutting part and at one end with a pair of spaced rail engaging jaws and at the other with a locking tongue extending backwardly away from the tie which, when the device is in place, bears with spring action against the rail.

2. An anti-creeper provided with a tie abutting part and at one end with a pair of spaced rail engaging jaws and at the other with a locking tongue notched for engagement with the rail base extending backwardly away from the tie which, when the device is in place, bears with spring action against the rail.

3. A one-piece anti-creeper provided at one end with a pair of spaced rail engaging jaws and at the other with a flexible locking tongue which, when the device is in place, bears with spring action against the rail.

4. A one-piece anti-creeper provided with a tie abutting part and at one end with a pair of spaced rail engaging jaws and at the other with a locking tongue extending backwardly away from the tie which, when the device is in place, bears with spring action against the rail.

5. A one-piece anti-creeper provided with a tie abutting part and at one end with a pair of spaced rail engaging jaws and at the other with a locking tongue notched for engagement with the rail base extending backwardly away from the tie which, when the device is in place, bears with spring action against the rail.

[Claims 6 to 17 not printed in the Gazette.]

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1,227,805. BRAKING MECHANISM FOR AUTOMOBILES. JOSEPH EUCLIDE LANDRY, New Bedford, Mass. Filed Aug. 30, 1916. Serial No. 117,793. (Cl. 21—8.)



1. The combination, in a vehicle, of four wheels, two of them being at each end and those at one end being swiveled on separate pivots constituting steering wheels; a brake on each wheel; and means to operate all four brakes simultaneously comprising two cables connecting front and rear wheels; an S-lever for each, traversed and medially penetrated thereby with a shipping contact; a single actuating means; and an equalizer connecting it with both levers.

2. The combination, in a vehicle, of four wheels, two of them constituting steering wheels; a brake on each steering wheel, braking means for the other wheels, and cables connected from the steering wheel brakes thereto, one for each steering wheel; means to take up slack in each cable independently of the other; an equalizer operating said slack taking means, and actuating means.

3. The combination, in a vehicle, of four wheels, two of them being at each end and those at one end being swiveled on separate pivots, constituting steering wheels; brakes for each of the wheels; a connection from each steering wheel brake to the brake of the other wheel on the same side of the vehicle independent of the brake connection between wheels on the other side of the vehicle, and means for applying the two brakes on one side simultaneously with each other.

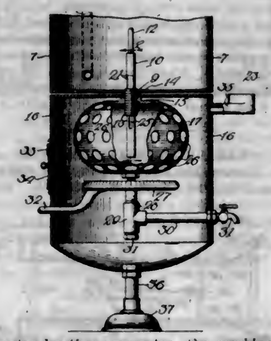
4. The combination, in a vehicle, of four wheels, two of them constituting steering wheels; brakes for each of the wheels; a connection from each steering wheel brake to the brake of the other wheel on the same side of the vehicle independent of the brake connection between wheels on the other side of the vehicle; means for taking up slack in each such connection, comprising a lever for each side, adapted to turn on its fulcrum independently of the other and to allow slippage of said connection past it; a single actuating means for both, and an equalizing connection whereby they take up slack independently and when tight apply the brakes together.

5. The combination, in a vehicle, of four wheels, two of them being at each end and those at one end being swiveled; a brake on each wheel, a cable connection between

each pair of brakes on the same side of the vehicle; a cross rod in the middle part of the vehicle; levers supported thereon, one engaging each of said connections and movable separately from the other about the axis of the cross rod as its fulcrum to tighten said connection; an actuating device therefor and equalizing means, each said lever being arranged so that its cable approaching from each brake passes over the end of the lever, to and along the remote side thereof, and through the middle part thereof, with a slipping contact.

[Claims 6 to 9 not printed in the Gazette.]

1,227,806. WATER-HEATING APPARATUS. SAMUEL LEAVITT, Chicago, Ill. Filed Sept. 1, 1916. Serial No. 117,970. (Cl. 122—18.).



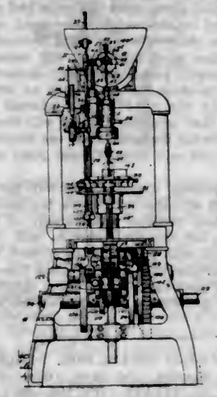
1. In a water heating apparatus, the combination with a reservoir, a water heater and a single pipe directly connecting said reservoir and heater, said pipe having a plurality of channels extended longitudinally thereof, at least one of said channels having communication at one of its ends with the reservoir near its bottom for the outlet therefrom of cold water into the said heater, and at least another of said channels having communication through its upper end and the upper end of said pipe with the reservoir and through its lower end with the heater near the bottom thereof, a fuel burner located below the said heater and being independent thereof, a housing surrounding said burner and heater and mounted on the aforesaid pipe, means to support the housing at its bottom, a drain pipe leading from the lower portion of the heater and having a section extended from its lower part through the housing to assist in supporting the latter, a faucet on the outer portion of said sectional pipe, and a supply pipe leading from a source of fuel supply through the wall of the housing and connecting with said fuel burner.

2. In a water heating apparatus the combination with a reservoir, of a heater, a single pipe directly connecting said reservoir and heater, said pipe having longitudinal partitions dividing it into a plurality of channels in each direction closed at opposite ends and also having openings leading into each of said channels from the walls of said pipe near said closed ends of the channels, a pipe communicating with the lower portion of the heater and having a section extended from its lower part through the housing to assist in supporting the latter, a faucet on said pipe, means to apply heat to said heater, and a supported housing for the heater.

[Claim 3 not printed in the Gazette.]

1,227,807. FILLING-MACHINE. FREDERICK W. LETSCH, Baltimore, Md., assignor to The Crown Cork & Seal Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed July 28, 1911. Serial No. 640,996. (Cl. 226—28.)

1. In a filling and closure applying machine for liquids under pressure, the combination with a filling chamber, of means for forming a gas tight seal between said chamber and the mouth of the receptacle, an inflow conduit, means for opening the inflow conduit, a venting conduit remaining open during substantially the time the inflow conduit is open, means for regulating the flow through the venting conduit, means for closing the venting conduit when the desired amount of liquid has entered the receptacle, means for closing the inflow conduit after the venting conduit has been closed, and closure applying means.



2. In a filling and closure applying machine for liquids under pressure, the combination with a filling chamber, of means for forming a gas tight seal between the chamber and the mouth of a receptacle, an inflow conduit, a vent tube having ports, means for controlling the flow through the tube and ports, a discharge conduit with which the ports are in register when the vent tube is in operative position, means for moving the vent tube to bring its ports out of register with the discharge conduit when the desired amount of liquid has entered the receptacle, means for closing the inflow conduit after the vent tube has been moved, and closure applying means.

3. In a filling and closure applying machine for liquids under pressure, the combination with a filling chamber, of means for forming a gas tight seal between said chamber and the mouth of a receptacle, an inflow conduit, a sleeve having a discharge conduit formed therein, a vent tube movable through the sleeve and having ports which register with the discharge conduit when the tube is in operative position, a regulating valve for the vent tube, means for moving the tube to bring its ports out of register with the discharge conduit when the desired amount of liquid has entered the receptacle, and means for closing the inflow conduit after the vent tube has been moved, and closure applying means.

4. In a filling mechanism, the combination with an inflow conduit, of an inlet valve therein, a venting conduit, an actuator, operating connections between the actuator and the venting conduit, and operating connections between the actuntor and the inlet valve.

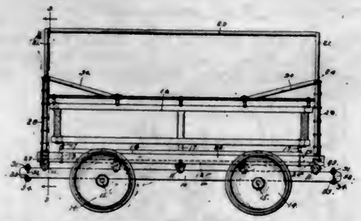
5. In a filling mechanism, the combination with an inflow conduit for charged liquid, of an inlet valve therein, means for supplying syrup to the inflow conduit, a venting conduit, an actuator, and operating connections between the actuator, the inlet valve, the syrup supplying means, and the venting conduit.

[Claims 6 to 31 not printed in the Gazette.]

1,227,808. SECTION-CAR. EDWARD D. LEVY, Springfield, Mo., and BURTON W. MUDGE, Chicago, Ill. Filed July 29, 1916. Serial No. 112,053. (Cl. 105—16.)

1. In a railway section car, the combination with the running gear and deck of the car, of guard structures providing hand-holds extending across the car from side to side thereof at opposite ends of the deck, and a longitudinal guard and bracing structure providing a hand-hold extending through the middle of the car and connecting said end guard structures.





2. In a railway section car, the combination with the running gear and deck of the car, of guard structures providing hand-holds at opposite ends of the deck, a longitudinal guard and bracing structure providing a hand-hold extending through the middle of the car and connecting said end guard structures, and wire mesh netting secured to the lower portions of said end guard structures.

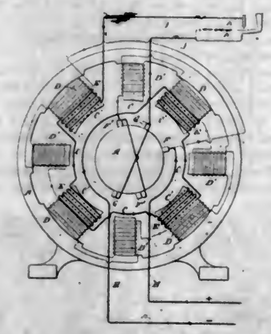
3. In a railway section car, the combination with the running gear and deck of the car, of guard structures providing hand-holds at opposite ends of the deck, a longitudinal guard and bracing structure providing a hand-hold extending through the middle of the car and connecting said end guard structures, and guard strips along the edges of the deck of the car.

4. In a railway section car, the combination with the running gear and deck of the car, of guard structures at opposite ends of the deck comprising arched shaped metal tubular members and horizontal and vertical tubular braces secured together, and a longitudinal tubular member connecting said arched members at their middle points.

5. In a railway section car, the combination with the running gear and deck of the car, of a bench extending lengthwise of the car, guard structures providing hand-holds at opposite ends of the car, a longitudinal guard and brace member providing a hand-hold above the bench and connecting said end guard structures, and diagonal braces attached to said bench for strengthening the aforesaid structures.

[Claims 6 to 9 not printed in the Gazette.]

1,227,809. METHOD OF AND MEANS FOR TRANSFORMING DIRECT CURRENT. JOHN C. LINCOLN, Cleveland, Ohio, assignor to The Lincoln Electric Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 2, 1912. Serial No. 674,892. (Cl. 171—123.)



1. In a direct current transformer, the combination of a field provided with symmetrically divided poles; an armature; main brushes; an intermediate brush; the windings on said armature being divided into two portions by the intermediate brush; part of the windings under one pole portion carrying a generated current; the pole portion opposite that part of the armature winding carrying the generated current being provided with a shunt winding and the other portion being provided with a shunt winding and a series winding, the series winding being in the circuit carrying the generated current and so connected as to strengthen the corresponding pole portions as the generated current increases.

2. In a dynamo-electric machine, the combination of a divided-pole field-structure; an armature rotatably mounted in the field; an exterior circuit; means for shifting the flux from one pole portion to another pole-portion; and additional means for producing a given shifting of such flux with currents of various amperage supplied to said exterior circuit.

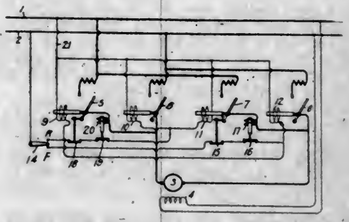
3. In a dynamo-electric machine, the combination of a divided-pole field structure; each pole portion provided with a shunt-winding and an additional winding; an armature rotatably mounted in the field; and switching mechanism whereby the additional windings on the part of pole-portions may be cut out of the circuit, and the additional windings of the other pole-portions may be connected in series-parallel in said circuit.

4. In a dynamo-electric machine, the combination of a divided-pole field-structure; each pole-portion provided with a shunt-winding and an additional winding; an armature rotatably mounted in the field; an exterior circuit connected with said armature; a resistance; and switching mechanism whereby the additional windings on part of the pole-portions may be cut out of the circuit, the additional windings of the other pole-portions may be connected in series-parallel, and the said resistance also connected in parallel with said series-parallel windings in the circuit.

5. In a dynamo-electric machine, the combination of a divided-pole field-structure; each pole-portion provided with a shunt-winding and an additional winding; an armature rotatably mounted in said field; means for connecting the additional windings on one set of pole-pieces so that they augment the magnetic action of the shunt-windings on such pole-pieces; and means for adjustably connecting the additional windings of the other set of pole-pieces so as to augment or diminish the magnetic action of the shunt-coils on the same pole-pieces, according to the adjustment made.

[Claims 6 and 7 not printed in the Gazette.]

1,227,810. MOTOR-CONTROL SYSTEM. WALTER O. LUM, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 12, 1915. Serial No. 20,681. (Cl. 172—288.)



1. In a motor control system, the combination with an electric motor, and a plurality of pairs of electromagnetic switches for controlling the direction of rotation of said motor, of means for preventing the closure of one pair of said switches when current of a predetermined value traverses the other pair of said switches, said means comprising relays having actuating coils in series with said switches and the armature of said motor, and means for preventing the simultaneous actuation of two pairs of said switches.

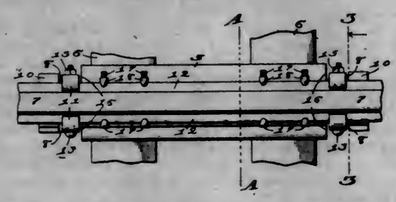
2. In a motor control system, the combination with an electric motor and a plurality of pairs of electromagnetic switches for controlling the direction of rotation of said motor, of means for preventing the simultaneous actuation of two pairs of said switches, said means comprising relays mechanically connected to certain of said switches and means for preventing the closure of one pair of switches when the current traversing the other pair of switches exceeds a predetermined value.

3. In a motor control system, the combination with an electric motor and a plurality of pairs of electromagnetic reversing switches therefor, of means for preventing the closure of one pair of said switches when the other pair of switches are in their open position and are traversed by current above a predetermined value, and relays mechanically connected to certain of said switches for controlling the actuating coils of said switches.

4. In a motor control system, the combination with an electric motor and a plurality of pairs of electromagnetic reversing switches therefor, of means for preventing the closure of one pair of said switches when arcs occurring at the other pair of switches conduct current above a predetermined value, said means comprising relays having actuating coils in series with said switches and with the armature of said motor, and relays mechanically connected to certain of said switches and in series circuit relation with the other relays for controlling the circuit of the actuating coils of said switches.

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1,227,811. ANTICREEPING MEANS FOR RAILWAY-RAILS. JOHN F. LYDON, Oklahoma, Okla. Filed June 4, 1915. Serial No. 32,223. (Cl. 238—2.)



1. In a rail anchor, the combination with the tie and rail, of a plate resting upon the tie and provided with a cut-away portion forming shoulders facing toward the ends of the rails, and anchorage means rigidly clamped upon the rail and having a slight amount of play within the cut-away portion of the plate, said anchorage means being adapted to engage either one of the shoulders to prevent creeping of the rail.

2. In a rail anchor, the combination with the tie and rail, of a plate resting upon the tie and provided in the edges thereof with notches forming shoulders which face toward the ends of the rail, and anchorage means rigidly applied to the basal flanges of the rail and projecting within the notches for engagement with either set of shoulders to prevent creeping of the rail.

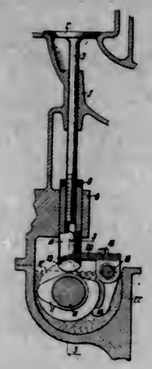
3. In a rail anchor, the combination with the tie and rail, of a plate resting upon the tie and provided in opposite edges thereof with corresponding notches, and corresponding anchor blocks rigidly applied to opposite sides of the rail and projecting into the notches for engagement with the ends thereof to prevent creeping of the rail.

4. In a rail anchor, the combination with the tie and rail, of a plate resting upon the tie and provided in opposite edges thereof with corresponding notches, hooked anchor blocks straddling the edges of the base of the rail and projecting downwardly through the notches, and clamping means connecting the hooked anchor blocks for holding them rigidly in position upon the rail, said anchor blocks being adapted to engage the ends of the notches to prevent creeping of the rail.

5. A tie, a plate resting on the tie and having a portion projecting beyond the edge of the tie, the projecting portion having a neck terminating in a T head, a rail resting on the plate and having anchorage means engaging the neck of said projection.

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1,227,812. VALVE MECHANISM. EARLE S. MACPHERSON, Detroit, Mich., assignor of one-half to Charles L. Nedoma, Detroit, Mich. Filed Sept. 5, 1916. Serial No. 118,363. (Cl. 121—97.)



1. In combination with a valve and a seat therefor, valve operating mechanism comprising cam means including positive and negative cam surfaces, follower means for the cam surfaces operatively connected to said valve, said follower means including two arms, one for each surface, that are mounted to swing about a single axis and are resiliently urged toward the corresponding cam surface.

2. In combination with a valve stem, a valve and a seat for the latter, valve operating mechanism comprising a cam and cam follower means mounted to swing about a single axis and co-acting with the valve stem to force the valve positively to its seat, said cam-follower means including a stiff resilient bodily movable element through which the force for seating the valve is transmitted.

3. In combination with a valve stem, a valve and a seat for the latter, valve operating mechanism comprising cam means having positive and negative cam surfaces and two followers, one for each surface, arranged to move the valve and valve stem in opposite directions, one of the followers having a slight clearance from the corresponding cam surface when the valve is being moved by the other, the other follower including a resilient member whereby the first named follower is constantly urged toward the corresponding cam.

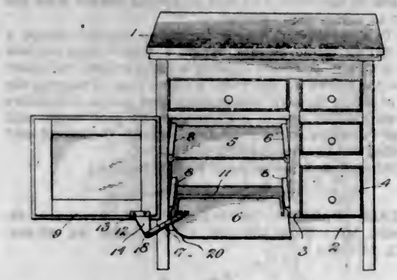
4. In combination with a valve stem, a valve and a seat for the latter, valve operating mechanism comprising a cam and movable cam follower means coacting with the valve stem to force the valve positively to its seat, said cam follower means including resilient pivotally mounted bodily movable means having a portion of relatively greater stiffness and another portion of relatively lesser stiffness through which the force for sealing the valve is transmitted.

5. In combination with a valve and seat and a valve stem, valve operating mechanism for the valve comprising cam means including positive and negative cam surfaces, a follower including a portion arranged to engage the positive cam surface to move the valve in one direction, another follower including a portion adapted to engage the negative surface to move the valve in another direction, said followers together including a bodily movable stiff leaf spring arranged at an angle to the valve stem whereby they are constantly urged toward the corresponding cam surfaces.

[Claims 6 to 13 not printed in the Gazette.]



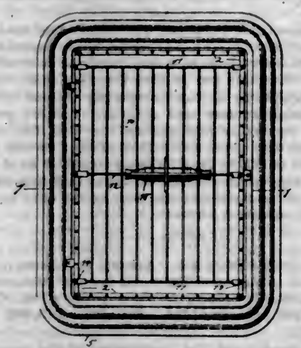
1,227,813. SLIDING SHELF FOR KITCHEN-CABINETS. CLARENCE MAHONEY, Elwood, Ind., assignor to G. I. Sellers & Sons Company, Elwood, Ind., a Corporation of Indiana. Filed Aug. 30, 1916. Serial No. 117,568. (Cl. 45—16.)



The combination with a kitchen cabinet provided in its base with a compartment having opposite horizontal ways, a door for closing the compartment and hinged in vertical alinement at one side of the compartment, and a shelf slidably mounted in the ways and having one of its outer or front corners adjacent the door cut away or rounded, of an angular bracket of sheet-metal having an outwardly disposed rigid arm attached to the inner side of the door immediately adjacent the hinge-edge thereof, the plane of the arm being but slightly below that of the underside of the shelf, a bracket attached to the underside of the shelf adjacent that edge thereof next the door, a straight link of sheet-metal pivoted at its ends to the two brackets, and a reinforcing strip attached to the link at an intermediate point and having its outer end offset to embrace the arm of the bracket on the door and connected thereto by the pivot of the link and arm.

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1,227,814. KNOCKDOWN BIRD-CAGE. THEODORE R. MAXWELL, Brooklyn, N. Y. Filed Aug. 14, 1916. Serial No. 114,679. (Cl. 119—17.)

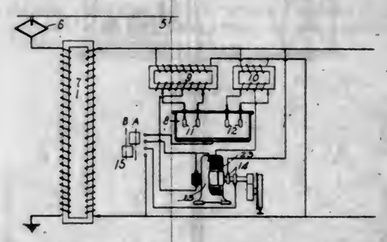


1. A knock-down bird cage comprising side plates having upright rods and upper horizontal connecting rails, corresponding end pieces hinged to the side pieces, some of the upright rods protruding at their ends above the upper horizontal rails, a top having a plurality of rods, and rails connecting said rods, said last named rails having apertured ends that are adapted to be projected over the protruding ends of the upright rods, into engagement with the upper horizontal rail of one of the side pieces.

2. A knock down bird cage comprising side pieces having connected upright rods, end pieces having connected upright rods, and hinged to the side pieces, a top pivoted to one of the side pieces, and a handle pivoted to the top and having a lobe adapted to be projected transversely between the rods of said side piece.

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1,227,815. SYSTEM OF CONTROL. FRIEDRICH W. MEYER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 24, 1915. Serial No. 16,685. (Cl. 172—274.)



1. In an electric distributing system, the combination with a single-phase alternating current source of supply, of a motor adapted to operate on either direct current or alternating current, a rectifying device, and connections whereby, at starting, said motor is supplied with direct current through said rectifying device and whereby it is subsequently supplied with alternating current from said source for operation as an induction motor, an auxiliary consumption circuit, and means operative in conjunction with said rectifying device whereby energy derived from the secondary member of said motor, in the speed regulation thereof, may be employed for the energization of said consumption circuit.

2. In an alternating-current distributing system, the combination with a source of alternating current, of a motor adapted for operation either as a direct-current motor or as an induction motor, a rectifying device, and control means whereby, at starting, said rectifier is connected between said source and said motor for the energization thereof with direct current and whereby, during subsequent operation, said motor is connected to said source for induction-motor operation and said rectifier is connected to the secondary member thereof for speed control.

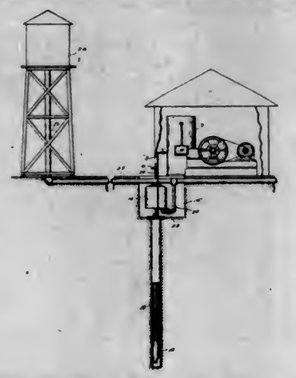
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1,227,816. AIR-LIFT-PUMP BOOSTER. FRANK S. MILLER, deceased, Indianapolis, Ind., by Donald S. Morris, administrator *de bonis non*, Indianapolis, Ind., assignor to William Langsenkamp, Jr., trustee. Filed May 20, 1916. Serial No. 98,852. (Cl. 103—84.)

1. In combination, a closed chamber, a pipe leading from a well into such chamber and opening into said chamber above the liquid level therein, an air nozzle in such pipe below such chamber, a pipe leading from such chamber and opening into such chamber below the liquid level therein, a downwardly opening hood located in said chamber and having its open lower end below the liquid level therein, said first named pipe discharging upwardly into said chamber and said last named pipe opening under said hood, said chamber having an air outlet opening therefrom which air outlet opening communicates with the chamber at a point higher than the liquid level therein, and a manually operated valve wholly controlling said air outlet opening to permit the escape of air from said chamber but to maintain a pressure greater than atmosphere in said chamber.

5. In combination, a closed chamber, a pipe leading from a well into such chamber, an air nozzle in such pipe below such chamber, a pipe leading from such chamber and opening into such chamber below the liquid level therein, said chamber having a restricted air outlet opening therefrom which air outlet opening communicates with the chamber at a point higher than the water level therein so as to permit a restricted escape of air while main-

taining the pressure of the retained air above atmospheric pressure, and a safety valve responsive to an excessive

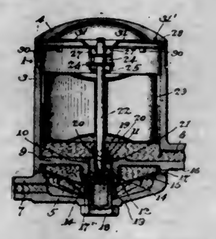


pressure within said chamber for permitting a greater escape of air from the chamber.

[Claims 2 to 4 and 6 not printed in the Gazette.]

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1,227,817. CARBURETER. HARRY A. MILLER and FRANK M. ADAMSON, Los Angeles, Cal., assignors to Master Carburetor Company, Los Angeles, Cal., a Corporation of California. Filed May 1, 1916. Serial No. 94,548. (Cl. 137—104.)



1. In a carbureter, a float chamber body, a valve plug to control the admission of fuel to said body, a float in said float chamber body, a plate having hangers, levers operated by said float and connected to the valve plug to operate said plug and pivoted to said hangers, said plate having spring members engaged by the cover, and said cover being provided with means to hold it toward the body against the expansion force of said spring members.

2. In a carbureter, a float chamber body, a valve plug to control the admission of fuel to said body, a float in said float chamber body, a plate having furcated hangers of spring material, levers operated by said float and connected to the valve plug to operate said plug, and pivots for said levers, the ends of said pivots being compressed between the furcations of the hangers.

3. In a carbureter, a float chamber body having recesses extending downward from its upper edge and extending circumferentially, a valve plug to control the admission of fuel to said body, a float in said float chamber body, means operated by said float and connected to the valve plug to operate said plug, a cover for the body, lugs projecting inward from the cover to engage said recesses, means supported by the body to support the plug-operating means, and spring members on said supporting means engaging the inside of the cover to force said cover outward against the upper edges of the recesses.

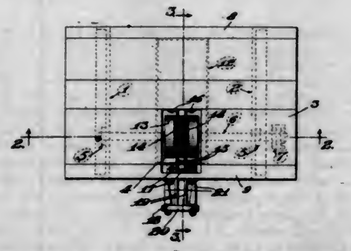
4. In a carbureter, a float chamber body having recesses extending downward from its upper edge and extending circumferentially, a valve plug to control the admission of fuel to said body, a float in said float chamber body, a plate having hangers, levers operated by said float and connected to the valve plug to operate said plug and pivoted to said hangers, said plate having spring members engaged by the cover, and lugs projecting inward from the cover to engage said recesses.

5. In a carbureter, a body having an annular flange, a ring fitting inside of said flange, a screen fixed to said ring, a dirt trap, means forming a passage from the space above the screen to the body, a valve plug to control the flow of liquid through said passage, and means detachably holding the dirt trap in engagement with said flange, said means including a cap extending through the screen and engaging the passage-forming means.

[Claims 6 to 8 not printed in the Gazette.]

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1,227,818. PASTING DEVICE. JOHN E. MITCHELL, St. Louis, Mo. Filed Mar. 25, 1916. Serial No. 86,663. (Cl. 12—50.)



1. In apparatus for pasting and assembling heel lifts, the combination of a table having an exposed supporting surface for the lifts, a heel former adjacent the edge of the table, said table having an opening therein, guiding means for supporting and guiding the heel-lifts across said opening, the space above said guiding means being unobstructed to enable the lifts to be moved by hand over said guiding means and into said heel-former, and means in the said opening for pasting the lifts as they pass toward said heel-former.

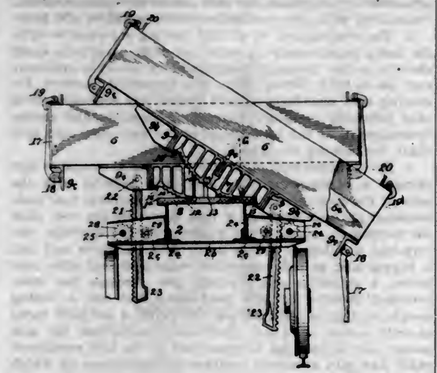
2. In apparatus for pasting and assembling heel-lifts, the combination of a table having an upper exposed supporting surface for the lifts, a heel former at substantially the level of the table and located near the front edge of the table, said table having an opening therein between said supporting surface and said heel former, guiding means for supporting and guiding the heel lifts across said opening, the space above said guiding means being unobstructed to enable the lifts to be moved by hand from said supporting surface toward and into said heel-former, and means in said opening for pasting the lifts as they pass toward said heel former.

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1,227,819. DUMPING-CAR. ALBERT C. MURPHY, New York, N. Y., assignor to Universal Car and Manufacturing Co. Inc., New York, N. Y., a Corporation of New York. Filed June 24, 1913. Serial No. 775,462. (Cl. 105—190.)

1. In a dumping car, the combination of the car frame having a platform at each end and a plurality of transversely arranged rocker beds intermediate of the platforms, with a plurality of box bodies each having a plurality of rockers supported by the beds whereby the bodies may be rocked toward either side of the car frame to incline said body and lower one side thereof, side doors to said bodies to permit the discharge of the contents when desired, longitudinal shafts journaled in the car frame and extending between the platforms and the box bodies, connecting means between the said shafts and their respective box bodies for oscillating the latter, and mechanical means on the platforms for rotating the longitudinal shafts whereby the box bodies may be rocked upon their rockers and beds from the platforms.





2. In a dumping car, the combination of the car frame having a platform at each end and a plurality of transversely arranged rocker beds intermediate of the platforms, with a plurality of box bodies each having a plurality of rockers supported by the beds whereby the bodies may be rocked toward either side of the car frame to incline said body and lower one side thereof, side doors to said bodies to permit the discharge of the contents when desired, longitudinal shafts journaled in the car frame and extending between the platforms and the box bodies, connecting means between the said shafts and their respective box bodies for oscillating the latter, mechanical means on the platforms for rotating the longitudinal shafts whereby the box bodies may be rocked upon their rockers and beds from the platforms, and means for locking the shafts against rotation in one direction when the box body is tilted or being tilted.

3. In a dumping car, the combination of a longitudinal car frame having a plurality of transversely arranged rocker beds, a plurality of box bodies arranged end to end along the length of the car frame and each provided with curved rockers adapted to the rocker beds so that each of the bodies may be independently rocked for dumping its contents, a plurality of longitudinal shafts journaled in the car frame part of which extend to one end of the car frame and part to the other end of the car frame, mechanical connections between the respective car bodies and the longitudinal shafts whereby a rotation of each shaft may rock a different car body, and means at the ends of the car frame for rotating the longitudinal shafts.

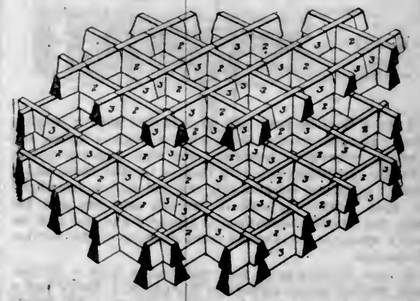
4. In a dumping car, the combination of a longitudinal car frame having a plurality of transversely arranged rocker beds, a plurality of box bodies arranged end to end along the length of the car frame and each provided with curved rockers adapted to the rocker beds so that each of the bodies may be independently rocked for dumping its contents, a plurality of longitudinal shafts journaled in the car frame part of which extend to one end of the car frame and part to the other end of the car frame, mechanical connections between the respective car bodies and the longitudinal shafts whereby a rotation of each shaft may rock a different car body, means at the ends of the car frame for rotating the longitudinal shafts, and means for locking the shafts against rotation in either direction and in both directions at the will of the operator.

5. In a dumping car, the combination of a longitudinal car frame having a plurality of transversely arranged rocker beds, a plurality of box bodies arranged end to end along the length of the car frame and each provided with curved rockers adapted to the rocker beds so that each of the bodies may be independently rocked for dumping its contents, a plurality of longitudinal shafts journaled in the car frame, and extending from the end of the car frame to points beneath the respective box bodies, mechanical connections between the respective car bodies and the longitudinal shafts whereby a rotation of each shaft may rock a different car body, and independent means at the end of the car frame for rotating the respective longitudinal shafts and holding the tilted bodies in tilted positions.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,820. REGENERATIVE STOVE. ALFRED C. NELSON, Lakewood, Ohio. Filed Nov. 18, 1915. Serial No. 62,151. (Cl. 72—15.5.)



1. In a regenerative stove, a flue structure having vertical non-interconnecting flues therein, the inner surfaces of the walls of which flues are provided with a multiplicity of downwardly facing shoulders, each of said shoulders entirely surrounding the flue in which it is located.

2. In a regenerative stove, a flue structure, having vertical non-interconnecting flues therein, the inner surfaces of the walls of which flues are provided with a multiplicity of projections, each having a downwardly facing horizontal surface and an upwardly facing inclined surface entirely surrounding the flue in which it is located.

3. In a regenerative stove, a flue structure having non-interconnecting flues therein, the walls of the flues being composed of brick of trapezoidal cross section built in layers one upon another, the wide bases of the brick of one layer resting upon the narrow tops of the brick of the next lower layer, each layer of brick being composed of spaced apart parallel rows of brick, the spaces between said parallel rows being divided at regular intervals by filler brick also of trapezoidal cross section, said filler brick having their ends beveled to rest upon the inclined sides of the brick of said parallel rows in the same layer, the rows of brick in a layer being directly superposed upon the corresponding rows of brick in the next lower layer whereby vertical non-interconnecting flues are formed extending from the bottom to the top of the structure, each of said flues, by reason of the trapezoidal shape of the brick being provided with a downwardly facing shoulder surrounding said flue at each intersection of the layers of brick of which the structure is built.

4. In a regenerative stove, a checker-work flue structure composed of brick of trapezoidal cross section built in layers, one upon another, the wide bases of the brick of one layer resting upon the narrow tops of the preceding layer, each layer of brick being composed of parallel rows of stretchers and parallel rows of fillers laid at right angles to the stretchers, the rows of stretchers and the rows of fillers being spaced apart so as to form flues between them, the brick constituting the rows of fillers having their ends beveled to rest upon the inclined sides of the rows of stretchers.

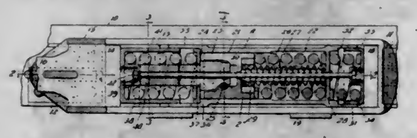
5. In a regenerative stove, a checker-work flue structure composed of brick of trapezoidal cross section built in layers, one upon another, the wide bases of the brick of one layer resting upon the narrow tops of the brick of the preceding layer, the brick being laid to form a plurality of vertical walls intersecting each other at right angles, the

brick composing parallel rows in a layer having their ends beveled to rest upon the inclined sides of the brick composing the walls running at right angles to said parallel walls in the same layer.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,821. FRICTION-GEAR HAVING A COMPOUND RELEASE. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Sept. 2, 1915. Serial No. 48,587. (Cl. 213—64.)



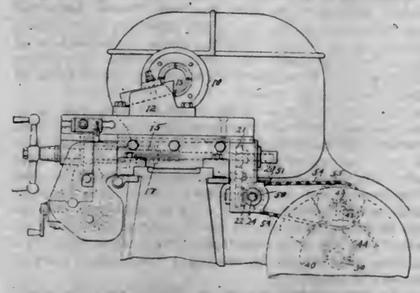
1. In a friction gear, the combination with a longitudinally movable friction shell, friction shoes, a wedge, and a spring coöperable therewith, of a high capacity spring, a spring cap telescoped with respect to said shell, and a plunger extending between said cap and said wedge whereby, upon relative movement between said cap and the shell, the friction mechanism is actuated and the high capacity spring is compressed independently of the friction mechanism.

2. In a friction gear, the combination with a friction shell, friction shoes coöperable therewith, a wedge and a spring coöperable with said shoes and wedge, of a spring cap telescoped with respect to said shell, a plate mounted within said shell and prevented from inward movement relatively thereto, and a high capacity spring interposed between said plate and said spring cap.

3. In a friction gear, the combination with a friction shell, friction shoes coöperable therewith, a wedge, and a spring within said shell coöperable with said shoes and wedge, of a spring cap movable with respect to the shell, a thrust member extending between said cap and said wedge and always in engagement with the latter, a preliminary spring of high capacity mounted within the cap, and means preventing movement of the inner end of said preliminary spring with respect to the friction shell, whereby said preliminary spring is adapted to effect a compound release in combination with the main spring cooperating with the friction shoes and wedge.

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1,227,822. MACHINE-TOOL. JOHN G. OLIVER, Cleveland, Ohio, assignor to Bardons and Oliver, a Partnership comprising George C. Bardons and John G. Oliver, Cleveland, Ohio. Filed Feb. 19, 1916. Serial No. 79,231. (Cl. 82—21.)



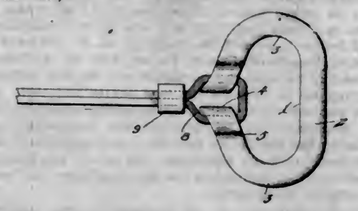
1. The combination of a lathe having a rotatable spindle and a transversely movable tool slide, mechanism by which the tool slide may be moved, a variable speed electric motor having a longitudinally movable armature mechanism by which the said armature may be moved longitudinally, and means connecting the mechanism for moving the slide with the mechanism for moving the said armature of the motor, the said means including a sliding connection with the mechanism which operates the slide.

2. The combination of a lathe having a rotatable spindle and a transversely movable tool slide, a variable speed electric motor having a longitudinally movable armature and mechanism which includes a rotatable member for moving said armature, a shaft operatively connected with said rotatable armature, controlling member, and means intermediate of the feed screw of the tool slide and said shaft for turning the latter.

3. The combination of a lathe having a rotatable live spindle, a carriage movable in a path parallel with the axis of the live spindle, a transversely movable tool slide mounted on said carriage, a feed screw on the tool slide for moving it, a gear train mounted on the carriage, one terminal member of which gear train embraces and has a tongue and groove connection with said tool slide feed screw, a rotatable shaft which goes through the other terminal member of said gear train and has a sliding tongue and groove connection therewith, a variable speed electric motor, armature positioning mechanism for said motor, and mechanism intermediate of the last mentioned shaft and said armature positioning mechanism by which the latter is operated.

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1,227,823. REIN-SUPPORT. CHARLES E. PATTERSON, Jacksonville, Ill. Filed May 4, 1916. Serial No. 95,428. (Cl. 54—73.)



1. A rein support including in combination with a spread strap, an open loop formed from a single piece of metal and constructed to engage the strap after a cross line has been received therein.

2. A device of the character described including in combination with a spread strap, an open loop formed from a single piece of material and adapted to be engaged by the strap after a cross line has been passed through the opening and received within the loop for preventing twisting of the cross line, and means for tightening the strap in the loop subsequent to engagement of a cross line.

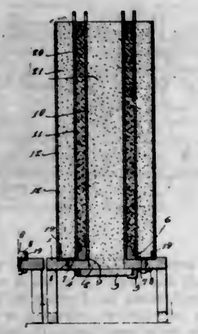
3. A device of the class described including in combination with a spread strap, an open oblong cross line receiving loop formed from a single piece of material and provided adjacent the opening with slots for receiving the strap subsequent to engagement of a cross line with the loop for preventing twisting of the cross line.

4. A device of the character described including in combination with a spread strap, a relatively narrow oblong open loop formed from a single piece of material and adapted to receive a cross line to prevent twisting thereof, the portions of the loop adjacent the opening being enlarged and provided with slots adapted to receive the strap and further having their free edges arranged in spaced parallel relation with each other, and means for tightening the strap when engaged with the loop.

5. A device of the character described including in combination with a spread strap, an open oblong cross line receiving loop having a width less than the width of the cross line to prevent twisting movement of the cross line therein, the portions of the loop adjacent the opening being extended slightly outwardly and enlarged and provided with strap receiving slots, and a loop slidably associated with the strap for tightening the strap when in engagement with the slots.



1,227,824. APPARATUS FOR CASTING BODIES FORMED OF CEMENT OR THE LIKE. JOHN COTTER PELTON, San Francisco, Cal. Filed May 18, 1916. Serial No. 98,262. (Cl. 25—127.)



1. In combination, a bench, two hollow concentric mold members spaced apart from one another and mounted on the bench, an openable receptacle surrounding the mold members and spaced apart therefrom and mounted on the bench, and means on the bench to fix the position of said receptacle relative to the outer mold member.

2. In combination, a bench having an orifice, two hollow concentric mold members spaced apart from one another and mounted on the bench, said orifice communicating with the interior of the inner mold member, a removable closure for the orifice, and a receptacle surrounding the mold members and spaced apart therefrom and mounted on the bench.

3. The combination, a bench having an orifice, two hollow concentric mold members spaced apart from one another and mounted on the bench, said orifice communicating with the interior of the inner mold member, a gate to close said orifice, and a receptacle surrounding the mold members and spaced apart therefrom and mounted on the bench.

4. In combination, a bench having an orifice, two hollow concentric mold members spaced apart from one another and mounted on the bench, a removable closure for the orifice, a receptacle surrounding the mold members and spaced apart therefrom and mounted on the bench, said receptacle comprising two hingedly connected members, and a latch to hold said receptacle members in closed position.

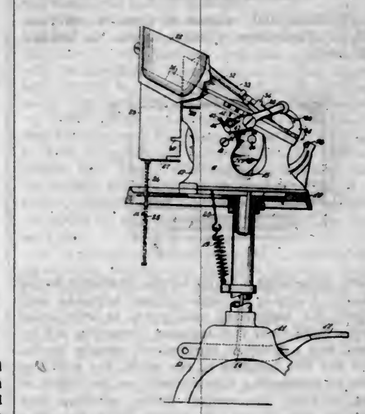
5. In combination, a bench, two hollow spaced apart mold members one inside of the other mounted on the bench to receive between the material to be cast, and openable means to hold loose material around the outer mold member, so that when said means are open the loose material will flow away from the article cast in the mold space.

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1,227,825. BUTTON-FEEDING MECHANISM. LORA E. POOLE, Anderson, Ind., assignor to Anderson Button Attaching Machine Company, Anderson, Ind., a Corporation. Original application filed July 10, 1915, Serial No. 39,077. Divided and this application filed Sept. 7, 1915. Serial No. 49,280. (Cl. 218—12.)

1. In a button attaching machine including a frame, a button chute, a button hopper at one end of said chute, a feeding plate adapted to be operated in said hopper, means on said machine for operating said plate, an inclined button chute on the upper end of said plate, and means for locking said plate in alinement with said button chute when so desired.

2. In a button attaching machine including a frame, a button chute, a hopper at one end of said chute, a button feeding plate adapted to be operated in said hopper, said plate having a recess in its lower end, and a lever pivoted to said frame adapted to enter said recess when said plate is in elevated position so as to lock it in said position.



3. In a button attaching machine including a frame, a button chute, a button hopper at one end of said chute, a feeding plate adapted to be operated in said hopper, a plate spring on the bottom of said feeding plate, disks in said frame for operating said machine, and a roller extending from the periphery of said disks for engaging said spring and operating said feeding plate.

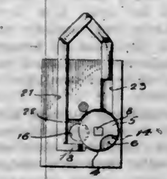
4. In a button attaching machine including a frame, a button chute, a button feed finger adapted to operate on said chute, means connected with said machine for operating said feed finger, a button gate on said chute, downwardly extending fingers on said gate, and a means on said feed finger adapted to engage one of said fingers for elevating said feed finger over said gate in position to drop down between said fingers on one of the buttons.

5. In a button attaching machine including a frame, a button chute, a button feed finger, an oscillatory plate on said frame, means for operating said plate to move said finger, and means for taking up the continued movement of said plate when said feed finger is arrested.

[Claim 6 not printed in the Gazette.]

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1,227,826. PERMUTATION-PADLOCK. JOHN B. RAFF, Los Lunas, N. Mex., assignor of one-fourth to Ramon B. Chavez, Tome, N. Mex. Filed Dec. 1, 1915. Serial No. 64,560. (Cl. 70—113.)

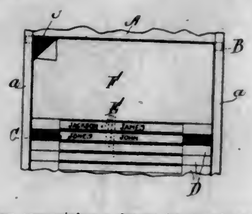


A permutation lock including a lock case having opposed pockets of different depths, a spherical locking member movable from one pocket to the other, a movable shackle engageable by the locking element, when said element is in the shallower pocket to retain the shackle in locked position, and permutation means for retaining the locking element in said pocket, said means when prop-

erly actuated, permitting movement of the locking element, into the deeper pocket whereby to permit movement of the shackle to unlocked position.

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1,227,827. INDEX-CARD. JAMES H. RAND, North Tonawanda, N. Y. Filed June 21, 1916. Serial No. 104,915. (Cl. 129—16.7.)



1. An index comprising a frame having inwardly facing guide channels, a series of cards, means engaging said guide channels for supporting said cards in overlapped spaced relation with their free margins projecting one beyond another, and a series of transparent sheaths on the front side of the free margins of the cards, the width of said sheaths corresponding substantially to the width of the spacing between the several cards, whereby said sheaths may lie side by side in substantially the same plane without overlapping.

2. An index comprising a frame having inwardly facing guide channels, a series of cards, means engaging said guide channels for supporting said cards in overlapped spaced relation with their free margins projecting one beyond another, and a series of transparent sheaths on the front side of the free margins of the cards, the width of said sheaths corresponding substantially to the width of the spacing between the several cards, whereby said sheaths may lie side by side in substantially the same plane without overlapping, the faces of said sheaths being inclined from the outer edge toward the face of the card to facilitate the edge of each overlying card slipping over the face of the sheath on the next underlying card when the cards are swung away from the frame.

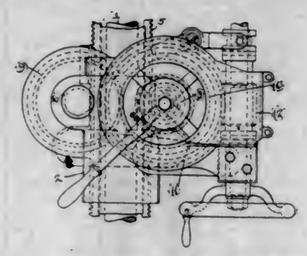
3. An index comprising a frame having inwardly facing guide channels, a series of cards, means engaging said guide channels for supporting said cards in overlapped spaced relation with their free margins projecting one beyond another, and a series of transparent sheaths on the free edges of the cards, each sheath comprising a front compartment adapted to receive an index slip and a pocket behind said front compartment adapted to receive a card insert.

4. An index comprising a frame having inwardly facing guide channels, a series of cards, means engaging said guide channels for supporting said cards in overlapped spaced relation with their free margins projecting one beyond another, and a series of transparent sheaths on the free edges of the cards, each having a closed front face and rearwardly and inwardly bent lips one overlapping the other, the front lip forming with the closed front face a compartment adapted to receive an index slip and forming with the rear lip a pocket adapted to receive a card insert.

5. An index comprising a frame having inwardly facing guide channels, a series of cards, means engaging said guide channels for supporting said cards in overlapped spaced relation with their free margins projecting one beyond another, and a series of transparent sheaths on the free edges of the cards, each sheath comprising a front compartment adapted to receive an index slip and a pocket behind said front compartment adapted to receive a card insert, and index slips in said compartments shorter than said compartments, whereby the interior of said pockets will be exposed to view through said transparent compartments at one or both ends of the index slips.

[Claims 6 to 18 not printed in the Gazette.]

1,227,828. DRILL-PRESS. GEORGE E. RANDLES, Cleveland, Ohio, assignor to The Foote-Burt Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 29, 1916. Serial No. 117,409. (Cl. 77—32.)

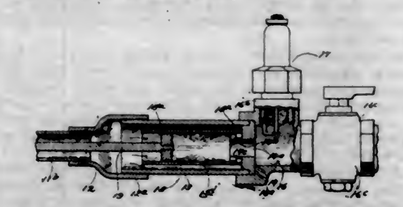


1. In a drill press, the combination of a circular guide, a spindle slidably and snugly mounted in said guide, longitudinally disposed racks on diametrically opposite sides of said spindle, and pinions engaging said racks operating to move the same longitudinally, said pinions being operatively connected together and being mounted to equalize the lateral thrust on said guide in the plane of said racks.

[Claim 2 not printed in the Gazette.]

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1,227,829. APPARATUS FOR AND PROCESS OF BURNING GAS. GEORGE L. REICHHELM, New Haven, Conn. Filed Sept. 4, 1915, Serial No. 48,962. Renewed Apr. 16, 1917. Serial No. 162,521. (Cl. 158—109.)



1. A process of combustion consisting in first supplying a combustible gaseous mixture, then dividing the same into a plurality of streams, retarding the velocity of the streams below the rate of flame propagation by directing them toward each other from opposite directions, and then igniting such mixture at the point of retardation.

6. In an apparatus of the class described, a burner having a combustion chamber, means to supply combustible mixture to said burner, means to divide said mixture into a plurality of streams or currents, means to retard the velocity of said streams below the rate of flame propagation in supplying the same to the combustion chamber of said burner, and means to ignite said mixture.

14. A gaseous fuel burner of the class described, comprising a combustion chamber, means for supplying opposed mutually baffling streams of a combustible mixture under pressure to said chamber, and a valve controlling the outlet from said chamber.

17. A process of burning a combustible mixture under high pressure which consists in supplying said mixture to an inclosed space in a stream, the velocity of which is greater than the rate of flame, propagation, baffling said stream in said inclosed space to reduce the velocity thereof below the rate of flame propagation, igniting said mixture at the baffling point of the stream thereof, and regulating the rate of combustion of said mixture by the back pressure to which said space is subjected.

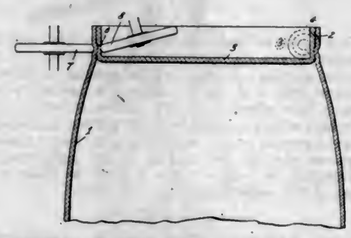
18. A process of combustion consisting in supplying opposed currents of a combustible mixture to an inclosed space, imparting to said streams spiral paths of movement adjacent the periphery of said inclosed space, and burning said mixture in the zone where said opposed currents meet.

[Claims 2 to 5, 7 to 13, 15, 16, and 19 not printed in the Gazette.]



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1,227,830. PROCESS OF UNITING METAL BODIES. ARCHER W. RICHARDS, Cleveland, Ohio, assignor to The Hydraulic Pressed Steel Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 31, 1915. Serial No. 18,267. (Cl. 219—10.)



1. The process of uniting an inner and an outer metallic member which consists in providing one of said members with a bead which is presented toward and adapted to engage the other member, the parts being of such diameter that the bead will engage its coöperating member under pressure thereby to secure a line contact therebetween, and electrically welding said members together along such line of contact.

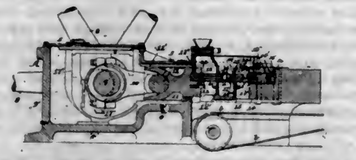
3. The process of uniting a pair of metal members which are adapted normally to fit snugly the one within the other, which process consists in providing one of said members with a continuous bead presented toward the other member and adapted to engage the latter member under pressure, and electrically welding said members together along the line of contact between said bead and the adjacent engaging member.

14. The process of heading metallic barrels and like metallic objects which consists in providing such object with a cylindrical neck and providing the head therefor with a cylindrical flange of substantially the same external diameter as the internal diameter of the neck, providing such neck with an inwardly extending circumferential bead, forcing the head into the neck with the flange in close engagement with the bead whereby a line contact is secured, said bead being located adjacent to the plate or body of the head when the head is positioned within the neck, and finally electrically welding the parts along such line of contact.

[Claims 2 and 4 to 13 not printed in the Gazette.]

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1,227,831. BRIQUETING-MACHINE. GRANT W. RIGBY, Pittsburgh, Pa., assignor to Isaac Well, Pittsburgh, Pa. Filed Aug. 8, 1913. Serial No. 783,752. (Cl. 25—83.)



1. A plunger mechanism for a molding machine having a reciprocating feed box for the material, comprising reciprocating plungers coöperating with said feed box and having material-receiving cavities in the ends thereof, movable resisting plungers in line with said first-named plungers and having material-receiving cavities in the ends thereof, said resisting plungers being held normally stationary against pressure and having fluid cylinders therein, ejector bars within said resisting plungers for expelling the molded material from the cavities thereof, and differential piston heads connected with said bars and contained in said cylinder.

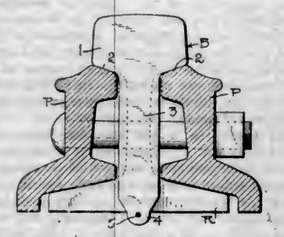
2. In a plunger mechanism for a molding machine, reciprocating plungers having material-receiving cavities in the ends thereof, movable resisting plungers in line with said reciprocating plungers and having material-receiving cavities in the ends thereof, said resisting plungers being held normally stationary against pressure, and having fluid cylinders therein, pressure-fluid-receiving cylinders for receiving the other ends of said resisting plungers to hold the same normally stationary against pressure, ejector bars within said resisting plungers for expelling the molded material from the cavities thereof, and differential piston heads connected with said ejector bars and contained in said first-named cylinders, for the purposes set forth.

3. In a plunger mechanism for a molding machine, reciprocating compressing plungers, movable resisting plungers alined with said compressing plungers and having fluid cylinders therein, said first and second mentioned plungers having material receiving cavities in their adjacent terminals, slidable ejector bars carried by the resisting plungers, and differential pistons carried by the bars and contained in said cylinders.

4. In a molding machine, a receptacle for containing a quantity of material considerably greater than the quantity molded at each operation, a pair of opposed molding plungers having mold-cavities at their opposing ends and arranged, when brought together, to form a mold complete in itself, means for effecting a relative movement between said plungers to effect the molding operation and the discharging operation, and means for effecting a relative movement between said receptacle and said plungers such that the molding operation takes place within said receptacle and the discharging operation takes place outside said receptacle.

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1,227,832. RAIL-JOINT. SULLIVAN ROME and JOSEPH IARUSSI, Hudson, Ohio. Filed Feb. 20, 1917. Serial No. 149,854. (Cl. 239—3.)

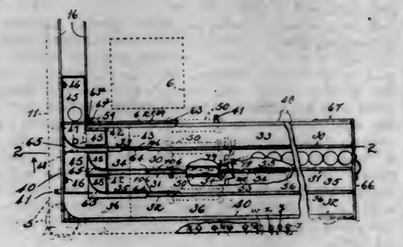


1. As a new article of manufacture, a block adapted to be inserted between the meeting ends of rails, and comprising a head conforming to the cross sectional configuration of the tread portions of the meeting ends of rails, a shank depending from said head and of a length to extend beyond the bases of the meeting ends of rails, and a member removably engaged with the free end portion of the shank and adapted to coact with the base portion of the meeting ends of rails to hold the block against removal.

2. As a new article of manufacture, a block adapted to be inserted between the meeting ends of rails and comprising a head conforming to the cross sectional configuration of the tread portion of the meeting ends of the rails, a shank depending from said head and of a length to extend adjacent the base portion of the rails, and means coacting with the end portion of the shank to hold the block against removal.

[Claim 3 not printed in the Gazette.]

1,227,833. AUTOMATIC BALL-RACKING DEVICE FOR BILLIARD-TABLES. JOSEPH B. RUSSELL, Chicago, Ill. Filed June 16, 1914. Serial No. 845,419. (Cl. 46—12.)



1. The combination with a billiard table having pockets, of a plurality of ball-racks, a return-way communicating therewith, one or more diverters adapted to be moved to establish communication between the return-way and each of said racks, a gate in said return way intermediate said pockets and racks, and means for operating said gate and a selective one of said diverters.

2. The combination with a billiard table having pockets, of a plurality of ball-racks, a return-way communicating therewith, one or more diverters adapted to be moved to establish communication between the return-way and each of the ball racks, a gate in said return way intermediate said pockets and racks, and means for simultaneously opening said gate and a selective one of said racks.

3. The combination with a billiard table having a plurality of pockets, of a plurality of ball-racks, a ball-way between said pockets and racks, a contact adapted to be operated by a ball, a plurality of cut-offs working one in connection with one of a plurality of said racks, an electric circuit, said contact therein, electro-mechanical means for moving each of said cut-offs in one direction, and means for moving each cut-off in the opposite direction, the electric circuit for operating said electro-mechanical means being a part of that containing said ball operated contact.

4. In an apparatus of the character described, a plurality of ball-racks, a ball delivery chute leading thereto, a ball-actuated contact disposed intermediate said chute and racks, cut-offs associated with each of a plurality of said racks, a source of electric energy, means in communication with said source whereby each of said cut-offs may be moved in one direction, and means for moving the moved cut-off to normal position.

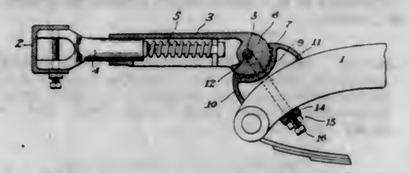
5. In an apparatus of the character described, a plurality of ball-racks, a return-way communicating therewith, one or more diverters adapted to be moved to establish communication between the return-way and each of said racks, an electric circuit, a ball-actuated contact adapted to make and break it, cut-offs, one working in connection with one of a plurality of said racks, electro-magnets in said circuit, means for connecting each cut-off with a solenoid core, and means whereby each electro-magnet so connected may be individually energized whereby it will move its connected cut-off in one direction.

[Claims 6 to 14 not printed in the Gazette.]

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1,227,834. SUPPORT FOR BUFFER-BARS. CLINTON M. SAGER, Rochester, N. Y., assignor to J. H. Sager Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 25, 1916. Serial No. 127,654. (Cl. 213—39.)

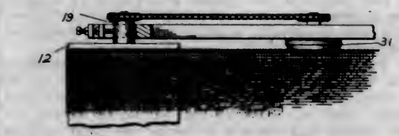
1. A support for buffer bars of automobiles, comprising a supporting arm having an end formed with a toothed outcurved portion and also with an opening substantially concentric with said toothed outcurved portion, a block having a face adapted to rest against the forward curved end of a vehicle frame and formed with a toothed incurved portion receiving the toothed outcurved portion of the supporting arm, and a U-shaped fastening clip passed through the opening of the supporting arm and having its arms lying upon opposite sides of the block to hold the latter against sidewise movement on the vehicle frame.



2. A support for buffer bars of automobiles comprising a supporting arm having an end formed with a toothed outcurved portion and also with an opening substantially concentric with said toothed outcurved portion, a block having a face adapted to rest against a vehicle frame and formed with a toothed incurved portion receiving the outcurved portion of the supporting arm, and a fastening clip passed through the opening of the supporting arm and engaging the vehicle frame to hold the block to the frame and the supporting arm to the block.

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1,227,835. APRON-GUIDING DEVICE. FREDERICK G. SARGENT, Westford, Mass., assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass., a Corporation of Massachusetts. Filed Nov. 20, 1916. Serial No. 132,337. (Cl. 193—23.)



1. In a device of the character described, the combination with a shaft, a drum thereon, and an apron passing over the drum, of a wheel located at a distance from said drum in position to be engaged by the edge of the apron and an eccentric bushing operated by said wheel for bodily moving the end of the shaft.

2. The combination with a rotary drum, of an endless apron carried thereby, a pair of conical wheels located at the sides of said apron but far enough apart so that they will not be engaged by the apron normally, an eccentric bushing at each end of the shaft, and means on each eccentric bushing for connecting it with one of said wheels, whereby upon the turning of one of said wheels the corresponding eccentric bushing will be turned.

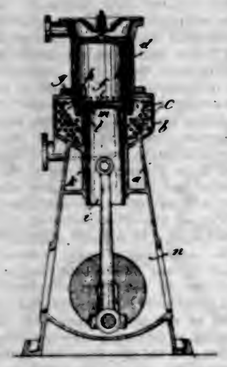
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1,227,836. SINGLE-ACTING, CONDENSING, CONTINUOUS-CURRENT STEAM-ENGINE. KARL SCHMID, Landsberg-on-the-Warthe, Germany. Filed July 27, 1914. Serial No. 853,410. (Cl. 127—45.)

1. A single-acting condensing steam engine, comprising a condensing chamber, a working cylinder and a coaxial guiding cylinder extending into said condensing chamber from opposite sides thereof with open inner ends separated from each other; a working piston fitted to said working cylinder, and a rigidly united guiding piston fitted to said guiding cylinder; said working cylinder having exhaust ports leading into the condensing chamber, and said working piston having a longitudinally extended cuff which surrounds the end of the guiding cylinder when the working cylinder is exhausting.

2. A single-acting condensing steam engine, comprising a condensing chamber, a working cylinder and a coaxial guiding cylinder extending into said condensing chamber from opposite sides thereof with open inner ends separated from each other; a working piston fitted to said working cylinder, and a rigidly united guiding piston fitted to said guiding cylinder; said working cylinder having exhaust ports leading into the condensing chamber, and said working piston having a longitudinally extended cuff which surrounds the end of the guiding cylinder when the working cylinder is exhausting; the working cylinder being of larger diameter than the guiding cylinder, and the open ends of said cylinders being longitudinally overlapped, so that the cuff on the working piston remains within the working cylinder when surrounding the end of the guiding cylinder.

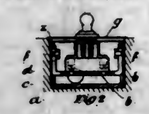




3. A single-acting condensing steam engine, comprising a common condensing chamber, a series of single-acting working cylinders all having open inner ends projecting into the common condensing chamber and constructed with exhaust ports communicating with said chamber, a coaxial guiding cylinder for each working cylinder, each having an open inner end projecting into the condensing chamber from the side opposite to its working cylinder, and each being of smaller diameter than and telescoping partially with its working cylinder, and a working piston for each working cylinder, having a rigidly united guiding piston fitted to the corresponding guiding cylinder; each working piston being constructed with a longitudinally projecting cuff in position to surround the end of the guiding cylinder when the working piston is in the exhaust position.

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1,227,837. ELECTRIC CONTACT-BOX. ARTHUR WILLIAM SCLATER, Piccadilly, Westminster, England. Filed Oct. 26, 1914. Serial No. 868,695. (Cl. 247—6.)



1. The combination with a contact box having an opening in its front face, of a U-shaped bridge carried therein having slots in the parallel members thereon, and means for clamping said parallel members to the walls of the contact box in fixed adjusted positions.

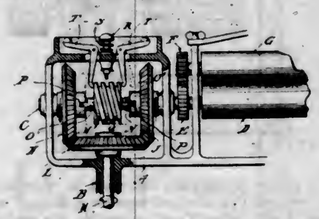
2. The combination with an electric contact box having an opening in its front face and grooves in its opposite walls, of a substantially U-shaped bridge adjustably carried in said grooves offset from the bottom of the box, the parallel members of the bridge being slidably carried in said grooves, and means for clamping the parallel members of the bridge in fixed positions on the walls of said box in said grooves, substantially as described.

3. The combination with an electric contact box having an opening in its front face, of a substantially U-shaped bridge removably carried therein offset from the bottom of the box, having elongated slots in the parallel members thereof and enlarged extensions thereof in the adjacent ends of the connecting member, and screws passing through said slots for removably and adjustably securing the bridge in fixed position, substantially as described.

4. The combination with an electric contact box having an opening in its front face, of a substantially U-shaped bridge removably carried therein offset from the bottom of the box, having slots in the parallel members thereof, and screws passing through said slots and engaging the adjacent walls of the box for removably and adjustably clamping the bridge in fixed position on said walls.

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1,227,838. CLUTCH-OPERATING MECHANISM. SIMON E. SCHROEDER, Minier, Ill. Filed June 8, 1914. Serial No. 843,816. (Cl. 192—9.)



1. The combination of a pair of driving members having clutch members, a companion clutch member for engagement with either of the clutch members of the driving members, said companion clutch member being provided with a spiral guide, means to effect engagement of the companion clutch member with either of the clutch members and means engaging the spiral guide to effect a disengagement of the companion clutch member with either of the clutch members.

2. The combination of a pair of driving members having clutch members, a companion clutch member for engagement with either of the clutch members of the driven members, said companion clutch member being provided with a spiral guide, means to effect engagement of the companion clutch member with either of the clutch members, means engaging the spiral guide to effect a disengagement of the companion clutch member with the clutch members and controlling means for effecting the operation of the engaging and disengaging means of the clutch members.

3. In combination, a driven shaft, a driven clutch member rotatable therewith and shiftable lengthwise thereof, a spiral member thereabout, a pair of driving members normally loose on said shaft and disposed at opposite ends of said shiftable clutch member, and each provided with a clutch part, a member fixed relative to the movement of the shiftable clutch member on said shaft and normally in clearance thereof but depressible to engage the spiral member, operable when depressed through engagement with the spiral to release the engagement of said member with either of the driving members, and means independent of said depressible member to move said driven clutch member into engagement with either of said driving members.

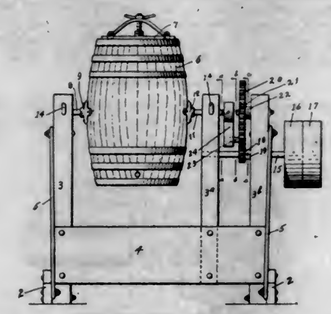
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1,227,839. GEARING. SIMON E. SCHROEDER and CHARLES W. BIRD, Minier, Ill. Filed Aug. 19, 1914, Serial No. 857,612. Renewed Nov. 2, 1916. Serial No. 129,230. (Cl. 74—7.)

1. In combination, a support, a mechanism thereon, means for driving said mechanism comprising a shaft connected with the mechanism, a crank arm on said shaft, a gear wheel, a driving support therefor, said gear being provided with an eccentrically disposed pin connected with said crank arm, a power shaft, a gear thereon for driving said first named gear.

2. In a device of the class described, in combination, a support, an operating mechanism supported therein, a driving connection for said operating mechanism comprising a shaft journaled in said support and connected with said operating mechanism, a crank on said shaft provided with an open slot at its outer end, a suitably supported driving gear for said crank provided with an eccentrically

disposed pin registering with the slot in said crank arm, a driven member and a gear thereon for driving said first named gear.

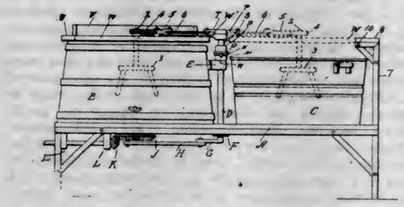


3. In a device of the class described, in combination, a support, an operating mechanism thereon, a shaft suitably journaled in said support and connecting the said operating mechanism, means for driving said shaft comprising a crank arm on said shaft, a suitably supported gear wheel provided with an eccentrically disposed pin connecting with the outer end of said crank arm, a driving shaft and a gear thereon meshing with said first named gear.

4. In a device of the class described, in combination, a support, an operating mechanism thereon, a shaft suitably journaled in said support and connecting the said operating mechanism, means for driving said shaft comprising a crank arm on said shaft provided with an open slot at its outer end, a suitably supported gear wheel provided with an eccentrically disposed pin registering with the open slot in said crank arm, a driving shaft and a gear thereon meshing with said first named gear.

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1,227,840. WASHING-MACHINE. SIMON E. SCHROEDER, Minier, Ill. Filed Oct. 9, 1915. Serial No. 55,086. (Cl. 68—15.)



1. In a device of the class described, the combination of a platform adapted to support a plurality of receptacles, a movable supplemental frame forming a cover for any one of said receptacles, means on the main frame for supporting the supplemental frame in a plurality of operating positions parallel with the main frame, power driving mechanism on the main frame, operating mechanism on the supplemental frame adapted to enter a receptacle when said supplemental frame is positioned thereover, and separable power transmission parts adapted to be engaged when the supplemental frame is in any of the operating positions and adapted to be disengaged when the supplemental frame is moved from the operating positions.

2. In a device of the class described, the combination of a main frame, a removable supplemental frame with an operating mechanism thereon, means at each end of the frame and intermediate of the ends of the frame for supporting the said supplemental frame in operating position at either end of the main frame, power driving mechanism on the main frame and transmission mechanism intermediate the ends of the main frame connecting the power driving mechanism and the said operating mechanism, said transmission mechanism being provided with separable parts, said parts being adapted to be separated when the supplemental frame is removed and adapted to be in engagement when the supplemental frame is in either position on the main frame.

3. In a device of the class described, the combination of a platform adapted to support a plurality of receptacles, a supplemental frame, operating mechanism on the supplemental frame, means on the platform for supporting the supplemental frame in a plurality of positions parallel with the platform and over one of said receptacles with the operating mechanism inserted therein, power driving mechanism under the platform, and power transmission mechanism extending upward through the platform, said transmission mechanism including separable parts adapted to be disconnected when the supplemental frame is removed and adapted to engage when the supplemental frame is in any of its operating positions.

4. In a device of the class described, the combination of a platform adapted to support a plurality of receptacles, a movable supplemental frame designed to be shifted to form a cover for any one of said receptacles, operating mechanism carried by the cover or supplemental frame and extending into the covered receptacle, an upright driving mechanism on the main frame, and separable clutch members forming a driving connection between the upright mechanism and the operating mechanism, and adapted to be disengaged when the cover is removed and adapted to be engaged when the cover is in position above any receptacle.

5. In a device of the class described, in combination, a platform, a plurality of container members thereon, a removable supplemental frame forming a cover for any of said container members, operating mechanism on said frame or cover, means for supporting said frame and mechanism interchangeably in superimposed operating relation with either of said container members, power driven mechanism on the main frame, separable power transmission parts adapted to be engaged when the supplemental frame is in any of its operating positions and adapted to be disengaged when the supplemental frame is moved from the operating positions.

[Claim 6 not printed in the Gazette.]

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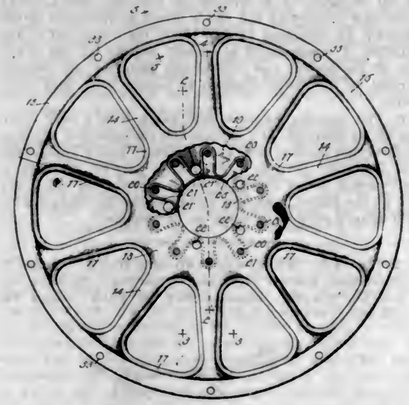
1,227,841. AUTOMOBILE-WHEEL. LEON C. SCHWAB, Milwaukee, Wis., assignor to A. O. Smith Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 24, 1914. Serial No. 820,421. (Cl. 21—69.)

1. A wheel of the class described; comprising in combination a pair of substantially symmetrical dished sheet metal members; each of said members comprising a felly section, a hub section, and a plurality of spoke sections interposed between the hub and felly sections; a serpentine spacer interposed between the hub sections; and a plurality of bosses formed in one of the hub sections arranged to prevent displacement of the spacer.

2. A vehicle wheel comprising in combination a pair of substantially symmetrical dished sheet metal members, each comprising a felly section, a hub section and a plurality of spoke sections interposed between the hub and felly sections, the hub section, spoke sections, and felly section of each of said dished sheet metal members being formed integral with one another, a metal strip bent into serpentine shape interposed between the hub sections of the dished sheet metal members, means for clamping the hub section to said serpentine spacer, an annular spacer interposed between the felly sections of the sheet metal members and means for clamping the felly sections to said annular spacer so as to form a wheel rim.

3. A vehicle wheel of the class described comprising a pair of substantially symmetrical dished sheet metal halves, each comprising a hub section, a felly section, and a plurality of spoke sections interposed between the hub and felly sections, the hub, felly, and spoke sections of each half being formed integral with one another, an annular spacer of substantially U shape in cross section disposed between the felly sections with the legs of the U abutting against the adjacent faces of the felly sections, and that portion of the U extending between the legs thereof lying at the periphery of the wheel and constituting the cylindrical wheel periphery, a rim band substantially L shape in cross section disposed around the periphery of the wheel with one arm of the L lying at one side of the felly, and clamping bolts extending through the rim band, felly sections, and the parallel legs of the spacer.





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1,227,842. FLOW-INDICATOR. JULIUS SELLIN, Stuttgart, Germany. Filed Sept. 9, 1913. Serial No. 788,830. (Cl. 116—31.)



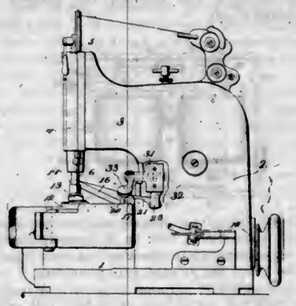
A device for indicating the movement of fluids in pressure conduits comprising a gage glass, and balls movable in said gage glass and serving as floating bodies, said balls being specifically heavier than the fluid to be conveyed and having a diameter which is greater than the radius of the gage glass.

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1,227,843. THREAD-CUTTER FOR SEWING-MACHINES. DUDLEY S. SEYMOUR, Oak Park, Ill., assignor to Union Special Maching Company, Chicago, Ill., a Corporation of Illinois. Filed June 18, 1913. Serial No. 774,411. (Cl. 112—33.)

1. The combination with stitch forming mechanism, of a thread cutting mechanism including a movable cutter blade located in rear of the stitch-forming mechanism, and manually controlled means for causing said cutting mechanism to be actuated from a moving part of the stitch forming mechanism at the will of the operator, said manually controlled means including devices for automatically disconnecting the movable blade from its actuating mechanism, and raising the same.

2. The combination with stitch forming mechanism, of a thread cutting mechanism including a stationary cutter blade and a movable cutter blade located in rear of the stitching mechanism, and in a plane at right angles to the line feed, and manually controlled means for actuating the movable blade from a moving part of the stitch forming mechanism at the will of the operator, said manually controlled means including devices for automatically disconnecting the movable blade from its actuating mechanism, and raising the same when released by the operator.



3. The combination with a stitch forming mechanism including a needle, of a thread cutting mechanism including a fixed blade, a movable blade, said cutting blades being located in rear of the stitch forming mechanism and in a plane at right angles to the line of feed, and manually controlled means for actuating said movable blade from a moving part of the stitch forming mechanism at the will of the operator, said means including devices for depressing the movable blade on the upward stroke of the needle and for releasing the same.

4. The combination with a stitch forming mechanism including a needle, of a thread cutting mechanism including a fixed blade, a movable blade, said cutting blades being located in rear of the stitch forming mechanism and in a plane at right angles to the line of feed, and manually controlled means for actuating said movable blade from a moving part of the stitch forming mechanism at the will of the operator, said means including devices for depressing the blade on the upward movement of the needle, releasing the same, and raising said blade.

5. The combination with stitch forming mechanism including a needle, of a thread cutting mechanism including a movable cutter blade pivoted to swing in a plane at right angles to the line of feed and in rear of the needle, a spring for normally holding said cutting blade raised, an arm attached to said cutting blade for moving the same, an actuating device movable in unison with the needle, manually controlled means carried by the arm and movable into the path of the actuating device for depressing the cutter, said means being so disposed as to be automatically disconnected from its actuating device when the needle is substantially at the upper end of its stroke.

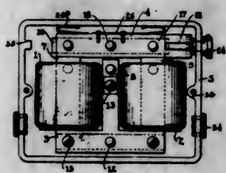
[Claims 6 to 12 not printed in the Gazette.]

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1,227,844. VARIABLE-VOLTAGE TRANSFORMER. ARTHUR SIMON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed July 3, 1915. Serial No. 37,998. (Cl. 171—119.)

1. In a variable voltage transformer, in combination, a primary coil, a secondary coil, an E-shaped core therefor, said coils being separately mounted on two legs of said core, the third leg of said core providing a magnetic shunt for said primary coil and an armature bridging all of said legs, said armature being adjustable to increase and decrease the reluctance of the magnetic circuit passing through the leg of said secondary coil to respectively decrease and increase the induced voltage of said secondary coil.

2. In a variable voltage transformer, in combination, a primary coil, a secondary coil, an E-shaped core therefor, said coils being separately mounted on the end legs of said core, the middle leg of said core providing a magnetic shunt for said primary coil and an armature bridging all of said legs, said armature being adjustable to increase and decrease the reluctance of the magnetic circuit passing through the leg of said secondary coil to respectively decrease and increase the induced voltage of said secondary coil.



3. In a variable voltage transformer, in combination, a primary coil, a secondary coil, an E-shaped core therefor, said coils being separately mounted on two legs of said core and the third leg of said core providing a magnetic shunt for said primary coil and being of relatively higher reluctance than the leg of said secondary coil and an armature bridging all of said legs, said armature being adjustable to increase and decrease the reluctance of the magnetic circuit passing through the leg of said secondary coil to respectively decrease and increase the induced voltage of said secondary coil.

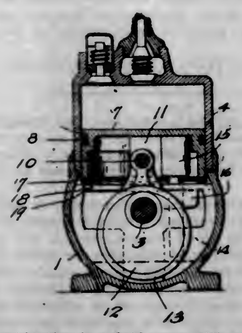
4. In a variable voltage transformer, in combination, a primary coil, a secondary coil, an E-shaped core therefor, said coils being separately mounted on the end legs of said core, the middle leg of said core providing a magnetic shunt for said primary coil and being of relatively higher reluctance than the leg of said secondary coil and an armature common to the three legs of said core, said armature being longitudinally adjustable to increase and decrease the reluctance of the magnetic circuit passing through the leg of said secondary coil to respectively decrease and increase the induced voltage of said secondary coil.

5. In a variable voltage transformer, in combination, a primary coil, a secondary coil, a substantially E-shaped core therefor, said coils being mounted on two legs of said core and the third leg being of restricted cross sectional area and length relative to said former legs and a longitudinally adjustable armature common to said legs.

[Claims 6 to 11 not printed in the Gazette.]

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1,227,845. FLUID-PUMP. RALPH H. SLEICHER, Troy, N. Y. Filed Aug. 9, 1916. Serial No. 113,913. (Cl. 184—19.)



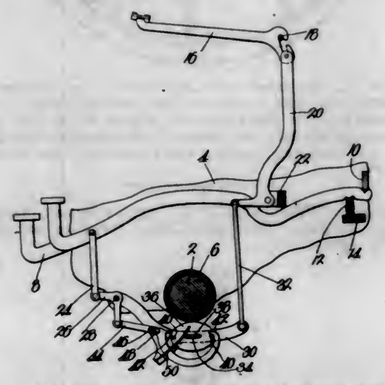
1. The combination in a fluid pump with an oil chamber, of a cylinder above the chamber, a piston reciprocable in the cylinder, a crank, a connecting rod and an abutment located below the lower end of the cylinder, and an absorbent compression member carried at the lower end forming an extension of the piston adapted to contact with said abutment, for the purpose described.

2. The combination in a fluid pump with a base forming an oil chamber, of a cylinder on the base and a crank shaft and connecting rod and a piston reciprocable in the cylinder, an abutment located below the lower end of the cylinder, a compressible absorbent member on the lower end of the piston, and a retaining plate for the member carried by the piston adapted to contact with said abutment.

3. The combination in a fluid pump with a base forming an oil chamber, of a cylinder on the base and a piston reciprocable therein, and a crank shaft and a connecting rod, a flanged portion in the upper part of the base, a felt washer and a retaining plate therefor on the lower end of the piston, and said plate adapted to contact with said flanged portion to compress the washer.

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1,227,846. TYPE-WRITING MACHINE. JAMES F. SMATHERS, Kansas City, Mo. Filed Nov. 27, 1914. Serial No. 874,204. Renewed Oct. 19, 1916. Serial No. 126,797. (Cl. 197—17.)



1. In a typewriting machine having a driving member and movable type-bar operating devices, the combination of an elliptical driven member carried by said devices, means tending to rotate said driven member until engaged with said driving member, a double escapement mechanism for normally preventing said driven member from turning, and means for tripping the operative parts of the escapement mechanism to permit the driven member to be turned and for simultaneously causing the other parts of the escapement mechanism to arrest the rotation of the said driven member as the same completes a half revolution.

2. In a typewriting machine having a driving member and movable type-bar operating devices, the combination of an elliptical driven member carried by said devices, means tending to rotate said driven member until engaged with said driving member, a double escapement mechanism for normally preventing said driven member from turning, and means for tripping the operative parts of the escapement mechanism to permit the driven member to be turned until engaged and driven by said driving member sufficiently to restore the said means tending to rotate the driven member to operative relation thereto, and for causing the escapement mechanism to arrest the rotation of the driven member before it completes a half revolution.

3. In a typewriting machine having a driving member and movable type-bar operating devices, the combination of an elliptical driven member carried by said devices,

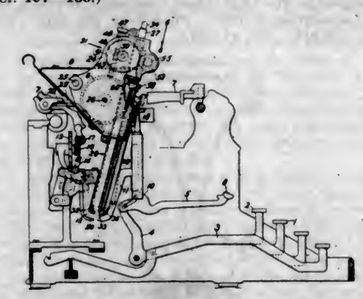


means tending to rotate said driven member until engaged with said driving member, a double escapement mechanism for normally preventing said driven member from turning, means for tripping the operative parts of the escapement mechanism to permit the driven member to be turned until engaged and driven by said driving member sufficiently to restore the said means for tending to rotate the driven member to operative relation thereto, and for causing the escapement mechanism to arrest the rotation of the driven member before it completes a half revolution, and means to return the escapement mechanism to its original position to permit said means tending to rotate the driven member to continue the rotation thereof until it completes a half revolution.

4. In a typewriting machine, a driving roller, movable type-bar operating devices, an elliptical member journaled on said movable type-bar operating devices, having a flattened hub and a pair of diametrically opposite pins, a tensioned spring exerting pressure on said hub to rotate the elliptic member into engagement with the driving roller, an escapement mechanism engaging one of said pins to prevent rotation of the elliptic member by said spring, means for operating said escapement mechanism to trip it from the path of the engaged pin, to permit said spring to rotate the elliptic member into peripheral engagement with the driven roller to cause the latter by continuing the operation of the elliptic member to effect movement of the type-bar operating mechanism and to effect the retensioning of said spring by said hub; said escapement mechanism being positioned by its operation, to arrest the rotation of said elliptic member after the movement of the type-bar operating mechanism and the retensioning of the spring is accomplished, and means to return the escapement mechanism to its original position to permit said spring to again turn the elliptic member until arrested by the engagement of the other pin with the escapement mechanism.

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1,227,847. TYPE-WRITING MACHINE. JESSE A. B. SMITH, Glenbrook, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 29, 1917. Serial No. 145,062. (Cl. 197—135.)



1. The combination with a platen, of a card-carrying frame arranged to bring a card in close juxtaposition to said platen, line-spacing mechanism for said platen, a spring drive for said frame, and an escapement mechanism for said frame under the control of said line-space mechanism, enabling said frame to keep pace with the line-space movements of said platen, so as to bring up to position fresh lines of said card to be printed on.

2. The combination with a platen, of a card-carrying frame coöperating with said platen to support a card against said platen, a power-drive for said frame, and an escapement mechanism controlling the movement of said frame by said power-drive, so as to give step-by-step line-space movements to said frame and the card carried thereby.

3. The combination with a platen, of a carrying frame for holding a card in juxtaposition to said platen, a pair of racks, one on each side of said frame, a pair of gears meshing with said racks, so as to give a justified movement of said frame, and a spring for driving said gears to give an advancing movement of said frame, so as to bring successive portions of said card into contingency with the platen.

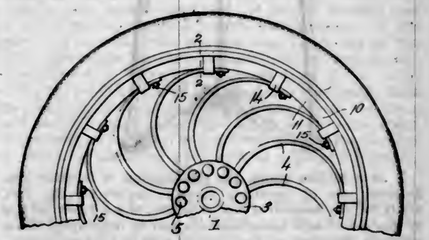
4. The combination with a platen, of a carrying frame for supporting a card in contact with said platen, a pair of racks, one on each side of said frame, a pair of gears driving said racks, secondary gears driving said first-mentioned gears, and a spring-barrel for driving said secondary gears, so as to give a justified advancing movement of said carrying frame to bring successive portions of said card into contingency with said platen.

5. The combination with a platen, of a carrying frame for supporting a card in contact with said platen, a pair of racks, one on each side of said frame, a pair of gears driving said racks, secondary gears driving said first-mentioned gears, a spring for driving said secondary gears, so as to give a justified advancing movement of said carrying frame to bring successive portions of said card into contingency with said platen, and a self-locking worm and worm-wheel gearing for giving an initial tension to said spring.

[Claims 6 to 10 not printed in the Gazette.]

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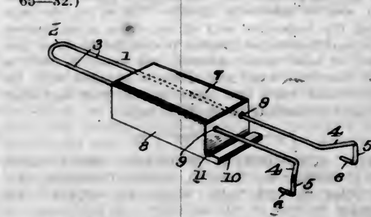
1,227,848. RESILIENT WHEEL. RALPH F. SPENCER, Osceola, Ill. Filed May 3, 1916. Serial No. 95,164. (Cl. 152—50.)



A wheel of the class described comprising a hub, resilient spokes having their inner ends engaged with the hub, a felly formed from channel iron and engaged with the outer ends of the spokes, the sides of the felly having recesses formed therein, clips carried by the felly, and engaged with the outer ends of the spokes, said clips having hooked ends engaged with the recesses to prevent the clips from creeping and a rim supported by the walls of the felly and engaged with said hooked ends.

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1,227,849. PAN-LIFTER. EARL E. STANFIELD, Denver, Colo. Filed Jan. 25, 1915. Serial No. 4,300. (Cl. 65—32.)

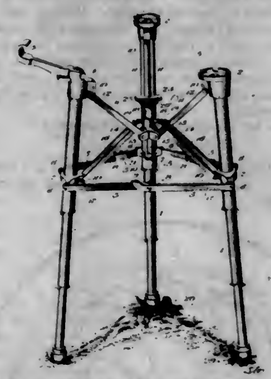


A pan lifter of the class described including a wire bent to form a U-shaped handle having the ends of its arms bent to provide L-shaped clamping arms, a rectangular non-heat-conducting block of a relatively long length provided near its upper side with a pair of longitudinally extending relatively spaced openings slidably and frictionally receiving the arms of the handle, said block being of sufficient length and width so as to prevent accidental

sliding movement of the block on the arms, a lip formed on and extending forwardly from the lower front edge of said block, said lip having a transversely extending groove on its upper face defining a shoulder, said shoulder adapted to be positioned under the beaded edge of a pan forcing the same into the groove and eliminating any rearward movement of the block with relation to the arms of the pan when the pan is clamped between the arms and block, said block permitting the pan to be lifted thus obviating the necessity of the operator touching the wire handles.

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1,227,850. FOLDING STAND. HARRY A. STONE, New York, N. Y. Filed Jan. 7, 1914, Serial No. 810,777. Renewed Oct. 24, 1916. Serial No. 127,300. (Cl. 45—117.)



1. In a folding stand, the combination of foldable legs, different sets of relatively movable braces for the legs, heads for the respective sets of braces, and a screw carried by one set of said heads and adapted to detachably screw into the other of said heads, whereby the braces may be rigidly connected to hold the stand extended, or, disconnected to permit folding of the legs and braces.

2. In a folding stand, the combination of foldable legs, upwardly extending braces pivoted to the legs, a head connected to said braces, downwardly extending braces pivoted to the legs, a head connected to said downwardly extending braces, the upwardly and downwardly extending braces crossing each other, and a clamp screw carried by one of said heads and adapted to detachably engage the other of said heads, whereby the braces may be rigidly connected to hold the stand extended, or disconnected to permit folding of the legs and braces.

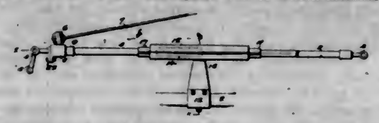
3. In a folding stand, the combination of foldable legs, different sets of relatively movable braces for the legs, heads for the respective sets of braces, a screw carried by one of said heads and adapted to detachably screw into the other of said heads, whereby the stand is held in extended condition when the screw is engaged with the head, or, folded when said screw is detached, and additional braces connecting the foldable legs.

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1,227,851. AUTOMOBILE STEERING MECHANISM. HUGO C. STRATFORD, Victoria, British Columbia, Canada. Filed Nov. 25, 1916. Serial No. 133,416. (Cl. 21—194.)

1. In an automobile steering gear, the combination with the front axle and the drag link by which movement of the steering wheel is communicated to the axle ends, of means mounted on the drag link and connected with the axle for automatically locking the drag link in any desired position of its endwise movement, and means cooperative with movement of the steering wheel for releasing said locking means.

8. In an automobile steering gear, means for locking the same to prevent movement of the wheels from any position to which they are moved by the steering mechanism, said means comprising the combination with the supporting axle of the leading wheels and the drag link by which movement from the steering wheel is transmitted to the spindle arms of the axle ends, of an elongated box of rectangular cross section having a bearing at each end through which the drag link is endwise movable, a link pivotally connected at one end to the box and at the other end to a bracket secured to and projecting from the supporting axle of the leading wheels, said link parallel to the drag link and approximately in a vertical plane through its axis, a toothed rack extending lengthwise within the box, a pawl carrying member endwise movable in the rectangular box to which member the

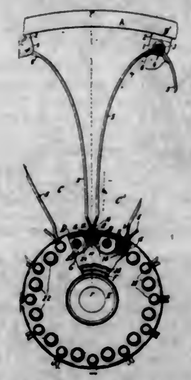


inner ends of the drag link are secured, toothed pawls mounted in this member to be movable to and from the rack bar, said pawls having teeth corresponding to those of the rack bar but angled on the sides which are toward the other pawl to move over the rack-teeth, a spring holding each pawl in engagement with the teeth of the rack, a rod passing through the drag link and through an aperture in each pawl and provided with a reversely inclined portion which is normally between the pawls that when moved endwise either way will lift the pawl on the side to which it is moved from engagement with the teeth of the rack, the end of said rod being connected to a sleeve having a limited endwise movement on the end of the drag link to which sleeve the rod from the steering wheel is connected.

[Claims 2 to 7 not printed in the Gazette.]

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1,227,852. SELF-CENTERING DEMOUNTABLE WHEEL. JOHN E. STRIETELMEIER, Cincinnati, Ohio, assignor to The Ideal Wheel Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Sept. 10, 1913. Serial No. 789,211. (Cl. 21—31.)



1. A resilient wheel combining a hub member peripherally provided with axially extending sockets having slots opening radially outwardly; a pair of sheet metal spoke elements terminating in each socket and each having an ogee curve immediately upon emerging from said slots; and wedge means for clamping said elements in said sockets.

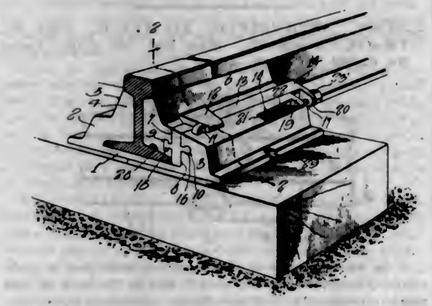
2. A wheel unit comprising a felly, a series of equispaced fastenings thereon, a hub-member providing a series of slots radially midway each pair of fastenings, a pair of similar sheet-metal spoke elements converging together at a fastening and each pivotally secured thereto, said spoke elements curving apart and the one entering the slot radially on one side of said fastening, and the other entering another slot radially on the other side of said fastening, and wedge means for rigidly securing said spoke elements in said slots.

3. A hub having a peripheral seat, an annular spoke-seating member circumscribing said seat, conical self-adjusting means intervening between said hub and member for maintaining concentricity between said parts and a spring for actuating said means.

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1,227,853. RAIL-JOINT. JACOB H. STULL, Fremont, Ohio. Filed Feb. 27, 1917. Serial No. 151,266. (Cl. 239—6.)



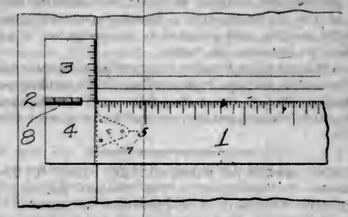
1. A railway chair comprising a base having laterally spaced upstanding walls formed in one piece therewith, one of said walls extending inwardly to form a fish plate, the other wall being longitudinally inclined with respect to the first named wall, a separate fish plate adapted to be positioned in spaced relation with respect to the inclined wall for engaging the track rail, a wedge block adapted to be positioned between said fish plate and the inclined wall, interengaging locking means on the sides of said block to prevent vertical movement of the block, a removable fastening member adjustably connecting one end of said block and the inclined wall, and cooperating locking means to hold the separate fish plate stationary in spaced relation with the inclined wall when the wedge block is being driven in position.

4. A railway chair comprising a base having laterally spaced upstanding walls formed in one piece therewith, one of said walls extending inwardly to form a fish plate, the other wall being longitudinally inclined with respect to the first named wall, a separate fish plate adapted to be positioned in spaced relation with respect to the inclined wall for engaging the track rail, a wedge block adapted to be positioned between said fish plate and the inclined wall, interengaging locking means to hold the separate fish plate in spaced relation with the wall when the wedge block is being placed in position, locking means on the sides of said block adjacent the wall and plate to prevent vertical movement of the block, a laterally projecting apertured ear on one end of said block or ear, said ear having teeth on its outer wall, a portion on the adjacent end of the inclined wall having an aperture therethrough alining with the aperture in the ear of the block, a headed bolt positioned through said apertures, the head of said bolt having teeth on its inner face, a spring locking washer between the head of the bolt and the ear on the block, a nut on the other end of said bolt, and a coiled spring on the bolt between the nut and the projecting portion of the inclined wall.

[Claims 2 and 3 not printed in the Gazette.]

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1,227,854. DEVICE FOR DRAWING PARALLEL LINES. DANIEL J. SULLIVAN and CARLETON F. STEVENS, Carson City, Nev. Filed June 3, 1916. Serial No. 101,583. (Cl. 33—112.)

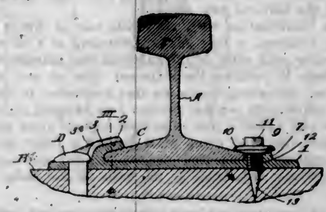


1. In combination with a ruler, a straight edge cooperating therewith for drawing parallel lines, said straight edge comprising a pair of hinged sections, one of which is fixed to the ruler in a manner to permit the other section to project at a right angle from the ruler, said projecting section provided with graduations along one of its edges and having a length equal to the width of the ruler and adapted to be folded upon the fixed section to permit of the ruler being used as originally intended.

2. In combination with a ruler, a straight edge cooperating therewith for drawing parallel lines, said straight edge comprising a pair of hinged sections, one of which has a tongue extending longitudinally of the ruler and by which the straight edge is secured to the ruler, said tongue having a prong struck up from its surface adapted to be embedded in the body of the ruler, said other section adapted to project at a right angle from the ruler and having graduations along one of its edges, said projecting section having a length equal to the width of the ruler and adapted to be folded upon the fixed section to permit of the ruler being used as originally intended.

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1,227,855. RAIL-SECURING DEVICE. JOHN W. THOMAS, Chicago, Ill., assignor to The Thomas Railway Track Appliance Company, a Corporation of Kansas. Filed Nov. 19, 1915. Serial No. 62,386. (Cl. 238—4.)



1. In a device of the character described, a tie-plate having a threaded hole therein, and a rail securing member consisting of a rail-engaging portion, a threaded portion depending from said rail-engaging portion and adapted to be screwed into the threaded hole of the tie-plate, and another portion depending from said threaded portion and adapted to be embedded in a cross-tie to prevent rotation of said rail securing member.

2. In a device of the character described, a tie-plate having a threaded hole therein, and a rail securing member consisting of a wide portion to overlap an adjacent portion of a rail, a threaded portion depending from said wide portion and adapted to be screwed into said threaded hole, and a wedge-shaped portion depending from said threaded portion and adapted to be embedded in a cross-tie to prevent rotation of said rail securing member.

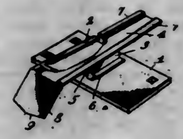
3. In a device of the character described, a tie-plate having a threaded hole in one side and a rail engaging

member at its opposite side, and a rail securing member consisting of a wide portion to engage an adjacent portion of a rail, a wrench-receiving portion surmounting said wide portion, a threaded portion depending from said wide portion and adapted to be screwed into the threaded hole of the tie-plate, and a shank depending from said threaded portion and adapted to be embedded in a cross-tie, for the purpose set forth.

4. A rail securing member comprising a circular portion, a rectangular portion surmounting said circular portion, a threaded portion depending from said circular portion, and a chisel-shaped portion depending from said threaded portion.

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1,227,856. RAILWAY FOOT-GUARD. JOHN W. THOMAS, Chicago, Ill., assignor to The Thomas Railway Track Appliance Company, a Corporation of Kansas. Filed Nov. 19, 1915. Serial No. 62,387. (Cl. 104—50.)



1. In a railway foot guard, a base plate, a lip adjacent one margin of said base plate, a top plate, and means connecting said base and top plates.

2. In a railway foot guard, a base plate, two oppositely-extending lips connected to said base plate and adapted to overlap the adjacent margins of the rails, a central web extending upwardly from said lips, and a top plate connected to said web.

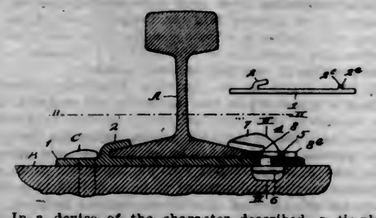
3. In a railway foot guard, a base plate adapted to underlie two adjacent rails, a top plate having a wall at one end and longitudinal up and outturned margins, and means connecting said base and top plates.

4. A railway foot guard, consisting of a base plate, a lip adjacent one margin of said base plate and adapted to overlap a rail base, two oppositely-extending lips connected to the base plate adjacent its central portion and adapted to overlap two rail bases, a web extending upward from the last-mentioned lips, and a top plate having an inclined end wall and two longitudinal margins adapted to engage the balls of two rails.

5. In combination with two rails one of which has a sloping terminal, a foot guard consisting of a base plate to underlie said rails, a lip adjacent one margin of said base plate to overlap the adjacent base of one of said rails, two oppositely-extending lips connected to the base plate adjacent its central portion and adapted to overlap the two rail bases, a web extending upward from the last-mentioned lips, and a top plate having a front wall and two longitudinal margins turned upward and outward to engage the undersides of the balls of the rails.

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1,227,857. RAIL-HOLDING DEVICE. JOHN W. THOMAS, Chicago, Ill., assignor to The Thomas Railway Track Appliance Company, a Corporation of Kansas. Filed Nov. 19, 1915. Serial No. 62,388. (Cl. 238—2.)



1. In a device of the character described, a tie-plate having a rail-engaging member at one side and an opening at its opposite side, and a fastening device rotatably arranged within said opening and embodying rail-holding means, and an edged member which latter is adapted to be embedded in an underlying cross tie.

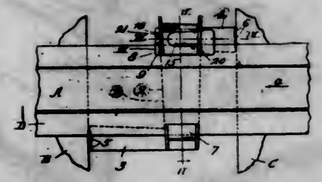
2. In a device of the character described, a tie-plate, and a rail fastening device rotatably mounted in said tie-plate and embodying a nonthreaded shouldered member of greater width than depth adapted to be embedded in an underlying cross-tie, for the purpose described.

3. In a device of the character described, a tie-plate having a spike hole therein, and a rail fastening device rotatably mounted within said tie-plate and embodying a lug extending at an angle thereto and adapted to abut a spike driven into said spike hole for holding the tie-plate in position, substantially as described.

4. A rail fastening device consisting of a cylindrical portion, an edge-shaped portion depending from said cylindrical portion, an eccentric portion surmounting said cylindrical portion, and a head surmounting said eccentric portion and adapted to overlap a rail base.

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1,227,858. ANTICREEPING APPLIANCE. JOHN W. THOMAS, Chicago, Ill. Filed Nov. 19, 1915. Serial No. 62,389. (Cl. 238—4.)



1. In an appliance of the character described, a plate adapted to extend beneath a rail, lips at the ends of said plate to overlap the rail base flanges, means interposed between one of said lips and the adjacent rail base flange to firmly grip the same, and means extending from the plate to abut two adjacent cross-ties underlying the rail.

2. In an appliance of the character described, a plate adapted to extend beneath a rail, a lip at one end of said plate to snugly embrace the adjacent rail base flange, a lip at the opposite end of said plate spaced from the adjacent rail base flange, means interposed between the last-mentioned lip and the adjacent rail base flange to firmly engage the same, and abutments projecting in opposite directions from the plate to bear against two cross-ties underlying the rail.

3. In an appliance of the character described, a plate adapted to extend beneath a rail, means on said plate to lap the rail base flanges, a tapered lock member adapted to be interposed between one of said means and the adjacent rail base flange to firmly engage the same, and a ball for securing said tapered lock member in position.

4. In appliance of the character described, a plate adapted to extend beneath a rail, means on said plate to lap the rail base flanges, one of said means having a ballway therein, a tapered lock member adapted to be interposed between one of said means and the adjacent rail base flange to firmly engage the same, and a ball interposed between the ballway and said tapered lock member.

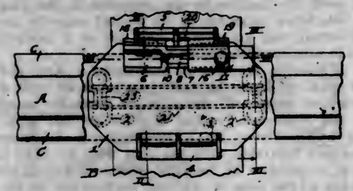
5. In an appliance of the character described, a plate adapted to extend transversely beneath a rail, means on said plate to lap the rail base flanges, a tapered lock member adapted to be interposed between one of said means and the adjacent rail base flange to firmly engage the same, said tapered lock member having a ballway therein, and a ball in said ballway adapted to lock said tapered lock member in position.

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1,227,859. RAILWAY-TRACK APPLIANCE. JOHN W. THOMAS, Chicago, Ill., assignor to The Thomas Railway Track Appliance Company, a Corporation of Kansas. Filed Nov. 19, 1915. Serial No. 62,390. (Cl. 238—2.)

1. In an appliance of the character described, a tie-plate member adapted to be interposed between a rail and a cross-tie, a yoke adapted to extend beneath the cross-tie and upward at opposite sides thereof and engage said tie-plate member, and frictional means for securing said yoke to the tie-plate member.





2. In an appliance of the character described, a tie-plate member adapted to be interposed between a rail and a cross-tie, sleeves integral with and depending from said tie-plate member and spaced apart to admit the cross-tie, means extending beneath said cross-tie and adapted to enter said sleeves, and devices for securing said means in the sleeves.

3. In an appliance of the character described, a tie-plate member adapted to be interposed between a rail and a cross-tie, sleeves depending from said tie-plate member and spaced apart to admit the cross-tie, said sleeves having tapered walls, a yoke adapted to extend beneath the cross-tie and enter said sleeves, and means adapted to engage said yoke and the tapered walls of the sleeves to secure said yoke therein.

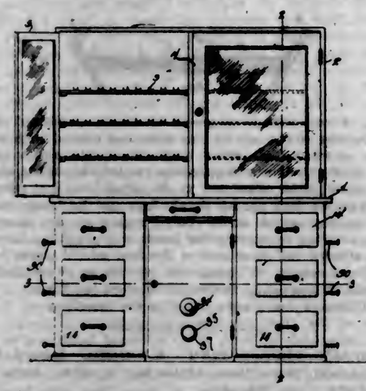
4. In an appliance of the character described, a tie-plate member adapted to be interposed between a rail and a cross-tie, sleeves depending from said tie-plate member and spaced apart to admit said cross-tie, a yoke adapted to extend beneath the cross-tie and enter said sleeves, and balls for locking said yoke within the sleeves.

5. In an appliance of the character described, a tie-plate member adapted to be interposed between a rail and a cross-tie, studs depending from said tie-plate member and adapted to enter recesses in the cross-tie, sleeves depending from said tie-plate member and spaced apart to admit said cross-tie, a yoke adapted to extend beneath the cross-tie and enter said sleeves, balls for locking the yoke within said sleeves, and coil springs bearing against a number of said balls to hold them in engagement with the yoke and the sleeves.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,860. DISINFECTING-CABINET. PINCKNEY V. TUELL, Rosebud, S. D. Filed Apr. 6, 1916. Serial No. 89,390. (Cl. 167—3.)



1. A combined cabinet and desk for disinfecting purposes, including a plurality of communicating compartments arranged therein, a spring wound curtain provided with an absorbent surface for receiving a disinfectant supported in one of the compartments and of means for holding the said curtain in an extended position.

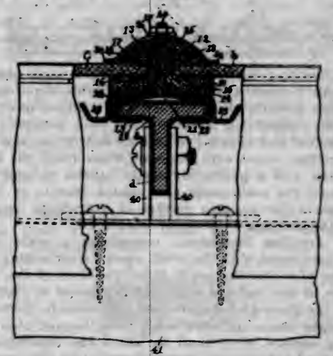
2. In a combined cabinet and desk for disinfecting purposes, comprising a plurality of compartments arranged therein, a spring wound curtain supported in one of the compartments, the curtain being constructed of absorbent material for receiving a disinfectant, spring gripping members for holding the curtain in its extended position, ports formed in the partition walls of the various compartments and a plurality of valves for opening and closing said ports.

3. A desk for disinfecting purposes, comprising a plurality of perforated drawers arranged and supported upon suitable partitions therein, a compartment for receiving a disinfectant, ports formed in the partition and communicating with the compartment and of screw operated cut-off valves arranged over said ports for controlling the flow of disinfectant to each of the drawers.

4. A disinfecting device, including a cabinet having a central compartment and a rear compartment, the wall between the central and rear compartments having port openings, valves for the openings, a spring roller mounted beneath the ports, a flexible absorbent fabric wound on the roller, a spring grip for receiving and holding the flexible absorbent fabric in an extended disinfectant receiving position, and perforated supports arranged in the cabinet accessible by the valved ports for receiving the fumes of the disinfectant on the flexible absorbent fabric.

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1,227,861. GLAZING CONSTRUCTION. WILLIAM P. WAUGH, Warren, R. I., assignor to Asbestos Protected Metal Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Sept. 21, 1915. Serial No. 51,887. (Cl. 108—16.)



1. In a glazing construction, in combination, a sealing member of substantially plastic, water-repelling material provided on its outer surface with protective means, glass panes resting on said sealing member and said protective means and separated from each other, a second sealing member of substantially plastic, water-repelling material contacting with the upper surfaces of said glass panes, and provided with a protective means on its outer surface having a portion interposed between the second sealing member and the glass panes, a rib of substantially plastic, water-repelling material filling the space between the edges of the glass panes and united with said sealing members between said glass panes, a cap plate covering the upper sealing member, a supporting member located below said panes, and means for securing said cap plate in fixed relation to said supporting member, said means being extended through said sealing members and rib to be sealed thereby below, between, and above said panes.

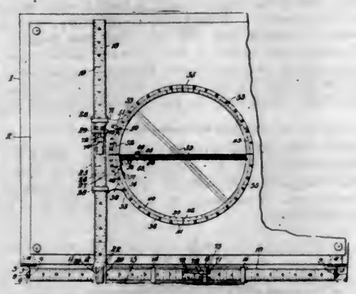
2. In a glazing construction, in combination, glass panes located in substantially the same plane and separated

from each other, asphalt sealing members contacting with the opposite surfaces of said glass panes and connected by an asphalt rib interposed and filling the space between the adjacent edges of said panes, a supporting member for said panes located below the same, a cap plate covering the upper sealing member, and means for securing said cap plate in fixed relation to said supporting member, said means being extended through the sealing members and rib and sealed by the latter between the glass panes.

3. A glazing structure comprising a plastic packing provided with a restraining fabric covering having its boundary edges interposed between a portion of said packing and the glass, leaving a portion of said plastic packing contacting directly with the glass, and rigid members substantially coextensive with the principal surfaces of said packing, and means to press said rigid members to bring the plastic material in close contact with the glass to seal the edges thereof.

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1,227,862. DRAFTING INSTRUMENT. SAMUEL A. WIKBERG and JOHAN WIKBERG, Everson, Wash. Filed June 15, 1916. Serial No. 103,870. (Cl. 33—32.)



1. A drafting instrument comprising a scale stock, a scale beam disposed at right angles to the stock and mounted on and movable along the stock at a higher level than the latter, supporting means for the stock located at the ends thereof and adapted to be attached to one side edge of a drafting board with the scale beam above the drafting board, and a protractor device carried by and movable along the scale beam and related thereto to be located above the working surface of a drafting board to which the drafting instrument is attached.

2. A drafting instrument comprising a scale stock, means associated with the scale stock for attaching it to one edge of a drafting board below the level of the working face of the board, a scale beam disposed at right angles to the stock and mounted on and movable therealong at a height above the scale stock to be located above the working surface of a board to which the instrument is applied, and a protractor device mounted on and movable along the scale beam in position to be in elevated relation to the working surface of the drafting board to which the instrument is applied.

3. A drafting instrument comprising a scale stock, means associated with the scale stock for attaching it to one edge of a drafting board below the level of the working face of the board, a scale beam disposed at right angles to the stock and mounted on and movable therealong at a height above the scale stock to be located above the working surface of a board to which the instrument is applied, and a protractor device mounted on and movable along the scale beam in position to be in elevated relation to the working surface of the drafting board to which the instrument is applied, said protractor device being provided with depending portions for contact with drawing paper upon the drawing board, whereby to support the protractor otherwise in elevated relation to the paper on the board to which the instrument is applied.

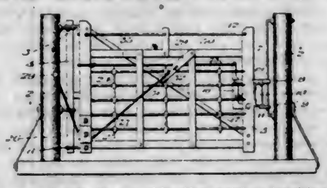
4. A drafting instrument comprising a scale stock, a scale beam supported by and at right angles to the scale stock and adjustable therealong, a protractor carried by and adjustable along the scale beam, and provided with a rotatable ring, and a rule supported across the rotatable ring with one edge of the rule in a diameter of the ring, said rule having pivotal supports in the ring and said rule being rotatable on its pivotal supports about a longitudinal axis to present any one of a plurality of edges in said diameter of the ring.

5. A drafting instrument comprising a scale stock, a scale beam supported by said scale stock at right angles thereto and adjustable therealong, a rotatable protractor ring and supporting means therefor on and adjustable along the scale beam, and a three-cornered rule supported across and rotatable with the ring with an edge of the rule in a diameter of the ring, said rule having pivotal supports at the ends in the ring for rotation of the rule about its longitudinal pivotal axis for presenting any one of its edges in said diameter of the ring.

[Claims 6 to 19 not printed in the Gazette.]

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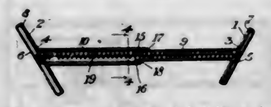
1,227,863. GATE-LATCH. ALOUIS L. WINNEGA, deceased, Preston, Minn., by Lily M. Winnega, administratrix, Preston, Minn., assignor to Oscar W. Clark, Cresco, Iowa. Original application filed May 3, 1915, Serial No. 25,553. Divided and this application filed Sept. 25, 1916. Serial No. 122,154. (Cl. 70—28.)



In a gate latch, the combination with a latching rod or keeper, of upper and lower horizontally disposed bifurcated latches, a rod or shaft which carries said latches and by which they are rockably mounted to move in unison in a horizontal plane, one of said latches being provided with a notch and with lugs or shoulders on opposite sides of said notch, and a manually retractable slidable locking bolt adapted to be received in the notch to lock the latches or to engage one or the other of the lugs to limit the lateral swinging of the latches.

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1,227,864. CUFF-LINK. FRANK E. WINSTON and VICTOR B. ROGERS, New York, N. Y. Filed Apr. 29, 1916. Serial No. 94,288. (Cl. 24—102.)



1. A cuff button composed of heads, a hollow shank connected at one end to one head and formed with opposite outwardly extending longitudinal ribs which latter are formed hollow and open into the interior of the shank, a hollow shank connected to the other head and received within the first named shank, lugs on the inner end of the second named shank sliding within the rib interiors, and a spring connecting the heads and extending through the shanks, the inner end of the first named shank being curved inwardly to engage the lugs so as to restrict the extent of separating movement between the heads.

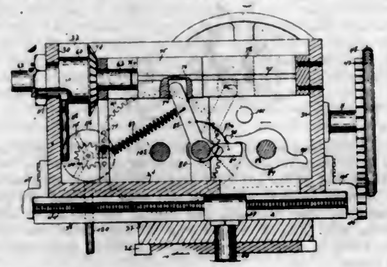
[Claims 2 and 3 not printed in the Gazette.]

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1,227,865. PROSPECTING - MACHINE. JOSEPH WISNIEWSKI, Butte, Mont. Filed Mar. 2, 1916. Serial No. 81,628. (Cl. 255—42.)

4. In a prospecting machine, a drill-holding spindle, a percussion hammer for striking the same provided with a pocket in its underside, and trip mechanism for operating the said hammer comprising a rotatable cam and a bell-crank-like lever one arm of which is lodged in the said pocket and the other is provided with a spring-controlled stub and means for rotating the said cam.



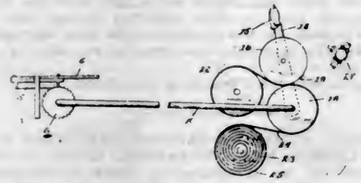


5. In a prospecting machine, a box-like works-containing head provided with a sleeve in its front wall, the said sleeve being recessed internally for the reception of a spring; a spring-pressed drill-holding spindle mounted rotatably and movable longitudinally in one end of the said sleeve, a gear splined on the said spindle provided with a circumferentially grooved hub and mounted rotatably in the opposite end of the said sleeve, and means in the said sleeve for engaging the said groove so as to hold the said gear non-movable longitudinally.

[Claims 1 to 3 not printed in the Gazette.]

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1,227,866. TRAIN-STOPPING APPARATUS. ADEN M. WORDEN, Phoenix, Ariz. Filed Apr. 4, 1916. Serial No. 88,875. (Cl. 246—14.)



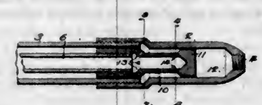
1. In automatic train stopping apparatus, the combination with a valve connected in the brake pipe and normally closed, of a lever capable of swinging movement toward said valve and adapted to engage the valve to open the latter, a shaft, a connection between said shaft and lever whereby the latter may be swung in the rotation of the shaft and operable to disconnect the lever from the shaft so that the lever may be restored to normal position, driving connections between said shaft and one of the drive wheels of the engine whereby the shaft will be rotated at less speed than the drive wheel of the engine so that the lever may be swung to open the valve after the train has traversed a prescribed distance.

2. In automatic train stopping apparatus, the combination with a valve connected in the brake pipe and normally closed, of a lever capable of swinging movement toward said valve and adapted to engage the valve to open the latter, a shaft, a connection between said shaft and lever whereby the latter may be swung in the rotation of the shaft and operable to disconnect the lever from the shaft so that the lever may be restored to normal position, driving connections between said shaft and one of the drive wheels of the engine whereby the shaft will be rotated at less speed than the drive wheel of the engine so that the lever may be swung to open the valve after the train has traversed a predetermined distance, and means associated with said lever for indicating the number of miles to be traveled by the train before the lever opens said valve.

3. In automatic train stopping apparatus, the combination with a valve connected in the brake pipe and normally closed, of a lever capable of swinging movement toward said valve and adapted to engage the valve to open the latter, a shaft, a connection between said shaft and lever whereby the latter may be swung in the rotation of the shaft and operable to disconnect the lever from the shaft so that the lever may be restored to normal position, driving connections between said shaft and one of the drive wheels of the engine whereby the shaft will be rotated at less speed than the drive wheel of the engine so that the lever may be swung to open the valve after the train has traversed a predetermined distance, and means driven from said shaft for recording the number of miles traversed by the train.

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1,227,867. CRUDE-OIL BURNER. JOHN YOUNG, New Westminster, British Columbia, Canada. Filed Jan. 6, 1917. Serial No. 140,917. (Cl. 158—75.)

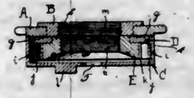


5. A crude oil burner, comprising in combination, an outer burner member axially bored and threaded at one end to fit an oil service pipe and therebeyond conically reduced to a cylindrical bore which at the farther end is abruptly reduced to a circular delivery outlet threaded with a screw thread, an inner burner member the outside diameter of which is at one end larger than the cylindrical bore of the outer member and at the other end has a diameter slightly less than the said cylindrical bore and intermediate of its ends is reduced below the diameter of the outer end, the reduction of the larger end being conical to correspond with the conical reduction in the bore of the outer member, the outer end of the inner member terminating a short distance from the outlet reduction of the outer member so as to leave a chambered interspace, the inner member being axially bored to a short distance from its outer end and having a series of small apertures through it at the intermediate reduced portion, and means for delivering a steam service to the bore of the inner member.

[Claims 1 to 4 not printed in the Gazette.]

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1,227,868. COASTER-BRAKE. HARRY F. YOUNGS, Santa Cruz, Cal. Filed June 24, 1915. Serial No. 36,027. (Cl. 208—57.)

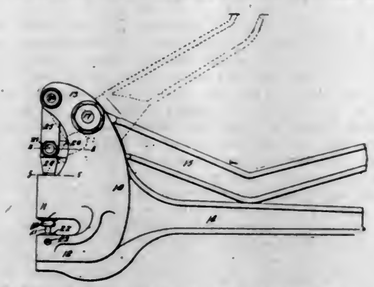


1. In a coaster brake, a hub member, an annular member rotatably supported by said hub member, said last named member being provided with driving means, coacting means carried by the hub member and the annular member for causing the same to rotate in unison in one direction, a second annular member rotatably supported by the hub member and provided in its inner face with beveled recesses, a pawl carried by the outer face of the first named annular member and coacting with the recesses of the second annular member for causing both of said annular members to rotate in unison in one direction but opposite to the direction of unitary movement of the hub member and the first named annular member, a cap inclosing the outer portion of the hub member and the second named annular member, and a brake band secured to the cap and disposed around the hub member and engaged with the second named annular member whereby the unitary movement of both of said annular members causes the brake band to frictionally engage the hub member.

2. In a coaster brake, a hub member, an annular member rotatably supported by said hub member, said last named member being provided with driving means, coacting means carried by the hub member and the annular member for causing the same to rotate in unison in one direction, a second annular member rotatably supported by the hub member and provided in its inner face with beveled recesses, a pawl carried by the outer face of the first named annular member and coacting with the recesses of the second annular member for causing both of said annular members to rotate in unison in one direction but opposite to the direction of unitary movement of the hub member and the first named annular member, a cap inclosing the outer portion of the hub member and the second named annular member, a brake band secured to the cap and disposed around the hub member and engaged with the second named annular member whereby the unitary movement of both of said annular members causes the brake band to frictionally engage the hub member, and an outstanding lug carried by the cap member at one side of its axial center to afford means to hold said cap against axial rotation.

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1,227,869. PUNCH. WILLIAM C. BAKER, Portland, Oreg. Filed July 7, 1916. Serial No. 108,047. (Cl. 164—120.)



1. A punch comprising a head having upper and lower stationary jaws extending in spaced relation, the jaws being provided with passageways and the passageway of the upper jaw having an enlarged upper end portion, a handle extending from said head, arms extending from said head above said jaws, a plunger slidably carried by the upper jaw, a lever extending above said handle and having a head pivotally mounted between said arms, a link pivotally mounted between said arms in front of the head of said lever, a link pivotally connected with the head of said lever, and a link pivotally connected with the upper end of said plunger and pivotally connected with said first and second mentioned links.

2. A punch comprising a head having upper and lower jaws positioned in spaced relation and provided with alined openings, a handle extending from said head, a plunger slidably carried by the upper jaw, a guiding pin carried by said plunger and fitting into grooves formed in the upper jaw to guide the sliding movement of the plunger, a link pivotally connected with said plunger by said guiding pin, arms extending from said head, a link pivotally mounted between said arms, a lever extending above said handle and pivotally mounted between said arms, and a link pivotally connected with said lever, the link of said lever and the link mounted between said arms being pivotally connected with the link pivotally connected with said plunger.

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1,227,870. BREAST-STRAP SLIDE. JOHN BROWN BAXTER, Watervliet, N. Y., assignor to Covert Manufacturing Company, Watervliet, N. Y., a Corporation of New York. Filed Dec. 12, 1916. Serial No. 136,563. (Cl. 54—59.)

1. In a device of the character described, the combination of a body part to receive a strap or the like and having elongated recesses adjacent opposite sides thereof, an attaching member having side arms, the ends of which are positioned in said recesses, and means for pivotally supporting said ends of the arms on the body part.



2. In a device of the character described, the combination of a strap receiving body part having end loops and an elongated recess adjacent each side thereof, an attaching member having side arms, the ends of which are positioned in said recesses, and means for pivotally supporting said ends of the arms on the body part, the said arms being in substantial alinement with the side arms of the loops.

3. In a device of the character described, the combination of a breast strap slide having a curved body part and side flanges, and a snap having side arm extensions pivotally mounted upon said side flanges and overlying the inner surfaces thereof.

4. In a device of the character described, the combination of a breast strap slide having a body part with side flanges and end loop members, a snap having rear end spaced arms, and means for pivotally mounting said arms so that the same are adapted to swing over the inner surfaces of said side flanges, said arms being spaced from one another approximately the same distances as the space between the side arms of the loop, substantially as and for the purpose described.

5. In a device of the character described, the combination of a trough-shaped body part having a curved bottom and side walls, said bottom having side recesses, a snap having side arm extensions projecting through said recesses adjacent the inner surfaces of the sides, and means for pivotally supporting said arms on the sides of the body part.

[Claims 6 to 8 not printed in the Gazette.]

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1,227,871. COMBINED BREAST-STRAP SLIDE AND ATTACHING MEANS THEREFOR. JOHN B. BAXTER, Watervliet, N. Y., assignor to Covert Manufacturing Company, Watervliet, N. Y., a Corporation of New York. Filed Dec. 12, 1916. Serial No. 136,564. (Cl. 54—59.)



1. In a device of the character described, the combination of a breast strap slide having curved bottom portions separated from one another by a roller receiving space and having connecting sides, of an attaching member having opposed arms projecting into said space, a roller arranged between said arms in said space, and a pivotal supporting bearing projecting between the sides of the slide for said roller and said arms.

2. In a device of the character described, the combination of a breast strap slide having a bottom portion and sides and terminal loop parts, said bottom portion having a roller receiving recess and connecting side recesses, and an attaching device having side arms positioned in said side recesses, a roller positioned in said roller receiving recess, and means for pivotally supporting said side arms and loosely mounting said roller including a member projecting between the sides of the slide and through said roller and side arms.



3. In a device of the character described, the combination of a breast strap slide having a bottom portion and sides and terminal loop parts, said bottom portion having a roller receiving recess and connecting side recesses, and an attaching device having side arms positioned in said side recesses, a roller positioned in said roller receiving recess, and means for pivotally supporting said side arms and loosely mounting said roller including a member projecting between the sides of the slide and through said roller and side arms, the sides of the loop members extending substantially parallel with the side arms.

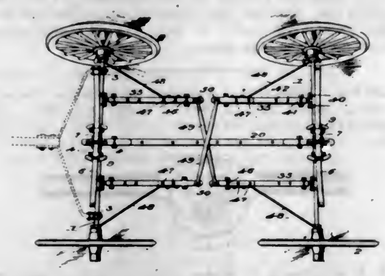
4. In a device of the character described, the combination of a breast strap slide having a curved body part with a roller receiving space and side recesses projecting beyond the opposite walls of said space, and a hook having rear side arm extensions positioned in said side recesses, means for pivotally mounting said arms whereby the same are free to move over the inner surface of the sides of the body part, and a loosely mounted roller positioned in the roller space between said arm extensions whereby the latter constitute end abutments for the roller.

5. In a device of the character described, the combination of a breast strap slide comprising a curved bottom portion and side flanges, the bottom portion having an elongated roller receiving recess connecting with side recesses extending laterally beyond the sides of the roller recess, said body portion having terminal loop members, a roller positioned in the roller space, and a hook having side arm extensions positioned in the side recesses of the body member and constituting end abutments for the roller, the side arm extensions of the hook being separated from one another a distance substantially equal to the distance between the side arms of the loop members of the slide, and a supporting pintle projecting between the sides of the slide and loosely passing through the side arms of the hook and said roller.

[Claim 6 not printed in the Gazette.]

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1,227,872. AUTO-TRAILER. CHARLES A. BEHLEN, Richmond, Va. Continuation of application Serial No. 73,126, filed Jan. 20, 1916. This application filed Sept. 19, 1916. Serial No. 120,981. (Cl. 21—144.)



1. The combination in an auto trailer, of two axles with wheels thereon, two head blocks, two frictional bearing members between each axle and a head block, a reach with its ends extended beneath the axles and each end of the reach rigidly secured to a head block, whereby each axle can turn relatively to a head block and the reach; two lever arms secured to each axle by clips; braces connecting each lever arm with an axle; and crossbars disposed in different parallel planes above the reach and pivoted at their ends to the free ends of the lever arms.

2. The combination in a trailer, of two head blocks, a reach, two axles with wheels, each axle being pivoted between a head block and an end of the reach, two pairs of lever arms one pair secured to each axle and extended to the free ends of opposite pairs are adjacent each other; and two rigid cross-bars pivotally uniting the lever arms; the adjacent lever arms of opposite pairs being provided with plates disposed in different planes whereby the bars are located in different planes so they can move freely each relatively to the other.

3. The combination in an auto trailer, of two head blocks; a reach rigidly uniting the head blocks; two axles, each pivoted between an end of the reach and a head block; two lever arms secured to each axle through the medium of offset heel irons and clips and braces whereby the said arms will lie in a plane above the reach; and crossbars in different planes uniting the lever arms.

4. The combination in an auto trailer and with the axles, of a reach uniting the axles; and lever arms secured to the axles by heel plates, each heel plate comprising a plate proper and an offset yoke with holes for clips, said yoke being in a plane parallel with the plate, whereby the lever arms may be disposed in a plane above the reach.

5. The combination in an auto trailer and with the axles, of a reach; pairs of lever arms secured to opposite axles, the free ends of the arms being provided with perforated plates secured to the top and bottom surfaces of the arms so as to lie in different parallel planes; and crossbars pivoted to the plates.

[Claims 6 and 7 not printed in the Gazette.]

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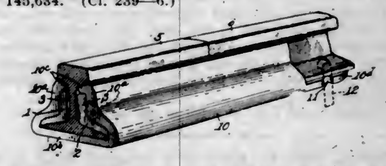
1,227,873. LIFTING-JACK. WILLIAM F. BOECKER, Adrian, Minn. Filed Apr. 20, 1916. Serial No. 92,513. (Cl. 254—89.)



A vehicle lifting jack including in combination with a frame, spaced pairs of standards pivotally mounted in said frame, connections between the corresponding standards to move the same in unison, means fixed to the upper ends of the front standards for engagement by the front axle of a vehicle to swing said standards past a perpendicular position and simultaneously raise the other pair of standards beneath the rear wheel axle, inclined braces fixed to the upper ends of the front standards, and a foot pedal pivotally mounted upon one of said braces in position to fulcrum upon the frame when the frame is in elevated position, whereby said front standards may be moved from their supporting positions to lower the vehicle.

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1,227,874. RAIL-JOINT. LUTHER H. BRAUN, Steubenville, Ohio, assignor of one-half to Frank X. Stecker, Steubenville, Ohio. Filed Jan. 31, 1917. Serial No. 145,634. (Cl. 239—6.)



1. The combination with the adjacent ends of railway rails, each of which has a portion of the web and base thereof cut away, of a rail clamp comprising a pair of parallel rail-embracing members and an integral abutment joining said members substantially midway between the ends of said clamp and adapted for receiving said rail ends thereagainst, one of said members having one end of shorter length than the corresponding end of the other member, a locking element complemental to said shorter end and adapted to engage the latter, and a rail chair adapted to occupy embracing relation to said clamp and to said locking element and to support said rail ends, said chair having a shoulder adjacent to one end thereof against which the outer end of said locking element seats

and which prevents longitudinal movement of said element in an outward direction.

2. The combination with the adjacent ends of railway rails, each of which has a portion of the web and base thereof cut away, of a rail clamp comprising a pair of parallel rail-embracing members which are rigidly united intermediate their ends by a transverse connecting member, said connecting member being adapted for receiving said rail ends in seating relation thereto, and a rail chair adapted to receive said clamp and the embraced rail ends within its embrace, said clamp having an inturned portion at one end thereof affording a shoulder whereby the extent of longitudinal movement of said clamp in one direction is limited.

3. The combination with the adjacent ends of railway rails, each of which has a portion of the web and base thereof cut away, of a rail clamp comprising a pair of parallel rail-embracing members which are rigidly united intermediate their ends by a transverse connecting member, said connecting member being adapted for receiving said rail ends in seating relation thereto, said rail-embracing members having their rail-web-engaging portions, of less height than the rail web, and a rail chair adapted to receive said clamp and the embraced rail ends within its embrace, said chair having inturned terminal edges snugly occupying the spaces between the upper edges of said rail-embracing members and the overlying shoulders of the rails, and said chair also having a portion at one end thereof preventing outward movement of said clamp in one direction from its properly seated position.

4. The combination with the adjacent ends of railway rails, each of which has a portion of the web and base thereof cut away, of a rail clamp comprising a pair of parallel rail-embracing members and an integral abutment joining said members substantially midway between the ends of said clamp and adapted for receiving said rail ends thereagainst, one of said members having one end of shorter length than the corresponding end of the other member, a locking element complemental to said shorter end and adapted to engage the latter, said rail-embracing members having their rail-web-engaging portions of less height than the rail web, and a rail chair adapted to receive within its embrace said clamp and said locking element, together with the embraced rail ends, said chair having inturned terminal edges disposed in underlying seated relation to the shoulders of the rails and also having at one end thereof an inturned portion affording a shoulder whereby said locking element is maintained against outward movement from its operative position.

5. The combination with the adjacent ends of railway rails, each of which has a portion of its web and base removed, of a rail clamp comprising parallel members between which said rail ends are received, and a transverse member connecting said parallel members at a point intermediate their ends, said transverse member being shaped to constitute an abutment against which said rail ends comfortably seat, and a rail chair for embracing and supporting said clamp and said rail ends and having a portion adapted to be engaged by said clamp whereby relative movement of the latter from its operative position is prevented.

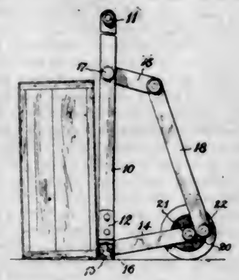
[Claims 6 and 7 not printed in the Gazette.]

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1,227,875. TRUCK. CHARLES A. BRICKEL, Ilion, N. Y. Filed July 10, 1916. Serial No. 108,456. (Cl. 21—65.)

1. A truck comprising a frame including side bars, a cross bar connecting said side bars, an engaging lip extending between said side bars, and having side arms connected with the forward end portions of said side bars, forward and rear standards pivotally connected with said side bars, an axle rotatably carried by the forward standards, supporting wheels rotatably mounted upon said axle, and bars pivotally connected with the end portions of said standards.

2. A truck comprising a frame including side bars, an engaging lip extending between said side bars and extending beyond the same, side arms extending from said engaging lip and connected with the forward end portions of said side bars, forward standards having pins pivotally connecting the same with the forward end portions of said side bars, the side arms being bent to extend in spaced relation to the securing pins for said standards, rear standards pivotally connected with said side bars, an axle carried by said forward standards, supporting wheels mounted upon said axle, and bars pivotally connected with the end portions of the forward and rear standards.

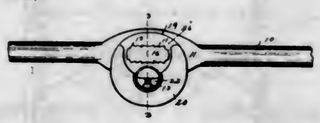


3. A truck comprising a frame including side bars, an engaging lip connected with the forward end portions of said side bars, forward and rear standards pivotally connected with said side bars, an axle having reduced end portions extending through openings formed in the forward standards, supporting wheels rotatably mounted upon the reduced end portions of said axle, and connecting bars pivotally connected with the forward and rear standards.

4. A truck comprising a frame including side bars, an engaging element carried by said side bars, forward and rear standards pivotally connected with said side bars, an axle carried by said forward standards and having its end portions extending through the same, securing means mounted upon the end portions of said axle, and connecting bars pivotally connected with said standards and engaging said securing means when moved in one direction to limit the forward pivotal movement of said connecting bars, said side bars engaging said connecting bars when swung rearwardly to limit the rearward pivotal movement of the side bars.

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1,227,876. WRENCH. ABRAHAM BRINKHUIS, Hospers, Iowa. Filed Jan. 5, 1915. Serial No. 701. (Cl. 81—111.)

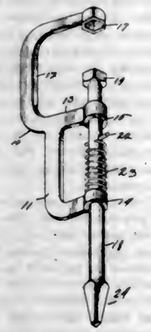


1. In a wrench, a sleeve having a pair of adjacent parallel openings therethrough and a substantially circular depression surrounding one end of one of the openings, said depression being of sufficient diameter to intersect the periphery of the other opening, a shank rotatably mounted in the opening having the depression surrounding it and projecting from the sleeve at the end opposite such depression, and a gripping member fixed to the other end of the shank within such depression, said gripping member being substantially equal in length to the diameter of the depression, and in width to the diameter of the opening wherein the shank is mounted.

2. In a wrench, a sleeve having a pair of adjacent parallel openings therethrough and a substantially circular depression surrounding one end of one of the openings, said depression being of sufficient diameter to intersect the periphery of the other opening, a shank rotatably mounted in the opening having the depression surrounding it and projecting from the sleeve at the end opposite such depression, and a gripping member fixed to the other end of the shank within such depression, said gripping member being substantially equal in length to the diameter of the depression, and in width to the diameter of the opening wherein the shank is mounted, the longer edges of the gripping member being serrated, with the teeth pointing away from the transverse central line.

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1,227,877. WRENCH. HOMER LE ROY BRISBIN, Townsend, Mont. Filed Oct. 30, 1916. Serial No. 128,570. (Cl. 81—55.)



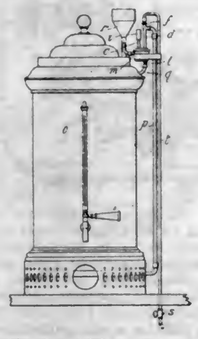
A wrench comprising a frame including a pair of yoke members disposed in the same plane and having a common connecting arm formed with an opening in its extremity, the arm of one of the said yoke members being formed with an opening alining with the first opening, the arm of the other yoke member being formed with a nut receiving and holding opening, a stem slidably disposed through the alining openings, a bit brace engaging member formed on one end of the stem, a bolt head socketed enlargement formed on the other end of the stem, a transverse stop member carried by the stem between the common arm and the arm of the first named yoke member, and a coil spring encircling the stem between said stop member and the said second-named arm.

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1,227,878. [WITHDRAWN.]

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1,227,879. AUTOMATIC GAS-CONTROLLER. SYDNEY GEORGE GARDINER BROOKMAN, Bristol, England. Filed Apr. 7, 1915. Serial No. 19,767. (Cl. 236—6.)



1. The combination with a steam boiler and gas-fed heating means therefor, of a controller for the gas fed to the heating means, comprising a valve for the gas, thermostatic operating means for the valve, and piping leading from the steam side of the boiler above the normal water line of the latter and freely open at all times to the atmosphere, said piping being also at all times in operative relation to the thermostatic valve operating means, whereby the thermostat becomes active to cut down the gas fed to the heating means as soon as steam is generated in the boiler and solely by such generated steam.

2. The combination with a steam boiler and gas-fed heating means therefor, of a controller for the gas fed to the heating means, comprising a valve for the gas, thermostatic operating means for the valve, a chamber inclosing the thermostatic means, and piping leading to and from the chamber, the piping leading to the chamber being connected to the boiler on the steam side of the latter at a point above the normal water line of the boiler and the piping leading from the chamber being freely open to the atmosphere, whereby when and only when steam is generated in the boiler will the thermostat become active to cut down the fuel supply.

3. A means for maintaining a supply of water at or slightly above the boiling point, comprising a steam boiler in constant free communication with the atmosphere and provided with a burner adapted to operate with fluid fuel, a valve for controlling the flow of fuel to the burner, thermostatic means for controlling the valve, and means for causing a flow of steam from the steam space of the boiler into operative relation to the thermostatic means as soon as the steam is generated, whereby the full effect of the heating medium may be had upon the water in the boiler until the steaming point is reached to cause rapid heating of the water to the steaming point, and the fuel supply is then cut down to thereafter maintain the water at or slightly above the boiling point.

4. The combination with a steam boiler and a burner adapted to operate with fluid fuel, of a valve for controlling the flow of fluid fuel to the burner, a receptacle for mercury in operative relation to the valve for the actuation of the valve in accordance with the expansion and contraction of mercury in the receptacle, a chamber in operative relation to the mercury receptacle, a duct leading from the boiler on the steam side of the latter and at all times above the normal water level in the boiler and connected to the chamber in operative relation to the mercury receptacle, and an outlet from said chamber freely open to the atmosphere, whereby the mercury is affected only when steam is generated in the boiler to cut down the flow of fuel as soon as the steam is generated to thereby maintain the water at or slightly above the boiling point.

5. The combination with a steam boiler and a burner adapted to operate with fluid fuel, of controlling means for the fuel comprising a receptacle for mercury, a duct for the fuel associated with the mercury receptacle for controlling the effective area of the duct by the expansion and contraction of the mercury, a steam chamber inclosing the mercury receptacle, a duct connecting the steam chamber to the steam side of the boiler at a higher point than the normal water level of the boiler, an escape duct for steam leading from the steam chamber and freely open to the atmosphere at all times, and accessible means communicating with the mercury receptacle and adjustable to vary the relation of the mercury in the receptacle to the fuel duct, whereby the amount of heat required to establish a minimum flame at the burner may be predetermined to establish either fast or slow boiling within the boiler.

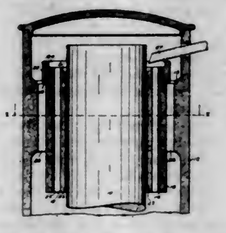
[Claims 6 to 8 not printed in the Gazette.]

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1,227,880. BEARING. ARTHUR J. BROWN, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Jan. 14, 1916. Serial No. 72,632. (Cl. 64—28.)

3. A bearing having a recess or pocket at its upper side adapted to receive lubricating fluid, said pocket having a countersunk portion communicating with the friction surface of said bearing, and cooling ducts through a portion of said bearing and opening into the body portion of said pocket.

4. A bearing having a recess or pocket adapted to receive lubricating fluid and communicating with the frictional surface of the bearing and adapted to supply lubricating fluid thereto, a cooling duct passing through a portion of said bearing and communicating with said pocket, the inlet to said cooling duct being at a higher level than the inlet to said frictional surface, and means for supplying lubricating fluid to said pocket at a point removed from the inlet to said cooling duct whereby the lubricating fluid supplied to said cooling duct is only the excess beyond that required for properly lubricating the frictional surface of the bearing.

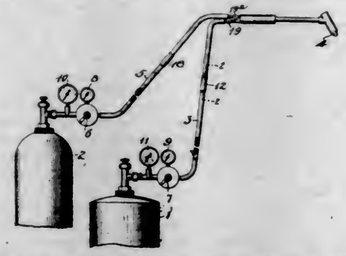


10. A bearing having a cooling duct, and means for supplying lubricating fluid in parallel to said cooling duct and the frictional surface of the bearing.

[Claims 1, 2, 5 to 9, and 11 to 14 not printed in the Gazette.]

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1,227,881. SAFETY MEANS FOR AUTOGENOUS WELDING OR CUTTING APPARATUS. RUDOLPH E. BRUCKNER, New York, N. Y. Filed Jan. 26, 1917. Serial No. 144,611. (Cl. 158—27.4.)



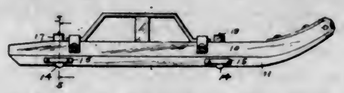
1. In an apparatus of the character described, two receptacles for containing different gases under pressure, a torch, flexible means of communication from said receptacles to said torch the communicating passages merging, pressure regulating mechanism for regulating the relative pressure of gas in said communicating passages, and means in said flexible communicating means to prevent the flow of gas from one tank into the other.

2. In an apparatus of the character described, two receptacles for containing different gases under pressure, a torch, flexible means of communication from said receptacles to said torch the communicating passages merging, pressure regulating mechanism for regulating the relative pressure of gas in said communicating passages, and means in said flexible communicating means to prevent the flow of gas from one tank into the other, said last mentioned means comprising a cylindrical valve chamber having a passage therethrough, a nipple extension at each end of said chamber and a check valve in said chamber.

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1,227,882. SLED-RUNNER ROLLER. WILLIAM E. BUTE, Stanhope, Iowa. Filed Aug. 30, 1916. Serial No. 117,672. (Cl. 21—96.)

1. In a device of the class described, a sled runner, a shoe thereon having a transverse groove in its lower surface, and bearing mounted in the groove having a portion of its periphery below the lower surface of the shoe cut away, and a roller mounted in the bearing so that it extends below the lower surface of the shoe.



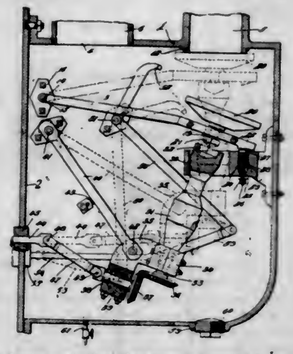
2. In a device of the class described a sled runner, and shoe thereon having a transverse groove in its lower surface with upwardly diverging sides, bearing slidably mounted in said groove, said bearing being of such shape that its outer surface registers with the inner surface of the groove and having its axis slightly above the plane of the lower surface of the shoe yet having the portion extending below said plane cut away, roller slidably and rotatably mounted in said bearing so that it extends slightly below the lower surface of the shoe, and a plate detachably fixed to each side of the shoe and covering sufficient of the ends of the bearing and roller so that they can not slide out of place.

3. In a device of the class described a sled runner, and shoe thereon having a transverse groove with upwardly diverging sides in its lower surface, a second transverse groove running across the top of the first described groove, bearing slidably received in the said groove of such shape that its outside surface registers with the inside surface of the said grooves, roller mounted in said bearing and extending below the lower surface of the shoe, and detachable means for holding the bearing and roller in place.

4. A sled runner having in its lower surface portion a recess for receiving the greater portion of the body of a roller, and forming a bearing therefor, a roller in said recess having a portion projecting outwardly from said recess at the bottom of the runner, and a detachable side plate mounted on said runner for holding said roller against sidewise removal from the runner.

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1,227,883. CHECK-VALVE. CLAUDE C. BUTLER, Fort Towson, Okla. Filed Oct. 16, 1916. Serial No. 125,966. (Cl. 137—139.)



1. A device of the character described comprising a valve casing having an inlet and an upper outlet, a check valve mounted within the casing for movement upward to close the outlet and for rotary movement, said valve normally gravitating away from the outlet, means independent of and normally disconnected from the valve movable into connection with the valve for forcing it toward said outlet and for rotating the valve, and means operable for moving the valve downwardly when held upwardly by pressure.

2. A device of the character described embodying a valve casing having an inlet and an outlet, a swinging member mounted within the casing, a rotatable check carried by said swinging member to normally move away from the outlet and seatable toward the outlet to close the same, said valve having a non-circular portion, a rotatable member mounted within the casing for movement into and out of engagement with said portion and movable to move the valve to seated position, and means for moving said rotatable member to seat the valve and for rotating said member to rotate the valve.



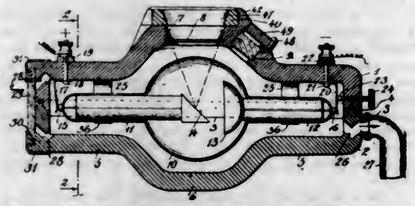
3. A device of the character described embodying a valve casing having an inlet and an upper outlet, a check valve mounted within the casing for rotary movement and for upward movement to seat toward the outlet to close the same, a movable member mounted within the casing below the valve, a rotatable member carried by the movable member to move upwardly into engagement with the valve, means for moving said movable member to bring the rotatable member into engagement with the valve and to seat the valve, and for also rotating the rotatable member to rotate the valve, and means for moving the valve downwardly when held seated by pressure.

4. A device of the character described comprising a valve casing having an inlet and an outlet, a swinging member mounted within the casing, a rotatable valve carried by said swinging member to normally move away from the outlet and to seat toward the outlet to close the same under certain conditions, the valve having a non-circular portion, a second swinging member mounted within the valve casing, a frame pivotally connected with the second swinging member, a rotatable shaft carried by the frame and having a non-circular portion to engage the aforesaid portion when the frame is swung toward the valve, a second shaft journaled in said frame and operatively connected with the aforesaid shaft, a stem slidable and rotatable through one wall of the valve casing, and a link connected by universal joints with said stem and second shaft.

5. The combination with the steam dome of a boiler, of a valve casing secured to one wall thereof upon the inside, the valve casing having a steam inlet and an upper steam outlet, a check valve mounted within the casing for movement to and from the steam outlet and normally moving away from the outlet, said valve being seatable toward the outlet for closing the same under certain conditions, a box secured to said wall of the steam dome upon the outside thereof and having a door, a stem extending through said wall of the steam dome and projecting into said box and casing, means operated by said stem for moving the valve away from the steam outlet, a second stem extending through said wall of the steam dome and projecting within said box and casing, and means operated by the second stem for seating the valve.

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1,227,884. X-RAY-TUBE APPARATUS. EUGENE W. CALDWELL, New York, N. Y. Filed Oct. 12, 1915. Serial No. 55,377. (Cl. 250—35.)



9. In X-ray tube apparatus, a sectional tube shield adapted to closely and disengageably inclose an X-ray tube, said shield having high electrical resistance and dielectric strength and being formed with inlet and outlet holes, coöperating means to effect the positive circulation of gaseous cooling medium in close contact with said X-ray tube, said shield being formed with an emission aperture for the useful X-rays and means to render said aperture substantially air tight.

15. In X-ray tube apparatus, a tube shield adapted to closely inclose an X-ray tube and containing incorporated salts of high atomic weight elements having different selective absorption for X-rays, said shield having high electrical resistance and dielectric strength and said shield being formed with an emission aperture for the useful X-rays.

19. In X-ray tube apparatus, a tube shield adapted to inclose an X-ray tube and containing at least fifty per cent. of incorporated salt of high atomic weight material capable of absorbing X-rays, said shield having considerable electrical resistance and dielectric and mechanical strength.

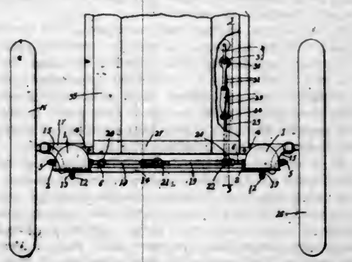
24. In X-ray apparatus, a tough, strong, shielding member adapted to intercept and absorb undesirable X-rays having high electrical resistance and dielectric strength and formed of converted molded phenolic condensation material containing at least fifty per cent. of incorporated finely divided high atomic weight material capable of absorbing X-rays.

39. In X-ray tube apparatus, a substantially inclosed sectional tube shield substantially non-transparent to X-rays and adapted to closely and disengageably inclose an X-ray tube, said shield having high electrical resistance, and dielectric strength and being formed with restricted inlet and outlet holes coöperating means to effect the positive circulation of gaseous cooling medium in close contact with said X-ray tube, said shield being formed with an emission aperture for the useful X-rays and means to render said aperture substantially air tight.

[Claims 1 to 8, 10 to 14, 16 to 18, 20 to 23, and 25 to 38 not printed in the Gazette.]

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1,227,885. DIRIGIBLE HEADLIGHT. FRANK E. COLBURN, Gardiner, Me. Filed Aug. 7, 1916. Serial No. 113,626. (Cl. 240—62.)



1. The combination with a vehicle, of a lamp carried thereby and mounted for swinging movement in a vertical plane and about a vertical axis, means connected to the lamp for swinging it about said axis, a pendulum carried by the vehicle independent of the lamp, and means operated by the pendulum having a flexible connection with the lamp for swinging the lamp.

5. The combination with an automobile and its steering gear, of a pair of members carried by the automobile for rotation about vertical axes and operatively connected with the steering gear, lamps having trunnions journaled to said members, an extensible shaft having its ends connected by universal joints with said trunnions, and means connected to said shaft for rocking it.

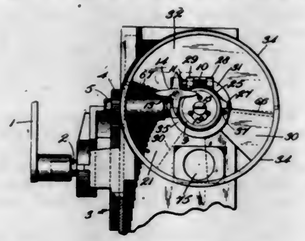
[Claims 2 to 4 and 6 not printed in the Gazette.]

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1,227,886. SHUTTER-CLOSING MECHANISM FOR MOVING-PICTURE MACHINES. HERSCHEL M. CONNOR and DON D. MILES, San Francisco, Cal., assignors, by direct and mesne assignments, of two-fifths to Albert H. Herbert, one-fifth to Pansy I. Connor, one-fifth to Myrtle C. Miles, and one-fifth to R. J. Graf, San Francisco, Cal. Filed May 20, 1916. Serial No. 98,881. (Cl. 88—19.3.)

1. In a shutter controlling device for moving picture machines, the combination of a power shaft; an aper-

tured shutter plate; connections between said shaft and plate for revolving the latter; a shutter closing plate revolving with said first named plate; and means for moving said closing plate relative to said first named plate through a predetermined angle at each revolution of said apertured plate, substantially as described.



2. In a shutter closing device for making dissolving views the combination of an apertured shutter plate; a shutter closing member associated with said plate; means for revolving said plate and member; and automatic means for moving said closing member relative to said plate a predetermined distance for each revolution of said plate, substantially as described.

3. In a shutter closing device for making dissolving views the combination of an apertured shutter plate; a shutter closing member associated with said plate; means for revolving said plate and member; automatic means comprising a movable member under the control of the operator; and gear connections governed by said movable member for moving said closing member relative to said plate a predetermined distance for each revolution of said plate, substantially as described.

4. In a camera shutter the combination of a member provided with an aperture; means for rotating said member; a plate carried by said member adapted to move across said aperture; gear controlled connections between said member and said plate; and automatic means for causing said connections to move said plate a predetermined angular distance across said aperture at each revolution of said member, substantially as described.

5. In a camera shutter the combination of a member provided with an aperture; means for rotating said member; a plate carried by said member adapted to move across said aperture; gear controlled connections between said member and said plate; automatic means for causing said connections to move said plate a predetermined angular distance across said aperture at each revolution of said member; and means for varying the value of said distance while said apertured member continues to rotate, substantially as described.

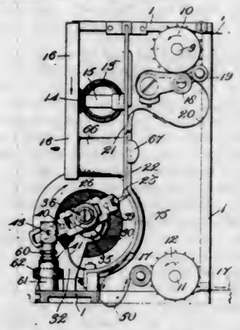
[Claims 6 to 10 not printed in the Gazette.]

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1,227,887. INTERMITTENT FILM-FEEDING MECHANISM. HERSCHEL M. CONNOR and DON D. MILES, San Francisco, Cal., assignors, by direct and mesne assignments, of two-fifths to Albert H. Herbert, one-fifth to Pansy I. Connor, one-fifth to Myrtle C. Miles, and one-fifth to R. J. Graf, San Francisco, Cal. Filed May 20, 1916. Serial No. 98,882. (Cl. 88—18.4.)

1. In a film feeding mechanism the combination of a curved plate provided with a slot and adapted to guide a film having perforations; a pivoted lever having film feeding means adapted to enter said slot and perforations; means for reciprocating said film feeding means lengthwise of said slot; means for adjusting the pivot of said lever lengthwise of said slot; and means for reciprocating said film feeding means into and out of said slot and perforations, substantially as described.

2. In a film feeding mechanism the combination of a plate having a curved slot and adapted to guide a perforated film; a pivoted lever having film feeding means; means for adjusting the pivot of said lever lengthwise of said slot, a revolving crank adapted to reciprocate said feeding means lengthwise of said slot; and a cam adapted to reciprocate said feeding means transversely of said slot, substantially as described.



3. In a film feeding mechanism the combination of a curved plate provided with a slot and adapted to guide a film having perforations; a pivoted lever having film feeding means adapted to enter said slot and perforations; means for reciprocating said film feeding means lengthwise of said slot; means for reciprocating said film feeding means into and out of said slot and perforations; and means for adjusting the position of the pivot of said lever lengthwise of said slot, substantially as described.

4. In a film feeding mechanism the combination of a plate having a curved slot and adapted to guide a perforated film; a pivoted lever having film feeding means; a revolving crank adapted to reciprocate said feeding means lengthwise of said slot; a cam adapted to reciprocate said feeding means transversely of said slot; and means for adjusting the position of the pivot of said lever lengthwise of said slot, substantially as described.

5. In an intermittent film feed, the combination of a plate having a curved slot, a feeding lever having a pivot and a feeding point adapted to traverse said slot; a crank pin and sliding block for moving said lever in opposite directions transverse to its length; a cam for moving said lever in opposite directions longitudinally; and means for moving the pivot of said lever lengthwise of said slot to change the transverse path of travel of said point, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

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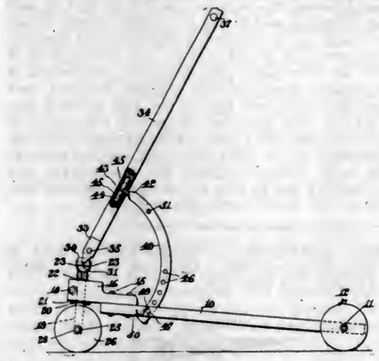
1,227,888. COASTER. ATHERTON D. CONVERSE, Winchendon, Mass. Filed Jan. 25, 1917. Serial No. 145,022. (Cl. 21—191.)

1. In a device of the class described, the combination of a platform; parallel traction members at the rear end thereof; a centrally divided block projecting from the forward upper face of said platform; a bolt connecting the two parts of said block; bolts connecting both parts of said block to said platform; a steering member extending through said block with its axis perpendicular to said platform; a traction member secured to the lower end of said steering member; and an operating handle universally connected to the upper end of said steering member.

2. In a device of the class described, the combination of a platform; parallel traction members at the rear end thereof; a steering member at the forward end of and perpendicular to said platform; a traction member secured to the lower end of said steering member; an actuating handle universally connected to the upper end of said member and provided with a cylindrical portion; and a vertical member projecting upwardly from said platform and having a bearing at its upper end for said cylindrical portion.



3. In a device of the class described, the combination of a platform; parallel traction members at the rear end thereof; a steering member at the forward end of and



perpendicular to said platform; a traction member secured to the lower end of said steering member; an actuating handle universally connected to the upper end of said member and provided with a cylindrical portion; a vertical member projecting upwardly from said platform and having a bearing at its upper end for said cylindrical portion; and means for adjusting said vertical member relatively to said platform.

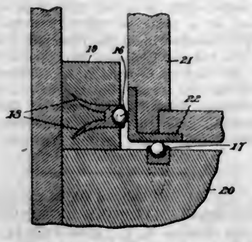
4. In a device of the class described, the combination of a platform; parallel traction members at the rear end thereof; a steering member at the forward end of and perpendicular to said platform; a traction member secured to the lower end of said steering member; an actuating handle universally connected to the upper end of said member and provided with a cylindrical portion; a vertical member projecting upwardly from said platform and having a bearing at its upper end for said cylindrical portion and provided with a plurality of openings therethrough; and a pin in said platform adapted to be positioned in either of said openings.

5. In a device of the class described, the combination of a platform; parallel traction members at the rear end thereof; a steering member at the forward end of and perpendicular to said platform; a traction member secured to the lower end of said steering member; a two-part actuating handle universally connected to the upper end of said member, said parts being connected by a dowel; and a member secured to said platform having an opening therein through which said dowel extends.

[Claim 6 not printed in the Gazette.]

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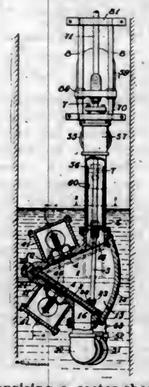
1,227,889. BALL-BEARING FOR DRAWERS. EARL W. COX, Seattle, Wash. Filed Feb. 23, 1915. Serial No. 9,785. Renewed Oct. 18, 1916. Serial No. 126,445. (Cl. 64—49.)



A ball bearing including a body-portion, a substantially hemi-spherical socket formed in one end, the inner wall of the socket being smooth and unobstructed, a ball of slightly less diameter than the socket received in the socket, the end of the body-portion constituting the side walls of the socket being swaged inwardly to retain the ball therein, the opposite end of the body-portion being bifurcated to provide a pair of legs, the opposed faces of the legs being beveled outwardly toward the ends thereof.

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1,227,890. PUMP. FREDERICK C. CROWE, North Yakima, Wash. Filed Sept. 9, 1915. Serial No. 49,696. (Cl. 103—73.)



1. A pump comprising a sector-shaped cylinder having inlet ports on its radial faces toward the apex of the sector, and discharge ports on the same faces toward the peripheral end thereof, a piston plate within and pivoted at the apex of the cylinder, and a piston actuating member pivoted upon the piston and freely reciprocable through one of the discharge ports.

2. A pump comprising a sector-shaped cylinder having inlet ports on the radial faces toward the apex of the sector and discharge ports on the same faces toward the peripheral end thereof, a piston plate within and pivoted at the apex of the cylinder, a discharge pipe connected with one discharge port and extending in a direction substantially paralleling a chord of the arc inclosed by the cylinder, a cross-head guided within said discharge pipe, a rod pivoted to the piston plate and to said cross-head, and reciprocable freely through said discharge opening, and a piston rod secured to the cross-head and extending outside of the discharge pipe.

3. A pump comprising a casing or cylinder having a sector shape in cross section with a pivot chamber of circular cross section concentric its apex, a pivot shaft seated in said pivot chamber and having a longitudinal groove, a piston plate having one edge seated in the groove of said shaft, and means for actuative connection with the opposite end of the piston plate.

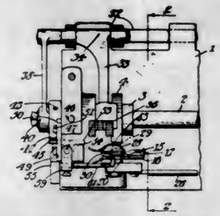
4. A pump comprising a casing or cylinder having a sector shape in cross section with a pivot chamber of circular cross section concentric its apex, a pivot shaft seated in said pivot chamber and having a longitudinal groove, a piston plate having one edge seated in the groove of said shaft, one side of the casing having a discharge opening toward the swinging end of the piston plate, and means for actuative connection with the opposite end of the piston plate.

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1,227,891. LOOP-RETAINER FOR SEWING-MACHINES. HARRY J. DAHL, Philadelphia, Pa., assignor to Lucius N. Littauer, Gloversville, N. Y. Filed Jan. 17, 1916. Serial No. 72,378. (Cl. 112—5.)

1. In a sewing machine having looper mechanism, the combination of loop retaining means comprising a loop retainer shiftable across the top of the looper and having substantially a triangular formation transversely of its

direction of movement and forming a loop engaging point, and means for actuating said loop retaining means.



7. In a sewing machine the combination of looper mechanism including a looper and a looper shaft, said looper having the top of the forward end thereof curved in the arc of a circle concentric with the axis of the looper and having its top provided with a recess, loop retaining means including a loop retainer coöperating with said looper adjacent to said recess, and means for swinging said loop retaining means across the top of the looper.

13. In a sewing machine, the combination of looper mechanism comprising a looper and a looper rocker, means for actuating the looper and its rocker, loop retaining means, and a pair of needle guards one carried by the looper and the other by the looper rocker.

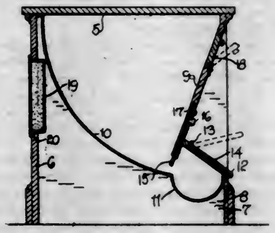
17. In a sewing machine having looper mechanism comprising a looper and a looper rocker, the combination of a pair of needle guards one attached to the looper and the other connected with the looper rocker, and means for actuating said looper and its rocker.

35. In a sewing machine the combination of stitching mechanism including a needle and a looper, actuating means therefor, a pivotally supported loop retainer, means for swinging it in a horizontal plane to retain the needle loop while the needle is descending and for withdrawing the retainer into its initial position as soon as the needle has secured the loop of the looper thread, said swinging means comprising a cam, and spring actuated means for holding the retainer in engagement with the cam.

[Claims 2 to 6, 8 to 12, 14 to 16, 18 to 34, and 36 not printed in the Gazette.]

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1,227,892. COUNTER-BIN. BENJAMIN E. DARBY, Duke, Okla. Filed Oct. 7, 1915. Serial No. 54,644. (Cl. 211—6.)

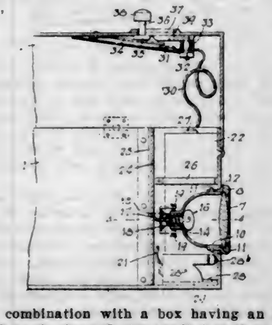


1. The combination with a counter having a top, front wall, rear baseboard and spaced vertical partition walls, of a downwardly and rearwardly inclined directing wall arranged between the partition walls and fixed to said top, said directing wall having a receiving trough formed in its rear edge, the inner edge of said trough being in the same horizontal plane as the upper edge of the baseboard, a wall inclined downwardly and inwardly from the rear edge of the counter top, the lower edge of said wall being spaced above the inner edge of the trough, and a door hingedly mounted upon said wall and normally resting at its free edge upon the baseboard of the counter to close said trough.

2. The combination with a counter having a top, front wall, rear baseboard and spaced vertical partition walls, of a downwardly and rearwardly inclined directing wall arranged between the partition walls and fixed to said top, said directing wall having a receiving trough formed in its rear edge, a wall inclined downwardly and inwardly from the rear edge of the counter top, substantially in line with the inner edge of the trough and terminating in spaced relation thereto, a door hingedly mounted upon said wall above the lower edge thereof and normally resting at its free edge upon the baseboard of the counter to close said trough, and a feed regulating plate longitudinally adjustable in the lower end of said inclined wall and adapted to be projected beyond the same toward said curved directing wall to vary the volume of material flowing from the bin compartment into said trough.

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1,227,893. COMBINATION DINNER-PAIL. FRANK K. DELZELL, Damascus, Ohio. Filed Jan. 9, 1917. Serial No. 141,469. (Cl. 240—8.4.)



1. The combination with a box having an opening in one end thereof, of a reflector applied to the opening and having a sleeve projecting from the base thereof, a socket slipped removably within the sleeve and insulated therefrom, an insulated center contact screw projecting from the base of the socket, a U-shaped retaining bracket having the base thereof engaged by the contact screw, clamping screws carried by the arms of the retaining bracket and engaging the sides of the sleeve to secure the socket in position and ground the center contact screw, and a switch controlled circuit having one terminal thereof grounded while the other terminal is connected to the shell of the socket.

2. The combination with a box having an opening in one end thereof, a lens, a flanged lens retaining ring fitted within the opening from the outside of the box and provided with spring tongues adapted to snap around the edges of the opening, a reflector fitted within the retaining ring from the interior of the box, an electric light at the base of the reflector, and a switch controlled circuit for the electric light.

3. The combination of a box having an opening in one end thereof, of a reflector applied to the opening, an electric light mounted upon the reflector, a battery in one corner of the box, an L-shaped partition arranged in the corner of the box to provide a space receiving the reflector and battery, flanges at the end and side of the box for slidably engaging the ends of the partition, a switch arranged upon the cover of the box, and an electric circuit including the switch, battery, and electric light.

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1,227,894. CYCLIC PROCESS OF MAKING AROMATIC HYDROCARBON HYDROXY COMPOUNDS. LOUIS M. DENNIS, Ithaca, N. Y. Filed July 14, 1916. Serial No. 109,212. (Cl. 23—24.)

1. A cyclic process of making an aromatic hydrocarbon hydroxy compound consisting in reacting on an aqueous solution of a sulfuric-acid-free aromatic hydro-carbon sulfonic acid with an oxy alkali salt of said aromatic hydrocarbon to form the hydroxy compound and the alkali salt of the aromatic hydrocarbon sulfonic acid, separating the products of the reaction, fusing the alkali salt with an alkali hydroxid to again produce the oxy alkali salt of the aromatic hydrocarbon, and treating the latter with a fresh charge of sulfuric-acid-free aromatic hydrocarbon sulfonic acid, and repeating the steps.

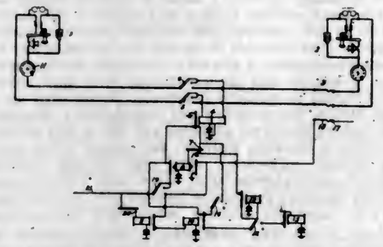
2. A cyclic process of making phenol consisting in reacting on an aqueous solution of sulfuric-acid-free benzene sulfonic acid with an alkali phenolate to form phenol and the alkali benzene sulfonate, separating the products of the reaction, fusing the sulfonate with alkali hydroxid to again produce alkali phenolate, and treating the latter with a fresh charge of sulfuric-acid-free benzene sulfonic acid, and repeating the steps.

3. A cyclic process of making phenol consisting in reacting on an aqueous solution of sulfuric-acid-free benzene sulfonic acid with sodium phenolate to form phenol and sodium benzene sulfonate, separating the products of the reaction, fusing the sulfonate with sodium hydroxid to again produce sodium phenolate, and treating the latter with a fresh charge of sulfuric-acid-free benzene sulfonic acid, and repeating the steps.



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1,227,895. TELEPHONE-EXCHANGE SYSTEM. BERT G. DUNHAM, Hawthorne, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 14, 1915. Serial No. 50,590. (Cl. 179—16.)



1. In a telephone exchange system, a plurality of lines, a selector switch for interconnecting the same, operating means and a restoring magnet for said selector switch, electromagnetic means for controlling the operation of said operating means, a circuit for said electromagnetic means and a contact in said circuit directly controlled by said magnet.

2. In a telephone exchange system, a plurality of lines, a selector switch for interconnecting the same, a primary and a secondary magnet for controlling the selective operation of said switch, electromagnetic means for controlling said magnets, a circuit for said electro-magnetic means, a release magnet for said selector switch, and a contact provided in the circuit of said means and controlled by the release magnet.

3. In a telephone exchange system, a plurality of lines, a selector switch for interconnecting the same, an operating and a restoring magnet for said switch, means for actuating said restoring magnet in off-normal positions of the selector switch, electro-magnetic means for controlling the operation of said selector switch, and a contact provided in the circuit of said electromagnetic means and controlled by said restoring magnet.

4. In a telephone exchange system, a plurality of lines, a selector switch for interconnecting the same, a primary and a secondary magnet for operating said selector switch, electromagnetic means, for controlling the operation of said selector switch, and a contact for said primary magnet for controlling the operation of said electromagnetic means.

5. In a telephone exchange system, a plurality of lines, a selector switch for interconnecting the same, a primary and a secondary magnet for operating said switch, electromagnetic means controlling the successive operation of said magnets, a slow-acting relay for controlling the operation of said electromagnetic means, and a contact in the circuit of said relay and controlled by said primary magnet.

[Claim 6 not printed in the Gazette.]

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1,227,896. GOGGLES. LOUIS DUNKELSBERG, Brooklyn, N. Y. Filed Feb. 5, 1917. Serial No. 146,656. (Cl. 2—149.)

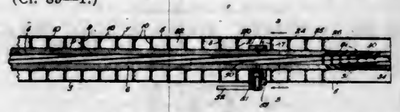


2. An eye shield or goggle, made of a single piece of material having lens receiving openings; the bridge piece uniting the two sections, each section having an inward projecting flange adapted to receive the lenses placed within said openings, and a removable spring carried by each section, each spring having an extension at each end and at its central portion adapted to engage with openings formed in each section, whereby each lens is securely seated and held in contact with the inward projecting flange of each section.

[Claim 1 not printed in the Gazette.]

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1,227,897. AUTOMATIC GUN. HENRY H. C. DUNWOODY, Washington, D. C., assignor to Dunwoody Automatic Gun and Projectile Company, a Corporation of Delaware. Filed Apr. 14, 1917. Serial No. 162,029. (Cl. 89—1.)



1. In a rapid fire gun the combination of a gun barrel; a casing surrounding the same; means to admit air at one end of said casing; means to create a partial vacuum at the other end of said casing; and a plurality of disk like members provided with staggered openings for the passage of said air located between said casing and barrel, substantially as described.

5. In a rapid fire gun the combination of a barrel provided with a muzzle portion, having a plurality of perforations through which the gases of explosion may pass; a casing surrounding said barrel and perforations; a plurality of disks integral with said barrel located between said barrel and casing each disk provided with a plurality of openings and each opening being angularly disposed with relation to an adjacent opening to form a tortuous passage for said air; substantially as described.

[Claims 2 to 4 not printed in the Gazette.]

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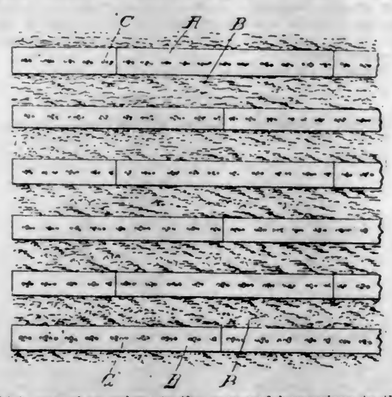
1,227,898. PROCESS FOR ENHANCING THE GROWTH OF SUGAR-CANE. CHARLES FRANKLIN ECKART, Olaa, Hawaii. Filed Nov. 27, 1916. Serial No. 133,675. (Cl. 47—36.)

1. A process for enhancing the growth of sugar cane which consists in applying fertilizer to the rows of cane and superimposing a cover on the rows which is pervious to the cane and impervious to weeds.

2. A process for enhancing the growth of sugar cane which consists in applying fertilizer to the rows of cane, superimposing a cover on the rows which is pervious to

the cane and impervious to weeds and attaching the cover to the ground.

3. A process for enhancing the growth of sugar cane which consists in superimposing a cover on the rows




which cover is pervious to the cane and impervious to the weeds and securing the cover to the ground.

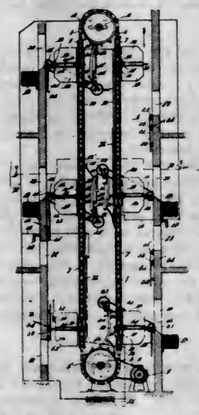
4. A process for enhancing the growth of sugar cane which consists in clearing the rows of trash, applying fertilizer to the rows, and superimposing a cover on the rows which cover is pervious to the cane and impervious to the weeds.

5. A process for enhancing the growth of sugar cane which consists in clearing the rows of trash, depositing the trash between the rows and superimposing a cover on the rows which cover is pervious to the cane and impervious to the weeds.

[Claim 6 not printed in the Gazette.]

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1,227,899. CONVEYER. RAYMOND J. FAHLE, Chicago, Ill. Filed Dec. 8, 1914. Serial No. 876,092. (Cl. 193—8.)



1. In a conveying apparatus; a carrier; means for propelling said carrier; a series of loading stations and a series of unloading stations which are passed by said carriers when in motion; unloading mechanism at each of said unloading stations; a series of movable devices out of alinement with one another with respect to the lines of travel of the conveyer, one at each unloading station adapted, when actuated to operate the corresponding unloading mechanism; a plurality of movably mounted members carried by said carrier adapted each, upon adjustment thereof to operative position, to engage with one of said devices for actuating the corresponding unloading mechanism; means for adjusting any one of said movable members to operative position; and means adapted, upon adjustment of one of said movable members to operative position, to lock the other of said members in inoperative position, substantially as described.

2. In a conveying apparatus; a carrier; means for propelling said carrier; a series of loading stations and a series of unloading stations which are passed by said carriers when in motion; unloading mechanism at each of said unloading stations; a series of movable devices out of alinement with one another with respect to the lines of travel of the conveyer, one at each unloading station adapted, when actuated to operate the corresponding unloading mechanism; a plurality of movably mounted members carried by said carrier adapted each, upon adjustment thereof to operative position, to engage with one of said devices for actuating the corresponding unloading mechanism; means for adjusting any one of said movable members to operative position; and means controlled by the operative movement of any one of said movable members adapted, upon adjustment of one of said movable member to operative position, to lock the other of said members in inoperative position, substantially as described.

3. In a conveying apparatus; a carrier; means for propelling said carrier; a series of loading stations and a series of unloading stations which are passed by said carriers when in motion; unloading mechanism at each of said unloading stations; a series of movable devices out of alinement with one another with respect to the lines of travel of the conveyer, one at each unloading station adapted, when actuated to operate the corresponding unloading mechanism; a plurality of movably mounted members carried by said carrier adapted each, upon adjustment thereof to operative position, to engage with one of said devices for actuating the corresponding unloading mechanism; means for adjusting any one of said movable members to operative position; and pivoted levers carrying detents coöperating with said movable members adapted, upon adjustment of one of said movable members to operative position, to lock the other of said members in inoperative position, substantially as described.

4. In a conveying apparatus, a carrier; means for propelling said carrier; a series of loading stations and a series of unloading stations which are passed by said carriers when in motion; unloading mechanism at each of said unloading stations; a series of movable devices out of alinement with one another with respect to the lines of travel of the conveyer, one at each unloading station adapted, when actuated to operate the corresponding unloading mechanism; a plurality of movably mounted members carried by said carrier adapted each, upon adjustment thereof to operative position, to engage with one of said devices for actuating the corresponding unloading mechanism; means for adjusting any one of said movable members to operative position, to lock the other of said members in inoperative position, substantially as described.

5. In a conveying apparatus, a carrier; means for propelling said carrier; a series of loading stations and a series of unloading stations which are passed by said carriers when in motion; unloading mechanism at each of said unloading stations; a series of movable devices out of alinement with one another with respect to the lines of travel of the conveyer, one at each unloading station adapted, when actuated to operate the corresponding unloading mechanism; a plurality of movably mounted members carried by said carrier adapted each, upon adjustment thereof to operative position, to engage with one of said devices for actuating the corresponding unloading mechanism; means for adjusting any one of said movable members to operative position; and detents adapted for engagement with recesses provided in said movable members whereby, upon adjustment of one of said movable members to operative position, the other of said members will be locked in inoperative position, substantially as described.

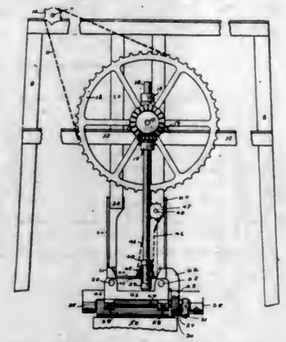


members to operative position; and a plurality of yieldingly mounted detents connected together for unisonous movement, said detents being adapted for coöperation with said movable members and adapted, upon adjustment of one of said movable members to operative position, to lock the other of said members in inoperative position, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,900. TROWELING MECHANISM. FRANK H. FOLDEN, Des Moines, Iowa, assignor to Monarch Manufacturing Corporation, Boone, Iowa, a Corporation of Iowa. Filed Sept. 16, 1916. Serial No. 120,450. (Cl. 25—104.)



1. In a mechanism for troweling forms of plastic material, a supporting frame, an upright rotatable laterally-movable shaft, a carriage supported by the frame to reciprocate horizontally, and including oppositely-disposed parallel racks positioned on opposite sides of the shaft, a troweling element carried by the carriage, a pinion mounted on the shaft, and means for shifting the shaft laterally to place the pinion in engagement with either rack.

2. In mechanism for troweling forms of plastic material, a supporting frame, an upright rotatable laterally-movable shaft, a carriage supported by the frame to reciprocated horizontally, and including oppositely-disposed parallel racks positioned on opposite sides of the shaft, a pinion on the shaft, means for shifting the shaft laterally to place the pinion alternately in engagement with the racks to reciprocate the carriage, a roller carried by the carriage to trowel the forms and means actuated by reciprocation of the carriage for rotating the roller.

3. In mechanism for troweling forms of plastic material, a supporting frame, an upright rotatable laterally-movable shaft, a carriage supported by the frame to reciprocate horizontally, and including oppositely-disposed parallel racks positioned on opposite sides of the shaft, a pinion on the shaft, means for shifting the shaft laterally to place the pinion alternately in engagement with the racks to reciprocate the carriage, a roller carried by the carriage to trowel the forms and means actuated by reciprocation of the carriage for rotating the roller oppositely to its direction of travel.

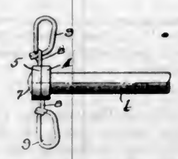
4. In mechanism for troweling forms of plastic material, a supporting frame, an upright rotatable laterally-movable shaft, a carriage supported by the frame to reciprocate horizontally, and including oppositely disposed racks positioned on opposite sides of the shaft, a pinion on the shaft, means for shifting the shaft laterally to place the pinion alternately in engagement with the racks, said means including a laterally movable bearing on the shaft and having a collar at right-angles to the shaft, and a rotatable shaft having an eccentric encircled by the collar, and a troweling element carried by the carriage.

5. In mechanism for troweling forms of plastic material, a supporting frame, a horizontal reciprocating carriage supported thereby, a troweling roller carried by the carriage, and means for rotating the roller oppositely to its direction of travel, including a rack secured to the frame, a pinion engaged by the rack and mounted on the carriage, sprocket-wheels mounted coaxially with the pinion and roller, and a chain connecting the sprocket-wheels.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,901. LADDER-JOINT. RAYMOND R. FOUST, Clarksburg, W. Va. Filed Sept. 11, 1916. Serial No. 119,534. (Cl. 228—6.)



1. A device of the character described including a ladder rung having one end reduced in diameter to provide a trunnion, a pair of disks having their proximate faces provided with grooves, communicating grooves extending from the marginal edge of each disk to the annular groove thereof, and a pair of links extended around the said trunnion and through the said grooves, the said links being disposed in opposite directions and through the short communicating grooves.

2. A device of the character described including a ladder rung, a pair of links, and a pair of disks rotarily mounted upon the rung and provided with interior annular grooves for receiving the loops of said links.

3. A device of the character described including a ladder rung, having its ends reduced in diameter to provide trunnions, a pair of disks mounted upon the trunnions, each of said disks being provided with a central opening the edge of which is beveled, the shoulder between the said trunnion and the rung being also beveled to fit the said beveled edge on one of the disks, and a rivet head formed on the end of the trunnion and adapted to fit the said beveled edge of the adjacent disk.

4. A device of the character described comprising a ladder rung, having its ends reduced to provide trunnions, a pair of disks mounted upon each of said trunnions, a pair of links having their loops engaged with one of the trunnions and extending in opposite directions from each other, each of said disks being provided with interior annular grooves for receiving the loops of said links and grooves formed in each disk whereby each link may extend outwardly from the said groove.

5. A device of the character described comprising a ladder rung, having its ends reduced to provide trunnions, a pair of disks mounted upon each of said trunnions, a pair of links having their loops engaged with one of the trunnions and extending in opposite directions from each other, each of said disks being provided with interior annular grooves for receiving the loops of said links and grooves formed in each disk whereby each link may extend outwardly from the said groove, and fastening means formed on the end of the trunnion for retaining the said disks in close relation to each other.

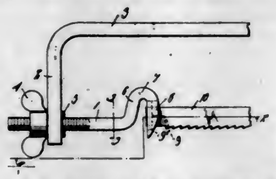
[Claims 6 and 7 not printed in the Gazette.]

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1,227,902. HACKSAW. ARTHUR G. FROST, Bellevue, Ky. Filed Nov. 4, 1916. Serial No. 129,562. (Cl. 145—33.)

The combination with a saw frame having an aperture therein; of a shank adjustable longitudinally in said aperture and having an inverted U-shaped member arranged at right angles thereto at its inner end with a longitudinally extending slot opening through the free end of the outer leg thereof, said slot having a recess in one side wall opening through the inner face of said leg with its

inner wall forming a shoulder spaced from the outer face of said leg and its lower wall an end shoulder, and a saw blade having a lateral projection at one end designed to seat in the recess of said leg and be supported on said end



shoulder and to engage said first mentioned shoulder and the blade proper to lie in the slot whereby the blade is held against inward longitudinal movement and against movement transversely.

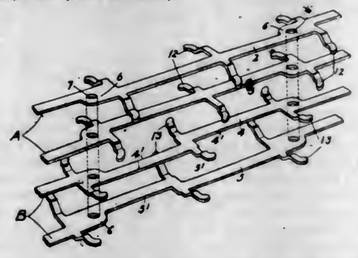
1,227,903. PROCESS OF PRODUCING PAVING MATERIAL. GUILFORD CRESSE GLYNN, Kansas City, Kans. Filed Dec. 20, 1916. Serial No. 138,133. (Cl. 106—31.)

1. The process of producing paving material consisting in stirring soil containing colloidal material with a deflocculating reagent and water to deflocculate the soil, heating the deflocculated mass, adding fluid bitumen to the latter and drying the resultant product.

2. The process of producing paving material consisting in stirring soil containing colloidal material with a deflocculating reagent and water to deflocculate the soil, heating the deflocculated mass, adding fluid bitumen to the mass to coat the individual soil particles, drying the mass, and reheating the mass to flux the material.

3. The process of producing paving material consisting in stirring soil containing colloidal material with a deflocculating reagent and water to deflocculate the soil, heating the deflocculated mass, adding fluid bitumen to the latter, air drying the resultant product, and reheating the latter to flux the material.

1,227,904. CONTACT-BANK FOR AUTOMATIC SWITCHING DEVICES. CHARLES L. GOODRUM and HENRY F. DOBBIN, New York, N. Y., assignors to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Mar. 23, 1916. Serial No. 86,178. (Cl. 175—305.)



1. In a contact bank, flat terminal strips arranged in pairs, the strips of a pair having portions intermediate their ends offset in the plane of the strips to effect a transposed relation between portions of the strips.

2. In a contact bank, flat terminal strips arranged in pairs, the strips of a pair having alternately disposed portions projecting in the plane of said strips intermediate their ends, arranged to effect a transposed relation between portions of the strips.

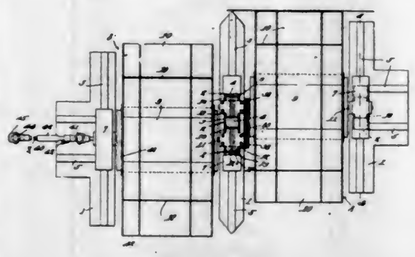
3. In a contact bank, pairs of flat terminal strips, portions in said strips offset at right angles to the bank, the offset portions of each strip being reversely arranged with respect to its companion strip.

4. In a contact bank, a pair of flat terminal strips, offset portions in said strips, said off-set portions being alternately disposed in opposite lateral directions in the plane of the strips, and the off-set portions of each of said strips being reversely arranged with respect to its companion strips.

5. In a switch bank, sets of superposed flat strips arranged in pairs, the strips of one set having relatively long off-set portions reversely arranged, and the strips of the other set having relatively short reversely arranged off-set portions.

[Claim 6 not printed in the Gazette.]

1,227,905. WATER-MOTOR. EDWARD E. HANKEN, Appleton City, Mo. Filed Jan. 18, 1916. Serial No. 72,758. (Cl. 170—107.)



1. In a device of the character described, a pair of piers, a pair of columns carried by each pier, the adjacent sides of the columns having guideways, bearings between the columns and slidably engaging said guideways, a water wheel rotatable between the piers and having an axle journaled in said bearings, means for raising the bearings, and a column of removable blocks fitting between the columns of each pair and having portions engaging said guide ways to prevent the lateral displacement of the blocks, the blocks being held in place when the bearings are seated thereon, and only being removable when the bearings are raised.

2. In a device of the character described, a pair of piers, a pair of columns carried by each pier, the adjacent walls of the columns being in the form of guide channels, bearings slidably engaging said channels, a water wheel between the piers having an axle journaled in said bearings, a column of blocks upon each pier and having portions fitting in the channels, the blocks having apertures, plungers extending through said apertures for raising the bearings, and cylinders for the plungers embedded within the piers.

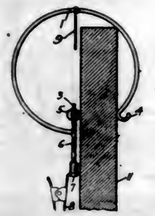
3. A water wheel comprising a buoyant hollow drum having blades upon its periphery, a framework for the drum within the same and embodying a set of spokes arranged in pairs, an axle, a hub secured to said axle to which said spokes are attached, rods having certain ends pivoted between the pairs of spokes and projecting between the companion pairs of spokes, and means upon the other ends of said rods engageable with the respective spokes for drawing the spokes together.

4. A water wheel comprising an axle, hubs secured thereon, sets of spokes attached to said hubs, rings attached to the outer ends of said spokes, rings surrounding the aforesaid rings, a drum having its periphery clamped between the first mentioned and second mentioned rings and having ends attached to the end spokes, outstanding arms attached to the second mentioned rings, and longitudinal blades attached to said arms.

5. In a device of the character described, three piers, two water wheels disposed between the piers and having axles offset from one another, three columns carried by the intermediate pier, a pair of columns carried by each of the other piers, a pair of bearings for the adjacent ends of the axles slidable between the columns of the intermediate pier, bearings for the remote ends of the axles slidable between the last mentioned columns, means for adjusting said bearings vertically, and means operatively connecting the adjacent ends of said axles.



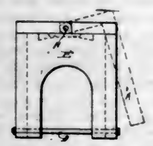
1,227,906. HAT-HANGER. CHARLES O. HAYWARD, Richland, Mich. Filed Oct. 9, 1916. Serial No. 124,557. (Cl. 24—84.)



1. In a hat hanger, the combination of an approximately circular spring supporting hook, one end of which is bent radially inward to provide an arm terminating in an eye disposed laterally to the plane of the supporting hook, a hanger link having an eye engaged in the eye of said arm, and a clasp swiveled on said hanger link.

[Claims 2 to 7 not printed in the Gazette.]

1,227,907. LOCOMOTIVE DRIVING-BOX. WILLIAM A. HAZLEWOOD, Fort Worth, Tex., assignor of one-half to J. Ado Whiteside, Fort Worth, Tex. Filed Aug. 4, 1916. Serial No. 113,113. (Cl. 64—25.)

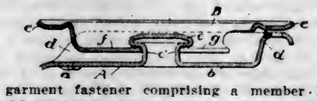


1. A driving box for locomotives having a detachable flange on the hub side thereof and vertical grooves in the sides thereof, made in two parts and joined together at the top and middle of said box by a rivet or bolt, the said flange having a rib on each part fitting into said grooves, and joined at the bottom with a bolt passing through the flanges with a nut on the end thereof.

2. A driving box for locomotives having a detachable flange composed of two members pivotally connected together on top of the box, said box having vertical grooves in the sides thereof, each member having a rib thereon and said ribs fitting in said grooves, and a rod securing said flange members on said block at the lower side thereof.

3. A driving box for locomotives having a detachable flange composed of two members pivotally connected together and engaging the upper side of the box, said box having vertical grooves in the side thereof and said members having portions thereof fitting in said grooves, and means for binding said members on said box.

1,227,908. GARMENT-FASTENER. PAUL J. HENTSCHEL, Baltimore, Md. Filed Jan. 25, 1917. Serial No. 144,478. (Cl. 24—222.)



A garment fastener comprising a member having a central headed post with a flange raised around three sides of said member and lying on the same face with and about the post, leaving one side open, and a second member having a flange opposite the flange of the first member and having also a protruding central portion, the latter being adapted to fit within the raised flange of the first member and slotted at its center to engage the post, substantially as described.

1,227,909. PRODUCTION OF REFRACTORY MATERIALS. PAUL RALPH HERSHMAN, Chicago, Ill., assignor to Armour Fertilizer Works, Chicago, Ill., a Corporation of New Jersey. Filed Oct. 21, 1916. Serial No. 126,996. (Cl. 204—64.)

1. The method of producing refractory material, comprising preliminarily heating alumina and carbon to a temperature at which the material will sinter, but not melt, then mixing the sintered material in a pulverulent form with carbon and a suitable binder, forming the mixture into pressed shapes, and finally heating the pressed shapes at a high temperature; substantially as described.

2. The method of producing refractory material, comprising preliminarily heating alumina and carbon to a temperature at which the material will sinter, but not melt, then mixing the sintered material in a pulverulent form with carbon and a suitable binder, forming the mixture into pressed shapes, and finally heating the pressed shapes at a high temperature in a combustion atmosphere containing an excess of reducing gas; substantially as described.

3. The method of producing refractory material, comprising preliminarily heating alumina and carbon to a temperature at which the mass will sinter, but not melt, said perliminary heating to be conducted in a combustion atmosphere containing an excess of reducing gas, then mixing the sintered material, in pulverulent form, with carbon and a suitable binder, forming the mixture and pressed products, and heating the pressed products to a high temperature; substantially as described.

4. The method of producing refractory material, comprising preliminarily heating aluminum oxid and carbon to a temperature of 1800 to 1900° C. under conditions appropriate to the obtaining of a sintered product; then mixing the sintered preliminary product with carbon and a suitable binder, forming the mixture into shapes, and finally heating said shapes to about 1950° C.; substantially as described.

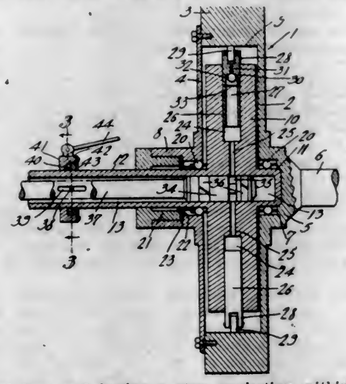
5. The method of producing refractory material, comprising preliminarily heating aluminum oxid and carbon to a temperature of 1800 to 1900° C. under conditions appropriate to the obtaining of a sintered product; then mixing the sintered preliminary product with carbon and a suitable binder, forming the mixture into shapes, and finally heating said shapes to about 1950° C. the preliminary heating and the final heating being both carried out in a combustion atmosphere containing an excess of reducing gas; substantially as described.

[Claim 6 not printed in the Gazette.]

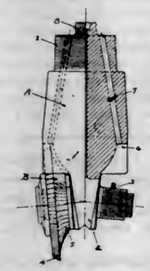
1,227,910. CLUTCH AND TRANSMISSION DEVICE. ADRA M. HUBBARD and OSCAR M. HUBBARD, Plainview, Tex., assignors of one-half to Morgan C. Wolfe and one-sixth to H. L. Battle and W. E. Hubbard, Dallas, Tex. Filed Apr. 18, 1916. Serial No. 91,972. (Cl. 192—18.)

1. A clutch and transmission device comprising a rotatable fluid-containing casing, a rotatable member therein having a tubular shaft projecting from one side through one side of the casing, said member having radial bores communicating with the bore of said shaft, a piston valve slidable in the bore of said shaft and having a stem projecting therein, said valve having an annular groove coöperable with the radial bores, plungers working in said radial bores and having bores communicating therewith and communicating with the space between said member and casing, the casing leaving means for moving said plungers when said member and casing are rotated relative to one another, and valves carried by said plungers, for preventing the flow of fluid therethrough in one direction.

2. A clutch and transmission device comprising a casing having side plates and a rim, said rim having an inner cam surface, a disk rotatable within the casing having a trunnion at one side mounted for rotation in one side plate, said disk having a tubular shaft projecting from its other side through the other side plate of the casing, the bore of said shaft extending into said disk, said disk having radial bores extending to its periphery and reduced bores extending from said radial bores to the first mentioned bore, a piston valve slidable within the first mentioned bore and having a stem projecting within said tubular shaft, said piston valve having an annular groove coöperable with the reduced bores, plungers slidable in said radial bores and having portions at their outer ends to bear against said cam surface, the plungers having bores communicating with the radial bores and with the space between said disk and casing, said plungers having valve seats, and outwardly seating valves coöperable with said valve seats.



1,227,911. ROTARY DISK DRILL. HOWARD R. HUGHES, Houston, Tex., assignor to Hughes Tool Company, Houston, Tex., a Corporation of Texas. Filed Dec. 29, 1916. Serial No. 139,620. (Cl. 255—71.)

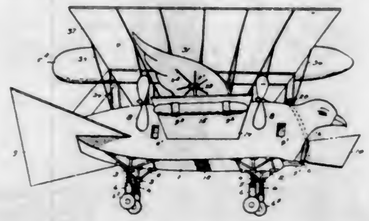


1. A drill comprising a head, recesses in opposite sides of one end of the head, disk-shaped cutters mounted in the recesses, the inner walls of the recesses shaped to conform to the shape of the cutters, the upper walls of the recesses extending radially entirely over the upper part of the cutters, and water courses opening into the recesses adjacent the cutters.

[Claims 2 to 8 not printed in the Gazette.]

1,227,912. COMBINED DIRIGIBLE AND HYDRO AEROPLANE. MARTIN JELALIAN, Cranston, R. I. Filed Nov. 17, 1916. Serial No. 131,914. (Cl. 244—9.)

1. An apparatus of the character described comprising a car simulating the body structure of a bird, a flat plane mounted above said car upon a series of vertical supports, two revolving propellers and a vertically reciprocating wing upon each side of the car and located directly beneath said plane, said reciprocating wings made of a series of transversely arranged equi-spaced supports, a wire netting secured to the latter and canvas carried upon top and bottom of the netting, pull string connections arranged upon said reciprocating wings and designed to facilitate the upward movements of the same, a gas bag supported upon said plane and said gas bag being of a cigar-shape and the ends of the same projecting outwardly beyond the plane.



3. An apparatus of the character described comprising a car simulating the body structure of a bird, a support secured centrally upon the bottom of the forward end of said car and projecting forwardly therefrom, and said support member carrying a vertically arranged stationary pin at its forward end, a tubular curved shaft loosely mounted upon said vertically arranged stationary pin and projecting inwardly to the car from the central part thereof and said tubular curved shaft having a flat vertical rudder secured to its lower part and also carrying a hand-wheel at its upper end, a foot operated lock for the rudder and said lock operable longitudinally of the car and mounted upon a transverse fixed rod, a coil pull-string upon each side of said lock and said springs encircling said rod and having one of their ends secured to a platform and the other ends attached to the lock, a portion of a sprocket-wheel integral with said tubular shaft, and said sprocket-wheel adapted to receive the free end portion of the lock, to hold the rudder in various desired positions.

5. An apparatus of the character described comprising a car, simulating the body structure of a bird, a series of supports projecting downwardly from the sidewalls of the car to a converging position and having an integral collar at the free ends thereof and also a shaft extending therefrom, a fixed collar upon the free end portion of said shaft, a tubular member slidably mounted upon the end portion of said shaft and inclosing said fixed collar, an expanding coil spring encircling said shaft and having one of its ends secured against said integral collar and the other end attached to the free end portion of the tubular member, said member also having a transverse portion at its lower end integral with and adapted to loosely support a wheel shaft, and said shaft having a solid-wheel secured at each end thereof.

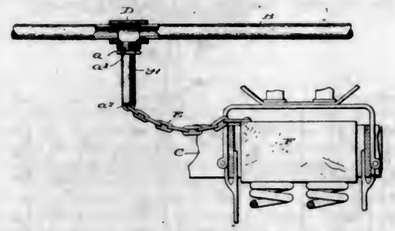
[Claims 2, 4, and 6 not printed in the Gazette.]

1,227,913. AUTOMATIC TRAIN-STOPPING DEVICE. JESSE A. JESSON, Corbin, Ky. Filed Mar. 23, 1917. Serial No. 156,892. (Cl. 188—81.)

1. An automatic safety device for applying emergency air brakes comprising a pipe-connection including a coupling member having a normally closed opening therein, and a plug member having a head-portion inserted in and closing said opening; said head-portion having a weak breakable part adjacent said coupling member, and means on the projecting portion of said plug member for connection with a fixture on the moving vehicle, whereby said plug member will be broken and unclose said opening under abnormal strain.



2. An automatic safety appliance for emergency air brakes comprising an air-pipe connection having a normally closed opening therein and a plug member having a head-portion inserted in and closing said opening; said head-portion being formed with a weak breakable part adjacent said opening, and means for flexibly connecting the free end of said plug member with a fixture on the moving vehicle.

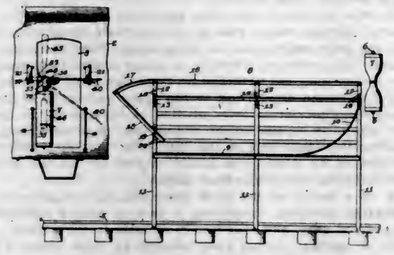


7. In an air brake system for railway trains, an automatic train stopping device comprising an air pipe having an opening therein through which the air may escape to permit the application of the brakes, and means for closing said opening; said means being adapted for direct connection to a part of the car and adapted under unusual stress to break and unclose said opening.

8. In an air brake system for railway trains, an automatic train stopping device comprising an air pipe having an opening therein through which the air may escape to permit the application of the brakes, and means for closing said opening, having a stressing connection with the car truck; said means being adapted under unusual stress of said connection to break and unclose said opening.

[Claims 3 to 6 not printed in the Gazette.]

1,227,914. MAIL-BAG-TRANSFERRING DEVICE. JAMES CALVIN JONES, Philadelphia, Pa. Filed May 12, 1916. Serial No. 97,027. (Cl. 258—19.)



1. A mail bag transferring device comprising a hanger supported upon a car, a delivery arm rod carried by said hanger, a releasing mechanism carried by the outer end of said rod, and a roller mounted on said rod and geared to the releasing mechanism whereby the latter will be actuated when a rotary motion is imparted to the roller.

2. A mail bag transferring device comprising a hanger supported upon a car, a delivery arm rod carried by said hanger, a releasing mechanism carried by the outer end of said rod, a roller rotatably mounted on said rod, gears for transmitting motion from the roller to the releasing mechanism when said roller is rotated, and means arranged in the path of travel of the roller when in its raised position for imparting a rotary motion to said roller.

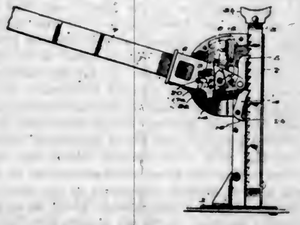
3. A mail bag transferring device comprising a hanger supported upon a car, a delivery arm rod carried by said hanger, a releasing mechanism carried by the outer end of said rod, a roller rotatably mounted on said rod, gears for transmitting motion from the roller to the releasing mechanism when said roller is rotated, and a running board or releasing ramp situated in the path of travel of the roller when in its raised position for imparting a rotary motion to said roller.

4. A mail bag transferring device comprising a hanger supported upon a car, a delivery arm rod carried by said hanger, a releasing mechanism carried by the outer end of said rod, a roller rotatably mounted on said rod, gears for transmitting motion from the roller to the releasing mechanism when said roller is rotated, a running board or releasing ramp situated in the path of travel of the roller when in its raised position for imparting a rotary motion to said roller, and a cage situated adjacent the releasing ramp, and in the path of travel of a bag carried by the releasing mechanism adapted to receive the bag when it is released.

5. A mail bag transferring device comprising a hanger supported upon a car, a delivery arm rod carried by said hanger, a roller journaled on said rod, a gear carried by said roller, a releasing mechanism frame mounted on the outer end of said rod, said frame being bifurcated to produce a pair of parallel downwardly projecting lugs, a bell crank lever pivoted to the frame, a catch carried by one end of said bell crank lever passing through the legs of the frame for locking the ring of a mail bag between said legs, a cam lever also pivoted to said frame, said cam levers having a notch therein, a pin carried by the bell crank lever adapted to register with said notch for locking the bell crank lever in its closed position, a coiled spring connected with said levers, a short shaft journaled in the frame, a cam bracket mounted on said shaft provided with a cam roller adapted to engage the free end of the cam lever when said cam bracket is rotated, and the cam lever is in the path of travel of said cam bracket, and a pinion mounted on said short shaft meshing with the gear carried by the roller.

[Claims 6 to 14 not printed in the Gazette.]

1,227,915. LIFTING-JACK. GEORGE LANE, Poughkeepsie, N. Y., assignor to Lane Bros. Co., Poughkeepsie, N. Y., a Joint-Stock Association of New York. Filed Nov. 17, 1916. Serial No. 131,911. (Cl. 254—111.)

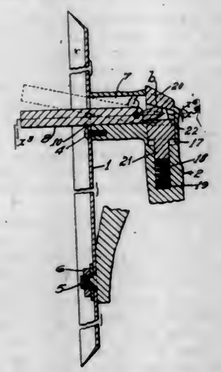


1. A jack comprising a standard, a lifting bar, an actuating lever, a lifting pawl and a holding pawl coöperating with said lifting bar, a carrier movable longitudinally of the actuating lever, a spring normally pushing said carrier away from the lifting bar, an equalizing member pivotally supported from said carrier, and having its ends resiliently connected respectively to said pawls, and means for pressing said carrier toward the lifting bar.

3. A jack comprising a standard, a lifting bar, an actuating lever, a lifting pawl and a holding pawl coöperating with said lifting bar, a carrier movable longitudinally of the actuating lever to either of two positions, an equalizing member pivotally mounted on said carrier and having upper and lower portions resiliently connected to said pawls, said equalizing device when in one position applying compression to said springs, and means acting on said equalizer when in its other position for applying copression and tension to said springs alternately at the extremities of the up and down movement of the actuating lever.

[Claims 2 and 4 to 12 not printed in the Gazette.]

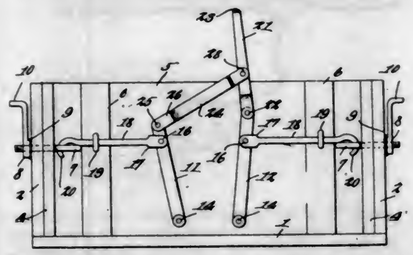
1,227,916. LATCH-HANDLE. FREDERICK E. LAUFFER, Los Angeles, Cal. Filed Mar. 20, 1913. Serial No. 756,053. (Cl. 70—16.)



1. In combination, an escutcheon plate having a rectangular orifice therein; a curved handle attached to the plate and having a vertical bore at the curve; a chamber extending horizontally in the handle from the bore to the orifice and conforming throughout its length to the rectangular shape of the orifice; a lever pivoted in the chamber adjacent to the bore and comprising one relatively long arm and one relatively short arm, the long arm of the lever fitting between the vertical sides of the chamber and extending through the orifice, the short arm of the lever reaching to or slightly beyond the median line of the bore and having vertical, parallel sides and curved, upwardly slanting upper and lower surfaces; a lever-operating member slidably fitted in the bore; a transverse guideway through the member having sides that fit over the vertical sides of the short arm thereby preventing the member from turning; the guideway also having an upper surface slanting downwardly and away from the pivot to engage the upper surface of the short arm, and a lower surface to engage the lower surface of the short arm; said member having an upper surface slightly protruding above the bore and adapting the member to be depressed to coöperate with the short arm for raising the long lever arm extension and thereby quickly to operate the latch; and a spring at the lower end of the bore acting upon the member and normally holding the member and the short arm in a raised position, the lower horizontal side of the chamber serving as a stop against which the long arm abuts for restricting the downward movement of the long arm as well as the upward movement of the member.

2. In combination, an escutcheon plate having a rectangular orifice therein; a curved handle attached to the plate and having a vertical bore at the curve; a chamber extending horizontally in the handle from the bore to the orifice and conforming throughout its length to the rectangular shape of the orifice; a lever pivoted in the chamber adjacent to the bore and comprising one relatively long arm and one relatively short arm, the long arm of the lever fitting between the vertical sides of the chamber and extending through the orifice, the short arm of the lever reaching to or slightly beyond the median line of the bore and having vertical, parallel sides and curved, upwardly slanting upper and lower surfaces; a lever-operating member slidably fitted in the bore; a transverse guideway through the member having sides that fit over the vertical sides of the short arm thereby preventing the member from turning; the guideway also having an upper surface slanting downwardly and away from the pivot to engage the upper surface of the short arm, and a lower surface to engage the lower surface of the short arm; said member having an upper slanting surface conforming to the curve of the handle, slightly protruding above the bore and axording the operator of the handle a convenient finger purchase for depressing the member; and a spring at the lower end of the bore acting upon the member and normally holding it in a raised position.

1,227,917. END-GATE FOR WAGONS. CHRISTOPHER A. LEGGETT and AMOS W. KERSEY, Emmett, Idaho. Filed Nov. 20, 1916. Serial No. 132,458. (Cl. 21—21.)



1. In a device of the class described, an end gate; a pair of upright radius rods pivoted at their lower extremities to the end gate; connections extended laterally in opposite directions from the radius rods and attached at their inner ends thereto; a link pivoted at one end to one radius rod; a lever pivoted at one end to the other radius rod; and a pivot element uniting the other end of the link with the intermediate portion of the lever.

2. In a device of the class described, an end gate; a pair of upright radius rods pivoted at their lower extremities to the end gate, one radius rod being longer than the other; connections extended laterally in opposite directions from the radius rods and attached at their inner ends thereto; a link pivoted at one end to the upper extremity of the shorter radius rod; a lever pivoted at one end to the upper extremity of the longer radius rod; and a pivot element uniting the other end of the link with the intermediate portion of the lever.

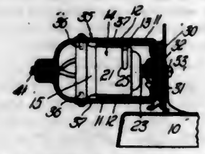
3. In a device of the class described, an end gate; a pair of upright radius rods pivoted at their lower ends to the end gate, one radius rod being longer than the other; connections extended laterally in opposite directions from the radius rods and attached at their inner ends thereto; a links pivoted at one end to the upper extremity of the shorter radius rod; a lever pivoted at one end to the upper extremity of the longer radius rod; a pivot element uniting the other end of the link with the intermediate portion of the lever; and guides carried by the end gate and receiving the connections slidably.

4. In a device of the class described, an end gate; cooperating elements comprising a pair of guides mounted on the end gate, and connections slidable in the guides; a pair of upright radius rods pivoted at their lower extremities to the end gate, the inner ends of the connections being pivotally assembled with the radius rods, one radius rod being longer than the other; a link pivoted at one end to the upper end of the shorter radius rod; a lever pivoted at one end to the upper extremity of the longer radius rod and being provided with an extension coacting with one of said coöperating elements, to limit the downward swinging movement of the lever; and a pivot element uniting the other end of the link with the intermediate portion of the lever.

1,227,918. PLUG AND RECEPTACLE CONNECTOR. LOUIS O. LIEBER, Los Angeles, Cal. Filed Feb. 3, 1916. Serial No. 76,040. (Cl. 173—328.)

1. An electric connector, embodying a cylindrical plug having an outwardly movable member thereon, and a cylindrical receptacle having an endless annular shoulder around its interior surface adapted to be engaged by the outwardly movable member on the plug, said outwardly movable member embodying a ball, and means to cause the ball to move outwardly by rotation of the plug.





2. An electric connector, embodying a cylindrical plug having an exterior cylindrical shell with a circumferential slot, an eccentric surface in the plug beneath the slot, and a ball adapted to move longitudinally in the slot and on said surface, in combination with a cylindrical receptacle having an interior endless annular shoulder.

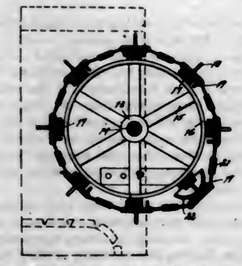
3. An electric connector, embodying a cylindrical plug having an exterior cylindrical shell with a circumferential slot, an eccentric surface in the plug beneath the slot, and a ball adapted to move longitudinally in the slot and on said surface, in combination with a cylindrical receptacle of interior diameter to fit freely over the cylindrical plug, and having an endless annular shoulder extending completely around its inner surface.

4. An electric connector, embodying a cylindrical plug having an exterior cylindrical shell with a circumferential slot, an eccentric surface in the plug beneath the slot, and a ball adapted to move longitudinally in the slot and on said surface, in combination with a cylindrical receptacle of interior diameter to fit freely over the cylindrical plug, and having an endless annular shoulder extending completely around its inner surface, said plug having a central end contact, and a resiliently supported contact at the rear end of the receptacle adapted to press against the central end contact of the plug and adapted to thereby press the ball on the plug against said annular shoulder.

5. An electric connector, embodying in combination a cylindrical receptacle having an endless annular shoulder around its interior surface, a plug adapted for free longitudinal and rotational movement in said receptacle, an outwardly movable locking member mounted on said plug and projecting beyond its surface to engage the receptacle, and means to cause the member to move outwardly by rotation of the plug.

[Claim 6 not printed in the Gazette.]

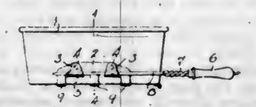
1,227,919. AUTOMATIC TEETH-CLEANING ATTACHMENT FOR MANURE-SPREADER CYLINDERS. JOHN W. A. MCGILVREY, Albia, Iowa, assignor of one-half to George W. Miller, Albia, Iowa. Filed Aug. 14, 1916. Serial No. 114,911. (Cl. 275—3.)



1. In a device of the class described, the combination of a spreader cylinder, having a plurality of longitudinally arranged spaced supporting members, each provided with outwardly extending teeth, inwardly opening channels mounted on each supporting member capable of sliding inwardly and outwardly thereon, said channels being wider than said supporting members and being provided with slots elongated circumferentially of the cylinder for receiving said teeth, flexible members connecting the ends of said channels, a guide device whereby said channels are moved outwardly out of a true circle from one point of their line of travel when the cylinder is rotated, whereby said channels serve to clean said teeth.

2. In a device of the class described, a manure spreader cylinder having a plurality of longitudinally arranged circumferentially spaced supporting member having outwardly extending teeth, inwardly opening channels of greater width than said supporting members mounted thereon, provided with circumferentially elongated slots for receiving said teeth, the central portions of said channels being extended at their ends, flexible members connecting the extending ends of the channels at the opposite ends of the spreader cylinder, and guide devices arranged in the path of travel of said extending end for causing said channels to move outwardly out of a true circle at one point in their line of travel when said cylinder is rotated for causing said channels to clean said teeth.

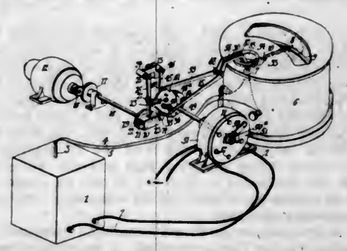
1,227,920. DETACHABLE BREAD-TIN HANDLE. EMIL F. MAASKE, Ableman, Wis. Filed May 10, 1916. Serial No. 96,589. (Cl. 53—6.)



1. In a device of the character described, the combination with a pan and a detachable handle member having a bifurcated end, of a plate applied to each side of the pan and provided at the lower edge thereof with alternately arranged tongues and extensions, the extensions being carried under the bottom of the pan, while the tongues are rolled outwardly to provide longitudinally extending side channels, said channels being adapted to loosely receive the arms of the bifurcated handle member.

2. In a device of the character described, the combination with a pan and a detachable handle member having a bifurcated end, of a plate applied to each side of the pan and provided at the lower edge thereof with alternately arranged tongues and extensions, the extensions being carried under the bottom of the pan, while the tongues are returned upwardly so that the ends thereof fit against the plates, the bases of the tongues being rolled outwardly to provide longitudinally extending side channels, and fastening members extending through the plates and returned tongues and serving to secure the plates to the pan, said side channels being adapted to loosely receive the arms of the bifurcated handle member.

1,227,921. ELECTRIC REGULATOR. GEORGE MACHLET, Jr., Elizabeth, N. J. Filed July 1, 1912. Serial No. 706,951. (Cl. 171—229.)



1. The combination of a main electrical circuit, a current regulator in said circuit, a work-apparatus operated by the current flowing through said circuit, a voltmeter having a movable needle, an independent circuit affected

by said work-apparatus, said voltmeter included in said independent circuit, a member caused to dip repeatedly and frequently into the path of said needle, means connected to said dipping member and rendered effective by the coöperation of said needle and said dipping member for adjusting said current regulator; said needle being movable freely past said dipping member, and a scale to coöperate with said needle throughout its range of movement, to indicate the condition of the work-apparatus.

2. The combination of a main electrical circuit, a current regulator in said circuit, an electrical furnace in said circuit, a voltmeter having a movable needle or part, a voltmeter circuit having an element in said furnace, and means, inclusive of a member caused to dip repeatedly and frequently into the path of said needle, for adjusting said current regulator; said needle being movable freely past said dipping member.

3. The combination with an electrical heating apparatus, of a movable indicator to show the temperature of the apparatus, a prime mover, means connected therewith to dip repeatedly into the path of said indicator, a rheostat, and a step-by-step rheostat-operating mechanism set into repeated action by means of the engagement of said dipping part and said indicator, and having means to control the electrical current to said heating apparatus; said indicator movable past said dipping part.

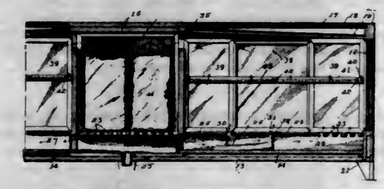
4. The combination of a movable indicator, a tactor, a rheostat, a prime mover, means operable thereby and tending repeatedly to operate said rheostat, a sear controlled by said tactor and effective at the movement of the latter into the path of said indicator to prevent the operation of said rheostat, and means controlled by said rheostat to regulate an electric current which affects said indicator.

5. The combination of a movable indicator, a tactor, a ratchet, a prime mover, means operable thereby and tending repeatedly to operate said ratchet, a sear controlled by said tactor and effective at the movement of the latter into the path of said indicator to prevent the operation of said ratchet, and means controlled by said ratchet to regulate a work apparatus whose condition is shown by said indicator.

[Claims 6 to 31 not printed in the Gazette.]

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1,227,922. REFRIGERATOR SHOW-CASE. GEORGE F. MOOREHEAD, Des Moines, Iowa, assignor to C. L. Percival Company, Des Moines, Iowa, a Corporation of Iowa. Filed May 13, 1912. Serial No. 697,068. (Cl. 62—37.)



1. A refrigerator show case comprising a central transverse ice chamber having openings on each side at the top and bottom thereof, a cooling chamber in each end having the top inclined downwardly from the end adjacent to the ice chamber and from a line above the upper edge of the upper opening in the ice chamber, and a false bottom in the cooling chambers spaced above the real bottom and the top of the lower opening from the ice chamber, said false bottom being provided with a series of openings which are graduated to increase in size or numbers per yard as the distance from the ice chamber of the successive openings increases.

2. A refrigerator show case comprising a central transverse ice chamber having openings on each side at the top and bottom thereof, a cooling chamber in each end having the top inclined downwardly from the end adjacent to the ice chamber and from a line above the upper edge of the upper opening in the ice chamber, and a removable sectional false bottom in the cooling chambers spaced above the real bottom and the top of the lower opening from the ice chamber, said false bottom being provided with a series of openings which are graduated to increase in size or be closer together as the distance of the successive openings from the ice chamber increases.

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1,227,923. FLOOR-COVERING COMPOSITION. MAX NIENSTAEDT, Palisade, N. J., assignor to American Flooring Company, Inc., New York, N. Y., a Corporation of New York. Filed Aug. 7, 1912. Serial No. 713,737. (Cl. 106—7.)

1. The improved floor covering composition comprising a resilient granular material, a pulverulent mineral filler, a mineral cement and china-wood oil, substantially as set forth.

2. The improved floor covering composition comprising granular resilient material mixed with ground istle fiber, a pulverulent mineral filler and a mineral cement, the whole being mixed with china-wood oil and adapted to be troweled.

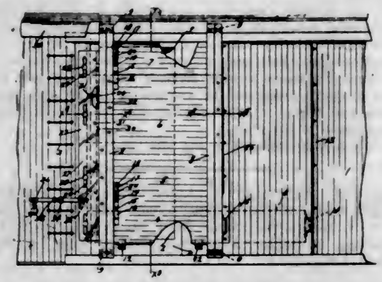
3. The improved floor covering composition which comprises a granular resilient material mixed with ground commercial istle fiber, a mineral cement and a slow-drying oil.

4. The improved floor covering composition which comprises finely ground cork, ground istle fiber, asbestos, a non-fibrous filler, a mineral cement and a slow-drying oil, the latter being incorporated with the other ingredients before the cement binder has set.

5. The improved floor covering composition which comprises fine granular resilient material, ground or chopped tough fiber, and a mineral cement, the whole being mixed with a slow-drying oil.

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1,227,924. CAR-DOOR. EDWARD ODEAN, Minneapolis, Minn. Filed May 11, 1916. Serial No. 96,803. (Cl. 20—22.)



1. The combination with a car body having a door opening, of a door for said door opening comprising upper and lower sections, upper and lower tracks secured to the car body, hangers supporting the door sections from the tracks for horizontal sliding movement, the one entirely above the other, said hangers permitting the door sections to be simultaneously opened and closed and also permitting the upper door section to be opened and closed independently of the lower section when the same is closed, and a common lock for securing either or both of the door sections in a closed position.

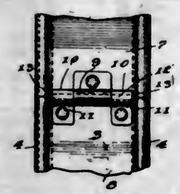
2. The combination with a car body having a door opening, of a car door for the door opening comprising upper, lower, and relief sections, abutting horizontal edges of the door sections having interlocking sliding engagement, one with the other, upper and lower tracks secured to the car body, hangers independently supporting the upper and lower door sections from the tracks for horizontal sliding movement, the one entirely above the other, and a bracket on the car body slidably supporting the relief door section for independent horizontal sliding movement or for simultaneous sliding movement with the lower door section.



3. The combination with a car body having a door opening, of a car door for the door opening comprising relief, lower, upper, and supplemental sections having interlocking sliding engagement, one with the other, a bracket on the car body slidably supporting the relief door section for horizontal movement, upper and lower tracks secured to the car body, hangers independently supporting the lower and upper door sections from the tracks for horizontal sliding movement, the one entirely above the other, means for locking the relief door section to the lower door section for common, horizontal sliding movement therewith, and means for locking the supplemental door section to the upper door section for common, horizontal sliding movement therewith.

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1,227,925. DEMOUNTABLE RIM. ELMER OLIVER, Daytona, Fla. Filed July 8, 1916. Serial No. 108,095. (Cl. 152—21.)



1. A demountable rim for pneumatic tires comprising a split rim body having end portions provided with abutting surfaces, and a cam or eccentric disposed upon the inner surface of one of the abutting ends operative for direct impingement against the other abutting end to spread said abutting ends into abutting engagement.

2. A demountable rim for pneumatic tires comprising a split rim body having end portions provided with abutting surfaces, a cam or eccentric disposed upon the inner surface of one of the abutting ends operable for engagement with the other abutting end to spread said abutting ends into engagement, and a lever for operating said cam or eccentric and adapted to overlap the latter named end of the rim when in thrown position.

3. A demountable rim for pneumatic tires comprising a rim body formed of two unequal sections, said sections being hinged at two of their ends and having abutting surfaces at their opposite ends, and a cam or eccentric disposed upon the inner surface of one of the abutting ends and operative for direct impingement against the end edge of the other abutting end to spread said abutting ends into abutting engagement.

4. A demountable rim for pneumatic tires comprising a rim body formed of two unequal sections, said sections being hinged at two of their ends and having abutting surfaces at their opposite ends, a cam or eccentric on one of the abutting ends operable for engagement with the other abutting end to spread said abutting ends into engagement, and a lever for operating said cam or eccentric and adapted to overlap the latter named end of the rim when in thrown position.

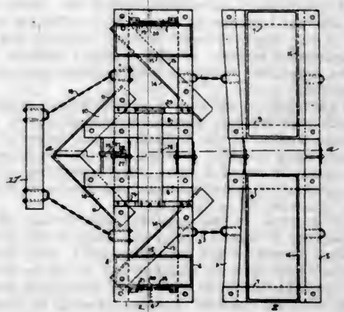
5. A demountable rim for pneumatic tires comprising a rim body formed of two unequal sections, said sections being hinged at two of their ends and having abutting surfaces at their opposite ends, a cam or eccentric on one of the abutting ends operable for engagement with the other abutting end to spread said abutting ends into engagement, a lever for operating said cam or eccentric, and means on the latter named abutting end of the rim for locking engagement with said lever.

[Claims 6 to 10 not printed in the Gazette.]

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1,227,926. SMOOTHING-DRAG. WILLIAM H. PARKER, Houston, Tex. Filed Mar. 27, 1915. Serial No. 17,571. (Cl. 37—5.)

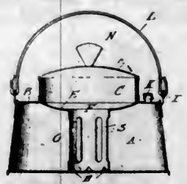
A device of the character described formed of front and rear beams, each of said beams being formed of two parts hinged together, cross braces secured to and connecting the respective ends of said parts, the braces connecting the inner ends of said parts projecting forwardly beyond the front beam, a pair of deflectors, said deflectors converging forwardly and being secured to the respective parts of the front beam at one end and to the forward ends of the forwardly projecting braces respectively, scrapers secured to the front side of the respective deflectors and projecting below the under surface thereof,



deflectors converging rearwardly and fixed at their respective ends to the corresponding parts of the respective front and rear beams near their outer ends and being arranged behind and at approximately right angles to the front deflectors, scraper blades secured to the front side of said rear deflectors and extending below their under sides, rearwardly curved runners arranged at each end of said device and means for elevating and lowering the beams upon said runners.

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1,227,927. COMBINATION MARKING-POT AND STENCIL-BRUSH INKER. CHARLES F. PAYNE, Wheeling, W. Va. Filed Aug. 30, 1916. Serial No. 117,614. (Cl. 91—66.) (Dedicated to the public.)



1. A device of the character described comprising a receptacle for holding marking fluid and having disposed therein a vertical core provided with a plurality of slots extending longitudinally of said core and notches at the lower end thereof, and a wick in said core.

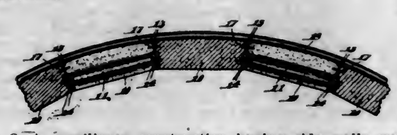
2. A device of the character described comprising a receptacle for holding marking fluid and having disposed therein a vertical core provided with a plurality of slots extending longitudinally of said core and notches at the lower end thereof, said core having a concave shelf at its upper end forming part of the top of the receptacle, and a wick in said core having its top extended to lie on said concave shelf.

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1,227,928. SILO CONSTRUCTION. CHARLES J. PERKINS, Des Moines, Iowa, assignor, by direct and mesne assignments, to Perfection Concrete Stave Silo Company, Pierre, S. D., a Corporation of South Dakota. Filed Jan. 22, 1915. Serial No. 3,692. (Cl. 72—6.)

1. A curvilinear construction having side walls made up of separate members set edge to edge, adjoining outer corner edges of said members being convexly rounded, and

fastening means connecting said edges substantially as described.



2. A curvilinear construction having side walls made up of separate members set edge to edge, adjoining corner edges of said members being convexly rounded, there being registering recesses in said members adjacent said rounded edges; and dowels in said recesses, substantially as described.

3. In a device of the class described, a wall formed of a plurality of separate members arranged edge to edge; the outer portion of the adjoining corner edges of said members being convexly rounded and the inner portion being concavely rounded, there being registering recesses in the convexly rounded portions, and dowels in said recesses, substantially as described.

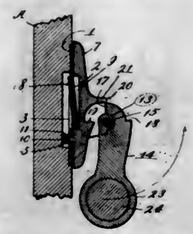
4. In a device of the class described, a wall formed of a plurality of separate members arranged edge to edge, the outer portion of the adjoining corner edges of said members being convexly rounded and the inner portion being concavely rounded, there being registering recesses in the convexly rounded portions, dowels in said recesses, and adhesive material securing said dowels in said recesses, substantially as described.

5. In a device of the class described, a wall formed of a plurality of separate members arranged edge to edge, the outer portion of the vertical edges of all of said members being convexly rounded and the inner portions of said edges being concavely rounded, the outer portions of the horizontal edges being flat and the inner portions thereof being of tongue and groove construction, there being registering recesses in the outer portions of said edges, and dowels in said recesses, substantially as described.

[Claim 6 not printed in the Gazette.]

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1,227,929. REMOVABLE CASKET-HANDLE. CLEON MOODY RALSTON, Bronson, Kans. Filed Dec. 11, 1916. Serial No. 136,354. (Cl. 16—103.)



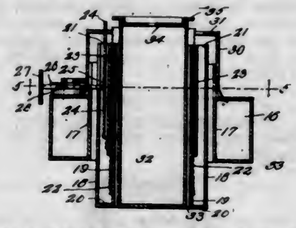
1. In a device of the character described, a resilient back plate, a tongue extending downwardly and outwardly therefrom, a cover plate, a tongue extending upwardly from said cover plate and adapted to interlock with the first tongue when the cover plate is pushed upwardly against the back plate, and a handle independent of said tongues and suitably connected to said cover plate.

2. In a device of the character described, a resilient back plate, a tongue on said back plate, a cover plate having an opening to receive said resilient tongue, a tongue on said cover plate adapted to interlock with the first tongue on proper manipulation of the cover plate, and a lip having an upturned terminal on the cover plate adapted to enter a slot in the back plate, and a spring on the cover plate adapted to bear against the lower sides of said slot and the lip to retain the latter in the former.

3. In a device of the character described, a resilient back plate, a tongue on said back plate, a cover plate, a tongue on said cover plate adapted to interlock with the first tongue on proper manipulation of the cover plate, an arm pivoted to the cover plate, and a handle connected to said arm.

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1,227,930. KEROSENE-OIL HEATING-STOVE. FERDINAND G. RAVENKAMP, Spearville, Kans. Filed Aug. 7, 1916. Serial No. 113,636. (Cl. 158—95.)



1. In an oil stove, a reservoir, having a central circular opening, a burner located centrally of the reservoir and projecting at its upper end above the reservoir, a connection between the burner and reservoir, an upstanding flange positioned on the inner edge of the top of the reservoir and having an inwardly directed flange at its upper edge to provide an opening concentric with the burner, said upstanding flange being provided with a horizontal row of air openings immediately above the reservoir, the edge of said opening being spaced from and below the top of the wick when the latter is in position for burning when turned up, said burner being in spaced relation to the reservoir whereby an air passage is provided between the burner and reservoir and the inwardly directed flange serves to direct the upflowing air current against the top of the wick.

2. In an oil stove, a reservoir having a central circular opening, a burner located centrally of the reservoir and projecting at its upper end above the reservoir, a connection between the burner and reservoir, an upstanding flange positioned on the inner edge of the top of the reservoir and having an inwardly directed flange at its upper edge to provide an opening concentric with the burner, said upstanding flange being provided with a horizontal row of air openings immediately above the reservoir, the edge of said opening being spaced from and below the top of the wick when the latter is turned up in position for burning, said burner being in spaced relation to the reservoir whereby an air passage is provided between the burner and reservoir and the inwardly directed flange serves to direct the upflowing air current against the top of the wick, and a central water receptacle arranged in spaced relation within the burner and provided with a closure cap having an outwardly projecting flange constituting a flame spreader.

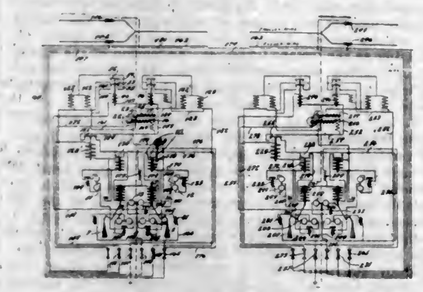
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1,227,931. ELECTRIC SIGNALING SYSTEM FOR ELECTRIC RAILWAYS. FRANKLIN M. RAYMOND and CLIFFORD H. DARE, Saugatuck, Conn.; said Dare assignor to said Raymond. Filed Aug. 28, 1913. Serial No. 787,058. (Cl. 246—36.)

1. A signaling device for electric railways, including a semaphore and operating means therefor, said operating means including a circuit, electromagnetic means for closing said circuit, means controlled by the semaphore operating means for short circuiting said last named means when the semaphore is in signal-indicating position, and electromagnetic locking means for maintaining said semaphore in its signal indicating position, said signaling device having a signal lamp and a circuit therefor and means controlled by the train for closing said last named circuit, said electromagnetic closing means and locking means being located in said last named circuit.

3. An electric signaling system having a source of power of varying potential, an electric signal, means for controlling said signal, said means having a circuit adapted to be connected to the source of power by a passing car, said circuit having a sectional resistance in shunt thereto, and means for cutting in said resistance in section, said means being controlled by the potential of the source of power.





10. In combination, a semaphore biased to one position, an electrically controlled operating mechanism for setting said semaphore to signal indicating position, a circuit therefor, electromagnetic means for closing said circuit, and means coöperating with the operating mechanism for short circuiting the electromagnetic means just after the arrival of the semaphore to signal indicating position, said means including a contact normally biased to closed position and means for raising said contact upon the movement of the semaphore to non-indicating position and for permitting the operation of the contact just after the arrival of the semaphore to signal indicating position.

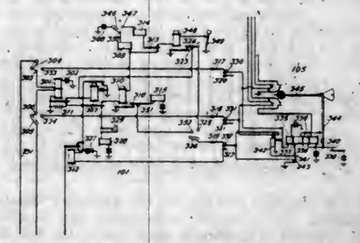
13. A block signal system for electric railways comprising a signaling device at each end of the block, danger and caution signals and danger and caution electrically operated semaphores in each of said devices, circuits for each of said semaphores, a step by step mechanism at each end of the block, circuits controlled by a passing car connecting each of said step by step mechanisms with both ends of the block, signal circuits, each signal circuit including the caution signal at one end of the block and the danger signal at the other end of the block, connected to the step by step mechanism located at the same end of the block as is the caution signal, relays in each of said signal circuits for closing a circuit to the caution semaphore at one end of the block and the danger semaphore at the other end of the block, means for opening the circuits to said semaphores when they reach their signal indicating position, means controlled by each of the signal circuits for maintaining said semaphores in said signal indicating position as long as said signal circuit remains energized and means also included in each of said signal circuits for opening the circuits controlling the action of the step by step mechanism at the other end of the block.

[Claims 2, 4 to 9, 11, and 12 not printed in the Gazette.]

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1,227,932. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. FRANK N. REEVES, Newark, N. J., and ALBEN E. LUNDELL, New York, N. Y., assignors, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed May 10, 1913. Serial No. 766,903. (Cl. 179—18.)

1. In an automatic telephone exchange system, a main office, a satellite office, interoffice trunk lines extending from said satellite to said main office, local trunk lines within said satellite, means for selecting an interoffice trunk upon the initiation of a call at said satellite, automatic switching mechanism for effecting connection between subscribers, controlling devices associated with said satellite for governing said switching mechanism, and discriminating means at said main office operated under the control of said controlling devices when manipulated in accordance with the number of the wanted subscriber, for completing a connection over said interoffice trunk or for releasing said interoffice trunk and selecting a local trunk and effecting a connection over said local trunk according to whether the wanted subscriber is located at an exchange exterior to said satellite or at said satellite.



2. In a telephone exchange system, a main office, a satellite office, trunk lines extending from said satellite to said main office and other trunk lines local to said satellite, a pair of trunk finders at said satellite, one for connecting the line of a calling subscriber at the satellite to an interoffice trunk and the other for connecting the line of the calling subscriber to a local trunk, and means at said main office whereby the interoffice trunk finder is actuated upon the imitiation of all calls at the satellite and whereby the local trunk finder is actuated only when the calling and called subscribers are at the same satellite.

3. In a telephone exchange system, a main office, a satellite office, trunk lines extending from said satellite to said main office and other trunk lines local to said satellite, automatic switches for effecting connection between subscribers, a pair of trunk finders at said satellite through one of which talking connection is established from calling subscribers at the satellite to subscribers associated with the main office and through the other of which connection is established to subscribers at said satellite, controlling devices associated with said satellite for governing said switches, and means at said main office operated under the control of said controlling devices when manipulated in accordance with the number of a wanted subscriber for selecting the necessary line finder and completing a talking connection therethrough.

10. In a telephone exchange system, a main office, a second office, interoffice trunk lines extending between said offices, other trunk lines local to said second office, and means at said main office whereby upon the initiation of all calls at said second office the subscriber's line will be connected to an interoffice trunk and whereby the subscriber's line will be connected to a local trunk only when the calling and called subscribers are at said second office.

11. In a telephone exchange system, a main office, a second office, interoffice trunk lines extending between said offices, other trunk lines local to said second office, switching devices at said second office for connecting the line of a calling subscriber thereat to an interoffice trunk and to a local trunk respectively, and means at said main office whereby upon the initiation of all calls at said second office the subscriber's line will be connected to an interoffice trunk and whereby the subscriber's line will be connected to the local trunk only when the calling and called subscribers are at said second office.

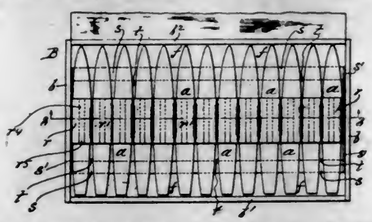
[Claims 4 to 9 and 12 to 14 not printed in the Gazette.]

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1,227,933. ORIGINAL PACKAGE. WILLIAM A. RICHTER, New York, N. Y. Filed Nov. 28, 1916. Serial No. 133,845. (Cl. 131—11.)

1. An original package of the character designated, comprising a box, shelf members formed with flanges by which they are secured to the inner walls of the box, and

tray members secured to said shelf members, each tray member being formed with a retaining strap having loops formed for vendible articles which are positioned on the tray before its insertion in the box and its attachment to its supporting shelf.



2. An original package of the character designated, comprising an elongated rectangular box, longitudinal shelf members of less width than that of the box, formed with end flanges by which they are adhesively secured to the end walls of the box in a centralized position with relation to the side walls thereof, longitudinal tray members of no greater width than the shelf members and adhesively secured to the latter, each of said tray members being formed with retaining loops for vendible articles which are inserted therein before the insertion of the tray into the box and before its attachment to its supporting shelf.

4. An original package of the character designated, comprising a box, shelf members formed with flanges by which they are secured to the inner walls of the box, and tray members secured to said shelf members, each tray member being formed with a plurality of retaining loops for vendible articles, and each loop being formed with an opening strip by weakened lines of prescribed severance, and each opening strip being formed with a loose end, for the purpose described.

[Claim 3 not printed in the Gazette.]

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1,227,934. MAIL CHUTE AND RECEPTACLE. ROBERT C. RIEGG, Sacramento, Cal. Filed Aug. 14, 1916. Serial No. 114,873. (Cl. 232—17.)



1. In a machine of the class described, a receptacle, a false bottom therefor, a pair of vertical guides on the opposite walls of said receptacle, and a spring tension device carried by the bottom, said bottom being movable downwardly against the tension of said device by the weight of articles placed thereon, the resistance of the device increasing as the weight increases, the tension of the device being exerted to automatically return said bottom to the top of the receptacle when the articles are removed.

2. In a device of the class described, a receptacle, a false bottom therefor in the form of a platform, a pair of vertical guides on the opposite walls of said receptacle, a rack on the edge of one of said guides, a shaft carried by the bottom, a gear wheel on the shaft and meshing with said rack, and a spring carried by the platform and connected to said shaft, the platform being movable downwardly against the tension of said spring by the weight of articles placed thereon, the tension of the spring being exerted automatically upon the removal of the articles to return said bottom to the top of the receptacle by the rotation of said gear wheel.

3. In a device of the class described, a receptacle, a false bottom therefor in the form of a platform, a pair of vertical guides on the opposite walls of said receptacle, a rack on one edge of each guide, spaced apart brackets secured to the under side of said platform, a shaft rotatably mounted in said brackets, gear wheels on the opposite ends of said shaft and in mesh with said racks, a roller carried by one of the brackets and contacting with the straight edge of one of said guides, and a spring carried by the platform and connected to said shaft, the platform being movable downwardly against the tension of said spring by the weight of articles placed thereon, the tension of the spring increasing as the weight increases, the tension of the spring being exerted automatically to rotate said gear wheels to return the platform to the top of the receptacle when the weight is removed.

4. In a device of the class described, a receptacle, a false bottom therefor in the form of a platform, a pair of vertical guides on the opposite walls of said receptacle, a rack on one edge of one of said guides, a shaft carried by the bottom, a gear wheel on the shaft and meshing with said rack, a spring carried by the platform and connected to said shaft, the platform being movable downwardly against the tension of said spring by the weight of articles placed thereon, the tension of the spring increasing as the weight increases, the tension of the spring being exerted automatically upon the removal of the weight to return said bottom to the top of the receptacle by the rotation of said gear wheel, and a pair of spaced apart wheels carried by said platform and disposed one on each side of one of said guides, said pair of wheels being disposed at a point spaced from said gear wheel whereby to maintain said platform in a horizontal position.

5. In a device of the class described, a receptacle, a false bottom therefor in the form of a platform, a pair of vertical guides on the opposite walls of said receptacle, brackets secured to the under side of said platform, a shaft rotatably mounted in said brackets, a connection between said shaft and one of said guides, a helical spring surrounding said shaft, a collar secured to the shaft, one end of said spring being attached to said collar, an additional collar rotatable on the shaft, and a pin extending from the last mentioned collar and contacting with the bottom of the platform to prevent rotation thereof, the opposite end of the spring being secured to the last mentioned collar, the platform being movable downwardly on said guides against the tension of said spring by the weight of articles placed thereon, said spring being wound more tightly as the weight on the platform increases, said platform being movable to the top of said receptacle upon the removal of the weight therefrom by the tension of the spring acting through said shaft upon the connection between said shaft and one of said guides.

[Claim 6 not printed in the Gazette.]

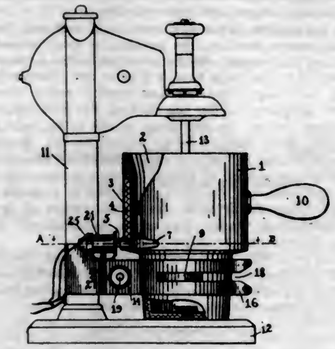
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1,227,935. FOOD AND BEVERAGE MIXER. WILLIAM P. ROBERTSON, New York, N. Y., assignor to William Henry Johnston, New York, N. Y. Filed June 15, 1916. Serial No. 103,827. (Cl. 219—43.)

1. In combination, a mixing device having a stirring element, an electric heating vessel, and current connecting means adapted to be engaged by the heating vessel when brought into operative position with respect to the stirrer.



2. In combination, a mixing device having electric current connectors thereon, and an electric heating vessel adapted to operatively engage the current connectors when brought into operative position with respect to the mixer.

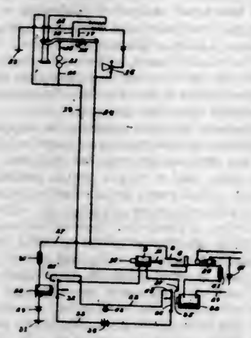


12. In combination with a vessel or container for holding a liquid of a member insertible in said vessel for agitating the liquid therein, a heating element in said vessel, and current connecting means adapted to be engaged by bringing the vessel into position with respect to the agitating member.

[Claims 3 to 11 not printed in the Gazette.]

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1,227,936. TELEPHONE-PLUG EJECTOR. HAROLD BARNHART RODIER, Washington, D. C., assignor of one-fourth to Irving N. Boernstein, one-fourth to Paul Koester, and one-fourth to Robert B. Gotta, Washington, D. C. Filed Dec. 30, 1915. Serial No. 69,451. (Cl. 179—93.)



1. An automatic ejector for telephone plugs comprising a circuit including a source of current and a solenoid for ejecting said plug, a signal lamp, means under the control of the receiver hook of a sub-station for breaking said circuit and illuminating said lamp, and means energized upon the insertion of said plug into its jack for closing said circuit at another point and deënergizing said lamp.

2. An automatic ejector for telephone plugs comprising a circuit including a source of current and a solenoid adapted to eject said plug when energized, a pair of switches in said circuit and normally assuming open and closed positions respectively, and means under the control of a receiver hook of a sub-station and the insertion of said plug into its jack for changing the normal condition of said switches.

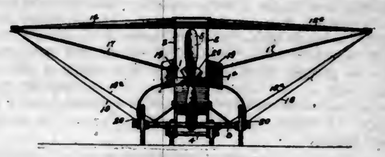
3. An automatic ejector for telephone plugs comprising a circuit including a source of current and a solenoid adapted to eject said plug when energized, a pair of switches in said circuit and normally assuming open and closed positions respectively, means under the control of a receiver hook of a sub-station and the insertion of said plug into its jack for changing the normal condition of said switches, and signaling means rendered active upon deënergization of a portion of said first means.

4. An automatic ejector for a telephone comprising a circuit including a source of current, a solenoid for ejecting said plug, a pair of switches arranged in said circuit, a lamp in said circuit, means under the control of a sub-station receiver hook for opening one of said switches and energizing said lamp, and plug control means for closing the other of said switches.

5. An automatic ejector for a telephone comprising a circuit including a source of current and a solenoid for ejecting said plug a pair of switches arranged in said circuit, a signal lamp in said circuit at a point between said switches, means under the control of a sub-station receiver hook for opening one of said switches and to be energized with said lamp and plug and control means for closing the other of said switches and deënergize said lamp.

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1,227,937. AEROPLANE. ADOLF FRANK RUSS, Pittsburgh, Pa. Filed Mar. 31, 1916. Serial No. 88,127. (Cl. 244—14.)



1. In an aeroplane, the combination of a carriage provided with propelling and steering mechanism, a laterally-extending foldable supporting wing having at its forward edge a rigid member pivotally secured to said carriage, a strut extending from the outer ends of and below said wing and detachably secured to the carriage, and a stay extending from the outer end of and below said wing and detachably secured to said carriage at a point below the attachment of said strut thereto.

2. In an aeroplane, the combination of a carriage provided with propelling and steering mechanism, a laterally-extending triangular supporting wing having at its forward edge a rigid member pivotally secured to said carriage, the sustaining surface of said wing being formed of a foldable member, and a strut and a stay extending from the outer end of said wing and each detachably connected to said carriage.

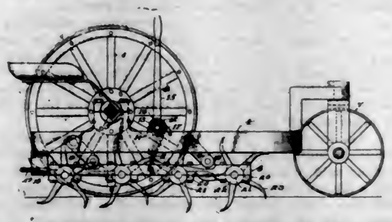
3. In an aeroplane, the combination of a carriage provided with propelling and steering mechanism, a laterally-extending triangular supporting wing having upper and lower membranes, the edges of said membranes adjacent to said carriage being secured one to the top and the other to the bottom of an elongate frame member having a convex top and a substantially straight line bottom and said membranes meeting each other at the forward and rearward edges and the outer end of the wing, the lower membrane of said wing being flexible and unsupported medially and thereby adapted to conform to the variable air pressure upon it.

4. In an aeroplane, the combination of a carriage provided with propelling and steering mechanism, a laterally-extending triangular supporting wing having upper and lower flexible membranes, the edges of said membranes adjacent to said carriage being secured one to the top and the other to the bottom of an elongate frame member having a convex top and a substantially straight line bottom, said membranes meeting each other at the forward

and rear edges and the outer end of the wing, and a strut and a stay extending from the outer end of said wing and each detachably connected to said carriage.

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1,227,938. AGRICULTURAL IMPLEMENT. BERNHARD SAGEN, Chicago, Ill. Filed Dec. 28, 1916. Serial No. 139,275. (Cl. 55—11.)

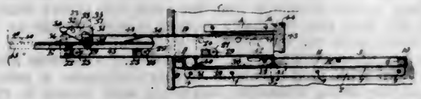


1. In a machine of the character set forth, the combination of a main frame, links pivoted to the main frame, an auxiliary frame pivoted to the lower ends of said links, threaded lugs at the rear end of the main frame, and screws in said lugs for engagement with the end of the auxiliary frame, to adjust the same with respect to the main frame.

2. In a machine of the character set forth, the combination of a main frame, a rear axle and wheels for supporting said frame, a front steering wheel for said frame, an auxiliary frame, links connecting the auxiliary frame with the main frame, manually operable means for lifting said auxiliary frame, lugs at the rear of said main frame, screws passing through said lugs and engaging with the rear end of the auxiliary frame, a plurality of transverse shafts carried by said auxiliary frame, and a plurality of rotary harrowing devices carried by each of said shafts.

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1,227,939. SUSPENSION DEVICE FOR DRAWERS. ERICK GOTFRED SAMPSON and GUSTAF JOHNSON, Jamestown, N. Y., assignors to The Art Metal Construction Company, Jamestown, N. Y., a Corporation of Massachusetts. Filed Feb. 17, 1915. Serial No. 8,815. (Cl. 45—77.)



1. A suspension device for drawers including a suspension member, a drawer rail slidable thereon, a stop element upon the drawer rail, a dog mounted upon the forward portion of the suspension member in the forward path of the stop element, said dog capable of being moved out of the path of the stop element to permit withdrawal of the drawer rail, the rear end of the drawer rail being provided with a bearing for coöperation with the suspension member, the front and rear end portions of the bearing being beveled or inclined to trip the the dog when passing therebeneath in each direction of movement of the drawer rail.

2. A suspension device for drawers including a channel bar suspension member, the front portion of the upper flange of the channel bar being omitted, and said bar being provided with an upward extension where the flange portion is omitted, a dog pivoted to the extension and having a shoulder extending into the channel bar, said dog having a rearward extension overhanging the suspension member and constituting a weight to hold the dog in its normal position, the forward end portion of the top flange of the suspension member constituting a stop for engagement by the rear extension of the dog, the lower edge of the dog being inclined upwardly and forwardly from the lower end of the shoulder on the dog, and a drawer rail slidable within the channel bar and provided with a stop shoulder for engagement with the shoulder on the dog, and a bearing device on the rear end portion of the drawer rail underlying the top flange of the suspension member and having front and rear beveled ends to wipe beneath the dog and trip the same.

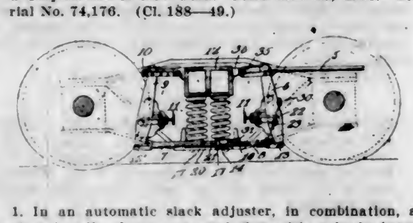
3. A suspension device for drawers including a channel bar suspension member, the bottom of the channel bar having an upstanding flange provided with a longitudinal channel in its inner face, a drawer rail slidable in the channel bar, and a floating anti-friction roller traveling upon its periphery within the channel bar and supporting the drawer rail on the periphery of the roller, said roller having an axial stud traveling loosely in the channel in the flange to prevent lateral displacement of the roller.

4. As a new article of manufacture, a suspension member of the character described consisting of a channel bar having a flange rising from the bottom flange of the bar, said upstanding flange having a longitudinal groove pressed therein on the inner face thereof.

5. A drawer rail of the character described comprising a Z-bar provided at its rear end with a bearing member located in one of the angles of the bar and having its front and rear portions beveled longitudinally.

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1,227,940. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,176. (Cl. 188—49.)



1. In an automatic slack adjuster, in combination, a push rod, a live lever connected therewith, a brake beam fulcrum for the live lever, and a return spring associated with said parts adjacent the fulcrum.

2. In an automatic slack adjuster, in combination, live and dead levers, an intervening connection therebetween, a brake beam fulcrum for the live lever, and a return spring associated with the fulcrum.

3. In an automatic slack-adjuster, in combination, live and dead levers, an intervening connection therebetween, a brake beam pivotal fulcrum for the live lever intermediate its ends, and a return spring coacting with the live lever and coiled about its pivotal fulcrum.

4. In an automatic slack adjuster, in combination, live and dead levers, a push rod therebetween and pivotally connected with the lower ends of said levers, brake beams pivotally connected with the levers intermediate their ends, and a return spring associated with one of said levers and reacting upon the adjacent brake beam.

5. In an automatic slack adjuster, in combination, a push rod, a live lever pivotally connected to one end thereof, a brake beam pivotally connected with the live lever intermediate its ends, and a U-shaped return spring coiled about the pivotal connection between the live lever and the brake beam and reacting upon both of said parts.

[Claim 6 to 33 not printed in the Gazette.]

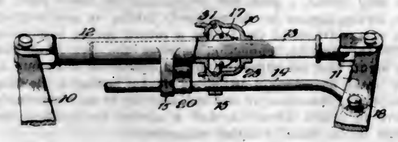
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1,227,941. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,177. (Cl. 188—49.)

1. In slack adjuster mechanism for brake rigging, in combination, a holding device adapted to be interposed between the effective ends of a two-part push rod comprising members adapted to engage substantially opposite sides of one part of the push rod and have a gripping action therewith when the brakes are applied.



2. In slack adjuster mechanism for brake rigging, in combination, supporting members, an intervening telescopic connection therebetween, and holding means carried by one and engaging the other adapted to prevent relative movements on application of the brakes, said means comprising a housing on the outer telescopic member, dogs therein engaging the inner telescopic member, said dogs adapted to have a gripping action between the walls of the housing and the inner telescopic member as the brakes are applied.



3. In slack adjuster mechanism for brake rigging, in combination, live and dead levers, a plural part intervening telescopic connection, and holding meaus carried by one part and engaging another adapted to prevent relative movement on application of the brakes, said connection comprising an enlarged housing cast on the outer one of the telescopic members, and holding dogs within said housing adapted to engage the sides of the inner telescopic members.

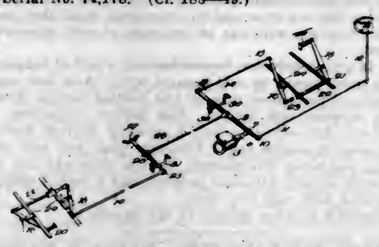
4. In slack adjuster mechanism for brake rigging, in combination, live and dead levers, an intervening two-part telescopic connection, and holding means carried by one part of said connection and engaging the other adapted to prevent relative movement on application of the brakes, said connection comprising an enlarged housing on the outer one of the telescopic members, and holding dogs within said housing having roughened surfaces adapted to engage the inner telescopic member, and links connected with said holding dogs occupying an angular relation to each other adapted to have a toggle action upon the inner telescopic member as the brakes are applied.

5. In slack adjuster mechanism for brake rigging, in combination, live and dead levers, an intervening two-part telescopic connection, and holding means carried by one part and engaging the other adapted to prevent relative movement on application of the brakes, said means comprising an enlarged housing integral with the outer one of the telescopic members, holding members within said housing having roughened surfaces adapted to engage the opposite sides of the inner telescopic members, and means for holding said members in close engagement with the inner telescopic member.

[Claim 6 not printed in the Gazette.]

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1,227,942. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,178. (Cl. 188—49.)



1. In apparatus of the characted described, in combination, a power cylinder, a lever associated therewith having operative connections with the truck brake rigging, means adapted to support said lever from the under side of the car body to insure uniform range of movement and a variable stop associated with said means.

2. In apparatus of the character described, in combination, a power cylinder, levers associated therewith having operative connections with the truck brake riggings, brackets secured to the under side of the car body adapted to support said levers and limit their range of movement in both directions and clamps on said brackets movable to adjusted position to vary the range of movement of said levers.

3. In apparatus of the character described, in combination, a power cylinder, live and dead levers associated therewith having operative connections with the truck brake riggings, lever supports secured in relatively fixed position adapted to support said levers and limit their range of movement, and variable means on said supports whereby the range of movement of the levers may be further adjusted and limited.

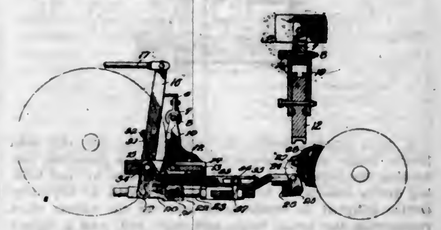
4. In apparatus of the character described, in combination, a power cylinder, levers associated therewith having operative connections with the truck brake riggings, and brackets, secured in relatively fixed position adapted to support said levers and limit their range of movement, and means whereby the range of movement of the levers may be further adjusted and limited, said means comprising a clamp secured to said bracket and adapted to engage the associated lever at one of its limits of movement.

5. In apparatus of the character described, in combination, a power cylinder, live and dead levers associated therewith, truck brake riggings operatively connected with the primary live and dead levers, automatic slack adjusters associated with the truck brake rigging, and means adapted to limit the movement of the levers and maintain them in a predetermined relation with respect to the power cylinder.

[Claims 6 to 8 not printed in the Gazette.]

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1,227,943. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,179. (Cl. 188—50.)



1. In a slack adjuster, in combination, a live lever, an actuating member connected to the upper part thereof, a dead lever pivotally supported at its lower end and carrying a brake shoe support at its upper end, an extensible rod between said levers composed of two parts pivotally connected to the live and dead levers respectively and adapted to telescope one within the other, and means coacting with the effective ends of said parts adapted to permit free movement in one direction and prevent movement in the opposite direction.

2. In a slack adjuster, in combination, a brake beam pivotally supported from a fixed part of the truck adapted to carry a brake shoe head, a live lever pivotally connected between its ends with said brake beams, a dead lever pivotally supported at its lower end on a relatively fixed part of the truck and carrying a brake shoe head at its upper end, a telescopic push rod pivotally connected near the middle of said dead lever and the lower end of the live lever, means adapted to permit relative expansion of the parts of said push rod and permanently hold the slack due to wear of the parts, and a return spring asso-

ciated with said live lever and its pivotal connection with the brake beam.

3. In a slack adjuster, in combination, a brake beam pivotally suspended by a frictional hanger from a relatively fixed part of the truck, a live lever having a pivotal connection with said beam, and a return spring associated with the pivotal connection of said live lever adapted to maintain a substantially constant normal angle between said parts.

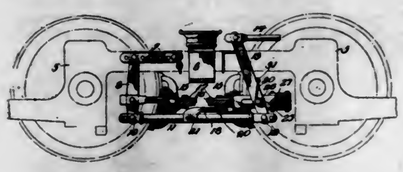
4. In a slack adjuster, in combination, a brake shoe head pivotally supported from a relatively fixed part of a truck, friction means associated with the support adapted to hold the brake shoe head in substantially the position to which it is moved, a live lever associated with said brake shoe head, having a pivot point between its end and near the brake shoe head, a dead lever, an extensible push rod between the live and dead lever adapted to permanently hold the slack due to excess travel of the parts, and a return spring associated with the pivotal connection of said live lever, said return spring being of substantially U-shaped construction.

5. In a slack adjuster, in combination, a brake beam pivotally suspended by a frictional hanger from a relatively fixed part of the truck, a brake beam strut connected therewith, and a live lever pivotally connected intermediate its ends with said strut and having its upper end connected with the brake actuating mechanism and its lower end connected to one portion of a two-part telescopic member, said member being provided with means operating between its effective ends adapted to permit free relative movement of the parts with respect to each other in one direction only.

[Claims 6 to 18 not printed in the Gazette.]

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1,227,944. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,180. (Cl. 188—49.)



1. In a slack adjuster, in combination, live and dead levers, brake beams associated therewith, a push rod connecting the lower ends of said levers, a take up and holding device associated with one of said parts, an adjusting device adapted to temporarily take up the excess slack connecting the brake beam and push rod, and a return spring associated with the live lever.

2. In a slack adjuster, in combination, live and dead levers, a push rod connecting their lower ends, brake beam struts having pivotal connections with said levers, an adjusting rod connected with one of said brake beam struts and having a yielding frictional connection with the push rod, a return spring coiled about the pivotal connection between the lever and its strut, and means associated with said strut for permanently taking up and holding the excess travel due to the wear of the brake.

3. In a slack adjuster, in combination, live and dead levers, a push rod connecting their lower ends, brake beam struts having pivotal connections with said levers, an adjusting rod having a yielding frictional connection with one of said brake beams, a return spring associated with the pivotal connection between the lever and its brake beam, and means associated with one of said parts for permanently taking up and holding the excess travel due to the wear of the brake shoes, said last mentioned means comprising a shim box and shims, and a take up and holding rod within the shim box and having a pivotal connection with the live lever.

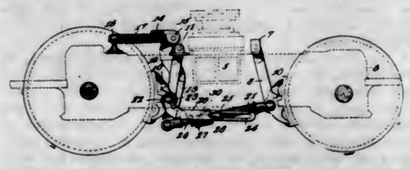
4. In a slack adjuster, in combination, a live lever, a dead lever, brake beams having struts forming pivotal supports for said levers, a push rod connecting the lower ends of the levers, means associated with one of said parts for permanently holding the excess travel of the levers, a return spring associated with the pivotal connection between the live lever and its strut, and an adjusting device connected with one of the brake beams.

5. In a slack adjuster, in combination, a live lever, a dead lever, brake beams having struts forming supports for said levers, a push rod connecting the lower ends of the levers, means for permanently taking up and holding the excess travel of the levers, a return spring associated with the pivotal connection between the live lever and its strut, and an adjusting device connected with one of the brake beams, said adjusting device having a yielding frictional connection at one end whereby it may yieldingly move in either direction, and a spring for holding the parts in frictional yielding engagement.

[Claims 6 to 14 not printed in the Gazette.]

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1,227,945. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,181. (Cl. 188—50.)



1. In a slack adjuster, in combination, a pair of brake shoe hangers, a live lever connected with one of the hangers and automatic slack adjusting means between one of the hangers and the live lever and the other hanger.

2. In a slack adjuster, in combination, a pair of brake shoe hangers, a live lever associated with one of the hangers, a telescopic member interposed between the live lever and one of the hangers and an adjusting rod adapted to actuate the telescopic member interposed between said member and the other hanger.

3. In a slack adjuster, in combination, a pair of hangers supported from relatively fixed parts of the truck, brake shoes carried by said hangers, a live lever, an adjusting means between said hangers comprising a relatively flat adjusting rod, and a two-part telescopic member, said rod being provided with slots at its ends adapted to temporarily take up the excess travel and also provide for brake shoe clearance.

4. In a slack adjuster, in combination, a pair of hangers, brake shoes carried by said hangers, a live lever, and temporary and permanent take up and holding devices interposed between said hangers, said mechanism comprising a relatively flat adjusting rod, and a two-part telescopic push rod, said adjusting rod being connected at one end adjacent the live lever and its associated brake shoe and at its other end with one of the parts of said telescopic member.

5. In a slack adjuster, in combination, a pair of hangers, brake shoes carried by said hangers, a live lever, and temporary and permanent take up and holding devices interposed between said hangers, said devices comprising a relatively flat adjusting rod, a yielding friction device associated therewith and a telescopic push rod, said adjusting rod being intermediate the live lever and one of the parts of said telescopic member, and a return spring associated with said live lever.

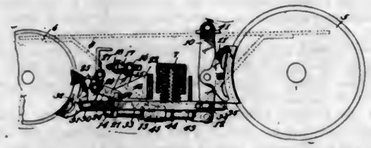
[Claims 6 to 9 not printed in the Gazette.]

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1,227,946. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,182. (Cl. 188—49.

1. In a slack adjuster, in combination, a member carrying a live lever, a dead lever supported from the truck, an extensible push rod connecting said levers, a brake shoe hanger, connections between the hanger and the live lever, and an adjusting rod between the hanger and the dead lever.





2. In a slack adjuster, in combination, a member carrying a live lever, a dead lever supported from the truck, a push rod connecting said levers, a brake shoe hanger, connections between the hanger and the live lever, an adjusting rod between the hanger and the dead lever, and temporary holding means associated with one of said parts adapted to actuate the push rod on release of the brakes.

3. In a slack adjuster, in combination, an actuating member, a live lever carried thereby and supported intermediate its ends from a relatively fixed part of the truck, a dead lever at the opposite side of the truck bolster, an extensible push rod connecting the lower ends of said levers, a brake shoe hanger substantially parallel to the live lever and connected thereto, brake shoes carried by the hanger and dead lever, an adjusting rod connecting the hanger and the dead lever, a lost motion connection at one point of connection, and a friction take up device at the other point of connection whereby the extensible push rod is actuated to permanently take up and hold the excess travel on release of the brakes.

4. In a slack adjuster, in combination, a live lever supported intermediate its ends from a relatively fixed part of the truck, a dead lever, an extensible push rod connecting said levers, a brake shoe hanger substantially parallel to the live lever and connected thereto, brake shoes carried by the hanger and dead lever, an adjusting rod connecting the hanger and the dead lever, a lost motion connection at one point of connection and a friction take up device at the other point of connection whereby the extensible push rod is actuated to permanently take up and hold the excess travel on release of the brakes, said extensible push rod including two telescopic members, a housing on one of said members, and a dog in said housing coacting with the other.

5. In a slack adjuster, in combination, a live lever connected with the brake actuating mechanism, a dead lever supported from a relatively fixed part of the truck, an extensible push rod connecting the levers, a brake shoe hanger adjacent and substantially parallel to the live lever, a link connecting the live lever and hanger near their central parts, an adjusting rod connecting the lower part of said hanger with a point near the lower end of said dead lever, a lost motion connection between said hanger and adjusting rod and a frictional connection between the adjusting rod and the dead lever adapted to temporarily take up and hold the excess travel of the brake rigging until the push rod can be actuated permanently to hold the same on release of the brakes.

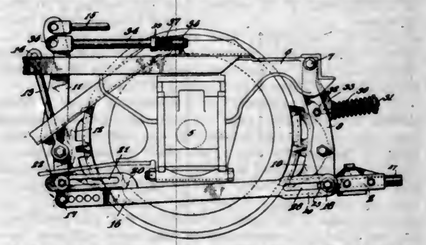
[Claims 6 to 10 not printed in the Gazette.]

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1,227,947. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,183. (Cl. 188—49.)

1. In a slack adjuster, in combination, a live lever, a dead lever, brake shoes carried thereby adapted to engage the opposite sides of a wheel, a two-part rod connecting the lower ends of said levers, a permanent take up and holding device located at the end of said rod, and an adjusting rod connecting the live and dead levers between their lower ends, said holding device including a housing having a spring held dog carried by one part of the two-part rod adapted to engage and positively bite into the other part.

2. In a slack adjuster, in combination, a live lever, a dead lever, brake shoes carried thereby adapted to engage the opposite sides of a wheel, a two-part rod connecting the lower ends of said levers, a permanent take up and holding device including a positively acting friction dog located at the end of said rod, and an adjusting rod connected with the lower ends of the live and dead levers, having a lost motion slot at one end and a yielding friction temporary take up and holding device near the other.



3. In a slack adjuster, in combination, a live lever, a dead lever, brake shoes carried thereby adapted to engage the sides of a wheel, a two-part rod connecting the lower ends of said levers, a permanent take up and holding device located at the end of said rod, an adjusting rod connected with the live and dead levers between their lower ends, said adjusting rod having a lost motion slot at one end, a yielding friction temporary take up and holding device at its other end, and restoring springs associated with both the live and dead levers respectively adapted to aid in returning the parts to normal position.

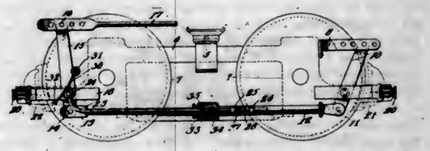
4. In a slack adjuster, in combination, a live lever, a dead lever, a two-part rod connecting the lower ends of said levers comprising an inner end member secured to one of the levers and telescoping within a housing carried by the other, positively acting dogs within said housing, and an adjusting rod connected with the dead lever at its point of connection with the inner telescopic push rod and having a yielding friction connection at its opposite end with the live lever.

5. In a slack adjuster, in combination, a live lever, a dead lever, brake shoes carried thereby adapted to engage the opposite sides of a wheel, a two-part rod connecting the lower ends of said levers, a permanent take up and holding device including a positively acting friction dog at the end of said rod, an adjusting rod connected with the lower ends of the live and dead levers, having a lost motion slot at one end and a yielding friction temporary take up and holding device at the other, and a return spring acting between a part of the truck and the upper end of one of the levers.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,948. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,184. (Cl. 188—49.)



1. In a slack adjuster, in combination with a truck having outside hung brake beams, a live lever, a dead lever, a telescopic member connecting said levers near their lower ends, permanent take up and holding means coacting between the effective ends of the parts of said telescopic member, and an adjusting rod connected with one of the levers at one end and having a yielding fric-

tional lost motion clamp device at its other end, connected with one of said first mentioned parts.

2. In a slack adjuster, in combination with a truck having outside hung brake beams, a live lever and a dead lever adjacent said beams, a telescopic member connecting the lower ends of said levers, a positive clutch device operating between the effective ends of said telescopic member, an adjusting rod pivotally connected with one of the levers at one end and passing through a pair of lugs on said member at its opposite end and having a yielding frictional clamp device operating between said lugs adapted to temporarily take up the excess travel of the brake rigging until taken up by said positive clutch device, and being so positioned and arranged as to insure predetermined brake shoe clearance at all times.

3. In a slack adjuster, in combination with a truck having outside hung brake beams, a live lever supported from one of the brake beams near its central part, a dead lever at the opposite side of the truck pivotally supported from a relatively fixed member, a two-part teleacopic pull rod connecting the lower ends of said levers, permanent take up and holding mechanism operating between the effective ends of the parts of said pull rod, and an adjusting rod pivotally connected with said levers adjacent their points of connections with the brake beams and having a lost motion device at one end, and temporary take up and holding mechanism adapted to operate upon said permanent take up and holding mechanism on release of the brakes if excess travel has taken place.

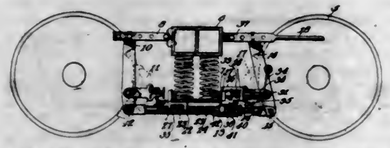
4. In a slack adjuster, in combination with a truck having outside hung brake beams, a live lever supported from one of the brake beams near its central part, a dead lever at the opposite side of the truck pivotally supported from a relatively fixed member, a two-part telescopic pull rod connecting the lower ends of said levers, permanent take up and holding mechanism operating between the effective ends of the parts of said pull rod, an adjusting rod pivotally connected with said levers adjacent their point of connections with the brake beams, having a lost motion device at one end, temporary take up and holding mechanism adapted to operate upon said permanent take up and holding mechanism on release of the brakes if excess travel has taken place, and a return spring associated with the live lever adjacent its point of connection with its brake beam.

5. In a slack adjuster, in combination with a truck having outside hung brake beams, a live lever, a dead lever, a telescopic pull rod connecting said levers, permanent take up and holding means operating between the effective ends of said telescopic pull rod, an adjusting rod adapted to temporarily take up and hold the excess slack and actuate the permanent take up mechanism on release of the brakes, and a return spring associated with the live lever and its brake beam adapted to return the parts to normal position.

[Claims 6 to 8 not printed in the Gazette.]

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1,227,949. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,185. (Cl. 188—49.)



1. In a slack adjuster, in combination, a live lever, a dead lever, a telescopic push rod connecting said levers, and a temporary adjusting device having a yielding frictional connection associated with each lever adapted to cause independent adjustment of the push rod.

2. In a slack adjuster, in combination, a live lever, a dead lever, a push rod connecting said levers, independent adjusting means either of which is adapted to actuate said push rod on excess travel of either brake lever and a return spring connected with the live lever adjacent its point of connection with its adjusting means.

3. In a slack adjuster, in combination, a live lever, a dead lever, a push rod connecting said levers, a fixed support, a plurality of adjusting rods associated with said fixed support and the levers adapted to cause an actuation of the push rod as wear of the parts takes place and a return spring connected with the live lever adjacent its point of connection with its adjusting means.

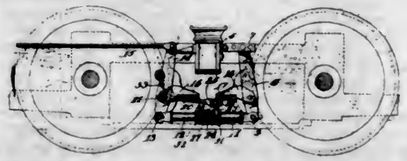
4. In a slack adjuster, in combination, a live lever, a dead lever, an extensible push rod connecting the lower ends of said levers, a fixed support, and an adjusting rod connected with said fixed support and one of the parts of said extensible push rod.

5. In a slack adjuster, in combination, a live lever, a dead lever, a telescopic push rod connecting the lower ends of said levers, a fixed support, and adjusting rods connected with said support and one of the levers and one of the parts of said push rod respectively.

[Claims 6 to 16 not printed in the Gazette.]

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1,227,950. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,186. (Cl. 188—49.)



1. In a slack adjuster, in combination, a live lever, an extensible push rod connected with said lever, and a plural part adjusting rod associated with one of said members, the parts of said adjusting rod normally lying at an angle to each other which angle is varied as the slack is taken up.

2. In a slack adjuster, in combination, a live lever, a dead lever, an extensible push rod connecting said levers, and a plural part adjusting rod intermediate one of said levers and push rod, the parts of said adjusting rod normally lying at an angle to each other which angle is varied as the slack is taken up.

3. In a slack adjuster, in combination, a live lever, a push rod connected with said lever, and a plural part angularly disposed adjusting rod having a connection with the live lever intermediate its ends, and a friction take-up device associated therewith at one end of one of said parts.

4. In a slack adjuster, in combination, a live lever, an extensible push rod, a release spring for the live lever, and a plural part adjusting rod having pivotal connection with the live lever adjacent the point of connection with the release spring.

5. In a slack adjuster, in combination, a live lever, a dead lever, an extensible push rod connected with the lower ends of said levers, brake beam struts pivotally connected with said levers intermediate their ends, a release spring associated with the live lever and its adjacent strut, and a plural part adjusting rod connected with said lever at its point of connection with its strut.

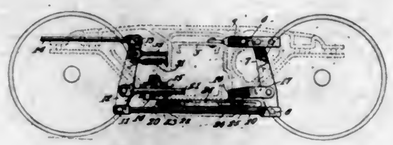
[Claims 6 to 11 not printed in the Gazette.]

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1,227,951. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,187. (Cl. 188—49.)

1. In a slack adjuster, in combination, live and dead levers, a push rod connecting said levers, and an adjusting mechanism connecting said levers intermediate their ends and substantially parallel with said push rod, said mechanism comprising a take up and holding means and a temporary adjusting means directly connected with each other in series.





2. In a slack adjuster, in combination, live and dead levers, a push rod connecting said levers, and an adjusting mechanism connecting said levers intermediate their ends and substantially parallel with said push rod, comprising a holding rod, a telescopic member coacting therewith and an adjusting means connected at one end to one of said parts and at the other end with the dead lever.

3. In a slack adjuster, in combination, live and dead levers, a push rod connecting the ends of said levers, and an adjusting mechanism connecting said levers intermediate their ends and comprising a housing, a holding rod connected with the live lever and telescoping within said housing, and an adjusting means connected at one end with said housing and at its opposite end with said dead lever.

4. In a slack adjuster, in combination, live and dead levers, a push rod connecting said levers, and an adjusting mechanism connecting said levers comprising a housing, a rod connected with the live lever and telescoping with said housing, and an adjusting rod connected at one end with said housing and at its opposite end with said dead lever, said connections of the adjusting rod comprising a lost motion device at one end, and a friction clamp device at the other.

5. In a slack adjuster, in combination, a live lever, a dead lever, a rod connecting said levers, the slack adjusting mechanism connecting said levers and comprising a housing located in one of the brake beams, a holding rod telescoping with said housing, and an adjusting rod connected with said housing at one end and having a friction clamp connection at its opposite end.

[Claims 6 to 17 not printed in the Gazette.]

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1,227,952. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York Filed Jan. 25, 1916. Serial No. 74,188. (Cl. 188—49.)



1. In a slack adjuster, in combination, a live lever, a dead lever, a push rod connecting the lower ends of said levers, a housing mounted upon a brake beam having holding devices associated therewith, a holding rod connected with the live lever and having a telescoping engagement with the housing and an adjusting device connected with said housing at one end and said push rod at its other.

2. In a slack adjuster, in combination, a brake beam, a lever, a push rod connected with the end of said lever, a housing mounted upon the brake beam having holding devices associated therewith, a holding rod connected with the lever and having a telescoping engagement with the housing, and an adjusting device between the push rod and the housing, the connection between such adjusting device and push rod being provided with a lost motion device to insure brake shoe clearance.

3. In a slack adjuster, in combination, a live lever, a push rod connected therewith, a brake beam, a housing mounted upon the brake beam having holding devices associated therewith, a holding rod connected with the live lever and coacting with the housing, an adjusting device between the push rod and the housing, the connection between such adjusting rod and push rod being provided with a lost motion device to insure brake shoe clearance, and a friction clamp yieldable in both directions associated with said adjusting rod adapted to be operated on excess travel of the brakes.

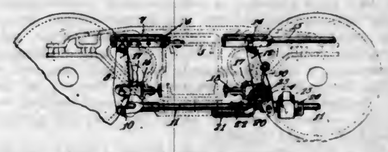
4. In a slack adjuster in combination, a live lever, a dead lever, a non-extensible push rod connecting said levers, a brake beam and strut associated with each of said levers, a housing rotatably mounted upon one of the beams, a take up rod co-acting with said housing and pivotally connected with the live lever, and an adjusting rod between the housing and the push rod.

5. In a slack adjuster, in combination, a brake beam strut, including a rotatably mounted housing, a holding rod coacting with said housing, and an adjusting rod associated with one of said parts.

[Claims 6 to 13 not printed in the Gazette.]

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1,227,953. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,189. (Cl. 188—49.)



1. In a slack adjuster, in combination, a live lever having a take up device connected therewith at its lower end, a dead lever, a push rod between the dead lever and the take up device, and adjusting means between the push rod and the live lever having a lost motion slot and a temporary take up slot at its points of connection.

2. In a slack adjuster, in combination, a live lever having a take up device directly connected therewith, a dead lever, a push rod between the dead lever and the take up device, adjusting means between the push rod and the live lever, and a release spring coacting with the live lever adjacent the point of connection between the live lever and the adjusting means.

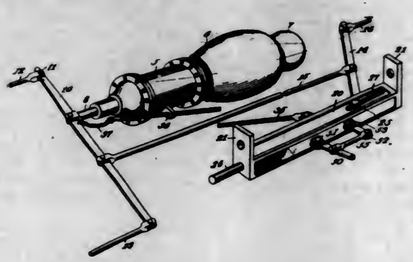
3. In a slack adjuster, in combination, a pull rod, a live lever actuated thereby, a bifurcation at its lower end having a take up device connected therewith, a dead lever, a push rod between the dead lever and the take up device, adjusting means between the push rod and the live lever, a release spring coacting with the live lever, and a stop at the upper end of the live lever formed by a continuation of the pull rod adapted to limit the return movement of the live lever to normal position.

4. In a slack adjuster, in combination, a live lever, a permanent take up and holding device carried by said lever, a dead lever, an intervening push rod between the levers and said device, and an adjusting means between the live lever and the push rod, said adjusting means having a yielding frictional connection at one end yieldable in either direction and a lost motion connection at the other.

5. In a slack adjuster, in combination, a live lever, a permanent take up and holding device connected with said lever, a dead lever, an intervening push rod between the dead lever and holding device, an adjusting means between the live lever and the push rod, having a frictional connection at one end yielding in either direction and a lost motion connection at the other, said holding device and adjusting means being located at opposite sides of the live lever.

[Claims 6 to 17 not printed in the Gazette.]

1,227,954. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,190. (Cl. 188—49.)



1. In a slack adjuster, in combination, a brake cylinder, a live lever connected therewith, a floating lever, a tie rod connecting said levers, and take up and holding mechanism associated with the fulcrum of the floating lever, said mechanism comprising a casing divided into a plurality of chambers, an adjusting take up device in one of said chambers, a holding device in another, and an adjustable fulcrum for the floating lever in another chamber.

2. In a slack adjuster, in combination, a brake cylinder, a lever actuated thereby, and take up and holding mechanism associated with the fulcrum of said lever, said mechanism comprising a casing divided into a plurality of chambers, a take up device in one of said chambers, a holding device in another, an adjustable fulcrum for the lever in another chamber, and a take up and holding rod pivotally connected with the end of the lever and passing through all of said chambers.

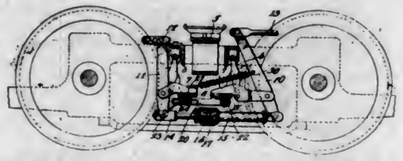
3. In a slack adjuster, in combination, a brake cylinder having a piston, a live lever pivotally connected with said piston, a floating lever connected with said first mentioned lever and actuated thereby, and take up and holding means associated with one end of said floating lever comprising a casing, a take up and holding rod within said casing and pivotally connected with the end of said floating lever, a clutch connected with the piston adapted to slide along said holding rod on excess piston travel and engage and move the holding rod a distance corresponding thereto on release of the brakes to shift the fulcrum of said floating lever, and means for holding said parts in shifted position.

4. In a slack adjuster, in combination, a brake cylinder having a piston, a live lever connected therewith, a floating lever at the opposite end of the cylinder, a link connecting said levers intermediate their ends, and take up and holding mechanism associated with the fulcrum of said floating lever comprising a casing supported from the under side of the car body, a take up and holding rod within the casing and pivotally connected with the end of said floating lever, means adapted to move along said holding rod on excess piston travel and move said holding rod a distance corresponding to the excess travel on release of the brakes to shift the fulcrum of said floating lever, and means for holding said fulcrum in shifted position comprising a holding dog coacting with said push rod and casing and normally spring held in biting engagement with said rod.

5. In a slack adjuster, in combination, a brake cylinder, a lever connected therewith, and take up and holding mechanisms associated with said lever, comprising a holding rod connected with said lever, a slidable member coacting with said rod and having a connection with the brake cylinder piston, a dog within said housing normally held in canted position adapted to move freely in one direction on application of the brakes when involving excess piston travel and bite into the rod on release of the brakes and carry the same in the opposite direction a distance equal to the excess piston travel, and means adapted to hold said rod in its newly adjusted position.

[Claims 6 to 10 not printed in the Gazette.]

1,227,955. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,191.. (Cl. 188—49.)



1. In a slack adjuster, in combination, a live lever, a dead lever, a telescopic push rod connecting said levers, brake beams and struts associated with said levers, a temporary take up and holding means connecting the brake beams comprising a relatively flat rod having a lost motion slot at one end and a yielding friction clamp device at its other end.

2. In a slack adjuster, in combination, a live lever, a dead lever, a telescopic push rod connecting said levers, brake beams and struts associated with said levers, a temporary take up and holding means connecting the brake beams comprising a relatively flat rod having a lost motion slot at one end and a yielding friction clamp device at its other end, and a return spring connecting the central part of the live lever with the brake beam associated with the dead lever.

3. In a slack adjuster, in combination, a live lever, a dead lever, a telescopic push rod connecting said levers, brake beams and struts associated with said levers, a temporary take up and holding means connecting the brake beams comprising a relatively flat rod having a lost motion slot at one end and a yielding friction clamp device at its other, the points of connection between said adjusting rod and the brake beams including a ball and socket joint adapted to permit relative turning movement of said rod.

4. In a slack adjuster, in combination, a live lever, a dead lever at opposite sides of the truck bolster, a two part extensible push rod connecting the ends of said levers having a positive permanent take up and holding device coöperating between the effective ends thereof, brake beams and struts associated with the respective levers, an adjusting rod connecting said brake beams having a lost motion slot at one end adapted to provide for brake shoe clearance, a yielding friction clamp at the other end adapted to temporarily take up the excess travel, ball and socket connections between the adjusting rod and the brake beams, and a return spring for restoring the parts to normal position intermediate of one of the brake beams and the live lever.

5. In a slack adjuster, in combination, a live lever, a dead lever at opposite sides of the truck bolster, a two part extensible push rod connecting the ends of said levers having a positive permanent take up and holding device coöperating between the effective ends thereof, brake beams and struts associated with the respective levers, an adjusting rod connecting said brake beams having a lost motion slot at one end adapted to provide for brake shoe clearance, and a yielding friction clamp at the other end adapted to temporarily take up the excess travel.

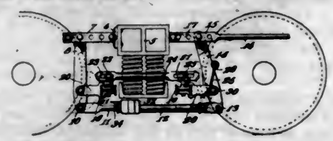
[Claims 6 to 11 not printed in the Gazette.]

1,227,956. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,192. (Cl. 188—49.)

1. In a slack adjuster, in combination, brake beams, live and dead levers associated with the brake beams, an adjusting rod directly connected with one of said pairs of parts having a lost motion slot at one end and a temporary take up and holding slot at the opposite end and a permanent holding device associated with one of said pairs of parts.



2. In a slack adjuster, in combination, brake beams, live and dead levers associated with the brake beams, an adjusting rod directly connected with one of said pairs of parts having a lost motion slot at one end, a temporary take up and holding slot at the opposite end embodying a yielding friction clamp, and a holding device comprising a two-part telescopic push rod connecting the lower ends of said live and dead levers.



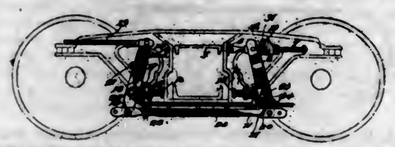
3. In a slack adjuster, in combination, brake beams, live and dead levers associated with the brake beams, an adjusting rod directly connected with one of said pairs of parts having a lost motion connection at one end and a temporary take up and holding slot at the opposite end, a permanent holding device associated with one of said pairs of parts, and a release spring associated directly with the live lever adjacent its point of connection with the brake beam.

4. In a slack adjuster, in combination, brake beams and struts, live and dead levers associated with the brake beams, an adjusting rod directly connected with one of said pairs of parts having a lost motion connection at one end and a temporary take up and holding device at the opposite end, a permanent holding device associated with one of said pairs of parts, and a release spring associated directly with the live lever and its strut adapted to maintain a predetermined angular relation between said parts.

5. In a slack adjuster, in combination, with a truck having a bolster and spring plank, brake beams adjacent the plank, live and dead levers associated with the brake beams, a return spring between one of said levers and one of said beams, an adjusting rod between the bolster and spring plank connecting one of said pairs of parts and having a frictional connection at one end adapted to yield in either direction, and a take up and holding rod connected with said live and dead levers, said last mentioned element comprising a two-part telescopic member and means adapted to coact between the effective ends of said telescopic parts.

[Claims 6 to 10 not printed in the Gazette.]

1,227,957. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,193. (Cl. 188—49.)



1. In a slack adjuster, in combination, a live lever and a dead lever positioned upon opposite sides of a truck bolster, a stop adapted to limit the movement of the live lever to normal position, a permanent take-up and holding device associated with the upper end of the dead lever, a push rod, an adjusting device associated with the lower ends of said dead lever, and a return spring associated with the point of connection between the adjusting rod and the live lever.

2. In a slack adjuster, in combination, a live lever, a dead lever, a push rod connecting the ends of said levers, a permanent take up device associated with the upper end of the dead lever, an adjusting rod connecting said levers having a lost motion connection with one of said levers and a sliding frictional connection with the other, and a return spring associated with the point of connection between the adjusting device and the live lever.

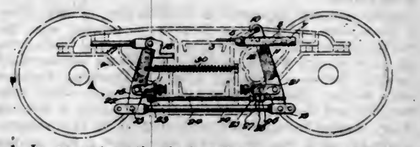
3. In a slack adjuster, in combination, a live lever, a dead lever, a push rod connecting the ends of said levers, a permanent take up device associated with the upper end of the dead lever, an adjusting rod connecting said levers having a lost motion connection with one of said levers and a sliding frictional connection with the other, and a return spring associated with the point of connection between the adjusting device and the live lever.

4. In a slack adjuster, in combination, a live lever, a dead lever, a push rod connecting the ends of said levers, a permanent take up device associated with the upper end of the dead lever, an adjusting rod connecting said levers having a lost motion connection with one of said levers, a return spring associated with the point of connection between the adjusting device and the live lever, and a stop adapted to coact with the live lever to limit its return movement.

5. In a slack adjuster, in combination, a live lever, a brake beam strut associated therewith, and a stop mounted upon one of said parts adapted to coact with the other to maintain predetermined angular relation therebetween.

[Claims 6 to 12 not printed in the Gazette.]

1,227,958. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,194. (Cl. 188—50.)



1. In an automatic slack adjuster, in combination, a car truck frame having a ratchet rod connected at one side thereof, a dead lever having a pawl coacting with the ratchet, a live lever at the opposite side of the frame, and parallel disposed push and adjusting rods associated with the lower ends of said levers, one of said rods having a yielding frictional supporting connection.

2. In an automatic slack adjuster, in combination, a car truck frame having a ratchet rod connected at one side thereof, a dead lever having a pawl coacting with the ratchet, a live lever at the opposite side of the frame, parallel disposed push and adjusting rods associated with the lower ends of said levers, and a stop pivotally mounted on the upper end of the live lever adapted to coact with the frame and limit the return of the parts to normal position.

3. In an automatic slack adjuster, in combination, a car truck frame, a ratchet rod, a dead lever having a pawl coacting with the ratchet, a live lever, a push rod connecting the lower ends of said levers, an adjusting rod connecting said levers near their points of connection with the brakes, one of the points of connection including a pair of relatively fixed lugs through which the adjusting rod passes, and means on said rod acting between the lugs to insure brake shoe clearance, and a release spring extending between the central part of the live lever and truck frame, said release spring, adjusting rod and push rod being substantially parallel with each other.

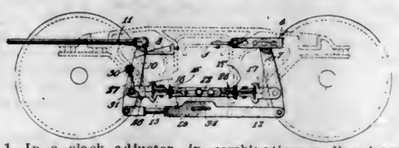
4. In an automatic slack adjuster, in combination, a truck frame, a dead lever at one side thereof, a permanent take up and holding device associated with the upper end of the dead lever, a live lever at the opposite side of the frame, a yielding frictional adjusting mechanism connecting said levers, and a release spring connecting the central part of said live lever with the truck frame.

5. In an automatic slack adjuster, in combination, a truck bolster, a dead lever at one side thereof, a permanent take up and holding device associated with the upper end of the dead lever, a live lever with a stop at the opposite side of the bolster, a release spring connecting the central part of said live lever with the truck frame, and adjusting mechanism including a two part member yield-

ingly and frictionally connected with each other and connecting said levers positioned substantially parallel to said release spring.

[Claims 6 and 7 not printed in the Gazette.]

1,227,959. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,195. (Cl. 188—50.)



1. In a slack adjuster, in combination, a live lever, a dead lever, actuating mechanism associated with the end of the live lever, an extensible push rod connecting the ends of said levers, an adjusting device substantially parallel thereto comprising a pair of parallel disposed links having elongated slots which links are loosely connected respectively with the live and dead levers to permit relative movement in both vertical and horizontal planes, and a friction clamp passing through said slots adapted to have relative movement with respect to either of said links.

2. In a slack adjuster, in combination, a live lever, a dead lever, actuating mechanism associated with the end of the live lever, an extensible push rod connecting the ends of said levers, an adjusting device substantially parallel thereto comprising a pair of parallel disposed links having elongated slots connected respectively with the live and dead levers by universal joints, a friction clamp passing through said slots adapted to have relative movement with respect to said links, and a lost motion device associated with one of the points of connection with one of the links and its associated lever.

3. In a slack adjuster, in combination, a live lever, a dead lever, actuating mechanism associated with the live lever, an extensible push rod connecting the ends of said levers, an adjusting device substantially parallel thereto comprising a pair of links having elongated slots connected respectively with the live and dead levers adapted to permit both vertical and lateral movement, a friction clamp passing through said slots adapted to have relative movement with respect to said links, said connection between the ends of said live lever and dead lever comprising a two part telescopic member having a pawl and ratchet connection between the effective ends.

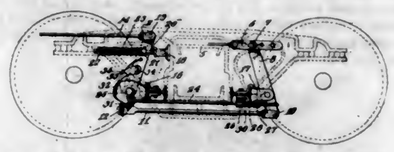
4. In a slack adjuster, in combination, a live lever, a dead lever, actuating mechanism connected with the live lever, a two part extensible push rod connecting the other end of the live lever with the corresponding end of the dead lever, and a temporary take up and holding device substantially parallel with said push rod and having universal connection with said live and dead levers.

5. In a slack adjuster, in combination, a live lever, a dead lever, actuating mechanism connected with the live lever, a two part extensible push rod connecting the other end of the live lever with the corresponding end of the dead lever, and a temporary take up and holding device substantially parallel with said push rod and connecting said live and dead levers, said take up device comprising a pair of over-lapping relatively flat links universally connected at their ends with the live levers and having elongated registering slots, and a friction clamp passing through said slots and adapted normally to permit movement in one direction only.

[Claims 6 to 9 not printed in the Gazette.]

1,227,960. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,196. (Cl. 188—49.)

1. In a slack adjuster, in combination, a source of power, a two part live lever connected therewith, temporary and permanent take up and holding mechanisms associated with the live lever adjacent the point of connection between its two parts and a return spring acting on one of said parts of said live lever.



2. In a slack adjuster, in combination, a source of power, a two part live lever connected therewith and temporary and permanent take up and holding mechanism associated with the live lever adjacent the point of connection between its two parts, said temporary mechanism having a yielding friction device associated therewith and so positioned and arranged as to permit brake shoe clearance.

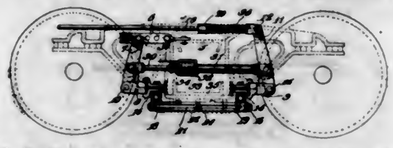
3. In a slack adjuster, in combination, a source of power, a plural part live lever connected therewith, and temporary and permanent take up and holding mechanism having means insuring brake shoe clearance associated with the live lever adjacent the point of connection between two of its parts, said permanent take up and holding device comprising a pawl and ratchet mechanism interposed between said two parts of the live lever.

4. In a slack adjuster, in combination, a source of power, a plural part live lever connected therewith, and temporary and permanent take up and holding mechanism associated with the live lever adjacent the point of connection between said parts and having a yielding frictional point of support, said permanent take up and holding device comprising means acting between the effective ends of the adjacent parts of the live lever adapted to hold the same in the desired angular relation.

5. In a slack adjuster, in combination, a dead lever, a two part live lever, a source of power connected with one of the parts of the live lever, a non-extensible push rod directly connecting the other part of the live lever and the dead lever, temporary take up and holding mechanisms between the live and dead levers, and permanent take up and holding mechanism between the parts of the live lever.

[Claims 6 to 15 not printed in the Gazette.]

1,227,961. SLACK-ADJUSTER. WILLIAM H. SAUVAGE, Flushing, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed Jan. 25, 1916. Serial No. 74,197. (Cl. 188—49.)



1. In a slack adjuster, in combination, live and dead levers, permanent take up and holding means connecting the central parts of said levers, brake beams supporting said levers and temporary take up and holding devices connecting said brake beams comprising a pair of links one of which has a lost motion connection at its point of support to insure brake shoe clearance and a yielding friction clamp connecting said links adapted to permit relative movement of the links to temporarily take up and hold the excess travel of the brake rigging.

2. In a slack adjuster, in combination, a live lever, a dead lever, a permanent take up and holding device connecting said levers near their central parts, and temporary take up and holding devices connecting said levers near their lower ends, said temporary take up and holding device comprising a pair of links having a yielding frictional connection with each other and also connected



respectively with said levers whereby they may move relatively to each other on excess travel of the brake rigging, one of said links being provided with a lost motion slot adjacent at its point of support adapted to insure brake shoe clearance.

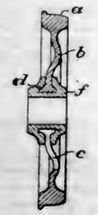
3. In a slack adjuster, in combination, a live lever, a dead lever, a telescopic push rod connecting their central parts, brake beam struts carried at their lower parts, and adjusting mechanism connecting said struts.

4. In a slack adjuster, in combination, a live lever, a dead lever, a telescopic push rod connecting their central parts, brake beam struts carried at their lower parts, and adjusting mechanism connecting said struts, said adjusting mechanism comprising a pair of relatively flat links having registering slots in their adjacent ends, and a friction device passing through said slots.

5. In a slack adjuster, in combination, a live lever, a dead lever, a telescopic push rod connecting their central parts, brake beam struts carried at their lower parts, and adjusting mechanism connecting said struts, said adjusting mechanism comprising a pair of relatively flat links having registering slots in their adjacent ends, and a bolt passing through said slots carrying friction members held in yielding engagement with the outer sides of said links.

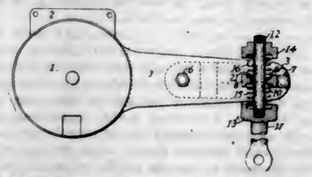
[Claims 6 to 14 not printed in the Gazette.]

1,227,962. METHOD OF MAKING CAR-WHEELS. FRIEDRICH SCHAFFER, Leobersdorf, Austria. Filed July 21, 1915. Serial No. 41,069. (Cl. 29—168.)



The method of making car wheels of the disk type, for use on railway-carriages, the said method consisting in first heating a block of steel and forming from it in one piece the tire and the disk portion with a central hub opening in the latter, making the edge of the disk portion surrounding said central hub opening of a T-shaped cross-section and providing radial slots in the disk portion terminating in said central hub opening and extending to points near the tire, then making the hub portion as a separate part in the shape of a flanged cylinder, then subjecting the said tire and disk portion and the said hub portion to a suitable heat treatment, then inserting the heated hub portion into the central hub opening of the said disk portion and forcing the hub portion around the edge of said circular hub opening and finally cooling off the finished wheel.

1,227,963. SHOCK-ABSORBER CONNECTION. FRIDOLIN SCHIMMEL, Faribault, Minn. Filed Aug. 20, 1915. Serial No. 46,494. (Cl. 21—105.)



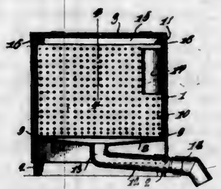
1. A shock absorber having a bifurcated arm, carrying a pivotedly mounted block, in combination, with a link yieldingly connected to the beforementioned block, the said link being free to move in any direction without contacting with the block.

2. A link connection for a shock absorber, in combination, a swivel block provided with a hole, a link passing through the hole of said block and yieldingly connected thereto, the diameter of the opening in the swivel block being enough larger than the diameter of the link to permit free movement in all directions.

3. A link connection for a shock absorber, in combination, a swivel block provided with a recessed hole, a link passing through the said hole, and provided with recessed shoulders, compression springs between the recesses in the swivel block and the recesses in the shoulders, the said link being free to move in any direction without contacting with the hole.

4. A link connection for a shock absorber, in combination, a swivel block provided with a through hole of comparatively large diameter and spring retainers, a link of comparatively small diameter passing through the hole and provided with spring retainers, coil springs interposed between the aforesaid retainers whereby the swivel and link are connected through a yielding pressure, permitting free resilient movement in all directions.

1,227,964. GARBAGE-CONTAINER. JAMES W. SHEPPERD, Los Angeles, Cal. Filed Jan. 10, 1917. Serial No. 141,647. (Cl. 220—115.)

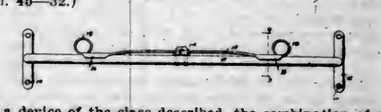


1. In containers, a casing having a downwardly directed approximately pyramidal bottom, the bottom of said casing having an upwardly extending peripheral flange secured to the inner face of the walls of the casing, a receptacle of foraminous construction mounted within said casing and fitting snugly in said flange so as to be supported by the bottom of the casing and held in spaced relation thereto and to the walls of the casing, and a drain pipe communicating with the interior of the casing at the apex of the bottom thereof.

4. In containers, a casing having a bottom inclined downwardly and inwardly from its periphery to its center, a drain pipe communicating with said casing at the center of the bottom thereof, a receptacle of foraminous construction removably mounted within the casing in spaced relation to the walls of the same, and a removable perforated cover for said receptacle, provided with a downwardly directed funnel member whereby said cover and receptacle are adapted to coöperate to provide an insect trap and to permit ventilation of the receptacle.

[Claims 2 and 3 not printed in the Gazette.]

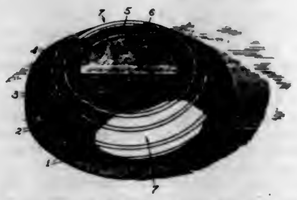
1,227,965. TOWEL-HOLDER. THOMAS J. SHERMAN, Billings, Mont. Filed May 11, 1916. Serial No. 96,798. (Cl. 45—32.)



In a device of the class described, the combination of a rod with a two-part cylindrical member hinged together at adjacent edges, means for adjustably fastening the free edges of said parts together, an inverted U-shaped member secured to said cylindrical member and extending upwardly therefrom, arms pivotally mounted on the up-

right portions of said U-shaped member said arms being made of resilient material, engaging portions at the outer ends of said arms, the parts being so connected and arranged that when the arms are above said rod, said engaging members will be yieldingly pressed toward the rod.

1,227,966. FLYING TARGET. CLARK A. SIGAFOOS, Omaha, Nebr. Filed Jan. 3, 1917. Serial No. 140,397. (Cl. 124—17.)



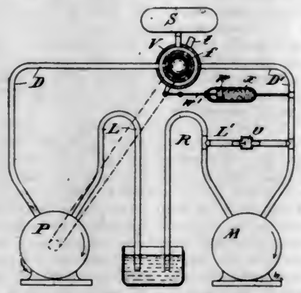
1. A flying target of fragile material having circumferentially discontinuous surface-portions colored to contrast with the remaining surface-portions thereof.

3. In a breakable flying target for trap-shooting, a target-body having alternating surface-areas of contrasting colors, said areas being circumferentially discontinuous but adapted to blend optically during rotation of the target-body about a central axis and form an apparently-continuous stripe around said target-body.

5. In a breakable flying target for trap-shooting, a target-body having uniformly curvilinear surface-elements symmetrical about a central axis, and spots on said surface of a color contrasting with the body-color, said spots adapted to blend optically during rotation of the body about its central axis.

[Claims 2 and 4 not printed in the Gazette.]

1,227,967. APPARATUS FOR DRIVING ROTARY ENGINES. GIULIO SILVESTRI, Vienna, Austria-Hungary. Filed June 16, 1913. Serial No. 774,002. (Cl. 138—22.)



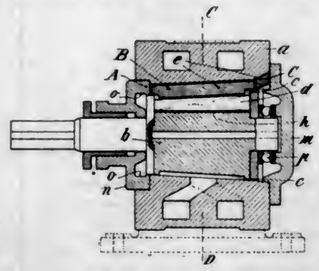
1. In an apparatus of the character described, the combination with a rotary pump for delivering fluid and a rotary motor, of pipes leading from the pressure side of the pump to the motor, a pipe leading the exhaust from the motor, a rotary flow interrupter fitted in said piping, an accumulator connected with said piping, a short-circuit pipe connecting said piping with said exhaust pipe, and a non-return valve arranged in the short circuit pipe.

2. In an apparatus of the character described, the combination with a rotary pump for delivering fluid and a rotary motor, of piping leading from the pressure side of the pump to the motor, a pipe leading the exhaust from the motor, a rotary flow interrupter fitted in said piping and driven by the pump, an accumulator connected with said piping, a short-circuit pipe connecting said piping with said exhaust pipe and a non-return valve arranged in said short-circuit pipe.

3. The hereindescribed flow interrupter consisting of a casing having two passages one of which serves as driving medium inlet, the other as driving medium outlet, an accumulator, directly connected to the said casing, a rotary hollow distributer having a ported wall adapted during its rotation to establish communication at intervals between the driving medium inlet and the outlet, and a sleeve disposed between the casing and the rotary distributer, said sleeve consisting of a stationary and an adjustable part, said parts having interengaging tooth shaped projections and recesses and serving to determine by the length of some of the recesses the duration of communication between the driving medium inlet and the inner space of the distributer.

4. The hereindescribed flow interrupter consisting of a casing having two passages, one of which serves as driving medium inlet, the other as the driving medium outlet, an accumulator directly connected with the said casing, a rotary hollow distributer having a ported wall adapted during its rotation to establish communication at intervals between the driving medium inlet and the driving medium outlet, a sleeve disposed between the casing and the rotary distributer, said sleeve consisting of a stationary and an adjustable part, said parts having interengaging tooth-shaped projections and recesses, a hollow shaft on said adjustable part, said hollow shaft extending through the casing, a lever mounted on said hollow shaft, a cylinder, and a piston movable within said cylinder, said piston being coupled with the lever and connected with the pressure pipe of the driving medium.

1,227,968. ROTARY ENGINE. GIULIO SILVESTRI, Vienna, Austria. Original application filed Oct. 28, 1912, Serial No. 728,115. Divided and this application filed Nov. 29, 1913. Serial No. 803,701. (Cl. 121—74.)

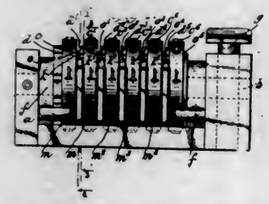


1. In a rotary engine the combination with a stator casing and a rotatable piston drum therein, said drum being of less diameter at one end than the other, of pistons radially displaceable in the said drum, a packing device separating the inlet side of the working chamber of the drum from the outlet side thereof, said packing device being divided into a plurality of parts, one of said parts serving as the actual packing piece and extending beyond both end faces of the guide slots for the pistons, which faces are parallel to the plane of rotation of the piston drum, and a cover for the casing at that side adjacent to the smaller end of the piston drum and being provided with an inner ring flange, and with a portion integral with said flange serving as a packing in the manner and for the purpose set forth.

2. In a rotary engine, the combination with a stator casing and a rotatable piston drum therein, said drum being of less diameter at one end than at the other, of pistons radially displaceable in the said drum and being longer in the direction of the axis of the drum than the working chamber, a packing device separating the inlet side of the working chamber of the drum from the outlet side thereof, said packing device being divided into parts B and C, the part B serving as the actual packing piece and extending beyond both end faces of the guide slots for the pistons, which faces are parallel to the plane of rotation of the piston drum, and a cover A for the casing at that side adjacent to the smaller end of the piston drum, said cover forming part of the packing, the said parts A, B, C being so constructed that the lines of division between them are situated outside the end surfaces of the drum.



1,227,969. NUMBERING-HEAD. AMOS H. SMITH, New York, N. Y., assignor to American Bank Note Company, a Corporation of New York. Filed Aug. 22, 1916. Serial No. 116,234. (Cl. 101—88.)



1. A numbering head embodying therein a sequence of digit wheels, a ratchet or spur wheel carried upon one side of each of said digit wheels and presented toward the wheel of next lower denomination, a cam disk upon the opposite face of each of said wheels, a locking pawl of a width to be operatively engaged by the ratchet or spur wheel of each digit wheel and the riser on the cam disk of the wheel of next lower denomination, a holding pawl operatively engaging each of said ratchet or spur wheels upon the side thereof opposite to the point of engagement of said locking pawl, a main actuating mechanism and operative connections between said main actuating mechanism and said digit wheels respectively.

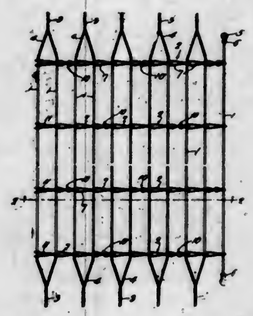
2. A numbering head embodying therein a sequence of digit wheels, a ratchet or spur wheel carried upon one side of each of said digit wheels and presented toward the wheel of next lower denomination, a cam disk upon the opposite face of each of said wheels, a locking pawl of a width to be operatively engaged by the ratchet or spur wheel of each digit wheel and the riser on the cam disk of the wheel of next lower denomination, a holding pawl operatively engaging each of said ratchet or spur wheels upon the side thereof opposite to the point of engagement of said locking pawl, means whereby all of said locking pawls may be simultaneously disengaged from their coöperating ratchet or spur wheels to permit the setting of said digit wheels, a main actuating mechanism and operative connections between said main actuating mechanism and said digit wheels respectively.

3. A numbering head embodying therein a sequence of digit wheels, a ratchet or spur wheel carried upon one side of each of said digit wheels, and presented toward the wheel of next lower denomination, a cam disk upon the opposite face of each of said wheels, a rock shaft, a plurality of locking pawls of a width to be operatively engaged by the ratchet or spur wheel of said digit wheels and the riser on the cam disks of the wheels of next lower denomination respectively, said pawls being loosely mounted upon said shaft, coöperating means carried by said shaft and said pawls respectively whereby said pawls are adapted to have movement independently of said shaft or to be moved by said shaft, means whereby said shaft may be actuated, a holding pawl operatively engaging each of said ratchet or spur wheels upon the side thereof opposite to the point of engagement of said locking pawl, a main actuating mechanism and operative connections between said main actuating mechanism and said digit wheels respectively.

4. A numbering head embodying therein a sequence of digit wheels, a double ratchet or spur wheel carried by each of said digit wheels, a plurality of pawls acting upon each of said ratchet wheels whereby the digit wheel carrying said ratchet wheel is normally locked against movement in either direction, means carried by the digit wheel of lower denomination acting upon one of the pawls of the digit wheel of higher denomination whereby said last named digit wheel will be permitted at predetermined intervals to turn in one direction only, a main actuating mechanism and operative connections between said main actuating mechanism and said digit wheels respectively.

5. A numbering head embodying therein a sequence of digit wheels, a ratchet wheel carried by each of said digit wheels having a plurality of angular spurs thereon, a plurality of pawls acting upon each of said ratchet wheels whereby the digit wheel carrying said ratchet wheel is normally locked against movement in either direction, means carried by the digit wheel of lower denomination acting upon one of the pawls of the digit wheel of higher denomiantion whereby said last named digit wheel will be permitted at predetermined intervals to turn in one direction only, a main actuating mechanism and operative connections between said main actuating mechanism and said digit wheels respectively.

1,227,970. BED-SPRING FABRIC. GARY B. SMITH, Chicago, Ill. Filed July 22, 1915, Serial No. 41,292. Renewed Oct. 26, 1916. Serial No. 127,963. (Cl. 245—9.)



1. In a bed-spring fabric, strands, cross links connecting them, there being throughout the greater portion of the fabric single links between each pair of strands, and at various points throughout the fabric a pair of doubled links between the respective pair of strands.

2. In a bed-spring fabric, strands, and cross chains comprising links engaged with the strands, there being throughout the greater portion of the fabric single links between each pair of strands, and at various points throughout the fabric a pair of doubled links between the respective pair of strands.

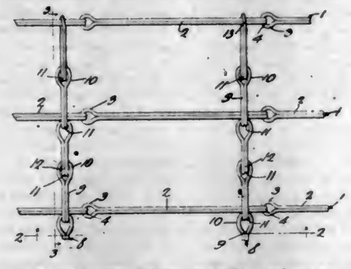
3. In a bed-spring fabric, strands, and cross chains comprising links engaged with the strands, there being throughout the greater portion of the fabric single links between each pair of strands, and said chains having at various points throughout the fabric yieldable portions between the respective pair of strands.

4. In a bed-spring, stands, cross chains, each embodying a series of doubled wire links having their ends bent into hooks engaging the bights of the companion links and embracing the respective strands, there being throughout a greater portion of the fabric a single link between each pair of strands, and at various points throughout the fabric a pair of doubled links between the respective pair of strands.

1,227,971. BED-SPRING FARRIC. GARY B. SMITH, Chicago, Ill. Filed July 22, 1915, Serial No. 41,293. Renewed Oct. 26, 1916. Serial No. 127,964. (Cl. 245—9.)

1. In a bed-spring fabric, strands, and cross chains having means embracing said strands and having links slid-

ably connected between said strands, all of the links of each cross chain being connected.



2. In a bed-spring fabric, strands, and cross chains embodying doubled wire links having their terminals reflexed to form hooks engaging the bends of the companion links, certain hooks of the chains embracing said strands and the others slidably receiving the bends of the respective links between said strands.

3. In a bed-spring fabric, chains embodying links having loops and reflexed portions engaging the loops of the companion links, and cross chains having their links engaged with the aforesaid links and reflexed portions.

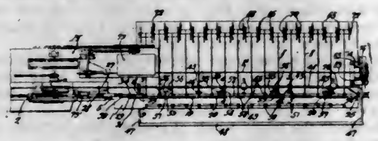
4. In a bed-spring fabric, chains embodying links having loops and reflexed portions engaging the loops of the companion links, and cross chains having their links engaged with the aforesaid links and reflexed portions, the reflexed portions having portions to prevent the movement of the cross chain links off of the same.

5. In a bed-spring fabric, chains embodying links having loops and reflexed portions engaging the loops of the companion links, and cross chains having hooks embracing the first-mentioned links and reflexed portions thereof, the reflexed portions having portions to prevent the movement of the cross chain links off of the same.

[Claims 6 to 9 not printed in the Gazette.]

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1,227,972. MACHINE FOR ASSEMBLING BED-FABRIC CHAINS. GARY B. SMITH, Chicago, Ill. Filed July 29, 1915, Serial No. 42,517. Renewed Oct. 26, 1916. Serial No. 127,965. (Cl. 140—7.)



1. A chain-fabric assembling machine embodying a guide for receiving a longitudinal chain and coöperable with cross chains, and means for moving the guide and cross chains relative to one another to engage the longitudinal chain to hooks of the cross chains.

2. A chain-fabric assembling machine embodying a guide for receiving a longitudinal chain and coöperable with cross chains, means for moving the guide and cross chains relative to one another to engage the longitudinal chain to hooks of the cross chains, and means for bending the hooks to embrace the longitudinal chain.

3. A chain-fabric assembling machine embodying a guide for receiving a longitudinal chain, and to coöperate with cross chains having hooks, means for moving said guide and cross chains relative to one another to carry the longitudinal chain into the hooks of the cross chains and to deliver the fabric to one side, and means for preventing the retrograde movement of the fabric.

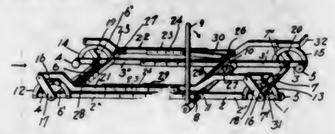
4. A chain-fabric assembling machine embodying a guide for receiving a longitudinal chain, and to coöperate with cross chains having hooks, means for moving said guide and cross chains relative to one another to carry the longitudinal chain into the hooks of the cross chains and to deliver the fabric to one side, means for preventing the retrograde movement of the fabric, and means for bending the hooks to embrace the longitudinal chain.

5. A chain-fabric assembling machine embodying a laterally movable guide for receiving a longitudinal chain and coöperable with cross chains having hooks, and means for moving said guide to carry the longitudinal chain into the hooks of the cross chains.

[Claims 6 to 51 not printed in the Gazette.]

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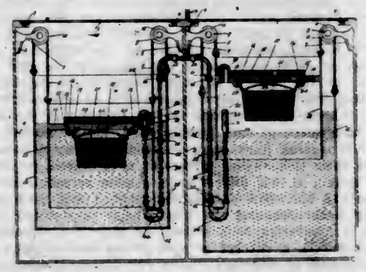
1,227,973. LIFTING-JACK FOR AUTOMOBILES. FLORENTINE LAFAYETTE SNIVELY, Dunnville, Ontario, Canada. Filed Jan. 15, 1917. Serial No. 142,537. (Cl. 254—91.)



A lifting jack for automobiles comprising a base frame, link members swung upon the base frame, a lifting frame carried by the links, right angular brackets extending horizontally outwardly from each side of the lifting frame and against which the wheels of the car are designed to have impact, bracket members carried by each end of the base frame and on which the lifting frame normally rests, and stop members extending outwardly from such bracket members and with which the links of the lifting frame engage when the lifting frame is carried to the lifted position.

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1,227,974. GAS-GENERATOR. CHARLES BREWSTER STEELE, New York, N. Y. Filed Apr. 16, 1908. Serial No. 427,511. (Cl. 48—41.)



1. A gas generator consisting of a liquid receptacle and a gasometer each being movable relatively to the other provided with a gas outlet pipe a valve provided with an automatic lock governing the outlet pipe adapted to be locked in closed position when the gas has all been withdrawn.

2. In a gas generator, a liquid receptacle, a plurality of flexible connections, one end of each connection being attached to the liquid receptacle, a bell inverted within the receptacle to which is attached the other end of each of the flexible connections, pulleys suitably supported over which the flexible connections run to support the receptacle and bell, a carbid holder within the bell, and a gas outlet pipe extending within the bell.

3. In a generator, a fluid receptacle, a bell disposed in said receptacle, each relatively movable to the other, flexible connections between said bell and said receptacle, whereby the said bell and receptacle may approach and recede from one another under variations of gas pressure, said bell being provided with a removable cover, and a carbid basket detachably connected to said cover.



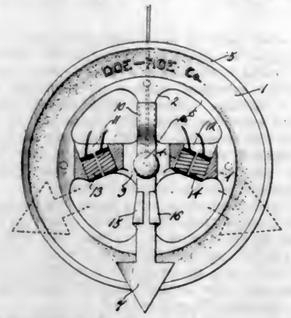
4. In a generator, a liquid receptacle, a gas receptacle movably disposed therein, a carbid holder within the gas receptacle, pulleys suitably supported, flexible connections attached at their ends to the receptacles and running over the pulleys, each receptacle being attached to opposite ends of the flexible connections.

5. In a generator, a liquid receptacle, a carbid holding receptacle movably disposed therein, flexible connections between said receptacles and supports for said connections, the carbid holding receptacle being so weighted that when charged with carbid it is of greater weight than the liquid receptacle when charged with the proper amount of water, each receptacle being attached to opposite ends of the flexible connections.

[Claims 6 to 12 not printed in the Gazette.]

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1,227,975. SIGNAL DEVICE. WILLIS W. STEFFY, Kutztown, and HORACE B. STECKEL, Slatington, Pa. Filed Dec. 4, 1915. Serial No. 65,059. (Cl. 177—337.)



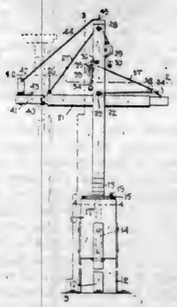
1. A signal device including a supporting disk having transversely extending spokes radiating from a central bearing, an indicating arrow having a bearing shank formed thereon at a point away from the head end and shaped to be received in the central bearing in a relation that the arrow normally swings by gravity to point to a neutral indication, magnets mounted on the transversely extending spokes, armatures carried by the arrow on the sides thereof, and a circuit in which the magnets are connected provided with a switch to be manually shifted to connect said magnets selectively in the circuit to be energized.

2. A signal device including a supporting disk made in the form of a ring having a plurality of spokes radiating from a central bearing opening and with two of said spokes extending horizontally from the bearing opening, an indicating arrow having a head at one end thereof provided with a shank adjacent the opposite end shaped to be received in the central bearing opening and to thus mount the indicating arrow in a relation that it is normally swung by gravity to point to a neutral indication, electromagnets mounted on the transversely extending spokes with the faces of the cores thereof disposed in planes taken radially through the central bearing, a pair of armatures independently mounted to be disposed on opposite sides of the arrow and shaped at their contacting faces to lie in planes taken radially from the central bearing, and a circuit connected with said magnets by which the same may be energized.

3. A signal device including a supporting disk made in the form of a ring having a plurality of spokes radiating from a central bearing opening and with two of said spokes extending horizontally from the bearing opening, an indicating arrow having a head at one end thereof provided with a shank adjacent the opposite end shaped to be received in the central bearing opening and to thus mount the indicating arrow in a relation that it is normally swung by gravity to point to a neutral indication, electromagnets mounted on the transversely extending spokes with the faces of the cores thereof disposed in planes taken radially through the central bearing, a pair of armatures independently mounted to be disposed on opposite sides of the arrow and shaped at their contacting faces to lie in planes taken radially from the central bearing, said indicating arrow being provided with a counter balance weight beyond the location of the bearing shank, circuit connections leading from a source of electrical energy to said magnets, and a switch within the control of the operator to be moved to energize said magnets selectively to cause the arrow to be swung to indicating positions.

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1,227,976. GRAIN-SPOUT ELEVATOR AND ADJUSTER. MARION E. STINNETT, Victoria, Ill. Filed July 31, 1916. Serial No. 112,395. (Cl. 254—84.)



1. An elevator spout holding and adjusting device comprising a base, a vertically slotted mast rotatably mounted on the base, a boom made of relatively telescopic sections, one of the sections being disposed through the slot and pivoted intermediate its ends to the mast for vertical movement, an elevator support operatively carried upon the extremity of the other section, means for raising or lowering the free end of the boom and holding it in its adjusted positions, and means for shifting the spout supporting section of the boom outward relative to the pivoted section thereof.

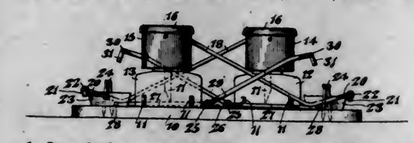
2. An elevator spout holding and adjusting device comprising a base, a mast rotatably mounted thereon, a boom having relatively telescopic sections, one of said sections being pivoted upon the mast for vertical movement, an elevator support pivotally carried upon the extremity of the other section for lateral movement in a horizontal plane, means for raising or lowering the boom and holding it is its adjusted positions, means for shifting the spout supporting section of the boom outward relative to the pivoted section thereof, and means for laterally shifting the elevator support and holding it in its laterally shifted positions.

3. Means for supporting adjustable elevator spouts comprising an adjustable mast vertically slotted for a portion of its length, a boom mounted for vertical movement within said slotted portion, means for raising or lowering the boom, a head pivoted upon the boom for lateral movement, means for lengthening or shortening the boom, and operating connections attached to the head and extending to the mast whereby the head may be laterally shifted and held in its shifted positions.

4. In an elevator spout supporting and holding device, a base, a mast rotatably mounted upon the base and being vertically slotted, means for holding the mast in rotatably adjusted positions relative to the base, a boom formed of telescopic sections, one of said sections being disposed in said slot and pivoted to the mast for vertical movement, means for raising or lowering said boom comprising a winding drum, a cable extending from the drum to the pivoted section of the boom, and means for adjusting the other section of the boom through said pivoted section comprising a winding drum, a cable mounted thereon

and having its free end operatively engaged with the mast, and a pulley on said second named section around which said cable passes.

1,227,977. COMBINED BOTTLE-HOLDER AND INK-FEEDER. EDWIN L. STOCKING, Los Angeles, Cal. Filed Mar. 29, 1916. Serial No. 87,559. (Cl. 120—72.)



1. In a device as specified, the combination with a base providing a support for two spaced apart bottles, removable caps on the bottles, of arms hinged to the base at the opposite ends thereof and extending along opposite sides of the bottle to their respectively remote bottles and connected to the caps thereof, and operating levers pivotally mounted on the base for independently actuating the arms.

2. The combination with a base providing a support, two spaced apart bottles on said support, and removable caps on the bottles, of arms hinged to the opposite ends of the base, extending along the opposite sides of the bottles and connected individually to the caps of the bottles remote from the respective hinged ends of the arms, and a lever for each bottle hinged to the base at the side of the bottle facing the hinge of the arm of that bottle, and comprising a portion extending to the side of the bottle remote from the hinge of its arm and a portion adapted to engage the arm of the bottle for lifting the cap therefrom, said levers being out of alinement with each other.

3. A device as specified comprising a base, means on the base for supporting two spaced apart bottles, a pair of levers extending longitudinally of the base and having their ends out of alinement with one another and lying at the opposite sides of the bottles, arms hinged to the opposite ends of the base and extending longitudinally at the sides thereof, and caps on the arms normally engaging over the bottles to close the same, one end of each of the levers having engagement with one of the hinged arms to raise the same and its cap when the free end of the lever is depressed.

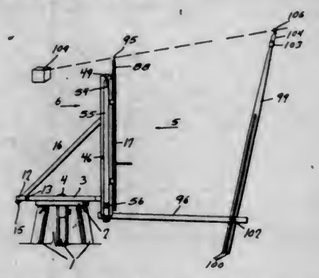
4. A device as specified comprising a base, a bottle thereon, a cap for said bottle, an arm hinged to the base at one side of the bottle, projecting toward the bottle and attached to the cap thereof, and a lever pivoted to the base at the same side of the bottle and comprising a finger piece extending to the opposite side of the bottle and closely adjacent thereto, and a portion adapted to engage the arm to lift the cap from the bottle.

5. A device as specified comprising a base, a bottle thereon, a cap for said bottle, a quill fixed to said cap, an arm pivoted to the base at one side of the bottle, projecting toward the bottle and attached to the cap thereof, a lever pivoted to the base on an axis extending transversely thereof between the axis of said arm and said bottle and comprising a portion extending around the bottle to the opposite side thereof and having a finger piece closely adjacent thereto, and a portion adapted to engage said arm for actuating the same.

[Claims 6 to 8 not printed in the Gazette.]

1,227,978. DRAFTING APPARATUS. CHRISTIAN THOMSON, Colville, Wash. Filed Apr. 28, 1915. Serial No. 24,428. (Cl. 33—20.)

1. In a view locator apparatus for draftsmen, a drawing board provided with battens projecting beyond one edge of said board, a range bar slidably engaging the board edge and resting on the projecting ends of said battens and provided with a shoulder bar engaging the bottom of said board and provided with a wire engaging stud, a tension or holding wire secured to one of said battens and extending over said stud to hold said range bar in sliding engagement with said board, and tension means mounted on the remaining batten and connected with said wire, substantially as described.



2. In a view finder or locator for draftsmen, a drawing board, a range bar slidably mounted on one edge of said board and being of rectangular cross section, and having longitudinally extending grooves at diagonally opposite corners, a carriage retaining wire looped about said grooves and extending diagonally across the ends of said bar, a carriage mounted on said bar and provided with devices engaging said wire to slidably connect said carriage with said bar, and view locating apparatus mounted on said carriage, substantially as described.

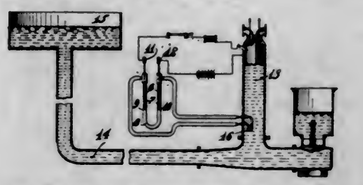
3. In a view finder or locating apparatus for draftsmen, a drawing board, a range bar slidably connected with said board and provided with a carriage retaining wire, a carriage slidable on said bar and provided with means engaging said wire to retain said carriage in position on said bar, and view locating apparatus mounted on said carriage, substantially as described.

4. In a view finding apparatus for draftsmen, a drawing board, a guide extending across said board and linearly slidable therealong, a tower support longitudinally slidable on said guide, a tower mounted on said support, a pencil guide slidable with respect to said first named guide and a cord movable along said tower and provided with an object locator and having operative connection with said pencil guide, substantially as described.

5. In a view finding apparatus for draftsmen, a drawing board, an elongated guide extending across said board and movable therealong linearly transversely with respect to the longitudinal axis of said elongated guide, a pencil guide slidable longitudinally in said elongated guide, a tower support adjustable longitudinally along said guide, a tower hinged to said support, cord sheaves mounted on said tower and at the point of hinge of the tower with said support and upon said elongated guide, a cord trained about said sheaves, a locator mounted on said cord, and means connecting said cord with said pencil guide, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

1,227,979. IGNITION CONTROL. CHARLES C. TRUMP, Syracuse, N. Y., assignor to Humphrey Gas Pump Company, a Corporation of New York. Filed Dec. 19, 1911. Serial No. 666,767. (Cl. 123—143.)



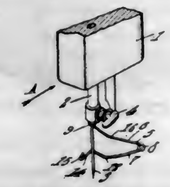
1. The method of ignition control which consists in utilizing the pressure of liquid to affect a medium against a restoring force and permitting the restoring force to become effective to react upon the medium upon change of pressure of the liquid.

2. The method of utilizing the impact of liquid for controlling an electric circuit which consists in actuating a medium by said impact, against a restoring force and permitting the restoring force to become effective to react upon the medium upon change of pressure of the liquid.

3. The method of utilizing the impact of liquid to make and break an electric circuit which consists in actuating a medium by said impact, against a restoring force and permitting the restoring force to become effective to react upon the medium upon change of pressure of the liquid.

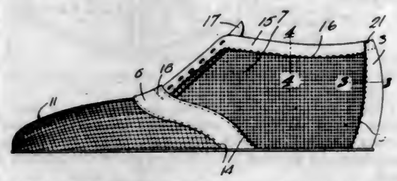


1,227,980. ATTACHMENT FOR SEWING-MACHINES. LUCIUS M. TYNES, Gloster, Miss. Filed June 19, 1915. Serial No. 35,035. (Cl. 112—13.)



An embroidery attachment fashioned from a single length of resilient wire, the same being bent upon itself to fashion a lateral loop comprising an upper arm and a lower arm, the arms being united by an integrally formed spiral spring constituting a means for aiding in compressing the lower arm, the upper arm at one extremity being twisted upon itself to form a needle receiving eye, the constituent material of the eye being extended to form an extension disposed at an acute angle to the upper arm and embodying a rearwardly extended terminal adapted to be engaged over the screw of a needle bar, the upper arm being bent upon itself to form a forwardly presented elbow, and the lower arm being bent upon itself to fashion a forwardly presented elbow, the angle in the elbow of the lower arm being more acute than the angle in the elbow of the upper arm, and the angle in the elbow of the upper arm lying to the rear of the angle in the elbow of the lower arm, the elbow in the lower arm lying in a plane which is inclined upwardly and forwardly at an angle to the axis of the eye, the extremity of the lower arm being formed into a free-ended forwardly prolonged projection bent forwardly and upwardly and is located approximately in a common plane with the elbow of the lower arm, the projection having a free forward end which is bent upwardly and backwardly to form a work-guiding eye.

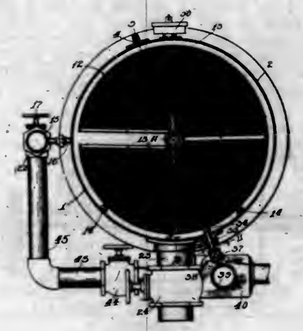
1,227,981. FISH-CORD SHOE. LUCIUS M. TYNES, Fort Worth, Tex. Filed Dec. 30, 1916. Serial No. 139,827. (Cl. 36—3.)



1. A shoe the upper of which embodies a woven, meshwork portion made up of water-proof, crossed, braided threads of rectangular cross section.

2. A shoe the upper of which embodies a woven, meshwork portion made up of crossed, braided threads, of rectangular cross section.

1,227,982. NON-CAKING FILTER-PRESS. HENRY A. VALLEZ, Bay City, Mich. Filed Feb. 24, 1914. Serial No. 820,526. (Cl 210—13.)



1. In a device of the class described a casing, an axial member therein, a plurality of filtering elements slotted to engage upon said member, agitating means movable between each of said filtering elements to stir the contents of the press and clean the surface of said elements, and means maintaining said filter elements stationary during the movement of said agitating means.

2. In a filter press a plurality of stationary slotted filter elements, the slots permitting independent insertion and removal of any one of said elements into and from said filter press, and a plurality of rotatable agitating arms movable therebetween to stir the contents of the press and clean the surface of said filtering elements.

3. In a device of the class described a casing comprising hinged sections, a drive shaft extending co-axially through said casing, supporting means on the side walls of said casing, a plurality of filter elements resting on said supporting means and constructed for engagement with said drive shaft for support thereby to permit removal of any one of said filter elements independently of the others when said hinged casing is opened, agitating arms secured on said drive shaft sweeping between adjacent filter elements to clean the same and stir the contents of the casing, and means drawing off the filtrate from each of said filter elements.

4. In a device of the class described a casing, a plurality of stationary filtering elements therein, each having a radial opening therethrough to permit independent removal of each from said casing, agitating arms moving over the surface thereof to prevent the formation of a cake thereon, and an individual eduction pipe for each of said filtering elements.

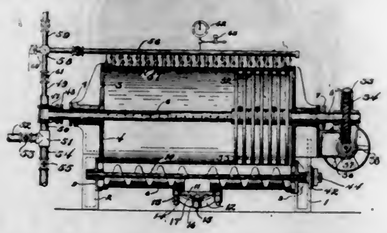
5. In a device of the class described a casing, means on the inner walls thereof forming supports thereon, filter elements within said casing supported on said means, a centrally disposed shaft within said casing and journaled to rotate therein, each of said filtering elements constructed to engage over said shaft, and cleaning and agitating mechanisms mounted on said shaft adapted to rotate between adjacent filtering elements.

[Claims 6 to 11 not printed in the Gazette.]

1,227,983. FILTER-PRESS. HENRY A. VALLEZ, Bay City, Mich. Filed Mar. 6, 1915. Serial No. 12,567. (Cl. 210—14.)

1. In a device for filtering cake-forming liquids, the combination of a casing, a plurality of filtering elements revolubly mounted therein and spaced apart, a cleaning bar connecting the peripheries of said filtering elements and disposed to travel in close proximity to the interior of said casing, a discharge chamber located beneath said casing and having a discharge opening, a conveyer in

said chamber adapted to deliver material to said opening, a plurality of jet-nozzles located near the top of said casing, each nozzle adapted to project a jet of washing liquid against the periphery of a cake at its place of attachment to the face of a filtering element, a pivotally mounted finger in said casing, one end of said finger adapted to engage the surface of the accumulating cake, a cake-thickness indicating device located outside the casing, and means operatively connecting said finger and indicating device, for the purposes set forth.



2. In a device for filtering cake-forming liquids, the combination of a casing, a plurality of filtering elements revolubly mounted therein and spaced apart, means for removing the accumulated cake from said elements, said means comprising a cleaning bar secured to and connecting the peripheries of said filtering elements and disposed to travel in close proximity to the interior of said casing to progressively sweep the casing free of accumulated cake.

3. In a device for filtering cake-forming liquids, the combination of a casing, a plurality of filtering elements revolubly mounted therein and spaced apart, a plurality of cleaning bars secured to and connecting the peripheries of said filtering elements and disposed to revolve with them in close proximity to the interior of said casing, a discharge chamber located beneath said casing and in the path of travel of said bar, said discharge chamber having a discharge opening intermediate its ends, a right- and left-hand conveyer in said chamber adapted to deliver material from said scraping bars to said opening, and means for simultaneously actuating said conveyers.

4. In a device for filtering cake-forming liquids, the combination of a casing, a plurality of filtering elements revolubly mounted therein and spaced apart, a discharge chamber located beneath said casing, a plurality of cleaning bars connecting the peripheries of said filtering elements and disposed to travel in close proximity to the interior of said casing, and a plurality of jet-nozzles located near the top of said casing, each of said nozzles adapted to project a jet of liquid against the periphery of a cake at its place of attachment to the face of one of said filtering elements.

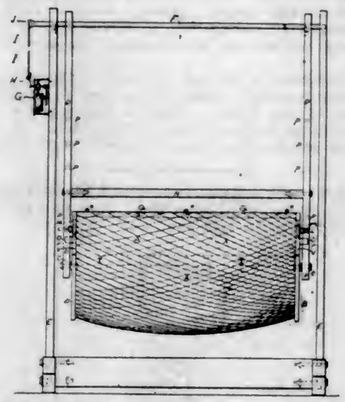
5. In a device for filtering cake-forming liquids, the combination of a casing, a plurality of filtering elements revolubly mounted therein and spaced apart, means for separating the accumulated cake from said elements, said means comprising a plurality of jet nozzles located near the top of said casing, each of said nozzles adapted to project a jet of liquid against the periphery of a cake at its place of attachment to the face of one of said filtering elements, and means for revolving said filtering elements in the path of said jets.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,984. CRADLE AND MEANS FOR ROCKING THE SAME. SHELDON D. VANDERBURGH, Hastings-upon-Hudson, N. Y. Filed Feb. 4, 1909. Serial No. 476,000. (Cl. 5—57.)

1. A rocking cradle including a supporting frame having swinging rods suspended therefrom, and spaced apart from each other, plates pivotally supported at their centers respectively on said swinging rods at the lower free ends thereof, and a hammock body supported by and between said plates, said plates having hinged peripheral sections to which portions of the ends of the hammock body are connected.

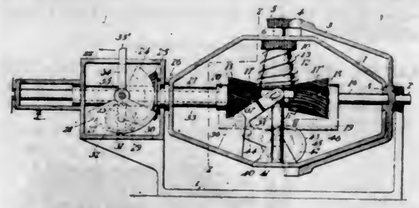


2. A rocking cradle including a supporting frame having swinging rods suspended thereform, and spaced apart from each other, plates pivotally supported upon and at the free ends of said rods and having hinged peripheral sections; rods connecting the free ends of the hinged sections of the one plate with the corresponding free ends of the sections of the other plate, and a hammock body secured at its ends to said plates and having portions thereof secured to said hinged sections, said hammock body being connected at its edges to said rods.

3. A rocking cradle including a supporting frame, swinging rods suspended therefrom spaced apart from each other, plates pivotally supported at their centers at the lower ends of said swinging rods to rock thereon, a hammock body suspended at its ends upon said plates, and stops to limit the extent of swinging movement of said plates upon said rods.

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1,227,985. VARIABLE-SPEED GEARING. PHILIP A. WEIGEL, Riverton, N. J., assignor, by mesne assignments, to Auto Transmission Company, a Corporation of Delaware. Filed June 8, 1914, Serial No. 843,597. Renewed Jan. 18, 1917. Serial No. 143,198. (Cl. 74—41.)



1. In a variable speed gearing, a cone driving gear, a helical flange thereon, a cone driven gear, curved teeth thereon adapted to mesh with said helical flange, and mechanism for shifting said gears to secure a variation of speed.

2. In a variable speed gearing, a support, a driving shaft journaled therein, a bell-shaped member on said driving shaft, variable speed driving gears actuated by said bell-shaped member, driven gears adapted to mesh with said driving gears, and mechanism for simultaneously shifting said gears.



3. In a variable speed gearing, a support, a frame rotatably mounted in said support, a driving shaft journaled in said support, variable speed driving gears journaled in said frame, driven gears adapted to mesh with said driving gears, gearing between said driving shaft and said driving gears, and mechanism for simultaneously shifting said driving and driven gears and rotating said frame.

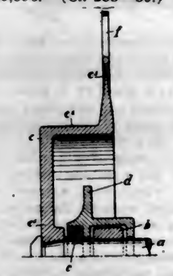
4. In a variable speed gearing, a suitable support, a frame rotatably mounted in said support, driving gears journaled in said frame, driven gears adapted to mesh with said driving gears, means for shifting said driven gears, and mechanism operated by said shifting means for changing the position of said driving gears.

5. In a variable speed gearing, a support, a bell-shaped driving gear journaled in said support, a frame journaled in said support and said bell-shaped member, variable speed gearing journaled in said frame, gearing between said bell-shaped gear and said variable speed gearing, and mechanism for shifting said variable speed gearing.

[Claims 6 to 10 not printed in the Gazette.]

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1,227,986. TURBINE-WHEEL. OSKAR ANTON WIBERG, Finspong, Sweden, assignor, by mesne assignments, to Aktiebolaget Ljungströms Ångturbin, Stockholm, Sweden, a Corporation of Sweden. Filed Apr. 3, 1917. Serial No. 159,596. (Cl. 253—39.)



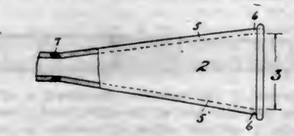
1. In a turbine, the combination of a shaft, a bearing therefor, and a rotor for driving the shaft comprising an inner portion which is mounted on the end of the shaft that overhangs the bearing, an outer portion that surrounds the shaft and is axially displaced from the first on the side adjacent the bearing, a member which unites said portions, and blades mounted on the outer portion for driving it and the shaft.

4. In a turbine rotor, the combination of a shaft, a disk mounted thereon, a self supporting ring located wholly at one side of the disk, radial blades mounted on the periphery of the ring, an annular member having ends that are circular in cross-section and are seated in corresponding grooves in both disk and ring, said member serving to hold the ring concentric with the shaft, transmit the torque exerted by the blades to the shaft, and prevent the transmission of strains due to centrifugal force, and means for locking the member to the ring and disk to prevent relative angular movement.

[Claims 2 and 3 not printed in the Gazette.]

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1,227,987. SHOT-SPREADING DEVICE FOR GUN-MUZZLES. JAMES E. WRIGHT, Bay City, Mich. Filed Aug. 30, 1916. Serial No. 117,649. (Cl. 42—79.)



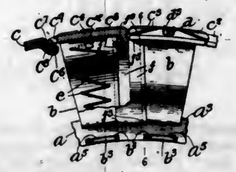
1. A gun barrel comprising a tube formed with a bore, the muzzle end of said tube being flatted to form a muzzle opening, the horizontal width of which is greater than its height, the height being sufficient to permit the passage of a single projectile, for the purposes set forth.

2. A gun barrel comprising a tube formed with a bore, the muzzle end of said tube being flatted to form a muzzle opening, the cross sectional area of which is slightly less than the cross sectional area of the bore, the horizontal width of said opening being greater than its height, the height being sufficient to permit the passage of a single projectile, for the purposes set forth.

3. A gun barrel comprising a tube formed with a bore, the discharge end of said tube being flatted to form a spreading muzzle, said muzzle formed with outwardly flaring sides, intermediate its ends, and parallel sides near its extremity.

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1,227,988. WHEEL RIM AND TIRE. RICHARD WUNNING, New York, N. Y. Filed Feb. 12, 1916. Serial No. 77,976. (Cl. 152—8.)



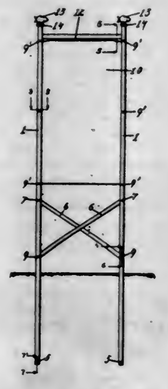
1. In a wheel rim and tire construction, a rim, transversely arranged spring loop or bow members open at their inner sides and connected with said rim and between which are radial open spaces, a flexible tread member mounted on said spring or bow members and inclosing the same, and curved supplemental flat spring members detachably mounted on the outer sides of the spring loop or bow members and inclosing said spaces and detachably connected with the rim and with the outer parts of the spring loop or bow members adjacent to the tread member and having tongues which project under the opposite edge portions of the tread member.

2. In a wheel rim and tire construction, a rim, a flexible tread member, spring loop or bow members connected with said rim and on which said tread member is mounted and between which are radial open spaces, said parts being detachably connected, said tread member being composed of separate blocks, the ends of which are provided with central interlocking hook members whereby they are detachably connected, and curved supplemental spring members of less width than said spring loop or bow members and adapted to inclose said spaces and being detachably connected with said rim, the separate parts of said tread member and the outer parts of said spring loop or bow members.

3. In a wheel rim and tire construction, a rim, a flexible tread member, and spring loop or bow members connected with said rim and on which said tread member is mounted and between which are radial open spaces, said parts being detachably connected and said tread member being composed of separate blocks which are rectangular in form and are provided centrally of one end thereof with transverse apertures, the ends of said blocks being provided with central interlocking devices and the corner portions of said blocks being also provided with supplemental interlocking devices.

4. In a wheel rim and tire construction, a rim, transversely arranged spring loop or bow members open at their inner ends and detachably connected with said rim and between which are radial open spaces, a flexible tread member composed of separate blocks which are rectangular in form and the ends of which are provided with central interlocking hook members whereby they are detachably connected, and supplemental spring loop or bow members detachably connected with said rim, the separate parts of said tread member and the outer parts of said spring loop or bow members and adapted to inclose said spaces.

1,227,989. SIGN-BOARD. MANLY E. AXTELL, Vicksburg, Mich. Filed Oct. 26, 1915. Serial No. 57,923. (Cl. 40—125.)



1. In a signboard, the combination of a pair of standards, each consisting of a pair of standard members having parallel upper portions and diverging leg portions, said leg portions being connected by cross pieces at their lower ends, said parallel portions being connected by bolts disposed therethrough, leg braces formed of bars folded into loops with the arms of the loops converging, said braces being disposed one through the other in a crossed relation and secured between the diverging leg portions of the standard, the upper end of each brace being pivotally secured so that they may be collapsed between the said leg portions of the standard to which their upper ends are connected when their lower ends are disconnected from the other standard, and a panel supported between parallel portions of said standard.

2. In a signboard, the combination of a pair of standards, each consisting of a pair of standard members having parallel upper portions and diverging leg portions, said leg portions being connected by cross-pieces at their lower ends, said parallel portions being connected by bolts disposed therethrough, leg braces formed of bars folded into loops with the arms of the loops converging, said braces being disposed one through the other in a crossed relation with their ends secured between the diverging leg portions of the standard members, the bight ends of said braces constituting cross pieces for the standards to which they are secured.

3. In a signboard, the combination of a pair of standards, each consisting of a pair of facing channel irons having parallel upper portions and diverging leg portions, said parallel portions being connected by bolts disposed therethrough, and a panel having flanged vertical edges adapted to be introduced into said standards by sliding longitudinally from the upper ends thereof, the connecting bolts for the parallel portions of said standard members at the lower ends of the panel being disposed under said panel and constituting rests therefor, the other bolts being disposed at the edges of the panel and constituting means for clamping the standard members upon said panel.

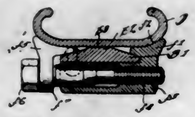
4. In a signboard, the combination of a pair of standards, each consisting of a pair of facing channel irons having parallel portions connected by bolts disposed therethrough, a panel having flanged vertical edges adapted to be introduced into said standards by sliding longitudinally from the upper ends thereof, the connecting bolts for the parallel portions of said standard members at the lower ends of the panel being disposed under said panel and constituting rests therefor, the other bolts being disposed at the edges of the panels and constituting means for clamping the standard members upon said panel, a top bar disposed above said panel with its ends clamped between said standard members.

5. In a signboard, the combination of a pair of standards, each consisting of a pair of standard members having parallel portions connected by bolts disposed therethrough, a panel arranged with its vertical edges between said standard members, the connecting bolts for the parallel portions of said standard members at the lower ends of the panel being disposed under said panel and constituting rests therefor, the other bolts being disposed at the edges of the panels and constituting means for clamping the upright members upon said panel, and a top bar disposed above said panel with its ends clamped between said standard members.

[Claim 6 not printed in the Gazette.]

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1,227,990. DEMOUNTABLE-RIM WHEEL. ERLE K. BAKER, Chicago, Ill., assignor to Universal Rim Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 31, 1912. Serial No. 739,459. (Cl. 152—21.)



1. A vehicle wheel comprising a wheel in combination with a plurality of pairs of opposed rim wedging clamps spaced around the wheel periphery and adapted to force the rim outwardly at a plurality of points, and a rim support carried by the wheel and extending circumferentially, intermediate of said pairs of clamps, to prevent excessive distortion of a rim upon the wheel.

2. A vehicle wheel comprising a wheel in combination with a plurality of rim retaining devices carried by and spaced around the wheel, each thereof comprising two complementary opposed wedging clamps and a coöperating bolt, rim supporting means arranged between the rim and the wheel and intermediate of said clamps and adapted to prevent excessive distortion of a rim by the clamps.

3. A vehicle wheel comprising a wheel in combination with a plurality of opposed wedging rim clamps carried by and spaced around the wheel, a centrally disposed circumferential rib or ridge on the wheel of slightly less circumference than the inner circumference of the rim, and adapted to support a rim intermediate of the clamps.

4. A vehicle wheel comprising a wheel proper having a fixed rim and a complementary demountable rim, said fixed rim being provided with a centrally disposed circumferential rib or ridge slightly smaller in diameter than the internal diameter of the rim, a plurality of wedging rim engaging devices spaced around the fixed rim and adapted to secure the demountable rim thereon, said rib serving to prevent the collapse of the demountable rim at points circumferentially between said wedging devices.

5. In a metallic vehicle wheel a sheet metal fixed rim substantially L-shaped in cross-section and provided on its outer periphery with a centrally disposed circumferential rib forming a rim seat.

[Claims 6 and 7 not printed in the Gazette.]

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1,227,991. CAMERA-SHUTTER-OPERATING DEVICE. MORRISSON J. BARNETT, Los Angeles, Cal., assignor to Eber Beaulieu, Alderpoint, Cal. Filed Mar. 18, 1916. Serial No. 85,098. (Cl. 161—26.)



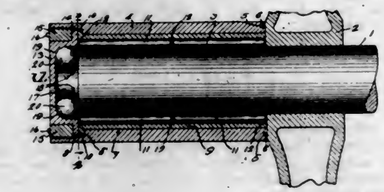
1. In a device of the character described, a cylinder closed at one end and open at the other, said closed end having therein a circular series of recesses, a traveler traveling in said cylinder, means carried by the inner end of the traveler for forming a movable air-tight partition across the cylinder, a spring acting to move the traveler toward the closed end of the cylinder, means for securing an actuating device to the other end of the traveler, the closed end of the cylinder having a vent hole therethrough, a needle valve screwed into said closed end and controlling said vent hole, and a spring arm secured to the outer end of said needle valve, and having means for engaging any one of said recesses.

2. In a device of the character described, a cylinder closed at one end and open at the other, a tubular traveler traveling in said cylinder, means carried by the inner end of the traveler for forming a movable air-tight partition across the cylinder, a spring acting to move the traveler across the closed end of the cylinder, said closed end having a vent hole therethrough, a needle valve screwed into said closed end and controlling said vent hole, the outer terminal portion of the tubular traveler having a contracted portion, and the sides of said tubular traveler, outside or beyond said contracted portion, being slotted, and a locking ring transversely movable in said slots and having a contracted portion for locking in said traveler the head of a release rod casing.



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1,227,992. JOURNAL-BEARING. GEORGE FRED BLUME, Richmond, Ind. Filed Jan. 16, 1917. Serial No. 142,723. (Cl. 64—49.)



1. A bearing embodying a journal box, a journal projecting into it, a ring engaged removably within the journal box, a ball cup fitted within and held by said ring and having a portion bearing against the inner portion of the ring to hold the cup in place, and anti-frictional balls between said journal and the interior of the cup.

3. A bearing embodying a journal box, a journal projecting into it and having a reduced end providing a shoulder, a ball cup within the journal box having an outturned flange of non-circular outline fitted within the journal box to prevent rotation of said cup therein, anti-frictional balls between said shoulder and cup around said reduced end, and a ring surrounding said cup, bearing against the flange thereof and engaged removably within the journal box.

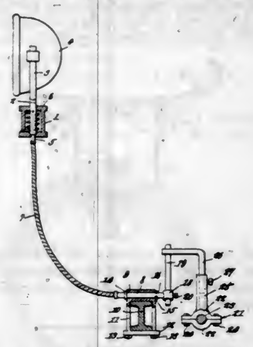
[Claim 2 not printed in the Gazette.]

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1,227,993. LAMP-TURNING DEVICE. WALTER A. BRAINARD and HANS M. MORTENSEN, Audubon, Iowa. Filed Dec. 23, 1916. Serial No. 138,610. (Cl. 240—62.)

1. A lamp turning device embodying a bearing, means for securing it upon the front axle of an automobile, a shaft journaled through said bearing, a lamp bracket connected to said shaft to be turned thereby, said shaft having a transverse sleeve, an arm adjustable in said sleeve, means for holding said arm in various adjustments in said sleeve, an angular member having one arm engageable with the aforesaid arm, and means for adjustably connecting the other arm of said angular member with the steering rod of the automobile steering gear.

3. In a lamp turning device, an oscillatory lamp bracket, a bearing attachable to the front axle of an automobile, a shaft journaled in said bearing, a flexible connection between said shaft and bracket, an arm carried by said shaft, a clamp to embrace the steering rod of the automobile steering gear, said clamp having a tubular socket, an angular member having one arm slidably and rotatably adjustable in said socket and having its other arm adapted to contact with the first mentioned arm, and means for

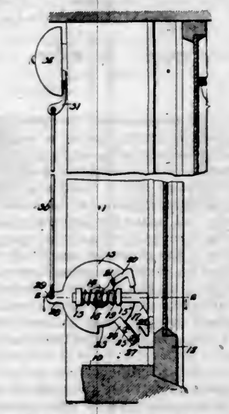


holding the first mentioned arm of said angular member in various adjusted positions in said socket.

[Claim 2 not printed in the Gazette.]

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1,227,994. BURGLAR-ALARM AND LATCH. LOUIS J. BRUNE, Algiers, La. Filed Nov. 6, 1916. Serial No. 129,778. (Cl. 116—44.)



1. In a window catch and alarm, the combination with a window frame and a sash slidable therein, of a catch member carried by the sash, a plate rotatably mounted on the frame, a lever slidably carried by the plate and having a lateral lug to engage the catch member, said lever being connected to an alarm, and a hook carried by the plate to retain the lever, at times, from engagement with the catch.

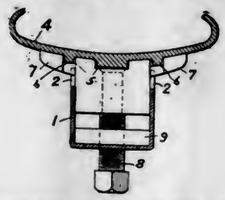
[Claims 2 and 3 not printed in the Gazette.]

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1,227,995. WHEEL. CHARLES EDWARD CAMERON, Collingswood, N. J., assignor of one-half to William L. Hurley, Camden, N. J. Filed May 16, 1916. Serial No. 97,845. (Cl. 152—21.)

1. In a wheel the combination of a fixed rim consisting of a channel section provided in its flanges with alined notches, demountable rim-saddles each provided with ears arranged in one pair of said alined notches and each having its body portion arranged between the flanges, and screws each interposed between the fixed rim and one of the saddles.

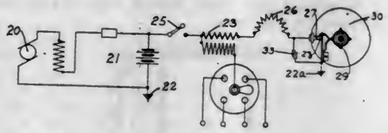
2. In a wheel the combination of a fixed rim consisting of a channel section provided in its flanges with alined notches, demountable rim-saddles each provided with ears arranged in one pair of said alined notches and each having its body portion arranged between the flanges, and



screws each interposed between the fixed rim and one of the saddles, and the confronting surfaces of the saddles and demountable rim being ribbed and grooved for mutual engagement.

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1,227,996. IGNITION SYSTEM. WILLIAM A. CHRYST, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Company, a Corporation of Ohio. Original application filed Aug. 4, 1913, Serial No. 782,886. Divided and this application filed Aug. 14, 1915. Serial No. 45,602. (Cl. 123—148.)



1. In a device of the character described, the combination with an electric circuit, having a source of supply; a current interrupter located in said circuit; a casing for said current interrupter; a terminal post adapted to be secured to said casing; and a resistance unit secured in position by said terminal post and electrically connected with the circuit; and means for insulating said resistance element from the terminal post and the casing.

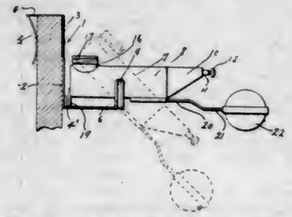
2. In a device of the character described, the combination with an electric circuit including a source of current and a current interrupter interposed therein; a casing for said current interrupter; a support connected to but insulated from said casing; a terminal post connected with said support; a disk of insulating material having a grooved periphery secured in position by said terminal post; a resistance unit mounted in the peripheral groove of said disk; contact plates secured to the opposite faces of said disk, each of said contact plates being connected to the opposite ends of said resistance and both of said contact plates being in series with the electric circuit.

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1,227,997. ANTISEPTIC-DISPENSER. HARLON ASHLEY CLIFFORD, Greenfeld, Mass., assignor of one-half to James W. Cobb, Greenfield, Mass. Filed Mar. 23, 1917. Serial No. 156,963. (Cl. 4—30.)

1. A device of the character described, embodying a reservoir having discharge means at one end for the discharge of a small quantity of the contents when the reservoir is tilted, means for supporting said reservoir for tilting movement within a flushing tank, and a float connected to the reservoir for raising the discharge end thereof to non-discharging position when the tank is filled.

2. A device of the character described, embodying a normally horizontal reservoir having discharge means at one end for the discharge of a small quantity of the contents when the reservoir is tilted, means for supporting the reservoir for tilting movement within a flushing tank, an arm connected to the reservoir and projecting beyond said end thereof, and a float connected to said arm for raising the discharge end of the reservoir to non-discharging position when the tank is filled.



4. A device of the character described, embodying an extensible hanger having a hook at its upper end to engage over one wall of a flushing tank and having an inwardly projecting bracket at its lower end, a reservoir pivotally connected with said bracket and having discharge means at one end, and a float connected to the reservoir for raising said end thereof when the tank is filled.

[Claims 3 and 5 not printed in the Gazette.]

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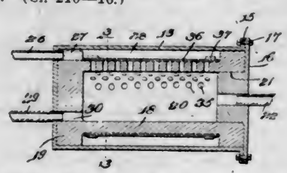
1,227,998. BELT-BUCKLE. DAVID M. COHN, Evansville, Ind. Filed May 29, 1916. Serial No. 100,545. (Cl. 24—79.)



A belt buckle having a front plate designed to overlie the adjustable belt end, a cam loop hinged to said front plate adapted for attachment to the fixed belt end and for clamping the adjustable belt end, and a fixed hook carried by the cam loop.

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1,227,999. GASOLENE-FILTER. ADOLPHUS DAMERON, Washington, D. C. Filed Mar. 29, 1916. Serial No. 87,545. (Cl. 210—16.)



1. A gasolene filter including a cylinder, a removable cylinder head closing one end of the cylinder and formed with an inwardly projecting boss, a filter proper fitting snugly within the cylinder and formed with an axial chamber opening through one end and normally closed by the boss, the filter proper being peripherally channeled exteriorly to provide an annular chamber between it and the cylinder and having its upper portion formed with openings establishing communication between the axial chamber and annular chamber, chamois skin extending across the openings, means for supplying gasolene to the axial chamber, means for conducting water from the axial chamber, and means for conducting gasolene from the annular chamber.

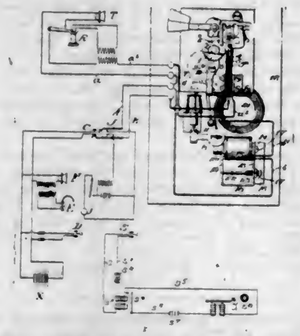
2. A gasolene filter including a cylinder closed at one end, a cylinder head closing the other end, a filter proper fitting snugly within the cylinder and peripherally channeled intermediate its length to provide with the cylinder an annular chamber, the filter proper being formed with an interior chamber and with openings establishing communication between the interior and annular chambers, a covering of porous material about the filter proper and across the openings, means for supplying gasolene through the removable cylinder head to the interior chamber, and means for independently drawing liquid from the interior chamber and annular chamber.

3. A gasolene filter including a cylinder, a removable cylinder head closing one end of the cylinder and formed with an inwardly projecting boss, a filter proper fitting snugly within the cylinder and formed with an axial chamber opening through one end and normally closed by the boss, the filter proper being peripherally channeled exteriorly to provide with the cylinder an annular chamber and having its upper portion formed with openings establishing communication between the chambers, one end of the filter proper being formed with passages communicating with the axial and annular chambers, chamois skin extending across the openings, means for supplying liquid to the axial chamber, and pipes extending into the cylinder and into the passages whereby liquid may be withdrawn independently from the axial and annular chambers and whereby the filter proper can be disposed within the cylinder only in one position which in proper position of the cylinder will bring the openings of the filter proper uppermost.



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1,228,000. TONE-PRODUCER FOR FIRE-ALARM-BOX MECHANISMS. DAVID G. DEE, Rochester, N. Y., assignor, by mesne assignments, to Rochester H. Rogers, Rochester, N. Y. Filed Apr. 23, 1914. Serial No. 833,857. (Cl. 177—377.)



1. In a tone producer the combination with an electromagnet, of a support therefor, an armature carried by said support, means for flexing said armature to bring it into operative position relatively to said magnet, said means also serving to hold the armature in its adjusted position, and automatic means for vibrating the armature.

2. In a tone producer the combination with a support, of an electromagnet mounted thereon and an armature also fixed to said support and having a normal tendency to move in a direction toward said magnet, means for adjusting it away from said magnet, and means for imparting periodic vibratory action to the armature.

3. In a tone producer, the combination with a member having a supporting portion and an armature positioned opposite thereto and a member operating against said support and said armature to separate them and impart a tension to the armature, of an electromagnet mounted between the support and armature and means for vibrating the latter.

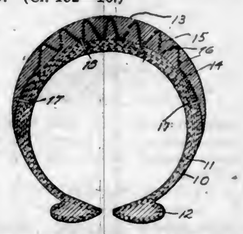
4. In a tone producer, the combination with a U-shaped metallic member comprising a supporting portion having an attaching flange at one edge and an end forming an armature, of an electromagnet mounted on the supporting portion, said armature end being initially bent toward the supporting portion and occupying a position in proximity thereto less than the length of the magnet, means for forcing the armature outwardly a distance greater than the length of said magnet and holding it in this position and means for vibrating the armature.

5. In a tone producer the combination with an electromagnet, of a support therefor, an armature carried by and forming an integral part of said support, means for flexing said armature to bring it into operative position relative to said magnet, and mechanical means for automatically vibrating said armature.

[Claims 6 to 10 not printed in the Gazette.]

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1,228,001. TIRE CASING OR SHOE. DEMETRIOS J. DEMAS, Pittsburgh, Pa. Filed July 13, 1916. Serial No. 109,099. (Cl. 152—16.)



A tire casing containing rubber; and an internal metallic armor plate embedded therein, said plate having its tread portion bent into corrugations which extend in the plane of rotation of the casing, the corrugations being apertured for the passage of the rubber and having their crests extending to the tread surface of the casing to form longitudinally extending gripping portions to contact with the road-bed.

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1,288,002. HEAD-COVERING. PATRICK N. DOLAN, West Philadelphia, Pa. Filed Apr. 22, 1916. Serial No. 92,885. (Cl. 2—114.)



1. A head-covering comprising a crown and a rim and having an opening in the side of the crown immediately above the rim, the inner edge of the rim at the opening being offset from the contour line of the side of the crown, a sweat-band secured to the lower edge of the side of the crown and to the offset edge of the rim, and a supporting-piece for an exterior band spanning said opening and having its lower edge offset from the contour line of the side of the crown.

5. A head-covering comprising a crown and a rim and having openings at intervals in the side of the crown immediately above the rim, tongues between the openings joining the crown and rim, the inner edge of the rim at the openings being offset from the contour line of the side of the crown, a sweat-band secured to the lower edge of the side of the crown between the openings and to the offset edges of the rim, and a supporting-strip for an exterior band extending around the side of the crown above the rim and over said openings and having its lower edge offset from the contour line of the side of the crown at said openings.

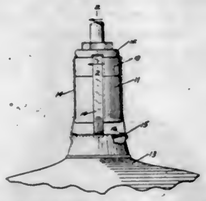
[Claims 2 to 4 not printed in the Gazette.]

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1,228,003. REFLECTOR-HOLDER. HENRY D'OLIER, Jr., Bridgeport, Conn. Filed Mar. 28, 1916. Serial No. 87,159. (Cl. 240—115.)

7. The combination with lamp socket structure comprising two parts detachable from each other, of a plurality of holder arms supported at their ends upon one of said lamp socket parts and lying against the same and engaging within a reflector member at their other ends, and means for locking said arms in engaging position comprising the second lamp socket member disposed within said arms and preventing their movement inwardly.

17. The combination with a cap, of a member supported thereon, a flange on said cap extending toward said member, said flange having a plurality of recesses, holder arms extending longitudinally of said member beyond the same and adapted to engage within a reflector member,

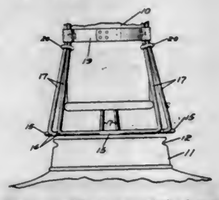


said arms having inwardly and then longitudinally extending portions adapted to be inserted through said recesses, and means disposed within said arms locking them in engaging position.

[Claims 1 to 6 and 8 to 16 not printed in the Gazette.]

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1,228,004. REFLECTOR-HOLDER. HENRY D'OLIER, Jr., Bridgeport, Conn. Filed Mar. 28, 1916. Serial No. 87,160. (Cl. 240—115.)

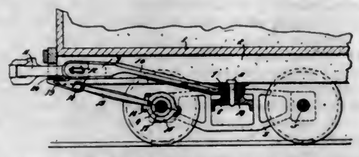


8. The combination with a porcelain lamp socket member, of a metallic cap to which said member is secured, a reflector member, a holder for supporting said reflector member with respect to said lamp socket member comprising a plurality of separate and independent resilient members each comprising an arcuate portion, upwardly extending arms extending inwardly above said lamp socket member and held by said cap, and members engaging and movable longitudinally of said arms of neighboring resilient members for causing said arcuate portions to engage said reflector member.

[Claims 1 to 7 not printed in the Gazette.]

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1,228,005. EMERGENCY DRAFT-GEAR. IRA S. DOWNING, Indianapolis, Ind. Filed Mar. 7, 1917. Serial No. 153,068. (Cl. 213—42.)



1. In combination, an emergency draft gear, comprising a coupler holding member adapted to occupy the space between the draft sills of a car, an extension secured at its rear end upon the car truck, and a strut between the end axle of the truck and the said member.

2. In combination, an emergency draft gear, comprising a coupler holding member adapted to occupy the space between the draft sills of a car, an extension secured at its rear end at the connection between the car truck and body of the car, and a strut between the end axle of the truck and the said member.

3. In combination, an emergency draft gear, comprising a yoke adapted to occupy the space between the draft sills of a car, an extension with its rear end encircling the truck pin, and a support between the yoke and the front axle of the truck.

[Claims 4 to 6 not printed in the Gazette.]

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1,228,006. PROCESS FOR INCREASING THE YIELD OF SUGAR-CANE. CHARLES FRANKLIN ECKART, Olaa, Hawaii. Filed May 13, 1916. Serial No. 97,292. (Cl. 47—36.)

1. The process of stimulating the tillering or suckering of sugar-cane plants, which consists in removing, above the uppermost immature node or terminal growing point of the stem, a portion of the leafy top of each stalk to produce a sudden check in the growth of the plants and to allow an increased amount of light to reach the base of the stalk.

2. The process of stimulating the tillering or suckering of sugar-cane plants which consists in removing, above the uppermost immature node or terminal growing point of the stem, the apical portion of the leafy top of each stalk, and then depositing the portion of the leafy top, thus removed, near the base of the plant for the purpose of forming a weed-covering layer.

3. The process of stimulating the tillering or suckering of sugar-cane plants, in rows, which consists in cleaning out or weeding the cane rows, applying a fertilizing material to the cane rows, removing, above the uppermost immature node or terminal growing point of the stem, a portion of the leafy top of each stalk, and depositing the leafy material, thus removed, as a weed preventive layer between the cane rows, substantially as described.

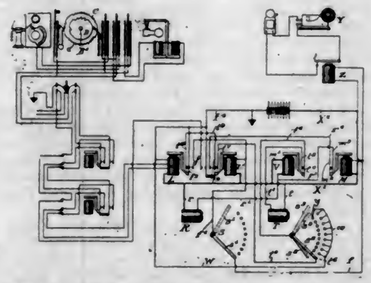
4. The process of increasing the total yield of sugar-cane and the like in bi-annual or tri-annual crops, which consists in temporarily checking the primary apical growth of the first season stalks, and simultaneously increasing the amount of light supplied to the second season shoots.

5. The process of increasing the total yield of sugar-cane in bi-annual or tri-annual crops, which consists in removing the weeds and the dead leaves from the plant rows, applying a fertilizing material to said rows, temporarily checking the primary apical growth of the first season stalks, and increasing the amount of light supplied to the second season shoots.

[Claims 6 to 14 not printed in the Gazette.]

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1,228,007. CONNECTOR REPEATER-SWITCH OF AUTOMATIC TELEPHONE-EXCHANGES FOR HANDLING FIRE-ALARM CALLS. JOHN ERICKSON, Chicago, Ill., assignor, by mesne assignments, to Rochester H. Rogers, Rochester, N. Y. Filed Feb. 25, 1914, Serial No. 821,097. Renewed Apr. 24, 1916. Serial No. 93,306. (Cl. 179—5.)



1. The combination with an automatic telephone exchange system comprising a subscriber's circuit provided with a manual impulse transmitter adapted to despatch impulses limited to a given maximum number, and automatic switches controlled by said impulses, of an alarm impulse transmitting mechanism associated with said



subscriber's circuit adapted to transmit current impulses of a number greater than the maximum number which may be despatched by the manual transmitter, a connector switch comprising coöperating wipers and contacts and means for driving the wipers in accordance with the current impulses when actuated by a number of impulses less than the total transmitted by the alarm transmitter, and an alarm trunk leading from the contacts of the switch upon which the wipers rest after being advanced.

2. In an automatic alarm apparatus for an automatic telephone exchange system, the combination with subscriber's lines equipped with manual impulse transmitters capable of despatching impulses of a given maximum number and automatic switches for connecting said lines and an alarm impulse transmitting mechanism capable of despatching impulses of a greater total number than said manual mechanism, of a connector switch adapted to be actuated by said impulses, comprising coöperating wipers and contacts, means for advancing the wipers, and devices for restoring them to normal upon cessation of the transmission of current impulses less in number than the total number of those despatched by the alarm transmitter and an alarm trunk circuit leading from the terminals of said switch upon which the wipers rest at the limit of their movement.

3. In an automatic alarm apparatus for an automatic telephone exchange system, the combination with subscriber's lines equipped with manually operated impulse transmitters capable of transmitting a maximum number of ten current impulses and an alarm impulse transmitter adapted to despatch eleven such impulses, of automatic switches for connecting the subscriber's lines comprising a connector switch having coöperating wipers and contacts and a release mechanism adapted to be automatically actuated upon the arresting of the wipers in any of the first ten positions and an alarm circuit leading from the contacts engaged by the wipers in their eleventh position of movement having alarm apparatus thereon.

4. In an automatic alarm apparatus for an automatic telephone exchange system, the combination with subscriber's lines equipped with manually operated impulse transmitters capable of transmitting a maximum number of ten current impulses, an automatic alarm impulse transmitter adapted to despatch a greater number of such impulses, and an alarm circuit provided with alarm apparatus, of an automatic switch mechanism having coöperating wipers and contacts and rotary driving devices actuating the wipers one step for each impulse transmitted by either of the transmitting mechanisms and also provided with release devices for restoring the wipers to their normal position, said release devices being adapted to be automatically operated upon the cessation of impulses which leave the wipers in any one of their first ten steps, but which are capable of operation in the usual manner by line control upon the eleventh or subsequent steps, and an alarm circuit leading from terminals with which the wipers engage when allowed to rest after the tenth step.

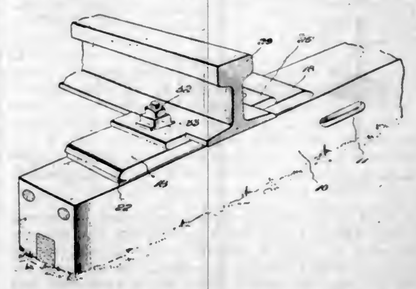
5. A connector switch for use in transmitting alarm impulses over the lines of automatic telephone systems comprising a bank of contacts arranged in a plurality of rows one of which comprises ten contacts, a set of line and release wipers, means for advancing the latter step-by-step into engagement with said contacts, said contacts and wipers being so positioned relatively to each other when the wipers are in the normal position that one step is required to position the release wiper in engagement with the first contact and eleven steps are required to place the line wiper in engagement with the tenth contact.

[Claims 6 to 10 not printed in the Gazette.]

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1,228,008. VITREOUS CROSS-TIE AND RAIL-FASTENING. DANIEL B. FABER, Uhrichsville, Ohio, assignor of one-half to David H. Brown, Uhrichsville, Ohio. Filed June 6, 1916. Serial No. 102,004. (Cl. 238—5.)

1. In a device of the character described, a tie body provided with spaced recesses, a reinforcing member arranged within the tie body, a rail chair mounted upon the tie body, the said chair including a bed plate, lugs carried by the said plate and engaging in said recesses for holding the bed plate against shifting movement upon the tie body, and a leveling element for the bed plate housed therebeneath and engaged by the said lugs for holding the said element in position, and coacting fastening devices coöperating with the bed plate and engaged with the said reinforcing member.



2. In a device of the character described, a tie body, a rail chair mounted upon the tie body, the said chair including a bed plate, a cushioning element arranged beneath the said plate, and means carried by the said plate and extending through the cushioning element to engage the tie body for holding the said plate and cushioning element against displacement with respect to the tie body, and coacting rail fastening devices coöperating with the said plate and cushioning element and operatively engaged with the tie body.

3. In a device of the character described, the combination with a porcelain tie body, of a rail chair mounted thereon and including a chair plate adjustable to compensate for the longitudinal shrinkage of the tie body, and an element interposed between the plate and the tie body for cushioning the said plate upon the tie body with the said element adapted to be cut away for leveling the plate with respect to the tie body, and coacting rail fastening devices coöperating with the said plate and element and operatively engaged with the tie body.

4. In a device of the character described, a tie body provided with a channel, a reinforcing element seating in said channel, a filler sealing the said element within the channel, a rail chair mounted upon the tie body, and a rail fastening device associated with the said chair and engaged with the said reinforcing element.

5. In a device of the character described, a tie body provided upon the lower side thereof with a longitudinally extending channel, a reinforcing element seating in said channel, and a filler incasing the reinforcing element within the channel, a rail chair mounted upon the tie body, and a rail fastening device associated with the said chair and engaged with the said reinforcing element.

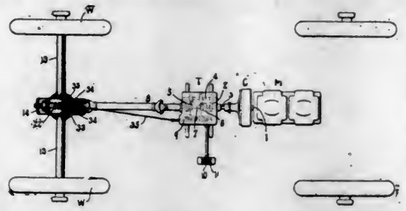
[Claims 6 and 7 not printed in the Gazette.]

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1,228,009. MOTOR-DRIVEN VEHICLE. CHARLES F. FELTZ, St. Louis, Mo., assignor of one-fourth to Wm. E. Anderson, one-fourth to Wm. H. Langdale, and one-fourth to Stonay L. Langdale, St. Louis, Mo. Filed Feb. 28, 1916. Serial No. 80,997. (Cl. 21—90.)

1. In a motor vehicle, driving mechanism comprising traction wheels, an axle secured to said traction wheels, differential gearing associated with said axle, and an overrunning clutch device providing for the transmission of power from said differential gearing to said axle, said axle being free to turn at a higher rate of speed than the differential gearing when the overrunning clutch device is in its operative condition, and said overrunning clutch device being free to uncouple said axle from said differential gearing when the axle turns at an excessive rate of speed thereby permitting said traction wheels and axle to turn independently of said differential gearing.

2. In a motor vehicle, driving mechanism comprising traction wheels, a sectional axle including two axle sections each of which is secured to one of said traction wheels, differential gearing associated with said axle sections and an overrunning clutch device associated with said differential gearing to provide for the transmission of power to said axle sections.



3. In a motor vehicle, driving mechanism comprising traction wheels, a sectional axle including two axle sections each of which is secured to one of said traction wheels, differential gearing associated with said axle sections and an overrunning clutch device associated with said differential gearing to provide for the transmission of power to said axle sections, said overrunning clutch device comprising two overrunning clutches through which power is transmitted to the axle sections.

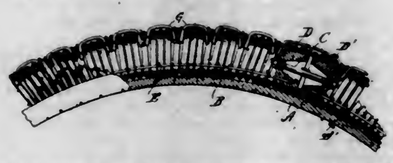
4. In a motor vehicle, driving mechanism comprising traction wheels, axle sections each of which is secured to one of said traction wheels, differential gearing associated with said axle sections, a driver for said differential gearing, and an overrunning clutch device providing for the transmission of power from said driver, through the differential gearing and to the axle sections, said overrunning clutch device being effective when the speed of the differential gearing is in synchronism with the speed of said axle sections, and the elements of said overrunning clutch device being free to allow said axle sections to turn independently of said driver.

5. In a motor vehicle, driving mechanism comprising traction wheels, an axle, differential gearing associated with said axle, transmission gearing, a motor for operating said transmission gearing, an overrunning clutch device providing for the transmission of power from said transmission gearing to said axle, the elements of said overrunning clutch device being free to allow said axle to turn in one direction at an excessive rate of speed and independently of said transmission gearing, said transmission gearing being provided with a reversing device operable to reverse the movement of said differential gearing, said overrunning clutch device being ineffective during the last mentioned movement, and means, under the control of said reversing device, through which power is transmitted to said axle when the reversing device is in its operative position.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,010. SPRING-TIRE FOR VEHICLES. ADRIAN A. FIRESTONE, Cleveland, Ohio. Filed Aug. 12, 1915. Serial No. 45,119. (Cl. 152—8.)



1. A vehicle tire which includes a coil spring having connectors cast into its ends, and a bolt which goes through said connectors to fasten them together and thereby produce a coil spring annulus, and two wires within said annulus, which wires are permanently anchored to said connectors, and a stretched coil spring within said annulus and connected at its ends with said wires.

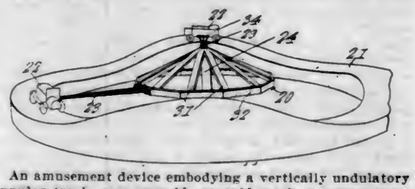
2. A tire for vehicle wheels which includes a coil spring annulus, and a plurality of U-shaped tread plates applied to the outer periphery of said annulus—each tread plate having its legs passed inward between coils, and being of such size that it embraces a plurality of coils, and the several tread plates being applied so as to leave one unembraced coil between adjacent tread plates,—and studs which pass through and are secured to the legs of said tread plates and project in both directions therefrom beneath the coils between which the said legs are passed.

3. A tire for vehicle wheels which includes a coil spring annulus, and a plurality of U-shaped tread plates applied to the outer periphery of said annulus—each tread plate having its legs passed inward between coils, and being of such size that it embraces a plurality of coils, and the several tread plates being applied so as to leave one unembraced coil between adjacent tread plates,—and studs which pass through and are secured to the legs of said tread plates and project in both directions therefrom beneath the coils between which the said legs are passed, one leg of each tread plate carrying two separated studs, and one leg carrying a centrally placed stud which extends between the two studs on the adjacent leg of the adjacent tread plate.

4. A tire for vehicle wheels which includes a coil spring annulus, and a plurality of U-shaped tread plates applied to the outer periphery of said annulus—each tread plate having its legs passed inward between coils, and being of such size that it embraces a plurality of coils, and the several tread plates being applied so as to leave one unembraced coil between adjacent tread plates,—and studs which pass through and are secured to the legs of said tread plates and project in both directions therefrom beneath the coils between which the said legs are passed, each of said tread plates having an inner metal member and an outer facing of softer material.

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1,228,011. AMUSEMENT DEVICE. JOHN A. FISHER, Homestead, Pa. Filed May 16, 1916. Serial No. 97,895. (Cl. 46—27.)



An amusement device embodying a vertically undulatory annular track, cars movable on said track, a rotary member located centrally of said track, tapered trussed centripetal frames extending radially from the rotary member and having their relatively wide ends hinged to the rotary member to swing upwardly and downwardly, bearings carried by said frames at their outer relatively narrow ends, radial spindles journaled in said bearings and projecting from the outer ends of said frames, the outer ends of said spindles being pivoted to the cars to permit said cars to swing upwardly and downwardly, heads upon said spindles, and adjustable guy members pivotally connected to said heads and cars and diverging from said heads to the cars.

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1,228,012. DOOR-CLOSING MECHANISM. CHARLES FORTH, Ottawa, Ontario, Canada. Filed Sept. 1, 1915. Serial No. 48,408. (Cl. 16—88.)

1. In a door closing mechanism, the combination of a closing motor adapted to be connected with the door, an arm actuated by the motor, a link pivotally connected with the outer end of the arm and adapted at its outer end to be connected with the door frame, the connected ends of the arm and link being movable into and out of engagement with each other in a direction axially of their connecting pivot, means tending to maintain the separation of said ends to permit their free relative movements in the normal operation of the motor, and manually operated means for clamping the ends of the arm and link in yielding engagement with each other to prevent the normal operation of the motor and to hold the door open, the said latter means being operable at will and independently of the movements of the door to hold the door open in any desired position.

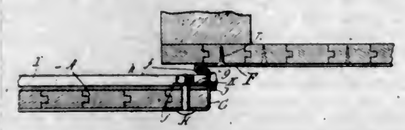


2. In a door closing mechanism, the combination of a closing motor, an arm actuated thereby, a link, a pivot pin connecting the arm and link together for relative pivotal movement, the adjacent faces of the arm and link being provided with coöperating beveled teeth adapted when engaged with each other to hold the parts against free relative movement, and said arm and link being separable from each other axially of the pin to permit of their free relative movement, a spring surrounding the pin and bearing against the link, and a nut on the pin bearing against the spring; whereby the spring may be compressed or relieved at will, to hold the parts yieldingly against relative movement or to permit their free relative movement, as desired.

3. In a door closing mechanism, the combination of a closing motor, an arm actuated thereby, a link, a pivot pin connecting the arm and link together for relative pivotal movement, the adjacent faces of the arm and link being provided with coöperating beveled teeth adapted when engaged with each other to hold the parts against free relative movement, and said arm and link being separable from each other axially of the pin to permit of their free relative movement, a spring surrounding the pin and bearing against the link, a nut on the pin bearing against the spring, whereby the spring may be compressed or relieved at will, to hold the parts yieldingly against relative movement or to permit their free relative movement as desired, and a second spring weaker than the first mentioned spring and arranged between the arm and link and acting to separate said parts when the first-mentioned spring is relieved.

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1,228,013. CAR-DOOR CONSTRUCTION. PETER FRANTZ, Sterling, Ill., assignor to Frantz Manufacturing Co., Sterling, Ill., a Corporation of Illinois. Filed Mar. 1, 1915. Serial No. 11,152. (Cl. 20—26.)



1. A car door construction comprising interlocking weather strips on the car and rear edge of the door, means for securing the door strip in position, and bolts having eyes for engaging said means, said bolts being disposed in a plane between the door and car, each bolt extending through the door strip and having a nut to hold this strip against distortion when the door is closed, said nuts extending substantially with the path of relative movement of the car strip, and the axes of said nuts being parallel with the side of the car.

2. A car door construction comprising interlocking weather strips on the car and rear edge of the door, bars on the inner surface of the door, bolts extending through said door and bars, eyes clamped against said bars by said bolts, said eyes having threaded portions extending through the door strip, and nuts engaging said threaded portions to clamp said door strip against the ends of said bars.



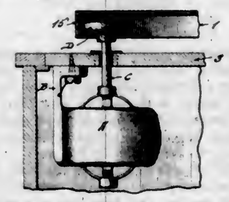
3. A car door construction comprising interlocking sheet metal weather strips on the car and rear edge of the door, the stationary strip having a portion thereof secured flatwise against the outer side surface of the car, and having an engaging portion formed by bending the sheet-metal first outward and away from the car and then toward the car.

4. A car door construction comprising interlocking weather strips on the car and rear edge of the door, channel bars on the inner surface of the door, bolts extending through said door and bars, eyes clamped against said bars by said bolts, said eyes having threaded portions extending through the door strip, and nuts engaging said threaded portions to clamp said door strip against the ends of said bars, and a threshold strip formed with a jutting flange engaging in the channel of the lowest bar.

5. A car door construction comprising interlocking weather strips on the car and rear edge of the door, channel bars on the inner surface of the door, bolts extending through said door and bars, eyes clamped against said bars by said bolts, said eyes having threaded portions extending through the door strip, and nuts engaging said threaded portions to clamp said door strip against the ends of said bars, said eyes and the inner ends of the bolts occupying the channels of said bars, so that the bolts can pass the car strip, and the car strip having an attaching portion secured flatwise to the side of the car and spaced from the inner edges of said bars.

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1,228,014. DRIVING DEVICE FOR TALKING-MACHINES. JOHN FRIER, St. Louis, Mo. Filed May 18, 1916. Serial No. 98,330. (Cl. 74—26.)



The combination, with a record turn-table having a depending annular flange and a base-plate; of a depending bracket secured to the base-plate; a motor mounted on the bracket, a vertical power-shaft on the motor, extending upwardly through the base-plate and a drive-wheel provided on the power-shaft and engaging the inner face of the depending annular flange of the record turn-table.

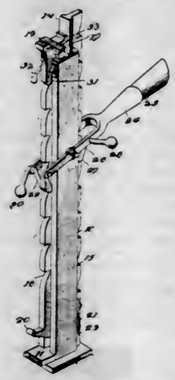
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1,228,015. LIFTING-JACK. OLUS GATES and HOWARD A. SMITH, Arnolds Park, Iowa; said Gates assignor to said Smith. Filed Apr. 25, 1916. Serial No. 93,450. (Cl. 254—108.)

1. A device of the character described including a body section, extensible sections shiftably mounted thereon, a pivoted operating lever carried by the body section, and means connected to said lever at opposite sides of the pivotal center thereof and engaging with the said extensible sections with the said means movable in opposite directions upon the actuation of the lever to simultaneously shift the said extensible sections in opposite directions relative to the body section by a step by step movement.

2. A device of the character described including a body section, extensible sections shiftably mounted thereon, a pivoted operating lever carried by the body section, and means connected to said lever at opposite sides of the pivotal center thereof and normally urged in opposite directions inwardly toward the said extensible sections to engage therewith with the said means movable in opposite directions upon the actuation of the said lever for simultaneously shifting the said extensible sections in opposite directions relative to the body section by a step by step movement.

3. A device of the character described including a body section, extensible sections adjustable in opposite directions thereon, a pivoted operating lever carried by the body section, means connected to said lever at opposite sides of the pivotal center thereof and engaging said extensible sections with the said means movable in opposite directions upon the actuation of the lever for shifting the said extensible sections in opposite directions relative to the body section, and means having weighted arms gravitating in opposite directions to urge the said last-mentioned means toward the said extensible sections to active position for holding the extensible sections at adjustment.



4. A device of the character described including a body section, extensible sections adjustable in opposite directions thereon, a pivoted operating lever carried by the body section, means connected to said lever at opposite sides of the pivotal center thereof and engaging the extensible sections with the said means movable in opposite directions upon the actuation of the lever for shifting the said extensible sections relative to the body section by a step by step movement, and means coöperating with said first-mentioned means and engaging the said extensible sections for holding said extensible sections at adjustment with the said last-mentioned means shiftable for gravitating movement to inactive position for freeing the said extensible sections.

5. A device of the character described including a body section, extensible sections shiftable in opposite directions thereon, means for holding one of said extensible sections fixed with respect to the body section, a pivoted operating lever carried by the body section, and means connected to said lever at opposite sides of the pivotal center thereof and engaging both of the said extensible sections with the said means movable in opposite directions upon the actuation of the lever for shifting the other of said extensible sections relative to the body section.

[Claims 6 to 10 not printed in the Gazette.]

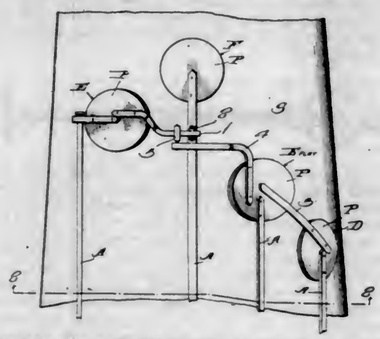
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1,228,016. KEY-ACTION FOR SAXOPHONES AND THE LIKE. SIDNEY C. GILBERT, Jackson, Ohio. Filed Apr. 13, 1916. Serial No. 90,919. (Cl. 84—7.)

1. The combination with three valves of a saxophone or similar instrument; of means for automatically opening one valve when another is opened, and additional means operated by the first named means for automatically opening the third valve when either of the first named valves is opened.

2. The combination with three sound controlling valves of a saxophone or similar instrument, of a rigid finger secured to one of said valves and positioned in the outward path of another valve, and a second rigid finger secured to the third valve and positioned in the outward path of the first named finger.

3. The combination with three sound controlling valves of a saxophone or similar instrument and the operating arms for said valves; of a rigid finger projecting laterally from one valve and having its free end offset outwardly from the instrument and disposed over the arm of another valve, an anti-friction roller on this arm underlying said finger, a second rigid finger projecting laterally from the third valve and having its free end offset outwardly from the instrument, and a second anti-friction roller on said second finger overlying the first named finger.



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1,228,017. COPPER-LEAD ALLOY. EDWARD D. GLEASON, Asbury Park, N. J., assignor to Neu-Metals and Process Company, Brooklyn, N. Y., a Corporation of New York. Filed May 17, 1915. Serial No. 28,574. (Cl. 75—1.)

1. The process of making a composition consisting principally of copper and lead; which consists in mixing, at fusing temperature, copper, lead, a manganese derivative, and cryolite.

2. The process of making a composition consisting principally of copper and lead; which consists in mixing, at fusing temperature, copper, lead, a manganese derivative and fluorid of sodium and aluminum.

3. The process of making a composition consisting principally of copper and lead; which consists in reducing manganese oxid by fusing the same with cryolite, in the presence of carbon, and adding that composition to a fused mixture of copper and lead.

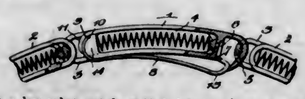
4. The process of making a composition consisting principally of copper and lead; which consists in reducing manganese oxid by fusing the same with fluorid of sodium and aluminum, in the presence of carbon, and adding that composition to a fused mixture of copper and lead.

5. The process of making a composition consisting principally of copper and lead; which consists in fusing copper and, while maintaining it at a temperature above its fusing point, gradually adding an equal quantity of lead and, when the mixture is liquid throughout its mass, adding a mixture formed by fusing three per cent. of cryolite and two per cent. of manganese oxid.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,018. BRACELET-CATCH. ART HADLEY, Providence, R. I. Filed Oct. 4, 1916. Serial No. 123,619. (Cl. 24—236.)



3. In a bracelet catch, a link having a part adjacent one end thereof rounded and having a bendable arm arranged in overlying relation to said end, a hook adjacent the other end of the link, and a spring having one end curved and conformably engaged over said rounded part of the link and having its other end formed to guard the mouth of the hook, said arm being bent to seat on top of said curved end of the spring to hold the latter on and against said rounded part of the link.

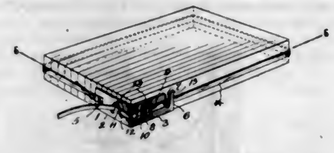
4. In a bracelet catch, a link having a groove formed across one end thereof, a hook carried by said end of the link and extending beyond the groove, and a spring connected to the link and having a part formed to extend across and guard the mouth of the hook, the free extremity of said part having a finger projecting out therefrom and arranged at right angles to the groove and sliding within the latter.

[Claims 1 and 2 not printed in the Gazette.]

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1,228,019. TYPE-BINDER. HARRY H. HANCOCK, Swampscott, Mass. Filed Mar. 13, 1914. Serial No. 824,383. (Cl. 24—129.)



1. A type binder, comprising an angle-plate, the angle of which forms an outer corner, a series of friction tongues or lips located on the arms of said angle-plate so that said corner is at a point between said tongues, said tongues extending substantially in the plane of those arms on which they are located, and a tie exemplified by a tape, attached to one end of said plate and adapted to be engaged over the free ends of said tongues or lips, said corner constituting additional friction means over which the said tie may be turned.

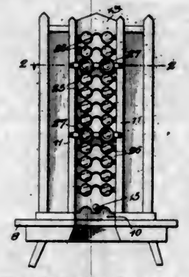
2. A type binder, comprising an elongated body, a friction tongue formed from said body and surrounded at its sides and free end by a part of said body, from which said tongue is spaced, said free end extending toward one side of said body, a transverse tongue extending from one end of said body, the other end of said body being substantially at right angles to said body and provided also with a tongue, and a tie exemplified by a tape, attached to said other end of said body and adapted to be engaged over the free ends of said tongues with said tongues.

3. A type binder, comprising an elongated body, of angular formation to provide two arms, a friction tongue on each of said two arms, surrounded at its sides and free end by a part of said body, from which said tongue is spaced, said free end extending toward a side of said body, and a tie exemplified by a tape, attached to one end of said plate and adapted to be engaged over said free ends with said tongues or lips.

4. A type-binder, comprising an angle-plate, the angle of which forms an outer corner, a series of friction members located on the arms of said angle-plate so that said corner is at a point between said members, said members being arranged to coöperate with the outer surfaces of those arms on which they are located, and a tie exemplified by tape, attached to one end of said plate and adapted to be engaged over the said members, said members and said surfaces being adapted to exert friction on said tape, and said corner constituting additional friction means over which the said tie may be turned.

5. A type-binder, comprising in combination a plate of angular formation to provide two distinct arms arranged substantially at right angles to each other, friction means on both of said arms and a tie attached at one end to said plate at a point laterally of said friction means, the outer angle of said plate at the junction of said arms providing friction means to coöperate with aforesaid friction means in binding and securing the free end of said tape.

1,228,020. EYE-TESTING DEVICE. CHARLES G. HERRICK, Independence, Iowa. Filed June 19, 1916. Serial No. 104,549. (Cl. 88—22.)



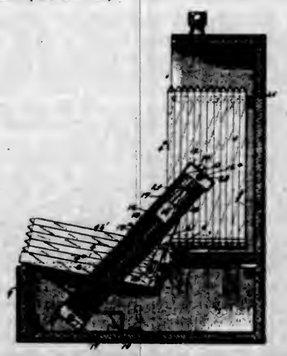
1. An eye-testing device having an opening therein, a slide movable in said opening and having a plurality of pairs of sight-openings disposed in straight series and arranged to be brought successively to position opposite to the line of vision of a user, a strip for each series of sight-openings arranged to be moved to close them, and means whereby glasses are removably secured to said slide with their lenses in alinement with said sight-openings.

2. An eye-testing device having an opening therein, a slide movable in said opening and having a plurality of pairs of sight-openings disposed in straight series and arranged to be brought successively to position opposite to the line of vision of a user, a strip for each series of sight-openings arranged to be moved to close them and having an opening alined with its series, and means whereby eye-glasses are removably secured to said slide with their lenses in alinement with said sight-openings.

3. In an eye-testing device, a slide movable transversely of the line of vision of a user and having a plurality of pairs of sight openings arranged to be brought successively to position opposite to the line of vision of a user, a strip for each series of sight-openings arranged to be moved to close them, and means whereby glasses are secured to said slide with their lenses in alinement with said sight-openings.

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1,228,021. FILING APPLIANCE. HARRY J. HICK, Alliance, Ohio. Filed July 25, 1914. Serial No. 853,062. (Cl. 45—2.)



1. A filing case including base and cover sections with hinge connections for swinging the cover section upon the rear end of the base section, a bearing head pivoted to the forward part of the base section, a sliding head pivoted to the cover section, a plurality of slide rods secured to the bearing head on opposite sides of its axis and operating in and through the sliding head, and compression

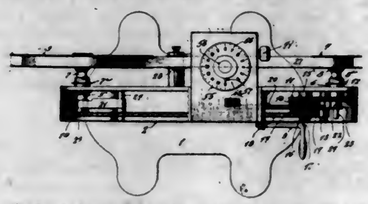
springs on the slide rods between the heads for counterbalancing one section on the other.

2. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends depending from a pivotal connection with the rear end of the cover section; counterbalance means for the cover section including a bearing head pivoted to the base section having a plurality of guide rods thereon, and a main head pivoted to the cover section having sliding engagement with the rods; and elevating and sustaining means for the holders including a minor head in the path of the main head having sliding engagement with certain rods, and a swinging link having slotted pivotal connections with the minor head and with the hinged end of the lower holder.

3. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends depending from the pivotal connection with the rear end of the cover section; counterbalance means for the cover section including a bearing head pivoted to the base section having a plurality of guide rods thereon, and a main head pivoted to the cover section having sliding engagement with the rods; and elevating and sustaining means for the holders including a minor head in the path of the main head having sliding engagement with certain rods and having a plate extending upward to pass alongside the main head, and a swinging link having slotted pivotal connection with the upper end of said extended plate and with the hinged end of the lower holder.

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1,228,022. DIFFERENTIAL WINDING AND MEASURING MACHINE. WALTER E. HOSCH, St. Louis, Mo. Filed Apr. 24, 1916. Serial No. 93,123. (Cl. 33—132.)



1. In a machine of the class described, the combination of two rotatable supporting means to carry two web-holders in order to pass the web from one holder to the other, and means for positively driving both of said supporting means at complementary rotary velocities as the web unwinds from one of said holders and winds upon the other, to compensate for the changing diameter of the coil of the web upon each holder.

2. In a machine of the class described, the combination of two rotatable supporting means to carry two web-holders in order to pass the web from one holder to the other, and differential driving mechanism for positively driving both of said supporting means at complementary rotary velocities as the web unwinds from one of said holders and winds upon the other, to compensate for the changing diameter of the coil of the web upon each holder.

3. In a machine of the class described, the combination of two rotary members constructed to carry respectively and rotate two web-holders, in order to pass the web from one holder to the other, and hand actuated means for driving said differential mechanism.

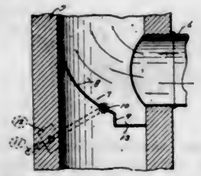
4. In a machine of the class described, the combination of two rotary members constructed to carry respectively and rotate two web-holders, in order to pass the web from one holder to the other, differential driving mechanism for driving both of the said rotary members at complementary rotary velocities to compensate for the changing diameter of the coil of web on each holder in winding the web from one holder to the other, hand actuated means for driving said differential mechanism, and means for maintaining tension in the web.

5. In a machine of the class described, the combination of rotary members constructed to carry respectively and rotate two web-holders in order to pass the web from one holder to the other, differential driving mechanism for driving both of the said rotary members at complementary rotary velocities, and means for resisting the rotation of the rotary member carrying the spool from which the web is uncoiling to maintain a tension in the web as it passes between the web-holders.

[Claims 6 to 13 not printed in the Gazette.]

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1,228,023. DEFLECTING-PLATE FOR SMOKE-FLUES. MILES C. HUYETTE, Buffalo, N. Y. Filed Aug. 23, 1916. Serial No. 116,455. (Cl. 126—292.)



1. The combination with a smoke-stack and a smoke flue of a deflecting plate, said plate comprising a stationary plate member and a movable plate member, and means for controlling said movable plate member.

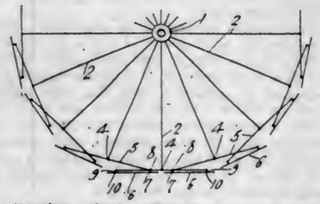
2. The combination with a smoke-stack and a smoke flue of a deflecting plate, said plate comprising a stationary plate member and a movable plate member, an operating shaft passing through the stack and connected with the adjacent ends of said plate members, and means for keeping said shaft and said movable plate members in their normal positions.

4. The combination with a smoke-stack and a smoke flue of a deflecting plate, said plate comprising a stationary plate member and a movable plate member, said movable plate member being provided with a pocket for the accumulation of soot, and means for operating said movable plate member, whereby the soot may be dumped therefrom.

[Claims 3 and 5 not printed in the Gazette.]

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1,228,024. TRACTOR-WHEEL. GEORGE F. JOHNSON, Maple City, Kans. Filed Nov. 11, 1916. Serial No. 130,851. (Cl. 21—152.)



1. A traction wheel embodying spokes; levers fulcrumed intermediate their ends on the spokes; and treads, the inner ends of the treads being pivoted to the ends of the levers of spaced spokes, and the outer ends of the treads being pivoted to the lever of a spoke which is located between the first-specified spokes.

2. In a device of the class described, a traction wheel; a set of levers fulcrumed intermediate their ends on the wheel and extended circumferentially of the wheel; treads having their inner ends pivoted to the ends of the spaced levers of the set, and the outer ends of the treads being pivoted to the ends of a lever of the set which is fulcrumed between the spaced levers.



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1,228,025. SAFETY-CATCH. WILLIAM G. KENDALL, Newark, N. J. Filed Feb. 27, 1917. Serial No. 151,299. (Cl. 24—157.)



1. A safety clasp applicable to pins of the safety-pin type including a base adapted to be secured to the rear face of the pin, outstanding side walls projecting in substantially parallel spaced relation from the base, the walls being cut away to define ears at one end and rebent hook portions at the other end the bills of which are curved toward the ears and base to provide restricted pin point receiving passages, and a locking plate pivoted adjacent one end between the ears and engaging at its other end against the base when in active position, the intermediate portion of the locking plate being outcurved to conform to the curvature of the hooks and to fit snugly between them.

3. A safety clasp applicable to pins of the safety-pin type including a base adapted to be secured to the rear face of the pin, outstanding side walls projecting in parallel spaced relation from the base, the upper edges of the walls being cut away to define ears at one end and rebent hook portions at the other end the bills of which are curved toward the ears and base to provide restricted pin point receiving passages, a locking plate pivoted adjacent one end between the ears and engaging at its other end against the base when in active position, the locking plate being outstruck intermediate its length to conform in curvature to the curvature of the hooks and to lie between them, a leaf spring fixed to the base at one end between the hooks with its other end in engagement with the pivoted end of the plate so that such end of the plate will wipe over the spring during swinging and be held in either active or inactive position, and a locking stud projecting from the plate to extend across the passages and engage the spring when the plate is in active position.

[Claims 2 to 4 not printed in the Gazette.]

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1,228,026. LAMP-SOCKET AND THE LIKE. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 24, 1913. Serial No. 756,432. (Cl. 173—362.)



1. In combination, a casing for lamp sockets comprising a cap and shell, a supporting base therein for the current carrying parts, and an insulating member within said casing and removably secured to said base independently of said cap to insulate conductors to be connected with said current carrying parts from each other and from said cap.

2. In a lamp socket or similar device, in combination, a casing comprising a conductor receiving cap and a shell, a supporting base within said casing adapted to carry a switch mechanism and oppositely disposed terminals accessible from the sides thereof, and an insulating cover secured to said base for interiorly insulating said conductor receiving cap, said cover having a plurality of recesses therein providing free passage for conductors to be connected to said terminals and having a chamber for housing said switch mechanism.

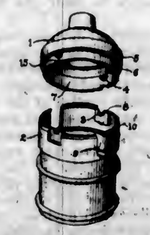
3. In a lamp socket or similar device, in combination, a casing comprising a cap and shell, an insulating base therein carrying oppositely disposed terminals adapted to receive conductors, and a divided insulating cover having its parts independently secured to said base at points spaced from said terminals for insulating said conductors from said cap, the parts of said cover being independently detachable.

4. In a lamp socket or similar device, in combination, a receiving cap provided with an inturned marginal portion, a resilient shell having lugs adapted to coöperate with said marginal portion to lock said cap and shell against relative rotation and axial separation, an insulating base within said shell for the current carrying parts including terminals, and an insulating cover secured to said base and lining said cap, said cover having a central opening in its top registering with the opening in said receiving cap, tunnels extending therefrom to said terminals for the reception of line wires, and a projection adapted to coöperate with certain of said lugs on said shell to lock said base against rotation within said shell.

5. A resilient shell for lamp sockets having a projecting lug adjacent one end, the metal of said shell being stiffened about said lug.

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1,228,027. CASING FOR LAMP-SOCKETS OR THE LIKE. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Dec. 8, 1913. Serial No. 805,290. (Cl. 173—362.)



1. A casing for lamp sockets comprising separable sections having overlapping portions provided with interlocking means engageable by contraction of one of said sections about the other and releasable by contraction of one of said sections at a point remote from said means with a resulting expansion of said section adjacent said means.

2. A casing for lamp sockets comprising separable sections having interlocking means therefor, one of said sections being relatively rigid, the other said section being resilient and contractible, independently of said first mentioned section, at a point remote from said interlocking means, with a resultant expansion adjacent to said means, and said means being releasable by such expansion of said resilient section.

3. A casing for lamp sockets comprising a cap and shell of unequal diameters, and coöperating shoulders carried thereby for locking said parts together, said parts having radial clearance at a point removed from said shoulders whereby the latter may be released by compression of said part of greater diameter at said point of radial clearance.

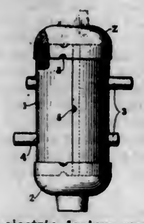
4. A casing for lamp sockets comprising sections having interfitting marginal portions, and interlocking means for the sections comprising a catch on one and a shoulder on the other, the outer section being resilient and having radial play with respect to the inner section at substantially right angles to the interlocking means whereby said section may be compressed at substantially right angles to said means to expand the same at said means.

5. A casing for lamp sockets comprising a cap and shell having interfitting marginal portions, certain portions of said shell being held against radial compression by portions of said cap received therein, and other portions of said shell being radially compressible to expand said first-mentioned portions, and interlocking means carried by said incompressible portions of said shell and the portions of said cap received therein.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,028. CASING FOR LAMP-SOCKETS AND THE LIKE. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Dec. 18, 1913. Serial No. 807,455. (Cl. 175—282.)



1. A casing for electric devices comprising in combination, telescoping sections and interlocking means therefor including an inwardly and upwardly bent catch on one section, upper and lower shoulders on the other section for engagement by said catch, the lower shoulder being offset to abut the under side of said upturned catch substantially at right angles to limit the telescoping of said sections.

2. A casing for electrical devices comprising in combination, separable sections having overlapping edges, a hooked and upwardly rounded catch on the outer section, substantially concentric arc-shaped shoulders on the inner section, the upper rounded surface of the catch engaging the upper shoulder for preventing axial separation of the sections, the lower shoulder being sprung outward to abut the hooked underside of the catch substantially at right angles to prevent telescoping of the sections, and the rounded sides of the catch engaging the shoulders for preventing relative rotation of the sections.

3. A casing for electrical devices, comprising in combination, separable overlapping sections, and marginal interlocking means therefor including an inturned and upturned catch on the outer section having rounded upper and lower bearing surfaces, and upper and lower arc-shaped shoulders formed in the inner section for engagement with said catch, the lower shoulder being offset to abut at right angles the lower bearing surface of said catch.

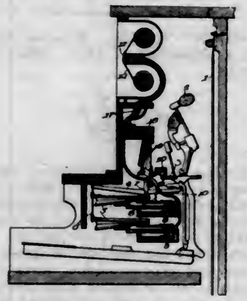
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1,228,029. MECHANICAL MUSICAL INSTRUMENT. PAUL BROWN KLUGH, Chicago, Ill., assignor to The Cable Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 19, 1910. Serial No. 593,205. (Cl. 84—160.)

1. A device of the character described comprising a piano action, a fixed abutment therefor, means movable to and from a position between a member of said action which is below the hammer shank and said abutment to limit the stroke thereof and means for moving said movable means.

2. A device of the character described comprising a piano action, an abutment therefor, a removable stop movable to and from a position between a member of said action which is below the hammer shank and said abutment to limit the stroke thereof and means for moving said stop.

3. A device of the character described comprising in combination, a piano action, power pneumatics to operate said action, an abutment, movable stops separate from said abutment normally positioned between said abutment and wippens of said action to limit the stroke of the wippens, and solo pneumatics to operate said stops, said stops being movable to and from their positions between the wippens and said abutment.



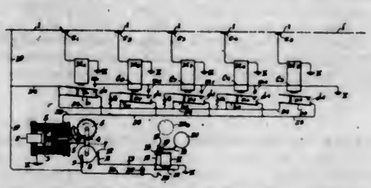
4. A device of the character described comprising a piano action, power pneumatics to operate same, a fixed abutment therefor, means movable to and from a position between an intermediate member of said action below the hammer shank and said abutment to limit the stroke thereof, and a solo pneumatic to operate said means.

5. A device of the character described comprising a piano action, power pneumatics to operate same, an abutment therefor, a removable stop movable between an intermediate member of said action below the hammer shank and said abutment to limit the stroke thereof, and a solo pneumatic to operate said removable stop.

[Claims 6 to 25 not printed in the Gazette.]

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1,228,030. CONTROL SYSTEM. HORACE C. KNERR, Primos, Pa. Filed Dec. 1, 1914. Serial No. 874,956. (Cl. 246—36.)



3. The combination with a translating device, of a plurality of magnets and their armatures controlling the same, means for energizing said magnets simultaneously or substantially simultaneously, and means preventing release of said armatures except in predetermined order of succession comprising for each magnet a circuit controlled by another of said magnets for maintaining said each of said magnets energized until after deënergization of said other of said magnets, each of said armatures being independent of mechanical control by the others.

6. In a signaling system, the combination with a plurality of circuits, of a switch for each of said circuits, movable means operating a plurality of said switches, a translating device adapted to be controlled by said circuits, a plurality of switches controlling the circuit of said translating device, an electro-magnet in each of said vehicle controlled circuits controlling one of said switches, and means insuring release of the armatures of said magnets in predetermined order of succession notwithstanding simultaneous or substantially simultaneous energization of said magnets.

16. The combination with a translating device, of a series of magnets and their armatures controlling the same, switches for energizing said magnets simultaneously or substantially simultaneously, means preventing release of said armatures except in predetermined order of suc



cession comprising for each magnet of the series a circuit adapted to energize the magnet to hold its armature, and switches controlled by said armatures in succession controlling said circuits, said armatures controlling said translating device only during movement after their release.

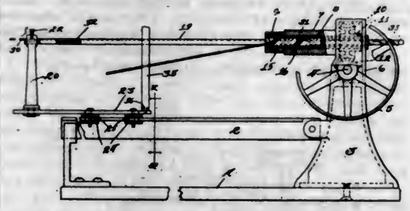
20. The combination with a translating device, of a series of magnets and their armatures controlling the same, means for controlling said magnets simultaneously or substantially simultaneously, and means preventing release of said armatures except in predetermined order of succession, said means insuring control of said translating device by said armatures in a predetermined order of succession and comprising a circuit for each of said magnets for prolonging the control thereof, and switches controlling said circuits and controlled by said armatures, the armature of one of said magnets controlling switches of the control prolonging circuits of the remainder of the magnets of the series, the others of the armatures of said magnets controlling progressively less numbers of switches accordingly as said armatures effect later controls of said translating device.

23. The combination with a translating device, of three or more magnets and their armatures controlling said translating device, release of any one of said armatures effecting operation of said translating device, means for energizing said magnets simultaneously or substantially simultaneously, and means preventing release of said armatures except in predetermined order of succession.

[Claims 1, 2, 4, 5, 7 to 15, 17 to 19, 21, 22, and 24 to 26 not printed in the Gazette.]

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1,228,031. MACHINE FOR FORMING WIRE-FENCE STAYS. GUSTAVE F. KRIEGEL, Minneapolis, Minn., assignor to Charles A. Rickert, Minneapolis, Minn. Filed May 25, 1916. Serial No. 99,890. (Cl. 140—90.)



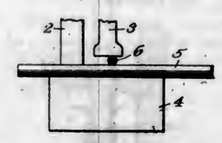
1. A machine for loosely entwining a portion of a wire stay about a substantially straight shaft portion thereof, comprising, in combination, a supporting frame, a longitudinal track carried by said frame, a revoluble member journaled in said frame, means carried by said frame for rotating said revoluble member, a hollow secondary die member having an outer spiral thread, said secondary die member being rotated by said revoluble member, a primary die slidably mounted in said secondary die having a longitudinal passage-way adapted to receive and form a bearing for the straight shaft portion of the stay, and a carriage movable upon said track and to which the outer end of said secondary die and the shaft portion of said stay are clamped, said secondary die having its spiral thread so arranged as to engage and entwine a portion of the stay about that portion thereof, which is held in the groove of said primary die.

2. A machine for loosely entwining one portion of a wire fence stay about another portion comprising in combination two die members, one constituting a primary die in the form of a shaft having a longitudinal passage in which a portion of the stay is held and a notch in its end through which the stay is bent and the other die member constituting a secondary die having a longitudinal passage through which the primary die is adapted to slide and a spiral thread on its outer surface adapted to engage and entwine the portion of the stay around that portion which is held within said primary die, a sleeve in which said secondary die is secured, a support in which said sleeve is journaled and means for revolving said sleeve.

3. A machine for loosely entwining a portion of a wire fence stay around another portion thereof, comprising, in combination, two die members, one constituting a primary die having a longitudinal groove in which a portion of the stay is held and a notch in one end of said primary die through which the stay is bent back and the other of said die members constituting a secondary die being formed with a longitudinal passage through which said primary die is slidable and a spiral thread on the outer surface of said secondary die adapted to engage and entwine the bent back outer portion of the stay around that portion which is held within said primary die, a sleeve surrounding and secured to said secondary die, a frame in which said sleeve is journaled, means for revolving said sleeve to effect the revolution of said secondary die around said primary die, a carriage movably mounted to travel toward said secondary die during the entwining operation thereof, said carriage being secured to and supporting the outer portion of said primary die and the portion of the stay which is held within said primary die, and a guard encompassing said primary die and carried by said carriage for limiting the outward position of that portion of the stay, which is being entwined about that portion of the stay which is held within said primary die.

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1,228,032. METHOD OF ELECTRIC WELDING AND APPARATUS. LAURENCE S. LACHMAN, New York, N. Y.; assignor to Universal Electric Welding Company, New York, N. Y., a Corporation of New York. Filed Oct. 24, 1916. Serial No. 127,325. (Cl. 219—10.)



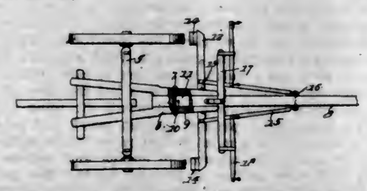
1. The method of welding pieces tending to heat at different rates by the contact electrode process, consisting in applying the current bearing electrodes to the work on parallel lines and regulating the distance between the electrode which engages the piece having the tendency to heat more slowly and the welding point to secure approximately equal heating of the pieces.

2. The method of welding two rods or pieces of different size together at the crossing point by the contact electrode process, consisting in applying the current bearing electrode engaging the larger piece to said piece at one side of the line of welding pressure and regulating the distance between said electrode and the line of welding pressure or position of the weld to secure approximately equal heating.

3. The method of welding crossing pieces of metal by the contact electrode process, consisting in inserting the work between one of said electrodes and a suitable base to apply welding pressure and bringing the other electrode into contact with that one of the two pieces which tends to heat the more slowly and in a position to one side of the line of welding pressure regulating the distance between the weld and said electrode according to the tendency of the pieces to heat at different rates and applying current and effecting the weld by the operation of the electrode engaging the other piece.

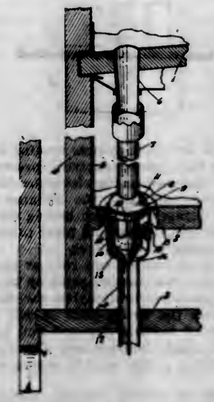
4. In an electric welding apparatus for welding by the contact electrode process, the combination of two electrodes one of which is applied to the work on a line to one side of the welding pressure but substantially parallel therewith, while the other is provided with an extended contact surface to permit the weld to be made at any one of a number of desired distances from the first-named electrode.

**1,228,033.** VEHICLE-BRAKE. THOMAS J. LAVERE, Bethel, Vt. Filed Dec. 11, 1913. Serial No. 806,024. (Cl. 21—9.)



In a brake for vehicles, hounds supported adjacent the forward end of the vehicle, said hounds being spaced apart to provide a clearance, a tongue having one of its ends positioned in said clearance, said tongue having a transverse slot, a bolt connecting the hounds, said bolt extending through the slot for connecting the tongue with the hounds, a pin extending vertically through the tongue and connecting the walls of the slot at a point adjacent the bolt, whereby movement of the tongue in one direction is restricted by the engagement of said pin with the bolt, and a brake bar carrying brake shoes, links for supporting the brake bar and links connecting the brake bar and the tongue, whereby movement of said tongue operates the brake shoes.

**1,228,034.** DRIP-CUP FOR REFRIGERATOR-TRAPS. CHARLES H. LEONARD, Grand Rapids, Mich., assignor to Grand Rapids Refrigerator Co., Grand Rapids, Mich., a Corporation of Michigan. Filed Oct. 9, 1916. Serial No. 124,625. (Cl. 182—13.)



1. In a device of the character described, a cylindrical sheet metal member provided with a plurality of screw threads in the sides thereof, a cup having an open upper end and downwardly and inwardly inclined sides coming substantially to a point, a rod depending from said point of the cup through said member, said cup and rod being free from contact with the inner sides of the member, and a plurality of outwardly extending ears on the cup engaging at their ends with the grooves formed in the member by said screw threads.

2. In a device of the character described, a cylindrical member adapted to be connected with a refrigerator, a cup having an open upper end and downwardly and inwardly inclined sides substantially to a point, a rod depending from the cup from said point, and means for securing the cup within said member and positioning it therein so as to hold the sides of the cup and said rod from contact with the inner sides of the member.

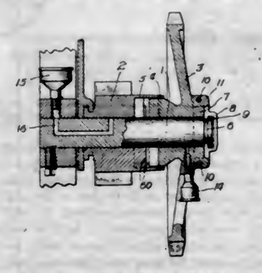
3. In a device of the character described, a sheet metal member having open ends and adapted to be connected with a refrigerator, a cup having an open upper end and downwardly and inwardly inclined sides coming substantially to a point, a rod depending from said cup at said point, means for securing the cup and rod within said member with the sides of the cup and the rod free from contact with the inner sides of the member, a tube having its lower end entered a distance into the cup, and a dome in the tube inserting into the upper end of said member and engaging therewith to limit the distance that the end of said tube enters into the cup.

4. In a device of the character described, a substantially cylindrical member having open ends, a cup having an open end and sides turned downwardly and inwardly, a rod depending from the bottom of the cup, and a plurality of ears at the upper edges of the cup, turned outwardly and upwardly therefrom and engaging with the inner sides of said member to position the cup and rod depending therefrom with the sides of the cup and rod free from contact with the inner sides of the member.

5. In combination, a cylindrical member having open ends adapted to be attached to a refrigerator, a tube leading into said member at its upper end, a dome secured to the tube inserting into the upper end of said member, a bead in the dome for determining the extent of the entrance of the tube into the member, a cup having an open upper end within the member into which the end of the tube extends, downwardly and inwardly turned sides to the cup a rod depending from the lower end of the cup through the member, and ears on the cup projecting laterally and upwardly and engaging against the inner sides of said member to position the cup and rod free from contact with the member.

[Claim 6 not printed in the Gazette.]

**1,228,035.** DUST-CAP AND WHEEL-HOLDER. EDGAR C. LITCHFIELD and HENRY L. LITCHFIELD, Waterloo, Iowa, assignors to The Litchfield Manufacturing Company, Waterloo, Iowa, a Corporation of Iowa. Filed Sept. 22, 1915. Serial No. 51,941. (Cl. 74—8.)



1. In combination, a shaft, a wheel provided with a hub arranged on said shaft, a sectional hub cap, and means for clamping said cap upon said hub and concealing one end of the shaft.

2. In combination, a shaft, a wheel provided with a hub arranged on said shaft, a hub cap divided along longitudinal lines into a plurality of sections, and means for fixing said sections upon said hub and concealing one end of the shaft.

3. In combination, a shaft, a wheel provided with a hub arranged on the shaft, a cup-shaped hub cap fixed upon said hub and with its mouth directly inwardly covering one end of said shaft, and the shaft and said cap having means for holding the wheel and the shaft against relative axial movements.

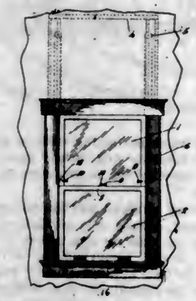
4. In combination, a shaft, a wheel provided with a hub arranged on the shaft, a hub cap divided along longitudinal lines secured to the hub and covering one end of the shaft, and said shaft and said cap having complementary tongue and groove members extending around the shaft and adapted to hold the wheel and the shaft against relative axial movements.

5. In combination, a shaft, a wheel on the shaft, an annular member surrounding the shaft, said member and said shaft having complementary interlocking tongue and groove members arranged angularly of the axis, said annular member being divided into sections to permit it to be slipped laterally upon the shaft, and means for fixing the said annular member to the wheel.

[Claims 6 to 11 not printed in the Gazette.]



**1,228,036.** POCKET-WINDOW. EDMUND H. LUNKEN, Cincinnati, Ohio. Filed Mar. 18, 1916. Serial No. 83,736. (Cl. 20—52.1.)

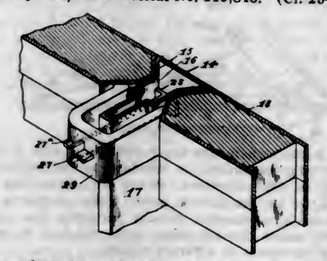


1. In a pocket window having a frame, in combination with two sliding sashes in said frame adapted to close the window opening, means for locking the two sashes together, and pins slidably mounted in the upper sash, and lock plates in the frame of the window to receive said pins, said plates having recesses with a beveled lower face, for the purpose described.

2. In a pocket window, in combination with a frame having an opening, a wall pocket adjacent said frame, sliding sashes adapted to close the opening, means for locking the sashes together, and means for locking the sash nearest the pocket to the frame, said means adapted to be manually set into locking position and automatically moved out of locking position by moving the said sash away from the pocket.

3. In a pocket window, a pair of sliding sashes, a frame in which said sashes are mounted, a wall pocket for said sashes adjacent the frame, and means for locking one of the sashes to the frame, said means adapted to be automatically released by moving said sash in a direction away from the pocket so as to permit said sash to be moved into the pocket.

**1,228,037.** CONCRETE-FORM. STEWART R. MCKAY, Cleveland, Ohio. Original application filed June 12, 1915, Serial No. 33,799. Divided and this application filed Sept. 13, 1916. Serial No. 119,848. (Cl. 25—131.)



1. In a form for concrete construction, the combination of a pair of posts the adjacent surfaces of said posts being formed with slanting surfaces which diverge from each other toward the rear of the post; plates extending between adjacent posts, each of said plates being provided with a beveled surface that coöperates with the beveled surfaces upon the posts, each plate being provided with a nose that engages with the post when the plate is in final seated position; and a series of clamping means carried by each post and adapted to engage the plates upon opposite sides of the posts to hold the plates with respect to the posts.

2. In a form for concrete construction, the combination of a pair of posts the adjacent surfaces of said posts being formed with slanting surfaces which diverge from each other toward the rear of the posts; plates extending between adjacent posts, each of said plates being provided with oppositely extending beveled surfaces, one of which surfaces coöperates with the beveled surface upon a post; and clamping means carried by the post and adapted to engage with beveled surfaces of plates upon opposite sides of the post to hold the plates with respect to the post.

3. In a form for concrete construction, the combination of a pair of posts the adjacent surfaces of said posts being formed with slanting surfaces which diverge from each other toward the rear of the posts; plates extending between adjacent posts, each of said plates at each end being provided with oppositely extending beveled surfaces which meet to form a nose, a beveled surface of each plate coöperating with a beveled surface upon the posts, the nose of each plate being in contact with a post when the plate is in final position with respect to the posts; and clamping means carried by each post and straddling each post to engage beveled surfaces of plates upon opposite sides of the post to hold the plates with respect to the post.

**1,228,038.** WELDING-TORCH. ISAAC U. MARLIN, Shreveport, La., assignor, by mesne assignments, to George T. Cunningham and Louis T. Cunningham, Shreveport, La. Filed May 15, 1914. Serial No. 838,828. (Cl. 158—27.4.)



1. A welding torch comprising a mixing chamber, an oxygen supply to said mixing chamber, a combustible gas-supply connected with said mixing chamber, a burner connected with the mixing chamber, and a check valve between said mixing chamber and said burner to permit a supply of gas to the burner and to prevent back fire from the burner thereinto.

2. A welding torch comprising a hollow cylindrical body having a solid lower end, a projection extending from the solid end and within the hollow body, a combining tube engaged with the projection and extending longitudinally and centrally within the hollow body, a tapering nipple also engaged with the projection and extending within the combining tube, and a mixing tube connected with the combining tube.

3. A welding torch comprising an oxygen supply nipple, a combining tube connected around said nipple, an oxygen supply connected with the nipple, a combustible gas supply connected to supply a combustible gas to the combining tube, a mixing tube connected with the combining tube beyond the extent of the nipple, a burner connected with the mixing tube, and a check valve connected between said mixing tube and said burner to permit the flow of gas from the mixing tube to the burner and to prevent back fire into the mixing tube.

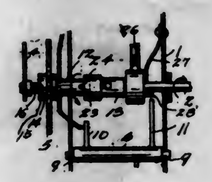
4. A welding torch comprising an oxygen supply-nipple, a combining tube connected around said nipple, an oxygen supply connected with the nipple, a combustible gas-supply connected to supply a combustible gas to the combining tube, valves to control the flow of gas through each of said supplies, a mixing tube connected with the combining tube beyond the extent of the nipple, a burner connected with the mixing tube, and a check valve between the mixing tube and said burner to permit the flow of gas from the mixing tube to the burner and to prevent back fire.

5. A welding torch comprising an oxygen supply-nipple, a combining tube connected around said nipple, an oxygen supply connected with the nipple, a combustible gas-supply connected to supply a combustible gas to the combining tube, valves to control the flow of gas through each of said supplies, a mixing tube connected with the combining tube beyond the extent of the nipple, a burner connected with the mixing tube, a check valve located between the mixing tube and burner, and a spring acting to normally hold said check valve closed against back fire from the burner and to resiliently permit opening of the valve as the proper gas pressure is attained within the tube.

[Claim 6 not printed in the Gazette.]

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1,228,039. ALARM-CLOCK. DANIEL G. MEIKLE, Detroit, Mich., assignor of one-half to John S. Shields, Detroit, Mich. Filed Oct. 5, 1916. Serial No. 123,941. (Cl. 58—16.)

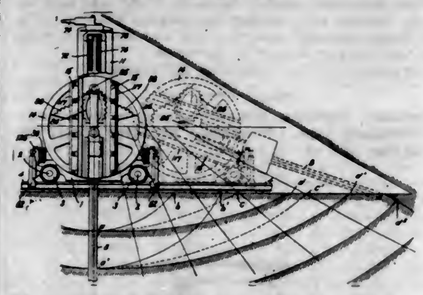


1. The combination with a time mechanism and an alarm mechanism of a spindle having a hub thereon and a gear on the hub actuated from the time mechanism, means on the hub whereby the hub is permitted to move laterally on the spindle as the gear is actuated to release the alarm mechanism, manual means for shutting off the released alarm mechanism, and means on the spindle for automatically and subsequently releasing the alarm mechanism.

2. The combination with a time mechanism and an alarm mechanism, of a spindle having a pin and a slidable notched hub thereon and a gear on the hub, a spring detent held in position by said hub to lock the alarm mechanism, said mechanism being released when the notch in the notched hub, engages the pin, manual means for shutting off said released mechanism, and means for automatically releasing the locked mechanism.

3. The combination with a time mechanism and an alarm mechanism and a spindle with a pin thereon, of a loose slidable hub notched to engage the pin and a gear on the hub, a second slidable hub rotatable with the spindle and formed with a notched head, and a pin on the first hub to engage said notched head, a spring detent held in operative position by the first hub to lock the alarm mechanism and released when the notch in the said second hub engages the pin, and manual means for locking the released alarm mechanism.

1,228,040. STONEWORKING-MACHINE. HENRY H. MERCER, Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 11, 1909. Serial No. 532,574. (Cl. 125—2.)



3. A channeling machine having cutting appliances, an oscillating carrier therefor and means dependent on the movement of the carrier for reciprocatively moving the cutting appliances.

6. A stone working machine having cutting appliances, a carrier, a support, means for oscillating the carrier, means for moving the cutting appliances in unison with the carrier, said means comprising a driving member connected to the cutting appliances and engaged by the carrier to impart movement to the cutting appliances, and a supporting member for said driving member adjustably mounted upon said main support.

10. A stone working machine having cutting appliances including a motor for actuating the same, a second motor, means driven by the second motor for swinging the cutting appliances, and means operated by the second motor for advancing and retracting the cutting appliances.

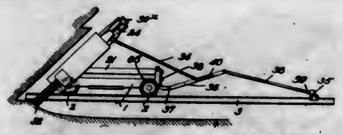
12. A channeling machine having cutting appliances, actuating means therefor, a support for the cutting appliances, and power driven means for periodically advancing and retracting the support bodily relatively to the work.

18. A channeling machine having a truck adapted to run upon a suitable trackway, cutting appliances carried thereby, power driven means upon said truck for oscillating said cutting appliances lengthwise the channel groove, means for synchronously moving said appliances toward and from the cut, and truck driving mechanism for synchronously moving the truck forward and backward along said trackway.

[Claims 1, 2, 4, 5, 7 to 9, 11, 13 to 17, and 19 to 45 not printed in the Gazette.]

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1,228,041. STONEWORKING-MACHINE. HENRY H. MERCER, Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 15, 1910. Serial No. 577,237. (Cl. 125—2.)



1. In a track channeler the combination with a truck, truck driving mechanism, a standard, a channeling tool mounted on said standard, means for connecting said standard to an extraneous point while operating said truck driving mechanism thereby swinging the cutting tool, and means for adjusting said standard to secure swinging movement in different planes.

8. In a stone working machine, the combination with a percussive cutting tool of a tool support on which the tool is mounted for swinging movement, a connection between the tool and a point extraneous to said support, means for causing relative movement between said point and said support to swing the tool and means for adjusting the plane of swinging movement.

22. In a channeling machine, the combination with a main support of a standard movably mounted thereon, a reciprocatory percussive channeling tool mounted on the standard, an extraneous object, a connection between the standard and said object, means for causing a relative movement between the support and said object to cause the tool to sweep through the channel cut during its reciprocatory percussive movement and means providing for the adjustment of the standard to different angular positions.

27. In a channeling machine the combination with a support, a tool carrier mounted for swinging movement thereon, a tool on said carrier, power driven means for feeding the tool toward or from the work, and means for adjusting the plane of swinging movement.

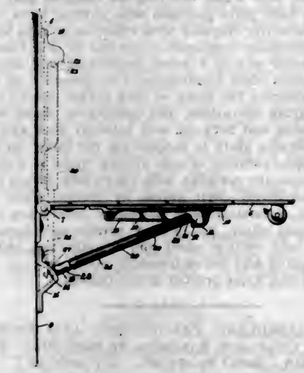
31. In a channeler the combination with a support, a tool mounted for swinging movement relatively to the work, power driven means for producing such swinging movement, power driven means for feeding the tool, and means for varying the speed of swinging movement while maintaining the speed of tool feed constant.

[Claims 2 to 7, 9 to 21, 23 to 26, 28 to 30, 32, and 33 not printed in the Gazette.]



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1,228,042. OVEN-DOOR. HENRY W. O'DOWD, Jersey City, N. J., assignor to William M. Crane Company, a Corporation of New York. Filed Aug. 24, 1912. Serial No. 716,845. (Cl. 126—190.)



1. The combination of an oven door, a bearing arranged upon the face of the door, a bearing arranged upon the oven casing below the door, and a member mounted in recesses in said bearings, said member comprising a tube, a rod arranged to reciprocate in said tube and having its lower end mounted in the recess in said second bearing, and a spring arranged in said tube and coöperating with said rod, said recess in said second bearing being so outlined and said rod being so proportioned and fashioned at its lower end that said end will abut against a wall of said second recess when the door is in its horizontal position.

2. The combination with an oven door mounted to swing vertically downward from its closed position and a bearing on the oven below the door, of a longitudinally compressible bracing member pivoted at opposite ends to the door and to said bearing, said member abutting under a wall of the bearing beyond its pivot therein, and being thereby maintained at a predetermined angle to hold the door in a horizontal position.

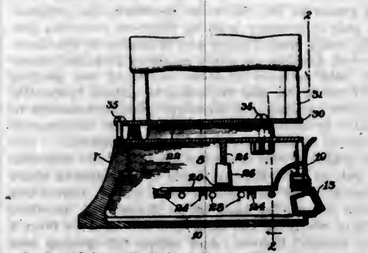
3. The combination with an oven door adapted to be swung open downwardly in a vertical plane and an arcuate bearing secured to the oven below the door, of a longitudinally compressible bracing member flexibly connected with the outer face of the door and with said bearing, and an abutment on said member oscillatable therewith along the arc of the bearing down to a point thereon capable of arresting it at a given angle relatively to the open door.

4. The combination of an oven door mounted to swing vertically downward from closed to open position, a bearing on the oven below the door, a longitudinally compressible member flexibly connected at its upper end to the door and at its lower end to said bearing, the latter-named end of said member taking under a wall of the bearing interiorly thereof, and an abutment on the member adapted to rest upon the exterior of the bearing coincidently with the engagement of said lower end of the member with said wall.

5. The combination with an oven door mounted to swing vertically downward from its closed position, of a bearing attached to the oven beneath the door, and a telescoping longitudinally compressible bracing member between the outer face of the door and said bearing, comprising a rod pivoted in the latter, a spring on the outer end of said rod, an abutment on the rod adapted to rest on the bearing at a predetermined angle relatively to the open door, and a tube slidable over said spring and rod down to said abutment.

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1,228,043. SAD-IRON. HENRY W. O'DOWD, Jersey City, N. J., assignor to William M. Crane Company, a Corporation of New York. Filed Sept. 13, 1912. Serial No. 720,204. (Cl. 158—28.1.)



1. A sad iron including in combination, a casing forming a chamber, a burner in said casing, openings in the rear wall of said chamber above said burner, and a baffle arranged longitudinally in said chamber between said burner and said openings and having its rear portion extended upwardly toward and above said openings.

2. A sad iron including in combination, a casing forming a chamber, a burner arranged at the rear of said chamber and having inwardly directed perforations, openings in the rear wall of said chamber above said burner, and a baffle arranged longitudinally in said chamber between said burner and said openings and having its rear portion extended upwardly toward and above said openings.

3. A sad iron including in combination, a casing forming a chamber, a burner arranged at the rear of said chamber and having inwardly directed perforations, openings in the rear wall of said chamber above said burner, a baffle arranged longitudinally in said chamber between said burner and said openings and having its rear portion extended upwardly toward and above said openings in the rear wall, and additional openings in the sides of said chamber below said baffle for the admission of air to support combustion, and a vent in the top of said chamber.

4. A sad iron including in combination, a casing forming a chamber, a burner arranged at the rear of said chamber and having inwardly directed perforations, openings in the rear wall of said chamber above said burner, a baffle arranged longitudinally in said chamber between said burner and said openings and having vents in its side and front for the passage of the heated products of combustion and having its rear portion extended upwardly toward and above said openings in the rear wall, and addi-

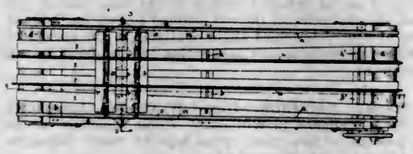
tional openings in the sides of said chamber below said baffle for the admission of air to support combustion, and a vent in the top of said chamber.

5. A sad iron including in combination, a casing forming a chamber, a burner arranged at the rear of said chamber and having inwardly directed perforations, a plurality of grooves in the bottom of said chamber, openings in the rear wall of said chamber above said burner, a baffle arranged longitudinally in said chamber between said burner and said openings and having its rear portion extended upwardly toward and above said openings, additional openings in the sides of said chamber below said baffle for the admission of air to support combustion, and a vent in the upper portion of said chamber.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,044. FRUIT AND VEGETABLE GRADER. WALTER GRANT PALMER, Wallace, Idaho. Filed Oct. 20, 1916. Serial No. 126,808. (Cl. 130—32.)



1. In a grader of the character described, the combination of a pair of primary grading members traveling longitudinally, being spaced apart and diverging in the direction of travel, auxiliary grading members arranged transversely to said primary members overlying the grading surfaces of the latter and traveling in unison therewith, and means for causing said auxiliary grading members to be progressively spaced apart in unison with the progressive divergence of said primary grading members.

2. In a grader of the character described, the combination of a pair of belts traveling side by side spaced apart and diverging in the direction of their travel; supporting and guiding means for said belts; transverse, parallel, movable bars overlying the belts and arranged to form a transverse channel thereon; and means for spacing said bars apart relatively to the progressive divergence of said belts.

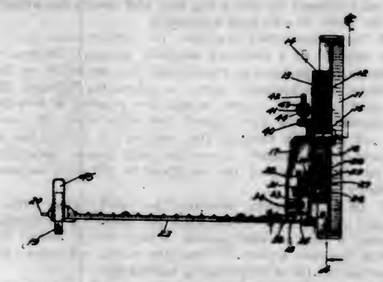
3. In a grader of the character described, the combination of a pair of flat belts traveling side by side spaced apart and diverging in the direction of their travel; ways for said belts to run on having their upper faces channeled; guide elements on the under faces of said belts running in said channels; transverse, parallel, movable bars overlying the belts and arranged to form a transverse channel thereon; and means for spacing said bars apart relatively to the progressive divergence of said belts.

4. In a grader of the character described, the combination of a pair of primary grading members traveling side by side spaced apart and diverging in the direction of travel, companion partition members overlying the grading surfaces of said primary grading members, being arranged transversely thereto and traveling in unison therewith and being inclined toward each other, and means for spacing said partition members relatively to the progressive divergence of said primary grading members.

5. In a grader of the character described, the combination of a pair of primary grading members traveling side by side, being spaced apart and diverging in the direction of travel, a plurality of two-leaf partitions overlying the primary grading members, being arranged transversely thereto and traveling in unison therewith, said leaves being hinged together and the companion leaves of adjacent partitions being inclined toward each other, and means for varying the inclination of said companion leaves relatively to the progressive divergence of said primary grading members.

[Claims 6 to 10 not printed in the Gazette.]

1,228,045. HAND-MOWER. ANGELO PIETROBONO, Riverside, Conn. Filed Jan. 22, 1917. Serial No. 143,624. (Cl. 56—19.)



1. A machine of the character described comprising a driving wheel, said wheel carrying an internal gear and a housing, a pair of superposed plates adjustably supported in a substantially horizontal position at one end by said housing and at the other end by a wheel paralleling said driving wheel, said plates being provided with cutting teeth which coöperate to perform shearing operations upon relative longitudinal reciprocation of said plates, and connecting means within said housing and between said internal gear and said plates to effect such relative reciprocation when said driving wheel is rotated in a direction to advance the machine.

4. A machine of the character described comprising a driving wheel, said wheel carrying an internal gear and a housing, a fixed plate provided with cutting teeth, said plate being laterally disposed with reference to said wheel and being adjustably supported at one end by said housing and at the other end by a wheel paralleling said driving wheel, a toothed plate longitudinally reciprocable on said fixed plate whereby the teeth of both plates coöperate to perform shearing operations, and connecting means within said housing and between said internal gear and the relatively movable plate to reciprocate the latter on said fixed plate upon rotation of said driving wheel in a direction to advance the machine, said connecting means comprising a horizontal shaft driven by pinions from said internal gear, a vertical shaft driven by bevel-gears from said horizontal shaft, all located within said housing, a crank on said vertical shaft and a connecting rod between said crank and the reciprocable plate.

[Claims 2 and 3 not printed in the Gazette.]

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1,228,046. COMBINED PAD-HOLDER AND TICKET-PUNCH. CHARLES T. RASCHICK, St. Paul, Minn. Filed May 8, 1916. Serial No. 96,263. (Cl. 211—37.)



1. In a device of the character described, in combination, a casing comprising a base having flanges on its longitudinal edges adapted to hold a set of leaves, a receptacle having an open end secured to one of said flanges, a plate pivotally supported above said base for engaging and retaining said leaves thereupon, a portion of said plate covering the open end of said receptacle and being provided with a cutting aperture above the open end of the receptacle, and a punch carried by said plate adapted to coöperate with said cutting aperture.

2. In a device of the character described, in combination, a casing comprising a base having flanges on its longitudinal edges adapted to hold a set of leaves, a receptacle having an open end secured to one of said flanges,



a plate journaled between said flanges above said base for engaging and retaining said leaves thereupon, a portion of said plate covering the open end of said receptacle and being provided with a cutting aperture above the open end of the receptacle, and a punch carried by said plate adapted to coöperate with said cutting aperture.

3. In a device of the character described, in combination, a casing comprising a base having flanges on its longitudinal edges adapted to hold a set of leaves, a receptacle having an open end secured to one of said flanges, a plate journaled between said flanges above said base for retaining said leaves thereupon, a portion of said plate covering the open end of said receptacle and being provided with a cutting aperture, a member carried by said plate having a punch adapted to coöperate with said cutting aperture, and an abutment depending from said member for positioning a leaf to be cut between said punch and said plate.

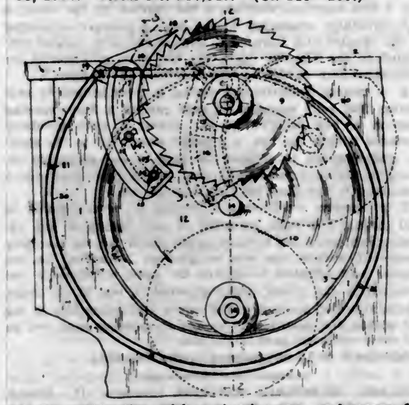
4. In a device of the character described, in combination, a casing comprising a base having flanges on its longitudinal edges adapted to hold a set of leaves, a receptacle having an open end secured to one of said flanges, a plate journaled between said flanges above said base for retaining said leaves thereupon, a portion of said plate covering the open end of said receptacle and being provided with a cutting aperture, a member carried by said plate having a punch adapted to coöperate with said cutting aperture, and a sliding abutment depending from said member for positioning a leaf to be cut between said punch and said plate.

5. In a device of the character described, in combination, a casing comprising a base having flanges on its longitudinal edges adapted to hold said leaves, a stop on said base against which one extremity of said leaves rests, a receptacle having an open upper end secured to one of said flanges, a plate journaled between said flanges above said base and having teeth at one end to engage and retain said leaves upon said base, a portion of said plate covering the open upper end of said receptacle and being provided with a cutting aperture, a member provided with an elongated slot carried by said plate and having a punch adapted to coöperate with said cutting aperture, and an abutment slidably mounted in the slot of said member and depending therefrom for positioning a leaf to be cut between said punch and said plate.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,047. SELF-ADJUSTING SPREADER FOR SAWS. DARWIN O. REINHOLD, San Francisco, Cal. Filed Dec. 18, 1916. Serial No. 137,549. (Cl. 143—159.)



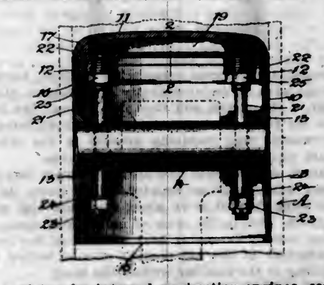
1. In combination with a circular saw, and means for raising and lowering the same, a spreader for the material cut by said saw, located adjacent to the rear portion of the saw near to, but below, the top of the same, and means for automatically raising or lowering the spreader with the rise or descent of the saw, while maintaining it adjacent thereto.

5. In combination with a circular saw, having a shaft and means for revolving said shaft and saw about an external axis, a rear spreader for said saw, a spreader holder revoluble with said shaft about said axis, and adjustable for saws of different diameters, said spreader being movable relatively to said spreader holder, and means for guiding said spreader while said holder is so revolving.

[Claims 2 to 4 not printed in the Gazette.]

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1,228,048. PISTON FOR INTERNAL-COMBUSTION ENGINES. GEORGE R. RICH, Oak Park, Ill. Filed Dec. 8, 1915. Serial No. 65,645. (Cl. 123—193.)



1. A piston for internal combustion engines, comprising an annular piston wall, having an annular groove in its external face at one end and formed on its internal wall with two hollow bosses, a wrist pin seated in said bosses, a separate head of less diameter than the annular piston wall, seated on said groove end and having a peripheral edge overhanging said groove, a piston ring in said groove, said piston ring being of greater internal diameter than the external diameter of the grooved end of the annular piston wall, screw threaded pins secured in said head and extending through said bosses and wrist pin, and means for drawing said pins down to firmly hold the piston head on the grooved end of the annular piston wall.

2. A piston for internal combustion engines, comprising an annular piston wall, having an annular groove in its external face at one end, and formed on its internal wall with bosses, a piston head seated on said grooved end of the annular wall and extending part way over said annular groove, there being an annular shoulder on the lower side of the head bearing against the inner face of the grooved end of the piston wall, screw threaded pins secured in said piston head and extending through apertures in said bosses, nuts on said threaded ends of the pins for drawing said head against the end of the annular piston wall, and a piston ring in said groove, said ring being of greater internal diameter than the external diameter of the grooved end of the annular piston wall.

[Claims 3 and 4 not printed in the Gazette.]

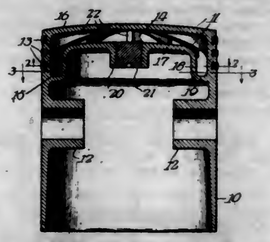
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1,228,049. PISTON FOR INTERNAL-COMBUSTION ENGINES. GEORGE R. RICH, Oak Park, Ill. Filed July 10, 1916. Serial No. 108,809. (Cl. 123—193.)

1. A piston for internal combustion engines, having a hollow piston head, the hollow space being completely inclosed and there being fins in the hollow space, formed on the underside of the top portion and extending to the annular wall portion of the hollow head.

2. A cast metal piston for internal combustion engines, having a hollow piston head cast with radially extending fins in the hollow portion, the hollow space being completely inclosed and said fins extending down from the underside of the top portion of the hollow head and their lower edges merging into said top portion and into the annular wall of the piston head.

3. A piston for internal combustion engines, having an annular wall open at the bottom and a hollow piston head, the hollow space being completely inclosed and the head being formed with heat conducting fins on the top portion of the hollow head, said fins being located in the hollow space.



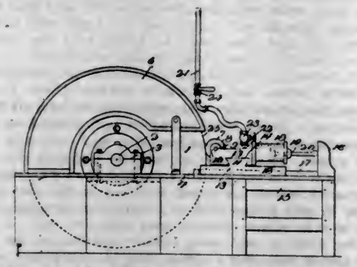
4. A piston for internal combustion engines, having a head formed with an isolated cavity extending to the annular wall of the piston and then down along the inside thereof in the form of an annular recess, there being one or more annular ring receiving grooves in the external face of said wall outside of said annular recess.

5. A piston for internal combustion engines, having a piston head formed with an isolated hollow space, the hollow space being carried down along the inner side of the annular piston wall in the form of an annular space, and there being radially extending heat conducting fins formed on the underside of the top portion of said hollow head and extending to the annular wall of the head.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,050. MACHINE FOR THE MANUFACTURE OF HIGH-SPEED FRICTION-SAWS. CHARLES F. ROBINSON, San Francisco, Cal. Original application filed Dec. 3, 1914, Serial No. 875,324. Divided and this application filed Oct. 4, 1915. Serial No. 54,037. (Cl. 76—25.)



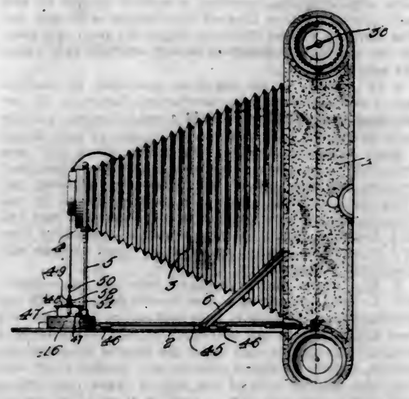
1. In a machine of the class described, a rotary shaft constituting a support for a saw disk blank, means for positively rotating the said shaft whereby to impart rotary motion to a blank thereon, a toothed roller supported in juxtaposition to the said shaft and in opposition to the periphery of a blank upon the shaft, the said roller being freely rotatable, and means for forcing the roller in the direction of the blank whereby to bring the periphery of the roller into working contact with the periphery of the blank, rotation of the blank serving to rotate the said roller.

2. In a machine of the class described, a support for a saw disk blank, means for rotating the support, a toothed roller supported in juxtaposition to the said support for the blank, means for forcing the roller in the direction of the blank whereby to bring the periphery of the roller into working contact with the periphery of the blank, rotation of the blank serving to rotate the said roller, and means for adjusting the roller transversely with relation to the blank.

3. In a machine of the class described, a support for a saw disk blank, a bed adjustable toward and from the said support, a head mounted upon the bed for transverse adjustment, a toothed roller carried by the head and arranged to be presented to the periphery of the blank, an abutment, and a fluid pressure cylinder connected with the head and having a piston coacting with the said abutment.

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1,228,051. CAMERA. ALBERT D. ROCHAU, Fairfax, Okla. Filed Jan. 18, 1915, Serial No. 2,918. Renewed Jan. 10, 1917. Serial No. 141,695. (Cl. 95—32.)



1. A camera comprising a casing, film rolls mounted in said casing, a film exposing shutter, a box secured to the casing, a gate pivotally connected within the box, a plunger connected to the shutter and engaging the gate, and means connected to the film for operating the gate.

2. A camera comprising a casing, film rolls mounted in the casing, a film exposing shutter, a box secured to the casing, a gate pivotally connected within the box, a plunger pivotally connected to the shutter and adapted to engage the gate, and means for simultaneously operating the shutter and plunger.

3. A camera comprising a casing, a cover pivotally connected to the casing, film rolls mounted within said casing, a film exposing shutter, a box carried by the cover, a gate pivotally connected to the box, a plunger connected to the shutter and adapted to engage the gate, means connected to the film for operating the gate, and means for simultaneously operating the shutter and plunger.

4. A camera comprising a casing, a cover hinged to said casing, film rolls mounted in said casing, a film exposing shutter, a box secured to the cover, a gate pivotally mounted within the box, a plunger connected to the shutter and adapted to engage the gate, a rod rotatably secured to the cover and connected to the gate, and means connected to the films for rotating the rod.

5. A camera comprising a casing, a cover hinged to said casing, film rolls mounted in said casing, a film exposing shutter, a box secured to the cover, a gate pivotally connected within the box, a plunger connected to the shutter and adapted to engage the gate, a rotatable rod mounted in the casing and connected to one of the rolls, a rotatable rod secured to the cover and connected to the rod within the casing, and means connecting said rod on the cover with the gate in the box.

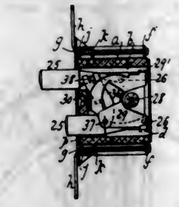
[Claims 6 to 18 not printed in the Gazette.]

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1,228,052. ELECTRIC SWITCH. JOSEPH H. RUBBY, Nutley, N. J. Filed May 22, 1913. Serial No. 769,199. (Cl. 175—293.)

1. An electric switch comprising an insulating supporting block, an adjusting screw and a wall supporting lug, said lug formed of a main stock, extending parallel with said adjusting screw, a portion bent forward from said main stock, said forward extending portion slotted to receive wall securing means, a portion having a threaded hole and bent backward from the base of said main stock, and a second portion having a threaded hole and bent backward from said main stock, above said first backwardly bent portion, said adjusting screw threaded through said threaded holes for adjustably mounting said lug upon said adjusting screw.





2. An electric switch comprising an insulating supporting block, an adjusting screw, and a supporting lug, said lug adjustably hinged upon said adjusting screw and having a main body extending parallel with said adjusting screw, said main body curved laterally away from said adjusting screw to provide swing room.

3. An electric switch comprising an insulating supporting block, a wall securing means, conductor contacts, and an operating mechanism, said mechanism including a base, a supporting stud on the base, an operating lever piece movably mounted on the stud, and a tubular member carried by the lever piece for mounting a spring.

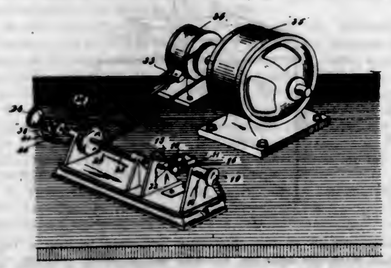
4. An electric switch comprising an insulating supporting block, an overhanging projection on the face of said block, said projection having a hole for a cover securing device, a post supported on said switch, a switch supporting lug swingingly mounted on said post, said lug being slotted to coact with a wall securing device and to provide clearance for said cover securing device.

5. An electric switch comprising an insulating supporting block, a strap on the face of said block, a base plate on the back of said block, connecting posts for mounting said strap and back plate upon said block and an adjustable supporting lug hinged upon said strap by said connecting post.

[Claims 6 to 18 not printed in the Gazette.]

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1,228,053. BALANCE-WHEEL POISING AND TRUING MACHINE. CHARLES E. SANFORD, New York, N. Y. Filed Apr. 21, 1916. Serial No. 92,603. (Cl. 77—63.)



1. In a machine of the class described, the combination with horizontal supports for the staff of a wheel to be balanced, one of said supports being rigid and the other movable, of a spindle slidable in the plane of said supports, a drill carried thereby, means for rotating said spindle, and means for moving said drill relative to the rim of said wheel.

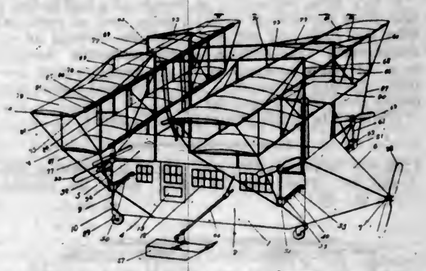
2. In a machine for balancing wheels, the combination with a pair of supports in which the shaft of said wheel may freely rotate in a horizontal plane, a drill slidable in a plane parallel to said supports, and positioned vertically therebelow, means for rotating said drill, and means for actuating said drill longitudinally.

3. In a machine for balancing wheels, the combination with a pair of supports, one of said supports being rigid, and the other resiliently mounted, said supports having means for engaging and disengaging the staff of a wheel, a drill mounted directly below said supports, parallel thereto, means for moving said drill axially, means for rotating said drill, a source of compressed air draft, means for conveying the air and discharging the same adjacent to the drill point when said drill is in a forward position, and means operative by the axial movement of said drill for opening or closing the air conveying means.

4. In a balancing machine, a pair of cupped supports receptive of the article to be balanced, and in which it freely rotates, a drill slidably mounted to register with the rim of the article, means for actuating said drill axially, means for rotating said drill, and means for blowing away the chips produced by said drill, the air draft in said blowing means being controlled by the axial movement of said drill.

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1,228,054. FLYING-MACHINE. CHARLES LEMUEL SANFORD, Washington, Pa., assignor to Sanford Manufacturing Company, Washington, Pa. Filed Aug. 19, 1914. Serial No. 857,570. (Cl. 244—15.)



1. In a flying machine, a car, a frame extending from said car, a plurality of planes supported by said frame, a plurality of lifting blades, vertical shafts supported by outriggers from said car and carrying said blades, a propulsive propeller, a tractive propeller, means for disconnecting the propulsive propeller and means extending to said vertical shafts and said tractive propeller for coincidently operating the latter in a reverse direction and the former in their normal direction.

2. In a flying machine, a car, a frame built up from said car extending thereabove forming posts and front and rear rods for fore and aft sets of bi-planes, plane sections pivotally secured between said rods and completing the planes, means for operating and connecting said plane sections to the car, a plurality of lateral beams extending outwardly from said car, vertical shafts secured and journaled at the extremities of said beams, lifting propellers mounted on said shafts, horizontal shafts on said beams operatively connected with said vertical shafts, a motor operatively connected with said horizontal shafts, a tractive propeller at the bow of said machine, a propeller shaft carrying said propeller and operatively connected to said motor independently of said lifting propellers, a propulsive propeller at the rear end of said machine, a shaft for said propulsive propeller operatively connected to said motor and driven co-incidently with said bow propeller and connections from said motor independent of the aforesaid connections for reversing the direction of rotation of said tractive propeller.

3. In a flying machine, a car, a motor contained in said car having its shaft extending from each end thereof,

auxiliary shafts at the front and rear ends of said motor respectively, clutches between said motor shaft and said auxiliary shafts, a bow propeller shaft, a stern propeller shaft, a subsidiary shaft operatively connected to the rear auxiliarly shaft and to the stern propeller shaft, a clutch mechanism intermediate of the length of said subsidiary shaft, a drive connection from said rear auxiliarly shaft to said bow propeller shaft, a bevel gear mounted on said bow propeller shaft, a gear shaft suitably journaled and supported adjacent to said bow propeller shaft and shiftable, a bevel gear on said gear shaft coacting with the aforesaid bevel gear, a driving connection between said forward auxiliary shaft and said gear shaft, an intermediate shaft suitably journaled and extending longitudinally with the car, a bevel gear at each end of said intermediate shaft, a plurality of horizontal shafts at right angles to said intermediate shaft, coacting bevel gears mounted on said horizontal shafts and connecting them with said intermediate shafts, gears on the extreme ends of said horizontal shafts, vertical shafts at the extreme ends of said horizontal shafts, coacting gears on the lower ends of said vertical shafts, lifting propellers mounted on said vertical shafts, a tractive propeller mounted on said bow propeller shaft, a propulsive propeller mounted on said stern propeller shaft and planes supported above and by said car.

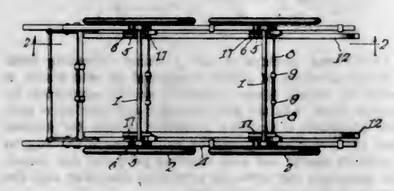
4. In a flying machine, a car formed of a hull having a tapering prow, a blunt stern, and a deck or roof sloping downwardly from a longitudinal central ridge and at the bottom thereof an air tight compartment and planes supported above and by said car.

5. In a flying machine, a car formed of a hull having a four sided pyramidical prow, a gable roof or deck, flat sides and stern and flat double bottoms forming an air compartment therebetween, shafts projecting laterally from said sides intermediate of the height thereof, pontoons pivotally swung from said shafts and planes supported above and by said car.

[Claims 6 to 10 not printed in the Gazette.]

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1,228,055. BABY-CARRIAGE. ALLEN D. SANTMIRE, Chicago, Ill. Filed Sept. 18, 1916. Serial No. 120,858. (Cl. 21—96.)



1. An attachment for vehicles comprising a frame, runners, long links pivoting the runners to the frame, slide bars, short links pivoting the bars to the long links, and means for sliding the bars.

2. A sled attachment for vehicles, comprising a frame, runners pivotally linked to said frame, bars slidably suspended beneath the frame, runner links each pivoted at its respective ends to the frame and runner, slide bar links each pivoted to said bar at one end and at the other end to an intermediate point on the runner link, and means for shifting the slide bars.

3. A sled attachment for vehicles, comprising a frame, runners pivotally linked to said frame, bars slidably suspended beneath the frame, runner links each pivoted at its respective ends to the frame and runner, slide bar links each pivoted to said bar at one end and at the other end to an intermediate point on the runner link, and a lever for shifting the slide bars.

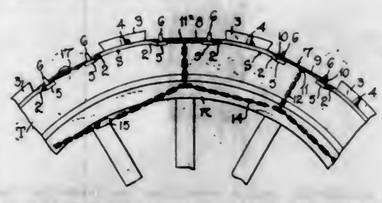
4. A sled attachment for vehicles, comprising a frame, runners pivotally linked to said frame, bars slidably suspended beneath the frame, runner links each pivoted at its respective ends to the frame and runner, slide bar links each pivoted to said bar at one end and at the other end to an intermediate point on the runner link, and an angular foot lever for shifting the slide bars.

5. A sled attachment for vehicles, comprising a fixed frame, movable runners, links connecting said runners to the frame, a slide bar operatively connected to the links, a lever, and links connecting the lever to the slide bar.

[Claims 6 to 10 not printed in the Gazette.]

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1,228,056. ANTISLIPPING DEVICE. HARRY A. SARVER, Parkersburg, W. Va. Filed Nov. 25, 1916. Serial No 133,424. (Cl. 152—14.)



1. An anti-slipping device comprising a plurality of sections, each of said sections including an elongated member provided with diverging extensions adjacent its opposite ends, said member and extensions being provided with calks, and means for connecting adjacent ends of said sections one to the other.

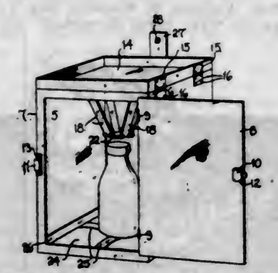
2. A device of the character described comprising, in combination, a plurality of sections adapted to be disposed circumferentially of a tire, rods connecting adjacent ends of the sections, said rods being provided intermediate their lengths with eyes, retaining members adapted to be disposed around the opposite sides of the tire, and connections between said last-named members and the eyes of the rods connecting the sections.

5. An anti-slipping device comprising a plurality of connected sections adapted to be disposed circumferentially of a tire, each of said sections including an elongated member provided adjacent its opposite ends with diverging extensions, a calk carried by the outer end portion of each of the extensions, and means in swiveled connection with the calks for connecting adjacent sections.

[Claims 3 and 4 not printed in the Gazette.]

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1,228,057. MILK-BOTTLE SAFETY-RECEPTACLE. ARTHUR SCHAFFER, Riverside, N. J. Filed May 27, 1916. Serial No. 100,351. (Cl. 232—41.)

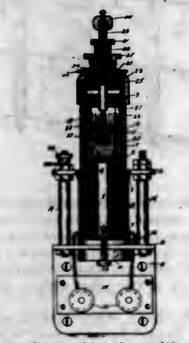


A receptacle of the character described having a top formed with an opening for the insertion of a bottle, a plurality of strips of resilient material each having an angularly bent upper end attached to the top and disposed at uniform distance around the opening, the free lower ends of the strips being urged toward each other by the resilience of the strips, the lower ends of the strips being formed with upwardly projecting ears, and coiled springs disposed between the lower ends of the strips and operatively connected to said ears, said springs yieldingly resisting outward movement of the lower ends of the strips and yieldingly holding the strips in spaced relation.



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1,228,058. ELECTRIC RELAY. FREDERICK W. SCHMIDT, Chicago, Ill., assignor, by mesne assignments, to Time-Systems Company, Portland, Me., a Corporation of Maine. Filed Oct. 19, 1914. Serial No. 867,296. (Cl. 175—281.)



1. In a relay, the combination with a tube, of a closure at one end thereof, an electromagnetic coil disposed below said closure and insulated therefrom, a core for said coil extending therethrough and into the closure aforesaid thereby having access to the interior of said tube, a float of insulating material located in said tube and provided with a projection on its under side, and an armature of magnetic material secured to said projection for coöperation with the core aforesaid.

2. The combination with a tube having one end thereof closed by an apertured plug, of an electro-magnetic coil alined with said tube and insulated therefrom, a core in said coil projecting into the aperture of said plug and having access to the interior of said tube a floating cup within said tube, and an armature for said core carried by the under side of said cup.

3. The combination with a tube having one end thereof closed by an apertured plug, of an electro-magnetic coil alined with said tube and insulated therefrom, a core in said coil projecting into the aperture of said plug and having access to the interior of said tube, a floating cup within said tube, an armature secured to the under side of said cup for coöperation with said core, and independent bodies of mercury within said cup and tube respectively adapted to establish electrical connection when the core attracts the armature aforesaid.

4. The combination with a tube, of an insulating closure in each end thereof, a rod adjustable through the closure of one end and extending into said tube, a core projecting through the remaining closure and having access to the interior of said tube, a coil surrounding said core, a float on the interior of said tube under the control of said coil and core and arranged to coöperate with the inner end of said rod, and mercury within the float and tube, adapted to establish a connection upon the attraction of the float by the core aforesaid.

5. In a relay, a metal tube, plugs of insulating material arranged in the ends of said tube, each of said plugs having an opening therethrough, an electro-magnet provided with a core fitting tightly within the opening in one of the plugs, a conducting rod extending into the tube through the other plug, a mercury bath in the tube, a cup-shaped float supported on said bath and surrounding the inner end of said rod, mercury in said cup-shaped float, a member of magnetic material secured to the lower end of the float, said float having an opening extending from the interior to the exterior thereof at such a height that normally the lowest point thereof lies above the level of the mercury in the tube a distance less than the distance between the effective lower end of the float and the effective bottom of the tube.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,059. WIRE-HOLDING DEVICE. ALFRED E. SCHNEIDER and BRUNO W. SCHNEIDER, Seattle, Wash. Filed June 7, 1915. Serial No. 32,563. (Cl. 242—157.)



1. A wire holding device comprising a supporting bar, a body plate slidable lengthwise of said bar, wire guides on said body plate, and means on said body plate for engaging a wire to permit it to be moved in one direction only.

2. A wire holding device of the class described comprising a body plate, perforated wire guides provided on said body plate, said wire guides having inclined slots that communicate with said perforations, to permit the insertion of a wire therein, an upwardly projecting wire engaging element in alinement with said wire guides, and a spring pressed cam to coact with said wire engaging element to hold a wire.

3. A wire holding device of the class described comprising a body plate, a supporting bar, means for slidably engaging said body plate with said supporting bar, wire guides provided on said supporting plate, an upwardly projecting wire engaging element, and a spring pressed cam to coact with said wire engaging element to hold a wire.

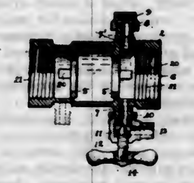
4. A device of the class described comprising a frame having a spool of wire associated therewith, of brake devices yieldably engaging said spool, a bar disposed lengthwise of said spool, and a wire holding device slidably mounted on said bar said wire holding device having means for guiding a wire and means for engaging a wire to permit said wire to be moved through said guides in one direction and to prevent movement of said wire in an opposite direction.

5. A device of the class described comprising a frame having a spool of wire cable associated therewith, brake devices yieldingly engaging said spool, a bar disposed lengthwise of said spool, a wire holding device slidably mounted on said bar, wire guides associated with said wire holding device, an upwardly projecting wire engaging member in alinement with said wire guides and a spring pressed cam to coact with said wire engaging member to hold a wire.

[Claim 6 not printed in the Gazette.]

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1,228,060. STOP AND WASTE VALVE. FRED SCHULDES, Cleveland, Ohio, assignor to United Brass Manufacturing Company, Cleveland, Ohio, a Partnership composed of Wm. J. Schoenberger and Benjamin F. Klein. Filed Dec. 13, 1915. Serial No. 66,651. (Cl. 137—5.)



1. A valve body having a main water passage through the same and a valve adapted to open and close said passage and provided with a waste nipple at one side open to the delivery end of said valve body, in combination with an elbow shaped waste discharge member rotatably engaged with said nipple, and a valve for said nipple

auxiliary shafts at the front and rear ends of said motor respectively, clutches between said motor shaft and said auxiliary shafts, a bow propeller shaft, a stern propeller shaft, a subsidiary shaft operatively connected to the rear auxiliarly shaft and to the stern propeller shaft, a clutch mechanism intermediate of the length of said subsidiary shaft, a drive connection from said rear auxiliarly shaft to said bow propeller shaft, a bevel gear mounted on said bow propeller shaft, a gear shaft suitably journaled and supported adjacent to said bow propeller shaft and shiftable, a bevel gear on said gear shaft coacting with the aforesaid bevel gear, a driving connection between said forward auxiliary shaft and said gear shaft, an intermediate shaft suitably journaled and extending longitudinally with the car, a bevel gear at each end of said intermediate shaft, a plurality of horizontal shafts at right angles to said intermediate shaft, coacting bevel gears mounted on said horizontal shafts and connecting them with said intermediate shafts, gears on the extreme ends of said horizontal shafts, vertical shafts at the extreme ends of said horizontal shafts, coacting gears on the lower ends of said vertical shafts, lifting propellers mounted on said vertical shafts, a tractive propeller mounted on said bow propeller shaft, a propulsive propeller mounted on said stern propeller shaft and planes supported above and by said car.

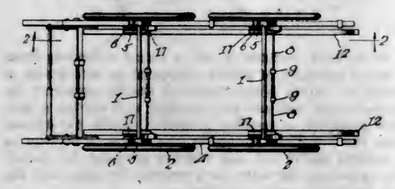
4. In a flying machine, a car formed of a hull having a tapering prow, a blunt stern, and a deck or roof sloping downwardly from a longitudinal central ridge and at the bottom thereof an air tight compartment and planes supported above and by said car.

5. In a flying machine, a car formed of a hull having a four sided pyramidical prow, a gable roof or deck, flat sides and stern and flat double bottoms forming an air compartment therebetween, shafts projecting laterally from said sides intermediate of the height thereof, pontoons pivotally swung from said shafts and planes supported above and by said car.

[Claims 6 to 10 not printed in the Gazette.]

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1,228,055. BABY-CARRIAGE. ALLEN D. SANTMIRE, Chicago, Ill. Filed Sept. 18, 1916. Serial No. 120,858. (Cl. 21—96.)



1. An attachment for vehicles comprising a frame, runners, long links pivoting the runners to the frame, slide bars, short links pivoting the bars to the long links, and means for sliding the bars.

2. A sled attachment for vehicles, comprising a frame, runners pivotally linked to said frame, bars slidably suspended beneath the frame, runner links each pivoted at its respective ends to the frame and runner, slide bar links each pivoted to said bar at one end and at the other end to an intermediate point on the runner link, and means for shifting the slide bars.

3. A sled attachment for vehicles, comprising a frame, runners pivotally linked to said frame, bars slidably suspended beneath the frame, runner links each pivoted at its respective ends to the frame and runner, slide bar links each pivoted to said bar at one end and at the other end to an intermediate point on the runner link, and a lever for shifting the slide bars.

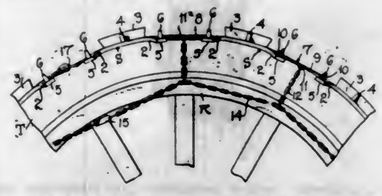
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5. A sled attachment for vehicles, comprising a fixed frame, movable runners, links connecting said runners to the frame, a slide bar operatively connected to the links, a lever, and links connecting the lever to the slide bar.

[Claims 6 to 10 not printed in the Gazette.]

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1,228,056. ANTISLIPPING DEVICE. HARRY A. SARVER, Parkersburg, W. Va. Filed Nov. 25, 1916. Serial No. 133,424. (Cl. 152—14.)



1. An anti-slipping device comprising a plurality of sections, each of said sections including an elongated member provided with diverging extensions adjacent its opposite ends, said member and extensions being provided with calks, and means for connecting adjacent ends of said sections one to the other.

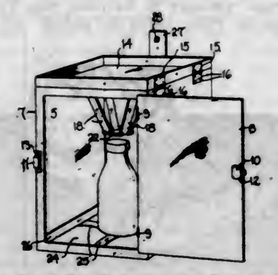
2. A device of the character described comprising, in combination, a plurality of sections adapted to be disposed circumferentially of a tire, rods connecting adjacent ends of the sections, said rods being provided intermediate their lengths with eyes, retaining members adapted to be disposed around the opposite sides of the tire, and connections between said transmitted members and the eyes of the rods connecting the sections.

5. An anti-slipping device comprising a plurality of connected sections adapted to be disposed circumferentially of a tire, each of said sections including an elongated member provided adjacent its opposite ends with diverging extensions, a calk carried by the outer end portion of each of the extensions, and means in swiveled connection with the calks for connecting adjacent sections.

[Claims 3 and 4 not printed in the Gazette.]

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1,228,057. MILK-BOTTLE SAFETY-RECEPTACLE. ARTHUR SCHAFFER, Riverside, N. J. Filed May 27, 1916. Serial No. 100,351. (Cl. 232—41.)

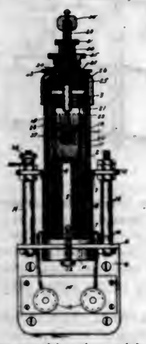


A receptacle of the character described having a top formed with an opening for the insertion of a bottle, a plurality of strips of resilient material each having an angularly bent upper end attached to the top and disposed at uniform distance around the opening, the free lower ends of the strips being urged toward each other by the resilience of the strips, the lower ends of the strips being formed with upwardly projecting ears, and coiled springs disposed between the lower ends of the strips and operatively connected to said ears, said springs yieldingly resisting outward movement of the lower ends of the strips and yieldingly holding the strips in spaced relation.



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1,228,058. ELECTRIC RELAY. FREDERICK W. SCHMIDT, Chicago, Ill., assignor, by mesne assignments, to Time-Systems Company, Portland, Me., a Corporation of Maine. Filed Oct. 19, 1914. Serial No. 867,296. (Cl. 175—281.)



1. In a relay, the combination with a tube, of a closure at one end thereof, an electromagnetic coil disposed below said closure and insulated therefrom, a core for said coil extending therethrough and into the closure aforesaid thereby having access to the interior of said tube, a float of insulating material located in said tube and provided with a projection on its under side, and an armature of magnetic material secured to said projection for coöperation with the core aforesaid.

2. The combination with a tube having one end thereof closed by an apertured plug, of an electro-magnetic coil alined with said tube and insulated therefrom, a core in said coil projecting into the aperture of said plug and having access to the interior of said tube a floating cup within said tube, and an armature for said core carried by the under side of said cup.

3. The combination with a tube having one end thereof closed by an apertured plug, of an electro-magnetic coil alined with said tube and insulated therefrom, a core in said coil projecting into the aperture of said plug and having access to the interior of said tube, a floating cup within said tube, an armature secured to the under side of said cup for coöperation with said core, and independent bodies of mercury within said cup and tube respectively adapted to establish electrical connection when the core attracts the armature aforesaid.

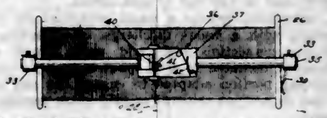
4. The combination with a tube, of an insulating closure in each end thereof, a rod adjustable through the closure of one end and extending into said tube, a core projecting through the remaining closure and having access to the interior of said tube, a coil surrounding said core, a float on the interior of said tube under the control of said coil and core and arranged to coöperate with the inner end of said rod, and mercury within the float and tube, adapted to establish a connection upon the attraction of the float by the core aforesaid.

5. In a relay, a metal tube, plugs of insulating material arranged in the ends of said tube, each of said plugs having an opening therethrough, an electro-magnet provided with a core fitting tightly within the opening in one of the plugs, a conducting rod extending into the tube through the other plug, a mercury bath in the tube, a cup-shaped float supported on said bath and surrounding the inner end of said rod, mercury in said cup-shaped float, a member of magnetic material secured to the lower end of the float, said float having an opening extending from the interior to the exterior thereof at such a height that normally the lowest point thereof lies above the level of the mercury in the tube a distance less than the distance between the effective lower end of the float and the effective bottom of the tube.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,059. WIRE-HOLDING DEVICE. ALFRED E. SCHNEIDER and BRUNO W. SCHNEIDER, Seattle, Wash. Filed June 7, 1915. Serial No. 32,563. (Cl. 242—157.)



1. A wire holding device comprising a supporting bar, a body plate slidable lengthwise of said bar, wire guides on said body plate, and means on said body plate for engaging a wire to permit it to be moved in one direction only.

2. A wire holding device of the class described comprising a body plate, perforated wire guides provided on said body plate, said wire guides having inclined slots that communicate with said perforations, to permit the insertion of a wire therein, an upwardly projecting wire engaging element in alinement with said wire guides, and a spring pressed cam to coact with said wire engaging element to hold a wire.

3. A wire holding device of the class described comprising a body plate, a supporting bar, means for slidably engaging said body plate with said supporting bar, wire guides provided on said supporting plate, an upwardly projecting wire engaging element, and a spring pressed cam to coact with said wire engaging element to hold a wire.

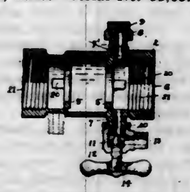
4. A device of the class described comprising a frame having a spool of wire associated therewith, of brake devices yieldably engaging said spool, a bar disposed lengthwise of said spool, and a wire holding device slidably mounted on said bar said wire holding device having means for guiding a wire and means for engaging a wire to permit said wire to be moved through said guides in one direction and to prevent movement of said wire in an opposite direction.

5. A device of the class described comprising a frame having a spool of wire cable associated therewith, brake devices yieldingly engaging said spool, a bar disposed lengthwise of said spool, a wire holding device slidably mounted on said bar, wire guides associated with said wire holding device, an upwardly projecting wire engaging member in alinement with said wire guides and a spring pressed cam to coact with said wire engaging member to hold a wire.

[Claim 6 not printed in the Gazette.]

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1,228,060. STOP AND WASTE VALVE. FRED SCHULDES, Cleveland, Ohio, assignor to United Brass Manufacturing Company, Cleveland, Ohio, a Partnership composed of Wm. J. Schoenberger and Benjamin F. Klein. Filed Dec. 13, 1915. Serial No. 66,651. (Cl. 137—5.)



1. A valve body having a main water passage through the same and a valve adapted to open and close said passage and provided with a waste nipple at one side open to the delivery end of said valve body, in combination with an elbow shaped waste discharge member rotatably engaged with said nipple, and a valve for said nipple

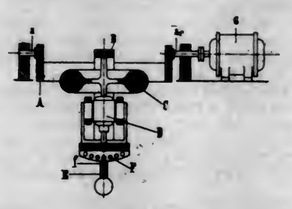
engaged in said member, and means to lock said discharge member in different set positions upon said nipple.

2. A valve body having an externally-threaded waste nipple, in combination with a waste discharge member of substantially elbow shape in rotatable screw engagement over said nipple, a lock nut mounted upon said nipple behind said discharge member and adapted to limit the same, and a valve to control the outflow of the waste adapted to seat in the end of said nipple.

3. A valve body having a waste nipple at its side, in combination with a waste discharge spout having rotatable screw connection with said waste nipple and a valve member mounted in said spout having an enlarged inner seating portion adapted to engage the end of said nipple and to prevent removal of said valve member from said spout.

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1,228,061. DEVICE FOR DAMPING OSCILLATIONS OF A GYROSCOPE-PENDULUM. MAX SCHULER, Neumühlen, near Kiel, Germany, assignor to Anschütz & Co., Neumühlen, near Kiel, Germany. Filed May 20, 1913. Serial No. 768,739. (Cl. 74—78.)



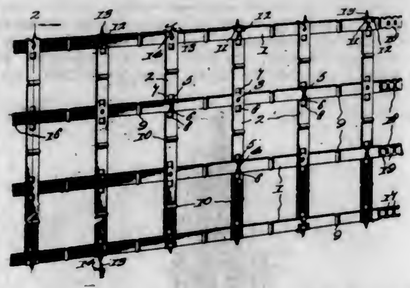
1. In combination, a main pendulum including a gyroscope said pendulum being adapted to oscillate about a horizontal axis while the gyroscope is adapted to oscillate about a second horizontal axis at right angles to the first named axis, a fixed support for the axis of the main pendulum, means entirely independent of the main pendulum and fixedly related to said fixed support for applying a turning moment to said main pendulum, and means whereby oscillations of said gyroscope control said turning moment applying means so as to counteract oscillations of said pendulum.

2. In combination, a main pendulum including a gyroscope said pendulum having a fixedly attached horizontal axis, and the gyroscope being adapted to oscillate about a second horizontal axis at right angles to the first named axis, a fixed support for the axis of the main pendulum, a motor fixedly related to said fixed support and engaging the aforesaid axis of the main pendulum, means whereby oscillations of the gyroscope control the action of the motor so as to cause turning moments to be applied to the main pendulum axis, whereby oscillations of said main pendulum are counteracted.

3. In a gyroscope pendulum, in combination a gyroscope having a normally vertical axis, means for pivoting said gyroscope universally about a point situated above its center of gravity, external means for applying a turning moment to said gyroscope about a horizontal axis, and a pendulum pivoted about a horizontal axis at right-angles to the first, and adapted to cause the said external means to apply turning moments to the gyroscope to counteract the oscillations thereof.

4. In a gyroscope pendulum, the combination with a gyroscope having a normally vertical axis, means for pivoting said gyroscope universally about a point situated above its center of gravity, an electric motor for applying a turning moment to said gyroscope about a horizontal axis, and a pendulum pivoted about a horizontal axis at right-angles to the first, electric contacts arranged in the circuit of said motor and adapted to be contacted by said pendulum during its oscillations, whereby the motor circuit is closed and the motor exerts a turning moment on said gyroscope to counteract the oscillations thereof.

1,228,062. FENCE. WALTER P. SCOFIELD, Woodrow, Fla., assignor of one-half to David C. Gillett, Tampa, Fla. Filed June 3, 1916. Serial No. 101,584. (Cl. 256—21.)



1. In a fence, line bands, stays crossing said line bands, heads and sockets formed between said bands and stays, and means for connecting said bands and stays to hold the heads in said sockets including tongues punched from one series of said members and overturned rearwardly against the members of the other series, substantially as described.

2. In a fence, line bands, stays crossing said line bands, heads and sockets formed between said bands and stays, and tongues punched from said stays and being overturned in opposite directions against said bands leaving openings for receiving fastening means, substantially as described.

3. In a fence, line bands having notches at one end thereof, complemental rectangular heads and sockets stamped from said bands, and lugs bent transversely from the opposite end of the band and inter-engaged with said notches, substantially as described.

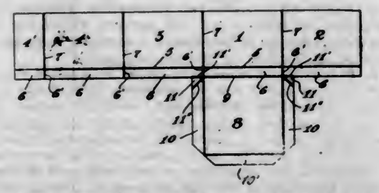
4. In a fence, line bands, stays crossing said line bands and secured thereto, loops bent in said stays and bands for permitting of contraction and expansion, lugs bent from one end of each of said bands and folded over on lines of flexure extending longitudinally of the band and clamped down against the adjacent end of the next band, substantially as described.

5. In a fence, stays, line bands crossing said stays, loops bent in said stays and bands for permitting of contraction and expansion and joints between said bands and stays including heads, sockets occupied by said heads, and tongues punched from said stays and bent over in pairs in opposite directions rearwardly to clamp said bands, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,063. RECEPTACLE. CHARLES SCUDDER, Seattle, Wash., assignor, by mesne assignments, to John W. Haas, Seattle, Wash. Filed June 13, 1914, Serial No. 844,919. Renewed Oct. 23, 1916. Serial No. 127,810. (Cl. 229—16.)



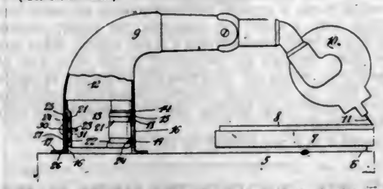
1. In a receptacle of the character described, a body formed of one piece folded to constitute the side walls of a container, a continuous flange secured along the lower edges of and upturned within said walls, a bottom secured along one edge to said flange and provided with downwardly projecting flanges, said flanges fitting between the side walls and their upturned flanges, said downwardly projecting flanges at two sides of the bottom being joined to said upturned flanges by a triangular piece which is an integral part of the downwardly projecting flange, and which is joined to the upturned flange along one edge, by means of which piece said upturned flanges are automatically spaced from the side walls to permit the proper seating of said downwardly projecting flanges.

2. In a receptacle of the character described, a body comprising four side walls formed of one piece of material, flanges formed integral therewith and upturned within said walls along their lower edges, a bottom formed integral therewith and folded along one side flange, flanges along the other three sides of said bottom formed integral therewith, said flanges projecting downwardly and fitting between the side walls and the upturned flanges, said downwardly projecting flanges at opposite sides of said bottom being secured to the upwardly projecting flanges adjacent to that flange to which the bottom is secured by integral triangular pieces, said pieces forming a continuation of said downwardly projecting flanges in the blank, and serving to automatically space said upturned flanges from the side walls, to thereby guide the downwardly projecting flanges into proper position.



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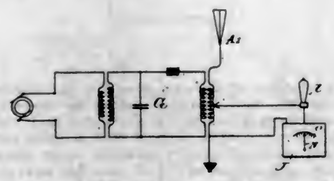
1,228,064. TONE-ARM SUPPORT. HERMAN SEGAL, New York, N. Y. Filed Sept. 5, 1916. Serial No. 118,890. (Cl. 274—23.)



The combination with the tone-arm and the cabinet of a talking machine, a hollow sleeve secured to said tone-arm and having a horizontal slot, a hollow bracket secured to said cabinet and adapted to receive said hollow sleeve, ball bearings between the latter and the said bracket, a plate for preventing the balls in said ball bearings from leaving the same and a screw for securing the said plate to the said hollow bracket, said screw extending into the said slot to limit the movement of the said tone-arm.

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1,228,065. CURRENT-INDICATING APPARATUS FOR DIRECT-READING WAVE-METERS FOR HIGH-FREQUENCY OSCILLATIONS. GEORGE SEIBT, Berlin, Germany, assignor to General Transmission Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 18, 1911. Serial No. 655,383. (Cl. 250—39.)



1. The combination with a direct reading wave meter for high frequency oscillations including adjacent coils in shunt to each other, a member inductively associated with both coils and having a pointer, and means associated with one of said coils to vary the relative inductive effect thereof on the member inductively associated therewith, of means for indicating the strength of current flowing through the wave meter.

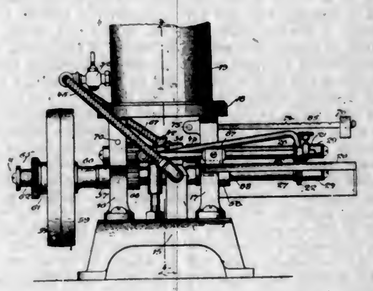
2. The combination with a direct reading wave meter for high frequency oscillations including adjacent coils in shunt to each other, a member inductively associated with both coils and having a pointer, and means to relatively vary the inductive effect of said coils, of an incandescent lamp arranged in series in the circuit of the wave meter to indicate the strength of current flowing therethrough.

3. The combination with a high frequency oscillation circuit, of a direct reading wave meter coupled to said oscillation circuit, means for indicating the strength of current flowing through the wave meter, and means for adjusting the coupling of the wave meter circuit to said oscillation circuit to maintain an approximately uniform minimum current flow through the meter.

4. The combination with a high frequency oscillation circuit, of a direct reading wave meter coupled to said oscillation circuit, said meter including adjacent coils in shunt to each other, a member inductively associated with both coils and having a pointer, and means for relatively varying the inductive effect of said coils; means for indicating the strength of current flowing through the wave meter, and means for adjusting the coupling of the wave meter circuit to said oscillation circuit to maintain an approximately uniform minimum current flow through the meter.

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1,228,066. SEAM-DAMPENING MACHINE. JOHN J. SELTENREICH, Chicago, Ill. Filed Sept. 8, 1913. Serial No. 788,602. (Cl. 68—9.)



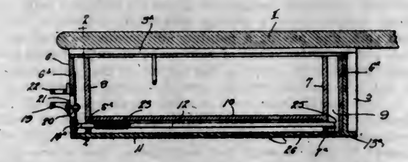
1. In a seam dampening machine comprising the combination of a combined feed and dampening wheel, means for driving the wheel, said wheel comprising two members spaced apart with a free water passage between them, and means for supplying water to flow outwardly through said passage to a collar.

2. In a seam dampening machine comprising the combination of a dampening wheel, comprising two members spaced apart with a free water passage between them and having peripheral feed-surfaces thereon, a shaft having a water-duct therein communicating with said passage, means for supplying water to the duct, and means for rotating said shaft.

3. In a seam dampening machine comprising the combination of a wheel comprising two members spaced apart with a free water passage between them, a chamber of a greater width than said passage being formed in the wheel between said passage and the shaft, a shaft having a water duct therein and a port between said chamber and said duct, means for supplying water to the duct, and means for rotating the shaft.

4. In a seam dampening machine, the combination of a pair of feed-wheels, dampening means, mechanism for operating the wheels, a lever for deflecting the tab on a collar, a collar-guide and a lever pivotally sustained between its ends, on which the guide is mounted so as to be shifted by the collar, the feed-deflecting lever being pivoted to the guide carrying lever.

**1,228,067. DESK-DRAWER.** CHARLES J. SEVERANCE, Wacousta, Mich. Filed Aug. 15, 1916. Serial No. 115,025. (Cl. 45—94.)



1. In a device of the character stated, a casing provided in the inner face of its bottom with a longitudinally extending series of recesses, a drawer slidable in said casing, a locking rod rockably supported by the drawer beneath the bottom thereof, the inner end of said rod being bent to engage into said recesses when the rod is depressed, and means for operating the rod exteriorly of the drawer.

2. In a device of the character stated, a casing provided in the inner face of its bottom with a longitudinally extending series of recesses, a drawer slidable in said casing, a locking rod rockably supported by the drawer beneath the bottom thereof and having its inner end bent to engage into said recesses when the rod is depressed, means for normally holding said rod depressed, a thumb knob slidably mounted on the front of said drawer, and connections between said knob and rod for raising the rod out of engagement of said recesses when the knob is raised.

3. In a device of the character described, the combination of a casing provided with a plurality of recesses in its bottom, a drawer slidable in the casing and having its bottom in spaced relation to the bottom of the casing, said drawer being provided with a transverse partition spaced from each end wall, a rod carried by the drawer and rockably mounted therein between the bottom of the drawer and the bottom of the casing, said rod being provided at its inner end with an integral latch member positioned between the inner end and the inner partition of the drawer and adapted to engage the said recesses in the bottom of the casing, a coil spring mounted about the rod and adapted to normally hold the latch member in depressed position, a plate slidably mounted on the front wall of the drawer, means for moving the plate vertically, and connections between the said plate and the outer end of the rod whereby the rod is rotated so as to lift the latch member into inoperative position when the plate is raised.

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**1,228,068. GARTER.** HARRIET TILNEY SHELDON, Marblecliff, Ohio. Filed Sept. 13, 1915. Serial No. 50,535. (Cl. 241—1.)

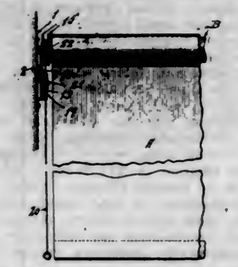


1. The combination with the depending supporter straps of a corset, and hose fasteners on the ends of said straps, of a garter band for encircling the leg of a wearer, and studs for coaction with said fasteners circumferentially adjustably mounted on said band, the arrangement being such that the hose lies on the outside of the garter band between said studs and said fasteners.

2. The combination with the depending supporter straps of a corset, and hose fasteners on the ends of said straps, of a garter band for encircling the leg of a wearer, and studs for coaction with said fasteners circumferentially adjustably mounted on said band, said studs being the only means to coact with said fasteners in their support of the hose and being also the only means of connection between said band and said straps, the arrangement being such that the hose lies on the outside of the garter band between said studs and said fasteners.

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**1,228,069. WINDOW-SHADE-OPERATING DEVICE.** EDWIN T. SHELTON, St. Louis, Mo., assignor of one-fourth to Stonay L. Langdale and one-fourth to William H. Langdale, St. Louis, Mo. Filed Dec. 9, 1916. Serial No. 135,964. (Cl. 156—35.)

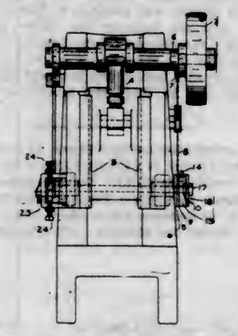


7. A window-shade operating device comprising a hanger plate, a roller drum having radial stops, a resilient yielding locking dog, having a lip for engaging the radial stops, a ratchet-wheel having radial ratchet teeth and peripheral detent lugs, for releasing the locking dog from the radial stops, a rocking pawl-bar having an inner arm provided with a pawl for engaging the radial ratchet teeth and an outer arm carrying a lower sheave, lower and upper stops, limiting the movement of the outer arm of the pawl-bar, means for returning the pawl-bar, an upper sheave and an operating flexible connection extending from the roller drum, beneath the lower sheave, and over the upper sheaves.

[Claims 1 to 6 not printed in the Gazette.]

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**1,228,070. NON-REPEATING SAFETY-CLUTCH.** CHARLES SHERMAN, Maywood, Ill. Filed Sept. 8, 1916. Serial No. 118,988. (Cl. 74—46.)



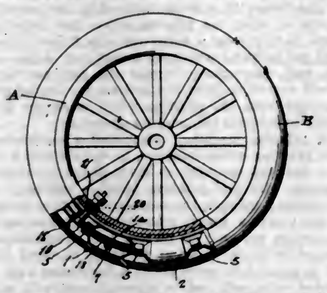
1. In machines of the class described, the combination of the driving clutch and the tripping mechanism therefor, levers on each side of said machine, a shaft connecting said levers, a series of disks with cutaway portions upon said shaft one part of said disk series being controlled by each of said levers, an operating pawl pivoted upon one of these disks and adapted to fall into the cutaway portions of said disks when the said levers move in unison, a restoring mechanism consisting of a cam with connections to forcibly restore the mechanism to normal position.

2. In machines of the class described, the combination of the driving clutch and the tripping mechanism therefor, levers on each side of said machine, a shaft connecting said levers, a series of disks with cutaway portions upon said shaft one part of said disk series being controlled by each of said levers, an operating pawl pivoted upon one of these disks and adapted to fall into the cutaway portions of said disks when the said levers move in unison, a restoring mechanism consisting of a cam with connections to forcibly restore the mechanism to normal position, a spring hinge in one of said levers, means for locking one of said levers, a pedal with connection to the other of said levers.

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**1,228,071. TIRE.** JOSEPH F. SINCAGE, Florence, Mass. Filed July 12, 1916. Serial No. 108,912. (Cl. 152—22.)

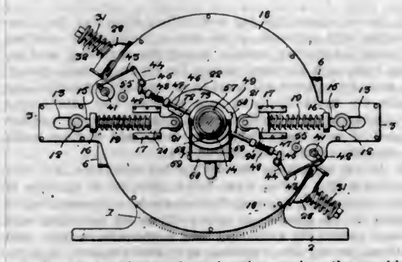


1. An inner tube comprising a plurality of inflatable sections, an air distributing tube extending through the sections and provided with ports, certain of the ports having grooves therein, valves slidably mounted in the grooves, pressure operated valves covering the other of the ports, stems depending from the first-mentioned valves, and an operating member connected to the stems.

2. An inner tube for a tire comprising a plurality of inflatable sections, means for connecting the sections to each other, an air distributing pipe extending through the sections and formed of sections, each of the sections of the air distributing pipe having opposed ports therein for establishing communication between the sections of the air distributing pipe and the adjacent inflatable sections, pressure operated valves closing certain of the ports in the sections of the distributing pipe, valves for closing the other ports in the sections of the distributing tube, an operating rod extending through the distributing tube and stems carried by the last-mentioned valves and having connection with the operating rod so as to effect the simultaneous unseating of all of the last-mentioned valves when the operating rod is moved in one direction for the purpose specified.

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**1,228,072. ROTARY INTERNAL-COMBUSTION ENGINE.** JOHN M. SINER, Parish, Fla. Filed June 30, 1916. Serial No. 106,917. (Cl. 123—14.)



1. In a rotary internal combustion engine, the combination of a stationary cylindrical casing having radially extended cut-off housings, inlet valve chambers and exhaust ports; a central engine shaft, a rotor fast on said shaft having an abutment formed with an eccentric face and a working face substantially parallel to the working face of the adjacent cut-off when in firing position; a plurality of radially movable cut-offs slidable in said housings between the inlet valve chambers and exhaust ports; oscillatory inlet valves in said valve chambers, a plurality of charge compressors mounted on the stationary casing and driven from the engine shaft, intake valves for said compressors, and means for quickly opening and closing said oscillatory inlet valves.

2. In a rotary internal combustion engine, the combination of a stationary cylindrical casing having radially extended cut-off housings, inlet valve chambers and exhaust ports; a central engine shaft, a rotor fast on said shaft having an abutment formed with an eccentric face and a working face substantially parallel to the working face of the adjacent cut-off when in firing position; a plurality of radially movable cut-offs slidable in said housings between the inlet valve chambers and exhaust ports; oscillatory inlet valves in said valve chambers, a plurality of charge compressors mounted on the stationary casing and driven from the engine shaft, intake valves for said compressors, cam mechanism for opening said inlet valves, and springs for quickly closing the same.

3. In a rotary internal combustion engine, the combination of a stationary cylindrical casing having radially extended cut-off housings, inlet valve chambers and exhaust ports; a central engine shaft, a rotor fast on said shaft having an abutment formed with an eccentric face and a working face substantially parallel to the working face of the adjacent cut-off when in firing position; a plurality of radially movable cut-offs slidable in said housings between the inlet valve chambers and exhaust ports; oscillatory inlet valves in said valve chambers, and a plurality of charge compressors mounted on the stationary casing and driven from the engine shaft, said intake valves each having ports only one of which at a time may register with its mating port in the casing.

4. In a rotary internal combustion engine, the combination of a stationary cylindrical casing having radially extended cut-off housings, inlet valve chambers and exhaust ports; a central engine shaft, a rotor fast on said shaft having an abutment formed with an eccentric face and a working face substantially parallel to the working face of the adjacent cut-off when in firing position; a plurality of radially movable cut-offs slidable in said housings between the inlet valve chambers and exhaust ports; oscillatory inlet valves in said valve chambers located between the compressors and the expansion chamber, a plurality of charge compressors mounted on the stationary casing and driven from the engine shaft, intake valves for said compressors, and means for quickly opening and closing said inlet valves.

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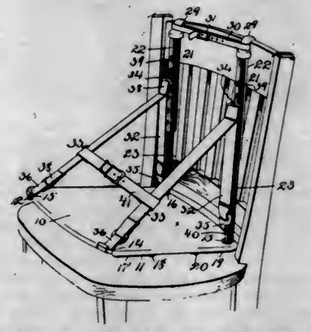
**1,228,073. FOLDING SEAT.** HARRY SLAVITT, Pleasantdale, N. J. Filed Feb. 12, 1916. Serial No. 77,819. (Cl. 155—26.)

1. In a device of the class described, the combination of a pair of sleeves, hooks at their upper ends for attachment to a supporting object, members telescopically received in said sleeves and projecting from the lower ends thereof, a seat bottom connected at its rearward part to said members, and a substantially V-shaped harness for supporting said telescoping members and said bottom from said sleeves, substantially as set forth.

2. In a device of the class described, a pair of sleeves having hooks at their upper ends and holes at their forward sides, a pair of members telescopically received within said sleeves, a seat bottom connected to said members at its rearward part, and harness members received in said apertures for limiting the withdrawal of said members from said sleeves and for supporting the forward side of said seat bottom from said sleeves, substantially as set forth.

3. In a device of the class described, a pair of apertured longitudinally extensible, substantially rigid back mem-

bers, hooks at their upper ends, a seat bottom, and means for suspending said seat bottom from said back members comprising hooks received within apertures in the back members, substantially as set forth.



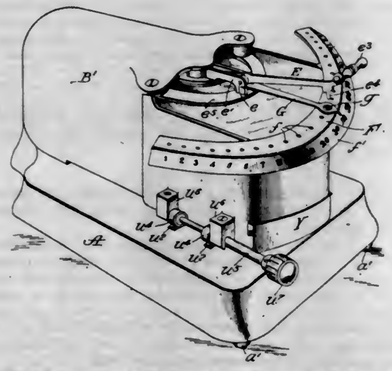
4. In a device of the class described, a pair of sleeves, hooks at their upper ends, said sleeves having inwardly extending flanges at their lower ends, members having enlarged upper ends received within said sleeves and projecting beyond the lower ends thereof, means for limiting the projection of said members beyond said sleeves, and a seat bottom supported from the lower ends of said members at its rearward portion and supported at its forward portion from said sleeves, substantially as set forth.

5. In a device of the class described, a pair of telescoping, substantially rigid back members, a seat bottom, and a harness for limiting the extension of said members and for supporting the forward portion of the seat bottom from said members, substantialy as set forth.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,074. PRINTING-MACHINE. RAYMOND P. SLOAN, Media, Pa. Filed July 15, 1916. Serial No. 109,441. (Cl. 197—6.4.)



1. A printing machine comprising a printing wheel having a flat face with a series of radially arranged characters, a platen for pressing the paper against the wheel, a lever for turning the wheel to printing position and for operating the platen, a flat inking pad, and means operated by the lever for moving the pad into contact with parts of the printing wheel and for coincidently operating the platen to press the paper against another part of said wheel.

2. A printing machine, comprising a printing wheel mounted to rotate in a horizontal plane, a vertically moving platen coöperating therewith, a lever mounted to turn about a vertical axis to move the printing wheel to printing position and to turn about a horizontal axis for moving the platen toward the printing wheel, and an inking device operated by said lever to apply ink to the printing wheel during the upward movement of the platen.

3. A printing machine, comprising a printing wheel, a platen coöperating therewith, a lever for turning the printing wheel to printing position and for operating the platen, an inking pad, a pad carrying frame, and connections between the pad-carrying frame and the lever for moving the pad against the printing wheel during the operation of the platen.

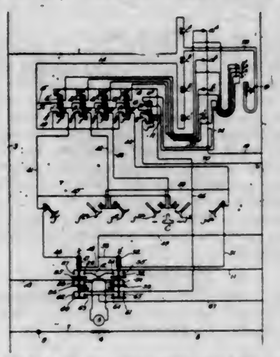
4. A printing machine, comprising a horizontally arranged printing wheel, a vertically moving platen cooperating therewith, a lever mounted to turn about a vertical axis to bring the printing wheel into printing position and to turn about a horizontal axis to move the platen toward the printing wheel, an inking pad, a pad-carrying frame, and connections between the pad-carrying frame and said operating lever for moving the inking pad into engagement with the printing wheel when the platen is actuated to perform the printing operation.

5. A printing machine, comprising a horizontally arranged printing wheel mounted to move about a vertical axis, a segment mounted to move about a vertical axis and geared with said printing wheel, a vertically moving rod extending through the segment, a platen coöperating with the printing wheel, connections between said vertically moving rod and the platen, and an operating lever connected with the segment to move it about its axis, which is pivoted to move about a horizontal axis, and is connected with said rod to move it vertically and thus actuate the platen.

[Claims 6 to 13 not printed in the Gazette.]

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1,228,075. CONTROLLING SYSTEM FOR ELECTRIC ELEVATORS. WILLIAM S. SMITH, Cambridge, Mass. Filed Mar. 28, 1916. Serial No. 87,294. (Cl. 172—152.)



1. In an apparatus for controlling elevators the combination with a motor, a car and a plurality of stations of motor-controlling devices, means for operating said devices from said stations, means for retaining said operating means whenever actuated in an operative position and means for short-circuiting said stations and said means for operating said motor-controlling devices to exclude control of said operating means from said stations until the car has reached its destination.

2. In an apparatus for controlling elevators the combination with a motor, a car and a plurality of stations of motor-controlling devices, floor-magnets corresponding in number to the number of said stations for operating said devices, means for actuating said floor-magnets from said stations, means for retaining said floor-magnets in actuated position and means for short-circuiting said stations and said actuating means to exclude control of said motor-controlling devices from said stations until the car has reached its destination.



3. In an apparatus for controlling elevators, the combination with a motor, a car and a plurality of stations of motor-controlling devices, means for operating said devices from said stations, means for retaining said operating means whenever actuated in an operative position and means for short-circuiting said station and said operating means to exclude control of said operating means from said stations until after the car has reached its destination and a door has been opened.

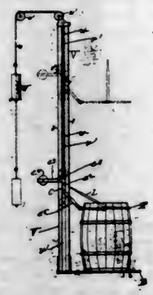
4. In an apparatus for controlling elevators, the combination with a motor, a car and a plurality of stations of motor-controlling devices, floor-magnets corresponding in number to the number of said stations for operating said devices, means for actuating said floor-magnets from said stations, means for retaining said floor-magnets in actuated position and means for short-circuiting said stations and said means to exclude control of said floor-magnets from said stations until after the car has reached its destination and a door has been opened.

5. In an apparatus for controlling elevators, the combination with a motor, a car and a plurality of stations of motor-controlling devices, floor-magnets corresponding in number to the number of said stations for operating said motor-controlling devices, means for actuating said floor-magnets from said stations and from said car, means for retaining said floor-magnets in actuated position and means for short-circuiting said stations, said car and said actuating means to exclude control of said floor-magnet from said stations and said car until after the car has reached its destination and a door has been opened.

[Claims 6 to 14 not printed in the Gazette.]

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1,228,076. BARREL-HEADING APPARATUS. THOMAS A. SULLIVAN, Brooklyn, N. Y., and HENRY J. VON BECK, Boston, Mass., assignor to Brooklyn Cooperage Company, New York, N. Y. Filed Jan. 2, 1917. Serial No. 140,199. (Cl. 147—6.)



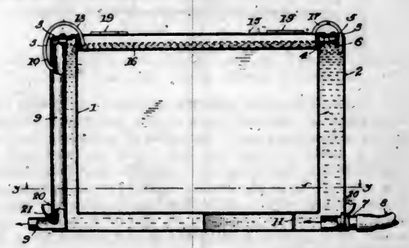
1. Barrel heading apparatus of the character designated, comprising a support for the barrel, a head rest carried by said support, a stave clamping ring in vertical alinement therewith, a vertical runway disposed entirely upon one side of and independent of said support, a carriage mounted to travel on said runway and carrying said clamping ring, and a manipulating lever mounted on said ring.

7. In barrel heading apparatus of the character designated, the combination of a vertical runway, a carriage having side members guided in said runway, rollers mounted on said side members and fitting in opposed grooves in the runway, bracket pieces secured to the side members of the carriage and formed with rearwardly projecting arms and with forwardly projecting convergent arms, a counterpoise mounted in the rearwardly projecting arms, the ends of the forwardly projecting convergent arms terminating in flanges, a stave clamping ring rigidly secured to said flanges, a stirrup pivotally connected with the side members of the carriage, and a counterpoised flexible ligament connected with said stirrup for counterpoising the carriage and the clamping ring.

[Claims 2 to 6 not printed in the Gazette.]

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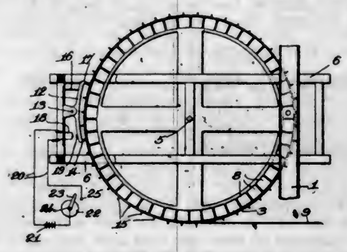
1,228,077. WATER-COOLED REFRIGERATOR. KATHERINE A. THOMPSON, Milwaukee, Wis. Filed May 17, 1915. Serial No. 28,541. (Cl. 257—21.)



In a device of the described class, the combination of a provision receptacle and an inclosing receptacle surrounding such provision receptacle upon all sides except upon that side occupied by the door, a cold water chamber located between said receptacles, a duct adapted to conduct water from a supply to said cold water chamber, a door or cover provided with a cold water space, a flexible duct communicating from the cold water chamber located between said interior and exterior receptacles to the cold water space in said door or cover, an additional flexible duct communicating from the cold water space in said door or cover to the outlet duct of said first named cold water chamber, a drip trough located near the lower side of said device, provided with a discharge opening leading to the outlet duct.

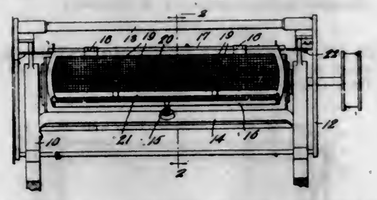
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1,228,078. RECORDING-SAMPLER. ARTHUR E. TRUESDELL, Adams, Mass. Filed June 15, 1912. Serial No. 703,803. (Cl. 73—21.)



In a recording sampler, the combination with a chute or passageway through which the material to be sampled passes and which is provided with an opening, of a permanently-open spout communicating with said opening and adapted to receive material therefrom, a sample-receiving element rotatable in a horizontal plane beneath the delivery end of said spout and closely adjacent thereto, said element having projections extending from its periphery, automatically, operative means acting on said element and tending to rotate it forwardly, a pivoted escapement lever coöperating with said projections and normally restraining said element from movement, and time-controlled electric means for periodically actuating the escapement lever to release the sample-receiving element and permit it to rotate one step forward.

**1,228,079. GUARD ATTACHMENT FOR CLOTH-SHEARING MACHINES.** WESLEY R. VAIR, Ravenna, Ohio. Filed Jan. 24, 1917. Serial No. 144,244. (Cl. 74—56.)



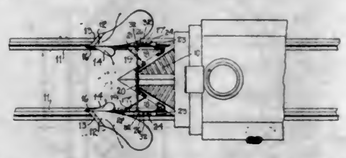
1. A guard for cloth shearing machines comprising sections hingedly connected, each section comprising a frame having transversely and longitudinally extending bracing bars, a fabric covering for each frame provided with a longitudinally extending slot adjacent the longitudinal free edge of one of the frames, means for connecting one of the sections with a cloth shearing machine, the second section normally extended in an operative position, and means for releasably holding the second section in an inoperative position.

2. A guard attachment for a cloth shearing machine comprising hingedly connected sections, each section having a frame, a fabric covering for each frame, the fabric covering of one frame being provided with a longitudinally extending slot adjacent the longitudinal free edge thereof, and means for connecting one of said sections with the frame of a cloth shearing machine, the second section normally extending in an operative position and movable to an inoperative position.

3. A guard attachment for a cloth shearing machine comprising hingedly connected sections, one of the sections being provided adjacent the free edge with a longitudinally extending slot, attaching brackets for connecting one of the sections with a cloth shearing machine frame, the second section normally extending in an operative position and movable to an inoperative position.

[Claim 4 not printed in the Gazette.]

**1,228,080. HARD-SNOW AND ICE PLOW FOR RAILWAYS.** JOHN W. VON NEIDA, Sioux Falls, S. D. Filed Mar. 24, 1917. Serial No. 157,187. (Cl. 104—100.)



1. The combination with a power propelled vehicle running on rails, of vertically disposed members operatively supported at their rear ends upon the vehicle and extending forward therefrom and disposed above the rails, runners on said members engaging the rails and supporting the members, main plow shares mounted upon said members at the forward end thereof and auxiliary plow points operatively connected to the main plow shares and extending down on the inside of the rails.

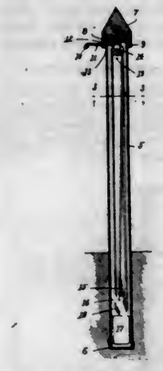
3. The combination with a snow plow, of a plurality of rail scrapers operatively mounted upon the plow, means for resiliently forcing said scrapers downward against the face of the rail, and means for limiting the downward movement of the scrapers, the undersurfaces of the scrapers being beveled so as to form transversely extending cutting edges.

4. The combination with a snow plow, of a coiled spring mounted upon the plow and having a forwardly extending portion, a plurality of collars mounted upon the plow, and a plurality of rail scrapers having stems extending through said collars and vertically movable therein, the upper ends of the stems being connected to a spring, and means for limiting the downward movement of the stems under the action of the spring.

7. The combination with a locomotive, of a pair of rail plows mounted upon the forward end of the locomotive and each comprising a main share extending downward, forward, and inward to a point above the rail, a removable plow point attached to the main share, an auxiliary point attached to the main share inward of the main point and adapted to cut a flangeway on the inside of the rail, an auxiliary share attached to the auxiliary point and extending rearward and inward therefrom, braces connecting the shares to each other and to the engine, vertically disposed runners connected to each of said braces and extending downward toward the rail, a block operatively mounted upon the forward end of each runner and having sliding engagement with the rail and acting to support the forward end of each plow, and a plurality of rail scrapers mounted upon the rear portion of each runner and resiliently forced downward into engagement with the rail.

[Claims 2, 5, 6, and 8 not printed in the Gazette.]

**1,228,081. COMBINED CLOTHES POLE AND LINE.** CHARLES W. WALKER, Stratford, Conn. Filed Feb. 10, 1916, Serial No. 77,392. Renewed Nov. 4, 1916. Serial No. 129,629. (Cl. 68—12.)



1. In a combined clothes post and line, the combination of a hollow metal post, a removable cover inclosing the top end of the post, a line attached to the cover and having one end extended out of the post, means within the post for drawing the clothes line within the post, the said line and actuating means being free to be removed from the upper end of the post by lifting the cover.

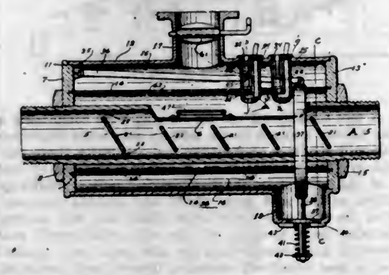
2. In a combined clothes post and line, the combination of a hollow metal post, a removable cover inclosing the top end of the post, a pulley block attached to the cover, a weight within the post, a second pulley attached to the weight, a line hung from the cover being threaded over and under the pulley blocks and having one end fixed and the other end extended out from the upper end of the post, the said weight and line being adapted to be removed through the upper end of the post by the removal of the cover.

3. A combined clothes post and line including a hollow post, a movable cover for the top end of the post and having an annular apron extended down around and spaced from the outer top sides of the post, a line attached to the cover, means within the post for drawing and normally holding the extended end of the line under the said apron.

4. A combined clothes post and line including a hollow post having an opening through its upper side portion, a rotatable cover for the top end of the post and having an annular apron extended down around and spaced from the outer top sides of the post, an opening through the said apron adapted to aline with the opening in the post, a line attached to the cover, means for drawing in and normally holding the end of the line housed under the said apron.



**1,228,082. COMBINED VAPORIZER AND MIXER.** JACOB WALTER, HARRY J. BUTTERWORTH, and OSCAR J. SIGLER, Mansfield, Ohio, assignors of one-fifth to Charles M. Rowland, Mansfield, Ohio. Filed May 10, 1916. Serial No. 96,782. (Cl. 48—107.)



1. In a combined vaporizer and mixer for internal combustion engines, a vaporizer, a drum having imperforate side walls and provided at the top with perforations which permit the escape of the volatile constituents of the vaporized hydrocarbon to mix with air at atmospheric temperature, a cylinder surrounding said drum, means to conduct liquid hydrocarbon fuel to the vaporizer, means for heating the vaporizer by the exhaust gases of the engine, and means operated by the suction of the engine to mix air at atmospheric temperature with the volatile constituents of the liquid hydrocarbon fuel.

2. In a combined vaporizer and mixer for internal combustion engines, a vaporizer, a drum having imperforate side walls and provided at the top with perforations which permit the escape of the volatile constituents of the vaporized hydrocarbon to mix with air at atmospheric temperature, a cylinder surrounding said drum, means to conduct liquid hydrocarbon fuel to the vaporizer, means for heating the vaporizer by the exhaust gases of the motor, means to mix air at atmospheric temperature with the volatile constituents of liquid hydrocarbon fuel, and auxiliary means for vaporizing hydrocarbon fuel preparatory to starting the motor.

3. In a combined vaporizer and mixer for internal combustion motors, a vaporizer having a portion cut away, a plate secured to the vaporizer to close said opening, a drum provided with a plurality of perforations spaced apart from the vaporizer and arranged in concentric relation thereto to form a chamber, a cylinder arranged to surround said vaporizer to form a chamber, means to conduct liquid hydrocarbon to the vaporizer and means operable by the suction of the pistons of the motor to supply atmospheric air to one of the chambers to mix with the volatile constituents of the vaporized liquid hydrocarbon fuel flowing from the other chamber.

4. In a combined vaporizer and mixer for internal combustion motors, a tubular vaporizer, cylinder heads mounted upon the vaporizer, a cylinder and a drum held and maintained by said heads in concentric relation to the vaporizer to provide chambers, a heater mounted upon the vaporizer, means to close and interrupt the circuit that conducts an electrical current to said heater to heat same; said means also operating an auxiliary valve to permit the flow of the liquid hydrocarbon fuel to the vaporizer, and means to utilize the exhaust gases of the engine to heat the vaporizer.

5. In a combined vaporizer and mixer for internal combustion motors, a tubular vaporizer, cylinder heads mounted upon the vaporizer, a cylinder and a drum held and maintained by said head in concentric relation to the vaporizer to provide chambers, a heater mounted upon the vaporizer, means to close and interrupt the circuit that conducts an electrical current to said heater to heat same; said means also operating an auxiliary valve to permit the flow of the liquid hydrocarbon fuel to the heater, means to conduct the flow of liquid hydrocarbon fuel to the vaporizer, means to utilize the exhaust gases of the engine to heat the vaporizer, and means to baffle the exhaust gases in their vaporizing area.

[Claims 6 to 16 not printed in the Gazette.]

**1,228,083. COPY-HOLDER.** LESLIE WARFEL, Dubois, Pa. Filed June 10, 1915. Serial No. 33,241. (Cl. 248—30.)

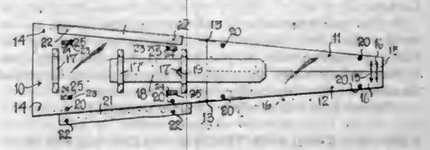


1. A support including a supporting standard, a clamping foot adjustably mounted on the standard, and common means passing through the foot and the standard for preventing the movement of the foot on the standard and for coöperation with the foot for removably securing the standard to a main support.

2. A support including a supporting standard having a bifurcated end, a clamping foot rotatably and adjustably mounted on the bifurcated end of the standard, a flange formed on the free end of the foot, and common means for engaging the foot and the standard between the bifurcations for preventing movement of the foot and for cooperating with the flange for removably holding the standard in a substantially rigid position on a main support.

3. A support including a supporting standard having the lower end bifurcated to provide threaded extensions, a collar threaded on the extensions, a triangular foot integral with and extending laterally from the collar, a flange formed upon the free end of the foot, and a bolt engaging the collar and passing between the extensions for preventing movement of the foot when adjusted and for cooperation with the flange for removably holding the standard in a substantially rigid position on a main support.

**1,228,084. CONVERTIBLE TABLE AND IRONING-BOARD.** LAWSON C. WASSON, Snyder, Tex. Filed Feb. 14, 1917. Serial No. 148,623. (Cl. 68—10.)



1. A convertible ironing board and table top comprising a body section having inclined side edges and additional sections hinged to the small end of the ironing board at the outside corners thereof, each of the additional sections

having straight inner edges and inclined outer edges whereby said sections may be turned into abutting relation with each other to form an extension of the body section or turned back upon the body section to abut against the inclined edge faces thereof, and means for locking the sections in either position.

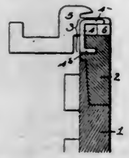
3. A convertible ironing board and table top comprising a body section, additional sections hinged to one end of the ironing board at the outside corners thereof, whereby said sections may be turned into abutting relation with each other to form an extension of the body section, or turned back upon the body section to abut against the edge faces thereof, and means for locking the sections in either position.

5. A convertible ironing board and table top comprising a body section, additional sections hinged to one end of the ironing board at the outside corners thereof, each additional section having a width approximately equal to one-half of the width of the body section, whereby said sections may be turned into abutting relation to each other to form an extension of the body section, or turned back upon the body section to abut against the edge faces thereof, means for locking the sections in either position, transversely extending straps mounted upon the under faces of the body section, a brace slidably mounted in said straps and longitudinally shiftable to project the brace beneath the additional sections when the latter are turned into extended position, and means for limiting the movement of the brace.

[Claims 2 and 4 not printed in the Gazette.]

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1,228,085. WEB-HOLDER GUIDING AND RETAINING DEVICE FOR KNITTING-MACHINES. LOUIS N. D. WILLIAMS, Ogontz, Pa. Filed Aug. 10, 1916. Serial No. 114,227. (Cl. 66—26.)



1. The combination of a knitting machine needle carrier with web holders and intervening bits separate from but confined to the needle carrier, said web holders and bits having horizontally engaging members which prevent rise of the web holders.

2. The combination of a knitting machine needle carrier with web holders and guiding and retaining bits therefor, separate from but secured to said needle carrier and each comprising an upwardly projecting stem with projecting tail at the bottom.

3. The combination of a knitting machine needle carrier with web holders and guiding and retaining bits therefor, separate from but secured to said needle carrier and each comprising a stem with forwardly projecting head at the top and projecting tail at the bottom.

4. The combination of a knitting machine needle carrier with web holders and guiding and retaining bits therefor, said bits being separate from but confined to said needle carrier and having forwardly and downwardly projecting heads which serve as vertical retainers for said web holders.

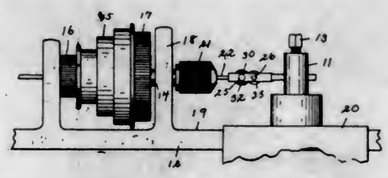
5. The combination of a knitting machine needle carrier with slotted web holders and bits separate from but secured to said needle carrier and having forwardly projecting heads which serve as vertical retainers for those members of the web holders beneath the slots.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,086. TOOL FOR TURNING BALLS. JAMES ALEXANDER, Bristol, Conn. Filed May 1, 1916. Serial No. 94,670. (Cl. 82—13.)

1. A tool for turning balls comprising a holder having a shank for being received in the tool-post of a lathe, a shaft supported by the said holder, means for rotating the said shaft, and a cutter supported by one end of the said shaft, the said holder being a unitary structure, having a pair of parallel side arms connected to the said shaft and in spaced relation, and the said means for rotating the shaft comprising a pulley, mounted on the said shaft, and positioned between the said arms.



2. A tool suitable for use for turning balls comprising a holder having a shank and a pair of side arms connected to the said shank, a main shaft and a counter shaft supported by the said side arms, a cutter supported by one end of the said main shaft, a driving pulley rotatively mounted on the said main shaft, and gearing interconnecting the said pulley and main shaft, the said gearing comprising gears mounted on the said countershaft and coöperating gears mounted on the said main shaft consisting of a gear rotatively mounted thereon and connected to the said pulley and a second gear rigidly mounted thereon.

3. In combination, a tool for turning balls comprising a holder for being supported by the tool-post of a lathe, a shaft, means for turning the said shaft, and an annular cutter at one end of the said shaft, and a backing device for engaging with the stock operated on by the said cutter comprising a contact member and means for resiliently holding the said contact member in engagement with the said stock.

4. In combination, a tool for turning balls comprising a holder for being supported by the tool-post of a lathe, a shaft, means for turning the said shaft, and an annular cutter at one end of the said shaft, a backing device for engaging with the stock operated on by the said cutter comprising a contact member and means for resiliently holding the said contact member in engagement with the said stock, and means for supporting the said backing device from the said holder.

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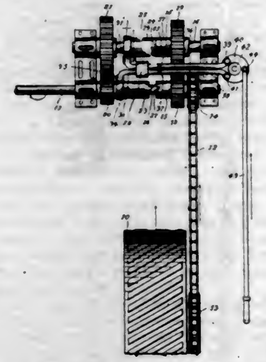
1,228,087. CHANGE-SPEED MECHANISM. ANDREW ANDERSON, Bigfork, Minn., assignor of one-half to T. M. Saunders, Bigfork, Minn. Filed July 27, 1914. Serial No. 853,270. (Cl. 74—59.)

1. In combination with the bull wheel and drive shaft of a grain harvester, a sleeve loose on said shaft driven from the bull wheel, means for connecting said sleeves directly to rotate the shaft therewith at the speed thereof, other means for rotating said shaft indirectly from said sleeve at another speed, and means under the control of the operator for making either connection at will.

2. In combination with the bull wheel and drive shaft of a grain harvester, a sleeve loose on said shaft driven from the bull wheel, a counter shaft, means thereon operatively connected with the drive shaft to rotate the same at a different speed from that of the sleeve, a sleeve loose on the counter shaft constantly driven from the first named sleeve, and means under the control of the operator to connect the drive shaft to rotate with the sleeve on said drive shaft or to connect the counter shaft to rotate with the sleeve thereon.

3. In combination with the bull wheel and drive shaft of a grain harvester, a sleeve loose on said shaft driven from the bull wheel, a counter shaft, means thereon operatively connected with the drive shaft to rotate the same at a different speed from that of the sleeve, a sleeve loose on the counter shaft constantly driven from the first named sleeve, an independent clutch member slidable on each of said shafts to connect the drive shaft or the counter shaft to rotate with its sleeve, a separate slidable rod connected with each of said clutch members, and means under the control of the operator simultaneously to slide said rods in opposite directions to render one or the other of said clutch members operative at will.

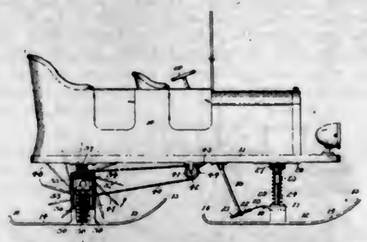




4. In combination with the bull wheel and drive shaft of a grain harvester, a sleeve loose on said shaft driven from the bull wheel, a counter shaft, means thereon operatively connected with the drive shaft to rotate the same at a different speed from that of the sleeve, a sleeve loose on the counter shaft constantly driven from the first named sleeve, an independent clutch member slidable on each of said shafts to connect the drive shaft or the counter shaft to rotate with its sleeve, a separate slidable rod connected with each of said clutch members, an oscillating disk, links pivotally connecting said rods with said disk, and means to oscillate said disk in either direction to cause said rods to slide in opposite directions and render one or the other of said clutch members operative at will.

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1,228,088. MOTOR-SLEIGH. STEPHAN BANIČ, Greenville, Pa. Filed Apr. 22, 1914. Serial No. 833,792. (Cl. 21—47.)



In a motor sleigh, the combination with a body and a pair of rear runners beneath the body, of a vertical guide extending upwardly from each runner and terminating at a point below said body, a bearing block mounted for vertical sliding movement in each guide, a traction shaft journaled in said bearing blocks, a traction member mounted on the shaft for contact with the ground, means for turning said shaft, springs in the upper ends of the guides between the body and said bearing blocks, and springs arranged in the lower ends of the guides between said bearing blocks and the runners to urge the latter downwardly in contact with the ground.

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1,228,089. SOLUBLE COLOR COMPOUND. WILLIAM BECKERS and ISAAC DREIFUS, Brooklyn, N. Y., assignors to W. Beckers Aniline & Chemical Works, Inc., a Corporation of New York. Filed July 6, 1914. Serial No. 849,116. (Cl. 8—1.)

1. The process of producing a compound of a mordant color soluble in water, alkaline water and acidulated water which comprises dissolving a neutral chromium alkali-metal compound in glucose, heating until no chromic acid is shown by testing with potassium iodid, and adding a solution of a mordant color.

2. The process of producing a compound of a mordant color soluble in water, alkaline water and acidulated water which comprises dissolving a neutral chromate of sodium in glucose, heating until no chromic acid is shown by testing with potassium iodid, and adding a solution of a mordant color.

3. The process of dissolving a neutral chromate of an alkali-metal compound in glucose, heating until there is no chromic acid present, and adding a solution of a mordant color.

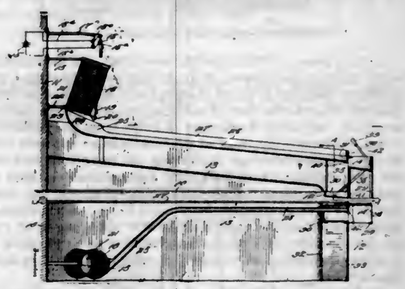
4. The process of dissolving neutral chromate of sodium in glucose, heating until there is no chromic acid present, and adding a solution of a mordant color.

5. The process of producing a compound of a mordant color soluble in water, alkaline water and acidulated water comprising heating glucose and a chromium compound together in solution producing a solution of a chromium compound not precipitatable by alkalis or mordant colors, and adding the solution of a mordant color.

[Claims 6 to 14 not printed in the Gazette.]

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1,228,090. GAME. KATE A. BRADLEY, Atlantic City, N. J. Filed Aug. 19, 1916. Serial No. 115,880. (Cl. 46—59.)



1. A game of the class described comprising a fixed ball-receiving receptacle, a ball deflecting element swingingly suspended above said receptacle, a ball receiving table and means located beneath said receptacle to receive balls discharged from said receptacle and to deliver the balls to said receiving table.

2. A game of the class described comprising a ball-receiving receptable, means for deflecting balls into said receptacle, a swinging bottom normally closing one end of said receptacle and being adapted to open upon receiving the weight of the ball, and inclined runways for returning balls thrown toward said receptacle to a point within convenient reach of the players of the game.

3. A game of the class described, comprising a receptacle, movable means for deflecting balls into said receptacle, a swinging bottom carried by said receptacle, said bottom being capable of opening upon receiving the weight of a ball to discharge the latter from said receptacle, an inclined runway for receiving balls emitted from said receptacle and to return the same to a player's stand, and an incline disposed beneath said runway to return balls, which fail to enter said receptacle, to said player's stand.

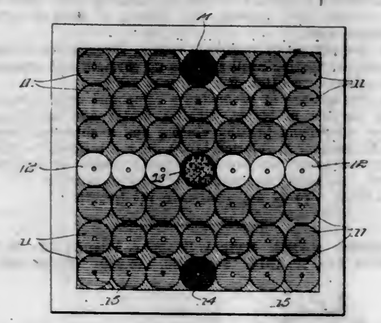
4. A game of the class described, comprising stationary missile receiving receptacle, upper and lower runways disposed beneath said receptacle and adapted to return mis-

siles thrown toward said receptacle to one side of the game, said runways terminating adjacent to a ball receiving table, and means for elevating the balls carried by the lower runway to a position in substantial alinement to the plane of said table, whereby said balls may be deposited upon the table.

5. A game of the class described, comprising a target of receptacle formation, upper and lower runways coöperating with said receptacle and utilized to return missiles thrown into and to one side of said receptacle to a player's position, means for retaining balls in the lowermost portions of said runways, and manually operated mechanism for moving said means, whereby said balls may be deposited upon a common ball receiving table.

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1,228,091. GAME. KATE A. BRADLEY, Atlantic City, N. J. Filed Sept. 18, 1916. Serial No. 120,790. (Cl. 46—64.)



1. In a game of the character described, the combination with playing characters, of a playing board having a plurality of parallel rows of designations thereon, the intermediate transverse row of designations indicating neutral territory and being distinctive in color from the remaining rows, the remaining rows of designations at opposite sides of the intermediate row indicating the operating territory for the playing characters, the designations of said remaining rows being similar in character except one designation at each side of the intermediate row, said exception being located in the outermost row of each group of rows at the opposite sides of the intermediate row, and said exception indicating a throne for certain of said playing characters.

2. In a game of the character described, the combination with a series of playing characters, of a playing board having a plurality of parallel rows of designations thereon, the intermediate transverse row of designations indicating neutral territory and being distinctive in color from the remaining rows of designations, said remaining rows representing operating territory for the playing characters, said remaining rows of designations being similar in character except one designation at each side of the intermediate row, said exceptions being located in the outermost row of each group of rows at the opposite sides of the intermediate row, said exceptions indicating a throne for certain playing characters, each of said designations having an opening, and pins on said playing characters adapted to fit into said openings for supporting the playing characters in upright position on the board.

3. In a game of the character described, the combination with a series of playing characters, of a playing board having spaced groups of parallel rows of designations indicating operating territory for the playing characters, a row of designations separating the respective groups and indicating neutral territory, said row being distinctive in color from the groups of rows, the designation of said groups of rows being similar in character except for one designation at each side of the single row separating said groups, said exceptions being located in the outermost row of each group and indicating thrones for certain playing characters, and the intermediate designation of said row of neutral territory being distinctive in color from the designations of its respective row and known as a "pass."

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1,228,092. FLAG-COVER. JOHN H. BREWER, Louisville, Ky. Filed Sept. 19, 1916. Serial No. 121,023. (Cl. 116—12.)



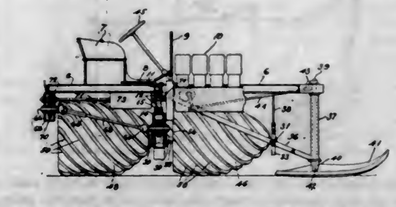
1. The combination with a flag or banner and its staff, of a cover consisting of a sheet of fabric secured to the staff near one edge of the flag, and adapted to be rolled about the flag when furled, or to be rolled about the staff below the flag when the flag is unfurled.

2. The combination with a flag and staff, of a cover secured to the staff so that it may be rolled about the flag when furled or about the staff below the flag and means for fastening the cover when rolled in either position.

3. The combination with a flag and its staff of a cover consisting of a piece of fabric secured to the staff near one of its corners at a place on the staff near the lower edge of the flag, and fastening devices on the cover, the parts being constructed and arranged so that the cover may be rolled about the flag when furled or rolled about the staff below the flag and secured in either position.

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1,228,093. MOTOR-SLED. FREDERICK R. BURCH, Seattle, Wash., assignor of nine one-hundredths to Joe West and nine one-hundredths to Eva West, Seattle, Wash. Filed July 24, 1916. Serial No. 111,097. (Cl. 21—47.)



1. A motor sled of the class described, which embodies four rotary tractors, each consisting of a cylinder having its forward end portion tapered and each provided with a plurality of propeller fins secured thereto to extend spirally therearound throughout its length; two shafts disposed with their axes in parallel vertical planes, and upon each of which shafts two of said tractors are rigidly mounted and disposed so that the front end of one of them shall be spaced from the rearward end of the other; two trunnions, each of which is provided with shaft bearings within which a different one of said two shafts is rotatably disposed, which bearings are disposed between the two tractors of said shaft; a sprocket wheel rigidly mounted on each of said two shafts in a position between the bearings thereof; a supporting frame within which said two trunnions are mounted to be independently rotatively movable with their axes in the same line, whereby said two shafts independently may oscillate in different vertical planes; another sprocket wheel rotatably mounted on each of said trunnions; a separate sprocket chain operatively disposed to communicate rotary motion from each of said other sprocket wheels to the sprocket wheel of a different one of said shafts; a body-frame mounted on said supporting frame to extend forwardly and rearwardly therefrom; a tubular stud rigidly attached to the forward end of said body-frame to extend downwardly therefrom; a vertical shaft disposed to extend through said tubular stud and adapted to be rotatively moved therein; a steering sled runner articulated to the lower end portion of said vertical shaft to adapt it to oscillate in a vertical plane; manually operative mechanism associated with said vertical shaft whereby said shaft may be rotatively moved to actuate said steering sled runner; a motor mounted on said body-frame; and controllable means for communicating rotary motion from said motor to the sprocket wheels mounted on said trunnions whereby said tractors may be rotated.

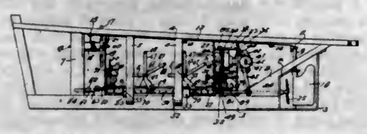
2. A motor sled of the class described, which embodies a supporting frame; two tractor shafts associated with said supporting frame to extend forwardly and rearwardly therefrom in positions parallel with each other and adapted each independently to oscillate in a different one of parallel vertical planes; two tractors rigidly mounted on each of said tractor shafts, each of said tractors comprising a cylinder provided with spirally disposed propelling fins; a body-frame resiliently mounted on said supporting frame; a steering runner operatively associated with a forward end portion of said body-frame; a motor mounted on said body-frame; a power shaft carried by the motor, stub-shafts operatively associated with the power shaft, a pair of driven shafts connected to the stub-shafts, a second pair of stub shafts driven by the driven shafts, and operative connections between the last named stub-shafts and the tractor shafts.

3. A motor sled comprising a body portion, an inverted U-shaped frame carried thereby, a central rib depending from the frame, a pair of trunnions journaled in the sides of the frame and the rib, shafts journaled in said trunnions, tractors upon said shafts, a motor operatively associated with the tractor shafts, and steering means for the sled.

4. A motor sled comprising a body portion, a frame carried thereby and having spaced depending members, trunnions journaled therein, shafts journaled in said trunnions, tractors upon said shafts at opposite sides of the trunnions, stub-shafts journaled on said trunnions, chain and sprocket connections between the said shafts, motor mechanism associated with the stub-shafts, and steering means for the sled.

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1,228,094. MOTOR ATTACHMENT FOR BOATS. BRITTON E. BYRD, Durham, N. C. Filed May 22, 1916. Serial No. 99,152. (Cl. 115—34.)



1. In a device of the class described, a boat; a propelling means therefor; a spring motor operatively connected with the propelling means; a winding means for the spring motor including a drive bar mounted to slide fore-and-aft of the boat; a thwart; and a lever fulcrumed on the boat and operatively connected with the drive bar, the lever being accessible from the thwart.



2. In a device of the class described, a boat; a propelling means therefor; a spring motor operatively connected with the propelling means; a winding means for the motor including spaced drive bars mounted to slide fore-and-aft of the boat; an operative connection between the forward ends of the drive bars; and levers individual to the drive bars and operatively connected therewith, the levers being fulcrumed on the boat.

3. In a device of the class described, a boat; a propelling means therefor; a spring motor operatively connected with the propelling means; a winding means for the motor comprising a pair of drive bars mounted to slide fore-and-aft of the boat; a walking beam fulcrumed on the boat; links connecting the ends of the walking beam with the forward ends of the drive bars; and levers fulcrumed on the boat and operatively connected with the drive bars.

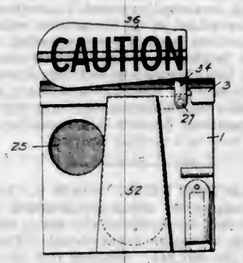
4. In a device of the class described, a boat; a propelling means therefor; a spring motor operatively connected with the propelling means; a winding means for the spring motor comprising a depending lever; a drive bar mounted to slide fore-and-aft of the boat; a link pivotally connecting the rear end of the drive bar with the lever; and an actuating lever operatively connected with the drive bar and fulcrumed on the boat.

5. In a device of the class described, a boat; a propelling means therefor; a spring motor operatively connected with the propelling means; a winding means for the motor including a pair of depending levers; links pivoted to the levers; drive bars mounted to slide longitudinally of the boat and pivotally connected at their rear ends with the links; a walking beam fulcrumed intermediate its ends on the boat; links forming pivotal connections between the forward ends of the drive bars and the ends of the walking beam; and operating levers individual to the drive bars, the operating levers being individual to the bars and being fulcrumed on the boat.

[Claims 6 to 11 not printed in the Gazette.]

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1,228,095. SIGNALING DEVICE. JOHN ROBERT CASPER, Washington, D. C. Filed Feb. 5, 1916. Serial No. 76,289. (Cl. 177—329.)




1. A signaling device for automobiles comprising a casing having glazed openings therein, a support within said casing, a shaft rotatably mounted in said support, a pair of semaphores fixed to said shaft and adapted in inoperative position to be out of alinement with said glazed openings, a second shaft mounted on said support and having one end projecting through a wall of the casing, a caution signal secured to said projecting end, a counter weight on the other end of said shaft, said caution signal being adapted to be hidden from view when said semaphores are in inoperative position and means connecting said shaft whereby when said semaphores are moved to operative position said caution signal will be exposed to view.

2. A signaling device for automobiles comprising a casing, a support within said casing, a pair of parallel shafts mounted in said support, means for rotatably connecting said shafts together, a caution signal plate connected to one of said shafts outside the casing wall, a sleeve mounted on the other of said shafts, a slotted disk formed on

said sleeve, a solenoid magnet, a curved arm connecting the core of said magnet with said sleeve whereby when said magnet is energized the shaft may be rotated, a pair of solenoid magnets having spring pressed cores adapted to engage the slots in said disk to lock said signal plate in operative or inoperative position.

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1,228,096. COVER FOR SAP-BUCKETS. WILLIAM H. COTTON, Salem, N. Y. Filed Oct. 22, 1915. Serial No. 57,330. (Cl. 47—29.)

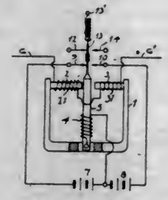


1. In a cover of the class described, the combination of a body having a central upstanding rib formed centrally thereon, said rib being provided with alined openings, a spout having alined openings, means passing through the openings in said rib and the openings in said spout for pivotally mounting said body upon said spout, said body being adapted to be normally carried in a horizontal plane, and means engaging said spout as the cover is raised for releasably retaining said body in a vertical position.

2. In a cover of the class described, the combination of a body having a central upstanding rib formed centrally thereon, said rib being provided with alined openings, a spout having alined openings, means passing through the openings in said rib and the openings in said spout for pivotally mounting said body upon said spout, said body being adapted to be normally carried in a horizontal plane, said rib being provided in its top portion with a pocket and with a cut-out portion communicating with said pocket, thereby forming inwardly extending spout gripping ears, said body being adapted to be swung upwardly so as to cause said ears to be spread as said spout passes into said pocket, after which action said ears will spring to their normal positions beneath said spout for releasably retaining said body in a vertical position.

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1,228,097. ELECTRIC RELAY. JAMES B. CRIPPEN, Chicago, Ill., assignor, by mesne assignments, to General Engineering and Construction Company, Limited, Toronto, Canada, a Corporation of Ontario. Filed May 14, 1912, Serial No. 697,148. Renewed Oct. 30, 1916. Serial No. 128,638. (Cl. 175—327.)

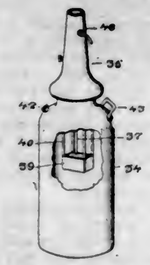


1. In an electric relay, an armature, a polarizing coil surrounding a portion of said armature, a pair of actuating coils each adjacent to said armature and not in electric contact with said polarizing coil, and means for reversing the direction of current flow through said polarizing coil when said armature is actuated by said actuating coils.

2. In an electric relay, an armature, a polarizing coil for said armature, a source of current for energizing said coil, a pair of armature actuating coils, a separate source of alternating current for energizing said actuating coils, and means for reversing the direction of current flow through said polarizing coil when said armature is actuated by said actuating coils.

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1,228,098. FIRE EXTINGUISHER AND ALARM. THOMAS A. COLE, Indianapolis, Ind. Filed Oct. 25, 1915. Serial No. 57,834. (Cl. 169—8.)



In combination, a chemical tank having a neck, a disk on the neck, a bottle holder in the tank and connected to and supported by the disk, a barrel secured to the neck and extending above the disk, a bottle in the bottle holder, a breech plug in the barrel and having a stem projecting through the disk into the tank and bottle holder and arranged to engage the bottle, a spring normally holding the breech plug and stem in inactive position, an explosive substance in the barrel and a fuse for the explosive substance.

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1,228,099. PROCESS OF MANUFACTURING PNEUMATIC-TIRE COVERS. JAMES WALTER HENRY DEW, London, England. Filed Dec. 30, 1912. Serial No. 739,406. (Cl. 154—14.)



1. A process for manufacturing tire covers which consists in forming a strip or sheet of unspun fibers laid parallel to one another in the direction of their length and approximately one fiber thick, impregnating said strip with liquid adhesive, superposing a plurality of said strips of fibers and adhesive spirally or helically relatively to the tire-forming member and vulcanizing said superposed strips.

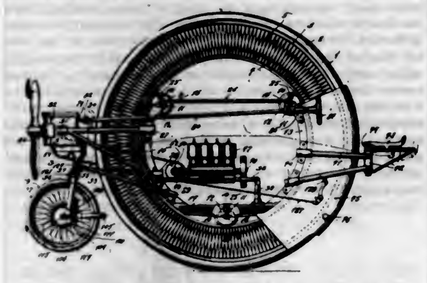
2. A process for manufacturing pneumatic tire covers which consists in forming a strip or sheet of unspun fibers laid parallel to one another in the direction of their length and approximately one fiber thick, impregnating said strip with liquid adhesive, superposing a plurality of said strips of fibers and adhesive helically or spirally relatively to the tire-forming member adding to such superposed strip an outer cover of rubber and subsequently vulcanizing the whole.

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1,228,100. UNICYCLE. ALFRED E. D'HARLINGUE, St. Louis, Mo. Filed Nov. 20, 1915. Serial No. 62,529. (Cl. 21—90.)

1. The combination with a wheel of a frame movable therein, a driving tractor for said wheel controlled by the weight of the rider, and means whereby the weight of the rider may be readily shifted for rendering said driving tractor inoperative.





2. The combination with a wheel of a frame movable therein, a driving tractor for said wheel controlled by the weight of the rider, and means movable in a rectilineal direction with respect to said wheel whereby the weight of the rider may be readily shifted for rendering said driving tractor inoperative.

3. The combination with a wheel of a frame movable therein, a driving tractor for said wheel, and movable means supporting the weight of the driver whereby said driving tractor is controlled by the shifting of the weight of the rider together with said means.

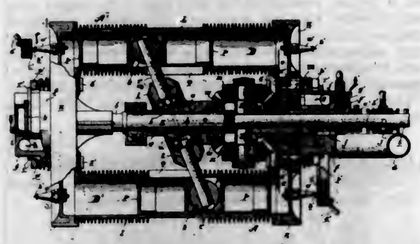
4. The combination with a wheel of a frame movable therein, a driving tractor for said wheel, and a seat for the rider movable rearwardly thereof whereby when said seat with the weight of the rider is shifted rearwardly said driving tractor is rendered inoperative.

5. The combination with a wheel of a frame movable therein, a driving tractor for said wheel, and a seat for the rider, said driving tractor being adapted to be rendered inoperative by the shifting of the said seat with the rider thereon.

[Claims 6 to 35 not printed in the Gazette.]

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1,228,101. ROTARY INTERNAL-COMBUSTION ENGINE. BURTON M. DUTTON, Abingdon, and FRANK L. JOHSON, Richmond, Va., assignors of one-fourth to James H. McEvoy, Richmond, Va. Filed Apr. 8, 1916. Serial No. 89,821. (Cl. 123—43.)



1. In an engine of the class set forth, a power shaft, two structures rotatable relatively on an axis concentric with said shaft, the outer structure embodying a pair of oppositely disposed double cylinders, a double piston working in each cylinder, and heads for said cylinders, said heads being provided with inlet and outlet passages and ports, means whereby the reciprocation of said pistons causes relative rotation of said structures, and means controlling said ports embodying abutments provided each with an inlet and an outlet port and members surrounding these ports and normally pressing against the adjacent cylinder head and abutment face.

2. In an engine of the class set forth, a power shaft, a rotatable structure mounted concentric therewith and comprising a plurality of double cylinders parallel to the power shaft, heads connecting the cylinders and provided with inlet and outlet ports and passages, a double piston working in each cylinder, a wabbler-head-carrying member mounted concentrically with respect to said shaft, said wabbler-head having its axis divergent to the axis of the shaft, a ring yoke embracing the wabbler-head and provided with means having connection with said pistons, and means controlling said ports embodying abutments provided each with an inlet port and an outlet port and a normally-expansible beveled packing ring surrounding each of said ports and normally bearing both against the abutment face and the adjacent cylinder head.

3. In an engine of the class set forth, a power shaft, a rotatable structure mounted concentric therewith and comprising a plurality of double cylinders parallel to the power shaft, heads connecting the cylinders and provided with inlet and outlet ports and passages, a double piston working in each cylinder, a wabbler-head-carrying member mounted concentrically with respect to said shaft, said wabbler-head having its axis divergent to the axis of the shaft, a ring yoke embracing the wabbler-head and provided with rods having connection with said pistons, and means whereby the rotation of the outer structure causes the wabbler-head-carrying member to rotate in a reverse direction.

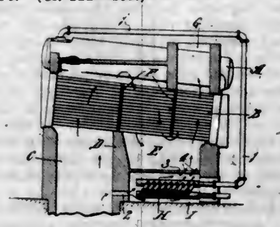
4. In an engine of the class set forth, a power shaft, a rotatable structure mounted concentric therewith and comprising a plurality of double cylinders parallel to the power shaft, heads connecting the cylinders and provided with inlet and outlet ports and passages, a double piston working in each cylinder, a wabbler-head-carrying member mounted concentrically with respect to said shaft, said wabbler-head having its axis divergent to the axis of the shaft, a ring yoke embracing the wabbler-head and provided with rods having connection with said pistons, and means whereby the rotation of the outer structure causes the wabbler-head-carrying member to rotate in a reverse direction, said means embodying a gear on one of the heads, a gear on the wabbler-head-carrying member and a pair of transmitting gears.

5. In an engine of the class set forth, a power shaft, a rotatable structure embodying cylinders and pistons and cylinder heads, the latter having ports and passages, a wabbler-head having its axis divergent to the axis of the shaft, means whereby the reciprocation of the pistons tends to rotate the wabbler-head in one direction and the rotating structure in the opposite direction, and gearing connecting the wabbler-head to one of the heads to positively assist said tendency to rotate in opposite directions.

[Claims 6 to 12 not printed in the Gazette.]

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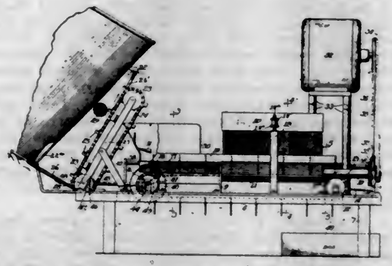
1,228,102. BOILER-FURNACE. EDWARDS R. FISH, Webster Groves, Mo. Filed Sept. 25, 1916. Serial No. 122,096. (Cl. 122—469.)



A boiler furnace provided with a superheater chamber, a superheater arranged in said chamber, a bridge wall which separates said chamber from the fire box of the furnace, said bridge wall being provided with an opening which establishes communication between said chamber and fire box, a partition wall which separates said super-

heater chamber from the combustion chamber of the furnace, and a valve in said wall which regulates the quantity of hot gases which enter said superheater chamber through the opening in the bridge wall and which also permits the gases which have been utilized to heat the superheater to thereafter pass into the combustion chamber and be further utilized to heat the tubes of the boiler, said valve being arranged adjacent the rear end of said superheater chamber.

1,228,103. PEANUT-BLANCHING MACHINE. JOSEPH A. FRANKLIN, Chicago, Ill., assignor to Franklin Auto Peanut Blanching Co., Chicago, Ill., a Copartnership. Filed Mar. 15, 1917. Serial No. 154,926. (Cl. 146—14.)



1. In a nut blanching machine, the combination of a pair of parallel tumbling rolls having corrugated surfaces of friction material, means for rotating said rolls simultaneously and at equal speeds with the upper halves of their surfaces moving away from each other, and a chain conveyer for the nuts to be blanched mounted to travel between and parallel with said rolls.

2. In a nut blanching machine, the combination of a pair of parallel tumbling rolls having longitudinally grooved rubber surfaces, means for rotating said rolls simultaneously and at equal high speeds with the upper halves of their surfaces moving away from each other, and a chain conveyer for the nuts to be blanched mounted to travel between and parallel with said rolls.

4. In a nut blanching machine, the combination of a pair of parallel tumbling rolls having corrugated surfaces of friction material, means for rotating said rolls simultaneously in opposite directions at high speed, an endless chain conveyer mounted to travel between and parallel with said rolls, and a top wall of yieldable material overlying the space between said rolls.

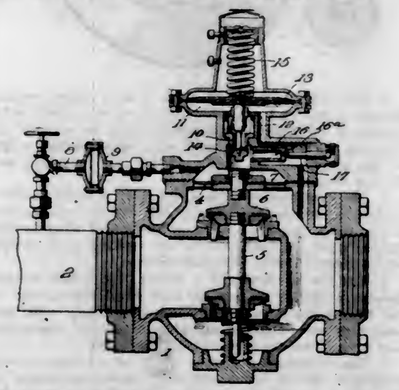
7. In a nut blanching machine, the combination of a pair of parallel tumbling rolls, a conveyer for the nuts to be blanched mounted to travel between and parallel with said rolls, stationary side walls extending lengthwise of and above said rolls, and a top wall having a yieldable surface spanning the space between said side walls.

9. In a nut blanching machine, the combination of a pair of parallel tumbling rolls, a conveyer for the nuts to be blanched mounted to travel between and parallel with said rolls, stationary side walls extending lengthwise of and above said rolls, a brush mounted above said rolls with the lower free edge of its body of bristles spanning the space between the upper edges of said side walls, and spaced flights on said conveyer the upper edges of which extend substantially into contact with the lower free edge of said brush, and the side edges of which lie closely adjacent to the inner upper portions of said rolls and said side walls.

[Claims 3, 5, 6, and 8 not printed in the Gazette.]

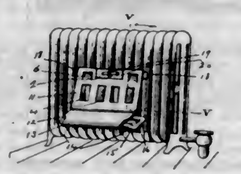
1,228,104. VALVE. LOUIS B. FULTON, Pittsburgh, Pa., assignor to The Chaplin-Fulton Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 18, 1915. Serial No. 46,157. (Cl. 50—11.)

1. A valve for maintaining a practically constant level of water in an elevated tank, comprising a casing having an inlet and an outlet, the outlet being designed to be connected to an overhead tank, a main valve within said casing, a normally balanced diaphragm to which said main valve is connected, said casing having a comparatively wide space beneath said diaphragm communicating with the outlet, whereby the diaphragm will constantly be subjected on its underside to the water pressure on the outlet side of the valve, a chamber above said diaphragm, which latter forms the bottom of such chamber, a by-pass connecting the inlet side of the casing with said chamber, a second chamber above the first mentioned chamber communicating therewith, a valve for controlling such communication, a diaphragm in said second chamber for actuating said valve, a by-pass connecting said second chamber with the outlet of the casing, and a relief port between said first mentioned chamber and said outlet.



2. A valve for maintaining a practically constant level of water in an elevated tank, comprising a casing having an inlet and an outlet, the outlet being designed to be connected to an overhead tank, a main valve within said casing, a normally balanced diaphragm to which said main valve is connected, said casing having a comparatively wide space beneath said diaphragm communicating with the outlet, whereby the diaphragm will constantly be subjected on its underside to the water pressure on the outlet side of the valve, a chamber above said diaphragm, which latter forms the bottom of such chamber, a by-pass connecting the inlet side of the casing with said chamber, a second chamber above the first mentioned chamber communicating therewith, a valve for controlling such communication, a diaphragm in said second chamber for actuating said valve, a by-pass connecting said second chamber with the outlet of the casing, and a relief port between said first mentioned chamber and said outlet and a valve controlling said relief port.

1,228,105. FOOT-WARMER ATTACHMENT FOR RADIATORS. ELMER J. FUNK, Kansas City, Mo. Filed Apr. 24, 1916. Serial No. 93,065. (Cl. 155—9.)

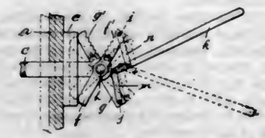


In a foot warmer attachment for radiators, the combination, of a supporting member comprising a bar having its end portions bent forwardly and then inwardly paral-



leling the bar to form opposed spaced arms and attaching means mounted on the bar between the terminal ends of said arms, a foot rest member comprising a shelf portion having its end portions cut away and its front turned under to form pivot bearings, the back portion of the shelf being provided with rearwardly and downwardly extending spaced apart integral hooks supportingly engaged by the arms on the supporting member, the terminal end portions of said hooks being bent inwardly to form stops below said arms, and with rearwardly inclined spaced apart integral stops presented to the front side of said arms and opposed to said hooks, said back portion of the shelf being partially severed at intervals and the cut portions bent rearwardly to provide air passages and form ribs at the borders of the passages, and a brace pivotally mounted on said foot rest member and adapted to bear on a radiator rearwardly of the foot rest and supportingly engage the cut away portion of said shelf portion.

1,228,106. MOLD-CLAMPING DEVICE. FRED J. GIDUZ, Roxbury, Mass. Filed Apr. 3, 1917. Serial No. 159,404. (Cl. 144—303.)

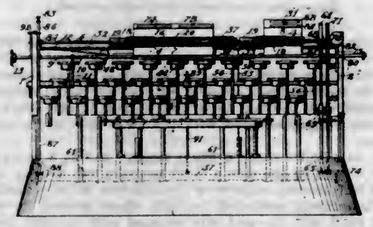


1. A mold-clamping device comprising a plate-member and a rod-member extending through and slidably in said plate member, a pair of arms pivoted on said rod-member and having the ends thereof arranged to engage said plate member at opposite sides of said rod, means to swing said arms toward each other while engaged with said plate and means to lock said arms against opposite swinging movement.

4. A mold-clamping device comprising a plate-member and a rod-member movable therein perpendicularly, a pair of arms intermediately pivoted to said rod-member, at one end, approximately in axial alinement, the corresponding ends of said arms being arranged to engage said plate-member at opposite sides of said rod-member, a lever, and a pair of links respectively pivoted to said lever at different longitudinal points therein and to the opposite ends of said arms from their plate-engaging ends.

[Claims 2 and 3 not printed in the Gazette.]

1,228,107. COMPUTING ATTACHMENT FOR TYPEWRITERS. CHARLES H. GILL, Chicago, Ill., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed May 15, 1909. Serial No. 496,130. (Cl. 235—59.)



1. In a computing machine, the combination of a frame, a pair of computing devices, movable relatively to each other, a pair of master mechanisms for respectively operating said computing devices and spaced apart in fixed relation to each other, means for causing simultaneous step by step advance of said computing devices with respect to their master mechanisms, and means for causing one of said computing devices to advance continuously in one direction through a repeated backward and forward movement of the other, said master mechanisms including a pair of master wheels turning on a single axis.

37. In a computing machine, the combination with numeral keys, a carriage and key-controlled means for effecting step-by-step movements thereof, of a plurality of jumping totalizers, movable on said carriage, a single master wheel for operating said totalizers, means for moving said totalizers automatically and simultaneously on said carriage to bring them successively into engagement with said master wheel, a second totalizer, a master wheel therefor, said second totalizer being fixed on said carriage, so that said totalizer is operated repeatedly as each jumping totalizer is operated, and mechanism extending from said keys to said master wheels to enable the operation of said wheels by said keys.

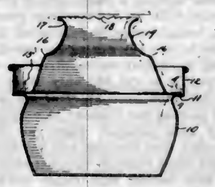
48. In a computing machine, the combination with numeral keys and a master wheel, of a pinion for turning said master wheel, a pair of racks normally out of mesh with said pinion, a universal member moved by the operation of any numeral key for bringing said pinion into mesh with one or the other of said racks, a universal member operated later by said numeral keys for moving said racks to turn said pinion, and means settable to determine which rack shall mesh with said pinion.

59. A computing typewriter combining numeral keys, digit wheels, means for rotating said wheels, connections between said keys and said means comprising a pinion and a pair of racks oppositely disposed with respect to the pinion, and both normally disconnected therefrom, means for effecting a mesh between the pinion and either of said racks, means settable for determining the rack selected, and means for effecting a relative driving movement between rack and pinion to rotate said digit wheel.

75. A computing typewriter combining a typewriter carriage providing relative traverse of keys and platen, a totalizer comprising digit wheels, a master wheel, a computing carriage providing relative traverse of totalizer and master wheel and adapted for movement independently of the typewriter carriage, means for locking said computing carriage with the master wheel out of engagement with the digit wheels, means tending to position said computing carriage, and a finger-piece for releasing said locking means to permit the computing carriage to be automatically positioned for computation, the computing carriage thereafter advancing with each letter-spacing of the typewriter carriage until computation is effected.

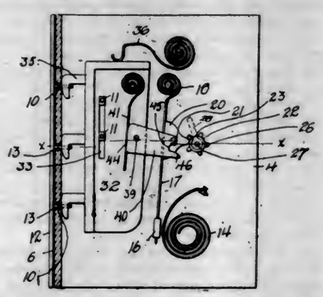
[Claims 2 to 36, 38 to 47, 49 to 58, and 60 to 74 not printed in the Gazette.]

1,228,108. COOKING UTENSIL. DUMITRU G. GOLOGAN, Newark, N. J. Filed May 5, 1915. Serial No. 26,096. (Cl. 53—1.)



In a cooking vessel the combination with a receptacle having a vertically flanged horizontal shoulder, of a member arranged for disposition on said shoulder and comprising a generally upwardly tapering hollow body open at both ends, the bottom of said body being formed with an outwardly directed horizontal flange, said flange having transverse corrugations formed therein, the lower portion of the side wall of the body being straight and inclining upwardly, the upper portion of the wall of the body being curved inwardly and meeting the lower portion to form a circumferential shoulder, the upper end of the body being flared outwardly.

1,228,109. LOCK. ANDRO GRUDOSKI and STANISLAW SZTONNHEWSKY, Horning, Pa. Filed Feb. 18, 1914. Serial No. 819,578. (Cl. 70—27.)



1. In lock structures, a member carrying keeper-engaging means, a removable key, and an element carried by said member and projecting into the path of movement of the key, said element having a pair of spaced projections differing in length and normally positioned in the path of travel of the key and either of which is brought into contact with the key dependent on the direction of key travel, contact with one of the projections permitting the element to be movable under key manipulation to provide a toggle joint relation between the key and element during a predetermined period in the movement of the key, the completion of the toggle joint providing a member-moving means effective to move the engaging means to disengaging position.

2. In lock structures, a member carrying keeper-engaging means, a removable key, and an element pivotally carried by said member and projecting into the path of movement of the key, said element having a pair of projections differing in length and an intermediate recess, said projections normally lying in the path of travel of the key, projection and key contact being limited to a single projection dependent upon the direction of key travel, with the recess accessible to the key solely when said element has been moved pivotally in one direction, said element and the key having a toggle joint producing relation when the key extends into said recess, said relation being completed solely by combined movement of the key and element in the reverse direction and being limited to a predetermined period in the length of key travel in such direction.

3. In lock structures, a member carrying keeper-engaging means, a removable key, an element pivotally carried by the member and extending into the travel path of the key, said element having a finger and a projection differing in length and with an intermediate recess, said finger and projection being normally positioned to provide contact with either by the key during its travel, the selection of contact being dependent on the direction of travel, with the recess accessible to the key only when the element is moved in one direction by contact of key and projection, and means for moving the element to normal position and retaining it in such position when the element is free from key restraint, said element and key being adapted to produce a toggle joint relation therebetween when the key extends into said recess, said finger acting to prevent movement of the element to normal position while the key extends into said recess, movements of the key and element in toggle relation removing the key from such recess at the end of a predetermined period.

[Claim 4 not printed in the Gazette.]

1,228,110. BORING-MACHINE. HARRY HANSON, Revere, Mass. Filed June 11, 1913. Serial No. 772,941. (Cl. 77—22.)

1. A boring machine having, in combination, a work-support, a plurality of boring tools, mechanism adapted to rotate said tools, means to impart a longitudinal motion to said rotating mechanism, whereby said boring tools may be advanced into the work or withdrawn therefrom, and means to adjust said tools transversely.

2. A boring machine having, in combination, a plurality of boring tools, mechanism adapted to impart a rotary motion thereto, a work-support, the supporting face thereof lying parallel to a common plane in which the axes of said tools are located, a clamp plate and means to move said work-support and said clamp plate in parallel relation toward said common plane to clamp the work.

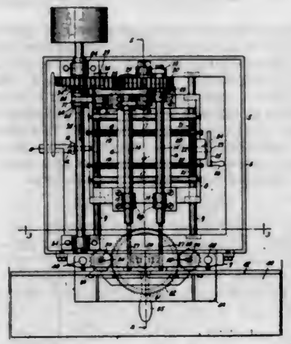
3. A boring machine having, in combination, a work-support, a plurality of boring tools, mechanism adapted to impart a rotary motion thereto, means for imparting a longitudinal movement to said mechanism and said tools, and mechanism adapted to simultaneously adjust said boring tools transversely toward and away from each other.

4. A boring machine having, in combination, a work-support, a slide, a plurality of spindles mounted thereon, boring tools carried by said spindles respectively, mechanism adapted to impart a rotary motion to said spindles and means for imparting motion to said slide to move said spindles longitudinally.

5. A boring machine having, in combination, a work-support, a slide, a plurality of carriers mounted thereon, spindles rotatably mounted on said carriers respectively, boring tools carried by said spindles respectively, mechanism adapted to rotate said spindles, means for imparting motion to said slide to move said spindles longitudinally, and mechanism for imparting simultaneous transverse motion to each of said carriers.

[Claims 6 to 14 not printed in the Gazette.]

1,228,111. ROLLER-SKATE. EMERY E. HARDY, Bayside, N. Y. Filed Mar. 18, 1916. Serial No. 84,998. (Cl. 46—51.)

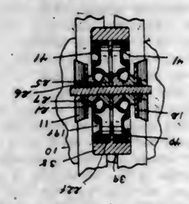


1. In a roller skate, a shaft provided with a raceway, a set of balls in the said raceway, and a wheel member operatively mounted on the said shaft by means comprising in combination a raceway on the said wheel member engaged with the said balls that is open on one side and a fixed bearing engaged with the other side of the said wheel.

2. In a roller skate, a wheel member having a raceway that is open on one side, a shaft having a ball bearing, the said ball bearing comprising a single row of balls, means for operatively mounting the said wheel member on the said shaft with the said balls engaged with the said raceway comprising in combination with the said raceway a fixed bearing engaged with the other side of the said wheel.

3. In a roller skate, a duplex wheel structure comprising two opposed separate wheel members, each having a raceway that is open on the outer side, a shaft passing through the said members, cone members mounted on the said shaft combining to form a pair of generally V-shaped raceways, means for securing the said cone members on the said shaft so that the said V-shaped raceways are in fixed spaced relation, and a set of balls positioned in each of the said V-shaped raceways and coöperating each with one of the said raceways in the wheel member.



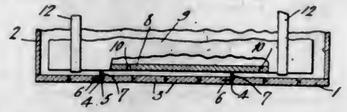


4. In a roller skate, a cushion wheel structure comprising a pair of wheel members, a shaft, means for operatively mounting each of the said wheel members on the said shaft, independently of the other, and a cushion member mounted on the peripheries of the said wheel members.

5. In a roller skate, a shaft, a pair of cone members mounted on the said shaft, and having coöperating cone surfaces forming a raceway, balls in the said raceway, one of the cone members having a cylindrical periphery, a bearing washer on the said shaft and positioned in abutment with the last named cone member, and a wheel member having a raceway engaged with the said balls and having a portion that fills the space between the said balls and the said bearing washer and engages the said cylindrical periphery.

[Claims 6 to 8 not printed in the Gazette.]

1,228,112. COFFIN AND ROUGH BOX. GEORGE W. HARRIS, Brushton, N. Y. Filed Mar. 24, 1917. Serial No. 157,208. (Cl. 27—3.)

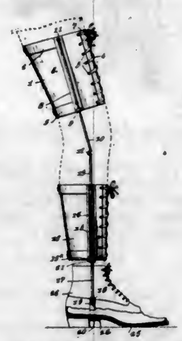


1. In a device of the class described, a rough box having upstanding projections on its bottom; and a coffin having recesses receiving the projections, the projections being spaced at unequal distances, from the ends of the rough box, and the recesses being spaced at unequal distances from the ends of the coffin, whereby when the coffin is in one position, the projections will be received in the recesses, and whereby when the coffin is turned end for end, the coffin will be supported on the projections, in spaced relation to the bottom of the rough box.

2. In a device of the class described, coöperating parts comprising a coffin-bottom and a rough-box-bottom, one of said coöperating parts being provided with projections which engage the other of said coöperating parts to hold the bottoms vertically spaced to receive coffin-lifting means, the other of said coöperating parts having seats in which the projections are received when the coffin is turned end for end, thereby to prevent relative lateral movement between said coöperating parts.

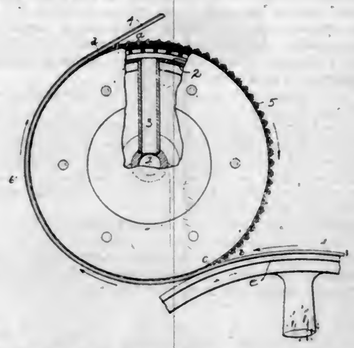
1,228,113. LEG-BRACE. WILLIAM M. HINSON, Local, Ala. Filed June 19, 1916. Serial No. 104,480. (Cl. 128—52.)

In a brace of the character described, an upper leg engaging member, a flat bar secured to each side thereof and turned outward at its lower end to provide an integral ear, a rod inserted through said ear and fixedly secured at its upper end to said bar, a lower leg engaging member, a flat bar secured to said lower member at each side thereof and turned outward at its lower end to provide an integral ear, tubes secured on each of said side bars of the lower member above the ear thereof, externally threaded rods slidably mounted in said tubes and through said ears, a stirrup pivotally secured to the lower end of said rods, nuts threaded on said threaded rods and bearing against



the ears of the bars of said lower leg engaging members whereby said rods may be forced out of said tubes by threading the nuts onto the rods, and rods fixedly secured in the upper portions of said tubes and pivotally secured at their upper ends to the lower ends of the rods carried by said upper leg engaging member.

1,228,114. COUCH-ROLL. FRANK H. HOBERG and COMADORE C. THOMAS, Jr., Green Bay, Wis. Filed Aug. 23, 1915. Serial No. 46,981. (Cl. 92—47.)



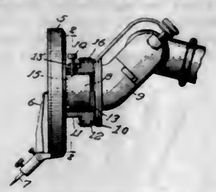
1. A suction roll covering, consisting of a knit sleeve, said sleeve adapted to be pulled over a suction roll and cover the periphery thereof, substantially as set forth.

2. A suction roll covering, consisting of a coarsely knit woolen sleeve, said sleeve adapted to be pulled over a suction roll and cover the periphery thereof, substantially as described.

1,228,115. SOUND-BOX MOUNTING FOR TALKING-MACHINES. ALBERT A. HUSEBY, Chicago, Ill. Filed Nov. 27, 1916. Serial No. 133,568. (Cl. 274—24.)

1. In a sound-box mounting for talking machines, the combination with a sound box having a laterally extending shank, and a tone arm formed with an annular flange, of an annular coupling member of rubber embracing said shank and formed with an annular flange, a fastening screw uniting said coupling member to said shank, a ring-shaped clamp fitting the inner face and a portion of

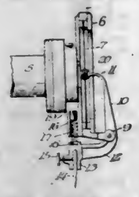
the peripheral edge of the flange of said coupling member, and fastening screws passing through said clamp, the



flange of said coupling member, and into the flange of the tone arm.

[Claims 2 and 3 not printed in the Gazette.]

1,228,116. SOUND-BOX FOR TALKING-MACHINES. ALBERT A. HUSEBY, Chicago, Ill. Filed Dec. 22, 1916. Serial No. 138,356. (Cl. 274—28.)

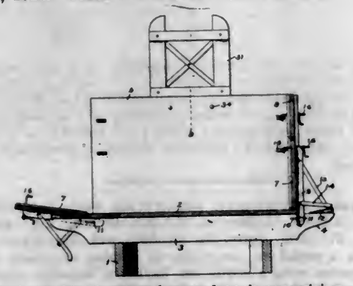


1. The combination with the sound box of a talking machine, of a one-piece stylus lever pivotally mounted intermediate its ends on and externally of the sound box, the upper arm of said lever having an inwardly turned end connected to the diaphragm of the sound box and the lower arm of said lever extending downwardly and inwardly beneath the sound box and at its free end provided with a transverse stylus socket, and a compression spring between said socket and the sound box through which a portion of the weight of the latter is yieldably transmitted to said lower lever arm.

2. In a sound box construction, the combination with an apertured diaphragm, of a stylus lever having a socketed diaphragm-engaging head, a centering member engaging the other side of the diaphragm and provided with a hollow stem extending through the aperture of the diaphragm and into the socket of said head, and a clamp-screw passed through the stem of said centering member and into the head of the stylus lever.

[Claims 3 to 6 not printed in the Gazette.]

1,228,117. COMBINED WAGON BOX AND RACK. THOMAS J. KENNEL, near Middletown, Ohio. Filed Sept. 2, 1916. Serial No. 118,213. (Cl. 21—74.)



2. A combined wagon-box and rack comprising, a box-floor, a plurality of cross-sills having the floor secured to them and having their ends projecting beyond the side-edges of the floor, end-gates secured to the cross-sills at the ends of the floor, box-sides having pivotal connection with the cross-sills and adapted to turn down to position over the projecting ends of the cross-sills, tongues carried by the bases of the box-sides, screws adapted to engage said tongues and hold the inner edges of the box-sides against the edges of the floor when the box-sides are turned down, and means for locking the box-sides in vertical position, combined substantially as set forth.

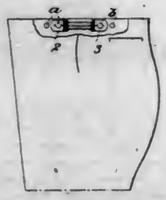
4. A combined wagon-box and rack comprising, a box-floor, a plurality of cross-sills having the floor secured to them and having their ends projecting beyond the side-edges of the floor, end-gates secured to the cross-sills at the ends of the floor, box-sides having pivotal connection with the cross-sills and adapted to turn down to position over the projecting ends of the cross-sills, tongues carried by the bases of the box-sides, screws adapted to engage said tongues and hold the inner edges of the box-sides against the edges of the floor when the box-sides are turned down, and means for locking the box-sides in vertical position, combined substantially as set forth.

4. A combined wagon-box and rack comprising, a box-floor, a plurality of cross-sills having the floor secured to them and having their ends projecting beyond the side-edges of the floor, end-gates secured to the cross-sills at the ends of the floor, box-sides having pivotal connection with the cross-sills and adapted to turn down to position over the projecting ends of the cross-sills, a pair of ribs secured to the side-boards at each of the cross-sills and having their feet straddling the cross-sills, pivots uniting the feet of the ribs to the cross-sills, a brace having its upper end pivoted to each pair of ribs and having its lower end supported by a projecting end of the appropriate cross-sills, and a bail pivoted to each pair of ribs and engaging outside of the feet of the brace pivoted to that pair of ribs, combined substantially as set forth.

5. A combined wagon-box and rack comprising, a box-floor, a plurality of cross-sills having the floor secured to them and having their ends projecting beyond the side edges of the floor, end-gates secured to the cross-sills at the ends of the floor, box-sides having pivotal connection with the cross-sills and adapted to stand vertically and to turn down to position over the projecting ends of the cross-sills, a pair of vertical battens secured to the forward end-gate, a ladder fitted to slide vertically between said battens and against the end-gate and to occupy selective positions independent of the position of the box-sides, and an adjustable clamp secured to the battens and extending across the face of the ladder and adapted to serve in clamping the ladder against the end-gate, combined substantially as set forth.

[Claims 1, 3, and 6 not printed in the Gazette.]

1,228,118. GARMENT-SUPPORTER. JACOB KRONENBERGER, New York, N. Y. Filed Apr. 22, 1916. Serial No. 92,914. (Cl. 2—143.)



A garment supporter comprising, tabs of non-metallic flexible material adapted to be detachably secured to the waist band of a garment and to come in flat contact therewith, metallic eyelets passing through each tab and arranged uniformly in the same longitudinal line with each other so as to reinforce the tab along one edge, the said eyelets being upset at their ends upon the opposite sides of the tab, and expansible members connected at their ends to the tabs and looped about the shanks of said eyelets, the upset ends of the eyelets serving to hold the members in close confinement with the tabs and against casual separation therefrom.

1,228,119. PROCESS OF TREATING ALUMINUM SKIMMINGS, SCREENINGS, DROSS, SLAGS, OR ANALOGOUS ALUMINOUS MATERIALS. JAMES WRIGHT LAWRIE, Milwaukee, Wis., assignor, by mesne assignments, to William F. Jobbins, Incorporated, Aurora, Ill., a Corporation of Illinois. Original application filed Apr. 8, 1913, Serial No. 759,645. Divided and this application filed Sept. 8, 1913. Serial No. 788,591. (Cl. 75—18.)

1. The method of utilizing aluminum skimmings, slags, dross or analogous waste aluminous materials, which consists in treating the waste materials to form an aluminate solution, separating the solution from the solid residue and separating the copper, iron and zinc or any of them therefrom.

2. The method of utilizing aluminum skimmings, slags, dross or analogous waste aluminous materials, which consists in treating the waste materials with a solution of alkaline caustic, separating the resulting aluminate solution from the solid residue and separating the copper iron and zinc or any of them therefrom.

3. The method of utilizing aluminum skimmings, slags, dross or analogous waste aluminous materials, which consists in treating the waste materials to form an aluminate solution, precipitating as sulfids the zinc, copper and other impurities from the aluminate solution, separating the solution from the solids and separating the copper, iron and zinc or any of them therefrom.

4. The method of utilizing aluminum skimmings, slags, dross or analogous waste aluminous materials, which consists in treating the waste materials with a solution of alkaline caustic to produce an aluminate solution, precipitating as sulfids the zinc, copper and other impurities from the aluminate solution, separating the solution from the solids and separating the copper, iron and zinc or any of them therefrom.

5. The method of utilizing aluminum skimmings, slags, dross or analogous waste aluminous materials, which consists in treating the waste materials to form an aluminate solution, precipitating the zinc, copper and other impurities from the aluminate solution, separating the solution from the solids, and separating the copper, iron and zinc or any of them therefrom.

[Claims 6 and 7 not printed in the Gazette.]

1,228,120. CARGO-BEAM. MELCHIOR LENKE, Brooklyn, N. Y. Filed Aug. 25, 1916. Serial No. 116,768. (Cl. 189—36.)



1. A permanent rigid structure constructed with upright posts spaced a material distance apart, a cargo beam of greater depth than thickness provided with means near the lower edges of said beam for connecting a tackle block therewith, and pivotal supports at the ends of said beam at higher points than said connecting means, said supports being connected with said posts.

2. A permanent rigid structure constructed with upright posts spaced a material distance apart, a cargo beam comprising a longitudinal I-beam, a stirrup passing over the lower flange of the I-beam and affixed to the web thereof, transverse hanger plates secured to the ends of said I-beam, and pivotal supports for the hanger plates above the upper flange of the I-beam and connected with said posts.

3. A shed structure comprising spaced upright posts adapted to form the sides of the door opening, a cargo beam between said posts comprising a longitudinal horizontally disposed plate, stirrups affixed thereto at spaced intervals over the door opening and projecting below the lower edge of said plate, transverse hanger plates secured to the ends of the longitudinal plate, and pivotal supports for the hanger plates above the upper edge of the longitudinal plate near the upper end of said upright posts.

4. A shed structure comprising spaced upright posts adapted to form the sides of a door opening, a cargo beam between said posts comprising a longitudinal horizontally disposed I-beam, a plurality of stirrups at spaced intervals over the door opening passing over the lower flange of the I-beam and affixed to the web thereof, transverse hanger plates secured to the ends of said I-beam, and pivotal supports for the hanger plates above the upper flange of the I-beam, near the upper end of said upright posts.





1,228,121. CAN-OPENER. WILLIAM L. LOESSER, Comstock, Mich. Filed Aug. 2, 1915, Serial No. 43,173. Renewed Aug. 28, 1916. Serial No. 117,384. (Cl. 30—3.)



A can opener comprising a body portion and an upwardly offset shank portion terminating in a diagonally disposed portion at its front end, an upwardly facing blade downwardly offset from the lower edge of the shank, the edge of the blade being straight and having a slight inclination from the shank, and a fulcrum jaw disposed transversely above the blade and toward its forward end and extending at each side thereof, said jaw being turned laterally from the diagonally disposed end of the shank and having a notch therein positioned at the outside of the plane of the blade and adapted to receive a bead or a corner of a can, the edge of the jaw projecting below the lower edge of the shank and being sharp throughout, there being sharp corners at the edges of the jaw and at the edges of the notch adapted to impinge the side or top of a can.

1,228,122. SHAMPOOING-STAND. SYLVESTER M. MCCANDLESS and FRANK G. MCPHERSON, Beaver Falls, Pa. Filed Jan. 8, 1914. Serial No. 811,089. (Cl. 4—2.)



1. A shampooing stand comprising a basin with a central opening therethrough to accommodate the neck of a person seated beneath the basin, and a single pedestal for inclosing water supply and drain pipes for the basin and supporting and connected to the basin wholly at one side of the latter, the overhang of the basin from the pedestal being such as to cover the shoulders of a person seated beneath the basin with the head above the latter and the neck passing through the central opening of the basin and with the head of the person so located wholly above the highest point of the basin.

2. A shampooing stand comprising a single upstanding pedestal for inclosing water supply and drain pipes, and a basin at the top of and fixed to the pedestal and offstanding therefrom to approximately the full diameter of the basin, said basin having a central upright opening therethrough for the passage of the neck of a person seated beneath the basin, with the diameter of the basin sufficient to extend over the shoulders of a person so seated, and the height of the sides of the basin being approximately the same as the height of the neck-surrounding opening, whereby the head of a person so seated is wholly exposed above the basin.

3. A shampooing stand comprising a single upstanding pedestal for inclosing supply and drain pipes for water, and a basin with a central upright passage therethrough for the neck of the person to be treated, and with fastening and sustaining means at one edge of the basin in co-

active relation to the pedestal and supporting the basin in offstanding relation to the pedestal with substantially all of the basin projecting to one side of said pedestal.

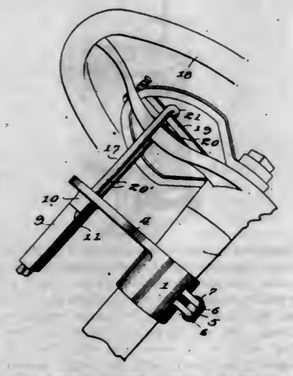
4. A shampooing stand comprising a single upstanding pedestal for inclosing supply and drain pipes for water, and a basin with a central upright passage therethrough for the neck of the person to be treated, and with fastening and sustaining means at one edge of the basin in coactive relation to the pedestal and supporting the basin in offstanding relation to the pedestal with substantially all of the basin projecting to one side of said pedestal, said basin having a removable section opposite to the pedestal with a portion of the walls of the removable section constituting a portion of the walls defining the neck-surrounding opening.

5. A shampooing stand comprising a single upstanding pedestal for inclosing supply and drain pipes for water, and a basin with a central upright passage therethrough for the neck of the person to be treated, and with fastening and sustaining means at one edge of the basin in coactive relation to the pedestal and supporting the basin in offstanding relation to the pedestal with substantially all of the basin projecting to one side of said pedestal, said basin having a removable section opposite to the pedestal with a portion of the walls of the removable section constituting a portion of the walls defining the neck-surrounding opening, and the said removable section being of a width to permit the introduction of the neck of the person being treated into the neck-receiving opening in a direction substantially radial to the basin.

[Claims 6 to 19 not printed in the Gazette.]

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1,228,123. VEHICLE-LOCK. DANIEL A. MCDERMOTT, Philadelphia, Pa. Filed June 24, 1916. Serial No. 105,633. (Cl. 70—126.)

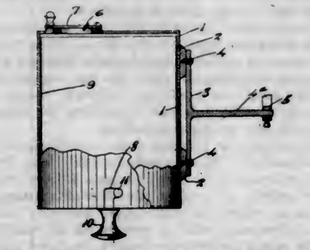


1. A vehicle lock comprising, in combination, a clamp capable of being secured to the steering column of a motor driven vehicle said clamp embodying pivotally connected jaws, means carried by said jaws to secure said clamp to said steering column, a yoke member pasing through openings formed in said jaw and adapted to prevent the removal of said clamp securing means when positioned in said openings, lock mechanism carried by said jaws for securing said yoke to said locking member, and said yoke formed to embrace the steering wheel and controlling levers of said vehicle when secured to said locking element.

2. A vehicle lock comprising in combination a clamp capable of being secured to the steering column of a motor driven vehicle, said clamp embodying a pair of pivotally connected jaws, interfitting depending members carried by the respective jaws, means for holding said interfitting members locked operatively, and a yoke adapted to straddle a spoke in the steering wheel and the controlling levers of the vehicle, said yoke passing through openings in said interfitting members at opposite sides of the locking means therefor to eliminate access being had to said means with the yoke in position, and key actuated means for locking said yoke within the openings of said interfitting members.

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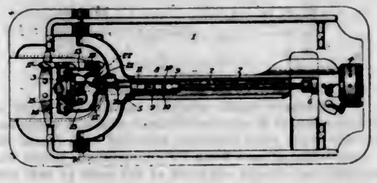
1,228,124. DENTAL-WASTE RECEIVER. CHARLES METZLER, Cincinnati, Ohio. Filed Oct. 19, 1915. Serial No. 56,792. (Cl. 32—5.)



A dental waste receiver comprising a cylindrical casing, a cup arranged to fit into said casing, studs near the bottom of said cup, bayonet slots in the bottom end of said cup arranged to receive said studs for temporarily securing said cup in said casing, an opening in the top of said casing over said cup for the insertion or removal of dental waste and a cover in said opening pivotally mounted on said casing.

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1,228,125. SEWING-MACHINE. GEORGE W. NELSON, Cleveland, Ohio, assignor to The Standard Sewing Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 7, 1915. Serial No. 65,479. (Cl. 112—15.)



6. In a lock-stitch sewing machine, the combination with a reciprocating needle, of a bed-plate having bearings at its under side, a drive shaft supported in said bearings and carrying a hook and bobbin at its forward end, said shaft being transversely divided between its ends and coupled by means permitting of the free endwise withdrawal of the hook-carrying end from the opposite or rear end, and means adjustably holding the hook-carrying end of the shaft in a longitudinally stationary position relative to the needle path.

12. In a lock-stitch sewing machine, the combination with a bed-plate having a support at its under side, of a bushing longitudinally adjustable in said support, a hook shaft journaled in said bushing, a hook on said shaft, a bobbin-case supported in the hook, and a bobbin-case latch attached to the bushing independently of the hook end and adjustable therewith.

[Claims 1 to 5, 7 to 11, and 13 not printed in the Gazette.]

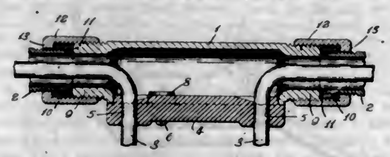
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1,228,126. THREAD FOR MAKING KNITTED GARMENTS. OWEN P. OAKES, West Roxbury, Mass. Filed June 11, 1913. Serial No. 773,147. (Cl. 28—5.)

A spun thread for knitting or weaving, consisting of a core of kapok fibers in non-adhesive relation and a protective coating of greater tensile strength or absorption-capacity such as worsted or cotton.



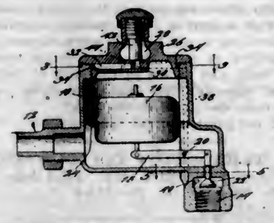
1,228,127. CONDUIT OUTLET-BOX. EDWIN A. OLLEY, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed May 25, 1911. Serial No. 629,250. (Cl. 247—1.)



The combination of an electric conduit having an externally threaded end, an outlet box having an integral nipple externally threaded and of greater diameter than the conduit, said conduit and nipple having bores of substantially the same diameter, a cup-shaped member having an opening through the bottom thereof of approximately the diameter of said bores, the outer face of the bottom of said member abutting against the end of the nipple, the inner face of the bottom of said member abutting against the end of the conduit, and the inner peripheral wall of the member being threaded for engagement with the external threads of the conduit, and a second member internally threaded for engaging the threads of the nipple and provided at its outer end with a flange, the inner face of which abuts against the edge of the first-named member opposite to the bottom thereof, substantially as and for the purpose described.

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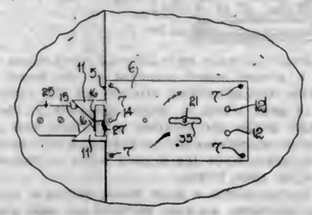
1,228,128. VACUUM-TRAP. ANDREW OLSON, Chicago, Ill. Filed May 26, 1915. Serial No. 30,655. (Cl. 236—18.)



In a device of the character described, the combination of a casing including a removable cover, an inlet and a discharge port in the casing, a valve controlling the discharge port, a float in the casing controlling said valve, a by-pass from the interior of the casing to the discharge side of said valve, said by-pass comprising a channel located wholly within the walls of the cover and side of the casing, and a thermostatic valve seated in the removable cover and adapted to open and close the by-pass substantially as and for the purpose described.

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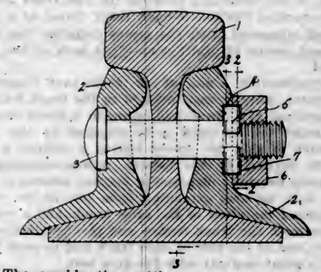
1,228,129. LATCH. ALSON C. PATTON, Senath, Mo. Filed Dec. 6, 1916. Serial No. 135,461. (Cl. 70—81.)



In a latch, a casing, opposed levers pivotally mounted at one of their ends in the casing and movable in a single plane, the other ends of the levers projecting exteriorly of the casing, a fixed keeper member having a shank disposed at right angles to the levers and terminating in a triangular-shaped head, said levers being provided on their latter ends with opposed, divergently inclined faces and notches at the inner ends thereof, said inclined faces coacting with the opposite edges of said shank in the sliding movement of the part to which the lock casing is attached, whereby the levers are forced apart and said shank received in said notches, said levers being also adapted to co-act with the inclined faces of said triangular head on the shank when the part to which the casing is attached is swung to its closed position to urge the levers apart and engage the same upon said shank behind the head, and a spring arranged within the casing and operatively engaged with the levers to urge the same toward each other and hold the outer ends of the levers in operative engagement with the keeper shank.

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1,228,130. LOCK-NUT. WILLIAM C. PRICE, Beattyville, Ky. Filed Feb. 24, 1917. Serial No. 150,757. (Cl. 151—39.)

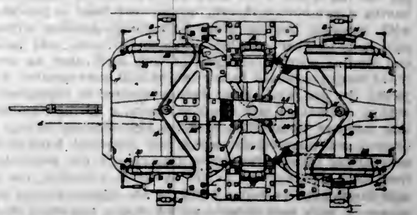


1. The combination with a structure having a recess provided with a corrugated wall, and a threaded member extending through the center of the recess, of a member screwed onto the threaded member and having a recess provided with a corrugated wall, the two corrugated walls being spaced from the threaded member, and a corrugated locking ring projecting into both recesses and adapted to fit snugly against the corrugated walls, said ring being contractible during the relative rotation of the two members.

2. The combination with a member having an inner corrugated wall and a threaded element extending through said member, of a second member screwed upon said element and having a recess provided with a corrugated wall coinciding with the wall in the first named member, and a split spring ring projecting into both members and spaced from the threaded element, said ring being corrugated to conform with the corrugations in the members.

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1,228,131. SELF-CENTERING RAILWAY-TRUCK. NEWMAN PYNN, Brooklyn, N. Y. Filed Nov. 21, 1916. Serial No. 132,573. (Cl. 105—137.)



1. A car truck, comprising a truck frame, wheel frames coupled to each other and to the truck frame to swing in

a plane substantially parallel to a track to be engaged by the truck, wheels carried by the wheel frames, lubricators carried by the wheel frames for the wheels, and means connecting the lubricators to the truck frame to move said lubricators against the wheels which diverge from each other when the wheel frames swing.

2. A car truck, comprising a truck frame, wheel frames pivoted to the truck frame in the longitudinal axis thereof to swing in a plane substantially parallel to the track to be engaged by the truck, means coupling the wheel frames for transmitting the swinging movement from one wheel frame to the other, wheels carried by said wheel frames, lubricators pivotally mounted on the wheel frames in proximity of the wheels, and means connecting each of the lubricators to the truck frame so as to swing the lubricators against the diverging wheels in the wheel frames when the wheel frames swing relative to one another.

3. In combination, a pair of car trucks, each comprising a truck frame, wheel frames, means coupling the wheel frames to each other in the longitudinal axis of the truck, means pivotally connecting the wheel frames to the truck frame in the longitudinal axis of the truck frame, an arm extending from one of the wheel frames toward the other; a rod extending between the two truck frames, means connecting the rod to each truck frame at a point in vertical alinement with the means coupling the wheel frames, and means pivotally connecting each of the arms to the rod.

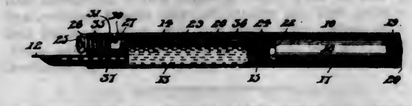
4. In combination, a pair of car trucks each comprising a truck frame, wheel frames pivoted to the truck frame in the longitudinal axis thereof to swing in a plane substantially parallel to the track to be engaged by the truck frames, each of said car trucks having a bolster, a king bolt to be carried by the bolster, means coupling the wheel frames normally disposed in vertical alinement with the king bolt, an arm extending from one of the wheel frames toward the other of the same truck, and a rod extending between the truck frames and pivotally connected to the free end of the arm of each truck and to each truck frame at a point co-axial with the king bolt.

5. A car truck, comprising a truck frame, wheel frames mounted to swing in the truck frame to take a radial position relative to a curve of a track, lubricators suspended from the wheel frame, and means connecting the lubricators to the truck frame to move said lubricators against the wheels when the wheel frame moves to a radial position.

[Claims 6 to 9 not printed in the Gazette.]

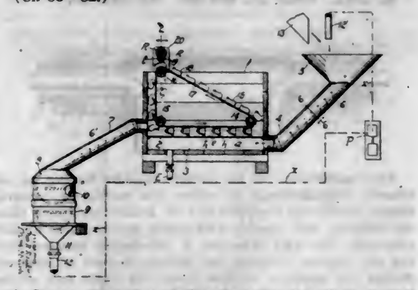
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1,228,132. FOUNTAIN-PEN LIGHT. FRANK RAUCH, Springfield, Mass. Filed Aug. 22, 1916. Serial No. 116,291. (Cl. 240—8.4.)



In a fountain-pen light, a body member, a casing applied to one end of said body-member and containing an electrical source of supply, said electrical source of supply having poles in a head thereof, said body-member having a pen-holder therein, whose rear head is provided with terminal binding posts, a resilient member within said body-member exerting pressure to retain said poles and binding posts in engagement with each other, an electrical lamp positioned in one end of said body-member, adjacent the pen, an angular spring-terminal in engagement with a contact of said electrical lamp, a spring adjacent said angular terminal, a slidable switch-closer having a contact-arm adapted to engage the electrical lamp-shell, said spring being arranged to ride upon a pin projecting from said switch-closer as the latter is actuated, one of said binding posts being wired to the spring having engagement with said slidable switch-closer, the other binding post being wired to said angular spring terminal.

1,228,133. APPARATUS FOR RECOVERING PRECIOUS METALS. CHARLES R. RAWDON and FRANK MCCOOLE, St. Louis, Mo. Filed Dec. 18, 1916. Serial No. 137,613. (Cl. 83—82.)



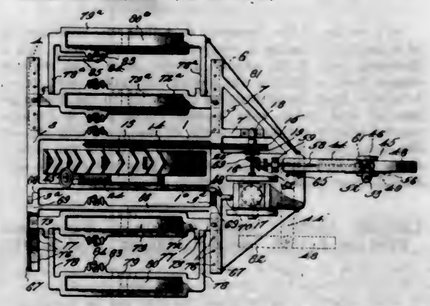
1. In an apparatus of the character described, a tank having intake and discharge means at different levels, a perforated screen or diaphragm disposed in a plane between the intake and discharge, an endless belt mounted in the tank above the screen and having a bottom lap disposed slightly above the level of the liquid traversing the tank, a series of porous buckets mounted on the belt and operating to dip slightly below the surface of the liquid to gather or skim the metal values sustained by the liquid body.

3. In an apparatus of the character described, a tank having intake and discharge means at different levels, a perforated screen or diaphragm disposed in a plane between the intake and discharge, an endless belt mounted in the tank above the screen and having a bottom lap disposed slightly above the level of the liquid traversing the tank, a series of porous fabric buckets mounted on the belt and operating to dip slightly below the surface of the liquid to gather or skim the metal values sustained by the liquid body, and means in the path of travel of the buckets for squeezing the liquid therefrom upon their emergence from the liquid in the tank.

[Claim 2 not printed in the Gazette.]

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1,228,134. TRACTOR PLOW AND CULTIVATOR. WILLIAM J. RAY, Fort Smith, Ark. Filed June 10, 1916. Serial No. 102,952. (Cl. 21—114.)



1. In tractor plows, a main frame, a drive wheel carried thereby, a ground wheel mounted at the front of the main frame and adjustable laterally of the same so as to form a gage wheel, a motor mounted on the main frame, and means for rotating said drive and ground wheels either simultaneously or independently, optionally, from said motor when the ground wheel is directed forwardly of the main frame.

2. In tractor plows, a main frame having a forwardly extending platform, an arm mounted on said platform, said arm being adjustable so as to extend forward of the main frame in longitudinal alinement therewith or laterally of said main frame at substantially a right angle thereto, optionally, a motor mounted on the said platform, driving connections between said motor and drive wheel, and means for rotating said ground wheel from the motor independently of the drive wheel or simultaneously therewith, optionally, when said arm is directed forward of the main frame.

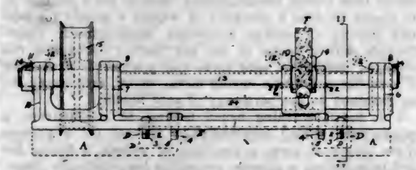
3. In tractor plows, a main frame, a drive wheel carried thereby, said drive wheel having an expanded hub provided with a plurality of outwardly directed radially disposed guide slots, a plate fixedly secured adjacent the drive wheel provided with an inwardly extending block, a guide plate slidably mounted on the inner face of said fixed plate, said guide plate being provided with a lower cam slot and being cut away at its upper portion to provide a central cam block, a plurality of radially disposed gripping members slidably mounted in the guide slots of said wheel hub and operable through the rim portion of the drive wheel, the rim of said wheel being provided with slots to accommodate said gripping members, each of said gripping members being provided adjacent its upper end with an inwardly directed actuating member operable in the cam slot of said guide plate, means for raising or lowering the guide plate, a motor mounted on said platform, and driving connections between said motor and drive wheel.

4. In tractor plows, a main frame, a drive wheel carried thereby, a motor mounted on the main frame, driving connections between said motor and drive wheel, a forwardly extending arm secured to the main frame, a shaft rotatably mounted through the outer end of said arm, a fork fixedly secured to the lower end of said shaft, a ground wheel mounted in the fork in substantial alinement with said drive wheel, and means for rotating said ground wheel from the motor independently of said shaft and either simultaneously with, or independently of, said drive wheel, optionally.



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1,228,135. GRINDER MECHANISM. FREDERICK W. REDSHAW, Scottdale borough, Pa. Filed Jan. 11, 1917. Serial No. 141,736. (Cl. 51—7.)

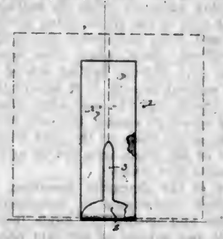


1. A grinding mechanism for sharpening the knives of jointers and planers without removing the latter from the machine, and comprising a flat base plate adapted to be laid transversely on the bed of the machine, adjacent and parallel to the rotary head thereof, and provided with depending positioning dowels, the bed of the machine being provided with holes to receive said dowels and accurately position the base plate of the grinder, means independent of said dowels and holes for holding said base plate rigidly on said bed, a pair of brackets permanently rigid with said base plate and so located as to extend one at either side of the bed plate of the machine, a third similar bracket spaced outwardly from one of said first named brackets, a rotary shaft journaled parallel with said base plate in all three of said brackets, a power pulley rigidly mounted on said shaft between said third bracket and the adjacent one of said first mentioned brackets, a grinding wheel slidably mounted on said shaft but rotating therewith, a bifurcated carriage embracing said wheel and slidably mounted on said shaft, a guide shaft parallel with said first mentioned shaft and extending between the first mentioned pair of brackets, said carriage being provided with a horizontal hole through which said guide shaft extends, and a hand grasp for said carriage, substantially as and for the purposes set forth.

2. A grinding mechanism for grinding the knives of jointers and planers without removing the latter from the machine, and comprising a metal frame consisting of a flat base plate adapted to rest upon and transversely of the bed of the machine, said base plate being provided with depending members which seat in accurately fitting recesses provided in the bed of the machine to insure exact positioning of the grinding mechanism, and three parallel brackets cast integrally with said base plate, one bracket being located at either side of the bed plate of the machine, and a third bracket outside of and adjacent to one of said first mentioned brackets, a rotary driving shaft journaled in all three brackets, a driving pulley rigid with said shaft between said third bracket and the adjacent one of said first mentioned brackets, a grinding wheel sliding on and rotated by said shaft, a guide shaft mounted on said frame parallel with said first mentioned shaft, a carriage sliding on both of said shafts and controlling the sliding motion of said wheel, and clamping means independent of said members and said recesses, for holding said grinding mechanism rigidly in place on said machine, substantially as and for the purposes set forth.

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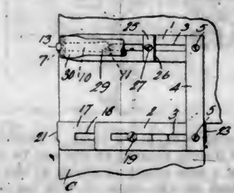
1,228,136. BOOK-HOLDER. WERT T. REED, Milwaukee, Wis. Filed May 13, 1914. Serial No. 838,222. (Cl. 45—57.)



As a new article of manufacture, a combined book-holder and marker comprising, in combination, a body plate acting as a support for the back of a book and having one end portion directed laterally and inwardly to form a leaf receiving recess, a centrally disposed tongue of restricted width formed integral with said end portion and extending upwardly at a spaced distance from the face of said plate, a lip on the other end of said body and having a spring hinged connection therewith, said spring connection tending to urge said lip toward the face of said plate to more securely retain the book in the holder, and supporting means carried by the plate for holding the same in an inclined position, said supporting means being foldable to lie against the body of the plate to adapt the device for use as a marker, substantially as described.

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1,228,137. COMBINED CURTAIN AND SHADE BRACKET. ALDEN C. ROBINSON, Aberdeen, Wash. Filed Dec. 18, 1916. Serial No. 137,624. (Cl. 156—24.)



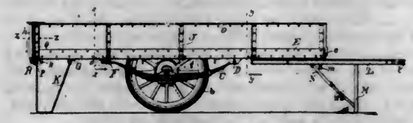
3. The combination with adjustably connected strips having toothed gripping fingers extending from the outer ends thereof, of a longitudinally slotted strip, a coupling strip adjustably connected to one of the first named strips and to said longitudinally slotted strip, a gripping element

adjustably connected to the longitudinally slotted strip, a shade roller supporting bracket adjustably mounted on said strip, an arm outstanding from the strip and constituting a guide for the gripping element, and a curtain supporting rod having a slotted end detachably mounted on the arm, there being a stud upon the arm and an aperture in the rod within which the stud is detachably seated.

[Claims 1, 2, 4, and 5 not printed in the Gazette.]

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1,228,138. AUTOMOBILE-TRAILER. CHARLES A. ROGERS, Albion, Pa., assignor to Rogers Bros. Co., Albion, Pa. Filed Dec. 2, 1915. Serial No. 64,733. (Cl. 21—7.)

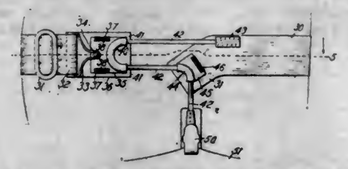


1. In a vehicle body, the combination with an angle iron frame, of a bottom supported by the said angle iron frame, one leg of each angle iron of the frame passing beneath the edge of the bottom, the said body having sides and front extending upwardly from the bottom, the other leg of each angle iron of the frame being arranged on the outside of the said sides and front, the said sides and front having vertical spaced angle iron braces secured thereto and the said bottom having spaced angle iron supporting bars secured thereto, both legs of the said vertical angle iron braces and the said angle iron bars near their ends being off-set to engage the said exteriorly disposed legs of the angle irons of the said frame, and the said set-off ends of the angle iron braces and bars being secured to the angle iron frame.

2. In a device of the character described, a rear end corner construction comprising in combination with a body having sides and bottom, an angle iron frame secured to the side and bottom of the said body, the ends of the rear member of the said frame projecting laterally beyond the sides of the body and said member having a downwardly extending leg, vertical angle iron braces having legs arranged upon the outside and inside of the side of the said body and secured thereto and to each other, the remaining legs of the said vertical braces having a space between them, the said vertical brace attached upon the outside of the side of the body terminating upon the said projecting portion of the said rear member of the frame, and the said vertical brace attached upon the inside of the side of the body having one leg extended downwardly and secured to the said downwardly extending leg of the said rear member of the frame.

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1,228,139. GARTER. JAMES CALVIN ROGERS, Birmingham, Ala. Filed Jan. 25, 1916. Serial No. 74,246. (Cl. 241—6.)



1. A garter comprising a leg band, a flexible element permanently and fixedly secured at one end to one end of the leg band, and a hose engaging means at the other end and tubular guides at the ends of said leg band, said guiding means slidably engaged by said flexible element.

2. A garter comprising a leg band, a cord permanently and fixedly secured at one end to one end of the leg band and provided at its other end with a hose gripping device, plates attached to the ends of said leg band, and tubular guides mounted on said plates, said tubular guides slidably engaged by the said cord.

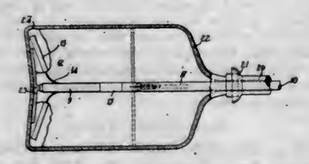
3. A garter comprising an open leg-band consisting of a central and two end portions, one end portion having a downwardly bent terminal, a cord having one end permanently and fixedly secured to the portion carrying the bent terminal and provided at its other end with a gripping device adapted to engage the hose to be supported, and guiding means carried by both end portions, one of said guiding means mounted on the downwardly bent terminal.

4. A garter, comprising a leg band provided at one end with a hook, a cord attached to the other end of the said leg band, a plate having a stud adapted to be engaged by the said hook, a plate attached to the end of the leg band adjacent the said fixed end of the cord, guiding means on the said plates and slidingly engaged by the said cord, and a gripping device on the free end of the cord.

5. A garter, comprising a leg band provided at one end with a hook, a cord attached to the other end of the said leg band, a plate having a stud adapted to be engaged by the said hook, a plate attached to the end of the leg band adjacent the said fixed end of the cord, segmental tubes fixed on the said plates and through which extends the said cord, and a gripping device on the free end of the said cord.

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1,228,140. BOTTLE-WASHING BRUSH. MAX C. ROSENFELD, Boston, Mass. Filed Feb. 8, 1917. Serial No. 147,469. (Cl. 141—7.)



1. A bottle washing brush having, in combination, a rubber tube slitted longitudinally thereof for a portion of its length to form a plurality of wipers, a holder for said tube having a passage extending longitudinally therethrough with a recess in one end thereof containing the unslitted portion of said tube, and a scrubber consisting of a rubber pad and a spring metal shank, said shank being fastened to the periphery of said holder.

2. A bottle washing brush having, in combination, a rubber tube slitted longitudinally thereof for a portion of its length to form a plurality of wipers, a holder for said tube having a passage extending longitudinally therethrough with a recess in one end thereof containing the unslitted portion of said tube, and a scrubber consisting of a rubber pad and a spring metal shank, said shank being fastened to the periphery of said holder and projecting therebeyond and between two of said wipers.

3. A bottle washing brush having, in combination, a rubber tube slitted longitudinally thereof for a portion of its length to form a plurality of wipers, a holder for said tube having longitudinal grooves in its periphery and a passage extending longitudinally therethrough with a recess in one end thereof containing the unslitted portion of said tube, a scrubber consisting of a rubber pad and a spring metal shank, said holder having a conical portion, a sleeve with a conical bore having engagement with the conical portion of said holder and a pipe having screw-threaded engagement with said holder and bearing against one end of said sleeve whereby said metal shanks may be clamped to said holder within the longitudinal grooves provided in the periphery of said holder.

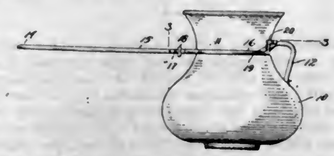
4. A bottle washing brush having, in combination, a rubber tube slitted longitudinally thereof for a portion of its length to form a plurality of wipers, a holder for said tube having a passage extending longitudinally therethrough with a recess in one end thereof containing the unslitted portion of said tube, a scrubber consisting of a rubber pad and a spring metal shank, said shank being fastened to the periphery of said holder, a rotary sleeve adapted to encircle said wipers and scrubber and a bearing within which said rotary sleeve is mounted.

5. A bottle washing brush having, in combination, a rubber tube slitted longitudinally thereof for a portion of its length to form a plurality of wipers, a holder for said tube having a passage extending longitudinally therethrough with a recess in one end thereof containing the unslitted portion of said tube, a scrubber consisting of a rubber pad and a spring metal shank, said shank being fastened to the periphery of said holder, a rotary sleeve adapted to encircle said wipers and scrubber, a bearing within which said rotary sleeve is mounted and a bell-mouthed nozzle fast to said bearing adjacent to said rotary sleeve and adapted to guide said wipers and scrubber thereinto.



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1,228,141. CUSPIDOR AND LIFTER. MARYA RUDEK, Philadelphia, Pa. Filed Feb. 21, 1917. Serial No. 150,256. (Cl. 57—111.)

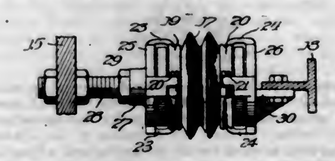


1. The combination with a cuspidor having a constricted portion intermediate its top and bottom and a handle on one side; of a detachable lifter and handle for the cuspidor comprising a spring rod doubled intermediate its end to provide a pair of arms arranged to engage the constricted portion of the cuspidor, and fingers on said arms arranged to releasably lock on the handle of the cuspidor.

2. The combination with a cuspidor having a constricted portion intermediate its top and bottom and a handle on one side; said handle having oppositely beveled portions adjacent the body of the cuspidor, of a detachable lifter and handle for the cuspidor comprising a spring rod doubled intermediate its end to provide a pair of arms arranged to engage the constricted portion of the cuspidor, and fingers on said arms, having opposed terminal portions forming barbed latch members engageable over the beveled portions of said handle, arranged to releasably lock on the handle of the cuspidor.

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1,228,142. HIGH-TENSION INSULATOR-SUPPORT FOR BUS-BARS. EDSON O. SESSIONS, Chicago, Ill. Filed Aug. 16, 1915. Serial No. 45,613. (Cl. 173—321.)



1. A supporting clamp for high-tension insulators, comprising a base section, a semi-circular member for engaging a groove in the end of the insulator, a plurality of arms rigidly connecting said semi-circular member with said base section without contact between said insulator and said arms and base section, a removable semi-circular member for also engaging said groove, clamping devices at the ends of said members for holding them together, and a lug extending from said removable member intermediate its ends and secured to said base section.

2. A supporting clamp for high-tension insulators, comprising a base section, a semi-circular member for engaging a groove in the end of the insulator, a plurality of arms rigidly connecting said semi-circular member with said base section without contact between said insulator and said arms and base section, a removable semi-circular member for also engaging said groove, clamping devices at the ends of said members for holding them together, a lug extending from said removable member intermediate its ends and secured to said base section, said lug conformed to engage a longitudinal groove in the outer surface of the end portion of said insulator to prevent rotation between said clamp and said insulator.

3. A supporting clamp for high-tension insulators, comprising a base section, a semi-circular member for engaging a groove in the end of the insulator, a plurality of arms rigidly connecting said semi-circular member with said base section without contact between said insulator and said arms and base section, a removable semi-circular member for also engaging said groove, clamping devices at the ends of said members for holding them together, a lug extending from said removable member intermediate its ends and secured to said base section, and conductor supporting means carried by said base section.

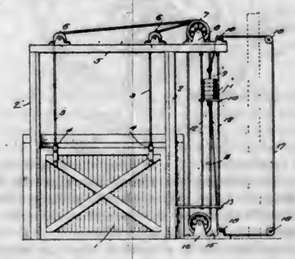
4. A supporting clamp for high-tension insulators, comprising a base section, a semi-circular member for engaging a groove in the end of the insulator, a plurality of arms rigidly connecting said semi-circular member with said base section without contact between said insulator and said arms and base section, a removable semi-circular member for also engaging said groove, clamping devices at the ends of said members for holding them together, a lug extending from said removable member intermediate its ends and secured to said base section, said lug conformed to engage a longitudinal groove in the outer surface of the end portion of said insulator to prevent rotation between said clamp and said insulator, and conductor supporting means carried by said base section.

5. A supporting clamp for high-tension insulators, comprising a base section, a semi-circular member for engaging a groove in the end of the insulator, a plurality of arms rigidly connecting said semi-circular member with said base section without contact between said insulator and said arms and base section, a removable semi-circular member for also engaging said groove, clamping devices at the ends of said members for holding them together, a lug extending from said removable member intermediate its ends and secured to said base section, lugs extending from said base section, and clamping plates secured to said lugs for rigidly supporting desired conductors from said clamp.

[Claims 6 to 15 not printed in the Gazette.]

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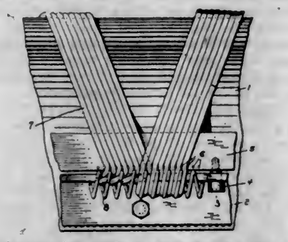
1,228,143. DOOR-OPERATOR. LOY LENWOOD SHOCKLEY, Columbia, Mo. Filed Feb. 27, 1917. Serial No. 151,197. (Cl. 268—8.)



In combination with the door and the vertical guides in which the door moves, of a support above the door, flexible members connected with the door and near the ends thereof, pulleys on the support over which the flexible members pass, said support being extended at one end of the door and carrying a double pulley, said flexible members passing over the double pulley, a counterweight connected with the ends of the flexible members, means for guiding the counterweight, a pulley journaled at the bottom of the door below the last named pulley, a flexible

member connected with each end of the counterweight and passing over the last named pulleys for operating the door, another flexible member having its ends connected with the opposite ends of the counterweight, and direction elements arranged in pairs in the form of a parallelogram over which the said flexible member passes, one pair of said direction elements being arranged at a distance from the door to permit the door being operated from a distance.

1,228,144. ANCHORING MEANS FOR TIRE FABRICS. BENJAMIN L. STOWE, Jersey City, N. J., assignor to Morgan & Wright, a Corporation of Michigan. Filed July 25, 1916. Serial No. 111,123. (Cl. 152—13.)

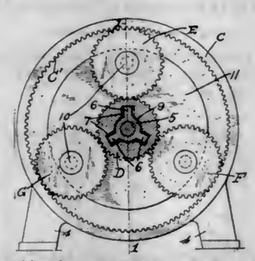


1. An anchorage for cords or strands of a tire carcass, comprising successive turns of helical coils over which the cords of said tire are looped.

2. An anchorage for cords or strands of cord tires, comprising successive turns of an endless helical coil over which the cords of said tire are looped, and means for preventing radial expansion of said helical coil.

3. An anchorage for cords or strands of a tire carcass, comprising successive turns of endless helical coils over which the cords of said tire are looped, and inexpansible cord or cable passing through said loops for preventing radial expansion of said helical coils.

1,228,145. POWER-TRANSMITTING MECHANISM. AUGUST SUNDH, Hastings-upon-Hudson, N. Y., assignor to Otis Elevator Company, a Corporation of New Jersey. Filed Mar. 21, 1914. Serial No. 826,167. (Cl. 74—34.)



1. The combination of a driving shaft, a driven shaft, and reduction gearing for transmitting power from the driving shaft to the driven shaft, said gearing being arranged to aline part of the reduction gearing with the driving shaft and independently thereof.

2. The combination of a driving shaft, a driven shaft, a yieldable pinion carried by the driving shaft, and means for transmitting power from the pinion to the driven shaft, said means being arranged to aline the pinion with the driving shaft and independently thereof.

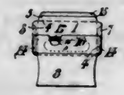
3. The combination of a driving shaft, a driven shaft, a yieldable pinion carried by the driving shaft, and gearing for transmitting power from said pinion to the driven shaft, said gearing being arranged to aline said pinion with the driving shaft and independently thereof.

4. The combination of a driving shaft, a driven shaft, a yieldable pinion carried by the driving shaft, and reduction gearing for transmitting power from the pinion to the driven shaft, said gearing being arranged to float said pinion and cause the latter to aline itself with the driving shaft independently thereof.

5. The combination of a driving shaft, a driven shaft, a yieldable pinion carried by the driving shaft, spur gears meshing with said pinion and arranged to aline the same with the driving shaft and independently thereof, and a driving connection between said spur gears and the driven shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,228,146. OPEN-FACE ENVELOP. GEORGE W. SWIFT, JR., Bordentown, N. J. Original application filed Mar. 25, 1915. Serial No. 16,870. Divided and this application filed July 30, 1915. Serial No. 42,671. (Cl. 229—71.)



An envelop having a front portion provided with an opening, a rear portion and end flaps attached to said front portion, a strip of transparent material covering said opening and extending lengthwise of the front portion and onto said end flaps said transparent strip being applied under tension which causes it to contract so as to terminate within the extreme limits of said flaps, whereby when said envelop is folded the extreme outer edge of said end flaps may be secured directly to said rear portion.

1,228,147. TOY. DON V. TANTLINGER, Lawton, Okla. Filed July 15, 1916. Serial No. 109,527. (Cl. 124—1.)



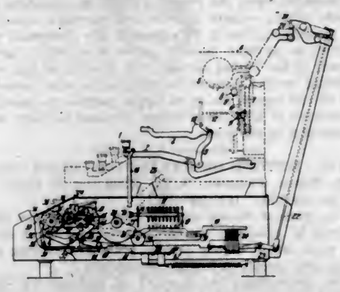
1. A toy of the character described, comprising a body portion, a rotatable shaft mounted in the body and having one end projecting through the same, a spring coiled on the shaft within the body for actuating it, an upwardly projecting arm secured to the projecting end of the said shaft and having on one face adjacent the outer end thereof a socket open at the top and adapted to receive a projectile, said arm being adapted to operate the shaft to put the spring under tension and when released to hurl the projectile, and coöperating means on the shaft and body for limiting the movement of the shaft in one direction.

2. A toy of the character described, comprising a hollow body portion, a rotatable transverse shaft mounted in the body with its ends projecting beyond the body, an arm on each projecting end of the shaft, one of the arms projecting upwardly and provided on one face adjacent its outer end with a socket open at the top, a spring coiled upon the shaft and having one end secured to the shaft and the other to the body, and coöperating means on the shaft and body for limiting the movement of said shaft in one direction.

3. A toy of the character described, comprising a hollow body, a spring actuated shaft mounted in the body and having one end projecting beyond the body, an arm on the projecting end of the shaft and provided with a socket, a notched bearing on the projecting end of the said shaft and a stop on the body and engaging the notch of the said bearing.



1,228,148. COMPUTING-MACHINE. JOHN N. THORNTON, Jersey City, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Apr. 5, 1912. Serial No. 688,581. (Cl. 235—131.)



1. In a computing machine, the combination with computing wheels, of means for rotating them, a lock for each wheel normally disengaged therefrom but positively moving to lock its wheel at the end movement of the means for rotating them, a carry-over train for operating each wheel from the one below, and means for moving each lock on movement of each carry-over train to lock each computing wheel immediately each carry-over train has completed the movement of its computing wheel.

2. In a computing machine, the combination with computing wheels, of means for rotating them, a lock for each wheel normally idle but positively locking its wheel at the end movement of the means for rotating them, a carry-over train for operating each wheel from the one below, a tooth on each computing wheel for setting its carry-over train, positive means for moving said train when set, and a lock for arresting said carry-over train when it has been thus positively turned, said first-mentioned lock also locking each computing wheel when it is turned by the carry-over train driving it.

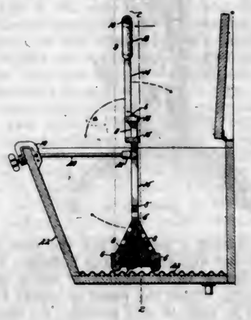
3. In a computing machine, the combination with computing wheels, of a carry-over train for turning each wheel by the one below, a tooth on each wheel for giving each carry-over train an initial turn, a stop limiting said turn, a spur for positively moving said train to turn the computing wheel it operates, a lock to arrest said train when it is moved by said spur, and a lock for said computing wheel for arresting it as it is moved by the carry-over train.

4. In a computing machine, the combination with computing wheels, of a carry-over train for turning each wheel by the wheel below, but normally out of mesh with each, a gear for positively turning each carry-over train, a tooth on each computing wheel for turning its carry-over train so that the gear for positively turning it will mesh with it, a stop arresting said train in said meshing position, and a lock for arresting each computing wheel as it is turned by its carry-over wheel.

5. In a computing machine, the combination with a gang of computing wheels and a gang of carry-over trains associated therewith, of a gear for positively driving each carry-over train to turn the computing wheel it drives, a tooth on each computing wheel for setting its carry-over train so that said train will mesh with its driving gear, a stop on said gear for arresting said train in meshing position, and a lock on said gear for arresting said train when it is turned.

[Claims 6 to 34 not printed in the Gazette.]

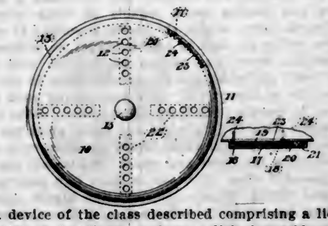
1,228,149. WASHING-MACHINE. JAMES J. WALSH, Elizabeth, N. J. Filed Apr. 29, 1916. Serial No. 94,356. (Cl. 68—20.)



1. In a washing machine, a rubber provided with an inverted U-shaped handle, clamps adapted to be secured to a tub, and a U-shaped link pivoted to the clamps and having its members pivotally connected with the side members of the handle intermediate of the ends thereof.

2. In a washing machine, a rubber having an inverted U-shaped handle, clamps connected together and adapted to be secured to a tub, a U-shaped link pivotally mounted in the clamps, and sockets pivoted to the side members of the handle intermediate of the ends thereof, and in which the side members of the link are secured.

1,228,150. UTENSIL-COVER. JOHN WASS, Beaver Falls, Pa. Filed Feb. 23, 1917. Serial No. 150,421. (Cl. 53—8.)

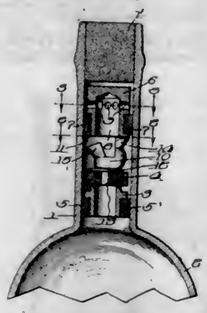


1. A device of the class described comprising a lid having outlet perforations, a closure disk for said perforations carried by the lid, a normally relative positioning means for the disk, and an adjustment retaining latch for said means.

4. A device of the class described comprising a lid having outlet openings, a closure disk for said openings centrally pivoted to the said lid and provided with radial slots adapted for registering with said openings, a tubular slotted casing carried by the lid, a lug projecting from said disk slidably arranged through the slot of the said casing, a normal positioning spring tensioned between the said lug and the opposite end of the casing, the said lid having an arcuate slot overlying the said casing with a notch adjacent the spring bearing end of the latter, and an operating latch pivoted to the said lug projecting through the said arcuate slot and adapted for seating within the said notch with said spring under compression when the device is open.

[Claims 2 and 3 not printed in the Gazette.]

1,228,151. LIQUID-HOLDING VESSEL. JOHN H. WATSON, Chicago, Ill. Filed Jan. 27, 1913, Serial No. 744,330. Renewed Dec. 2, 1915. Serial No. 64,777. (Cl. 215—62.)



1. A vessel having a passage for the flow of liquid between its interior and exterior and including a passage opening and closing valve capable of being moved by liquid whose entry within the vessel is sought to close it and free bodily to shift in said passage; an abutment in said passage above and spaced apart from said valve; and a bodily shiftable tilting weight element in the space between the abutment and valve having a base portion for engagement with the top of the valve and arms projecting upwardly and outwardly from opposite sides of said base portion and adapted for engagement with the abutment, said weight element having such dimensions as to permit it to have simultaneous valve closing engagement with the abutment and valve when the vessel is tilted to positions in which liquid whose entry is sought will not close the valve and which will permit the valve to be unseated when the vessel is tilted to a pouring position, said weight element having an arm to coöperate with the abutment to prevent material upward movement of the tilting element and thereby of the valve when the vessel is upright.

2. A vessel having a passage for the flow of liquid between its interior and exterior and including a passage opening and closing valve capable of being moved by liquid whose entry within the vessel is sought to close it and free bodily to shift in said passage; an abutment in said passage above and spaced apart from said valve; and a bodily shiftable tilting weight element in the space between the abutment and valve and having such dimensions as to permit it to have simultaneous valve closing engagement with the abutment and valve when the vessel is tilted to positions in which liquid whose entry is sought will not close the valve and which will permit the valve to be unseated when the vessel is tilted to a pouring position, said tilting weight element being higher upon one side than the other to coöperate with the abutment to prevent material opening of the valve when the vessel is upright.

3. A vessel having a passage for the flow of liquid between its interior and exterior and including a passage opening and closing valve capable of being moved by liquid whose entry within the vessel is sought to close it and free bodily to shift in said passage; an abutment in said passage above and spaced apart from said valve; and a bodily shiftable tilting weight element in the space between the abutment and valve and having such dimensions as to permit it to have simultaneous valve closing engagement with the abutment and valve when the vessel is tilted to positions in which liquid whose entry is sought will not close the valve and which will permit the valve to be unseated when the vessel is tilted to a pouring position, said tilting weight element having a dimension which permits it closely to approach the abutment when the vessel is upright thereby to prevent material upward movement of the tilting element and thereby of the valve, said tilting weight element having spaced apart arms included in its formation permitting the operation of the tilting weight element without material reduction in the pour.

4. A vessel having a passage for the flow of liquid between its interior and exterior and including a passage opening and closing valve capable of being moved by liquid whose entry within the vessel is sought to close it and free bodily to shift in said passage; an abutment in said passage above and spaced apart from said valve; and a bodily shiftable tilting weight element in the space between the abutment and valve and having such dimensions as to permit it to have simultaneous valve closing engagement with the abutment and valve when the vessel is tilted to positions in which liquid whose entry is sought will not close the valve and which will permit the valve to be unseated when the vessel is tilted to a pouring position, said tilting weight element also having a dimension which permits it closely to approach the abutment when the vessel is upright then to prevent material upward movement of the tilting element and thereby of the valve, said tilting weight element having spaced apart arms included in the formation of its upper portion to permit of the operation of the tilting weight element without material reduction in the pour.

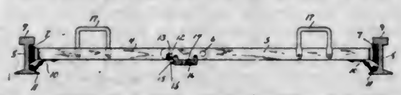
1,228,152. METHOD OF MAKING ICE-CREAM. ERNST F. W. WIEDA, Paterson, N. J. Filed Oct. 6, 1915. Serial No. 54,435. (Cl. 99—14.)

1. The method herein described of making ice cream consisting in breaking up the lacteal ingredient and a binder each into a highly divided state and mixing them together, and finally freezing the mixture.

2. The hereindescribed method of making ice cream consisting in preparing a mixture containing, with the lacteal content, a binder, then breaking up the lacteal content and the binder into a highly divided state and mixing them together, and finally freezing the mixture.

3. The hereindescribed frozen ice cream mixture containing, with the lacteal content, a binder, the binder and lacteal content being each broken up into a highly divided state and each homogeneously distributed in the mixture.

1,228,153. PORTABLE ABUTMENT FOR AUTOMATIC TRAIN-STOPS. CHARLES A. WILLARD, Madison, Conn. Filed June 2, 1916. Serial No. 101,398. (Cl. 246—59.)



1. A portable abutment for automatic train stops comprising two bars pivotally connected together the upper edges of said bars provided with upwardly projecting abutments, and means for locating the bars between the opposite rails of a railroad.

2. A portable abutment for automatic train stops comprising two bars pivotally connected, said bars provided at their outer ends with insulating blocks, said bars provided with abutments projecting upward from their upper edges, and means for locking the bars in their open position.

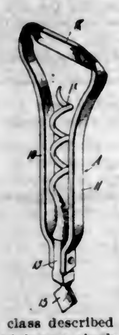
3. A portable abutment for automatic train stops comprising two bars pivotally connected together, the end of one bar projecting beyond the end of the other bar, said projecting end formed with a notch, the other bar provided with a pin adapted to enter said notch, and means for holding the pin in the notch when the bars are in their open position.

4. A portable abutment for automatic train stops comprising two bars pivotally connected together, said bars provided at their outer ends with insulating blocks, and with springs projecting below the lower edge of said bars, said bars provided with abutments projecting upward from their upper edges, and means for locking said bars in their open position.



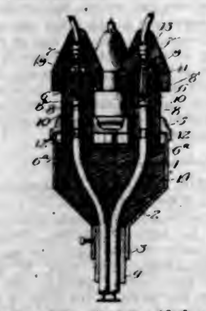
5. A portable abutment for automatic train stops, comprising two bars pivotally connected together, the end of one bar projecting beyond the end of the other bar, said projecting end formed with a notch, a pin on the other bar adapted to enter said notch, a latch mounted on the projecting end of the bar and extending across the open side of the notch and adapted to engage with said pin to hold the same in the notch when the bars are in the open position.

1,228,154. SCRAPER. FRANCIS E. WILLIAMS, Hartford, Conn. Filed June 3, 1915. Serial No. 31,930. (Cl. 145—47.)



A device of the class described comprising a U-shaped body portion formed from a single length of metal having a greater width than thickness and having its arm connecting portion twisted to lie in a plane parallel to the plane of its arms to form a projecting scraping edge and further having its arms contracted at a point spaced from the arm connecting portion, and means connecting the free ends of the arms of the body.

1,228,155. POTHEAD. PAUL F. WILLIAMS, Chicago, Ill., assignor to G & W Electric Specialty Co., Chicago, Ill., a Corporation of Illinois. Filed May 13, 1908, Serial No. 432,728. Renewed Sept. 18, 1912. Serial No. 721,098. (Cl. 247—12.)



8. In a device of the class specified, a connecting device comprising metallic terminals adapted to be fitted together, one of the same being confined in an outlet tube having a shelf; and a web having an aperture for said terminal, said terminal having side lugs, and the web having corresponding recesses.

9. A device of the class specified, comprising a casing having an inlet, a cover for the casing having a plurality of outlets, said outlets being tubular and each being provided with metallic connecting devices, caps for said outlets, connecting devices carried by said caps, said caps being arranged in connection with insulating material in the outlets so as to hermetically seal the outlets and the terminals therein, and insulating material in the casing arranged to seal the cable entering said inlet and also seal the adjacent ends of the outlets.

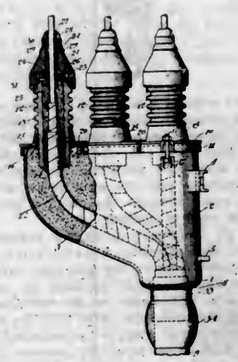
11. A device of the class specified, comprising a bowl or casing having its lower end provided with an inlet and its upper end provided with a plurality of outlet openings, tubular insulators arranged in said outlet openings and having their inner ends projecting into the interior of the bowl or casing and having their upper ends provided with water sheds, and their upper ends projecting above the top of the bowl or casing, and connecting devices arranged within said tubular insulators.

16. A device of the class specified, comprising a bowl or casing having its lower end provided with an inlet opening and its upper end provided with a plurality of tubular insulators projecting above the top of the bowl or casing, and having their upper ends provided with outwardly and downwardly extending water shedding members, said insulators being open throughout their length to permit the conductors to be extended through the bowl and then through the insulators, and having their bores substantially the size of the conductors.

25. The combination of a bowl or casing; a tubular insulating member forming an outlet from said bowl or casing, a connecting device located within said insulating member and completely inclosed thereby, said connecting device being smaller than the interior of said insulating member, whereby a space is formed between the connecting device and the inner wall of the tubular insulating member and insulating cement within the tubular insulating member and embedding said connecting device, said tubular insulating member consisting of a tubular sleeve secured to the wall of the bowl or casing and made open at its outer end and containing said insulating cement, and a closure covering the outer open end of said sleeve, said closure being conical shaped and pointing outwardly.

[Claims 1 to 7, 10, 12 to 15, 17 to 24, and 26 to 36 not printed in the Gazette.]

1,228,156. CONNECTOR FOR ELECTRICAL CONDUCTORS. PAUL F. WILLIAMS, Chicago, Ill., assignor to G & W Electric Specialty Co., Chicago, Ill., a Corporation of Illinois. Filed Mar. 17, 1913. Serial No. 754,726. (Cl. 173—353.)



1. A device of the class specified comprising in combination, a tubular outlet, a cover for the same, a connecting device extending through said cover and having its lower end projecting into the upper end of said tubular member, means for securing the lower end of said connecting device to the upper end of said tubular member, and a cap fitting over the upper end of said cover.

2. In a device of the class specified, a tubular outlet member containing a connecting device, screws extending through the walls of the outlet member to the connecting device and making connection with the latter, and a top

extending down over the upper end of said outlet member and covering the ends of said screws.

3. In a device of the class specified, a tubular outlet member containing a connecting device, securing means extending crosswise through the outlet member and engaging the connecting device, a cover for the outlet member, said connecting device extending up through said cover and a cap member fitted over the upper end of said cover.

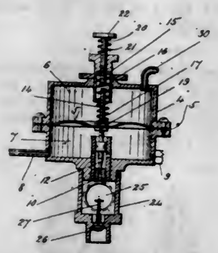
4. In a device of the class specified, a tubular outlet member containing a connecting device, securing means extending crosswise through the outlet member and engaging the connecting device, a cover for the outlet member, said connecting device extending up through said cover and a cap member fitted over the upper end of said cover, and surrounding the upper end portion of said connecting device.

5. In a device of the class specified, a tubular insulator forming an outlet member, a removable cover of insulating material fitted over the upper end of said insulator, a metallic connecting device confined within said cover and having its lower end projecting into the insulator and its upper end projecting above the upper end of the cover, securing means extending crosswise of the insulator near the upper end thereof and from the wall of the same to the connecting device for holding the lower end of the latter in position, and a metallic cap fitted over the upper end of the cover and engaging the upper end portion of said connecting device.

[Claims 6 to 16 not printed in the Gazette.]

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1,228,157. AIR-MOISTENER. WILLIAM WYAND, Absecon, N. J., assignor to Absecon Manufacturing Company, Absecon, N. J. Filed Mar. 16, 1916. Serial No. 84,738. (Cl. 261—69.)



1. In an air moistener, a mixing chamber, an inlet valve for the said chamber, a water valve, and an air-inlet piece secured between the said inlet valve and water valve, said valves both being operated automatically and independently of each other when the pressure in the mixing chamber is reduced, and the said water valve operating to feed the water through the air-inlet piece and inlet valve into the mixing chamber.

2. In an air moistener, a mixing chamber, an inlet valve for the said chamber, a water valve, and an air-inlet piece secured between the said inlet valve and water valve and having air inlet openings at opposite sides of it which form sight-holes for the feed from the water valve through the said inlet valve into the mixing chamber, said valves being operated automatically and independently of each other when the pressure in the mixing chamber is reduced.

3. In an air moistener, a mixing chamber, an inlet valve for the mixing chamber, a casing, a diaphragm secured in the casing and separating it into a water chamber and an air chamber, a water valve controlled by the said diaphragm and operatively connected with the said mixing chamber, and a pipe connection between the said air chamber and the mixing chamber, whereby the said inlet valve and water valve are opened simultaneously when the pressure in the mixing chamber is reduced below that of the atmosphere.

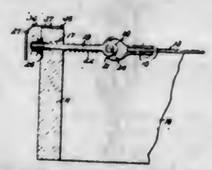
4. In an air moistener, a mixing chamber, an inlet valve for the said chamber, a water valve, and an air-inlet piece secured between the said inlet valve and water valve and provided with a sight-hole for the feed from the water valve, said inlet valve and water valve being operated automatically when the pressure in the mixing chamber is reduced below that of the atmosphere.

5. In an air moistener, a mixing chamber, an inlet valve for the mixing chamber, a casing, a flexible diaphragm secured in the casing and separating it into a water chamber and an air chamber, a water valve controlled by the said diaphragm and discharging into the mixing chamber, a spring normally closing the said water valve, a stop for regulating the lift of the said water valve, and a pipe connection between the air chamber and the mixing chamber.

[Claim 6 not printed in the Gazette.]

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1,228,158. BED-SPRING. JOHN L. YATES, New York, N. Y. Filed May 24, 1916. Serial No. 99,478. (Cl. 5—69.)



1. The combination of a rigid rectangular frame, a spring anchored at one end to one end of the frame, a tubular casing comprising a pair of parallel plates embracing the other end of the spring, means binding the casing to the spring, a series of jack bolts, means to connect the jack bolts to the casng with their free ends projecting oppositely therefrom toward the other end of the frame, means coöperating with the bolts to draw the same and the casing toward the latter mentioned end of the frame, and a series of adjustably tensioned coil springs extending between the casing and the end of the frame to support the spring after the proper tension is determined.

2. The combination with a rigid rectangular frame, a spring anchored at one end to one end of the frame and threaded devices connected to the other end of the spring and projecting through the adjacent end of the frame to tighten the spring, of a metal angular guard for the latter mentioned end of the frame, and means to hinge the guard to the upper edge of said end providing for the guard to hang over the threaded ends aforesaid or to be folded upwardly and inwardly to give access to the threaded devices, substantially as set forth.

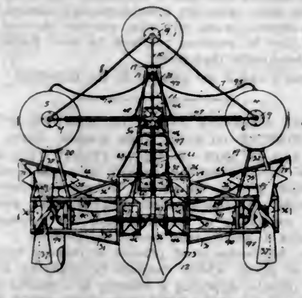
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1,228,159. AIRSHIP. ISRAEL I. ZIPERSTEIN, New York, and ABRAHAM C. KAPLAN, Brooklyn, N. Y., assignors of fifteen one-hundredths to Nathan Schreiber, fifteen one-hundredths to Aaron Schreiber, fifteen one-hundredths to Benjamin Kaiser, and five one-hundredths to Benjamin Oppenheim, New York, N. Y., and one thirty-second to Kate Zucker, Chicago, Ill. Filed Dec. 24, 1915. Serial No. 68,468. (Cl. 244—5.)

1. An airship comprising lighter-than-air supporting means comprising elongated, spaced gas bags or containers, triangularly disposed in relation to each other and with two of said bags disposed in a horizontal plane, a supporting structure or frame suspended below the uppermost bag, side extensions on said frame, connected with the lower bags, and propellers carried on said side extensions.

2. An airship comprising lighter-than-air supporting means comprising elongated, spaced gas bags or containers, triangularly disposed in relation to each other and with two of said bags disposed in a horizontal plane, a supporting structure suspended below the uppermost bag, side extensions on said frame, connected with the lower bags, and propellers carried on said side extensions and arranged underneath said lower bags.





3. An airship comprising lighter-than-air supporting means comprising elongated, spaced gas bags or containers, triangularly disposed in relation to each other and with two of said bags disposed in a horizontal plane, a supporting structure suspended below the uppermost bag, side extensions on said frame connected to said lower bags, and a plurality of propellers arranged in axial alinement on each of said side extensions.

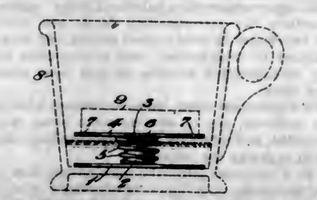
4. An airship including lighter-than-air supporting means comprising elongated spaced gas bags or containers, triangularly disposed in parallel relation to each other and with two of said bags disposed in a horizontal plane, a supporting structure suspended below the uppermost bag, side extensions on said frame suspended from said lower bags, a plurality of propellers carried on said side extensions and motors for said propellers, carried on said side extensions.

5. An airship including lighter-than-air supporting means comprising elongated gas bags or containers disposed in triangular and parallel relation to each other, a supporting structure suspended from the uppermost bag, side extensions connected with the lower bags, movable wings connected with the frame and means on said side extensions for moving the wings.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,160. ATTACHMENT FOR SHAVING-MUGS. CHARLES AINIS, Philadelphia, Pa. Filed Aug. 9, 1916. Serial No. 113,861. (Cl. 132—15.)

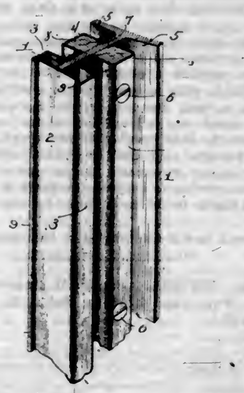


In an attachment for shaving mugs, a base plate adapted to be located in a mug or cup, a hub centrally disposed of said plate, a coiled spring encircling said hub and normally projecting above the top thereof, a disk mounted upon said spring having an offset upon its lower surface provided with a rounded edge, said offset being adapted to seat on said hub, whereby said disk may be tilted in any radial direction and rolled under pressure upon said hub.

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1,228,161. SIDE FRAME FOR CAR-WINDOWS. CHARLES H. ANDERSON, Cincinnati, Ohio. Filed Sept. 24, 1914. Serial No. 863,370. (Cl. 189—75.)

1. In a side frame for car windows, the combination of a T-shaped metal side post, a metal covering bent to provide a pilaster and stop strips, the pilaster lying in front of the edge of the web of the post and the free edges of said covering being bent inwardly and lying against the sides of the web with spaces between said inwardly turned edges and the body of the post for the window sashes, and readily accessible fastening means securing said covering to the post.

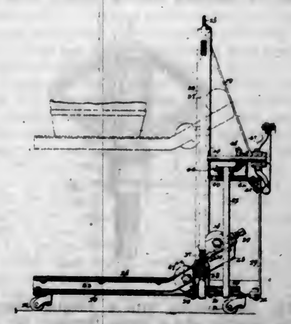


2. In a side frame for car windows, the combination of a metal side post, a covering for the inner portion of the same, the said covering consisting of a sheet of metal bent to form a pilaster for the inner face of the post and stop strips, the latter being located at opposite sides of the post, the free edges of the covering bearing directly against the sides of the post at a point removed from the body thereof, and forming with the latter, guides for the window sashes, the pilaster being supported centrally by the inner edges of the post, and readily accessible means for detachably securing the covering to the post.

3. The combination of a T-shaped metal side post, a combined integral pilaster and stop strips made of sheet metal and covering the inner edge and parts only of the sides of the web of the post so as to leave spaces for the window sashes between the edges of the covering and the body of the post, filler blocks filling the stop strips and screws passing through the stop strips and filler blocks and engaging the web of the post for detachably securing the covering to the post.

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1,228,162. ELEVATING-TRUCK. JOHN H. ANDERSON, Havana, N. D. Filed Feb. 7, 1916. Serial No. 76,657. (Cl. 187—9.)



1. An elevating truck comprising a portable frame including spaced uprights, a platform movable vertically in

the frame and having supporting bars provided with rearwardly and upwardly inclined rear ends between the said uprights, a guide roller carried by the lower inner portion of each of said inclined rear ends and engaging one side of the respective upright, and a roller adjustably supported by the rear upper end of each of the said angular rear ends and engaging the relatively opposite side of the respective guide at a point vertically spaced from the point engaged by the first roller and adjusting means for adjusting the upper rollers under pressure.

3. An elevating truck comprising a main portable frame having an opening, a platform carried thereby and vertically movable with respect thereto, a screw shaft extending in a vertical direction in the main frame provided with an upper free end and having its lower end loosely stepped in the said opening of the frame, operative connections between said shaft and said platform permitting relative angular movements thereof and coöperating with the frame opening to support the shaft in operative position, and means in the main frame for rotating said screw shaft.

[Claims 2 and 4 not printed in the Gazette.]

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1,228,163. STENCIL. HAROLD D. ARENTS, New Haven, Conn. Filed June 2, 1916. Serial No. 101,407. (Cl. 101—127.)



A blackboard stencil for making map-drawings, comprising a relatively large rectangular stencil-sheet having portions of its interior area cut away to form the required stencil design, a rigid frame corresponding to the dimensions of the said sheet and applied directly to the edge of the front face thereof so as to leave the entire rear face thereof free to lie flat upon the face of a blackboard in direct contact therewith, and suspension means applied to the frame so as to utilize the weight thereof in holding the entire rear face of the stencil-sheet in uniform direct contact with the face of the blackboard.

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1,228,164. THERMOMETER-ATTACHING MEANS. LOUIS V. ARONSON, Newark, N. J. Filed July 27, 1916. Serial No. 111,585. (Cl. 73—52.)



1. The combination with a tubular temperature responsive member and a frame therefor, the latter being provided with a suitable socket to receive one end of the member and with an opening through which said member may pass, said member being provided with a shoulder between its ends; of a threaded sleeve surrounding the one end of said member and adapted to engage the said shoulder thereof to support the said member and to advance the same inwardly toward the said socket, as said sleeve is rotated in one direction, whereby the said tubular member may be securely retained by said frame and be readily removable therefrom.

[Claims 2 and 3 not printed in the Gazette.]

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1,228,165. PROCESS FOR THE MANUFACTURE OF REINFORCED GLASS. ABEL BARDIN, Paris, France. Filed July 16, 1913. Serial No. 779,297. (Cl. 91—68.)

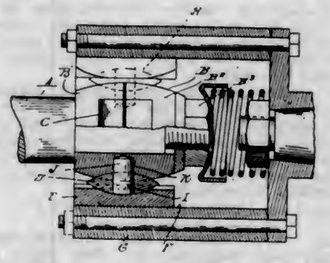
1. The herein-described process of making reinforced glass which consists in coating the glass surface with a transparent, adhesive medium, a transparent, reinforcing medium consisting of celluloid, and finally coating the whole with a transparent protecting medium.

3. The herein-described process of making transparent reinforced glass, which consists in applying a gelatin coating thereto, applying a coating of adhesive material consisting of a solution of cellulose ester which in solidifying produces a haze, applying a solution for removing the haze of the adhesive coating, applying a coating of a solution of celluloid, and finally applying a protective coating.

[Claims 2 and 4 to 11 not printed in the Gazette.]

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1,228,166. UNIVERSAL JOINT. WILLIAM J. BARKER, Flint, Mich. Filed Jan. 31, 1916, Serial No. 75,433. Renewed Mar. 28, 1917. Serial No. 158,120. (Cl. 74—19.)



2. A universal joint, comprising male and female members having corresponding polygonal faces, bearing blocks intermediate the corresponding faces, and intermediate blocks arc-shaped in longitudinal section and substantially rectangular in cross-section, said intermediate blocks engaging corresponding recesses in said male member and bearing block.

6. In a universal joint, the combination with male and female members, one of said members being recessed, of a reversible non-rotatable block intermediate said members and engaging the recess.

11. In a universal joint, the combination with male and female members, of a block intermediate said members having similar inner and outer faces arc-shaped in longitudinal section and being substantially angular in cross section, and means for adjusting one of said members to compensate for wear.

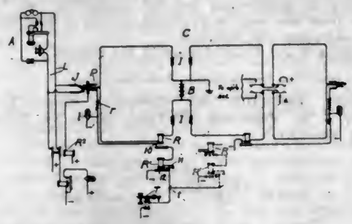
[Claims 1, 3 to 5, 7 to 10, 12, and 13 not printed in the Gazette.]

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1,228,167. AUXILIARY-SUPERVISORY-SIGNAL SYSTEM. HENRY M. BASCOM, Brooklyn, N. Y., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Jan. 29, 1916. Serial No. 75,049. (Cl. 179—73.)

1. In a telephone system, a plurality of cord circuits situated at an operator's position, a supervisory relay associated with each cord circuit, a supervisory signal controlled by each relay, electromagnetic devices adapted to be placed by the relays in parallel with the supervisory signals, and an audible signal responding first to the energization of said relays and then to the energization of said electromagnetic devices.





2. In a telephone system, a connecting circuit including a supervisory relay, a branch circuit provided with a recalling signal device, and electromagnetic means in said branch circuit operated by said relay, said signal device responding first to the energization of said relay and then to the operation of said electromagnetic means.

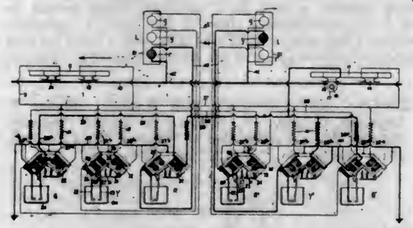
3. In a telephone system, a connecting circuit provided with switching elements, a supervisory relay associated therewith the energization of which is effected wholly by the connection of said elements, an electromagnetic device under the control of the supervisory relay in its energization and deënergization, and a device governed by said electromagnetic device and giving a signal upon the energization only of the supervisory relay.

4. In a telephone system, a connecting circuit including switching elements, a supervisory signal relay associated therewith, an auxiliary signal relay, a circuit for said auxiliary signal relay including said elements and a contact of the supervisory signal relay and the winding and a contact of the auxiliary signal relay, and a signal controlled by said circuit.

5. In a telephone system, a connecting circuit, a supervisory relay associated therewith, a make-before-break relay, a circuit for said relay including a contact of the supervisory relay and its own winding and break contact, signal controlled by said circuit, and a second circuit for the make-before-break relay including a contact of the supervisory relay and its own make contact.

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1,228,168. AUTOMATIC BLOCK-SIGNAL APPARATUS. VIRGIL WEBB BAUMGARTNER, Salt Lake City, Utah. Filed Feb. 10, 1915. Serial No. 7,429. (Cl. 246—36.)



1. The combination of track rails, with a block signal system independent of the track rails and comprising a clear signal at the entering end of the block and a clear and a danger signal at the leaving end of the block, a switch for each signal to complete the circuit thereof, electrical means for closing the clear signal switches as a car is leaving the block for setting clear signals, electrical means for closing the danger signal switch and opening the clear signal switches as a car enters the block, whereby a danger signal is given at the far end of the block, each switch including an electro-magnetically operated movable contact for opening the switch, and an electrically operated lock movable to and from a position for holding the movable contact in open position.

2. The combination of track rails, with a block signal system independent of the track rails, and comprising an energized conductor extending along the block, clear and danger signals at each end of the block, and connected with the conductor, a pair of yieldingly mounted contacts associated with the conductor at each end of the block, a car-carried element engaging the conductor and adapted to strike the said contacts to electrically connect the same with the conductor, normally closed switches for completing the circuits of clear signals, electrical means connected to one of the said contacts at each end of the block for opening the said switches as the said element enters either end of a block to destroy the clear signals, electrical means connected to the other of said contacts at each end of the block for effecting the closing of the said switches when the car-carried element leaves the remote end of the block, a normally open switch adapted when closed to complete the circuit of the danger signal at the remote end of the block, electrical means connected with the first mentioned contact at the entering end of the block, for closing the last mentioned switch when the car carried element enters the block, and means connected with the second mentioned contacts for opening the danger signal switches simultaneously with the closing of the clear signal switches, as the car-carried element leaves the remote end of the block, each of said switches comprising a movable contact, an electromagnet adapted when energized to operate the contact to open the switch, locking means for holding the said contact in open position, an electromagnet controlling said locking means and adapted when energized to release the movable contact, and means for moving the said contact to closed position when released.

3. The combination of track rails, with a block signal system independent of the track rails and comprising an energized conductor, an element carried by a car and engaging the conductor, a pair of contacts at each end of the block and associated with the conductor, whereby the said element in passing the contacts electrically connects the contacts with the conductor, clear and danger signals at each end of the block and connected with the conductor, normally closed clear signal switches for completing the circuits of the clear signals, electrical means connected with one of said contacts at each end of the block, for opening the said switches, when a car enters either end of the block, electrical means connected with the other contacts at each end of the block for effecting the closing of the clear signal switches when a car is leaving the remote end of the block, normally open danger signal switches for closing the circuit of each of the danger signals, electrical means connected with the first mentioned contacts for effecting the closing of the danger signal switch at the remote end of the block as a train enters the block, and electrical means for opening the closed danger signal switch, as the train is leaving the remote end of the block, each of said switches including a fixed and a movable contact, an electromagnet adapted when energized to control the movable contact to open the switch, locking means for holding the movable contact in open position, an electromagnet adapted when energized to move the locking means to release the said contact, and resilient means for moving the said contact to closed position when released.

4. The combination of track rails on which cars travel in both directions, with a block signal system comprising clear, danger and caution signals at each end of the block, a pair of contacts at each end of the block, an element carried by a car and adapted to engage the said contacts and connect the same with a source of current, said contacts being spaced apart in the direction of travel of the car, whereby the element engages the contacts successively when the car passes through the block from either end, normally closed clear signal switches for energizing the clear signals, electrical means for opening the said switches when the element engages the inner one of the contacts at the entering end of the block when the car is passing through the block in either direction, electrical means for effecting the closing of the switches when the element engages the outer one of the contacts at the remote end of

the block, normally open danger signal switches, electrical means for effecting the closing of the danger signal switch for the danger signal at the remote end of the block by the engagement of the element with the inner contact at the entering end of the block simultaneously with the opening of the clear signal switches, means for opening the said closed danger signal switch by the said element engaging the outer contact at the remote end of the block simultaneously with the closing of the clear signal switches, normally open caution signal switches, electrical means for effecting the closing of the caution signal switch for the caution signal at the entering end of the block when said car-carried element effects the opening of the clear signal switches and the closing of the danger signal switch at the remote end of the block, and electrical means for effecting the opening of the said closed caution signal switch by the said element when the latter in leaving the remote end of the block effects the closing of the clear signal switches and the opening of the closed danger signal switch, each switch including an electro-magnetically operated movable contact for opening the switch, an electrically operated lock movable to and from a position for holding the movable contact in open position, and means for closing the movable contact when released from said lock.

5. The combination of track rails, with a block signal system independent of the said rails and comprising clear, danger and caution signals at each end of the block, switches for controlling the circuits of the signals, there being one switch for each signal, electrical means connected with the clear signal switches and controlled by a car passing from the remote end of the block to operate the said switches to set the clear signals, electrical means controlled by a car entering the block at either end to open the clear signal switches and to close the caution signal switch to set the caution signal at the entering end, and to operate the danger signal switch corresponding to the danger signal at the remote end of the block to set the latter signal, each of said switches including a pair of armatures disposed at an angle to each other and arranged to interlock, electro-magnets for actuating the armatures each in one direction, resilient means for moving the armatures in the opposite direction, switch contacts one of which is fastened to the armature of one of the electromagnets, the said electromagnet when energized serving to move the said contact to open the switch, the armature of the other electromagnet when the latter is energized releasing the armature of the first or opening magnet to permit its resilient means to move the armature to close the said switch.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,169. MANUFACTURE OF ELECTRODES. EDMUND HENRY BECKER, Washington, D. C., assignor to Kinetic Electric Company, Norfolk, Va., a Corporation of Virginia. Filed Sept. 27, 1916. Serial No. 122,563. (Cl. 204—38.)

1. A copper oxid electrode for electric cells composed of granules of copper oxid material in mechanically interlocked mutual relative position.

2. A copper oxid electrode for electric cells composed of granules of copper oxid material in mechanically interlocked mutual relative position and united by a sintered union at their meeting faces.

3. The process of making negative electrodes which comprises forming a slurry of a fine ground copper oxid material with water, vibrating such slurry in a mold until said copper oxid material forms a compact body with the particles in interlocking relation and separating the clear liquid from the body so produced.

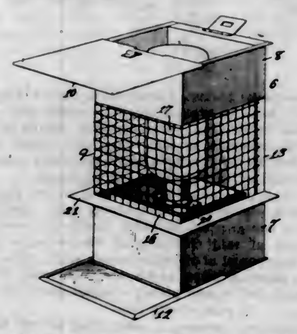
4. The process of making negative electrodes which comprises forming a slurry of a fine ground copper oxid material with water containing a small amount of temporary binder, vibrating such slurry in a mold until said copper oxid material forms a compact body with the particles in interlocking relation and separating the clear liquid from the body so produced.

5. The process of making negative electrodes which comprises forming a slurry of a fine ground copper oxid material with water containing a small amount of temporary binder, vibrating such slurry in a mold until said copper oxid material forms a compact body with the particles in interlocking relation, separating the clear liquid from the body so produced, adding a little water and continuing the vibration.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,170. FLY-POISONER. ERNEST J. BELEAL, Valley City, N. D. Filed Sept. 27, 1916. Serial No. 122,496. (Cl. 43—22.)



1. A device of the class described, comprising a casing formed of upper and lower imperforate members and an interposed foraminous member, a horizontal shelf at the top of said lower member, a tank having its upper edge in the approximate plane of said shelf and adapted to contain a poisonous liquid, a removable bottom, and a bait pan beneath said tank.

2. A device of the class described, comprising a casing formed of upper and lower imperforate members and an interposed foraminous member, a shelf at the top of said lower member exteriorly of said casing, a tank having its upper edge in the approximate plane of said shelf and adapted to contain a poisonous liquid, a float in said tank for flies to stand upon while drinking said liquid, a removable bottom, and a bait pan beneath said tank.

3. A device of the class described, comprising a casing formed of upper and lower imperforate members and an interposed foraminous member, a shelf at the top of said lower member, a tank for a poisonous liquid having its top in the approximate plane of said shelf, a removable bottom, a bait pan beneath said tank, and a cover for said casing to prevent access to the interior thereof by children.

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1,228,171. ANTICREEPER FOR RAILS. ROBERT E. BELKNAP, Chicago, Ill., assignor to Anchor Company, Chicago, Ill., a Corporation of Illinois. Filed June 23, 1913. Serial No. 775,172. (Cl. 188—4.)



1. An anti-creeper for rails comprising a pair of jaws adapted to grip the base of the rail near the web, the gripping action being increased when the jaws are tilted in a vertical plane, and a depending leg normally biasing



the jaws to grip the rail and abutting a tie below and in advance of the jaws to tilt the jaws when the rail tends to creep.

3. An anti-creeper for rails comprising a substantially non-resilient member having a jaw arranged to oscillate and to normally grip the rail along line contacts substantially transverse of the length of the rail.

9. An anti-creeper for rails comprising a substantially non-resilient body depending from the rail, and arranged to oscillate thereon, said body having jaw members provided with lines of biting contact substantially opposite each other and normally gripping the rail base in a direction transverse of the length thereof.

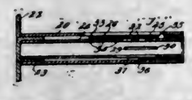
31. A rail anchor comprising gripping jaws disposed on opposite sides of, and adapted to firmly grip the base of a rail, a depending leg for engaging a tie to cause the jaws to grip the rail base, and pivotal means to hold the jaws in place and insure their gripping the rail base when the leg abuts a tie as the rail tends to creep.

42. A rail anchor having a depending leg for abutting a tie, a pair of jaws formed integrally with the leg and operated thereby to grip the rail base between them near its center.

[Claims 2, 4 to 8, 10 to 30, and 32 to 41 not printed in the Gazette.]

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1,228,172. TUBULAR LOCK. ALBERT C. BELL, Chicago, Ill., assignor to Adolph Kretz and Ulrich Kornstein, Chicago, Ill. Filed July 10, 1916. Serial No. 108,285. (Cl. 70—14.)



1. In a lock construction, the combination of a tubular casing, a tubular bolt in the casing having a portion of smaller diameter than the internal diameter of the casing, said bolt having an enlarged head at one end of substantially the inner diameter of the casing, and a spring carried by the casing having its locking end within the inner surface of the casing and resting upon the smaller diameter portion of said bolt to in part guide said bolt, said spring having a bent end and said bolt having openings therethrough coöperating with said bent end for holding said bolt in its locking and unlocking positions, said bolt having openings therethrough for permitting the insertion and turning of a key to disengage said spring from said bolt and move said bolt in said casing.

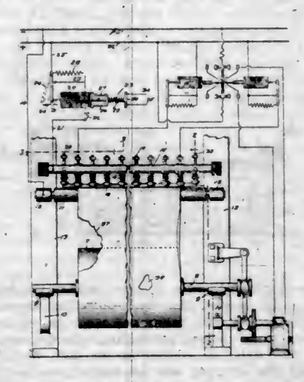
3. In a lock construction, the combination of a tubular casing, a tubular bolt in the casing having a portion of smaller diameter than the internal diameter of the casing, said bolt having an enlarged head at one end of substantially the inner diameter of the casing, and a spring carried by the casing having its locking end within the inner surface of the casing and resting upon the smaller diameter portion of said bolt to in part guide said bolt, said spring having a bent end and said bolt having openings therethrough coöperating with said bent end for holding said bolt in its locking and unlocking positions, said bolt having openings therethrough for permitting the insertion and turning of a key to disengage said spring from said bolt and move said bolt in said casing, said spring being separate from said casing and having bent projections holding it in place in said casing.

[Claim 2 not printed in the Gazette.]

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1,228,173. PAPER-FEED-CONTROLLING APPARATUS. THEODORE J. BERGH, Jr., New York, N. Y., assignor of one-half to Charles Francis, New York, N. Y. Continuation in part of application Serial No. 852,356, filed July 22, 1914. This application filed Apr. 21, 1915. Serial No. 22,806. Renewed Apr. 10, 1917. Serial No. 161,062. (Cl. 273.)

2. An apparatus as characterized, comprising an operating circuit; a pipe roll for guiding paper, constituting a terminal of said circuit; a plurality of movable plungers normally suspended in line with and in separated relation to said pipe roll to engage the same when permitted; a plurality of latches for suspending said

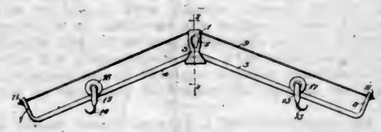


plungers; and a band extending across said paper in juxtaposed relation thereto adapted to engage any uncalculated thickened portion of said paper, for disengaging said latches and plungers.

[Claim 1 not printed in the Gazette.]

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1,228,174. GAMBREL. WILSON H. BERGSTRESER, Bancroft, S. D. Filed Aug. 14, 1916. Serial No. 114,830. (Cl. 17—30.)



In a gambrel including a supporting block having openings extending transversely thereof adjacent its upper and lower edges, a supporting frame comprising a rod member extending through the openings adjacent the lower end of said block, said rod including a pair of downwardly extending angularly related arms, extensions formed on the lower ends of said arms, a truss rod extending through the opening adjacent the upper edge of said block, the free ends of the truss rod and said extensions being connected, and suspending means associated with the angularly related arms the movement of which being limited by said extensions for a purpose specified.

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1,228,175. STOCK FEED. BENJAMIN A. BERRY, Toledo, Ohio. Filed Dec. 1, 1916. Serial No. 134,393. (Cl. 99—11.)

1. A stock feed consisting of the dried stomach contents of butchered farm stock.

2. A stock feed consisting of the dried stomach content of butchered hay and corn or grain eating animals.

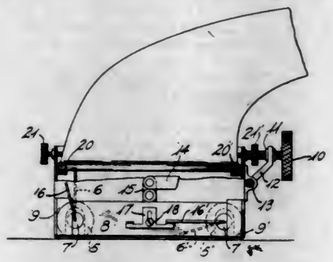
3. A stock feed consisting of dried stomach contents of butchered cattle and hogs.

4. A stock feed consisting of the dried and sterilized stomach contents of butchered farm stock with a small proportion of salt added thereto.

5. A stock feed consisting of the dried and sterilized contents of butchered farm stock with small proportions of salt and chopped hay added thereto.

[Claim 6 not printed in the Gazette.]

1,228,176. VACUUM-CLEANER NOZZLE. BARRY N. BISHOP, Newark, N. J., assignor to Richard Denbigh, Newark, N. J. Filed May 31, 1916. Serial No. 100,806. (Cl. 15—60.)



1. The combination of a vacuum cleaner nozzle, an oscillating roller carried thereby, oscillating thread-lifting means actuated by said roller and when in contact with the surface to be cleaned protruding into the space lying between the axis of oscillation of said thread-lifting means and the advance wall of said nozzle so that the plane passing through said axis and the contacting portion of the thread-lifting means is inclined at an acute angle to said surface, said roller coöperating with the surface to be cleaned.

2. The combination of a vacuum cleaner nozzle, a roller carried thereby, scooping teeth carried by said roller and when in contact with the surface to be cleaned protruding into the space lying between the axis of oscillation of said roller and a wall of said nozzle, said roller being oscillatingly mounted relatively to said nozzle.

3. The combination of a vacuum cleaner nozzle, a roller carried thereby, scooping teeth carried by said roller and when in contact with the surface to be cleaned protruding into the space lying between the axis of oscillation of said roller and a wall of said nozzle, said roller being oscillatingly mounted relatively to said nozzle, and a stop for limiting the downward movement of said teeth.

4. The combination of a vacuum cleaner nozzle, a roller carried thereby, scooping teeth carried by said roller and when in contact with the surface to be cleaned protruding into the space lying between the axis of oscillation of said roller and a wall of said nozzle, said roller being oscillatingly mounted relatively to said nozzle, and means for raising and lowering said roller.

5. The combination of a vacuum cleaner nozzle, a roller carried thereby, scooping thread-lifting means carried by said roller and when in contact with the surface to be cleaned protruding into the space lying between the axis of oscillation of said roller and a wall of said nozzle, said roller being oscillatingly mounted relatively to said nozzle, and means for holding said lifting means in elevated position relatively to its axis so as to be held from operation, the plane passing through the point of contact of the thread-lifting means with the surface to be cleaned and its axis of oscillation being inclined to said surface.

[Claims 6 to 9 not printed in the Gazette.]

1,228,177. MOUNTING FOR PRESSER-BAR-ACTUATING LEVER FOR SELF-FILLING FOUNTAIN-PENS. EDWIN F. BRITTEN, Jr., Jersey City, N. J., assignor to L. E. Waterman Company, New York, N. Y., a Corporation of New York. Continuation of application Serial No. 40,625, filed July 19, 1915. This application filed Oct. 9, 1916. Serial No. 124,616. (Cl. 120—46.)

1. A fountain pen including a barrel having a slot, an ink holding sack therein, a presser bar for the sack, and actuating means for the presser bar, said means including a box fitted in the slot and a lever fulcrumed in the box.

9. A fountain pen including a barrel having a longitudinal slot and depressions in the outer surface of the barrel at the ends of the slot, a frame set into the slot and having lugs bent into the depressions, and the outer surfaces of the lugs being flush with the outer surface of the barrel, an ink sack in the barrel, and means mounted in the frame for deflating the sack.



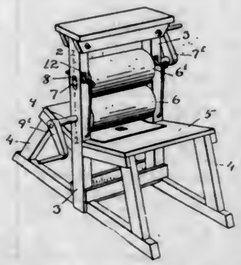
12. A fountain pen comprising a barrel having a slot the walls of which are imperforate, supporting members disposed in the slot and spaced apart, an ink sack in the barrel, a presser bar engaging the sack for deflating the same, actuating means for the presser bar, and means separate from the members for movably mounting the actuating means on the said members.

14. A fountain pen comprising a barrel having a slot the walls of which are imperforate, a lever in the slot and of such width as to leave a space between a wall of the slot and the lever, a stationary member disposed in the space, means for pivoting the lever on the said member, an ink sack in the barrel, and means actuated by the lever for deflating the sack.

17. A fountain pen comprising a barrel having a slot provided with imperforate walls, an ink sack in the barrel, and a presser bar for compressing the sack, in combination with a unitary, self-contained operating device for the presser bar, said device comprising a supporting member disposed in the slot, a lever in the slot for engaging the presser bar, and a pivot pin passing through the supporting member and lever for mounting the lever on the supporting member.

[Claims 2 to 8, 10, 11, 13, 15, and 16 not printed in the Gazette.]

1,228,178. CANE-MILL. SILAS E. BROOKER, La Crosse, Fla. Filed Dec. 2, 1916. Serial No. 134,735. (Cl. 100—47.)

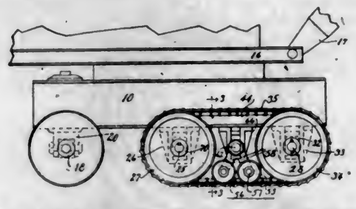


In a sugar cane mill, a frame provided with vertical slots and with perforations, a roller mounted in said frame, a coöperating roller having end journals engaging said slots, spring straps engaging the end journals of said coöperating roller and provided at their ends with perforations, and spring U-form loops at right angles to said straps, engaging the perforations of said frame and having lateral arms engaging the perforations of said straps.

1,228,179. TRUCK. LE GRAND G. CAREY, Cleveland, Ohio, assignor to Edwin D. Carey, Bedford, Ohio. Filed Mar. 26, 1915. Serial No. 17,107. (Cl. 21—114.)

1. In a device of the character described, the combination of a truck frame, transverse axles therefor, wheels on the ends of said axles, said wheels having peripheral grooves, and traction aprons running over said wheels and comprising a continuous series of flights attached together by chains adapted to run in said grooves.





2. In a device of the character described, the combination of a truck frame, a pair of transverse axles therefor extending outwardly past the frame, wide wheels on the ends of the axles, each having a plurality of peripheral grooves, traction aprons adapted to run on said wheels and comprising a series of flights secured together by chains, said chains being adapted to run in said grooves, and sprocket teeth in the wheels of one of said axles adapted to engage the chain for driving the traction apron.

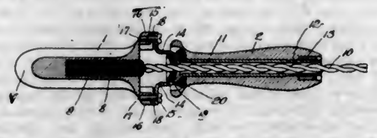
3. The combination with a truck frame, of a pair of transverse axles, traction wheels on said axles, endless traction aprons adapted to run on said wheels, smaller wheels between the larger wheels, axles adapted to hold them in contact with the lower reach of the traction apron, and a swinging member carrying said last named axles.

4. The combination with a truck frame, of a pair of transverse axles, traction wheels on said axles, endless traction aprons adapted to run on said wheels, smaller wheels between the larger wheels, axles therefor adapted to hold these wheels in contact with the lower reach of the traction apron, and means carrying said last named wheels and adapted to allow a limited movement of the axis thereof.

5. The combination with a truck frame, of a pair of transverse axles, weight supporting wheels on the outer ends of the same, traction aprons adapted to run over the alined wheels on the last mentioned axles, a transverse member between the last mentioned axles, depending frames pivoted to swing on said member, and a series of wheels carried by said frames adapted to contact with the lower reach of the traction apron to hold the same in contact with the ground.

[Claims 6 to 15 not printed in the Gazette.]

1,228,180. ELECTRICALLY-HEATED SHOE-IRON. EDWIN N. CHANDLER, Braintree, Mass., assignor to Boston Last Company, Boston, Mass., a Corporation of Maine. Filed Oct. 7, 1914. Serial 865,471. (Cl. 12—104.)



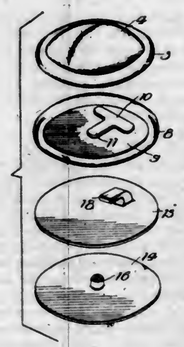
1. An electrically heated shoe finishing iron, having a substantially flat surface throughout its entire extent from end to end, one end of said iron being pointed and tapering from a rounded contour above said flat surface, said iron being formed with a recess opening at its other end to receive a removable heating unit, and means to hold a handle to said recessed end in such manner that said handle is insulated from the heat of the iron.

2. An electrically heated shoe finishing iron, having a substantially flat surface throughout its entire extent from end to end, said iron having an end face extending upwardly from said flat surface to a rounded contour above said flat surface and being inclined to said flat surface at an acute angle such that the tapered end of said iron can readily be inserted in the welt crease of a shoe, said iron being formed with a recess open at its other end to receive a heating unit, a handle adapted to receive and conduct heat supply wires therethrough and means to unite the handle to said iron adjacent said recess, said uniting means providing heat insulation for said handle.

3. An electrically heated shoe finishing iron, adapted to fit within the shank and welt crease of a boot or shoe, having a substantially triangular form in cross section with a rounded angle uniting two sides, said iron at one end tapering downwardly to its bottom edge, said iron being formed with a recess to receive a detachable electric heating unit, a handle having tubular conducting means therein for the supply wires for said heating unit with one end of said tube secured to said handle, and the other end having flanges secured to the heating iron, and heat insulating means between the iron and handle.

4. An electrically heated hammering and burnishing tool comprising a body having a cylindrical socket which is open at one end of the body, the opposite end being closed, a portion of said socket wall having a rounded external face capable of use as a hammer head, while another portion of said wall has a flat burnishing face extending from end to end of the body, and a U-shaped burnishing face inclined relatively to said flat face and intersecting the latter to form an acute angled U-shaped burnishing edge extending along both sides of the body and across its outer end, and an electrical heating unit removably inserted in said socket.

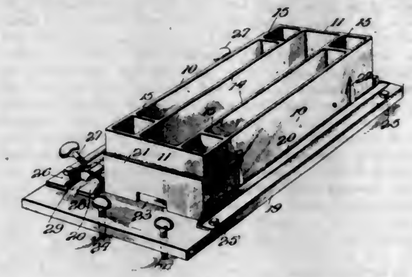
1,228,181. DETACHABLE HOOK-FASTENER. ALICE CODY, Newark, Ohio. Filed Sept. 20, 1916. Serial No. 121,192. (Cl. 24—222.)



2. A detachable fastener of the class described comprising a body having a shank extending therefrom, a hollow head consisting of a disk and plate, said disk having the peripheral edge therefor rolled to engage said plate, said shank being adapted to engage said hollow head through a portion of the garment, said plate being provided with a T-shaped opening, a pair of circular plates one having a threaded shank and the other an enlargement adapted for relative engagement, means to prevent rotation of said plates relative to a portion of the garment to which the same is adapted to be secured, a hook carried by one of the plates having a bill portion adapted to pass through the shank of the T-shaped opening and the shank of said hook being adapted to slide longitudinally in the head portion of said opening for the purpose specified.

[Claim 1 not printed in the Gazette.]

1,228,182. CASTING-MOLD. PATRICK J. CONLON, North Adams, Mass. Filed Sept. 27, 1916. Serial No. 122,462. (Cl. 22—116.)



1. A mold for casting a facing on an article, comprising a base plate, side and end walls mounted on the base plate, the article being positioned above the base plate inside the side and end walls and spaced from the base plate, one of the walls having a pouring opening, and the article having side lugs seating on opposite walls and holding the article spaced from the base plate.

2. A mold for casting a facing on an article, comprising a base plate, side and end walls mounted on the base plate, the article being positioned above the base plate inside the side and end walls and spaced from the base plate, one of the walls having a pouring opening, and the article having side lugs seating on opposite walls and holding the article spaced from the base plate, one of the side walls of the mold being adjustable toward and from the corresponding side of the article.

3. A mold for casting a facing on an article, comprising a base plate, side and end walls mounted on the base plate, the article being positioned above the base plate, one of the walls having a pouring opening, the article having side lugs seating on opposite walls and holding the article spaced from the base plate, one of the side walls of the mold being loosely mounted on the base plate, a support on the base plate adjacent to the last-mentioned side wall, and set screws threaded through said support to engage said side wall.

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1,228,183. FLOTATION OF MINERALS. HARRY P. CORLISS, Pittsburgh, Pa., assignor to Metals Recovery Company, New York, N. Y., a Corporation of Maine. Filed Mar. 21, 1917. Serial No. 156,491. (Cl. 83—85.)

1. The method of effecting the concentration of minerals by flotation, which comprises adding to the mineral pulp a small amount of alpha-naphthylamin and subjecting the resulting mixture to a flotation operation; substantially as described.

2. The method of effecting the concentration of minerals by flotation, which comprises adding to the mineral pulp a small amount of alpha-naphthylamin and of oil and subjecting the resulting mixture to a flotation operation; substantially as described.

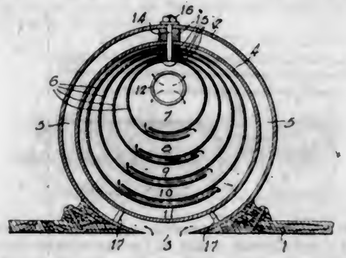
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1,228,184. FLOTATION OF MINERALS. HARRY P. CORLISS, Pittsburgh, Pa., assignor to Metals Recovery Company, New York, N. Y., a Corporation of Maine. Filed Mar. 21, 1917. Serial No. 156,492. (Cl. 83—85.)

1. The method of effecting the concentration of minerals by flotation, which comprises adding to the mineral pulp a small amount of nitro-naphthalene and subjecting the resulting mixture to a flotation operation; substantially as described.

2. The method of effecting the concentration of minerals by flotation, which comprises adding to the mineral pulp a small amount of nitro-naphthalene and of oil and subjecting the resulting mixture to a flotation operation; substantially as described.

1,228,185. SILENCER AND CONDENSER FOR GASOLENE-ENGINES. JAMES ERNEST DALEY, Port Anson, Ontario, Canada. Filed May 24, 1916. Serial No. 99,697. (Cl. 121—116.)



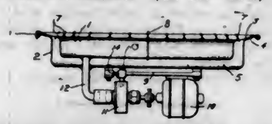
1. A silencer and condenser for internal combustion engines, including an outer casing having an inlet and an outlet, a rolled resilient sheet arranged within the outer casing and rigidly supported therein at an intermediate point in its length, the edges and ends of the rolled sheet being free so that the ends of the sheet will flex under the pulsations of pressure.

4. A silencer and condenser for internal combustion engines, including an outer casing having an inlet and an outlet, a series of rolled resilient sheets nested within each other and arranged within the outer casing to provide a succession of expansion chambers through which the exhaust gases must pass before being discharged, the free edges of the rolled sheets overlapping each other and the overlapping of the edges increasing successively from the inner rolled sheet to the outer rolled sheet, and means for rigidly supporting the rolled sheets at intermediate points in the length thereof with the ends thereof free to flex, said ends of the rolled sheets flexing under the pulsations of pressure when the device is in operation.

[Claims 2 and 3 not printed in the Gazette.]

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1,228,186. SELF-CONTAINED PORTABLE FOUNTAIN. FREDERIC W. DARLINGTON, Chicago, Ill. Filed Nov. 24, 1916. Serial No. 133,125. (Cl. 137—108.)



1. In a self-contained fountain, a basin of sheet metal having an outwardly directed flange around the mouth thereof and an annular conduit surrounding the same and closed at the top by said flange, spraying nozzles projecting upwardly from said flange and communicating at the lower ends with the interior of said conduit, and means including a power plant hung on the under side of the basin for taking water from the basin and forcing it into said conduit.

2. In a self-contained portable fountain, a basin comprising a sheet metal basin-like member having a flange extending outwardly therefrom at the mouth thereof, a second sheet metal member surrounding the aforesaid member beneath the flange on the latter and engaging the aforesaid flange, said members being secured together to form a continuous conduit around the inner member, spraying nozzles projecting upwardly from the first mentioned flange; and means including a power plant hung on the under side of the basin for taking water from said basin-like member and forcing it into said conduit.

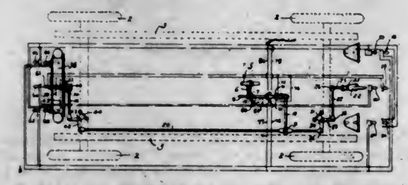
3. A basin for a portable fountain comprising a sheet metal basin-like member having a flange extending outwardly therefrom at the mouth thereof, a second member surrounding the aforesaid member beneath the flange on the latter and forming an annular conduit beneath said flange, and spraying nozzles projecting upwardly from said flange and communicating at their lower ends with said conduit.

4. A basin for a portable fountain comprising a sheet metal basin-like member having a flange extending outwardly therefrom at the mouth thereof, and a second sheet metal member surrounding the aforesaid member beneath the flange and forming with the latter an annular conduit, and spraying nozzles projecting upwardly from said flange and communicating at their lower ends with the interior of said conduit.



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1,228,187. AUTOMOBILE-SIGNAL. SAMUEL H. DAVIS, Roanoke, Va. Filed June 8, 1915. Serial No. 32,887. (Cl. 177—337.)



1. In an automobile signal, a shaft having a hand-lever affixed to the top thereof and adapted to form rotative means for the actuation of the said shaft, an arm secured to the lower end of said shaft, a rod pivotally connected between its extremities to the end of the said arm, a pair of bell-crank levers fulcrumed to convenient parts of the machine near the ends of the machine, one arm of each of the said bell-crank levers having pivotal connection with an end of the said rod, a front-end direction indicator mounted above and to the front of the machine, a vertical shaft to which is secured the said direction indicator, an arm secured to the lower extremity of said vertical shaft, a rod having pivotal connection at one end with one of the arms of the said front bell crank lever and having pivotal connection at its other end with the said arm on the front-end direction indicator shaft, a rear-end direction indicator comprising a double arm pointer, a case inclosing said pointer, a shaft journaled in said case, to which shaft is secured the said double-arm pointer, an arm secured to the said pointer shaft and a rod having pivotal connection at one end with one of the arms of the rear bell-crank lever and having pivotal connection at the other end with the said arm on the rear-end indicator shaft, substantially as described.

2. In an automobile signal, a shaft having a hand lever affixed to the top thereof and adapted to form rotative means for the actuation of the said shaft, an arm secured to the lower end of said shaft, a rod pivotally connected between its extremities to the end of the said arm, a pair of bell-crank levers fulcrumed to convenient parts of the machine near the ends of the machine, one arm of each of the said bell-crank levers having pivotal connection with an end of the said rod, a front-end direction indicator mounted above and to the front of the machine, a vertical shaft to which is secured the said direction indicator, an arm secured to the lower extremity of said vertical shaft, a rod having pivotal connection at one end with one of the arms of the said front bell-crank lever, and having pivotal connection at its other end with the said arm on the front-end direction indicator shaft, a rear-end direction indicator comprising a double arm pointer, a case inclosing said pointer, a shaft journaled in said case to which shaft is secured the said double-arm pointer, an arm secured to the said pointer shaft and a rod having pivotal connection at one end with one of the arms of the rear bell-crank lever and having pivotal connection at the other end with the said arm on the rear indicator shaft, a rear-end stop signal contained within the said rear-end case, said stop signal having a flag at one end and tension member connecting means at its opposite end, the pivot point being between the extremities of the said stop signal, a rod disposed approximately parallel with the said hand lever shaft and having tension member connecting means at its lower end, a tension member connecting said stop signal with the lower end of the said rod, and means for manually effecting the longitudinal movement of the said rod for the actuation of the said stop signal, substantially as described.

4. In an automobile signal, a rear end signal comprising a circular case of a size suitable for receiving an automobile tire circumferentially about the said case, the said case having front and rear heads, the said rear head being provided with a pair of laterally disposed sight apertures, a shaft extending longitudinally of the said case and being journaled therein, a double arm indicator secured to said shaft, the two arms thereof being disposed at approximately 90° from each other, a stop signal pivoted loosely on said shaft and to the front of the said double arm indicator, means for manually rotating the said shaft to such angular position as to display first one of the arms of the said indicator in one of the said sight apertures and then the other of the said arms of the indicator in the other sight aperture, and means for manually rotating the said stop signal about the said shaft to such an angle as will make the same visible through one of the said sight apertures, substantially as described.

6. In an automobile signal, visual front-end and rear-end signals, means within the reach of the driver for actuating the said signals, a series of front-end and rear-end electric light signals, and means acting in conjunction and in harmony with the mechanism for the actuation of the said visual signals for controlling the lights of the said electric light signals, the said electric signals being embraced in three distinct electrical circuits, the said controlling means comprising a three-arm throw attached to a convenient rotating member of the visual signal system, a leaf spring adjacent each arm of the said throw and adapted to be deflected thereby when the said throw is rotated, the said leaf springs forming electrical switches in the said electrical circuits, substantially as described.

7. In an automobile signal, visual front-end and rear-end signals, means within the reach of the driver for actuating said signals, a series of front-end and rear-end electric light signals, means acting in conjunction with and in harmony with the actuation of the said visual signals for controlling the lights of the said electrical signals, said means comprising a longitudinally-moving rod, an arm attached to said rod, a leaf spring having connection at one end with one wire of the electric circuit to the said electrical signals, the other end of said leaf spring being over the adjacent arm on the said rod, an electrical terminal adjacent the free end of the said leaf spring, the other wire of the circuit to the said electrical signals being in electrical communication with the said terminal, the said leaf spring being disposed in the path of travel of the arm on the said rod and being adapted when depressed thereby to complete the electrical connection to the said electrical signals, substantially as described.

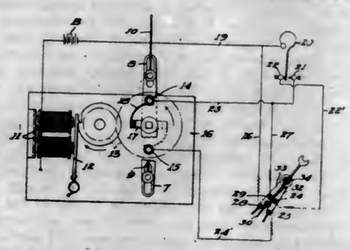
[Claims 3 and 5 not printed in the Gazette.]

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1,228,188. PRESSURE-REGULATOR. FREDERICK S. DENISON, Minneapolis, Minn., assignor to Minneapolis Heat Regulator Company, Minneapolis, Minn., a Corporation. Filed June 29, 1916. Serial No. 106,710. (Cl. 236—4.)

2. A heat regulating device comprising a motor, a thermostat having contact points in circuit with said motor, a pressure gage and indicator hand therefor, a pair of arms mounted on said gage concentric with said indicator hand and adjustable back and forth on the face of said gage, a pair of contact posts carried by each of said arms and in circuit with said thermostat and motor, said indicator hand having means for contacting with each pair of posts for closing the circuit between them through said motor independently of said thermostat.

3. A heat regulating device comprising a motor, a thermostat and circuit therefor, a pressure gage and indicator hand, arms mounted on said gage and having contact posts arranged in pairs thereon in circuit with said thermostat, a substantially T-shaped tongue carried by said indicator hand and positioned to contact with the posts of each pair for closing the circuit between them when the pressure rises above a predetermined degree.



4. A heat regulating device comprising a thermostat, a motor, electric circuits therefor, a pressure gage and indicator hand, contact posts mounted in pairs upon opposite sides of said indicator hand and adjustable on the face of said gage and connected with said thermostat and motor circuits, said indicator hand having means for contacting with a pair of posts simultaneously.

[Claim 1 not printed in the Gazette.]

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1,228,189. RESILIENT BOLT. ETHAN I. DODDS, Central Valley, N. Y., assignor to Kerner Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 3, 1913. Serial No. 777,211. (Cl. 85—1.)

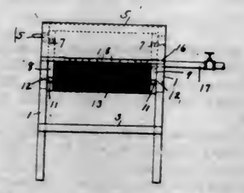


1. A bolt having a head in the form of an eye, and separate members extending from the head to the other end of the bolt and having screw threads on the ends thereof, said members being twisted about each other at an angle of less than 180°; substantially as described.

2. A bolt having a head in the form of an eye and a plurality of separate members extending therefrom, the ends of said members being provided with a screw thread, said members being twisted about each other; substantially as described.

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1,228,190. LIME-SLAKING MACHINE. MORRIS DORMAN, Baltimore, Md. Filed Feb. 9, 1917. Serial No. 147,544. (Cl. 222—4.)

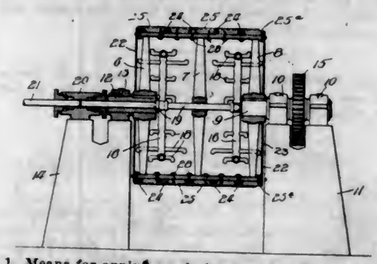


2. A lime slaking machine comprising a frame, rollers secured at opposite sides of the frame, a perforated cylinder resting upon said rollers and adapted to rotate thereon, means for rotating said cylinder, a water supply pipe leading into said cylinder and having perforations therein, a cover hinged to said frame and projecting over said cylinder, and rollers at each end of said cover adapted to rest upon the ends of the said cylinder.

[Claim 1 not printed in the Gazette.]

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1,228,191. MEANS FOR ORNAMENTING PREPARED ROOFING. WILLIAM P. DUN LANY, Chicago, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Sept. 5, 1916. Serial No. 118,403. (Cl. 91—67.9.)



1. Means for applying a design to prepared roofing comprising, in combination, a cylinder having a series of heat-conducting bars arranged peripherally thereon in a configuration according to a design to be applied to the roofing, means for heating the bars, and heat-insulating material in the spaces between said bars.

2. Means for applying a design to prepared roofing comprising, in combination, a hollow cylinder having means for rotatably supporting it, means for interiorly heating the cylinder, a plurality of heat-conducting bars on the periphery of the cylinder arranged in a configuration according to the design to be applied to the roofing, the cylinder and said bars being of good heat-conducting material, and heat-insulating material filling the spaces between said bars on the periphery of the cylinder.

3. Means for applying a design to prepared roofing comprising, in combination, a cylinder having on its external periphery a series of heat conducting bars arranged in a configuration according to a design to be applied to the roofing, the bars being in intimate heat-conducting relation to the periphery of the cylinder, means for heating the cylinder and the bars, and means for minimizing radiation from the periphery of the cylinder except through said bars, the latter means consisting of heat-insulating cement applied to the periphery of the cylinder in the spaces between said bars.

4. Means for applying a design to prepared roofing comprising, in combination, a hollow iron cylinder having means for rotatably supporting it, means within the cylinder for heating it, a plurality of heat conducting bars on the periphery of the cylinder arranged in a configuration according to the design to be applied to the roofing, and means for mounting said bars in such a manner that they may be adjusted to maintain a perfect cylindrical contour of the set of bars irrespective of any irregularity in the shape of the cylinder caused by warping thereof.

5. Means for applying a design to prepared roofing comprising, in combination, a rotatably mounted cylinder, means for heating the cylinder, a plurality of separate bars mounted on the exterior periphery of the cylinder and arranged in a configuration according to the design to be imparted to the roofing, and means for adjustably securing said bars to the cylinder and allowing the adjustment of the bars to maintain the cylindrical contour of the set of bars as a whole irrespective of any irregularity in the cylinder.

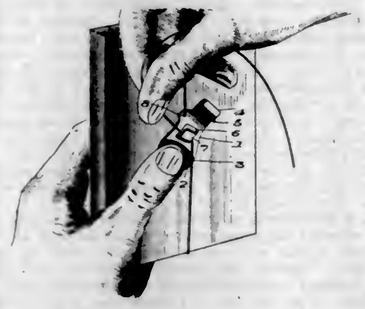
[Claims 6 to 8 not printed in the Gazette.]

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1,228,192. MAIL AND PACKAGE TYING DEVICE. ISAAC N. EABY and PAUL M. EABY, Lancaster, Pa. Filed Feb. 3, 1917. Serial No. 146,368. (Cl. 24—18.)

1. A mail or package tying device consisting of a substantially flat, oblong plate provided at one end with a thumb-piece, a cord guide independent thereof and separated therefrom, said guide being integral with the plate and projecting upwardly therefrom, cord holding means formed at the opposite end of the plate, and cord attaching means located at one side of said plate and intermediate of said guide and holding means.



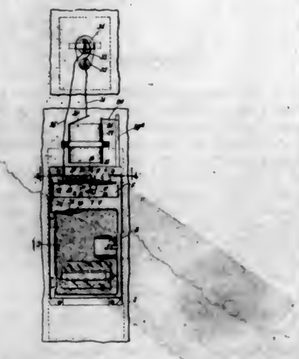


2. A mail or package tying device consisting of a substantially flat, oblong plate broadened at one end to provide a thumb-piece and at the other end having a slightly offset toe portion provided with cord gripping means, said plate being slotted intermediate its ends to provide an integral, upwardly-projecting guide tongue and a cord attaching means located between the guide and cord gripping means and laterally thereof.

3. An article of manufacture consisting of an oblong plate of sheet metal of single thickness throughout, having an enlarged end roughened on its upper surface to provide a holding face, and being slotted adjacent thereto to form an integral guide tongue projecting above the surface of the plate, the opposite end of the plate being folded back to provide a spring holding jaw, said plate being also provided with a cord attaching means located between said guide and holding means and laterally offset therefrom.

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1,228,193. LETTER-BOX. ALICE H. EWING, Salt Lake City, Utah. Filed Feb. 9, 1915. Serial No. 7,107. (Cl. 200—29.)



1. In combination, a mail box having a door for the insertion of mail, a door for the removal of mail, an electric circuit controlled by the same, means for closing the circuit at the mail box when the mail insertion door is moved, comprising a spring-pressed rocker arm directly connected to the two doors.

2. In combination, a mail box having a door for the insertion of mail, a door for the removal of mail, an electric circuit controlled by the same, means for closing the circuit at the mail box when the mail insertion door is moved and breaking it when the mail removal door is moved, comprising a spring-pressed rocker arm adapted to be moved in opposite directions by the two doors, and a push rod having a lost motion connection between the rocker arm and the mail removal door.

3. In combination, a mail box having a door for the insertion of mail, a door for the removal of mail, an electric circuit controlled by the same, means for closing the circuit at the mail box when the mail insertion door is moved and breaking it when the mail removal door is moved, comprising a spring-pressed rocker arm adapted to be moved in opposite directions by the two doors, and a push rod connecting the rocker arm to the mail removal door by means of a slot located in the rocker arm.

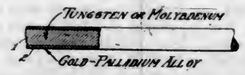
4. In combination, a mail box having a door for the insertion of mail, a door for the removal of mail, an electric circuit controlled by the same, means for closing the circuit at the mail box when the mail insertion door is moved and breaking it when the mail removal door is moved, comprising a spring-pressed rocker arm adapted to be moved in opposite directions by the two doors, and a push rod connecting the mail insertion door with the rocker arm.

5. In combination, a mail box having a door for the insertion of mail, a door for the removal of mail, an electric circuit controlled by the same, means for closing the circuit at the mail box when the mail insertion door is moved and breaking it when the mail removal door is moved, comprising a spring-pressed rocker arm adapted to be moved in opposite directions by the two doors, a push rod connecting the rocker arm to the mail removal door, and a push rod connecting the mail insertion door with the rocker arm.

[Claim 6 not printed in the Gazette.]

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1,228,194. COMPOSITE METAL ARTICLE. FRANK A. FAHRENWALD, Cleveland, Ohio, dedicated, by mesne assignments, to the Government of the United States of America, and to the people of the United States of America. Filed May 31, 1916. Serial No. 100,996. (Cl. 29—182.) (Dedicated to the public.)




1. A composite metal article comprising one or more metals of the tungsten group and a coating of pure gold metallically united to or wetting the same.

4. A composite metal article consisting of a ductile, mechanically strong and resilient metal retaining said properties at a temperature of at least about 1,000° C., and a coating of incorrodible alloy adhering to the surface of said metal and consisting largely or wholly of gold.

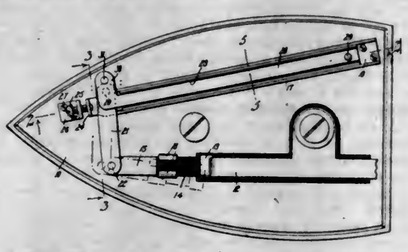
[Claims 2 and 3 not printed in the Gazette.]

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1,228,195. AUTOMATIC CIRCUIT-CLOSER FOR ELECTRIC HEATERS. MICHAEL HOUGH FARLEY, Seattle, Wash., assignor of one-half to Arthur W. Kah, Seattle, Wash. Filed Mar. 23, 1916. Serial No. 86,135. (Cl. 200—31.)

1. In a thermostatic circuit closer, the combination of relatively fixed and movable contact members, a lever having longer and shorter arms, the longer arm being connected to the movable contact member, a pair of expansion members arranged parallel to each other, one of said members being anchored at one end and the other member being anchored at its opposite end, and means to connect the otherwise free ends of the expansion members to said lever whereby the effect of the expansion of

one member acting upon the lever will be added to that of the other expansion member.



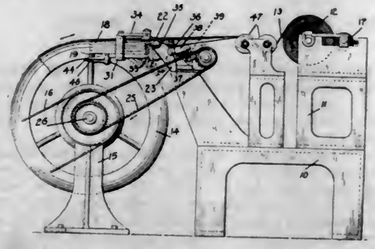
2. In a thermostatic circuit closer, the combination with relatively fixed and movable contact members, of a thermostat connected to the movable member and comprising a lever, a pair of expansion members arranged and guided one within the other and of approximately the same length, means to fix one end of one member in stationary position, means to anchor the opposite end of the other member in position, the otherwise free end of one of the expansion members being pivoted to the lever, and a draft member extending from the otherwise free end of the other expansion member to a point of pivotal connection with said lever, the two pivotal connecting points between the lever and the two expansion members being movable relatively in opposite directions whereby the expansion of the two members is accumulative as made effective upon the movable contact member through said lever.

3. In a device of the character set forth, the combination of a pair of expansion members one arranged within the other, means to anchor opposite ends of these two members respectively in fixed position, a lever extending laterally with respect to the longitudinal axis of said expansion members, and means to connect the otherwise free ends of the expansion members respectively to independent points of said lever whereby the expansion of said expansion members tends to vary the angle between the lever and said axis.

4. In a device of the character set forth, the combination of an expansion member, means to anchor one end of this member in fixed position, a second expansion member housed within and movable lengthwise with respect to the axis of the first mentioned member, means to adjustably anchor the end of the second member remote from the anchorage point of the first member, a lever extending at an angle to the axis aforesaid, and independent and independently movable points of connection between said lever and the free ends of said expansion members.

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1,228,196. TIRE-BUILDING MACHINE. GEORGE F. FISHER, Roselle, N. J., assignor to The Hartford Rubber Works Company, a Corporation of Connecticut. Filed Dec. 31, 1915. Serial No. 69,547. (Cl. 154—10.)



1. A tire building machine embodying a revoluble core for receiving material, and positively reciprocating presser fingers adapted to push the material in the direction of rotation of the core for shaping the material on the core.

2. A tire building machine embodying a revoluble core for receiving material, presser fingers adapted to contact with the material, and means for positively reciprocating the fingers substantially tangentially to the core.

3. A tire building machine embodying a revoluble core for receiving material, presser fingers adapted to frictionally contact with the material, and means for positively reciprocating each finger substantially tangentially to and at a predetermined ratio of speed relatively to a corresponding portion on the surface of the core.

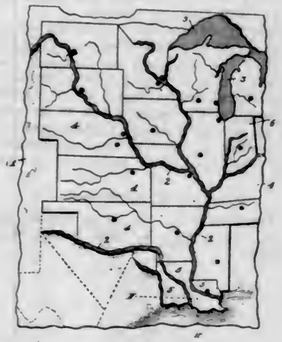
4. A tire building machine embodying a revoluble core for receiving material, a series of presser fingers adapted to frictionally contact with the material from near the tread portion to near the bead portion of the core, and means for positively reciprocating each finger substantially tangentially to the core and at a different speed than its neighbors in the series.

5. A tire building machine embodying a revoluble core for receiving material, presser fingers adapted to frictionally contact with the material from near the tread portion to near the bead portion of the core, and means for positively reciprocating each finger substantially tangentially to the core and at a faster speed than its neighbor nearer the tread portion of the core.

[Claims 6 to 10 not printed in the Gazette.]

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1,228,197. EDUCATIONAL DEVICE. CHARLES A. B. FLENNIKEN, Watertown, Mass. Filed Nov. 11, 1916. Serial No. 130,786. (Cl. 35—6.)



1. An educational device, comprising a base board having a map indicated thereon in outline, raised portions on said base board indicating water, and blocks designating subdivisions of said map and shaped to interfit with each other and with said raised portions.

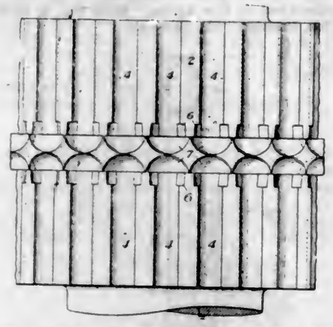
2. An educational device, comprising a base board having a map indicated thereon in outline, raised portions on said base board indicating rivers, and blocks designating subdivisions of said map and shaped to interfit with each other and with said raised portions, whereby the rivers when the map is assembled will be indicated separately.

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1,228,198. METHOD OF MANUFACTURING COMPOSITE BOLTS. JOSEPH A. FRAUENHEIM, Pittsburgh, Pa., assignor to Kerner Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 10, 1914. Serial No. 876,532. (Cl. 10—27.)

1. The method of manufacturing semi-bolt blanks in sheet form, consisting in passing a sheet between a pair of forging rolls, and forcing the metal of the sheet into transverse blank-forming cavities to form a plurality of semi-bolt blanks arranged side by side throughout the length of the sheet and connected to each other by thin webs, substantially as described.



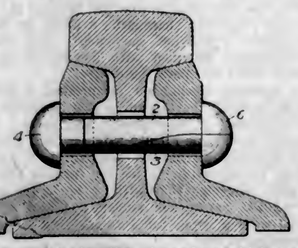


2. The method of manufacturing headed semi-bolt blanks in sheet form, consisting in passing a sheet having a thickened longitudinal portion between a pair of rolls, and forcing the metal of the sheet into transverse blank-forming cavities to form a plurality of semi-bolt blanks arranged side by side throughout the length of the sheet and connected to each other by thin webs, substantially as described.

3. The method of manufacturing bolt blanks in sheet form, consisting in passing a sheet having a thickened central longitudinal portion between a pair of rolls having two sets of transversely arranged blank-forming cavities, and forcing the metal of the sheet into the blank-forming cavities to simultaneously form two sets of blanks arranged end to end transversely of the sheet, and connected to each other by thin webs, substantially as described.

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1,228,199. BOLT. JOSEPH A. FRAUENHEIM, Pittsburgh, Pa., assignor to Kerner Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 15, 1915. Serial No. 28,298. (Cl. 85—38.)



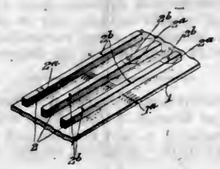
1. A bolt having a plurality of members which are separate throughout the entire length of the bolt, said members being upset at both ends to form heads, the body of the bolt being twisted about its longitudinal axis intermediate said heads and a plurality of members through which the body members of the bolt extend and which are held in position with relation to each other by means of the heads, substantially as described.

[Claims 2 to 4 not printed in the Gazette.]

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1,228,200. MECHANISM FOR GRIPPING AND CARRYING GRAIN-STALKS. VICTOR E. FREEMAN, Long Beach, and LOUIS P. WHITAKER, New York, N. Y. Filed Nov. 14, 1916. Serial No. 131,225. (Cl. 55—66.)

1. Mechanism for gripping and carrying grain stalks comprising a pair of endless belts having opposed parallel portions, each of said belts comprising a broad band of flexible material provided with a plurality of longitudinally extensible, longitudinally disposed ribs projecting from its exterior surface, said ribs being substantially coextensive longitudinally with the belt and the ribs of one belt being out of alinement transversely with and intermeshing with those of the other belt, and out of contact with the surface of the opposing belt, throughout the parallel opposed portions of said belts, and means for driving said belts so as to cause the parallel opposed portions to move in the same direction and at the same speed.

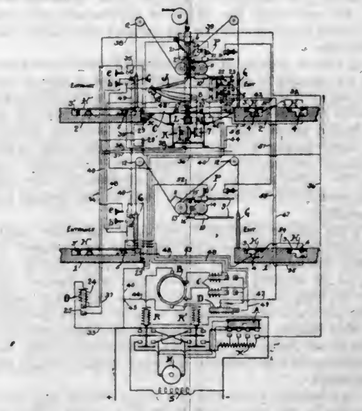


4. Mechanism for gripping and carrying grain stalks comprising a pair of endless belts having parallel opposed portions each of said belts comprising a band of material substantially indexible in directions parallel to the planes of its inner and outer faces, but flexible in directions transversely of said planes, and provided with a plurality of longitudinally disposed ribs formed of a composition including rubber, and being elastic longitudinally and transversely, the ribs of one belt being out of alinement transversely with and intermeshing with those of the other belt, and being out of contact with the face of the opposed belt throughout the parallel portions thereof, said ribs each having their ends joined to make them endless, the joints of said ribs being out of alinement with each other, and out of alinement with any line of joining of the belt material.

[Claims 2 and 3 not printed in the Gazette.]

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1,228,201. ELEVATOR-DOOR MECHANISM. FLOYD C. FURLOW, Montclair, N. J., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 20, 1915. Serial No. 46,419. (Cl. 187—52.)



1. In elevator apparatus, the combination with a car, a landing gate, and means controllable conjointly by the car and a vehicle for controlling the gate.

2. In elevator apparatus, the combination with a car, a landing gate, and means operable by a vehicle to control the gate only when the car is substantially at the landing.

3. In elevator apparatus, the combination with a car, a landing gate, and means comprising a weight controlled

circuit-controlling device operable to control the gate only when the car is substantially at the landing.

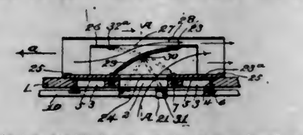
4. In elevator apparatus, the combination with a car, a landing gate, a series of movable floor sections, contacts controlled by said sections, and an electric circuit including said contacts in series and controlling said gate.

5. In elevator apparatus, the combination with a car, a landing gate, a series of movable floor sections positioned, a pre-determined distance from the gate, contacts controlled by said sections, and an electric circuit including said contacts in series controlling said gate.

[Claims 6 to 37 not printed in the Gazette.]

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1,228,202. VENTILATOR. JACOB W. GERKE, EDWARD J. BRAISTED, and EDMOND T. KELLEHER, Flushing, N. Y.; said Gerke assignor to said Braisted and said Kelleher. Filed Apr. 13, 1916. Serial No. 90,869. (Cl. 98—22.)



1. An ejector ventilator comprising a pair of open end casings secured together one within the other and affording an air channel between the walls of the casings and within the outer casing, the inner wall of the outer casing having an air opening in communication with the inner casing, the outer wall of the inner casing having an air opening in communication with said channel, a valve pivoted in the inner casing and closing communication between said openings, and means for operating the valve to alternately open and close communication between the ends of the casings and said openings.

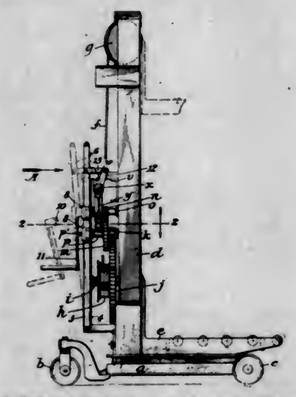
2. An ejector ventilator comprising a pair of casings one within the other and having walls spaced apart, the inner wall of the outer casing having an air opening, the outer wall of the inner casing having an air opening opposite the opening in the outer casing and adjacent to a solid wall of the outer casing, a valve in the inner casing and closing communication between said openings, and means for operating the valve to alternately open and close communication between the ends of the casings and the openings.

3. An ejector ventilator comprising an outer casing having an air opening in the inner wall thereof, a casing fixed to said wall within the outer casing and having side walls flush with the sides of said opening, the outer wall of the inner casing having an air opening opposite the opening in the outer casing, a valve swingable in the inner casing and closing communication between said openings, and means for operating the valve to alternately open and close communication between the ends of the casings and said openings.

4. In an ejector ventilator, an open end outer casing having an air opening through the inner wall thereof, an open end casing contained within the outer casing and having an air opening through the outer wall thereof, said casings forming an air channel within the outer casing between the walls of the casings, a valve within the inner casing and closing communication between said openings, and means for operating the valve to alternately open and close communication between the ends of the casings and said openings.

5. In an ejector ventilator, an outer casing having an air opening in the inner wall thereof, a casing contained in the outer casing and having side walls fixed to said inner wall, the outer wall of the inner casing having an air opening opposite the opening in the outer casing, the inner casing terminating in open ends between said opening in the outer casing and the ends of the outer casing, a valve in the inner casing and closing communication between said openings, and means for operating the valve to alternately open and close communication between the ends of the casings and said openings.

1,228,203. MACHINE-BRAKE. HENRY SHELDEN GERMOND, Jr., Bayonne, N. J., assignor to New York Revolving Portable Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 4, 1913. Serial No. 793,390. (Cl. 74—13.)



1. A hoisting mechanism comprising a driving shaft therefor; means for holding said shaft against retrograde rotation; and mechanism which is mounted free to slip outwardly along said shaft and wipe therefrom articles slidably mounted thereon and which when slipped outwardly along said shaft throws said means into releasing position.

2. A hoisting mechanism comprising a driving shaft therefor; means for holding said shaft against retrograde rotation; a device for operating said shaft and slidably mounted thereon; and mechanism which is mounted free to slip outwardly along said shaft and wipe said device therefrom and which when slipped outwardly along said shaft throws said device therefrom and said means into releasing position.

3. A hoisting mechanism comprising a driving shaft therefor; an operating device for turning the latter and removably connected therewith; a brake for holding said shaft against retrograde movement; and brake-controlling mechanism provided with means for disconnecting said shaft from its operating device.

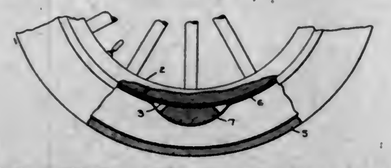
4. A hoisting mechanism comprising a driving shaft therefor; locking mechanism which prevents the retrograde movement of said shaft; and means which wipe said shaft clear and release said locking mechanism.

5. A hoisting mechanism comprising a driving shaft therefor; an operating device for turning the latter and removably connected therewith; a brake for holding said shaft against retrograde movement; and a brake-lever provided with a wiper for disconnecting said shaft from its operating device.

[Claim 6 not printed in the Gazette.]

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1,228,204. FLAT-TIRE SIGNAL. DAVID D. GETMAN, Minneapolis, Minn., assignor of one-third to Joseph P. Sternhagen, Glasgow, Mont. Filed Mar. 3, 1917. Serial No. 152,268. (Cl. 152—13.)



1. In combination, with a pneumatic tire and means normally held by the inflated tube out of contact with the tire tread but allowed to press thereon at a point in the circumference of the tire when the tube is deflated, said means being mounted on the tire casing between it and the inner wall of the tube.

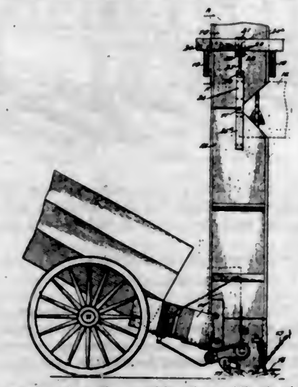
4. In combination, with a pneumatic tire, a block having surfaces for fitting the flanges of the casing and the surfaces of the tube and having means for connection with the tire casing, said block bearing on the tread of the casing when the tube is deflated.

[Claims 2 and 3 not printed in the Gazette.]



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1,228,205. ADJUSTABLE SUPPORT FOR CUP ELEVATORS. JOHN H. GILMAN, Ottawa, Ill., assignor to King & Hamilton Company, Ottawa, Ill., a Corporation of Illinois. Original application filed Dec. 17, 1914, Serial No. 877,646. Divided and this application filed June 9, 1915. Serial No. 33,030. (Cl. 193—3.)



1. In an elevator, the combination with the joists of the building, of a vertical framework depending through and between the joists, supporting beams resting on the joists, hook members having their uppermost horizontal flange resting on the beams, studs projecting from the sides of the framework, eye-bolts having their eyes over the studs and having their threaded ends extending upward through the lower horizontal flanges of the hook members, and nuts coöperating with the bolts and hook members to regulate the height of the framework.

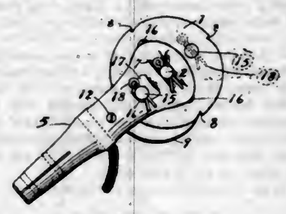
2. In an elevator, the combination with the joists of a building, of a vertical framework depending through and between the joists, a swinging frame portion hinged to the stationary portion below the joists, hinges comprising hinge straps secured to the bottom of the stationary frame section and to the top of the swinging section, a hinge rod passing through the overlapping ends of the hinge straps, a suspension rod passed through the stationary frame section and the upper ends of the upper hinge straps, supporting beams resting on the joists, hook members having their uppermost horizontal flanges resting on the beams, eye-bolts having their eyes over the outer ends of the suspension rod and having their threaded ends extending upward through the lower horizontal flanges of the hook members, and nuts coöperating with the bolts and hook members to regulate the height of the framework.

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1,228,206. TROLLEY. GEORGE D. HARLOW, St. Louis, Mo. Filed May 22, 1916. Serial No. 99,007. (Cl. 191—61.)

1. The combination with a trolley head, of a wheel rotatably mounted in said head, and means coöperating with said wheel for yieldingly holding said wheel against rotation in one direction and allowing free rotation in the other direction.

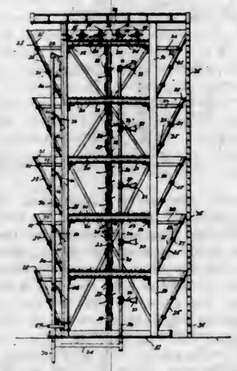
8. In combination with a trolley head, a wheel rotatably mounted in said head, an annular groove formed in the peripheral face of said wheel, a plurality of ratchet teeth formed on the periphery of the opposite walls of said groove, and a resilient pawl supported on said head, and adapted for engagement with said ratchet teeth for yieldingly holding said wheel against rotation in one direction, and adapted to slide out of engagement with said ratchet teeth when traveling in the opposite direction to constitute said wheel a rotary contact.



[Claims 2 to 7 not printed in the Gazette.]

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1,228,207. COOLING-TOWER. BENJAMIN F. HART, Jr., Hoboken, N. J. Filed Mar. 29, 1915. Serial No. 17,788. (Cl. 261—114.)



1. A cooling tower comprising a supporting frame work, a series of water pans or trays arranged at different levels thereon and having means to discharge from one series to another at a lower level, and a series of vertical water distributing nozzles arranged adjacent to and over the upper water pans of the tower, each nozzle being surrounded by a water distributer cone between its outlet and the pans.

2. A cooling tower comprising a supporting frame work, a series of water pans arranged in vertically spaced layers and having lateral discharge means, the water pans in one layer being in lateral staggered relation to the water pans in the next layer and a series of vertical water distributing nozzles arranged adjacent to and over the upper water pans, each nozzle being surrounded by a water distributer cone between its outlet and the pans.

3. A cooling tower comprising a supporting frame work including sets of I-beams arranged in spaced parallel relation in horizontal planes, a series of laterally spaced water pans supported on the upper flanges of two of the beams of a set, and a second series of laterally spaced water pans supported on the lower flanges of the beams, the second series of pans being arranged in staggered relation to the first series of pans, and a series of vertical water distributing nozzles arranged over the upper water pans.

4. A cooling tower comprising a supporting frame work, a series of water pans arranged at different levels thereon, a series of inclined supporting members secured to the frame work and extending upwardly and outwardly about

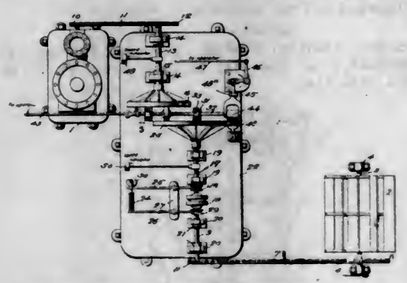
said frame work, rods engaging the supporting members and provided with devices for adjusting the tension thereof and sheets forming wind shields secured to said rods.

5. A cooling tower comprising a supporting frame work, a series of water pans arranged at different levels thereon and having means to discharge from one level to another, a series of inclined supporting members secured to the frame work and extending upwardly and outwardly laterally of said frame work, sheets forming wind shields secured to said inclined supporting member and arranged to leave spaces substantially above and below the same through the tower, and a set of baffles intermediate the wind shields arranged to check the flow of air from one side to the other of the frame work.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,208. TRANSMISSION MECHANISM. ROLLIE CALVIN HILL, Memphis, Tenn. Filed Aug. 12, 1916. Serial No. 114,602. (Cl. 74—26.)



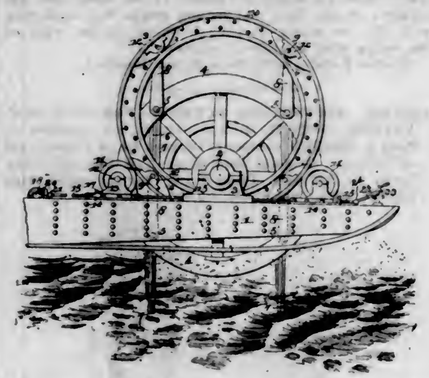
1. Transmission mechanism comprising driving and driven shafts journaled parallel and in offset relation, friction disks on the adjacent ends of the shafts, a connecting friction wheel between the disks, means for supporting and moving the wheel between the shafts, a transmission shaft in alinement with the driven shaft, a connection between the adjacent ends of the transmission shaft and the driven shaft for constraining them to rotate together and for permitting them to move longitudinally with respect to each other, each of the said last named shafts having a grooved collar adjacent to the connected end, levers pivoted intermediate their ends adjacent to the shafts and engaging the grooves of the collars at their inner ends, a spring connection between the outer ends of the levers and normally acting to draw them together, and means for varying the tension of the spring.

2. Transmission mechanism comprising driving and driven shafts journaled parallel and in offset relation, friction disks on the adjacent ends of the shafts, a connecting friction wheel between the disks, means for supporting and moving the wheel between the shafts, a transmission shaft mounted in alinement with the driven shaft, a connection between the said transmission and driven shafts for constraining them to rotate together and for permitting them to move longitudinally with respect to each other, a spring arranged in spaced relation and lateral with respect to the transmission and driven shafts and connected therewith for normally forcing them apart, and means for varying the tension of the spring.

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1,228,209. PROPELLING-WHEEL. ROLLIE CALVIN HILL, Memphis, Tenn. Filed Sept. 14, 1916. Serial No. 120,037. (Cl. 170—151.)

1. A propeller comprising a wheel consisting of spaced frames, shafts journaled in the frames between the same, at spaced intervals, vanes secured to the shafts, each shaft having a pair of radial arms, and rings at the outer side of each frame and of equal radius and mounted above the wheel, said arms being journaled at their outer ends in the adjacent rings and normally holding the vanes vertical, means for supporting the rings for rotation with the wheel, and means in connection with said supporting means for altering the position of the rings with respect to the wheel, said means comprising rollers upon which

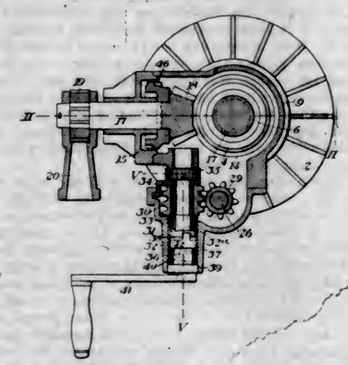


the rings are mounted to rotate, carriages upon which the rollers are mounted, guides for the carriages, and means for moving the carriages at each end toward and from said rings.

[Claim 2 not printed in the Gazette.]

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1,228,210. SCREW-JACK. ISAIAH E. HINDMAN, Oakmont, Pa., assignor to The Duff Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 26, 1916. Serial No. 80,629. (Cl. 254—103.)



6. A jack having a lifting screw, mechanism for rotating the screw to elevate it, a lock comprising a worm and a worm wheel, a one-way clutch member connecting the worm wheel, a second clutch member coacting with the first clutch member to permit said clutch members to be moved relative to each other in one direction, means connected to the last mentioned clutch member and the screw for rotating said clutch member, and means for rotating the other clutch member to permit the screw to be lowered; substantially as described.

8. A jack having a frame, a nut mounted in said frame, a screw coacting with the nut, mechanism for rotating the screw and nut relative to each other in one direction, locking mechanism for preventing reverse movement thereof, mechanism for rotating the screw in the reverse direction, and means to actuate the locking mechanism and last

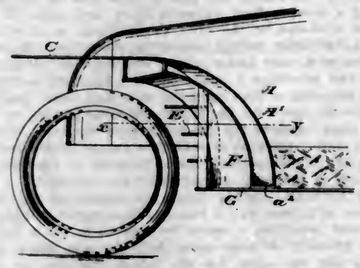


mentioned screw actuating mechanism to unlock the screw and permit the screw and nut to move relative to each other in the reverse direction; substantially as described.

[Claims 1 to 5, 7, and 9 to 12 not printed in the Gazette.]

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1,228,211. MUD-GUARD FOR VEHICLES. WILLIAM HEAP HOLLAND, Alderley Edge, England. Filed Oct. 6, 1914. Serial No. 865,247. (Cl. 21—23.)



1. In a mudguard for the wheels of vehicles, a horizontal mudguard plate above the wheel and bent down behind the wheel, this part being bent outward and rearward, a deflector mudguard of similar form and disposition within the bent down part of the said horizontal mudguard leaving a space between them which is wider at the inside than at the outside, short horizontal plates within the deflector mudguard and an auxiliary plate projecting about horizontally forward from the lower end of the deflecting mudguard, substantially as described.

2. A mudguard comprising a guard plate disposed above the wheel and extending downwardly to the rear of the wheel, the inner edge of said plate being in advance of the outer edge, a deflector plate extending downwardly and disposed between said wheel and guard plate, the inner edge of said deflector plate being in advance of its outer edge and arranged in such a manner as to leave a passage for air between the two said plates.

3. A mudguard comprising a guard plate disposed above the wheel, a deflector plate extending downwardly from the said guard plate, the inner edge of the said deflector plate being in advance of the outer edge, said deflector plate being disposed so as to form a passage for the air between itself and the body of the car in which it is disposed, and an auxiliary plate projecting horizontally forward from the lower end of the first named downwardly projecting deflector plate.

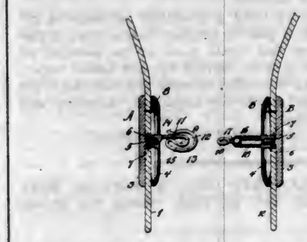
4. A mudguard comprising a guard plate disposed above the wheel, a deflector plate extending downwardly from the said guard plate, the inner edge of the said deflector plate being in advance of the outer edge, said deflector plate being disposed so as to form a passage for the air between itself and the body of the car in which it is disposed, horizontal plates between the wheel and the downwardly extending deflector, and an auxiliary plate projecting horizontally forward from the lower end of the first named downwardly projecting deflector plate.

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1,228,212. CUFF-BUTTON. LAWRENCE LEWIS HOUSER, Mishawaka, Ind. Filed Oct. 21, 1916. Serial No. 126,920. (Cl. 24—102.)

1. A cuff button comprising a button section having a hook rigidly mounted thereon, and a companion button section having a rigid member extending toward the hook, and means on the extremity of the said member, said hook having a resilient bill normally engaged with the shank of the hook to retain the said means engaged with the hook against accidental detachment for engagement with the said hook.

2. A cuff button comprising a button section having a hook rigidly mounted thereon, and a companion button section having an eye swiveled thereon for engagement with the said hook, each button section being composed of an outer member and an inner member detachably screwed together for clamping to a cuff.

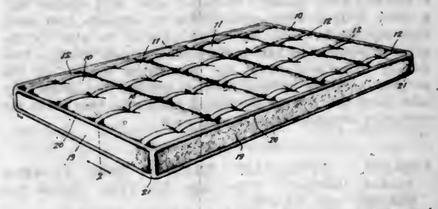


3. A cuff button comprising a button section having a hook, said hook consisting of a shank and a spring bill extending from one side of the shank to the other and spaced therefrom except that the free extremity of the bill bears against the shank, whereby a closed recess is formed, a companion button section having an eye detachably engaged with the bill of the said hook and freely movable in the portion of the recess at the side of the shank opposite from the free extremity of the bill.

4. A cuff button comprising two button sections, one section having a fixed stud carrying an eye, the other section being formed with a hook composed of a rigid shank bent back on itself, and a bill connected with the bent back portion of the shank and extending around the latter to the opposite side from the bent back portion, with the free extremity of the bill bearing against the shank, said bill being separated from the shank to provide a recess to movably receive the said eye, the bill being resilient to permit the eye to be passed between the shank and the free end of the bill.

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1,228,213. MATTRESS. OZELLO R. HUNT, Chicago, Ill., assignor of one-half to John F. Gail, Kenosha, Wis. Filed July 14, 1915. Serial No. 39,765. (Cl. 5—13.)



1. A mattress comprising a plurality of sections arranged side by side, a pair of relatively narrow opposite bands passing transversely of the upper and lower faces of the sections respectively, and means lying between the meeting edges of the sections for securing the upper band to the lower band.

2. A mattress comprising a plurality of sections arranged side by side, a pair of relatively narrow bands passing transversely across the sections and lying opposite one another on the upper and lower faces thereof respectively, and means lying between the meeting edges of the sections for detachably securing the upper and lower bands to one another.

3. A mattress comprising a plurality of sections arranged side by side, a pair of opposite bands passing transversely across the upper and lower faces respectively of the said sections, and means lying between the meeting edges of the sections for securing the upper to the lower band, said means being adjustable, whereby the tension of the bands may be varied.

4. A mattress comprising a plurality of sections arranged side by side, a pair of relatively narrow opposite bands passing transversely over the upper and lower faces

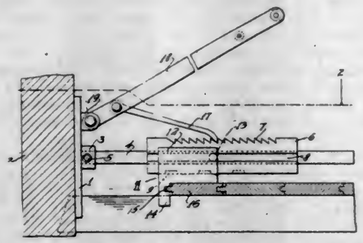
of the said sections, tongues secured to said bands and extending inwardly toward one another between the meeting edges of the said sections, and means for attaching said tongues to one another.

5. A mattress comprising a plurality of sections arranged side by side, a pair of opposite bands lying transversely of the upper and lower faces of the sections respectively, opposite tongues carried by said bands respectively and extending inwardly between the meeting edges of the sections, and means for adjustably securing said tongues to one another.

[Claims 6 to 11 not printed in the Gazette.]

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1,228,214. FLOOR-CLAMP. JOHN E. JOHNSON, Munising, Mich. Filed Nov. 18, 1915. Serial No. 62,192. (Cl. 254—14.)

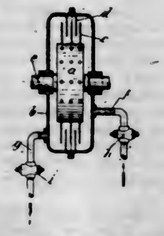


1. In a floor clamp, a base plate, a runner bar carried thereby, a rack slidably arranged upon said runner bar, a block embracing and slidably connected to said rack, means carried by said block and rack whereby they may be releasably locked in operative relation, a notched leg formed integral with said block and a lever fulcrumed upon said base plate for operative engagement with said rack.

2. In a floor clamp, a base plate, a runner bar carried thereby, a rack, having longitudinally grooved sides and a notched face, slidably arranged upon said runner bar, a block formed with spaced sides to straddle said rack, ears carried by said sides and adapted to ride in the grooved portions of said rack to support said block, a boss formed upon said block for disposition in any of the notched portions of said rack, a notched leg carried by said block and a lever fulcrumed upon said base plate for operative engagement with said rack.

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1,228,215. HYDRAULIC BRAKE. HUGO JUNKERS, Aachen, Germany. Filed Apr. 15, 1914. Serial No. 832,123. (Cl. 74—69.)



1. A hydraulic testing apparatus comprising the combination of a rotor and a stator, one mounted within the other and providing space for a liquid between them, and a plurality of pins mounted on the rotor and stator at distributed points and projecting therefrom into the space in which the liquid is received, the pins on the rotor being shaped to throw the liquid against the pins on the stator and these pins on the stator being shaped to throw back the liquid against said pins on the rotor; substantially as described.

2. A hydraulic testing apparatus comprising the combination of a rotor and a stator, one mounted within the other and providing space between them for a liquid, and a plurality of pins upon the rotor and stator projecting into the space for the liquid, the pins being arranged in rows about the axis of rotation and the rows of pins on the rotor being opposite the spaces between the rows of pins on the stator, the pins of each row on the rotor having a cross-section symmetrical on both sides of the line of extension of the row; substantially as described.

3. A hydraulic testing apparatus comprising the combination of a rotor and a stator, one mounted within the other and providing a space between them for a liquid, and a plurality of pins upon the rotor and stator projecting into the space for the liquid, the rows of pins on the rotor being opposite the spaces between the rows of pins on the stator, the pins of each row on the stator having cross-sections symmetrical on both sides of the line of extension of the row; substantially as described.

4. A hydraulic testing apparatus comprising the combination of a rotor and a stator, one mounted within the other and providing a space between them for a liquid, and a plurality of pins upon the rotor and stator projecting into the space for the liquid, the rows of pins on the rotor being opposite the spaces between the rows of pins on the stator, the pins of the rows on both the rotor and the stator having a cross-section symmetrical on both sides of the line of extension of the row; substantially as described.

5. A hydraulic testing apparatus comprising the combination of a rotor adapted to be connected to the engine to be tested, a casing surrounding the rotor and providing a space for a liquid between it and the rotor, and a plurality of pins mounted at distributed points projecting outwardly from the rotor and inwardly from the casing, the pins in the form of columns free from reëntrant surfaces and being arranged in rows about the axis of rotation with the rows of pins on the rotor opposite the spaces between the rows of pins on the casing.

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1,228,216. DRAFT-RIGGING FOR RAILWAY-CARS. BYERS W. KADEL, Roanoke county, Va. Filed Jan. 6, 1915. Serial No. 793. (Cl. 213—64.)



1. In a draft rigging for railway cars, a coupler, a casing slidably connected thereto, frictional elements within the casing and coöperating therewith to frictionally resist movement of the said coupler under both buffing and draft, and further friction elements and a spring within the said casing said last mentioned elements coacting with the said casing to frictionally resist movement of the coupler in one direction only.

2. In a draft rigging for railway cars, a coupler, a draft gear disposed behind said coupler, a strut interposed between the said coupler and the said draft gear, said strut being movable by said coupler under both buffing and pulling, the said coupler having operative engagement with the said draft gear through the said strut in buffing and independent of the said strut in pulling, and additional friction means in coöperative engagement with the said strut in buffing.

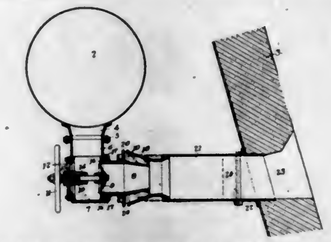
3. In a draft rigging for railway cars, a coupler, a draft gear disposed behind said coupler, a strut interposed between the said coupler and the said draft gear, said strut contacting with the said coupler and being movable therewith in both directions, the said coupler having operative engagement with the said draft gear through the said strut in buffing and independent of the said strut in pulling, and an additional draft gear in operative engagement as a spring draft gear with the said strut in pulling.



4. In a draft rigging for railway cars, a coupler, a draft gear disposed behind the said coupler and in operative engagement therewith, said draft gear comprising a hollow casing, a rearward extension from the said coupler disposed within the said casing and having movement relative thereto in buffing, said movement being equal to the travel of the coupler, friction elements engaging the said coupler extension and the said casing, and a spring adapted to co-act with the said friction elements to wedge the same between the said coupler extension and the said casing.

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1,228,217. GAS-BURNER. JULIAN KENNEDY, Pittsburgh, Pa. Filed Jan. 21, 1916. Serial No. 73,299. (Cl. 158—118.)



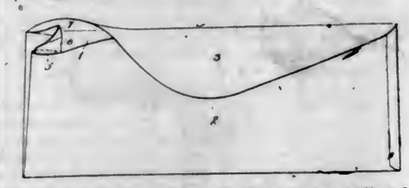
1. A gas burner for furnaces having a casing, a nozzle extending therefrom, a valve arranged to open and close communication between the nozzle and casing, an air inlet member surrounding said nozzle and connected thereto, there being air passages between said nozzle and the air inlet member, a valve arranged to regulate the amount of air passing through the air inlet, and a pipe telescopically connected with the end of the air inlet member and arranged to form an extension thereof; substantially as described.

2. A gas burner for furnaces having a casing, a nozzle extending therefrom, a valve arranged to open and close communication between the nozzle and casing, said nozzle having a helical thread on a portion of the periphery thereof, an air inlet member surrounding the outer end of said nozzle, there being air passages between said nozzle and the air inlet member, and an air controlling valve having a screw threaded connection with the thread on the nozzle arranged to regulate the amount of air passing through the air inlet; substantially as described.

3. A gas burner for furnaces having a casing, a nozzle extending therefrom, a valve arranged to open and close communication between the nozzle and casing, an air inlet member surrounding said nozzle and connected thereto, there being air passages between said nozzle and the air inlet member, a valve having a screw threaded connection with the nozzle arranged to regulate the amount of air passing through the air inlet, and a pipe telescopically connected with the end of the air inlet member and arranged to form an extension thereof, substantially as described.

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1,228,218. ENVELOP. JOHN GEORGE KNURCK, Woodhaven, N. Y. Filed Dec. 9, 1916. Serial No. 135,976. (Cl. 229—76.)

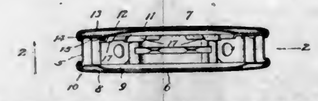


1. An envelop comprising a body having a sealing flap along one edge, a double flap connected with one face of the envelop and disposed within the body, a flap connected with the other face and normally disposed within the folded flap, said folded flap having an extension folded in the line of fold of the folded flap and forming a secondary flap extending out of the body and folded downwardly against one of the faces thereof and lying under the sealing flap.

2. An envelop comprising front and back sections, a double flap extending along the edge of one section and normally lying between the sections, a flap extending along the corresponding edge of the other section and entering the pocket formed by the folded flap, said folded flap having a triangular secondary flap folded on the line of fold of the folded flap and further folded back against the outside of one of the sections, and a sealing flap on the said section having the double flap, adapted to cover the secondary flap.

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1,228,219. STRUCTURE COMPRISING DISKS COVERED WITH FLEXIBLE MATERIAL. JOSEPH KOMOROUS, Chicago, Ill., assignor to Parisian Novelty Company, Chicago, Ill., a Corporation of Illinois. Original application filed Oct. 24, 1916, Serial No. 127,350. Divided and this application filed Apr. 6, 1917. Serial No. 160,268. (Cl. 220—9.)



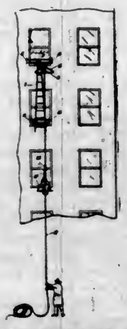
1. A structure formed of a flanged disk having covering material extending over a face thereof and over its flange, and a circular member interlocked with said flange, with the said covering material interposed between said disk and member, said member containing a notch in its periphery into which the said covering material extends and interlocks therewith for the purpose set forth.

3. A receptacle formed of relatively-rotatable body and cover portions, said cover portion being formed of a flanged disk having covering material extending over a face thereof and over its flange, and a circular member interlocked with said flange, with the said covering material interposed between said disk and member, said member containing a notch in its periphery into which the said covering material extends and interlocks therewith, for the purpose set forth.

[Claims 2 and 4 not printed in the Gazette.]

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1,228,220. RESCUE APPARATUS. JOHN KONRATH, New York, N. Y. Filed May 2, 1912. Serial No. 694,617. (Cl. 228—20.)



1. A scaling ladder having its side pieces bent downwardly at their upper ends to form a hook adapted to rest upon a window ledge, the ends of the two hook-shaped portions being sharpened and brought together to form substantially a single engaging point, and a tie member

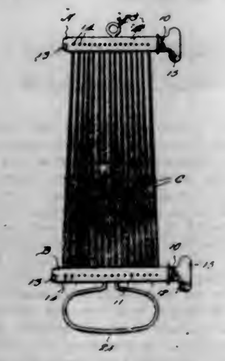
arranged to tie the respective ends to the opposite side pieces whereby strain upon the hook will tend to draw the pointed ends together.

2. A scaling ladder comprising side pieces spread apart at their lower ends and substantially uniformly approaching each other toward their upper ends and meeting at their upper ends and shaped to form a single engaging point at the upper end of the ladder, the upper ends of the side pieces being bent downwardly to provide a hook-shaped portion adapted to rest with the single engaging point upon a window ledge, and a tie member arranged to tie the respective ends to the opposite side pieces whereby strain upon the hook will tend to draw the pointed ends together.

3. A scaling ladder having the side pieces bent downwardly at their upper ends and inwardly toward the main part of the ladder, the ends being in close proximity to the main part of the ladder, whereby the ends may rest upon a window ledge with the main part of the ladder in contact with the ledge, and a tie member arranged to tie the respective ends to the opposite side pieces.

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1,228,221. COMB-CLEANER. FELIX F. KORDINA, Lebanon, Oreg. Filed Nov. 23, 1916. Serial No. 133,019. (Cl. 132—17.)



1. In a comb cleaner, the combination of a pair of frames having supporting pins and clamping sections, and a plurality of tapering cleaning elements arranged in divergent relation, the free ends of said elements having loops to engage said pins, and said clamping sections engaging said loops to retain the cleaning elements in connection with said frames.

2. In a comb cleaner, the combination of a pair of frames having supporting pins and clamping sections, a plurality of tapering cleaning elements arranged in divergent relation to form a tapering structure, the free ends of said elements having loops to engage said pins, said clamping sections having openings to accommodate said pins, and means for maintaining said clamping sections in engagement with said loops to retain the cleaning elements in connection with the frames.

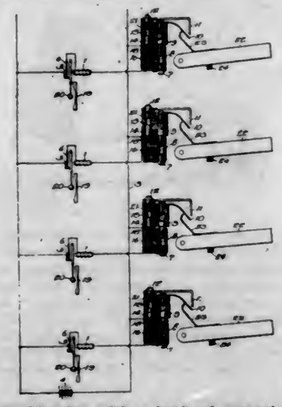
3. In a comb cleaner, the combination with a pair of frames having supporting pins and clamping sections, of a plurality of cleaning elements for association therewith, said cleaning elements being formed of strands of wire tapering and arranged in divergent pairs, the free ends of the strands being twisted and formed to provide loops to engage the pins, and said clamp members being adapted to engage said loops to retain the cleaning elements in connection with said frames.

4. In a comb cleaner, the combination of a pair of frames having supporting pins and clamping sections, a plurality of cleaning elements formed of strands of wire, said strands of wire being looped to form divergent sections, said sections of said strands being twisted at their free ends forming loops to engage said pins, and means carried by said frames to engage said clamping sections and maintain the same in snug engagement with said pins and said loops to connect the cleaning elements with the frames.

5. In a comb cleaner, the combination of a pair of frames comprising base members, pins extending from said base members, and retaining plates hingedly connected with said base plates, said base plates having openings therein to receive said pins, and a plurality of tapering cleaning elements arranged in divergent relation engaging said pins.

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1,228,222. ELECTRIC SWITCHING MECHANISM. FREDERICK B. LITTLE, Chicago, Ill., assignor, by mesne assignments, to J. C. Deagan Musical Bells, Chicago, Ill., a Corporation of Illinois. Filed Mar. 13, 1916. Serial No. 83,774. (Cl. 84—81.)

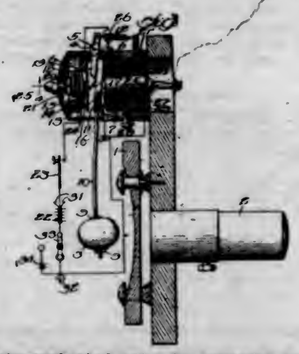


3. The combination with a bank of manual keys that are each individual to a sound producing device; of switches, each individual to a manual key and operable thereby; individual carriers for said switches; a mounting for said carriers; and connecting switches having separable complemental parts upon the mounting and carriers.

[Claims 1, 2, 4, and 5 not printed in the Gazette.]

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1,228,223. ELECTROMECHANICAL ACTION FOR MUSICAL INSTRUMENTS. FREDERICK B. LITTLE, Chicago, Ill., assignor, by mesne assignments, to J. C. Deagan Musical Bells, Chicago, Ill., a Corporation of Illinois. Filed Feb. 25, 1916. Serial No. 80,328. (Cl. 177—7.)



An electro-mechanical action for percussion musical instruments including an electro-magnet; a hammer carried by the armature of the magnet; a pair of contacts in the magnet circuit, one of these contacts having a spring support to enable it to be moved toward and from the other; a mounting for these contacts that is apart from the magnet armature; a contact actuator carried by the armature and arranged to move said spring support to exclude the magnet from circuit before the magnetically attracted armature has completed its range of movement whereby the hammer will continue in movement of momentum; and a spring for restoring the armature and hammer and against the force of which spring the armature is magnetically attracted, the aforesaid mounting constituting a back stop engaged by said contact actuator when the armature is restored to limit the restoring movement of the armature effected by the armature restoring spring.



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1,228,224. DRINKING-FOUNTAIN. WILLIS W. LUKE, MILTON A. RUSSELL, LEWIS R. KENNEDY, and CHARLES E. ANDERSON, Fairfield, Iowa, assignors of one-fourth to said Anderson, one-fourth to said Luke, one-fourth to said Kennedy, and one-fourth to J. P. Foreman, Fairfield, Iowa. Filed July 1, 1916. Serial No. 107,176. (Cl. 119—73.)



1. A drinking fountain of the class described comprising a drinking receptacle, a water supply means, a bracket supporting said drinking receptacle, said bracket provided with a drain pocket, means for operating said drain pocket to be manually closed when so desired, an automatic valve for closing said drain pocket when water is being admitted to the drinking receptacle, and being adapted to be raised to an inoperative position for permitting said drinking receptacle to be automatically drained when the supply of water has been cut off, and said bracket provided with an overflow tube extending vertically of said drinking receptacle.

2. A drinking fountain of the class described comprising a drinking receptacle, a water supply means, a bracket supporting said drinking receptacle, said bracket provided with a drain pocket, means for operating said drain pocket to be manually closed when so desired, an automatic valve for closing said drain pocket when water is being admitted to the drinking receptacle and being adapted to be raised to an inoperative position for permitting said drinking receptacle to be automatically drained when the supply of water has been cut off, said bracket provided with an overflow tube extending vertically of said drinking receptacle, an inner basin secured within said drinking receptacle and capable of having vertical movement therein, and means carried by said inner basin for controlling the supply of water to and from said drinking receptacle.

3. A drinking fountain of the class described comprising a drinking receptacle, a water supply means, means supporting said drinking receptacle, said supporting means provided with a drain pocket, an automatic valve for closing said drain pocket when the water is being admitted to the drinking receptacle, and being adapted to be raised to an inoperative position for permitting said drinking receptacle to be automatically drained when the supply of water has been cut off.

4. A drinking fountain of the class described, comprising a drinking receptacle, a water supply means, a basin vertically mounted within said drinking receptacle, a rod connected to said basin and passing through said water supply means, a valve coöperating with said rod for controlling the entrance of water through said water supply means, a spring secured within said drinking fountain, an inverted concavo-convex spring retaining plate secured to the under face of said basin and constituting a housing for the upper end of said spring, draining means communicating with said drinking receptacle, and a valve carried by said inverted concavo-convex plate for automatically controlling the opening and closing of said draining means.

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1,228,225. APPARATUS FOR RECOVERING SOLVENTS. JAMES LYNAH, Newburgh, N. Y., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed Oct. 16, 1912. Serial No. 726,016. (Cl. 34—3.)



1. In a device of the character described, an evaporating chamber, means for supporting a coated web in the same, a vapor-tight cover loosely supported over the same and an air pipe connected to said cover.

2. In a device of the character described, an evaporating chamber, means for supporting a coated web in the same, and a vapor-tight cover loosely supported over the same in a castor oil seal.

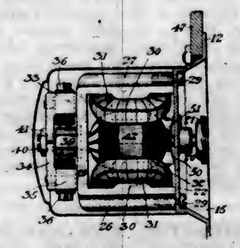
3. In a device of the character described, a feeding chamber for a coating material, an evaporating chamber, means for supporting a coated web in the same, and a vapor-tight cover loosely supported over the feeding and evaporating chambers.

4. In a device of the character described, a feeding chamber for a coating material, an evaporating chamber, means for supporting a coated web in the same, and a vapor-tight cover loosely supported over the feeding and evaporating chambers in a liquid seal.

5. In a device of the character described, a feeding chamber for a coating material, an evaporating chamber, means for supporting a coated web in the same, and a vapor-tight cover loosely supported over the feeding and evaporating chambers located at the outer edge of the cover, and also between the feeding chamber and the evaporating chamber.

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1,228,226. DIAPHRAGM-HORN. DUNCAN A. MCCONNELL, Arlington, N. J., assignor to Lovell-McConnell Manufacturing Company, Newark, N. J., a Corporation of Delaware. Filed Jan. 7, 1914. Serial No. 810,801. (Cl. 177—7.)



1. In a horn or signaling device, the combination of an elastic diaphragm, a transverse member in the rear thereof, a high speed electric motor secured to said member and having its armature shaft journaled in said member and presented endwise to said diaphragm, a rotor carried by

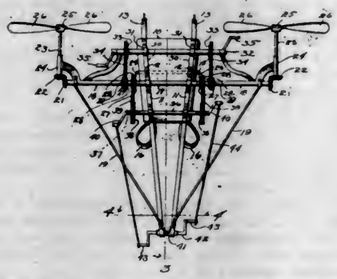
said shaft for effecting vibration of said diaphragm toward and from said rotor, an adjustable thrust bearing for limiting the axial rearward movement of said shaft and said rotor under the reaction of said diaphragm, and a bowed leaf spring disposed between the armature of said motor and the rear surface of said member for maintaining the armature shaft in engagement with said thrust bearing throughout the range of normal adjustment and operation of the device.

2. In a horn, a diaphragm, a diaphragm case having a substantially plain rear wall, an electric motor at the rear of said diaphragm case, the armature shaft of said electric motor extending through said plain rear wall and presented endwise to the diaphragm, an actuator mounted upon said armature shaft and disposed within the diaphragm case, an adjustable end thrust bearing for said armature shaft for moving the same toward the diaphragm, and a spring mounted on said shaft and having its end portions supported by said diaphragm case and its intermediate portion bowed toward said end thrust bearing to normally hold the armature shaft the maximum adjusted distance from the diaphragm.

[Claims 3 and 4 not printed in the Gazette.]

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1,228,227. AEROPLANE. ALEX MELNICZAK, Camden, N. J. Filed Dec. 18, 1916. Serial No. 137,627. (Cl. 244—19.)



1. In a flying machine, the combination with a breast plate, means to secure the breast plate to the body of a person, a shaft carried by the breast plate and extending transversely of the body, a pedal operated shaft supported from said breast plate, a manually operated shaft supported from said breast plate, helicopters driven by the first shaft on opposite sides of the breast plate and means to connect the first shaft to each of the other shafts, said means being arranged to permit either of the last-mentioned shafts to rotate faster than the other in one direction.

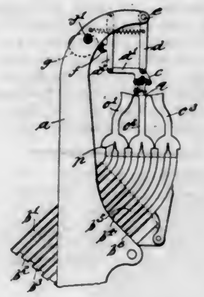
3. In a flying machine, the combination with a breast plate, means to secure the breast plate to the body of a person, a shaft carried by the breast plate and extending transversely of the body, a pedal operated shaft supported from said breast plate, a manually operated shaft supported from said breast plate, helicopters driven by the first shaft on opposite sides of the breast plate, sprockets freely revoluble on the first shaft, sprockets fixed to the last two shafts and connected by chains with the first sprockets, a ratchet fixed to the first-mentioned shaft adjacent each of the first sprockets, a pawl on each of the first sprockets coacting with the adjacent ratchet and releasable means to lock said pawls on their ratchets.

[Claim 2 not printed in the Gazette.]

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1,228,228. DISTRIBUTING MECHANISM OF TYPOGRAPHICAL COMPOSING-MACHINES. CARL MUEHLEISEN, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Nov. 11, 1916. Serial No. 130,883. (Cl. 199—40.)

1. In a typographical machine, the combination of a distributer having a plurality of series of combinations, those of one series adapted to release matrices of one font according to character and those of another series adapted to release matrices of another font according to character, and means actuated in proper synchronism with the operation of the distributer for moving the latter to different operative positions.



2. In a typographical machine, the combination of a distributer, and means actuated in proper synchronism with the actuation of the distributer for moving it to different operative positions, the said distributer having a plurality of series of combinations, those of one series adapted in one position of the distributer to release matrices of one font according to character and those of another series adapted in a different position of the distributer to release matrices of a further font according to character.

3. In a typographical composing machine, the combination with a plurality of magazines having their entrance channels arranged in echelon, and a distributer rail having different portions of its length appropriate to the distribution of matrices according to font, of means adapted to move the distributer rail into operative relationship with the different magazines, and means adapted to move matrices along the rail from one of the said portions to another during the movement of the distributer rail from one magazine to another.

6. In a typographical machine, the combination of a distributer having a plurality of series of combinations, those of one series adapted to release matrices of one font according to character and those of another series adapted to release matrices of a different font according to character, and continuously operated means for moving the distributer to different operative positions, the said means being constructed so as to allow the distributer to pause temporarily in each of its operative positions while matrices of the corresponding font are being released.

13. In a typographical machine, the combination of a distributer comprising a longitudinally ribbed rail and means for propelling matrices therealong, a movable supporting frame carrying said distributer, and continuously operated means for moving the supporting frame backwardly and forwardly to locate the distributer in different operative positions.

[Claims 4, 5, 7 to 12, and 14 not printed in the Gazette.]

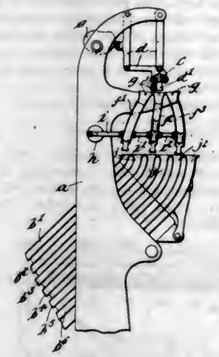
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1,228,229. DISTRIBUTING MECHANISM OF TYPOGRAPHICAL COMPOSING-MACHINES. CARL MUEHLEISEN and CHRISTIAN A. ALBRECHT, Berlin, Germany, assignors to Mergenthaler Linotype Company, a Corporation of New York. Filed Nov. 21, 1916. Serial No. 132,640. (Cl. 199—40.)

1. In a typographical composing machine, the combination with a plurality of stationary magazines and a distributer adapted to separate matrices according to font and character, of a plurality of intermediate magazines between the stationary magazines and the distributer, and means adapted to move the distributer into operative register with the different intermediate magazines.



2. In a typographical composing machine, the combination with a plurality of stationary magazines and a distributer adapted to separate matrices according to font and character, of a plurality of intermediate magazines between the stationary magazines and the distributer, means adapted to move the distributer into operative register with different intermediate magazines, and means adapted to move each of the intermediate magazines into operative relationship with different stationary magazines.



3. In a typographical composing machine, the combination with a plurality of stationary magazines and a distributer adapted to separate matrices according to character and font, of a plurality of intermediate magazines between the stationary magazines and the distributer, and means adapted to move the distributer into operative register with different intermediate magazines, the said distributer being adapted in its different positions to release matrices of the corresponding fonts according to character.

4. In a typographical composing machine, the combination with a plurality of stationary magazines and a distributer adapted to separate matrices according to font and character, of a plurality of intermediate magazines between the stationary magazines and the distributer, means adapted to move the distributer into operative register with different intermediate magazines, means adapted to move each of the intermediate magazines into operative relationship with different stationary magazines, and means adapted to release matrices from each intermediate magazine according to font only when said magazine is in operative relationship with the respective stationary magazine.

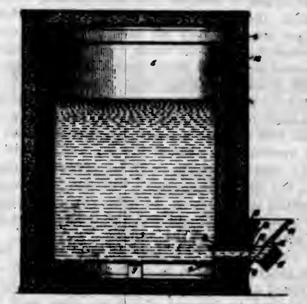
5. In a typographical composing machine, the combination with a plurality of stationary magazines and a distributer adapted to separate matrices according to character and font, of a plurality of intermediate magazines between the stationary magazines and the distributer, means adapted to move the distributer into operative register with different intermediate magazines, said distributer adapted in its different positions to release matrices of the corresponding fonts according to character, and means adapted to release matrices from each intermediate magazine according to font only when said magazine is in operative relationship with the respective stationary magazine.

[Claims 6 to 10 not printed in the Gazette.]

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1,228,230. CHICKEN-FOUNTAIN. CHARLES ALFONSO MULLER, Pueblo, Colo. Filed Feb. 23, 1917. Serial No. 150,570. (Cl. 119—73.)

1. A fountain having an outlet in its side, a cup secured to the fountain below the outlet and having its front and side walls extending above the outlet, the front wall of the cup diverging upwardly relatively to the side wall of the fountain, there being an opening in the front of the

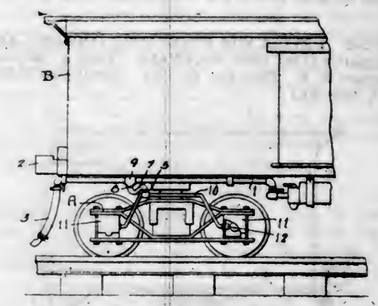


cup at the bottom thereof and substantially in alinement with the outlet, and means to close the opening.

[Claims 2 and 3 not printed in the Gazette.]

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1,228,231. DEVICE FOR DETECTING AND COOLING HOT JOURNALS. PAUL J. MURRAY, Oswego, N. Y. Filed Aug. 11, 1916. Serial No. 114,489. (Cl. 188—81.)



1. The combination with a railway car including its truck and air-brake systems, of pipes leading from the air brake pipe to the journal boxes of the truck, and fuse means closing the ends of the pipes and constructed to permit a small quantity of air to escape and play upon the journals when the journals become only slightly heated, the amount of the escaping air being insufficient to cause an application of the brakes.

2. The combination with a railway car including its truck and air-brake system, of pipes leading from the air brake pipe to the journal boxes of the truck, fuse caps arranged within the journal boxes and applied to the ends of the pipes, said fuse caps being each provided with a small aperture and a large aperture, and fuses closing the apertures, the fuse of the small aperture being of a composition which will melt at a lower temperature than that of the large aperture so that if the journal is only slightly heated the small aperture will be opened, while if the journal is hot the large aperture will also be opened, thereby exhausting the air from the air-brake system and causing the air-brakes to be applied, the escaping air in either instance serving to cool the journal.

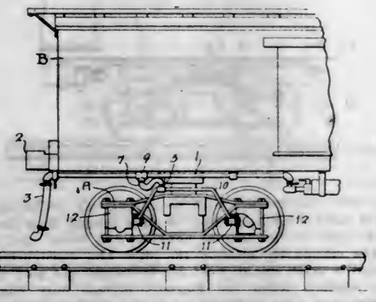
3. The combination with a railway car including its truck and air brake system, of pipes leading from the air brake pipe to the journal boxes of the truck, and fuse means normally closing the ends of the pipes and constructed to permit a small quantity of air to escape and play upon the journals when the latter are slightly heated and to subsequently permit the escape of a large quantity of air and cause the air brakes to be applied when the journals become hot.

4. The combination with a railway car including its truck and air-brake system, of a transverse pipe extending across the truck, a flexible pipe establishing communication between the transverse pipe and the air-brake pipe, branch pipes leading from the ends of the transverse pipe to the journal boxes of the truck, fuse caps arranged within the journal boxes and fitted upon the ends of the branch pipes, said fuse caps being each provided with a small aperture and a large aperture, and fuses closing the apertures, the fuse for the small aperture being of a composition which will melt at a lower temperature than that of the large aperture, so that if the journal is only slightly heated the small aperture will be opened, while if the journal is hot the large aperture will also be opened, thereby exhausting the air from the air-brake system and causing the air brakes to be applied, the escaping air in either instance serving to cool the journal.

5. The combination of a journal box, an air pipe leading to the journal box and in communication with a source of compressed air, a fuse cap arranged within the journal box and applied to the end of the air pipe, said fuse cap being provided with a small aperture and a large aperture, and fuses closing the apertures, the fuse for the small aperture being of a composition that will melt at a lower temperature than that of the large aperture, so that if the journal is slightly heated the small aperture will be opened, while if the journal is hot the large aperture will also be opened, the escaping air in either instance serving to cool the journal.

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1,228,232. DEVICE FOR DETECTING, COOLING, AND LUBRICATING HOT JOURNALS. PAUL J. MURRAY, Oswego, N. Y. Filed Jan. 31, 1917. Serial No. 145,681. (Cl. 188—81.)




1. The combination with a railway car including its truck and air-brake system, of a nozzle applied to a journal box of the truck and in communication with the air-brake system, a fuse member normally closing the nozzle but adapted to melt and permit a jet of air to play upon the journal when the journal becomes heated, and means for automatically supplying a lubricant to the journal when the fuse melts.

2. The combination with a railway car including its truck and air-brake system, of a nozzle applied to a journal box of the truck and in communication with the air-brake system, a fuse member sealing the nozzle but adapted to melt and permit a jet of air to play upon the journal when it becomes heated, and means for causing the escaping air to spray the journal with lubricant.

3. The combination with a railway car including its truck and air-brake system, of a nozzle applied to a journal box of the truck and in communication with the air-brake system, a lubricant reservoir carried by the nozzle, and a fuse member normally sealing the nozzle but arranged to melt and permit a jet of air to play upon the journal when it becomes heated, the said jet of air carrying the lubricant from the reservoir to the journal.

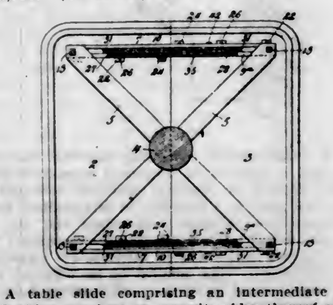
4. The combination with a railway car including its truck and air-brake system, of a nozzle applied to the journal box of the truck and in communication with the air-brake system, an oil cup carried by the nozzle, a fuse cap closing the discharge end of the nozzle and formed with a jet opening closed by a fuse, said jet opening communicating with an oil duct which is in communication with the oil cup and is normally sealed by the fuse, said fuse being adapted to melt when the journal becomes heated to permit the escape of the air and oil.

5. The combination with a railway car including its truck and air-brake system, of a nozzle applied to a journal box of the truck and in communication with the air-brake system, a cap closing the discharge end of the nozzle and formed with a jet opening closed by a fuse adapted to melt and permit the escape of air when the journal becomes heated, an oil reservoir, and an oil supply pipe leading from the oil reservoir to a point adjacent the jet opening of the fuse cap.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,233. SELF-CENTERING SLIDE FOR EXTENSION-TABLES. WILLIAM H. NORTHALL, Evansville, Ind., assignor of one-half to Frederick W. Goedeke, Evansville, Ind. Filed May 2, 1914. Serial No. 835,956. (Cl. 45—9.)



1. A table slide comprising an intermediate member and flanking members on opposite sides thereof extending above the intermediate member, supports for the flanking members on the sides of the intermediate member and along which supports the flanking members are movable lengthwise, and a chain and direction-changing rollers therefor carried by the intermediate member and connected to the flanking members, said chain and rollers being located on the intermediate member between the sides and rising above the top thereof.

2. A table slide comprising a central or intermediate metallic channel member, flanking metallic runners having longitudinal channels at opposite edges, supporting rollers carried by the channel member exterior thereto and engaging the edge channels of the runners, rollers mounted within the channel member near opposite ends thereof and in part projecting through the top portion of the channel member, and an effectively endless chain connected to the respective runners near opposite ends thereof, one run of the chain extending through the channel member and the other run extending over the channel member.

3. A table slide comprising an elongated channel member with edge flanges each having spurs or teeth near the ends and said channel member having inturned overlapping ears adjacent to the spurs, with the ears and a corresponding portion of the channel member provided with matching perforations for the passage of a fastening bolt, and runners mounted on and movable along the channel member.

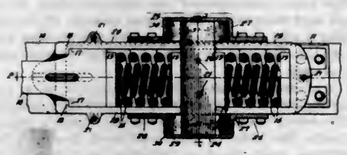
4. A table slide comprising an elongated channel member with means at the ends for attachment to a relatively stationary portion of a table, longitudinally movable runners mounted on and carried by the channel member exterior thereto and having means for attachment to the sections of a divided table top, and means for causing the simultaneous movement of the runners in opposite directions comprising rollers mounted in the channel member and in part extending through the top thereof, and an effectively endless chain extending about the rollers with one run above the channel member and the other run within the channel member, and with said runs connected to respective runners.

5. A table slide comprising an elongated channel member with means at the ends for attachment to a relatively stationary portion of a table, longitudinally movable runners mounted on and carried by the channel member exterior thereto and having means for attachment to the sections of a divided table top, and means for causing the simultaneous movement of the runners in opposite directions comprising rollers mounted in the channel member and in part extending through the top thereof, and an effectively endless chain extending about the rollers with one run above the channel member and the other run within the channel member, one runner having a bracket above the channel member and the other runner having a bracket extending into the channel member near the lower portion thereof and both brackets being connected to respective runs of the chain.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,234. DRAFT-RIGGING. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 18, 1915. Serial No. 15,344. (Cl. 213—64.)



1. In a draft rigging, the combination with shock absorbing means, a draw-bar, and operative connections between the draw-bar and said means, of dampening mechanism operated upon release of said means after actuation either in buff or draft, said mechanism affording a maximum resistance upon approach of said means to normal or full release position.

2. In a draft rigging, the combination with shock absorbing means and a yoke, of devices for dampening the recoil of said means, said devices including a member movable with said yoke and relatively fixed frictional elements engaged by said member in its movements, the friction between said member and elements being at a maximum when the rigging is in full release.

3. In a draft rigging, the combination with shock absorbing means and a yoke, of devices for dampening the recoil of said means, said devices including a member movable with said yoke and relatively fixed frictional elements engaged by said member in its movements, said fixed elements being in the form of bowed plate springs.

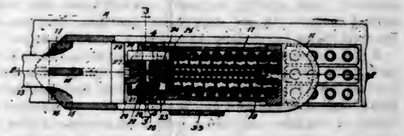
4. In a draft rigging, the combination with shock absorbing means and a yoke operatively connected therewith, of devices for dampening release of said means, said devices including a plate having a box-like portion secured to the draft sills, relatively stationary friction elements mounted within said box-like portion and a member movable in unison with said yoke having an end thereof engageable with said friction elements.

5. In a draft rigging, the combination with shock absorbing means and a yoke operatively connected therewith, of devices for dampening the recoil of said means, said devices including a plurality of bowed plate springs, a member connected and movable in unison with said yoke and having one end thereof engageable with said springs, and means for adjusting the tension of said springs.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,235. DRAFT-RIGGING FOR RAILWAY-CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 18, 1915. Serial No. 15,349. (Cl. 213—64.)



1. A friction gear for draft riggings comprising, a friction shell, friction shoes coöperable therewith, a spring, and wedging means between the spring and shoes, said means comprising oppositely arranged spreaders, one behind the other, and rockers between said spreaders and shoes.

2. A friction gear for draft riggings comprising a friction shell, friction shoes, a spring, wedging means including spreaders, rockers between the spreaders and shoes, and anti-friction rollers between the rockers and spreaders.

3. A friction gear comprising a friction shell, friction shoes coöperable therewith, a spring, and wedging means comprising oppositely arranged spreaders, and rockers interposed between the spreaders and shoes.

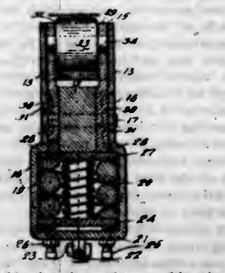
4. A friction gear comprising a friction shell, friction shoes coöperable therewith, a spring, and wedging means comprising oppositely arranged spreaders, and rockers interposed between the spreaders and shoes, said rockers overlapping the ends of both spreaders.

5. A friction gear comprising a friction shell, friction shoes, a spring, and wedging means including a pair of spreaders, and rockers, corresponding in number to the friction shoes, interposed between the shoes and spreaders, said rockers being mounted in recesses on the inner faces of the shoes.

[Claims 6 fo 9 not printed in the Gazette.]

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1,228,236. ROLLER SIDE BEARING. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Nov. 6, 1915. Serial No. 59,918. (Cl. 64—64.)



1. In a roller side bearing, the combination with a two part fixed bearing member adapted to be attached to a part of a truck, said member being provided with an upper horizontal bearing surface and recessed at the center and provided with a spring chamber at the bottom, of a hollow box-like member slidably mounted within said first named member, a spring for yieldingly supporting said hollow box-like member, and an anti-friction roller carried by said box-like member, the engaging surface of said roller being normally above said fixed bearing surface, and means for adjusting the tension of said spring.

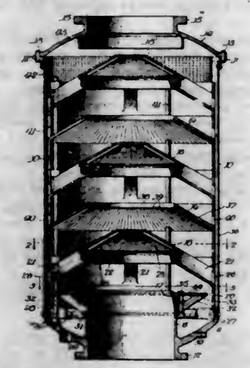
2. In a device of the character described, the combination with a side bearing bridge of a truck, of a hollow bearing member mounted on said bridge and having portions extending above, below and at the sides thereof, said bearing member having an upper horizontal surface,

a second hollow member slidably mounted within said first named member and having depending arms straddling said bridge, a spring located beneath the bridge and mounted within the lower portion of the first named member, said spring normally maintaining the second named member in its uppermost position, and an anti-friction roller carried by the second named member.

3. In a device of the character described, the combination with the side bearing bridge of a truck, of a hollow bearing member mounted on said bridge and having portions located above and below said bridge, an anti-friction roller, a member carrying said anti-friction roller and slidably mounted within said first named member, and spring means located below the bearing bridge for holding the roller carrying member in its uppermost position.

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1,228,237. SEPARATOR FOR STEAM AND OIL. OLAF E. OLESON, Chicago, Ill., assignor to The Edward Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 24, 1914. Serial No. 858,186. (Cl. 183—103.)



1. In a steam separator, the combination of a casing, separating units disposed in the casing in two series, the units of one series alternating with the units of the other series, each of the units of one series having a conically shaped separating wall closed at its upper end and open at its lower end, and each of the units of the other series having a conical separating wall, open at its upper end and closed at its lower end, a tubular wall located inside of and separated from said casing, each unit having an outlet opening or openings through said tubular wall to deliver water and foreign matter into the space between said tubular wall and said casing, and means in each of the units of the first series for conducting water and foreign material from the separating surface thereof to the outlet opening of said unit.

2. In a steam separator, the combination of a casing, separating units disposed in the casing in two series, the units of one series alternating with the units of the other series, each of the units of one series having a conically shaped separating wall closed at its upper end and open at its lower end, and each of the units of the other series having a conical separating wall, open at its upper end and closed at its lower end, a tubular wall located inside of and separated from said casing, each unit having an outlet opening or openings through said tubular wall to deliver water and foreign matter into the space between said tubular wall and said casing, the lower surface of each conical separating wall being provided with ridges extending substantially parallel with the elements of said conical surface, and means in each of the units of the first series for conducting water and foreign material from the separating surface thereof to the outlet opening of said unit.

3. In a steam separator, the combination of a casing, separating units disposed in the casing in two series, the units of one series alternating with the units of the other series, each of the units of one series having a conically shaped separating wall closed at its upper end and open at its lower end, and each of the units of the other series having a conical separating wall, open at its upper end and closed at its lower end, a tubular wall located inside of and separated from said casing, each unit having an outlet opening or openings through said tubular wall to deliver water and foreign matter into the space between said tubular wall and said casing, a horizontal perforated wall located near the bottom of the casing for preventing ready contact of the steam entering the separator with the separated water, and means in each of the units of the first series for conducting water and foreign material from the separating surface thereof to the outlet opening of said unit.

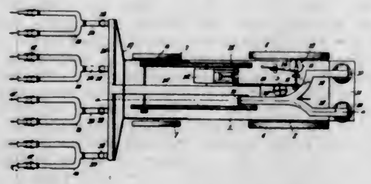
4. In a steam separator, the combination of a casing, separating units disposed in the casing in two series, the units of one series alternating with the units of the other series, each of the units of one series having a conically shaped separating wall closed at its upper end and open at its lower end, and each of the units of the other series having a conical separating wall, open at its upper end and closed at its lower end, a tubular wall located inside of and separated from said casing, each unit having an outlet opening or openings through said tubular wall to deliver water and foreign matter into the space between said tubular wall and said casing, a receptacle formed in the lower part of said casing for receiving the separated water and foreign matter, communicating passages between the space surrounding the circular walls of said units and said receptacle, and means in each of the units of the first series for conducting water and foreign material from the separating surface thereof to the outlet opening of said unit.

5. In a steam separator, the combination of a cylindrical casing, two series of separating units disposed alternately one above the other in the casing upon a common vertical axis, the units of one series each having a conical separating wall closed at its upper portion and open at its lower portion, and each of the units of the other series having a conical separating wall closed at its lower portion and open at its upper portion to engage the moisture contained in the steam passing through the separator, devices for conducting the separated moisture to the lower portion of the casing, said casing having an outlet opening for each of the first mentioned series of units, and means in each of the units of said first series for conducting water and foreign material from the separating surface thereof to the outlet opening of said unit.

[Claims 6 to 16 not printed in the Gazette.]

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1,228,238. COTTON-PICKING MACHINE. JOHN W. PATTERSON, Decatur, Ala. Filed July 3, 1915. Serial No. 37,876. (Cl. 56—117.)



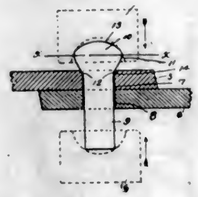
1. In a pneumatic cotton picking machine, a pneumatic trunk, an intake tube discharging into the trunk, a nozzle at the front end of said intake tube and a boll opening device carried by and projecting in front of said nozzle and consisting of a revoluble spear having a conical head, and a fan motor geared to said spear, said motor being mounted in a casing on one side of the nozzle and extending across and arranged with its upper side in the throat of the nozzle and thereby adapted to be revolved by the air drawn in through the nozzle.



2. In a pneumatic cotton picking machine, a pneumatic trunk, an intake tube discharging into the trunk, a nozzle at the front end of said intake tube, and a boll opening device carried by and projecting in front of said nozzle and consisting of a revoluble spear having a conical enlarged head arranged in front of the nozzle, and means to revolve said spear.

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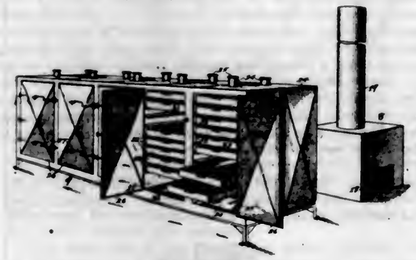
1,228,239. RIVET. GEORGE B. PHILLIPS, Lima, Ohio, assignor of one-third to Sherman S. Lawson and one-third to Watson M. Myers, Lima, Ohio. Filed Apr. 22, 1916. Serial No. 92,825. (Cl. 85—37.)



A rivet consisting of a cylindrical body and a knob-shaped head of compact form devoid of heat radiating corners or projections, the head below its plane of maximum width being convex and its lower part being concave to gradually come to the same diameter as the cylindrical body whereby when riveting pressure is applied metal will shift readily from the head into the rivet hole without interference by the rivet hole edge.

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1,228,240. FURNACE AND EVAPORATOR. JAMES LOUIS PIERCE, Manila, Philippine Islands. Filed Feb. 17, 1916. Serial No. 78,896. (Cl. 34—39.)



1. A device of the class described, comprising a casing divided into compartments the top, bottom, back and two side walls of each of which are separated from said casing, a door in the front of each compartment, a plurality of removable trays in each compartment, means for leading heated air to the interior of said casing around each compartment, means for leading said air to each compartment beneath each tray, and means for leading the air from the top of each compartment.

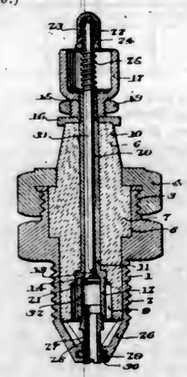
2. A device of the class described, comprising a casing divided into compartments the top, bottom, back and two side walls of each of which are separated from said casing, a door in the front of each compartment, means for leading heated air to the interior of said casing, a plurality of trays in each compartment, the walls of each compartment being perforated beneath each tray, and a controlled flue for each compartment.

3. A device of the class described, comprising a casing divided into compartments the top, bottom, back and two side walls of each of which are separated from said casing, and perforated along superimposed horizontal lines, tray supports above said lines of perforations, a tray on each set of supports, controlled means for leading air through the bottoms of said compartments, a door for each compartment, means for leading heated air to said casing and thence to said compartments, and means for controlling the escape of air from said compartments.

4. A device of the class described, comprising a casing divided into compartments the top, bottom, back and two side walls of each of which are separated from said casing, a door for each compartment, controllable means for leading heated air to said casing, controllable means for leading said air to said compartments, controllable means for leading the air from said compartments, and a plurality of superimposed trays in the path of the heated air through said compartments.

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1,228,241. SPARK-PLUG. JOHN JELLIFF PLATT, Milford, Conn. Filed Oct. 3, 1914. Serial No. 864,883. (Cl. 123—169.)



1. A self cleaning and priming spark plug, comprising in combination, an outer shell, a truss bar at the ignition end of said shell, an electrode carried by said truss bar, a tubular electrode extending centrally and longitudinally of the shell, and having its inner end enlarged to form an expanded tubular end portion which is counterbored to form an internal beveled valve seat, a stem extending within and lengthwise of said tubular electrode, and a valve on said stem having a beveled face to engage said valve seat, said stem having oppositely disposed flat faces which provide separate and independent exterior longitudinal air and liquid passages.

2. A self cleaning and priming spark plug, comprising in combination, an outer shell, a truss bar at the ignition end of said shell, an electrode carried by said truss bar, a tubular electrode extending centrally and longitudinally of the shell, a stem extending within and lengthwise of said tubular electrode, a valve on said stem controlling the bore of said tubular electrode, a priming cup threaded directly on the outer end of said tubular electrode, and a contact nut threaded directly on a reduced part of said cup.

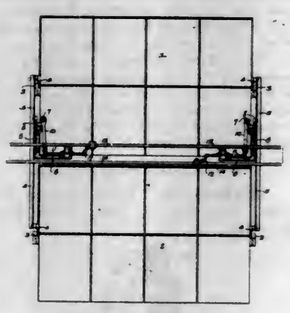
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1,228,242. WINDOW-OPERATING DEVICE. CLARKE P. POND, Philadelphia, Pa. Filed June 1, 1916. Serial No. 101,073. (Cl. 16—28.)

1. The combination in a sash operating device of a supporting frame consisting of two members substantially at right-angles to each other; a lever mounted on one member of the frame and movable on a horizontal axis; and a second lever mounted on the other frame member and free to swing on a vertical axis; with means for operatively connecting said levers.

2. The combination in a sash operating device of a supporting frame consisting of two bars extending substantially at right-angles to each other; a lever pivoted to one member adjacent the free end thereof and movable

on a horizontal axis; a second lever pivoted adjacent the free end of the other frame member and movable on a vertical axis; with means for operatively connecting said levers.

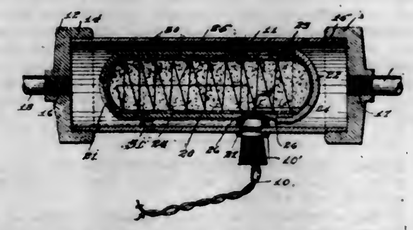


3. The combination of a pivoted sash; a lever having an arm connected thereto and free to move on an axis parallel to the sash pivot; a second lever pivoted to move on an axis at right angles to that of the first lever and having an arm connected to a second arm of the first lever; with an operating member movable in either of two directions and connected to the second arm of the second lever.

4. The combination of a plurality of sashes; a bar connecting said sashes; a lever pivoted to swing on a horizontal axis and having an arm connected to said bar; a second lever pivoted to swing on a vertical axis; a link connecting the second arm of the first lever with one arm of the second lever; a power actuated member movable in a horizontal line; and means for connecting said member with the second arm of the second lever.

5. The combination of sash frame; a sash pivoted therein; a frame including two members at right-angles to each other and mounted on the sash frame adjacent two sides of the sash; a lever mounted on said one of said members and free to swing on a horizontal axis; means for connecting one arm of said lever to the sash; a second lever pivoted to the second member of the frame and free to swing on a vertical axis; a link connecting the second arm of the first lever with an arm of the second lever; a power actuated operating lever mounted to move adjacent the sash; and means for connecting said member with the second arm of the second lever.

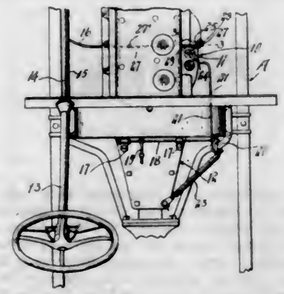
1,228,243. WATER-HEATER. FREDERICK POOLE, Jewell, Kans. Filed Feb. 2, 1915. Serial No. 5,738. (Cl. 219—39.)



1. A water heater including a casing interposed in a pipe line, a second casing within said first casing having a removable closure cap, an insulating lining for the second casing and the closure cap, an electrical heating element in said second casing, a connecting plug carried by the main casing and connected to said heating element, and a spacing band arranged about the second casing for maintaining the same in spaced relation from the first casing.

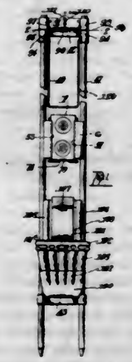
2. A water heater, including a main casing interposed in a pipe line, a second casing within said main casing having a removable closure cap, an insulating lining for the second casing and the closure cap, an electrical heating element in said second casing, a connecting plug carried by the main casing and connected to said heating element, a spacing element formed of heat non-conducting material arranged adjacent the connecting plug, and a band arranged about the second casing for maintaining the same in spaced relation from said first casing.

1,228,244. THROTTLE-CONTROLLER FOR AUTOMOBILES. SAMUEL ALBERT PRITCHARD, Van Meter, Iowa. Filed Dec. 7, 1915. Serial No. 65,628. (Cl. 21—90.)



In an automobile the combination of a motor, a carbureter including a throttle lever, a transmission casing, a steering column, a handle throttle shaft mounted on the steering column, an arm on said shaft, a shaft rotatably mounted on the transmission casing, a foot lever fixed to the second shaft, an arm on the second shaft, a spring connecting said arm to the transmission casing, a link having one end connected to the arm on the second shaft and at its other end connected to the throttle lever, a pivot pin carried by the throttle lever, said pivot pin including an eye head, a rod having one end slidably engaged in the eye head and its other end connected to the arm on the first named shaft, a spring encircling said rod and having one end fixed thereto and its other end bearing against the eye head, and means for limiting sliding movement of the rod in one direction with respect to the eye head.

1,228,245. TARGET-HOLDER FOR PRACTICE-RODS. ROBERT EDWIN REARDON, Ottawa, Ontario, Canada. Filed Mar. 8, 1917. Serial No. 153,478. (Cl. 124—15.5.)



1. A target holder for practice rods, comprising parallel rods, a clip embracing both rods, and formed on its face with a cartridge pocket.



3. A target holder for practice rods, comprising parallel rods, a spring clip fitting between both rods having a pocket to receive the extra targets.

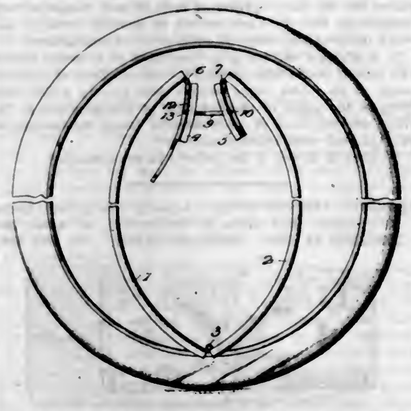
8. In a target holder for practice rods, a sheath tube and spring means carried by the elements of the practice rod for retaining the elements of the practice rod in the tube.

14. In a target holder, the combination with a target support including parallel rods, of an invertible and reversible target block having means to removably engage the rods and being further formed with means for supporting a target.

21. In a target practice rod in combination with a target support, of a gage thereon adapted to indicate the correct distance which the muzzle of the rifle should be placed away from the rod, said gage comprising a pivoted bale.

[Claims 2, 4 to 7, 9 to 13, and 15 to 20 not printed in the Gazette.]

1,228,246. DEMOUNTABLE RIM. JAMES D. REILLY, Providence, R. I. Filed Jan. 6, 1917. Serial No. 140,872. (Cl. 152—21.)



1. A demountable rim comprising hinged sections, a locking segment hinged to one of said sections and adapted to aline therewith, and a link connecting said segment with the other of said hinged sections, said link being fulcrumed to said segment, and said fulcrum being movable lengthwise of said segment.

2. A demountable rim comprising hinged sections, locking segments each having hinged connection with one of said sections, said sections and said segments having butt ends, a link having a fixed pivotal connection with one of said segments and a movable pivotal connection with the other of said segments.

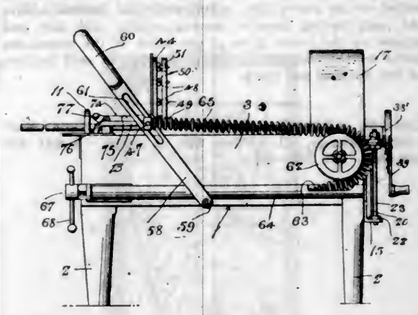
3. A demountable rim comprising a pair of hinged sections, a pair of locking segments each hinged at one end to its complementary section, a link connecting said segments, said link having a fixed pivotal connection with one of said segments and a pivotal connection with the other segment permitting it to move relatively thereto, said segments having recesses to receive said link.

4. A demountable rim comprising a pair of hinged sections, a pair of locking segments each hinged at one end to its complementary section, and each having a recess, the walls of the recess of one of said segments having a longitudinal groove, a link connecting said segments and adapted to fit in said recesses, and a pivot for said link fitting in said grooves, the opposite end of said link being pivoted to the other of said segments.

5. A demountable rim comprising a pair of hinged sections, a pair of locking segments each having a hinged connection with one of said sections and provided with a recess on its underside, a link connecting said segments, a movable fulcrum for said link, and a latch pivoted to one of said segments and adapted to fit in said recess.

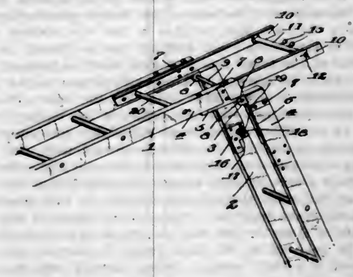
[Claim 6 not printed in the Gazette.]

1,228,247. GRATER. ANTONIO ROSS, Utica, N. Y. Filed July 9, 1914. Serial No. 850,003. (Cl. 146—9.)



A grater of the character set forth including a support, a trough mounted upon said support, a pair of guides arranged on the upper edges of said trough, a cutter mounted at one end of the trough, a follower slidably mounted within the trough, means for supporting said follower to permit the same to move longitudinally within the trough, a transverse bar slidably mounted on the guides and connected to said follower, one end of said bar projecting beyond the sides of said trough, a lever provided with a slot intermediate its ends, said slot connecting said transverse bar of the follower with the lever, a rod to hold the follower in its rearmost position, spring means to exert pull on the follower to urge the same toward the cutter, means to adjust the tension of the spring to urge the follower toward the cutter, and means to limit the movement of the follower in its sliding movement in the trough.

1,228,248. HINGE-JOINT FOR FOLDING LADDERS. HARRY H. RUDD, Roanoke, Va. Filed June 20, 1916. Serial No. 104,742. (Cl. 228—17.)



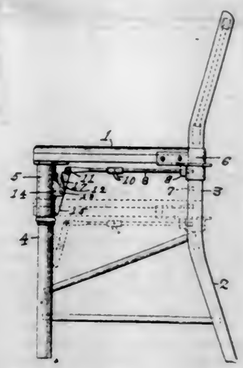
1. In a hinge joint for folding ladders, the combination with two sections whose stiles meet end to end; of a hinge connecting each pair of meeting stiles and consisting of leaves secured to the lower edges of the stiles, braces extending integrally from the outer edges of said leaves and countersunk into the outer faces of the stiles, ears carried by the leaves, and a single bolt pivotally connecting all ears; extensions secured to the inner faces of the stiles of one section and projecting beyond their upper ends, means for removably latching the projecting ends of said extensions within the other section when the sections are alined, and a rung connecting the secured ends of said extension and spaced to conform to the spacing of the other

rungs in the sections, said bolt and said securing means constituting other rungs similarly spaced.

2. In a hinge joint for folding ladders, the combination with two sections, hinges on the lower edges of the meeting ends of the stiles of said sections, and extensions secured to the inner faces of the stiles of the lower ladder section and projecting beyond their upper ends; of a tubular rung uniting the upper ends of said extensions and slotted on its under side, spring-projected latches within said rung having handles moving within said slot, and keepers on the inner faces of the stiles of the remaining ladder section adapted to receive the tips of said latches, for the purpose set forth.

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1,228,249. ADJUSTABLE CHAIR. GEORGE HENRY SAUTIER, Chicago, Ill. Filed Apr. 8, 1916. Serial No. 89,951. (Cl. 155—22.)



1. In a device of the class described an adjustable seat adapted to be raised and lowered and locked in different positions, and guided on the chair legs by sockets telescoping the front legs and clips embracing the rear legs; with means on each side of the chair for simultaneously locking the sockets and clips to the legs.

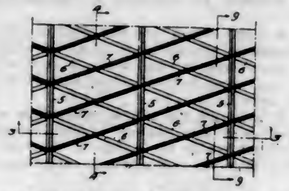
2. In an adjustable chair a seat provided with sockets that telescope over the tops of the front legs and clips that embrace the back legs, notches in the legs adapted to receive locking members, locking levers hinged to the sockets of the front legs and held into engagement with the notches by springs, locking bolts hinged to the levers and adapted to be actuated in locking the seat to the rear legs simultaneously with the action of the locking levers.

3. In an adjustable chair an adjustable seat adapted to be raised or lowered by sliding contact with the chair frame, clips and sockets secured to the seat and embracing the chair frame, locking devices mounted under the chair seat at the sides thereof and adapted to lock simultaneously the front and rear of the seat on the same side.

4. In a chair of the class described an adjustable seat held in position in the chair frame by sockets and clips adapted to permit vertical sliding contact with the chair frame, locking levers mounted at one set of legs and locking bolts at the other set of legs and connected to operate together in releasing or securing the seat in the chair frame.

5. In a chair of the class described, an adjustable seat adapted to be adjusted in vertical sliding contact in relation to the chair frame and back, and held at all four corners of the seat, sockets or clips secured to the seat and adapted to engage the chair frame from all four corners, the back legs of the chair forming the back frame as well as the legs and having inclined portions at the top and bottom and straight portions at the middle where the seat is secured, with means for locking the seat in different positions for height.

1,228,250. STORAGE-BATTERY CONSTRUCTION. JAMES M. SKINNER, Philadelphia, Pa., assignor to Philadelphia Storage Battery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 11, 1916. Serial No. 96,852. (Cl. 204—29.)



1. A storage battery grid having a frame including two sets of connecting members of acute angular section lying in substantially parallel planes, the members of one set lying respectively in parallel planes intersecting other parallel planes including the members of the second set.

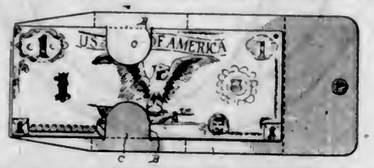
4. A storage battery grid including two sets of connecting members having flat base portions lying in the same plane, the flat base portion of each of said members being engaged by the flat base portion of another member, and being integral therewith at such point of engagement.

5. A storage battery grid consisting of a frame having two sets of connecting members, said members of each set being of an acute angle section and having a flat base lying in the plane of the flat base of the members of the other set, the base of each member being intersected by and integral with another member.

[Claims 2, 3, and 6 not printed in the Gazette.]

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1,228,251. POCKET-BOOK. IREDELL SMITH, St. Louis, Mo., assignor to Charles F. Wallerstedt, St. Louis, Mo. Filed May 18, 1916. Serial No. 98,329. (Cl. 150—38.)




A porte-monnaie comprising a single piece of material having two oppositely disposed flaps cut up therefrom and spaced apart and underneath which a bill is adapted to be placed with the opposite marginal edges thereof bearing against the inner ends of the slits formed by cutting of the flaps.

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1,228,252. EFFERVESCENT COMPOUND. MICHAEL D. SOHON, New York, N. Y. Filed Sept. 9, 1915. Serial No. 49,827. (Cl. 99—10.)

1. As an article of manufacture, an effervescent preparation containing a pyrosulfate.

2. As an article of manufacture, an effervescent preparation containing a pyrosulfate of an alkali metal.

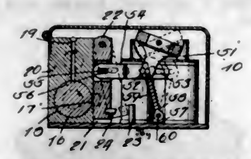
3. As an article of manufacture, an effervescent preparation containing a sodium pyrosulfate.

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1,228,253. TRANSMISSION-LOCK. LESTER H. SPARKS, Lakewood, N. J., assignor of forty-nine one-hundredths to Jennie I. Miller, Lakewood, N. J. Filed Mar. 9, 1914, Serial No. 823,482. Renewed Feb. 26, 1917. Serial No. 151,124. (Cl. 70—50.)

1. The combination with a lock casing, of a member slidable therethrough the said member having a notch therein, a lever pivotally supported in the said casing and adapted to engage said notch, a plurality of electro-magnets, a link connecting the said lever and the armatures of said magnets, means to control the energizing of said magnets to move said links and resilient means for completing the movement of said links.





2. In combination with a lock casing, a member slidable therethrough and having a notch therein, a lever adapted to engage said notch when the latter is in a predetermined position, a plurality of electro-magnets, a link connecting said lever and the armatures of said magnet, means to control the movement of said armatures to move the lever toward the aforementioned slidable member and resilient means for completing the movement of the said lever when the notch in the said slidable member reaches a predetermined position.

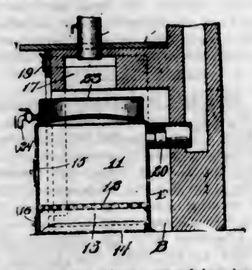
3. The combination with a lock casing of a member slidable therethrough, the said member having a notch therein, means to engage said notch to lock the said slidable member, means to move the said last mentioned means, and means to complete the movement of the notch engaging means to move it into the notch in the said slidable member when the said notch arrives in alinement therewith.

4. The combination with a lock casing; of a member slidable therethrough and provided with a locking notch, a plurality of electro-magnets, an armature lever pivoted intermediate said magnets, a pair of armatures on said lever arranged for selective attraction by said magnets, a locking member mounted on said casing to engage said notch, an arm depending from said armature lever, a link connecting the locking member and arm, and means to move said arm to extreme positions after energization of a selected magnet.

5. The combination with a lock casing; of a member slidable therethrough and provided with a locking notch, a plurality of electro-magnets, an armature lever pivoted intermediate said magnets, a pair of armatures on said lever arranged for selective attraction by said magnets, a locking member mounted on said casing to engage said notch, an arm depending from said armature lever, a link connecting the locking member and arm, means to move said arm to extreme positions after energization of a selected magnet, and means to break a circuit through the selected magnets when the armature lever has been rocked to a predetermined point.

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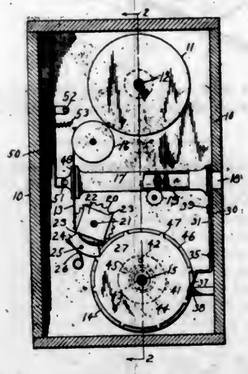
1,228,254. FIREPLACE-HEATER. JOHN M. SPEER, Fort Branch, Ind. Filed June 3, 1916. Serial No. 101,585. (Cl. 126—126.)



In combination, a fire place comprising back, side and top walls, the side walls being each formed with a vertical passage extending from the point adjacent the base of the fire place upward, to a point above the fire place opening, a horizontal passage formed in the top wall and connecting with each of the passages of the side walls, a heat collecting chamber located below and connecting with said horizontal passage, a heat outlet above said chamber, damper controlled openings for said passages and a heater within the fire place.

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1,228,255. MOTION-PICTURE CAMERA. CHARLES SPIRO, New York, N. Y. Filed Apr. 8, 1916. Serial No. 89,868. (Cl. 88—18.2.)



1. In a motion-picture camera, film feeding and receiving spools, a driving shaft upon which the latter is loosely mounted, and a film escapement controlled by a member upon said receiving spool shaft to permit the film to be placed under a predetermined tension and subsequently released therefrom.

2. In a motion picture camera, film feeding and receiving spools, a driving shaft upon which the latter is loosely mounted, a spring driving connection secured at one end to said shaft and releasably connected at its opposite end to said receiving spool, and a film escapement controlled by a member upon the receiving spool shaft.

6. In a motion picture camera, film feeding and receiving spools, a driving shaft for the latter, a lens, a shutter mechanism coöperating therewith, and means carried by said shaft to effect an intermittent film feed by the receiving spool and control said shutter mechanism.

10. In a motion picture camera, film feeding and receiving spools, a driving shaft for the latter, a film holding wheel, a detent member upon the shaft thereof, a pawl cooperating with said detent, and a controlling wheel mounted upon the shaft of the receiving spool and disposed to actuate said pawl to release the film.

19. In a motion picture camera, film feeding and receiving spools, a lens, a shutter mechanism therefor comprising opposite pivoted bell crank levers having a slot and arm connection for joint operation, an offset extension from one of said levers, means for moving said extension in one direction, and means for restoring the same.

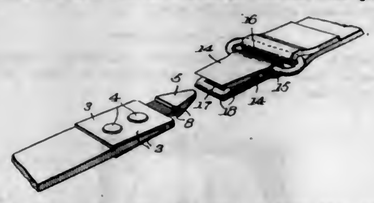
[Claims 3 to 5, 7 to 9, 11 to 18, and 20 to 26 not printed in the Gazette.]

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1,228,256. CONNECTING DEVICE. LOUIS S. STOLL, Smithland, Iowa. Filed May 14, 1915. Serial No. 28,146. (Cl. 24—230.)

In a device of the kind described in combination a socket member formed with a pair of clamping yieldable plates arranged in parallel relation, said plates being formed with registering openings, and a latch member consisting of a shank and a head formed integrally upon said shank, said head having its top and bottom faces and its side edges tapering and said top and bottom faces forming shoulders with said shank, said head being of such a length that when inserted between said plates with its

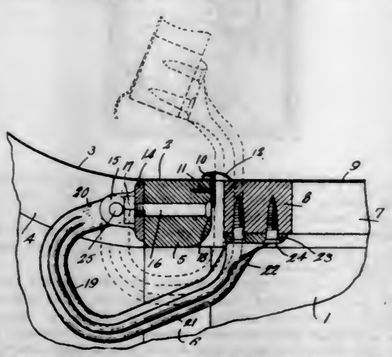
shoulders engaged against the outer edge of said openings, the opposite end of said head will project beyond the inner edges of said openings between the plates



whereby when said head is turned between said plates the latter may be spread apart to disengage said shoulders.

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1,228,257. AUTOMOBILE-BODY. GEORGE O. STUCK, Union City, Ind. Filed June 10, 1916. Serial No. 102,940. (Cl. 21—81.)



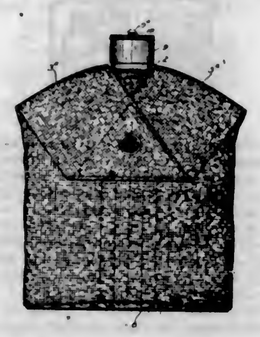
A vehicle body comprising a deck having an opening; a cross beam supporting the deck, the rear edge of the deck being upwardly extended to form a water-deflecting rib integral with the deck and being downwardly extended to form a flange engaging the rear face of the cross beam; a lid for the opening and including a plate prolonged to form a lip overhanging the rib; a support abutting against the forward face of the cross beam; a securing element engaged with the cross beam and with the support, the flange engaging one end of the securing element to hold the same in the cross beam; and a hook-shaped hinge located within the body, the forward end of the hinge being pivoted to the support, and the rear end of the hinge being secured to the lid.

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1,228,258. CARRIER OR COVER FOR CANTEENS OR WATER-BOTTLES, &c. CECELIA I. SULLIVAN, Worcester, Mass., assignor, by mesne assignments, to Universal Patents Company, Woonsocket, R. I., a Corporation of Rhode Island. Filed June 24, 1916. Serial No. 105,535. (Cl. 150—52.)

1. A carrier or cover comprising a carrier or cover-body and a V-shaped closure-flap, with the divergent branches of said closure-flap adapted to fold over the shoulders of a contained canteen or water-bottle, and said closure-flap attached by the ends of such branches to the back of the said body, combined with fastening means by which the junction or apex of the said closure-flap is detachably engaged with the front of the said body.

2. A carrier or cover comprising a carrier or cover-body and a V-shaped closure-flap formed with an opening between its branches whereby the closure-flap is adapted to encircle the neck of a canteen or water-bottle occupying the said body, with the ends of the branches of the said flap made fast to the back of the cover-body, combined with fastening means by which the junction or apex of the closure-flap is detachably engaged with the front of the said body.



3. A carrier or cover comprising a carrier or cover-body and a closure-flap formed of a strip of flexible material doubled back upon itself by a bias fold forming divergent branches, and having the ends of the said branches secured to the back of the said body, combined with fastening means by which the junction or apex of the closure-flap is detachably engaged with the front of the said body.

4. A carrier or cover comprising a carrier or cover-body composed of a length of selvaged webbing having its ends united to each other, and a closure-flap formed of a strip of selvaged webbing doubled back upon itself by a bias fold forming divergent branches, with the ends of the said branches secured to the back of the said body, combined with fastening means by which the junction or apex of the closure-flap is engaged detachably with the front of the said body.

5. A carrier or cover composed of a carrier or cover-body and a V-shaped closure-flap with its divergent branches adapted to fold over the top of a contained canteen or water-bottle and attached by the ends of the said branches to the back of the said body, combined with a single fastener device comprising a member carried by the front of the said body and a co-acting member carried by the junction or apex of the V-shaped closure-flap.

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1,228,259. WRITING FLUID. FRANCIS ROY SULLIVAN, Shelburne Falls, Mass. Filed Sept. 18, 1916. Serial No. 120,881. (Cl. 134—37.)

1. A writing fluid of the class described comprising transparent gloss varnish, a suspension of precipitated white chalk in turpentine, and oil of sassafras.

2. A writing fluid of the class described composed of fifty per cent. of transparent gloss varnish, forty-seven per cent. of a suspension of precipitated white chalk in turpentine, and three per cent. of oil of sassafras.

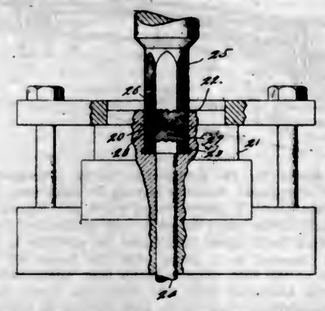
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1,228,260. PROCESS OF MAKING PRESSED-STEEL NUTS. CARL G. SWENSON, Indianapolis, Ind. Filed Dec. 12, 1916. Serial No. 136,505. (Cl. 10—86.)

1. The process of making pressed steel nuts, comprising stamping out a sheet metal disk, pressing the disk through a die to form a cup, compressing this cup within a polygonal opening in a die by a correspondingly polygonal punch with the elements of the peripheral surface of the cup in alinement with the direction of pressure of the punch and at the same time forcing outward the metal of the cup also by mating projections on the punch face and the bottom of the opening in the die, and axially drilling and internally screw-threading the polygonal member thus produced to form a nut.

2. The process of making pressed steel nuts, comprising stamping out a sheet metal disk, pressing the disk through a die to form a cup, compressing this cup within a polygonal opening in a die by a correspondingly polygonal punch with the elements of the peripheral surface of the cup in alinement with the direction of pressure of the punch, and axially drilling and internally screw-threading the polygonal member thus produced to form a nut.

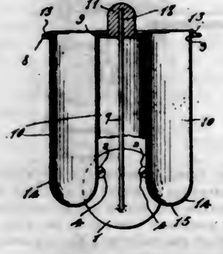




3. The process of making pressed steel articles, comprising stamping out a sheet metal disk, pressing the disk into the form of a cup, and compressing this cup within a polygonal opening in a die by a correspondingly polygonal punch acting in alinement with the elements of the peripheral surface of said cup to thicken the walls of the latter and force the metal of the cup outward into the corners of such opening.

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1,228,261. TOOTH-BRUSH HOLDER. JOSEPH J. TAYLOR, Richmond, Vt. Filed Apr. 26, 1916. Serial No. 93,655. (Cl. 248—63.)



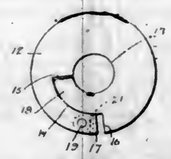
A tooth brush holder comprising a bracket, having a horizontal arm and vertical arm, a circular attaching plate secured to the end of the horizontal arm and adapted to secure the same to a support, a disk provided centrally with an opening, a cap having its end secured in the opening, said cap provided with a vertically inwardly extending bore adapted to receive the upper end of the vertical standard therein, said cap permitting the disk to be freely rotated on and removed from the standard, said disk provided with a plurality of annularly arranged spaced openings adjacent its periphery, which are adapted to receive a plurality of depending brush holding tubes therein the upper ends of said groove being rolled outwardly and adapted to engage the upper surface of the disk to prevent the same from being accidentally displaced therefrom.

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1,228,262. NUT-LOCK. WILLIAM R. TAYLOR, Monticello, Ky. Filed Oct. 8, 1915. Serial No. 54,827. (Cl. 151—39.)

1. In a nut lock, a washer having an arcuate slit and radial slits at the terminals of the arcuate slit defining oppositely directed inner nut engaging and outer object engaging tongues.

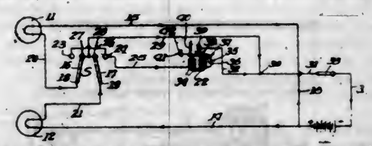
2. In a nut lock, a washer having an arcuate slit and radial slits extending oppositely from the opposite ends of the arcuate slit defining oppositely directed and overlapping inner nut engaging and outer object engaging tongues, means carried by the outer object engaging tongue for engaging an object to lock the washer against rotation thereon, the inner nut engaging tongue having a curved end adapted to engage and lock a nut against rotation thereon.



3. A nut lock including a bolt, a circular washer positioned upon said bolt, a nut threaded upon said bolt, engaged with said washer and being of approximately one-half the diameter of the latter, said washer having an arcuate slit and radial slits at the opposite ends of the arcuate slit, defining oppositely directed inner nut engaging and outer object engaging tongues, the outer tongue lying outwardly of the nut and movable independently of the latter, the outer radial slit being of adequate width to permit of the insertion of the blade of a tool, ratchet teeth formed on the inner face of said nut adapted to be engaged by the inner tongue to lock the washer and nut against relative rotation, and means carried by the outer tongue adapted to engage an object to lock the washer against rotation thereon.

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1,228,263. LIGHTING AND SIGNALING SYSTEM FOR VEHICLES. JOHN A. TOPPING, Chicago, Ill. Filed Jan. 10, 1916. Serial No. 71,241. (Cl. 177—337.)



1. A signaling system for association with a vehicle having a pair of wheels, one on each side thereof, and comprising a lamp mounted adjacent each wheel and positioned to throw its rays downwardly and outwardly beyond the wheel in a transverse path upon the roadway, means under the control of the vehicle operator for energizing one or both of said lamps periodically to cast upon the roadway a series of flashes visible from the front or rear of the vehicle and thereby signal the direction in which the vehicle is to turn or that it is to stop, and means under the control of the vehicle operator to energize either one or both of said lamps continuously to give an uninterrupted steady illumination of the roadway adjacent and at the outer side of the wheels.

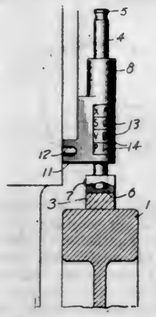
2. A signaling system for association with a vehicle having a pair of wheels, one on each side thereof, and comprising a lamp mounted adjacent each wheel and positioned to throw its rays downwardly and outwardly beyond the wheel in a transverse path upon the roadway, and means under the control of the vehicle operator for energizing either one or both of said lamps periodically to cast upon the roadway a series of flashes visible from the front or rear of the vehicle and thereby signal the direction in which the vehicle is to turn or that it is to stop.

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1,228,264. PERMUTATION-LOCK. HUGHEY ALBERT TOUSSAINT, Caseyville, Ill. Filed Aug. 26, 1916. Serial No. 117,004. (Cl. 70—53.)

A permutation lock comprising a casing having a bore enlarged at one end to form a tumbler receiving chamber

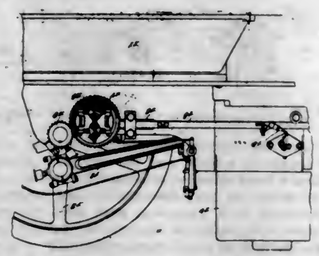
opening at the front of the casing, a bolt slidable and rotatable in the bore, a series of ring-shaped tumblers in the enlargement and encircling the bolt, each tumbler having an inwardly extending radial lug, the bolt having an annular groove for each tumbler and an additional annular groove, said grooves being spaced to correspond with the spacing of the lugs of the tumblers and adapted for en-



gagement by said lugs to hold the bolt in locking or unlocking position, and a longitudinally extending groove intersecting the annular groove stopping short at the innermost of the grooves to provide a limiting means for the outward movement of the bolt by the engagement of the lug of the innermost tumbler with the inner wall of the innermost groove.

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1,228,265. CAM-GEAR. FRANK L. UNGER, New Prague, Minn. Filed Aug. 26, 1914. Serial No. 858,723. (Cl. 74—41.)

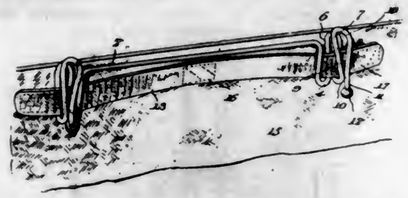


2. A cam gear comprising a circular hub portion having a circumferential groove in its peripheral edge, and a cam formed centrally on the side of said grooved portion, an annular rim adapted to embrace said grooved portion, and an inwardly directed flange thereon engaging said groove, removable means for preventing the lateral displacement of the two portions, and a slide lock between the two portions to permit shifting of the cam relatively to the rim without disturbing said first-named means.

4. A cam gear comprising a circular hub portion having a peripheral groove at one side and an integral cam portion formed centrally thereof and on one face of the same, an annular rim having a plurality of notches therein adapted to surround said hub portion provided with peripheral gear teeth and an inwardly projecting flange on one side thereof to engage said peripheral groove, removable straps fastened on the hub portion and projecting over the rim portion to prevent lateral displacement of the rim in one direction, and a sliding spring pin carried by the hub portion engageable in one of a plurality of notches in the rim portion to lock the two portions in fixed relation and also to permit a determined rotatable adjustment between the two parts.

[Claims 1 and 3 not printed in the Gazette.]

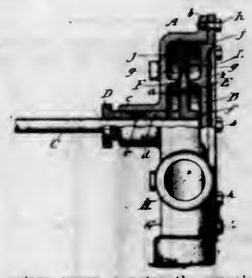
1,228,266. GARMENT-SUPPORT. JOHN GEORGE URSTADT, New York, N. Y. Filed Nov. 18, 1916. Serial No. 132,142. (Cl. 24—81.)



In a device for the purpose set forth, a member constructed of resilient material having its ends bent to provide substantially U-shaped loops which are disposed at a right angle to the body, the outer end members of the said loops being bent upon themselves to provide U-shaped tongues disposed in a plane with the loops, the outer members of the said tongues being bent upon themselves to provide U-shaped clips, the said clips being disposed at substantially a right angle with respect to the tongue and to the loop, and the outer member of the said clips being formed with enlargements providing heads.

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1,228,267. ROTARY PUMP. ADOLPH WAHLE, Davenport, Iowa. Filed Nov. 6, 1915. Serial No. 59,905. (Cl. 253—176.)



1. In a rotary pump, a rotor the marginal portion of the outer circumference of which is provided with a series of buckets the bottoms of which are substantially flat and incline from the periphery thereof to the side of the same nearer the center of the rotor and are separated by blades having flat transverse sides.

2. In a rotary pump, a rotor the marginal portion of the outer circumference of which is provided on each side of the same with a series of buckets the bottoms of which are inclined substantially from the center of width of the periphery thereof to the sides thereof at points nearer the center of the rotor and are separated by equi-distant blades having substantially flat transverse sides.

3. In a rotary pump, a casing having a passage extending circumferentially from a suitable inlet to a suitable outlet located adjacent thereof and having a circumferential slot in the annular transverse partition constituting the inner circumference of the same, of a rotor the axis of which is concentric to the center from which said axis is struck and which has an outer marginal portion which extends through said slot into said passage and is provided with a series of buckets therein each having a substantially flat bottom inclining from the periphery to the side thereof at a point adjacent said annular partition and separated by transverse blades.

4. In a rotary pump, a casing having a passage extending circumferentially from a suitable inlet to a suitable outlet located adjacent thereof and having a circumferential slot in the annular transverse partition constituting the inner circumference of the same, of a rotor the axis



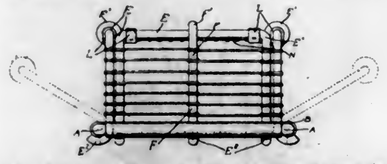
of which is concentric to the center from which said axis is struck and which has an outer marginal portion which extends through said slot into said passage and is provided with a series of buckets therein each bucket on each side of the rotor having a substantially flat bottom inclining from the center of width of the periphery of said rotor to a point on the side thereof adjacent said transverse partition and separated by equi-distant transverse blades.

5. In a rotary pump, a casing having a passage extending circumferentially from a suitable inlet to a suitable outlet located adjacent thereof and having a circumferential slot in the annular transverse partition constituting the inner circumference of the same, of a rotor the axis, of which is concentric to the center from which said axis is struck and which has an outer marginal portion which extends through said slot into but less than half the depth of said passage and is provided with a series of buckets therein, each bucket on each side of the rotor having a substantially flat bottom inclining from the center of width of the periphery of said rotor to a point on the side thereof adjacent said transverse partition and separated by equi-distant transverse blades.

[Claims 6 to 8 not printed in the Gazette.]

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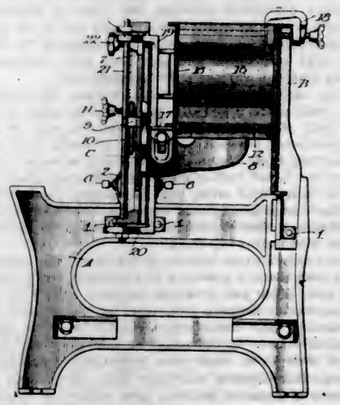
1,228,268. KNOCKDOWN CRATE. PHILIP WALSTON, Boise, Idaho. Filed Mar. 1, 1917. Serial No. 151,742. (Cl. 220—132.)



A knock-down crate comprising a bottom of sheet metal with an iron frame about which the edges of the bottom are bent, said bottom being apertured, sides made up of rods with hooked ends engaging said apertures and the marginal edges of the frame, a top having plates secured thereto with curved arms adapted to engage over the upper edges of the sides, and cotter pins passed through apertures in said arms and adapted to hold the plates securely in place.

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1,228,269. BLOCK-MOLDING MACHINE. CHARLES ROSTAN WALTER, Fredericktown, Ohio, assignor to J. B. Foote Foundry Company, Fredericktown, Ohio. Filed Mar. 14, 1914. Serial No. 824,784. (Cl. 25—41.)



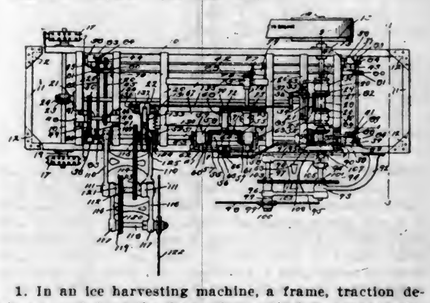
1. In a molding machine, the combination of a frame having a stationary and a movable side member, removable brackets mounted on the movable side member, and means carried by said brackets and engaging the movable side member for adjusting the angle of the brackets with respect to the side members, and a pallet, face plate and end members supported on said brackets.

7. In a molding machine, the combination of a frame having a stationary and movable side member, brackets mounted on the movable side member, a pallet and face plate supported on said brackets, end members connected to the face plate at one edge, and adjustable stops carried by the stationary side member and adapted to extend across the opposite edge of the end members, whereby the end members are braced at their upper edges against lateral movement.

[Claims 2 to 6 not printed in the Gazette.]

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1,228,270. ICE-HARVESTING MACHINE. FRED A. WARNER, Egremont, Mass. Filed Sept. 5, 1916. Serial No. 118,483. (Cl. 125—14.)



1. In an ice harvesting machine, a frame, traction devices mounted on the frame for vertical movement relative to said frame, gearing arranged to move said traction devices upward and downward and including a bevel driving gear and a pair of bevel driven gears selectively meshing with the driving gear but normally out of mesh therewith, means to bring either of said driven gears into mesh with the driving gear to effect movement of the traction devices, and other means to move the last mentioned means to throw the meshing driven gear out of mesh automatically upon the traction devices reaching the desired limit of movement.

2. In an ice harvesting machine, a frame, a drive shaft journaled on the frame, a saw supported by the frame and movable transversely of the frame into and out of cutting position, a lever controlling the position of the saw and movable in two directions at right angles to each other, a guide for said lever arranged to prevent movement of the lever in one direction when the saw is in cutting position, a traction mechanism carried by the frame and including means releasably connected to the shaft, and means controlled by the movement of the lever in the second direction to connect and disconnect the last-mentioned means to the shaft.

3. In an ice harvesting machine, a frame, a drive shaft journaled on the frame, a saw supported by the frame and movable transversely of the frame into and out of cutting position, a lever controlling the position of the saw and movable in two directions at right angles to each other, a guide for said lever arranged to prevent movement of the lever in one direction when the saw is in cutting position, a traction mechanism carried by the frame and including means releasably connected to the shaft, and means controlled by the movement of the lever in the second direction to connect and disconnect the last-mentioned means to the shaft, the lever controlled means being engaged by the lever when the saw is moved out of cutting position and being disengaged from the lever when the saw is moved into cutting position.

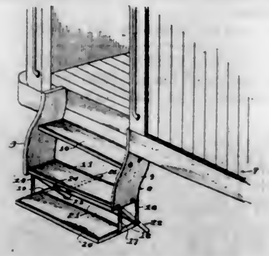
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1,228,271. EXTENSION CAR-STEP. CHIPMAN J. WELLS, Long Beach, Cal., assignor of one-half to Sarah L. De Land, Long Beach, Cal. Filed Aug. 17, 1916. Serial No. 115,462. (Cl. 105—86.)

1. An extension step, comprising in combination a tread structure, pairs of riser bars pivotally secured ad-

jacent one of their ends to said tread structure and pivotally supported at the other ends below a step, members of a pair spaced along said tread structure, whereby said tread structure may be swung downwardly and forwardly with respect to said step, and a latch brace bar pivotally connected to said step at a point forward of the rear riser bars, and having a catch to engage said tread structure rearwardly of the pivotal point of said latch bar.

2. An extension step, comprising in combination a



tread structure, pairs of riser bars pivotally secured adjacent one of their ends to said tread structure and pivotally supported at the other ends below a step, members of a pair spaced along said tread structure, whereby said tread structure may be swung downwardly and forwardly with respect to said step, a catch bar secured to said tread structure, and a latch brace bar pivotally connected to said step at a point forward of the rear riser bars, and having a notch to engage said catch bar.

3. In combination, a tread structure comprising tread supporting bars disposed beneath said tread and extending to the rear thereof, pairs of riser bars pivotally connected to the extended portion of said supporting bars and pivotally supported below a step, the members of a pair spaced along a supporting bar, whereby said tread structure may be swung downwardly and forwardly with respect to said step, and a latch bar arranged to catch and lock the tread structure when the latter is extended.

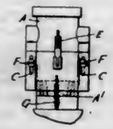
4. In combination, a tread structure comprising tread supporting bars disposed beneath said tread and extending to the rear thereof, pairs of riser bars pivotally connected to the extended portion of said supporting bars and pivotally supported below a step, the members of a pair spaced along a supporting bar, whereby said tread structure may be swung downwardly and forwardly with respect to said step, and a latch brace bar pivotally connected to said step at a point forward of the rear riser bars and having a catch to engage said tread structure rearwardly of the pivotal point of said latch bar.

5. In combination, a tread structure, comprising tread supporting bars disposed beneath said tread and extending to the rear thereof, pairs of riser bars pivotally connected to the extended portion of said supporting bars and pivotally supported below a step, the members of a pair spaced along a supporting bar, whereby said tread structure may be swung downwardly and forwardly with respect to said step, a catch bar secured between said supporting bars, and a latch brace bar pivotally connected to said step at a point forward of the rear riser bars, and having a notch to engage said catch bar.

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1,228,272. CARBURETER FOR INTERNAL-COMBUSTION ENGINES. SYDNEY WERTHEIMER, London, England. Filed Nov. 18, 1916. Serial No. 132,179. (Cl. 261—63.)

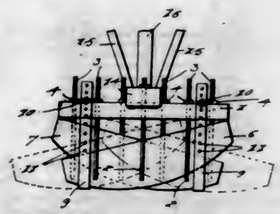
1. In a carbureter for an internal combustion engine, the combination with a jet, of a choke tube surrounding the jet, an open air supply for the choke tube below the jet, the choke tube having a large single opening at its restricted part contiguous to and surrounding the jet, a slidable sleeve adapted to control the passage of air through said opening in the choke tube, guides for the sleeve on the outside of the choke tube, supporting the sleeve out of contact with the tube, and means for moving the sleeve.



2. A carbureter for an internal combustion engine having in combination the following elements, a jet, a choke tube surrounding the jet, and having a large single opening contiguous to and surrounding the jet, an outer casing for the choke tube, having an opening corresponding to that in the choke tube, a sleeve mounted on said outer casing, and adapted to be moved over said openings to control passage of air therethrough, guides for the sleeve, a cable for moving the sleeve in one direction, and a spring for returning the sleeve.

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1,228,273. AGRICULTURAL IMPLEMENT. JAMES B. WHITE, Bolivar, Tenn. Filed Oct. 6, 1916. Serial No. 124,058. (Cl. 55—23.)



1. In an agricultural implement structure, the combination of a body bar, and a plurality of harrow teeth carried by said body bar and arranged in rows, the teeth in one row being disposed staggeredly with respect to the teeth in the row next thereto and a pair of drag plates adjustably connected to said body bar, and positioned between the rows of said harrowing teeth.

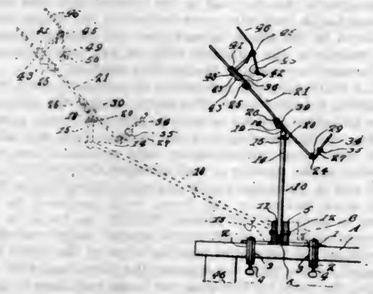
2. In an agricultural implement structure, the combination of a body plate, a plurality of harrowing teeth carried by said body plate and arranged in rows, a pair of drag plates positioned between the rows of harrowing teeth and adapted for movement into and out of an operative dragging position, and means for engaging the lower edges of said drag plates and said body plate for holding said drag plates in various adjusted positions.

3. In an agricultural implement structure, the combination of a body plate, a plurality of harrowing teeth carried by said body plate and arranged in rows, a pair of drag plates positioned between said rows of teeth, said drag plates having their lower edges curved, metallic straps engaging the lower curved edges of said drag plates adjacent to their outer ends, pins adjustably connected to said straps and engaging said body plate for holding said drag plates in adjusted position with respect to the body plate and said harrowing teeth.

4. In an agricultural implement structure, the combination of a body plate, a plurality of harrowing teeth carried by said body plate and arranged in rows, a pair of drag plates positioned between said rows of teeth, said drag plates having their lower edges curved, metallic straps engaging the lower curved edges of said drag plates adjacent to their outer ends, pins adjustably connected to said straps and engaging said body plate for holding said drag plates in adjusted position with respect to the body plate and said harrowing teeth, a tongue attached to said body plate, a standard attached to said tongue, an ordinary handle attached to said tongue and said standard.



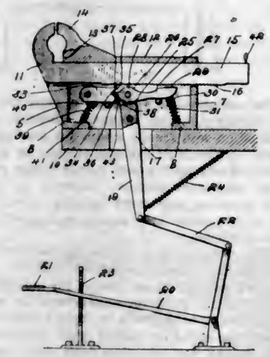
1,228,274. READING ATTACHMENT FOR CHAIRS. GODFREY WICKBERG, Seattle, Wash. Filed Jan. 21, 1916. Serial No. 73,416. (Cl. 45—82.)



In a device of the class described, a base structure, a socket device pivotally mounted on the base structure for angular movement in a horizontal plane, an inclined supporting arm pivotally connected to the socket device for angular movement in a vertical plane, means to secure said supporting arm at any desired inclination, a standard having its lower end pivotally mounted on the supporting arm so that the standard is adapted to turn axially, a book holder, and a link lug secured to the rear side of the holder and pivotally connected to the standard, the axis of the pivotal connection between the link lug and the standard being at right angles to said standard.

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1,228,275. WORK-HOLDING VISE. EDWIN W. WIDGER, Downsville, N. Y. Filed June 20, 1916. Serial No. 104,720. (Cl. 81—30.)



1. A vise embodying a casing provided with a fixed jaw, a movable jaw slidably mounted in said casing and having a toothed shank, a lever pivotally mounted within said casing, tensioned means carried by said lever for moving said jaw to closed position, and tensioned means operable through the operation of the latter mentioned means for locking said movable jaw in adjusted position.

2. A vise embodying a casing provided with a fixed jaw, a movable jaw mounted in said casing having a toothed shank, a spring tensioned locking dog pivotally mounted in said casing, a lever pivotally mounted in said casing, and an actuating dog pivotally mounted on said lever, and adapted to simultaneously operate the locking dog into locking engagement with the toothed shank of the movable jaw upon operation of said lever.

3. A vise embodying a casing provided with a fixed jaw, a movable jaw mounted in said casing having a toothed shank, a spring tensioned locking dog pivotally mounted in said casing and formed with a transverse groove, a lever pivotally mounted within said casing, and an actuating dog pivotally connected with said lever and provided with a lip, the lip of the actuating dog engaging in the groove of the locking dog for causing a simultaneous operation of the latter dog upon the operation of the former mentioned dog.

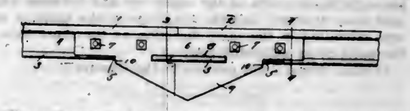
4. A vise embodying a casing provided with a fixed jaw, a movable jaw mounted in said casing having a toothed shank, a spring tensioned locking dog pivotally mounted in said casing and formed with a transverse groove, a lever pivotally mounted within said casing, and a spring tensioned actuating dog pivotally connected with said lever and provided with a lip, the lip of the actuating dog engaging in the groove of the locking dog for causing a simultaneous operation of the latter dog upon the operation of the former mentioned dog.

5. A vise embodying a casing provided with a fixed jaw, a movable jaw mounted in said casing and formed with a toothed shank, tensioned locking means for said jaw, a lever, and foot operating means pivotally connected to the lever for rocking the lever for forcing said locking means in engagement with the toothed shank of said movable jaw.

[Claims 6 and 7 not printed in the Gazette.]

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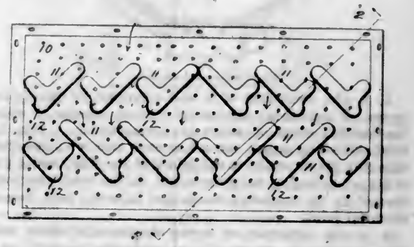
1,228,276. RAIL-JOINT. JOE WINTER, Matador, Tex. Filed Aug. 28, 1916. Serial No. 117,298. (Cl. 239—9.)



The combination with a pair of rails having abutting ends and recesses in the bases thereof, of fish plates mounted on the rails and bridging the joint between them, the said plates including portions contacting with the webs of the rails and triangular portions extending below the bases of the rails, which latter portions have shoulders on their ends adapted to engage the cross ties, the said plates having elongated openings therein through which the portions of the bases which are located between the recesses therein, extend.

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1,228,277. SHAKING-SCREEN. CHARLES V. WRIGHT, Reynolds, Pa. Filed Oct. 5, 1916. Serial No. 123,944. (Cl. 83—56.)



1. A shaker plate having rows of riffles composed of oppositely diverging legs, the rows being arranged progressively one after another in the direction of flow of material over the plate, and the plate having surfaces between the legs of adjacent riffles of the same row and the legs of adjacent rows forming paths for the passage of material between riffles of the same row and between the rows of riffles.

2. A shaker plate having rows of riffles composed of oppositely diverging legs, the rows being arranged progressively one after another in the direction of flow of material over the plate, and the plate having surfaces between the legs of adjacent riffles of the same row and the legs of adjacent rows forming paths for the passage of material between riffles of the same row and between the rows of riffles, said legs being of unequal length, and the longer leg of one set extending past the shorter leg of an adjacent set.

3. A shaker plate having rows of riffles composed of oppositely diverging legs, the rows being arranged progressively one after another in the direction of flow of material over the plate, and the plate having surfaces between the legs of adjacent riffles of the same row and the legs of adjacent rows forming paths for the passage of material between riffles of the same row and between the rows of riffles, said legs being of unequal length, and the longer leg of one set extending past the shorter leg of an adjacent set, said riffles being arranged in a row formed of groups with the short legs of one group extending in the same direction as the long legs of an adjacent group.

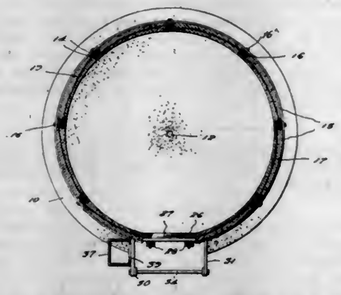
4. A shaker plate having parallel rows of riffles formed of V-shaped units, each unit having a short leg and a long leg, spaces being provided between the units of a row and between the rows of units, that form zigzag paths between adjacent units of the same row and between adjacent rows of units.

5. A shaker plate having parallel rows of riffles formed of V-shaped units, each unit having a short leg and a long leg, spaces being provided between the units of a row and between the rows of units, that form zigzag paths between adjacent units of the same row and between adjacent rows of units, and the long legs of the units of one row extending in the same direction as the short legs of the units of an adjoining row.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,278. SILO. EDGAR J. ABBETT, Houston, Tex. Filed Mar. 4, 1916. Serial No. 82,156. (Cl. 72—6.)



1. A silo, consisting of a wall composed of superposed layers or segmental reinforced concrete blocks or slabs, the meeting edges of which are connected by a ship lap joint, fastening means carried by each slab for disposition adjacent the circumferential joints of the wall, and a plurality of retaining hoops attached to the wall exteriorly thereof by the fastening means and adjacent each circumferential joint.

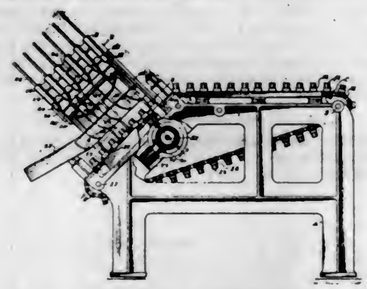
2. A silo, composed of layers of segmental slabs, each slab of which is composed of a reinforcing element made from a metal open frame and a taut wire mesh carried thereby, and concrete surrounding said reinforcing element, the edges of the slab being formed to provide ship lap joints when the slabs are in position, fastening means carried by each of the frames and engageable with the frames in the adjacent slabs, and bracing means engaging the silo at the horizontal meeting edges of the slabs and held in position by the fastening means.

3. A silo composed of a plurality of segmental slabs having their adjacent sides and ends reduced to provide ship lap joints, a reinforcing element in each slab embodying a frame conforming to the contour of and arranged diagonally in the slab and in the reduced ends and sides thereof and a taut wire mesh carried by the frame, bolts anchored in the frame in each slab and passing through the frames in the adjacent slabs at the joints thereof, and means for clamping the bolts in position.

4. A silo comprising a plurality of segmental slabs each including a body formed of concrete having the adjacent ends and sides reduced to provide ship lap joints, a reinforcing element anchored in the body of each slab when it is molded and embodying an open metallic frame conforming to the contour of and arranged diagonally in the body and in the reduced ends and sides thereof and a taut wire mesh carried by the frame, bolts anchored in the frame in each slab and passing through the frame in the adjacent slab body at the joints thereof, hoops encircling the silo at the horizontal meeting edges of the joints and engaged by the bolts for bracing the slabs, and nuts engaging the bolts for clamping the hoops and slabs in position.

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1,228,279. PITTER. LISLE T. ARGO, Los Angeles, Cal., assignor to Curtis Olive Corporation, Bloomington, Cal., a Corporation of California. Filed July 26, 1916. Serial No. 111,433. (Cl. 146—6.)



1. A pitter, comprising a frame, a conveyer provided with fruit holding means mounted thereon, a pitting punch mounted on said frame, means for moving said conveyer to position the fruit for engagement by said punch, means for actuating said punch to force the pits out of the fruit, an alinement member mounted on said frame arranged to position said fruit holding means in alinement with said punch, and means to operatively move said alinement member.

2. A pitter, comprising a frame, a conveyer provided with fruit holding means mounted thereon, a pitting punch mounted on said frame, means for moving said conveyer to position the fruit for engagement by said punch, means for actuating said punch to force the pit out of the fruit, a discharge chute for pitted fruit disposed adjacent said punch, means for releasing fruit from said punch, and a trough on said chute disposed to catch the released fruit and guide it into said chute.

3. A pitter, comprising a frame, a conveyer provided with fruit holding means mounted thereon, a pitting punch mounted on said frame, means for moving said conveyer to position the fruit for engagement by said punch, means for actuating said punch to force the pit out of the fruit, a discharge chute for pitted fruit disposed adjacent said punch, means for releasing fruit from said punch, and a trough extending laterally from said chute and communicating therewith for catching pitted fruit and guiding the same into said chute, said trough provided with a fruit releasing wall through which said punch passes.

4. A pitter, comprising a frame, a conveyer provided with fruit holding means mounted thereon, a pitting punch mounted on said frame, means for moving said conveyer to position the fruit for engagement by said punch, means for actuating said punch to force the pits out of the fruit, an alinement member mounted on said frame arranged to position said fruit holding means in alinement with said punch, means to operatively move said alinement member, and a fruit releasing means disposed to engage the fruit on withdrawal of said punch.

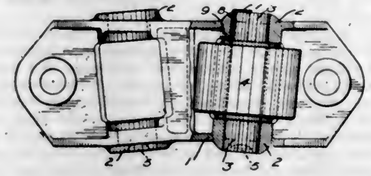
5. A pitter, comprising a frame, a conveyer provided with fruit holding means mounted thereon, a reciprocating pitting punch mounted on said frame, a slow return mechanism for actuating said punch, means for intermittently moving said conveyer whereby the latter remains stationary while said punch is pitting the fruit, an alinement member mounted on said frame arranged to position said fruit holding means in alinement with said punch.

[Claims 6 to 12 not printed in the Gazette.]



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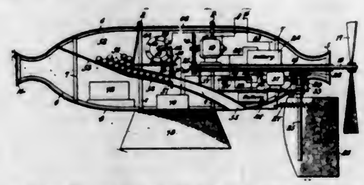
1,228,280. SIDE BEARING FOR CARS. FRANKLIN L. BARBER and EDWIN W. WEBB, Chicago, Ill., assignors to Standard Car Truck Company, Chicago, Ill., a Corporation of New Jersey. Filed Feb. 21, 1916. Serial No. 79,586. (Cl. 64—64.)



A side bearing for cars comprising a housing having in its side walls bearing hubs, a pin mounted in the bearing hubs, a roller journaled on the pin, a key seat formed in the internal wall of one of the bearing hubs and extending laterally into the respective side wall of the housing, and an L-shape key mounted in the key seat, the outer end of the key adapted to be bent over the adjacent end of the pin, the body of the key being curved to form a continuation of the internal wall of the respective bearing hub across its key seat and to fit the contour of the pin.

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1,228,281. AERIAL TORPEDO. CLARENCE BARRETT, Salt Lake City, Utah, assignor, by direct and mesne assignments, of one-third to George Morrow and one-third to Robert W. Salisbury, Salt Lake City, Utah. Filed Sept. 22, 1915. Serial No. 52,041. (Cl. 244—1.)



1. An aerial torpedo provided with means for sustaining it in the air, means for propelling the torpedo structure progressively, means responsive to earth magnetism for maintaining a predetermined course of the torpedo structure, means for releasing destructive devices at a predetermined point in the progressive movement of the torpedo structure, and means for causing the destruction of the torpedo structure.

2. An aerial torpedo comprising a container, means for sustaining the container in the air, propelling and steering mechanism for the torpedo in part within the container, a reservoir for explosive devices within the container, and releasing means for the explosive devices within the reservoir, said releasing means having propelling means therefor independent of the propelling means for the torpedo, whereby the explosive devices may be automatically and intermittently released at predetermined times irrespective of the progress of the torpedo under the action of its propelling means.

3. An aerial torpedo comprising a container, means for sustaining the container in the air, propelling and steering mechanism for the torpedo in part within the container, a reservoir for explosive devices within the container, and releasing means for the explosive devices within the reservoir, said releasing means having propelling means therefor independent of the propelling means for the torpedo, whereby the explosive devices may be automatically and intermittently released at predetermined times irrespective of the progress of the torpedo under the action of its propelling means, said reservoir having a slanting bottom with a slanting chute leading downwardly therefrom through the bottom of the container toward the rear of said container to discharge the explosive devices by gravity in a rearward or trailing direction with relation to the progress of the container.

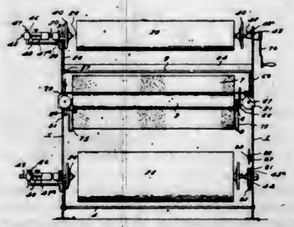
4. An aerial torpedo structure comprising a body member with means for sustaining the body member in the air and causing its progressive movement through the air and means for causing the release of destructive devices at a certain predetermined point in the flight of the torpedo and containing the release of the destructive devices for a predetermined period of time, the torpedo being also provided with means for the destruction of the torpedo structure after the escape of the supply of the destructive devices.

5. An aerial torpedo structure comprising a body member with means for sustaining the body member in the air and causing its progressive movement through the air and means for causing the release of destructive devices at a certain predetermined point in the flight of the torpedo and continuing the release of the destructive devices for a predetermined period of time, the torpedo being also provided with means for the destruction of the torpedo structure after the escape of the supply of the destructive devices, and said torpedo structure having other means for the destruction of said torpedo structure, said last named means being responsive to the effects of shock.

[Claims 6 to 10 not printed in the Gazette.]

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1,228,282. INVOICING-MACHINE. JOSEPH E. BEAN, Windom, Kans. Filed Apr. 3, 1915. Serial No. 18,985. (Cl. 33—129.)



1. A measuring machine of the class described including a frame, a measuring drum or cylinder journaled in the frame and provided with means for engaging the material, a slidable spring-actuated pressure roller located in advance of the measuring drum or cylinder and also mounted on the frame, a shield movably mounted on the frame and arranged to be interposed between the measuring drum or cylinder and the pressure roller when placing the material in the machine, and operating means connected with the pressure roller and the shield for moving the said roller toward and from the measuring drum or cylinder and for carrying the shield simultaneously from and to the space between the pressure roller and the cylinder or drum.

2. A measuring machine of the class described including a measuring cylinder, a pressure roller movable toward and from the cylinder, a shield pivotally mounted on

the axis of the measuring cylinder and adapted to be interposed between the pressure roller and the cylinder and operating mechanism connected with the pressure roller and with the shield for simultaneously operating the same.

3. A measuring machine of the class described including a measuring cylinder, a pressure roller coacting with the cylinder, slidable bearing blocks supporting the pressure roller, guides supported by the machine receiving the blocks and interlocked therewith, adjustable plates also slidably interlocked with the guides and having openings, springs interposed between the plates and the blocks, adjusting screws engaging the plates at the openings thereof for controlling the tension of the springs and provided with openings and pins supporting the springs and extending through the openings of the plates into the openings of the screws.

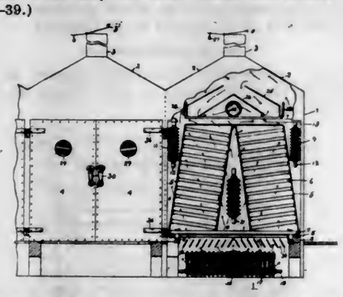
4. A measuring machine of the class described including a frame, a measuring cylinder mounted on the frame and provided with needle points for engaging the fabric or other material, a pressure roller coacting with the cylinder for forcing the material into engagement with the needle points, a shield arranged at the cylinder adjacent to the pressure roller, means for moving the said roller toward and from the cylinder, and means for moving the shield to and from the space between the roller and the cylinder.

5. A measuring machine of the class described including a frame, a measuring cylinder mounted on the frame and provided with needle points, a pressure roller also mounted on the frame and coacting with the measuring cylinder and provided with a yieldable surface adapted to have the needle points embedded in it, a shield arranged adjacent to the pressure roller, means for shifting the shield to interpose the same between the cylinder and the roller and to carry it from such position and means for moving the pressure roller toward and from the cylinder.

[Claims 6 to 11 not printed in the Gazette.]

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1,228,283. APPARATUS AND PROCESS FOR DRYING. OTTO Q. BECKWORTH and OLIVER J. HOBSON, Seattle, Wash. Filed May 11, 1915. Serial No. 27,444. (Cl. 34—39.)



1. A process for dehydrating fruits and vegetables without disturbing the cell structure or causing harmful chemical changes, which consists in first applying thereto heated vapor, then subjecting the material to the effect of radiant heat from numerous sources about the walls of a closed chamber while circulating a moist drying medium at a controlled temperature around the material being treated, said radiant heat being supplied to said sources from outside said chamber, removing the moisture from the surface of the material and from the surrounding air by circulating the vapor-laden air and allowing the moister air to escape from the circulating medium, and drying out the remaining moisture from the material by the simultaneous application of said radiant heat and dry warm air.

2. The herein described process for treating fruits and vegetables consisting in first subjecting the material in a closed compartment to the heat of convection, then subjecting it to gradually increasing additional heat from radiating means located adjacent to the walls of the compartment and energized from without said compartment circulating the medium at a lower temperature than that of the material and simultaneously gradually reducing the humidity within said chamber.

3. The herein described process for treating fruits and vegetables consisting first in subjecting the material in a closed compartment to the heat of convection and then to additional heat from radiating means located adjacent to the walls of the compartment and energized from without said compartment, simultaneously separating the drier portions of air from the moister portions in an upper compartment, eliminating the moister portions and returning the drier portions of the air to a point below the material being treated for equal distribution and renewed contact with the material being treated.

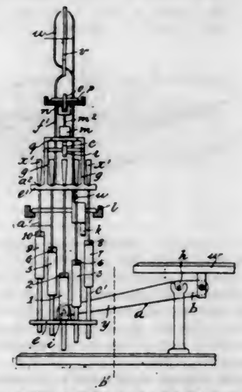
4. The hereindescribed process of treating fruits and vegetables consisting of first subjecting them in a closed compartment to moist heat at a temperature less than that required to cook them, then subjecting them to upwardly flowing currents of air in conjunction with radiant heat of sufficient volume and temperature to liberate the inherent moisture in the materials, and maintaining this step, and while the medium within the said chamber is approaching saturation, drawing off the vapors from a point above the material being treated and setting up a forced circulation of warm air below that point.

5. A process for de-hydrating material comprising fruits, vegetables and the like, which consists in applying thereto a moist drying medium and circulating said medium around said material to moisten the surface thereof and heat the same throughout by convection, in subjecting said material to radiant heat from a source which is independent of said moist drying medium to supply additional heat thereto, and simultaneously with said additional supply continuously circulating around said material a drying medium the vapor contents whereof are under control, and whereof the temperature is under control, in continuously removing said circulating medium from said material, in discharging some thereof and returning the remainder and again circulating it around said material, and in subsequently applying de-hydrated warm air simultaneously with the continued application of said radiant heat to said material.

[Claims 6 to 11 not printed in the Gazette.]

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1,228,284. AUTOMATIC INDICATING WEIGHING MECHANISM. WILLIAM ALFRED BENTON, Birmingham, England. Filed Dec. 17, 1915. Serial No. 67,470. (Cl. 73—102.)



1. An automatic weighing mechanism, comprising a load receiver, a weight-pan, means whereby said weight-pan is adapted to be raised and lowered by the load receiver, a dial, means connecting the dial to the weight-pan whereby the dial is movable with the weight-pan, a plurality of balanced weights arranged to be successively lifted by the movement of said weight-pan and thereby disturb the balance of said weights, balancing means supporting said weights, counter-weight means coöperating with the balanced weights to restore the balance of said weights, and a pointer coöperating with the dial and having an operative connection with the counter-weight means whereby the pointer is operated to indicate upon the dial the weight on the load receiver.

2. An automatic weighing mechanism, comprising, a load receiver, a weight-pan adapted to be raised and lowered by the load receiver, a dial, means connecting the dial to the weight-pan whereby the dial is movable with the weight-pan, a plurality of balanced weights arranged to be successively lifted by the rise of the weight-pan thereby disturbing the balance of said weights, balancing means supporting said weights, an indicating pointer arranged to coöperate with the dial, and balanced counter-weight means independent of said first mentioned balanced weights and arranged to operate to restore at all times the balance of the latter weights, said counter-weight means having a connection with said pointer for operating the latter to indicate upon the dial the weight on the load receiver.

3. An automatic weighing mechanism, comprising, a scale beam, a load receiver on said scale beam, a weight-pan on the scale beam and adapted to be raised and lowered by the load receiver, a dial, means connecting the dial to the weight-pan whereby the former is movable with the latter, a balanced weight beam, a plurality of weights of equal weight supported from each end of said beam, said weights being arranged so that the weights on each end of said beam are successively lifted in alternation by the weight-pan thereby disturbing the balance of the weight beam, balanced counter-weight means arranged to be effected by the position of said weight beam and to restore the latter to its balanced position, and a pointer arranged to coöperate with the dial and actuated by the movement of said counter-weight means to indicate upon the dial the weight on said load receiver.

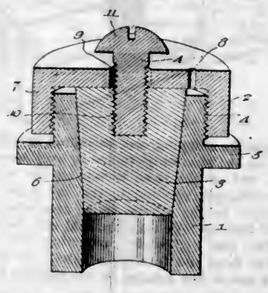
4. An automatic weighing mechanism, comprising, a load receiver, a weight-pan adapted to be raised and lowered by the load receiver, a dial, means connecting the dial to the weight-pan for rendering the dial movable with the weight-pan, a plurality of balanced weights arranged to be alternately and successively engaged and lifted by the weight-pan when a load is on the load received thereby disturbing the balance of said weights, a balanced counter-weight means coöperating with said first mentioned balanced weights to restore at all times the balance of the latter, and a pointer to coöperate with said dial to indicate the weight on said load receiver and actuated by the movement of said counter-weight means to move over said dial, said first mentioned weights being arranged relatively to the weight-pan to permit an idle lift of the dial previous to the lift of each succeeding weight.

5. An automatic weighing mechanism, comprising a scale beam, a load receiver on one end of the scale beam and a weigh-pan on the other end thereof, a balancing weight beam, a plurality of weights of equal weight supported from each end of the weight beam, the weights on each end of the weight beam being arranged to be successively lifted from the beam in alternation by the weight-pan to disturb the equilibrium of said beam, a third balancing beam, a counter-balancing means carried by one end of said third beam, means associated with one end of the weight beam and coöperative with said counter-balancing means to at all times restore the balance of said weights, a dial, a pointer coöperating with said dial to indicate the weight on the load receiver, and means associated with the other end of said third beam whereby relative movement is imparted to the pointer and the dial by the movement of said counter-balancing means.

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1,228,285. FILLER-PLUG. ANTHONY HENRY BIEKER, Allan, Saskatchewan, Canada. Filed May 9, 1916. Serial No. 96,461. (Cl. 220—124.)

1. In combination with a nipple, a plug for the nipple, a cap having threaded engagement with the nipple and also provided with a vent opening, and with a centrally arranged unthreaded opening and a screw movable freely through said central opening having threaded engagement with the plug and provided at its outer end with an enlarged head, spaced above the cap and permitting limited vertical movement of the cap independently of the plug.



2. In combination with a nipple, a plug for the nipple, a cap having threaded engagement with the nipple and also provided with a vent opening, and with a centrally arranged unthreaded opening and a screw movable freely through said central opening having threaded engagement with the plug and provided at its outer end with an enlarged head, spaced above the cap and permitting limited vertical movement of the cap independently of the plug, the said plug being tapered and the said nipple having a correspondingly shaped outer bore in which the nipple is adapted to be closely fitted by the cap.

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1,228,286. TATTING-SHUTTLE. JOSEPH C. BIGELOW, Olympia, Wash. Filed Aug. 16, 1916. Serial No. 115,242. (Cl. 66—10.)



1. A tatting shuttle comprising a sheath, a thread-receiving spool supported in said sheath, spring means normally tending to rotate said spool to wind the thread thereon and adapted to be automatically wound during the unwinding of the thread from the spool, releasable means for locking said spring means against operation, and means independent of said spool for winding said spring means.

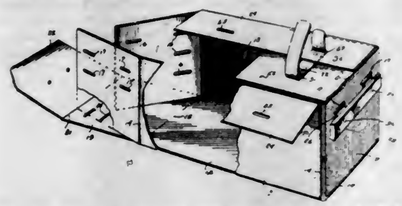
2. A tatting shuttle including a sheath having a curved slot therein, a frame supported in said sheath, a thread-receiving spool supported in the frame, spring means normally tending to rotate the spool and adapted to be automatically wound as the thread is unwound from the spool, a spring actuated pawl pivotally mounted within the sheath normally engaging and locking the spring means against operation, and an arm carried by the pawl projecting exteriorly of the sheath through the slot.

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1,228,287. COLLAPSIBLE SHIPPING-CASE. ROY L. BOSWELL and HARRY E. MARTIN, Tate, Nebr. Filed July 10, 1916. Serial No. 108,393. (Cl. 229—33.)

2. A collapsible shipping case including bottom, side and end walls, flaps carried by the end walls removably folded to close the top of the case, flaps carried by the side walls removably folded to overlap the first named flaps and provided with transversely alined openings and flexible locking strips secured between their ends to the first named flaps and having their ends removably inserted through corresponding openings in the last named flaps, one end of each strip being bent to overlie the other end

thereof and having its extremity disposed in the opening through which the other end protrudes.

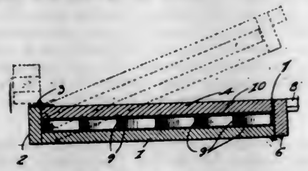


3. A collapsible shipping case including bottom and side walls, flaps on the side walls folded in overlapped relation to close an end of the case, a flap on the bottom wall folded in overlapped relation to the end flaps, a pair of locking strips having their ends removably engaged through and bent to lock together said end flaps and bottom wall flap, and a member connecting the strips outwardly of the flaps and forming a handle for the case.

[Claims 1 and 4 not printed in the Gazette.].

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1,228,288. FOLDING DOUGH-BOARD AND BISCUIT-CUTTER. ROBERT L. BOWER, Mullins, W. Va. Filed Oct. 20, 1915. Serial No. 56,951. (Cl. 107—46.)



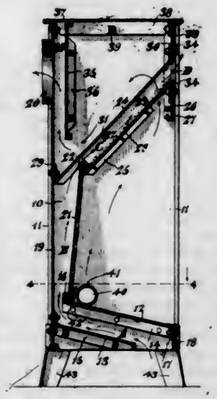
A folding dough board and biscuit cutter comprising a dough board provided at the back with a strip, a lid hinged at its rear edge to the said strip and arranged to abut against the front face thereof when in closed position, said lid provided with front and side strips depending therefrom and extending below the upper surface and engaging the side and front edges of the dough board to form a casing about said board to exclude flies and other insects, a lining secured to and covering the inner surface of said lid, and a plurality of cutters secured to said lining of the lid, as and for the purpose specified.

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1,228,289. GAS-HEATER. HAMILTON K. BOYD, Pittsburgh, Pa., assignor of one-half to Ernest H. Ohlendorf, Mims, Fla. Filed July 14, 1916. Serial No. 109,313. (Cl. 126—88.)

1. A gas heater comprising a shell formed of side plates, a top plate and a back plate connected to the top and side plates, an upwardly inclined deflecting plate connected to the back plate and the side plates below the top plate, and a front plate connected to the upper end of the deflecting plate thereby forming a heating chamber which is defined by the back, front, top and deflecting plates, said back plate having an opening near the top, a baffle plate depending from the top plate and arranged to extend below the opening of the back plate, a second back plate and a second deflecting plate each spaced from the first mentioned back plate and deflecting plate to provide an air duct which is open at the bottom for the ingress of cold air, and a burner arranged in front of the second mentioned back plate, the deflecting plates having registering passages formed therein at the top for the products of combustion to reach the heating chamber without escaping into the air duct.

2. A gas heater comprising an open front shell composed of side walls, a back wall joining the side walls, a bottom plate inclined downwardly from the back wall and terminating short of the front edges of the side walls, a top plate, and an upwardly inclined deflecting plate spaced below the top plate to provide a heating chamber in the top of the shell, a combustion chamber in the shell between said side walls composed of a second bottom plate inclined upwardly and backwardly from the front edges of the side walls and spaced from the first mentioned bottom plate to provide an air duct in the bottom of the heater, and terminating short of said back wall, a back plate rising from the rear end of the second mentioned bottom plate and spaced from the back plate to provide a continuation of the air duct at the back of the heater, a second upwardly inclined deflecting plate spaced below the first deflecting plate to provide therewith the upper end of the air duct, a front plate to which the said deflecting plates are connected, said front plate having an opening in line with the air duct, and a burner in the combustion chamber, said deflecting plates having passages therethrough leading from the top of the combustion chamber to the heating chamber.

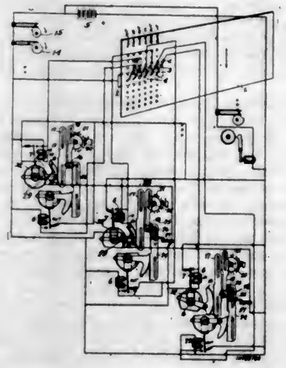


3. A gas heater having side plates, a back plate joining the rear edges of the side plates, upper and lower front plates connecting the forward edges of the side plates, spaced apart and overlapping bottom plates of less width than the side plates and arranged between the side plates and extending one from the back plate and one from the lower front plate and providing therebetween an air duct in the bottom of the heater, a second back plate rising from the inner end of the upper bottom plate and in spaced relation to the first mentioned back plate to provide a vertical continuation of the air duct in the back of the heater, a pair of spaced apart deuector plates inclining upwardly and forwardly from the back plates to provide an upper continuation of the air duct, the upper front plate having an opening in alinement with the upper end of the duct formed between the deflecting plates, and a burner arranged above the upper bottom plate, and close to the second back plate.

4. A gas heater comprising a shell having an outlet in its back, an open front combustion chamber arranged within the shell, said shell and said combustion chamber having opposed and spaced apart bottom plates, back plates and top deflecting plates to provide an air duct therethrough extending along the bottom and about the combustion chamber and opening thereabove through the front of the shell, the upper deflecting plate forming the bottom of a heating chamber in the top of the shell opening through said outlet, both of the deflecting plates having a passage therethrough at the front connecting the combustion chamber with the heating chamber, a burner in the combustion chamber at the lower end thereof and at the rear, the upper of said bottom plates being provided with a series of openings between said burner and the inner one of said back plates whereby air is admitted to said burner from said air duct, and means for deflecting the heated products of combustion along the top of the upper deflecting plate.

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1,228,290. ELECTRICALLY-CONTROLLED CALCULATING-MACHINE. JAMES W. BRYCE, Brooklyn, N. Y. Filed Apr. 12, 1916. Serial No. 90,568. (Cl. 235—58.)



1. In a calculating machine, the combination with contacts adapted to travel over a workman's punched time card and to close circuits when passing over perforations therein, of means for breaking the operating circuit of the machine when the contacts have passed the last line for perforations, type-wheels carrying type corresponding to time units, and means for shifting said wheels in opposite directions adapted to be started in operation by the contacts and stopped by the interruption of the main circuit, whereby the type brought to the printing position will indicate the difference between the "out" and the "in" units of time.

2. In a calculating machine, the combination with type-wheels with type for indicating different time units, of electromagnetically controlled means for turning the type-wheels in opposite directions, differential gearing between the same and the type-wheels, of means for starting the said means in operation at periods of time corresponding to the "in" and "out" holes in a workman's punched time card, and means for interrupting the main circuit of the machine after the card has moved to a certain point whereby the type brought to the printing position will represent the difference between the "out" and the "in" units of time as indicated by the position of the holes in the card.

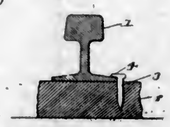
3. In a calculating machine the combination with type-wheels corresponding to different orders of time units, of independent driving means for moving each wheel in opposite directions, electro-magnets for controlling said means, contacts operating in connection with holes in a workman's punched time card for energizing said magnets, differential gearing between the driving means and the type wheels and a circuit controller for the main circuit including the magnets of the driving means adapted to interrupt the said circuit at a predetermined time with respect to the cycles of operation of the machine.

4. In a calculating machine, the combination with type-wheels corresponding to different orders of time units, adjusting rack bars movable in opposite directions for imparting forward and backward motion to the type-wheels, a rack bar gearing with each type-wheel and with the adjusting rack bars by a pinion carried by it, electro-magnets controlling the operation of the adjusting rack bars, contacts operating at periods determined by the position of punched holes in a workman's time card to energize said magnets and a timed circuit controller for the main circuit including said magnets.

5. In a time calculating machine controlled in its operation by currents produced by the relative movement of contacts and time cards punched with lines of holes which by their position indicate different points of time, the combination with electro-magnetic type-wheel adjusting mechanism of circuits controlled by said contacts whereby the adjusting mechanism is started in operation at periods of time determined by the position of holes in the card, and a timed circuit controller for throwing the adjusting means out of operation at a predetermined time with respect to the cycles of operation of the machine.

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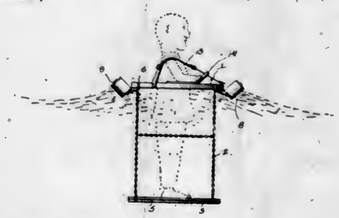
1,228,291. RAILWAY-SPIKE. PETAR M. BULATOVICH, Sesser, Ill. Filed Aug. 28, 1916. Serial No. 117,359. (Cl. 85—13.)



A railroad spike comprising a shank having a tapered penetrating end which is slotted longitudinally a predetermined distance in a line with the straight sides of said end of the spike, whereby to produce outer comparatively thin limbs or members and an inner comparatively thick limb or member, as and for the purpose set forth.

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1,228,292. LIFE-SAVER. PETAR M. BULATOVICH, Sesser, Ill. Filed Sept. 29, 1916. Serial No. 122,947. (Cl. 9—17.)



1. A life saving device comprising an upper float member, a lower float member, chains flexibly connecting the members together, an auxiliary float member flexibly connected to the upper member and a harness for attaching the upper member to a person.

2. A life saving device comprising an upper float member, a lower float member, chains flexibly connecting the members together, an auxiliary float member flexibly connected to the upper member and a harness for attaching the upper member to a person and a hand grip secured to the upper member.

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1,228,293. ATTACHMENT FOR ELECTRIC-LIGHT SNAP-SWITCHES. FERNAND CAILLETEAU, Atlanta, Ga. Filed Oct. 6, 1916. Serial No. 124,171. (Cl. 240—123.)



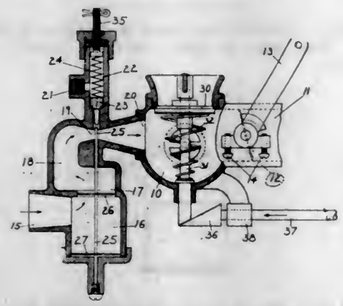
1. An attachment for key snap switches comprising a block formed with a transverse slot to receive the key of the switch and having an outer circular edge, an annular

row of teeth formed on said edge, collars surrounding the circular edge of said block at the opposite sides of the row of teeth thereon, and capable of movement relatively to the block, a weight depending from said collars to hold the same in normal position on the block and restore the collars to normal position, a lever pivoted between said collars above said block, a dog on said lever engaging said teeth, and a pull cord connected to said lever whereby the latter may be pulled to engage the dog with the teeth and rotate said block and key.

2. An attachment for key snap switches comprising a block formed with a transverse slot to receive the key of the switch and having an outer circular edge, an annular row of teeth formed on said edge, collars surrounding the circular edge of said block at opposite sides of the row of teeth thereon, and capable of movement relatively to the block, a weight depending from said collars to hold the same in normal position on the block and restore the collars to normal position, a lever pivoted between said collars above said block, a dog on said lever engaging said teeth, a pull cord connected to said lever whereby the latter may be pulled to engage the dog with the teeth and rotate said block and key, and means carried by said block and encircling the shank of the key to prevent accidental disconnection of the block from the key.

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1,228,294. CARBURETER. HARRY G. CARNELL, Dayton, Ohio. Filed Mar. 29, 1915. Serial No. 17,871. (Cl. 261—50.)



1. A carbureter having a mixing chamber, a controlling valve and a secondary valve adapted to admit air simultaneously to the mixing chamber, a spring tending to close each valve; the relationship between the coefficients of strain of said springs being such that the controlling valve will be moved from a given fixed point a predetermined distance for each proportional increase in the amount of air admitted by both valves.

2. A carbureter having a mixing chamber, a controlling valve and a secondary valve adapted to admit air simultaneously to said chamber, and a spring tending to close each valve, the relationship between the coefficients of strain of said springs being such that the controlling valve will be moved from a given fixed point a predetermined distance for each proportional increase in the total amount of air entering the mixing chamber; a fuel valve, and connecting means whereby the controlling valve moves the fuel valve in one direction.

3. A carbureter having a mixing chamber, a controlling valve and a secondary valve adapted to admit air simultaneously to said chamber, and a spring tending to close each valve, the relationship between the coefficients of strain of said springs being such that the controlling valve will be moved from a given fixed point a predetermined distance for each proportional increase in the total amount of air entering the mixing chamber; and a fuel valve of such form that it will admit fuel in quantities proportional to its distance from a fixed point and of such dimensions that said quantities will be proportional to the total amount of air admitted to the mixing chamber.

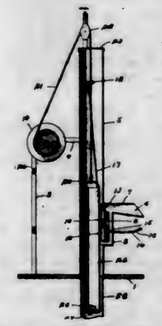
4. A carbureter having a mixing chamber, a controlling valve and a secondary valve adapted to admit air simultaneously to said chamber, and a spring tending to close each valve, the relationship between the coefficients of strain of said springs being such that the controlling valve will be moved from a given fixed point a predetermined distance for each proportional increase in the total amount of air entering the mixing chamber; a fuel valve of such form that it will admit fuel in quantities proportional to its distance from a fixed point and of such dimensions that said quantities will be proportional to the total amount of air admitted to the mixing chamber, and connecting means whereby the controlling valve opens the fuel valve and the controlling valve spring closes both valves.

5. A carbureter having a mixing chamber, a controlling valve and a secondary valve adapted to admit air simultaneously to said chamber, and a spring tending to close each valve, the relationship between the coefficients of strain of said springs being such that the controlling valve will be moved from a given fixed point a predetermined distance for each proportional increase in the total amount of air entering the mixing chamber; a fuel valve of such form that it will admit fuel in quantities proportional to its distance from a fixed point and of such dimensions that said quantities will be proportional to the total amount of air admitted to the mixing chamber, connecting means whereby the controlling valve opens the fuel valve and the controlling valve spring closes both valves, and means for varying the relative tension of the springs.

[Claims 6 to 13 not printed in the Gazette.]

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1,228,295. WINDLASS WATER-ELEVATOR. ELBERT R. CHANDLER, Guntersville, Ala., assignor to Webster B. Heidt, Guntersville, Ala. Filed Aug. 9, 1916. Serial No. 114,054. (Cl. 103—35.)



1. In a device of the class described, the combination with a well, a platform of the well, a frame upon the platform, a pipe member supported by the frame, a discharge spout formed upon the pipe member, a pocket formed with the spout and the pipe member disposed below the spout and outward of the pipe member, a water chute pivoted between the sides of the pocket, said chute including a body member having a flexible flange adapted to contact with the pipe and with the sides of the chute when the same is in a discharge position to be wholly received in the pocket when in an inoperative position, a latch for holding the chute in a discharge position, a bucket playing in the pipe, said bucket having a valved bottom provided with an extending stem, a bail for the discharge chute provided with an eye, a cable for the bucket passing through the eye, and a windlass upon the frame for the cable.

2. In a device for the purpose described, a base, a frame upon the base, a pipe supported between the front uprights and the frame, a windlass from the rear uprights of the frame, a cable trained over the pulley of the connecting member of the front uprights of the frame and connected with the valve in the pipe, said pipe having a discharge spout, a pocket formed with the discharge spout and with the pipe, a pivoted water chute in the pocket, a notched latch rod connected with the water chute and passing through the elongated opening in the pocket, a flexible flanged side for the chute, the bail having an eye through which the cable passes and which is connected with the chute, and a lipped base plate upon the body of the chute.

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1,228,296. DRILL-BIT. CHARLES T. CHAPMAN, Terre Haute, Ind. Filed Oct. 21, 1916. Serial No. 126,926. (Cl. 255—69.)

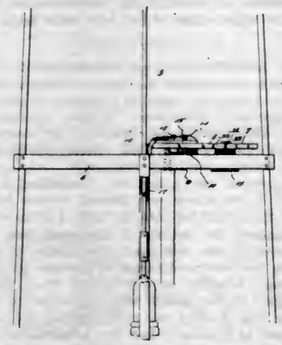


1. In a drill structure, the combination, of an auger conveyer having one end cut flat, a lug positioned intermediate the edges on the flat end of said conveyer and extending outwardly therefrom, and a plurality of rectangular bits detachably carried by said auger conveyer.

2. In a drill structure, the combination, of an auger conveyer having one end cut flat, a lug positioned intermediate the edges on the flat end of said conveyer and extending outwardly therefrom, and a plurality of rectangular bits detachably carried by said auger conveyer, said bits flaring outwardly from the central axis of the conveyer, and the pairs of bits upon the opposite sides of the central axis being angled oppositely to the pair upon the opposite side of the axis of the conveyer for presenting cutting edges to the surface being drilled during the rotation of the drill.

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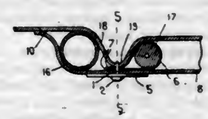
1,228,297. PUMPING ATTACHMENT FOR WINDMILLS. ELLSWORTH ADAM CRAWFORD, Thatcher, Ariz. Filed Sept. 9, 1916. Serial No. 119,255. (Cl. 74—71.)



As a means for counter-balancing a vertically reciprocating rod, a pivotally mounted attaching block having one end curved and grooved and positioned adjacent the rod, a flexible element the respective ends of which are pivotally connected to the rod and to the block while the main portion thereof is trained about the curved and grooved end of the block, a substantially U-shaped frame the side arms of which are rigidly connected at their free ends to the block so as to extend the frame from the opposite end of the block, and a weight adjustably mounted between the arms of the frame.

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1,228,298. PEN AND PENCIL HOLDER. MARTIN R. CROSSMAN, Boston, Mass. Filed Sept. 11, 1916. Serial No. 119,390. (Cl. 24—10.)



1. In a pen and pencil holder, the combination with an elastic pencil-holding element in the form of an elastic tape bent into a loop, of a fastening device presenting a shank having a head at one end thereof, the shank being inserted through the sides of the loop and adapted to be inserted through a garment and secured thereto whereby the elastic loop will be held in position against the garment.

2. The combination with a garment, of a pen and pencil holder comprising an elastic tape bent into loop formation, and a fastening device having a shank with a head at one end, said shank being inserted through the sides of the loop and through the garment and fastened thereto whereby the loop will be clamped between the head of the fastening device and the garment.

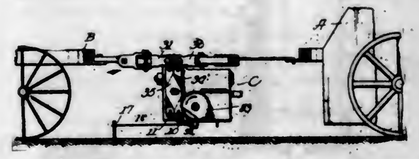
3. In a pen and pencil holder, the combination with a fastening device comprising a bifurcated shank provided with a head, of a washer mounted on the shank adjacent the head, and an elastic tape bent into loop formation, the shank being inserted through the sides of the loop.

4. The combination with a garment having a pocket, of a pencil-holding device comprising a fastening device having a bifurcated shank provided with a head, which shank is inserted through the garment, and the ends thereof are bent over to lock the fastening device to the garment, and an elastic tape bent into loop formation and secured to the shank between the body of the garment and the head of the shank.

5. The combination with a garment having a pocket, of a pencil holding device comprising a fastening device having a bifurcated shank provided with a head, which shank is inserted through the outer wall of the pocket and the two parts thereof are bent over against the inside of the garment in a vertical direction, and an elastic tape bent into loop formation and secured to the shank between the body of the garment and the outer wall of the pocket, the bent-over ends of the shank coöperating with a pencil inserted into the pencil holding element to maintain said pencil in vertical position.

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1,228,299. DYNAMOMETER. JAY B. DAVIDSON, Davis, Cal. Filed May 10, 1916. Serial No. 96,489. (Cl. 265—8.)



1. A dynamometer comprising two separable parts, means for resisting separation of said parts, a recorder mechanism arranged for movement in accordance with the distance of dynamometer travel, a coöperating recorder mechanism for movement in accordance with relative displacement of the parts, said mechanisms coöperating to record the operation of the dynamometer, and means for

automatically actuating the first said recorder mechanism through a predetermined distance of travel.

2. A dynamometer comprising heads, connections therebetween permitting separation of said heads, a recorder part arranged for rotation in accordance with distance of travel, and carried by one of said heads, a coöperating recorder part for movement in accordance with relative displacement of the heads, said parts coöperating to record the operation of the device, means for automatically actuating the first said recorder part through a predetermined distance of travel, and a calibrated spring opposing separation of said heads.

3. A traction dynamometer comprising parallel heads, shackles connected to like extremities of said heads, parallel link motion connections between said heads to maintain them in parallelism in their separating movements under the pull of the shackles, a spring opposing separation of said heads, a recorder part operable in accordance with distance of travel, carried by one of said heads, a coöperating recorder part displaceable relative to the first in accordance with the separation of the two heads and means for automatically actuating the first said recorder part through a predetermined distance of travel.

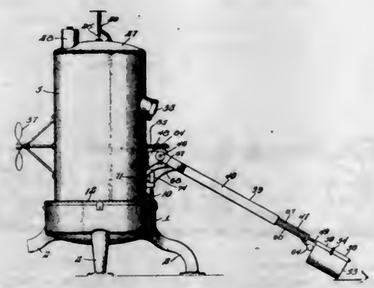
4. In a dynamometer of the class described, the combination of a fixed head, a movable head, a stem carried by the one head extending through the other head near one end thereof, a spring encircling said stem and abutting against the stem and the appropriate head, tending to maintain said heads against separation, guiding mechanism permitting the separation of said heads only in substantial parallelism, a stem carried by the movable head extending through the fixed head, a marking arm operable by said last mentioned stem, a paper strip coöperating with said marking arm, and means for moving said paper strip in accordance with the distance of travel.

5. In a dynamometer, the combination of parallel heads, connections between said heads comprising two pairs of crossed levers on opposite sides of the heads, each lever connected at opposite ends with the opposite heads, the connections at one end being pivotal and the other being slidingly pivotal, fulcrum blocks extending transversely between the heads connecting the lever pairs on opposite sides of the head, said fulcrum blocks jointly providing a knife edge pivot adjacent the center of the lever system and each of said blocks being connected against rotation with two of the levers of opposite pairs; means for separating said heads, spring means opposing the separation of said heads, and means for recording the separation of said heads.

[Claims 6 to 10 not printed in the Gazette.]

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1,228,300. DIVING AND EXCAVATING APPARATUS. DEWEY T. DEEMER, Hopkins, Mich. Filed July 10, 1916. Serial No. 108,529. (Cl. 61—7.)



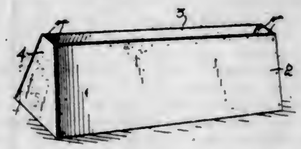
1. In a diving and excavating apparatus, the combination of a base, a shell detachably and rotatably mounted upon the base, an excavator arm pivotally mounted upon the exterior of the shell and comprising telescopic sections, a bucket carried by said arm and comprising pivoted bucket sections in gear for opening and closing movements, means operative from the interior of the shell for raising and lowering the arm, means operative from the interior of the shell for projecting and retracting the sliding section of the telescopic arm, and means operative from the interior of the shell for opening and closing the sections of the bucket.

2. In a diving and excavating apparatus, the combination of a weighted base, a shell detachably and rotatably mounted upon the base, means for rotating the shell upon the base, concentrically mounted locking devices for respectively connecting the shell to and releasing it from the base and locking the shell against rotation, the first-named locking device being adapted to permit rotation of the shell when the second-named locking device is in released position, and excavating means carried by the shell and operated from the interior thereof.

3. In a diving and excavating apparatus, the combination of a base, a shell detachably and rotatably mounted upon the base, an excavator arm pivotally mounted upon the exterior of the shell and comprising telescopic sections, a clam-shell bucket carried by said arm and comprising pivoted bucket sections in gear for opening and closing movements, and electrically operated means for raising and lowering the arm, electrically operated means for projecting and retracting the sliding section of the telescopic arm, and pneumatically operated means for opening and closing the sections of the bucket.

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1,228,301. FEEDING DEVICE. SAMUEL L. DENNEY, Lincoln University, Pa. Filed Mar. 11, 1916. Serial No. 83,624. (Cl. 119—61.)



A feeding trough for poultry comprising an elongated sheet of material having its longitudinal marginal portions bent upwardly on converging planes to afford a supporting base and inwardly inclined side walls, plates for closing the space between the side walls and base at the ends thereof, the top being open and of restricted transverse width to permit dropping therein, said open top being positioned at substatnially the transverse center of the base, the upper edges of the side walls being sharp.

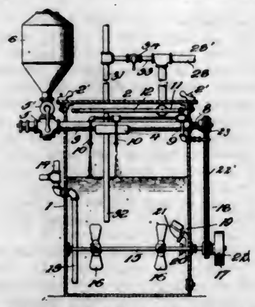
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1,228,302. ACETYLENE-GAS GENERATOR. CHARLES A. DUNCAN and GEORGE L. SHOUP, Duluth, Minn., assignors to American Carbolite Company, Duluth, Minn., a Corporation of Minnesota. Original application filed Jan. 15, 1913, Serial No. 742,301. Divided and this application filed June 25, 1915. Serial No. 36,332. (Cl. 48—57.)

1. An acetylene gas generator, comprising a tank, a carbid feed in the upper end thereof, means for mixing water with the carbid fed into the tank, a transverse shaft located adjacent the bottom of the tank, two propeller wheels carried by the said shaft, the blades of one wheel set opposite the blades of the other, means for operating the said shaft whereby each propeller wheel thoroughly mixes one-half of the sludge with the water in the tank, a discharge pipe having one end adjacent the bottom of the tank and at a point below the propeller wheels, and its other end extending without the tank at the desired water level.

2. An acetylene gas generator comprising a tank, a rotary carbid feed in the upper end thereof, means for mixing water with the carbid fed into the tank, a transverse shaft located adjacent the bottom of the tank, propeller wheels carried by the said shaft, a water and sludge discharge pipe, unitary driving means for the carbid feed and the transverse shaft, and a float operated by the water in the tank having means carried thereby for locking the transverse shaft against rotation and

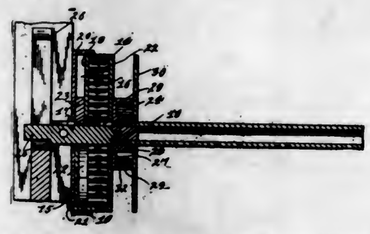




thereby stopping the carbid feed and the propeller wheels when the water in the tank falls below the level of the float.

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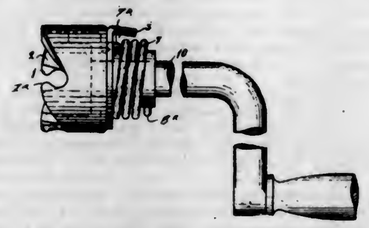
1,228,303. SPRING-ROLLER. JOHN B. DRUMM, Winslow, Ariz. Filed May 15, 1916. Serial No. 97,658. (Cl. 156—36.)



In a spring roller, a roller proper, a cap member secured to one end of the roller, a grooved axle carried by the end of the roller and passing through the cap, the flange of said cap having a plurality of tongues, a disk disposed inwardly of the edge of the flange of the cap and provided with notches in its peripheral edge receiving the said tongues therethrough to prevent rotation of the disk relative to the cap and a cap engaged on the flange of the first cap and having slots receiving the tongues therethrough to prevent rotation of the caps relative to each other, said tongues having their ends bent to lie against the second cap and lock said caps and disk together.

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1,228,304. SAFETY MEANS FOR CRANKING INTERNAL-COMBUSTION ENGINES. WALFRID S. EKLUND, Donner, La. Filed Dec. 29, 1916. Serial No. 139,711. (Cl. 123—185.)



1. A safety cranking device for internal combustion engines comprising an internal ratchet member provided with engaging portions to receive the cross pin of a crank shaft of an internal combustion engine, an outer ratchet member provided with engaging portions for holding the cross pin in engagement with the engaging portions of the internal ratchet member, and a spring yieldably connecting the inner and outer ratchet members and adapted to permit the outer ratchet member to yield under an excess of pressure for releasing the cross pin.

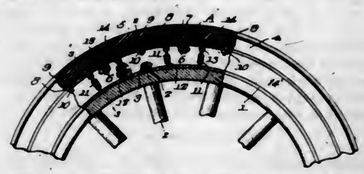
2. A safety cranking device for internal combustion engines comprising an internal ratchet member of substantially cylindrical form provided with engaging portions having inclined edges adapted to receive the cross pin of a crank shaft of an internal combustion engine, an outer substantially cylindrical ratchet member provided with approximately hook-shaped engaging portions for holding the cross pin in engagement with the said inclined edges, and a spring yieldably connecting the inner and outer ratchet members and adapted to permit the outer ratchet member to yield under an excess of pressure for releasing the cross pin.

6. A safety cranking device for internal combustion engines including an inner ratchet member having a reduced portion or sleeve and provided with an opening, an external ratchet member mounted for rotary movement on the internal ratchet member and having a lug for engaging the said opening and provided with spaced openings, an adjusting plate also mounted for rotary movement on the internal ratchet member and provided with a lug or projection for engaging the openings of the external ratchet member, and a coiled spring disposed on the internal ratchet member and connected with the same and with the adjusting plate and maintaining the adjusting plate in interlocked relation with the external ratchet member and retaining the lug of the latter in the opening of the internal ratchet member, said spring also yieldably maintaining the internal and external ratchet members in engagement with the crank shaft of an engine and permitting disengagement under excessive pressure.

[Claims 3 to 5 not printed in the Gazette.]

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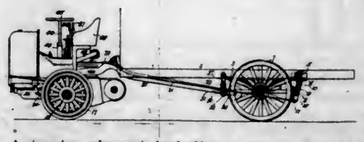
1,228,305. RESILIENT TIRE. CHARLES F. ERICKSON, Brooklyn, N. Y. Filed Apr. 25, 1916. Serial No. 93,452. (Cl. 152—8.)



A resilient tire comprising a plurality of inner bands lying side by side, means for clamping said bands independently of each other around the felly of a wheel, an outer resilient band, a tread supported by said outer band, and a series of flexible suspending connections between said outer band and each of said inner bands, the latter being adjustable independently of each other and circumferentially of the felly.

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1,228,306. MOTOR-TRACTOR. POWELL EVANS, Philadelphia, Pa. Filed Apr. 19, 1912. Serial No. 691,779. (Cl. 21—90.)



1. A tractor element including a frame and a single pair of supporting wheels therefor; a tail piece consist-

ing of an elongated rearwardly extending rigid supporting member pivotally connected to the frame; driving mechanism for the wheels; a horizontal pivotal structure whereby the body is connected to the tail piece at its forward end; and other means connecting the tail piece and body under the main portion of the latter.

2. A tractor element consisting of a frame; a pair of supporting wheels therefor; driving mechanism carried by the frame and operatively connected to the wheels; a tail piece pivotally connected to the frame; and means for turning said parts relatively to each other consisting of a toothed segment mounted on the frame; a sprocket wheel rotatably mounted on the tail piece; a gear connected to said wheel and meshing with said segment; and means for actuating the said wheel.

3. A tractor element consisting of a frame; a pair of supporting wheels therefor; driving mechanism carried by the frame and operatively connected to the wheels; a tail piece pivotally connected to the frame; a toothed segment mounted on the frame; a gear mounted on the tail piece and meshing with said segment; and means for turning said gear consisting of a pair of sprocket wheels of which one is connected to the gear; a chain connecting said wheels; means for turning the other one of the wheels; and means for taking up the slack of said chain.

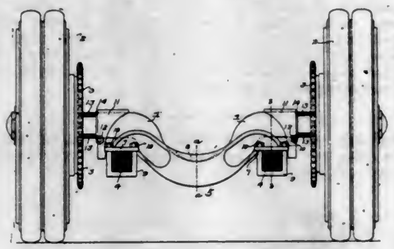
4. A tractor element consisting of a frame; a pair of supporting wheels therefor; a driving mechanism carried by the frame and operatively connected on the wheels; a tail piece pivotally connected to the frame; a toothed segment mounted on the frame; a gear mounted on the tail piece and meshing with said segment; a driver's seat carried by the frame; a steering post mounted adjacent said seat; a sprocket on said post; a second sprocket connected to said gear; a pair of sprockets mounted concentrically with the pivot between the frame and the tail piece; and two sprocket chains respectively transmitting power between said sprocket wheels.

5. A tractor element consisting of a frame; a pair of supporting wheels therefor; driving mechanism carried by the frame and operatively connected to the wheels; a tail piece pivotally connected to the frame; a toothed segment mounted on the frame; a gear mounted on the tail piece and meshing with said segment; a driver's seat carried by the frame; a steering post mounted adjacent said seat; a sprocket on said post; a second sprocket connected to said gear; a pair of sprockets mounted concentrically with the pivot between the frame and the tail piece; two sprocket chains respectively transmitting power between said sprocket wheels; and independent means for taking up the slack in said two chains.

[Claims 6 to 18 not printed in the Gazette.]

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1,228,307. AXLE CONSTRUCTION. POWELL EVANS, Philadelphia, Pa. Filed Feb. 28, 1914. Serial No. 821,664. (Cl. 21—90.)



1. The combination of an axle; a member elongated in the general line of said axle to constitute a saddle and formed to have a limited universal connection with the axle; and a structure to be supported including members extending under the axle in engagement with the ends of the saddle.

6. The combination of an axle; a saddle including side plates adjacent the opposite sides of the axle; and a cross member having a limited universal connection with said axle.

9. The combination of an axle having a downwardly bowed central portion; with a saddle consisting of an elongated member extending in the general line of the axle and including a convex portion movably engaging said downwardly curved portion of the axle.

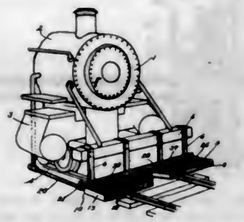
12. The combination of an axle; a saddle consisting of a cross member and two side members, the latter extending on opposite sides of the axle and the cross member being curved to roll on said axle; a plate at each end of each of the side members of the saddle; springs; means for connecting said springs to the saddle plates; with U-shaped thrust members fixed to the axle and each extending into position to be engaged by two adjacent ends of the saddle side members.

14. In a road vehicle the combination of road-engaging wheels; a primary axle supported by the wheels; and a load-supporting secondary axle having a limited universal motion connection with said primary axle; with thrust members on the primary axle placed to limit the longitudinal movement of the secondary axle relatively thereto.

[Claims 2 to 5, 7, 8, 10, 11, and 13 not printed in the Gazette.]

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1,228,308. FOOTBOARD FOR SWITCH-ENGINES. ROLLO E. EVANS, Emporia, Kans. Filed Sept. 8, 1916. Serial No. 119,038. (Cl. 105—17.)



1. A foot board for locomotives, comprising a plurality of spaced tread strips, heating pipes disposed beneath said tread strips, and means for admitting steam from the locomotive to said heating pipes.

2. A foot board for locomotives, comprising a tray, heating pipes located in said tray adapted for receiving steam from the locomotive, and a plurality of spaced tread strips overlying said heating pipes and extending above the tray.

3. In a locomotive, the combination with spaced hangers, of a foot board comprising a tray supported by said hangers, heating pipes in said tray, spaced tread strips overlying said pipes, and means for admitting a heating medium to said pipes.

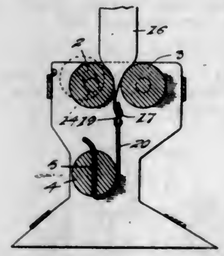
4. In a locomotive, the combination with spaced hangers, of a foot board comprising a tray supported by said hangers, heating pipes arranged longitudinally in said tray and having connecting end manifolds, a plurality of spaced tread strips overlying the heating pipes, a pipe for admitting steam from the locomotive to one of said manifolds, a valve in said pipe, and a valve for draining the heating pipes.

5. In a locomotive, the combination with spaced hangers, of a foot board comprising a tray supported by said hangers having perforations in its base portion, heating pipes arranged within the said tray having connecting manifolds at their ends, a pipe adapted for admitting steam from said locomotive to one of said manifolds, a drain valve in the opposite manifold, a tread comprising spaced strips overlying said heating pipes and manifold, and extending above the tray sides, and means for fastening said tread strips together and within the tray.

[Claims 6 and 7 not printed in the Gazette.]



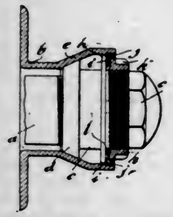
1,228,309. APPARATUS FOR DISCHARGING COLLAPSIBLE TUBES. CLARKE V. FOLAND, Bluefield, W. Va. Filed Mar. 27, 1915. Serial No. 17,340. (Cl. 221—60.)




The combination with a collapsible tube, of a body, a pair of parallel compression rollers journaled to said body and receiving the tube, means by which one of the rollers may be moved toward and from the other roller, a roller journaled in said body and having a longitudinally extending groove therein, said tube having its lower end bent upon itself to form a loop, a central bar extending through the loop, curved side members formed on the ends of the bar, an upper bar connecting the upper ends of the members and bearing against the ends of the tube to bind it against the body of the tube, a lower bar connecting the lower ends of the members, and a ribbon passed about the lower bar and having its ends inserted through the longitudinally extending groove to establish a flexible connection between the tube and the last mentioned roller for drawing the tube through the compression rollers upon rotation of the roller.

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1,228,310. DETACHABLE OR INTERCHANGEABLE WHEEL FOR MOTOR-VEHICLES. JAMES SAMUEL FOLBY, West Bromwich, and FREDERICK WILLIAM BAKER, Stourbridge, England. Filed Sept. 30, 1916. Serial No. 123,203. (Cl. 21—69.)



1. A permanent and detachable hub combination, having a retaining member having a screwed connection with the permanent hub and adapted to engage with the detachable hub, and a locking member having a screwed connection with the retaining member, the locking of the retaining member being effected by engagement of the locking member with a part which is restrained from rotation in relation to the hub.

2. A detachable and permanent hub combination, having a screwed retaining member and a locking member screwed thereon, such locking member being adapted to engage with a member extending circumferentially of the hub, which member is relatively restrained from rotation in relation to, but is axially movable in relation to, the detachable hub.

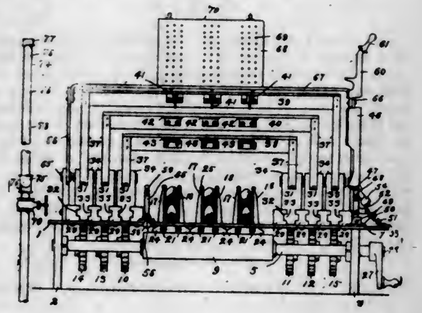
3. A detachable and permanent hub combination having a screwed retaining member and a locking member screwed thereon, and substantially semi-circular members intermediate said retaining member and said locking member, said substantially semi-circular members engaging with the detachable hub to prevent the rotation of the semi-circular members relatively thereto.

4. A detachable and permanent hub combination having a screwed retaining member, a locking member having screwed connection with said retaining member, and a member extending circumferentially of the hub intermediate said retaining member and said locking member with which intermediate member said retaining and locking members have frictional engagement, said intermediate member being retained from rotation in relation to the detachable hub, but being separable therefrom.

5. A permanent and detachable hub combination having a screwed retaining member adapted to engage with the detachable hub, a part restrained from rotation in relation to the hub by engagement with the detachable hub but which is axially movable with relation to the hub, and a screwed locking member for said retaining member, said retaining and locking members being prevented from becoming detached by reason of frictional engagement between said members and said restrained part.

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1,228,311. FISH-CLEANING MECHANISM. EDWARD P. FOLLETT, Duluth, Minn. Filed June 28, 1915, Serial No. 36,796. Renewed Apr. 18, 1917. Serial No. 163,038. (Cl. 17—10.)



5. A fish cleaning mechanism comprising a framework, a plurality of fish holding devices mounted thereupon, a plurality of U-shaped members of graduated sizes mounted one within the other, the lower ends of the said members pivotally connected to the framework, a plurality of knives carried by the said members, the said members movable toward and away from the fish in a vertical plane, and means for normally holding the said members in a vertical position, and a decapitating knife located at one side of the framework and in a line with the front end of the fish holding devices, said knife adapted to swing in a vertical plane and engage the necks of the fish held within the holding devices.

12. The combination with a fish cleaning device having a pivotally operated decapitating knife of a plurality of fish holding devices, a plurality of knives and cleaning elements pivotally mounted adjacent the holding devices and means for manually bringing the knives and cleaning devices in contact with fish within the holders.

13. In a fish cleaning device, the combination with a plurality of fish holding means of a decapitating knife pivotally mounted adjacent the holding means whereby a plurality of fish within the holders may be decapitated simultaneously.

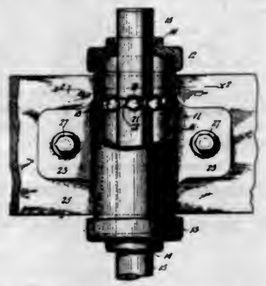
14. In a fish cleaning device, the combination with a plurality of fish holding means, of a salting mechanism pivotally mounted adjacent the holding means, whereby a plurality of fish within the holders may be salted simultaneously.

15. In a fish cleaning device, the combination with a plurality of fish holding means, a plurality of knives, cleaning elements and salting means carried by the frame-

work, and means for manually bringing the knives, cleaning devices and salting mechanism in contact with the fish within the holders.

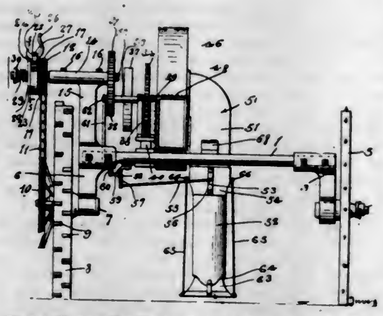
[Claims 1 to 4 and 6 to 11 not printed in the Gazette.]

1,228,312. ANTIFRICTION-BEARING FOR STAMP-MILLS. THOMAS R. GARNIER, South Pasadena, Cal., assignor of one-half to Anna E. Steddom, Los Angeles, Cal. Filed Aug. 17, 1916. Serial No. 115,541. (Cl. 74—87.)



An anti-friction bearing for a cylindrical stem comprising a housing having a cylindrical cavity therein; an upper cap threaded on said housing in such a manner as to close the upper end of said cavity, said cap having a central opening through which said stem extends; a lower cap threaded on said housing in such a manner as to close the lower end of said cavity, said cap having a central opening through which said stem extends; a series of balls surrounding said stem of such a size as to aline said stem centrally in said cavity; and a cage so formed as to hold said balls in the proper relationship with each other and with said stem and cavity, said balls and cage being free to slide or rotate inside said cavity.

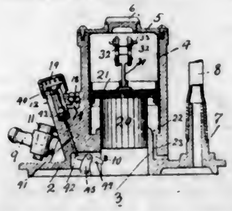
1,228,313. BOLL-WEEVIL EXTERMINATOR. ROBERT K. GOAR, Hamilton, Tex. Filed Jan. 13, 1917. Serial No. 142,178. (Cl. 43—1.)



1. In a boll weevil exterminator, a suction nozzle structure including a flexible section and a lower nozzle section, means connected to said nozzle structure for swinging the lower nozzle section laterally of a row, a hood pivotally connected to the lower end of the lower nozzle section, and means connected to said hood and said nozzle section for holding said hood in a horizontal position during the swinging movement of said nozzle.

2. In a boll weevil exterminator, the combination, of a supporting structure, a rotary air suction fan, a nozzle connected to the inlet of said fan, said nozzle being composed of a rigid upper section and a lower section, flexible means connecting said lower section to said upper rigid section, and means operatively connected to said lower section for swinging the lower section laterally of a row of plants during the travel of the exterminator, a hood pivotally connected to the lower ends of said lower nozzle section and means for holding said hood in a horizontal position during the swinging movement of the lower nozzle section.

1,228,314. MILKING APPARATUS. EZRA E. GOOD, Minneapolis, Minn. Filed Aug. 27, 1915. Serial No. 47,569. (Cl. 31—99.)



1. In a milking apparatus, the combination with a closed milk receptacle, of a differential cylinder and a differential piston working therein, said cylinder having its small end in constant communication with said receptacle, a reverse valve and coöperating ports for alternately connecting the larger end of said cylinder to said milk receptacle and to the atmosphere, piston actuated connections for moving said reverse valve, a milk delivery conduit connected to said milk receptacle, and a relief valve distinct from said piston for said milk delivery conduit, controlled by movements of said differential piston.

2. In a milking apparatus, the combination with a closed milk receptacle, of a differential cylinder and a differential piston therein, said cylinder having its small end in constant communication with said milk receptacle, a reverse valve and coöperating ports for alternately connecting the larger end of said cylinder to said milk receptacle and to the atmosphere, piston controlled connections for moving said reverse valve from one position to another, a milk delivery conduit leading to said milk receptacle and arranged to be opened and closed by the small portion of said differential piston, and a normally closed relief valve distinct from said piston, located in said milk conduit and arranged to be opened by said differential piston after the same has first closed the delivery end of said milk delivery conduit, whereby pressure pulsations are produced in said milk delivery conduit without affecting the partial vacuum maintained in said milk receptacle.

3. In a milking apparatus, the combination with a closed milk receptacle in which an approximately constant partial vacuum may be maintained, of a cylinder and coöperating piston therein, said cylinder having one end in communication with said milk receptacle, a reverse valve and coöperating ports for alternately connecting the other end of said cylinder to said milk receptacle and to the atmosphere, a toggle-like connection to said reverse valve serving to temporarily lock the same in one position, and a spring-actuated accelerator actuated by said piston and operating said toggle but having a limited movement in respect thereto.

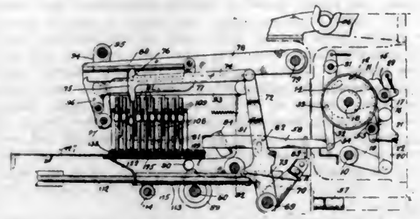
4. In a milking apparatus, the combination with a closed milk receptacle, of a cylinder and coöperating piston therein, said cylinder having one end in communication with said milk receptacle, a reverse valve and coöperating ports for alternately connecting the other end of said cylinder to said milk receptacle, and to the atmosphere, a valve connection serving to temporarily lock said reverse valve in one position, and a device operated by said piston and operating on said valve connection to move said valve into its other position and back again to lock position.

5. In a milking apparatus, the combination with a closed milk receptacle, of a cylinder and coöperating piston therein, said cylinder having one end in communication with said milk receptacle, a reverse valve and coöperating ports for alternately connecting the other end of said cylinder to said milk receptacle, and to the atmosphere, a valve connection serving to temporarily lock said reverse valve in one position, and a device operated by said piston and operating on said valve connection to move said valve into its other position and back again to lock position, a milk delivery conduit leading to said milk receptacle and arranged to be opened and closed by said piston, and a normally closed relief valve in said milk conduit arranged to be opened by said piston while said milk conduit is closed by the said piston.

[Claims 6 to 12 not printed in the Gazette.]



1,228,315. COUNTING AND RECORDING MECHANISM. HARRY T. GOSS, Rutherford, N. J., assignor to International Time Recording Company of New York, Endicott, N. Y., a Corporation of New York. Filed Oct. 28, 1915. Serial No. 58,360. (Cl. 234—1.)



1. The combination with a counter permanently associated with a machine for recording its operations, of a separable recorder adapted for temporary connection with such counter, parts or elements in the counter movable to positions which correspond to the record which it has made, coöperating parts or elements in the recorder and means for moving them to extents determined by the corresponding parts in the counter, and means for registering such movements and obtaining thereby a record which corresponds to the number displayed by the counter.

2. The combination with a counter permanently associated with a machine for recording its operations, of a separable recorder adapted for temporary connection with the counter, parts in the counter movable to positions corresponding to the record which it has made, coöperating parts in the recorder and means carried by the recorder for moving such parts into positions corresponding with those in the counter, registering or recording such movements and obtaining thereby a record which corresponds to the number displayed by the counter.

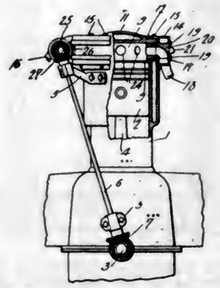
3. The combination with a counter permanently associated with a machine, numbered disks therein which by their positions indicate the operations of such machine, and parts movable with the disks to positions corresponding to the numbers displayed, of a separable recording instrument adapted to be connected in coöperative relation to such counter and means therein for moving its registering devices to extents determined by the positions of the movable parts of the counter and producing a record of such movements which corresponds to the numbers displayed by the counter.

4. The combination with a counter attached to a machine, numbered disks therein which by their positions indicate the operations of such machine, and cams movable with such disks, points on which indicate by their distance from the axes of the cams the numbers displayed by the disks, of a separable recorder adapted for temporary connection with such a counter, selectors therein, means for moving the same into contact with the indicating points on the cams, and recording devices controlled by the selectors for recording the positions of the cams and indicating thereby the numbers displayed by the counter disks.

5. The combination of a counter permanently associated with a machine, disks therein which by their positions display numbers indicating the operations of the machine, and cams connected with said disks with points thereon, the distance of which from the axes of the cams corresponds with the numbers displayed, of a separable self contained recording mechanism, movable selective fingers therein, and means for moving the same, when the recorder is attached to the counter into contact with the indicating points on the counter cams, and recording devices controlled by the selective fingers to produce a record of the positions of such fingers, and of the corresponding numbers displayed by the counter disks.

[Claims 6 to 15 not printed in the Gazette.]

1,228,316. MOTOR. SYLVESTER ONSLOW GOULD, Marion, Ind. Filed Aug. 1, 1916. Serial No. 112,626. (Cl. 123—80.)



1. In an internal combustion engine, a cylinder; a ring supported on the cylinder and provided with a flange engaged within the cylinder, the ring having ports; a head carried by the ring; a manifold supported by the head; a manifold assembled with the cylinder; a valve ring surrounding the first specified ring and journaled between the manifolds, the valve ring being provided with ports which communicate respectively with the manifolds, and are adapted to communicate with the ports in the first specified ring when the valve ring is rotated; and means for rotating the valve ring.

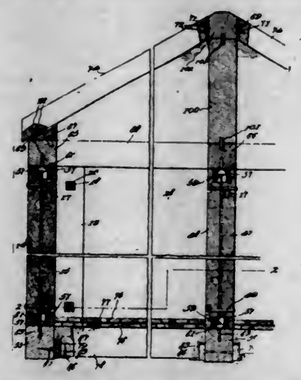
2. In an internal combustion engine, a cylinder having lateral ports; manifolds carried by the cylinder; a valve ring journaled between the manifolds and provided with ports coöperating respectively with the manifolds and adapted to coöperate with the ports in the cylinder when the valve ring is rotated, the valve ring being provided with peripheral teeth; a worm including a spiral thread, and a communicating thread disposed at right angles to the axis of the worm, the teeth of the valve ring coacting with the threads; means for supporting the worm for rotation; and means for rotating the worm.

1,228,317. PORTABLE HOUSE. ALPHONSE GRAVEL, New Orleans, La. Filed July 7, 1916. Serial No. 108,008. (Cl. 20—2.)

1. A building construction including a foundation, split posts erected on said foundation and having complemental recesses in the bases of the sections thereof, coupling heads on said foundation adapted to fit said recesses for securing the split posts in place thereon, and means for securing the sections of the split posts together with the recessed ends clamping said coupling heads, substantially as described.

2. A building construction including sills, beams connecting said sills, a floor laid on said beams, split posts erected on said sills, coupling heads carried by said sills, plates carried by the sections of said split posts and adapted to embrace said coupling heads to secure the posts to said sills, means for clamping the sections of the posts together about said coupling heads, and walls extending between said posts.

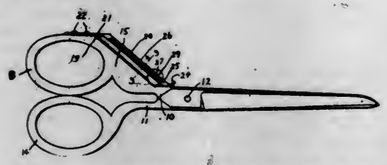
3. A building construction including a foundation, divided posts erected on said foundation and having recesses at the opposite ends thereof, coupling heads on said foundation adapted to be received into the recesses in the lower ends of said split posts whereby to secure the same in position thereon, beams supported by said divided posts, coupling heads on said beams arranged to be embraced by the recesses in the upper ends of said posts to hold the parts together, and means for securing the sections of said divided posts together, substantially as described.



4. A building construction including a foundation, divided posts erected on said foundation and having recesses in the ends thereof, plates carried by said posts and fitted in said recesses, means for securing the sections of the posts together, coupling heads on said foundation received between the plates on the lower ends of said posts for securing the same to the foundation, beams supported by said posts, and coupling heads on said beams received between the plates in the upper ends of said posts, substantially as described.

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1,228,318. CUTTER. DURBIN H. GRAZIER, Johnstown, Pa. Filed Nov. 25, 1916. Serial No. 133,433. (Cl. 164—83.)



1. In a cutter, a support, a blade mounted on the support, a guard secured to the support in spaced relation outwardly from the blade, and a pressure member carried upon the guard and extending inwardly for contact with the blade to press material to be cut thereagainst.

7. In a device as specified, the combination of a supporting member having an upper straight inclined face, and having a groove formed in said face longitudinally thereof, a reversible double-edged blade adapted to be fitted at one edge in said groove, a guard provided at its upper edge with an attaching lug adapted for adjustable securement to said supporting member to hold the guard in spaced relation over said inclined face, said guard being provided at its lower end with an upturned guiding lip adapted to bear against the adjacent face of the supporting member and to receive and guide cloth therebeneath for contact with the upwardly extending cutting edge of said blade, a contact roller pivotally mounted in said guard and adapted for engagement over the upwardly extending cutting edge of said blade, and means for adjusting said contact roller longitudinally in the guard for engagement over various points of said cutting edge throughout the length of said blade.

[Claims 2 to 6 not printed in the Gazette.]

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1,228,319. SPRING-SUSPENDED FRAME FOR AUTOMOBILES. FRED GUENTHER, Los Angeles, Cal. Filed Jan. 11, 1916. Serial No. 71,459. (Cl. 267—31.)



1. In combination, a front and a rear axle of a vehicle, a lower rectangular frame arranged below said axles, a pair of semi-elliptical front springs secured to said front axle, said springs supporting the forward end of said frame, a pair of semi-elliptical rear springs secured to said rear axle, said springs supporting the rear end of said frame, an upper frame of smaller dimensions than said lower frame arranged above said axles, a pair of semi-elliptical front springs, and a pair of semi-elliptical rear springs yieldingly connecting said lower frame to said upper frame at points intermediate the ends thereof, said frame connecting springs being pivoted at their inner ends and their centers to the upper side of said upper frame and pivoted at their outer ends to said lower frame at points lying in a vertical plane passing through the centers of the front and rear axle springs, respectively, the centers of said frame connecting springs being in longitudinal alinement with the outer ends of the adjacent axle springs.

2. In combination, a front and a rear axle of a vehicle, a lower frame arranged below said axles, a pair of front springs secured to said front axle from which the forward end of said frame is suspended, a pair of rear springs from which the rear end of said frame is suspended, an upper frame arranged above said axles, a pair of front springs, and a pair of rear springs yieldingly connecting said lower frame to said upper frame at points intermediate the ends thereof, said frame connecting springs being pivoted at their inner ends and their centers to said upper frame, and pivoted at their outer ends to said lower frame, the centers of said frame connecting springs being in longitudinal alinement with the outer ends of the adjacent axle springs.

3. In combination, a front and a rear axle of a vehicle, a lower frame arranged below said axles, a pair of front springs secured to said front axle from which the forward end of said frame is suspended, a pair of rear springs secured to said rear axle from which the rear end of said frame is suspended, an upper frame arranged above said lower frame, a pair of front springs, and a pair of rear springs yieldingly connecting said lower frame to said upper frame at points intermediate the ends thereof, said frame connecting springs being pivoted at their inner ends and their centers to said upper frame and pivoted at their outer ends to said lower frame at points lying in a vertical plane passing through the centers of the front and rear springs, respectively.

4. In combination, a front and a rear axle of a vehicle, a rigid undersiung frame, a set of superposed semi-elliptical springs mounted on said axles, and whereon said frame is hung, a set of intermediate semi-elliptical springs supported by said frame, an upper frame wholly supported by said intermediate springs, the outer ends of said intermediate springs being pivoted to said lower frame, swinging pivots connecting the inner ends of said intermediate springs to said upper frame, and a rigid fulcrum for each of said intermediate springs pivotally connecting them with said upper frame at points intermediate their ends.

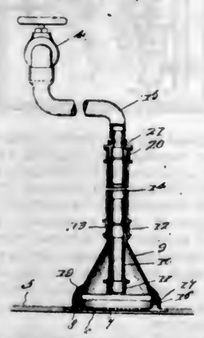
5. In combination, a front and a rear axle of a vehicle, a rigid undersiung frame, a set of superposed springs tapering toward their opposite ends and mounted on said axles, said springs supporting said frame, a set of intermediate springs tapering toward their opposite ends and supported by said frame, an upper frame wholly supported by said intermediate springs, said upper frame being in substantially the same plane as said axles, the outer ends of said intermediate springs being pivoted to said lower frame, swinging pivots connecting the inner ends of said intermediate springs to said upper frame, and a rigid fulcrum for each of said intermediate springs pivotally connecting them with said upper frame at points intermediate their ends.

[Claim 6 not printed in the Gazette.]



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1,228,320. APPARATUS FOR CLEANING SINKS, &c. EUGENE GUILLOT, Helena, Mont. Filed Mar. 27, 1917. Serial No. 157,774. (Cl. 4—1.)

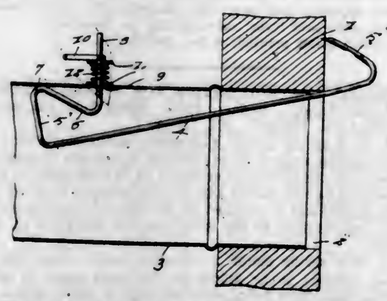


1. A device of the character described including a reversible hood, with a gasket on one edge of said hood and extending over one side thereof for forming a fluid tight joint when the hood is in either position, substantially as described.

2. A device of the character described including a substantially conical hood having a gasket, with an annular depression therein, secured to the enlarged end of said hood, and a pipe passing through the apex of said hood and having nozzles at both ends, one on the interior and the other on the exterior of said hood for receiving fluid supply connections, substantially as described.

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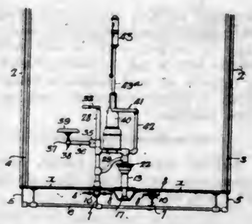
1,228,321. STOVEPIPE-LOCK. EDWARD C. HENRY, Missoula, Mont. Filed Feb. 28, 1917. Serial No. 151,492. (Cl. 126—318.)



The combination with a chimney having a flue opening and stove pipe therein having an opening, of a wire disposed within the stove pipe and having one end bent to engage the chimney, the other end of said wire being bent to form a V-shaped portion having the apex portion thereof disposed against the inner face of the wall of the stove pipe, the free end of the V-shaped portion being bent at right angles and extending through the opening of the stove pipe, the last named end forming an anchoring extension having the free end thereof bifurcated, a locking lever pivoted within the bifurcated end and adapted to be swung at right angles thereto, a pair of relatively spaced washers mounted upon the last named end and disposed between the stove pipe and locking lever, and a coiled spring interposed between the washers to permit the wire to be moved downwardly within the stove pipe to free its first named end from engagement with the chimney.

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1,228,322. CAR-DOOR-OPERATING DEVICE. WILLIAM H. HEULINGS, Jr., Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 1, 1915. Serial No. 25,168. (Cl. 268—7.)



1. The combination of a platform having a door at each side; operating connections for the doors; a structure on the platform adjustable toward and from the doors; and means on the structure for operating the doors, said means being arranged so that it can be shifted into engagement with the operating connections of either door when the structure is adjusted.

2. The combination of a passenger car having a platform; a door at each side of the platform; a structure pivotally mounted on the platform; door operating connections at the floor of the platform on each side of the pivot of the structure; and operating mechanism carried by the structure and arranged to engage either of the door operating connections when the structure is shifted into either of its two positions.

3. The combination in a passenger car, of a platform; a door at each side of the platform; a structure pivotally mounted on the platform; door operating connections at the floor of the platform and on each side of the pivot of the structure; a vertical operating shaft mounted on the structure and having a handle at the upper end; and means at the lower end to engage the door operating connections at the floor of the platform when the structure is shifted into either of its two positions.

4. The combination of a platform; a structure forming a barrier between two passageways; a pivot for the structure; a vertical shaft carried by the structure some distance from the pivot and having a clutch at its lower end and a handle at its upper end; a door at each side of the platform; and door operating connections for each door terminating in an operating head having a coupling arranged to be engaged by the clutch on the shaft when the structure is turned into either of its two positions.

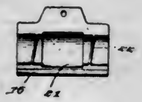
5. The combination of a platform having a door at each side; a structure pivotally mounted on the platform; operating connections for each door located under the platform and having an operating head with an exposed coupling, one coupling being located on one side of the pivot and the other being located on the opposite side thereof; and an operating shaft on the structure arranged to be engaged by either coupling of the operating connections of the door at the opposite sides of the pivot.

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1,228,323. PIPE-COUPLING. JOHN T. HUDGINS, Norfolk, Va., assignor of one-half to Edward Sawyer, Norfolk, Va. Filed Aug. 25, 1914. Serial No. 858,527. (Cl. 137—28.)

In combination a pair of semi-cylindrical members each formed with an integral lip, one of said members being

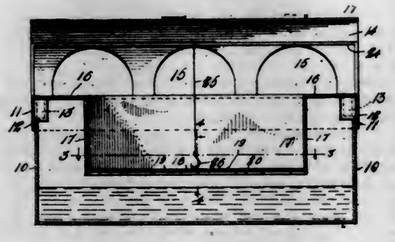
formed diametrically opposite its lip with an inwardly extending tongue and the other of said members being formed with a rib in diametrical alinement with its lip, the first-named member having a shoulder formed by its tongue disposed flush with its lip, said members adapted to be coupled together and being so positioned that the surface of the coupled members adjacent thereto forms



part of a cylindrical surface, said tongue being adapted to be hooked onto said rib and engaging said shoulder to cause said lips to contact, each of said members being formed internally with a pair of semi-cylindrical disposed threads, the threads of said members being coupled to form completely cylindrical threads, and means for securing said lips together.

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1,228,324. MOUSE AND RAT TRAP. JOSEPHINE E. JASCEN, Oceanside, Cal. Filed Jan. 4, 1917. Serial No. 140,611. (Cl. 43—24.)

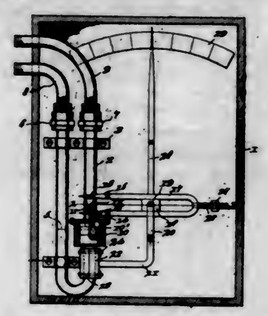


1. In a trap, the combination of an open-ended receptacle adapted to contain a quantity of water, a frame adapted to fit over the open end of said receptacle and provided with an inwardly extending platform at its upper edge, a well depending from the inner marginal edge of said platform and adapted to overhang the body of water, a pair of doors hinged in the lower end of the well, means for normally maintaining the doors closed, a bail arched upwardly from said frame and bridging said well, a bait support depending from the intermediate portion of said bail and including a hook arranged above said doors when closed, and a detachable cover fitting over said frame and over said well and provided in its sides and ends with openings adapted to receive small animals.

4. In a trap, the combination of a receptacle open at its upper end and adapted to contain a body of water, a frame fitting about the upper end of the receptacle and provided with supporting blocks in the corners thereof, an inwardly extending platform carried upon the upper edge of the frame, a well depending from the inner marginal edge of said platform, a pair of opposed hinged doors carried upon the lower end of the well, weights connected to the doors for normally holding the same in closed position, an upwardly arched bail carried by the frame and overhanging the well, a flexible bait support depending from the bail into the well and adapted to support bait above said doors when closed, and a substantially V-shaped cover resting at its lateral edges upon said platform, and provided with depending posts adapted to fit into said frame to support the cover, said cover being provided with open ends and with lateral openings adapted to receive small animals therethrough.

[Claims 2 and 3 not printed in the Gazette.]

1,228,325. GAGE. JOSEPH WENDELIN JOACHIM, New Orleans, La. Filed July 29, 1916. Serial No. 112,144. (Cl. 73—31.)



1. In an improved gage, a magnetic body having recessed ends, means for causing said magnetic body to move in response to the variations to be indicated, and an indicating device under the magnetic influence of said body and operable thereby, substantially as described.

2. In an improved gage, a magnetic body having a reduced central portion and enlarged ends whereon the magnetism is concentrated, means for causing said magnetic body to move in response to the variations to be indicated, and an indicating device under the magnetic influence of said body and movable with the latter, substantially as described.

3. In an improved gage, a magnetic body having a reduced central portion and enlarged recessed ends with flanges surrounding the recesses, means for causing said magnetic body to move in response to the variations to be indicated, and an indicating device under the magnetic influence of said body and movable with the latter, substantially as described.

4. An improved gage including a tube for containing a fluid, a device therein movable in response to fluid variations, a magnetic body shiftable with said device, a U-shaped lever having bifurcated ends embracing said tube and disposed one opposite each of the magnetic poles of said body, and an indicating device operated from said lever, substantially as described.

5. In an improved gage of the character described, the combination of a magnetic body having recessed ends, means for causing said body to respond to the variations to be indicated, a magnetized lever having its ends disposed opposite said body, and an indicating device associated with said lever, substantially as described.

[Claim 6 not printed in the Gazette.]

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1,228,326. CONTROL DEVICE FOR SPRING-MOTORS. JACOB KIRSCH, Banner, Okla. Filed July 18, 1916. Serial No. 109,915. (Cl. 74—46.)

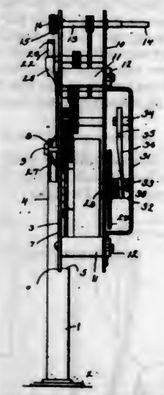
1. In a spring motor, a stopping means comprising a drum having a spiral groove therein, a stop pin removably secured to the drum and arranged to be positioned in the groove at various points and an arm adapted to travel in said groove and be engaged by the stop pin thereby stopping the rotation of the drum and the operation of the motor.

2. In a spring motor, a stopping means comprising a drum adapted to be driven by the drive shaft of said motor, said drum being provided with a spiral groove, a stop pin adapted to be secured to the drum in the path of the spiral groove, a stud attached to the frame of the motor, a volute spring secured to said stud and an arm on the spring adapted to travel in the groove and thereby intercept the path of the stop pin to cause the stopping of the motor.

3. In a spring motor, a manually operated controlling means for stopping and starting said motor comprising a



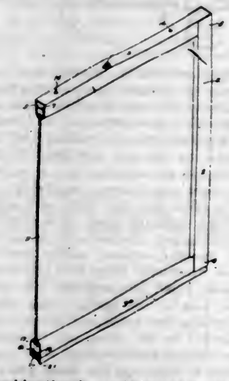
notched disk secured to the driven shaft of said motor, a lever slidably mounted on the frame of the motor, a



finger on the lever adapted to engage in the notches in the disk and means to hold said lever in operative or inoperative positions.

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1,228,327. METALLIC SASH. GEORGE B. KOHLER, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 21, 1915. Serial No. 51,844. (Cl. 189—78.)

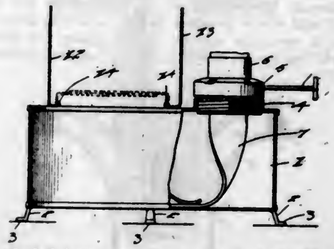


1. The combination in a window sash, of a hollow metallic frame, a clamping bar mounted in said frame, and means for moving the clamping bar forward to engage the glass, said clamping bar being made of metal and having yielding flanges bent to form a recess for the reception of the edge of the glass, the edges of said flanges being disconnected and overlapping and arranged to bear on the edge of the glass so that when the clamping bar has moved forward it will press upon the edge of the glass and on continuing the movement it will yieldingly bind upon the side surfaces of said glass holding the glass firmly to the sash.

2. The combination in a window sash, of a hollow metallic frame, a clamping bar mounted in said frame, said clamping bar being made of sheet metal and having yielding flanges bent to form a recess for the edge of the glass, the edges of said flanges being disconnected and overlapping and arranged to bear on the edge of the glass so that when the clamping bar is moved forward it will press upon the edge of the glass and upon continuing the movement it will yieldingly bind upon the side surfaces of said glass and thereby hold the sheet firmly in the sash, nuts secured to the back of the hollow frame, and a screw adapted to each nut and bearing against the interior wall of the hollow frame, said screw having a reduced portion extending into an opening in the sash so that the screw can be turned on the outside to adjust the clamping bar to the glass.

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1,228,328. ALCOHOL-LAMP. WILLIAM L. LIGGINS, St. Louis, Mo. Filed Jan. 25, 1916. Serial No. 74,174. (Cl. 126—43.)



An alcohol lamp comprising a body, a burner located near one end of the body, and a pair of sheet metal arms, one end of each arm being bent to provide a right angled base having a hinged barrel on one side thereof, pintles passing through said barrels and secured in relatively spaced relation to the upper side of said body to permit said arms to be folded one upon the other in parallel relation to said top and to be supported by said bases in an upright position with relation to said top, the bases fully engaging said top below said pintles and each arm being located to one side of its pintles when the arms are in upright position so as to prevent the arms from accidentally falling into folded position, either of said arms when in upright position forming a bundle, by which the lamp may be moved from place to place, and the side edges of said arms being flared laterally in the direction of the free ends to provide heads adapted to prevent the grasp from slipping through the hands, the upper edges of said arms being recessed to receive a curling iron, and said bases supporting the arms when folded above said top so as to permit the folded arms to be used as a handle also.

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1,228,329. STOVEPIPE-CLEANER. ERNEST LIGHLL, Dalbo, Minn. Filed Jan. 4, 1916. Serial No. 70,258. (Cl. 15—41.)



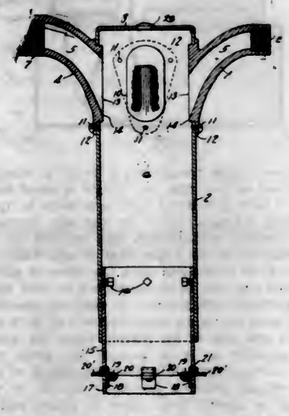
A stove pipe cleaner including a triangular plate provided with slots radiating from the center and extending toward the vertices thereof, supporting flanges formed at the vertices, a plurality of brushes, arms extending from the brushes and slidably supported in the flanges, the inner arms being bent and arranged through the slots, nuts threaded upon the extremities of the bent ends of the arms for removably holding the arms in various adjusted positions on the plate to consequently hold the brushes in an adjusted position, and means for operating the plate.

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1,228,330. OUTLET-BOX. CLYDE H. LOUGHRIDGE and HOWARD R. LOUGHRIDGE, Pittsburgh, Pa. Filed Sept. 24, 1915. Serial No. 52,362. (Cl. 247—5.)

1. In an outlet box, the combination of a cylindrical casing having an integral top provided with perforating

openings therethrough for attaching devices, and provided with a plurality of oppositely arranged elongated rounded end openings through its cylindrical wall, and a plurality of laterally arranged connecting tubular elbow members each provided with an individual upwardly and outwardly curved interior conduit and a threaded connecting terminal disposed for connection with a horizontal pipe extension and having a vertically elongated portion extending through one of said openings in the casing wall and beyond the inner face thereof and providing an inner terminal portion of the elbow conduit rounded on its inner edges whereby the curved interior opening leads therethrough downwardly to the interior of the casing, each of said elbow members having a surrounding flange curved to the outer contour of the casing and provided with holding screws engaging the casing, substantially as set forth.

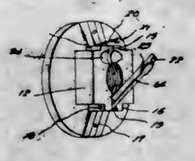


2. An outlet box having a telescoping terminal shell provided with means for adjustably securing it in position, terminal flange devices extending through the terminal shell, and a registering plaster ring having corresponding attaching flanges and screws.

3. In an outlet box, the combination with a cylindrical casing, of a telescoping cylindrical plaster ring terminal provided with interior securing lugs, and securing means therefor consisting of stirrups extending through the lower edge portion of the casing and having inner and outer terminal flanges, and means connecting the inner flanges thereof with the plaster ring lugs.

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1,228,331. NUT-LOCK. ALFRED I. LUSK and LEE ZEIGER, Melbourne, Iowa. Filed Dec. 1, 1916. Serial No. 134,497. (Cl. 151—5.)

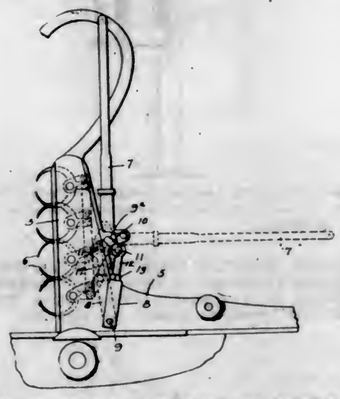


1. The combination with a spindle end, of a nut detachably mounted thereon and having a central outer boss, a locking bar pivotally mounted on the boss and counterseated therein for engagement with the end of the spindle, means for tensioning the bar, a resilient keeper engaged with the bar when in locking position, the said boss being formed with finger receiving depressions, and lips on the bar overhanging said depressions.

2. The combination with a spindle end, of a nut detachably mounted thereon and having a central outer boss, a locking bar pivotally mounted on the boss and counterseated therein for engagement with the end of the spindle, means for tensioning the bar, a resilient keeper engaged with the bar when in locking position, the said boss being formed with finger receiving depressions, lips on the bar overhanging said depressions, and ribs formed on opposite sides of the boss and forming seats for the resilient means and keeper.

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1,228,332. ATTACHMENT FOR SAWMILL-DOGS. CHARLEY W. LYNCH, Trinity, Tex. Filed Sept. 28, 1915. Serial No. 53,064. (Cl. 74—39.)



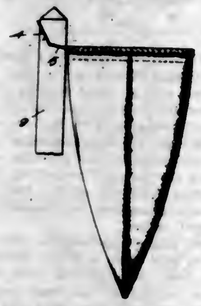
1. The combination with a sawmill dog including an upright body side plate, and an operating lever for the saw mill dog located at a point intermediate of the ends of the said side plate and arranged to swing upwardly and downwardly to and from a vertical and a horizontal position for operating the saw mill dog, of an exteriorly arranged attachment for holding the operating lever in either position, said atachment comprising a horizontal shaft forming a pivot for the lever and adapted to be substituted for the ordinary pivot of a sawmill dog and having a crank arranged exteriorly of the said side plate, a substantially upright tubular casing provided at the lower end with a transverse pivot bolt piercing the casing and the said side plate for securing the casing to the same, the upper end of the casing being open, a coiled spring located within the casing and seated upon the bolt, and a rod connected to the crank and extending into the open end of the casing and provided with means for engaging the spring to compress the same when the operating lever is oscillated in either direction, whereby the spring will hold the lever in either position.

2. The combination with a sawmill dog including an upright body side plate, an operating lever for the saw mill dog located at a point intermediate of the ends of the body and arranged to swing upwardly and downwardly to and from a vertical and a horizontal position for operating the saw mill dog, of an exteriorly arranged attachment for holding the lever in either position, said attachment comprising a horizontal shaft forming a pivot for the operating lever and adapted to be substituted for the ordinary pivot of such a lever and having a crank located exteriorly of the side plate, said crank being set at an obtuse angle to the lever and extending downwardly from the shaft, an exteriorly arranged cylindrical casing located below the shaft in substantially an upright position and having a contracted upper end, a pivot bolt piercing the lower end of the casing and the side plate and arranged in vertical alinement with the said shaft, a coiled spring housed within the casing and seated upon the bolt, a rod connected to the upper end of the crank and extending into the casing and having an enlarged threaded portion, a nut arranged on the threaded portion, and a washer mounted on the rod and engaged by the nut and bearing against the upper end of the spring to compress the same when the lever is oscillated, whereby the lever is held in either position, said washer being of greater diameter than the contracted end of the casing so as to retain the spring therein when the rod is disconnected from the shaft and the said bolt confining the spring at the lower end of the said casing.



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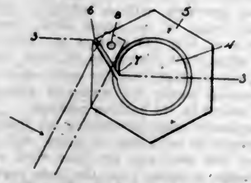
1,228,333. REFUSE-COLLECTING BAG. HENRY C. MCBURNEY, Los Angeles, Cal. Filed Nov. 20, 1915. Serial No. 62,546. (Cl. 150—1.)



In combination with a bag having a circular pocket at the mouth thereof, one wall of the pocket having an opening therein, of a frame formed of a single length of wire bent at a point intermediate its ends to provide an L-shaped looped portion, the ends of the wire being continued from the horizontal arm of the looped portion and intersected and extended through the opening in the wall of the pocket, the said ends of the wire being curved from their point of intersection and extended around the pocket in the bag and having their terminals overlapped, for the purpose specified.

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1,228,334. LOCK-WASHER. THEODORE H. MCCAIN, Gibson's Landing, British Columbia, Canada. Filed Aug. 18, 1916. Serial No. 115,616. (Cl. 151—21.)



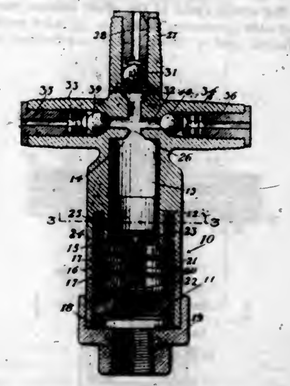
1. A lock washer of thin flat steel or the like apertured to fit the bolt, said washer slit angularly outward from the aperture, and the acute angle so formed adjacent the aperture, turned slightly inward within the circle of the bolt aperture.

2. A lock washer of thin flat steel or the like apertured to correspond with the bottom of the bolt thread, the edge of which aperture is formed to fit the thread, said washer slit angularly outward from the aperture, and the acute point so formed adjacent the aperture turned slightly inward within the circle of the bolt aperture.

3. A lock washer of thin flat steel, apertured to snugly fit the bolt, said washer being slit angularly outward from the aperture and the acute angle so formed adjacent to the aperture being turned slightly inward within the circle of the bolt aperture, said washer having a tool receiving hole at the side of the slit having the inturned portion, substantially as shown and for the purposes described.

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1,228,335. COMPOUND HIGH-PRESSURE LUBRICATING-PUMP. EARBY H. MCCLELLAND, Tucson, Ariz. Filed June 12, 1916. Serial No. 103,257. (Cl. 184—29.)



1. In a high pressure pump, the combination of a motor cylinder of relatively large bore, said motor cylinder being adapted to be connected to the steam chest of an engine, a motor piston disposed in said motor cylinder, a pump cylinder of relatively small bore co-axial with said motor cylinder, a pump plunger integral with said motor piston disposed in said pump cylinder, a check valve controlled oil inlet port, a check valve controlled discharge port, both of said ports being in communication with said pump cylinder, and of considerably smaller cross sectional area than said pump cylinder, a passage leading from the pump cylinder to the motor cylinder and a check valve opening said passage on the upward stroke and closing the same on the downward stroke of said motor piston.

2. In a high pressure pump, the combination of a motor cylinder of relatively large bore, a motor piston disposed therein, a pump cylinder of relatively small bore co-axial with said motor cylinder, a pump plunger integral with said motor piston disposed in said pump cylinder, valve controlled inlet and outlet ports communicating with said pump cylinder, a passage leading from said pump cylinder to said motor cylinder, and a check valve opening said passage on the upward stroke and closing the same on the downward stroke of said motor piston.

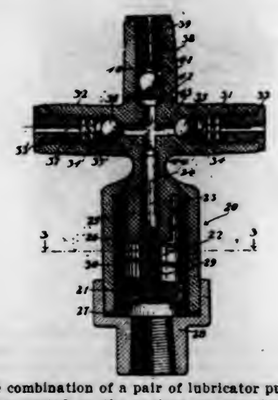
3. In a high pressure pump, the combination of a motor cylinder of relatively large bore, a motor piston disposed therein, a pump cylinder of relatively small bore, a pump plunger actuated by said motor piston, an oil inlet port, a discharge port, a passage leading from said pump cylinder to said motor cylinder and a valve opening said passage on the upward stroke and closing the same on the downward stroke of said motor piston.

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1,228,336. HIGH-PRESSURE LUBRICATING-PUMP WITH DOUBLE DISCHARGE. EARBY H. MCCLELLAND, Tucson, Ariz., assignor to Joseph F. Heimbach, trustee, Tucson, Ariz. Filed June 12, 1916. Serial No. 103,258. (Cl. 184—29.)

1. The combination of a pair of lubricator pumps adapted to be mounted on the engines on opposite sides of a boiler, each of said pumps comprising a body provided with a relatively large bore at one end thereof forming a motor cylinder, a downwardly extending steam inlet port for said cylinder adapted to be connected to one end of the steam chest of the engine, said body having a relatively small bore at the other end thereof, forming a pump cylinder, a motor piston disposed within said motor cylinder, a pump plunger secured to said motor piston and disposed in said pump cylinder, a helical spring tending to move said motor piston toward said steam inlet port, a

pair of oppositely disposed discharge ports leading from said pump cylinder, one of said discharge ports being connected to the steam chest of the engine on which the pump is mounted, the other discharge port being connected to the steam chest of the other engine, check valves controlling said discharge ports, an oil inlet port for said pump cylinder and a check valve controlling said inlet port.



2. The combination of a pair of lubricator pumps adapted to be mounted on the engines on opposite sides of a boiler, each of said pumps comprising a body provided with a relatively large bore forming a motor cylinder, a steam inlet port for said cylinder adapted to be connected to the steam chest of the engine on which the pump is mounted, a pump cylinder of relatively small bore, a motor piston disposed within said motor cylinder, a pump plunger operatively connected to said motor piston and disposed in said pump cylinder, a pair of valve controlled discharge ports leading from said pump cylinder, one discharge port connected to the steam chest on which the pump is mounted, the other to the steam chest of the other engine, and a valve controlled oil inlet port for said pump cylinder.

3. The combination of a pair of lubricator pumps adapted to be mounted on the engines on opposite sides of a boiler, each of said pumps comprising a body provided with a relatively large bore at one end thereof forming a motor cylinder, a steam inlet port for said cylinder adapted to be connected to the steam chest of the engine, a pump cylinder of relatively small bore, a motor piston disposed within said motor cylinder, a pump plunger operatively connected to said motor piston and disposed in said pump cylinder, a pair of discharge ports leading from said pump cylinder, one of said ports being connected to the steam chest of the engine on which the pump is mounted, the other discharge port being connected to the steam chest of the engine at the other side of the boiler, and a valve controlled oil inlet port for said pump cylinder.

4. The combination of a pair of engines disposed on opposite sides of a boiler, a high pressure lubricating pump adapted to be operated from the steam in the steam chest mounted on each of said engines, a valve controlled oil inlet port for each of said pumps, a pair of valve controlled discharge ports for each of said pumps, said discharge ports of each pump supplying oil to both engines.

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**1,228,337. ELECTRICAL ATTACHMENT-PLUG.** PHILIP S. MCLEAN, Bloomfield, N. J. Filed Apr. 4, 1916. Serial No. 88,790. (Cl. 173—359.)

1. An attachment plug comprising an insulating base, circuit terminals on said base, a screw shell rotatable about the base and provided with an inwardly projecting flange, a contact on the base connected with one circuit terminal and engaging with the screw shell contact, an end contact on the base connected with the other circuit terminal provided with a holding lug to overstand the inwardly projecting flange on the screw shell and means for shifting the end contact laterally to carry said holding lug into position overstanding said inwardly projecting flange.



2. An attachment plug comprising an insulating base, circuit terminals on said base, a screw shell contact rotatable about the base and provided with an inwardly projecting flange, a contact on the base connected with one circuit terminal and engaging with the screw shell contact, an end contact on the base electrically connected with the other circuit terminal and provided with a holding lug overstanding the inwardly projecting flange on the screw shell contact to rotatably confine the same to the base and an insulating medium interposed between the end contact and shell contact.

3. An attachment plug comprising an insulating base, circuit terminals on said base, a screw shell contact rotatable about the base and provided with an inwardly projecting flange, a contact on the base connected with one circuit terminal and engaging with the screw shell contact, an end contact movably mounted on the base electrically connected with the other circuit terminal and provided with a holding lug arranged in one position of said end contact to overstand the inwardly projecting flange to hold the screw shell rotatably confined to the base and in another position of said end contact to be clear of the flange to release the screw shell from the base and means for normally maintaining the end contact with the lug thereof in its holding position.

4. An attachment plug comprising an insulating base, circuit terminals on said base, a screw shell contact rotatable about the base and provided with an inwardly projecting flange, a contact on the base connected with one circuit terminal and engaging with the screw shell contact, an end contact releasably seated on the end of the base electrically connected with the other circuit terminal and provided with a laterally extending lug overlying the flange of the screw shell contact in the seated position of said end contact to thereby rotatably confine said screw shell contact to the base, means for insulating said end contact from the screw shell contact and readily releasable means for normally maintaining the end contact seated in its holding position.

5. An attachment plug comprising an insulating base, circuit terminals on said base, a screw shell contact rotatable about the base and provided with an inwardly projecting flange, a contact on the base connected with one circuit terminal and engaging with the screw shell contact, an end contact movably mounted on the base and provided with an outstanding lug arranged in one position of said end contact to hold the screw shell rotatably confined to the base and in another position of the end contact to release the screw shell from the base and means for holding the end contact in its holding position and for releasing it from such holding position, said means providing a means of electrical connection between the end contact and the other circuit terminal.

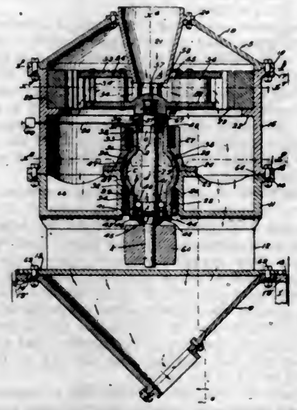
[Claims 6 to 10 not printed in the Gazette.]

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**1,228,338. CENTRIFUGAL IMPACT PULVERIZING APPARATUS.** DONN O. MARKS, San Francisco, Cal., assignor of one-half to Lynn S. Atkinson, Los Angeles, Cal. Filed Dec. 11, 1913. Serial No. 806,104. (Cl. 83—46.)

1. In an impact pulverizing apparatus having an annular impact wall; a rotor provided with impellers pivotally connected to the rotor body at one side of their centers of gravity and extending only part of the way from their pivots to said wall, so as to leave at all times an unobstructed space between the impeller and the wall, and so that the impellers are free to swing their longitudinal axes to and fro across those radii of the rotor in which the impeller pivots are located, respectively, without touching the impeller wall; for the purpose of yieldingly taking on the material to be impelled outward for disintegrating impact with the surrounding wall.





2. The combination with a disk; of a shaft fixed to the center of the disk; a ball-and-socket support in which the shaft is journaled; and impellers pivotally mounted on the disk at one side of their centers of gravity respectively, said impellers being free to swing their axes to and fro across those radii of said rotor in which the impeller pivots are located respectively.

3. The combination with a disk; of a shaft fixed to the center of the disk; a ball-and-socket support in which the shaft is journaled; impellers pivotally mounted on the disk at one side of their centers of gravity respectively, said impellers being free to swing their axes to and fro across those radii of said rotor in which the impeller pivots are located respectively; and yielding means to normally hold the shaft in vertical position.

4. The combination with a shaft; of a sleeve having a portion that is the segment of a sphere; anti-friction bearings on opposite sides of the spheric portion; a socket to support said spheric portion; a rotary head fixed on the upper end of the shaft; impellers pivoted to the rotary head, said impellers being free to swing their axes to and fro across those radii of said rotor in which the impeller pivots are located respectively; and means at the lower end of the shaft to impart rotary action to the shaft.

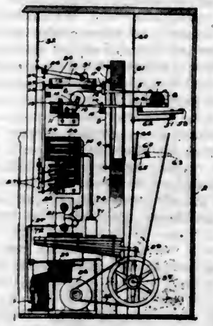
5. In a centrifugal impact pulverizer; a rotor comprising a shaft, a head on said shaft, said head being constructed with two disks spaced apart, one above the other; centrifugally cushioned impellers pivoted between the disks; a universal joint; a bearing for the shaft; said bearing being located near the lower end of the shaft and supported by the universal joint, and power applying means connected below the bearing to drive the shaft.

[Claims 6 and 7 not printed in the Gazette.]

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**1,228,339. AUTOMATIC VIOLIN-PIANO.** CESARE MARTINI, North Tonawanda, N. Y., assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y., a Corporation of New York. Filed Apr. 21, 1913. Serial No. 762,568. (Cl. 84—228.)

1. An instrument of the character described, comprising vibratory strings, endless bow-bands coöperating therewith, front and rear guide rollers for the said bands, one of said rollers consisting of separate sections, and independent tension-regulating devices for said several roller-sections.



2. In an automatic violin, the combination of the strings, bow-bands coöperating therewith, means for moving the bands against the strings, a wind chest arranged horizontally below said bands, motor pneumatics for actuating said band-moving means, arranged beneath the wind-chest, and upright abstracts connecting said pneumatics with said band-moving means and arranged on the front side of said wind chest.

3. In an automatic violin, the combination of the strings, bow-bands coöperating therewith, a pair of guides for each bow-band, and rock-members carrying said guides, the axis of each of said rock members intersecting the respective string.

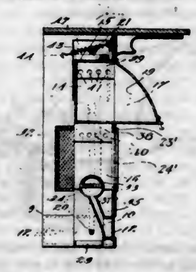
4. In an automatic violin, the combination of the strings, bow-bands coöperating therewith, and a row of rock shafts each carrying a pair of deflecting rollers for the corresponding band, the line of the axis of each of said shafts intersecting the respective string.

5. In an automatic violin, the combination of the strings, bow-bands coöperating therewith, means for pressing the bands against the strings, motor pneumatics, abstracts connecting said band-pressing means with said pneumatics, a tremolo rail arranged to engage said abstracts, and means for vibrating said rail.

[Claims 6 to 13 not printed in the Gazette.]

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**1,228,340. PORTABLE FIREPLACE.** CHARLES MAYNARD, Milan, Mich. Filed Oct. 25, 1916. Serial No. 127,639. (Cl. 126—129.)



1. In a heating apparatus comprising an outer casing having formed contiguous with the inner base portion thereof an air conduit, an inner casing arranged in the outer casing and partitioned off to provide upper and lower compartments, an air chamber arranged on opposite sides of the inner casing and communicating with the respective compartments of the said inner casing for heating the air passing from the compartments within

such chambers, and means arranged in the lower compartment of said inner casing for distributing the air received from the air conduit to the chambers in a heated condition.

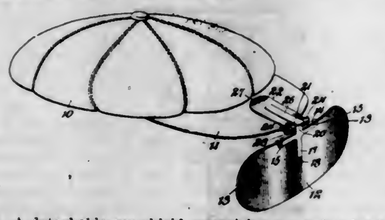
2. In a heating apparatus comprising an outer casing having formed contiguous with the inner base portion thereof an air conduit, an inner casing arranged in the outer casing and partitioned off to provide upper and lower compartments, an air chamber arranged on opposite sides of the inner casing and communicating with the respective compartments of the said inner casing for heating the air passing from the compartments within such chambers, and means arranged in the lower compartment of said inner casing for distributing the air received from the air conduit to the chambers in a heated condition, and registers formed in the front and sides of the outer casing whereby the air received in the air chambers may be distributed therefrom, substantially as and for the purpose specified.

3. In a portable heating apparatus comprising inner and outer spaced casings, the outer casing being provided along the base portion thereof with a continuous air conduit, a heating cylinder arranged within the inner casing for receiving the air contained in the air conduit, means for heating said cylinder, a baffle plate arranged in the cylinder at points between the inlets and outlets thereof, an air chamber disposed on opposite sides of the inner casing and integral therewith and in which the air from the said cylinder is distributed in a heated condition, and registers formed in the outer casing for allowing the heated air contained in the air chambers to be discharged therefrom, substantially as and for the purpose specified.

4. In a portable heating apparatus comprising inner and outer spaced casings, the outer casing being provided along the base portion thereof with a continuous air conduit, a heating cylinder arranged within the inner casing for receiving the air contained in the air conduit, means for heating said cylinder, a baffle plate arranged in the cylinder points between the inlets and outlets thereof, an air chamber disposed on opposite sides of the inner casing and integral therewith and in which the air from the said cylinder is distributed in a heated condition, said inner casing being provided with upper and lower compartments, the point of formation of the air chambers with the inner casing providing channels having apertures for permitting of the air within the respective compartments being distributed within said air chambers, and means mounted in the outer casing for permitting of the air to escape from the air chambers in a heated condition, substantially as and for the purpose specified.

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1,228,341. DETACHABLE EYE-SHIELD. JOSEPH ALPHONSE MAYNARD, Ravena, N. Y., assignor of one-half to Thomas J. Quest, Kingston, N. Y. Filed Feb. 9, 1916. Serial No. 77,204. (Cl. 2—149.)



1. A detachable eye shield comprising a member having means for attachment to the vizor of a cap or the brim of a hat and extended beyond the edge of the vizor or brim, a shield, a second member having means for attachment to the shield, and a horizontal pivot connecting the second to the first member at the point where the latter extends beyond the vizor or brim, whereby the shield may stand out from and in alinement with the vizor or brim, or may be swung downwardly at an angle thereto, or inwardly beneath the same out of the line of vision.

2. A detachable eye shield comprising an elongated strip bent transversely intermediate its ends to provide a clasp for engagement over the vizor of a cap or the brim of a hat, said strip being slotted to provide a longitudinally disposed spring tongue which is extended at its free end beyond the bend of said strip, a shield, a member secured to the shield and projecting from the same, said member and said strip having an eye on one part fitted between spaced bearings of the other part, means for pivotally connecting said eye to said bearings, said eye having its outer wall engaged by the free end of said spring to retain the shield in its adjusted position.

3. A detachable eye shield comprising a longitudinally slotted strip overturned intermediate its ends to provide a clasp for engagement over the vizor of a cap or the brim of a hat, and having spaced apart bearings at the bend, and a spring tongue arranged in the slot and extending at its free end beyond said bearings, a shield, a member secured to the shield and having an eye for engagement between said bearings and against one side of the tongue, and a pin engaging through said bearings and said eye for pivotally connecting the shield to the strip.

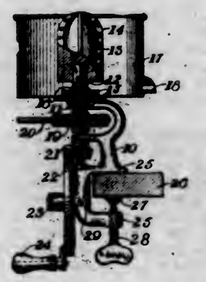
4. A detachable eye shield comprising a member for attachment to the vizor of a cap or the brim of a hat and having spaced bearings extending beyond the edge of the vizor or brim, a shield, a strip overturned longitudinally to provide a clasp engaging over one edge of the shield, and having a pair of arms extending oppositely from a point intermediate the ends of the strip, and bearing at their ends against the opposite sides of the shield, one of said arms being looped to provide an eye engaging between said spaced bearings of the member, and a pin extending through the bearings and the eye to pivotally connect the shield to the member.

5. A detachable eye shield comprising a longitudinally slotted strip overturned intermediate its ends to provide a clasp for engagement over the vizor of a cap or the brim of a hat, and having spaced apart bearings at the bend and a spring tongue integral with one end and extending at its free end in the slot beyond said bearings, a shield, a second strip overturned longitudinally to provide a clasp engaging over the edge of the shield and having an arm extending from a point intermediate the ends of the second strip and being looped to provide an eye engaging between said bearings and beneath the tongue of the first strip, and a pin extending through the bearings and the eye to pivotally connect the strips together.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,342. FRUIT-JUICE EXTRACTOR. ROBERT L. MEYERS, San Francisco, Cal. Filed May 8, 1916. Serial No. 96,040. (Cl. 100—49.)

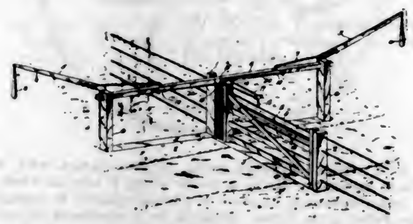


In a fruit juice extractor, a supporting frame, a bucket having a central opening, one end of the frame extending upwardly and passed through said opening and being cored to provide a vertical hollow bearing, an operating spindle extending through the bearing and having a squared extremity and having an annular part at the inner end of said squared extremity, said annular part of the squared extremity being positioned within said hollow bearing of the frame to support the spindle in an upright position, a bulb bit having a squared opening embracing the squared end of the spindle, and means engaging over the upwardly extending end of the frame to clamp the bucket thereagainst.



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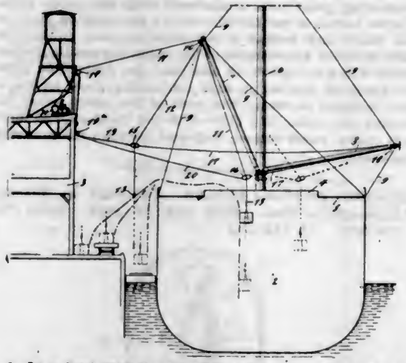
1,228,343. FARM-GATE. LEONARD W. MILLER, Fort Jones, Cal. Filed Mar. 15, 1916. Serial No. 84,469. (Cl. 39—34.)



A gate comprising a hinged post, a shaft journaled thereon, a gate panel hinged on said shaft, a latch carried by the panel, a disk fixed on the upper end of the journaled shaft, and having an upstanding flange, rods connected with the flange at the opposite sides of the shaft, and operatively connected with the latch, a bar movably mounted transversely of the shaft and bearing against the edge of the disk and cables connected with the bar and arranged to wind upon the periphery of the disk.

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1,228,344. LOAD-TRANSFER APPARATUS. THOMAS SPENCER MILLER, South Orange, N. J., and LOUIS G. RUGGLES, New York, N. Y.; said Ruggles assignor of his one-half to Lidgerwood Manufacturing Company, a Corporation of New York. Filed June 3, 1913. Serial No. 771,399. (Cl. 212—76.)



1. In a load transfer apparatus, in combination, an elevated support, a plurality of hoisting ropes suspended from said support, a swinger frame engaging the fall of each of said ropes, means for moving the hoisting ropes simultaneously in the same direction, and means for simultaneously operating the swinger frames.

2. In a load transfer apparatus, in combination, an elevated support, a plurality of hoisting ropes suspended from said support, a swinger frame engaging the fall of each of said ropes, means for moving the hoisting ropes simultaneously in the same direction, and means for simultaneously operating the swinger frames so that one moves in the opposite direction to the other.

3. In a load-transfer apparatus, in combination, an elevated support, two hoisting ropes suspended from said support, actuating means for simultaneously moving the hoisting ropes in the same direction, a swinger frame engaging the fall of each of said ropes, rope means for swinging said frames simultaneously in opposite directions to each other, and a pair of drums for operating said swinger rope means.

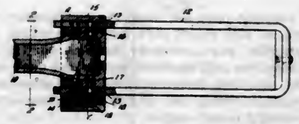
4. In a load-transfer apparatus, in combination, an elevated support, two hoisting ropes suspended from said support, a hoisting drum for operating each of said ropes, a swinger frame engaging the fall of each of said hoisting ropes, and means for swinging said frames in opposite directions.

5. In a load-transfer apparatus, in combination, an elevated support, two hoisting ropes suspended therefrom, a winding drum for each rope, a swinger frame engaging the fall of each of said ropes, each of said frames being provided with a swinger rope for swinging it in one direction, interconnected drums for operating said swinger ropes, and means for operating said drums simultaneously.

[Claims 6 to 12 not printed in the Gazette.]

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1,228,345. DRAW-BAR AND YOKE CONNECTION. WILLIAM H. MINER, Chazy, N. Y. Filed Sept. 8, 1916. Serial No. 118,967. (Cl. 213—42.)



1. In combination, a draw bar having standardly located and spaced rivet holes therein, a yoke strap also having standardly located and spaced rivet holes therein, and means for detachably connecting the strap and draw bar including, elements extending from opposite directions through said holes of the strap and into said holes of the draw bar, said elements being releasably connected.

2. In combination, a draw bar, a yoke, the butt of the draw bar extending between the arms of the yoke, said arms and butt having alined holes, two members located on the outer faces of the ends of the yoke arms, one member straddling the draw bar and each having means extending through the adjacent alined holes of the yoke and into the holes of draw bar butt, and a transversely extending key located outside of the draw bar butt for holding said members in operative position.

3. As an article of manufacture, a hood adapted to detachably connect a draw bar and a yoke strap having the usual rivet holes therein, said hood comprising, a U shaped member adapted to straddle the yoke and draw bar when the latter are assembled, a block adapted to form the fourth side of the hood and when in position being located between the ends of said U-shaped member, means for locking said member and block together, and means penetrating said rivet holes in said draw bar and yoke strap held in operative position by said U-shaped member and block when the latter are assembled.

4. As an article of manufacture, a hood adapted to detachably connect a draw bar having standardly spaced rivet holes therein, and a strap also having standardly spaced rivet holes therein, said hood comprising a U shaped member adapted to straddle the yoke and draw bar, a block, and means for locking said member and block together, said member and block being each provided with oppositely arranged, inwardly extended lugs adapted to pass through the alined rivet holes of the strap and draw bar.

5. In a draft rigging, means detachably connecting a draw bar and yoke having alined rivet holes, said means comprising an inverted U shaped member adapted to straddle the yoke and draw bar, the cross portion of the U shaped member being provided with a pair of downwardly extended lugs arranged to pass through the alined rivet holes of the upper arm of the yoke and draw bar butt,

a block having upwardly extended lugs adapted to extend through the alined rivet holes of the lower arm of the yoke and draw bar butt, and a key extending transversely beneath and engaging said block, said key being supported by the depending side arms of the U shaped member.

[Claims 6 to 8 not printed in the Gazette.]

1,228,346. REMOVABLE RESILIENT CORE FOR TIRES. JOHN WM. MOAKLER, East Worcester, N. Y., assignor of one-half to Noah S. Wright, East Worcester, N. Y. Filed June 9, 1916. Serial No. 102,684. (Cl. 152—5.)



1. In a resilient core for tires, the combination with a vertical web, of side plates each having a vertical portion and an upwardly and outwardly inclined portion having a resilient edge, the said plates being secured upon opposite sides of the said web forming a Y-shaped structure, and a rubber cushion fitting the said Y-shaped structure and having a curving outer surface.

2. In a resilient core for tires, the combination with a vertical web, of side plates each having a vertical portion and an upwardly and outwardly inclined portion having at the edge a series of spaced and inwardly curved resilient fingers, the said plates being secured upon opposite sides of the said web forming a Y-shaped structure, and a rubber cushion fitting the said Y-shaped structure and having a curving outer surface.

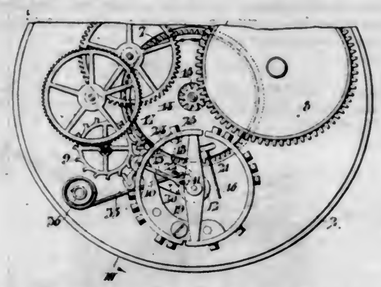
3. In a resilient core for tires, the combination with a vertical web, of side plates each having a vertical portion and an upwardly and outwardly inclined portion having a resilient edge, the said plates being secured upon the opposite sides of the said web forming a Y-shaped structure, and a rubber cushion fitting the said Y-shaped structure, the said cushion having a plurality of chambers therein and a curving outer surface.

4. In a resilient core for tires, the combination with a vertical web, of side plates each having a vertical portion and an upwardly and outwardly inclined portion having a resilient edge, the said plates being secured upon opposite sides of the said web forming a Y-shaped structure, and a rubber cushion fitting the said Y-shaped structure and having an outer curving surface, the said cushion having a plurality of chambers opening outwardly at the said curved surface of the cushion.

1,228,347. TIMING DEVICE. WALTER H. MOORE, Philadelphia, Pa., assignor to James H. Bell, Philadelphia, Pa. Filed Mar. 27, 1916. Serial No. 86,878. (Cl. 161—18.)

1. A timing device including in combination with a watch movement, of a brake adapted to engage a moving part of the watch movement, means controlled by the movement of the pallet beyond its normal throw for applying said brake to a moving part of the watch movement, and means controlled by a moving element of the watch movement for holding the brake applied.

2. A timing device including in combination with a watch movement, of a brake adapted to engage the moving part of the watch movement, means controlled by the movement of the pallet beyond its normal throw for applying said brake to a moving part of the watch movement, and means controlled by a moving element of the watch movement for holding the brake applied, said brake being released by a movement of said holding element in its normal travel.

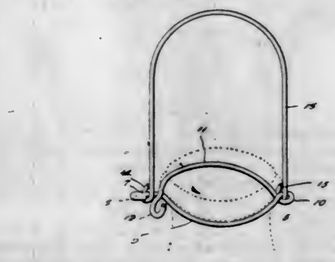


3. A timing device including in combination with a watch movement having a center wheel, a balance wheel, a roller table and a pallet, of a brake adapted to engage the roller table, means operated by a movement of the pallet beyond its normal throw for moving said brake into engagement with the roller table, and means coöperating with the center wheel for holding the brake applied, said center wheel in its normal travel releasing the brake.

4. A timing device including in combination with a watch movement having a center wheel, a balance wheel, a roller table and a pallet, of a controlling plate frictionally engaging the center wheel, a brake movable by said controlling plate into engagement with the roller table, a lever having a lug forming one of the banking pins for the pallet and having a lug engaging said controlling plate, whereby a movement of the pallet beyond its normal throw will move the lever and shift the controlling plate for applying the brake.

5. A timing device including in combination with a watch movement having a center wheel, a balance wheel, a roller table and a pallet, of a controlling plate frictionally engaging the center wheel, a brake movable by said controlling plate into engagement with the roller table, a lever having a lug forming one of the banking pins for the pallet and having a lug engaging said controlling plate whereby a movement of the pallet beyond its normal throw will move the lever and shift the controlling plate for applying the brake, said controlling plate having a pawl adapted to engage the teeth of the center wheel for holding the controlling plate with the brake applied until said center wheel turns a sufficient distance for releasing the brake.

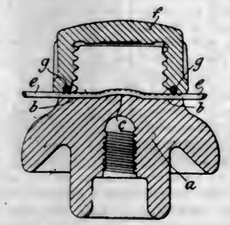
1,228,348. BOTTLE-CARRIER. THEODORE M. MORGAN, Minneapolis, Minn. Filed Aug. 23, 1916. Serial No. 116,505. (Cl. 215—1.)



A bottle carrier including a bottle neck engaging member formed from a single piece of resilient wire and embodying a coil, oppositely disposed bowed portions continuing from the coil, an arm extending from one bowed portion, a stop formed on the end of the arm, an offset finger engaging loop formed on the terminal of the other bowed portion and having a portion thereof adjacent to the bowed portion shaped to serve as a hook for removable engagement with the arm for clamping the bowed portions about a bottle neck, a bail, and loops formed at the terminals of the bail one of which is pivoted to the coil while the other is pivotally and slidably engaged on the arm adjacent the stop for preventing unnecessary movement of the hoop portion of the offset loop and retained against displacement by the stop.



1,228,349. ELECTRIC INSULATOR. AUGUSTE ROBERT MÜLLER, Walthamstow, England. Filed Dec. 4, 1916. Serial No. 135,054. (Cl. 173—314.)



1. An insulator comprising a body portion, a screw-threaded member projecting therefrom, a flat seating on the body portion, a groove formed in and extending diametrically across said seating and said projection, a centrally located convexity in said groove terminating short of said seating and forming a tortuous path for a conductor, and a screw cap having an annular flange adapted to overlie and coöperate with said seating and engage the conductor only at diametrically opposite sides of the insulator.

2. An insulator comprising a body portion, a screw-threaded member projecting therefrom, a flat seating on the body portion, and an angular groove formed in and extending diametrically across said seating and said projection, a centrally located convexity in said groove terminating short of said seating and forming a tortuous path for a conductor, and a screw cap having an annular flange adapted to overlie and coöperate with said seating and engage the conductor when at diametrically opposite sides of the insulator.

1,228,350. TAPPET FOR INTERNAL-COMBUSTION ENGINES. GEORGE R. RICH, Battle Creek, Mich., assignor to Rich Steel Products Company, Battle Creek, Mich., a Corporation of Michigan. Filed Feb. 12, 1917. Serial No. 148,272. (Cl. 74—47.)

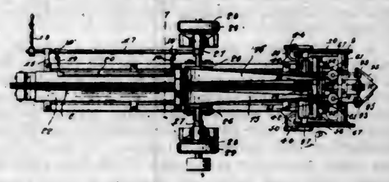


1. A tappet for internal combustion engines, comprising a body portion consisting of a single piece having a thin walled tubular stem, formed with a disk like head on one end thicker than the wall of the stem, and a plug seated on the open end and permanently secured to said stem.

3. A tappet for internal combustion engines, comprising a one piece body portion consisting of a disk like head portion and a tubular stem portion, the wall of which is considerably thinner than the head, and a centrally bored internally screw threaded plug, having a neck portion located in the open end of the stem and permanently secured thereto, said plug protruding from said stem, and the protruding portion being of the same diameter as the stem and having two oppositely disposed flat surfaces adapted to be grasped by a wrench.

[Claims 2, 4, and 5 not printed in the Gazette.]

1,228,351. STAVE-JOINTING MACHINE. NOAH P. SPAYD, Van Wert, Ohio, assignor of one-half to Ezra C. Spayd, Van Wert, Ohio. Filed Sept. 24, 1914. Serial No. 863,340. (Cl. 147—25.)



1. A stave jointing machine comprising a support, a plurality of laterally slidable guides carried thereby, cutting head supporting plates connected to said laterally slidable guides, cutting heads supported by said cutting head supporting plates, means for driving said cutting heads, rack bars carried by said guides, segmental gears carried by said rack bars and meshing together, arms secured to said segmental gears, depending rods secured to the outer ends of said arms, a guiding bar, said depending rods passing through said guiding bar, locking plates slidably mounted upon said guiding bars and having their ends adapted to engage said depending rods for firmly gripping the same and preventing vertical downward movement of said rods, and means for forcing said locking plates to a locked position.

2. A stave jointing machine comprising a support, a plurality of laterally slidable guides, cutting heads connected to said laterally slidable guides, rack bars carried by said guides, segmental gears engaging said rack bars and meshing together, arms secured to said segmental gears and projecting laterally of said support, depending rods pivotally secured to said arms, weights carried thereby, a supporting bar carried by said support, said rods passing through said supporting bar, and means slidably mounted upon said supporting bar and adapted to be firmly brought into engagement with said depending rods against movement through said supporting bar.

3. A stave jointing machine comprising a support, a plurality of laterally slidable guides carried thereby, cutting head supporting plates secured to said laterally slidable guides, means for pivotally securing said supporting plates at the lower face thereof, means carried by said supporting plates and guides for permitting the inward movement of said plates with respect to each other, cutter heads carried by said plates, controlling arms coöperating with said guides and capable of being swung as said guides are moved, depending rods connected to said arms, a supporting bar carried by said support and provided with apertures formed therein, said depending rods passing through said apertures, slidable locking plates carried by said supporting bar, yieldable means for normally holding said locking plates out of engagement with said depending rods, a cam lever pivoted between said locking plates and adapted to engage the ends of said locking plates for forcing said locking plates into biting engagement with said depending rods as said cam lever is swung for locking said depending rods against movement at pre-determined intervals.

4. A stave jointing machine comprising a support, a plurality of laterally slidable guides carried thereby, cut-

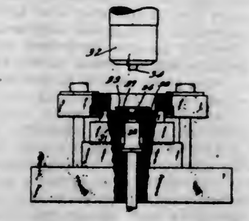
ting head supporting plates secured to said laterally slidable guides, means for pivotally securing said supporting plates at the lower face thereof, means carried by said supporting plates and guides for permitting the inward movement of said plates with respect to each other, cutter heads carried by said plates, controlling arms coöperating with said guides and capable of being swung as said guides are moved, depending rods connected to said arms, a supporting bar carried by said support and provided with apertures formed therein, said depending rods passing through said apertures, slidable locking plates carried by said supporting bar, yieldable means for normally holding said locking plates out of engagement with said depending rods, a cam lever pivoted between said locking plates and adapted to engage the ends of said locking plates for forcing said locking plates into biting engagement with said depending rods as said cam lever is swung for locking said depending rods against movement at pre-determined intervals, and means for swinging said cam lever at pre-determined intervals.

5. A stave jointing machine comprising a support, a plurality of laterally slidable guides carried thereby, cutting head supporting plates secured to said laterally slidable guides, means for pivotally securing said supporting plates at the lower face thereof, means carried by said supporting plates and guides for permitting the inward movement of said plates with respect to each other, cutter heads carried by said plates, controlling arms cooperating with said guides and capable of being swung as said guides are moved, depending rods connected to said arms, a supporting bar carried by said support and provided with apertures formed therein, said depending rods passing through said apertures, slidable locking plates carried by said supporting bar, yieldable means for normally holding said locking plates out of engagement with said depending rods, a cam lever pivoted between said locking plates and adapted to engage the ends of said locking plates for forcing said locking plates into biting engagement with said depending rods as said cam lever is swung for locking said depending rods against movement at pre-determined intervals, means for swinging said cam lever at pre-determined intervals, said means comprising a cam wheel, a pivotal arm engaging said cam wheel, and a yieldable connection formed between said cam lever and said pivoted mounted arm.

[Claim 6 not printed in the Gazette.]

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1,228,352. PROCESS OF MAKING BALL-BEARING CONES. CARL G. SWENSON, Indianapolis, Ind., assignor to The Oakes Company, Indianapolis, Ind., a Corporation of Indiana. Filed July 7, 1916. Serial No. 108,041. (Cl. 29—148.)



1. The process of making pressed steel ball-bearing cones, comprising stamping out a sheet metal disk, pressing the disk through a die to form a cup the side walls of which have substantially parallel elements, annealing the cup, forcing the cup into a contracting die by pressure in alinement with the parallel elements of the side walls of the cup to compress the cup into a member which is bell-shaped exteriorly and substantially straight-sided interiorly, punching a hole through the closed end of this bell, annealing the perforated bell, forcing the perforated bell into a die which has a convex portion to form a ball race and an interior portion which acts on the recently perforated end of the bell to force the adjacent metal out into the ball race, spreading out the flaring end of the perforated bell to form a plane flange, punching out this flange into the desired non-circular shape, and screw-threading internally the ball-bearing cone thus produced.

2. The process of making pressed steel ball-bearing cones, comprising stamping out a sheet metal disk, pressing the disk through a die to form a cup the side walls of which have substantially parallel elements, forcing the cup into a contracting die by pressure in alinement with the parallel elements of the side walls of the cup to compress the cup into a member which is bell-shaped exteriorly, punching a hole through the closed end of this bell, forcing the perforated bell into a die which has a convex portion to form a ball race, spreading out the flaring end of the perforated bell to form a plane flange, punching out this flange into the desired non-circular shape, and screw-threading internally the ball-bearing cone thus produced.

3. The process of making pressed steel ball-bearing cones, comprising stamping out a sheet metal disk, pressing the disk through a die to form a cup the side walls of which have substantially parallel elements, annealing the cup, forcing the cup into a contracting die by pressure in alinement with the parallel elements of the side walls of the cup to compress the cup into a member which is bell-shaped exteriorly, punching a hole through the closed end of this bell, annealing the perforated bell, forcing the perforated bell into a die which has a convex portion to form a ball race, spreading out the flaring ends of the perforated bell to form a plane flange, punching out this flange into the desired non-circular shape, and screw-threading internally the ball-bearing cone thus produced.

4. The process of making pressed steel ball-bearing cones, comprising stamping out a sheet metal disk, pressing the disk through a die to form a cup the side walls of which have substantially parallel elements, forcing the cup into a contracting die by pressure in alinement with the parallel elements of the side walls of the cup to compress the cup into a member which is bell-shaped exteriorly and substantially straight-sided interiorly, punching a hole through the closed end of this bell, forcing the perforated bell into a die which has a convex portion to form a ball race, spreading out the flaring end of the perforated bell to form a plane flange, punching out this flange into the desired non-circular shape, and screw-threading internally the ball-bearing cone thus produced.

5. The process of making pressed steel ball-bearing cones, comprising stamping out a sheet metal disk, pressing the disk through a die to form a cup the side walls of which have substantially parallel elements, forcing the cup into a contracting die by pressure in alinement with the parallel elements of the side walls of the cup to compress the cup into a member which is bell-shaped exteriorly, punching a hole through the closed end of this bell, forcing the perforated bell into a die which has a convex portion to form a ball race, and having an interior portion which acts on the recently perforated end of the bell to force the adjacent metal out into the ball race, spreading out the flaring end of the perforated bell to form a plane flange, punching out this flange into the desired non-circular shape, and screw-threading internally the ball-bearing cone thus produced.

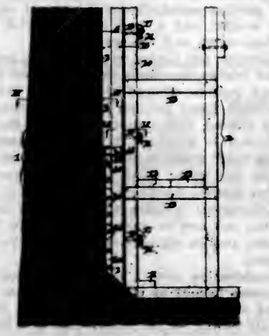
[Claims 6 to 10 not printed in the Gazette.]

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1,228,353. APPARATUS FOR APPLYING MASTIC TO WALLS. HENRY WIEDERHOLD, Philadelphia, Pa., assignor to The Barber Asphalt Paving Company, Philadelphia, Pa., a Corporation of West Virginia. Filed Jan. 2, 1915. Serial No. 206. (Cl. 25—131.)

1. A temporary structure of the class described comprising a series of uprights, means for holding them rigid, adjustable spacing bars supported by said uprights, horizontal limiting members supported by said adjustable spacing bars; means for holding said horizontal members against said adjustable spacing bars; and means for varying the distance between the uprights and the adjustable spacing bars, said adjustable spacing bars being parallel to said uprights and arranged to support a plurality of horizontal members.





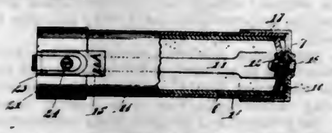
2. A temporary structure of the class described, comprising a series of uprights; means for holding them rigid; adjustable spacing bars supported by said uprights; horizontal limiting members supported by said adjustable spacing bars; each spacing bar being arranged to support a plurality of said horizontal members; means for holding said horizontal members against said adjustable spacing bars; and means for varying the distance between the uprights and the adjustable spacing bars.

3. In a temporary structure of the class described, the combination of horizontal limiting members; an adjustable spacing bar adapted to support a plurality of said limiting members; a rigid upright supporting said adjustable spacing bar; and means for varying the distance between the upright and the spacing bar.

4. In a temporary structure of the class described, the combination of a plurality of horizontal limiting members; an adjustable spacing bar supporting said limiting members; a rigid upright supporting said adjustable spacing bar; and means for varying the distance between the upright and the spacing bar, including a bushing in said upright, a bolt rigidly secured to said spacing bar, adapted to slide within said bushing, and to protrude beyond said bushing, and a flanged nut adapted to engage the end of said bolt.

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1,228,354. ELECTRICAL FUSE. HARRY W. YOUNG, Chicago, Ill. Filed Sept. 26, 1914. Serial No. 863,690. (Cl. 175—273.)



1. A fuse comprising a tube; a disk inserted in the end of said tube; a cap pressed over the end of said tube, the edges of said disk being embedded therein; a fusible member in said tube; and means for effecting electrical connection with the ends of said fusible member, substantially as described.

2. A fuse comprising a tube of insulating material; a metallic disk inserted in the end of said tube; a metallic cap pressed over the end of said tube, the edges of said disk being embedded therein, a fusible member in said tube; and means for effecting electrical connection with the ends of said fusible member, substantially as described.

3. A fuse comprising a tube; a disk inserted in the end of said tube and having teeth on its edges; a cap pressed over the end of said tube, said teeth being embedded therein; a fusible member in said tube; and means for effecting electrical connection with the ends of said fusible member, substantially as described.

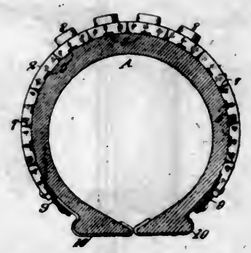
4. A fuse comprising a tube of insulating material; a metallic disk inserted in the end of said tube and having teeth on its edges; a metallic cap pressed over the end of said tube, said teeth being embedded therein; a fusible member in said tube; and means for effecting electrical connection with the ends of said fusible member, substantially as described.

5. A fuse comprising a tube of insulating material; a convex metallic disk inserted within each end of said tube and having teeth on its edges; a metallic cap pressed over each end of said tube, said teeth being embedded therein; a fusible member within said tube having one end soldered to one of said disks and the other end passing through the disk and cap at the corresponding end of said tube; and means for effecting electrical connection with said protruding end of said fusible member and with the disk at the other end thereof, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,355. VEHICLE-TIRE JACKET. ANDREW S. ANDERSON, Oakland, Cal., assignor of one-half to Roe L. Smith, Oakland, Cal. Filed Apr. 3, 1916. Serial No. 88,519. (Cl. 152—16.)



1. A tire jacket embodying a series of plates having chambers formed on their inner faces and having the walls defining the chambers recessed to form inwardly extending projections, and connecting means for the plates having hooks on their ends engaged with said projections with the hook terminals located at points between the inner and outer faces of the plates.

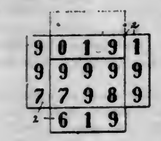
2. A tire protecting armor consisting of rectangular imperforate plates with beveled edges adapted to lie in contact the inner surface of said plates being provided with central recesses and transverse channels, elastic strips extending across the junction of said plates within said channels and having their ends formed into hooks to engage in the recesses of said plates.

3. An armor jacket for tires consisting of a series of square imperforable beveled edge plates lying side by side having transverse channels upon the lower interior faces, and central, divergently countersunk openings in the latter, and hook-shaped, elastic plates fitting in the channels connecting each plate with the one adjacent and having inturned hooks engaging the central spaces.

4. A tire protecting armor composed of rectangular sections linked together to form a band, said sections having solid outer surfaces and central divergent depressions in their inner surfaces, spring strips, the inner ends of which engage the edges of said depressions, and channels extending to the edges of the sections, the bottoms of the channels forming curved faces upon which the springs are yieldably seated.

5. A flexible tire jacket comprising a plurality of plates having solid outer faces and recessed inner faces, the latter further having channels leading therefrom the bottom faces of which curve outwardly toward the edges of the plates, and connecting strips seating in the plate channels and having hooked terminals interlocking in the plate recesses for flexibly connecting the plates.

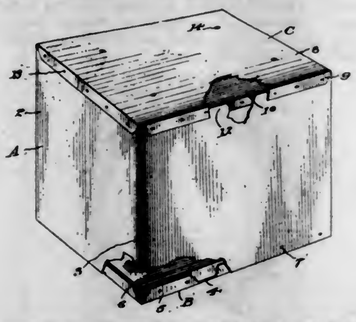
1,228,356. CUMULATIVE ADDITIVE DRILL-CARD. RUBY SHEARER BRENNAN, Portland, Oreg. Filed Mar. 15, 1917. Serial No. 155,117. (Cl. 35—2.)




2. A drill card of the character deferred to comprising a body portion provided with numerals, and with one or more side flaps also provided with numerals on both sides and adapted to be turned upon the body of the card, whereby to change the visible combinations of numerals.

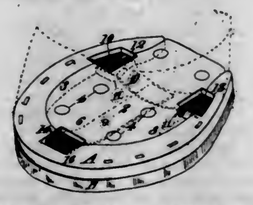
[Claims 1 and 3 to 5 not printed in the Gazette.]

1,228,357. METALLIC CONTAINER. TAKANOSHIN DOMOTO, San Francisco, Cal. Filed Nov. 8, 1916. Serial No. 130,147. (Cl. 220—5.)



A container comprising a metal body, a wood member fitted in an end of the body, a thin metal plate having notched corners rigidly secured to the top face of said wood member and having freely movable and independent flanges projecting downwardly therefrom and extending between the notches, and nails driven through the flanges through the said end of the body and into the wood member to draw the flanges against the body and to secure all of the parts rigidly in position.

1,228,358. OVERSHOE FOR HORSES. GEORGE J. DONNELLY, Oakland, Cal. Filed Aug. 22, 1916. Serial No. 116,262. (Cl. 168—28.)



1. An overshoe for horses comprising a pad adapted to enter and engage the inner rim of an ordinary metal shoe, a tread portion secured to said pad overlying the metal shoe, said tread portion being longitudinally and transversely slotted, and a pair of crossed flat flexible metal fasteners adapted to be placed in the slotted portion of the pad to bring their outer ends into engagement with the inner face of the metal shoe, said flexible fastener positioned in the transverse slot adapted to overlie one end of the flexible fastener positioned in the longitudinal slot and lock it against removal.

2. An overshoe for horses consisting of a pad having a portion to fit inside an ordinary metal shoe, and another portion to overlie the metal shoe, the pad having grooves and adapted to receive crossed flexible metal fasteners which engage underneath the metal shoe, said last-named pad portion being divided by one of said grooves into a toe section and a heel section which are independently removable and renewable.

3. An overshoe for horses comprising a pad adapted to enter and engage the inner rim of an ordinary metal shoe, a tread portion secured to said pad overlying the metal shoe, said tread portion being longitudinally and transversely slotted, and a pair of crossed flexible metal fasteners adapted to be placed in the slotted portion of the pad to bring their outer ends into engagement with the inner face of the metal shoe, said metal fasteners consisting of two flat flexible strips and separately insertible into place, the metal fastener which fits the longitudinal groove having one end to engage underneath the end of the metal shoe and its opposite end beneath the transverse metal fastener.

4. The combination with a horseshoe having a pair of opposed recesses formed on the hoof side of the shoe near the rear end and a recess on the same side of the shoe approximately central of the toe portion, of a pad adapted to enter and fit the inner rim of the shoe and cover the frog of the hoof, a tread portion secured to said pad overlying the metal shoe, said tread portion having a transverse groove formed therein in alinement with the opposed recesses formed near the rear end of the shoe and a longitudinal groove in alinement with the front recess, a flexible fastener received by said longitudinal groove adapted to have one end inserted in the toe recess and having sufficient length to enter the transverse groove, and a second flexible fastener received by the transverse groove adapted to lie across the free end of the first-named flexible fastener and also adapted to have its opposite ends inserted in the opposed recesses in the shoe.

1,228,359. NON-HYDRATED MOISTURE-CONTAINING MANGANESE DEPOLARIZING COMPOUND. CARLTON ELLIS, Montclair, N. J., assignor, by mesne assignments, to National Carbon Company, Long Island City, N. Y., a Corporation of New Jersey. Filed Oct. 23, 1915. Serial No. 57,435. (Cl. 204—38.)

1. A depolarizing agent for batteries of the Leclanché type comprising an intimate mix of graphite and non-acid artificial manganese dioxid containing adsorbed moisture.

2. A depolarizing agent for batteries of the Leclanché type comprising an intimate mix of carbon and neutral non-acid substantially non-hydrated artificial manganese dioxid containing adsorbed moisture.

3. A depolarizing agent for batteries of the Leclanché type comprising an intimate mix of carbon and neutral non-acid artificial manganese dioxid containing adsorbed moisture, the proportion of carbon being less than that of the dioxid.

4. A depolarizing agent for batteries of the Leclanché type comprising an intimate mix of graphite and non-acid artificial manganese dioxid containing occluded moisture and being substantially free from mineral manganese dioxid; the proportion of graphite being substantially less than that of the manganese dioxid.

5. A depolarizing agent for batteries of the Leclanché type comprising an intimate mix of graphite and neutral non-acid artificial substantially non-hydrated manganese dioxid containing occluded moisture and being substantially free from natural manganese dioxid; the proportion of graphite being substantially less than that of the manganese dioxid.

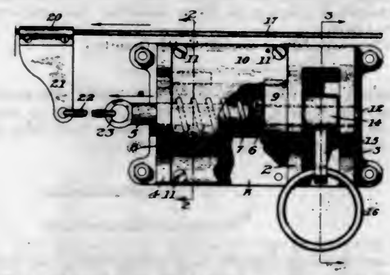
[Claims 6 to 10 not printed in the Gazette.]

1,228,360. RELEASING DEVICE. GIOVANNI FRANCHINI and CARLO BARTOLOMEE, San Francisco, Cal. Filed July 18, 1916. Serial No. 109,944. (Cl. 119—115.)

In a releasing device, a casing having compartments, a spring pressed bolt operating in the casing and having an eye extending beyond an end of the casing, a flexible



cable positioned above the top of the casing, a bracket member having a substantially wide upper end doubled upon itself to form an eye and having its terminal seated on one of the faces of said member, said bracket eye receiving the flexible cable, screws passed through the eye terminal and body of the bracket member, the lower end

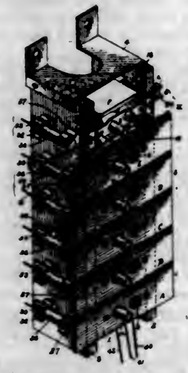


of the bracket extending downwardly and having a perforation disposed at a point in the same horizontal plane with the bolt, a flexible cable secured in the perforation of the bracket and in the eye of the bolt, and a keeper in one of the compartments having an opening adapted to receive the other end of the bolt.

1,228,361. AMELIORATION OF SOIL. HAROLD P. HAYDEN, Perth Amboy, N. J., assignor to The Barber Asphalt Paving Company, Philadelphia, Pa., a Corporation of West Virginia. Filed Nov. 16, 1915. Serial No. 61,752. (Cl. 71—9.)

The process of rendering soil more suitable for vegetable growth, which consists in combining colloidal matter such as clay with oil and water in the form of an emulsion, and effecting the infiltration of the soil with this emulsion.

1,228,362. SWITCH BOARD OR MOUNTING. JOHN P. HAYES, Pittsburgh, Pa., assignor of one-half to John E. Barnhart, Pittsburgh, Pa. Filed Oct. 5, 1914. Serial No. 865,006. (Cl. 247—13.)



1. In a switch board or mounting of the class described, the combination of a pair of confronting insulating bases forming side wall members, bus bars on the inner faces thereof, switches arranged between said bases connected to said bus bars, and cover plates for the switches lying across the edges of said bases.

2. In a switch board or mounting of the class described, the combination of a pair of insulating bases arranged face-wise and forming side wall members, bus bars mounted on the inner side of said bases, switches arranged between said bases connected to said bus bars, and circuit conducting devices mounted on the outer side of said bases and connected with the bus bars, substantially as set forth.

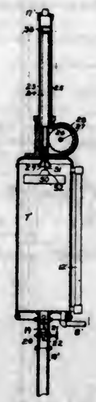
3. In a switch board or mounting of the class described, the combination of a pair of insulating bases arranged face-wise to each other and forming side walls, a bus bar mounted on the inner side of one of said bases, a plurality of bus bars in alinement on the other of said bases confronting and parallel with said bus bar, and switches arranged between said bases and connected to said bus bars.

4. In a switch board or mounting of the class described, the combination of a pair of insulating bases, a positive and a negative bus bar arranged in alinement on the inner side of one of said bases, a neutral bus bar similarly arranged on the other of said bases, and switches arranged between said bases connected to said bus bars, substantially as set forth.

5. In a switch board or mounting of the class described, the combination of a pair of insulating bases, a positive and a negative bus bar arranged in alinement on the inner side of one of said bases, a neutral bus bar similarly arranged on the other of said bases, switches arranged between said bases connected to said bus bars, and outermost fuse devices and connections connected with said switches, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

1,228,363. LIQUID-MEASURING APPARATUS. JAMES A. MACKENZIE and GEORGE W. MACKENZIE, Jr., Ben Avon, Pa. Filed Sept. 14, 1914. Serial No. 861,547. (Cl. 221—100.)



1. In apparatus for delivering liquid in measured quantities, the combination of a main reservoir, a superimposed vessel connected therewith, an intervening controlling valve, an outlet conduit having a controlling valve, means for exhausting air from the superimposed vessel to effect its partial or entire filling from the main reservoir, said superimposed vessel being provided with an adjustable air suction conduit having a valve seat and a loosely attached float having a valve dependent on the rise of liquid in the vessel for effecting seating of said valve and terminating the outflow of air therefrom and resulting flow of liquid thereinto.

2. In apparatus for delivering liquid in measured quantities, the combination of a main reservoir, a superimposed vessel connected therewith, an intervening controlling valve, an outlet conduit having a controlling valve, means for exhausting air from the superimposed vessel to effect its partial or entire filling from the main reservoir, said superimposed vessel being provided with an adjust-

able air suction conduit having a valve seat and a loosely attached float having a valve dependent on the rise of liquid in the vessel for effecting seating of said valve and terminating the outflow of air therefrom and resulting flow of liquid thereinto.

3. In apparatus for delivering liquid in measured quantities, the combination of a main reservoir, a superimposed vessel connected therewith, an intervening controlling valve, an outlet conduit having a controlling valve, means for exhausting air from the superimposed vessel to effect its partial or entire filling from the main reservoir, said superimposed vessel being provided with an adjustable air suction conduit having a valve seat and a loosely attached float having a valve dependent on the rise of liquid in the vessel for effecting seating of said valve and terminating the out-flow of air therefrom and resulting flow of liquid thereinto and for indicating the contents of said vessel at the termination of such outflow and inflow respectively.

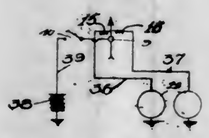
4. In apparatus for delivering liquid in measured quantities, the combination of a main reservoir, a superimposed measuring tank connected therewith having an outlet conduit, means for exhausting air from the measuring tank, a vertically movable hollow stem forming a conduit for the exhaust air and having a valve seat at its lower end, and a float having a valve adapted to seat therein to close said conduit by buoyant action of the liquid.

5. In apparatus for delivering liquid in measured quantities, the combination of a main reservoir, a superimposed measuring tank connected therewith having an outlet conduit, a check valve interposed between the measuring tank and the main reservoir, means for exhausting air from the measuring tank, a vertically movable hollow stem forming a conduit for the exhaust air and having a valve seat at its lower end, and a float having a valve adapted to seat therein to close said conduit by buoyant action of the liquid.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,364. AUTOMATIC PILOT MECHANISM. ALFRED J. MACY, Chicago, Ill. Filed Aug. 8, 1913, Serial No. 783,683. Renewed Oct. 18, 1916. Serial No. 126,453. (Cl. 172—282.)




1. In a device of the class described the combination of a compass needle, magnetic coils adjacent thereto, a contact associated with each of said coils adapted to be closed by said needle to form a circuit and energize the coil, a magnetic clutch adapted to be set in operation when a contact is closed, the field set up by the energized coil acting to repel the needle and break the circuit.

2. In a device of the class described, steering mechanisms for a vehicle, power driven magnetic clutches, a compass needle adapted to close electrical contacts to set said magnetic clutches in operation to steer the vehicle, and magnetic means acting to repel said needle when a contact is closed to break the circuit.

3. In combination with a vehicle and steering means therefor, a compass, a rotatable table therefor, means on said table for holding the same in stationary position after adjustment, magnetic coils on said table adapted to be disposed symmetrically on each side of a compass needle, electrical connections adapted to be effected through said compass needle and said coils, to set said steering means in operation.

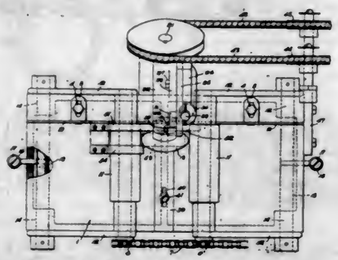
4. In a device of the class described, a compass needle, a rotatable table therefor, contact coils thereon adapted to be temporarily energized by contact with said compass needle, steering mechanism for a vehicle, magnetic clutches connected thereto to drive the same, and means energizing said clutches when said electrical contacts are closed to drive the steering mechanism of said vehicle.

5. In a device of the class described the combination of a compass needle, coils adjacent thereto, contacts associated with said coils adapted to be closed by said needle to form a circuit and energize said coils, and steering mechanism adapted to be set in operation when the contacts are closed.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,365. APPARATUS FOR CUTTING WELTING. THOMAS MARTIN, Dorchester, Mass., assignor to William B. Arnold, North Abington, Mass. Filed June 8, 1912. Serial No. 702,488. (Cl. 164—61.)



1. Apparatus for cutting welting comprising in combination a bed plate, means to feed the stock therealong, a disk cutter 18 for severing welting strips from the stock having a supporting spindle 21, a sleeve bearing 22 therefor provided with projecting ears 27, bolts 23 positioned therein, and a pivotal support for said sleeve.

2. Apparatus for cutting welting comprising in combination a bed plate, means to feed the stock in a straight path along said bed plate, a disk cutter 18 for severing welting strips from the stock having a supporting spindle 21, a bearing sleeve 22 having a pivotal support 24, a supporting plate 25 to which the sleeve 22 is adjustably secured, and a support 26 to which the plate 25 is adjustably secured.

3. Apparatus for cutting stock comprising a bed plate, means to feed the stock therealong, a rotatable disk cutter, and a slide mounted in the bed plate and carrying an embedding surface for the cutter.

4. Apparatus for cutting stock comprising a bed plate, means to feed the stock therealong, a rotatable disk cutter, and a slide adjustably mounted in the bed plate and provided with a socket to receive an embedding surface for the cutter.

5. Apparatus for cutting welting comprising in combination a bed plate, two pairs of feed rolls, one member of each pair being positively driven and the other member thereof being yieldingly pressed thereagainst, and an interposed disk cutter having its cutting edge arranged at an acute angle to the face of the stock for severing a welting strip therefrom.

[Claims 6 to 17 not printed in the Gazette.]

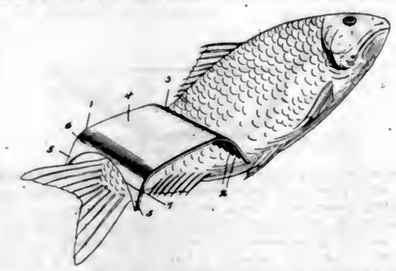
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1,228,366. HOLDER FOR USE IN SCALING FISH. JOHN B. MILLS, Fort Wayne, Ind. Filed Mar. 10, 1917. Serial No. 153,868. (Cl. 17—10.)

1. In a holder for fish during the scaling operation, a central portion for engagement by the hand, in combination with fish-engaging teeth at one end and support-engaging prongs at the other end of the holder.

2. In a holder for fish during the scaling operation, a central hand hold, in combination with a downwardly-extending fish-engaging front member and a downwardly extending support-engaging rear member.

3. In a holder for fish during the scaling operation, a central hand hold in combination with a downwardly-extending front portion having fish engaging projections thereon and a downwardly-extending rear portion cut away at its middle part and provided with support-engaging prongs at the sides.

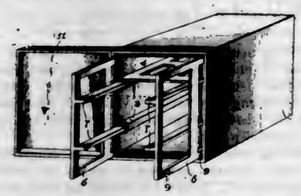


4. A holder for fish during the scaling operation having the middle of its length adapted to be grasped by the hand of the user and a front end at an angle to this middle portion and terminating in fish holding means near the middle of its width, the rear end being provided with a clearance opening for the fish.

5. A holder for fish during the scaling operation having its rear terminating in projections at the sides, leaving a clearance space between, in combination with fish holding means at the front end located nearer the middle of the width of the holder than these rear projections.

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1,228,367. OVEN. HENRY W. O'DOWD, Jersey City, N. J. Filed Sept. 28, 1912. Serial No. 722,854. (Cl. 126—275.)



1. In an oven the combination of a pair of sides, each side having a recess formed therein and substantially coextensive therewith, a plurality of recessed ledges projecting from said side and registering with similar recessed ledges projecting from the opposite side, said first-mentioned recess communicating with the recesses of the ledges, and a frame having shelves arranged to reciprocate in said recesses, substantially as described.

2. In an oven the combination of a pair of sides, each side having a recess formed therein and substantially coextensive therewith, a plurality of recessed ledges projecting from said side and registering with similar recessed ledges projecting from the opposite side, said first-mentioned recess communicating with the recesses of the ledges, a frame having shelves arranged to reciprocate in said recesses, and rollers arranged on said frame, substantially as described.

3. In an oven the combination of a pair of sides, each side having a recess formed therein, a plurality of recessed ledges projecting from said side and registering with similar recessed ledges projecting from the opposite side, said first-mentioned recess communicating with the recesses of the ledges, and a frame having shelves arranged to reciprocate in said recesses, substantially as described.

4. In an oven the combination of a pair of sides, each side having a recess formed therein, a plurality of recessed ledges projecting from said side and registering with similar recessed ledges projecting from the opposite side, said first-mentioned recess communicating with the recesses of the ledges, a frame having shelves arranged to reciprocate in said recesses, and rollers arranged on said frame, substantially as described.

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1,228,368. WOOD SEPARATOR FOR STORAGE-BATTERY PLATES. WILLIAM MORRISON, Chicago, Ill., assignor to Vesta Accumulator Company, a Corporation of Indiana. Filed Nov. 11, 1916. Serial No. 130,877. (Cl. 204—29.)

2. A method of treating wood separators, which consists in treating them with a solution of barium hydroxid and then converting the barium hydroxid into barium sulfate.

4. The method of treating wood separators which consists in producing in the pores thereof an insoluble barium compound.

[Claims 1, 3, 5, and 6 not printed in the Gazette.]

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1,228,369. SEPARATOR FOR STORAGE-BATTERY PLATES. WILLIAM MORRISON, Chicago, Ill., assignor to Vesta Accumulator Company, a Corporation of Indiana. Filed Apr. 2, 1917. Serial No. 159,286. (Cl. 204—29.)

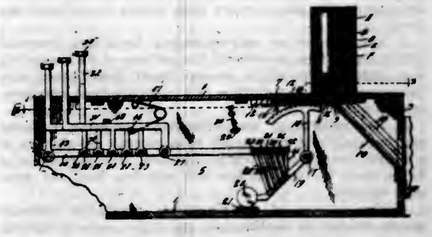
3. A separator having strontium sulfate in its pores.

4. The method of treating porous separators, which consists in introducing into the pores a solution of strontium hydroxid, and then converting the strontium hydroxid into strontium sulfate.

[Claims 1, 2, 5, and 6 not printed in the Gazette.]

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1,228,370. MONEY-CHANGING MACHINE. FRED P. FURTTINGER, Dallas, Tex. Filed June 7, 1915. Serial No. 32,498. (Cl. 133—4.)



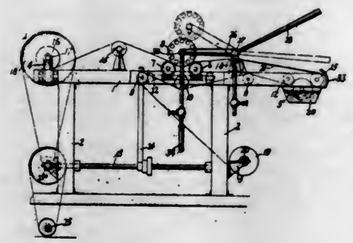
1. In a money changing machine, the combination of a plurality of vertical coin tubes, an ejector working under each tube, a plurality of swinging sectors engaging the ejectors and each having a depending arm, a weight mounted on the end of each sector arm adapted to return it to normal position, a plurality of key controlled operating members disposed in advace of the sector arms, and a plurality of links connecting one end of the operating member with the sector arms, there being a single link connection between each operating member and one of the sector arms, said links being pivoted to the sector arms at relative different points with relation to the pivot points of the sectors.

2. In a money changing machine, the combination of a plurality of coin tubes, an ejector mounted under each tube and each ejector having a length of movement in proportion to the diameter of the coin ejected, elements for operating the ejectors, a swinging member connected to each of said elements, an operating device for each swinging member, and a separate connection between each operating member and its correlated swinging member pivoted to both, some of the connections being pivoted to the swinging members at greater distances from the pivot points of said members than other connections, whereby the amplitude of the movement of some of said members is greater than others.

3. In a money changing machine, the combination of a plurality of coin tubes, an ejector mounted under each tube and each ejector having a length of movement in proportion to the diameter of the coin ejected, sectors meshing with the ejectors, arms rigid with the sectors, key operated swinging members, and links of varying lengths pivoted to the swinging arms at different relative distances from the pivot points of said arms, whereby the amplitude of the swing of the arms varies.

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1,228,371. PROCESS OF PRODUCING INSULATING MATERIALS. EMIL HAEFELY, Basel, Switzerland, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 27, 1912. Serial No. 700,027. (Cl. 91—70.)



1. The process of manufacturing insulating material which consists in moistening with a solvent liquid the surface of a fabric coated with an adhesive, distributing mica flakes upon the wet surface and applying heat and pressure to the mica-covered strip before the solvent has dried.

2. The process of manufacturing insulating material which consists in moistening the surface of an insulating gum-coated fabric with a solvent liquid, distributing mica flakes upon the wet surface and applying heat and pressure thereto.

3. The process of manufacturing insulating material which consists in moistening with alcohol the surface of a fabric coated with insulating gum, distributing mica flakes upon the wet surface and applying heat and pressure thereto.

4. The process of manufacturing insulating material which consists in continuously passing a strip of insulating gum-coated fabric from a source of supply over and in contact with a source of solvent material, thereafter, applying mica flakes to the fabric, and then passing the fabric between pressure members at least one of which is heated.

5. The process of manufacturing insulating material which consists in continuously passing a strip of insulating gum-coated fabric over a source of solvent material, manually distributing mica flakes upon the wet surface, and applying heat and pressure to the fabric.

[Claims 6 to 11 not printed in the Gazette.]

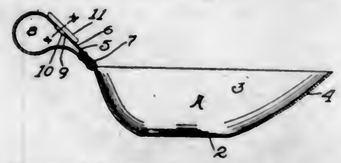
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1,228,372. PROCESS OF MANUFACTURING COLOR LEAF. GOHEI IWATSUBO, Kioto, Japan. Filed May 31, 1916. Serial No. 101,004. (Cl. 18—57.)

3. The process of manufacturing color leaf which consists in first immersing a plate into a volatile solution consisting of 100 parts volatile oil, 15 parts crude camphor, 2 parts stearin removing said plate applying thereto a color mixture, consisting of 100 parts water, 10 parts gelatin, 5 parts glycerin, 2 parts syrup and 1 part starch in addition to the necessary amount of color, and subjecting the plate to heat, to loosen the leaf from the surface of the plate.

[Claims 1, 2, and 4 not printed in the Gazette.]

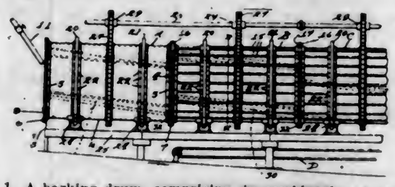
1,228,373. SCOOP. FRANK J. KRISTOFEK, St. Paul, Minn., assignor to Brown & Bigelow, St. Paul, Minn., a Corporation of Minnesota. Filed Apr. 21, 1914. Serial No. 833,420. (Cl. 65—36.)



An advertising novelty, comprising, a scoop consisting of a shell forming a body portion having a horizontal flat stability base, said body portion terminating at one extremity in an elongated upwardly inclined pouring portion and at its opposite extremity in a lip, a loop member secured to said lip forming a hand grasp, and a button having a flat upper surface secured to said loop forming a broad thumb bearing surface and affording an advertising medium, the said portions at the opposite extremities of said base counter-balancing one another, whereby its stability is enhanced.

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1,228,374. BARKING-DRUM. JOHN J. ROSS, International Falls, Minn. Filed Feb. 12, 1916. Serial No. 78,034. (Cl. 144—208.)



1. A barking drum, comprising, in combination, a rotatable slatted drum having a wood receiving end, means for revolving said drum, and means arranged within said drum for loosening the bark on the wood and positively advancing the wood through the drum from its receiving end to its opposite end.

2. A barking machine, comprising, in combination, a rotatable drum through one end of which the wood to be barked is introduced, means for revolving said drum, and a bark knocker spirally arranged on the inner surface of said drum to advance the wood through the drum and against which the wood is adapted to impinge to loosen and remove the bark.

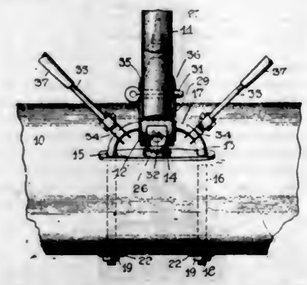
3. A barking drum, comprising, in combination, a rotatable slatted drum having a wood receiving end, means for revolving said drum, and a plurality of spaced devices arranged on the inner surface of said drum to positively advance the wood through the drum and against which the wood is adapted to impinge to loosen and remove the bark.

4. A barking drum, comprising, in combination, a rotatable slatted drum having a wood receiving end, means for revolving said drum, and a plurality of spaced devices spirally arranged on the inner surface of said drum to positively advance the wood through the drum and against which the wood is adapted to impinge to loosen and remove the bark.

5. A barking machine, comprising, in combination, a rotatable drum having a plurality of longitudinal sections arranged endwise together, a set of bark knockers spirally arranged on the inner surfaces of said sections, said knockers being placed endwise together to form substantially continuous wood feeding spirals traversing the entire length of said drum and for positively advancing the wood therethrough, one of said sections being formed with a soaking compartment for the wood, and the remainder of said sections having passages through which the free bark may pass.



1,228,375. UNIVERSAL WING-POST SOCKET. JOHN P. TARBOX and HENRY KLECKLER, Buffalo, N. Y., assignors to Curtiss Aeroplane & Motor Corporation, a Corporation of New York. Filed Sept. 18, 1915. Serial No. 51,458. (Cl. 244—31.)



2. A wing post socket of the character described including a socket plate, a bearing block and means freely connecting the block and plate and at the same time limiting oscillatory movement of the former in a pair of rectangularly opposed planes.

8. A wind post socket of the character described, including a socket plate, a bearing block, means carried by the block to provide one axis of oscillation therefor, and a U-bolt providing an axis of oscillation for said block in a plane rectangularly opposed to the plane of the first said axis.

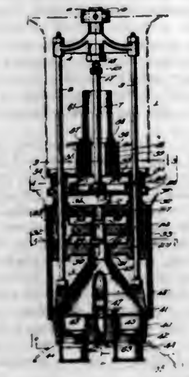
32. A wing post socket for aeroplanes including a bearing member, a socket member, and a one-piece substantially U-shaped retaining member having its bight portion extended sufficiently beyond the sides of the post to provide anchorages for the wing structure brace wires.

33. In a wing post socket of the character described, the combination of stay wires for the wing post, a socket plate and a bearing block comprising the wing post socket and means triply functioning to connect the socket plate and bearing for relative movement, to limit such movement to oscillation about axes defined by the means and to anchor said stay wires to the post.

[Claims 1, 3 to 7, 9 to 31, and 34 to 42 not printed in the Gazette.]

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1,228,376. HYDROCARBON-BURNER. WILLIAM H. THAYER, Columbia, S. C. Filed Aug. 17, 1916. Serial No. 115,445. (Cl. 67—43.)



1. A hydrocarbon burner comprising a generator tube, a burner supporting member below said tube and in open communication therewith, burners depending from said member and communicating therewith, means interposed between said supporting member and the lower end of said generator tube for mixing the vapor issuing from said tube with air and delivering the mixture to said supporting member, a burner surrounding said generator tube, and means leading from said supporting member to said burner and forming a shunt for a portion of the mixture, whereby said burner may be supplied with fuel.

2. A hydrocarbon burner comprising a generator tube, a hollow burner supporting member below said tube, and in open communication therewith, burners depending from said member and in open communication therewith, means interposed between said burner supporting member and the lower end of said generator tube for mixing the vapor issuing from said tube with air and delivering the mixture to said member, a burner surrounding said generator tube, a U tube having a long arm leading from said member to the burner which surrounds the generator tube, and having a short arm flared and flattened and positioned directly beneath the air mixing device to receive a portion of the air and gas mixture and deliver it to the generator burner without materially obstructing the flow to the depending burners.

3. A hydrocarbon burner comprising a generator tube, means for carbureting gas discharged from said tube and for conducting the same to a flared burner mouth, a fuel conduit disposed within said flared mouth and provided with an elongated and tapered fuel admitting opening and a burner for heating said generator and adapted to be supplied with fuel by means of said conduit.

4. A hydrocarbon burning lamp embodying a fuel supply pipe, a valve connected with said pipe, depending rods connected with said valve, a vaporizing tube communicating with said valve, a starting pan carried by said rods and adapted to initially heat said vaporizing tube, a main tube heating burner connected with said rods and located concentrically of said vaporizing tube, a mixing chamber supported by said rods and having graduated passages formed in vertical alinement with the discharge extremity of said vaporizing tube, said passages being spaced with respect to each other to provide air admitting openings, a downwardly flared casing secured to the lower extremities of said rods and employed to conduct fuel from said passage ways to burner tube, manties secured to said tubes and depending downwardly and means situated within said flared casing to conduct surplua gas admitted to the same to the main burner for heating said vaporizing tube.

5. A hydrocarbon burner comprising a generator tube, a hollow cone-shaped burner supporting member below said tube, and in open communication therewith, burners depending from said member and in open communication therewith, means interposed between said cone-shaped burner support and the lower end of said generator tube for mixing the vapor issuing from said tube with air and delivering the mixture to said cone-shaped member, a burner surrounding said generating tube, and means leading from said cone-shaped member to said burner and forming a shunt for a portion of said mixture, whereby the burner may be supplied with fuel.

[Claims 6 to 9 not printed in the Gazette.]

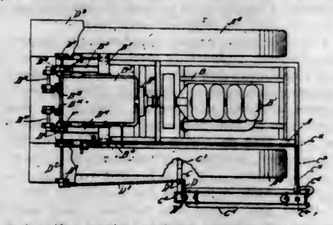
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1,228,377. AUTOMATIC STEERING-GEAR FOR TRACTORS AND THE LIKE. WILLIAM TURNBULL, Stockton, Cal., assignor to Holt Manufacturing Company, Peoria, Ill., a Corporation of California. Filed Sept. 30, 1914. Serial No. 864,258. Renewed Mar. 27, 1917. Serial No. 157,845. (Cl. 97—81.)

1. In a traction engine such as described, the combination of a main frame, a single power source, a single tractor on each side of the main frame, and means responsive to a deviation of the tractor engine to either side of a straight ahead line of travel for disconnecting from the power source the tractor on the side of the frame opposite to the line of deviation.

3. In a traction engine such as described, the combination of a main frame, a single power source, a single trac-

tor on each side of the main frame, independent clutches between the power source and the respective tractors, a furrow wheel, and connection between the furrow wheel and the clutches operative upon a deviation of the traction engine to either side of a straight ahead line of travel to disconnect from the power source the tractor on the side of the frame opposite to the line of deviation.

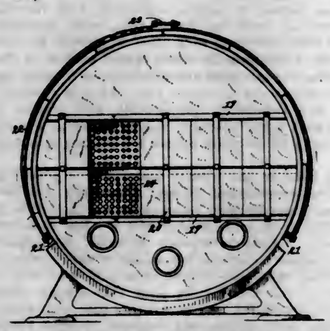


5. In a traction engine such as described, the combination of a main frame, a single power source, a single tractor on each side of the main frame, independent power connections between the power source and the respective tractors, a furrow wheel, connections between the furrow wheel and the power connections of both tractors operative upon a deviation of the traction engine to either side of a straight ahead line of travel to disconnect from the power source the tractor on the side of the frame opposite to the line of deviation, and means for manually elevating and lowering said furrow wheel into and out of the furrow.

[Claims 2, 4, and 6 not printed in the Gazette.]

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1,228,378. INSULATION. ABRAM E. BROWN, Cleveland, Ohio, assignor to The Carey Company, a Corporation of Ohio. Filed Apr. 14, 1916. Serial No. 91,123. (Cl. 154—44.)



1. An insulating unit comprising layers of insulating material, a metal backing for the insulating material, means to hold the various elements together; an adjacent insulating unit therebelow having a metal backing, and means on the first backing to engage the second backing.

3. A boiler, supports on the boiler, independent metal casings supported by the supports and holding the insulation against the boiler, and removable means resting against the casings and holding the casings in place.

4. A boiler or the like, supports on the boiler, cement on the boiler, a plurality of sections of insulation resting on the supports and in the cement, bands running around the boiler from the supports and holding in place the sections of insulation, and means for connecting the bands.

9. A boiler insulation comprising cement adjacent the boiler, magnesia blocks on the cement, fibrous material on the magnesia, asbestos board on the fibrous material, a metal sheathing, and means to hold the magnesia, fibrous material and asbestos in the sheathing.

[Claims 2, 5 to 8, and 10 not printed in the Gazette.]

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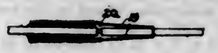
1,228,379. HYDROCARBON-LAMP. THOMAS JEFFERSON CROOK, Wichita, Kans. Filed Jan. 15, 1916, Serial No. 72,222. Renewed Apr. 18, 1917. Serial No. 168,037. (Cl. 67—50.)



In a hydrocarbon lamp, the combination of a reservoir, a retort connected to said reservoir, a hollow substantially oval-shaped chamber supported by said retort, said chamber having a central mixing tube formed integrally therewith and arranged transversely thereof, the walls of said tube being of a single thickness and venturi shaped, the top of said walls terminating short of the top of the chamber, the positioning of said tube centrally of the chamber thereby forming burner tubes upon opposite sides of the mixing tube between the same and the outside walls of the chamber, said burner tubes extending downwardly beyond the bottom of the mixing tube, and means for supplying air to said mixing tube.

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1,228,380. METHOD AND SYSTEM FOR OPERATING RUDDERS OF AIRCRAFT. GLENN H. CURTISS, Hammondsport, N. Y., assignor to The Curtiss Motor Company, Hammondsport, N. Y., a Corporation of New York. Filed Feb. 18, 1914. Serial No. 819,521. (Cl. 244—29.)



1. In an aircraft, a rudder system comprising a rudder, a relatively fixed support to which said rudder is connected, and a transversely extending tension device on each side of said rudder interconnecting the rudder and its support, said tension device comprising a spring and a link respectively pivoted one to the other at a point adjacent the attachment of said rudder to said support.

2. In an aircraft, a rudder system comprising a rudder, a relatively fixed support to which said rudder is attached and a transversely extending tension device on each side of said rudder interconnecting the rudder and its support, said tension device comprising a spring hinged at a point adjacent the line of attachment of said rudder and said support.

3. In an aircraft, a rudder system comprising a rudder, a relatively fixed support to which said rudder is connected, said rudder being when deflected biased to a normal position by wind pressure, and a transversely extending bendable tension member on each side of said rudder interconnecting the rudder and its support and normally exerting tension on lines passing close to the line of connection between said rudder and its support, each member being bendable about said line without substatnial alteration of the force exerted on said rudder when the rudder is moved in a prescribed direction, and each on the other hand when the rudder is deflected in the opposite direction occupying a position removed from said line of connection and exerting a force biasing said rudder against wind pressure.

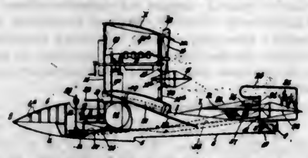
4. In an aircraft, a rudder system comprising a rudder, a relatively fixed support to which said rudder is connected, said rudder being when deflected in either direction biased to a normal position by wind pressure, and a transversely extending tension device on each side of said rudder interconnecting the rudder and its support, the tension of said devices while the rudder is in normal position being equilibrated whereby the rudder is not appreciably biased from normal position, but when said rudder is moved in either direction from normal the equilibrium of tension being destroyed and a draft applied to the rudder by preponderating tension of one device or the other in the direction in which it has been moved.

5. In an aircraft, a rudder system comprising a rudder, a relatively fixed support to which said rudder is attached, and a transversely extending tension device on one side of said rudder interconnecting the rudder and its support, said tension device comprising a spring having a hinge joint adjacent the line of attachment of said rudder and said support to permit deflection of said rudder from its normal position.



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1,228,381. HYDRO-AERO MACHINE. GLENN H. CURTISS, Buffalo, N. Y., assignor to The Curtiss Motor Company, Hammondsport, N. Y., a Corporation of New York. Original application filed Sept. 6, 1912, Serial No. 718,840. Divided and application filed June 4, 1913, Serial No. 771,646. Divided and this application filed June 7, 1915. Serial No. 32,654. (Cl. 244—2.)



1. In a hydro-aero-machine, the combination of means for floating the machine on the water, air planes extending out laterally on either side thereof and secured to the same in lifting relation thereto, means including an aerial propeller for driving the machine at such speed as to cause it to skim along the surface of the water, and means for maintaining the lateral equilibrium of the machine on the water comprising means on each side of the floating means depending from the lower surface of the air planes and located well out laterally from the floating means and on each side of the floating means consisting of a curved part conforming substantially to the lower surface of said air planes and substantially fitting the same and a substantially flat part extending downwardly and rearwardly from the air planes at a salient angle to the horizontal and adapted to engage the water and by the rush of water against said inclined part prevent submersion of the air planes when the machine tips laterally.

2. In a hydro-aero-machine, the combination of means for floating the machine on the water, air planes extending out laterally on either side thereof and secured to the same in lifting relation thereto and curvilinear in section fore and aft, means including an aerial propeller for driving the machine at such speed as to cause it to skim along the surface of the water, lateral equilibrium-maintaining pontoons carried close up under the lower surface of said air planes well out from the floating means on each side thereof and each having a curvilinear upper part conforming substantially to the curvilinear section of the air planes and a lower part substantially rectilinear in transverse section, said lower part being inclined downwardly and rearwardly and adapted to engage the water when the machine is tilted laterally to prevent submersion of the air planes and by the rush of water against the inclined part, to quickly right the machine.

3. In a hydro-aero-machine, the combination of means for floating the machine on the water, air planes extending out laterally on either side thereof and secured to the same in lifting relation thereto and curvilinear in section fore and aft, means including an aerial propeller for driving the machine at such speed as to cause it to skim along the surface of the water, lateral equilibrium-maintaining pontoons carried under the lower surface of said air planes well out from the floating means on each side thereof and each having a curvilinear upper portion conforming substantially to the curvilinear section of the air plane and also having a downwardly and rearwardly inclined projecting part with a lower surface forming a salient angle to the horizontal and adapted to extend beyond the air planes and to engage the water and by the rush of water against the same right the machine when tilted laterally.

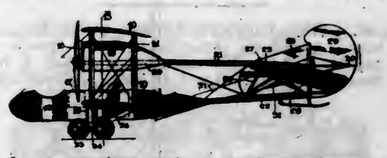
4. In a hydro-aero-machine, the combination of means for floating the machine on the water, air planes extending out laterally on either side thereof and secured to the same in lifting relation thereto, means including an aerial propeller for driving the machine at such speed as to cause it to skim along the surface of the water, lateral equilibrium-maintaining water-tight pontoons carried close up to and under the lower surface of said air planes well out from the floating means on each side thereof so as to prevent the air from sliding out laterally from beneath said air planes and having a part with a lower surface inclined downwardly and rearwardly at a salient angle to the horizontal and adapted to extend beyond the air planes and to engage the water when the boat is traveling thereon and by the rush of water against said part right the machine when tilted laterally.

5. In a hydro-aero-machine, the combination of means for floating the machine on the water, air planes extending out laterally on either side thereof and secured to the same in lifting relation thereto, means including an aerial propeller for driving the machine at such speed as to cause it to skim along the surface of the water, lateral equilibrium-maintaining water-tight pontoons carried close up to and under the lower surface of said air planes well out from the floating means on each side thereof so as to prevent the air from sliding out laterally from beneath said air planes and having a lower surface extending downwardly and rearwardly from the forward portion thereof in the form of a flexible hydroplane surface forming a salient angle to the horizontal.

[Claims 6 to 20 not printed in theGazette.]

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1,228,382. FLYING-MACHINE. GLENN H. CURTISS, Buffalo, N. Y., assignor to The Curtiss Motor Company, Hammondsport, N. Y., a Corporation of New York. Filed July 14, 1915. Serial No. 39,836. (Cl. 244—14.)



1. In an aeroplane, main supporting surfaces, twin driving motors, a nacelle for seating the passengers, and a fuselage supporting the rear controls and comprising three longitudinal members trussed together, one extending aft from each motor, the other extending aft from the rear end of the nacelle.

2. In an aeroplane, main supporting surfaces, driving motors, a nacelle structure for carrying passengers, and a fuselage carrying controls and comprising a plurality of longitudinal members extending one, at least, from each of the motors and the nacelle.

3. In an aeroplane, main supporting surfaces, a driving motor, a motor support, a nacelle, and a fuselage structure including longitudinal members extended rearwardly as actual prolongations respectively of the motor support and of the nacelle, said members in each instance terminating forwardly in the vicinity of the aft end of the structure which they prolong.

4. In an aeroplane, main supporting surfaces, a driving motor mounted intermediate the supporting surfaces,

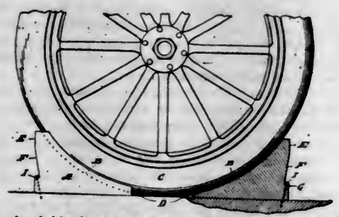
motor supports interconnecting the respective supporting surfaces, engine bed beams interconnecting corresponding motor supports, rear controls, and a longitudinal member extending rearwardly in prolongation of the engine bed beams to carry said rear controls.

5. In an aeroplane, a nacelle structure, twin driving motors mounted without, in a horizontal plane above and respectively at opposite sides of the nacelle, rear controls, and a longitudinal member extending rearwardly in prolongation of each motor and the nacelle, said members collectively constituting a fuselage structure for supporting the rear controls.

[Claims 6 to 20 not printed in the Gazette.]

# REISSUES.

14,306. CHOCK-BLOCK. EDWARD S. EVANS, Detroit, Mich. Filed Apr. 18, 1917. Serial No. 163,069. Original No. 1,188,745, dated June 27, 1916, Serial No. 72,903, filed Jan. 19, 1916. (Cl. 21—8.)



1. A chock-block having a plurality of faces, one of said faces having an incut terminating short of the base of the block whereby a heel or ledge is formed adjacent the base, said heel or ledge adapted to receive fastening means to secure the block to a support and one of said faces being a wheel engaging face.

2. A chock-block having a wheel-engaging face and having an incut in the rear face, the incut being so formed as to provide a heel on the block near the lower end of said rear face, the heel and incut providing a face to receive fastening means to secure the block to a support, the rear face of the heel and the rear face of the block above the incut being in the same vertical plane.

14,307. CAST TRUCK-BOLSTER. YUSKE MIYASAKI, McKees Rocks, Pa. Filed Jan. 19, 1917. Serial No. 143,318. Original No. 1,189,608, dated July 4, 1916, Serial No. 60,929, filed Nov. 11, 1915. (Cl. 105—104.)



1. A cast truck bolster including spaced parallel longitudinally extending bottom chord members, the upper of said members having flanges formed on its longitudinal edges and directed away from the bottom chord member.

2. A cast truck bolster including spaced longitudinally extending chord members in vertically spaced relation, the upper of the chord members having longitudinal depending flanges and spaced longitudinally disposed flanges at opposite sides thereof and having an offset in the web near the end of the bolster to increase vertical strength of the bolster.

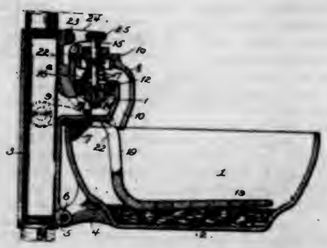
3. A cast truck bolster consisting of upper and lower longitudinally extended chord members integrally connected at opposite ends, and a vertical truss integrally connecting the chord members at the center of the bolster, the upper chord member being provided with spaced longitudinally disposed flanges at opposite sides thereof, each of said flanges being integrally connected with the central truss, the outer flange of each set extending the entire length of the bolster and the outer ends of the inner flanges terminating in close proximity to the ends of the bolster.

4. A cast truck bolster including spaced longitudinally extending chord members in vertically spaced relation, the lower of the said chord members having upper and lower chord members which are integrally connected to each other by a central longitudinally extending web, the upper of the said members having flanges formed on its longitudinal edges and directed away from the bottom chord member.

5. A cast truck bolster including upper and lower longitudinally extending chord members integrally connected at opposite ends, and a vertical truss integrally connecting the chord members at the center of the bolster, the upper of the said chord members having longitudinal depending flanges and spaced longitudinally disposed flanges at opposite sides thereof, each of the inner flanges being integrally connected with the central truss and the other ends terminating in close proximity to the ends of the bolster, the outer flange of each set extending the entire length of the bolster.

6. A cast truck bolster including spaced longitudinally extending chord members in vertically spaced relation and having their end portions connected, a central truss connecting said chord members, the upper of said chord members having longitudinally depending flanges, and longitudinally spaced flanges at opposite sides thereof, said longitudinally disposed flanges extending in opposite directions from the central truss and terminating in close proximity to the connected end portions of the chord members to increase the vertical and horizontal strength of the bolster.

14,308. WATERING DEVICE FOR CATTLE. HUGO C. RASSMANN, Beaver Dam, Wis. Filed Feb. 6, 1917. Serial No. 147,020. Original No. 1,204,066, dated Nov. 7, 1916, Serial No. 96,207, filed May 8, 1916. (Cl. 119—75.)



1. In a watering device for animals, the combination of a water supply device having a valve controlled outlet, a bowl hinged at the side thereof nearest said water supply device, latching means for said bowl located at the hinged side thereof, and animal controlled means projecting into the bowl beyond the arc made by upper edge of the bowl nearest the hinged side thereof, for operating the valve of said valve controlled outlet.

2. In a watering device for animals, the combination of a water pipe having a valve controlled outlet, a bowl in front of said pipe, means for hinging said bowl at the side thereof nearest the water pipe, latching means for holding the bowl in horizontal position, and animal controlled means projecting into the bowl beyond the arc made by the upper edge of the bowl nearest the hinged side thereof, for actuating the valve in said valve-controlled outlet.

3. In a watering device for animals, the combination of a water pipe provided with a valve-controlled outlet, a bowl in front of said pipe and having hinged connection therewith, animal controlled means entering the bowl and projecting beyond the arc made by the upper edge of the bowl nearest the hinged side thereof, for operating the valve in said valve-controlled outlet, and a latch between the bowl and the water pipe.

4. In a watering device for animals, the combination of a stand pipe, a bowl hinged near its bottom thereto, a latch mounted on the stand pipe and engaging the upper portion of the bowl, and animal-controlled means for discharging water from said stand-pipe to the bowl, said animal-controlled means projecting into the bowl beyond the arc made by the upper edge of the bowl nearest the hinged side thereof.

5. In a watering device for cattle, the combination with a bowl, and water supply means having a discharge outlet over the bowl and provided with a valve having a stem projecting in an upright position above the water supply outlet means, of a bail forming a pivoted lever having its side members disposed at respective sides of the path of water flowing from said discharge outlet, a platform rigid with said bail and disposed within the bowl, and means on said bail extending over the water supply means in position to engage the stem of the valve therein.

6. In an animal watering device, the combination of a water pipe, a bowl supported thereby, a valve casing rigid with said water pipe and projecting over the bowl, said casing having a lateral duct communicating with the water pipe and a duct discharging into the bowl, said last-mentioned duct being deflected in a direction toward the rear end of the bowl, a spring-actuated valve disposed between said ducts, and an animal-operated lever operatively associated with said valve.

7. In an animal watering device, the combination with a water pipe, a bowl, a casing rigid with the water pipe and having two ducts, one of said ducts communicating with the water pipe and the other discharging into the bowl, a spring actuated valve between said ducts and provided with a stem projecting above the casing, of an animal-operated lever having a member disposed over the bottom of the bowl, said lever having an upwardly projecting part at one end, said upwardly projecting part being bifurcated forming two arms pivotally mounted near their upper ends on said pipe, said arms terminating in forwardly projecting members, and a cross bar connecting said forwardly projecting lever members and disposed over the stem of the valve.



# DESIGNS.

50,828. TIRE-TREAD. WARREN B. BUCKLEY, New York, N. Y. Filed Mar. 28, 1917. Serial No. 158,132. Term of patent 14 years.



The ornamental design for a tire tread, as shown.

50,829. BROCADE. JAMES H. BUNTING, New York, N. Y., assignor to Susquehanna Silk Mills, New York, N. Y. Filed Mar. 27, 1917. Serial No. 157,831. Term of patent 3½ years.



The ornamental design for brocade as shown.

50,830. BROCADE. JAMES H. BUNTING, New York, N. Y., assignor to Susquehanna Silk Mills, New York, N. Y. Filed Mar. 27, 1917. Serial No. 157,832. Term of patent 3½ years.



The ornamental design for brocade as shown.

50,831. BROCADE. JAMES H. BUNTING, New York, N. Y., assignor to Susquehanna Silk Mills, New York, N. Y. Filed Mar. 27, 1917. Serial No. 157,833. Term of patent 3½ years.



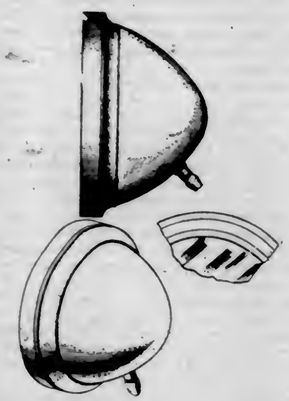
The ornamental design for brocade as shown.

50,832. TOY. JULIUS CHEIN, Montclair, N. J. Filed Feb. 20, 1917. Serial No. 149,962. Term of patent 7 years.



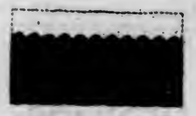
The ornamental design for a toy, as shown.

50,833. AUTOMOBILE-LAMP. DAVID HENRY ELKINS, Amesbury, Mass., assignor to Gray & Davis Inc., Cambridge, Mass. Filed Aug. 18, 1915. Serial No. 46,215. Term of patent 7 years.



The ornamental design for an automobile lamp, as shown.

50,834. QUILLING FOR DRAPERIES, GARMENTS, OR SIMILAR ARTICLES. WILLIAM R. FAIRCLOUGH, Boston, Mass. Filed Nov. 10, 1916. Serial No. 130,649. Term of patent 7 years.



The ornamental design for a quilling for draperies, garments or similar articles, as shown.

50,835. SPOON, FORK, OR SIMILAR ARTICLE. RICHARD FEIL, Taunton, Mass., assignor to Reed & Barton Corporation, Taunton, Mass. Filed Apr. 4, 1917. Serial No. 159,789. Term of patent 14 years.



The ornamental design for a spoon, fork or similar article as shown.

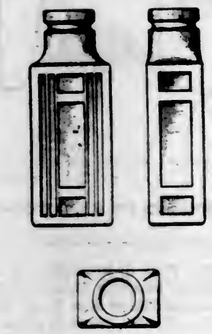


50,836. PILLOW-SLIP. MAX FIX, New York, N. Y. Filed Feb. 28, 1917. Serial No. 151,593. Term of patent 3½ years.



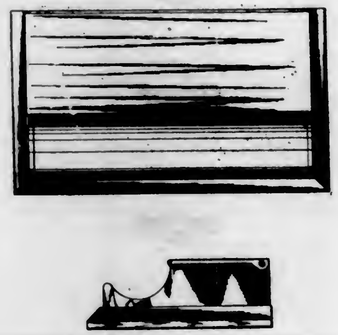
The ornamental design for a pillow slip, as shown and described.

50,837. BOTTLE. ARTHUR O. FREEDMAN, New Haven, Conn., assignor to The Arthur Company, Inc., New Haven, Conn., a Corporation of Connecticut. Filed Feb. 14, 1917. Serial No. 148,634. Term of patent 3½ years.



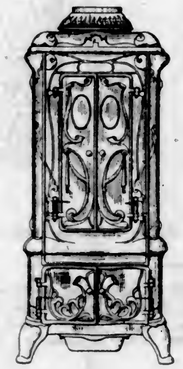
The ornamental design for a bottle, as shown.

50,838. DESK-TRAY. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed Mar. 16, 1917. Serial No. 155,339. Term of patent 7 years.



The ornamental design for a desk tray, as shown.

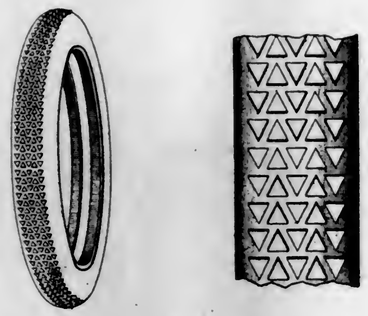
50,839. CASING FOR WATER-HEATERS. HERBERT S. HUMPHREY, Kalamazoo, Mich. Filed Apr. 9, 1917. Serial No. 160,903. Term of patent 14 years.





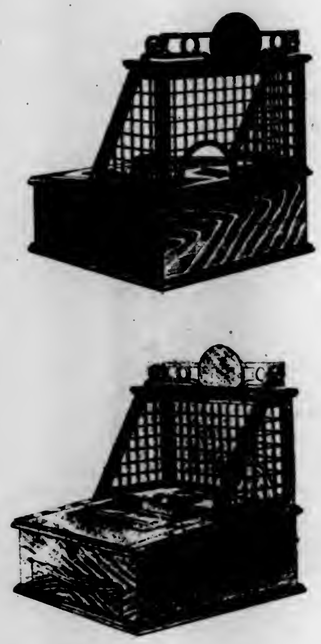
The ornamental design for a casing for water heaters, as shown.

50,840. PNEUMATIC-TIRE TREAD. JAMES C. KOCONTES, River Forest, Ill. Filed Nov. 25, 1916. Serial No. 133,499. Term of patent 14 years.



The ornamental design for a pneumatic tire tread as shown.

50,841. REGISTER CABINET OR CASING. HAAKON A. MARTIN, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio. Filed June 10, 1916. Serial No. 103,036. Term of patent 14 years.



The ornamental design for a register cabinet or casing as shown.

50,842. POCKET DEPOSIT-RECEPTACLE. ALEXANDER MCPHADEN, Chicago, Ill., assignor of one-half to Edward K. Aanonsen and one-half to Joseph T. Sandberg, Chicago, Ill. Filed Dec. 7, 1916. Serial No. 135,705. Term of patent 3½ years.



The ornamental design for a pocket deposit receptacle as shown.

50,843. BUTTON. JOHN S. MONAGHAN, Rochester, N. Y., assignor to German-American Button Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 28, 1917. Serial No. 157,030. Term of patent 3½ years.




The ornamental design for a button substantially as shown and described.



50,844. BUTTON. JOHN S. MONAGHAN, Rochester, N. Y., assignor to German-American Button Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 23, 1917. Serial No. 157,031. Term of patent 3½ years.




The ornamental design for a button substantially as shown and described.

50,845. BUTTON. JOHN S. MONAGHAN, Rochester, N. Y., assignor to German-American Button Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 4, 1917. Serial No. 159,787. Term of patent 3½ years.



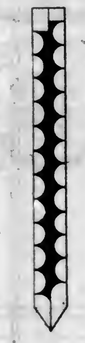

The ornamental design for a button substantially as shown and described.

50,846. BUTTON. JOHN S. MONAGHAN, Rochester, N. Y., assignor to German-American Button Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 4, 1917. Serial No. 159,788. Term of patent 3½ years.



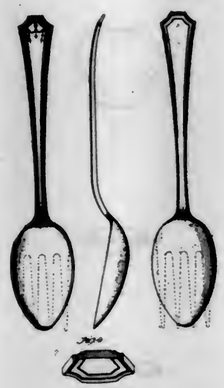

The ornamental design for a button substantially as shown and described.

50,847. INDICATOR-HAND FOR COMPUTERS, GUIDE MAPS, CHARTS, AND SIMILAR DEVICES. ARTHUR H. PLEASANTS, Baltimore, Md. Filed Dec. 1, 1916. Serial No. 134,524. Term of patent 3½ years.



The ornamental design for an indicator hand for computers, guide maps, charts, and similar devices, as shown.

50,848. SPOON, FORK, OR SIMILAR ARTICLE. JACOB ROTHLISBERGER, Muncie, Ind., assignor to W. D. Smith Silver Co., a Corporation of Delaware. Filed Mar. 7, 1917. Serial No. 153,200. Term of patent 7 years.



The ornamental design for a spoon, fork, or similar article as shown.

50,849. CASING FOR SOUND-REPRODUCING MACHINES. HENRY T. SCHIFF, Chicago, Ill. Filed Jan. 18, 1917. Serial No. 143,183. Term of patent 3½ years.



The ornamental design for a casing for sound reproducing machine as shown.

50,850. BUTTON. RUDOLPH SIEBERT, Rochester, N. Y., assignor to German-American Button Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 23, 1917. Serial No. 157,027. Term of patent 3½ years.



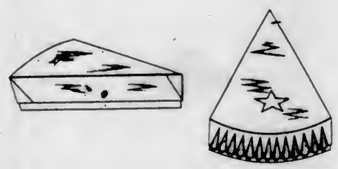
The ornamental design for a button substantially as shown and described.

50,851. BUTTON. RUDOLPH SIEBERT, Rochester, N. Y., assignor to German-American Button Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 4, 1917. Serial No. 159,784. Term of patent 3½ years.



The ornamental design for a button substantially as shown and described.

50,852. PIE-HOLDER. MATILDA STAFFORD, Urbandale, Iowa. Filed Nov. 26, 1915. Serial No. 63,679. Term of patent 3½ years.



The ornamental design for a pie holder, as shown.



50,853. TOY. ESTHER H. SWETLAND, North Tonawanda, N. Y. Filed Apr. 3, 1917. Serial No. 159,555. Term of patent 7 years.



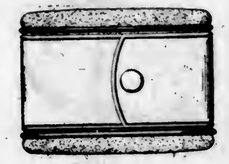
The ornamental design for a toy as shown.

50,854. TOY. ESTHER H. SWETLAND, North Tonawanda, N. Y. Filed Apr. 9, 1917. Serial No. 160,898. Term of patent 7 years.



The ornamental design for a toy as shown.

50,855. MANICURING-SET CASE. JOHN WAHNER, Brooklyn, N. Y. Filed Mar. 23, 1917. Serial No. 157,028. Term of patent 3½ years.



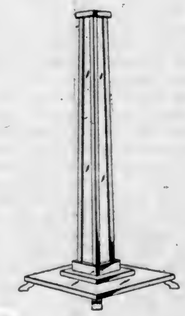
The ornamental design for a manicuring set case, as shown.

50,856. SHAVING-BRUSH. SACHARY WERSCHANSKY, New York, N. Y. Filed Nov. 18, 1916. Serial No. 132,227. Term of patent 3½ years.



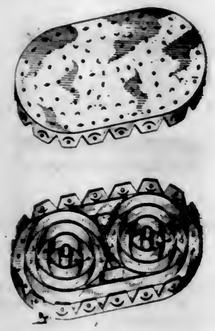
The ornamental design for a shaving brush as shown.

50,857. LAMP BASE AND STANDARD. WILLIAM G. WEST and RODERIC S. FOSTER, Aurora, Ill. Filed Feb. 21, 1917. Serial No. 150,282. Term of patent 7 years.



The ornamental design for a lamp base and standard, as shown.

50,858. REST FOR CLOTHES AND OTHER ARTICLES IN WASHBOILERS. SYLVESTER WOINA, Lost Creek, W. Va. Filed Nov. 10, 1916. Serial No. 130,677. Term of patent 7 years.



The ornamental design for a rest for clothes and other articles in wash boilers, as shown.

50,859. RECORD-CABINET. JOSEPH WOLFF, Brooklyn, N. Y., assignor to Sonora Phonograph Corporation, a Corporation of New York. Filed Mar. 10, 1917. Serial No. 154,043. Term of patent 14 years.



The ornamental design for a record cabinet, substantially as shown.



# TRADE-MARKS

## PUBLISHED MAY 29, 1917.

**The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.**

**Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.**

**As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.**

Ser. No. 86,699. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FOLEY BROS. & QUINLAN, INCORPORATED, St. Paul, Minn. Filed May 18, 1915.




*Particular description of goods.*—Dried Fruits, Preserved Fruits, Jams, Candied Citron-Peel, Candied Lemon-Peel, Candied Orange-Peel, Candy, Cotton-Seed Salad-Oil, Table Sauce, Chilli Sauce, Pickles, Prepared Mustard, Olives, Sago, Tapioca, Cocoanut, Poultry-Seasoning, Jelly, Apple-Butter, Honey, Sage, Savory, Thyme, and Marjoram.

*Claims use* since on or about Sept. 1, 1897.

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Ser. No. 89,137. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. M. SMITH & Co., London, Ontario, Canada. Filed Sept. 10, 1915.




Consisting of a red band placed upon and located centrally of the upper and lower sides of the package or carton containing the goods upon which the trade-mark is used, the words "Red Band" being associated with said band, no claim being made to the larger uncolored rectangular panel shown in the drawing.

*Particular description of goods.*—Dried Fruits, Cereal Breakfast Foods, and Extracts for Food-Flavoring Purposes.

*Claims use* since January, 1900.

Ser. No. 91,003. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GROCETERIA STORES COMPANY, Seattle, Wash. Filed Nov. 29, 1915.



Consists of the representation of a hand holding a shears and cutting in halves a number of bills of currency, the uppermost bill having printed thereon "Cost of Selling."

*Particular description of goods.*—Wheat-Flour, White Flour, Whole-Wheat Flour, Graham Flour, Coarse Graham Flour, Pancake-Flour, Buckwheat-Flour, Rye-Flour, Cornmeal-Flour, White Cornmeal, Rolled Oats, Steel-Cut Oats, Rolled Oats and Wheat; Powdered, Cube, and Yellow Cane-Sugar; Nuts, Peanut-Butter; Citron, Orange, and Lemon Peel; Lemon and Vanilla Extracts, Spices, Dried Black Figs, Dried White Figs, Candies, Coffee, Tea, Cocoa; Ground, Bitter, and Sweet Chocolate; Jellies, Jams, Marmalades; Cane, Sugar, and Maple Syrups; Molasses, Olive-Oil, Catsups; Evaporated Fruits—Namely, Raisins, Apples, Apricots, Peaches, and Prunes; Canned Vegetables—Namely, Sweet Potatoes, Pumpkin, Squash, Spinach, Sweet Corn, Lima Beans, String-Beans, Red Kidney-Beans, Pork and Beans, Baked Beans and Tomato Sauce, Sugar-Peas, Hominy, Succotash; Tomato Soup; Canned Fruits—Namely, Grapes, Strawberries, Loganberries, Blackberries, Pineapple, Peaches, Prunes, Apricots, and Apples; Canned Alaska Salmon, Canned Lobster; Ripe, Plain, and Stuffed Olives; Pickles, Vinegar, Chow-Chow, Sweet Picallili Relish, India Relish, Oyster Cocktail; Red-Pepper, Green-Red-Pepper, Mustard, and Worcestershire Sauces; Mayonnaise Dressing, Butter and Substitutes Therefor, Cheese; Milk, Both Raw, Treated, and Condensed; Bread, Cakes, Crackers, Yeast, Gelatin, Farina, Tapioca, Small Tapioca, Pearl-Barley; Cracked Rice, Head-Rice, Extra Fancy Rice, Blue Rose Rice, Broken Rice, and Jap Rice; Split Peas, Green Peas, Popcorn, Hominy, and Hominy-Grits; Dried Large and Small White Beans, Lima Beans, and Brown Beans; Cooking-Starch, Dried Fish, Poultry.

*Claims use* since Nov. 6, 1915.

Ser. No. 92,818. (CLASS 38. PRINTS AND PUBLICATIONS.) THE ROSE PATCH AND LABEL CO., Grand Rapids, Mich. Filed Feb. 12, 1916.

ROSE



No claim being made to the exclusive use of the words "Patented Process" and "Patch."
*Particular description of goods.*—Printed Labels.
*Claims use* since Oct. 20, 1915.

Ser. No. 93,190. (CLASS 39. CLOTHING.) RICHARD A. POHLMANN, Jefferson City, Mo. Filed Feb. 29, 1916.



OLD TRUSTY

No claim being made to the word "Brand."
*Particular description of goods.*—Overalls, Jumpers, Trousers, Coats, Shirts of All Kinds, Underwear of All Kinds, Gloves, and Hosiery.
*Claims use* since August, 1915.

Ser. No. 94,062. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) CHAMPION MANUFACTURING & SALES COMPANY, St. Louis, Mo. Filed Apr. 3, 1916.

CHAMPION

*Particular description of goods.*—Exhaust-Ventilators Which are Placed on Buildings and the Like to Withdraw the Foul Air or Gases Therefrom as Distinguished from Blowers or Fans.
*Claims use* since September, 1911.

Ser. No. 94,566. (CLASS 39. CLOTHING.) CHARLES H. DUDLEY, Hanover, N. H. Filed Apr. 20, 1916.



*Particular description of goods.*—Sweaters, Jerseys, Coats, Caps, Shirts, Underwear, Socks, and Leggings.
*Claims use* since Apr. 7, 1916.

Ser. No. 95,565. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEVENS MILLING & FEED CO. INC., Lacona, N. Y. Filed May 31, 1916.




No claim is made to the representation of a cow apart from the mark shown in the drawing.
*Particular description of goods.*—Dairy Ration.
*Claims use* since May 1, 1916.

Ser. No. 95,946. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MANHATTAN COFFEE MILLS, INC., Washington, D. C. Filed June 17, 1916. Under ten-year proviso.

MANHATTAN COFFEE MILLS

*Particular description of goods.*—Coffee.
*Claims use* since the year 1881.

Ser. No. 96,804. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAVON CHEMICAL CO., INC., New York, N. Y. Filed July 24, 1916.

UN-SAV

*Particular description of goods.*—Remedies for External Use Intended for the Treatment of Burns, (Whether from Fire, Hot Surfaces, Hot Liquids, or Sunburn,) Also for Treating Cuts, Bruises, and the Like.
*Claims use* since May 15, 1916.

Ser. No. 96,983. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) SAMUEL CLELAND DAVIDSON, Belfast, Ireland. Filed July 31, 1916.

WASP

*Particular description of goods.*—Pistols or Guns for Throwing Shells, and Such Shells.
*Claims use* since Apr. 17, 1916.

Ser. No. 96,984. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) SAMUEL CLELAND DAVIDSON, Belfast, Ireland. Filed July 31, 1916.

HORNET

*Particular description of goods.*—Pistols or Guns for Throwing Shells, and Such Shells.
*Claims use* since Apr. 17, 1916.





Ser. No. 97,357. (CLASS 39. CLOTHING.) SCHNEIDER & KALENDER, New York, N. Y. Filed Aug. 15, 1916.

CRESCENT

No claim is being made to the words "Tailor Made."
*Particular description of goods.*—Boys' Wash-Suits and Novelty Suits in Velvets, Corduroys, and other Materials and Cloth and Washable Suits and Dresses for Boys and Girls.
*Claims use* since about Nov. 1, 1915.

Ser. No. 97,688. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ALBERT C. JONES, Boston, Mass. Filed Aug. 29, 1916.

BECCO

*Particular description of goods.*—Gold and Silver Cleaner.
*Claims use* since June 1, 1916.

Ser. No. 97,723. (CLASS 32. FURNITURE AND UPHOLSTERY.) WEST COAST SPECIALTY CO., Portland, Oreg. Filed Aug. 30, 1916.

TOTEM

*Particular description of goods.*—Card-Tables, Sewing-Tables, Kitchen-Tables, Extension-Tables, Library-Tables, Magazine-Racks, Taborets, Step-Ladder Stools, Cedar Chests, Cupboards, Kitchen-Cabinets, Camp-Stools.
*Claims use* since March, 1916.

Ser. No. 97,754. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN MORRELL & CO., Ottumwa, Iowa. Filed Sept. 1, 1916.



The heart being printed in red, no claim being made to the exclusive use of the word "Morrell's" as shown.
*Particular description of goods.*—Extract of Beef.
*Claims use* since August, 1903.

Ser. No. 97,800. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. C. BAXTER & BRO., Brunswick, Me. Filed Sept. 11, 1916. Under ten-year proviso.

BAXTER'S

*Particular description of goods.*—Canned Vegetables, Particularly Canned Corn, Lima Beans, and Succotash.
*Claims use* since 1889.

Ser. No. 98,222. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SPARTAN GRAIN & MILL CO., Spartanburg, S. C. Filed Sept. 25, 1916.




No claim is made herein to the representation of a cow.
*Particular description of goods.*—Mixed Animal Feeds.
*Claims use* since Nov. 1, 1915.

Ser. No. 99,354. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DR. J. O. LAMBERT LIMITED, Montreal, Quebec, Canada. Filed Nov. 17, 1916.



The name being a facsimile of the signature of F. Boisvert.
*Particular description of goods.*—A Preparation for the Treatment of Cough, Cold, Bronchitis, Catarrh, Whooping-Cough, Asthma, Croup.
*Claims use* since Dec. 4, 1912.

Ser. No. 99,380. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EUGENE NEUMAIER, New York, N. Y. Filed Nov. 18, 1916.




The words "Curtains," "No.," and "3 yds." being disclaimed.
*Particular description of goods.*—Curtains of Knitted, Netted, and Textile Fabrics Trimmed with Lace and Goods and Merchandise of Above Description Sold by the Yard for Curtains.
*Claims use* since July 15, 1916.

Ser. No. 99,570. (CLASS 39. CLOTHING.) ELIZABETH G. GOMEZ, Buffalo, N. Y. Filed Nov. 27, 1916.




*Particular description of goods.*—Children's and Misses' Outer Garments, Including Coats, Suits, Dresses, and Hats.
*Claims use* since Apr. 10, 1913.

Ser. No. 99,578. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARTHUR P. MARTINEZ, Dallas, Tex., Filed Nov. 27, 1916.



*Particular description of goods.*—Coffee.
*Claims use* since Oct. 1, 1916.

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Ser. No. 99,695. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WORUMBO MANUFACTURING COMPANY, Lisbon Falls, Me. Filed Dec. 2, 1916.



*Particular description of goods.*—Woolen Goods in the Piece.
*Claims use* since Nov. 10, 1915.

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Ser. No. 99,759. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE HILL & GRIFFITH CO., Cincinnati, Ohio. Filed Dec. 7, 1916.

KORO

*Particular description of goods.*—Core-Blacking.
*Claims use* since Nov. 23, 1916.

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Ser. No. 99,800½. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) X-RAY INCUBATOR COMPANY, Des Moines, Iowa. Filed Dec. 8, 1916.




*Particular description of goods.*—Incubators and Brooders.
*Claims use* since Mar. 1, 1915.

Ser. No. 99,858. (CLASS 39. CLOTHING.) O'SULLIVAN RUBBER COMPANY, Portland, Me., and New York, N. Y. Filed Dec. 11, 1916.



No claim being made for the representation of a rubber heel except in connection with the mark shown.
*Particular description of goods.*—Rubber Heels for Boots and Shoes.
*Claims use* since November, 1914.

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Ser. No. 99,864. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TAKAMINE LABORATORY, INC., New York, N. Y. Filed Dec. 11, 1916.

Hirathiol

*Particular description of goods.*—Salves and Ointments for External Application for Cuts, Bruises, Burns, and Diseases of the Skin.
*Claims use* since Nov. 22, 1916.

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Ser. No. 99,961. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) B. L. KELLEY & SONS, Lancaster, Ky. Filed Dec. 15, 1916.

B. L. Kelley & Sons

The name "B. L. Kelley & Sons" is a facsimile of the handwriting of Walter T. Kelley, one of the members of the firm.
*Particular description of goods.*—Tobacco-Seed.
*Claims use* since the year 1900.

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Ser. No. 100,258. (CLASS 39. CLOTHING.) JAMES A. HEARN & SON, INC., New York, N. Y. Filed Dec. 30, 1916.

JAHSON

*Particular description of goods.*—Women's, Misses', and Children's Trimmed and Untrimmed Hats and Caps; Women's and Misses' Bathing-Suits, Wrappers, Kimonos, and Bath-Robes and Lounging-Robes, Pajamas, and House-Dresses, Negligées or Dressing-Sacks; Maids' Dresses and Nurses' Uniforms; Women's, Misses', and Children's Apparel—Namely, Suits, Dresses, Cloaks, Coats, Sweaters, Skirts, Fur Coats, Fur Neckwear, Fur Muffs, Fur Scarfs, Silk and other Colored Petticoats, Muslin Underwear, Woolen, Silk, Cotton, and Mixed Knit and Merino Underwear, Middy-Blouses, Waists, Blouses, and Aprons; Men's Boys', and Youths' Suits, Coats, Waistcoats, Vests, Bathing-Suits, Reefers, Ulsters, Hats and Caps, Shirts, Blouses, Shirt-Waists, Underclothing, Both Cotton and Woolen and Merino, Stockings, Socks, Collars and Cuffs, Neckwear, Pajamas, Sweaters, Night-Shirts, Bath-Robes, Smoking-Jackets, House-Coats, Cardigan Jackets, and Hosiery and Gloves.
*Claims use* since Friday, Sept. 1, 1916.





Ser. No. 100,489. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) PETER PAN FILM CORPORATION, Eddyville, N. Y. Filed Jan. 9, 1917.




The words "Film Corporation" being disclaimed.
*Particular description of goods.*—Photographic Films, Including Motion-Picture Films.
*Claims use* since Dec. 28, 1916.

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Ser. No. 100,498. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) L. J. MUTTY COMPANY, Boston, Mass. Filed Jan. 9, 1917.

DRIDEK

*Particular description of goods.*—Waterproofed Textile Fabrics for Tops, Curtains, and Upholstery for Automobiles and other Motor-Vehicles.
*Claims use* since Dec. 19, 1916.

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Ser. No. 100,517. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HOCKMEYER BROS., New York, N. Y. Filed Jan. 10, 1917.

Leatherskin

Comprising the word "Leatherskin," no claim being made to the exclusive use of the word "Cloth."
*Particular description of goods.*—Cotton Piece Goods, Corduroys, and Velvets.
*Claims use* since October, 1916.

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Ser. No. 100,519. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TONY W. KAECHELE, Tracy, Minn. Filed Jan. 10, 1917.



*Particular description of goods.*—An Embalming Fluid.
*Claims use* since June 1, 1906.

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Ser. No. 100,585. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) MAIL ORDER HOUSE OF SWITZERLAND, INC., New York, N. Y. Filed Jan. 13, 1917.




The picture being fanciful.
*Particular description of goods.*—Embroidered Patterns for Subsequent Conversion into Handkerchiefs, Ladies' Robes, Ladies' Waists, Children's and Babies' Dresses, Ladies' and Children's Underwear, Doilies, and Centerpieces.
*Claims use* since Dec. 20, 1916.

Ser. No. 100,735. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) GEORGE BORGFELDT & CO., New York, N. Y. Filed Jan. 19, 1917.

Cheerup

*Particular description of goods.*—Dolls and Doll Clothing, Doll Ornaments, Doll Implements, Doll Toys, Doll-Houses, Doll Furniture, Doll-Clothes, Doll Articles, Stuffed Animals, Balls of Rubber, Stuffed Textile Fabrics, and Leather or other Suitable Material, Balloons, Toy Animals of Rubber or other Suitable Material, Battles, Easter Eggs, Christmas-Tree Ornaments, Holiday and Table Favors, Children's Paint-Boxes, Plain and Dissected Picture-Blocks, Stencils, Toy Tea Sets, Toy Tool Sets, Toy Beach Sets, Toy Sewing Sets, Toy Embroidery Sets, Toy Trunks, Christmas Stockings, Mechanical Toys, Decalcomania Outfits, Stencil Outfits, Toy Drawing Outfits, Toy Transparent Slates, Toy Drums, Musical Toys, Cornucopias, Toy Archery Sets, Toy Watches, Whistles, and Marbles, Inflatable Toys and Toy Books, Roly-Polies, Nodding-Head Figures, Checkers, Chess, Counters, Dice Games, Indoor Golf, Table-Tennis, Table-Croquet, Toy Pool-Tables, Toy Fish-Ponds, Out-of-Door Games, Indian Game Outfits, Masks, Toy Boats, Toy Canoes, Drawing-Boxes, Cut-Out Toys, Building-Blocks, Construction Toys, Toy Garden Sets, Toy Air-Guns, Pop-Guns, and Toy Pistols, Tops, Toy Vehicles, Toy Sleds, Skates, and Skees, Base-Ball Outfits, as Follows: Bats, Balls, Mitts, Masks, Body-Guards, and Shin-Guards.
*Claims use* since Dec. 27, 1916.

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Ser. No. 100,786. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) DAVID VALENTINE, New York, N. Y. Filed Jan. 20, 1917.

Boudoir

*Particular description of goods.*—Silk Piece Goods.
*Claims use* since Dec. 27, 1916.

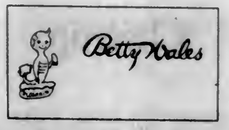
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Ser. No. 100,873. (CLASS 38. PRINTS AND PUBLICATIONS.) BUCKLEY, DEMENT & COMPANY, Chicago, Ill. Filed Jan. 24, 1917.



Buckley, Dement & Company disclaims the right to use exclusively the words "Reach 100 Direct by Mail at Cost of One in Person" in connection with its trade-mark.
*Particular description of goods.*—Form-Letters, Mailing-Lists, Catalogues of Mailing-Lists, and Mailing Advertising Publications.
*Claims use* since Apr. 25, 1916.

Ser. No. 100,887. (CLASS 17. TOBACCO PRODUCTS.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Jan. 24, 1917.




Comprising the words "Betty Wales" and "Ploshkin," with the doll figure, all included in a quadrangular figure, no claim being made to the exclusive right to the use of the words "Trade Mark."

*Particular description of goods.*—Cigars, Cigarettes; Smoking, Chewing, and Snuffing Tobacco; Little Cigars, Cheroots, Stogies; Leaf, Cut, Uncut, and Dust Tobacco, and Plug-Tobacco.

*Claims use* since Jan. 5, 1917.

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Ser. No. 100,924. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROBT. W. HESSEE, Ennis, Tex. Filed Jan. 25, 1917.

"RIVER BOTTOM"

*Particular description of goods.*—A Laxative Chill-Tonic.

*Claims use* since Feb. 1, 1916.

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Ser. No. 100,945. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) VESUVIUS CRUCIBLE COMPANY, Swissvale, Pa. Filed Jan. 25, 1917.




*Particular description of goods.*—Crucibles.

*Claims use* since Oct. 21, 1916.

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Ser. No. 101,042. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMUEL H. MCKEAN, New York, N. Y. Filed Jan. 30, 1917.

Bitro

No claim is made to the word "Phosphate."

*Particular description of goods.*—A Tonic to Strengthen the Nerves, Increase the Red Corpuscles of the Blood, and Correct Faulty Metabolism.

*Claims use* since Dec. 15, 1916.

Ser. No. 101,062. (CLASS 39. CLOTHING.) THE EXCELSIOR SHOE COMPANY, Portsmouth, Ohio. Filed Jan. 31, 1917.

EXCELSIOR

*Particular description of goods.*—Leather Shoes, Canvas Shoes, and Fabric Shoes other Than Fabric Shoes Having Uppers Cemented or Vulcanized to Soles of Rubber.

*Claims use* since Sept. 1, 1916.

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Ser. No. 101,143. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE COLORADO PHONOGRAPH COMPANY, Denver, Colo. Filed Feb. 3, 1917.

Ampliphone

*Particular description of goods.*—Talking-Machines.

*Claims use* since on or about Dec. 1, 1916.

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Ser. No. 101,213. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES ISENBERG, Philadelphia, Pa. Filed Feb. 7, 1917.




No claim being made to the terms "Face Powder" and "Trade Mark."

*Particular description of goods.*—Face-Powder.

*Claims use* since Sept. 1, 1916.

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Ser. No. 101,216. (CLASS 39. CLOTHING.) ROGERS BROTHERS, Chicago, Ill. Filed Feb. 7, 1917.



No claim being made to the words "Rogers Brothers."

*Particular description of goods.*—Men's Wearing-Apparel—to wit, Men's Suits, Overcoats, Rain-Coats, and Gabardines.

*Claims use* since September, 1915.





Ser. No. 101,228. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MABEL NICKERSON BAILEY, Oakland, Cal. Filed Feb. 8, 1917.




No claim being made to the word "Chocolates."

*Particular description of goods.*—Chocolate Confections.

*Claims use* since Apr. 15, 1915.

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Ser. No. 101,296. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INTERSTATE COTTON OIL REFINING CO., Sherman, Tex. Filed Feb. 10, 1917.

VELVET

*Particular description of goods.*—Shortening Composed of Cotton-Seed Oil and Oleo-Stearin.

*Claims use* since Oct. 13, 1916.

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Ser. No. 101,365. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HOLDEN-LEONARD CO., New York, N. Y. Filed Feb. 14, 1917.

CRYSTAL

No claim is made to the word "Cloth."

*Particular description of goods.*—Fabric Woven of Worsted Yarn, Woolen Yarn, and Silk for Garments and Coverings.

*Claims use* since December, 1916.

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Ser. No. 101,427. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EMILLIE LA HAYE, New York, N. Y. Filed Feb. 16, 1917.

Gloriotint

*Particular description of goods.*—Tinting Silk Underwear, Crêpe de Chine, Georgette Crape, and Silk Blouses.

*Claims use* since Jan. 1, 1917.

Ser. No. 101,560. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TEXAS-MEXICAN MILLING CO., Laredo, Tex. Filed Feb. 20, 1917.

LA "MALINCHE"



*Particular description of goods.*—Wheat-Flour.

*Claims use* since Mar. 31, 1916.

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Ser. No. 101,601. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIGGS, COOPER & COMPANY, St. Paul, Minn. Filed Feb. 23, 1917.

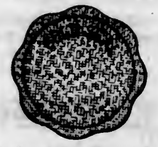
Krystup

*Particular description of goods.*—Table-Syrup.

*Claims use* since Jan. 1, 1917.

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Ser. No. 101,618. (CLASS 39. CLOTHING.) OLMSTEAD QUABOAG CORSET COMPANY, West Brookfield, Mass. Filed Feb. 23, 1917.



The mark being shown in gold color.

*Particular description of goods.*—Corsets.

*Claims use* since about Feb. 7, 1917.

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Ser. No. 101,720. (CLASS 15. OILS AND GREASES.) THE WARREN REFINING & CHEMICAL CO., Cleveland, Ohio. Filed Feb. 26, 1917.

Veracity

*Particular description of goods.*—Lubricating-Oil, Transmission-Grease, and Differential-Grease.

*Claims use* since July, 1906.

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Ser. No. 101,760. (CLASS 39. CLOTHING.) L. H. TELLER AND COMPANY, Philadelphia, Pa. Filed Feb. 27, 1917.




No claim is made to the exclusive use of the phrase "Standard Skirts."

*Particular description of goods.*—Skirts.

*Claims use* since Sept. 1, 1916.

Ser. No. 101,784. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) B. J. JOHNSON SOAP CO. INC., Milwaukee, Wis. Filed Feb. 28, 1917.

**TROCO**

*Particular description of goods.*—A Substitute for Butter.
*Claims use* since Nov. 15, 1916.

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Ser. No. 101,785. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) B. J. JOHNSON SOAP CO. INC., Milwaukee, Wis. Filed Feb. 28, 1917.

***TROCOLENE***

*Particular description of goods.*—A Substitute for Lard.
*Claims use* since Jan. 2, 1917.

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Ser. No. 101,793. (CLASS 39. CLOTHING.) MOLLIE MARKUN, New York, N. Y. Filed Feb. 28, 1917.

Markun

The trade-mark is a facsimile of the surname of the proprietor and applicant, whose full name is Mollie Markun, in her handwriting.
*Particular description of goods.*—Outer Skirts.
*Claims use* since Jan. 2, 1917.

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Ser. No. 101,914. (CLASS 33. GLASSWARE.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Mar. 6, 1917.




Comprising the words "Betty Wales" and "Ploshkin," together with the doll figure, all inclosed in a quadrangle, no claim being made to the exclusive right to the use of the words "Trade Mark."
*Particular description of goods.*—Glassware, as Follows: Lamp-Chimneys, Lantern-Globes, Shades, Reflectors, Arc-Lights, Glass Bulbs, Ornaments of Glass, Bottles, Flasks, Siphons, Prisms, Reinforced Glass, Fruit-Jars, Preserving-Jars, Glass Shelves, Glass Containers, Glassware for Table Use, and Cooking Utensils.
*Claims use* since Jan. 5, 1917.

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Ser. No. 101,953. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GERET H. CONOVER, Middletown, N. J. Filed Mar. 7, 1917.

Mother-in-law

Comprising the words "Mother-in-Law."
*Particular description of goods.*—A Vegetable Relish Composed of Tomatoes, Peppers, Onions, Cauliflower, and Cucumbers.
*Claims use* since October, 1915.

Ser. No. 101,991. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MACLAREN IMPERIAL CHEESE CO. LIMITED, Toronto, Ontario, Canada, and Detroit, Mich. Filed Mar. 8, 1917.

**NIPPY**

*Particular description of goods.*—Cheese.
*Claims use* since June, 1910.

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Ser. No. 102,045. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE PARK & POLLARD COMPANY, Boston, Mass. Filed Mar. 10, 1917.

OVERALL

*Particular description of goods.*—Feeders, Drinking-Fountains, and Water-Holders for Poultry.
*Claims use* since Nov. 1, 1910.

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Ser. No. 102,085. (CLASS 39. CLOTHING.) ABRAHAM M. MALOUF, Salt Lake City, Utah. Filed Mar. 12, 1917.

First National

*Particular description of goods.*—Gloves for Men, Women, and Children, Made of Leather, Wool, Cotton, and Silk.
*Claims use* since Jan. 3, 1916.

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Ser. No. 102,105. (CLASS 38. PRINTS AND PUBLICATIONS.) THE THIRD NATIONAL BANK OF ST. LOUIS, MISSOURI, St. Louis, Mo. Filed Mar. 12, 1917. Under ten-year proviso.

NATIONAL BANK 3rd OF ST. LOUIS

*Particular description of goods.*—Printed Books, Booklets, Circulars, Pamphlets, and Posters.
*Claims use* since Jan. 1, 1892.

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Ser. No. 102,137. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE DUQUESNE PAINT COMPANY, Pittsburgh, Pa. Filed Mar. 14, 1917.

DU-KANE

*Particular description of goods.*—Ready-Mixed and Paste Paint.
*Claims use* since Mar. 7, 1917.





Ser. No. 102,155. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CONVERSE RUBBER SHOE COMPANY, Malden, Mass. Filed Mar. 15, 1917.

GOOD AS WHEAT

*Particular description of goods.*—Rubber Tires.
*Claims use* since Mar. 8, 1917.

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Ser. No. 102,191. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOVE-ME-GUM CO., Baltimore, Md. Filed Mar. 16, 1917.

CUPID

*Particular description of goods.*—Chewing-Gum.
*Claims use* since Jan. 27, 1917.

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Ser. No. 102,201. (CLASS 39. CLOTHING.) JOSEPH ROSENBERG, New York, N. Y. Filed Mar. 16, 1917.

JOROCO

*Particular description of goods.*—Ladies' Dresses.
*Claims use* since Feb. 15, 1917.

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Ser. No. 102,208. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) G. ARTHUR BUHL, Chicago, Ill. Filed Mar. 17, 1917.

ASKUM

*Particular description of goods.*—Malt-Sugar and Malt-Flour.
*Claims use* since Feb. 19, 1917.

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Ser. No. 102,228. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FREDERICK STEARNS & CO., Detroit, Mich. Filed Mar. 17, 1917.

**RENSIN**

*Particular description of goods.*—Milk-Coagulant.
*Claims use* since Oct. 28, 1916.

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Ser. No. 102,254. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) HARTMAN FURNITURE AND CARPET COMPANY, Chicago, Ill. Filed Mar. 19, 1917.

HERCULES



*Particular description of goods.*—Ready-Mixed Paints.
*Claims use* since Feb. 1, 1917.

Ser. No. 102,301. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) TITUS BLATTER & COMPANY, New York, N. Y. Filed Mar. 20, 1917.

**LEONITE**

*Particular description of goods.*—Artificial and Imitation Leather.
*Claims use* since Nov. 1, 1916.

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Ser. No. 102,303. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) BASS-HUETER PAINT CO., San Francisco, Cal. Filed Mar. 21, 1917.

B-H

*Particular description of goods.*—Paste and Ready-Mixed Paints, Varnishes, and Stains.
*Claims use* since Jan. 2, 1916.

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Ser. No. 102,366. (CLASS 39. CLOTHING.) UNION MILLS, INC., New York, N. Y. Filed Mar. 22, 1917.

**CALORIC**

Comprising the word "Caloric."
*Particular description of goods.*—Knitted Underwear, Sweaters, and Sweater-Coats.
*Claims use* since Mar. 9, 1917.

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Ser. No. 102,368. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) BENJAMIN ELECTRIC MANUFACTURING COMPANY, Chicago, Ill. Filed Mar. 23, 1917.

**TELECODE**

*Particular description of goods.*—Electric Sound-Producing Signaling Devices.
*Claims use* since Jan. 1, 1917.

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Ser. No. 102,376. (CLASS 27. HOROLOGICAL INSTRUMENTS.) GOLDSMITH, STERN & CO., New York, N. Y. Filed Mar. 23, 1917.

**LILY**

*Particular description of goods.*—Watches and Watch-Movements.
*Claims use* since Mar. 20, 1917.

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Ser. No. 102,388. (CLASS 38. PRINTS AND PUBLICATIONS.) SCOTT PUBLISHING COMPANY, St. Louis, Mo. Filed Mar. 28, 1917.

Home Circle Magazine Section

*Particular description of goods.*—The Magazine-Section of a Monthly Publication.
*Claims use* since Feb. 25, 1917.

Ser. No. 102,417. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. JELKE COMPANY, Chicago, Ill. Filed Mar. 24, 1917.

Delicia

"Delicia."
*Particular description of goods.*—Oleomargarin.
*Claims use* since May 1, 1890.

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Ser. No. 102,424. (CLASS 38. PRINTS AND PUBLICATIONS.) THE AUTOMOBILE ROUTE BOOK COMPANY, Kansas City, Mo. Filed Mar. 24, 1917.

TIB

*Particular description of goods.*—Guide-Books Published Annually in the Spring of Each Year, There Being No Definite Date for Publication; Maps and Touring-Information Literature.
*Claims use* since January, 1917.

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Ser. No. 102,431. (CLASS 39. CLOTHING.) CARL BONWIT, INC., New York, N. Y. Filed Mar. 26, 1917.

*Ribonette*

*Particular description of goods.*—Outer Skirts.
*Claims use* since Mar. 10, 1917.

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Ser. No. 102,433. (CLASS 10. FERTILIZERS.) DARLING & COMPANY, Chicago, Ill. Filed Mar. 26, 1917. Under ten-year proviso.

DARLING'S

*Particular description of goods.*—Fertilizers, and Particularly Fertilizers Composed of Animal Matter.
*Claims use* since 1881.

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Ser. No. 102,503. (CLASS 39. CLOTHING.) C. H. WOLFELT CO., Los Angeles, Cal. Filed Mar. 27, 1917.

"THE BOOTERY"

*Particular description of goods.*—Boots, Shoes, and Slippers Made of Leather, Rubber, or Canvas.
*Claims use* since Nov. 9, 1908.

Ser. No. 102,531. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE RAPPAHANNOCK WOOLEN MILLS CO., Laurel Mills, Va. Filed Mar. 28, 1917. Under ten-year proviso.

RAPPAHANNOCK

*Particular description of goods.*—Woolen Goods in the Piece.
*Claims use* since 1891.

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Ser. No. 102,550. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BALTIMORE PEARL HOMINY COMPANY, Baltimore, Md. Filed Mar. 29, 1917.

FAIRY

*Particular description of goods.*—Corn Flakes.
*Claims use* since June 15, 1916.

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Ser. No. 102,578. (CLASS 27. HOROLOGICAL INSTRUMENTS.) WESTERN CLOCK CO., Peru, Ill. Filed Mar. 29, 1917.

RED HEAD

*Particular description of goods.*—Clocks and Watches.
*Claims use* since Mar. 6, 1917.

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Ser. No. 102,589. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BURDETT OXYGEN COMPANY, Denver, Colo. Filed Mar. 30, 1917.

PUROX

*Particular description of goods.*—Electrolytic Oxygen.
*Claims use* since about Mar. 6, 1917.

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Ser. No. 102,629. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) PRESSURE PROOF PISTON RING CO., Boston, Mass. Filed Mar. 31, 1917.

PPP

*Particular description of goods.*—Piston-Rings.
*Claims use* since Mar. 28, 1917.

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Ser. N. 102,645. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELLIS GROVE MILLING COMPANY, Ellis Grove, Ill. Filed Apr. 2, 1917.

PLEEZE-ALL

*Particular description of goods.*—Wheat-Flour.
*Claims use* since about January, 1915.





Ser. No. 102,646. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELLIS GROVE MILLING COMPANY, Ellis Grove, Ill. Filed Apr. 2, 1917.

Catch

*Particular description of goods.*—Wheat-Flour.
*Claims use* since about July, 1908.

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Ser. No. 102,647. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELLIS GROVE MILLING COMPANY, Ellis Grove, Ill. Filed Apr. 2, 1917.

TRILBY

*Particular description of goods.*—Wheat-Flour.
*Claims use* since about January, 1897.

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Ser. No. 102,650. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) HIGRADE BELTING & WEAVING CO., Newark, N. J. Filed Apr. 2, 1917.

STANWELL

Comprising the word "Stanwell."
*Particular description of goods.*—Textile, Fiber, Rubber, and Balata Belting.
*Claims use* since Mar. 16, 1917.

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Ser. No. 102,651. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) HIGRADE BELTING & WEAVING CO., Newark, N. J. Filed Apr. 2, 1917.

MANX

Comprising the word "Manx."
*Particular description of goods.*—Textile, Fiber, Rubber, and Balata Belting.
*Claims use* since Mar. 16, 1917.

Ser. No. 102,652. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) HIGRADE BELTING & WEAVING CO., Newark, N. J. Filed Apr. 2, 1917.

CLIMAX

Comprising the word "Climax."
*Particular description of goods.*—Textile, Fiber, Rubber, and Balata Belting.
*Claims use* since Mar. 16, 1917.

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Ser. No. 102,653. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) HIGRADE BELTING & WEAVING CO., Newark, N. J. Filed Apr. 2, 1917.

IWANA

Comprising the word "Iwana."
*Particular description of goods.*—Textile, Fiber, Rubber, and Balata Belting.
*Claims use* since Mar. 16, 1917.

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Ser. No. 102,654. (CLASS 2. RECEPTACLES.) HYGEIA CAN COMPANY, INC., New York, N. Y. Filed Apr. 2, 1917.

HYGIA

*Particular description of goods.*—Waste-Receptacles—Namely, Containers for Garbage, Refuse, &c.
*Claims use* since about Oct. 1, 1916.

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Ser. No. 102,681. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) D. P. BROWN & CO., Philadelphia, Pa. Filed Apr. 3, 1917.

BETA

*Particular description of goods.*—Textile Belting.
*Claims use* since about November, 1907.

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Ser. No. 102,730. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Apr. 4, 1917.

AVIONITE

*Particular description of goods.*—Aeroplane-Wing Fabrics.
*Claims use* since Feb. 12, 1917.

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Ser. No. 102,732. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE BLU STREEK COMPANY, El Centro, Cal. Filed Apr. 5, 1917.

Blu-Streek

*Particular description of goods.*—A Metal-Grinding Compound.
*Claims use* since Jan. 1, 1917.

Ser. No. 102,738. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) HERO SNAP FASTENER Co., New York, N. Y. Filed Apr. 5, 1917.

NOXALL

*Particular description of goods.*—Metal Snap-Fasteners, Snap-Fastening Buttons, or Push-Buttons.
*Claims use* since about Mar. 15, 1917.

Ser. No. 102,822. (CLASS 39. CLOTHING.) N. R. ALLEN'S SONS COMPANY, Kenosha, Wis. Filed Apr. 9, 1917. Under ten-year proviso.

ALLEN'S SOLE STRIP

*Particular description of goods.*—Sole-Strips.
*Claims use* since June 1, 1894.

Ser. No. 102,831. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) B. HELLER & Co., Chicago, Ill. Filed Apr. 9, 1917.

ANT-BANE

*Particular description of goods.*—An Ant-Destroyer.
*Claims use* since July 26, 1911.

Ser. No. 102,884. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) HOPE MACHINE COMPANY, Philadelphia, Pa. Filed Apr. 11, 1917.

ECLIPSE

*Particular description of goods.*—Piston-Rings.
*Claims use* since Feb. 15, 1916.

Ser. No. 102,889. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MAIN & MAIN, Iowa City, Iowa. Filed Apr. 11, 1917.

New Comfort

*Particular description of goods.*—Sewing-Machines.
*Claims use* since Mar. 1, 1917.

Ser. No. 102,907. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THEO. A. KOCHS COMPANY, Chicago, Ill. Filed Apr. 12, 1917.

*Pleezall*

*Particular description of goods.*—Razors.
*Claims use* since on or about Mar. 1, 1913.

Ser. No. 102,912. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LEWIS E. ROTHLEIN, New York, N. Y. Filed Apr. 12, 1917.

FLUX-O-LIN

*Particular description of goods.*—Soldering Fluid.
*Claims use* since Feb. 10, 1917.

Ser. No. 102,930. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FREDERICK J. BRONS, Peoria, Ill. Filed Apr. 13, 1917.

KICKAPOO

*Particular description of goods.*—Canned Tomatoes, Canned Hominy, Canned Wax-Beans, Canned String-Beans, Canned Black Raspberries, Canned Beets, Canned Spinach, and Canned Pink Beans.
*Claims use* since Mar. 1, 1916.

Ser. No. 102,982. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DETROIT STARTER Co., Detroit, Mich. Filed Apr. 14, 1917.

VERSAL

*Particular description of goods.*—Electric-Motor-Car-Lighting Systems.
*Claims use* since about Dec. 1, 1916.

Ser. No. 102,983. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DETROIT DENTAL MANUFACTURING Co., Detroit, Mich. Filed Apr. 14, 1917.

EX-O-DENT

*Particular description of goods.*—Chewing-Gum.
*Claims use* since about Apr. 2, 1917.

Ser. No. 102,987. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) KEYSTONE SNAP FASTENER CORPORATION, Philadelphia, Pa. Filed Apr. 14, 1917.



*Particular description of goods.*—Snap-Fasteners.
*Claims use* since Feb. 1, 1917.

Ser. No. 102,988. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) KEYSTONE SNAP FASTENER CORPORATION, Philadelphia, Pa. Filed Apr. 14, 1917.



*Particular description of goods.*—Snap-Fasteners.
*Claims use* since Feb. 1, 1917.





Ser. No. 102,991. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) MILLS & GIBB CORPORATION, New York, N. Y. Filed Apr. 14, 1917.

CARNATION

Comprising the word "Carnation."
*Particular description of goods.*—Snap-Fasteners, Safety-Pins, Collar-Supporters, and Hooks and Eyes.
*Claims use* since January, 1914.

Ser. No. 102,997. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) VERNAM PICTURES Co. (INC.), New York, N. Y. Filed Apr. 14, 1917.

FORTUNE

*Particular description of goods.*—Moving-Picture Films.
*Claims use* since Mar. 3, 1917.

Ser. No. 102,999. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARKADELPHIA MILLING COMPANY, Arkadelphia, Ark. Filed Apr. 16, 1917.

WHITE GLORY

*Particular description of goods.*—Wheat-Flour.
*Claims use* since about February, 1905.

Ser. No. 103,000. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARKADELPHIA MILLING COMPANY, Arkadelphia, Ark. Filed Apr. 16, 1917.

PLEASE

*Particular description of goods.*—Wheat-Flour.
*Claims use* since about April, 1906.

Ser. No. 103,002. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ALABAMA GROCERY Co., Birmingham, Ala. Filed Apr. 16, 1917.

Bottle Rock

*Particular description of goods.*—Ginger-Ale and Syrup for the Manufacture of the Same.
*Claims use* since July 6, 1906.

Ser. No. 103,030. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MODERN FLOUR MILLS, Macon, Ga. Filed Apr. 16, 1917.

STAG

*Particular description of goods.*—Self-Rising Wheat-Flour.
*Claims use* since about Dec. 4, 1913.

Ser. No. 103,032. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MODERN FLOUR MILLS, Macon, Ga. Filed Apr. 16, 1917.

NANCY LEE

*Particular description of goods.*—Self-Rising Wheat-Flour.
*Claims use* since about Dec. 12, 1913.

Ser. No. 103,033. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MODERN FLOUR MILLS, Macon, Ga. Filed Apr. 16, 1917.

EL CAPITAN

*Particular description of goods.*—Self-Rising Wheat-Flour.
*Claims use* since about May 15, 1914.

Ser. No. 103,035. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MODERN FLOUR MILLS, Macon, Ga. Filed Apr. 16, 1917.

FAIR PLAY

*Particular description of goods.*—Self-Rising Wheat-Flour.
*Claims use* since about May 27, 1914.

Ser. No. 103,036. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MODERN FLOUR MILLS, Macon, Ga. Filed Apr. 16, 1917.

ANGORA

*Particular description of goods.*—Self-Rising Wheat-Flour.
*Claims use* since about Oct. 24, 1916.

Ser. No. 103,077. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE CLEVELAND MILLING MACHINE COMPANY, Cleveland, Ohio. Filed Apr. 18, 1917.

SC

*Particular description of goods.*—Milling, Grinding, and Relieving Machines and Cutters.
*Claims use* since Apr. 16, 1916.

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Ser. No. 103,084. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE LITTLE GIANT STARTER COMPANY, Canton, Ohio. Filed Apr. 18, 1917.

LITTLE GIANT

*Particular description of goods.*—Engine-Starters other Than Electrical.
*Claims use* since Aug. 1, 1914.

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Ser. No. 103,092. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) P. E. SHARPLESS COMPANY, Philadelphia, Pa. Filed Apr. 18, 1917.

BALL

*Particular description of goods.*—Sweetened and Condensed Skimmed Milk.
*Claims use* since prior to May 1, 1915.

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Ser. No. 103,094. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) P. E. SHARPLESS COMPANY, Philadelphia, Pa. Filed Apr. 18, 1917.

BAMBOO

*Particular description of goods.*—Pimento Cheese.
*Claims use* since prior to July 1, 1913.

Ser. No. 103,096. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) P. E. SHARPLESS COMPANY, Philadelphia, Pa. Filed Apr. 18, 1917.

PESCO

*Particular description of goods.*—Neufchâtel Style of Soft Cheese.
*Claims use* since prior to Mar. 26, 1913.

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Ser. No. 103,097. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INDEPENDENT GUM CO., Kansas City, Mo. Filed Apr. 18, 1917.



*Particular description of goods.*—Chewing-Gum.
*Claims use* since December, 1916.

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Ser. No. 103,098. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INDEPENDENT GUM CO., Kansas City, Mo. Filed Apr. 18, 1917.



*Particular description of goods.*—Chewing-Gum.
*Claims use* since December, 1916.

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Ser. No. 103,099. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INDEPENDENT GUM CO., Kansas City, Mo. Filed Apr. 18, 1917.



*Particular description of goods.*—Chewing-Gum.
*Claims use* since December, 1916.

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Ser. No. 103,104. (CLASS 46. FOODS AND INGREDIENTS OF GOODS.) FRANK E. DAVIS COMPANY, Gloucester, Mass. Filed Apr. 19, 1917.

FLUFF

The word "Fluff."
*Particular description of goods.*—Filamented Preserved Fish.
*Claims use* since August, 1905.

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Ser. No. 103,118. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHNSON EDUCATOR FOOD CO., Boston, Mass. Filed Apr. 19, 1917.

CAMPUS

The word "Campus."
*Particular description of goods.*—Crackers and Biscuits.
*Claims use* since Oct. 1, 1916.





Ser. No. 103,131. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TEBBETTS AND GARLAND STORE, Chicago, Ill. Filed Apr. 19, 1917.

KOLAN

*Particular description of goods.*—Blend Coffee.
*Claims use* since Feb. 1, 1917.

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Ser. No. 103,167. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FAIRMONT CREAMERY CO., Omaha, Nebr. Filed Apr. 21, 1917.

Liquid Gold

*Particular description of goods.*—Butter.
*Claims use* since some time in 1908.

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Ser. No. 103,182. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) PIONEER SUSPENDER COMPANY, Philadelphia, Pa. Filed Apr. 21, 1917.

TUXEDO

*Particular description of goods.*—Suspenders.
*Claims use* since prior to 1902.

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Ser. No. 103,228. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) PROTEX MANUFACTURING CO., Chicago, Ill. Filed Apr. 23, 1917.




*Particular description of goods.*—Tire-Gages and Speedometers.
*Claims use* since Feb. 25, 1917.

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Ser. No. 103,245. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) B. O. BOWERS CO., New York, N. Y. Filed Apr. 24, 1917.

BOBCO

*Particular description of goods.*—Canned Shrimps, Canned Sardines in Olive-Oil and Canned Sardines in Cotton-Seed Oil, and Canned Salmon.
*Claims use* since Sept. 16, 1913.

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Ser. No. 103,251. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PETER DIRVIN, Healdsburg, Cal. Filed Apr. 24, 1917.

ENTERPRISE

*Particular description of goods.*—Chilli Sauce, Canned Pears, Canned Royal Anne Cherries, Canned Peaches, Canned Tomatoes, and Canned Apricots.
*Claims use* since Aug. 8, 1910.

Ser. No. 103,252. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THOMAS A. EDISON, INCORPORATED, West Orange, N. J. Filed Apr. 24, 1917.

CONQUEST

*Particular description of goods.*—Motion-Picture Films.
*Claims use* since Mar. 10, 1917.

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Ser. No. 103,253. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THOMAS A. EDISON, INCORPORATED, West Orange, N. J. Filed Apr. 24, 1917.



*Particular description of goods.*—Motion-Picture Films.
*Claims use* since Mar. 10, 1917.

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Ser. No. 103,255. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FEDERAL CONDENSED MILK COMPANY, Seattle, Wash. Filed Apr. 24, 1917.

FEDERAL

*Particular description of goods.*—Condensed Evaporated Milk.
*Claims use* since Apr. 18, 1917.

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Ser. No. 103,260. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RANDOLPH MARKETING CO., Los Angeles, Cal. Filed Apr. 24, 1917.

WHITE HOUSE

*Particular description of goods.*—Oranges, Lemons, Grape-Fruit, Tangerines.
*Claims use* since Dec. 15, 1911.

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Ser. No. 103,275. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WARD BAKING COMPANY, New York, N. Y. Filed Apr. 24, 1917.

ARKOLENE

*Particular description of goods.*—Shortening.
*Claims use* since Aug. 7, 1916.

Ser. No. 103,278. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) ARTCRAFT PICTURES CORPORATION, New York, N. Y. Filed Apr. 25, 1917.




*Particular description of goods.*—Moving-Picture Films.
*Claims use* since Oct. 7, 1916.

Ser. No. 103,289. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) FAMOUS PLAYERS FILM COMPANY, New York, N. Y. Filed Apr. 25, 1917.



*Particular description of goods.*—Moving-Picture Films.
*Claims use* since Jan. 1, 1914.

Ser. No. 103,382. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE BLACK & DECKER MANUFACTURING COMPANY, Baltimore, Md. Filed Apr. 28, 1917.




*Particular description of goods.*—Electric Drills and Electric Air-Pumps.
*Claims use* since on or about Mar. 19, 1915.

Ser. No. 103,434. (CLASS 27. HOROLOGICAL INSTRUMENTS.) LOUIS F. SACKERMAN, Baltimore, Md. Filed Apr. 30, 1917.

Radilo

*Particular description of goods.*—Clocks.
*Claims use* since Jan. 15, 1917.

Ser. No. 103,451. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) H. T. PAIste COMPANY, Philadelphia, Pa. Filed May 1, 1917.

H. & L.

*Particular description of goods.*—Fuse-Plugs.
*Claims use* since about September, 1904.

Ser. No. 103,452. (CLASS 27. HOROLOGICAL INSTRUMENTS.) PEOPLE'S OUTFITTING COMPANY, Detroit, Mich. Filed May 1, 1917.

WOLVERINE

*Particular description of goods.*—Watches.
*Claims use* since Jan. 10, 1917.

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# TRADE-MARK REGISTRATIONS GRANTED

## MAY 29, 1917.

116,814. DOLLS, DOLL-HOUSES, TOY HOUSES, TOY FIGURES, TOY BLACKBOARDS, AND TOY FURNITURE. THE BEAVER COMPANY, Buffalo and Beaver Falls, N. Y.; Roanoke Rapids, N. C.; Thorold and Ottawa, Ontario, Canada, and London, England.
Filed November 29, 1916. Serial No. 99,618. PUBLISHED MARCH 27, 1917.

116,815. COTTON PIECE GOODS. BOOTT MILLS, Lowell, Mass.
Filed January 12, 1917. Serial No. 100,542. PUBLISHED MARCH 20, 1917.

116,816. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. GEORGE BORGFELDT & Co., New York, N. Y.
Filed September 6, 1916. Serial No. 97,819. PUBLISHED MARCH 27, 1917.

116,817. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. GEORGE BORGFELDT & Co., New York, N. Y.
Filed September 22, 1916. Serial No. 98,155. PUBLISHED MARCH 27, 1917.

116,818. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. GEORGE BORGFELDT & Co., New York, N. Y.
Filed October 5, 1916. Serial No. 98,429. PUBLISHED MARCH 27, 1917.

116,819. COTTON DAMASKS, NAPKINS, TABLECLOTHS, AND COTTON PIECE GOODS. DUDLEY D. CAMPBELL, New York, N. Y.
Filed February 7, 1917. Serial No. 101,209. PUBLISHED MARCH 20, 1917.

116,820. LAXATIVE JAM. CANTRELL & DAWSON, Guymon, Okla.
Filed January 31, 1917. Serial No. 101,058. PUBLISHED MARCH 27, 1917.

116,821. MEDICINAL TONIC. CANTRELL & DAWSON, Guymon, Okla.
Filed January 31, 1917. Serial No. 101,059. PUBLISHED MARCH 27, 1917.

116,822. ENAMEL PAINT. CARPENTER-MORTON CO., Boston, Mass.
Filed October 31, 1916. Serial No. 98,993. PUBLISHED MARCH 27, 1917.

116,823. NON-ALCOHOLIC CARBONATED BEVERAGE TO BE SOLD AS A SOFT DRINK. COLFAX BOTTLING WORKS, Colfax, Iowa.
Filed February 9, 1917. Serial No. 101,260. PUBLISHED MARCH 27, 1917.

116,824. BLOOD REMEDY FOR TREATING CERTAIN NAMED DISEASES. COMAR REMEDY COMPANY, Hot Springs, Ark.
Filed February 1, 1917. Serial No. 101,084. PUBLISHED MARCH 27, 1917.

116,825. WALL-PAPER SIZE ADAPTED FOR COVERING WALLS, CEILINGS, AND OTHER SURFACES. THE COTT-A-LAP COMPANY, Somerville, N. J.
Filed November 21, 1916. Serial No. 99,432. PUBLISHED MARCH 27, 1917.

116,826. ILLUMINATING, LUBRICATING, AND BURNING OILS AND GREASES. CREW LEVICK COMPANY, Philadelphia, Pa.
Filed January 9, 1917. Serial No. 100,480. PUBLISHED MARCH 27, 1917.

116,827. SOLUBLE SULFONATED HYDROCARBON HAVING CURATIVE PROPERTIES AND USED IN TREATING CERTAIN NAMED DISEASES. JOHN ALDEN CUSHING, Lancaster, N. Y.
Filed December 21, 1916. Serial No. 100,077. PUBLISHED MARCH 27, 1917.

116,828. MIXED LIQUID PAINTS. THE CUSHING & FEARN COMPANY, Columbus, Ohio.
Filed February 15, 1917. Serial No. 101,384. PUBLISHED MARCH 27, 1917.

116,829. NON-ALCOHOLIC CARBONATED BEVERAGES TO BE SOLD AS SOFT DRINKS. EDWARD DIEHL, Nashville, Tenn.
Filed February 9, 1917. Serial No. 101,263. PUBLISHED MARCH 27, 1917.

116,830. TABLE-TOPS. THE ENAMEL PRODUCTS COMPANY, Cleveland, Ohio.
Filed January 8, 1917. Serial No. 100,426. PUBLISHED MARCH 27, 1917.

116,831. MOVING-PICTURE FILMS. ESSANAY FILM MANUFACTURING COMPANY, Chicago, Ill.
Filed January 24, 1917. Serial No. 100,876. PUBLISHED MARCH 27, 1917.

116,832. LIQUID TOILET CREAMS. WILLIAM E. EVENSON, Baraboo, Wis.
Filed January 2, 1917. Serial No. 100,287. PUBLISHED MARCH 27, 1917.

116,833. CERTAIN NAMED METALS AND METAL CASTINGS AND FORGINGS. THE FAIRLEY-DAVIDSON STEEL CO. INC., New York, N. Y.
Filed January 30, 1917. Serial No. 101,033. PUBLISHED MARCH 27, 1917.

116,834. CERTAIN NAMED METALS AND METAL CASTINGS AND FORGINGS. THE FAIRLEY-DAVIDSON STEEL CO. INC., New York, N. Y.
Filed January 30, 1917. Serial No. 101,034. PUBLISHED MARCH 27, 1917.

116,835. CERTAIN NAMED METALS AND METAL CASTINGS AND FORGINGS. THE FAIRLEY-DAVIDSON STEEL CO. INC., New York, N. Y.
Filed January 30, 1917. Serial No. 101,035. PUBLISHED MARCH 27, 1917.

116,836. SYRUPS FOR MAKING SOFT DRINKS AND BOTTLED NON-ALCOHOLIC STILL OR CARBONATED BEVERAGES MADE THEREFROM. FLORIDA CITRAJUICE CO., Winter Park, Fla.
Filed February 9, 1917. Serial No. 101,267. PUBLISHED MARCH 27, 1917.

116,837. BOXES OF PAPER OR CARDBOARD. FLORENCE FORRISTALL, Brookline, Mass.
Filed February 2, 1917. Serial No. 101,123. PUBLISHED MARCH 27, 1917.

116,838. WOOLEN AND WORSTED PIECE GOODS. FORSTMANN & HUFFMANN CO., Passaic, N. J.
Filed February 14, 1917. Serial No. 101,357. PUBLISHED MARCH 20, 1917.

116,839. WOOLEN AND WORSTED PIECE GOODS. FORSTMANN & HUFFMANN CO., Passaic, N. J.
Filed February 14, 1917. Serial No. 101,358. PUBLISHED MARCH 20, 1917.

116,840. WOOLEN AND WORSTED PIECE GOODS. FORSTMANN & HUFFMANN CO., Passaic, N. J.
Filed February 14, 1917. Serial No. 101,359. PUBLISHED MARCH 20, 1917.

116,841. WOOLEN AND WORSTED PIECE GOODS. FORSTMANN & HUFFMANN CO., Passaic, N. J.
Filed February 14, 1917. Serial No. 101,361. PUBLISHED MARCH 20, 1917.

116,842. WOOLEN AND WORSTED PIECE GOODS. FORSTMANN & HUFFMANN CO., Passaic, N. J.
Filed February 16, 1917. Serial No. 101,421. PUBLISHED MARCH 20, 1917.

116,843. SPARK-PLUGS. EMIL GROSSMAN MANUFACTURING CORPORATION, Brooklyn, N. Y.
Filed February 15, 1917. Serial No. 101,393. PUBLISHED MARCH 27, 1917.

116,844. COTTON PIECE GOODS. PAUL S. HALPERN, New York, N. Y.
Filed February 16, 1917. Serial No. 101,423. PUBLISHED MARCH 20, 1916.

116,845. HAIR-NETS. MOSES HERZOG, New York, N. Y.
Filed February 8, 1917. Serial No. 101,230. PUBLISHED MARCH 20, 1917.

116,846. PUMPS AND COMPRESSORS. ISKO, INCORPORATED, Detroit, Mich.
Filed February 12, 1917. Serial No. 101,331. PUBLISHED MARCH 27, 1917.

116,847. CERTAIN NAMED CLOTHING FOR WOMEN, MISSES, AND CHILDREN. KING & APPLEBAUM, New York, N. Y.
Filed December 26, 1916. Serial No. 100,172. PUBLISHED MARCH 20, 1917.

116,848. WATER-PAINT. A. HILLBORN KNIGHT, Philadelphia, Pa.
Filed December 1, 1916. Serial No. 99,656. PUBLISHED JANUARY 30, 1917.

116,849. CERTAIN NAMED CUTLERY, MACHINERY, AND PARTS THEREOF. A. KRRAMER, INC., Brooklyn, N. Y.
Filed February 17, 1917. Serial No. 101,447. PUBLISHED MARCH 27, 1917.

116,850. FORKS, SPOONS, CHEESE-SCOOPS, NUT-PICKS, AND PIE-SERVERS MADE OF BASE METAL. LANDERS, FRARY & CLARK, New Britain, Conn.
Filed January 16, 1917. Serial No. 100,654. PUBLISHED MARCH 27, 1917.

116,851. MEDICAL REMEDY FOR SYPHILIS. ELBERT J. LATTA, Lincoln, Nebr.
Filed September 8, 1916. Serial No. 97,864. PUBLISHED OCTOBER 31, 1916.

116,852. PREVENTIVE FROM MOSQUITO-STINGS. ERNEST MOORE, London, England.
Filed December 12, 1916. Serial No. 99,875. PUBLISHED MARCH 27, 1917.

116,853. METAL KITCHEN-CABINETS, METAL KITCHEN-TABLES, METAL KITCHEN-STOOLS. THE OHIO STATE STOVE CO., Columbus, Ohio.
Filed September 5, 1916. Serial No. 97,806. PUBLISHED MARCH 27, 1917.

116,854. READY-MIXED PAINTS. THE PARAFFINE PAINT COMPANY, San Francisco, Cal.
Filed February 19, 1917. Serial No. 101,504. PUBLISHED MARCH 27, 1917.

116,855. DRY AND READY-MIXED PAINTS, DRIERS, ENAMELS, STAINS, WALL-PAINTS, LACS, FILLERS, AND VARNISHES. THE PATTERSON-SARGENT COMPANY, Cleveland, Ohio.
Filed February 19, 1917. Serial No. 101,505. PUBLISHED MARCH 27, 1917.

116,856. DRY AND READY-MIXED PAINTS, DRIERS, ENAMELS, STAINS, WALL-PAINTS, LACS, FILLERS, AND VARNISHES. THE PATTERSON-SARGENT COMPANY, Cleveland, Ohio.
Filed February 19, 1917. Serial No. 101,506. PUBLISHED MARCH 27, 1917.

116,857. HIGH-TEMPERATURE FIRE-BRICK CEMENT, NON-CONDUCTING BOILER-COVERING AND STOVE-LINING. REFRACTORY MATERIALS COMPANY, New York, N. Y.
Filed December 5, 1916. Serial No. 99,734. PUBLISHED JANUARY 30, 1917.

116,858. WIRE SCREEN-CLOTH. REYNOLDS WIRE CO., Dixon, Ill.
Filed January 31, 1917. Serial No. 101,072. PUBLISHED MARCH 27, 1917.

116,859. BODIES AND TOPS AND PARTS OF SAME FOR CERTAIN NAMED VEHICLES. REX MANUFACTURING COMPANY, Connersville, Ind.
Filed December 5, 1916. Serial No. 99,732. PUBLISHED MARCH 27, 1917.

116,860. LAGER-BEER. THE SALT LAKE CITY BREWING CO., Salt Lake City, Utah.
Filed February 23, 1917. Serial No. 101,623. PUBLISHED MARCH 27, 1917.

116,861. VELVETS AND PLUSHES IN THE PIECE. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed February 23, 1917. Serial No. 101,625. PUBLISHED MARCH 20, 1917.

116,862. SEAL. SIGNODE SYSTEM, INC., Chicago, Ill.
Filed January 22, 1917. Serial No. 100,825. PUBLISHED MARCH 27, 1917.

116,863. METAL STRAPPING FOR BOX-FASTENINGS OR THE LIKE. SIGNODE SYSTEM, INC., Chicago, Ill.
Filed January 22, 1917. Serial No. 100,826. PUBLISHED MARCH 27, 1917.

116,864. VARNISHES. WILLIAM E. SPENCER, New York, N. Y.
Filed November 18, 1916. Serial No. 99,386. PUBLISHED MARCH 27, 1917.

116,865. LAXATIVE TABLETS. C. M. C. STEWART SULPHUR CO., Seattle, Wash.
Filed January 16, 1917. Serial No. 100,644. PUBLISHED MARCH 27, 1917.

116,866. LOADING IMPLEMENTS FOR RIFLE, PISTOL, AND SHOTGUN CARTRIDGES AND MOLDS FOR BULLETS. PHINEAS M. TALCOTT, New Haven, Conn.
Filed December 19, 1916. Serial No. 100,051. PUBLISHED MARCH 27, 1917.

116,867. THERMAL AND ACOUSTIC INSULATOR MADE OF VEGETABLE FIBERS. UNION FIBRE COMPANY, Winona, Minn.
Filed January 19, 1917. Serial No. 100,759. PUBLISHED MARCH 27, 1917.

116,868. BRUSHES FOR GENERAL AND CERTAIN NAMED USE. UNITED SHOE MACHINERY COMPANY, Paterson, N. J., and Boston, Mass.
Filed June 24, 1915. Serial No. 87,678. PUBLISHED MARCH 27, 1917.

116,869. BOTTLE-WASHING MACHINES. THE S. S. WENZELL MACHINE COMPANY, Philadelphia, Pa.
Filed February 23, 1917. Serial No. 101,631. PUBLISHED MARCH 27, 1917.



116,870. CERTAIN NAMED CHEMICAL PREPARATIONS. THE S. S. WHITE DENTAL MANUFACTURING COMPANY, Philadelphia, Pa.; New York and Brooklyn, N. Y., and Boston, Mass., Chicago, Ill., Atlanta, Ga., Cincinnati, Ohio, San Francisco and Oakland, Cal., Toronto and Montreal, Canada, and Berlin, Germany.
Filed May 24, 1915. Serial No. 86,873. PUBLISHED MARCH 27, 1917.

116,871. MEDICINAL PREPARATIONS FOR TREATING CERTAIN NAMED DISEASES. B. O. & G. C. WILSON, INC., Boston, Mass.
Filed January 31, 1917. Serial No. 101,077. PUBLISHED MARCH 27, 1917.

# TRADE-MARK REGISTRATIONS RENEWED.

14,403. SALVE. JAMES F. CORRY, Cincinnati, Ohio.
Registered May 17, 1887. Renewed May 17, 1917.

14,423. MILLS, MACHINERY, STEAM-ENGINES, AND MILL AND ENGINE SUPPLIES. EDWARD P. ALLIS & Co., Milwaukee, Wis.; Allis-Chalmers Manufacturing Company, a Corporation of Delaware, assignee by mesne assignments.
Registered May 24, 1887. Renewed May 24, 1917.

14,478. DRESS-STAYS, CORSETS, HEALTH-WAISTS, AND ELASTIC BODY-SUPPORTS. THE WARREN FEATHERBONE COMPANY, Chicago, Ill., and Three Oaks, Mich.
Registered May 31, 1887. Renewed May 31, 1917.

# TRADE-MARK REGISTRATIONS CANCELED.

11,848. ITALIAN CLOTH. WM. SCHUTTE & Co., Barmen, Germany, and New York, N. Y.
Registered January 6, 1885. Canceled April 27, 1917.

# LABELS

## REGISTERED MAY 29, 1917.

20,116.—*Title:* "SUPER-SIX." (For Electric Batteries.) C. F. BURGESS LABORATORIES, Madison, Wis. Filed April 28, 1917.

20,117.—*Title:* "BARBOUR COFFEE." (For Coffee.) SALIM BARBOUR, New York, N. Y. Filed May 12, 1917.

20,118.—*Title:* "BEECH-NUT BRAND." (For a Beverage.) BEECH-NUT PACKING COMPANY, Canajoharie, N. Y. Filed April 30, 1917.

20,119.—*Title:* "SUNSHINE BRAND PURE LARD, WITH OLEO STEARINE ADDED." (For Lard.) BANKS BROS. PACKING CO., Norfolk, Va. Filed May 1, 1917.

20,120.—*Title:* "SNOW BANK." (For a Food Product.) BANKS BROS. PACKING CO., Norfolk, Va. Filed May 1, 1917.

20,121.—*Title:* "TANG." (For a Non-Intoxicating Beverage.) THE CROWN BREWING COMPANY, Cincinnati, Ohio. Filed April 26, 1917.

20,122.—*Title:* "MARBLEOID ASPHALT ROOFING." (For Roofing-Paper.) S. D. DUNLAP, Batavia, N. Y. Filed November 17, 1916.

20,123.—*Title:* "IRONCLAD KHAKI TWILLS." (For Woven Fabric Piece Goods.) FRANKLIN MFG. CO., Baltimore, Md. Filed April 30, 1917.

20,124.—*Title:* "ORCHARD BLOSSOM." (For a Disinfectant and Deodorizer.) HENRY KRAHN, Elmhurst, N. Y. Filed March 28, 1917.

20,125.—*Title:* "MEPACOTE." (For Book-Paper.) THE MEAD PULP AND PAPER COMPANY, Dayton, Ohio. Filed April 2, 1917.

20,126.—*Title:* "MECOPA." (For Bond-Paper.) THE MEAD PULP & PAPER COMPANY, Dayton, Ohio. Filed April 2, 1917.

20,127.—*Title:* "TUB CORDUROY." (For Corduroy.) NEW YORK MILLS CORPORATION, New York Mills, N. Y. Filed March 16, 1917.

20,128.—*Title:* "LABOR TEMPLE." (For Cigar Boxes.) PACIFIC CIGAR BOX CO., Los Angeles, Cal. Filed January 8, 1917.

20,129.—*Title:* "PEAT'S WATERPROOF LEATHER DRESSING." (For Leather-Dressing.) C. W. PEAT, Aberdeen, Wash., and Portland, Oreg. Filed April 17, 1917.

20,130.—*Title:* "PEAT'S WATERPROOF LEATHER DRESSING." (For Leather-Dressing.) C. W. PEAT, Aberdeen, Wash., and Portland, Oreg. Filed April 17, 1917.

20,131.—*Title:* "SPALDING MIDGET HONOR GOLF BALL." (For Golf-Balls.) A. G. SPALDING & BROS., Jersey City, N. J., and New York, N. Y. Filed April 9, 1917.

20,132.—*Title:* "SPALDING FLOATING HONOR GOLF BALL." (For Golf-Balls.) A. G. SPALDING & BROS., Jersey City, N. J., and New York, N. Y. Filed April 9, 1917.

20,133.—*Title:* "HONOLULU FRUIT GUM." (For Chewing-Gum.) THE NATIONAL PEPSIN GUM COMPANY, San Francisco, Cal. Filed April 10, 1917.

20,134.—*Title:* "AMERICAN LADY." (For Fasteners.) SNAP FASTENER SALES CO. CORP., New York, N. Y. Filed April 27, 1917.

20,135.—*Title:* "BURN=DRES." (For a Burn Treatment.) J. LEO WAMBAUGH, Wilkinsburg, Pa. Filed April 18, 1917.

# PRINTS

## REGISTERED MAY 29, 1917.

4,696.—*Title:* "HYGEIAN." (For a Disinfectant.) ELIJAH F. BALLARD, Dallas, Tex. Filed December 12, 1916.

4,697.—*Title:* "TUB CORDUROY." (For Corduroy.) NEW YORK MILLS CORPORATION, New York Mills, N. Y. Filed March 16, 1917.

4,698.—*Title:* "STEDEM'S FORMULA FAIRMOUNT WEED KILLER." (For a Weed-Killing Chemical.) STEDEM CHEMICAL LABORATORY, Philadelphia, Pa. Filed February 20, 1917.

4,699.—*Title:* "LE LAIT DES ROSES." (For Antiseptic and Tonic of the Skin.) THE COSMETIC PRODUCT COMPANY, Montreal, Canada. Filed April 27, 1917.

4,700.—*Title:* "SPOCO." (For Automobile-Oil.) THE SWAN PROCESS OIL CO., INC., Denver, Colo. Filed March 6, 1917.

4,701.—*Title:* "MRS. SANTA CLAUS." (For Toys.) ISIDORE ROTHSTEIN, Pittsburgh, Pa. Filed November 10, 1916.



# DECISIONS

OF THE

# COMMISSIONER OF PATENTS

AND OF

# UNITED STATES COURTS IN PATENT CASES.

## COMMISSIONER'S DECISIONS.

AMES, JR., *v.* RYAN.

*Decided May 7, 1917.*

1. INTERFERENCE—MOTION TO AMEND—FORM OF.

"The rule provides that a motion to amend may be made containing claims which in the opinion of the moving party 'should be made the basis of interference between himself and any of the other parties.' The motion should, therefore, also be accompanied by a statement that it is believed that the claims are patentable and should be made the issue of an interference."

2. SAME—SAME—DEFINITENESS.

The reasons why a specific application of the references should be made when a motion to dissolve an interference is brought under Rule 122 apply also where a motion to amend the issue under Rule 109 by adding claims is presented. It should be pointed out specifically wherein the claims which it is desired to add are applicable to the structure of each of the parties.

3. SAME—SAME—TRANSMISSION REFUSED—INDEFINITE.

A motion to amend by adding twenty-two counts to the issue without pointing out why so large a number of claims is necessary or wherein these claims are applicable to the moving party's disclosure will not be set for hearing.

ON MOTION to amend.

ORDER.

*Messrs. Roberts, Roberts & Cushman* for Ames, Jr.

*Messrs. Coale & Hayes* and *Mr. Alex D. Salinger* for Ryan.

WHITEHEAD, *First Assistant Commissioner:*

A motion to amend has been filed by Ryan, by which it is proposed to add twenty-two claims which are stated to be taken from the Ames application.

It is not pointed out wherein so large a number of claims is necessary for the determination of the question of priority, nor is it pointed out wherein these claims are applicable to the moving party's disclosure.

Rule 122 provides that motions to dissolve an interference shall contain a full statement of the grounds relied upon, and it has been repeatedly held that where it is alleged that the claims are not patentable over the prior art a specific application of the reference should be made.

For the same reason where a motion to amend the issue under the provisions of Rule 109 is presented it should be pointed out specifically wherein these claims are applicable to the structures of each of the parties.

The rule provides that a motion to amend may be made containing claims which, in the opinion of the moving party—

should be made the basis of interference between himself and any of the other parties.

The motion should, therefore, also be accompanied by a statement that it is believed that the claims are patentable and should be made the issue of an interference.

This motion was not filed within the time fixed by the Examiner of Interferences for bringing motions. In the affidavit accompanying the motion it is stated that the associate attorney came into the case on April 24, and the motion to amend was brought as soon as he discovered that the opposing party had in his case broad claims which apparently had been allowed, although he was moving to dissolve as to the broad counts of the issue. On May 2, 1917, a notice was filed by the junior party that his motion for dissolution is withdrawn.

For the reasons above stated the motion to amend filed by Ryan as now presented will not be set for hearing.

## DECISIONS OF THE U. S. COURTS.

U. S. District Court—Northern District of Illinois.

WIREBOUNDS PATENTS CO. *et al. v.* CHICAGO MILL & LUMBER CO.

*Decided May 23, 1916.*

238 Fed. Rep., 929.

1. PATENTS—VALIDITY AND INFRINGEMENT—WIRE-BOUND BOX.

The Inwood and Lavenberg reissue patent, No. 12,726, (original No. 799,854,) for a wire-bound box, is within the invention of the original patent, discloses patentable invention, and as covering a highly useful and successful box, which was the first of its kind, is entitled to a fair range of equivalents; also *Held* infringed.

2. SAME—REISSUES—GROUNDS OF REISSUE.

The statute providing for reissues is not to be so construed as to deny a reissue where by the inadvertent use of a limiting word the original patent does not protect the real invention.

3. SAME—VALIDITY AND INFRINGEMENT—WIRE-BOUND BOX.

The Flora patent, No. 907,586, for a wire-bound box, is for an improvement only, and, while valid, is to be narrowly construed; as so construed *Held* not infringed.

IN EQUITY. Suit by the Wirebounds Patents Company and the Wirebounds Corporation against the

Chicago Mill & Lumber Company. On final hearing. Decree for complainants in part.

*Messrs. Dyrenforth, Lee, Chritton & Wiles* (*Mr. Charles C. Linthicum, Mr. Laurence A. Janney*, and *Messrs. Dunne & Murphy* of counsel) for the plaintiffs.

*Mr. W. C. Gilbert* (*Mr. Arthur M. Hood* and *Mr. Edward Rector* of counsel) for the defendant.

SANBORN, *Dis. J.*:

Infringement suit, begun January 20, 1914, on the Inwood and Lavenberg reissued Patent No. 12,725, dated November 26, 1907, (original No. 799,854,) applied for October 17, 1904; also on the patent to Ellsworth E. Flora, No. 907,586, dated December 22, 1908, applied for December 4, 1905. Defenses set up are invalidity of the reissue, as broadening the original, invalidity, and non-infringement.

The controversy relates to wire-bound boxes made by complicated and elaborate machinery, and the business is a very important and rapidly-growing one. Plaintiffs own twenty-nine patents on box-making machinery and twelve on the boxes or box-blanks. Plaintiffs' thirty-six licensees sold 60,008 boxes in 1906 and 9,652,604 in 1914. They are used mainly for shipping small packages in some 851 different industries.

Defendant is licensee of the Greenstreet Folding Box Machine Company, and there are six other licensees. Competition is quite active. Plaintiffs and the Greenstreet Company are the only makers of wire-bound boxes in this country.

The box material (except cleats) is thin veneer, and utilizes much material which would otherwise be wasted, and which is of inferior quality for many other purposes. The main parts of the box consist of four veneer blanks for the top, bottom, and sides, bound together, eight cleats with wires attached to the blanks and cleats by staples, and of the box ends, which are fastened to the inner surfaces of the cleats. All these parts are turned out by machines. Plaintiffs' expert thus describes the boxes (except ends):

(1) The foldable box blank is wire-bound; that is to say, the different sections of which the blank is composed are united together by binding wires, and in the completed box the ends of these binding wires are connected together, so as to circumferentially bind the whole box together, this being the significance of the wire-bound characteristic of the box.

(2) The box blank comprises four sections, which are independent of each other, except for the uniting wires, and each of these sections comprises side sheet material and two cleats secured thereto, and in the completed box each of these four side sections has the capacity of movement longitudinally relatively to the adjacent sections, without disrupting the integrity of its own elements, consisting of the sheet material and the two cleats.

(3) The sheet material constituting the sides of the box projects beyond the cleats sufficiently to enable the sheets to overlap each other, so as to constitute a tight box.

(4) The sheets are straight-edged, thus not only contributing to the tight joints, but also tensioning the wires.

(5) The tensioning of the wire thus obtained not only holds the four sides of the box closely and tightly together, but it also has the important effect of utilizing the lateral flexibility of the wire, in permitting the side sections to move relatively to each other, while at the same time utilizing the strength of the wire in resisting any distortion of the box under diagonal strains.

The ultimate strength of the Inwood and Lavenberg box is dependent upon the wires. Owing to the tensioning of the wires at the corners of the box, this strength is utilized to its full capacity. This will be readily understood by reference to an ordinary nailed box. When such a box is subjected to diagonal strains, the tendency is to distort and disrupt the box, either by pulling out the nails or by disrupting the box material at the nail holes. This is avoided in the Inwood and Lavenberg box, because the wires themselves withstand the strains, and the box can be distorted to the breaking point without disrupting the union between the side material and the cleats, because the side sections can slip on each other, leaving the strains to be borne by the wires. Consequently the box can be materially distorted, and nevertheless, after the distorting strain has ceased, the box can resume its original shape and still be an efficient carrier for its contents. Owing to the tension of the wires at the corners, the box is stiffened in the first instance, so that ordinary strains will be withstood, without any distortion of the box; and then, if the strain is increased sufficiently to distort the box, the wires will hold the box together, and the side sections will slide without disrupting.

The box ends are fastened to the inside of the side and bottom cleats, but not to the top. The two claims in suit, one from each patent, are as follows, the word "step-mitered," in parenthesis, having been included in the original Inwood and Lavenberg patent, but omitted in the reissue:

1. A wire-bound foldable box blank, comprising, in combination, a plurality of straight-edged sheets, wires connecting the sheets in longitudinal series and extending the full length of the series, and cleats formed with rabbeted mutually engageable ends, the wires, sheets, and cleats being stitched together, and the cleats being in end-to-end spaced relation, the whole being constructed and arranged to cause the rabbeted adjacent cleat ends, in the operation of folding the blank, to engage with each other and lock adjacent sheets against relative sliding, and cause one sheet to overlap the end of the adjacent sheet at box corners.

1. A wire-bound foldable box blank, comprising a plurality of straight-edged sheets, wires secured to and connecting said sheets, and (step-mitered) cleats secured to said sheets to terminate short of edges of the latter a distance equal or approximately equal to the thickness of a sheet, whereby, when folded at a right angle, the end of one sheet overlaps the end of an adjacent sheet.

(1) *Validity of Inwood and Lavenberg claim.*—Aside from the question of reissue, as to this patent, like that in question in the recent case of *Miner* v. *T. H. Symington & Co.*, (in this circuit,) (229 Fed., 730; C. C. A., 140,) there are no new elements in it, and its validity depends entirely upon the arrangement of parts. Such arrangement combines the parts in a new way. The result is beneficial and highly useful. The box is flexible, elastic, strong, light, has proved very successful, and was the first of its kind. If it did not actually create the wire-bound box industry, certainly it was a most important factor. Were the patent merely a paper one, there might be doubt of its validity; but, having been instrumental in founding a large industry, it should be sustained, and is entitled to a fair range of equivalents.

In this construction the particular shape of the four cleats at each end is not vital. In the original patent the claim required them to be step-mitered at the ends, so as to give greater strength to the box, and enable it to keep its square shape. Novelty, however, did not consist in the shape of the cleats, but the bringing together of cleats, sides, top, bottom, ends, and wires to make a practical, efficient, strong, light structure, in which the ends serve to brace it and prevent crushing, rendering the particular shape of the cleat ends where they touch each other less important in preventing perpendicular or horizontal movement of the parts upon each other. Thus there was no reason for limiting the original claim to step-mitered cleat ends, and the reissue did not change the real invention, which did not consist of the particular form of the cleats, but of the bringing together of all the elements mentioned, having the qualities referred to.

(2) The reissue is valid under *Topliff* v. *Topliff*, (145 U. S., 156; 12 Sup. Ct., 825; 36 L. Ed., 658.) While the original may not have been technically inoperative or invalid by reason of the patentees having failed to claim the invention illustrated by the drawings showing the cleats in a step-mitered form, yet it was so limited as to be practically useless, while the reissue secured the real, meritorious invention. The statute providing for reissues would be lamentably incomplete, if it should be construed not to reach and relieve such a mistake as this, where the claim, by the inadvertent use of a limiting word, does not cover the real invention. (*Money-weight Scale Co.* v. *Toledo Computing Scale Co.*, 187 Fed., 826; 109 C. C. A., 586.)

(3) *The Flora patent.*—Since the Flora disclosure practically adds to Inwood and Lavenberg only the feature of rabbeted cleat ends designed to brace the structure, so as to prevent lateral sliding of parts, the foregoing discussion would tend to show the addition of an immaterial element only. It may, however, be narrowly sustained, though not infringed, as embodying an improved, more compact, and stronger box.

*Infringement.*—From the exhibits of defendant's box introduced by plaintiffs, it appears that their construction differs in some respects from both patents in suit, particularly in that they employ a mortise-and-tenon joint at the cleat ends, instead of either step-mitered or rabbeted forms. It also appears from these exhibits that all the sheets forming the sides, top, and bottom do not terminate "short of edges" of the cleats. Some of them do so, and some do not. It is true, however, that defendant has practically adopted the Inwood and Lavenberg construction, particularly in Exhibits 31 and 33. While the fact that an invention is meritorious and successful affords no presumption whatever that defendant uses it, and infringement must clearly appear, the proof shows that defendant makes and sells substantially the Inwood and Lavenberg box.

Both patents are held valid, and the reissue infringed. The Flora patent is not infringed. Plaintiffs should have a decree, without costs; each party to pay the disbursements incurred by them respectively.





## Court of Appeals of the District of Columbia.

### IN RE MANSON.

*Decided January 2, 1917.*

1. NEW MATTER—ELECTRIC HORN.

When the application as filed was for a push-button for electric horns, the supply of current being regulated by varying the pressure on the button to produce low or loud signals at will, and the new claims relate wholly to the production of a single signal by a tilting motion of the button, a mode of operation not referred to in the original application, *Held* the new claims were properly rejected as containing new matter.

2. SAME—CONSTRUCTION NOT ORIGINALLY DESCRIBED—MODE OF OPERATION.

When the applicant contends that the structure originally disclosed can be operated as well in a tilted position by a pressure on the edge as by a straight depression, but to reach this conclusion something not found in the original disclosure must be read into it—namely, that the button operates so loosely that when pressed on the edge and thus tilted in the socket the points of contact will produce an electrical connection—*Held* that this introduces a new mode of operation, as well as means for producing the electrical connection, and is well within the rule forbidding insertion of new matter.

3. SAME—MODE OF OPERATION NOT ORIGINALLY DESCRIBED—TEST.

If those skilled in the art, making the article from the information furnished in the original application, would naturally so construct it that it would have the capability in question, that capability must be regarded as inherent in the applicant's disclosure and a necessary characteristic of his invention whether originally known to or appreciated by him or not.

*Mr. F. O. Richey* for the appellant.

*Mr. W. R. Ballard* for the Commissioner of Patents.

VAN ORSDEL, *J.*:

This is an *ex parte* appeal from the decision of the Commissioner of Patents affirming the decision of the Board of Examiners-in-Chief which, in turn, affirmed the decision of the Primary Examiner rejecting claims 11 to 21, inclusive, for an invention relating to circuit-closers of the push-button type for use with electric horns.

Claims 11 and 21 of the rejected claims sufficiently describe the features of applicant's invention here involved:

11. In a device of the class described, the combination of a casing, electrical contacts mounted therein, a push button concentric with said casing and of large horizontal area, catch means mounted on the casing and companion catch means on the button, said catch means normally engaging each other at a plurality of points, spring means normally pressing said members together and a device for placing said contacts in electrical connection when the push button is tilted.

21. In a circuit controller, the combination of a stationary member and a movable member, means for creating a loose pivotal engagement between said members at a plurality of points, and an electric switch operated when said movable member is operated about any of the said points of pivotal engagement.

In the original application of appellant, into which he now seeks to bring these claims by way of amendment, the object of the invention is stated as follows:

My invention relates to devices for controlling electrical circuits, and while I contemplate its use in a number of situations, a description of its use in connection with automobile horns will aptly illustrate the functions. Where it is desired to operate a horn to give a loud or a low signal by varying the strength of the current, it is desired that the controlling means should be easily operated and accessible to the driver. The circuit controller which I have produced may be operated to condition the horn to produce different signals by varying the pressure upon the button, and it may be placed upon the steering wheel or if desired, on the top of the steering post.

The claims before us were rejected by each of the tribunals below on the ground that they relate to new matter not disclosed in the original application. Applicant's claims 1 to 10, inclusive, covering the invention disclosed in the original application, were allowed. The application, as filed, was for a push-button for electric automobile-horns, which would enable the operator to give low or loud signals at will by simply varying the pressure upon the button. The supply of current is so regulated by the degree of pressure from the operator as to produce low or loud signals at will.

The present claims of the amendment have nothing to do with the production of signals of varying intensity. They relate wholly to the production of a single signal by a tilting motion of the button. It is conceded that the original application contained no reference whatever to the operation of the button in a tilted position, but applicant now contends that the structure originally disclosed can be operated

as well in a tilted position by a pressure on the edge as by a straight depression. But to reach this conclusion, we must read into his original disclosure something not there to be found, namely, that the button operates so loosely in its socket that, when pressed on the edge and thus tilted in the socket, the points of contact will produce an electrical connection. This introduces a new method of operating the button, as well as means for producing the electrical connection, a case well within the rule forbidding the insertion of new matter by way of amendment to an original application. It is well settled that a pending application may not be amended by the insertion of new matter not embraced in the original disclosure, with a view of having it relate back to the original filing date. (*In re Dilg*, 25 App. D. C., 9; 115 O. G., 1067; *in re Scott*, 25 App. D. C., 307; 117 O. G., 278; *in re Mraz*, 36 App. D. C., 435; 164 O. G., 978.)

The test of applicant's right to make the claims of the amendment is well stated in the opinion of the Board of Examiners-in-Chief as follows:

Did the appellant's application as filed present this inventive idea? The specification made no mention of any tilting action. The only ground upon which it might be held that the application as filed disclosed the tilting action is that this action is inherent in the structure as the same was originally disclosed. If those skilled in the art making the article from the information furnished in the original application would naturally so construct it that it would have the capability here in question, this capability must be regarded as inherent in the applicant's disclosure and a necessary characteristic of his invention whether originally known to or appreciated by him or not. But if those skilled in the art making a device in accordance with the application as filed would, as likely as not, produce an article which would not have the capability here in question, this capability cannot well be said to be inherent in the applicant's original disclosure. If a device might naturally be constructed from the applicant's specification and drawing as filed which would have every mode of operation and fulfil every purpose suggested in the specification as filed, and not be capable of closing the circuit by a mere tilting of the button, we cannot see how the applicant can have originally disclosed an invention which has this capability for its distinguishing characteristic.

Clearly the decision of the Commissioner of Patents is right. It, therefore, is affirmed, and the clerk is directed to certify these proceedings as by law required.

Affirmed.

## ADJUDICATED PATENTS.

(U. S. C. C. A.) The England patent, No. 1,008,805, for a door for automobiles, *Held* void for lack of invention. *Edward G. Budd Mfg. Co.* v. *England Mfg. Co.*, 240 Fed. Rep., 415.

(U. S. D. C.) The Hall patent, No. 1,064,639, for an improved acid arsenate of lead, *Held* void for lack of invention. *Corona Chemical Co.* v. *Latimer Chemical Co.*, 240 Fed. Rep., 423.

(U. S. C. C. A.) The Hoefler and Schantz patent, No. 921,837, for an ice-cream freezer, *Held* void for lack of patentable invention. *Becker* v. *Miller Pasteurizing Mach. Co.*, 240 Fed. Rep., 420.

(U. S. C. C. A.) The Morse and Lucas patent, No. 906,545, for improvements in adjustable cooling-boxes, *Held* void for lack of novelty and invention. *Iceless Ice Box Co.* v. *Mitchell*, 240 Fed. Rep., 418.

### Adverse Decisions in Interference.

PATENT NO. 1,164,734.

On April 27, 1917, a decision was rendered that Donald McDermid was not the first inventor of the subject-matter of the invention covered by the single claim of his Patent No. 1,164,734, subject, "Electroplating-generators," and no appeal having been taken within the time allowed such decision has become final.

### Italy—License to Use Patents and Trade-Marks of Enemy Subjects—Extension of Time-Limits of Priority Under Article 4, International Union, to Subjects of Allied Nations—Reciprocal.

DEPARTMENT OF STATE,
*Washington, D. C., May 16, 1917.*

The Secretary of State presents his compliments to the Honorable the Secretary of the Interior and has the honor to inclose for the information and use of the Patent Office a copy of a report dated April 13, 1917, from the American Consul-General at Genoa, Italy, in regard to a new decree relating to trade-marks, patents, and monopoly grants.

NEW DECREE RELATING TO TRADE-MARKS, PATENTS, AND MONOPOLY GRANTS.

From Consul-General David F. Wilber, Genoa, Italy,
*April 13, 1917.*

The following Lieutenant's Decree, No. 533, given on March 22, 1917, and published at Rome in the *Gazzetta Ufficiale* of April 10, 1917, is as follows:

In consideration of the law of May 22, 1916, No. 671, conferring extraordinary powers on the Royal Government for the duration of the war;

In view of laws of October 30, 1859, No. 3731, on industrial monopolies and No. 4577 of August 30, 1868, concerning trade-marks and other patents;

In view of the law of April 6, 1913, No. 285, sanctioning the agreement of the League for the Protection of Industrial Rights at Washington;

In consideration of the necessity of disciplining the industrial-property rights of subjects of enemy countries so that the same may not impede the use of inventions in the interest of the national defense or of whomsoever the nation's industry shall have need of service;

In consideration, moreover, of the opportune measure of extending the time-limit within which persons belonging to allied or neutral nations, conferring equal privileges to Italians, may request industrial monopoly grants in the Kingdom of Italy, returning in possession of the priority of applications presented for the first time in one of the said nations;

Approved by the Council of Ministers, and at the instance of the Minister of Industry, Commerce, and Labor, in concert with the Minister of Foreign Affairs, of War, and of the Navy;

We have decreed and hereby decree as follows:

ARTICLE 1. For the duration of the war the validity for private industrial rights belonging to enemy subjects, firms, or corporations, located in enemy countries, of inventions regarding war material or which may be used for military purposes, is canceled.

The Ministers of War and Navy shall have the right to use such inventions or concede to others the privilege of using the same for furnishing the Army or Navy.

The present ruling is to take effect regarding every enemy country, covering the period since the declaration of war.

ART. 2. If reasons of public welfare necessitate the actual use of inventions within the country which are protected as monopoly grants in favor of enemy subjects, firms, or companies, located in enemy countries, such privilege may be granted for the use of those inventions during the war, even without the consent of the holder of the patent, to whomsoever shall request the same.

The license to use such inventions during the war shall be granted by the Minister of Industry, Commerce, and Labor, upon the approval of the committee which examines all recourse pertaining to industrial rights. This grant may be subject to special conditions and to the deposit of a certain sum of money in the Government Treasury.

ART. 3. If a trade-mark registered in the name of an enemy subject, firm, or company, shall have become the common designation of the products it serves to distinguish, the use of the trade-mark may be granted upon application, during the war, to Italian manufacturers of those same articles.

The license to use these trade-marks shall be granted by decree of the Minister of Industry, Commerce, and Labor, in the same manner and on the conditions set forth in the preceding article.

ART. 4. No recourse either administrative or judicial is admissible against the rulings as per preceding articles.

ART. 5. The time-limits of priority, as established by article 4 of the League's Convention at Paris, approved at Washington, which had not expired on May 24, 1915, are suspended for the entire duration of the war and until three years after the publishment of peace, in favor of persons belonging to these allied or neutral nations belonging to the Union, which may have granted the same benefit to Italians.

(Signed) TOMASO DI SAVOIA.

Given at Rome March 22, 1917.

DAVID F. WILBER,
*American Consul-General.*





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TO THE

# DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

MAY, 1917.

[Decisions of the United States District Courts are indicated by the letter (ᵇ), of the Court of Appeals of the District of Columbia by one star (*), and of the Supreme Court of the United States by two stars (**).]

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# DIGEST

OF THE

# DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

## MAY, 1917.

[Decisions of the United States District Courts are indicated by the letter (ᵇ), of the Court of Appeals of the District of Columbia by one star (*), and of the Supreme Court of the United States by two stars (**).]

### ABANDONMENT.

See Res Adjudicata, 1.

### ADDITIONAL CLAIMS.

See Interference, 6.

### APPLICATIONS.

1. SIGNED BY ATTORNEY—PATENT GRANTED ONLY WHEN SIGNED BY INVENTOR, IF LIVING.

When application as filed was signed by an attorney and accepted under war conditions prior to act of August 17, 1916, under practice outlined in the Commissioner's letter of September 15, 1914, (223 O. G., 1007,) *Held* that the patent, under section 4888, Revised Statutes, can be granted only on an application executed by the inventor, if living. [*Ex parte* Kramer, 986.

2. PRACTICE.

The practice instituted to meet the emergency arising out of the European war (Commissioner's letter, *supra*) was not recommended to the profession and would not have been instituted if the act of August 17, 1916, had been passed at an early date. [Id.

### ASSIGNEES.

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### ATTORNEYS.

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### CONCEPTION OF INVENTION.

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### CONDITIONS EXISTING BY REASON OF STATE OF WAR.

See Applications.

### CONDITIONS IMPOSED AFTER SALE OF MACHINE.

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### CONSTRUCTION OF CLAIMS.

See Interference, 1.

1. PATENTABILITY—PROCESS OF CONSTRUCTING ROADS.

Claims *Held* to be unpatentable in view of the art of record. [**In re* Travilla, 649.

2. SAME—FLYING-MACHINE.

Claims *Held* to be unpatentable on the ground of inoperativeness. [**In re* Mattullath, 650.

3. SAME—HANDLE—CONVENIENCE OF OPERATION.

The combination, with the handle of a vacuum-cleaner having an upper curved and hollow end containing the motor-switch, of a rotatable cap upon the end of the handle to control the switch, presents a compact and convenient arrangement by which the movement of the cleaner and the position of the switch can be controlled by one hand and is patentable. [*Ex parte* Kirby, 1329.

4. SAME—NEW RESULT—COMMUNION-TRAY.

A communion-tray having a series of small openings to receive full cups and hold them in an elevated position, each opening closely contiguous to a larger opening by which the empty cup may be held in a lower position, *Held* to present patentable invention over a reference showing a large group of small openings surrounded by a single ring of larger perforations, where it appears that the novel arrangement not only accomplishes the desired end in a manner not contemplated in the reference, but accomplishes additional results. [*Ex parte* Husted, 1330.

5. NEW MATTER—ELECTRIC HORN.

When the application as filed was for a push-button for electric horns, the supply of current being regulated by varying the pressure on the button to produce low or loud signals at will, and the new claims relate wholly to the production of a single signal by a tilting motion of the button, a mode of operation not referred to in the original application, *Held* the new claims were properly rejected as containing new matter. [**In re* Manson, 1641.

6. SAME—CONSTRUCTION NOT ORIGINALLY DESCRIBED—MODE OF OPERATION.

When the applicant contends that the structure originally disclosed can be operated as well in a tilted position by a pressure on the edge as by a straight depression, but to reach this conclusion something not found in the original disclosure must be read into it—namely, that the button operates so loosely that when pressed on the edge and thus tilted in the socket the points of contact will produce an electrical connection—*Held* that this introduces a new mode of operation, as well as means for producing the electrical connection, and is well within the rule forbidding insertion of new matter. [*Id.

7. SAME—MODE OF OPERATION NOT ORIGINALLY DESCRIBED—TEST.

If those skilled in the art, making the article from the information furnished in the original application, would naturally so construct it that it would have the capability in question, that capability must be regarded as inherent in the applicant's disclosure and a necessary characteristic of his invention whether originally known to or appreciated by him or not. [*Id.

### CONSTRUCTION OF RULES.

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### CONSTRUCTION OF SPECIFICATIONS AND PATENTS.

See Particular Patents.

### CONSTRUCTION OF STATUTES.

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DISCLOSURE OF INVENTION.

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See Patent Rights, 1.

GRANT OF PATENT.

See Applications, 1; Scope of Patent, 2.

RIGHTS CREATED BY.

"It has long been settled that the patentee receives nothing from the law which he did not have before, and that the only effect of his patent is to restrain others from manufacturing, using, or selling that which he has invented. The patent law simply protects him in the monopoly of that which he has invented and has described in the claims of his patent. (*United States* v. *American Bell Telephone Co.*, 79 O. G., 1362; 167 U. S., 224; *Paper Bag Patent Case*, 36 O. G., 1297; 210 U. S., 405; *Bauer* v. *O'Donnell*, 191 O. G., 1068; 229 U. S., 1.)"

[**Motion Picture Patents Company v. Universal Film Manufacturing Company *et al.*, 311.

INDEFINITENESS.

See Interference, 5, 6.

INFRINGEMENT.

See Particular Patents.

INOPERATIVENESS.

See Construction of Claims, 2; Res Adjudicata, 1.

INTERFERENCE.

See Res Adjudicata.

1. PRIORITY—REDUCTION TO PRACTICE.

Where in an interference between C. and J. it was finally held that "the issue calls for and describes a hydroaeroplane, a machine capable of rising from and alighting upon the water," and priority was awarded to J. on the ground that the building and testing by C. of a machine which could skim on the water at high speed but could not rise into the air was not a reduction to practice of the invention there in issue, *Held* that this was the only point or question actually litigated and determined in that interference and that C. was not estopped to thereafter make claims relating solely to a device capable of traveling at high speed upon the water without regard to its ability to rise from or alight upon the water.

[*In re Curtiss, 650.

2. DETERMINATION OF THE EXISTENCE OF WITHIN THE DISCRETION OF THE COMMISSIONER OF PATENTS.

Section 4904 "commits to the opinion (judgment) of the Commissioner the effect of an application upon a pending one—whether it will interfere with a pending one; something more, therefore, than the fact of two applications, something more than the mere assertion of a claim. The assertion must be, in the opinion of the Commissioner, an interference with another. And it is this other that is first in regard, not to be questioned except at the instance of the Commissioner by an exercise of judgment upon the circumstances."

[**Ewing, Commissioner of Patents, v. The United States, *ex rel.* The Fowler Car Company, 983.

3. SAME—MANDAMUS WILL NOT LIE TO CONTROL.

Where it appears that an applicant for patent did not conceive the invention until after another application disclosing the same invention was filed, *Held* that there was no question of priority to be determined and that mandamus will not lie to compel the Commissioner of Patents to declare an interference. [**Id.

4. MOTION TO AMEND—FORM OF.

"The rule provides that a motion to amend may be made containing claims which in the opinion of the moving party 'should be made the basis of interference between himself and any of the other parties.' The motion should, therefore, also be accompanied by a statement that it is believed that the claims are patentable and should be made the issue of an interference."

[Ames, Jr., v. Ryan, 1639.

5. SAME—DEFINITENESS.

The reasons why a specific application of the references should be made when a motion to dissolve an interference is brought under Rule 122 apply also where a motion to amend the issue under Rule 109 by adding claims is presented. It should be pointed out specifically wherein the claims which it is desired to add are applicable to the structure of each of the parties. [Id.

6. SAME—TRANSMISSION REFUSED—INDEFINITE.

A motion to amend by adding twenty-two counts to the issue without pointing out why so large a number of claims is necessary or wherein these claims are applicable to the moving party's disclosure will not be set for hearing. [Id.

INTERFERENCE PROCEEDINGS.

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JUDICIAL TRIBUNALS.

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LICENSE.

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LIMITATION OF PATENT.

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MODE OF OPERATION.

See Construction of Claims.

MONOPOLY.

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MOTION TO AMEND THE ISSUE.

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MOTION TO VACATE SERVICE.

See Service of Process, 3.

NEW CLAIMS.

See Res Adjudicata, 4.



NEW MATTER.

See Construction of Claims, 5, 6, 7.

NEW RESULTS.

See Construction of Claims, 4; Scope of Patents, 2.

PARTICULAR PATENTS.

1. FLORA—NO. 907,586—WIRE-BOUND BOX—VALIDITY AND INFRINGEMENT.

The Flora patent, No. 907,586, for a wire-bound box is for an improvement only, and, while valid, is to be narrowly construed; as so construed *Held* not infringed.

[bWirebounds Patents Co. *et al.* v. Chicago Mill & Lumber Co., 1639.

2. INWOOD AND LAVENBERG—NO. 12,725, (REISSUE)—WIRE-BOUND BOX—VALIDITY AND INFRINGEMENT.

The Inwood and Lavenberg reissue patent, No. 12,725, (original No. 799,854,) for a wire-bound box, is within the invention of the original patent, discloses patentable invention, and as covering a highly useful and successful box, which was the first of its kind, is entitled to a fair range of equivalents; also *Held* infringed. [bId.

PATENT LAWS.

See Grant of Patent.

PURPOSE OF.

"The primary purpose of our patent laws is not the creation of private fortunes for the owners of patents but is 'to promote the progress of science and the useful arts.' (Constitution, Art. I, sec. 8.)"

[**Motion Picture Patents Company v. Universal Film Manufacturing Company *et al.*, 311.

PATENT RIGHTS.

1. RESTRICTING USE OF PATENTED MACHINE.

A patentee or his assignee may not license another to manufacture and sell a patented moving-picture machine and by a mere notice attached to it limit its use by the purchaser or by the purchaser's lessee to moving-picture films which are no part of the patented machine and which are not patented. (*Henry* v. *Dick*, 176 O. G., 751; 224 U. S., 1, overruled.)

[**Motion Picture Patents Company v. Universal Film Company *et al.*, 311.

2. IMPOSING CONDITIONS AFTER SALE.

The assignee of a patent which has licensed another to make and sell the machine covered by it may not by a mere notice attached to such machine limit the use of it by the purchaser or by the purchaser's lessee to terms not stated in the notice, but which are to be fixed, after sale, by such assignee in its discretion. [**Id.

3. LICENSE NOTICE ATTEMPTING TO CONTROL PRICE INVALID.

Plaintiff, a manufacturer of sound-reproducing machines embodying various features covered by patents of which it was the owner, adopted a form of contract which is called a "license contract" and a form of notice called a "license notice." The notice was attached to each machine and licensed the machine for use only with certain materials made by plaintiff, granted to distributors the right to use the machine for demonstrating purposes only and a right to assign a like right to the public or to regularly-licensed dealers at the dealers' regular discount royalty, and provided that the dealers might convey the license only when a certain royalty had been paid. It also provided that the title to the machine should remain in plaintiff, with right of repossession upon breach of the conditions by paying to the user the amount paid by him less five per cent. for each year the machine was used, and that violation of the conditions or removal of the notice was an infringement of the patent. Defendant, being a member of the general unlicensed public and having no contract relations with plaintiff, secured from plaintiff's wholesale and retail agents some of the machines and sold them, and threatened to sell others, at prices less than the price fixed in the notice. *Held* that the "license notice" is merely a disguised attempt to control the price of the machines after they had been sold and paid for and that it is invalid under the doctrine announced in *Adams* v. *Burke* (17 Wall., 453) and *Bauer* v. *O'Donnell*, (191 O. G., 1068; 229 U. S., 1.)

[**Straus *et al.* v. Victor Talking Machine Company, 316.

PATENTABILITY.

See Construction of Claims, 1, 2, 3, 4; Interference, 4; Particular Patents, 2.

PLEADING.

See Service of Process, 3.

PRACTICE IN THE PATENT OFFICE.

See Applications, 2.

PRIORITY OF INVENTION.

See Interference, 1, 3.

PRIVILEGE.

See Service of Process, 3.

REDUCTION TO PRACTICE.

See Interference, 1.

REFERENCES.

See Construction of Claims, 4; Interference, 5.

REISSUES.

See Particular Patents, 2.

CONSTRUCTION OF STATUTE.

The statute providing for reissues is not to be so construed as to deny a reissue where by the inadvertent use of a limiting word the original patent does not protect the real invention.

[bWirebounds Patents Co. *et al.* v. Chicago Mill & Lumber Co., 1639.

RES ADJUDICATA.

1. OPERATIVENESS.

The decision in *in re Mattullath* (C. D., 1912, 490; 38 App. D. C., 497) was directed to the question of abandonment, and the question of operativeness was not passed upon.

[*In re Mattullath, 650.

2. INTERFERENCE.

The broad rule stated in *Blackford* v. *Wilder* (C. D., 1907, 491; 127 O. G., 1255; 28 App. D. C., 535) that "the final decision in the first interference is conclusive, unless it can be made to appear that the question upon which the determination of the second case rests is one that neither was nor could have been presented and determined in the first case," applies only when the cause of action is the same or the claim and demand in controversy is the same. [*In re Curtiss, 650.

3. SAME.

"It follows, therefore, that only the matters that might have been presented relative to the particular thing or issue determined in the former interference can constitute estoppel in a second proceeding between the same parties relating to the same subject-matter." [*Id.

4. SAME—TEST.

Where, after final decision in an interference, claims are presented by the losing party, the test to determine whether they should be refused on the ground that the matter is *res adjudicata* is whether they would dominate the subject-matter upon which the other party prevailed. [*Id.

RIGHT TO USE PATENTED MACHINE.

See Patent Rights; Scope of Patent, 2.

RIGHTS CREATED BY GRANT OF PATENT.

See Grant of Patent; Scope of Patent, 2.

SCOPE OF PATENT.

1. LIMITED BY ITS CLAIMS.

"The scope of every patent is limited to the invention described in the claims contained in it, read in the light of the specification. These so mark where the progress claimed by the patent begins and where it ends that they have been aptly likened to the description in a deed which sets the bounds to the grant which it contains."

[**Motion Picture Patents Company v. Universal Film Company *et al.*, 311.

2. PATENT FOR MACHINE DOES NOT COVER MATERIALS OPERATED UPON.

Section 4886, Revised Statutes, restricts the patent granted on a machine to the mechanism described in the patent as necessary to produce the described results. It is not concerned with the materials with which or on which the machine operates. The grant is of the exclusive right to use the mechanism to produce the results with any appropriate material, and the materials with which the machine is operated are no part of the patented machine or of the combination which produces the patented result.

[**Id.

SECOND INTERFERENCE.

See Res Adjudicata, 2, 3.

SERVICE OF CIVIL PROCESS.

1. EXEMPTION FROM SERVICE—EXTENT.
The exemption from service of civil process while in attendance upon a hearing before a judicial tribunal and for a reasonable time in going and returning extends to all forms of process of a civil character. [*Engle v. Manchester and Spooner, 1331.

2. SAME—DURING INTERFERENCE PROCEEDINGS.
Non-residents present in the District of Columbia solely for attendance on the taking of testimony in interference proceedings in the Patent Office between themselves and a rival inventor are exempt from service of subpœna in a suit brought by such rival against them in the courts of the District. [*Id.

3. PRIVILEGE—PRACTICE—MOTION TO DISMISS.
When in a motion to vacate service the question of privilege involving facts not apparent from the record was raised by motion to dismiss, *Held* the better practice would require the filing of a plea in abatement. [*Id.

SIGNATURE OF APPLICATIONS.

See Applications.

STATE OF THE ART.

See Construction of Claims, 1.

TEST.

See Construction of Claims, 7; Res Adjudicata, 4.

TESTIMONY.

See Service of Process, 2.

TRANSMISSION OF MOTION.

See Interference, 6.

VALID PATENTS.

See Particular Patents.

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# ALPHABETICAL LIST OF PATENTEES

TO WHOM

## PATENTS WERE ISSUED DURING THE MONTH OF MAY, 1917.

[Abbreviations: "Gaz."—Official Gazette.]

A. Schrader's Son. (See Allen, William A., assignor.)
A. G. Spalding & Bros. (See Pierce, George L., assignor.)
A. O. Smith Company. (See Schwab, Leon C., assignor.)
A. B. C. Starter Company. (See Allison, Fred, assignor.)
A-B-C Starter Company. (See Churchward, Alexander, assignor.)
A. C. K. Belting Co. (See Kaplan, Jacob, assignor.)
Aasen, Niels W., Copenhagen, Denmark. Safety device for shells. No. 1,224,885; May 8; v. 238; p. 323.
Abbett, Edgar J., Houston, Tex. Silo. No. 1,228,278; May 29; v. 238; p. 1574.
Abbey, Simeon A. (See Buxton and Abbey.)
Abbott, Cecil C., Harbor Springs, Mich. Device for trimming the tips of billiard-cues. No. 1,227,025; May 22; v. 238; p. 1128.
Abbott, Chauncey W., Auburn, N. Y., assignor to The American Conduit Manufacturing Company, Pittsburgh, Pa. Electrical conduit. No. 1,225,553; May 8; v. 238; p. 549.
Abbott, George E., Hartford, Conn. Ball-forming machine. No. 1,226,435; May 15; v. 238; p. 891.
Abell, Rollin, Boston, Mass. Flexible shafting. No. 1,224,886; May 8; v. 238; p. 323.
Abernathy, George J. (See Amos and Abernathy.)
Abraham, Herbert, New York, N. Y. Roofing material. No. 1,226,738; May 22; v. 238; p. 1028.
Abrahamson, Nils S., Los Angeles, Cal. Ocean-power. No. 1,226,937; May 22; v. 238; p. 1096.
Abramson, Alfred C., Rockford, Ill. Piano bench and cabinet. No. 1,227,229; May 22; v. 238; p. 1197.
Absecon Manufacturing Company. (See Wyand, William, assignor.)
Achtmeyer, William, Middletown, Conn. Endless-web belt. No. 1,225,554; May 8; v. 238; p. 549.
Achtmeyer, William, Middletown, Conn. Web-fastener. No. 1,225,555; May 8; v. 238; p. 550.
Adams, Alfred C., Peckham, London, England. Mud-guard for motor and other vehicles. No. 1,227,026; May 22; v. 238; p. 1128.
Adams, Benton C., Miles City, Mont. Attachment for riding-saddles. No. 1,226,623; May 22; v. 238; p. 991.
Adams, George L. (See Hess, Clare W., assignor.)
Adams, Henry, assignor to The Adams Mining Machinery Corporation, New London, Conn. Non-attrition process of and apparatus for washing and sorting coal. No. 1,224,350; May 1; v. 238; p. 85.
Adams Mining Machinery Corporation, The. (See Adams, Henry, assignor.)
Adams, Thomas F. (See Konar, John, assignor.)
Adams, Walter S., assignor to The J. G. Brill Company, Philadelphia, Pa. Universal joint. No. 1,225,303; May 8; v. 238; p. 465.
Adams & Westlake Company, The. (See Hamm, Legge, and Krohn, assignors.)
Adams, William S. (See Cole, Clifford M., assignor.)
Adamson, Frank M. (See Miller and Adamson.)
Adder Machine Company. (See Hunter and Küntzler, assignors.)
Addison, Josiah, Broughton, Ill. Cake-turner. No. 1,224,351; May 1; v. 238; p. 86.
Addison, William J., assignor of one-half to A. K. Boyer, St. Louis, Mo. Roller car-door hanger. No. 1,225,098; May 8; v. 238; p. 396.
Adelman, Samuel. (See Arkin and Adelman.)
Adler, Bror A., assignor to P. A. Lorenz, Chicago, Ill. Differential clutch mechanism. No. 1,224,124; May 1; v. 238; p. 3.
Adom, Movsess B., White Plains, N. Y. Rendering textile fabrics antique. No. 1,227,361; May 22; v. 238; p. 1239.
Aetna Explosives Company. (See Flurscheim, Bernhard J., assignor.)
Ahle, William H., and E. L. Fitzgerald, Gerald, Mo. Gearing. No. 1,225,202; May 8; v. 238; p. 429.
Aichele, Albert, Baden, Switzerland. Change-gear. (Reissue.) No. 14,293; May 1; v. 238; p. 273.
Aichele, Albert, assignor to Aktiengesellschaft Brown Boveri & Cie., Baden, Switzerland. Insulator for high-tension conductors. No. 1,225,738; May 15; v. 238; p. 655.
Aikman, Burton S., assignor to National Brake & Electric Company, Milwaukee, Wis. Electric pump-governor. No. 1,227,230; May 22; v. 238; p. 1197.
Ainis, Charles, Philadelphia, Pa. Attachment for shaving-mugs. No. 1,228,160; May 29; v. 238; p. 1537.
Aisen, Maurice N., Chicago, Ill. Sizing solution and making the same. No. 1,224,125; May 1; v. 238; p. 3.
Aitken, Hugh W., Glasgow, Scotland. Roller-adjusting means for sugar-cane mills. No. 1,227,561; May 29; v. 238; p. 1335.
Akerly, Frank F. (See Cate, Clarence, assignor.)
Akins, Stephen A., Kansas City, Mo. Game. No. 1,226,841; May 22; v. 238; p. 1064.
Aktiebolaget Ljungströms Angturbin. (See Wiberg, Oskar A., assignor.)
Aktiebolaget Svenska Kullagerfabriken. (See Wingquist, Sven G., assignor.)
Aktiengesellschaft Brown Boveri & Cie. (See Aichele, Albert, assignor.)
Albrecht, Christian A. (See Muehleisen and Albrecht.)
Albrecht, William F. (See Lemp, Albrecht, and Shebol.)
Albrecht, William F., Salt Lake City, Utah. Faucet. No. 1,226,436; May 15; v. 238; p. 892.
Alden, Vern E., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Transforming system. No. 1,224,255; May 1; v. 238; p. 51.
Alder, Jacob, Sr., St. Louis, Mo. Sewer-opening apparatus. No. 1,225,739; May 15; v. 238; p. 655.
Alexander, Elmer P., assignor to James H. Mann Company, Lewistown, Pa. Grinding-wheel stand. No. 1,227,547; May 22; v. 238; p. 1300.
Alexander, George W. (See Nace, Alexander, and Brown.)
Alexander, James, Bristol, Conn. Tool for turning balls. No. 1,228,086; May 29; v. 238; p. 1514.
Alexander, Jesse, New York, N. Y. Type-writing-machine line-spacing mechanism. No. 1,227,519; May 22; v. 238; p. 1291.
Alexander, Percy, Marblehead, Mass. Treating leather. No. 1,225,389; May 8; v. 238; p. 495.
Alexander, William B., Hazelrigg, Ind. Brush-making machine. No. 1,227,562; May 29; v. 238; p. 1335.
All-Weather Spark Plug Company. (See Mack, Otto B., assignor.)
Allard, Dominique, Manchester, N. H. Machine for rolling raw cotton into sheets. No. 1,225,099; May 8; v. 238; p. 396.
Allen, James, Washington, D. C. Fly-catcher. No. 1,225,556; May 8; v. 238; p. 550.
Allen, James M., and J. C. Christen, said Christen assignor to O. S. Miller, St. Louis, Mo. Cementation compound. No. 1,226,739; May 22; v. 238; p. 1028.
Allen, Joseph H., El Paso, Tex. Collar attachment. No. 1,224,828; May 1; v. 238; p. 253.
Allen, William A., Yonkers, assignor to A. Schrader's Son, Incorporated, New York, N. Y. Pressure-gage attachment. No. 1,227,563; May 29; v. 238; p. 1335.
Allerdice, Joseph, *et al.* (See Ericksen, Charles E., assignor.)
Allerdice, W. H., *et al.* (See Ericksen, Charles E., assignor.)
Allgrunn, Axel, Dover, N. J. Demountable rim. No. 1,225,557; May 8; v. 238; p. 550.
Alliance Machine Company, The. (See Kendall, David, assignor.)
Alliance Vegetable Company. (See Humphrey, George F., assignor.)
Allingham, Henry W. (See Phillips and Allingham.)
Allis-Chalmers Manufacturing Company. (See Brown, Arthur J., assignor.)
Allis-Chalmers Manufacturing Company. (See Fischer, Charles A., assignor.)
Allis-Chalmers Manufacturing Company. (See Search, Charles E., assignor.)
Allis-Chalmers Manufacturing Company. (See Soreng, Edgar M., assignor.)
Allis-Chalmers Manufacturing Company. (See Steen, Halfdan A., assignor.)
Allis, Louis, Milwaukee, Wis. Athletic brace for limbs. No. 1,226,160; May 15; v. 238; p. 798.

All'son, Fred, assignor to A. B. C. Starter Company, Detroit, Mich. Starting device. No. 1,225,558; May 8; v. 238; p. 551.

Allmand, John T., Detroit, Mich., assignor, by mesne assignments, to Fisher Body Corporation. Weather-strip. No. 1,226,159; May 15; v. 238; p. 798.

Alphaduct Company. (See Hyde, Courtney, assignor.)

Alstrom, Irvin, Galva, Ill. Sack holder and support. No. 1,226,295; May 15; v. 238; p. 848.

Alsworth, Louie F., Chicago, Ill. Device for opening and closing doors for garages, &c. No. 1,225,205; May 8; v. 238; p. 430.

Altorfer, Alpheus W., Roanoke, assignor to Power Washing Machine Co., Peoria, Ill. Driving mechanism. No. 1,227,733; May 29; v. 238; p. 1393.

Aluminum Seal Company. (See Buhles, William C., assignor.)

Ambrose, Harry T. (See Walter, Edward C., assignor.)

Amend, Otto P. (See Axtell, Cyrus F., assignor.)

American B. H. P. Aero Engine Corporation. (See Pullinger, Thomas C. W., assignor.)

American Ball Bearing Company, The. (See Baker, Walter C., assignor.)

American Bank Note Company. (See Smith, Amos H., assignor.)

American Brake Company. (See Schwentler, Francis E., assignor.)

American Brake Shoe & Foundry Company, The. (See Jones, Harry, assignor.)

American Brake Shoe and Foundry Company, The. (See McDonough, William H., assignor.)

American Brake Shoe & Foundry Company, The. (See Sargent, Fitz William, assignor.)

American Brake Shoe and Foundry Company, The. (See Schoenheiter, Herman K., assignor.)

American Can Company. (See Eberhart, Felix, assignor.)

American Can Company. (See Hodgson, John G., assignor.)

American Can Company. (See Hothersall, John M., assignor.)

American Can Company. (See Rudolph, Franklin, assignor.)

American Can Company. (See Rudolphi and Ostlin, assignors.)

American Can Company. (See Vaughan, Ross, assignor.)

American Can Company. (See Wood, Frederick P., assignor.)

American Can Company. (See Young, John M., assignor.)

American Car and Foundry Company. (See Ames, Joseph H., assignor.)

American Car and Foundry Company. (See Beard, Paul M., assignor.)

American Car and Foundry Company. (See Dietrichson, William F., assignor.)

American Car and Foundry Company. (See Ellis, Robert G., assignor.)

American Car and Foundry Company. (See Gibbs, Frederick H., assignor.)

American Car and Foundry Company. (See Hochberg, Oscar, assignor.)

American Car and Foundry Company. (See McDowell, John L., assignor.)

American Car and Foundry Company. (See Ostrander, Allen E., assignor.)

American Car and Foundry Company. (See Roa, William J., assignor.)

American Car and Foundry Company. (See Rohlfing, John M., assignor.)

American Car and Foundry Company. (See Stevenson, Frederick A., assignor.)

American Car and Foundry Company. (See Weisbrod, Jacob H., assignor.)

American Car and Foundry Company. (See Willoughby, Victor, assignor.)

American Carbolite Company. (See Duncan and Shoup, assignors.)

American Carbon & Battery Company. (See Hambuechen, Carl, assignor.)

American Carburetor Co. (See Merriam, Harry C., assignor.)

American Conduit Manufacturing Company, The. (See Abbott, Chauncey W., assignor.)

American Electrical Heater Company. (See Kuhn and Shallor, assignors.)

American Engine and Electric Company. (See Hensley, William T., assignor.)

American Flooring Company. (See Nienstaedt, Max, assignor.)

American Graphophone Company. (See Capps and Scully, assignors.)

American Graphophone Company. (See Woods, Clinton E., assignor.)

American Hoist & Derrick Company. (See Crosby, Oliver, assignor.)

American Incandescent Heat Company. (See Smallwood, Alfred, assignor.)

American Laundry Machinery Company. (See Richmond, John, assignor.)

American Linen Company. (See Overholt and Granbois, assignors.)

American Machine & Foundry Company. (See Marsh, Harry S., assignor.)

American Machine & Manufacturing Company. (See Kennedy, Alfred D., assignor.)

American Manganese Steel Company. (See Elfborg, Henry G., assignor.)

American Molding Machine Co. (See Norcross, William C., assignor.)

American Optical Company. (See Bugbee, Lucian W., assignor.)

American Optical Company. (See Day, George H., assignor.)

American Paper Goods Company, The. (See Cooley, Henry B., assignor.)

American Photo Player Company. (See Van Valkenburg, Harold A., assignor.)

American Pressweld Radiator Corporation. (See Singer, Frank J., assignor.)

American Rolling Mill Company, The. (See Freeze, Johnathan R., assignor.)

American Seeding Machine Company, The. (See Faas and Braley, assignors.)

American Slicing Machine Company. (See Wolff and Hood, assignors.)

American Steel and Wire Company of New Jersey, The. (See Carstarphen, Frederick C., assignor.)

American Steel & Wire Company of New Jersey. (See Hindmarsh, Percy J., assignor.)

American Steel & Wire Company of New Jersey, The. (See Seaholm and Wilton, assignors.)

American Telephone and Telegraph Company. (See Barrows and Charlesworth, assignors.)

American Telephone and Telegraph Company. (See Bascom, Henry M., assignor.)

American Telephone and Telegraph Company. (See Campbell, George A., assignor.)

American Telephone and Telegraph Company. (See Singer, Frank K., assignor.)

American Type Founders Company. (See Kelly, William H., assignor.)

American Warp Drawing Machine Company. (See Hathaway and Labning, assignors.)

American Warp Drawing Machine Company. (See Hathaway and Lea, assignors.)

American Well Works, The. (See Palmer, Benjamin L., assignor.)

Ames, Joseph H., Detroit, Mich., assignor to American Car and Foundry Company, St. Louis, Mo. Die-machine for forging annular work. No. 1,224,829; May 1; v. 238; p. 253.

Amet, Edward H., Redondo Beach, Cal. Means for utilizing electrically-transmitted impulses. No. 1,226,203; May 8; v. 238; p. 429.

Amis, Henry C., Stanfield, Oreg. Hay-knife. No. 1,224,436; May 1; v. 238; p. 117.

Amos, Thomas E., and G. J. Abernathy, Ambrose, Tex. Peanut-digger. No. 1,226,437; May 15; v. 238; p. 892.

Amsden, George A., Littleton, assignor to The Lamson Company, Boston, Mass. Cable-carrier apparatus. No. 1,226,740; May 22; v. 238; p. 1029.

Amsel, Henry, and B. Reichard, New York, N. Y. Extension-table. No. 1,227,102; May 22; v. 238; p. 1154.

Anchor Company. (See Belknap, Robert E., assignor.)

Anderson, Andrew, assignor of one-half to T. M. Saunders, Bigfork, Minn. Change-speed mechanism. No. 1,228,087; May 29; v. 238; p. 1514.

Anderson, Andrew S., assignor of one-half to R. L. Smith, Oakland, Cal. Vehicle-tire jacket. No. 1,228,355; May 29; v. 238; p. 1601.

Anderson, Austin E., East Randolph, N. Y. Milking apparatus. No. 1,226,842; May 22; v. 238; p. 1064.

Anderson Button Attaching Machine Company. (See Poole, Lora E., assignor.)

Anderson, Carl E., Austin, assignor to J. Rousso, Chicago, Ill. Towel-serving apparatus. No. 1,225,390; May 8; v. 238; p. 495.

Anderson, Carl J., Sanborn, N. D. Harrow. No. 1,225,204; May 8; v. 238; p. 430.

Anderson, Charles E. (See Luke, Russell, Kennedy, and Anderson.)

Anderson, Charles H., Cincinnati, Ohio. Side frame for car-windows. No. 1,228,161; May 29; v. 238; p. 1537.

Anderson, Ernst G. K., Chicago, Ill., assignor to Benjamin Electric Manufacturing Company. Attachment-plug. No. 1,225,391; May 8; v. 238; p. 496.

Anderson, Hans J., Lakemills, Wis. End-gate fastener. No. 1,227,231; May 22; v. 238; p. 1198.

Anderson, James A., New York, N. Y. Endless-apron compressor and disintegrator. No. 1,224,993; May 8; v. 238; p. 360.

Anderson, James A., New York, N. Y. Apparatus for treating garbage. No. 1,227,232; May 22; v. 238; p. 1198.

Anderson, John E., assignor of one-half to W. P. Seng, Chicago, Ill. Lubricator for vehicle-springs. No. 1,224,256; May 1; v. 238; p. 51.

Anderson, John E., assignor of one-half to W. P. Seng, Chicago, Ill. Lubricator for vehicle-springs. No. 1,224,257; May 1; v. 238; p. 51.

Anderson, John H., Havana, N. D. Elevating-truck. No. 1,228,162; May 29; v. 238; p. 1537.

Anderson, Neal L., Winston-Salem, N. C. Type-writer carriage-return mechanism. No. 1,226,296; May 15; v. 238; p. 848.

Anderson, Nels A., Warren, assignor to The Harris Automatic Press Company, Niles, Ohio. Buckling device. No. 1,225,740; May 15; v. 238; p. 655.

Anderson, Olef A. (See Schefstrom and Anderson.)





Anderson, Oscar T., Waterloo, Iowa. Tool-holder. No. 1,226,047; May 15; v. 238; p. 760.

Anderson, Otto V., Loxley, Ala. Door and window screen. No. 1,227,734; May 29; v. 238; p. 1393.

Anderson, Pehr M., Chicago, Ill. Meat-slicing machine. No. 1,227,233; May 22; v. 238; p. 1199.

Anderson, Wm. E., *et al.* (See Feltz, Charles F., assignor.)

Andersson, Gustaf, assignor to Nya Aktiebolaget Atlas, Stockholm, Sweden. Rock-drilling engine. No. 1,227,564; May 29; v. 238; p. 1336.

Anelli, Pietro, Cremona, Italy. Keyboard of pianos. No. 1,224,994; May 8; v. 238; p. 360.

Angello, Louis, Kansas City, Mo. Repeating attachment for phonographs. No. 1,224,995; May 8; v. 238; p. 360.

Angier, Edward H., Quincy, Mass. Composite sheet. No. 1,227,520; May 22; v. 238; p. 1292.

Anglo-American Textile Machinery Company. (See Leigh, Thomas E., assignor.)

Ankers, Joseph T., Charlottesville, Va. Match-box. No. 1,227,362; May 22; v. 238; p. 1239.

Anschütz & Co. (See Schuler, Max, assignor.)

Anthony, Stanley, Boston, Mass. Connector. No. 1,226,161; May 15; v. 238; p. 798.

Apostolopoulos, Nicklas A., Providence, R. I. Disk-record cabinet. No. 1,224,352; May 1; v. 238; p. 86.

Apple, Vincent G., Dayton, Ohio. Armature construction for dynamo-electric machines. No. 1,224,518; May 1; v. 238; p. 144.

Appleton Machine Company. (See Saecker, Frank E., assignor.)

Apsley Rubber Company. (See Dunbar, Ernest W., assignor.)

Arbetter Felling Machine Company. (See Hayes, Thomas J., assignor.)

Arbey, Alphonse. (See Peuch and Arbey.)

Arents, Harold D., New Haven, Conn. Stencil. No. 1,228,163; May 29; v. 238; p. 1538.

Argo, Lisle T., Los Angeles, assignor to Curtis Olive Corporation, Bloomington, Cal. Pitter. No. 1,228,279; May 29; v. 238; p. 1574.

Ariani, Adriano, New York, N. Y. Sostenuto mechanism for pianos. No. 1,224,437; May 1; v. 238; p. 117.

Arkin, Louis, Boston, Mass. Fastener. No. 1,225,741; May 15; v. 238; p. 655.

Arkin, Louis, and S. Adelman, Boston, Mass. Motion-picture apparatus. No. 1,225,392; May 8; v. 238; p. 496.

Armour Fertilizer Works. (See Hershman, Paul R., assignor.)

Armstrong, Edward P., Portland, Oreg. Rocker-frame for grinding-wheels and the like. No. 1,227,556; May 22; v. 238; p. 1303.

Armstrong, Edwin T., Adrian, Mich. Rotary disk valve for gas-engines. No. 1,225,916; May 15; v. 238; p. 714.

Armstrong, John L. (See Hughes and Armstrong.)

Armstrong, Lysander B. (See Bosson and Armstrong.)

Armstrong, William B., Sigourney, Iowa. Coal-cabinet. No. 1,224,590; May 1; v. 238; p. 170.

Arner, Joseph, assignor of one-fourth to G. V. Gadde and three-sixteenths to C. C. Hawbaker, Washington, D. C. Transmission mechanism. No. 1,226,048; May 15; v. 238; p. 760.

Arnold, Harry B. (See Porter and Arnold.)

Arnold, William B. (See Martin, Thomas, assignor.)

Aroian, Ernest, Kingston, N. Y. Condiment-shaker. No. 1,224,699; May 1; v. 238; p. 208.

Aronson, Louis V., Newark, N. J. Thermometer-attaching means. No. 1,228,164; May 29; v. 238; p. 1538.

Art Metal Construction Company. (See Carlson, Underwood, and Jnderstrom, assignors.)

Art Metal Construction Company, The. (See Sampson and Johnson, assignors.)

Art Metal Construction Company. (See Ulrich, Charles B., assignor.)

Artfilm Studios. (See Stambaugh, Reginald V., assignor.)

Arvine, Freeling W., Rochester, N. Y. Sash-balance. No. 1,226,843; May 22; v. 238; p. 1065.

Asbestos Protected Metal Company. (See Waugh, William P., assignor.)

Asbury, Charles W., Oak Lane, assignor to The Enterprise Manufacturing Company of Pennsylvania, Philadelphia, Pa. Cherry-stoner. No. 1,226,438; May 15; v. 238; p. 892.

Asch, Paul B. (See Simmons, Albert H., assignor.)

Ashley, Robert W., New York, N. Y., assignor of one-half to E. Oberkirch, St. Marys, Pa. Vehicle-wheel rim. No. 1,224,830; May 1; v. 238; p. 253.

Ashley, William E., Greensboro, N. C. Bridge-protector. No. 1,227,565; May 29; v. 238; p. 1336.

Ashus, John, Roxbury, Mass. Beverage and making same. No. 1,226,439; May 15; v. 238; p. 893.

Askew, Wille G., Morgan City, La. Bread raising and warming cabinet. No. 1,227,103; May 22; v. 238; p. 1154.

Asilin, James, Providence, R. I. Blowpipe. No. 1,227,104; May 22; v. 238; p. 1155.

Asplet, Arthur, assignor of one-half to W. H. Woodbury, Murphy, N. C. Nut-lock. No. 1,226,440; May 15; v. 238; p. 893.

Atherton, Charles, assignor to Unit System of Heating and M'f'g Company, Pasadena, Cal. Gas-furnace. No. 1,224,700; May 1; v. 238; p. 208.

Atkinson, Alfred C., Kelburn, Wellington, New Zealand. Metal molding and casting appliance. No. 1,225,206; May 8; v. 238; p. 430.

Atkinson, Joseph. (See White, Franklin M., assignor.)

Atkinson, Lynn S. (See Marks, Donn O., assignor.)

Atterbury, John N., Laurel, Oreg. Potato-separator. No. 1,226,441; May 15; v. 238; p. 893.

Attula, Frederic, Chicago, Ill. Mechanical bait-casting fishing-rod. No. 1,226,162; May 15; v. 238; p. 798.

Atwood, Seth B., Rockford, Ill. Buffer for doors. No. 1,226,442; May 15; v. 238; p. 893.

Aubrey, Orley R., Holbrook, Oreg. Adjustable logging-sling. No. 1,225,100; May 8; v. 238; p. 396.

Audsley, Maurice A., West Philadelphia, Pa. Game. No. 1,225,393; May 8; v. 238; p. 496.

Auñero, Emanuel, Brooklyn, N. Y. Signal device. No. 1,226,624; May 22; v. 238; p. 991.

Auld, John, Chicago, Ill. Fountain-brush. No. 1,226,163; May 15; v. 238; p. 799.

Ault & Wiborg Company, The. (See Hochstetter, Robert, assignor.)

Aurora Door Hanger & Specialty Company. (See Guy, George G., assignor.)

Austin, Frederick C. (See Rosendahl, Nils M., assignor.)

Austin, Herbert, Bromsgrove, England. Appliance for boring metals or other hard substances. No. 1,226,164; May 15; v. 238; p. 799.

Austin, William A., *et al.* (See Phillips, George B., assignor.)

Auto-Ped Company of America. (See Wacker, George W., assignor.)

Auto Transmission Company. (See Weigel, Philip A., assignor.)

Autogenwerk Sirius, Gesellschaft mit beschrankter Haftung. (See Samesreuther, Richard, assignor.)

Automatic Candy Machine Company. (See Waugh and Swartz, assignors.)

Automatic Electric Company. (See Blessing, John G., assignor.)

Automatic Electric Company. (See Erickson, John, assignor.)

Automatic Electric Company. (See Martin, Talbot G., assignor.)

Automatic Electric Company. (See Mollerup, Christopher, assignor.)

Automatic Electric Washer Company. (See Ogg, Harry L., assignor.)

Autosales Gum & Chocolate Company. (See Grover, Albert D., assignor.)

Avery Company. (See Bartholomew, John B., assignor.)

Axtell, Cyrus F., assignor of one-half to O. P. Amend, New York, N. Y. Lubricant. No. 1,226,165; May 15; v. 238; p. 800.

Axtell, Manly E., Vicksburg, Mich. Sign-board. No. 1,227,989; May 29; v. 238; p. 1482.

Ayling, John, Vancouver, assignor of one-half to W. J. Carmichael, Ladysmith, British Columbia, Canada. Water-heater. No. 1,227,566; May 29; v. 238; p. 1336.

Ayres, Charles S., Cleveland, Ohio. Registering mechanism. No. 1,227,567; May 29; v. 238; p. 1337.

B. Jahn Manufacturing Company, The. (See Jahn, Berthold, assignor.)

B. Jahn Manufacturing Company, The. (See Jahn and Hammer, assignors.)

B.-C. M'f'g Co. (See Vaughan, Thomas M., assignor.)

B. F. Goodrich Company, The. (See Gammeter, John R., assignor.)

B. F. Sturtevant Company. (See Bergstrom, Carl O., assignor.)

Babcock, Charles S. (See Leighton and Babcock.)

Babin, Telesphore, Houma, La. Acetylene-gas generator. No. 1,225,559; May 8; v. 238; p. 551.

Bachman, Joseph A. (See Stephens, Charles D., assignor.)

Bachmann, Alwin B., Cincinnati, Ohio. Educational modeling device. No. 1,226,049; May 15; v. 238; p. 760.

Bacho, Frederick W., Biloxi, Miss. Farm-gate. No. 1,224,353; May 1; v. 238; p. 86.

Bacon, Albert E. (See Sharp and Bacon.)

Bacon, Byron R., North Chili, assignor of one-half to W. J. Burden, Rochester, N. Y. Bread-knife. No. 1,227,234; May 22; v. 238; p. 1199.

Bacon, George M., Salt Lake City, Utah. Electric time-switch. No. 1,224,887; May 8; v. 238; p. 323.

Badanes, Bernard, New York, N. Y. Receiver-support for telephones. No. 1,226,166; May 15; v. 238; p. 800.

Badische Anilin & Soda Fabrik. (See Bosch and Mittasch, assignors.)

Bailey, Anna D., New York, N. Y. Adjustable dress-form. No. 1,225,207; May 8; v. 238; p. 431.

Bailey, Bella P., Portland, Oreg. Combined baby hammock and swing. No. 1,225,208; May 8; v. 238; p. 431.

Bailey, David D., Coffeyville, Kans. Necktie. No. 1,226,741; May 22; v. 238; p. 1029.

Bailey, William K. (See Jenkins and Bailey.)

Baily, Thaddeus F., and F. T. Cope, assignors to The Electric Furnace Company, Alliance, Ohio. Heat-treating furnace. No. 1,227,027; May 22; v. 238; p. 1128.

Bain, Fred B. (See Williams, Bert C., assignors.)

Baird, George H., Winnipeg, Manitoba, Canada. Voice-silencer. No. 1,227,363; May 22; v. 238; p. 1239.

Bajett, Louis, Plainfield, N. J. Belt-tightener and brake for sponging-machines. No. 1,226,297; May 15; v. 238; p. 848.

Baker, Andrew J., Fort Wayne, Ind. Dry-spray gun. No. 1,226,443; May 15; v. 238; p. 893.
Baker, Edward A. (See Baker, William, assignor.)
Baker, Erle K., assignor to Universal Rim Company, Chicago, Ill. Demountable-rim wheel. No. 1,227,990; May 29; v. 238; p. 1482.
Baker, Frederick W. (See Foley and Baker.)
Baker, George S. (See Carr and Baker.)
Baker, Henry C. (See Jones, John D., assignor.)
Baker, James R., Arlington, N. J., assignor to Cooper-Hewitt Electric Company, Hoboken, N. J. Multiple-anode mercury-vapor apparatus. No. 1,224,701; May 1; v. 238; p. 208.
Baker-Vawter Company. (See Manny, Fred L., assignor.)
Baker, Walter C., assignor to The American Ball Bearing Company, Cleveland, Ohio. Power-transmitting mechanism. No. 1,226,742; May 22; v. 238; p. 1029.
Baker, William, Barberton, assignor of one-half to E. A. Baker, Mansfield, Ohio. Means for operating and locking valves. No. 1,226,938; May 22; v. 238; p. 1096.
Baker, William C., Portland, Oreg. Punch. No. 1,227,869; May 29; v. 238; p. 1440.
Baker, William E., Waco, Tex. Rail-joint. No. 1,227,364; May 22; v. 238; p. 1239.
Bakken, Andrew H., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Centrifugal switch. No. 1,224,126; May 1; v. 238; p. 3.
Balden, Frank E., Portland, Oreg. Furnace. No. 1,226,167; May 15; v. 238; p. 800.
Balding, N. A., *et al.* (See Thomas, Solomon, assignor.)
Baldwin, Arthur J. (See Ford, Hannibal C., assignor.) (Reissue.)
Baldwin, Charles M., Hudson Falls, N. Y. Cigarette-box. No. 1,224,996; May 8; v. 238; p. 361.
Baldwin, Lovell. (See Sherwood and Baldwin.)
Bales, James W. H., assignor of one-third to William B. Buchanan, Sanford, Fla. Calipers. No. 1,227,365; May 22; v. 238; p. 1240.
Balke, Julius. (See Crane, Frank G., assignor.)
Ball, Henry P., assignor to S. Sternau & Co., Brooklyn, N. Y. Portable lamp for burning solid fuel. No. 1,226,625; May 22; v. 238; p. 991.
Ballard, George L., assignor to Wildman Mfg. Co., Norristown, Pa. Clutch. No. 1,224,997; May 8; v. 238; p. 361.
Ballmer, August A., Loma, Colo. Piston-ring. No. 1,225,101; May 8; v. 238; p. 396.
Ballou, Charles E., Roanoke, Va. Insulated rail-joint. No. 1,227,028; May 22; v. 238; p. 1129.
Ballweg, Frank J., Mobile, Ala. Automobile-axle. No. 1,227,029; May 22; v. 238; p. 1129.
Balsillie, John G., Melbourne, Victoria, Australia. Wireless-telegraph transmitter. No. 1,227,521; May 22; v. 238; p. 1292.
Balzer, Fritz, assignor to Troy Laundry Machinery Company, Limited, Chicago, Ill. Centrifugal extractor. No. 1,224,888; May 8; v. 238; p. 324.
Bamford, Cyril J. (See Bamford, Joseph and C. J.)
Bamford, Joseph and C. J., St. Mary's Mount, Uttoxeter, England. Side-delivery hay-raking machine. No. 1,224,876; May 1; v. 238; p. 269.
Banbury, Fernley H., Ansonia, assignor to Birmingham Iron Foundry, Derby, Conn. Machine for treating rubber and other heavy plastic material. No. 1,227,522; May 22; v. 238; p. 1292.
Bancel, Paul A., New York, N. Y. Boiler. No. 1,225,304; May 8; v. 238; p. 465.
Banic, Stephan, Greenville, Pa. Motor-sleigh. No. 1,228,088; May 29; v. 238; p. 1515.
Banks, Frank, Hibbing, Minn. Gearing for automobiles. No. 1,225,102; May 8; v. 238; p. 397.
Bannfield, Edwin J., Toronto, Ontario, Canada. Machine for finishing base or gas-check plugs for artillery-shells. No. 1,225,742; May 15; v. 238; p. 656.
Barber Asphalt Paving Company, The. (See Hayden, Harold F., assignor.)
Barber Asphalt Paving Company, The. (See Wiederhold, Henry, assignor.)
Barber, Carver W., *et al.* (See Carlisle, George J., assignor.)
Barber-Colman Company. (See Colman, Howard D., assignor.)
Barber, Floyd N., Crafton, Pa., assignor, by mesne assignments, to The Electric Controller & Manufacturing Company. Electric switch. No. 1,227,568; May 29; v. 238; p. 1337.
Barber, Franklin L., and E. W. Webb, assignors to Standard Car Truck Company, Chicago, Ill. Side bearing for cars. No. 1,228,280; May 29; v. 238; p. 1575.
Barber, Fred A., assignor to Globe Ear-Phone Co., Boston, Mass. Hand-audiphone. No. 1,227,030; May 22; v. 238; p. 1129.
Barber, Homer M., Goldfield, Nev. Set for timbering mines. No. 1,226,444; May 15; v. 238; p. 894.
Barber, Howard M., Stonington, Conn., assignor, by mesne assignments, to C. B. Cottrell & Sons Company, New York, N. Y. Sheet-delivery apparatus for printing-machines. No. 1,225,743; May 15; v. 238; p. 656.
Barber, Howard M., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Flat-sheet-delivery mechanism for printing-presses. No. 1,226,168; May 15; v. 238; p. 800.
Bardin, Abel, Paris, France. Manufacture of reinforced glass. No. 1,228,165; May 29; v. 238; p. 1538.
Bardons, George C. (See Oliver and Bardons.)
Bardons, George C., assignor to Bardons and Oliver, Cleveland, Ohio. Turret-lathe. No. 1,224,889; May 8; v. 238; p. 325.
Bardons and Oliver. (See Bardons, George C., assignor.)
Bardons and Oliver. (See Oliver, John G., assignor.)
Barker, Albert F., San Francisco, Cal. Clamp for advertising, manifolding, and other sheets. No. 1,224,998; May 8; v. 238; p. 362.
Barker, George H., Pasadena, Cal. Means for preventing frost on trees and other vegetation. No. 1,225,304; May 8; v. 238; p. 496.
Barker, John, Los Angeles, Cal. Folding sunshade and tent. No. 1,225,917; May 15; v. 238; p. 715.
Barker, Noah, Seevers, Iowa. Temperature-controlling device. No. 1,224,862; May 1; v. 238; p. 263.
Barker, Noel W., Victoria, British Columbia, Canada. Drain and relief valve. No. 1,225,744; May 15; v. 238; p. 657.
Barker, Walter G. (See Wilkinson and Barker.)
Barker, William J., Flint, Mich. Universal joint. No. 1,228,166; May 29; v. 238; p. 1538.
Barksdale, Clement D., Petersburg, Va. Trunk. No. 1,224,863; May 1; v. 238; p. 264.
Barnaby, Charles W., New York, N. Y. Type-writer platen. No. 1,226,626; May 22; v. 238; p. 991.
Barnard and Leas Manufacturing Company. (See Cornwall, John B., assignor.)
Barnard, John H., Brooklyn, N. Y. Sectional mounting of charts, &c. No. 1,225,305; May 8; v. 238; p. 466.
Barnard, Walter E., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Copy-holder. No. 1,226,939; May 22; v. 238; p. 1097.
Barnes, John W., Rock Ferry, England. Boring-bar for use in the manufacture of ammunition-shells or the like. No. 1,225,745; May 15; v. 238; p. 657.
Barnes, Lew A., Chicago, Ill. Adjustable supporting device. No. 1,227,105; May 22; v. 238; p. 1156.
Barnes Manufacturing Company, The. (See Gorman, James C., Jr., assignor.)
Barnes, William F., Spartanburg, S. C. Tag. No. 1,226,050; May 15; v. 238; p. 761.
Barnett, Morrisson J., Los Angeles, assignor to E. Beaulieu, Alderpoint, Cal. Camera-shutter-operating device. No. 1,277,991; May 29; v. 238; p. 1482.
Barnett, Otto R. (See Laas, Edward, assignor.)
Barnett, Solomon V., and J. W. Holloway, Prague, Okla. Corn-harvester. No. 1,227,235; May 22; v. 238; p. 1199.
Barnhart, John E. (See Hayes, John P., assignor.)
Barnum, Thomas E., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Resistance unit. No. 1,226,627; May 22; v. 238; p. 992.
Barrett, Clarence, assignor of one-third to G. Morrow and one-third to R. D. Salisbury, Salt Lake City, Utah. Aerial torpedo. No. 1,228,281; May 29; v. 238; p. 1575.
Barrett, Glenn J., Grand Rapids, Mich., assignor, by mesne assignments, to Remington Typewriter Company, Ilion, N. Y. Type-writing and computing machine. No. 1,227,236; May 22; v. 238; p. 1200.
Barrows, Frank L., Moscow, Idaho. Attachment for phonographs. No. 1,225,560; May 8; v. 238; p. 551.
Barrows, Frank L., Moscow, Idaho. Attachment for phonographs. No. 1,225,561; May 8; v. 238; p. 552.
Barrows, Leon D., New York, N. Y., and H. P. Charlesworth, East Orange, N. J., assignors to American Telephone and Telegraph Company. System for connecting telephone-stations. No. 1,227,735; May 29; v. 238; p. 1394.
Barry-Wehmiller Machinery Company. (See Wehmiller, Alfred H., assignor.)
Barth, Carl G., Philadelphia, Pa. Lathe. No. 1,226,051; May 15; v. 238; p. 761.
Barth, Frank. (See Bloom and Barth.)
Barthel, Oliver E., Detroit, Mich. Piston. No. 1,224,999; May 8; v. 238; p. 362.
Bartholomew, John B., assignor to Avery Company, Peoria, Ill. Gang-plow. No. 1,227,237; May 22; v. 238; p. 1200.
Bartholomew, Thomas, Columbus, Ohio. Toothpick-holder. No. 1,227,031; May 22; v. 238; p. 1130.
Bartholomew, William, assignor to Troy Laundry Machinery Company, Limited, Chicago, Ill. Centrifugal extractor. No. 1,224,890; May 8; v. 238; p. 325.
Bartlett, Earle H., Kansas City, Mo. Adjustable window-shelf. No. 1,224,127; May 1; v. 238; p. 4.
Bartlett, Evan A., Fairmont, W. Va. Posterior injection-protector. No. 1,225,000; May 8; v. 238; p. 362.
Bartlett, John H., assignor to The Oshkosh Trunk Company, Oshkosh, Wis. Laundry-bag for trunks. No. 1,225,001; May 8; v. 238; p. 362.
Bartolomee, Carlo. (See Franchini and Bartolomee.)
Bascom, Henry M., Brooklyn, N. Y., assignor to American Telephone and Telegraph Company. Auxiliary supervisory signal system. No. 1,228,167; May 29; v. 238; p. 1538.
Bassford, William K., Perth Amboy, N. J., assignor to Universal Oil Converter Company, Long Island City, N. Y. Fuel-supplying device for internal-combustion engines. No. 1,226,940; May 22; v. 238; p. 1097.
Bassler, Edwin M., assignor to Bayley Manufacturing Company, Milwaukee, Wis. Heating apparatus. No. 1,226,298; May 15; v. 238; p. 849.
Bastian Brothers Co. (See Eggert, Louis H., assignor.)
Bates, Emma I., Park River, N. D. Hat-pin shield. No. 1,227,238; May 22; v. 238; p. 1200.



Battle, H. L., *et al.* (See Hubbard, Adra M. and O. M., assignors.)
Battu, Leonce L., assignor to Rateau Battu Smoot Company, New York, N. Y. Bearing lubrication. No. 1,226,844; May 22; v. 238; p. 1065.
Bauer, Hans F. (See Lenders and Bauer.)
Bauer, John, Louisville, Ky. Wind-shield attachment. No. 1,225,746; May 15; v. 238; p. 657.
Bauer, Lawrence E., Havre de Grace, Md., assignor to The Bauer Manufacturing Company. Can-opener. No. 1,226,628; May 22; v. 238; p. 992.
Bauer Manufacturing Company, The. (See Bauer, Lawrence E., assignor.)
Bauer, Martin, Cleveland, Ohio. Roof-jack. No. 1,226,169; May 15; v. 238; p. 800.
Baum, Albert J., assignor to A. Wanner, Jr., New York, N. Y. Manufacture of chair-seats. No. 1,224,891; May 8; v. 238; p. 325.
Bauman, Herman, and I. Teitelbaum, New York, N. Y. Collection-wagon. No. 1,225,562; May 8; v. 238; p. 552.
Baumann, Gottfried P., assignor to Latham Machinery Company, Chicago, Ill. Wire-stitching machine. No. 1,226,170; May 15; v. 238; p. 801.
Baumeister, Anton, Groton, S. D. Ellipsograph. No. 1,224,591; May 1; v. 238; p. 170.
Baumgartner, Virgil W., Salt Lake City, Utah. Automatic block-signal apparatus. No. 1,228,168; May 29; v. 238; p. 1539.
Bausch & Lomb Optical Company. (See Patterson, William L., assignor.)
Bausch & Lomb Optical Company. (See Patterson and Kellner, assignors.)
Baxa, James F., Chicago, Ill. Antiskidding device. No. 1,226,171; May 15; v. 238; p. 801.
Baxter, John B., assignor to Covert Manufacturing Company, Watervliet, N. Y. Breast-strap slide. No. 1,227,870; May 29; v. 238; p. 1440.
Baxter, John B., assignor to Covert Manufacturing Company, Watervliet, N. Y. Combined breast-strap slide and attaching means therefor. No. 1,227,871; May 29; v. 238; p. 1440.
Bayley Manufacturing Company. (See Bassler, Edwin M., assignor.)
Bayrer, Louis G., assignor to The Billings & Spencer Company, Hartford, Conn. Drop-hammer. No. 1,225,695; May 8; v. 238; p. 597.
Bazinet, Nazaire, Winnipeg, Manitoba, Canada. Drinking-fountain. No. 1,227,306; May 22; v. 238; p. 1240.
Beachler, George F., Cleveland, Ohio. Sphygmomanometer. No. 1,225,395; May 8; v. 238; p. 497.
Beacon Falls Rubber Shoe Company, The. (See Crowley, John T., assignor.)
Beadle, George W. (See Beatty, Wallace A., assignor.)
Beall, John S. (See Olcott, Herbert R., assignor.)
Beam, Jacob B., Punxsutawney, Pa. Valve. No. 1,225,002; May 8; v. 238; p. 363.
Beam, Victor S., Maplewood, and E. C. Otto, Elizabeth, N. J., assignors to Westinghouse Electric & Manufacturing Company. Latching and tripping mechanism. No. 1,227,367; May 22; v. 238; p. 1240.
Bean, Joseph E., Windom, Kans. Invoicing-machine. No. 1,228,282; May 29; v. 238; p. 1575.
Beard, Paul M., assignor to American Car and Foundry Company, St. Louis, Mo. Car end construction. No. 1,224,831; May 1; v. 238; p. 254.
Beard, Paul M., assignor to American Car and Foundry Company, St. Louis, Mo. Steel roof. No. 1,224,832; May 1; v. 238; p. 254.
Beasley, Thomas, North Vancouver, British Columbia, Canada. Collapsible case. No. 1,224,833; May 1; v. 238; p. 254.
Beatty, Frank, Seattle, Wash. Smoothing-iron. No. 1,227,736; May 29; v. 238; p. 1394.
Beatty, John D., Ivanhoe, N. C. Railway-signal. No. 1,225,747; May 15; v. 238; p. 658.
Beatty, Wallace A., New York, N. Y. Synthetic gum. No. 1,225,749; May 15; v. 238; p. 659.
Beatty, Wallace A., New York, N. Y. Artificial gum and producing the same. No. 1,225,750; May 15; v. 238; p. 659.
Beatty, Wallace A., assignor to G. W. Beadle, New York, N. Y. Condensation product and making same. No. 1,225,748; May 15; v. 238; p. 658.
Beatty, William G., Fergus, Ontario, Canada. Cattle-stanchion. No. 1,225,003; May 8; v. 238; p. 363.
Beaudry, Zotique, Lynn, Mass. Machine for burnishing the edges of the soles of boots and shoes. No. 1,226,941; May 22; v. 238; p. 1098.
Beaulieu, Alfred F., Chicago, Ill. Drill extension. No. 1,225,209; May 8; v. 238; p. 431.
Beaulieu, Eber. (See Barnett, Morrison J., assignor.)
Beaver, Thomas, Sewell, N. J. Traffic-signal. No. 1,226,445; May 15; v. 238; p. 894.
Bechman, Henry F., assignor to Duplex Printing Press Company, Battle Creek, Mich. Steam-table. No. 1,227,100; May 22; v. 238; p. 1155.
Bechtel, John A., Tarentum, Pa., assignor to Pittsburgh Plate Glass Company. Handling material in glass-making. No. 1,224,892; May 8; v. 238; p. 326.
Beck, Christopher W., Canastota, S. D. Luggage-carrier. No. 1,226,446; May 15; v. 238; p. 894.
Beck, Henry J. (See Sullivan and Beck.)
Beck, Joseph H., and G. Bedford, Brooklyn, N. Y. Player-piano. No. 1,227,368; May 22; v. 238; p. 1240.
Beck, Rasmus, assignor to Dürener Metallwerke Aktien-Gesellschaft, Düren, Germany. German-silver-alloy products and manufacture of same. No. 1,227,569; May 29; v. 238; p. 1337.
Beck, Stefan. (See Murf and Beck.)
Becker, Anton, assignor to The Ralston Steel Car Company, Columbus, Ohio. Car-underframe. No. 1,225,103; May 8; v. 238; p. 397.
Becker, Edmund H., Washington, D. C., assignor to Kinetic Electric Company, Norfolk, Va. Manufacture of electrodes. No. 1,228,169; May 29; v. 238; p. 1540.
Becker, John, assignor to Becker Milling Machine Company, Hyde Park, Mass. Standard and knee connection for milling and other machines. No. 1,225,726; May 8; v. 238; p. 607.
Becker, John P., St. Louis, Mo. Lock for automobiles. No. 1,224,258; May 1; v. 238; p. 52.
Becker Milling Machine Company. (See Becker, John, assignor.)
Beckers, William, and I. Dreyfus, Brooklyn, N. Y., assignors to W. Beckers Anilin & Chemical Works, Inc. Soluble color compound. No. 1,228,089; May 29; v. 238; p. 1515.
Beckett, Arthur L., Stigler, Okla. Bucket bottom and lift. No. 1,227,032; May 22; v. 238; p. 1130.
Beckwith, Louis I., Boston, Mass. Folding frame. No. 1,224,893; May 8; v. 238; p. 326.
Beckworth, Otto Q., and O. J. Hobson, Seattle, Wash. Apparatus and process for drying. No. 1,228,283; May 29; v. 238; p. 1576.
Bedford, George. (See Beck and Bedford.)
Bedingfield, Wade R. (See Goldwire and Patton, assignors.)
Bedrang, Charles E., Monument, Kans. Connecting-rod. No. 1,226,447; May 15; v. 238; p. 895.
Bee, Herman L., Webster Springs, W. Va. Railway-tie. No. 1,225,751; May 15; v. 238; p. 659.
Beeler, James W., St. Louis, Mo. Close-range attachment for gun-sights. No. 1,225,918; May 15; v. 238; p. 715.
Beeson, Ira S., assignor of one-fourth to B. Lee McComb, and one-fourth to E. F. Smith, Monticello, Miss. Spring-tire. No. 1,225,210; May 8; v. 238; p. 432.
Begany, Michael, Elizabeth, N. J. Combination-ruler. No. 1,224,592; May 1; v. 238; p. 171.
Behlen, Charles A., Richmond, Va. Autotrailer. No. 1,227,872; May 29; v. 238; p. 1441.
Behm, Henry, assignor to W. S. Heal, Elizabeth, N. J. Combined vibrator and spray. No. 1,225,752; May 15; v. 238; p. 660.
Behnke, Otto. (See Heilemann, Behnke, and Koch.)
Belden-Porter-Gray Company. (See Porter, Ray S., assignor.)
Beleal, Ernest J., Valley City, N. D. Fly-poisoner. No. 1,228,170; May 29; v. 238; p. 1540.
Belknap, Robert E., assignor to Anchor Company, Chicago, Ill. Anticreeper for rails. No. 1,228,171; May 29; v. 238; p. 1540.
Bell, Albert C., assignor to A. Kretz and U. Kornstein, Chicago, Ill. Tubular lock. No. 1,228,172; May 29; v. 238; p. 1541.
Bell, Alexander T., Chicago, Ill. Duplicating-machine. No. 1,224,702; May 1; v. 238; p. 209.
Bell & Howell Company. (See Howell, Albert S., assignor.)
Bell, James H. (See Moore, Walter H., assignor.)
Bell, John. (See Miller and Bell.)
Bell, John H., Haddonfield, N. J. Ice-making apparatus. No. 1,227,369; May 22; v. 238; p. 1241.
Bellah, Samuel E., assignor of one-half to T. P. Blevins, Chiricahua, Ariz. Pump. No. 1,225,563; May 8; v. 238; p. 553.
Bellis, Lewis A., and W. A. Bleecker, Somerville, N. J. Can-opener. No. 1,227,737; May 29; v. 238; p. 1395.
Bellis, Lewis A., and W. A. Bleecker, Somerville, N. J. Jar-vise. No. 1,227,738; May 29; v. 238; p. 1395.
Beman, Frank, *et al.* (See Pilcher, Frank A., assignor.)
Beman, Myron C., *et al.* (See Pilcher, Frank A., assignor.)
Bement, Frank, and E. A. Logan, Shrewsbury, Mass. Insulator. No. 1,224,259; May 1; v. 238; p. 52.
Bemis Car Truck Company. (See Boyer, Warren L., assignor.)
Bengtsson, Bror J., Kållered, Sweden. Grinding-machine. No. 1,224,593; May 1; v. 238; p. 171.
Benjamin, Bert R., Oak Park, Ill., assignor to International Harvester Company of New Jersey. Head-holder for grain-binders. No. 1,226,629; May 22; v. 238; p. 992.
Benjamin, Clarence F., Milford, Conn. Combined carpenter's square and miter-gage. No. 1,226,172; May 15; v. 238; p. 801.
Benjamin, Clarence F., Milford, Conn. Combined carpenter's square and miter-gage. No. 1,226,173; May 15; v. 238; p. 802.
Benjamin Electric Manufacturing Company. (See Anderson, Ernst G. K., assignor.)
Benjamin Electric Manufacturing Company. (See Benjamin, Reuben B., assignor.)
Benjamin, George H. (See Evans, Frank T., assignor.)
Benjamin, George H., New York, N. Y. Apparatus for conditioning and dehydrating fibrous and other bodies. No. 1,225,211; May 8; v. 238; p. 432.
Benjamin, George H., New York, N. Y. Dehydrating and curing tobacco. No. 1,224,703; May 1; v. 238; p. 209.

Benjamin, George H., New York, N. Y. Drying bodies. No. 1,225,212; May 8; v. 238; p. 432.
Benjamin, George H., New York, N. Y. Producing carbonic oxid. No. 1,225,396; May 8; v. 238; p. 491.
Benjamin, George H., New York, N. Y. Drying hops. No. 1,226,052; May 15; v. 238; p. 761.
Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Shade-supporting device. No. 1,225,397; May 8; v. 238; p. 498.
Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Carbureter. No. 1,225,398; May 8; v. 238; p. 498.
Benn, Alonzo N., Chicago, Ill. Meat-smoking trolley. No. 1,226,845; May 22; v. 238; p. 1065.
Benner, Raymond C., and H. F. French, Fremont, Ohio, assignors to National Carbon Company. Electric battery. No. 1,225,306; May 8; v. 238; p. 466.
Benner, Samuel A., Pittsburgh, Pa. Truck-bolster. No. 1,224,128; May 1; v. 238; p. 4.
Benner, Samuel A., Pittsburgh, Pa. Rolling metal sections. No. 1,226,942; May 22; v. 238; p. 1098.
Bennett, George E., San Francisco, Cal. Safety-guard for cutting-machines. No. 1,226,846; May 22; v. 238; p. 1066.
Bennett, James E., and F. Cellitti, Momence, Ill. Railway-rail joint with reraller and deraller. No. 1,225,104; May 8; v. 238; p. 397.
Bentel & Margedant Company, The. (See Gardner, John T., assignor.)
Benton, William A., Birmingham, England. Automatic indicating weighing mechanism. No. 1,228,284; May 29; v. 238; p. 1576.
Beregh, Theodore J., Jr., assignor of one-half to C. Francis, New York, N. Y. Paper-feed-controlling apparatus. No. 1,228,173; May 29; v. 238; p. 1541.
Berge, Nicholai J., Deerfield, Wis. Road-drag. No. 1,224,438; May 1; v. 238; p. 118.
Berger, Adolf, assignor of one-half to B. Gottlieb, Philadelphia, Pa. Reversible garment. No. 1,224,704; May 1; v. 238; p. 210.
Berger, Joseph, Jr., Utica, N. Y., assignor to Union Special Machine Co., Chicago, Ill. Folder for sewing-machines. No. 1,225,919; May 15; v. 238; p. 715.
Bergman, Carl O. (See Mark and Bergman.)
Bergstresser, Wilson H., Bancroft, S. D. Gambrel. No. 1,228,174; May 29; v. 238; p. 1541.
Bergstrom, Carl O., assignor to B. F. Sturtevant Company, Boston, Mass. Oil-deflector. No. 1,224,260; May 1; v. 238; p. 52.
Berners, Edward C., Two Rivers, Wis. Dispensing-receptacle for mucilage. No. 1,224,894; May 8; v. 238; p. 326.
Bernhardt, David F., New York, N. Y. Plaster-block-making machine. No. 1,225,753; May 15; v. 238; p. 660.
Berrigan, John J., Orange, N. J., assignor to Henry R. Worthington. Press. No. 1,227,739; May 29; v. 238; p. 1395.
Berry, Benjamin A., Toledo, Ohio. Stock feed. No. 1,228,175; May 29; v. 238; p. 1541.
Berryman, Robert J., Philadelphia, Pa. Method of and apparatus for manufacturing ice from raw water. No. 1,225,213; May 8; v. 238; p. 433.
Bertram, William E., Brooklyn, and T. S. Homans, Hempstead, assignors to Intertype Corporation, New York, N. Y. Typographical machine. No. 1,225,564; May 8; v. 238; p. 553.
Bertsch & Company. (See Bertsch, Lawrence H., assignor.)
Bertsch, John C., New York, N. Y. Refrigerating apparatus. No. 1,224,594; May 1; v. 238; p. 171.
Bertsch, Lawrence H., assignor to Bertsch & Company, Cambridge City, Ind. Gage operating and controlling mechanism for punching and riveting machines. No. 1,226,174; May 15; v. 238; p. 802.
Best, William J., assignor to Gas Oil Stove Company, Detroit, Mich. Hydrocarbon-burner. No. 1,227,239; May 22; v. 238; p. 1201.
Beyers, Charles A., Kane, Pa. Shoe-polishing stand. No. 1,226,053; May 15; v. 238; p. 762.
Biblehelser, Francis J., Jr., Baltimore, Md. Faucet. No. 1,226,175; May 15; v. 238; p. 803.
Bicalky, Charles H., Buffalo, N. Y. Air-washing apparatus. No. 1,225,696; May 8; v. 238; p. 597.
Bie, Albert, Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo. Engine-cylinder. No. 1,226,630; May 22; v. 238; p. 993.
Bie, Albert, Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo. Combustion-engine piston. No. 1,226,631; May 22; v. 238; p. 993.
Bie, Albert, Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo. Engine-cylinder. No. 1,227,240; May 22; v. 238; p. 1201.
Biser, Anthony H., Allan, Saskatchewan, Canada. Filler-plug. No. 1,228,285; May 29; v. 238; p. 1577.
Bierbaum, Christopher H., Buffalo, N. Y. Slide-shifting device for projection apparatus. No. 1,226,176; May 15; v. 238; p. 803.
Biffar, Fred. (See Donadio, Prospero, assignor.)
Bigelow, Joseph C., Olympia, Wash. Tatting-shuttle. No. 1,228,286; May 29; v. 238; p. 1577.
Billerman, William G., Cleveland, Ohio. Advertising device. No. 1,224,261; May 1; v. 238; p. 53.
Billings, Donald U., Topeka, Kans. Slide-presenting machine. No. 1,226,177; May 15; v. 238; p. 804.
Billings & Spencer Company, The. (See Bayrer, Louis G., assignor.)
Bills, Grant, Watkins, N. Y. Carton-filling machine. No. 1,226,448; May 15; v. 238; p. 895.
Bilyeu, William F., Riverton, N. J., assignor to Warren Webster & Company. Apparatus for measuring feed-water, &c. No. 1,226,847; May 22; v. 238; p. 1066.
Binzel, Otto, Wilmington, Del. Shoe stretcher and former. No. 1,226,449; May 15; v. 238; p. 895.
Bircher, Eugene A., Rochester, N. Y. Currency-slitter. No. 1,227,370; May 22; v. 238; p. 1241.
Bird, Charles W. (See Schroeder and Bird.)
Bird, James, Buffalo, N. Y. Street-indicator. No. 1,225,214; May 8; v. 238; p. 433.
Bird, William F., assignor to Davenport Wagon Company of Illinois, Davenport, Iowa. Axle for vehicles. No. 1,224,262; May 1; v. 238; p. 53.
Birkigt, Marc, Bois Colombes, France. Connecting-rod. No. 1,227,371; May 22; v. 238; p. 1242.
Birkigt, Marc, Bois-Colombes, France. Valve-gear. No. 1,225,565; May 8; v. 238; p. 554.
Birmingham Iron Foundry. (See Banbury, Fernley H., assignor.)
Birnstock, William W., assignor to Hench & Dromgold Company, York, Pa. Cultivator. No. 1,226,450; May 15; v. 238; p. 895.
Biroli, Marco, Pavia, Italy. Producing glossy threads from viscose. No. 1,226,178; May 15; v. 238; p. 804.
Bishop, Barry N., assignor to R. Denbigh, Newark, N. J. Vacuum-cleaner nozzle. No. 1,228,176; May 29; v. 238; p. 1542.
Bisinger, Bessie. (See Harvey, Hornbeck, and Bisinger.)
Bissell, Carl H., and E. G. Smith, assignors to Crouse-Hinds Company, Syracuse, N. Y. Electrical appliance. No. 1,227,241; May 22; v. 238; p. 1201.
Bissell, Carl H., and F. W. Clary, Syracuse, N. Y. Loose-leaf binder. No. 1,227,740; May 29; v. 238; p. 1396.
Bissett, Ernest E., Vancouver, British Columbia, Canada. Cargo-bucket-operating device. No. 1,225,215; May 8; v. 238; p. 434.
Bjork, David T. (See Martin and Bjork.)
Black, Clarence J., Argenta, Ark. Curb-wheel attachment for babies' sulkies. No. 1,226,848; May 22; v. 238; p. 1066.
Black, Harvey B., Bogota, N. J. Garter. No. 1,226,054; May 15; v. 238; p. 762.
Black, James W. (See Hester, Loring B., assignor.)
Black, John N. (See Black, William J. and J. N.)
Black, John R., Toulon, Ill. Combined mulching and leveling attachment for plows. No. 1,225,399; May 8; v. 238; p. 498.
Black, John R., Toulon, Ill. Leveling and mulching attachment for plows. No. 1,225,400; May 8; v. 238; p. 499.
Black, Roger, Pleasant Hill, Ohio. Hay-rack. No. 1,225,004; May 8; v. 238; p. 364.
Black, William J. and J. N., Washington, Pa. Paint composition. No. 1,225,105; May 8; v. 238; p. 398.
Black, William L., Fort McKavett, Tex. Pecan-cracker. No. 1,227,570; May 29; v. 238; p. 1338.
Blackmer, Walter S., Salisbury, N. C. Register mechanism for meters. No. 1,224,834; May 1; v. 238; p. 255.
Blackstone, John W., Shullsburg, Wis. Operating mechanism for valves. No. 1,224,835; May 1; v. 238; p. 255.
Blainer, John, Farrell, Pa. Tool-setting gage. No. 1,224,836; May 1; v. 238; p. 256.
Blakely, Sidney B., Chicago, Ill. Electric controlling and feeding apparatus. No. 1,226,451; May 15; v. 238; p. 896.
Blanc, Ferdinand, Charlottenburg, assignor to Siemens-Schuckertwerke, G. m. b. H., Berlin, Germany. Induction-motor. No. 1,224,895; May 8; v. 238; p. 326.
Blanch, Malcolm. (See Smith and Blanch.)
Blanchard, Charles M., Willoughby, Ohio. Water-cooling device for engine-pistons. No. 1,225,401; May 8; v. 238; p. 499.
Blanchard, Harry A., Savannah, Ga. Device for gluing belts. No. 1,224,837; May 1; v. 238; p. 256.
Blanditi, Decenzio, assignor to Firm of A. Saurer, Arbon, Switzerland. Driving-clutch for magnetos. No. 1,225,754; May 15; v. 238; p. 660.
Blaw Steel Construction Company. (See Loxterman, Howard B., assignor.)
Bledsoe, Yancey M., Bonham, Tex. Wrench. No. 1,227,372; May 22; v. 238; p. 1242.
Bleecker, Walter A. (See Bellis and Bleecker.)
Blessing, John G., assignor to Automatic Electric Company, Chicago, Ill. Phonographic time-announcer. No. 1,227,523; May 22; v. 238; p. 1293.
Blevins, Timothy P. (See Bellah, Samuel E., assignor.)
Blissman, Amos, and R. E. Struse, New York, N. Y.; said Blissman assignor to said Struse. Portable drainboard. No. 1,224,838; May 1; v. 238; p. 256.
Bloch, Gotthold, Brooklyn, assignor to National Enameling & Stamping Company, New York, N. Y. Reinforced nozzle for sheet-metal containers. No. 1,226,605; May 15; v. 238; p. 944.
Blomfield, Alfred L., Denver, Colo. Settling apparatus. No. 1,227,107; May 22; v. 238; p. 1156.





Blomstrom, Carl H. and L. C., Detroit, Mich. Power-transmission mechanism. No. 1,225,307; May 8; v. 238; p. 466.
Blomstrom, Lowell C. (See Blomstrom, Carl H. and L. C.)
Bloom, Elza, and F. Barth, Upper Sandusky, Ohio. Feed-trough. No. 1,227,524; May 22; v. 238; p. 1293.
Bloomer, Reubin H., Council Bluffs, Iowa. Rubbing-post. No. 1,225,920; May 15; v. 238; p. 716.
Blumberg, Gustav, and J. A. Butkus, Baltimore, Md. Electric motor. No. 1,227,571; May 29; v. 238; p. 1338.
Blume, George F., Richmond, Ind. Journal-bearing. No. 1,227,992; May 29; v. 238; p. 1483.
Blumlein, Jacob. (See Mero, Jesse R., assignor.)
Bocchino, Ernest, Passaic, assignor of one-half to W. Brouillier, Haledon, N. J. Hair-singeing device. No. 1,225,402; May 8; v. 238; p. 500.
Bock, Henry L. (See Bock, William E. and H. L.)
Bock, William E. and H. L., Toledo, Ohio; said H. L. Bock assignor to said William E. Bock. Motor-vehicle. No. 1,226,632; May 22; v. 238; p. 993.
Bodene, John M., assignor to Chicago Flexible Shaft Company, Chicago, Ill. Comb for sheep-shear. No. 1,227,572; May 29; v. 238; p. 1338.
Boecker, William F., Adrian, Minn. Lifting-jack. No. 1,227,873; May 29; v. 238; p. 1441.
Boernstein, Irving N., *et al.* (See Rodler, Harold B., assignor.)
Boggs, Hamilton C., Decatur, Ala. Inner tube for pneumatic tires. No. 1,227,108; May 22; v. 238; p. 1156.
Bohm, Wilhelm A. and W. A., Jr., Baltimore, Md. Toilet-seat. No. 1,227,373; May 22; v. 238; p. 1242.
Bohn, Frank, Chester, Pa. Life-saving device for ocean vessels. No. 1,226,055; May 15; v. 238; p. 762.
Bohn, Gebhard C., St. Paul, Minn. Table. No. 1,224,129; May 1; v. 238; p. 4.
Bohn, Gebhard C., St. Paul, Minn. Bulkhead. No. 1,224,130; May 1; v. 238; p. 5.
Boidin, Auguste, Seclin, France, and J. Effront, Brussels, Belgium. Treating amylaceous substances. No. 1,227,374; May 22; v. 238; p. 1242.
Boidin, Auguste, Seclin, France, and J. Effront, Brussels, Belgium. Process of manufacturing diastases and toxins by oxidizing ferments. No. 1,227,525; May 22; v. 238; p. 1293.
Boirault, Louis, Paris, France. Electric connection for railway-vehicles. No. 1,227,375; May 22; v. 238; p. 1243.
Bole, William A., Pittsburgh, Pa. Making castings. No. 1,227,573; May 29; v. 238; p. 1338.
Bolens, Harry W., Port Washington, Wis. Adjusting means for the backs of type-writer chairs. No. 1,224,263; May 1; v. 238; p. 54.
Boles, Arthur R., Indianapolis, Ind. Violin chin-rest. No. 1,225,566; May 8; v. 238; p. 554.
Bolin, Charles D., St. Louis, Mo. Oven-thermometer. No. 1,224,896; May 8; v. 238; p. 327.
Bolin, Charles D., St. Louis, Mo. Oven-thermometer. No. 1,224,897; May 8; v. 238; p. 327.
Bolt, Ernest J., Allentown, Pa. Valve. No. 1,227,574; May 29; v. 238; p. 1338.
Bolton, Alice, Spokane, Wash. Copy-holder. No. 1,226,452; May 15; v. 238; p. 896.
Boltz, Fred S., Cambridge, Mass. Heat-economizing apparatus. No. 1,226,299; May 15; v. 238; p. 849.
Bommer, Emil. (See Rogers, Clarence T., assignor.)
Bommer, Emil, Brooklyn, N. Y. Spring-hinge. No. 1,226,179; May 15; v. 238; p. 804.
Bond Bottle Sealing Company. (See Bond, Samuel C., assignor.)
Bond, George T., Huntington, W. Va. Making brake-shoes and product thereof. No. 1,227,376; May 22; v. 238; p. 1243.
Bond, Leonard, Glossop, England. Incubating and chicken-raising apparatus. No. 1,227,377; May 22; v. 238; p. 1244.
Bond, Samuel C., Hollyoak, assignor to Bond Bottle Sealing Company, Wilmington, Del. Preparing natural cork for industrial use. No. 1,224,264; May 1; v. 238; p. 54.
Bonfield, William W., Cleveland, Ohio. Apparatus for feeding scale-preventive into boilers. No. 1,226,300; May 15; v. 238; p. 850.
Bongiovanni, Antonio, assignor of one-half to H. Greenwood, Barnesboro, Pa. Head-rest hanger for barbers' chairs. No. 1,225,567; May 8; v. 238; p. 555.
Bonnart, Auguste, Philadelphia, Pa. Reversing means for internal-combustion engines. No. 1,224,839; May 1; v. 238; p. 256.
Bonney, George W., Phoenix, assignor of one-third to J. R. Williams, Mechanicsburg, Miss. Permutation-padlock. No. 1,224,595; May 1; v. 238; p. 172.
Bookhart, Edward W. (See Klaus and Bookhart.)
Bookman, Joseph B., Manhattan, Nev. Electric water-heater. No. 1,226,849; May 22; v. 238; p. 1067.
Booth, Henry S., Manchester, England, assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Calculating-machine. No. 1,227,033; May 22; v. 238; p. 1130.
Booty, Stanley S., London, England. Wick-holder. No. 1,226,850; May 22; v. 238; p. 1067.
Bootz, Eugene, Edgewater, Colo. Automobile-starter. (Reissue.) No. 14,297; May 8; v. 238; p. 611.
Borden, William E., Hillsboro, Ohio. Mail-carrier. No. 1,226,851; May 22; v. 238; p. 1067.
Borden, William H., Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Work-support. No. 1,227,575; May 29; v. 238; p. 1339.
Borden's Condensed Milk Company. (See Robertson, William P., assignor.)
Borislavsky, Michael, Minsk, Russia. Apparatus for cleaning and drying grain. No. 1,225,408; May 8; v. 238; p. 500.
Born, Julius L., Detroit, Mich. Garbage-receptacle for sinks. No. 1,225,308; May 8; v. 238; p. 467.
Borrás, Edelmiro, Barcelona, Spain. Preparation of potato-peelings for the purpose of their industrial utilization. No. 1,226,852; May 22; v. 238; p. 1068.
Bosch, Carl, and A. Mittasch, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Catalytic production of ammonia. No. 1,225,755; May 15; v. 238; p. 661.
Bosch, Firm of Robert. (See Woerner, Eugen, assignor.)
Bosch Magneto Company. (See Heins and Kliesrath, assignors.)
Bosch Magneto Company. (See Heins and Wild, assignors.)
Bosch Magneto Company. (See Schwarzmann, Wolfgang E., assignor.)
Boss Manufacturing Company. (See Möller, Johan P., assignor.)
Bosson, Frederick N., Calumet, Mich., and L. B. Armstrong, Milwaukee, Wis. Shock-absorber for batteries. No. 1,224,439; May 1; v. 238; p. 118.
Bostaph Engineering Company. (See Ramage, Alexander S., assignor.)
Boston Last Company. (See Chandler, Edwin N., assignor.)
Boswell, Roy L., and H. E. Martin, Tate, Nebr. Collapsible shipping-case. No. 1,228,287; May 29; v. 238; p. 1577.
Bothwell, Henry R. (See Newman and Bothwell.)
Bouchane, Edmond, Pittsfield, Mass. Ice-cutter. No. 1,224,840; May 1; v. 238; p. 257.
Bouchard, Elmer R., assignor of one-half to G. Parker, Knowles, Okla. Pitman. No. 1,225,756; May 15; v. 238; p. 661.
Boudreau, Jeremiah J., Tomahawk, Wis. Fish gaff or spear. No. 1,227,035; May 22; v. 238; p. 1131.
Bourdeau, Leon N., Rock Island, Ill. Ladder-jack. No. 1,226,853; May 22; v. 238; p. 1068.
Bourquin, Numa. (See Willson and Bourquin.)
Boushor, Roger A. (See Dillon, Joseph P., assignor.)
Boutard, Louis, assignor to Société Générale Meulière, La Ferté-sous-Jouarre, France. Grinding-mill. No. 1,224,354; May 1; v. 238; p. 87.
Bouton, Edward, Jr., Los Angeles, Cal. Method of and means for maintaining internal-combustion chambers at efficient temperatures. No. 1,226,180; May 15; v. 238; p. 805.
Bowden, Junius A., Los Angeles, Cal. Steering-wheel-locking means for automobiles. No. 1,224,440; May 1; v. 238; p. 118.
Bowden, Junius A., Los Angeles, Cal. Steering-wheel-locking means for automobiles. No. 1,225,697; May 8; v. 238; p. 597.
Bowen, David R., assignor to Farrel Foundry & Machine Company, Ansonia, Conn. Clutch for roll-driving mechanism. No. 1,225,309; May 8; v. 238; p. 467.
Bowen, George W. (See Zerk, Oscar, assignor.)
Bower, Ferdinand A., Flint, assignor to General Motors Company, Detroit, Mich. Differential gearing. No. 1,226,854; May 22; v. 238; p. 1068.
Bower, Robert L., Mullens, Wyo. Folding dough-board and biscuit-cutter. No. 1,228,288; May 29; v. 238; p. 1578.
Bowles, Oscar D., Terre Haute, Ind. Universal tractor. No. 1,227,576; May 29; v. 238; p. 1339.
Bowling, William R., Selden, Kans. Spring-wheel. No. 1,225,404; May 8; v. 238; p. 500.
Bowman, Charles C., Hinton, W. Va. Automatic train-stop. No. 1,224,841; May 1; v. 238; p. 257.
Bowman, M. T. (See McGonigal, Jerome T., assignor.)
Bowman, William F., Decatur, Ill. Window or door frame shield. No. 1,226,743; May 22; v. 238; p. 1030.
Boyd, Hamilton K., Pittsburgh, Pa., assignor of one-half to E. H. Ohlendorf, Mims, Fla. Gas-heater. No. 1,228,289; May 29; v. 238; p. 1578.
Boyd, Harcourt W., Chicago, Ill. Automatic pocket-closer. No. 1,224,842; May 1; v. 238; p. 258.
Boyd, Peter, Beaver, and A. M. Saunders, McKeesport, assignors to National Tube Company, Pittsburgh, Pa. Well-casing. No. 1,225,005; May 8; v. 238; p. 364.
Boyd, Samuel A., *et al.* (See Sons, Ernest L., assignor.)
Boye Needle Company, The. (See Needham, John L., assignor.)
Boyer, Alexander K. (See Addison, William J., assignor.)
Boyer, Warren L., Longmeadow, assignor to Bemis Car Truck Company, Springfield, Mass. Reraller. No. 1,226,744; May 22; v. 238; p. 1030.
Boyer, William E., Beebe, Ark. Fence-wire joint. No. 1,225,216; May 8; v. 238; p. 434.
Boyer, William R., Philadelphia, Pa. Stop mechanism for phonographs. No. 1,225,217; May 8; v. 238; p. 435.
Boyle, Harry L., Oakland, Cal. Rail-clip. No. 1,227,526; May 22; v. 238; p. 1294.
Boyle, John R., Beloit, Wis. Toilet-paper holder. No. 1,226,458; May 15; v. 238; p. 897.

Boynton, Paul A., Palatine, Ill. Measuring device. No. 1,226,855; May 22; v. 238; p. 1068.
Boynton, Willie A., assignor of one-half to G. A. Terrell, Newcastle, Tex. Clothes-pin. No. 1,226,568; May 8; v. 238; p. 556.
Boyton, John C., and O. H. Nickerson, Cleveland, Ohio. Weather-cap. No. 1,224,131; May 1; v. 238; p. 5.
Boyum, Eric E., Hamakuapoko, Hawaii. Latch. No. 1,227,034; May 22; v. 238; p. 1181.
Brackin, Arthur W., Letohatchie, Ala. Kerosene attachment for gasolene-engines. No. 1,224,441; May 1; v. 238; p. 118.
Bradbury, Samuel. (See Perkin and Bradbury.)
Braden, Lincoln, Carbon, Cal. Transmission-gearing for mowing-machines. No. 1,226,454; May 15; v. 238; p. 897.
Braden, Lincoln, Carbon, Cal. Transmission-gearing for mowing-machines. No. 1,226,455; May 15; v. 238; p. 897.
Braden, Lincoln, Carbon, Cal. Transmission-gearing for mowing-machines. No. 1,226,456; May 15; v. 238; p. 898.
Bradley, Charles P., Pemberton, N. J. Mechanical horn. No. 1,224,843; May 1; v. 238; p. 258.
Bradley, Franklin F., assignor to Bradley & Vrooman Company, Chicago, Ill. Hanger. No. 1,226,856; May 22; v. 238; p. 1069.
Bradley, Kate A., Atlantic City, N. J. Game. No. 1,228,090; May 29; v. 238; p. 1515.
Bradley, Kate A., Atlantic City, N. J. Game. No. 1,228,091; May 29; v. 238; p. 1516.
Bradley & Vrooman Company. (See Bradley, Franklin F., assignor.)
Bradley & Vrooman Co. (See Rosenthal, Edward M., assignor.)
Bradley, William T., Troy, Ala. Ball-joint. No. 1,224,844; May 1; v. 238; p. 258.
Bradshaw, William M., and W. G. Mullus, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Electrical measuring instrument. No. 1,226,056; May 15; v. 238; p. 762.
Brady, Frank T., Bayonne, N. J. Differential housing-truss. No. 1,227,378; May 22; v. 238; p. 1244.
Brainard, Walter A., and H. M. Mortensen, Audubon, Iowa. Lamp-turning device. No. 1,227,903; May 29; v. 238; p. 1483.
Braisted, Edward J. (See Gerke, Braisted, and Kelleher.)
Braley, William L. (See Faas and Braley.)
Bramsted, Hyrum, Mount Pleasant, Utah. Gate-latch. No. 1,224,265; May 1; v. 238; p. 54.
Branch, Michael, Richmond, Va. Type-writing machine. No. 1,225,698; May 8; v. 238; p. 598.
Bratsch, Theodore G., assignor of three-fourths to J. B. Handy, Orange, Cal. Pedal. No. 1,227,741; May 29; v. 238; p. 1396.
Bratton, Ambrose A., McVeytown, assignor to Pennsylvania Glass Sand Company, Lewistown, Pa. Apparatus for drying sand and the like. No. 1,224,132; May 1; v. 238; p. 5.
Brauer, Carl, Hostomitz, near Teplitz, Austria. Apparatus for transferring bottles or the like to an annealing-oven. No. 1,226,633; May 22; v. 238; p. 994.
Braun, Albert H. (See McGehee, John S., assignor.)
Braun, Luther H., assignor of one-half to F. X. Stecker, Steubenville, Ohio. Rail-joint. No. 1,227,874; May 29; v. 238; p. 1441.
Braunlich, Hugo G., Davenport, Iowa. Operating mechanism for centrifugal wringers. No. 1,224,266; May 1; v. 238; p. 54.
Braymes, Mark. (See Taylor and Braymes.)
Bréchot, Arthur, assignor to Companie d'Incineration Industrielle, Paris, France. Refuse-destructor. No. 1,226,943; May 22; v. 238; p. 1098.
Brennan, Ruby S., Portland, Oreg. Cumulative additive drill-card. No. 1,228,356; May 29; v. 238; p. 1602.
Brennen, Frederic W., Hamilton, Ontario, Canada. Shavings and sawdust separator. No. 1,224,898; May 8; v. 238; p. 328.
Brenner, Joseph, and A. Bresnick, Boston, Mass. Collapsible container. No. 1,224,519; May 1; v. 238; p. 145.
Bresee, James M., Mattoon, Ill. Road-grading machine. No. 1,225,006; May 8; v. 238; p. 364.
Bresnick, Abraham. (See Brenner and Bresnick.)
Bretz, George W., assignor of three-fifteenths to C. A. Lowry, O. O. Wood, J. H. Wade, and P. R. Pirtle, one-fifteenth to F. E. Jones, one-fifteenth to S. H. Gripp, and one-fifteenth to L. C. Irons, Houston, Tex. Attachment for cameras. No. 1,225,757; May 15; v. 238; p. 661.
Brewer, John H., Louisville, Ky. Exhibiting device. No. 1,224,267; May 1; v. 238; p. 55.
Brewer, John H., Louisville, Ky. Frame. No. 1,227,577; May 29; v. 238; p. 1339.
Brewer, John H., Louisville, Ky. Flag-cover. No. 1,228,092; May 29; v. 238; p. 1516.
Brewster & Co. (See Moister, William, assignor.)
Brewster, Percy D., East Orange, N. J. Transferring photographic prints from separate supports to a single support. No. 1,224,442; May 1; v. 238; p. 119.
Brexendorf, Alexander M., Carlisle, Pa. Record-cabinet. No. 1,226,301; May 15; v. 238; p. 850.
Brick, Charles C. (See Cox, William H., assignor.)
Brickel, Charles A., Ilion, N. Y. Truck. No. 1,227,875; May 29; v. 238; p. 1442.
Bricken, John, assignor, by mesne assignments, to Chicago Braid Bow Company, Chicago, Ill. Machine for making bows. No. 1,224,268; May 1; v. 238; p. 55.
Bridgeport Brass Company. (See Clark, Robert, assignor.)
Bridges, Alonzo J., Bedford, Iowa. Filter. No. 1,225,007; May 8; v. 238; p. 365.
Briese, Frederick W., Jamaica, N. Y. Garbage-can. No. 1,226,634; May 22; v. 238; p. 994.
Brigham, Waldo, and G. A. Furneaux, Dufur, Oreg. Flushing-tank. No. 1,224,845; May 1; v. 238; p. 258.
Brightman, Latham H., Columbus, Ohio. Machine for making nut-blanks. No. 1,226,302; May 15; v. 238; p. 850.
Brightman, Latham H., Columbus, Ohio. Automatic cut-off machine. No. 1,226,303; May 15; v. 238; p. 851.
Brindley, Willis, Seattle, Wash. Stud for the erection of circular structures. No. 1,224,443; May 1; v. 238; p. 119.
Brinkhuis, Abraham, Hospers, Iowa. Wrench. No. 1,227,876; May 29; v. 238; p. 1442.
Brinkman, Lewis A., Chicago, Ill. Indexing attachment for lathes and the like. No. 1,225,106; May 8; v. 238; p. 398.
Brinton, William C., Jr., assignor to Philips-Brinton Company, Kennett Square, Pa. Ignition system for internal-combustion engines. No. 1,227,109; May 22; v. 238; p. 1156.
Brinton, William C., Jr., assignor to Philips-Brinton Company, Kennett Square, Pa. Ignition system for internal-combustion engines. No. 1,227,110; May 22; v. 238; p. 1157.
Brisbin, Homer L., Townsend, Mont. Wrench. No. 1,227,877; May 29; v. 238; p. 1443.
Bristol Company, The. (See Bristol and Koester, assignors.)
Bristol, William H., and H. Koester, assignors to The Bristol Company, Waterbury, Conn. Thermostat. No. 1,225,758; May 15; v. 238; p. 662.
Britten, Edwin F., Jr., Jersey City, N. J., assignor to L. E. Waterman Company, New York, N. Y. Mounting for presser-bar-actuating lever for self-filling fountain-pens. No. 1,228,177; May 29; v. 238; p. 1542.
Britton, Jarvis A., Los Angeles, Cal., assignor to The National Motor Supply Company, Cleveland, Ohio. Fuel-gage for automobiles. No. 1,226,618; May 15; v. 238; p. 949.
Brixius, Frank E., assignor to Manitowoc Electric Implement Co., Manitowoc, Wis. Electromagnetic vibrator. No. 1,226,635; May 22; v. 238; p. 994.
Broadbent, David L. J., Southport, England. Fitting for electrical conduit systems. No. 1,224,269; May 1; v. 238; p. 56.
Broady, Harry W., Bayside, N. Y., assignor to Welin Marine Equipment Company. Life-boat and the like. No. 1,226,944; May 22; v. 238; p. 1099.
Brock, Arthur, Jr. (See Holst, Lodewyk J. R., assignor.)
Brockway, Leslie S., Minneapolis, Minn. Clip. No. 1,225,921; May 15; v. 238; p. 716.
Brogden, Joah, assignor to David Lupton's Sons Company, Philadelphia, Pa. Joint for sash-bars. No. 1,225,727; May 8; v. 238; p. 607.
Brokaw, William G., Paris, France. Apparatus for Inflating life-preserving belts. No. 1,226,857; May 22; v. 238; p. 1069.
Bronander, Bertil W., Brooklyn, assignor to Wahlstrom Tool Company, New York, N. Y. Tapping attachment for boring-machines. No. 1,224,596; May 1; v. 238; p. 172.
Brooker, Silas E., La Crosse, Fla. Cane-mill. No. 1,228,178; May 29; v. 238; p. 1542.
Brooklyn Cooperage Company. (See Sullivan and Von Beck, assignors.)
Brookman, Sydney G. G., Bristol, England. Automatic gas-controller. No. 1,227,879; May 29; v. 238; p. 1443.
Brooks, Emerson S., Morgantown, N. C. Railway cross-tie. No. 1,227,030; May 22; v. 238; p. 1131.
Brooks, Frederick A., Urbana, Ill. Rotary engine. No. 1,226,745; May 22; v. 238; p. 1030.
Brooks, G. B., *et al.* (See Underwood, Charles W., assignor.)
Brooks, Hugh, Glasgow, Mont. Shoe-horn. No. 1,224,846; May 1; v. 238; p. 259.
Brooks, William G., Chicago, Ill., assignor to Westinghouse Electric and Manufacturing Company. Lubricating device. No. 1,224,133; May 1; v. 238; p. 6.
Brooksbank, Ethelbert, assignor to Brooksbank Limited, Bradford, England. Spinning-frame stop-motion. No. 1,227,379; May 22; v. 238; p. 1244.
Brooksbank Limited. (See Brooksbank, Ethelbert, assignor.)
Brouillier, Walter. (See Bocchino, Ernest, assignor.)
Broussard, Aman G., Breaux Bridge, La. Test-drill. No. 1,224,847; May 1; v. 238; p. 259.
Brown, Abram E., Cleveland, Ohio, assignor to The Carey Company. Insulation. No. 1,228,378; May 29; v. 238; p. 1606.
Brown, Albert H., Grand Rapids, Mich. Coal-scuttle. No. 1,227,527; May 22; v. 238; p. 1294.
Brown, Alexander T., assignor to Brown-Lipe Gear Company, Syracuse, N. Y. Gearing. No. 1,227,242; May 22; v. 238; p. 1202.
Brown, Allen B., Portland, Oreg. Rail-joint. No. 1,227,742; May 29; v. 238; p. 1396.





Brown, Arthur J., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Bearing. No. 1,227,880; May 29; v. 238; p. 1443.
Brown & Bigelow. (See Kristofek, Frank J., assignor.)
Brown, Charles A. (See Johnson, Philip D., assignor.)
Brown, Charles F., Salt Lake City, Utah. Railway road-bed. No. 1,225,218; May 8; v. 238; p. 435.
Brown, Charles F., assignor to Universal Liquid Register Company, New York, N. Y. Liquid measuring and dispensing apparatus. No. 1,224,355; May 1; v. 238; p. 87.
Brown, David H. (See Faber, Daniel B., assignor.)
Brown, Edward R., Boston, Mass. Measuring-faucet. No. 1,225,699; May 8; v. 238; p. 598.
Brown, Eric F., Buxton, Iowa. Vehicle road-track. No. 1,225,008; May 8; v. 238; p. 365.
Brown, Ernest, London, England, assignor to M. M. A. H. de Dampierre, Paris, France. Apparatus for treating heavy oils. No. 1,225,569; May 8; v. 238; p. 555.
Brown, Evan A., Tacoma, Wash. Dental tray. No. 1,226,457; May 15; v. 238; p. 898.
Brown, George F. (See Ellis and Brown.)
Brown, Harvey E., St. Louis, Mo., assignor to The Simmons Manufacturing Company, Kenosha, Wis. Fabric-making machine. No. 1,224,270; May 1; v. 238; p. 56.
Brown, Homer D., Ogden, Utah. Beet-topper. No. 1,225,759; May 15; v. 238; p. 662.
Brown, Ida, San Francisco, Cal. Corset-stay tip. No. 1,224,597; May 1; v. 238; p. 172.
Brown, James, Columbia, Mo. Device for lifting automobiles out of mud-holes. No. 1,226,458; May 15; v. 238; p. 898.
Brown, James A., *et al.* (See Rathman, Gilbert, assignor.)
Brown, John B., Akron, Ohio. Triple screw-driver. No. 1,225,922; May 15; v. 238; p. 716.
Brown, John F., Providence, R. I. Piston. No. 1,226,459; May 15; v. 238; p. 898.
Brown-Lipe Gear Company. (See Brown, Alexander T., assignor.)
Brown, Louis M., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Toe-centering device. No. 1,226,057; May 15; v. 238; p. 763.
Brown, Lucius A., assignor to The M. M. Johnson Co., Clay Center, Nebr. Thermometer-holder for incubators. No. 1,225,570; May 8; v. 238; p. 555.
Brown, Milton H. (See Nace, Alexander, and Brown.)
Brown, Oscar W., White Rock, S. D. Puzzle. No. 1,225,760; May 15; v. 238; p. 662.
Brown, Theophilus, assignor to Marseilles Company, East Moline, Ill. Manure-spreader. No. 1,226,746; May 22; v. 238; p. 1031.
Brown, Thomas R. (See Dewson and Brown.)
Brown, Thomas R., Sparkill, N. Y., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Automatic train-line coupling. No. 1,226,612; May 15; v. 238; p. 946.
Brown, Wallace R., Olean, N. Y. Tool. No. 1,226,636; May 22; v. 238; p. 994.
Brown, William A., Montgomery, Ala. Coffee substitute. No. 1,224,271; May 1; v. 238; p. 56.
Brown, William C., Syracuse, N. Y., assignor to Humphrey Gas Pump Company. Ignition control. No. 1,224,356; May 1; v. 238; p. 87.
Brown, William C., Syracuse, N. Y., assignor to Humphrey Gas Pump Company. Utilizing expansive energy. No. 1,224,705; May 1; v. 238; p. 210.
Browning Company, The. (See Waite, William H., assignor.)
Browning, Wilbert N. (See Ellis, Frank J., assignor.)
Brownlie, A. D. (See Naysmith, Gillaspy, and Carl, assignors.)
Brubaker, John L. (See Vanbuskirk, Thomas W., assignor.)
Bruckner, Rudolph E., New York, N. Y. Safety means for autogenous welding or cutting apparatus. No. 1,227,881; May 29; v. 238; p. 1444.
Bruhn, Max C., Chicago, Ill. Change-maker. No. 1,226,181; May 15; v. 238; p. 805.
Brumley, Howard V., Plandome, assignor to Whitall Tatum Company, New York, N. Y. Water-bag stopper. No. 1,226,304; May 15; v. 238; p. 851.
Brune, Louis J., Algiers, La. Burglar-alarm and latch. No. 1,227,994; May 29; v. 238; p. 1483.
Bruner, Philip, Boise, Idaho. Heel-removing machine. No. 1,226,460; May 15; v. 238; p. 899.
Bruning, Bernard N., Breda, Iowa. Mail-box support. No. 1,225,571; May 8; v. 238; p. 556.
Brunkhorst, D. M. (See Walden, Marcus A., assignor.)
Brunner, Sherman, *et al.* (See Hyeem, Martin, assignor.)
Brunt, R. H. (See King, George H., assignor.)
Brush, William M., Brule, Nebr. Block for hay-balers. No. 1,225,219; May 8; v. 238; p. 435.
Bryant, Charlie, Coin, Iowa. Belt-fastener. No. 1,225,572; May 8; v. 238; p. 556.
Bryant Electric Company, The. (See Thomas, George B., assignor.)
Bryant Electric Company, The. (See Young, William R., assignor.)
Bryant, George H. (See Ward, Bryant, and Inman.)
Bryant, Richard S., assignor to The Standard Welding Company, Cleveland, Ohio. Rim for vehicle-wheels. No. 1,224,706; May 1; v. 238; p. 210.
Bryce, James W., Bloomfield, N. J. Electrically-controlled calculating-machine. No. 1,226,068; May 15; v. 238; p. 763.
Bryce, James W., Brooklyn, N. Y. Electrically-controlled calculating-machine. No. 1,226,290; May 29; v. 238; p. 1579.
Bubier, Howard F., Lynn, Mass., assignor to The Singer Manufacturing Company. Edge-folding and tape-guiding device for sewing-machines. No. 1,226,461; May 15; v. 238; p. 899.
Buchan, Edward F., *et al.* (See Woodford, Arthur J., assignor.)
Buchan, William H., *et al.* (See Woodford, Arthur J., assignor.)
Buchanan, James C., Washington, D. C., assignor to Rapid Tobacco Stemmer Co., Baltimore, Md. Tobacco-stemming mechanism. No. 1,224,848; May 1; v. 238; p. 259.
Buchanan, William B. (See Bales, James W. H., assignor.)
Buchstein, Ferdinand, Minneapolis, Minn. Artificial leg. No. 1,225,923; May 15; v. 238; p. 716.
Buck, Herman J., assignor to Mathews Gravity Carrier Company, Ellwood City, Pa. Gravity-carrier. No. 1,226,182; May 15; v. 238; p. 806.
Buckeye Incubator Company, The. (See Cugley, George, assignor.)
Buckley, William, and W. Iversen, Portage, Wis. Folding coop. No. 1,226,305; May 15; v. 238; p. 851.
Buckner, Frederick I., assignor of one-half to C. G. Soriano, Douglas, Ariz. Washing-machine. No. 1,227,578; May 29; v. 238; p. 1340.
Budd, Harry, Independence, Kans. Washing-machine. No. 1,226,183; May 15; v. 238; p. 806.
Buff, Louis F. (See Henrici, Fritz W. A., assignor.)
Bugbee, Alvin, Trenton, N. J. Roadway-box. No. 1,226,747; May 22; v. 238; p. 1031.
Bugbee, Lucian W., assignor to American Optical Company, Southbridge, Mass. Edging-machine. No. 1,227,243; May 22; v. 238; p. 1202.
Bubles, William C., Alameda, Cal., assignor to Aluminum Seal Company, Pittsburgh, Pa. Closing-machine. No. 1,227,244; May 22; v. 238; p. 1202.
Bulatovich, Petar M., Sesser, Ill. Railway-spike. No. 1,228,291; May 29; v. 238; p. 1579.
Bulatovich, Petar M., Sesser, Ill. Life-saver. No. 1,228,292; May 29; v. 238; p. 1579.
Bulla, William H., King City, Mo. Automobile-jack. No. 1,226,050; May 15; v. 238; p. 764.
Bullen, Harry S. (See Dyson and Bullen.)
Bullington, Frank A., Portland, Oreg. Mechanism for controlling aeroplanes. No. 1,224,357; May 1; v. 238; p. 87.
Bullis, Frederick O., assignor to Lektric Sales Company, Louisville, Ky. Combined dispensing and measuring device. No. 1,225,107; May 8; v. 238; p. 398.
Bunce, Harry, East Islip, N. Y. Heat-conserver for gas-stoves. No. 1,225,761; May 15; v. 238; p. 663.
Bunda, John. (See Marcinkowski and Bunda.)
Bunker, Ward S., Waukesha, Wis. Road-surfacer. No. 1,226,637; May 22; v. 238; p. 995.
Burch, Allen, assignor of one-half to W. W. Fennell, Amory, Miss. Fire-screen. No. 1,225,762; May 15; v. 238; p. 663.
Burch, Frederick R., assignor of nine one-hundredths to J. West and nine one-hundredths to E. West, Seattle, Wash. Motor-sled. No. 1,228,093; May 29; v. 238; p. 1516.
Burch, Henry K., Miami, Ariz. Screen. No. 1,224,598; May 1; v. 238; p. 173.
Burchenal, John J., assignor, by mesne assignments, to The Hydrogenation Company, Cincinnati, Ohio. Making a nickel catalyst. No. 1,226,945; May 22; v. 238; p. 1099.
Burchfiel, Otha P. (See Stapleton, Charles A., assignor.)
Burden, William J. (See Bacon, Byron R., assignor.)
Burdick, Ellsworth J., Detroit, Mich. Insulator-block cable bracket-hanger. No. 1,227,111; May 22; v. 238; p. 1157.
Burford, Clarence K., Pittsburgh, Pa. Potato-masher. No. 1,224,134; May 1; v. 238; p. 6.
Burgedorff, Raymond N., Denver, Colo. Attachment for crank-arms. No. 1,227,743; May 29; v. 238; p. 1396.
Burgess, Frederick T., assignor of one-half to Humber Limited, Coventry, England. Piston particularly for internal-combustion engines. No. 1,226,306; May 15; v. 238; p. 852.
Burgess, John W., assignor of two-thirds to B. A. Hawk and H. B. Jenkins, Topeka, Kans. Fastener for canclosures. No. 1,227,380; May 22; v. 238; p. 1244.
Burgquist, Ernest J., Chicago, Ill. Curtain-stretcher. No. 1,227,744; May 29; v. 238; p. 1397.
Burke, James A., Ligonier, Pa. Window-fastener. No. 1,225,763; May 15; v. 238; p. 663.
Burkett, John W., assignor to The Burkett Manufacturing Company, Columbus, Ohio. Internal-combustion engine. No. 1,225,310; May 8; v. 238; p. 468.
Burkett Manufacturing Company, The. (See Burkett, John W., assignor.)
Burkhart, Franklin H. (See Fenstermaker, Emanuel L., assignor.)
Burmeister, John, Minneapolis, Minn. Garment-supporter. No. 1,227,112; May 22; v. 238; p. 1158.
Burmeister, Louis, Milwaukee, Wis. Hand-hole spout-tube. No. 1,224,135; May 1; v. 238; p. 7.
Burnett, Richard W., Montreal, Quebec, Canada. Car-roof. No. 1,224,899; May 8; v. 238; p. 328.

Burnham, George A., Saugus, assignor to S. B. Condit, Jr., Brookline, Mass. Solenoid. No. 1,226,748; May 22; v. 238; p. 1032.
Burns, John. (See Parker and Burns, assignors.)
Burns, Robert J., Hewitt, Okla. Concrete-culvert form. No. 1,224,900; May 8; v. 238; p. 328.
Burns, William. (See Parker and Burns.)
Burns, William H., Chicago, Ill. Hair-trimmer. No. 1,224,444; May 1; v. 238; p. 120.
Burpee, Frank W., South Bellingham, Wash. Can-coverseaming machine. No. 1,224,358; May 1; v. 238; p. 88.
Burpee, Frank W., assignor to Burpee & Letson, Ltd., South Bellingham, Wash. Conveyer. No. 1,224,445; May 1; v. 238; p. 120.
Burpee & Letson. (See Burpee, Frank W., assignor.)
Burr, James I., Elerro, N. Mex. Internal-combustion engine. No. 1,226,462; May 15; v. 238; p. 899.
Burrell, George T., River Forest, Ill. Automobile-guard. No. 1,225,406; May 8; v. 238; p. 501.
Burrell, Oliver J., San Francisco, Cal. Exterior seat for windows. No. 1,226,859; May 22; v. 238; p. 1069.
Burris, George P., Pueblo, Colo. Safety-envelop. No. 1,225,924; May 15; v. 238; p. 717.
Burroughs Adding Machine Company. (See Rinsche, Frank C., assignor.)
Burrows, Clarence B., assignor, by mesne assignments, to Florida Soil Fertility Company, Tampa, Fla. Root-grubbing machine. No. 1,226,463; May 15; v. 238; p. 900.
Burson Manufacturing Company. (See Parker, William S., assignor.)
Burt, Hugh V., Rock Island, Ill. Aluminum-soldering flux. No. 1,225,764; May 15; v. 238; p. 663.
Burton, Charles S., Oak Park, assignor to Melville Clark Piano Company, Chicago, Ill. Combined piano and phonograph. No. 1,227,579; May 29; v. 238; p. 1340.
Busch, Albert, Brunswick, and R. Lauch, assignors to Firm of J. A. Wilding, Berlin, Germany. Manufacture of calcium acetyl salicylate. No. 1,225,407; May 8; v. 238; p. 501.
Busch-Sulzer Bros.-Diesel Engine Company. (See Ble, Albert, assignor.)
Bush, Henry H., Muskegon, Mich. Adjustable pedestal. No. 1,225,573; May 8; v. 238; p. 556.
Butcher, Cuthbert W., Mamaroneck, N. Y. Knockdown step-ladder. No. 1,224,599; May 1; v. 238; p. 173.
Butcher, Elmer E., Interlaken, N. J., assignor to Marconi Wireless Telegraph Company of America. Receiver of electrical oscillations. No. 1,226,060; May 15; v. 238; p. 764.
Bute, William E., Stanhope, Iowa. Sled-runner roller. No. 1,227,882; May 29; v. 238; p. 1444.
Butkus, John A. (See Blumberg and Butkus.)
Butler, Claude C., Port Towson, Okla. Check-valve. No. 1,227,883; May 29; v. 238; p. 1444.
Butler, Harry O., and W. B. Jennings, Franklin, Ind. Pump-operating mechanism. No. 1,224,849; May 1; v. 238; p. 260.
Butler, H. S. (See Shedenhelm, Robert, assignor.)
Butterworth, Harry J. (See Walter, Butterworth, and Sigler.)
Buttman, Alonzo C., and F. P. Gable, Grandview, Iowa; said Buttman assignor to said Gable. Saw attachment. No. 1,226,464; May 15; v. 238; p. 900.
Butts, Eugene, Evansville, Wis. Hog ringing and castrating crate. No. 1,225,311; May 8; v. 238; p. 468.
Buxton, Gustavus T., and S. A. Abbey, Charlotte, N. C. Filtration device for fluid-distributing systems. No. 1,226,307; May 15; v. 238; p. 852.
Bygrave, Leonard C., assignor to The Relay Automatic Telephone Company, Limited, London, England. Electrical selector. No. 1,226,184; May 15; v. 238; p. 806.
Byrd, Britton E., Durham, N. C. Motor attachment for boats. No. 1,228,094; May 29; v. 238; p. 1517.
Byrne, James A., West Orange, N. J. Combined police club and whistle. No. 1,224,850; May 1; v. 238; p. 260.
C. Cowles & Co. (See Hart, Franklin H., assignor.)
C. A. Schneible, Inc. (See Schneible, Frank, assignor.)
C. B. Cottrell & Sons Company. (See Barber, Howard M., assignor.)
C. B. Cottrell & Sons Company. (See Cottrell, Edgar H., assignor.)
C. G. Sargent's Sons Corporation. (See Sargent, Frederick G., assignor.)
C. L. Percival Company. (See Moorehead, George F., assignor.)
C. O. Bartlett & Snow Company, The. (See Dupuy, Arthur O., assignor.)
Cable Company, The. (See Hagey, James C., assignor.)
Cable Company, The. (See Klugh, Paul B., assignor.)
Cabot, Godfrey L. and J. J., Boston, Mass. Apparatus for condensing gas under high pressure. No. 1,225,574; May 8; v. 238; p. 557.
Cabot, James J. (See Cabot, Godfrey L. and J. J.)
Cade, Jack. (See Cade, James W. and J.)
Cade, James W. and J., Mount Carmel, S. C. Fertilizer-distributer. No. 1,224,520; May 1; v. 238; p. 145.
Cadillac Motor Car Company. (See Snell, Lyle K., assignor.)
Cady, Carson J., Rochester, N. Y., assignor to United Shoe Machinery Company, Paterson, N. J. Sewing-machine. No. 1,225,220; May 8; v. 238; p. 436.
Calleteau, Fernand, Atlanta, Ga. Attachment for electric-light snap-switches. No. 1,228,293; May 29; v. 238; p. 1579.
Cain, William H., Los Angeles, Cal. Gas-heater. No. 1,225,575; May 8; v. 238; p. 557.
Caire, Eugene F., St. Patricks, La. Railway-rail joint. No. 1,224,851; May 1; v. 238; p. 260.
Caldwell, Eugene W., New York, N. Y. X-ray-tube apparatus. No. 1,227,884; May 29; v. 238; p. 1445.
Caldwell, Frank, Cincinnati, Ohio. Spray-discharge equalizer. No. 1,224,852; May 1; v. 238; p. 261.
Calhoun, Henry C., Detroit, Mich. Expander for wheels. No. 1,226,638; May 22; v. 238; p. 995.
Calhoun, Henry C., Detroit, Mich. Wheel structure. No. 1,227,381; May 22; v. 238; p. 1245.
California Macvan Company. (See Vandercock, Albert E., assignor.)
Callan, William H., and G. J. MacFadden, Franklin, Pa., assignors to Chicago Pneumatic Tool Company, Chicago, Ill. Unloader for air-compressors. No. 1,224,272; May 1; v. 238; p. 56.
Cameron, Charles E., Collingswood, assignor of one-half to W. L. Hurley, Camden, N. J. Wheel. No. 1,227,995; May 29; v. 238; p. 1483.
Cameron, William W., assignor to La Crosse Plow Co., La Crosse, Wis. Plow. No. 1,227,745; May 29; v. 238; p. 1397.
Campbell, Edward A., St. Louis, Mo. Advertising apparatus for vehicle-tops. No. 1,224,446; May 1; v. 238; p. 120.
Campbell, Edward A., St. Louis, Mo. Display-sign for automobiles. No. 1,227,746; May 29; v. 238; p. 1398.
Campbell, George A., Montclair, N. J., assignor to American Telephone and Telegraph Company. Electric wave-filter. No. 1,227,113; May 22; v. 238; p. 1158.
Campbell, George A., Montclair, N. J., assignor to American Telephone and Telegraph Company. Electrical receiving, translating, or repeating circuit. No. 1,227,114; May 22; v. 238; p. 1158.
Campbell, George W., St. John, New Brunswick, Canada. Manufacturing an ax. No. 1,224,853; May 1; v. 238; p. 261.
Campbell, John B., Louisville, Ky. Partition-wall. No. 1,225,576; May 8; v. 238; p. 557.
Campbell, Lawrence S., Los Angeles, and J. Grant, Florence, Cal.; said Campbell assignor to said Grant. Combination bit and rotary underreamer. (Reissue.) No. 14,301; May 15; v. 238; p. 950.
Campbell, Silas H., Portland, Me. Fence-post. No. 1,226,465; May 15; v. 238; p. 981.
Campbell, Sterling H., St. Louis, Mo. Releasing device for car-couplings. No. 1,226,859; May 22; v. 238; p. 1070.
Canda, Ferdinand E., New York, N. Y. Ball-rolling machine. No. 1,225,765; May 15; v. 238; p. 664.
Candee, Andrew H. (See Schaake and Candee.)
Canfield, Lewis T., Chicago, Ill., assignor to P. H. Murphy Company, Parnassus, Pa. Car structure. No. 1,226,860; May 22; v. 238; p. 1070.
Canning, William P., assignor to United Engineering and Foundry Company, Pittsburgh, Pa. Method and apparatus for forming cutting-tools. No. 1,224,273; May 1; v. 238; p. 57.
Cannock, Francis B., New York, N. Y. Variable-speed-transmission gearing. No. 1,225,925; May 15; v. 238; p. 717.
Cantilever Airless Tire Co. (See Loeser, Edward G., assignor.)
Canton, Allen A., New York, N. Y., assignor to The Device Testing Company. Speedometer. No. 1,224,707; May 1; v. 238; p. 211.
Canton, Allen A., New York, N. Y., assignor to The Device Testing Company. Speedometer. No. 1,225,312; May 8; v. 238; p. 468.
Canton, Allen A., New York, N. Y., assignor to The Device Testing Company. Speedometer. No. 1,226,946; May 22; v. 238; p. 1099.
Canton, Allen A., New York, N. Y., assignor to The Device Testing Company. Speedometer. No. 1,227,747; May 29; v. 238; p. 1398.
Capps, Frank L., and J. J. Scully, assignors to American Graphophone Company, Bridgeport, Conn. Shaving-machine for sound-record tablets. No. 1,227,748; May 29; v. 238; p. 1398.
Car Lighting Improvement Co. (See Watson, Thomas S., assignor.)
Carbis, Samuel H., Freeport, Pa. Apparatus for handling metal sheets. No. 1,224,521; May 1; v. 238; p. 145.
Cardin, Joseph P. P., Sorel, Quebec, Canada. Differential gearing for automobiles, &c. No. 1,227,882; May 22; v. 238; p. 1245.
Carey Company, The. (See Brown, Abram E., assignor.)
Carey, Edwin D. (See Carey, Le Grand G., assignor.)
Carey, Le Grand G., Cleveland, assignor to E. D. Carey, Bedford, Ohio. Truck. No. 1,228,179; May 29; v. 238; p. 1542.
Carl, Forrest D. (See Naysmith, Gillaspy, and Carl.)
Carlin, Samuel, assignor of one-half to E. Morin, Spokane, Wash. Machine for making box-splints, veneers, shingles, &c. No. 1,226,165; May 15; v. 238; p. 807.
Carlisle, George J., assignor of one-half to C. W. Barber and one-half to Utility Development & Sales Company, Chicago, Ill. Safety-razor and hair-cutter. No. 1,227,548; May 22; v. 238; p. 1300.
Carlson, Charles J. (See Larson and Carlson.)





Carlson, David A., R. F. Underwood, and C. D. Jaderstrom, assignors to Art Metal Construction Company, Jamestown, N. Y. Follower for filing-cabinets. No. 1,227,749; May 29; v. 238; p. 1399.
Carlson, John, Fort William, Ontario, Canada. Clothes-line reel. No. 1,225,766; May 15; v. 238; p. 664.
Carmack, James H., Denison, Tex. Trolley-harp. No. 1,225,926; May 15; v. 238; p. 718.
Carmichael, William J. (See Ayling, John, assignor.)
Carnell, Harry G., Dayton, Ohio. Carbureter. No. 1,228,294; May 29; v. 238; p. 1580.
Carpenter, Eugene R., Chattanooga, Tenn. Cattle-yoke. No. 1,227,383; May 22; v. 238; p. 1245.
Carr, John, and G. S. Baker, London, England. Scrap-separating apparatus for dough-cutting and similar machines. No. 1,224,600; May 1; v. 238; p. 173.
Carrie, Frank G. (See Rossiter, George A., assignor.)
Carrigan, Thomas, New York, N. Y., and A. J. Sweeney, Bayonne, N. J. Refrigerating apparatus. No. 1,226,186; May 15; v. 238; p. 807.
Carroll, Cornelius P., Columbia, La. Combined screen-wire support and measuring device. No. 1,226,466; May 15; v. 238; p. 901.
Carroll, George P., Bridgeport, Conn. Refrigerating-machine. No. 1,225,408; May 8; v. 238; p. 501.
Carroll, John B., Chicago, Ill. Savings-bank. No. 1,227,580; May 29; v. 238; p. 1340.
Carson, Clarence, New York, N. Y., assignor to H. W. Johns-Manville Company. Portable-electric-lamp holder. No. 1,224,864; May 1; v. 238; p. 264.
Carson, George L., et al. (See Noah, Robert S., assignor.)
Carson, John F., assignor to Essansee Lock Company, Philadelphia, Pa. Automobile-lock. No. 1,226,467; May 15; v. 238; p. 901.
Carstarphen, Frederick C., Trenton, assignor to The American Steel and Wire Company of New Jersey, Hoboken, N. J. Brake. No. 1,225,009; May 8; v. 238; p. 366.
Carton, Albert F., Pipestone, Minn. Fluid-gage. No. 1,225,108; May 8; v. 238; p. 390.
Cary, Bourdon, Norfolk, Va. Sewing-machine table. No. 1,227,384; May 22; v. 238; p. 1246.
Cary, Spencer C., Brooklyn, N. Y. Electric welding. No. 1,226,639; May 22; v. 238; p. 995.
Case, Frank E., Schenectady, N. Y., assignor to General Electric Company. Circuit-interrupting means. No. 1,227,385; May 22; v. 238; p. 1246.
Case, Frank E., Schenectady, N. Y., assignor to General Electric Company. Two-voltage circuit-breaker. No. 1,227,386; May 22; v. 238; p. 1246.
Case & Martin Co. (See Ehrlich, William, assignor.)
Cashel, John A., Worthington, Minn. Vessel-propelling mechanism. No. 1,224,274; May 1; v. 238; p. 57.
Caskey, Frank L., Emporium, Pa. Sealing hopper-closure. No. 1,224,136; May 1; v. 238; p. 7.
Cason, Charles W., Sr., Camden, N. J. Railway-rail. No. 1,226,061; May 15; v. 238; p. 764.
Casper, John R., Washington, D. C. Signaling device. No. 1,228,095; May 29; v. 238; p. 1517.
Cass, William J., Easton, Me. Clip for neck-yokes. No. 1,224,708; May 1; v. 238; p. 211.
Casteris, Antonios, Newark, N. J. Floral decoration. No. 1,225,767; May 15; v. 238; p. 664.
Cate, Clarence, assignor to F. F. Akerly, Chicago, Ill. Automatic stopping device for graphophones. No. 1,226,749; May 22; v. 238; p. 1032.
Caterson, Edward. (See Soons, James E., assignor.)
Cavil, George H., West De Pere, Wis. Culvert-mold. No. 1,225,768; May 15; v. 238; p. 664.
Cecil, Morris New York, N. Y. Safety-razor. No. 1,225,409; May 8; v. 238; p. 502.
Cellitti, Frank. (See Bennett and Cellitti.)
Celluloid Company, The. (See Lindsay, William G., assignor.)
Central Electric Company. (See Woodhead, Daniel, assignor.)
Central Scientific Company. (See De Khotinsky, Achilles, assignor.)
Chabot, Joseph, assignor to Geo. L. Paine Company, North Attleboro, Mass. Belt-buckle. No. 1,227,115; May 22; v. 238; p. 1150.
Chadima, Frank, assignor to J. G. Cherry Company, Cedar Rapids, Iowa. Apparatus for pasteurizing, cooling, and ripening milk, cream, and other liquids. No. 1,224,901; May 8; v. 238; p. 328.
Chadwick, Charles H., Chicago, Ill. Towel-holding apparatus. No. 1,224,137; May 1; v. 238; p. 7.
Chalman, John E., assignor to Union Special Machine Company, Chicago, Ill. Tuck-forming mechanism for sewing-machines. No. 1,227,116; May 22; v. 238; p. 1159.
Chamberlain, Chauncey, assignor to J. F. Field, Ionia, Mich. Hood-clamp. No. 1,225,313; May 8; v. 238; p. 469.
Chambers, John E., Shelbyville, Ind. Combined gas-stove and fireless cooker. No. 1,225,769; May 15; v. 238; p. 665.
Champion Shoe Machinery Company. (See Dobyne, Stephen A., assignor.)
Chance, Thomas M., Philadelphia, Pa. Coal-washing and ore concentration. No. 1,224,138; May 1; v. 238; p. 8.
Chandler, Edwin N., Braintree, Mass. Edge-setter. No. 1,225,010; May 8; v. 238; p. 366.
Chandler, Edwin N., Braintree, assignor to Boston Last Company, Boston, Mass. Electrically-heated shoe-iron. No. 1,228,180; May 29; v. 238; p. 1543.
Chandler, Elbert R., assignor to W. B. Heidt, Guntersville, Ala. Windlass water-elevator. No. 1,228,295; May 29; v. 238; p. 1580.
Chaplin-Fulton Manufacturing Company, The. (See Fulton, Louis B., assignor.)
Chaplin, Merle P., assignor to Keyes Fibre Company, Fairfield, Me. Lubricating-bearing. No. 1,225,577; May 8; v. 238; p. 558.
Chapman, Albert W., et al. (See Kennedy, Henry A., assignor.)
Chapman, Charles T., Terre Haute, Ind. Drill-bit. No. 1,228,296; May 29; v. 238; p. 1581.
Chapman, Nathan C., assignor to Gas Oil Stove Company, Detroit, Mich. Igniter for liquid-fuel burners. No. 1,227,245; May 22; v. 238; p. 1203.
Chappell, Howard F., assignor to Mineral Products Corporation, New York, N. Y. Manufacture of refractory bodies. No. 1,226,750; May 22; v. 238; p. 1033.
Charles, Carl, Rosedale, Kans. Gas-generating oil-burner. No. 1,224,854; May 1; v. 238; p. 261.
Charles Cory & Son. (See Wood, Frank W., assignor.)
Charles, Ulysses G., Wichita, Kans. Pocket. No. 1,226,640; May 22; v. 238; p. 996.
Charlesworth, Harry P. (See Barrows and Charlesworth.)
Charley, Walter G., Murrumbeena, Victoria, Australia. Road-vehicle suspension. No. 1,226,468; May 15; v. 238; p. 902.
Charron, George E., Ottawa, Ontario, Canada. Electrical safety device for railways. No. 1,226,619; May 15; v. 238; p. 949.
Chase Foundry and Manufacturing Company, The. (See Chase and Fleming, assignors.)
Chase, Rudolph K., Syracuse, N. Y. Flush-tank valve. No. 1,227,087; May 22; v. 238; p. 1182.
Chase, Sherwood M., and F. A. Fleming, assignors to The Chase Foundry and Manufacturing Company, Columbus, Ohio. Road-working machine. No. 1,225,011; May 8; v. 238; p. 366.
Chauvin, James F., assignor to C. P. Jones, Houma, La. Pneumatic tire. No. 1,225,770; May 15; v. 238; p. 665.
Chavez, Ramon B. (See Raff, John B., assignor.)
Chemical Development Company. (See Mersereau, Gail, assignor.)
Chernyshoff, Alexander, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Distributing system. No. 1,224,139; May 1; v. 238; p. 8.
Chesley, Frank P., Montreal, Canada. Bed-spring-locking device. No. 1,224,601; May 1; v. 238; p. 173.
Chicago Braid Bow Company. (See Bricken, John, assignor.)
Chicago Flexible Shaft Company. (See Bodene, John M., assignor.)
Chicago Pneumatic Tool Company. (See Callan and MacFadden, assignors.)
Chicago Wholesale Saddlery & Mfg. Co. (See Soper, Charles A., Jr., assignor.)
Chidley, Joseph, Cleveland, Ohio., assignor to The Dressel Railway Lamp Works. Focusing apparatus for headlights. No. 1,227,528; May 22; v. 238; p. 1294.
Chile Exploration Company. (See Scott, Arthur P., assignor.)
Chism, Louis W., Springfield, Mass., assignor, by mesne assignments, to The Rowe Ring-Point Company, Hartford, Conn. Store-service apparatus. No. 1,227,246; May 22; v. 238; p. 1203.
Cholet, Leon, New York, N. Y. Safety-chair for window-cleaners. No. 1,224,709; May 1; v. 238; p. 211.
Chorraicelo Company. (See Severy and Sinclair, assignors.)
Chovan, Gustave. (See Trood and Chovan.)
Christen, Joseph C. (See Allen and Christen.)
Christensen, Jacob V. C. T., Wichita Falls, Tex. Lomomotive brake-shoe. No. 1,227,581; May 29; v. 238; p. 1341.
Christiansen, Christian, Sioux Falls, S. D. Automobile-wheel-positioning device. No. 1,225,109; May 8; v. 238; p. 390.
Christiansen, Heinrich, Pinneberg, Germany. Pneumatically-operated percussion-tool. No. 1,227,117; May 22; v. 238; p. 1160.
Christie, Harold N. C., Point Pleasant, N. J. Safety signaling. No. 1,227,387; May 22; v. 238; p. 1247.
Chriswell, Frederick W., assignor to Seattle Car & Foundry Co., Seattle, Wash. Log-bunk. No. 1,224,275; May 1; v. 238; p. 58.
Chriswell, Frederick W., assignor to Seattle Car & Foundry Co., Seattle, Wash. Log-bunk. No. 1,224,276; May 1; v. 238; p. 58.
Chryst, William A., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Electrical connection. No. 1,224,856; May 1; v. 238; p. 261.
Chryst, William A., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Company. Engine-starting system. No. 1,226,751; May 22; v. 238; p. 1033.
Chryst, William A., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Company. Resistance unit for electric circuits. No. 1,227,038; May 22; v. 238; p. 1132.

Chryst, William A., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Company. Ignition system. No. 1,227,996; May 29; v. 238; p. 1484.

Church, Frank E., Clintonville, Wis. Steering-knuckle. No. 1,225,110; May 8; v. 238; p. 400.

Church, Harold D., assignor to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,224,522; May 1; v. 238; p. 146.

Churchill, Frank B., La Harpe, Ill. Power attachment for washing-machines. No. 1,227,388; May 22; v. 238; p. 1247.

Churchward, Alexander, Boston, Mass., assignor to A-B-C Starter Company, Detroit, Mich. Electrical apparatus. No. 1,224,602; May 1; v. 238; p. 174.

Chylewski, Witold, Lemberg, Austria. Automatic pistol. No. 1,224,902; May 8; v. 238; p. 329.

Cibulka, George A. (See Randle, Harry T., assignor.)

Ciesilk, Antonl, Lorain, Ohio. Nethergarment. No. 1,225,578; May 8; v. 238; p. 588.

Cino Camera Company. (See Pietzsch, Richard H., assignor.)

Cirillo, Loreta A., New York, N. Y. Corset. No. 1,226,308; May 15; v. 238; p. 852.

Citizens Savings & Trust Company, The, executor. (See Glauber, Joseph H.)

Clairemont, Victor, Petaluma, Cal. Apparatus for treating eggs. No. 1,224,710; May 1; v. 238; p. 212.

Clairemont, Victor, San Francisco, Cal. Apparatus for preserving eggs. No. 1,224,711; May 1; v. 238; p. 212.

Clare, James P., Newton, Mass. Ecraseur or such like instrument. No. 1,225,771; May 15; v. 238; p. 666.

Clark, Frederic B. (See Kronenberger, Ferdinand, assignor.)

Clark, George S., Oilfields, Cal. Muffler for internal-combustion engines. No. 1,225,927; May 15; v. 238; p. 718.

Clark, Myron H., Hastings-upon-Hudson, N. Y., assignor to The Goodyear's Metallic Rubber Shoe Company, Machine for treating sheet-rubber. No. 1,226,949; May 22; v. 238; p. 1100.

Clark, Norris E., Plainville, Conn. Metal-working machine. No. 1,224,523; May 1; v. 238; p. 146.

Clark, Norris E., Plainville, Conn. Metal-working. No. 1,224,877; May 1; v. 238; p. 269.

Clark, Oscar W. (See Winnega, Alouis L., assignor.)

Clark, Robert, assignor to Bridgeport Brass Company, Bridgeport, Conn. Drain for sinks. No. 1,224,603; May 1; v. 238; p. 174.

Clark, Robert, assignor to Bridgeport Brass Company, Bridgeport, Conn. Sink-drain. No. 1,224,712; May 1; v. 238; p. 212.

Clark, Robert G., Brooklyn, N. Y. Sheet-feeding mechanism. No. 1,225,410; May 8; p. 238; p. 502.

Clark, Robert G., New York, N. Y. Brush-holder. No. 1,226,309; May 15; v. 238; p. 852.

Clark, Robert G., New York, N. Y. Fastening device. No. 1,226,310; May 15; v. 238; p. 853.

Clarke, Albert R., Sheridan, Wyo., assignor to Clarke Electric Heater Company. Radiator-heater. No. 1,227,529; May 22; v. 238; p. 1294.

Clarke, Alexander F., Pittsburgh, Pa. Ingot-mold and ingot produced thereby. No. 1,224,277; May 1; v. 238; p. 58.

Clarke Electric Heater Company. (See Clarke, Albert R., assignor.)

Clarke, Mary A., Trenton, N. J. Foot-dress. No. 1,227,750; May 29; v. 238; p. 1399.

Clary, Francis W. (See Bissell and Clary.)

Claus, Emil L., Milwaukee, Wis. Cock. No. 1,225,012; May 8; v. 238; p. 367.

Clausen, Henry P., Mount Vernon, assignor to Western Electric Company, Incorporated, New York, N. Y. Automatic testing system. No. 1,224,140; May 1; v. 238; p. 9.

Clausen, Henry P., Mount Vernon, assignor to Western Electric Company, Incorporated, New York, N. Y. Terminal bank. No. 1,226,947; May 22; v. 238; p. 1100.

Clausen, Henry P., Mount Vernon, assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,227,582; May 29; v. 238; p. 1341.

Cleaver, Fremont J., Carnegie borough, assignor of one-third to S. L. H. Morris and one-third to H. W. Hodgdon, Pittsburgh, Pa. Multiple refillable fuse. No. 1,226,780; May 22; v. 238; p. 1044.

Clements Company, The. (See Kennedy, Joseph, assignor.)

Clemons, William. (See King, William A., assignor.)

Cleveland Dental Manufacturing Company, The. (See Patten, Felix A., assignor.)

Cleveland, Edgar W. (See Fox and Cleveland.)

Cleveland, Willard E., assignor to Cote Piano Mfg. Co., Fall River, Mass. Stop for phonographs. No. 1,225,579; May 8; v. 238; p. 559.

Cliff, Harry G., Hamilton, Ontario, Canada. Steel cupboard. No. 1,225,928; May 15; v. 238; p. 718.

Clifford, Charles W., Trenton, N. J. Plant-receptacle. No. 1,226,311; May 15; v. 238; p. 853.

Clifford, Harlon A., assignor of one-half to J. W. Cobb, Greenfield, Mass. Antiseptic-dispenser. No. 1,227,997; May 29; v. 238; p. 1484.

Clifford, Harry E., Cambridge, Mass., assignor to General Electric Company. Electric switch. No. 1,225,580; May 8; v. 238; p. 559.

Climax Container Company. (See Shevlin, Charles W., assignor.)

Cline, George W., Albany, Oreg. Stabilizer for flying-machines. No. 1,226,312; May 15; v. 238; p. 853.

Clipper Belt Lacer Company. (See Diamond, James K., assignor.)

Clokey, Allison A., Jersey City, N. J., assignor to The Western Union Telegraph Company, New York, N. Y. Contact arrangement for call-boxes and other transmitters. No. 1,224,350; May 1; v. 238; p. 89.

Closs, Adolph, Webster City, Iowa. Resilient wheel. No. 1,224,360; May 1; v. 238; p. 89.

Cluett, Peabody & Co. (See Hurd, Hubbard F., assignor.)

Cluiee, Stephen J., Attleboro, Mass. Eyeglass construction. No. 1,224,361; May 1; v. 238; p. 89.

Coade, Loftus G., Birmingham, England. Sewing-machine. No. 1,225,772; May 15; v. 238; p. 666.

Cobb, James W. (See Clifford, Harlon A., assignor.)

Cobb, Richard H., Cleveland, Ohio. Fire-extinguisher. No. 1,227,751; May 29; v. 238; p. 1399.

Cochran, Albert W., and F. M. Youngs, Portland, Oreg. Make-ready of impression-cylinders of printing-presses. No. 1,227,557; May 22; v. 238; p. 1303.

Cochran, Robert L. (See Edmonds, Charles T., assignor.)

Cochrane, Albert P., Brooklyn, assignor to J. H. Cochrane, New York, N. Y. Knockdown container. (Reissue.) No. 14,294; May 1; v. 238; p. 274.

Cochrane, Jane H. (See Cochrane, Albert P., assignor.) (Reissue.)

Cock, Michael D., Powlett River, Victoria, Australia. Agricultural tractor. No. 1,227,389; May 22; v. 238; p. 1248.

Cody, Alice, Newark, Ohio. Detachable hook-fastener. No. 1,228,181; May 29; v. 238; p. 1543.

Coffman, Samuel M., Kansas City, Mo., assignor, by mesne assignments, to Photo Motion Company. Film-tensioning device. No. 1,227,039; May 22; v. 238; p. 1132.

Cohen, Joseph J., New York, N. Y. Type-writer. No. 1,224,141; May 1; v. 238; p. 9.

Cohen, Louis. (See McLeed, William, assignor.)

Cohn, Albert, and L. H. Debs, Chicago, Ill. Electric-lighting fixture. No. 1,225,411; May 8; v. 238; p. 502.

Cohn, David M., Evansville, Ind. Belt-buckle. No. 1,227,966; May 29; v. 238; p. 1484.

Coin Device & Signal Co. (See Drew and Mazza, assignors.)

Colburn, Ernest A. (See Colburn, Herbert C. and E. A.)

Colburn, Frank E., Gardiner, Me. Dirigible headlight. No. 1,227,885; May 29; v. 238; p. 1445.

Colburn, Herbert C., Colorado Springs, and E. A. Colburn, Denver, Colo. Ore-flotation process. No. 1,226,062; May 15; v. 238; p. 765.

Colburn, Herbert C., Colorado Springs, and E. A. Colburn, Denver, Colo. Ore-flotation apparatus. No. 1,226,063; May 15; v. 238; p. 765.

Cole, Clifford M., Lander, assignor of one-half to W. S. Adams, Riverton, Wyo. Fluid-gage. No. 1,224,713; May 1; v. 238; p. 213.

Cole, Elisha W. (See Cole, Eugene M. and E. W.)

Cole, Eugene M. and E. W., Charlotte, N. C. Planter. No. 1,226,187; May 15; v. 238; p. 807.

Cole, Jay H., Binghamton, N. Y. Automatic safety elevator-gate. No. 1,225,773; May 15; v. 238; p. 666.

Cole, Robert C., assignor to The Johns-Pratt Company, Hartford, Conn. Fusible element for inclosed electrical fuses. No. 1,227,752; May 29; v. 238; p. 1399.

Cole, Robert C., assignor to The Johns-Pratt Company, Hartford, Conn. Fuse-block. No. 1,227,753; May 29; v. 238; p. 1399.

Cole, Thomas A., Indianapolis, Ind. Fire extinguisher and alarm. No. 1,228,098; May 29; v. 238; p. 1518.

Coleman, Maurice B., West Newton, Mass. Sanitary connection. No. 1,226,469; May 15; v. 238; p. 902.

Coleston, Claude E., Fellows, assignor of one-half to M. H. Whittier, Los Angeles, Cal. Automatic safety-brake for railways. No. 1,224,865; May 1; v. 238; p. 264.

Collins, Arthur L., San Francisco, Cal. Measuring the viscosity of fluids. No. 1,224,142; May 1; v. 238; p. 9.

Collins, William L., Pittsburgh, Pa. Shade-holder. No. 1,225,700; May 8; v. 238; p. 598.

Collom, Martin H., Denver, Colo. Valve mechanism for steam-heated rotary cylinders. No. 1,227,040; May 22; v. 238; p. 1133.

Colman, Howard D., assignor to Barber-Colman Company, Rockford, Ill. Bobbin-handling apparatus. No. 1,226,606; May 15; v. 238; p. 945.

Colman, Howard D., assignor to Barber-Colman Company, Rockford, Ill. Bobbin-sorter. No. 1,227,118; May 22; v. 238; p. 1160.

Colman, Howard D., assignor to Barber-Colman Company, Rockford, Ill. Winder. No. 1,227,754; May 29; v. 238; p. 1400.

Colson, Frankie M., Salt Lake City, Utah. Supporter. No. 1,225,581; May 8; v. 238; p. 559.

Colt, Le Baron C., Bristol, R. I., assignor to National India Rubber Company. Apparatus for varnishing rubber shoes. No. 1,225,013; May 8; v. 238; p. 367.

Colt, Samuel S., Orange, N. J. Molding apparatus. No. 1,227,041; May 22; v. 238; p. 1133.

Commercial Camera Co. (See Greene, John S., assignor.)

Compagnie Des Forges Et Acieries De La Marine Et D'Homecourt. (See Rimailho, Emile, assignor.)





Compagnie d'Incineration Industrielle. (See Brechot, Arthur, assignor.)

Company of Whipp Bros. & Tod Limited. (See Craig, Thomas J. I., assignor.)

Compound Heater Mfg. Company, The. (See Fischer, William C., assignor.)

Condit, Sears B., Jr. (See Burnham, George A., assignor.)

Cone, Frank L., Windsor, Vt., assignor, by mesne assignments, to The National-Acme Company, Cleveland, Ohio. Multiple-spindle metal-working machine. No. 1,224,714; May 1; v. 238; p. 214.

Conlon, Patrick J., North Adams, Mass. Casting-mold. No. 1,228,182; May 29; v. 238; p. 1544.

Conn, Byron O. (See Root, Charles F., assignor.)

Conner, Caleb J., Coatesville, Pa. Electrical testing apparatus. No. 1,225,014; May 8; v. 238; p. 367.

Conner, May. (See Scott, Luther, assignor.)

Connerton, William E., Fall River, Mass. Bevel-gear puller. No. 1,227,583; May 29; v. 238; p. 1341.

Connor, Herschel M., and D. D. Miles, assignors of two-fifths to A. H. Herbert, one-fifth to P. I. Connor, one-fifth to M. C. Miles, and one-fifth to R. J. Graf, San Francisco, Cal. Shutter-closing mechanism for moving-picture machines. No. 1,227,886; May 29; v. 238; p. 1445.

Connor, Herschel M., and D. D. Miles, assignors of two-fifths to A. H. Herbert, one-fifth to P. I. Connor, one-fifth to M. C. Miles, and one-fifth to R. J. Graf, San Francisco, Cal. Intermittent film-feeding mechanism. No. 1,227,887; May 29; v. 238; p. 1446.

Connor, Pansy I., *et al.* (See Connor and Miles, assignors.)

Conrad, Frank, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of electrical distribution. No. 1,224,143; May 1; v. 238; p. 10.

Conrad, Robert, Weissensee, near Berlin, Germany. Gage. No. 1,225,314; May 8; v. 238; p. 469.

Conrad, Robert, Berlin, Germany. Gage. No. 1,225,315; May 8; v. 238; p. 469.

Conrader, Rudolph, Erie, Pa. Pump-regulating mechanism. No. 1,226,752; May 22; v. 238; p. 1033.

Consolidated Car-Heating Company. (See McElroy, James F., assignor.)

Consolidated Press Company. (See Patrick, Isaac, assignor.)

Continental Can Company. (See Kronquest, Alfred L., assignor.)

Continental Fibre Company, The. (See Tiffany, Harold E., assignor.)

Converse, Atherton D., Winchendon, Mass. Coaster. No. 1,227,888; May 29; v. 238; p. 1446.

Cook, Frank C., Denver, Colo. Cue-pointing tool. No. 1,225,582; May 8; v. 238; p. 560.

Cook, George F., East Washington, N. H. Bicycle attachment. No. 1,227,390; May 22; v. 238; p. 1248.

Cook, George J., Fairmont, W. Va. Marble-machine. No. 1,226,313; May 15; v. 238; p. 853.

Cook, Judson, Albany, N. Y. Brake-shoe. No. 1,225,583; May 8; v. 238; p. 560.

Cook, Justin B., Tempe, Ariz. Apparatus for cooling sterilized or cooked can goods. No. 1,225,774; May 15; v. 238; p. 667.

Cook, Roy J., assignor of one-half to G. C. Murray, Chicago, Ill. Yoke. No. 1,224,278; May 1; v. 238; p. 59.

Cook, Willard J., Des Moines, Iowa. Manure-spreader. No. 1,224,903; May 8; v. 238; p. 329.

Cooley, Henry B., Kensington, Conn., assignor to The American Paper Goods Company, Montclair, N. J. Cup-dispensing apparatus. No. 1,225,728; May 8; v. 238; p. 607.

Coolidge, William D., Schenectady, N. Y., assignor to General Electric Company. Refractory-metal tube. No. 1,226,470; May 15; v. 238; p. 902.

Coolidge, William D., Schenectady, N. Y., assignor to General Electric Company. Refractory-metal tube. No. 1,226,471; May 15; v. 238; p. 902.

Cooling, Arthur B., Sterling, Ill. Operating mechanism for washing-machines. No. 1,227,584; May 29; v. 238; p. 1342.

Cooney, Hugh, Marion, Ind. Tire-vulcanizing mold. No. 1,225,584; May 8; v. 238; p. 560.

Cooper Company, The. (See Cooper, Hugh S., assignor.)

Cooper, Charles H., administrator. (See Cooper, John W.)

Cooper, George, Ansonia, Conn. Pencil-sharpener. No. 1,226,412; May 8; v. 238; p. 503.

Cooper, Harry S., assignor to Griswold Manufacturing Company, Erie, Pa. Flask. No. 1,224,144; May 1; v. 238; p. 10.

Cooper, Henry A., Peebles, Ohio. Pipe-remover. No. 1,227,391; May 22; v. 238; p. 1248.

Cooper-Hewitt Electric Company. (See Baker, James R., assignor.)

Cooper Hewitt Electric Co. (See Hewitt, Peter C., assignor.)

Cooper Hewitt Electric Co. (See Thomas, Percy H., assignor.)

Cooper, Hugh S., assignor to The Cooper Company, Cleveland, Ohio. Aluminum-calcium alloy and making the same. No. 1,224,362; May 1; v. 238; p. 90.

Cooper, James H., Wheeling, W. Va. Wear-plate for shoe-heels. No. 1,227,392; May 22; v. 238; p. 1249.

Cooper, John W., deceased; C. H. Cooper, administrator, assignor to The Trumpfheller Manufacturing Corporation, Buffalo, N. Y. Street-railway system. No. 1,227,585; May 29; v. 238; p. 1342.

Cope, Frank T. (See Baily and Cope.)

Corcoran-Victor Company, The. (See Kuen, Eugene A., assignor.)

Corcos, Joseph. (See Spielman, Max H., assignor.)

Corder, Waitman D., Philippi, W. Va. Garment-supporter. No. 1,224,604; May 1; v. 238; p. 175.

Cordts, George, assignor to C. E. Dressler, New York, N. Y. Adding-machine. No. 1,226,064; May 15; v. 238; p. 765.

Corliss, Harry P., Pittsburgh, Pa., assignor to Metals Recovery Company, New York, N. Y. Flotation of minerals. No. 1,225,185; May 29; v. 238; p. 1544.

Corliss, Harry P., Pittsburgh, Pa., assignor to Metals Recovery Company, New York, N. Y. Flotation of minerals. No. 1,228,184; May 29; v. 238; p. 1544.

Corn, Robert R., Union, S. C. Rock-shaft bearing for looms. No. 1,226,188; May 15; v. 238; p. 808.

Cornell, Robert, Paris, France. Sewing-machine. No. 1,227,119; May 22; v. 238; p. 1160.

Cornwall, John B., assignor to Barnard and Leas Manufacturing Company, Moline, Ill. Grain-separator. No. 1,226,189; May 15; v. 238; p. 808.

Correll, Jefferson F., Bucyrus, Ohio. Conveying apparatus. No. 1,224,605; May 1; v. 238; p. 175.

Cosner, Eddie L., Roanoke, W. Va. Supporting-hook. No. 1,225,585; May 8; v. 238; p. 560.

Cote Piano Mfg. Co. (See Cleveland, Willard E., assignor.)

Cotton, William H., Salem, N. Y. Cover for sap-buckets. No. 1,228,096; May 29; v. 238; p. 1518.

Cottrell, Edgar H., Westerly, R. I., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Folding-machine. No. 1,226,948; May 22; v. 238; p. 1100.

Cottrell, Joseph B., Edna, Ala. Culinary pliers. No. 1,224,606; May 1; v. 238; p. 175.

Couch, Silvester E., Clearwater, Fla. Portable couch. No. 1,227,586; May 29; v. 238; p. 1342.

Coughlin, William G., Philadelphia, Pa. Railway-tie. No. 1,225,418; May 8; v. 238; p. 503.

Courson, John F., Pittcairn, Pa. Draft-gear. No. 1,225,111; May 8; v. 238; p. 400.

Courtney, Edward D., Danville, Ind. Mop-head. No. 1,224,524; May 1; v. 238; p. 147.

Courtney, Minder A., assignor of one-half to C. R. Patterson, Birmingham, Ala. Numbering-machine for printing-presses. No. 1,224,279; May 1; v. 238; p. 59.

Covert, Albert D., Leland, Ill. Governing device for take-up reels of moving-picture machines. No. 1,225,222; May 8; v. 238; p. 436.

Covert Manufacturing Company. (See Baxter, John B., assignor.)

Covey, F. W. (See Frazure, Isaac N., assignor.)

Cowley, James T., Minot, assignor to The Lamson Company, Boston, Mass. Selective discharge-conveyer. No. 1,225,586; May 8; v. 238; p. 561.

Cox, Archibald, Plainfield, N. J., and A. H. Peter, New York, N. Y. Extraction and recovery of copper. No. 1,226,190; May 15; v. 238; p. 808.

Cox, Arthur M., Commerce, Okla. Spectacles. No. 1,225,775; May 15; v. 238; p. 667.

Cox, Earl W., Seattle, Wash. Ball-bearing for drawers. No. 1,227,889; May 29; v. 238; p. 1447.

Cox, Michael, New York, N. Y. Folding bed. No. 1,224,715; May 1; v. 238; p. 214.

Cox, William H., Portsmouth, Va., assignor of one-half to C. C. Brick, Salem, Ohio. Collapsible boat. No. 1,227,247; May 22; v. 238; p. 1204.

Crabtree, John I., assignor to Eastman Kodak Company, Rochester, N. Y. Apparatus for treating photographic films. No. 1,225,929; May 15; v. 238; p. 719.

Craig, Arthur S., Kansas City, Mo. Spine rest or support. No. 1,225,776; May 15; v. 238; p. 668.

Craig, Clifford H., Redstone, N. H. Measuring instrument for tailors. No. 1,225,980; May 15; v. 238; p. 719.

Craig, David, Peabody, Mass. Pipe-union. No. 1,225,777; May 15; v. 238; p. 668.

Craig, Edward, St. Joseph, Mich. Fastener-driving machine. No. 1,224,280; May 1; v. 238; p. 60.

Craig, Thomas J. I., Manchester, England. Fireproofing of fabrics and other articles. No. 1,225,414; May 8; v. 238; p. 503.

Craig, Thomas J. I., assignor of one-half to the Company of Whipp Bros. & Tod Limited, Manchester, England. Fireproofing and bleaching of fabrics and the like. No. 1,224,145; May 1; v. 238; p. 10.

Crailey, John T., Chicago, Ill., assignor to P. H. Murphy Company, Parnassus, Pa. Anchor for roof-sheets. No. 1,226,861; May 22; v. 238; p. 1070.

Cram, Hervey G., and C. A. Parsons, assignors to Great Northern Paper Company, Millinocket, Me. Wet machine. No. 1,225,778; May 15; v. 238; p. 668.

Crane, Frank G., West Collingsworth, N. J., assignor of one-half to J. Balke, Chicago, Ill. Bowling-pin and making same. No. 1,227,246; May 22; v. 238; p. 1204.

Craven, Claud C., Waurika, Okla. Tractor. No. 1,224,716; May 1; v. 238; p. 214.

Craven, James F., Pittsburgh, Pa. Spike and tie-plate. No. 1,224,607; May 1; v. 238; p. 175.

Craven, James F., Pittsburgh, Pa. Railway-rail fastener. No. 1,224,608; May 1; v. 238; p. 176.

Craven, James F., Pittsburgh, Pa. Spike-puller. No. 1,224,609; May 1; v. 238; p. 176.

Crawford, Ellsworth A., Thatcher, Ariz. Pumping attachment for windmills. No. 1,228,297; May 29; v. 238; p. 1581.
Creamer, Irvin S., Pleasant Hall, Pa. Priming device. No. 1,226,191; May 15; v. 238; p. 808.
Crecelius, Lawrence P., assignor to The Electric Railway Improvement Company, Cleveland, Ohio. Making rail-bonds. No. 1,225,316; May 8; v. 238; p. 469.
Creighton, Elmer E. F., Schenectady, N. Y., assignor to General Electric Company. Protecting means for transmission systems. No. 1,225,587; May 8; v. 238; p. 561.
Cressman, Wayne E., Gwynedd Valley, Pa. Toy. No. 1,227,393; May 22; v. 238; p. 1249.
Crippen, James B., Chicago, Ill., assignor, by mesne assignments, to General Engineering and Construction Company, Limited, Toronto, Canada. Electric relay. No. 1,228,097; May 29; v. 238; p. 1518.
Crislip, Chester A., *et al.* (See Thompson, James V., assignor.)
Critchley, Daniel M. (See Von Sick, William M., assignor.)
Critchlow, Benjamin P., Ogden, Utah. Carbureter. No. 1,226,753; May 22; v. 238; p. 1034.
Crittenden, Philip L., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Electric pump-governor. No. 1,224,147; May 1; v. 238; p. 11.
Crittenden, Philip L., Edgewood, and L. D. Saunders, Wilkinsburg, assignors to The Westinghouse Air Brake Company, Wilmerding, Pa. Pump-unloading device. No. 1,224,146; May 1; v. 238; p. 10.
Crompton & Knowles Loom Works. (See Holmes and Davis, assignors.)
Crompton & Knowles Loom Works. (See Jenckes, Lawrence B., assignor.)
Cromwell, Lewis M., Gracemont, Okla. Cotton-chopper. No. 1,226,754; May 22; v. 238; p. 1034.
Cronemiller, Moses E., Patton, Pa. Artificial arm and hand. No. 1,225,415; May 8; v. 238; p. 504.
Crook, Thomas J., Wichita, Kans. Hydrocarbon-lamp. No. 1,228,379; May 29; v. 238; p. 1608.
Crosby, Oliver, assignor to American Hoist & Derrick Company, St. Paul, Minn. Sling. No. 1,224,148; May 1; v. 238; p. 11.
Cross, Clay. (See Hannon and Cross.)
Crossen, Elmer J., Joliet, Ill. Coke-oven. No. 1,227,518; May 22; v. 238; p. 1291.
Crossley, Albert D., Hartford, Conn., assignor of one-half to N. F. Wilson, New York, N. Y. Ambulance operating-table. No. 1,225,015; May 8; v. 238; p. 367.
Crossman, Martin R., Boston, Mass. Pen and pencil holder. No. 1,228,298; May 29; v. 238; p. 1581.
Crouse-Hinds Company. (See Bissell and Smith, assignors.)
Crouse-Hinds Company. (See Olley, Edwin A., assignor.)
Crouse-Hinds Company. (See Parker and Winter, assignors.)
Crouse-Hinds Company. (See Stewart, George L., assignor.)
Crow, Charles L., Alexander City, Mont. Antislipping armored pneumatic tire. No. 1,226,862; May 22; v. 238; p. 1071.
Crowe, Frederick C., North Yakima, Wash. Pump. No. 1,227,890; May 29; v. 238; p. 1447.
Crowe, Paul L., New York, N. Y. Ash-dumping mechanism. No. 1,224,904; May 8; v. 238; p. 330.
Crowley, Dennis E., Milwaukee, Wis. Anticreeping device for rails. No. 1,227,755; May 29; v. 238; p. 1400.
Crowley, John T., assignor to The Beacon Falls Rubber Shoe Company, Beacon Falls, Conn. Apparatus for treating rubber articles. No. 1,225,779; May 15; v. 238; p. 669.
Crown Cork and Seal Company of Baltimore City, The. (See La Porte, Norbert M., assignor.)
Crown Cork & Seal Company of Baltimore City, The. (See Letsch, Frederick W., assignor.)
Crown Optical Company. (See Stout, Charles H., assignor.)
Cru Patents Corporation. (See Uebelmesser, Charles, assignor.)
Crump, Armistead C., New York, N. Y. Valve mechanism. No. 1,224,447; May 1; v. 238; p. 121.
Crump, James I., East Orange, N. J. Toy or educational device. No. 1,224,363; May 1; v. 238; p. 90.
Crumrine, Ellen M., Lima, Ohio. Hose-supporter. No. 1,227,042; May 22; v. 238; p. 1134.
Cuban-American Sugar Company, The. (See Hughes, Peter F., assignor.)
Cugley, George, assignor to The Buckeye Incubator Company, Springfield, Ohio. Hover. No. 1,227,120; May 22; v. 238; p. 1161.
Cumming, James D., Copper Cliff, Ontario, Canada. Acetylene-lamp. No. 1,225,016; May 8; v. 238; p. 368.
Cummings, Henry H., Newton Highlands, Mass., assignor of one-half to H. R. Gary, Alexandria, Va. Apparatus for measuring the twist of shafts. No. 1,227,043; May 22; v. 238; p. 1134.
Cummings, Thomas G., assignor of one-half to P. Grant, Grand Rapids, Mich. Automatic nailing-machine. No. 1,225,317; May 8; v. 238; p. 470.
Cumner, Matthew S., New York, N. Y., and F. W. Geissenhainer, Freehold, N. J., assignors to Nestor Manufacturing Co., Inc., New York, N. Y. Rheostat. No. 1,224,610; May 1; v. 238; p. 176.
Cunningham, George T., *et al.* (See Marlin, Isaac U., assignor.)
Cunningham, John F., San Francisco, Cal. Nut-lock. No. 1,226,863; May 22; v. 238; p. 1071.
Cunningham, Louis T., *et al.* (See Marlin, Isaac U., assignor.)
Cure, Elam, St. Paul, Minn. Flagman's signaling kit. No. 1,227,587; May 29; v. 238; p. 1342.
Currier, Harry, assignor of two-thirds to J. A. Hamilton and J. W. Stobie, Madison, Me. Automatic coupling for air-pipes. No. 1,224,611; May 1; v. 238; p. 177.
Curry, L. L. M., *et al.* (See Jernigan, Albert S., assignor.)
Curry, John W., Kane, Pa. Package-tie. No. 1,227,394; May 22; v. 238; p. 1249.
Curtis, Henry H. (See Phelps, James C., assignor.)
Curtis Olive Corporation. (See Argo, Lisle T., assignor.)
Curtis, Wallace B., Hamburg, N. Y. Trap. No. 1,227,395; May 22; v. 238; p. 1249.
Curtis, William J. (See Tonnele and Curtis.)
Curtiss Aeroplane & Motor Corporation. (See Tarbox and Kleckler, assignors.)
Curtiss, Dante S., Orillia, Wash. Hand-protector. No. 1,225,588; May 8; v. 238; p. 562.
Curtiss, Glenn H., assignor to The Curtiss Motor Company, Hammondsport, N. Y. Method and system for operating rudders of aircraft. No. 1,228,380; May 29; v. 238; p. 1608.
Curtiss, Glenn H., Buffalo, assignor to The Curtiss Motor Company, Hammondsport, N. Y. Hydro-aero machine. No. 1,228,381; May 29; v. 238; p. 1609.
Curtiss, Glenn H., Buffalo, assignor to The Curtiss Motor Company, Hammondsport, N. Y. Flying-machine. No. 1,228,382; May 29; v. 238; p. 1609.
Curtiss Motor Company, The. (See Curtiss, Glenn H., assignor.)
Cushing, William H., assignor of one-half to C. E. Gault, Topeka, Kans. Sanitary rat-trap. No. 1,226,641; May 22; v. 238; p. 996.
Custer, Arthur E., Salt Lake City, Utah. Rifle-box. No. 1,224,281; May 1; v. 238; p. 60.
Cuthbert, John, Chicago, Ill. Electrical connector. No. 1,227,588; May 29; v. 238; p. 1342.
Cutler-Hammer Mfg. Co., The. (See Barnum, Thomas E., assignor.)
Cutler-Hammer Mfg. Co., The. (See Foote, Edward T., assignor.)
Cutler-Hammer Mfg. Co., The. (See Horton, Albert J., assignor.)
Cutler-Hammer Mfg. Co., The. (See Klein, Charles J., assignor.)
Cutler-Hammer Mfg. Co., The. (See Mortensen, Niels L., assignor.)
Cutler-Hammer Mfg. Co., The. (See Simon, Arthur, assignor.)
Cutler-Hammer Mfg. Co., The. (See Yerger, Charles W., assignor.)
Cutler, William C., North Glendale, Cal. Underreamer. No. 1,225,701; May 8; v. 238; p. 599.
Cutting, William S., Onaway, Mich. Railway-spike. No. 1,225,589; May 8; v. 238; p. 562.
Cyphers, Henry T., and F. E. Holmes, Torrance, Cal. Rotary machine. No. 1,226,864; May 22; v. 238; p. 1071.
D'Harlingue, Alfred E., St. Louis, Mo. Unicycle. No. 1,228,100; May 29; v. 238; p. 1518.
D'Olier, Henry, Jr., Bridgeport, Conn. Reflector-holder. No. 1,228,003; May 29; v. 238; p. 1485.
D'Olier, Henry, Jr., Bridgeport, Conn. Reflector-holder. No. 1,228,004; May 29; v. 238; p. 1486.
Dabney, Frank C., Wichita, Kans. Basket. No. 1,226,472; May 15; v. 238; p. 903.
Dahl, Harry J., Philadelphia, Pa., assignor to Union Special Machine Company, Chicago, Ill. Overseaming-machine. No. 1,227,756; May 29; v. 238; p. 1400.
Dahl, Harry J., Philadelphia, Pa., assignor to L. N. Littauer, Gloversville, N. Y. Loop-retainer for sewing-machines. No. 1,227,891; May 29; v. 238; p. 1447.
Dahlen, Julian L., Borup, Minn. Wagon-body. No. 1,227,757; May 29; v. 238; p. 1401.
Dain, Joseph, Moline, Ill., and J. Macphail, Davenport, Iowa, assignors, by mesne assignments, to Deere & Company, Moline, Ill. Horse-rake. No. 1,225,112; May 8; v. 238; p. 400.
Dain Manufacturing Company, The. (See Duffield, Wayne G., assignor.)
Dake, Charles W., assignor to The Pyle-National Company, Chicago, Ill. Reversing-shaft for engine valve-gears. No. 1,225,931; May 15; v. 238; p. 719.
Daley, James E., Port Anson, Ontario, Canada. Silencer and condenser for gasolene-engines. No. 1,228,185; May 29; v. 238; p. 1544.
Dalton Adding Machine Company, The. (See Dalton, James L., assignor.)
Dalton Adding Machine Company, The. (See Landsiedel, Harry, assignor.)
Dalton, James L., Poplar Bluff, Mo., assignor, by mesne assignments, to The Dalton Adding Machine Company, Cincinnati, Ohio. Adding-machine. No. 1,225,590; May 8; v. 238; p. 562.
Dalton, Joseph H., St. Paul, Minn. Sand cutting and screening machine. No. 1,227,589; May 29; v. 238; p. 1343.
Dameron, Adolphus, Washington, D. C. Gasolene-filter. No. 1,227,999; May 29; v. 238; p. 1484.
Dampierre, M. Marie A. H. de. (See Brown, Ernest, assignor.)



Daniel, Alva P., Commerce, Okla. Steam-cup. No. 1,226,473; May 15; v. 238; p. 903.
Dann, Walter M., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Transformer. No. 1,224,149; May 1; v. 238; p. 11.
Darby, Benjamin E., Duke, Okla. Counter-bin. No. 1,227,892; May 29; v. 238; p. 1448.
Darby, Isaac L., Greeley, Colo., and G. H. Smith, Columbus, Ohio. Spading-machine. No. 1,224,717; May 1; v. 238; p. 215.
Dare, Clifford H. (See Raymond and Dare.)
Darling, Louis S. (See Fiegel and Darling.)
Darlington, Frederic W., Chicago, Ill. Self-contained portable fountain. No. 1,228,186; May 29; v. 238; p. 1544.
Darlington, Philip J., assignor to The Roto Company, Hartford, Conn. Rotary motor. No. 1,225,224; May 8; v. 238; p. 437.
Darrah, William A., and S. Trood, Wilkinsburg, Pa., assignors to Industrial Development Company. Vapor treatment of metals. No. 1,224,339; May 1; v. 238; p. 81.
Dauch, Jacob J. (See Kennedy, George A., assignor.)
Davenport Wagon Company of Illinois. (See Bird, William F., assignor.)
Davey, Walter F., Somerville, Mass. Game apparatus. No. 1,227,249; May 22; v. 238; p. 1204.
David Lupton's Sons Company. (See Brogden, Joah, assignor.)
Davidson, Isaac, Albert Lea, Minn. Coupling-bolt. No. 1,225,932; May 15; v. 238; p. 719.
Davidson, Jay B., Davis, Cal. Dynamometer. No. 1,228,299; May 29; v. 238; p. 1581.
Davidson, Louis, New York, N. Y. Device for removing snow, storm-water, and sewage. No. 1,224,448; May 1; v. 238; p. 121.
Davie, John M., Cleveland, Ohio. Adjustable spacing-collar. No. 1,225,113; May 8; v. 238; p. 400.
Davies, Alfred E. (See Thompson and Davies.)
Davies, David P., assignor to J. I. Case Threshing Machine Company, Racine, Wis. Mixer or carbureter for internal-combustion engines. No. 1,224,612; May 1; v. 238; p. 177.
Davino, Alphonso, San Diego, Cal. Cable-controlled carrying apparatus. No. 1,226,814; May 15; v. 238; p. 854.
Davis, Arthur, New Westminster, British Columbia, Canada. Belt-measuring device. No. 1,225,223; May 8; v. 238; p. 436.
Davis, Charles M., and M. J. Loomis, Battle Creek, Mich.; said Loomis assignor to said Davis. Milk-bottle holder. No. 1,226,192; May 15; v. 238; p. 809.
Davis, David C., Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Arc-suppressing device. No. 1,224,150; May 1; v. 238; p. 12.
Davis, Don M., Houston, Tex., and T. J. Underwood, Kansas City, Mo. Ventilating-fastener. No. 1,225,114; May 8; v. 238; p. 401.
Davis, Forrest E., Whitingham, Vt. Brake and clutch mechanism. No. 1,227,758; May 29; v. 238; p. 1401.
Davis, John L., Walnut Springs, Tex. Safety device for elevators. No. 1,225,780; May 15; v. 238; p. 669.
Davis, Joseph W., San Francisco, Cal. Direction-indicator for automobiles. No. 1,224,905; May 8; v. 238; p. 330.
Davis, Monroe, assignor of one-half to G. D. Wilson, Enid, Okla. Threshing-machine. No. 1,226,865; May 22; v. 238; p. 1072.
Davis, Samuel H., Roanoke, Va. Automobile-signal. No. 1,228,187; May 29; v. 238; p. 1545.
Davis, Simon. (See Holmes and Davis.)
Davis, William G., Granite City, Ill. Means for carburation. No. 1,227,530; May 22; v. 238; p. 1295.
Davison, Dell C., Bethlehem, Pa. Wrench. No. 1,227,396; May 22; v. 238; p. 1250.
Davol, George K., San Francisco, Cal. Internal-combustion engine. No. 1,225,702; May 8; v. 238; p. 599.
Davol, George K., San Francisco, Cal. Fuel-valve for internal-combustion engines. No. 1,225,703; May 8; v. 238; p. 599.
Dawkins, Will E., and A. W. Lipscomb, Breese, Ill. Automatic mine-track switch. No. 1,224,282; May 1; v. 238; p. 60.
Dawley, Daniel D., assignor to Payton & Kelley Company, Providence, R. I. Chain-reel. No. 1,225,933; May 15; v. 238; p. 720.
Dawson, Edward E., Petersburg, Ill. Stock-feeder. No. 1,226,474; May 15; v. 238; p. 904.
Day, Charles, assignor to Okmulgee Glass Company, Okmulgee, Okla. Glass-drawing apparatus. No. 1,225,591; May 8; v. 238; p. 563.
Day, George H., assignor to American Optical Company, Southbridge, Mass. Ophthalmic mounting. No. 1,224,283; May 1; v. 238; p. 60.
Day, Rodney D., Pittsburgh, Pa. Plate-valve. No. 1,227,759; May 29; v. 238; p. 1401.
Dayton Engineering Laboratories Co., The. (See Chryst, William A., assignor.)
Dayton Engineering Laboratories Co., The. (See Kettering and De Maree, assignors.)
De Jersey, Claude, *et al.* (See Underwood, Charles W., assignor.)
De Khotinsky, Achilles, assignor to Central Scientific Company, Chicago, Ill. Liquid-level regulator. No. 1,225,416; May 8; v. 238; p. 504.
De Khotinsky, Achilles, assignor to Central Scientific Company, Chicago, Ill. Thermoregulator. No. 1,227,760; May 29; v. 238; p. 1402.
De Frehm, Charles H., Johnstown, Pa. Sanitary tray. No. 1,226,866; May 22; v. 238; p. 1073.
De Lan, Richie, Philadelphia, Pa. Lid for cooking utensils. No. 1,227,251; May 22; v. 238; p. 1205.
De Land, Sarah L. (See Wells, Chipman J., assignor.)
De Laval Steam Turbine Company. (See Hanzlik, Henry J., assignor.)
De Maree, Robert S. (See Kettering and De Maree.)
De Martin, Charles L., assignor to Indiana Lamp Co., Connersville, Ind. Switch connection for electric lamps. No. 1,226,193; May 15; v. 238; p. 809.
De Mattia, Barthold. (See De Mattia, Peter and B.)
De Mattia, Peter and B., Clifton, N. J. Pneumatic-tire-building apparatus. No. 1,225,593; May 8; v. 238; p. 563.
De Roode, Trimble, New York, N. Y. Mining. No. 1,224,613; May 1; v. 238; p. 178.
De Roode, Trimble, New York, N. Y. Mining. No. 1,225,784; May 15; v. 238; p. 670.
De Roode, Trimble, New York, N. Y. Mining apparatus. No. 1,226,065; May 15; v. 238; p. 766.
De Smidt, John H. (See De Smidt, William A., assignor.)
De Smidt, William A., Cedar Grove, Wis., assignor of one-half to J. H. De Smidt, Minneapolis, Minn. Collapsible voting-booth. No. 1,226,194; May 15; v. 238; p. 809.
De Smith, Henry, assignor to M. D. Knowlton Company, Rochester, N. Y. Feeding device for stay-applying machines. No. 1,225,018; May 8; v. 238; p. 368.
De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,226,951; May 22; v. 238; p. 1101.
De Vries, Emma O., Chicago, Ill. Sifting attachment for boxes. No. 1,227,121; May 22; v. 238; p. 1161.
De Wendt, William C., Chicago, Ill. Invalid-bed. No. 1,227,399; May 22; v. 238; p. 1251.
De Wilde, Fred P., Sheboygan, Wis. Cuff-holder. No. 1,226,644; May 22; v. 238; p. 997.
Dean, Clark A., assignor, by mesne assignments, to Shurnuff Manufacturing Company, St. Louis, Mo. Automobile-axle construction. No. 1,224,449; May 1; v. 238; p. 121.
Dearing, Joseph W., assignor to Eureka Automatic Gas Valve Mfg. Co., Kansas City, Mo. Gas-shut-off valve. No. 1,224,284; May 1; v. 238; p. 61.
Debs, Lewis H. (See Cohn and Debs.)
Deck, Thomas I., Cantwell, Mo. Shaft-coupling. No. 1,226,476; May 15; v. 238; p. 904.
Decker, William M., Buffalo, N. Y. Milk-bottle and similar receptacle. No. 1,225,017; May 8; v. 238; p. 368.
Dee, David G., Chicago, Ill., assignor, by mesne assignments, to R. H. Rogers, Rochester, N. Y. Fire-alarm system. No. 1,225,934; May 15; v. 238; p. 720.
Dee, David G., assignor, by mesne assignments, to R. H. Rogers, Rochester, N. Y. Fire-alarm telephone transmitting mechanism. No. 1,225,935; May 15; v. 238; p. 720.
Dee, David G., assignor, by mesne assignments, to R. H. Rogers, Rochester, N. Y. Fire-alarm trunk-switching mechanism. No. 1,225,936; May 15; v. 238; p. 721.
Dee, David G., assignor, by mesne assignments, to R. H. Rogers, Rochester, N. Y. Factory-fire-drill system. No. 1,225,937; May 15; v. 238; p. 721.
Dee, David G., assignor, by mesne assignments, to R. H. Rogers, Rochester, N. Y. Tone-producer for fire-alarm-box mechanisms. No. 1,228,000; May 29; v. 238; p. 1485.
Deemer, Dewey T., Hopkins, Mich. Diving and excavating apparatus. No. 1,228,300; May 29; v. 238; p. 1582.
Deems, Edward M., Forest Hills, N. Y., assignor to Duplex Channel Pin Company, Inc. Bonding-pin. No. 1,225,781; May 15; v. 238; p. 669.
Deere & Company. (See Dain and Macphail, assignors.)
Deere & Company. (See Johnson, Eric, assignor.)
Deere & Mansur Company. (See White, Charles E., assignor.)
Defiance Button Machine Co. (See Styles, Joseph H., assignor.)
Degener, Gustave O., assignor to Underwood Computing Machine Company, New York, N. Y. Combined typewriting and computing machine. No. 1,226,315; May 15; v. 238; p. 854.
Degener, Gustave O., assignor to Underwood Computing Machine Company, New York, N. Y. Combined typewriting and computing machine. No. 1,226,950; May 22; v. 238; p. 1101.
Degginger, Louis A., Covington, Ky., assignor to The No-Break Egg Carrier Co., Cincinnati, Ohio. Egg-carrier No. 1,227,250; May 22; v. 238; p. 1204.
Deindoerfer, John A., Jr., Defiance, Iowa. Box-fastener. No. 1,227,590; May 29; v. 238; p. 1343.
Delane, Anson W., New York, N. Y. Resilient wheel. No. 1,225,225; May 8; v. 238; p. 437.
Dell, Mirah, Hallandale, Fla. Device for oiling saws. No. 1,226,476; May 15; v. 238; p. 904.
Delzell, Frank K., Damascus, Ohio. Combination dinner-pail. No. 1,227,893; May 29; v. 238; p. 1148.
Demas, Demetrios J., Pittsburgh, Pa. Tire casing or shoe. No. 1,228,001; May 29; v. 238; p. 1485.
Demovitsch, John, Pittsburgh, Pa. Dough-cutting machine. No. 1,226,642; May 22; v. 238; p. 996.

Dempsey, Peter P., New York, N. Y. Oil-engine. No. 1,224,151; May 1; v. 238; p. 12.
Dempsey, William L., Somerville, Mass. Wagon. No. 1,226,867; May 22; v. 238; p. 1073.
Denbigh, Richard. (See Bishop, Barry N., assignor.)
Denburger, Joseph D., Lents, Oreg. Mail catching and delivering apparatus. No. 1,225,594; May 8; v. 238; p. 564.
Denison, Frederick S., assignor to Minneapolis Heat Regulator Company, Minneapolis, Minn. Pressure-regulator. No. 1,228,188; May 29; v. 238; p. 1545.
Denne, Mark T., Rushden, England. Cam-operated transmission mechanism. No. 1,225,782; May 15; v. 238; p. 670.
Denne, Mark T., Rushden, England. Threading device for hook-needles in sewing-machines. No. 1,225,783; May 15; v. 238; p. 670.
Denney, Samuel L., Lincoln University, Pa. Feeding device. No. 1,228,301; May 29; v. 238; p. 1581.
Dennis, Adolphus S., Lakewood, Ohio, assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,226,643; May 22; v. 238; p. 996.
Dennis, Louis M., Ithaca, N. Y. Separating benzenedisulfonic acid from sulfuric acid and converting the benzenedisulfonic acid into a salt. No. 1,227,252; May 22; v. 238; p. 1205.
Dennis, Louis M., Ithaca, N. Y. Cyclic process of making aromatic hydrocarbon hydroxy compounds. No. 1,227,894; May 29; v. 238; p. 1448.
Dentists' Supply Company, The. (See Mountford, Edwin, assignor.)
Denver Rock Drill Manufacturing Company, The. (See Waugh, Daniel S., assignor.)
Depoillier, Charles L., Brooklyn, N. Y. Take-up device for wrist-straps for watches. No. 1,226,316; May 15; v. 238; p. 855.
Depoillier, Charles L., Brooklyn, N. Y. Take-up device for wrist-straps for watches. No. 1,227,591; May 29; v. 238; p. 1344.
Depue, Clark A. (See Depue, Herbert F. and C. A.)
Depue, Herbert F. and C. A., Moville, Iowa. Motor-vehicle. No. 1,225,938; May 15; v. 238; p. 722.
Deranek, Joseph P., East St. Louis, Ill. Combined support and circuit-breaker for conductors. No. 1,224,865; May 1; v. 238; p. 90.
Dervoz, Mebo, Chicago, Ill. Nut-lock. No. 1,225,785; May 15; v. 238; p. 670.
Deschamps, Joseph O., Lumby, British Columbia, Canada. Sleigh-brake. No. 1,227,397; May 22; v. 238; p. 1250.
Detroit Stove Works. (See Fry, John A., assignor.)
Device Testing Company, The. (See Canton, Allen A., assignor.)
Devoe & Raynolds Company. (See Gilpatrick, George F., assignor.)
Dew, James W. H., London, England. Manufacturing pneumatic-tire covers. No. 1,228,099; May 29; v. 238; p. 1518.
Deweese, Jay H., Moscow, Ky. Pocket match-box. No. 1,225,939; May 15; v. 238; p. 722.
Dewson, Edward H., New York, and T. R. Brown, Sparkill, N. Y., assignors to The Westinghouse Air Brake Company, Pittsburgh, Pa. Car and electric coupling. No. 1,225,786; May 15; v. 238; p. 671.
Dexter, Fred A. (See Williams, Dexter, and Smith.)
Di Salvo, Joseph, Joliet, Ill. Expansion device. No. 1,224,720; May 1; v. 238; p. 216.
Diamond, James K., assignor to Clipper Belt Lacer Company, Grand Rapids, Mich. Belt hook or staple. No. 1,227,253; May 22; v. 238; p. 1205.
Diamond Power Specialty Company. (See Watson, Glenn W., assignor.)
Dickel, Frank A. (See Dickel, James A., assignor.)
Dickel, James A., assignor of one-half to F. A. Dickel, Ottumwa, Iowa. Hay-press. No. 1,227,761; May 29; v. 238; p. 1402.
Dickelman, Lizzie H., Forest, Ohio. Metal building-plate. No. 1,226,477; May 15; v. 238; p. 904.
Dickey, James W., Olustee, Okla. Maize-harvester attachment for wagons. No. 1,224,718; May 1; v. 238; p. 215.
Diehl, Arthur V., Buzzards Bay, Mass. Educational magnetic toy. No. 1,225,787; May 15; v. 238; p. 671.
Diehm, Lucius N., West Hartford, assignor of two-thirds to B. C. Stone, Middletown, Conn. Automatic firearm. No. 1,226,478; May 15; v. 238; p. 905.
Dies, Charles A., assignor to C. Mark, Chicago, Ill. Making elbows. No. 1,225,788; May 15; v. 238; p. 671.
Dietrich, Edward A., New York, N. Y. Brake mechanism. No. 1,225,595; May 8; v. 238; p. 564.
Dietrichson, William F., assignor to American Car and Foundry Company, St. Louis, Mo. Metallic end for railway-cars. No. 1,224,719; May 1; v. 238; p. 216.
Dillon, Joseph J., Wilmette, Ill. Pulley. No. 1,224,152; May 1; v. 238; p. 13.
Dillon, Joseph P., assignor to R. A. Boushor, Kansas City, Mo. Soap-dispenser. No. 1,224,285; May 1; v. 238; p. 62.
Dispatch Motor Car Company. (See Sparling, Rowland, assignor.)
Disturnal, Thomas J., Belmont, Ireland. Carbureter. No. 1,226,479; May 15; v. 238; p. 905.
Dixon, David J., Tacoma, Wash. Cutter-head. No. 1,225,019; May 8; v. 238; p. 369.
Dixon, Laurens P., New York, N. Y. Alarm device. No. 1,225,940; May 15; v. 238; p. 723.
Dobbin, Henry F. (See Goodrum and Dobbin.)
Dobbins, James C., Portland, Oreg. Liquid coating composition. No. 1,226,195; May 15; v. 238; p. 810.
Doble, John A., Waltham, Mass. Apparatus for vaporizing and burning hydrocarbon fuels. No. 1,225,417; May 8; v. 238; p. 505.
Dobyne, Stephen A., assignor to Champion Shoe Machinery Company, St. Louis, Mo. Horn for fastener-inserting machines. No. 1,224,450; May 1; v. 238; p. 121.
Dodd, Harry S., Toronto, Ontario, Canada. Heater. No. 1,226,868; May 22; v. 238; p. 1073.
Dodd, John, Port Arthur, Tex. Chain-release for logging-cars. No. 1,226,869; May 22; v. 238; p. 1074.
Dodd, William T., Brooklyn, N. Y., assignor to National Roller Gin Company, Phoenix, Ariz. Cotton-gin. No. 1,226,317; May 15; v. 238; p. 855.
Dodds, Ethan I., Zellenople, assignor to Kerner Manufacturing Company, Pittsburgh, Pa. Making stay-bolts. No. 1,228,480; May 15; v. 238; p. 906.
Dodds, Ethan I., Natral Valley, N. Y., assignor to Kerner Manufacturing Company, Pittsburgh, Pa. Resilient bolt. No. 1,228,189; May 29; v. 238; p. 1546.
Dodge, Charles C., Boston, Mass. Hinged last. No. 1,224,451; May 1; v. 238; p. 122.
Dodge, Joshua, Detroit, Mich. Truss. No. 1,226,645; May 22; v. 238; p. 997.
Dodge Manufacturing Company. (See Kenyon, Bertram C., assignor.)
Doehler Die Casting Company. (See Doehler, Herman H., assignor.)
Doehler, Herman H., Brooklyn, assignor to Doehler Die Casting Company. Casting fluid metals. No. 1,224,906; May 8; v. 238; p. 330.
Doering, Charles, Jr., and H. H., Chicago, Ill. Liquid-dispensing device. No. 1,225,418; May 8; v. 238; p. 505.
Doering, Henry H. (See Doering, Charles, Jr., and H. H.)
Doherty, Henry L., New York, N. Y. Distillation process. No. 1,225,226; May 8; v. 238; p. 437.
Dohner, Burt E. and A. J. Huff, Dayton, Ohio. Feed-tube. No. 1,227,592; May 29; v. 238; p. 1344.
Dolan, Patrick N., West Philadelphia, Pa. Head-covering. No. 1,228,002; May 29; v. 238; p. 1485.
Dolivo-Dobrowolsky, Michael, Wilmersdorf, Germany, assignor to General Electric Company. Electric motor. No. 1,227,400; May 22; v. 238; p. 1251.
Domestic Vacuum Cleaner Company. (See Smith and Blanch, assignors.)
Dominguez, Salvador, San Antonio, Tex. Automobile-wheel. No. 1,225,789; May 15; v. 238; p. 672.
Dominguez, Salvador, assignor to Mexica Power-Increasing Machine Co., San Antonio, Tex. Power mechanism. No. 1,227,593; May 29; v. 238; p. 1344.
Domoto, Takanoshin, San Francisco, Cal. Metallic container. No. 1,228,357; May 29; v. 238; p. 1602.
Donadio, Prospero, Brooklyn, N. Y., assignor to F. Biffar, Chicago, Ill. Safety-lock for firearms. No. 1,227,531; May 22; v. 238; p. 1295.
Donahue, George A., Wilmington, Del. Nut-lock. No. 1,225,419; May 8; v. 238; p. 505.
Donnelly, George J., Oakland, Cal. Overshoe for horses. No. 1,228,358; May 29; v. 238; p. 1602.
Donnenwirth, John W., Akron, Ohio. Forming fabric-lined rubber articles. No. 1,226,481; May 15; v. 238; p. 906.
Donohue, James S., assignor of one-third to M. V. Moran and one-third to J. E. Moreland, Washington, D. C. Gas-main stopper. No. 1,224,721; May 1; v. 238; p. 216.
Dontje, Benjamin. (See Dontje, Emanuel C., B., and C. I.)
Dontje, Cornelius I. (See Dontje, Emanuel C., B., and C. I.)
Dontje, Emanuel C., B., and C. I., Kalamazoo, Mich. Universal joint. No. 1,224,286; May 1; v. 238; p. 62.
Dooley, James P., assignor to Wright Wire Company, Worcester, Mass. Continuous wire-drawing machinery. No. 1,227,532; May 22; v. 238; p. 1295.
Dorman, Morris, Baltimore, Md. Lime-slaking machine. No. 1,228,190; May 29; v. 238; p. 1546.
Dorn-Cloney Laundry and Dry Cleaning Co. (See Tow, James O., assignor.)
Dorsey, Parmer, Hutchinson, Kans. Signaling device. No. 1,226,755; May 22; v. 238; p. 1034.
Dossey, William J., Glasgow, Ky. Rotary tooth-brush. No. 1,226,482; May 15; v. 238; p. 906.
Dostal, John R., Milwaukee, Wis. Bottle-washer. No. 1,227,594; May 29; v. 238; p. 1344.
Dotti, Joseph, assignor to The Dotti Manufacturing Company, Madison, Wis. Spring and frame supporter for motor-vehicles. No. 1,225,115; May 8; v. 238; p. 401.
Dotti Manufacturing Company, The. (See Dotti, Joseph, assignor.)
Double, Edward, Los Angeles, Cal. Rotary bit. No. 1,224,287; May 1; v. 238; p. 62.
Dougan, Kennedy, Minneapolis, Minn. Temperature-governor for fluids. No. 1,224,614; May 1; v. 238; p. 178.
Dougherty, Owen T., St. Paul, Minn. Railway-car truck. No. 1,226,756; May 22; v. 238; p. 1035.
Douglas, Harry A., assignor to Douglas & Rudd Manufacturing Company, Bronson, Mich. Electrical connector. No. 1,224,907; May 8; v. 238; p. 331.



Douglas, Harry A., assignor to Douglas & Rudd Manufacturing Company, Bronson, Mich. Electrical connector. No. 1,224,908; May 8; v. 238; p. 331.
Douglas & Rudd Manufacturing Company. (See Douglas, Harry A., assignor.)
Douglas, William, Detroit, Mich. Retting vegetable stalks. No. 1,224,722; May 1; v. 238; p. 217.
Doujak, Maria, assignor of part interest to C. Heller, New York, N. Y. Wind-shield. No. 1,227,595; May 29; v. 238; p. 1345.
Dover Stamping and Manufacturing Company. (See Whitney, Horace E., assignor.)
Dow Wire & Iron Works. (See Logan, William H., assignor.)
Downing, Ira S., Indianapolis, Ind. Emergency draft-gear. No. 1,228,005; May 29; v. 238; p. 1486.
Doyle, John, Hoboken, N. J. Rug-holder. No. 1,224,615; May 1; v. 238; p. 179.
Drake, Marshall D., Crestwood, Ky. Hover. No. 1,227,401; May 22; v. 238; p. 1251.
Draper Corporation. (See Ferguson, Thomas, assignor.)
Draper Corporation. (See Hebert, Ubald, assignor.)
Draper Corporation. (See Lussier, Henry, assignor.)
Draper Corporation. (See Nutting, Charles E., assignor.)
Draper Corporation. (See Stimpson, Edward S., assignor.)
Draper, David F., Georgetown, Tex. Metallic roof. No. 1,227,402; May 22; v. 238; p. 1251.
Drendell Electrical and Manufacturing Company. (See Siebenhauer, Lester, assignor.)
Dressel Railway Lamp Works, The. (See Childley, Joseph, assignor.)
Dressel, Warren E., Edwardsville, Ill. Relief device for acetylene-gas generators. No. 1,224,616; May 1; v. 238; p. 179.
Dressler, Charles E. (See Cordts, George, assignor.)
Dressler, Conrad, Marlow, England. Tunnel kiln. No. 1,225,318; May 8; v. 238; p. 470.
Drew, Harry A., West New York, and G. M. Mazza, Weehawken, N. J., assignors to Coin Device & Signal Co., Inc. Coin-collecting apparatus. No. 1,227,403; May 22; v. 238; p. 1252.
Drexelius, George M. (See Metz, Walter R., assignor.)
Dreyfus, Isaac. (See Beckers and Dreyfus.)
Driggs, Louis L., New York, N. Y. Apparatus for feeding cartridges to machine-guns. No. 1,224,366; May 1; v. 238; p. 90.
Driscoll, Michael E., Somerville, N. J. Attachment for cutting figures on fabrics. No. 1,225,596; May 8; v. 238; p. 564.
Dritley, William, Chicago, Ill. Forming machine for plain upholstered seats. No. 1,224,909; May 8; v. 238; p. 332.
Drumm, John B., Winslow, Ariz. Spring-roller. No. 1,228,303; May 29; v. 238; p. 1583.
Du Bois, Delafield, New York, N. Y., assignor to General Electric Company. Expansion-chamber for electrical apparatus. No. 1,227,404; May 22; v. 238; p. 1252.
Du Brul, Napoleon, Cincinnati, Ohio. Rod-cutting device. No. 1,226,066; May 15; v. 238; p. 766.
Dubois Watch Case Company. (See Ellis, Fred S., assignor.)
Duckham, Arthur M., Ashstead, England. Apparatus for discharging coke-hoppers or the like. No. 1,225,597; May 8; v. 238; p. 565.
Duerr, Philip F., Alvo, Nebr. Self-cleaning currycomb. No. 1,226,757; May 22; v. 238; p. 1035.
Duff Manufacturing Company, The. (See Hindman, Isaiah E., assignor.)
Duffie, Daniel P., West New Brighton, N. Y. Non-skid attachment. No. 1,224,367; May 1; v. 238; p. 91.
Duffield, Wayne G., Moline, Ill., assignor to The Dain Manufacturing Company of Iowa, Ottumwa, Iowa. Hay-press. No. 1,224,288; May 1; v. 238; p. 63.
Dufty, Arthur, La Fayette, Ind. Flush-tank. No. 1,226,758; May 22; v. 238; p. 1035.
Duke, Henry R., assignor of one-half to A. O. Thayer, Mobile, Ala. Exhaust-valve for hydrocarbon-engines. No. 1,227,254; May 22; v. 238; p. 1205.
Dumbolton, John A. (See Field and Dumbolton.)
Dumler, Frank, Isabella, Okla. Disk-guard for grain-binders. No. 1,225,598; May 8; v. 238; p. 565.
Dun Lany, William P., assignor to Sears, Roebuck and Company, Chicago, Ill. Means for ornamenting prepared roofing. No. 1,228,191; May 29; v. 238; p. 1546.
Dunbar, Ernest W., assignor to Apsley Rubber Company, Hudson, Mass. Rubber-soled shoe. No. 1,226,318; May 15; v. 238; p. 855.
Duncan, Charles A., and G. L. Shoup, assignors to American Carbolite Company, Duluth, Minn. Acetylene-gas generator. No. 1,228,302; May 29; v. 238; p. 1582.
Duncan, Leander, Butte, Mont. Concrete railway-tie. No. 1,227,405; May 22; v. 238; p. 1252.
Dunham, Bert G., Hawthorne, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,227,895; May 29; v. 238; p. 1449.
Dunham, Charles W., Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa. Rheostat. No. 1,225,227; May 8; v. 238; p. 438.
Dunkelsberg, Louis, New York, N. Y. Goggles. No. 1,225,110; May 8; v. 238; p. 401.
Dunkelsberg, Louis, Brooklyn, N. Y. Goggles. No. 1,227,896; May 29; v. 238; p. 1449.
Dunlap, Dix, La Junta, Colo. Vertical-feed attachment for turning-lathes. No. 1,225,117; May 8; v. 238; p. 401.
Dunlap, Harley M., Battle Creek, Mich. Air-pump. No. 1,227,762; May 29; v. 238; p. 1403.
Dunwoody Automatic Gun and Projectile Company. (See Dunwoody, Henry H. C., assignor.)
Dunwoody, Henry H. C., Washington, D. C., assignor to Dunwoody Automatic Gun and Projectile Company. Automatic gun. No. 1,227,897; May 29; v. 238; p. 1449.
Duplex Channel Pin Company. (See Deems, Edward M., assignor.)
Duplex Printing Press Company. (See Bechman, Henry F., assignor.)
Duplicator Manufacturing Company. (See Flanigan, John J., assignor.)
Dupuy, Arthur O., assignor to The C. O. Bartlett & Snow Company, Cleveland, Ohio. Mold-dumping machine. No. 1,227,763; May 29; v. 238; p. 1403.
Dupuy, Arthur O., assignor to The C. O. Bartlett & Snow Company, Cleveland, Ohio. Mold-dumping machine. No. 1,227,764; May 29; v. 238; p. 1404.
Dürener Metallwerke Aktien-Gesellschaft. (See Beck, Rasmus, assignor.)
Durham, Baltis A., Irvington, N. J. Train-stopping apparatus. No. 1,224,723; May 1; v. 238; p. 217.
Duryea, Charles E., Saginaw, Mich. Internal-combustion engine. No. 1,226,870; May 22; v. 238; p. 1074.
Dusha, Paul F., and A. Feyk, assignors to Holub-Dusha Company, New York, N. Y. Automatic tool-sharpening button-lathe. No. 1,225,599; May 8; v. 238; p. 566.
Duskes, Samuel, Montreal, Quebec, Canada. Ash-sifter. No. 1,225,941; May 15; v. 238; p. 723.
Dutton, Burton M., Abingdon, and F. L. Jobson, assignors of one-fourth to J. H. McEvoy, Richmond, Va. Rotary internal-combustion engine. No. 1,228,101; May 29; v. 238; p. 1519.
Duval, Ruben, Arma, Kans. Railway-tie. No. 1,225,600; May 8; v. 238; p. 566.
Duvall Coal Dock Company, The. (See Duvall, Edwin, assignor.)
Duvall, Edwin, Sharonville, assignor to The Duvall Coal Dock Company, Lewisburg, Ohio. Car-unloading apparatus. No. 1,226,483; May 15; v. 238; p. 906.
Duxbury, Henry A. (See Hall and Duxbury.)
Dwyer, Henry P., San Francisco, Cal. Container for eggs and the like. No. 1,225,704; May 8; v. 238; p. 600.
Dyarman, George W., New York, N. Y. Tie for railways and road constructions. No. 1,226,646; May 22; v. 238; p. 997.
Dyer, Charlie W., Stratton, Me. Oil-vaporizer for explosive-engines. No. 1,226,319; May 15; v. 238; p. 855.
Dyer, George, Wallaceton, Va. Brush-handle. No. 1,224,724; May 1; v. 238; p. 218.
Dyer, Thomas C., Blanchard, Okla. Gun-sight. No. 1,226,952; May 22; v. 238; p. 1102.
Dyson, Albert H., Montclair, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Calling device. No. 1,226,953; May 22; v. 238; p. 1102.
Dyson, Edward T., and H. S. Bullen, Oakland, Cal. Shipping-case. No. 1,225,705; May 8; v. 238; p. 600.
E. Kirstein Sons Company. (See McDonell, William E., assignor.)
E. I. du Pont de Nemours Powder Company. (See Lynah, James, assignor.)
E. H. Kluge Weaving Company. (See Jordan, Cornelius, assignor.)
E. H. Sprague Manufacturing Company. (See Peterson, Thorwald B. and W. C., assignors.)
E. T. Burrowes Company, The. (See Orr, John E., assignor.)
Eaby, Isaac N. and P. M., Lancaster, Pa. Mail and package tying device. No. 1,228,192; May 29; v. 238; p. 1546.
Eaby, Paul M. (See Eaby, Isaac N. and P. M.)
Earl, Edwin T. (See Hoskins, Laban A., assignor.)
Easterday, Philip S., Portland, Oreg. Reinforced concrete construction. No. 1,226,954; May 22; v. 238; p. 1102.
Eastman, Frank M., *et al.* (See Moore, Samuel E., assignor.)
Eastman Kodak Company. (See Crabtree, John I., assignor.)
Eastman Kodak Company. (See Gray, Harry L., assignor.)
Eastman Kodak Company. (See Kroedel, Robert, assignor.)
Eastman Kodak Company. (See Meyering, Bernard H., assignor.)
Eastman Kodak Company. (See Ruttan and Hutchings, assignors.)
Easton, Frank S., Stamford, Conn., assignor of one-half to A. M. Suter, Taughannock Falls, N. Y. Cup-holder. No. 1,224,617; May 1; v. 238; p. 179.
Eaton, Joseph J., and A. V. Free, Yonkers, N. Y. Score-card for golf. No. 1,224,452; May 1; v. 238; p. 122.
Eberhart, Felix, Newark, N. J., assignor to American Can Company, New York, N. Y. Can and attachable metallic label therefor. No. 1,227,122; May 22; v. 238; p. 1162.
Eberhart, Felix, Newark, N. J., assignor to American Can Company, New York, N. Y. Manufacturing lithographed cans. No. 1,227,123; May 22; v. 238; p. 1162.

Eberhart, Felix, Newark, N. J., assignor to American Can Company, New York, N. Y. Lap-seam can. No. 1,227,596; May 29; v. 238; p. 1345.
Ebert, Otto, Cleveland, Ohio. Hollow mill. No. 1,227,533; May 22; v. 238; p. 1295.
Eby, Earl E., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Auxiliary apparatus for vapor-converters. No. 1,226,067; May 15; v. 238; p. 767.
Eckart, Charles F., Olaa, Hawaii. Enhancing the growth of sugar-cane. No. 1,227,898; May 29; v. 238; p. 1449.
Eckart, Charles F., Olaa, Hawaii. Increasing the yield of sugar-cane. No. 1,228,006; May 29; v. 238; p. 1486.
Eckerson, Charles H., Closter, assignor of one-half to G. J. Scott, Englewood, N. J. Camera. No. 1,226,955; May 22; v. 238; p. 1103.
Eddingsaas, Halver O., Stoughton, Wis. Rotary-top table. No. 1,225,228; May 8; v. 238; p. 438.
Eddy, Herbert G. (See Lundell and Eddy.)
Edel, Lucas, St Louis, Mo. Casting. No. 1,224,618; May 1; v. 238; p. 179.
Edelman, Hyman, Chicago, Ill. Garment. No. 1,225,732; May 8; v. 238; p. 609.
Edelson, Harry, assignor to Regal Button Works, Inc., Philadelphia, Pa. Button and fastening device therefor. No. 1,227,124; May 22; v. 238; p. 1102.
Edmonds, Charles T., assignor of one-half to R. L. Cochran, Drumright, Okla. Liquid-fuel burner. No. 1,226,871; May 22; v. 238; p. 1075.
Edmonds, Laben S., Chapmanville, W. Va. Stove-lid lifter. No. 1,225,601; May 8; v. 238; p. 566.
Edmunds and Jones Corporation. (See Godley, Charles E., assignor.)
Edtbauer, Petronella, Chicago, Ill. Weighing-machine. No. 1,224,289; May 1; v. 238; p. 63.
Edward Manufacturing Company, The. (See Oleson, Olaf E., assignor.)
Edwards, John, Flagstaff, Ariz. Condiment-holder. No. 1,226,759; May 22; v. 238; p. 1036.
Edwards, Oliver M. (See Stuck, Everett, assignor.)
Edwards, Thomas J., Jamesport, Mo. Lock whip-socket. No. 1,224,619; May 1; v. 238; p. 180.
Effront, Jean. (See Boldin and Effront.)
Eggert, Louis H., assignor to Bastian Brothers Co., Rochester, N. Y. Fastening means. No. 1,225,420; May 8; v. 238; p. 505.
Ehrlich, Albert H., St. Joseph, Mo. Refrigerator display-counter. No. 1,227,765; May 29; v. 238; p. 1404.
Ehrlich, William, assignor to Case & Martin Co., Chicago, Ill. Measure. No. 1,226,484; May 15; v. 238; p. 906.
Eichelberger, Walter C., assignor to Enger-Kress Pocket Book Co., West Bend, Wis. Edge-folding machine for pocket-book bodies. No. 1,225,790; May 15; v. 238; p. 672.
Eiermann, William, Brooklyn, N. Y. Ash-cart. No. 1,224,290; May 1; v. 238; p. 64.
Eisenschimi, Otto, assignor, by mesne assignments, to New Process Filler Co., Chicago, Ill. Shoe-filling composition. No. 1,224,153; May 1; v. 238; p. 13.
Eklund, Walfrid S., Donner, La. Safety means for cranking internal-combustion engines. No. 1,228,304; May 29; v. 238; p. 1583.
Elam, Calvin, *et al.* (See Thomas, Solomon, assignor.)
Elder, Thomas W., Jr., Avalon, assignor to Pressed Steel Car Company, Pittsburgh, Pa. Tank-car construction. No. 1,226,647; May 22; v. 238; p. 997.
Eldredge, Robert J., Waverly, Iowa. Reinforced-roof form. No. 1,227,255; May 22; v. 238; p. 1206.
Electric Controller & Manufacturing Company, The. (See Barber, Floyd N., assignor.)
Electric Controller & Manufacturing Company, The. (See Stratton, Harry F., assignor.)
Electric Furnace Company, The. (See Bally and Cope, assignors.)
Electric Railway Improvement Company, The. (See Crecelius, Lawrence P., assignor.)
Electro Dental Manufacturing Company. (See Russell, Sepas, and Wilford, assignors.)
Elfborg, Henry G., assignor to American Manganese Steel Company, Chicago, Ill. Railway-crossing. No. 1,225,421; May 8; v. 238; p. 506.
Elfstrum, Axel F., Willmar, Minn. Roosting-pole. No. 1,224,453; May 1; v. 238; p. 122.
Ella, Giovanni E., assignor to Vickers Limited, Westminster, London, England. Submarine mine. No. 1,226,196; May 15; v. 238; p. 810.
Ella, Giovanni E., assignor to Vickers Limited, Westminster, London, England. Submarine mine. No. 1,226,197; May 15; v. 238; p. 810.
Ellard, Hugh F., Missoula, Mont. Conveyer cable or rope. No. 1,225,020; May 8; v. 238; p. 369.
Elliott Rim Chain & Tread Corporation. (See Elliott, Thaddious V., assignor.)
Elliott, Thaddious V., New York, assignor to Elliott Rim Chain & Tread Corporation, Esopus, N. Y. Tire. No. 1,226,320; May 15; v. 238; p. 856.
Ellis, Carleton, Montclair, N. J. Removing catalyzer from oil. No. 1,224,291; May 1; v. 238; p. 64.
Ellis, Carleton, Montclair, N. J. Color concentrate for edible oil or fat composition. No. 1,224,910; May 8; v. 238; p. 332.
Ellis, Carleton, Montclair, N. J. Product of hydrogenation. No. 1,226,620; May 15; v. 238; p. 949.
Ellis, Carleton, Montclair, N. J., assignor to Ellis-Foster Company. Making white hydraulic cement and potash salts. No. 1,224,454; May 1; v. 238; p. 123.
Ellis, Carleton, Montclair, N. J., assignor to Ellis-Foster Company. Making sulfuric anhydrid. No. 1,227,044; May 22; v. 238; p. 1134.
Ellis, Carleton, Montclair, N. J., assignor, by mesne assignments, to National Carbon Company, Long Island City, N. Y. Non-hydrated moisture-containing manganese depolarizing compound. No. 1,228,359; May 29; v. 238; p. 1602.
Ellis, Carleton, and L. Rabinovitz, Montclair, N. J., assignors, by mesne assignments, of four-tenths to Ellis-Foster Company and six-tenths to Indestructible Paint Company, Ltd., London, England. Making varnish-bases. No. 1,226,760; May 22; v. 238; p. 1036.
Ellis, Charles S., Chicago, Ill. Self-inking dating-stamp. No. 1,226,648; May 22; v. 238; p. 996.
Ellis-Foster Company. (See Ellis, Carleton, assignor.)
Ellis-Foster Company, *et al.* (See Ellis and Rabinovitz, assignors.)
Ellis, Frank J., assignor of one-half to W. N. Browning, Philadelphia, Pa. Watch-carrier. No. 1,227,597; May 29; v. 238; p. 1345.
Ellis, Fred S., Brooklyn, assignor to Dubois Watch Case Company, Brooklyn, N. Y. Securing device for wrist-watches. No. 1,227,598; May 29; v. 238; p. 1345.
Ellis, George M., Mitchell, S. D., and G. F. Brown, Winnipeg, Manitoba, Canada; said Ellis assignor to said Brown. Intermittent-grip device for capstans. No. 1,226,321; May 15; v. 238; p. 856.
Ellis, Robert G., University, assignor to American Car and Foundry Company, St. Louis, Mo. Draft-arm and center-sill reinforcement for underframes. No. 1,224,806; May 1; v. 238; p. 265.
Ellis, William O., Dallas, Oreg. Jar-holding device. No. 1,225,229; May 8; v. 238; p. 438.
Ellison, George. (See Glasner and Ellison.)
Elsner, Wilhelm, Zurich, Switzerland. Vessel for dispensing liquids. No. 1,227,125; May 22; v. 238; p. 1162.
Elwin, George N., Victoria, British Columbia, Canada. Rotary tooth-brush. No. 1,225,230; May 8; v. 238; p. 439.
Ely, Maurice M., assignor of one-half to C. F. Hooks, Clinton, Iowa. Support for washtubs. No. 1,225,319; May 8; v. 238; p. 471.
Emens, Albert L., assignor to Sangamo Electric Company, Springfield, Ill. Mercury motor-meter. No. 1,226,956; May 22; v. 238; p. 1103.
Emerick, Herton W. (See Needham and Emerick.)
Emerson-Brantingham Company. (See Waterman, Lewis E., assignor.)
Enebo, Elias K., Minneapolis, Minn. Automatically-actuated gate. No. 1,226,761; May 22; v. 238; p. 1036.
Engelhart, John G., Atlanta, Ga., assignor of one-half to L. F. Ostrander, St. Louis, Mo. Quick-opening packless valve. No. 1,226,485; May 15; v. 238; p. 907.
Enger-Kress Pocket Book Co. (See Eichelberger, Walter C., assignor.)
Engi, Gadient, A. Grob, and F. Straub, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Producing fast tints on animal fibers. No. 1,227,406; May 22; v. 238; p. 1253.
Engi, Gadient, A. Grob, and J. Würgler, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Chromium compounds of the gallocyanin series and making same. No. 1,227,407; May 22; v. 238; p. 1253.
Engle, George S., Cranston, R. I. Primary battery. No. 1,224,453; May 1; v. 238; p. 123.
Englund, Ole J., Worthington, Minn. Sofa-bed. No. 1,225,942; May 15; v. 238; p. 723.
Engstrom, Carl O., Sacramento, Cal. Safety-razor. No. 1,226,322; May 15; v. 238; p. 856.
Enterprise Manufacturing Company of Pennsylvania, The. (See Asbury, Charles W., assignor.)
Eppler, Andrew, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Inseam-trimming machine. No. 1,226,872; May 22; v. 238; p. 1075.
Erbslöh, Walter, Barmen, Germany. Rolling-machine. No. 1,226,198; May 15; v. 238; p. 810.
Ericksen, Charles E., Indianapolis, Ind., assignor of one-third to J. Allerdice and one-third to W. H. Allerdice. Forming-machine. No. 1,225,602; May 8; v. 238; p. 507.
Erickson, Charles F., Brooklyn, N. Y. Resilient tire. No. 1,228,305; May 29; v. 238; p. 1583.
Erickson, Edward, Cliftondale, assignor to Victor Shoe Machinery Company, Lynn, Mass. Automatic stop-motion. No. 1,224,456; May 1; v. 238; p. 123.
Erickson, John, assignor to Automatic Electric Company, Chicago, Ill. Measured-service telephone system. No. 1,225,603; May 8; v. 238; p. 567.
Erickson, John, Chicago, Ill., assignor, by mesne assignments, to R. H. Rogers, Rochester, N. Y. Switchboard cord-circuit for fire-alarm telephone systems. No. 1,225,943; May 15; v. 238; p. 723.
Erickson, John, Chicago, Ill., assignor, by mesne assignments, to R. H. Rogers, Rochester, N. Y. Connector repeater-switch of automatic telephone-exchanges for handling fire-alarm calls. No. 1,228,007; May 29; v. 238; p. 1486.
Erickson, Louis O., Denver, Colo. Measuring instrument. No. 1,224,725; May 1; v. 238; p. 218.



Ernst, George, Newark, N. J. Safety gage-glass. No. 1,225,604; May 8; v. 238; p. 567.
Errington, Franklin A., Stapleton, N. Y. Multiple tapping device and similar tool. No. 1,226,486; May 15; v. 238; p. 907.
Errington, Franklin A., Stapleton, N. Y. Ceiling drill-press. No. 1,226,487; May 15; v. 238; p. 907.
Erwin, James B. and O. R., Milwaukee, Wis. Fire-extinguishing apparatus. No. 1,225,944; May 15; v. 238; p. 724.
Erwin, Orlando R. (See Erwin, James B. and O. R.)
Esperon, J. F. (See Ostrander, Lewis F., assignor.)
Essansee Lock Company. (See Carson, John F., assignor.)
Esser, Henry J., New Orleans, La. Garter. No. 1,224,154; May 1; v. 238; p. 13.
Eureka Automatic Gas Valve Mfg. Co. (See Dearing, Joseph W., assignor.)
Evans, A. D. (See Markwell, Andrew E., assignor.)
Evans, Edward S., Detroit, Mich. Chock-block. (Reissue.) No. 14,306; May 29; v. 238; p. 1610.
Evans, Frank T., U. S. Navy, assignor to G. H. Benjamin, New York, N. Y. Obtaining pure water from salt water. No. 1,225,118; May 8; v. 238; p. 402.
Evans, Howard S., assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa. Decorating glassware. No. 1,226,957; May 22; v. 238; p. 1103.
Evans, Leigh R., Rochester, N. Y. Gasolene-tank for motor-cycles. No. 1,226,190; May 15; v. 238; p. 811.
Evans, Powell, Philadelphia, Pa. Motor-tractor. No. 1,228,306; May 29; v. 238; p. 1583.
Evans, Powell, Philadelphia, Pa. Axle construction. No. 1,228,307; May 29; v. 238; p. 1584.
Evans, Powell, assignor, by mesne assignments, to Globe Automatic Sprinkler Company, Philadelphia, Pa. Dry-pipe valve. No. 1,226,488; May 15; v. 238; p. 908.
Evans, Powell, assignor, by mesne assignments, to Globe Automatic Sprinkler Company, Philadelphia, Pa. Dry-pipe valve. No. 1,226,489; May 15; v. 238; p. 908.
Evans, Rollo E., Emporia, Kans. Footboard for switch-engines. No. 1,228,308; May 29; v. 238; p. 1584.
Evenson, Adolph O., Duluth, Minn. Horseshoe-calk. No. 1,225,119; May 8; v. 238; p. 402.
Eversole, Henley, Newman, Ill. Agricultural tractor. No. 1,226,200; May 15; v. 238; p. 811.
Ewing, Alice H., Salt Lake City, Utah. Letter-box. No. 1,228,193; May 29; v. 238; p. 1547.
Ewing, Charles F., Johnstown, Pa. Box-car construction. No. 1,227,408; May 22; v. 238; p. 1253.
Excelsior Steel Furnace Company, The. (See Scherer, Albert G., assignor.)
Exolon Company, The. (See Kalmus, Herbert T., assignor.)
Ezzo, Pasquale, Newark, N. J. Coffee-roaster. No. 1,224,620; May 1; v. 238; p. 180.
F. J. Strobel & Co. (See Strobel, Francis J., assignor.)
F. L. Smidth & Co. (See Schultz, Oscar, assignor.)
F. N. Burt Company. (See Holly, Carlos, assignor.)
Faas, Henry N., and W. L. Braley, assignors to The American Seeding Machine Company, Springfield, Ohio. Hopper for seeding-machines. No. 1,224,911; May 8; v. 238; p. 332.
Faas, Walter, assignor of one-fourth to C. Steffen, El Paso, Tex. Drafting-tool. No. 1,226,068; May 15; v. 238; p. 768.
Faber, Daniel B., assignor of one-half to D. H. Brown, Uhrichsville, Ohio. Vitreous cross-tie and rail-fastening. No. 1,228,008; May 29; v. 238; p. 1487.
Fageol, Rollie R., Oakland, Cal. Flexible vehicle. No. 1,226,958; May 22; v. 238; p. 1104.
Fageol, Rollie B., Oakland, Cal. Vehicle. No. 1,226,959; May 22; v. 238; p. 1104.
Fageol, Rollie B., Oakland, Cal. Vehicle. No. 1,226,960; May 22; v. 238; p. 1104.
Fageol, Rollie B., Oakland, Cal. Intersteering connection for flexible vehicles. No. 1,226,961; May 22; v. 238; p. 1105.
Fageol, Rollie B., Oakland, Cal. Flexible road-train. No. 1,226,962; May 22; v. 238; p. 1105.
Fahle, Raymond J., Chicago, Ill. Conveyer. No. 1,227,899; May 29; v. 238; p. 1450.
Fahrenwald, Frank A., Cleveland, Ohio, dedicated, by mesne assignments, to the Government of the United States of America. Composite metal article. No. 1,228,194; May 29; v. 238; p. 1547.
Fairgrieve, Frederick M., Toronto, Ontario, Canada. Coupling element. No. 1,225,791; May 15; v. 238; p. 672.
Fairhurst, John T., Brooklyn, N. Y., assignor to The Folding Partition Company. Folding partition. No. 1,224,155; May 1; v. 238; p. 13.
Fandel, Peter, Gibson, La. Means for operating changeable exhibitors. No. 1,227,409; May 22; v. 238; p. 1253.
Farley, Michael H., assignor of one-half to A. W. Kah, Seattle, Wash. Automatic circuit-closer for electric heaters. No. 1,228,195; May 29; v. 238; p. 1547.
Farmer, Luke W., Somerville, Mass. Paper carton. No. 1,224,726; May 1; v. 238; p. 218.
Farnham, Sidney W., Chicago, and F. W. Olin, Alton, assignors to Western Cartridge Company, East Alton, Ill. Method of and apparatus for measuring the stringing of shot. No. 1,226,762; May 22; v. 238; p. 1037.
Farnsworth, Charles H., assignor of one-half to Tosten Bros., Briceland, Cal. Sharpening attachment for mowing-machines. No. 1,227,410; May 22; v. 238; p. 1254.
Farnsworth, Sidney W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Anode structure for vapor-converters. No. 1,226,069; May 15; v. 238; p. 768.
Farnsworth, Sidney W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Sustaining device for vapor-converters. No. 1,227,766; May 29; v. 238; p. 1404.
Farrel Foundry & Machine Company. (See Bowen, David R., assignor.)
Farwell, John C. (See Hiscock, Emory C., assignor.)
Fath, George H. (See Peters, Fath, and Miller.)
Faulkinberry, Joseph G. (See Myers and Faulkinberry.)
Feary, Neville A. T. N., Peterborough, assignor to Frederick Sage & Company, Limited, London, England. Spring fastening device. No. 1,227,411; May 22; v. 238; p. 1254.
Fedders, John M., assignor to Fedders Manufacturing Company, Inc., Buffalo, N. Y. Metal-bending machine. No. 1,226,490; May 15; v. 238; p. 909.
Fedders Manufacturing Company. (See Fedders, John M., assignor.)
Federal Rubber Company, The. (See Pratt, Benjamin H., assignor.)
Federal Telegraph Company. (See Watkins, James O., assignor.)
Fefell, Henry H., Dayton, Ohio. Combined chain and lock stitch. No. 1,227,045; May 22; v. 238; p. 1134.
Feher, Michael, Alliance, Ohio. Ear-protecting device. No. 1,225,422; May 8; v. 238; p. 506.
Felgen, John, Indianapolis, Ind. Building-board. No. 1,227,767; May 29; v. 238; p. 1405.
Felmstein, Jennie L. P., Grand Forks, N. D. Child's undergarment. No. 1,225,945; May 15; v. 238; p. 724.
Feldkamp, Frederick A., Newark, N. J., J. P. Payor, New York, N. Y., and H. Payson, Short Hills, N. J., assignors to The Six-In-One Fuse Company, New York, N. Y. Multiple-fuse plug. No. 1,227,256; May 22; v. 238; p. 1206.
Fell, William S., New Orleans, La. Window-latch. No. 1,227,768; May 29; v. 238; p. 1405.
Fellman, Edward J., Milwaukee, Wis. Half-screen hanger. No. 1,224,912; May 8; v. 238; p. 333.
Fellmeth, Jacob W., assignor to The Marion Steam Shovel Co., Marion, Ohio. Operating mechanism for brakes, clutches, and the like. No. 1,224,621; May 1; v. 238; p. 180.
Fellows, Frank P., Tacoma, Wash. Automatic safety stopping device for machines. No. 1,224,622; May 1; v. 238; p. 181.
Feltes, Peter, Cleveland, Ohio. Artificial limb. No. 1,224,368; May 1; v. 238; p. 91.
Feltz, Charles F., assignor of one-fourth to W. E. Anderson, one-fourth to W. H. Langdale, and one-fourth to S. L. Langdale, St. Louis, Mo. Motor-driven vehicle. No. 1,228,009; May 29; v. 238; p. 1487.
Fendrich, Adam E., Weehawken, N. J. Tooth-brush. No. 1,227,412; May 22; v. 238; p. 1254.
Fennell, Walter W. (See Burch, Allen, assignor.)
Fenstermaker, Emanuel L., assignor of one-third to F. H. Burkhart, Lancaster, Pa. Screw-cap wrench. No. 1,225,231; May 8; v. 238; p. 439.
Ferguson, Alexander, *et al.* (See Ferguson, Baltuce W., assignor.)
Ferguson, Baltuce W., assignor of one-fourth to W. B. Rodman, one-fourth to S. B. Ferguson, Jersey City, N. J., and one-fourth to A. Ferguson, Syracuse, N. Y. Soap-holder support. No. 1,227,046; May 22; v. 238; p. 1135.
Ferguson, Carl S., Jonesburg, Mo. Heater for oil-lamps. No. 1,224,623; May 1; v. 238; p. 181.
Ferguson, Charles, Milton, Ind. Road-drag. No. 1,225,792; May 15; v. 238; p. 673.
Ferguson, John A., assignor to The Ferguson Synstone Co., Denver, Colo. Fireproof wall construction. No. 1,227,599; May 29; v. 238; p. 1346.
Ferguson, Joseph B., New York, N. Y. Vehicle. No. 1,227,257; May 22; v. 238; p. 1207.
Ferguson, Sheldon B., *et al.* (See Ferguson, Baltuce W., assignor.)
Ferguson Synstone Co., The. (See Ferguson, John A., assignor.)
Ferguson, Thomas, Lowell, assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Feeler-motion for looms. No. 1,225,120; May 8; v. 238; p. 402.
Ferguson, William C., St. Louis, Mo. Septic tank. No. 1,224,913; May 8; v. 238; p. 333.
Ferney, Daniel F., assignor to Grand Rapids School Equipment Co., Grand Rapids, Mich. Miter-clamp. No. 1,226,763; May 22; v. 238; p. 1037.
Fernholz, Lawrence, Arcadia, Wis. Emergency windlass for automobiles. No. 1,225,946; May 15; v. 238; p. 725.
Feron, Léon, Brussels, Belgium. Skittle-game apparatus. No. 1,224,727; May 1; v. 238; p. 218.
Ferrier, Albert C., assignor of one-half to W. J. Hill, Lincoln, Nebr. Carbureter attachment. No. 1,225,021; May 8; v. 238; p. 369.
Ferris, Henry L., assignor to Hunt, Helm, Ferris & Company, Harvard, Ill. Stall construction. No. 1,225,320; May 8; v. 238; p. 471.

Ferris, Howard J., assignor to Hunt-Helm-Ferris & Co., Harvard, Ill. Bull-staff. No. 1,226,201; May 15; v. 238; p. 811.
Ferris, Ralph E., Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of control. No. 1,227,413; May 22; v. 238; p. 1254.
Ferritto, Daniel, Cleveland, Ohio. Table-leg leveler. No. 1,224,156; May 1; v. 238; p. 14.
Fettig, Carl A. (See Mennle, William, assignor.)
Fey, John W., Shreveport, La. Automobile-signal. No. 1,225,022; May 8; v. 238; p. 370.
Feyk, Anton. (See Dusha and Feyk.)
Fialkowski, Kazimir A., Brooklyn, N. Y. Bicycle mud-guard. No. 1,226,323; May 15; v. 238; p. 856.
Fiedler & Co. G. m. b. H. (See Niederwerfer, Valentin, assignor.)
Fiego, Alexander J. R., Lynn, Mass., assignor to General Electric Company. Electric meter. No. 1,226,491; May 15; v. 238; p. 909.
Field, Allan B., London, England, assignor to Westinghouse Electric and Manufacturing Company. Dynamo-electric machine. No. 1,227,414; May 22; v. 238; p. 1255.
Field, John F. (See Chamberlain, Chauncey, assignor.)
Field, William T., and J. A. Dumbolton, Lincoln, Nebr. Grease-gun. No. 1,224,914; May 8; v. 238; p. 333.
Fiero, George M., Pittsburgh, Pa. Steering mechanism for automobile-lamps. No. 1,226,492; May 15; v. 238; p. 910.
Fifield, Albert F., Newark, N. J., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,226,963; May 22; v. 238; p. 1106.
Findley, Benjamin F., Denver, Mo. Road-drag. No. 1,224,728; May 1; v. 238; p. 219.
Finley, Thomas E. (See McKinnon, Walter A., assignor.)
Finn, William, Bloomfield, N. J., assignor to The Western Union Telegraph Company, New York, N. Y. Relay and repeater. (Reissue.) No. 14,304; May 22; v. 238; p. 1304.
Finnegan, John F., *et al.* (See Hveem, Martin, assignor.)
Firestone, Adrian A., Cleveland, Ohio. Spring-tire for vehicles. No. 1,228,010; May 29; v. 238; p. 1488.
Fischer, Alex, Kensington, London, England. Portable cabinet-gramophone. No. 1,224,369; May 1; v. 238; p. 91.
Fischer, Anton C. (See Fischer, Anton E. and A. C.)
Fischer, Anton E. and A. C., Cedarburg, Wis. Revolving platform. No. 1,225,793; May 15; v. 238; p. 673.
Fischer, Charles A., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Truss. No. 1,225,232; May 8; v. 238; p. 439.
Fischer, William C., New York, N. Y., assignor to The Compound Meter Mfg. Company, Inc. Gas-heater. No. 1,226,964; May 22; v. 238; p. 1106.
Fish, Edwards R., Webster Groves, Mo. Boiler-furnace. No. 1,228,102; May 29; v. 238; p. 1519.
Fish, John, Sunnyside, Utah. Tilling-machine. No. 1,226,493; May 15; v. 238; p. 910.
Fisher, Alva J., Evanston, assignor to Hurley Machine Company, Chicago, Ill. Ironing-machine. No. 1,225,121; May 8; v. 238; p. 403.
Fisher Body Corporation. (See Allmand, John T., assignor.)
Fisher, George F., Plainfield, N. J., assignor to The Hartford Rubber Works Company. Tire fabric and making the same. No. 1,224,878; May 1; v. 238; p. 270.
Fisher, George F., Roselle, N. J., assignor to The Hartford Rubber Works Company. Tire-building machine. No. 1,228,196; May 29; v. 238; p. 1548.
Fisher, John A., Homestead, Pa. Amusement device. No. 1,228,011; May 29; v. 238; p. 1488.
Fisk, Frederick C. (See Swanberg, Arthur W., assignor.)
Fisker, Peder A., Frederiksberg, near Copenhagen, Denmark. Machine for cleaning, grinding, finishing, and polishing of parquetted floors and similar surfaces. No. 1,224,292; May 1; v. 238; p. 64.
Fitch, Albert C., Detroit, Mich. Adjustable form for molding concrete structures. No. 1,227,769; May 29; v. 238; p. 1405.
Fitzgerald, Edward L. (See Ahle and Fitzgerald.)
Fjellman, Bengt W., Säfve Strandgata, Gottenborg, Sweden, assignor, by mesne assignments, to S. K. F. Ball Bearing Company, Hartford, Conn. Ball-retainer of sheet metal for ball-bearings. No. 1,224,624; May 1; 238; p. 181.
Flagg, Ernest, New York, N. Y. Compartment sleeping-car. No. 1,224,625; May 1; v. 238; p. 182.
Flagg, Ernest, New York, N. Y. Metal window. No. 1,224,626; May 1; v. 238; p. 182.
Flagg, George B., New York, N. Y. Cigarette-packing machine. No. 1,227,600; May 29; v. 238; p. 1346.
Flanigan, John J., assignor to Duplicator Manufacturing Company, Chicago, Ill. Multiple copying-machine. No. 1,226,649; May 22; v. 238; p. 998.
Fleck, Franklin A., Middletown, Pa. Fan. No. 1,225,122; May 8; v. 238; p. 403.
Fleget, Benjamin F., Racine, Wis., and L. S. Darling, Ellington, Conn. Pipe-bowl cleaner. No. 1,227,601; May 29; v. 238; p. 1346.
Fleischmann, Isidor, Brooklyn, N. Y. Automobile-radiator. No. 1,227,770; May 29; v. 238; p. 1406.
Fleischmann, Lionel, Berlin, Germany, assignor to General Electric Company. Rotary converter. No. 1,224,729; May 1; v. 238; p. 219.
Fleming, Allison H., Fairmont, W. Va. Belt. No. 1,225,947; May 15; v. 238; p. 725.
Fleming, Frank A. (See Chase and Fleming.)
Flenniken, Charles A. B., Watertown, Mass. Educational device. No. 1,228,197; May 29; v. 238; p. 1548.
Flentje, Ernst, Cambridge, Mass. Shock-absorber. No. 1,227,126; May 22; v. 238; p. 1163.
Flint, John B., Winthrop, Mass., assignor to The Reece Shoe Machinery Company, Boston, Mass. Nailing-machine. No. 1,225,794; May 15; v. 238; p. 673.
Florida Soil Fertility Company. (See Burrows, Clarence B., assignor.)
Floyd, George, Portsmouth, Ohio. Internal-combustion engine. No. 1,225,605; May 8; v. 238; p. 568.
Flume Improvement Company. (See Hinman, Leroy R., assignor.)
Flurscheim, Bernhard J., Fleet, England, assignor to Aetna Explosives Company, Inc., New York, N. Y. Nitrating toluols containing paraffins. No. 1,225,321; May 8; v. 238; p. 471.
Fogal, John E. W., assignor to Quincy Elevator Gate Company, Quincy, Ill. Operating means for elevator shaft and car doors. No. 1,225,606; May 8; v. 238; p. 568.
Fogg, Ernest, Newcastle-upon-Tyne, England. Artificial teeth. No. 1,227,602; May 29; v. 238; p. 1347.
Fogler, George L., Pittsburgh, Pa. Reducing metal-bearing substances. No. 1,227,127; May 22; v. 238; p. 1163.
Foland, Clarke V., Bluefield, W. Va. Apparatus for discharging collapsible tubes. No. 1,228,309; May 29; v. 238; p. 1585.
Folden, Frank H., Des Moines, Iowa. Multimolding concrete-block machine. No. 1,226,765; May 22; v. 238; p. 1038.
Folden, Frank H., Des Moines, Iowa. Concrete-block machine. No. 1,226,873; May 22; v. 238; p. 1075.
Folden, Frank H., Des Moines, assignor to Monarch Manufacturing Corporation, Boone, Iowa. Troweling mechanism. No. 1,227,900; May 29; v. 238; p. 1451.
Folding Partition Company, The. (See Fairhurst, John T., assignor.)
Foley, Hugh B., Minneapolis, Minn. Saw-filing machine. No. 1,224,293; May 1; v. 238; p. 64.
Folger, Harry S., and T. Ross, Chicago, Ill. Hand-stamp. No. 1,226,874; May 22; v. 238; p. 1076.
Foley, James S., West Bromwich, and F. W. Baker, Stourbridge, England. Detachable or interchangeable wheel for motor-vehicles. No. 1,228,310; May 29; v. 238; p. 1585.
Follett, Edward P., Duluth, Minn. Fish-cleaning mechanism. No. 1,228,311; May 29; v. 238; p. 1585.
Fonnebeck, Leon, Logan, Utah. Agricultural implement. No. 1,225,423; May 8; v. 238; p. 507.
Fontenot, F. M., *et al.* (See Underwood, Charles W., assignor.)
Fontenot, Gus E., *et al.* (See Underwood, Charles W., assignor.)
Fontenot, Rufus W., *et al.* (See Underwood, Charles W., assignor.)
Fooks, Harry C., Salisbury, Md. Fruit-protecting device for berry-crates. No. 1,226,875; May 22; v. 238; p. 1076.
Foote-Burt Company, The. (See Randles, George E., assignor.)
Foote, Edward T., Montclair, N. J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Battery-charging equipment. No. 1,227,771; May 29; v. 238; p. 1406.
Foote, Herman M., Cleveland, Ohio, assignor to The Mechanical Rubber Company. Annular article. No. 1,225,023; May 8; v. 238; p. 370.
Forbes, Ida R. (See McGowen and Thalhammer, assignors.)
Ford, Hannibal C., Jamaica, assignor to A. J. Baldwin, New York, N. Y. Railway system. (Reissue.) No. 14,295; May 1; v. 238; p. 274.
Ford, Oscar B., E. H. Loy, and J. J. Heeter, Lewisburg, Ohio. Assorting-cabinet. No. 1,225,607; May 8; v. 238; p. 568.
Ford, Silas M., St. Paul, Minn. Machine for making lath-board. No. 1,226,650; May 22; v. 238; p. 999.
Ford, Walter C., Erick, Okla. Disk plow. No. 1,225,233; May 8; v. 238; p. 440.
Fordice, Ray E., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Roller side bearing. No. 1,226,202; May 15; v. 238; p. 812.
Forelly, Carl B. (See Paulson, Rudolf, assignor.)
Foreman, J. P. (See Luke, Russell, Kennedy, and Anderson, assignors.)
Fort, George L., assignor to Fort-ified Manufacturing Company, Kansas City, Mo. Melting-pot feeder. No. 1,226,651; May 22; v. 238; p. 999.
Fort-ified Manufacturing Company. (See Fort, George L., assignor.)
Fortescue, Charles L., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical protective device. No. 1,224,370; May 1; v. 238; p. 92.
Fortescue, Charles L., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Transformer. No. 1,227,415; May 22; v. 238; p. 1255.
Fortescue, Charles L., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Circuit-interrupting device. No. 1,227,416; May 22; v. 238; p. 1255.



Fortescue, Charles L., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Circuit-interrupting device. No. 1,227,417; May 22; v. 238; p. 1256.
Fortescue, Charles L., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electric distributing system. No. 1,227,772; May 29; v. 238; p. 1406.
Forth, Charles, Ottawa, Ontario, Canada. Door-closing mechanism. No. 1,225,322; May 8; v. 238; p. 472.
Forth, Charles, Ottawa, Ontario, Canada. Door-closing mechanism. No. 1,228,012; May 29; v. 238; p. 1488.
Fosburgh, Lawrence L., Sapulpa, Okla. Aeroplane. No. 1,224,915; May 8; v. 238; p. 333.
Foster Brothers Manufacturing Company. (See Foster, William B., assignor.)
Foster, Van Buren, Boyles, Ala. Journal-box. No. 1,224,730; May 1; v. 238; p. 219.
Foster, William B., assignor to Foster Brothers Manufacturing Company, Utica, N. Y. Bed-spring hanger. No. 1,224,158; May 1; v. 238; p. 14.
Foster, William J., assignor to The Ohio Blower Company, Cleveland, Ohio. Conveying mechanism. No. 1,227,128; May 22; v. 238; p. 1163.
Foundry Appliance Company, The. (See Frantz, Jerome N., assignor.)
Fournier, Minnie, Minong, Wis. Combined vegetable cooker and drainer. No. 1,224,731; May 1; v. 238; p. 220.
Foust, Raymond R., Clarksburg, W. Va. Ladder-joint. No. 1,227,901; May 29; v. 238; p. 1451.
Fowler, Alfred B., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Channel-guide mechanism for sewing-machines. No. 1,226,070; May 15; v. 238; p. 768.
Fowler Car Company, The. (See Fowler, William E., Sr., assignor.)
Fowler, Charles R., Philadelphia, Pa. Radiator-support. No. 1,224,916; May 8; v. 238; p. 334.
Fowler, Clarence E., Toledo, Ohio. Steam-turbine. No. 1,225,424; May 8; v. 238; p. 507.
Fowler, William E., Sr., assignor to The Fowler Car Company, Chicago, Ill. Steel-sheathed box-car. No. 1,225,948; May 15; v. 238; p. 725.
Fox, Bert M., assignor to Grand Rapids Hand Screw Co., Grand Rapids, Mich. Knockdown table. No. 1,225,234; May 8; v. 238; p. 440.
Fox, Edward G. B., assignor to The Franklin Electric Manufacturing Company, Hartford, Conn. Protector for incandescent lamps and the like. No. 1,225,425; May 8; v. 238; p. 507.
Fox, Gordon, assignor to Mark Manufacturing Company, Chicago, Ill. Method and apparatus for electrically heating pipe-blanks. No. 1,227,603; May 29; v. 238; p. 1347.
Fox, Richard K., Colorado Springs, Colo. Extension piano-pedal. No. 1,226,494; May 15; v. 238; p. 910.
Fox, William R., and E. W. Cleveland, Jackson, Mich.; said Cleveland assignor to said Fox. Multiple-spindle drilling-machine. No. 1,225,235; May 8; v. 238; p. 440.
Franchini, Giovanni, and C. Bartolomee, San Francisco, Cal. Releasing device. No. 1,228,360; May 29; v. 238; p. 1602.
Francis, Charles. (See Beregh, Theodore J., Jr., assignor.)
Francis, William P., Atlanta, Ga. Masonry beam. No. 1,227,418; May 22; v. 238; p. 1256.
Frank, Herbert L. (See Lambert, Howard J., assignor.)
Frank, Joseph, New York, N. Y. Duplicating and addressing machine. No. 1,226,495; May 15; v. 238; p. 911.
Frank, William P., Chicago, Ill. Tube-bending machine. No. 1,225,426; May 8; v. 238; p. 507.
Frankland, Alexander J., Tropico, assignor to L. D. Jacoby, Los Angeles, Cal. Means for making paper spoons. No. 1,227,534; May 22; v. 238; p. 1296.
Franklin Auto Peanut Blanching Co. (See Franklin, Joseph A., assignor.)
Franklin Electric Manufacturing Company, The. (See Fox, Edward G. B., assignor.)
Franklin, Joseph A., assignor to Franklin Auto Peanut Blanching Co., Chicago, Ill. Peanut-blanching machine. No. 1,228,103; May 29; v. 238; p. 1520.
Frantz, Jerome N., assignor to The Foundry Appliance Company, Newark, N. J. Molding-machine. No. 1,227,773; May 29; v. 238; p. 1407.
Frantz Manufacturing Company. (See Frantz, Peter, assignor.)
Frantz, Peter, assignor to Frantz Manufacturing Co., Sterling, Ill. Car-door construction. No. 1,228,013; May 29; v. 238; p. 1489.
Franzen, Ernst, Chicago, Ill. Furniture-caster. No. 1,224,294; May 1; v. 238; p. 65.
Fraser, Charles A., and F. M. Henry, assignors of one-third to C. K. Spears, Minneapolis, Minn. Melting-pot. No. 1,226,496; May 15; v. 238; p. 911.
Fraser, Daniel M., Toronto, Ontario, Canada. Pipe-fitting. No. 1,225,795; May 15; v. 238; p. 674.
Fraser, John A., assignor to Kawneer Manufacturing Company, Niles, Mich. Metal-forming machine. No. 1,227,604; May 29; v. 238; p. 1347.
Frauenheim, Joseph A., assignor to Kerner Manufacturing Company, Pittsburgh, Pa. Apparatus for making compound twisted bolts. No. 1,226,497; May 15; v. 238; p. 911.
Frauenheim, Joseph A., assignor to Kerner Manufacturing Company, Pittsburgh, Pa. Manufacturing composite bolts. No. 1,228,198; May 29; v. 238; p. 1548.
Frauenheim, Joseph A., assignor to Kerner Manufacturing Company, Pittsburgh, Pa. Bolt. No. 1,228,199; May 29; v. 238; p. 1549.
Frazure, Isaac N., St. Petersburg, assignor of one-third to F. W. Covey, Tampa, Fla. Sewing-machine attachment. No. 1,225,236; May 8; v. 238; p. 441.
Fréchette, Ferdinand, Notre Dame de Charny, Quebec, Canada. Grate-bar. No. 1,224,159; May 1; v. 238; p. 14.
Frederick Sage & Company. (See Feary, Neville A. T. N., assignor.)
Frederick, Willard E., Pasadena, Cal. Dispensing device. No. 1,226,498; May 15; v. 238; p. 912.
Fredrikson, John. (See Nickelson and Fredrikson.)
Free, Albert V. (See Eaton and Free.)
Freeman, Arthur C., Jr., Norfolk, Va. Glare-shield for automobiles. No. 1,225,608; May 8; v. 238; p. 569.
Freeman, Franklyn S., *et al.* (See Morris, Robert B., assignor.)
Freeman, Malon E., Colby, Kans. Pipe-wrench. No. 1,225,024; May 8; v. 238; p. 370.
Freeman, Victor E., Long Beach, and L. P. Whitaker, New York, N. Y. Mechanism for gripping and carrying grain-stalks. No. 1,228,200; May 29; v. 238; p. 1549.
Freese, Robert E. L., Fayette, Mo. Fence-stretcher. No. 1,224,627; May 1; v. 238; p. 182.
Freeze, Johnathan R., Middletown, Ohio, assignor to The American Rolling Mill Company, Newark, N. J. Metallic crate. No. 1,225,025; May 8; v. 238; p. 370.
French, Charles B. (See Neafie and French.)
French, Cyrus A., *et al.* (See Willard, George W., assignor.)
French, Harry F. (See Benner and French.)
French, Morgan C., Denver, Colo. Colter. No. 1,225,949; May 15; v. 238; p. 725.
Friberger, Harry L., Eureka, Kans., assignor of three-tenths to V. C. Joslyn and three-tenths to C. H. Keller, El Paso, Tex. Treating ores. No. 1,224,917; May 8; v. 238; p. 334.
Fricke, Otto, New York, N. Y. Automatic fog safety ship's guide. No. 1,225,796; May 15; v. 238; p. 674.
Fried Krupp Aktiengesellschaft. (See Heilemann, Behnke, and Koch, assignors.)
Friel, Claude L. (See Friel, Legrand and C. L.)
Friel, Legrand, Los Angeles, Cal. Printing-matrix. No. 1,226,499; May 15; v. 238; p. 912.
Friel, Legrand and C. L., Los Angeles, Cal. Casting mechanism for producing linotype. No. 1,225,706; May 8; v. 238; p. 600.
Frier, John, St. Louis, Mo. Driving device for talking-machines. No. 1,228,014; May 29; v. 238; p. 1489.
Friess, Gustav A., Chicago, Ill. Cylinder-mounting for printing-presses. No. 1,227,774; May 29; v. 238; p. 1407.
Friess, Gustav A., Chicago, Ill. Cylinder-grinding machine. No. 1,227,775; May 29; v. 238; p. 1408.
Friis, John, assignor to Thos. Cusack Company, Chicago, Ill. Electric switch. No. 1,227,605; May 29; v. 238; p. 1348.
Fronan, James E., Evansville, Ind. Cradle or crib. No. 1,224,525; May 1; v. 238; p. 147.
Froom, Acel H., Santa Maria, Cal. Folding camp-kit. No. 1,227,419; May 22; v. 238; p. 1256.
Frost, Arthur G., Bellevue, Ky. Hacksaw. No. 1,227,002; May 29; v. 238; p. 1451.
Frueh, Alfred J., New York, N. Y. Toy animal. No. 1,227,129; May 22; v. 238; p. 1164.
Fry, John A., assignor to Detroit Stove Works, Detroit, Mich. Gas-burner. No. 1,224,157; May 1; v. 238; p. 14.
Fuehler, Gustav, Verdon, S. D. Water explosion-engine. No. 1,226,500; May 15; v. 238; p. 912.
Fulcher, Roy G., and J. Sterling, Carson, La. Attachment to plow-stock. No. 1,226,965; May 22; v. 238; p. 1107.
Fullenwider, Ralph, Idaho Falls, Idaho. Strainer-holder. No. 1,224,732; May 1; v. 238; p. 220.
Fuller, Franz A., assignor to The J. E. Mergott Company, Newark, N. J. Bag-fastener. No. 1,225,950; May 15; v. 238; p. 726.
Fuller, Robert C., Chapman, Ill. Package-tie. No. 1,225,609; May 8; v. 238; p. 569.
Fullmer, John H., and R. W. Runser, assignors to Huebner-Bleistein Patents Company, Buffalo, N. Y. Photographic-printing machine. No. 1,225,729; May 8; v. 238; p. 608.
Fulton, Louis B., assignor to The Chaplin-Fulton Manufacturing Company, Pittsburgh, Pa. Valve. No. 1,228,104; May 29; v. 238; p. 1520.
Funck, Jakob, Charlottenburg, Germany, assignor to The Grondal Kjellin Company, Limited, London, England. Electric induction-furnace. No. 1,226,764; May 22; v. 238; p. 1038.
Funk, Elmer J., Kansas City, Mo. Foot-warmer attachment for radiators. No. 1,228,105; May 29; v. 238; p. 1520.
Funk, Nelson E., Montclair, N. J. Envelop-machine. No. 1,225,026; May 8; v. 238; p. 371.
Funke, Gustave R. (See Stohs and Funke.)
Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Splitting-machine. No. 1,224,527; May 1; v. 238; p. 147.

Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Splitting-machine. No. 1,224,918; May 8; v. 238; p. 335.
Furlong, James J., Tacoma, Wash. Safety-pin. No. 1,224,733; May 1; v. 238; p. 220.
Furlow, Floyd C., Montclair, assignor to Otis Elevator Company, Jersey City, N. J. Elevator-door mechanism. No. 1,228,201; May 29; v. 238; p. 1549.
Furneaux, George A. (See Brigham and Furneaux.)
Furth, George W., Cleveland, Ohio. Sailing-tie buckle. No. 1,226,876; May 22; v. 238; p. 1076.
Furttinger, Fred P., Dallas, Tex. Money-changing machine. No. 1,228,370; May 29; v. 238; p. 1605.
G & O Manufacturing Co., The. (See Gargiulo, Salvatore, assignor.)
G & W Electric Specialty Co. (See Williams, Paul F., assignor.)
G. L. Sellers & Sons Company. (See Mahoney, Clarence, assignor.)
G. M. Parks Company, The. (See Parks, Frederick W., assignor.)
Gable, Frank P. (See Buttman and Gable.)
Gabriel, Elmer, Athens, Ohio. Trolley-wheel. No. 1,226,501; May 15; v. 238; p. 912.
Gadde, George V., *et al.* (See Arner, Joseph, assignor.)
Gage, Edward E., New York, N. Y. Door-securing mechanism. No. 1,225,427; May 8; v. 238; p. 508.
Gage, Seth H., Amesbury, assignor of one-half to F. H. Rowe, Lynn, Mass. Hinge-lock. No. 1,226,324; May 15; v. 238; p. 857.
Gage, William B., Whitewater, Wis. Lubricator. No. 1,224,919; May 8; v. 238; p. 335.
Gail, John F. (See Hunt, Ozello R., assignor.)
Gallagher, John H., Mncomb, Ill. Water-closet. No. 1,224,734; May 1; v. 238; p. 221.
Gallagher, Thomas V., Leadville, Colo. Mail-rack. No. 1,225,123; May 8; v. 238; p. 404.
Gallo, Giuseppe. (See Primavera and Gallo.)
Gamache, Clovis, Jr., Nashua, N. H., and W. S. McNear, assignors to Nur-Pon Company, Boston, Mass. Tampon-applicator. No. 1,224,735; May 1; v. 238; p. 221.
Gamble, Joseph W., Carpentersville, Ill. Tractor-binder hitch. No. 1,225,428; May 8; v. 238; p. 508.
Gammeter, John R., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Door-mounting for heaters. No. 1,226,766; May 22; v. 238; p. 1039.
Gardner, John, Knott End, England. Microphonic signaling device. No. 1,225,429; May 8; v. 238; p. 508.
Gardner, John T., assignor to The Bentel & Margedant Company, Hamilton, Ohio. Wheel-machine. No. 1,224,628; May 1; v. 238; p. 183.
Gardner, Percy W., Holdenville, Okla. Flour-bin. No. 1,225,797; May 15; v. 238; p. 674.
Gardner, Randall D., Boston, Mass. Counterbalancing device. No. 1,224,629; May 1; v. 238; p. 183.
Gardon, Ambroise, Meacham, Saskatchewan, Canada. Plow. No. 1,224,371; May 1; v. 238; p. 92.
Garges, William H., Rutherford, N. J. Roofing-shingle and laying same. No. 1,227,776; May 29; v. 238; p. 1408.
Gargiulo, Salvatore, assignor to The G & O Manufacturing Co., New Haven, Conn. Machine for producing radiator-tubing for automobiles. No. 1,225,730; May 8; v. 238; p. 608.
Garner, Asa B., Kitzmiller, Md. Powder-container. No. 1,225,610; May 8; v. 238; p. 569.
Garnier, Thomas R., South Pasadena, assignor of one-half to A. E. Steddom, Los Angeles, Cal. Antifriction-bearing for stamp-mills. No. 1,228,312; May 29; v. 238; p. 1586.
Gartley, William H., assignor to The United Gas Improvement Company, Philadelphia, Pa. Manufacture of toluol. No. 1,225,237; May 8; v. 238; p. 441.
Gary, Howland R. (See Cummings, Henry H., assignor.)
Gas Oil Stove Company. (See Best, William J., assignor.)
Gas Oil Stove Company. (See Chapman, Nathan C., assignor.)
Gates, Olus, and H. A. Smith, Arnolds Park, Iowa; said Gates, assignor to said Smith. Lifting-jack. No. 1,228,015; May 29; v. 238; p. 1489.
Gatlin, Edward C., Kansas City, Mo. Garment-support. No. 1,225,611; May 8; v. 238; p. 570.
Gaudy, Ralph J., Detroit, Mich. Producing smoke for curing meats. No. 1,225,798; May 15; v. 238; p. 675.
Gault, Charles E. (See Cushing, William H., assignor.)
Gautschy, Heinrich, Basel, Switzerland. Folding device for umbrella-sticks. No. 1,226,877; May 22; v. 238; p. 1076.
Gaylak, Joseph G., Monongahela, Pa. Kitchen utensil. No. 1,225,430; May 8; v. 238; p. 509.
Gawley, George J., Fleet, England. Percussive tool. No. 1,225,612; May 8; v. 238; p. 570.
Gehman, Charles A., New York, N. Y., and J. W. Hughes, Narberth, Pa., assignors to Gehman Pump Company, Phoenix, Ariz. Pump. No. 1,225,124; May 8; v. 238; p. 404.
Gehman Pump Company. (See Gehman and Hughes, assignors.)
Geiger, Cornelius M., St. Petersburg, Fla. Skirt-fastener. No. 1,225,613; May 8; v. 238; p. 570.
Geissenhainer, Frederick W. (See Cumner and Geissenhainer.)
Gelbart, Theophilus A., New York, N. Y. Knockdown furniture. No. 1,225,431; May 8; v. 238; p. 509.
General Electric Company. (See Case, Frank E., assignor.)
General Electric Company. (See Clifford, Harry E., assignor.)
General Electric Company. (See Coolidge, William D., assignor.)
General Electric Company. (See Creighton, Elmer E. F., assignor.)
General Electric Company. (See Dolivo-Dobrowolsky, Michael, assignor.)
General Electric Company. (See Du Bois, Delafield, assignor.)
General Electric Company. (See Fiege, Alexander J. R., assignor.)
General Electric Company. (See Fleischmann, Lionel, assignor.)
General Electric Company. (See Johannesen, Svend E., assignor.)
General Electric Company. (See Ljungström, Fredrik and B., assignors.)
General Electric Company. (See Luckiesh, Matt, assignor.)
General Electric Company. (See Osnos, Mendel, assignor.)
General Electric Company. (See Quackenbush and Smedley, assignors.)
General Electric Company. (See Robinson, Lewis T., assignor.)
General Electric Company. (See Rose, Paul, assignor.)
General Electric Company. (See Seede, John A., assignor.)
General Engineering and Construction Company. (See Crippen, James B., assignor.)
General Fire Extinguisher Company. (See Loepsinger, Albert J., assignor.)
General Motors Company. (See Bower, Ferdinand A., assignor.)
General Railway Signal Company. (See Henry, William S., assignor.)
General Transmission Company. (See Selbt, George, assignor.)
Geo. L. Paine Company. (See Chabot, Joseph, assignor.)
Geo. W. Blabon Company. (See Schaefer, Earle B., assignor.)
Geo. W. Smyth Lumber Company. (See Tenholder, Herman G., assignor.)
George H. Wilkins Company. (See Wilkins, George H., assignor.)
Gerke, Jacob W., E. J. Braisted, and E. T. Kelleher, Flushing, N. Y.; said Gerke assignor to said Braisted and said Kelleher. Ventilator. No. 1,228,202; May 29; v. 238; p. 1550.
Germond, Henry S., Jr., Bayonne, assignor to New York Revolving Portable Elevator Company, Jersey City, N. J. Machine-brake. No. 1,228,203; May 29; v. 238; p. 1550.
Geromanos, Hercules W., Boston, Mass. Projecting-lamp. No. 1,226,325; May 15; v. 238; p. 857.
Gerst, Philip. (See Schrader, John R., assignor.)
Gervais, Wainwright B., assignor to Variety Manufacturing Company, Chicago, Ill. Fire-door. No. 1,224,295; May 1; v. 238; p. 65.
Getman, David D., Minneapolis, Minn., assignor of one-third to J. P. Sternhagen, Glasgow, Mont. Flat-tire signal. No. 1,228,204; May 29; v. 238; p. 1550.
Ghiglieri, William, San Francisco, Cal. Traffic-signal. No. 1,224,632; May 1; v. 238; p. 184.
Gibbs, Frederick H., Brooklyn, assignor to American Car and Foundry Company, New York, N. Y. Mine-car wheel and attaching means therefor. No. 1,224,736; May 1; v. 238; p. 221.
Gibson-Hollister Manufacturing Company. (See Gibson, Lester H., assignor.)
Gibson-Hollister Manufacturing Company. (See Hollister, George S., assignor.)
Gibson, Lester H., Brookline, assignor to Gibson-Hollister Manufacturing Company, Boston, Mass. Ignition device. No. 1,224,296; May 1; v. 238; p. 65.
Gibson, William A., assignor of one-third to G. B. Koontz and one-third to J. C. Schleich, Peoria, Ill. Feed-water system for steam-boilers. No. 1,226,502; May 15; v. 238; p. 913.
Gidley, Cyril M. (See Miller, Oscar C., assignor.)
Giduz, Fred J., Roxbury, Mass. Mold-clamping device. No. 1,228,106; May 29; v. 238; p. 1521.
Gieland, Emil, Charlotte, N. C. Sand-blast for satin-finishing metals. No. 1,226,621; May 15; v. 238; p. 949.
Gieseker, Frederick C., Elmwood, Wis. Cow-tail holder. No. 1,227,606; May 29; v. 238; p. 1348.
Gifford, Alvin, *et al.* (See Wallace, Francisco D., assignor.)
Gifford, Reuben W., *et al.* (See Wallace, Francisco D., assignor.)
Gilberg, Charles G., Rockford, Ill. Pneumatic action. No. 1,226,320; May 15; v. 238; p. 857.
Gilbert, Edwin R., Chicago, Ill. Fuse for projectiles. No. 1,226,652; May 22; v. 238; p. 1000.
Gilbert, Horace M., North Yakima, Wash. Brush-rake. No. 1,225,432; May 8; v. 238; p. 509.
Gilbert, Sidney C., Jackson, Ohio. Key-action for saxophones and the like. No. 1,228,016; May 29; v. 238; p. 1490.
Giles, Eugene M., Peoria, Ill. Speedometer. No. 1,227,420; May 22; v. 238; p. 1257.



Gill, Charles H., Chicago, Ill., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Computing attachment for typewriters. No. 1,228,107; May 29; v. 238; p. 1521.
Gillaspy, Thomas J. (See Naysmith, Gillaspy, and Carl.)
Gillen, Paul, Lynbrook, assignor to Hudson Brass Works in the City of New York, Brooklyn, N. Y. Phonograph-lamp. No. 1,226,607; May 15; v. 238; p. 945.
Gillett, David C. (See Scofield, Walter P., assignor.)
Gillette, Robert D., St. Charles, Mo. Bending-machine. No. 1,226,503; May 15; v. 238; p. 913.
Gilliam, Lawrence M., San Francisco, Cal., assignor to Ligett & Myers Tobacco Company, St. Louis, Mo. Cigarette-machine. No. 1,227,549; May 22; v. 238; p. 1300.
Gilliam Manufacturing Company, The. (See White, Harry B., assignor.)
Gilliland, Maria A., Adrian, Mich. Towel-rack. No. 1,227,421; May 22; v. 238; p. 1257.
Gillpatrick, George F., assignor to Devoe & Raynolds Company, Kansas City, Mo. Producing laundry blue. No. 1,224,737; May 1; v. 238; p. 222.
Gilman, Benoist P., Yoakum, Tex. Firing-valve to control the feed of oil in firing oil-burning locomotives. No. 1,226,504; May 15; v. 238; p. 913.
Gilman, John H., assignor to King & Hamilton Company, Ottawa, Ill. Adjustable support for cup elevators. No. 1,228,205; May 29; v. 238; p. 1551.
Gilmore, George E., Cleveland, and F. V. Roesel, Akron, Ohio. Core for resilient wheel-tires. No. 1,227,422; May 22; v. 238; p. 1257.
Gilmore, George W., Alliance, Ohio. Detachable contact-plate. No. 1,225,433; May 8; v. 238; p. 510.
Gilson, Henry R., Baden, Pa. Metric valve. No. 1,227,607; May 29; v. 238; p. 1349.
Gilson, Henry R., Baden, assignor to National Metal Molding Company, Pittsburgh, Pa. Conduit-connector. No. 1,225,614; May 8; v. 238; p. 570.
Gilson, John, Sr., Port Washington, Wis. Garden-tool. No. 1,224,630; May 1; v. 238; p. 184.
Gilson Manufacturing Company. (See Thiel, Ervin R., assignor.)
Gilson, Robert M., Pittsburgh, assignor to The Union Switch & Signal Company, Swissvale, Pa. Signal. No. 1,227,777; May 29; v. 238; p. 1408.
Gilson, Robert M., Pittsburgh, assignor to The Union Switch & Signal Company, Swissvale, Pa. Signal. No. 1,227,778; May 29; v. 238; p. 1408.
Ginnel, Henry, Brooklyn, N. Y. Bracelet. No. 1,224,528; May 1; v. 238; p. 148.
Gipson, James S., Fort Stockton, Tex. Fuel-oil burner. No. 1,224,372; May 1; v. 238; p. 92.
Girdwood, Kennet J., Montreal, Quebec, Canada. Percussion-fuse. No. 1,224,631; May 1; v. 238; p. 184.
Girvin, Charles W., San Francisco, Cal., assignor to Girvin Electrical Development Company, Honolulu, Hawaii. Direct-current apparatus. No. 1,224,160; May 1; v. 238; p. 15.
Girvin Electrical Development Company. (See Girvin, Charles W., assignor.)
Glasel, Charles J., New York, N. Y. Hide-working machine. No. 1,227,779; May 29; v. 238; p. 1409.
Glasner, Frank, and G. Ellison, Hinton, Iowa. Drinking-cup. No. 1,227,423; May 22; v. 238; p. 1258.
Glass, Perley R., assignor to P. R. Glass Company, Boston, Mass. Folding-machine. No. 1,224,529; May 1; v. 238; p. 148.
Glauber, Joseph H., deceased, Cleveland, Ohio; The Citizens Savings & Trust Company, executor. Lavatory-fitting. No. 1,224,297; May 1; v. 238; p. 65.
Gleason, Edward D., Asbury Park, N. J., assignor to Neu-Metals and Process Company, Brooklyn, N. Y. Copper-lead alloy. No. 1,228,017; May 29; v. 238; p. 1490.
Gleckner, Charles V., Canton, Pa. Griddle-greaser. No. 1,224,457; May 1; v. 238; p. 124.
Glenn, Ida. (See Spencer, George A., assignor.)
Glenn, Lawrence, Sparta, Ill. Cork-extractor. No. 1,227,424; May 22; v. 238; p. 1258.
Globe Automatic Sprinkler Company. (See Evans, Powell, assignor.)
Globe Ear-Phone Co. (See Barber, Fred A., assignor.)
Glynn, Guilford C., Kansas City, Kans. Producing paving material. No. 1,227,903; May 29; v. 238; p. 1452.
Goar, Robert K., Hamilton, Tex. Boll-weevil exterminator. No. 1,228,313; May 29; v. 238; p. 1586.
Goble, Mason O., Beatrice, Nebr. Egg-carrier. No. 1,224,373; May 1; v. 238; p. 93.
Godfrey, Richard W., New York, N. Y. Cigar-box. No. 1,227,608; May 29; v. 238; p. 1349.
Godley, Charles E., assignor to Edmunds and Jones Corporation, Detroit, Mich. Lamp-mounting. No. 1,227,258; May 22; v. 238; p. 1207.
Goedeke, Frederick W. (See Northall, William H., assignor.)
Goetter, Frank B. (See Hendricks, James S., assignor.)
Goetzke, Otto, Jersey City, N. J. Sanitary soap-disk. No. 1,225,323; May 8; v. 238; p. 472.
Goetzke, Otto, Jersey City, N. J., assignor of one-half to E. A. Muth, Buffalo, N. Y., and T. G. Hartwig, Rockville, Conn. Transparent pane. No. 1,224,530; May 1; v. 238; p. 148.
Goffin, John. (See Slingerland, Zeifang, and Goffin.)
Goldbeck, Charles F., Philadelphia, Pa. Identification device. No. 1,225,324; May 8; v. 238; p. 472.
Goldberg, Hyman E., Chicago, Ill. Calculating-machine. No. 1,224,633; May 1; v. 238; p. 184.
Goldberg, Max W., Milwaukee, Wis. Crucible-holder. No. 1,226,653; May 22; v. 238; p. 1000.
Goldberg, Naiman, Hartford, Conn. Wind-shield. No. 1,226,203; May 15; v. 238; p. 812.
Goldsmith, Hugo, Cincinnati, Ohio. Foot-ball pants. No. 1,225,799; May 15; v. 238; p. 675.
Goldwire, William S., and J. F. Patton, assignors of one-third to W. R. Bedingfield, Macon, Ga. Camera. No. 1,224,531; May 1; v. 238; p. 149.
Gologan, Dumitru G., Newark, N. J. Cooking utensil. No. 1,228,108; May 29; v. 238; p. 1521.
Gonsalves, Manoel E., New Amsterdam, British Guiana. Lock. No. 1,227,425; May 22; v. 238; p. 1258.
Good, Ezra E., Minneapolis, Minn. Milking apparatus. No. 1,228,314; May 29; v. 238; p. 1586.
Goodcell, William, Balboa, Cal. Folding bed. No. 1,224,738; May 1; v. 238; p. 222.
Goodlett, Edgar N., San Francisco, Cal. Concrete railway-tie. No. 1,225,325; May 8; v. 238; p. 473.
Goodrum, Charles L., Urbana, Ohio, assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,224,161; May 1; v. 238; p. 15.
Goodrum, Charles L., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Two-way, two-wire trunk for multi-office automatic exchange systems. No. 1,224,374; May 1; v. 238; p. 93.
Goodrum, Charles L., Urbana, Ohio, assignor, by meane assignments, to Western Electric Company, Incorporated. Telephone system and apparatus. No. 1,226,966; May 22; v. 238; p. 1107.
Goodrum, Charles L., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,227,609; May 29; v. 238; p. 1349.
Goodrum, Charles L., and H. F. Dobbin, assignors to Western Electric Company, Incorporated, New York, N. Y. Contact-bank for automatic switching devices. No. 1,227,904; May 29; v. 238; p. 1452.
Goodyear's Metallic Rubber Shoe Company, The. (See Clark, Myron H., assignor.)
Gordon, Albert H., Brooklyn, N. Y. Boy's blouse. No. 1,226,654; May 22; v. 238; p. 1000.
Gordon, Frank, *et al.* (See Guthrie, Venable J., assignor.)
Gordon, Hayner H., Washington, D. C. Electrical system. No. 1,224,739; May 1; v. 238; p. 222.
Gordon, Joseph L., Liverpool, England. Means for securing ships' hatch-coverings. No. 1,226,878; May 22; v. 238; p. 1077.
Gorman, James C., Jr., assignor to The Barnes Manufacturing Company, Mansfield, Ohio. Double-acting force-pump. No. 1,224,532; May 1; v. 238; p. 149.
Gorman, John A., Newton, N. J. Button and buttonhole-marker combined. No. 1,225,615; May 8; v. 238; p. 571.
Gosnell, Christapher C. (See Thacker and Gosnell.)
Goss, Charles E. (See Goss, George W., assignor.)
Goss, George W., assignor of one-half to C. E. Goss, Baltimore, Ohio. Planting-machine. No. 1,227,610; May 29; v. 238; p. 1350.
Goss, Harry T., Rutherford, N. J., assignor to International Time Recording Company of New York, Endicott, N. Y. Counting and recording mechanism. No. 1,228,315; May 29; v. 238; p. 1587.
Goss Printing Press Company. (See Goss, Samuel G., assignor.)
Goss, Samuel G., Glencoe, assignor to Goss Printing Press Company, Chicago, Ill. Operating mechanism for ink-rollers. No. 1,225,800; May 15; v. 238; p. 675.
Gotta, Robert B., *et al.* (See Rodier, Harold B., assignor.)
Gottlieb, Bernhard. (See Berger, Adolf, assignor.)
Gottschalk, Frederick, assignor to Graphic Duplicator Co., Inc., New York, N. Y. Duplicating-machine. No. 1,224,634; May 1; v. 238; p. 185.
Gotty Gas Lighting Company. (See Gotty, John G., assignor.)
Gotty, John G., Jacksonville, Fla., assignor to Gotty Gas Lighting Company. Production of self-lighting gas-mantles. No. 1,227,259; May 22; v. 238; p. 1207.
Gotty, John G., Jacksonville, Fla., assignor to Gotty Gas Lighting Company. Gas-mantle ring. No. 1,227,260; May 22; v. 238; p. 1207.
Goudy, C. F., *et al.* (See Johnson, Rolly A. and G., assignors.)
Gough, Isabelle V., administratrix. (See Gough, William R.)
Gough, William R., deceased, Brooklyn, N. Y.; I. V. Gough, administratrix. Fire-hose coupling. No. 1,225,616; May 8; v. 238; p. 571.
Gould Coupler Company. (See Sauvage, William H., assignor.)
Gould, Sylvester O., Marion, Ind. Motor. No. 1,228,316; May 29; v. 238; p. 1587.
Government of the United States of America. (See Fahrenwald, Frank A., assignor.)
Gower, Arthur, London, England. Method of manufacturing padding for use in making bullet-proof clothing, armor, shields, and the like. No. 1,226,767; May 22; v. 238; p. 1039.
Goyssovich, Rafoelo. (See Hrnich, Milan, assignor.)

Grabau, Hans E., Long Island City, and A. C. Schwartz, New York, N. Y.; said Grabau assignor to said Schwartz. Tire-casing. No. 1,227,426; May 22; v. 238; p. 1259.

Grabau, Hans E., Long Island City, and A. C. Schwartz, New York, N. Y.; said Grabau assignor to said Schwartz. Making tire-casings. No. 1,227,427; May 22; v. 238; p. 1259.

Graf, R. J., *et al.* (See Connor and Miles, assignors.)

Graham, George M., Jr., Fargo, N. D. Forming reinforced-concrete floors. No. 1,224,375; May 1; v. 238; p. 93.

Graham, John W., Hinton, W. Va. Typographical or line-casting machine. No. 1,226,204; May 15; v. 238; p. 812.

Graham, John W., Hinton, W. Va. Typographical or slug-casting machine. No. 1,226,205; May 15; v. 238; p. 812.

Graham, Walter E., Philadelphia, Pa. Lawn-mower. No. 1,226,206; May 15; v. 238; p. 813.

Granbois, Arthur G. (See Overholt and Granbois.)

Grand Rapids Hand Screw Co. (See Fox, Bert M., assignor.)

Grand Rapids Refrigerator Co. (See Leonard, Charles H., assignor.)

Grand Rapids School Equipment Co. (See Ferney, Daniel F., assignor.)

Grant, Andrew S. (See Lake, John L., assignor.)

Grant, John. (See Campbell and Grant.) (Reissue.)

Grant, John, Chicago, Ill. Moving-picture machine. No. 1,225,801; May 15; v. 238; p. 676.

Grant, Patrick. (See Cummings, Thomas G., assignor.)

Grantland, John W., Cincinnati, Ohio. Injector. No. 1,225,617; May 8; v. 238; p. 572.

Graphic Duplicator Co. (See Gottschalk, Frederick, assignor.)

Grass, Henry A., Chicago, Ill. Musical toy. No. 1,225,733; May 8; v. 238; p. 609.

Graumann, John, Granite, Okla. Cover-preventing shield. No. 1,227,261; May 22; v. 238; p. 1208.

Gravel, Alphonse, New Orleans, La. Portable house. No. 1,228,317; May 29; v. 238; p. 1587.

Graves, John, assignor of seventy-five one-hundredths to J. H. Rapel and twenty-five one-hundredths to J. E. Matteson, Milwaukee, Wis. Rotary engine. No. 1,227,780; May 29; v. 238; p. 1409.

Gray, Alanson M., Elizabeth, N. J. Apparatus for molding wax and other materials. No. 1,225,707; May 8; v. 238; p. 601.

Gray, Benjamin F., Blocton, Ala. Boll-weevil exterminator. No. 1,226,505; May 15; v. 238; p. 914.

Gray, Harry L., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic-film cartridge. No. 1,225,951; May 15; v. 238; p. 726.

Gray, John H., Worcester, Mass. Nail. No. 1,225,708; May 8; v. 238; p. 601.

Gray, Joseph P., Pittsburg, Kans. Cylinder-cock. No. 1,225,238; May 8; v. 238; p. 441.

Gray, W. E., *et al.* (See Underwood, Charles W., assignor.)

Gray, William G., St. Johns, New Brunswick, Canada. Arch-readjuster. No. 1,226,327; May 15; v. 238; p. 858.

Gray, William P., Campbellton, New Brunswick, Canada. Brush. No. 1,227,047; May 22; v. 238; p. 1135.

Grazier, Durbin H., Johnstown, Pa. Cutter. No. 1,228,318; May 29; v. 238; p. 1588.

Great Lakes Dredge & Dock Company, The. (See Wilhelm, Jesse E., assignor.)

Great Northern Paper Company. (See Cram and Parsons, assignors.)

Green, John C., Burwell, Nebr. Rotary tooth-brush. No. 1,224,740; May 1; v. 238; p. 223.

Green, Rufus E. (See Williston, Benjamin F., assignor.)

Greenawalt, Samuel G., Shawinigan Falls, Quebec, Canada. Stoker. No. 1,225,802; May 15; v. 238; p. 676.

Greenberg, Max I., Great Neck, N. Y. Protective lining for garments. No. 1,227,428; May 22; v. 238; p. 1259.

Greene, John S., Rochester, N. Y., assignor to Commercial Camera Co., Providence, R. I. Photographic developing apparatus. No. 1,226,803; May 15; v. 238; p. 676.

Greenway, John C., Warren, Ariz., and H. W. Morse, Los Angeles, Cal. Hydrometallurgy of copper. No. 1,224,458; May 1; v. 238; p. 124.

Greenwood, Harry. (See Bonglovanni, Antonio, assignor.)

Greer, Medorem W., New York, N. Y. Master-last. No. 1,226,071; May 15; v. 238; p. 768.

Greif, Louis M., West Park, Ohio. Permutation-lock. No. 1,227,535; May 22; v. 238; p. 1296.

Greiner, Charles M., and H. D. Jones, assignors to The Kelly-Springfield Road Roller Company, Springfield, Ohio. Scarifying attachment for road-engines. No. 1,226,506; May 15; v. 238; p. 914.

Greising, Charles M., St. Paul, Minn., assignor, by mesne assignments, to International Harvester Company of New Jersey. Machine for treating fiber. No. 1,225,804; May 15; v. 238; p. 677.

Gresson, James H., Hudson, Wis. Wheel-hub. No. 1,227,429; May 22; v. 238; p. 1259.

Griepe, Augustus W. H., New York, N. Y., assignor to Turbo Company. Air and gas compressor. No. 1,225,805; May 15; v. 238; p. 677.

Gries, Frederick W., Watervliet, N. Y. Collapsible tube. No. 1,227,430; May 22; v. 238; p. 1260.

Grieve, David, Needham Heights, Mass. Antislipping device. No. 1,227,431; May 22; v. 238; p. 1260.

Griffin, Henry W., New York, N. Y., assignor to The Union Switch and Signal Company, Swissvale, Pa. Controlling apparatus for railway switches and signals. (Reissue.) No. 14,302; May 15; v. 238; p. 951.

Griffin, James S. (See McKeever and Griffin.)

Griffin, Lewis B., Candor, N. Y. Flame-regulator for incubators. No. 1,225,239; May 8; v. 238; p. 441.

Griffith, Richard T., assignor to The Miller Rubber Company, Akron, Ohio. Rubber glove. No. 1,225,027; May 8; v. 238; p. 371.

Griffith, Richard T., assignor to The Miller Rubber Company, Akron, Ohio. Mold for the manufacture of rubber gloves. No. 1,225,028; May 8; v. 238; p. 371.

Grimes, Franklin C., Idaho Falls, Idaho. Recovering potassium salts from organic carbonaceous materials. No. 1,227,781; May 29; v. 238; p. 1409.

Grimes, Thaddeus S., assignor to Lummus Cotton Gin Company, Columbus, Ga. Shaft-coupling. No. 1,227,432; May 22; v. 238; p. 1260.

Gripp, S. H., *et al.* (See Bretz, George W., assignor.)

Griswold, Lester E., assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa. Lighting-fixture. No. 1,224,162; May 1; v. 238; p. 16.

Griswold Manufacturing Company. (See Cooper, Harry S., assignor.)

Grob, Armin. (See Engi, Grob, and Straub.)

Grob, Armin. (See Engi, Grob, and Würgler.)

Grodsky, Aaron, Cincinnati, Ohio. Tobacco-stemming machine. No. 1,225,240; May 8; v. 238, p. 442.

Grondal Kjellin Company, The. (See Funck, Jakob, assignor.)

Gronke, Barney, Chicago, Ill., assignor to International Harvester Company of New Jersey. Snapping-roll for corn huskers, pickers, and the like. No. 1,225,806; May 15; v. 238; p. 677.

Gronke, Barney, Chicago, Ill., assignor to International Harvester Company of New Jersey. Corn-husker. No. 1,225,807; May 15; v. 238; p. 678.

Gros, Gustave G. (See Kebbell, John F., assignor.)

Grossarth, Albert A., Chicago, Ill. Drive-gear for deep-well pumps. No. 1,226,967; May 22; v. 238; p. 1108.

Grosvenor, William M., Ridgewood, N. J. Moving-picture film. No. 1,226,655; May 22; v. 238; p. 1000.

Grover, Albert D., New York, N. Y., assignor to Autosales Gum & Chocolate Company. Coin-testing mechanism for coin-controlled machines. No. 1,225,808; May 15; v. 238; p. 678.

Grudoski, Andro, and S. Sztonnhewsky, Horning, Pa. Lock. No. 1,228,109; May 29; v. 238; p. 1522.

Grunig, Frédéric, New York, N. Y., and M. L. Van Huele, Elizabeth, N. J. Adjustable hat-lining. No. 1,225,618; May 8; v. 238; p. 572.

Grunwald, Albert C., assignor to Precision Metal Workers, Chicago, Ill. Grease-cup. No. 1,227,130; May 22; v. 238; p. 1164.

Grunwald, Albert C., assignor to Precision Metal Workers, Chicago, Ill. Grease-cup. No. 1,227,131; May 22; v. 238; p. 1165.

Grupe, Grover R., Elizabeth, N. J. Illuminating-burner for Christmas trees. No. 1,225,241; May 8; v. 238; p. 442.

Guenther, David S., Dayton, Ohio. Wall-bracket for supporting fire-extinguishers. No. 1,226,968; May 22; v. 238; p. 1108.

Guenther, Fred, Los Angeles, Cal. Spring-suspended frame for automobiles. No. 1,228,319; May 29; v. 238; p. 1588.

Guerin, Joseph A., Seattle, Wash. Oil-burner. No. 1,225,242; May 8; v. 238; p. 442.

Guerrant, John L., Sedalia, Mo. Freight-car door. No. 1,226,207; May 15; v. 238; p. 813.

Guess, Learner E., Marion, Ky. Tire-inflating apparatus. No. 1,226,507; May 15; v. 238; p. 914.

Guett, Monroe, assignor to The Hart & Hegeman Manufacturing Company, Hartford, Conn. Electric-cable clamp. No. 1,225,125; May 8; v. 238; p. 404.

Guglielmone, Oscar, New York, N. Y. Folding umbrella. No. 1,224,533; May 1; v. 238; p. 149.

Guillot, Eugene, Helena, Mont. Apparatus for cleaning sinks, &c. No. 1,228,320; May 29; v. 238; p. 1589.

Gulledge, James A. (See Robinett and Gulledge.)

Gumprecht, William L., Hartford, Conn., assignor to Underwood Computing Machine Company, New York, N. Y. Type-writing machine. No. 1,227,262; May 22; v. 238; p. 1208.

Gustafson, Adolph P., assignor to M. Schulz Co., Chicago, Ill. Pneumatic action for pneumatically-operated musical instruments. No. 1,225,709; May 8; v. 238; p. 601.

Gustafson, Lawrence W., Smolan, Kans. Lock for automobile-hoods. No. 1,227,048; May 22; v. 238; p. 1135.

Guthrie, John C., *et al.* (See Guthrie, Venable J., assignor.)

Guthrie, Venable J., Cambria, assignor of one-eighth to J. C. Guthrie, Pearisburg, and one-eighth to W. C. Guthrie, one-eighth to H. D. Jordan, and one-eighth to F. Gordon, Dublin, Va. Air-compressor. No. 1,226,328; May 15; v. 238; p. 858.

Guthrie, William C., *et al.* (See Guthrie, Venable J., assignor.)

Guy, George G., Batavia, assignor to Aurora Door Hanger & Specialty Company, Aurora, Ill. Frame for grindstones. No. 1,226,969; May 22; v. 238; p. 1109.

Gyllsdorff, Torsten A., Detroit, Mich. Hair-pin. No. 1,226,508; May 15; v. 238; p. 914.

H. Brinton Company. (See Larkin, Walter, assignor.)



H. & B. American Machine Company. (See Riley and Robinson, assignors.)

H. H. Franklin Manufacturing Company. (See Murphy, Ralph, assignor.)

H. J. Mahony Co. (See Irwin, James, assignor.)

H. K. Mulford Company. (See Reichel and Werner, assignors.)

H. P. Patents and Processes Company. (See Hochstetter, Frederick W., assignor.)

H. T. Paiste Company. (See Paiste, Henry T., assignor.)

H. W. Johns-Manville Company. (See Carson, Clarence, assignor.)

Haas, Gus. (See Haas and Myers, assignors.)

Haas, Irvin M. and N. R., and B. V. Myers, assignors of one-fourth to G. Haas, Dayton, Ohio. Vehicle-tire. No. 1,224,920; May 8; v. 238; p. 335.

Haas, John W. (See Scudder, Charles, assignor.)

Haas, Nelson R. (See Haas and Myers.)

Haberman, Zeno, Garden City, S. D. Cellar-door. No. 1,226,509; May 15; v. 238; p. 915.

Hachmann, Frederick, St. Louis, Mo., assignor to Hachmann Specialty Company. Container-cap. No. 1,224,453; May 1; v. 238; p. 124.

Hachmann Specialty Company. (See Hachmann, Frederick, assignor.)

Hadley, Art, Providence, R. I. Bracelet. No. 1,224,921; May 8; v. 238; p. 335.

Hadley, Art, Providence, R. I. Bracelet-catch. No. 1,228,018; May 29; v. 238; p. 1490.

Hadley, Charles W., Ogden, Utah. Elevating-machine. No. 1,225,809; May 15; v. 238; p. 678.

Haefely, Emil, Basel, Switzerland, assignor to Westinghouse Electric and Manufacturing Company. Producing insulating materials. No. 1,228,371; May 29; v. 238; p. 1606.

Hagar, Arthur P., Newark, N. J., assignor to Safety Car Heating & Lighting Company. Acetylene-generator. No. 1,225,434; May 8; v. 238; p. 510.

Hagey, James C., assignor of one-half to The Cable Company, Chicago, Ill. Pressure-regulator. No. 1,225,619; May 8; v. 238; p. 572.

Hagey, James C., assignor of one-half to The Cable Company, Chicago, Ill. Power-regulating apparatus. No. 1,225,620; May 8; v. 238; p. 573.

Hahl, Harold D., and J. J. Lambert, Houston, Tex. Perforator. No. 1,225,326; May 8; v. 238; p. 473.

Haines, Jones & Cadbury. (See Sharp and Bacon, assignors.)

Haines, Samuel K., Shubert, Nebr. Trace-holder. No. 1,225,621; May 8; v. 238; p. 573.

Hajek, William F., Chicago, Ill. Window construction. No. 1,225,435; May 8; v. 238; p. 511.

Hake, George, St. Louis, Mo. Garment-supporter. No. 1,225,436; May 8; v. 238; p. 511.

Hale, Frederick M., Bromley, England. Explosive shell or similar body. No. 1,224,163; May 1; v. 238; p. 16.

Hale and Kilburn Company. (See Von Schlegell, Victor, assignor.)

Hale, Walter S. (See Schwartzman, Abraham, assignor.)

Hall, Charles S., Sandcoulee, Mont. Automobile steering-wheel. No. 1,225,622; May 8; v. 238; p. 573.

Hall, Clarence. (See Paul and Hall.)

Hall, James F., Anniston, Ala. Cover for service-boxes or the like. No. 1,224,534; May 1; v. 238; p. 150.

Hall, Robert O. D., and H. A. Duxbury, Wigan, England. Device for fastening or securing ropes, rope handles, cords, and the like. No. 1,225,623; May 8; v. 238; p. 573.

Haller, Pearl M., Bay City, Mich. Fire-extinguisher. No. 1,225,624; May 8; v. 238; p. 573.

Hallwood, Henry S., Columbus, Ohio. Mortising-machine. No. 1,225,625; May 8; v. 238; p. 574.

Hambuechen, Carl, Belleville, assignor to American Carbon & Battery Company, East St. Louis, Ill. Battery. No. 1,224,376; May 1; v. 238; p. 94.

Hamill, James, Honolulu, Hawaii. Separation of impurities from liquids by centrifugal force. No. 1,224,164; May 1; v. 238; p. 17.

Hamilton, Hugh R., Webster, Mass., assignor to R. W. Milner, Montreal, Canada. Holder for sewing-machine bobbins, &c. No. 1,225,952; May 15; v. 238; p. 727.

Hamilton, John A., *et al.* (See Currier, Harry, assignor.)

Hamilton, Richard C., Inverness, Nova Scotia, Canada. Incubator. No. 1,225,953; May 15; v. 238; p. 727.

Hamm, Peter, Milwaukee, Wis. Magneto. No. 1,224,535; May 1; v. 238; p. 150.

Hamm, William S., Hubbard Woods, T. A. Legge, and N. Krohn, assignors to The Adams & Westlake Company, Chicago, Ill. Washstand. No. 1,226,879; May 22; v. 238; p. 1077.

Hammer, Anders O., Williams, Mont. Level. No. 1,224,536; May 1; v. 238; p. 150.

Hamner, Joseph C. (See Jahn and Hamner.)

Hammond, Phillip W., Columbus, Ohio. Electric signal and damper control. No. 1,225,437; May 8; v. 238; p. 511.

Hamric, Grover B., Sleith, W. Va. Automatic stave-sawing machine. No. 1,224,635; May 1; v. 238; p. 185.

Hancock, Harry H., Swampscott, Mass. Type-binder. No. 1,228,019; May 29; v. 238; p. 1491.

Hancock, Harry W. (See Schinkez, Albert, assignor.)

Hand, Frederick E., assignor to The Vulcan Plow Company, Evansville, Ind. Plow. No. 1,226,510; May 15; v. 238; p. 915.

Handschuch, Frances P., New York, N. Y. Stocking. No. 1,226,208; May 15; v. 238; p. 814.

Handy, Joel B. (See Bratsch, Theodore G., assignor.)

Hanken, Edward E., Appleton City, Mo. Water-motor. No. 1,227,905; May 29; v. 238; p. 1452.

Hanlon, Michael J. (See Houghton, Ralph E., assignor.)

Hannon, Custer L., and C. Cross, Skiatook, Okla. Nut and bolt lock. No. 1,225,626; May 8; v. 238; p. 574.

Hansen, Albert E., deceased; E. Hipp, administratrix, Topeka, Kans. Track level and gage. No. 1,224,165; May 1; v. 238; p. 17.

Hansen, Augie L., Evanston, assignor to Justrite Manufacturing Company, Chicago, Ill. Acetylene-lamp. No. 1,224,537; May 1; v. 238; p. 151.

Hansen, Johan, Tonopah, Nev. Axle attachment for automobiles. No. 1,227,611; May 29; v. 238; p. 1350.

Hansen, Marinius, Brooklyn, N. Y. Machine for grooving lenses. No. 1,226,329; May 15; v. 238; p. 858.

Hanson, Hans, Hartford, Conn., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,226,970; May 22; v. 238; p. 1109.

Hanson, Harry, Revere, Mass. Boring-machine. No. 1,228,110; May 29; v. 238; p. 1522.

Hanson, Lennie A., Deering, N. D. Attachment for motor-cars. No. 1,226,656; May 22; v. 238; p. 1001.

Hanzlik, Henry J., assignor to De Laval Steam Turbine Company, Trenton, N. J. Valve and valve-gear for elastic-fluid turbines. No. 1,227,612; May 29; v. 238; p. 1351.

Haran, Thomas S., Wishaw, Scotland. Machine for effecting the rapid propulsion of the human body in water. No. 1,226,708; May 22; v. 238; p. 1030.

Hardie, Robert W., Hartsdale, N. Y. Heater and radiator. No. 1,227,263; May 22; v. 238; p. 1208.

Hardinge Brothers. (See Hardinge, Franklin, assignor.)

Hardinge, Franklin, assignor to Hardinge Brothers, Chicago, Ill. Tool-holder. No. 1,226,657; May 22; v. 238; p. 1001.

Hardy, Emery E., Bayside, N. Y. Roller-skate. No. 1,228,111; May 29; v. 238; p. 1522.

Harlow, George D., St. Louis, Mo. Trolley. No. 1,228,206; May 29, v. 238; p. 1551.

Harmon, Frank L., Beverly, Mass., assignor to Singer Manufacturing Company, Elizabeth, N. J. Eyleting-machine. No. 1,224,460; May 1; v. 238; p. 125.

Harper, Frederick, Chicago, Ill. Refuse-receptacle. No. 1,226,511; May 15; v. 238; p. 915.

Harrill, Robert L., Lathmore, N. C. Manure-drill. No. 1,225,538; May 1; v. 238; p. 151.

Harris, Albert J. B., East Rochester, N. Y. Coupling-key-retaining means. No. 1,224,461; May 1; v. 238; p. 125.

Harris Automatic Press Company, The. (See Anderson, Nels A., assignor.)

Harris, Edward G., Jefferson Barracks, Mo. Hair-cutting instrument. No. 1,224,462; May 1; v. 238; p. 125.

Harris, George W., Brushton, N. Y. Coffin and rough box. No. 1,228,112; May 29; v. 238; p. 1523.

Harris, Hugh H., Alexandria, Va. Plumbing appliance. No. 1,226,209; May 15; v. 238; p. 814.

Harris, John S., St. Louis, Mo. Rim and tire for wheels. No. 1,226,880; May 22; v. 238; p. 1077.

Harrison, Charles E., Littleton, Colo. Radiator-covering. No. 1,224,539; May 1; v. 238; p. 152.

Harry L. Husemann Refrigerator & Supply Company. (See Schulde, John, assignor.)

Hart, Benjamin F., Jr., Hoboken, N. J. Cooling-tower. No. 1,228,207; May 29; v. 238; p. 1551.

Hart, Franklin H., assignor to C. Cowles & Co., New Haven, Conn. Switch for electric lights. No. 1,227,132; May 22; v. 238; p. 1165.

Hart, Frederick A., Jersey City, N. J., assignor to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,226,072; May 15; v. 238; p. 769.

Hart, Frederick A., Jersey City, and B. C. Stickney, Elizabeth, N. J., assignors, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,225,810; May 15; v. 238; p. 679.

Hart & Hegeman Manufacturing Company, The. (See Guett, Monroe, assignor.)

Hart, William J., Mount Vernon, N. Y., assignor to Splitdorf Electrical Company, Newark, N. J. Combined starting and ignition switching device and circuits therefor. No. 1,226,971; May 22; v. 238; p. 1110.

Hart, William J., Mount Vernon, N. Y., assignor to Splitdorf Electrical Company, Newark, N. J. Auxiliary starting device for internal-combustion engines. No. 1,226,972; May 22; v. 238; p. 1110.

Hartenheim, Max, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Relay. No. 1,227,433; May 22; v. 238; p. 1261.

Hartford Rubber Works Company, The. (See Fisher, George F., assignor.)

Hartigan, Patrick J. (See Kearns and Hartigan.)

Hartman, Stephen L., Fillmore, Cal. Phonograph-cabinet. No. 1,227,536; May 22; v. 238; p. 1206.

Hartmann, Max. (See Hüssy and Hartmann.)

Hartnett, Christopher M., Chicago, Ill. Mouthpiece for telephone instruments. No. 1,224,922; May 8; v. 238; p. 336.

Hartsell, Jonah L., and W. J. West, assignors to Young-Hartsell Mills Company, Concord, N. C. Card-feeler stop-motion. No. 1,227,613; May 29; v. 238; p. 1351.

Hartsough, Walter W., Minneapolis, Minn. Ditching-machine. No. 1,225,327; May 8; v. 238; p. 473.
Hartwig, Theodore G., *et al.* (See Goetzke, Otto, assignor.)
Harvey, Louis B., W. Hornbeck, and B. Bisinger, Sacramento, Cal. Retaining-clamp for demountable rims. No. 1,225,126; May 8; v. 238; p. 405.
Harwell, Meade S. (See Stark and Harwell.)
Hastings, Donald T. (See Watts and Hastings.)
Hasty, Otis R., Elgin, Ill. Shoe-shining chair. No. 1,225,811; May 15; v. 238; p. 679.
Hathaway, Edgar F., Boston, and C. D. Lanning, Dorchester, assignors to American Warp Drawing Machine Company, Boston, Mass. Pattern-controlled device. No. 1,225,328; May 8; v. 238; p. 474.
Hathaway, Edgar F., and C. Lea, Boston, Mass., assignors to American Warp Drawing Machine Company. Textile-machine. No. 1,227,537; May 22; v. 238; p. 1296.
Haubner, John W., Friday Harbor, Wash. Fish-cleaning device. No. 1,224,923; May 8; v. 238; p. 336.
Haug, Martin J., Madelia, Minn. Automobile-jack. No. 1,224,298; May 1; v. 238; p. 66.
Haultain, Herbert E. T., Toronto, Ontario, Canada. Concentrating and separating minerals by flotation. No. 1,226,330; May 15; v. 238; p. 859.
Hauptman, Herman, Pittsburgh, Pa. Pencil attachment for sectional rules. No. 1,227,614; May 29; v. 238; p. 1351.
Hauser, Peter D., San Antonio, Tex. Safety-razor-blade sharpener. No. 1,224,924; May 8; v. 238; p. 337.
Haverstick, Daniel F., Trenton, N. J. Floor-covering. No. 1,225,954; May 15; v. 238; p. 727.
Havrilla, Andy, Senecaville, Ohio. Rail-joint. No. 1,226,512; May 15; v. 238; p. 916.
Hawbaker, Claude C., *et al.* (See Arner, Joseph, assignor.)
Hawes, Olga B., Paterson, N. J. Syringe and tube hanger. No. 1,225,243; May 8; v. 238; p. 442.
Hawk, Beecher A., *et al.* (See Burgess, John W., assignor.)
Hawkins, Fletcher M., Greenville, Tex. Fumigating apparatus. No. 1,225,627; May 8; v. 238; p. 574.
Hawkins, Frank C. (See Stubblefield and Hawkins.)
Haworth, Walter N., and J. C. Irvine, St. Andrews, Scotland. Manufacture of hypochlorous acid. No. 1,227,049; May 22; v. 238; p. 1135.
Hawthorne, Ellsworth, Bridgeport, Conn. Vehicle-lamp. No. 1,224,463; May 1; v. 238; p. 126.
Hayden, Harold P., Perth Amboy, N. J., assignor to The Barber Asphalt Paving Company, Philadelphia, Pa. Amelioration of soil. No. 1,228,361; May 29; v. 238; p. 1603.
Hayes, John P., assignor of one-half to J. E. Barnhart, Pittsburgh, Pa. Switch board or mounting. No. 1,228,362; May 29; v. 238; p. 1603.
Hayes Pump & Planter Company. (See Hayes, Ralph W. E., assignor.)
Hayes, Ralph W. E., assignor of one-half to Hayes Pump & Planter Company, Galva, Ill. Attachment for spray-rods. No. 1,225,029; May 8; v. 238; p. 372.
Hayes, Robert D., assignor to Index Visible, Incorporated, New Haven, Conn. Index or file. No. 1,224,636; May 1; v. 238; p. 185.
Hayes, Stephen Q., and C. M. Moss, Pittsburgh, Pa., assignors to Westinghouse Electric and Manufacturing Company. Switching device. No. 1,227,434; May 22; v. 238; p. 1261.
Hayes, Thomas J., Roslindale, assignor to Arbetter Felling Machine Company, Boston, Mass. Feeding mechanism for blindstitching-machines. No. 1,225,628; May 8; v. 238; p. 574.
Hayes, Thomas J., assignor to Arbetter Felling Machine Company, Boston, Mass. Seam for sewed articles. No. 1,226,210; May 15; v. 238; p. 814.
Haynes, David W., Lakemp, Okla. Tiltable turn-table. No. 1,225,030; May 8; v. 238; p. 372.
Hayton, Thomas R., Appleton, Wis. Device for covering holes in vessels. No. 1,226,881; May 22; v. 238; p. 1078.
Hayward, Charles O., Richland, Mich. Hat-hanger. No. 1,227,906; May 29; v. 238; p. 1453.
Hazen, Edward H., and S. L. Levi, New York, N. Y. Horseshoe. No. 1,227,133; May 22; v. 238; p. 1165.
Hazlewood, William A., assignor of one-half to J. A. Whiteside, Fort Worth, Tex. Locomotive driving-box. No. 1,227,907; May 29; v. 238; p. 1453.
Heal, William S. (See Behm, Henry, assignor.)
Heath, Lewis W., Hastings, Mich. Connector for circuit-wires. No. 1,225,127; May 8; v. 238; p. 405.
Hebert, Ubald, Manchester, N. H., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Shuttle. No. 1,226,613; May 15; v. 238; p. 947.
Heenan & Froude Limited. (See Heenan, John N. D., assignor.)
Heenan, John N. D., Chapel Walks, assignor to Heenan & Froude Limited, Manchester, England. Superheater for locomotive, marine, and other tubular boilers. No. 1,227,435; May 22; v. 238; p. 1261.
Heeter, Jessie J. (See Ford, Loy, and Heeter.)
Hegeler, Herman. (See Hegeler, Julius W. and H.)
Hegeler, Julius W., and H. Hegeler, deceased, L. S. Hegeler, executrix, assignors to The Hegeler Zinc Company, Danville, Ill. Zinc-smelting furnace. No. 1,227,050; May 22; v. 238; p. 1136.
Hegeler, Louise S., executrix. (See Hegeler, Julius W. and H.)
Hegeler Zinc Co., The. (See Hegeler, Julius W. and H., assignors.)
Heiden, Louis W., Arthur, N. D. Grain-handling device. No. 1,225,031; May 8; v. 238; p. 373.
Heidt, Webster B. (See Chandler, Elbert R., assignor.)
Heilemann, Walter, and O. Behnke, Essen-on-the-Ruhr, and N. Koch, Essen-on-the-Rellinghausen, assignors to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Device for adjusting the recoil length in fluid recoil-brakes for guns. No. 1,227,134; May 22; v. 238; p. 1166.
Heilmann, William A., Newark, N. J., assignor to The R. Neumann Hardware Co. Sheet-metal bag-frame. No. 1,224,540; May 1; v. 238; p. 152.
Heimark, Selmer H., Hawley, Minn. Rope-measuring device. No. 1,225,128; May 8; v. 238; p. 405.
Heimbach, Joseph F., trustee. (See McClelland, Earby H., assignor.)
Heimerl, Julius E., Milwaukee, Wis. Heated receptacle for meals. No. 1,227,782; May 29; v. 238; p. 1410.
Heinkel, Christian F., and W. G. Lueters, Cleveland, Ohio. Surfacing-machine. No. 1,227,051; May 22; v. 238; p. 1136.
Heins, Otto, New York, N. Y., and C. M. Wild, Springfield, Mass., assignors to Bosch Magneto Company, New York, N. Y. Magneto. No. 1,225,330; May 8; v. 238; p. 474.
Heins, Otto, New York, and V. W. Kliesrath, Port Washington, assignors to Bosch Magneto Company, New York, N. Y. Distributing mechanism for electrical ignition systems. No. 1,226,658; May 22; v. 238; p. 1001.
Heller, Carl. (See Doujak, Maria, assignor.)
Hellmund, Rudolf E., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control system for single-phase motors. No. 1,224,166; May 1; v. 238; p. 18.
Hellmund, Rudolf E., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control system. No. 1,224,167; May 1; v. 238; p. 18.
Helmond, William F., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,225,331; May 8; v. 238; p. 475.
Hemenway, John F., New York, N. Y. Automatic pressure-roll release for clothes-wringers. No. 1,224,541; May 1; v. 238; p. 153.
Hemenway, John F., New York, N. Y. Clothes-wringer. No. 1,226,331; May 15; v. 238; p. 859.
Hemleb, Martin, Elizabeth, N. J., assignor to The Singer Manufacturing Company. Rotary-hook sewing-machine. No. 1,226,973; May 22; v. 238; p. 1111.
Hench & Dromgold Company. (See Birnstock, William W., assignor.)
Hendee Manufacturing Company. (See Jacobson, Edward B., assignor.)
Henderson, James B., Lee, England. Gyro-compass. No. 1,226,882; May 22; v. 238; p. 1078.
Henderson, Wilbert D., San Francisco, Cal. Furring and partition channel. No. 1,227,264; May 22; v. 238; p. 1209.
Hendricks, Brandon. (See Riemer and Hendricks.)
Hendricks, James S., assignor of one-half to F. B. Goetter, Colville, Wash. Hair-cleaner. No. 1,225,244; May 8; v. 238; p. 443.
Hendricks, Jim A. (See Krugh and Hendricks.)
Hendrix, Hiram E., Victoria, British Columbia, Canada. Copy-holder for type-writers. No. 1,227,436; May 22; v. 238; p. 1262.
Hennies, Emil M., Donnellson, Iowa. Carrier. No. 1,225,245; May 8; v. 238; p. 443.
Henrici, Fritz W. A., Dorchester, assignor to L. F. Buff, Jamaica Plain, Mass. Reversing mechanism. No. 1,227,783; May 29; v. 238; p. 1410.
Henry, Earl, Albert Lea, Minn. Demountable rim. No. 1,224,637; May 1; v. 238; p. 186.
Henry, Edward C., Missoula, Mont. Stovepipe-lock. No. 1,228,321; May 29; v. 238; p. 1589.
Henry, Frank M. (See Fraser and Henry.)
Henry R. Worthington, Inc. (See Berrigan, John J., assignor.)
Henry Vogt Machine Company. (See Thurstensen, Soren, assignor.)
Henry, William S., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Circuit-controller. No. 1,224,542; May 1; v. 238; p. 153.
Hensley, Sewell S., Mexia, Tex. Drill. No. 1,225,629; May 8; v. 238; p. 575.
Hensley, William T., Bound Brook, assignor to American Engine and Electric Company, Middlesex, N. J. Clutch mechanism. No. 1,226,769; May 22; v. 238; p. 1040.
Hentschel, Paul J., Baltimore, Md. Garment-fastener. No. 1,227,908; May 29; v. 238; p. 1453.
Herber, Samuel M., Inza, Mo. Distillation of oil. No. 1,227,558; May 22; v. 238; p. 1303.
Herber, Samuel M., Inza, Mo. Apparatus for oil distillation. No. 1,227,559; May 22; v. 238; p. 1304.
Herber, Samuel M., Inza, Mo. Revoluble retort for distilling oil. No. 1,227,560; May 22; v. 238; p. 1304.
Herbert, Albert H., *et al.* (See Connor and Miles, assignors.)
Herman, Francis A., Slatington, Pa. Permutation-padlock. No. 1,224,168; May 1; v. 238; p. 19.
Herman, Maxence B., Memphis, Tenn. Surgical instrument. No. 1,226,513; May 15; v. 238; p. 916.



Herman Pneumatic Machine Company. (See Ringle, Robert F., assignor.)
Herrick, Charles G., Independence, Iowa. Eye-testing device. No. 1,228,020; May 29; v. 238; p. 1491.
Herrick, Gerardus P., New York, N. Y. Machine for cutting glass. No. 1,226,659; May 22; v. 238; p. 1002.
Herrick, William J., Chicago, Ill. Transmission-gear. No. 1,227,135; May 22; v. 238; p. 1166.
Herrick, William J., Chicago, Ill. Clutch. No. 1,227,136; May 22; v. 238; p. 1166.
Herschede, Edward F., Cincinnati, Ohio. Clasp. No. 1,225,710; May 8; v. 238; p. 601.
Herschel, Richard D., Birmingham, Ala. Camera focusing device. No. 1,226,660; May 22; v. 238; p. 1002.
Hershman, Paul R., assignor to Armour Fertilizer Works, Chicago, Ill. Production of refractory materials. No. 1,227,900; May 29; v. 238; p. 1453.
Herskovitz, Max, assignor to Peerless Light Company, Chicago, Ill. Lighting-fixture. No. 1,226,211; May 15; v. 238; p. 815.
Herr, Herbert T., Pittsburgh, assignor, by mesne assignments, to The Westinghouse Machine Company, East Pittsburgh, Pa. Speed-indicator. No. 1,226,073; May 15; v. 238; p. 769.
Hertzfeldt, Albert C., Independence, Wis. Vehicle-seat. No. 1,227,437; May 22; v. 238; p. 1262.
Hess, Clare W., Flint, Mich., assignor of one-half to G. L. Adams, Fowlerville, Mich. Carbureter. No. 1,227,137; May 22; v. 238; p. 1167.
Hess, Edward B., Brooklyn, assignor to Royal Typewriter Company, Inc., New York, N. Y. Shift-key mechanism for type-writing machines. No. 1,226,770; May 22; v. 238; p. 1040.
Hess, Edward B., Brooklyn, assignor to Royal Typewriter Company, Inc., New York, N. Y. Type-writing machine. No. 1,227,438; May 22; v. 238; p. 1262.
Hess, Henry, assignor to Hess-Ives Corporation, Philadelphia, Pa. Color photography. No. 1,225,246; May 8; v. 238; p. 443.
Hess-Ives Corporation. (See Hess, Henry, assignor.)
Hester, Loring B., assignor of one-half to J. W. Black, Bond, Miss. Coffee-pot. No. 1,225,812; May 15; v. 238; p. 680.
Heulings, William H., Jr., assignor to The J. G. Brill Company, Philadelphia, Pa. Car-door-operating device. No. 1,228,322; May 29; v. 238; p. 1589.
Heuston, Adam K., Roaring Spring, Pa. Splice-bar. No. 1,226,212; May 15; v. 238; p. 815.
Hewey, Everett L., East Dixfield, Me. Saw-set. No. 1,226,514; May 15; v. 238; p. 916.
Hewis, George P., Regina, Saskatchewan, Canada. Indicator for fluid-containers. No. 1,224,741; May 1; v. 238; p. 223.
Hewitt, Edward R., Midvale, N. J. Drive mechanism for automobiles. No. 1,224,543; May 1; v. 238; p. 154.
Hewitt, Herbert H., and C. H. Paeplow, Jr., Buffalo, N. Y. Hose-coupling. No. 1,224,638; May 1; v. 238; p. 186.
Hewitt, Peter C., Ringwood Manor, N. J. Apparatus for translating electrical variations. No. 1,225,333; May 8; v. 238; p. 476.
Hewitt, Peter C., Passaic, N. J. High-speed motor-craft. No. 1,227,784; May 29; v. 238; p. 1410.
Hewitt, Peter C., New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Co., Hoboken, N. J. Apparatus for transforming electrical energy. No. 1,224,639; May 1; v. 238; p. 186.
Hewitt, Peter C., Ringwood Manor, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Method of and apparatus for translating electrical variations. No. 1,225,332; May 8; v. 238; p. 475.
Hice, William E., Pittsburgh, Pa. Grinding apparatus. No. 1,224,169; May 1; v. 238; p. 19.
Hick, Harry J., Alliance, Ohio. Filing appliance. No. 1,227,550; May 22; v. 238; p. 1301.
Hick, Harry J., Alliance, Ohio. Filing appliance. No. 1,228,021; May 29; v. 238; p. 1491.
Hick, Harry J., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,227,785; May 29; v. 238; p. 1410.
Hickman, John, Tangiefing, Saskatchewan, Canada. Rotary tooth-brush. No. 1,225,955; May 15; v. 238; p. 727.
Hicks, James W., Clifton Hill, assignor of one-third to T. A. Nolan and one-third to E. Webb, Victoria, Australia. Clothes-pin. No. 1,225,630; May 8; v. 238; p. 575.
Hicks, Thomas W., Minneapolis, Minn. Planting. No. 1,226,515; May 15; v. 238; p. 916.
Hidlebaugh, W. W. (See Palmer, Ira A., assignor.)
Higgins, Arthur H., assignor to Minerals Separation Limited, London, England. Treatment of ores. No. 1,227,615; May 29; v. 238; p. 1352.
Higham, Daniel, New York, N. Y. Combined phonograph and moving-picture apparatus. No. 1,226,883; May 22; v. 238; p. 1078.
Hildebrand, Benjamin F., Agnew, Cal. Nut-locking washer. No. 1,227,265; May 22; v. 238; p. 1209.
Hilgendorf, Louis W., Fountain, Colo. Cartridge-magazine. No. 1,227,439; May 22; v. 238; p. 1263.
Hiliger, James, Scottville, Mich. Separator or screen for threshing-machines. No. 1,224,377; May 1; v. 238; p. 94.
Hill, Edward F., assignor to E. W. Hill, Chicago, Ill. Loose-leaf-binder construction. No. 1,224,464; May 1; v. 238; p. 126.
Hill, Edward W. (See Hill, Edward F., assignor.)
Hill, Edward W., Chicago, Ill. Loose-leaf binder. No. 1,224,465; May 1; v. 238; p. 127.
Hill, George S., Strafford, N. H., assignor to United Shoe Machinery Company, Paterson, N. J. Eyelet-sewing machine. No. 1,225,247; May 8; v. 238; p. 444.
Hill, Lindsay L., Louisville, Ky. Railway-crossing gate. No. 1,226,213; May 15; v. 238; p. 816.
Hill, Roille C., Memphis, Tenn. Transmission mechanism. No. 1,228,208; May 29; v. 238; p. 1552.
Hill, Roille C., Memphis, Tenn. Propelling-wheel. No. 1,228,209; May 29; v. 238; p. 1552.
Hill, Walter L., Kenna, N. Mex. Hot-water drum. No. 1,226,516; May 15; v. 238; p. 917.
Hill, William J. (See Ferrier, Albert C., assignor.)
Hillyard, Newton S., St. Joseph, Mo. Paper-towel and toilet-paper fixture. No. 1,224,378; May 1; v. 238; p. 95.
Hillyer, Virgil M., Baltimore, Md. Educational device for teaching reading. No. 1,224,742; May 1; v. 238; p. 228.
Hilton, Clarence E., Monarch, Wyo. Dumping device. No. 1,225,813; May 15; v. 238; p. 680.
Hiltz, Lawson D., Marysville, New Brunswick, Canada. Wetting attachment for trimming-machines. No. 1,227,786; May 29; v. 238; p. 1411.
Himelspach, Frank G., Trinidad, Colo. Cartridge-belt. No. 1,227,266; May 22; v. 238; p. 1209.
Hindman, Isaiah E., Oakmont, assignor to The Duff Manufacturing Company, Pittsburgh, Pa. Screw-jack. No. 1,228,210; May 29; v. 238; p. 1552.
Hindmarsh, Percy J., Lincoln, Nebr., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Post-anchor. No. 1,224,925; May 8; v. 238; p. 337.
Hindmarsh, Percy J., Lincoln, Nebr., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Fence-post anchor. No. 1,224,926; May 8; v. 238; p. 337.
Hindmarsh, Percy J., Lincoln, Nebr., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Fence-post. No. 1,224,927; May 8; v. 238; p. 338.
Hine, Adelbert P., Woodbury, Conn. Spinning-ring. No. 1,226,661; May 22; v. 238; p. 1002.
Hinkle, Clarence E., Roswell, N. Mex. Portable electric water-heater. No. 1,225,631; May 8; v. 238; p. 576.
Hinman, Leroy R., assignor, by mesne assignments, to The Flume Improvement Company, Denver, Colo. Flume. No. 1,226,662; May 22; v. 238; p. 1002.
Hinson, William M., Local, Ala. Leg-brace. No. 1,228,113; May 29; v. 238; p. 1523.
Hipp, Ella, administratrix. (See Hansen, Albert E.)
Hiscock, Emory C., assignor to J. C. Farwell, Chicago, Ill. Pneumatic action for player-pianos. No. 1,227,787; May 29; v. 238; p. 1411.
Hiskey, George M., Los Angeles, Cal. Safety-razor. No. 1,226,614; May 15; v. 238; p. 947.
Hitch, Albert J., Windsor, Ontario, Canada. Paper-hanging machine. No. 1,225,731; May 8; v. 238; p. 609.
Hitchcock, Romyn, New York, N. Y. Telegraph system. No. 1,224,640; May 1; v. 238; p. 186.
Hite, Charles E., Burlington, N. J., assignor to Universal Briquetting Company. Treating coal. No. 1,224,641; May 1; v. 238; p. 187.
Hixson, Calvin D., Hiawatha, Kans. Drinking-fountain for poultry. No. 1,224,544; May 1; v. 238; p. 154.
Hoberg, Frank H., and C. C. Thomas, Jr., Green Bay, Wis. Couch-roll. No. 1,228,114; May 29; v. 238; p. 1523.
Hobing, John W., Cincinnati, Ohio. Fuel-valve. No. 1,227,616; May 29; v. 238; p. 1352.
Hobson, Oliver J. (See Beckworth and Hobson.)
Hochberg, Oscar, assignor to American Car and Foundry Company, St. Louis, Mo. Reinforced car-wall construction. No. 1,224,743; May 1; v. 238; p. 224.
Hochstetter, Frederick W., New York, N. Y., assignor to H. P. Patents and Processes Company, Inc. Device for exhibiting moving pictures. No. 1,226,663; May 22; v. 238; p. 1003.
Hochstetter, Frederick W., New York, assignor to P. M. Pierson, Scarboro, N. Y. Apparatus for restoring blemished moving-picture films. No. 1,227,138; May 22; v. 238; p. 1167.
Hochstetter, Robert, assignor to The Ault & Wiborg Company, Cincinnati, Ohio. Ink and producing same. No. 1,226,884; May 22; v. 238; p. 1079.
Hochstrasser, Morgan T., Gainesville, Fla. Mixing cement mortar. No. 1,225,129; May 8; v. 238; p. 406.
Hodgdon, Herbert W., *et al.* (See Cleaver, Fremont J., assignor.)
Hodgkinson, William, *et al.* (See Rathman, Gilbert, assignor.)
Hodgson, John G., Maywood, Ill., assignor to American Can Company, New York, N. Y. Spraying-machine. No. 1,227,617; May 29; v. 238; p. 1353.
Hodgson, John G., Maywood, Ill., assignor to American Can Company, New York, N. Y. Apparatus for spreading lacquer over the interior walls of cans. No. 1,227,618; May 29; v. 238; p. 1353.

Hodgson, John G., Maywood, Ill., assignor to American Can Company, New York, N. Y. Can-lacquering machine. No. 1,227,619; May 29; v. 238; p. 1353.
Hodgson, John R. C. (See Johnston, William J., assignor.)
Hoefelman, Adolph B. and E. O., Platte Center, Nebr. Pedal-lock for automobiles. No. 1,225,130; May 8; v. 238; p. 406.
Hoefelman, Ernst O. (See Hoefelman, Adolph B. and E. O.)
Hoene, Alexander E., Tacoma, Wash. Corner-fastener for iron beds. No. 1,226,885; May 22; v. 238; p. 1079.
Hoepner, George, Chicago, Ill. Labeling-machine. No. 1,227,139; May 22; v. 238; p. 1168.
Hoffer, P. C., *et al.* (See Johnson, Rolly A. and G., assignors.)
Hoffman, Addison F., assignor of one-half to W. M. Parkin, Pittsburgh, Pa. Pickling-bath and making the same. No. 1,225,956; May 15; v. 238; p. 727.
Hoffman, Aubrey F., Longford, Kans. Halter. No. 1,227,440; May 22; v. 238; p. 1263.
Hoffman, Cromer, Mechanicsville, N. Y. Note-register. No. 1,224,170; May 1; v. 238; p. 19.
Hoffman, John N., Forest Grove, Oreg. Animal-trap. No. 1,226,517; May 15; v. 238; p. 917.
Hofman, John, Bee Branch, Ark. Operating mechanism for churns. No. 1,227,267; May 22; v. 238; p. 1210.
Hogan, Roger, Geneva, N. Y. Combination-range. No. 1,225,248; May 8; v. 238; p. 444.
Hogan, Thomas L., New York, N. Y. Sleeve-protector and advertising device. No. 1,227,052; May 22; v. 238; p. 1137.
Hohnberg, Fritz. (See Lehmann and Hohnberg.)
Holcom, Lindsey E., Twisp, Wash. Snap-hook. No. 1,224,744; May 1; v. 238; p. 224.
Holcomb, Walter O., *et al.* (See Morris, Robert B., assignor.)
Holden, Artemas E. F., Centralia, W. Va. Churn-dasher. No 1,226,518; May 15; v. 238; p. 917.
Holden, Edward R., Los Angeles, Cal. Hydrometallurgy. (Reissue.) No. 14,298; May 8; v. 238; p. 611.
Holder, Eugene H. (See Salter, Edmond A., assignor.)
Holland-Letz, Lud, Chicago, Ill., assignor to International Harvester Company of New Jersey. Switch-controlling mechanism for self-rake reapers. No. 1,227,788; May 29; v. 238; p. 1412.
Holland, Newman H., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Telephone-transmitter. No. 1,226,886; May 22; v. 238; p. 1079.
Holland, William H., Alderley Edge, England. Mud-guard for vehicles. No. 1,228,211; May 29; v. 238; p. 1553.
Holle, Alexander A., Thames Ditton, assignor to The Variplane Company, Limited, London, England. Plane and the like for aeroplanes. No. 1,225,711; May 8; v. 238; p. 602.
Holley, Henry E., Otisville, N. Y. Ophthalmic mounting. No. 1,227,620; May 29; v. 238; p. 1354.
Hollister, Edwin H., Ashland, Nebr. Printing-frame. No. 1,225,957; May 15; v. 238; p. 728.
Hollister, George S., assignor to Gibson-Hollister Manufacturing Company, Boston, Mass. Ignition device. No. 1,224,299; May 1; v. 238; p. 66.
Holloway, John W. (See Barnett and Holloway.)
Holly, Carlos, Lockport, N. Y., assignor to F. N. Burt Company, Limited, Toronto, Canada. Shearing mechanism. No. 1,227,621; May 29; v. 238; p. 1354.
Holman, Ralph H. (See Shenk and Holman.)
Holmes, Elbridge R., and S. Davis, assignors to Crompton & Knowles Loom Works, Worcester, Mass. Shuttle tension device. No. 1,226,519; May 15; v. 238; p. 917.
Holmes, Frank E. (See Cyphers and Holmes.)
Holmes Motor Corporation. (See Holmes, Roy B., assignor.)
Holmes, Roy B., assignor to Holmes Motor Corporation, Los Angeles, Cal. Motor. No. 1,224,642; May 1; v. 238; p. 187.
Holophane Glass Company. (See Mygatt, Otis A., assignor.)
Holst, Lodewyk J. R., assignor to A. Brock, Jr., Philadelphia, Pa. Means for determining ground speed. No. 1,224,545; May 1; v. 238; p. 154.
Holste, Nels M., Brooklyn, N. Y. Button-fastener. No. 1,225,814; May 15; v. 238; p. 680.
Holt, Harold E. S., Farnborough, England. Illuminating device for use on air-craft. No. 1,227,441; May 22; v. 238; p. 1263.
Holt Manufacturing Company. (See Turnbull, William, assignor.)
Holtschneider, Leo G. G., St. Louis, Mo. Insulated screw-driver. No. 1,225,249; May 8; v. 238; p. 444.
Holub-Dusha Company. (See Dusha and Feyk, assignors.)
Homans, Thomas S. (See Bertram and Homans.)
Homans, Thomas S., Hempstead, assignor to Intertype Corporation, New York, N. Y. Mold for line-casting machines. No. 1,225,632; May 8; v. 238 p. 576.
Homans, Thomas S., Hempstead, assignor to Intertype Corporation, New York, N. Y. Typographical machine. No. 1,225,633; May 8; v. 238; p. 576.
Home Devices Corporation (See Sauer, Frederick W., assignor.)
Honohan, William D., Chicago, Ill. Weight-grading machine. No. 1,224,379; May 1; v. 238; p. 95.
Hood, Ernest K. (See Wolff and Hood.)
Hooks, C. F. (See Ely, Maurice M., assignor.)
Hooper, Louis M., Rutherford, N. J. Bath-tub. No. 1,227,140; May 22; v. 238; p. 1168.
Hoople, Charles I., Oakland, Cal. Connecting means for fabric strips. No. 1,227,053; May 22; v. 238; p. 1137.
Hoover, George W. (See Johnson and Hoover.)
Hoover, Howard E., Chicago, Ill. Lubricating system. No. 1,227,141; May 22; v. 238; p. 1168.
Hoover, Howard E., Chicago, Ill. assignor to Hoover Suction Sweeper Company, New Berlin, Ohio. Cleaner. No. 1,227,142; May 22; v. 238; p. 1168.
Hoover Suction Sweeper Company. (See Hoover, Howard E., assignor.)
Hope, Ernest, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Finishing-machine. No. 1,227,622; May 29; v. 238; p. 1354.
Hope Machine Company. (See Kinsley, Lewis, assignor.)
Hopedale Manufacturing Company. (See Kennedy, Henry A., assignor.)
Hopkins, Frederick, Buffalo, N. Y. Expression-indications for perforated note-sheets for player-pianos and the like. No. 1,226,332; May 15; v. 238; p. 859.
Hopkins, Ralph Z., Detroit, Mich. Building construction. No. 1,226,214; May 15; v. 238; p. 816.
Hopwood, Ernest P., Portland, Oreg. Combination cup-board and table. No. 1,225,958; May 15; v. 238; p. 728.
Hornbeck, Walter. (See Harvey, Hornbeck, and Bisinger.)
Horsley, David, Bayonne, N. J. Automatic light-controlled film-printing apparatus. No. 1,227,623; May 29; v. 238; p. 1355.
Horton, Albert J., White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,227,789; May 29; v. 238; p. 1412.
Horton, Albert J., White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Control-panel. No. 1,227,790; May 29; v. 238; p. 1412.
Horton, Fred E., *et al.* (See Lind, James A., assignor.)
Horwitz, Barnett I., Denver, Colo. Making cigar-tips. No. 1,226,074; May 15; v. 238; p. 769.
Hosch, Walter E., St. Louis, Mo. Differential winding and measuring machine. No. 1,228,022; May 29; v. 238; p. 1492.
Hose, Walter R., New Ulm, Minn. Air-valve. No. 1,226,664; May 22; v. 238; p. 1003.
Hoskins, Laban A., assignor to E. T. Earl, Los Angeles, Cal. Locking means for printing-types. No. 1,225,712; May 8; v. 238; p. 602.
Hoskins, William, Chicago, Ill. Separating suspended pulp. No. 1,226,333; May 15; v. 238; p. 860.
Hotchkin, Paul M., Chicago, Ill. Reflector. No. 1,225,032; May 8; v. 238; p. 373.
Hothersall, John M., Brooklyn, assignor to American Can Company, New York, N. Y. Bung-seal. No. 1,227,143; May 22; v. 238; p. 1169.
Houck, Ralph M. (See Schoenman and Houck.)
Hough, Azel C., assignor to Hough Shade Corporation, Janesville, Wis. Mechanism for weaving slat-blinds. No. 1,225,815; May 15; v. 238; p. 680.
Hough Shade Corporation. (See Hough, Azel C., assignor.)
Hough, William S., Jr. (See Wiley and Hough.)
Houghton, Frederic D., Worcester, Mass. Spraying device. No. 1,225,713; May 8; v. 238; p. 602.
Houghton, Ralph E., and M. J. Hanlon, Cliftondale, Mass. Illuminating device for electric fixtures. No. 1,227,144; May 22; v. 238; p. 1169.
House, Charles E., Eustis, Nebr. Dirigible automobile-headlight. No. 1,226,665; May 22; v. 238; p. 1004.
Houser, Lawrence L., Mishawaka, Ind. Cuff-button. No. 1,228,212; May 29; v. 238; p. 1553.
Howard, William B., Brooklyn, N. Y. Automatically-timed asphalt-tester. No. 1,225,438; May 8; v. 238; p. 511.
Howe, Charles M. (See Howe, Lee and C. M.)
Howe, Lee and C. M., Nemaha, Iowa. Self-starter for automobile-engines. No. 1,225,816; May 15; v. 238; p. 681.
Howe, William H., Chicago, Ill. Compressor. No. 1,225,817; May 15; v. 238; p. 681.
Howell, Albert S., assignor to Bell & Howell Company, Chicago, Ill. Control means for motion-picture-printing machines. No. 1,225,335; May 8; v. 238; p. 477.
Howell, Ivy D., Ballston Spa, N. Y. Corset. No. 1,227,442; May 22; v. 238; p. 1264.
Howland, Chauncey W., assignor to The Standard Optical Company, Geneva, N. Y. Machine for centering, marking, and testing lenses. No. 1,225,334; May 8; v. 238; p. 476.
Howland, Henry P., Chicago, Ill. Stove for blast-furnaces. No. 1,224,928; May 8; v. 238; p. 338.
Hoyt, Clarence A., Tacoma, Wash. Camera exposure-indicator and shutter-lock. No. 1,224,300; May 1; v. 238; p. 66.
Hoyt, Francis R., East Orange, N. J., assignor to The Simms Magneto Co. Magneto electric machine. No. 1,226,666; May 22; v. 238; p. 1004.
Hrnich, Milan, assignor of one-half to R. Goyssovich, Conemaugh, Pa. Combined car and pipe coupling. No. 1,226,887; May 22; v. 238; p. 1079.
Hruby, John O., Jr., *et al.* (See Mueller, August E., assignor.)
Hruby, Thomas J., *et al.* (See Mueller, August E., assignor.)



Hubbard, Adra M. and O. M., Plainview, assignors of one-half to M. C. Wolfe and one-sixth to H. L. Battle and W. E. Hubbard, Dallas, Tex. Clutch and transmission device. No. 1,227,910; May 29; v. 238; p. 1453.
Hubbard, Eber J., Chicago, Ill. Sheet-metal spool. No. 1,225,959; May 15; v. 238; p. 728.
Hubbard, Oscar M. (See Hubbard, Adra M. and O. M.)
Hubbard, W. E., *et al.* (See Hubbard, Adra M. and O. M., assignors.)
Hubler, John, Brandon, Wis., assignor to Wisconsin Hemp Company. Fiber-breaking machine. No. 1,224,929; May 8; v. 238; p. 338.
Hudgins, John T., assignor of one-half to E. Sawyer, Norfolk, Va. Pipe-coupling. No. 1,228,323; May 29; v. 238; p. 1589.
Hudson Brass Works in the City of New York. (See Gillen, Paul, assignor.)
Huebner-Bleistein Patents Company. (See Fullmer and Runser, assignors.)
Huebner, Josef, assignor to Pan-American Rubber Co., Milwaukee, Wis. Tire for vehicles and making the same. No. 1,227,701; May 29; v. 238; p. 1413.
Huether, Paul, Pittsburgh, Pa. Fountain-brush. No. 1,226,520; May 15; v. 238; p. 918.
Huff, Albert J. (See Dohner and Huff.)
Huff, John M., San Francisco, Cal. Flying-machine. No. 1,226,521; May 15; v. 238; p. 918.
Hughes, Godfrey P., Melbourne, Victoria, and J. L. Armstrong, Caulfield, Melbourne, Victoria, Australia. Interlocking roofing-tile. No. 1,226,888; May 22; v. 238; p. 1080.
Hughes, Howard R., Houston, Tex. Horizontal-drilling machine. No. 1,224,930; May 8; v. 238; p. 339.
Hughes, Howard R., assignor to Hughes Tool Company, Houston, Tex. Rotary disk drill. No. 1,227,911; May 29; v. 238; p. 1454.
Hughes, James W. (See Gehman and Hughes.)
Hughes, Peter F., Perth Amboy, N. J., assignor to The Cuban-American Sugar Company. Sugar-cane mill. No. 1,227,145; May 22; v. 238; p. 1169.
Hughes Tool Company. (See Hughes, Howard R., assignor.)
Hull, Nathaniel D., assigner to The Hull Pump & Tank Company, Owensboro, Ky. Discharge-valve. No. 1,224,546; May 1; v. 238; p. 155.
Hull Pump & Tank Company, The. (See Hull, Nathaniel D., assignor.)
Hultgren, William H., Roselle Park, N. J. Toy. No. 1,227,268; May 22; v. 238; p. 1210.
Humber Limited. (See Burgess, Frederick T., assignor.)
Humbert, Richard E., Montclair, N. J. Toy. No. 1,224,643; May 1; v. 238; p. 188.
Humphrey Gas Pump Company. (See Brown, William C., assignor.)
Humphrey Gas Pump Company. (See Humphrey, Herbert A., assignor.)
Humphrey Gas Pump Company. (See Humphrey and Rusdell, assignors.)
Humphrey Gas Pump Company (See Trump, Charles C., assignor.)
Humphrey, George F., assignor to Alliance Vegetable Company, Limited, London, England. Dehydrating or drying apparatus. No. 1,225,634; May 8; v. 238; p. 577.
Humphrey, Herbert A., London, England, assignor to Humphrey Gas Pump Company. Raising or forcing liquid. No. 1,224,380; May 1; v. 238; p. 95.
Humphrey, Herbert A., London, England, assignor to Humphrey Gas Pump Company. Utilizing an expansive force in forcing or raising liquid. No. 1,224,644; May 1; v. 238; p. 188.
Humphrey, Herbert A., London, and W. J. Rusdell, Dudley, Worcester, England, assignors to Humphrey Gas Pump Company. Pump and compressor. No. 1,224,381; May 1; v. 238; p. 96.
Humphrey, Herbert A., London, and W. J. Rusdell, Dudley, England, assignors to Humphrey Gas Pump Company. Operating pumps. No. 1,224,931; May 8; v. 238; p. 339.
Humphreys, Arthur C., Toronto, Ontario, Canada. Railway-gate. No. 1,224,745; May 1; v. 238; p. 224.
Hunker, Martin L., assignor, by mesne assignments, to Whitaker-Glessner Company, Wheeling, W. Va. Batten-strip. No. 1,226,334; May 15; v. 238; p. 860.
Hunsicker, Charles M., Dayton, Ohio. Flying-machine. No. 1,227,269; May 22; v. 238; p. 1210.
Hunt-Helm-Ferris & Co. (See Ferris, Howard J., assignor.)
Hunt, Helm, Ferris & Company. (See Ferris, Henry L., assignor.)
Hunt, Ozello R., Chicago, Ill., assignor of one-half to J. F. Gall, Kenosha, Wis. Mattress. No. 1,228,213; May 29; v. 238; p. 1553.
Hunter, Howard M., *et al.* (See Johnson, Rolly A. and G., assignors.)
Hunter, John P., and H. Küntzler, Wilkes-Barre, Pa., assignors to Adder Machine Company. Mechanical movement for adding-machines. No. 1,225,960; May 15; v. 238; p. 729.
Hunter, John P., and H. Kuentzler, assignors to Adder Machine Company, Wilkes-Barre, Pa. Carrying mechanism. No. 1,225,961; May 15; v. 238; p. 729.
Hunter, Matthew A., Troy, N. Y. Electromagnetic element or structure. No. 1,226,667; May 22; v. 238; p. 1004.
Hunting, Irving A., Plainfield, N. J. Sheet-feeding mechanism for printing-presses. No. 1,224,645; May 1; v. 238; p. 188.
Huntly, Gibbs, Caro, Mich. Bill-file. No. 1,226,522; May 15; v. 238; p. 918.
Hupp Motor Car Corporation. (See Watts and Hastings, assignors.)
Hurd, Hubbard F., assignor to Cluett, Peabody & Co., Inc., Troy, N. Y. Fold-collar. No. 1,226,216; May 15; v. 238; p. 817.
Hurley Machine Company. (See Fisher, Alva J., assignor.)
Hurley, William L. (See Cameron, Charles E., assignor.)
Huseby, Albert A., Chicago, Ill. Motor-controlling mechanism for talking-machines. No. 1,224,301; May 1; v. 238; p. 66.
Huseby, Albert A., Chicago, Ill. Motor-controlling mechanism for talking-machines. No. 1,224,547; May 1; v. 238; p. 155.
Huseby, Albert A., Chicago, Ill. Sound-box mounting for talking-machines. No. 1,228,115; May 29; v. 238; p. 1523.
Huseby, Albert A., Chicago, Ill. Sound-box for talking-machines. No. 1,228,116; May 29; v. 238; p. 1524.
Hüssy, Paul, and M. Hartmann, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Silver compound of the acridin series and making same. No. 1,227,624; May 29; v. 238; p. 1356.
Hutchings, Charles E. (See Ruttan and Hutchings.)
Hutchinson, William H., Rochester, N. Y. Cooking device. No. 1,226,771; May 22; v. 238; p. 1041.
Huyette, Miles C., Buffalo, N. Y. Deflecting-plate for smoke-flues. No. 1,228,023; May 29; v. 238; p. 1492.
Hveem, Martin, Bayles, assignor of one-fourth to J. F. Finegan and one-fourth to S. Brunner, La Moine, Cal. Gearless differential device. No. 1,224,746; May 1; v. 238; p. 225.
Hyatt Roller Bearing Company. (See Lockwood, Charles S., assignor.)
Hyde, Courtney, Brooklyn, N. Y., assignor to Alphaduct Company, Jersey City, N. J. Flexible electrical conduit. No. 1,227,538; May 22; v. 238; p. 1297.
Hyde-Murphy Company. (See Turner, Joseph P., assignor.)
Hydraulic Pressed Steel Company, The. (See Richards, Archer W., assignor.)
Hydrogenation Company, The. (See Burchenal, John J., assignor.)
Hyle, Jacob A., assignor of one-half to J. F. Sweeney, Chicago, Ill. Combined rail-joint and tie-plate. No. 1,227,146; May 22; v. 238; p. 1169.
Hymans, Frederick, Glen Ridge, assignor to Otis Elevator Company, Jersey City, N. J. Safety device. No. 1,225,962; May 15; v. 238; p. 730.
Hymans, Frederick, Glen Ridge, assignor to Otis Elevator Company, Jersey City, N. J. Motor-control apparatus. No. 1,225,963; May 15; v. 238; p. 730.
Iarussi, Joseph. (See Rome and Iarussi.)
Ideal Coated Paper Co. (See Lawrence, Edwin V., assignor.)
Ideal Wheel Company. (See Strietelmeier, John E., assignor.)
Illsley, Frank P., Detroit, Mich. Liquid-level-regulating device. No. 1,227,539; May 22; v. 238; p. 1297.
Independent Button Fastener Machine Company. (See Stenman, Axel C., assignor.)
Indestructible Paint Company, *et al.* (See Ellis and Rabinovitz, assignors.)
Index, Visible. (See Hayes, Robert D., assignor.)
Indiana Lamp Co. (See De Martin, Chrales L., assignor.)
Industrial Development Company. (See Darrah and Trood, assignors.)
Industrial Development Company. (See Trood, Samuel, assignor.)
Ingalls, William A., Arkansas City, Kans. Cushion-wheel. No. 1,224,747; May 1; v. 238; p. 225.
Ingersoll, Leonard R., Madison, Wis. Apparatus for measuring the gloss of non-metallic surfaces. No. 1,225,250; May 8; v. 238; p. 445.
Inman, Horace, and F. M. Joslin, assignors to Inman Manufacturing Company, Incorporated, Amsterdam, N. Y. Machine for making paper box-blanks. No. 1,225,131; May 8; v. 238; p. 406.
Inman, John C., Eden, Ontario, Canada. Automobile-tire holder particularly adapted to clencher-tires. No. 1,224,548; May 1; v. 238; p. 155.
Inman Manufacturing Company. (See Inman and Joslin, assignors.)
Inman, Thomas M. (See Ward, Bryant, and Inman.)
International Dental Appliance Co. (See Lyon, William T., assignor.)
International Harvester Company of New Jersey. (See Benjamin, Bert R., assignor.)
International Harvester Company of New Jersey. (See Greising, Charles M., assignor.)
International Harvester Company of New Jersey. (See Gronke, Barney, assignor.)
International Harvester Company of New Jersey. (See Holland-Letz, Lud, assignor.)
International Harvester Company of New Jersey. (See Mowry, Edward, assignor.)
International Harvester Company of New Jersey. (See Pearson, Charles, assignor.)
International Harvester Company of New Jersey. (See Phelphs, George L., assignor.)

International Harvester Company of New Jersey. (See Raney, Clemma R., assignor.)
International Harvester Company of New Jersey. (See Raney and Livesay, assignors.)
International Harvester Company of New Jersey. (See Schutt, Duny A., assignor.)
International Harvester Company of New Jersey. (See Sharp, James A., assignor.)
International Harvester Company of New Jersey. (See Smith, John P., assignor.)
International Harvester Company of New Jersey. (See Stone, John A., assignor.)
International Harvester Company of New Jersey. (See Sturrock, John, assignor.)
International Harvester Corporation. (See Mohr, Albert F., assignor.)
International Harvester Corporation. (See Podlesak, Henry J., assignor.)
International Time Recording Company of New York. (See Goss, Harry T., assignor.)
Intertype Corporation. (See Bertram and Homans, assignors.)
Intertype Corporation. (See Homans, Thomas S., assignor.)
Irons, L. C., *et al.* (See Bretz, George W., assignor.)
Irvine, James C. (See Haworth and Irvine.)
Irving, Fred W. (See Schaefer, George A., assignor.)
Irwin Auger Bit Company, The. (See McPherson, Elmer T., assignor.)
Irwin, James, South San Francisco, assignor to H. J. Mahony Co., San Francisco, Cal. Releasing device. No. 1,227,147; May 22; v. 238; p. 1170.
Irwin, John T., London, England. Electrodynamometer instrument. No. 1,224,171; May 1; v. 238; p. 20.
Irwin, Truman M., Wallaceburg, Ontario, Canada. Safety hose-supporter. No. 1,224,466; May 1; v. 238; p. 127.
Isakson, Carl, Dunseith, N. D. Door-catch. No. 1,224,382; May 1; v. 238; p. 96.
Isbell, John F., assignor, by mesne assignments, to G. L. Knight, Los Angeles, Cal. Concentrator. No. 1,227,792; May 29; v. 238; p. 1413.
Ison, George G., Mangum, Okla. Fortification-shield. No. 1,226,075; May 15; v. 238; p. 770.
Iversen, William. (See Buckley and Iversen.)
Iwamoto, Sumu, Higashi-Ku, Osaka, Japan. Process of making charcoal and apparatus therefor. No. 1,227,148; May 22; v. 238; p. 1170.
Iwatsubo, Gohei, Kioto, Japan. Manufacturing color-leaf. No. 1,228,372; May 29; v. 238; p. 1606.
J. Milhening, Inc. (See Milhening, Frank, assignor.)
J. B. Foote Foundry Company. (See Walter, Charles R., assignor.)
J. C. Deagan Musical Bells. (See Little, Frederick B., assignor.)
J. E. Mergott Company, The. (See Fuller, Franz A., assignor.)
J. G. Brill Company, The. (See Adams, Walter S., assignor.)
J. G. Brill Company, The. (See Heuling, William H., Jr., assignor.)
J. G. Brill Company, The. (See Kohler, George B., assignor.)
J. G. Cherry Company. (See Chadima, Frank, assignor.)
J. G. Cherry Company. (See Van Kuren, Stephen J., assignor.)
J. H. Sager Company. (See Sager, Clinton M., assignor.)
J. I. Case Threshing Machine Company. (See Davies, David P., assignor.)
J. T. Slocomb Company. (See Slocomb, John T., assignor.)
Jackson, Charles C., Akron, Ohio. Wind-wheel. No. 1,225,033; May 8; v. 238; p. 373.
Jackson, Maxey, Toppenish, Wash. Railway-switch. No. 1,225,635; May 8; v. 238; p. 577.
Jackson, Ray P., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Protective means for an electrical distributing system. No. 1,224,172; May 1; v. 238; p. 20.
Jackson, Robert J., assignor of one-half to W. H. Jenkins, Philadelphia, Pa. Circuit-closing push-button. No. 1,227,270; May 22; v. 238; p. 1210.
Jacobs, Arthur E., Cleveland, Ohio. Toy cash-register. No. 1,227,054; May 22; v. 238; p. 1137.
Jacobs, Edwin C., Norwalk, Ohio. Device for the study of common fractions. No. 1,224,748; May 1; v. 238; p. 225.
Jacobs, Jacques, Maastricht, Netherlands. Paint and making same. No. 1,226,889; May 22; v. 238; p. 1080.
Jacobson, Edward B., Pittsfield, assignor to Hendee Manufacturing Company, Springfield, Mass. Charging secondary batteries. No. 1,227,149; May 22; v. 238; p. 1170.
Jacoby, Leo D. (See Frankland, Alexander J., assignor.)
Jaderstrom, Charles D. (See Carlson, Underwood, and Jaderstrom.)
Jaeger, Otto, Norristown, Pa. Coin-controlled device. No. 1,227,150; May 22; v. 238; p. 1171.
Jahn, August H., Pittsburgh, Pa. Cut-out for gas-engines. No. 1,226,974; May 22; v. 238; p. 1111.
Jahn, Berthold, New Britain, and J. C. Hammer, Hartford, assignors to The B. Jahn Manufacturing Company, New Britain, Conn. Telephone-directory holder. No. 1,224,467; May 1; v. 238; p. 127.
Jahn, Berthold, assignor to The B. Jahn Manufacturing Company, New Britain, Conn. Cup-dispenser. No. 1,226,772; May 22; v. 238; p. 1041.
James H. Mann Company. (See Alexander, Elmer P., assignor.)
James Manufacturing Company. (See Olson, John, assignor.)
James, Thomas, Jr., Philadelphia, Pa. Locomotive valve-gear. No. 1,226,523; May 15; v. 238; p. 919.
James, William E., Prichard, Ala. Ice-box. No. 1,227,443; May 22; v. 238; p. 1264.
Janes, Ralph R., Brooklyn, N. Y., assignor to Standard Knitting Mills Company. Closed-crotch underwear. No. 1,226,773; May 22; v. 238; p. 1041.
Janes, Robert T., Comanche, Tex. Folding crate. No. 1,227,793; May 29; v. 238; p. 1414.
Jansa, Anton, assignor of one-half to J. Por, Cleveland, Ohio. Rail-joint. No. 1,227,625; May 29; v. 238; p. 1356.
Jantzer, Elsie A., Brooklyn, N. Y. Snap button or fastener. No. 1,226,818; May 15; v. 238; p. 682.
Jarrell, Thomas M., assignor of one-half to W. D. Simmons, High Point, N. C. Non-skid auto-chain. No. 1,226,890; May 22; v. 238; p. 1080.
Jascen, Josephine E., Oceanside, Cal. Mouse and rat trap. No. 1,228,324; May 29; v. 238; p. 1590.
Jay, James W., Philadelphia, Pa. Means for attaching baits to lines. No. 1,226,891; May 22; v. 238; p. 1080.
Jeckert, Joseph F., Garfield, N. J. Smoker's kit. No. 1,227,444; May 22; v. 238; p. 1264.
Jefferson Glass Company. (See Rankin, Carl, assignor.)
Jeffery, Benjamin A., Detroit, Mich. Apparatus for forming blanks of ceramic material. No. 1,226,668; May 22; v. 238; p. 1005.
Jeffries, Adolphus F., New York, N. Y. Receptacle-closure. No. 1,226,524; May 15; v. 238; p. 919.
Jelalian, Martin, Cranston, R. I. Combined dirigible and hydro aeroplane. No. 1,227,912; May 29; v. 238; p. 1454.
Jenckes, Lawrence B., assignor to Crompton & Knowles Loom Works, Worcester, Mass. Take-up mechanism for looms. No. 1,226,525; May 15; v. 238; p. 919.
Jenkins, Charles F., Washington, D. C. Motion-picture machine. No. 1,225,636; May 8; v. 238; p. 577.
Jenkins, Charles H., Garfield, Wash. Fifth-wheel or coupling-gear. No. 1,225,637; May 8; v. 238; p. 577.
Jenkins, Homer B., *et al.* (See Burgess, John W., assignor.)
Jenkins, Luther V., and W. K. Bailey, Sadieville, Ky. Foldable crate. No. 1,227,445; May 22; v. 238; p. 1265.
Jenkins Petroleum Process Company. (See Jenkins, Ulysses S., assignor.)
Jenkins, Ulysses S., Chicago, Ill., assignor, by mesne assignments, to Jenkins Petroleum Process Company, Milwaukee, Wis. Obtaining gasolene and other light oils from heavier hydrocarbons. No. 1,226,526; May 15; v. 238; p. 920.
Jenkins, Wrisdon H. (See Jackson, Robert J., assignor.)
Jennings, Oliver S., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Revolving fan. No. 1,226,076; May 15; v. 238; p. 770.
Jennings, William B. (See Butler and Jennings.)
Jensen, Peter, Colton, Oreg. Draft-releasing device. No. 1,227,446; May 22; v. 238; p. 1265.
Jensen, Rudolph C., Springwells, Mich. Leather facing for cone-clutches. No. 1,227,151; May 22; v. 238; p. 1171.
Jernigan, Albert S., assignor of one-fourth to J. L. M. Curry and A. J. Smith, Cheyenne, Okla. Fly-trap. No. 1,225,638; May 8; v. 238; p. 578.
Jessen, Charles C., Oakland, Cal. Gas-radiator. No. 1,225,034; May 8; v. 238; p. 374.
Jessen, James. (See McNulty, Nelson, and Jessen.)
Jesson, Jesse A., Corbin, Ky. Automatic train-stopping device. No. 1,227,913; May 29; v. 238; p. 1454.
Jiranek, Louis A., Birnamwood, Wis. Sanitary seat-cover apparatus. No. 1,224,646; May 1; v. 238; p. 189.
Joachim, Joseph W., New Orleans, La. Gage. No. 1,228,325; May 29; v. 238; p. 1590.
Jobson, Frank L. (See Dutton and Jobson.)
Johannesen, Svend E., Pittsfield, Mass., assignor to General Electric Company. Method and means of voltage control. No. 1,225,639; May 8; v. 238; p. 578.
Johanson, Carl S., Montclair, N. J. Extensible window-frame. No. 1,227,152; May 22; v. 238; p. 1171.
John Deere Wagon Company, The. (See Lay, Francis M., assignor.)
John Douglas Company, The. (See McNeil, Daniel W., assignor.)
John, Griffith, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Safety device. No. 1,225,964; May 15; v. 238; p. 730.
John Maddock & Sons. (See Maddock, John, assignor.)
Johns-Pratt Company, The. (See Cole, Robert C., assignor.)
Johnsen, Alfred J., Illovo River, and H. E. Johnsen, Durban, Natal, South Africa. Fish-joint. No. 1,227,271; May 22; v. 238; p. 1211.
Johnsen, Henry E. (See Johnsen, Alfred J. and H. E.)
Johnson, Albin J., Duluth, Minn. Combination toilet article. No. 1,226,609; May 22; v. 238; p. 1005.
Johnson, Arley M., Belle Center, Ohio. Hog catcher and holder. No. 1,227,794; May 29; v. 238; p. 1414.
Johnson, Charles, Seaside, Oreg. Street-sweeper. No. 1,225,251; May 8; v. 238; p. 445.



Johnson, Charles T., Mossville, La. Stove-top protector. No. 1,227,447; May 22; v. 238; p. 1265.
Johnson, Edwin L., Kansas City, Mo. Automobile-signal. No. 1,225,714; May 8; v. 238; p. 603.
Johnson, Eric, assignor to Deere & Company, Moline, Ill. Lubricating device. No. 1,224,647; May 1; v. 238; p. 189.
Johnson, Frank C. (See Nash, Charles M., assignor.)
Johnson, Garfield. (See Johnson, Rolly A. and G.)
Johnson, George A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. High-capacity friction spring draft-rigging. No. 1,225,715; May 8; v. 238; p. 603.
Johnson, George F., Maple City, Kans. Tractor-wheel. No. 1,228,024; May 29; v. 238; p. 1492.
Johnson, Gustaf. (See Sampson and Johnson.)
Johnson, Hans O., assignor of one-half to A. E. Noack, Sacramento, Cal. Dimmer for motor-vehicles. No. 1,227,795; May 29; v. 238; p. 1414.
Johnson, James A. (See Turner, Joseph B., assignor.)
Johnson, Jeremiah P., Detroit, Mich. Curtain construction for vehicles. No. 1,226,217; May 15; v. 238; p. 817.
Johnson, John, Stoughton, Wis. Door-hinge fitter. No. 1,224,302; May 1; v. 238; p. 67.
Johnson, John E., Munising, Mich. Floor-clamp. No. 1,228,214; May 29; v. 238; p. 1554.
Johnson, John H., Omaha, Nebr. Attachment for steel squares and the like. No. 1,226,132; May 8; v. 238; p. 406.
Johnson, John I., Nekoma, Kans. Steering apparatus. No. 1,224,549; May 1; v. 238; p. 156.
Johnson, John T., Chicago, Ill. Gage. No. 1,225,819; May 15; v. 238; p. 682.
Johnson, John W., and G. W. Hoover, Wapella, Ill. Brake mechanism. No. 1,225,965; May 15; v. 238; p. 731.
Johnson, Lewis H., Bloomfield, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,227,153; May 22; v. 238; p. 1172.
Johnson, Philip D., Chicago, assignor of one-half to C. A. Brown, Hinsdale, Ill. Liquid-fuel burner. No. 1,225,716; May 8; v. 238; p. 603.
Johnson, Philip D., Chicago, assignor of one-half to C. A. Brown, Hinsdale, Ill. Oil-burner. No. 1,225,717; May 8; v. 238; p. 604.
Johnson, Philip D., Chicago, assignor of one-half to C. A. Brown, Hinsdale, Ill. Oil-burner. No. 1,225,718; May 8; v. 238; p. 604.
Johnson, Philip D., Chicago, assignor of one-half to C. A. Brown, Hinsdale, Ill. Pilot-burner. No. 1,225,719; May 8; v. 238; p. 605.
Johnson, Rolly A. and G., assignors of one-sixth to F. C. Hoffer, one-sixth to C. F. Goudy, one-sixth to F. Sparks, and one-sixth to H. M. Hunter, Los Angeles, Cal. Valveless four-cycle engine. No. 1,224,468; May 1; v. 238; p. 128.
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Rear-sight bolt-action military arm. No. 1,225,640; May 8; v. 238; p. 578.
Johnson, William R., Camden, N. J. Fiber-cleaning machine. No. 1,224,648; May 1; v. 238; p. 189.
Johnston, James S., Utica, N. Y. Cloth-plier. No. 1,224,550; May 1; v. 238; p. 156.
Johnston, William H. (See Robertson, William P., assignor.)
Johnston, William J., Port Carling, assignor of one-half to J. R. C. Hodgson, Gregory, Ontario, Canada. Motor attachment for boats. No. 1,225,252; May 8; v. 238; p. 445.
Joly, Cezaire, Salem, Mass. Automatic train-stopping mechanism. No. 1,224,932; May 8; v. 238; p. 339.
Jones Bros. Overall Company. (See Jones, David R., Jr., assignor.)
Jones, Campbell P. (See Chauvin, James F., assignor.)
Jones, Chelsie E. (See Pearson and Jones.)
Jones, David R., Jr., assignor to Jones Bros. Overall Company, Dubuque, Iowa. Sleeping-robe. No. 1,225,966; May 15; v. 238; p. 731.
Jones, Edward M., Winchester, Ky. Comb. No. 1,226,527; May 15; v. 238; p. 920.
Jones, F. E., *et al.* (See Bretz, George W., assignor.)
Jones, Frank E., South Coffeyville, Okla. Door latch and holdback. No. 1,224,749; May 1; v. 238; p. 226.
Jones, Harry, Suffern, N. Y., assignor to The American Brake Shoe & Foundry Company, Wilmington, Del. Reinforcing-back for brake-shoes. No. 1,224,867; May 1; v. 238; p. 265.
Jones, Harry, Suffern, N. Y., assignor, by mesne assignments, to The American Brake Shoe & Foundry Company, Wilmington, Del. Brake-shoe. No. 1,225,336; May 8; v. 238; p. 477.
Jones, Henry D. (See Greiner and Jones.)
Jones, Henry D., assignor to The Kelly-Springfield Road Roller Company, Springfield, Ohio. Scarifying attachment for road-engines. No. 1,226,528; May 15; v. 238; p. 920.
Jones, Horace E., Ebensburg, Pa. Wheel-holder. No. 1,226,335; May 15; v. 238; p. 860.
Jones, J Albert, Marcellus, Mich. Head-lamp control for motor-vehicles. No. 1,226,529; May 15; v. 238; p. 920.
Jones, James C., Philadelphia, Pa. Mail-bag-transferring device. No. 1,227,914; May 29; v. 238; p. 1455.
Jones, Jesse W., Birmingham, Ala. Jack. No. 1,227,448; May 22; v. 238; p. 1266.
Jones, John D., Walla Walla, Wash. Valve. No. 1,226,671; May 22; v. 238; p. 1005.
Jones, John D., assignor of one-half to H. C. Baker, Walla Walla, Wash. Fan. No. 1,226,670; May 22; v. 238; p. 1005.
Jones, Louis W., Pittsburgh, Pa. Pipe-vise and mounting. No. 1,227,449; May 22; v. 238; p. 1266.
Jones, Lucy B., Chattanooga, Tenn. Millinery-cabinet. No. 1,225,641; May 8; v. 238; p. 578.
Jones, Marshall N., Denver, Colo., assignor to National Glass Casket Company. Coffin. No. 1,224,383; May 1; v. 238; p. 96.
Jones, Oscar O., Ontonagon, Mich. Self-cleaning curry-comb. No. 1,225,133; May 8; v. 238; p. 406.
Jones, Owen M., New York, N. Y. System for controlling the levels of liquids. No. 1,227,540; May 22; v. 238; p. 1297.
Jones, Walter C., Chicago, Ill. Separable attachment-plug. No. 1,225,837; May 8; v. 238; p. 477.
Jones, Wesley C., Portland, Oreg. Computing attachment for dial-scales. No. 1,225,134; May 8; v. 238; p. 407.
Jones, William G. A., Denver, Colo. Folding easel. No. 1,225,642; May 8; v. 238; p. 579.
Jones, William J., Martinsville, Va. Vehicle-wheel. No. 1,225,967; May 15; v. 238; p. 731.
Jope, Thomas E., New York, N. Y. Picture-frame. No. 1,226,077; May 15; v. 238; p. 770.
Jordan, Cornelius, Weehawken, N. J., assignor to E. H. Kluge Weaving Company, New York, N. Y. Manufacture of labels. No. 1,225,253; May 8; v. 238; p. 442.
Jordan, Fred A., assignor of one-half to W. G. Swart, Duluth, Minn. Rotary mill. No. 1,224,933; May 8; v. 238; p. 340.
Jordan, Jay B., Lock Berlin, N. Y. Flexible sled. No. 1,226,672; May 22; v. 238; p. 1006.
Jordan, Perry L., Clallam Bay, Wash. Automobile driving-gear. No. 1,224,750; May 1; v. 238; p. 226.
Jordon, Henry D., *et al.* (See Guthrie, Venable J., assignor.)
Josephson, Henry, Cleveland, Ohio. Pawl-locking mechanism for pawl-carrying levers. No. 1,225,135; May 8; v. 238; p. 407.
Joslen, Alonzo, Oklahoma, Okla. Rake. No. 1,224,551; May 1; v. 238; p. 157.
Josephson, Henry, Cleveland, Ohio. Shaft-operating mechanism. No. 1,227,796; May 29; v. 238; p. 1414.
Josephson, Henry, Cleveland, Ohio. Brake-shaft-operating mechanism for automobiles. No. 1,227,797; May 29; v. 238; p. 1415.
Joslin, Frank M. (See Inman and Joslin.)
Joslyn, Victor C., *et al.* (See Friberger, Harry L., assignor.)
Jungclaus, Henry P., Indianapolis, Ind. Column-form clamp. No. 1,227,798; May 29; v. 238; p. 1415.
Junkers, Hugo, Aachen, Germany. Hydraulic brake. No. 1,228,215; May 29; v. 238; p. 1554.
Justice, Ithamar M. (See Underwood and Justice.)
Justrite Manufacturing Company. (See Hansen, Augie L., assignor.)
Kadel, Byers, W., Roanoke county, Va. Draft-rigging for railway-cars. No. 1,228,216; May 29; v. 238; p. 1554.
Kah, Arthur W. (See Farley, Michael H., assignor.)
Kaiser, Benjamin, *et al.* (See Ziperstein and Kaplan, assignors.)
Kajiyama, Tameo, New York, N. Y. Game device. No. 1,224,173; May 1; v. 238; p. 21.
Kalamazoo Loose Leaf Binder Co. (See Wigginton, George P., assignor.)
Kalmus, Herbert T., Brookline, assignor to The Exolon Company, Cambridge, Mass. Making abrasive material. No. 1,226,892; May 22; v. 238; p. 1081.
Kammerhoff, Heinrich H. M., Orange, N. J. Electric gas-engine-starting and battery-charging system. No. 1,225,643; May 8; v. 238; p. 579.
Kandlbinder, Emelia F., Springfield, Ill. Automobile-lifting-jack apparatus. No. 1,225,644; May 8; v. 238; p. 580.
Kane, Peter W., assignor of one-half to E. N. Pearce, Rochester, Wash. Pneumatic cushioning device. No. 1,226,673; May 22; v. 238; p. 1006.
Kane, William. (See Wessels and Kane.)
Kaplan, Abraham C. (See Ziperstein and Kaplan.)
Kaplan, Jacob, assignor to A. C. K. Belting Co., Chicago, Ill. Belt tightener and spreader. No. 1,227,541; May 22; v. 238; p. 1298.
Kaplan, Julius, New York, N. Y. Garment. No. 1,225,254; May 8; v. 238; p. 446.
Karcher, Otto, Canton, Ohio. Dispensing device. No. 1,226,218; May 15; v. 238; p. 817.
Karpen, Isaac, assignor to S. Karpen & Bros., Chicago, Ill. Spring structure. No. 1,226,219; May 15; v. 238; p. 818.
Kartrude, Peter O., Luverne, Minn. Draft-equalizer. No. 1,226,975; May 22; v. 238; p. 1111.
Kasley, Alexander T., Swissvale, Pa., assignor to The Westinghouse Machine Company. Power-developing apparatus. No. 1,226,220; May 15; v. 238; p. 818.
Kastner, Henry J., Dayton, Ohio. Sound-intensifying device for telephones. No. 1,225,136; May 8; v. 238; p. 408.
Kate, John H., assignor to X-Ray Incubator Company, Des Moines, Iowa. Egg-tester. No. 1,226,078; May 15; v. 238; p. 771.
Kaub, Arthur D., Mongo, Ind. Cabinet. No. 1,227,799; May 29; v. 238; p. 1415.

Kauffman, Ralph A., Waterloo, assignor, by mesne assignments, of one-half to E. Von Osterheldt, Des Moines, Iowa. Automatic vehicle-top. No. 1,226,079; May 15; v. 238; p. 771.
Kaukaine, Herman, Virginia, Minn. Portable conveyer. No. 1,224,384; May 1; v. 238; p. 97.
Kavalas, Evans. (See Kavalas, Tom and E.)
Kavalas, Tom and E., Rock Falls, Ill. Wire-fence machine. No. 1,227,272; May 22; v. 238; p. 1211.
Kawate, Hiyozo, assignor of forty one-hundredths to O. Shintani, Seattle, Wash. Can-labeling machine. No. 1,224,303; May 1; v. 238; p. 67.
Kawneer Manufacturing Company. (See Fraser, John A., assignor.)
Kays, Charles A. (See Wilhelm and Kays.)
Keahn, Emil J., Detroit, Mich. Attachment for fur-sewing machines. No. 1,224,174; May 1; v. 238; p. 21.
Kearns, Chester A., and P. J. Hartigan, Paynesville, Minn. Pump for motor-vehicles. No. 1,226,530; May 15; v. 238; p. 921.
Keator, Edward O., Cincinnati, Ohio. Adjustable clamp. No. 1,226,221; May 15; v. 238; p. 818.
Kebbell, John F., assignor of one-half to G. G. Gros, London, England. Folding box. No. 1,226,531; May 15; v. 238; p. 922.
Keck, William M., Coalinga, Cal. Underreamer. No. 1,225,968; May 15; v. 238; p. 732.
Keefer, Samuel H. (See Sears and Keefer.) (Reissue.)
Keeney, Fred W., and J. M. Perkins, Oklahoma, Okla. Sedimentation-basin. No. 1,226,893; May 22; v. 238; p. 1081.
Keeran, Charles R., Chicago, Ill. Receptacle-closure. No. 1,226,532; May 15; v. 238; p. 922.
Keith, George, Sheridan, Ill. Inflating device. No. 1,225,137; May 8; v. 238; p. 408.
Keith and Wright *et al.* (See Wilson, John M., assignor.)
Kelleher, Edmond T. (See Gerke, Brailsted, and Kelleher.)
Keller, Cornelius H., *et al.* (See Friberger, Harry L., assignor.)
Kelley, Paul J., Beverly, Mass. Device for use with collets. No. 1,227,626; May 29; v. 238; p. 1356.
Kellner, Gustav A. H. (See Patterson and Kellner.)
Kellogg, Charles S., Montclair, N. J. Differential gear. No. 1,227,055; May 22; v. 238; p. 1137.
Kellogg Switchboard and Supply Company. (See Reid, William, assignor.)
Kellogg Switchboard and Supply Company. (See Weiss, Alfred H., assignor.)
Kellogg Switchboard & Supply Company. (See Winston, Charles S., assignor.)
Kellogg, Winthrop C., Wilkinsburg, assignor to Mathews Gravity Carrier Company, Ellwood City, Pa. Reversible coupling for gravity-carriers. No. 1,226,222; May 15; v. 238; p. 810.
Kelly, Henry D., Kansas City, Mo. Hand-hole plate for boilers. No. 1,226,080; May 15; v. 238; p. 771.
Kelly, Henry D., Kansas City, Mo. Measuring-faucet. No. 1,226,081; May 15; v. 238; p. 772.
Kelly-Springfield Road Roller Company, The. (See Greiner and Jones, assignors.)
Kelly-Springfield Road Roller Company, The. (See Jones, Henry D., assignor.)
Kelly, William M., assignor to American Type Founders Company, Jersey City, N. J. Printing-press. No. 1,227,450; May 22; v. 238; p. 1266.
Kelsall, Oliver H., *et al.* (See Medanich, Daniel B., assignor.)
Kemp, Joseph A., *et al.* (See Patterson, Warren A., assignor.)
Kemp Manufacturing Co. (See Randall, Herman P., assignor.)
Kempf, Henry J., assignor to Package Machinery Company, Springfield, Mass. Wrapping-machine. No. 1,226,622; May 15; v. 238; p. 949.
Kendall, David, assignor to The Alliance Machine Company, Alliance, Ohio. Crane. No. 1,226,533; May 15; v. 238; p. 922.
Kendall, William G., Newark, N. J. Hinge for vanity-cases. No. 1,225,439; May 8; v. 238; p. 512.
Kendall, William G., Newark, N. J. Safety-catch. No. 1,228,025; May 29; v. 238; p. 1403.
Kendrick, James P., Fayette, Mo. Automatic dirigible light-support. No. 1,227,154; May 22; v. 238; p. 1172.
Kennedy, Alfred D., Greenville, S. C., assignor of one-half to American Machine & Manufacturing Company. Means for indicating abnormal temperatures in vegetable matter. No. 1,224,385; May 1; v. 238; p. 97.
Kennedy, Charles E. (See Mosteller and Kennedy.)
Kennedy, Charles J., assignor to Northern Novelty Manufacturing Company, Duluth, Minn. Instrument. No. 1,225,969; May 15; v. 238; p. 732.
Kennedy, George A., deceased; M. Kennedy, administratrix, assignor to J. J. Dauch, Sandusky, Ohio. Lifting mechanism for power-operated plows. No. 1,224,879; May 1; v. 238; p. 270.
Kennedy, Henry A., assignor of five-eighths to A. W. Chapman, Providence, R. I., and one-eighth to Hopedale Manufacturing Company, Hopedale, Mass. Thread guide or eye for loom-shuttles. No. 1,225,035; May 8; v. 238; p. 374.
Kennedy, Joseph, assignor to The Clements Company, New York, N. Y. Wall-socket. No. 1,227,627; May 29; v. 238; p. 1356.
Kennedy, Julian, Pittsburgh, Pa. Gas-burner. No. 1,228,217; May 29; v. 238; p. 1555.
Kennedy, Lewis R. (See Luke, Russell, Kennedy, and Anderson.)
Kennedy, Marie, administratrix. (See Kennedy, George A.)
Kennedy, William J., Fairfield, Iowa. Salt-holding device for animals. No. 1,225,645; May 8; v. 238; p. 580.
Kennel, Thomas J., near Middletown, Ohio. Combined wagon box and rack. No. 1,228,117; May 29; v. 238; p. 1524.
Kennell, Henry, New York, N. Y. Bottle-holder. No. 1,227,451; May 22; v. 238; p. 1267.
Kenny, John J., Chicago, Ill. Pipe-closure. No. 1,224,934; May 8; v. 238; p. 340.
Kent, Perry E., New York, N. Y. Fastening device for overshoes for tires. No. 1,227,800; May 29; v. 238; p. 1416.
Kenyon, Bertram C., assignor of one-half to Dodge Manufacturing Company, Mishawaka, Ind. Rotating-cylinder gas-engine. No. 1,227,452; May 22; v. 238; p. 1267.
Kern, George, Peru, Ill. Coin-controlled machine. No. 1,225,720; May 8; v. 238; p. 605.
Kern, George, Peru, Ill. Vending apparatus. No. 1,225,970; May 15; v. 238; p. 732.
Kern, George, Peru, Ill. Vending apparatus. No. 1,226,774; May 22; v. 238; p. 1042.
Kerner Manufacturing Company. (See Dodds, Ethan I., assignor.)
Kerner Manufacturing Company. (See Frauenheim, Joseph A., assignor.)
Kersey, Amos W. (See Leggett and Kersey.)
Kessler, William E., Jersey City, N. J. Periscope. No. 1,225,646; May 8; v. 238; p. 580.
Kester, Willard W., Paso Robles, Cal. Insect-beater. No. 1,225,971; May 15; v. 238; p. 733.
Kettelson, Harry C., Milwaukee, Wis. Roofing-cleat. No. 1,225,972; May 15; v. 238; p. 733.
Kettering, Charles F., and R. S. De Maree, Dayton, Ohio, assignors to The Dayton Engineering Laboratories Co. Electric switch. No. 1,225,820; May 15; v. 238; p. 682.
Keyes Fibre Company. (See Chaplin, Merle P., assignor.)
Keystone Driller Co. (See Wagner, George E., assignor.)
Kidder, George C., Salt Lake City, Utah. Furnace or stove construction. No. 1,226,082; May 15; v. 238; p. 772.
Kiefer, Karl, Cincinnati, Ohio. Filling apparatus. No. 1,227,028; May 29; v. 238; p. 1357.
Kieren, Joseph, Gilbert, Minn. Alarm for cars. No. 1,225,036; May 8; v. 238; p. 375.
Kilbourn Manufacturing Corporation. (See Smith, William E., assignor.)
Kilgore, Joseph D., Homestead, Pa. Toy pistol. No. 1,225,821; May 15; v. 238; p. 683.
Killark Electric Manufacturing Company. (See Thomas, Henry V., assignor.)
Killen, Edward B., London, England. Rubber tire and its attachment and detachment to and from wheels. No. 1,225,973; May 15; v. 238; p. 733.
Kimball, Philip S., Milford, Mass. Jack. No. 1,225,822; May 15; v. 238; p. 683.
Kimmich, Ernest, Detroit, Mich. Fire-pot attachment. No. 1,225,440; May 8; v. 238; p. 512.
Kinetic Electric Company. (See Becker, Edmund H., assignor.)
King, George H., Anderson, assignor of one-fourth to R. H. Brunt, Summitville, Ind. Heating-stove. No. 1,224,469; May 1; v. 238; p. 128.
King & Hamilton Company. (See Gilman, John H., assignor.)
King, Jess E., assignor of one-half to W. C. Pearce, Syracuse, N. Y. Electric load-distributer. No. 1,226,534; May 15; v. 238; p. 922.
King, Michael S., Blackfoot, Idaho. Potato-cutter. No. 1,227,056; May 22; v. 238; p. 1138.
King, Robert L., Yancy Mills, Mo. Automatic lamp-lighter. No. 1,225,647; May 8; v. 238; p. 580.
King, Roswell B., Pensacola, Fla. Reel-brake for fishing-rods. No. 1,227,273; May 22; v. 238; p. 1211.
King, William A., La Conner, assignor of one-half to W. Clemons, Skagit county, Wash. Motion-picture machine. No. 1,224,304; May 1; v. 238; p. 68.
Kingsbury, Harry T., Keene, N. H. Toy dump-wagon. No. 1,224,935; May 8; v. 238; p. 340.
Kinnard, Luella S., Chicago, Ill. Toilet-box. No. 1,224,552; May 1; v. 238; p. 157.
Kinney, Frederick A., Philadelphia, Pa. Safety-pin. No. 1,225,823; May 15; v. 238; p. 684.
Kinsley, Lewis, Philadelphia, Pa., assignor to Hope Machine Company. Piston packing-ring. No. 1,224,751; May 1; v. 238; p. 226.
Kinsey, Martin L., Dos Palos, Cal. Cork-extractor. No. 1,225,037; May 8; v. 238; p. 375.
Kipper, Herman B., Solvay, N. Y. Making caustic soda. No. 1,227,453; May 22; v. 238; p. 1268.
Kippes, Henry W., Brooklyn, N. Y. Rowlock. No. 1,225,824; May 15; v. 238; p. 684.
Kirkwood, Ramey, Abbeville, S. C. Liquid-gage. No. 1,224,752; May 1; v. 238; p. 227.
Kirsch, Jacob, Banner, Okla. Control device for spring-motors. No. 1,228,326; May 29; v. 238; p. 1590.
Kirstin, Alfred J. (See Moe and Kirstin.)
Kiser, Frank H., Columbus, Ohio. Carriage-top. No. 1,225,038; May 8; v. 238; p. 376.
Kiss, Andre, Cincinnati, Ohio. Adjustable plate-holder attachment for cameras. No. 1,225,039; May 8; v. 238; p. 376.



Kitchen, Joseph M. W., East Orange, N. J. Bottle-closure. No. 1,224,649; May 1; v. 238; p. 190.
Kitchen, Joseph M. W., East Orange, N. J. Toilet-paper. No. 1,224,650; May 1; v. 238; p. 190.
Kitchen, Joseph M. W., East Orange, N. J. Centering-director for record-disks. No. 1,226,674; May 22; v. 238; p. 1007.
Kitching, David C., Valley Mills, Tex. Automobile-headlight-lamp mounting. No. 1,224,470; May 1; v. 238; p. 128.
Klasulich, John, Universal, Ind. Door-spring. No. 1,224,753; May 1; v. 238; p. 227.
Klaus, Nicholas, and E. W. Bookhart, Breda, Iowa. Skirt-band fastening. No. 1,227,274; May 22; v. 238; p. 1212.
Klay, Abraham B., Modesto, Cal. Ware-kiln. No. 1,226,535; May 15; v. 238; p. 923.
Kleckler, Henry. (See Tarbox and Kleckler.)
Kleckner, William R., Cowell, Cal. Temperature-signal for stacks. No. 1,225,648; May 8; v. 238; p. 581.
Kleckner, William R., Cowell, Cal. Bacteria and fungi exterminator. No. 1,227,454; May 22; v. 238; p. 1268.
Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,227,801; May 29; v. 238; p. 1416.
Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Lamp-socket and the like. No. 1,228,026; May 29; v. 238; p. 1493.
Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Casing for lamp-sockets or the like. No. 1,228,027; May 29; v. 238; p. 1493.
Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Casing for lamp-sockets and the like. No. 1,228,028; May 29; v. 238; p. 1494.
Kleinschmidt, Henry F. A., Johnstown, Pa. Surface-grinder. No. 1,225,040; May 8; v. 238; p. 376.
Kller, William R., Galva, Ill. Attachment for belt guides and shifters. No. 1,224,553; May 1; v. 238; p. 157.
Kliesrath, Victor W. (See Heins and Kliesrath.)
Kline, John A., Bloomsburg, Pa. Lock-bolt. No. 1,224,936; May 8; v. 238; p. 341.
Klipfel Manufacturing Company. (See Swan, John H., assignor.)
Kloepper, Fred H., Lancaster, Kans. Attachment for oil-founts. No. 1,227,629; May 29; v. 238; p. 1357.
Kluge, Martin, Sandusky, Ohio. Extension-table. No. 1,224,175; May 1; v. 238; p. 21.
Klugh, Paul B., assignor to The Cable Company, Chicago, Ill. Mechanical musical instrument. No. 1,228,029; May 29; v. 238; p. 1494.
Knapp, Theron L. (See Roderick and Knapp.)
Knecht, John E., Batavia, Ill. Candy-pulling machine. No. 1,225,138; May 8; v. 238; p. 408.
Knepper, J. F. (See Taylor, John E., assignor.)
Knerr, Horace C., Primos, Pa. Control system. No. 1,228,030; May 29; v. 238; p. 1494.
Knight, George L. (See Isbell, John F., assignor.)
Knouff, John E., Wilmot, Ind. Grindstone attachment. No. 1,224,754; May 1; v. 238; p. 227.
Knurck, John G., Woodhaven, N. Y. Envelop. No. 1,228,218; May 29; v. 238; p. 1555.
Koch, Felix, Bellevue, assignor to Pressed Steel Car Company, Pittsburgh, Pa. Passenger-car construction. No. 1,224,176; May 1; v. 238; p. 22.
Koch, Norbert. (See Hellemann, Behnke, and Koch.)
Koch, Ralph A. (See Sterling and Koch.)
Koch, William C., St. Paul, Minn. Antirattling device for automobile-curtains. No. 1,224,177; May 1; v. 238; p. 22.
Koch, William C., St. Paul, Minn. Releasing device. No. 1,224,651; May 1; v. 238; p. 190.
Kocourek, Henry, assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Electric jack. No. 1,224,652; May 1; v. 238; p. 191.
Koehler, Andrew R., Buffalo, N. Y. Trimming-machine. No. 1,227,155; May 22; v. 238; p. 1172.
Koehler, Andrew R., Buffalo, N. Y. Work-holder for machines for trimming electrotype-blocks or the like. No. 1,227,156; May 22; v. 238; p. 1173.
Koehler, Frank G., St. Louis, Mo. Truck-bearing. No. 1,226,894; May 22; v. 238; p. 1081.
Koehring Machine Company. (See Koehring, Philip A., assignor.)
Koehring, Philip A., assignor to Koehring Machine Company, Milwaukee, Wis. Conveyer apparatus. No. 1,227,157; May 22; v. 238; p. 1173.
Koenig, Ralph, Newburg, Wis. Telegraph-sounder. No. 1,226,775; May 22; v. 238; p. 1042.
Koering, Bruno R., Detroit, Mich. Filter-tank. No. 1,225,441; May 8; v. 238; p. 513.
Koester, Herman. (See Bristol and Koester.)
Koester, Paul, *et al.* (See Rodier, Harold B., assignor.)
Kögler, Albert P., San Francisco, Cal. Oil-feeding valve. No. 1,224,755; May 1; v. 238; p. 228.
Kohlbach, Henry F. W., New Bedford, Mass. Lawn-mower sharpener. No. 1,226,675; May 22; v. 238; p. 1007.
Kohler, George B., assignor to The J. G. Brill Company, Philadelphia, Pa. Metallic sash. No. 1,228,327; May 29; v. 238; p. 1591.
Kohne, Robert D., Toledo, Ohio. Agricultural tractor. No. 1,227,630; May 29; v. 238; p. 1357.
Kolesch, Percy A., Brooklyn, N. Y. Surveyor's target. No. 1,227,631; May 29; v. 238; p. 1358.
Kollock, George L., and R. P. Martin, assignors to Universal Hammer Company, Seattle, Wash. Hammer. No. 1,224,471; May 1; v. 238; p. 129.
Komorous, Joseph, assignor to Parisian Novelty Company, Chicago, Ill. Structure comprising disks covered with flexible material. No. 1,228,219; May 29; v. 238; p. 1555.
Konar, John, Chicago, Ill., assignor of two-thirds to T. F. Adams, Sunnyside, Mont. Mechanical movement. No. 1,225,442; May 8; v. 238; p. 513.
Konrath, John, New York, N. Y. Rescue apparatus. No. 1,228,220; May 29; v. 238; p. 1555.
Koontz, Dennis L., Port Atkinson, Wis. Paper package. No. 1,227,802; May 29; v. 238; p. 1416.
Koontz, George B., *et al.* (See Gibson, William A., assignor.)
Koppel, Hyman, Boston, Mass. Ash-sifting apparatus. No. 1,226,976; May 22; v. 238; p. 1111.
Korolina, Felix F., Lebanon, Oreg. Comb-cleaner. No. 1,228,221; May 29; v. 238; p. 1556.
Koren, Harald, Cleveland, Ohio. Display apparatus. No. 1,226,676; May 22; v. 238; p. 1007.
Korn, Henry, Chicago, Ill. Distributer for gravity conveyer systems. No. 1,224,472; May 1; v. 238; p. 129.
Kornstein, Ulrich, *et al.* (See Bell, Albert C., assignor.)
Korzeniewski, John, Toledo, Ohio. Balloon. No. 1,225,139; May 8; v. 238; p. 409.
Kosel, Henry G., New York, N. Y. Smoke-preventer. No. 1,227,057; May 22; v. 238; p. 1138.
Kottus, Tam, Cleveland, Ohio. Folding chair for tables or the like. No. 1,227,803; May 29; v. 238; p. 1417.
Kraemer, Emil, and G. Schuler, Woodside, N. Y. Shade-roller. No. 1,225,338; May 8; v. 238; p. 478.
Kraemer, Paul, Jersey City, N. J. Floating bicycle. No. 1,224,653; May 1; v. 238; p. 191.
Kramer, Andrew A., Kansas City, Kans. Window-frame. No. 1,226,776; May 22; v. 238; p. 1042.
Krasa, Albert, Michigan City, Ind. Transmission for sewing-machines and the like. No. 1,224,473; May 1; v. 238; p. 130.
Kraus, David. (See Montague, Harold E., assignor.)
Kraus Engine Company. (See Kraus, Otto, assignor.)
Kraus, Julius C., New York, N. Y. Bird-bath. No. 1,224,305; May 1; v. 238; p. 68.
Kraus, Otto, assignor to Kraus Engine Company, New York, N. Y. Apparatus for the production of working fluids. No. 1,227,275; May 22; v. 238; p. 1212.
Krauth, Albert, Hamilton, Ohio. Manifolding apparatus. No. 1,225,140; May 8; v. 238; p. 409.
Krenz, Fred J., Bloomer, Wis. Potato-vine lifter for cultivators. No. 1,224,554; May 1; v. 238; p. 158.
Krenzler, Emil, Barmen, Germany. Lace-braiding machine. No. 1,226,223; May 15; v. 238; p. 819.
Kressel, Edward C. L., Camden, N. J. Fertilizer and making same. No. 1,225,825; May 15; v. 238; p. 684.
Kretz, Adolph, *et al.* (See Bell, Albert C., assignor.)
Kreutzberg Meter Company. (See Kreutzberg, Otto A., assignor.)
Kreutzberg, Otto A., Lake Bluff, assignor to Kreutzberg Meter Company, Chicago, Ill. Volumetric meter. No. 1,224,654; May 1; v. 238; p. 191.
Krider, Clement V. (See Madole and Krider.)
Kries, Lawrence F., assignor to C. M. Marshall, trustee, Baltimore, Md. Electric switch and fuse box. No. 1,224,880; May 1; v. 238; p. 270.
Kries, Lawrence F., assignor to C. M. Marshall, trustee, Baltimore, Md. Electric switch and fuse box. No. 1,224,881; May 1; v. 238; p. 271.
Kriesel, Gustave F., assignor to C. A. Rickert, Minneapolis, Minn. Machine for forming wire-fence stays. No. 1,228,031; May 29; v. 238; p. 1495.
Kristofek, Frank J., assignor to Brown & Bigelow, St. Paul, Minn. Scoop. No. 1,228,373; May 29; v. 238; p. 1606.
Kroedel, Robert, assignor to Eastman Kodak Company, Rochester, N. Y. Spool-holder for film-cameras. No. 1,227,276; May 22; v. 238; p. 1212.
Krohn, Gustave A., Coarsegold, Cal. Ignition device for internal-combustion engines. No. 1,226,083; May 15; v. 238; p. 772.
Krohn, Nels. (See Hamm, Legge, and Krohn.)
Kronenberger, Ferdinand, Brooklyn, N. Y., assignor to F. B. Clark, Englewood, N. J. Egg-carrier. No. 1,225,141; May 8; v. 238; p. 409.
Kronenberger, Ferdinand, Brooklyn, N. Y., assignor to F. B. Clark, Englewood, N. J. Egg-carrier. No. 1,225,142; May 8; v. 238; p. 410.
Kronenberger, Jacob, New York, N. Y. Garment-supporter. No. 1,228,118; May 29; v. 238; p. 1524.
Kronquest, Alfred L., Chicago, Ill., assignor to Continental Can Company, Inc., Syracuse, N. Y. Coating-machine. No. 1,225,649; May 8; v. 238; p. 581.
Kronser, John, Appleton, Wis. Mold for making pig-troughs. No. 1,225,650; May 8; v. 238; p. 581.
Krook, John L. L., Proctor, Vt. Machine for cutting sheet metal. No. 1,226,536; May 15; v. 238; p. 923.
Krouse, William G., Wyoming, Iowa. Engine-supporting device. No. 1,225,651; May 8; v. 238; p. 582.
Kruger, Theodore, Peoria, Ill. Shutter-operating attachment for cameras. No. 1,225,652; May 8; v. 238; p. 582.
Krugh, Charles A., Monroe, and J. A. Hendricks, Decatur, Ind. Steering device for tractors. No. 1,227,455; May 22; v. 238; p. 1268.

Kuefer, Anthony, assignor to R. B. Wilson, trustee, Toledo, Ohio. Autoplow. No. 1,225,339; May 8; v. 238; p. 478.

Kuen, Eugene A., assignor, by mesne assignments, to The Corcoran-Victor Company, Cincinnati, Ohio. Lamp. No. 1,224,178; May 1; v. 238; p. 22.

Kuen, Eugene A., assignor, by mesne assignments, to The Corcoran-Victor Company, Cincinnati, Ohio. Lamp. No. 1,224,179; May 1; v. 238; p. 23.

Kuhn, Frank, and F. E. Shallor, assignors to American Electrical Heater Company, Detroit, Mich. Electrical heating unit. No. 1,225,826; May 15; v. 238; p. 684.

Kuhn, Frank, and F. E. Shallor, assignors to American Electrical Heater Company, Detroit, Mich. Electrical heating unit. No. 1,225,827; May 15; v. 238; p. 685.

Kulick, Isaac, Brooklyn, N. Y. Dispensing apparatus. No. 1,225,143; May 8; v. 238; p. 410.

Kumauchi, James I., Seattle, Wash. Reflecting apparatus. No. 1,226,537; May 15; v. 238; p. 924.

Küntzler, Henry. (See Hunter and Küntzler.)

Kupetz, Adolph G., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Stand or support for loose-leaf books, &c. No. 1,226,336; May 15; v. 238; p. 861.

Kusterko, Madeleine, Yonkers, N. Y. Garment. No. 1,226,977; May 22; v. 238; p. 1112.

Kutschbach, August E., Houston, Tex. Pump. No. 1,225,041; May 8; v. 238; p. 376.

Kyler, Charles B., Evansville, Ind. Car-seal. No. 1,225,255; May 8; v. 238; p. 446.

L. E. Waterman Company. (See Britten, Edwin F., Jr., assignor.)

La Crosse Plow Co. (See Cameron, William W., assignor.)

La Point, Stephen, Columbus, Ohio. Clothes-stick. No. 1,225,043; May 8; v. 238; p. 377.

La Porte, Norbert M., assignor to The Crown Cork and Seal Company of Baltimore City, Baltimore, Md. Selecting mechanism. No. 1,226,777; May 22; v. 238; p. 1043.

La Porte, Norbert M., assignor to The Crown Cork and Seal Company of Baltimore City, Baltimore, Md. Capping-machine. No. 1,226,778; May 22; v. 238; p. 1043.

La Porte, Norbert M., assignor to The Crown Cork and Seal Company of Baltimore City, Baltimore, Md. Making closures. No. 1,227,160; May 22; v. 238; p. 1175.

La Société "La Cellophane." (See Laussedat, Auguste J. B., assignor.)

Laas, Edward, assignor, by mesne assignments, to O. R. Barnett, Chicago, Ill. Anticreeper. No. 1,227,804; May 29; v. 238; p. 1417.

Lacey, Edward P., assignor of one-half to D. L. Skipper, Zolfo, Fla. Flush-tank mechanism. No. 1,225,340; May 8; v. 238; p. 479.

Lacey, Thomas. (See Vredenburg and Lacey.)

Lachman, Laurence S., assignor to Universal Electric Welding Company, New York, N. Y. Electric welding and apparatus. No. 1,228,032; May 29; v. 238; p. 1495.

Lackawanna Steel Company. (See Neafie and French, assignors.)

Lackner, Peter, New Brunswick, N. J. Universal micrometer. No. 1,226,337; May 15; v. 238; p. 861.

Lacy, Will B. (See McAdams, William C., assignor.)

Ladd, Lester L., Lockport, Ill. Labeling-machine. No. 1,227,158; May 22; v. 238; p. 1174.

Lafitte, Théodore, Paris, France. Transmission mechanism. No. 1,227,456; May 22; v. 238; p. 1208.

Labore, John A., Ardmore, Pa. Packing-case. No. 1,226,677; May 22; v. 238; p. 1008.

Lager, Dave O., Helena, Mont. Moisture-supplying device for incubators. No. 1,227,542; May 22; v. 238; p. 1298.

Lagerbäck, Per G., Sattsjö-Dufnäs, Sweden. Socket for drills with conical shafts. No. 1,227,632; May 29; v. 238; p. 1358.

Lahue, Moses M., Lowell, Mass. Apparatus for sighting and leveling guns. No. 1,227,633; May 29; v. 238; p. 1358.

Laing, Sallie W., New York, N. Y. Diaper. No. 1,224,756; May 1; v. 238; p. 228.

Laisure, William H. (See Smith and Laisure.)

Lake, Fred O., Washington, D. C. Green-corn cutting and scraping implement. No. 1,224,474; May 1; v. 238; p. 150.

Lake, John L., Cleveland, Ohio, assignor to A. S. Grant, Toronto, Canada. Vehicle. No. 1,227,634; May 29; v. 238; p. 1358.

Lake, John L., Cleveland, Ohio, assignor to A. S. Grant, Toronto, Canada. Stabilizing mechanism for motorcycles and the like. No. 1,227,635; May 29; v. 238; p. 1359.

Lake, Simon, Milford, Conn. Apparatus for treating certain diseases of the human body. No. 1,224,180; May 1; v. 238; p. 23.

Lamberson, George E., Brooklyn, N. Y. Cigarette-box wrapper. No. 1,227,159; May 22; v. 238; p. 1174.

Lambert, Henry M., Portland, Oreg., assignor to Lambert Multiplus Company, Phoenix, Ariz. Cushion-tire for vehicle-wheels. No. 1,225,042; May 8; v. 238; p. 377.

Lambert, Howard J., assignor of one-half to H. L. Frank, Portland, Oreg. Radiator. No. 1,226,224; May 15; v. 238; p. 819.

Lambert, James J. (See Hahl and Lambert.)

Lambert Multiplus Company. (See Lambert, Henry M., assignor.)

Lambrix, Mary J., Dayton, Ohio. Splash-board. No. 1,225,256; May 8; v. 238; p. 447.

Lampe, Tadeusz J., Warsaw, Russia. Bottle-washing machine. No. 1,225,653; May 8; v. 238; p. 582.

Lamson Company, The. (See Amsden, George A., assignor.)

Lamson Company, The. (See Cowley, James T., assignor.)

Land, Charles H., Detroit, Mich. Burner for dental furnaces. No. 1,227,277; May 22; v. 238; p. 1212.

Land, Floyd E., Medford, Oreg. Clutch mechanism for transmission-gearings. No. 1,225,144; May 8; v. 238; p. 411.

Land, Herbert R., Little Rock, Ark. Lamp-socket lock. No. 1,226,338; May 15; v. 238; p. 862.

Landeen, James, Sidney, Ohio. Keyless padlock. No. 1,226,895; May 22; v. 238; p. 1081.

Landry, Joseph E., New Bedford, Mass. Braking mechanism for automobiles. No. 1,227,805; May 29; v. 238; p. 1417.

Landsiedel, Harry, assignor to The Dalton Adding Machine Company, Cincinnati, Ohio. Adding-machine. No. 1,225,654; May 8; v. 238; p. 583.

Landsiedel, Harry, assignor to The Dalton Adding Machine Company, Cincinnati, Ohio. Adding and recording machine. No. 1,225,655; May 8; v. 238; p. 583.

Landsiedel, Harry, assignor to The Dalton Adding Machine Company, Cincinnati, Ohio. Adding and recording machine. No. 1,225,656; May 8; v. 238; p. 584.

Lane Bros. Co. (See Lane, George, assignor.)

Lane, Charles C., San Francisco, Cal. Transmission-clutch control. No. 1,226,084; May 15; v. 238; p. 773.

Lane, Cora M. (See Okell, George E., assignor.)

Lane, Franklin L., assignor to P. B. Yates Machine Company, Beloit, Wis. Profile cutter-head. No. 1,226,896; May 22; v. 238; p. 1082.

Lane, George, Haverford, Ill. Socket for tennis-posts and the like. No. 1,224,387; May 1; v. 238; p. 98.

Lane, George, Haverford, Pa. Apparatus for supporting lawn-tennis nets and the like. No. 1,224,388; May 1; v. 238; p. 98.

Lane, George, assignor to Lane Bros. Co., Poughkeepsie, N. Y. Lifting-jack. No. 1,227,915; May 29; v. 238; p. 1455.

Lane, John J., St. Louis, Mo. Valve. No. 1,225,974; May 15; v. 238; p. 734.

Lang, Charles J., Lawrenceburg, Ind. Shoe-support. No. 1,225,657; May 8; v. 238; p. 574.

Langan, George R., New York, N. Y. Gear-puller. No. 1,227,457; May 22; v. 238; p. 1269.

Langdale, Stonay L., *et al.* (See Feltz, Charles F., assignor.)

Langdale, Stonay L., *et al.* (See Shelton, Edwin T., assignor.)

Langdale, William H., *et al.* (See Shelton, Edwin T., assignor.)

Langdale, Wm. H., *et al.* (See Feltz, Charles F., assignor.)

Langford, Jeremiah E., Salt Lake City, Utah. Railway-tie and rail-grip. No. 1,227,636; May 29; v. 238; p. 1359.

Langner, Lawrence, New York, N. Y. Lighting appliance. No. 1,224,386; May 1; v. 238; p. 98.

Langsenkamp, William, Jr., Trustee. (See Miller, Frank S., assignor.)

Lanning, Charles D. (See Hathaway and Lanning.)

Lanphier, Robert C., assignor to Sangamo Electric Company, Springfield, Ill. Mercury motor-meter. No. 1,225,975; May 15; v. 238; p. 734.

Lappen, James E., assignor to Union Fibre Company, Winona, Minn. Heat-insulating board composed of cereal straw. No. 1,225,443; May 8; v. 238; p. 514.

Lappen, James E., assignor to Union Fibre Company, Winona, Minn. Composition of matter for making fireproof and waterproof boards. No. 1,226,779; May 22; v. 238; p. 1044.

Larkin, Walter, assignor to H. Brinton Company, Philadelphia, Pa. Threading attachment for stop-motions. No. 1,226,538; May 15; v. 238; p. 924.

Larmore, James A., Westgrove, Pa. Car-coupling. No. 1,226,085; May 15; v. 238; p. 773.

Larson, David, Berlin, Germany, assignor to Otis Elevator Company, Jersey City, N. J. Elevator-control system. No. 1,225,976; May 15; v. 238; p. 735.

Larson, Leonard M., and C. J. Carlson, Tacoma, Wash. Clothes-tongs. No. 1,226,539; May 15; v. 238; p. 924.

Laskewitz, Edward T., Lynnville, assignor of one-half to L. C. Schnell, Kellogg, Iowa. Rail-joint. No. 1,224,857; May 1; v. 238; p. 262.

Lassen, Axel J. L., Copenhagen, Denmark. Machine for closing bottles and the like with capsules. No. 1,224,937; May 8; v. 238; p. 341.

Lassen, Axel J. L., Copenhagen, Denmark. Spring supporting device for vehicles. No. 1,226,225; May 15; v. 238; p. 820.

Latham, Albert, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Thread-lock. No. 1,226,086; May 15; v. 238; p. 774.

Latham Machinery Company. (See Baumann, Gottfried P., assignor.)

Lauber, Erwin R., and R. V. Neher, Emmishofen, Switzerland. Producing bands of aluminium. No. 1,225,044; May 8; v. 238; p. 377.

Lauch, Richard. (See Busch and Lauch.)



Lauffer, Frederick E., Los Angeles, Cal. Latch-handle. No. 1,227,916; May 29; v. 238; p. 1456.

Lauletta, Nicholas M., Philadelphia, Pa. Clasp. No. 1,226,540; May 15; v. 238; p. 924.

Laurie, William I. (See Newby, William, assignor.)

Laussedat, Auguste J. B., assignor to La Société "La Cellophane," Paris, France. Label for bottles and other receptacles. No. 1,226,897; May 22; v. 238; p. 1082.

Lautenschlager, William F., Cincinnati, Ohio. Cement-applying machine. No. 1,225,828; May 15; v. 238; p. 685.

Lavalle, Peter J. (See Ulrich, William C., assignor.)

Lavere, Thomas J., Bethel, Vt. Vehicle-brake. No. 1,228,033; May 29; v. 238; p. 1490.

Lawler, Arthur P., Brockville, Ontario, Canada. Liquid-seal trap. No. 1,224,181; May 1; v. 238; p. 23.

Lawrence, Edwin V., assignor to Ideal Coated Paper Co., Brookfield, Mass. Reel. No. 1,225,658; May 8; v. 238; p. 584.

Lawrence, Valentine D., Nemaha, Nebr. Cultivator-shovel. No. 1,225,659; May 8; v. 238; p. 585.

Lawrie, James W., Milwaukee, Wis., assignor, by mesne assignments, to William F. Jobbins, Incorporated, Aurora, Ill. Treating aluminum skimmings, screenings, dross, slags, or analogous aluminous materials. No. 1,228,119; May 29; v. 238; p. 1524.

Lawson, Mary. (See Risdon, Robert S., assignor.)

Lawson, Sherman S., *et al.* (See Phillips, George B., assignor.)

Lay, Francis M., asignor to The John Deere Wagon Company, Moline, Ill. Stake-holder for vehicles. No. 1,225,145; May 8; v. 238; p. 411.

Layman, Arthur R., Dover, N. H. Mule stop-motion. No. 1,225,660; May 8; v. 238; p. 585.

Layman, Hebron B., assignor to The Layman Pressed Rod Co., Inc., New York, N. Y. Connecting-rod. No. 1,226,978; May 22; v. 238; p. 1112.

Layman Pressed Rod Co., The. (See Layman, Hebron B., assignor.)

Le Brocq Company. (See Le Brocq, Richard F., assignor.)

Le Brocq, Richard F., New York, assignor to Le Brocq Company, Brooklyn, N. Y. Door-lock for elevators. No. 1,224,182; May 1; v. 238; p. 24.

Le Rond, Louis J. J. B., Paris, France. Recuperating-cycle for engines. No. 1,226,226; May 15; v. 238; p. 820.

Lea, Charles. (See Hathaway and Lea.)

Leach, Robert P. (See Shepperd, George C., assignor.)

Lear, Charles L., Burton, Nebr. Pole-tip. No. 1,225,829; May 15; v. 238; p. 685.

Leaver, Lewis, Armstrong, Iowa. Draft-equalizer. No. 1,226,541; May 15; v. 238; p. 925.

Leavitt, John E., Stoughton, Mass. Tag-holder. No. 1,225,661; May 8; v. 238; p. 585.

Leavitt Machine Company, The. (See Smith and Williams, assignors.)

Leavitt Machine Company, The. (See Stuard, Smith, and Williams, assignors.)

Leavitt Machine Company, The. (See Williams, Dexter, and Smith, assignors.)

Leavitt Machine Company, The. (See Williams and Smith, assignors.)

Leavitt, Samuel, Chicago, Ill. Water-heating apparatus. No. 1,227,806; May 29; v. 238; p. 1418.

Leclair, Henry H., Lowville, N. Y. Runner attachment for vehicles. No. 1,225,444; May 8; v. 238; p. 514.

Lecoutre, Auguste J., assignor to Royal Worcester Corset Co., Worcester, Mass. Corset. No. 1,226,087; May 15; v. 238; p. 774.

Lederer, Otto, Vienna, Austria. Surgical device. No. 1,225,341; May 8; v. 238; p. 479.

Ledoux, John W., Swarthmore, Pa. Fluid-measuring mechanism. No. 1,225,977; May 15; v. 238; p. 735.

Ledoux, John W., Swarthmore, Pa. Proportional meter. No. 1,225,978; May 15; v. 238; p. 735.

Ledvina, Fred C., Irving, Iowa. Internal-combustion engine. No. 1,225,830; May 15; v. 238; p. 685.

Lee, Albert J. F., West Ealing, England. Submersible vessel. No. 1,225,662; May 8; v. 238; p. 585.

Lee, Belle, *et al.* (See Beeson, Ira S., assignor.)

Lee S. Smith and Son Manufacturing Company. (See Mahan, Joseph E., assignor.)

Legere, John P., assignor to Standard Comb Company, Leominster, Mass. Braid-binder. No. 1,225,831; May 15; v. 238; p. 686.

Legge, Thomas A. (See Hamm, Legge and Krohn.)

Leggett, Christopher A., and A. W. Kersey, Emmett, Idaho. End-gate for wagons. No. 1,227,917; May 29; v. 238; p. 1456.

Lehman, Peter G., Mishawaka, Ind. Collar-wrapping machine. No. 1,224,858; May 1; v. 238; p. 262.

Lehmann, Hermann, and F. Hohnberg, Magdeburg, Germany. Recoil-reducing means for guns. No. 1,227,161; May 22; v. 238; p. 1175.

Leibner, Albert, New York, N. Y. Car safety-fender. No. 1,227,458; May 22; v. 238; p. 1269.

Leigh, Thomas E., Manchester, England, assignor to Anglo-American Textile Machinery Company, Abington, Mass. Lappet and thread-guide for spinning and like machines. No. 1,225,663; May 8; v. 238; p. 586.

Leighton, George W., and C. S. Babcock, Chicago, Ill. Coating material for paper for photographic uses. No. 1,225,146; May 8; v. 238; p. 411.

Leister, Curtis D., Paris, Ark. Collapsible chicken crate or coop. No. 1,226,781; May 22; v. 238; p. 1044.

Leitch, John W., Huddersfield, England. Chilling molten material and obtaining the solid in a subdivided state. No. 1,226,542; May 15; v. 238; p. 925.

Lektric Sales Company. (See Bullis, Frederick O., assignor.)

Lemen, Lewis E. (See Matthews, Edward, assignor.)

Lemieux, Alphonse E., Portland, Me. Ball-bearing. No. 1,226,782; May 22; v. 238; p. 1045.

Lemp, Mickael, W. F. Albrecht, and J. Shebol, assignors to Notowi Manufacturing Company, Syracuse, N. Y. Lavatory-fixture. No. 1,224,306; May 1; v. 238; p. 69.

Lenders, Adolph W. H., and H. F. Bauer, Cedar Rapids, Iowa. Manufacture of corn-oil. No. 1,225,664; May 8; v. 238; p. 586.

Lenke, Melchior, Brooklyn, N. Y. Cargo-beam. No. 1,228,120; May 29; v. 238; p. 1525.

Lenker, Will G., Sunbury, Pa. Leveling-rod. No. 1,224,938; May 8; v. 238; p. 342.

Lentz, Hugo, Halensee, near Berlin, Germany. Multiple-expansion steam-engine. No. 1,224,939; May 8; v. 238; p. 342.

Lentz, Hugo, Berlin-Halensee, Germany. Steam-engine for locomotives. No. 1,225,342; May 8; v. 238; p. 479.

Leombruni, Louis, Meriden, Conn. Sounding toy. No. 1,225,445; May 8; v. 238; p. 514.

Leonard, Charles H., assignor to Grand Rapids Refrigerator Co., Grand Rapids, Mich. Drip-cup for refrigerator-traps. No. 1,228,034; May 29; v. 238; p. 1496.

Lepak, Peter, Pittsburgh, Pa. Article-supporting stand. No. 1,226,543; May 15; v. 238; p. 925.

Lépine, Robert, New York, N. Y. Necktie-holder. No. 1,225,257; May 8; v. 238; p. 447.

Letsch, Frederick W., assignor to The Crown Cork & Seal Company of Baltimore City, Baltimore, Md. Filling-machine. No. 1,227,807; May 29; v. 238; p. 1418.

Levi, Samuel L. (See Hazen and Levi.)

Levy, Edward D., Springfield, Mo., and B. W. Mudge, Chicago, Ill. Section-car. No. 1,227,808; May 29; v. 238; p. 1418.

Lewis, Corinne M., Newtonville, Mass. Hand-loom. No. 1,225,446; May 8; v. 238; p. 515.

Lewis, Lloyd V., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Fluid-pressure-controlling apparatus for railway-vehicles. No. 1,224,940; May 8; v. 238; p. 342.

Lewis, William, Utica, N. Y. Wire mattress. No. 1,225,258; May 8; v. 238; p. 447.

Ley, Herbert J., Lawrenceburg, Tenn. Barn. No. 1,226,783; May 22; v. 238; p. 1045.

Liddle, Walter J., Milwaukee, Wis. Priming-cup for motors. No. 1,227,459; May 22; v. 238; p. 1270.

Lidgerwood Manufacturing Company. (See Miller and Ruggles, assignors.)

Lidgerwood Manufacturing Company. (See Swan, Ervin D., assignor.)

Lieber, Louis O., Los Angeles, Cal. Plug and receptacle connector. No. 1,227,918; May 29; v. 238; p. 1456.

Lieberthal, Robert H. (See Schwalb, Otto, assignor.)

Liebknecht, Otto, Frankfort-on-the-Main, Germany, assignor to Roessler & Hasslacher Chemical Company, New York, N. Y. Manufacturing alkali percarbonates. No. 1,225,832; May 15; v. 238; p. 686.

Ligett & Myers Tobacco Company. (See Gilliam, Lawrence M., assignor.)

Liggins, William L., St. Louis, Mo. Alcohol-lamp. No. 1,228,328; May 29; v. 238; p. 1591.

Lightfoot, Wallace L., Brooklyn, N. Y. Repeater for talking-machines. No. 1,226,979; May 22; v. 238; p. 1112.

Lilley, Agnes B., Los Angeles, Cal. Paper absorbent material for surgical and sanitary purposes. No. 1,225,833; May 15; v. 238; p. 686.

Limoncello, Joseph, Chicago, Ill. Knockdown crate. No. 1,225,665; May 8; v. 238; p. 586.

Limpp, Rufus H., and U. Wineland, King City, Mo. Grease-cup. No. 1,227,543; May 22; v. 238; p. 1298.

Lincoln Electric Company, The. (See Lincoln, John C., assignor.)

Lincoln, James F., Cleveland, Ohio. Arc-welding apparatus. No. 1,224,307; May 1; v. 238; p. 69.

Lincoln, John C., assignor to The Lincoln Electric Company, Cleveland, Ohio. Method of and means for transforming direct current. No. 1,227,809; May 29; v. 238; p. 1419.

Lind, August S., McKeesport, Pa. Apparatus for polishing rolling-mill rolls. No. 1,224,889; May 1; v. 238; p. 99.

Lind, Herman P. T., Kew Gardens, England. Interlocking block. No. 1,224,757; May 1; v. 238; p. 228.

Lind, James A., Providence, assignor of one-third to W. Q. Sampson and one-third to F. E. Horton, Cranston, R. I. Needle. No. 1,225,045; May 8; v. 238; p. 377.

Lindsay, William G., Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y. Solvent for acetyl cellulose. No. 1,226,339; May 15; v. 238; p. 862.

Lindsay, William G., Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y. Solvent for acetyl cellulose. No. 1,226,340; May 15; v. 238; p. 862.

Lindsay, William G., Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y. Making acetyl-cellulose plastic compounds. No. 1,226,341; May 15; v. 238; p. 862.

Lindsay, William G., Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y. Making acetylcellulose plastic compounds. No. 1,226,342; May 15; v. 238; p. 862.

Lindsay, William G., Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y. Making acetylcellulose plastic compounds. No. 1,226,343; May 15; v. 238; p. 863.

Lindstrom, John T., Allentown, Pa. Steam-separator. No. 1,227,275; May 22; v. 238; p. 1213.

Lines, John, assignor to The Scovill Mfg. Co., Waterbury, Conn. Valve. No. 1,226,608; May 15; v. 238; p. 945.

Link-Belt Company. (See Pratt, Howell D., assignor.)

Linse, Benjamin F., Seattle, Wash. Weeder. No. 1,226,980; May 22; v. 238; p. 1113.

Lipinski, John, Leavenworth, Kans. Lace-fastening device. No. 1,224,390; May 1; v. 238; p. 99.

Lipscomb, Arthur W. (See Dawkins and Lipscomb.)

Lisell, Ernest, Dalbo, Minn. Stovepipe-cleaner. No. 1,228,329; May 29; v. 238; p. 1591.

Liston, Thomas. (See Vick, Frank H., assignor.)

Litchfield, Edgar C. and H. L., assignors to The Litchfield Manufacturing Company, Waterloo, Iowa. Dust-cap and wheel-holder. No. 1,228,035; May 29; v. 238; p. 1496.

Litchfield, Henry L. (See Litchfield, Edgar C. and H. L.)

Litchfield Manufacturing Company, The. (See Litchfield, Edgar C. and H. L., assignors.)

Litot, Francis E. J., Wilkinsburg, Pa. Soldering compound. No. 1,224,941; May 8; v. 238; p. 343.

Littauer, Lucius N. (See Dahl, Harry J., assignor.)

Littge, Bertha E., Paonia, Colo. Window-screen. No. 1,225,979; May 15; v. 238; p. 736.

Little, Frederick B., assignor, by mesne assignments, to J. C. Deagan Musical Bells, Chicago, Ill. Electric switching mechanism. No. 1,228,222; May 29; v. 238; p. 1556.

Little, Frederick B., assignor, by mesne assignments, to J. C. Deagan Musical Bells, Chicago, Ill. Electromechanical action for musical instruments. No. 1,228,223; May 29; v. 238; p. 1556.

Little, James A., Bismarck, N. D. Water-heater for gas or gasolene stoves. No. 1,225,834; May 15; v. 238; p. 686.

Livesay, Robert C. (See Raney and Livesay.)

Livingston, D McRa, New York, N. Y. Radiator attachment. No. 1,226,344; May 15; v. 238; p. 863.

Livingston, George, Philadelphia, Pa. Box. No. 1,224,391; May 1; v. 238; p. 99.

Livingston, William, New York, N. Y., assignor to The Noesting Pin Ticket Company, Inc. Pin-ticket. No. 1,224,183; May 1; v. 238; p. 24.

Ljungström, Birger. (See Ljungström, Fredrik and B.)

Ljungström, Fredrik and B., Finspong, Sweden, assignors to General Electric Company. Device for restricting axial movements of shafts. No. 1,224,882; May 1; v. 238; p. 271.

Lloyd, Richard P., Trenton, N. J. Shoe-protector. No. 1,224,655; May 1; v. 238; p. 192.

Loadometer Company, The. (See Troll, Frederick J., assignor.)

Lobdell, Burr, Detroit, Mich. Gun-sight. No. 1,227,544; May 22; 238; p. 1299.

Locke, Fred M., Victor, N. Y. Insulator. No. 1,225,147; May 8; v. 238; p. 411.

Locke, Fred M., Victor, N. Y. Insulator and composition material for insulating and other purposes. No. 1,226,088; May 15; v. 238; p. 775.

Lockwood, Charles S., Newark, assignor to Hyatt Roller Bearing Company, Harrison, N. J. Double-thrust bearing. No. 1,226,345; May 15; v. 238; p. 863.

Lockwood, Louis S., assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y. Organ swell-box. No. 1,225,666; May 8; v. 238; p. 587.

Locomotive Superheater Company. (See McKee, Neal T., assignor.)

Locomotive Superheater Company. (See Ostermann, Rudolf M., assignor.)

Loepsinger, Albert J., Cranston, R. I., assignor to General Fire Extinguisher Company, New York, N. Y. Apparatus for sealing glass bulbs. No. 1,225,980; May 15; v. 238; p. 736.

Loeser, Edward G., Roxbury township, Dane county, assignor to Cantilever Airless Tire Co., Milwaukee, Wis. Metallic spring-actuated mechanism for rubber tires. No. 1,224,758; May 1; v. 238; p. 228.

Loesser, William L., Comstock, Mich. Can-opener. No. 1,228,121; May 29; v. 238; p. 1525.

Lofe, Charles F., Pittsburgh, Pa. Keg liner and cleat. No. 1,226,346; May 15; v. 238; p. 864.

Loftus, Francis A., Philadelphia, Pa. Projecting apparatus. No. 1,224,392; May 1; v. 238; p. 100.

Logan, Edward A. (See Bement and Logan.)

Logan, William H., assignor to Dow Wire & Iron Works, Louisville, Ky. Revolving table. No. 1,224,475; May 1; v. 238; p. 130.

Lohrer, William, River Forest, Ill. Ribbon-reel. No. 1,227,460; May 22; v. 238; p. 1270.

Long, Elmer C., Hannibal, Mo. Internal-combustion engine. No. 1,226,678; May 22; v. 238; p. 1008.

Long, George F., assignor to G. Piel, New York, N. Y. Automatic horn. No. 1,226,089; May 15; v. 238; p. 775.

Longabaugh, Annah E., Metz, Mo. Poison-bottle indicator. No. 1,224,393; May 1; v. 238; p. 100.

Loomis, Allen, assignor to Packard Motor Car Company, Detroit, Mich. Speedometer driving mechanism. No. 1,226,784; May 22; v. 238; p. 1045.

Loomis, Milton J. (See Davis and Loomis.)

Loomis, Morris A., Gallion, Ala. Necktie stretcher and supporter. No. 1,226,544; May 15; v. 238; p. 926.

Lorentzen, Edward C., Kendrick township, Greene county, Iowa. Bottle-vending machine. No. 1,224,942; May 8; v. 238; p. 343.

Lorenz, Peter A. (See Adler, Bror A., assignor.)

Losee, Joseph S., Hebron, Ill. Muffler cut-out. No. 1,227,461; May 22; v. 238; p. 1270.

Losey, Arthur W., Dover, N. J. Plate-lifter. No. 1,224,808; May 1; v. 238; p. 69.

Louden, Thomas, Fairfield, Iowa. Sanitary drinking-bowl for stock. No. 1,227,279; May 22; v. 238; p. 1213.

Loughridge, Clyde H. and H. R., Pittsburgh, Pa. Pipe-cutter's work-bench. No. 1,225,981; May 15; v. 238; p. 736.

Loughridge, Clyde H. and H. R., Pittsburgh, Pa. Outlet-box. No. 1,228,330; May 29; v. 238; p. 1591.

Loughridge, Howard R. (See Loughridge, Clyde H. and H. R.)

Lovell-McConnell Manufacturing Company. (See McConnell, Duncan A., assignor.)

Lowe, Henry L., Indianapolis, Ind. Engine. No. 1,225,259; May 8; v. 238; p. 447.

Lowry, Claud A., *et al.* (See Bretz, George W., assignor.)

Loxterman, Howard B., Pittsburgh, assignor to Blaw Steel Construction Company, Hoboken, Pa. Mold-form. No. 1,227,280; May 22; v. 238; p. 1213.

Loxterman, Howard B., Pittsburgh, assignor to Blaw Steel Construction Company, Hoboken, Pa. Tunnel-form. No. 1,227,281; May 22; v. 238; p. 1213.

Loy, Ernest H. (See Ford, Loy, and Heeter.)

Lubarsky, Harry C., Philadelphia, Pa. Method and means for dyeing fur skins. No. 1,225,447; May 8; v. 238; p. 515.

Luck, George A., Cambridge, Mass. Calipers. No. 1,225,835; May 15; v. 238; p. 686.

Luckiesh, Matt, Cleveland, Ohio, assignor to General Electric Company. No-glare device. No. 1,227,462; May 22; v. 238; p. 1271.

Lucy, Ira, Long Pine, Nebr. Foldable crate. No. 1,226,227; May 15; v. 238; p. 820.

Ludlum, Albert C., New York, N. Y., assignor to National Bush Company. Bushing for bungs. No. 1,226,090; May 15; v. 238; p. 775.

Ludlow Typograph Company, The. (See Reade, William A., assignor.)

Lueters, William G. (See Heinkel and Lueters.)

Lukacher, Leon, Detroit, Mich. Game-table. No. 1,225,260; May 8; v. 238; p. 448.

Luke, Willis W., M. A. Russell, L. R. Kennedy, and C. E. Anderson, assignors of one-fourth to said Anderson, one-fourth to said Luke, one-fourth to said Kennedy, and one-fourth to J. P. Foreman, Fairfield, Iowa. Drinking-fountain. No. 1,228,224; May 29; v. 238; p. 1557.

Lum, Walter O., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Motor-control system. No. 1,227,810; May 29; v. 238; p. 1419.

Lummus Cotton Gin Company. (See Grimes, Thaddeus S., assignor.)

Lummus, Walter E., Lynn, Mass. Column for distillation and the like. No. 1,226,898; May 22; v. 238; p. 1082.

Lumsden, John O., Seattle, Wash. Yeast substitute. No. 1,226,347; May 15; v. 238; p. 864.

Lundell, Alben E. (See Reeves and Lundell.)

Lundell, Alben E., New York, N. Y., and H. G. Eddy, Bayonne, N. J., assignors, by mesne assignments, to Western Electric Company, Incorporated. Telephone-call-registering system. No. 1,226,981; May 22; v. 238; p. 1113.

Lunken, Edmund H., Cincinnati, Ohio. Pocket-window. No. 1,228,036; May 29; v. 238; p. 1497.

Lupinski, Max, and G. J. Meyer, Milwaukee, Wis. Barrel washing and renovating machine. No. 1,225,982; May 15; v. 238; p. 736.

Lupinski, Max, and G. J. Meyer, Milwaukee, Wis. Barrel calking and renovating machine. No. 1,225,983; May 15; v. 238; p. 737.

Lüpke, Paul, Jr., Trenton, N. J. Pipe-hanger. No. 1,224,309; May 1; v. 238; p. 70.

Lusardi, Lucy, Defiance, Mich. Guy-anchor. No. 1,225,448; May 8; v. 238; p. 516.

Lusk, Alfred L., and L. Zeiger, Melbourne, Iowa. Nut-lock. No. 1,228,331; May 29; v. 238; p. 1592.

Lussier, Henry, Salem, assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Shuttle. No. 1,226,615; May 15; v. 238; p. 947.

Lutze, Alfred, Halle-on-the-Saale, Germany. Machine for cutting plastic or pulverulent masses of all kinds. No. 1,224,304; May 1; v. 238; p. 100.

Lux, Engelbert, Bellingham, Wash. Portable, power, wood-surfacer. No. 1,224,943; May 8; v. 238; p. 343.

Luyties, Amalie F., New York, N. Y. Cover for refuse-cans. No. 1,227,463; May 22; v. 238; p. 1271.

Lydon, John F., Oklahoma, Okla. Anticreeping means for railway-rails. No. 1,227,811; May 29; v. 238; p. 1420.

Lynah, James, Newburgh, N. Y., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Apparatus for recovering solvents. No. 1,228,225; May 29; v. 238; p. 1557.



Lynch, Charley W., Trinity, Tex. Attachment for sawmill-dogs. No. 1,228,332; May 29; v. 238; p. 1592.

Lyon, Eva M., Escondido, Cal. Dirigible headlight for vehicles. No. 1,225,984; May 15; v. 238; p. 737.

Lyon, William T., assignor to The International Dental Appliance Co., Portland, Oreg. Dental apparatus. No. 1,224,395; May 1; v. 238; p. 101.

M. Schulz Co. (See Gustafson, Adolph P., assignor.)

M. D. Knowlton Company. (See De Smith, Henry, assignor.)

M. M. Johnson Co., The. (See Brown, Lucius A., assignor.)

Maasko, Emil F., Ableman, Wis. Detachable bread-tin handle. No. 1,227,920; May 29; v. 238; p. 1457.

MacDonald, Alexander, Omaha, Nebr. Dump-wagon. No. 1,226,787; May 22; v. 238; p. 1040.

MacDonald, George M., San Bernardino, Cal. Artificial honeycomb. No. 1,224,479; May 1; v. 238; p. 131.

MacDougall, Allan J., Detroit, Mich. Book-hanger. No. 1,224,947; May 8; v. 238; p. 345.

MacFadden, George J. (See Callan and MacFadden.)

MacGahan, Paul, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical protective device. No. 1,224,400; May 1; v. 238; p. 102.

MacGahan, Paul, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical measuring instrument. No. 1,227,468; May 22; v. 238; p. 1273.

MacGahan, Paul, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Relay. No. 1,227,469. May 22; v. 238; p. 1273.

MacKay, Malcolm. (See Rice, George M., assignor.)

MacKenzie, Fred L., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for inserting fastenings. No. 1,225,837; May 15; v. 238; p. 687.

MacKenzie, George W., Jr. (See McKenzie, James A. and G. W., Jr.)

MacKenzie, James A. and G. W., Jr., Ben Avon, Pa. Liquid-measuring apparatus. No. 1,228,363; May 29; v. 238; p. 1603.

MacLaurin, John, Brookfield, Mass. Process of veneering. No. 1,225,734; May 8; v. 238; p. 609.

MacLaurin, John, Brookfield, Mass. Veneering-tape. No. 1,225,735; May 8; v. 238; p. 610.

MacLeith, Walter D., St. Paul, assignor of one-third to Uniloy Fibre Company, Winona, Minn. Insulating floor construction. No. 1,226,788; May 22; v. 238; p. 1046.

MacNamara, Patrick T., assignor to The Western Union Telegraph Company, New York, N. Y. Gravity-battery electrode. No. 1,225,946; May 8; v. 238; p. 481.

MacPherson, Allan R., Tacoma, Wash. Game apparatus. No. 1,226,551; May 15; v. 238; p. 928.

MacPherson, Earle S., assignor of one-half to C. L. Nedoma, Detroit, Mich. Valve mechanism. No. 1,227,812; May 29; v. 238; p. 1420.

Macbeth-Evans Glass Company. (See Evans, Howard S., assignor.)

Macbeth-Evans Glass Company. (See Griswold, Lester E., assignor.)

Machlet, George, Jr., Elizabeth, N. J. Electric regulator. No. 1,227,921; May 29; v. 238; p. 1457.

Mack, James E., Ray Brook, N. Y. Holder for toilet articles. No. 1,226,231; May 15; v. 238; p. 822.

Mack, Otto B., assignor to All-Weather Spark Plug Company, Des Moines, Iowa. Spark-plug. No. 1,227,470; May 22; v. 238; p. 1273.

Mack, William, New York, N. Y. Bird bath-house. No. 1,227,471; May 22; v. 238; p. 1274.

Macleod, Alice, San Jose, Cal. Composition of fruit matter for food production. No. 1,225,450; May 8; v. 238; p. 516.

Macomber, Edmund K., Amsterdam, N. Y. Revolving light for automobiles. No. 1,224,763; May 1; v. 238; p. 230.

Macomber Motors Company. (See Macomber, Walter G., assignor.)

Macomber, Walter G., assignor to Macomber Motors Company, Los Angeles, Cal. Muffler. No. 1,226,789; May 22; v. 238; p. 1047.

Macon, Joseph B., Pine Bluff, Ark. Sectional hat-box. No. 1,225,451; May 8; v. 238; p. 516.

Macphail, James. (See Dain and Macphail.)

Macy, Alfred J., Chicago, Ill. Automatic pilot mechanism. No. 1,228,364; May 29; v. 238; p. 1604.

Maddock, John, assignor to John Maddock & Sons, Trenton, N. J. Siphon structure for use in water-closets. No. 1,225,452; May 8; v. 238; p. 517.

Madole, William J., and C. V. Krider, Paris, Tenn. Display-rack. No. 1,226,679; May 22; v. 238; p. 1008.

Maguire, George F. (See Vick, Frank H., assignor.)

Mahan, Joseph E., Swissvale, assignor to Lee S. Smith and Son Manufacturing Company, Pittsburgh, Pa. Dental cement. No. 1,226,232; May 15; v. 238; p. 822.

Maher, John, Cleveland, Ohio. Draft-indicator. No. 1,227,286; May 22; v. 238; p. 1215.

Maher, John, assignor of one-fifth to E. Quigley and one-fifth to J. J. McKee, Cleveland, Ohio. Draft-indicator. No. 1,227,285; May 22; v. 238; p. 1214.

Mahoney, Clarence, assignor to G. I. Sellers & Sons Company, Elwood, Ind. Sliding shelf for kitchen-cabinets. No. 1,227,813; May 29; v. 238; p. 1421.

Mahoney, Joseph N., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Circuit-interrupter. No. 1,224,186; May 1; v. 238; p. 25.

Mahoney, Joseph N., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Circuit-interrupter. No. 1,227,472; May 22; v. 238; p. 1274.

Mahoney, Thomas, assignor to L. A. Young, Detroit, Mich. Spring-connector. No. 1,225,148; May 8; v. 238; p. 412.

Mahony, Henry J., Green Bay, Wis. Telegraphic transmitter. No. 1,224,187; May 1; v. 238; p. 26.

Mai, Bernhard, West Hoboken, N. J. Fruit-stoning apparatus. No. 1,225,838; May 15; v. 238; p. 688.

Mains, Franklin E., Orosi, Cal. Starting-crank for automobiles. No. 1,224,401; May 1; v. 238; p. 103.

Maisch, Gustav F., Chicago, Ill. Refrigerating apparatus. No. 1,225,453; May 8; v. 238; p. 517.

Maixner, Frank J. (See Prenosil, Anthony J., assignor.)

Maker, John A., Duluth, Minn. Closure for dispensing paste-tubes. No. 1,227,638; May 29; v. 238; p. 1360.

Maland, Ole O. (See Sheldrup and Maland.)

Malm, John A., Diamond, S. D. Grain-pan for threshing-machines. No. 1,224,188; May 1; v. 238; p. 26.

Maltby, George K., New York, N. Y. Lamp. No. 1,224,189; May 1; v. 238; p. 27.

Maltby, Lewis C., assignor to The Stone Straw Company, Washington, D. C. Glue-pot. No. 1,224,764; May 1; v. 238; p. 230.

Mandel, Aaron H., and M. Roth, New York, N. Y. Changeable sign. No. 1,225,454; May 8; v. 238; p. 517.

Mangisch, Edward, and A. Rey, New York, N. Y. Coffee-percolator. No. 1,226,552; May 15; v. 238; p. 928.

Manierre, George, Milwaukee, Wis. Box-car-loading apparatus. No. 1,226,553; May 15; v. 238; p. 928.

Manitowoc Electric Implement Co. (See Brixius, Frank E., assignor.)

Manly, Charles M., Freeport, N. Y. Variable-stroke pump. No. 1,227,164; May 22; v. 238; p. 1176.

Manly, Charles M., Brooklyn, N. Y. Distant control apparatus. No. 1,227,639; May 29; v. 238; p. 1360.

Manning, Bowman & Company. (See Wilkinson and Barker, assignors.)

Manning, William M., Seattle, Wash. Window-lock. No. 1,226,680; May 22; v. 238; p. 1008.

Manny, Fred L., assignor, by mesne assignments, to Baker-Vawter Company, Benton Harbor, Mich. Follower for filing-trays. No. 1,226,790; May 22; v. 238; p. 1047.

Manny, Fred L., assignor, by mesne assignments, to Baker-Vawter Company, Benton Harbor, Mich. Follower for filing-trays. No. 1,226,791; May 22; v. 238; p. 1048.

Mansfield, Clarence H., El Paso, Tex. Filing-winder for cameras. No. 1,226,681; May 22; v. 238; p. 1009.

Mansfield, Royal J., New York, N. Y. Sprinkler-tank equipment. No. 1,227,287; May 22; v. 238; p. 1215.

Mante, Ferdinand, Oakland, Cal. Folding stool. No. 1,226,554; May 15; v. 238; p. 929.

Marabini, Raffaele, New York, N. Y. Pneumatic shoe. No. 1,225,455; May 8; v. 238; p. 518.

Marathon Electric Mfg. Company. (See Sellers, Harry E., assignor.)

Marble, George E., Dubuque, Iowa. Car-truck. No. 1,225,149; May 8; v. 238; p. 412.

Marcinkowski, Józef, and J. Bunda, Chicago, Ill. Automobile steering attachment and self-starting device. No. 1,224,402; May 1; v. 238; p. 103.

Marconi, Guglielmo, London, England, assignor to Marconi Wireless Telegraph Company of America, New York, N. Y. Transmitting apparatus for use in wireless telegraphy and telephony. No. 1,226,099; May 15; v. 238; p. 777.

Marconi Wireless Telegraph Company of America. (See Butcher, Elmer E., assignor.)

Marconi Wireless Telegraph Company of America. (See Marconi, Guglielmo, assignor.)

Marcotte, Eugene J., Salina, Kans. Car-replacer. No. 1,227,288; May 22; v. 238; p. 1216.

Marcy, Frank E., Salt Lake City, Utah. Tube-mill. No. 1,226,555; May 15; v. 238; p. 929.

Mardick, John R., New York, N. Y. Nitro aromatic compound and making same. No. 1,225,347; May 8; v. 238; p. 481.

Marin, William, New York, N. Y. Brackett. No. 1,227,165; May 22; v. 238; p. 1176.

Marinsky, Davis, New York, N. Y. Fastening device. (Reissue.) No. 14,303; May 15; v. 238; p. 953.

Marion Steam Shovel Co., The. (See Fellmeth, Jacob W., assignor.)

Mark, Clayton. (See Dies, Charles A., assignor.)

Mark, Clayton. (See Mark and Bergman, assignors.)

Mark, Clarence, and C. O. Bergman, Evanston, assignors to C. Mark, Lake Forest, Ill. Mechanism for welding pipe by electricity. No. 1,226,350; May 15; v. 238; p. 865.

Mark Cross Company. (See Schwing, Henrietta, assignor.)

Mark Manufacturing Company. (See Fox, Gordon, assignor.)

Markko, John E. (See Sundell and Markko.)

Marks, Donn O., San Francisco, assignor of one-half to L. S. Atkinson, Los Angeles, Cal. Centrifugal impact pulverizing apparatus. No. 1,228,338; May 29; v. 238; p. 1504.

Markun, Mollie, New York, N. Y. Gymnasium-skirt. No. 1,226,100; May 15; v. 238; p. 778.

Markwell, Andrew E., assignor to A. D. Evans, Fort Worth, Tex. Matrix molding device. No. 1,226,556; May 15; v. 238; p. 929.

Markwell, Andrew E., assignor to A. D. Evans, Fort Worth, Tex. Matrix molding device. No. 1,226,557; May 15; v. 238; p. 930.
Marlin, Isaac U., assignor, by mesne assignments, to G. T. and L. T. Cunningham, Shreveport, La. Welding-torch. No. 1,228,038; May 29; v. 238; p. 1497.
Marquardt, Louis H., Genoa, Nebr. Ironing-board. No. 1,227,640; May 29; v. 238; p. 1361.
Marrington, Jesse M., Nemaha, Iowa. Seed-corn stringer. No. 1,227,059; May 22; v. 238; p. 1139.
Marsden, John E., Philadelphia, Pa. Vase-holder. No. 1,226,101; May 15; v. 238; p. 778.
Marseilles Company. (See Brown, Theophilus, assignor.)
Marsh, Harry S., Brooklyn, assignor to American Machine & Foundry Company, New York, N. Y. Expanding pulley. No. 1,224,558; May 1; v. 238; p. 159.
Marsh, Luther, Philadelphia, Pa. Adjustable alligator-wrench. No. 1,226,351; May 15; v. 238; p. 865.
Marsh, William J., Dexter, Iowa. Animal-oiling device. No. 1,225,456; May 8; v. 238; p. 518.
Marshall, Carrie A., Whitewater, Wis. Sign. No. 1,224,480; May 1; v. 238; p. 131.
Marshall, Charles M., trustee. (See Kries, Lawrence F., assignor.)
Marshall, George R., Hunkers, Pa. Mail-catcher. No. 1,227,473; May 22; v. 238; p. 1274.
Marshall, Matthew, Sr., Vancouver, British Columbia, Canada. Coking-oven. No. 1,227,060; May 22; v. 238; p. 1139.
Martin, Alfred, Rockford, Ill. Furnace. No. 1,224,190; May 1; v. 238; p. 27.
Martin, Haakon A., assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,226,682; May 22; v. 238; p. 1009.
Martin, Harry, St. Louis, Mo. Caster. No. 1,224,765; May 1; v. 238; p. 231.
Martin, Harry E. (See Boswell and Martin.)
Martin, John F., *et al.* (See Noah, Robert S., assignor.)
Martin, Richard, Minneapolis, Minn. Vapor-heating system. No. 1,224,559; May 1; v. 238; p. 159.
Martin, Robert P. (See Kollock and Martin.)
Martin, Samuel H., Chicago, Ill. Synchronous dynamo-electric machine. No. 1,226,901; May 22; v. 238; p. 1083.
Martin, Talbot G., assignor to Automatic Electric Company, Chicago, Ill. Telephone system. No. 1,227,474; May 22; v. 238; p. 1275.
Martin, Thomas, Dorchester, assignor to W. B. Arnold, North Abington, Mass. Apparatus for cutting welting. No. 1,228,365; May 29; v. 238; p. 1604.
Martin, William D., and D. T. Bjork, Chicago, Ill. Delivery-box. No. 1,224,766; May 1; v. 238; p. 231.
Martinez, Victorino, Habana, Cuba. Electric-lamp holder. No. 1,226,558; May 15; v. 238; p. 930.
Martini, Ceasar, assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y. Automatic violin-piano. No. 1,228,339; May 29; v. 238; p. 1595.
Martini, Otto A., Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,227,061; May 22; v. 238; p. 1140.
Martiny, John P., Big Rapids, Mich. Antiskid device for auto-tires. No. 1,225,839; May 15; v. 238; p. 688.
Martus, Martin L. (See Schoenmehl and Martus.)
Mason, Andrew J., Granite, Okla. Machine for making pinless clothes-lines. No. 1,224,767; May 1; v. 238; p. 232.
Mason, Carl T., assignor to Splitdorf Electrical Company, Newark, N. J. Adjustable interrupter for ignition-dynamos. No. 1,226,982; May 22; v. 238; p. 1114.
Mason, Charles T., Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J. Combination coil and condenser for dynamos. No. 1,225,457; May 8; v. 238; p. 519.
Mason, Charles T., Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J. Ignition-dynamo. No. 1,226,233; May 15; v. 238; p. 822.
Mason, Charles T., Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J. Distributer for ignition devices. No. 1,226,234; May 15; v. 238; p. 822.
Mason, John C., Salisbury, N. C. Change-gear mechanism. No. 1,226,559; May 15; v. 238; p. 930.
Massachusetts Chocolate Company. (See Walker, John, assignor.)
Massey, Nelson C. (See Winters and Massey.)
Master Carburetor Company. (See Miller and Adamson, assignors.)
Masuda, Taichiro, Marysville, Cal. Figure polycycle. No. 1,226,560; May 15; v. 238; p. 930.
Maszczyk, Alexander, Milwaukee, Wis. Safety-razor. No. 1,227,641; May 29; v. 238; p. 1361.
Matchette, Frank J., and R. Raddatz, Milwaukee, Wis., assignors, by mesne assignments, to Richmond Radiator Company, New York, N. Y. Vacuum cleaning and force-draft system. No. 1,224,481; May 1; v. 238; p. 132.
Matchette, Frank J., and R. Raddatz, Milwaukee, Wis., assignors, by mesne asignments, to Richmond Radiator Company, New York, N. Y. Vacuum cleaning and force-draft system. No. 1,224,482; May 1; v. 238; p. 132.
Matheeuwissen, Walterus T., Rotterdam, assignor of one-half to W. Tom, Katwyjk-aan-Zee, Netherlands. Friction-clutch. No. 1,227,475; May 22; v. 238; p. 1275.
Mathews Gravity Carrier Company. (See Buck, Herman J., assignor.)
Mathews Gravity Carrier Company. (See Kellogg, Winthrop C., assignor.)
Mathews, Henry B. (See Minnich and Mathews.)
Mathews, John J. (See Minnich and Mathews.)
Matney, James, assignor of one-half to E. Roberts, Livingston, Mont. Rotary weeder and cultivator. No. 1,227,166; May 22; v. 238; p. 1177.
Matteson, Jesse E., *et al.* (See Graves, John, assignor.)
Matthels, Samuel G., *et al.* (See Mentzer, Claude E., assignor.)
Matthews, Claude L., assignor to W. N. Matthews and Brother, Incorporated, St. Louis, Mo. Rope-clamp. No. 1,227,167; May 22; v. 238; p. 1177.
Matthews, Claude L., assignor to W. N. Matthews and Brother, Inc., St. Louis, Mo. Eye for guy attachments. No. 1,227,168; May 22; v. 238; p. 1177.
Matthews, Edward, assignor of one-half to L. E. Lemen, Denver, Colo. Vehicle-spring. No. 1,225,458; May 8; v. 238; p. 519.
Mauboules, J. S., *et al.* (See Underwood, Charles W., assignor.)
Mauk, Albert S., Orangeville, Md. Wheel-tire. No. 1,225,459; May 8; v. 238; p. 519.
Maurice, Albert, Paris, France. Apparatus for re-educating and improving hearing. No. 1,227,476; May 22; v. 238; p. 1276.
Maussner, Frederick, Philadelphia, Pa., assignor to M. L. Maussner, Collingswood, N. J. Machine for interlacing curled hair. No. 1,225,671; May 8; v. 238; p. 589.
Maussner, Madeline L. (See Maussner, Frederick, assignor.)
Maxwell, Clarence E. (See Naginey, Samuel R., assignor.)
Maxwell, Theodore R., Brooklyn, N. Y. Knockdown birdcage. No. 1,227,814; May 29; v. 238; p. 1421.
Mayer, Heinrich, and G. Schlatter, assignors to Firm of A. Saurer, Arbon, Switzerland. Circulating lubricating system. No. 1,225,840; May 15; v. 238; p. 688.
Mayer, Louis, Antigo, Wis. Power-hammer-ram coupling. No. 1,225,046; May 8; v. 238; p. 378.
Mayhew, Douglas R., Shingle Springs, Cal. Automatic extension car-step. No. 1,227,642; May 29; v. 238; p. 1361.
Maynard, Charles, Milan, Mich. Portable fireplace. No. 1,228,340; May 29; v. 238; p. 1595.
Maynard, Joseph A., Ravena, assignor of one-half to T. J. Quest, Kingston, N. Y. Detachable eye-shield. No. 1,228,341; May 29; v. 238; p. 1596.
Mayne, Leander M., Columbia, S. C. Roller for sliding drawers. No. 1,226,561; May 15; v. 238; p. 931.
Mazza, George M. (See Drew and Mazza.)
McAdams, William C., Millport, Ala., assignor of one-half to W. B. Lacy, Columbus, Miss. Boll-weevil catcher and destroyer. No. 1,224,555; May 1; v. 238; p. 158.
McBurney, Henry C., Los Angeles, Cal. Refuse-collecting bag. No. 1,228,333; May 29; v. 238; p. 1593.
McCabe, Allan J., Charlottetown, Prince Edward Island, Canada. Linoleum-truck. No. 1,224,759; May 1; v. 238; p. 229.
McCabe, Ira E., Lexington, Nebr. Aeronautics. No. 1,227,404; May 22; v. 238; p. 1271.
McCain, Cyrus A., Bensonhurst, N. Y. Printing-press impression mechanism. No. 1,225,667; May 8; v. 238; p. 587.
McCain, Cyrus A., Bensonhurst, N. Y. Printing-press inking mechanism. No. 1,225,668; May 8; v. 238; p. 587.
McCain, Cyrus A., Bensonhurst, N. Y. Printing-press sheet-delivery mechanism. No. 1,225,669; May 8; v. 238; p. 588.
McCain, Cyrus A., Bensonhurst, N. Y. Printing-press. No. 1,225,670; May 8; v. 238; p. 588.
McCain, Theodore H., Gibson's Landing, British Columbia, Canada. Lock-washer. No. 1,228,334; May 29; v. 238; p. 1593.
McCandless, David C., Boise, Idaho. Flash-light apparatus. No. 1,225,261; May 8; v. 238; p. 448.
McCandless, Edgar S., Rolla, Mo. Concrete-mixer. No. 1,224,656; May 1; v. 238; p. 192.
McCandless Sylvester M., and F. G. McPherson, Beaver Falls, Pa. Shampooing-stand. No. 1,228,122; May 29; v. 238; p. 1525.
McCandless, William L., *et al.* (See Sons, Ernest L., assignor.)
McCargar, Lorren B., North Kansas City, Mo. Vehicle-motor power. No. 1,226,785; May 22; v. 238; p. 1045.
McCarthy, James B., Birmingham, Mich., assignor to National Metal Molding Company, Pittsburgh, Pa. Insulator wall-bracket. No. 1,225,460; May 8; v. 238; p. 519.
McCarthy, Robert H., Madella, Minn. Guard. No. 1,225,461; May 8; v. 238; p. 520.
McCaskey Register Company, The. (See Hick, Harry J., assignor.)
McCaskey Register Company, The. (See Wildman, Joseph E., assignor.)
McClelland, Earby H., Tucson, Ariz. Compound high-pressure lubricating-pump. No. 1,228,335; May 29; v. 238; p. 1593.



McCleliand, Earby H., assignor to J. F. Heimbach, trustee, Tucson, Ariz. High-pressure lubricating-pump with double discharge. No. 1,228,336; May 29; v. 238; p. 1593.
McCluer, Anna T., New York, N. Y. Chart-case. No. 1,224,396; May 1; v. 238; p. 101.
McClure, Carey S., Dayton, Wyo. Hay-bunching machine. No. 1,227,058; May 22; v. 238; p. 1138.
McCollum, Burton, Washington, D. C. Alternating-current induction-motor. No. 1,226,091; May 15; v. 238; p. 775.
McConahey, William M., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Transformer insulation. No. 1,224,184; May 1; v. 238; p. 24.
McConahy, James, Ellwood City, Pa. Nut-lock. No. 1,224,556; May 1; v. 238; p. 158.
McConnell, Duncan A., Arlington, assignor to Lovell-McConnell Manufacturing Company, Newark, N. J. Diaphragm-horn. No. 1,228,226; May 29; v. 238; p. 1557.
McConway & Torley Company, The. (See McConway and Regan, assignors.)
McConway & Torley Company, The. (See Milliken, Isaac H., assignor.)
McConway & Torley Company, The. (See Redman, William A., assignor.)
McConway, William, Jr., and W. J. Regan, assignors to The McConway & Torley Company, Pittsburgh, Pa. Uncoupling mechanism. No. 1,226,092; May 15; v. 238; p. 776.
McConway, William, Jr., and W. J. Regan, assignors to The McConway & Torley Company, Pittsburgh, Pa. Uncoupling and centering mechanism for car-couplings. No. 1,226,093; May 15; v. 238; p. 776.
McConway, William, Jr., and W. J. Regan, assignors to The McConway & Torley Company, Pittsburgh, Pa. Uncoupling mechanism. No. 1,226,094; May 15; v. 238; p. 776.
McCoole, Frank. (See Rawdon and McCoole.)
McCoy, James P. A., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Molding material and making the same. No. 1,227,465; May 22; v. 238; p. 1272.
McCoy, John S., Scarbro, W. Va. Grease-cup. No. 1,226,786; May 22; v. 238; p. 1046.
McCoy, Walter E. (See Sprong and McCoy.)
McCulloch, Harry G., assignor, by mesne assignments, to Stover Manufacturing and Engine Company, Freeport, Ill. Feed-mill. No. 1,225,449; May 8; v. 238; p. 516.
McDaid, Martin, Leith, Scotland, assignor, by mesne assignments, to Revere Rubber Company. Machine for winding the cores of golf-balls. No. 1,224,397; May 1; v. 238; p. 101.
McDermott, Daniel A., Philadelphia, Pa. Vehicle-lock. No. 1,228,123; May 29; v. 238; p. 1526.
McDonald, Charles D., assignor to McDonald Machine Co., Chicago, Ill. Metal-shearing machine. No. 1,227,162; May 22; v. 238; p. 1175.
McDonald, George G., St. Esprit, Nova Scotia, Canada. Rowboat. No. 1,226,095; May 15; v. 238; p. 777.
McDonald Machine Co. (See McDonald, Charles D., assignor.)
McDonell, William E., assignor to E. Kirstein Sons Company, Rochester, N. Y. Temple for spectacles and making same. No. 1,225,343; May 8; v. 238; p. 480.
McDonough, William H., New York, N. Y., assignor, by mesne assignments, to The American Brake Shoe and Foundry Company, Wilmington, Del. Reinforcing backplate and key-lug attachment for brake-shoes. No. 1,224,476; May 1; v. 238; p. 130.
McDonough, William H., New York, N. Y., assignor, by mesne assignments, to The American Brake Shoe and Foundry Company, Wilmington, Del. Combined reinforcing-plate and key-lug for brake-shoes. No. 1,226,545; May 15; v. 238; p. 926.
McDonough, William H., New York, N. Y., assignor, by mesne assignments, to The American Brake Shoe and Foundry Company, Wilmington, Del. Combined reinforcing-plate and key-lug for brake-shoes. No. 1,227,282; May 22; v. 238; p. 1214.
McDowell, Cantella D., Pontiac, Mich. Self-winding hose-reel. No. 1,227,466; May 22; v. 238; p. 1272.
McDowell, John L., Berwick, Pa., assignor to American Car and Foundry Company, St. Louis, Mo. Tight and loose running-gear. No. 1,224,760; May 1; v. 238; p. 229.
McDowell, Lewis J., Brooklyn, assignor to Wheeler McDowell Elevator Company, New York, N. Y. Automatic motor-controller. No. 1,226,546; May 15; v. 238; p. 926.
McDowell, Orin H. (See Swaim, Claude R., assignor.)
McElroy, James F., Albany, N. Y., assignor to Consolidated Car-Heating Company. Electric heater. No. 1,227,637; May 29; v. 238; p. 1360.
McElroy, John H., Chicago, Ill. Shower-bath apparatus. No. 1,225,985; May 15; v. 238; p. 738.
McEntire, Ford, Shelby, N. C. Churn. No. 1,225,462; May 8; v. 238; p. 520.
McEvoy, James H. (See Dutton and Jobson, assignors.)
McGehee, John S., assignor of one-half to A. H. Braun, Palmersville, Tenn. Roofing. No. 1,226,547; May 15; v. 238; p. 927.
McGlehan, Isaac S., Mount Vernon, N. Y. Pneumatic tire for vehicles and making the same. No. 1,225,344; May 8; v. 238; p. 480.
McGill, George W., Cleveland, Mo. Tractor-plow. No. 1,224,761; May 1; v. 238; p. 230.
McGilvrey, John W. A., assignor of one-half to G. W. Miller, Albia, Iowa. Automatic teeth-cleaning attachment for manure-spreader cylinders. No. 1,227,919; May 29; v. 238; p. 1457.
McGonigal, Jerome T., Pottersdale, assignor of one-half to M. T. Bowman, Clearfield, Pa. Mouthpiece for telephones and the like. No. 1,225,463; May 8; v. 238; p. 520.
McGowen, Francis J., and K. W. Thalhammer, assignors of five-twelfths to said McGowen, one-fourth to said Thalhammer, and one-third to I. R. Forbes, Los Angeles, Cal. Telephone signal and recorder. No. 1,224,185; May 1; v. 238; p. 25.
McGray, Arthur N., New York, N. Y. Submarine mine and propeller-entanglement. No. 1,226,348; May 15; v. 238; p. 804.
McGuire, Arthur L., St. Louis, Mo. Coat-hanger. No. 1,225,150; May 8; v. 238; p. 412.
McGuire, James F. (See Seese and McGuire.)
McIntire, Roy F., Pella, Iowa. Drafting instrument. No. 1,225,464; May 8; v. 238; p. 520.
McIntosh, Robert C., Plainfield, N. J. Door-hanger. No. 1,226,548; May 15; v. 238; p. 927.
McIntosh, William G., Plankinton, S. D. Toy. No. 1,224,398; May 1; v. 238; p. 102.
McKay, Stewart R., Cleveland, Ohio. Concrete-form. No. 1,228,037; May 29; v. 238; p. 1497.
McKechnie, James, Barrow-in-Furness, assignor to Vickers Limited, London, England. Controlling the supply of liquid fuel to internal-combustion engines. No. 1,225,345; May 8; v. 238; p. 480.
McKee, John J., *et al.* (See Maher, John, assignor.)
McKee, Neal T., Yonkers, assignor to Locomotive Superheater Company, New York, N. Y. Damper. No. 1,225,986; May 15; v. 238; p. 738.
McKeever, James A., and J. S. Griffin, New York, N. Y. Frangible protective hood. No. 1,227,467; May 22; v. 238; p. 1272.
McKeever, James P. (See Murphy, McKeever, and Peters.)
McKelvy, Thomas M., Fresno, Cal. Internal-combustion engine. No. 1,224,557; May 1; v. 238; p. 158.
McKeown, Annie T., Washington, D. C. Fly-screen holder. No. 1,224,762; May 1; v. 238; p. 230.
McKibbin, John B., Crafton, assignor of one-half to E. J. Sugden, Pittsburgh, Pa. Process and apparatus for heating metal for rolling. No. 1,227,163; May 22; v. 238; p. 1176.
McKinney, Edward L., Johnstown, Pa. Resilient wheel. No. 1,224,399; May 1; v. 238; p. 102.
McKinnon, Lemuel, Salt Lake City, Utah. Tire. No. 1,226,899; May 22; v. 238; p. 1083.
McKinnon, Walter A., assignor of one-sixth to T. E. Finley, San Francisco, Cal. Powder-dispenser for billiard-cues. No. 1,224,944; May 8; v. 238; p. 344.
McKinzie, Mortimer, assignor of one-third to J. Potter, New York, N. Y. Wrench. No. 1,226,228; May 15; v. 238; p. 821.
McKirdy, James, *et al.* (See Moore, Samuel E., assignor.)
McLain, Charles U., East Bakersfield, Cal. Variable valve-gear. No. 1,226,549; May 15; v. 238; p. 927.
McLaughlin, Wharton B., New York, N. Y. Metallic compound for internal administration. No. 1,226,229; May 15; v. 238; p. 821.
McLean, Finis, Valley Junction, Iowa. Railway-tie plate. No. 1,226,096; May 15; v. 238; p. 777.
McLean, Hugh, Bathurst, New Brunswick, Canada. Shingle-binding device. No. 1,226,900; May 22; v. 238; p. 1083.
McLean, Philip S., Bloomfield, N. J. Electrical attachment-plug. No. 1,228,337; May 29; v. 238; p. 1594.
McLene, Jeremiah B., Chicago, Ill. Combination sad-iron and heating utensil. No. 1,226,230; May 15; v. 238; p. 821.
McLeod, William, assignor of one-fourth to L. Cohen, Wanganut, New Zealand. Roofing and wailing. No. 1,226,097; May 15; v. 238; p. 777.
McLoughlin, Henry, Sioux City, Iowa. Gain-cutter. No. 1,225,836; May 15; v. 238; p. 687.
McMann, John F., Rochester, N. Y. Siphon. No. 1,224,477; May 1; v. 238; p. 131.
McNeal, Charles A., Columbus, Ohio. Illuminated sign. No. 1,226,550; May 15; v. 238; p. 928.
McNear, Walter S. (See Gamache and McNear.)
McNeil, Daniel W., assignor to The John Douglas Company, Cincinnati, Ohio. Flush-valve for water-closets. No. 1,225,987; May 15; v. 238; p. 738.
McNeil, Michael, Los Angeles, Cal. Invalid-bed. No. 1,224,478; May 1; v. 238; p. 131.
McNeill, David, Watford, assignor of one-fourth to H. G. Shoring, Cricklewood, one-fourth to G. L. Waterfield, and one-fourth to T. Waterfield, Highgate, England. Apparatus for indicating speed. No. 1,227,283; May 22; v. 238; p. 1214.
McNulty, James A., Minneapolis, N. H. Nelson, Willmar, and J. Jessen, Minneapolis, Minn. Sleeping-car. No. 1,226,349; May 15; v. 238; p. 864.
McPherson, Elmer T., assignor to The Irwin Auger Bit Company, Wilmington, Ohio. Chuck. No. 1,224,945; May 8; v. 238; p. 344.
McPherson, Frank G. (See McCandless and McPherson.)
McPherson, Floyd H., Everett, Wash. Oiling attachment for die-stocks. No. 1,224,946; May 8; v. 238; p. 344.

McVey, Ambrose, Wilmington, Del. Switch-shifter. No. 1,225,465; May 8; v. 238; p. 521.
McWatters, Thomas, Chestnut Ridge, Pa. Safe for seagoing vessels. No. 1,226,098; May 15; v. 238; p. 777.
McWatters, Thomas, Chestnut Ridge, Pa. Life-saving boat. No. 1,227,284; May 22; v. 238; p. 1214.
Meade, Morrison. (See Sutton and Meade.)
Mechanical Rubber Company, The. (See Foote, Herman M., assignor.)
Medanich, Daniel B., Buechel, assignor to himself, P. J. B. Parenteau, J. R. Wright, and O. H. Kelsall, Louisville, Ky. Internal-combustion motor. No. 1,227,169; May 22; v. 238; p. 1177.
Medgyes, Charles, Budapest, Hungary, assignor to Wenger & Co., Delemont, Switzerland. Machine for polishing metallic bodies. No. 1,224,191; May 1; v. 238; p. 27.
Medicus, Randall F., Youngstown, Ohio. Direction-indicator and signaling device for vehicles. No. 1,226,102; May 15; v. 238; p. 778.
Meek, Lawrence N., Squirrel, Idaho. Beet and vegetable topper. No. 1,225,841; May 15; v. 238; p. 688.
Megill, Edward L., New York, N. Y. Apparatus for treating house waste or sewage. No. 1,224,483; May 1; v. 238; p. 133.
Mehlfelder, Anton, New York, N. Y. Intermittent-motion mechanism. No. 1,225,151; May 8; v. 238; p. 413.
Meikle, Daniel G., assignor of one-half to J. S. Shields, Detroit, Mich. Alarm-clock. No. 1,228,039; May 29; v. 238; p. 1498.
Meile, Frank N., Boulder, Colo. Brooder. No. 1,226,235; May 15; v. 238; p. 823.
Meinhart, Paul H., Marion, Ohio. Rocker attachment. No. 1,227,062; May 22; v. 238; p. 1140.
Meis, Ernst, Peru, Ill. Vehicle. No. 1,227,477; May 22; v. 238; p. 1276.
Meisel, Francis, assignor to Meisel Press & Manufacturing Company, Boston, Mass. Machine for coating bottle-caps. No. 1,224,768; May 1; v. 238; p. 232.
Meisel Press & Manufacturing Company. (See Meisel, Francis, assignor.)
Mellick, Thomas L., Plainfield, N. J. Lead-pencil. No. 1,224,769; May 1; v. 238; p. 233.
Melling, Herman W., Jackson, Mich. Tool and tool-carrier. No. 1,225,152; May 8; v. 238; p. 413.
Mello, Alfred S., Cambridge, assignor to The Reece Button Hole Machine Company, Boston, Mass. Combined clutch and stop motion. No. 1,227,643; May 29; v. 238; p. 1362.
Melniczak, Alex, Camden, N. J. Aeroplane. No. 1,228,227; May 29; v. 238; p. 1558.
Melville Clark Piano Company. (See Burton, Charles S., assignor.)
Mennle, William, assignor of one-half to C. A. Fettig, Detroit, Mich. Differential gearing. No. 1,225,842; May 15; v. 238; p. 689.
Menzenhauer, Frederick, Jersey City, N. J. Zither-action. No. 1,226,352; May 15; v. 238; p. 865.
Mentzer, Claude E., assignor of one-third to C. B. Smith and one-third to S. G. Mattheis, Des Moines, Iowa. Steering-wheel lock for automobiles. No. 1,227,644; May 29; v. 238; p. 1362.
Menzel, Herbert, Germania, Wyo. Cuspidor implement. No. 1,227,645; May 29; v. 238; p. 1363.
Mercer, Henry H., Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass. Stoneworking-machine. No. 1,228,040; May 29; v. 238; p. 1498.
Mercer, Henry H., Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass. Stoneworking-machine. No. 1,228,041; May 29; v. 238; p. 1498.
Mergenthaler Linotype Company. (See Muehleisen, Carl, assignor.)
Mergenthaler Linotype Company. (See Muehleisen and Albrecht, assignors.)
Mermelstein, Bertha, New York, N. Y. Tire-protector. No. 1,227,289; May 22; v. 238; p. 1216.
Mero, Jesse R., Half Moon Bay, assignor of six-tenths to J. Blumlein, San Francisco, Cal. Machine for separating peas from refuse. No. 1,224,484; May 1; v. 238; p. 133.
Merrell, Irving S., assignor to Merrell-Soule Company, Syracuse, N. Y. Changing the consistency of liquids containing solids. No. 1,225,348; May 8; v. 238; p. 481.
Merrell-Soule Company. (See Merrell, Irving S., assignor.)
Merriam, Harry C., assignor to American Carbureter Co., Indianapolis, Ind. Carbureter. No. 1,225,466; May 8; v. 238; p. 521.
Merrill, Charles W., Berkeley, Cal. Apparatus for separating unfilterable material from a mixture of filterable and unfilterable matter. No. 1,226,103; May 15; v. 238; p. 779.
Merrill, Charles W., Berkeley, Cal. Treating semisolid material in the containers of filter-presses and removing the same therefrom. No. 1,226,104; May 15; v. 238; p. 779.
Merrill, Nathaniel C., New York, N. Y. Bake-pan. No. 1,226,353; May 15; v. 238; p. 866.
Merriman, Collett H., Dana, Ind. Power-tamp. No. 1,224,770; May 1; v. 238; p. 233.
Mersereau, Gail, New York, N. Y., assignor to Chemical Development Company. Process of chlorinating and products thereof. No. 1,224,485; May 1; v. 238; p. 134.
Mery, Robert, New York, N. Y. Automobile-body construction. No. 1,227,290; May 22; v. 238; p. 1216.
Messerschmitt, Anton, Stolberg, Germany. Apparatus for producing hydrogen. No. 1,225,262; May 8; v. 238; p. 449.
Messerschmitt, Anton, Stolberg, Germany. Apparatus for producing hydrogen. No. 1,225,263; May 8; v. 238; p. 449.
Messerschmitt, Anton, Stolberg, Germany. Producing hydrogen. No. 1,225,264; May 8; v. 238; p. 449.
Messner, John H., Pittsburgh, Pa. Railway cross-tie. No. 1,225,153; May 8; v. 238; p. 413.
Mesta, Charles J., and C. L. W. Trinks, assignors to Mesta Machine Company, Pittsburgh, Pa. Barometric condenser. No. 1,224,810; May 1; v. 238; p. 70.
Mesta Machine Company. (See Mesta and Trinks, assignors.)
Metallurgical Engineering & Process Corporation. (See Robinson, Cyrus, assignor.)
Metals Recovery Company. (See Corliss, Harry P., assignor.)
Metz, Robert R., Chicago, Ill. Annunciator. No. 1,226,683; May 22; v. 238; p. 1009.
Metz, Walter R., Washington, D. C., assignor of one-half to G. M. Drexelius, Baltimore, Md. Elevator-truck. No. 1,227,646; May 29; v. 238; p. 1363.
Metzler, Charles, Cincinnati, Ohio. Dental-waste receiver. No. 1,228,124; May 29; v. 238; p. 1526.
Meuler, Ludwig, Oconomowoc, Wis. Rake. No. 1,227,478; May 22; v. 238; p. 1276.
Mewes, Richard W., Des Moines, Iowa. Valve for engines. No. 1,227,479; May 22; v. 238; p. 1277.
Mexica Power-Increasing Machine Co. (See Dominguez, Salvador, assignor.)
Meyer, Bacharach and Friedheim. (See Meyer, William K., assignor.)
Meyer, Erwin E. A. G., and G. W. Selberling, Detroit, Mich., assignors to Morgan & Wright. Manufacturing tires. No. 1,226,236; May 15; v. 238; p. 823.
Meyer, Friedrich W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of control. No. 1,227,815; May 29; v. 238; p. 1421.
Meyer, George J. (See Lupinski and Meyer.)
Meyer, Henry F. (See Walsh, William F., assignor.)
Meyer, Herman, Denver, Iowa. Poultry-roost. No. 1,227,047; May 29; v. 238; p. 1363.
Meyer, William K., Brooklyn, assignor to Meyer, Bacharach and Friedheim, New York, N. Y. Necktie. No. 1,226,105; May 15; v. 238; p. 780.
Meyercord, George R., Chicago, Ill. Toilet inclosure or booth. No. 1,226,684; May 22; v. 238; p. 1010.
Meyering, Bernard H., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic-film cartridge. No. 1,225,988; May 15; v. 238; p. 739.
Meyers, Freddie A. C., Porter, Minn. Hair-bobbing device. No. 1,224,403; May 1; v. 238; p. 104.
Meyers, Robert L., San Francisco, Cal. Fruit-juice extractor. No. 1,228,342; May 29; v. 238; p. 1596.
Michigan Lubricator Company. (See Whitbeck, Neal W., assignor.)
Midgley, Albert H. (See Vandervell and Midgley.)
Michle Printing Press & Manufacturing Company. (See Stevens, Burt D., assignor.)
Mikorey, Hans, Schöneberg, near Berlin, Germany, assignor, by mesne assignments, to Minimax Company, New York, N. Y. Fire-extinguisher. No. 1,224,192; May 1; v. 238; p. 27.
Miles, Christopher C., Westover, Md. Combined stove and table. No. 1,224,773; May 1; v. 238; p. 234.
Miles, Don D. (See Connor and Miles.)
Miles, George W., Belmont, Mass. Method of making emulsions of compound waxes and the product of said method. No. 1,224,948; May 8; v. 238; p. 345.
Miles, Myrtle C., *et al.* (See Connor and Miles, assignors.)
Milhening, Frank, assignor to J. Milhening, Inc., Chicago, Ill. Ring. No. 1,224,193; May 1; v. 238; p. 28.
Millard, Robert M. (See Stafford, Millard, and Paul.)
Miller, Albert F. (See Peters, Fath, and Miller.)
Miller, Carl G., Bay City, Mich. Automobile street-sweeper. No. 1,224,771; May 1; v. 238; p. 233.
Miller, Charles T., Macon, Ga. Water-faucet. No. 1,226,106; May 15; v. 238; p. 780.
Miller, Dorr, Chicago, Ill., assignor to Miller Transmission Company. Variable-speed-transmission device. No. 1,224,808; May 1; v. 238; p. 266.
Miller, Forest E., Newberry, S. C. Grits-separator. No. 1,226,562; May 15; v. 238; p. 931.
Miller, Frank S., deceased; D. S. Morris, administrator, Indianapolis, Ind., assignor to W. Langsenkamp, Jr., trustee. Air-lift-pump booster. No. 1,227,816; May 29; v. 238; p. 1421.
Miller, Frederick H., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Gyratory fan. No. 1,227,291; May 22; v. 238; p. 1217.
Miller, George J., Winnebago, Minn. Self-centering punch. No. 1,225,265; May 8; v. 238; p. 450.
Miller, George T., Williams, Cal. Nut and bolt lock. No. 1,226,354; May 15; v. 238; p. 866.
Miller, George W. (See McGilvrey, John W. A., assignor.)
Miller, Harry A., and F. M. Adamson, assignors to Master Carburetor Company, Los Angeles, Cal. Carbureter. No. 1,227,817; May 29; v. 238; p. 1422.



Miller, Henry C., Waterford, N. Y., assignor to Victor Talking Machine Company, Camden, N. J. Tone-arm mounting for sound-reproducing machines. (Reissue.) No. 14,305; May 22; v. 238; p. 1306.
Miller, Herman F., Rushville, Nebr. Cover for coal-hods or similar devices. No. 1,225,989; May 15; v. 238; p. 739.
Miller, Herman F., Rushville, Nebr. Valve for pneumatic tires. No. 1,226,563; May 15; v. 238; p. 931.
Miller, Jacob M., Millersburg, Ohio. Draft appliance. No. 1,224,772; May 1; v. 238; p. 233.
Miller, Jennie I. (See Sparks, Lester H., assignor.)
Miller, John C., assignor to The Miller Pasteurizing Machine Company, Canton, Ohio. Apparatus for filling and capping bottles. No. 1,225,349; May 8; v. 238; p. 482.
Miller, Leonard W., Fort Jones, Cal. Farm-gate. No. 1,228,343; May 29; v. 238; p. 1597.
Miller, Merwin B., Willard, Utah. Pruning implement. No. 1,224,194; May 1; v. 238; p. 28.
Miller, M. W. (See Tyson, Frank, assignor.)
Miller, Orion S. (See Allen and Christen, assignors.)
Miller, Oscar C., assignor of one-half to C. M. Gidley, Philadelphia, Pa. Spark-plug. No. 1,225,467; May 8; v. 238; p. 521.
Miller Pasteurizing Machine Company, The. (See Miller, John C., assignor.)
Miller, Roman J., and J. Bell, Bremerton, Wash. Direction-indicator for automobiles. No. 1,224,657; May 1; v. 238; p. 193.
Miller Rubber Company, The. (See Griffith, Richard, assignor.)
Miller, Thomas D., Catonsville, Md. Shingle. No. 1,226,564; May 15; v. 238; p. 932.
Miller, Thomas S., South Orange, N. J., and L. G. Ruggles, New York, N. Y.; said Ruggles assignor of his one-half to Lidgerwood Manufacturing Company. Load-transfer apparatus. No. 1,228,344; May 29; v. 238; p. 1597.
Miller Transmission Company. (See Miller, Dorr, assignor.)
Miller, Wilbur G., Grand Forks, N. D. Lifting-jack for automobiles or other vehicles. No. 1,227,480; May 22; v. 238; p. 1277.
Milligan, Henry C., Canton, Ohio. Cooking vessel. No. 1,225,047; May 8; v. 238; p. 378.
Milliken, Isaac H., Aspinwall, assignor to The McConway & Torley Company, Pittsburgh, Pa. Car-coupling. No. 1,227,170; May 22; v. 238; p. 1178.
Mills, Chester B., East McKeesport, Pa., assignor to Westinghouse Electric and Manufacturing Company. Bed-plate. No. 1,227,292; May 22; v. 238; p. 1217.
Mills, John B., Fort Wayne, Ind. Holder for use in scaling fish. No. 1,228,366; May 29; v. 238; p. 1604.
Millsaps, Daniel W., Albemarle, N. C. Shingle. No. 1,226,355; May 15; v. 238; p. 866.
Milzner, Richard W. (See Hamilton, Hugh R., assignor.)
Miner, James H., Lumberton, Miss. Gas-saver attachment for motor-vehicles. No. 1,224,774; May 1; v. 238; p. 234.
Miner, William H. (See Fordice, Ray E., assignor.)
Miner, William H. (See Johnson, George A., assignor.)
Miner, William H. (See O'Connor, John F., assignor.)
Miner, William H. (See Patch, Calvin B., assignor.)
Miner, William H. (See Schulz, Ernest R., assignor.)
Miner, William H., Chazy, N. Y. Draw-bar-centering device. No. 1,225,154; May 8; v. 238; p. 414.
Miner, William H., Chazy, N. Y. Draw-bar and yoke connection. No. 1,228,345; May 29; v. 238; p. 1597.
Mineral Products Corporation. (See Chappell, Howard F., assignor.)
Minerals Separation Limited. (See Higgins, Arthur H., assignor.)
Minimax Company. (See Mikorey, Hans, assignor.)
Minneapolis Heat Regulator Company. (See Denison, Frederick S., assignor.)
Minnich, Charles, J. J. Mathews, Greenville, and H. B. Mathews, Ansonia, Ohio. Belt. No. 1,225,843; May 15; v. 238; p. 689.
Minnich, Edwin J., Salem, Oreg. Nail-extractor. No. 1,227,063; May 22; v. 238; p. 1140.
Minnick, Alfred, Newark, N. J. Train-control system. No. 1,226,792; May 22; v. 238; p. 1048.
Minnis, George F., Chicago, Ill. Expansion-bolt. No. 1,225,468; May 8; v. 238; p. 522.
Mistrik, John, Etna, Pa. Curtain-bracket. No. 1,225,469; May 8; v. 238; p. 522.
Mitchell, Frank S. (See Tettenborn, Charles, assignor.)
Mitchell, Harrison J., assignor to P. B. Yates Machine Company, Beloit, Wis. Tool and guide adjustment. No. 1,226,902; May 22; v. 238; p. 1084.
Mitchell, James E., Pine Hill, Ky. Lamp-chimney holder. No. 1,225,990; May 15; v. 238; p. 739.
Mitchell, John, Northampton, Pa. Corset-fastener. No. 1,224,486; May 1; v. 238; p. 134.
Mitchell, John E., St. Louis, Mo. Pasting device. No. 1,227,818; May 29; v. 238; p. 1422.
Mitchell, Nels. (See Wartman and Mitchell.)
Mitchell, Vernon E., *et al.* (See Wilson, John M., assignor.)
Mittasch, Alwin. (See Bosch and Mittasch.)
Miyasaki, Yuske, McKees Rocks, Pa. Cast truck-bolster. (Reissue.) No. 14,307; May 29; v. 238; p. 1610.
Moakler, John W., assignor of one-half to N. S. Wright, East Worcester, N. Y. Removable resilient core for tires. No. 1,228,346; May 29; v. 238; p. 1598.
Modler, Johann H., Schweinfurt, Germany. Roller-bearing. No. 1,226,685; May 22; v. 238; p. 1010.
Moe, Gerhard, Ladysmith, Wis., and A. J. Kirstin, Escanaba, Mich. Stump-puller. No. 1,226,616; May 15; v. 238; p. 948.
Mohn, John, Detroit, Mich. Indicating device. No. 1,224,949; May 8; v. 238; p. 345.
Mohr, Albert F., Milwaukee, Wis., assignor to International Harvester Corporation. Carbureter. No. 1,226,356; May 15; v. 238; p. 867.
Mohr, Julius, Milwaukee, Wis. Extension-table. No. 1,225,991; May 15; v. 238; p. 739.
Moister, William, Corona, assignor to Brewster & Co., New York, N. Y. Expansible tool for cleaning combustion-cylinders. No. 1,226,903; May 22; v. 238; p. 1084.
Möller, Johan P., assignor to Boss Manufacturing Company, Kewanee, Ill. Cotton glove. No. 1,225,155; May 8; v. 238; p. 414.
Mollerup, Christopher, assignor to Automatic Electric Company, Chicago, Ill. Telephone supervisory system. No. 1,224,883; May 1; v. 238; p. 272.
Molyneux, George E., Bayonne, N. J., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,224,311; May 1; v. 238; p. 70.
Molyneux, George E., Bayonne, N. J., assignor to The Singer Manufacturing Company. Sewing-machine guide. No. 1,225,156; May 8; v. 238; p. 414.
Monarch Manufacturing Corporation. (See Folden, Frank H., assignor.)
Monroe, Henry, Fairview, Kans. Tidal motor. No. 1,224,950; May 8; v. 238; p. 345.
Montague, Harold E., Philadelphia, Pa., assignor of fifty-five one-hundredths to D. Kraus, New York, N. Y. Internal-combustion engine. No. 1,227,551; May 22; v. 238; p. 1301.
Monti, Eudo, Turin, Italy. Digesting and concentrating protein in any form by dissolving it in grape-juice. No. 1,226,983; May 22; v. 238; p. 1114.
Moon, Orland J. (See Moon, Thomas E., assignor.)
Moon, Thomas E., Sabina, assignor of one-half to O. J. Moon, New Holland, Ohio. Toy gun. No. 1,226,273; May 15; v. 238; p. 840.
Moore, Charles C. (See Walker and Moore.)
Moore, Charles C., Washington, D. C., assignor of one-half to F. C. Stevens, Attica, N. Y. Making starch and product thereof. No. 1,224,951; May 8; v. 238; p. 346.
Moore, Charles L., Dallas, Tex. Amusement device. No. 1,226,565; May 15; v. 238; p. 932.
Moore, Edward Y., Cleveland, Ohio. Load-hook. No. 1,227,171; May 22; v. 238; p. 1176.
Moore, Oliver P., Spokane, Wash. Oil or gas burning smelting-furnace. No. 1,225,470; May 8; v. 238; p. 522.
Moore Rifle and Arms Company, The. (See Moore, Robert A., assignor.)
Moore, Robert A., assignor to The Moore Rifle and Arms Company, Inc., New York, N. Y. Firearm. No. 1,226,566; May 15; v. 238; p. 932.
Moore, Samuel E., Harrisburg, assignor of one-fourth to J. McKirdy, Carlisle, and one-fourth to F. M. Eastman, Harrisburg, Pa. Index-drawer. No. 1,227,172; May 22; v. 238; p. 1178.
Moore, Walter H., assignor to J. H. Bell, Philadelphia, Pa. Timing device. No. 1,228,347; May 29; v. 238; p. 1598.
Moorehead, George F., assignor to C. L. Percival Company, Des Moines, Iowa. Refrigerator show-case. No. 1,227,922; May 29; v. 238; p. 1458.
Moore, George F., Owensboro, Ky., assignor to The Reciproto Engine Co. Rotary engine. No. 1,227,173; May 22; v. 238; p. 1179.
Mora, Peter, Clinton, Ind. Acetylene-lamp. No. 1,226,237; May 15; v. 238; p. 824.
Moran, Michael V., *et al.* (See Donohue, James S., assignor.)
Morando, Joseph R., New York, N. Y. Punching-bag platform. No. 1,224,658; May 1; v. 238; p. 193.
Morehead, George G., San Jose, Cal. Ant-exterminator. No. 1,225,471; May 8; v. 238; p. 523.
Moreland, John E., *et al.* (See Donohue, James S., assignor.)
Morelli, Enrico, assignor of one-half to D. Venosa, Jr., Cincinnati, Ohio. Wagon-dumping mechanism. No. 1,224,487; May 1; v. 238; p. 134.
Morgan Engineering Company, The. (See Taylor, Clarence L., assignor.)
Morgan, John W., Marysville, Cal. Disk plow. No. 1,226,793; May 22; v. 238; p. 1048.
Morgan, Lucy, Peck, Kans. Stove attachment. No. 1,226,567; May 15; v. 238; p. 933.
Morgan, Richard J., Peoria, Ill. Sign. No. 1,226,357; May 15; v. 238; p. 867.
Morgan, Theodore M., Minneapolis, Minn. Bottle-carrier. No. 1,228,348; May 29; v. 238; p. 1598.
Morgan & Wright. (See Meyer and Selberling, assignors.)
Morgan & Wright. (See Stowe, Benjamin L., assignor.)
Morin, Ernest. (See Carlin, Samuel, assignor.)
Morin, Joseph A., Springfield, Vt. Automobile tail-light. No. 1,225,472; May 8; v. 238; p. 523.
Morison, Charles H., Newark, N. J. Safety-catch for cuff-buttons. No. 1,227,293; May 22; v. 238; p. 1217.

Moritz, George T., Brooklyn, N. Y. Cigarette-case. No. 1,225,473; May 8; v. 238; p. 523.
Morkert, Walter A., Thompson Falls, Mont. Steering-gear. No. 1,226,568; May 15; v. 238; p. 933.
Morris, Albert W., Springfield, Mass. Aluminum alloy and article made therefrom. No. 1,227,174; May 22; v. 238; p. 1179.
Morris, Albert W., Springfield, Mass. Automatic forging apparatus. No. 1,227,175; May 22; v. 238; p. 1179.
Morris, Donald S., administrator. (See Miller, Frank S.)
Morris, Joseph W., West Frankfort, Ill. Window-sash holder. No. 1,226,569; May 15; v. 238; p. 933.
Morris, Robert B., assignor of one-third to W. O. Holcomb and one-third to F. S. Freeman, Harrisonville, Mo. Cotton-chopper. No. 1,227,294; May 22; v. 238; p. 1218.
Morris, Samuel L. H., *et al.* (See Cleaver, Fremont J., assignor.)
Morris, William L., Fort Wayne, Ind. Lubricating mechanism. No. 1,227,481; May 22; v. 238; p. 1277.
Morrison, Clarence E., Albany, N. Y. Rotary duplicating-machine. No. 1,227,176; May 22; v. 238; p. 1179.
Morrison, Joseph S., Wallport, Oreg. Ore-separator. No. 1,227,552; May 22; v. 238; p. 1302.
Morrison, William, Des Moines, Iowa. Storage-battery electrode or grid. No. 1,227,295; May 22; v. 238; p. 1218.
Morrison, William, Chicago, Ill., assignor to Vesta Accumulator Company. Wood separator for storage-battery plates. No. 1,228,368; May 29; v. 238; p. 1605.
Morrison, William, Chicago, Ill., assignor to Vesta Accumulator Company. Separator for storage-battery plates. No. 1,228,369; May 29; v. 238; p. 1605.
Morrow, George, *et al.* (See Barrett, Clarence, assignor.)
Morrow, George C. (See Waddell and Morrow.)
Morrow, John B., Bay Shore, N. Y. Pipe. No. 1,224,488; May 1; v. 238; p. 134.
Morse Chain Company. (See Phillips and Allingham, assignors.)
Morse, Harry J., Norwich, Conn. Lamp-burner attachment. No. 1,225,474; May 8; v. 238; p. 523.
Morse, Harry W. (See Greenway and Morse.)
Morse, Robert V., Ithaca, N. Y. Turbo-generator for ships. No. 1,225,992; May 15; v. 238; p. 739.
Mortensen, Hans M. (See Brainard and Mortensen.)
Mortensen, Niels L., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,227,177; May 22; v. 238; p. 1180.
Morton, Charles P., Cincinnati, Ohio. Cutter-head. No. 1,226,686; May 22; v. 238; p. 1010.
Moss, Charles M. (See Hayes and Moss.)
Mossman, Roy L., Humboldt, Tenn. Calipers. No. 1,225,475; May 8; v. 238; p. 523.
Mosteller, Dosier H., and C. E. Kennedy, Chicago, Ill. Envelop-sealing device. No. 1,226,238; May 15; v. 238; p. 824.
Motsinger, Homer N., La Fayette, Ind. Carburetor. No. 1,224,489; May 1; v. 238; p. 135.
Mountford, Edwin, York, Pa., assignor to The Dentists' Supply Company. Artificial tooth and making same. No. 1,224,195; May 1; v. 238; p. 28.
Mountford, Edwin, York, Pa., assignor to The Dentists' Supply Company. Mold for making artificial teeth. No. 1,224,490; May 1; v. 238; p. 135.
Mowry, Edward, Sterling, Ill., assignor to International Harvester Company of New Jersey. Hitch for trailing vehicles. No. 1,226,687; May 22; v. 238; p. 1011.
Moyer, David A., Birdsboro, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Toe-rest for turn-shoe work. No. 1,224,196; May 1; v. 238; p. 29.
Moyer, David A., Birdsboro, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-shaping. No. 1,224,197; May 1; v. 238; p. 29.
Moyer, David A., Birdsboro, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-shaping means. No. 1,224,198; May 1; v. 238; p. 29.
Moyer, Harry J., Philadelphia, Pa. Jigger for separating coal and slate. No. 1,225,157; May 8; v. 238; p. 414.
Moyer, Harry J., Philadelphia, Pa. Movable-bottom-screen jigger. No. 1,225,158; May 8; v. 238; p. 415.
Moyer, Harry J., Philadelphia, Pa. Stabilized movable bottom for jiggers. No. 1,225,159; May 8; v. 238; p. 415.
Muckenhirn, Charles H., Detroit, Mich., assignor to The Standard Sanitary Manufacturing Company, Pittsburgh, Pa. Valve mechanism for flushing-tanks. No. 1,224,491; May 1; v. 238; p. 135.
Muckenhirr, William. (See Peterson, Peter, assignor.)
Mudge, Burton W. (See Levy and Mudge.)
Muehleisen, Carl, Berlin, Germany, assignor to Mergenthaler Linotype Company. Distributing mechanism of typographical composing-machines. No. 1,228,228; May 29; v. 238; p. 1558.
Muehleisen, Carl, and C. A. Albrecht, Berlin, Germany, assignors to Mergenthaler Linotype Company. Distributing mechanism of typographical composing-machines. No. 1,228,229; May 29; v. 238 p. 1558.
Mueller, August E., assignor of one-third to T. J. Hruby and one-third to J. O. Hruby, Jr., Chicago, Ill. Rotary engine. No. 1,225,844; May 15; v. 238; p. 690.
Mueller, August E., assignor of one-third to T. J. Hruby and one-third to J. O. Hruby, Jr., Chicago, Ill. Burner for steam boilers and superheaters. No. 1,226,570; May 15; v. 238; p. 934.
Mueller, John G., Dayton, Ohio. Rail-brace. No. 1,226,571; May 15; v. 238; p. 934.
Mueller, Ralph S. (See Wolcott, Robeson B., assignor.)
Muir, James A., Morristown, N. J. Beater-roll. No. 1,225,476; May 8; v. 238; p. 524.
Muir, Robert W. Hunter, N. D. Gas-engine. No. 1,226,239; May 15; v. 238; p. 825.
Mullaney, John F., Colorado Springs, Colo. Strainer for fluids. No. 1,225,993; May 15; v. 238; p. 740.
Müller, Auguste R., Walthamstow, England. Electric insulator. No. 1,228,349; May 29; v. 238; p. 1599.
Muller, Charles A., Pueblo, Colo. Chicken-fountain. No. 1,228,230; May 29; v. 238; p. 1559.
Multipost Company. (See Schweiger, William F., assignor.)
Munson, Mandius J., Bairdstown, Cal. Combination pocket article. No. 1,224,199; May 1; v. 238; p. 30.
Murf, Andrew, and S. Beck, Etna, Pa. Metal-tubing machine. No. 1,227,482; May 22; v. 238; p. 1278.
Murphy, Albert C., New York, N. Y. Dumping-car. No. 1,224,404; May 1; v. 238; p. 104.
Murphy, Albert C., assignor to Universal Car and Manufacturing Co. Inc., New York, N. Y. Dumping-car. No. 1,227,819; May 29; v. 238; p. 1422.
Murphy, Francis P., Newport, and J. P. McKeever and H. E. Peters, Claremont, N. H., assignors to W. H. McElwain Company, Boston, Mass. Innersole. No. 1,227,483; May 22; v. 238; p. 1278.
Murphy, Ralph, assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y. Dust-proof cap. No. 1,226,240; May 15; v. 238; p. 825.
Murphy, Walter P., Chicago, Ill., assignor to P. H. Murphy Company, Parnassus, Pa. Car-roof. No. 1,227,484; May 22; v. 238; p. 1278.
Murray, Arthur C., Buffalo, N. Y. Producing half-tone engravings. No. 1,225,477; May 8; v. 238; p. 524.
Murray, George C. (See Cook, Roy J., assignor.)
Murray, George C., Chicago, Ill. Draft-gear attachment. No. 1,224,312; May 1; v. 238; p. 71.
Murray, Paul J., Oswego, N. Y. Device for detecting and cooling hot journals. No. 1,228,231; May 29; v. 238; p. 1559.
Murray, Paul J., Oswego, N. Y. Device for detecting, cooling, and lubricating hot journals. No. 1,228,232; May 29; v. 238; p. 1560.
Murray, Robert W., Corning, Ohio. Pump. No. 1,224,200; May 1; v. 238; p. 30.
Murray, Thomas E., New York, N. Y. Tube-flange and clamping device therefor. No. 1,225,478; May 8; v. 238; p. 524.
Murray, Thomas E., New York, N. Y. Valve. No. 1,225,479; May 8; v. 238; p. 524.
Murray, Thomas E., New York, N. Y. Metal vehicle-wheel. No. 1,227,178; May 22; v. 238; p. 1180.
Murray, Thomas E., New York, N. Y. Coupling for flanged tubes or pipes. No. 1,227,179; May 22; v. 238; p. 1180.
Murta, Samuel, St. Louis, Mo. Water-elevator. No. 1,227,180; May 22; v. 238; p. 1181.
Muskett, Jabez, Pendleton, Manchester, England. Rubber-covered roller. No. 1,226,984; May 22; v. 238; p. 1114.
Muth, Edward A., *et al.* (See Goetzke, Otto, assignor.)
Myers, Bertram V. (See Haas and Myers.)
Myers, George F., Columbus, Ohio. Flying-machine. No. 1,226,985; May 22; v. 238; p. 1115.
Myers, Henry F., Lake Lindon, Mich. Counting device. No. 1,227,485; May 22; v. 238; p. 1279.
Myers, Randolph, and J. G. Faulkinberry, Ardmore, Tenn. Fan for sewing-machines. No. 1,226,572; May 15; v. 238; p. 934.
Myers, Watson M., *et al.* (See Phillips, George B., assignor.)
Mygatt, Otis A., assignor to Holophane Glass Company, New York, N. Y. Making molds for ornamental glassware. No. 1,226,609; May 15; v. 238; p. 946.
Myllus, Walter G. (See Bradshaw and Myllus.)
Nace, Levi W., G. W. Alexander, and M. H. Brown, Hanover Pa. Case-clamp. No. 1,227,296; May 22; v. 238; p. 1218.
Nace, Mabelle, Piedmont, Cal. Tire-tread. No. 1,226,358; May 15; v. 238; p. 867.
Nachod, Carl P., Philadelphia, Pa., assignor to Nachod Signal Company, Inc. Signaling system. No. 1,225,736; May 8; v. 238; p. 610.
Nachod Signal Company. (See Nachod, Carl P., assignor.)
Naginey, Samuel R., assignor of one-half to C. E. Maxwell, Bremen, Ohio. Electric-switch structure. No. 1,224,952; May 8; v. 238; p. 346.
Nakal, Hitasu, Havre, Mont. Telephone transmitter and mouthpiece. No. 1,225,672; May 8; v. 238; p. 589.
Narobe, Frank, New York, N. Y. Making bread. No. 1,224,492; May 1; v. 238; p. 136.
Narunsky, Solomon, Baltimore, Md. Non-refillable bottle. No. 1,227,648; May 29; v. 238; p. 1363.
Nash, Alexander Q., Kansas City, Mo. Oil-burner. No. 1,225,994; May 15; v. 238; p. 740.
Nash, Charles M., assignor of one-half to F. C. Johnson, Covina, Cal. Direction-indicator for automobiles. No. 1,225,721; May 8; v. 238; p. 606.
Nathan, Edwin B., New York, N. Y. Automobile-hood cover. No. 1,227,181; May 22; v. 238; p. 1181.
Nathan, John, Los Angeles, Cal. Thermostatic regulator. No. 1,224,313; May 1; v. 238; p. 71.
National-Acme Company, The. (See Cone, Frank L., assignor.)



National Adjustable Bed and Spring Company. (See Tonnele and Curtis, assignors.)
National Brake & Electric Company. (See Aikman, Burton S., assignor.)
National Bush Company. (See Ludlum, Albert C., assignor.)
National Carbon Company. (See Benner and French, assignors.)
National Carbon Company. (See Ellis, Carleton, assignor.)
National Carbon Company. (See Shaw, William, assignor.)
National Carbon Company. (See Walker, Robert P., assignor.)
National Cash Register Company. (See Martin, Haakon A., assignor.)
National Enameling & Stamping Company. (See Bloch, Gotthold, assignor.)
National Enameling & Stamping Company, The. (See Wagandt, Charles L., assignor.)
National Glass Casket Company. (See Jones, Marshall N., assignor.)
National India Rubber Company. (See Colt, Le Baron C., assignor.)
National Metal Molding Company. (See Gilson, Henry R., assignor.)
National Metal Molding Company. (See McCarthy, James B., assignor.)
National Motor Supply Company, The. (See Britton, Jarvis A., assignor.)
National Roller Gin Company. (See Dodd, William T., assignor.)
National Safety Appliance Company, The. (See Sedgwick, Hiram G., assignor.)
National Spring Bed Company, The. (See Porter and Arnold, assignors.)
National Tube Company. (See Boyd and Saunders, assignors.)
Naylor, Isaac, Los Angeles, and H. B. Ruggles, Pasadena, Cal. Receptacle or container. No. 1,226,359; May 15; v. 238; p. 868.
Naysmith, Frank M., T. J. Gillaspy, and F. D. Carl, assignors of one-half to said T. J. Gillaspy and one-half to A. D. Brownlie, Davenport, Iowa. Vulcanizing device. No. 1,225,845; May 15; v. 238; p. 690.
Neafie, Andrew J., Mountain Lake, and C. B. French, Dover, N. J., assignors to Lackawanna Steel Company, Lackawanna, N. Y. Splice-bar for railway-rails. No. 1,226,360; May 15; v. 238; p. 868.
Neal, Richard O., Albany, Okla. Conveying mechanism. No. 1,227,182; May 22; v. 238; p. 1181.
Nedoma, Charles L. (See MacPherson, Earle S., assignor.)
Nedoma, Charles L., Detroit, Mich. Universal joint. No. 1,226,688; May 22; v. 238; p. 1011.
Nedoma, Charles L., Detroit, Mich. Universal joint. No. 1,226,689; May 22; v. 238; p. 1011.
Needham, Frank E., and B. W. Emerick, Salem, Oreg. Drying apparatus. No. 1,224,560; May 1; v. 238; p. 160.
Needham, John L., assignor to The Boye Needle Company, Chicago, Ill. Jar-wrench. No. 1,227,183; May 22; v. 238; p. 1182.
Negrete, Julius G., Cerro, Cuba. Spur. No. 1,225,350; May 8; v. 238; p. 482.
Neher, Robert V. (See Lauber and Neher.)
Neidlinger, George H., East Orange, N. J., assignor to Peerless Tube Co., New York, N. Y. Collapsible tube for paste. No. 1,227,297; May 22; v. 238; p. 1219.
Neidlinger, Henry T., Oswego, N. Y. Making malt syrup. No. 1,227,184; May 22; v. 238; p. 1182.
Neighbour, Arthur G. L., Beaumaris, Victoria, Australia. Change-speed gear for motors. No. 1,227,298; May 22; v. 238; p. 1219.
Nelson, Alfred C., Lakewood, Ohio. Regenerative stove. No. 1,227,820; May 29; v. 238; p. 1423.
Nelson, Charles T., Oakland, Nebr. Automobile-jack. No. 1,224,561; May 1; v. 238; p. 160.
Nelson, George W., assignor to The Standard Sewing Machine Company, Cleveland, Ohio. Sewing-machine. No. 1,228,125; May 29; v. 238; p. 1526.
Nelson, John A. (See Spangler, John H., assignor.)
Nelson, Lewis D., Union City, Mich. Bag-tying machine. No. 1,226,794; May 22; v. 238; p. 1049.
Nelson, Nels H. (See McNulty, Nelson, and Jessen.)
Nelson, Noah C., Imperial, Cal. Bean-vine-gathering apparatus. No. 1,226,573; May 15; v. 238; p. 935.
Nelson, William J., assignor to West Albany Moulding Sand Co., West Albany, N. Y. Apparatus for mixing molding-sand. No. 1,224,659; May 1; v. 238; p. 193.
Némedy, Alexander, Yonkers, N. Y. Folding box. No. 1,224,493; May 1; v. 238; p. 136.
Nenno, Clayton A., Buffalo, N. Y. Sterilizing apparatus. No. 1,224,201; May 1; v. 238; p. 30.
Neptune, Richard C., St. Louis, Mo. Roofing. No. 1,226,904; May 22; v. 238; p. 1085.
Ness, Charles M., and C. T. Thompson, Philadelphia, Pa. Racket-press. No. 1,226,986; May 22; v. 238; p. 1115.
Nestor Manufacturing Co. (See Cumner and Geissenhainer, assignors.)
Neu-Metals and Process Company. (See Gleason, Edward D., assignor.)
Neuland, Alphons H., New York, N. Y. Induction device. No. 1,227,185; May 22; v. 238; p. 1182.
Neumann, John, Philadelphia, Pa. Oil-distributer. No. 1,226,905; May 22; v. 238; p. 1085.
Neumerkel, Max, Madison, Conn. Foldable box. No. 1,226,906; May 22; v. 238; p. 1085.
Neuteboom, Boudewijn B. (See Taylor and Neuteboom.)
Neville, Asa G., Wellsburg, W. Va. Locking device for motor-vehicles. No. 1,226,241; May 15; v. 238; p. 826.
Neville, William, Duluth, Minn. Gasolene-evaporator. No. 1,226,107; May 15; v. 238; p. 780.
New Departure Manufacturing Company, The. (See Rockwell, Albert F., assignor.)
New Haven Clock Co. (See Porter, Wilson E., assignor.)
New Jersey Patent Company. (See Holland, Newman H., assignor.)
New Method Stove Company. (See Sanford, Henry H., assignor.)
New Process Filler Co. (See Eisenschimi, Otto, assignor.)
New York Revolving Portable Elevator Company. (See Germond, Henry S., Jr., assignor.)
Newby, William, assignor to W. I. Laurie, Youngstown, Ohio. Insulator-press. No. 1,226,795; May 22; v. 238; p. 1049.
Newcombe, Charles W., Tacoma, Wash. Automatic drain-valve. No. 1,226,796; May 22; v. 238; p. 1049.
Newman, Paul B., La Fayette, Ind. Filing-table for tubes. No. 1,224,562; May 1; v. 238; p. 160.
Newman, Rutledge H., Chicago, Ill. Fruit-knife. No. 1,226,797; May 22; v. 238; p. 1050.
Newman, Samuel, and H. E. Bothwell, Cincinnati, Ohio, assignors to said Newman. Lathe attachment. No. 1,227,486; May 22; v. 238; p. 1279.
Niagara Multiple Typewriter Company. (See Slingerland, Zelfang and Goffin, assignors.)
Nichols, Ella L., Kansas City, Mo. Sanitary toilet-seat cover. No. 1,225,673; May 8; v. 238; p. 590.
Nicholson, Frank E. (See Underwood, George W., assignor.)
Nichols, Mahlon P., Leetonia, Ohio. Ironing-board. No. 1,226,987; May 22; v. 238; p. 1115.
Nicholson, Robert M., Houston, Tex. Indicating device for vehicles. No. 1,227,186; May 22; v. 238; p. 1182.
Nickelson, Joseph A., and J. Fredrikson, New York, N. Y., assignors to said Nickelson. Vaporizer. No. 1,227,649; May 29; v. 238; p. 1364.
Nickerson, Orls H. (See Boyton and Nickerson.)
Nickolai, Carl L. (See Nickolai, Frank, J. E., and C. L.)
Nickolai, Frank, J. E., and C. L., De Beque, Colo. Hose-coupling. No. 1,225,480; May 8; v. 238; p. 525.
Nickolai, Julius E. (See Nickolai, Frank, J. E., and C. L.)
Niederwerfer, Valentin, assignor to Fiedler & Co., G. m. b. H., Burkhardtsdorf, Germany. Device for making the cutting-lists of slit-up fabrics. No. 1,226,361; May 15; v. 238; p. 868.
Nielsen, Andreas C., Cleveland, Ohio. Micrometer-gage. No. 1,226,574; May 15; v. 238; p. 935.
Nienstadt, John H., Brooklyn, N. Y. Attachable automobile-seat. No. 1,224,405; May 1; v. 238; p. 105.
Nienstaedt, Max, Palisade, N. J., assignor to American Flooring Company, Inc., New York, N. Y. Floor-covering composition. No. 1,227,923; May 29; v. 238; p. 1458.
Nihart, Julius, Flak, Minn. Fish-gate. No. 1,225,160; May 8; v. 238; p. 416.
Nil, Joseph A., Sacramento, Cal. Faucet. No. 1,226,575; May 15; v. 238; p. 935.
Niles-Bement-Pond Co. (See Sears and Keefer, assignors.) (Reissue.)
Nimphius, Emil, Evanston, assignor of one-fourth to J. H. Whitaker, Chicago, Ill. Gas-producer. No. 1,225,048; May 8; v. 238; p. 378.
Nitkey, John E., Harrison, Idaho. Pool-ball rack and triangle. No. 1,227,299; May 22; v. 238; p. 1220.
Nix, Manning L., Oklahoma, Okla. Pipe-fitting. No. 1,226,690; May 22; v. 238; p. 1012.
No-Break Egg Carrier Co., The. (See Degginger, Louis A., assignor.)
Noack, Alex E. (See Johnson, Hans O., assignor.)
Noah, Robert S., assignor of one-third to A. H. Wilson, one-third to J. F. Martin, and one-third to G. L. Carson, Annapolis, Md. Lifting-jack. No. 1,227,064; May 22; v. 238; p. 1141.
Nock, Harold E., assignor to Paye & Baker Manufacturing Company, North Attleboro, Mass. Dripless strainer. No. 1,226,691; May 22; v. 238; p. 1012.
Noel Four-Wheel-Drive Manufacturing Company. (See Ream, Fred H., assignor.)
Noel, John, Chaudière Junction, Quebec, Canada. Coupling. No. 1,224,202; May 1; v. 238; p. 30.
Noesting Pin Ticket Company, The. (See Livingston, William, assignor.)
Noice, Harry, Portland, Oreg. Washing-machine. No. 1,227,065; May 22; v. 238; p. 1141.
Nolan, Thomas A., *et al.* (See Hicks, James W., assignor.)
Nolen, Robert R., Dallas, Tex. Mill for grinding or crushing cotton-seed or the like. No. 1,224,406; May 1; v. 238; p. 105.
Non-Slip Tile Company. (See Will, Henry N., assignor.)
Norcross, William C., assignor to American Molding Machine Co., Terre Haute, Ind. Combination jolt-ramming and rock-over machine. No. 1,224,407; May 1; v. 238; p. 105.

Norfolk, William H., San Pedro, Cal. Enfilading-machine. No. 1,227,487; May 22; v. 238; p. 1280.
Norman, Magnus, St. Paul, Minn. Combined generator and burner. No. 1,226,798; May 22; v. 238; p. 1050.
Norris, Henry O., assignor to B. E. Porter, Celeste, Tex. Riveting-machine. No. 1,225,995; May 15; v. 238; p. 741.
North American Chemical Company. (See Thoma, Andrew, assignor.)
Northall, William H., assignor of one-half to F. W. Goedeke, Evansville, Ind. Self-centering slide for extension-tables. No. 1,228,233; May 29; v. 238; p. 1560.
Northern Novelty Manufacturing Company. (See Kennedy, Charles J., assignor.)
Northrup, Elmer C., assignor, by mesne assignments, to Savings Union Bank and Trust Company, San Francisco, Cal. Box-nailing machine. No. 1,226,907; May 22; v. 238; p. 1086.
Northwood, Harry, Wheeling, W. Va. Socket-cover. No. 1,225,049; May 8; v. 238; p. 378.
Norvell, Lorenzo, St. Louis, Mo. Automobile-hood. No. 1,226,576; May 15; v. 238; p. 936.
Notowl Manufacturing Company. (See Lemp, Albrecht, and Shebol, assignors.)
Noyes, Hiland B. (See Strahle and Noyes.)
Nubson, Johan A. (See Nuubson and Nubson.)
Nur-Pon Company. (See Gamache and McNear, assignors.)
Nutt, Hugh W., Rainier, Oreg. Clamp for well-polished rods. No. 1,225,674; May 8; v. 238; p. 590.
Nutting, Charles E., Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me. Weft-feeler for looms. No. 1,224,775; May 1; v. 238; p. 234.
Nuubson, Ole C., and J. A. Nubson, Duluth, Minn. Dough-sheeting machine. No. 1,225,481; May 8; v. 238; p. 525.
Nya Aktiebolaget Atlas. (See Andersson, Gustaf, assignor.)
Nye, John L., Oelrichs, S. D. Cuff-link guard. No. 1,226,577; May 15; v. 238; p. 936.
O'Brien, Joseph J., Washington, D. C. Writing instrument. No. 1,224,495; May 1; v. 238; p. 136.
O'Callaghan, Peter J., Chicago, Ill. Berth for sleeping-cars. No. 1,224,660; May 1; v. 238; p. 194.
O'Connell, Daniel C., *et al.* (See Spirewfki, John S., Jr., assignor.)
O'Connell, James E., *et al.* (See Spirewfki, John S., Jr., assignor.)
O'Connor, Charles H., Sault Ste. Marie, Ontario, Canada. Paper-roll holder and printing device. No. 1,226,243; May 15; v. 238; p. 827.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Frictional shock-absorber for vehicles. No. 1,224,496; May 1; v. 238; p. 136.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Means for supporting vestibule-diaphragm face-plates. No. 1,225,161; May 8; v. 238; p. 416.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging for railway-cars. No. 1,225,162; May 8; v. 238; p. 416.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Locomotive and tender connection. No. 1,225,163; May 8; v. 238; p. 417.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging for railway-cars. No. 1,225,675; May 8; v. 238; p. 590.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Indicator. No. 1,225,996; May 15; v. 238; p. 741.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction spring unit for draft-riggings. No. 1,226,244; May 15; v. 238; p. 827.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Hoisting apparatus. No. 1,226,578; May 15; v. 238; p. 936.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction spring-gear. No. 1,226,579; May 15; v. 238; p. 936.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction-gear having a compound release. No. 1,227,321; May 29; v. 238; p. 1424.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging. No. 1,228,234; May 29; v. 238; p. 1561.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging for railway-cars. No. 1,228,235; May 29; v. 238; p. 1561.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Roller side bearing. No. 1,228,236; May 29; v. 238; p. 1561.
O'Connor, Maurice, Fort Adams, R. I. Vehicle-hub. No. 1,224,953; May 8; v. 238; p. 346.
O'Connor, Maurice, Fort Adams, R. I. Vehicle-wheel. No. 1,226,362; May 15; v. 238; p. 868.
O'Dowd, Henry W., Jersey City, N. J. Oven. No. 1,228,367; May 29; v. 238; p. 1605.
O'Dowd, Henry W., Jersey City, N. J., assignor to W. M. Crane Company. Heating apparatus. No. 1,224,497; May 1; v. 238; p. 137.
O'Dowd, Henry W., Jersey City, N. J., assignor to W. M. Crane Company. Oven-door. No. 1,228,042; May 29; v. 238; p. 1499.
O'Dowd, Henry W., Jersey City, N. J., assignor to W. M. Crane Company. Sad-iron. No. 1,228,043; May 29; v. 238; p. 1499.
O'Rourke, William F., Chicago, Ill. Transom-lifter. No. 1,225,351; May 8; v. 238; p. 483.
Oakes Company, The. (See Swenson, Carl G., assignor.)
Oakes, Owen F., West Roxbury, Mass. Thread for making knitted garments. No. 1,228,126; May 29; v. 238; p. 1526.
Oakes, Stanley B., Flint, Mich. Electric cooker. No. 1,227,488; May 22; v. 238; p. 1280.
Oatman, Paul B., Erie, Pa. Collapsible tap or reamer. No. 1,224,494; May 1; v. 238; p. 136.
Oberdier, John, Mount Gilead, Ohio. Lifting-jack mechanism for motor-vehicles. No. 1,226,242; May 15; v. 238; p. 826.
Oberg, Carl I., Brownville, Me. Fish-line guide. No. 1,227,300; May 22; v. 238; p. 1220.
Oberkirch, Frank. (See Ashley, Robert W., assignor.)
Oberkirch, Frank. (See Thomas, William M., assignor.)
Odean, Edward, Minneapolis, Minn. Car-door. No. 1,227,924; May 29; v. 238; p. 1458.
Oesterlein Machine Company, The. (See Oesterlein, William, assignor.)
Oesterlein, William, assignor to The Oesterlein Machine Company, Cincinnati, Ohio. Belt-shifter. No. 1,224,954; May 8; v. 238; p. 346.
Oetter, Ernest J., Denver, Colo. Tire. No. 1,226,580; May 15; v. 238; p. 937.
Ogden, William C., Binghamton, N. Y. Invalid-carrier. No. 1,227,301; May 22; v. 238; p. 1220.
Ogg, Harry L., assignor to Automatic Electric Washer Company, Newton, Iowa. Supporting-frame for washing-machines. No. 1,226,988; May 22; v. 238; p. 1116.
Oglesby, Sabert G., Green Pond, Ala. Dirigible headlight. No. 1,226,581; May 15; v. 238; p. 937.
Obelski, Joseph, Parsons, Pa. Automobile-brake. No. 1,226,245; May 15; v. 238; p. 828.
Ohio Blower Company, The. (See Foster, William J., assignor.)
Ohlendorf, Ernest H. (See Boyd, Hamilton K., assignor.)
Okell, George E., assignor to (Miss) C. M. Lane, Los Angeles, Cal. Pump-cylinder attachment. No. 1,225,676; May 8; v. 238; p. 590.
Okmulgee Glass Company. (See Day, Charles, assignor.)
Olcott, Herbert R., assignor to J. S. Beall, Portland, Oreg. Culvert-joint. No. 1,227,187; May 22; v. 238; p. 1183.
Oldham, Arthur S., Helena, Ark. Cooker. No. 1,224,563; May 1; v. 238; p. 160.
Olena, Harold G., Brooklyn, N. Y. Sanitary tooth-brush holder. No. 1,226,799; May 22; v. 238; p. 1050.
Oleson, Olaf E., assignor to The Edward Manufacturing Company, Chicago, Ill. Separator for steam and oil. No. 1,228,237; May 29; v. 238; p. 1562.
Olin, Franklin W. (See Farnham and Olin.)
Oliver, Elmer, Daytona, Fla. Demountable rim. No. 1,227,925; May 29; v. 238; p. 1459.
Oliver, John G., and G. C. Bardons, Cleveland, Ohio. Automatic stop mechanism for turret-lathes. No. 1,224,955; May 8; v. 238; p. 347.
Oliver, John G., assignor to Bardons and Oliver, Cleveland, Ohio. Machine-tool. No. 1,227,822; May 29; v. 238; p. 1424.
Oliver Typewriter Company, The. (See Roderick and Knapp, assignors.)
Olley, Edwin A., assignor to Crouse-Hinds Company, Syracuse, N. Y. Panel-board and lining-strip supporting means. No. 1,225,997; May 15; v. 238; p. 741.
Olley, Edwin A., assignor to Crouse-Hinds Company, Syracuse, N. Y. Conduit outlet-box. No. 1,228,127; May 29; v. 238; p. 1527.
Ollivier, Jocelyn E., La Vignette St. Gervais, France. Device for transforming a motor-car into a sled. No. 1,225,998; May 15; v. 238; p. 742.
Ollivier, Jocelyn E., La Vignette, France. Driving mechanism for autosleds. No. 1,225,999; May 15; v. 238; p. 742.
Olmsted, Osmond W., Hartford, Conn., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,224,314; May 1; v. 238; p. 71.
Olney, George J., Westernville, N. Y. Measuring and mixing device. No. 1,226,108; May 15; v. 238; p. 780.
Olsen, Fredrik O., Horton, Norway. Safety-pin. No. 1,225,164; May 8; v. 238; p. 417.
Olson, Andrew, Chicago, Ill. Vacuum-trap. No. 1,228,128; May 29; v. 238; p. 1527.
Olson, Fletcher, Robbinsdale, Minn. Garden-seeder. No. 1,226,800; May 22; v. 238; p. 1051.
Olson, John, assignor to James Manufacturing Company, Fort Atkinson, Wis. Gate-lock. No. 1,226,000; May 15; v. 238; p. 742.
Olson, Joseph S., Henriette, Minn. Road-drag. No. 1,226,801; May 22; v. 238; p. 1051.
Olson, William F., Omaha, Nebr. Necktie former and fastener. No. 1,225,482; May 8; v. 238; p. 526.
Oman, John W., Houston, Tex. Airship. No. 1,227,650; May 29; v. 238; p. 1364.
Onderdonk, Lansing, New York, N. Y., assignor to The Union Special Machine Company, Chicago, Ill. Trimming mechanism for sewing-machines. No. 1,225,165; May 8; v. 238; p. 417.



Onderdonk, Lansing, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Shaft-driving mechanism. No. 1,227,188; May 22; v. 238; p. 1183.
Oppenheim, Benjamin, *et al.* (See Ziperstein and Kaplan, assignors.)
Oregon Brass Works. (See Rahner, Martin L., assignor.)
Organ Power Company, The. (See Spencer, Ira H., assignor.)
Organ, Thomas O., Philadelphia, Pa. Axle-lubricator. No. 1,225,483; May 8; v. 238; p. 526.
Orndoff, Oscar F. (See Rewell, Elbridge G., assignor.)
Orr, John E., assignor to The E. T. Burrowes Company, Portland, Me. Window-screen. No. 1,226,802; May 22; v. 238; p. 1051.
Osborn, Francis C., Detroit, Mich. Soap-powder dispenser. No. 1,226,803; May 22; v. 238; p. 1052.
Osborne, Francis M., Washington, Pa. Plt-car axle. No. 1,225,166; May 8; v. 238; p. 417.
Oshkosh Trunk Company, The. (See Bartlett, John H., assignor.)
Oslus, Frederick J., Racine, Wis. Driving mechanism for treadle-operated machines. No. 1,226,804; May 22; v. 238; p. 1052.
Osnos, Mendel, Berlin, Germany, assignor to General Electric Company, Means for controlling alternating currents. No. 1,227,302; May 22; v. 238; p. 1221.
Ostermann, Rudolf M., assignor to Locomotive Superheater Company, New York, N. Y. Combined superheater and economizer. No. 1,225,846; May 15; v. 238; p. 690.
Ostlin, Olaf. (See Rudolphi and Ostlin.)
Ostmann, Louis, St. Charles, Mo. Shoe-buckle. No. 1,226,582; May 15; v. 238; p. 937.
Ostrander, Allen E., Ridgewood, N. J., assignor to American Car and Foundry Company, St. Louis, Mo. Tank-carrying box-car with trussed underframe. No. 1,224,776; May 1; v. 238; p. 234.
Ostrander, Allen E., Ridgewood, N. J., assignor to American Car and Foundry Company, St. Louis, Mo. Corrugated-sheet-metal car. No. 1,224,777; May 1; v. 238; p. 235.
Ostrander, Lewis F. (See Engelhart, John G., assignor.)
Ostrander, Lewis F., St. Louis, Mo., assignor of one-half to I. Esperon, Indianapolis, Ind. Gas-burner. No. 1,227,189; May 22; v. 238; p. 1183.
Otani, Shozaburo, San Francisco, Cal. Combination sweeper and vacuum-cleaner. No. 1,226,363; May 15; v. 238; p. 869.
Otis Elevator Company. (See Furlow, Floyd C., assignor.)
Otis Elevator Company. (See Hymans, Frederick, assignor.)
Otis Elevator Company. (See John, Griffith, assignor.)
Otis Elevator Company. (See Larson, David, assignor.)
Otis Elevator Company. (See Schuller, Alfred L., assignor.)
Otis Elevator Company. (See Sundh, August, assignor.)
Otte, Otho M., Jamestown, N. Y. Wire-trench and picture-molding. No. 1,224,315; May 1; v. 238; p. 72.
Otte, Otho M., Jamestown, N. Y. Sheet-metal door. No. 1,227,066; May 22; v. 238; p. 1141.
Otto, Ernest C. (See Beam and Otto.)
Overholt, Frank M., and A. G. Granbois, assignors of one-half to American Linen Company, Minneapolis, Minn. Laundry-mangle feed-hopper. No. 1,226,246; May 15; v. 238; p. 828.
Owen, Thomas W., Pittsburgh, Pa. Roller-bearing. No. 1,225,266; May 8; v. 238; p. 450.
P. Lorillard Company. (See Williams, George M., assignor.)
P. H. Yates Machine Company. (See Lane, Franklin L., assignor.)
P. B. Yates Machine Company. (See Mitchell, Harrison J., assignor.)
P. H. Murphy Company. (See Canfield, Lewis T., assignor.)
P. H. Murphy Company. (See Cralley, John T., assignor.)
P. H. Murphy Company. (See Murphy, Walter P., assignor.)
P. R. Glass Company. (See Glass, Perley R., assignor.)
Pacific Canning Machinery Company. (See Privett, Henry C., assignor.)
Package Machinery Company. (See Kempf, Henry J., assignor.)
Packard Motor Car Company. (See Church, Harold D., assignor.)
Packard Motor Car Company. (See Loomis, Allen, assignor.)
Packard Motor Car Company. (See Tibbetts, Milton, assignor.)
Page, Emily V., Brooklyn, N. Y. Clothes-line. No. 1,226,583; May 15; v. 238; p. 937.
Page, Stanley H., San Francisco, assignor to Union Gas Engine Company, Oakland, Cal. Rocker-arm. No. 1,225,267; May 8; v. 238; p. 450.
Page, Stanley H., San Francisco, assignor to Union Gas Engine Company, Oakland, Cal. Engine crank-case. No. 1,226,109; May 15; v. 238; p. 781.
Paiste, Henry T., assignor to H. T. Paiste Company, Philadelphia, Pa. Cut-out. No. 1,226,584; May 15; v. 238; p. 938.
Palm, Oliver, Morsan, Tex. Container. No. 1,224,778; May 1; v. 238; p. 235.
Palmer, Arthur T., Albany, N. Y. Book-clasp. No. 1,226,001; May 15; v. 238; p. 743.
Palmer, Benjamin L., assignor to The American Well Works, Aurora, Ill. Well-sinking apparatus. No. 1,226,989; May 22; v. 238; p. 1116.
Palmer, Charles, Buffalo, N. Y. Phonograph-record cleaner and lubricator. No. 1,225,847; May 15; v. 238; p. 691.
Palmer, Ira A., assignor of one-half to W. W. Hildebaugh, Bayard, Iowa. Automatic head-lamp control. No. 1,224,779; May 1; v. 238; p. 235.
Palmer, Walter G., Wallace, Idaho. Fruit and vegetable grader. No. 1,228,044; May 29; v. 238; p. 1500.
Pan-American Rubber Co. (See Huebner, Josef, assignor.)
Panoulias, Panayiotis. (See White, George, assignor.)
Pantillon, Georges, La Chaux-de-Fonds, Switzerland. Appliance for teaching music. No. 1,227,489; May 22; v. 238; p. 1280.
Paiplow, Charles H., Jr. (See Hewitt and Paiplow.)
Paquin, Leontine B. (See Towle, Adelbert M. and G. M., assignors.)
Parenteau, Pendleton J. B., *et al.* (See Medanich, Daniel B., assignor.)
Parisian Novelty Company. (See Komorous, Joseph, assignor.)
Parker, Frederick R., Chicago, Ill. Electromagnet. No. 1,226,617; May 15; v. 238; p. 948.
Parker, Guy. (See Bouchard, Elmer R., assignor.)
Parker, John E., and D. B. Winter, assignors to Crouse-Hinds Company, Syracuse, N. Y. Means for attaching electrical appliances to conduit outlet-boxes. No. 1,224,316; May 1; v. 238; p. 72.
Parker, Nelson J., Lincoln, Ill. Multistage compressor. No. 1,224,661; May 1; v. 238; p. 194.
Parker, Orrel A., Cleveland, Ohio. Wheel for vehicles. No. 1,227,651; May 29; v. 238; p. 1365.
Parker Process Company. (See Parker, William M., assignor.)
Parker, Thomas T., New York, N. Y. Steam-boiler. No. 1,224,662; May 1; v. 238; p. 195.
Parker, William E., and W. Burns; said Parker assignor to J. Burns, Ithaca, N. Y. Folding truck. No. 1,226,585; May 15; v. 238; p. 938.
Parker, William H., Houston, Tex. Smoothing-drag. No. 1,227,926; May 29; v. 238; p. 1459.
Parker, William M., Oklahoma, Okla., assignor, by mesne assignments, to Parker Process Company, Refining oils. No. 1,226,990; May 22; v. 238; p. 1117.
Parker, William S., assignor to Burson Manufacturing Company, Rockford, Ill. Controlling device for knitting-machines. No. 1,225,848; May 15; v. 238; p. 691.
Parkes, Samuel R., Willenhall, England. Case for sash pulleys, locks, or the like. No. 1,225,849; May 15; v. 238; p. 692.
Parkhurst, George A., Minneapolis, Minn. Conductor's-check holder. No. 1,224,317; May 1; v. 238; p. 73.
Parkin, William M. (See Hoffman, Addison F., assignor.)
Parks, Frederick W., assignor to The G. M. Parks Company, Fitchburg, Mass. Humidifying apparatus. No. 1,227,190; May 22; v. 238; p. 1184.
Parsons, Clifford A. (See Cram and Parsons.)
Parsons, William P., Corning, N. Y. Lathe-chuck jaw. No. 1,224,780; May 1; v. 238; p. 235.
Pasman, Abram N., East Orange, N. J. Flush-valve apparatus. No. 1,225,352; May 8; v. 238; p. 483.
Passarelli, Dominick A., Danbury, Conn. Chromatic-bass guitar. No. 1,226,991; May 22; v. 238; p. 1117.
Patch, Calvin B., Glenellyn, Ill., assignor to W. H. Miner, Chazy, N. Y. Roller side bearing. No. 1,225,677; May 8; v. 238; p. 591.
Patch, Calvin B., Glenellyn, Ill., assignor to W. H. Miner, Chazy, N. Y. Spring-controlled roller side bearing. No. 1,225,678; May 8; v. 238; p. 591.
Patents Process Company. (See Reid, James H., assignor.)
Paterson, William, Oakland, Cal. Motor-plow tractor. No. 1,225,268; May 8; v. 238; p. 451.
Patrick, Isaac, assignor to Consolidated Press Company, Hastings, Mich. Clutch. No. 1,227,191; May 22; v. 238; p. 1184.
Patten, Felix A., assignor to The Cleveland Dental Manufacturing Company, Cleveland, Ohio. Belt. No. 1,224,203; May 1; v. 238; p. 31.
Patterson, Charles E., Jacksonville, Ill. Rein-support. No. 1,227,823; May 29; v. 238; p. 1424.
Patterson, Charles R. (See Courtney, Minder A., assignor.)
Patterson, Chester J., White Rock, Pa. Auto steering device. No. 1,226,586; May 15; v. 238; p. 938.
Patterson, Harry R., assignor of one-half to B. W. Twyman, Columbus, Ohio. Carbureter. No. 1,226,805; May 22; v. 238; p. 1053.
Patterson, John W., Decatur, Ala. Cotton-picking machine. No. 1,228,238; May 29; v. 238; p. 1562.
Patterson, Lon H., Portland, Oreg. Airless auto-tire. No. 1,226,110; May 15; v. 238; p. 781.
Patterson, Warren A., assignor of one-half to J. A. Kemp, Wichita Falls, Tex. Cotton-threshing machine. No. 1,227,652; May 29; v. 238; p. 1365.
Patterson, William L., assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Projection apparatus and illumination system therefor. No. 1,224,663; May 1; v. 238; p. 195.
Patterson, William L., assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Scene-shifting device for projection apparatus. No. 1,226,806; May 22; v. 238; p. 1053.

Patterson, William L., and G. A. H. Kellner, assignors to Bausch & Lomb Optical Company, Rochester, N. Y. Binocular microscope. No. 1,225,167; May 8; v. 238; p. 418.

Pattison, Eugene D., Danville, Ill. Differential driving mechanism. No. 1,224,781; May 1; v. 238; p. 236.

Patton, Alson C., Senath, Mo. Latch. No. 1,228,129; May 29; v. 238; p. 1527.

Patton, John F. (See Goldwire and Patton.)

Paul, James W., and C. Hall, Pittsburgh, Pa.; said Paul assignor to said Hall. Breathing apparatus for use in noxious gases. No. 1,225,269; May 8; v. 238; p. 451.

Paul, Joseph. (See Stafford, Millard, and Paul.)

Paul, Samuel J., Los Angeles, Cal. Motive-force control for apparatus. No. 1,226,587; May 15; v. 238; p. 938.

Paulson, Rudolf, Wakefield, assignor of one-half to C. B. Forelly, Foxboro, Mass. Trap-nest. No. 1,224,318; May 1; v. 238; p. 73.

Paulus, George W., Grand Rapids, Wis. Pencil-holder. No. 1,226,992; May 22; v. 238; p. 1118.

Paye & Baker Manufacturing Company. (See Nock, Harold E., assignor.)

Payne, Charles F., Wheeling, W. Va. Combination marking-pot and stencil-brush inker. No. 1,227,927; May 29; v. 238; p. 1459.

Payne, John S., Wortendyke, N. J. Locomotive-truck. No. 1,227,192; May 22; v. 238; p. 1184.

Payne, William J., Panther Burn, Miss. Nutcracker. No. 1,225,484; May 8; v. 238; p. 526.

Payor, Joseph P. (See Feldkamp, Payor, and Payson.)

Payson, Harold. (See Feldkamp, Payor, and Payson.)

Payton & Kelley Company. (See Dawley, Daniel D., assignor.)

Peacock, Robert A., Delaware City, Del. Game. No. 1,227,303; May 22; v. 238; p. 1221.

Pearce, Edward N. (See Kane, Peter W., assignor.)

Pearce, W. C. (See King, Jess E., assignor.)

Pearson, Charles, Chicago, Ill., assignor to International Harvester Company of New Jersey. Pitman. No. 1,226,364; May 15; v. 238; p. 869.

Pearson, Elmer R., Omaha, Nebr., and C. E. Jones, Council Bluffs, Iowa. Film-lubricator. No. 1,225,270; May 8; v. 238; p. 451.

Peck, William E., and Joseph W. Pennington, Steubenville, Ohio. Bath-tub attachment. No. 1,226,908; May 22; v. 238; p. 1086.

Pedersen, Peter, Newell, Iowa. Bed. No. 1,224,782; May 1; v. 238; p. 236.

Pedlar, William S., Vancouver, British Columbia, Canada. Lawn-mower. No. 1,225,050; May 8; v. 238; p. 379.

Pedrick, Howard A., Bala, assignor to Pedrick Tool and Machine Company, Philadelphia, Pa. Ring-cutting machine. No. 1,227,304; May 22; v. 238; p. 1221.

Pedrick Tool and Machine Company. (See Pedrick, Howard A., assignor.)

Peeper, Josiah, Coeur d'Alene, Idaho. Slip-joint-pipe-locking means. No. 1,226,002; May 15; v. 238; p. 743.

Peeper, Josiah, Coeur d'Alene, Idaho. Lawn-sprinkler. No. 1,226,003; May 15; v. 238; p. 744.

Peerless Electric Company, The. (See Swift, Robert W., assignor.)

Peerless Light Company. (See Herskovitz, Max, assignor.)

Peerless Motor Car Company, The. (See Strickland, William R., assignor.)

Peerless Tube Co. (See Neidlinger, George H., assignor.)

Peet, Edward B. (See Peet, Walter F., assignor.)

Peet, Walter F., assignor of one-half to E. B. Peet, Philadelphia, Pa. Paper-clip. No. 1,227,193; May 22; v. 238; p. 1185.

Pegram, Howard L., Mulvane, Kans. Concrete bridge construction. No. 1,225,485; May 8; v. 238; p. 527.

Pelton, John C., San Francisco, Cal. Apparatus for casting bodies formed of cement or the like. No. 1,227,824; May 29; v. 238; p. 1425.

Pence, Frank R., Pence, Ind. Bolster for vehicles. No. 1,225,168; May 8; v. 238; p. 418.

Pendry, William J., Patterson, Cal. Bedclothes-clamp. No. 1,226,807; May 22; v. 238; p. 1053.

Pennewill, James W., Silver City, N. Mex. Accounting-sheet. No. 1,226,111; May 15; v. 238; p. 781.

Pennewill, James W., Silver City, N. Mex. Accounting record-sheet. No. 1,227,653; May 29; v. 238; p. 1365.

Pennington, Joseph W. (See Peck and Pennington.)

Pennington, Willis. (See Rupright, Frederick E., assignor.)

Pennsylvania Glass Sand Company. (See Bratton, Ambrose A., assignor.)

Peoria Drill and Seeder Co. (See Steele, Benjamin M., assignor.)

Pepin, Joseph N. (See Pepin, Jule C. and J. N.)

Pepin, Jule C. and J. N., East Chicago, Ind. Trestle. No. 1,226,112; May 15; v. 238; p. 781.

Pepper, Frederick W., assignor to Standard Baking Company, Minneapolis, Minn. Baking-cone. No. 1,224,564; May 1; v. 238; p. 161.

Perez de Villa-Amil, Alberto, Cienfuegos, Cuba. Tool-holder. No. 1,227,398; May 22; v. 238; p. 1250.

Perfection Concrete Stave Silo Company. (See Perkins, Charles J., assignor.)

Perkin, William H., Oxford, and S. Bradbury, Ashton-upon-Mersey, England. Treatment of cotton and cotton goods and other combustible substances to render them permanently less inflammable. No. 1,224,204; May 1; v. 238; p. 31.

Perkin, William H., Oxford, and S. Bradbury, Ashton-upon-Mersey, England. Treatment of cotton and cotton goods and other combustible substances to render them permanently less inflammable. No. 1,224,205; May 1; v. 238; p. 31.

Perkins, Albert E., Wooster, Ohio. Device for cleansing and drying dishes. No. 1,226,993; May 22; v. 238; p. 1118.

Perkins-Campbell Company, The. (See Stricker, Clarence W., assignor.)

Perkins, Charles J., Des Moines, Iowa., assignor to Perfection Concrete Stave Silo Company, Pierre, S. D. Silo construction. No. 1,227,928; May 29; v. 238; p. 1459.

Perkins, Joseph M. (See Keeney and Perkins.)

Perkins, Laurence M., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical protective device. No. 1,224,408; May 1; v. 238; p. 106.

Perkins, Samuel F., Boston, Mass. Kite. No. 1,227,654; May 29; v. 238; p. 1365.

Peronto, William J., Hardwood, Mich. Log-loader. No. 1,224,565; May 1; v. 238; p. 161.

Perreten, Michael, Alliance, Ohio. Till. No. 1,225,169; May 8; v. 238; p. 419.

Perreten, Michael, Alliance, Ohio. Filing-cabinet. No. 1,225,170; May 8; v. 238; p. 419.

Perreten, Michael, Alliance, Ohio. Permutation-lock. No. 1,225,171; May 8; v. 238; p. 419.

Perry, George E. (See Spinner and Perry.)

Perry, Victor N., Batavia, N. Y. Pneumatic straw-stacker. No. 1,226,588; May 15; v. 238; p. 939.

Peter, Arnold H. (See Cox and Peter.)

Peters, Henry M., Chicago, Ill. Portable electric lamp. No. 1,225,051; May 8; v. 238; p. 379.

Peters, Herbert E. (See Murphy, McKeever, and Peters.)

Peters, Melville E., G. H. Fath, and A. F. Miller, Denver, Colo. Automatically-operating closed-gap blank-gumming cylinder. No. 1,226,994; May 22; v. 238; p. 1118.

Peters, Melville E., G. H. Fath, and A. F. Miller, Denver, Colo. Box and plunger and blank registering mechanism. No. 1,226,995; May 22; v. 238; p. 1118.

Peters, Melville E., G. H. Fath, and A. F. Miller, Denver, Colo. Extension-edge-box-blank-wrapping mechanism. No. 1,226,996; May 22; v. 238; p. 1119.

Peters, Melville E., G. H. Fath, and A. F. Miller, Denver, Colo. Mechanism for cleaning the ends of intermittent endless-conveyer gummed-blank grippers. No. 1,226,997; May 22; v. 238; p. 1120.

Petersen, Hans, Lostwood, N. D. Belt-fastener. No. 1,224,498; May 1; v. 238; p. 137.

Petersen, Sophus, assignor to Sperry Gyroscope Company, Brooklyn, N. Y. Means for transmitting angular movements. No. 1,225,486; May 8; v. 238; p. 527.

Peterson, Fredolf J., Alliance, Ohio. Adding-machine. No. 1,227,655; May 29; v. 238; p. 1366.

Peterson, Gustaf E., assignor to Pratt & Whitney Company, Hartford, Conn. Automatic back-rest. (Reissue.) No. 14,299; May 8; v. 238; p. 612.

Peterson, John M., assignor to G. J. Sayer, Chicago, Ill. Refrigerating apparatus. No. 1,225,850; May 15; v. 238; p. 692.

Peterson, Peter, near Stavely, assignor of one-half to W. Muckenhirr, Stavely, Alberta, Canada. End-gate for grain tank-wagons. No. 1,224,319; May 1; v. 238; p. 73.

Peterson, Samuel, Iron River, Mich. Curtain and shade holder. No. 1,227,194; May 22; v. 238; p. 1185.

Peterson, Theodore L., Brooklyn, N. Y. Gage-glass for steam-boilers. No. 1,227,305; May 22; v. 238; p. 1222.

Peterson, Thorwald B. and W. C., assignors to E. H. Sprague Manufacturing Company, Omaha, Nebr. Motor-vehicle steering mechanism. No. 1,224,869; May 1; v. 238; p. 266.

Peterson, Winford C. (See Peterson, Thorwald B. and W. C.)

Peuch, Emile, Bourges, and A. Arbey, Beure, France. Apparatus for use as a clutching, coupling, or locking device and the like. No. 1,227,306; May 22; v. 238; p. 1222.

Pfeiffer, William H., Omaha, Nebr. Casket-holding means for hearses. No. 1,227,656; May 29; v. 238; p. 1366.

Pfeil, Otto. (See Wuensch and Pfeil.)

Phelps, George L., Chicago, Ill., assignor to International Harvester Company of New Jersey. Corn husker and shredder. No. 1,226,365; May 15; v. 238; p. 869.

Phelps, James C., Springfield, Mass. Terminal fitting for electric conduits. No. 1,224,320; May 1; v. 238; p. 74.

Phelps, James C., assignor of one-half to H. H. Curtis, Springfield, Mass. Barrier-cut-out switch. No. 1,224,409; May 1; v. 238; p. 106.

Philadelphia Storage Battery Company. (See Skinner, James M., assignor.)

Philip, Arnold, and L. J. Steele, Portsmouth, England. Detector of combustible gases. No. 1,224,321; May 1; v. 238; p. 74.

Philip Carey Manufacturing Company, The. (See Steffens, Walter L., assignor.)

Phillips-Brinton Company. (See Brinton, William C., Jr., assignor.)

Phillips, George B., Lima, assignor of one-fourth to A. W. Wheatley, Shawnee township, one-fourth to W. A. Austin, and one-fourth to W. H. Myers, Lima, Ohio. Locomotive-pilot. No. 1,225,353; May 8; v. 238; p. 483.





Phillips, George B., assignor of one-third to S. S. Lawson and one-third to W. M. Myers, Lima, Ohio. Rivet. No. 1,226,239; May 29; v. 238; p. 1563.

Phillips, Walter, and H. W. Allingham, London, England, assignors to Morse Chain Company, Ithaca, N. Y. Change-speed gearing. No. 1,225,851; May 15; v. 238; p. 692.

Photo Motion Company. (See Coffman, Samuel M., assignor.)

Pickard, Greenleaf W., Amesbury, assignor to Wireless Specialty Apparatus Company, Boston, Mass. Radio telegraphy and telephony receiver. No. 1,224,499; May 1; v. 238; p. 137.

Pickard, Greenleaf W., Amesbury, Mass., assignor to Wireless Specialty Apparatus Company, New York, N. Y. Rectifier. No. 1,225,852; May 15; v. 238; p. 693.

Pidgeon, Clifford H., Columbus, Ohio. Cultivator. No. 1,225,853; May 15; v. 238; p. 693.

Piel, Gottfried. (See Long, George F., assignor.)

Pierce, George L., Brooklyn, assignor to A. G. Spalding & Bros., New York, N. Y. Protected stocking or the like. No. 1,225,354; May 8; v. 238; p. 484.

Pierce, George L., Brooklyn, assignor to A. G. Spalding & Bros., New York, N. Y. Golf-bag. No. 1,227,657; May 29; v. 238; p. 1367.

Pierce, James L., Manila, Philippine Islands. Furnace and evaporator. No. 1,228,240; May 29; v. 238; p. 1563.

Piersen, Edwin H., Topeka, Kans. Telegraph-transmitter. No. 1,224,956; May 8; v. 238; p. 347.

Pierson, Paul M. (See Hochstetter, Frederick W., assignor.)

Pietrobono, Angelo, Riverside, Conn. Hand-mower. No. 1,228,045; May 29; v. 238; p. 1500.

Pietzsch, Richard H., assignor to Cino Camera Company, Philadelphia, Pa. Motion-picture apparatus. No. 1,224,500; May 1; v. 238; p. 138.

Piguet, Alfred, assignor to Society of Chemical Industry in Basle, Basel, Switzerland. Treating organic compounds by electrolysis. No. 1,225,052; May 8; v. 238; p. 379.

Pilcher, Frank A., assignor of one-third to M. C. Beman and one-third to F. Beman, Binghamton, N. Y. Automatic musical instrument. No. 1,224,783; May 1; v. 238; p. 236.

Pilcher, John V., Louisville, Ky. Button. No. 1,226,692; May 22; v. 238; p. 1012.

Pinzon, Alejandro A. (See Velis, Jorge B., assignor.)

Ploch, Frank J., San Francisco, Cal. Gas-heated radiator. No. 1,224,784; May 1; v. 238; p. 237.

Pirtle, P. R., *et al.* (See Bretz, George W., assignor.)

Pitman-Moore Company. (See Roberts, George H., assignor.)

Pittman, Moses S., Sawtelle, Cal. Rail-joint. No. 1,224,785; May 1; v. 238; p. 237.

Pitts, Edwin B., Sr., Oswego, N. Y. Blower for steam-boiler furnaces. No. 1,225,053; May 8; v. 238; p. 380.

Pittsburgh Plate Glass Company. (See Bechtel, John A., assignor.)

Plank, Samuel K., Houston, Tex. Vehicle-spring. No. 1,227,307; May 22; v. 238; p. 1222.

Plank, Samuel K., Houston, Tex. Darby. No. 1,227,308; May 22; v. 238; p. 1222.

Platt, Clarence D., Bridgeport, Conn. Sealable fuse-plug. No. 1,226,808; May 22; v. 238; p. 1053.

Platt, Clarence D., Bridgeport, Conn. Push-button switch. No. 1,227,195; May 22; v. 238; p. 1185.

Platt, John J., Milford, Conn. Spark-plug. No. 1,228,241; May 29; v. 238; p. 1563.

Platzer, Adolf. (See Silz and Platzer.)

Pocock, Augustine J., Dayton, Ohio. Water-box for pumps. No. 1,226,693; May 22; v. 238; p. 1012.

Pocock, Francis A., Philadelphia, Pa. Water-gage. No. 1,227,196; May 22; v. 238; p. 1185.

Podlešák, Henry J., Chicago, Ill., assignor, by mesne assignments, to International Harvester Corporation. Carbureter for gas-engines. No. 1,226,366; May 15; v. 238; p. 869.

Poetsch, Chester M., Chicago, Ill. Radiator-cover. No. 1,224,501; May 1; v. 238; p. 138.

Pogue, George D., St. Louis, Mo. Driving mechanism. No. 1,225,355; May 8; v. 238; p. 484.

Poix, Gabrielle M., Brooklyn, N. Y. Brassière. No. 1,226,113; May 15; v. 238; p. 782.

Polk, Walter C., Fort Branch, Ind. Concrete-casting machine. No. 1,225,356; May 8; v. 238; p. 484.

Pollak, Armin, New York, N. Y. Lock. No. 1,224,502; May 1; v. 238; p. 138.

Pollock, John R., Los Angeles, Cal. Dust-separator for street-sweeping machines. No. 1,226,589; May 15; v. 238; p. 939.

Pond, Clarke P., Philadelphia, Pa. Window-operating device. No. 1,228,242; May 29; v. 238; p. 1503.

Poole, Frederick, Jewell, Kans. Water-heater. No. 1,228,243; May 29; v. 238; p. 1564.

Poole, Lora E., assignor to Anderson Button Attaching Machine Company, Anderson, Ind. Button-feeding mechanism. No. 1,227,825; May 29; v. 238; p. 1425.

Pope, Alfred C., New York, N. Y. Foot-actuated musical instrument. No. 1,227,309; May 22; v. 238; p. 1222.

Pope, Henry, North Adelaide, South Australia, Australia. Lever device for coupling hose and for other purposes connected with water systems. No. 1,225,271; May 8; v. 238; p. 452.

Por, John. (See Jansa, Anton, assignor.)

Porte, Thomas J., Winnipeg, Manitoba, Canada. Golf-practising device. No. 1,224,410; May 1; v. 238; p. 107.

Porter, Burr E. (See Norris, Henry O., assignor.)

Porter, Clarence H. (See Ruber and Porter.)

Porter, Frank A., and H. B. Arnold, assignors to The National Spring Bed Company, New Britain, Conn. Hammock. No. 1,224,859; May 1; v. 238; p. 262.

Porter, Ray S., assignor to Belden-Porter-Gray Company, Minneapolis, Minn. Heating system. No. 1,226,694; May 22; v. 238; p. 1013.

Porter, Wilson E., assignor to New Haven Clock Co., New Haven, Conn. Device for regulating balance-wheels. No. 1,226,998; May 22; v. 238; p. 1120.

Posson, Edward, Chicago, Ill. Car-door. No. 1,225,272; May 8; v. 238; p. 452.

Potenza, Teodosio, New Haven, Conn. Stove-lid lifter. No. 1,226,367; May 15; v. 238; p. 870.

Potter, James C., Pawtucket, R. I. Gearing for turret-lathes and other mechanism. No. 1,225,487; May 8; v. 238; p. 527.

Potter, Joseph. (See McKinzie, Mortimer, assignor.)

Powell, Lura D., Swampscott, Mass. Combined vehicle and hobby-horse. No. 1,226,590; May 15; v. 238; p. 939.

Powell, Milton C., Ralston, Nebr. Kitchen-cabinet. No. 1,225,054; May 8; v. 238; p. 380.

Powell, William J., Ocean City, N. J. Bowling apparatus. No. 1,224,322; May 1; v. 238; p. 75.

Power Washing Machine Co. (See Altorfer, Alpheus W., assignor.)

Powers Accounting Machine Company. (See Powers, James, assignor.)

Powers, James, assignor, by mesne assignments, to Powers Accounting Machine Company, New York, N. Y. Tabulating-machine. No. 1,224,411; May 1; v. 238; p. 107.

Powers, James, assignor, by mesne assignments, to Powers Accounting Machine Company, New York, N. Y. Analyzing and recording mechanism. No. 1,224,412; May 1; v. 238; p. 108.

Powers, James, assignor to Powers Accounting Machine Company, New York, N. Y. Combined printing mechanism and perforating-machine. No. 1,224,413; May 1; v. 238; p. 108.

Powers, John N., assignor to United States Ordnance Company, Washington, D. C. Detonating-fuse. No. 1,224,414; May 1; v. 238; p. 108.

Powers, John N., assignor to United States Ordnance Co., Washington, D. C. Wheel. No. 1,227,197; May 22; v. 238; p. 1186.

Powers, Richard, Pittsburgh, Pa. Liquid-level indicator. No. 1,224,786; May 1; v. 238; p. 238.

Pratt, Benjamin H., Milwaukee, assignor to The Federal Rubber Company, Cudahy, Wis. Blow-out patch for pneumatic tires. No. 1,226,909; May 22; v. 238; p. 1087.

Pratt, Howell D., Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill. Ice-sawing machine. No. 1,225,488; May 8; v. 238; p. 528.

Pratt & Whitney Company. (See Peterson, Gustaf E., assignor.) (Reissue.)

Precision Metal Workers. (See Grunwald, Albert C., assignor.)

Prenosil, Anthony J., assignor of one-half to F. J. Maixner, Dwight, Nebr. Container for mucilage. No. 1,227,658; May 29; v. 238; p. 1367.

Prescott, Sydney I., New York, N. Y. Internal-combustion engine. No. 1,224,566; May 1; v. 238; p. 161.

Pressed Metal Radiator Company. (See Sonneborn, Charles, assignor.)

Pressed Steel Car Company. (See Elder, Thomas W., Jr., assignor.)

Pressed Steel Car Company. (See Koch, Felix, assignor.)

Pressed Steel Car Company. (See Ristine, George W., Jr., assignor.)

Price, William C., Beattyville, Ky. Lock-nut. No. 1,228,130; May 29; v. 238; p. 1527.

Priest, Edward D., Schenectady, N. Y. Sleeping-car. No. 1,225,854; May 15; v. 238; p. 693.

Primavera, Vincent, and G. Gallo, New York, N. Y. Cigarette-case. No. 1,226,591; May 15; v. 238; p. 940.

Primavese, Thusneida C., Corona, N. Y. Dessicating eggs. No. 1,226,999; May 22; v. 238; p. 1120.

Prince, John D., New York, N. Y. Tread-surface for boots and shoes. No. 1,226,247; May 15; v. 238; p. 828.

Pritchard, Samuel A., Van Meter, Iowa. Throttle-controller for automobiles. No. 1,228,244; May 29; v. 238; p. 1564.

Privett, Henry C., Long Beach, Cal. Continuous exhaust-box for preserve-containing cans. No. 1,226,592; May 15; v. 238; p. 940.

Privett, Henry C., Los Angeles, Cal. Continuous-agitating cooker. No. 1,226,593; May 15; v. 238; p. 940.

Privett, Henry C., assignor to Pacific Canning Machinery Company, Long Beach, Cal. Can-conveyer. No. 1,225,172; May 8; v. 238; p. 419.

Prometheus Electric Company, The. (See Woerner, William L., assignor.)

Proudfit, William S., Grand Rapids, Mich. Loose-leaf binder. No. 1,224,664; May 1; v. 238; p. 196.

Provident Systems Corporation. (See Taylor, Frederick F., assignor.)

Pruden, Clarence D., Baltimore, Md. Wall structure for sheet-metal houses. No. 1,224,665; May 1; v. 238; p. 196.
Pruefert, August J. E., East Aurora, N. Y. Poultry drinking-fountain. No. 1,226,594; May 15; v. 238; p. 941.
Pruyn, Francis L., New York, N. Y. Combined steel and concrete pile. No. 1,225,855; May 15; v. 238; p. 694.
Pugh, William E., Seattle, Wash. Tire. No. 1,227,000; May 22; v. 238; p. 1120.
Pullinger, Thomas C. W., near Dumfries, Scotland, assignor to American B. H. P. Aero Engine Corporation, New York, N. Y. Aluminium or other light metal casting for internal-combustion engines. No. 1,226,595; May 15; v. 238; p. 941.
Putnam, James R., assignor to Waterbury Clock Co., Waterbury, Conn. Tubular chime-clock. No. 1,225,489; May 8; v. 238; p. 528.
Pyle-National Company, The. (See Dake, Charles W., assignor.)
Pynn, Newman, Brooklyn, N. Y. Self-centering railway-truck. No. 1,228,131; May 29; v. 238; p. 1527.
Pyrah, William S., Old Trafford, England, assignor to Westinghouse Electric and Manufacturing Company. Commutator-cylinder for dynamo-electric machines. No. 1,224,206; May 1; v. 238; p. 32.
Q. & H. Company. (See Schroyer, Charles A., assignor.)
Quackenbush, Cleveland H., and J. C. Smedley, Cleveland, Ohio, assignors to General Electric Company. Wire-coiling apparatus. No. 1,227,659; May 29; v. 238; p. 1367.
Quest, Thomas J. (See Maynard, Joseph A., assignor.)
Quick, Alfred A., London, England. Toothed transmission-gearing. No. 1,225,856; May 15; v. 238; p. 694.
Quick, Elonzy W., Centralia, Fla. Nut-lock. No. 1,227,310; May 22; v. 238; p. 1223.
Quigley, Eugene, *et al.* (See Maher, John, assignor.)
Quincy Elevator Gate Company. (See Fogal, John E. W., assignor.)
Quiram, Albert F., Varna, Ill. Game. No. 1,226,695; May 22; v. 238; p. 1013.
R. Neumann Hardware Co., The. (See Hellmann, William A., assignor.)
Rabinovitz, Louis. (See Ellis and Rabinovitz.)
Raddatz, Richard. (See Matchette and Raddatz.)
Raeburn, William M., Toronto, Ontario, Canada. Paint-brush. No. 1,226,368; May 15; v. 238; p. 870.
Raff, John B., Los Lunas, assignor of one-fourth to R. B. Chavez, Tome, N. Mex. Permutation-padlock. No. 1,227,826; May 29; v. 238; p. 1425.
Rafferty, Charles D., Middleport, Ohio. Locomotive-valve-setting machine. No. 1,225,490; May 8; v. 238; p. 528.
Ragan, Ralph, Atlanta, Ga. Rotary pump. No. 1,224,567; May 1; v. 238; p. 162.
Ragsdale, Charles R., St. Louis, Mo. Demountable rim. No. 1,224,666; May 1; v. 238; p. 196.
Rahner, Martin L., assignor to Oregon Brass Works, Portland, Oreg. Bubbling drinking-cup. No. 1,227,311; May 22; v. 238; p. 1223.
Ralston, Cleon M., Bronson, Kans. Removable casket-handle. No. 1,227,929; May 29; v. 238; p. 1460.
Ralston Steel Car Company, The. (See Becker, Anton, assignor.)
Ramage, Alexander S., assignor to Bostaph Engineering Company, Detroit, Mich. Transforming mineral oils. No. 1,224,787; May 1; v. 238; p. 238.
Ramsay, Samuel R., assignor of one-eighth to L. Wilson, New Westminster, British Columbia, Canada. Automobile front axle. No. 1,226,809; May 22; v. 238; p. 1054.
Ramsden, John T., assignor to The Tabor Manufacturing Company, Philadelphia, Pa. Car for molding-machines. No. 1,225,273; May 8; v. 238; p. 452.
Ramseur, Wellington A., Gainesville, Ga. Thermostat-operated circuit. No. 1,226,696; May 22; v. 238; p. 1014.
Rand, James H., North Tonawanda, N. Y. Card-index. No. 1,227,660; May 29; v. 238; p. 1368.
Rand, James H., North Tonawanda, N. Y. Card-index. No. 1,227,661; May 29; v. 238; p. 1368.
Rand, James H., North Tonawanda, N. Y. Index device. No. 1,227,662; May 29; v. 238; p. 1369.
Rand, James H., North Tonawanda, N. Y. Index device. No. 1,227,663; May 29; v. 238; p. 1369.
Rand, James H., North Tonawanda, N. Y. Index device. No. 1,227,664; May 29; v. 238; p. 1370.
Rand, James H., North Tonawanda, N. Y. Index device. No. 1,227,665; May 29; v. 238; p. 1370.
Rand, James H., North Tonawanda, N. Y. Index-card. No. 1,227,827; May 29; v. 238; p. 1426.
Randall, Herman P., Pasadena, assignor to Kemp Manufacturing Co., Los Angeles, Cal. Drawer-stop. No. 1,227,001; May 22; v. 238; p. 1121.
Randall, Karl C., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Circuit-interrupter. No. 1,226,114; May 15; v. 238; p. 782.
Randle, Harry T., assignor of one-fourth to G. A. Cibulka, St. Louis, Mo. Automobile-signal. No. 1,226,004; May 15; v. 238; p. 744.
Randles, George E., assignor to The Foote-Burt Company, Cleveland, Ohio. Drill-press. No. 1,227,828; May 29; v. 238; p. 1426.
Raney, Clemma R., Chicago, Ill., assignor to International Harvester Company of New Jersey. Grain-shocker. No. 1,226,369; May 15; v. 238; p. 870.
Raney, Clemma R., Chicago, Ill., assignor to International Harvester Company of New Jersey. Harvester attachment. No. 1,226,370; May 15; v. 238; p. 871.
Raney, Clemma R., Chicago, Ill., assignor to International Harvester Company of New Jersey. Harvesting-machine attachment. No. 1,226,372; May 15; v. 238; p. 871.
Raney, Clemma R., Chicago, Ill., assignor to International Harvester Company of New Jersey. Shocking-machine. No. 1,226,373; May 15; v. 238; p. 872.
Raney, Clemma R., Chicago, Ill., assignor to International Harvester Company of New Jersey. Grain-shocking machine. No. 1,226,374; May 15; v. 238; p. 872.
Raney, Clemma R., Chicago, Ill., assignor to International Harvester Company of New Jersey. Automatic trip for shocking-machines. No. 1,226,375; May 15; v. 238; p. 872.
Raney, Clemma R., Chicago, Ill., assignor to International Harvester Company of New Jersey. Binding mechanism. No. 1,226,376; May 15; v. 238; p. 873.
Raney, Clemma R., Chicago, and R. C. Livesay, Berwyn, Ill., assignors to International Harvester Company of New Jersey. Grain-shocker. No. 1,226,371; May 15; v. 238; p. 871.
Rankin, Carl, Wellsburg, assignor to Jefferson Glass Company, Follansbee, W. Va. Clutch-timing mechanism. No. 1,227,545; May 22; v. 238; p. 1299.
Ranschousen, Lyman A., Springfield, Mass. Operating mechanism for cover-plates. No. 1,225,679; May 8; v. 238; p. 591.
Ransome, Bernard, Oakland, Cal. Pavement. No. 1,225,055; May 8; v. 238; p. 380.
Rapel, Joseph H., *et al.* (See Graves, John, assignor.)
Rapid Tobacco Stemmer Co. (See Buchanan, James C., assignor.)
Raschick, Charles T., St. Paul, Minn. Combined pad-holder and ticket-punch. No. 1,228,046; May 29; v. 238; p. 1500.
Rasmussen, Henry E., Fitchburg, Mass. Pressure-bag for vulcanizing purposes. No. 1,226,596; May 15; v. 238; p. 941.
Rassmann, Hugo C., Beaver Dam, Wis. Watering device for cattle. (Reissue.) No. 14,308; May 29; v. 238; p. 1610.
Ratau Battu Smoot Company. (See Battu, Leonce L., assignor.)
Rathman, Gilbert, assignor of three-tenths to W. Hodgkinson and four-tenths to J. A. Brown, New York, N. Y. Coffee-percolator. No. 1,226,005; May 15; v. 238; p. 744.
Rau, Stanley L., New Brighton, Pa. Attachment of corrugated sheets to frame structures. No. 1,227,666; May 29; v. 238; p. 1370.
Rauch, Frank, Springfield, Mass. Fountain-pen light. No. 1,228,132; May 29; v. 238; p. 1528.
Rauhut, John R., Chicago, Ill. Sprinkling device. No. 1,225,857; May 15; v. 238; p. 695.
Raule, Clifford T., Philadelphia, Pa. Automatic sizing device. No. 1,225,858; May 15; v. 238; p. 695.
Ravenkamp, Ferdinand G., Spearville, Kans. Kerosene-oil heating-stove. No. 1,227,930; May 29; v. 238; p. 1460.
Rawdon, Charles R., and F. McCoole, St. Louis, Mo. Apparatus for recovering precious metals. No. 1,228,133; May 29; v. 238; p. 1528.
Rawlings, Samuel V., Calumet, Mich. Power-hammer mechanism. No. 1,226,006; May 15; v. 238; p. 745.
Ray, William J., Fort Smith, Ark. Bale-tying mechanism. No. 1,225,173; May 8; v. 238; p. 420.
Ray, William J., Fort Smith, Ark. Tractor plow and cultivator. No. 1,228,134; May 29; v. 238; p. 1528.
Rayfield, Charles L., Chicago, Ill. Multiple-jet carbureter. No. 1,224,207; May 1; v. 238; p. 32.
Rayfield, Charles L., Chicago, Ill. Carbureter. No. 1,224,208; May 1; v. 238; p. 33.
Rayfield, Charles L., Chicago, Ill. Carbureter. No. 1,224,209; May 1; v. 238; p. 33.
Raymond, Franklin M., and C. H. Dare, Saugatuck, Conn.; said Dare assignor to said Raymond. Electric signaling system for electric railways. No. 1,227,031; May 29; v. 238; p. 1460.
Re, Alfred, New York, N. Y. Window-lock. No. 1,226,507; May 15; v. 238; p. 942.
Reade, William A., assignor to The Ludlow Typograph Company, Cleveland, Ohio. Typograph mechanism. No. 1,226,007; May 15; v. 238; p. 745.
Reagan, Daniel E., Columbus, Ohio. Brickmaking-machine. No. 1,226,115; May 15; v. 238; p. 782.
Ream, Fred H., assignor to Noel Four-Wheel-Drive Manufacturing Company, Kansas City, Mo. Universal joint. No. 1,225,174; May 8; v. 238; p. 420.
Ream, Myrton E., Evanston, Ill. Laundry-receptacle. No. 1,224,568; May 1; v. 238; p. 162.
Rear, Douglas J., Durban, South Africa. Cue-rest. No. 1,227,312; May 22; v. 238; p. 1223.
Reardon, Robert E., Ottawa, Ontario, Canada. Target-practice rod. No. 1,227,313; May 22; v. 238; p. 1224.
Reardon, Robert E., Ottawa, Ontario, Canada. Target-holder for practice-rods. No. 1,228,245; May 29; v. 238; p. 1564.



Reber, Paul, Philadelphia, Pa. Bird-cage. No. 1,224,415; May 1; v. 238; p. 109.
Reciproto Engine Co., The. (See Moors, George F., assignor.)
Recker, Adolph C., Oakville, assignor to Waterbury Mfg. Co., Waterbury, Conn. Portable electric lamp. No. 1,225,491; May 8; v. 238; p. 529.
Recker, Adolph C., Oakville, assignor to Waterbury M'f'g Co., Waterbury, Conn. Plural lamp-socket. No. 1,227,553; May 22; v. 238; p. 1302.
Red Jacket Mfg. Co. (See Stebbins, Timothy, assignor.)
Redfield, Casper L., and T. Ross, Chicago, Ill. Clock. No. 1,226,810; May 22; v. 238; p. 1054.
Redman, John D., Fillmore, N. Y. Shovel. No. 1,125,680; May 8; v. 238; p. 592.
Redman, William A., assignor to The McConway & Torley Company, Pittsburgh, Pa. Coupling-centering mechanism. No. 1,226,116; May 15; v. 238; p. 783.
Redshaw, Frederick W., Scottdale borough, Pa. Grinder mechanism. No. 1,228,135; May 29; v. 238; p. 1529.
Reece Button Hole Machine Company, The. (See Mello, Alfred S., assignor.)
Reece Shoe Machinery Company, The. (See Flint, John B., assignor.)
Reece Shoe Machinery Company, The. (See Schoenky, August R., assignor.)
Reece Shoe Machinery Company. (See Zaleski, Frank, assignor.)
Reed, Emerson G., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Transformer-core punching. No. 1,224,210; May 1; v. 238; p. 34.
Reed, Emerson G., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Transformer. No. 1,227,314; May 22; v. 238; p. 1224.
Reed, Fred R., Highland Park, Mich. Carbon-remover. No. 1,227,667; May 29; v. 238; p. 1370.
Reed, Homer L., Louisiana, Mo. Truck. No. 1,225,859; May 15; v. 238; p. 695.
Reed, Lyman C., and O. P. Smith, New Orleans, La. Cake-holder for coating-machines. No. 1,226,910; May 22; v. 238; p. 1087.
Reed, Roy E., Ripon, Wis. Variable-resistance device. No. 1,225,357; May 8; v. 238; p. 485.
Reed, Sylvanus A., New York, N. Y. Apparatus for generating electricity. No. 1,225,175; May 8; v. 238; p. 420.
Reed, Wert T., Milwaukee, Wis. Book-holder. No. 1,228,136; May 29; v. 238; p. 1529.
Reese, Louis C., assignor to Werner & Pfleiderer Co., Saginaw, Mich. Machine for molding dough and the like. No. 1,226,248; May 15; v. 238; p. 828.
Reese, Louis C., assignor to Werner & Pfleiderer Co., Saginaw, Mich. Machine for molding dough and the like. No. 1,226,249; May 15; v. 238; p. 829.
Reese, Louis C., assignor to Werner & Pfleiderer Co., Saginaw, Mich. Machine for molding dough and the like. No. 1,226,250; May 15; v. 238; p. 830.
Reese, Louis C., assignor to Werner & Pfleiderer Co., Saginaw, Mich. Machine for molding dough and the like. No. 1,226,251; May 15; v. 238; p. 831.
Reese, Louis C., assignor to Werner & Pfleiderer Co., Saginaw, Mich. Charging and discharging of automatic ovens, proofing-chambers, and the like. No. 1,226,252; May 15; v. 238; p. 831.
Reese, Louis C., assignor to Werner & Pfleiderer Co., Saginaw, Mich. Charging and discharging of automatic ovens, proofing-chambers, and the like. No. 1,226,253; May 15; v. 238; p. 832.
Reeves, Frank N., Newark, N. J., and A. E. Lundell, New York, N. Y., assignors, by mesne assignments, to Western Electric Company, Incorporated. Automatic telephone-exchange system. No. 1,227,932; May 29; v. 238; p. 1461.
Regal Button Works. (See Edelson, Harry, assignor.)
Regan, William J. (See McConway and Regan.)
Reichard, Benjamin. (See Amsel and Reichard.)
Reichel, John, Philadelphia, and H. Werner, Norwood, assignors to H. K. Mulford Company, Philadelphia, Pa. Treating hog-cholera antitoxin. No. 1,224,860; May 1; v. 238; p. 263.
Reichheim, George L., New Haven, Conn. Apparatus for and process of burning gas. No. 1,227,829; May 29; v. 238; p. 1426.
Reid, James H., Newark, N. J. Securing potassium cyanid from water-insoluble potassium containing mineral. No. 1,226,811; May 22; v. 238; p. 1054.
Reid, James H., Newark, N. J. Securing water-soluble potassium compounds from water-insoluble potassium-containing mineral. No. 1,226,812; May 22; v. 238; p. 1055.
Reid, James H., Newark, N. J., assignor to Patents Process Company. Securing combustible fluids from carbonaceous solids. No. 1,224,788; May 1; v. 238; p. 238.
Reid, James H., Newark, N. J., assignor to Patents Process Company. Means for promoting the discharge of molten products from a furnace or other apparatus. No. 1,227,067; May 22; v. 238; p. 1142.
Reid, James H., Newark, N. J., assignor to Patents Process Company. Furnace or apparatus for making products electrically and means for facilitating discharge of same. No. 1,227,068; May 22; v. 238; p. 1142.
Reid, James H., Newark, N. J., assignor to Patents Process Company. Furnace or apparatus for electrically making products and means for heating discharging products. No. 1,227,069; May 22; v. 238; p. 1142.
Reid, W. Eugene. (See Reid, William J., assignor.)
Reid, William, assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Lamp-controlled circuit. No. 1,227,070; May 22; v. 238; p. 1143.
Reid, William J., assignor to W. E. Reid, Dobson, N. C. Oil-burner. No. 1,227,315; May 22; v. 238; p. 1224.
Reilly, James D., Providence, R. I. Demountable rim. No. 1,228,246; May 29; v. 238; p. 1565.
Reinhold, Darwin O., San Francisco, Cal. Self-adjusting spreader for saws. No. 1,228,047; May 29; v. 238; p. 1501.
Reising, Eugene G., Hartford, Conn. Firearm. No. 1,227,668; May 29; v. 238; p. 1371.
Relay Automatic Telephone Company, The. (See Bygrave, Leonard C., assignor.)
Relay Automatic Telephone Company, The. (See Ward, Bryant, and Inman, assignors.)
Remer, Adam, and J. S. Tripp, Oklahoma, Okla. Train-hose coupling. No. 1,224,211; May 1; v. 238; p. 34.
Remick, Lloyd T., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Finishing edges. No. 1,226,117; May 15; v. 238; p. 783.
Remington Typewriter Company. (See Barrett, Glenn J., assignor.)
Remington Typewriter Company. (See Selb, George A., assignor.)
Remy, Benjamin P. and F. L. Anderson, Ind., assignors, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J. Generating and timing ignition-currents. No. 1,227,816; May 22; v. 238, p. 1225.
Remy, Frank L. (See Remy, Benjamin P. and F. L.)
Rennau, Charles A., assignor of one-half to J. W. Shelburne, Hannibal, Mo. Gripping-tool for packing-rings. No. 1,224,416; May 1; v. 238; p. 109.
Reordan, Charles E., Dallas, Tex. Method and apparatus for generating motive fluid. No. 1,224,789; May 1; v. 238; p. 239.
Reuter, Balthasar E., assignor to Reuter Process Company, Chicago, Ill. Apparatus for the decomposition of fats and oils. No. 1,227,198; May 22; v. 238; p. 1186.
Reuter, Frederick, New York, N. Y. Binding for books. No. 1,224,667; May 1; v. 238; p. 197.
Reuter Process Company. (See Reuter, Balthasar E., assignor.)
Revere Rubber Company. (See McDaid, Martin, assignor.)
Rewell, Elbridge G., Council Bluffs, Iowa, assignor of one-half to O. F. Orndoff, Harvevs, Pa. Milk-can-lid holder. No. 1,224,212; May 1; v. 238; p. 34.
Rey, Anthony. (See Mangisch and Rey.)
Reynolds, John C., Stamford, Conn. Tool for compressing valve-springs. No. 1,227,669; May 29; v. 238; p. 1371.
Rhoades, Arthur J., Philadelphia, Pa. Puffing cereal grains. No. 1,227,002; May 22; v. 238; p. 1121.
Rice, George M., Lincoln, Nebr., assignor of one-half to M. MacKay, Kansas City, Mo. Excavating-machine. No. 1,224,323; May 1; v. 238; p. 75.
Rich, Ambrose, Stamford, Conn. Non-skid tire. No. 1,226,254; May 15; v. 238; p. 833.
Rich, George R., Oak Park, Ill. Piston for internal-combustion engines. No. 1,228,048; May 29; v. 238; p. 1501.
Rich, George R., Chicago, Ill. Piston for internal-combustion engines. No. 1,228,049; May 29; v. 238; p. 1501.
Rich, George R., assignor to Rich Steel Products Company, Battle Creek, Mich. Tappet for internal-combustion engines. No. 1,228,350; May 29; v. 238; p. 1599.
Rich Steel Products Company. (See Rich, George R., assignor.)
Richard, Joseph. (See Rioux, Alphonse, assignor.)
Richard, Leroy L., Coalinga, Cal. Rotary drilling-bit. No. 1,226,377; May 15; v. 238; p. 873.
Richards, Archer W., assignor to The Hydraulic Pressed Steel Company, Cleveland, Ohio. Uniting metal bodies. No. 1,227,830; May 29; v. 238; p. 1427.
Richards, Julius H., Essex, assignor to Splitdorf Electrical Company, Newark, N. J. Engine-starter. No. 1,227,008; May 22; v. 238; p. 1121.
Richmond, John, Rochester, N. Y., assignor to American Laundry Machinery Company, Cincinnati, Ohio. Motor-controlling device. No. 1,226,255; May 15; v. 238; p. 833.
Richmond Radiator Company. (See Matchette and Raddatz, assignors.)
Richter, Joseph, Austin, Tex. Newspaper-holder. No. 1,227,490; May 22; v. 238; p. 1280.
Richter, William A., New York, N. Y. Original package. No. 1,227,933; May 29; v. 238; p. 1461.
Rickert, Charles A. (See Kriesel, Gustave F., assignor.)
Rider, James T., Rienzi, Miss. Spindle-protector. No. 1,226,008; May 15; v. 238; p. 745.
Rieber, Frank, assignor to The Rieber Laboratories, San Francisco, Cal. Electric control system. No. 1,225,860; May 15; v. 238; p. 696.
Rieber Laboratories, The. (See Rieber, Frank, assignor.)
Rieck, George E., Bremerton, Wash. Paint for coating metallic surfaces subject to high temperatures. No. 1,227,071; May 22; v. 238; p. 1144.
Riegg, Robert C., Sacramento, Cal. Mail chute and receptacle. No. 1,227,934; May 29; v. 238; p. 1462.

Riemer, Carll A., and B. Hendricks, New York, N. Y. Cuff-link. No. 1,226,378; May 15; v. 238; p. 873.
Riesenberg, Frank W., Chicago, Ill. Jar-opening wrench. No. 1,226,911; May 22; v. 238; p. 1087.
Rieser, Charles, Chicago, Ill. Burglar-alarm. No. 1,226,009; May 15; v. 238; p. 746.
Rigby, George E., Manchester, England. Spring suspension for the wheels of side cars for motor-cycles. No. 1,227,317; May 22; v. 238; p. 1225.
Rigby, Grant W., assignor to I. Well, Pittsburgh, Pa. Briquetting-machine. No. 1,227,831; May 29; v. 238; p. 1427.
Riggs, Ashley M. (See Riggs, Lewis W. and A. M.)
Riggs, Lewis W. and A. M., Wheeling, W. Va. Rotary internal-combustion engine. No. 1,225,056; May 8; v. 238; p. 381.
Riker, David, Newark, N. J. Soap-dish. No. 1,227,318; May 22; v. 238; p. 1225.
Riley, Charles E., Newton, Mass., and C. Robinson, assignors to H. & B. American Machine Company, Pawtucket, R. I. Apparatus for distributing cotton or other materials. No. 1,227,072; May 22; v. 238; p. 1144.
Riley, Lewis A., White Plains, N. Y. Superheater. No. 1,226,379; May 15; v. 238; p. 873.
Riley, Ralph J., Livermore Falls, Me. Gate-valve. No. 1,226,380; May 15; v. 238; p. 874.
Rimailho, Emile, assignor to Compagnie Des Forges Et Acieries De La Marine Et D'Homecourt, Paris, France. Gun-carriage for ordnance. No. 1,225,492; May 8; v. 238; p. 529.
Ringle, Robert F., assignor to Herman Pneumatic Machine Company, Zellenople, Pa. Equalizing-table. No. 1,226,256; May 15; v. 238; p. 833.
Rinsche, Frank C., assignor to Burroughs Adding Machine Company, Detroit, Mich. Solenoid for driving adding-machines. No. 1,226,697; May 22; v. 238; p. 1014.
Rioux, Alphonse, assignor of one-half to J. Richard, Nashua, N. H. Railway signaling system. No. 1,225,493; May 8; v. 238; p. 529.
Ripley, John W., Flushing, N. Y. Dock construction. No. 1,227,070; May 29; v. 238; p. 1371.
Risdon, Robert S., assignor of one-half to M. Lawson, San Francisco, Cal. Automatic headlight control. No. 1,225,494; May 8; v. 238; p. 529.
Ristine, George W., Jr., Chicago, Ill., assignor to Pressed Steel Car Company, Pittsburgh, Pa. Discharge-door-operating mechanism. No. 1,225,176; May 8; v. 238; p. 421.
Ritzert, Robert W., Dayton, Ohio. Lock. No. 1,226,257; May 15; v. 238; p. 834.
Rivelli, Samuel, Philadelphia, Pa. Ornamental buckle. No. 1,225,358; May 8; v. 238; p. 485.
Rixson, Oscar C., New Rochelle, N. Y. Friction-stay. No. 1,225,359; May 8; v. 238; p. 485.
Rixton, William, Pond Eddy, N. Y. Rail-holder. No. 1,226,381; May 15; v. 238; p. 874.
Roa, William J., assignor to American Car and Foundry Company, St. Louis, Mo. Floor and wall-connection for railway-cars. No. 1,224,790; May 1; v. 238; p. 239.
Roa, William J., assignor to American Car and Foundry Company, St. Louis, Mo. Draft-arm and sill-reinforcement. No. 1,224,791; May 1; v. 238; p. 239.
Roa, William J., assignor to American Car and Foundry Company, St. Louis, Mo. Car-underframe. No. 1,224,792; May 1; v. 238; p. 240.
Roach, Finis E., Chicago, Ill. Anchor for dental plates and the like. No. 1,227,073; May 22; v. 238; p. 1144.
Robbins, Leon C., Loveland, Colo. Advertising toy. No. 1,227,319; May 22; v. 238; p. 1225.
Robert N. Bassett Company, The. (See Stuart, Henry J., assignor.)
Roberts, E. (See Matney, James, assignor.)
Roberts, Eugene, assignor to Sugar Centrifugal Discharger Company, Salt Lake City, Utah. Steam-pump. No. 1,225,274; May 8; v. 238; p. 457.
Roberts, George H., assignor to Pitman-Moore Company, Indianapolis, Ind. Animal-bleeding apparatus. No. 1,226,598; May 15; v. 238; p. 942.
Roberts, Harry B., Highland Park, Ill. Telephone-bracket. No. 1,224,324; May 1; v. 238; p. 76.
Roberts, James M., Marion, Ky. Combination-lock. No. 1,224,569; May 1; v. 238; p. 163.
Robertson, Levi L., Madison, Minn. Windmill attachment. No. 1,224,417; May 1; v. 238; p. 110.
Robertson, Lucius, Cincinnati, Ohio. Artificial-tooth plate. No. 1,226,382; May 15; v. 238; p. 875.
Robertson, William P., assignor to Borden's Condensed Milk Company, New York, N. Y. Food and beverage mixer. No. 1,227,671; May 29; v. 238; p. 1372.
Robertson, William P., assignor to W. H. Johnston, New York, N. Y. Food and beverage mixer. No. 1,227,935; May 29; v. 238; p. 1462.
Roblnett, William P., and J. A. Gulledge, Malden, Mo. Camera attachment. No. 1,225,495; May 8; v. 238; p. 530.
Robinson, Aiden C., Aberdeen, Wash. Combined curtain and shade bracket. No. 1,228,137; May 29; v. 238; p. 1529.
Robinson, Charles. (See Riley and Robinson.)
Robinson, Charles F., San Francisco, Cal. Machine for the manufacture of high-speed friction-saws. No. 1,228,050; May 29; v. 238; p. 1502.
Robinson, Charles W., Battle Creek, Mich. Garden-tool. No. 1,224,957; May 8; v. 238; p. 847.
Robinson, Cyrus, Mount Vernon, N. Y., assignor to Metallurgical Engineering & Process Corporation. Dehydrator. No. 1,227,491; May 22; v. 238; p. 1281.
Robinson, Laura V., Baltimore, Md. Scraping device. No. 1,224,798; May 1; v. 238; p. 240.
Robinson, Lewis T., Schenectady, N. Y., assignor to General Electric Company. Demand apparatus. No. 1,227,320; May 22; v. 238; p. 1226.
Robinson, Olinthus B., Denton, Tex. Detergent device. No. 1,225,496; May 8; v. 238; p. 530.
Robinson, William, West Lynn, Mass. X-ray tube. No. 1,226,383; May 15; v. 238; p. 875.
Robison, Manville F., Bar View, Oreg. Box. No. 1,224,794; May 1; v. 238; p. 240.
Rochau, Albert D., Fairfax, Okla. Camera. No. 1,228,051; May 29; v. 238; p. 1502.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Alarm-bell. No. 1,226,010; May 15; v. 238; p. 746.
Rockwell, Walter S., assignor to W. S. Rockwell Company, New York, N. Y. Furnace chill and floor-pipe. No. 1,227,672; May 29; v. 238; p. 1372.
Rodenbaugh, Charles, Pittsburgh, Pa. Truss. No. 1,225,177; May 8; v. 238; p. 421.
Roderick, Charles, and T. L. Knapp, Woodstock, assignors to The Oliver Typewriter Company, Chicago, Ill. Means for securing type-writers to base-boards. No. 1,225,057; May 8; v. 238; p. 381.
Rodger Ballast Car Company. (See Yost, Winfield H., assignor.)
Rodler, Harold B., assignor of one-fourth to I. N. Boernstein, one-fourth to P. Koester, and one-fourth to R. B. Gotta, Washington, D. C. Telephone-plug ejector. No. 1,227,936; May 29; v. 238; p. 1463.
Rodman, William B., *et al.* (See Ferguson, Baltuce W., assignor.)
Rodriguez, Henry A., Wood Brook, Port of Spain, Trinidad, British West Indies. Garter. No. 1,227,199; May 22; v. 238; p. 1186.
Rodzikevitch, Nikolaj F., Farrell, Pa. Anti-aircraft bomb or shell. No. 1,225,497; May 8; v. 238; p. 530.
Rodzikevitch, Nikolaj F., Farrell, Pa. Torpedo-guard for war-ships. No. 1,225,498; May 8; v. 238; p. 530.
Roehm, Richard, Newark, N. J., assignor to The Whitehead & Hoag Company. Advertising-sign. No. 1,227,074; May 22; v. 238; p. 1145.
Roelofson, Richard W., Galt, Ontario, Canada. Screw-cutting die. No. 1,224,795; May 1; v. 238; p. 241.
Roemisch, Henry A., Blackfoot, Idaho. Tatting-shuttle. No. 1,224,958; May 8; v. 238; p. 347.
Roesel, Frederick V. (See Gilmore and Roesel.)
Roessler & Hassiacher Chemical Company. (See Liebknecht, Otto, assignor.)
Roessler & Hassiacher Chemical Company. (See Schaidhauf, Alois, assignor.)
Rogers, Allen, Brooklyn, N. Y. Ink and making the same. No. 1,224,668; May 1; v. 238; p. 197.
Rogers Bros. Co. (See Rogers, Charles A., assignor.)
Rogers, Charles A., assignor to Rogers Bros. Co., Albion, Pa. Automobile-trailer. No. 1,228,138; May 29; v. 238; p. 1530.
Rogers, Charles E., Detroit, Mich. Desiccating apparatus. No. 1,226,011; May 15; v. 238; p. 746.
Rogers, Clarence T., New York, assignor to E. Bommer, Brooklyn, N. Y. Door-check. No. 1,226,258; May 15; v. 238; p. 834.
Rogers, James C., Birmingham, Ala. Garter. No. 1,228,139; May 29; v. 238; p. 1530.
Rogers, John F., New York, N. Y. Fuel-tank gage. No. 1,225,178; May 8; v. 238; p. 421.
Rogers, Rochester H. (See Dee, David G., assignor.)
Rogers, Rochester H. (See Erickson, John, assignor.)
Rogers, Victor B. (See Winston and Rogers.)
Rohlfing, John M., assignor to American Car and Foundry Company, St. Louis, Mo. Operating mechanism for car-doors. No. 1,224,796; May 1; v. 238; p. 241.
Rohlfing, John M., assignor to American Car and Foundry Company, St. Louis, Mo. Dumping-car-door-operating mechanism. No. 1,224,797; May 1; v. 238; p. 241.
Roll, Frank H., Buffalo, N. Y. Signaling mechanism for motor-cars, &c. No. 1,225,058; May 8; v. 238; p. 381.
Rolls-Royce Limited. (See Royce, Frederick H., assignor.)
Rome, Sullivan, and J. Iarussi, Hudson, Ohio. Rail-joint. No. 1,227,832; May 29; v. 238; p. 1427.
Rome-Turney Radiator Co. (See Turney, George W., assignor.)
Rook, James H. (See Spinner and Perry, assignors.)
Root, Charles F., assignor of one-fourth to B. O. Conn, Mansfield, Ohio. Combined safety and throw-off mechanism. No. 1,226,259; May 15; v. 238; p. 835.
Root, Charles F., assignor of one-fourth to B. O. Conn, Mansfield, Ohio. Combined safety and throw-off mechanism. No. 1,226,260; May 15; v. 238; p. 835.
Rose, Harry E., Spokane, Wash. Propelling device. No. 1,227,200; May 22; v. 238; p. 1187.
Rose, Paul, Berlin, Germany, assignor to General Electric Company. Regulator for dynamo-electric machines. No. 1,227,321; May 22; v. 238; p. 1226.
Rose, Robert W., Marblehead, Mass. Dumping-vehicle hoist. No. 1,226,384; May 15; v. 238; p. 875.
Rosenberg, Louis, Richmond, Va. Mail-assorting device. No. 1,225,499; May 8; v. 238; p. 531.



Rosendahl, Nils M., Winthrop Harbor, assignor to F. C. Austin, Chicago, Ill. Device for loading concrete-mixers. No. 1,226,261; May 15; v. 238; p. 836.
Rosenfeld, John W. (See Rosenfeld, Louis, and J. W. Thompson.)
Rosenfeld, Louis, and J. W. Thompson, Tuscaloosa, Ala. Cloth measuring and dispensing machine. No. 1,227,322; May 22; v. 238; p. 1227.
Rosenfeld, Max C., Boston, Mass. Bottle-washing brush. No. 1,228,140; May 29; v. 238; p. 1530.
Rosenfeld, Sidney, Cleveland, Ohio. Faucet. No. 1,224,959; May 8; v. 238; p. 347.
Rosenthal, Edward M., assignor to Bradley & Vrooman Co., Chicago, Ill. Paint-strainer. No. 1,224,213; May 1; v. 238; p. 34.
Rosenzweig, Leon, New York, N. Y. Hat-adjuster. No. 1,225,275; May 8; v. 238; p. 453.
Rosino, Gilbert G., Sandusky, Ohio. Device for taking foot impressions. No. 1,225,500; May 8; v. 238; p. 531.
Ross, Antonio, Utica, N. Y. Grater. No. 1,228,247; May 29; v. 238; p. 1565.
Ross, Harry B., assignor to Ross Transmission Gear Co., Incorporated, Denver, Colo. Transmission-gearing. No. 1,226,012; May 15; v. 238; p. 747.
Ross, John C., Boston, Mass. Key-gage. No. 1,227,492; May 22; v. 238; p. 1281.
Ross, John J., International Falls, Minn. Barking-drum. No. 1,228,374; May 29; v. 238; p. 1606.
Ross, Torey. (See Folger and Ross.)
Ross, Torey. (See Redfield and Ross.)
Ross Transmission Gear Co. (See Ross, Harry B., assignor.)
Rossiter, George A., Brooklyn, assignor to F. G. Carrie, New York, N. Y. Meridian-finder and latitude-indicator. No. 1,226,385; May 15; v. 238; p. 876.
Rotary Rod Weeder & Manufacturing Company. (See Wolfe, Garnett H., assignor.)
Roth, Adolph, New York, N. Y. Fracture apparatus. No. 1,226,013; May 15; v. 238; p. 747.
Roth, Maximilian. (See Mandel and Roth.)
Roto Company, The. (See Darlington, Philip J., assignor.)
Rounds, Wilbur L., Rensselaer, N. Y. Hydraulic clutch. No. 1,224,660; May 1; v. 238; p. 197.
Rountree, Richard, San Francisco, Cal. Wave-motor. No. 1,227,201; May 22; v. 238; p. 1187.
Rouse, Seymour A., Chicago, Ill. Armored liner for pneumatic tires. No. 1,227,673; May 29; v. 238; p. 1372.
Rousso, Jacques. (See Anderson, Carl E., assignor.)
Rowe, Alvin V., Galesburg, Ill. Gate. No. 1,224,325; May 1; v. 238; p. 76.
Rowe, Frederick H. (See Gage, Seth H., assignor.)
Rowe Ring-Point Company, The. (See Chism, Louis W., assignor.)
Rowland, Charles M. (See Walter, Butterworth, and Sigler, assignors.)
Rowntree, Carl B., Atlanta, Ga. Apparatus for and method of taking trick and advertising moving pictures. No. 1,227,075; May 22; v. 238; p. 1145.
Rowntree, Harold, Kenilworth, Ill. Electric-wiring connection. No. 1,226,813; May 22; v. 238; p. 1055.
Royal Baking Powder Company. (See Vaygouny, Moosbegh, assignor.)
Royal Typewriter Company. (See Hess, Edward B., assignor.)
Royal Worcester Corset Co. (See Lecoutre, Auguste J., assignor.)
Royce, Frederick H., assignor to Rolls-Royce Limited, Derby, England. Epicyclic gearing. No. 1,225,360; May 8; v. 238; p. 486.
Royce, Frederick H., assignor to Rolls-Royce Limited, Derby, England. Lubricant-retaining device for the valve mechanism of internal-combustion engines. No. 1,225,361; May 8; v. 238; p. 486.
Royle, Vernon and Vernon E., Paterson, N. J. Ellipsograph attachment for routing-machines. No. 1,226,912; May 22; v. 238; p. 1087.
Royle, Vernon E. (See Royle, Vernon and V. E.)
Ruben, John W., Portland, Oreg. Soaring aeroplane. No. 1,225,059; May 8; v. 238; p. 382.
Ruber, Anton G., and C. H. Porter, Albany, N. Y. Flexible sleeve for stay-bolts. No. 1,225,501; May 8; v. 238; p. 531.
Rubinstein, Elias, New York, N. Y. Edge-binder. No. 1,227,076; May 22; v. 238; p. 1145.
Rudd, Harry H., Roanoke, Va. Hinge-joint for folding ladders. No. 1,228,248; May 29; v. 238; p. 1565.
Rudek, Marya, Philadelphia, Pa. Cuspidor and lifter. No. 1,228,141; May 29; v. 238; p. 1531.
Rudert, Paul, Tarentum, Pa. Sound-box for sound-reproducing machines. No. 1,226,262; May 15; v. 238; p. 836.
Rudolph, Franklin, Winnetka, Ill., assignor to American Can Company, New York, N. Y. Drying apparatus. No. 1,227,674; May 29; v. 238; p. 1373.
Rudolph, Isador, Philadelphia, Pa. Plaque. No. 1,225,179; May 8; v. 238; p. 422.
Rudolph Wurlitzer Manufacturing Company, The. (See Lockwood, Louis S., assignor.)
Rudolph Wurlitzer Manufacturing Company, The. (See Martini, Ceasar, assignor.)
Rudolphi, Frank, New York, N. Y., and O. Ostlin, Maywood, Ill., assignors to American Can Company, New York, N. Y. Can-body-making machine. No. 1,227,077; May 22; v. 238; p. 1146.
Ruff, William J., Quincy, Ill. Shipping-barrel. No. 1,226,814; May 22; v. 238; p. 1055.
Ruggiero, Pasquale, Philadelphia, Pa. Heel for shoes. No. 1,227,202; May 22; v. 238; p. 1188.
Ruggles, Henry B. (See Naylor and Ruggles.)
Ruggles, Louis G. (See Miller and Ruggles.)
Rundle, George W., Columbus, Ohio. Propulsion mechanism. No. 1,226,014; May 15; v. 238; p. 748.
Runser, Robert W. (See Fullmer and Runser.)
Runyan, Arthur L., Waterloo, Iowa, assignor to Runyan Cushion Wheel Company, Omaha, Nebr. Resilient heel for boots or shoes. No. 1,227,493; May 22; v. 238; p. 1281.
Runyan, Arthur L., assignor to Runyan Cushion Wheel Company, Omaha, Nebr. Resilient wheel. No. 1,227,494; May 22; v. 238; p. 1282.
Runyan, Arthur L., assignor to Runyan Cushion Wheel Company, Omaha, Nebr. Resilient tire. No. 1,227,495; May 22; v. 238; p. 1282.
Runyan Cushion Wheel Company. (See Runyan, Arthur L., assignor.)
Rupright, Frederick E., assignor of one-half to W. Pennington, Interlochen, Mich. Igniter and valve mechanism. No. 1,225,681; May 8; v. 238; p. 592.
Rupright, Frederick E., assignor of one-half to W. Pennington, Interlochen, Mich. Charge-forming device. No. 1,227,546; May 22; v. 238; p. 1299.
Rusby, Joseph H., Nutley, N. J. Electric switch. No. 1,228,052; May 29; v. 238; p. 1502.
Rusdell, William J. (See Humphrey and Rusdell.)
Rushton, Kenneth. (See Wilhelm and Rushton.)
Russ, Adolf F., Pittsburgh, Pa. Aeroplane. No. 1,227,937; May 29; v. 238; p. 1463.
Russ, John D., *et al.* (See Thompson, James V., assignor.)
Russel, Joseph, St. Louis, Mo. Shoe-cleaner. No. 1,225,502; May 8; v. 238; p. 532.
Russell, Franklin H., Hollandale, Miss. Display and selling device. No. 1,227,323; May 22; v. 238; p. 1227.
Russell, Joseph B., Chicago, Ill. Automatic ball-racking device for billiard-tables. No. 1,227,833; May 29; v. 238; p. 1428.
Russell, Loren M. (See Van Dolsen, Emmet L., assignor.)
Russell, Milton A. (See Luke, Russell, Kennedy, and Anderson.)
Russell, Percy, Brooklyn, N. Y., F. J. Sepas, Philadelphia, and E. B. Wilford, Merion borough, assignors to Electro Dental Manufacturing Company, Philadelphia, Pa. Air-heater. No. 1,227,324; May 22; v. 238; p. 1228.
Russell, Zachary E., assignor to C. W. Warren, Sauk Rapids, Minn. Curtain-anchoring device. No. 1,225,060; May 8; v. 238; p. 382.
Rustin, Rufus W., Bishopville, S. C. Process of and apparatus for separating cotton-seed hulls and meats. No. 1,226,263; May 15; v. 238; p. 837.
Ruthrauff, William M., Chicago, Ill. Dentifrice. No. 1,225,362; May 8; v. 238; p. 486.
Ruttan, Alfred A., and C. E. Hutchings, assignors to Eastman Kodak Company, Rochester, N. Y. Latch mechanism for folding cameras. No. 1,225,861; May 15; v. 238; p. 696.
Ruttan, Alfred A., and C. E. Hutchings, assignors to Eastman Kodak Company, Rochester, N. Y. Photographic-plate holder. No. 1,227,203; May 22; v. 238; p. 1188.
Ruttan, Alfred A., and C. E. Hutchings, assignors to Eastman Kodak Company, Rochester, N. Y. Focusing mechanism for cameras. No. 1,227,675; May 29; v. 238; p. 1373.
Rutz, Arnold O., Milwaukee, Wis. Valve. No. 1,227,078; May 22; v. 238; p. 1146.
Rydquist, Adolph, Rochester, N. Y. Check-controlled apparatus. No. 1,226,015; May 15; v. 238; p. 748.
S. Karpen & Bros. (See Karpen, Isaac, assignor.)
S. Sternau & Co. (See Ball, Henry P., assignor.)
S. K. F. Ball Bearing Company. (See Fjellman, Bengt W., assignor.)
Sabin, Lucius N., San Francisco, Cal. Roll-holder. No. 1,225,363; May 8; v. 238; p. 487.
Sabo, John, Cleveland, Ohio. Game-trap. No. 1,224,670; May 1; v. 238; p. 198.
Sackett, John W., Jacksonville, Fla. Cutter-head for suction-dredges. No. 1,226,386; May 15; v. 238; p. 876.
Saecker, Frank E., assignor to Appleton Machine Company, Appleton, Wis. Paper-stock shredder. No. 1,224,960; May 8; v. 238; p. 348.
Safety Car Heating & Lighting Company. (See Hagar, Arthur P., assignor.)
Sagen, Bernhard, Chicago, Ill. Agricultural implement. No. 1,227,938; May 29; v. 238; p. 1464.
Sager, Clinton M., assignor to J. H. Sager Company, Rochester, N. Y. Support for buffer-bars. No. 1,227,834; May 29; v. 238; p. 1428.
Saginaw Plate Glass Company. (See Smith, Carlton L., assignor.)
Saholt, Orville E., Fergus Falls, Minn. Mechanism for automatically opening and closing car-doors. No. 1,226,698; May 22; v. 238; p. 1014.
Salisbury, Robert W., *et al.* (See Barrett, Clarence, assignor.)

Salmson, Emile J. J., assignor to Societe Des Moteurs Salmson (Systeme Canton-Unne), Billancourt, France. Contact apparatus for the electrical connection of magnetos. No. 1,224,214; May 1; v. 238; p. 35.
Salt, Gerald C., Victoria, British Columbia, Canada. Clutch control. No. 1,226,118; May 15; v. 238; p. 783.
Salt Lake Stamp Co. (See Schaub, Jacob, assignor.)
Salter, Edmond A., Provencial, assignor of one-half to E. H. Holder, Cypress, La. Railway cross-tie. No. 1,225,503; May 8; v. 238; p. 532.
Samesreuther, Richard, Dusseldorf, assignor of one-half to Autogenwerk Sirius, Gesellschaft mit beschrankter Haftung, Dusseldorf-Eller, Germany. Flux for welding nickel and nickel alloy. No. 1,224,418; May 1; v. 238; p. 110.
Sampson, Erick G., and G. Johnson, assignors to The Art Metal Construction Company, Jamestown, N. Y. Suspension device for drawers. No. 1,227,939; May 29; v. 238; p. 1464.
Sampson, Willis Q., *et al.* (See Lind, James A., assignor.)
Sams, Albert J., Pittsburg, Kans. Hub-plate. No. 1,226,119; May 15; v. 238; p. 784.
Sandage, Jacob R., assignor to Upton Machine Company, St. Joseph, Mich. Toy rifle. No. 1,226,016; May 15; v. 238; p. 749.
Sandberg, Henry J. (See Vicic and Sandberg.)
Sanders, Peter W., Belleville, N. J. Crutch. No. 1,225,364; May 8; v. 238; p. 487.
Sandham, John. (See Sandham, Ralph R., assignor.)
Sandham, Ralph R., assignor of one-half to J. Sandham, Harlan, Iowa. Hand-stamp. No. 1,227,204; May 22; v. 238; p. 1188.
Sandreuter, Stuart, Stamford, Conn. Interrupter. No. 1,224,570; May 1; v. 238; p. 163.
Sanford, Charles E., New York, N. Y. Balance-wheel poising and truing machine. No. 1,228,053; May 29; v. 238; p. 1503.
Sanford, Charles L., assignor to Sanford Manufacturing Company, Washington, Pa. Flying-machine. No. 1,228,054; May 29; v. 238; p. 1503.
Sanford, Henry H., assignor to New Method Stove Company, Mansfield, Ohio. Stove. No. 1,227,676; May 29; v. 238; p. 1373.
Sanford Manufacturing Company. (See Sanford, Charles L., assignor.)
Sangamo Electric Company. (See Emens, Albert L., assignor.)
Sangamo Electric Company. (See Lanphier, Robert C., assignor.)
Santmire, Allen D., Chicago, Ill. Baby-carriage. No. 1,228,055; May 29; v. 238; p. 1504.
Sapp, Isaac H., Cheyenne, Wyo. Drum-snare. No. 1,227,496; May 22; v. 238; p. 1282.
Sargent, Fitz William, Mahwah, N. J., assignor to The American Brake Shoe & Foundry Company, Wilmington, Del. Reinforcing-back for brake-shoes. No. 1,224,503; May 1; v. 238; p. 139.
Sargent, Frederick G., Westford, assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass. Apron-guiding device. No. 1,227,835; May 29; v. 238; p. 1428.
Sartain, William, Haskell, Okla. Pulling device for motor-vehicles. No. 1,226,815; May 22; v. 238; p. 1056.
Sartakoff, Jack D., New York, N. Y. Self-cleaning blackboard. No. 1,227,205; May 22; v. 238; p. 1189.
Sarver, Harry A., Parkersburg, W. Va. Antislipping device. No. 1,228,056; May 29; v. 238; p. 1504.
Sauder, Emanuel M., Wauseon, Ohio. Front-wheel drive. No. 1,224,504; May 1; v. 238; p. 139.
Sauer, Frederick W., Hollis Court, assignor to Home Devices Corporation, Brooklyn, N. Y. Driving mechanism for laundry apparatus. No. 1,224,961; May 8; v. 238; p. 348.
Sauer, Frederick W., Hollis Court, assignor to Home Devices Corporation, Brooklyn, N. Y. Reversing-gearing for wringers. No. 1,224,962; May 8; v. 238; p. 349.
Sauer, Frederick W., assignor to Home Devices Corporation, Brooklyn, N. Y. Laundry apparatus. No. 1,224,963; May 8; v. 238; p. 349.
Saunders, Augustus M. (See Boyd and Saunders.)
Saunders, Frederick L., Green Bay, Wis. Boat. No. 1,226,699; May 22; v. 238; p. 1015.
Saunders, Lawrence D. (See Crittenden and Saunders.)
Saunders, T. M. (See Anderson, Andrew, assignor.)
Saunt, William F., Lundy Island, via Instow, North Devon, England. Aerial machine. No. 1,226,599; May 15; v. 238; p. 942.
Saurer, Firm of Adolph. (See Blanditi, Decenzio, assignor.)
Saurer, Firm of Adolph. (See Mayer and Schlatter, assignors.)
Saurer, Hippolyt, Arbon, Switzerland. Apparatus for perforating jackquard-cards. No. 1,225,365; May 8; v. 238; p. 487.
Sautier, George H., Chicago, Ill. Adjustable chair. No. 1,228,249; May 29; v. 238; p. 1566.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,940; May 29; v. 238; p. 1464.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,941; May 29; v. 238; p. 1464.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,942; May 29; v. 238; p. 1465.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,943; May 29; v. 238; p. 1465.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,944; May 29; v. 238; p. 1466.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,945; May 29; v. 238; p. 1466.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,946; May 29; v. 238; p. 1466.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,947; May 29, v. 238; p. 1467.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,948; May 29; v. 238; p. 1467.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,949; May 29; v. 238; p. 1468.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,950; May 29; v. 238; p. 1468.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,951; May 29; v. 238; p. 1468.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,952; May 29; v. 238; p. 1469.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,953; May 29; v. 238; p. 1469.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,954; May 29; v. 238; p. 1470.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,955; May 29; v. 238; p. 1470.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,956; May 29; v. 238; p. 1470.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,957; May 29; v. 238; p. 1471.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,958; May 29; v. 238; p. 1471.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,959; May 29; v. 238; p. 1472.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,960; May 29; v. 238; p. 1472.
Sauvage, William H., Flushing, N. Y., assignor to Gould Coupler Company. Slack-adjuster. No. 1,227,961; May 29; v. 238; p. 1472.
Savings Union Bank and Trust Company. (See Northrup, Elmer C., assignor.)
Sawyer, Edward. (See Hudgins, John T., assignor.)
Saxe, Charles J., Montreal, Quebec, Canada. Adjustable stop for windows or doors. No. 1,225,862; May 15; v. 238; p. 696.
Saxe, John L., Waterbury, Conn. Churn. No. 1,224,798; May 1; v. 238; p. 242.
Saxegaard, Andreas, Stavanger, Norway. Apparatus for household cooking. No. 1,224,326; May 1; v. 238; p. 76.
Sayer, George J. (See Peterson, John M., assignor.)
Scalbom, Oscar L., Glenview, Ill. Flash-light. No. 1,224,215; May 1; v. 238; p. 35.
Scarr, James, Randsburg, Cal. Collapsible crate. No. 1,227,079; May 22; v. 238; p. 1146.
Schaab, John J., St. Louis, Mo. Safety attachment for garment-pockets. No. 1,225,863; May 15; v. 238; p. 696.
Schaake, William, Pittsburgh, and A. H. Candee, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Control system for pantograph-trolleys. No. 1,224,216; May 1; v. 238; p. 36.
Schade, Edmund A., assignor to The Stanley Rule & Level Company, New Britain, Conn. Joint for folding rules. No. 1,227,206; May 22; v. 238; p. 1189.
Schaefer, Charles, New York, N. Y. Stationary washtub. No. 1,224,671; May 1; v. 238; p. 198.
Schaefer, Earle B., assignor to Geo. W. Blabon Company, Philadelphia, Pa. Block-printing machine. No. 1,224,964; May 8; v. 238; p. 350.
Schaefer, George A., assignor of one-half to F. W. Irving, Chicago, Ill. Inclosed fuse. No. 1,226,017; May 15; v. 238; p. 749.
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Schaffner, Clarence E., Cincinnati, Ohio. Garment-supporter. No. 1,226,387; May 15; v. 238; p. 877.
Schaidhauf, Alois, Frankfort-on-the-Main, Germany, assignor to Roessler & Hasslacher Chemical Company, New York, N. Y. Manufacturing alkali-metal percarbonate. No. 1,225,722; May 8; v. 238; p. 606.
Schaidhauf, Alois, Frankfort-on-the-Main, Germany, assignor to Roessler & Hasslacher Chemical Company, New York, N. Y. Rendering alkali percarbonates stable. No. 1,225,872; May 15; v. 238; p. 699.



Schaier, Louis, Minneapolis, Minn. Weed-puller. No. 1,224,571; May 1; v. 238; p. 163.
Scharpenberg, Charles C., Bakersfield, Cal. Gas-trap. No. 1,226,913; May 22; v. 238; p. 1088.
Schaub, Jacob, assignor to Salt Lake Stamp Co., Salt Lake City, Utah. Implement for attaching ear-tags. No. 1,225,180; May 8; v. 238; p. 422.
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Schelbe, Harold M., Cambridge, Mass., assignor to Westinghouse Electric and Manufacturing Company. Means for producing air-currents. No. 1,224,218; May 1; v. 238; p. 36.
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Scherer, Albert G., assignor to Excelsior Steel Furnace Company, Chicago, Ill. Furnace. No. 1,224,220; May 1; v. 238; p. 37.
Schiff, Sigmund, New York, N. Y. Bottle-neck mold-roll apparatus. No. 1,226,700; May 22; v. 238; p. 1015.
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Schillinger, Henry H., Paw Paw, Mich., assignor to Wise Sportsman's Supply Co., Chicago, Ill. Fish bait or lure. No. 1,226,701; May 22; v. 238; p. 1016.
Schimmel, Fridolin, Faribault, Minn. Shock-absorber connection. No. 1,227,063; May 29; v. 238; p. 1473.
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Schinkez, Albert, assignor to H. W. Hancock, Charlotte, Mich. Pressure-indicator. No. 1,227,080; May 22; v. 238; p. 1147.
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Schleicher, John C., Mount Vernon, N. Y. Vehicle-wheel. No. 1,225,181; May 8; v. 238; p. 423.
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Schmid, Karl, Landsberg-on-the-Warthe, Germany. Single-acting, condensing, continuous-current steam-engine. No. 1,227,836; May 29; v. 238; p. 1428.
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Schmidt, Cecilia K., Boston, Mass. Bank-check, &c. No. 1,227,004; May 22; v. 238; p. 1122.
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Schnell, Lewis C. (See Laskewitz, Edward T., assignor.)
Schoch, Floyd W., Jersey City, N. J. Oil storage and delivery apparatus. No. 1,226,914; May 22; v. 238; p. 1088.
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Schoenky, August R., Somerville, assignor to Reece Shoe Machinery Company, Boston, Mass. Retaining device. No. 1,226,705; May 22; v. 238; p. 1017.
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Schulde, John, assignor, by mesne assignments, to Harry L. Hussmann Refrigerator & Supply Company, St. Louis, Mo. Show-case refrigerator. No. 1,225,682; May 8; v. 238; p. 592.
Schulder, Fred, assignor to United Brass Manufacturing Company, Cleveland, Ohio. Stop and waste valve. No. 1,228,060; May 29; v. 238; p. 1505.
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Schuler, Max, assignor to Anschütz & Co., Neumühlen, near Kiel, Germany. Device for damping oscillations of a gyroscope-pendulum. No. 1,228,061; May 29; v. 238; p. 1506.
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Schwab, Leon C., assignor to A. O. Smith Company, Milwaukee, Wis. Automobile-wheel. No. 1,227,841; May 29; v. 238; p. 1430.
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Schwarzmann, Wolfgang E., Springfield, Mass., assignor to Bosch Magneto Company, New York, N. Y. Distributing mechanism for electrical ignition systems. No. 1,226,817; May 22; v. 238; p. 1056.
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Scott, Arthur P., Chicago, Ill., assignor to Chile Exploration Company, New York, N. Y. Casting-mold. No. 1,226,123; May 15; v. 238; p. 785.
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Scott, Henry H., Strassburg, Saskatchewan, Canada. Harrow-tooth. No. 1,225,367; May 8; v. 238; p. 488.
Scott, Luther, assignor of one-half to M. Couner, Garden Grove, Iowa. Circle-swing. No. 1,225,506; May 8; v. 238; p. 533.
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Scott, Robert W., assignor to Scott & Williams, Incorporated, Boston, Mass. Pattern mechanism for knitting-machines. No. 1,225,683; May 8; v. 238; p. 593.
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Seal, William D., Piedmont, Mo. Resilient tire and wheel. No. 1,225,183; May 8; v. 238; p. 423.
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Search, Charles E., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Tractor. No. 1,227,005; May 22; v. 238; p. 1122.
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Selbt, George, Berlin, Germany, assignor to General Transmission Company, New York, N. Y. Current-indicating apparatus for direct-reading wave-meters for high-frequency oscillations. No. 1,228,065; May 29; v. 238; p. 1507.
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Sellers, Harry E., assignor to Marathon Electric Mfg. Company, Wausau, Wis. Control mechanism for sewing-machine motors. No. 1,224,508; May 1; v. 238; p. 140.
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Seng, Wendelin P., Chicago, Ill. Lubricator for the springs of vehicles. No. 1,224,329; May 1; v. 238; p. 77.
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Severy, Melvin L., Arlington Heights, assignor to Severy Manufacturing Company, Boston, Mass. Making resistance elements. No. 1,225,368; May 8; v. 238; p. 488.
Severy, Melvin L., Arlington Heights, Mass., and G. B. Sinclair, Georgetown, Me., assignors to Chloralcelo Company, Boston, Mass. Synchronizer. No. 1,224,420; May 1; v. 238; p. 110.
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Shedenhelm, Robert, assignor, by mesne assignments, to H. S. Butler, Ladora, Iowa. Manure-loader. No. 1,226,125; May 15; v. 238; p. 785.
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Sherwood, Walter, and L. Baldwin, Wellsville, N. Y. Core-box for bladed diaphragms of steam-turbines. No. 1,226,604; May 15; v. 238; p. 944.
Sherwood, William E., Canastota, N. Y. Coaster. No. 1,224,575; May 1; v. 238; p. 165.
Shevlin, Charles W., assignor to Climax Container Company, Chicago, Ill. Machine for ironing and finishing paraffined containers. No. 1,224,969; May 8; v. 238; p. 351.
Shewmake, Charles M., Castlerock, Wash. Car-replacer. No. 1,226,390; May 15; v. 238; p. 877.
Shields, George A., Columbus, Ohio. Reversible pot. No. 1,226,022; May 15; v. 238; p. 751.
Shields, Harry A., Grand Rapids, Mich. Automatic table control for fabric-piling machines. No. 1,225,875; May 15; v. 238; p. 700.
Shields, John S. (See Meikle, Daniel G., assignor.)
Shihara, Hiroo, Seattle, Wash. Fender for vehicles. No. 1,224,422; May 1; v. 238; p. 111.
Shintani, Otozo. (See Kawate, Hiyozo, assignor.)
Shipley, Thomas, York, Pa. Refrigerating or ice-making apparatus. No. 1,226,391; May 15; v. 238; p. 878.
Shockley, Loy L., Columbia, Mo. Door-operator. No. 1,228,143; May 29; v. 238; p. 1531.
Shoemaker, John F., Des Moines, Iowa. Check. No. 1,225,512; May 8; v. 238; p. 535.
Shoring, Harry G., *et al.* (See McNeill, David, assignor.)
Shoup, George L. (See Duncan and Shoup.)
Shultz, Albert B., Buffalo, N. Y. Gas-engine body or frame. No. 1,226,820; May 22; v. 238; p. 1058.
Shurnuff Manufacturing Company. (See Dean, Clark A., assignor.)
Sickman, Davy V., Denver, Colo. Telescoping-piston hydraulic cartridge of reaction type. No. 1,225,062; May 8; v. 238; p. 383.
Siebenhauer, Lester, assignor to Drendell Electrical and Manufacturing Company, San Francisco, Cal. Safety device for electrical systems. No. 1,224,330; May 1; v. 238; p. 78.
Sieber, Ferdinand, Vado Ligure, Italy, assignor to Westinghouse Electric and Manufacturing Company. Transformer. No. 1,224,225; May 1; v. 238; p. 39.
Siemens-Schuckertwerke G. m. b. H. (See Blanc, Ferdinand, assignor.)
Siert, Paul K., Blair, Nebr. Chicken-brooder and grain-sprouter. No. 1,225,063; May 8; v. 238; p. 383.
Sietsema, Remmer H., Little Rock, Iowa. Holder. No. 1,225,064; May 8; v. 238; p. 383.
Siever, Charles M., Holton, Kans. Mucilage-bottle. No. 1,226,821; May 22; v. 238; p. 1058.
Sigafoos, Clark A., Omaha, Nebr. Flying target. No. 1,227,966; May 29; v. 238; p. 1474.
Sigler, Oscar J. (See Walter, Butterworth, and Sigler.)
Silk, Thomas, Portsmouth, Ohio. Sheet-metal barrel. No. 1,225,876; May 15; v. 238; p. 701.
Silvestri, Giulio, Vienna, Austria. Apparatus for driving rotary engines. No. 1,227,907; May 29; v. 238; p. 1474.
Silvestri, Giulio, Vienna, Austria. Rotary engine. No. 1,227,908; May 29; v. 238; p. 1474.
Sliz, Max A., and A. Platzer, Cleveland, Ohio. Pattern appliance. No. 1,225,187; May 8; v. 238; p. 425.
Simmins, Charles, Philadelphia, Pa. Jacquard mechanism. No. 1,225,065; May 8; v. 238; p. 384.
Simmon, Karl A., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of distribution and control for electric railways. No. 1,226,126; May 15; v. 238; p. 786.
Simmons, Albert H., assignor of one-third to P. B. Asch, Chicago, Ill. Attachment for electric-lamp-socket keys. No. 1,225,279; May 8; v. 238; p. 455.
Simmons Manufacturing Company, The. (See Brown, Harvey E., assignor.)
Simmons, Walter B. (See Staley and Simmons.)
Simmons, William D. (See Jarrell, Thomas M., assignor.)
Simms Magneto Co., The. (See Hoyt, Francis R., assignor.)
Simms, William, Elgin, Ill. Multiple table. No. 1,227,681; May 29; v. 238; p. 1375.
Simon, Arthur, assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Variable-voltage transformer. No. 1,227,844; May 29; v. 238; p. 1431.
Simons, Ernst, Cassel, Germany. Preparing tubers for manufacture of dough or flour for bread and bakers' wares. No. 1,225,877; May 15; v. 238; p. 701.
Simons, Ernst, Cassel, Germany. Preparing legumes for the manufacture of dough or flour for bread and bakers' wares. No. 1,225,878; May 15; v. 238; p. 701.
Simpson, Albert L., San Diego, Cal. Necktie-former. No. 1,227,329; May 22; v. 238; p. 1229.
Simpson, Bert E., Chassell, Mich. Lumber-stamping machine. No. 1,225,513; May 8; v. 238; p. 535.
Simpson, Fitzroy K., Kansas City, Mo. Speed-transmission mechanism. No. 1,226,392; May 15; v. 238; p. 878.
Simpson, James E., Brooklyn, N. Y. Line-producing pen. No. 1,225,067; May 8; v. 238; p. 384.
Simpson, James E., Brooklyn, N. Y. Line-forming device for type-writing machines. No. 1,225,369; May 8; v. 238; p. 488.
Sims, James G., Bowie, Tex. Cotton-chopper. No. 1,225,066; May 8; v. 238; p. 384.
Simsohn, Julian S. (See Weinhandler and Simsohn.)
Sincage, Joseph F., Florence, Mass. Tire. No. 1,228,071; May 29; v. 238; p. 1509.
Sinclair, George B. (See Severy and Sinclair.)
Siner, John M., Parish, Fla. Rotary internal-combustion engine. No. 1,228,072; May 29; v. 238; p. 1509.
Singer, Frank, assignor to Syracuse Twist Drill Company, Syracuse, N. Y. Combination-tool. No. 1,225,723; May 8; v. 238; p. 606.
Singer, Frank J., assignor to American Pressweld Radiator Corporation, Detroit, Mich. Radiator. No. 1,224,677; May 1; v. 238; p. 200.
Singer, Frank K., Pittsburgh, Pa., assignor to American Telephone and Telegraph Company, Boston, Mass. Lineman's shield. No. 1,224,970; May 8; v. 238; p. 352.
Singer Manufacturing Company, The. (See Bubier, Howard F., assignor.)
Singer Manufacturing Company, The. (See De Voe, Albert H., assignor.)
Singer Manufacturing Company, The. (See Fifield, Albert F., assignor.)
Singer Manufacturing Company. (See Harmon, Frank L., assignor.)
Singer Manufacturing Company, The. (See Hemleb, Martin, assignor.)
Singer Manufacturing Company, The. (See Molyneux, George E., assignor.)
Sistare, William M., New London, Conn. Course-finder. No. 1,225,514; May 8; v. 238; p. 535.
Sittner, Conrad and H., Ritzville, Wash. Means for bending springs. No. 1,226,918; May 22; v. 238; p. 1090.
Sittner, Henry. (See Sittner, Conrad and H.)
Six-In-One Fuse Company, The. (See Feldkamp, Payor, and Payson, assignors.)
Sjostrom, Peter, Maplewood, assignor to Victor Shoe Machinery Company, Boston, Mass. Shuttle-driving mechanism for sewing-machines. No. 1,224,226; May 1; v. 238; p. 39.
Sjostrom, Peter, Maplewood, assignor to Victor Shoe Machinery Co., Lynn, Mass. Take-up-actuating mechanism for sewing-machines. No. 1,224,423; May 1; v. 238; p. 112.
Skandora, Jakob, Racine, Wis. Weight-motor. No. 1,225,685; May 8; v. 238; p. 593.
Skarle, George, Albert Lea, Minn. Automobile-tire-fastening device. No. 1,227,330; May 22; v. 238; p. 1229.
Skeen, Samuel T., Sandoval, Ill. Drill. No. 1,226,393; May 15; v. 238; p. 879.
Skelton, L. S. (See Westbury, William, assignor.)
Skillman, Harrison L., Youngstown, Ohio. Combined eaves-trough and down-spout construction. No. 1,226,712; May 22; v. 238; p. 1019.
Skinner, James M., assignor to Philadelphia Storage Battery Company, Philadelphia, Pa. Storage-battery construction. No. 1,228,250; May 29; v. 238; p. 1566.
Skinner, John T., Lawrence, Kans. Multiple service connection. No. 1,224,971; May 8; v. 238; p. 352.
Skinner, William C., Toronto, Ontario, Canada. Fuel-burning device. No. 1,225,280; May 8; v. 238; p. 455.
Skipper, David L. (See Lacey, Edward P., assignor.)
Skipper, Ira V., Meridian, Miss. Convertible fork and rake. No. 1,226,265; May 15; v. 238; p. 837.
Slade, Isaac S., assignor to Slade Manufacturing Company, San Francisco, Cal. Condiment-holder. No. 1,227,331; May 22; v. 238; p. 1230.
Slade Manufacturing Company. (See Slade, Isaac S., assignor.)
Slater, Harry P., Cedar Rapids, Iowa. Iodin compound and preparing same. No. 1,226,394; May 15; v. 238; p. 879.
Slattery, Austin E., Minneapolis, Minn. Safety engine-cranking device. No. 1,226,395; May 15; v. 238; p. 879.

Slaughter, James M., Chattanooga, Tenn. Self-lubricating car-wheel. No. 1,226,127; May 15; v. 238; p. 786.
Slavitt, Harry, Pleasantdale, N. J. Folding seat. No. 1,228,073; May 29; v. 238; p. 1509.
Sleeper, Frank H., assignor to Sleeper & Hartley, Inc., Worcester, Mass. Machine for grinding springs. No. 1,227,498; May 22; v. 238; p. 1283.
Sleeper & Hartley. (See Sleeper, Frank H., assignor.)
Sleicher, Ralph H., Troy, N. Y. Fluid-pump. No. 1,227,845; May 29; v. 238; p. 1432.
Slingerland, George S., jr., Zelfang, and J. Goffin, assignors to Niagara Multiple Typewriter Company, Niagara Falls, N. Y. Printing-machine. No. 1,225,515; May 8; v. 238; p. 535.
Sloan, Raymond P., Media, Pa. Printing-machine. No. 1,228,074; May 29; v. 238; p. 1510.
Slocomb, John T., assignor to J. T. Slocomb Company, Providence, R. I. Micrometer-gage. No. 1,226,396; May 15; v. 238; p. 880.
Smallwood, Alfred, London, England, assignor to American Incandescent Heat Company, Portland, Me. Furnace for heating or annealing. No. 1,226,266; May 15; v. 238; p. 838.
Smallwood, Alfred, London, England, assignor to American Incandescent Heat Company, Portland, Me. Furnace. No. 1,226,267; May 15; v. 238; p. 838.
Smart, Rupert B., Chicago, Ill. Sound-conducting aural device. No. 1,224,331; May 1; v. 238; p. 78.
Smathers, James F., Kansas City, Mo. Type-writing machine. No. 1,227,846; May 29; v. 238; p. 1432.
Smaw, Ernest C., Chesapeake, Va. Ink-bottle. No. 1,227,209; May 22; v. 238; p. 1190.
Smedley, James C. (See Quackenbush and Smedley.)
Smith, Adelaide C., St. Mary's, Ontario, Canada. Non-refillable bottle. No. 1,226,822; May 22; v. 238; p. 1058.
Smith, Amos H., New York, N. Y., assignor to American Bank Note Company. Numbering-head. No. 1,227,969; May 29; v. 238; p. 1475.
Smith, Arthur H., and M. Blanch, assignors to Domestic Vacuum Cleaner Company, Worcester, Mass. Cleaning device. No. 1,227,682; May 29; v. 238; p. 1375.
Smith, A. J., *et al.* (See Jernigan, Albert S., assignor.)
Smith, Allison S., Bellaire, Ohio. Molding-base canopy-set. No. 1,224,576; May 1; v. 238; p. 165.
Smith, Benjamin H., Turtle Creek, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical protective device. No. 1,224,332; May 1; v. 238; p. 78.
Smith, Carl B., *et al.* (See Mentzer, Claude E., assignor.)
Smith, Carlton L., assignor to Saginaw Plate Glass Company, Saginaw, Mich. Vacuum lifting-cup. No. 1,225,724; May 8; v. 238; p. 606.
Smith, Charles D., Paris, Ill. End-gate for wagons. No. 1,227,332; May 22; v. 238; p. 1230.
Smith, Charles H., Short Hills, N. J. Process of and apparatus for treating coal. No. 1,224,424; May 1; v. 238; p. 112.
Smith, Chester J., Jamestown, N. Y. Calculating-machine. No. 1,224,333; May 1; v. 238; p. 79.
Smith, Cicero G., Palisades, Colo. Spring-wheel. No. 1,226,397; May 15; v. 238; p. 880.
Smith Company, T. I. (See Ware, Charles B., assignor.)
Smith, Edgar C., Fallon, Nev. Dirigible-headlight-operating mechanism. No. 1,225,516; May 8; v. 238; p. 536.
Smith, Elda G. (See Bissell and Smith.)
Smith, Emma F., *et al.* (See Beeson, Ira S., assignor.)
Smith, Frank L. (See Stuard, Smith, and Williams.)
Smith, Frank L. (See Williams and Smith.)
Smith, Frank L., Chicago, Ill., and T. B. Williams, assignors to The Leavitt Machine Company, Orange, Mass. Facing-tool for dressing valve-seats, &c. No. 1,227,499; May 22; v. 238; p. 1284.
Smith, Frederick C., Port Arthur, Tex. Automatic slack-take-up and cooling device. No. 1,226,713; May 22; v. 238; p. 1019.
Smith, Frederick C., Port Arthur, Tex. Filling-machine. No. 1,226,714; May 22; v. 238; p. 1020.
Smith, Gary B., Chicago, Ill. Bed-spring fabric. No. 1,227,970; May 29; v. 238; p. 1475.
Smith, Gary B., Chicago, Ill. Bed-spring fabric. No. 1,227,971; May 29; v. 238; p. 1475.
Smith, Gary B., Chicago, Ill. Machine for assembling bed-fabric chains. No. 1,227,972; May 29; v. 238; p. 1476.
Smith, George H. (See Darby and Smith.)
Smith, George M., Winooski, Vt. Clutch. No. 1,226,268; May 15; v. 238; p. 838.
Smith, Glenn, Young's Cove, New Brunswick, Canada. Brake. No. 1,225,517; May 8; v. 238; p. 536.
Smith, Harvey E., and W. H. Laisure, Tacoma, Wash. Automatic decarbonizer for internal-combustion engines. No. 1,225,068; May 8; v. 238; p. 384.
Smith, Henry A. W., Chatham, Va. Shears. No. 1,227,333; May 22; v. 238; p. 1230.
Smith, Howard A. (See Gates and Smith.)
Smith, Ira L., Pine Bluff, Ark. Automatic key for feed-shafts. No. 1,224,334; May 1; v. 238; p. 79.
Smith, Iredell, assignor to C. F. Wallerstedt, St. Louis, Mo. Pocket-book. No. 1,228,251; May 29; v. 238; p. 1566.
Smith, Irvin G., assignor of one-fourth to R. A. Wheelock, Elgin, Ill. Water-heater. No. 1,224,335; May 1; v. 238; p. 80.
Smith, Jacob E., Homestead, Pa. Weed-digging implement. No. 1,225,188; May 8; v. 238; p. 425.
Smith, Jesse A. B., Glenbrook, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,227,847; May 29; v. 238; p. 1433.
Smith, John P., Chicago, Ill., assignor to International Harvester Company of New Jersey. Shocking-machine for grain and the like. No. 1,226,398; May 15; v. 238; p. 880.
Smith, Joseph J., jr., Benton Harbor, Mich. Spark-plug. No. 1,226,399; May 15; v. 238; p. 881.
Smith, Owen P. (See Reed and Smith.)
Smith, Robert A., Mahwah, N. J., assignor to Smith-Serrell Co., Inc., New York, N. Y. Flexible coupling. No. 1,225,518; May 8; v. 238; p. 537.
Smith, Roe L. (See Anderson, Andrew S., assignor.)
Smith-Serrell Co. (See Smith, Robert A., assignor.)
Smith, Sidney A., Jamestown, N. Y. Baffle-plate for propeller-wheels. No. 1,226,400; May 15; v. 238; p. 881.
Smith, Thomas B., Wichita Falls, Tex. Rotary core-drill. No. 1,224,509; May 1; v. 238; p. 141.
Smith, Thomas K., Pittsburgh, Pa. Inkstand. No. 1,227,009; May 22; v. 238; p. 1123.
Smith, Victor A., Rockport, Miss. Mosquito-bar. No. 1,226,401; May 15; v. 238; p. 881.
Smith, Walter A., Topeka, Kans. Clamp for soil-pipe test-plugs. No. 1,226,023; May 15; v. 238; p. 751.
Smith, Walton D., Prophetstown, assignor to C. W. Thurow, Aurora, Ill. Blotter. No. 1,225,519; May 8; v. 238; p. 537.
Smith, William B., Chicago, Ill. Pocketed receptacle. No. 1,226,919; May 22; v. 238; p. 1090.
Smith, William E., Milltown, assignor to Kilbourn Manufacturing Corporation, New Brunswick, N. J. Circular-knitting machine. No. 1,227,683; May 29; v. 238; p. 1370.
Smith, William J., assignor to Waterbury Clock Co., Waterbury, Conn. Keyless clock. No. 1,226,402; May 15; v. 238; p. 881.
Smith, William S., Cambridge, Mass. Controlling system for electric elevators. No. 1,228,075; May 29; v. 238; p. 1510.
Smith, William W., Hawthorne, Cal. Automatic moisture and ventilation regulator for incubators. No. 1,224,336; May 1; v. 238; p. 80.
Smithson, John T., Hopkinsville, Ky. Vise. No. 1,226,715; May 22; v. 238; p. 1020.
Smythe, Edwin H., Chicago, Ill., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,227,010; May 22; v. 238; p. 1123.
Snell, Lyle K., assignor to Cadillac Motor Car Company, Detroit, Mich. Hood construction. No. 1,226,269; May 15; v. 238; p. 839.
Snipes, William E., Roxboro, N. C. Engine-starter. No. 1,225,879; May 15; v. 238; p. 701.
Snively, Florentine L., Dunnville, Ontario, Canada. Lifting-jack for automobiles. No. 1,227,973; May 29; v. 238; p. 1476.
Snively, Lawrence E., jr., Glenside, Pa. Tire-clamp. No. 1,226,270; May 15; v. 238; p. 839.
Snover, Edward S., Toledo, Ohio. Loom-fastener. No. 1,224,227; May 1; v. 238; p. 40.
Snyder, Arthur M., Fairfield, Iowa. Bottle-carrier. No. 1,225,069; May 8; v. 238; p. 385.
Snyder, August Z., Turtle Creek, Pa. Bucket-handle. No. 1,226,403; May 15; v. 238; p. 882.
Snyder, John G., New York, N. Y. Railway-tie and fastener. No. 1,227,083; May 22; v. 238; p. 1148.
Snyder, Thomas R., assignor of one-fourth to W. H. Werley, Barberton, Ohio. Tire-rim detacher. No. 1,227,011; May 22; v. 238; p. 1124.
Societe Des Moteurs Salmson (Systeme Canton-Unne). (See Salmson, Emile J. J., assignor.)
Société Générale Meuliere. (See Boutard, Louis, assignor.)
Society of Chemical Industry in Basle. (See Engi, Grob, and Straub, assignors.)
Society of Chemical Industry in Basle. (See Engi, Grob, and Wirgler, assignors.)
Society of Chemical Industry in Basle. (See Hüssy and Hartmann, assignors.)
Society of Chemical Industry in Basle. (See Piguet, Alfred, assignor.)
Sohon, Michael D., New York, N. Y. Effervescent compound. No. 1,228,252; May 29; v. 238; p. 1556.
Sokolov, Jacob, New York, N. Y. Door-lock. No. 1,227,684; May 29; v. 238; p. 1376.
Solaini, Peter, New York, N. Y. Lock. No. 1,224,228; May 1; v. 238; p. 40.
Solaro del Borgo, Britannio, Paris, France. Night-sight for firearms. No. 1,225,592; May 8; v. 238; p. 563.
Sonneborn, Charles, West Pittsburgh, assignor to Pressed Metal Radiator Company, Pittsburgh, Pa. Heat-radiator. No. 1,226,128; May 15; v. 238; p. 787.
Sonneborn, Charles, West Pittsburgh, assignor to Pressed Metal Radiator Company, Pittsburgh, Pa. Heat-radiator. No. 1,226,129; May 15; v. 238; p. 787.
Sons, Ernest L., assignor of one-half to S. A. Boyd and one-fourth to W. L. McCandless, Pittsburgh, Pa. Marine vessel. No. 1,224,678; May 1; v. 238; p. 200.
Sons, Ernest L., assignor of one-half to W. L. McCandless and one-fourth to S. A. Boyd, Pittsburgh, Pa. Life-saving device. No. 1,224,679; May 1; v. 238; p. 201.



Soons, James E., assignor of sixty one-hundredths to E. Caterson, New York, N. Y. Automatic stop for phonographs. No. 1,227,334; May 22; v. 238; p. 1230.
Soper, Charles A., jr., assignor to Chicago Wholesale Saddlery & Mfg. Co., Chicago, Ill. Pack-bag for delicate instruments such as telephones. No. 1,224,510; May 1; v. 238; p. 141.
Soreng, Edgar M., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Brush for electric machinery. No. 1,226,130; May 15; v. 238; p. 787.
Sörensen, Marius, Copenhagen, Denmark. Lasting boots and shoes. No. 1,224,220; May 1; v. 238; p. 40.
Sörensen, Niels G., Stockholm, Sweden. Post carrying crossed threads for the supporting of crop or plants. No. 1,225,281; May 8; v. 238; p. 456.
Soriano, Celso G. (See Buckner, Frederick I., assignor.)
Sorrells, Lemuel, Industry, Ill. Wire-stretcher. No. 1,225,189; May 8; v. 238; p. 426.
Southworth Company. (See Scott, Frank O., assignor.)
Spangler, John H., assignor of one-half to J. A. Nelson, Minneapolis, Minn. Egg-shipping case. No. 1,226,823; May 22; v. 238; p. 1058.
Sparks, Frank, *et al.* (See Johnson, Rolly A. and G., assignors.)
Sparks, Fred E., Bellaire, Ohio. Sash retainer and fastener. No. 1,224,799; May 1; v. 238; p. 242.
Sparks, Lester H., assignor of forty-nine one-hundredths to J. I. Miller, Lakewood, N. J. Transmission-lock. No. 1,228,253; May 29; v. 238; p. 1566.
Sparks, William, assignor to The Sparks-Withington Company, Jackson, Mich. Signal. No. 1,227,084; May 22; v. 238; p. 1148.
Sparks, William, assignor to The Sparks-Withington Company, Jackson, Mich. Signal. No. 1,227,085; May 22; v. 238; p. 1149.
Sparks-Withington Company, The. (See Sparks, William, assignor.)
Sparling, Rowland, assignor to Dispatch Motor Car Company, Minneapolis, Minn. Transmission mechanism. No. 1,225,190; May 8; v. 238; p. 426.
Spaugy, Jacob D., Meyersdale, Pa. Gearing for washing-machines. No. 1,227,335; May 22; v. 238; p. 1231.
Spayd, Ezra C. (See Spayd, Noah P., assignor.)
Spayd, Noah P., assignor of one-half to E. C. Spayd, Van Wert, Ohio. Stave-jointing machine. No. 1,228,351; May 29; v. 238; p. 1599.
Spears, Criss K. (See Fraser and Henry, assignors.)
Speed, Samuel, Tatum, Tex. Hammer for overhead nailing. No. 1,225,070; May 8; v. 238; p. 385.
Speer, John M., Fort Branch, Ind. Fireplace-heater. No. 1,228,254; May 29; v. 238; p. 1567.
Spence, Harry L., Sanford, Me. Thread-cutter. No. 1,224,800; May 1; v. 238; p. 242.
Spencer, George A., assignor of one-third to I. Glenn, Jackson, Mich. Rotary spring-fitting machine. No. 1,224,577; May 1; v. 238; p. 165.
Spencer, Ira H., West Hartford, assignor to The Organ Power Company, Hartford, Conn. Blower. No. 1,226,131; May 15; v. 238; p. 788.
Spencer, Ralph F., Osceola, Ill. Resilient wheel. No. 1,227,848; May 29; v. 238; p. 1433.
Spencer, Sally M., Flagstaff, Ariz. Toilet-pail. No. 1,227,336; May 22; v. 238; p. 1231.
Sperry, Elmer A., Brooklyn, N. Y. Combustion-engine. No. 1,226,132; May 15; v. 238; p. 788.
Sperry, Elmer A., Brooklyn, N. Y. Operating flaming-arc lights for projectors. No. 1,227,210; May 22; v. 238; p. 1190.
Sperry Gyroscope Company. (See Petersen, Sophus, assignor.)
Spielman, Max H., New York, assignor of one-half to J. Corcos, Brooklyn, N. Y. Flash-light. No. 1,227,012; May 22; v. 238; p. 1124.
Spielman, Max H., New York, assignor of one-half to J. Corcos, Brooklyn, N. Y. Flash-light or electric torch. No. 1,227,013; May 22; v. 238; p. 1124.
Spinner, Isidore, and G. E. Perry; said Perry assignor, by mesne assignments, to J. H. Rook, Chicago, Ill. Loose-leaf binder. No. 1,227,685; May 29; v. 238; p. 1376.
Spirewfki, John S., jr., assignor of one-third to D. C. O'Connell and one-third to J. E. O'Connell, Milwaukee, Wis. Dirigible-headlight mechanism. No. 1,226,133; May 15; v. 238; p. 789.
Spiro, Charles, New York, N. Y. Motion-picture camera. No. 1,228,255; May 29; v. 238; p. 1567.
Splitdorf Electrical Company. (See Hart, William J., assignor.)
Splitdorf Electrical Company. (See Mason, Charles T., assignor.)
Splitdorf Electrical Company. (See Remy, Benjamin P. and F. I., assignors.)
Splitdorf Electrical Company. (See Richards, Julius H., assignor.)
Splitdorf Electrical Company. (See Williams, Fred B., assignor.)
Spooner, Thomas, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Temperature-measuring instrument. No. 1,227,337; May 22; v. 238; p. 1231.
Spotswood, Frank D., Lexington, Ky. Puzzle-picture. No. 1,225,071; May 8; v. 238; p. 385.
Sprague, Theodore A., Pittsburgh, Pa. Filler for tire-casings. No. 1,225,880; May 15; v. 238; p. 702.
Sprong, Severn D., and W. E. McCoy, New York, N. Y. Means for preventing current leakage in electric cables. No. 1,227,211; May 22; v. 238; p. 1190.
Sprung, Edmund, Detroit, Mich. Stud extractor and tightener. No. 1,224,801; May 1; v. 238; p. 242.
Srader, Pearl M., Lebanon, Kans. Circular extension-table. No. 1,226,134; May 15; v. 238; p. 789.
Staff, Olof, Milltown, Mont. Skate. No. 1,224,802; May 1; v. 238; p. 243.
Stafford, James M., Washington, Ind. Current-motor. No. 1,225,072; May 8; v. 238; p. 386.
Stafford, William H., R. M. Millard, and J. Paul, Eau Claire, Wis. Employee's number, name, and rate record. No. 1,225,073; May 8; v. 238; p. 386.
Staley, Harrison L., Martinsville, Ind., and W. B. Simmons, assignors to Wilts Veneer Company, Richmond, Va. Shipping-pail. No. 1,225,520; May 8; v. 238; p. 537.
Stalker, Eli S., Hallstead, Pa. Tire-protector. No. 1,224,803; May 1; v. 238; p. 243.
Stambaugh, Reginald V., Dayton, assignor to Artfilm Studios, Cleveland, Ohio. Making moving-picture films. No. 1,226,135; May 15; v. 238; p. 789.
Standard Baking Company. (See Pepper, Frederick W., assignor.)
Standard Car Truck Company. (See Barber and Webb, assignors.)
Standard Comb Company. (See Legere, John P., assignor.)
Standard Knitting Mills Company. (See Janes, Ralph R., assignor.)
Standard Optical Company, The. (See Howland, Chauncey W., assignor.)
Standard Sanitary Manufacturing Company, The. (See Muckenhirn, Charles H., assignor.)
Standard Sewing Machine Company, The. (See Nelson, George W., assignor.)
Standard Welding Company, The. (See Bryant, Richard S., assignor.)
Stanek, William G., Renwick, Iowa. Transmission-gearing. No. 1,225,881; May 15; v. 238; p. 702.
Stanfield, Earl E., Denver, Colo. Pan-lifter. No. 1,227,849; May 29; v. 238; p. 1433.
Stanford, Arthur L., Chicago, Ill. Rail-anchor tie-plate. No. 1,226,136; May 15; v. 238; p. 789.
Stanley, Frederick W., Washington, D. C. Automatic irrigation-nozzle. No. 1,226,137; May 15; v. 238; p. 790.
Stanley, Irving, New York, N. Y. Muffler cut-out. No. 1,227,212; May 22; v. 238; p. 1190.
Stanley Rule & Level Company, The. (See Schade, Edmund A., assignor.)
Stanton, Le Roy W., Davenport, Iowa. Telephone system. No. 1,224,425; May 1; v. 238; p. 113.
Stapleton, Charles A., assignor of one-half to O. P. Burchfiel, Anthony, Kans. Safety appliance for motor-vehicle steering mechanism. No. 1,226,138; May 15; v. 238; p. 790.
Star Fuse Co. (See Weinberg, Louis E., assignor.)
Starin, Frank, Springfield, Mass. Finishing ball-bearings. No. 1,224,680; May 1; v. 238; p. 201.
Stark, John R., and M. S. Harwell, Nashville, Tenn. Electric sign. No. 1,227,686; May 29; v. 238; p. 1377.
Staszak, John, assignor of one-half to M. Staszak, Pulaski, Wis. Urinal. No. 1,226,716; May 22; v. 238; p. 1020.
Staszak, Micheal. (See Staszak, John, assignor.)
Stead, Ernest, Binghamton, N. Y. Pliers. No. 1,225,074; May 8; v. 238; p. 386.
Stebbins, George A., Watertown, N. Y. Apparatus for making bisulfite liquor. No. 1,224,578; May 1; v. 238; p. 166.
Stebbins, Timothy, assignor to Red Jacket Mfg. Co., Davenport, Iowa. Float-valve. No. 1,226,139; May 15; v. 238; p. 790.
Stebbins, Timothy, assignor to Red Jacket Mfg. Co., Davenport, Iowa. Pump. No. 1,226,140; May 15; v. 238; p. 790.
Stecker, Frank X. (See Braun, Luther H., assignor.)
Steckel, Horace B. (See Steffy and Steckel.)
Steddom, Anna E. (See Garnier, Thomas R., assignor.)
Steele, Benjamin M., assignor to Peoria Drill and Seeder Co., Peoria, Ill. Agricultural implement. No. 1,226,920; May 22; v. 238; p. 1091.
Steele, Charles B., New York, N. Y. Passenger-car. No. 1,224,681; May 1; v. 238; p. 201.
Steele, Charles B., New York, N. Y. Gas-generator. No. 1,227,974; May 29; v. 238; p. 1476.
Steele, James R., jr., assignor to Steele Rail Anchor Company, Inc., Owego, N. Y. Rail-fastening. No. 1,224,426; May 1; v. 238; p. 113.
Steele, Louis J. (See Philip and Steele.)
Steele Rail Anchor Company. (See Steele, James R., assignor.)
Steele, William P. (See Vincent and Steele.)
Steely, Dale G., Cambridge, Mass. Method and apparatus for coating chocolates. No. 1,226,824; May 22; v. 238; p. 1059.
Steen, Halfdan A., Norwood, Ohio, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Switch. No. 1,224,337; May 1; v. 238; p. 80.
Steenson, Jesse G., Minneapolis, Minn. Gas-burner. No. 1,227,088; May 22; v. 238; p. 1149.
Steffan, Frank, Riverside, Cal. Container. No. 1,227,338; May 22; v. 238; p. 1232.
Steffen, Catherine. (See Faas, Walter, assignor.)

Steffens, Fred, St. Joseph, Mo. Car. No. 1,225,882; May 15; v. 238; p. 702.
Steffens, Walter L., Cincinnati, assignor to The Philip Carey Manufacturing Company, Lockland, Ohio. Underground-pipe-covering system. No. 1,227,087; May 22; v. 238; p. 1149.
Steffy, Willis W., Kutztown, and H. B. Steckel, Slatington, Pa. Signal device. No. 1,227,975; May 29; v. 238; p. 1477.
Stegall, Walter F., Concord, N. C. Water-elevator. No. 1,227,014; May 22; v. 238; p. 1125.
Steinbart, Alfred, Pittsburgh, Pa. Draft gage. No. 1,225,883; May 15; v. 238; p. 703.
Steiner & Son. (See Van Kirk, John P., assignor.)
Steinmetz, Joseph A., Philadelphia, Pa. Protecting from poisonous gas in warfare. No. 1,225,521; May 8; v. 238; p. 538.
Steinmetz, Joseph A., Philadelphia, Pa. Grenade. No. 1,225,884; May 15; v. 238; p. 703.
Stenberg, Charles R., Genoa, Nebr. Dirigible headlight. No. 1,224,804; May 1; v. 238; p. 243.
Stenman, Axel C., Jamaica Plain, Mass., assignor to Independent Button Fastener Machine Company. Button-feeding mechanism for button-attaching machines. No. 1,224,972; May 8; v. 238; p. 352.
Stephens, Charles D., assignor of one-half to J. A. Bachman, Austin, Tex. Demountable rim and felly-band. No. 1,224,511; May 1; v. 238; p. 142.
Sterling, Frank W., and R. A. Koch, U. S. Navy. Navigation-protractor. No. 1,226,141; May 15; v. 238; p. 791.
Sternhagen, Joseph P. (See Getman, David D., assignor.)
Stevens, Burt D., Riverside, assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill. Machine-frame. No. 1,225,252; May 8; v. 238; p. 456.
Stevens, Carleton F. (See Sullivan and Stevens.)
Stevens, Frederick C. (See Moore, Charles C., assignor.)
Stevens, Leslie, Glen Ridge, N. J. Hat-shaping apparatus. No. 1,224,427; May 1; v. 238; p. 114.
Stevens, Merton P., East Orange, N. J. Lighting-fixture. No. 1,226,717; May 22; v. 238; p. 1021.
Stevens Regulator Co. (See Stevens, Willie J., assignor.)
Stevens, Willie J., assignor to Stevens Regulator Co., Portland, Me. Boiler-feed-water regulator. No. 1,226,885; May 15; v. 238; p. 703.
Stevenson, Frederick A., Detroit, Mich., assignor to American Car and Foundry Company, St. Louis, Mo. Apparatus for forming annular work. No. 1,224,805; May 1; v. 238; p. 244.
Stewart, George L., assignor to Crouse-Hinds Company, Syracuse, N. Y. Connection for electric conduits. No. 1,226,921; May 22; v. 238; p. 1091.
Stewart, Harry D., Gilman, Iowa. Taper-cutting attachment for lathes. No. 1,226,825; May 22; v. 238; p. 1059.
Stewart, Milton H., assignor to T. J. Walsh, Detroit, Mich. Tire-carrier. No. 1,225,370; May 8; v. 238; p. 489.
Stewart-Warner Speedometer Corporation. (See Kocourek, Henry, assignor.)
Stickler, Charles W. Lansford, Pa. Safety-lock for dump-cars. No. 1,225,522; May 8; v. 238; p. 538.
Stickney, Burnham C. (See Hart and Stickney.)
Stickney, Burnham C., Elizabeth, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,227,015; May 22; v. 238; p. 1125.
Stickney, Burnham C., Elizabeth, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,227,213; May 22; v. 238; p. 1191.
Stickney, Charles A., Chicago, Ill. Crank-pin oiler. No. 1,224,338; May 1; v. 238; p. 81.
Stimpson, Edward S., Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Portland, Me. Automatically-threading loom-shuttle. No. 1,224,806; May 1; v. 238; p. 244.
Stinnett, Marion E., Victoria, Ill. Grain-spout elevator and adjuster. No. 1,227,976; May 29; v. 238; p. 1477.
Stirling, John. (See Fulcher and Stirling.)
Stobie, John W., *et al.* (See Currier, Harry, assignor.)
Stock, Daniel, Clarence, Iowa. Disk-sharpening machine. No. 1,224,807; May 1; v. 238; p. 245.
Stocking, Edwin L., Los Angeles, Cal. Combined bottle-holder and ink-feeder. No. 1,227,977; May 29; v. 238; p. 1478.
Stohs, Charls L., and G. R. Funke, Milwaukee, Wis. Fluid-receptacle. No. 1,226,024; May 15; v. 238; p. 751.
Stoker, King E., Stockton, Cal. Direction-signal for motor-vehicles. No. 1,226,826; May 22; v. 238; p. 1059.
Stoker, Mack D., Appleby, Tex. Storage-bin. No. 1,226,025; May 15; v. 238; p. 752.
Stoll, Louis S., Smithland, Iowa. Connecting device. No. 1,228,256; May 29; v. 238; p. 1567.
Stoll, Victor, Brooklyn, N. Y. Dental tool. No. 1,227,687; May 29; v. 238; p. 1377.
Stone, Berkley C. (See Diehm, Lucius N., assignor.)
Stone, Harry A., New York, N. Y. Folding stand. No. 1,227,850; May 29; v. 238; p. 1434.
Stone, John A., Chicago, Ill., assignor to International Harvester Company of New Jersey. Corn-husker. No. 1,226,718; May 22; v. 238; p. 1021.
Stone, John A., Chicago, Ill., assignor to International Harvester Company of New Jersey. Snapping-rolls for corn harvesters, huskers, or the like. No. 1,226,719; May 22; v. 238; p. 1021.
Stone, Samuel J., Tippecanoe City, Ohio. Bill-holder. No. 1,227,339; May 22; v. 238; p. 1232.
Stone Straw Company, The. (See Maltby, Lewis C., assignor.)
Storer, Norman W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Voltage-regulating system. No. 1,226,142; May 15; v. 238; p. 791.
Stortz Gear Shift Company. (See Stortz, John H., assignor.)
Stortz, John H., Philadelphia, Pa., assignor to Stortz Gear Shift Company, Wilmington, Del. Power-transmitting mechanism. No. 1,224,682; May 1; v. 238; p. 202.
Stout, Charles H., assignor to Crown Optical Company, Rochester, N. Y. Optical instrument. No. 1,226,026; May 15; v. 238; p. 752.
Stover Manufacturing and Engine Company. (See McCulloch, Harry G., assignor.)
Stow, William T., Coolamon, New South Wales, Australia. Draft-inducing, spark-destroying, and fume-conveying apparatus for locomotives and the like. No. 1,227,340; May 22; v. 238; p. 1232.
Stowe, Benjamin L., Jersey City, N. J., assignor to Morgan & Wright. Anchoring means for tire fabrics. No. 1,228,144; May 29; v. 238; p. 1532.
Strahle, Arthur L., Benson, and H. B. Noyes, Omaha, Nebr. Starting device for internal-combustion engines. No. 1,227,688; May 29; v. 238; p. 1378.
Stratford, Hugo C., Victoria, British Columbia, Canada. Automobile steering mechanism. No. 1,227,851; May 29; v. 238; p. 1434.
Stratton, Harry F., assignor to The Electric Controller & Manufacturing Company, Cleveland, Ohio. Electric controller. No. 1,225,686; May 8; v. 238; p. 594.
Stratton, Harry F., assignor to The Electric Controller & Manufacturing Company, Cleveland, Ohio. Electromagnetic apparatus. No. 1,225,687; May 8; v. 238; p. 594.
Stratton, Harry F., assignor to The Electric Controller & Manufacturing Company, Cleveland, Ohio. Electromagnetic device. No. 1,227,341; May 22; v. 238; p. 1232.
Straub, Fritz. (See Engi, Grob, and Straub.)
Straw, Walter H., Bridgeport, Conn. Smoking-pipe. No. 1,226,922; May 22; v. 238; p. 1091.
Stricker, Clarence W., assignor to The Perkins-Campbell Company, Cincinnati, Ohio. Power-transmission belt. No. 1,224,230; May 1; v. 238; p. 41.
Strickland, William R., assignor to The Peerless Motor Car Company, Cleveland, Ohio. Motor-vehicle. No. 1,224,973; May 8; v. 238; p. 353.
Strietelmeier, John E., assignor to The Ideal Wheel Company, Cincinnati, Ohio. Self-centering demountable wheel. No. 1,227,852; May 29; v. 238; p. 1434.
Strobel, Francis J., Chicago, Ill., assignor to F. J. Strobel & Co. Leaf-binder. No. 1,225,886; May 15; v. 238; p. 704.
Strong, Chester F., Des Moines, Iowa. Automatic electric generating apparatus. No. 1,225,283; May 8; v. 238; p. 456.
Strong, Chester F., Des Moines, Iowa. Automatic electric generating apparatus. No. 1,225,284; May 8; v. 238; p. 457.
Strong, Ira, Petrol, N. D., assignor of one-half to H. J. Wright, Des Moines, Iowa. Railway-rail joint. No. 1,227,689; May 29; v. 238; p. 1378.
Struse, Richard E. (See Blissman and Struse.)
Stuard, James A., Harrisburg, Pa., F. L. Smith, Chicago, Ill., and T. B. Williams, assignors to The Leavitt Machine Company, Orange, Mass. Facing-tool for dressing valve-seats, &c. No. 1,227,500; May 22; v. 238; p. 1284.
Stuart, Henry J., assignor to The Robert N. Bassett Company, Derby, Conn. Tab end. No. 1,226,271; May 15; v. 238; p. 840.
Stubblefield, Charlie C., and F. C. Hawkins, Rogers, Ark. Lock-nut. No. 1,226,143; May 15; v. 238; p. 792.
Stuck, Everett, assignor to O. M. Edwards, Syracuse, N. Y. Forming the sheet-metal barrels of winding-rollers. No. 1,224,579; May 1; v. 238; p. 166.
Stuck, George O., Union City, Ind. Automobile-body. No. 1,228,257; May 29; v. 238; p. 1568.
Stuebing, William, Jr. (See Van Guelpen and Stuebing.)
Stull, Jacob H., Fremont, Ohio. Rail-joint. No. 1,227,853; May 29; v. 238; p. 1435.
Sturges, Arthur H., Omaha, Nebr. Locking means for vehicle steering-wheels. No. 1,226,720; May 22; v. 238; p. 1022.
Sturges, Walter, assignor to M. J. Trumble, Los Angeles, Cal. Milk-bottle container. No. 1,227,214; May 22; v. 238; p. 1191.
Sturm, James C., Grafton, W. Va. Tractor. No. 1,227,016; May 22; v. 238; p. 1125.
Sturrock, John, Chicago, Ill., assignor to International Harvester Company of New Jersey. Grain-drill. No. 1,226,721; May 22; v. 238; p. 1022.
Sturtevant, Thomas E., Dover, N. J. Pile-hammer. No. 1,226,272; May 15; v. 238; p. 840.
Styles, Joseph H., assignor to Defiance Button Machine Co., New York, N. Y. Trimming-button. No. 1,227,501; May 22; v. 238; p. 1285.
Subers, Lawrence A., Cleveland, Ohio. Hose. No. 1,227,690; May 29; v. 238; p. 1378.



Sueliohn, Anton, Milwaukee, Wis. Lavatory-bowl. No. 1,224,974; May 8; v. 238; p. 353.
Sugar Centrifugal Discharger Company. (See Roberts, Eugene, assignor.)
Sugden, Edmonds J. (See McKibbin, John B., assignor.)
Sullivan, Cecelia I., Worcester, Mass., assignor, by mesne assignments, to Universal Patents Company, Woonsocket, R. I. Carrier or cover for canteens or water-bottles, &c. No. 1,228,258; May 29; v. 238; p. 1568.
Sullivan, Daniel. St. Louis, Mo. Skirt-measuring gage and marker. No. 1,224,683; May 1; v. 238; p. 202.
Sullivan, Daniel J., and C. F. Stevens, Carson City, Nev. Device for drawing parallel lines. No. 1,227,854; May 29; v. 238; p. 1435.
Sullivan, Francis R., Shelburne, Mass. Writing fluid. No. 1,228,259; May 29; v. 238; p. 1568.
Sullivan, Jeremiah J., Nashville, Tenn. Lateral-motion truck-bolster. No. 1,224,684; May 1; v. 238; p. 203.
Sullivan, Jeremiah J., Nashville, Tenn. Lateral-motion truck-bolster. No. 1,224,685; May 1; v. 238; p. 203.
Sullivan Machinery Company. (See Mercer, Henry H., assignor.)
Sullivan, Thomas A., Brooklyn, N. Y., and H. J. Von Beck, Boston, Mass., assignors to Brooklyn Cooperage Company, New York, N. Y. Barrel-heading apparatus. No. 1,228,076; May 29; v. 238; p. 1511.
Sullivan, Walter P., Horton, Kans. Automatic gear-shifting mechanism. No. 1,226,144; May 15; v. 238; p. 792.
Sullivan, William J., Bessemer, Ala. Measuring device. No. 1,226,722; May 22; v. 238; p. 1023.
Sumich, Simun, Roseburg, Oreg. Non-refillable bottle. No. 1,224,231; May 1; v. 238; p. 41.
Summerfield, Emanuel P. (See Taylor, Aiken C., assignor.)
Sumner, William, assignor to Universal Engineering Company, Limited, Liverpool, England. Advertising apparatus. No. 1,224,232; May 1; v. 238; p. 41.
Sundell, Arvid G., Columbus, Ohio, and J. E. Markko, Washington, D. C. Faucet. No. 1,224,808; May 1; v. 238; p. 245.
Sundh, August, Hastings-upon-Hudson, N. Y., assignor to Otis Elevator Company. Power-transmitting mechanism. No. 1,228,145; May 29; v. 238; p. 1532.
Surles, Robert E., Cuthbert, Ga. Lumber-stacker. No. 1,225,523; May 8; v. 238; p. 538.
Suter, A. M. (See Easton, Frank S., assignor.)
Sutherland, Alexander K., New Britain, Conn., assignor to The Trumbull Electric Manufacturing Company, Plainville, Conn. Switch. No. 1,226,404; May 15; v. 238; p. 882.
Sutton, John W., Oakhill, and M. Meade, Longford, Kans. Friction transmission-gear. No. 1,225,371; May 8; v. 238; p. 489.
Swaim, Claude R., Muncie, Ind., assignor to O. H. McDowell, Steubenville, Ohio. Door-holder device. No. 1,225,285; May 8; v. 238; p. 457.
Swain, Roy M., Princeton, Ind. Automatic dirigible light. No. 1,227,088; May 22; v. 238; p. 1150.
Swan, Ervin D., Glen Ridge, N. J., assignor to Lidgerwood Manufacturing Company, New York, N. Y. Cableway. No. 1,226,405; May 15; v. 238; p. 882.
Swan, Eugene R., Billings, Mont. Power-transmitting mechanism. No. 1,225,075; May 8; v. 238; p. 387.
Swan, John H., assignor to Klipfel Manufacturing Company, Chicago, Ill. Valve-operating mechanism. No. 1,225,887; May 15; v. 238; p. 704.
Swanberg, Arthur W., Minneapolis, Minn., assignor of one-half to F. C. Fisk, Williamsville, N. Y. Liquid-fuel composition and making the same. No. 1,225,405; May 8; v. 238; p. 501.
Swanson, Stanley S., Bellevue, Ohio. Rotary weeder and cultivator. No. 1,224,975; May 8; v. 238; p. 353.
Swart, Walter G. (See Jordan, Fred A., assignor.)
Swartz, George A., Pearl River, N. Y. Shaft-coupling. No. 1,225,524; May 8; v. 238; p. 539.
Swartz, William J. (See Waugh and Swartz.)
Sweeney, Andrew J. (See Carrigan and Sweeney.)
Sweeney, George F., deceased; M. Sweeney administratrix, Boston, Mass. Life-raft. No. 1,226,274; May 15; v. 238; p. 841.
Sweeney, John F. (See Hyle, Jacob A., assignor.)
Sweeney, Margaret, administratrix. (See Sweeney, George F.)
Sweet, Oliver T., St. Louis, Mo. Outlet-box and support therefor. No. 1,225,525; May 8; v. 238; p. 539.
Sweetland, Ernest J., Montclair, N. J. Packing and the like. No. 1,225,286; May 8; v. 238; p. 458.
Swenson, Carl G., Indianapolis, Ind. Making pressed-steel nuts. No. 1,228,260; May 29; v. 238; p. 1568.
Swenson, Carl G., assignor to The Oakes Company, Indianapolis, Ind. Making ball-bearing cones. No. 1,228,352; May 29; v. 238; p. 1600.
Swift, George W., Jr., Bordentown, N. J. Making open-face envelops. No. 1,227,017; May 22; v. 238; p. 1125.
Swift, George W., Jr., Bordentown, N. J. Open-face envelop. No. 1,228,146; May 29; v. 238; p. 1532.
Swift, Robert W., assignor to The Peerless Electric Company, Warren, Ohio. Alternating-current synchronous motor. No. 1,226,406; May 15; v. 238; p. 882.
Swift, Willard E., Worcester, assignor to United States Envelope Company, Springfield, Mass. Paper drinking-cup. No. 1,224,809; May 1; v. 238; p. 246.
Switzer, Oscar S., Chicago, Ill. Display-receptacle. No. 1,224,233; May 1; v. 238; p. 42.
Symons, Edgar B., Chicago, Ill. Crushing-machine. No. 1,226,275; May 15; v. 238; p. 841.
Symons, Robert R., Dodgeville, Wis. Penholder. No. 1,227,691; May 29; v. 238; p. 1378.
Syracuse Twist Drill Company. (See Singer, Frank, assignor.)
Sztonnhewsky, Stanislaw. (See Grudoski and Sztonnhewsky.)
T. A. Willson & Co. (See Willson and Bourquin, assignors.)
Taber Carbureter Company, The. (See Taber, George H., assignor.)
Taber, Charles, Phalanx, N. J. Collapsible box. No. 1,224,234; May 1; v. 238; p. 42.
Taber, George H., assignor to The Taber Carbureter Company, Inc., Binghamton, N. Y. Carbureter-valve. No. 1,225,076; May 8; v. 238; p. 387.
Tabor Manufacturing Company, The. (See Ramsden, John T., assignor.)
Tallaferro, Samuel W., New York, N. Y. Mold for making dental-crown dies. No. 1,224,687; May 1; v. 238; p. 203.
Tamura, Tokumatsu, Reno, Nev. Camera. No. 1,227,092; May 29; v. 238; p. 1379.
Tanaka, Masao, New York, N. Y. Envelop. No. 1,227,215; May 22; v. 238; p. 1192.
Tanaka, Masao, New York, N. Y. Hair-clipper. No. 1,227,216; May 22; v. 238; p. 1192.
Tanczer, Josef, Budapest, Hungary. Ground-cultivator. No. 1,227,089; May 22; v. 238; p. 1150.
Tanczer, Josef, Budapest, Hungary. Hoe for cultivating-machines. No. 1,227,090; May 22; v. 238; p. 1150.
Tandy, John L., Kansas City, Mo. Bed-spring cover. No. 1,227,693; May 29; v. 238; p. 1379.
Tantlinger, Don V., Lawton, Okla. Toy. No. 1,228,147; May 29; v. 238; p. 1532.
Tanzer, Gottwerth L., Seattle, Wash. Apparatus for roasting ores. No. 1,226,928; May 22; v. 238; p. 1092.
Tarbox, John P., and H. Kleckler, Buffalo, N. Y., assignors to Curtiss Aeroplane & Motor Corporation. Universal wing-post socket. No. 1,228,375; May 29; v. 238; p. 1607.
Tarlton, Pearl E., Long Beach, Cal. Axle or shafting guard. No. 1,227,342; May 22; v. 238; p. 1233.
Tatlow, Richard H., Jr., Denver, Colo. Lamp. No. 1,227,694; May 29; v. 238; p. 1379.
Taussig, Maurice, Chicago, Ill. Notion-counter. No. 1,226,027; May 15; v. 238; p. 752.
Taylor, Aiken C., Richmond, assignor to E. P. Summerfield, Norfolk, Va. Window. No. 1,226,145; May 15; v. 238; p. 793.
Taylor, Carl R., and M. Braymes, Cleveland, Ohio. Device for rolling rugs. No. 1,226,407; May 15; v. 238; p. 883.
Taylor, Cecil H., and B. B. Neuteboom, Detroit, Mich. Drive-wheel construction for motor-vehicles. No. 1,226,276; May 15; v. 238; p. 841.
Taylor, Clarence L., assignor to The Morgan Engineering Company, Alliance, Ohio. Machine for sawing metal. No. 1,227,695; May 29; v. 238; p. 1380.
Taylor, Floyd T., Boston, Mass. Automatic controller. No. 1,225,888; May 15; v. 238; p. 704.
Taylor, Frederick F., Pelham, assignor to Provident System's Corporation, New York, N. Y. Device for use in industrial-life-insurance systems. No. 1,226,277; May 15; v. 238; p. 842.
Taylor, George W., Rochester, N. Y. Skate. No. 1,224,688; May 1; v. 238; p. 204.
Taylor, Harry A., New York, N. Y. Stocking. No. 1,227,217; May 22; v. 238; p. 1192.
Taylor, John B., Schenectady, N. Y. Speed-regulating apparatus. No. 1,227,091; May 22; v. 238; p. 1150.
Taylor, John E., Camden, Ohio, assignor of one-half to J. F. Knepper, Whitewater, Ind. Planter. No. 1,227,018; May 22; v. 238; p. 1126.
Taylor, Joseph J., Richmond, Vt. Tooth-brush holder. No. 1,228,261; May 29; v. 238; p. 1569.
Taylor, William C., Bloomfield, N. J. Game apparatus. No. 1,226,028; May 15; v. 238; p. 752.
Taylor, William R., Monticello, Ky. Nut-lock. No. 1,228,262; May 29; v. 238; p. 1569.
Taylor, Willis A., Presque Isle, Me. Shaver's cabinet. No. 1,226,723; May 22; v. 238; p. 1023.
Teats, Alice A. (See Seymour, Glenn K., assignor.)
Teetor, Dan C., Hagerstown, Ind. Display apparatus. No. 1,224,512; May 1; v. 238; p. 142.
Teitelbaum, Israel. (See Bauman and Teitelbaum.)
Tenca, Louis P., Cleveland, Ohio. Die-casting machine. No. 1,226,408; May 15; v. 238; p. 883.
Teneau, Valentin C., New York, N. Y. Apparatus for drying photographic prints or the like. No. 1,227,092; May 22; v. 238; p. 1151.
Tenholder, Herman G., assignor of one-half to Geo. W. Smyth Lumber Company, Beaumont, Tex. Form-holder and wall-tie. No. 1,224,810; May 1; v. 238; p. 246.
Terhaar, Aloysius S., San Diego, Cal. Safety appliance for ships. No. 1,227,093; May 22; v. 238; p. 1151.
Terrell, Geo. A. (See Boynton, Willie A., assignor.)
Terry, Edward, Brixton, England. Carriage-step. No. 1,227,218; May 22; v. 238; p. 1193.
Tessmer, Frederick P., Detroit, Mich. Clamp. No. 1,226,029; May 15; v. 238; p. 753.

Tettenborn, Charles, deceased, Cincinnati, Ohio; K. Tettenborn, administratrix, assignor to F. S. Mitchell, Beaver Falls, Pa. Refrigerator-lining. No. 1,224,235; May 1; v. 238; p. 42.

Tettenborn, Charles, deceased, Cincinnati, Ohio; K. Tettenborn, administratrix, assignor to F. S. Mitchell, Beaver Falls, Pa. Refrigerator-lining. No. 1,224,236; May 1; v. 238; p. 43.

Tettenborn, Kate, administratrix. (See Tettenborn, Charles.)

Tevander, Olof N., Chicago, Ill. Dislodging-tool. No. 1,226,827; May 22; v. 238; p. 1059.

Teves, Frederick E., Glen Cove, N. Y. Salt-shaker pulverizer. No. 1,226,278; May 15; v. 238; p. 842.

Thacker, William T., and C. C. Gosnell, Greenville, S. C. Adjustable warp-stop-motion drop-wire rack for looms. No. 1,226,409; May 15; v. 238; p. 883.

Thalhammer, Karl W. (See McGowen and Thalhammer.)

Thayer, A. O. (See Duke, Henry R., assignor.)

Thayer, Paul C., Quincy, Cal. Trap. No. 1,226,924; May 22; v. 238; p. 1092.

Thayer, William H., Columbia, S. C. Hydrocarbon-burner. No. 1,228,376; May 29; v. 238; p. 1607.

Thiel, Ervin R., Sheboygan, assignor to Gilson Manufacturing Company, Port Washington, Wis. Chair detail. No. 1,226,410; May 15; v. 238; p. 884.

Thoma, Andrew, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y. Apparatus for automatically filling shoe-bottoms. No. 1,224,428; May 1; v. 238; p. 114.

Thoma, Andrew, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y. Machine for filling the bottoms of shoes. No. 1,225,372; May 8; v. 238; p. 490.

Thoma, Andrew, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y. Filling shoes. No. 1,227,502; May 22; v. 238; p. 1285.

Thoma, Andrew, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y. Shoe-filler. No. 1,227,696; May 29; v. 238; p. 1380.

Thomas, Carl C., Baltimore, Md. Apparatus for cooling water and other liquids. No. 1,225,889; May 15; v. 238; p. 705.

Thomas, Comadore C., Jr. (See Hoberg and Thomas.)

Thomas, George B., assignor to The Bryant Electric Company, Bridgeport, Conn. Electrical receptacle. No. 1,225,526; May 8; v. 238; p. 539.

Thomas, Henry V., Kirkwood, assignor to Killark Electric Manufacturing Company, St. Louis, Mo. Fuse-plug. No. 1,225,890; May 15; v. 238; p. 705.

Thomas, John W., Chicago, Ill. Anticreeping appliance. No. 1,227,858; May 29; v. 238; p. 1436.

Thomas, John W., Chicago, Ill., assignor to The Thomas Railway Track Appliance Company. Rail-securing device. No. 1,227,855; May 29; v. 238; p. 1435.

Thomas, John W., Chicago, Ill., assignor to The Thomas Railway Track Appliance Company. Railway footguard. No. 1,227,856; May 29; v. 238; p. 1436.

Thomas, John W., Chicago, Ill., assignor to The Thomas Railway Track Appliance Company. Rail-holding device. No. 1,227,857; May 29; v. 238; p. 1436.

Thomas, John W., Chicago, Ill., assignor to The Thomas Railway Track Appliance Company. Railway-track appliance. No. 1,227,859; May 29; v. 238; p. 1436.

Thomas, Percy H., Upper Montclair, assignor to Cooper Hewitt Electric Co., Hoboken, N. J. System of electrical distribution. No. 1,224,689; May 1; v. 238; p. 204.

Thomas Railway Track Appliance Company, The. (See Thomas, John W., assignor.)

Thomas, Solomon, near New Cambria, assignor of one-half to N. A. Balding, C. Elam, and J. J. Williams, Ethel, Mo. Vehicle-wheel. No. 1,224,429; May 1; v. 238; p. 114.

Thomas, William B., Jacksonville, Fla. Steering device. No. 1,226,411; May 15; v. 238; p. 884.

Thomas, William M., assignor of fifty and one-half one-hundredths to F. Oberkirch, New York, N. Y. Coal-cutting machine. No. 1,226,412; May 15; v. 238; p. 884.

Thompson, Arthur J., Argyle, Mich. Cow-tail holder. No. 1,224,237; May 1; v. 238; p. 44.

Thompson, Charles T. (See Ness and Thompson.)

Thompson, Charles T., Philadelphia, Pa. End-support for rods. No. 1,227,019; May 22; v. 238; p. 1126.

Thompson, Charles T., Philadelphia, Pa. Support for rods. No. 1,227,020; May 22; v. 238; p. 1126.

Thompson, Earl E., Winnipeg, Manitoba, Canada. Sheaf-loader. No. 1,227,843; May 22; v. 238; p. 1233.

Thompson, George, New York, N. Y. Hanger for pictures and mirrors. No. 1,224,513; May 1; v. 238; p. 143.

Thompson, Henry A., Withington, Manchester, England. Actuating signals on and communicating with trains. No. 1,227,021; May 22; v. 238; p. 1126.

Thompson, Herbert H., Aldridge, and A. E. Davies, Hockley Heath, England. Ore-separating machine. No. 1,224,580; May 1; v. 238; p. 166.

Thompson, James V., assignor of one-fourth to C. A. Crislip and one-half to J. D. Russ, Spencer, W. Va. Oil-well-drilling apparatus. No. 1,225,891; May 15; v. 238; p. 705.

Thompson, Katherine A., Milwaukee, Wis. Water-cooled refrigerator. No. 1,228,077; May 29; v. 238; p. 1511.

Thompson, Oscar E., Hadlock, Wash. Feathering paddle-wheel. No. 1,225,287; May 8; v. 238; p. 458.

Thompson, Ralph E., Brookline, Mass. Indicating mechanism. No. 1,225,527; May 8; v. 238; p. 539.

Thompson, Scott, Potlatch, Idaho. Tool. No. 1,226,413; May 15; v. 238; p. 885.

Thompson, Walter, Engle, N. Mex. Mattress. No. 1,227,022; May 22; v. 238; p. 1127.

Thomson, Christian, Colville, Wash. Drafting apparatus. No. 1,227,978; May 29; v. 238; p. 1478.

Thomson Electric Welding Company. (See Thomson, Roland D., assignor.)

Thomson, Roland D., Schenectady, N. Y., assignor to Thomson Electric Welding Company, Lynn, Mass. Electric welding. No. 1,225,373; May 8; v. 238; p. 490.

Thornton, John N., Jersey City, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Computing-machine. No. 1,228,148; May 29; v. 238; p. 1533.

Thos. Cusack Company. (See Friis, John, assignor.)

Thos. H. Dallett Co. (See Van Sickel, Wilber H., assignor.)

Thowless, Arthur J. (See Thowless, Orlando M., assignor.)

Thowless, Orlando M., assignor of one-half to A. J. Thowless, Newark, N. J. Ductile filament. No. 1,226,925; May 22; v. 238; p. 1092.

Throckmorton, Charles L., San Francisco, Cal. Automatic center-punch. No. 1,225,191; May 8; v. 238; p. 426.

Thurman, William B., Madera county, Cal. Toy. No. 1,224,430; May 1; v. 238; p. 115.

Thurow, Carl W. (See Smith, Walton D., assignor.)

Thurstensen, Soren, assignor to Henry Vogt Machine Company, Louisville, Ky. Apparatus for refrigeration plants. No. 1,224,811; May 1; v. 238; p. 246.

Thysell, Clifford A., Rockford, Ill. Lathe-dog. No. 1,227,219; May 22; v. 238; p. 1193.

Tibbetts, Milton, assignor to Packard Motor Car Company, Detroit, Mich. Ignition apparatus for hydrocarbon-engines. No. 1,227,697; May 29; v. 238; p. 1380.

Tibbetts, Milton, assignor to Packard Motor Car Company, Detroit, Mich. Hydrocarbon-motor. No. 1,227,698; May 29; v. 238; p. 1381.

Tiffany, Harold E., assignor to The Continental Fibre Company, Newark, Del. Eliminating and recovering acids or metallic salts. No. 1,226,279; May 15; v. 238; p. 843.

Time-Systems Company. (See Schmidt, Frederick W., assignor.)

Tisclone, Joseph, New York, N. Y. Electric flash-light. No. 1,226,926; May 22; v. 238; p. 1092.

Tisher, Zachriah, Spokane, Wash. Flange-oiler. No. 1,226,927; May 22; v. 238; p. 1093.

Toan-Kebe, Winchester, Mass. Manufacturing metallic chromates. No. 1,225,374; May 8; v. 238; p. 491.

Tobin, John J., assignor to Tobin Manufacturing Company, Chicago, Ill. Coaster-brake. No. 1,224,514; May 1; v. 238; p. 143.

Tobin Manufacturing Company. (See Tobin, John J., assignor.)

Togstad, Kaja P., Maddock, N. D. Spring-tire. No. 1,226,414; May 15; v. 238; p. 885.

Togstad, Kaja P., Maddock, N. D. Safety-parachute for aviators. No. 1,227,344; May 22; v. 238; p. 1234.

Toler, G. W., *et al.* (See Underwood, Charles W., assignor.)

Toler, J. K., *et al.* (See Underwood, Charles W., assignor.)

Toler, T. J., *et al.* (See Underwood, Charles W., assignor.)

Tom, Willem. (See Matheeuwissen, Walterus T., assignor.)

Tonn, Alexander W., Milwaukee, Wis. Railway-tie. No. 1,227,345; May 22; v. 238; p. 1234.

Tonnele, Alfred, and W. J. Curtis, assignors to National Adjustable Bed and Spring Company, Wilmington, Del. Adjustable support for beds. No. 1,226,415; May 15; v. 238; p. 885.

Toole, Lucius C. (See Toole, Marguerite R. and L. C.)

Toole, Marguerite R. and L. C., Indianapolis, Ind. Motion-picture-theater chair. No. 1,226,416; May 15; v. 238; p. 886.

Topping, John A., Chicago, Ill. Lighting and signaling system for vehicles. No. 1,228,263; May 29; v. 238; p. 1569.

Torr, John G., Sydney, New South Wales, Australia. Locking means for tripods. No. 1,226,724; May 22; v. 238; p. 1023.

Tosten Bros. (See Farnsworth, Charles H., assignor.)

Toussaint, Hughey A., Caseyville, Ill. Permutation-lock. No. 1,228,264; May 29; v. 238; p. 1569.

Tow, James O., assignor, by mesne assignments, to Dorn-Cloney Laundry and Dry Cleaning Co., Columbia, Mo. Reversing-gearing. No. 1,224,812; May 1; v. 238; p. 247.

Towle, Adelbert M., Augusta, and G. M. Towle, Hallowell, assignors of one-third to L. B. Paquin, Augusta, Me. Repairing enameled leather. No. 1,226,146; May 15; v. 238; p. 793.

Towle, Guy M. (See Towle, Adelbert M. and G. M.)

Towler, Elva B., assignor of one-half to G. F. Wilson, Macon, Ill. Spring-mounting for vehicles. No. 1,225,288; May 8; v. 238; p. 458.

Towler, Isaiah P., Newark, N. J. Steam-heating cooking-range. No. 1,225,528; May 8; v. 238; p. 540.

Townley, Charles E., Dryden, N. Y. Flexible coupling. No. 1,224,690; May 1; v. 238; p. 204.



Trahan, Joseph E., Detroit, Mich. Spark-plug. No. 1,227,699; May 29; v. 238; p. 1381.

Trasso, Anthony J., West Hoboken, N. J. Container. No. 1,224,691; May 1; v. 238; p. 205.

Traub, George E., San Diego, Cal. Index for pressure-gages. No. 1,226,828; May 22; v. 238; p. 1060.

Traylor, Ezra A., Commerce, Tex. Vehicle-body. No. 1,225,192; May 8; v. 238; p. 427.

Treacy, Cyril S., New York, N. Y. Combined clamp and support. No. 1,224,515; May 1; v. 238; p. 143.

Trescott, Charles B., Chicago, Ill. Cooking. No. 1,226,147; May 15; v. 238; p. 793.

Trew, Arthur S., Portland, Oreg. Card-making attachment for adding and listing machines. No. 1,224,813; May 1; v. 238; p. 247.

Tribbey, George W., Marshfield, Oreg. Device for protecting receptacles against freezing. No. 1,226,030; May 15; v. 238; p. 753.

Trinks, Charles L. W. (See Mesta and Trinks.)

Tripp, John S. (See Remer and Tripp.)

Troll, Frederick J., assignor to The Loadometer Company, Baltimore, Md. Load-indicator for motor-vehicles and the like. No. 1,227,503; May 22; v. 238; p. 1285.

Troll, Frederick J., assignor to The Loadometer Company, Baltimore, Md. Load-controller for motor-vehicles. No. 1,227,504; May 22; v. 238; p. 1285.

Troll, Frederick J., assignor to The Loadometer Company, Baltimore, Md. Load-indicator for vehicles. No. 1,227,505; May 22; v. 238; p. 1286.

Troll, Frederick J., assignor to The Loadometer Company, Baltimore, Md. Load-indicator for vehicles. No. 1,227,506; May 22; v. 238; p. 1286.

Trood, Samuel. (See Darrah and Trood.)

Trood, Samuel, New Castle, Pa., assignor to Industrial Development Company. Machine for continuous treatment of metals. No. 1,224,340; May 1; v. 238; p. 82.

Trood, Samuel, Edgewood Park, and G. Chovan, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Making electrical conductors. No. 1,227,346; May 22; v. 238; p. 1234.

Trout, Silas E., Philadelphia, Pa. Filing system. No. 1,224,976; May 8; v. 238; p. 354.

Troy Laundry Machinery Company. (See Balzer, Fritz, assignor.)

Troy Laundry Machinery Company. (See Bartholomew, William, assignor.)

Troy, Patrick J., Bristol, Conn. Ball-cock. No. 1,225,892; May 15; v. 238; p. 706.

Truesdell, Arthur E., Adams, Mass. Recording-sampler. No. 1,228,078; May 29; v. 238; p. 1511.

Trumble, Milon J. (See Sturges, Walter, assignor.)

Trumble, Milon J., Alhambra, Cal. Bottle holding and locking device. No. 1,227,220; May 22; v. 238; p. 1193.

Trumbull Electric Manufacturing Company, The. (See Sutherland, Alexander K., assignor.)

Trump, Charles C., Syracuse, N. Y., assignor to Humphrey Gas Pump Company. Ignition control. No. 1,227,979; May 29; v. 238; p. 1478.

Trumpfheller Manufacturing Corporation, The. (See Cooper, John W., assignor.)

Truscott, Howard W., Portland, Oreg. Fluid-pressure pump. No. 1,226,417; May 15; v. 238; p. 886.

Trust, Josephine, Brooklyn, N. Y. Vegetable and fruit peeling machine. No. 1,226,418; May 15; v. 238; p. 887.

Tubbs, Oscar J., Winslow, Me. Sled. No. 1,225,529; May 8; v. 238; p. 540.

Tucker, Hamilton W., Washington, D. C. Hand-brace and wrist-support. No. 1,227,700; May 29; v. 238; p. 1381.

Tucker, William H., Dobbs Ferry, N. Y. Grass-plot foundation. No. 1,224,692; May 1; v. 238; p. 205.

Tuell, Pinckney V., Rosebud, S. D. Disinfecting-cabinet. No. 1,227,860; May 29; v. 238; p. 1437.

Turbeville, Maxie D., assignor of one-half to A. H. Williams, Lake City, S. C. Fertilizer-distributer. No. 1,227,701; May 29; v. 238; p. 1382.

Turbo Company. (See Griepe, Augustus W. H., assignor.)

Turnbull, William, Stockton, Cal., assignor to Holt Manufacturing Company, Peoria, Ill. Automatic steering-gear for tractors and the like. No. 1,228,377; May 29; v. 238; p. 1607.

Turner, George T., Philadelphia, Pa. Apparatus for manufacturing artificial ice. No. 1,225,893; May 15; v. 238; p. 706.

Turner, John C., Dayton, Ohio. Wheeled toy. No. 1,225,894; May 15; v. 238; p. 706.

Turner, Joseph B., assignor of forty one-hundredths to J. A. Johnson, Sulphur, La. Music-leaf turner. No. 1,226,280; May 15; v. 238; p. 843.

Turner, Joseph P., assignor to Hyde-Murphy Company, Ridgway, Pa. Joint-clamp. No. 1,226,419; May 15; v. 238; p. 887.

Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Brake and safety car control. No. 1,224,238; May 1; v. 238; p. 44.

Turney, George W., assignor to Rome-Turney Radiator Co., Rome, N. Y. Radiator. No. 1,225,895; May 15; v. 238; p. 707.

Twaits, Daniel H., Chicago, Ill. Grease-cup cap. No. 1,225,077; May 8; v. 238; p. 387.

Twaits, Daniel H., Chicago, Ill. Grease-cup base. No. 1,225,078; May 8; v. 238; p. 388.

Twaits, Daniel H., Chicago, Ill. Grease-cup body. No. 1,225,375; May 8; v. 238; p. 491.

Twaits, Daniel H., Chicago, Ill. Grease-cup. No. 1,226,725; May 22; v. 238; p. 1024.

Twentieth Century Machinery Company, The. (See Vois, Simon, assignor.)

Twitchell, George B., Cincinnati, Ohio. Casing for sausages and preparing. No. 1,225,530; May 8; v. 238; p. 541.

Twombly Car Corporation. (See Twombly, Willard I., assignor.)

Twombly, Willard I., assignor to Twombly Car Corporation, New York, N. Y. Steering mechanism. No. 1,225,289; May 8; v. 238; p. 459.

Twombly, Willard I., assignor to Twombly Car Corporation, New York, N. Y. Hood for engines of motor-vehicles. No. 1,226,610; May 15; v. 238; p. 946.

Twombly, William F., Orient, Iowa. Brush and timber cutting device. No. 1,225,531; May 8; v. 238; p. 541.

Twyford, Cary B., Sistersville, W. Va. Device for cleaning cloth. No. 1,224,581; May 1; v. 238; p. 107.

Twyman, B. Wycliffe. (See Patterson, Harry R., assignor.)

Tyler, Clifford M., Brookline, Mass. Damper. No. 1,224,516; May 1; v. 238; p. 143.

Tynes, Lucius M., Gloster, Miss. Attachment for sewing-machines. No. 1,227,980; May 29; v. 238; p. 1479.

Tynes, Lucius M., Fort Worth, Tex. Fish-cord shoe. No. 1,227,981; May 29; v. 238; p. 1479.

Tyson, Frank, assignor to M. W. Miller, Canton, Ohio. Ice-cream freezer. No. 1,227,702; May 29; v. 238; p. 1382.

Uebelmesser, Charles, New York, N. Y., assignor to Cru Patents Corporation. Film-reel shaft. No. 1,227,094; May 22; v. 238; p. 1151.

Uebelmesser, Elizabeth M. (See Segel, Michael, assignor.)

Ulmann, Carl J., New York, N. Y. Device for winding yarn and the like. No. 1,224,977; May 8; v. 238; p. 354.

Ulrich, Charles B., Houghton, Mich., assignor to Art Metal Construction Company, Jamestown, N. Y. Shelving. No. 1,227,703; May 29; v. 238; p. 1382.

Ulrich, Charles B., Houghton, Mich., assignor to Art Metal Construction Company, Jamestown, N. Y. Filing-cabinet. No. 1,227,704; May 29; v. 238; p. 1383.

Ulrich, Charles B., assignor to Art Metal Construction Company, Jamestown, N. Y. Garment-hanger. No. 1,227,705; May 29; v. 238; p. 1383.

Ulrich, William C., assignor of one-half to P. J. Lavalle, St. Paul, Minn. Insulation-repairing device. No. 1,225,290; May 8; v. 238; p. 459.

Underhill, George H., Boston, Mass. Phonograph. No. 1,227,023; May 22; v. 238; p. 1127.

Underwood, Charles W., assignor of six thirty-sixths to J. K. Toler, two thirty-sixths to G. E. Fontenot, two thirty-sixths to J. S. Mauboules, two thirty-sixths to W. E. Gray, one thirty-sixth to T. J. Toler, one thirty-sixth to G. W. Toler, one thirty-sixth to F. M. Fontenot, one thirty-sixth to C. De Jersey, one thirty-sixth to G. B. Brooks, and one thirty-sixth to R. W. Fontenot, Crowley, La. Piston for internal-combustion engines. No. 1,224,239; May 1; v. 238; p. 44.

Underwood Computing Machine Company. (See Booth, Henry S., assignor.)

Underwood Computing Machine Company. (See Degener, Gustave O., assignor.)

Underwood Computing Machine Company. (See Gill, Charles H., assignor.)

Underwood Computing Machine Company. (See Gumprecht, William L., assignor.)

Underwood Computing Machine Company. (See Hanson, Hans, assignor.)

Underwood Computing Machine Company. (See Hart, Frederick A., assignor.)

Underwood Computing Machine Company. (See Hart and Stickney, assignors.)

Underwood Computing Machine Company. (See Kupetz, Adolph G., assignor.)

Underwood Computing Machine Company. (See Olmsted, Osmond W., assignor.)

Underwood Computing Machine Company. (See Thornton, John N., assignor.)

Underwood Engineering Company. (See Underwood and Justice, assignors.)

Underwood, George W., assignor of one-half to F. E. Nicholson, Orienta, Okla. Grain-collector. No. 1,224,871; May 1; v. 238; p. 267.

Underwood, John T., and I. M. Justice, Dayton, Ohio, assignors to Underwood Engineering Company, Detroit, Mich. Kiln for and method of treating ceramic and similar material. No. 1,224,978; May 8; v. 238; p. 354.

Underwood, Ralph F. (See Carlson, Underwood, and Jaderstrom.)

Underwood, Thomas J. (See Davis and Underwood.)

Underwood Typewriter Company. (See Barnard, Walter E., assignor.)

Underwood Typewriter Company. (See Dennis, Adolphus S., assignor.)

Underwood Typewriter Company. (See Helmond, William F., assignor.)

Underwood Typewriter Company. (See Martini, Otto A., assignor.)

Underwood Typewriter Company. (See Smith, Jesse A. B., assignor.)

Underwood Typewriter Company. (See Stickney, Burnham C., assignor.)

Unger, Frank L., New Prague, Minn. Cam-gear. No. 1,228,265; May 29; v. 238; p. 1570.
Union Fibre Company. (See Lappen, James E., assignor.)
Union Fibre Company. (See MacLeith, Walter D., assignor.)
Union Gas Engine Company. (See Page, Stanley H., assignor.)
Union Special Machine Co. (See Berger, Joseph, Jr., assignor.)
Union Special Machine Company. (See Chalman, John E., assignor.)
Union Special Machine Company. (See Dahl, Harry J., assignor.)
Union Special Machine Company, The. (See Onderdonk, Lansing, assignor.)
Union Special Machine Company. (See Seymour, Dudley S., assignor.)
Union Switch & Signal Company, The. , (See Dunham, Charles W., assignor.)
Union Switch & Signal Company, The. (See Gilson, Robert M., assignor.)
Union Switch and Signal Company, The. (See Griffin, Henry W., assignor.) (Reissue.)
Union Switch & Signal Company, The. (See Lewis, Lloyd V., assignor.)
Unit System of Heating and M'f'g Company. (See Atherton, Charles, assignor.)
United Brass Manufacturing Company. (See Schulder, Fred, assignor.)
United Engineering and Foundry Company. (See Canning, William P., assignor.)
United Gas Improvement Company, The. (See Gartley, William H., assignor.)
United Shoe Machinery Company. (See Borden, William H., assignor.)
United Shoe Machinery Company. (See Brown, Louis M., assignor.)
United Shoe Machinery Company. (See Cady, Carson J., assignor.)
United Shoe Machinery Company. (See Eppler, Andrew, assignor.)
United Shoe Machinery Company. (See Fowler, Alfred B., assignor.)
United Shoe Machinery Company. (See Furber, Frederick M., assignor.)
United Shoe Machinery Company. (See Hill, George S., assignor.)
United Shoe Machinery Company. (See Hope, Ernest, assignor.)
United Shoe Machinery Company. (See Latham, Albert, assignor.)
United Shoe Machinery Company. (See MacKenzie, Fred L., assignor.)
United Shoe Machinery Company. (See Moyer, David A., assignor.)
United Shoe Machinery Company. (See Remick, Lloyd T., assignor.)
United Shoe Machinery Company. (See Webster, Edwin A., assignor.)
United States Envelope Company. (See Swift, Willard E., assignor.)
United States Ordnance Company. (See Powers, John N., assignor.)
Universal Briquetting Company. (See Hite, Charles E., assignor.)
Universal Car and Manufacturing Co. (See Murphy, Albert C., assignor.)
Universal Electric Welding Company. (See Lachman, Laurence S., assignor.)
Universal Engineering Company. (See Sumner, William, assignor.)
Universal Hammer Company. (See Kollock and Martin, assignors.)
Universal Liquid Register Company. (See Brown, Charles F., assignor.)
Universal Oil Converter Company. (See Bassford, William K., assignor.)
Universal Patents Company. (See Sullivan, Cecelia I., assignor.)
Universal Rim Company. (See Baker, Erle K., assignor.)
Updike, Frank L., Sapulpa, Okla. Paper-dispensing device. No. 1,226,928; May 22; v. 238; p. 1093.
Upson, Charles A., Lockport, N. Y. Packaging wallboard. No. 1,225,079; May 8; v. 238; p. 388.
Upton Machine Company. (See Sandage, Jacob R., assignor.)
Uribe, Marcelino, San Antonio, Tex. Automobile-fender. No. 1,226,420; May 15; v. 238; p. 887.
Urstadt, John G., New York, N. Y. Garment-support. No. 1,228,266; May 29; v. 238; p. 1570.
Utility Development & Sales Company, *et al.* (See Carlisle, George J., assignor.)
Vair, Wesley R., Ravenna, Ohio. Guard attachment for cloth-shearing machines. No. 1,228,079; May 29; v. 238; p. 1512.
Valiquet, Louis P., New York, N. Y., assignor to Victor Talking Machine Company. Automatically-operated talking-machine. No. 1,224,979; May 8; v. 238; p. 355.
Vallez, Henry A., Bay City, Mich. Non-caking filter-press. No. 1,227,982; May 29; v. 238; p. 1479.
Vallez, Henry A., Bay City, Mich. Filter-press. No. 1,227,983; May 29; v. 238; p. 1479.
Van den Bos, John, Grand Rapids, Mich. Carbureter. No. 1,226,929; May 22; v. 238; p. 1093.
Van Alstyn, Albert T., New York, N. Y. Clip-tag. No. 1,226,281; May 15; v. 238; p. 843.
Van Altena, Anton, Kansas City, Mo. Engine. No. 1,224,814; May 1; v. 238; p. 248.
Van Buren, Alexander, East Quogue, N. Y. Pipe. No. 1,224,980; May 8; v. 238; p. 355.
Van Dolsen, Emmet L., assignor of one-half to L. M. Russell, Laporte, Ind. Power transmission. No. 1,225,081; May 8; v. 238; p. 389.
Van Dorn Coupler Company. (See Van Dorn, Herbert E., assignor.)
Van Dorn, Herbert E., assignor to Van Dorn Coupler Company, Chicago, Ill. Car and air coupling. No. 1,224,240; May 1; v. 238; p. 45.
Van Guelpen, Louis J., and W. Stuebing, Jr., Cincinnati, Ohio. Burnishing-machine. No. 1,227,221; May 22; v. 238; p. 1194.
Van Horn, Charles B., Philadelphia, Pa. Vehicle-wheel. No. 1,226,421; May 15; v. 238; p. 888.
Van Huele, Maxime L. (See Grunig and Van Huele.)
Van Keuren, Henry P. T., Philadelphia, Pa. Engine. No. 1,225,376; May 8; v. 238; p. 491.
Van Kirk, John P., Bradley Beach, assignor to Steiner & Son, Asbury Park, N. J. Pajamas. No. 1,227,347; May 22; v. 238; p. 1234.
Van Kuren, Stephen J., assignor to J. G. Cherry Company, Cedar Rapids, Iowa. Apparatus for pasteurizing, cooling, and ripening milk, cream, and other liquids. No. 1,224,981; May 8; v. 238; p. 355.
Van Nees, Ralston M., Fairbury, Nebr. Distributing-spout and overflow-receiver. No. 1,224,241; May 1; v. 238; p. 45.
Van Nostrand, William, Dalton, N. Y. Grinding-ring for attrition-mills. No. 1,226,032; May 15; v. 238; p. 754.
Van Sickel, Wilber H., Langhorne, Pa., assignor to Thos. H. Dallett Co., Stone-dressing machine. No. 1,227,095; May 22; v. 238; p. 1152.
Van Valkenburg, Harold A., Oakland, assignor to American Photo Player Company, Berkeley, Cal. Automatic music-playing instrument. No. 1,224,693; May 1; v. 238; p. 205.
Van Vorst, John, Scotia, N. Y. Motorist's eye-shield. No. 1,224,431; May 1; v. 238; p. 115.
Van Wye, Garry P., New York, N. Y. Catapult. No. 1,227,222; May 22; v. 238; p. 1194.
Vanbuskirk, Thomas W., assignor of one-half to J. L. Brunker, Juniata, Pa. Train-pipe coupling. No. 1,225,080; May 8; v. 238; p. 388.
Vandal, Marcel, Paris, France. Coloring-machine for moving-picture films. No. 1,226,282; May 15; v. 238; p. 844.
Vandegrift, William G., Harrisburg, Pa. Card-holder. No. 1,224,582; May 1; v. 238; p. 167.
Vanderburgh, Sheldon D., Hastings-upon-Hudson, N. Y. Cradle and means for rocking the same. No. 1,227,984; May 29; v. 238; p. 1480.
Vandercook, Albert E., Oakland, Cal., assignor to California Macvan Company. Precipitation apparatus. No. 1,226,611; May 15; v. 238; p. 946.
Vandervell, Charles A., and A. H. Midgley, Acton Vale, London, England. Electric switchboard. No. 1,226,031; May 15; v. 238; p. 754.
Variety Manufacturing Company. (See Gervais, Wainwright B., assignor.)
Variopiane Company Limited, The. (See Holle, Alexander A., assignor.)
Varley Duplex Magnet Company. (See Varley, Richard, assignor.)
Varley, Richard, Englewood, N. J. Ignition system and apparatus. No. 1,225,533; May 8; v. 238; p. 541.
Varley, Richard, Englewood, N. J. Electrical system. No. 1,225,534; May 8; v. 238; p. 542.
Varley, Richard, Englewood, N. J. Electrical system. No. 1,225,535; May 8; v. 238; p. 542.
Varley, Richard, Englewood, N. J. Electrical system. No. 1,225,536; May 8; v. 238; p. 542.
Varley, Richard, Englewood, assignor to Varley Duplex Magnet Company, Jersey City, N. J. Power system and appartus. No. 1,225,532; May 8; v. 238; p. 541.
Vaughan, Ross, assignor to American Can Company, New York, N. Y. Spout for receptacles. No. 1,224,553; May 1; v. 238; p. 167.
Vaughan, Thomas M., assignor to B.-C. M'f'g Co., Battle Creek, Mich. Wheeled toy. No. 1,225,082; May 8; v. 238; p. 389.
Vaygouny, Mooshegh, Berkeley, Cal., assignor to Royal Baking Powder Company. Making glyoxylic acid or its compounds. No. 1,227,706; May 29; v. 238; p. 1383.
Velis, Jorge B., assignor of one-half to A. A. Pinzon, Habana, Cuba. Tire-protector. No. 1,224,341; May 1; v. 238; p. 82.
Venosa, Domenico, Jr. (See Morelli, Enrico, assignor.)
Venter, John H., Lincoln, Nebr. Harness back-strap. No. 1,225,083; May 8; v. 238; p. 390.
Verenius, Otto N., Sioux City, Iowa. Ticket-separating machine. No. 1,226,930; May 22; v. 238; p. 1094.
Vesta Accumulator Company. (See Morrison, William, assignor.)
Vicic, John, and H. J. Sandberg, Chicago, Ill. Automobile-top. No. 1,225,377; May 8; v. 238; p. 492.
Vick, Frank H., assignor to G. F. Maguire, New York, N. Y. Mechanism for making and dispensing drinking-cups and dispensing liquids. No. 1,226,033; May 15; v. 238; p. 754.



Vick, Frank H., assignor to T. Liston, New York, N. Y. Machine for making paper receptacles. No. 1,226,034; May 15; v. 238; p. 755.
Vickers Limited. (See Ellia, Giovanni E., assignor.)
Vickers Limited. (See McKechnie, James, assignor.)
Victor, Alexander F., assignor to Victor Animatograph Company, Davenport, Iowa. Stereopticon. No. 1,227,507; May 22; v. 238; p. 1287.
Victor Animatograph Company. (See Victor, Alexander F., assignor.)
Victor Shoe Machinery Company. (See Erickson, Edward, assignor.)
Victor Shoe Machinery Co. (See Sjostrom, Peter, assignor.)
Victor Talking Machine Company. (See Miller, Henry C., assignor.) (Reissue.)
Victor Talking Machine Company. (See Valiquet, Louis P., assignor.)
Vidrine, Achille C., Deshotels, La. Plow attachment. No. 1,227,508; May 22; v. 238; p. 1287.
Viggers, Felix, Des Moines, Iowa. Automatic stoker. No. 1,227,707; May 29; v. 238; p. 1384.
Vincent, Harry M. (See Westcott and Vincent.)
Vincent, Harry S., Ridgewood, and W. P. Steele, Palisade, N. J. Throttle-valve mechanism for locomotives. No. 1,227,096; May 22; v. 238; p. 1152.
Vincent, Harry S., Ridgewood, N. J. Throttle-valve. No. 1,227,097; May 22; v. 238; p. 1152.
Vincent, Louis N., Prescott, Ariz. Drain-valve. No. 1,227,098; May 22; v. 238; p. 1153.
Virden, Jessie E., Philadelphia, Pa. Washing apparatus. No. 1,226,283; May 15; v. 238; p. 844.
Vittetoe, James W., Mart, Tex. Cotton-picker. No. 1,225,196; May 8; v. 238; p. 427.
Vogan, Frank M., Canton, Ohio. Mold for concrete construction. No. 1,224,584; May 1; v. 238; p. 168.
Vogel, Peter, and H. Schutte, Spokane, Wash. Door-fastener. No. 1,227,708; May 29; v. 238; p. 1384.
Voigtlander, Otto, Essen-on-the-Ruhr, Germany. Producing homogeneous articles of any desired form out of pure tungsten. No. 1,224,242; May 1; v. 238; p. 45.
Volkmann, Charles, Chicago, Ill. Cotton-picking spindle and stripper therefor. No. 1,227,223; May 22; v. 238; p. 1195.
Vollmer, Charles F., Denver, Colo. Wardrobe. No. 1,226,931; May 22; v. 238; p. 1094.
Volz, Simon, assignor to The Twentieth Century Machinery Company, Milwaukee, Wis. Apparatus for pasteurizing bottled liquids. No. 1,226,726; May 22; v. 238; p. 1024.
Von Neida, John W., Sioux Falls, S. D. Hard-snow and ice plow for railways. No. 1,228,080; May 29; v. 238; p. 1512.
Von Osterheldt, Earl. (See Kauffman, Ralph A., assignor.)
Von Schlegell, Victor, New York, N. Y., assignor to Hale and Kilburn Company, Philadelphia, Pa. Car construction. No. 1,226,035; May 15; v. 238; p. 755.
Von Sick, William M., Los Angeles, Cal., assignor of one-half to D. M. Critchley. Pressure indicator and regulator. No. 1,225,084; May 8; v. 238; p. 390.
Voorhorst, Clarence J., Portland, Oreg. Division-plate for egg-cases. No. 1,227,224; May 22; v. 238; p. 1195.
Voss, William H., Davenport, Iowa. Washing-machine gearing. No. 1,225,896; May 15; v. 238; p. 707.
Vrana, Theodore W., Newark, N. J. Pedal-gate for pianos. No. 1,226,284; May 15; v. 238; p. 845.
Vredenburg, Charles E., Mechanicsville, N. Y., and T. Lacey, Quincy, Mass. Brick-kiln and operating the same. No. 1,224,243; May 1; v. 238; p. 46.
Vreeland Apparatus Company. (See Vreeland, Frederick K., assignor.)
Vreeland, Frederick K., Montclair, assignor to Vreeland Apparatus Company, Inc., New York, N. Y. Multiplex-telegraphy. No. 1,224,342; May 1; v. 238; p. 82.
Vulcan Plow Company, The. (See Hand, Frederick E., assignor.)
W. Beckers Anilin & Chemical Works. (See Beckers and Dreyfus, assignors.)
W. H. McElwain Company. (See Murphy, McKeever, and Peters, assignors.)
W. N. Matthews and Brother. (See Matthews, Claude L., assignor.)
W. S. Rockwell Company. (See Rockwell, Walter S., assignor.)
Wachtel, Charles, Jamaica, N. Y. Pocket flash-light. No. 1,226,727; May 22; v. 238; p. 1025.
Wachtel, Charles, Jamaica, N. Y. Pocket flash-light. No. 1,226,728; May 22; v. 238; p. 1025.
Wacker, George W., Rutherford, N. J., assignor to Auto-Ped Company of America. Magneto. No. 1,224,244; May 1; v. 238; p. 46.
Wacker, George W., Rutherford, N. J., assignor to Auto-Ped Company of America. Magneto. No. 1,224,245; May 1; v. 238; p. 46.
Wacker, George W., Rutherford, N. J., assignor to Auto-Ped Company of America. High-tension coil. No. 1,224,246; May 1; v. 238; p. 47.
Wacker, George W., Rutherford, N. J., assignor to Auto-Ped Company of America. Magneto. No. 1,224,247; May 1; v. 238; p. 47.
Waddell, James W., and G. C. Morrow, Clinton, Ark. Wagon-tongue support. No. 1,226,829; May 22; v. 238; p. 1060.
Wade, J. H., *et. al.* (See Bretz, George W., assignor.)
Wagandt, Charles L., Baltimore, Md., assignor to The National Enameling & Stamping Company, New York, N. Y. Bail-ear for oil-cans. No. 1,225,725; May 8; v. 238; p. 607.
Wagner, Alva E., Des Moines, Iowa. Door-latch. No. 1,227,709; May 29; v. 238; p. 1385.
Wagner, George E., assignor to Keystone Driller Co., Beaver Falls, Pa. Excavating-machine. No. 1,225,537; May 8; v. 238; p. 543.
Wahle, Adolph, Davenport, Iowa. Rotary pump. No. 1,228,267; May 29; v. 238; p. 1570.
Wahlen, Gustavus A. N., St. Johnsbury, Vt. Scale-check. No. 1,225,085; May 8; v. 238; p. 391.
Wahlstrom Tool Company. (See Bronander, Bertil W., assignor.)
Waite, William H., assignor to The Browning Company, Cleveland, Ohio. Clutch. No. 1,226,036; May 15; v. 238; p. 756.
Walden, Marcus A., assignor of one-half to D. M. Brunkhorst, San Francisco, Cal. Pencil-holder. No. 1,227,099; May 22; v. 238; p. 1153.
Walding, William L., Milford, La. Indicator device for sawmills. No. 1,226,037; May 15; v. 238; p. 756.
Waldmeier, Emile, Guilport, Miss. Automatic atomizer for internal-combustion engines. No. 1,227,225; May 22; v. 238; p. 1195.
Wale, Alfred E., Coleshill, England. Tire. No. 1,227,348; May 22, v. 238; p. 1235.
Walker & Bennett Manufacturing Company. (See Walker, Sheridan A., assignor.)
Walker, Charles W., Stratford, Conn. Combined clothes pole and line. No. 1,228,081; May 29; v. 238; p. 1512.
Walker, Edwin, Erie, Pa. Turnbuckle. No. 1,226,830; May 22; v. 238; p. 1060.
Walker, John, assignor to Massachusetts Chocolate Company, Boston, Mass. Apparatus for treating cocoa and other pulverulent material. No. 1,226,831; May 22; v. 238; p. 1060.
Walker, Mathew A., and C. C. Moore, Elephant Butte, N. Mex. Rubber spring-tire. No. 1,227,024; May 22; v. 238; p. 1127.
Walker, Robert P., assignor to National Carbon Company, Cleveland, Ohio. Arc-light electrode. No. 1,225,194; May 8; v. 238; p. 427.
Walker, Rudolph B. D., Blenheim, New Zealand. Potato-hilling plow. No. 1,225,378; May 8; v. 238; p. 492.
Walker, Sheridan A., New York, N. Y., assignor to Walker & Bennett Manufacturing Company. Grip-handle for car-seats. No. 1,224,861; May 1; v. 238; p. 263.
Walkush, Charles, Ashland, Wis. Quickly-mountable shade and curtain support. No. 1,226,422; May 15; v. 238; p. 888.
Wall, Ormond E., Honolulu, Hawaii. Wind-shield cleaner. No. 1,227,100; May 22; v. 238; p. 1153.
Wallace, Francisco D., Westfield, N. Y., assignor of one-third to A. Gifford and one-third to R. W. Gifford, Cleveland, Ohio. Reversible plow. No. 1,227,349; May 22; v. 238; p. 1235.
Wallace, Harry B., St. Louis, Mo. Mandrel. No. 1,227,509; May 22; v. 238; p. 1287.
Waller, Grover E., Laverne, Okla. Whiffletree-hook. No. 1,226,423; May 15; v. 238; p. 888.
Wallerstedt, Charles F. (See Smith, Iredell, assignor.)
Walsh, James J., Elizabeth, N. J. Washing-machine. No. 1,228,149; May 29; v. 238; p. 1533.
Walsh, Thomas J. (See Stewart, Milton H., assignor.)
Walsh, Vincent, New York, N. Y. Automobile-signal. No. 1,227,226; May 22; v. 238; p. 1196.
Walsh, William F., assignor of one-half to H. F. Meyer, St. Paul, Minn. Cradle apparatus. No. 1,227,710; May 29; v. 238; p. 1385.
Walston, Philip, Boise, Idaho. Knockdown crate. No. 1,228,268; May 29; v. 238; p. 1571.
Walter, Charles R., assignor to J. B. Foote Foundry Company, Fredericktown, Ohio. Block-molding machine. No. 1,228,269; May 29; v. 238; p. 1571.
Walter, Edward C., New York, N. Y. Attachment for graphophone-machines. No. 1,225,538; May 8; v. 238; p. 543.
Walter, Edward C., New York, N. Y., assignor to H. T. Ambrose, Orange, N. J. Calculating-machine. No. 1,224,872; May 1; v. 238; p. 267.
Walter, Edward C., New York, N. Y., assignor to H. T. Ambrose, Orange, N. J. Computing and recording machine. No. 1,224,873; May 1; v. 238; p. 267.
Walter, Jacob, H. J. Butterworth, and O. J. Sigler, assignors of one-fifth to C. M. Rowland, Mansfield, Ohio. Combined vaporizer and mixer. No. 1,228,082; May 29; v. 238; p. 1513.
Walters, Edward A., Youngstown, Ohio. Granulating-machine. No. 1,224,815; May 1; v. 238; p. 248.
Walters, Frank W., Auckland, New Zealand. Diving-dress. No. 1,226,148; May 15; v. 238; p. 794.
Walworth Manufacturing Company. (See Work, Willis I., assignor.)
Wanda, Frank W., Madison, Me. Picture-frame. No. 1,225,195; May 8; v. 238; p. 427.
Wankel, Frank, New York, N. Y. Key-cutting machine. No. 1,225,539; May 8; v. 238; p. 544.
Wanner, Albert, Jr. (See Baum, Albert J., assignor.)
Ward, Francis M., G. H. Bryant, and T. M. Inman, assignors to The Relay Automatic Telephone Company, Limited, London, England. Telephone system. No. 1,225,291; May 8; v. 238; p. 460.

Ware, Charles B., Attleboro, assignor to T. I. Smith Company, North Attleboro, Mass. Bracelet. No. 1,224,585; May 1; v. 238; p. 108.
Warfel, Leslie, Dubois, Pa. Copy-holder. No. 1,228,083; May 29; v. 238; p. 1513.
Warmoth, George W., Indianapolis, Ind. Anchor-strip for paving-blocks. No. 1,226,149; May 15; v. 238; p. 794.
Warner, Fred A., Egremont, Mass. Ice-harvesting machine. No. 1,228,270; May 29; v. 238; p. 1571.
Warner, John H., Dayton, Ohio. Toy. No. 1,225,379; May 8; v. 238; p. 492.
Warner, Thomas, Oregon City, Oreg. Automatic means for regulating pulp-stock. No. 1,225,086; May 8; v. 238; p. 391.
Warren, Clyde W. (See Russell, Zachary E., assignor.)
Warren, Howard, Los Angeles, Cal. Lawn-mower. No. 1,225,380; May 8; v. 238; p. 492.
Warren, Peter R., Boston, Mass. Paper box. No. 1,226,150; May 15; v. 238; p. 794.
Warren Webster & Company. (See Bilyeu, William F., assignor.)
Wartman, Edward, and N. Mitchell, Everett, Wash. Railway cross-tie. No. 1,225,688; May 8; v. 238; p. 595.
Wassaler, Harry C., Virginia, Minn. Tag-holder. No. 1,227,711; May 29; v. 238; p. 1385.
Washelm, Herman A., New York, N. Y. Convertible furniture. No. 1,224,982; May 8; v. 238; p. 355.
Wass, John, Beaver Falls, Pa. Utensil-cover. No. 1,228,150; May 29; v. 238; p. 1533.
Wasson, Lawson C., Snyder, Tex. Convertible table and ironing-board. No. 1,228,084; May 29; v. 238; p. 1513.
Waterbury Battery Company, The. (See Schoenmehl and Martus, assignors.)
Waterbury Clock Co. (See Putnam, James R., assignor.)
Waterbury Clock Co. (See Smith, William J., assignor.)
Waterbury Clock Co. (See Wehinger, Frederick, assignor.)
Waterbury Mfg. Co. (See Recker, Adolph C., assignor.)
Waterfield, George L., *et al.* (See McNeill, David, assignor.)
Waterfield, Thomas, *et al.* (See McNeill, David, assignor.)
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Landing device. No. 1,225,897; May 15; v. 238; p. 707.
Watkins, James O., assignor to Federal Telegraph Company, San Francisco, Cal. Wireless telegraphy. No. 1,224,343; May 1; v. 238; p. 83.
Watkins, William, Monessen, Pa. Game. No. 1,226,424; May 15; v. 238; p. 888.
Watkins, William C., Weston, Ohio. Casket. No. 1,226,038; May 15; v. 238; p. 756.
Watson, Clarence C., Waterman, Ill. Hog-trap. No. 1,227,712; May 29; v. 238; p. 1386.
Watson, Glenn W., assignor to Diamond Power Specialty Company, Detroit, Mich. Boiler-tube cleaner. No. 1,225,292; May 8; v. 238; p. 460.
Watson, James P., Benton, Ill. Hay-rack. No. 1,225,087; May 8; v. 238; p. 391.
Watson, John H., Chicago, Ill. Liquid-holding vessel. No. 1,228,151; May 29; v. 238; p. 1534.
Watson-Stillman Company, The. (See Wigtel, Carl, assignor.)
Watson, Thomas S., assignor to Car Lighting Improvement Co., Milwaukee, Wis. Electric regulator. No. 1,224,083; May 8; v. 238; p. 356.
Watterberg, Axell, Sanish, N. D. Rotary engine. No. 1,227,350; May 22; v. 238; p. 1235.
Watts, Frank E., and D. T. Hastings, Detroit, Mich., assignors, by mesne assignments, to Hupp Motor Car Corporation, Richmond, Va. Engine-casing. No. 1,225,088; May 8; v. 238; p. 391.
Waugh, Daniel S., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Rock-drill. No. 1,225,898; May 15; v. 238; p. 708.
Waugh, Edward H., and W. J. Swartz, assignors to Automatic Candy Machine Company, Seattle, Wash. Preparing and depositing apparatus for confectionery. No. 1,227,713; May 29; v. 238; p. 1386.
Waugh, Edward H., and W. J. Swartz, Seattle, Wash., assignors to Automatic Candy Machine Company. Preparing apparatus for confectionery. No. 1,227,714; May 29; v. 238; p. 1386.
Waugh, William P., Warren, R. I., assignor to Asbestos Protected Metal Company, Pittsburgh, Pa. Glazing construction. No. 1,227,861; May 29; v. 238; p. 1437.
Wayrynen, William L., Lake Norden, S. D. Tire-patch. No. 1,224,248; May 1; v. 238; p. 48.
Webb, Aaron B., Streator, Ill. Compressed-air engine. No. 1,227,715; May 29; v. 238; p. 1387.
Webb, Ebenezer, *et al.* (See Hicks, James W., assignor.)
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Webb, Henry C., Bradentown, Fla. Clearing-plow. No. 1,226,425; May 15; v. 238; p. 889.
Webber, Fred M., Joplin, Mo. Pneumatic pitman-balance for swing-jaw rock and ore crushers. No. 1,226,832; May 22; v. 238; p. 1061.
Weber, Max, Cleveland, Ohio. Hinge contrivance. No. 1,225,899; May 15; v. 238; p. 708.
Weber, Wilhelm, Hayingen, Germany. Blasting-cartridge. No. 1,226,833; May 22; v. 238; p. 1061.
Webster, Edwin A., Plaistow, N. H., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-splitting machine. No. 1,225,900; May 15; v. 238; p. 708.
Webster, Howard J., Philadelphia, Pa. Steam-boiler. No. 1,225,293; May 8; v. 238; p. 461.
Wedge, Frank, Elysian, Minn. Checking device. No. 1,224,432; May 1; v. 238; p. 116.
Wedge, Utley, Ardmore, Pa. Gas-burner. No. 1,225,381; May 8; v. 238; p. 493.
Weed, Howard W., Stamford, Conn. Folding back. No. 1,227,351; May 22; v. 238; p. 1236.
Wehinger, Frederick, assignor to Waterbury Clock Co., Waterbury, Conn. Stem-winding and stem-setting watch. No. 1,226,285; May 15; v. 238; p. 845.
Wehinger, Frederick, assignor to Waterbury Clock Co., Waterbury, Conn. Stem-winding and stem-setting watch. No. 1,226,286; May 15; v. 238; p. 845.
Wehmiller, Alfred H., St. Louis, Mo., assignor to Barry-Wehmiller Machinery Company. Pasteurizing liquids. No. 1,227,101; May 22; v. 238; p. 1154.
Weigel, Arnold A., assignor to A. G. Welch, Chicago, Ill., trustee. Antifriction-bearing. No. 1,226,729; May 22; v. 238; p. 1026.
Weigel, Philip A., Riverton, N. J., assignor, by mesne assignments, to Auto Transmission Company. Variable-speed gearing. No. 1,227,985; May 29; v. 238; p. 1480.
Weil, Isaac. (See Rigby, Grant W., assignor.)
Weil, Julius, Philadelphia, Pa. Garment-fastening. No. 1,226,039; May 15; v. 238; p. 757.
Weinberg, Louis E., assignor to Star Fuse Co., Inc., New York, N. Y. Refillable cartridge-fuse. No. 1,226,151; May 15; v. 238; p. 795.
Weinhandler, Sampson H., New York, N. Y., and J. S. Simsohn, Philadelphia, Pa. Eliminating salts of the weak sulfur acids from fixed photographic media. No. 1,224,984; May 8; v. 238; p. 356.
Weir, David, Hartford, Conn. Chuck. No. 1,225,089; May 8; v. 238; p. 392.
Weisbrod, Jacob H., assignor to American Car and Foundry Company, St. Louis, Mo. Metallic car-wall construction. No. 1,224,816; May 1; v. 238; p. 249.
Weiss, Albert T., assignor to Yawman & Erbe Mfg. Co., Rochester, N. Y. Interlocking mechanism for sectional furniture. No. 1,225,294; May 8; v. 238; p. 462.
Weiss, Alfred H., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Switching device. No. 1,224,517; May 1; v. 238; p. 144.
Weiss, Georg, Chicago, Ill. Filling-machine. No. 1,224,249; May 1; v. 238; p. 48.
Weissberg, Ernst, Cassel, Germany. High-tension switch. No. 1,225,901; May 15; v. 238; p. 709.
Welch, Albert G., trustee. (See Weigel, Arnold A., assignor.)
Welin Marine Equipment Company. (See Broady, Harry W., assignor.)
Wells, Chipman J., assignor of one-half to S. L. De Land, Long Beach, Cal. Extension car-step. No. 1,228,271; May 29; v. 238; p. 1571.
Wells, George T., Providence, R. I. Dust-pan. No. 1,225,540; May 8; v. 238; p. 544.
Wells, James B., Longview, Tex. Potato-curing apparatus. No. 1,225,382; May 8; v. 238; p. 493.
Wells, Joel C., Southbridge, Mass. Ophthalmic mounting. No. 1,225,689; May 8; v. 238; p. 595.
Welte, Edwin, Freiburg, Germany. Pressure-controlling mechanism for automatic musical instruments. No. 1,225,902; May 15; v. 238; p. 709.
Wenck, Walter M. (See Yogerst and Wenck.)
Wenger & Co. (See Medgyes, Charles, assignor.)
Wentworth, John F., Quincy, Mass. Internal-combustion engine. No. 1,225,295; May 8; v. 238; p. 462.
Wenzel, Max, Spremberg, Germany. Piecing warp-threads. No. 1,227,716; May 29; v. 238; p. 1387.
Werley, William H. (See Snyder, Thomas R., assignor.)
Werner, Henry. (See Reichel and Werner.)
Werner & Pfleiderer Co. (See Reese, Louis C., assignor.)
Wertheimer, Sydney, London, England. Carbureter for internal-combustion engines. No. 1,228,272; May 29; v. 238; p. 1572.
Weser, John A., New York, N. Y. Piano-player. No. 1,225,196; May 8; v. 238; p. 427.
Weslow, Charles, Jersey City, N. J. Shooting. No. 1,226,152; May 15; v. 238; p. 795.
Wessels, Thomas C., and W. Kane, Lytton, British Columbia, Canada. Gate. No. 1,225,197; May 8; v. 238; p. 428.
West Albany Moulding Sand Co. (See Nelson, William J., assignor.)
West, Eva, *et al.* (See Burch, Frederick R., assignor.)
West, Joe, *et al.* (See Burch, Frederick R., assignor.)
West, Percy C. H., London, England. Treatment of lead-sulfid ore. No. 1,225,296; May 8; v. 238; p. 462.
West, William J. (See Hartsell and West.)
West, William R., Simla, Colo. Mail-catcher. No. 1,224,433; May 1; v. 238; p. 116.
Westbury, William, assignor to L. S. Skelton, Okmulgee, Okla. Guard or shield for glass-drawing apparatus. No. 1,225,541; May 8; v. 238; p. 545.
Westbury, William, assignor to L. S. Skelton, Okmulgee, Okla. Drawing-ring. No. 1,225,542; May 8; v. 238; p. 545.
Westby, Peder P., Peterborough, Ontario, Canada. Pulp-screen. No. 1,225,198; May 8; v. 238; p. 428.
Westcott, Allen E., Ilion, N. Y. Stanchion. No. 1,227,227; May 22; v. 238; p. 1196.
Westcott, Delbert M., and H. M. Vincent, San Luis Obispo, Cal. Folding bed for automobiles. No. 1,226,426; May 15; v. 238; p. 889.



Western Cartridge Company. (See Farnham and Olin, assignors.)
Western Electric Company. (See Clausen, Henry P., assignor.)
Western Electric Company. (See Dunham, Bert G., assignor.)
Western Electric Company. (See Dyson, Albert H., assignor.)
Western Electric Company. (See Goodrum, Charles L., assignor.)
Western Electric Company. (See Goodrum and Dobbin, assignors.)
Western Electric Company. (See Johnson, Lewis H.)
Western Electric Company. (See Lundell and Eddy, assignors.)
Western Electric Company. (See Reeves and Lundell, assignors.)
Western Electric Company. (See Smythe, Edwin H., assignor.)
Western Union Telegraph Company, The. (See Clokey, Allison A., assignor.)
Western Union Telegraph Company, The. (See Finn, William, assignor.) Reissue.
Western Union Telegraph Company, The. (See MacNamara, Patrick T., assignor.)
Westinghouse Air Brake Company, The. (See Brown, Thomas R., assignor.)
Westinghouse Air Brake Company, The. (See Crittenden, Philip L., assignor.)
Westinghouse Air Brake Company, The. (See Crittenden and Saunders, assignors.)
Westinghouse Air Brake Company, The. (See Dewson and Brown, assignors.)
Westinghouse Air Brake Company. (See Turner, Walter V., assignor.)
Westinghouse Electric and Manufacturing Company. (See Alden, Vern E., assignor.)
Westinghouse Electric and Manufacturing Company. (See Bakken, Andrew H., assignor.)
Westinghouse Electric & Manufacturing Company. (See Bean and Otto, assignors.)
Westinghouse Electric and Manufacturing Company. (See Bradshaw and Mylius, assignors.)
Westinghouse Electric and Manufacturing Company. (See Brooks, William G., assignor.)
Westinghouse Electric and Manufacturing Company. (See Chernyshoff, Alexander, assignor.)
Westinghouse Electric and Manufacturing Company. (See Conrad, Frank, assignor.)
Westinghouse Electric and Manufacturing Company. (See Dann, Walter M., assignor.)
Westinghouse Electric and Manufacturing Company. (See Davis, David C., assignor.)
Westinghouse Electric and Manufacturing Company. (See Eby, Earl E., assignor.)
Westinghouse Electric and Manufacturing Company. (See Farnsworth, Sidney W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Ferris, Ralph E., assignor.)
Westinghouse Electric and Manufacturing Company. (See Field, Allan B., assignor.)
Westinghouse Electric and Manufacturing Company. (See Fortescue, Charles L., assignor.)
Westinghouse Electric and Manufacturing Company. (See Haelfely, Emil, assignor.)
Westinghouse Electric and Manufacturing Company. (See Hartenheim, Max, assignor.)
Westinghouse Electric and Manufacturing Company. (See Hayes and Moss, assignors.)
Westinghouse Electric and Manufacturing Company. (See Hellmund, Rudolf E., assignor.)
Westinghouse Electric and Manufacturing Company. (See Jackson, Ray P., assignor.)
Westinghouse Electric and Manufacturing Company. (See Jennings, Oliver S., assignor.)
Westinghouse Electric and Manufacturing Company. (See Lum, Walter O., assignor.)
Westinghouse Electric and Manufacturing Company. (See MacGahan, Paul, assignor.)
Westinghouse Electric and Manufacturing Company. (See Mahoney, Joseph N., assignor.)
Westinghouse Electric and Manufacturing Company. (See McConahey, William M., assignor.)
Westinghouse Electric and Manufacturing Company. (See McCoy, James P. A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Meyer, Friedrich W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Miller, Frederick H., assignor.)
Westinghouse Electric and Manufacturing Company. (See Mills, Chester R., assignor.)
Westinghouse Electric and Manufacturing Company. (See Perkins, Laurence M., assignor.)
Westinghouse Electric and Manufacturing Company. (See Pyrah, William S., assignor.)
Westinghouse Electric and Manufacturing Company. (See Randall, Karl C., assignor.)
Westinghouse Electric and Manufacturing Company. (See Reed, Emerson G., assignor.)
Westinghouse Electric and Manufacturing Company. (See Schanke and Candee, assignors.)
Westinghouse Electric and Manufacturing Company. (See Scheibe, Harold M., assignor.)
Westinghouse Electric and Manufacturing Company. (See Sieber, Ferdinand, assignor.)
Westinghouse Electric and Manufacturing Company. (See Simmon, Karl A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Smith, Benjamin H., assignor.)
Westinghouse Electric and Manufacturing Company. (See Spooner, Thomas, assignor.)
Westinghouse Electric and Manufacturing Company. (See Storer, Norman W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Trood and Chovan, assignors.)
Westinghouse Machine Company, The. (See Herr, Herbert F., assignor.)
Westinghouse Machine Company, The. (See Kasley, Alexander T., assignor.)
Westman, August J., Monroe, Wash. Nut-lock. No. 1,226,834; May 22; v. 238; p. 1061.
Weston, Edward B., Dayton, Ohio. Display-rack. No. 1,225,903; May 15; v. 238; p. 710.
Weston, Milton T., New York, N. Y. Belt-conveyer. No. 1,226,730; May 22; v. 238; p. 1026.
Westover, Claude O., Jacksonville, Fla. Vehicle-bumper. No. 1,224,817; May 1; v. 238; p. 249.
Wetherell Tag-Stringing Machine Company. (See Whatley, Alfred H., assignor.)
Whatley, Alfred H., Providence, R. I., assignor to Wetherell Tag-Stringing Machine Company, Fall River, Mass. Tag-tying machine. No. 1,225,090; May 8; v. 238; p. 392.
Wheale, George, Meadowbrook, Pa. Dust-pan. No. 1,226,153; May 15; v. 238; p. 796.
Wheary, George H., Racine, Wis. Wardrobe-suitcase. No. 1,224,250; May 1; v. 238; p. 48.
Wheatley, Arthur W., *et al.* (See Phillips, George B., assignor.)
Wheeler, David B., Washington, D. C. Blank for negotiable banking instruments. No. 1,225,543; May 8; v. 238; p. 545.
Wheeler McDowell Elevator Company. (See McDowell, Lewis J., assignor.)
Wheeler, William J., Patchogue, N. Y. Trip riding-pawl. No. 1,226,731; May 22; v. 238; p. 1027.
Wheelock, Ernest O., Chicago, Ill. Container. No. 1,226,154; May 15; v. 238; p. 796.
Wheelock, Russell A. (See Smith, Irvin G., assignor.)
Whitaker-Glessner Company. (See Hunker, Martin L., assignor.)
Whitaker, James H. (See Nimphius, Emil, assignor.)
Whitaker, Louis P. (See Freeman and Whitaker.)
Whitaker, William J., Reeds, Mo. Saw-table and track. No. 1,225,545; May 8; v. 238; p. 546.
Whitall Tatum Company. (See Brumley, Howard V., assignor.)
Whitbeck, Neal W., assignor to Michigan Lubricator Company, Detroit, Mich. Valve. No. 1,226,040; May 15; v. 238; p. 757.
Whitcome, William F., Chicago, Ill. Machine and method for making paper tubes. No. 1,225,091; May 8; v. 238; p. 393.
White-American Locomotive Sander Company. (See White, William H., assignor.)
White, Carter, London, England. Treatment of mineral oils and residues for the production of lower-boiling hydrocarbons. No. 1,226,041; May 15; v. 238; p. 757.
White, Charles E., Moline, Ill., assignor to Deere & Manour Company, Harrow. No. 1,225,904; May 15; v. 238; p. 710.
White, Clarence W., Chicago, Ill. Projectile. No. 1,226,732; May 22; v. 238; p. 1027.
White, Ernest M., Detroit, Mich. Lubricating system for internal-combustion engines. No. 1,224,694; May 1; v. 238; p. 206.
White, Frank C., assignor to The Wilcox & White Company, Meriden, Conn. Pneumatic player mechanism. No. 1,227,510; May 22; v. 238; p. 1286.
White, Franklin M., assignor of one-half to J. Atkinson, Toledo, Ohio. Window-ventilator. No. 1,224,818; May 1; v. 238; p. 249.
White, George, assignor to P. Panoulias, Jersey City, N. J. Feeding or conveying mechanism. No. 1,226,982; May 22; v. 238; p. 1094.
White, Harry R., assignor to The Gilliam Manufacturing Company, Canton, Ohio. Bow rest and clamping device. No. 1,226,287; May 15; v. 238; p. 845.
White, James B., Bolivar, Tenn. Agricultural implement. No. 1,228,273; May 29; v. 238; p. 1572.
White, James E., Baltimore, Md. Trap. No. 1,226,288; May 15; v. 238; p. 846.
White, William A., New York, N. Y. Atomizer. No. 1,227,352; May 22; v. 238; p. 1236.
White, William H., assignor to White-American Locomotive Sander Company, Inc., Roanoke, Va. Sand-trap. No. 1,226,427; May 15; v. 238; p. 889.
Whitehead & Hoag Company, The. (See Roehm, Richard, assignor.)
Whitesell, David P., Greenville, Ohio. Film-winding device. No. 1,225,905; May 15; v. 238; p. 710.
Whiteside, J. Ado. (See Hazlewood, William A., assignor.)
Whitin, George M., assignor to The Whitin Machine Works, Whitinsville, Mass. Heilman comber. No. 1,224,985; May 8; v. 238; p. 357.
Whitin Machine Works, The. (See Whitin, George M., assignor.)
Whitman, Frank V., Walkerville, Mont. Bicycle-gearing. No. 1,225,544; May 8; v. 238; p. 546.

Whitney, Horace E., Cambridge, Mass., assignor to Dover Stamping and Manufacturing Company, Portland, Me. Lamp-container. No. 1,226,733; May 22; v. 238; p. 1027.

Whittier, Mericos H. (See Coleston, Claude E., assignor.)

Wiberg, Georg, Stockholm, Sweden. Apparatus for preparing coffee, tea, or similar drinks. No. 1,225,690; May 8; v. 238; p. 595.

Wiberg, Oskar A., Finspong, assignor, by mesne assignments to Aktiebolaget Ljungströms Ångturbin, Stockholm, Sweden. Turbine-wheel. No. 1,227,986; May 29; v. 238; p. 1481.

Wickberg, Godfrey, Seattle, Wash. Reading attachment for chairs. No. 1,228,274; May 29; v. 238; p. 1573.

Widger, Edwin W., Downsville, N. Y. Work-holding vise. No. 1,228,275; May 29; v. 238; p. 1573.

Wieber, George, Washington, D. C. Milk-bottle top. No. 1,224,251; May 1; v. 238; p. 49.

Wieda, Ernst F. W., Paterson, N. J. Making ice-cream. No. 1,228,152; May 29; v. 238; p. 1534.

Wiederbold, Henry, assignor to The Barber Asphalt Paving Company, Philadelphia, Pa. Apparatus for applying mastic to walls. No. 1,228,353; May 29; v. 238; p. 1600.

Wiener, Bernhard, Chicago, Ill. Acetylene-burner. No. 1,225,383; May 8; v. 238; p. 493.

Wieting, Carl A., Snoqualmie, Wash. Automatic gas cut-off. No. 1,224,586; May 1; v. 238; p. 168.

Wigginton, George P., assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Temporary binder. No. 1,227,717; May 29; v. 238; p. 1387.

Wigginton, George P., assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Temporary binder. No. 1,227,718; May 29; v. 238; p. 1388.

Wigren, Amandus, Ornskoldsvik, Sweden. Support for life-preservers. No. 1,224,819; May 1; v. 238; p. 250.

Wigtel, Carl, Brooklyn, N. Y., assignor to The Watson-Stillman Company, Aldene, N. J. Hydraulic jack. No. 1,225,906; May 15; v. 238; p. 711.

Wikberg, Johan. (See Wikberg, Samuel A. and J.)

Wikberg, Samuel A. and J., Everson, Wash. Drafting instrument. No. 1,227,862; May 29; v. 238; p. 1438.

Wikstedt, Frans F., Fitchburg, Mass. Egg-beater holder. No. 1,225,907; May 15; v. 238; p. 711.

Wilber, Lyman J., Brockton, Mass. Receptacle-filler. No. 1,226,042; May 15; v. 238; p. 758.

Wilcox, Clifford, Belden, Nebr. Buckle. No. 1,224,252; May 1; v. 238; p. 49.

Wilcox & White Company, The. (See White, Frank C., assignor.)

Wild, Charles M. (See Heins and Wild.)

Wildau, Michael F., Buffalo, N. Y. Vehicle-top. No. 1,225,384; May 8; v. 238; p. 493.

Wilday, Robert, New York, N. Y. Apparatus for making rubber stamps. No. 1,226,289; May 15; v. 238; p. 846.

Wilder, Allen B., assignor to Wilder Patents Company, St. Louis, Mo. Electrical toy. No. 1,226,835; May 22; v. 238; p. 1061.

Wilder Patents Company. (See Wilder, Allen B., assignor.)

Wildman, Joseph E., Landover, Md., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Slip or bill holder. No. 1,227,719; May 29; v. 238; p. 1388.

Wildman Mfg. Co. (See Ballard, George L., assignor.)

Wiley, Roy R. and W. K., Buffalo, N. Y., and W. S. Hough, Jr., St. Catharines, Ontario, Canada. Illuminated sign. No. 1,224,253; May 1; v. 238; p. 49.

Wiley, Wallace K. (See Wiley and Hough.)

Wilford, Edward B. (See Russell, Sepas, and Wilford.)

Wilhelm, Jesse E., Cleveland, Ohio, assignor to The Great Lakes Dredge & Dock Company, Chicago, Ill. Reinforced-concrete pile and making the same. No. 1,225,385; May 8; v. 238; p. 494.

Wilhelm, Joseph, and C. A. Kays, McKees Rocks, Pa. Mechanical toy. No. 1,226,155; May 15; v. 238; p. 796.

Wilhelm, Walter M., Swarthmore, and K. Rushton, Wynnewood, Pa. Time-fuse for explosive projectiles. No. 1,227,720; May 29; v. 238; p. 1389.

Wilkins, George H., Greenfield, Mass., assignor to George H. Wilkins Company, Chicago, Ill. Device for filling pipe-joints. No. 1,226,043; May 15; v. 238; p. 758.

Wilkinson, Francis A., Hatfield, England. Internal-combustion engine. No. 1,224,254; May 1; v. 238; p. 50.

Wilkinson, Louis H., and W. G. Barker, assignors to Manning, Bowman & Company, Meriden, Conn. Electrically-heated utensil. No. 1,227,721; May 29; v. 238; p. 1389.

Will, Henry N., Elmhurst, assignor to Non-Slip Tile Company, New York, N. Y. Floor-tile. No. 1,225,908; May 15; v. 238; p. 712.

Willard, Charles A., Madison, Conn. Portable abutment for automatic train-stops. No. 1,228,153; May 29; v. 238; p. 1534.

Willard, George W., assignor of one-third to C. A. French, Sherbrooke, and one-third to L. R. Willard, East Angus, Quebec, Canada. Pipe-wrench. No. 1,225,909; May 15; v. 238; p. 712.

Willard, Lockhart R., *et al.* (See Willard, George W., assignor.)

Willard Storage Battery Company. (See Willard, Theodore A., assignor.)

Willard, Theodore A., assignor to Williard Storage Battery Company, Cleveland, Ohio. Storage battery. No. 1,224,434; May 1; v. 238; p. 116.

Willard, Theodore A., assignor to Willard Storage Battery Company, Cleveland, Ohio. Connector and connection for storage batteries. No. 1,225,297; May 8; v. 238; p. 463.

Willard, Theodore A., assignor to Willard Storage Battery Company, Cleveland, Ohio. Connector and connection for storage batteries. No. 1,225,298; May 8; v. 238; p. 463.

Willard, Theodore A., assignor to Willard Storage Battery Company, Cleveland, Ohio. Storage battery. No. 1,226,290; May 15; v. 238; p. 846.

Willers, Carl, Chicago, Ill. Signal. No. 1,224,695; May 1; v. 238; p. 206.

William F. Jobbins, Incorporated. (See Lawrie, James W., assignor.)

William M. Crane Company. (See O'Dowd, Henry W., assignor.)

Williams, Ashton H. (See Turbeville, Maxie D., assignor.)

Williams, Benjamin F., Grand Rapids, Mich. Musical-leaf turner. No. 1,225,546; May 8; v. 238; p. 547.

Williams, Bert C., assignor of thirty one-hundredths to F. B. Bain, San Francisco, Cal. Air valve and trap. No. 1,226,291; May 15; v. 238; p. 847.

Williams, Charles H., Fowler, Cal. Hoe. No. 1,225,386; May 8; v. 238; p. 494.

Williams, Eden B., Chamberlin, La. Reinforced-concrete flower-pot. No. 1,224,820; May 1; v. 238; p. 250.

Williams, Francis E., Hartford, Conn. Scraper. No. 1,228,154; May 29; v. 238; p. 1535.

Williams, Fred B., Highland Park, Ill., assignor to Spiltdorf Electrical Company, Newark, N. J. Starter-coupling. No. 1,226,933; May 22; v. 238; p. 1094.

Williams, George B., Cincinnati, Ohio. Steam-trap. No. 1,224,821; May 1; v. 238; p. 250.

Williams, George M., Elizabeth, N. J., assignor to P. Lorillard Company, New York, N. Y. Cigar-case. No. 1,225,092; May 8; v. 238; p. 394.

Williams, J. J., *et al.* (See Thomas, Solomon, assignor.)

Williams, James R. (See Bonney, George W., assignor.)

Williams, Louis N. D., Ogontz, Pa. Web-holder guiding and retaining device for knitting-machines. No. 1,228,085; May 29; v. 238; p. 1514.

Williams, Michael J., Buffalo, N. Y. Hat-pin. No. 1,226,836; May 22; v. 238; p. 1062.

Williams, Milford L., Revere, Mo. Acetylene-generator. No. 1,224,822; May 1; v. 238; p. 251.

Williams, Paul F., assignor to G & W Electric Specialty Co., Chicago, Ill. Pothead-connector. No. 1,225,299; May 8; v. 238; p. 463.

Williams, Paul F., assignor to G & W Electric Specialty Co., Chicago, Ill. Connecting device for electric conductors. No. 1,225,300; May 8; v. 238; p. 464.

Williams, Paul F., assignor to G & W Electric Specialty Co., Chicago, Ill. Pothead. No. 1,228,155; May 29; v. 238; p. 1535.

Williams, Paul F., assignor to G & W Electric Specialty Co., Chicago, Ill. Connector for electrical conductors. No. 1,228,156; May 29; v. 238; p. 1535.

Williams, Thomas B. (See Smith and Williams.)

Williams, Thomas P. (See Stuard, Smith, and Williams.)

Williams, Thomas B. Orange, Mass., and F. L. Smith, Chicago, Ill., assignors to The Leavitt Machine Company, Orange, Mass. Facing-tool for dressing valve-seats, &c. No. 1,227,511; May 22; v. 238; p. 1288.

Williams, Thomas B. Orange, Mass., and F. L. Smith, Chicago, Ill., assignors to The Leavitt Machine Company, Orange, Mass. Facing-tool for dressing valve-seats, &c. No. 1,227,512; May 22; v. 238; p. 1288.

Williams, Thomas B. Orange, Mass., and F. L. Smith, Chicago, Ill., assignors to The Leavitt Machine Company, Orange, Mass. Facing-tool for dressing valve-seats, &c. No. 1,227,513; May 22; v. 238; p. 1289.

Williams, Thomas B. Orange, Mass., and F. L. Smith, Chicago, Ill., assignors to The Leavitt Machine Company, Orange, Mass. Rotary cutter. No. 1,227,514; May 22; v. 238; p. 1289.

Williams, Thomas B., F. A. Dexter, Orange, Mass., and F. L. Smith, Chicago, Ill., assignors to The Leavitt Machine Company, Orange, Mass. Facing-tool for dressing valve-seats, &c. No. 1,227,515; May 22; v. 238; p. 1290.

Williams, William A., San Francisco, Cal. Flushing-tank. No. 1,225,691; May 8; v. 238; p. 596.

Williams, William A., Barton, Ohio. Tire-valve-unseating device. No. 1,225,910; May 15; v. 238; p. 712.

Williams, William E., Chicago, Ill. Universal joint for power-shafts. No. 1,225,199; May 8; v. 238; p. 428.

Willing, Caughy B. (See Willing, William L. and C. B.)

Willing, William L. and C. B., Bellevue, Ohio. Composition for lithic building material. No. 1,226,292; May 15; v. 238; p. 847.

Wills, Arthur J., Brookfield, Mass. Means for attaching heels. No. 1,227,722; May 29; v. 238; p. 1389.

Willis, Bernard D., Chicago, Ill. Safety purse-holder. No. 1,225,692; May 8; v. 238; p. 596.

Willis, William Z., Bear Creek, Ala. Automatic wagon-brake. No. 1,224,587; May 1; v. 238; p. 169.

Williston, Benjamin F., assignor of one-half to R. E. Green, Detroit, Mich. Variable-resistance unit. No. 1,226,837; May 22; v. 238; p. 1062.

Willoughby, Victor, Jeffersonville, Ind., assignor to American Car and Foundry Company, St. Louis, Mo. Mail-pouch rack. No. 1,224,823; May 1; v. 238; p. 251.



Willoughby, Victor, Jeffersonville, Ind., assignor to American Car and Foundry Company, St. Louis, Mo. Coupling for mine-cars. No. 1,224,824; May 1; v. 238; p. 251.

Willoughby, Victor, Jeffersonville, Ind., assignor to American Car and Foundry Company, St. Louis, Mo. Passenger-car roof. No. 1,224,825; May 1; v. 238; p. 252.

Willson, Augustus C., Des Moines, Iowa. Road-making machine. No. 1,225,547; May 8; v. 238; p. 547.

Willson, Frederick, and N. Bourquin, assignors to T. A. Willson & Co., Inc., Reading, Pa. Eye-shield spectacles. No. 1,226,548; May 8; v. 238; p. 547.

Willson, William W., Gahanna, Ohio. Sprocket-wheel. No. 1,227,353; May 22; v. 238; p. 1236.

Wilson, Andrew H., *et al.* (See Noah, Robert S., assignor.)

Wilson, David H., Ridgewood, N. J., assignor to Wilson Storage Battery Company, New York, N. Y. Apparatus for charging storage batteries. No. 1,224,986; May 8; v. 238; p. 357.

Wilson, Edward E., Cleveland, Ohio. Matrix or type bar or holder. No. 1,225,093; May 8; v. 238; p. 394.

Wilson, George D. (See Davis, Monroe, assignor.)

Wilson, George W. (See Towler, Elva B., assignor.)

Wilson, John M., assignor of one-third to V. E. Mitchell and one-third to Keith and Wright, Wichita, Kans. Steam cook-stove. No. 1,226,044; May 15; v. 238; p. 758.

Wilson, J. Pearl, Jacksonville, Fla. Chain-lug. No. 1,226,156; May 15; v. 238; p. 796.

Wilson, Leonard. (See Ramsay, Samuel R., assignor.)

Wilson, Louis T., Bisbee, Ariz. Hanging shelves. No. 1,227,723; May 29; v. 238; p. 1390.

Wilson, Nichols F. (See Crossley, Albert D., assignor.)

Wilson, Robert B., trustee. (See Kuefer, Anthony, assignor.)

Wilson Storage Battery Company. (See Wilson, David H., assignor.)

Wilson, Wylie T., Philadelphia, Pa. Paper container. No. 1,226,293; May 15; v. 238; p. 847.

Wilton, John. (See Seaholm and Wilton.)

Wilts Veneer Company. (See Staley and Simmons, assignors.)

Winchester Repeating Arms Co. (See Johnson, Thomas C., assignor.)

Winchester, Roy C., Palmetto, Fla. Internal-combustion engine. No. 1,224,435; May 1; v. 238; p. 116.

Wine, William E., Toledo, Ohio. Freight-car end. No. 1,224,344; May 1; v. 238; p. 83.

Wine, William E., Toledo, Ohio. Side bearing. No. 1,224,345; May 1; v. 238; p. 83.

Wineland, Urless. (See Limpp and Wineland.)

Winer, Andrew A., Ocala, Fla. Automobile runway and lift. No. 1,225,549; May 8; v. 238; p. 548.

Winnega, Alouis L., deceased; L. M. Winnega, administratrix, Preston, Minn., assignor to O. W. Clark, Cresco, Iowa. Gate-latch. No. 1,227,863; May 29; v. 238; p. 1438.

Winnega, Lily M., administratrix. (See Winnega, Alouis L.)

Wingquist, Sven G., assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Roller-bearing. No. 1,224,346; May 1; v. 238; p. 83.

Winston, Charles S., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Combined telephone and signaling system. No. 1,226,157; May 15; v. 238; p. 797.

Winston, Frank E., and V. B. Rogers, New York, N. Y. Cuff-link. No. 1,227,864; May 29; v. 238; p. 1438.

Winter, Christian, Oskaloosa, Iowa. Gate. No. 1,225,550; May 8; v. 238; p. 548.

Winter, Daniel B. (See Parker and Winter.)

Winter, Joe, Matador, Tex. Rail-joint. No. 1,228,276; May 29; v. 238; p. 1573.

Winters, Benniah H., and N. C. Massey, assignors to The Winters-Coleman Scale Company, Springfield, Ohio. Weighing-machine. No. 1,225,387; May 8; v. 238; p. 494.

Winters-Coleman Scale Company, The. (See Winters and Massey, assignors.)

Winters, Lincoln, Watauga, S. D. Dish-washing machine. No. 1,226,428; May 15; v. 238; p. 890.

Wireless Specialty Apparatus Company. (See Pickard, Greenleaf W., assignor.)

Wisconsin Hemp Company. (See Hubler, John, assignor.)

Wise, Charles H., Ithaca, N. Y. Window-shade spring-tightener and locking bracket. No. 1,227,724; May 29; v. 238; p. 1390.

Wise, John D., Jackson, Tenn. Antiseptic tooth-brush holder and sterilizer. No. 1,224,696; May 1; v. 238; p. 207.

Wise Sportsman's Supply Co. (See Schilliuger, Henry H., assignor.)

Wiser, George L., Elkhart, Ind. Brake mechanism. No. 1,224,826; May 1; v. 238; p. 252.

Wisniewski, Joseph, Butte, Mont. Prospecting-machine. No. 1,227,865; May 29; v. 238; p. 1438.

Woerner, Eugen, assignor to Firm of R. Bosch, Stuttgart, Germany. Force-pump mechanism. No. 1,225,911; May 15; v. 238; p. 712.

Woerner, William L., New York, N. Y., assignor to The Prometheus Electric Company. Cut-out for electric sterilizers. No. 1,227,228; May 22; v. 238; p. 1196.

Wolber, Arthur F., Dayton, Ohio. Photographic screen. No. 1,226,838; May 22; v. 238; p. 1063.

Wolcott, Frank E., Hartford, Conn. Automobile-lamp. No. 1,226,294; May 15; v. 238; p. 847.

Wolcott, Robeson B., East Cleveland, assignor to R. S. Mueller, Cleveland, Ohio. Attachment-plug. No. 1,224,987; May 8; v. 238; p. 357.

Wolf, Henry, West Hoboken, N. J. Corner-piece for windows. No. 1,224,988; May 8; v. 238; p. 358.

Wolfe, Charles W., New York, N. Y. Buck-clamp. No. 1,226,045; May 15; v. 238; p. 759.

Wolfe, Garnett H., assignor to Rotary Rod Weeder & Manufacturing Company, Incorporated, Cheney, Wash. Bearing. No. 1,224,874; May 1; v. 238; p. 208.

Wolfe, Ira T., Seattle, Wash. Corn-popping machine. No. 1,224,347; May 1; v. 238; p. 84.

Wolfe, Morgan C., *et al.* (See Hubbard, Adra M. and O. M., assignors.)

Wolfe, Robert U., Omaha, Nebr. Combined tractor, roller, and plow. No. 1,225,912; May 15; v. 238; p. 713.

Wolfe, Wallace F., Schenectady, N. Y. Pipe-vise clamp. No. 1,225,301; May 8; v. 238; p. 464.

Wolff, Wallace B., Chicago, Ill., and E. K. Hood, Indianapolis, Ind., assignors to American Sliciug Machine Company, Chicago, Ill. Intermittent feeding mechanism for slicing-machines. No. 1,224,989; May 8; v. 238; p. 358.

Wolfson, Jacob, Brooklyn, N. Y. Signaling device. No. 1,226,429; May 15; v. 238; p. 890.

Wollant, John, Cleveland, Ohio. Gas heating apparatus. No. 1,225,603; May 8; v. 238; p. 596.

Wollensak, Arthur C., Milwaukee, Wis. Load-indicator for vehicles. No. 1,225,094; May 8; v. 238; p. 394.

Wolterstorff, John H., St. Paul, Minn. Steamer. No. 1,227,354; May 22; v. 238; p. 1237.

Wood, Frank W., Montclair, N. J., assignor to Charles Cory & Son, Inc., New York, N. Y. Rudder control. No. 1,225,913; May 15; v. 238; p. 713.

Wood, Frederick P., Oak Park, Ill., assignor to American Can Company, New York, N. Y. Packaging ice-cream and the like. No. 1,227,725; May 29; v. 238; p. 1390.

Wood, Harry, Santa Barbara, Cal. Crude-oil burner. No. 1,225,551; May 8; v. 238; p. 548.

Wood, Herbert J., Mount Clemens, Mich. Portable water-closet. No. 1,225,914; May 15; v. 238; p. 714.

Wood, Oscar O., *et al.* (See Bretz, George W., assignor.)

Wood, Preston K., Los Angeles, Cal. Mechanical movement for pump-heads. No. 1,226,430; May 15; v. 238; p. 890.

Woodbridge, Joseph L., Philadelphia, Pa. Electromagnetic switch. No. 1,225,388; May 8; v. 238; p. 495.

Woodbury, William H. (See Asplet, Arthur, assignor.)

Woodford, Arthur J., assignor of one-fourth to E. F. Buchan and one-fourth to W. H. Buchan, Worthington, Minn. Pump-tool. No. 1,226,431; May 15; v. 238; p. 891

Woodford, Frank E., Chicago, Ill. Car-handling apparatus. No. 1,225,694; May 8; v. 238; p. 596

Woodhead, Daniel, assignor to Central Electric Company, Chicago, Ill. Cable-terminal. No. 1,227,726; May 29; v. 238; p. 1390

Woods, Clinton E., assignor to American Graphophone Company, Bridgeport, Conn. Sound-conveyer and tone-modulator. No. 1,226,839; May 22; v. 238; p. 1063.

Wooldridge, James L., Decatur, Tex. Mote-board for cotton-gins. No. 1,227,727; May 29; v. 238; p. 1391.

Worden, Aden M., Phoenix, Ariz. Train-stopping apparatus. No. 1,227,866; May 29; v. 238; p. 1439.

Work, Willis I., assignor to Walworth Manufacturing Company, Boston, Mass. Electric-fan attachment. No. 1,226,734; May 22; v. 238; p. 1027.

Wray, Harry C., North Bend, Oreg. Camera attachment. No. 1,224,588; May 1; v. 238; p. 169.

Wright, Adrian P., Valley Center, Kans. Traction baling-machine. No. 1,227,355; May 22; v. 238; p. 1237.

Wright, Charles V., Reynolds, Pa. Shaking-screen. No. 1,228,277; May 29; v. 238; p. 1573.

Wright, Howard J. (See Strong, Ira, assignor.)

Wright, Isabella J., Kalamazoo, Mich. Ink-removing and bleaching compound. No. 1,226,735; May 22; v. 238; p. 1028.

Wright, James E., Bay City, Mich. Shot-spreading device for gun-muzzles. No. 1,227,987; May 29; v. 238; p. 1481.

Wright, John R., *et al.* (See Medanich, Daniel B., assignor.)

Wright, John W., Marion township, Boone county, Ind. Division-block for baling-presses. No. 1,224,697; May 1; v. 238; p. 207.

Wright, Noah S. (See Moakler, John W., assignor.)

Wright, Noah S., East Worcester, N. Y. Motor-oiler protector. No. 1,227,728; May 29; v. 238; p. 1391.

Wright, Walter, New York, N. Y. Rotary type-supply drum. No. 1,226,046; May 15; v. 238; p. 759.

Wright, Walter E., Cleveland, Ohio. Paint composition. No. 1,226,934; May 22; v. 238; p. 1095.

Wright Wire Company. (See Dooley, James P., assignor.)

Wuensch, Hearman, and O. Pfeil, Fredericksburg, Tex. Cotton-press follower-board. No. 1,225,095; May 8; v. 238; p. 395.

Wuesthoff, Frederick J., San Francisco, Cal. Knife-setting gage. No. 1,225,552; May 8; v. 238; p. 549.

Wüling, Firm of Johann A. (See Busch and Lauch, assignors.)

Wunning, Richard, New York, N. Y. Wheel rim and tire. No. 1,227,988; May 29; v. 238; p. 1481.

Würgler, Jakob. (See Engl, Grob, and Würgler.)
Wyand, William, assignor to Absecon Manufacturing Company, Absecon, N. J. Air-moistener. No. 1,228,157; May 29; v. 238; p. 1536.
Wylie, Thomas B., Pittsburgh, Pa. Proportional gas-meter. No. 1,226,158; May 15; v. 238; p. 797.
Wyman, Jesse M., Canton, Ohio. Turning-signal for automobiles. No. 1,224,348; May 1; v. 238; p. 84.
X-Ray Incubator Company. (See Kate, John H., assignor.)
Yaroscak, Anna E. T., Chisholm, Minn. Pot-protector. No. 1,227,356; May 22; v. 238; p. 1238.
Yarrow, Harold E., Glasgow, Scotland. Propeller chamber or tunnel for shallow-draft vessels. No. 1,227,357; May 22; v. 238; p. 1238.
Yater, James M., Nevada, Mo. Float-controlled valve for water systems. No. 1,226,840; May 22; v. 238; p. 1063.
Yates, John L., New York, N. Y. Bed-spring. No. 1,228,158; May 29; v. 238; p. 1536.
Yawman & Erbe Mfg. Co. (See Weiss, Albert T., assignor.)
Yeakey, Robert L., Cave in Rock, Ill. Stringed musical instrument. No. 1,227,358; May 22; v. 238; p. 1238.
Yeakey, Robert L., Cave in Rock, Ill. Violin chin-rest. No. 1,227,359; May 22; v. 238; p. 1238.
Yelinek, Emil E., Clutler, Iowa. Detachable clothes-rack for opera-chairs. No. 1,227,516; May 22; v. 238; p. 1290.
Yerger, Charles W., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,225,096; May 8; v. 238; p. 395.
Yessne, Harman, Duluth, Minn. Street-cleaning device. No. 1,224,349; May 1; v. 238; p. 85.
Yocum, Anthony A., North St. Paul, Minn. Speedometer-pinion bracket. No. 1,227,517; May 22; v. 238; p. 1291.
Yogerst, John. (See Yogerst and Wenck, assignors.)
Yogerst, John S., and W. M. Wenck, assignors of one-half to said John S. Yogerst and one-half to J. Yogerst, St. Cloud, Minn. Sash-fastener. No. 1,226,736; May 22; v. 238; p. 1028.
Yost, Winfield H., Montreal, Quebec, Canada, assignor to Rodger Ballast Car Company, Chicago, Ill. Car. No. 1,225,302; May 8; v. 238; p. 465.
Youlten, William, Hove, England. Sighting of small-arms. No. 1,226,935; May 22; v. 238; p. 1095.
Youlten, William, Hove, England. Sighting of guns. No. 1,226,936; May 22; v. 238; p. 1095.
Young, Charles D., Altoona, Pa. Superheater. No. 1,224,990; May 8; v. 238; p. 359.
Young, Charles D., Altoona, Pa. Superheater. No. 1,224,991; May 8; v. 238; p. 359.
Young, Harry W., Chicago, Ill. Electrical fuse. No. 1,228,354; May 29; v. 238; p. 1601.
Young-Hartsell Mills Company. (See Hartsell and West, assignors.)
Young, John, New Westminster, British Columbia, Canada. Crude-oil burner. No. 1,227,867; May 29; v. 238; p. 1439.
Young, John M., assignor to American Can Company, San Francisco, Cal. Operating on can-bodies. No. 1,225,200; May 8; v. 238; p. 429.
Young, Leonard A. (See Mahoney, Thomas, assignor.)
Young, Leonard A., Highland Park, Mich. Rim-strip. No. 1,226,737; May 22; v. 238; p. 1028.
Young, Ransome B., Hazleton, Pa. Plumb-level. No. 1,227,360; May 22; v. 238; p. 1238.
Young, Valner W., Abilene, Tex. Fruit-picker. No. 1,225,097; May 8; v. 238; p. 395.
Young, William I., Jamaica Plain, Mass. Blacking-dauber. No. 1,226,432; May 15; v. 238; p. 891.
Young, William R., assignor to The Bryant Electric Company, Bridgeport, Conn. Current-tap. No. 1,226,433; May 15; v. 238; p. 891.
Youngs, Fred M. (See Cochran and Youngs.)
Youngs, Harry F., Santa Cruz, Cal. Coaster-brake. No. 1,227,868; May 29; v. 238; p. 1439.
Zaleski, Frank, West Roxbury, assignor to Reece Shoe Machinery Company, Boston, Mass. Machine for making composite insoles. No. 1,227,729; May 29; v. 238; p. 1392.
Zarth, Anna, administratrix. (See Zarth, Otto.)
Zarth, Otto, deceased, Aurora, Ill.; A. Zarth, administratrix. Nipple-wrench. No. 1,224,875; May 1; v. 238; p. 268.
Zelfang, John F. (See Slingerland, Zelfang, and Goffin.)
Zelger, Lee. (See Lusk and Zelger.)
Zelsel, Adolph, assignor to Zelsel Electric Co., Bel Air, Md. Controller for indicating systems. No. 1,224,827; May 1; v. 238; p. 252.
Zelsel Electric Co. (See Zelsel, Adolph, assignor.)
Zerk, Oscar, Cleveland, Ohio, assignor, by mesne assignments, to G. W. Bowen, Auburn, N. Y. Making grease-cup bodies. No. 1,225,915; May 15; v. 238; p. 714.
Zerk, Oscar, Cleveland, Ohio, assignor, by mesne assignments, to G. W. Bowen, Auburn, N. Y. Grease-cup. No. 1,227,730; May 29; v. 238; p. 1392.
Zerk, Oscar, Cleveland, Ohio, assignor, by mesne assignments, to G. W. Bowen, Auburn, N. Y. Grease-cup. No. 1,227,731; May 29; v. 238; p. 1392.
Ziemer, Fredrick, Freeport, N. Y. Pencil attachment. No. 1,224,992; May 8; v. 238; p. 359.
Ziemer, Fredrick, Freeport, N. Y. Cue-tip. No. 1,225,201; May 8; v. 238; p. 429.
Zifferer, Lothar R., Ridgewood, N. J. Expansion device. No. 1,224,098; May 1; v. 238; p. 207.
Ziperstein, Israel I., New York, and A. C. Kaplan, Brooklyn, assignors of fifteen one-hundredths to N. Schreiber, fifteen one-hundredths to A. Schreiber, fifteen one-hundredths to B. Kaiser, five one-hundredths to B. Oppenheim, New York, N. Y., and one thirty-second to K. Zucker, Chicago, Ill. Airship. No. 1,228,159; May 29; v. 238; p. 1536.
Zistel, Oscar, Sandusky, Ohio. Fish-conveying auto. No. 1,227,732; May 29; v. 238; p. 1393.
Zuber, John G., Chicago, Ill. Variable-delivery pump and injector. No. 1,224,589; May 1; v. 238; p. 169.
Zucker, Kate, *et al.* (See Ziperstein and Kaplan, assignors.)
Zumwalt, Arthur B., Fulton, Cal. Shock-absorber. No. 1,226,434; May 15; v. 238; p. 891.

# ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

A. S. Ward Machinery Co., The. (See Ward, Ashley F., assignor.)
Aanonsen, Edward K., *et al.* (See McPhaden, Alexander, assignor.)
Adams, Salathiel S., Lafayette, Tenn. Tire-tread. No. 50,673; May 1; v. 238; p. 277.
American Bank Note Company. (See Major, Alfred S., assignor.)
American Lead Pencil Company. (See Stetson, John P., assignor.)
Armstrong Cork Company. (See Humphreys, Harry, assignor.)
Arthur Company, The. (See Freedman, Arthur O., assignor.)
Automatic Recording Safe Company, The. (See Grunwald, Albert C., assignor.)
Automatic Recording Safe Company, The. (See Hoche, Edmund S., assignor.)
Bailey, George R., assignor to Sterling Casket Hardware Company, Brooklyn, N. Y. Holy-water font. No. 50,708; May 8; v. 238; p. 613.
Bailey, George R., assignor to Sterling Casket Hardware Company, Brooklyn, N. Y. Casket-handle lug. No. 50,710; May 8; v. 238; p. 614.
Bailey, George R., assignor to Sterling Casket Hardware Company, Brooklyn, N. Y. Casket-handle lug. No. 50,771; May 15; v. 238; p. 953.
Bailey, George R., assignor to Sterling Casket Hardware Company, Brooklyn, N. Y. Ornament for caskets. No. 50,772; May 15; v. 238; p. 954.
Baker, George W., Rheems, Pa. Badge. No. 50,803; May 22; v. 238; p. 1306.
Baker, Stephen D., assignor to The Hotchkiss, Vail & Garrison Company, New York, N. Y. Water-closet bowl. No. 50,674; May 1; v. 238; p. 277.
Barnard, Arthur W., Newton, and J. W. McMillan, Marshfield, Mass., assignors to Colonial Scale Company. Weighing-scale. No. 50,804; May 22; v. 238; p. 1307.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Company, New York, N. Y. Arm for lighting-fixtures. No. 50,675; May 1; v. 238; p. 278.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Company, New York, N. Y. Wall-plate for lighting-fixtures. Nos. 50,676–8; May 1; v. 238; p. 278.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Company, New York, N. Y. Arm for lighting-fixtures. No. 50,679; May 1; v. 238; p. 278.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Company, New York, N. Y. Wall-plate for lighting-fixtures. No. 50,680; May 1; v. 238; p. 278.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Co., Inc., New York, N. Y. Wall-plate for lighting-fixtures. No. 50,709; May 8; v. 238; p. 614.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors, by mesne assignments, to Mitchell Vance Co., Inc., New York, N. Y. Wall-plate for lighting-fixtures. Nos. 50,805–6; May 22; v. 238; p. 1307.
Bonn, Samuel. (See Cerone, Pietro, assignor.)
Bourgeois, Rudolph J. (See Smith and Bourgeois.)
Bowden, Martin L. and M. L., Jr., Brooklyn, N. Y. Ring or similar article. No. 50,807; May 22; v. 238; p. 1307.
Boyer, Lola A., Firdale, Wash. Sewing-table. No. 50,711; May 8; v. 238; p. 614.
Broughton, John S., assignor to United and Globe Rubber M'f'g. Companies, Trenton, N. J. Tire. No. 50,681; May 1; v. 238; p. 279.
Brown, Kenneth W., Yonkers, N. Y., assignor to E. Quigley, as chancellor of Delta Theta Phi Law Fraternity. Key. No. 50,801; May 15; v. 238; p. 959.
Buchek, Joseph, Oak Park, Ill. Lock. No. 50,773; May 15; v. 238; p. 954.
Buckeye Incubator Company, The. (See Smith, Samuel B., assignor.)
Buckley, Warren B., New York, N. Y. Tire-tread. No. 50,828; May 29; v. 238; p. 1611.
Bunting, James H., assignor to Susquehanna Silk Mills, New York, N. Y. Brocade. Nos. 50,829–31; May 29; v. 238; pp. 1611–12.
Cerone, Pietro, assignor to S. Bonn, Syracuse, N. Y. Panel for wood furniture. No. 50,774; May 15; v. 238; p. 954.
Chein, Julius, Montclair, N. J. Toy. No. 50,832; May 29; v. 238; p. 1612.
Cohen, Henry D., Newark, N. J. Lens for headlights. No. 50,682; May 1; v. 238; p. 279.
Coleman, Herman, Kansas City, Mo. Casket. No. 50,712; May 8; v. 238; p. 614.
Colonial Scale Company. (See Barnard and McMillan, assignors.)
Cummings, Thomas F., Chicago, Ill. Wheeled cabinet. No. 50,713; May 8; v. 238; p. 614.
Curtiss Aeroplane & Motor Corporation. (See Dalton, Nelson W., assignor.)
Dalton, Nelson W., Buffalo, N. Y., assignor to Curtiss Aeroplane & Motor Corporation. Aeroplane-body. No. 50,714; May 8; v. 238; p. 614.
Darling, Loren M., Des Moines, Iowa. Ring or similar article. No. 50,808; May 22; v. 238; p. 1307.
Darlington, Howard D., Dayton, Ohio. Talking-machine cabinet. No. 50,775; May 15; v. 238; p. 954.
Electric Railway Equipment Company. (See Frary, Ihna T., assignor.)
Elkins, David H., Amesbury, assignor to Gray & Davis Inc., Cambridge, Mass. Automobile-lamp. No. 50,833; May 29; v. 238; p. 1612.
Emerson Engineering Company. (See Emerson, Victor L., assignor.)
Emerson, Victor L., Alexandria, Va., assignor to The Emerson Engineering Company. Automobile-radiator. No. 50,776; May 15; v. 238; p. 954.
English & Mersick Co., The. (See Williams, Gordon, assignor.)
Fairclough, William R., Boston, Mass. Quilling for draperies, garments, or similar articles. No. 50,834; May 29; v. 238; p. 1612.
Feil, Richard, assignor to Reed & Barton Corporation, Taunton, Mass. Spoon, fork, or similar article. No. 50,835; May 29; v. 238; p. 1612.
Fensterer, Walter J., Englewood, N. J. Shade. No. 50,777; May 15; v. 238; p. 955.
Fix, Max, New York, N. Y. Pillow-slip. No. 50,836; May 29; v. 238; p. 1613.
Fleming, Paul E., Huron, S. D. Emblem. No. 50,715; May 8; v. 238; p. 615.
Forbell, Charles H., Woodhaven Junction, assignor of one-half to J. H. Kebler, New York, N. Y. Statuette. No. 50,778; May 15; v. 238; p. 955.
Foster, Roderic S. (See West and Foster.)
Frary, Ihna T., Cleveland, assignor to Electric Railway Equipment Company, Cincinnati, Ohio. Street-light standard. No. 50,716; May 8; v. 238; p. 615.
Freedman, Arthur O., assignor to The Arthur Company, Inc., New Haven, Conn. Bottle. No. 50,837; May 29; v. 238; p. 1613.
Fuller, Franz A., assignor to The J. E. Mergott Company, Newark, N. J. Desk-tray. No. 50,838; May 29; v. 238; p. 1613.
Gaspar, George, Pinehill, Pa. Combined coffee and tea pot. No. 50,779; May 15; v. 238; p. 955.
Geis, George V., Dayton, Ohio. Pan-biscuit. No. 50,810; May 22; v. 238; p. 1308.
German-American Button Company. (See Monaghan, John S., assignor.)
German-American Button Company. (See Siebert, Rudolph, assignor.)
Gold Car Heating & Lighting Company. (See Johns, Ellwood C., assignor.)
Gorham Manufacturing Company. (See Jenks, Barton P., assignor.)
Gove, Henry H., Biddeford, Me. Flushing device. No. 50,683; May 1; v. 238; p. 279.
Gray & Davis. (See Elkins, David H., assignor.)
Grunwald, Albert C., Maywood, assignor, by mesne assignments, to The Automatic Recording Safe Company, Chicago, Ill. Clock-bank case. Nos. 50,717–22; May 8; v. 238; pp. 615–16.
Guth, Edwin F., assignor to Luminous Unit Company, St. Louis, Mo. Lighting-fixture. Nos. 50,684–5; May 1; v. 238; p. 279.
Guth, Edwin F., assignor to Luminous Unit Co., St. Louis, Mo. Revolving tray. No. 50,723; May 8; v. 238; p. 617.
Hardwick & Magee Co. (See Ulmer, Harry, assignor.)
Hatch, Herbert F., Newton, assignor to W. H. Holbrook Company, Boston, Mass. Cloth, paper, leather, or other fabric. No. 50,686; May 1; v. 238; p. 279.
Hazelton Brothers. (See Plaisted, William M., assignor.)
Hoche, Edmund S., assignor to The Automatic Recording Safe Company, Chicago, Ill. Clock-bank case. Nos. 50,724–50; May 8; v. 238; pp. 617–23.
Hookstra, John B. (See Youngman, Otto J., assignor.)

Hotchkiss, Vail & Garrison Company, The. (See Baker, Stephen D., assignor.)
Humphrey, Herbert S., Kalamazoo, Mich. Casing for water-heaters. No. 50,839; May 29; v. 238; p. 1613.
Humphreys, Harry, Lancaster, assignor to Armstrong Cork Company, Pittsburgh, Pa. Linoleum, oil-cloth, or floor-covering. Nos. 50,780–5; May 15; v. 238; pp. 955–6.
Hunold, Ernest, Providence, R. I. Heel-plate for skates. No. 50,811; May 22; v. 238; p. 1308.
Hunter, Wilber E., Morgantown, W. Va. Goblet. No. 50,687; May 1; v. 238; p. 280.
Hunter, Wilber E., Morgantown, W. Va. Goblet. No. 50,751; May 8; v. 238; p. 623.
Hunter, Wilber E., Morgantown, W. Va. Goblet or similar article. No. 50,786; May 15; v. 238; p. 956.
Hunter, Wilber E., Morgantown, W. Va. Goblet. No. 50,812; May 22; v. 238; p. 1308.
J. E. Mergott Company, The. (See Fuller, Franz A., assignor.)
Jaenichen, Louis, assignor to The Standard Computing Scale Company, Detroit, Mich. Scale-frame. No. 50,688; May 1; v. 238; p. 280.
Jenks, Barton P., assignor to Gorham Manufacturing Company, Providence, R. I. Handle for a spoon, fork, or similar article. No. 50,802; May 15; v. 238; p. 959.
Johns, Ellwood C., Jersey City, N. J., assignor to Gold Car Heating & Lighting Company, New York, N. Y. Casing for thermostats. No. 50,787; May 15; v. 238; p. 956.
Johnson, Ernest S., Waterloo, Iowa. Check and deposit-slip tray. No. 50,788; May 15; v. 238; p. 956.
Jones, Charles E., Chicago, Ill. Gravity-clamp for light reflecting bowls. No. 50,689; May 1; v. 238; p. 280.
Jones, Charles E., Chicago, Ill. Rosette-clamp for light-reflecting bowls. No. 50,690; May 1; v. 238; p. 280.
Jones, Charles E., Chicago, Ill. Chain-support for chandeliers. No. 50,691; May 1; v. 238; p. 280.
Jones, Charles E., Chicago, Ill. Extension-bracket for lighting-fixtures. No. 50,692; May 1; v. 238; p. 280.
Jones, Charles E., Chicago, Ill. Electric-bracket back. No. 50,693; May 1; v. 238; p. 281.
Jones, Charles E., Chicago, Ill. Clamp for light-reflecting bowls. Nos. 50,694–5; May 1; v. 238; p. 281.
Jones, Charles E., Chicago, Ill. Scroll-clamp for light-reflecting bowls. No. 50,696; May 1; v. 238; p. 281.
Jones, Charles E., Chicago, Ill. Arm for chandeliers or brackets. No. 50,697; May 1; v. 238; p. 281.
Jones, Charles E., Chicago, Ill. Bracket-arm for lighting-fixtures. No. 50,698; May 1; v. 238; p. 281.
Jones, Charles E., Chicago, Ill. Clamp for light-reflecting bowls. Nos. 50,813–14; May 22; v. 238; p. 1308.
Jungers, John, Grafton, Wis. Range. No. 50,789; May 15; v. 238; p. 957.
Kehler, James H. (See Forbell, Charles H., assignor.)
Kern, George, Peru, Ill. Casing for vending-machines. No. 50,699; May 1; v. 238; p. 281.
Kocontes, James C., River Forest, Ill. Pneumatic-tire tread. No. 50,840; May 29; v. 238; p. 1614.
Kunkel, Benjamin H., Lemoyne, Pa. Necktie. No. 50,752; May 8; v. 238; p. 623.
Lamont, Charles T., Milwaukee, Wis. Horn. No. 50,753; May 8; v. 238; p. 624.
Lawson Manufacturing Company. (See Parisen, Robert T., assignor.)
Layman, Hebron B., assignor to The Layman Pressed Rod Company, Inc., New York, N. Y. Connecting-rod. No. 50,754; May 8; v. 238; p. 624.
Layman Pressed Rod Company, The. (See Layman, Hebron B., assignor.)
Lee, Herbert, Carthage, S. D. Poison-bottle. No. 50,815; May 22; v. 238; p. 1309.
Lucas, Philip G., Jr., St. Louis, Mo. Minnow-bucket or similar article. No. 50,755; May 8; v. 238; p. 624.
Luminous Unit Company. (See Guth, Edwin F., assignor.)
Luttringhaus, Walter, Maywood, Ill. Coffee-pot. No. 50,756; May 8; v. 238; p. 624.
Major, Alfred S., assignor to American Bank Note Company, New York, N. Y. Bank-note. Nos. 50,816–17; May 22; v. 238; p. 1309.
Martin, Haakon A., assignor to The National Cash Register Company, Dayton, Ohio. Register cabinet or casing. No. 50,841; May 29; v. 238; p. 1614.
McCorkle, Donald H., Berkeley, Cal. Gas-heater grill. No. 50,790; May 15; v. 238; p. 957.
McMahon, Thomas J., Brooklyn, N. Y. Curtain. No. 50,757; May 8; v. 238; p. 624.
McMillan, John W. (See Barnard and McMillan.)
McPhaden, Alexander, assignor of one-half to E. K. Aanonsen and one-half to J. T. Sandberg, Chicago, Ill. Pocket deposit-receptacle. No. 50,842; May 29; v. 238; p. 1614.
Miller, Jennie, Austin, Tex. Dish-scalding device. No. 50,818; May 22; v. 238; p. 1309.
Mitchell Vance Company, The. (See Barrows and Strahan, assignors.)
Moe, Aaron B., Lombard, Ill., assignor to Otis & Moe Manufacturing Company. Poultry-fountain. No. 50,700; May 1; v. 238; p. 282.
Moffatt, Maud A., Dorchester, Mass. Candy-box. No. 50,791; May 15; v. 238; p. 957.
Monaghan, John S., assignor to German-American Button Company, Rochester, N. Y. Button. Nos. 50,843–6; May 29; v. 238; pp. 1614–15.
National Cash Register Company, The. (See Martin, Haakon A., assignor.)
Nekarda, Mabel D., New York, N. Y. Button. No. 50,819; May 22; v. 238; p. 1309.
Nock, Harold E., assignor to Towle Manufacturing Company, Newburyport, Mass. Handle for spoons or analogous articles. No. 50,792; May 15; v. 238; p. 957.
Oliver, Marion F., Berkeley, Cal. Tire. No. 50,793; May 15; v. 238; p. 957.
Otis & Moe Manufacturing Company. (See Moe, Aaron B., assignor.)
Ovida Company. (See Perillat, Marie, assignor.)
Parisen, Robert T., assignor to Lawson Manufacturing Company, Pittsburgh, Pa. Top for gas-stoves. No. 50,701; May 1; v. 238; p. 282.
Pathé Frères Phonograph Company. (See Widmann, Eugene A., assignor.)
Paul, William C., Newark, N. J. Non-glare lamp-casing. Nos. 50,758–9; May 8; v. 238; p. 625.
Perillat, Marie, assignor to Ovida Company, Inc., New York, N. Y. Reducing-brassière. No. 50,702; May 1; v. 238; p. 282.
Pittsburgh Lamp, Brass & Glass Company. (See Yokel, Frank, assignor.)
Plaisted, William M., Larchmont, assignor to Hazelton Brothers, New York, N. Y. Piano-case. No. 50,794; May 15; v. 238; p. 958.
Plaisted, William M., Larchmont, assignor to Hazelton Brothers, New York, N. Y. Player-piano case. No. 50,795; May 15; v. 238; p. 958.
Plaisted, William M., Larchmont, assignor to Hazelton Brothers, New York, N. Y. Piano-case. No. 50,796; May 15; v. 238; p. 958.
Plaisted, William M., Larchmont, assignor to Hazelton Brothers, New York, N. Y. Player-piano case. No. 50,797; May 15; v. 238; p. 958.
Pleasants, Arthur H., Baltimore, Md. Indicator-hand for computers, guide maps, charts, and similar devices. No. 50,847; May 29; v. 238; p. 1615.
Pohlman, Arthur E., Watertown, Wis. Emblem. No. 50,798; May 15; v. 238; p. 958.
Quigley, Eugene, chancellor. (See Brown, Kenneth W., assignor.)
Reed & Barton Corporation. (See Fell, Richard, assignor.)
Richard, François, Cleveland, Ohio. Automobile-body. No. 50,799; May 15; v. 238; p. 959.
Ridgway, Edward J., Staten Island, N. Y. Article of manufacture. No. 50,703; May 1; v. 238; p. 282.
Ross, Charles J., Oakland, Cal. Toy figure. No. 50,820; May 22; v. 238; p. 1309.
Rothlisberger, Jacob, Muncie, Ind., assignor to W. D. Smith Silver Co. Spoon, fork, or similar article. No. 50,848; May 29; v. 238; p. 1616.
Ryan, Matthew W., New York, N. Y. Cretonne or other textile fabric. No. 50,760; May 8; v. 238; p. 625.
Sandberg, Joseph T., *et al.* (See McPhaden, Alexander, assignor.)
Schiff, Henry T., Chicago, Ill. Casing for sound-reproducing machines. No. 50,849; May 29; v. 238; p. 1616.
Sebring, Oliver H., Sebring, Ohio. Cream-pitcher or similar article. No. 50,761; May 8; v. 238; p. 625.
Sebring, Oliver H., Sebring, Ohio. Sugar-bowl or similar article. No. 50,821; May 22; v. 238; p. 1310.
Sheff, William, New York, N. Y. Ring. No. 50,762; May 8; v. 238; p. 625.
Siebert, Rudolph, assignor to German-American Button Company, Rochester, N. Y. Button. Nos. 50,850–1; May 29; v. 238; p. 1616.
Smith, Samuel B., Cleveland, assignor to The Buckeye Incubator Company, Springfield, Ohio. Brooder-stove. No. 50,763; May 8; v. 238; p. 626.
Smith, Winfield D., Asbury Park, N. J., and R. J. Bourgeois, Oak Park, assignors to W. D. Smith Silver Company, Chicago, Ill. Teapot or similar article. Nos. 50,764–5; May 8; v. 238; p. 626.
Sonora Phonograph Corporation. (See Wolff, Joseph, assignor.)
Speidel, Edwin, Cranston, assignor to Standard Neckchain Company, Providence, R. I. Link for neckchains. No. 50,766; May 8; v. 238; p. 626.
Stafford, Matilda, Urbandale, Iowa. Pie-holder. No. 50,852; May 29; v. 238; p. 1616.
Standard Computing Scale Company, The. (See Jaenichen, Louis, assignor.)
Standard Neckchain Company. (See Speidel, Edwin, assignor.)
Stephens, Alois J., Plainfield, N. J. Shade-bracket. No. 50,822; May 22; v. 238; p. 1310.
Sterling Casket Hardware Company. (See Bailey, George R., assignor.)
Stetson, John P., assignor to American Lead Pencil Company, New York, N. Y. Display-stand. No. 50,823; May 22; v. 238; p. 1310.
Strahan, George V. (See Barrows and Strahan.)
Susquehanna Silk Mills. (See Bunting, James H., assignor.)
Swetland, Esther H., North Tonawanda, N. Y. Toy. Nos. 50,853–4; May 29; v. 238; p. 1617.
Thiede, William, New Britain, Conn. Fob. No. 50,824; May 22; v. 238; p. 1310.
Tilton, George P., Attleboro, Mass. Spoon, fork, or similar article. No. 50,825; May 22; v. 238; p. 1310.
Torak, John, Moline, Ill. Plate. No. 50,826; May 22; v. 238; p. 1311.
Towle Manufacturing Company. (See Nock, Harold E., assignor.)



Trowbridge, William B., Baldwinsville, N. Y. Table-chair. No. 50,767; May 8; v. 238; p. 626.
Ulmer, Harry, assignor to Hardwick & Magee Co., Philadelphia, Pa. Rug. No. 50,800; May 15; v. 238; p. 959.
United and Globe Rubber M'f'g. Companies. (See Broughton, John S., assignor.)
Vavra, John J. (See Von Vargyas, Eugene, assignor.)
Von Vargyas, Eugene, Washington, D. C., assignor of sixty one-hundredths to J. J. Vavra, Binghamton, N. Y. Tread for automobile-tires. No. 50,769; May 8; v. 238; p. 627.
W. D. Smith Silver Co. (See Rothlisberger, Jacob, assignor.)
W. D. Smith Silver Company. (See Smith and Bourgeois, assignors.)
W. H. Holbrook Company. (See Hatch, Herbert F., assignor.)
Waehner, John, Brooklyn, N. Y. Manicuring-set case. No. 50,855; May 29; v. 238; p. 1617.
Ward, Ashley F., assignor to The A. S. Ward Machinery Co., Boston, Mass. Loaf of biscuit. No. 50,827; May 22; v. 238; p. 1311.
Werschansky, Sachary, New York, N. Y. Shaving-brush. No. 50,856; May 29; v. 238; p. 1617.
West, William G., and R. S. Foster, Aurora, Ill. Lamp base and standard. No. 50,857; May 29; v. 238; p. 1617.
Widmann, Eugene A., Brooklyn, assignor to Pathé Frères Phonograph Company, New York, N. Y. Phonograph-cabinet. Nos. 50,704–6; May 1; v. 238; pp. 282–3.
Williams, Gordon, Mount Carmel, assignor to The English & Mersick Co., New Haven, Conn. Vehicle-lamp. No. 50,770; May 8; v. 238; p. 627.
Wolna, Sylvester, Lost Creek, W. Va. Rest for clothes and other articles in washboilers. No. 50,858; May 29; v. 238; p. 1618.
Wolff, Joseph, Brooklyn, N. Y., assignor to Sonora Phonograph Corporation. Record-cabinet. No. 50,859; May 29; v. 238; p. 1618.
Yokel, Frank, assignor to Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa. Lamp-shade. No. 50,809; May 22; v. 238; p. 1308.
Youngman, Otto J., assignor of one-half to J. B. Hookstra, Berkeley, Cal. Piano. No. 50,707; May 1; v. 238; p. 283.

# ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A/S. Norske Mineralkilder, Larvik, Norway. Mineral waters. No. 116,784; May 22; v. 238; p. 1326.
A. Kreamer, Inc., Brooklyn, N. Y. Certain named cutlery, machinery, and parts thereof. No. 116,849; May 29; v. 238; p. 1636.
A. Wilhelm Company, The, Reading, Pa. Certain named paints and painters' materials. No. 116,730; May 15; v. 238; p. 980.
A. Wilhelm Company, The, Reading, Pa. Certain named paints and painters' supplies. No. 116,811; May 22; v. 238; p. 1327.
A. L. Tuska Son & Co., New York, N. Y. Certain named clothing for men, misses, and ladies. No. 116,712; May 15; v. 238; p. 979.
Abbott Company, C. M., The, Providence, R. I. Certain named articles of jewelry. No. 116,570; May 15; v. 238; p. 975.
Acme Packing Co., Chicago, Ill. Certain named goods. No. 116,738; May 22; v. 238; p. 1325.
Adams-Bagnall Electric Co., The, Cleveland, Ohio. Electric lamps and parts thereof. No. 116,739; May 22; v. 238; p. 1327.
Adams Brothers, New York, N. Y. Chewing-gum. No. 116,571; May 15; v. 238; p. 975.
Adams Brothers, New York, N. Y. Chewing-gum. No. 116,740; May 22; v. 238; p. 1325.
Ajax Pile Remedy Company, Chicago, Ill. Certain pile remedy. No. 116,495; May 8; v. 238; p. 645.
Albany Perforated Wrapping Paper Company, Albany, N. Y. Toilet-paper and paper towels. Nos. 116,388–9; May 1; v. 238; p. 305.
Albany Perforated Wrapping Paper Company, Albany, N. Y. Toilet-paper and paper towels. Nos. 116,572–3; May 15; v. 238; p. 975.
Albany Perforated Wrapping Paper Company, Albany, N. Y. Toilet-paper and paper towels. Nos. 116,741–2; May 22; v. 238; p. 1326.
Alexander & Callen, Los Angeles, Cal. Stuffed ripe and ripe olives. No. 116,496; May 8; v. 238; p. 645.
American Manganese Steel Company, Chicago, Ill. Steel, steel castings, and particularly manganese-steel castings. No. 116,390; May 1; v. 238; p. 305.
American Papeterie Company, Albany, N. Y. Writing-paper. No. 116,391; May 1; v. 238; p. 305.
American Road Machinery Company, Inc., Kennett Square, Pa. Road-making machines. No. 116,392; May 1; v. 238; p. 305.
American Sugar Refining Company, The, Jersey City, N. J., and New York, N. Y. Sugar for use as a food. No. 116,497; May 8; v. 238; p. 645.
Appelbaum, Misha, New York, N. Y. Printed folders and magazines issued monthly. No. 116,743; May 22; v. 238; p. 1325.
Ardin, Lucien, New York, N. Y. Appetizer made from select old wines. No. 116,498; May 8; v. 238; p. 645.
Armstrong Cork Company, Pittsburgh, Pa. Innersoling for shoes. No. 116,744; May 22; v. 238; p. 1325.
Atlantic Drier & Varnish Co., Philadelphia, Pa. Certain named paints and painters' materials. Nos. 116,574–5; May 15; v. 238; p. 975.
Atlas Crucible Steel Company, Dunkirk, N. Y. Tool-steels. No. 116,393; May 1; v. 238; p. 305.
B. O. & G. C. Wilson, Inc., Boston, Mass. Medicinal preparations for treating certain named diseases. No. 116,871; May 29; v. 238; p. 1637.
Baring, John, Chicago, Ill. Medical preparation for internal use for the treatment of diabetes. No. 116,394; May 1; v. 238; p. 305.
Baltimore Roofing & Asbestos Manufacturing Co., Wilmington, Del., and Asbestos, Md. Prepared asphalt roofing. No. 116,576; May 15; v. 238; p. 975.
Barker, Fred I., Minneapolis, Minn. Capsules containing atropin, strychnin, and extract cannabis indica used as home liquor and drug treatment. No. 116,499; May 8; v. 238; p. 645.
Barley Foods Co., Morgantown, W. Va. Specially-prepared and pearl barley. No. 116,395; May 1; v. 238; p. 305.
Bear & Glick, Chicago, Ill. Pressure-indicating devices. No. 116,577; May 15; v. 238; p. 975.
Beaver Company, The, Buffalo, N. Y. Toy figures and dolls. No. 116,578; May 15; v. 238; p. 975.
Beaver Company, The, Buffalo and Beaver Falls, N. Y.; Roanoke Rapids, N. C.; Thorold, Ontario, Canada, and London, England. Dolls, doll-houses, toy houses, figures, &c. No. 116,814; May 29; v. 238; p. 1635.
Berlin Fabric Glove Co. Inc., New York, N. Y. Fabric gloves. No. 116,396; May 1; v. 238; p. 305.
Berry, Andrew H., New York, N. Y. Batteries. No. 116,579; May 15; v. 238; p. 975.
Berry, Charles S., Little Rock, Ark. Minted Epsom salts. No. 116,397; May 1; v. 238; p. 305.
Bérubé, Alexandre, Berlin, N. H. Tooth powder and cream. No. 116,580; May 15; v. 238; p. 975.
Birkenfeld, Strauss & Co., New York, N. Y. Certain named clothing. No. 116,581; May 15; v. 238; p. 975.
Bittner Hunsicker & Co., Allentown, Pa. Overalls, work-shirts, and hosiery. No. 116,582; May 15; v. 238; p. 975.
Booth Fisheries Company, Chicago, Ill. Canned salmon. No. 116,501; May 8; v. 238; p. 645.
Boott Mills, Lowell, Mass. Cotton piece goods. No. 116,815; May 29; v. 238; p. 1635.
Bosca & Figli, Luigi, Canelli, Italy. Sparkling wines. No. 116,657; May 15; v. 238; p. 977.
Bouzoukis, Kostas G., Nashua, N. H. Remedy for certain named diseases. No. 116,583; May 15; v. 238; p. 975.
Boyd-Welsh Shoe Company, St. Louis, Mo. Leather and cloth shoes. No. 116,736; May 22; v. 238; p. 1325.
Breneman, Charles W., Cincinnati, Ohio. Spring-rollers for window-shades, awnings, maps, cars, &c. No. 116,585; May 15; v. 238; p. 975.
Brown & Bro., B., New York, N. Y. Soda-ash, caustic soda, chlorate of potash, bichromate of soda. No. 116,502; May 8; v. 238; p. 645.
Brown Instrument Company, The, Philadelphia, Pa. Pyrometers, tachometers, operation-recorders, &c. No. 116,398; May 1; v. 238; p. 305.
Brundage Brothers Company, The, Toledo, Ohio. Coffee, tea, salted and sugar peanuts, peanut oil and butter. No. 116,503; May 8; v. 238; p. 645.
Brundage Brothers Company, The, Toledo, Ohio. Coffee, tea, salted peanuts, sugar peanuts, &c. No. 116,586; May 15; v. 238; p. 975.
Bucadyne Chemical Company, San Francisco, Cal. Dentifrices. No. 116,504; May 8; v. 238; p. 645.
C. M. C. Stewart Sulphur Co., Seattle, Wash. Laxative tablets. No. 116,865; May 29; v. 238; p. 1636.
C. A. Gambrill Mfg. Co., Baltimore, Md. Self-rising wheat-flour. No. 116,618; May 15; v. 238; p. 976.
C. E. Slauson Co., Stamford, Conn. Canned fruits and vegetables. No. 116,694; May 15; v. 238; p. 973.
C. G. Conn, Ltd., Elkhart, Ind. Wind, stringed, and percussion instruments. No. 116,403; May 1; v. 238; p. 305.
Camp, Samuel H., Jackson, Mich. Abdominal belts or supporters. No. 116,588; May 15; v. 238; p. 975.
Campbell, Dudley D., New York, N. Y. Cotton damasks, napkins, table-cloths, and cotton piece goods. No. 116,819; May 29; v. 238; p. 1635.
Canadian-American Cereal Products Co., The, New York, N. Y. Wheat-flour. No. 116,589; May 15; v. 238; p. 975.
Cantrell & Dawson, Guymon, Okla. Laxative jam. No. 116,820; May 29; v. 238; p. 1635.
Cantrell & Dawson, Guymon, Okla. Medicinal tonic. No. 116,821; May 29; v. 238; p. 1635.
Capital City Dairy Co., Columbus, Ohio. Oleomargarin. No. 116,590; May 15; v. 238; p. 975.
Carl E. Schmidt & Co. Inc., Detroit, Mich. Leather. No. 116,737; May 22; v. 238; p. 1325.
Carpenter-Morton Company, Boston, Mass. Medicated preparation destructive or repellent to flies, lice, ticks, &c. No. 116,591; May 15; v. 238; p. 975.
Carpenter-Morton Co., Boston, Mass. Enamel paint. No. 116,822; May 29; v. 238; p. 1635.
Castle Brothers, San Francisco, Cal. Certain named foods. No. 116,505; May 8; v. 238; p. 645.
Chamberlain & Company, Inc., Boston, Mass. Certain named foods. No. 116,506; May 8; v. 238; p. 645.
Chandler, Harry H., New York, N. Y. Valve-grinding compound. No. 116,507; May 8; v. 238; p. 645.
Charles H. Brown Paint Co., The, Brooklyn, N. Y. Paste paints. No. 116,399; May 1; v. 238; p. 305.
Chase Electric Company, Chicago, Ill. Electric window-lighting and signs. No. 116,400; May 1; v. 238; p. 305.
Chicago Pneumatic Tool Company, Chicago, Ill. Automobiles and automobile-trucks. No. 116,595; May 15; v. 238; p. 975.
Chicago Varnish Company, Chicago, Ill. Varnish; paint, dry, paste, red-mixed, and ceramic; japan, &c. No. 116,745; May 22; v. 238; p. 1325.
Cincinnati Galvanizing Company, The, Cincinnati, Ohio. Garbage pails and cans and cans used in making artificial ice. No. 116,596; May 15; v. 238; p. 975.
Cincinnati Rubber Manufacturing Company, The, Norwood, Ohio. Rubber and duck beltings and hose and rubber, flax, and asbestos machinery packing. No. 116,746; May 22; v. 238; p. 1325.

Clark Thread Company, The, Newark, N. J. Crochet hooks or needles. No. 116,597; May 15; v. 238; p. 975.
Clausen, Holger V., New York, N. Y. Hair-water for the treatment of dandruff and a medicated injection and pills for treating venereal diseases. No. 116,508; May 8; v. 238; p. 645.
Cledon, James G., Dixon, Ill. Carbonated soft drinks. No. 116,492; May 1; v. 238; p. 305.
Cluthe, Charles, Sr., Cincinnati, Ohio. Trusses. No. 116,598; May 15; v. 238; p. 975.
Cochrane, J. P., Edinburgh, Scotland. Iron heads for golf-clubs. No. 116,599; May 15; v. 238; p. 976.
Colfax Bottling Works, Colfax, Iowa. Non-alcoholic carbonated beverage to be sold as a soft drink. No. 116,823; May 29; v. 238; p. 1635.
Comar Remedy Company, Hot Springs, Ark. Blood remedy for treating certain named diseases. No. 116,824; May 29; v. 238; p. 1635.
Commercial Creamery Company, Spokane, Wash. Butter and honey. No. 116,600; May 15; v. 238; p. 976.
Continental Mills, The, Lewiston, Me., and Boston, Mass. Pillow-tubing, sheeting, and cotton piece goods. No. 116,601; May 15; v. 238; p. 976.
Coony Bayer Cigar Co., Fort Wayne, Ind. Cigars. No. 116,747; May 22; v. 238; p. 1325.
Coronet Phosphate Company, New York, N. Y. Pebble phosphate. No. 116,602; May 15; v. 238; p. 976.
Cot-a-lap Company, The, Somerville, N. J. Wall-paper size adapted for covering walls, ceilings, and other surfaces. No. 116,825; May 29; v. 238; p. 1635.
Cottonseed Products Co., The, Roff, Okla. Stock and cotton-seed mixed feeds. No. 116,603; May 15; v. 238; p. 976.
Crampton-Farley Brass Co., Kansas City, Mo. Floor-drains. No. 116,604; May 15; v. 238; p. 976.
Crandall Packing Company, Palmyra, N. Y., and Birmingham, Ala. Rubber belting and hose. No. 116,748; May 22; v. 238; p. 1325.
Crew Levick Company, Philadelphia, Pa. Illuminating, lubricating, and burning oils and greases. Nos. 116,404–7; May 1; v. 238; p. 305.
Crew Levick Company, Philadelphia, Pa. Illuminating, lubricating, and burning oils and greases. No. 116,826; May 29; v. 238; p. 1635.
Crown Willamette Paper Company, San Francisco, Cal. Wrapping-paper. Nos. 116,408–10; May 1; v. 238; p. 305.
Cushman & Denison Mfg. Co., New York, N. Y. Pen-racks. No. 116,411; May 1; v. 238; p. 305.
Cushing, John A., Lancaster, N. Y. Soluble sulfonated hydrocarbon having curative properties and used in treating certain named diseases. No. 116,827; May 29; v. 238; p. 1635.
Cussins & Fearn Co., The, Columbus, Ohio. Wire fencing. No. 116,749; May 22; v. 238; p. 1325.
Cussins & Fearn Co., The, Columbus, Ohio. Mixed liquid paints. No. 116,828; May 29; v. 238; p. 1635.
Davis, Fred L., Gloucester, Mass. Salted, smoked, pickled, fresh, and canned fish. No. 116,750; May 22; v. 238; p. 1325.
De Courcy, Alice, Cincinnati, Ohio. Remedy for sore throat, pyorrhea, catarrh, and hay-fever, also a mouth-wash. No. 116,413; May 1; v. 238; p. 305.
Deagan, John C., assignor to J. C. Deagan Musical Bells, Chicago, Ill. Musical instruments of the xylophone type having metal or wooden bars. No. 116,412; May 1; v. 238; p. 305.
Derr, Geo. L., New York, N. Y. Moving-picture films. Nos. 116,414–16; May 1; v. 238; pp. 305–6.
Detwiller & Street Fireworks Manufacturing Company, New York, N. Y. Fireworks. Nos. 116,605–8; May 15; v. 238; p. 976.
Dieckerhoff, Raffloer & Co., New York, N. Y. Crochet-hooks. No. 116,609; May 15; v. 238; p. 976.
Diehl, Edward, Nashville, Tenn. Non-alcoholic carbonated beverages to be sold as soft drinks. No. 116,829; May 29; v. 238; p. 1635.
Dietrich, Pierce A., Philadelphia, Pa. Certain named medicines and pharmaceutical preparations. No. 116,680; May 15; v. 238; p. 973.
Doc. Strock Remedy Co., Akron, Ohio. Catarrh, pile, cough, &c., remedies, antiseptic powder, cathartic pills. No. 116,700; May 15; v. 238; p. 979.
Doggett, Stanley, New York, N. Y. Foundry-facings of all sorts. No. 116,752; May 22; v. 238; p. 1325.
Donohue, Patrick, Columbus, Ohio. Medicinal preparation for treatment of certain named diseases. No. 116,610; May 15; v. 238; p. 976.
Doran, William J. H., Denver, Colo. Substitute for coffee. No. 116,611; May 15; v. 238; p. 976.
Durkee-Atwood Co., Minneapolis, Minn. Certain named lubricating oils and greases. No. 116,417; May 1; v. 238; p. 306.
E-ZE Products Co., Inc., The, New York, N. Y. Cold-cream. No. 116,421; May 1; v. 238; p. 306.
E. & Z. Van Raalte, New York, N. Y. Nettings, veils, and veilings in the piece. No. 116,480; May 1; v. 238; p. 307.
E. A. Bowman Co., Detroit, Mich. Spark and priming plugs. No. 116,584; May 15; v. 238; p. 975.
E. P. Johnson Piano Co., Ottawa, Ill. Talking-machines. No. 116,525; May 8; v. 238; p. 646.
Eastman Kodak Co., Rochester, N. Y. Photographic paper. Nos. 116,612–15; May 15; v. 238; p. 976.
Edgar Roberts Manufacturing Company, St. Louis, Mo. Cakes of soap made in part by the use of cochin or cocoanut oil. No. 116,466; May 1; v. 238; p. 307.
Eigenmann, August P., Evansville, Ind. Work-shirts. No. 116,509; May 8; v. 238; p. 645.
Elder Manufacturing Co., St. Louis, Mo. Men's and boys' dress, negligée, and work shirts. No. 116,418; May 1; v. 238; p. 305.
Elgin American Manufacturing Co., Elgin, Ill. Certain named articles made of precious materials. No. 116,616; May 15; v. 238; p. 976.
Elliott, William A., Brockton, Mass. Shoe-polish. No. 116,419; May 1; v. 238; p. 306.
Emil Grossman Manufacturing Corporation, Brooklyn, N. Y. Spark-plugs. No. 116,758; May 22; v. 238; p. 1325.
Emil Grossman Manufacturing Corporation, Brooklyn, N. Y. Spark-plugs. No. 116,843; May 29; v. 238; p. 1636.
Enamel Products Company, The, Cleveland, Ohio. Table-tops. No. 116,830; May 29; v. 238; p. 1635.
Engelman, E. Y. B., Noxen, Pa. Liquid or paste detergent for the hands, fabrics, machinery, leather-dressing, and a lubricant. No. 116,753; May 22; v. 238; p. 1325.
Enoch Morgan's Sons Company, New York, N. Y. Cleansing or scouring cake or powder. No. 116,540; May 8; v. 238; p. 646.
Essanay Film Manufacturing Company, Chicago, Ill. Moving-picture films. No. 116,831; May 29; v. 238; p. 1635.
Evenson, William E., Baraboo, Wis. Liquid toilet creams. No. 116,832; May 29; v. 238; p. 1635.
F. A. Hardy & Co., Chicago, Ill. Manufactured glass—namely, lenses for lanterns. No. 116,762; May 22; v. 238; p. 1325.
F. E. Okie Company, Philadelphia, Pa. Printing-inks. No. 116,677; May 15; v. 238; p. 973.
Fairley-Davidson Steel Co. Inc., The, New York, N. Y. Certain named metals and metal castings and forgings, &c. Nos. 116,833–5; May 29; v. 238; p. 1635.
Fargo, Stephen, Cleveland, Ohio. Preparation for the treatment of certain named diseases. No. 116,510; May 8; v. 238; p. 645.
Ferguson, Arthur S., Springfield, Mo. Toy moving-picture machines. No. 116,764; May 22; v. 238; p. 1325.
Finkelstein & Co., Joseph, New York, N. Y. Raspberry brandy. No. 116,423; May 1; v. 238; p. 306.
Fisk Rubber Company, The, Chicopee Falls, Mass. Rubber tires. No. 116,756; May 22; v. 238; p. 1325.
Fitzpatrick, H. B., Fort Wayne, Ind. Games. No. 116,617; May 15; v. 238; p. 976.
Florida Citrajuice Co., Winter Park, Fla. Syrups for making soft drinks and bottled non-alcoholic still or carbonated beverages made therefrom. No. 116,836; May 29; v. 238; p. 1635.
Florida Fruit Preserving Co., Jacksonville, Fla. Fruit jellies, preserves, and marmalades. No. 116,511; May 8; v. 238; p. 645.
Folsom Asparagus Gin Co., San Francisco, Cal. Asparagus gin. No. 116,512; May 8; v. 238; p. 645.
Foose, Alphonse P., Dayton, Ohio. Remedy for muscular rheumatism. No. 116,513; May 8; v. 238; p. 645.
Forristall, Florence, Brookline, Mass. Boxes of paper or cardboard. No. 116,837; May 29; v. 238; p. 1635.
Forstmann & Huffmann Co., Passaic, N. J. Woolen and worsted piece goods. Nos. 116,838–42; May 29; v. 238; p. 1636.
Franklin MacVeagh & Company, Chicago, Ill. Periodical or journal published monthly. No. 116,774; May 22; v. 238; p. 1326.
Frictionless Metal Co., Chattanooga, Tenn. Chemically-alloyed high-speed bearing metal. No. 116,425; May 1; v. 238; p. 306.
Frost Remedy Company, Albany, Mo. Remedy for asthma. No. 116,514; May 8; v. 238; p. 645.
Gardner, Henry A., Washington, D. C. Paints, especially shingle-paint. No. 116,757; May 22; v. 238; p. 1325.
Geis, Renata, Ross township, Allegheny county, Pa. Salve and cough medicine for certain named diseases. No. 116,619; May 15; v. 238; p. 976.
General Chemical Company, New York, N. Y. Effervescent salt. No. 116,426; May 1; v. 238; p. 306.
General Roofing Manufacturing Company, East St. Louis, Ill. Wood-preservatives and creosote shingle-stains. No. 116,515; May 8; v. 238; p. 645.
Germicide Company, The, Denver, Colo. Antiphlogistic preparation in the form of a plastic dressing. No. 116,516; May 8; v. 238; p. 645.
George Borgfeldt & Co., New York, N. Y. Certain named pharmaceutical preparations. Nos. 116,816–18; May 29; v. 238; p. 1635.
Gibson Company, The, Indianapolis, Ind. Wheel-rims, tire-holders, seat-covers, bumpers, and fenders. No. 116,620; May 15; v. 238; p. 976.
Gilham, Dilman C., Schuylkill Haven, Pa. A peanut-butter and honey food compound. No. 116,621; May 15; v. 238; p. 976.
Glencrest Food Co., Chicago, Ill. Spaghetti, apple-butter, mince-meat, marmalades. No. 116,517; May 8; v. 238; p. 645.
Goldman Bros., St. Louis, Mo. Tables, chairs, beds, wardrobes, sideboards, desks, couches. Nos. 116,622–3; May 15; v. 238; p. 976.



Goodrich Drug Company, Omaha, Nebr. Toilet water, perfumes, nail-polish. No. 116,518; May 8; v. 238; p. 645.
Goodwill Electric Company, The, Chicago, Ill. Electric heating-pads. No. 116,624; May 15; v. 238; p. 976.
Goodyear Tire & Rubber Company, The, Akron, Ohio. Soles and heels for boots and shoes formed of an artificial composition. No. 116,519; May 8; v. 238; p. 645.
Grain Chemical Company, Inc., The, New York, N. Y. Organic phosphorus compounds. No. 116,520; May 8; v. 238; p. 645.
Graphite Lubricating Company, The, Boundbrook, N. J. Self-lubricating trolley-wheel bushings and metal and graphite bearings and bushings. No. 116,521; May 8; v. 238; p. 645.
Gray Co., Jane, New York, N. Y. Dolls. No. 116,768; May 22; v. 238; p. 1326.
Grecian Imp. & Trading Co. Inc., New York, N. Y. Bottled Grecian white gin. Nos. 116,625–6; May 15; v. 238; p. 976.
Grieshamer, John, Jacksonville, Fla. Liquid polish for auto and carriage bodies, furniture, &c. No. 116,428; May 1; v. 238; p. 306.
Grip Nut Company, Chicago, Ill., and South Whitley, Ind. Nuts, bolts, and metal washers. No. 116,429; May 1; v. 238; p. 306.
Groff, Raymond M., Lancaster, Pa. Cereal breakfast food. No. 116,627; May 15; v. 238; p. 976.
Gulfport Grocery Company, Gulfport, Miss. Wheat-flour. No. 116,628; May 15; v. 238; p. 976.
Gund, George, Cleveland, Ohio. Smoking-tobacco. No. 116,760; May 22; v. 238; p. 1325.
Hagan, John C., Richmond, Va. Natural and artificial mineral water. No. 116,761; May 22; v. 238; p. 1325.
Halpern, Paul S., New York, N. Y. Cotton piece goods. No. 116,844; May 29; v. 238; p. 1636.
Hanlon & Goodman Co., New York, N. Y. Paint-brushes. No. 116,629; May 15; v. 238; p. 976.
Harbison-Walker Refractories Company, Pittsburgh, Pa. Fire-brick. No. 116,630; May 15; v. 238; p. 976.
Hardie, George R., New York, N. Y. Condensed milk. No. 116,522; May 8; v. 238; p. 646.
Harris, Carl C., Orange, Mass. Punches and pincers. No. 116,763; May 22; v. 238; p. 1325.
Haseltine, Sherwin L., Springfield, Mo. Tablets for treatment of la grippe and colds. No. 116,631; May 15; v. 238; p. 976.
Hatfield, Andrew L., Hillside, N. J. Substitute for leather and rubber. No. 116,764; May 22; v. 238; p. 1325.
Hawek, Frederick W., Omaha, Nebr. Overcoats. No. 116,632; May 15; v. 238; p. 977.
Heisey & Co., A. H., Newark, Ohio. Lime blown glass. No. 116,634; May 15; v. 238; p. 977.
Heisig & Norvell, Beaumont, Tex. Certain named foods. No. 116,633; May 15; v. 238; p. 977.
Heller & Co., B., Chicago, Ill. Polish for vehicle-bodies and the like. No. 116,765; May 22; v. 238; p. 1326.
Hero Snap Fastener Company, New York, N. Y. Metal snap-fasteners or snap-fastening buttons or clasps. No. 116,635; May 15; v. 238; p. 977.
Herzog, Moses, New York, N. Y. Hair-nets. No. 116,845; May 29; v. 238; p. 1636.
Hill-Smith Metal Goods Company, The, Boston, Mass. Repair parts for automobile-engines and certain named tools. No. 116,430; May 1; v. 238; p. 306.
Hillerich & Bradsby Company, Louisville, Ky. Certain named sporting goods. No. 116,637; May 15; v. 238; p. 977.
Hirsh, Wickwire Company, Chicago, Ill. Men's and youths' coats, waistcoats, trousers, and overalls. No. 116,431; May 1; v. 238; p. 306.
Holcomb & Hoke Mfg. Co., Indianapolis, Ind. Peanut-bags. No. 116,766; May 22; v. 238; p. 1326.
Holland Food Corporation, New York, N. Y. Condensed skimmed milk. No. 116,638; May 15; v. 238; p. 977.
Home Products Company, The, Newburgh, N. Y. Vanishing cream. No. 116,639; May 15; v. 238; p. 977.
Hood Rubber Company, Watertown, Mass. Rubber boots, shoes, and overshoes, rubber-sole canvas shoes. Nos. 116,640–3; May 15; v. 238; p. 977.
Hopfinger & Roth, St. Louis, Mo. Hair-dressing. No. 116,644; May 15; v. 238; p. 977.
Hunold, Ernest, Providence, R. I. Ice-skates and parts thereof. No. 116,645; May 15; v. 238; p. 977.
Hydragas Corporation, The, New York, N. Y. Certain named vaporizing device. No. 116,646; May 15; v. 238; p. 977.
Imperial Candy Co., Seattle, Wash. Certain named confectionery. No. 116,524; May 8; v. 238; p. 646.
India Rubber Company, New Brunswick, N. J., and New York, N. Y. Hard-rubber acid-conducting pipes. No. 116,767; May 22; v. 238; p. 1326.
Interstate Engine & Tractor Company, Waterloo, Iowa. Tractors. No. 116,432; May 1; v. 238; p. 306.
Ireland Chemical Co., Chicago, Ill. Antiseptic, astringent, &c., preparation for treatment of diseases of the respiratory mucous membranes. No. 116,647; May 15; v. 238; p. 977.
Isko, Incorporated, Detroit, Mich. Pumps and compressors. No. 116,846; May 29; v. 238; p. 1636.
J. Bulova Company, New York, N. Y. Watches. No. 116,587; May 15; v. 238; p. 975.
J. Paskus & Son, New York, N. Y. Sole-leather. No. 116,786; May 22; v. 238; p. 1326.
J. C. Deagan Musical Bells. (See Deagan, John C., assignor.)
J. M. Robinson, Norton & Co., Louisville, Ky. Certain named clothing. No. 116,683; May 15; v. 238; p. 978.
J. P. Eustis Manufacturing Company, Boston, Mass. Bath-tub seats, shelf rails and brackets, robe and spray hooks. No. 116,420; May 1; v. 238; p. 306.
Jacobs, Wilbert R., Emlenton, Pa. Polishing-oils. No. 116,648; May 15; v. 238; p. 977.
James L. Taylor Mfg. Co., Poughkeepsie, N. Y. Wrenches, clamps, and clamp-carriers. No. 116,471; May 1; v. 238; p. 307.
Jaquet & Maxwell, New York, N. Y. Perfumes, face and sachet powders, creams, toilet waters. No. 116,649; May 15; v. 238; p. 977.
Jenkins, Edgar W., Chicago, Ill. Iron-cement. No. 116,650; May 15; v. 238; p. 977.
Jobbers Overall Co., Inc., Lynchburg, Va. Overalls, overall coats and pants. No. 116,433; May 1; v. 238; p. 306.
John Chatillon & Sons, New York, N. Y. Weighing-scales. No. 116,401; May 1; v. 238; p. 305.
John Chatillon & Sons, New York, N. Y. Weighing-scales. Nos. 116,592–4; May 15; v. 238; p. 975.
John Morrell & Co., Ottumwa, Iowa. Breakfast-bacon. No. 116,541; May 8; v. 238; p. 646.
John Morrell & Co., Ottumwa, Iowa. Meat products—namely, breakfast-bacon. No. 116,674; May 15; v. 238; p. 973.
Jones, Wm. K., Wichita, Kans. Infants' flat and knitted underwear. No. 116,651; May 15; v. 238; p. 977.
Jos. Schlitz Brewing Co., Milwaukee, Wis. Non-alcoholic beverage sold as a soft drink. No. 116,685; May 15; v. 238; p. 973.
Joseph G. Dill, Inc., Richmond, Va. Chewing and smoking tobacco. No. 116,751; May 22; v. 238; p. 1325.
Kammerling, Max, New York, N. Y. Furniture-polishes. No. 116,652; May 15; v. 238; p. 977.
Kervan, Charles, New York, N. Y. Odorless kerosene used as a hair-dressing and dandruff-remover. No. 116,526; May 8; v. 238; p. 646.
Keystone Rubber Manufacturing Company, Erie, Pa. Inner-tubes, liners and patches for the same. No. 116,769; May 22; v. 238; p. 1326.
King & Applebaum, New York, N. Y. Certain named clothing for women, misses, and children. No. 116,847; May 29; v. 238; p. 1636.
Kirchner, Louis W., Baltimore, Md. Remedy for certain named affections and diseases. No. 116,527; May 8; v. 238; p. 646.
Klabenes, Marie, Leigh, Nebr. Remedy for cholera affecting cattle and fowl. No. 116,528; May 8; v. 238; p. 646.
Klauber Bros. & Co., New York, N. Y. Piece goods of wool, cotton, linen, silk, and combinations thereof. No. 116,434; May 1; v. 238; p. 306.
Knight, A. Hillborn, Philadelphia, Pa. Water-paint. No. 116,848; May 29; v. 238; p. 1636.
Korn, Harold, New York, N. Y. Certain named toilet preparation. No. 116,770; May 22; v. 238; p. 1326.
Körting & Mathiesen Aktiengesellschaft, Leutzsch, near Leipzig, Germany. Arc and electric lamps, their accessories and supplies. No. 116,775; May 22; v. 238; p. 1326.
Kuehnrich, P. Max, Los Angeles, Cal. Calcium salts. Nos. 116,529–31; May 8; v. 238; p. 646.
L. Frank & Son Co., Milwaukee, Wis. Certain named canned goods. No. 116,424; May 1; v. 238; p. 306.
Lance, Shields D., Troy, Ohio. Powder used as a remedy for piles. No. 116,532; May 8; v. 238; p. 646.
Landers, Frary & Clark, New Britain, Conn. Forks, spoons, cheese-scoops, &c., made of base metal. No. 116,850; May 29; v. 238; p. 1636.
Lange Canning Co., Eau Claire, Wis. Canned fruits and vegetables. No. 116,533; May 8; v. 238; p. 646.
Larabee Flour Mills Corporation, The, Hutchinson, Kans. Wheat-flour. No. 116,654; May 15; v. 238; p. 977.
Latta, Elbert J., Lincoln, Nebr. Medical remedy for syphilis. No. 116,851; May 29; v. 238; p. 1636.
Lauderbach-Barber Co., Philipsburg, Pa. Wheat-flour. No. 116,435; May 1; v. 238; p. 306.
Lilly, Dungan & Company, Baltimore, Md. Cigars and cigarettes. No. 116,656; May 15; v. 238; p. 977.
Lindenhurst Manufacturing Co., Lindenhurst, N. Y. Buttons. No. 116,436; May 1; v. 238; p. 306.
Linn, George R., Chicago, Ill. Butter. No. 116,771; May 22; v. 238; p. 1326.
Locomotive Pulverized Fuel Company, New York, N. Y. Certain named furnaces and boilers and parts and devices for same. No. 116,772; May 22; v. 238; p. 1326.
Longwood Laboratories, Incorporated, The, Kingston, N. Y. Dandruff and falling hair. No. 116,534; May 8; v. 238; p. 646.
Louis Hilfer Company, The, Chicago, Ill. Matches. No. 116,636; May 15; v. 238; p. 977.
Louis Levy Grocer Co., Ltd., Baton Rouge, La. Wheat-flour. No. 116,655; May 15; v. 238; p. 977.
Lundborg Company, New York, N. Y. Display-stands for exhibiting perfumery in bottles and other articles for sale. No. 116,658; May 15; v. 238; p. 977.
Lyon & Healy, Chicago, Ill. Piano benches and stools, music-cabinets. No. 116,659; May 15; v. 238; p. 977.
M. Smolensky Manufacturing Co., The, Cleveland, Ohio. Metallic rotary suction and check valves. No. 116,799; May 22; v. 238; p. 1327.

M. D. Knowlton Company, Rochester, N. Y. Staying and fastening material—namely, adhesively-coated strips of paper and textile material. No. 116,653; May 15; v. 238; p. 977.

MacDonell-Chow Corp., New York, N. Y. Mineral waters. No. 116,660; May 15; v. 238; p. 977.

Machinery Merchants, Inc., New York, N. Y. Lathes. No. 116,439; May 1; v. 238; p. 306.

Malouf, Abraham M., Salt Lake City, Utah. Embroideries made of silk and wool, and suspenders. No. 116,440; May 1; v. 238; p. 306.

Manhattan Electrical Supply Company, Jersey City, N. J., and New York, N. Y. Certain named electrically-operated therapeutic apparatus and appliances and parts and attachments therefor. No. 116,662; May 15; v. 238; p. 977.

Manhattan Rubber Mfg. Co., The, New York, N. Y. Hose made partly of rubber and partly of cotton. No. 116,776; May 22; v. 238; p. 1326.

Manhattan Rubber Mfg. Co., The, New York, N. Y. Machinery packing made of rubber and asbestos. No. 116,777; May 22; v. 238; p. 1326.

Manhattan Rubber Mfg. Co., New York, N. Y. Rubber composition in sheet form. No. 116,778; May 22; v. 238; p. 1326.

Marr and Colton Organ Co., Warsaw, N. Y. Organs and parts thereof. No. 116,663; May 15; v. 238; p. 977.

Marshall Field & Company, Chicago, Ill. Electric suction-cleaners. No. 116,755; May 22; v. 238; p. 1326.

Martí, Juan, Santa Coloma de Farnés, Spain. Mineral, carbonic, and table waters. No. 116,535; May 8; v. 238; p. 646.

Martin, William E., Chicago, Ill. Metal-polish. No. 116,441; May 1; v. 238; p. 306.

Marvel Mfg. Co., New Haven, Conn. Optical toy. No. 116,664; May 15; v. 238; p. 973.

Master Talking Machine Company, The, Towanda, Pa. Talking-machines, records, needles, and parts thereof, except horns. No. 116,665; May 15; v. 238; p. 973.

Mathis, Sidney C., Walton county, Ga. Diphtheria specific. No. 116,536; May 8; v. 238; p. 646.

Mayer Brothers Company, Mankato, Minn. Tractors. No. 116,666; May 15; v. 238; p. 973.

McAfee, Norman R., Pittsburgh, Pa. Plastic or paste composition for cleaning the hands, wood, metal, earthen, and enameled wares. No. 116,773; May 22; v. 238; p. 1326.

McCain, Robert E., Chicago, Ill. Cooling, healing, and odor-destroying compound for the feet. No. 116,437; May 1; v. 238; p. 306.

McFadden, William A., New York, N. Y. Hammers. No. 116,438; May 1; v. 238; p. 306.

McKnight, Charles J., Greensburg, Pa. Toy push-cars. No. 116,661; May 15; v. 238; p. 977.

Mestayer, Henry, New Orleans, La. Antiseptic, germicide, and disinfectant for dental use. No. 116,538; May 8; v. 238; p. 646.

Mexican Petroleum Corporation, Los Angeles, Cal. Fuel-oils. No. 116,667; May 15; v. 238; p. 973.

Mid-West Box Company, Anderson and Kokomo, Ind. Corrugated and fiber board for boxes and products made from such board. No. 116,668; May 15; v. 238; p. 973.

Milbury Atlantic Mfg. Co., New York, N. Y. Bathing and gymnasium shoes of canvas, sateen, leather, &c. No. 116,669; May 15; v. 238; p. 973.

Miller, E. R., Frederick, Md. Ointment especially prepared for the eye, ear, and nose and general use. No. 116,539; May 8; v. 238; p. 646.

Miller Rubber Company, The, Akron, Ohio. Toy balloons. No. 116,670; May 15; v. 238; p. 973.

Millville Manufacturing Company, The, Philadelphia, Pa. Hemmed diapers. No. 116,671; May 15; v. 238; p. 973.

Min-Nix Company, Rochester, N. Y. Artificial lures—viz., spoons, wabblers, and spinners. No. 116,779; May 22; v. 238; p. 1326.

Mocha Pipe Company, Newark, N. J. Smoking-pipes. No. 116,780; May 22; v. 238; p. 1326.

Model Mills Company, Philadelphia, Pa. Textile rugs. No. 116,672; May 15; v. 238; p. 973.

Moler, Arthur B., Chicago, Ill. Face-cream, hair-tonic, face-lotion for use after shave or when desired. No. 116,673; May 15; v. 238; p. 973.

Monitor Stove & Range Co., The, Cincinnati, Ohio. Hot-air furnaces. No. 116,781; May 22; v. 238; p. 1326.

Moore, Ernest, London, England. Preventive from mosquito-stings. No. 116,852; May 29; v. 238; p. 1636.

Morris and Company, Chicago, Ill. Pork, and particularly for pork cured with dry salt and plain pickle. No. 116,542; May 8; v. 238; p. 646.

Mosby, William A., Marvell, Ark. Candies. No. 116,543; May 8; v. 238; p. 646.

Mount Vernon-Woodberry Mills, Incorporated, Baltimore, Md. Cotton duck. Nos. 116,442–3; May 1; v. 238; p. 306.

Münch Brewing Bottling Dept., Inc., New York and Brooklyn, N. Y. Beverage made from a compound of malt and hops and cereals. No. 116,544; May 8; v. 238; p. 646.

National Paper Products Company, San Francisco, Cal. Floor dressings and polishes. No. 116,782; May 22; v. 238; p. 1326.

National Papeterie Company, Springfield, Mass. Printing and writing papers. No. 116,675; May 15; v. 238; p. 973.

Naya Company, New York, N. Y. Hair-tonic. No. 116,444; May 1; v. 238; p. 306.

Nettles Co., S. S., The, Montgomery, Ala. Laxative tablet. No. 116,546; May 8; v. 238; p. 646.

Niagara Silk Mills, North Tonawanda, N. Y. Cotton goods in the piece. No. 116,445; May 1; v. 238; p. 306.

Niana Pure Food Company, Waukesha, Wis. Food product consisting of prepared animal milk. No. 116,783; May 22; v. 238; p. 1326.

Nocatee Citrus Growers' Association, Nocatee, Fla. Oranges, grape-fruit, lemons, and all citrus fruits. No. 116,676; May 15; v. 238; p. 973.

Noryzon Company, Inc., The, New York, N. Y. Nasal salve. No. 116,547; May 8; v. 238; p. 646.

Nu-Ex Fire Appliance Co., The, Columbus, Ohio. Fire-extinguishing compound. No. 116,548; May 8; v. 238; p. 646.

Ohio State Stove Co., The, Columbus, Ohio. Metal kitchen cabinets, tables, and stools. No. 116,853; May 29; v. 238; p. 1636.

Owen, Charles A., Syracuse, N. Y. Dairy-culture. No. 116,446; May 1; v. 238; p. 306.

Pabst, Dec'd, Estate of George, The, Philadelphia, Pa. Window-shade cloths of sized and oil-painted fabrics. Nos. 116,447–8; May 1; v. 238; pp. 306–7.

Pacific Creosoting Co., Seattle, Wash. Wood-block paving. No. 116,678; May 15; v. 238; p. 973.

Paraffine Paint Company, The, San Francisco, Cal. Ready-mixed paints. No. 116,854; May 29; v. 238; p. 1636.

Paramount Knitting Company, Chicago, Ill. Hosiery. Nos. 116,449–50; May 1; v. 238; p. 307.

Paruitzky, Paul, New York, N. Y. Geographical maps. No. 116,785; May 22; v. 238; p. 1326.

Patterson-Sargent Company, The, Cleveland, Ohio. Paints, driers, enamels, stains, lacs, &c. No. 116,451; May 1; v. 238; p. 307.

Patterson-Sargent Company, The, Cleveland, Ohio. Paints, driers, enamels, stains, lacs, fillers, varnishes. Nos. 116,855–6; May 29; v. 238; p. 1636.

Peppett, William J., Boston, Mass. Medicine for certain named diseases. No. 116,452; May 1; v. 238; p. 307.

Peter Schoenhofen Brewing Company, The, Chicago, Ill. Cereal beverages sold as soft drinks. No. 116,686; May 15; v. 238; p. 973.

Peters, Eleanore M., Chicago, Ill. Cover and hanger for hot-water bags, &c. No. 116,679; May 15; v. 238; p. 973.

Philadelphia Lawn Mower Company, The, Philadelphia, Pa. Lawn-mowers. Nos. 116,453–6; May 1; v. 238; p. 307.

Philadelphia Quartz Company, Philadelphia, Pa. Sodium silicate. No. 116,549; May 8; v. 238; p. 646.

Phillips, Della E., Philadelphia, Pa. Mixed vegetable relishes and pickles. No. 116,457; May 1; v. 238; p. 307.

Picture Press, Inc., The, New York, N. Y. Newspaper-supplements. No. 116,787; May 22; v. 238; p. 1326.

Pierce Fordyce Oil Association, Dallas, Tex. Mineral wax. No. 116,681; May 15; v. 238; p. 973.

Pompeian Mfg. Co., The, Cleveland, Ohio. Tooth-paste and beauty-powder—viz., face and toilet powder. No. 116,788; May 22; v. 238; p. 1326.

Pond, Edmund M., Rutland, Vt. Medicaments for rectal and vaginal application. No. 116,550; May 8; v. 238; p. 646.

Quabaug Rubber Company, Brookfield and North Brookfield, Mass. Rubber soles and heels. No. 116,551; May 8; v. 238; p. 646.

Rand Company, North Tonawanda, N. Y. Indicators and index devices. No. 116,458; May 1; v. 238; p. 307.

Rauser, Katherine A., Chicago, Ill. Toy dressmaking outfit. No. 116,789; May 22; v. 238; p. 1326.

Refractory Materials Company, New York, N. Y. High-temperature fire-brick cement, non-conducting boiler-covering and stove-lining. No. 116,857; May 29; v. 238; p. 1636.

Reliance Manufacturing Company, Chicago, Ill. Overalls. No. 116,552; May 8; v. 238; p. 646.

Resaler, Isidore, Detroit, Mich. Disinfectants. No. 116,790; May 22; v. 238; p. 1326.

Reynolds Wire Co., Dixon, Ill. Wire screen-cloth. No. 116,858; May 29; v. 238; p. 1636.

Rex Manufacturing Company, Connersville, Ind. Bodies and tops and parts or same for certain named vehicles. No. 116,859; May 29; v. 238; p. 1636.

Rich, Ralph E., Chicago, Ill. Alloy for bearings in ingots, castings, or forgings. No. 116,791; May 22; v. 238; p. 1326.

Richardson, Frank W., assignor to Richelow Mfg. Co., Inc., New York, N. Y. Solidified alcohol for fuel. No. 116,459; May 1; v. 238; p. 307.

Richelow Mfg. Co. (See Richardson, Frank W., assignor.)

Ridley's, The Old Chambers St. Candy Manufactory, New York, N. Y. Candy. No. 116,553; May 8; v. 238; p. 646.

Rite Specialty Co., New York, N. Y. Dolls. No. 116,682; May 15; v. 238; p. 973.

Robart, Albert, Minerva, Ohio. Preparation for treatment of gravel, bladder, backache, and kidney trouble. No. 116,554; May 8; v. 238; p. 646.

Roberts Cone Manufacturing Company, St. Joseph, Mo. Ice-cream cones. No. 116,555; May 8; v. 238; p. 646.



Roberts Safety Water Tube Boiler Co., The, Red Bank, N. J. Water-tube boilers. No. 116,792; May 22; v. 238; p. 1326.

Rodgers, Elmer R., St. Joseph, Mich. Veterinary remedy—namely, preparation for treatment of heaves in horses and mules. No. 116,556; May 8; v. 238; p. 647.

Roko Manufacturing Co., Denver, Colo. Compositions for use with printers' and lithographers' inks. No. 116,461; May 1; v. 238; p. 307.

Rotofotos, Inc., New York, N. Y. Newspaper-supplements. No. 116,793; May 22; v. 238; p. 1326.

Roundup Fisheries Co., Spokane, Wash. Canned salmon, cove-oysters, and minced clams, dried codfish. No. 116,684; May 15; v. 238; p. 973.

Russell-Miller Milling Co., Minneapolis, Minn. Wheat-flour. No. 116,462; May 1; v. 238; p. 307.

S. F. Zaloom & Co., New York, N. Y. Oyzo, koniak, matika, and arak. No. 116,813; May 22; v. 238; p. 1327.

S. S. Wenzell Machine Company, Philadelphia, Pa. Bottle-washing machines. No. 116,869; May 29; v. 238; p. 1636.

S. S. White Dental Manufacturing Company, Philadelphia, Pa.; New York and Brooklyn, N. Y.; Boston, Mass.; Chicago, Ill.; Atlanta, Ga.; Cincinnati, Ohio; San Francisco and Oakland, Cal.; Toronto and Montreal, Canada and Berlin, Germany. Certain named pharmaceutical preparations. No. 116,870; May 29; v. 238; p. 1637.

"Salada" Tea Company, Incorporated, Portland, Me., and Boston, Mass. Tea. No. 116,557; May 8; v. 238; p. 647.

Salt Lake City Brewing Co., The, Salt Lake City, Utah. Lager-beer. No. 116,860; May 29; v. 238; p. 1636.

Salt's Textile Manufacturing Company, The, Bridgeport, Conn., and New York, N. Y. Velvets and velvetines in the piece. No. 116,861; May 29; v. 238; p. 1636.

Salux Drug Company, St. Louis, Mo. Perfumes, cold-cream, massage-cream, toilet water, and face-powder. No. 116,685; May 15; v. 238; p. 973.

Samstag & Hilder Bros., New York, N. Y. Dress and snap fasteners. No. 116,794; May 22; v. 238; p. 1326.

Save-O. Co., Inc., Hartford, Conn. Chemical compound for preserving rubber. No. 116,463; May 1; v. 238; p. 307.

Scudder, Isaiah C., New York, N. Y. Electrolyte. No. 116,795; May 22; v. 238; p. 1326.

Seamless Rubber Company, The, New Haven, Conn. Water-bottles, fountain and combination syringes, face and ice bags. No. 116,687; May 15; v. 238; p. 973.

Sears, Roebuck and Co., Chicago, Ill. Leather shoes. No. 116,559; May 8; v. 238; p. 647.

Sears, Roebuck and Co., Chicago, Ill. Rubber heels and composition soles. No. 116,688; May 15; v. 238; p. 973.

Seggerman Bros. Inc., New York, N. Y. Tuna fish, crab-meat. No. 116,689; May 15; v. 238; p. 973.

Senger Drug Co., Danville, Ill. Antiseptic liniment for sprains, stiff joints, bruises, &c. No. 116,796; May 22; v. 238; p. 1326.

Shanhouse & Sons, W., Rockford, Ill. Children's sleeping-garments. No. 116,560; May 8; v. 238; p. 647.

Shapleigh Hardware Company, St. Louis, Mo. Talking-machines. No. 116,690; May 15; v. 238; p. 973.

Sieben, Henry, Kansas City, Mo. Dolls. No. 116,797; May 22; v. 238; p. 1327.

Signode System, Inc., Chicago, Ill. Stretching-tool. No. 116,691; May 15; v. 238; p. 973.

Signode System, Inc., Chicago, Ill. Sealing-tool. No. 116,692; May 15; v. 238; p. 973.

Signode System, Inc., Chicago, Ill. Seal. No. 116,862; May 29; v. 238; p. 1636.

Signode System, Inc., Chicago, Ill. Metal strapping for box-fastenings or the like. No. 116,863; May 29; v. 238; p. 1636.

Sinclair Oil & Refining Corporation, Chicago, Ill. Illuminating, lubricating, and burning oils and greases made from petroleum. No. 116,693; May 15; v. 238; p. 973.

Sloat, Harry W., Chicago, Ill. Cakes. No. 116,561; May 8; v. 238; p. 647.

Smeyers, Benjamin F., Troutville, Pa. Preservative for fruit, vegetables, and meats. No. 116,464; May 1; v. 238; p. 307.

Smith, Dewane B., Utica, N. Y. Nursers, nursing-bottles, and rubber nipples. No. 116,798; May 22; v. 238; p. 1327.

Smith Lichty and Hillman Company, Waterloo, Iowa. Cheese. No. 116,695; May 15; v. 238; p. 973.

Southern Railway Supply and Equipment Co., St. Louis, Mo. Saws, chisels, hatchets, files, axes, and adzes. No. 116,800; May 22; v. 238; p. 1327.

Speier, Sidney S., Louisville, Ky. Cigars. No. 116,801; May 22; v. 238; p. 1327.

Spencer, William E., New York, N. Y. Varnishes. No. 116,864; May 29; v. 238; p. 1636.

Spielman Electric Co., New York, N. Y. Telephones, electric cigar-lighters and lamps. No. 116,465; May 1; v. 238; p. 307.

Sprague, Warner & Company, Chicago, Ill. Tea. No. 116,696; May 15; v. 238; p. 979.

Spratt's Patent (America) Limited, London, England, and Newark, N. J. Medicines for dogs, cats, rabbits, fish, birds, and poultry. No. 116,466; May 1; v. 238; p. 307.

Springfield Grinding Co., Springfield, Mass. Grinding-wheels. No. 116,467; May 1; v. 238; p. 307.

Standard Oil Company, Richmond, Cal. Ready-mixed paint. No. 116,697; May 15; v. 238; p. 979.

Standard Oil Company, Richmond, Cal. Petroleum-oils for lubricating and cushioning purposes. No. 116,698; May 15; v. 238; p. 979.

Standard Tire and Rubber Manufacturing Company, The, Cleveland, Ohio. Inner tubes. No. 116,802; May 22; v. 238; p. 1327.

Standard Woven Fabric Company, Walpole, Mass. Rubber matting. No. 116,803; May 22; v. 238; p. 1327.

Star Company, New York, N. Y. Newspaper-section. No. 116,804; May 22; v. 238; p. 1327.

Star Fuse Co., Inc., New York, N. Y. Electric fuses and cartridges. No. 116,468; May 1; v. 238; p. 307.

Steel Basket Company, The, Cedar Rapids, Iowa. Shovels, spades, handles for shovels, spades, and agricultural forks. No. 116,469; May 1; v. 238; p. 307.

Stein, Charles F., Chicago, Ill. Polish for pianos, furniture, floors, automobiles, &c. No. 116,699; May 15; v. 238; p. 979.

Struss-Anderson Laboratories, New York, N. Y. Photographic developers. Nos. 116,562–3; May 8; v. 238; p. 647.

Sunshine Poultry Farm, Shelby, Wis. Certain named foods. No. 116,701; May 15; v. 238; p. 979.

Sussman, Wormser & Co., San Francisco, Cal. Certain named canned foods. No. 116,470; May 1; v. 238; p. 307.

Sweet Candy Co., Salt Lake City, Utah. Chocolates. No. 116,564; May 8; v. 238; p. 647.

Takis, Costis, New York, N. Y. Candies. No. 116,702; May 15; v. 238; p. 979.

Talcott, Phineas M., New Haven, Conn. Loading implements for rifle, pistol, and shotgun cartridges and molds for bullets. No. 116,866; May 29; v. 238; p. 1636.

Tate Electrolytic Waterproofing Company, Incorporated, New York, N. Y. Waterproofed paper. No. 116,703; May 15; v. 238; p. 979.

Tebbetts & Garland Store, The, Chicago, Ill. Soaps, washing-powders, cleansers, and metal-polish. No. 116,472; May 1; v. 238; p. 307.

Tebbetts & Garland Store, The, Chicago, Ill. Whisky. No. 116,805; May 22; v. 238; p. 1327.

Theobald and Oppenheimer Company, Philadelphia, Pa. Cigars. No. 116,473; May 1; v. 238; p. 307.

Thistle Hat Co., The, New York, N. Y. Hats. No. 116,704; May 15; v. 238; p. 979.

Thomas Advertising Service, The, Jacksonville, Fla. Pure juice of grape-fruit or pomelo. No. 116,705; May 15; v. 238; p. 979.

Timson Bros. Inc., Boston, Mass. Boots, shoes, slippers, and sandals made wholly and in part of leather and cloth. No. 116,706; May 15; v. 238; p. 979.

Tinker, Matthew, Baltimore, Md. Rubber-stamp outfit and inking-pad combined. No. 116,474; May 1; v. 238; p. 307.

Titus Blatter & Company, New York, N. Y. Cotton drapery fabrics. No. 116,707; May 15; v. 238; p. 979.

Titus Blatter & Company, New York, N. Y. Drapery fabrics made of cotton and of cotton and silk mixtures. No. 116,708; May 15; v. 238; p. 979.

Tlach, Victor F. J., New York, N. Y. Certain named metal tools for cutting, forming, or holding. No. 116,709; May 15; v. 238; p. 979.

Topeka Flour Mills Company, The, Topeka, Kans. Wheat-flour. No. 116,710; May 15; v. 238; p. 979.

Topeka Oil Company, The, Topeka, Kans. Illuminating, lubricating, and fuel oils. No. 116,475; May 1; v. 238; p. 307.

Travis, Stephen J., Chicago, Ill. Phonographs. No. 116,711; May 15; v. 238; p. 979.

Trippe, Barker & Co., New York, N. Y. Cotton and linen piece goods. No. 116,476; May 1; v. 238; p. 307.

Tryalax Mfg. Co. Inc., Philadelphia, Pa. Laxative. No. 116,477; May 1; v. 238; p. 307.

Twyman, Sidney J., Hamilton, Ohio. Certain named children's play-suits and boys' outer garments. No. 116,713; May 15; v. 238; p. 979.

Union Fibre Company, Winona, Minn. Thermal and acoustic insulator made of vegetable fibers. No. 116,867; May 29; v. 238; p. 1636.

Union Pacific Tea Company, New York, N. Y. Toilet, laundry, and scouring soaps, washing powder and tablets, silver-polish. No. 116,806; May 22; v. 238; p. 1327.

Union Seed & Fertilizer Company, Guttenberg, N. J. Foodstuffs for cattle, &c., consisting of cotton-seed meal. No. 116,714; May 15; v. 238; p. 979.

United Cigar Manufacturers Company, New York, N. Y. Cigars. No. 116,715; May 15; v. 238; p. 979.

United Cigar Manufacturers Company, New York, N. Y. Cigars. No. 116,807; May 22; v. 238; p. 1327.

United Drug Company, Boston, Mass. Rubber nipple. No. 116,808; May 22; v. 238; p. 1327.

United Liquid Sulphur Co., Inc., New York, N. Y. Chemicals, medicines, and pharmaceutical preparations containing sulfur in a dissolved form. No. 116,716; May 15; v. 238; p. 979.

United Phonographs Corporation, Port Washington, Wis. Phonographs and phonograph-records. No. 116,717; May 15; v. 238; p. 979.

United Shoe Machinery Company, Paterson, N. J. Brushes for general and certain named use. No. 116,868; May 29; v. 238; p. 1636.

United States Motion Picture Corporation, Wilkes-Barre, Pa. Motion-picture films. No. 116,478; May 1; v. 238; p. 307.

United States Rubber Company, New York, N. Y. Composition insoles, box-toes, and heel-counters for boots and shoes. Nos. 116,565–6; May 8; v. 238; p. 647.

Universal Optical Corporation, Providence, R. I. Certain named optical supplies. No. 116,718; May 15; v. 238; p. 979.

Universal Register Co., Chicago, Ill. Certain named racks, registers, bulletins, and the like. No. 116,719; May 15; v. 238; p. 979.

University Chemical Co., Philadelphia, Pa. Tooth-powder. No. 116,479; May 1; v. 238; p. 307.

Val. Blatz Brewing Co., Milwaukee, Wis. Non-intoxicating brewed soft drink. No. 116,500; May 8; v. 238; p. 645.

Vanola Company, The, Winston-Salem, N. C. Chewing-gum and mint. No. 116,720; May 15; v. 238; p. 979.

Vis Vitae Company, Inc., Portland, Oreg. Preparation for external application indicated in the treatment of rheumatism. No. 116,481; May 1; v. 238; p. 307.

W. M. Finck & Company, Detroit, Mich. Men's overalls, jackets, trousers, coats, work-shirts. No. 116,422; May 1; v. 238; p. 306.

W. R. Grace & Co., New York, N. Y. Linseed-oil and ready-mixed paints. No. 116,427; May 1; v. 238; p. 306.

Wagner, Elmer E., Hazleton, Pa. Overalls and ja kets. No. 116,482; May 1; v. 238; p. 308.

Wallis, James F., Pleasantville, N. J. Preparation for the treatment of cancer and for charging water with radio-active therapeutic properties. No. 116,567; May 8; v. 238; p. 647.

Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft, Schönau, near Chemnitz, Germany. Certain named receptacles. No. 116,721; May 15; v. 238; p. 979.

Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft, Schönau, near Chemnitz, Germany. Certain named furniture. Nos. 116,722–3; May 15; v. 238; p. 979.

Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft, Schönau, near Chemnitz, Germany. Certain named cutlery, machinery, and tools, and parts thereof. No. 116,809; May 22; v. 238; p. 1327.

Warner Bros. Co., The, Bridgeport, Conn. Corsets. No. 116,483; May 1; v. 238; p. 308.

Warren Manufacturing Company, Warren, Md. Cotton duck, canvas, and yarn spun or woven in textile fabrics. No. 116,484; May 1; v. 238; p. 308.

Washburn Crosby Company, Minneapolis, Minn. Wheat-flour. No. 116,724; May 15; v. 238; p. 979.

Waskow, Frank, Chicago, Ill. Butter. No. 116,568; May 8; v. 238; p. 647.

Waterside Mills, Inc., Lowell, Mass. Cotton piece goods—namely, corduroys and velveteens. No. 116,485; May 1; v. 238; p. 308.

Weideman Co., Cleveland, Ohio. Certain named canned goods and food products. No. 116,486; May 1; v. 238; p. 308.

Well Corset Company, The, New Haven, Conn. Abdominal surgical health-belts. No. 116,725; May 15; v. 238; p. 979.

West Virginia Pulp & Paper Co., New York, N. Y. Coated lithographic paper. No. 116,487; May 1; v. 238; p. 308.

Western Clock Co., Peru, Ill. Clocks and watches. No. 116,726; May 15; v. 238; p. 979.

Western Dry Battery Co., Seattle, Wash. Dry batteries. No. 116,727; May 15; v. 238; p. 979.

Western Screw & Lock-Nut Co., San Francisco, Cal. Nuts. No. 116,810; May 22; v. 238; p. 1327.

Whatcom Fish Products Co., Bellingham, Wash. Canned salmon. Nos. 116,728–9; May 15; v. 238; p. 980.

Whiting Paper Company, Holyoke, Mass. Writing-papers. No. 116,488; May 1; v. 238; p. 308.

Wilkins, Horace P., Chicago, Ill. Medicinal preparation or tonic for use in certain named conditions. No. 116,569; May 8; v. 238; p. 647.

William S. Merrell Chemical Company, The, Cincinnati, Ohio. Pine-oil antiseptic. No. 116,537; May 8; v. 238; p. 646.

Wilmington Hosiery Mills, Inc., The, Wilmington, N. C. Hosiery. No. 116,731; May 15; v. 238; p. 980.

Winchemint Co., Inc., The, Harrisburg, Pa. Candy. No. 116,732; May 15; v. 238; p. 980.

Wm. Greilich & Sons, Brooklyn, N. Y. Fittings for traveling-bags, trunks, &c., particularly for protecting footwear and the like carried therein. No. 116,759; May 22; v. 238; p. 1325.

Woolson Spice Company, The, Toledo, Ohio. Coffee. No. 116,733; May 15; v. 238; p. 980.

Wortendyke Manufacturing Co., Richmond, Va. Toilet-paper and paper towels. Nos. 116,489–91; May 1; v. 238; p. 308.

Worthington Pump and Machinery Corporation, New York, N. Y. Internal-combustion engines. No. 116,492; May 1; v. 238; p. 308.

Worumbo Manufacturing Company, Lisbon Falls, Me. Woolen goods in the piece. No. 116,493; May 1; v. 238; p. 308.

Young, William C., Buffalo, N. Y. Corn-solvent, dandruff remedy, headache-tablets. No. 116,812; May 22; v. 238; p. 1327.

Ziegfeld Cinema Corporation, New York, N. Y. Moving-picture films. No. 116,494; May 1; v. 238; p. 308.

Ziff, Joseph, Detroit, Mich. Suspenders, belts, garters. No. 116,734; May 15; v. 238; p. 980.

Zip Co., New York, N. Y. Bleaching and water-softening compound. No. 116,735; May 15; v. 238; p. 980.

# ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

A. Schreiber Brewing Co., Buffalo, N. Y. "Schreiber's Kloster Beer." (For Beer.) No. 20,100; May 15; v. 238; p. 981.

A. G. Spalding & Bros., Jersey City, N. J., and New York, N. Y. "Spalding Midget Honor Golf Ball." (For Golf-Balls.) No. 20,131; May 29; v. 238; p. 1638.

A. G. Spalding & Bros., Jersey City, N. J., and New York, N. Y. "Spalding Floating Honor Golf Ball." (For Golf-Balls.) No. 20,132; May 29; v. 238; p. 1638.

A. J. Reach Co., Philadelphia, Pa. "Reach Whippet Golf Balls." (For Golf-Balls.) No. 20,109; May 22; v. 238; p. 1328.

A. J. Reach Co., Philadelphia, Pa. "Reach Paramount Golf Balls." (For Golf-Balls.) No. 20,110; May 22; v. 238; p. 1328.

A. J. Reach Co., Philadelphia, Pa. "Reach Meteor Golf Balls." (For Golf-Balls.) No. 20,111; May 22; v. 238; p. 1328.

A. J. Reach Co., Philadelphia, Pa. "Reach New Scotty Golf Balls." (For Golf-Balls.) No. 20,112; May 22; v. 238; p. 1328.

American Lithographic Company, New York, N. Y. "Quality Cigars." (For Cigars.) No. 20,090; May 8; v. 238; p. 648.

Aromint Company, The, Cincinnati, Ohio. "Kof Not." (For Candy Cough-Tablets.) No. 20,051; May 1; v. 238; p. 309.

Aunt Jemima Mills Company, St. Joseph, Mo. "Aunt Jemima." (For Pancake, Buckwheat, Corn, and Wheat Flour.) No. 20,105; May 22; v. 238; p. 1328.

Banks Bros. Packing Co., Norfolk, Va. "Sunshine Brand Pure Lard, With Oleo Stearine Added." (For Lard.) No. 20,119; May 29; v. 238; p. 1638.

Banks Bros. Packing Co., Norfolk, Va. "Snow Bank." (For a Food Product.) No. 20,120; May 29; v. 238; p. 1638.

Barbour, Salim, New York, N. Y. "Barbour Coffee." (For Coffee.) No. 20,117; May 29; v. 238; p. 1638.

Beech-Nut Packing Company, Canajoharie, N. Y. "Beech-Nut Brand." (For a Beverage.) No. 20,118; May 29; v. 238; p. 1638.

Brockton Macaroni Manufacturing Company, Brockton, Mass. "Brockton Brand Macaroni." (For Macaroni.) No. 20,052; May 1; v. 238; p. 309.

Burly Drug Co., Lansing, Mich. "Wa-Ke-Za For Sore Feet." (For Liquid for the Prevention and Cure of Sore Feet.) No. 20,053; May 1; v. 238; p. 309.

C. F. Burgess Laboratories, Madison, Wis. "Super-Six." (For Electric Batteries.) No. 20,116; May 29; v. 238; p. 1638.

Cohen, N. B., Scranton, Pa. "The Face Veil." (For Veils.) No. 20,104; May 22; v. 238; p. 1328.

Crown Brewing Company, The, Cincinnati, Ohio. "Tang." (For a Non-Intoxicating Beverage.) No. 20,121; May 29; v. 238; p. 1638.

Detroit Stove Works, Detroit, Mich. "Jewel Stove and Furnaces Detroit Stove Works." (For Stoves and Furnaces.) No. 20,070; May 8; v. 238; p. 648.

Dunlap, S. D., Batavia, N. Y. "Marbleoid Asphalt Roofing." (For Roofing-Paper.) No. 20,122; May 29; v. 238; p. 1638.

Edwin B. Stimpson Company, Brooklyn, N. Y. "Stimpson-Riveta." (For Riveta.) No. 20,059; May 1; v. 238; p. 309.

Egola Mfg. Co., West Cornwall, Conn. "Egola." (For a Substitute for Eggs.) No. 20,050; May 1; v. 238; p. 309.

Excello Polish Co., Portsmouth, Ohio. "Excello." (For a Polish for Furniture.) No. 20,093; May 15; v. 238; p. 981.

Felix Girard Company, The, Minneapolis, Minn. "Don't Forget Gopherget For Gophers." (For Poison for Gophers, Squirrels, Moles, and other Pest Animals.) No. 20,055; May 1; v. 238; p. 309.

Frank G. Fawkes & Co., Chicago, Ill. "Magic Whistle." (For Cartons Containing Whistles.) No. 20,054; May 1; v. 238; p. 309.

Franklin Mfg. Co., Baltimore, Md. "Ironclad Khaki Twills." (For Woven Fabric Piece Goods.) No. 20,123; May 29; v. 238; p. 1638.

Gouled Embroidery Works, Union Hill, N. J. "Gouled Embroidered Initials." (For Embroidered Initials.) No. 20,106; May 22; v. 238; p. 1328.

Guth Chocolate Company, Baltimore, Md. "Guth Chocolate Fruit & Nut Easter Egg." (For Candy.) No. 20,094; May 15; v. 238; p. 981.

Hamilton, John W., Hutchinson, Kans. "Health Food." (For Bread.) No. 20,071; May 8; v. 238; p. 648.

Hamilton, John W., Hutchinson, Kans. "Health Food." (For Candy.) No. 20,072; May 8; v. 238; p. 648.

Hazell, Emma, Philadelphia, Pa. "French Rheumatism Cure." (For a Cure for Rheumatism.) No. 20,115; May 22; v. 238; p. 1328.

Herrero Bros., San Francisco, Cal. "La Bella Carmen." (For Tobacco-Packages.) No. 20,068; May 1; v. 238; p. 309.

Hess, George, Chicago, Ill. "Directions." (For E-Z Marvel Cleaner.) No. 20,091; May 8; v. 238; p. 648.

Hess, George, Chicago, Ill. "E-Z Marvel Kleaner." (For a Cleaner.) No. 20,092; May 8; v. 238; p. 648.

Independent Gum Co., Kansas City, Mo. "Morton's." (For Chewing-Gum.) Nos. 20,073–4; May 8; v. 238; p. 648.

Independent Button & Machine Company, Chicago, Ill. "Men's Suit Buttons." (For Buttons.) No. 20,075; May 8; v. 238; p. 648.

Krahn, Henry, Elmhurst, N. Y. "Orchard Blossom." (For a Disinfectant and Deodorizer.) No. 20,124; May 29; v. 238; p. 1638.

Ku-Rall Medicine Co., The, Nashville, Tenn. "Ka-Dene." (For Ointment.) No. 20,106; May 22; v. 238; p. 1328.

L. E. Waterman Company, New York, N. Y. "Waterman's Ideal Ink." (For Ink.) No. 20,069; May 1; v. 238; p. 309.

Lape, George H., Adrian, Mich. "Save-the-Cow." (For Medicine for Cows.) No. 20,076; May 8; v. 238; p. 648.

Leshin, S., Milwaukee, Wis. "White Lily Brand Butter." (For Butter.) No. 20,077; May 8; v. 238; p. 648.

Lynn Rubber Manufacturing Company, Lynn, Mass. "Sans O Dor." (For Foot-Powders.) No. 20,095; May 15; v. 238; p. 981.

Maier & Co., R. E., Chicago, Ill. "R. E. Maier's Veribest." (For a Polishing and Cleaning Compound.) No. 20,107; May 22; v. 238; p. 1328.

McCawley & Co. Inc., Baltimore, Md. "The 20th Century Shirt." (For Men's Work-Shirts.) No. 20,058; May 1; v. 238; p. 309.

McCawley & Co., Inc., Baltimore, Md. "For Playtime And All Times." (For Boys' and Girls' Outer Garments.) No. 20,079; May 8; v. 238; p. 648.

Mead Pulp and Paper Company, The, Dayton, Ohio. "Chamois." (For Book-Paper.) No. 20,057; May 1; v. 238; p. 309.

Mead Pulp and Paper Company, The, Dayton, Ohio. "Mepacote." (For Book-Paper.) No. 20,125; May 29; v. 238; p. 1638.

Mead Pulp & Paper Company, The, Dayton, Ohio. "Mecopa." (For Bond-Paper.) No. 20,126; May 29; v. 238; p. 1638.

Melches, George, Chicago, Ill. "Stop." (For Hair-Tonic.) No. 20,108; May 22; v. 238; p. 1328.

Michelson & Brothers, I., Cincinnati, Ohio. "Old Morris 1878 Brand." (For Whisky.) No. 20,078; May 8; v. 238; p. 648.

Minnick, Howard B., Louisville, Ky. "Dan-D." (For a Beverage.) No. 20,096; May 15; v. 238; p. 981.

Mother's Macaroni Company, Minneapolis, Minn. "Creamettes." (For Macaroni.) No. 20,097; May 15; v. 238; p. 981.

National Pepsin Gum Company, The, San Francisco, Cal. "Honolulu Fruit Gum." (For Chewing-Gum.) No. 20,133; May 29; v. 238; p. 1638.

New York Mills Corporation, New York Mills, N. Y. "Tub Corduroy." (For Corduroy.) No. 20,127; May 29; v. 238; p. 1638.

Nowater Soap and Cleanser Co. of U. S. A., The, Warren, Pa. "Nowater Cleanser Made In U. S. A." (For Cleansers.) No. 20,080; May 8; v. 238; p. 648.

Old Dominion Iron & Nail Works Co., Richmond, Va. "Electric Engine Bolt Steel." (For Steel.) No. 20,098; May 15; v. 238; p. 981.

Olson Coffee Co., Omaha, Nebr. "Happy Hollow." (For Coffee.) No. 20,081; May 8; v. 238; p. 648.

Pacific Cigar Box Co., Los Angeles, Cal. "Labor Temple." (For Cigars.) No. 20,128; May 29; v. 238; p. 1638.

Peat, C. W., Aberdeen, Wash., and Portland, Oreg. "Peat's Waterproof Leather Dressing." (For Leather-Dressing.) Nos. 20,129–30; May 29; v. 238; p. 1638.

Quencho Co., The, Baltimore, Md. "For That Thirst." (For Non-Alcoholic Beverage.) No. 20,082; May 8; v. 238; p. 648.

Quencho Co., The, Baltimore, Md. "For Dry People." (For Non-Alcoholic Beverage.) No. 20,083; May 8; v. 238; p. 648.

Quencho Co., The, Baltimore, Md. "For Goodness Sake." (For Non-Alcoholic Beverage.) No. 20,084; May 8; v. 238; p. 648.

R. P. Richardson, Jr. & Co., Inc., East Orange, N. J., and Reidsville, N. C. "Bo." (For Cigars.) No. 20,087; May 8; v. 238; p. 648.

Randolph Fruit Co., Los Angeles, Cal. "Randolph Special." (For Oranges.) No. 20,085; May 8; v. 238; p. 648.

Reliance Manufacturing Company, Chicago, Ill. "Sunapee." (For Fine Yarn Chambray.) No. 20,086; May 8; v. 238; p. 648.

Sauquoit Toilet Paper Co., New Hartford, N. Y. "Honor Brand." (For Crape-Tissue.) No. 20,113; May 22; v. 238; p. 1328.

Schlichting, Albert T., Newark, N. J. "Slick-Shine." (For Automobile-Body Polish.) No. 20,099; May 15; v. 238; p. 981.

Shore Distilling Co., Philadelphia, Pa. "Mt. Purn Brand Cognac." (For Brandies.) No. 20,060; May 1; v. 238; p. 309.

Snap Fastener Sales Co. Corp., New York, N. Y. "American Lady." (For Fasteners.) No. 20,134; May 29; v. 238; p. 1638.

Tieberman, Julius F., Cincinnati, Ohio. "Cotton-Top." (For Non-Intoxicating Beverages.) No. 20,088; May 8; v. 238; p. 648.

Triaca Company, The, Baltimore, Md. "Tipperary." (For Dry Gin.) No. 20,101; May 15; v. 238; p. 981.

True Blue Drug Co., Columbus, Ohio. "True Blue." (For a Compound of Camphor and Menthol Balm.) No. 20,102; May 15; v. 238; p. 981.

Truesdell, C. B., Sac City, Iowa. "Home Made." (For Cough-Drops.) No. 20,061; May 1; v. 238; p. 309.

Tustin Hills Citrus Association, Tustin, Cal. "Geo. Washington." (For Oranges.) No. 20,062; May 1; v. 238; p. 309.

Victoria Broom & Whisk Factory, Victoria, Tex. "Kleene K-S Sweepe." (For Brooms.) No. 20,063; May 1; v. 238; p. 309.

Wambaugh, J. Leo, Wilkinsburg, Pa. "Burn—Dres." (For a Burn Treatment.) No. 20,135; May 29; v. 238; p. 1638.

Wheeler Beauty Co., New York, N. Y. "Nail Bright." (For Nail-Polish.) No. 20,089; May 8; v. 238; p. 648.

White King Squab Products Co., Vineland, N. J. "White King Squab Soup." (For Squab Soup.) No. 20,114; May 22; v. 238; p. 1328.

Young, Willis G., Chicago, Ill. "Chocolate-Splash." (For a Game.) No. 20,064; May 1; v. 238; p. 309.

Young, Willis G., Chicago, Ill. "Can-You Beat-It? (Solitaire)." (For a Game.) No. 20,065; May 1; v. 238; p. 309.

Young, Willis G., Chicago, Ill. "Top-Pacheeza." (For a Game.) No. 20,066; May 1; v. 238; p. 309.

Young, Willis G., Chicago, Ill. "Fig-Mill." (For a Game.) No. 20,067; May 1; v. 238; p. 309.

## PRINTS.

Ballard, Elijah F., Dallas, Tex. "Hygeian." (For a Disinfectant.) No. 4,696; May 29; v. 238; p. 1638.

Barlow, Francis J., Chicago, Ill. "La Barlo." (For Cigars.) No. 4,691; May 15; v. 238; p. 981.

Channell Chemical Company, Chicago, Ill. "Cheerfully Bright Wherever O-Cedar Polish is used." (For O-Cedar Polish.) No. 4,683; May 8; v. 238; p. 648.

Channell Chemical Company, Chicago, Ill. "The O-Cedar Way." (For O-Cedar Polish.) No. 4,684; May 8; v. 238; p. 648.

Cosmetic Product Company, The, Montreal, Canada. "Le Lait Des Roses." (For Antiseptic and Tonic of the Skin.) No. 4,699; May 29; v. 238; p. 1638.

Creamette Company, The, Minneapolis, Minn. "How To Cut the High Cost of Living With Creamettes." (For Macaroni.) No. 4,692; May 15; v. 238; p. 981.

Dalton Machine Co. Inc., New York, N. Y. "Bulletin B—602." (For Lathes.) No. 4,685; May 8; v. 238; p. 648.

Dalton Machine Co. Inc., New York, N. Y. "Bulletin B—601." (For Lathes.) No. 4,686; May 8; v. 238; p. 648.

Dalton Machine Co. Inc., New York, N. Y. "Bulletin B—603." (For Lathes.) No. 4,687; May 8; v. 238; p. 648.

David Weil's Sons Lithographic Co., Brooklyn, N. Y. "Advisor." (For Hosiery.) No. 4,695; May 22; v. 238; p. 1328.

New York Mills Corporation, New York Mills, N. Y. "Tub Corduroy." (For Corduroy.) No. 4,697; May 29; v. 238; p. 1638.

Postum Cereal Company, Battle Creek, Mich. "There's a Reason." (For Postum Cereal.) No. 4,694; May 22; v. 238; p. 1328.

Rathbone Sard & Company, Albany, N. Y. "Always Improving." (For Stoves and Ranges.) No. 4,688; May 8; v. 238; p. 648.

Rathbone Sard & Company, Albany, N. Y. "Always Improving." (For Ranges and Heaters.) No. 4,689; May 8; v. 238; p. 648.

Rothstein, Isidore, Pittsburgh, Pa. "Mrs. Santa Claus." (For Toys.) No. 4,701; May 29; v. 238; p. 1638.

Rubber & Celluloid Products Company, Newark, N. J. "Old King Rubberset." (For Brushes.) No. 4,693; May 15; v. 238; p. 981.

Spring Snap Fastener Company, Lynn, Mass. "Nugget Fastener." (For Spring Snap-Fasteners.) No. 4,690; May 8; v. 238; p. 648.

Stedem Chemical Laboratory, Philadelphia, Pa. "Stedem's Formula Fairmount Weed Killer." (For a Weed-Killing Chemical.) No. 4,698; May 29; v. 238; p. 1638.

Swan Process Oil Co., Inc., The, Denver, Colo. "Spoco." (For Automobile-Oil.) No. 4,700; May 29; v. 238; p. 1638.

## DISCLAIMERS.

Abbott, Franklin E., Buffalo, N. Y.; disclaimer filed by the inventor and assignee, Lackawanna Steel Company. Splice-bar. No. 1,152,375; disclaimer filed May 1, 1917; v. 238; p. 653.

Allison, Daniel K., Cincinnati, Ohio, and B. D. Pinkney, Newport, Ky.; disclaimer filed by assignee, The J. H. Day Company. Cracker-cutting machine. No. 1,112,184; disclaimer filed May 7, 1917; v. 238; p. 653.

Neuberger, John, and J. F. Hines, Cleveland, Ohio; disclaimer filed by John Neuberger. Shade and curtain-pole support. No. 1,074,973; disclaimer filed Apr. 28, 1917; v. 238; p. 321.

Smith, Franklin H., Yonkers, N. Y.; disclaimer filed by assignee, Gold Car Heating & Lighting Company. Electric heater. No. 1,040,043; disclaimer filed May 2, 1917; v. 238; p. 653.

# ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

## PATENTS WERE ISSUED DURING THE MONTH OF MAY, 1917.

[Abbreviations: "Gaz."—Official Gazette.]

Abrasive material, Making. H. T. Kalmus. No. 1,226,892; May 22; v. 238; p. 1081.

Accounting record-sheet. J. W. Pennewill. No. 1,227,653; May 29; v. 238; p. 1365.

Accounting-sheet. J. W. Pennewill. No. 1,226,111; May 15; v. 238; p. 781.

Acetylene-burner. B. Wiener. No. 1,225,383; May 8; v. 238; p. 493.

Acetylene-generator. A. P. Hagar. No. 1,225,434; May 8; v. 238; p. 510.

Acetylene-generator. M. L. Williams. No. 1,224,822; May 1; v. 238; p. 251.

Acid, Manufacture of hypochlorous. W. N. Haworth and J. C. Irvine. No. 1,227,049; May 22; v. 238; p. 1135.

Acids or metallic salts, Eliminating and recovering. H. E. Tiffany. No. 1,226,279; May 15; v. 238; p. 843.

Actuating signals on and communicating with trains. H. A. Thompson. No. 1,227,021; May 22; v. 238; p. 1126.

Adding and listing machines, Card-making attachment for. A. S. Trew. No. 1,224,813; May 1; v. 238; p. 247.

Adding and recording machine. H. Landsiedel. No. 1,225,655; May 8; v. 238; p. 583.

Adding and recording machine. H. Landsiedel. No. 1,225,656; May 8; v. 238; p. 584.

Adding-machine. G. Cordts. No. 1,226,064; May 15; v. 238; p. 765.

Adding-machine. J. L. Dalton. No. 1,225,590; May 8; v. 238; p. 562.

Adding-machine. H. Landsiedel. No. 1,225,654; May 8; v. 238; p. 583.

Adding-machine. F. J. Peterson. No. 1,227,655; May 29; v. 238; p. 1366.

Adding-machines, Mechanical movement for. J. P. Hunter and H. Küntzler. No. 1,225,900; May 15; v. 238; p. 729.

Adding-machines, Solenoid for driving. F. C. Rinsche. No. 1,226,097; May 22; v. 238; p. 1014.

Adjustable chair. G. H. Sautier. No. 1,228,249; May 29; v. 238; p. 1566.

Adjustable clamp. E. O. Keator. No. 1,226,221; May 15; v. 238; p. 818.

Advertising apparatus. W. Sumner. No. 1,224,232; May 1; v. 238; p. 41.

Advertising apparatus for vehicle-tops. E. A. Campbell. No. 1,224,446; May 1; v. 238; p. 120.

Advertising device. W. G. Billerman. No. 1,224,261; May 1; v. 238; p. 53.

Advertising device, Electrical. F. Schneiblé. No. 1,225,865; May 15; v. 238; p. 697.

Aerial machine. W. F. Saunt. No. 1,226,599; May 15; v. 238; p. 942.

Aeronautics. I. E. McCabe. No. 1,227,464; May 22; v. 238; p. 1271.

Aeroplane. L. L. Fosburgh. No. 1,224,915; May 8; v. 238; p. 333.

Aeroplane. A. Melniczak. No. 1,228,227; May 29; v. 238; p. 1558.

Aeroplane. A. F. Russ. No. 1,227,937; May 29; v. 238; p. 1463.

Aeroplane, Combined dirigible and hydro. M. Jelalian. No. 1,227,912; May 29; v. 238; p. 1454.

Aeroplane-controlling mechanism. F. A. Bullington. No. 1,224,357; May 1; v. 238; p. 87.

Aeroplane, Soaring. J. W. Ruben. No. 1,225,059; May 8; v. 238; p. 382.

Aeroplanes, Plane and the like for. A. A. Holle. No. 1,225,711; May 8; v. 238; p. 602.

Agricultural implement. L. Fonnesbeck. No. 1,225,423; May 8; v. 238; p. 507.

Agricultural implement. B. Sagen. No. 1,227,938; May 29; v. 238; p. 1464.

Agricultural implement. B. M. Steele. No. 1,226,920; May 22; v. 238; p. 1091.

Agricultural implement. J. B. White. No. 1,228,273; May 29; v. 238; p. 1572.

Air and gas compressor. A. W. H. Griepe. No. 1,225,805; May 15; v. 238; p. 677.

Air-compressor. V. J. Guthrie. No. 1,226,328; May 15; v. 238; p. 858.

Air-compressors, Unloader for. W. H. Callan and G. J. MacFadden. No. 1,224,272; May 1; v. 238; p. 56.

Air-currents, Means for producing. H. M. Scheibe. No. 1,224,218; May 1; v. 238; p. 36.

Air-heater. P. Russell, F. J. Sepas, and E. B. Wilford. No. 1,227,324; May 22; v. 238; p. 1228.

Air-moistener. W. Wyand. No. 1,228,157; May 29; v. 238; p. 1536.

Air-moistening device. O. I. Shaver. No. 1,225,684; May 8; v. 238; p. 593.

Air-pipe coupling, Automatic. H. Currier. No. 1,224,611; May 1; v. 238; p. 177.

Air-washing apparatus. C. H. Bicalky. No. 1,225,696; May 8; v. 238; p. 597.

Aircraft, Illuminating device for use on. H. E. S. Holt. No. 1,227,441; May 22; v. 238; p. 1263.

Aircraft, Method and system for operating rudders of. G. H. Curtiss. No. 1,228,380; May 29; v. 238; p. 1608.

Airship. J. W. Oman. No. 1,227,650; May 29; v. 238; p. 1364.

Airship. I. I. Ziperstein and A. C. Kaplan. No. 1,228,159; May 29; v. 238; p. 1536.

Alarm: *See*—
Burglar-alarm.
Car-alarm.

Alarm device. L. P. Dixon. No. 1,225,940; May 15; v. 238; p. 723.

Alkali-metal percarbonate, Manufacturing. A. Schaidhauf. No. 1,225,722; May 8; v. 238; p. 606.

Alkali percarbonates, Manufacturing. O. Liebknecht. No. 1,225,832; May 15; v. 238; p. 686.

Alkali percarbonates stable, Rendering. A. Schaidhauf. No. 1,225,872; May 15; v. 238; p. 699.

Alligator-wrench, Adjustable. L. Marsh. No. 1,226,351; May 15; v. 238; p. 865.

Alloy and article made therefrom, Aluminum. A. W. Morris. No. 1,227,174; May 22; v. 238; p. 1179.

Alloy and making the same, Aluminum-calcium. H. S. Cooper. No. 1,224,362; May 1; v. 238; p. 90.

Alloy, Copper-lead. E. D. Gleason. No. 1,228,017; May 29; v. 238; p. 1490.

Alloy products and manufacture of same, German-silver-. R. Beck. No. 1,227,569; May 29; v. 238; p. 1337.

Aluminium, Producing bands of. E. R. Lauber and R. V. Neher. No. 1,225,044; May 8; v. 238; p. 377.

Aluminum skimmings, screenings, dross, slags, or analogous aluminous materials, Treating. J. W. Lawrie. No. 1,228,119; May 29; v. 238; p. 1524.

Ammonia, Catalytic production of. C. Bosch and A. Mittasch. No. 1,225,755; May 15; v. 238; p. 661.

Amusement device. J. A. Fisher. No. 1,228,011; May 29; v. 238; p. 1488.

Amusement device. C. L. Moore. No. 1,226,565; May 15; v. 238; p. 932.

Amylaceous substances, Treating. A. Boidin and J. Effront. No. 1,227,374; May 22; v. 238; p. 1242.

Analyzing and recording mechanism. J. Powers. No. 1,224,412; May 1; v. 238; p. 108.

Angle-spreader and swivel. H. A. Schilling. No. 1,227,325; May 22; v. 238; p. 1228.

Angular movements, Means for transmitting. S. Petersen. No. 1,225,486; May 8; v. 238; p. 527.

Animal-trap. J. N. Hoffman. No. 1,226,517; May 15; v. 238; p. 917.

Annular article. H. M. Foote. No. 1,225,023; May 8; v. 238; p. 370.

Annular work, Apparatus for forming. F. A. Stevenson. No. 1,224,805; May 1; v. 238; p. 244.

Annunciator. R. R. Metz. No. 1,226,683; May 22; v. 238; p. 1009.

Ant-exterminator. G. G. Morehead. No. 1,225,471; May 8; v. 238; p. 523.

Anticreeper. E. Laas. No. 1,227,804; May 29; v. 238; p. 1417.

Anticreeper for rails. R. E. Belknap. No. 1,228,171; May 29; v. 238; p. 1540.

Anticreeping appliance. J. W. Thomas. No. 1,227,858; May 29; v. 238; p. 1436.

Anticreeping device for rails. D. E. Crowley. No. 1,227,755; May 29; v. 238; p. 1400.

Anticreeping means for railway-rails. J. F. Lydon. No. 1,227,811; May 29; v. 238; p. 1420.

Antiseptic-dispenser. H. A. Clifford. No. 1,227,997; May 29; v. 238; p. 1484.

Antiskid device for auto-tires. J. P. Martiny. No. 1,225,839; May 15; v. 238; p. 688.
Antiskidding device. J. F. Baxa. No. 1,226,171; May 15; v. 238; p. 801.
Antislipping device. D. Grieve. No. 1,227,431; May 22; v. 238; p. 1260.
Antislipping device. H. A. Sarver. No. 1,228,056; May 29; v. 238; p. 1504.
Apron-guiding device. F. G. Sargent. No. 1,227,835; May 29; v. 238; p. 1428.
Arc-lights for projectors, Operating flaming. E. A. Sperry. No. 1,227,210; May 22; v. 238; p. 1190.
Arc-suppressing device. D. C. Davis. No. 1,224,150; May 1; v. 238; p. 12.
Arch-readjuster. W. G. Gray. No. 1,226,327; May 15; v. 238; p. 858.
Arm and hand, Artificial. M. E. Cronemiller. No. 1,225,415; May 8; v. 238; p. 504.
Article-supporting stand. P. Lepak. No. 1,226,543; May 15; v. 238; p. 925.
Ash-dumping mechanism. P. L. Crowe. No. 1,224,904; May 8; v. 238; p. 330.
Ash-sifting apparatus. H. Koppel. No. 1,226,976; May 22; v. 238; p. 1111.
Asphalt-tester, Automatically-timed. W. B. Howard. No. 1,225,438; May 8; v. 238; p. 511.
Athletic brace for limbs. L. Allis. No. 1,226,160; May 15; v. 238; p. 798.
Atomizer. W. A. White. No. 1,227,352; May 22; v. 238; p. 1236.
Audiphone, Hand-. F. A. Barber. No. 1,227,030; May 22; v. 238; p. 1129.
Auto-chain, Non-skid. T. M. Jarrell. No. 1,226,890; May 22; v. 238; p. 1050.
Auto, Fish-conveying. O. Zistel. No. 1,227,732; May 29; v. 238; p. 1393.
Auto steering device. C. J. Patterson. No. 1,226,586; May 15; v. 238; p. 938.
Automatically-actuated gate. E. K. Enebo. No. 1,226,761; May 22; v. 238; p. 1036.
Automobile-body. G. O. Stuck. No. 1,228,257; May 29; v. 238; p. 1568.
Automobile-body construction. R. Mery. No. 1,227,290; May 22; v. 238; p. 1216.
Automobile-brake. J. Oheiski. No. 1,226,245; May 15; v. 238; p. 828.
Automobile-braking mechanism. J. E. Landry. No. 1,227,805; May 29; v. 238; p. 1417.
Automobile-curtains, Antirattling device for. W. C. Koch. No. 1,224,177; May 1; v. 238; p. 22.
Automobile direction-indicator. J. W. Davis. No. 1,224,905; May 8; v. 238; p. 330.
Automobile direction-indicator. R. J. Miller and J. Bell. No. 1,224,657; May 1; v. 238; p. 193.
Automobile direction-indicator. C. M. Nash. No. 1,225,721; May 8; v. 238; p. 606.
Automobile driving-gear. P. L. Jordan. No. 1,224,750; May 1; v. 238; p. 226.
Automobile-fender. M. Uribe. No. 1,226,420; May 15; v. 238; p. 887.
Automobile fuel-gage. J. A. Britton. No. 1,225,618; May 15; v. 238; p. 949.
Automobile-gearing. F. Banks. No. 1,225,102; May 8; v. 238; p. 397.
Automobile glare-shield. A. C. Freeman, Jr. No. 1,225,608; May 8; v. 238; p. 569.
Automobile-guard. G. T. Burrell. No. 1,225,406; May 8; v. 238; p. 501.
Automobile-hood. L. Norvell. No. 1,226,576; May 15; v. 238; p. 936.
Automobile-hood cover. E. B. Nathan. No. 1,227,181; May 22; v. 238; p. 1181.
Automobile-hood lock. L. W. Gustafson. No. 1,227,048; May 22; v. 238; p. 1135.
Automobile-jack. W. H. Bulla. No. 1,226,059; May 15; v. 238; p. 764.
Automobile-jack. M. J. Haug. No. 1,224,298; May 1; v. 238; p. 66.
Automobile-jack. C. T. Nelson. No. 1,224,561; May 1; v. 238; p. 160.
Automobile-lifting-jack apparatus. E. F. Kandlbinder. No. 1,225,644; May 8; v. 238; p. 580.
Automobile-lock. J. P. Becker. No. 1,224,258; May 1; v. 238; p. 52.
Automobile-lock. J. F. Carson. No. 1,226,467; May 15; v. 238; p. 901.
Automobile-pedal lock. A. B. and E. O. Hoefelman. No. 1,225,130; May 8; v. 238; p. 406.
Automobile-radiator. I. Fleischmann. No. 1,227,770; May 29; v. 238; p. 1406.
Automobile runway and lift. A. A. Winer. No. 1,225,549; May 8; v. 238; p. 548.
Automobile-seat, Attachable. J. H. Nienstadt. No. 1,224,405; May 1; v. 238; p. 105.
Automobile-signal. S. H. Davis. No. 1,228,187; May 29; v. 238; p. 1545.
Automobile-signal. J. W. Fey. No. 1,225,022; May 8; v. 238; p. 370.
Automobile-signal. E. L. Johnson. No. 1,225,714; May 8; v. 238; p. 603.
Automobile-signal. H. T. Randle. No. 1,226,004; May 15; v. 238; p. 744.
Automobile-signal. V. Walsh. No. 1,227,226; May 22; v. 238; p. 1196.
Automobile-starter. E. Bootz. (Reissue.) No. 14,297; May 8; v. 238; p. 611.
Automobile starting-crank. F. E. Mains. No. 1,224,401; May 1; v. 238; p. 103.
Automobile steering attachment and self-starting device. J. Marinkowski and J. Bunda. No. 1,224,402; May 1; v. 238; p. 103.
Automobile steering mechanism. R. Serban. No. 1,225,737; May 8; v. 238; p. 610.
Automobile steering mechanism. H. C. Stratford. No. 1,227,851; May 29; v. 238; p. 1434.
Automobile steering-wheel. C. S. Hall. No. 1,225,622; May 8; v. 238; p. 573.
Automobile-steering-wheel lock. C. E. Mentzer. No. 1,227,644; May 29; v. 238; p. 1362.
Automobile-steering-wheel-locking means. J. A. Bowden. No. 1,224,440; May 1; v. 238; p. 118.
Automobile-steering-wheel-locking means. J. A. Bowden. No. 1,225,697; May 8; v. 238; p. 597.
Automobile tail-light. J. A. Morin. No. 1,225,472; May 8; v. 238; p. 523.
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Bottle-holder. H. Kennell. No. 1,227,451; May 22; v. 238; p. 1267.
Bottle-holder and ink-feeder, Combined. E. L. Stocking. No. 1,227,977; May 29; v. 238; p. 1478.
Bottle holder, Milk-. C. M. Davis and M. J. Loomis. No. 1,226,192; May 15; v. 238; p. 809.
Bottle holding and locking device. M. J. Trumble. No. 1,227,220; May 22; v. 238; p. 1193.
Bottle indicator, Poison-. A. E. Longabaugh. No. 1,224,393; May 1; v. 238; p. 100.
Bottle, Ink-. E. C. Smaw. No. 1,227,209; May 22; v. 238; p. 1190.
Bottle, Mucilage-. C. M. Siever. No. 1,226,821; May 22; v. 238; p. 1058.
Bottle-neck mold-roll apparatus. S. Schiff. No. 1,226,700; May 22; v. 238; p. 1015.
Bottle, Non-refillable. S. Narunsky. No. 1,227,648; May 29; v. 238; p. 1363.
Bottle, Non-refillable. A. C. Smith. No. 1,226,822; May 22; v. 238; p. 1058.
Bottle, Non-refillable. S. Sumich. No. 1,224,231; May 1; v. 238; p. 41.
Bottle safety-receptacle, Milk-. A. Schaffer. No. 1,228,057; May 29; v. 238; p. 1504.
Bottle top, Milk-. G. Wieber. No. 1,224,251; May 1; v. 238; p. 49.
Bottle-washer. J. R. Dostal. No. 1,227,594; May 29; v. 238; p. 1344.
Bottle-washing machine. T. J. Lampe. No. 1,225,653; May 8; v. 238; p. 582.
Bottles or the like to an annealing-oven, Apparatus for transferring. C. Brauer. No. 1,226,633; May 22; v. 238; p. 994.
Bottles and the like with capsules, Machine for closing. A. J. L. Lassen. No. 1,224,937; May 8; v. 238; p. 341.
Bow rest and clamping device. H. B. White. No. 1,226,287; May 15; v. 238; p. 845.





Bows, Machine for making. J. Bricken. No. 1,224,268; May 1; v. 238; p. 55.
Bowling apparatus. W. J. Powell. No. 1,224,322; May 1; v. 238; p. 75.
Bowling-pin and making same. F. G. Crane. No. 1,227,248; May 22; v. 238; p. 1204.
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Cigar-box. Letter-box.
Cigarette-box. Locomotive driving-box.
Collapsible box. Match-box.
Conduit outlet-box. Organ swell-box.
Core-box. Outlet-box.
Delivery-box. Paper box.
Electric contact-box. Rifle-box.
Electric switch and fuse box. Roadway-box.
Sound-box.
Foldable box. Talking-machine sound-box.
Folding box. Toilet-box.
Hat-box. Wagon-box.
Ice-box.
Journal-box.
Box. G. Livingston. No. 1,224,391; May 1; v. 238; p. 99.
Box. M. F. Robison. No. 1,224,794; May 1; v. 238; p. 240.
Box and plunger and blank registering mechanism. M. E. Peters, G. H. Fath, and A. F. Miller. No. 1,226,995; May 22; v. 238; p. 1118.
Box-fastener. J. A. Deindoerfer, Jr. No. 1,227,590; May 29; v. 238; p. 1343.
Box-nailing machine. E. C. Northrup. No. 1,226,907; May 22; v. 238; p. 1086.
Box-splints, veneers, shingles, &c., Machine for making. S. Carlin. No. 1,226,185; May 15; v. 238; p. 807.
Boxes or the like, Cover for service-. J. F. Hall. No. 1,224,534; May 1; v. 238; p. 150.
Boxes, Sifting attachment for. E. O. De Vries. No. 1,227,121; May 22; v. 238; p. 1161.
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Hand-brace. Rail-brace.
Bracelet. H. Ginnel. No. 1,224,528; May 1; v. 238; p. 148.
Bracelet. A. Hadley. No. 1,224,921; May 8; v. 238; p. 335.
Bracelet. C. B. Ware. No. 1,224,585; May 1; v. 238; p. 168.
Bracelet-catch. A. Hadley. No. 1,228,018; May 29; v. 238; p. 1490.
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Curtain and shade bracket. Telephone-bracket.
Curtain-bracket. Wall-bracket.
Speedometer-pinion bracket.
Bracket. W. Marin. No. 1,227,165; May 22; v. 238; p. 1176.
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Braid-binder. P. Legere. No. 1,225,831; May 15; v. 238; p. 686.
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Coaster-brake. Vehicle-brake.
Hydraulic brake. Wagon-brake.
Machine-brake.
Brake. F. C. Carstarphen. No. 1,225,009; May 8; v. 238; p. 366.
Brake. G. Smith. No. 1,225,517; May 8; v. 238; p. 536.
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Brake-shoe. H. Jones. No. 1,225,336; May 8; v. 238; p. 477.
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Brake-shoes, Combined reinforcing-plate and key-lug for. W. H. McDonough. No. 1,227,282; May 22; v. 238; p. 1214.
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Electric generating apparatus, Automatic. C. F. Strong. No. 1,225,284; May 8; v. 238; p. 457.
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Lamp control for motor-vehicles, Head-. J. A. Jones. No. 1,226,529; May 15; v. 238; p. 920.
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Plate-lifter. Transom-lifter.
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Dirigible light. Pen-light.
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Automobile-pedal lock.
Automobile-steering-wheel lock.
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Gate-lock.
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Nut-lock.
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Padlock, Permutation-. G. W. Bonney. No. 1,224,595; May 1; v. 238; p. 172.
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Pail, Toilet-. S. M. Spencer. No. 1,227,336; May 22; v. 238; p. 1231.
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Dust-pan.
Threshing-machine grain-pan.
Pan-lifter. E. E. Stanfield. No. 1,227,849; May 29; v. 238; p. 1433.
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Paper box-blanks, Machine for making. H. Inman and F. M. Joslin. No. 1,225,131; May 8; v. 238; p. 406.
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Paper-dispensing device. F. L. Updike. No. 1,226,928; May 22; v. 238; p. 1093.
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Paper-feed-controlling apparatus. T. J. Beregh, Jr. No. 1,228,173; May 29; v. 238; p. 1541.
Paper-hanging machine. A. J. Hitch. No. 1,225,731; May 8; v. 238; p. 609.
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Pickling-bath and making the same. A. F. Hoffman. No. 1,225,956; May 15; v. 238; p. 727.
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Bowling-pin. Hat-pin.
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Spring-connector. T. Mahoney. No. 1,225,148; May 8; v. 238; p. 412.
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Plate. J. Torak. No. 50,826; May 22; v. 238; p. 1311.
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Quilling for draperies, garments, or similar articles. W. R. Fairclough. No. 50,834; May 29; v. 238; p. 1612.
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Scale-frame. L. Jaenichen. No. 50,688; May 1; v. 238; p. 280.
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Sewing-table. L. A. Boyer. No. 50,711; May 8; v. 238; p. 614.
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Sound-reproducing machines, Casing for. H. T. Schiff. No. 50,849; May 29; v. 238; p. 1616.
Spoon, fork, or similar article. R. Feil. No. 50,835; May 29; v. 238; p. 1612.
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Statuette. C. H. Forbell. No. 50,778; May 15; v. 238; p. 955.
Stove, Brooder-. S. B. Smith. No. 50,763; May 8; v. 238; p. 626.
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Talking-machine, Cabinet. H. D. Darlington. No. 50,775; May 15; v. 238; p. 954.
Teapot or similar article. W. D. Smith and R. J. Bourgeois. Nos. 50,764–5; May 8; v. 238; pp. 626–7.
Thermostat-casing. E. C. Johns. No. 50,787; May 15; v. 238; p. 956.
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Tire-tread. S. S. Adams. No. 50,673; May 1; v. 238; p. 277.
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Toy figure. C. J. Ross. No. 50,820; May 22; v. 238; p. 1309.
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Tray, Revolving. E. F. Guth. No. 50,723; May 8; v. 238; p. 617.
Vending-machine casing. G. Kern. No. 50,699; May 1; v. 238; p. 281.
Washboilers, Rest for clothes and other articles in. S. Wolna. No. 50,858; May 29; v. 238; p. 1618.
Water-closet bowl. S. D. Baker. No. 50,674; May 1; v. 238; p. 277.
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Abdominal belts or supporters. S. H. Camp. No. 116,588; May 15; v. 238; p. 975.
Abdominal surgical health-belts. The Well Corset Company. No. 116,725; May 15; v. 238; p. 979.
Alcohol for fuel purposes, Solidified. F. W. Richardson. No. 116,459; May 1; v. 238; p. 307.
Alloy for bearings, in ingots, castings, or forgings. R. E. Rich. No. 116,791; May 22; v. 238; p. 1326.
Antiphlogistic preparation in the form of a plastic dressing. The Germicide Company. No. 116,516; May 8; v. 238; p. 645.
Antiseptic germicide and disinfectant for dental use. H. Mestayer. No. 116,538; May 8; v. 238; p. 646.
Antiseptic, Pine-oil. The William S. Merrell Chemical Company. No. 116,537; May 8; v. 238; p. 646.
Appetizer made from select old wines. L. Ardin. No. 116,498; May 8; v. 238; p. 645.
Auto and carriage body, furniture, &c., polish. J. Grieshamer. No. 116,428; May 1; v. 238; p. 306.
Automobile repair parts, wrenches, reamers, &c. The Hill-Smith Metal Goods Company. No. 116,430; May 1; v. 238; p. 306.
Automobiles and automobile-trucks. Chicago Pneumatic Tool Company. No. 116,595; May 15; v. 238; p. 975.
Bacon, Breakfast-. John Morrell & Co. Nos. 116,541–2; May 8; v. 238; p. 646.
Bacon, Breakfast-. John Morrell & Co. No. 116,674; May 15; v. 238; p. 978.
Bag, trunk, &c., fittings, Traveling-. Wm. Greilich & Sons. No. 116,759; May 22; v. 238; p. 1325.
Bags, Peanut-. Holcomb & Hoke Mfg. Co. No. 116,766; May 22; v. 238; p. 1326.
Barley and pearl-barley, Specially-prepared. Barley Foods Co. No. 116,395; May 1; v. 238; p. 305.
Bath-tub seats, shelf rails and brackets, robe and spray hooks. J. P. Eustis Manufacturing Company. No. 116,420; May 1; v. 238; p. 306.
Batteries. A. H. Berry. No. 116,579; May 15; v. 238; p. 975.
Batteries, Dry. Western Dry Battery Co. No. 116,727; May 15; v. 238; p. 979.
Beer, Lager-. The Salt Lake City Brewing Co. No. 116,860; May 29; v. 238; p. 1636.
Benches and stools and music-cabinets, Piano. Lyon & Healy. No. 116,659; May 15; v. 238; p. 977.
Beverage made from a compound of malt, hops, and cereals. Münch Brewery Bottling Dept. No. 116,544; May 8; v. 238; p. 646.
Beverage sold as a soft drink, Non-alcoholic. Jos. Schlitz Brewing Co. No. 116,685; May 15; v. 238; p. 978.
Beverages sold as soft drinks, Cereal. The Peter Schoenhofen Brewing Company. No. 116,686; May 15; v. 238; p. 978.
Beverage to be sold as a soft drink, Non-alcoholic carbonated. Colfax Bottling Works. No. 116,823; May 29; v. 238; p. 1635.
Beverages, Non-alcoholic carbonated. E. Diehl. No. 116,829; May 29; v. 238; p. 1635.
Bleaching and water-softening compound. Zip Co. No. 116,735; May 15; v. 238; p. 980.
Board used in the manufacture of boxes and products made from same, Corrugated and fiber. Mid-West Box Company. No. 116,668; May 15; v. 238; p. 978.
Boilers, Water-tube. The Roberts Safety Water Tube Boiler Co. No. 116,792; May 22; v. 238; p. 1326.
Boot and shoe soles and heels formed of an artificial composition. The Goodyear Tire & Rubber Company. No. 116,519; May 8; v. 238; p. 645.
Boots, shoes, slippers, sandals, leather and cloth. Timson Bros. No. 116,706; May 15; v. 238; p. 979.
Bottle-washing machines. The S. S. Wenzell Machine Company. No. 116,869; May 29; v. 238; p. 1636.
Brandy, Raspberry. J. Finkelstein & Co. No. 116,423; May 1; v. 238; p. 306.
Brick, Fire-. Harbison-Walker Refractories Company. No. 116,630; May 15; v. 238; p. 976.
Brushes for general and certain named use. United Shoe Machinery Company. No. 116,868; May 29; v. 238; p. 1636.
Brushes, Paint-. Hanlon & Goodman Co. No. 116,629; May 15; v. 238; p. 976.
Bushings and metal and graphite bearings and bushings, Self-lubricating trolley-wheel. The Graphite Lubricating Company. No. 116,521; May 8; v. 238; p. 645.
Butter. C. R. Linn. No. 116,771; May 22; v. 238; p. 1326.
Butter. F. Waskow. No. 116,568; May 8; v. 238; p. 647.
Butter and honey. Commercial Creamery Company. No. 116,660; May 15; v. 238; p. 976.
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Cabinets, tables, and stools, Metal kitchen. The Ohio State Stove Co. No. 116,853; May 29; v. 238; p. 1636.
Cakes. H. W. Sloat. No. 116,561; May 8; v. 238; p. 647.
Calcium salts. P. M. Kuehnrich. Nos. 116,529–31; May 8; v. 238; p. 646.
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Candy. The Wintermint Co. No. 116,732; May 15; v. 238; p. 980.
Canned fruits and vegetables. Lange Canning Co. No. 116,533; May 8; v. 238; p. 646.
Canned fruits and vegetables. C. E. Slauson Co. No. 116,694; May 15; v. 238; p. 978.
Canned goods and food products, Certain named. The Weideman Co. No. 116,486; May 1; v. 238; p. 308.
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Canned goods, Certain named. Sussman, Wormser & Co. No. 116,470; May 1; v. 238; p. 307.
Canned salmon. Booth Fisheries Company. No. 116,501; May 8; v. 238; p. 645.
Canned salmon. Whatcom Fish Products Co. Nos. 116,728–9; May 15; v. 238; p. 980.
Canned salmon, cove-oysters, and minced clams, dried codfish. Roundup Fisheries Co. No. 116,684; May 15; v. 238; p. 978.
Capsules used as a home liquor and drug treatment. F. I. Barker. No. 116,499; May 8; v. 238; p. 645.
Cement, Iron-. E. W. Jenkins. No. 116,650; May 15; v. 238; p. 977.
Cement, non-conducting boiler-covering and stove-lining, Fire-brick. Refractory Materials Company. No. 116,857; May 29; v. 238; p. 1636.
Cheese. Smith Lichty and Hillman Company. No. 116,695; May 15; v. 238; p. 978.
Chemicals, medicines, and pharmaceutical preparations for treating certain named diseases. United Liquid Sulphur Co. No. 116,716; May 15; v. 238; p. 979.
Chocolates. Sweet Candy Co. No. 116,564; May 8; v. 238; p. 647.
Cigars. Coony Bayer Cigar Co. No. 116,747; May 22; v. 238; p. 1325.
Cigars. S. S. Speier. No. 116,801; May 22; v. 238; p. 1327.
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Cigars, United Cigar Manufacturers Company. No. 116,715; May 15; v. 238; p. 979.
Cigars, United Cigar Manufacturers Company. No. 116,807; May 22; v. 238; p. 1327.
Cigars and cigarettes. Lilly, Dungan & Company. No. 116,656; May 15; v. 238; p. 977.
Cleaners, Electric suction-. Marshall Field & Company. No. 116,755; May 22; v. 238; p. 1325.
Cleaning composition for the hands, wood, metal, earthen, and enameled wares. N. R. McAfee. No. 116,773; May 22; v. 238; p. 1326.
Cleansing or scouring cake or powder. Enoch Morgan's Sons Company. No. 116,540; May 8; v. 238; p. 646.
Clocks and watches. Western Clock Co. No. 116,726; May 15; v. 238; p. 979.
Clothing. Certain named. Birkenfeld, Strauss & Co. No. 116,581; May 15; v. 238; p. 975.
Clothing, Certain named. J. M. Robinson, Norton & Co. No. 116,683; May 15; v. 238; p. 978.
Clothing, Certain named. A. L. Tuska Son & Co. No. 116,712; May 15; v. 238; p. 979.
Clothing for women, misses, and children, Certain named. King & Applebaum. No. 116,847; May 29; v. 238; p. 1636.
Coats, waistcoats, trousers, and overcoats, Men's and youths'. Hirsh, Wickwire Company. No. 116,431; May 1; v. 238; p. 306.
Coffee. The Woolson Spice Company. No. 116,733; May 15; v. 238; p. 980.
Coffee substitute. W. J. H. Doran. No. 116,611; May 15; v. 238; p. 976.
Coffee, tea, salted and sugar peanuts, &c. Brundage Brothers Company. No. 116,586; May 15; v. 238; p. 975.
Compound for the feet, Cooling, healing, and odor-destroying. R. E. McCain. No. 116,437; May 1; v. 238; p. 306.
Confectionery. Imperial Candy Co. No. 116,524; May 8; v. 238; p. 646.
Corduroys and velveteens. Waterside Mills. No. 116,485; May 1; v. 238; p. 308.

Corn-solvent, dandruff remedy, and headache-tablets. W. C. Young. No. 116,812; May 22; v. 238; p. 1327.
Corsets. The Warner Bros. Co. No. 116,483; May 1; v. 238; p. 308.
Cotton and cotton and silk mixture drapery fabrics. Titus Blatter & Company. No. 116,708; May 15; v. 238; p. 979.
Cotton and linen piece goods. Trippe, Barker & Co. No. 116,476; May 1; v. 238; p. 307.
Cotton damasks, napkins, table-cloths, and cotton piece goods. D. D. Campbell. No. 116,819; May 29; v. 238; p. 1635.
Cotton drapery fabrics. Titus Blatter & Company. No. 116,707; May 15; v. 238; p. 979.
Cotton duck. Mount Vernon-Woodberry Mills. Nos. 116,442–3; May 1; v. 238; p. 306.
Cotton duck, canvas, and yarn spun or woven in textile fabrics. The Warren Manufacturing Company. No. 116,484; May 1; v. 238; p. 308.
Cotton goods in the piece. Niagara Silk Mills. No. 116,445; May 1; v. 238; p. 306.
Cotton piece goods. Bootts Mills. No. 116,815; May 29; v. 238; p. 1635.
Cotton piece goods. P. S. Halpern. No. 116,844; May 29; v. 238; p. 1636.
Cream, Cold-. The E-ZE Products Co. No. 116,421; May 1; v. 238; p. 306.
Cream, hair-tonic, face-lotion for use after shave or when desired, Face-. A. B. Moler. No. 116,673; May 15; v. 238; p. 978.
Cream, Vanishing. Home Products Company. No. 116,639; May 15; v. 238; p. 977.
Creams, Liquid toilet. W. E. Evenson. No. 116,832; May 29; v. 238; p. 1635.
Crochet-hooks. Dieckerhoff, Raffloer & Co. No. 116,609; May 15; v. 238; p. 976.
Crochet hooks or needles. The Clark Thread Company. No. 116,597; May 15; v. 238; p. 975.
Cutlery, machinery, and parts thereof, Certain named. A. Kreamer, Inc. No. 116,849; May 29; v. 238; p. 1636.
Cutlery, machinery, and tools, and parts thereof, Certain named. Wanderer Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft. No. 116,809; May 22; v. 238; p. 1327.
Dairy-culture. C. A. Owen. No. 116,446; May 1; v. 238; p. 306.
Dandruff and falling hair. The Longwood Laboratories. No. 116,534; May 8; v. 238; p. 646.
Dentifrices. Bucadyne Chemical Company. No. 116,504; May 8; v. 238; p. 645.
Detergent for the hands and fabrics, machinery, &c. E. Y. B. Engelman. No. 116,753; May 22; v. 238; p. 1325.
Diapers, Hemmed. The Millville Manufacturing Company. No. 116,671; May 15; v. 238; p. 978.
Disinfectants. Bucadyne Chemical Company. No. 116,504; May 8; v. 238; p. 645.
Detergent for the hands and fabrics, machinery, &c. E. Y. B. Engelman. No. 116,753; May 22; v. 238; p. 1325.
Diapers, Hemmed. The Millville Manufacturing Company. No. 116,671; May 15; v. 238; p. 978.
Disinfectants. I. Ressler. No. 116,790; May 22; v. 238; p. 1326.
Display-stands for exhibiting perfumery in bottles and other articles for sale. Lundborg Company. No. 116,658; May 15; v. 238; p. 977.
Dolls. J. Gray Co. No. 116,768; May 22; v. 238; p. 1326.
Dolls. Rite Specialty Co. No. 116,682; May 15; v. 238; p. 978.
Dolls. H. Sieben. No. 116,797; May 22; v. 238; p. 1327.
Dolls, doll-houses, toy houses, figures, &c. The Beaver Company. No. 116,814; May 29; v. 238; p. 1635.
Drains, Floor-. Crampton-Farley Brass Co. No. 116,604; May 15; v. 238; p. 976.
Dress and snap fasteners. Samstag & Hilder Bros. No. 116,794; May 22; v. 238; p. 1326.
Drink, Non-intoxicating brewed soft. Val. Blatz Brewing Co. No. 116,500; May 8; v. 238; p. 645.
Drinks, Carbonated soft. J. G. Cledon. No. 116,402; May 1; v. 238; p. 305.
Electric heating-pads. The Goodwill Electric Company. No. 116,624; May 15; v. 238; p. 976.
Electric window-lighting and signs. Chase Electric Company. No. 116,400; May 1; v. 238; p. 305.
Electrolyte. I. C. Scudder. No. 116,795; May 22; v. 238; p. 1326.
Embroideries made of silk and wool, and suspenders. A. M. Malouf. No. 116,440; May 1; v. 238; p. 306.
Engines, Internal-combustion. Worthington Pump and Machinery Corporation. No. 116,492; May 1; v. 238; p. 308.
Feed and cotton-seed mixed feed, Stock. The Cottonseed Products Co. No. 116,603; May 15; v. 238; p. 976.
Fencing, Wire. The Cussins & Fearn Co. No. 116,749; May 22; v. 238; p. 1325.
Fire-extinguishing compound. The Nu-Ex Fire Appliance Co. No. 116,548; May 8; v. 238; p. 646.
Fireworks. Detwiller & Street Fireworks Manufacturing Company. Nos. 116,605–8; May 15; v. 238; p. 976.
Fish, crab-meat, Tuna. Seggerman Bros. No. 116,689; May 15; v. 238; p. 978.
Fish, Salted, smoked, pickled, fresh, and canned. F. L. Davis. No. 116,750; May 22; v. 238; p. 1325.
Floor dressings and polishes. National Paper Products Company. No. 116,782; May 22; v. 238; p. 1326.
Flour, Self-rising wheat-. C. A. Gambrill Mfg. Co. No. 116,618; May 15; v. 238; p. 976.
Flour, Wheat-. The Canadian-American Cereal Products Co. No. 116,589; May 15; v. 238; p. 975.
Flour, Wheat-. Gulfport Grocery Co. No. 116,628; May 15; v. 238; p. 976.
Flour, Wheat-. The Larabee Flour Mills Corporation. No. 116,654; May 15; v. 238; p. 977.
Flour, Wheat-. Lauderbach-Barber Co. No. 116,435; May 1; v. 238; p. 306.
Flour, Wheat-. Louis Levy Grocer Co. No. 116,655; May 15; v. 238; p. 977.
Flour, Wheat-. Russell-Miller Milling Co. No. 116,462; May 1; v. 238; p. 307.
Flour, Wheat-. The Topeka Flour Mills Company. No. 116,710; May 15; v. 238; p. 979.
Flour, Wheat-. Washburn Crosby Company. No. 116,724; May 15; v. 238; p. 979.
Folders and magazines issued monthly. M. Appelbaum. No. 116,743; May 22; v. 238; p. 1325.
Food, Cereal breakfast. R. M. Groff. No. 116,627; May 15; v. 238; p. 976.
Food product consisting of prepared animal milk. Niana Pure Food Company. No. 116,783; May 22; v. 238; p. 1326.
Foods, Certain named. Acme Packing Co. No. 116,738; May 22; v. 238; p. 1325.
Foods, Certain named. Castle Brothers. No. 116,505; May 8; v. 238; p. 645.
Foods, Certain named. Chamberlain & Company. No. 116,506; May 8; v. 238; p. 645.
Foods, Certain named. Heisig & Norvell. No. 116,633; May 15; v. 238; p. 977.
Foods, Certain named. Sunshine Poultry Farm. No. 116,701; May 15; v. 238; p. 979.
Foodstuffs for cattle, &c., Cotton-seed-meal. Union Seed & Fertilizer Company. No. 116,714; May 15; v. 238; p. 979.
Forks, spoons, cheese-scoops, &c., of base metal. Landers, Frary & Clark. No. 116,850; May 29; v. 238; p. 1636.
Foundry-facings of all sorts. S. Doggett. No. 116,752; May 22; v. 238; p. 1325.
Furnaces and boilers and parts and devices for same, Certain named. Locomotive Pulverized Fuel Company. No. 116,772; May 22; v. 238; p. 1326.
Furnaces, Hot-air. Moniter Stove & Range Co. No. 116,781; May 22; v. 238; p. 1326.
Furniture, Certain named. Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft. Nos. 116,722–3; May 15; v. 238; p. 979.
Furniture-polishes. M. Kammerling. No. 116,652; May 15; v. 238; p. 977.
Fuses and cartridges, Electric. Star Fuse Co. No. 116,468; May 1; v. 238; p. 307.
Games. H. B. Fitzpatrick. No. 116,617; May 15; v. 238; p. 976.
Garments, Children's sleeping-. W. Shanhouse & Sons. No. 116,560; May 8; v. 238; p. 647.
Gin, Asparagus. Folsom Asparagus Gin Co. No. 116,512; May 8; v. 238; p. 645.
Gin, Bottled Grecian white. Grecian Imp. & Trading Co. Nos. 116,625–6; May 15; v. 238; p. 976.
Glass, Lime blown. A. H. Heisey & Co. No. 116,634; May 15; v. 238; p. 977.
Gloves, Fabric. Berlin Fabric Glove Co. No. 116,396; May 1; v. 238; p. 305.
Golf-club heads, Iron. J. P. Cochrane. No. 116,599; v. 238; p. 976.
Grape-fruit or pomelo juice. The Thomas Advertising Service. No. 116,705; May 15; v. 238; p. 979.
Grinding-wheels. Springfield Grinding Co. No. 116,467; May 1; v. 238; p. 307.
Gum and mints, Chewing-. The Vanola Company. No. 116,720; May 15; v. 238; p. 979.
Gum, Chewing-. Adams Brothers. No. 116,571; May 15; v. 238; p. 975.
Gum, Chewing-. Adams Brothers. No. 116,740; May 22; v. 238; p. 1325.
Hair-dressing. Hopfinger & Roth. No. 116,644; May 15; v. 238; p. 977.
Hair-nets. M. Herzog. No. 116,845; May 29; v. 238; p. 1636.
Hair-water for dandruff and medicated injection and pills for the treatment of venereal diseases. H. V. Clausen. No. 116,508; May 8; v. 238; p. 645.
Hammers. W. A. McFadden. No. 116,438; May 1; v. 238; p. 306.
Hats. The Thistle Hat Co. No. 116,704; May 15; v. 238; p. 979.
Hose made partly of rubber and partly of cotton. The Manhattan Rubber Mfg. Co. No. 116,776; May 22; v. 238; p. 1326.
Hosiery. Paramount Knitting Company. Nos. 116,449–50; May 1; v. 238; p. 307.
Hosiery. The Wilmington Hosiery Mills. No. 116,731; May 15; v. 238; p. 980.
Hot-water-bag, &c., cover and hanger. E. M. Peters. No. 116,679; May 15; v. 238; p. 978.
Hydrocarbon used in the treatment of certain named diseases, Soluble sulfonated. J. A. Cushing. No. 116,827; May 29; v. 238; p. 1635.
Ice-cream cones. Roberts Cone Manufacturing Company. No. 116,555; May 8; v. 238; p. 646.
Indicators and index devices, card-indexes, &c. The Rand Company. No. 116,458; May 1; v. 238; p. 307.



Inks, Compositions for use with printers' and lithographers'. Roko Manufacturing Co. No. 116,461; May 1; v. 238; p. 307.
Inks, Printing-. F. E. Okie Company. No. 116,677; May 15; v. 238; p. 978.
Insoles, box-toes, and heel-counters for boots and shoes, Composition. United States Rubber Company. Nos. 116,565–6; May 8; v. 238; p. 647.
Insulator, Thermal and acoustic. Union Fibre Company. No. 116,867; May 29; v. 238; p. 1636.
Jellies, preserves, and marmalades, Fruit. Florida Fruit Preserving Co. No. 116,511; May 8; v. 238; p. 645.
Jewelry, Certain named articles of. The C. M. Abbott Company. No. 116,570; May 15; v. 238; p. 975.
Kerosene used as a hair-dressing and dandruff-remover, Odorless. C. Kervan. No. 116,526; May 8; v. 238; p. 646.
Lamps and parts thereof, Electric. The Adams-Bagnall Electric Co. No. 116,739; May 22; v. 238; p. 1325.
Lamps, their accessories and supplies, Arc and electric. Körting & Mathiesen Aktiengesellschaft. No. 116,775; May 22; v. 238; p. 1326.
Lathes. Machinery Merchants, Inc. No. 116,439; May 1; v. 238; p. 306.
Laxative. Tryalax Mfg. Co. No. 116,477; May 1; v. 238; p. 307.
Laxative jam. Cantrell & Dawson. No. 116,820; May 29; v. 238; p. 1635.
Leather. Carl E. Schmidt & Co. No. 116,737; May 22; v. 238; p. 1325.
Leather and rubber substitute. A. L. Hatfield. No. 116,764; May 22; v. 238; p. 1325.
Leather, Sole-. J. Paskus & Son. No. 116,786; May 22; v. 238; p. 1326.
Lenses for lanterns. F. A. Hardy & Co. No. 116,762; May 22; v. 238; p. 1325.
Liniment for sprains, stiff joints, bruises, &c., Antiseptic. Senger Drug Co. No. 116,796; May 22; v. 238; p. 1326.
Lures—viz., spoons, wabblers, and spinners, Artificial. Min-Nix Company. No. 116,779; May 22; v. 238; p. 1326.
Maps, Geographical. P. Parnitzky. No. 116,785; May 22; v. 238; p. 1326.
Matches. The Louis Hilfer Company. No. 116,636; May 15; v. 238; p. 977.
Medicaments for rectal and vaginal application. E. M. Pond. No. 116,550; May 8; v. 238; p. 646.
Medicinal preparations for treating certain named diseases. B. O. & G. C. Wilson. No. 116,871; May 29; v. 238; p. 1637.
Medicinal preparation or tonic for use in certain named conditions. H. P. Wilkins. No. 116,569; May 8; v. 238; p. 647.
Medicinal tonic. Cantrell & Dawson. No. 116,821; May 29; v. 238; p. 1635.
Medicine for certain named diseases. W. J. Peppett. No. 116,452; May 1; v. 238; p. 307.
Medicine for dogs, cats, rabbits, &c. Spratt's Patent (America). No. 116,466; May 1; v. 238; p. 307.
Medicines and pharmaceutical preparations, Certain named. P. A. Dietrich. No. 116,680; May 15; v. 238; p. 978.
Metal, Chemically-alloyed high-speed bearing. Frictionless Metal Co. No. 116,425; May 1; v. 238; p. 306.
Metal-polish. W. E. Martin. No. 116,441; May 1; v. 238; p. 306.
Metals and metal castings and forgings, Certain named. The Fairley-Davidson Steel Co. Nos. 116,833–5; May 29; v. 208; p. 1635.
Milk, Condensed. G. R. Hardie. No. 116,522; May 8; v. 238; p. 646.
Milk, Condensed. Holland Food Corporation. No. 116,638; May 15; v. 238; p. 977.
Mosquito-sting preventive. E. Moore. No. 116,852; May 29; v. 238; p. 1636.
Mowers, Lawn-. The Philadelphia Lawn Mower Company. Nos. 116,458–6; May 1; v. 238; p. 307.
Musical instruments of the xylophone type. J. C. Deagan. No. 116,412; May 1; v. 238; p. 305.
Nettings, veils, and veilings in the piece. E. & Z. Van Raalte. No. 116,490; May 1; v. 238; p. 307.
Newspaper-section. Star Company. No. 116,804; May 22; v. 238; p. 1327.
Newspaper-supplements. The Picture Press. No. 116,787; May 22; v. 238; p. 1326.
Newspaper-supplements. Rotofotos, Inc. No. 116,793; May 22; v. 238; p. 1326.
Nursers, nursing-bottles, and rubber nipples. D. B. Smith. No. 116,798; May 22; v. 238; p. 1327.
Nuts. Western Screw & Lock-Nut Co. No. 116,810; May 22; v. 238; p. 1327.
Nuts, bolts, and metal washers. Grip Nut Company. No. 116,429; May 1; v. 238; p. 306.
Oil and ready-mixed paints, Linseed-. W. R. Grace & Co. No. 116,427; May 1; v. 238; p. 306.
Oils and greases. Crew Levick Company. Nos. 116,404–7; May 1; v. 238; p. 305.
Oils and greases. Crew Levick Company. No. 116,826; May 29; v. 238; p. 1635.
Oils and greases, Lubricating. Durkee-Atwood Co. No. 116,417; May 1; v. 238; p. 306.
Oils and greases made from petroleum. Sinclair Oil & Refining Corporation. No. 116,693; May 15; v. 238; p. 978.
Oils for lubricating and cushioning purposes, Petroleum-. Standard Oil Company. No. 116,698; May 15; v. 238; p. 979.
Oils, Fuel-. Mexican Petroleum Corporation. No. 116,667; May 15; v. 238; p. 978.
Oils, Illuminating, lubricating, and fuel. The Topeka Oil Company. No. 116,475; May 1; v. 238; p. 307.
Oils, Polishing-. W. B. Jacobs. No. 116,648; May 15; v. 238; p. 977.
Ointment especially prepared for the eye, ear, and nose, but can be used on any portion of the body. E. R. Miller. No. 116,539; May 8; v. 238; p. 646.
Oleomargarin. Capital City Dairy Co. No. 116,500; May 15; v. 238; p. 975.
Olives, Stuffed ripe and ripe. Alexander & Callen. No. 116,496; May 8; v. 238; p. 645.
Optical supplies, Certain named. Universal Optical Corporation. No. 116,718; May 15; v. 238; p. 979.
Oranges, grape-fruit, lemons, and all citrus fruits. Nocatee Citrus Growers' Association. No. 116,676; May 15; v. 238; p. 978.
Organs and parts thereof. Marr and Colton Organ Co. No. 116,663; May 15; v. 238; p. 977.
Overalls. Reliance Manufacturing Company. No. 116,552; May 8; v. 238; p. 646.
Overalls and jackets. E. E. Wagner. No. 116,482; May 1; v. 238; p. 308.
Overalls, jackets, trousers, coats, and work-shirts, Men's. W. M. Finck & Company. No. 116,422; May 1; v. 238; p. 306.
Overalls, overall coats and pants. Jobbers Overall Co. No. 116,433; May 1; v. 238; p. 306.
Overalls, work-shirts, and hosiery. Bittner Hunsicker & Co. No. 116,582; May 15; v. 238; p. 975.
Overcoats. F. W. Hawck. No. 116,632; May 15; v. 238; p. 977.
Oyzo, koniak, matika, and arak. S. F. Zaloom & Co. No. 116,813; May 22; v. 238; p. 1327.
Packing, Machinery. The Manhattan Rubber Mfg. Co. No. 116,777; May 22; v. 238; p. 1326.
Pails and cans and cans used in making artificial ice, Garbage. The Cincinnati Galvanizing Company. No. 116,590; May 15; v. 238; p. 975.
Paint, Enamel. Carpenter-Morton Co. No. 116,822; May 29; v. 238; p. 1635.
Paint, Ready-mixed. Standard Oil Company. No. 116,697; May 15; v. 238; p. 979.
Paint, Water-. A. H. Knight. No. 116,848; May 29; v. 238; p. 1636.
Paints and painters' materials, Certain named. The A. Wilhelm Company. No. 116,730; May 15; v. 238; p. 980.
Paints and painters' supplies, Certain named. The Wilhelm Company. No. 116,811; May 22; v. 238; p. 1327.
Paints, driers, enamels, stains, &c. The Patterson-Sargent Company. No. 116,451; May 1; v. 238; p. 307.
Paints, driers, enamels, stains, lacs, fillers, varnishes. The Patterson-Sargent Company. Nos. 116,855–6; May 29; v. 238; p. 1636.
Paints, especially shingle-paint. H. A. Gardner. No. 116,757; May 22; v. 238; p. 1325.
Paints, Mixed liquid. The Cussins & Fearn Co. No. 116,828; May 29; v. 238; p. 1635.
Paints, Paste. The Charles H. Brown Paint Co. No. 116,309; May 1; v. 238; p. 305.
Paints, Ready-mixed. The Paraffine Paint Company. No. 116,854; May 29; v. 238; p. 1636.
Paper and paper towels, Toilet-. Albany Perforated Wrapping Paper Company. Nos. 116,388–9; May 1; v. 238; p. 305.
Paper and paper towels, Toilet-. Albany Perforated Wrapping Paper Company. Nos. 116,572–3; May 15; v. 238; p. 975.
Paper and paper towels, Toilet-. Albany Perforated Wrapping Paper Company. Nos. 116,741–2; May 22; v. 238; p. 1325.
Paper and paper towels, Toilet-. Wortendyke Manufacturing Co. Nos. 116,489–91; May 1; v. 238; p. 306.
Paper, Coated lithographic. West Virginia Pulp & Paper Co. No. 116,487; May 1; v. 238; p. 308.
Paper or cardboard, Boxes of. F. Forristall. No. 116,537; May 29; v. 238; p. 1635.
Paper, Waterproofed. Tate Electrolytic Waterproofing Company. No. 116,703; May 15; v. 238; p. 979.
Paper, Wrapping-. Crown Willamette Paper Company. Nos. 116,408–10; May 1; v. 238; p. 305.
Paper, Writing-. American Papeterie Company. No. 116,391; May 1; v. 238; p. 305.
Papers, Printing and writing. National Papeterie Company. No. 116,675; May 15; v. 238; p. 978.
Papers, Writing-. Whiting Paper Company. No. 116,488; May 1; v. 238; p. 308.
Paving, Wood-block. Pacific Creosoting Co. No. 116,678; May 15; v. 238; p. 978.
Peanut-butter and boney food compound. D. C. Gilham. No. 116,621; May 15; v. 238; p. 976.
Peanuts, peanut butter, and oil, coffee, sugar, tea, Salted. The Brundage Bros. Co. No. 116,508; May 8; v. 238; p. 645.
Pen-racks. Cushman & Denison Mfg. Co. No. 116,411; May 1; v. 238; p. 305.
Perfumes, cold and massage creams, toilet water, face-powder. Salux Drug Company. No. 116,558; May 8; v. 238; p. 647.

Perfumes, face and sachet powders, creams, toilet waters. Jaquet & Maxwell. No. 116,649; May 15; v. 238; p. 977.
Periodical or journal published monthly. Franklin MacVeagh & Company. No. 116,774; May 22; v. 238; p. 1326.
Pharmaceutical preparations, Certain named. G. Borgfeldt & Co. Nos. 116,816–18; May 29; v. 238; p. 1635.
Pharmaceutical preparations, Certain named. The S. S. White Manufacturing Company. No. 116,870; May 29; v. 238; p. 1637.
Phonographs. S. J. Travis. No. 116,711; May 15; v. 238; p. 979.
Phonographs and phonograph-records. United Phonographs Corporation. No. 116,717; May 15; v. 238; p. 979.
Phosphate, Pebble. Coronet Phosphate Company. No. 116,602; May 15; v. 238; p. 976.
Phosphorus compounds, Organic. The Grain Chemical Company. No. 116,520; May 8; v. 238; p. 645.
Photographic developers. Struss-Anderson Laboratories. Nos. 116,562–3; May 8; v. 238; p. 647.
Photographic paper. Eastman Kodak Co. Nos. 116,613–14; May 15; v. 238; p. 976.
Photographic plates. Eastman Kodak Co. No. 116,612; May 15; v. 238; p. 976.
Photographic plates. Eastman Kodak Co. No. 116,615; May 15; v. 238; p. 976.
Piano, furniture, floor, automobile, &c., polish. C. F. Stein. No. 116,699; May 15; v. 238; p. 979.
Picture films, Motion-. United States Motion Picture Corporation. No. 116,478; May 1; v. 238; p. 307.
Picture films, Moving-. G. L. Derr. Nos. 116,414–16; May 1; v. 238; pp. 305–6.
Picture films, Moving-. Essanay Film Manufacturing Company. No. 116,831; May 29; v. 238; p. 1635.
Picture films, Moving-. Ziegfeld Cinema Corporation. No. 116,494; May 1; v. 238; p. 308.
Pillow-tubing, sheeting, and cotton piece goods. The Continental Mills. No. 116,601; May 15; v. 238; p. 976.
Pipes, Hard-rubber acid-conducting. India Rubber Company. No. 116,767; May 22; v. 238; p. 1326.
Pipes, Smoking-. Mocha Pipe Company. No. 116,780; May 22; v. 238; p. 1326.
Pork. Morris & Company. No. 116,542; May 8; v. 238; p. 646.
Powder and cream, Face and liquid face. H. Korn. No. 116,770; May 22; v. 238; p. 1326.
Powder and cream, Tooth. A. Bérubé. No. 116,580; May 15; v. 238; p. 975.
Powder, Tooth-. University Chemical Co. No. 116,479; May 1; v. 238; p. 307.
Precious materials, Certain named articles made of. Elgin American Manufacturing Co. No. 116,616; May 15; v. 238; p. 976.
Preparation destructive or repellent to flies, lice, ticks, &c. Carpenter-Morton Company. No. 116,591; May 15; v. 238; p. 975.
Preparation for the treatment of cancer and for charging water with radio-active therapeutic properties. J. F. Wallis. No. 116,567; May 8; v. 238; p. 647.
Preparation for the treatment of certain named diseases. S. Fargo. No. 116,510; May 8; v. 238; p. 645.
Preparation for the treatment of diseases of the respiratory mucous membranes. Ireland Chemical Co. No. 116,647; May 15; v. 238; p. 977.
Preparation for the treatment of gravel, bladder, backache, and kidney trouble. A. Robart. No. 116,554; May 8; v. 238; p. 646.
Preparation for the treatment of rheumatism. Vis Vitae Company. No. 116,481; May 1; v. 238; p. 307.
Preparation for treatment of certain named diseases, Medicinal. P. Donohue. No. 116,610; May 15; v. 238; p. 976.
Preparation for treatment of diabetes, Medical. J. Barling. No. 116,394; May 1; v. 238; p. 305.
Preparations for sore throat, pyorrhea, catarrh, &c., Medicinal. A. De Courcy. No. 116,413; May 1; v. 238; p. 305.
Preservative for fruit, vegetables, and meats. B. F. Smeyers. No. 116,464; May 1; v. 238; p. 307.
Pressure-indicating devices. Bear & Glick. No. 116,577; May 15; v. 238; p. 975.
Pumps and compressors. Isko, Incorporated. No. 116,846; May 29; v. 238; p. 1636.
Punches and pincers. C. C. Harris. No. 116,763; May 22; v. 238; p. 1325.
Pyrometers, tachometers, operation-recorders, &c. The Brown Instrument Company. No. 116,398; May 1; v. 238; p. 305.
Racks, registers, bulletins, and the like, Certain named. Universal Register Co. No. 116,719; May 15; v. 238; p. 979.
Receptacles, Certain named. Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft. No. 116,721; May 15; v. 238; p. 979.
Relishes and pickles, Mixed vegetable. D. E. Phillips. No. 116,457; May 1; v. 238; p. 307.
Remedies, antiseptic powder, cathartic pills, Catarrh, pile, &c. Doc. Strock Remedy Co. No. 116,700; May 15; v. 238; p. 979.
Remedy, Certain pile. Ajax Pile Remedy Company. No. 116,495; May 8; v. 238; p. 645.
Remedy for asthma. Frost Remedy Company. No. 116,514; May 8; v. 238; p. 645.
Remedy for certain named diseases. K. G. Bousoukis. No. 116,583; May 15; v. 238; p. 975.
Remedy for cholera affecting cattle and fowl. M. Klabenes. No. 116,528; May 8; v. 238; p. 646.
Remedy for coughs, hoarseness, laryngitis, &c. L. W. Kirchner. No. 116,527; May 8; v. 238; p. 646.
Remedy for muscular rheumatism. A. P. Foose. No. 116,513; May 8; v. 238; p. 645.
Remedy for piles in powder form. S. D. Lance. No. 116,532; May 8; v. 238; p. 646.
Remedy for syphilis, Medical. E. J. Latta. No. 116,851; May 29; v. 238; p. 1636.
Remedy for treating certain named diseases, Blood. Comar Remedy Company. No. 116,824; May 29; v. 238; p. 1635.
Rifle, pistol, and shotgun cartridges and molds for bullets, Loading implements for. P. M. Talcott. No. 116,866; May 29; v. 238; p. 1636.
Road-making machines. American Road Machinery Company. No. 116,302; May 1; v. 238; p. 305.
Rollers for window-shades, awnings, maps, cars, &c., Spring-. C. W. Breneman. No. 116,585; May 15; v. 238; p. 975.
Roofing, Prepared asphalt. Baltimore Roofing & Asbestos Manufacturing Co. No. 116,576; May 15; v. 238; p. 975.
Rubber and duck beltings and hose and rubber, flax, and asbestos machinery packings. The Cincinnati Rubber Manufacturing Company. No. 116,746; May 22; v. 238; p. 1325.
Rubber belting and hose. Crandall Packing Company. No. 116,748; May 22; v. 238; p. 1325.
Rubber boots, shoes, and overshoes, rubber-sole canvas shoes. Hood Rubber Company. Nos. 116,640–3; May 15; v. 238; p. 977.
Rubber composition in sheet form. The Manhattan Rubber Mfg. Co. No. 116,778; May 22; v. 238; p. 1326.
Rubber heels and composition soles. Sears, Roebuck and Co. No. 116,688; May 15; v. 238; p. 978.
Rubber matting. Standard Woven Fabric Company. No. 116,803; May 22; v. 238; p. 1327.
Rubber nipples. United Drug Company. No. 116,808; May 22; v. 238; p. 1327.
Rubber-preserving compound, Chemical. Save-O. Co. No. 116,463; May 1; v. 238; p. 307.
Rubber soles and heels. Quabaug Rubber Company. No. 116,551; May 8; v. 238; p. 646.
Rubber-stamp outfit and inking-pad combined. M. Tinker. No. 116,474; May 1; v. 238; p. 307.
Rugs, Textile. Model Mills Company. No. 116,672; May 15; v. 238; p. 978.
Salt, Effervescent. General Chemical Company. No. 116,426; May 1; v. 238; p. 306.
Salts, Minted Epsom. C. S. Berry. No. 116,397; May 1; v. 238; p. 305.
Salve and cough medicine for certain named diseases. R. Geis. No. 116,619; May 15; v. 238; p. 976.
Salve, Nasal. The Noryzon Company. No. 116,547; May 8; v. 238; p. 646.
Saws, chisels, hatchets, files, axes, and adzes. Southern Railway Supply and Equipment Co. No. 116,800; May 22; v. 238; p. 1327.
Scales, Weighing-. John Chatillon & Sons. No. 116,401; May 1; v. 238; p. 305.
Scales, Weighing-. John Chatillon & Sons. Nos. 116,592–4; May 15; v. 238; p. 975.
Seal. Signode System. No. 116,862; May 29; v. 238; p. 1636.
Shade cloths of sized and oil-painted fabrics, Window-. The Estate of George Pabst, Dec'd. Nos. 116,447–8; May 1; v. 238; pp. 306–7.
Shirts, Men's and boys'. Elder Manufacturing Co. No. 116,418; May 1; v. 238; p. 306.
Shirts, Work-. A. P. Eigenmann. No. 116,509; May 8; v. 238; p. 645.
Shoe-polish. W. A. Elliott. No. 116,419; May 1; v. 238; p. 306.
Shoes, Bathing and gymnasium. The Milbury Atlantic Mfg. Co. No. 116,669; May 15; v. 238; p. 978.
Shoes, Innersoling for. Armstrong Cork Company. No. 116,744; May 22; v. 238; p. 1325.
Shoes, Leather. Sears, Roebuck and Co. No. 116,559; May 8; v. 238; p. 647.
Shoes, Leather and cloth. Boyd-Welsh Shoe Company. No. 116,736; May 22; v. 238; p. 1325.
Shovels, spades, handles for shovels, spades, and agricultural forks. The Steel Basket Company. No. 116,469; May 1; v. 238; p. 307.
Size adapted for covering walls, ceilings, &c., Wall-paper. The Cott-a-lap Company. No. 116,825; May 29; v. 238; p. 1635.
Skates and parts thereof, Ice-. E. Hunold. No. 116,645; May 15; v. 238; p. 977.
Snap-fasteners or snap-fastening buttons or clasps, Metal. Hero Snap Fastener Company. No. 116,635; May 15; v. 238; p. 977.
Soap made in part by the use of cochin or cocoanut oil, Cakes of. Edgar Roberts Manufacturing Company. No. 116,460; May 1; v. 238; p. 307.
Soaps, washing powder and tablets, silver-polish, Toilet, &c. Union Pacific Tea Company. No. 116,806; May 22; v. 238; p. 1327.
Soaps, washing-powders, cleansers, and metal-polish. The Tebbetts & Garland Store. No. 116,472; May 1; v. 238; p. 307.



Soda-ash, caustic soda, chlorate of potash, bichromate of soda. B. Brown & Bro. No. 116,502; May 8; v. 238; p. 645.
Sodium silicate. Philadelphia Quartz Company. No. 116,549; May 8; v. 238; p. 646.
Spaghetti, apple-butter, mince-meat, marmalades. Glencrest Food Co. No. 116,517; May 8; v. 238; p. 645.
Spark and priming plugs. E. A. Bowman Co. No. 116,584; May 15; v. 238; p. 975.
Spark-plugs. Emil Grossman Manufacturing Corporation. No. 116,758; May 22; v. 238; p. 1325.
Spark-plugs. Emil Grossman Manufacturing Corporation. No. 116,843; May 29; v. 238; p. 1636.
Specific, Diphtheria. S. C. Mathis. No. 116,536; May 8; v. 238; p. 646.
Sporting goods, Certain named. Hillerich & Bradsby Company. No. 116,637; May 15; v. 238; p. 977.
Staying and fastening material. M. D. Knowlton Company. No. 116,653; May 15; v. 238; p. 977.
Steel, steel castings, and particularly manganese-steel castings. American Manganese Steel Company. No. 116,390; May 1; v. 238; p. 305.
Steels, Tool-. Atlas Crucible Steel Company. No. 116,393; May 1; v. 238; p. 305.
Strapping for box-fastenings or the like, Metal. Signode System. No. 116,863; May 29; v. 238; p. 1636.
Sugar. The American Sugar Refining Company. No. 116,497; May 8; v. 238; p. 645.
Suits and boys' outer garments, Certain named children's. S. J. Twyman. No. 116,713; May 15; v. 238; p. 979.
Suspenders, belts and garters. J. Ziff. No. 116,734; May 15; v. 238; p. 980.
Syrups and bottled non-alcoholic still or carbonated beverages made from such syrups. Florida Citrajuice Co. No. 116,836; May 29; v. 238; p. 1635.
Table-tops. The Enamel Products Company. No. 116,880; May 29; v. 238; p. 1637.
Tables, chairs, beds, wardrobes, &c. Goldman Bros. Nos. 116,622–3; May 15; v. 238; p. 976.
Tablet, Laxative. The S. S. Nettles Co. No. 116,546; May 8; v. 238; p. 646.
Tablets for treatment of la grippe and colds. S. L. Haseltine. No. 116,631; May 15; v. 238; p. 976.
Tablets, Laxative. C. M. C. Stewart Sulphur Co. No. 116,865; May 29; v. 238; p. 1636.
Talking-machines. E. P. Johnson Piano Co. No. 116,525; May 8; v. 238; p. 646.
Talking-machines. Shapleigh Hardware Company. No. 116,690; May 15; v. 238; p. 978.
Talking-machines, records, needles, and parts thereof, except horns. The Master Talking Machine Company. No. 116,665; May 15; v. 238; p. 978.
Tea. The "Salada" Tea Company. No. 116,557; May 8; v. 238; p. 647.
Tea. Sprague, Warner & Company. No. 116,696; May 15; v. 238; p. 979.
Telephones, electric cigar-lighters and lamps. Spielman Electric Co. No. 116,465; May 1; v. 238; p. 307.
Therapeutic apparatus and appliances and parts and attachments therefor, Electrically-operated. Manhattan Electrical Supply Company. No. 116,662; May 15; v. 238; p. 977.
Tires, Rubber. The Fisk Rubber Company. No. 116,756; May 22; v. 238; p. 1325.
Tobacco, Smoking-. G. Gund. No. 116,760; May 22; v. 238; p. 1325.
Tobaccos, Chewing and smoking. Joseph G. Dill, Inc. No. 116,751; May 22; v. 238; p. 1325.
Toilet water, perfumes, nail-polish. Goodrich Drug Company. No. 116,518; May 8; v. 238; p. 645.
Tool, Sealing-. Signode System. No. 116,692; May 15; v. 238; p. 978.
Tool, Stretching-. Signode System. No. 116,691; May 15; v. 238; p. 978.
Tools for cutting, forming, or holding, Certain named metal. V. F. J. Tlach. No. 116,709; May 15; v. 238; p. 979.
Tooth-paste and beauty-powder—viz., face and toilet powder. The Pompeian Mfg. Co. No. 116,788; May 22; v. 238; p. 1326.
Toy balloons. The Miller Rubber Company. No. 116,670; May 15; v. 238; p. 978.
Toy dressmaking outfit. K. A. Rauser. No. 116,789; May 22; v. 238; p. 1326.
Toy figures and dolls. The Beaver Company. No. 116,578; May 15; v. 238; p. 975.
Toy moving-picture machines. A. S. Ferguson. No. 116,754; May 22; v. 238; p. 1325.
Toy, Optical. Marvel Mfg. Co. No. 116,664; May 15; v. 238; p. 978.
Toy push-cars. C. J. McKnight. No. 116,661; May 15; v. 238; p. 977.
Tractors. Interstate Engine & Tractor Company. No. 116,432; May 1; v. 238; p. 306.
Tractors. Mayer Brothers Company. No. 116,666; May 15; v. 238; p. 978.
Trusses. C. Cluthe, Sr. No. 116,598; May 15; v. 238; p. 975.
Tubes, Inner. Standard Tire and Rubber Manufacturing Company. No. 116,802; May 22; v. 238; p. 1327.
Tubes, liners, and patches for the same, Inner. Keystone Rubber Manufacturing Company. No. 116,769; May 22; v. 238; p. 1326.
Underwear, Infants' flat and knitted. W. K. Jones. No. 116,651; May 15; v. 238; p. 977.
Valve-grinding compound. H. H. Chandler. No. 116,507; May 8; v. 238; p. 645.
Valves, Metallic rotary suction and check. The M. Smolensky Manufacturing Co. No. 116,799; May 22; v. 238; p. 1327.
Vaporizing device, Certain named. The Hydragas Corporation. No. 116,646; May 15; v. 238; p. 977.
Varnish, paint, japan, &c. Chicago Varnish Company. No. 116,745; May 22; v. 238; p. 1325.
Varnishes. W. E. Spencer. No. 116,864; May 29; v. 238; p. 1636.
Varnishes, japan-colors, japans, driers, &c. Atlantic Drier & Varnish Co. Nos. 116,574–5; May 15; v. 238; p. 975.
Vehicle-body and the like polish. B. Heller & Co. No. 116,765; May 22; v. 238; p. 1326.
Vehicles, Bodies and tops and parts of same for certain named. Rex Manufacturing Company. No. 116,859; May 29; v. 238; p. 1636.
Velvets and plushes in the piece. The Salt's Textile Manufacturing Company. No. 116,861; May 29; v. 238; p. 1636.
Veterinary remedy. E. R. Rodgers. No. 116,556; May 8; v. 238; p. 647.
Watches. J. Bulova Company. No. 116,587; May 15; v. 238; p. 975.
Water-bottles, fountain and combination syringes, and face and ice bags, The Seamless Rubber Company. No. 116,687; May 15; v. 238; p. 978.
Water, Natural and artificial mineral. J. C. Hagan. No. 116,761; May 22; v. 238; p. 1325.
Waters, Mineral. A/S Norske Mineralkilder. No. 116,784; May 22; v. 238; p. 1326.
Waters, Mineral. MacDonell-Chow Corp. No. 116,660; May 15; v. 238; p. 977.
Waters, Mineral, carbonic, and table. J. Martí. No. 116,535; May 8; v. 238; p. 646.
Wax, Mineral. Pierce Fordyce Oil Association. No. 116,681; May 15; v. 238; p. 978.
Wheel-rims, tire-holders, seat-covers, bumpers, fenders. The Gibson Company. No. 116,620; May 15; v. 238; p. 976.
Whisky. The Tebbetts & Garland Store. No. 116,805; May 22; v. 238; p. 1327.
Wind, stringed, and percussion instruments. C. G. Conn, Ltd. No. 116,403; May 1; v. 238; p. 305.
Wire screen-cloth. Reynolds Wire Co. No. 116,858; May 29; v. 238; p. 1636.
Wines, Sparkling. L. Bosca & Figli. No. 116,657; May 15; v. 238; p. 977.
Wood-preservatives and creosote shingle-stains. General Roofing Manufacturing Company. No. 116,515; May 8; v. 238; p. 645.
Wool, cotton, linen, silk, and combination piece goods. Klauber Bros. & Co. No. 116,434; May 1; v. 238; p. 306.
Woolen and worsted piece goods. Forstmann & Huffmann Co. Nos. 116,838–42; May 29; v. 238; p. 1636.
Woolen goods in the piece. Worumbo Manufacturing Company. No. 116,498; May 1; v. 238; p. 308.
Wrenches, clamps, and clamp-carriers. James L. Taylor Mfg. Co. No. 116,471; May 1; v. 238; p. 307.

# ALPHABETICAL LIST OF LABELS.


"American Lady." (For Fasteners.) Snap Fastener Sales Co. Corp. No. 20,134; May 29; v. 238; p. 1638.

"Aunt Jemima." (For Pancake, Buckwheat, Corn, and Wheat Flours.) Aunt Jemima Mills Company. No. 20,103; May 22; v. 238; p. 1328.

"Barbour Coffee." (For Coffee.) S. Barbour. No. 20,117; May 29; v. 238; p. 1638.

"Beech-Nut Brand." (For a Beverage.) Beech-Nut Packing Company. No. 20,118; May 29; v. 238; p. 1638.

"Bo." (For Cigars.) R. P. Richardson, Jr. & Co. No. 20,087; May 8; v. 238; p. 648.

"Brockton Brand Macaroni." (For Macaroni.) Brockton Macaroni Manufacturing Company. No. 20,052; May 1; v. 238; p. 309.

"Burn—Dres." (For a Burn Treatment.) J. L. Wambaugh. No. 20,135; May 29; v. 238; p. 1638.

"Can-You Beat-It? (Solitaire)." (For a Game.) W. G. Young. No. 20,065; May 1; v. 238; p. 309.

"Chamois." (For Book-Paper.) The Mead Pulp and Paper Company. No. 20,057; May 1; v. 238; p. 309.

"Chocolate-Splash." (For a Game.) W. G. Young. No. 20,064; May 1; v. 238; p. 309.

"Cotton-Top." (For Non-Intoxicating Beverages.) J. F. Tieberman. No. 20,088; May 8; v. 238; p. 648.

"Creamettes." (For Macaroni.) Mother's Macaroni Company. No. 20,097; May 15; v. 238; p. 981.

"Dan-D." (For a Beverage.) H. B. Minnick. No. 20,096; May 15; v. 238; p. 981.

"Directions." (For E-Z Marvel Cleaner.) G. Hess. No. 20,091; May 8; v. 238; p. 648.

"Don't Forget Gopherget For Gophers." (For Poison for Gophers, Squirrels, Moles, and other Pest Animals.) The Felix Girard Company. No. 20,055; May 1; v. 238; p. 309.

"E-Z Marvel Kleaner." (For a Cleaner.) G. Hess. No. 20,092; May 8; v. 238; p. 648.

"Egola." (For a Substitute for Eggs.) Egola M'f'g Co. No. 20,056; May 1; v. 238; p. 309.

"Electric Engine Bolt Steel." (For Steel.) Old Dominion Iron & Nail Works Co. No. 20,098; May 15; v. 238; p. 981.

"Excello." (For a Polish for Furniture.) Excello Polish Co. No. 20,093; May 15; v. 238; p. 981.

"Fig-Mill." (For a Game.) W. G. Young. No. 20,067; May 1; v. 238; p. 309.

"For Dry People." (For Non-Alcoholic Beverage.) The Quencho Co. No. 20,083; May 8; v. 238; p. 648.

"For Goodness Sake." (For Non-Alcoholic Beverage.) The Quencho Co. No. 20,084; May 8; v. 238; p. 648.

"For Playtime And All Times." (For Boys' and Girls' Outer Garments.) McCawley & Co. No. 20,079; May 8; v. 238; p. 648.

"For That Thirst." (For Non-Alcoholic Beverage.) The Quencho Co. No. 20,082; May 8; v. 238; p. 648.

"French "heumatism Cure." (For a Cure for Rheumatism.) E. Hazell. No. 20,115; May 22; v. 238; p. 1328.

"Geo. Washington." (For Oranges.) Tustin Hills Citrus Association. No. 20,062; May 1; v. 238; p. 309.

"Gouléd Embroidered Initials." (For Embroidered Initials.) Gouled Embroidery Works. No. 20,105; May 22; v. 238; p. 1328.

"Guth Chocolate Fruit & Nut Easter Egg." (For Candy.) Guth Chocolate Company. No. 20,094; May 15; v. 238; p. 981.

"Happy Hollow." (For Coffee.) Olson Coffee Co. No. 20,081; May 8; v. 238; p. 648.

"Health Food." (For Bread.) J. W. Hamilton. No. 20,071; May 8; v. 238; p. 648.

"Health Food." (For Candy.) J. W. Hamilton. No. 20,072; May 8; v. 238; p. 648.

"Home Made." (For Cough-Drops.) C. B. Truesdell. No. 20,061; May 1; v. 238; p. 309.

"Honolulu Fruit Gum." (For Chewing-Gum.) The National Pepsin Gum Company. No. 20,133; May 29; v. 238; p. 1638.

"Honor Brand." (For Crape-Tissue.) Sauquoit Toilet Paper Co. No. 20,113; May 22; v. 238; p. 1328.

"Ironclad Khaki Twills." (For Woven Fabric Piece Goods.) Franklin Mfg. Co. No. 20,123; May 29; v. 238; p. 1638.

"Jewel Stoves and Furnaces Detroit Stove Works." (For Stoves and Furnaces.) Detroit Stove Works. No. 20,070; May 8; v. 238; p. 648.

"Ka-Dene." (For Ointment.) The Ku-Rall Medicine Co. No. 20,106; May 22; v. 238; p. 1328.

"Kleene K-S Sweepe." (For Brooms.) Victoria Broom & Whisk Factory. No. 20,063; May 1; v. 238; p. 309.

"Kof Not." (For Candy Cough-Tablets.) The Aromint Company. No. 20,051; May 1; v. 238; p. 309.

"La Bella Carmen." (For Tobacco-Packages.) Herrero Bros. No. 20,068; May 1; v. 238; p. 309.

"Labor Temple." (For Cigars.) Pacific Cigar Box Co. No. 20,128; May 29; v. 238; p. 1638.

"Magic Whistle." (For Cartons Containing Whistles.) F. G. Fawkes & Co. No. 20,054; May 1; v. 238; p. 309.

"Marbleoid Asphalt Roofing." (For Roofing-Paper.) S. D. Dunlap. No. 20,122; May 29; v. 238; p. 1638.

"Mecopa." (For Bond-Paper.) The Mead Pulp & Paper Company. No. 20,126; May 29; v. 238; p. 1638.

"Men's Suit Buttons." (For Buttons.) Independent Button & Machine Company. No. 20,075; May 8; v. 238; p. 648.

"Mopacote." (For Book-Paper.) The Mead Pulp and Paper Company. No. 20,125; May 29; v. 238; p. 1638.

"Morton's." (For Chewing-Gum.) Independent Gum Co. Nos. 20,073–4; May 8; v. 238; p. 648.

"Mt. Purn Brand Cognac." (For Brandies.) Shore Distilling Co. No. 20,060; May 1; v. 238; p. 309.

"Nail Bright." (For Nail-Polish.) Wheeler Beauty Co. No. 20,089; May 8; v. 238; p. 648.

"Nowater Cleanser Made In U. S. A." (For Cleansers.) The Nowater Soap and Cleanser Co. of U. S. A. No. 20,080; May 8; v. 238; p. 648.

"Old Morris 1878 Brand." (For Whisky.) I. Michelson & Brothers. No. 20,078; May 8; v. 238; p. 648.

"Orchard Blossom." (For a Disinfectant and Deodorizer.) H. Krahn. No. 20,124; May 29; v. 238; p. 1638.

"Peat's Waterproof Leather Dressing." (For Leather-Dressing.) C. W. Peat Nos. 20,129–30; May 29; v. 238; p. 1638.

"Quality Cigars." (For Cigars.) American Lithographic Company. No. 20,090; May 8; v. 238; p. 648.

"R. E. Maier's Veribest." (For a Polishing and Cleaning Compound.) R. E. Maier & Co. No. 20,107; May 22; v. 238; p. 1328.

"Randolph Special." (For Oranges.) Randolph Fruit Co. No. 20,085; May 8; v. 238; p. 648.

"Reach Meteor Golf Balls." (For Golf-Balls.) A. J. Reach Co. No. 20,111; May 22; v. 238; p. 1328.

"Reach New Scotty Golf Balls." (For Golf-Balls.) A. J. Reach Co. No. 20,112; May 22; v. 238; p. 1328.

"Reach Paramount Golf Balls." (For Golf-Balls.) A. J Reach Co. No. 20,110; May 22; v. 238; p. 1328.

"Reach Whippet Golf Balls." (For Golf-Balls.) A. J. Reach Co. No. 20,109; May 22; v. 238; p. 1328.

"Sans O Dor." (For Foot-Powders.) Lynn Rubber Manufacturing Company. No. 20,095; May 15; v. 238; p. 981.

"Save-the-Cow." (For Medicine for Cows.) G. H. Lape. No. 20,076; May 8; v. 238; p. 648.

"Schreiber's Kloster Beer." (For Beer.) A. Schreiber Brewing Co. No. 20,100; May 15; v. 238; p. 981.

"Slick-Shine." (For Automobile-Body Polish.) A. T. Schlichting. No. 20,099; May 15; v. 238; p. 981.

"Snow Bank." (For a Food Product.) Banks Bros. Packing Co. No. 20,120; May 29; v. 238; p. 1638.

"Spalding Floating Honor Golf Ball." (For Golf-Balls.) A. G. Spalding & Bros. No. 20,132; May 29; v. 238; p. 1638.

"Spalding Midget Honor Golf Ball." (For Golf-Balls.) A. G. Spalding & Bros. No. 20,131; May 29; v. 238; p. 1638.

"Stimpson-Rivets." (For Rivets.) Edwin B. Stimpson Company. No. 20,059; May 1; v. 238; p. 309.

"Stop." (For Hair-Tonic.) G. Melches. No. 20,108; May 22; v. 238; p. 1328.

"Sunapee." (For Fine Yarn Chambray.) Reliance Manufacturing Company. No. 20,086; May 8; v. 238; p. 648.

"Sunshine Brand Pure Lard, With Oleo Stearine Added." (For Lard.) Banks Bros. Packing Co. No. 20,119; May 29; v. 238; p. 1638.

"Super-Six." (For Electric Batteries.) C. F. Burgess Laboratories. No. 20,116; May 29; v. 238; p. 1638.

"Tang." (For a Non-Intoxicating Beverage.) The Crown Brewing Company. No. 20,121; May 29; v. 238; p. 1638.

"The Face Veil." (For Veils.) N. B. Cohen. No. 20,104; May 22; v. 238; p. 1328.

"The 20th Century Shirt." (For Men's Work-Shirts.) McCawley & Co. No. 20,058; May 1; v. 238; p. 309.

"Tipperary." (For Dry Gin.) The Triaca Company. No. 20,101; May 15; v. 238; p. 981.
"Top-Pacheeza." (For a Game.) W. G. Young. No. 20,066; May 1; v. 238; p. 309.
"True Blue." (For a Compound of Camphor and Menthol Balm.) True Blue Drug Co. No. 20,102; May 15; v. 238; p. 981.
"Tub Corduroy." (For Corduroy.) New York Mills Corporation. No. 20,127; May 29; v. 238; p. 1638.
"Wa-Ke-Za For Sore Feet." (For Liquid for the Prevention and Cure of Sore Feet.) Burly Drug Co. No. 20,053; May 1; v. 238; p. 309.
"Waterman's Ideal Ink." (For Ink.) L. E. Waterman Company. No. 20,069; May 1; v. 238; p. 309.
"White King Squab Soup." (For Squab Soup.) White King Squab Products Co. No. 20,114; May 22; v. 238; p. 1328.
"White Lily Brand Butter." (For Butter.) S. Leshim. No. 20,077; May 8; v. 238; p. 648.

## PRINTS.

"Advisor." (For Hosiery.) David Weil's Sons Lithographic Co. No. 4,695; May 22; v. 238; p. 1328.
"Always Improving." (For Stoves and Ranges.) Rathbone Sard & Company. No. 4,688; May 8; v. 238; p. 648.
"Always Improving." (For Ranges and Heaters.) Rathbone Sard & Company. No. 4,689; May 8; v. 238; p. 648.
"Bulletin B-601." (For Lathes.) Dalton Machine Co. No. 4,686; May 8; v. 238; p. 648.
"Bulletin B-602." (For Lathes.) Dalton Machine Co. No. 4,685; May 8; v. 238; p. 648.
"Bulletin B-603." (For Lathes.) Dalton Machine Co. No. 4,687; May 8; v. 238; p. 648.
"Cheerfully Bright Wherever O-Cedar Polish is used." (For O-Cedar Polish.) Channell Chemical Company. No. 4,683; May 8; v. 238; p. 648.
"How To Cut the High Cost of Living With Creamettes." (For Macaroni.) The Creamette Company. No. 4,692; May 15; v. 238; p. 981.
"Hygeian." (For a Disinfectant.) E. F. Ballard. No. 4,696; May 29; v. 238; p. 1638.
"La Barlo." (For Cigars.) F. J. Barlow. No. 4,691; May 15; v. 238; p. 981.
"Le Lait Des Roses." (For Antiseptic and Tonic of the Skin.) The Cosmetic Product Company. No. 4,699; May 29; v. 238; p. 1638.
"Mrs. Santa Claus." (For Toys.) I. Rothstein. No. 4,701; May 29; v. 238; p. 1638.
"Nugget Fastener." (For Spring Snap-Fasteners.) Spring Snap Fastener Company. No. 4,690; May 8; v. 238; p. 648.
"Old King Rubberset." (For Brushes.) Rubber & Celluloid Products Company. No. 4,693; May 15; v. 238; p. 981.
"Spoco." (For Automobile-Oil.) The Swan Process Oil Co. No. 4,700; May 29; v. 238; p. 1638.
"Stedem's Formula Fairmount Weed Killer." (For a Weed-Killing Chemical.) Stedem Chemical Laboratory. No. 4,698; May 29; v. 238; p. 1638.
"The O-Cedar Way." (For O-Cedar Polish.) Channell Chemical Company. No. 4,684; May 8; v. 238; p. 648.
"There's a Reason." (For Postum Cereal.) Postum Cereal Company. No. 4,694; May 22; v. 238; p. 1328.
"Tub Corduroy." (For Corduroy.) New York Mills Corporation. No. 4,697; May 29; v. 238; p. 1638.

## DISCLAIMERS.

Cracker-cutting machine. D. K. Allison and B. D. Pinkney. No. 1,112,184; date of patent Sept. 29, 1914; disclaimer filed May 7, 1917; v. 238; p. 653.
Electric heater. F. H. Smith. No. 1,040,043; date of patent Oct. 1, 1912; disclaimer filed May 2, 1917; v. 238; p. 653.
Shade and curtain-pole support. J. Neuberger and J. F. Hines. No. 1,074,973; date of patent Oct. 7, 1913; disclaimer filed Apr. 28, 1917; v. 238; p. 321.
Splice-bar. F. E. Abbott. No. 1,152,375; date of patent Aug. 31, 1915; disclaimer filed May 1, 1917; v. 238; p. 653.

# CLASSIFICATION OF PATENTS

## MAY, 1917.

NOTE.—First number—class, second number—subclass, third number—patent number.

1— 6: 1,225,837
7: 1,226,170
10: 1,225,317
1,226,907
14: 1,224,280
18: 1,225,794
41: 1,224,450
2— 9: 1,225,027
1,225,155
11: 1,226,105
1,226,741
15: 1,226,640
23: 1,226,208
32: 1,225,275
41: 1,225,966
60: 1,226,977
67: 1,226,216
73: 1,226,308
1,227,442
74: 1,226,087
76: 1,224,597
81: 1,227,428
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84: 1,225,257
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1,227,004
16: 1,224,667
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1,227,653
23: 1,225,500
1,226,277
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# OFFICIAL GAZETTE

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OF THE

P.L.
3-19-18

# UNITED STATES PATENT OFFICE.

VOLUME CCXXXIX.

JUNE,

1917.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1917.

10539

# ERRATA.

**1,228,785,** page 140, first claim, line 7, for the word "track" read *tracks*.

**1,229,403,** page 396, second claim, line 8, after the word "liquid" insert the words *to supply lacking liquid;* same claim, line 9, strike out the words "to supply lacking liquid."

**1,229,642,** page 478, fourth claim, line 4, strike out the word "current."

**1,230,034,** page 604, in heading, after residence of patentee, insert *assignor to Newton Machine Tool Works, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania.*

**1,230,529,** pages 806–807, strike out all after number—heading, drawing, and claim—and insert the word WITHDRAWN.

**1,230,842,** page 950, fourth claim. line 8, for the word "mouth" read *mount*.

**1,230,866,** page 957, in heading, residence of patentee, for "Cedar Rapids, Iowa" read *Cedar Falls, Iowa.*

**1,231,066,** page 1026, in heading, name of first-mentioned patentee, for "Hae R. Reynolds" read *Hal R. Reynolds.*

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# THE OFFICIAL GAZETTE

OF THE

# United States Patent Office.

Vol. 239—No. 1. TUESDAY, JUNE 5, 1917. Price—$5 per year.

**The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.**

**Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.**

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## PAYMENT OF TAXES, ANNUITIES OR FEES ON GERMAN PATENTS.

[Letters Patent—Germany.]

**By the President of the United States of America—**
**A Proclamation.**

**Whereas, the laws of the German Empire provide that Letters Patent granted or issued to citizens of other countries shall lapse unless certain taxes, annuities or fees are paid within stated periods;**

**And whereas, the interests of the citizens of the United States in such Letters Patent are of great value, so that it is important that such payments should be made in order to preserve their rights;**

**Now, therefore, I, Woodrow Wilson, President of the United States of America, by virtue of the powers vested in me as such, hereby declare and proclaim that citizens of the United States owning Letters Patent granted or issued by the German Empire are hereby authorized and permitted to make payment of any tax, annuity or fee which may be required by the laws of the German Empire for the preservation of their rights in such Letters Patent.**

**In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.**

**Done at the city of Washington, this 24th day of May, in the year of our Lord nineteen hundred and seventeen and of the Independence of the United States, the one hundred and forty-first.**

(Seal.) **WOODROW WILSON.**

By the President:
ROBERT LANSING,
*Secretary of State.*

[No. 1,372.]

## Notice—Attorneys.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., May 25, 1917.*

This Office has been advised by the Secretary of the Interior that the name of L. S. Myler, of Winfield, Kans., has been stricken from the roll of attorneys admitted to practice before this Department.

THOMAS EWING,
*Commissioner of Patents.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., May 25, 1917.*

This Office has been advised by the Secretary of the Interior that John M. Caulfield, of South Bend, Ind., was suspended from practice before the Department and its bureaus and offices for a period of six months from April 7, 1917.

THOMAS EWING,
*Commissioner of Patents.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., May 25, 1917.*

This Office has been advised by the Secretary of the Interior that on April 5, 1917, George H. Dyer, of New York, N. Y., was suspended from practice before the Department and its bureaus and offices.

THOMAS EWING,
*Commissioner of Patents.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., May 25, 1917.*

This Office has been advised by the Secretary of the Interior of the disbarment of the following attorneys from practice before the Department or any Bureau thereof: John W. Patterson, Newport News, Va., formerly of Washington, D. C., January 17, 1917; Adolph L. Gesche, Inverness, Mont., April 27, 1917; Julius J. Hirshheimer, Portland, Oreg., formerly of La Crosse, Wis., April 3, 1917; Irvin A. Whitman, Lyons, N. Y., May 8, 1917.

THOMAS EWING,
*Commissioner of Patents.*

## Disclaimer.

668,656.—*William H. Miner*, Chicago, Ill., now of Chazy, N. Y. TANDEM-SPRING DRAFT-RIGGING FOR LOCOMOTIVE-TENDERS. Patent dated February 26, 1901. Disclaimer filed May 31, 1917, by the patentee.

Enters this disclaimer—

"To claim 2 of said specification, which is in the following words, to wit:

"2. In a draft-rigging, the combination with the draft-timbers, end sill and body-bolster, of a pair of draw-bar stop-castings fitting between and secured at their backs to the draft-timbers and abutting at one end against the end sill and at the other against the body-bolster, substantially as specified."

# APPLICATIONS UNDER EXAMINATION.

*Condition at Close of Business June 1, 1917.*

| Room No. | Divisions and subjects of invention. | Oldest new application and oldest action by applicant awaiting office action. New. | Amended | No. of applications awaiting action. |
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| 131 | 8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports. | Jan. 10 | Apr. 13 | 940 |
| 142 | 9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps | Jan. 5 | May 5 | 420 |
| 235 | 10. Carriages and Wagons | Jan. 24 | May 2 | 780 |
| 154 | 11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus. | Apr. 19 | Apr. 30 | 143 |
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| 307 | 14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working. | Mar. 2 | Mar. 16 | 239 |
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| 109 | 16. Electric Signaling; Radiant Energy; Telegraphy; Telephony | Dec. 8 | Mar. 26 | 608 |
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| 264 | 36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring | Mar. 1 | May 12 | 570 |
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| 378 | 38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells | May 3 | May 12 | 135 |
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| 125 | 41. Railway Draft Appliances; Resilient Tires and Wheels | Mar. 6 | Apr. 23 | 279 |
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Oldest new case, Dec. 8; oldest amended, Aug. 26.
Total number of applications awaiting action..... 16,308

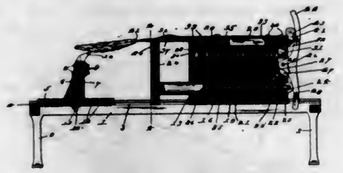
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| | Labels and Prints | May 24 | May 23 | 46 |



# PATENTS

## GRANTED JUNE 5, 1917.

1,228,383. OYSTER-OPENING MACHINE. NICHOLAS G. ABBATE, New York, N. Y. Filed July 27, 1916. Serial No. 111,608. (Cl. 17—31.)



1. In an oyster shucker, the combination with a support, of an upright movably mounted thereon, oyster retaining means carried by said upright, a fixed carriage, a knife mounted thereon, a movable knife coöperating with the fixed knife, and means for moving the movable knife, said means being operated by the moving of the upright when the oyster is being operated upon.

2. In an oyster shucker, the combination with a support, of a movable upright, an oyster retaining fork mounted thereon, a fixed carriage, a knife mounted thereon, a movable knife operating in conjunction with the fixed knife, and means for moving the movable knife when the oyster is being operated upon.

3. In an oyster shucker, the combination with a support having guide slots therein, of a movable upright having guide flanges engaging said guide slots, a fixed carriage on said support and in line with said upright, a rigid knife mounted thereon, a movable knife operating in conjunction with said rigid knife, means for operating said movable knife, and means for operating said movable upright.

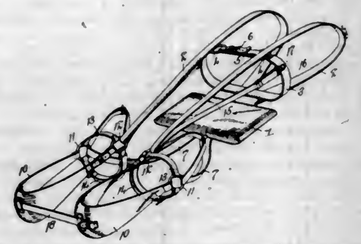
4. In an oyster shucker, the combination with a support having guide slots therein, of a movable upright having guide flanges engaging said guide slots, a fixed carriage on said support and in line with said upright, a rigid knife mounted thereon, a movable knife for operating in conjunction with said rigid knife, means for operating said movable knife, and means for operating said movable upright consisting of teeth on the underneath side of said upright forming a rack gear, a gear wheel engaging said rack gear and mounted on a shaft journaled in said support, and a crank lever for manipulating said upright.

5. In an oyster shucker, the combination with a support, of a movable upright having oyster retaining means, a fixed carriage, a knife mounted thereon, a movable knife operating in conjunction with said fixed knife, means for operating said movable knife consisting of a vertical plate forming an abutment, a rocking lever pivoted in said carriage, means connecting the vertical plate and one end of said rocking lever, means carried by the movable knife and engaging the other end of said rocking lever, and means for operating said movable upright to effect the shucking of the oyster, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

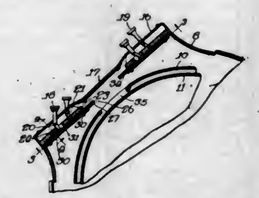
1,228,384. OBSTETRICAL APPLIANCE. ELLA C. AGERTON, Ringold, Okla. Filed June 28, 1916. Serial No. 106,443. (Cl. 128—20.)

In a device of the class described, a back engaging cushion, shoulder engaging straps connected with the cushion, knee slings having rings carried by their ends, means for connecting the knee slings to limit the lateral movement thereof, upper and lower strips connecting the rings, said shoulder engaging straps being slidably engaged in certain of said rings, second straps connected with the cushion and slidably engaged with the other



rings, and having their ends connected with the ends of the shoulder engaging strap, and means for connecting certain of the rings and the band which is associated with the shoulder strap.

1,228,385. CALCULATING APPLIANCE. PERRY B. ARRINGTON and CHARLES H. MILLER, Chicago, Ill., assignors to Multicalculator Company, Chicago, Ill., a Corporation of Delaware. Filed Apr. 10, 1916. Serial No. 90,112. (Cl. 235—87.)



1. In a calculating-appliance of the character described, the combination of a manually-operable revoluble cylinder displaying a plurality of rows of numbers on its surface, said numbers being arranged in rows both transversely and longitudinally of the cylinder, one of said transverse rows being a series of multipliers, the other transverse rows being products of such multipliers, a plurality of pivoted keys of different multiplicand values, there being one of such keys for each of said transverse product rows, each key displaying its value, said keys being manually actuated to operative and inoperative position and maintained in either position until re-set, and an index actuated by each of said keys and in coöperative relation with the corresponding product row of numbers on the cylinder, whereby upon actuating any one of such keys corresponding to the proposed multiplicand and revolving said cylinder to bring the proposed multiplier to a predetermined position, the number designated by the index of the actuated key will be the product of such multiplicand and multiplier, substantially as described.

2. In a calculating-appliance of the character described, the combination of a pair of manually-operable independently-revoluble cylinders one within the other, each of said cylinders displaying a plurality of rows of numbers on its surface, said numbers being arranged in rows both transversely and longitudinally of the cylinder, one of said transverse rows being a series of multipliers, the

other transverse rows being products of such multipliers, said outer cylinder having a window for the display of the numerals on the inner cylinder, a series of movable keys of different multiplicand values one for each of said transverse product rows of one of said cylinders, and a second series of movable keys of different multiplicand values one for each of said transverse product rows on the other cylinder, said keys maintaining their actuated positions until re-set, whereby upon actuating any one of such keys corresponding to the proposed multiplicand and shifting the corresponding cylinder to bring the proposed multiplier to a predetermined position, the number opposite the actuated key will be the product of such multiplicand and multiplier, substantially as described.

3. In a calculating-appliance of the character described, the combination of a pair of manually-operable independently-revoluble cylinders one within the other, each of said cylinders displaying a plurality of rows of numbers on its surface, said numbers being arranged in rows both transversely and longitudinally of the cylinder, one of said transverse rows being a series of multipliers, the other transverse rows being products of such multipliers, said outer cylinder having a window for the display of the numerals on the inner cylinder, a plurality of pivoted keys of different multiplicand values, there being one of such keys for each of said transverse product rows of one of said cylinders, each key displaying its value, a second set of pivoted keys of different multiplicand value there being one of such keys for each of said transverse product rows of the other cylinder, each of said keys displaying its value, the keys of both groups being manually actuated to operative or inoperative position and maintained in either position until re-set, and an index actuated by each of said keys and in coöperative relation with the corresponding product row of numbers on the corresponding cylinder, whereby upon actuating any one of such keys representing the proposed multiplicand and turning the corresponding cylinder to bring the proposed multiplier to a predetermined position, the number designated by the index of the actuated key will be the product of such multiplicand and multiplier, substantially as described.

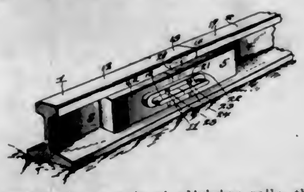
4. In a calculating-appliance of the character described, the combination of an inclosing casing provided with a window, a pair of manually-operable independently-revoluble cylinders in said casing one within the other, each of said cylinders displaying a plurality of rows of numerals on its surface, said numerals being arranged in rows both transversely and longitudinally of the cylinder, one of said transverse rows being a series of multipliers, the other transverse rows being the products of such multipliers, the outer cylinder having a window for the display of the numerals on the inner cylinder, a series of movable keys of different multiplicand values at one side of said casing window, one for each of said transverse product rows of one of said cylinders, each of said keys displaying its value, and a second series of movable keys of different multiplicand values at the opposite side of said casing window, one for each of said transverse product rows of the other cylinder, each of said latter series of keys also displaying its value, whereby upon actuating any key of either series representing a proposed multiplicand and turning the corresponding cylinder to bring the proposed multiplier opposite the casing window, the number opposite said key will be the product of such multiplicand and multiplier, substantially as described.

5. In a calculating appliance of the character described, the combination of an inclosing casing provided with a window, a pair of manually-operable independently-revoluble cylinders in said casing one within the other, each of said cylinders displaying a plurality of rows of numbers on its surface, said numbers being arranged in rows both transversely and longitudinally of the cylinder, one of said transverse rows being a series of multipliers, the other transverse rows being products of such multipliers, said outer cylinder having a window for the display of the numerals on the inner cylinder, a series of pivoted keys of different multiplicand values at one side of said casing window, one for each of said transverse product rows of one of said cylinders, a second series of pivoted keys of different multiplicand values at the opposite side of said casing window, one for each of said transverse product rows of the other cylinder, each key of both series displaying its value and maintaining its actuated position until manually re-set, and a sliding index actuated by each of said keys and coöperating with one of the product rows of the corresponding cylinder, whereby by rocking one of said keys of a value of the proposed multiplicand, thus sliding its index, and turning the corresponding cylinder to bring the proposed multiplier to a predetermined position opposite the casing window, the product will be designated by said index, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,386. RAIL-JOINT. JOHN F. BALL, Estep, W. Va. Filed Mar. 7, 1917. Serial No. 153,071. (Cl. 239—8.)



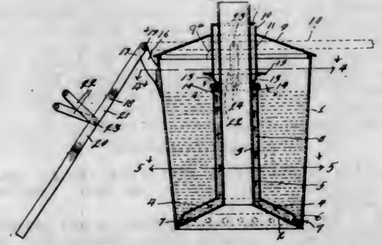
1. In combination, a pair of adjoining rails, the adjacent ends of said rails having a T-shaped tongue and pocket connection to prevent longitudinal displacement of the rails, the opposite sides of the rails adjacent the adjoining ends having laterally extending flanges, one pair on each side, and means coöperating with said flanges to prevent extreme upward displacement of one of the rails.

3. In combination, a pair of adjoining rails, the adjacent ends of which having enlargements, the enlargement of one rail having a substantially T-shaped pocket V-shaped in cross section, the end face of the enlargement of the other rail having a projecting substantially T-shaped tongue corresponding with and being V-shaped in cross section to engage and fit said pocket, the tread of the rail having the pocket having an extension protruding beyond the enlargement which has the pocket, the under face of said tread extension having a projection, the tread of the rail having the tongue being cut-away half the length of the enlargement, the enlargement on its upper face where the tread is cut-away having a socket to receive said projection, the opposite side faces of each enlargement having lateral flanges provided with apertures, looped links engaging said flanges to link-connect the rails, and keys passing through the flanges to hold the links in place.

[Claim 2 not printed in the Gazette.]

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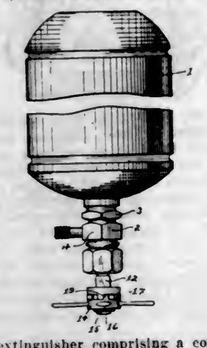
1,228,387. WASHING-MACHINE. JOHN J. BANTA and JULIUS E. BANTA, Sullivan, Mo. Filed Nov. 15, 1916. Serial No. 131,535. (Cl. 68—19.)



In a washing machine, a main receptacle having a conical bottom, and a tubular column rising axially from the bottom, an agitator consisting of a tubular column telescoping the first column and provided with a flange at its lower end, the outer portion of the flange terminating in means engaging said bottom to space the flange apart from the bottom, a sleeve telescoping the first column and having arms extending into the agitator column to hold it spaced from the first column, the lower end of the sleeve having an outwardly extending annular flange to deflect the water and the suds downwardly as it leaves the space between the agitator and the first column, the arms of the sleeve also acting to hold the sleeve at its lower end spaced from the first column, the upper end of the sleeve having an inturned flange engaging the first column to hold the sleeve spaced from the first column, and a cover telescoping the sleeve and engaging the first receptacle.

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1,228,388. FIRE-EXTINGUISHER. FREDERICK C. BARGAR, Columbus, Ohio, assignor to Nu-Ex Fire Appliance Company, Columbus, Ohio, a Corporation of Ohio. Filed Nov. 6, 1916. Serial No. 129,681. (Cl. 169—12.)



1. A fire extinguisher comprising a container, a spray head attached to said container, a valve and handle controlling the outflow through said head, and means whereby said handle is operable to open said valve when the container is in one position and inoperative to open said valve when the container is in an inverted position.

2. A fire extinguisher comprising a container, a spray head attached to said container, a valve and handle controlling the outflow through said head, and a clutch mechanism between said valve and handle operable to couple the handle to the valve when the container is in one position and to uncouple the handle from the valve when the container is in an inverted position.

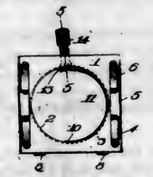
3. A fire extinguisher comprising a container, a spray head attached to said container, a valve and handle controlling the outflow through said head, and a clutch member slidable up and down on the stem of said valve and arranged to clutch the handle to the valve when the container is in one position and to uncouple the handle from the valve when said container is in an inverted position.

4. A fire extinguisher comprising a container, a spray head attached to said container, a valve including a valve stem controlling the outflow through said head, a handle on said stem, said stem being polygonal in shape, a clutch jaw on said handle, a clutch member having a polygonal bore slidable on said stem, and a clutch jaw on said clutch member, said member having a slidable movement sufficient to couple the handle to the valve stem when the container is in one position and to uncouple them when the container is in an inverted position.

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1,228,389. RAY-FILTER HOLDER. FREDERICK W. BARNES, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 15, 1916. Serial No. 137,081. (Cl. 95—81.5.)

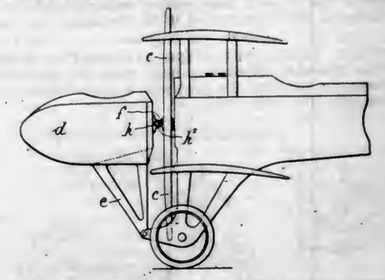
In a ray filter holder, the combination with an open filter frame comprising a plate having filter holding members projecting from one side and a central tubular collar at the margin of the opening therein extending from the other side and provided with a circumferential guide slot, of a flexible steel clamping strip adapted to be drawn around a lens tube and having one end secured on the inside of the collar and the other end provided with a post



projecting through and slidable in the guide slot and a nut threaded on the post exteriorly of the collar and adapted to be screwed down against the latter to lock the free end of the clamping strip at different points in the guide.

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1,228,390. AEROPLANE. LOUIS BÉCHEREAU, Paris, France, assignor to The Society "Spad Société Anonyme pour l'Aviation et ses Derivés", Paris, France. Filed Feb. 1, 1916. Serial No. 75,528. (Cl. 244—30.)



1. An aeroplane or other air craft apparatus comprising a fuselage, a tractor propeller mounted in front of the fuselage, and an observer's car having means for removably mounting it in an overhanging position in front of the propeller.

2. In an aeroplane, the combination with a unit comprising a landing frame, a fuselage, and a tractor propeller mounted in front thereof, of another unit comprising an observer's car constructed separately from the unit first mentioned and mounted in front of the propeller and having arms securing it to the landing frame of the first-mentioned unit.

3. In an aeroplane having a landing frame, a fuselage, and a tractor propeller mounted in front thereof, an observer's car mounted in front of the propeller and having means connecting it to the forward end of the propeller shaft and also having means connecting it to the landing frame.

4. In an aeroplane, the combination of a landing frame, a fuselage, and a tractor propeller mounted in front of the fuselage, of an observer's car having a pair of arms pivoted at their lower ends to the landing frame and arranged in the same plane with the uprights of the landing frame.

5. The combination with an aeroplane having a fuselage, and a tractor propeller mounted in front thereof, of an observer's car mounted in front of the fuselage and having means for connecting it to the forward end of the propeller shaft.

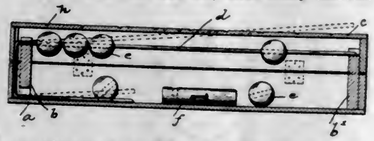
[Claims 6 to 9 not printed in the Gazette.]

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1,228,391. EDUCATIONAL APPLIANCE. JESSIE BARR and EMMA A. MYERS, Brooklyn, N. Y. Filed Mar. 19, 1917. Serial No. 155,727. (Cl. 35—2.)

1. An educational appliance embodying therein a casing, a rod having one end thereof movably mounted in

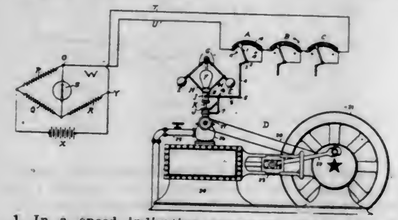
said casing and the other end thereof seated in the opposite side of said casing, whereby the mounting of movable elements upon, and their removal from, said rod is permitted, and a plurality of elements each having an opening therethrough whereby it may be removably mounted upon said rod, and may slide freely thereon.



3. An educational appliance embodying therein a casing, a rod having one end thereof movably mounted in said casing and the other end thereof seated in the opposite side of said casing, whereby the mounting of movable elements upon, and their removal from, said rod is permitted, a plurality of elements each having an opening therethrough whereby it may be removably mounted upon said rod, and may slide freely thereon, and a cover for said casing having impressed thereon digits or numerals, with a corresponding number of unitary indices associated with each digit or number, said digits or numbers and said indices being out of the plane of said cover whereby they are both visual and sensible to touch.

[Claims 2 and 4 not printed in the Gazette.]

1,228,392. SPEED-INDICATING APPARATUS. HENRY EARL BEIGHLEE, Cleveland, Ohio. Filed Oct. 20, 1914, Serial No. 867,675. Renewed Nov. 8, 1916. Serial No. 130,275. (Cl. 175—183.)



1. In a speed indicating apparatus, the combination with a plurality of moving parts, of a single indicating device, a common electrical circuit extending from said device to said moving parts, means controlled by said moving parts and exercised over said circuit for causing to be indicated on said device the sum of the speeds of the rotating parts, substantially as set forth.

2. In a speed indicating apparatus, the combination with a plurality of rotating parts, of a single indicating device, a common electrical circuit extending from said device to said rotating parts having a certain resistance, means controlled by said rotating parts for varying said resistance, the variation in resistance causing to be indicated by said device the sum of the speeds of the rotating parts, substantially as set forth.

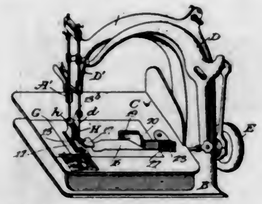
3. In a speed indicating apparatus, the combination with a plurality of rotating parts, of a single indicating device, a common electrical circuit extending from said device to said rotating parts, governors associated with said rotating parts, means controlled by said governors and exercised over said control circuit for causing to be indicated the sum of the speeds of said rotating parts on said device, substantially as set forth.

4. In a speed indicating apparatus, the combination with a plurality of rotating parts, of a single indicating device, a common agency connecting said parts and said device, of means controlled by said rotating parts for registering on said device by the medium of said agency the sum of the speeds or variation in speeds of the rotating parts, substantially as set forth.

5. In a speed indicating apparatus, the combination with a single indicating device, of a plurality of rotating parts, a two-conductor control circuit extending from said device to said rotating parts, means individual to each of said rotating parts for causing variations in said control circuit, said variations causing to be indicated on said device the sum of the speeds of the rotating parts, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

1,228,393. FEEDING MECHANISM FOR SEWING-MACHINES. JOSEPH BERGER, Jr., Utica, N. Y., assignor, by mesne assignments, to Union Special Machine Company, a Corporation of Illinois. Filed Aug. 4, 1902. Serial No. 118,236. (Cl. 112—8.)



1. A sewing and binding machine comprising feeding mechanism, including a device operating upon and feeding the body fabric in advance of and on one side of the stitching point, and a feeding device operating upon and feeding the binding in rear of the stitching point, a binding mechanism coöperating with the feeding mechanism, mechanism coöperating with the feeding mechanism, comprising a plurality of parallel members engaging the upper face of the fabric arranged one beside the other and coöperating with the respective feeding devices, means for imparting a differential movement to said feeding devices, and means for rendering ineffective said differential feed movement without stopping the stitch forming mechanism.

2. A sewing and binding machine comprising a feeding mechanism having a plurality of dogs operating at different speeds the one upon the fabric in advance of the needle and the other upon the binding strip in rear of the needle, a presser foot having portions coöperating respectively with the several dogs arranged side by side and one portion extending in advance of the other, means for rendering ineffective the differential movement of the feed dogs without stopping the stitch forming mechanism, and a binding guide coöperating with the feeding mechanism.

3. A sewing and binding machine comprising a differential feed mechanism, having a plurality of feeding devices operating one upon the body fabric in advance of and to one side of the stitching point, the other upon the binding in rear of the stitching point, a presser foot having parallel portions coöperating respectively with the several feeding devices, the one which coöperates with the first mentioned feeding device extending from a point in rear of and to one side of the needle to a point in front thereof, and the other located with its front end in rear of the front end of the first foot portion, and a binding guide for guiding and applying a binding to the work, the delivery end thereof being positioned alongside of said first portion and in front of the rear portion, and means for varying the effective differential action of the feeding mechanism without stopping the stitch forming mechanism.

4. A sewing and binding machine comprising a differential feed mechanism having a plurality of feeding devices operating, one upon the body fabric in advance of the needle and extending up to the needle to crowd the goods thereto, the other operating upon the binding in rear of the stitching point, a presser foot having two independently operating portions, one coöperating with the forward feeding device, but also bearing upon the fabric at a point in rear of the needle, and the other a spring pressed portion coöperating with the rear feeding device

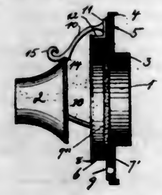


but extending in front of the needle, a binding guide with its delivery end located alongside the front presser foot and in front of the rear foot, and means for varying the effective differential action of the feeding mechanism without stopping the stitch-forming mechanism.

5. A sewing and binding machine comprising a differential feeding mechanism having a plurality of feeding devices operating one upon the body fabric in advance of the needle and extending up to the needle to crowd the goods thereto, the other operating upon the binding in rear of the stitching point, a coöperating presser foot mechanism, a binding guide arranged at right angles to the line of feed and arranged with its delivery end cut off at an angle and delivering the binding with a reverse fold to the stitch-forming mechanism and treadle-controlled means for varying the effective action of the differential feeding mechanism.

[Claims 6 to 38 not printed in the Gazette.]

1,228,394. DISINFECTING AND ADVERTISING DEVICE FOR TELEPHONES AND THE LIKE. LOUIS BLOCK, Brooklyn, N. Y., assignor to (Mrs.) Minnie Frankl, New York, N. Y. Filed May 3, 1916. Serial No. 95,077. (Cl. 179—185.)



1. In combination with the mouthpiece of a telephone, a disinfecting and advertising device comprising a main part having a circular opening to correspond with the opening of said mouthpiece and a receding inwardly projecting portion, a disinfecting medium frictionally held therein, a flat ring loosely bearing against said main portion and having lugs fastened thereto, each lug being provided with two resilient clips, one adapted to abut against a flange on said inwardly projecting portion and the other to enter a notch in said flange and curved braces fastened to said ring and shaped to rotatably hold the device on the edge of said mouthpiece.

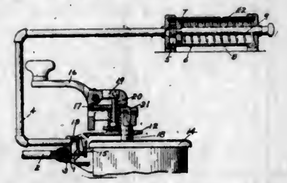
2. In a disinfecting device for the mouthpiece of telephones and the like, a disinfecting medium comprising a thin elastic wire bent into circular shape so as to have a tendency to spread and covered with an absorbent material saturated with a liquid disinfectant.

3. In combination with the mouthpiece of a telephone, a disinfecting and advertising device comprising a main part having a circular opening to correspond with the opening of said mouthpiece and a receding inwardly projecting portion, a disinfecting medium elastically held therein, a ring loosely bearing against said main portion and curved braces fastened to said ring and shaped to rotatably hold the device on the edge of said mouthpiece said braces having hook-shaped ends adapted for the suspension therefrom of light articles.

1,228,395. AUTOMATICALLY-OPERATED CIRCUIT-BREAKER. JOSEPH M. BOSENBURY, Peoria, Ill., assignor of one-half to Charles O. Birney, Mount Healthy, Ohio. Filed July 12, 1915. Serial No. 39,296. (Cl. 188—1.)

1. The combination with a controller handle, of a motor circuit breaker and means operated by fluid under pressure upon release of the controller handle for first effecting the movement of the circuit breaker to open the motor circuit and for then venting fluid to effect an application of the brakes.

2. The combination with a controller handle, of a motor circuit breaker, a pipe a reduction in fluid pressure in which operates to effect an application of the brakes, valve means operated upon release of the controller handle by the operator for venting fluid from said pipe, and a piston device operated by fluid vented from said pipe for first effecting the movement of the circuit breaker to open the motor circuit and then adapted to open a vent port from said pipe to effect a reduction in pressure therein and thereby produce an application of the brakes.



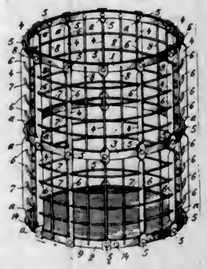
3. The combination with a controller handle, of a switch for controlling the motor circuit, a pipe normally charged with fluid under pressure, a reduction in pressure in which operates to effect an application of the brakes, a piston operated by fluid pressure for first effecting the movement of said switch to open the motor circuit and for then opening an atmospheric vent port to permit the escape of fluid under pressure, and a pilot valve operated upon the release of the controller handle by the operator for opening communication for admitting fluid from said pipe to said piston.

4. The combination with a controller handle, of a vent valve, a lever operated upon release of the controller handle by the operator for actuating said valve, and a locking device for preventing movement of the lever when the controller handle is in "off" position.

5. The combination with a controller handle, of a vent valve, a lever operated upon reelase of the controller handle by the operator for actuating said valve, a lug carried by the lever, a lug movable with said handle and adapted to interlock with the lug on the lever in the "off" position of the handle to prevent movement of the lever when the handle is released by the operator.

[Claim 6 not printed in the Gazette.]

1,228,396. RECEPTACLE FOR RUBBISH. SAMUEL BRAGMAN and SIGMUND WAGREICH, New York, N. Y. Filed May 17, 1916. Serial No. 98,101. (Cl. 220—136.)



1. A receptacle for rubbish comprising a series of flat metallic hoops and a series of flat metallic bars which are fastened together so that a cylindrical frame is produced, parts of each of said bars not attached to said hoops being twisted at right angles to the parts attached; a series of longitudinal wires which are secured to certain of said flat metallic hoops; in combination with a series of wire hoops which are interwoven with said longitudinal wires, and which are passed through a series of holes formed in said parts of said bars which are twisted at right angles to the parts attached to said flat metallic hoops, together with a bottom which is fastened to one of said flat metallic hoops, substantially as described.

2. A receptacle for rubbish, comprising a series of flat metallic bars and a series of flat metallic hoops, one of said hoops being secured to one end of each of said bars, another of said hoops being secured to the other end of each of said bars, and a third of said hoops being secured to the middle of each of said bars; parts of each of said bars not attached to said hoops being twisted at right angles to the parts attached; in combination with a series of wire hoops which are passed through a series of holes formed in said parts of said bars which are twisted at right angles to the parts attached to said flat metallic hoops; and a series of longitudinal wires which are secured to said end hoops and which are interwoven with said wire hoops and said middle flat metallic hoop; together with a bottom which is fastened to one of said end flat metallic hoops, substantially as described.

3. A receptacle for rubbish, comprising a series of flat metallic bars and a series of flat metallic hoops, one of said hoops being secured to one end of each of said bars, another of said hoops being secured to the other end of each of said bars, and a third of said hoops being secured to the middle of each of said bars; parts of each of said bars not attached to said hoops being twisted at right angles to the parts attached; the twist part *a* of said bars by bearing against the edges of said end and middle hoops enabling the cylindrical frame to resist torsional strain in line with the hoops, and longitudinal strain in line with the bars; in combination with a bottom which is fastened to one of said end flat metallic hoops, substantially as described.

4. A receptacle for rubbish, comprising a series of flat metallic hoops and a series of flat metallic bars which are fastened together so that a cylindrical frame is produced; parts of each of said bars not attached to said hoops being twisted at right angles to the parts attached in order that said bars will resist strain in a direction transverse to the cylindrical frame; the twist part *a* of said bars by bearing against the edges of said hoops enabling the cylindrical frame to resist torsional strain in line with the hoops, and longitudinal strain in line with the bars; a series of longitudinal wires which are secured to certain of said flat metallic hoops; in combination with a series of wire hoops which are interwoven with said longitudinal wires and which are passed through a series of holes formed in said parts of said bars which are twisted at right angles to the parts attached to said flat metallic hoops; together with a bottom which is fastened to one of said flat metallic hoops, substantially as described.

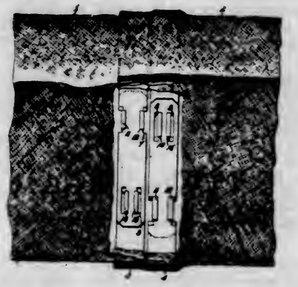
5. A receptacle for rubbish, comprising a series of flat metallic hoops and a series of flat metallic bars which are fastened together so that a cylindrical frame is produced; parts of each of said bars not attached to said hoops being twisted at right angles to the parts attached, in order that said bars will resist strain in a direction transverse to the cylindrical frame; the twist part *a* of said bars, by bearing against the edges of said hoops, enabling the cylindrical frame to resist torsional strain in line with the hoops, and longitudinal strain in line with the bars; in combination with a bottom which is fastened to one of said flat metallic hoops, substantially as described.

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1,228,397. CANVAS-HOSE COUPLING. NORMAN B. BRALY, Butte, Mont. Filed May 2, 1916. Serial No. 94,884. (Cl. 137—28.)

1. In a coupling of the character described, a pair of canvas hose sections with rings arranged in each section, each of said rings being of the same size and formed with overlapping portions provided with pressed-out members for limiting lateral movement and also longitudinal movement of the overlapping sections.

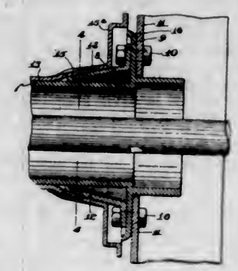
2. In a coupling of the character described a ring formed of resilient material having overlapping ends, one of said ends having an elongated aperture therein and an elongated notch spaced from said aperture, and the other said ends having a pair of turned over members, one of said turned over members extending through said aperture and the other said turned over members fitting into said notch, said turned over members being of a less length than the aperture and notch whereby a sliding movement is permitted between said ends for increasing or decreasing the diameter of the ring.



3. In a coupling for canvas hose, a ring for each end of each section, each of said rings being formed from resilient material having overlapping ends, one of said ends having a pair of parallel apertures and a pair of parallel notches spaced from the apertures, the other of said ends having a pair of turned over interlocking members extending through said apertures, said interlocking members being of less length than said apertures, said last mentioned end being also provided with a pair of turned over interlocking members extending through said notches, said last mentioned interlocking members being of less length than said notches whereby said ends may slide relatively to each other.

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1,228,398. WHEEL-HUB. MARCUS I. BROCK, Wayne, Pa. Filed July 21, 1914. Serial No. 852,135. (Cl. 21—31.)



A fixed hub element comprising a substantially cylindrical body, a relatively short tapering shell surrounding and secured to said cylindrical body and provided with a plurality of parallel tapering projections, a movable hub element of cylindrical formation having a flaring rear end to receive the tapering shell and having interiorly disposed tapering recesses for coöperating with the tapering projections.

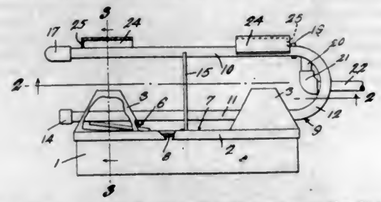
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1,228,399. OIL-BURNER. CARL E. BROWN, Columbus, Ohio. Filed Oct. 17, 1916. Serial No. 126,169. (Cl. 158—64.)

In a device of the class described, a combustion chamber having an outlet at its top; a U-shaped pipe comprising upper and lower arms, the lower arm passing through the combustion chamber and having a burner orifice located within the contour of the chamber, the upper arm being provided with a return bend disposed in approximate parallelism with the upper arm and disposed approximately in a common horizontal plane with the upper arm, the upper arm and the return bend lying above



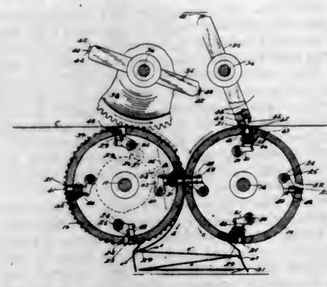
the outlet for the combustion chamber; means for supplying fuel to the return bend; and a flame spreader including downwardly diverging walls engaged respectively



with the return bend and with the upper arm, the diverging walls of the flame spreader being connected at one end by a transverse wall.

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1,228,400. MECHANISM FOR INTERLEAVING SHEETS. HORACE P. BROWN and CLARENCE L. JOHNSTON, Oakland, Cal. Filed Dec. 15, 1913. Serial No. 806,732. (Cl. 270—39.)



1. Mechanism for interfolding sheets, which consists in the combination of a pair of cylinders arranged parallel to each other, gripper means carried by said cylinders for alternately folding web sections so that each section is folded once upon itself, with one leaf of one section interleaved with the two leaves of another section, means coöperative with the cylinders for cutting the webs, and feed means for engaging the leading ends of the severed webs.

6. In a machine for interleaving and folding in zigzag order in-feeding webs of stock, the combination of uniformly revolving juxtaposed drums carrying coöperative receiving gripping and carrying means for folding the webs, first in one cylinder and then in the opposite, cutting devices for coöperating with respective drums for severing the webs in antecedent position with relation to the folding operation, and positively actuated means for picking up the severed, advance end of the in-feeding stock and carrying it around with the drum to the folding mechanism of the drums.

8. A mechanism for severing and folding webs and alternately distributing the folds in a pile, comprising in combination cylinders disposed with adjacent faces in close juxtaposition and revolving at uniform speed, said cylinders carrying a plurality of circumferentially spaced coöperating mechanisms for folding and gripping simultaneously in-feeding webs, and rotary cutting devices coöperating with complementary portions of the drums for cutting the webs in proper time, the axes of said cutters being disposed at an angle of less than 90° to each other.

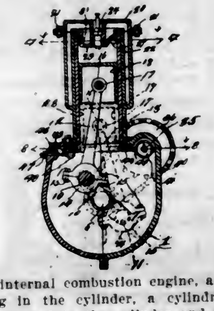
17. In a paper folding machine, a pair of coördinate adjacent rollers for folding the paper zig-zag fashion in severed sections, means on the rollers for folding each section intermediate its length, automatic transfer means on each roller for carrying the loose leading ends of the sections from one roller to the other, said means being operative by the rotation of the rollers, and comprising projectable and retractile pins, and automatic feed means for engaging the leading ends of the sections and drawing them around into position for action of the transfer means.

31. In a machine for interleaving and folding paper towels and the like, the combination of two coacting cylinders between which two webs of paper are adapted to pass, means coacting with the cylinders to sever the webs into sections so that the sections of one web overlap the sections of the other web, and positively operated means contained within the said cylinders for receiving and clamping the central portion of every web section to fold the same and with means on the cylinders to control the leading ends of each of the sections so that the sections are delivered folded and interleaved from the cylinders with each folded section embracing substantially one-half of another section.

[Claims 2 to 5, 7, 9 to 16, 18 to 30, and 32 to 47 not printed in the Gazette.]

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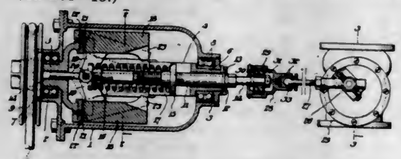
1,228,401. ROTARY EXPLOSIVE-ENGINE. ALBERT W. BRUCE, Bloomfield, Iowa. Filed Apr. 14, 1916. Serial No. 91,094. (Cl. 123—80.)



1. In an internal combustion engine, a cylinder, a piston working in the cylinder, a cylindrical valve telescopically arranged in the cylinder and surrounding the piston, means for continuously rotating the valve during the normal operation of the engine, inlet and exhaust ports for the cylinder, diametrically disposed ports in the cylindrical valve, said ports acting alternately as inlet and exhaust ports and arranged to register with the inlet and exhaust ports of the cylinder in such a way that when one port in the cylindrical valve acts as an intake for a certain charge the diametrically opposite port in the cylindrical valve will perform the exhaust function for the same charge, and means to secure the cylindrical valve against longitudinal movement, said means comprising an adjustable device attached to the engine casing which device can be operated from the outside of the casing to compensate for any longitudinal wear in the cylindrical valve.

2. In an internal combustion engine, a cylinder, a piston working in the cylinder, a cylindrical valve telescopically arranged in the cylinder and surrounding the piston, means for continuously rotating the valve during the normal operation of the engine, inlet and exhaust ports for the cylinder, diametrically disposed ports in the cylindrical valve, said ports acting alternately as inlet and exhaust ports and arranged to register with the inlet and exhaust ports of the cylinder in such a way that when one port in the cylindrical valve acts as an intake for a certain charge the diametrically opposite port in the cylindrical valve will perform the exhaust function for the same charge, and means to secure the cylindrical valve against longitudinal movement, said means comprising an adjustable device to compensate for longitudinal wear in the cylindrical valve and being composed of a cranked stub-pin pivotally adjustable in the engine casing and a roller adapted to engage the flange of the cylindrical valve.

1,228,402. SPEED-GOVERNOR. TRACY V. BUCKWALTER, Altoona, Pa. Filed June 24, 1916. Serial No. 105,638. (Cl. 264—15.)

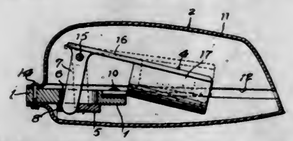


1. A centrifugal governor comprising a revoluble yoke having bearings concentric with and bearings transverse to its axis of revolution, a shaft movable longitudinally in said concentric bearings, weights having turning connections with said shaft and curved bearings adapted to roll on said bearings second named to vary the distances between their fulcrums and said axis, and a spring disposed between said bearings first named for resisting the outward movements of said weights.

3. A centrifugal governor comprising a revoluble yoke having bearings transverse to its axis of revolution, a shaft movable longitudinally in said yoke, a coiled spring through which said shaft passes, and weights having pivotal connections with said shaft, rolling connections movable radially on said bearings and bifurcations adapted for straddling said spring.

[Claims 2 and 4 not printed in the Gazette.]

1,228,403. MOWER-KNIFE SHARPENER. WILLIAM T. BUTCHER, Upper Lake, Cal. Filed Nov. 2, 1915. Serial No. 59,289. (Cl. 56—43.)



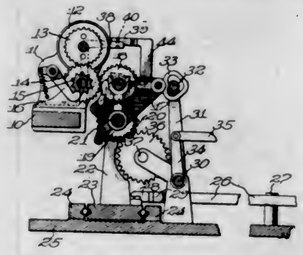
2. In a mowing knife sharpener, a grinding element mounted for movement into and out of operative association with the mower knife, and a means to move the grinding element in the manner stated including a diagonally slotted bar mounted for longitudinal reciprocatory movement in proximity to said grinding element, and means on the grinding element engageable by the walls of the slot in said bar.

6. In a mower knife sharpener, a grinding element mounted for movement into and out of operative association with the mower knife, a resilient supporting plate for said grinding element mounted for pivotal movement with respect to the mover knife, an arm mounted to extend at a right angle to said supporting plate, a relatively fixed cutter bar provided with a transverse slot through which the mentioned arm extends, and a reciprocal bar carried beneath said cutter bar and provided with a diagonal slot through which said arm extends, movement of said last mentioned bar controlling movement of the grinding element substantially as described.

[Claims 1 and 3 to 5 not printed in the Gazette.]

1,228,404. ATTACHMENT FOR CALCULATING-MACHINES. SAMUEL E. CARLIN, Chicago, Ill., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Nov. 26, 1910. Serial No. 594,255. (Cl. 235—130.)

1. The combination with a register, of actuating mechanism for said register, said register and said actuating mechanism having a relative movement past each other, so as to bring said actuating mechanism successively into coöperation with individual parts of said register, and also having a relative movement toward and from each other, to connect and disconnect them operatively, means for bringing said actuating means and said register into approximate coöperative relation, and justifying means for bringing said register and said actuating mechanism into accurate coöperation with each other; said justifying means actuing to lock said register and said actuating mechanism against a relative movement past each other until they have had a relative movement away from each other.



2. The combination with a register, of actuating mechanism for said register, said register and said actuating mechanism having a relative movement past each other, so as to bring said actuating mechanism successively into coöperation with individual parts of said register, and also having a relative movement toward and from each other to connect and disconnect them operatively, and justifying means, carried by said actuating mechanism and said register brought into play by the relative movement of said register and said actuating mechanism, for bringing said register and said actuating mechanism into accurate register with each other.

3. The combination with a register, of actuating mechanism for said register, said register and said actuating mechanism having a relative movement past each other, so as to bring said actuating mechanism successively into coöperation with individual parts of said register, and also having a relative movement toward and from each other, to connect and disconnect them operatively, means for bringing said actuating means and said register into approximate coöperative relation, and justifying means, mounted partly on said register and partly on said actuating mechanism, for bringing said register and said actuating mechanism into accurate coöperation with each other, the relative movement of said register and said actuating mechanism in one direction controlling their relative movement in another direction through the intermediary of said justifying means.

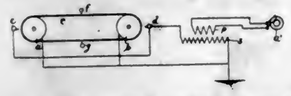
4. The combination with a register including a series of computing wheels, of an actuating mechanism for said register, said actuating mechanism and said register having a relative traveling movement to enable said actuating mechanism to drive said computing wheels *seriatim*, and a relative movement to cause engagement of said register and actuating mechanism and justifying means for justifying said actuating mechanism with respect to the particular computing wheel which it is to drive at the instant of meshing of the actuating mechanism with said computing wheel, said justifying means acting to lock said register and said actuating mechanism against a relative movement past each other during the period of meshing; said justifying means including normally disengaged parts, one on the framework and the other on the relatively traveling member; and provision being made to cause the justifying parts to come into locking engagement at the relative movement between said actuating mechanism and said register, which causes engagement between said register and actuating mechanism.

5. The combination with a series of computing wheels, of a master wheel for driving said computing wheels *seriatim*, said master wheel and computing wheels having relative movement past each other, and having a relative movement to cause engagement of said master wheel and computing wheels and justifying means for bringing said master wheel into perfect register with each computing wheel at the instant of meshing of the master wheel with each computing wheel, said justifying means acting to lock said computing wheels and said master wheel against a relative movement past each other during the period of meshing; said justifying means including normally disengaged parts, one on the framework and the other on the relatively traveling member; and provision being made to cause the justifying parts to come into locking engagement at the relative movement between said master wheel and said computing wheels, which causes engagement between said master wheel and computing wheels.

[Claims 6 to 9 not printed in the Gazette.]



1,228,405. PROCESS AND APPARATUS FOR RECTIFYING ALTERNATING CURRENTS OF ELECTRICITY. WILLIAM H. CHAPMAN, Portland, Me. Filed Sept. 29, 1915. Serial No. 53,193. (Cl. 175—364.)



1. The process of rectifying charges from an alternating source of electricity which consists of discharging said charges in the form of a glow discharge to a body of relatively thin non-conducting material backed by a body of conducting material whereby ions of one sign are delivered upon said thin material, separating the materials from each other and finally collecting the resulting charge.

2. The process of rectifying charges from an alternating source of electricity which consists of discharging said charges in the form of a glow discharge to a body of relatively thin non-conducting material backed by a body of conducing material whereby ions of one sign are delivered upon said thin material separating the materials from each other and finally collecting the resulting charge from the thin material.

3. The process of rectifying charges from an alternating source of electricity which consists of discharging said charges in the form of a glow discharge to a body of paper, backed by a body of metal, then separating the paper and metal and finally collecting the rectified charge from the paper.

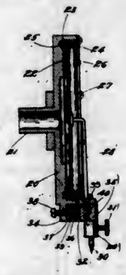
4. In an apparatus for rectifying alternating charges of electricity the combination of a thin sheet of insulating material and a conducting body so movable with relation to each other that portions of the sheet will repeatedly approach to a point adjacent to the conducting body and recede therefrom, a conductor having small discharging points or surfaces for delivering the alternating charge to the sheet while the same is adjacent to the conducting body and means for collecting the rectified charge from the sheet after it has receded from the conducting body.

5. In an apparatus for rectifying alternating charges of electricity the combination of a thin sheet of insulating material and a conducting body so movable with relation to each other that portions of the sheet will repeatedly contact with the conducting body and recede therefrom, a conductor having small discharging points or surfaces for delivering the alternate charge to the sheet while the same is in contact with the conducting body and means for collecting the rectified charge from the sheet after it has receded from the conducting body.

[Claims 6 to 9 not printed in the Gazette.]

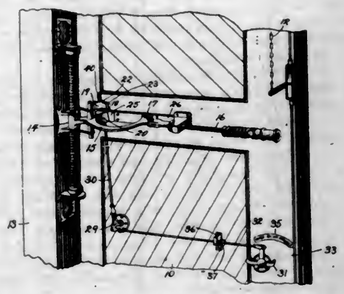
1,228,406. CUSHION-SUPPORT FOR PIVOT-JOINTS. FOREST CHENEY, Chicago, Ill., assignor, by mesne assignments, to Cheney Talking Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 22, 1913. Serial No. 791,239. (Cl. 274—35.)

In a sound box for sound reproducing machines, the combination with the frame of the box, of a stylus-supporting lever having a cross bar thereon, spaced parallel supporting members projecting from the periphery of said frame between which said cross bar is located, one of said members and one side of said cross bar carrying respective elements of two pin and socket pivot joints, one pivot joint being located at each side of said lever, a



cushion between the other of said members and the other side of said cross bar, and screws alining with said pivot joints and adjustably extending through said last-named member for comprissing said cushion against said cross bar to maintain the elements of said two pivot joints in contact with each other.

1,228,407. DOOR OPENER AND CHECK. GEORGE B. CLAY, Jenkintown, Pa. Filed Jan. 17, 1917. Serial No. 142,843. (Cl. 16—96.)



1. A device of the character stated embracing in combination a door, a stop movably mounted upon the door, a pivot, a jointed arm, one section of which is mounted to swing around said pivot and the other section of which is slidingly mounted upon the door, one of said sections being constructed to coöperatively engage with said stop upon opening of the door a predetermined distance to arrest return movement thereof and means connecting with said stop for withdrawing the same from the path of travel of the stop engaging section.

2. A device of the character stated embracing in combination a door, a stop movably mounted upon the door, a pivot, a jointed arm, one section of which is mounted to swing around said pivot and the other section of which is slidingly mounted upon the door, one of said sections being constructed to coöperatively engage with said stop upon opening of the door a predetermined distance to arrest return movement thereof and means connecting with said stop for withdrawing the same from the path of travel of the stop engaging section and means connected with said stop for returning it to normal position.

5. A device of the character stated embracing in combination a door, a stop movably mounted upon the door, a pivot, a jointed arm one part of which is mounted to swing around the pivot and the other section of which is slidingly mounted upon the door, one of said sections

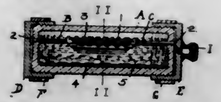
being constructed to cooperatively engage with said stop upon opening of the door a predetermined distance to arrest return movement thereof, means connecting with the stop for withdrawing the same from the path of travel of said stop engaging section and an operating attachment connected with said means and removing an appreciable distance away from said stop.

9. Releasing means for door openers embracing a fixed guide piece having an inclined way therein, a substantially wedge-shaped stop under spring tension movable through said way, a bell-crank lever, a link pivotally connecting said stop and an arm of the lever, an operating handle and a link pivotally connecting said handle and the other arm of said lever.

[Claims 3, 4, and 6 to 8 not printed in the Gazette.]

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1,228,408. CIRCUIT-BREAKER. FREMONT J. CLEAVER, Carnegie borough, Pa., assignor of one-half to Herbert W. Hodgdon, Pittsburgh, Pa. Filed Nov. 1, 1915. Serial No. 58,947. (Cl. 175—273.)



1. An electric circuit breaker comprising a hermetically sealed receptacle, a reservoir contained in said receptacle and having an open top elevated above the bottom of the latter, a pair of line terminals leading through the walls of said receptacle and into the ends of said reservoir, and a filling of fluid conductor for said reservoir normally electrically connecting said line terminals but in the presence of an abnormal rise in current being expelled over the open top of said reservoir into the bottom of said receptacle, thus breaking the electrical connection between said line terminals.

2. An electric circuit breaker comprising a hermetically sealed receptacle, a reservoir contained in said receptacle and having an open top normally elevated above the bottom of said receptacle, a pair of line terminals leading through the walls of said receptacle and extending into the ends of said reservoir, and a supply of fluid conductor in said receptacle whereby said reservoir may be filled with said conductor and the terminals electrically connected by inverting said receptacle and allowing said fluid conductor to flow into the reservoir over the open top thereof, and in case of an abnormal rise in current said fluid conductor is expelled from said reservoir and falls to the bottom of said receptacle, thus breaking said electrical connection.

3. In combination with contact members interposed in an electric circuit, a circuit breaker having its extremities mounted in said members and rotatable therein, said circuit breaker consisting of a hermetically closed receptacle provided with an open top reservoir in the interior thereof, terminals connected to said members and leading through the walls of said receptacle into the ends of said reservoir, and a filling of fluid conductor for said reservoir normally connecting said terminals electrically together but adapted to be expelled from said reservoir to break said connection when an abnormal rise of current occurs, said reservoir being refilled and said electrical connection of said terminals being restored by rotating said receptacle, substantially as described.

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1,228,409. SAFETY-BLADE KNIFE. WILLIAM ARTHUR COLLINGS, Kansas City, Mo. Filed Sept. 10, 1915. Serial No. 49,969. (Cl. 30—10.)

1. In a device of the class described, a handle, a razor blade, interfitting elements on said handle and blade for uniting the two, a plate, a flange on three sides of said handle for slidably receiving said plate to hold said blade in position, and a cover guard pivotally mounted on the other end of said handle and adapted to fold over and cover the same.

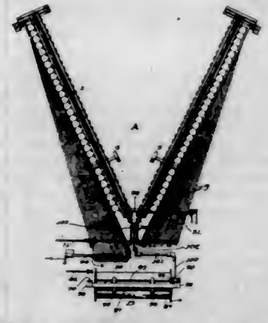
2. In a device of the class described, a handle, projections integrally formed thereon and adapted for engagement with a safety razor blade, a plate, a flange on three



sides of said handle for slidably receiving said plate to hold said blade in position, and a cover guard pivotally mounted on the other end of said handle and adapted to fold over and cover the same.

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1,228,410. CREEL. HOWARD D. COLMAN, Rockford, Ill., assignor to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners doing business as Barber-Colman Company, Rockford, Ill. Filed June 28, 1913. Serial No. 776,237. (Cl. 242—131.)



1. A warper creel having, in combination, a bar, a plurality of members vertically movable on said bar, a spindle on each member for rotatably supporting a yarn mass for the unwinding of yarn therefrom, a relatively stationary brake arm for each yarn mass, and means for raising and lowering said members to place the yarn masses in and out of peripheral braking contact with the brake arms.

2. A creel, having, in combination, a bar, a brake arm fixed to said bar, a guide sleeve vertically movable on said bar, a yarn-mass supporting spindle on said sleeve, and means for raising and lowering said sleeve to place the yarn mass in and out of peripheral contact with said brake arm.

3. A creel having, in combination, a bar, a plurality of brake plates mounted on said bar, a plurality of guide sleeves mounted on said bar for vertical movement, a yarn-mass supporting spindle on each of said sleeves, a member connecting all of said sleeves, and means for raising and lowering said member to place the yarn masses in and out of peripheral contact with the brake plates.

4. A creel having, in combination, a bar, a plurality of brake plates mounted on said bar, a plurality of guide sleeves mounted on said bar for vertical movement, a yarn-mass supporting spindle on each of said sleeves, a member loosely connected to all of said sleeves, and means for raising and lowering said member to place the warn masses in and out of peripheral contact with the brake plates.

5. A creel having, in combination, a framework, a plurality of trees supported in said framework, each tree comprising a plurality of vertically movable yarn-mass supporting devices, a member connecting all of the yarn-mass supporting devices on each tree, braking devices on each tree, a plurality of bell-cranks supported upon said framework, one arm of each bell-crank being connected to one of said members, and means engaging the other

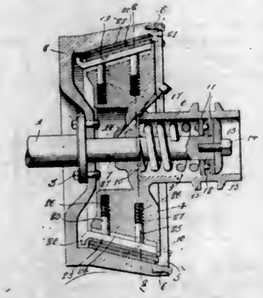


arms of said bell-cranks for moving said bell-cranks to move the yarn-mass supporting devices with relation to the braking devices.

[Claims 6 to 11 not printed in the Gazette.]

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1,228,411. CLUTCH. GEORGE W. CONNER and RAY CONNER, Mount Pleasant, Iowa. Filed Oct. 2, 1915. Serial No. 53,739. (Cl. 192—8.)



1. A clutch comprising a flywheel, a cone movable longitudinally within said flywheel, a flexible band carried by said cone, a friction sleeve resting upon said flexible band, and a flexible band carried by said friction sleeve for engagement with said flywheel when the cone is in operative position, said sleeve and the band surrounding the same being disconnected from each other, from the fly wheel and from the cone.

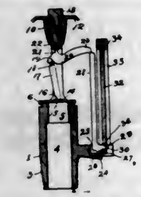
3. A clutch comprising a flywheel, a cone within said flywheel, a friction sleeve mounted upon said cone and adapted to slide transversely of the same at times, means for limiting transverse sliding movement of said sleeve upon said cone, means for locking said friction sleeve against independent rotation upon said cone, said last-mentioned means also serving to prevent said friction sleeve from sliding off said cone, and means for resiliently retaining said cone in operative position.

5. A clutch comprising a fly-wheel, a cone movable longitudinally within said fly-wheel, a flexible band carried by and secured to said cone, a friction sleeve resting upon said flexible band, a flexible band carried by said friction sleeve for engagement with said fly-wheel when the cone is in operative position, said sleeve and the band carried thereby adapted to float between the cone and the fly-wheel when the clutch is disengaged, and resilient means on the cone for holding the sleeve from free rotation.

[Claims 2, 4, and 6 not printed in the Gazette.]

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1,228,412. AUTOMATIC SPRINKLER. ROLAND STERLING DAVIDSON, Winnipeg, Manitoba, Canada. Filed Apr. 26, 1916. Serial No. 93,672. (Cl. 169—5.)



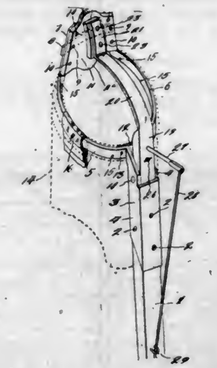
1. An automatic sprinkler comprising a valve, means to maintain the valve normally in closed position, and means to release the valve retaining means, said last means comprising a plurality of parts connected to form a single thermostatically operated system positioned and responsive to a rapid rise in temperature to release the valve retaining means but unresponsive to a gradual rise in temperature.

2. A sprinkler having a valve, means to maintain the valve in closed position, and means operated by a rapid rise in temperature to release the valve retaining means, said last named means comprising a flexible container supported from the body of the device and operatively engaging the valve retaining means, an orifice in the container communicating with the outer air, and means to control the size of the orifice whereby the same may be regulated so that a predetermined rate of increase in temperature will increase the pressure in the container to operate the valve release.

3. A sprinkler having a body, a valve, a strut having one end engaging the valve, a lever positioned to maintain the position of the strut, a trigger supported from the body and engaging the end of the lever, and means operated by a rapid rise in temperature to actuate the trigger, thereby releasing the lever, strut and valve.

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1,228,413. FRUIT-GATHERER. PETER T. DELENICOFF, North McGregor, Iowa. Filed July 6, 1916. Serial No. 107,790. (Cl. 56—99.)



In a fruit gatherer, the combination of an elongated handle member and a fruit gathering sleeve attached thereto, of a plate member secured to the upper end of the handle member and provided with curved rigid arms inclined upwardly and laterally, and to which arms the upper open end of the sleeve is attached, said arms having extensions, a curved bar connecting said extensions constituting a stationary jaw, a cushioning pad secured to said extensions and having its upper and lower edge portions yieldable to prevent bruising the fruit and provided with an upper yieldable lip, a spring tensioned member pivoted to the member carried by the handle and provided with a cushioned grasping jaw to cooperate with the stationary jaw, and means for actuating the spring tensioned member against the action of the spring means thereof.

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1,228,414. METHOD OF SEPARATING AN AROMATIC SULFONIC ACID FROM SULFURIC ACID AND OF OBTAINING THE SULFONIC ACID IN SOLID FORM. LOUIS M. DENNIS, Ithaca, N. Y. Filed Nov. 20, 1916. Serial No. 132,339. (Cl. 23—24.)

1. A method of separating a sulfonic acid of a hydrocarbon of the aromatic series from sulfuric acid and of obtaining the sulfonic acid in solid form, consisting in treating a mixture of the acids with a solvent which dissolves the sulfonic acid but not the sulfuric acid and which dissolves an appreciably greater amount of the

sulfonic acid at high temperature than it does at low temperature, separating the sulfonic acid solution from the sulfuric acid and cooling said solution.

3. A method of separating a sulfonic acid of a hydrocarbon of the aromatic series from sulfuric acid and of obtaining the sulfonic acid in solid form, consisting in treating a mixture of the acids with an organic solvent which dissolves the sulfonic acid but not the sulfuric acid and which dissolves an appreciably greater amount of the sulfonic acid at high temperature than it does at low temperature, separating the sulfonic acid solution from the sulfuric acid and cooling said solution.

5. A method of separating a sulfonic acid of a hydrocarbon of the aromatic series from sulfuric acid and of obtaining the sulfonic acid in solid form, consisting in treating a mixture of the acids with toluene, separating the toluene solution of sulfonic acid from the sulfuric acid and cooling said solution.

10. A method of separating a naphthalene sulfonic acid from sulfuric acid and of obtaining the sulfonic acid in solid form, consisting in treating a mixture of the acids with toluene, separating the toluene solution of sulfonic acid from the sulfuric acid and cooling said solution.

15. A method of separating naphthalene beta-sulfonic acid from sulfuric acid and of obtaining the sulfonic acid in solid form, consisting in treating a mixture of the acids with toluene, separating the toluene solution of sulfonic acid from the sulfuric acid and cooling said solution.

[Claims 2, 4, 6 to 9, and 11 to 14 not printed in the Gazette.]

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1,228,415. CHARGE-PREPARING APPARATUS. RALPH OTIS DEULEN, Bridgeport, Nebr. Filed Dec. 29, 1916. Serial No. 139,648. (Cl. 123—122.)



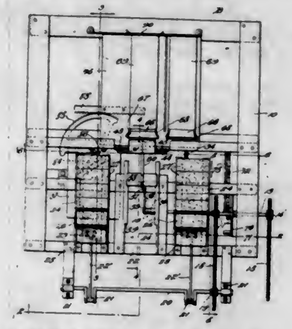
In an apparatus of the kind set forth, the combination with a multiple cylinder engine, of an exhaust manifold having a downwardly extending closed end, and an intake manifold connected to the exhaust and intake ports respectively of the cylinders of the engine, a charge feed pipe extending from the carbureter of the engine into one end of the exhaust manifold, extending across the mouths of said exhaust ports, turned into a loop and merging into a return portion connected to and in communication with the intake manifold, and means on and carried by that portion of the charge intake pipe extending across the exhaust ports to confine the exhaust directly upon said pipe, said means comprising sleeves having an open side and end, the open side of each adjacent an exhaust port, whereby the exhaust will be confined on said pipe, said open end facing in a direction toward the closed end of the exhaust manifold, whereby the exhaust may return under said pipe.

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1,228,416. RECEPTACLE-FILLING MACHINE. CHARLES DAOLET, Sr., Philadelphia, Pa., assignor to Fels and Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 13, 1916. Serial No. 136,654. (Cl. 100—59.)

1. In a packing machine, the combination with an article receiving frame, of means for intermittently discharging articles from said frame, a movable carrier operable to receive frame discharged articles, means for moving said carrier and an article carried thereby to a position in communication with an article receiving receptacle, and means for ejecting an article from the carrier into the said receptacle.

2. In a packing machine, the combination with an article receiving frame, of means for supplying articles to said frame, mechanism for discharging said articles from the frame at intermittent periods and to deposit the same upon a movable carrier, mechanism for moving said carrier and an article carried thereby to a position substantially in alinement with an article receiving receptacle, and means for ejecting the article from the carrier into said receptacle.



3. In a packing machine, the combination with an article supplying magazine, of means for intermittently discharging articles from said magazine upon a frame carried guideway, mechanism for effecting the discharge of articles from said guideway upon an oscillating carrier at intermittent periods, means for revolving said carrier and an associated article to a position substantially in alinement with an article receiving container, and means for ejecting an article from the oscillating carrier into said container.

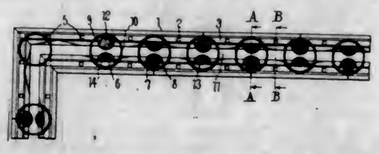
4. In a packing machine, the combination with a plurality of article receiving guides of means for intermittently advancing articles along said guides and for effecting a discharge of the articles therefrom, of a plurality of oscillating carriers operable when in a substantially horizontal position to receive articles discharged from said guides, means for revolving said carriers and associated articles to an approximately vertical position whereby said carriers will be substantially juxtaposed, and a reciprocating mechanism for ejecting said articles from the carriers into a receptacle when the carriers are in said vertical position.

5. In a packing machine of the class described, the combination with a plurality of soap containing magazines, of guides located beneath said magazines and adapted to receive soap discharged from said magazines, reciprocating pressing elements operable to advance soap along said guides and to intermittently discharge the soap therefrom, of a plurality of oscillating carriers cooperating with the said guides and adapted to receive soap after the latter is ejected from said guides, means for revolving said carriers and associated soap into contiguous vertical relation, and a plunger for expelling the soap for said carriers into a container, when the soap is in the last mentioned position.

[Claims 6 to 10 not printed in the Gazette.]

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1,228,417. HOLLOW COMPOSITION WALL CONSTRUCTION. RICHARD B. EASON, Jr., New York, N. Y. Filed Jan. 11, 1916. Serial No. 71,514. (Cl. 72—30.)



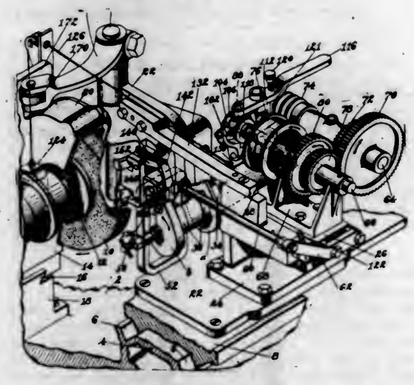
1. A hollow composition wall having two tiers of blocks with an air space between them, the blocks in the two tiers having horizontal and vertical broken joints, reinforcing vertical piers forming integral parts of the vertical joints of the blocks of each tier and extending along the inner faces of the intervening blocks and annular metallic tie pieces for connecting the said tiers, each tie piece having a portion of its circumference embedded in one of said piers.

2. In a hollow composition wall, two tiers of blocks with an air space between them, the said blocks being arranged in the two tiers so as to have horizontal and vertical broken joints, the top of one block in one tier having a curved groove near its center and the tops of the two blocks, opposite the first block, in the other tier having, in their adjacent ends, corresponding curved grooves and an annular metallic tie piece adapted to rest in the said grooves to lock the two tiers together.



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1,228,418. GRINDING-MACHINE. HARRISON H. EATON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 8, 1915. Serial No. 60,293. (Cl. 51—17.)



1. In a machine for shaping articles in conformity to a pattern, the combination with a tool for operating upon the work, of a pattern-guide arranged to coöperate with the pattern to control the position of the work presented to the tool and having a guiding face conformable substantially to the contour of the working face of the tool, the guide being constructed and arranged so that the contour of its face may be adjusted to correspond to variations in the contour of the working face of the tool.

2. In a machine for shaping articles in conformity to a pattern, the combination with relatively adjustable work shaping and work holding devices, of means for controlling the relative position of said devices during the presentation of the work to the shaping device including a pattern-guide adjustable to vary the contour of its guiding face, and means controlled by the relative adjustment of said devices for varying the contour of said face of the guide.

3. In a machine for shaping articles in conformity to a pattern, the combination with a work holding device, of a rotary tool adjustably movable toward and from said device, means for controlling the position of said device during the presentation of the work to the tool including a pattern-guide adjustable to different degrees of curvature, and means for varying the curvature of said guide in proportion to the extent of said adjusting movement of the tool.

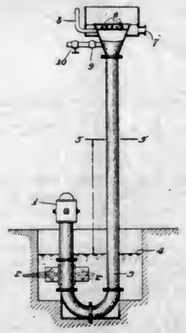
4. In a machine for shaping articles in conformity to a pattern, the combination with a work holding device, of a rotary tool having a curved periphery for engagement with the work and adjustably movable toward said device to compensate for decrease in the diameter of the tool through wear, a pattern-guide arranged to present a curved face conformable substantially to the peripheral curve of the tool, said guide being adjustable to different degrees of curvature, and automatic means for adjusting the guide in proportion to said adjusting movement of the tool to cause the curvature of the guide to conform to the varying curvature of the tool.

5. In a machine for shaping articles in conformity to a pattern, the combination with work holding means, of a shaft upon which may be mounted rotary tools of different diameters, said shaft being adjustable laterally to bring the curved periphery of a tool mounted thereon into engagement with the work, a pattern-guide adjustable to different degrees of curvature and adapted to present a guiding face conformable substantially to the peripheral curve of the tool, and means for adjusting the curvature of said guide in accordance with the distance of the tool shaft from the work.

[Claims 6 to 27 not printed in the Gazette.]

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1,228,419. PRESSURE CONTROL IN PUMPING. GEORGE H. ECKERT, Syracuse, N. Y., assignor to Humphrey Gas Pump Company, a Corporation of New York. Filed May 27, 1915. Serial No. 30,729. (Cl. 160—1.)



1. The method which consists in reciprocating a column of liquid with a velocity sufficiently limited to preserve the coherence of the column and having sufficient bulk and path of travel to acquire useful momentum, utilizing an expansive force to cause one stroke of said reciprocation, and restraining a return stroke by a below atmospheric pressure to the rear of the column in order to reduce the pressure developed.

2. The method which consists in reciprocating a column of liquid with a velocity sufficiently limited to preserve the coherence of the column and having sufficient bulk and path of travel to acquire useful momentum, utilizing an expansive force to cause one stroke of said reciprocation, and reducing the velocity of the return stroke by a below atmospheric pressure to the rear of the column.

3. The method which consists in reciprocating a column of liquid with a velocity sufficiently limited to preserve the coherence of the column and having sufficient bulk and path of travel to acquire useful momentum, utilizing an expansive force to cause one stroke of said reciprocation, discharging a portion of the liquid at the required head and utilizing a partial vacuum above the liquid column beneath the point of discharge, by preventing air from entering the space vacated by the returning column, to retard the return stroke.

4. The method which consists in reciprocating a column of liquid with a velocity sufficiently limited to preserve the coherence of the column and having sufficient bulk and path of travel to acquire useful momentum, utilizing an expansive force to cause one stroke of said

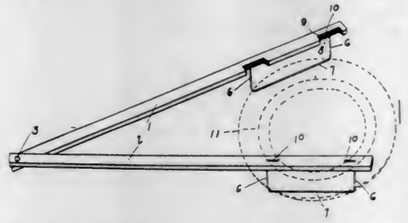
reciprocation, to force the liquid to the required head or pressure and utilizing a vacuum above the liquid column, by preventing air from entering the space vacated by the returning column, to retard the return stroke, and thereby reduce the pressure to be overcome upon the next power stroke.

5. The combination of a power chamber, a play pipe for the reciprocation of liquid in operative relationship therewith, said play pipe provided with liquid intake valves and liquid discharge valves, the latter being placed near the upper end of the play pipe and arranged to close after the discharge of liquid therethrough and thereby cause a vacuum or partial vacuum on top of the liquid column upon its return stroke in order to retard said return stroke.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,420. HOLDER. JOHN EDEN, Attleboro, Mass. Filed Aug. 16, 1915. Serial No. 45,619. (Cl. 65—32.)



1. A device of the class described consisting of a pair of flat handle or lever members pivoted at one end in superposed, flatwise relation, flat U-shaped plate engaging loops or bails carried upon one side of the pair of levers, one on each lever, and projecting perpendicularly therefrom so that when the levers are swung together the loops or bails lie substantially parallel in close relation within a space of the width of the closed overlapping levers.

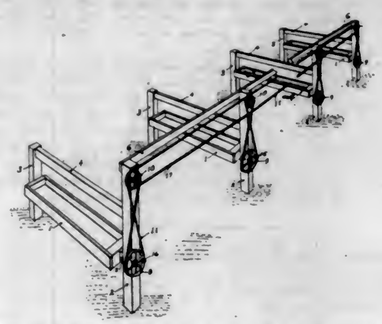
2. In a device of the class described, a pair of pivoted lever members, and article engaging devices depending vertically from said members and each formed as an open sided loop having an article supporting portion spaced from and substantially parallel to and extending in the direction of length of its lever member below the same, and spaced perpendicular article engaging arms connected to said supporting portions at their ends and having their free ends formed for positive engagement with said lever members, the said arms projecting perpendicularly from one side of the pair of lever members in a direction parallel with the pivotal axis of the levers.

3. A device of the class described consisting of a pair of handle or lever members connected at one end for relative angular movement, each member having a flat U-shaped bail or loop secured therein so as to project perpendicularly from one side of the pair of members, said loops adapted to lie in close, substantially parallel relation in a space the width of the closed members.

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1,228,421. INTERLOCKING REVERSIBLE FEED-TROUGH. JAMES S. ELDER and HERBERT J. WILSON, Fort Collins, Colo. Filed Feb. 27, 1917. Serial No. 151,235. (Cl. 119—61.)

1. The combination of a series of feed troughs reversibly mounted upon axles in a framework, drive pulleys anchored to an axle of each trough, idler pulleys mounted on said framework above each drive pulley, a continuous cable passing around and operatively connecting all of said drive pulleys throughout the series and arranged to pass over said idler pulleys so that the portions of said cable extending between troughs longitudinally of the series are held well above the level of the troughs to allow free access thereto, with means to operate said

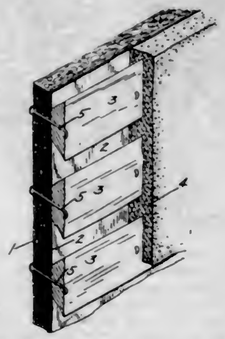


cable to reverse said troughs in unison, substantially as described.

[Claim 2 not printed in the Gazette.]

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1,228,422. COMPOSITE LATH AND HEAT-INSULATING MATERIAL. GEORGE H. ELLIS, St. Paul, Minn. Filed June 18, 1915. Serial No. 34,831. (Cl. 154—44.)



1. A composite lath and heat insulating material comprising a felted flexible insulating sheet, and a vegetable fiber board lath secured thereto.

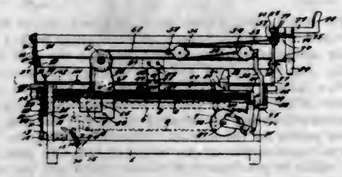
2. A composite lath and heat insulating material comprising a flexible insulating body sheet, a water proof facing applied thereto, vegetable fiber board lath applied to said water proof facing, and metallic fastening devices driven through said three elements and clenched against said lath.

3. A composite lath and heat insulating material comprising a flexible insulating body sheet, a water proof facing applied thereto, vegetable fiber board lath applied to said water proof facing, and metallic fastening devices driven through said three elements and clenched against said lath, the edges of said lath being undercut.

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1,228,423. TYPE-WRITING MACHINE. HARRY ELLWOOD ELLIS and JOHN W. WILHELM, Palmetto, Fla. Filed June 1, 1916. Serial No. 101,164. (Cl. 197—90.)

1. In a typewriter, the combination of a frame having a carriage mounted in guides of the frame to move transversely and a screw intermittently mounted in bearings of the frame, of a member having a shoe to engage the screw and being carried by the carriage, and means actuated by the keys of the typewriter for imparting an intermittent movement to the screw for moving the carriage transversely and intermittently, means for disengaging said member from the screw at the terminus of a line, to permit the carriage to return to its initial or starting position, and means for holding said member out of engagement with said screw while the carriage is returning to its initial or starting position, and means for returning said member into engagement with the screw substantially when the carriage reaches its initial or starting position, and means for returning the carriage to its initial or starting position, said means for disengaging the member from the screw comprising a toothed member at one end of the screw, and a lug carried by said member to engage the toothed member whereby the member with the lug is disengaged from the screw.



2. In a carriage feed mechanism for typewriters, a frame, a carriage mounted in guides thereof and provided with a pivoted bar having a downwardly extending arm, a feed screw mounted in bearings and disposed transversely of the machine and provided with a collar at one end having upon one face a series of ratchet teeth, a threaded shoe carried by said arm arching over and engaging said feed screw, whereby as the screw is rotated, the carriage is moved transversely of the machine, and means carried by the shoe to engage one of the ratchet teeth of said collar, to tilt said pivoted bar upwardly, and disengage the shoe from the feed screw.

3. In a carriage feed mechanism for typewriters, a frame, a carriage mounted in guides thereof, a bar extending longitudinally of the carriage and having transverse arms at its ends pivoted at the opposite ends of said carriage, said bar having a downwardly extending arm, a feed screw extending transversely of the frame and mounted in bearings thereof and provided with a collar at one end having one face provided with ratchet teeth, a shoe carried by the arm of said bar and arching the feed screw and having threads to engage the threads of the screw, whereby as the screw is rotated, the carriage is fed in one direction, said shoe having a projection to engage one of the teeth of the collar, whereby the bar is tilted upwardly and the shoe is disengaged from the screw.

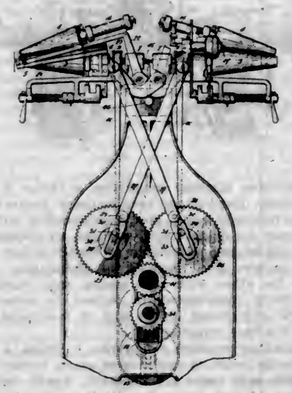
4. In a carriage feed mechanism for typewriters, a frame, a carriage mounted in guides thereof, a bar extending longitudinally of the carriage and having transverse arms at its ends pivoted at the opposite ends of said carriage, said bar having a downwardly extending arm, a feed screw extending transversely of the frame and mounted in bearings thereof and provided with a collar at one end having one face provided with ratchet teeth, a shoe carried by the arm of said bar and arching the feed screw and having threads to engage the threads of the screw, whereby as the screw is rotated, the carriage is fed in one direction, said screw having a projection to engage one of the teeth of the collar, whereby the bar is tilted upwardly and the shoe is disengaged from the screw, spring means connected to one of the end arms of said bar and to the carriage, and against the action of which the shoe is disengaged from the screw, means to engage one of the end arms of the bar to hold the shoe disengaged from the screw, said shoe having an ear, and means at one end of the frame to be engaged by said ear, to overcome said holding means, whereby the spring means will actuate said bar and return the shoe in engagement with the screw.

5. In a carriage feed mechanism for typewriters, a frame, a carriage mounted in guides thereof, an intermittent feed screw mounted in bearings of said frame and having a collar at one end provided with ratchet teeth on one face, means to impart an intermittent motion to said screw, a bar having end arms pivoted on the carriage, spring means connected to one of the end arms, said bar having a downwardly extending arm provided with a shoe arching and engaging the threads of the screw, said shoe having means to engage one of the teeth of the collar to raise the shoe and the bar against the action of the spring means, one of said end arms having apertures, and a leaf spring provided with a lug to engage one of the apertures to hold the bar raised against the action of the spring means, with the shoe out of engagement with the screw.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,424. WINDING-MACHINE. GEORGE W. FOSTER, Boston, Mass. Filed Oct. 19, 1914. Serial No. 867,324. (Cl. 242—43.)



1. In a winding machine, the combination of a rotatable spindle, a cone-shaped drive roll, means for rotating said drive roll to operate said spindle, a thread guide, means for reciprocating said thread guide, and automatic means for changing longitudinally in reverse direction the position of said drive roll with relation to said spindle during the operation of the machine.

2. In a winding machine, the combination of a rotatable spindle adapted to hold a substantially cone-shaped cop, a drive roll for driving said spindle by surface contact with its cop, means for rotating said drive roll, a thread guide, means for reciprocating said thread guide, and automatic means for changing longitudinally in reverse directions the relative positions of said drive roll and cop carried by the spindle during the operation of the machine.

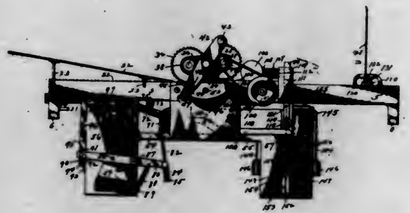
3. In a winding machine, the combination of a rotatable spindle adapted to hold a cop, a substantially cone-shaped drive roll, means for rotating said drive roll to operate said spindle by surface contact with its cop, a thread guide, means for reciprocating said thread guide, and means whereby the relative longitudinal positions of said drive roll and cop are changed automatically in reverse directions from time to time during the operation of the machine.

4. In a winding machine, the combination of a rotatable spindle adapted to hold a substantially cone-shaped cop, a drive roll for operating said spindle by surface contact with its cop, means for rotating said drive roll, a thread guide, means for reciprocating said thread guide, and means whereby the relative longitudinal positions of said drive roll and cop are changed automatically in reverse directions from time to time during the operation of the machine.

5. In a winding machine, the combination of a rotatable spindle adapted to receive a substantially cone-shaped cop, a substantially cone-shaped drive roll for driving said spindle by surface contact with its cop, means for rotating said drive roll, a thread guide, means for reciprocating said thread guide, and automatic means whereby a forward and reverse longitudinal movement are imparted to said drive roll from time to time during the operation of the machine.

[Claims 6 to 11 not printed in the Gazette.]

1,228,425. PRINTING, DUPLICATING, AND ADDRESSING MACHINE. HARRY M. FRECK, Columbus, Ohio. Filed May 21, 1909. Serial No. 497,451. (Cl. 101—1.)



1. A printing machine comprising a frame, a reciprocable carriage, forward and reverse gears, separate shafts for supporting said gears, means coöperating with either of said gears for driving said carriage, an element carrying said shafts and adjustable to render either the forward or reverse gear operable by disengaging one and engaging the other with said means, said carriage and element being complementally formed to automatically effect such adjustment at the end of movement of said carriage in either direction.

2. A printing machine comprising a frame, a reciprocable carriage, forward and reverse gears, separate shafts upon which said gears are mounted, means coöperating with either of said gears for driving said carriage, an element carrying said shafts and adjustable to render either the forward or reverse gear operable by disengaging one and engaging the other with said means, irregularities on said carriage operative on said element at the end of movement of said carriage in either direction to effect such adjustment.

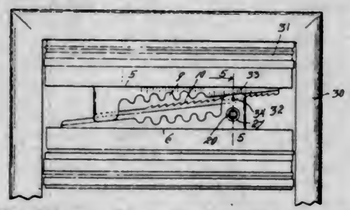
3. A printing machine comprising a frame, a reciprocable carriage, forward and reverse gears, separate shafts upon which said gears are mounted, means coöperating with either of said gears for driving said carriage, an element carrying said shafts and adjustable to render either the forward or reverse gear operable by disengaging one and engaging the other with said means, a trip element on said first named element, and an irregularity at each end of said carriage coöperative with said trip element to effect adjustment of said first named element automatically.

4. A printing machine comprising a frame, a reciprocable carriage, forward and reverse gears, a flat faced rack section carried by said carriage for coöperation with said gears, and a tiltable supporting element for said gears movable to engage either gear with said rack, said carriage being structurally formed to adjust said element at the end of its movement in either direction.

5. A printing machine comprising a frame, a reciprocable carriage, forward and reverse gears, a flat faced rack section carried by said carriage for coöperation with said gears, a tiltable supporting element for said gears movable to engage either gear with said rack, and a trip arm on said element, said carriage being complementally formed to automatically move said arm and tilt said frame to its position of adjustment at the end of movement of the carriage in either direction.

[Claims 6 to 23 not printed in the Gazette.]

1,228,426. AUTOMATIC LOCK FOR QUOINS. JAMES E. GALLAGHER, Denver, Colo. Filed Apr. 6, 1916. Serial No. 89,381. (Cl. 254—42.)



1. The combination of two quoin members, one of which is provided with ratchet teeth and the other with a dog movably mounted in an opening formed in the said member, the dog having an opening arranged transversely thereof, a spindle journaled in the quoin member on opposite sides of the dog, and having an eccentrically arranged web passing through the opening formed in the dog, and a spring acting on the dog and coöperating with the web.

2. The combination of two coöperating quoin members, one of which is provided with ratchet teeth and the other with a dog mounted to move toward and away from the first named member, the dog having an opening and a flat face adjacent said opening, a spindle journaled in the quoin member on opposite sides of the dog and having a web eccentrically arranged and extending through the opening in the dog, the web having a flat face which engages the flat face of the dog when the dog is in the locking position, and a spring acting on the dog to maintain it in the last named position.

3. The combination of two coöperating quoin members, one of which is provided with teeth and the other with a dog movable toward and away from the first named member into locking or unlocking relation as may be required, the dog having a transverse opening and a flat face adjacent said opening, a spindle journaled in the quoin member on opposite sides of the dog and having a web eccentrically arranged and passing through the opening in the dog and provided with opposing flat faces, means for actuating the spindle to operate the dog, whereby the flat face of the dog is brought into engagement with either of the flat faces of the web according as the dog is in the locked or unlocked position, and a spring acting on the dog and coöperating with the spindle, substantially as described.

4. The combination of two quoin members, one of which is provided with a dog and the other constructed to cooperate with the dog, the latter being movably mounted for locking purposes, a spindle journaled in the dog-carrying quoin member and having an eccentrically arranged web passing through an opening in the dog, the dog having a flat face adjacent the opening and the web having a flat face to engage the said face of the dog when the latter is in the locked position, and a spring engaging the dog and coöperating with the spindle to hold the flat faces of the web and dog in contact.

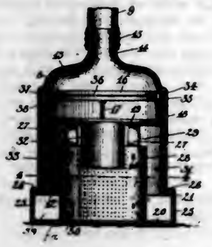
5. The combination of two quoin members, one of which is provided with a dog mounted to move toward and away from its companion member, the latter being constructed to coöperate with the dog for locking purposes, and a spindle journaled in the dog-carrying quoin member and having an eccentrically arranged part passing through an opening formed in the dog, the spindle being movable rotatably for dog-adjusting purposes, and a spring coöperating with the dog and spindle, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,228,427. STRAINER OR SEPARATOR. BERT L. GIFFORD, Barker, N. Y. Filed Mar. 23, 1916. Serial No. 86,234. (Cl. 210—16.)

1. A device of the kind described, comprising a casing having an inlet and an outlet, a member within said casing open at its upper end, and a second member within said casing open at opposite ends and having its lower portion extending into the upper open end of said first-mentioned member and being spaced from the outlet of said casing.





2. A device of the kind described, comprising a casing having an inlet at its lower end and an outlet at its upper end, a wall or partition within said casing between said inlet and said outlet provided with a depending tube, said wall or partition fitting snugly within said casing, and a wall spaced from the wall of said casing and surrounding the lower end of said depending tube, the inlet of said casing being arranged to direct liquid insecticide into the space between said surrounding wall and the wall of the casing.

3. A device of the kind described, comprising a casing having an inlet at its lower end and an outlet at its upper end, a tubular member fitting into said casing from the bottom and spaced from the wall of said casing, and a horizontal wall within the casing having a centrally-disposed depending tube extending into the upper end of said tubular member and spaced from the same, said wall fitting snugly within said casing.

4. A device of the kind described, comprising a casing having its lower end open and provided with a nipple at its upper end serving as an outlet, said casing having an internal shoulder between the open lower end thereof and said nipple, a partition or wall held in a fixed position within said casing by said internal shoulder and, having a depending tube, a supporting member spaced from the lower edge of said casing and having upstanding supporting arms engaging said partition or wall to hold the same elevated, and a curb or wall extending upwardly into the casing and spaced from the wall thereof and from said depending tube, said curb or wall having its upper edge in a plane above the lower edge of said depending tube and spaced from said partition or wall.

5. A device of the kind described, comprising a casing open at its lower end and having an outlet at its upper end, a screen within said casing, a partition or wall within said casing spaced from said screen and having a depending tube, means for holding said casing elevated from the surface on which said device rests, and a tubular member extending upwardly into the lower open end of the casing and being spaced from the wall thereof, said depending tube projecting into the upper portion of said tubular member and being separated therefrom by an intervening space.

[Claims 6 to 13 not printed in the Gazette.]

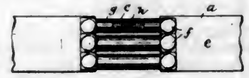
1,228,428. COMPOSITION OF MATTER. BYRON B. GOLDSMITH, New York, N. Y. Original application filed Jan. 10, 1913, Serial No. 741,158. Patent No. 1,168,626, reissued as Patent No. 14,087. Divided and this application filed Aug. 4, 1915. Serial No. 43,542. (Cl. 106—22.)

1. The compound produced by heating together a phenol and a definite compound of formaldehyde and an amin, said compound having the physical characters of a resin and being soluble in acetone.

5. As a new composition of matter, the product of reaction between a fusible phenolic resin and anhydro-formaldehyde-anilin, said product being characterized by its initial fusibility and its transformation by heat into a hard, homogeneous, non-porous product without formation of a readily volatile by-product of the reaction.

[Claims 2 to 4 not printed in the Gazette.]

1,228,429. DRIVING-BELT. AQUILA H. GRIFFIN and GEORGE GRIFFIN, Paterson, N. J., assignors of one-tenth to John W. Stewart, Paterson, N. J. Filed Sept. 25, 1916. Serial No. 121,928. (Cl. 24—32.)



5. A driving belt formed for the major portion of its circumference of relatively inelastic material having a gap therein and including elastic means in the gap to connect the adjoining ends of the material, means, to connect said ends, for resisting the extension of the elastic means, and common means to secure both of the other means at their ends to said ends of the material.

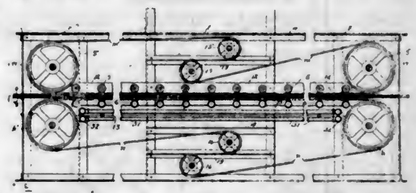
6. A driving belt formed for the major portion of its circumference of relatively inelastic material having a gap therein and including an extensible spring in the gap to connect said ends, a flexible member, to connect said ends, for resisting the extension of said spring and having its end portions folded around the ends of the spring, and clenching devices penetrating said material and the spring ends and the folded end portions of said member.

11. A driving belt formed for the major portion of its circumference of relatively inelastic material having a gap therein and including elastic means in the gap connecting the adjoining ends of said material and also including a flexible sheath arranged at the relatively inner side of the elastic means.

12. A driving belt formed for the major portion of its circumference of relatively inelastic material having a gap therein and including elastic means in the gap connecting the adjoining ends of said material and also including means, joining the said ends, to resist separating movement thereof and consequent over-distention of the elastic means.

[Claims 1 to 4 and 7 to 10 not printed in the Gazette.]

1,228,430. DUAL-FACING MACHINE FOR CORRUGATED PAPER-BOARD. JOHN N. HAHN, Cleveland, Ohio. Filed June 27, 1913, Serial No. 776,118. Renewed Apr. 19, 1917. Serial No. 163,812. (Cl. 34—48.)



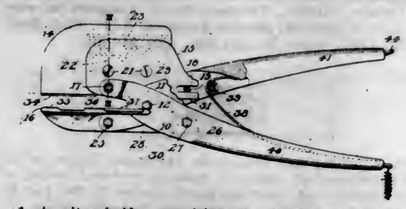
1. In a machine for facing corrugated paper board, a main frame and a set of parallel bars within each side thereof and one above the other, a series of carrying rolls having fixed bearings in the lower set of said bars, and a series of presser rolls having independent vertically slidable bearings for said rolls and side guides for said bearings fixed on the upper set of said bars, in combination with two endless aprons mounted to travel in the same direction between said rolls.

3. In a machine for facing corrugated paper board, a pair of endless aprons and two series of rollers between which said aprons are stretched, in combination with hot air pressure devices comprising a tube lengthwise on the side of the machine having a duct lengthwise arranged

to discharge between the adjacent edges of said aprons and means to force heated air through said tube and duct.

[Claims 2 and 4 to 9 not printed in the Gazette.]

1,228,431. MITER-KNIFE. ANDERS CONRAD HANSON, Stanton, Iowa. Filed Feb. 2, 1917. Serial No. 146,201. (Cl. 144—216.)

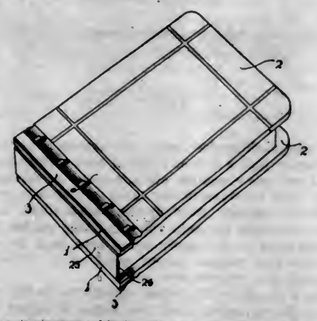


1. A miter knife comprising pivoted levers, a cutting block pivoted to one of said levers having rearwardly diverging portions of V-shape extending to opposite sides of the levers and formed with upright flanges upon the working face of the said block, work-engaging guide lugs carried by the said block spaced from the said flanges, one face each of two of said lugs being parallel to the adjacent upright flange, the other two faces of said two lugs, and two faces of the remaining lugs being parallel, and a cutting blade carried by the other lever, whereby the desired direction-angle and straight edge may be cut.

2. A miter knife comprising pivoted levers, a cutting block pivoted to one of said levers having rearwardly diverging portions formed with upright flanges upon the working face of the said block, work-engaging guide lugs carried by the said block spaced from the said flanges, a knife-engaging strip arranged centrally of the cutting block between the said lugs and flanges, a plate pivoted to the adjacent end of the other lever, movement limiting pins carried by said levers for the said block and plate, and a cutting blade adjustably carried by the plate having a cutting edge arranged parallel to the said strip.

3. A cutting knife comprising pivoted levers, a substantially arrow-head shaped work-engaging cutting block having a shank pivoted to the forward end of one of said levers and arranged with a slot in its rear end, a guide pin carried by the other one of said levers arranged within said slot, work-positioning lugs and flanges upon the said plate, a cutting strip of relatively softer material having dove-tailed engagement centrally of said block and a cutting knife arranged adjacent said block.

1,228,432. TEMPORARY BINDER. FREDERIC HARCOURT, Birmingham, England. Filed Mar. 31, 1917. Serial No. 158,877. (Cl. 129—13.)



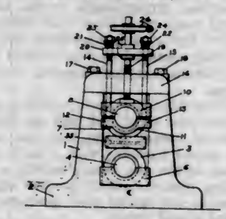
1. In a temporary binder the combination of two gripping jaws each having a longitudinal groove in its outer surface; a series of telescopic posts passed through said jaws from the outside; and a slide in each of said grooves covering the outer ends of said posts and retaining said posts in position, but permitting them to be demounted after the slides have been removed.

3. In a temporary binder the combination of two gripping jaws; and a series of posts each comprising in combination firstly an outer member having an internal projection, secondly an intermediate member having a longitudinal groove upon its exterior extending not quite to the end of said member, and receiving said internal projection on the outer member, said intermediate member having also an internal projection, and thirdly an inner member having a longitudinal groove upon its exterior in which the internal projection of said intermediate member engages.

4. In a temporary binder the combination of a plurality of triple posts; and one or more double posts, the double posts separating when the binder is opened to its maximum width for the purpose specified.

[Claim 2 not printed in the Gazette.]

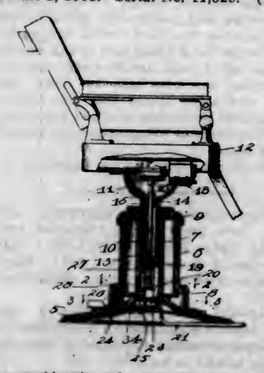
1,228,433. ROLLING-MILL. CHARLES W. HAWTHORNE, Hamilton, Ontario, Canada. Filed Mar. 16, 1916. Serial No. 84,578. (Cl. 80—34.)



6. A metal rolling mill including in combination a pair of parallel driven, journaled rolls, each having annular divergent beveled surfaces separated by a cylindrical surface, a pair of discoidal floating, unmounted rolls having their peripheries extending within the space between the beveled portions of the first-mentioned rolls, said discoidal rolls having annular inwardly beveled surfaces on their sides, the beveled surfaces on the four rolls interlocking, the portions carrying the beveled surfaces of the driven journaled pair of rolls being angularly movable relatively to the body of the rolls.

[Claims 1 to 5, 7, and 8 not printed in the Gazette.]

1,228,434. CHAIR. EDWARD W. HEDBERG, Chicago, Ill. Filed Mar. 2, 1915. Serial No. 11,529. (Cl. 172—152.)



3. The combination of a part to be raised and lowered, a plunger rigid therewith, a base having a tubular guide in which said plunger fits slidably, a screw-shaft mounted within said plunger, a reversible motor stationarily mounted with respect to said first mentioned part and connected to said shaft, a bearing member in said base in which said shaft is threaded, said part, plunger, motor and shaft moving longitudinally as a unit in opposite directions when said shaft is rotated in opposite directions, a circuit for said motor, a switch device in said circuit for controlling the motor, a member mounted on said shaft and longitudinally slidable therewith, and a pair of circuit breakers in said motor circuit in series with and independent of said switch device and arranged to be operated by said member at the extremities of movements of the first mentioned part for stopping the motor.

[Claims 1 and 2 not printed in the Gazette.]



1,228,435. BOOK HOLDER AND PROTECTOR. EDWARD B. HESS, Brooklyn, N. Y. Filed Nov. 6, 1914. Serial No. 870,580. (Cl. 45—82.)



1. A book holder and protector, comprising a casing consisting of two shallow box shaped parts hinged together at about midway the thickness of the closed casing along adjacent sides, the flanged sides of one part adapted to surround the flanged sides of the other part when closed thereover to fully protect an inclosed book, and when open to hold the book in open position, said hinged part of the casing then extending into the folded back of the book, and a transparent flexible covering adapted to cover the holder and protect the book therein when in open position.

2. A book holder and protector, comprising a casing consisting of two shallow box shaped parts hinged together at adjacent sides, the flanged sides of one part adapted to surround the flanged sides of the other part when closed thereover to fully protect an inclosed book, the edge of the upper flange of the inside part being turned inwardly, and the casing when open being adapted to hold the book in open position and a transparent flexible covering adapted to cover the holder and protect the book therein when in open position, the upper edge of the flexible covering being held down by the inturned edge of the inside part of the casing.

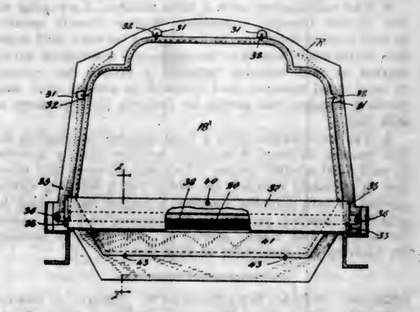
3. In a book holder and protector, in combination, a hinged two part casing, each part having surrounding walls or flanges, a flexible transparent covering, a spring roller carried by one part of the casing to which one edge of the flexible covering is attached, an angular strip connected to the opposite edge of the flexible covering to seat over the outer flange of the other part of the casing when in open position said strip being in cross-section a right angle and double with the flexible covering interposed between the two parts thereof and means for attaching the angular strip to said flange.

4. In a book holder and protector, in combination, a hinged two part casing, each part having surrounding walls or flanges, a flexible transparent covering, a spring roller carried by one part of the casing to which one edge of the flexible covering is attached, an angular strip connected to the opposite edge of the flexible covering to seat over the outer flange of the other part of the casing when in open position, reinforce pieces at the edges of the covering adjacent the end of the angular strip and means for attaching the angular strip to said flange.

5. In a book holder and protector, in combination, a hinged two part casing, each part having surrounding walls or flanges, the side flange and upper flange of one part having its edges bent inwardly, a flexible transparent covering, a spring roller carried by one part of the casing having its side flange bent inwardly and to which one edge of the flexible covering is attached, said covering passing over the inturned edge of the side flange and under the bent edge of the upper flange when drawn from the spring roller in being placed in protecting position and means at the opposite edge of the covering for fastening said edge to the opposite side of the other part of the casing when in open position.

[Claims 6 and 7 not printed in the Gazette.]

1,228,436. PROTECTOR FOR MOTOR DEVICES OF AUTOMOBILES. EDWARD B. HESS, Brooklyn, N. Y. Filed Jan. 6, 1915. Serial No. 727. (Cl. 156—10.)



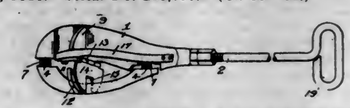
1. A protector for radiators of automobiles, comprising a roller, a curtain attached to the roller, a casing or frame in which the roller is held consisting of a plate and brackets in which the roller has its bearings, a cover hinged to the plate and adapted to extend over and protect the roller and curtain, means for securing the casing to the front of the automobile and means for holding the curtain in front of the radiator.

2. A protector for radiators of automobiles, comprising a roller, a curtain attached to the roller, a casing or frame in which the roller is held consisting of a bottom plate and end brackets in which the roller has its bearings, a spring actuated cover hinged to the front of the bottom plate and adapted to extend over and protect the roller and curtain with its free edge bearing against the face of the radiator or interposed curtain, lugs extending from the casing, means for securing the lugs to the front of the automobile and means for holding the curtain in front of the radiator.

3. A protector for radiators of automobiles, comprising a roller, a curtain attached to the roller, a casing or frame in which the roller is held, means for securing the casing to the front of the automobile, a plate pivoted to the underside of the casing adapted to cover the part of the face of the radiator below the casing, means for holding the pivoted plate against and away from the radiator and means for holding the curtain in front of the radiator.

4. A protector for radiators of automobiles, comprising a roller, a curtain attached to the roller, a casing or frame in which the roller is held consisting of a bottom plate and end brackets in which the roller has its bearings, a spring actuated cover hinged to the front of the bottom plate and adapted to extend over and protect the roller and curtain with its free edge bearing against the face of the radiator or interposed curtain, lugs extending from the casing, means for securing the lugs to the front of the automobile, a plate pivoted to the underside of the casing adapted to cover the part of the face of the radiator below the casing, means for holding the pivoted plate against and away from the radiator and means for holding the curtain in front of the radiator.

1,228,437. TUBE-CLEANER FOR MARINE BOILERS. JINKICHI HIKIDA, Toyama-Ken, Japan. Filed Sept. 7, 1916. Serial No. 118,795. (Cl. 83—64.)

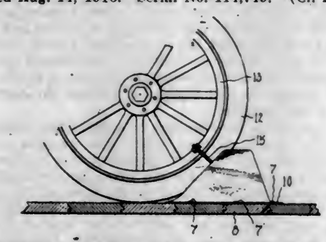


1. In a tube cleaner device, the combination with an upper member and a removable cleaner therefor, means for adjustably attaching said cleaner to said upper member of an automatically adjustable lower member, a scraper therefor means for adjustably attaching the lower member to the said upper member, and a swinging flap hinged to and dependent from the said upper member.

2. The combination with a fixed member, a scraping device carried thereby, a movable member loosely secured to said fixed member means interposed between said members to normally separate the same, and a scraping device carried by said movable member, a hinged flap carried by said fixed member, and adapted to extend over said movable member, and means for limiting the movement of said flap.

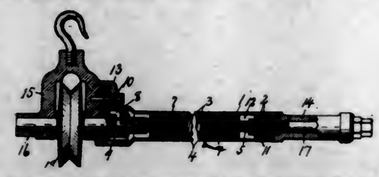
3. The combination with a fixed member, a scraping device carried thereby, a movable member loosely secured to said fixed member means interposed between said members to normally separate the same, and a scraping device carried by said movable member, a hinged flap carried by said fixed member, and adapted to extend over said movable member, and means carried by said movable member for limiting the movement of said flap.

1,228,438. METAL WHEEL-BLOCK. ARTHUR J. HORAN, Detroit, and JAMES H. GRAY, Highland Park, Mich. Filed Aug. 14, 1916. Serial No. 114,749. (Cl. 21—8.)



A metallic wheel block made of a single piece of material providing an apertured base flange at three sides thereof and inclined walls with one of said walls formed with a recessed portion to receive a portion of a wheel, a shackle extending through the recessed wall at the sides of the recessed portion adapted to engage under the recessed portion in said block and hold a wheel relative thereto, and means adapted for holding the base flange of said block relative to a support.

1,228,439. FLEXIBLE SHAFT. CLARENCE F. HOTCHKISS, Binghamton, N. Y. Filed Jan. 30, 1914. Serial No. 815,413. (Cl. 64—30.)



1. A flexible shaft comprising concentric coils having lengthwise outflow and return passages, the central passage of the inner coil being connected by a branch passage to the passage of the outer coil at one end thereof and a source of oil supply at the other ends of said passages.

2. A flexible shaft comprising relatively rotatable wire coils having lengthwise passages, the central passage of the inner coil being connected by a branch passage to the passage of the outer coil at one end thereof and a force feed oil-circulating device connected to the other ends of said passages.

3. A flexible shaft comprising a tubular flexible casing, caps closing the ends of the casing and provided with journal bearings co-axial with said casing, a rotary flexible shaft section extending centrally through the casing and having its ends provided with non-flexible extensions journaled in said bearings, said casing and rotary shaft section being provided with lengthwise passages therethrough connected near one end by a branch passage and a source of oil supply communicating with the other end of said passages.

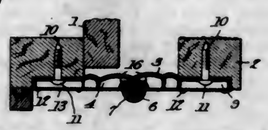
4. A flexible shaft comprising a tubular flexible case, caps closing the ends of the casing and provided with journal bearings co-axial with said casing, a rotary flexible shaft section extending centrally through the casing and having its ends provided with non-flexible extensions journaled in said bearings, said casing and rotary shaft section being provided with lengthwise passages therethrough connected near one end by a branch passage, and a force feed device connected to the other end of the passages for circulating oil therethrough.

1,228,440. TROUSERS-STRETCHER. JOSEPH HREN, Kingston, N. Y. Filed Apr. 8, 1916. Serial No. 89,739. (Cl. 223—19.)



A trouser stretcher comprising a pair of longitudinal bars, an upper plate having an aperture, a lower plate, an upper pair of toothed intermeshing links pivoted to the bars and to the upper plate, a lower pair of toothed intermeshing links pivoted to the bars and to the lower plate, and a looped string secured to the plates at its ends, and passing loosely through the aperture of the upper plate.

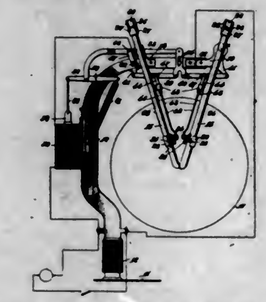
1,228,441. HINGE. RICHARD W. HUBBARD, Ashtabula, Ohio. Filed Oct. 23, 1916. Serial No. 127,248. (Cl. 16—106.)



In a hinge construction, the combination of a door casing and a door having countersinks, hinge members of hollow form having outer reduced portions arranged in the countersinks and flush with the door casing and door, respectively, and also having apertures in said reduced portions; one of said members having knuckles separated by an intervening space and the other having a knuckle interposed between the first-named knuckle, a pintle connecting said knuckles, screws arranged in said apertures and connecting the members to the door casing and door, respectively, and having heads disposed in the hollow members, and closure plates fastened against the door casing and the door, respectively, and arranged against the inner sides of the members.



1,228,442. ARC-LAMP. GUSTAVE HUMBER, Denver, Colo. Filed Mar. 29, 1915. Serial No. 17,716. (Cl. 176—51.)



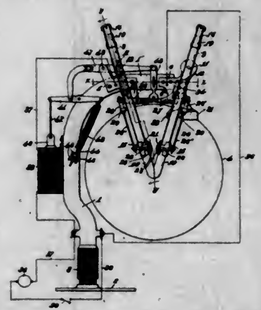
3. In an arc lamp, a support, an electrode bracket on said support, said bracket comprising a pair of sections slidably connected together at their adjacent ends to permit of extension or contraction of said bracket, means tending normally to hold said bracket in extended position, an electrode guide at the end of one of said sections, an electrode on said bracket extending loosely through said guide, a clutch on said guide provided with means adapted to alternately engage or release said electrode when said clutch is moved in opposite directions, a rock lever, a link extending longitudinally of said bracket and connected at its opposite ends with said rock lever and said clutch, and means for rocking said rock lever, substantially as described.

4. An electrode bracket comprising a pair of sections adapted to slidably engage with each other at their adjacent ends, one of said sections being provided at its end with a longitudinally extending socket, a member on the adjacent end of the other of said sections for sliding engagement within said socket, a spring interposed between the end of said member and the bottom of said socket normally forcing said member outwardly, said member being provided with a longitudinally extending groove, a set screw on said socket section extending through the same for engagement within said groove, and means on said sections for loosely supporting an electrode, substantially as described.

[Claims 1 and 2 not printed in the Gazette.]

1,228,443. ARC-LAMP. GUSTAVE HUMBER, Denver, Colo. Continuation of application Serial No. 17,716, filed Mar. 29, 1915. This application filed Oct. 1, 1915. Serial No. 53,487. (Cl. 176—51.)

1. In an arc lamp, a support, a pair of electrode holders on said support arranged in convergent relation, electrodes slidably mounted in said holders, a clutch on each holder, each clutch comprising a bar pivoted on said holder and having at one end a pair of spaced grip members arranged to grip said electrodes alternately when said bar is moved to extreme opposite positions and to be out of engagement therewith when in intermediate position, a pair of rock levers, a connection between each rock lever and each clutch, a solenoid, and means connecting said solenoid and said rock levers whereby movements of the former will be imparted to the latter, substantially as described.



2. In an arc lamp, a support, an electrode holder fixed to said support, a second electrode holder pivoted on said support, both of said holders being arranged for supporting electrodes in downwardly converging position, electrodes in said brackets, a clutch pivotally mounted upon each of said holders and adapted to engage its respective electrode at the limit of movement in each direction, said clutches normally holding said electrodes firmly clamped in said holders with their points in contact, means for swinging said pivoted holder outwardly away from said fixed holder, and for simultaneously operating said clutches to release said electrodes, and by further outward movement of said pivoted holder for holding said electrodes, substantially as described.

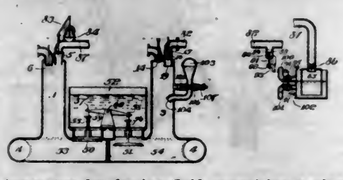
3. In an arc lamp, a support, an electrode holder fixed to said support, a second electrode holder pivoted on said support, and said holders being arranged to converge downwardly, electrodes arranged in said holders with their points protruding, a clutch pivotally mounted on each of said holders for holding said electrodes, said clutches being adapted to engage their respective electrodes at the limit of movement in each direction, means for moving said second holder outwardly away from said fixed holder, means governed by said first named means for operating said clutches upon initial movement of said holder to release said electrodes, and to again grip said electrodes upon further outward movement of said pivoted holder, substantially as described.

4. In an arc lamp, a support, a pair of holders on said support, said holders being adapted to support electrodes in downwardly converging position, electrodes in said holders extending therefrom to meet at their points, a clutch on each of said holders, each clutch having a pair of spaced grip members adapted to release and grip said electrode upon movement of said clutch in a given direction, a solenoid, a connection between the core of said solenoid and each of said clutches whereby movement of the said core in one direction will release and grip successively said electrodes, substantially as described.

5. In an arc lamp, a support, an electrode holder fixed to said support, a second electrode holder pivoted to said support, and said holders being arranged in downwardly convergent position, electrodes in said holders with their ends protruding therefrom to meet at their ends, clutches pivotally mounted on said holders for normally holding said electrodes against gravitation, said clutches being adapted to engage their respective electrodes at the limit of movement in each direction, a solenoid, means connecting the core of said solenoid with said pivoted holder whereby the latter will be moved accordingly with the core, and means governed by said first named means for operating said clutches to release and grip successively each of said electrodes upon rocking movement of said pivoted holder, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

**1,228,444. APPARATUS FOR UTILIZING HEAT ENERGY.** HERBERT ALFRED HUMPHREY, London, England, assignor to Humphrey Gas Pump Company, a Corporation of New York. Original application filed July 17, 1908, Serial No. 444,061. Divided and this application filed Apr. 7, 1914. Serial No. 830,262. (Cl. 230—16.)



1. Apparatus for forcing fluid comprising a play pipe for the free reciprocation of a liquid column moving with a velocity sufficiently limited to preserve the coherence of the column, and of sufficient bulk and path of travel to acquire useful momentum, means for applying an actuating force to each end of the column at required intervals respectively and means for utilizing the pressure of the liquid column in its reciprocating movements.

2. Apparatus for forcing fluid comprising a play pipe for the free reciprocation of a liquid column moving with a velocity sufficiently limited to preserve the coherence of the column, and of sufficient bulk and path of travel to acquire useful momentum, means for applying an actuating force to each end of the column at required intervals respectively and a discharge in the play pipe as means for utilizing the pressure of the liquid column in its reciprocating movements.

3. Apparatus for forcing fluid comprising a play pipe for the free reciprocation of a liquid column moving with a velocity sufficiently limited to preserve the coherence of the column, and of sufficient bulk and path of travel to acquire useful momentum, said play pipe having fluid inlets at each end and a discharge, and means for applying an actuating force to each end of the liquid column alternately whereby the pressure of the liquid column in its reciprocating movements is utilized.

4. A play pipe for the free reciprocation of a liquid column moving with a velocity sufficiently limited to preserve the coherence of the column, and of sufficient bulk and path of travel to acquire useful momentum, means for applying an actuating force thereto, means whereby the movement of the liquid, due to its momentum, compresses an elastic fluid, and means whereby the energy of a portion of the compressed elastic fluid is utilized to cause a return movement of the liquid to cause an intake of fresh elastic fluid.

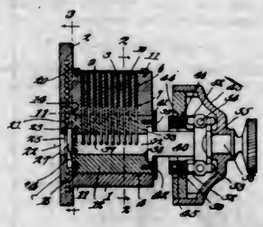
5. A play pipe for the free reciprocation of a liquid column moving with a velocity sufficiently limited to preserve the coherence of the column, and of sufficient bulk and path of travel to acquire useful momentum, a power chamber as means for applying an actuating force thereto, means whereby the movement of the liquid due to the actuating force compresses an elastic fluid and means whereby the energy of a portion of the compressed elastic fluid is utilized to cause a return movement of the reciprocating column to exhaust the power chamber and to compress an elastic cushion therein, the energy of said elastic cushion being utilized to cause a second outstroke to introduce a fresh charge and to compress an elastic fluid and the energy of the compressed elastic fluid being utilized to cause a second return stroke of the liquid column to compress the charge.

[Claims 6 to 34 not printed in the Gazette.]

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**1,228,445. LOCK.** ALONZO JANES, Beirne, Ark. Filed Aug. 3, 1916. Serial No. 113,003. (Cl. 70—46.)

A lock comprising a casing having a recess at its forward end; a barrel rotatable in the casing and provided at its forward end with a flange which is rotatable within the recess, the barrel having a key hole slot and being provided at its forward end with a laterally enlarged chamber communicating with the key hole slot; a barrier pivoted to the barrel and mounted to swing in the chamber transversely of the key hole slot; spring means in the chamber for maintaining the barrier in closed position with respect to the key hole slot; an auxiliary plate secured to the flange and constituting a closure for the forward end of the chamber, the auxiliary plate being rotatably mounted in the recess and having a key hole slot alined with the



key hole slot of the barrel, the barrier having a beveled key-engaging portion alined with the key hole slot of the auxiliary plate; a tumbler slidable in the barrel transversely of the barrel and accessible from the key hole slot of the barrel; and a locking bolt slidable in the casing and alined with the tumbler, the tumbler constituting means for moving the locking bolt outwardly, to aline the inner ends of the tumbler and the bolt with the outer surface of the barrel, whereby the barrel may be rotated.

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**1,228,446. TALKING-MACHINE CABINET.** ALVA D. JONES, Philadelphia, Pa. Filed Feb. 1, 1917. Serial No. 145,990. (Cl. 274—2.)



2. A cabinet comprising an inner resonant casing and an outer non-resonant casing, in combination with a sound reproducing mechanism within said cabinet.

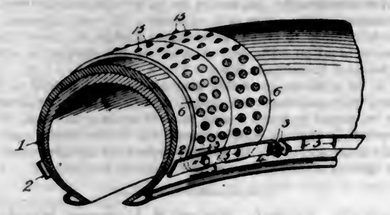
7. A talking machine cabinet having reproducing mechanism therein, a cover for said cabinet, said cover comprising an inner part of resonant material and an outer inclosing part of non-resonant material, whereby excessive vibrations of the resonant part of the cover are damped by the non-resonant portion.

[Claims 1, 3 to 6, 8, and 9 not printed in the Gazette.]

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**1,228,447. TIRE-SHIELD.** LOUIS KOENIG, New York, N. Y. Filed Jan. 22, 1916. Serial No. 73,631. (Cl. 152—16.)

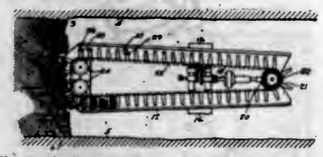
A tire protector comprising a plurality of protector elements each arranged to transversely embrace a portion of the wearing tread of the tire, attaching bands positioned parallel to the tire on opposite sides thereof and provided with a plurality of spaced radially extending slots, and individually removable means passing through each of said slots for attaching each of said elements to said



bands whereby each element may be removed without disturbing said bands or any other element.

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**1,228,448. METHOD OF MINING COAL.** HARRY A. KUHN, Pittsburgh, Pa. Filed Aug. 14, 1914. Serial No. 856,848. (Cl. 125—20.)



1. The method of mining coal consisting in introducing expanding forces within the solid of the seam of uncut coal, whereby the coal is loosened from the surrounding solid, cracked along lines of cleavage and forced to expand outwardly, subsequently making a creviced opening in the mass of loosened coal with forces traveling laterally, and simultaneously therewith distorting the mass of loosened coal by forces applied in the crevicelike opening, simultaneously dislodging the coal and conveying it away.

2. The method of mining coal, consisting in introducing expanding and disrupting forces within the solid of a seam of uncut coal, whereby the coal is loosened from the solid and disrupted along cleavage lines, subsequently making a crevicelike opening or kerf in the mass of disrupted coal by applying forces traveling laterally, and simultaneously therewith distorting the mass of the coal adjacent to the forces working in the opening, and simultaneously dislodging the coal and conveying it away.

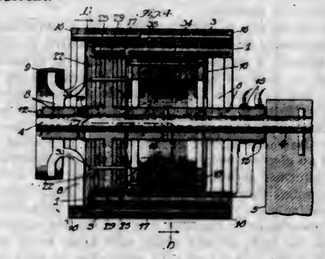
3. The method of mining coal, consisting in introducing expanding and disrupting forces within the solid of a seam of uncut coal, whereby the coal is loosened from the solid and disrupted along cleavage lines, subsequently undermining this mass of disrupted coal by forces traveling laterally, and simultaneously therewith distorting the mass, dislocating the integral lumps of the mass, and simultaneously dislodging the coal and conveying it away.

4. The method of mining coal consisting of drilling an opening in a wall of coal substantially parallel to the floor near the center of a wall of uncut coal, drilling openings near the center of the seam at each side thereof said last openings inclined from the level, inserting explosives in said openings, shooting the coal, whereby the coal is disrupted along lines of its cleavage and loosened from the surrounding solid, subsequently making a crevice like opening in the mass by undermining with forces traveling continuously in one direction, and simultaneously therewith applying in said crevicelike opening other forces working at an angle to the plane of the traveling forces, distorting the mass of coal, dislocating its integral lumps formed by disrupting the adhesions along its cleavage lines, and simultaneously conveying away the coal as the forces are applied.

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**1,228,449 ELECTRIC MOTOR.** SAMUEL ELLSWORTH KURTZ, Sac City, Iowa. Filed Feb. 26, 1914. Serial No. 821,127. (Cl. 172—280.)

1. An induction motor comprising three concentric cylindrical members, one of which is adapted and arranged to serve as a field member, and is rotatably mounted, another of which is relatively short and stationarily mounted within the first member adjacent to one end thereof, and in inductive relation thereto, and the other of which is disposed adjacent to the outer surface of said field member, in combination with a fixed or stationary field member adjacent to the second member and occupying the space within the opposite end of said rotary field member and in inductive relation with respect thereto, said rotary field member being excited adjacent to said short cylindrical member by current supplied from an external source, and also having conductors disposed partly adjacent to said fixed field member and partly adjacent to the outermost member for the generation and delivery of exciting current to the outer portion of said rotary field member, an external source of alternating current from which said first mentioned current is supplied, and a circuit containing relatively movable contacts for carrying said current.

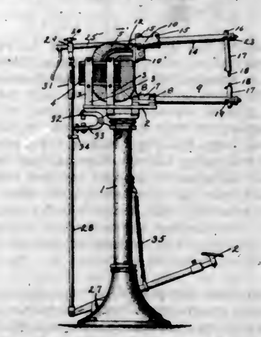


2. An induction motor comprising an annular member having a series of magnetic poles on one side, another series of magnetic poles on the opposite side, each series being wound and arranged to produce a rotary field, exterior and interior sources of alternating current, independent circuits for supplying current from the outside source to energize the poles of each series respectively, a circuit for energizing one series of said poles by current from the interior source, and a switch arranged to close either of the circuits for the said one series of poles.

3. An induction motor comprising a hub member having two sets of spider arms, in combination with a power transmission member carried by one set, and a rotor member carried by the other set.

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**1,228,450. ELECTRIC WELDING-MACHINE.** LAURENCE S. LACHMAN, New York, N. Y., assignor, by mesne assignments, to Thomson Spot Welder Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 17, 1915. Serial No. 51,129. (Cl. 219—4.)



1. In an electric welding machine, the combination with the transformer, of a projecting arm secured to each terminal of the secondary of said transformer, contact elec-

trodes mounted in the ends of said arms for engaging opposite surfaces of the work and means for varying the length of the projecting portions of both said arms from the machine within a wide range of travel.

2. In an electric welding machine, the combination with the transformer secondary, of an arm secured to each terminal of said secondary and projecting forward from the machine, a contact electrode mounted in the end of each arm for engaging opposite surfaces of the work and means for moving said contacts to and from each other, said arms both having a sliding engagement with the secondary terminals whereby the distance of said contacts from the machine may be shortened or lengthened an appreciable extent.

3. In an electric welding machine, the combination with the transformer secondary, of a block secured to each terminal of said secondary and a projecting arm mounted in each of said blocks, said arms being both bodily slidable in said blocks to vary the extent of the projecting portion a considerable distance.

4. In an electric welding machine, the combination with the transformer secondary, of a block secured to each terminal thereof, a projecting arm circular in cross-section mounted in each of said blocks, said arms being bodily slidable and rotatable in said blocks whereby said arms may be adjusted to extend from the front of the machine to various distances within a wide range of travel and contact electrodes carried by the ends of said arms.

5. In an electric welding machine, the combination with the transformer secondary, of a projecting arm secured to each terminal thereof, said arms being bodily slidable in said terminals to vary the extent of the projecting portion a considerable distance and pin-shaped contacts secured to the ends of said arms, said arms being also capable of being rotated in said terminals to vary the angular position of said contacts.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,451. MEDICAL DEVICE FOR TREATING VENEREAL DISEASES. ELBERT J. LATTA, Lincoln, Nebr. Filed Jan. 12, 1917. Serial No. 142,004. (Cl. 128—28.)



1. In a combination pump and vacuum dry-cupping device, the combination of a cup having a cylindrical extension and a plunger rod guided in said extension and provided with a plunger through which said rod partially moves, said plunger when moved outwardly through the extension causing vacuum to be created in said cup, to draw the flesh into the cup dilating the pores thereof, said plunger rod being hollow, of means for forcing the medical fumes through the plunger rod and into the cup to be absorbed into the cutaneous pores, when the plunger is moved inwardly, said hollow plunger rod having a pair of ports to be covered and uncovered by the plunger, whereby a vacuum may be created in the cup when covered, and medical fumes to be forced into the cup when uncovered.

2. A combination pump and vacuum dry-cupping device, comprising a cylindrical elongated hollow body having an outwardly flared portion at one end constituting a cup to engage that part of the skin to be treated, and provided with a chamber, a hollow plunger rod guided in said hollow body, the inner end of said rod having spaced collars, a plunger mounted upon the rod to have a limited movement between said collars, said hollow rod having ports between the collars to be uncovered and thrown in communication with said chambers by said plunger to permit fumes to enter the chamber and to be closed from communication with said chamber by the plunger to cause a vacuum in said chamber.

3. In a device for heating medicine, a receptacle to receive the medicine, and provided with an annular groove, at its upper portion, a ring in said groove provided with depending arms, a basket connected to the lower end of said arms to receive an alcohol saturated asbestos wad to be lighted whereby the medicine may be heated.

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1,228,452. URINAL. MARINER S. LAWRENCE, Wakefield, Mass. Filed Mar. 26, 1917. Serial No. 157,348. (Cl. 128—51.)



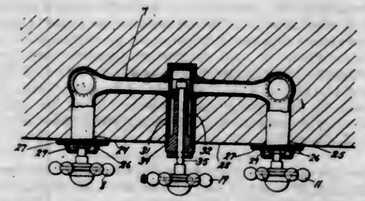
1. A urinal comprising a pouch having an open top shaped to fit the body of the wearer, a partition extending across said pouch adjacent the top and provided with a penis-receiving aperture, said pouch having a rearward extension above said partition, and a guard diaphragm extending across said rearward extension above the bottom thereof and forming therewith a pocket to retain any liquid which may be discharged over the top of said partition.

2. A urinal comprising a pouch having an open top shaped to fit the body of the wearer, a partition extending across said pouch adjacent the top and provided with a penis-receiving aperture, said pouch having a rearward extension above said diaphragm, and a guard diaphragm extending across the pouch above said partition, said guard diaphragm being provided with a penis-receiving aperture.

3. A urinal comprising a pouch having an open top shaped to fit the body of the wearer, a partition extending across said pouch adjacent the top and provided with a penis-receiving aperture, said pouch having a rearward extension above said diaphragm, and a guard diaphragm extending across the pouch above said partition, said guard diaphragm being provided with a U-shaped slit through which the penis may be inserted.

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1,228,453. BATH-ROOM FIXTURE. HENRY W. A. LEHNERT, New York, N. Y. Filed July 13, 1915. Serial No. 39,719. (Cl. 137—26.)



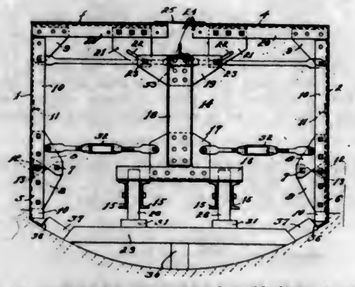
1. A fixture of the kind described, having a pair of inlets and a pair of outlets, a separate valve for each of the inlets, and a single valve controlling both outlets whereby when one of the outlets is open the other is closed, said single valve member being slidably removable from the fixture in a direction at right angles to the direction of movement of the valve.

2. A fixture of the kind described, having a water supply inlet and having a tubular offset portion, a member slidable into the tubular offset portion and adapted to be held therein, said member having its inner end bifurcated, a stem passing through said member and carrying at its inner end between the bifurcation, a cam, and a U-shaped member slidable within said bifurcations and having on its arms gaskets, the said fixture being provided with opposed valve seats with either of which said U-shaped member may coöperate.



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1,228,454. TUNNEL MOLD-FORM. HOWARD B. LOXTERMAN, Pittsburgh, Pa., assignor to Blaw Steel Construction Company, Hoboken, Pa., a Corporation of New Jersey. Filed Feb. 5, 1916. Serial No. 76,347. (Cl. 25—131.6.)



1. In combination in a tunnel mold form, a pair of rigid mold forms each adapted to form a side wall and a portion of the ceiling of the tunnel, and a support for the forms having slot and pin engagement with the forms, the said slots being inclined with respect to the horizontal and so arranged that when a form is drawn toward the support the form will be forced downward by the contact of the pin with the walls of the said slot.

2. In combination in a tunnel mold form, a pair of mold forms each adapted to form a side wall and a portion of the ceiling of the tunnel, a support for the form, plates connecting the forms with the support extending transversely of the axis of the forms and provided with inclined slots, and pins adapted to coöperate with the slots whereby the forms are drawn downward toward the support when the forms are drawn together laterally.

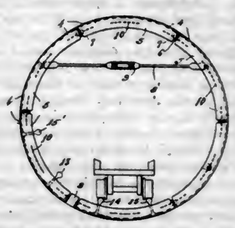
3. In combination in a tunnel mold form, a support, a pair of mold forms arranged on opposite sides of the support, plates extending transversely of the axis of the form for slidably connecting the forms to the support provided with inclined surfaces adapted to engage the support whereby the forms are forced downward when they are drawn toward one another laterally.

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1,228,455. TELESCOPIC CONCRETE TUNNEL AND SHAFT MOLD-FORM. HOWARD B. LOXTERMAN, Pittsburgh, Pa., assignor to Blaw Steel Construction Company, Hoboken, Pa., a Corporation of New Jersey. Filed Apr. 12, 1916. Serial No. 90,531. (Cl. 25—128.)

1. A circular form comprising a series of circular panels having their ends joined by means of inwardly projecting flanges, and rail members extending parallel with the axis of the mold, carried by the panels adjacent the lower portion thereof and having their tread surface projecting above the flanges whereby the wheels of the truck are free to pass from one panel to another through the form.

2. A circular form comprising a series of circular panels having their ends joined by means of inwardly projecting flanges, and rail members extending parallel with the axis of the mold, carried by each panel adjacent the lower portion thereof and adapted to aline with the rail members of the adjoining panel, whereby a truck may be moved through the form upon the rails.

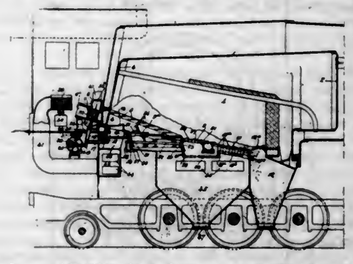


3. A circular mold form comprising a series of similar circular panels formed of joined segments arranged together so that the joints of one panel are in staggered relation with the joints of an adjoining panel, and a plurality of truck rails carried by each panel, and so disposed that when two or more panels are connected in the above relation at least two of the rails of one panel will aline with two of the rails of the adjoining panel so as to form a continuous track for the passage of a truck through the joined panels.

4. A circular mold form comprising a series of circular panels forming the greater part of a circle, a filler block for each panel disposed between the ends thereof for separating the ends of the panels to form a mold of predetermined diameter, flanges on the edges of the panels terminating at the ends thereof for securing the panels in alinement, the said panels being so arranged relatively that the flange of one panel bridges the space between the ends of an adjacent panel.

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1,228,456. AUTOMATIC FURNACE. EDWIN LUNDGREN, Brooklyn, N. Y. Filed Aug. 9, 1912. Serial No. 714,165. (Cl. 110—48.)



1. In combination in a furnace, an inclined underfeed section, comprising downwardly inclined retorts for supplying fuel, extending from the rear of the furnace forwardly, and twyer blocks arranged in rows, which alternate with the retorts and over which fuel is forced from the retorts, twyers formed in the blocks for delivering air to the fuel leaving the retorts, an inclined overfeed section located adjacent the lower end of the underfeed section and over which fuel from said section passes, means for supplying forced draft to said twyers, means for supplying air to the over-feed section by induced draft and a dump grate located at the lower end of the overfeed section.

2. In combination in a furnace, an inclined underfeed section, comprising alternately arranged rows of twyer blocks and downwardly inclined retorts extending from the rear of the furnace forwardly and from which fuel is forced over the twyer blocks, an over-feed section located at the forward and lower end of the underfeed section receiving fuel therefrom and comprising a plurality of

inclined movable grate bars, and a dump grate located at the forward and lower end of the over-feed section and means for delivering forced draft to the underfeed section and induced draft to the overfeed section.

3. A furnace comprising a combustion chamber, an inclined underfeed fuel supporting section located therein and extending from the rear end of the chamber forwardly, an inclined over-feed section located at the forward and lower end of the furnace and over which fuel from the underfeed section passes, a dump grate located at the lower end of the over-feed section, means for supplying forced draft to the underfeed section, means for supplying induced draft to the over-feed section, a substantially air tight hopper located beneath the dump grate, and means for discharging ash therefrom.

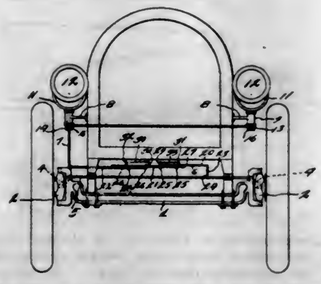
4. A furnace comprising a combustion chamber, a fuel supporting section located therein comprising a retort for the supply of fuel on the underfeed principle and twyers adjacent said retort for the supply of air; a longitudinally adjacent fuel supporting section comprising movable grate bars adapted to receive fuel from the first named section, on the overfeed principle, a ram reciprocating to feed fuel entering the retort of the underfeed section, an adjustable connection between said ram and the grate bars to actuate the grate bars of the overfeed section relatively to the reciprocations of said ram and means for delivering forced draft to the underfeed section and induced draft to the overfeed section.

5. A furnace comprising a combustion chamber, an inclined fuel supporting section located therein comprising a retort having a movable bottom plate, twyers adjacent said retort; a longitudinally adjacent inclined fuel supporting section comprising movable grate bars adapted to receive fuel from the first named section, a ram reciprocating in an inclined plane adapted to feed fuel into said retort, and connections between said ram, movable bottom plate and grate bars to actuate said bottom plate and grate bars.

[Claim 6 not printed in the Gazette.]

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1,228,457. DIRIGIBLE-LAMP MECHANISM. CHARLES R. MCCLELLAN, Pepperwood, Cal. Filed Nov. 2, 1916. Serial No. 129,140. (Cl. 240—62.)

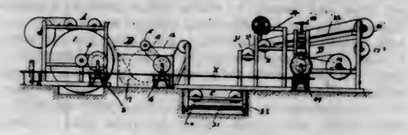


In a dirigible lamp mechanism, the combination of a pair of lamp brackets, the stems of each of which having forwardly extending arms and a rod connecting said arms, one of the stems having a rearwardly extending arm, rearwardly extending arms carried by the knuckle hubs of the front axle, a rod connecting the rearwardly extending arms of the knuckle hubs, and a yieldable section rod connecting the connecting rod of the rearwardly extending arms of the knuckle hub and the rearwardly extending arm of the stem of one of the lamp brackets.

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1,228,458. PROCESS OF IMPREGNATING FABRICS WITH RUBBER. ISAAC S. MCGIFFERT, New York, N. Y. Filed Dec. 17, 1915. Serial No. 67,473. (Cl. 91—70.)

1. A process of manufacturing rubber coated fabrics consisting in passing the fabric through a rubber solution so as to thoroughly impregnate the fabric with rubber and then applying a coating of rubber to the surface of the fabric, leveling said coating and finally passing the fabric between rollers having yielding surfaces so as to secure density and homogeneity in the product.

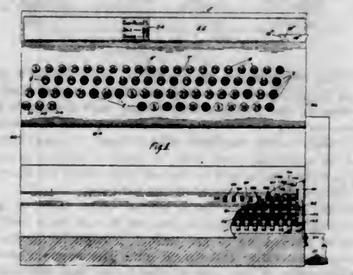


2. A process of manufacturing rubber coated fabrics consisting in passing the fabric through a rubber solution so as to thoroughly impregnate the fabric with rubber, heating the so impregnated fabric and then applying a coating of rubber to the surface of the same, leveling said coating and finally passing the fabric between rollers having yielding surfaces, substantially as and for the purpose described.

3. A process of manufacturing rubber coated fabrics consisting in passing the fabric through a rubber solution so as to thoroughly impregnate the fabric with rubber, then applying a coating of rubber to the surface of the fabric, leveling said coating by flexible scraping means, and finally passing the fabric between rollers having yielding surfaces, so as to secure density and homogeneity.

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1,228,459. AUTOMATIC CHANGE-MAKING MACHINE. CHARLES A. MCMULLEN, Caldwell, N. J. Filed Dec. 20, 1913. Serial No. 807,860. (Cl. 133—2.)



1. An automatic change making machine, comprising in combination, change delivery devices, indicating devices possessing values representing amounts received, a plurality of change making devices distinguishably associated with each indicating device, possessing values less than the value of the indicating device with which they are associated and representing amounts for the payment of which the amount of that particular indicating device might be tendered and operating connections from the change making devices to the change delivery devices necessary to deliver the change between the values of the respective indicating devices and the values of the change making devices which are distinguishably associated with the respective indicating devices.

2. An automatic change making machine, comprising in combination, change delivery devices, indicating keys having values representative of amounts received, change making keys grouped in distinguishing relation to the respective indicating keys and having values less than the values of the indicating keys with which they are grouped, and operating connections from different change making keys to the change delivery devices necessary to deliver the difference in change between the values of the respective indicating keys and the values of the change making keys in grouped relation to the respective indicating keys.

3. An automatic change making machine, comprising in combination, registering mechanism, indicating keys of different values representative of various amounts received and arranged each when operated to actuate the registering mechanism to the extent of its value, change making keys distinguishably related to the indicating keys, of less value than the indicating keys and arranged when operated to actuate the registering mechanism to the extent of their respective values, change delivery devices and operating connections from the change making keys to the change delivery devices necessary to deliver the change between the values of the change making keys and the values of the indicating keys with which the respective change making keys are distinguishably associated.

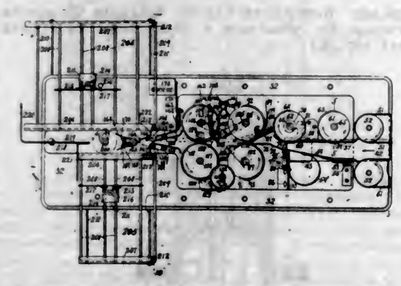
4. An automatic change making machine, comprising, indicating keys of graduated value, change making keys grouped in distinguishing relation to individual indicating keys and possessing values related to the values of the indicating keys with which they are grouped, change delivery devices and operating connections from the change making keys to the change delivery devices necessary to deliver the change between the values of the change making keys and the values of the indicating keys with which the said change making keys are grouped.

5. An automatic change making machine, comprising, indicating keys of graduated value, change making keys grouped in distinguishing relation to individual indicating keys and possessing values related to the values of the indicating keys with which they are grouped, change delivery devices, operating connections from the change making keys to the change delivery devices necessary to deliver the change between the values of the change making keys and the values of the indicating keys with which the said change making keys are grouped and indicator cards operatively connected with the change making keys and bearing indicia of the change making transactions accomplished by the keys with which they are connected.

[Claim 6 not printed in the Gazette.]

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1,228,460. AUTOMATIC CANCELING-MACHINE. LUTHER L. MACK, Los Angeles, Cal., assignor to Cancelograph Company, Los Angeles, Cal. Filed Oct. 30, 1912, Serial No. 728,612. Renewed July 3, 1914. Serial No. 848,946. (Cl. 101—82.)



1. In a mail marking machine having means for assorting mail matter with regard to length, the combination of a rotary printing member secured to a shaft journaled in a suitable bed plate, a set of continuously contacting forwarding rollers for advancing mail matter of various length, width and thickness by said printing member, a set of intermittently contacting rollers adapted to receive at regular intervals and advance said matter one piece at a time to said forwarding rollers, a regulating and timing arm normally across the path of said matter adapted to stop the matter in its passage and release it after a certain period of time in order to register with the die on said printing member, one or more feed rollers having an intermittently acting frictional surface for feeding said matter to said receiving rollers, conveyer means for delivering said matter from a facing table to said feed rollers, means for holding said matter firmly in contact with said feed rollers, means for separating said matter, piece by piece as it is delivered to said receiving rollers by said feed rollers, a feed receptacle opposite said feed rollers for holding said matter while it is being separated and fed, and driving means.

2. In a mail marking machine having means for assorting mail matter with regard to length, the combination of a rotary printing member secured to a shaft journaled in a suitable bed plate, a set of continuously contacting forwarding rollers for advancing mail matter of various length, width and thickness by said printing member, a set of intermittently contacting rollers adapted to receive at regular intervals and advance said matter one piece at a time to said forwarding rollers, a regulating and timing arm normally across the path of said matter adapted to stop the matter in its passage and release it after a certain period of time in order to register with the die on said printing member, one or more feed rollers having an intermittently acting frictional surface for feeding said matter to said receiving rollers, conveyer means for delivering said matter from a facing table to said feed rollers, means for holding said matter firmly in contact with said feed rollers, means for separating said matter, piece by piece as it is delivered to said receiving rollers by said feed rollers, a feed receptacle opposite said feed rollers for holding said matter while it is being fed, means for separating said matter piece by piece as it is delivered to said receiving rollers by said feed rollers, and driving means.

3. In a mail marking machine having means for assorting mail matter with regard to length, the combination of a rotary printing member secured to a shaft journaled in a suitable bed plate, a set of continuously contacting forwarding rollers for advancing mail matter of various length, width and thickness by said printing member, a set of intermittently contacting rollers adapted to receive at regular intervals and advance said matter one piece at a time to said forwarding rollers, a regulating and timing arm normally across the path of said matter adapted to stop the matter in its passage and release it after a certain period of time in order to register with the die on said printing member, means for operating said timing arm, one or more feed rollers having an intermittently acting frictional surface for feeding said matter to said receiving rollers, conveyer means for delivering said matter from a facing table to said feed rollers, means for holding said matter firmly in contact with said feed rollers, a feed receptacle opposite said feed rollers for holding said matter while it is being fed, means for separating said matter piece by piece as it is delivered to said receiving rollers by said feed rollers, and driving means.

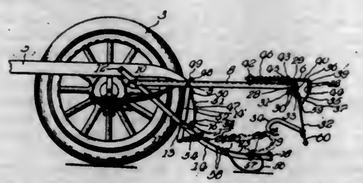
4. In a mail marking machine having means for assorting mail matter with regard to length, the combination of a rotary printing member secured to a shaft journaled in a suitable bed plate, means for supplying ink to said printing member, a set of continuously contacting forwarding rollers for advancing mail matter of various length, width and thickness by said printing member, a set of intermittently contacting rollers adapted to receive at regular intervals and advance said matter one piece at a time to said forwarding rollers, a regulating and timing arm normally across the path of said matter adapted to stop the matter in its passage and release it after a certain period of time in order to register with a die on said printing member, means for operating said timing arm, one or more feed rollers having an intermittently acting frictional surface for feeding said matter to said receiving rollers, conveyer means for delivering said matter from a facing table to said feed rollers, means for holding said matter firmly in contact with said feed rollers, a feed receptacle opposite said feed rollers for holding said matter while it is being fed, means for separating said matter piece by piece as it is delivered to said receiving rollers by said feed rollers, and driving means.

5. In a mail marking machine having means for assorting mail matter with regard to length, the combination of a vertical face plate secured to a suitable bed plate having longitudinally disposed slots in its face, one or more feed rollers having an intermittently acting frictional surface adapted to project through said slots once in each revolution thereof, yielding means for holding said matter firmly in contact with the frictional surface

of said feed rollers, conveyer means for delivering said matter from a facing table to said feed rollers, means for separating said matter, means for guiding the matter so separated into the machine, a set of intermittently contacting receiving rollers having their contacting surfaces in the path of said mail matter, a rotary printing member for printing the day, hour, month and year and for canceling a stamp on said matter, the periphery of said printing member being also in the path of said mail matter, and timing means interposed between the receiving rollers adapted to stop and hold a piece of matter a certain period of time and release it so that it will register with said printing means.

[Claims 6 to 19 not printed in the Gazette.]

1,228,461. AUTOTRUCK-FENDER. LARS C. MADSEN, Chicago, Ill. Filed Feb. 1, 1915. Serial No. 5,351. (Cl. 105—130.)



1. The combination with frame portions of an auto truck or the like, of angle iron supports 7 and 8, a channel iron bumper on the ends of said supports, brace rods 11 extending downwardly and forwardly from said portions and supports, a guard of strips 50 to 53 inclusive extending from said supports to said brace-rods forming a flexible fender portion, a pivoted fender portion pivoted at the lower ends of said brace rods, and a trigger mechanism mounted on said bumper and normally engaging the front of the pivoted fender portion to support the latter in a raised position.

2. The combination with a fender, of a bumper, a rearwardly yielding member facing said bumper, hooks mounted on arms and arranged below the level of said bumper which normally support said fender in a raised position, and tension devices connecting said arms with said yielding member for holding said hooks and fender in engagement with each other.

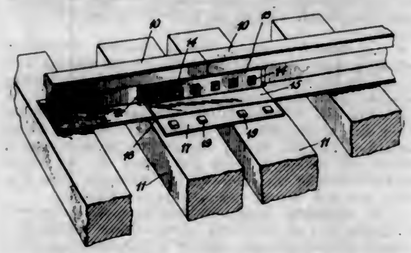
3. The combination with an auto truck of the horizontal angle iron supports 7 and 8, the channel iron bumper having one of its parallel wings secured to wings of said supports, downwardly projecting arms hinged to the other of said parallel wings of said bumper, horizontal strips on said arms which form a guard in front of said bumper, hooks on the lower ends of said arms, a fender having a flexible portion in front of the wheels of said truck and a pivotally movable portion having its axis of movement substantially on the level of said hooks, and means holding said fender's movable portion in engagement with said hooks to hold said fender's front edge in a normally raised position.

4. The combination with an auto truck, of a bumper and bumper supports 7 and 8, horizontally arranged strips forming guards depending substantially vertically below said supports and bumper immediately in front of the auto truck wheels and below said bumper, respectively, a pivotally movable fender portion pivoted at the lower extremity of the rear of said guards, and trigger means for normally supporting the front of the fender upon the front one of said guards.

5. The combination with a fender, of a bumper, a contact bar yieldingly mounted in front of said bumper, pivoted arms projecting below the horizontal plane of said bumper, tension springs connecting said arms and contact bar, means at the lower ends of said arms engaging the front of the fender and normally supporting it in a raised position, said fender being pivoted at its rear in substantially the horizontal plane of said engaging means, tension means tending to lower said fender and hold it in a lowered position, and runners on said fender guarding the front edge thereof against contact with the road.

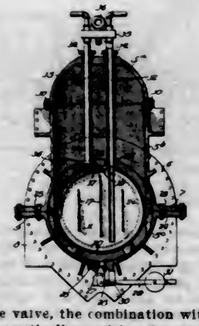
[Claims 6 to 10 not printed in the Gazette.]

1,228,462. COMBINED NUT-LOCK AND RAIL-BRACE. ALBERT G. MARKS, Hoult, W. Va., assignor of one-half to Marcus C. Hite, Rivesville, W. Va. Filed Sept. 12, 1916. Serial No. 119,707. (Cl. 239—9.)



The combination with meeting rail ends having fish plates at the joint therebetween with the said rail ends connected by a plurality of bolts extending through the said fish plates, of a combined rail brace and locking member overlying the joint between the said rail ends, said member including a body seating against the outer sides of the base flanges of the rails and offset to provide a shoulder engaging the adjacent outer edges of the said flanges, the body being thence extended at its outer extremity to form an attaching flange seating upon the rail ties and being bent at its inner extremity to provide an upstanding locking flange seating at its upper and lower margins against the outermost of said fish plates with the upper edge of said flange engaging beneath the rail treads to form a brace therefor with openings formed in the said flange to receive the nuts of the said bolts for locking the nuts thereon.

1,228,463. HOT-BLAST VALVE. WALTHER MATHESIUS, Chicago, Ill. Filed Sept. 9, 1916. Serial No. 119,273. (Cl. 137—5.)



1. In a gate valve, the combination with a valve casing, of a pair of vertically positioned parallel annular seat members in spaced relation, a disk valve for engagement between said seat members, said valve being of wedge shape in vertical transverse section and a stem supporting said valve, said valve being mounted for swinging movement from its point of support to alternately engage said seats when in fully closed position, substantially as described.

2. In a gate valve, the combination of a pair of annular parallel valve seats, a valve for coöperation therewith, a stem supporting the valve through the casing whereby



the valve is permitted to swing between the seat members with the point of support as a center, the valve being tapered so as to engage every portion of either seat member when swung thereagainst, substantially as described.

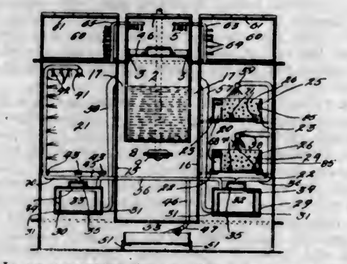
3. In a gate valve for hot blast mains, the combination with a valve casing a pair of vertically mounted parallel annular seat members, the seat members being in spaced relation, a valve proper, a valve stem attached to said valve, and extending through said valve casing, said valve stem being supported as a pendulum at the point where the valve stem passes through the valve casing, said valve being tapered in vertical transverse section, the taper being such as to permit one side of the valve when swung against one of the seat members to be in contact therewith, substantially as described.

4. In a gate valve, a casing having a valve seat arranged perpendicular to the longitudinal axis of the pipe within which the valve is located, a valve having a coöperating face arranged out of parallelism with the operating stem, said valve being mounted for limited swinging movement from the point of entrance of the stem to the casing, the valve face being so shaped as to be in parallelism with said seat only when fully closed, substantially as described.

5. In a gate valve, a casing, a valve mounted in said casing and adapted for limited swinging movement from the point of entrance of the valve stem to the casing, said casing being provided with parallel seats, a valve, the faces on opposite sides of which converge toward the end of the valve, the relation between the taper of the valve and the extent of swinging movement thereof being such that either face of the valve is parallel with its coöperating seat when the valve is in closed position and in contact with the seat, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,228,464. STERILIZER FOR BARBERS' APPLIANCES. FRANK PAOLO MAZZEI, Petersburg, Va. Filed Oct. 3, 1914. Serial No. 864,772. (Cl. 167—3.)



1. In an apparatus for sterilizing barbers' articles, a casing having a central heat chamber, a compartment on each side of said chamber, means to support barbers' articles in the compartments, mixing chambers in the compartments below said supporting means, disinfectant containers in the mixing chambers, tubes leading from the upper part of the heat chamber and communicating with said mixing chambers whereby the heat may surround the containers and cause the liberation of disinfecting fumes from the disinfectant, and means for conveying the disinfectant fumes to the articles and spraying said fumes on said articles.

2. In an apparatus for sterilizing barbers' articles, a casing, a central heat chamber therein, a compartment on each side of said chamber, means in the upper part of said compartments to support barbers' articles, disinfectant vaporizing chambers, tubes rising upwardly from the mixing chambers and having means to spray the heated disinfectant fumes toward and upon the articles, and tubular means cross connecting the mixing chambers and having a tube extending downwardly through the heat chamber and terminating in a spray nozzle therebelow.

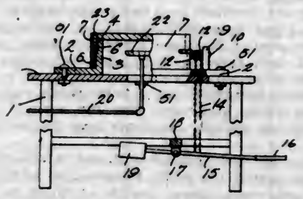
1,228,465. ARGILLACEOUS COMPOSITION AND PROCESS OF MAKING THE SAME. LE ROY H. MINTON, Metuchen, N. J., assignor of one-half to Abram W. Herbst, Philadelphia, Pa. Filed Nov. 29, 1916. Serial No. 134,088. (Cl. 106—11.)

1. The process of making an argillaceous composition which comprises mixing clay with suitably subdivided acid furnace slag, substantially free from metallic iron, and sufficient water to produce a plastic mass, shaping and drying the mass and heating it to a temperature sufficient to destroy the peculiar plastic property of the clay.

20. A terra-cotta composed of a fired mixture of about 30 parts of stoneware clay, about 30 parts of low grade fire-clay, and about 40 parts of slag high in silica, low in lime, and substantially free from iron, said terra cotta being substantially unvitrified and strongly weather resistant.

[Claims 2 to 19 not printed in the Gazette.]

1,228,466. COLLAR-PRESS. HENRY PAUL MOHN, Jacksonville, Ill. Filed Jan. 31, 1917. Serial No. 145,725. (Cl. 68—9.)



1. A device for putting a bulge into one wall of a double-walled collar, to permit a necktie to slide between the walls of the collar, the device including a core having an exterior recess extended circumferentially of the core; a shaper extended circumferentially of the core and having a rib coöperating with the recess; a compression member coöperating with the outer face of the shaper; and mechanism for operating the compression member.

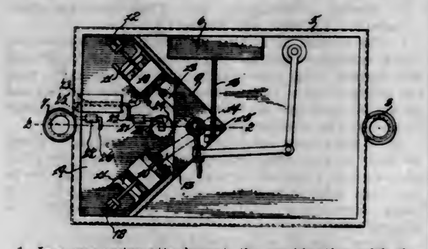
2. A device of the class described comprising a core having an exterior recess extended circumferentially of the core; a shaper extended circumferentially of the core and having a rib coöperating with the recess; a compression member coöperating with the outer face of the shaper; and tension means connected with the compression member to effect a compression thereof.

3. A device of the class described comprising a core having an exterior recess extended circumferentially of the core; a shaper extended circumferentially of the core and having a rib coöperating with the recess; and a compression means coöperating with the outer face of the shaper.

4. A device of the class described comprising a support; a core carried by the support, the core having an exterior recess extended circumferentially of the core; a shaper extended circumferentially of the core and having a rib coöperating with the recess; a compression member cooperating with the outer face of the shaper; a pedal fulcrumed on the support; flexible elements connected with the ends of the compression member and with the pedal; and direction changing means coacting with the flexible elements.

5. A device of the class described comprising a support; a core carried by the support and provided with an exterior circumscribing recess; a shaper extended circumferentially of the core and coöperating with the recess; a compression member coöperating with the outer face of the shaper; flexible elements connected with the ends of the compression member; and means for operating the flexible elements from a point below the table, the compression member being outwardly expansible to effect an upward movement of the flexible elements.

1,228,467. GAS-METER ATTACHMENT. HENRY C. MORRIS, Dallas, Tex. Filed June 28, 1916. Serial No. 106,314. (Cl. 73—1.)



1. In a gas meter attachment, the combination with the valve case of the meter, of means for admitting gas to said valve case, and means capable of tilting in opposite directions, maintained in inoperative position when the meter is in its normal upright position, for closing said gas-admission means when the meter is tilted in either of said opposite directions from its upright position.

2. In a gas meter attachment, the combination with the valve case of the meter having an inflow pipe, of a normally open valve for said pipe, and means capable of tilting in opposite directions, maintained in inoperative position when them eter is in its normal upright position, for closing said valve when the meter is tilted in either of said opposite directions from its upright position.

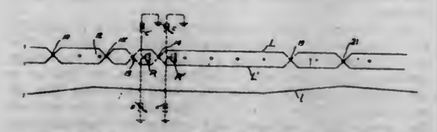
3. In a gas meter attachment, the combination with the valve case of the meter, of means for admitting gas to said valve case, means capable of tilting in opposite directions, maintained in inoperative position when the meter is in its normal upright position, for closing said gas-admission means when the meter is tilted in either of said opposite directions from its upright position, and means for limiting the movement of said closing means.

4. In a gas meter attachment, the combination with the valve case of the meter having an inflow pipe, of a normally open valve for said pipe, means capable of tilting in opposite directions, maintained in inoperative position when the meter is in its normal upright position, for closing said valve when the meter is tilted in either of said opposite directions from its upright position, and means for limiting the movement of said valve-closing means.

5. In a gas meter attachment, the combination with the valve case of the meter having an inflow pipe, of a valve seating on said pipe, a crank arm normally supporting said valve off its seat, and a weight whose base loosely rests on the floor of said valve case to support said crank arm when the floor is maintained in horizontal position, said members being disposed so that the weight shifts to operate the crank arm to force said valve on its seat when the meter is tilted.

[Claims 6 to 8 not printed in the Gazette.]

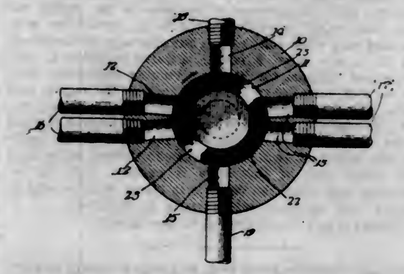
1,228,468. METHOD OF LOCATING SPECIAL TRANSPOSITION-POINTS. HUGHES MOURADIAN, Philadelphia, Pa., assignor to American Telephone and Telegraph Company, Boston, Mass., a Corporation of New York. Filed Jan. 2, 1917. Serial No. 140,245. (Cl. 179—78.)



1. The method of locating transposition points in signaling circuits to overcome disturbances from adjacent conductors which consists in determining changes in the electrical characteristics of the circuit necessary to effect a substantial neutralization of the disturbances for a plurality of transpositions, and making the desired transposition at a point fixed by the nature of the changes in such electrical characteristics.

2. The method of determining special transposition points in signaling circuits to overcome inductive disturbances from adjacent conductors which consists in tentatively transposing the circuit, determining the capacity to ground necessary to effect a balance of the inductive disturbances, again tentatively transposing the circuit, determining the capacity necessary to effect the balance under these conditions, and finally making the transposition at a point fixed by the nature of the change in such capacities.

1,228,469. VALVE. AUGUST E. MUELLER, Chicago, Ill., assignor of one-third to Thomas J. Hruby and one-third to John O. Hruby, Jr., Chicago, Ill. Filed June 17, 1916. Serial No. 104,152. (Cl. 137—26.)



1. A valve device comprising a casing having a chamber and a plurality of radial passages leading therefrom; a rotative, ported, hollow disturbing and valve member in said chamber provided with a stem which extends outwardly from said chamber and a supply pipe leading through the wall of said casing and through one wall of said member and having a wide face bearing with the inned face of said wall.

2. A valve device comprising a casing having a chamber and a plurality of radial passages leading therefroin; a rotative, ported, hollow distributing and valve member in said chamber, and provided with a stem which extends outwardly from said chamber; a supply pipe leading through the wall of said casing and into said chamber and provided at its inner end with a flange; a removable cover plate fastened to said member through which said pipe extends and bearing at its inner face against said flange, and means to rotate said valve and disturbing member.

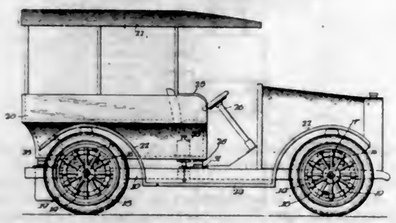
3. A valve device comprising a casing formed with a central chamber which is open to one side of the casing and provided with a plurality of radial passages leading therefrom; a hollow, rotative, ported distributing and valve member in said chamber and open at the open side of the chamber; a removable cover plate to cover the open side of said member and provided with a central opening; a plate applied over said casing against said cover plate and provided with a stuffing box; a supply pipe extending through said stuffing box and said cover plate and having a face bearing against the inner side of said cover plate, and means for rotating said distributing and valve member.

4. A valve device comprising a hollow casing provided with two oppositely disposed pairs of ports and with two oppositely disposed single ports and a hollow rotative valve member in said casing provided with two oppositely disposed ports adapted to register with the ports of the casing.

5. A valve device comprising a casing having a chamber; two oppositely disposed pairs of passages leading therefrom; two single, oppositely disposed passages leading from the chamber intermediate said pairs, and a hollow rotative valve and distributing member, with means to supply motive fluid thereto and provided with oppositely disposed ports adapted to be brought alternately into register with the opposed pairs of passages and with the opposed single passages, said ports being made of a width to span the receiving ends of said pairs of passages, with means for rotating said member.



1,228,470. SPRING-MOUNTING FOR VEHICLES. AUGUST E. MUELLER, Chicago, Ill., assignor of one-third to Thomas J. Hruby and one-third to John O. Hruby, Jr., Chicago, Ill. Filed July 22, 1916. Serial No. 110,641. (Cl. 267—22.)



1. The combination with an unsprung chassis and a body, of front and rear springs fixed to the body and removably fixed to and bearing upon the chassis, and auxiliary and recoil cushion devices comprising closed topped casings fixed to the body; plungers therein provided with stems which extend downwardly through the bottom heads of the casings, with means to rockingly and detachably fix them to the chassis, and auxiliary and recoil cushioning elements between the plunger and the top and bottom heads of said casings, respectively.

2. The combination with an unsprung chassis and a body, of front and rear springs fixed to the body and removably fixed to and bearing upon the chassis, and auxiliary and recoil cushion devices comprising closed topped casings fixed to the body; plungers therein provided with stems which extend downwardly through the bottom heads of the casings, and formed at their lower ends with shoes which rockingly engage supporting surfaces on the chassis, and auxiliary and recoil cushioning elements within the casings associated with said plungers.

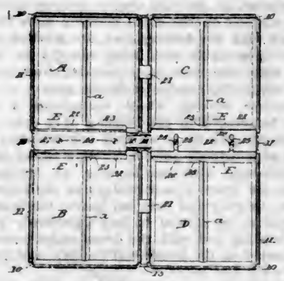
3. The combination with an unsprung chassis and a body, of front and rear springs fixed to the body and removably fixed to and bearing upon the chassis, and auxiliary and recoil cushion devices comprising closed topped casings fixed to the body; plungers therein provided with stems which extend downwardly through the bottom heads of the casings, and formed at their lower ends with shoes which rockingly engage supporting surfaces on the chassis, and auxiliary and recoil cushioning elements within the casings associated with said plungers, with means to adjustable vary the resiliency of the auxiliary and recoil elements.

4. The combination with an unsprung chassis and a body, the former including longitudinal side members, of front and rear semi-elliptic springs fixed to the body and slidingly engaging at their ends the longitudinal members of the chassis, with means to confine the springs therein, and auxiliary spring devices comprising members fixed to the body and other members slidingly engaged therewith and rockingly and detachably fixed to the chassis.

5. The combination with an unsprung chassis and a body, the former including longitudinal side members, of front and rear springs fixed to the body and detachably fixed to the chassis, and auxiliary spring devices comprising casings fixed to the body; plungers slidable therein; stems fixed to the plungers and formed at their lower ends with shoes which are rockingly supported on the chassis, and cushioning elements between the plungers and the upper heads of said casings.

[Claims 6 to 11 not printed in the Gazette.]

1,228,471. BAKING-PAN. GEORGE MUELLER, Salt Lake City, Utah. Filed Oct. 25, 1916. Serial No. 127,640. (Cl. 53—6.)



3. A multiple baking pan comprising a plurality of pans arranged end to end in spaced relation, and means supported between and extending into the pans for adjusting the capacities of the pans.

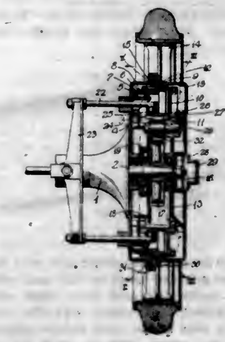
5. A multiple baking pan comprising a plurality of pans arranged end to end in spaced relation, an element located between the pans provided with screw-threaded apertures, means for adjusting the capacity of the pans comprising coöperating angular shaped members, both of which are provided with slots adapted to aline with relation to each other and with relation to the screw-threaded apertures in said element, a plate having apertures adapted to aline with the aforesaid apertures and slots, and screw-bolts adapted to pass through said alining apertures and slots and have working fit in the screw-threaded apertures of said element whereby the angular shaped members of the adjusting means may be adjusted to vary the capacity of the pans.

8. A multiple baking pan comprising a plurality of pans, means for connecting the pans together, and means supported exteriorly of the pans and having portions extending into the pans for adjusting the capacity of the pans.

9. A device of the character described, comprising a baking pan, a rib in the bottom of the pan, means for adjusting the capacity of the pan comprising a member having a portion which projects into the pan and which is provided with a recess adapted to fit over the rib.

[Claims 1, 2, 4, 6, and 7 not printed in the Gazette.]

1,228,472. TRACTION BEARING-WHEEL. NELS L. OLSON, Detroit, Mich. Filed Dec. 4, 1915. Serial No. 65,004. (Cl. 21—90.)



1. A traction bearing wheel comprising a housing adapted to be secured non-rotatably to the housing of a

driving axle, a driving gear adapted to be secured non-rotatably to the live axle of a driving axle concentric with the housing, a wheel including a drum concentric with the housing, an internal gear journaled in the drum and planet pinions on the drum meshing with the internal gear and with the driving gear, the internal gear being axially reciprocable and being adapted to interlock effectively with the stationary housing and with the drum, and means for manipulating the gear.

2. A traction bearing wheel comprising a housing adapted to be secured to the housing of a drive axle, a driving gear adapted to be secured non-rotatably to the drive shaft of a driving axle, a traction wheel including a drum concentric with the housing, an internal gear journaled in the drum, planet pinions on the drum meshing with the driving and internal gears, the latter gear being adapted to be shifted to lock selectively with the stationary housing and with the drum and a yoke adapted to be mounted on the housing of the axle and to engage the gear to shift the latter.

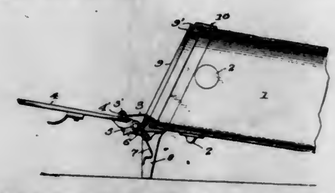
6. The combination of a driving axle including a stationary housing, and a live shaft, of a traction bearing wheel including a housing adapted to be non-rotatably secured to the stationary housing, a drum concentric therewith housing an internal planetary gear train, the driving member of which is secured to the live axle and the internal member of which rotates in the drum, an annulus rotatable in the housing and non-rotatable in the internal follower member of the train, the latter being shiftable axially to interlock with the housing or with the drum, and means for shifting the follower arranged and mounted on the housing of the driving axle.

8. An auxiliary transmission for motor vehicles, comprising in combination with the axle, the housing therefor and the wheels journaled on the axle, a gear wheel keyed to the axle at the inner face of each wheel, pinions journaled on the inner face of each wheel and meshing with the gear wheel, an internal gear ring mounted coaxial with the wheel and meshing with the pinions, and means operable at will for fixing the gear ring to the axle housing or to the wheel.

9. An auxiliary transmission for motor vehicles, comprising in combination with the axle, the housing therefor and the wheels journaled on the axle, of means arranged between the housing and the wheels for connecting the axle directly or indirectly with the wheels, and for releasing the axle from the wheels, said means comprising a gear wheel rigid with the axle at each wheel, pinions journaled on the wheel and meshing with the gear wheel, an internal gear ring journaled coaxial with the wheel and meshing with the pinions, and a common actuating means for effecting a fixing of the gear ring to the housing or to the wheel and for releasing the wheel from the axle.

[Claims 3 to 5 and 7 not printed in the Gazette.]

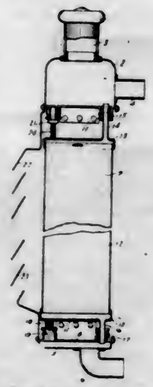
1,228,473. TRANSPARENT SHOW-JAR. KARL PANAY, Milwaukee, Wis. Filed May 10, 1915. Serial No. 26,956. (Cl. 211—25.)



1. The combination with the front end of a horizontal show jar, of a door adapted to close the open end of such jar, a hinge for connecting said door with said jar, a bridge member pivotally connected with the lower edge of said door above said hinge, said bridge member being adapted to span the space between said jar and door above said hinge when the door is opened, whereby the contents of said jar is prevented from dropping through the space between said door and jar, when said door is open, upon said hinge.

2. In a device of the described class, the combination with a metallic member affixed to the front open end of a horizontal jar, of a pair of vertical legs formed integral with said metallic member and adapted to support the front end of said jar upon a higher plane than the rear end.

1,228,474. AUTOVEHICLE-RADIATOR. THOMAS F. PAYNE, Pittsburgh, Pa. Filed Dec. 6, 1915. Serial No. 65,276. (Cl. 257—130.)



1. In an autovehicle radiator, upper and lower tank portions, a removable radiator unit connecting the tank portions, said unit comprising a conduit and terminal headers, a positioning support for one of the headers, carried by an opposing wall of a tank portion, means for engaging said support carried by the header, and means carried by the other header and adapted to coöperate with the opposing wall of its adjacent tank portion to hold the first header in engagement with the support.

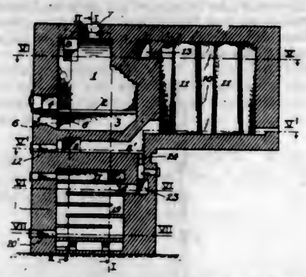
2. In an autovehicle radiator, upper and lower tank portions, a plurality of removably mounted radiator units comprising headers and connecting conduits, means constituting communication between each header and a tank portion, a positioning support for each header carried by a tank portion, and means for removably connecting the other headers to the other tank portion whereby the units are secured between said upper and lower tanks.

3. In an autovehicle radiator, upper and lower tank portions, a plurality of removably mounted units comprising conduits and headers, the units having communication with the upper and lower tank portions, positioning means carried by one tank portion and means carried by one header to coöperate therewith, and coöperating complementary clamping means carried by the other tank portion and other header of each unit to secure the unit between the upper and lower tank portions.

4. In an autovehicle radiator, upper and lower tank portions, and a plurality of removably mounted radiator units comprising conduits and headers, means constituting communication between each header and a tank, a stud carried by a header of each unit, means mounted on the tank for engagement with the stud, and coöperating means carried by the second header engaging the opposing wall of the adjacent tank portion to maintain said unit between the tanks.

1,228,475. VERTICAL BENCH. PIERRE PLANTINGA, Cleveland, Ohio. Filed July 12, 1915. Serial No. 39,277. (Cl. 110—31.)

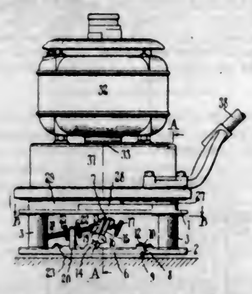
1. In a vertical bench, the combination of a gas producer, an oven adjacent to said producer, a gas conduit leading from the upper part of said producer, and downward to the lower part of the oven, a conduit for leading secondary air to said gas conduit, a recuperator situated below the level of the open, and a conduit leading from the upper part of the oven downward and through the recuperator to a stack.



2. In a vertical bench, in combination, a gas producer, an oven adjacent thereto, a recuperator below the producer and oven, a gas conduit leading from the upper part of the producer to the lower part of the oven, a secondary air supply means leading through the recuperator to said gas conduit and discharging in the vicinity below the level of the oven, and a conduit leading from the upper part of the oven downward through the wall of the producer and through the recuperator to heat the air passing through the recuperator.

3. In a vertical bench, in combination, a gas producer, an oven beside said producer, a recuperator below said producer and oven, all constituting an integral masonry structure, gas conduits in said structure leading from the top of the producer to the bottom of the oven, conduits in said structure leading from the top of the oven downward and through the recuperator, and air conduits in the recuperator leading to the discharge ends of the gas conduits.

1,228,476. ROTARY FLOOR-MACHINE. ROBERT A. PONSELLE, New York, N. Y. Filed Aug. 26, 1914. Serial No. 858,730. (Cl. 144—119.)



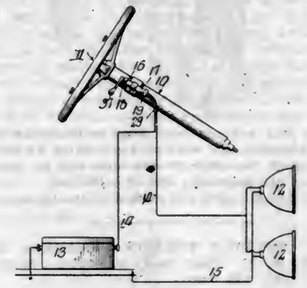
1. A device of the character described comprising a frame provided with upper and lower plates, holders having a tongue and groove connection with the lower plate, means for locking the holders in the lower plate, scrapers mounted in said holders, a clutch member on the upper plate, and means engaging the said clutch member for rotating the frame.

2. A device of the character described comprising a frame provided with upper and lower plates, holders having a tongue and groove connection with the lower plate, spring actuated means for locking the holders in the lower plate scrapers mounted in said holders, a clutch member on the upper plate, and means engaging the said clutch member for rotating the frame.



3. A device of the character described comprising a frame provided with upper and lower plates, holders having a tongue and groove connection with the lower plate, means for locking the holders in the lower plate, said means comprising a pin on the holder and a spring secured to said lower plate and having a hole for the reception of said pin, scrapers mounted in said holders, a clutch member on the upper plate, and means engaging the said clutch member for rotating the frame.

1,228,477. DIMMING DEVICE. ROY E. REED, Ripon, Wis. Filed Nov. 8, 1916. Serial No. 130,249. (Cl. 219—56.)



1. A dimming device adapted to be interposed in the line circuit of electric lights for motor vehicles and the like, comprising a casing, a resistance coil placed within and insulated from said casing, an insulating sleeve within said casing having a slot extending longitudinally of the casing, and a brush device having teeth adapted to expand radially in said casing and to project through said slot into engagement with said resistance coil, said brush and casing being rotative, the one with respect to the other and said slot and brush being correlated in form to bring the teeth of the brush in successive alinement with said slot in said rotative movement.

3. A dimming device adapted to be interposed in the line circuit of electric lights for motor vehicles comprising a casing, a resistance coil placed within and insulated from said casing, an insulating sleeve fixed in said casing within said coil and having a spiral slot which extends longitudinally of the casing, a brush device rotatively mounted in said casing, said brush device having alined flexible teeth which are adapted to be brought into engagement with successive sections of said coil by engagement with that part of said coil exposed by said spiral slot when said brush device is rotated and means without said casing for rotating said brush device.

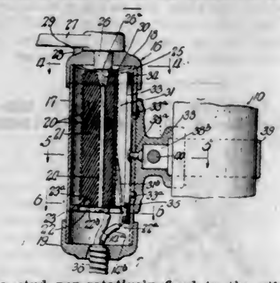
[Claims 2 and 4 to 6 not printed in the Gazette.]

1,228,478. DIMMING DEVICE. ROY E. REED, Ripon, Wis. Filed Feb. 9, 1917. Serial No. 147,666. (Cl. 219—56.)

1. A dimming device comprising a casing, a resistance unit including a core inclosed in said casing, a split ring fixed in said casing, a bearing plate fixed to one end of said core and engaging in said ring, a stud fixed with respect to the other end of said core and journaled in said casing, a brush inclosed in said casing and adapted to engage said resistance unit, said resistance unit and said brush being relatively rotative the one with respect to the other, said core having helical coils thereon and the said brush having a long spiral member extending transversely of the helical coils on said core.

4. A dimming device, comprising a casing, cap members closing the top and bottom ends of said casing, a bearing ring located near one of said caps, a core of insulating material rotatively mounted in said casing, a plate non-rotatively fixed to said core and engaging in said bearing

ring, a helical resistance coil wound upon said core member, said core having a longitudinally extending radial rib, a brush member having a spiral, beaded edge extending transversely of and adapted to engage with the successive parts of said coil on the radial rib of said core



member, a stud non-rotatively fixed to the other end of said core member, said stud having bearing in and projecting through the other of said caps, and an operating arm fixed to the projecting end of said stud.

[Claims 2, 3, 5, and 6 not printed in the Gazette.]

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1,228,479. SHUTTLE TENSION. FRANCESCO RENZO, Paterson, N. J. Filed Sept. 22, 1916. Serial No. 121,603. (Cl. 139—46.)



1. A tension device for a shuttle tension means of the class described including an elongated body member and a series of eyelet members each including an eyelet proper and a block-shaped base, the several bases being removably secured in a row on said body member.

2. A tension device for a shuttle tension means of the class described including an elongated body member formed of an elongated piece of sheet material having its longitudinal edges bent back and forming opposite grooves for a part of the length of the piece and a series of eyelet members arranged on the body member and engaged in said grooves and thereby held to the body member.

3. A tension device for a shuttle tension means of the class described including an elongated body member formed of an elongated piece of sheet material having its longitudinal edges bent back and forming opposite grooves for a part of the length of the piece and a series of eyelet members arranged on the body member and engaged in said grooves and thereby held to the body member, one end of said piece being bent into a loop including bearing-forming projection.

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1,228,480. HOSE-SUPPORTER CLASP. FRIEND A. RUSS, Greenwich, and HENRY J. STUART, Derby, Conn., assignors to Robert N. Bassett Company, Shelton, Conn., a Corporation of Connecticut. Filed June 15, 1915. Serial No. 34,275. (Cl. 24—245.)

1. In a button clasp for hose supporters and like articles a button comprising a base on which is mounted a stud, fabric material provided with an aperture through which said stud extends, the said fabric material being folded around said base, the fold being left open along the sides of the base, and an elastic button shank surrounding said stud in front of said fabric material, the edges of the aperture in the fabric material being confined between said shank and base, and the said base having its greatest dimension less than the width of the folded fabric material so that when the base is revolved it will not project beyond the side edges of said fabric material.

2. In a button clasp, a button comprising a base on which is mounted a stud, an apertured tape folded around said base, the said stud being passed through the aperture and the fold being left open along the sides of the base, and an elastic collet sprung over the stud in front of said tape, the edges of the aperture in the tape being confined between the collet and base, and the said base having its greatest dimension less than the width of the folded tape so that when the base is revolved it will not project beyond the side edges of the tape.

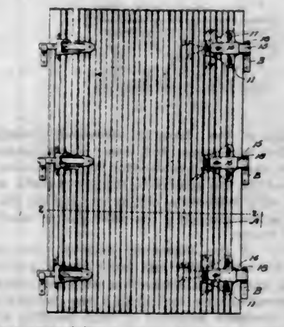


3. In a button clasp a button comprising a base on which is mounted a headed stud, the said base having its front side covered with fabric material through which the stud extends and an elastic collet surrounding said stud in front of the fabric material and containing a passage therethrough of less diameter than the head of the stud, the said collet being held against the fabric material by the under side of the head of the stud, and the said fabric material being wider than the greatest dimension of the base so that when the latter is revolved it will not project beyond the side edges of the fabric material.

4. In a button clasp a button comprising a base on which is mounted a headed stud, the said base being covered with tape through which the stud extends and an elastic collet sprung over said stud in front of the tape and containing a passage therethrough of less diameter than the head of the stud which latter passes entirely through said collet, the said collet being seated against the under side of the head of the stud and entirely filling the space between said under side and the front of the tape, and the said tape being wider than the greatest dimension of the base so that when the latter is revolved it will not project beyond the side edges of the tape.

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1,228,481. HINGE FOR FIRE-DOORS. FELIX L. SAINO, Memphis, Tenn. Filed May 26, 1915. Serial No. 30,611. (Cl. 16—113.)

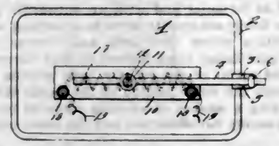


A hinge comprising a corrugated plate of substantially triangular design and provided with slots disposed at the apices thereof and arranged in parallel relation, said slots adapted to receive bolts for securing the plate against a corrugated supporting surface and adjusting the same thereon in the lengthwise direction of said corrugations, said plate constructed with integral side portions and the plate portion between said side portions being constructed with a level surface, a portion formed integrally with and connecting said side portions and forming a socket piece therewith, a bar fitting closely within said socket piece, said bar and the plate portion constructed with a slot and an aperture respectively, and a securing bolt passing through said slot and aperture for adjusting the hinge at right angles to the first mentioned adjustment, substantially as set forth.



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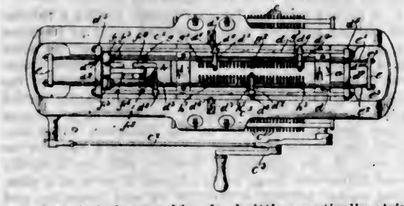
1,228,482. ANTIFROSTING DEVICE. FRANK SCHONGER, Kingston, N. Y. Filed Mar. 7, 1917. Serial No. 153,103. (Cl. 219—19.)



In an anti-frosting device, a heating coil, a supporting plate for the heating coil, a post attached to said plate, a rod connected with said post, and a clamp connected with said rod, the post having means for changing the position of the plate and the heating coil with respect to the rod, the clamp having means for securing it to the wind shield and for simultaneously securing the rod to it, the clamp being further provided with means to permit the position of the rod to be varied longitudinally or angularly with respect to it.

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1,228,483. KNITTING-MACHINE. ALVIN SCHWARTZ, New York, N. Y. Filed June 22, 1916. Serial No. 105,115. (Cl. 66—12.)



1. In a knitting machine for knitting vertically striped fabric, the combination with a needle-bed, a set of independent needles and a cam-carrier for actuating the needles successively, of a plurality of yarn-guides free to pass one another, and means to actuate the yarn-guides in succession, each yarn-guide coming to rest after it has moved beyond the initial position of the next succeeding yarn-guide, the movement of which then commences.

2. In a knitting machine for knitting vertically striped fabric, the combination with a needle-bed, independent needles and a cam-carrier for actuating the needles successively, of a plurality of yarn-guides free to pass one another, and means to actuate the yarn-guides in succession and to carry each beyond the initial position of the next one, each yarn-guide coming to rest after it has moved beyond the initial position of the next succeeding yarn-guide, the movement of which then commences.

3. In a knitting machine for knitting vertically striped fabric, the combination with a needle-bed, independent needles and a cam-carrier for actuating the needles successively, of a plurality of yarn-guides free to pass one another, yielding means carried with the cam-carrier to actuate the yarn-guides in succession, and stops to check the yarn-guides, each yarn-guide coming to rest after it has moved beyond the initial position of the next succeeding yarn-guide, the movement of which then commences.

4. In a knitting machine for knitting vertically striped fabric, the combination with a needle-bed, independent needles and a cam-carrier for actuating the needles successively, of a rod parallel with the needle-bed, yarn-guides mounted movably on the rod, a yielding driver carried by the cam-carrier to engage the corresponding yarn-guides yieldingly, and means to disengage the yarn-guides from the driver and check their movement at different points, each yarn-guide coming to rest after it has moved beyond the initial position of the next succeeding yarn-guide, the movement of which then commences.

5. In a knitting machine for knitting vertically striped fabric having two opposed needle-beds and sets of independent needles, and a cam-carrier for actuating the needles of both sets successively, the combination of a plurality of yarn-guides free to pass one another, and means to actuate the yarn-guides in succession, each yarn-guide coming to rest after it has moved beyond the initial position of the next succeeding yarn-guide, the movement of which then commences.

[Claims 6 to 15 not printed in the Gazette.]

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1,228,484. GAUZE BRUSH. EDMUND O. SCHWEITZER, Chicago, Ill. Filed Mar. 17, 1916. Serial No. 84,778. (Cl. 200—25.)



1. In a brush of the class described, a contact wire adapted to rest on a commutator, said wire being coated with an individual coating rigidly adhering to and moving with the wire and being made of a lubricating material softer than the metal of the wire, said lubricating coating being adapted to interpose itself between the commutator and the edge of the wire and to hold the wire out of direct contact with the commutator when the relative setting of the wire with respect to the commutator is shifted.

2. A brush for electrical machinery comprising a plurality of fine wires woven into a gauze, said wires being made of a metal comprising mostly copper, each of said wires having deposited thereupon an individual surface coating of a soft lubricating metal in solid form completely inclosing the wire, said coating adhering to and moving with the individual wire upon which it is deposited, said lubricating metal being substantially softer than copper.

4. A brush for electrical machinery comprising a body of wire gauze formed into a prismatic block, the wires of said gauze having deposited upon their individual surfaces individual surface coatings of a soft lubricating metal comprising tin.

11. A brush for electrical contact with a metallic surface comprising a plurality of fine wires interwoven into a gauze, each of said wires having an individual coating thereon of metal softer than that of the wires and that of the contact surface whereby to provide a lubricating film between the wires and said surface.

12. A brush formed of interwoven metal wires having each an individual metal coating only of a metal softer than copper to afford lubricating means for the same.

[Claims 3 and 5 to 10 not printed in the Gazette.]

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1,228,485. METHOD OF PRODUCING BODIES OF EXTENDED DISCONTINUOUSLY-ASSOCIATED SOLID PARTICLES AND THE PRODUCT THEREOF. WILLIAM R. SEIGLE, New York, N. Y., assignor to H. W. Johns-Manville Company, New York, N. Y., a Corporation of New York. Filed June 1, 1915. Serial No. 31,504. (Cl. 106—18.)

1. The method of producing bodies composed of extended, discontinuously associated particles of solid ma-

terial, which consists in distributing the particles in a liquid with an insoluble soap, then eliminating the liquid and drying the residual solid.

2. The method of producing bodies composed of extended, discontinuously associated particles of magnesium carbonate, which consists in distributing the particles in a liquid with an insoluble soap, then eliminating the liquid and drying the residual solid.

3. The method of producing bodies composed of extended, discontinuously associated particles of solid material, which consists in distributing the particles mingled with fibers in a liquid with an insoluble soap, then eliminating the liquid and drying the residual solid.

4. The method of producing bodies composed of extended, discontinuously associated particles of solid material, which consists in distributing the particles mingled with asbestos fibers in a liquid with an insoluble soap, then eliminating the liquid and drying the residual solid.

5. The method of producing bodies composed of extended, discontinuously associated particles of solid material, which consists in distributing the particles mingled with asbestos fibers and cellulose fibers in a liquid with an insoluble soap, then eliminating the liquid and drying the residual solid.

[Claims 6 to 34 not printed in the Gazette.]

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1,228,486. METHOD OF PRODUCING BODIES OF EXTENDED DISCONTINUOUSLY-ASSOCIATED PARTICLES OF CALCIUM CARBONATE AND THE PRODUCT THEREOF. WILLIAM R. SEIGLE, New York, N. Y., assignor to H. W. Johns-Manville Company, New York, N. Y., a Corporation of New York. Original application filed June 1, 1915, Serial No. 31,504. Divided and this application filed June 28, 1916. Serial No. 106,522. (Cl. 106—18.)

1. The method of producing bodies composed of extended, discontinuously associated particles of calcium carbonate, which consists in distributing the particles in a liquid with an insoluble soap, then eliminating the liquid and drying the residual solid.

2. The method of producing bodies composed of extended, discontinuously associated particles of calcium carbonate, which consists in distributing the particles mingled with fibers, in a liquid with an insoluble soap, then eliminating the liquid and drying the residual solid.

3. The method of producing bodies composed of extended, discontinuously associated particles of calcium carbonate, which consists in distributing the particles mingled with asbestos fibers, in a liquid with an insoluble soap, then eliminating the liquid and drying the residual solid.

4. The method of producing bodies composed of extended, discontinuously associated particles of calcium carbonate, which consists in distributing the particles mingled with asbestos fibers and cellulose fibers, in a liquid with an insoluble soap, then eliminating the liquid and drying the residual solid.

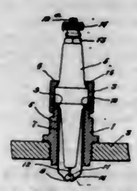
5. The method of producing bodies composed of extended, discontinuously associated particles of calcium carbonate, which consists in distributing the particles mingled with sulfite pulp fibers, in a liquid with an insoluble soap, then eliminating the liquid and drying the residual solid.

[Claims 6 to 18 not printed in the Gazette.]

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1,228,487. SPARK-PLUG. FRANK L. SESSIONS, Lakewood, Ohio. Filed May 8, 1915. Serial No. 26,763. (Cl. 123—169.)

1. In a spark plug, insulation surrounding and carrying the inner electrode, the insulation having an enlarged portion forming inner and outer transverse shoulders, a metal shell adapted to be secured in the wall of the combustion chamber which the spark plug serves, a ground terminal provided with a sparking point at its inner end and an outwardly turned, transverse flange at its outer end, the body portion of the ground terminal being adapted to enter the bore of the metal shell, and the flange of the ground terminal being adapted to rest on the outer end of the metal shell, and means coöperating with the insulation and the metal shell to clamp the flange of the ground terminal between the inner shoulder on the insulation and the metal shell.



2. A ground terminal for spark plugs, having a tubular body portion provided at its inner end with a sparking point and at its outer end with an outwardly projecting transverse flange adapted to serve as a packing washer for the insulation which surrounds and carries the inner electrode, said flange being formed by first outwardly flaring the end metal of the tubular body portion and then underturning the outer portion of the flange thus formed and including a washer of yielding material between the upper, outwardly flared portion and the lower underturned portion.

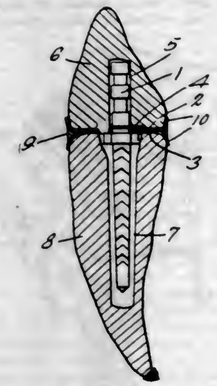
3. A ground terminal for spark plugs, having a tubular body portion provided with a sparking point at its inner end, an outwardly turned transverse flange at its outer end, a tubular extension to the outwardly turned transverse flange, an inwardly turned transverse flange at the outer end of the tubular extension, said outwardly turned transverse flange being adapted to serve as a packing washer between a shoulder on the insulation which surrounds and carries the inner electrode and a shoulder on the wall of the supporting member, and the inwardly turned transverse flange being adapted to serve as a cushioning washer between a shoulder on said insulation and the member which clamps it to the supporting member and to serve as a means for withdrawing the ground terminal with the insulation from the supporting member.

4. A ground terminal for spark plugs, having a tubular body portion provided with a sparking point at its inner end, an outwardly turned transverse flange at its outer end, a tubular extension to the outwardly turned transverse flange, an inwardly turned transverse flange at the outer end of the tubular extension, said outwardly turned transverse flange being adapted to serve as a packing washer between a shoulder on the insulation which surrounds and carries the inner electrode and a shoulder on the wall of the supporting member, and the inwardly turned transverse flange being adapted to serve as a cushioning washer between a shoulder on said insulation and the member which clamps it to the supporting member and to serve as a means for withdrawing the ground terminal with the insulation from the supporting member, the tubular extension and the inwardly turned transverse flange being split longitudinally to permit the shoulders on the insulation to enter the tubular extension.

5. In a spark plug adapted to be secured in the opening in the wall of the combustion chamber which the spark plug serves, an insulation body surrounding and carrying the inner electrode and having an annular shoulder, a ground terminal carrying a sparking point at its inner end and an annular flange at its outer end, a tubular member carried by the combustion chamber and provided with an annular shoulder, a compressible washer between said annular shoulder and said annular flange on the ground terminal, and means for clamping said washer against said shoulder through the medium of said annular flange and the shoulder on the insulation body, the washer coming in direct contact with the shoulder carried by the combustion chamber and the annular flange on the ground terminal coming in direct contact with the shoulder of the insulation body, whereby the compression of the washer in clamping the parts in position will not vary the distance between the spark points.



1,228,488. DENTAL-CROWN ATTACHMENT. WILLIAM F. SHAW, Pueblo, Colo. Filed Dec. 1, 1916. Serial No. 134,375. (Cl. 32—30.)




1. The method of attaching an artificial crown to a natural root, consisting in pressing between the crown and root two attached malleable layers spread apart with the intervening space filled with soft wax or equivalent material, to cause the layers to conform to the adjacent portions of the crown and root, removing the wax, filling the intervening space between the layers with solder, and cementing the layers to the crown and root.

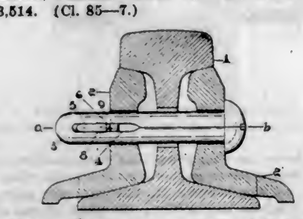
2. The method of attaching an artificial crown to a natural root, consisting in pressing between the crown and root two centrally attached malleable layers spread apart with the intervening space filled with soft wax or equivalent material, to cause the layers to conform to the adjacent portions of the crown and root, burnishing the marginal portions of the layers to the crown and root, removing the wax, filling the intervening space between the layers with solder, grinding away the surplus material, and cementing the layers to the crown and root.

3. A dental crown attachment embodying two attached malleable layers adapted to be spread to conform to the adjacent portions of an artificial crown and natural root.

4. A dental crown attachment embodying in combination with a pin two malleable layers having their central portions attached and mounted upon said pin, the marginal portions of said layers being separable to conform to the adjacent portions of an artificial crown and natural root.

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1,228,489. LOCKING MEANS FOR KEY-BOLTS. FREDERICK L. H. SIMS, Toronto, Ontario, Canada, assignor to The Diaphone Signal Company, Limited, Toronto, Ontario, Canada. Filed Apr. 25, 1916. Serial No. 93,514. (Cl. 85—7.)




1. The combination of an axially slotted bolt; a part through which said bolt passes; a removable one part key passing through the slot in the bolt; a locking strip passing through the slot in the bolt and lying between the key and the part through which the bolt passes, the said strip having an end bent up to engage an outer end of the key and intermediate of its ends being shaped to engage one of the parts relative to which the key is movable.

2. The combination of an axially slotted bolt; a part through which said bolt passes; a removable key passing through the slot in the bolt; a locking strip passing through the slot in the bolt and lying between the key and the part through which the bolt passes, the said strip having an end bent up to engage an outer end of the key and intermediate of its ends being shouldered to engage the part through which the bolt passes.

3. The combination of an axially slotted bolt; a part through which said bolt passes; a removable key passing through the slot in the bolt; a locking strip passing through the slot in the bolt and lying between the key and the part through which the bolt passes, the said strip having an end bent up to engage an outer end of the key and intermediate of its ends bent to form a shoulder to engage the part through which the bolt passes.

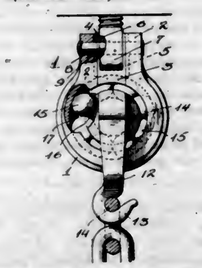
4. The combination of an axially slotted bolt; a part through which said bolt passes; a removable key passing through the slot in the bolt; a locking strip bent double and passing through the slot in the bolt and lying between the key and the part through which the bolt passes, the said strip having an end bent up to engage an outer end of the key and intermediate of its ends bent to form a shoulder to engage the part through which the bolt passes.

5. The combination of an axially slotted bolt; a part through which said bolt passes; a removable one part key passing through the slot in the bolt; a locking strip lying between the key and the part through which the bolt passes, the said strip having an end bent up to engage an outer end of the key and intermediate of its ends being shaped to engage one of the parts relative to which the key is movable.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,490. SUSPENDING-HOOK. HAROLD SLASOR, New Philadelphia, Ohio. Filed Dec. 20, 1916. Serial No. 138,090. (Cl. 248—22.)




1. In a suspending hook, the combination of a housing provided with spaced bars and an opening located between said spaced bars, a circumferentially grooved disk located within the housing and a series of anti-friction balls located within the housing and around the disk within the housing and a filling block adapted to close the opening around the disk and a suspending hook carried by said housing.

3. In a suspending hook of the class described, the combination of a housing provided with a circular opening, the wall of said opening provided with a groove, spaced arms extended from the housing, a filling block provided with a groove located between the spaced arms, a circumferentially grooved disk located within the housing and a series of anti-friction balls located around the grooved disk and within the housing, a hooked yoke suspended from the grooved disk and carried thereby and a suspending bolt pivotally connected to the spaced arms.

5. In a suspending hook of the character described, a housing provided with spaced arms, a filling block provided with spaced members, a suspending bolt pivotally connected to the spaced arms, a disk located within the housing, a series of anti-friction balls located between the disk and housing and a hooked swinging yoke carried by the disk, and means for pivotally connecting the suspending bolt to the housing.

[Claims 2 and 4 not printed in the Gazette.]

1,228,491. MACHINE FOR ASSEMBLING BED-FABRIC CHAINS. GARY B. SMITH, Chicago, Ill. Filed July 29, 1915, Serial No. 42,518. Renewed Nov. 2, 1916. Serial No. 129,229. (Cl. 140—7.)



1. A chain-fabric assembling machine embodying a guide for receiving a longitudinal chain and coöperable with cross chains having hooks, means for moving said guide and cross chains relative to one another, and automatic means for setting said means in operation when the longitudinal chain is delivered into the guide.

2. A chain-fabric assembling machine embodying a guide for receiving a longitudinal chain and coöperable with cross chains having hooks, means for bending the hooks of the cross chains to embrace the longitudinal chain, and means operated automatically when the longitudinal chain is received by the guide for setting the aforesaid means in operation.

3. A chain-fabric assembling machine embodying a guide for receiving a longitudinal chain and coöperable with cross chains having hooks, means for moving the guide and cross chains relative to one another, means for bending the hooks to embrace the longitudinal chain, and means operated automatically when the longitudinal chain is received by the guide for setting in motion the first and second mentioned means.

4. A chain-fabric assembling machine embodying a guide for receiving a longitudinal chain and coöperable with cross chains having hooks, feeding means for moving the cross chains across the guide, the guide being stationary, and means operated automatically when the longitudinal chain is received by the guide for setting said means in motion.

5. A chain-fabric assembling machine embodying a stationary guide for receiving a longitudinal chain and cooperable with cross chains having hooks, means for bending the hooks of the cross chains to embrace the longitudinal chain, means for feeding the cross chains across the guide, and means operated automatically when a longitudinal chain is received by the guide for setting the first-mentioned and second-mentioned means in motion.

[Claims 6 to 33 not printed in the Gazette.]

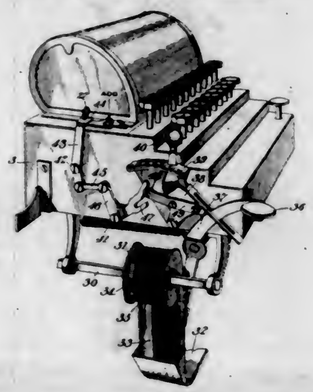
1,228,492. COMBINED KEY-CONNECTING AND RIBBON-SHIFTING MECHANISM FOR COMBINED TYPE-WRITERS AND ADDERS. JOHN A. SMITH, Harrisburg, Pa., assignor to Elliott-Fisher Company, Harrisburg, Pa., a Corporation of Delaware. Filed June 26, 1909. Serial No. 504,501. (Cl. 235—59.)

1. The combination with recording mechanism and keys, of adding mechanism, automatically operated key connecting mechanism, operative to connect the adding mechanism and keys, and including setting means, multicolor inking means movable to determine the color of the record, and means adjustable with the setting means to determine the position of the inking means.

2. The combination with recording mechanism and keys, of adding mechanism, automatically operated key connecting mechanism, intermediate of the adding mechanism and keys, and including setting means, multicolor inking means movable to determine the color of the record, and a stop adjustable with the settling means and coacting with the inking means.

3. The combination with recording mechanism and keys, of adding mechanism, key connecting mechanism including setting means, operative to control the subsequent operation of the key connecting mechanism to connect the adding mechanism and keys, a laterally shiftable multicolor ribbon for the recording mechanism, and means adjustable with the setting means to determine the position of the ribbon.

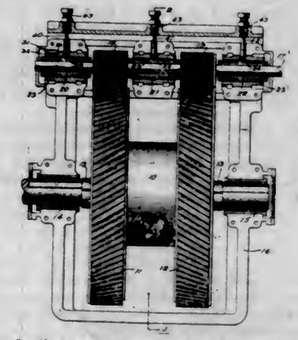
4. The combination with recording mechanism and keys, of adding mechanism, key connecting mechanism, adapted to connect the keys and adding mechanism, and including setting means, a laterally shiftable multicolor ribbon for the recording mechanism, and a stop coöperatively related to the setting means and disposed to limit the movement of the ribbon in one direction.



5. The combination with recording mechanism and keys, of adding mechanism, key connecting mechanism, arranged to connect the keys and adding mechanism, and including setting means, which may be set prior to the connection of the keys and adding mechanism, a laterally shiftable multicolor ribbon for the recording mechanism, a member movable to shift the ribbon laterally, and an operative connection between said member and the setting means.

[Claims 6 to 22 not printed in the Gazette.]

1,228,493. REDUCTION-GEARING. LOUIS L. SMITH, Edgewood, Pa., assignor, by mesne assignments, to The Westinghouse Gear and Dynamometer Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 12, 1913. Serial No. 760,762. (Cl. 74—7.)



1. A reduction gearing comprising intermeshing gears, supporting means for one of said gears for allowing relative angular motion between the shafts of the gears and comprising bearings spaced along the shaft of one of the gears, each bearing comprising a central bearing member surrounding the shaft of the gear, a bearing support, concentric cylindrical sleeves surrounding the said central member and located between it and said support, and means for delivering lubricant under pressure to each bearing, whereby a thin film of lubricant is maintained between adjacent sleeves.



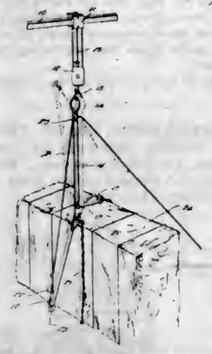
2. A reduction gearing comprising intermeshing gears, in combination with supporting means for one of the gears, permitting relatively angular motion between the longitudinal axes of the gears, and comprising a stationary support for the angularly movable gear, bearing sleeves in which the angularly movable gear is journaled, means for forming a plurality of liquid films between each bearing sleeve and the stationary supporting means, and means for delivering liquid to said films.

3. A reduction gearing comprising intermeshing gears, in combination with supporting means for one of the gears, permitting relative angular motion between the longitudinal axes of the gears, and comprising bearings for the shaft of the angularly movable gear, means forming a part of each bearing for segregating a plurality of relatively thin liquid films which yieldingly support the shaft, and means for delivering liquid under pressure to the said films.

4. A reduction gearing comprising intermeshing gears, supporting means for one of the gears constructed to allow relative angular motion between the axes of the shafts of the gears, and comprising cellular bearings spaced along the shaft of the angularly movable gear, means for delivering liquid under pressure to the bearings, and means for limiting the movement of the shaft to a plane substantially perpendicular to the plane defined by the normal positions of the axes of the gears.

5. A reduction gearing comprising intermeshing gears, supporting means for one of the gears constructed to permit relative angular motion between the axes of the gears and comprising cellular bearings for the shaft of the angularly movable gear, means for delivering fluid under pressure to the bearings, means for limiting the angular motion of the angularly movable gear to a plane substantially perpendicular to the plane defined by the normal positions of the axes of the gears, and means for adjusting the angularly movable gear toward and away from the other gear.

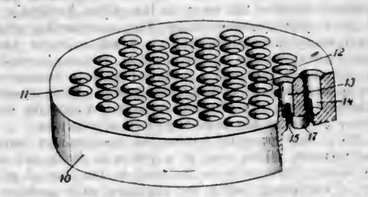
1,228,494. HOISTING APPARATUS. JOHN E. STEWART, Oakland, Ill. Filed Jan. 18, 1917. Serial No. 143,099. (Cl. 57—11.)



1. A hoisting device comprising a sheet metal band flexed intermediate its ends forming a pair of parallel arms, a link member mounted between the ends of said arms, a rod having an opening in each end thereof and pivotally connected to the said arms between the ends of the link member, an enlargement formed on the end of said rod adjacent the end pivotally connected to said arms, a projection extending from said enlargement, a chain having one end connected to the said link, the free end of the chain adapted for engagement with the said projection, a pulley wheel rotatably mounted between the said arms, a flexible element attached to the other opening in said rod and trained over the said pulley for a purpose specified.

2. In a device of the class described a sheet metal band flexed intermediate its ends forming an enlarged loop, a pair of parallel arms extending from said loop, a rod, a link, said rod and link being pivotally connected to the free ends of said arms, a chain having one end thereof connected to the said link, and the opposite end connected to the said rod and adapted to be released upon the raising of the said rod.

1,228,495. DIE CONSTRUCTION. GUIDO TANZI, New York, N. Y., assignor to the Firm of V. A. Tanzi & Sons Co., consisting of Vito Antonio Tanzi, Aurelio Tanzi, Valentino Tanzi, Mario Tanzi, and said Guido Tanzi, New York, N. Y. Filed Dec. 13, 1916. Serial No. 136,668. (Cl. 107—14.)



1. A die, for forming tubular articles, consisting of a solid plate having one or more openings therethrough, each of which is formed by a plurality of adjacent openings extending into one side of the plate and communicating with an annular opening extending into the plate from the opposite side.

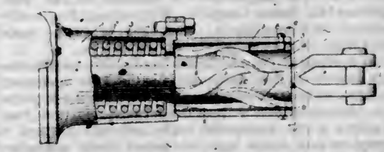
2. A solid tube-forming die having a plurality of slightly separated holes on the entrance side which have communication with an annular hole on the discharge side of the die whereby the material which enters said plurality of holes is all discharged through said annular hole.

3. A solid tube-forming die having one or more openings therethrough, each of which is formed by three openings arranged in a circle and extending into one side of the die and communicating with an annular opening which extends into the opposite side of the die and is centrally arranged with respect to said three openings.

4. A tube-forming die having one or more passages therethrough, for the material, each of said passages being formed by a plurality of slightly separated holes in the entrance side which communicate with a hole, central with respect thereto, in the discharge side, and a mandrel centrally arranged in the last-mentioned hole and carried by the material between said plurality of holes.

5. The method of making a solid tube-forming die which consists in drilling a plurality of openings from the entrance side of the die, and an annular opening from the discharge side and into communication with said plurality of openings.

1,228,496. PISTON-ROTATOR. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Oct. 3, 1914. Serial No. 864,872. (Cl. 121—45.)



1. In a fluid pressure brake, the combination with a brake cylinder, a piston therein, and a non-rotating brake connection adapted to be operated by said piston, of means operated by the reciprocative movement of the

brake cylinder piston in either direction for imparting to the piston a progressive rotative movement in one direction to thereby equalize the wear on the piston packing.

2. In a fluid pressure brake, the combination with a brake cylinder containing a brake cylinder piston and a non-rotating brake connection adapted to be operated by said piston, of means for rotating the piston in one direction in applying and in the same direction in releasing the brakes to thereby equalize the wear on the piston packing.

3. In a fluid pressure brake, the combination with a brake cylinder piston and rod and a non-rotative brake connection adapted to be operated by said piston, of means carried by said rod and operated by the reciprocation of the piston for progressively rotating said rod in one direction only and thereby the brake cylinder piston to thereby equalize the wear on the piston packing.

4. In a fluid pressure brake, the combination with a non-rotating brake connection, a brake cylinder piston and rod for operating said connection, of cams carried by said rod and a stationary roller adapted to engage said cams upon movement of the piston rod in either direction to thereby effect the rotation of said rod and the brake cylinder piston in the same direction of rotation.

5. In a fluid pressure brake, the combination with a brake cylinder piston rod, of a series of front and rear cams having cam surfaces inclined to the line of movement, a stationary roller for engaging said surfaces to impart rotary movement to the piston rod by first engaging a cam surface of one series and then of the other series.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,497. AUTOMATIC ELECTRIC BRAKE. WALTER V. TURNER and PATRICK H. DONOVAN, Edgewood, Pa., assignors to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Feb. 10, 1915. Serial No. 7,419. (Cl. 188—36.)



1. In an electrically controlled brake, the combination with a device operated electrically for effecting an application of the brakes on a car, of a grounded train wire connected to said device, a main source of current, a grounded auxiliary source of current, and a relay normally connected through said main wire with the auxiliary source and adapted upon deënergization to connect the main source of current to said train wire.

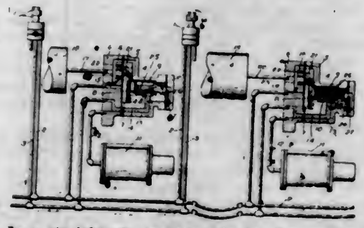
2. In an electric brake system, the combination with means operating on a normally open circuit for controlling the brakes, of means operating on a normally closed circuit for controlling the normally open circuit and a single train wire for both circuits.

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1,228,498. STRAIGHT-AIR EMERGENCY-BRAKE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Feb. 17, 1915. Serial No. 8,839. (Cl. 188—1.)

1. In a straight air emergency brake, the combination with a source of fluid under pressure and an emergency brake pipe, of an emergency valve device having a piston and a passage normally providing communication from said source to the emergency brake pipe and adapted to be closed by said piston upon movement of the emergency valve device to effect an application of the brakes and a removable choke plug in said passage having a restricted passage for regulating the rate of flow between said source and the emergency brake pipe.

2. In a straight air emergency brake, the combination with a source of fluid under pressure and an emergency brake pipe, of an emergency valve device having a passage constantly providing communication from the source to the emergency pipe independently of the moving parts of the emergency valve device and containing a removable choke plug having a restricted passage for controlling the rate of flow from the source of pressure to the emergency pipe.



3. In a straight air emergency brake, the combination with a source of fluid under pressure and an emergency brake pipe, of an emergency valve device having a charging passage normally providing communication from the source of pressure to the emergency pipe and adapted to be closed upon movement of the emergency valve device to effect an application of the brakes and an equalizing passage constantly providing communication from the source of pressure to the emergency pipe, each passage having a choke plug for regulating the rate of flow between the source of pressure and the emergency pipe.

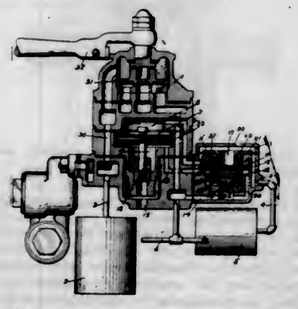
4. In a straight air emergency brake, the combination with a straight air pipe and an emergency brake pipe, of a brake valve adapted in service position to connect the emergency brake pipe with the straight air pipe and provided with a removable choke plug for regulating the rate of flow from the emergency brake pipe to the straight air pipe.

5. In a straight air emergency brake, the combination with a straight air pipe and an emergency brake pipe, of a brake valve having two service positions in which fluid is supplied from the emergency brake pipe to the straight air pipe and choke plugs for regulating the rate of flow in said positions.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,499. ENGINEER'S BRAKE-VALVE DEVICE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed July 13, 1915. Serial No. 39,566. (Cl. 188—7.)



1. In a fluid pressure brake, the combination with a brake pipe and a brake valve device having an equalizing discharge valve mechanism for venting fluid from the brake pipe upon a reduction in equalizing reservoir pressure, of a valve piston subject to the opposing pressures of the equalizing reservoir and the brake pipe and operative to restrict communication through which fluid is vented from the brake pipe by the discharge valve mechanism when the equalizing reservoir pressure is reduced at a greater rate than the brake pipe pressure.

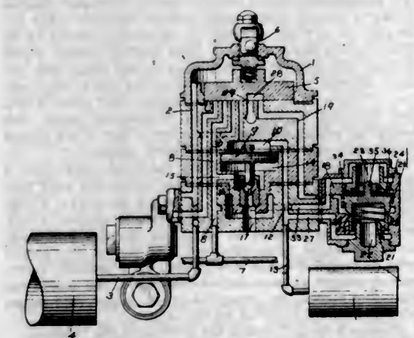
2. In a fluid pressure brake, the combination with a brake pipe and a brake valve device having an equalizing discharge valve mechanism for venting fluid from the brake pipe upon a reduction in equalizing reservoir pressure, of a valve piston subject on one side to the pressure of the equalizing reservoir and a spring and on the opposite side over a restricted area to brake pipe pressure and operated, when the equalizing reservoir pressure is less than the brake pipe pressure, to expose the full area to brake pipe pressure and then restrict communication for discharging fluid from the brake pipe through the equalizing discharge valve.

4. The combination with a brake pipe and a brake valve device having an equalizing discharge valve mechanism operated upon a reduction in equalizing reservoir pressure for discharging fluid from the brake pipe, of a valve device separate from the equalizing discharge valve mechanism for restricting the discharge of fluid from the brake pipe when the equalizing reservoir pressure is reduced faster than the brake pipe pressure.



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1,228,500. ENGINEER'S BRAKE-VALVE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed July 13, 1915. Serial No. 39,567. (Cl. 188—7.)



1. In a fluid pressure brake, the combination with a brake pipe and a brake valve device having an equalizing discharge valve mechanism for controlling the discharge of fluid from the brake pipe, of means for preventing a second reduction in brake pipe pressure by manipulation of the brake valve until a predetermined time interval has elapsed.

2. In a fluid pressure brake, the combination with a brake pipe and a brake valve device having an equalizing discharge valve mechanism for controlling the discharge of fluid from the brake pipe, of means for insuring a predetermined time interval between successive reductions in brake pipe pressure as effected by manipulation of the brake valve.

3. In a fluid pressure brake, the combination with a brake pipe and a brake valve device having an equalizing discharge valve mechanism for controlling the discharge of fluid from the brake pipe, of means for limiting to a predetermined degree the reduction in brake pipe pressure which can be made at one time by manipulation of the brake valve and adapted to prevent a successive reduction in brake pipe pressure until a predetermined time interval has elapsed.

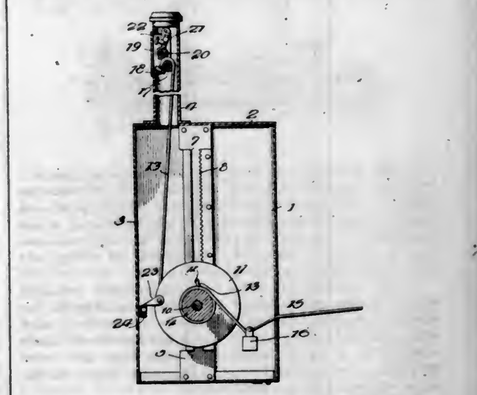
4. In a fluid pressure brake, the combination with a brake pipe and a brake valve device having an equalizing discharge valve mechanism for controlling the discharge of fluid from the brake pipe, of means for automatically regulating the operation of the equalizing discharge valve mechanism when the brake valve is successively operated, to produce predetermined reductions in brake pipe pressure at predetermined time intervals.

5. In a fluid pressure brake, the combination with a brake pipe and a brake valve device having an equalizing discharge valve mechanism subject to the opposing pressures of an equalizing reservoir and the brake pipe for controlling the discharge of fluid from the brake pipe, of a valve device subject to the opposing pressures of the brake pipe and the equalizing reservoir and adapted upon the equalizing reservoir pressure reducing at a greater rate than the brake pipe pressure to first cut off communication through which said pressure is reduced and then open said communication upon a predetermined increase in equalizing reservoir pressure.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,501. HOSE-REEL. LARS M. TWITE, Colfax, Wash. Filed May 29, 1916. Serial No. 100,601. (Cl. 242—86.)



1. In an apparatus for the purpose set forth, the combination of vertically disposed guides, a reel movable along said guides, a hose wound on said reel and having both ends free of the same, means for causing rotation of the reel as it moves along the guides, means between the reel and supply end of the hose for holding the hose taut, and means for limiting the downward movement of the reel.

2. In an apparatus for the purpose set forth, the combination of a reel, a hose wound thereon and having both ends free thereof, means for causing upward movement of the reel as the hose is unwound therefrom, means for causing downward movement of the reel and rewinding of the hose upon release of the hose, means between the reel and the supply end of the hose to keep the hose taut, and means for limiting the downward movement of the reel.

3. In an apparatus for the purpose set forth, the combination of a housing to move vertically therein, a reel disposed within the housing, a hose wound on the reel and having both ends free of the same, a stop on the interior of the housing near the lower end of the same, a finger upon the reel projecting beyond the periphery of the same

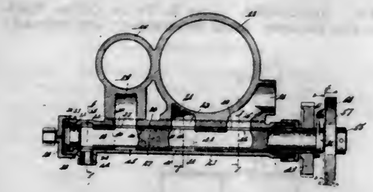
to engage said stop, and means for causing rotation of the reel as it moves vertically within the housing whereby to wind or unwind the hose.

4. In an apparatus for the purpose set forth, the combination of a housing, a reel mounted within the housing and having two concentric members of different diameters, the larger member having an opening in its end adjacent the smaller member, a hose wound upon the two members of the reel and passing through the said opening, a tension device engaging that portion of the hose passing from the smaller member of the reel, and means for effecting vertical movement and rotation of the reel to automatically wind and unwind the hose.

5. In an apparatus for the purpose set forth, the combination of a housing, a column rising from said housing, a reel mounted within the housing, a hose wound upon the reel and extending upward within said column, means for effecting a rotary movement of the reel to permit unwinding of the hose when a pull is exerted on the hose, an idler in the column over which the hose passes, a hanger pivoted in the column above said idler, and a keeper carried by the lower end of the hanger and adapted to coact with said idler to hold the hose against movement.

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1,228,502. ROTARY VALVE FOR ENGINES. WILLIAM W. VANCE, Chicago, Ill. Filed Nov. 19, 1914. Serial No. 872,979. (Cl. 121—35.)



1. The combination with two continuously rotatable relatively rotatably shiftable valve members, of means for rotatably shifting said valve members relatively to each other during rotation thereof, said last mentioned means comprising a plurality of pivotally connected links connecting said valve members; and means for tilting said links, substantially as described.

2. The combination with two continuously rotatable relatively rotatably shiftable valve members, of means for rotatably shifting said valve members relatively to each other during rotation thereof, said last mentioned means comprising a toggle mechanism connecting said valve members; and means for actuating said toggle mechanism, substantially as described.

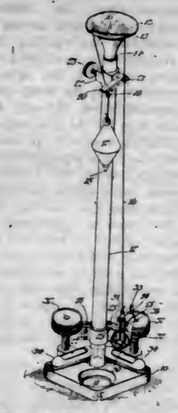
3. The combination with two continuously rotatable relatively rotatably shiftable valve members, of means for rotatably shifting said valve members relatively to each other during rotation thereof, said last mentioned means comprising a toggle mechanism connecting said valve members; means for operating said toggle mechanism; and manually controlled means for regulating the operation of said toggle mechanism, substantially as described.

4. The combination with two continuously rotatable relatively rotatably shiftable valve members, of cam operated means for rotatably shifting said valve members relatively to each other during rotation thereof, substantially as described.

5. The combination with two continuously rotatable relatively rotatably shiftable valve members, of means for rotatably shifting said valve members relatively to each other during the rotation thereof, said last mentioned means comprising a plurality of pivotally connected links connecting said valve members; and a cam for actuating said links, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

1,228,503. APPARATUS FOR MEASURING THE HARDNESS OF METAL, &c. LEONARD WALDO, Plainfield, N. J., assignor to Palo Company, New York, N. Y., a Corporation of New York. Filed Nov. 7, 1916. Serial No. 129,928. (Cl. 265—13.)



1. An apparatus of the class described comprising a supporting structure, an elevated member thereon having two horizontally-spaced thread guides, a lower member having a thread guide, a light flexible strand drawn through the respective guides and flexed about said elevated member, a plummet secured to the end of that portion of the strand depending through the lower guide, said plummet having a conical impression point, and means for releasably holding the other end of the strand to maintain the plummet temporarily suspended.

2. An apparatus of the class described comprising a supporting structure, an elevated member thereon having two horizontally-spaced thread guides, a lower member having a thread guide, said elevated member being adjustable to vary the position of the guides thereof in relation to the lower guide, a light flexible strand drawn through the respective guides and flexed about said elevated member, a plummet secured to the end of that portion of the strand depending through the lower guide, said plummet having a conical impression point, and means for releasably holding the other end of the strand to maintain the plummet temporarily suspended.

6. An apparatus of the class described comprising a base, a column thereon, a rotatively adjustable head having therein spaced apertures, a thread guide eye, a support therefor adjustably mounted on the column, a suspension strand adapted to be passed through said apertures and flexed upon the head, one end of the strand being threaded through the guide eye, a pendant point-bearing weight on such end of the strand, and means for releasably holding the other end of the strand, said means being adjustably mounted on the column.

[Claims 3 to 5, 7, and 8 not printed in the Gazette.]

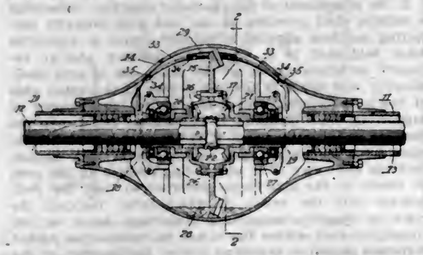
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1,228,504. MOTOR-VEHICLE DRIVING-AXLE. SIDNEY D. WALDON, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 1, 1912. Serial No. 712,825. (Cl. 74—34.)

1. In a motor vehicle driving axle, the combination of a tubular axle casing, differential mechanism including a housing mounted in bearings therein, shafts connected to said mechanism and having bearings for their inner ends in said housing, a driving wheel mounted on said housing, and means for catching oil from said wheel and feeding it to said shafts adjacent their bearings in said housing.



2. In a motor vehicle driving axle, the combination of a tubular axle casing, differential mechanism including a housing mounted in bearings therein, shafts connected to said mechanism and having bearings for their inner ends in said housing, a driving wheel mounted on said housing, and means for catching oil from said wheel and feeding it around said differential housing bearings to the shafts adjacent their bearings in said housing.



3. In a motor vehicle driving axle, the combination of a tubular axle casing, differential mechanism including a housing having sleeves mounted in separated bearings therein, shafts connected to said mechanism and having bearings in said sleeves, said shafts being exposed within the axle casing at the outer sides of said separated bearings, a drive wheel mounted on said housing, and an oil catcher adapted to transfer oil from adjacent the periphery of said wheel to the exposed parts of said shafts at points immediately at the outer sides of said separated bearings.

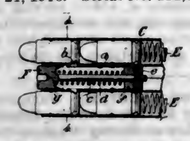
4. In a motor vehicle driving axle, the combination of a tubular axle casing, differential mechanism including a housing having sleeves mounted in separated bearings therein, shafts connected to said mechanism and having bearings in said sleeves, said shafts being exposed within the axle casing at the outer sides of said separated bearings, a drive wheel mounted on said housing, and an oil catcher detachably secured to the interior of the axle casing and comprising a receiving trough and feeding channels, said catcher being adapted to transfer oil from adjacent the periphery of said wheel to the exposed parts of said shafts whereby the rotation of said differential mechanism and shafts will cause a constant circulation of oil through the shaft bearings and differential gears.

5. In a motor vehicle driving axle, the combination of a tubular axle casing, differential mechanism including a rotatable housing mounted in said casing, axle shafts in said casing having bearings for their inner ends in said housing, said shafts being adapted to rotate simultaneously with or relatively to said housing, a driving wheel on said housing, and means to catch oil from said driving wheel and feed it to said shafts adjacent the bearings in said housing.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,505. LOADING-PACK FOR REVOLVERS. JOSEPH H. WESSON, Springfield, Mass., assignor to Smith & Wesson, Springfield, Mass., a Voluntary Association. Filed Sept. 21, 1916. Serial No. 121,411. (Cl. 42—89.)



1. A loading pack for revolvers comprising a cartridge carrier having a plurality of elongated cartridge chambers grouped to correspond with the chambers in the cylinder of the revolver, springs for pressing the cartridges forward, and retaining means for normally holding the cartridges adapted to coact with the cylinder whereby to be automatically released upon introducing the cartridges into the chambers of the cylinder.

2. A loading pack for revolvers comprising a cartridge carrier having a plurality of elongated cartridge chambers grouped to correspond with the chambers in the cylinder of the revolver, springs for pressing the cartridges forward, retaining means for normally holding the cartridges comprising spring catches, and releasing means comprising a part displaced by engagement with the cylinder of the revolver and engaging said catches to retract them.

3. A loading pack for revolvers comprising a cartridge carrier having a plurality of elongated cartridge chambers grouped to correspond with the chambers in the cylinder of the revolver, springs for pressing the cartridges forward, spring catches for normally holding the cartridges, and a spring-pressed plunger engaging said catches to retract them when displaced by contact with the cylinder of the revolver.

4. A loading pack for revolvers comprising a cartridge carrier having a plurality of elongated cartridge chambers grouped to correspond with the chambers in the cylinder of the revolver, springs for pressing the cartridges forward, spring catches for normally holding the cartridges, said catches having beveled heads, and releasing means comprising a plunger having an annular flange engaging said beveled heads and adapted on being pressed back by contact with the cylinder of the revolver to release said catches.

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1,228,506. PISTOL-STOCK. JOSEPH H. WESSON, Springfield, Mass., assignor to Smith & Wesson, Springfield, Mass., a Voluntary Association. Filed Dec. 29, 1916. Serial No. 139,544. (Cl. 42—71.)



1. A pistol, the grip of which comprises a middle frame and lateral stocks embracing the frame between them, the frame shaped and adapted to receive the smallest stocks to be applied as cheek pieces to its opposite sides so as to expose the frame between them, and larger stocks adapted to fit the frame, and extended beyond it and meeting each other whereby to form a longer and larger grip.

3. A pistol, the grip of which comprises a middle frame and lateral stocks embracing the frame between them, the frame shaped and adapted to receive the smallest stocks to be applied as cheek pieces to its opposite sides so as to expose the frame between them, and having a portion of its rear tang recessed, and a filling piece for filling said recess, having a lug entering a socket in said tang, and a fastening pin passing through said lug and tang to hold the filling piece in place, and larger stocks adapted when said filling piece is removed to fit the frame, and having a portion fitting into said recess.

5. A pistol, the grip of which comprises a middle frame and lateral stocks embracing the frame between them, the frame shaped and adapted to receive stocks to be applied as cheek pieces to its opposite sides so as to expose the frame between them, and having a portion of its rear tang cut away, the cut away portion terminating with an undercut, and stocks adapted to fit the frame and having rear walls entering into such cut away portion, the upper edges of said rear walls entering beneath and conforming to said undercut.

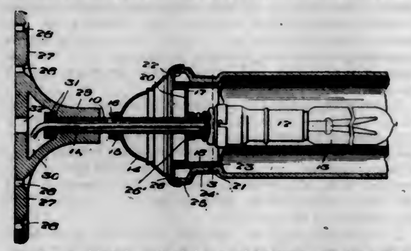
[Claims 2 and 4 not printed in the Gazette.]

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1,228,507. ILLUMINATED SIGN. FREDERICK W. WILSON, Elmhurst, N. Y. Filed Jan. 26, 1916. Serial No. 74,340. (Cl. 240—81.)

1. In combination, a globe, a globe-supporting member, a collar adapted to encircle one end of said globe and

overlap said globe-supporting member, and a cap movable longitudinally of the globe supporting member and encircling and engaging about said collar to lock the same in place and retain that portion of the collar encircling the end of the globe in clamping position thereabout.



2. In combination, a globe, a globe-supporting member, a collar adapted to encircle one end of the globe and overlap said globe-supporting member, and a cap movable to and from said collar and encircling and engaging that portion of the collar which encircles the globe to retain the collar in clamping position thereabout.

3. In combination, a globe having an open end, a globe-supporting member having an outwardly projecting portion extending into and engaging the inner walls of the open end of the globe, said outwardly extending portion having substantially the same external dimensions as the internal dimensions of the open end of said globe to form an enlarged bearing surface between the globe and said outwardly extending portion, a collar adapted to engage about one end of the globe and overlap said globe-supporting member, and means for locking said collar in position.

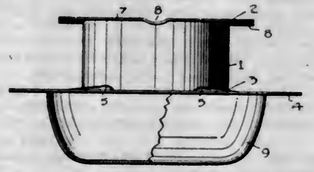
4. In combination, a globe having an open end, the opening through which is substantially of uniform diameter throughout, a globe-supporting member having an outwardly projecting portion of substantially the same diameter throughout the opening in the open end of said globe, said projecting portion being circular in cross-section, said globe being adapted to be inserted over the outer end of said outwardly extending portion of the globe-supporting member, a collar encircling one end of the globe and overlapping said supporting member, and a cap engaging said collar to lock the same in position.

5. In combination, a globe, a globe-supporting member having a tapering portion adapted to extend into and fitting the open end of the globe, a split collar adapted to encircle said globe adjacent its open end and overlap said globe-supporting member, and a cap for locking the collar in position.

[Claims 6 to 15 not printed in the Gazette.]

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1,228,508. ASH-RECEIVER. JOHN S. WISE, Jr., New York, N. Y. Filed May 28, 1915. Serial No. 30,873. (Cl. 131—51.)



1. An attachment of the character described embodying a tubular shell provided at one end with laterally projecting members adapted to support cigars or cigarettes when said shell is in upstanding position, and an extensive peripheral flange at the other end of said shell, whereby said flange is adapted to rest on the upper edge of bowls or vessels of various sizes for the purpose of supporting the attachment in coöperative relation to the bowl or vessel with which it is associated, said attachment being mountable upon said vessel in such manner that the shell may be in upstanding relation to the bowl or vessel or the attachment inverted so that the shell depends into the vessel, in which latter instance the cigar or cigarette supporting projections serve to centralize the shell within the vessel.

2. An attachment of the character described embodying a tubular shell provided at one end with laterally projecting members adapted to support cigars or cigarettes when said shell is in upstanding position, and an extensive peripheral flange at the other end of said shell, whereby said flange is adapted to rest on the upper edge of bowls or vessels of various sizes for the purpose of supporting the attachment in coöperative relation to the bowl or vessel with which it is associated, said attachment being mountable upon said vessel in such manner that the shell may be in upstanding relation to the bowl or vessel or the attachment inverted so that the shell depends into the vessel, in which latter instance the cigar or cigarette supporting projections serve to centralize the shell within the vessel, in combination with a perforate partition extending across the interior of the shell to preclude the cigars or cigarettes from falling into the bowl or vessel.

3. An attachment of the character described embodying a tubular shell provided at one end with laterally projecting members adapted to support cigars or cigarettes when said shell is in upstanding position, and an extensive peripheral flange at the other end of said shell, whereby said flange is adapted to rest on the upper edge of bowls or vessels of various sizes for the purpose of supporting the attachment in coöperative relation to the bowl or vessel with which it is associated, said attachment being mountable upon said vessel in such manner that the shell may be in upstanding relation to the bowl or vessel or the attachment inverted so that the shell depends into the vessel, in which latter instance the cigar or cigarette supporting projections serve to centralize the shell within the vessel, in combination with a perforate partition extending across the interior of the shell to preclude the cigars or cigarettes from falling into the bowl or vessel, and cigar retaining means associated with the peripheral flange for supporting a cigar or cigarette thereon when the attachment is in inverted position.

4. An attachment of the character described embodying a tubular shell provided at one end with an extensive peripheral flange, whereby said flange is adapted to rest upon the upper edge of bowls or vessels of various sizes for the purpose of supporting the attachment in such position that the shell projects downwardly into the vessel with which the attachment is associated, and lateral projections at the lower end of the shell for centralizing said shell within the vessel, in combination with means associated with the peripheral flange for supporting a cigar or cigarette thereon, and a perforate partition extending across the interior of the shell for precluding such cigar or cigarette from falling into the vessel.

5. In an attachment of the character described, the combination of a tubular shell, provided at one end with means, extending beyond the edge of the shell, for supporting a cigar or cigarette and having at its other end a broad peripheral flange adapted to rest on the upper edge of bowls or vessels of widely varying diameters for the purpose of supporting the attachment in coöperative relation to the bowl or vessel with which it is associated.

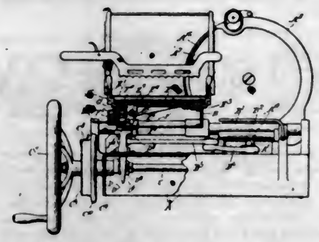
[Claims 6 and 7 not printed in the Gazette.]

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1,228,509. SLICING-MACHINE. WALLACE B. WOLFF, Chicago, Ill., and ERNEST K. HOOD, Indianapolis, Ind., assignors to American Slicing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 31, 1915. Serial No. 18,212. (Cl. 17—24.)

1. A slicing machine comprising a reciprocating carriage, a feed carriage mounted for movement therealong, a power shaft and a driving connection between it and the reciprocating carriage, an eccentric cam mounted on the power shaft, means for varying the eccentricity of said cam, a feed lever controlled at one end by the eccentric cam, and means responsive to the rocking of this feed lever for feeding the feed carriage forward along the reciprocating carriage.





2. The combination with a reciprocating carriage of a driving power shaft therefor, a feed carriage mounted for movement therealong, a lever mounted for oscillation adjacent one end of the excursion of the reciprocating carriage, an adjustable cam mounted on the power shaft in opposition to one end of said lever, a tappet plate on the upper end of the lever, a roller slidable upon the reciprocating carriage in opposition to said plate, and a clutch interposed between the roller and the feed carriage.

3. The combination with a reciprocating carriage of a driving power shaft therefor, a feed carriage mounted for movement therealong, a lever mounted for oscillation adjacent one end of the excursion of the reciprocating carriage, an adjustable cam mounted on the power shaft in opposition to one end of said lever, a tappet plate on the upper end of the lever, a driving member mounted on the reciprocating carriage in engagement with the feed carriage and in opposition to the tappet plate.

4. The combination with a reciprocating carriage of a driving power shaft therefor, a feed carriage mounted for movement therealong, a lever mounted for oscillation adjacent one end of the excursion of the reciprocating carriage, an adjustable cam mounted on the power shaft in opposition to one end of said lever, a tappet plate on the upper end of the lever, a roller slidable upon the reciprocating carriage in opposition to said plate, a clutch interposed between the roller and the feed carriage, clutch means for resisting rearward movement of the feed carriage, and a trip for arresting the operation of the clutch when the feed carriage has reached the predetermined limit of its movement.

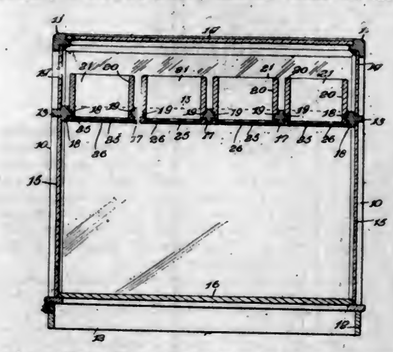
5. The combination with a reciprocating carriage of a driving power shaft therefor, a feed carriage mounted for movement therealong, a lever mounted for oscillation adjacent one end of the excursion of the reciprocating carriage, a cam mounted on the power shaft in opposition to one end of said lever, a tappet plate on the upper end of the lever, a roller slidable upon the reciprocating carriage in opposition to said plate, and a clutch interposed between the roller and the feed carriage, clutch means for resisting rearward movement of the feed carriage, and a trip for arresting the operation of the clutch when the feed carriage has reached the predetermined limit of its movement.

[Claims 6 to 17 not printed in the Gazette.]

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1,228,510. DISPLAY-CASE. JAMES M. WRIGHT, Tama, Iowa. Filed May 25, 1916. Serial No. 99,870. (Cl. 45—71.)

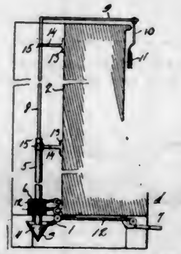
A display case including a cabinet having inclosing walls and provided with intermediate end frame members and an intermediate side frame member arranged in a horizontal plane, said intermediate end frame members and side frame member being provided with enlarged heads directed inwardly of the walls of the cabinet, the inner face of the head portion of the side frame member being unobstructed and the inner faces of the end frame members being provided with inwardly extending guide ribs, a plurality of intermediate horizontal supports arranged within the cabinet between the end frame members and engaging the side frame member at one end, each end frame member and each intermediate support being provided with oppositely disposed guiding ribs, a plurality of drawers slidably mounted within the casing



and provided with guiding channels adapted to receive the guiding ribs, the sides of the drawers adapted to slidably engage the body portions of the end frame members and the intermediate frame members and to bear at one end against the inner face of the side frame member, whereby the drawers are maintained in spaced relation to the walls of the cabinet to permit the circulation of air around the drawer.

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1,228,511. MUSIC-TURNER. ANTHONY J. YAKLICH, St. Peter, Mont. Filed June 5, 1916. Serial No. 101,824. (Cl. 84—17.)



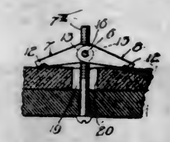
A music leaf turner comprising a bracket to be connected to a piano, two pedals pivotally supported by the bottom of the piano, a bearing carried by the bracket, a tube having its lower end journaled in the bearing, a pulley fixed to the tube, two cords each having one of their ends connected to one of the pedals and their other ends wound in opposite directions on the pulley and secured thereto, a rod adjustably connected to the tube, a horizontal arm carried by the upper end of the rod, a second rod pivotally connected to the forward end of said arm and having a fork carried thereby for engaging a music leaf, said pedals being adapted for successive operation to turn the tube and thus the music leaf in opposite directions.

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1,228,512. TOGGLE-BOLT. LOTHAR R. ZIFFERER, Ridgewood, N. J. Filed Oct. 21, 1916. Serial No. 126,978. (Cl. 85—3.)

1. In a device of the kind described, the combination of a bolt, a nut threaded on the bolt, and coaxially pivoted wings carried by the nut, the wings being U-shaped

in cross section and arranged to fold upon the bolt with the side walls of the wings overlapping the bolt, there being means independent of the bolt for limiting the unfolding movement of the wings with respect to each other, substantially as described.



2. In a device of the kind described, the combination of a bolt, a nut threaded on the bolt, co-axially pivoted wings carried by the nut, and a shoulder on one wing arranged to engage with the other wing to limit the opening movement of the wings, each of the wings at its pivotal end having a portion thereof cut away to provide an opening through which the bolt may protrude without engaging with the wings when the wings are in distended relation, substantially as described.

4. A toggle head having wings with bearing surfaces normally in such angular relation to each other that they engage with a wall only at their extremities, the engaging portions of the bearing surfaces being notched to provide additional points of contact, substantially as described.

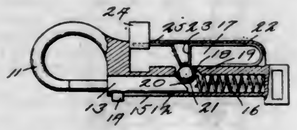
6. In a device of the kind described, the combination of a bolt, and wings pivotally mounted in operative relation to the bolt, each wing being provided with a wall engaging surface, there being means independent of the bolt for arresting the swinging movements of the wings at a point where the wings remain always in such relative angular relation that they contact with the wall only at their extremities, substantially as described.

9. In a device of the kind described, the combination of a bolt, a nut threaded on the bolt, wings pivoted to the nut, and a shoulder on one wing arranged to engage with the other wing to limit the distending movements of the wings, substantially as described.

[Claims 3, 5, 7, and 8 not printed in the Gazette.]

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1,228,513. SAFETY-SNAP. ADOLPH F. ANDERSON, Conde, S. D. Filed May 19, 1916. Serial No. 98,668. (Cl. 24—241.)

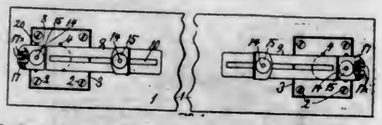


A snap hook comprising a body including a hook and having an axial bolt-way and a chamber connected to said bolt-way by a passage, a locking bolt slidably mounted in the bolt-way, said passage having a beveled wall disposed inwardly of the inner end of the bolt when the latter is in locking position, a locking ball normally interposed between the inner end of the locking bolt and the beveled wall of the passage to lock the bolt against retraction, a spring in said bolt-way operating on the ball to hold the latter in locking position, and means mounted in the chamber and operable from the exterior of the body to force said ball out of locking position to permit retraction of the bolt.

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1,228,514. ADJUSTABLE SHADE-BRACKET AND CURTAIN-SUPPORT. MARCUS THEODORE ANDERSON, St. Paul, Minn. Filed Aug. 4, 1916. Serial No. 113,195. (Cl. 156—24.)

1. In a device of the class described, two plates and means for securing them upon window casings, each plate having a substantially central key-hole shaped aperture and two oppositely arranged studs adjacent thereto, upon the inner side of the plate, a slotted arm having at one end a head adapted for insertion in the aperture and provided with a finger adapted to rest alternately upon either stud, to hold the arm alternately in two reverse directions, and a curtain bracket slidably secured upon each of said arms.



2. In a device of the class described, two plates and means for securing them upon window casings, each plate having a substantially central key-hole shaped aperture and two oppositely arranged studs, adjacent thereto, upon the inner side of the plate, a slotted arm having at one end a head adapted for insertion in the aperture and provided with a finger adapted to rest alternately upon either stud to hold the arm alternately in two reverse directions, and a curtain bracket slidably secured upon each of said arms, and also a bracket for shade rollers slidably secured upon said arm.

3. In a device of the class described, two metal plates and means for securing them upon window casings, each plate having two key-hole shaped apertures and near one of the apertures two studs upon the inner side, the outer side having two cavities near the other aperture, an arm having at one end a stem adapted to enter the aperture having the studs near it and provided with a finger arranged to rest alternately upon either one of the studs to hold the arm alternately in opposite horizontal positions, a curtain rod bracket and a shade roller bracket mounted upon each slotted arm, means for holding said brackets adjustably on the arm, said holding means of the curtain bracket being adapted to also enter the other aperture in the plate and hold the bracket to said plate, said bracket having means entering the cavities in the plate to hold the brackets in proper position relative to the curtain rod.

4. In a device of the class described, two metal plates and means for securing them upon window casings, each plate having two key-hole shaped apertures and near one of the apertures two studs upon the inner side, the outer side having two cavities near the other aperture, an arm having at one end a stem adapted to enter the aperture having the studs near it, and provided with a finger arranged to rest alternately upon either one of the studs to hold the arm alternately in opposite horizontal positions, a curtain rod bracket and a shade roller bracket mounted upon each slotted arm, means for holding said brackets adjustably on the arm, said holding means of the curtain bracket being adapted to also enter the other aperture in the plate and hold the bracket to said plate, said bracket having means entering the cavities in the plate, to hold the bracket in proper position relative to the curtain rod, said holding means for the curtain rod consisting of a bolt and nut thereon, the bolt having a head adapted to enter the aperture and engage the inner side of the plate at the narrow portion of the aperture.

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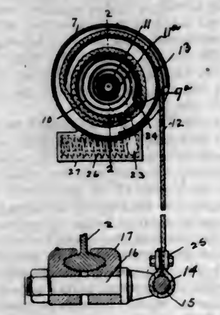
1,228,515. SNUBBER. WILLIAM N. BARRETT, Meadville, Pa. Filed May 18, 1916. Serial No. 98,282. (Cl. 21—105.)

1. In a snubber, the combination of the members forming a means of attachment to an axle and a car body; a curved friction surface carried by one of the members; a friction strap operating over said surface and having one end secured to the opposite member; and a rotatively mounted spring device arranged within the curve of the friction surface operating upon the opposite end of the strap, and increasing the braking action of the strap as the members separate.

2. In a snubber, the combination of the members forming a means of attachment to an axle and a car body; a



curved friction surface carried by one of the members; a friction strap operating over said surface and having one end secured to the opposite member; a wheel rotatively mounted within the curve of the friction surface to which the opposite end of the strap is secured; and a spring resisting the movement of the wheel.



3. In a snubber, the combination of the members forming a means of attachment to an axle and a car body; a cover plate rotatively mounted; a curved friction surface carried by the cover plate; a friction strap operating over the surface and having one end secured to the opposite member; a spring operating on the opposite end of the strap; and means for rotatively adjusting the cover plate to vary the length of friction surface engaged.

4. In a snubber, the combination of the members forming a means of attachment to an axle and a car body; a friction surface carried by one of the members; a friction strap operating over said surface and having one end secured to the opposite member; a resisting device operating on the opposite end of the strap and inducing frictional engagement between the strap and friction surface; and an auxiliary resisting device adapted to augment the frictional engagement between the strap and friction surface at a point in the movement of the strap.

5. In a snubber, the combination of the members forming a means of attachment to an axle and a car body; a friction surface carried by one of the members; a friction strap operating over said surface and having one end secured to the opposite member; a spring operating on the opposite end of the strap; a buffer spring; and means for locking the strap with the buffer spring at a point in the movement of the strap.

[Claims 6 to 9 not printed in the Gazette.]

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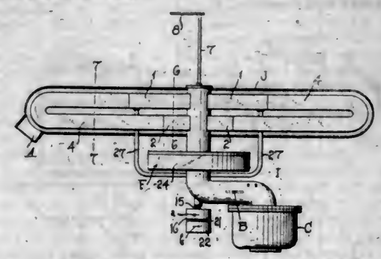
1,228,516. METHOD OF MAKING LEAD ARSENATE. EDWIN O. BARSTOW and JOSEPH A. CAVANAGH, Midland, Mich., assignors to Dow Chemical Company, Midland, Mich., a Corporation of Michigan. Filed Aug. 2, 1916. Serial No. 112,727. (Cl. 23—13.)

The method of making lead arsenate which consists in directly reacting, in the presence of water, between arsenic acid and sublimed lead monoxid.

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1,228,517. FUEL-HEATING DEVICE. JAMES H. BATCHELOR, Savannah, Ga., assignor to Carl Espy, Savannah, Ga. Filed June 17, 1916. Serial No. 104,245. (Cl. 257—241.)

1. A fuel heating device, comprising headers in communication with an intake pipe and in spaced relation longitudinally of the intake pipe, one of said headers being provided with an outlet port, a pipe disposed in an irregular path in communication with the outer ends of the headers, a valve for controlling the flow from the intake pipe to the header provided with the outlet port, and through the pipe connecting the headers, and a jacket incasing the intake pipe, the headers and the pipe connecting the headers, said jacket being in communication with a source of heat.



2. A fuel heating device comprising headers in communication with an intake pipe and in spaced relation longitudinally of the intake pipe, one of said headers being provided with an outlet port, a pipe disposed in an irregular path in communication with the outer ends of the headers, a valve for controlling the flow from the intake pipe to the header provided with the outlet port and through the pipe connecting the headers, a baffle plate partially intersecting the header provided with the outlet port and positioned at a point intermediate said outlet port and the outer end of the header, and a jacket incasing the intake pipe, the headers and the pipe connecting the headers, said jacket being in communication with a source of heat.

3. A fuel heating device comprising headers in communication with an intake pipe and in spaced relation longitudinally of the intake pipe, one of said headers being provided with an outlet port, a pipe disposed in an irregular path in communication with the outer ends of the headers, a valve for controlling the flow from the intake pipe to the header provided with the outlet port and through the pipe connecting the headers, a baffle plate partially intersecting the header provided with the outlet port and positioned at a point intermediate said outlet port and the outer end of the header, a return pipe leading from the header at a point in advance of the baffle plate and discharging within the intake pipe, and a jacket incasing the intake pipe, the headers and the pipe connecting the headers, said jacket being in communication with a source of heat.

4. A fuel heating device comprising headers in communication with an intake pipe and in spaced relation longitudinally of the intake pipe, one of said headers being provided with an outlet port, a pipe disposed in an irregular path in communication with the outer ends of the headers, a valve for controlling the flow from the intake pipe to the header provided with the outlet port and through the pipe connecting the headers, said valve being hollow and provided with a filler of filtering material, and a jacket incasing the intake pipe, the headers and the pipe connecting the headers, said jacket being in communication with a source of heat.

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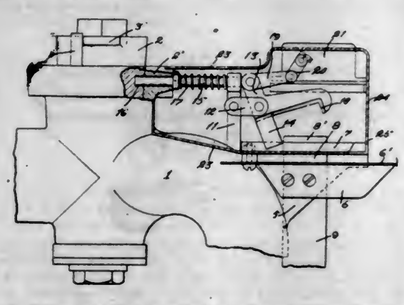
1,228,518. REGISTERING-LOCK FOR VALVES. GEORGE E. BATEMAN, Alameda, Cal. Filed May 22, 1916. Serial No. 99,042. (Cl. 235—94.)

1. In combination with a fluid controlling valve, locking means for preventing the operation of the same, a key for operating said locking means, and mechanism associated with said locking means and actuated thereby for registering each operation thereof.

2. In combination with a fluid controlling valve having a movable member, means for locking said member to prevent movement thereof, a key for operating said locking means, and mechanism associated with said locking means and actuated thereby for registering each operation of the movable valve member.

3. In combination with a faucet having means for supporting a receptacle to be filled therefrom, means for preventing the operation of said faucet when no receptacle

is associated therewith, and mechanism associated with said means and operated thereby for registering each operation of said faucet.



4. In combination with a faucet having means for supporting a receptacle to be filled therefrom, locking means for normally preventing the operation of said faucet, means associated with said receptacle for actuating said locking means to permit the operation of the faucet, and mechanism for registering each operation of said locking means.

5. In combination with a faucet having means for supporting a receptacle to be filled therefrom, locking means for normally preventing the operation of said faucet, means associated with said receptacle for actuating said locking means to permit the operation of the faucet, and mechanism associated with said locking means and operated thereby for registering each operation of said faucet.

[Claims 6 to 10 not printed in the Gazette.]

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1,228,519. STOVE. BERRY A. BAXTER, Mansfield, Ohio, assignor to New Method Stove Company, Mansfield, Ohio, a Firm composed of Henry H. Sanford, Bernhard R. Ahrent, Edwin D. Baxter, and Berry A. Baxter. Filed Aug. 19, 1915. Serial No. 46,238. (Cl. 126—89.)

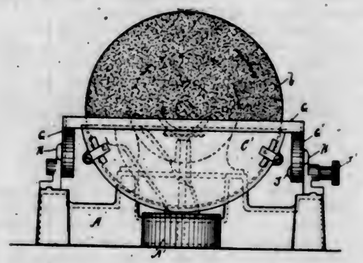


1. In a heating apparatus, a body including a front wall formed with an opening, a rear wall, and a top, a curved deflector extending from the front wall adjacent the lower edge of the open end inclining upwardly and rearwardly within the body and terminating in spaced relation to the rear wall, the upper edge of the deflector being approximately in line with the upper edge of the front wall opening, a burner arranged within the body in approximate alinement with the upper edges of the deflector and the front wall opening, and adjacent the front wall, a baffle plate secured to the front wall immediately above the opening and extending transversely the body with its rear wall exceeding the minimum distance between the rear wall and curved deflector, said burner being formed to direct the flame therefrom toward the space intermediate the free ends of the curved deflector and baffle plate but at an angle to the rear wall, whereby air currents are directed through the front wall opening above and below the burner and between the deflector and rear wall wholly to one side of the burner, a hollow member secured to the top of the body and being in communication with the body and with the atmosphere, said member having a passage in parallelism with the top of the body, with the passage opening to the body and having an outlet beyond the body, and a damper in the member to control the atmospheric communication of the body.

2. In a heating apparatus, a body having an open front, an upwardly and rearwardly curved deflector arranged in the body and coextensive in height with the opening in the front, a burner arranged in line with the upper edge of the deflector and the upper edge of the open front, an opening in the body above and to the rear of the burner, a hollow member independently secured to the top of the body and having an outlet in line with the opening of the top of the body and an outlet passage arranged in parallelism with the top of the body, said outlet passage being in open communication with the opening at the top of the body, and a damper mounted in said member to control communication between said passage and the opening from the hollow member.

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1,228,520. SANDPAPERING-MACHINE. GEORGE J. BEHRINGER, Erie, Pa. Filed Jan. 3, 1917. Serial No. 140,451. (Cl. 51—13.)



1. In a machine of the class described, a hollow base-plate, a horizontal fan-drum having a discharge opening into said hollow base-plate, a horizontal shaft mounted on said base-plate above said fan-drum, a disk on said shaft, a plate to close the upper end of said fan-drum, an air duct secured to said fan-drum covering-plate, a vertical shaft in said air duct and supported in suitable bearings on said air-duct, a friction wheel on the upper end of said vertical shaft and engaging the rear side of said disk, a fan on said vertical shaft within said drum, a semi-circular plate supported by said air-duct and having an opening therethrough into said air-duct, a flange around the semi-circular edge of said plate, and a semi-circular plate adapted to fit into said flange in front of said disk, substantially as set forth.

2. In a machine of the class described, a horizontal fan-drum, a plate to cover the upper end of said drum, a disk, a semi-circular shield inclosing the lower portion of said disk and having a segmental groove in the rear wall thereof behind said disk at the corner thereof adjacent to the upwardly moving edge of said disk, an air-duct leading from said segmental groove through the central portion of said fan-drum cover and supporting said semi-circular shield, a fan in said drum, a shaft secured to said fan and extending upwardly through a portion of said air duct, a friction-wheel on said shaft engaging the rear side of said disk, substantially as set forth.



1,228,521. ROCKING-CHAIR CLAMP. SILAS D. BELL, Childress, Tex., assignor to J. H. Mowrey, Childress, Tex. Filed Aug. 9, 1915. Serial No. 44,430. (Cl. 155—18.)



The combination with a chair leg and a rocker, of a clamp comprising two curved resilient metal plates, each provided with a forward end to partly inclose the leg and a lower gripping end to engage the side of a rocker, a series of perforations traversing the body of each plate, a bolt traversing registering perforations of the plates, and a nut adapted when advanced on said bolt to clamp the plates together upon the leg and upon the sides of the rocker.

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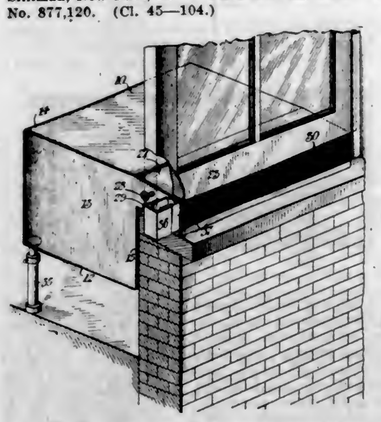
1,228,522. FLYING TORPEDO. EMILE BERLINER, Washington, D. C. Filed Sept. 30, 1909. Serial No. 520,293. (Cl. 102—2.)



A self controlled flying torpedo including in combination, a body portion, laterally projecting planes, a torpedo proper mounted on said body portion and projecting in front of said planes, and means for propelling said body portion, said body portion having an inclined water plane or planes to cause skipping on the surface of the water at frequent and regular intervals.

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1,228,523. PROVISION-SAFE. WILLIAM N. BEST, New York, N. Y., assignor of one-half to Charles Herbert Silliman, New York, N. Y. Filed Dec. 14, 1914. Serial No. 877,120. (Cl. 45—104.)



1. A provision safe of substantially rectangular form and provided with an extension across one side thereof adjacent to the top, said extension having a partition subdividing the same into two superposed passages communicating at their outer ends with the outside atmosphere, a substantially vertical partition within said chamber and connecting at its upper end with said first mentioned partition, a substantially horizontal partition within said chamber and adjacent to the bottom thereof and connected to said second mentioned partition, said third mentioned partition having apertures therethrough whereby air may enter the lower passage and flow down one side and across the bottom and upwardly through said apertures and thence out the upper passage.

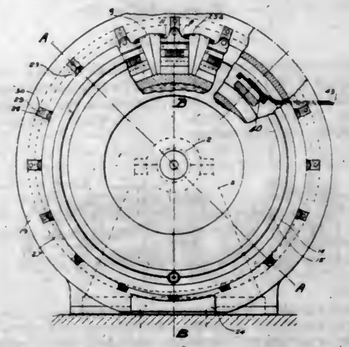
2. A provision safe comprising a substantially rectangular body having an extension along one side adjacent to the top thereof and adapted to rest upon a window-sill to partially support the device, an independent support adjacent to the opposite side of the body and a partition sub-dividing the space within said extension into superposed passages, each communicating with the outside atmosphere at its outer end and one having its inner end communicating with the lower portion of the body and the other communicating with the upper portion of the body.

3. A provision safe including a body of substantially rectangular form and an extension along one side thereof adjacent to the top and adapted to rest upon a window-sill and project through the window opening, a partition within said extension subdividing the latter into two superposed passages, a damper within each passage, a screen at the outer end of each passage and a partition within said body portion and extending from the inner end of said first mentioned partition downwardly toward the lower portion of said body.

4. A provision safe including a body of substantially rectangular form and an extension along one side thereof adjacent to the top and adapted to rest upon a window-sill and project through the window opening, a partition within said extension subdividing the latter into two superposed passages, a damper within one of said passages, a screen at the outer end of each passage and a passage within said body portion and connecting the inner end of one of said passages with the lower portion of said body and said extension having upon one side thereof a spacing device adjustable in width in accordance with the width of the window.

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1,228,524. TYPE-CASTING MACHINE. SHANKER ABAJI BHISEY, London, England, assignor to Sir Ratan Tata, London, England. Filed May 26, 1913. Serial No. 770,000. (Cl. 22—7.)



1. In type casting machines a continuously rotating mold wheel, type molds carried in the periphery of the mold wheel, a casting spout, an annular mold member interposed between the type molds and the casting spout, means for causing the cast types to be extruded from the mold cavities, a platform tangential to the mold wheel upon which the extruded types are deposited as the mold

wheel rotates and an inclinable extremity to said platform and means for inclining said extremity to cause said types to be delivered substantially as specified.

2. In type casting machines a continuously rotating mold wheel, type molds carried in the periphery of the mold wheel, a casting spout, an annular mold member interposed between the type molds and the casting spout, means for causing the cast types to be extruded from the mold cavities, and a platform tangential to the mold wheel, upon which the extruded types are deposited as the mold wheel rotates, an extremity of polygonal cross-section for said platform so arranged that the facea of the extremity form the end of the platform and means for rotating the extremity and discharging the types substantially as specified.

3. In type casting machines a continuously rotating mold wheel, type molds carried in the periphery of the mold wheel, a casting spout, an annular mold member interposed between the type molds and the casting spout, means for causing the cast types to be extruded from the mold cavities, a platform tangential to the mold wheel upon which the extruded types are deposited as the mold wheel rotates, an extremity of polygonal cross-section for said platform so arranged that the faces of said extremity form the extremity of the platform, means for rotating said first mentioned extremity and discharging the types, a chute down which the types pass and means for detaching the break pieces from the types as said types pass down the chute substantially as specified.

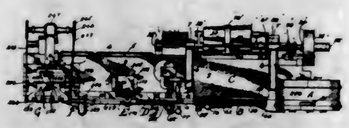
4. In type casting machines a continuously rotating wheel, type molds carried in the periphery of said mold wheel, a casting spout, an annular mold member interposed between the casting spout and the type molds, means for opening the molds after the types have been cast, extruding fingers adapted to enter the mold cavities, means for positioning the extruding fingers behind the types in the molds and means whereby the molds move relatively to the fingers and cause said fingers to extrude the types, a reciprocating platform upon which the types are extruded and a stationary platform tangential to the mold wheel to which the types on the reciprocating platform are transferred substantially as specified.

5. In type casting machines, a continuously rotating mold wheel, type molds carried by the mold wheel, a casting spout, a mold member interposed between the type molds and the casting spout, means for closing the molds and adjusting the matrices, movable nick forming protrusions located within the molds during casting and means for causing said nick forming protrusions automatically to move out of the molds to permit the cast types to be extruded substantially as specified.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,525. CONTINUOUS-ROD CIGARETTE-MACHINE. WILLIAM C. BRIGGS, Lynchburg, Va., assignor to United Cigarette Machine Co., Inc., Lynchburg, Va., a Corporation of Virginia. Filed Oct. 17, 1916. Serial No. 126,098. (Cl. 131—43.)



1. In a cigarette machine of the continuous rod type, a machine frame and an automatic tobacco feed unit cooperatively associated therewith, said feed unit embodying a tobacco receiving hopper, a tobacco chute and a trough-guide therebelow, the front wall of said chute being arranged below and in substantially the plane of the front wall of the tobacco hopper, and said feed unit being removably supported as a whole upon the machine frame.

2. In a cigarette machine of the continuous rod type, a machine frame having a top-plate and an automatic tobacco feed unit coöperatively associated therewith, said feed unit embodying a tobacco receiving hopper, a tobacco chute and a trough-guide all formed as a part of the feed unit, the front wall of said chute being arranged below and in substantially the plane of the front wall of the tobacco hopper, and said trough-guide having a vertically movable front wall to permit unrestricted access thereto, said feed unit being removably supported upon the top-plate of the machine frame.

3. In a cigarette machine of the continuous rod type, a machine frame, rod-forming instrumentalities carried thereby, and an automatic tobacco feed unit coöperatively associated therewith, said feed unit embodying a trough-guide and a tobacco hopper overlying and removably supported upon said frame and said feed unit having depending supporting legs at one end only, said legs abutting a vertical face of the machine frame, whereby the trough-guide will aline with the rod-forming instrumentalities when the feed unit is positioned upon the machine frame.

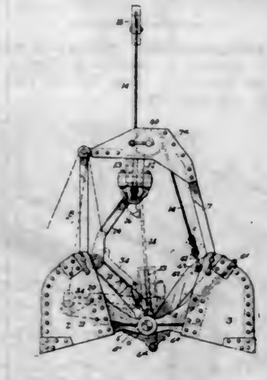
4. In a cigarette machine of the continuous rod type, a machine frame having a top plate, leg-supporting ledges below said plate, and a vertical bearing face between the said top-plate and ledges, an automatic tobacco feed unit coöperatively associated with said machine frame, said feed unit embodying a tobacco hopper overlying and removably supported upon said top plate and said hopper having depending supporting legs each resting at its lower end upon one of said leg-supporting ledges and engaging said bearing face.

5. In a cigarette machine of the continuous rod type, a machine frame having a top plate and leg supporting ledges therebelow, an automatic tobacco feed unit cooperatively associated therewith, said feed unit embodying a tobacco hopper and a trough-guide carried thereby, said hopper and trough-guide overlying and removably supported as a whole from said top plate, and the hopper having depending supporting legs each resting at its lower end upon one of said leg-supporting ledges.

[Claims 6 to 48 not printed in the Gazette.]

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1,228,526. HOISTING-BUCKET. EDGAR E. BROSIUS, Pittsburgh, Pa. Filed Apr. 5, 1916. Serial No. 89,051. (Cl. 37—30.)



1. A hoisting bucket comprising a central lifting member, bucket sections swung about the axis of said member, a cross head movable to position above and adjacent to the lifting member, coöperating latch means carried by the crosshead and by the lifting member, a toggle device connected to the crosshead and to the lifting member, and a stop member for said toggle device also carried by the lifting member, together with a stop chain connected to said lifting member and with one of the bucket sections, substantially as described.



2. A hoisting bucket comprising a central lifting member, bucket sections swung about the axis of said member, one of said sections being secured to said member, a crosshead movable to a position above and adjacent to the lifting member, coöperating latch means carried by the crosshead and by the lifting member, and a stop chain connected to the lifting member and to one of the bucket sections, substantially as described.

3. A hoisting bucket, comprising a central lifting member, two bucket sections swung at their upper inner corner portions about the axis of said member, link members pivotally connected at their lower ends with the upper outer corners of said sections and with each other at their upper ends, a cross-head over the lifting member and movable vertically toward and away from the same, latch means for connecting the cross-head to the lifting member, and a flexible suspension member connected at its end to one of the bucket sections at a point to cause an increasing pull directly upon said suspension member throughout at least the major portion of the opening movement of the bucket sections, substantially as described.

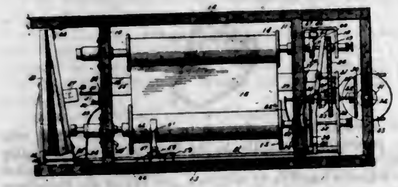
4. A hoisting bucket comprising a central lifting member, bucket sections carried thereby, a jointed frame to which the bucket sections are pivoted, a crosshead, latch means for engaging the crosshead with the lifting member, sheaves carried by the crosshead, other sheaves carried by said frame above the crosshead, and a flexible suspension members having its dead end portions carried around the sheaves on the crosshead and thence upwardly over the sheaves carried on said frame, and thence downwardly and connected at their ends to one of the bucket sections at points which cause an increasing pull directly on said suspension member during the opening movements of the bucket sections, substantially as described.

5. A hoisting bucket comprising a central lifting member, bucket sections carried thereby, a jointed frame to which the bucket sections are pivoted, a crosshead, latch means for engaging the crosshead with the lifting member, sheaves carried by the crosshead, other sheaves carried by said frame above the crosshead, and a flexible suspension member having its dead end portions carried around the sheaves on the crosshead and thence upwardly over the sheaves carried on said frame, and thence downwardly and connected at their ends to one of the bucket sections, said section having inwardly projecting members at its upper corner portions to which said ends are connected, substantially as described.

[Claim 6 not printed in the Gazette.]

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1,228,527. WINDING AND REWINDING MECHANISM FOR NOTE-SHEETS. PAUL I. BURKS, Louisville, Ky. Filed Apr. 19, 1915. Serial No. 22,377. (Cl. 84—166.)



1. In a pneumatic piano playing apparatus, a music roll, a take-up roll, a driving mechanism, a clutch between the driving mechanism and said rolls, a shifting lever connected to said clutch, a pneumatic, a connecting rod between the lever and the pneumatic, a tracker bar between the rolls over which the music sheet is adapted to pass, a flushing valve for the tracker bar comprising a spring leaf pivoted intermediate its ends and engaging at one end about said connecting rod, and means on the rod for striking the end of the link to open the valve when the connecting rod is moved by the pneumatic to shift the clutch into rewinding position.

2. In a pneumatic piano playing apparatus, a music roll, a take-up roll, a driving mechanism, a clutch between the driving mechanism and said roll, a shifting lever connected to said clutch, a pneumatic, a connecting rod between the lever and the pneumatic, a tracker-bar between the rolls over which the music sheet is adapted to pass, a flushing valve controlling an opening in the end of the tracker-bar and comprising a leaf pivoted intermediate its ends and engaging at its lower end about said connecting rod, and an abutment on said connecting rod for striking the lower end of the leaf to open the valve when the rod is moved in a direction to shift the clutch to drive the music roll.

3. In a pneumatic piano-playing apparatus, a music roll, a take-up mechanism, a driving mechanism, a clutch between the driving mechanism and the roll, a pneumatic, a connection between the pneumatic and the clutch, a tracker-bar between the rolls, and a flushing valve controlling an opening in the end of the tracker-bar and comprising a spring-leaf pivoted intermediate its ends, one of the ends closing the opening and the other engaging the connection between the pneumatic and the clutch, and resilient means for normally holding the valve closed, said valve being open when said connection is moved to shift the clutch to drive the music roll.

4. In pneumatic piano playing apparatus, a music roll, a take up roll, a tracker bar between the rolls over which the music sheet is adapted to pass, driving mechanism for the rolls, a clutch for alternately connecting the rolls to the mechanism, a brake for each roll, a shifting lever connected to the brakes and the clutch to alternately and oppositely apply the brakes to the rolls upon the operation of the clutch, a flushing valve for the tracker bar and having connection with said shifting lever, means for normally holding the shifting lever in position to drive the take up roll and to retain the flushing valve in closed position, and operating means for the shifting lever for moving the same to operate the clutch to drive the music roll and open said flushing valve, said shifting lever reversing the application of said brakes to prevent the racing of the take-up roll during the driving of the music-roll.

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1,228,528. POWER-TRANSMISSION BELT. MILTON D. CAMPBELL, Cincinnati, Ohio, assignor to The Perkins Campbell Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 31, 1916. Serial No. 75,227. (Cl. 74—63.)



1. A laminated power transmission belt comprising an inner lamina of leather, and an outer lamina of stretched and water proofed fabric webbing sewed and vulcanized to the leather lamina.

2. In a laminated power transmission belt the combination of an inner lamina of leather, and an outer lamina of stretched fabric webbing sewed and vulcanized to the leather lamina.

3. In combination in a power transmission belt an inner lamina of leather, and an outer lamina of stretched fabric webbing sewed to the leather lamina.

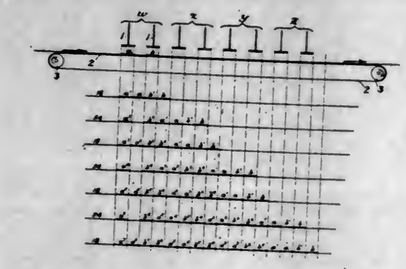
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1,228,529. FLAT-BLOCK LINOLEUM-PRINTING MACHINE. NEIL L. CAMPBELL, Salem, N. J. Filed Mar. 14, 1917. Serial No. 154,685. (Cl. 101—198.)

1. A flat block linoleum printing machine having a plurality of its blocks arranged to operate with the same color and provided with means for feeding a carpet alternately and different distances at each printing operation, substantially as described.

2. A flat block linoleum printing machine having a plurality of blocks arranged to operate with the same color and provided with means for feeding a carpet alternately at each printing operation a distance equal to the space

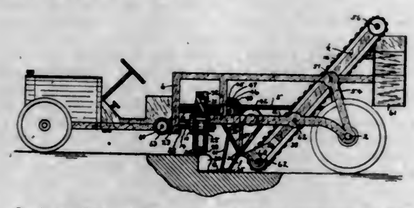
between two blocks and a distance equal to the sum of the space between two blocks plus the sum of the widths of



the faces of said plurality of blocks, substantially as described.

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1,228,530. GRADING-MACHINE. CARL GEORGE CARLBERG, Omaha, Nebr. Filed Sept. 21, 1916. Serial No. 121,391. (Cl. 37—11.)



2. A grading machine, comprising, in combination with a forwardly movable vehicle, a carrier frame mounted upon and adapted to have an intermittent movement longitudinally of the vehicle, a movable, endless carrier mounted upon and encircling the carrier frame, a plurality of plows of varying dimensions mounted on the carrier and adapted to be disposed in alinement during a part of the movement of said carrier for forming furrows transverse to the line of movement of the vehicle, an actuated, inclined conveyer on the vehicle, and a scraper member mounted on the carrier frame movable in one direction to receive the furrow slices when formed by the plows and movable in an opposite direction to deposit the furrow slices upon the conveyer.

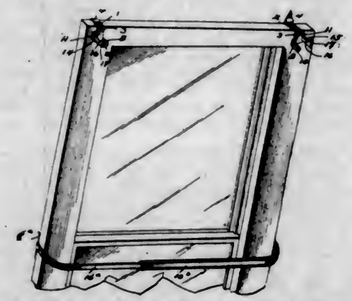
5. A grading machine, comprising, in combination with an engine-driven vehicle, a carrier frame on the vehicle, mechanism actuated by the engine for shifting the carrier frame forwardly of the vehicle, an endless carrier on the carrier frame, a plow member mounted on the carrier with its bottom projecting outwardly therefrom, secondary plow members each having a less dimension than the first named plow member, said endless carrier being movable by actuation of the engine for disposing the plow members below the carrier frame during a part of its movements, an endless, actuated conveyer on the vehicle, a scraper member mounted on the carrier frame formed angular in cross-section to provide a blade and a slide-plate, mechanism actuated by the engine for moving the scraper in one direction to dispose the blade in a plane substantially at the bottom of the furrow to receive the furrow slices while the plows are disposed below the carrier frame, and mechanism actuated by the engine for moving the scraper in a reverse direction for depositing the furrow slices upon the conveyer.

8. A grading machine, comprising, in combination with an engine-driven vehicle, a carrier frame on the vehicle, mechanism actuated by the engine for shifting the carrier frame forwardly of the vehicle, an endless carrier on the carrier frame, a plow member mounted on the carrier with its bottom projecting outwardly therefrom, secondary plow members each having a lesser dimension than the first named plow member, said endless carrier being movable transversely of the line of movement of the vehicle by actuation of the engine for disposing the plow members in alinement below the carrier frame to form furrows, and means actuated by the engine for elevating the furrow slices formed by said plow members.

[Claims 1, 3, 4, 6, 7, and 9 not printed in the Gazette.]

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1,228,531. CURTAIN-HANGER. JAMES J. CAVANAUGH, Omaha, Nebr. Filed July 25, 1916. Serial No. 111,161. (Cl. 156—24.)



1. In a curtain hanger the combination of a sheet metal bracket comprising a back section, a top section, a front section having a vertical slot near one edge and a shade roller supporting section extending from the opposite edge of the front section, and lace curtain supporting means comprising a plate adapted to be inserted between the front section and the window casing and a bar adapted to enter the said slot in the front section.

3. The combination of a main bracket comprising a section adapted to engage the front of a window casing, the said section having a vertical slot near one edge, means carried by the section for supporting one end of a shade roller, and lace curtain supporting means comprising a plate adapted to be inserted between the said section and the window casing and a bar adapted to enter the said slot each bar being slotted adjacent the plate.

[Claim 2 not printed in the Gazette.]

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1,228,532. MUSICAL INSTRUMENT OR VOCAL FLUTE. AURION V. CHEVERS, East Providence, R. I. Filed Feb. 24, 1916. Serial No. 80,107. (Cl. 46—46.)



1. A vocal flute constructed in a single piece from rubber, porcelain or the like in the form of a curved tubular stem with an enlargement at the top adapted to fit against the player's nostrils to receive a current of air therefrom and with its walls contracted to form a slit-like orifice at the bottom for directing the air across the operator's lips whereby the vocal cavity acts as a resonator.

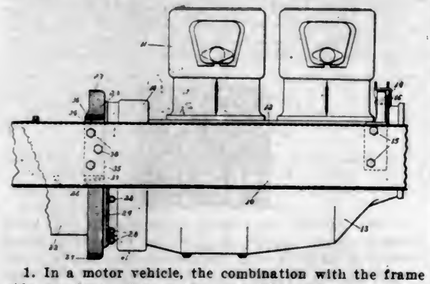
2. A vocal flue consisting of a tubular stem constructed in a single piece with relatively thin walls swelled out at the top and provided with an entrance for receiving the air current from the nostrils of the operator and flattened together at the bottom to provide a narrow rectilinear slit through which the air is expelled across the mouth of the player.

3. A vocal flute constructed in a single piece with a molded curved tubular stem formed with a bulbous enlargement at the top provided with an opening for receiving a current of air from the operator's nostrils and a contracted slit-like orifice at the bottom arranged with its edges in a plane at substantially right-angles to the plane of the top opening.



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1,228,533. MOTOR-VEHICLE. HAROLD D. CHURCH, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed May 14, 1913. Serial No. 767,696. (Cl. 21—90.)



1. In a motor vehicle, the combination with the frame side members, of a motor comprising a base having a part inclosing and extending beyond the fly-wheel, a casing member forming a continuation of said base, a supporting cross member arranged between said extended part of the base and said casing member, and means for securing said base and casing member to the supporting member.

2. In a motor vehicle, the combination with the frame side members, of a motor having a base enlarged at the fly wheel end, a cross member secured to the frame side members and having an enlarged central portion, means for securing said enlarged central portion to the enlarged portion of said motor base, and means for supporting the other end of said motor.

3. In a motor vehicle, the combination with the frame side members, of a motor, a clutch casing, a cross member secured to the frame side members, and passing between said motor and clutch casing, and means extending from the motor to the clutch casing for securing the motor, clutch casing and cross member together.

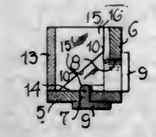
4. In a motor vehicle, the combination with a motor having a base enlarged at the fly wheel end thereof, of a clutch casing, a supporting member arranged between the enlarged part of the motor base and the clutch casing, and means extending from the motor to the clutch casing for securing the motor base and clutch casing to the supporting member.

5. In a motor vehicle, the combination with the motor having a base enlarged at the fly wheel end, of a clutch casing having an enlarged part adjacent the enlarged part of said base, a supporting member having a disk part arranged between and forming a liner for said enlarged base part and said clutch casing, and bolts securing the parts together.

[Claims 6 to 12 not printed in the Gazette.]

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1,228,534. APPARATUS FOR MOLDING LINK CHAINS. EDWARD W. CLARKE, Wilmington, Del. Filed May 6, 1916. Serial No. 95,881. (Cl. 22—50.)



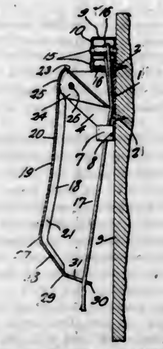
1. An apparatus for forming link chain molds in quarter sections including a stripping plate having walls extending at right angles to each other, each of said walls being provided with means to removably receive a plurality of link patterns, a flask section having a body wall adapted to be arranged on edge on one wall of the stripping plate and in spaced, parallel relation to the other wall thereof, said flask section having angular end walls contacting with the face of the latter wall of the stripping plate, and means for detachably securing said end walls of the flask section to the walls of the stripping plate.

2. An apparatus for forming link chain molds in quarter sections including a stripping plate having walls extending at right angles to each other, each of said walls being provided with means to removably receive a plurality of link patterns, a flask section having a body wall adapted to be arranged on edge on one wall of the stripping plate and in spaced, parallel relation to the other wall thereof, said flask section having angular end walls contacting with the face of the latter wall of the stripping plate, a plurality of angularly disposed webs integrally formed with the body wall of the flask section and disposed in parallel relation to said end wall, each of the webs having one of its edges obliquely inclined and spaced from the wall of the stripping plate upon which the flask section is arranged, and means for detachably securing the end walls of the flask section to the stripping plate.

3. An apparatus for forming link chain molds in quarter sections including a stripping plate having walls extending at right angles to each other, each of said walls being provided with means to removably receive a plurality of link patterns, a flask section having a body wall adapted to be arranged on edge on one wall of the stripping plate and in spaced, parallel relation to the other wall thereof, said flask section having angular end walls contacting with the face of the latter wall of the stripping plate, a plurality of spaced webs integrally formed with the body wall of the flask section and extending at right angles thereto, said webs being of less width than the end walls and having their end edges spaced from the face of the first named wall of the stripping plate, and means for detachably securing the end walls of the flask section to the stripping plate.

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1,228,535. CORD AND ROPE HOLDER. HENRY W. CLOUGH, South Pasadena, Cal. Filed Oct. 30, 1916. Serial No. 128,576. (Cl. 24—134.)



3. In a device of the class described, a base plate having ears at its sides, the ears terminating in depending extensions which are turned inwardly toward the base plate to form cord guides, the upper extremity of the base plate being forwardly extended to form an end plate terminating in a depending front plate, the base plate and one ear being equipped with an integrally formed upstanding flange which is bent forwardly to extend beneath the end plate and to serve as a support therefor; a cord-gripping means carried by the ears; and a cord directing means carried by the depending front plate and the upper end of the base plate.

[Claims 1 and 2 not printed in the Gazette.]

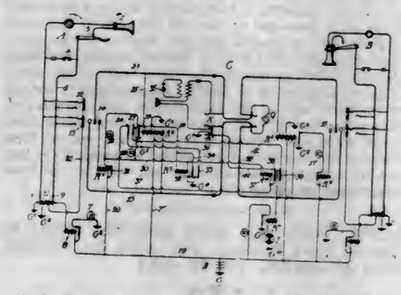
1,228,536. WINDOW-SCREEN. EDWARD M. CRAIG, Charleston, W. Va. Filed Oct. 3, 1916. Serial No. 123,535. (Cl. 156—14.)



2. A device of the character described comprising a frame adapted to be positioned within an opening, opposed edges of said frame being provided with open-end grooves, a screen section provided with pivot members insertible within said grooves, and dogs pivotally engaged with the frame and arranged for contact with said pivot members for holding the screen section within the frame, each of said dogs being provided with an extension arranged for contact with a pivot member and of a length to substantially intersect a groove when the dog is operatively engaged with a pivot member.

[Claim 1 not printed in the Gazette.]

1,228,537. TELEPHONE SYSTEM. WILLIAM W. DEAN, Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 29, 1915. Serial No. 58,580. (Cl. 179—58.)



1. In combination a telephone line having line terminals, a cord circuit for connecting said line with other lines, a supervisory relay in said cord circuit, a supervisory signal device, a locking relay and a separate recall signal device controlled by said supervisory relay and said locking relay, said recall signal device being individual to said cord circuit.

2. In combination a plurality of telephone lines to be interconnected, a cord circuit for connecting said lines in conversation, a supervisory relay in said cord circuit, a supervisory signal controlled by said relay, a locking relay controlled by energization of said supervisory relay, a separate recall signal, a recall relay, said recall relay being controlled by energization of said locking relay and deënergization of said supervisory relay, said recall signal being displayed by energization of said supervisory relay and said recall relay.

3. In combination a plurality of telephone lines to be interconnected, a cord circuit for interconnecting the same, a sleeve relay for said cord circuit, a supervisory relay for said cord circuit, a supervisory signal device and a separate recall signal device, said devices being individual to said cord circuit, said supervisory signal device being controlled by said sleeve relay and said supervisory relay, and a locking relay, said recall signal device being controlled by said sleeve relay, said supervisory relay and said locking relay.

4. In combination a plurality of telephone lines to be interconnected, a cord circuit for interconnecting the same, a supervisory signal device and a separate recall signal device, said signaling devices being individual to said cord circuit, and a supervisory relay controlling both of said signals.

5. In combination, a plurality of telephone lines to be interconnected, a cord circuit for interconnecting the same, a supervisory signal lamp and a recall signaling lamp, said lamps being individual to said cord circuit, a circuit for said supervisory signaling lamp to energize the same for steady illumination, a circuit for said recall signaling lamp to illuminate the same intermittently, and a supervisory relay controlling both of said circuits in due order.

1,228,538. PROCESS OF MANUFACTURING ARCHITECTURAL TERRA-COTTA IN COLORS FOR BUILDING PURPOSES AND THE PRODUCT OF SUCH PROCESS. WALTER E. DENNISON, Alameda, Cal. Filed Apr. 18, 1916. Serial No. 92,038. (Cl. 25—156.)



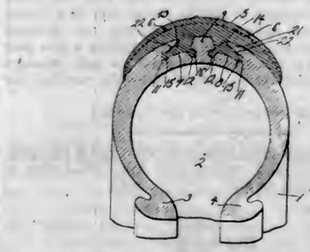
1. The process of making architectural terra-cotta building blocks resembling geological formations which consists in dashing with considerable force into a mold, chunks, lumps, or handfuls of differently colored clays while in a plastic condition, pressing the plastic mass into the indentations, depressions and cavities of the mold, allowing the molded mass to dry out by evaporation, removing the molded article from the mold, and burning it in a kiln.

4. An architectural terra-cotta building block comprised of layers of differently colored clays compressed together irregularly while in plastic condition so as to produce veins or tracings that follow random and irregular courses throughout and resemble the veins of natural geological formations such as travertin, onyx, lava, or variegated marble, said clays being molded to shape while in a plastic condition, then dried out and burned in a kiln.

9. An architectural terra cotta building block having a vitrified or glazed surface composed of differently colored clays assembled promiscuously so as to produce variegated color effects resembling natural geological formations and compressed into coherency and shaped in the desired form in a mold while in plastic condition, then dried out and having a liquid glaze applied thereto, and finally burned in a kiln.

[Claims 2, 3, and 5 to 8 not printed in the Gazette.]

1,228,539. RESILIENT TIRE. JOHN V. DEWALD, Philadelphia, Pa. Filed Sept. 12, 1916. Serial No. 119,635. (Cl. 152—17.)



1. A tire for vehicle wheels, comprising a body and a tread section both made of flexible material, said sections having interlocking flange and groove connection one with the other, the flange portion being interrupted in its length to form cavities, means interposed in said cavities and projecting from said other section to form an interlock between the sections to prevent relative creeping movement between the tread section and body section,

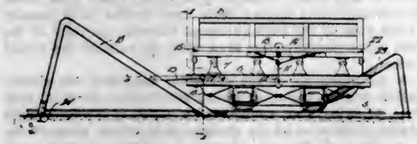


and reinforcing material embedded within said means, substantially as described.

3. A tire for vehicle wheels, comprising a body section and a tread section, said body section having under-cut annular recesses and annular grooves adjacent the outer portions of said recesses, a flange extending between said recesses, said flange being interrupted at pre-determined positions throughout its length to form cavities, said tread section having flanges fitting said recesses and including beaded portions fitting said annular grooves, said flanged portions of the tread section being connected at predetermined positions throughout the length thereof, said connecting portion fitting within said cavities to form an interlock between said sections, said connecting portion including reinforcing material to prevent shear of the material positioned within said cavities, substantially as described.

[Claim 2 not printed in the Gazette.]

1,228,540. AUTOMATIC DUMPING AND RIGHTING MECHANISM FOR TILTABLE DUMP-CARS. JOSEPH M. DRUECKER, Stone City, Iowa. Filed June 30, 1916. Serial No. 106,767. (Cl. 214—1.)



1. The combination with a track way and a tilting car on said track way, of releasable means holding said car against tilting, a projection at one side of the tilting axis of the car, an inclined member along the track way engageable by said projection, and a member along the track way and adapted to operatively engage said releasable holding means prior to the engagement of said projection with the inclined member.

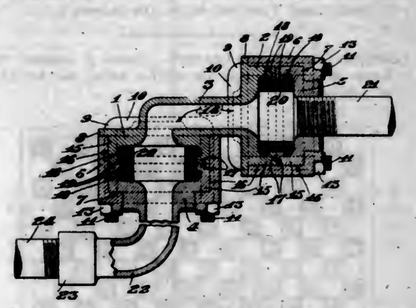
2. The combination with a track way and a tilting car on said track way including a base frame and a tilting body of a link pivoted to the body at one side of its tilting axis, a holding member on the base frame engageable by said link to hold the body against tilting, a projection at said side of the body, an inclined member engageable by said projection and a trip member engageable by the link prior to engagement of said projection with the inclined member.

3. The combination with a track way and a car including a base frame and a tilting body of a link pivoted to one side of the body, a hook on the adjacent side of the frame having its top portion beveled, means limiting pivotal movement of the link member, a spring urging said link member to its limit of pivotal movement, a projection on said side of the car body, an inclined member engageable by said projection, and a trip member engageable by the link to release it prior to the engagement of the projection and inclined member.

4. The combination with a track way and a tilting car on said track way including a base frame and a tilting body of a link pivoted to the body at one side of its tilting axis, a holding member on the base frame engageable by said link to hold the body against tilting, a projection at said side of the body, an inclined member engageable by said projection a trip member engageable by the link prior to engagement of said projection with the inclined member, a projection on the opposite side of the car body and an inclined member along the track way engageable by the said projection.

1,228,541. SWIVEL-COUPLING FOR PIPE-LINES. VOTAW S. DURBIN, St. Louis, Mo. Filed June 17, 1916. Serial No. 104,165. (Cl. 137—34.)

1. A pipe coupling for conducting a fluid under pressure, consisting of two connected coupling heads with their axes disposed at an angle to each other, swivel coupling heads coöperating, respectively, with said first-named coupling heads, each coöperating pair of said coupling heads having annular faces coöperating to form a washer-seat, said heads having cylindrical walls with end faces held in juxtaposition, said cylindrical walls lying outward beyond said annular faces and having outer cylindrical faces terminating at the end faces of said coupling heads, a sleeve engaging said cylindrical faces of each pair of coupling heads for connecting the same and permitting a swiveling movement of each coupling head upon its coöperating coupling head, a yieldingly expansible washer received on the seat of each coöperating pair of coupling heads extending across the juxtaposed end faces of said heads and having its inner face unobstructed and exposed to the pressure of the fluid, the pressure of the fluid operating to force said washer against its seat.



2. A pipe coupling for conducting a fluid under pressure, comprising coupling members having substantially cylindrical walls the end faces whereof are in juxtaposition, said coupling members having inwardly extending annular projections adjacent to said end faces, each coupling member further having an annular groove adjacent to its corresponding annular projection, said projections and said grooves coöperating to form a washer-seat surrounded by said cylindrical walls, an expansible annular washer extending across the plane of said end faces, having a middle portion of reduced diameter the outer face whereof seats against said inward projections, said washer having enlarged heads seating in said grooves, the inner face of said washer being exposed to the pressure of the fluid within the coupling, said coupling members having outer cylindrical faces terminating at said end faces, and a sleeve engaging said cylindrical faces for connecting said coupling members and permitting the same to swivel upon each other, the pressure of the fluid passing through said coupling operating to force said washer against said seat.

3. A coupling for conducting a fluid under pressure comprising two coupling heads and means for connecting the same to permit a swiveling movement of one head upon the other, said coupling heads having cylindrical walls with their end faces in juxtaposition, and having cylindrical outer faces terminating at said end faces, said coupling heads having annular grooves on the interior coöperating to form a washer seat, and an expansible annular washer having a middle portion of reduced diameter, extending across the plane of said end faces, said washer having ends of enlarged diameter seating in said grooves, the interior of said washer being exposed to the pressure of a fluid flowing through said coupling and forced against said seat by the pressure of the fluid.

4. A coupling for conducting a fluid under pressure, comprising two coupling heads, a washer connecting said coupling heads to prevent leakage of the fluid at said coupling, a sleeve surrounding said heads and permitting a swiveling movement of said heads with respect to each other, and securing means in the form of U bolts, each U bolt having a cross-bar engaging one of said coupling heads, and having threaded extensions projecting along

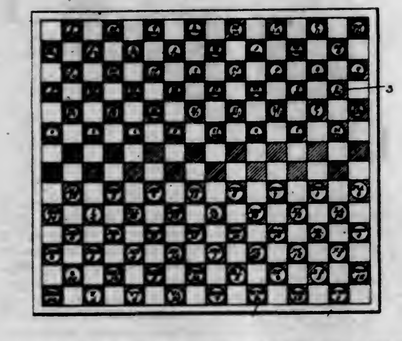
the sides of said sleeves, and nuts on said threaded extensions for holding said sleeve in position.

5. A pipe coupling for conducting fluid under pressure, comprising coupling members having substantially cylindrical walls, the end faces whereof are in juxtaposition, said coupling members having inwardly extending annular projections, an expansible annular washer extending across the plane of said end faces, extending longitudinally beyond said annular projections and seating against the inner faces of said cylindrical walls, the inner face of said washer being exposed to the pressure of the fluid within the coupling, said coupling members having outer cylindrical faces terminating at said end faces, and a sleeve engaging said cylindrical faces for connecting said coupling members and permitting the same to swivel upon each other, the pressure of the fluid operating to force said washer against its seat.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,542. GAME APPARATUS. VOTAW S. DURBIN, St. Louis, Mo. Filed Jan. 13, 1917. Serial No. 142,125. (Cl. 46—64.)



1. A game apparatus comprising a game board having means thereupon for indicating the direction of movement for pieces, in combination with a plurality of movable pieces having different values indicated thereupon, respectively, and adapted to be moved about upon the game board.

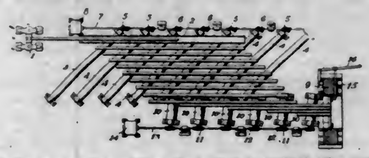
2. A game apparatus comprising a game board having means thereupon for indicating the direction of movement for pieces, in combination with a plurality of movable pieces corresponding to States of the Union, each piece bearing a number indicating the electoral vote of the State to which that piece corresponds.

3. A game apparatus comprising a game board having means thereupon for indicating the direction of movement for pieces, in combination with a plurality of movable pieces corresponding to States of the Union and comprising two distinctive duplicate sets, each piece bearing a number indicating the electoral vote of the State to which that piece corresponds.

4. A game apparatus comprising a checkered board in combination with a plurality of movable pieces corresponding to States of the Union and comprising two distinctive duplicate sets, each piece having means thereupon indicating that it corresponds to a certain State and also bearing a number indicating the electoral vote of that State.

5. A game apparatus comprising a checkered board with squares thereupon disposed in transverse rows, in combination with a plurality of movable pieces corresponding to States of the Union and comprising two distinctive duplicate sets corresponding to two political parties, each piece having means thereupon for indicating that it corresponds to a certain State and bearing a number indicating the electoral vote of that State.

1,228,543. FEEDING MECHANISM FOR METAL-CUTTING SHEARS. VICTOR E. EDWARDS, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Nov. 24, 1914. Serial No. 873,816. (Cl. 164—49.)



1. In apparatus of the character described, the combination with a shear, of means for feeding bars, in multiple, to said shear, comprising a plurality of series of conveyer rolls, having their axes skewed with respect to the axes of the bars advanced thereon, the rolls of one series being skewed at a different angle from the rolls of another series.

2. In apparatus of the character described, the combination with a shear, of means for feeding bars, in multiple, to said shear, comprising an initial and a final series of conveyer rolls having their axes skewed with respect to the axes of the bars advanced thereon, the rolls of the final series having a less skew than the rolls of the initial series.

3. In apparatus of the character described, the combination with a shear, of means for feeding bars, in multiple, to said shear, comprising a series of conveyer rolls having their axes at an oblique angle to the axes of the bars advanced thereon, whereby a combined endwise and sidewise movement is imparted to each bar, and means for delivering bars broadside to said rolls.

4. In apparatus of the class described, the combination with a shear, of a shear approach table to which successive bars are delivered broadside, said table comprising a series of skewed rolls, whereby the broadside movement of the bars is continued, in conjunction with their longitudinal movement, in overlapping relation toward the shear.

5. In apparatus of the class described, the combination with a shear, of a shear approach table to which successive bars are delivered broadside, said table comprising a series of skewed rolls, and means for rotating said rolls at a speed so related to the speed of broadside delivery that a plurality of bars, in overlapping relation, are continuously advanced thereon.

[Claims 6 to 11 not printed in the Gazette.]

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1,228,544. ICE-SKATE. CARL LOUIS FALSTROM and JOHN ALBERT BRAGG, Parry Sound, Ontario, Canada. Filed Apr. 19, 1916. Serial No. 92,289. (Cl. 46—50.)



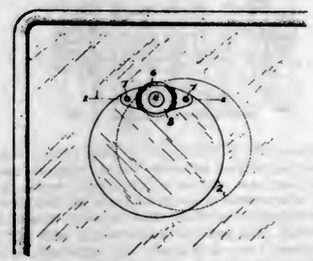
1. An ice skate, comprising, a blade formed in two sections and having abutting end surfaces extending upwardly from the bottom of the blade, a sole plate rigidly secured to the toe section of said blade having a pair of downwardly turned lugs embracing the rear end of said toe section and extending rearwardly beyond the blade to form a vertical socket adapted to receive the upper forward end of the heel section, and means for holding said heel section within said socket in sliding engagement.

[Claims 2 and 3 not printed in the Gazette.]

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1,228,545. GLARE-PROTECTOR. MICHAEL J. FITZGERALD, Richmond, Cal. Filed Sept. 27, 1915. Serial No. 52,838. (Cl. 21—148.)



1. In combination, a glare protector having a hole eccentric thereto, and a rubber suction cup provided with means extending through said hole for securing the glare protector to the cup in various adjusted positions without moving the cup.

2. In combination, a rubber suction cup having a round rubber shank, and adapted to be pressed by suction against a surface, and a glare protector having therethrough an eccentrically located round hole through which said shank extends with a tight fit.

3. In combination, a rubber suction cup having a round shank and adapted to be pressed by suction against a surface, a glare protector having therethrough an eccentrically located round hole through which said shank extends, and an apertured plate through which said shank also extends and pressing the edge of the glare protector against said surface.

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1,228,546. PASTE FOR STORAGE-BATTERY PLATES AND PROCESS OF MAKING THE SAME. LOUIS H. FLANDERS, Jenkintown, Pa. Filed Oct. 20, 1913. Serial No. 796,114. (Cl. 204—29.)

1. The method of making storage battery paste of any desired lead content per unit of volume from varying oxids of lead, which consists in mixing the lead oxid with sufficient water to make a paste and mixing said paste with sulfuric acid of strength adapted to preserve the required consistency of the paste and in quantity to produce lead sulfate in appropriate quantity for increasing the volume of the water paste to give a predetermined lead content per unit of volume and leave sulfatable oxids present, substantially as described.

2. A non-setting storage battery paste of dough-like or pasty consistency having its lead content per unit of volume fixed by the quantitative relation of contained lead sulfate and other lead content a portion of which is adapted to re-act with sulfating material to chemically set the paste.

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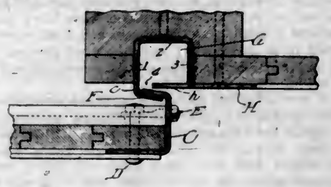
1,228,547. PROCESS OF MAKING PASTED STORAGE-BATTERY PLATES. LOUIS H. FLANDERS, Jenkintown, Pa. Filed Oct. 20, 1913. Serial No. 796,115. (Cl. 204—29.)

1. The process of making storage battery plates of predetermined capacity from an oxid or oxids of varying density and lead content, which consists in preparing a paste having a definite weight of lead content per unit of volume from such oxid or oxids by ascertaining the density and lead content of the oxid or oxids used and converting a portion of the oxid into a quantity of lead sulfate appropriate for the ascertained density and lead content of the oxid or oxids used and to the capacity required and leaving sulfatable oxids, applying such a paste to a grid and thereby fixing the volume of such paste used and the lead content in the plate available for the formation of active material, subjecting the plate while the paste is still wet to the action of a sulfating fluid to cause said sulfatable oxids to set and to convert the material available for the formation of active material into a hard homogeneous structure, and charging the plate to produce uniform active material of the desired porosity.

2. The process of making storage battery plates of predetermined capacity from leaden raw material of varying density and lead content, which consists in preparing a paste having a definite weight of lead content per unit of volume from such raw material by ascertaining the density and lead content of the raw materials used and converting a part of the raw material into a quantity of lead sulfate appropriate for the ascertained density and lead content of the raw material used and to the capacity required and leaving sulfatable oxids, and applying such a paste to a grid and thereby fixing the volume of such paste used and the lead content in the plate available for the formation of active material.

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1,228,548. CAR-DOOR WEATHER-STRIP CONSTRUCTION. PETER FRANTZ, Sterling, Ill., assignor to Frantz Manufacturing Co., Sterling, Ill., a Corporation of Illinois. Filed Sept. 18, 1915. Serial No. 51,315. (Cl. 20—26.)



1. In a car door weather-strip construction for tightly sealing the rear edge of the door, when the door slides forward into closed position, a vertical strip on the car body, means on said door to engage said strip, and a vertical drain passage in the side of said body adjacent said strip, said means extending vertically between said passage and said door; the outer side of said passage having a vertical slot to admit rain and thereby prevent the water from entering between said strip and means, said strip having an integral body portion forming, in effect, a vertical tube which constitutes a lining for said passage, which tube is embedded in the side of the car.

2. In a car door weather-strip construction for tightly sealing the rear edge of the door, when the door slides forward into closed position, a vertical strip on the car body, means on said door to engage said strip, and a vertical drain passage in the side of said body adjacent said strip, the outer side of said passage being open to receive rain and thereby prevent the water from entering between said strip and means, said body having a plate extending over said passage, and the edge of said plate being immediately behind said strip, there being an entrance space between said edge and means.

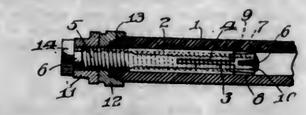
3. In a car door weather-strip construction for tightly sealing the rear edge of the door, when the door slides forward into closed position, a weather strip on the door, and a sheet-metal tube extending vertically in the side of the car body, said tube having its side which faces outward away from the car body provided with a vertical slot, and said tube having a vertical flange on one edge immediately outside of said slot, so that said strip tightly engages the inside surface of said flange when the door is closed, with space between said strip and the other edge of said slot to admit rain to the interior of said tube and

said engaging surface of the flange being a continuation of the inside surface of the tube.

4. In a car door weather-strip construction for tightly sealing the rear edge of the door, when the door slides forward into closed position, a weather strip on the door, a sheet-metal tube extending vertically in the side of the car body, said tube having its side which faces outward away from the car body provided with a vertical slot, and said tube having a vertical flange on one edge immediately outside of said slot, so that said strip tightly engages the inner surface of said flange, with space between said strip and the other edge of said slot to admit rain to the interior of said tube, and a plate secured to the car body and extending in front of said tube and forming said other edge of said slot, said plate projecting beyond the edge of said flange.

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1,228,549. CONNECTING DEVICE FOR HOSE. NICHOLAS FURDUY, Philadelphia, Pa. Filed Sept. 1, 1916. Serial No. 118,123. (Cl. 137—28.)



1. A hose coupling including a sleeve designed to be inserted within the hose and having an expansible portion, means for expanding said portion within the hose, said sleeve throughout its entire length being capable of fitting within said hose, said sleeve also being threaded throughout a portion of its length, and a threaded band designed to be screwed on said threaded portion of the sleeve and to directly engage and compress the end of the hose, substantially as described.

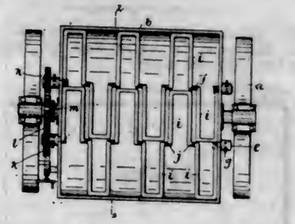
2. A hose coupling including a sleeve designed to be inserted within the hose and having an expansible portion, means for expanding said portion within the hose, said sleeve throughout its entire length being capable of fitting within said hose, said sleeve also being threaded throughout a portion of its length, and a threaded band having a tapered recess designed to receive the end of the hose and compress it into contact with the outer surface of the sleeve, substantially as described.

3. A connecting device for hose, comprising a sleeve having a bifurcated portion designed to be placed within said hose, a nipple having a tapered outer surface, one end of said nipple being of smaller diameter than the inner diameter of the sleeve, the opposite end of said nipple being of larger diameter than the inner diameter of the sleeve, said nipple having an internal screw-thread extending therethrough, and means operative to engage the internal screw-thread of the nipple to pull said nipple into the sleeve and thereby expand the bifurcated portion into engagement with the internal surface of the hose, said sleeve having a screw-threaded portion designed to extend out of said hose, and a band designed to be screwed onto said screw-threaded portion, said band having a tapered recess designed to engage and compress the end of said hose in contact with said sleeve, substantially as described.

4. A connecting device for hose, comprising a sleeve having a bifurcated portion designed to be placed within said hose, a nipple having a tapered outer surface, one end of said nipple being of smaller diameter than the inner diameter of the sleeve, the opposite end of said nipple being of larger diameter than the inner diameter of the sleeve, said nipple having an internal screw-thread extending therethrough, and a bolt operative to engage the internal screw-thread of the nipple to pull said nipple into the sleeve and thereby expand the bifurcated portion into engagement with the internal surface of the hose, said sleeve having a screw-threaded portion designed to extend out of said hose, and a band designed to be screwed onto said screw-threaded portion, said band having a tapered recess designed to engage and compress the end of said hose in contact with said sleeve, substantially as described.

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1,228,550. MIXING AND KNEADING MACHINE. FRANK GOEBR, Paterson, N. J. Filed Sept. 29, 1916. Serial No. 122,809. (Cl. 259—119.)



In combination, a receptacle, a pair of substantially counterpart agitators journaled in said receptacle on horizontal parallel axes and each including a series of substantially counterpart U-shaped beaters projecting alternately in opposite directions from the axis of said agitator and alined axial portions *j* alternating with said beaters and spaced from each other, said agitators being arranged in substantially parallel planes and so that each beater of either is opposite the corresponding beater of the other and so that on the rotation of the agitators the beaters of either move between the beaters, and near to the axis, of the other agitator, and means to rotate said agitators in unison in the same direction and at the same speed.

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1,228,551. NEGATIVE-POLE PLATE FOR STORAGE BATTERIES AND PROCESS OF MAKING THE SAME. WILLIAM G. S. GRANT, Hamilton, Ontario, Canada, and LOUIS H. FLANDERS, Jenkintown, Pa., assignors to The Electric Storage Battery Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Oct. 8, 1913. Serial No. 793,982. (Cl. 204—29.)

1. A dry charged negative pole plate of the pasted type for storage batteries having coherent active material free from cracks and consisting substantially of pure lead and ready for discharge, without further electric charge, when mounted in a battery, substantially as described.

2. The improvement in the art of making dry reduced negative pole plates which consists in reducing them before their paste is ever dried from its initial wetting incident to its manufacture and consequently subjecting them to the prolonged action of dilute sulfuric acid, and drying the plates while their paste is wet from the reducing operation in a non-oxidizing atmosphere.

3. The improvement in the art of making dry reduced negative pole plates which consists in subjecting them to a prolonged soaking in dilute sulfuric acid while their paste is wet from its initial wetting incident to its manufacture, reducing the plates and while the paste is wet from the reducing operation, drying the plates in a non-oxidizing atmosphere, substantially as described.

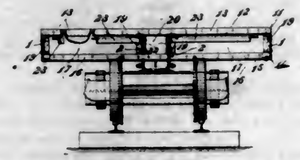
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1,228,552. CAR-FRAME CONSTRUCTION. OTIS TIFFANY GREGG, Hackensack, N. J., assignor to The Gregg Company, Limited, Hackensack, N. J., a Corporation of New York. Filed July 8, 1913. Serial No. 777,925. (Cl. 105—76.)

1. In a car frame having center and side sills, a cross-bearer comprising an upper member extending from one side sill to the other and across the center sill, a lower compression member extending from one side sill to the other and under the center sill, the space between the upper and lower cross members being greater toward the center sill than next to the side sills, and tension members extending downwardly from the upper cross member to the compression member from the center sill to a point at or near the side sills.



2. In a car frame having center and side sills, a cross-bearer comprising an upper member extending from one side sill to the other and across the center sill, said member having a horizontal leg and a vertical leg, a lower compression member extending from one side sill to the other and transversely of the center sill, said member having a horizontal leg and a vertical leg, and tension members connected at one end to the upper cross member adjacent to the center sill and extending downwardly and outwardly toward the side sills and connected at one end to the lower compression member adjacent to the side sills.



3. In a car frame having center and side sills, a cross-bearer comprising an upper member extending from one side sill to the other and across the center sill and resting upon the sills, said member having a horizontal leg attached to the sills and a vertical leg, a lower member extending from one side sill to the other and transversely of the center sill, said member having a horizontal leg attached to the sills and a vertical leg, said upper member and lower member, respectively, lying entirely above and below the side and center sills and coöperating to space apart the center and side sills and increase the depth of the cross-bearer and impart additional strength to the frame.

4. In a car frame having center and side sills, a bolster construction comprising upper cross members arranged parallel with each other and extending from one side sill to the other and across the center sill and resting on top of the sills, each of said members having a horizontal leg and vertical leg, lower cross members arranged parallel with each other and extending from one side sill to the other and through the center sill, each of said members having a horizontal leg and a vertical leg, the horizontal leg being at the bottom of the cross member and a part of the vertical leg removed to receive the side sills, and spacing members connecting the upper and lower cross members and having their upper edges lying between and secured to the vertical legs of the upper cross members and their lower edges lying between and secured to the vertical legs of the lower cross members.

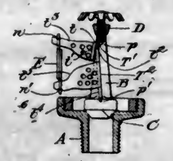
5. In a car frame having center and side sills, a bolster construction comprising an upper cross member extending from one side sill to the other and across the center sill and resting upon the sills, said member having a horizontal leg and vertical leg, a lower cross member extending from one side sill to the other and through the center sill, said member having a horizontal leg at its bottom to receive the side sills and an upwardly extending vertical leg, a portion of which is removed to permit the side sill to rest on the horizontal leg, spacing members connecting the upper and lower cross members and secured at the top to the vertical leg of the upper cross member and at the bottom to the upwardly extending vertical leg of the lower cross member, and a strengthening member between two members of the center sill and having its upper and lower edges secured to the vertical legs of the upper and lower cross members, respectively, and provided with lateral flanges secured, respectively, to the two members of the center sill.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,553. AUTOMATIC SPRINKLER. WILBERFORCE BEECHER HAMMOND, Boston, Mass., assignor, by mesne assignments, to Combined Heat and Sprinkler Company, a Corporation of Massachusetts. Filed Oct. 19, 1915. Serial No. 56,781. (Cl. 169—5.)

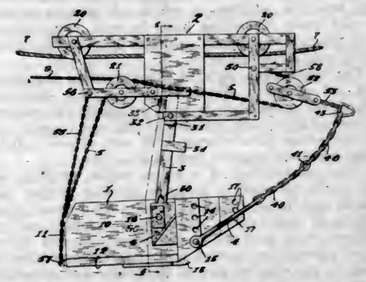
1. In an automatic sprinkler of the character described, a pair of valve holding toggle lever members, each integrally formed of sheet metal, one bent to form a relatively short toggle portion, an arm supporting portion bent at an angle to said toggle portion, and a laterally extending lever arm bent up from one side of said arm supporting portion, and the other member bent to form a relatively long toggle portion, which engages said shoulder, and a lever arm extending from one side of said toggle portion.



2. In an automatic sprinkler of the character described, a pair of valve holding toggle-lever members, each integrally formed of sheet metal, one bent to form a relatively short toggle portion, an arm supporting portion bent at an angle to said toggle portion, and a laterally extending lever arm bent up from one side of said arm supporting portion, and the other member bent to form a relatively long toggle portion, which engages said shoulder, and a lever arm extending from one side of said toggle portion, both of said lever arms being perforated to provide an open work and heat dispersing structure.

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1,228,554. DRAG-BUCKET APPARATUS. ALEXANDER L. HANOT, Fairbanks, Alaska. Filed Nov. 25, 1916. Serial No. 133,455. (Cl. 37—19.)



1. The combination with a scraper bucket and a supporting carriage, of a rigid ball member, pivoted upon and connecting carriage and bucket, and a controlling guide and stop carried by the bucket having means to insure the swinging of the connecting ball toward the loading end of the bucket when lowered to the ground, and to limit the extent of such swing.

2. The combination with a scraper bucket and a supporting carriage, of a rigid ball member pivoted upon and connecting carriage and bucket, and a stop carried by the carriage in position to engage the ball to prevent its swinging toward the front end of the carriage.

3. The combination with a scraper bucket and a supporting carriage, of a rigid ball member pivoted upon and connecting carriage and bucket, a stop carried by the carriage in position to engage the ball to prevent its swinging toward the front end of the carriage, and a stop carried by the bucket in position to engage the ball to prevent its swinging toward the rear end of the bucket.

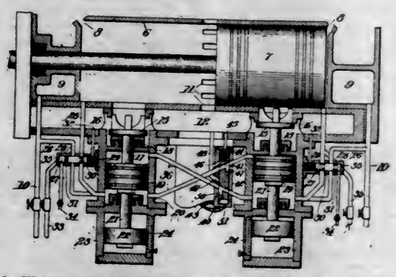
4. The combination with a scraper bucket and a supporting carriage, of a rigid ball member pivoted upon and connecting carriage and bucket, and a stop carried by the carriage in position to engage the ball to prevent its swinging toward the front end of the carriage, and a stop carried by the bucket limiting the swing of the ball.

5. The combination with a scraper bucket, a supporting carriage, a suspension ball pivoted to the carriage

and having a pin-and-slot pivotal connection with the bucket, and a guide engaged by the bail to swing its upper end forwardly as it drops downwardly.

[Claims 6 to 9 not printed in the Gazette.]

1,228,555. AUTOMATIC EXHAUST-VALVE FOR STEAM-ENGINES. AXEL CONSTANTIN HANSEN, New York, N. Y. Filed Jan. 8, 1916. Serial No. 70,942. (Cl. 121—45.)



1. The combination with a steam engine cylinder of the uniflow type, having an inlet port at each end and a middle exhaust port, of separate auxiliary exhaust valves located between the inlet ports and the middle exhaust port, a piston rigidly connected to each of said valves, means to alternately supply pressure to opposite sides of each piston and exhaust it from the other side respectively, whereby each valve is positively opened and closed, according to the stroke of the engine, said means comprising separate cylinders in which said pistons reciprocate, and cross connecting pipes between both ends of one of the last mentioned cylinders and the relatively opposite ends of the other.

2. The combination with the exhaust valves of a steam engine, of cylinders, pistons therein rigidly connected to the valves respectively, a pressure supply and exhaust pipe connected to each cylinder at one end thereof, and cross connecting pipes between both ends of one cylinder and the relatively opposite ends of the other.

10. The combination of a steam engine cylinder, exhaust valves therefor, a pressure operated device connected to each valve, cross pipe connections between opposite sides of said devices respectively, a supply and exhaust pipe from each end of the cylinder to each device, a steam supply pipe to each device, valves controlled by vacuum in the exhaust pipe of the engine and governing said pipes and adapted to open and close the same respectively according to whether the engine is running noncondensing or condensing, and another valve controlled by vacuum in the exhaust pipe and governing said cross pipe connections to open or close the same according to the same conditions.

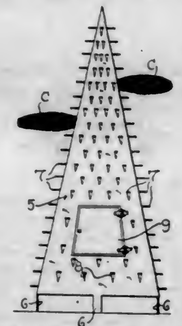
13. The combination with a uniflow steam engine cylinder, of auxiliary exhaust valves therefor, a pressure operated device connected to each valve, a pressure supply and exhaust pipe extending from each end of the cylinder to said devices respectively, means connecting said devices to supply pressure to relatively opposite sides of each device and exhaust pressure from the other sides thereof, whereby said valves are alternately opened and closed, and means connected with a condenser and actuated by reduction of pressure therein to automatically supply pressure to the same relative sides of each device and exhaust pressure from the other sides thereof, whereby both valves are held closed.

[Claims 3 to 9, 11, and 12 not printed in the Gazette.]

1,228,556. SEED-CORN DRIER. JOSEPH HESSE, Hartington, Nebr. Filed Aug. 21, 1916. Serial No. 116,108. (Cl. 34—26.)

1. A seed corn drier comprising a pyramidal-shaped body open at its lower end, each of the side walls of said body being provided with a multiplicity of spaced, outwardly projecting spurs to receive the corn ears, and a ventilating opening immediately below each of said spurs.

2. A seed corn drier comprising a pyramidal-shaped, sheet metal body open at its lower end, each of the side walls of the body having a multiplicity of V-shaped incisions cut therein and the metal struck outwardly at right angles to the body wall to provide V-shaped spurs to receive the corn ears, and a ventilating opening immediately below each of said spurs.

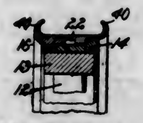


3. A seed corn drier comprising a pyramidal-shaped, sheet metal body open at its lower end, each of the side walls of the body having a multiplicity of V-shaped incisions cut therein and the metal struck outwardly at right angles to the body wall to provide V-shaped spurs to receive the corn ears, a ventilating opening immediately below each of said spurs, a plurality of supporting legs on the lower edge of each of the side walls to support the open lower end of the body above the floor, and a door in one of the side walls to afford access to the interior thereof for the ignition of a suitable air heating means.

4. A seed corn drier comprising a sheet metal body open at its lower end and provided with supports to space said open end of the body from the ground, each of the side walls of the body having outwardly struck spurs projecting at right angles to the wall and providing a ventilating opening immediately below each spur.

5. A seed corn drier comprising a sheet metal body open at its lower end and having upwardly converging side walls, each of said side walls being provided with a plurality of integral, outwardly projecting, corn ear supports and a ventilating opening immediately beneath each of said supports.

1,228,557. WHEEL. GABRIEL P. B. HOYT, New York, N. Y. Filed June 20, 1916. Serial No. 104,749. (Cl. 152—21.)



1. In a wheel, the combination of a wheel body, a rim adapted to be moved axially relatively to the wheel body to place the rim concentrically in position on the wheel or to remove it therefrom, and said body and rim having eccentric peripheral frictional locking means adapted to lock the rim in concentric position on the wheel body on turning the wheel body and rim one relatively to the other in the plane of the rotation of the wheel.

2. In a wheel, the combination of a wheel body, a single piece rim adapted to be moved axially relatively to the wheel body to place the rim into concentric position on the wheel body or remove it therefrom, the said wheel body and rim having eccentric interlocking means disposed peripherally on the contacting faces of the wheel body and rim and adapted to interlock on turning the wheel body and rim one relatively to the other in the plane of the rotation of the wheel.

3. In a wheel, the combination of a wheel body, a single piece rim, the said body and rim when in one position being adapted to be moved axially one relative to the other to place the rim in concentric position on the wheel body or to remove it therefrom, and eccentric interlocking means on the contacting peripheral concentric faces of the wheel body and rim adapted to move in register with each other on the wheel body and rim assuming the said engaging or removing position, the said eccentric interlocking means moving into or out of frictional locking position on turning the wheel body and rim one relatively to the other in the plane of the rotation of the wheel.

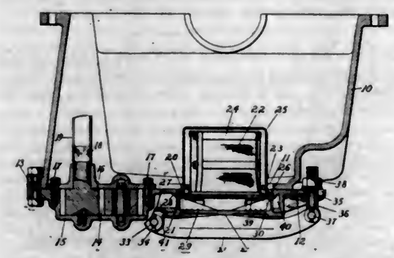
4. In a wheel, the combination of a wheel body, a rim adapted to fit concentrically on the said wheel body, and a peripheral eccentric on one of the said parts engaging an eccentric rabbet on the other part.

5. In a wheel, the combination of a wheel body, a one piece rim adapted to be moved axially relatively to the said wheel body to place the rim in concentric position on the wheel body or remove it therefrom, and frictional locking means for fastening the rim in place on the wheel body, the said frictional locking means comprising an eccentric rib engaging an eccentric rabbet, one being on the peripheral face of the wheel body and the other being on the inner face of the rim, the said eccentric rib and rabbet moving into or out of locking position on turning the wheel body and rim one relatively to the other in the plane of rotation of the wheel.

[Claims 6 to 9 not printed in the Gazette.]



1,228,558. HYDROCARBON-MOTOR. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed May 17, 1913. Serial No. 768,300. (Cl. 184—6.)



1. The combination with a motor crank case having an opening therein, a detachable cover for said opening, a pump detachably fastened to the inside of said cover, and a strainer detachably secured to the outside of said cover, said cover having a passage between said pump and strainer.

2. A strainer comprising a supporting portion having double walls and registering openings therein, a cover for one of said openings, a screen secured over the other opening by said cover, and means for securing the cover in position.

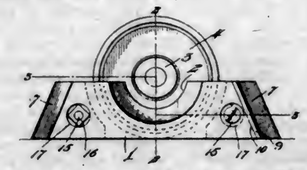
3. The combination with a motor crank case having an opening therein, of an inverted cup shaped screen extending upwardly from said opening and having a flange in contact with the edge of said opening, a cover for said opening beneath said screen and having a part in contact with the flange of said screen for securing the screen in position, and means on the outside of the crank case for holding the cover in place.

4. The combination with a motor crank case having an opening therein, of an inverted cup shaped screen extending upwardly from said opening and having a flange in contact with the edge of said opening, a cover for said opening beneath said screen and having a part in contact with the flange of said screen for securing the screen in position, and means on the outside of the crank case for holding the cover in place, comprising a swinging clamp extending across the cover and pivoted at one side thereof and detachably secured at the other side thereof.

5. The combination with a motor crank case having an opening in the bottom thereof, of an inverted cup shaped protector extending upwardly from said opening and having a flange in contact with the edge of said opening, an inverted cup shaped screen arranged within said protector, a cover for said opening beneath said screen and having a part adapted to secure said screen and protector in position, and means on the outside of the crank case for holding said cover in place.

[Claims 6 to 9 not printed in the Gazette.]

1,228,559. TRACK-SCRAPER. ARTHUR E. HUNT, Raymond, Wash. Filed Oct. 14, 1916. Serial No. 125,680. (Cl. 104—100.)



1. A track scraper comprising a pair of side sections, each provided at one end with a lug projecting toward the opposite section and adapted to slide upon a rail, the other ends of the sections overlapping and being secured to said lugs.

2. A track scraper comprising a pair of side sections, each provided at one end with a lug projecting toward the opposite section and adapted to slide upon a rail, said lugs having means for scraping the rail, the other ends of the sections overlapping the faces of said lugs, and means for clamping the last mentioned ends of the sections to the lugs.

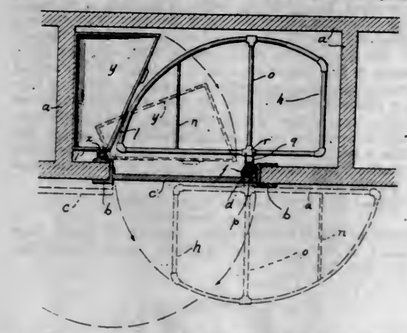
3. A track scraper embodying a pair of side sections, each provided at one end with a lug projecting from its inner side toward the opposite section, said lug being adapted to slide on a rail and having means for scraping the rail, said lug having a recess, the other ends of the sections overlapping the faces of said lugs, the sections having secondary lugs projecting from their inner sides adjacent to the last mentioned ends and fitting in said recesses, and securing elements extending through the sections adjacent to their ends for clamping them together.

4. A track scraper embodying a pair of side sections, each provided adjacent to one end with a lug projecting from its inner side toward the opposite section, said lug being adapted to slide on a rail and having means for scraping the rail, the face of each lug having a recess receiving the reverse end of the opposite section, said recesses providing shoulders fitting the second mentioned ends of the sections, said lugs having secondary recesses within the outlines of the aforesaid recesses, within the outlines of the aforesaid recesses, the sections having secondary lugs projecting from their inner sides adjacent to their second mentioned ends and fittings in the secondary recesses, the sections having apertures extending through the secondary lugs and registering apertures centrally of the secondary recesses, and clamping elements extending through the registering apertures for clamping the sections together.

1,228,560. EQUIPMENT FOR CLOTHES-CLOSETS. LEWIS C. HUNTER, Detroit, Mich. Filed Mar. 31, 1916. Serial No. 87,897. (Cl. 45—37.)

1. The combination of a closet with a door opening and closet space to one side of the door opening, a rack adapt-

ed to rotate in and out of the said closet space through the door opening, the said rack comprising a rotatable spindle located at the side of the door opening adjacent the said closet space, one or more trays rotatable upon the spindle, and a garment hanger rotatable upon the spindle.



2. The combination of a closet, with a door opening and closet space to one side of the door opening, a rack adapted to rotate in and out of the said closet space through the door opening and comprising a rotatable spindle located at the side of the door opening adjacent the said closet space, one or more trays and a garment hanger rotatable upon the spindle, and means for locking each of these rotating members to the spindle to prevent independent rotation.

3. The combination of a closet with a door opening and closet space to one side of the door opening, and a rack adapted to rotate in and out of the said closet space through the door opening on an axis at the side of the door opening adjacent the said closet space and made up of one or more frames.

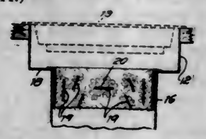
4. The combination of a closet with a door opening and closet space to one side of the door opening and a rack adapted to rotate in and out of the said closet space through the door opening on an axis at the side of the door opening adjacent the said closet space and comprising one or more tubular frames in outline similar to a truncated semi-circle.

5. The combination of a closet with a door opening and closet space to one side of the door opening, a rotating rack adapted to swing in and out of the said closet space through the door opening on an axis at the side of the door opening adjacent the said closet space, and a stack of drawers swinging on a pivot arranged in the end of the closet opposite the end into which the rack swings.

[Claims 6 and 7 not printed in the Gazette.]

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**1,228,561. DUST-COLLECTOR.** JESSIE JANES, Bellevue, Ky., assignor of one-half to Charles R. Hall, Cincinnati, Ohio. Filed Jan. 13, 1917. Serial No. 142,122. (Cl. 183—44.)

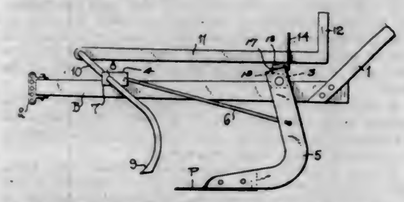


1. A dust collector consisting of a sheet metal frame, a series of parallel metal vanes located therein and spaced therefrom and from each other, and a coating of dust occluding fire proof material attached to both sides of the vanes and to the inside of the frame, said vanes being inclined at angles to the direction of the normal passage of air through the collector.

2. A dust collector comprising a sheet metal frame adapted to be located within an air pipe, a series of sheet metal vanes located therein spaced therefrom and from each other and adapted to baffle the air passing through the pipe, and carded asbestos attached to the vanes and to the interior of the frame and extending into the spaces between the vanes and the frame, said vanes being inclined at angles to the direction of the normal passage of air through the collector.

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**1,228,562. PEANUT-DIGGER.** VELMER H. JOCKISCH, Greensboro, Ala. Filed July 24, 1916. Serial No. 111,061. (Cl. 55—9.)

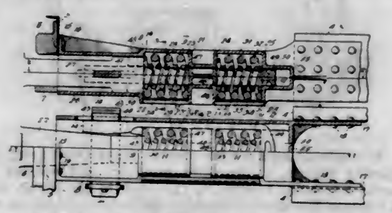


1. A peanut digger comprising a beam, a cross beam secured thereto and extending beyond opposite sides thereof, substantially L-shaped shanks having the upper end portions of their stems pivotally engaged with the ends of the beam, a flat digging element supported by the forward end portions of the feet of said shanks, and means for holding the shanks against pivotal movement.

2. A peanut digger comprising a beam, a cross beam secured thereto and extending beyond opposite sides thereof, substantially L-shaped shanks having the upper end portions of their stems pivotally engaged with the ends of the beam, a flat digging element supported by the forward end portions of the feet of said shanks, a second cross beam carried by the first named beam at a predetermined point in advance of the first named cross beam, and braces secured to the stems of the shanks and disposed through the end portions of the second cross beam for holding said shanks against pivotal movement.

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**1,228,563. DRAFT-ARM FOR RAILWAY-CARS.** GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 9, 1914. Serial No. 865,789. (Cl. 213—42.)



1. A draft arm for railway car draft riggings comprising a hollow, box-like casting arranged to receive a horizontal yoke and having side and top walls, said casting being provided with a rear wall having a horizontal convolution therein adapted to receive the rear end of a yoke and accommodate its inward movement under buff, the side walls of said casting being extended rearwardly beyond said convolution.

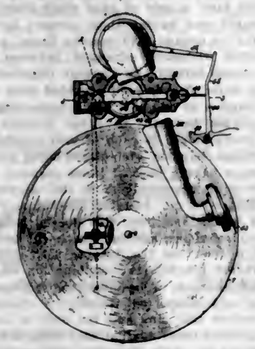
2. In a draft rigging, a hollow, box-like casting having stop shoulders, said casting being formed at its outer end with integral upper and lower horizontal walls and vertical side walls, to thereby form a pocket adapted to receive the inner end of a draw-bar, said upper and lower horizontal walls being in line with the front stops.

3. As an article of manufacture, a draft arm for railway draft riggings, said draft arm comprising a box-like casting of substantially uniform thickness throughout, said casting being provided with longitudinally arranged convolutions on the sides thereof adapted to accommodate a horizontal yoke, said casting being provided also with integral transverse upper and lower convolutions approximately at the center thereof, said transverse convolutions forming intermediate stops.



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**1,228,564. AUTOMATIC STOP FOR TALKING-MACHINES.** ANDRÉ JUNOD, New York, N. Y. Filed May 28, 1916. Serial No. 99,274. (Cl. 74—40.)



1. An automatic stop for talking machines comprising in combination a movable record, a movable amplifying arm, a brake for arresting the movement of the record, a sliding member mounted to revolve and slide when the record is revolved, a second member coupled to revolve with the first so as to have a predetermined angular displacement relative thereto, motion-transmission means from the arm to said second member to synchronize the movement of said second member with the first when said arm is displaced by the record, and motion-transmission means from said second member to the brake becoming operative when the synchronism between the two members is disturbed.

2. An automatic stop for talking machines comprising in combination a movable record, a movable amplifying arm, a brake for the record, a member mounted to revolve, motion-transmission means from the record to said member to revolve the same, a second revoluble member cooperatively disposed with the first, motion-transmission means from the arm to said second member for rotating said second member in synchronism with the first when said arm is displaced by the record, a sliding member associated with one of said revoluble members, means for operating said sliding member when the synchronism between said revoluble member is disturbed, and motion-transmission means from said sliding member to the brake.

3. An automatic stop for talking machines comprising in combination a record mounted to rotate, a movable amplifying arm coöperating with the record, a brake shoe for arresting the movement of the record, a member mounted to revolve, motion-transmission means from the record to said member to revolve the same, a second revoluble member coupled to the first and having relative to the first a predetermined angular displacement, motion-transmission means from the arm to said second member to revolve the member in the same direction and at the same speed as the first member is revolved, tripping means for the brake, and means from one of said members to the tripping means becoming operable when the synchronism between the two revoluble members is disturbed.

4. An automatic stop for talking machines comprising in combination a movable record, a movable amplifying arm coöperating with the record, a brake for the record, a member mounted to revolve, motion-transmission means from the record to said member for revolving the same, a second revoluble member coupled to the first so as to have a predetermined relative angular displacement, motion-transmission means from the arm to said second member to rotate the member in the same direction and speed as the first member when said arm is coöperating with the record, a slide carried by one of said members, slide operating means carried by the other member to displace the slide when the synchronism between the two revoluble members is disturbed, and tripping means from the slide to the brake.

5. An automatic stop for talking machines comprising in combination a movable record, a movable amplifying arm for coöperating with the record, a brake for the record, a member mounted to revolve, motion-transmission means from the record to said member to revolve the same, a second member mounted to revolve with the first and having an angular displacement relative to the first member, motion-transmission means from the arm to said second member for rotating said second member in synchronism with the first when said arm is coöperating with the record, a slide carried by one of said revoluble members, slide-operating means carried by the other of said members in register with the slide, said slide-operating means becoming operative when the synchronism between the two revoluble members is disturbed, and tripping means connecting the slide with the brake.

[Claim: 6 to 15 not printed in the Gazette.]

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**1,228,565. VALVE.** JOSEPH A. KEAN, deceased, Des Moines, Iowa, by Ida Kean, administratrix, Des Moines, Iowa. Filed Nov. 15, 1916. Serial No. 131,580. (Cl. 137—82.)



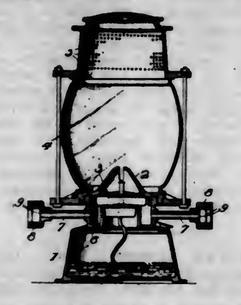
1. A valve comprising a casing formed with alining bores in its ends of less diameter than the interior thereof, a plug mounted for rectilinear reciprocation in said casing, said plug being formed with a recessed head slidable in one of said bores and a barrel slidable in the other bore, said recessed head forming a shoulder at its inner end and being formed with lateral ports adapted to open, in one position of the plug, to the interior of the casing, said plug being removable through one end only of said casing, a shoulder being formed by a reduced extremity of said barrel, a washer on said reduced portion of the barrel engaging said latter shoulder and also adapted to engage the outer face of the adjacent end of the casing, a thread being formed on said reduced portion of the barrel, a nut mounted on said thread to retain said washer, said plug being formed with a circumferential groove adjacent said barrel, and an expansive coil spring mounted on said plug within the casing, one end of said spring impinging the first said shoulder, the opposite end of said spring impinging the inner face of the opposite end of said casing.

2. A valve comprising a casing formed with alining end bores of different diameters, said end bores each being of less diameter than the interior of the casing, a plug movably mounted in and projecting at one end from said casing, said plug being formed with a recessed head slidable in one of said end bores and constituting the largest diameter of said plug and forming a shoulder surrounding said plug, the plug also being formed with a barrel slidable in the smaller end bore, the end portion on the plug adjacent the barrel being reduced to form a shoulder at the outer end of said barrel, a fibrous washer mounted on said reduced end portion of the plug and adapted to engage said shoulder adjacent thereto and also adapted to engage the outer face of the adjacent end of the casing, means for securing said washer to the plug, said plug being formed with a circumferential groove within

the casing of greater length than the smaller end bore, and an expansive coil spring on said plug within said casing and impinging at opposite ends on the first shoulder and the inner face of the opposite end of the casing respectively, the recessed head being formed with radial ports adapted to register with the interior of the casing at times.

[Claim 3 not printed in the Gazette.]

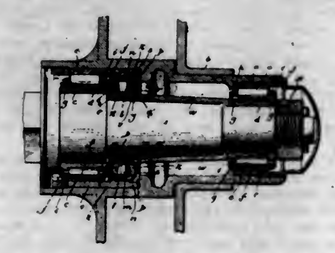
1,228,566. SAFETY-LAMP. ELMER C. KINCADE, Beaumont, Tex., assignor of one-half to John F. Fisher, Beaumont, Tex. Filed Apr. 8, 1916. Serial No. 89,876. (Cl. 240—18.)



1. In a miner's safety lamp, the combination with a dome having fine perforations at its top for the escape of products of combustion, a burner and an air chamber surrounding and beneath said burner, of a plurality of radially disposed tubes entering said chamber and each having an enlarged orifice at its outer end and a wire gauze screen mounted in and extending transversely across said orifice, said air chamber and tubes constituting expansion spaces for the products of combustion of explosive gases to cut off the air supply and extinguish the lamp.

2. In a lamp, the combination with a burner and an air chamber, of an air tube entering said chamber and having an orifice at its outer end, spacing rings in said orifice, a pair of wire gauze screens supported between said spacing rings and a lock nut tapped in the outer extremity of said orifice.

1,228,567. THRUST-BEARING. ALBERT T. KILLIAN, Buffalo, N. Y. Filed Aug. 13, 1913. Serial No. 784,581. (Cl. 64—50.)



1. In a thrust bearing, an inner member, an outer member, means carried by said members forming therewith an annular channel surrounding the inner member, the inner and outer corners of said channel being each provided with an annular beveled face, a pair of race rings loosely mounted in said channel and having their corners adapted to engage said beveled faces, and a series of anti-friction elements arranged between said race rings.

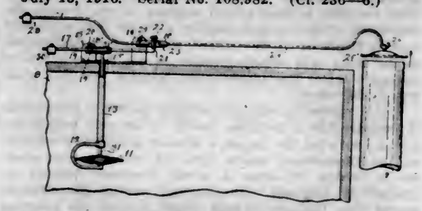
2. In a thrust bearing, the combination of an inner member, an outer member, means forming therewith an annular chamber having beveled corners, a pair of race rings loosely mounted in such annular chamber and having their outer corners beveled to correspond with the beveled corners of the annular chamber, and anti-friction elements arranged between said race rings.

3. In a thrust bearing, an inner member, an outer member, means carried by said members forming therewith an annular channel surrounding the inner member, the corners of said channel being each provided with an annular beveled face, a pair of race rings loosely mounted in said channel and having their corners beveled so as to be adapted to engage said beveled faces, and a series of anti-friction elements arranged between said race rings, said means forming an annular chamber consisting of inner and outer sleeves each provided with an annular flange, the flanges at one side being removable.

4. In a thrust bearing, an inner member, an outer member, a sleeve affixed to each of said members so as to form an annular chamber, each sleeve being provided with annular flanges having beveled inner corners, the flanges at one side being removable from the sleeves and each being provided with an annular extension v projecting beyond said beveled corners, the sleeves being provided with internal shoulders against which the inner ends of said flanges p abut, for the purpose set forth.

5. In a thrust bearing, the combination of an axle or shaft, sleeves thereon, a bearing ring clamped between said sleeves and supported thereby, a clearance being provided between this ring and the axle or shaft, means for clamping the sleeves against said ring, a rotary member surrounding the axle structure and carrying a companion thrust ring, and anti-friction thrust bearing devices engaging said rings.

1,228,568. THERMOSTATIC REGULATOR FOR INCUBATORS. ALOIS KLADIVA, Kenosha, Wis. Filed July 13, 1916. Serial No. 108,982. (Cl. 236—6.)

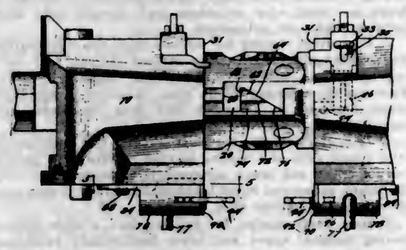


1. A thermostatic regulator for incubators, comprising a thermostatic member, a movable member engaged thereby, a supporting member formed of sheet metal and having pairs of upturned eyed ears and a depending tubular member which supports the thermostatic member and through which the movable member extends, a tubular trunnion member partially mounted between the ears of one of the pairs of ears, a main lever rod extending through and carried by the trunnion member and having a forward upturned end, said main lever trunnion being engaged by the upper end of the movable member, a T-shaped trunnion member pivotally mounted between the other pair of ears, an adjusting screw carried by the T-shaped member and engaging the upturned end of the main lever, lever rods projecting from the T-shaped member, a heat controlling damper carried by one of the rods, a counterweight mounted on the other rod, and a counterweight mounted on the main lever.

2. A thermostatic regulator for incubators, comprising a supporting member having pairs of upturned eyed ears and a depending tubular portion having a curved lower portion, a thermostat carried by the curved portion, a trunnion member pivotally journaled between one of the pairs of ears and having a tubular extension, a main lever extending through the extension and having an upturned front end and a rear end provided with a counterbalance, another trunnion pivotally mounted in the other ears, a set screw threaded through the last mentioned trunnions and bearing against the upturned end of the main lever, a rod mounted in the last mentioned trunnion and carrying a damper on its free end, and another rod mounted in the last mentioned trunnions and projecting rearwardly therefrom and having a counterweight on its free end.



1,228,569. CAR AND AIR-HOSE COUPLING. WILLIAM S. KNISELY, Benton Harbor, Mich. Original application filed Jan. 2, 1913, Serial No. 739,582. Divided and this application filed July 10, 1915. Serial No. 39,065. (Cl. 213—40.)



1. In combination with two car coupler members adapted to be secured together, train pipe coupler members, one for each car coupler member and exterior thereto, mounted for free longitudinal movement with reference to its main coupler member, and means limiting the length of travel of the train pipe coupler member, said means holding said train couplers rigidly in coupling position with reference to each other when the car couplers are coupling, while permitting substantial movement of the coupled train pipe couplers without beginning to uncouple them as the car couplers start to separate.

2. In combination with two car coupler members adapted to be secured together, train pipe coupling members, one for each car coupler member and exterior thereto, mounted for free longitudinal movement with reference to its main coupler member, and a pin and slot connection between each car coupler member and its train pipe coupler member so proportioned that said pins hold said train coupler members rigid in coupling position with reference to each other when the car coupler members are coupling, while permitting substantial movement of the coupled train pipe couplers without beginning to uncouple them as the car couplers start to separate.

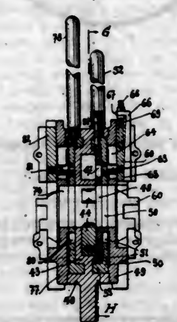
3. In combination with two coupler members adapted to be secured together, train pipe coupler members, one for each car coupler member and exterior thereto, each mounted for free longitudinal movement with reference to its main coupler member, means independent of the car coupling devices for detachably securing the train pipe coupler members together, and means limiting the length of travel of the train pipe coupler members, said means holding said train couplers rigidly in coupling position with reference to each other when the car couplers are coupling, while permitting substantial movement of the coupled train pipe couplers without beginning to uncouple them as the car couplers start to separate.

4. In combination with two car coupler memebrs adapted to be secured together, train pipe coupler members, one for each car coupler member and exterior thereto, mounted for free longitudinal movement with reference to its main coupler member, means independent of the car couplers detachably securing the train pipe coupler members together, and a pin and slot connection between each car coupler member and its train pipe, coupler members so proportioned that said pins hold said train coupler members rigid in coupling position with reference to each other when the car coupler members are coupling, while permitting substantial movement of the coupled train pipe couplers without beginning to uncouple them as the car couplers start to separate.

5. In a train pipe coupling, the combination of a pair of supports, two train pipe coupler members mounted on said supports respectively for free sliding movement longitudinally of the supports in either direction, and means carried by each support for positively limiting the sliding movement of the related train pipe coupler member in either direction, said means being so positioned as to hold the train pipe coupler members rigidly in coupling position during the operation of coupling the members, while permitting movement of the coupled train pipe couplers relatively to the supports during a predetermined movement of said supports away from each other.

[Claim 6 not printed in the Gazette.]

1,228,570. ATTACHMENT FOR LATHES AND THE LIKE. JAKOB KUPP, Küsnacht, Switzerland. Filed July 25, 1916. Serial No. 111,218. (Cl. 82—35.)



1. An attachment for lathes comprising in combination a casing adapted to be fixed to the carriage of a lathe or to the bed therefor, two disks with curved slots and a handle rotatably mounted in said casing, three slides for each disk arranged in radial guides of said casing adapted to be moved by said disks, means for centering a work piece on some of said slides and cutting tools on the other slides, means for adjusting the cutting tools in the direction of the axis of the attachment and means for coupling the disk for moving the steadying dies and the cutting tools substantially as described and shown.

2. An attachment for lathes comprising in combination, a casing adapted to be fixed to the carriage of a lathe or to the bed thereof, two disks with curved slots and a handle rotatably mounted in said casing, three slides for each disk arranged in radial guides of said casing adapted to be moved by said disks, a handle projecting through the circumference of said casing and rollers supported by said slides adapted to be actuated by said handle for centering a work piece on some of said slides, and cutting tools on the other slides, set screws for adjusting the cutting tools in the direction of the axis of the attachment and means for coupling the disk for moving the steadying dies and the cutting tools, substantially as described.

1,228,571. DISPENSING-CARTON. WILLIAM T. LAZAR, San Francisco, Cal. Filed May 22, 1915. Serial No. 29,910. (Cl. 206—57.)

1. The combination with a paper towel dispensing carton having a longitudinal slot in the lower portion thereof, of a pile of interleaved towels having a greater width than the carton and means to hold said towels in an arched position above the bottom of the carton.

3. A paper towel dispensing carton having a longitudinal slot in the bottom thereof and adapted to contain

a pile of interleaved towels, and suitable inverted cup shaped ends inserted within the ends of the carton and extending within the ends of the slot whereby a towel

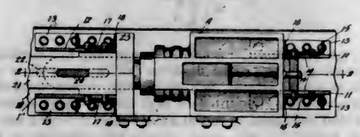


being withdrawn is prevented from engaging the ends of the said slot.

[Claim 2 not printed in the Gazette.]

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1,228,572. DRAFT-RIGGING FOR CARS. GOODRICH Q. LEWIS, Wheaton, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 18, 1915. Serial No. 56,437. (Cl. 213—64.)



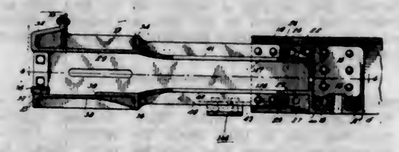
1. In a draft rigging, the combination with draft sills and channel shaped stop members secured thereto, said channel stop members extending parallel to the axis of the draft rigging, of means for bracing said stop members, said means comprising channels extending at right angles to the axis of the draft rigging.

2. In a draft rigging, a stop member comprising a section of a channel arranged to have the flanges thereof secured to a pair of draft sills, and a section of another channel secured to the web of said first named channel section and having one of the flanges thereof flush with the edge of the web of said first named channel section.

3. A stop member for draft riggings which comprises a section of a channel adapted to have the flanges thereof secured to opposite draft sills, a portion of the web of said channel being cut out to thereby form a recess, and a section of another channel secured to the web of the first named channel and extending in a direction transversely thereof, one of the flanges of the second named channel section being flush with the edge of the web of the first named channel section at the inner end of said recess.

4. In a draft rigging, the combination with draft sills, of upper and lower stop members for a draft gear having a horizontal yoke, said stop members being each secured at its sides to the sills and having a horizontal web, the upper stop member being provided at its inner edge with a transverse, vertical, upwardly extending flange and the lower stop member being provided at its inner edge with a transverse, downwardly extending, vertical flange.

1,228,573. DRAFT-RIGGING. GOODRICH Q. LEWIS, Wheaton, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Apr. 13, 1916. Serial No. 90,841. (Cl. 213—42.)



1. In a draft rigging for railway cars, a stop casting having integral, upper and lower horizontally extending front and rear stop shoulders and integral side webs forming center sill extensions.

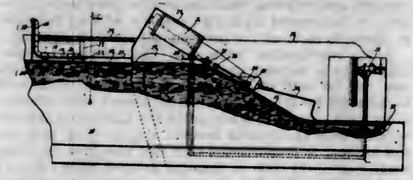
2. In a draft rigging for railway cars, the combination with center sills, of a casting secured thereto, said casting having an integral buffer block, upper and lower horizontally arranged front stop shoulders, upper and lower horizontally arranged rear stop shoulders, and bolster filler.

3. In a draft rigging for railway cars, the combination with center sills, of a casting secured thereto, said casting having upper and lower horizontally arranged front stop shoulders, upper and lower horizontally arranged rear stop shoulders, and bolster filler.

4. In a draft rigging for railway cars, a stop casting having integral upper and lower horizontally extending front stop shoulders connected by integral vertical webs, said casing having also an integral buffer block substantially in line with the upper stop shoulder.

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1,228,574. LOCOMOTIVE-TENDER. NATHAN M. LOWER, Schenectady, N. Y., assignor to Locomotive Stoker Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 18, 1916. Serial No. 72,693. (Cl. 105—260.)



1. In combination, a tender having a coal bin and a fuel deck back of the bin, and a bulkhead movable over the deck and adapted to advance the mass of fuel thereon.

2. In combination, a tender having a coal bin, a fuel deck back of the bin, a bulkhead movable over the deck and adapted to advance the mass of fuel thereon, and means for maintaining the bulkhead in upright position.

3. In combination, a tender having a coal bin, a fuel deck back of the bin, and a bulkhead having a forwardly projecting floor and movable over the deck and adapted to advance the mass of fuel thereon.

4. In combination, a tender having a coal bin, a fuel deck back of the bin, and a bulkhead having a forwardly projecting floor and side walls and movable over the deck and adapted to advance the mass of fuel thereon.

5. In combination, a tender having a fuel deck, and a bulkhead having a forwardly projecting floor, such floor having a downwardly and forwardly inclined lip at its forward end, and movable over the deck and adapted to advance the mass of fuel thereon.

[Claims 6 to 9 not printed in the Gazette.]

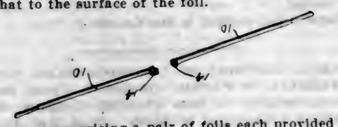
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1,228,575. GAME. EUGENE P. LYNCH, Providence, R. I. Filed Oct. 2, 1916. Serial No. 123,240. (Cl. 46—59.)

1. A game comprising a pair of foils each provided with a player block supporting area near its end, and a player block for each foil shaped on one of its faces to rest upon said supporting area whereby it may be readily dislodged therefrom.



2. A game comprising a pair of foils each provided with a player block supporting area near its end, and a player block for each foil shaped on one of its faces to rest upon said supporting area whereby it may be readily dislodged therefrom, and means for causing the block to adhere somewhat to the surface of the foil.

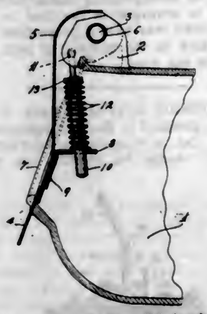


3. A game comprising a pair of foils each provided with a flat area near its end for supporting a player block, and a player block for each foil shaped on one of its faces to rest upon said area whereby it may be readily dislodged therefrom, and a flexible connector for loosely attaching each block to its foil.

4. A game comprising a pair of foils each having a long slim body portion with an enlarged head having a flat supporting surface, a playing block for said face also provided with a flat surface to rest upon that of the foil whereby the block may be readily dislodged therefrom, and means in said block for distinguishing them one from the other.

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1,228,576. CAR-AXLE-BOX LID. DAVID W. MCCORD, New York, N. Y., and IVAR A. RANDEL, Chicago, Ill. Filed July 21, 1916. Serial No. 110,536. (Cl. 64—28.)



1. A pressed metal axle box lid having a separately formed spring bracket attached thereto.

2. A pressed metal axle box lid having an independently formed spring bracket attached thereto by interlocking engagement therewith.

3. A pressed metal lid formed with the hood adapted to embrace a hinge lug of an axle box, the sides of the hood having inwardly pressed trunnions affording bosses for engagement with seats in said hinge lug.

4. A pressed sheet metal axle box lid having a hood of less width than its body portion, the said hood extending above the upper edge of the body of said lid and adapted to embrace a hinge lug on an axle box, the sides of said hood being formed with inwardly pressed trunnions affording bosses for engagement with said trunnion seats.

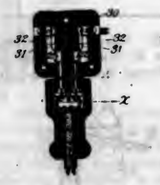
5. A pressed metal axle box lid formed with parallel slits and having the portion between its slits pressed laterally inward, to form a pocket, and an independently-formed spring bracket having an arm telescoped into said pocket.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,577. ELECTRICAL PLUG AND SOCKET. JAMES F. MCELROY, Albany, N. Y.; Susie H. McElroy, executrix of said James F. McElroy, deceased, assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed Feb. 27, 1912. Serial No. 680,232. (Cl. 173—338.)

1. The combination with a socket member having an internal cavity provided with spaced apart internal contacts, a plug provided with a small contact block on each face of its entering portion, the entering portion of the plug being of such dimensions as to divide said cavity into isolated, independent chambers, one contact of the socket and the corresponding contact of the plug being located in each chamber, the entrance opening of the cavity being smaller than the cavity to form a tight fit with the plug.



3. The combination with a socket member having an internal cavity provided with spaced apart internal contacts, a plug provided with a small contact block in each face of its entering portion, said entering portion being of a width and depth equal to the internal width and depth of the cavity, and of a thickness less than the transverse width of the cavity, whereby the entry of the plug into the cavity will divide the same into isolated, independent chambers, one contact of the socket and the corresponding contact of the plug being located in each chamber, the entrance opening of the cavity being smaller than the cavity to form a tight fit with the plug.

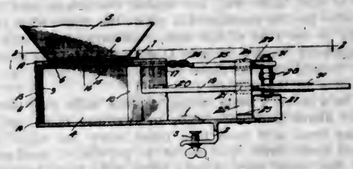
6. A plug socket comprising a receptacle of insulating material provided with an internal cavity, one wall of which is provided with a narrow slot of less width than said cavity and equal to the interior length of the cavity, said slot being positioned to cause the entering plug to engage the wall opposite the slot, whereby the interior space of the socket may be divided into two oppositely disposed parallel non-communicating distinct chambers.

9. The combination with a socket, of a plug formed in two sections, a nut embedded in and projecting laterally from the entering section of the plug, a screw in the handle section of the plug engaging the nut to hold the plug sections assembled, a casing inclosing the socket, and means carried by the casing for engaging the projecting portion of the nut to hold the plug in engagement with the socket.

[Claims 2, 4, 5, 7, 8, 10, and 11 not printed in the Gazette.]

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1,228,578. GEARING FOR SLICING-MACHINES OR THE LIKE. ALBERT D. MARSTON, Whiting, Kans. Filed Aug. 9, 1916. Serial No. 114,043. (Cl. 74—27.)

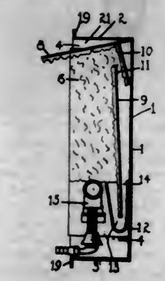


1. As a means for moving elements in timed relation with each other, a pair of slidably mounted rack bars each adapted to be associated with an element, means for guiding the sliding movement of the bars, a rockably mounted lever, segmental gears carried by the lever and positioned so that one will engage one rack bar when the other gear becomes disengaged from the other rack bar.

2. As a means for moving two elements in timed relation with each other, a pair of slidably mounted rack bars one of which is longer than the other while each is adapted to engage an element, a bracket provided with means for slidably receiving and guiding the movement of the bars, a rockably mounted lever, segmental gears carried by the inner end of the lever on opposite sides thereof and

projecting from the lever to engage the rack bars, and the segmental gears being arranged so that when the lever is rocked in one direction from a middle position one rack bar will be reciprocated while the other rack bar will remain stationary, and when the lever is rocked in an opposite direction the first mentioned rack bar will remain stationary while the other rack bar will be reciprocated.

1,228,579. STOVE. SIMON N. MENTEL, MARY A. MENTEL, and GEORGE E. MENTEL, Springfield, Ohio. Filed June 8, 1916. Serial No. 102,462. (Cl. 126—87.)



1. In a stove, a main casing, a main baffle wall located in said casing having passageways above, to the rear and below the same, a gas burner located in front of said baffle wall with the gas outlets thereof above the lower edge of said wall, and an auxiliary wall located between said baffle wall and said burner so as to form a continuation of the passageway beneath said baffle wall, the upper edge of said auxiliary wall extending to a point in close proximity to the gas outlet openings.

2. In a stove, the combination with a main casing, a main baffle wall therein, a hood above said wall, said main baffle wall having passageways between the upper edge thereof and said hood, to the rear of the same and beneath the same, a gas burner in said casing in front of said main baffle with the gas outlet portions thereof arranged above the lower edge of said main baffle wall, and an auxiliary wall located between said burner and said main baffle wall so as to form a continuation of the passageway beneath said main baffle wall, the upper edge of said auxiliary wall being located at a point in close proximity to the gas outlet portion of said burner.

3. In a stove, a main casing, a burner therein, a main baffle wall therein, a U-shaped plate embracing the lower edge of said baffle wall but spaced therefrom, said baffle wall also having passageways about the upper edge thereof and to the rear of the same communicating with said passageways formed by said U-shaped plate, the passageways formed by said plate extending to a point in close proximity to the burner.

4. In a stove, a main casing, a main baffle wall therein, a hood above said baffle wall, an auxiliary baffle wall extending from said hood to a point below the upper edge of said main baffle wall so as to provide a passageway about the upper edge of said main baffle wall, said main baffle wall and the rear of said casing forming a passageway back of said main baffle wall, a gas burner extending across and in front of said main baffle wall with the gas outlet portion thereof above the lower edge of said wall, and a second auxiliary baffle wall between said burner and main baffle wall to form a continuation of the passageway beneath said main baffle wall, the passageway between said second auxiliary wall and said main baffle wall being extended to a point in close proximity to the gas outlet openings of said burner.

5. In a stove, a main casing, a burner therein, a main baffle wall, a hood above the upper edge of said wall, and an auxiliary baffle wall extending from said hood to a point to the rear of and below the upper edge of said main wall, a U-shaped plate embracing the lower edge of said main wall but spaced therefrom, said baffle walls, hood and U-shaped plate forming passageways which extend about the upper edge, behind and around the lower edge of said main baffle wall to a point in proximity to said burner.

[Claim 6 not printed in the Gazette.]

1,228,580. METHOD OF INCORPORATING FILLING MATERIAL IN PAPER. GEORGE W. MILES, Belmont, Mass., assignor to Ross Chemical Company, Boston, Mass., a Corporation of Maine. Filed Mar. 11, 1915. Serial No. 13,692. (Cl. 92—21.)

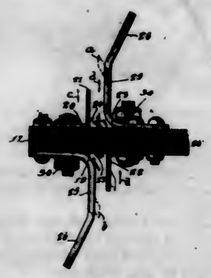
1. A method of incorporating filling material in paper, which consists in mixing with the fiber before its final formation into a paper web an emulsion of waxy material with a proportion of filler in excess of that which in the absence of said emulsion will incorporate with the fiber.

2. A method of incorporating filling material in paper, which consists in mixing with the fiber before its final formation into a paper web an emulsion of paraffin wax with a proportion of filler in excess of that which in the absence of said emulsion will incorporate with the fiber.

3. A method of incorporating filling material in paper which consists of mixing with the fiber in the beater an emulsion of waxy material with a proportion of filler in excess of that which in the absence of said emulsion will incorporate with the fiber.

4. A method of incorporating filling material in paper which consists in mixing with the fiber in the beater an emulsion of paraffin wax with a proportion of filler in excess of that which in the absence of said emulsion will incorporate with the fiber.

1,228,581. WIGWAG SIGNAL. MARK S. MORSE, Los Angeles, Cal., assignor to Railway Specialties Company, Los Angeles, Cal., a Corporation of California. Filed May 17, 1916. Serial No. 98,075. (Cl. 175—282.)



1. In combination, a spring blade, a contact on said blade, and spaced apart circuit-closing contacts having their adjacent ends in the path of travel of the spring blade contact so as to deflect the spring blade first to one side and then to the other as the blade oscillates.

2. In combination, a spring blade, a contact on said blade, spaced apart contacts having their adjacent ends in the path of travel of the spring blade contact so as to deflect the spring blade first to one side and then the other as the blade oscillates, and means to stop vibration of the spring blade during the movement of the blade contact from one to the other of the spaced apart contacts.

3. In combination, a shaft, a spring blade mounted to turn with said shaft, a contact on said blade, and a pair of spaced apart circuit-closing contacts having overlapping ends bent at angles toward one another and adapted to be alternatively engaged by the blade contact when said shaft is oscillated.

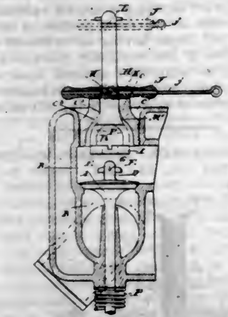
4. In combination, a shaft, a spring blade mounted to turn with said shaft, a contact on said blade, a pair of spaced apart contacts having overlapping ends bent at angles toward one another and adapted to be alternatively engaged by the blade contact when said shaft is oscillated, and guards spaced apart from the stationary contacts to engage the blade contact when it slips from the stationary contacts to stop vibration of the spring blade.

5. In combination, a shaft, a spring blade mounted to turn with said shaft, a pair of spaced apart circuit-closing contacts having overlapping ends bent at angles toward one another, and a contact on said spring blade operative by turning of the shaft in one direction to engage one of the stationary contacts and operative by turning of the shaft in the opposite direction to engage the other stationary contact.

[Claims 6 to 9 not printed in the Gazette.]



1,228,582. REGRINDING DEVICE FOR THE VALVES OF EXPLOSION-ENGINES. JOSEPH B. MOWRY, Cleveland, Ohio. Filed June 25, 1914, Serial No. 847,327. Renewed Oct. 28, 1916. Serial No. 128,348. (Cl. 137—4.)



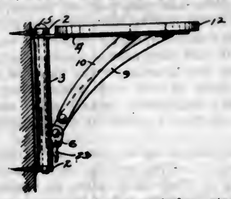
1. The combination with an engine cylinder having a valve controlled port and a lifting spring controlled valve therein, said cylinder having an opening in line with the movement of the valve and a plug therein having an opening, of an engaging device upon the outer extremity of said valve, and a device insertible in said opening in said plug for operatively connecting with said engaging means on said valve for lifting said valve against the tension of said spring, said lifting device serving also as a device for rotating said valve, and a ground joint in said plug for said lifting and rotating device.

2. The combination with an engine cylinder having a valve port and spring controlled valve therein, and a plug in line with said valve, of an engaging means upon the outer end of said valve, an adjustable device for operating said valve adapted to both lift and rotate the same, said operating device movable in said plug, and adapted to make operative connection with the engaging means upon said valve.

3. The combination with the cylinder of an explosion engine and spring controlled valve therein, of an engaging means upon the outer end of said valve, a device movable in the wall of said cylinder for operatively connecting with said engaging means on said valve to raise and rotate the same, and means for normally securing said operating device out of engagement with said engaging means on the valve.

4. In combination with the cylinder and spring controlled valve of an explosion engine, an engaging means upon the outer extremity of said valve, a stem longitudinally movable in the wall of said cylinder, and adapted to make operative connection with said engaging means on said valve, to raise and rotate said valve, and a nut for normally securing said stem out of contact with said valve, said nut serving as a clamping device, said stem and wall making a gas tight joint, adapted to be closed by said clamping device.

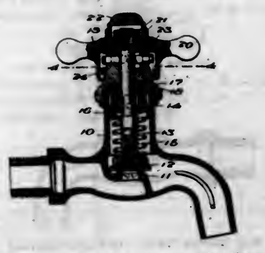
1,228,583. BRACKET. OTTO MUELLER, Richmond, Cal. Filed Mar. 4, 1916. Serial No. 82,089. (Cl. 248—18.)



1. A bracket comprising a tubular standard, a pin adapted to pass through the tubular standard for connecting the bracket to suitable supports, an integral horizontally extending member connected with the tubular standard, a stand top connected to the horizontally extending member, and braces connected to said stand top and to the first brace on each side of the horizontally extending member.

2. A bracket comprising a tubular standard, a pin adapted to pass through the tubular standard for connecting the bracket to suitable supports, an integral horizontally extending member connected to the tubular standard, a brace connected to the tubular standard and the horizontally extending member, and an eccentric lever for locking the position of the bracket with respect to the supporting pin therefor.

1,228,584. SELF-CLOSING COCK WITH CHECK. PHILIP MUELLER, Decatur, Ill. Filed May 22, 1916. Serial No. 99,161. (Cl. 137—4.)



1. In a self-closing valve, the combination of a body-portion having a valve-seat, a valve having a stem, means tending to close said valve, an operating handle on said stem having a depending skirt to house the upper part of the valve body and the operating parts between said handle and body-portion, means between said handle and body-portion to lift said valve and stem when said handle is rotated, stop means on said body-portion, and stop means on the skirt of said handle which are brought into registering contact upon rotation and lift of said handle, so as to limit rotation of said handle and lift of said valve.

2. In a self-closing valve, the combination of a body-portion having a valve-seat, a valve having a stem, means tending to close said valve, an operating handle on said stem having a depending skirt to house the upper part of said body-portion and the operating parts between said handle and body-portion, means between said handle and body-portion to lift said valve and stem when said handle is rotated, stop means on the exterior of said body-portion, and stop means on the interior of the skirt of said handle said stop means being offset vertically but adapted to be brought into registering contact upon rotation and lift of said handle, so as to limit rotation of said handle and lift of said valve.

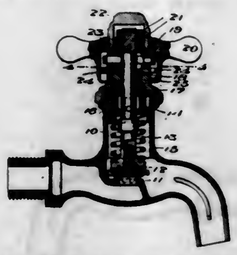
3. In a self-closing valve, the combination of a body-portion having a valve-seat, a valve having a stem, means tending to close said valve, an operating handle

on said stem having a depending skirt to house the upper part of said body-portion and the operating means between said handle and body-portion, means between said handle and body-portion to lift said valve and stem when said handle is rotated, radially projecting stop means on the exterior of said body-portion, and radially projecting stop means on the interior of the skirt of said handle, the opposed edges of said stop means being adapted to be brought into registering contact when said handle is rotated so as to limit rotation of said handle and lift of said valve.

4. In a self-closing valve, the combination of a body portion having a valve seat, a valve having a stem, means tending to close said valve, an operating handle on said stem having a depending skirt to house the upper part of said body portion and the operating parts between said body portion and handle, means between said handle and body portion to lift said valve and stem when the handle is rotated, stops integral with and projecting radially from the exterior of said body portion and disposed equidistant thereabout, and stops integral with and projecting radially of the interior of the skirt of the handle and being angularly spaced thereabout to correspond to the stops on said body portion, the stops on said body portion being vertically offset from the stops on said handle but being in such relation thereto that upon rotation and lift of the handle they will be brought into registering contact so as to limit rotation of said handle and lift of the valve.

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1,228,585. SELF-CLOSING COCK WITH CHECK. PHILIP MUELLER and ANTON C. SCHUERMANN, Decatur, Ill. Filed May 22, 1916. Serial No. 99,162. (Cl. 137—4.)



1. In a self-closing valve, the combination of a body portion having a valve seat, a valve having a stem, means tending to close said valve, an operating handle on said stem, means between said handle and body portion to lift said valve and stem when said handle is rotated, stop means on said body portion, and stop means on said handle, said stop means being angularly and vertically movable relative to each other, so as to bring their upper and lower surfaces into frictional contact when said handle is rotated to limit the rotation of said handle and lift of said valve.

2. In a self-closing valve, the combination of a body portion having a valve seat, a valve having a stem, means tending to close said valve, an operating handle on said stem having a depending skirt to house the upper part of the valve body and the operating parts between said handle and body portion, means between said handle and body portion to lift said valve and stem when said handle is rotated, stop means on said body portion, and stop means on the skirt of said handle, said stop means being angularly and vertically movable relative to each other so as to bring their opposed upper and lower surfaces into frictional contact when said handle is rotated to limit the rotation of said handle and lift of said valve.

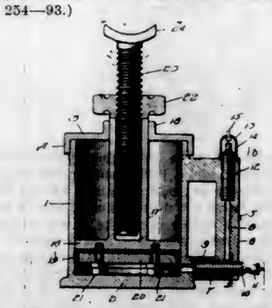
3. In a self-closing valve, the combination of a body portion having a valve seat, a valve having a stem, means tending to close said valve, an operating handle on said stem having a depending skirt to house the upper part of the valve body and the operating parts between said handle and body portion, means between said handle and body portion to lift said valve and stem when said handle is rotated, radially projecting stop means on the exterior of said body portion and radially projecting stop means on the interior of the skirt of said handle, said stop means being angularly and vertically movable relative to each other so as to bring their opposed upper and lower surfaces into frictional contact when said handle is rotated to limit the rotation of said handle and lift of said valve.

4. In a self-closing valve, the combination of a body portion having a valve seat, a valve having a stem, means tending to close said valve, an operating handle on said stem, means between said handle and body portion to lift said valve and stem when said handle is rotated, stops on said body portion, and stops on said handle, one of said sets of stops having an extended area and being offset from the other set of stops, so that upon relative angular and vertical movement of said stops their opposed upper and lower surfaces are brought into frictional contact to limit the rotation of said handle and lift of said valve.

5. In a valve, the combination of a body portion having a valve seat, a valve having a stem, an operating handle on said stem, a stop on said body portion, a stop on said handle, one of said stops having an extended area, said stops being angularly and vertically movable relative to each other, so as to bring their opposed upper and lower surfaces into frictional contact when said handle is rotated to limit the rotation of said handle and lift of said valve.

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1,228,586. LIFTING-JACK. DANIEL C. MULVIHILL, Hannibal, Mo. Filed Feb. 23, 1917. Serial No. 150,816. (Cl. 254—93.)



3. A lifting jack comprising a compressed air cylinder closed at the bottom and open at the top, a cap screwed upon the open end of said cylinder, a hollow handle for said cylinder, the hollow opening to the interior of the cylinder, an air valve in the hollow of said handle and adapted for connection with a flexible air connection, a plunger sliding in said cylinder and having a tubular stem guided in said cap, a screw threaded post sliding in said tubular stem, and a nut threaded upon said post and resting upon the upper end of said stem.

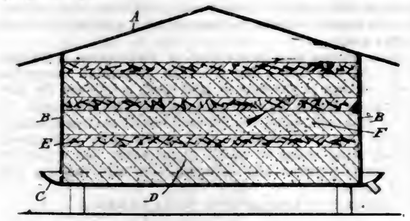
[Claims 1, 2, 4, and 5 not printed in the Gazette.]

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1,228,587. FERTILIZER AND THE MANUFACTURE THEREOF. FREDERIC J. NASH, Brooklyn, N. Y. Filed Feb. 24, 1916. Serial No. 80,097. (Cl. 71—6.)

1. The method of making a combined green manure and potash fertilizer, which consists in placing a layer of sea vegetation in substantially the condition in which it comes from the water before it has lost its deliquescent potash, upon and in direct contact with a layer of ripened peat, then permitting said layers to stand and dry out for a sufficient length of time to enable the layer of peat to absorb substantially all the drainage from the sea vegetation and retain the potash, and finally producing a humus forming mixture for useful purposes retaining the partially dried sea vegetation as a green manure in addition to the fertilizing constituents of the potash impregnated peat.





2. The method of making a combined green manure and potash fertilizer, which consists in forming a stack of suitable shape of alternate layers of ripened peat, and sea vegetation in substantially the condition in which it comes from the water before it has lost its deliquescent potash, beginning with peat as the bottom layer, each layer of one material being in direct contact with the next adjacent layer or layers of the other material throughout substantially the entire dividing surface contact areas, then permitting the stack to stand and dry out for a sufficient length of time to enable the layers of peat to absorb substantially all the drainage from the sea vegetation and retain the potash, and finally producing a humus forming mixture for useful purposes, retaining the partially dried sea vegetation as a green manure in addition to the fertilizing constituents of the potash impregnated peat.

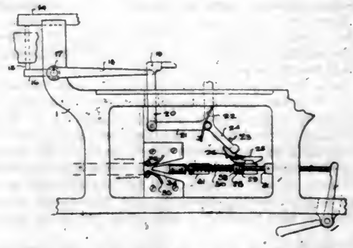
3. The method of making a combined green manure and potash fertilizer, which consists in first placing a layer of ripened peat within a structure, then spreading over the layer of peat and in direct contact therewith over substantially its entire upper surface a layer of sea vegetation, in substantially the condition in which it comes from the water before it has lost its deliquescent potash, then permitting the said layers to stand and dry out in said structure, for a sufficient length of time to enable the layer of peat to absorb substantially all the drainage from the sea vegetation and retain the potash, and finally producing a humus forming mixture for useful purposes, retaining the partially dried sea vegetation as a green manure in addition to the fertilizing constituents of the potash impregnated peat.

4. The method of making a combined green manure and potash fertilizer, which consists in forming a stack of suitable shape of alternate layers of ripened peat, and sea vegetation in substantially the condition in which it comes from the water before it has lost its deliquescent potash, within a structure, the first layer being formed of peat, and each layer of one material being in direct contact with the next adjacent layer or layers of the other material throughout substantially the entire dividing surface contact areas, then permitting the stack to stand and dry out in said structure for a sufficient length of time to enable the layers of peat to absorb substantially all the drainage from the sea vegetation and retain the potash, and finally producing a humus forming mixture for useful purposes retaining the partially dried sea vegetation as a green manure in addition to the fertilizing constituents of the potash impregnated peat.

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1,228,588. SQUIRT-PREVENTER FOR TYPE-CASTING MACHINES. WILLIAM NICHOLAS, New York, N. Y., assignor to Premier Machine Company, a Corporation of Delaware. Filed July 7, 1914. Serial No. 849,527. (Cl. 199—90.)

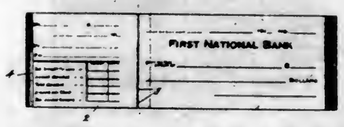
1. In a type casting and composing machine, a mold and movable matrix thereon; yielding means for locating the matrix to form a metal-tight connection with said mold; means comprising a multiplying lever and slidable rods in connection with said lever; a spring actuated circuit making and breaking device normally held in position to complete or close the circuit that drives the motor; means comprising a latch for holding said circuit making and breaking device in said closed circuit making position; and means connected with one of said rods for operably disconnecting said latch from said circuit closing device.



2. In a type casting and composing machine having a mold and a movable matrix plate thereon, yielding means for centering and seating said matrix plate upon said mold to form a metal-tight connection between said mold and plates; means for breaking the current that drives the motor of said machine when said plate has not been seated sufficiently close to said mold to prevent molten metal from entering the crevice formed thereby, comprising a spring yielding contact rod normally held by a spring latch in position to close the motor circuit; and means whereby said latch is lifted to permit said rod to be withdrawn from its contact closing position, comprising a fulcrum lever having a short arm at one end and long arm at the other end; a vertically sliding rod between the short arm and said matrix plate, and a similar rod operably disposed between said long arm and said latch lifting mechanism.

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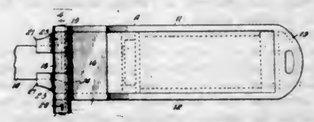
1,228,589. FOLDING CHECK-BOOK. JOHN P. NORMANN, Crookston, Minn., assignor of one-half to S. A. Erickson, Crookston, Minn. Filed June 29, 1914. Serial No. 847,829. (Cl. 11—17.)




A folding check book comprising a pad of leaves having stub portions at one end thereof and separated therefrom by perforated tearing lines on which the pad may be folded bodily, flat upon itself, the perforate tearing lines of successive leaves extending in a plane obliquely through the pad, the stub portions of the pad being bound together at the outer end, and a back also bound with the stub portions and terminating at said tearing lines.

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1,228,590. CONNECTION FOR DRAFT-RIGGING DRAW-BARS AND YOKES. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 18, 1915. Serial No. 15,346. (Cl. 213—42.)



1. A yoke for draft riggings having parallel arms and provided with side plates at the front end thereof, blocks each having a shoulder on the inner side thereof arranged to engage a shoulder of a draw-bar, and means for detachably connecting said blocks to said side plates.

2. In a device of the character described, the combination with a draw bar having upper and lower transversely extending shoulders, of a yoke having parallel arms, a pair of upper and lower detachable blocks arranged to fit over the upper and lower faces of the draw bar and engage said shoulders, said blocks having their ends extending laterally beyond the side face of the drawbar, and means, located outside of the side planes of the draw bar and forwardly of said shoulders, for detachably connecting said blocks to said yoke arms.

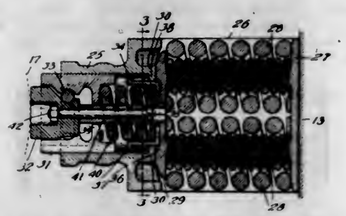
3. In a draw-bar and yoke connection, the combination with a draw-bar having upper and lower shoulders, of a yoke having a plurality of perforated ears at its forward end located to the sides of the draw-bar, upper and lower blocks fitting the upper and lower faces of the draw-bar shank and engaging said draw-bar shoulders, the ends of said blocks fitting between said perforated ears, and detachable pins passing through said perforated ears and the ends of said blocks for connecting the latter with the yoke.

4. In a draw-bar and yoke connection, the combination with a draw-bar having upper and lower shoulders, of a two-part yoke, each part having a series of spaced, perforated ears at its forward end, blocks extending transversely across the top and bottom of said draw-bar and engaging the shoulders thereof, and means for connecting said blocks with said perforated ears of the yoke parts.

5. In a draw-bar and yoke connection, the combination with a draw-bar having upper and lower shoulders, of a two part yoke divided longitudinally thereof, blocks extending transversely across the top and bottom of said draw-bar and engaging the shoulders thereof, and means for connecting said blocks with said yoke parts and thereby preventing lateral separation of said parts.

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1,228,591. DRAFT-GEAR. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Sept. 2, 1915. Serial No. 48,589. (Cl. 213—64.)



1. A friction gear comprising, in combination, a friction shell, friction shoes coöperable therewith, a wedge, a main spring, a spring follower, located between said shoes and said main spring, a thrust member interposed between said wedge and said follower, and a preliminary spring interposed between said shoes and said follower.

2. A friction gear comprising, in combination, a friction shell, friction shoes coöperable therewith, a wedge, a main spring, a follower, a thrust member interposed between said wedge and said follower, and arranged to maintain a fixed distance between said wedge and follower at all times, and a preliminary spring interposed between said shoes and said follower, said preliminary spring, main spring, and follower all being located on the same side of the friction shoes.

3. A friction gear comprising, in combination, a friction shell, friction shoes coöperable therewith, a wedge, a main spring, a spring follower, a preliminary spring between said shoes and said follower, and a supplemental follower movable with said first named follower during a portion of the operation of the gear, and means for arresting the movement of said supplemental follower prior to the full movement of the gear.

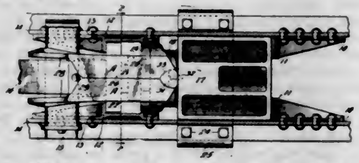
4. A friction gear comprising, in combination, a friction shell, friction shoes coöperable therewith, a wedge, a main spring, a preliminary spring acting directly against said shoes, a follower against which one end of said preliminary spring acts directly, said preliminary spring being under an initial compression, and means for limiting the movement of said follower after a partial actuation of the gear.

5. A friction gear comprising, in combination, a friction shell, friction shoes and a wedge coöperable therewith, main springs at the rear of said shell, a follower for said springs, a preliminary spring interposed between said follower and said shoes, the forward end of said preliminary spring directly engaging said shoes, said preliminary spring being under an initial compression, and a plunger interposed between and engaging both said follower and said wedge.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,592. RAILWAY DRAFT-RIGGING. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 13, 1916. Serial No. 109,004. (Cl. 213—42.)



1. In a draft rigging, the combination with a draw bar and a friction gear including a friction shell, of means for connecting the draw bar and front end of the shell comprising a yoke consisting of two parts interlocked when assembled and having shouldered engagement with the friction shell.

2. In a draft rigging, the combination with a draw bar and a friction gear including a friction shell, of means for connecting the draw bar and front end of the shell comprising a two-part yoke having a detachable hinge connection.

3. In a draft rigging, the combination with a draw bar and a friction gear including a friction shell, of means for connecting the draw bar and front end of the shell comprising a two-part yoke having a detachable hinge connection, said yoke and friction shell having coöperating engaging shoulders.

4. In a draft rigging, the combination with a draw bar and a friction gear including a friction shell, of means for connecting the draw bar and front end of the shell comprising two members having an interior shoulder at their rear ends, the shell having an angular shoulder at its front end coöperable therewith.

5. In a draft rigging, the combination with a draw bar and a friction gear including a friction shell, of means for connecting the draw bar and front end of the shell comprising two members having an interior shoulder at their rear ends, the shell having an angular shoulder at its front end coöperable therewith, said members being interlocked when in assembled position.

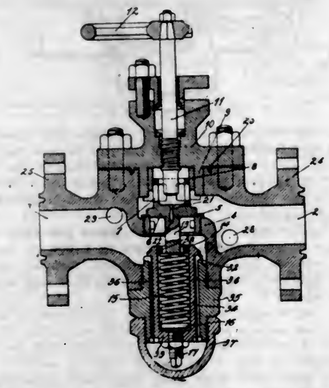
[Claims 6 to 9 not printed in the Gazette.]

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1,228,593. AUTOMATIC PRESSURE-LIMITING VALVE. OLAF E. OLSSON, Chicago, Ill., assignor to The Edward Steam Specialty Co., Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1913. Serial No. 739,696. (Cl. 137—4.)

1. In a valve construction, the combination of a housing having an aperture extending through it, a valve seat located in said aperture, a valve coöperating with said seat to control the flow of fluid through said aperture, a stem extending from said valve transversely of the main direction of said aperture, a spring engaging said stem and tending to hold the valve away from its seat, a screw for changing the tension on said spring, a second valve seat disposed in the housing in opposite relation to the first valve seat, a bushing surrounding said spring and having a second valve formed on its inner end for engaging said second valve seat, said bushing being slidably mounted in the housing and serving to support said screw, there being restricted passageways from the said aperture along the sides of said bushing to its outer end, and a cap inclosing the outer end of said bushing and screw.





5. In a valve, the combination of a casing having a passage permitting the flow therethrough of fluid under pressure, two valve seats in said passage, two valves, one for engaging each seat, whereby one valve checks the flow in one direction and the other valve checks the flow in the opposite direction through said passage, a stem extending from one side of one of said valves, a tubular extension projecting from the other valve in the same direction as said stem, and a spring in said tubular extension engaging said extension and said stem, said casing having a bore for containing said tubular extension.

8. In a valve, the combination of a casing having a passage permitting the flow therethrough of fluid under pressure, two valve seats in said passage, two valves, one for engaging each seat, whereby one valve checks the flow in one direction and the other valve checks the flow in the opposite direction through said passage, a stem extending from one side of one of said valves, a tubular extension projecting from the other valve in the same direction as said stem, a spring in said tubular extension engaging said extension and said stem, said casing having a bore for containing said tubular extension, and a disk on the outer end of said stem loosely fitting said tubular extension.

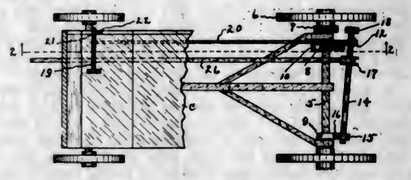
11. In a valve, the combination of a casing having a passage permitting the flow therethrough of fluid under pressure, two valve seats in said passage, two valves, one for engaging each seat, whereby one valve checks the flow in one direction and the other valve checks the flow in the opposite direction through said passage, a stem extending from one side of one of said valves, a tubular extension projecting from the other valve in the same direction as said stem, a spring in said tubular extension engaging said extension and said stem, said casing having a bore for containing said tubular extension, and a threaded rod for engaging the other side of said first valve to positively hold it against its seat, said first valve having a vent therethrough closed by said rod when it engages said valve.

12. In a valve, the combination of a casing having a passage permitting the flow therethrough of fluid under pressure, two valve seats in said passage, two valves, one for engaging each seat, whereby one valve checks the flow in one direction and the other valve checks the flow in the opposite direction through said passage, a stem extending from one side of one of said valves, a tubular extension projecting from the other valve in the same direction as said stem, and a spring in said tubular extension engaging said extension and said stem, said casing having a bore for containing said tubular extension and forming a receptacle for fluid under pressure around the outer end of said tubular extension, there being restricted passageways along the outer wall of said tubular extension between said receptacle and the passage through said casing.

[Claims 2 to 4, 6, 7, 9, and 10 not printed in the Gazette.]

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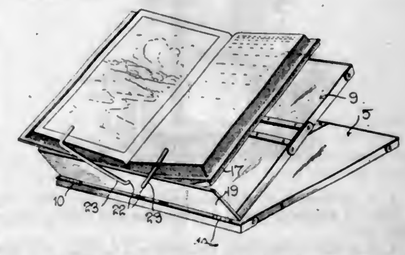
1,228,594. VEHICLE ATTACHMENT. RASMUS PEDERSON, East Omaha, Nebr. Filed Sept. 21, 1916. Serial No. 121,407. (Cl. 21—136.)



In a vehicle attachment, the combination with an annular rack on the wheel hub, an angular bracket mounted on the axle, a rock lever mounted upon said bracket, a shaft having bearings in one of the arms of the rock lever, a pinion on said shaft a spring mounted on the bracket and connected with the arm of the rock lever opposite to the bearings of the shaft for controlling one of the movements of the rock lever, means for moving the rock lever against the force of the spring for causing engagement of the pinion with the annular rack to permit a rotation of the shaft, and a strap secured to the shaft to cause it to be wound thereon when the shaft is rotated.

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1,228,595. LEAF-HOLDER. ISIDORE J. PLAMONDON, Dubuque, Iowa. Filed Dec. 27, 1915. Serial No. 68,851. (Cl. 45—61.)



1. The combination with a book holder including a support and a rest plate for the book fixed to the support, of clamping rods having angular end portions rotatably mounted in the rest plate, and a single length of resilient wire having spring coils formed in each end thereof loosely engaged upon the respective angular ends of said rods and fixed at their extremities to the rods, said spring coils acting independently upon the rods to yieldingly hold the other ends thereof in clamping engagement upon the opposed leaves of an open book arranged on the support.

2. The combination with a book holder including a support, of clamping rods pivotally mounted at one of their ends upon the support, and a resilient wire having spaced spring coils formed therein encircling the respective pivotally mounted ends of the rods and fixed at their extremities to said rods, said springs acting independently upon the rods to hold their free outer ends in clamping engagement upon the opposed leaves of an open book arranged on the support.

3. The combination with a book holder including a support, said support having a recess in one edge thereof and spaced sockets at the inner end of said recess, of clamping rods rotatably engaged at their corresponding ends in the

respective sockets and extending through said recess, and spring coils engaged upon said ends of the rods within said recess and independently acting upon the rods to force the outer free ends of the same apart and into clamping engagement with the opposed leaves of an open book arranged on the support.

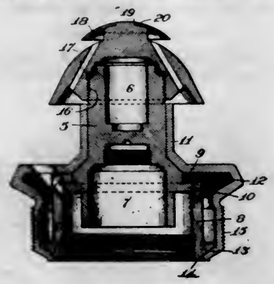
4. The combination with a book holder including a support provided with a recess in one edge and spaced sockets at the inner end of said recess, of clamping rods having their corresponding ends extended through said recess and rotatably engaged in the respective sockets, coil springs engaged upon the said ends of the rods and independently acting thereon to force the other ends of the rods apart and into clamping engagement with the opposed leaves of an open book arranged on the support, and a bar fixed to the support over the recess therein and said bar being recessed to accommodate said springs.

5. The combination with a book holder including a support, and a stop plate or rest for the book fixed to said support, of U-shaped clamping rods having one of their ends rotatably mounted in said stop plate and their other ends projecting over the upper edge of said plate, and a resilient wire having spaced series of spring coils formed therein engaged upon said rotatably mounted ends of the rods and fixed at their extremities thereto, said springs acting independently upon the rods to urge the free ends of the same apart and into clamping engagement with the opposed leaves of an open book arranged on the support.

[Claim 6 not printed in the Gazette.]

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1,228,596. TIME-FUSE BODY AND CAP AND METHOD OF MAKING SAME. IRVING L. POMEROY, Chicago, Ill. Filed Jan. 29, 1917. Serial No. 145,116. (Cl. 102—36.)



1. A shrapnel fuse body comprising a die-cast core, and a shell of malleable metal surrounding and closely fitting said core.

4. A shrapnel fuse body comprising a die-cast core and annular supplemental member, and a shell of malleable metal surrounding said core and supplemental member and maintaining them in assembled relation.

5. A shrapnel fuse body comprising a die-cast core and a malleable metal shell having a stiffening ring supporting it at its greatest diameter, said shell being secured to said core and surrounding the major portion thereof.

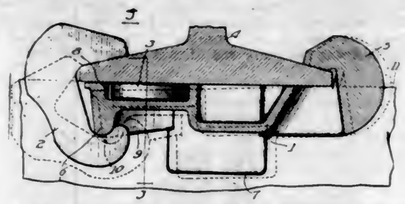
9. A method of making fuse bodies comprising die-casting a core, forming a shell of malleable metal to snugly fit said core, and securing said core and shell together.

[Claims 2, 3, 6 to 8, and 10 not printed in the Gazette.]

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1,228,597. ANTICREEPER. FREDERICK A. PRESTON, Highland Park, Ill., assignor to The P. & M. Co., Chicago, Ill., a Corporation of Illinois. Filed June 16, 1916. Serial No. 103,967. (Cl. 238—4.)

1. An anti-creeper comprising a member beneath the rail base having a jaw fitted over one side of the latter, a dog engaging said member beneath the rail base and fitting over the top of the latter to draw said member upwardly against the rail base and a third member cooperating with said parts to increase the frictional engagement between them and the rail base.



2. An anti-creeper comprising a transverse member having a jaw fitting one side of the rail base, a dog engaging the other end of said member beneath the rail base and fitting over the top of the latter to hold said member to the rail base and a spring washer carried by one of said members.

6. An anti-creeper comprising a casting having an integral jaw thereon and a tie abutting flange, a dog, a member between said dog and said first member and a resilient member arranged to press said first and second members apart.

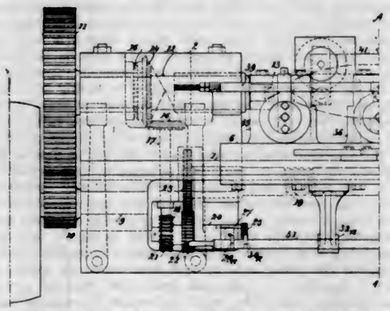
8. An anti-creeper comprising a transverse member having a jaw at one end, a downward extension at the other end, a movable piece associated with said member and adjacent to said extension, a resilient member arranged to press said piece away from said extension, a dog to resist such action and teeth on said dog and said piece to permit adjustment of the anchor to rails of different sizes.

10. An anti-creeper comprising a transverse member beneath the rail base, means for holding said member to the rail base on one side, a notched plate arranged to embrace the other side of the rail base and said member to hold the latter to the rail, said plate when it is being positioned acting momentarily to clamp said member more closely against the rail base than when in final position, and additional means arranged to yield during said positioning movement and thereafter to maintain the parts in yielding frictional engagement with the rail base.

[Claims 3 to 5, 7, and 9 not printed in the Gazette.]

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1,228,598. MACHINE FOR FINISHING SHELLS. VICTOR ETIENNE PRÉTOT, Paris, France. Filed Mar. 7, 1916. Serial No. 82,618. (Cl. 29—27.)



1. Improved machine for finishing steel shells in a single operation comprising in combination a lathe frame, a fixed and an adjustable head in said frame, a rotatable shaft passing through said fixed head and bearing a center adapted to engage in the fuse-hole of the shell to be finished, a horizontally adjustable head clamped on the lathe frame, a center on the adjustable head coaxial with the center on the rotatable shaft, a traveling tool carrier, double-cutting tools on said carrier adapted to operate on the shell in either direction of the carrier motion, reversible transmission gear for moving said carrier operated from the rotatable shaft, gearing transmitting motion from the rotatable shaft to a rocking mechanism suspended around the tool carrier shaft, double gears on said rocking mechanism adapted to transmit the motion of the rotatable shaft to the tool carrier shaft in one or the other direction, an operating handle for changing the direction of such motion, double-cutting tools supported on said carrier, and means for pressing a cutting edge of said tools continuously against the rotating shell.

2. Improved machine for finishing shells in a single operation comprising in combination a lathe frame, heads in said frame adapted to hold and rotate the shell under operation, a traveling tool carrier, mechanism for imparting longitudinal motion to said carrier, mechanism for reversing the direction of motion of said carrier, a set of double-cutting tools operatively supported on said carrier and adapted to cut continuously in either direction of the carrier motion, a vertical tool holder supported on the lathe head, double-cutting tools in said holder adapted to cut a groove around the body of the shell, double-cutting tools adapted to finish the base of said shell and means for manually adjusting said tools.



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1,228,599. SUSPENDERS. WILLIAM C. REINMUTH, Los Angeles, Cal. Filed June 8, 1916. Serial No. 102,581. (Cl. 241—12.)



1. In a suspender; a strap; a central tab in longitudinal extension of said strap; a pair of side tabs located on opposite sides of said central tab; slides carried on said strap and said tabs; and a cord passing through said slides and connecting said tabs with said strap in such a manner as to produce an equal tension on each of said tabs.

2. In a suspender; a strap; a bar on said strap; strap slides attached to said bar; a central tab; a central tab slide secured to said central tab; a pair of side tabs located on opposite sides of said central tab; a side tab slide secured to each of said side tabs; and a cord secured at either end to said bar and passing successively through said central tab slide, one of said strap slides, one of said side tab slides, the other bar slide, and the other side tab slide.

3. In a suspender; a strap; a central tab in longitudinal extension of said strap; a pair of side tabs located on opposite sides of said central tab; slides carried on said strap and said tabs; and a cord passing through said slides and connecting said tabs with said strap.

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1,228,600. METHOD OF FASTENING WOOD HANDLES TO TOOLS. EDWARD JOHN RENKENBERGER, Buffalo, N. Y., assignor, by mesne assignments, to George C. Renkenberger, Buffalo, N. Y. Filed July 25, 1913. Serial No. 781,152. (Cl. 145—79.)



1. A tool impact head and permanently attached handle, the head having a cylindrical shank and the handle a cylindrical bore, the end of the shank corresponding substantially to the bore of the handle and the portion between the end and the head being of materially smaller diameter than the end of the shank and the bore of the handle to leave a clearance between the shank and wall of the bore, substantially as described.

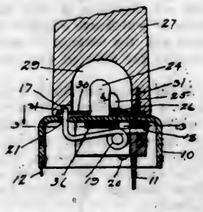
2. A tool impact head and handle, the handle having a longitudinal bore, and the head having a cylindrical shank within the bore and of materially smaller diameter than the bore to form a clearance to impart elasticity to the handle and formed with side fins extending from the head toward the opposite end of the shank and fitting in corresponding slots formed in the end of the handle, substantially as described.

3. A tool impact head and handle, the handle formed with a central bore and reduced in diameter between the end next to the tool head and the grip portion of the handle, and the tool head formed with a shank a portion of which is materially smaller in diameter than the bore of the handle to form a clearance to impart elasticity to the handle and provided with fins extending from the head toward the opposite end of the shank and fitting in corresponding slots formed in the end of the handle, substantially as described.

4. A tool impact head and handle, the handle having a central bore and reduced in diameter between the two ends of the bore, and the head formed with a shank fitting in the bore and provided with fins fitting in corresponding slots formed in the handle, the fins which lie at the upper and lower faces of the handle being formed with lateral extensions bearing against the handle to brace the slotted portion of the handle and resist strains, and a ferrule formed of wire wrapped around the handle to bear against the fins of the shank and extending around the reduced portion of the handle to brace and strengthen such portion.

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1,228,601. CUE-LOCK. THOMAS D. RICE, Pawtucket, R. I. Filed Feb. 12, 1916. Serial No. 77,889. (Cl. 70—14.)



1. A cue lock comprising a base portion containing locking mechanism, a cue adapted to rest on said base, a post and a lock pin in the base, and means whereby the operation of the cue is adapted to cause said pin to operate to engage and secure the cue to said base.

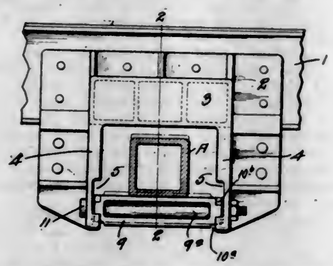
2. A cue lock comprising in combination a cue, a base portion on which the cue is adapted to rest and locking means in said base portion whereby the rotating of said cue on said base operates the mechanism to lock the cue to said base.

6. A cue lock comprising an inverted cup-shaped base member in which the locking elements are housed, a central post having a laterally extending barb, a spring actuated locking pin projecting from the upper face of the base, a cue having a central hole in its wall for receiving said post and barb when positioned thereon, said cue base also having a hole for the reception of said pin, whereby when the cue is positioned and rotated on said base a predetermined distance the pin hole is caused to register with the pin which automatically enters the same and prevents further rotation of the cue, and a key for withdrawing said pin to permit said cue to be rotated back to the starting point to be removed.

7. In a cue lock the combination with a cue, of a base portion containing the locking mechanism on which the end of the cue is adapted to rest, said locking mechanism being adapted to be operated by a movement of the cue to engage and lock the cue thereto, a key for releasing the locking mechanism and adjustable means in said mechanism to set said mechanism to different keys.

[Claims 3 to 5 not printed in the Gazette.]

1,228,602. DRAW-BAR CARRY-IRON. GEORGE W. RINK, Jersey City, N. J., assignor to Flory Carry Iron Company, St. Louis, Mo., a Corporation of Delaware. Filed Nov. 8, 1912, Serial No. 730,235. Renewed Feb. 7, 1914. Serial No. 817,326. (Cl. 213—42.)



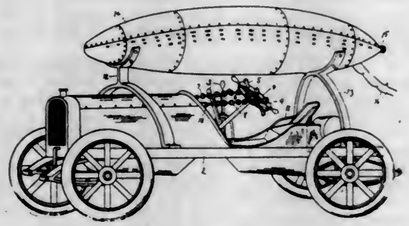
1. The combination with supports having pockets which are open front and rear and provided with carry iron supporting flanges at the lower ends of said pockets, of a carry iron provided with a bearing face for supporting a draw bar in position, the ends of which carry iron occupy said pockets and rest upon said flanges, means on said flanges for engaging the carry iron to hold the same against backward and forward movement upon said flanges, and means passing through the supports and the carry iron for fastening the latter to said supports in operative position.

2. In a device of the class described, a pair of supports, carry iron supporting members projecting inwardly from said supports, lugs on the ends of said supports and a carry iron, the ends of which are adapted to engage said supporting members and the corners of which carry iron are notched to receive the lugs on the ends of the supports.

3. In a device of the class described, a carry iron having a bearing face for supporting a draw bar, means for supporting said carry iron from a car comprising a pair of supports spaced apart to permit the carry iron to be inserted from the front or rear thereof, flanges and lugs on said supports for engaging the carry iron, and means extending lengthwise through the carry iron for rigidly fixing it to the supports.

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1,228,603. WAR-AUTOMOBILE. FELIX SABAH, Philadelphia, Pa. Filed Aug. 3, 1916. Serial No. 113,005. (Cl. 102—2.)



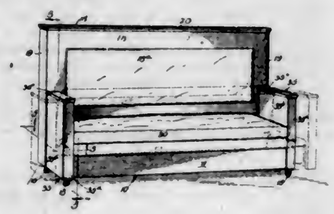
1. The combination in an automobile of the character described, of a steering wheel having a number of projections, a plurality of chains connected to relatively fixed parts of the automobile, each chain having a ring designed to embrace any of said projections, and means for drawing the chains taut whereby the steering wheel is held against rotary movement, substantially as described.

3. In combination an automobile provided with a steering wheel and having starting levers arranged on the side thereof and projecting some distance therefrom, means for locking the steering wheel in any adjusted position, a pair of forked supports one secured adjacent the front end of the automobile, the other adjacent the rear end, thereof, and a torpedo mounted in and secured to said supports some distance above the automobile, said torpedo provided with means for exploding the same.

[Claim 2 not printed in the Gazette.]

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1,228,604. COMBINED DIVAN AND BED. JOHN P. SANDELL, Chicago, Ill. Filed Nov. 29, 1915. Serial No. 63,941. (Cl. 5—48.)



1. A combined divan and bed, comprising a horizontally disposed frame having a front member and two end members, a combination member hinged near one edge to the frame end members with its ends projecting beyond said frame end members, rail members connected to said frame, extending at right angles to said combination member and normally located within the planes of its ends but capable of movement beyond said planes, said rail members being adapted to become head and foot board members of the bed, a seat member normally resting at its forward edge upon the front frame member, devices extending from said combination member and pivotally connected to said seat member providing rear supports for said seat member, and means for locking said seat member to said combination member when said seat member is swung upon its pivotal connection with said combination member.

2. A combined divan and bed, comprising a horizontally disposed frame having a front member and two end members, a combination member hinged near one edge to the frame end members with its ends projecting beyond said frame end members, rail members connected to said frame, extending at right angles to said combination member and normally located within the planes of its ends but capable of movement beyond said planes, said rail members being adapted to become head and foot board members of the bed, a seat member normally resting at its forward edge upon the front frame member, devices extending from said combination member and pivotally connected to said seat member providing rear supports for said seat member, and means for automatically locking said seat member in substantially parallel relation to said combination member when said seat member is swung upon its pivotal connection with said combination member.

3. A combined divan and bed, comprising a horizontally disposed frame having a front member and two end members, a combination member hinged near one edge to the frame end members with its ends projecting beyond said frame end members, rail members connected to said frame, extending at right angles to said combination member and normally located within the planes of its ends but capable of movement beyond said planes, said rail members being adapted to become head and foot board members of the bed, a seat member normally resting at its forward edge upon the front frame member, devices extending from said combination member and pivotally connected to said seat member providing rear supports for said seat member, said device being detachably connected to said seat member, and means for locking said seat member in substantially parallel relation to said combination member when said seat member is swung upon its pivotal connection with said combination member.



5. A combined divan and bed comprising a horizontally disposed frame having a front member and two end members, a combination member hinged near one edge to the frame end members with its ends projecting beyond said frame end members, rail members connected to said frame, extending at right angles to said combination member and normally located within the planes of its ends but capable of movement beyond said planes, a seat member normally resting at its forward edge upon the front frame member, devices extending from said combination member and pivotally connected to said seat member providing rear supports for said seat member, means for locking said rail members to said frame when the seat member is in horizontal position, and means actuated in raising the seat for unlocking the seat member from said rail members.

6. A combined divan and bed comprising a horizontally disposed frame having a front member and two end members, a combination member hinged near one edge to the frame end members with its ends projecting beyond said frame end members, rail members connected to said frame, extending at right angles to said combination member and normally located within the planes of its ends but capable of movement beyond said planes, a seat member normally resting at its forward edge upon the front frame member, devices extending from said combination member and pivotally connected to said seat member providing rear supports for said seat member, means for locking said rail members to said frame when the seat member is in horizontal position, means actuated in raising the seat for unlocking the seat member from said rail members, and means for locking said seat member in substantially parallel relation to said combination member when said seat member is swung upon its pivotal connection with said combination member.

[Claim 4 not printed in the Gazette.]

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1,228,605. MAIL-BAG-SUPPORTING MECHANISM. JOSEPH P. SANDER, Spokane, Wash., assignor to The Spokane Mail Equipment Company, Spokane, Wash., a Corporation. Filed Sept. 21, 1915. Serial No. 51,798. (Cl. 258—26.)



1. In combination with the supporting elements of a mail bag transferring mechanism and a mail bag provided with attaching devices secured at either end, of a continuous removable mail bag supporting line adapted to be held in a vertical position between said supporting elements and provided with attaching devices to coöperate with said attaching devices of the mail bag to retain said bag in a vertical distended position and in close parallel relation to said line.

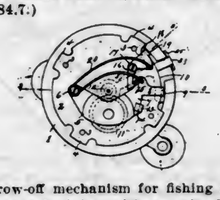
2. In combination with the supporting elements of a mail bag transferring mechanism and a mail bag provided with attaching devices secured at either end, of a bag supporting line adapted to be held in a vertical position between said supporting elements and provided with attaching devices to coöperate with said attaching devices of the mail bag, an additional bag strap retaining device carried by said line disposed intermediate of the aforementioned attaching devices of said line, the several attaching devices of the bag and line all serving to retain said bag in a vertical distended position and in close parallel relation to said line.

3. In combination with the supporting elements of a mail bag transferring mechanism and a mail bag provided with attaching devices secured at either end, of a continuous removable mail bag supporting line adapted to be held in a vertical position between said supporting elements for instantaneous detachment therefrom and provided with attaching devices disposed intermediate of its ends to coöperate with said attaching devices of the mail bag to retain said bag in a vertical distended position and in close parallel relation to said line.

4. In combination with the supporting elements of a mail bag transferring mechanism and a mail bag provided with a plurality of attaching devices, of a removable mail bag supporting line adapted to be held in a vertical position between said supporting elements for instantaneous detachment therefrom and provided with a plurality of attaching devices disposed intermediate of its ends to cooperate with said attaching devices of the mail bag to retain said bag in a vertical distended position.

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1,228,606. THROW-OFF MECHANISM FOR FISHING-REELS. LOUIS M. SANDERS, East Orange, N. J., assignor to A. F. Meisselbach & Brother, a Corporation of New Jersey. Filed June 16, 1916. Serial No. 103,920. (Cl. 242—84.7.)



1. In a throw-off mechanism for fishing reels, the combination of a spool pinion with a main driving gear in normal engagement therewith, a bridge pivoted at one end for supporting said gear, a hook at the opposite end of said bridge, a pivoted, spring actuated detent for locking said hook, said detent being provided with a tail-piece whereby said locking engagement may be broken, and said bridge being provided with an arm by which said locking engagement may be restored and a manually operated lever for alternate engagement with said tail piece and said arm to lock and unlock said bridge.

2. In a throw-off mechanism for fishing reels, the combination of a spool pinion with a driving gear in normal engagement therewith, a bridge for supporting said gear, said bridge being pivoted at one end and provided with a locking hook at its opposite end, a pivoted, spring actuated detent having normal locking engagement with said hook, and a spring in engagement with said bridge for swinging the same upon its pivot when said locking engagement is broken, whereby said gear is separated from said pinion and a pivoted manually operated lever for breaking and restoring said locking engagement.

3. In a throw-off mechanism for fishing reels, the combination of a spool pinion and a driving gear in normal engagement therewith, a bridge pivoted at one end for supporting said driving gear and having a locking hook at its opposite end, a locking detent for engagement with said hook, a two armed spring having one of its arms connected to said detent and its other arm connected to said hook, whereby when said detent is in engagement with said hook said spring tends to maintain said engagement, and when said engagement is broken said spring will swing said bridge upon its pivot to separate said gear from said pinion and a pivoted manually operated lever for breaking and restoring said locking engagement.

4. In a throw-off mechanism for fishing reels, the combination of a spool pinion and a driving gear in normal engagement therewith, a bridge pivoted at one end for supporting said driving gear and having a locking hook

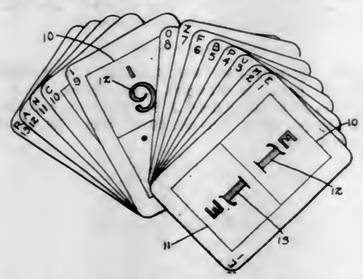
at its opposite end, a spring actuated locking detent for engagement with said hook, a spring connected with said hook for separating the same when disengaged and a pivoted lever having tripping engagement with said detent and restoring engagement with said bridge.

5. In a throw-off mechanism for fishing reels, the combination of a spool pinion and a driving gear in normal engagement therewith, a bridge pivoted at one end for supporting said driving gear, a locking hook at the opposite end of said bridge, a locking detent for engagement with said hook, a spring having its arms connected respectively with said hook and said detent for holding the same in engagement, and a pivoted lever having tripping engagement with said detent and restoring engagement with said bridge.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,607. CARD GAME. EMMONS WOODBURY SAWYER, Minneapolis, Minn. Filed Mar. 6, 1917. Serial No. 152,621. (Cl. 46—25.)



1. A deck of cards comprising four groups of equal number, the cards of each group being marked to distinguish the same from the cards of each other group, the cards of each gronp being consecutively numbered, and each card of each group having a different letter of the alphabet thereon, some of said letters appearing on a card of each group, others of said letters appearing on a card of each of two groups and still others of said letters appearing on a card of only one group.

2. A deck of cards comprising four groups of equal number, the cards of each group being marked to distinguish the same from the cards of each other group, the cards of each group being consecutively numbered, and each card of each grou; having a different letter of the alphabet thereon, each ;roup having the cards thereof marked with one each of the vowels A, E, I, O, U, each of said vowels appearing on a different numbered card on each group.

3. A deck of cards comprising four groups of equal number, the cards of each group being marked to distinguish the same from the cards of each other group, the cards of each group being consecutively numbered, and each card of each group having a different letter of the alphabet thereon, each group having the cards thereof marked with one each of the vowels A, E, I, O, U, each of said vowels appearing on a different numbered card on each group, a portion of the consonants appearing on a card of each of two groups and the remaining consonants appearing on a card of only one group.

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1,228,608. FLUID-OPERATED EJECTOR. ARTHUR EDWIN LEIGH SCANES, Ashton-upon-Mersey, England, assignor to The British Westinghouse Electric & Manufacturing Company, Limited, London, England. Filed July 14, 1915. Serial No. 39,783. (Cl. 230—13.)

1. In a fluid ejector for exhausting gases from an inclosed space in which the pressure is below atmospheric pressure, a diffuser adapted to be connected to said inclosed space and having its outlet in communication with a space of greater pressure than that in said inclosed space, a convergent divergent air nozzle discharging into said diffuser and a steam nozzle combined with said air nozzle in such manner that a mixture of steam and air acts on the gases to be exhausted and causes them to pass through said diffuser.



2. In a fluid ejector for exhausting gases from an inclosed space in which the pressure is below atmospheric pressure, a diffuser the inlet end of which is connected to said space and the outlet of which connects with a space of greater pressure than that in said inclosed space, means including a divergent nozzle for delivering high and low pressure motive fluid to said diffuser, arranged so that the point of admission of high pressure motive fluid is located at a point within said divergent nozzle where the velocity of the low pressure motive fluid is substantially equal to the velocity of the high pressure motive fluid as it enters said nozzle.

3. In a fluid ejector, a diffuser, a divergent nozzle for delivering low pressure motive fluid to said diffuser and means for delivering high pressure motive fluid to said divergent nozzle, arranged so that the high pressure motive fluid and the low pressure motive fluid intermingle within said divergent nozzle at a point at which their velocities are substantially equal.

4. In a fluid ejector, a combining tube adapted to be connected with an inclosed space in which the pressure is below atmospheric pressure, a diffuser connected to said combining tube, a divergent nozzle at its inlet end connected with the atmosphere and arranged to deliver into said combining tube and means for delivering high pressure steam to said divergent nozzle at a point intermediate its inlet and outlet ends.

5. In a fluid ejector, a combining tube adapted to be connected to the device to be exhausted, a convergent divergent nozzle communicating at its inlet end with a source of low pressure motive fluid and at its delivery end with said combining tube and means for delivering high pressure motive fluid to said nozzle at a point intermediate its inlet and delivery ends.

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1,228,609. PROCESS FOR MAKING INSULATING MATERIAL FROM BASIC MAGNESIUM CARBONATE AND FIBROUS SUBSTANCES. KARL SCHMID, Alt-Mugeln, near Mugeln, Leipzig, Germany, assignor to the Firm of "Lipsia" Chemische Fabrik, Actien-Gesellschaft, Mugeln, Leipzig, Germany. Filed Nov. 9, 1916. Serial No. 130,333. (Cl. 106—18.)

1. The process of making insulating material from basic magnesium carbonate and fibrous substances, consisting in depositing basic magnesium carbonate on fibrous substances *in statu nascendi*.

2. The process of making insulating material from basic magnesium carbonate and fibrous substances, consisting in converting normal magnesium carbonate, produced by the reaction of a carbonate compound of ammonia on magnesium oxid suspended in water, by means of the action of heat into basic magnesium carbonate and adding the fibrous substances to the pasty product of said reaction.

3. The process of making insulating material from basic magnesium carbonate and fibrous substances, consisting in converting normal magnesium carbonate produced by the reaction of a carbonate compound of ammonia on magnesium hydroxid suspended in water, by means of the action of heat into basic magnesium carbonate and adding the fibrous substances to the pasty product of said reaction.

4. The process of making insulating material consisting in depositing normal magnesium carbonate on a mass of fibrous substances suspended in a solution containing magnesium oxid by the reaction of a carbonate compound of ammonia therewith, thereupon filtering off the liquid and drying the remaining mass, the said normal magnesium carbonate being thereby converted into the basic magnesium carbonate.

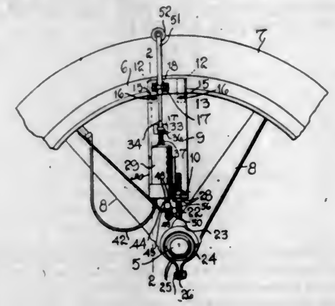
5. The process of making insulating material consisting in depositing normal magnesium carbonate on a mass of fibrous substances suspended in a solution containing magnesium hydroxid by the reaction of a carbonate compound of ammonia therewith, thereupon filtering off the liquid and drying the remaining mass, the said normal magnesium carbonate being thereby converted into the basic magnesium carbonate.

[Claims 6 to 9 not printed in the Gazette.]



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1,228,610. AUTOMATIC TIRE-INFLATING DEVICE FOR VEHICLE-WHEELS. SHERMAN T. SHULTS, McCammon, Idaho. Filed Oct. 18, 1916. Serial No. 126,354. (Cl. 152—11.)



1. The combination with a vehicle wheel having a pneumatic tire, of a plate adapted to be arranged within adjacent wheel spokes and having a flange on one end to engage one side of the wheel rim, rim clamping means mounted upon the opposite side of the plate, a laterally adjustable support mounted upon the inner end of said plate, an air pump arranged upon said support, a connection between the pump chamber and the tire valve, said pump including a reciprocatory piston, and means operatively connected to the piston engageable with the ground surface in each revolution of the wheel.

2. The combination with a vehicle wheel having a pneumatic tire, of a plate radially disposed between the rim and hub of the wheel, means on one end of the plate for clamping the same to the wheel rim, laterally adjustable guide members mounted upon said plate, a laterally adjustable pump support mounted upon the inner end of the plate, a hub clamp, means adjustably connecting the hub clamp to the pump support, a pump arranged upon said support and including a piston, a connection between the pump chamber and tire valve, and a rod reciprocating through said guides and connected to the pump piston.

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1,228,611. WIRE-STRETCHER. SHERMAN T. SHULTS, McCammon, Idaho. Filed Oct. 18, 1916. Serial No. 126,353. (Cl. 140—123.5.)

1. A wire stretcher comprising two crossed members pivotally connected one to the other, adjacent portions of said members being provided with coacting beveled faces to afford clamping jaws, one of said members being provided in its beveled portion with an open end groove.

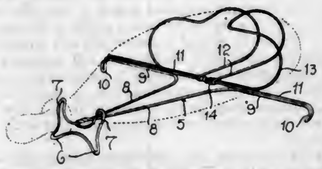
2. A wire stretcher comprising two crossed members pivotally connected one to the other, adjacent portions of said members being provided with coacting beveled faces to afford clamping jaws, one of said members being provided with a transversely and inwardly directed extension coacting with the second member for preventing lateral separation of said members.



3. A wire stretcher comprising two crossed members pivotally connected one to the other, adjacent portions of said members being provided with coacting beveled faces to afford clamping jaws, one of said members being provided in its beveled portion with a transversely disposed groove.

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1,228,612. BOTTLE-HOLDER. LUDVIK SOLEM, Duluth, Minn. Filed July 22, 1916. Serial No. 110,725. (Cl. 248—41.)



1. A bottle holder comprising a base including portions extending at right angles to each other in intersecting relation, one of such portions terminating at its opposite ends in downwardly projecting supporting feet and the other base portion having a downwardly projecting support formed on one end thereof, the opposite end of the latter portion of the base being upwardly turned for engagement against the bottom of a bottle, spaced, bowed clamping arms disposed upon the first named base portion for engagement with the bottle, and clamping means on the latter base portion for engagement with the neck of the bottle.

2. A bottle holder of the character described constructed from a single length of resilient wire bent to provide supporting feet and bowed clamping arms projecting above the supporting feet, said wire being extended from the arms in divergent relation and then laterally and outwardly to provide transverse extensions having hooks formed on their outer ends, said wire being returned from said hooks in parallel relation to said lateral extensions, said returned portions being extended past each other in lapping engagement, and the end portions of the wire being extended from such returned portions and bent to form bowed clamping arms for engagement upon the body of the bottle, the terminals of the wire being tightly coiled around the lapped inner ends of the returned portions.

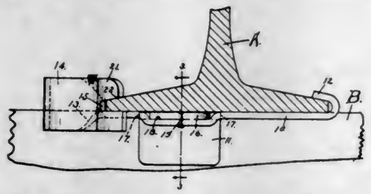
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1,228,613. RAIL-STAY. HIRAM H. SPONENBURG, Gurnee, Ill., assignor, by mesne assignments, to Otto R. Barnett, Chicago, Ill. Filed May 29, 1916. Serial No. 100,452. (Cl. 238—4.)

1. A rail stay comprising a member adapted to engage a rail and a foot member adapted to bear against the tie; said members being engaged one with the other for handling as a unitary device but so that the rail engaging member may move, relatively to the foot member, with the longitudinal movements of the rail when engaged therewith.

2. A rail stay comprising a member adapted to engage a rail and a foot member adapted to bear against a tie; said members being engaged one to the other for handling as a unitary device but so that the rail engaging member may, when engaged with the rail, have free, unimpeded

movement to and from the part of the foot member bearing against the tie.



3. A rail stay comprising a resilient member adapted to engage a rail by spring action, and a foot member adapted to bear against the tie; said members being engaged one with the other for handling as a unitary device but so that the rail engaging member may move, relatively to the foot member, with the longitudinal movements of the rail when engaged therewith.

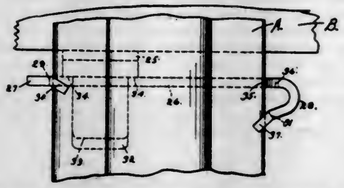
4. In a rail stay, the combination of a rail engaging member consisting of a flat bar of metal to extend under the base of a rail and provided at opposite ends with means for engaging opposite edges of the rail base, and a foot member adapted to bear against a tie and formed with a tongue to extend between the rail engaging member and the rail; said tongue and rail engaging member being engaged one to the other to permit the device to be handled as a unitary structure but so that the rail engaging member may move, relatively to the foot member, with the longitudinal movements of the rail when engaged therewith.

5. In a rail stay, the combination of a rail engaging member consisting of a flat bar of spring metal to extend under the base of a rail and provided at opposite ends with means for resiliently engaging opposite edges of the rail base, and a foot member adapted to bear against a tie and formed with a tongue to extend between the rail engaging member and the rail; said tongue and rail engaging member being engaged one to the other to permit the device to be handled as a unitary structure but so that the rail engaging member may move, relatively to the foot member, with the longitudinal movements of the rail when engaged therewith.

[Claims 6 to 16 not printed in the Gazette.]

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1,228,614. RAIL-ANCHOR. HIRAM H. SPONENBURG, Gurnee, Ill., assignor, by mesne assignments, to Otto R. Barnett, Chicago, Ill. Filed May 29, 1916. Serial No. 100,454. (Cl. 238—4.)



1. A rail anchor comprising a bar of spring metal adapted to extend under the base of a rail and formed at one end so as to provide an edge to bear against the edge of the rail base and with a tongue extending backwardly away from said bar and the tie against which the device is abutted, the extremity of which is adapted to exert spring pressure against the rail.

2. A rail anchor comprising a bar of spring metal adapted to extend under the base of a rail and formed at one end so as to provide an edge to bear against the edge of the rail base and with a tongue extending backwardly away from said bar and the tie against which the device is abutted, the extremity of which is adapted to exert spring pressure against the rail and is notched for engagement with said rail base.

3. A rail anchor provided with a tie abutting member and comprising a bar of spring metal adapted to extend under the base of a rail and formed at one end with a tongue extending backwardly away from the tie against which the device abuts and adapted to exert spring pressure against the edge of the rail base.

4. A rail anchor provided with a tie abutting member and comprising a bar of spring metal adapted to extend under the base of a rail and formed at one end to provide an edge adapted to bear against the edge of the rail base, and with a tongue extending backwardly from said edge away from the tie against which said device abuts and adapted to exert spring pressure against the edge of the rail base.

5. A rail anchor provided with a tie abutting member and comprising a bar of spring metal adapted to extend under the base of a rail and formed at one end to provide an edge adapted to bear against the edge of the rail base, and with a tongue extending backwardly from said edge away from the tie against which said device abuts and adapted to exert spring pressure against the edge of the rail base, the extremity of the tongue being notched for engagement with said rail base.

[Claims 6 to 25 not printed in the Gazette.]

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1,228,615. SELF-RIGHTING GUIDE-POST. MARTIN A. STAFFORD, Harvard, Ill. Filed Aug. 26, 1915. Serial No. 47,402. (Cl. 248—37.)



1. A portable self-righting guide post comprising a weighted pedestal and an upright shaft, said pedestal having a flat base upon which it normally rests and having upwardly and outwardly curved sides, said pedestal also having an upright axial opening which is larger in diameter in the vicinity of said flat base to provide an annular shoulder in said opening, said upright shaft having one end arranged within said opening and terminating short of the annular shoulder therein, said post having a signal means at its opposite end, and a collar seated against the shoulder in said opening, said collar acting to secure said post against withdrawal from said pedestal.

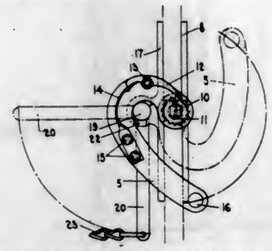
2. A portable self-righting guide post comprising a weighted pedestal and an upright shaft, said pedestal having a flat base upon which it normally rests and having upwardly and outwardly curved sides, said pedestal also having an upright axial opening which is larger in diameter in the vicinity of said base to provide an annular shoulder in said opening, said upright shaft being a hollow shaft and being reduced in diameter at one end to provide a shoulder which engages upon the top of said pedestal, the reduced end of said shaft being arranged within the opening in said pedestal and terminating short of the annular shoulder therein, said post having a signal means at its opposite end, and an apertured collar seated against the shoulder in said opening and bolts extending through said collar and having screw threaded connection with the bottom end of said post.

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1,228,616. COUPLING DEVICE OR APPARATUS FOR THE VESTIBULES OR GANGWAYS OF CORRIDOR ROLLING-STOCK FOR RAILWAYS. WILLIAM GEORGE STEPHENSON, Buenos Aires, Argentina. Filed Apr. 17, 1916. Serial No. 91,743. (Cl. 105—266.)

1. In a curtain releaser, a casing secured to one vestibule frame, a bolt slidable in the casing, a hook pivoted to the opposed vestibule frame and movable crosswise of the said bolt and adapted to engage with its front end portion, and means for automatically retracting the said bolt out of engagement with the hook when the vestibules are moved apart as set forth.





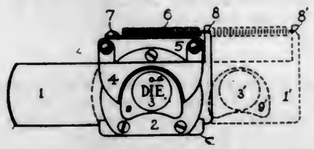
2. In a curtain releaser, a casing secured to one vestibule frame, a bolt slidable longitudinally in and revoluble in the said casing, an operating handle projecting from the bolt, means for sliding the bolt longitudinally when it is moved circumferentially by the said handle, a hook pivoted to the opposed vestibule frame and movable crosswise of the said bolt and adapted to engage with its front end portion, and means for operating the said handle automatically so as to retract the bolt when the vestibules are moved apart as set forth.

3. In a curtain releaser, a casing secured to one vestibule frame, a bolt slidable in the casing, a pin secured to the opposed vestibule frame and arranged parallel to the said bolt, a hook journaled on the said pin and adapted to engage with the front end portion of the said bolt, means for preventing the said hook from revolving backwardly, and means for automatically retracting the said bolt out of engagement with the hook when the vestibules are moved apart as set forth.

4. In a curtain releaser, a pair of opposed vestibule frames, a casing secured to one of the frames, a bolt slidable in the said casing, a hook-shaped lever pivoted to the other frame and movable crosswise of the said bolt and having an eccentric surface adapted to engage with its front end portion and operating to draw the frames together when the lever is turned by hand in one direction, and means for automatically retracting the said bolt out of engagement with the hook-shaped lever when the vestibules are moved apart as set forth.

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1,228,617. DENTAL DIE-PUNCH. AXEL EDMUND STIGBRAG and CHARLES BECHTOLD, Brooklyn, N. Y. Filed Feb. 8, 1917. Serial No. 147,447. (Cl. 118—49.)

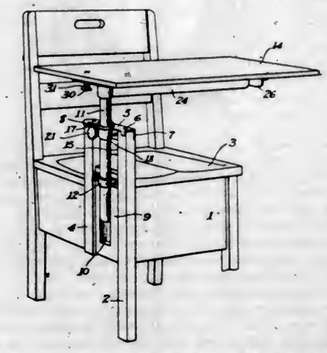



1. A punch including a slidable receiving plate arranged to reciprocate in a base plate, a rearward limit upon said plate adapted to abut said base plate, and a die mounted upon the same, a stop behind said die adapted to retain in position products pressed upon said die during the reciprocation of said slidable plate, a reciprocating die adapted to coöperate with the die upon said receiving plate, and resilient means (slidable) retaining said plate with the said die thereon in operative relation to said reciprocating die.

2. A punch including in combination a base plate housing, a slidable plate, a die mounted upon said slidable plate, a ring die mounted across said plate upon said base plate, a reciprocating die adapted to pass through said ring die and coöperate with the die upon said slidable plate, and resilient means retaining said slidable plate and the die thereupon mounted in operative relation with said reciprocating die.

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1,228,618. TABLE ATTACHMENT FOR FURNITURE. MARTIN THUM, Rochester, N. Y., assignor to Langslow Fowler Company, Rochester, N. Y., a Corporation. Filed July 18, 1916. Serial No. 109,870. (Cl. 155—34.)



1. In combination with a metallic plate having a guide opening therein and also having a downwardly-turned portion at one side of the guide opening, a standard guided in the opening in the plate, a table carried by said standard, and an adjustable clamp secured to the downwardly-turned portion of the plate and engaging the standard.

2. In combination with a suitable support having a guide member, a standard movable in the guide and provided with a plurality of transverse openings, a pin adapted to fit in any of said openings, and a cup-shaped member surrounding the guide member, abutting the top of the guide member and serving as an abutment for the pin in the standard.

5. In combination with a chair, a standard mounted to turn thereon to one side of the seat, a frame rigidly secured to the upper end of the standard and extending over the seat, a horizontally arranged table pivoted to the frame to turn about an axis parallel to the turning axis of the standard, means for securing the standard in an adjusted position about its turning axis, and means for securing the table in an adjusted position about its turning axis on the frame.

7. In combination with a suitable support; a standard mounted to turn on the support; a frame secured to the standard and comprising a plate provided with a slot and a pair of arms extending from the plate; a table pivoted to one of the arms and having a pin-and-slot connection with the other arm; a pin projecting from the table through the slot in the plate, a thumb nut operating on the screw to clamp the table in its adjusted position, and means for holding the post in its adjusted position.

[Claims 3, 4, and 6 not printed in the Gazette.]

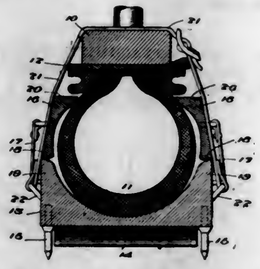
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1,228,619. TRACTION AND TIRE-PROTECTING DEVICE FOR AUTOMOBILES. ARTHUR C. TILGNER, Northville, S. D. Filed Nov. 18, 1915. Serial No. 62,140. (Cl. 152—16.)

1. A traction device for wheels, comprising a tire-receiving member, side pieces connected with said member and movable inwardly toward each other, and means for securing said device to a wheel.

2. A traction device for wheels comprising a tire-receiving member, side pieces having rim-engaging ledges

hinged to said member and movable inwardly toward each other, and means for securing said device to a wheel.



3. A traction device for wheels comprising a tire-receiving member, hinged side-pieces having a rocking engagement with said member and movable inwardly toward each other, and means for securing said device to a wheel.

4. A traction device for wheels comprising a tire-receiving member, side-pieces supported by said member and movable inwardly toward each other on collapse of the tire, rim-engaging ledges on said side-pieces, and means for securing said device to a wheel.

5. A traction device for wheels, comprising a tire-receiving member, grooved tire-engaging side-pieces hinged to said member and movable inwardly toward each other, rim-engaging ledges on said side-pieces, and fastening means tending to force said side-pieces inwardly.

[Claim 6 not printed in the Gazette.]

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1,228,620. DENTAL BRIDGE. GEORGE W. TODD, Omaha, Nebr. Filed Apr. 7, 1917. Serial No. 160,340. (Cl. 32—12.)



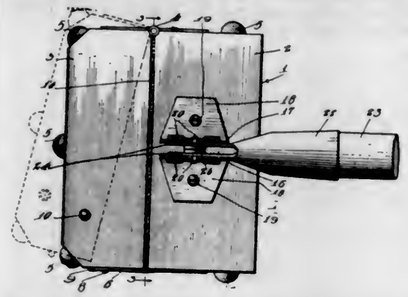
1. In a dental bridge, the combination with a plurality of teeth each having a concaved depression formed in its back midway between its sides and a pair of concaved depressions extending transversely from a point midway between its sides to open on the first named depression, each depression extending from near the top to open on the base and the curvatures of said depressions being formed longitudinally and transversely of the tooth, a metallic part having convexed ridges, the curvatures of each ridge being longitudinal and transverse for engaging in said depressions when the parts are assembled.

2. In a dental bridge, the combination with a plurality of teeth each having a concaved base and having a concaved depression formed in its back midway between its sides and a pair of concaved depressions extending transversely from a point midway between its sides to open on the first named depression, each depression extending from near the top to open on the concaved base and the curvatures of said depressions being formed longitudinally and transversely of the tooth, a metallic part having convexed ridges, each ridge having a longitudinal and a transverse curvature for engaging in said depressions when the parts are assembled, and a plurality of pins engaging the teeth and the metallic part for maintaining said parts in connected relation.

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1,228,621. FLOOR-WAXER. GEORGE W. VAN ALSTYNE, Los Angeles, Cal. Filed Sept. 5, 1916. Serial No. 118,435. (Cl. 15—13.)

1. A floor waxer comprising a body portion having hinged sections, a handle attached to one section, a porous wax container adapted to be held between the sections and to lie under either of the sections dependent upon the direction of movement of the waxer when in use, and means to hold the sections together.



2. A floor waxer comprising a body portion consisting of flat sections hinged to one another at one end and adapted to clamp a waxing element therebetween, a porous wax container for the pliable wax therein located between and adapted to be held by the sections when the latter are fastened together, a handle connected to one section, means between the sections to prevent the container from being pulled downwardly and permitting the container to be pulled upwardly, and means to fasten the sections together.

3. A floor waxer comprising a body portion consisting of hinged sections adapted to clamp a waxing element therebetween, a porous wax container having pliable wax therein held between the sections and being freely movable so as to lie under either of the sections, means to releasingly lock the sections together, and means to prevent the container from being pulled downwardly from between the sections and permitting the container to be pulled upwardly when the sections are held together.

4. A floor waxer comprising similar sections hinged to one another and adapted to clamp a waxing element therebetween, a porous wax container having pliable wax therein located between and adapted to be held by the sections when the latter are fastened together, means to fasten the sections together, and means between the sections to prevent the container from being pulled downwardly and permitting the container to be pulled upwardly including upwardly extending teeth adapted to extend into the flexible porous container.

5. A floor waxer comprising a body portion consisting of sections hinged to one another and lying in the same plane, a porous wax container adapted to be held between the sections and to lie under either of the sections dependent upon the direction of movement of the waxer when in use, and means to releasingly hold the sections together to hold the container in place.

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1,228,622. PREPARING COMPOUNDS OF CHROMIUM OXID. ERNST VOETTER, Krefeld, near Bockum, Germany. Filed July 2, 1914. Serial No. 848,561. (Cl. 252.)

1. Process of preparing organic chromium compounds especially well adapted for tanning purposes, which consists in reducing compounds containing chromic acid with sugars in the absence of free acid other than chromic acid.

3. Process of preparing organic chromium compounds which consists in reducing compounds containing chromic acid with glucose in absence of free acids other than chromic acid.

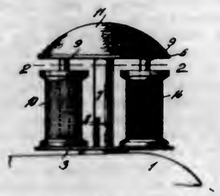
4. Process of preparing organic chromium compounds which consists in reducing salts of chromic acid with glucose.

5. Process of preparing organic chromium compounds which consists in reducing salts of chromic acid with glucose and thiosulfate.

[Claims 2, 6, and 7 not printed in the Gazette.]



1,228,623. SPOOL-HOLDER FOR SEWING-MACHINES. GEORGE W. WEISS, New York, N. Y. Filed Apr. 30, 1915. Serial No. 24,934. (Cl. 242—139.)

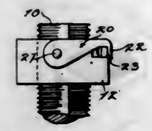


1. The combination in a spool holder of upper and lower plates, frictional devices to secure the two plates to the sewing machine with a space between, spool pins carried by one of the plates, and a pin cushion attached to one of the plates.

2. The combination in a spool holder of upper and lower plates, a frictional device on each plate for securing it to the sewing machine with a space between the plates to contain the spools, spool pins secured to the upper plate, said pins terminating short of the lower plate for the purpose of allowing the coils of thread to slip off under the spool.

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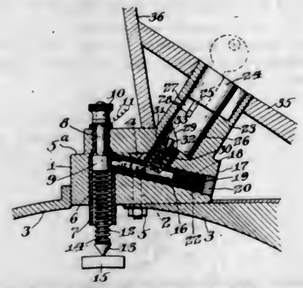
1,228,624. NUT-LOCK. OSCAR E. W. WELANDER, Balaton, Minn. Filed Jan. 13, 1916. Serial No. 71,975. (Cl. 151—12.)



In combination with a bolt, of a nut carrying a pivoted pawl means in engagement with said pawl for normally urging one end thereof in engagement with said bolt to prevent the independent rotation of said nut on said bolt and a pivoted catch on said nut having a hook end provided with a beveled face, said beveled face adapted to guide said hook over a portion of said pawl to position the same in said hook and move one end thereof out of engagement with said bolt to allow the free movement of said nut upon said bolt.

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1,228,625. LOCKING DEVICE FOR AUTOMOBILES. JESSEE M. WHITE, Philadelphia, Pa. Filed Apr. 6, 1916. Serial No. 89,341. (Cl. 175—282.)



1. A device of the character described, comprising a metallic casing having an insulated opening therein, resiliently pressed means in said opening forming a conductor for electric current, a second current-conducting means in said casing and insulated therefrom, said second means being in metallic connection with said conductor, a movable member in metallic connection with said casing, and a lock operative by selective means, said lock having a portion for engagement with said latter member to move it into electric contact with said second conducting means, substantially as described.

2. A device of the character described, comprising a metallic casing having an opening therein, an insulating sleeve in said opening, means within said sleeve forming a conductor of electricity, said casing having a second opening, an insulating sleeve for said second opening, a metallic plunger in said second sleeve, means for holding said plunger in contact with said conductor, said casing having a recess, a metallic cylinder fitting said recess, a passageway formed in said casing, a sleeve insulating said passageway and partially closed at one end, a finger movable in said passageway and having a portion abutting said end and an extension projecting through said end, resilient means for normally holding said portion in engagement with the closed end and for forming an electric conductor between said plunger and the finger, and a lock operative by selective means for moving said cylinder into electric contact with the projecting portion of said finger, substantially as described.

3. A device of the character described, comprising a metallic casing having openings and a recess, insulating sleeves in said openings, means within one of said sleeves forming a conductor of electricity, a metallic plunger in the second sleeve, means for holding said plunger in contact with the conductor, a metallic cylinder fitting said recess, said casing having a passageway formed therein, a sleeve insulating said passageway and having an end closure, a finger movable in said passageway and having a portion abutting said end closure, said finger having another portion designed to project through said end closure and into said recess, a metallic spring for normally keeping said second portion of the finger within said recess and acting as an electric conductor between said plunger and the finger, and a lock operative by selective means for moving said cylinder into electric contact with said finger to complete a circuit with said casing through the medium of said cylinder, substantially as described.

4. A device of the character described, comprising a metallic casing having openings and a recess, insulating sleeves in said openings, means within one of said sleeves forming a conductor of electricity, a metallic plunger in the second sleeve, means for holding said plunger in contact with said conductor, a metallic cylinder fitting said recess and having a cam portion, a passageway formed in said casing, a sleeve insulating said passageway, a metallic finger movable in said passageway, a metallic spring for moving said finger into said recess and for forming an electric conductor between said plunger and finger, and a lock operative by selective means for moving said cylinder to bring said cam face into electric contact with said finger whereby an electric circuit is completed between said finger and the casing through the medium of said cylinder, substantially as described.

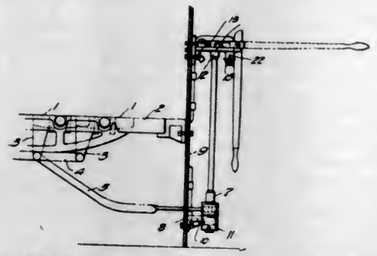
5. A device of the character described, comprising a metallic casing having a cylindrical chamber, current-conducting means in said casing and insulated therefrom, said means including a spring-pressed pin normally projecting into said chamber, a member rotatably fitting within said chamber and in electrical contact with said casing, said latter member being normally out of contact with said spring-pressed pin, and a lock operative by selective means for moving said member into engagement with said first means, substantially as described.

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1,228,626. OPERATING MECHANISM FOR SHAKER-GRATES. ROBERT C. WHITE, Birmingham, Ala. Filed Oct. 31, 1916. Serial No. 128,751. (Cl. 126—169.)

1. In a grate shaking appliance, a shaker shaft disposed vertically, operating connections from its lower end to the grate, a shaker handle pivoted to the upper end of the shaker shaft and adapted to swing downwardly to a substantially vertical position, and a bracket disposed below the pivotal connection, a yoke slide laterally adjustable on the bracket, and means to adjust the slide, the

yoke being in position to have the handle thrust therein for the purpose of locking the shaker grate in predetermined position.



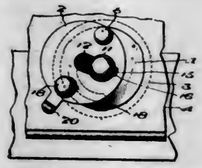
3. In a grate shaking appliance, a shaker grate, a vertical shaker shaft having a yoke head mounted on its upper end, a laterally disposed lug carried by said head, a pivoted detent adapted to swing downwardly into engagement with said lug to limit its oscillatory movements, said detent having a pivotal support, and a projection below said support which, when the detent is raised, is moved into position to be engaged by the lug to reset the detent in operating position.

6. A grate shaking appliance comprising a vertical shaker shaft having lower operating connections to the grate and having at its top a yoke head, a yoke bearing bracket under the head, an adjustable yoke laterally movable on the bracket, a shaker handle pivoted in the yoke head and adapted to be received in the adjustable yoke, means on the yoke bracket to laterally adjust the adjustable yoke, a detent pivoted to the bracket, a lug on the head adapted to be engaged and have its oscillatory movements limited by said detent, said detent being movable to clear the lug and having a bottom portion adapted to be engaged by the lug to restore the detent to operating position, and means to limit the movement of the head away from said detent when the latter is in inoperative position, substantially as described.

[Claims 2, 4, and 5 not printed in the Gazette.]

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**1,228,627. FASTENER FOR AUTOMOBILE AND VEHICLE CURTAINS.** DANIEL M. WINANS, Binghamton, N. Y., assignor to Crandal, Stone & Co., Binghamton, N. Y., a Corporation of New York. Filed Dec. 21, 1916. Serial No. 138,177. (Cl. 24—211.)



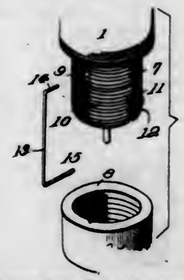
1. A fastener for automobile and vehicle curtains comprising a base plate having a stud-receiving opening, a movably mounted locking plate carried thereby provided with a key-hole slot, the parts of which may be brought into or out of line with the stud-receiving opening on moving the locking plate, a spring catch on one of said plates, and a concavity in the body of the locking plate adapted to receive the spring catch when the locking plate is in locking position, to thereby secure the latter.

2. A fastener for automobile and vehicle curtains comprising a base plate having a stud-receiving opening, a movably mounted locking plate carried thereby provided with a closed key-hole slot, the parts of which may be brought into or out of line with the stud-receiving opening on moving the locking plate, and a stop on the base plate which is received in the key hole slot and is adapted to engage the margin of the latter to limit movement of the locking plate to cause the larger portion of the key-hole slot to register with the stud-receiving opening.

3. A fastener for automobile and vehicle curtains comprising a base plate having a stud-receiving opening, a locking plate pivoted to the base plate so as to be adapted to swing in a plane parallel thereto and provided with a key-hole slot, the parts of which may be brought into or out of line with the stud-receiving opening on swinging the locking plate, one of the said plates being provided with a struck-up spring tongue and the other plate a depression or concavity adapted to receive said tongue to secure the locking plate in locking position, there being also provided on one of the plates at the margin of the opening therein a struck-up lip or stop and at the margin of the opening on the other plate a notch to receive said lip or stop whereby the locking plate is arrested when the larger portion of the key-hole slot is in register with the stud-receiving opening.

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**1,228,628. SPARK-PLUG FOR GAS-ENGINES.** CHARLES R. WINSTON, Richmond, Va. Filed Dec. 4, 1916. Serial No. 134,890. (Cl. 123—169.)



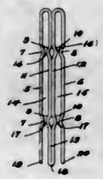
1. A spark plug comprising a sleeve having a threaded portion adapted to be screwed into the head of the cylinder, a porcelain center, a point carried by the porcelain center and extending downwardly through the sleeve below its lower end, a point adjustably carried by the outer face of the sleeve, and means surrounding the sleeve and holding the point in its adjusted position on the sleeve.

2. A spark plug comprising a sleeve having a threaded portion adapted to be screwed into the head of the cylinder, a porcelain center, a point carried by the porcelain center and extending downwardly through the sleeve below its lower end, a point adjustably resting in grooves in the outer face of the sleeve, and a ring screwed on the sleeve and holding the point in its adjusted position thereon.

[Claims 3 to 6 not printed in the Gazette.]

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**1,228,629. LOCK HAIR-PIN.** HARRY OSCAR WINTER, Philadelphia, Pa. Filed Jan. 9, 1917. Serial No. 141,356. (Cl. 132—22.)

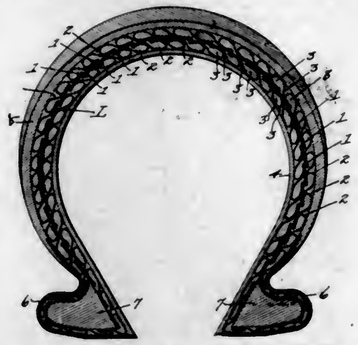


4. A double hair pin having substantially parallel side prongs, a double central prong reversly bent at the front end to form a point and there extending longitudinally beyond the side tines and projections from the central prong and side prong toward each other restricting the opening between the prongs.

[Claims 1 to 3 not printed in the Gazette.]



**1,228,630. TIRE-BODY CONSTRUCTION.** PAUL E. WIRT, Bloomsburg, Pa. Filed June 19, 1914. Serial No. 846,057. (Cl. 152—13.)



1. A tire body including separate superimposed sheets of fabric material having upset overlapping folds, the said upset folds in the separate layers of material being arranged in juxtaposition and disposed obliquely in diagonally crossing relation, and a rubber bond tying together the two layers and filling the bights thereof.

2. A tire body including separate superposed layers of fabric material having overlapping folds whose alternate bights respectively project in opposite direction, the folds in one layer having an inverted relation to and crossing the folds in the other layer.

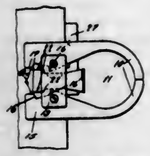
3. A tire body including separate superposed layers of fabric material having overlapping folds presenting a series of alternate narrow and broad bights respectively projecting in opposite directions, the folds in one layer having an inverted relation to and crossing the folds in the other layer.

4. A tire body including superposed layers of fabric strips, each strip having a close succession of folds with adjoining fold walls disposed in overlapping relation, and the folds presenting a sereis of alternating relatively narrow and broad bights, the said separate layers of folded fabric strips being arranged in reversed relation to each other to bring similar bights thereof in juxtaposition and overlapping relation.

5. A tire body including superposed layers of fabric strips, each strip having a close succession of folds with adjoining fold walls disposed in overlapping relation, and the folds presenting a series of alternating relatively narrow and broad bights, the said separate layers of fabric strips being arranged in reversed relation to each other to respectively dispose the broad bights of the inner layer next to the inner wall of the tire body, and the broad bights of the outer layer next to the outer wall of the tire body.

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**1,228,631. UMBRELLA RACK AND LOCK.** IRA T. WOLFE, Seattle, Wash. Filed June 7, 1915. Serial No. 32,522. (Cl. 45—33.)

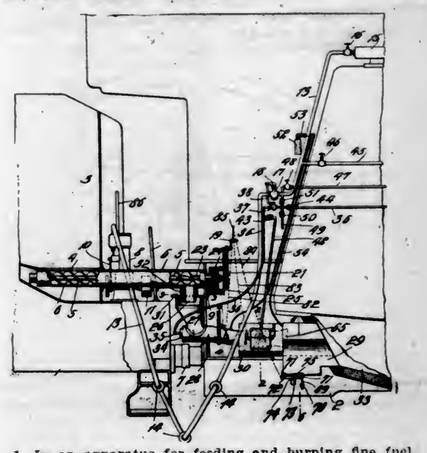


1. In an umbrella lock, a fixed rail, oppositely disposed locking jaw members pivoted intermediate their ends to one side of said rail, each jaw member being formed with an abutment near its inner extremity and with a recess between the abutment and pivot, a U-shaped locking bar straddling said rail having a head formed on the end of one leg adapted to be interposed between said abutments to receive said jaws in closed position and positioned in said recess whereby the jaws may be opened, and key-controlled locking mechanism associated with the other leg of the locking bar.

2. In an umbrella lock, a fixed rail, a pair of coöperating jaw members pivoted to one side thereof, a U-shaped locking bar straddling said rail and having one leg interposed between the inner ends of the jaw members whereby the same may be held in open or closed position, the other leg of the U-shaped locking bar having a notch in the side thereof, a vibratory dog having a lug adapted to be received in said notch, and a removable key insertible in said lock and engageable with the vibratory dog when the locking bar is outwardly positioned and the jaw-members are opened.

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**1,228,632. FEEDING AND BURNING FINE FUEL.** WALTER D. WOOD and HENRY G. BARNHURST, Allentown, Pa., assignors to Fuel Saving Company, Allentown, Pa., a Corporation of Pennsylvania. Filed June 22, 1916. Serial No. 105,120. (Cl. 110—104.)



1. In an apparatus for feeding and burning fine fuel, the combination of a fuel receptacle, a feed screw, means for actuating said screw, said actuating means, screw and receptacle being supported in the same unitary combination, a furnace, a pipe for transporting a stream of fuel to said furnace, and a nozzle at the end of said pipe, said nozzle being provided with counterbalanced automatically operated air valves, and means for carrying air or steam to said nozzle.

2. In an apparatus for feeding and burning fine fuel, the combination of a feed screw, a motor for driving it, means for supplying steam from the locomotive to actuate said motor, a furnace, a delivery conduit for receiving the fuel from the screw and carrying it to the furnace, counterbalanced automatically operated air valves arranged in connection with said conduit, and means for supplying auxiliary air or steam jets to said conduit for forcing an induced stream of air thereinto, and at the same time acting upon the aforesaid air valves.

3. In an apparatus for feeding and burning fine fuel, the combination of a feed screw, a motor for driving it, a delivery conduit for receiving the fuel from the screw and carrying it to the furnace, counterbalanced automatically operated air valves arranged in connection with said conduit, together with means for delivering air or steam to said conduit for forcing an induced stream of air

therein for the purpose of effecting an opening of the air valves.

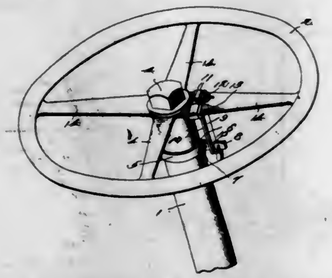
4. In an apparatus for feeding and burning fine fuel, the combination of a feed screw, a motor for driving it, means for manually operating the feed screw when the motor is idle, a delivery conduit for carrying the fuel from the screw to the firing chamber, counterbalanced automatically operated air valves arranged in connection with said conduit, and means for delivering auxiliary steam or air jets at opposite sides of the conduit for forcing an induced stream or streams of air into the openings containing these air valves so as to simultaneously open the said air valves.

5. In an apparatus for feeding and burning fine fuel, the combination of a feed screw having a discharge spout, a hopper, a sliding cover thereon, resilient means tensioned between the feed screw and the cover, a delivery conduit for receiving the fuel and carrying it to the furnace, a nozzle for said delivery conduit, counterbalanced automatically operated air valves arranged in connection with said nozzle, and means for delivering air or steam to said conduit to force an induced stream of air so as to open said air valves.

[Claims 6 to 20 not printed in the Gazette.]

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1,228,633. AUTOMOBILE-LOCK. HARLEY I. ABBOTT, Battle Creek, Mich. Filed Oct. 10, 1916. Serial No. 124,866. (Cl. 70—129.)

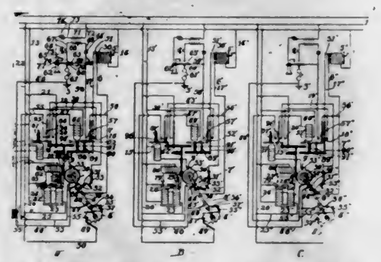


A lock for a steering mechanism comprising a pair of semi-circular members formed of flat metal and permanently secured to the steering post casing, an apertured lug formed by the extension of one of said members, a removable element comprising flat metal members bent at one end to form laterally extending U-shaped portions, said portions being hinged together and adapted to be closed to form a flat loop for engagement with the spoke of a steering wheel, said members being given a quarter turn and bent at right angles to said U-shaped sections and brought into alining contact, said sections being further provided with registering openings adapted to be slid over the lug of the semi-circular member and a lock for engagement with said lug.

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1,228,634. INTERCOMMUNICATING LOCK OUT TELEPHONE SYSTEM. FRANK W. ADSIT, Minneapolis, Minn. Filed May 24, 1915, Serial No. 30,166. Renewed Feb. 13, 1917. Serial No. 148,901. (Cl. 179—30.)

1. In an intercommunicating telephone lock-out system the combination of two subscribers' stations, a pair of wires conecting said subscribers' stations, a ground connection at each of said subscribers' stations, means at each of said subscribers' stations adapted to generate alternating current, means responsive to said alternating current at each subscribers' station, a shaft at each subscribers' station adapted to be rotated by said means responsive to said alternating current, a contact positioned near said shaft, means associated with said shaft adapted to close and open said contact during the rotation of said shaft, a second contact positioned near said shaft, a second means associated with said shaft adapted to close and open said second contact during the rotation of said shaft, and adjustable means adapted to vary the point in the rotation of said shaft at which said second contact is closed and opened.



2. In an intercommunicating telephone lock-out system the combination of two subscribers' stations, a pair of wires connecting said subscribers' stations, and the combination at each of said subscribers' stations of an alternating current generator, a shaft, means responsive to alternating current adapted to rotate said shaft, a permanently located contact point adjacent to said shaft, a contact maker on said shaft adapted to make contact with said permanently located contact point during the rotation of said shaft, a settable contact point positioned adjacent to said shaft, and a second contact maker on said shaft adapted to make contact with said settable contact point during the rotation of said shaft.

3. In an intercommunicating telephone lock-out system the combination of two subscribers' stations, a pair of wires connecting said subscribers' stations, the combination at each of said subscribers' stations of an alternating current generator, a shaft, means responsive to alternating current adapted to rotate said shaft, a permanently located contact point adjacent to said shaft, a contact maker associated with said shaft and adapted to make and break contact with said permanently located contact point during the rotation of said shaft, a settable contact point positioned adjacent to said shaft, a second contact maker associated with said shaft adapted to make and break contact with said settable contact point during the rotation of said shaft, means adapted to limit the amount of rotation of said shaft, and a contact adapted to be closed when the rotation of said shaft is substantially completed.

4. In an intercommunicating telephone lock-out system the combination of two subscribers' stations, a pair of wires conecting said subscribers' stations, and the combination at each of said subscribers' stations of an alternating current generator, a shaft, means responsive to alternating current adapted to rotate said shaft, a permanently located contact point adjacent to said shaft, a contact maker associated with said shaft and adapted to make and break contact with said contact point during the rotation of said shaft, a settable contact point adjacent to said shaft, a second contact maker associated with said shaft adapted to make contact with said settable contact point during the rotation of said shaft, and a normal contact adapted to be opened at the beginning of the rotation of said shaft.

5. In an intercommunicating telephone lock-out system the combination of three subscribers' stations, a pair of wires conecting said subscribers' stations, and the combination at each of said subscribers' stations of an alternating current generator, a shaft, means responsive to alternating current adapted to rotate said shaft, a permanently located contact point adjacent to said shaft, a contact maker associated with said shaft adapted to make contact with said permanently located contact point during the rotation of said shaft, a settable contact point positioned adjacent to said shaft, a second contact maker



associated with said shaft adapted to make contact with said settable contact point during the rotation of said shaft, a normal contact included in the circuit of said subscribers' stations so as to open said circuit when said normal contact is opened, means associated with said shaft for opening said normal contact at the beginning of the rotation of said shaft, electro-magnetic means operable through said permanently located contact point at one of said subscribers' stations when it is being called, by alternating current from said alternating current generator of one of the other of said subscribers' stations when it is calling through said settable contact at said subscribers' station that is calling.

[Claim 6 not printed in the Gazette.]

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1,228,635. LAMP-DIMMER. HARRY ALEXANDER, New York, N. Y. Filed Mar. 9, 1915. Serial No. 13,278. (Cl. 219—49.)

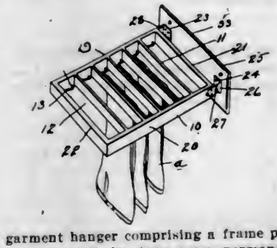


1. A lamp dimmer which comprises a threaded base and a threaded socket, one of which includes a material of high electrical resistance, said base engaging directly with said socket, and an extensible terminal associated with both elements and making contact therebetween irrespective of the distance that the base is inserted in the socket.

[Claims 2 and 3 not printed in the Gazette.]

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1,228,636. GARMENT-HANGER. RALPH C. BANGS, Cranston, R. I., assignor of one-fourth to Philip H. Cadby, Providence, R. I. Filed Apr. 16, 1915. Serial No. 21,804. (Cl. 211—13.)



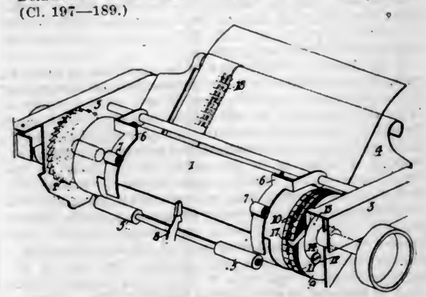
1. A garment hanger comprising a frame provided with side bars connected by transverse permanently spaced partitions, and gravity operating clamping members pivotally attached to said side bars near the lower edges thereof, and adjacent a transverse partition, and each extending diagonally upward and having a free longitudinal edge coöperating with one side of a partition spaced from the first mentioned partition, to form a garment supporting clamp.

2. A garment hanger comprising a frame provided with side bars connected by transverse permanently spaced partitions, and bent wire clamping members having offset ends pivotally engaging said side bars near the lower edges thereof, and adjacent a transverse partition, and each having a straight body portion coöperating with one side of a partition spaced from the first mentioned partition, to form a garment supporting clamp.

3. A garment hanger comprising a frame provided with side bars connected by transverse permanently spaced partitions, gravity operated clamping members coöperating with said partitions to form garment supporting clamps, ears attached to said side walls and having transverse slots provided with offset ends, and a supporting member provided with pins entering said slots, whereby said frame may be selectively supported in a vertical or horizontal position.

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1,228,637. TYPE-WRITING MACHINE. WALTER E. BARNARD, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 25, 1914. Serial No. 858,434. (Cl. 197—189.)



1. In a typewriting machine, the combination with a platen rotatable through line-spaces of a predetermined extent, of a paper shelf at the introductory side of the platen, a side-gage for the work-sheets, said side-gage having a plate portion to underlie the work-sheet, said plate portion bearing numeral indications, each indication representing the number of lines which may still be written on a work-sheet carried by the platen, said side-gage being adjustable along the paper shelf so as to be engageable by a work-sheet of any width, and so that each number is brought to view only as the work-sheet reaches a position to be designated by said number, and so that said number is then in immediate proximity or in contact with the sheet, whereby liability of error in reading the indications is avoided.

2. In a typewriting machine, the combination with a rotary platen, of a rotary indicator mounted thereon, said indicator formed of sheet metal and comprising a ring surrounding the platen at the end thereof and extending a substantial distance beyond the platen end, the outer edge of the ring being curved inwardly toward the platen axis and backwardly toward the platen end and terminating in an annular flange lying flat against the end of the platen, holding screws in the ends of the platen with their heads projecting over said flange to thereby hold the indicator on the platen to permit rotation thereof relatively to the platen, and springs interposed between said flange and the platen to frictionally retard the rotation of the indicator relative to the platen and cause it to rotate with the platen.

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1,228,638. ELASTIC WHEEL FOR VEHICLES. MAURICE BAUDOU and RENÉ BAUDOU, Les Eglisottes, near Bordeaux, France. Filed May 7, 1914. Serial No. 837,034. (Cl. 152—28.)



1. In an elastic wheel for vehicles traveling on roads or rails, the combination of a circumferential part comprising a rim and two concentric, parallel and circular rings connected to the rim by wires, a central part formed by two parallel, metallic and circular rings mounted on the axle, and a vibrating ring formed by an annular, metallic

disk placed in the middle of the plane of the wheel, between the parallel rings of the circumferential part and the parallel rings of the central part, the said vibrating ring being provided with two concentric rows of metallic tubes each inclosing an annular core of compressed rubber in the hollow hub of which is mounted a spindle combined with a ball bearing, the ends of the spindles of one of the rows of cores being secured to the rings of the central part and the spindles of the other row of cores being secured to the rings of the circumferential part, and two series of guides, the ends of one of them touching the inner faces of the circular rings.

2. In an elastic wheel for vehicles traveling on roads or rails, the combination of a circumferential part comprising a rim and two concentric, parallel and circular rings of angle iron connected to the rim by wires, a central part formed by two parallel, metallic and circular rings mounted on the axle, and a vibrating ring formed by an annular, metallic disk placed in the middle of the plane of the wheel, between the parallel rings of the circumferential part and the parallel rings of the central part, the said vibrating ring being provided with two concentric rows of metallic tubes each inclosing an annular core of compressed rubber in the hollow hub of which is mounted a spindle combined with a ball bearing, the ends of the spindles of one of the rows of cores being secured to the rings of the central part and the spindles of the other row of cores being secured to the rings of the circumferential part and two concentric rows of cross bars rigidly secured to the middle disk and projecting to the same extent at each side of the disk so that the ends of the outer row of bars touch the inner faces of the angle iron rings, and the ends of the inner row of bars touch the inner faces of the parallel rings of the central part.

3. In an elastic wheel for vehicles traveling on roads or rails, the combination of a circumferential part comprising a rim and two concentric, parallel and circular rings of angle iron connected to the rim by wires, a central part formed by two parallel, metallic and circular rings mounted on the axle, and a vibrating ring formed by an annular, metallic hollow disk placed in the middle plane of the wheel, between the parallel rings of the circumferential part and the parallel rings of the central part, the said vibrating ring being provided with two concentric rows of metallic tubes each inclosing an annular core of compressed rubber in the hollow hub of which is mounted a spindle combined with a ball bearing, the ends of the spindles of one of the rows of cores being secured to the rings of the central part and the spindles of the other row of cores being secured to the rings of the circumferential part, and two concentric rows of hollow cross-bars rigidly secured to the middle disk and projecting to the same extent at each side of the disk so that the ends of the outer row of bars touch the inner faces of the angle iron rings, and the ends of the inner row of bars touch the inner faces of the parallel rings of the central part, the bars being provided with small holes so that lubricant placed in the hollow disk can pass out from the ends of the bars.

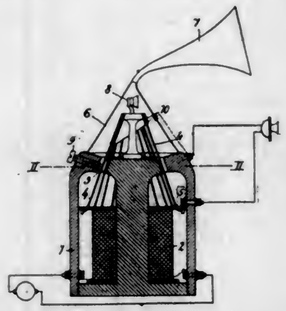
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1,228,639. SOUND-PRODUCING DEVICE. ERIK CHRISTIAN BAYER, Jordløse, Svebølle Station, Denmark. Filed Mar. 27, 1914. Serial No. 827,652. (Cl. 179—100.)

1. In a sound reproducing device, the combination with a telephone transmitter and its circuit, of a plurality of tightened wires of non-magnetic material adjusted to various tones and all constantly forming integral parts of said circuit, and a powerful magnet producing a field passed through by the said wires.

2. In a sound reproducing device, the combination with a telephone transmitter and its circuit, of a plurality, of tightened wires of non-magnetic material arranged in a circle and adjusted to various tones and all constantly forming integral parts of said circuit, and a powerful magnet producing an annular field passed through by the said wires.

3. In a sound reproducing device, the combination with a telephone transmitter and its circuit, of a plurality of tightened wires of non-magnetic material arranged in a circle and adjusted to various tones and all constantly forming integral parts of said circuit, and a powerful magnet producing an annular field passed through by the said wires and provided with means for adjusting its field intensity in respect of each individual wire.

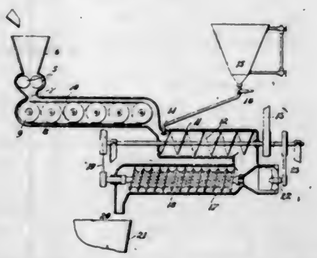


4. In a sound reproducing device, the combination with a telephone transmitter and its circuit, of a plurality of tightened wires of non-magnetic material arranged in a circle and adjusted to various tones and all constantly forming integral parts of said circuit, and a powerful magnet producing an annular field passed through by the said wires and provided with means for adjusting its field intensity in respect of each individual wire, and a sound collector encircling said wires.

5. In a sound reproducing device responsive to undulating electric currents, the combination of a plurality of tightened wires of non-magnetic material adjusted to various tones and all constantly forming integral parts of a circuit which is adapted to convey said undulating electric currents, and a powerful magnet producing a field passed through by the said wires.

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1,228,640. APPARATUS FOR PREPARING FOOD. JOHN D. BELTON, Crowley, La., assignor of one-half to Aleck Brown, Morse, La. Filed July 13, 1916. Serial No. 109,148. (Cl. 99—5.)



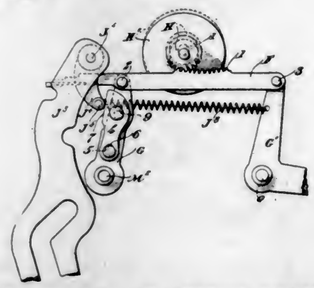
1. In a device of the class described, a heating and mixing chamber, the former communicating with the latter, heated rollers in said heating chamber, a belt conveyer on said rollers, a spirial conveyer in said mixing chamber, an aspirator chamber communicating with said mixing chamber, a spiral drum in said aspirator, means for rotating said conveyer and drum, and means for creating air currents in said aspirator, substantially as described.

2. In a device of the class described, a mixing chamber, a screw conveyer in said chamber, a molasses introducing nozzle in said chamber, an aspirator chamber communicating with said mixing chamber, a spiral drum in said aspirator chamber, a fan for creating air currents in said chamber and drum, and means for driving said screw conveyer, drum and fan, substantially as described.



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1,228,641. CALCULATING-MACHINE. FRANK H. BICKFORD, Kingston, Pa., assignor to The Adder Machine Company, Wilkes-Barre, Pa., a Corporation of Pennsylvania. Filed July 5, 1911. Serial No. 637,018. (Cl. 74—14.)



1. The combination with coöperating members, at least one of which is shiftable; of a plate shiftably connected to one of said members, and having its working face projectable beyond said member to be contacted by the other member; and an eccentric seated in the plate and connected to the member which supports the plate, to adjust the position of the plate, relatively to its support.

2. The combination with coöperating members, at least one of which is shiftable; of a plate shiftably connected to one of said members, and having its working face projectable beyond said member to be contacted by the other member; and a stud journaled in the member bearing the plate, and having an eccentric head entered in an aperture in the plate, to adjust the latter.

3. The combination with coöperating members, at least one of which is shiftable, said members being required to maintain a predetermined relation; of means to compensate for the wear of one of said members and effective to maintain said predetermined adjustment; and self-locking means to adjust the compensating means and to hold it where adjusted.

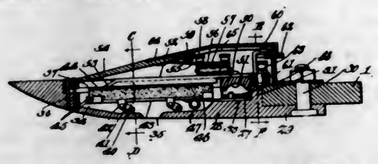
4. In a calculating machine, the combination with cooperating members, at least one of which is shiftable; of an adjustment for said members, comprising a wear plate shiftably connected to one of said members for movement relatively thereto; said plate having an aperture; and an eccentric entered in the aperture to adjust the plate.

5. The combination with coöperating members, at least one of which is shiftable; of an adjustment for said members, comprising a wear plate having an elongated slot; a pin passing through the slot to connect the plate to its member; said plate having an aperture; and an eccentric entered in said aperture to adjust the plate.

[Claims 6 to 13 not printed in the Gazette.]

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1,228,642. MOWING APPARATUS. WILLIAM BURDINE BLAND, Jenks, Okla. Filed June 24, 1916. Serial No. 105,734. (Cl. 56—43.)



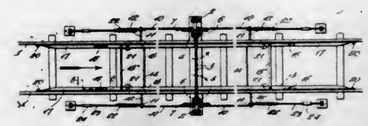
1. In mowing apparatus, the combination with a guard finger and a knife mounted to reciprocate thereacross of a sharpening element normally housed within the finger, a resilient support for said element and means for bodily lifting said sharpening element against the reciprocating knife.

8. In a mowing apparatus, the combination with a finger bar and fingers extending therefrom and having recesses in their upper faces, of a holding element movably mounted within each recess, a sharpening device carried by each of said elements, links pivotally connecting said holding elements to the fingers, a shifting bar slidably mounted across the fingers, means operated by the movement of said bar for simultaneously pulling upon the holding elements to shift the links and move the sharpening devices out of the recesses, a cutter bar, knives secured to the cutter bar reciprocating across and between the fingers, the sharpening devices when shifted out of their normal positions engaging said knives, cutting elements at the sides of each finger and coöperating with the knives, said sharpening devices being movable into and out of position between the blades on each finger, a cap secured upon each finger and extending over the knives and cutter bar, and anti-friction means for pressing the knives in contact with the cutting elements.

[Claims 2 to 7 not printed in the Gazette.]

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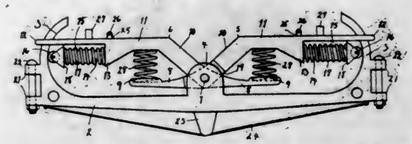
1,228,643. MINE-DOOR. ALONZO BLEVINS, CHARLES F. KILGORE, and ALLEN L. BLEVINS, Coeburn, Va., assignors, by direct and mesne assignments, of one-fourth to said Alonzo Blevins and one-fourth to said Kilgore, and one-fourth to Mason L. Johnson and one-fourth to Joseph J. Body, Dante, Va. Filed Apr. 20, 1916. Serial No. 92,478. (Cl. 269—9.)



The combination with a railway and a door mounted to swing across the same, a pair of operating links extending to opposite sides of said door, operating connections between said door and links for opening the former in either direction according to the direction in which the links are shifted, a depressible rail passing beneath the door and disposed adjacent one rail of the railway, inclined rail sections at and in line with the ends of said depressible rail, said sections being both pivotally and slidably connected with the ends of said depressible rail and being pivoted to said one rail of the railway, and a pair of rock shafts extending transversely of the railway on opposite sides of the door, said shafts having upstanding crank arms pivoted to the aforesaid links and additional cranks upon which the depressible rail rests, said rail bearing on said additional cranks at points spaced toward the door from said rock shafts whereby a car traveling in either direction will open the door in the direction said car is traveling.

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1,228,644. VEHICLE SUSPENSION AND SHOCK-ABSORBER. FLETCHER O. BOSWELL, Philadelphia, Pa., assignor to F. O. B. Manufacturing Company, Philadelphia, Pa., a Corporation of Delaware. Filed May 23, 1916. Serial No. 99,270. (Cl. 267—9.)



1. A vehicle suspension and shock absorber comprising arcuate tracks, body supporting means, and spring actu-

ated thrust members carried by the body supporting means and engaging said arcuate tracks.

2. A vehicle suspension and shock absorber comprising supporting means connected with the running gear of a vehicle, arcuate tracks carried by said supporting means, movable body supporting means and spring pressed members carried by said means and engaging said arcuate tracks.

3. A vehicle suspension and shock absorber comprising arcuate tracks supported by the running gear of a vehicle, pivot levers coacting with said arcuate tracks and spring pressed thrust members carried by said levers and engaging said tracks.

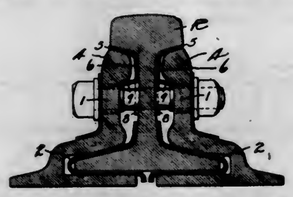
4. A vehicle suspension and shock absorber comprising arcuate tracks supported by the running gear of a vehicle, pivot levers coacting with said arcuate tracks, spring pressed thrust members carried by said levers and engaging said tracks, and resilient means situated between one portion of one lever and a different portion of the coacting lever.

5. In a device of the character stated a strut beam, arcuate tracks carried thereby, body supporting means and spring pressed thrust members carried by the body supporting means and engaging said arcuate tracks.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,645. INSULATED RAIL-JOINT. BANCROFT G. BRAINE, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Mar. 23, 1916. Serial No. 86,213. (Cl. 239—5.)



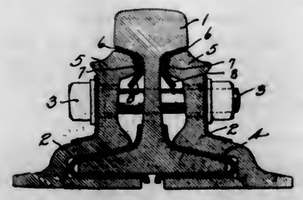
2. A rail head insulating unit comprising an insulation plate shaped to fit the head portion of the joint bar beneath the rail head and provided with an outturned guard flange adapted to abut against the joint bar.

4. A rail-head insulating unit comprising an insulation plate having an upper insulating flange and a depending web formed with a depending skirt and with an outturned guard flange.

[Claims 1, 3, and 5 not printed in the Gazette.]

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1,228,646. PLURAL-FACED INSULATING UNIT. BANCROFT G. BRAINE, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Mar. 23, 1916. Serial No. 86,214. (Cl. 239—5.)

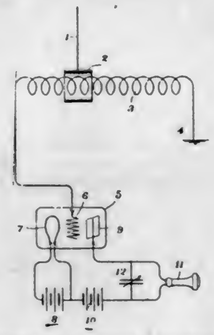


2. A rail-head insulating unit consisting of an insulation channel plate, every member of which is formed to fit between a joint bar and the underside of a rail-head.

3. A rail head insulating unit consisting of an insulation channel plate.

[Claims 1, 4, and 5 not printed in the Gazette.]

1,228,647. OSCILLATION-RECEIVING APPARATUS. ELMER E. BUTCHER, Interlaken, N. J., assignor to Marconi Wireless Telegraph Company of America, a Corporation of New Jersey. Filed May 19, 1914. Serial No. 839,483. (Cl. 250—20.)



1. In an oscillation receiving apparatus, a grounded open secondary circuit containing an inductance and a detector and tuned to the periodicity of the received oscillations excited by an aerial circuit electrostatically coupled thereto and also tuned to the periodicity of the received oscillations.

2. In an oscillation receiving apparatus, an open oscillating circuit containing an inductance and connected to the earth at one end and to a detector at a point of maximum potential remote from the earthed point and an aerial circuit tuned to the periodicity of the received oscillations electrostatically coupled thereto.

3. In an oscillation receiving apparatus, an open oscillating circuit containing an inductance and a detector and an oscillating circuit electrostatically coupled thereto at the point at which the inductance is included in the circuit.

4. In an oscillation receiving apparatus, an aerial circuit containing one element of an electrostatic coupling and a detector circuit containing an inductance and a detector, the inductance constituting the other element of the electrostatic coupling.

5. In an oscillation receiving apparatus, an aerial circuit containing one element of an electrostatic coupling and an open detector circuit grounded at one end, containing an inductance and connected to a detector at a point of maximum potential remote from the earthed point, the inductance constituting the other element of the electrostatic coupling.

[Claims 6 to 9 not printed in the Gazette.]

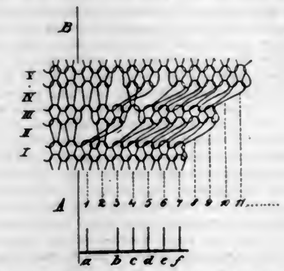
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1,228,648. KNITTED GOODS AND THE METHOD OF MAKING THE SAME. FRANZ CECKA, Chemnitz, Germany, assignor to the Firm of Schubert & Salzer Maschinenfabrik, Aktiengesellschaft, Chemnitz, Germany. Filed Sept. 8, 1914. Serial No. 860,642. (Cl. 66—4.)

1. The method of producing on a knitting machine, a knitted fabric having at least one widened portion which comprises regularly knitting at least one row of loops, widening at least one succeeding row of loops by transferring a group of loops for at least two needle divisions, and reducing the gap produced at the commencement of the said transference to the width of one needle division by excluding from said transference at least the second loop within said group whereby the loops of the succeeding row are locked against raveling.

2. The method of producing on a knitting machine, a knitted fabric having at least one widened portion which comprises regularly knitting at least one row of loops, widening at least one succeeding row of loops by uniformly transferring a group of loops for at least two needle divisions, and reducing the gap produced at the commencement of the said transference to the width of one needle division by excluding from said transference at least the second loop within said group whereby the loops of the succeeding row are locked against raveling.





3. A knitted fabric comprising rows of successively knitted loops, a group of successive loops excluding at least one loop being widened out the distance of at least two loops, the excluded loop locking the loops of the succeeding row against raveling.

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1,228,649. SUPPORTING DEVICE. ELMER ELLSWORTH CHILDS, Lyons, N. J. Filed Nov. 11, 1916. Serial No. 130,706. (Cl. 248—39.)



1. A holding device for sustaining an article free of any other support comprising two suction cups arranged stiffly back to back and suzstantially in line and connected by a relatively stiff and short connecting portion.

2. A holding means adapted to hold an article without any other support and adapted to be concealed from the front by the supported article comprising a pair of suction cups arranged close together and back to back and with a relatively stiff connecting portion between them.

3. A holding device comprising a pair of suction cups, a neck connecting the cups, and means between the cups against which the backs of the cups are forced when the cups are flattened to a holding position.

4. A holding device comprising a pair of suction cups arranged back to back, a neck between the cups, and a collar on the neck and adapted to prevent undue relative tilting of the cups by engagement with the backs of the cup.

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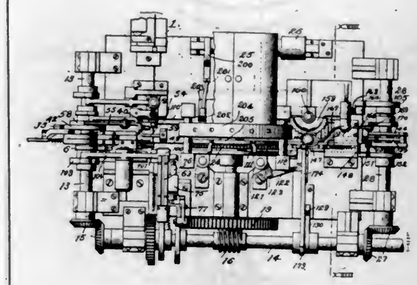
1,228,650. TIRE. JAMES H. CHRISTIAN, Detroit, Mich., assignor to Perfection Tire & Rubber Co., a Corporation of South Dakota. Filed Feb. 8, 1915. Serial No. 6,739. (Cl. 152—18.)



In a tire, a carcass, a tread, a rubber cushion between said carcass and said tread and uniting the same to form an outer casing, layers of wire in said rubber cushion with each wire inclosed by a heat resisting material, the inclosed wires being interwoven with spaces between confronting faces thereof so that the rubber from which the cushion is formed may enter the spaces between the inclosed wires and yieldably cushion said wires relative to one another, said embedded wires terminating at a point removed from the side edges of the rubber cushion so as to preclude cutting therethrough when said casing is subjected to pressure.

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1,228,651. SAFETY-PIN MACHINE. WILLIAM A. COURTLAND, Brooklyn, N. Y., assignor to American Pin Company, Waterbury, Conn., a Corporation of Connecticut. Filed May 27, 1915. Serial No. 30,762. (Cl. 163—7.)



3. In a safety pin machine, blank cutting means, means for necking a blank, means for applying a cap to said blank, a pressure arch adapted to frictionally engage the shank of said capped blank, means for conveying said capped blanks breadthwise over said pressure arch, said conveying means being adapted to permit the capped blank to be rotated by the frictional pressure of said pressure arch, means reciprocable lengthwise of said pin blank for sharpening the uncapped end thereof, and an abutment plate against which said cap revolves for taking up the end thrust of said sharpening means.

5. In a safety pin machine, the combination with necking, capping and sharpening means, of blank-winding means, means for conveying a capped blank from said sharpening means while arranging it to present the cap in a predetermined direction, and means for positively gripping and conveying said blank or safety pin away from said winding means.

17. In a safety pin machine, the combination with a sharpening mechanism adapted to revolve safety pin blanks with caps already applied, of means for arranging said blanks with the caps presented in a predetermined direction, winding mechanism, means for conveying a blank from said sharpening mechanism to said winding mechanism, a slide movable toward and away from said winding mechanism, said slide being provided with means for retaining the caps of said blanks in predetermined direction during their movement, and a picker movable toward and away from said winding mechanism to positively engage and remove the completed pins, and means operatably connecting said slide to said picker to alternate the movements of said slide and picker with respect to said winding mechanism.

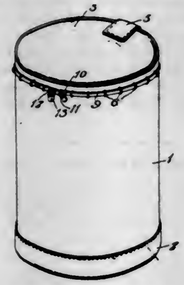
[Claims 1, 2, 4, and 6 to 16 not printed in the Gazette.]

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1,228,652. MAIL-BAG CLOSURE. CHARLES L. DAUGHERTY, Lyons, Ky. Filed July 7, 1916. Serial No. 107,970. (Cl. 150—15.)

In a device of the class described, the combination of a mail bag having a plurality of vertically arranged elongated openings, a closure therefor comprising a cap member, a laterally extending flange formed on said cap member, looped strap members adapted to be engaged in said

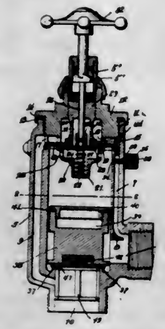
openings mounted on the flange, the ends of said strap members being secured to said flange and a retaining



strap inserted through each of said looped strap members after the same has been engaged in the opening.

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1,228,653. FLUSHING DEVICE. JAMES F. DE SPIRITO, Brooklyn, N. Y. Filed Aug. 21, 1913. Serial No. 785,938. (Cl. 137—93.)

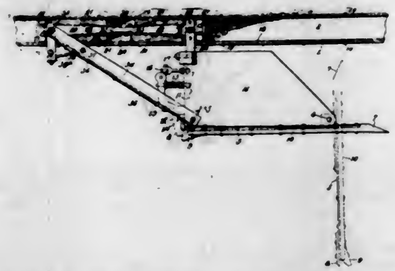


1. A flushing device comprising the combination with a casing having an upper flange, a lower discharge end, an inlet passage opening into the upper portion of said casing, a connecting passage from the top of said casing to the outlet port thereof, and a valve closing communication between said inlet and said outlet ports, of a removable cap secured in said flange, a removable apertured plate positioned in said casing and having an upstanding flange, a depending flange carried by said cap and resting upon the upper face of said plate to retain the latter in position, said flanges of the plate and the cap having registering openings communicating with the upper end of said connecting passage formed in the casing, said cap having an upper fluid chamber formed therein, valve seat means carried by said cap and extending through said upper fluid chamber, a valve chamber suspended from said plate and having communication with the upper portion of said casing and with the apertures through said plate, a valve within said valve chamber and normally engaged with said plate and said valve seat means, means for resiliently retaining said second mentioned valve in normal position, a handle, and means adapted to be operated by either downward or rotary movement of said handle to unseat the second mentioned valve and permit passage of fluid from the upper portion of said casing to the outlet port of said casing and thereby allow upward movement of the first mentioned valve to open a direct communication between the inlet and outlet ports of said casing.

2. A flushing device comprising a casing having an open upper end and a lower discharge end, said casing having an inlet at one side, a cap for the open upper end of said casing, an apertured plate positioned between said upper end of the casing and said cap, a valve chamber suspended from said plate and communicating with the aperture therein, said valve chamber having openings forming communication between the interior thereof and the upper portion of said casing, a stuffing box mounted in said cap, said stuffing box having a depending flange provided with side openings, a valve seat secured between said depending flange and said apertured plate, said cap having a depending flange surrounding and spaced from the hollow depending flange of said stuffing box and provided with openings, a releasing valve within said valve chamber, means for resiliently retaining said valve in engagement with said seat, a valve normally closing communication between the inlet passage and the outlet passage of said casing, said casing having a passage leading from the portion of said casing above said plate to the lower end of said casing below the second mentioned valve, and means for forcing said releasing valve away from said seat to permit fluid from the upper portion of said casing to enter the hollow depending flange of the stuffing box.

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1,228,654. EXCAVATOR-BUCKET MOUNTING. ROBERT M. DOWNIE, Beaver Falls, Pa., assignor to Keystone Driller Company, Beaver Falls, Pa., a Corporation of Pennsylvania. Filed Feb. 25, 1916. Serial No. 80,480. (Cl. 37—16.)



1. In an excavating machine, the combination with an elongated boom having longitudinal runways and a scoop or shovel supported by the boom and movable lengthwise thereof, of a supporting slide structure for the scoop or shovel adapted to the runways of the boom, said slide structure including spacer bars and shoes on the spacer bars engaging in the runways and slidable therealong, a supporting connection between one end of the spacer-bar portion of the slide structure and the rear end of the scoop or shovel, and brace bars between the other end of the spacer bar portion of the slide structure and the rear end of the scoop or shovel.

2. In an excavating machine, the combination with an elongated boom having longitudinal runways and a scoop or shovel supported by the boom and movable lengthwise thereof, of a supporting slide structure for the scoop or shovel adapted to the runways of the boom, said slide structure including spacer bars and shoes on the spacer bars engaging in the runways and slidable therealong, a supporting connection between one end of the spacer-bar portion of the slide structure and the rear end of the scoop or shovel, and brace bars between the other end of the spacer bar portion of the slide structure and the rear end of the scoop or shovel, the supporting connection being in the form of a hanger secured to the upper portion of the rear end of the bucket and the brace bars being connected to the bucket near the lower portion of the rear end of the bucket.

3. In an excavating machine, the combination with an elongated boom having longitudinal runways and a scoop or shovel supported by the boom and movable lengthwise thereof, of a supporting slide structure for the scoop or shovel adapted to the runways of the boom, said slide structure including spacer bars and shoes on the spacer bars engaging in the runways and slidable therealong, a supporting connection between one end of the spacer-bar portion of the slide structure and the rear end of the scoop or shovel, and brace bars between the other end of the spacer bar portion of the slide structure and the rear end of the scoop or shovel, the supporting connection being secured to the upper end of the rear of the bucket and having adjustable connections to the corresponding end of the spacer bar portions of the slide, and the brace bars having pivotal connections at opposite ends to the spacer bar parts of the slide and the lower portion of the rear end of the bucket, respectively.

4. In an excavating machine, the combination with an elongated boom having channel runways on opposite sides and a scoop or shovel supported by the boom and movable lengthwise thereof, of a slide structure for supporting the bucket comprising slides adapted to the runways on the boom, each slide consisting of an elongated spacer bar increasing in width from the mid portion toward the ends, and wedge blocks or shoes on and adjustable lengthwise of the spacer bar to maintain a snug fit of the slide in the respective runway by compensating for wear.

5. In an excavating machine, an elongated boom having channel runways on opposite sides, an excavating scoop or shovel, slides adapted to the respective runways and each comprising an elongated spacer bar tapering from the ends toward the middle portion, wedge blocks secured to and adjustable along the taper portions of the spacer bar, hangers connected to the front ends of the slides and to the rear end of the scoop, and brace bars connected to the rear ends of the slides and the rear end of the scoop adjacent to the bottom thereof.

[Claims 6 to 20 not printed in the Gazette.]



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1,228,655. TOOL FOR PERFORATING CORRUGATED MATERIAL. CHARLES A. ELIGH, Detroit, Mich., assignor to Long Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 4, 1915. Serial No. 59,531. (Cl. 164—110.)



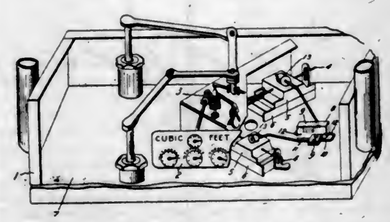
1. A tool for perforating material, comprising a die whose surface has corrugations complementary to the corrugations of the material to be perforated and having apertures located indiscriminately with reference to the corrugations; punches adapted to pass through the material, into said apertures, thereby perforating the material, and pressing means independent of the punches for pressing the material against the die, said pressing means being constructed with auxiliary provisions for maintaining substantially invariable pressure during the entire travel of said punches from the top to the bottom of the corrugations.

2. A tool for perforating corrugated material, comprising a die whose surface has corrugations complementary to the corrugations of the material to be perforated and having apertures located indiscriminately with reference to and extending over one or more corrugations indiscriminately, the edges of said apertures being adapted to act as shears, and punches having edges to coöperate with the edges of the apertures and shear perforations in the material lying upon the corrugated surface.

3. A tool for perforating corrugated material, comprising a die whose surface has corrugations complementary to the corrugations of the material to be perforated and having apertures which extend over two or more corrugations; and punches adapted to pass through the material into said apertures, thereby perforating the material.

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1,228,656. GAS-METER-VALVE PROTECTOR. BENNETT EMERSON and HENRY C. MORRIS, Dallas, Tex.; said Emerson assignor to said Morris. Filed Apr. 13, 1915. Serial No. 21,000. (Cl. 73—1.)



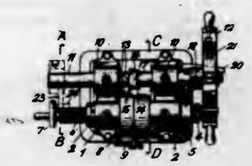

1. In a device of the character described, the combination with registering mechanism of a meter, of a sliding valve cover indirectly controlling said mechanism, and means, maintained in inoperative condition when the meter is in its normal upright position, for holding said cover in operative position when the meter is moved from its normal position.

5. In a device of the character described, the combination with a registering mechanism, of two valve covers the movement of which indirectly controls said mechanism, a weight tiltably mounted adjacent to each cover, a crank arm projecting from each weight, a bearing for each crank arm, and a roller carried by each crank arm and extending over and adjacent to each cover.

[Claims 2 to 4 not printed in the Gazette.]

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1,228,657. CAPSTAN-LATHE. AUGUST FRISCH, Zürich, Switzerland, assignor to the Firm of A. Frisch & Co., Zürich, Switzerland. Filed May 4, 1916. Serial No. 95,370. (Cl. 29—43.)

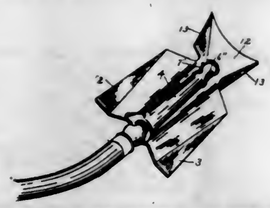


1. In a capstan lathe, a headstock, a work-carrying mandrel mounted therein, a lead screw fitted over said work carrying mandrel, a revolving head, a mandrel carrying the latter mounted in the headstock parallel to the work-carrying mandrel and rotatable and movable in a longitudinal direction, and an arm fixed on the mandrel carrying the revolving head and provided with a sectional nut engaging said bead screw.

2. In a capstan lathe, a headstock, a work-carrying mandrel mounted therein, a revolving head, a mandrel carrying the latter mounted in the headstock parallel to the work-carrying mandrel and rotatable and movable in a longitudinal direction, a stop-piece mounted on the revolving head adapted to limit the turning movement of the latter and a stop for the revolving head adjustable in the direction of rotation of the latter.

3. In a capstan lathe, a headstock, a work-carrying mandrel mounted therein, a lead screw fitted over said mandrel, a revolving head, a mandrel carrying the latter and mounted in the headstock parallel to the work-carrying mandrel and rotatable and movable in longitudinal direction, an arm fixed on the mandrel carrying the revolving head and provided with a sectional nut engaging said lead screw, a stop-piece mounted in the revolving head adapted to limit the turning movement of the latter, and a stop for said revolving head, adjustable in the direction of rotation of the latter.

1,228,658. SPRAYING ATTACHMENT FOR NOZZLES. JOSEPH B. GAINES, Springfield, Ohio. Filed Sept. 7, 1915. Serial No. 49,358. (Cl. 137—57.)



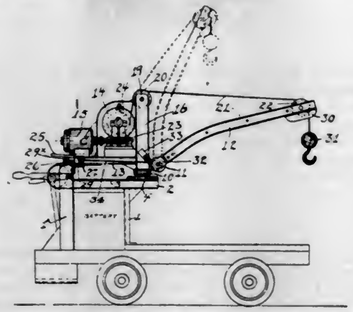
1. As an article of manufacture, in a spraying attachment for nozzles, a main body portion having a longitudinal centrally-arranged channel therein and integrally-formed downwardly-projecting angularly-arranged wings on the side edges thereof to form supports, spring arms arranged in said channel to receive the nozzle, and an integrally-formed forwardly and upwardly projecting portion on said main body portion, said upwardly projecting portion having side walls and a centrally-arranged rib and also having its outer edge slightly upturned to form a lip.

2. In a spraying attachment, a channel-shaped portion to receive the nozzle, an upwardly and outwardly extending spraying member attached to said channel-shaped portion, said channel-shaped portion having a struck-up part open at the front and rear, and a spring clamp inserted under said struck-up part and having upwardly projecting spring arms to receive the nozzle.

3. In a spraying attachment, a main channel-shaped portion to receive the nozzle, a forwardly extending spraying member attached to said channel-shaped portion, a struck-up part in said channel-shaped portion, a pair of spring arms connected together, the connecting portion of said arms being bent at right angles thereto and inserted under said struck-up part, said struck-up part and the connecting portion of said arms having coinciding bends to lock the same together.

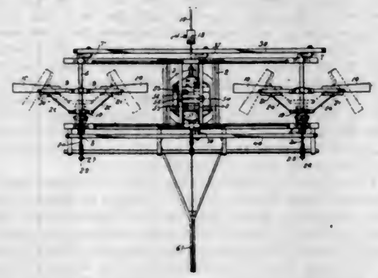
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1,228,659. CRANE. THORVALD N. GARSON, Greenville, N. J. Filed Sept. 13, 1916. Serial No. 119,816. (Cl. 212—59.)



In a crane the combination with a support, of a hoisting drum and driving means therefor, a boom pivotally mounted upon the support, a hoisting rope connected with the drum and led over the end of the boom, a contact device carried by the hoisting rope and adapted to engage the boom to elevate the same when the hoisting rope is wound a predetermined length on the drum, and two interengaging members at the base of the boom for automatically locking the latter in its elevated position to permit a reverse movement of the hoisting rope, one of said members being carried by the boom and the second member being carried by the support.

1,228,660. WINDMILL. ALBERT F. GEORGE, Salina, Kans. Filed June 14, 1915. Serial No. 33,907. (Cl. 170—38.)



1. In a wind mill, a rotary shaft, a pinion rotatable on said shaft, a reciprocative longitudinally and laterally movable member adapted to lift a load and having a gear having two longitudinal parallel rows of teeth, the pinion being in mesh with said gear and adapted to lift said member and the load when engaged with one of said rows of teeth, means connecting said shaft and pinion for rotating said pinion when the latter is engaged with said row, and releasable means for connecting said shaft and pinion and adapted to hold the pinion from rotating faster than said shaft, the first named connecting means being arranged to permit such faster rotation of the pinion.

2. In a wind mill, a rotary shaft, a pinion rotatable thereon, two clutch members rotatable with said shaft and provided with means for engaging said pinion, one of said clutch members serving to drive said pinion and which permits the pinion to rotate faster than said shaft, the other clutch member being releasable from said pinion and which, when engaged therewith, holds the pinion from rotating faster than said shaft, a reciprocative member adapted to lift a load and movable longitudinally and laterally and provided with a gear engaging said pinion and having two longitudinal parallel rows of teeth, and means for retaining said pinion engaged with said gear.

3. In a wind mill, a rotary shaft, a pinion rotatable thereon, two clutch members rotatable with said shaft and adapted to engage said pinion, one of said clutch members serving to drive said pinion and to permit the pinion to rotate faster than said shaft, the other clutch member serving to hold the pinion from rotating faster than said shaft, means for normally holding the last named clutch member releasably engaged with said pinion, and a reciprocative member adapted to lift a load and movable longitudinally and laterally and having a gear engaging said pinion and provided with two longitudinal parallel rows of teeth.

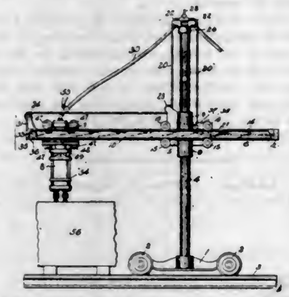
4. In a wind mill, a wind wheel, a rotary shaft, driving means connecting said wheel and said shaft, a pinion rotatable on said shaft, two clutch members rotatable with said shaft each having means for engaging said pinion, one of said members serving to drive said pinion and to permit it to rotate faster than said shaft, the other member serving to hold the pinion from rotating faster than said shaft, releasable means for holding the last named clutch member engaged with said pinion, and a longitudinally reciprocative and laterally movable member adapted to lift a load and provided with a gear engaging said pinion and having two longitudinal parallel rows of teeth.

5. In a wind mill, a rotary shaft, a pinion rotatable thereon, two clutch members adapted to engage said pinion, one of said members serving to drive said pinion and to permit it to rotate faster than said shaft, the other member serving to hold the pinion from rotating faster than said shaft, means for moving the last named clutch member into and out of engagement with said pinion, and a longitudinally reciprocative laterally movable member adapted to lift a load and having a gear engaging said pinion and having two parallel rows of teeth, one of said rows when engaged by said pinion alining with the load.

[Claims 6 to 18 not printed in the Gazette.]

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1,228,661. STONEWORKING-MACHINE. GEORGE H. GILMAN, Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Feb. 20, 1908. Serial No. 416,843. (Cl. 125—6.)



1. In an apparatus of the class described, the combination with a central support, a radial tool-supporting member adapted to swing about said central support, said member being longitudinally adjustable relatively to said support, holding means for holding said member longitudinally fixed, and controlling means for rendering the same effective or ineffective at will, said controlling means being controllable at a point relatively remote from said central support, said holding means acting to hold said member in any given position of longitudinal adjustment.

3. In an apparatus of the class described, the combination with a central support, of a tool-carrying-supporting arm longitudinally adjustable thereon, locking means for locking the same in any given position of longitudinal adjustment, a controlling member adjacent one end of said arm for rendering said locking means effective or ineffective at will, and connections between said controlling member and said locking means.

14. In an apparatus of the class described, the combination with central supporting means, of a longitudinally adjustable arm carried thereby, means for supporting said arm comprising a flexible connection suitably guided by sheaves, the latter supported near the upper portion of said supporting means, said flexible connection having one end attached to a part upon said supporting arm, and a winding drum engaging the opposite end of said flexible connection and secured adjacent the opposite end of said arm, whereby the arm may be adjusted longitudinally without affecting the vertical adjustment and vice versa.

17. In an apparatus of the class described, the combination with a support, a radial tool-carrying member sustained thereby, a pressure-fluid-actuated tool carried by said member, means permitting the turning of said tool relatively to said member and means for supplying pressure fluid centrally to said tool and substantially coincident with the turning axis thereof.

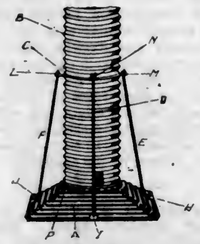
20. In an apparatus of the class described, the combination with a support, a supporting arm adapted to be swung in the arc of a circle, a tool having a plurality of separate cutting units, said tool being carried by said arm, and means to turn said tool and said cutting units together upon the said arm.

[Claims 2, 4 to 13, 15, 16, 18, and 19 not printed in the Gazette.]

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1,228,662. CULVERT-HEAD OR RETAINING-WALL FOR CULVERTS. JONATHAN R. GOOD, Didsbury, Alberta, Canada. Filed Jan. 8, 1916. Serial No. 71,132. (Cl. 61—9.)

1. The combination with a metal conductor pipe for culverts of a culvert head or retaining wall constructed of four quadrilateral pieces of corrugated sheet metal riveted together so as to form a hollow truncated pyramid or funnel shaped structure with rectangular base (the corrugations running parallel to the base) and having a comparatively short axis with a rectangular piece of sheet metal at the apex of the structure, the said rectangular piece of sheet metal having a centrally located opening of the same size and shape as the end of the conductor pipe with a short piece of corrugated pipe approximating in size the size of the opening in the said rectangular piece of sheet metal and being slightly smaller than and of the same shape as the conductor pipe and having the edges of one end bent outward at right angles and riveted to the said rectangular piece of sheet metal around the edge of the opening on the opposite side to that on which is riveted the funnel shaped structure so that axis of the said piece of pipe is at right angles to the base of the pyramid and fitted into the culvert conductor pipe so that the end of the culvert conductor pipe comes in contact with the rectangular piece of sheet metal; and with a corrugated metal band bound around the short piece of corrugated pipe with draw bolts binding it to the conductor pipe, with four metal rods hooked into metal rings riveted to the outer basal edge of the pyramid, a metal ring firmly drawn around the conductor pipe by a bolt and nut into which are bolted the outer ends of the said rods, the axis of the conductor pipe being at right angles to the base of the said pyramid or funnel shaped structure.



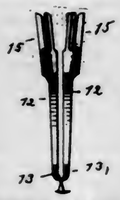
2. The combination with a conductor pipe for culverts of a culvert head or retaining wall constructed of four quadrilateral pieces of sheet metal riveted together so as to form a hollow truncated pyramid or funnel shaped structure with rectangular base with a rectangular piece of sheet metal at the apex of the structure the said rectangular piece of sheet metal having a centrally located opening approximating in size and shape the size and shape of the end of the said conductor pipe a short piece of metal piping being slightly smaller than and of the same shape as the conductor pipe and having the edges of one end bent upward at right angles and riveted to the said rectangular piece of sheet metal around the edge of the opening on the opposite side to that on which is riveted the funnel shaped structure so that the axis of the said piece of pipe is at an angle to the base of the pyramid and fitted into the culvert conductor pipe so that the end of the culvert conductor pipe comes in contact with the rectangular piece of sheet metal and with a metal band bound around the short piece of pipe with draw bolts binding it to the conductor pipe, with four metal rods hooked into metal rings riveted to the outer basal edge of the pyramid, a metal ring firmly drawn around the conductor pipe by a bolt and nut into which are bolted the outer ends of the said rods.

3. The combination with a metal conductor pipe of a hollow truncated pyramid or funnel shaped structure having a comparatively short axis with a piece of sheet metal completely covering and fastened to the apex of the said truncated pyramid, having a centrally located opening in it of the same shape and size as the end of the conductor pipe with a short piece of pipe approximating in size the size of the opening in the said piece of sheet metal and being slightly smaller than, and of the same

shape as the conductor pipe, the said short piece of pipe being fastened to the said piece of sheet metal covering the apex of the said truncated pyramid and with a metal band drawn around the said short piece of pipe with draw bolts, the whole structure being held to the conductor pipe by four metal rods or chains hooked into metal rings fastened to the outer basal edge of the said pyramid, the outer ends of the said rods or chains being fastened to a metal ring or rod firmly drawn around the conductor pipe.

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1,228,663. FINGER-RING. JOSEF GRAFSTEIN, New York, N. Y., assignor to Conjoint Jewelry Corporations Inc., New York, N. Y., a Corporation of New York. Filed June 14, 1916. Serial No. 103,685. (Cl. 63—15.)

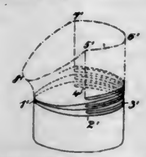


2. A finger ring comprising a first annular ring half, a first socket half carried thereby, said socket half being semi-circular in cross section, prongs projecting from the socket half, a second annular ring half, a second socket half carried thereby and likewise semi-circular in cross section, prongs projecting from the last named socket half, the inner faces of the two ring halves contacting with each other, and the inner faces of the two socket halves being parallel and likewise contacting with each other to form a continuous circular socket, the two ring halves as well as the two socket halves being soldered to each other.

[Claim 1 not printed in the Gazette.]

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1,228,664. SEAMLESS STOCKING OR SOCK AND METHOD OF MAKING SAME. HERMANN WALTER GRÄNZ, Chemnitz, Germany, assignor to the Firm of Schubert & Salzer Maschinenfabrik, Aktiengesellschaft, Chemnitz, Germany. Filed May 28, 1913. Serial No. 770,371. (Cl. 66—4.)



1. The herein described method of making stockings or socks, which consists in first knitting the leg on two oppositely disposed needle bars, thereupon simultaneously knitting the heel and the adjacent part of the foot with one part of the foot and heel loops carried by each of the said needle bars, knitting the foot portion, and finally knitting the toe while narrowing the loops located on each needle bar at parts intermediate the ends thereof.

2. The herein described method of making stockings or socks, which consists in first knitting the leg on two oppositely disposed needle bars, thereupon simultaneously knitting the heel and the adjacent part of the foot with one part of the foot and heel loops carried by each of the said needle bars, knitting the heel cap, knitting the foot portion, and finally knitting the toe while narrowing the loops located on each needle bar at parts intermediate the ends thereof.

3. The herein described method of making stockings or socks, which consists in first knitting the leg on two oppositely disposed needle bars, thereupon simultaneously knitting the heel and the adjacent part of the foot with one part of the foot and heel loops carried by each of the said needle bars, knitting the foot portion, and finally knitting the toe while narrowing the loops located on each needle bar at two parts intermediate the ends thereof and at a distance from each other.

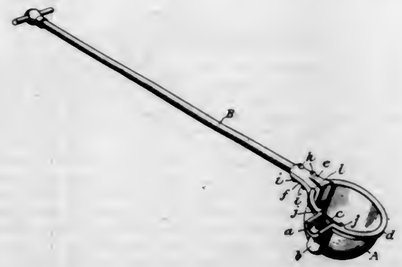
4. The herein described method of knitting a stocking or sock, which comprises alternately knitting at least one half open row of the length corresponding to the breadth of the heel and a closed circular row corresponding to the circumference of the heel and adjacent part of the foot, all the half open rows being made on the same number of needles.

5. The herein described method of knitting a stocking or sock, which comprises alternately knitting at least one half open row of the length corresponding to the breadth of the heel and at least one closed circular row corresponding to the circumference of the heel and adjacent part of the foot, and after completing the heel and adjacent part of the foot knitting the cap.

[Claims 6 to 11 not printed in the Gazette.]

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1,228,665. LADLE. JAMES H. GRIFFIN, Clay Center, Kans. Filed Jan. 13, 1916. Serial No. 71,872. (Cl. 22—86.)



A ladle provided with a projecting rim encircling the same to which is attached a handle adjustable with the periphery whereby the angle of the lip with relation to the handle may be varied.

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1,228,666. EMBROIDERING-MACHINE. JOSEPH A. GROSSLI, New York, N. Y. Filed July 12, 1916. Serial No. 108,777. (Cl. 112—7.)



1. The combination, in an embroidering machine, of a tambour frame provided with fabric carrying and shifting means, means for moving the tambour frame step by step into stitch positions, and means independent of the tambour frame moving means for automatically returning the tambour frame toward an initial position.



2. The combination, in an embroidering machine, of a tambour frame provided with fabric carrying and shifting means, means for moving the tambour frame step by step into stitch positions, and means independent of the tambour frame moving means for optionally automatically returning the tambour frame toward an initial position.

3. The combination, in an embroidering machine, of a tambour frame, fabric carrying and shifting means mounted therein, and means actuated by such fabric carrying and shifting means for moving the tambour frame in a direction reverse to the shift of the fabric.

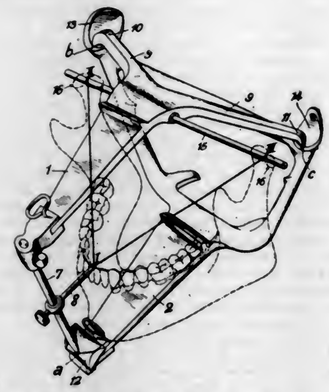
4. The combination, in an embroidering machine, of a tambour frame, fabric carrying and shifting means mounted therein, and automatic means actuated by such fabric carrying and shifting means for moving the tambour frame in a direction reverse to the shift of the fabric.

5. The combination, in an embroidering machine, of a tambour frame, fabric carrying and shifting means mounted therein, and automatic and manually controllable means actuated by such fabric carrying and shifting means for moving the tambour frame in a direction reverse to the shift of the fabric.

[Claims 6 to 13 not printed in the Gazette.]

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1,228,667. DENTAL ARTICULATOR. ALFRED GYSI, Zürich, Switzerland. Filed May 10, 1916. Serial No. 96,542. (Cl. 32—1.)



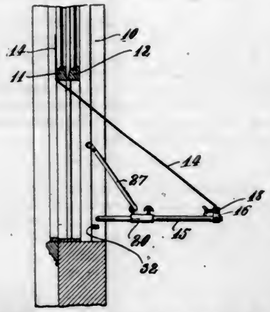
1. An articulator for artificial sets of teeth, comprising a lower articulator part provided with two guide-sockets integral with the uprights of the lower frame and arranged behind the points corresponding to the natural jaw hinges and lying in common geometrical centers of the opening angle and the angle of lateral grinding movement of the set of teeth and an upper articulator part, the downward bent rear end of which rests on said guide-sockets, substantially as described.

2. An articulator for artificial sets of teeth, comprising a lower articulator part provided with two guide-sockets integral with the uprights of the lower frame and arranged behind the points corresponding to the natural jaw hinges and lying in common geometrical centers of the opening angle and the angle of lateral grinding movement of the set of teeth, said sockets being provided with a guiding surface having an angle of inclination of 33° to the grinding plane, a front guiding surface on said lower articulator part having an angle of inclination of 40° to the grinding plane and an upper articulator part provided with rear supports resting with their bent ends on said inclined surfaces of the guide-sockets and a front support resting on the inclined front guiding surface of the lower articulator part, the rear supports of this upper articulator part being moved during the lateral grinding movement upward and rearward along the inclined surfaces of the sockets, while the front support is moved in the same way along its guiding surface, substantially as described.

3. An articulator for artificial sets of teeth, comprising a lower articulator part having two guide-sockets integral with the uprights of the lower frame and arranged behind the points corresponding to the natural jaw hinges and lying in common geometrical centers of the opening angle and the angle of lateral grinding movement of the set of teeth and an upper articulator part, the downward bent rear end of which rests on said guide sockets, and a horizontal pin interchangeably mounted at the upper articulator part in such a way that points of the pin fall into the line connecting the natural jaw hinges of a lower jaw placed in the articulator, substantially as described.

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1,228,668. SHADE-AWNING SUPPORT. ANDREW HANAUER, New York, N. Y. Filed Jan. 12, 1917. Serial No. 141,940. (Cl. 156—42.)



1. An awning support comprising a pair of arms pivotally engaged with a window casing, open jawed members rigidly secured at the outer ends of said arms, said members being receptive of the end of a curtain, means for clamping the curtain therein, sleeves slidably engaged on said arms, means for clamping said sleeves thereon, said clamp means having a hooked head, a loop secured in each of said sleeves, a pair of support rods, other loops secured therein engaged with the first of said loops, hooks formed with the opposite end of said support rods, and studs set in a window casing with which said hooks or screw heads are engageable.

2. An awning support comprising a pair of arms hingedly engaged at opposite sides of a window frame, means for detachably engaging the hem of a curtain with the free end of said arms, sleeves operable on said arms, means for clamping said sleeve in an adjusted position, rods loosely hinged to said sleeves, means formed at the outer end of said rods for engaging with the window frame, and means for holding said arms and rods parallel in a vertical position when in a folded position, said means being formed with said sleeve clamping means.

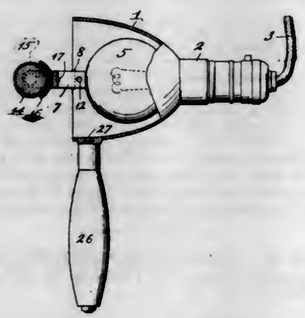
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1,228,669. APPLIANCE FOR LIGHT, HEAT, AND MASSAGE TREATMENT. EDWIN F. HARDEY, Kansas City, Mo. Filed Jan. 22, 1917. Serial No. 143,650. (Cl. 174—87.)

1. In a device of the character described, the combination with an electric lamp and a reflector for projecting the light and heat rays from said lamp, of a rubber applicator, means for supporting said applicator in front of the reflector, and a shield for protecting the applicator from the light and heat rays.

2. In a device of the character described, the combination with an electric lamp and a reflector for projecting

the light and heat rays from said lamp, of an applicator, and a bridge secured at its ends to the reflector and projecting forwardly therefrom to support the applicator in advance of the reflector.



3. In a device of the character described, the combination with an electric lamp and a reflector for projecting the light and heat rays from said lamp, said reflector having two oppositely-disposed notches therein, a bridge having shoulders to fit into the notches and lugs to fit against the sides of the reflector, thumb screws for engaging the reflector and said lugs, and an applicator supported in front of the reflector by the bridge.

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1,228,670. FLEXIBLE INSULATED ELECTRICAL CONDUCTOR. JOHN C. HENDERSON, Washington, D. C., assignor to Driver-Harris Wire Company, Harrison, N. J., a Corporation of New Jersey. Filed Nov. 3, 1916. Serial No. 129,276. (Cl. 173—264.)



1. An electrical conductor, comprising a plurality of sets of conducting wires, each set composed of a plurality of closely associated conducting wires individually insulated throughout their intermediate portions and free from insulation at their ends, the adjacent ends of the individual wires of each set being in electrical contact so as to place all the individual conducting wires of that set in parallel, a fireproof sheath for each set surrounding that set individually, and an external sheath surrounding the intermediate portions of all of said sheathed sets.

2. An electrical conductor, comprising a plurality of sets of conducting wires, each set composed of a plurality of closely associated conducting wires individually coated with enamel insulation throughout their intermediate portions and free from insulation at their ends, the adjacent ends of the individual conducting wires of each set being in electrical contact so as to place all the individual wires of that set in parallel, a fireproof sheath for each set surrounding that set individually, and an external sheath surrounding the intermediate portions of all of said sheathed sets.

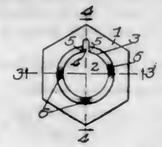
3. An electrical conductor, comprising a plurality of sets of conducting wires, each set composed of a plurality of closely associated conducting wires individually insulated throughout their intermediate portions and free from insulation at their ends, the adjacent ends of the individual wires of each set being in electrical contact so as to place all the individual conducting wires of that set in parallel, a fireproof sheath for each set surrounding that set individually, and an external sheath surrounding the intermediate portions of all of said sheathed sets, the insulation and sheaths being flexible.

4. A flexible conductor, comprising two cables covered with a fibrous fireproof sheathing, the cables being made up of fine conducting wires, each separately insulated by enamel except at their ends, the ends of the fine wires of each cable being free from insulation and in electrical contact with one another so as to place all the individual conducting wires of each cable in parallel.

5. A flexible conductor, comprising a plurality of cables covered with a fibrous fireproof sheathing, the cables being made up of fine conducting wires, each separately insulated by enamel except at their ends, the ends of the fine wires of each cable being free from insulation and in electrical contact with one another so as to place all the individual conducting wires of each cable in parallel, and a fibrous sheathing holding said plurality of such sheathed cables together.

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1,228,671. NUT-LOCK. EDWARD R. HIBBARD, Chicago, Ill., assignor to Grip Nut Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 25, 1912. Serial No. 727,748. (Cl. 151—22.)



1. A nut lock, comprising a disk, having formed therein a bolt hole, the adjacent wall of which is permanently displaced laterally beyond one face of the disk to form a single substantially resilient undulating spiral thread thereat, adapted to engage the threaded portion of a bolt.

2. A nut lock, comprising a disk having formed therein a bolt hole, the adjacent wall being broken and permanently offset laterally on both sides to form a single resilient progressive thread, the thread being undulated to cause the opposite faces thereof to firmly engage the threads of a bolt upon which the lock may be placed.

3. A nut lock comprising a disk having formed therein a bolt hole, the wall of which is V-shaped to form a thread member, and severed and permanently offset laterally to form a single spiral thread, said thread member being undulated and provided with impinging shoulders extending in one direction only, whereby the disk may be threaded upon a bolt and forced home thereon, and upon backing the disk off the said shoulders will tend to impinge upon the adjacent portions of the bolt thread to prevent accidental disengagement of the parts.

4. A nut lock, comprising a disk, having formed therein a bolt hole, the wall of which is V-shaped to form a thread member, and is severed to permit the disk to be threaded upon a bolt, and to form a single progressive resilient thread thereon, said thread member being undulated and provided with an impinging shoulder, tending to impinge upon the adjacent portions of the thread of a bolt upon which the lock is placed to prevent accidental disengagement of the parts.

5. A nut lock, comprising a disk having a bolt hole formed therein, the wall of which is V-shaped to form a single resilient thread adapted to engage a bolt thread and permanently displaced on opposite sides of the disk, a distance greater than the pitch of the thread of the bolt upon which it is adapted to be used.

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1,228,672. COMBINED PENCIL AND PENCIL-SHARPENER. EDWARD W. HILL, Chicago, Ill. Filed May 17, 1916. Serial No. 98,064. (Cl. 120—93.)

1. The combination with a lead carrier having a lead inclosing casing at the point end thereof and a projecting stud of slightly larger diameter than said lead inclosing casing at its opposite end, of a blade holder provided with a socket in the end thereof closely engaging the protruding stud on the end of the lead carrier to thereby secure said blade holder to the lead carrier and said socket being adapted when disengaged from the lead carrier to freely receive the lead inclosing casing on the opposite end of the lead carrier to thereby guide and rotatably support the point end of the lead carrier within said blade holder and a lead sharpening blade at the inner end of the socket in the blade holder.



2. A lead sharpener for clutch pencils comprising a blade holder having a substantially cylindrical longitudinally extensive socket in one end thereof provided with relatively rigid longitudinally extending walls adapted to embrace and house a pencil casing and thereby rotatably confine said pencil casing in said holder and provided with a lead receiving guide at the inner end of said pencil-casing socket in axial alinement with the socket, said holder further having a longitudinal slot therein extending inward from the opposite end of the blade holder to said lead guide and a cutting blade seated in said slot and provided with a cutting edge in line with the lead guide, all whereby the pencil casing and lead are rotatably centered in the sharpener and relative angular movement of the pencil and sharpener is prevented by engagement of the pencil casing with the rigid longitudinal inner walls of the socket in the end of the blade holder in conjunction with the similar supporting of the lead in the lead guide, and independently of any support afforded by the cutting blade.

3. The combination with a lead carrier having a lead inclosing casing at the point end thereof and a screw threaded stud of slightly larger diameter at its opposite end, of a blade holder having an internally screw threaded socket in one end thereof to receive and engage the screw threaded stud, the screw threads on the inner walls of said socket having blunt edges to allow for free and unrestricted rotation of the point of the pencil within the socket and to prevent scratching of such point in the socket and a lead sharpening blade at the inner end of the socket in the holder.

4. The combination with a pencil having a lead inclosing casing at the point end thereof and a screw threaded stud of slightly larger diameter at the opposite end thereof, of a blade holder having a screw threaded socket receiving and fitting the screw threaded stud whereby said blade holder is normally confined to and carried by the pencil, said socket loosely receiving the lead inclosing casing at the point end of the pencil whereby the point of the pencil may be rotated in the blade holder, said blade holder having a guide at the inner end of the socket therein receiving and bracing that portion of the lead projecting beyond the lead inclosing casing and a lead sharpening blade mounted in the blade holder at the end of the lead guide aforesaid.

5. In a device of the character set forth, a holder having a socket in one end thereof and a longitudinal slot in the opposite end extending longitudinally to said socket and separating the end portion of the holder into two parts, a cutter blade seated in said slot and having a cutting edge disposed within the socket and means for clamping the two separated end portions of the holder together upon the blade therebetween.

[Claims 6 and 7 not printed in the Gazette.]



1,228,673. CLUTCH MECHANISM. JOE HRIBAR, Waukegan, Ill. Filed Mar. 13, 1916. Serial No. 83,896. (Cl. 74—13.)



1. In a brake mechanism, the combination with a shaft, of a journal bearing having a passage for the shaft with a race way in the journal bearing concentric with and opening into the passage, said journal bearing having a plurality of sockets entering the race way, pins each provided with a recess and adapted to be received in the sockets, and rotatable members in the recesses in position to engage the shaft within the passage for the shaft in the journal bearings, and said recesses being so arranged in relation to the shaft as to cause the rotatable members to clutch the shaft when the latter is rotated in one direction and to free the shaft when the latter is rotated in the other direction, said rotatable members being in number and so disposed about the shaft as to constitute a friction reducing bearing for the shaft on its rotation in a direction opposed to that causing the clutching of the shaft in the journal bearing.

2. In a brake mechanism, the combination with a shaft, of a journal bearing having a passage for the shaft with a race way in the journal bearing concentric with and opening in the passage and said journal bearing having a plurality of sockets entering the race way, pins each provided with a recess and each having a spring lodged in it with the pins adapted to be received in the sockets, and members, one in each recess in position to engage the shaft within the passage in the journal bearing for the shaft, the recesses in the pins being so arranged with relation to the shaft as to cause the members in the recesses to clutch the shaft when the latter is rotated in one direction and to free the shaft when the latter is rotated in the other direction, said members in the recesses being of a number and so disposed about the shaft as to constitute a friction reducing bearing for the shaft when the latter is rotated in a direction opposite to that causing the clutching of the shaft in the journal bearing.

3. In a brake mechanism, the combination with a shaft, of a journal bearing having a passage for the shaft with a race way surrounding and concentric with said passage and said shaft being provided with a circumferential groove matching the race way, a circular series of pins in the journal bearing in tangential relation to and intersecting the race way, each pin having an elongated recess where intersecting the race way, rotatable members lodged one in each recess and the portion of the race way matching the recess, and a spring in each pin engaging a respective one of the rotatable members to move the latter lengthwise of the recesses and the recess in each pin being so related to the race way as to reduce the radial depth of the latter in the direction in which the spring urges the rotatable member and said pins and rotatable members being in number and so disposed about the shaft as to provide a friction reducing bearing for the shaft for one way rotation thereof.

4. In a brake mechanism, the combination with a shaft, of a journal bearing having a passage for the shaft with a race way surrounding and concentric with said passage and said shaft being provided with a circumferential groove matching the race way, a circular series of pins in the journal bearing in tangential relation to and intersecting the race way, each pin having an elongated recess where it intersects the race way, a rotatable member lodged in each recess and the portion of the race way matching the recess, and a spring in each pin engaging the rotatable member to move the latter lengthwise of the recess, said recess in each pin being so re-

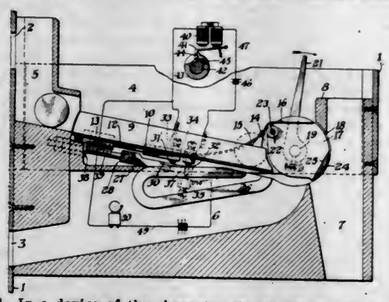
lated to the race way as to reduce the radial depth of the latter in the direction in which the spring urges the rotatable member, and said pins and rotatable members being in number and so disposed about the shaft as to provide a friction reducing bearing for the shaft for one way rotation thereof, each pin having a longitudinal bore for receiving the spring with the outer end of the bore threaded, and a screw inserted in the threaded end of the bore to retain the spring in place.

5. In a brake mechanism, the combination with a shaft, of a journal bearing having a passage for the shaft with a race way surrounding and concentric with said passage and said shaft being provided with a curcumferential groove matching the race way, a circular series of pins in the journal bearing in tangential relation to and intersecting the race way, each pin having an elongated recess where it intersects the race way, a rotatable member lodged in each recess and the portion of the race way matching the recess, and a spring in each pin engaging the rotatable member to move the latter lengthwise of the recess, said recess in each pin being so related to the race way as to reduce the radial depth of the latter in the direction in which the spring urges the rotatable member and said pins and rotatable members being in number and so disposed about the shaft as to provide a friction reducing bearing for the shaft for one way rotation thereof, each pin having a longitudinal bore for receiving the spring with the outer end of the bore threaded, and a screw inserted in the threaded end of the bore to retain the spring in place, said screw having an axially extended stem for centering the spring in the bore.

[Claim 6 not printed in the Gazette.]

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1,228,674. COIN-CONTROLLED MECHANISM. JAMES W. HUGHES, Haddon Heights, N. J., assignor to Hughes-Lippincott Company, a Corporation of Pennsylvania. Filed Mar. 2, 1915. Serial No. 11,464. (Cl. 194—103.)



1. In a device of the character stated, the combination of a coin runway mounted for tilting movement and adapted to be actuated by the weight of a coin, an electrical circuit closer arranged to be operated by said runway in tilted position, means to positively hold a coin in arrested position to cause said runway to tilt, and means to release and discharge said coin from said runway.

2. In a device of the character stated, a pivoted coin runway normally held in an inclined position and adapted to be actuated by the weight of the coin, means located adjacent the upper end of said runway for delivering a coin to said runway, an electrical circuit closer arranged to be operated by said runway in its tilted position, means to positively hold a coin in arrested position to cause said runway to tilt, and means positively operated independently of the coin located adjacent the lower end of said runway for discharging said coin.

3. In a device of the character stated, a pivoted coin runway normally held in an inclined position and adapted to be actuated by the weight of a coin, means located adjacent the upper end of said runway for delivering a coin to said runway, an electrical circuit closer arranged to be operated by said runway in tilted position, adjustable means to balance said runway in untilted position to maintain said circuit closer in position to open the circuit, and means located adjacent the lower end of said runway for controlling the discharge of said coin, said means comprising mechanically operated devices independent of the coin and the electric circuit closer for arresting the travel of said coin while in the runway and then controllably releasing it from the runway.

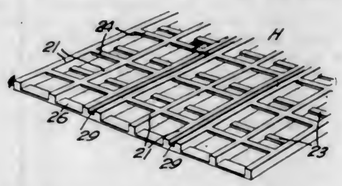
4. In a device of the character stated, a pivoted coin runway normally held in an inclined position and adapted to be actuated by the weight of a coin, means located adjacent the upper end of said runway for delivering a coin to said runway, an electrical circuit closer arranged to be operated by said runway in its tilted position, means to hold a coin in position to cause said runway to tilt and close said circuit, and operable means whose time of operation is controlled by the circuit closing means to release said holding means at a predetermined time to cause said coin to be discharged.

5. In a device of the character stated, a pivoted coin runway normally held in an inclined position and adapted to be actuated by the weight of a coin, means located adjacent the upper end of said runway for delivering a coin to said runway, a plurality of circuit closers arranged to control independent electrical circuits and arranged to be successively controlled by said runway while tilting, one of said closers being operated by the position of the runway as determined by a valid coin and the other closer being operated by the position of the runway as determined by a coin of greater weight than the predetermined coin for operating the device.

[Claims 6 to 23 not printed in the Gazette.]

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1,228,675. STORAGE-BATTERY PLATE. WILLIAM SCOTT HUTCHINSON, Montreal, Quebec, Canada. Filed July 16, 1913. Serial No. 779,373. (Cl. 204—29.)



1. In a storage battery unit, a frame comprising a plurality of longitudinal insulating members and a plurality of transverse insulating members connecting the longitudinal members, certain of said longitudinal members being wider than others, electrolyte passages formed in said wider longitudinal members, metallic conducting strips inserted in the channels between said longitudinal members, and a coating of active material on said strips.

2. In a storage battery unit an electrode frame comprising a plurality of longitudinal insulating members having transverse strip retaining bars said members being separated into groups by electrolyte circulation passages.

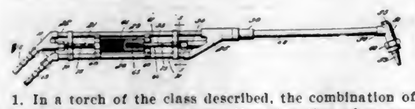
3. In a storage battery unit, an electrode frame comprising a plurality of longitudinal insulating members of different widths and electrolyte passages formed in the wider of said longitudinal insulating members.

4. In a storage battery unit, an electrode frame comprising a plurality of longitudinal insulating members of different widths, transverse insulating members connecting the longitudinal members and electrolyte passages formed in the wider of said longitudinal insulating members.

5. In a storage battery unit an electrode frame comprising a plurality of longitudinal members having transverse strip retaining bars of insulating material therebetween, some of said longitudinal members being wider than the others and electrolyte circulation passages in the wider of said members.



1,228,676. OXYACETYLENE-TORCH. ALEXANDER F. JENKINS, Baltimore, Md., assignor to The Alexander Milburn Company, Baltimore, Md., a Corporation of Maryland. Filed Oct. 13, 1913. Serial No. 794,898. (Cl. 158—27.4.)



1. In a torch of the class described, the combination of a casting having channels extending therethrough, a second casting having channels therethrough, pipes connecting the castings and the channels therein thereby forming gas conduits, valves controlling said conduits, stems connected with said valves, means for operating said stems and valves, the stems and operating means extending between the said pipes, and a torch head connected to one of said castings.

2. In a torch of the class described, the combination of castings having passageways extending therethrough, pipes connecting the castings and the passageways therein, valves controlling said passageways and operating means for said valves having parts thereof disposed between said pipes.

3. In a torch of the class described, the combination of a handle section comprising a casting having gas inlets, a second casting having gas outlets, and pipes joining the castings and connecting the inlets with the outlets, means extending into the space between said pipes for controlling the flow of gas from said inlets to said outlets, a burner tip, and a tube between and connecting the burner tip with the handle section.

4. In a torch of the class described, the combination of a handle section comprising a casting at one end having inlets, one of which is provided with a valve, a casting at the opposite end having independent passageways therein, one of which is provided with a valve, and pipes connecting the passageways in the second casting with the passageways in the first casting, operating means for said valves, said means being located between the said pipes, a burner tip, and a pipe connecting the burner tip with the second casting.

5. In a torch of the class described, the combination of a casting having passageways therethrough, a valve controlling one of the passageways, a second casting having passageways therein, a second valve controlling one of the last mentioned passageways, pipes connecting the two castings and the passageways therein, said valves having stems, the stems of the valves extending between the said pipes, a burner tip, and a tube connecting the burner tip to said second casing.

[Claims 6 to 27 not printed in the Gazette.]

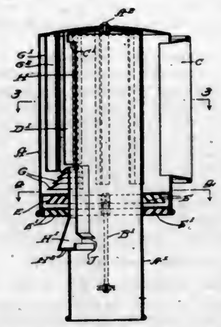
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1,228,677. VENTILATOR-COWL FOR SHIPS. JOHN JENKINS, Dalmuir, Scotland. Filed Oct. 10, 1916. Serial No. 124,754. (Cl. 114—211.)

1. In a ventilator cowl for ships, the combination of two coaxial substantially cylindrical structures or members one within the other and each provided with a segmental aperture respectively, baffles on said structures extending into the space between them, louvers in the lower open end of the space between said structures and a well at the lower edge of the aperture in the inner of said structures, said well being provided at its bottom with apertures communicating with both the inside and the outside of said inner structure.

2. In a ventilator cowl for ships, the combination of two coaxial substantially cylindrical structures one within the other and each provided with a segmental aperture respectively, baffles on said structures extending into the space between them, louvers in the lower open end of the space between said structures, and a well at the lower edge of the aperture in the inner structure, said well being provided with apertures communicating with the outside of said inner structures and with an air passage a little above the bottom of said well and communicating with the interior of said inner structure.

3. In a ventilator cowl for ships, the combination of two coaxial substantially cylindrical structures one within the other and each provided with a segmental aperture respectively, said apertures being on opposite sides of the axis of said structures, a perforated plate extending in the space between said structures and arranged between the inner surface of the outer structure and the said aperture in the inner structure and oppositely angled, vertical baffles extending from that face of said perforated plate which is adjacent said aperture in said inner structure.



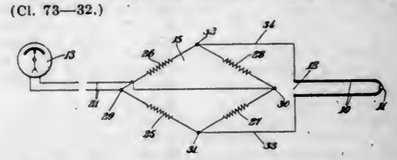
4. In a ventilator cowl for ships, the combination of two coaxial substantially cylindrical structures one within the other and each provided with a segmental aperture respectively, two series of angular louvers oppositely angled with respect to each other and positioned within the lower end of the outer structure in the space between said structures and a further series of overlapping louvers above the said series of angular louvers, mounted on said inner member at substantially the lower edge of the aperture in said inner member.

5. In a ventilator cowl for ships, the combination of an outer cylindrical member provided with an aperture in the side thereof, an inner cylindrical member mounted coaxially with said outer member and also provided with a similar aperture through the side thereof, the space between said members affording a passage for air between said members to the opening in said inner member, vertically extending baffle plates in the inner surface of the outer member and the outer surface of the inner member, louvers between the said inner and outer members positioned at the lower end of said outer member, and a series of louvers secured to said inner member adjacent the bottom edge of the said aperture therein and extending substantially between said inner and outer members.

[Claim 6 not printed in the Gazette.]

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1,228,678. AUTOMATIC COMPENSATING DEVICE. MANFRED JOHNSON, Naugatuck, Conn., assignor to The Bristol Company, Waterbury, Conn., a Corporation of Connecticut. Filed Sept. 25, 1916. Serial No. 121,989. (Cl. 73—32.)



1. Automatic temperature compensating device for a thermo-electric pyrometer, including a thermo-electric couple and a measuring instrument connected therewith comprising: a plurality of resistances arranged in the form of a Wheatstone bridge, the cold end of the couple being connected directly across one pair of opposite junctions thereof and in close proximity thereto, and the

measuring instrument connected directly across the other pair, whereby variations of temperature at said cold end of the couple will be substantially without effect as to the indications of said measuring instrument.

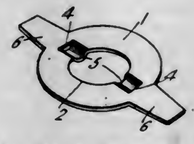
4. Automatic temperature compensating device for a thermo-electric pyrometer, including a thermo-electric couple and a measuring instrument connected therewith comprising: a plurality of resistances arranged in the form of a Wheatstone bridge, three of the resistances being of manganin and the fourth of nickel, the cold end of the couple being connected directly across one pair of opposite junctions thereof and in close proximity thereto, and the measuring instrument connected directly across the other pair.

5. Automatic temperature compensating device for a thermo-electric pyrometer, including a thermo-electric couple and a measuring instrument connected therewith comprising: a cylindrical casing, two tubes of insulating material mounted therein and surrounding the cold end of the thermo-couple, resistance wire wound in pairs upon each of said tubes and arranged in the form of a Wheatstone bridge, the cold end of the couple extending midway into the tubes and being connected across one pair of opposite junctions of said bridge, and the measuring instrument connected directly across the other pair.

[Claims 2 and 3 not printed in the Gazette.]

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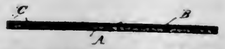
1,228,679. LOCK-WASHER. ELI JONES, Lexington, Tenn., assignor of one-half to Robert A. Lewis, Lexington, Tenn. Filed Oct. 14, 1916. Serial No. 125,679. (Cl. 151—53.)



A lock washer having diametrically opposite slits between its inner and outer edges, the portions between said slits and inner edge being struck to one side to provide corrugations to engage an object, the washer having diametrically opposite bendable tongues projecting radially from its outer edge in alinement with the corrugations, the basal portions of said tongues being wider than the lengths of said slits.

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1,228,680. PHOTOGRAPHIC PRINTING PAPER AND TRANSFER PROCESS. FRANK WILLIAM KENT, London, England. Filed Dec. 13, 1913. Serial No. 806,445. (Cl. 95—5.)



1. Process for transferring photographs which consists in completely saturating with wax a sheet of paper so that it becomes wholly non-absorbent of aqueous fluids and repellent of aqueous emulsion, coating the paper with gelatin and pyroxylin dissolved in acetic acid, and over this coating with a sensitive stratum, forming a picture by exposure, development and fixation, transferring the picture to an adhesive surface, and stripping off the wax saturated sheet.

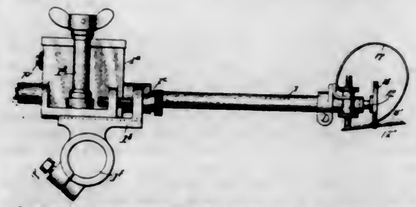
2. Process for transferring photographs which consists in completely saturating with wax a sheet of paper so that it becomes wholly non-absorbent of aqueous fluids and repellent of aqueous emulsion, coating the paper with gelatin and pyroxylin dissolved in acetic acid and alcohol, and over this coating with a sensitive stratum, forming a picture by exposure, development and fixation, transferring the picture to an adhesive surface, and stripping off the wax saturated sheet.

3. Photographic paper for printing and subsequent transfer consisting of a base of wax saturated paper carrying a substratum consisting of gelatin and pyroxylin, and over this carrying a sensitive stratum.

4. Photographic printing and transfer paper consisting of a base of wax saturated paper carrying a stratum consisting of collodio-gelatin emulsion.

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1,228,681. FEED-GAGE. STEPHEN J. KUBEL, Washington, D. C. Filed Nov. 23, 1916. Serial No. 133,060. (Cl. 271—60.)



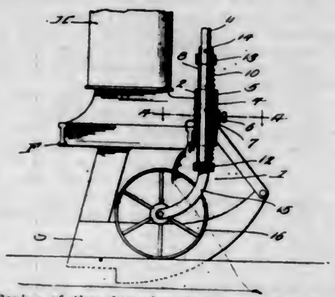
1. A feed gage comprising a gage plate, a rotary spindle for adjusting the plate, oppositely disposed ratchets on said spindle, and means for actuating the spindle which includes oppositely disposed electro-magnets, an armature disposed between the same, and oppositely disposed pawls carried by the armature and coöperating with the respective ratchets.

6. The combination with a feed plate, of a feed gage including a gage-plate rotatable on an axis passing through the same, said gage-plate extending below the surface of the feed plate.

[Claims 2 to 5, 7, and 8 not printed in the Gazette.]

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1,228,682. GAGE-WHEEL ATTACHMENT FOR PLANTERS. JOHN S. MCCABE, Bridgeville, Pa. Filed July 17, 1916. Serial No. 109,711. (Cl. 97—14.)



A device of the class described comprising a tubular bracket having attaching ears thereon, a longitudinal rib on the outer face of said bracket, a longitudinal groove in said rib opening into said tubular bracket, a threaded aperture in said rib to receive a set screw, a tubular sleeve having a toothed rib thereon, said sleeve adapted to be received in said bracket, the toothed rib being received in said groove and being held in adjusted position by a set screw, a gage wheel pivot shaft extending upwardly through said sleeve, a cup-shaped member on the said shaft extending around the same and adapted to receive the lower end of the said sleeve, and a cap member secured to said shaft near its upper end and adapted to cover the upper end of said sleeve.

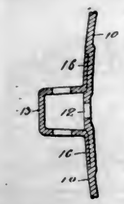
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1,228,683. BRAKE-SHOE. WILLIAM H. MCDONOUGH, New York, N. Y., assignor, by mesne assignments, to The American Brake Shoe and Foundry Company, Wilmington, Del., a Corporation of Delaware. Filed Apr. 25, 1916. Serial No. 93,363. (Cl. 188—82.)

1. In a brake shoe, a sheet metal reinforcing back and a key lug provided with outwardly flanged lips, said lips being welded to said back.



3. In a brake shoe, a reinforcing back provided with depressed portions, a key lug having keyway openings in the sides thereof and provided with outwardly flanged

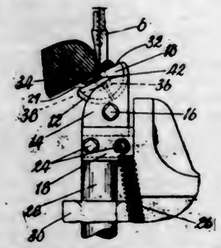


lips, said lips seating within the depressed portions of the said back and anchored thereto.

[Claim 2 not printed in the Gazette.]

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1,228,684. WORK-SUPPORT. ALBERT A. MACLEOD, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 17, 1915. Serial No. 51,191. (Cl. 1—41.)



1. In a machine of the class described, a shoe support comprising a sole engaging face and a fastening clenching anvil spaced from said face and constructed and arranged to enter a slit in the sole of a shoe to be operated upon to clench fastenings driven into one of the two sole parts into which the sole is divided by the slit and to provide a recess between said anvil and said member for the reception of the other of said sole parts.

2. In a machine of the class described, a shoe engaging support comprising a sole engaging face and a fastening clenching anvil spaced from said member and overhanging said member, said anvil being constructed and arranged to enter a slit in the sole of a shoe to be operated upon to clench fastenings driven into one of the two sole parts into which the sole is divided by said slit and to provide a recess for the reception of the other of said sole parts.

3. In a machine of the class described, a shoe support having a sole engaging face, and an offset portion spaced from said sole engaging face to provide a fastening clenching element constructed and arranged to enter a slit in the sole of a shoe to be operated upon to clench fastenings driven into one of the two parts into which the sole is divided by the slit and to provide a recess between the sole engaging face and the fastening clenching element for the reception of the other of said sole parts.

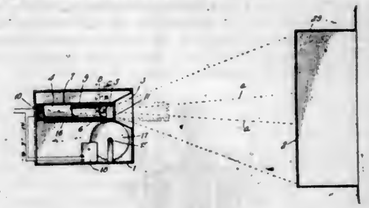
4. In a machine of the class described, a work support having a shoe sole supporting face constructed and arranged to present an offset staple clenching surface and having a channel flap receiving recess located adjacent to said offset surface.

5. In a machine of the class described, a work support having a shoe sole supporting face a portion of which is offset to provide a staple clenching surface adapted to enter the channel of a channeled sole, and having a channel flap receiving recess adjacent to said offset portion.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,685. PROJECTING APPARATUS. HUGH BENNETT MAGOWAN, Whitby, Ontario, Canada. Filed Feb. 9, 1916. Serial No. 77,234. (Cl. 88—24.)



1. A source of light, a mask mounted to have the rays of light projected therethrough and arranged to be capable of movement in a straight line toward and away from said source of light to vary the width of the angle at which said rays are projected therethrough, and means to accomplish the desired movement of the mask.

2. A source of light, a mask mounted to have the rays of light projected therethrough and arranged to be movable in its relative disposition with respect to the source of light, means to accomplish movement of the mask, and means deriving operative movement from the mask moving means to extinguish the light at predetermined intervals.

3. In combination with a screen, a lamp arranged to cast rays of light upon the screen, a mask mounted between the lamp and the screen to be capable of relative movement in its proximity to the lamp on a line from the lamp to the screen, and means to transmit movement to the mask to vary the proximity of the same to the lamp and to thus vary the angle at which the rays are cast through the mask from the lamp to be received on the screen.

4. A projecting apparatus comprising a casing, a screen, a lamp mounted at a fixed point, a mask arranged to be capable of movement with respect to the lamp and to have the rays cast therethrough to be received on the screen, means to normally hold said mask in one of its extreme positions, and means to move the mask to the remaining position and to permit return of the same under the action of said first means.

5. A projecting apparatus comprising a casing, a screen, a lamp mounted at a fixed point, a mask arranged to be capable of movement with respect to the lamp and to have the rays cast therethrough to be received on the screen, means to normally hold said mask in one of its extreme positions, means to move the mask to the remaining position and to permit return of the same under the action of said first means, and means to extinguish the light during the movement of the mask in one direction.

[Claims 6 and 7 not printed in the Gazette.]

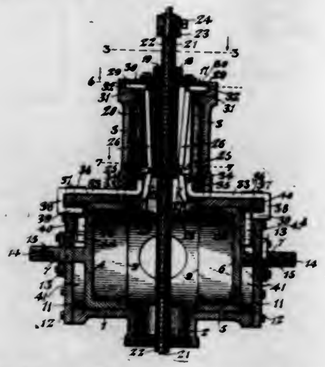
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1,228,686. CASING-HEAD FOR OIL-WELLS. DILLARD L. MAXWELL, Wirt, Okla., assignor of one-fourth to Williamson J. Milburn, one-fourth to Leonidas J. Milburn, and one-fourth to Theodore Stockdell, Oklahoma, Okla. Filed July 5, 1916. Serial No. 107,651. (Cl. 166—15.)

1. A casing head for oil wells having a passage therethrough for the drilling tools and cable, cut-off means for said passage having means imparting to the cut-off means a normal tendency toward the cut-off position and holding means for temporarily maintaining the cut-off means out of the path of the drilling tools and cable, said holding means being located in the path of the tools for operation thereby when the tools are withdrawn from the casing head.

2. A casing head for oil wells having a passage therethrough for the drilling tools and cable, means for closing said passage provided with means imparting to the closing means a normal tendency toward the closed or cut-off position, and means for holding the cut-off means against

its normal tendency and for releasing it to move under its normal tendency to the closed or cut-off position, said releasing means being located in the path of the drilling tool and constructed to respond to forces exerted on the releasing means by the withdrawal of the drilling tools from the casing head, whereby the cut-off means are automatically released to move to the cut-off position as a tool is lifted from the casing head.



3. A casing head for oil wells provided with means for the passage of oil well tools and an operating cable therethrough, a cut off valve in the casing provided with means for automatically moving it to the cut-off position, and latch means for holding the valve in the open position in opposition to the normal tendency of the automatic means.

4. A casing head for oil wells comprising a casing with oppositely disposed necks for connecting the casing to a well tubing and for the entrance into the casing of an operating cable and tools, a closing head for the second-named neck, a rockable valve in the casing movable to close and open the second-named neck, automatic means for moving the valve to the closed position and yieldable to forces tending to move the valve to the open position, latch means for holding the valve in the open position against the normal tendency of the automatic means, and latch means for holding the closing head for the second-named neck thereto, the two latch means being in coactive relation to cause operative movement of one to produce operative movement of the other latch means.

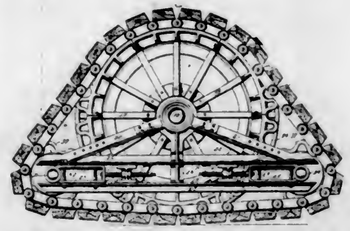
5. A casing head for oil wells comprising a casing having oppositely disposed necks for attachment to a well tubing and for the entrance of tools and operating cable into the casing and into the well tubing, a rockable valve in the casing having a passage therethrough for the tools and cable and movable into and out of closing relation to the second-named neck, a closure for the second-named neck, latch means for holding the closure to the second-named neck, automatic means for moving the valve to the closed position, and yieldable to forces tending to open the valve, and latch means in coactive relation to the first-named latch means for holding the valve in the open position against its normal tendency to close under the action of the automatic means.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,687. CATERPILLAR-WHEEL. ARTHUR E. MILLER, Newton, Iowa, assignor to The G. W. Parsons Company, Newton, Iowa. Filed Nov. 17, 1913. Serial No. 801,554. (Cl. 21—150.)

1. In a device of the class described, an axle, a sleeve mounted thereon, a wheel mounted on said sleeve, bearings on said sleeve on each side of said wheel, frames supported on said bearings, sprockets in said frames above the level of the lower part of the wheel, sprocket rims mounted on the sides of said wheel near the periphery thereof, a tread device comprising tread members arranged in succession, sprocket chains on the ends of said tread members arranged to travel over the sprocket wheels on each side of the first wheel and on the upper and lower parts of the respective sprocket rims.



2. In a device of the class described, an axle, a sleeve mounted thereon, a wheel mounted on said sleeve, bearings on said sleeve on each side of said wheel, frames supported on said bearings, sprockets in said frames above the level of the lower part of the wheel, sprocket rims mounted on the sides of said wheel near the periphery thereof, a tread device comprising tread members arranged in succession, sprocket chains on the ends of said tread members arranged to travel over the sprocket wheels on each side of the first wheel and on the upper and lower parts of the respective sprocket rims, said first wheel being provided with a rim which travels on the central parts of said tread members.

3. In a device of the class described, a sleeve, an axle eccentrically mounted therein, a wheel mounted on said sleeve, bearings adjustably mounted on said sleeve on each side of said wheel, frames supported on said bearings, sprockets in said frames above the level of the lower part of the wheel, sprocket rims mounted on the sides of said wheel near the periphery thereof, a tread device comprising tread members arranged in succession, sprocket chains on the ends of said tread members arranged to travel over the sprocket wheels on each side of the first wheel and on the upper and lower parts of the respective sprocket rims, a rim mounted on one side of said first wheel having gear teeth formed on the periphery thereof, a second shaft, and a gear wheel thereon in mesh with said teeth.

4. In a device of the class described, a sleeve, an axle eccentrically mounted therein, a driving tractor wheel mounted on said sleeve, a rim secured to said wheel, having gear teeth formed on its periphery, a second axle, and a gear wheel thereon in mesh with said teeth.

5. A device of the character described comprising in combination a pair of spaced side frames of substantially triangular formation having bearings at each corner thereof and having their lower sides disposed in substantially horizontal planes, bearing wheels mounted in the bearings of the lower and outer ends of said frames, means for adjusting said bearings longitudinally of the frames, a tractor wheel, means for rotatively supporting the tractor wheel from the bearings at the upper portions of said frames, means for adjusting such mounting of the tractor wheel with relation to a supporting axle, and an endless tread member comprising a central ground engaging portion upon which said tractor wheel travels and sprocket chains disposed outwardly thereof, said tractor wheel being provided with sprocket teeth for engagement with said sprocket chains, said tread member passing over said bearing wheels.

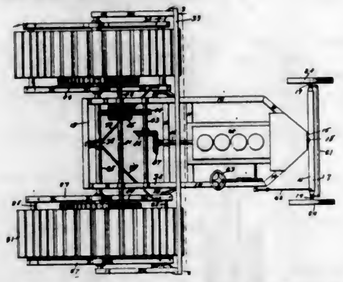
[Claim 6 not printed in the Gazette.]

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1,228,688. CATERPILLAR-TRACTOR. ARTHUR E. MILLER, Newton, Iowa, assignor to The G. W. Parsons Company, Newton, Iowa. Filed Aug. 31, 1914. Serial No. 859,541. (Cl. 21—114.)

1. In a device of the class described, a frame, a supporting wheel mounted near one end of said frame to permit lateral tilting of the frame with relation to said wheel, an axle mounted on said frame near the other end thereof to permit vertical tilting of said frame, caterpillar traction devices mounted on the ends of said axle and vertically tiltable at all times with relation thereto, a source of power on said frame, gearing devices for imparting motion from said source of power to said caterpillar traction devices in all positions of the tilting movement of said main frame with relation to said axle, and guide devices on said frame for engaging said caterpillar devices and preventing the lateral swinging movement thereof, without interfering with the tilting movement of said caterpillar devices.





3. In a device of the class described, a frame, a supporting wheel mounted near one end of said frame to permit lateral tilting of the frame with relation to said wheel, an axle mounted on said frame near the other end thereof to permit vertical tilting of said frame, caterpillar traction devices mounted on the ends of said axle and vertically tiltable with relation thereto, each of said caterpillar traction devices including a large wheel mounted on the axle, a smaller frame mounted on the axle and extending forwardly and rearwardly from said large wheel, small wheels mounted in the ends of said smaller frame in front and in rear of said large wheel, and an endless track traveling over the wheels of each caterpillar traction device, said smaller wheels being below the level of said axle and the lower peripheries of said smaller wheels being above the level of the lower part of said large wheel, so that said endless track is slightly inclined from its lower point below the large wheel upwardly and forwardly, and rearwardly and upwardly, when the device is in normal position.

4. In a device of the class described, a frame, a supporting wheel mounted near one end of said frame to permit lateral tilting of the frame with relation to said wheel, an axle mounted on said frame near the other end thereof to permit vertical tilting of said frame, caterpillar traction wheels mounted on the ends of said axle and vertically tiltable with relation thereto, each of said caterpillar traction wheels including a large wheel mounted on the axle, a smaller frame mounted on the axle and extending forwardly and rearwardly from said large wheel, small wheels mounted in the ends of said smaller frame in front and in rear of said large wheel, an endless track traveling over the wheels of each caterpillar traction wheel, and means for engaging said smaller frame for preventing the caterpillar traction wheels from swinging laterally with relation to the main frame and for thereby reducing the twisting strain on the axle, said means being so constructed as not to interfere with the three point suspension of the main frame.

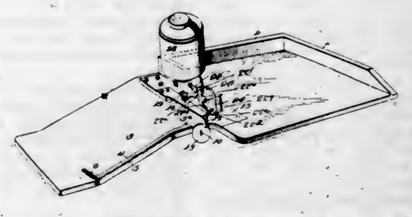
5. In a device of the class described, a frame, a supporting wheel mounted near one end of said frame to permit lateral tilting of the frame with relation to said wheel, an axle mounted on said frame near the other end thereof to permit vertical tilting of said frame, caterpillar traction wheels mounted on the ends of said axle and vertically tiltable with relation thereto, each of said caterpillar traction wheels including a large wheel mounted on the axle, a smaller frame suitably mounted on the axle and extending forwardly and rearwardly from said large wheel, small wheels mounted in the ends of said smaller frame in front and in rear of said large wheel, an endless track traveling over the wheels of said caterpillar traction wheel, a collar mounted on said axle to permit the rotation of said axle within said collar, means for securing said collar to the main frame, and means for securing said collar to said smaller frames for preventing the lateral movement of said smaller frames and permitting vertical tilting movement thereof.

6. In a device of the class described, the combination with a frame, wheeled means engaging said frame at a single point of suspension at one end, an axle extending transversely of the opposite end of said frame and upon which said frame is supported, caterpillar traction devices mounted upon the outer ends of said axle, each of said devices comprising a large traction wheel journaled upon said axle, a substantially triangular frame hung upon said axle and extending forwardly and rearwardly thereof, smaller wheels journaled in the opposite ends of said frame, and an endless track passing over the wheels of each frame, said frames being free to tilt vertically upon said axle.

[Claims 2 and 7 not printed in the Gazette.]

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1,228,689. SEAM-DAMPENING MACHINE. HENRY C. MILLER, Waterford, N. Y. Original application filed June 17, 1907, Serial No. 379,487. Divided and this application filed May 26, 1913. Serial No. 770,090. (Cl. 68—9.)



1. A seam dampening machine comprising a dampening element, an angularly disposed guide located below the dampening element, and a seam guide located above the angularly disposed guide and adjacent the dampening element, the angularly disposed guide causing the collar to move laterally to force the seam thereof against the seam guide while being drawn under the dampening element.

2. A seam dampening machine comprising a dampening element, a rotatable angularly disposed guide which engages one surface of the collar being operated upon, a combined seam guide and tab throw-out device located above the rotatable angularly disposed guide, the rotatable angularly disposed guide causing the collar to move laterally to force the seam thereof against the seam guide while being drawn past the dampening element, the seam guide acting to throw the tab of the collar out of the path of the dampening element when the end of the seam is reached.

3. A seam dampening machine comprising dampening means, an inclined element engaging a collar to move same laterally during the dampening operation, and a guide against which the seam of the collar contacts when moved angularly by the inclined element.

4. A seam dampening machine comprising a dampening element, a tab throw-out device adjacent the dampening element and engaging one surface of a collar, and an angularly disposed guide adjacent the tab throw-out device and engaging the other surface of the collar and between which and the tab throw-out device the collar passes, said guide being angularly disposed to laterally move the collar during the dampening operation to insure the dampening element dampening the collar along the seam line, the tab-throw-out device throwing the collar tab out of the path of the dampening element when the end of the seam is reached.

5. A seam dampening machine comprising dampening means, and two elements located one above the other, one of said elements acting as a tab throw out, and the other extending in a vertical plane and acting, when a collar is drawn between the elements at an angle to said plane, to deflect the collar laterally to dampen same along the seam line.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,690. DEVICE FOR LIFTING, LOWERING, AND CONVEYING FRAGILE OBJECTS, SUCH AS SHEET-GLASS AND THE LIKE. GEORGES MONNET, Stolberg, Germany. Filed Aug. 22, 1912. Serial No. 716,436. (Cl. 57—9.)



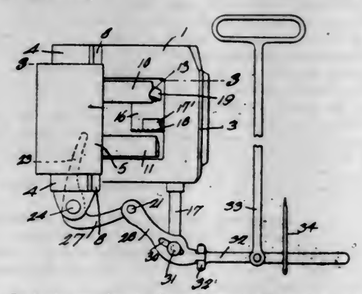
1. In a device for lifting sheets of fragile material, in combination, a frame having a plurality of hinged brackets provided with guide openings, rods mounted for rectilinear movement within the guide openings of the said brackets, suction cups mounted pivotally upon the respective rods, and means for exhausting the air from the said cups.

2. In a device for lifting sheets of fragile material, in combination, a main frame, suction cups carried by the said main frame, an auxiliary frame pivotally connected with the main frame and adapted to support the same, and means for adjusting the two frames angularly and for securing the same in adjusted position.

3. In a device for lifting sheets of fragile material, in combination, a frame, suction disks carried thereby, said disks being provided with a rubber member formed of a plurality of concentrically arranged rings the edges of which are in the same plane and are adapted to engage the surface of the sheet to be lifted, and means for exhausting the air from the spaces formed between said concentrically arranged rings.

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1,228,691. CAR-COUPLING. ALBERT AUGUSTUS MOSS, Newark, N. J., assignor of one-half to Louis J. Walter, Elizabeth, N. J. Filed Oct. 11, 1916. Serial No. 125,070. (Cl. 213—10.)



1. In a car coupler, a pivoted knuckle having a cam and ratchet teeth, a dog mounted for swinging and vertical sliding movements and having a portion to be raised by said cam when the knuckle is swung to locking position, said portion in engaging said cam tending to swing the knuckle into engagement with said ratchet teeth should the knuckle tend to swing to unlocking position after being swung toward locking position.

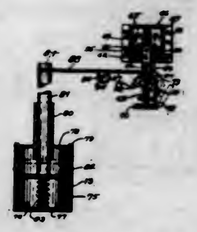
7. In a car coupler, a draw head, a knuckle pivoted thereto, a dog mounted for swinging and vertical sliding movements within the draw head, a pin slidable in the draw head for raising the dog, a lever pivoted to the draw head and swingable to swing the dog to unlocking position, the draw head having an upper cam with which the dog contacts when raised to swing it to releasing position, and means connected to said pin and lever for sliding the pin and swinging said lever.

9. In a car coupler, a draw head, a knuckle pivoted thereto, a slidable dog within the draw head to hold the knuckle in locking position, a pin slidable in the head for sliding the dog with it, a lever pivoted to the draw head for swinging the knuckle to unlocking position, and a floating lever connected to said pin and aforesaid lever for operating them in succession.

[Claims 2 to 6, 8, and 10 not printed in the Gazette.]

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1,228,692. CARBURETER. JAMES L. MUNSON, Sparta, N. J. Filed May 2, 1916. Serial No. 94,927. (Cl. 261—34.)



1. The combination with a float chamber, throttle valve and a fuel nozzle, of an auxiliary reservoir, conduits connecting said chamber, fuel nozzle and reservoir, a piston in said reservoir, a spring fulcrumed between its ends and having one end connected to said piston and connections between the other end of said spring and said throttle valve.

2. The combination with a mixing chamber, of a throttle valve mounted therein, a tube depending from said chamber, a tubular air valve slidably mounted in said tube and having a lower annular valve face and a venturi, a fuel nozzle mounted in said venturi, an air chamber surrounding said tube and provided with a valve seat at its lower end and with openings to said carbureting chamber at its upper end, and a spring for forcing said face against said seat.

3. The combination with a source of fuel, of a fuel nozzle connected thereto, an auxiliary reservoir and a piston therein, a conduit connecting said nozzle and reservoir, a throttle including a shaft, a cam on said shaft, and a yielding connection between said cam and said piston for moving said piston to force fuel from said reservoir to said nozzle.

4. The combination with a source of fuel, of a fuel nozzle connected thereto, an auxiliary reservoir and a piston therein, a conduit connecting said nozzle and reservoir, a throttle including a shaft, a cam on said shaft, a yielding connection between said cam and said piston for moving said piston in one direction, and a spring for moving said piston in the opposite direction.

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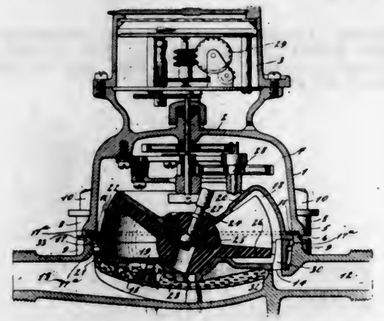
1,228,693. WATER-METER. LEWIS HALLOCK NASH, South Norwalk, Conn. Filed July 2, 1914, Serial No. 848,526. Renewed Apr. 12, 1917. Serial No. 161,674. (Cl. 73—98.)

1. In a water meter, a casing comprising a base, provided with inlet and outlet passages, and an upper portion separable therefrom, and a piston chamber within the casing comprising separable lower and upper members, the upper member having a lateral projection clamped between the lower member and the upper portion of the casing.

4. In a water meter, a casing, a wall closing said casing and separable therefrom, said casing having a shoulder facing said wall, and said wall having a shoulder facing said first-named shoulder but spaced therefrom, a



piston chamber in the casing and composed of readily separable parts, one part having a flange projecting between said shoulders and the other part, being located

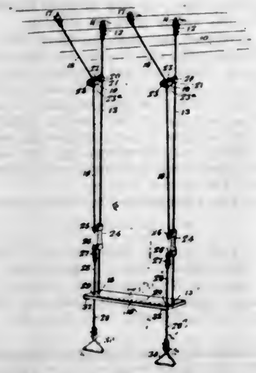


between said casing and wall, and being held in contact with said first-named part solely by said wall, and means for clamping said casing and wall together.

[Claims 2, 3, and 5 to 8 not printed in the Gazette.]

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1,228,694. SWING. GEORGE A. NETCOTT, Independence, Iowa. Filed Mar. 18, 1916. Serial No. 85,162. (Cl. 155—35.)



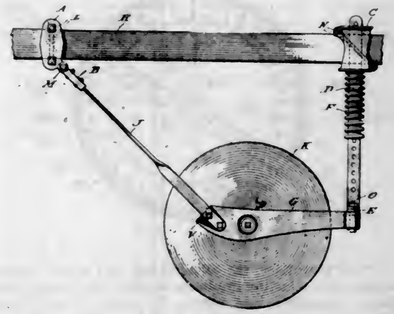
1. In a swing, a pair of supporting ropes, a seat secured to the lower ends of said supporting ropes, a pair of propelling ropes, short straps adjustably secured upon said supporting ropes and having eyes to receive downwardly therethrough said propelling ropes, a pair of handles slidable on the supporting ropes above the seat and having connection with said propelling ropes whereby the drawing down of said handles to straighten the propelling ropes draws the straps and supporting ropes forwardly, foot ropes secured to the handles and passing downwardly through the seat, and stirrups upon the lower ends of said foot ropes to receive the feet of the occupant so that the downward pressure of the feet draws said propelling ropes taut and urges the swing in a forward direction.

2. A swing comprising a pair of suspension hooks, supporting ropes secured to and depending from said hooks, a seat secured to said ropes, a second pair of hooks spaced inwardly from said first hooks, a pair of propelling ropes secured to said hooks, a pair of handles slidably mounted upon said supporting ropes and having connection with the lower ends of said propelling ropes, foot ropes secured to said handles and passing downwardly through said seat, stirrups on the lower ends of the foot ropes, pulleys carried upon the opposite ends of the seat against the forward sides of said foot ropes to take up frictional contact of the ropes with the seat when the stirrups are drawn forwardly, a strip of metal bent upon itself and engaging at its looped end around the supporting rope below said suspension hooks, clamping screws engaging through the sides of the strips to bind the looped ends about the supporting rope, and pulleys secured across the outer ends of the strips to provide eyes therein, said strips being relatively short and adapted to receive the intermediate portions of the propelling ropes through the eyes thereof whereby upon the downward movement of said handles and said stirrups, said propelling ropes draw said strips and said supporting rope forwardly to propel the swing.

3. In a swing, a seat, pendant supporting ropes for the same, a propelling rope suspended in front of each of said supporting ropes, a vertically slidable handle on each supporting rope above the seat, means for fixedly mounting a pulley on and in spaced relation to each supporting rope above the handle, said pulley having the propelling rope passed around the same and being spaced from the supporting rope a distance less than the spacing of the upper ends of each propelling rope from the upper ends of each supporting rope, said handles having connection with the lower ends of the propelling ropes, ropes connected to and leading downwardly from the handles through guides provided in the seat, and foot propelled means connected to the lower ends of the last mentioned ropes.

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1,228,695. DISK JOINTER. VERN O. OGLE, Waterville, Wash. Filed May 6, 1916. Serial No. 95,966. (Cl. 97—43.)



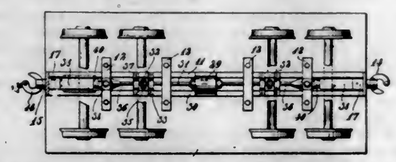
1. The combination with a plow beam, of a rotatable weed cutting and turning disk, a bearing member for said disk, a pivoted drag-link carried by the plow beam and connected to the forward end of the bearing member, a suspension bar connected to the rear end of the bearing member, a boxing mounted on the plowbeam and having a vertical opening in which the upper end of the suspension bar is slidably mounted, an abutment on the suspension bar, and a spring between the abutment and the boxing.

2. The combination with a plow beam, of a rotatable weed cutting and turning disk, a bearing member for said disk, a pivoted drag-link carried by the plow beam and adjustably connected to the forward end of the bearing member, the adjustment being such that the angle of the drag-link may be changed, and a yielding support for the rear end of the bearing member, said support being carried by the plow beam.

3. The combination with a plow beam, of a rotatable weed cutting and turning disk, a bearing member for said disk, a pivoted drag-link carried by the plow beam and connected to the forward end of the bearing member, a suspension bar depending from the plow beam and yieldingly supported thereby and connected at its lower end to

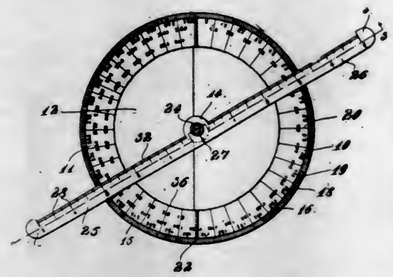
the rear end of the bearing member, said connection being an adjustable one to permit adjustment of the bearing member laterally with respect to the plow beam.

1,228,696. CAR-COUPLING. ANTON OLEJNICZAK, Chicago, Ill. Filed Feb. 16, 1917. Serial No. 148,964. (Cl. 213—41.)



In a combined draw-head and bumper, the combination with a rigid longitudinal support attached to the car frame, draw-heads slidably engaged at the ends of said support, casings connected to the inner ends of said draw-head, rigid cross-bars passing through said casing, springs disposed upon either side of said cross-bar within said casing, a spring centrally arranged of said support element, said spring being adapted to operate in both directions, independent bars interposed between said springs, and means for supporting said bars.

1,228,697. PROTRACTOR. ANTON OLLARIU, Philadelphia, Pa. Filed Aug. 31, 1916. Serial No. 117,834. (Cl. 33—75.)



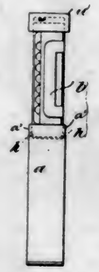
1. In a protractor, the combination with a pair of semi-circular plates having graduations upon their upper face, hinges connecting said plates, the axis of said hinges being on line with the center of the apparatus, and a folding scale rotatably engaged with said plates in such manner that it may move therearound.

2. In a protractor, the combination with a pair of circular plates having beveled edges, degree marks formed upon said edges, a thinner plate extending inwardly from one of said semi-circular plates, a scale having a hinge at its center, said hinge being at the center of said plate, and a tubular rivet passing through said scale and the mentioned plate whereby the scale may be rotated axially of said plates.

3. In a protractor of the class described, the combination with two semi-circular rings having graduations upon their upper surface, a plate extending from one of said rings including the center thereof, hinges connecting said rings, the axis of said hinges being in alinement with the center of said rings, and a jointed scale pivotally held to the center of said plate, said scale being movable completely over the surface of the instrument.

4. In a protractor, the combination of two semi-circular rings having divisions up on their upper surface, a central hub formed with one of said rings, a plurality of serrations formed in the inner annular edge of said rings, said serrations registering with the mentioned divisions, a scale having a central joint rotatably engaged with said hub and hinged connections between said rings, the axis of the hinges being co-incident with the central joint of said scale.

1,228,698. COMBINED HANDLE AND RECEPTACLE FOR SAFETY-RAZOR BLADES. WILLIAM EDMUND O'REILLY, London, England. Filed Apr. 26, 1916. Serial No. 93,601. (Cl. 206—16.)

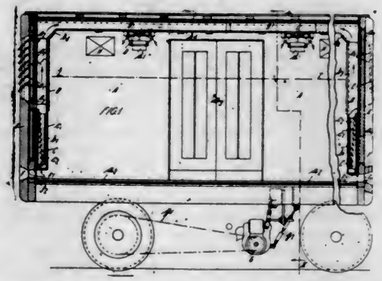


1. In a device of the class described, the combination with a hollow handle, of a closure for the handle; a member attached to the closure and slidable within the handle; an envelop for spare blades having means thereon for attaching it to the member slidable within the handle; and attaching means upon the said slidable member coöperating with the like means upon the envelop.

3. In a device of the class described, the combination with a hollow handle; of a closure for the handle; a member attached to the closure and slidable within the handle; a projection at the lower end of the slidable member; a lug at one side of said member having a slot; projections adjacent the open end of the handle, engaging the projection on the slidable member within the handle to prevent its withdrawal therefrom; an envelop for spare blades; and means upon said envelop engaging the slotted lug to secure the envelop thereto.

[Claims 2 and 4 not printed in the Gazette.]

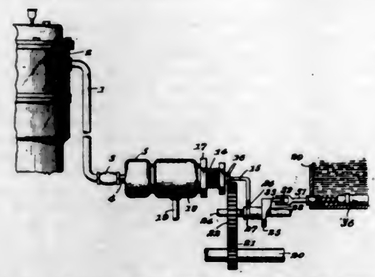
1,228,699. APPARATUS FOR MAINTAINING A UNIFORM TEMPERATURE IN RAILWAY FREIGHT-VANS. ARTHUR WILLIAM PRIM, Liverpool, and FRANCIS WILLIAM ROPER, Sheffield, England. Filed July 28, 1913. Serial No. 781,568. (Cl. 237—5.)



A self contained freight car having air casings for the circulation of air within the car so that it passes through the freight contained therein, means located at the end of the car for heating the air as it circulates, fans for circulating the air through the air casings, adjustable means located at the ends of the car and communicating with the atmosphere for ventilating the car, valved air ports communicating with the atmosphere at the ends of the car and in proximity to said heating means, whereby the car may be completely closed and circulation of the heated air effected therein, or it may be ventilated through openings to the outside air.



1,228,700. FEED-REGULATOR FOR LUBRICATING SYSTEMS. GEORGE W. RAMSEY, Peoria, Ill. Filed June 7, 1910. Serial No. 565,569. (Cl. 103—85.)



1. In a device of the character described, the combination of a source of power, a lubricating pump, means for actuating said lubricating pump, and means distinct from the pump actuating means and operatively connected with said source of power and said actuating means in such manner that the amount of actuation of said pump is determined by the amount of work being done by said source of power.

2. In a device of the character described, the combination of a source of power, a lubricating pump, said lubricating pump including a pump cylinder and a piston operative in said pump cylinder, a piston rod connected with said piston, means comprising a cam for actuating said piston rod, means for regulating said actuating means, the arrangement and construction of parts being such that the adjustments of said regulating means is dependent upon the work being done by said source of power.

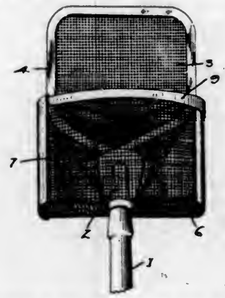
3. In a device of the character described, the combination of a source of power, a shaft operatively connected with said source of power, a lubricating pump, actuating means for said lubricating pump, said actuating means comprising mechanisms operatively connected with said shaft, determining means operatively connected with said source of power and said actuating means, said determining means being constructed and arranged in such manner that the amount of actuation of said lubricating pump is determined by the amount of horse power delivered from said source of power.

4. In a device of the character described, the combination of a source of power, a power shaft operatively connected with said source of power, a secondary shaft, gearing mechanism operatively connecting said power shaft and said secondary shaft, a cam member operatively mounted upon said secondary shaft, a lubricating pump comprising a pump cylinder, a piston rod operatively connected therewith and adapted to engage with said cam member, and means operatively connected with said source of power and said cam member in such manner that the effectiveness of said cam member is dependent upon the amount of horse power delivered from said source of power.

5. In a device of the character described, the combination of a main drive shaft, a secondary shaft, gearing mechanism operatively connected with said main drive shaft and said secondary shaft, a container for lubricant, a lubrication pump operatively connected with said container, said lubrication pump comprising a pump cylinder, a piston operative in said pump cylinder, a piston rod connected with said piston, a cam member separably mounted upon said secondary shaft and coöperating with said pump cylinder, a source of power, means operatively connected with said source of power and with said cam member in such manner that said cam member is moved upon said shaft to varying positions thereon, said movement being determined by the amount of horse power delivered by said source of power.

[Claims 6 to 15 not printed in the Gazette.]

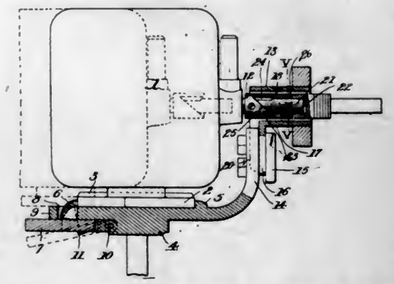
1,228,701. INSECT-KILLER. ALEXANDER E. ROCHFORT, Oakland, Cal. Filed July 25, 1916. Serial No. 111,151. (Cl. 43—1.)



1. The combination with a handle, a flexible insect killer fixed in said handle and alined with said handle; and a retaining means attached to said handle and spaced therefrom and surrounding part of said killer.

2. In combination with a handle an insect killer abutting one end and positioned in the same plane as the handle, a container open at its upper end and having three side walls connected to each other along their edges and provided with an orifice adapted to removably engage the handle of said killer.

1,228,702. ELECTRICAL APPARATUS. JOSEPH SCHMIDINGER, New York, N. Y. Filed Oct. 25, 1916. Serial No. 127,675. (Cl. 192—1.)



1. The combination with a stand having a bracket arm, of a motor on the stand, an implement-carrying bracket having sliding connection with said bracket arm, and telescoping clutch members one carried by the motor and the other by said bracket for operating the implement by means of the motor, said motor being movable on the stand transversely to the path of movement of the bracket, for the purpose specified.

4. The combination with a stand having parallel guides, of an implement-carrying bracket slidingly connected to said stand, a carriage slidingly mounted between said guides and movable transversely to the path of movement of the bracket, a motor on said carriage, interengaging clutch members one carried by the motor and the other by the bracket for operating the implement by means of the motor, a stop on the stand for limiting the movement of

the carriage in one direction, and a spring-pressed trigger for engaging the other end of the carriage when the same is in contact with said stop.

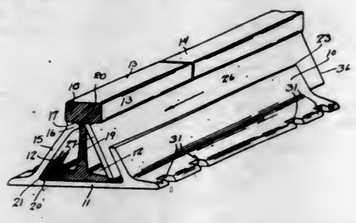
8. The combination with a stand having a bracket arm, of a motor movably mounted on the stand, an implement-carrying bracket to slidingly connect with said bracket arm when the motor is in one position, supplemental clutch members, one carried by the motor and the other connected to an implement and mounted in the bracket, said clutch members being engaged when the motor is in another position, for actuating the implement by means of the motor, one of said clutch members having a socket, and a projecting pin on the other clutch member engaging said socket whereby the bracket is locked on the bracket arm when the clutch members are in driving connection.

11. The combination with a stand having a bracket arm, of a motor movably mounted on the stand, an implement-carrying bracket to detachably connect with the bracket arm when the motor is in one position, said implement-carrying bracket having a tubular portion, a clutch member carried by the implement and having an annular groove, a ring loosely fitted in said groove, means for fastening the ring in the tubular portion of the bracket for supporting said clutch member loosely therein and limiting its axial movement, and a supplemental clutch member on the motor adapted to engage the first clutch member when the motor is in another position, for operating the implement by means of the motor.

[Claims 2, 3, 5 to 7, 9, and 10 not printed in the Gazette.]

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1,228,703. BOLTLESS RAIL-JOINT. DANIEL SCHNEIDER, Spokane, Wash., assignor of one-fourth to Wilhelm Hoeffer and one-fourth to Wallock Zarnekee, Spokane, Wash. Filed June 21, 1916. Serial No. 104,999. (Cl. 239—6.)



1. In combination with a track rail provided with a head and with base flanges, a rail chair provided with a rail-supporting base, a rail brace integral with said chair, the upper portion of said brace bearing against the lower face of the head of said rail and against the web of said rail, a locking member tapered only with respect to its thickness, the upper edge of said locking member being adapted to bear against the lower face of the head of said rail, and the bottom edge of said locking member being adapted to bear only against the upper surface of one of the base flanges of said rail, a wedge shape member extending upwardly and inwardly at an acute angle with said rail supporting base, the tapered face of said wedge member being adapted to directly co-act with said tapered locking member, said direct co-action serving to secure said rail directly between said rail brace and said tapered locking member, and means slidably mounted on the base flanges of said rail and adapted to retain said tapered locking member in locking position.

2. In combination with a track rail provided with a head and with base flanges, a rail chair provided with a rail supporting base, a rail brace integral with said chair, the upper portion of said brace bearing against the lower face of the head of said rail and against the web of said rail, a locking member tapered only with respect to its thickness, the upper edge of said locking member being adapted to bear against the lower face of the head of said rail, and the bottom edge of said locking member being adapted to bear only against the upper surface of one of the base flanges of said rail, a wedge shape member extending upwardly and inwardly at an acute angle with said rail supporting base, the tapered face of said wedge member being adapted to directly co-act with said tapered locking member, said direct co-action serving to secure said rail directly between said rail brace and said tapered locking member, a clamp member slidably mounted on the base flanges of said rail and means to lock said clamp on said base flanges to retain said tapered locking member in locking position.

3. In combination with a track rail having a head and base flanges, a rail chair provided with a rail supporting base, a rail brace integral with said chair, the upper edge of said brace bearing against the lower face of the head of said rail and the edge of one of the flanges of said rail being adapted to bear against the juncture of said base and said brace, a locking member tapered with respect to its thickness only and of substantially constant width throughout its length, the upper edge of said locking member being adapted to bear against the lower face of the head of said rail and the bottom edge of said locking member being adapted to bear only against the upper surface of the other base flange of said rail, a wedge shape member extending upwardly and inwardly at an acute angle with said rail supporting base and integral with said rail chair, the tapered face of said wedge member being adapted to directly co-act with said tapered locking member, said direct co-action serving to securely wedge said rail between said rail brace and said tapered locking member, a clamp member slidably mounted on the base flanges of said rail and means to lock said clamp on said base flanges to retain said tapered locking member in locking position.

4. The combination with abutting track rails and a rail supporting chair, of a key in flat-plate form of substantially uniform width throughout its length but tapering in respect to thickness, said key being adapted to be inserted in a slanting position on one side of said rails, with the outer face of said key in direct contact with a corresponding sloping face of said supporting chair, so that when said key is driven into place its tapering thickness causes said rails to be firmly wedged in said supporting chair and means slidably mounted on the base flanges of said rail and adapted to retain said tapered locking member in locking position.

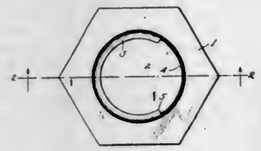
5. The combination with abutting track rails and a rail supporting chair, of a key in flat-plate form of substantially uniform width throughout its length but tapering in respect to thickness, said key being adapted to be inserted in a slanting position on one side of said rails, with its upper edge bearing in the corner formed at the juncture of the webs and heads of said rails, with the lower edge of said key bearing against the upper surface of the base flanges of said rails, and with the outer face of said key in direct contact with a suitably formed face of said supporting chair, so that when said key is driven into place its tapering thickness causes said rails to be firmly wedged between said supporting chair on the bottom and one side, and said key on the other side to brace the heads of said rails against lateral strain; and means slidably mounted on the base flanges of said rail and adapted to retain said tapered locking member in locking position.

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1,228,704. NUT-LOCK. WILLIAM E. SHARP, Chicago, Ill., assignor to Grip Nut Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 22, 1914. Serial No. 858,030. (Cl. 151—22.)

1. A lock nut, comprising a metal plate of suitable size and form, and having a bolt hole formed therein, with a single section of the wall of the hole less than the entire circumference thereof, V-shaped to engage a bolt thread and the remaining part of the wall substantially at right angles to the surface of the plate, and adapted to impinge upon the apexes of the thread of a bolt upon which the lock is mounted.

2. A lock nut, comprising a metal plate of suitable size and form, and having a bolt hole formed therein, with a single section of the wall of the hole less than the entire circumference thereof and V-shaped to engage a bolt thread, and the remaining part of the wall substantially at right angles to the surface of the plate, and adapted to impinge upon the apexes of the thread of a bolt upon which the lock is mounted, the advancing end of the nut thread in the direction in which the nut would be rotated when backed off a bolt, being formed with an impinging point adapted to impinge upon the proximate part of a bolt.

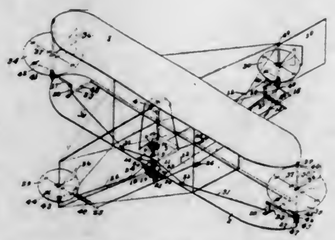


3. A threaded bolt in combination with a lock nut, comprising a metal plate of suitable size and form, and having a bolt hole formed therein of a size adapting it to tightly fit upon the said bolt, a single section of the wall of the bolt hole less than the circumference thereof V-shaped to engage the bolt thread, and the remaining part of the wall substantially at right angles to the surface of the plate and adapted to impinge upon the apexes of the bolt thread, substantially as described.

4. A threaded bolt in combination with a lock nut, comprising a metal plate of suitable size and form, and having a bolt hole formed therein of a size adapting it to form a binding fit upon the bolt, with a single part of the wall of the bolt hole less than the entire circumference thereof shaped to engage the bolt thread, and the remaining part of the wall adapted to impinge upon the apexes of the bolt thread, the advancing end of the nut thread, as the plate is backed off the bolt, being formed with an impinging point adapted to impinge upon the proximate part of the bolt.

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1,228,705. AEROPLANE. OSAM SHUDOW, San Francisco, Cal. Filed Mar. 6, 1911. Serial No. 612,509. (Cl. 244—29.)



1. In an aeroplane balancing control, the combination of a frame, an operator's swing seat attached to the frame, and a manually controlled lever mounted on the frame so as to move relative to the frame, and movably jointed to the seat, whereby the lever moves relative to the seat and frame as the former swings relative to the latter.

2. In an aeroplane balancing control, the combination of a frame, a universally movable swing seat attached to the frame, and a lever controlled from the seat and universally jointed to the frame and seat.

3. In an aeroplane balancing control, the combination of a frame, an operator's swing seat, and a lever operated from the seat and movably jointed to the frame and seat, for controlling the swinging movements of the seat.

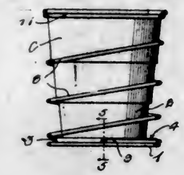
4. In an aeroplane balancing control, the combination of a frame, an operator's swing seat attached to the frame, a control lever movably jointed to the frame and seat, whereby it is capable of coöperative control by the gravitation of the seat and manual control of the lever.





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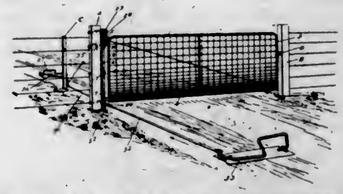
1,228,706. COLLAPSIBLE DRINKING-CUP. WILLIAM F. SMYTHE, New York, N. Y. Filed Dec. 2, 1915. Serial No. 64,732. (Cl. 65—58.)



A drinking cup comprising a plurality of tapered telescoping annular sections the uppermost of which is formed with an outstanding bead, a circular base for the lowermost section, said base projecting beyond this section, and a coiled spring surrounding the several sections and bearing at its upper end against said bead, the lower end of said spring bearing against the base, said spring serving to hold the cup in distended position and the convolutions of said spring being spaced from the aforesaid sections to serve as a yielding guard to prevent injury thereof.

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1,228,707. GATE. PETER W. SOMMER, Peoria, Ill., assignor, by mesne assignments, to The First Trust and Savings Company, Cleveland, Ohio, a Corporation of Ohio, and William E. Stone, Peoria, Ill., trustees. Filed June 21, 1915. Serial No. 35,439. (Cl. 39—56.)



1. In combination, a gate having upper and lower hinge members, a rotatable rod, a bracket secured to the gate and lower hinge member and receiving said rod, cranks attached to the upper end of said rod, an auxiliary rod, connecting said cranks and passing through said upper hinge member, and means for operating said first rod.

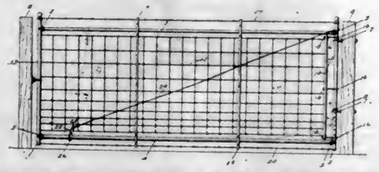
2. In combination, a gate having upper and lower hinge members, a rotatable rod, a bracket secured to the gate and lower hinge member and receiving said rod, cranks attached to the upper end of said rod, an auxiliary rod, connecting said cranks and passing through said upper hinge member, a crank on the lower end of said first rod, a casting pivotally attached to said last crank, rods connected to said casting and extending in opposite directions, and wheel operated cranks operatively connected to said last mentioned rods.

3. In combination, a gate, a rotatable rod, a bracket through which said rod passes, said bracket adapted to embrace a vertical reach of the gate and having a U portion adapted to receive and embrace a horizontal reach of the gate, cranks attached to the upper part of the rod, an auxiliary rod connected to said cranks, a hinge member attached to the gate through which the auxiliary rod passes, means for journaling said first rod on a support, and means for operating said rod.

4. In combination, a gate hanging including a T bar, members permanently secured to said bar formed with col-

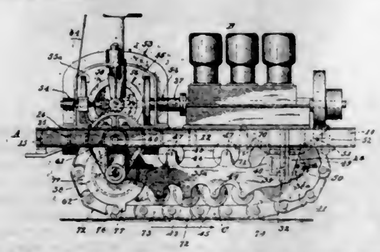
lars and also parts adapted to be secured to a support, a rotatable rod journaled in the collar portions of said members, cranks secured to said rod, an auxiliary rod connecting said cranks, means connecting the upper part of the gate with said auxiliary rod, means connecting the lower part of the gate with said first rod, and means for operating said first rod.

1,228,708. GATE. PETER W. SOMMER, Peoria, Ill., assignor, by mesne assignments, to The First Trust and Savings Company, Cleveland, Ohio, a Corporation of Ohio, and William E. Stone, Peoria, Ill., trustees. Filed June 21, 1915. Serial No. 35,440. (Cl. 39—80.)



In a gate, in combination, a frame including upper and lower horizontal tubular reach bars and a pair of spaced vertical tubular reach bars flexibly connected, a collar slidable on the lower horizontal reach bar near its front end, said collar having a diameter but little larger than the diameter of said reach bar, so as to adapt the collar to be inclined on said bar to bind there against, an arm extension connected with said collar and having an eye, a rod connected to the eye of said arm, said rod extending diagonally up and across the gate and connected to the upper end of the rear vertical reach bar above its connection with the upper horizontal reach bar.

1,228,709. TRACTION-ENGINE. WILLIAM O. STARK, Chicago, Ill., assignor to Bullock Tractor Co., Chicago, Ill., a Corporation of Illinois. Continuation in part of application Serial No. 785,675, filed Aug. 20, 1913. This application filed Apr. 5, 1916. Serial No. 89,202. (Cl. 21—114.)

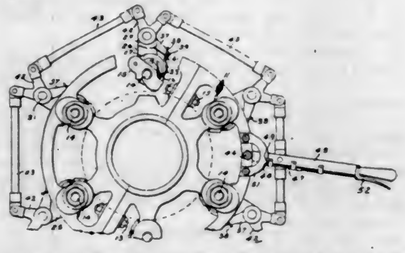


1. In a tractor of the type described, an endless track band constructed of articulated members, each member having two oppositely extending bosses, said members being substantially box shaped, said members comprising top and bottom members, said top members affording a wide smooth uninterrupted track, and a driving sprocket, said driving sprocket comprising a drum, said drum being constructed to run on said smooth upper surface, said drum having on its two margins radially projecting teeth, said teeth being constructed to overlap the sides of said box-shaped members, to engage the oppositely extending bosses of said articulated members.

2. In a tractor of the type specified, an endless track band comprising a series of shoes, each shoe having wide box-shaped member, the upper surface of said member being constructed to form a track, said box-shaped members being hingedly connected one to the other, there being a boss laterally projecting from opposite sides of said box-shaped members, a twin driving sprocket for said endless track band, said driving sprocket comprising a drum, said drum being constructed to run on the upper surface of said box-shaped members, there being on the margins of said drum radially projecting teeth or cogs, said cogs being constructed to engage the said laterally projecting bosses on said box-shaped members.

3. In a tractor, the combination, of an endless track band comprising a plurality of pivotally connected box-shaped members, said members having plane upper surfaces affording an uninterrupted path or track, each of said members having lateral, axially-alined projections, said projections extending from the sides of said box-shaped members, and a driving element for said endless band, said driving member being a wide drum constructed to roll on the said wide surface of said track, there being at the opposed margins of said drum radially projecting teeth, said teeth being constructed to engage said projections at a point medially of the length of said teeth, there being no contact of said projections with said teeth at the jointure of said teeth with said drum.

1,228,710. BRUSH-LIFTING MECHANISM. CHARLES W. STEEN, Norwood, Ohio, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed June 19, 1914. Serial No. 846,205. (Cl. 200—24.)



1. In a dynamo-electric machine, a brush holder, a brush mounted thereon and movable relatively thereto into and out of engagement with a collecting surface, means coöperative with sai brush holder and said brush for resiliently urging said brush into engagement with said collecting surface, actuating mechanism, and a permanent flexible connection between said actuating mechanism and said brush and independent of said urging means whereby said brush may be moved relatively to said brush holder and away from said collecting surface.

2. In a dynamo-electric machine, a supporting frame, a brush rod mounted on said frame, a brush holder mounted on said rod, a brush movably mounted on said brush holder, a member rotatably mounted adjacent said brush holder, supporting means for said member secured to said brush rod, and a permanent operating connection between said rotatably mounted member and said brush, whereby said brush may be moved relatively to said brush holder on the rotation of said member.

3. In a dynamo-electric machine, a supporting frame, a plurality of circumferentially spaced brush rods secured in operative position on said frame, a plurality of brush holders mounted on each rod, brushes movably mounted in said brush holders, means associated with each of said brush holders for resiliently urging the corresponding brush into engagement with a current collecting surface, movably mounted members supported in operative position by said brush rods, actauting means for said members, and operating connections between said movable members and said brushes and independent of said urging means whereby said brushes are raised on the actuation of said members.

4. In a dynamo-electric machine, a brush holder, a brush mounted for movement relatively thereto, means for resiliently urging said brush into engagement with a current collecting surface, a member rotatably mounted

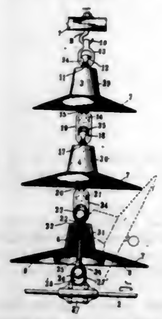


adjacent said brush holder, a flexible connection between said brush and said member, said connection being fixed at one end to said brush and being adjustably connected at the other end to said rotatable member and being independent of said urging means.

5. In a dynamo-electric machine, a supporting frame, a plurality of circumferentially spaced brush rods secured in operative position on said frame, a plurality of brush holders mounted on said rods, brushes movably mounted in said brush holders and engageable with a collecting surface of the machine, means associated with said brush holders for resiliently urging said brushes into engagement with said collecting surface, supports mounted on said brush rods, movable members operatively mounted on said supports, means for mechanically connecting the movable members mounted on the several brush rods for simultaneous operation, and permanent flexible connections between said movable members and said brushes and independent of said urging means whereby said brushes may be moved from engagement with said collecting surface on the actuation of said movable members.

[Claim 6 not printed in the Gazette.]

1,228,711. CONNECTING DEVICE FOR CHAIN-TYPE INSULATORS. LOUIS STEINBERGER, Brooklyn, N. Y. Filed Dec. 6, 1912. Serial No. 735,293. (Cl. 173—318.)



1. In a chain type insulator, means for flexibly connecting adjacent insulating units thereof, comprising a member having sockets at its opposite ends, ball shaped portions formed upon adjacent insulating units projecting into said sockets, so as to comprise ball and socket connections with said insulating units, said connecting member being tubular and having a pair of openings formed in its opposite walls through which said balls may pass respectively, for detachment from said connecting member, and said openings being arranged in lapping relation, whereby movement of one ball to a position before its respective opening will dispose a portion of that ball before the other opening to retain the other ball against movement to position before said other opening, and prevent simultaneous detachment of both of said balls.

2. As an article of manufacture, a connecting member of the class described, having means at one end for forming one element of a ball and socket joint, and also having other means at one end for forming one element of a simple hinge joint.

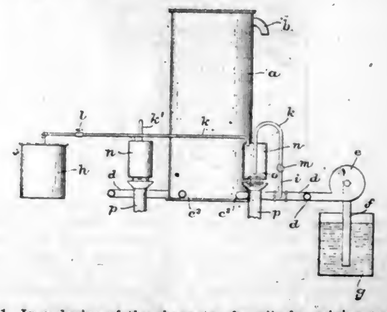
3. As an article of manufacture, a connecting member of the class described, having a part at one end for forming one element of a ball and socket joint, and said part having an aperture extending therethrough, the walls of said aperture providing means for forming one element of a single hinge joint.

4. As an article of manufacture, an insulating unit, a part carried thereby, by which the insulator unit may be connected to a support, said part having means for forming one element of a ball and socket joint, and said part also having means for forming one element of a simple hinge joint.

5. In a chain type insulator, means for flexibly connecting together adjacent units thereof, said means comprising a connecting member having a pair of sockets therein, ball-shaped members formed upon said adjacent units projecting into said sockets so as to comprise ball and socket connections between said units and said connecting members, one of said members having means whereby said members may be disconnected, and said two members having coöperative portions for preventing detachment of both said ball-shaped members simultaneously from their respective sockets.

[Claim 6 not printed in the Gazette.]

1,228,712. APPARATUS FOR STERILIZATION OF LIQUIDS BY OZONE. JAN STEYNIS, Bay Shore, N. Y., assignor to Steynis Ozone Company, a Corporation of New York. Filed Nov. 24, 1914. Serial No. 873,702. (Cl. 210—1.)



1. In a device of the character described a mixing tank, means for injecting liquid and gas into said tank, gas supplying means, a safety reservoir, a connection between said gas supplying means and said safety reservoir, and a connection between said safety reservoir and said injecting means.

2. In a device of the character described a mixing tank, means for injecting liquid into said tank, gas supplying means, a safety reservoir, a valve in said reservoir, a connection between said gas supplying means and said reservoir and a connection between said reservoir and said injecting means.

3. In a device of the character described, a mixing tank, means for injecting liquid and gas into said tank, means for supplying liquid to said injecting means, gas supplying means connected to said injecting means, and a safety reservoir interposed in the connections between the gas supplying means and the injecting means whereby the liquid is prevented from entering the gas supplying means in case of the failure of said liquid supplying means.

4. In a device of the character described, a mixing tank, means for injecting liquid and gas into said tank, said means being so constructed that the liquid and the gas in the tank are given a rotary movement, gas supplying means, a safety reservoir, a connection between said gas supplying means and said safety reservoir, and a connection between said safety reservoir and said injecting means.

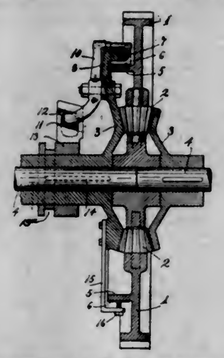
5. In a device of the character described, a mixing tank, means for injecting liquid into said tank, said means being so constructed that the liquid in the tank is given a rotary movement, gas supplying means, a safety reservoir, a valve in said reservoir, a connection between said gas supplying means and said reservoir, and a connection between said reservoir and said injecting means.

[Claims 6 and 7 not printed in the Gazette.]

1,228,713. DIFFERENTIAL TRANSMISSION-GEAR. CHARLES H. STINSON, Watertown, S. D. Filed Mar. 4, 1916. Serial No. 82,105. (Cl. 74—34.)

1. In a differential gear mechanism, the combination with a master wheel, opposing beveled gears, and an intermediate planetary pinion of a differential gear mechanism, of an annular part of said master wheel having a

brake surface, a movable brake element carried by one of said beveled gears and coöperating with the said brake surface of said master wheel, a brake lever pivoted to the same beveled gear and connected to the said movable brake element, and a sliding collar arranged to rotate with said beveled gear to which said lever is pivoted, and operatively connected to the said brake lever.

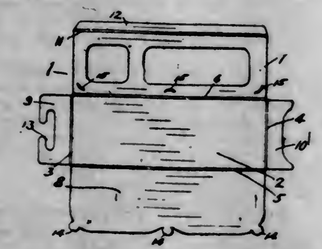


2. The combination with the master wheel, opposing beveled gears and interposed planetary pinion of a differential gear mechanism, of an annular brake flange on said master wheel, a brake band working on said brake flange and anchored at one end to one of said beveled gears, a brake lever pivoted to the same beveled gear and connected to the other end of said brake band, and a sliding collar arranged to rotate with the said beveled gear to which said brake lever is pivoted, but having a sliding movement in respect thereto, and having a connection with said brake lever for causing the same to set and release the brake band.

3. The combination with the master wheel, opposing beveled gears and interposed planetary pinion of a differential gear mechanism, of an annular brake flange on said master wheel, a brake band working on said brake flange and anchored at one end to one of said beveled gears, a brake lever intermediately pivoted to the said same beveled gear and connected at its outer end to the other end of said brake band, and a sliding collar arranged to rotate with the said beveled gear to which said brake lever is pivoted, but having a sliding movement in respect thereto, said sleeve having an outstanding portion formed with an oblique slot operating on the inner end of said brake lever to cause the same to set and release the brake band.

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1,228,714. DISPLAY-BOX. JOHN H. STORTZ, Philadelphia, Pa. Filed Aug. 25, 1914. Serial No. 858,448. (Cl. 229—87.)

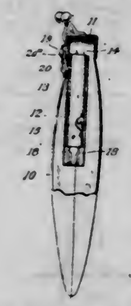


1. A display box, including a back having inwardly folding end flaps to retain the contents of the box in position, a front wall having a viewing opening therein, said front wall having a longitudinal infolding flap, said infolding flap of the front being received between the flaps of the back and the back to lock the front with the back, and a closure-wall overlying said front wall, all in a single piece.

2. A display box, including a back having inwardly folding end flaps to retain the contents of the box, one of said end flaps being adapted to suspend the contained objects, a front wall having a viewing opening therein, said front wall having a longitudinal infolding flap, said infolding flap of the front being received between the flaps of the back and the back to lock said front with the back, and a closure wall overlying said front wall, all in a single piece.

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1,228,715. BAG. GUSTAVUS E. STRAUSS, New York, N. Y. Filed May 18, 1916. Serial No. 98,258. (Cl. 150—28.)



1. The combination with a bag, of an inner receptacle movably mounted inside of the bag and releasably held therein, and means for automatically raising the receptacle when the same is released.

2. The combination with a bag having a mouth, of an inner receptacle movably mounted inside the mouth of the bag, means for automatically raising the purse, and a manually releasable catch to hold the receptacle in depressed position.

3. The combination with a bag having a mouth and a frame defining said mouth, of an open-top carrier fixed to the said frame inside the bag mouth, an inner receptacle mounted to slide in said carrier, and spring means to raise the receptacle in said carrier.

4. The combination with a bag having a mouth, a frame defining the bag mouth and comprising two pivoted members, an open-top carrier fixed to one of said members, an inner receptacle slidably mounted in said carrier and spring means at the bottom of said carrier to raise the receptacle therein.

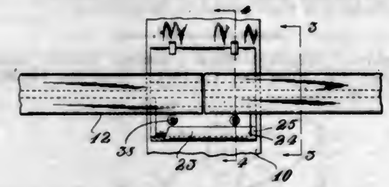
5. The combination with a bag having a mouth, a frame defining the bag mouth, an open-top carrier fixed at its upper end to said frame, an inner receptacle mounted to slide vertically in said carrier, spring means for raising the receptacle out of the bag mouth into position for convenient access, and manually releasable means to hold the receptacle in its lower position in said carrier.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,716. RAIL-JOINT. MIKOLAJ TARAS, Toledo, Ohio, assignor of one-half to John Bartuzel, Youngstown, Ohio. Filed Oct. 19, 1916. Serial No. 126,506. (Cl. 239—6.)

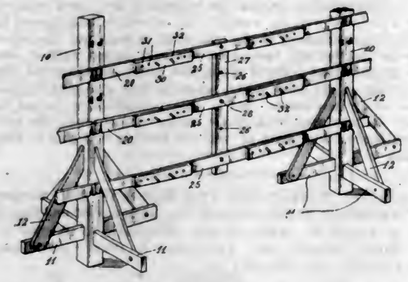
In a rail joint, a splice bar comprising a vertical side portion provided at its lower edge with an out-turned flange adapted to overlie the base of a rail, a base plate formed integrally with the outer edge of said flange adapted to underlie the rail, a raised resilient element formed on the opposite side of said base plate, a second splice bar of lesser length having a vertical portion engageable with the stem of the rail and a flange portion adapted to overlie the base of the rail, said flanged portion being engageable below said resilient portion of the first named splice bar, means formed with said first mentioned splice bar preventing longitudinal motion of the



second splice bar, and means for securing both of said splice bars to the rails and tie therebelow.

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1,228,717. FARM-FENCE. PETRO TATARYN, Chester, Pa. Filed Mar. 2, 1917. Serial No. 151,933. (Cl. 256—59.)



In a fence of the class described, the combination with posts having transverse elements rigidly attached at the lower end and containing a plurality of paired openings passing transversely therethrough, bolts engageable in said openings, said bolts having a hooked outer end, a sleeve and washer on said bolts whereby they are permitted to be drawn tightly against the base of said post, longitudinally disposed main rails having slots extending from their lower side toward their center adjacent to one end thereof, connecting rails engaging with said main rails disposable between pairs, cleats combined with said main and connecting rails whereby the same may be held in alinement, and bars disposed centrally between said posts to which said connecting rails are attached.

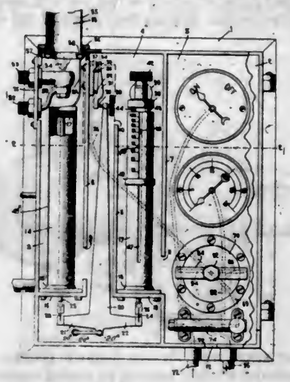
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1,228,718. HUMIDITY-CONTROLLING APPARATUS. ALBERT W. THOMPSON, Fitchburg, and EDWARD W. COMFORT, Winchester, Mass., assignors to The G. M. Parks Company, Fitchburg, Mass., a Corporation of Massachusetts. Filed Nov. 10, 1915. Serial No. 60,804. (Cl. 236—27.)

1. In a thermostatic regulating device comprising expansible members adapted for exposure respectively to the dry and wet bulb temperatures of the atmosphere and means operable by their conjoint action to control a source of energy; means for supplying the wet bulb member with moisture precipitated from a supersaturated sample of atmosphere and collected by means other than the walls of said wet bulb member.

14. A thermostatic regulating device comprising wet and dry bulb expansible members of different predetermined lengths, each having a uniform co-efficient of expansion independent of its length, the ratio of the length of the wet bulb member to the length of the dry bulb member being identical with the relation between the dry bulb temperature and the wet bulb temperature at a desired condition of humidity.

19. In a thermostatic regulating device comprising expansible members adapted for exposure respectively to the dry and wet bulb temperatures of the atmosphere, means for maintaining the wet bulb member at the psychrometric wet bulb temperature of the atmosphere, means for adjusting and for correlating the effective length of the dry bulb member in a predetermined ratio to the length of the wet bulb member corresponding inversely to the relation of the dry bulb temperature to the wet bulb temperature of the atmosphere at a predetermined condition of humidity.



21. A thermostatic regulator comprising a pneumatically actuated relay valve adapted to control a source of energy, a bypass for controlling said relay valve, a valve for said by-pass, expansible members adapted for exposure to the dry and wet bulb temperatures of the atmosphere, means operable by the conjoint action of said members to control the by-pass valve, means for causing a continuous sample of the atmosphere to traverse successively the dry and wet bulb members, means for supersaturating the sample of atmosphere thereafter, means for precipitating and collecting excess moisture therefrom, and means for enveloping said wet bulb member in the precipitated fluid thus obtained.

23. In a thermostat... ...ing device, hollow cylindrical expansion members adapted for exposure respectively to the dry and wet bulb temperatures of the atmosphere, means for immovably retaining one end of each member, means for supplying the wet bulb member with an envelop of moisture, means, operable by the conjoint action of said members to control a source of energy, fixedly secured to said wet bulb member at a suitable distance from its fixed end and adjustably secured to the dry bulb member at a distance from its fixed end.

[Claims 2 to 13, 15 to 18, 20, 22, 24, and 25 not printed in the Gazette.]

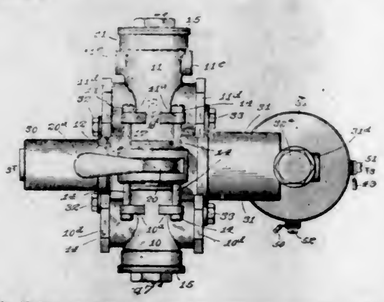
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1,228,719. ELECTROPNEUMATIC TRIPLE-VALVE MECHANISM FOR COUPLING SYSTEMS. CHARLES H. TOMLINSON, Mansfield, Ohio, assignor to The Tomlinson Coupler Company, Denver, Colo., a Corporation of South Dakota. Filed Mar. 30, 1914. Serial No. 828,157. (Cl. 137—26.)

1. Valve mechanism for car coupler systems and the like comprising a plurality of operatively connected valve members, a housing for said members, two cylinders opening on the interior of said housing and providing opposed openings for receiving each a piston on a common plunger, means for operating said valve members from said plunger, connections for admitting fluid pressure for operating each of the pistons on said plunger, and means for controlling the fluid-pressure connections to one of the pistons on said plunger comprising a valve, elastic means for seating said valve, and an electrically operated device for unseating said valve to admit fluid pressure into the cylinder of said piston.

2. Valve mechanism for car coupler systems and the like, comprising a valve housing or casing consisting of

a central compartment with two diametrically opposed housings or casings in the form of frusta of cones secured to the said central housing with their ends of smallest diameter engaging the central housing, valve members of the general form of frusta of cones within the casings or housings, means for closing the outer extremities of said casings or housings, elastic means interposed between said last-mentioned means and the said valve members for holding them in their normal seated position, and common means in the central housing for operating the said valve members.



3. Valve mechanism for car coupler systems and the like, comprising a valve housing or casing consisting of a central compartment with two diametrically opposed housings or casings in the form of frusta of cones secured to the said central housing with their ends of smallest diameter engaging the central housing, valve members of the general form of frusta of cones within the casings or housings, means for closing the outer extremities of said casings or housings, elastic means interposed between said last-mentioned means and the said valve members for holding them in their normal seated position, common means in the central housing for operating the said valve members, comprising a lever engaging both said valve members, and a pneumatically-operated reciprocating plunger operatively connected with said lever.

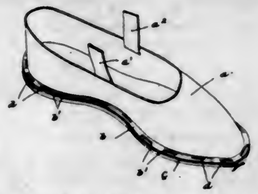
4. In a valve mechanism for car coupler systems, and the like, the combination with a central casing, of two cylinders of unequal diameters located on the same axial line with each other on diametrically opposite sides of said central casing, conical valve chambers in communication with said central casing and extending on diametrically opposite sides thereof at approximately right angles to said cylinders, respective valve members in said valve chambers being adapted to control the passage of fluids through said chambers, respective pistons in said cylinders of unequal diameters and coöperating therewith, a rigid connection between said pistons, and an operative connection between said piston connection and said valve members for operating the latter.

9. In a valve mechanism for car coupler systems, the combination with a central casing, of two cylinders of unequal diameters located on the same axial line with each other, on diametrically opposite sides of said central casing, conical valve chambers in communication with said central casing and extending on diametrically opposite sides thereof at approximately right angles to said cylinders, respective perforated valve members in said valve chambers being adapted to control the passage of fluids through said chambers, respective pistons in said cylinders being rigidly connected to operate synchronously, connections between said valves and said pistons for operating them upon the operation of the pistons, a metallic housing adjacent the larger one of said cylinders, there being a fluid inlet port communicating between the interior of said housing and the interior of said cylinder, and a port leading to the atmosphere through the wall of said housing and communicating with said inlet port, means for supplying fluid pressure to the interior of the housing, and a valve controlled device for admitting fluid pressure through the inlet port into the cylinder and closing the passage to the atmosphere and for closing the passage to the inlet port and opening the passage therefrom to the port to the atmosphere at the will of the operator.

[Claims 5 to 8 not printed in the Gazette.]

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1,228,720. BATHING-SHOE. BERTHA TROUTT, Rosemont, Pa. Filed Feb. 13, 1917. Serial No. 148,332. (Cl. 36—15.)



A bathing shoe having the bottom of the upper secured to a strip or welt by a single line of stitching adjacent to the inner periphery of the said strip or welt and the latter projecting beyond the outline of said upper with a row of perforations located along the outer edge beyond the contour of the said upper, whereby the said perforations are easily accessible, and a sole removably attached to said strip or welt by a single lacing cord through the perforations of said strip or welt for holding said sole to said shoe.

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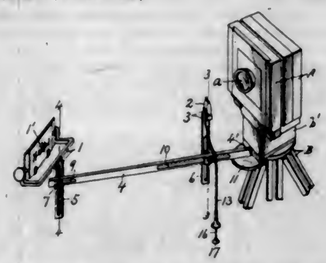
1,228,721. NOSE-CLAMP FOR EYEGLASSES. ROBERT HENDERSON TUDOR, Atlanta, Ga., assignor of one-fourth to James W. Hubbard and one-fourth to Walter N. Baker, Atlanta, Ga. Filed July 5, 1916. Serial No. 107,648. (Cl. 88—50.)



An eye glass frame embodying arms provided with balls; nose clamps; and sockets on the nose clamps and receiving the balls, the clamps having slots receiving the arms, the slots being elongated transversely of the nose clamps, thereby to prevent the frame from tilting forwardly and rearwardly, but to permit the clamps to have tilting movements in two directions, one of which is longitudinally of the nose of the wearer, the other of which is transversely of the nose of the wearer, thereby permitting the clamps to conform to both the vertical slope of the nose and to the horizontal slope of the nose.

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1,228,722. PHOTOGRAPHIC APPARATUS. WILLIAM VERBECK, Manlius, N. Y., assignor to Katherine J. Verbeck, Manlius, N. Y. Filed Oct. 6, 1914. Serial No. 865,312. (Cl. 88—24.)



1. In combination with a photographic camera, means for photographing an object outside of the field of the camera simultaneously with the photographing of such field, said means including a light-refracting medium focused on said object and adjustable to direct the rays of light from said object into and out of the field of the camera-lens.



2. In combination with a photographic camera, means for photographing an object outside of the field of the camera-lens simultaneously with the photographing of said field, said means including an auxiliary lens focused on said object, and means for moving the auxiliary lens into and out of said field.

3. The combination with a photographic camera, of a converging lens adjustable to focus upon an object outside of the camera-field, and means for moving said lens into and out of said field while it is focused on said object.

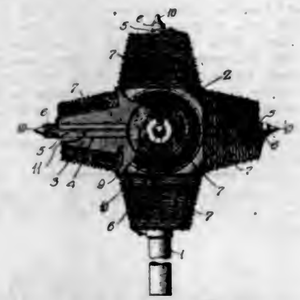
4. In combination with a photographic camera, means for supporting an object outside of the field of the camera and at a different distance therefrom than that for which the camera is focused, and a light-refracting medium focused on said object and adapted to be positioned so as to direct the rays of light from said object to the camera-lens for impressing the image of said object upon the sensitized member simultaneously with the photographing of the field.

5. The combination with a photographic camera, of a converging lens, means for adjusting said lens to focus upon an object outside of the field of the camera, separate means for adjusting the lens into and out of such field while focused on said object.

[Claims 6 to 10 not printed in the Gazette.]

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1,228,723. EXPLOSIVE PROJECTILE. ENID S. WALES, Detroit, Mich., assignor of one-half to Henrietta K. Pierce, Detroit, Mich. Filed May 22, 1916. Serial No. 99,055. (Cl. 102—29.)



1. An explosive projectile carrying wire coils detachably secured on the exterior and having means adapted to project the wire in various directions when the projectile is disrupted by a contained charge.

2. An explosive projectile comprising a stem, a chambered head on the stem carrying an explosive charge, wire coils arranged on the exterior of the head, and means carried by the head adapted to project the wire therefrom when the charge is exploded.

3. An explosive projectile comprising a stem, a chambered head on the stem, extensions from the surface of the head, coils of wire disposed on the extensions, and means in the extensions connected to the wire for distributing the latter in various directions when the charge carried by the head is exploded.

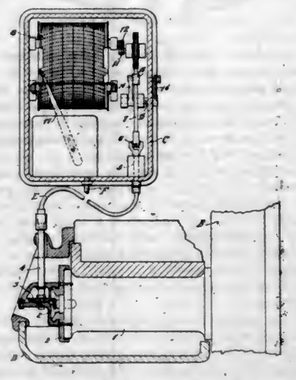
4. An explosive projectile comprising a stem adapted to be inserted in a piece of ordnance, a chambered head with charge secured on the stem, lateral extensions from the head, wire coils disposed on the extensions, and means secured to the outer ends of the coils and adapted to be projected with a rifling motion from the head by the explosion of the charge thereof.

5. An explosive projectile comprising a stem adapted to fit the barrel of a piece of ordnance, a chambered head thereon, lateral extensions on the head provided with rifled openings, studs fitting the openings, coils of wire disposed on the extensions each secured to a stud and means on the stud for firing the charge in the head chamber.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,724. DRIVING MECHANISM FOR RECORDING APPARATUS. JAMES T. WALLIS, Altoona, Pa. Filed Nov. 6, 1914. Serial No. 870,566. (Cl. 74—7.)



1. In combination in an axle driving means for a recording instrument, an axle, a journal box, a journal member mounted for rotation upon and with respect to the end of the rotating axle independent of the journal box, a pair of intermeshing gears, one carried non-rotatively upon the end of the axle, and the other carried by the journal member, a shaft for said other gear extending transversely of the end of the axle and held against rotation with the axle, and driving connections with the shaft adapted to operate the recording apparatus.

3. In combination in a driving mechanism for recording apparatus mounted upon a vehicle having a rotating axle, a bevel gear secured to the end of the axle and non-rotatable with respect thereto, a journal casing mounted for relative rotative movement upon the end of the axle, a second bevel gear carried in the casing and meshing with the first gear, a drive shaft for the second gear, means for preventing the shaft from turning with the axle, and driving connections with the shaft adapted to operate the recording apparatus.

5. In combination in a driving mechanism for recording apparatus mounted upon a vehicle having a rotating axle, a bevel gear having a stem threaded into the end of the axle, a cap fitting over the end of the axle and overlapping a part of said stem and preventing its unscrewing, screws extending through the cap and into the end of the axle, a two part journal member having a dovetailed engagement with the said cap and overlapping the screws, means for securing the two parts of the journal member together, a bevel gear provided with a shaft carried by the journal member and meshing with the first gear, and driving connections with the shaft adapted to operate the recording apparatus.

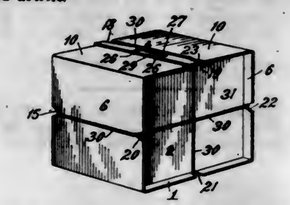
[Claims 2 and 4 not printed in the Gazette.]

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1,228,725. SHIPPING-ENVELOP. MAURICE C. WALTER, New York, N. Y., assignor to Associated Farms Co., Inc., a Corporation of New York. Filed Oct. 6, 1915. Serial No. 54,338. (Cl. 229—23.)

1. A collapsible envelop, having open ends, a tie-member to tie an article inside said envelop remote from the edges thereof, said tie-member passing across said ends and remote from the edges of the envelop, and retaining

walls lying between said tie-member and the ends of the inclosed article.



2. A collapsible envelop having open ends and provided with seats remote from the edges thereof for a cord member, a cord member adapted to tie an article within said envelop remote from the edges thereof, said cord member passing across said ends and seating in the edges thereof, and retaining walls lying between said cord member and the ends of the inclosed article.

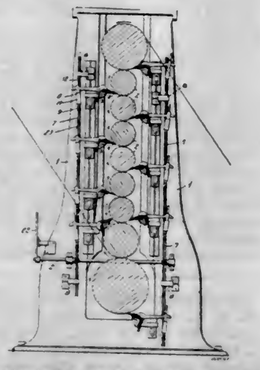
3. A collapsible envelop having open ends and provided with notches extending inwardly from and terminating remotely from the edges of the ends, said notches serving as seats for a cord member, a cord member adapted to tie an article within said envelop remote from the edges thereof, said cord member passing across said ends and seating in the notches therein, and retaining walls lying between said cord member and the ends of the inclosed article.

4. A collapsible envelop of substantially cubical form when erected, having open ends, each of the end edges of whose sides is provided with a seat for a tie-member, a tie-member to tie an article within said envelop remote from the edges thereof, said tie-member passing across said ends, and remote from the edges of the envelop, and retaining walls lying between said tie-member and the ends of the inclosed article.

5. A collapsible envelop of substantially cubical form when erected, having open ends, each of the end edges of whose sides is provided with a substantially centrally disposed notch serving as a seat for a cord, a cord adapted to tie an article within said envelop remote from the edges thereof, said cord passing across said ends and seating in said notches remote from the edges of the envelop, and upright retaining walls lying between said cord and the ends of the inclosed article.

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1,228,726. CALENDER-DOCTOR. THOMAS E. WARREN, Ticonderoga, N. Y. Filed Jan. 30, 1917. Serial No. 145,377. (Cl. 92—74.)



1. In a calendering machine, the combination of a roll, a pivotally mounted doctor coöperating therewith, an arm moving with the doctor, a latch engaging the arm and movable to detach it from the arm, a movable member on which the latch is mounted and means for moving said member.

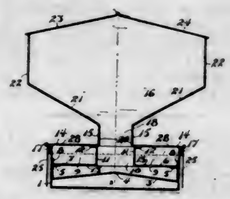
4. In a calendering machine, the combination of a roll, a doctor coacting therewith, an arm moving with the doctor, and means for holding the doctor in coaction with the roll including a detachable latch engaging said arm and consisting of two parts and a spring coöperating with them, one of which parts normally engages said arm and the other of which parts may be moved into engagement with the arm by the spring.

9. In a calendering machine comprising a stack of rolls, a set of doctors for a plurality or said rolls, means for simultaneously shifting said doctors toward and from their respective rolls, and means for individually releasing any one of said doctors without disturbing the adjustment of any other doctor.

[Claims 2, 3, 5 to 8, and 10 to 16 not printed in the Gazette.]

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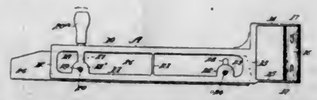
1,228,727. FEED-BOX. THEODORE WETZEL, Jr., San Francisco, Cal. Filed May 31, 1916. Serial No. 100,746. (Cl. 119—52.)



In a feed box, the combination of a sloping bottom to support the feed, a cover plate for said feed having a series of small holes therethrough, a container communicating with the space between the bottom and the cover plate, a shelf above, and spaced from, said cover plate having a series of larger holes therethrough in front of, and corresponding longitudinally with, the series of holes in the cover plate, and means for preventing access to said holes in the cover plate except through said holes in the shelf.

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1,228,728. DADO-SAW. FRANKLIN E. WHITE, Forty Fort, Pa. Filed Dec. 5, 1916. Serial No. 135,195. (Cl. 145—31.)

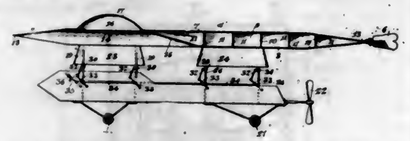


1. A dado-saw comprising a holder frame consisting of spaced parallel bars connected at their ends, a handle secured to one end of said frame, a handle secured to said frame adjacent the opposite end thereof, one of said bars having inwardly projecting lugs provided with screw-threaded apertures, screw-threaded bolts fitted in said screw-threaded apertures and projecting beyond opposite sides of the holder frame, saw blades each having transverse slots therein adapted to aline with the aforesaid screw-threaded apertures and which slots receive said bolts, one of said saw blades adapted to lie against one side of the holder frame, a set of nuts having working fit on said bolts to clamp the latter blade against the side of the holder frame, another set of nuts on said bolts on the opposite side of the holder frame and disposed therebetween and the other of said blades, and another set of nuts having working fit on said bolts to clamp said other blade adjustably on the bolts against the second set of nuts, whereby the blades may be adjusted to vary the depth and width of grooves.

[Claim 2 not printed in the Gazette.]



1,228,729. AEROPLANE. WILLIAM FRANCES WILLIAMS, Leadwood, Mo. Filed Sept. 15, 1916. Serial No. 120,376. (Cl. 244—6.)



1. An aeroplane having a body portion, wings and tail in the form of a plane of cellular structure with the top and bottom surfaces flat and substantially parallel throughout the greater portion of their areas and with the edges reduced to relative sharpness.

2. An aeroplane having a body portion, wings and tail in the form of a plane of cellular structure with the edges reduced to relative sharpness, the body portion having a channel on the under surface throughout substantially the length of the body portion as measured from front to rear of the aeroplane.

3. An aeroplane comprising a body portion, wings and tail of cellular construction and having a channel on the under surface extending from the front of the aeroplane toward the rear thereof with the channel intermediate of the wings.

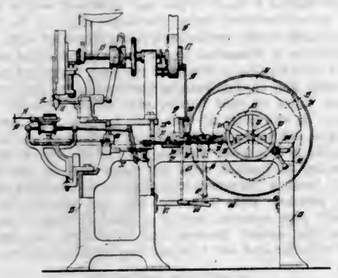
4. An aeroplane having a body with wings and tail and provided with a centralized channel extending from the front of the body portion toward the tail, the channel being open through the under surface of the body, and the upper surface of the body rising above the general plane of the top of the body and constituting an air pocket opening at the bottom into the top of the channel.

5. An aeroplane having a body portion, wings and tail with parachute structures on opposite sides of the center line at the wing portion of the body and a parachute structure back of the body portion of the aeroplane, said parachute structures being normally closed and provided with mechanical means for automatically opening them to a limited extent.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,730. CAM MECHANISM. KARL WINKLER, Newark, N. J., assignor to Mohawk Brush Company, a Corporation of New York. Filed June 28, 1915. Serial No. 36,781. (Cl. 74—1.)



1. In a cam mechanism, the combination with mechanism to be operated, of intermittently rotatable means provided with a plurality of spaced retaining tracks, relatively near each other, individual means slidably engaged with each of said tracks, and adjustable with relation to each other within the extremities of said tracks, and projecting outwardly from the surface of said rotatable means, means for securing the position of said individual means to form a cam track, and means coöperating with said track adapted to be reciprocated thereby to transmit movement to said mechanism.

2. In a cam mechanism, the combination with mechanism to be operated, of intermittently rotatable means provided with an annular cam surface, a plurality of spaced grooves therein, relatively near each other, and extending transversely of said cam surface, individual slide blocks mounted within said grooves, adjustable within the extremities of said grooves, and provided with projecting lugs, said lugs forming a cam track about said cam surface adapted to be changed by movement of said slide blocks, means for securing the position of said slide blocks, and means coöperating with said track adapted to be reciprocated thereby to transmit movement to said mechanism.

3. In a cam mechanism, the combination with mechanism to be operated, of intermittently rotatable means having a relatively wide peripheral surface, and provided on said peripheral surface with a plurality of spaced and transverse grooves therein, relatively near each other, individual slidable means removably secured within each of said grooves, adapted to project outwardly from the periphery of said rotatable means, and adapted to be individually adjusted with relation to each other, within the extremities of said grooves to form a cam track, means coöperating with said track adapted to be reciprocated thereby, and to transmit movement to said mechanism.

4. In a cam mechanism, the combination with mechanism to be operated, of intermittently rotatable means provide with a plurality of spaced retaining tracks, relatively near each other, individual means slidably engaged with each of said tracks, and adjustable with relation to each other within the extremities of said tracks, and projecting outwardly from the surface of said rotatable means, means for securing the position of said individual means to form a cam track, and means coöperating with said track adapted to be reciprocated thereby, and comprising a slidable member, opening and closing members carried thereby, means for opening the said members simultaneously with the intermitent movement of said rotatable means, means for closing the members between the movements of the said rotating wheel, spaced guiding means carried by the said opening and closing members, the spaced projecting means of the cam track adapted to intermittently engage between the said guiding means upon opening of said members, the said guiding means adapted to engage said projecting means upon closing of said members, the relative positions of the said projecting means causing corresponding reciprocatory motion of said slidable member, the movement of said slidable member adapted to transmit movement to said mechanism.

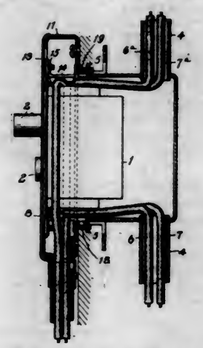
5. In a cam mechanism, the combination with mechanism to be operated, of movable means provided with a plurality of spaced retaining tracks, relatively near each other, individual means slidably engaged with each of said tracks, and adjustable with relation to each other within the extremities of said tracks, and projecting outwardly from the surface of said rotatable means, means for securing the position of said individual means to form a cam track, and means coöperating with said cam track adapted to be moved thereby to transmit movement to said mechanism.

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1,228,731. CIRCUIT EXTENSION-BOX. CHAUNCEY W. ABBOTT, Auburn, N. Y., and HENRY R. GILSON, Baden, and JAMES M. G. FULLMAN, Sewickley, Pa., assignors to National Metal Molding Company, Pittsburgh, Pa., a Corporation. Filed May 26, 1914. Serial No. 841,062. (Cl. 247—5.)

1. A circuit extension box comprising a substantially flat bottom portion adapted to be attached to and to extend laterally from the open side of an outlet box for a switch and having a central open area adapted to receive the body of a switch, a side wall extending substantially vertical to said bottom and from the outer edge thereof, said bottom and side wall forming an open channel to receive and contain electrical conductors, and switch-supporting brackets formed integrally with said bottom portion and extending from the edge of the central opening therein at

angles to the general plane of said bottom portion and in the same general direction as the side wall.



2. A circuit extension box comprising a substantially flat bottom portion adapted to be attached to and to extend from the open side of an outlet box for a switch and having a central opening adapted to receive the body of a switch, a side wall extending substantially vertical to said bottom portion and from the outer edge thereof, said bottom and side wall forming an open channel to receive and contain electrical conductors, and switch-supporting brackets extending angularly from the edge of the central opening of the bottom portion and in the same general direction as said side wall, said side wall and brackets being formed integrally with the bottom portion.

3. A circuit extension box comprising a bottom portion with a central opening, a side wall extending from the outer edge and switch-supporting brackets from the inner edge of said bottom portion and substantially vertical to the plane thereof, said wall and brackets being formed integrally with the bottom portion and extending substantially the same distance and in the same general direction therefrom, and said bottom and side wall forming an open channel to receive and contain electrical conductors.

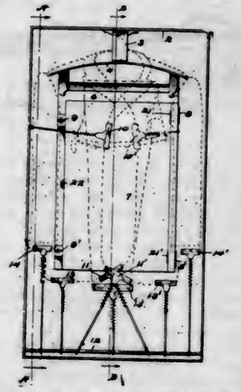
4. The combination of an outlet box having an open face and provided with lugs extending laterally from opposite sides thereof, a circuit extension box adjacent to said open face and comprising a bottom portion extending laterally from the sides of said outlet box and a wall projecting vertically from the outer edge of the bottom portion, said bottom having a central opening and provided with oppositely disposed elongated slots, and securing members extending through said slots and engaging said outlet box lugs, whereby said boxes may be adjusted with relation to each other in the general plane of their attachment.

5. The combination of an outlet box having an open face and provided with lugs extending laterally from opposite sides thereof, a circuit extension box adjacent to said open face and having as a part thereof a bottom portion extending laterally from the sides of said outlet box, said bottom portion having a central opening registering with the open face of the outlet box and provided with a pair of screw-receiving elongated slots disposed on opposite sides of said opening, a screw extending through each of said slots and engaging said outlet box lugs, the end of one of said slots diverging from said central bottom opening and provided with an enlargement adapted to receive the head of the screw in such slot, and the other of said slots opening into said central bottom opening.

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1,228,732. GARMENT RECEPTACLE AND HANGER. EDWARD L. ADAMS, Bradford, Pa. Filed July 10, 1916. Serial No. 108,409. (Cl. 206—7.)

1. A garment receptacle of the character described, comprising a casing having fixed garment supporting means, and detachable garment edge staying means yieldingly attached to fixed supports, whereby tension is applied between the garment edges and the fixed supports.

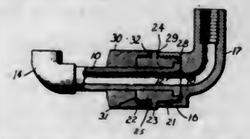


5. In a garment receptacle the combination of an outer casing, an inner casing having garment supporting means, with means for maintaining a garment folded around said inner casing, comprising detachable garment edge staying means, with means for applying tension to the edge staying means and the inner casing garment supporting means.

[Claims 2 to 4 and 6 to 9 not printed in the Gazette.]

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1,228,733. PIPE-COUPLING. HENRY ARALL, Portland, Oreg. Filed Aug. 24, 1916. Serial No. 116,692. (Cl. 137—34.)



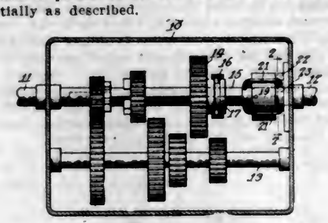
An all metal swivel pipe coupling consisting of a pipe member having a head at one end provided with a recess and a screw-threaded flange, the outer edge of the flange and the base of the recess each being provided with bearing surfaces, a threaded socket member provided with a central bore having a recess at one end, a central peripheral flange and having bearing surfaces at its ends and on opposite faces of said flange, said socket member being mounted in the head of said pipe member with one end bearing in contact with the bearing surface at the base of the recess in said head and one face of its central peripheral flange in contact with the outer edge of the flange on said head, a threaded coupling sleeve mounted on the socket member and inclosing the end thereof, and a revoluble pipe member having a head resting in the recess in the socket member and extending through the socket member and out through the coupling sleeve.

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1,228,734. AUTOMATIC BRAKE. ALBERT H. ALKIRE, Des Moines, Iowa. Continuation of application Serial No. 132,139, filed Nov. 18, 1916. This application filed Feb. 8, 1917. Serial No. 147,383. (Cl. 21—8.)

1. In a device of the class described, the combination of a driven shaft, a stop in proximity thereto, a pawl mounted on said shaft on a transverse pivot and unbalanced with relation to said pivot, said pawl being mounted in such relation to said stop as to engage the same when the shaft is stopped and to be rigidly held out of engagement by centrifugal force when said shaft is rotated and means for retaining said pawl in an inoperative position to permit of reverse rotation of said shaft, substantially as described.





3. In a safety brake, the combination of a shaft, a slotted collar thereon, an unbalanced pawl in said slot, a cam with which said pawl may coöperate to prevent accidental reverse rotation of said shaft and means for retaining said pawl in an inoperative position to permit of reverse rotation of said shaft, substantially as described.

6. In an automobile brake, the combination with the transmission shaft, a pawl pivotally mounted thereon, and a ratchet tooth fixed in the path of the pawl and having an abrupt face and an inclined face over which latter the pawl slides when the shaft is revolving in a direction to move the machine forward, of means connected with the reverse lever for holding the pawl out of contact with said tooth, substantially as described.

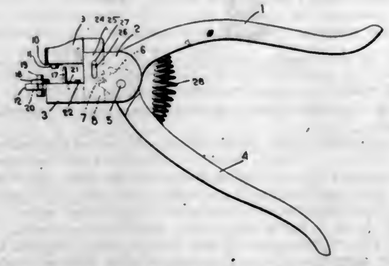
8. In an automobile brake, the combination with the transmission shaft, a disk fixed thereon, a pawl pivoted in the edge of the disk and having one end heavy and the other end turned inward toward the shaft, and a ratchet tooth fixed on an adjacent member in the path of the heavy end of the pawl, of another disk slidably mounted on the shaft adjacent said inturned end of the pawl, and connections between this disk and the reverse lever, whereby movement of the lever slides the disk and throws the heavy end of the pawl outward, for the purpose set forth.

9. In an automobile brake, the combination with the transmission shaft, a pawl pivotally mounted thereon, and a ratchet tooth fixed in the path of the pawl and having an abrupt face and an inclined face, of an element slidably mounted on the shaft and adapted in one position to hold the pawl out of contact with said ratchet tooth, a lever within reach of the driver, and connections between said element and the lever, for the purpose set forth.

[Claims 2, 4, 5, and 7 not printed in the Gazette.]

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1,228,735. EYELET-SETTING DEVICE. MARCUS O. ANTHONY, Englewood, N. J., assignor to A. Kimball Company, New York, N. Y., a Corporation of New York. Filed Aug. 17, 1914. Serial No. 857,080. (Cl. 218—25.)



1. An eyelet setting device comprising a pair of jaws, means for opening and closing said jaws while maintaining the same in parallelism, an eyelet receiving member carried by one of said jaws, resilient means normally holding said eyelet receiving member extended beyond the end of the coöperating jaw, and a stud yieldably mounted in said eyelet receiving member adapted to enter an eyelet positioned in the work and providing means whereby pressure upon said work will thrust said eyelet receiving jaw in operative relation to the coöperating jaw.

2. An eyelet setting device comprising a pair of pivotal handles, a pair of jaws, means including a rack and pinion operable by said handles for opening and closing said jaws while maintaining the same in parallelism, an eyelet receiving member extended beyond the end of the coöperating jaw, and a stud yieldably mounted in said eyelet receiving member adapted to enter an eyelet positioned in the work and providing means whereby pressure upon said work will thrust said eyelet receiving jaw in operative relation to the coöperating jaw.

3. An eyelet setting device comprising a pair of jaws, means for opening and closing said jaws while maintaining the same in parallelism, an eyelet receiving member carried by one of said jaws, resilient means normally holding said eyelet receiving member extended beyond the face of its supporting jaw, means carried by said eyelet receiving member adapted to be engaged by the work in which the eyelet is to be set and to be thrust thereby within the face of its supporting jaw and in operative relation to the coöperating jaw and means independent of the eyelet receiving member but movable therewith for preventing the closing of the jaws when the eyelet receiving member is in an extended position.

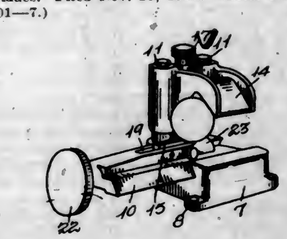
4. In an eyeleting device comprising a stationary jaw, a relatively movable hammer jaw having an eyelet crimping member and means for actuating said jaw, an anvil having a crimping member slidably mounted in said stationary jaw, a spring normally projecting said anvil beyond the end of said stationary jaw, means carried by said anvil member adapted to be engaged by the work to position the crimping members in operative relation against the resistance of the spring and a pin passing through said anvil adapted to register with an aperture in the hammer jaw when in eyelet setting position and also to engage a shoulder on the anvil supporting jaw to limit the movement of the anvil and thereby to position the clamping members in operative position.

5. An eyeleting device comprising a stationary jaw, a relatively movable hammer jaw having an eyelet crimping face, an anvil slidably mounted in said stationary jaw having a crimping member provided with a central eyelet receiving stud adapted to be forced by pressure upon the work to position the anvil crimping member in operative relation to the crimping face of a hammer member, and means carried by the anvil independently of said eyelet receiving stud adapted to engage the hammer jaw for preventing the depression of the eyelet receiving stud unless the crimping members are in proper alinement.

[Claim 6 not printed in the Gazette.]

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1,228,736. MACHINE FOR MARKING GOLF-BALLS. EDWARD F. BACHELLER and JOHN HAMMOND STEWART, Lynn, Mass. Filed Nov. 13, 1916. Serial No. 130,948. (Cl. 101—7.)



1. A golf ball marker comprising a base having a guideway, a bed fitting and movable along said guideway having projecting types, a post rising from said base, a ball guide mounted on said post to overhang said bed, being adjustable toward and away from the bed, and means for rigidly limiting the distance of said guide from said bed.

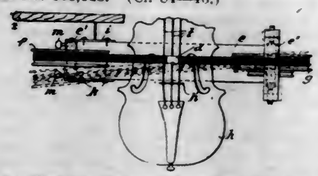
4. A golf ball marking machine comprising a base, a bed

movable on said base, a printing element carried by said bed having letters arranged in a straight line parallel to the path of the bed, a guide overhanging the bed and having walls arranged to engage a golf ball at points on opposite sides of a plane passing through the said line of letters and the center of the ball and an adjustable abutment arranged to sustain said guide against the thrust of the printing member upon the ball, and being adjustable to regulate the pressure of such thrust.

6. The combination with a golf ball marking machine having a bed and a line of printing devices carried by said bed and projecting therefrom, of a guard constructed to embrace said line of types and being of such dimensions as to lie between the faces thereof and the face of the bed.

[Claims 2, 3, and 5 not printed in the Gazette.]

1,228,737. BOW FOR PIANO-VIOLINS. LUDWIG BAJDE, Leipzig-Gohlis, and GUSTAV KARL HENNIG, Böhlitz-Ehrenberg, near Leipzig, Germany, assignors to the Firm of Ludwig Hupfeld Aktiengesellschaft, Böhlitz-Ehrenberg, near Leipzig, Germany. Filed July 3, 1914. Serial No. 848,813. (Cl. 84—46.)



1. An endless bow for piano-violins having sets of hairs crossing one another and means inserted between said sets intermediate the crossing points of the hairs to maintain them crossed.

2. An endless bow for piano-violins, comprising hanks of hair, the connecting points of said hanks being outside the effective surface, a tab of soft material forming a connecting member for the ends of the hairs and to which said ends are secured.

3. An endless bow for piano-violins, comprising two sets of crossed hairs, the hairs of one set alternating with those of the other set, pieces of soft flexible material to which the ends of the hairs of a set are secured, and additional pieces of soft material interposed between the sets of hairs at intervals between the ends of said hairs and maintaining said sets in crossed relation.

4. In an endless bow for piano-violins, crossed sets of hairs, flexible tabs to which the opposite ends of the hairs of each set are respectively connected and similar tabs interposed between the sets between the crossing points of the two sets.

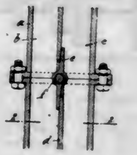
5. In an endless bow for piano-violins, sets of crossed hairs forming an endless band, and tabs of flexible material inserted between the sets and to which one portion of a set on the side of the bowing surface is secured at points between the crossing points of the sets, thereby holding the sets in proper relation and providing a continuous bowing surface of hair.

[Claim 6 not printed in the Gazette.]

1,228,738. CARBURETER FOR EXPLOSION-MOTORS. MARIUS JEAN BAPTISTE BARBAROU, Neuilly-sur-Seine, France, assignor to Societe Lorraine Des Anciens Etablissements De Dietrich & Cie De Luneville, Paris, France. Filed Feb. 1, 1916. Serial No. 75,491. (Cl. 137—26.)

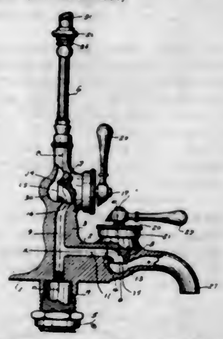
1. An obturation device for double feeding pipes leading from the carbureters to the two groups of cylinders of an explosion motor comprising in combination a tube, *a*, a median wall *d* dividing said tube into two conduits *b c* of equal cross section, a cross slot formed in said wall, and a valve flap *e* the spindle *f* of which is snugly journaled in the said slot and the two wings of which are respectively and symmetrically arranged in the two conduits, substantially as described and for the purpose set forth.

2. An obturation device for double feeding pipes leading from the carbureters to the two groups of cylinders of an explosion motor comprising in combination a tube *a*, a median wall *d* dividing said tube into two conduits *b c* of equal cross section, a cross slot formed in said wall, a valve flap *e* the spindle *f* of which is snugly journaled in the said slot and the two wings of which are respectively and symmetrically arranged in the two conduits, and special wall portions formed adjacent to the cross slot so as to afford a snugly fitting of the valve flap against said wall when the flap is in the full open position, substantially as described and for the purpose set forth.



3. An obturation device for double feeding pipes leading from the carbureters of the two groups of cylinders of an explosion motor, comprising in combination a tube, a median wall dividing said tube into two conduits of equal cross section, a cross slot formed in said wall, said wall being offset in opposite directions at opposite sides of said slot, a valve flap, the spindle of which is snugly journaled in the said slot and the two wings of which are adapted to rest in said offset portions when the flap is in the full open position, substantially as described and for the purpose set forth.

1,228,739. COMBINED FIXTURE AND VALVES FOR LAVATORIES OR THE LIKE. ANDREW J. BARR, Mansfield, Ohio, assignor of one-half to Herman E. Homberger, Mansfield, Ohio. Filed Aug. 28, 1916. Serial No. 117,148. (Cl. 137—26.)



1. A valve casing, having a plurality of main ports, a valve for controlling the discharge from said ports singly and collectively, ports intersecting said main ports, and a valve for controlling the discharge from said intersecting ports.

2. A valve casing, comprising a body having a plurality of main ports therein, means for controlling the discharge from said ports, a plurality of ports in the body, and each of which ports intersects a single main port, and means for controlling the discharge of said intersecting ports.

3. A valve casing made of a single casting having a plurality of main ports formed therein, and a plurality of ports formed in the casting communicating with said main ports, and means for controlling the flow of liquid through said ports.

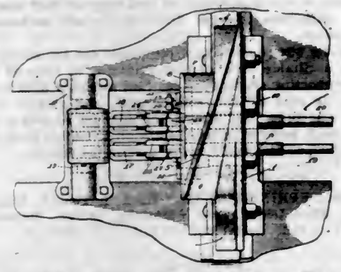
6. A valve casing, comprising two parallel ports, a valve for controlling the discharge from said ports singly and collectively, and two auxiliary ports in said casing, each auxiliary port communicating with a main port, and a valve for controlling the discharge from said auxiliary ports singly and collectively.

7. A valve casing, comprising a body having a longitudinal member and a member extending at an angle thereto, said longitudinal and angular members having ports formed therein, each of the ports in the angular member communicating with a port in the longitudinal member, and a valve in each member for controlling the flow through said ports of the respective members.

[Claims 4 and 5 not printed in the Gazette.]



1,228,740. DERAILING DEVICE. JOHN A. BODKIN, New York, N. Y. Filed May 25, 1914. Serial No. 840,686. (Cl. 104—127.)



1. A derailing device comprising a plurality of independent members adapted to pass through holes in the web of a rail, supporting means carried by said members and supported wholly thereby, and a derailing block mounted upon said supporting means, substantially as specified.

2. A derailing device comprising a plurality of independent members adapted to pass through holes in the web of a rail, supporting means carried by said members and supported wholly thereby, and a derailing block rotatably mounted upon said supporting means, substantially as specified.

3. A derailing device comprising a plurality of independent supporting members adapted to pass through holes in the web of a rail, a pin engaging said members and carried thereby, and a derailing block rotatably mounted upon said pin, substantially as specified.

4. A derailing device comprising a plurality of independent supporting members adapted to pass through holes in the web of a rail, a pin carried by the ends of said members at one side of the web of the rail, and a derailing block rotatably mounted upon said pin, substantially as specified.

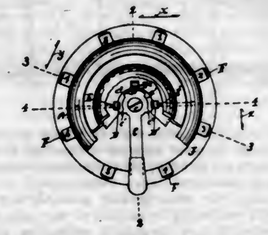
5. A derailing device comprising a plurality of supporting members adapted to be secured to a rail, each of said members comprising a shank adapted to pass through a hole in the web of the rail and having a head at one end thereof, a pin carried by the heads of said supporting members, and a derailing block rotatably mounted upon said pin, substantially as specified.

[Claims 6 to 9 not printed in the Gazette.]

1,228,741. COMBINATION ELECTRIC SWITCH. RUDOLPH A. BOEHM, Erie, Pa., assignor to Benjamin S. Putts, Erie, Pa. Filed Apr. 8, 1916. Serial No. 89,882. (Cl. 175—282.)

1. In a device of the class described, a body frame, an electric circuit therethrough, spring pressed means adapted to close said circuit, a slidable member adapted to control said spring pressed means, and a series of spring pressed push pins, some of which are adapted to move said slidable member in one direction, and others of which are adapted to move said member in the opposite direction, substantially as set forth.

2. In a device of the class described, a body frame, an electric circuit therethrough, a post secured in said frame and forming a portion of said circuit, a slidable member mounted on said post, means controlled by said slidable member adapted to make and break said circuit, and a series of spring pressed push pins, some of which are adapted to move said slidable member in one direction, and some of which are adapted to move said slidable member in the opposite direction, substantially as set forth.



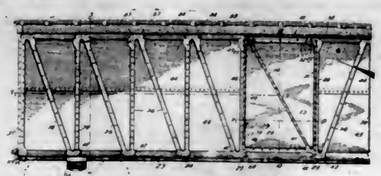
3. In a device of the class described, a body frame, a pair of electric terminals thereon, a hollow post secured thereon, an electric conductor connecting one of said terminals with said hollow post, a spring actuated slide mounted in said hollow post, a conductor connected with the other of said electric terminals and adapted to be engaged by said spring actuated slide, a slidable sleeve on said hollow post having an annular groove therein adapted to control said spring actuated slide, inclined annular surfaces around the exterior of said sleeve and a series of spring pressed push pins mounted in said frame, some of which are adapted to engage one of said inclined annular surfaces to move said sleeve in one direction and the others of which are adapted to engage the other of said inclined annular surfaces to move said sleeve in the opposite direction, substantially as set forth.

4. In a device of the character described, a body frame, a switch lever pivoted thereon, a contact point on said lever, an electric terminal secured in said body frame adapted to be engaged by said contact point, an electric conductor connected with said terminal, a post secured in said frame and contacting with said switch lever, a slidable sleeve on said post, another electric conductor, means supported by said post adapted to make and break an electric connection between said post and the last named conductor and adapted to be controlled by said sleeve, and a series of spring pressed push pins, some of which are adapted to engage and move said sleeve in one direction, and some of which are adapted to engage and move said sleeve in the opposite direction, substantially as set forth.

5. In a device of the class described, a body frame, a hollow post non-rotatably secured therein, a switch lever pivoted to one end of said post, a laterally movable spring pressed bar within said hollow post, a transverse pin secured in said spring pressed bar and slidably mounted in the wall of said hollow post, another pin secured in said spring pressed bar, and projecting through an opening in the wall of said hollow post parallel with said transverse pin, a sleeve slidably mounted in said hollow post and having an internal groove therein adapted to receive said last mentioned pin thereinto, opposing conical shoulders around said sleeve, a series of spring pressed push pins radially mounted in said frame, the inner ends of some of said pins being adapted to engage one of said conical shoulders and slide said sleeve in one direction the inner ends of others of said push pins being adapted to engage the other of said conical shoulders and slide said sleeve in the other direction, an electric conductor connected with one end of said hollow post, and another electric conductor mounted in said frame and adapted to be contacted with by said transversely slidable pin, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,228,742. FREIGHT-CAR. WILLIAM J. BOHAN, St. Paul, Minn. Filed July 12, 1915. Serial No. 39,288. (Cl. 105—192.)



1. A sheet metal car, each side of which is provided with a continuous integral member extending from end to end and having vertically and diagonally extending portions forming posts and braces, respectively.

2. A car having the sides thereof provided with continuous members extending from end to end and having alternately vertically and diagonally extending portions forming posts and braces, respectively.

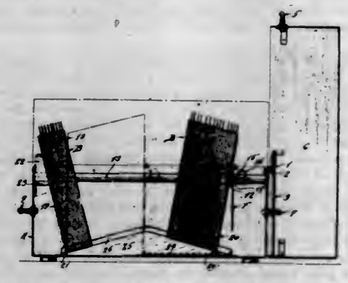
3. A steel box car provided with side doors, the posts and braces of the side walls throughout their entire length being formed of a continuous commercially shaped member, said member, at the center thereof having two vertical posts and an upper horizontal connecting portion forming the door posts and lintel.

4. A steel car the sides of which have vertical posts and diagonal braces formed integrally by a channel shaped member extending from end to end of the car, said channel shaped member at the angles where the diagonal braces and posts meet, having the outer flange thereof flattened down into the plane of the web to thereby provide a greater riveting area.

5. A car provided with side doors and having Z bar side sills, and a member on each side thereof extending continuously from end to end of the car, each of said members having alternate vertical post and diagonal brace portions from the ends of the car to the side door, said member having an upper horizontal connecting portion over the door.

[Claims 6 to 11 not printed in the Gazette.]

1,228,743. FILE-BOX. EDWARD F. BREDEHOFT, St. Louis, Mo., assignor to Geo. D. Barnard & Company, a Corporation of Illinois. Filed Oct. 23, 1916. Serial No. 127,131. (Cl. 129—16.)



2. A file box comprising a receptacle for the matter to be filed, a hinge secured to said receptacle, and a closure slidably connected to said hinge, said closure being movable upwardly about the axis of said hinge and then downwardly transversely to said axis.

4. A file box comprising a receptacle for the matter to be filed, a hinge device pivoted to said receptacle, a closure for said receptacle, guide rods secured to said closure and slidably fitted to said hinge device, said guide rods being arranged at a right angle to the axis of said hinge device.

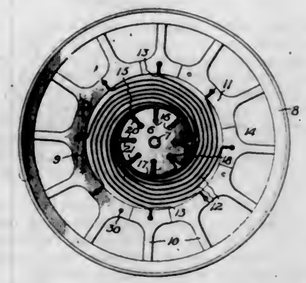
6. A file box comprising a receptacle for the sheets to be filed, a follower adjustably mounted in said receptacle, a tiltable back member arranged to lie between said follower and the filed sheets, and a retaining device to which said tiltable back member is adjustably secured, said tiltable back member being movable toward and away from said follower and adjustable to different positions along said retaining device.

9. A file box comprising a receptacle for the sheets to be filed, a pair of tiltable back members arranged in said receptacle, said tiltable back members being so arranged that the filed sheets will be confined between them, a hinge securing the lower edge of one of said tiltable back members to said receptacle, the other tiltable back member being adjustable to different positions to compensate for variations in the dimensions of the body of filed sheets, and an adjustable follower fitted to the last mentioned back member.

10. A file box comprising a receptacle for the sheets to be filed, a tiltable back member arranged to form an inclined supporting element for the filed sheets, a filler associated with said tiltable back member, and a pivot supporting said filler, said filler being adapted to retain the tiltable back member in a substantially vertical position.

[Claims 1, 3, 5, 7, and 8 not printed in the Gazette.]

1,228,744. SPRING-WHEEL. JOHN T. BREEN, Huron, S. D. Filed Dec. 7, 1915, Serial No. 65,547. Renewed Nov. 27, 1916. Serial No. 133,816. (Cl. 152—45.)



1. A wheel of the class described comprising a hub, a spoke carrying rim and a felly, said spoke carrying rim being composed of a plurality of abutting wedge shaped sections, a plurality of flat spring members being interposed between said hub and said spoke carrying rim, the outer ends of alternate spring members being clamped between the abutting edges of said wedge shaped sections of the spoke carrying rim and means for preventing their accidental displacement therefrom.

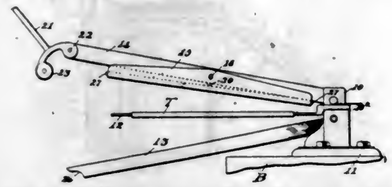
2. A wheel of the class described comprising a hub, a spoke carrying rim and a felly, said spoke carrying rim being composed of a plurality of wedge shaped sections, a plurality of flat spring members being interposed between said hub and said spoke carrying rim, the outer ends of said flat spring members having enlarged heads some of which are adapted to be clamped between the abutting edges of said wedge shaped sections of the spoke carrying rim, while the others are adapted to be embedded within said rim intermediate said abutting edges.

3. A device of the class described comprising a hub, a rim coöperating therewith, and a plurality of flat spring members interposed between the hub and rim, the inner ends of said flat spring members being embedded in slots formed in the hub and provided with means for increasing the resiliency of said flat spring members when the device is rotated in a reverse direction, said means comprising loops formed in the ends of the spring members, the walls of which are adapted to engage the walls of said slots and to be moved toward one another when the device is rotated in a reverse direction.



4. A wheel of the class described, comprising a hub and a felly provided with a plurality of spokes terminating in wedge-shaped sections integral therewith, adapted to abut one against the other, thereby forming a continuous rim surrounding said hub, a plurality of spring members interposed between said rim and said hub, adapted to resiliently support the latter, the outer ends of alternate spring members being rigidly clamped between said abutting wedge-shaped sections, while the inner ends thereof terminate in substantially V-shaped loops which are loosely embedded in suitable slots formed in the said hub, in such manner as to permit of the said V-shaped loops contracting when the spring members are placed under compression.

1,228,745. CLAMP FOR TOP-ROLL COVERS. CYRILLE CARTIER, Woonsocket, R. I. Filed Feb. 2, 1917. Serial No. 146,207. (Cl. 144—289.)



1. A clamp for a top roll cover having, in combination, a fixed upright stand, a rod effective to support a top roll cover, said rod being mounted upon said stand and held from longitudinal movement thereby, upper and lower clamping members supported by said stand, means to move one of said members toward and from said rod, and connections between said members through which movement of either member causes a simultaneous but reverse movement of the other member.

6. A clamp for a top roll cover having, in combination, a fixed stand, a rod effective to support a top roll cover and mounted on said stand, upper and lower clamping members supported by said stand, and means to clamp said members simultaneously against opposite sides of said rod, one of said members including a saddle pivotally mounted thereon in position to engage said rod.

[Claims 2 to 5 and 7 not printed in the Gazette.]

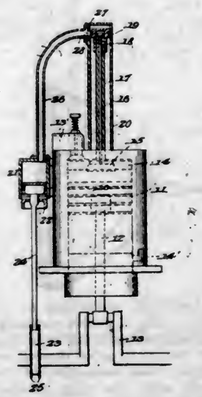
1,228,746. FIRE-EXTINGUISHER. WALTER T. CHARLES, Chicago, Ill. Filed June 17, 1916. Serial No. 104,190. (Cl. 169—12.)



1. An apparatus of the class described, comprising an elongated tubular receptacle adapted to contain a liquid, a pump cylinder rigidly mounted in said receptacle, a valve casing rigidly mounted in said receptacle medially of the ends thereof, a pair of flexible discharge pipes each having one end thereof mounted on and communicating with said valve casing, the other end of each of said discharge pipes being freely movable and being weighted for causing them to hang downward in said casing, a discharge nozzle communicating with said valve casing, and a piston slidably mounted in said pump cylinder, said pump cylinder having an air inlet communicating with the atmosphere and an air outlet communicating with the interior of said receptacle, all being adapted to pump air into said receptacle and to discharge the liquid through said discharge pipe, valve casing, and nozzle.

2. An apparatus of the class described, comprising a tubular receptacle adapted to contain a liquid, a pump cylinder mounted in said receptacle, a valve casing mounted in said receptacle medially of the ends thereof, a pair of flexible discharge pipes each having one end thereof mounted on and communicating with said valve casing, the other end of each of said discharge pipes being freely movable and being weighted for causing them to hang downward in said casing, a discharge nozzle communicating with said valve casing, and a piston slidably mounted in said pump cylinder, said pump cylinder having an air inlet communicating with the atmosphere and an air outlet communicating with the interior of said receptacle, all being adapted to pump air into said receptacle and to discharge the liquid through said discharge pipe, valve casing and nozzle.

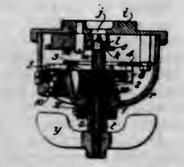
1,228,747. CYLINDER-CLEANER FOR GAS-ENGINES. ALFRED COFFELT, Friday Harbor, Wash. Filed May 14, 1912, Serial No. 697,279. Renewed Jan. 2, 1917. Serial No. 140,306. (Cl. 123—66.)



In a gas engine, a main cylinder having a piston operating therein, a crank shaft in connection with said piston, an auxiliary cylinder connected to the main cylinder, a second piston working within the main cylinder, a hollow rod extending from said second piston longitudinally of the auxiliary cylinder, a cap connected to the free end of rod, said cap forming a piston within the auxiliary cylinder, a valve in the second piston having a stem extending longitudinally of the hollow rod and terminating in an enlarged head, a spring intermediate the enlarged head and hollow rod end, openings in the side at the upper end of the auxiliary cylinder, one of said openings being somewhat larger than the other, a compressor chamber connected to the main cylinder and having therein a piston in connection with the above mentioned crank shaft, and a tubular member connecting the said chamber and auxiliary cylinder.

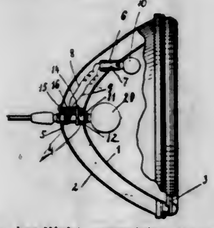
1,228,748. EXPLOSIVE BOMB. THOMAS COOPER, Kings Lynn, England. Filed Dec. 30, 1916. Serial No. 139,943. (Cl. 102—29.)

1. In a bomb to be exploded by a percussion device liberated by a fan or its equivalent, an endway movable shaft in permanent alinement with the detonator but out of reach thereof and a striker which is interposed between the end of the said shaft and the detonator by a transverse movement of the striker relative to the shaft, initiated by the fan, the arrangement being such that when an endway movement is imparted to the shaft after the striker has been moved into position, the latter will be driven against the detonator substantially as described.



2. In a bomb of the kind specified, a wind operated device, a detonator, an endway movable shaft in permanent alinement with the detonator but out of reach thereof, a striker capable of being interposed between the end of the said shaft and the detonator but normally out of alinement therewith, means for interposing the striker by giving it a movement transverse to the shaft, means for impelling the shaft endwise against the striker and time means for liberating the shaft impelling means substantially as described.

1,228,749. REFLECTOR-LAMP. EDWARD B. CORCORAN, Cincinnati, Ohio, assignor, by mesne assignments, to The Corcoran-Victor Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Mar. 4, 1916. Serial No. 82,032. (Cl. 240—41.)



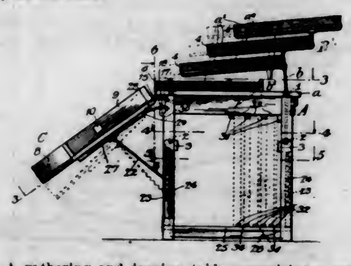
An electric headlight comprising an outer shell, and a reflector shell, a plug, a double end socket piece adjustably supported between said shells on approximately the axial line or at the focal point thereof, said socket piece adapted to receive, from inside the reflector, a lamp, and from outside the shell, the plug, another lamp located out of focus of the reflector, wires from the sides of said socket piece intermediate the shells to the other lamp, said plug and socket piece having electrical connection for both lamps.

1,228,750. GATHERING AND JOGGING TABLE. FRANK C. CRITTENDEN, Chicago, Ill. Filed June 15, 1914. Serial No. 845,110. (Cl. 101—34.)

1. A gathering and jogging table comprising a support for the paper, a receiving board hinged to said support, a carrier plate arranged beneath said receiving board for supporting the same, means flexibly connecting said carrier plate to said support, a brace or strut pivoted to said carrier plate and a vertical series of stops in which the lower end of said brace or strut is interchangeable, and stops on said receiving board, substantially as described.

2. A gathering and jogging table comprising a support for the paper, a receiving board adjustably secured thereto, means for supporting said receiving board in different inclined positions, and stops on said receiving board which define lines which extend at right angles to each other and which converge downwardly, substantially as described.

3. A gathering and jogging table comprising a support for the paper, a receiving board hinged to said support, a carrier plate flexibly connected to said support and arranged beneath said receiving board for supporting same, means for supporting said carrier plate in different adjusted positions corresponding to different inclined positions of said receiving board, and stops on said receiving board which define lines which extend at right angles to each other and which converge downwardly, substantially as described.



4. A gathering and jogging table comprising a support for the paper, a receiving board adjustably secured thereto and which forms an extension thereof in a downwardly inclined plane, means for supporting said receiving board in different inclined positions, and stops on said receiving board which define line which extend at right angles to each other and which converge downwardly, substantially as described.

5. A gathering and jogging table comprising a support for the paper, a receiving board secured to a side thereof, said receiving board being wider at one end than the other, the wider end and lower side thereof extending substantially at right angles to each other, and stops on said receiving board, said stops comprising side pieces secured to the lower side and wider end thereof and which project above the exposed upper side of said receiving board, and other stops adapted to be removably secured in different positions on the exposed upper side of said receiving board to define lines which are substantially parallel with the side pieces secured to the sides of said receiving board, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,228,751. LOCOMOTIVE DRIVING CONNECTION. WILLIAM DALTON, Schenectady, N. Y. Filed Sept. 1, 1916. Serial No. 117,991. (Cl. 105—17.)



1. In a locomotive engine having a plurality of driving axles, the combination of a main crank pin; a main connecting rod coupled thereto; and coupling rods, fitted on the main rod, independently of the main crank pin and concentrically therewith.

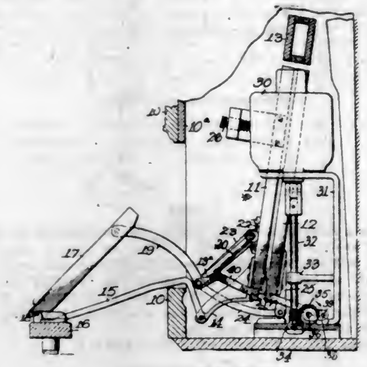
2. In a locomotive engine having a plurality of driving axles, the combination of a main crank pin; a main connecting rod coupled thereto and having lateral coupling rod bearings; and coupling rods, each fitted on one of the bearings of the main rod.

3. In a locomotive engine having a plurality of driving axles, the combination of a main crank pin; a main connecting rod coupled thereto and having lateral coupling rod bearings of unequal lengths; and coupling rods, each fitted on one of the bearings of the main rod, throughout the length of said bearing.

[Claims 4 to 8 not printed in the Gazette.]



1,228,752. DRIVING MECHANISM FOR MUSICAL INSTRUMENTS. FRANK A. DECKER, New York, N. Y., assignor to Lyrachord Company, New York, N. Y., a Corporation of New York. Filed Sept. 3, 1915. Serial No. 48,791. (Cl. 74—81.)



1. In a machine of the class described, in combination, a movable member, pedal-operated means for actuating said member, said means being movable to operative and inoperative positions, a motor for actuating said member by power, and connections between said pedal-operating means, said motor, and said member, said connections automatically establishing driving relation between said motor and said member when said pedals are moved to inoperative position.

2. In a device of the character described, a movable member, pedal-operated means for actuating said member, said means being movable to operative and inoperative positions, a motor for actuating said member by power, and connections between said pedal-operating means, said motor, and said member, said connections automatically rendering said motor drive inoperative when the pedals are moved to operative position.

3. In a device of the character described, in combination, a movable member, pedal-operated means for actuating said member, said means being movable to operative and inoperative positions, a motor for actuating said member by power, and connections between said pedal-operating means, said motor, and said member, said pedals being effective, when moved to inoperative position, to thereby establish driving connection between the motor and the member, and when moved to operative position to disconnect the motor drive.

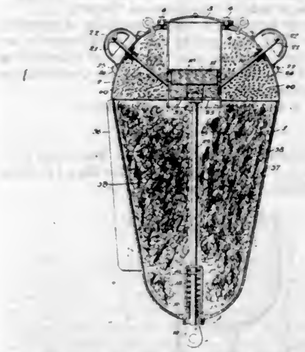
4. In a machine of the class described, in combination, a movable member, a pedal-operated means for actuating said member, said means being movable to operative and inoperative positions, a motor for actuating said member by power, and connections between said pedal-operating means, said motor, and said member, all parts of said connections being permanently united, and being rendered operative or inoperative by changes in the positions of said pedal-operated means.

5. In a machine of the class described, in combination, a movable member, pedal-operated means for actuating said member, said means being movable to operative and inoperative positions, a motor for actuating said member by power, and connections between said pedal-operating means, said motor, and said member, said connections including a driving link actuated by said motor, an intermediate link, devices connecting said intermediate link to said member, and means to vary the relation of said devices to said link and said member by movement of said pedal-operating means to operative or inoperative positions.

[Claims 6 and 7 not printed in the Gazette.]



1,228,753. MARINE MINE. PHILIPPO L. E. DEL FUNGO-GIERA, New York, N. Y. Filed May 11, 1916. Serial No. 96,802½. (Cl. 102—3.)



1. In a mine, a bursting charge incased in liquid glass.

2. In a mine, the combination of a bursting charge, a priming charge and a charge of mono-nitro-naphthalene.

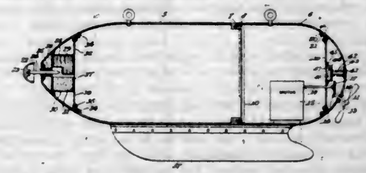
3. A mine comprising a vertically elongated casing containing a bursting charge, a charge of mono-nitro-naphthalene and firing mechanism, and a vertically elongated fin projecting radially from said casing and extending longitudinally thereof throughout the major portion of its length.

4. In a mine, a casing, a contact plunger having an end projecting exteriorly of said casing, and a housing of frangible material secured to said casing and inclosing said projecting end, whereby said housing must be broken before said projecting end may be engaged and actuated.

5. In a mine, a casing, a contact plunger having an end projecting exteriorly of said casing, and a dome-shaped housing of glass secured to said casing and inclosing said projecting end, whereby said housing must be broken before said projecting end may be engaged and actuated.

[Claims 6 to 12 not printed in the Gazette.]

1,228,754. MINE OR TORPEDO. PHILIPPO L. E. DEL FUNGO-GIERA, New York, N. Y. Filed May 11, 1916. Serial No. 96,802½. (Cl. 114—23.)



1. In a traveling mine or torpedo, the combination of motive mechanism, two propellers one arranged on each side of the medial fore-and-aft line of the torpedo, and means whereby said propellers are automatically operated to drive the torpedo periodically and alternately in directions inclined to a medial course.

2. In a traveling mine or torpedo, the combination of motor mechanism, two propellers one arranged on each side of the medial fore-and-aft line of the structure, and means for automatically driving said propellers alternatingly and periodically.

3. In a traveling mine or torpedo, the combination of motive mechanism, two propellers one arranged on each side of a medial fore-and-aft line of the torpedo, and means to automatically and periodically drive said propellers in succession to propel the torpedo alternately in directions inclined to a medial course.

4. In a traveling mine or torpedo, the combination of motor mechanism, means for driving said mine in a zig-

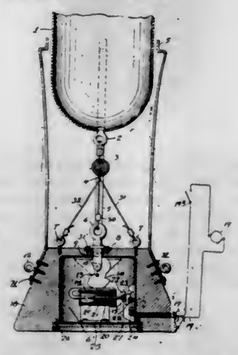
zag path, and means for interchangeably securing to the body of said mine or torpedo any one of a plurality of substitutive ballast fins or keels of different weight to predetermine the depth of submergence thereof.

5. In a mine or torpedo, a body containing a bursting charge, a fin or keel, and means for interchangeably securing to said body any one of a plurality of substitutive ballast fins or keels of different weight to predetermine the depth of submergence thereof.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,755. MINE-RELEASING DEVICE. PHILIPPO L. E. DEL FUNGO-GIERA, New York, N. Y. Filed May 11, 1916. Serial No. 96,803½. (Cl. 102—8.)



1. In combination, a floating mine, an anchor therefor, a pivotally-mounted hook connecting said mine to said anchor, and electrically-operated means for turning said hook about its pivotal axis to effect its disengagement.

2. In combination, a mine, an anchor member, means connecting said mine to said anchor member including an eyelet projecting into said anchor member, a pivoted hook engaging in said eyelet, and electrically-operated means for moving said hook around its pivot to release said eyelet to permit said mine to rise under the influence of its buoyancy.

3. In combination, a floating mine, an anchor member, means connecting said mine and anchor member including a pin provided with a perforation and extending into said anchor member, a pivoted hook engaging said perforated pin, and electrically-operated means for moving said hook about its pivot to release said pin and permit the mine to rise under the influence of its buoyancy.

4. In combination, a floating mine, an anchor member, means connecting said mine and anchor member including an apertured pin and a pivoted hook engaging therewith, a spring tending to disengage said pin and hook, and electrically-operated means for maintaining said spring under compression.

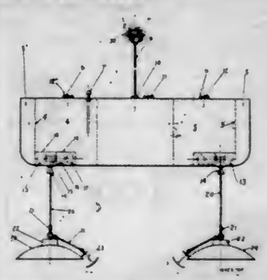
5. In combination, a floating mine, an anchor member, means connecting said mine and anchor member including an apertured pin and a pivoted hook engaging therewith, said hook being provided with teeth, a rack engaging the teeth on said hook, a spring urging said rack in a direction to move said hook about its pivot and disengage said hook and pin, and electrically-operated means for maintaining said spring under compression.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,756. SUBMARINE SUPPLY-TENDER. PHILIPPO L. E. DEL FUNGO-GIERA, New York, N. Y. Filed July 21, 1916. Serial No. 110,584. (Cl. 114—0.5.)

1. In a submarine supply tender, the combination of a hull or shell, anchoring means therefor, a motor within said hull, operative connections between said motor and said anchoring means for raising and lowering said hull, and connections for controlling said motor accessible from the surface of the water.

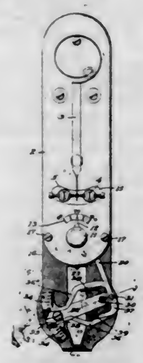


5. In a submarine supply tender, the combination of a hull or shell, anchoring means therefor, an electric motor within said hull, operative connections between said motor and said anchoring means for raising and lowering said hull, means for controlling the direction of rotation of said motor, a marking buoy, and electrical connections between said motor and said buoy.

[Claims 2 to 4 not printed in the Gazette.]

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1,228,757. CLOCK ATTACHMENT FOR ELECTRIC THERMOSTATS. FREDERICK S. DENISON, Minneapolis, Minn., assignor to Minneapolis Heat Regulator Co., Minneapolis, Minn., a Corporation. Filed Jan. 18, 1916. Serial No. 72,696. (Cl. 236—7.)



2. The combination, with a thermostat having a thermostatic bar and contact posts upon opposite sides thereof, and means for adjusting said posts with respect to said bar, of a time piece having an alarm attachment and a revolving member mounted on the back thereof and connected therewith, arms having cam surfaces upon opposite sides of said revolving member and concentrically mounted for movement independently of one another or simultaneously, and means connecting said arms with the adjusting means of said contact posts.

3. The combination, with a thermostat, including a manually operated shifting mechanism, of a time piece having an alarm attachment and a revolving member connected therewith, substantially L-shaped members having their short arms concentrically pivoted and provided with cam surfaces upon opposite sides of said revolving member, the oscillation of said arms on their pivot moving said cam surfaces into the path of said revolving member or out of the path of the same for varying the shifting periods of said thermostat adjusting mechanism, and means for connecting said members with said mechanism.

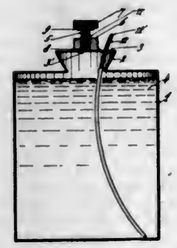


8. The combination, with a thermostat having a manually operated adjusting means, of a time piece having an alarm attachment and a revolving arm connected therewith, a plate pivotally supported at one end, members having a common pivot on said plate and provided with long and short arms, the latter projecting upon opposite sides of said revolving arm and having cam surfaces to be engaged thereby, said plate having means for engaging and locking said long arms and a link connecting the pivot of said members with manually operated means.

[Claims 1 and 4 to 7 not printed in the Gazette.]

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1,228,758. LIQUID-DISPENSING DEVICE. KARL L. DIETERLE, Los Angeles, Cal. Filed Apr. 10, 1916. Serial No. 90,037. (Cl. 220—67.)



1. A container for liquid, provided with a puncturable sheet metal seal portion, and a puncturing and regulating device mounted on and supported by said container to move toward or from said seal portion to puncture the same and to form a variable dispensing opening.

2. A container for liquids, provided with a puncturable seal portion, and a puncturing means mounted on and supported by the container and formed as a screw having a pointed end, said puncturing means being mounted on said container to screw thereon so as to cause the point of the screw to puncture the seal, and to withdraw the point from the punctured part to form a variable dispensing opening.

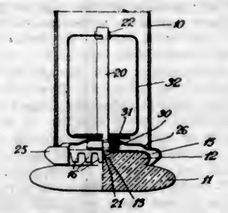
3. A container for liquids, provided with a puncturable seal portion, a puncturing means mounted on and supported by the container and formed as a screw having a pointed end and screwing on said container to cause said pointed end to puncture the seal or to open or close the opening formed by puncturing the seal, and an air inlet tube extending from near the bottom of the container to the outside of the container, said air inlet tube being of soft metal and being of sufficient length outside the container to enable it to be repeatedly cut for opening the tube or pinched for closing the same, and said puncturing means being provided with packing means for tightly engaging the outside of the container to close the same.

4. A container for liquids, provided with a puncturable seal portion, a projection on the container, a screw working in said projection and having a pointed end adapted to puncture the seal portion and to coöperate therewith as a valve, and a normally closed air inlet tube communicating with the interior of the container and consisting of easily cut material to enable it to be opened for admission of air.

5. A container for liquids, having a portion formed with a screw threaded opening, a puncturable seal normally closing said opening, a screw working in said screw threaded opening and having a pointed end adapted to puncture said seal and to coöperate with the punctured portion to form a variable dispensing opening, said screw having a longitudinal groove for enabling liquid to pass the screw, and said screw having an operating head and provided with a packing member on said head to engage the portion of the container around the screw threaded opening, to provide for tight closure of the container.

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1,228,759. SLIDING SHOE FOR FURNITURE-LEGS AND OTHER USES. ALBERT B. DISS, Newark, N. J., assignor to Universal Caster & Foundry Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 14, 1914. Serial No. 831,723. (Cl. 155—33.)

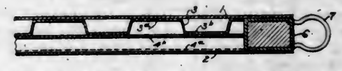



1. The combination of a sliding shoe having a central recess therein, an attaching plate fitted and secured to the shoe, a pintle rigidly joined to the said attaching plate, said pintle having an enlargement above the plate and a riveted head beneath the same in said recess, a leg-supporting plate surrounding the pintle, means for securing the pintle within the leg and permitting its rotation during conditions of use, and ball bearings between the leg-supporting plate and the attaching plate, the leg-uspporting plate being domed at its central portion to accommodate said ball bearings.

2. The combination of a sliding shoe having an overhanging curved shoulder and a central recess, and an attaching plate therefor provided with a pintle extending through the plate and riveted fixedly thereto with its lower end enlarged and received within the said recess in the shoe, said attaching plate having a series of teeth engaging with and beneath said overhanging shoulder, and a leg supporting plate having a downturned edge portion extending around the said attaching plate and means for frictionally attaching all the said parts to a leg.

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1,228,760. PANEL FOR BOXES. WILLIAM H. DOBLE, Quincy, Mass., assignor of one-fourth to Pneumatic Scale Corporation, Limited, Quincy, Mass., a Corporation of Maine. Filed July 9, 1915. Serial No. 38,890. (Cl. 220—17.)



1. A box panel consisting of two metallic face plates spaced apart from each other, two metallic corrugated plates inserted between said two face plates, one of said corrugated plates having portions which engage with one of said face plates and the other of said corrugated plates having portions which engage with the other of said face plates and each of said corrugated plates having other portions which engage with portions of said other corrugated plate, the engaging portions of said plates being welded together at the points of contact.

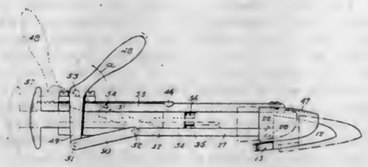
2. A box panel consisting of two metallic face plates spaced apart from each other, two metallic corrugated plates inserted between said face plates, the said corrugated plates being corrugated in such manner as to have a series of alternating broad flat faced depressions and elevations, thus forming a series of flat faces separated from each other in one plane and another series of flat faces separated from each other in another plane, the two sets of flat faces being in planes parallel with each other, one set of the flat faces of one of the corrugated plates engaging one of said face plates, one set of the flat faces of the other corrugated plate engaging with the other face plate, and the second set of flat faces of the first of said corrugated plates engaging with the second set of flat faces of the second corrugated plate, the contacting faces of said corrugated plates and face plates all being welded together.

3. A box panel consisting of three or more metallic plates superposed upon each other, the intermediate plates having corrugations formed in such manner as to form flat topped and flat bottomed depressions, the flat contacting faces of all of said plates being welded together, thereby uniting all of said members into one integral panel.

4. A box panel consisting of two metallic face plates spaced apart from each other, two metallic corrugated plates inserted between said face plates, said corrugated plates being corrugated in such manner as to each have a series of alternating broad flat faced depressions and elevations which extend transversely thereof, thus forming in each corrugated plate a series of flat faces separated from each in one plane and another series of flat faces separated from each other in another plane, the two sets of flat faces being in planes parallel with each other, the said corrugated plates being arranged so that the corrugations of one plate extend at right angles to those of the other corrugated plate, the contiguous flat faces of the two corrugated plates being welded together where they cross each other, and the two face plates also being welded to the contiguous flat faces of the corrugated plates.

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1,228,761. SHOEMAKER'S TOOL. MILTON L. DODGE, Newburyport, Mass. Filed Sept. 30, 1916. Serial No. 123,170. (Cl. 12—103.)



1. A device of the character described, comprising a toe-box holder adapted to go into the toe of a shoe, a carrier for said holder, a guard adapted to go into the toe of the shoe between the lining thereof and a toe-box on said holder, a carrier for said guard, an element carried by the latter said carrier and arranged to abut against the heel-end of the shoe, and means arranged to act on said two carriers to cause relative movement of them, whereby said device is adapted to act against the heel-end of the shoe to move a box, on said holder, against the toe-end of the shoes.

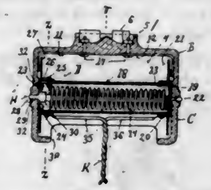
2. A device of the character described, comprising a toe-box holder adapted to go into the toe of a shoe, a carrier for said holder, a guard adapted to go into the toe of the shoe between the lining thereof and a toe-box on said holder, a carrier for said guard, a connecting member arranged to abut against the heel-end of the shoe, said connecting member and each of said carriers having cooperative sliding tongue-and-groove portions, means arranged to cause relative movement of said carriers to extend said device, and means arranged to transmit such relative movement from said guard carrier to said connecting member.

4. A device of the character described, comprising a toe-box holder adapted to go into the toe of a shoe, a guard adapted to go into the toe of the shoe between the lining thereof and a toe-box on said holder, a carrier for said guard, a member arranged to slide on said carrier and arranged to abut against the heel-end of the shoe, said carrier and said member having coöperative sliding tongue-and-groove portions arranged to keep them connected, two coöperative toothed members carried by said carrier and said member respectively to keep them extended in various relations, one of said toothed members being movable to and from coöperative engagement with the other to permit adjustment of said carrier and said member relatively to each other, a carrier for said holder, said member and the latter said carrier having coöperative sliding tongue-and-groove portions arranged to keep them connected, and means arranged to cause relative movement of said two carriers to extend said device.

[Claims 3, 5, and 6 not printed in the Gazette.]

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1,228,762. ELECTRIC-LIGHT FIXTURE. CHARLES F. DOLLE, Cincinnati, Ohio. Filed Sept. 14, 1912. Serial No. 720,373. (Cl. 173—367.)



1. An electric light fixture comprising a casing composed of a base member of insulating material to be permanently and rigidly attached in position and a sectional chambered member of insulating material having an elongated slot through its wall for the passage of a lamp cord, detachably supported by said base member, a drum having an intermediate tubular section of insulating material and flanged cap members of conducting material at opposite ends, said drum being pivotally supported in the chamber of said chambered member, means to tension and to automatically lock said drum to varying positions, flexible insulated conductors wound upon said drum and connected at one end to the respective cap members and at the opposite end after passing through said slot connected to the terminals of an electric light dependently supported from said drum, and spring electrical contacts carried by said chambered member to continuously maintain electrical contact with the respective cap members of said drum.

2. In an electric light fixture in combination with a supporting casing having stationarily supported electrical contacts, a drum rotatably supported by said casing and comprising an intermediate tubular section of insulating material having its ends telescopically united with tubular sections of cap-members of conducting material located at opposite ends of said drum, a coiled spring located in the interior of said drum and connected thereto at one end, a spindle journaled in and projecting through one of said cap-members and occupying an axial position within said drum and spring and attached to the opposite end of said spring, a series of pawls carried by the cap-member in which said spindle is journaled to engage recesses in said spindle to lock said spindle and drum together, and a plurality of flexible electrical conductors electrically connected to said respective cap-members and coiled upon said drum.

3. In an electric light fixture in combination with a chambered casing of insulating material having interior stationarily supported electric contacts, a drum rotatably supported within the chamber of said casing and comprising a tubular intermediate section of insulating material telescopically connected at opposite ends to metallic cap-members, a coiled tensioning spring located within said drum and connected thereto at one end, a spindle occupying an axial position within said drum connected at one end to said spring and journaled in and projecting through one of said cap-members at its opposite end, a plurality of pawls carried by the cap-member in which said spindle is journaled to engage recesses on said spindle to lock said drum and spindle together, and a lamp cord coiled upon said drum with opposite strands in electrical contact with said respective cap-members.

4. In an electric light fixture in combination with a rigidly positioned casing member of insulating material having stationarily supported flexible electrical contacts, and a chambered casing member having an elongated slot and detachably connected to said rigidly positioned casing



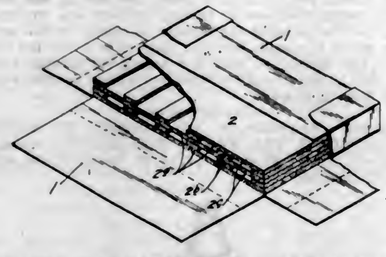
member, a drum located in the chamber formed by said casing members and rotatably held in position between said casing members and comprising a tubular intermediate section of insulating material connected at opposite ends to metallic cap-members, a coiled tensioning spring located within said drum and connected thereto at one end, a spindle occupying an axial position within said drum and connected at one end to said spring and journaled in and projecting through one of said cap-members at its opposite end, pawls carried by the cap-member in which said spindle is journaled to engage recesses on said spindle to lock said drum and spindle together, and a lamp cord coiled upon said drum with opposite strands in electrical contact with said respective cap members.

5. In an electric light fixture in combination with a rigidly positioned chambered casing of two substantially medially divided sections having internally stationarily supported flexible contact members, a rotatable drum located within the chamber of said casing and held in position therein between the separable sections of said casing and comprising a tubular intermediate section of insulating material connected at opposite ends to metallic cap-members, a coiled tensioning spring located within said drum and connected at one end thereto, a spindle occupying an axial position within said drum and connected at one end to said spring and journaled and projecting through one of the cap-members at its opposite end, pawls carried by said cap-member in which said spindle is journaled to engage recesses on said spindle to lock said drum and spindle together, and a lamp cord coiled upon said drum with opposite strands in electrical contact with said respective cap-members.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,763. HEAT - INSULATING UNIT. GEORGE H. ELLIS, St. Paul, Minn. Original application filed Mar. 16, 1914, Serial No. 842,959. Divided and this application filed Mar. 22, 1915. Serial No. 16,061. (Cl. 154—45.)



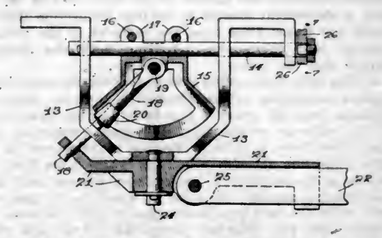
A heat insulating panel or unit comprising an envelop made of flexible water-proof material, and a non-water-proofed heat insulating filler incased in said envelop and protected thereby from moisture, the said envelop being folded around said filler and having overlapped edges.

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1,228,764. LAND-MARKER FOR PLANTERS. ERNST E. ENGLUND, Moline, Ill., assignor to D. M. Sechler Implement & Carriage Company, Moline, Ill., a Corporation of Illinois. Filed Nov. 6, 1916. Serial No. 129,874. (Cl. 97—83.)

1. In a device of the class described, the combination with a planter-frame, of a laterally-swinging pivoted bar carrying a marking device at its outer end, a rock-shaft arranged transversely of the machine, means connecting said rock-shaft and bar to cause a turning of the bar when said shaft is rocked, an operating lever secured to the shaft and adapted to be locked in place when the marker-bar is elevated, and other means for assisting in holding said marker-bar elevated.

9. In a device of the class described, the combination with a planter-frame, of a rock-shaft arranged transversely of the machine, an arm rigidly mounted on said rock-shaft, a laterally swinging pivoted bar carrying a marking device at its outer end, a link pivotally connected with said arm and bar, said arm having a recess to receive the link when the marker-bar is elevated and a cam-shaped guiding surface at each side of said recess each adapted to coact with the link, and means for turning said rock-shaft.

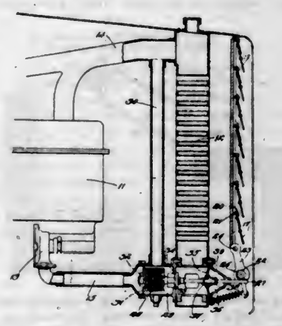


12. In a device of the class described, the combination with a planter-frame, of a rock-shaft arranged transversely of the machine, a hollow arm rigidly connected to said rock-shaft, a laterally-swinging pivoted bar carrying a marking device at its outer end, a pivoted link in said arm and projecting therefrom and connected with said marker-bar, said arm having a cam-shaped guiding surface coacting with the link during the movement of the marker-bar and having means for retaining said link against movement when the marker-bar is elevated, and means for rocking said shaft and the arm carried thereby.

[Claims 2 to 8, 10, 11, and 13 not printed in the Gazette]

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1,228,765. TEMPERATURE - CONTROL APPARATUS FOR INTERNAL-COMBUSTION ENGINES. STEPHEN IVAN FEKETE, Detroit, Mich., assignor to Kent Motors Company, Detroit, Mich., a Corporation of Michigan. Filed June 2, 1916. Serial No. 101,422. (Cl. 123—178.)



1. In combination with an internal combustion engine, a water cooling system including a radiator, a radiator shutter controlling the flow of air through the radiator, a valve controlling the flow of water through the cooling system, and a thermostat operated by the changes in temperature of the water in the cooling system and actuating both the radiator shutter and the valve.

2. In combination with an internal combustion engine, a water cooling system including cylinder jackets, a radiator and pipe conections between said parts, a radiator shutter controlling the flow of air through the radiator, a valve controlling the flow of water through the cooling system, a thermostat located in the pipe connection through which the water flows from the radiator to the

cylinder jackets, said thermostat actuating both the radiator shutter and the valve.

3. In combination with an internal combustion engine, a water cooling system including cylinder jackets, a radiator and pipe connections between said parts, a by-pass around said radiator, a radiator shutter controlling the flow of air through the radiator, a valve controlling the flow of water through the cooling system, said valve being located betweenn the bottom of the radiator and the by-pass, a thermostat located in the pipe connection through which the water flows from the radiator to the cylinder jackets, said thermostat actuating both the radiator shutter and the valve.

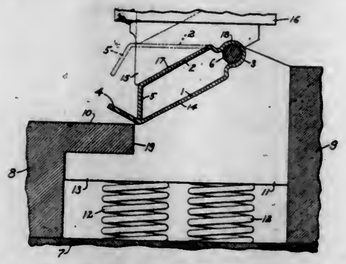
4. The improved cooling system for internal combustion engines comprising cylinder jackets, a radiator, pipe connections from the cylinder jackets to the top and bottom of the radiator respectively, a by-pass connecting said pipe connections, a radiator shutter, a thermostat in the pipe connection through which the water flows from the bottom of the radiator to the cylinder jackets, said thermostat being opposite the point at which the by-pass connects with the said pipe connection, a valve between the by-pass and the radiator, connections from said thermostat to said valve and said radiator shutter whereby the valve and radiator shutter are operated by changes in temperature in the water returning to the cylinder jackets.

5. The improved water cooling system for internal combustion engines having a thermostat located in the return pipe from the bottom of the radiator to the cylinder jackets, a thermostat rod projecting through the radiator, a valve on said thermostat rod controlling the passage between the bottom of the radiator and the return pipe, a radiator shutter, and connections between the protruding end of the thermostat rod and the radiator shutter by which the radiator shutter is moved by the thermostat simultaneously with the movement of the valve.

[Claim 6 not printed in the Gazette.]

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1,228,766. METHOD OF FORMING A LAP-JOINTED TUBE. SAMUEL B. FIELD, Holbrook, Mass., assignor of one-fourth to Pneumatic Scale Corporation, Limited, Quincy, Mass., a Corporation of Maine, and three-fourths to William H. Doble, Quincy, Mass. Filed July 22, 1915. Serial No. 41,418. (Cl. 113—116.)



1. In the process of making a lap jointed tube formed of a single sheet of metal, bending the blank so that the edge of one of the lap elements engages in an angle formed by the other lap element and its adjacent panel portion, then utilizing said first lap element as an anvil and applying pressure to said envil element in a direct line with its plane toward the junction of said other lap element and its adjacent panel, and also applying pressure to the other lap element to bend it over the edge of said anvil element and bring it up into a plane parallel with the plane of said first lap element.

2. In the process of making a lap jointed tube formed of a single sheet of metal, bending the blank to bring two panel portions into parallel relation to each other and to bring two end portions which are to form the lap elements into position so that the edge of one of the lap elements engages in the angle formed by the other lap element and its adjacent panel, then applying pressure in opposite directions to the outer faces of said two parallel panel elements and applying a wiping pressure over the outer face of the outer lap element to bend it over the edge of said first lap element and bring it into contact with the outer face of said first lap element.

3. In the process of making a lap joint for a polygonal sided tube to be formed of a single sheet of metal, bending the blank so that the edge of one of the lap elements engages in an angle formed by the other lap element and its adjacent panel, then holding the partially folded blank rigidly between two surfaces and while so held utilizing the said first lap element as an anvil and applying pressure to the said other lap element to bend it over the edge of said anvil element into a plane parallel with the face of said anvil element.

4. In the process of making a lap jointed tube formed of a single sheet of metal, bending the blank to bring two panel portions into parallel relation to each other and to bring two end portions which are to form the overlap elements into position so that the edge of one of the lap elements engages in an angle formed by the other lap element and its adjacent panel, then holding the partially folded blank between two surfaces which respectively engage said two parallel panels and moving said partially folded blank while rigidly held in such manner as to cause the outer lap element to wipe over a surface which bends said outer lap element into overlapping contact with said inner lap element.

5. In the process of making a lap jointed tube formed of a single sheet of metal, bending the blank to bring two panel portions into parallel relation to each other and to bring two end portions which are to form the overlap elements into position so that each is at an obtuse angle to the respective panel with which it is directly connected and so that the edge of one overlap element engages in the angle formed by the other overlap element with its adjacent panel, then holding the partially folded blank between two surfaces which respectively engage said two parallel panels and hold them rigidly while the said first overlap element is engaged in the angle between the second element and its adjacent panel, then moving said partially folded blank and its holding members in a direction to cause the unfolded lap element to engage with a surface which is parallel with the plane of said first lap element and thereby to bend said second lap element over the edge of said first lap element into a plane parallel with said first lap element.

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1,228,767. SPARK-PLUG AND METHOD OF MANUFACTURING THE SAME. FREDERICK M. FURBER, Revere, Mass. Filed Mar. 17, 1917. Serial No. 155,463. (Cl. 123—169.)



1. A spark plug comprising a shell having a bore formed therethrough, an insulator positioned in said bore and having a circumferential enlargement with shoulders at the opposite ends of said enlargement, a seat in said shell supporting one of said shoulders, and a corrugated flange at the outer end of said shell turned inwardly over the other shoulder of said insulator and clamping the insulator in the shell.

6. A spark plug comprising a shell having a bore formed therethrough, an insulator positioned in said bore and having a circumferential enlargement with shoulders at the opposite ends of said enlargement, a seat in said shell supporting one of said shoulders, and a flange at the outer end of said shell turned inwardly over the other shoulder of said insulator to secure the insulator in the shell, said flange varying substantially in thickness at successive points circumferentially thereof.

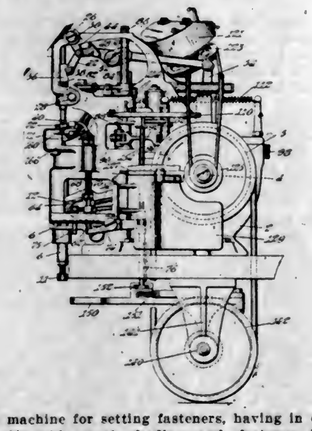
11. That improvement in the method of securing an insulator having a circumferential enlargement with upper and lower shoulders, respectively, at the opposite ends of said enlargement, in a spark plug shell having an internal seat for the lower of said shoulders, which consists in forming a flange in the outer end of said shell, placing said insulator in the shell, and turning said flange inwardly over said upper shoulder in such a manner that the flange will exert substantially a uniform pressure on said upper shoulder at all points circumferentially thereof notwithstanding variations in the height of the enlargement.

[Claims 2 to 5, 7 to 10, and 12 to 17 not printed in the Gazette.]



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1,228,768. FASTENER-SETTING MACHINE. PERLEY R. GLASS, Brookline, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 5, 1914. Serial No. 855,185. (Cl. 218—15.)



1. A machine for setting fasteners, having in combination, adjustable work feeding and fastener inserting means, and variable speed transmission mechanism limited as to its effective speed by the adjustment of the work feeding means.

2. A machine for setting fasteners, having in combination, work feeding and fastener inserting means, feed regulating means, and change speed mechanism controllably related to said regulating means.

3. A machine for setting fasteners, having in combination, work feeding means, a regulating device therefor, and means for controlling the speed of the machine in accordance with the setting of said regulating device.

4. A machine for setting fasteners, having in combination, means constructed and arranged to feed the work intermittently variable distances in accordance with the will of the operator, and means for increasing the speed of the machine as the extent of the feeding steps is decreased.

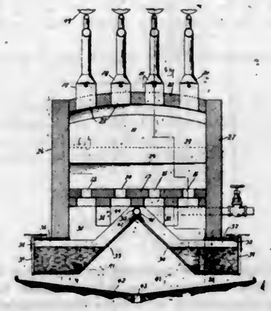
5. A machine for setting fasteners, having in combination, work feeding means constructed and arranged for adjustment for varying the spacing of the fasteners, and speed controlling means constructed and arranged to maintain the speed of the work through the machine substantially uniform while the fasteners are set at different spacings.

[Claims 6 to 28 not printed in the Gazette.]

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1,228,769. APPARATUS FOR BURNING POWDERED COAL. AUBREY J. GRINDLE, Chicago, Ill., assignor to Combustion Economy Corporation, Chicago, Ill., a Corporation. Filed Feb. 15, 1916. Serial No. 78,372. (Cl. 110—28.)

1. In a furnace, in combination, a combustion chamber having a floor with an opening therein, a main flue leading out of the combustion chamber above its said floor, a supplemental flue extending under the floor of the said combustion chamber and communicating with the said opening in the floor of the chamber at one end and with the first mentioned flue at the other end to form a by-pass through said opening to the main flue for a part only of the products of combustion, a jet burner for comminuted solid fuel entering the combustion chamber and a receiver for the melted fuel ash below the said opening in the floor of the combustion chamber.



2. In a furnace, in combination, a combustion chamber having a floor with an opening therein, a main flue leading out of the combustion chamber above its said floor, a supplemental flue extending away from the said opening at the under side of the floor of the combustion chamber, a jet burner for comminuted solid fuel entering the combustion chamber, and a receiver for the melted fuel ash below the floor of the combustion chamber in line with its said opening.

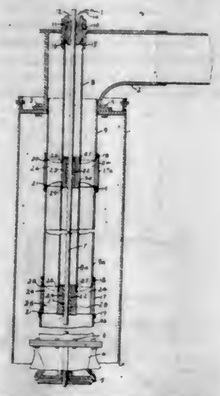
3. In a furnace, in combination, a combustion chamber having a pair of laterally separated openings in its floor, a pair of inclined walls below the floor of the combustion chamber, said walls facing laterally outward in opposite directions and each extending from the longitudinal median line of the furnace under one of the said openings in the floor of the combustion chamber, a pipe extending along the ridge formed by the meeting of the said two walls upon the median line of the furnace, said pipe having openings at each side for the discharge of a cooling fluid over the said two walls, a sealed well at each side of the furnace at the lower edge of the corresponding one of the said sloping walls, a flue extending out of the space between the floor of the combustion chamber and the said two sloping walls and a burner for comminuted solid fuel entering the combustion chamber.

4. In a furnace in combination, a combustion chamber having an opening in its floor, a sloping wall extending under the said opening in the floor of the combustion chamber, a sealed well at the lower edge of the said sloping wall, means for delivering a cooling fluid upon the said sloping wall adjacent its upper edge, a burner for comminuted solid fuel entering the combustion chamber and a flue leading out of the space between the underside of the floor of the combustion chamber and the said sloping wall.

5. In a furnace, in combination, a combustion chamber having an opening in its floor, a main flue leading out of the combustion chamber above its said floor, a sloping wall extending under the said opening in the floor of the combustion chamber, a sealed well at the lower edge of the said sloping wall, means for delivering a cooling fluid upon the said sloping wall adjacent its upper edge, a burner for comminuted solid fuel entering the said combustion chamber and a supplemental flue leading out of the space between the underside of the floor of the combustion chamber and the said sloping wall.

[Claims 6 to 9 not printed in the Gazette.]

1,228,770. PUMP MECHANISM. STANLEY M. HALSTEAD, San Jose, Cal. Filed Dec. 20, 1915. Serial No. 67,797. (Cl. 253—199.)



1. A bearing member adapted to engage a shaft and adapted to slidably engage conduits through which said shaft passes and tapped to receive the threaded ends of discharge casing members.

5. A mechanism of the character described, comprising a shaft, a pump attached to said shaft and submerged in a well, a pump bowl inclosing said pump, a discharge casing extending from said bowl to the top of the well, and a plurality of bearings for said shaft supported by said discharge casing, the lowermost of said bearings being spaced a distance above said pump bowl, and the successive bearings being connected by tubes in such a manner as to form conduits through which said shaft passes and permit a quantity of water to enter said conduits and traverse said bearings when the pump is in operation.

7. In combination with a pump having a shaft attached thereto, an upper bearing adapted to receive a lubricating fluid, means for introducing a predetermined quantity of lubricant into said bearing, a bottom bearing adapted to drain away lubricating fluid from said bearings, and alternate and loosely coupled conduits and bearings through which said shaft passes connecting said upper and bottom bearings.

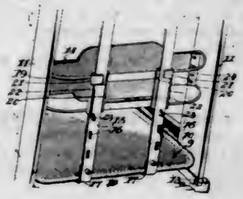
[Claims 2 to 4, 6, and 8 not printed in the Gazette.]

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1,228,771. CHAIR. JAMES E. HANGER, Washington, D. C. Filed Dec. 4, 1913. Serial No. 804,661. (Cl. 155—27.)

1. A chair back having a plurality of vertically arranged guides spaced apart, a back rest slidable on said guides and extending forwardly therefrom, said back rest comprising a rigid back frame extending between said guides and having near its top coöperating guide elements spaced apart and engaging said guides and arranged to permit swinging forward of the bottom of the back rest with respect to the guides and guide elements, means carried by the back rest arranged to engage said guides and to be held normally in engagement therewith by the weight of the back rest and to disengage said guides and permit adjusting of the back rest when the bottom thereof is swung forward.

2. A chair back having a plurality of vertically arranged flexible guides spaced apart and yieldable independently of each other, a back rest slidable on said guides and extending forwardly therefrom, said back rest comprising a rigid back frame extending between said guides and having near its top coöperating guide elements spaced apart and engaging said guides and arranged to permit swinging forward of the bottom of the back rest with respect to the guides and guide elements, means carried by the back rest arranged to engage said guides and to be held normally in engagement therewith by the weight of the back rest and to disengage said guides and permit adjusting of the back rest when the bottom thereof is swung forward.

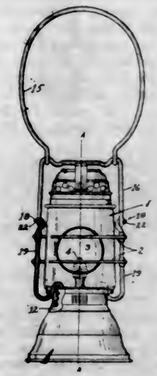


3. A chair back having a plurality of vertically arranged guides spaced apart, a back rest slidable on said guides and extending forwardly therefrom, said back rest comprising a rigid back frame extending between said guides and having near its top coöperating guide elements spaced apart and engaging said guides and arranged to permit swinging forward of the bottom of the back rest with respect to the guides and guide elements, means projecting from the bottom of the back rest arranged to engage said guides and to be held normally in engagement therewith by the weight of the back rest and to be disengaged by forward movement of the bottom of the back rest to permit adjusting of the back rest.

4. A chair back having a plurality of vertically arranged flexible guides spaced apart and yieldable independently of each other, a back rest slidable on said guides and extending forwardly therefrom, said back, rest comprising a rigid back frame extending between said guides and having near its top coöperating guide elements spaced apart and engaging said guides and arranged to permit swinging forward of the bottom of the back rest with respect to the guides and guide elements, means projecting from the bottom of the back rest arranged to engage said guides and to be held normally in engagement therewith by the weight of the back rest and to be disengaged by forward movement of the bottom of the back rest to permit adjusting of the back rest.

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1,228,772. ACETYLENE-GAS LANTERN. AUGIE L. HANSEN, Chicago, Ill., assignor to Justrite Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed June 8, 1912. Serial No. 702,403. (Cl. 48—4.)



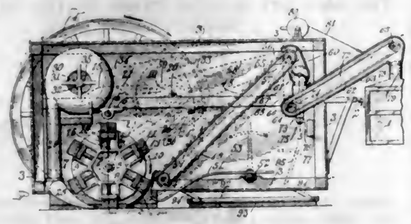
An acetylene gas lantern including a water tank, a carbid receptacle and gas chamber, a burner in the lantern



proper, a tube forming a handle support, the tube having one of its ends curved downwardly and outwardly and extending into the water chamber to provide an exhaust pipe, the central portion thereof extending upwardly and the extreme upper end being curved to provide a hook to receive a handle bail.

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1,228,773. STREET-SWEEPING MACHINE. SAMUEL C. HARTMAN, Dayton, Ohio. Filed Mar. 17, 1916. Serial No. 84,763. (Cl. 15—17.)



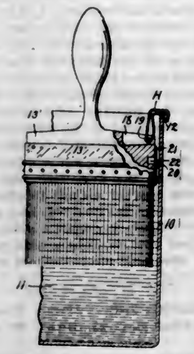
1. In a street sweeping machine, the combination with a carrying frame, of a rotating sweeper mounted in said frame, an air pipe in the rear of said sweeper terminating in discharge nozzles above and below said sweeper, and a traveling conveyer adapted to receive the sweepings from said sweeper, substantially as specified.

2. In a street sweeping machine, the combination with a carrying frame, of a rotating sweeper mounted in said frame, an air pipe in the rear of said sweeper terminating in discharge nozzles above and below said sweeper, means for controlling the discharge of air from said air pipe to said nozzle, and a traveling conveyer adapted to receive the sweepings from said sweeper, substantially as specified.

3. In a street sweeping machine, the combination of a casing, and a rotatable sweeper mounted therein, an air discharge pipe in the rear of said sweeper terminating in discharge spouts which project above and below the sweeper, means mounted in said discharge pipe at the entrance of said spouts for controlling the passage of air thereto, means for controlling the position of said air-discharge-controlling means, and a conveyer to carry the sweepings from the sweeper, substantially as specified.

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1,228,774. BRUSH-HOLDER. CHARLES E. HECHT, Irvington, N. J. Filed Sept. 15, 1916. Serial No. 120,274. (Cl. 248—50.)



1. A brush provided with a recess and a resilient hooked holding member, the hook portion of said member being normally of form to prevent its being received in said recess, but being compressible into form to be received and retained in the recess until withdrawn therefrom.

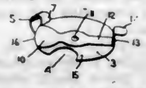
5. In a brush, a head provided with a recess on its upper portion and with a second recess on its end, and a hooked member loosely pivoted in the first recess and having the hook thereof adapted to be forced into the second recess by springing the hooked member whereby it is retained in place by its spring action.

7. In a brush, a brush head provided with a recess, a pivot extending across the recess, a compressible member of skeleton form and provided with a hook, the pivot passing loosely through said member, and means whereby the member is spring-retained within its recess by hooking said member into a recess provided in the end of the brush.

[Claims 2 to 4 and 6 not printed in the Gazette.]

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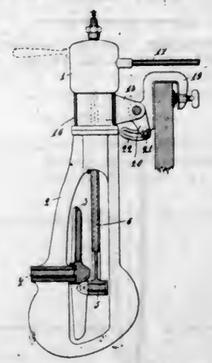
1,228,775. MILK-BOTTLE CAP. JOHN E. HILL, Boston, Mass., assignor to Art Products Company, Boston, Mass., a Corporation of Massachusetts. Filed July 16, 1915. Serial No. 40,332. (Cl. 215—14.)



A bottle cap comprising a disk-like member of a size to fit into the mouth of the bottle and having formed integral therewith a resilient retaining finger adapted to extend up over and around the outside of the bead at the neck of the bottle, said disk having in one edge a pouring opening, and a closure for said opening pivoted centrally to the disk and having integral therewith an extension overlying the disk and having its end bent upwardly and then laterally to overlie the top of the bottle and to provide a finger piece, said retaining finger constituting a stop to limit the opening movement of said closure, and said disk having a projection to limit the closing movement thereof.

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1,228,776. DRIVING DEVICE FOR BOATS. CARL ALRIK HULT and OSCAR WALFRID HULT, Stockholm, Sweden. Filed Apr. 14, 1914. Serial No. 831,696. (Cl. 115—18.)



1. In driving apparatus for boats, the combination of an explosive engine having a reciprocable piston therein, means consisting of a sleeve loosely surrounding a part of the engine for supporting said engine from a bont above the surface of the water, whereby said engine is rotatable as a whole about its vertical axis in said supporting means, a propeller of sufficient weight to revolve by momentum without aid of a fly wheel, and a connecting rod extending below the surface of the water, the lower end of said connecting rod being directly connected to said propeller.

2. In driving apparatus for boats, the combination of an explosive engine having a reciprocable piston therein, means consisting of a sleeve loosely surrounding a part of the engine for supporting said engine from a boat above the surface of the water, whereby said engine is rotatable as a whole about its vertical axis in said supporting means, a propeller having an interior filling of a material which is specifically heavier than the walls inclosing said filling and the total weight of which propeller is sufficiently great to revolve by momentum without aid of a fly wheel, and a connecting rod extending below the surface of the water, the lower end of said connecting rod being directly connected to said propeller.

3. In driving apparatus for boats, the combination of an explosive engine having a reciprocable piston therein, means consisting of a sleeve loosely surrounding a part of the engine for supporting said engine from a boat above the surface of the water, whereby said engine is rotatable as a whole about its vertical axis in said supporting means, a propeller having blades of greatest thickness at their outer peripheries and being of sufficient weight to revolve by momentum without aid of a fly wheel, and a connecting rod extending below the surface of the water, the lower end of said connecting rod being directly connected to said propeller.

4. In driving apparatus for boats, the combination of an explosive engine having a reciprocable piston therein, means consisting of a sleeve loosely surrounding a part of the engine for supporting said engine from a boat above the surface of the water, whereby said engine is rotatable as a whole about its vertical axis in said supporting means, a propeller having blades elongated in the direction of the periphery of the propeller and being of sufficient weight to revolve by momentum without aid of a fly wheel, and a connecting rod extending below the surface of the water and having its lower end directly connected to said propeller.

5. In driving apparatus for boats, the combination of an explosive engine having a reciprocable piston therein, a sleeve fixed to the boat and loosely surrounding a part of said engine and in which said engine is suspended and capable of rotating as a whole about its vertical axis, a propeller of sufficient weight to revolve by momentum without aid of a fly wheel, and a connecting rod extending below the surface of the water and having its lower end directly connected to said propeller.

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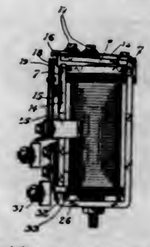
1,228,777. IRRIGATOR. JOHN E. JONASSON, Bow, Wash. Filed July 16, 1915. Serial No. 40,292. (Cl. 137—60.)



An irrigator including a hollow body having an open filling end and a tapered discharge end, a U-shaped handle having the free ends pivotally secured at diametrically opposed points to the open end of said body, a valve slidably mounted in the tapered portion of said body, a stem carried by said valve projecting outwardly of the open end of the body and being looped to provide a handle, a U-shaped guide secured to the open end of said body and including a web portion extending diametrically across the open end and slidably receiving said stem, and a contractile spring coiled about said stem, secured at one end to the web portion of said guide and at the opposite end to the handle loop and normally retaining the valve in closed position.

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1,228,778. KNIFE-SWITCH RELAY. WILLIAM KAISLING, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed July 1, 1913. Serial No. 776,802. (Cl. 175—321.)



1. A relay comprising a U-shaped heel iron, a spool electromagnet within said heel iron and having one end of its core secured thereto and its free end supported by a non-magnetic element at the open end of the heel iron, an armature pivotally secured to one prong of the heel iron, a spring secured to said armature, a stop secured to the other prong of said heel iron with which the said spring coöperates to retract the said armature, an angular member attached to the said armature for limiting the return movement of the said armature, and common means for securing said spring and angular member to said armature.

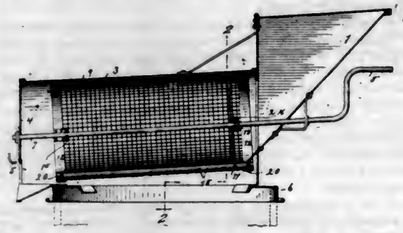
2. A relay comprising a U-shaped heel iron, a spool electromagnet within said heel iron having one end of its core secured thereto and its free end extending through a non-magnetic bridge piece mounted between the free ends of said heel iron, an armature pivoted to one prong of said heel iron, a bifurcated spring secured to said armature, a plate member secured to the other prong of said heel iron and provided with a plurality of stops for coöperating with said bifurcated spring to retract the said armature, an angular member attached to the said armature for limiting the return movement of the said armature, and a contact maker secured to said armature between the bifurcations of said spring.

3. A relay comprising a U-shaped heel iron, a spool electromagnet within said heel iron and having one end of its core secured thereto and its free end supported by a non-magnetic bridge element at the open end of the heel iron, a pair of insulatingly mounted contact springs lying in a plane parallel to the plane of the core of the electromagnet and secured to one prong of said heel iron, an insulating member for spacing said contact springs, an armature pivotally secured to the other prong of the heel iron and extending into operative relation with the electromagnet and other prong, a flat conducting element insulatingly secured to the armature and adapted to be thrust between the contact springs to effect their connection when the armature is attracted, and a spring secured to said armature coöperating with a plate secured to one prong of said heel iron to return said armature to its normal position when said electromagnet is deënergized.

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1,228,779. ASH-SIFTER. MYER KAMENSTEIN, New York, N. Y. Filed Nov. 25, 1916. Serial No. 133,286. (Cl. 83—60.)

2. A shaft bearing comprising a strap having bent ends and a laterally extending integral U-shaped loop provided with a pair of parallel apertured sides and an apertured end, a shaft extending longitudinally through said loop and passing through said apertured end, a pin engaging the shaft and passing through said apertured sides, a

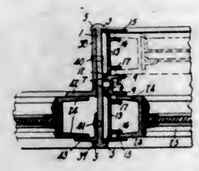


rotatable member, a band carried by said member, and means for connecting the bent ends to said band.

[Claim 1 not printed in the Gazette.]

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1,228,780. WINDOW. THOMAS HENRY KANE, Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 8, 1915. Serial No. 1,087. Renewed Nov. 8, 1916. Serial No. 130,274. (Cl. 189—73.)



1. In a stile construction for windows, a side member including retaining means, a detachable sash guide mounted on the side member, a wedge strip also mounted on the side member, and means for causing said wedge strip to force the sash guide into engagement with the retaining means.

2. In a stile construction for windows; a sash guide having a flange thereon arranged to guide a sash vertically and to prevent movement thereof in a plane at right angles to the plane of the window, a side member, means carried by the side member for retaining the sash guide in position, and wedge means for forcing the sash guide in a direction at right angles to the window into operative engagement with the guide-retaining means.

3. In a stile construction for windows, a sash guide having a flange thereon arranged to guide a sash vertically and to prevent movement thereof in a plane at right angles to the plane of the window, a side member, means carried by the side member for retaining the sash guide in position, and means for wedging the sash guide into operative engagement with the guide-retaining means, said wedging means being adjustable toward the side member in a plane at an angle to the window opening.

4. In a stile construction for windows, a sash guide having a pair of spaced flanges thereon arranged to guide a sash vertically, a side member, means carried by the side member for retaining the sash guide in position, and means for wedging the sash guide in a direction at an angle to the plane of the window, whereby it is caused to operatively engage with the retaining means.

5. In a window construction, a sash guide having a vertically extending groove therein, and a window sash received in the groove, a side member including sash guide retaining means, means for wedging the sash guide in a direction at an angle to the plane of the window, whereby it is caused to operatively engage with the retaining means.

[Claims 6 to 16 not printed in the Gazette.]



1,228,781. FOUNTAIN-PEN. ROBERT ANDREW KER, London, England. Filed Apr. 12, 1915. Serial No. 20,890. (Cl. 120—48.)

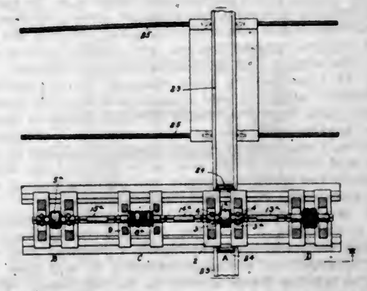



1. A fountain pen comprising a barrel, a thimble screwed into said barrel from the front end thereof and provided with an internal longitudinal groove, a rotatable nib holder detachably mounted in said thimble and provided with a valve seat and having a spiral slot in its wall, and a valve arranged in said nib holder and provided with a projection which passes through said spiral slot and engages the groove of the thimble, whereby the relative rotation of said thimble and nib holder will cause said valve to open or close.

2. A fountain pen comprising a barrel provided at its forward end with internal screw threads, a thimble screwed into said barrel from the front end thereof and provided with a longitudinal groove and an annular recess, a nib holder rotatably mounted in said thimble, and provided at its upper end with screw threads, a nut engaging the screw threads of said nib holder for detachably connecting the nib holder and thimble, a packing arranged in said recess for preventing the passage of ink between said nib holder and the lower end of the thimble, said nib holder being also provided with a valve seat and with spiral slots, and a valve located in said nib holder for engagement with said valve seat and provided with projections which pass through said slots and engage said grooves, whereby the relative rotation of said thimble and nib holder will cause said valve to open and close.

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1,228,782. UNIVERSAL MILL. ROBERT B. KERNOHAN and NORMAN C. RENDLEMAN, Pittsburgh, Pa. Filed Oct. 23, 1914. Serial No. 868,190. (Cl. 80—46.)

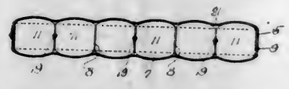


2. In a universal mill for rolling flanged sections, the combination of a set of universal rolls for rolling the web and sides of the flanges of a blank, a set of edging rolls placed end-to-end of said universal rolls and adapted

to roll the edges of the flanges of such blank, and a conveyer at each side of said set of rolls whereby a blank may be given a single pass through one of said sets of rolls and between two passes through the other of said sets of rolls.

[Claim 1 not printed in the Gazette.]

1,228,783. MATTRESS. GEORGE EDWARD KERIVAN, Newton, Mass. Filed Dec. 18, 1915. Serial No. 67,684. (Cl. 5—1.)

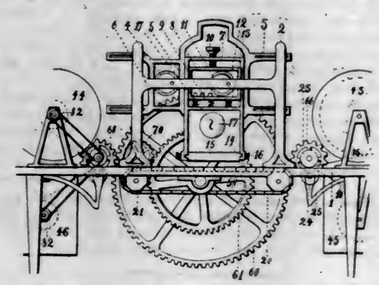


1. A mattress of the character described comprising, in combination, a body having a series of substantially square cells, an air cushion in each of said cells, the height of said air cushions when inflated being slightly greater than the height of said cells, all substantially as set forth.

3. A mattress of the character described comprising, in combination, a body provided with a series of cells having open ends and vertical walls, an air cushion in each of said cells, said air cushions when inflated adapted to fill said cells and projecting slightly beyond the open ends thereof, the said projecting portions of said cushions being rounded over substantially as set forth.

[Claim 2 not printed in the Gazette.]

1,228,784. COMBINATION PHOTO AND TYPE PRINTING MACHINE. CHARLES KESSES, New York, N. Y. Filed Apr. 11, 1916. Serial No. 90,489. (Cl. 95—75.)



1. In a combination photo and type printing machine, a support, means to feed a film strip along said support, means movably mounted on said support adapted to hold a bed of type and a photographic negative in the path of movement of said strip, and means to operate the first and second mentioned means simultaneously whereby the type and negative may be brought into printing contact with the film strip during the feeding movement thereof.

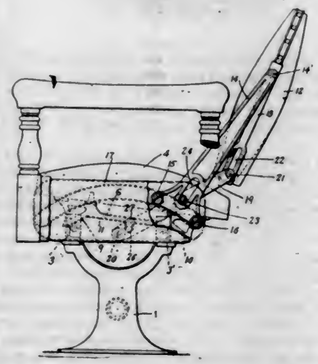
2. In a combination photo and type printing machine, a support, means on said support to feed a film along a given plane, a printing frame carrier mounted to reciprocate parallel with and at right angles to said plane, a printing frame secured in said carrier, and means to operate said feeding means and to reciprocate the carrier, whereby the frame is brought into printing contact with the film during the feeding movement thereof.

3. In a combination photo and type printing machine, the combination of a support, a main carrier arranged for sliding movement on said support, a printing frame carrier arranged for sliding transversely in said main carrier, a printing frame secured in the last named carrier and adapted to hold a bed of type and a photographic negative, means for reciprocating said carriers in unison; a movable platform, rollers adjoining said platform to feed paper continuously, and means for adjusting the reciprocating means to cause the type bed and a photographic printing frame to contact with and move at the same speed and in same direction as the paper during exposure and printing.

4. In a combination photo and type printing machine, a support, a main carrier reciprocably mounted on said support, a frame carrier reciprocably mounted in said main carrier, a printing frame mounted in said frame carrier and adapted to hold a bed of type and a photographic negative, a movable platform on said support, rollers adjacent said platform to feed paper continuously along said platform, and means for simultaneously reciprocating said carriers to bring the type and negative into printing contact with the paper during the feeding movement thereof.

5. In a combination photo and type printing machine, a support, a main carrier reciprocably mounted on said support, a frame carrier reciprocably mounted in said main carrier, a printing frame mounted in said frame carrier and adapted to hold a bed of type and a photographic negative, a movable platform on said support, rollers adjacent said platform to feed paper continuously along said platform, means for simultaneously reciprocating said carriers to bring the type and negative into printing contact with the paper during the feeding movement thereof, and means on said carriers to adjust said reciprocating means whereby the printing frame is caused to move substantially at the same speed and in the same direction as the paper while in printing contact therewith.

1,228,785. REVERSIBLE CAR-SEAT. JOHN EDWIN KILBURN, Philadelphia, Pa., assignor to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed May 11, 1914. Serial No. 837,619. (Cl. 155—2.)

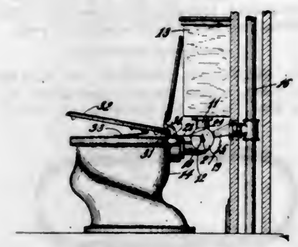


1. In a reversible car-seat, the combination of a support, curved tracks supported thereby, rockers slidably mounted on said support and a seat carried thereby, a back movable from one edge of the seat to the other to reverse the facing direction of the seat, arms pivoted to the back intermediate its top and bottom and carrying rollers running on said track, links having fixed pivots at their lower ends below the seat and having pin and slot connections with said back and also with said arms, said links also having pins above the pivotal points thereof engaging slots in said rockers to move the seat in the same direction as that of the back in reversal, substantially as set forth.

2. In a reversible car-seat, the combination of a support, curved tracks supported thereby, rockers slidably mounted on said support and a seat carried thereby, a back movable from one edge of the seat to the other, arms pivoted to the back intermediate its top and bottom and carrying at their lower ends rollers running on said tracks, said arms having downwardly extending slots at their lower ends between said rollers, and said back having downwardly extending slots at the lower portions of its ends, and links having fixed pivots at their lower ends below said seat and having pins slidably engaged within the slots in said arms and said back, said links also having pin and slot connections with said rockers, substantially as set forth.



1,228,786. VENTILATOR FOR WATER-CLOSETS. ERNST F. KLEMME, Milwaukee, Wis. Filed Jan. 19, 1917. Serial No. 143,217. (Cl. 4—21.)



1. A ventilator for water closets, comprising a vent controlling valve in the flushing pipe closed by a flow of water through the flushing pipe and other means for opening and closing the valve.

2. A ventilator for water closets, comprising a vent controlling valve in the flushing pipe closed by the flow of water through the flushing pipe and means operated by the closet seat for automatically opening the valve.

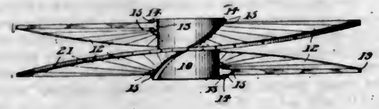
3. A ventilator for water closets, comprising a vent connection with the flushing pipe, a valve for controlling same, means influenced by a flow of water through the flushing pipe for closing the valve, and other means for opening and closing the valve.

7. A ventilator for water closets, comprising a vent controlling valve in the flushing pipe closed by a flow of water through the flushing pipe, and other means for automatically opening and closing the valve.

8. A ventilator for water closets, comprising a normally closed vent controlling valve in the flushing pipe closed by the flow of water through the flushing pipe, and means operated by the closet seat for automatically opening the valve.

[Claims 4 to 6 not printed in the Gazette.]

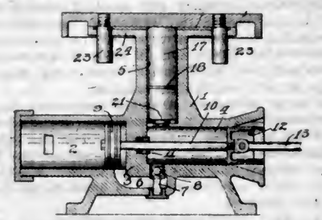
1,228,787. PROPELLER. FRANCISZEK KOWALSKI, Philadelphia, Pa. Filed Oct. 16, 1916. Serial No. 125,878. (Cl. 170—177.)



1. A propeller comprising a hub, substantially semi-helical guide strips secured to the outer face thereof, a plurality of blades having their inner ends removably secured within the said guide strips, said plates being tapered and having their outer enlarged ends of arcuate formation provided with dove-tailed grooves adapted for forming a continuous groove throughout the said plates when the latter are arranged in an edgewise engagement, and a locking strip for the said plates peripherally secured thereto removably positioned within the said grooves.

[Claim 2 not printed in the Gazette.]

1,228,788. JOLTER FOR MOLDS. WILLIAM P. KRAUSE, Chicago, Ill. Filed Apr. 10, 1914. Serial No. 830,842. (Cl. 22—45.)



1. In a jolting machine for molds connected compounded compressing cylinders for a fluid, a check valve mounted therebetween, another cylinder communicating with the high pressure cylinder of said compounded cylinders, a plunger movable therein, and a table connected with said plunger adapted to be oscillated by the compression and release of the fluid in the cylinders.

2. In a device of the class described low and high pressure compounded cylinders, means controlling the flow therebetween, another cylinder in communication with the high pressure cylinder, a plunger mounted in said cylinder, a table to receive molds to be formed thereon connected to said plunger and adapted to be oscillated thereby, and means controlling the inlet and outlet of fluid with respect to said cylinders.

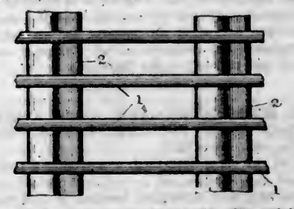
3. In a device of the class described a plunger cylinder, a plunger therein controlling the outlet therefrom independently of valve gearing, a table thereon to receive molds, tandem pressure means for causing jolting of said table by movement of the plunger, and mechanism independent of said cylinder adapted to control said jolting.

4. In a device of the class described a table to receive molds thereon, a plunger connected to said table, pressure producing mechanisms for elevating said plunger, means to permit said plunger itself to act automatically independently of auxiliary valve gearing to cause release of the pressure to jolt said table, and means below said table for obviating secondary vibrations.

5. In a device of the class described a plunger cylinder, a plunger therein controlling the outlet therefrom independently of valve mechanism, a jolting table thereon, shock absorbing means between said cylinder and said table, fluid pressure mechanisms for elevating said table by movement of the plunger and means controlling the force of shock transmitted to the mold through said table.

[Claims 6 to 34 not printed in the Gazette.]

1,228,789. METAL FABRIC. MAURICE LACHMAN, New York, N. Y., assignor to Universal Electric Welding Company, New York, N. Y., a Corporation of New York. Filed Nov. 5, 1909. Serial No. 526,348. (Cl. 72—110.)



1. A metal fabric comprising a plurality of longitudinal members and a plurality of square or rectangular transverse members of relatively greater cross-section crossing said longitudinal members and welded thereto by a corner of said transverse members, the sides of the heavier members being disposed at an angle to the other members.

2. A metal fabric comprising a plurality of longitudinal members and a plurality of square or rectangular transverse members of greater cross-sectional area than the longitudinal members and provided with a rounded corner joining two of the sides, said longitudinal members engaging the rounded corner of the transverse members and welded thereto and the sides of said rectangular members adjacent the rounded corner being disposed at an angle to said longitudinal members.

3. A metal fabric or structure comprising longitudinal and transversely disposed members, one of said members having a greater cross-section than the other and the lighter member welded to a corner of the heavier member, whereby the sides of the heavier member adjacent the corner are disposed at an angle to the plane of the lighter members.

4. An article of manufacture comprising one or more longitudinal bars polygonal in cross-section, the intersection of the principal faces of which form edges, and one or more transverse metallic members arranged in contact with one of said edges of said longitudinal bar or bars and electrically welded thereto.

5. An article of manufacture, the same comprising one or more longitudinal bars and one or more transverse members engaging said bars, each of said longitudinal bars having longitudinal faces which converge and meet forming a longitudinal edge, each of said bars being disposed so that said edge engages said transverse members and the faces forming said edge are both at an angle to said transverse members, said bars and transverse members being welded to each other at the points of intersection.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,790. APPARATUS FOR DRYING WOOD VENEER. ERIC LAMBERT, Kansas City, Mo. Filed May 8, 1916. Serial No. 96,122. (Cl. 34—47.)



2. A dry kiln comprising a rectangular shaped housing, a radiator located in one end of said housing forming an end way thereof and provided with openings through which air may be drawn, the opposite end of said housing closed by an end wall, and an exhaust fan connecting with the interior of said housing through said wall.

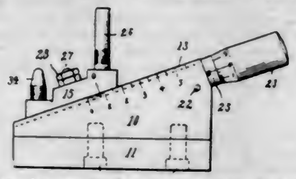
3. A dry kiln comprising a housing, said housing comprising a floor and sides and cover and end walls, doors arranged in one of said side walls, said floor and cover and side walls being continuous and free from projections on the interior sides thereof when said doors are closed, a radiator mounted in one wall of said housing provided with air passages therethrough, the opposite wall of said housing closed excepting an opening for an exhaust fan, and an exhaust fan communicating with said opening.

[Claim 1 not printed in the Gazette.]

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1,228,791. MICROMETER-GAGE. ALBERT R. LAUBSCHER, Bridgeport, Conn. Filed Aug. 4, 1916. Serial No. 113,123. (Cl. 33—162.)

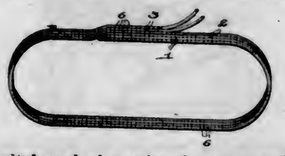
A gage of the class described, comprising a body having an inclined top surface, with a ribbed guideway formed therein, an attached elongated bearing in alinement with the guideway and having a graduation mark indicated thereon, a slide block mounted in the guideway, and having a graduation mark indicated thereon, a screw rotatably mounted in the bearing, a handle attached to the screw and having a series of graduation marks upon its periphery to register with the mark upon the bearing, a split slide nut mounted upon the screw within the body and having a threaded shank that extends through a hole in the slide-block, means to engage the shank for clamping the block to the body, nuts upon the split slide nut to take up wear



and tighten the nut to the screw, a base removably attached to the body, a post carried upon the slidable block, and a scribing attachment carried upon the post.

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1,228,792. BELT AND PROCESS OF MAKING THE SAME. OLEY JOSIAH LEAR, Philadelphia, Pa. Filed Oct. 11, 1916. Serial No. 125,004. (Cl. 154—4.)



1. A belt formed of a series of units extended side by side and secured together, each unit being formed of a series of strands also laid side by side, the strands of one unit being continuous with those of adjacent units.

2. A belt formed of a series of units laid side by side, and having their ends secured to their body portions, each unit consisting of at least two strands of fabric, and each unit being secured to its adjacent units.

3. The process of forming a belt comprising uniting ends of two or more strands of yarn or equivalent material to the body portion of said strands, thereby determining the length of the belt, and then continuing said strands along the sides of the belt so started, stitching them together, until the other ends of the strands are reached and securing said ends to the body portion of the belt at the side opposite the connection of the first mentioned ends.

4. The process of forming an endless belt which consists in laying strands side by side and stitching until said belt has reached the desired width, the strands forming the belt being continuous from one side of the belt to the other.

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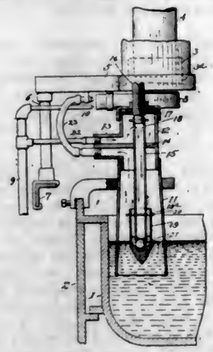
1,228,793. FUEL-REGULATING DEVICE. GEORGE E. LEE, Cleveland, Ohio, assignor to The George E. Lee Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 19, 1914. Serial No. 819,676. (Cl. 22—80.)

1. The combination of a melting pot and an auxiliary melting cup discharging into the same, a burner for heating the auxiliary melting cup, a fuel supply conduit to said burner, said conduit extending into the melting pot and having an opening, a valve controlling said opening, said valve being moved to open and closed position by the metal in said pot, as it rises and falls.

2. In combination, a melting pot, an auxiliary melting cup discharging into the same, a burner for heating the latter, a fuel supply conduit to said burner, said conduit extending into the melting pot and having an opening, a float coöperating with said opening and having valvular means adapted to open and close the said opening as the float rises and falls by the change in level of the molten metal.

3. The combination with a receptacle adapted to hold melted material, of an auxiliary melting cup adapted to hold material in solid form, a burner for heating the melting cup, a regulating device provided with two chambers, means for leading fuel from one of said chambers, and means for conducting fuel to the other of said chambers to the burner, a conduit extending from the first mentioned chamber and extending adjacent the surface of the melted material within the receptacle, a float member floating upon the surface of the material within the receptacle, coöperating valvular means carried by the float and said conduit for opening and closing the end of said conduit, as the float member rises and falls by the change in level of the material within the receptacle.





4. The combination with a receptacle adapted to hold melted material, of an auxiliary melting cup adapted to hold said material in solid form, a burner for heating the melting cup, a connection for supplying fuel to said burner, a regulating device inserted in said connection, said regulating device comprising an inlet chamber and an outlet chamber, a fuel conduit extending from the inlet chamber into the outlet chamber and adjacent the surface of the molter material within the said receptacle, a float resting upon the material within said receptacle, said float having a portion which surrounds the lower end of the conduit, coöperating means upon said conduit and float for guiding the float as it moves relative to the conduit, and valvular means associated with the float and conduit for causing the end of said conduit to be opened and closed by the rise and fall of the float, due to changes in level of the melted material within the receptacle.

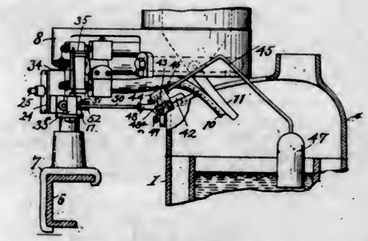
5. The combination with a receptacle adapted to hold melted material, of an auxiliary melting cup adapted to hold said material in solid form, a burner for heating the melting cup, a regulating device comprising a body portion formed with an inlet chamber and an exit chamber, means for conducting fuel to said inlet chamber, and means for conducting the fuel from the outlet chamber to the burner, said body portion at one end extending below the level of the melted material within the receptacle, the walls of this portion of the body slanting outwardly, a conduit connecting the inlet chamber with the outlet chamber, a float member floating on the surface of the melted material, said float member having the lower outward body portion tapered, and valvular means coöperating with the float and conduit for opening and closing the end of said conduit as the float rises and falls by the change in level of the melted material.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,794. DEVICE FOR CONTROLLING SUPPLY OF HEAT TO AN AUXILIARY HEATING DEVICE. GEORGE E. LEE, Cleveland, Ohio, assignor to The George E. Lee Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 14, 1916. Serial No. 78,144. (Cl. 22—80.)

1. The combination with a movable melting pot of an auxiliary melting device mounted above the said melting pot and adapted to supply melted material to the said melting pot, a heating element for said auxiliary device, means through which heat furnishing media is supplied to the heating element, a movable member for interrupting or establishing such supply of heat furnishing media, a device mounted upon the pot and extending into the pot, and sensitive to the rise and fall of the material within the pot, and a connection between the means for interrupting the supply of heat furnishing media and the device which is mounted upon the pot to move the said means controlling the supply of heat furnishing media in accordance with the rise and fall of the level of the material in the pot, said connection embodying a sliding engagement between the said device and the said movable member controlling the supply of heat furnishing media whereby the melting pot may be moved without affecting the operative engagement between the aforesaid device and the aforesaid movable member.



2. The combination with a movable melting pot of an auxiliary melting device mounted above the said melting pot and adapted to supply melted material to the said melting pot, a heating element for said auxiliary device, means through which heat furnishing media is supplied to the heating element, a movable member for interrupting or establishing such supply of heat furnishing media, a float within the melting pot, said float being pivotally mounted upon the pot and responsive to the rise and fall of the metal in the pot, a connection between the said float and the means for controlling the supply of heat furnishing media to move the said means controlling the supply of heat furnishing media in accordance with the rise and fall of the level of the material in the pot, said connection embodying a sliding engagement between the said float and the said movable member controlling the supply of heat furnishing media whereby the melting pot may be moved without affecting the operative engagement between the aforesaid float and the aforesaid movable member.

3. The combination with a melting pot of an auxiliary melting device above the melting pot, a heating element associated with the auxiliary melting device, means for supplying heating media to the heating element, means for controlling the supply of heat furnishing media said means including a rotatable shaft, a pair of stop members carried by the shaft, a movable arm extending between said stop members, a device carried by the pot and sensitive to the rise and fall of the metal in the pot said device being operatively connected with the arm which extends between said stop members whereby movement imparted to the arm due to the rise and fall of the material within the pot will be imparted to one of the aforesaid stop members thereby to turn the shaft and operate the controlling means.

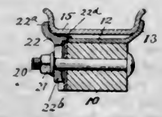
4. The combination with a melting pot of an auxiliary melting device including a heating element, means for supporting the said device above the melting pot, movable means for controlling the supply of heat furnishing media to the heating elements, an arm coöperating with said movable means and adapted to move the same, said arm being pivotally mounted upon the melting pot, a device associated with the material in the melting pot and responsive to the rise and fall of the level of the material within the pot, a connection between said device and the pivoted arm whereby the pivoted arm is moved in accordance with the rise and fall of the material within the pot and communicates its movement to the movable means for controlling the supply of heat furnishing media.

5. The combination with a melting pot of an auxiliary melting device, means for supporting the said device above the melting pot, of an auxiliary melting device adapted to supply melted material to the melting pot, a heating element for said auxiliary melting device, means for supporting the said device above the melting pot, movable means for controlling the supply of the heat furnishing media to the heating element, an arm coöperating with said movable means and adapted to move the same, said arm being pivotally mounted upon the melting pot, a second arm pivotally mounted upon the melting pot and operatively coöperating with the first mentioned arm, means whereby the said arms may be relatively adjusted, and a device associated with material in the melting pot and responsive to the rise and fall of the level of material within the pot, said device being connected with the second mentioned arm whereby both of said arms will be moved in accordance with the rise and fall of the material within the pot and communicate the movement of said device to the movable means for controlling the supply of heat furnishing media.

[Claims 6 to 17 not printed in the Gazette.]

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1,228,795. MEANS FOR HOLDING DEMOUNTABLE RIMS ON WHEELS. STEWART R. MCKAY, Cleveland, Ohio, assignor to The McKay Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 13, 1916. Serial No. 103,408. (Cl. 152—21.)



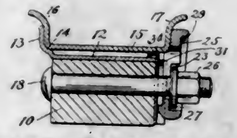

1. The combination of a wheel, a demountable rim therefor, means carried by the wheel which engage said rim and limit its lateral movement in one direction, and a plurality of clamping devices,—each comprising a bolt which projects laterally from the outer side of the wheel, a nut thereon, and a clamp having a jaw for engagement with the rim and having a shank in which there is a radially elongated hole through which the bolt passes and having an integral strain-resisting lug which extends over the periphery of the wheel and into engagement therewith,—the thickness of said lug being less than the distance between the outer periphery of the wheel and the inner periphery of the rim whereby said lug is out of contact with the rim when it is in contact with the periphery of the wheel.

2. The combination of a wheel, a demountable rim therefor, means carried by the wheel which engage said rim and limit its lateral movement in one direction, and a plurality of clamping devices each comprising a bolt which projects laterally from the outer side of the wheel, a nut thereon, a clamp having a jaw for engagement with the rim and having a shank in which there is a radially elongated hole through which the bolt passes and having an integral strain resisting lug which extends over the periphery of the wheel and into engagement therewith,—the thickness of said lug being less than the distance between the outer periphery of the wheel and the inner periphery of the rim whereby said lug is out of contact with the rim when it is in contact with the periphery of the wheel and a plate fixed to the side of the wheel behind the clamp,—which plate is provided with outwardly extended radial flanges which are outside of but close to the sides of said clamp.

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1,228,796. RIM-CLAMPING DEVICE. STEWART R. MCKAY, Cleveland, Ohio, assignor to The McKay Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 28, 1916. Serial No. 111,938. (Cl. 152—21.)

1. The combination of a wheel, a demountable rim thereon, and means to limit the backward movement of the rim upon the wheel, of a plurality of rim clamping devices each comprising a bolt which projects forward from the front side of the wheel felly, a nut on said bolt having an annular flange, and a clamp which lies between the nut and the wheel felly, and has a radial slot through which the bolt passes,—which slot is proportioned and located to permit the clamp to move radially from the operative position in which it may engage the rim, to the inoperative position in which it is wholly out of the path of the rim as the latter is moved onto or off of the wheel, and said clamp having also a cylindrical surface which overlies the flange on the nut and engages therewith when the clamp is in the operative position.




2. The combination of a wheel, a demountable rim thereon, and means to limit the backward movement of the rim upon the wheel, of a plurality of rim clamping devices each comprising a bolt which projects forward from the front side of the wheel felly, a nut on said bolt having an annular flange, and a clamp which lies between the nut and the wheel felly, and has a radial slot through which the bolt passes,—which slot is proportioned and located to permit the clamp to move radially from the operative position in which it may engage the rim, to the inoperative position in which it is wholly out of the path of the rim as the latter is moved onto or off of the wheel, and said clamp having also a cylindrical surface which overlies the flange on the nut and engages therewith when the clamp is in the operative position, a plate fixed to the front face of the felly behind the clamp, which plate has forwardly projecting side flanges which lie alongside of the sides of the clamp.

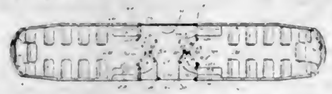
3. The combination of a wheel, a demountable rim thereon, and means to limit the backward movement of the rim upon the wheel, of a plurality of rim clamping devices each comprising a bolt which projects forward from the front side of the wheel felly, a nut on said bolt having an annular flange, and a clamp which lies between the nut and the wheel felly, and has a radial slot through which the bolt passes,—which slot is proportioned and located to permit the clamp to move radially from the operative position in which it may engage the rim, to the inoperative position in which it is wholly out of the path of the rim as the latter is moved onto or off of the wheel, and said clamp having also a cylindrical surface which overlies the flange on the nut and engages therewith when the clamp is in the operative position, a plate fixed to the front face of the felly behind the clamp, having its outer end bent over the felly band and between it and the rim, and in substantial contact with the latter.

4. The combination of a wheel, a demountable rim thereon, and means to limit the inward movement of the rim upon the wheel, of a plurality of rim clamping devices,—each comprising a bolt which projects forward from the front side of the wheel felly, a nut on said bolt having adjacent its back end an outwardly extended annular flange, and a clamp which lies between the nut and wheel felly and has a radial slot through which said bolt passes,—which slot extends radially toward the outer end of the clamp to a point such that the distance between the outer end of the slot and the outer edge of the clamp is less than the distance between the bolt and the inner periphery of the rim, and said clamp having a depressed surface for the rear end of the nut to engage with when the clamp is in operative position and having above said depressed surface an outwardly projecting cylindrical flange which overlies and engages the flange of said nut.

5. A rim clamp having a jaw portion and a shank portion which shank portion is formed with a cylindrical depression in its front face, and has a radial slot which extends from about the center of said depression outward toward the jaw and to a point which lies between said depression and the outer edge of said jaw.



1,228,797. PASSENGER-CAR FOR RAILWAYS. HERBERT MCNULTA, Chicago, Ill. Original application filed June 28, 1909, Serial No. 504,651. Divided and this application filed Aug. 12, 1912. Serial No. 715,188. (Cl. 105—205.)



1. A railway passenger car comprising in combination a car floor, a platform extending the entire width of said floor in a plane below the same, steps leading from the platform to said floor, an inside door directly fronting said steps, substantially as described.

2. A railway passenger car comprising in combination a car floor, a platform extending substantially the width of said floor, in a plane below the same, steps located toward the opposite sides of said platform, and doors at the top of said steps in diagonal arrangement with reference to the body of the car, substantially as described.

3. A railway passenger car comprising in combination a car floor, a platform at the middle of the car extending the entire width of said floor in a plane below the same, a side entrance to said platform steps leading from the platform to said floor, and separate entrances and exits to said steps, substantially as described.

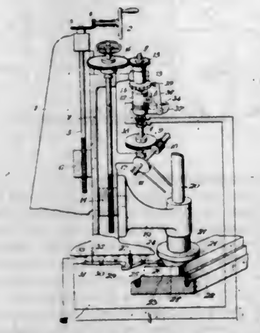
4. A railway passenger car comprising in combination a car floor, a platform at the middle of the car extending the entire width of said floor in a plane below the same, steps leading from said platform to the floor, separate entrances and exits therefor and seats arranged lengthwise of the car adjacent said entrances and exits, and thereby providing a broad space for passengers making entrance to and exit from the car floor, and for standing room, substantially as described.

5. A railway passenger car comprising in combination a car floor, a platform extending the entire width of said floor in a plane below the same, steps leading from said platform to the car floor, converging doors located at the top of said steps, and means whereby said doors when moved to an open position are suspended at a point immediately above the platform, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

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1,228,798. ADJUSTING DEVICE FOR GRINDING-WHEELS. MAX MAAG, Zurich, Switzerland. Filed July 26, 1916. Serial No. 111,425. (Cl. 51—12.)



1. In a grinding machine, the combination with the work-support, the grinding-wheel, and means for feeding one relative to the other, of means for automatically compensating for the wear of the grinding-wheel, comprising a constantly driven shaft, a clutch to connect the same to said feeding means, and electro-magnetic means to control said clutch, the circuit of said electro-magnetic means including a feeler responsive to wear of said grinding-wheel.

3. In a grinding machine, the combination with the work-support, the grinding-wheel, and means for feeding one relative to the other, of means for automatically compensating for the wear of the grinding-wheel, comprising a feeler lever, the position of which is determined by the wear of the grinding-wheel, an electric circuit arranged to be opened or closed by said feeler lever, a source of power, a clutch to connect the latter to said feeding means, an electromagnet in said circuit controlling the operation of said clutch, and means to disengage said clutch when said circuit is opened.

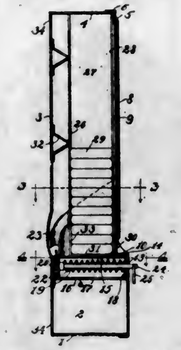
4. In a grinding machine, the combination with the work-support, the grinding-wheel, and means for feeding one relative to the other, of means for automatically compensating for the wear of the grinding-wheel, comprising a feeler lever, the position of which is determined by the wear of the grinding-wheel, an electric circuit arranged to be opened and closed by said feeler lever, a constantly rotating member arranged to oscillate said lever at regular intervals, means, controlled by said circuit to intermittently connect said member to said feeding means, and means, also controlled by said circuit, to connect said member to said feeding means to impart a relatively rapid and greater feeding movement between the grinding-wheel and work.

5. In a grinding machine, the combination with the work-support, the grinding-wheel, and means for feeding one relative to the other, of means for automatically compensating for the wear of the grinding-wheel, comprising a feeler lever, the position of which is determined by the wear of the grinding-wheel, an electric circuit arranged to be opened and closed by said feeler lever, a constantly rotating member arranged to oscillate said lever at regular intervals, means, controlled by said circuit to intermittently connect said member to said feeding means, means, also controlled by said circuit, to connect said member to said feeding means to impart a relatively rapid and greater feeding movement between the grinding-wheel and work, and manually-operable means to move said rotating member so that it no longer oscillates said lever, said manually-operable means at the same time affecting said circuit so as to render operative the said means for imparting the rapid feeding movement.

[Claims 2 and 6 not printed in the Gazette.]

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1,228,799. VENDING-MACHINE. GEORGE H. MARCOPOULOS, Cleveland, Ohio. Filed Feb. 1, 1915. Serial No. 5,852. (Cl. 194—80.)



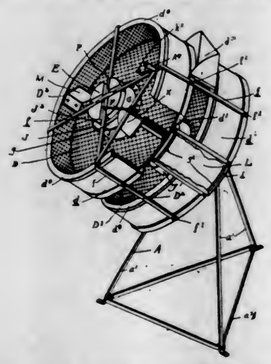
1. A vending machine comprising a vertically disposed open front casing, a horizontal ledge extending along each side and across the front of the casing near the bottom thereof, a coin mover reciprocable beneath the ledge and having a through slot for the reception of a coin, a shelf extending from the back of the casing forward less

than the depth of the casing beneath the coin mover and in a position to support a coin in the slot of the coin mover with the upper edge of the coin above the aforesaid ledge, guides for the coin mover extending from front to back of the casing, springs supported by the guides and interposed between the coin mover and a portion of the casing, an operating member extending forwardly from and connected to the coin mover, there being a coin receiving space provided between the bottom of the casing and the aforesaid shelf, a coin chute extending downward and to the rear along the inside of one side wall of the casing the same being turned at its rear end to deliver a coin, transversely disposed, to the coin mover when the latter is in normal position, the chute being only slightly wider than the thickness of the coin, a goods container supported by the aforesaid ledge and extending upward therefrom to the top of the casing and laterally from the aforesaid coin chute entirely to the opposite side of the casing, and a door for closing the entire front side of the casing, said door having a coin receiving slot that registers with the coin chute, an opening through which the goods may be ejected, and an opening through which the operating member of the coin mover projects.

2. A vending machine comprising a vertically disposed open front casing, a horizontal ledge near the bottom thereof, a coin mover reciprocable beneath the ledge and having a through slot for the reception of a coin, a shelf beneath the coin mover and in a position to support a coin in the slot of the coin mover with the upper edge of the coin above the aforesaid ledge, an operating member extending forwardly from and connected to the coin mover, there being a coin receiving space provided between the bottom of the casing and the aforesaid shelf, a coin chute extending downward and to the rear along the inside of one side wall of the casing and being turned at its rear end to deliver a coin, transversely disposed, to the coin mover when the latter is in normal position, the chute being only slightly wider than the thickness of the coin, a goods container supported by the aforesaid ledge and extending upward therefrom to the top of the casing and laterally from the aforesaid coin chute entirely to the opposite side of the casing, and a door for closing the entire front side of the casing, said door having a coin receiving slot that registers with the coin chute, an opening through which the goods may be ejected, and an opening through which the operating member of the coin mover projects.

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1,228,800. GRADING OR SEPARATING MACHINE. SYLVESTER MARSHALL, Athens, Ohio. Filed Sept. 1, 1916. Serial No. 118,140. (Cl. 130—16.)



1. A grader or separator comprising, an inclined rotary screen or sieve formed of a circular rim, a flat reticulated bottom, and a cylindrical screen within and spaced from the said rim and secured at its lower edge to the said reticulated bottom; the openings in the said reticulated bottom and cylindrical screen being larger than the greatest transverse diameter of the largest grains, an outlet being provided through the rim between the reticulated and imperforate bottoms, and independent means for discharging the largest grains from above the reticulated bottom.

2. A grader or separator comprising, a suitable base or support, a rotary inclined flat screen or sieve mounted centrally thereon and provided with an axially arranged outlet, a valve controlling said outlet and a separate and independent bucket or gate operatively connected at its inner end to said valve to open and close the same and adapted to open the valve, lift the graded material and discharge it directly into said outlet.

3. A grader or separator comprising, a suitable base or support, a rotary inclined flat sieve mounted centrally thereon and having an imperforate rim, a cylindrical screen extending up from the flat screen at right angles thereto and spaced from the said rim, an imperforate bottom below the flat screen having a discharge outlet, an axially arranged outlet tube extending through the said imperforate bottom and flat screen and having an opening in one side above the flat screen, and means for lifting the graded material and discharging it directly into said axial outlet.

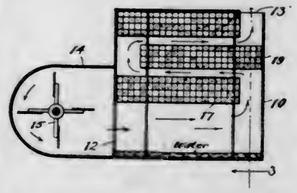
4. A grader and separator comprising, an inclined rotary screen having a centrally arranged outlet, a hinged valve therefor, and a bucket pivoted within the screen or sieve to swing at its outer end toward and from the rim of the sieve and at the inner end into and out of register with the rear wall of said outlet and a link connecting the inner end of the bucket with the adjacent free end or edge of said valve for the purpose described.

5. A grader or separator comprising, an inclined rotary screen having a centrally arranged outlet, a hinged valve therefor, a bucket pivoted within the screen or sieve and operatively connected with said valve, a spring for throwing the bucket into operative position between said outlet and the rim of the screen, and a finger released catch for holding the bucket in its inoperative position as described.

[Claims 6 to 9 not printed in the Gazette.]

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1,228,801. APPARATUS FOR MOISTENING AIR. FRANK W. MASEK, Cleveland, Ohio. Filed Apr. 26, 1915. Serial No. 23,820. (Cl. 261—95.)



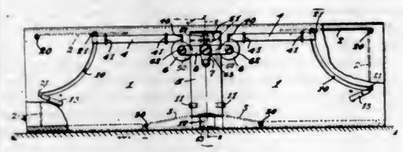
1. In an apparatus for moistening air, a casing provided with inlet and outlet openings, means for forcing air therethrough, a plurality of reticulated supports extending substantially horizontally and alternately from opposite sides of the casing at different elevations and spaced apart to form a zig-zag passageway for air between the inlet and outlet openings, and absorbent media adapted to hold water resting upon said supports.

4. An apparatus for moistening air, a chamber having inlet and outlet openings, means for causing air to pass through the chamber, said chamber having a plurality of receptacles extending horizontally alternately from opposite sides and spaced apart so as to form a zig-zag path for the air passing through the casing, said receptacles being formed of wire mesh or netting and containing water absorbing material.

[Claims 2 and 3 not printed in the Gazette.]



1,228,802. TRAP. JAMES H. MAXWELL, Seattle, Wash. Filed Mar. 14, 1916. Serial No. 84,222. (Cl. 43—19.)



1. In an animal trap, in combination, a casing having an entrance opening, a door for closing said opening hinged by its upper edge to swing upwardly, an arm extending from a side of the door, the casing having an arcuate slot permitting the exterior projection of said arm, a catch bar mounted on the exterior of the casing and movable to supportingly engage and to disengage said arm, a vertically movable floor section, a movable supporting member for said floor section, and a bell crank member pivoted adjacent the floor supporting member and a catch bar, said latter members each having offset portions adapted to engage the arms of the bell-crank connecting member.

2. In an animal trap, in combination, a casing having an entrance opening, a door for closing said opening hinged by its upper edge to swing upwardly, an arm extending from a side of the door, the casing having an arcuate slot permitting the exterior projection of said arm, a catch bar mounted for longitudinal reciprocation horizontally in position to enter beneath the outwardly projecting arm of the door, the end of said catch bar having a side projecting arm, a bell-crank member pivoted upon the casing and having an arm engaging the side projecting arm of the catch bar, a vertically movable floor section, and a bar mounted for vertical movement on the casing having a side arm supporting the movable floor section, and an actuating engagement with the other arm of the bell-crank member.

3. In an animal trap, in combination, a casing having an entrance opening, a door for closing said opening hinged by its upper edge to swing upwardly, an arm extending from a side of the door, the casing having an arcuate slot permitting the exterior projection of said arm, a catch bar mounted for longitudinal reciprocation horizontally in position to enter beneath the outwardly projecting arm of the door, the end of said catch bar having a side projecting arm, a bell-crank member pivoted upon the casing and having an arm engaging the side projecting arm of the catch bar, a vertically movable floor section, and a bar mounted for vertical movement on the casing having a side arm supporting the movable floor section and an actuating engagement with the other arm of the bell-crank member, the upper end of said floor supporting bar having a side projecting flange, and a setting catch adapted to engage said flange to hold the bar raised.

4. In an animal trap, in combination, a casing having an entrance opening, a door for closing said opening hinged by its upper edge to swing upwardly, an arm extending from a side of the door, the casing having an arcute slot permitting the exterior projection of said arm, a catch bar mounted for longitudinal reciprocation horizoutally in position to enter beneath the outwardly projecting arm of the door, the end of said catch bar having a side projecting arm, a bell crank member pivoted upon the casing and having an arm engaging the side projecting arm of the catch bar, a vertically movable floor section, and a bar mounted for vertical movement on the casing having a side arm supporting the movable floor section, and an actuating engagement with the other arm of the bell-crank member, and a locking member positioned to project into said arcuate slot, and adapted to secure said door in closed position.

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1,228,803. AUTOMATIC COMPENSATING DEVICE. GISBERT MERTELMEYER, Waterbury, Conn., assignor to The Bristol Company, Waterbury, Conn., a Corporation of Connecticut. Filed Oct. 25, 1916. Serial No. 127,555. (Cl. 73—32.)



1. Automatic temperature compensating device for thermo-electric pyrometer, comprising: a plurality of resistances located in proximity to the cold end of said couple, one being connected in series therewith and another in shunt across said couple, whereby variations of temperature at the cold end of said couple will tend to divert the current flowing inversely to the said change and maintain substantially constant the effective electromotive force of said couple.

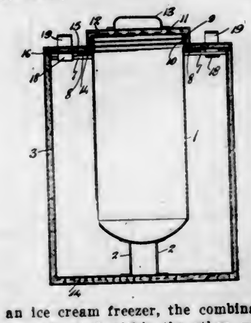
3. Automatic temperature compensating device for thermo-electric pyrometer, comprising; a resistance of manganin connected in series with said couple, and a resistance of nickel connected in shunt across said couple.

5. The combination with a thermo-electric couple used as a pyrometer or thermometer, and a measuring instrument; of a compensating device located in proximity to the cold end of said couple and comprising a resistance of zero temperature coefficient in series with one of the elements of the couple, and a resistance having an appreciable temperature coefficient connected in shunt across said couple; and additional resistance of zero temperature coefficient in series therewith and located within said instrument.

[Claims 2 and 4 not printed in the Gazette.]

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1,228,804. ICE-CREAM FREEEZER. JOHN C. MILLER, Covington, Ky., assignor, by mesne assignments, to The Cincinnati Can Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 18, 1913. Serial No. 794,767. (Cl. 220—147.)



1. In an ice cream freezer, the combination of two receptacles, one located within the other, with both vessels opening at the top, a cover for the outer vessel, means for providing a water tight seat for the lower edge of said cover on the inner vessel, a cover for the inner vessel adapted to pass over the outside thereof, means for providing a water tight seat for its lower edge on the inner vessel independent of the outer cover, and securing means for holding each cover in place.

2. In an ice cream freezer, the combination of two receptacles, one located within the other, with both vessels opening at the top, an annular shoulder on the outside of the inner vessel, a cover for the outer vessel seat-

ing on said shoulder, a cover for the inner vessel likewise seating on said shoulder independent of the outer cover, and securing means for holding each cover in place.

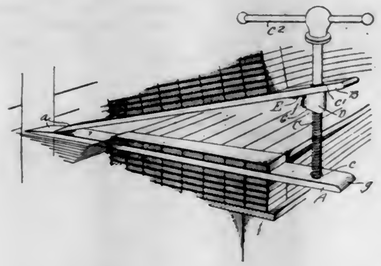
3. In an ice cream freezer, the combination with two receptacles, one located within the other, with both vessels opening at the top, a cover for the outer vessel, means for providing a seat for the lower edge of said cover on the inner vessel, insulation for said seat, a cover for the inner vessel, means for providing a seat for its lower edge on the inner vessel independent of the outer cover, means for insulating said latter seat, and securing means for holding the said covers in place tightly against their seats.

4. In an ice cream freezer, the combination with two receptacles, one located within the other, with both vessels opening at the top, a cover for the outer vessel, means for seating the lower edge of said cover on the inner vessel, insulation for said seat, a cover for the inner vessel, means for seating its lower edge on the inner vessel independent of the outer cover, means for insulating said latter seat, and securing means for holding the said covers in place tightly against their seats, said two covers and the walls of the outer receptacle being hollow and filled with insulating material.

5. In an ice cream freezer, the combination of two receptacles, the one located within the other, with both vessels opening at the top, and separate covers for said vessels, the outer vessel formed with a seat at its upper end and a flange on the inner vessel coöperating with the seat to form a support for the cover of the outer vessel, brace rods to secure the inner vessel in fixed position within the outer vessel, and plates flaring downwardly secured to the under surface of the cover and adapted to engage the braces when the cover is turned to lock the same in place and form an airtight closure.

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1,228,805. JACK OR DEVICE FOR SPREADING CABLES AND THE LIKE. GEORGE RALPH MORRIS, Buffalo, N. Y. Filed Jan. 8, 1915. Serial No. 1,131. (Cl. 254—126.)



1. In a jack for spreading objects arranged in a pile, the combination of two members adapted to be inserted endwise one below and one above one or more of the objects in the pile, said members being adapted to bear one on the other at the inner ends thereof which are inserted into the pile, and a device which is located at the outer ends of said members and is movable while retained at the outer ends of said members for spreading said outer ends apart, whereby the movement of the spreading device is not obstructed by the objects between said members, there being no connection between said members other than the spreading device at their outer ends.

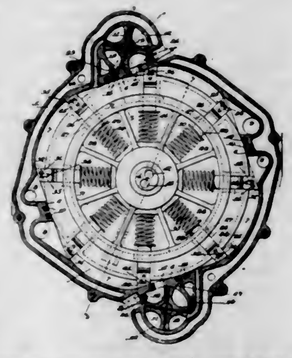
2. In a jack for spreading objects arranged in a pile, the combination of two members adapted to be inserted endwise at opposite sides of one or more of the objects in the pile, said members being adapted to bear one on the other at the inner ends thereof which are inserted into the pile, and a screw which engages one of said members and has a screw connection with the other member at the outer ends of said members for spreading said outer ends apart, there being no connection between said members other than the spreading device at their outer ends.

3. In a jack for spreading objects arranged in a pile, the combination of two bars adapted to be shoved endwise into place on opposite sides of one or more of the objects in the pile, said bars being adapted to bear one on the other at the inner ends thereof which are inserted into the pile, and a screw which has a screw-threaded connection with one of said bars and removably bears on the other bar for forcing said bars apart, said bars being disconnected and adapted to be placed in position and removed separately.

4. In a jack for spreading objects arranged in a pile, the combination of two members adapted to be inserted at opposite sides of one or more of the objects in the pile, said members being adapted to bear one on the other at one end, a screw which engages one of said members, and a nut having a screw-threaded engagement with said screw and engaging said other member, said nut being adapted to bear and slide onto the end of said first member and one of said coöpearting bearing parts being beveled.

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1,228,806. INTERNAL-COMBUSTION ENGINE. LOUIS S. MORRIS, Bridgeport, Conn. Filed Aug. 13, 1914. Serial No. 856,624. (Cl. 123—16.)



An internal combustion engine comprising a stator and a rotor, a fuel inlet, a spring pressed piston slide, an oscillatory face block carried by the piston slide, a plurality of links for securing the block to the slide, and recesses in the block to permit the block to oscillate.

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1,228,807. LIGHT-PROOF AND SANITARY SKIRT. STELLA MOSCOW, Brooklyn, N. Y. Filed May 29, 1916. Serial No. 100,529. (Cl. 2—42.)



1. In an underskirt of the character described, a body, an opaque skirt member having an opening at the front and back, a protecting sheet arranged below each of said openings, and means for connecting said protecting sheet to said opaque skirt member.

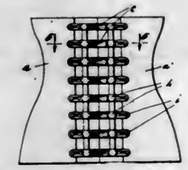
2. An underskirt, comprising a body, an auxiliary skirt member connected to said body, said auxiliary skirt member being connected adjacent the top and also at a point spaced from the top, said skirt member at said point being open for part of the distance at the front and at the back, a protecting sheet arranged at the front and back, said protecting sheets being adapted to be passed through said openings, a line of fastening means connected to said auxiliary skirt member at said openings, a line of fastening means connected to the upper edge of each of said sheets, the fastening means on the sheets interlocking with the fastening means on the auxiliary skirt member so as to hold the sheet properly in position, and fastening means for closing the open sections of said auxiliary skirt member.



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1,228,808. CORSET. MARY G. MOTZ, Hillsdale, N. J. Filed May 31, 1916. Serial No. 100,786. (Cl. 2—74.)

1. In a corset, elastic strips, a pair of stays around

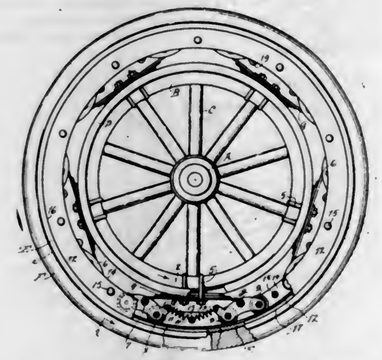


which said strips are attached to form therewith a single piece, eyeleted members projecting from said stays and buttons on the edges of said corset which serve to engage said eyeleted members.

2. In a corset, elastic strips, a pair of stays around which the ends of said strips are folded and stitched to form therewith a single piece and means on said stays for the attachment of said piece to said corset.

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1,228,809. RESILIENT WHEEL. CHARLES NEIMEYER, Little Rock, Ark. Filed Mar. 18, 1916. Serial No. 85,193. (Cl. 152—32.)

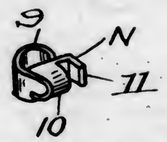


1. In a resilient wheel, the combination of inner and outer rims, laterally spaced annular roller-beds connected to the inner side of the outer rim with a space between them which forms an annular guide-way, trucks provided with rollers seated on these roller beds on which they are adapted to move and comprising also rollers which are larger in diameter and extend into these guide-ways, springs to connect these trucks to the outer rim and additional springs to connect them to the inner rim.

2. In a resilient wheel, the combination of an inner rim, an outer rim spaced therefrom and provided with a guide-way between its edges, trucks comprising spaced frame members provided in the space between the rims, three rollers mounted between the frame members at each end of the trucks and seated on the outer rim with the central roller at each end occupying the guide-way mentioned, springs connecting these trucks to the inner rim and additional springs for connecting them to the outer rim.

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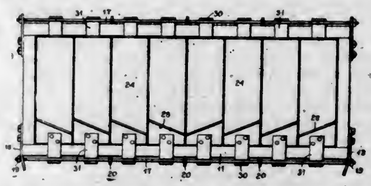
1,228,810. UMBRELLA. GEORGE NEU, Sr., Cincinnati, Ohio. Filed Feb. 25, 1916. Serial No. 80,544. (Cl. 135—32.)



In a device of the character described, in combination, with a rib, a brace joint secured thereto, said brace joint being formed substantially from a T-shaped metal blank, said T-shaped blank having one of its alining arms curled around in one direction so as to provide a loop, the arm at right angles to the last-named arm being curled back at right angles to the plane of said last-named loop, while the third and remaining arm is bent back at right angles upon itself so as to be spaced apart from the adjacent edge of said second named curled portion, and a rib having a right angular terminal of a length sufficient to project into said second-named curled portion as said rib also engages said right angular portion of the third arm.

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1,228,811. ROAD-FINISHING MACHINE. ELLWOOD HAMPTON NEWMAN, Spring Lake Beach, N. J. Filed July 28, 1916. Serial No. 111,813. (Cl. 37—5.)



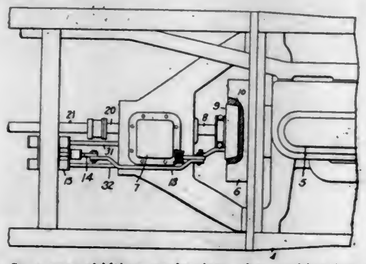
1. An implement as characterized comprising a series of smoothing sleds; and means for holding said sleds in service arrangement, said means embodying a surrounding frame, and individual attachments between said frame and each of said sleds, said attachments embodying rods extended transverse said frame, and hooks engaging the same, said hooks being permanently attached to the front and rear ends of paired sleds.

2. An implement as characterized comprising a series of smoothing sleds; means for holding said sleds in service arrangement; and a plurality of scraping members, one attached to each of said sleds, said members being inclined rearwardly.

3. An implement as characterized comprising a series of smoothing sleds; and means for holding said sleds juxtaposed in service relation, thereby forming a floor for carrying broken particles placed thereon, said means forming surrounding rails for said floor.

4. An implement as characterized comprising a series of smoothing sleds; means for holding said sleds juxtaposed in service relation, thereby forming a floor for carrying broken particles placed thereon, said means forming surrounding rails for said floor; and a plurality of scraping members, one attached to each of said sleds and at the forward end thereof.

1,228,812. GEAR-SHIFTING MECHANISM. JOHN P. NIKONOW, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 16, 1915. Serial No. 14,775. (Cl. 74—58.)



1. In a gear-shifting mechanism, the combination with a shiftable member, and a normally unstressed spring for shifting said member from a neutral position, of a magnet for supplying energy to said spring, and means for controlling the shifting of said member.

2. In a gear-shifting mechanism, the combination with a shiftable member, and normally unstressed spring means for actuating said member in opposite directions from a neutral position, of electromagnetic means for supplying energy to said spring means, and means for selectively controlling said electromagnetic means.

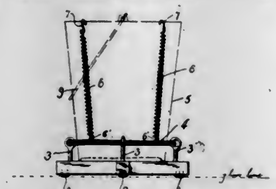
3. In a gear-shifting mechanism, the combination with a shiftable member, and normally unstressed resilient means for actuating said member in opposite directions from a neutral position, of means for supplying energy to said resilient means, and means for selectively controlling the actuation of said member and the operation of said energy-supplying means.

4. In a gear-shifting mechanism, the combination with a rod shiftable in opposite directions from a neutral position, a plurality of electromagnets, and a core member actuated in opposite directions by said electromagnets, of resilient means for connecting said core member to said shift rod, and means for selectively energizing said electromagnets to supply energy to said resilient means.

5. In a gear-shifting mechanism, the combination with a shift rod, a plurality of electromagnets, a core member therefor, and resilient means for connecting said core member to said rod, of means for selectively controlling said electromagnets to energize said resilient means.

[Claims 6 to 10 not printed in the Gazette.]

1,228,813. DEVICE FOR SUPPORTING PAILS OR THE LIKE. WILLARD A. OSLEY, Springfield, Mass. Filed Nov. 15, 1916. Serial No. 131,409. (Cl. 248—41.)

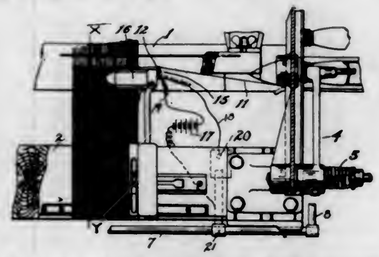


1. In a device of the class described, the combination with a suitable support, comprising a cross shaped member the arms of which are designed to receive the lower edge of the receptacle, devices secured to the ends of the arms and a coil spring slidably engaging said devices, means for clamping the receptacle to the base member comprising extensible springs provided with hooks at their upper ends for engaging the upper edge of the receptacle, as described.

5. In a device of the class described, the combination with a suitable support to receive a receptacle, comprising a member having arms which are designed to receive the lower edge of said receptacle, devices secured to the ends of the arms and a spring engaging said devices, means for clamping the receptacle to the base member comprising extensible springs having one end attached to said spring and its other end provided with attaching devices for engaging the upper edge of the receptacle, as described.

[Claims 2 to 4 and 6 not printed in the Gazette.]

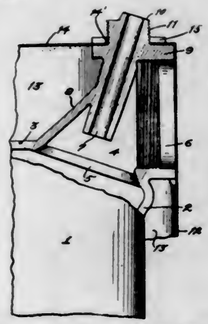
1,228,814. THREAD-PARTING MECHANISM FOR LOOMS. HENRY A. OWEN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Oct. 22, 1915. Serial No. 57,362. (Cl. 139—85.)



1. In a loom having an automatic filling replenishing mechanism, the combination of said mechanism and means for severing the trailing filling end of the ejected filling bobbin, said means comprising an electric circuit controlled by the filling indicating motion of the replenishing mechanism, said circuit including a resistance part whereby the trailing filling end is parted on coming in contact with it due to the heat generated therein by the current.

2. In a loom having an automatic filling replenishing mechanism the combination of said mechanism, an electric circuit, a cut-out in the electric circuit actuated by the filling indicating motion whereby the electric current is controlled and a resistance part in the electric circuit situated in the path of the trailing filling end whereby the same is severed by being drawn in contact with the heated surface of the resistance part.

1,228,815. ENGINE-CYLINDER AND JACKET. STANLEY H. PAGE, San Francisco, Cal., assignor to Union Gas Engine Company, Oakland, Cal., a Corporation of California. Filed Dec. 11, 1916. Serial No. 136,150. (Cl. 123—193.)



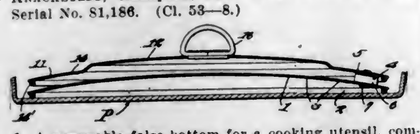
1. In combination with a cylinder for internal combustion engines of the overhead valve type, provided with upwardly extending tubular guides in the head thereof for receiving the stems of the cylinder controlling valves, the upper ends of said guides providing bosses projecting upwardly from said cylinder, a flange surrounding the base of each boss the outer surface of said bosses disposed perpendicularly to the said flange and said guides passing through the bosses at an angle, a jacket for positioning over and surrounding the cylinder side walls in spaced relation thereto and provided with openings in its head and through each of which one of said bosses projects, and means for positioning over said bosses and engaging the jacket head for removably securing said jacket in position on the cylinder with the head thereof in contact with said flange.

2. In combination with a cylinder for internal combustion engines of the overhead valve type provided on its head with one or more tubular, externally threaded bosses extending vertically from the cylinder head and each providing a valve guide the bore of which is disposed at an angle and the exterior wall perpendicular to the top surface of the cylinder, a jacket for removably positioning over and surrounding the cylinder side walls in spaced relation thereto and provided on its head with one or more openings through each of which one of said bosses extends, and a nut for threaded engagement with each of said bosses for contacting with said jacket head for detachably securing the jacket in position on the cylinder.

3. In combination with a cylinder for internal combustion engines of the overhead valve type, provided with upwardly projecting guides through which the stems of the controlling valves extend the bores of said guides being disposed at an angle to each other and the outer surfaces thereof arranged perpendicular to the top wall of the cylinder in parallel spaced relation, the upper ends of said guides providing shouldered bosses, a headed jacket member for positioning over and surrounding the cylinder side walls in spaced relation thereto and provided in its head with openings through each of which one of said bosses extends, a nut for threaded attachment with said bosses for forcing said jacket head into contact with the shoulder surrounding said bosses for detachably securing the jacket in position on the cylinder.



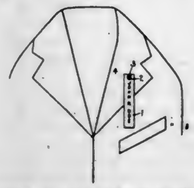
1,228,816. COOKER. SAMUEL PETERSON and LOUIS C. KNACKSTEDT, Annapolis, Md. Filed Feb. 29, 1916. Serial No. 81,186. (Cl. 53—8.)



1. A removable false bottom for a cooking utensil, comprising superposed upwardly bulged concavo-convex disks having perforations; and connections uniting the disks, the connections being spaced from each other circumferentially of the disks, to leave the space between the disks open at the peripheries of the disks throughout practically the entire circumference of the disks.

2. A removable false bottom for a cooking utensil, comprising superposed disks; and brackets secured to the lower disk, the upper disk being provided with openings, and the tops of the brackets being provided with tongues extended circumferentially of the disks and disposed approximately parallel to the disks, the openings being adapted to receive the tongues, upon relative rotation between the disks, thereby to hold the disks releasably interlocked.

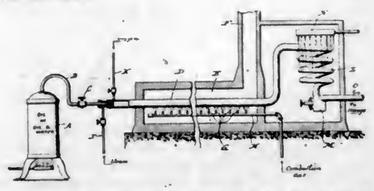
1,228,817. IDENTIFYING-CARD. EDWIN G. PICKERING, Montgomery county, near Dayton, Ohio. Original application filed Dec. 21, 1916, Serial No. 138,255. Divided and this application filed Mar. 24, 1917. Serial No. 157,110. (Cl. 40—25.)



1. An identifying card adapted to receive a name written in a vertical manner, and a cranked element coöperating with a hole formed in the top portion of said card, for firmly securing it in a vertical position to the coat of the wearer.

[Claim 2 not printed in the Gazette.]

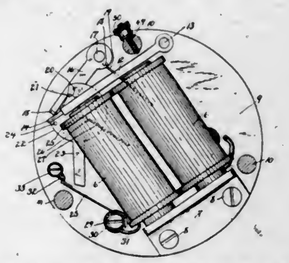
1,228,818. MANUFACTURING OF CARBON MONOXID AND HYDROGEN. RAOUL PIERRE PICTET, Wilmersdorf, near Berlin, Germany. Original application filed May 29, 1911, Serial No. 630,177. Divided and this application filed July 1, 1912. Serial No. 707,034. (Cl. 48—214.)



1. A process for manufacturing a hydrogen-carbon monoxid mixture from hydrocarbonaceous material, which comprises simultaneously admitting said material, steam and oxygen to a conduit heated sufficiently to decompose the steam and hydrocarbon.

2. A process for the manufacture of a hydrogen-carbon monoxid mixture from hydrocarbonaceous material, which comprises simultaneously admitting said material, steam, and oxygen to a conduit heated sufficiently to decompose the steam and hydrocarbon and initiate the reaction, the oxygen being sufficient to produce the heat of oxidation of the carbon required to establish the equilibrium of the reaction.

1,228,819. ELECTRIC CLOCK. WILSON E. PORTER, New Haven, Conn., assignor to New Haven Clock Co., New Haven, Conn., a Corporation. Filed Oct. 26, 1916. Serial No. 127,771. (Cl. 58—41.)

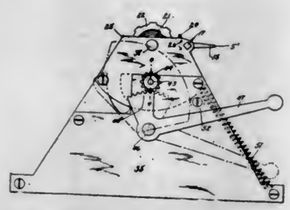


1. In an electric clock, the combination with an electro magnet, of an armature therefor, a trigger operated by the said armature, a circuit-closer cocked and released by the said trigger and operated for opening the circuit by the said armature, a contact with which the circuit-closer coacts, and a driving-spring energized by the movement of the armature and connected with the time-train of the clock.

4. In an electric clock, the combination with an electromagnet, a pivotal armature therefor, a trigger having a cocking-shoulder and an operating-arm which latter coacts with the armature, an oscillating circuit-closer cocked by the said cocking shoulder of the trigger when moved into its open-circuit position by the said armature, and provided with a contact-arm, a contact-spring with which the said contact-arm makes sliding contact, a driving-spring, and connection between the said driving-spring and the armature, whereby the spring is energized by the armature every time the same is moved by the energization of the magnet.

[Claims 2 and 3 not printed in the Gazette.]

1,228,820. DEVICE FOR REGULATING BALANCE-WHEELS. WILSON E. PORTER, New Haven, Conn., assignor to New Haven Clock Co., New Haven, Conn., a Corporation. Filed Dec. 26, 1916. Serial No. 138,945. (Cl. 73—51.)



1. In a device for regulating balance-wheels, the combination with a rocking carrier mounting a master balance-wheel and the balance-wheel to be adjusted, of indicators mounted in the said carrier, respectively connected with the outer ends of the hair springs of the said balance-wheels and arranged in conjunction with each other for the comparison of their relative oscillatory movement.

2. In a device for regulating balance-wheels, the combination with a rocking carrier mounting a master balance-wheel and the balance-wheel to be adjusted, of indicator staffs mounted in the carrier for oscillation therein, indicators carried by the respective shafts and located in opposition to each other, and means connecting the said shafts with the outer ends of the hair-springs of the respective balance-wheels, whereby the relative oscillation of the said wheels is visualized for comparison.

3. In a device for regulating balance-wheels, the combination with a rocking-carrier mounting a master balance-wheel and the balance-wheel to be regulated, oscillatory indicator-staffs mounted in the said carrier, indicators carried by the respective staffs and arranged in opposition for the comparison of their movement, and means for connecting the outer ends of the hair-springs of the said wheels with the said shafts, the hair-spring of the balance-wheel to be regulated being adjustably connected with its indicator staff.

4. In a device for regulating balance-wheels, the combination with a rocking carrier mounting a master balance-wheel and the balance-wheel to be regulated, oscillatory indicator-staffs mounted in the said carrier, indicators carried by the said staffs and arranged in opposition for the convenient comparison of their movement, connection between the outer end of the hair-spring of the master balance-wheel with one of the said staffs, and connection between the hair-spring of the balance wheel to be adjusted with the other staff, the latter connection including a notched stud receiving the end of the hair-spring of the said balance-wheel, and a gripping-spring for holding the hair-spring in position in the said notch.

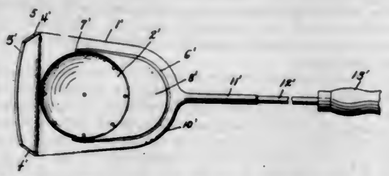
5. In a device for regulating balance-wheels, the combination with a rocking-carrier mounting the master balance-wheel and the balance-wheel to be adjusted, of indicators respectively connected with and operated by the hair-springs of the said balance-wheels for the comparison of their relative movement, the said indicators being bent toward each other in the same plane so as to centralize the comparison.

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1,228,821. EGG-LIFTER. HOWARD W. REYNOLDS, Chicago, Ill. Filed Feb. 18, 1915. Serial No. 9,128. (Cl. 65—3.)

1. An egg lifter comprising a blade having a forward scooping edge and a handle having its forward extremity connected to the underside of the blade adjacent the front thereof and spaced from the remaining portion of the blade.

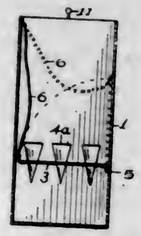
2. An egg lifter comprising a blade having a forward scooping edge and a central downwardly dished portion, and a handle having a bifurcated end connected at its extremities to the underside of the blade adjacent the front thereof and spaced from the remaining portion of the blade.



3. An egg lifter including a main member having a depressed draining portion and provided with a U-shaped slot straddling the draining portion, and having its bight to the rear of the draining portion, the portion of the member within the slot being upturned at its rear end, and a rearward extension on the portion exterior to the slot arranged to form a handle socket.

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1,228,822. BAG OR RECEPTACLE. BERNARD RIES, Norfolk, Va. Filed June 9, 1916. Serial No. 102,679. (Cl. 229—6.)



1. A device of the class described comprising a foldable member having a perforated non-detachable and non-foldable false bottom or partition having one end fixed to the inner surface of the bag and adapted to hingedly raise and lower from said fixed point in an arc of a circle when the bag is opened and closed, and strap holding means for the free end of the partition for limiting the up and down movement thereof.

2. A foldable paper bag having a non-detachable partition or false bottom and a flexible strap holding means therefor, said false bottom having one of its ends hingedly fitted to the interior of the bag and the other end being free to swing up and down in the arc of a circle when the bag is opened and closed, said strap holding means serving to limit the downward movement of the free end of the false bottom.

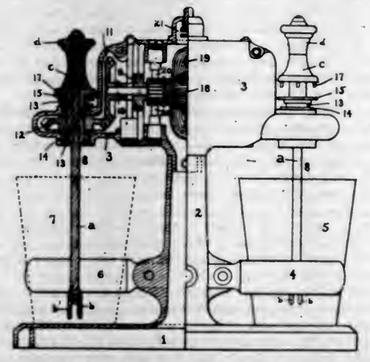
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1,228,823. FOOD AND BEVERAGE MIXING DEVICE. WILLIAM P. ROBERTSON, New York, N. Y. Filed Aug. 1, 1916. Serial No. 112,490. (Cl. 259—104.)

1. A mixing device of the class described comprising in combination a base carrying an upright or standard, holders extending in opposite directions from said standard for positioning and holding vessels or containers in which a mixing operation is to be performed, a housing carried by said standard at the upper end thereof, a horizontally extending shaft mounted in bearings in said housing, a driving bevel gear on each end of said shaft and driven thereby, a driven bevel gear meshing with each of said driving gears, said driven bevel gears being carried in bearings in said housing, and an agitating member driven by each driven bevel gear, said driving bevel gears being located between the driven bevel gears.

2. A mixing device of the class described comprising in combination a standard having thereupon a housing, a horizontally extending shaft in said housing, bevel gears each revoluble about its vertically extending axis, one of said gears being located in bearings at the right hand side of said housing, the other of said gears being located at the left hand side of said housing, bevel gears carried by the horizontally extending shaft, which last mentioned gears are in mesh with and between the bevel gears that revolve about their vertical axes, and agitating or mixing members driven through the medium of the vertical gears that revolve about their vertically extending axes.





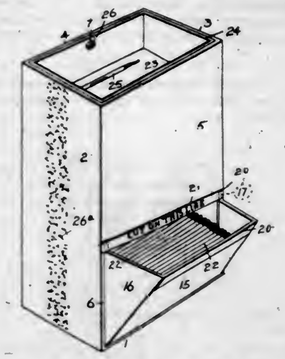
3. A mixing device of the class described comprising in combination a standard, a housing supported by the standard, a motor carried by said housing and having a horizontally extending armature shaft mounted in bearings so that the armature shaft can revolve, the armature winding being on that portion of the shaft which is between said bearings, said housing carrying at the right and left hand sides of the device bevel gears which revolve about their vertically extending axes, bevel gears carried by said armature shaft, one at each end thereof and in mesh with and driving said first-mentioned bevel gears, and a vertically movable agitating member driven by each of said last mentioned gears, each driving bevel gear being located between its corresponding bevel gear and the armature of the motor in such location that the driving bevel gear is in mesh with the inner side portion of the driven gear.

4. A mixing device of the class described comprising in combination an upright or standard, a housing having therein a motor and provided with bearings supporting an armature shaft extending horizontally from the right to the left hand side of the device, a bevel gear mounted on each end of said shaft, a plurality of bevel gears which revolve about their vertically extending axes, one of said gears being carried in bearings at the right hand side of the device the other of said gears being carried in bearings at the left hand side of the device and both of said gears being in mesh with and driven by the bevel gears which are carried on the armature shaft, a driving element carried on that portion of the shaft which is between the bevel gears on the shaft, and agitating members on the lower ends of vertically moving shafts which are driven through the medium of the bevel gears which revolve about the vertically extending axis, the construction being such that the armature shaft terminates short of the path of movement of the vertically movable shafts.

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1,228,824. RECEPTACLE. CHARLES WESLEY ROBISON, Crafton, Pa. Filed Dec. 13, 1916. Serial No. 136,589. (Cl. 206—31.)

1. A receptacle for the purpose set forth comprising an outer and an inner section, the latter of less length than the former and in the form of a tray, said outer section having the lower portion of its front provided with an opening, a trough forming member hinged to the bottom of said inner section and normally secured within said outer section and capable when released to swing through said opening to provide a trough, said member having a pair of protuberances abutting against the front wall of the outer section to arrest outward movement of said member, and a container mounted in the top of said outer section and against the upper end of the inner section for maintaining the latter in the former and providing a receptacle for burnt match sticks, said container having a lining of asbestos.



2. A receptacle for the purpose set forth comprising an outer and an inner section, the latter of less length than the former and in the form of a tray, said outer section having the lower portion of its front provided with an opening, a trough forming member hinged to the bottom of said inner section and normally secured within said outer section and capable when released to swing through said opening to provide a trough, said member having a pair of protuberances abutting against the front wall of the outer section to arrest outward movement of said member, and a container mounted in the top of said outer section and against the upper end of the inner section for maintaining the latter in the former and providing a receptacle for burnt match sticks, said container having a lining of asbestos.

3. A receptacle for the purpose set forth comprising an outer and an inner section, the latter of less length than the former and in the form of a tray, said outer section having the lower portion of its front provided with an opening, a trough forming member hinged to the bottom of said inner section and normally secured within said outer section and capable when released to swing through said opening to provide a trough, said member having a pair of protuberances abutting against the front wall of the outer section to arrest outward movement of said member, and a container mounted in the top of said outer section and against the upper end of the inner section for maintaining the latter in the former and providing a receptacle for burnt match sticks, and metallic reinforcements for said protuberances.

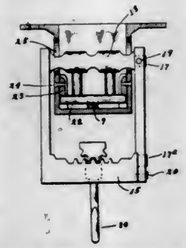
4. A receptacle for the purpose set forth comprising an outer and an inner section, the latter of less length than the former and in the form of a tray, said outer section having the lower portion of its front provided with an opening, a trough forming member hinged to the bottom of said inner section and normally secured within said outer section and capable when released to swing through said opening to provide a trough, said member having a pair of protuberances abutting against the front wall of the outer section to arrest outward movement of said member, and a container mounted in the top of said outer section and against the upper end of the inner section for maintaining the latter in the former and providing a receptacle for burnt match sticks, and metallic reinforcements for said protuberances.

5. A receptacle for the purpose set forth comprising an outer and an inner section, said outer section having the lower portion of its front provided with an opening, a

trough forming member hinged to the bottom of said inner section and normally secured within said outer section and capable when released to swing through said opening to provide a trough, means normally maintaining said member within said inner section, said member having a pair of extensions provided with protuberances, said protuberances when said member is released capable of abutting against the front wall of the outer section to arrest movement of said member, and said inner section having means to provide pockets for said extensions.

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1,228,825. HANGER FOR SWINGS. WILLIAM J. ROMACK, Freedom, Pa. Filed May 17, 1916. Serial No. 98,158. (Cl. 155—35.)



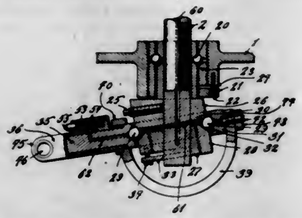
1. A hanger for swings comprising a casing having slotted sides provided with bearings and further having the upper face of its bottom formed with a bearing, a hanger member including a frame extending through the slotted sides and depending from said casing and further including a shaft mounted upon said bearings, means for maintaining the shaft upon the bearings, and a suspension hook carried by said frame.

2. A hanger for swings comprising a casing having slotted sides provided with bearings and further having the upper face of its bottom formed with a bearing, a hanger member including a frame extending through the slotted sides and depending from said casing and further including a horizontally disposed shaft depending from the top of the frame and extending into said casing and mounted upon said bearings, and a pivoted suspension hook depending from the bottom of the said frame and arranged exteriorly of said casing.

3. A hanger for swings comprising a casing having slotted sides and bearings arranged therein, a hanger member including a frame having the top bar thereof extending through said slotted sides of the casing, the sides and bottom of said frame being arranged exteriorly of the casing, a shaft connected with the top of the frame and arranged within said casing and seated upon the bearings, and means for maintaining the shaft upon the bearings, and a suspension hook depending from the bottom of the frame.

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1,228,826. CLOTH-CUTTING MACHINE. ADOLPH RUBIN, St. Louis, Mo. Filed Mar. 20, 1916. Serial No. 85,310. (Cl. 164—75.)



1. A cloth cutting machine comprising a reciprocating knife, a vertical electric motor having a vertical armature shaft, suitable casings and framing, a rockable arm for reciprocating said knife, said arm being mounted at the lower end of said armature shaft and entirely supported thereby, and means carried by said shaft for rocking said arm.

2. A cloth cutting machine comprising a reciprocating knife, a vertical electric motor having a vertical armature-shaft, and casing for said motor, a transmission-case located beneath said motor casing and arranged to support said motor and its casing, a standard for supporting said transmission case, a base on which said standard is mounted, a rockable arm for reciprocating said knife, said arm being mounted at the lower end of said armature shaft and entirely supported thereby, and means carried by said shaft for rocking said arm.

3. A cloth cutting machine comprising a reciprocating knife, a vertical electric motor having a vertical armature shaft, suitable casings and framing, a rockable arm for reciprocating said knife, bodies fixed upon the lower portion of said armature shaft and having a wabbling-groove formed between them, balls located in said wabbling-groove and connecting said rockable arm to the said bodies, so that said rockable arm is entirely supported by the said armature shaft, and a guide for preventing said rockable arm from rotating with said shaft while permitting said arm to rock.

4. A cloth cutting machine having a vertical electric motor and a vertical armature shaft, a reciprocating knife, suitable casings and framing, a rockable driving arm for reciprocating said knife, bodies fixed on the lower portion of said armature shaft and provided with inclined walls which form the walls of a wabbling-groove, said rockable driving arm also having inclined walls which form the walls of a ball-race therein, balls located in said wabbling-groove and in said ball-race and connecting said rockable arm to the said armature shaft, so that said rockable arm is entirely supported by the lower portion of said armature shaft, a suitable guiding device, for preventing said rockable arm from rotating with said shaft while permitting said arm to rock, and a knife-holder carried by said rockable arm.

5. A cloth-cutting machine having a vertical electric-motor, the armature-shaft of which is provided with oil-channel formed in the same shaft at a point near its lower end, a body fixed upon said shaft to rotate therewith and having a wabbling-groove in its periphery, and arranged so that said transverse oil-channel of said shaft is in communication with said wabbling-groove, a rockable driving shank having an oil-channel in communication with said wabbling-groove, means for connecting said driving shank to the walls of said wabbling-groove, so that when said body is rotated the said driving shank will be rocked, a driving-arm carried by said shank and adapted to be oiled to said arm, and a knife-holder connected to said driving-arm.

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1,228,827. RECOIL-OPERATED FIREARM. OLIVER BERRY SAALFIELD, West Hoboken, N. J., assignor to Maxim Munitions Corporation, New York, N. Y., a Corporation of Delaware. Filed Aug. 8, 1916. Serial No. 113,808. (Cl. 42—4.)



1. In an automatic firearm, a recoil-operated barrel, a spring actuated breech-bolt device including a tubular bolt carrier, a firing pin coaxially arranged within the carrier and rigidly connected at one end thereto, a cartridge positioning bolt slidably mounted in the bolt carrier and slidable upon the firing pin, and an automatic device for temporarily locking the bolt to the carrier, and means for automatically locking the bolt to the barrel and releasing it therefrom.



2. An automatic firearm including a recoil operated barrel, locking means for holding said barrel in a relatively fixed position, a spring actuated breech bolt having means for placing a cartridge in the barrel and also having means for releasing said locking means to permit the recoil of the barrel, and a trigger device having means engaging and releasing the breech bolt.

3. An automatic firearm including a spring tensioned barrel, locking means for holding the barrel in firing position, a spring actuated breech bolt having cartridge positioning means, and also having means for releasing said locking means to permit recoil of the barrel, holding lugs carried by the rear end of the barrel adapted to automatically engage said cartridge positioning means, and a trigger device for engaging and releasing the breech bolt.

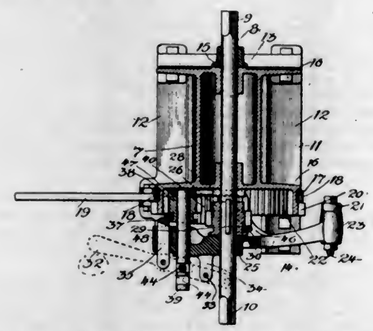
4. An automatic firearm including a tubular casing, a rifle barrel in the casing, means for holding the barrel in firing position, a spring actuated breech bolt slidable in the casing, means for automatically locking said breech bolt to the barrel and releasing it therefrom, and a trigger device for engaging and releasing said breech bolt.

5. An automatic firearm including a tubular casing, a rifle barrel in the casing, a spring for positioning the barrel in the casing, a barrel locking detent, a spring actuated breech-bolt device slidable in the casing, said device including a bolt carrier having means for automatically releasing said barrel locking detent, a rectilinearly and rotatably movable breech-bolt having a locking engagement with the barrel, and means for locking the breech-bolt in an extended position, and a trigger device for engaging and releasing said breech-bolt device.

[Claims 6 to 14 not printed in the Gazette.]

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1,228,828. WINDLASS DRIVING MECHANISM. MICHAEL J. SASGEN and ALBERT GLOOR, Chicago, Ill., assignors to Sasgen Derrick Co., Chicago, Ill., a Corporation of Illinois. Filed Mar. 5, 1915. Serial No. 12,447. (Cl. 74—58.)



1. In a windlass driving mechanism, the combination of a drum, a shaft upon which the drum is loosely mounted, an internal gear on one end of the drum, a shiftable gear meshing with the internal gear, an intermediate gear, a gear on said shaft, said shiftable and shaft gears meshing with the intermediate gear, a web-like support extending from in front of the internal gear to adjacent the rear of said gear, a stub shaft mounted in said web-like support on which said intermediate gear is mounted, means for moving said shiftable and shaft gears simultaneously and in opposite directions, and clutch members mounted upon said shaft gear and drum, said shiftable and shaft gears when moved into one position bringing said shiftable and internal gears into mesh and breaking the clutch connection between said drum and shaft gear, and the moving of said shiftable and shaft gears into another position bringing said shiftable and internal gears out of mesh and establishing a clutch connection between said shaft gear and drum, said stub shaft having a series of notches thereon, and a locking member on the means for moving said shiftable and shaft gears, adapted to rest within a selected one of said notches to lock said gears in shifted position, substantially as described.

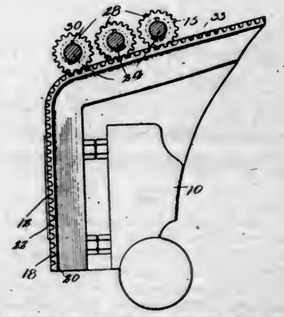
2. In a windlass driving mechanism, the combination of a drum having one end recessed, an internal gear in said recessed end, a shaft on which the drum is loosely mounted, a gear on the shaft, coöperating clutch members on the shaft gear and drum, a shiftable gear adapted to mesh with the internal gear, an intermediate gear connecting the shaft and shiftable gears, and with which said gears are constantly in mesh, a stub shaft for the shiftable gear, a stub shaft for the intermediate gear, a mounting lying at the recessed end of the drum and comprising a front and a rear section, said stub shafts being held by both the front and rear sections of said mounting, and the front section of said mounting serving to hold one end of the drum shaft, and means for simultaneously moving in opposite directions the shaft and shiftable gears, substantially as described.

3. In a windlass driving mechanism, the combination of a drum having one end recessed, an internal gear in said recessed end, a shaft on which the drum is loosely mounted, a gear on the drum shaft, coöperating clutch members on the shaft gear and drum, a shiftable gear adapted to mesh with the internal gear, an intermediate gear connecting the shaft gear and shiftable gear, a stub shaft for the intermediate gear, a stub shaft for the shiftable gear, a mounting arranged at the recessed end of the drum, and comprising a plate-like front portion joined to a plate-like rear portion, said stub shafts being held by said front and rear portions, and one end of the drum shaft being held by said front portion, and means for simultaneously moving the shiftable and drum shaft gears in opposite directions, substantially as described.

4. In a windlass driving mechanism, the combination of a drum having one end recessed, an internal gear in said recessed end, a shaft on which the drum is loosely mounted, a gear on the shaft, coöperating clutch members on the shaft gear and drum, a shiftable gear adapted to mesh with the internal gear, an intermediate gear connecting the shaft and shiftable gears, and with which said gears are constantly in mesh, a stub shaft for the shiftable gear, a stub shaft for the intermediate gear, a mounting lying at the recessed end of the drum and comprising a front and a rear section, said stub shafts being held by both the front and rear sections of said mounting, and the front section of said mounting serving to hold one end of the drum shaft, the front portion of the mounting having an ear intermediate the drum shaft and stub shaft of the intermediate gear, a member pivoted to said ear, a connection between said member and the drum shaft gear, and a connection between the member and shiftable gear, said connections being on opposite sides of the pivot point of said member, substantially as described.

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1,228,829. NON-SKID PRINTING-ROLLER. WILLIAM SCHALLER, Brooklyn, N. Y. Filed Oct. 24, 1916. Serial No. 127,431. (Cl. 101—338.)



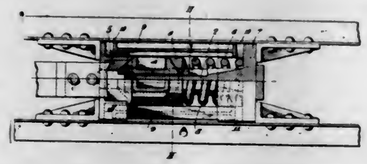
1. In a printing press, the combination of a press body having side rails and flanges, gear teeth formed on said

flanges, inking rollers, shafts carrying said inking rollers, the free ends of said shafts being reduced to engage roller carrying members, key members formed on said shafts, pinions carried on said shafts and engaged by said key members, said pinions engaging said gear teeth on said flanges, and said keys being formed with offset portions to space said pinions from said rollers.

2. In a printing press, the combination of a press body having side rails and toothed flanges, inking rollers and shafts therefor, keys on said shafts, pinions carried by the shafts engaging with said keys, said pinions to engage said toothed flanges, said pinions having tread portions formed thereon to engage said rails, and said keys being formed with offset portions to space said pinions from said rollers.

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1,228,830. SHOCK-ABSORBING MECHANISM FOR RAILWAY-CARS. ERNEST H. SCHMIDT, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 2, 1915. Serial No. 5,603. (Cl. 213—64.)

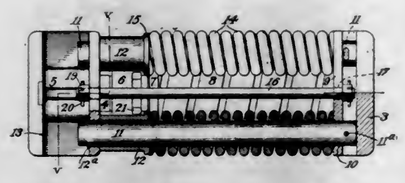


1. In frictional shock absorbing mechanism, a central friction member having a plurality of friction faces, a plurality of friction shoes engaging said friction faces, a wedge adapted to compress the friction shoes against the friction faces on the central member, a compression spring, the central friction member having a base portion, and longitudinally-extending stops formed separately from the base portion and the wedge and seating in recesses thereof, the said stops engaging said base portion and said wedge, to limit the compression of the device.

2. In frictional shock absorbing mechanism, a friction member having a plurality of outwardly-radiating arms forming with each other reëntrant angles, a plurality of friction shoes, each seating in a reëntrant angle, an integral wedge engaging said shoes, and a plurality of floating stops engaging a wedge and a portion of the friction member to limit the compression of the device.

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1,228,831. SHOCK-ABSORBING MECHANISM. ERNEST H. SCHMIDT, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 30, 1915. Serial No. 64,208. (Cl. 213—64.)



1. In frictional shock absorbing mechanism a cushioning element comprising friction members and a compression spring, a pair of followers, longitudinally extending stop members seated in sockets in said followers, said stop members being secured to and movable with one of said followers and being capable upon movement of the device to slide in sockets in the other follower, said stop members comprising means for limiting the compression of the device.

2. A combined wedge follower for frictional shock absorbing mechanism, substantially rectangular in form, having parallel outer and inner plane faces, inclined faces intermediate said outer and inner faces, said inner face being apertured for the reception of stop members, and said outer face having at its inner side a plurality of raised compression pads adapted to receive pressure from the stop members.

3. A combined friction member and follower for frictional shock absorbing mechanism, having a longitudinally extending frictional portion comprising a plurality of radiating arms, a rear base portion of substantially rectangular form, having parallel outer and inner plane faces, said inner face forming a seating surface for springs and being apertured for the reception of stop members, said outer face having at its inner side a plurality of raised compression pads adapted to receive pressure from the stop members.

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1,228,832. INDICATING-BOTTLE. WILLIAM C. SCHMIDT, Richmond, Va. Filed Feb. 24, 1909, Serial No. 479,737. Renewed Oct. 23, 1916. Serial No. 127,313. (Cl. 215—112.)



1. An indicating bottle of the kind described having in the neck thereof an indicating device visible from the exterior of the bottle, said indicator comprising a plurality of chemicals and a fraud indicating character, the character being invisible when the contents of the bottle are original, and the chemicals being adapted when in solution caused by inflowing liquid, to form a chemical solution which is adapted to bring said indicating character to view.

2. An indicating bottle of the kind described, having in the neck thereof an indicating device visible from the exterior of the bottle, said indicator comprising a plurality of chemicals and a fraud indicating character, a coating covering said indicating character and rendering it invisible from the exterior of the bottle, and the chemicals being adapted when in solution caused by inflowing liquid to form a chemical combination, which is adapted to destroy said coating to display said fraud indicating character.

3. An indicating bottle of the kind described, having in the neck thereof an indicator visible from the exterior of the bottle, said indicator comprising a plurality of chemicals and a fraud indicating character, the character being invisible when the contents of the bottle are original, and one of said chemicals being adapted to react chemically upon another when in solution caused by inflowing liquid, whereby said fraud indicating character is exhibited to the vision.

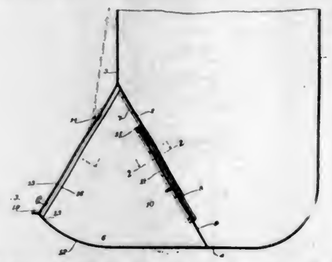
4. An indicating bottle of the kind described, having in the neck thereof an indicator visible from outside the bottle, said indicator comprising a non-hygroscopic carbonate coating, and an absorbent material impregnated with a non-hygroscopic acid the acid being easily soluble in liquid.

5. An indicating bottle of the kind described having in the neck thereof an indicator visible from outside the bottle, said indicator comprising a coating of bicarbonate of soda, and an absorbent material impregnated with citric acid, whereby when liquid is brought into contact therewith, the coating is removed carrying therewith an indication appearing thereon and displaying an indication covered thereby.

[Claims 6 to 14 not printed in the Gazette.]



1,228,833. SCOOP-OUT BIN. EDWARD F. SCHNUCK, Greenburgh, and ROBERT BURNS and WILLIAM G. BURNS, New York, N. Y., assignors to Jabez Burns & Sons, a Corporation of New York. Filed May 7, 1915. Serial No. 26,487. (Cl. 193—45.)

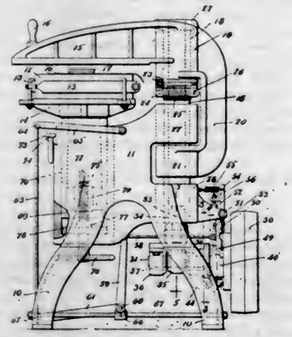


1. A bin comprising a chute having a scoop out portion extending forwardly therefrom, a partition plate fastened to the side walls of said bin between said chute and said scoop out portion, channeled guide strips fastened to said plate and to the side walls of said bin, said guide strips extending below said partition plate and terminating above the bottom of said bin, and a gate sliding in the channels of said guide strips.

2. In multiple scoop out bin construction, a plurality of bins, means for delivering material thereto, each bin having a bottom, a rear wall separating the scoop out portion from said delivering means, sides, and a door at the front for closing the scoop out portion, side walls for each bin comprising a plate at each side having an angle iron interiorly secured thereto to increase the stiffness and form opposite seats for the door, a sheathing covering the angle irons and the edges of adjoining side walls, and a single fastening means for holding said adjoining side walls, angle irons and sheathing together.

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1,228,834. PRESS FOR CUTTING OR PUNCHING SHEET MATERIAL. AUGUST R. SCHOENKY, Somerville, Mass., assignor to Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Dec. 8, 1916. Serial No. 135,743. (Cl. 164—23.)



1. A power press for cutting-out or punching leather or other sheet material, including, in combination with the machine frame, and the bed carried thereby; a non-rotating upright pillar reciprocable downwardly and upwardly; a laterally swingable presser rotatably engaged upon and carried by the pillar and adapted to extend over said bed, said presser comprising a forwardly extending head, a rotary bearing at the rear of the head engaging the pillar, an extension for a second rotary bearing, and a second rotary bearing also engaging the pillar, said second rotary bearing being provided on said extension and spaced vertically substantially from the first bearing, and said head and extension and rotary bearings constituting a solid unitary member capable of bodily rotation relatively to the pillar and of reciprocation with the pillar; a guide on said frame engaging said pillar between said two rotary bearings; power connections engaging the pillar at a point spaced below the lower rotary bearing; and a second guide on said frame engaging said pillar between the lower rotary bearing and the power connections.

3. A power press for cutting-out or punching leather or other sheet material, including, in combination with the machine frame, and the bed carried thereby; a non-rotating upright pillar reciprocable downwardly and upwardly; a laterally swingable presser rotatably engaged upon and carried by the pillar and adapted to extend over said bed, said presser comprising a forwardly extending head, an upper rotary bearing at the rear of and substantially on a level with the head, a downward extension from said rotary bearing, a lower rotary bearing on said extension, said two rotary bearings engaging the pillar at spaced apart points, and said head and extension and rotary bearings constituting a solid unitary member capable of bodily rotation relatively to the pillar and of reciprocation with the pillar; and a guide bearing on said frame engaging said pillar between said two rotary bearings.

4. A power press for cutting-out or punching leather or other sheet material, including, in combination with the machine frame, and the bed carried thereby; a non-rotating upright pillar reciprocable downwardly and upwardly; a laterally swingable presser rotatably engaged upon and carried by the pillar and adapted to extend over said bed, said presser comprising a forwardly extending head, an upper rotary bearing at the rear of and substantially on a level with the head, a downward extension from said rotary bearing, a lower rotary bearing on said extension, said two rotary bearings engaging the pillar at spaced apart points, and said head and extension and rotary bearings constituting a solid unitary member capable of bodily rotation relatively to the pillar and of reciprocation with the pillar; a guide bearing on said frame engaging said pillar between said two rotary bearings, a second guide bearing below the lower rotary bearing; and power connections engaging the pillar below all said bearings for reciprocating it at suitable times.

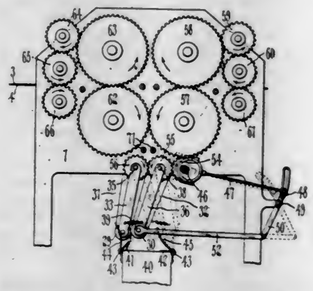
5. A power press for cutting-out or punching leather or other sheet material, including, in combination with the machine frame, and the bed at the upper front thereof, an upright presser-carrying pillar near the rear of the machine; a rearward extension on the frame at substantially the level of the bed and giving support to the pillar; a laterally swingable presser rotatably engaged upon and carried by the pillar, said presser comprising the following substantially unitary and rigidly associated parts, namely, an upper rotary bearing surrounding the pillar above said frame extension, a head extending forwardly from said upper bearing, a balancing arm extending rearwardly from said upper bearing, said rearward arm formed with a downward extension, and a lower

rotary bearing on said extension surrounding the pillar below said frame extension; and power connections for causing relative up-and-down movements between the bed and presser.

[Claim 6 not printed in the Gazette.]

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1,228,835. SHEET-INTERFOLDING MACHINE. PAUL A. SCHUCHART, Brooklyn, N. Y., assignor, by direct and mesne assignments, to Paper Service Co., Inc., a Corporation of New York. Filed Feb. 28, 1914. Serial No. 821,796. (Cl. 270—39.)



1. The combination with a machine for reversely creasing, superposing and overlapping sheets cut from different webs, of a pair of coacting rotary delivery rolls, means for oscillating the rolls for delivering the sheets in a continuous interfolded stack and a pair of retainers for the top of the stack operated by said rolls to alternately engage the stack.

2. The combination with a machine for reversely creasing, superposing and overlapping sheets cut from different webs, of a pair of coacting rotary delivery rolls, a swinging support for said rolls to cause them to deliver the sheets in a continuous interfolded stack and a pair of retainers for the top of the stack operated by said rolls to alternately engage the stack.

3. The combination with a machine for reversely creasing, superposing and overlapping sheets cut from different webs, of a pair of coacting endless tape carriers, and means for oscillating the delivery end of the tape carriers for delivering the sheets in a continuous interfolded stack.

4. The combination with a machine for reversely creasing, superposing and overlapping sheets cut from different webs, of a pair of coacting endless tape carriers, means for oscillating the delivery end of the said tape carriers for delivering the sheets in a continuous interfolded stack, and a pair of retainers for the top of the stack operated by said tape carriers to alternately engage the stack.

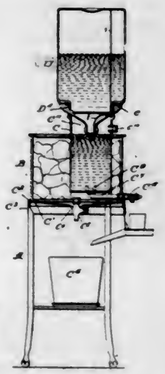
5. The combination with a machine for reversely creasing, superposing and overlapping sheets cut from different webs, of a device for delivering the sheets in a continuous interfolded stack comprising upper and lower pairs of rolls, tapes passing over said rolls, means for oscillating the lower pair of rolls, and a pair of retainers for the top of the stack operated by said device to alternately engage the stack.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,836. WATER-COOLER. HERMAN E. SCHULSE, Bayonne, N. J., assignor to Safety First Filter Company, Inc., a Corporation of New York. Filed Dec. 2, 1915. Serial No. 64,731. (Cl. 210—12.)

1. The combination with a filtered water receiver having a draw-off, of a liquid dispensing and filtering vessel mounted thereon and having a self-contained filter through which the liquid must pass before reaching the outlet of said vessel, said dispensing vessel having an air vent tube at the mouth end entering said receiver and adapted to be sealed and unsealed by the level of the liquid therein.



2. The combination with a filtered water receiver having a draw-off, of a liquid dispensing and filtering vessel mounted thereon and having its mouth end provided with a filtering medium, and an air-vent tube in the filtering vessel having an inlet end adapted to enter the receiver and to be sealed and unsealed by the level of the filtered water therein.

3. The combination with a filtered water receiver having a draw-off, of a liquid dispensing and filtering vessel mounted thereon and having a neck portion, a filter medium fixedly secured in said neck portion, and an air-vent tube fixed to said neck portion and having an inlet end extending through the mouth of the dispensing vessel and into the receiver and adapted to be sealed and unsealed by the level of the liquid in said receiver.

4. The combination with a filtered water receiver, of a liquid dispensing and filtering vessel, said receiver having an open end adapted to receive the discharge end of said vessel when the latter is inverted, a filter in said vessel and through which the contents of the latter must pass out of the vessel, said receiver having its lower portion provided with a draw-off, and an air-vent tube extending through said vessel and through the discharge end of the same and into said receiver and adapted to be sealed and unsealed by the level of the water in said receiver.

5. The combination with a filtered water receiver, of a water containing vessel having a separable neck-portion provided with a filtering medium and an air-vent tube, said tube adapted to extend beyond the neck portion of said vessel and into the receiver and adapted to be sealed and unsealed by the level of the water in the receiver, said receiver having a draw-off connected with its lower portion.

[Claims 6 to 9 not printed in the Gazette.]

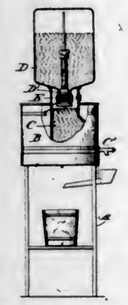
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1,228,837. LIQUID DISPENSING AND FILTERING BOTTLE. HERMAN E. SCHULSE, New York, N. Y., assignor to Safety First Filter Company, Incorporated, a Corporation of New York. Filed June 20, 1916. Serial No. 104,789. (Cl. 210—12.)

1. The combination with a filtered water vessel having a faucet, of a liquid dispensing bottle adapted to be supported in an inverted position on said vessel and having a neck portion, a plug stopper for said neck portion and a filter medium fixedly secured to the stopper and removable therewith and sustained thereby in the dispensing vessel in an upright position, said filter medium and stopper having an internal air-venting passage which extends therethrough to a point above the level of the water in the dispensing vessel, said venting passage opening into the filtered water vessel and adapted to be sealed and unsealed by the level of the water therein.



2. The combination with a filtered water vessel, of a liquid filtering bottle adapted to be supported in an inverted position on said vessel, and having a neck portion, a plug stopper for said bottle adapted to enter said vessel, a filter medium fixedly secured to said stopper and sustained thereby in the bottle in an upright position, said filter medium having an internal air venting passage which extends to a point above the level of the water in the bottle, said venting passage extending through the stopper and communicating with the filtered water vessel and adapted to be sealed and unsealed by a difference in the level of the water therein, said filtered water vessel having a draw-off attachment.



3. The combination with a filtered water vessel, of a liquid filtering bottle adapted to be supported in an inverted position thereon, and having one end open, a plug stopper for the open end of the bottle, a cylindrical filter secured to the stopper and maintained upright in the liquid contents of the bottle, detachable connections between the stopper and filter, said stopper having a liquid passage leading from the interior of the filter into said vessel and said stopper having a venting tube which extends through the filter to a point above the level of the liquid in the bottle, the inlet to said tube being within the filtered water vessel and adapted to be sealed and unsealed by the level of the water therein, said filtered water vessel having a draw-off attachment.

4. The combination of a water bottle having a neck portion, a stopper for the bottle, said stopper and the neck of the bottle having interengaging connections, a filter axially alined with the stopper and secured thereto and adapted to be sustained thereby in the bottle in an upright position, said stopper having a water passage through it connecting with the interior of the filter, and said stopper having an air-venting passage through it, said passage extending through the filter to a point above the level of the liquid in the bottle, and a filtered water vessel into which the neck portion of the bottle enters, said vessel having a filtered water draw-off.

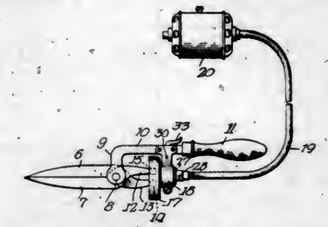
5. In combination with a liquid container having a mouth portion, of a plug stopper therefor, a cylindrical filter, and means securing the same to the stopper, said stopper having a liquid passage communicating with the interior of the filter and an air-venting passage which extends through the filter and beyond the same and to a point above the level of the liquid in the container, a receiver to which the container is fitted, said receiver having a filtered liquid draw-off and means carried by the plug for sealing the air vent thereof by the level of the liquid in said receiver.

[Claims 6 to 9 not printed in the Gazette]

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1,228,838. POWER-OPERATED SHEARS. JOHN SCHUTZ, Chicago, Ill., assignor of one-half to Jacob Benovy, Chicago, Ill. Filed July 26, 1916. Serial No. 111,360. (Cl. 164—41.)

1. Shears, comprising a transportable support, two cutting blades pivoted together upon said support, and each having a cam engaging shank, a cam block rotating in a plane transverse to the plane of the blades and having a continuous cam groove formed therein, said shanks traveling in said groove and a rotatory cam driving shaft carried by said support.



2. Shears, comprising a transportable support, two cutting blades pivoted together upon said support, each blade having a cam engaging shank, a rotatory cam block, rotating in a plane transverse to the plane of the blades and having a continuous cam groove formed therein, in which the shanks travel, a rotatory shaft carried by said support, and a clutch between said cam block and shaft.

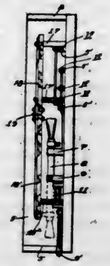
3. Shears, comprising a transportable support, two cutting blades, pivoted together upon said support, each blade having a cam engaging shank, a rotatory cam block journaled on said support and rotating in a plane transverse to the plane of the blades and having a continuous cam groove formed therein, in which said shanks travel, a flexible rotatory driving shaft, and clutch mechanism between said cam block and shaft.

4. Shears, comprising a transportable support having a handle thereon, two cutting shear blades pivoted together upon said support, each having a cam engaging shank, an anti-friction ball mounted on the end of each shank, a rotatory cam block journaled on said support and coöperating with said shanks to actuate the blades, said cam block rotating in a plane transverse to the plane of the blades, a flexible driven shaft and clutch mechanism between said cam block and shaft.

5. Shears, comprising a transportable support having a handle thereon, two blades pivoted together and carried by said support, each formed with a shank, a cam block journaled on said support and rotating in a plane transverse to the plane of the blades, said cam block having a continuous cam groove, at least one of said shanks traveling in said cam groove, a driven flexible shaft, a short shaft secured thereto, and clutch mechanism carried by said support for clutching and unclutching said cam block from said short shaft.

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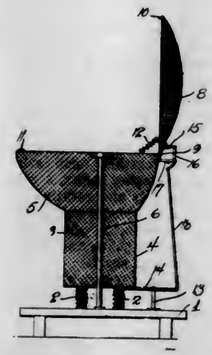
1,228,839. SAFETY MEANS FOR SWITCH-BOXES. LESTER SIEBENHAUER, San Francisco, Cal., assignor to Drendell Electrical and Manufacturing Company, San Francisco, Cal., a Corporation of California. Filed Sept. 27, 1915. Serial No. 52,847. (Cl. 247—13.)



In a switch box the combination of a base, side walls surrounding the same and projecting above the face there-

of, exposed bus bars carried on the face of said base, laterals extending from said bus bars, an insulated switch for controlling each set of laterals, a knife switch associated with said bus bars and controlling the supply of current thereto, and a protecting plate of insulating material supported above said bus bars and knife switch for protecting the same against accidental contact therewith, the portion over said knife switch being hinged to that portion over said bus bars and capable of raising to permit the operation of said switch, said hinged portion adapted for overlying said switch when the same is either in open or closed position.

1,228,840. MAIL-BAG RECEIVER. ALMA V. SIMPSON, Granada, Colo. Filed Feb. 24, 1916. Serial No. 80,247. (Cl. 258—20.)



1. A mail bag receiver including a platform, a container having a fixed bottom normally disposed above the platform in spaced relation thereto, means interposed between the bottom of the receptacle and said platform for resiliently supporting the said container, and stationary guide rods carried by the platform and engaging the rim of the said container for assuring vertical springing movement thereof.

2. A mail bag receiver including a platform, a container having a fixed bottom normally disposed above the platform in spaced relation thereto, means interposed between the bottom of the receptacle and said platform for resiliently supporting the said container, a hingedly mounted closure for the top of the container, a catch carried by the closure, and a plurality of levers connected to the said fixed bottom and associated with the catch for releasing the closure when the said bottom of the container is moved outwardly.

3. A mail bag receiver including a platform, a container arranged in spaced relation to the platform, resilient supporting means interposed between the platform and the container, guide rods carried by the platform and connected to the said container, a closure for the container, and means for releasing the closure from open position.

4. A mail bag receiver including a container, means for resiliently supporting the container, guide arms engaging the container and fixedly supported for assuring vertical movement of the container when receiving a mail bag, a closure for the top of the container, a lever arm pivotally mounted and having one end engaging the bottom of the container, a mechanism associated with the end of said lever arm and releasably engaging the said closure for releasing the closure from open position.

5. A mail bag receiver including a basket resiliently mounted for vertical springing movement, a closure for said basket, a mechanism for releasing said closure from open position, said mechanism being operated by the vertical movement incurred by the resiliency of said basket.

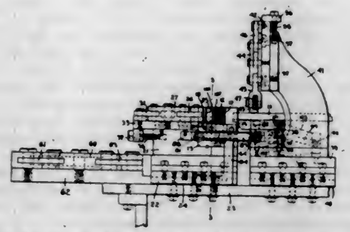
[Claims 6 and 7 not printed in the Gazette.]

1,228,841. HARVESTER ATTACHMENT. CHARLES H. SIMPSON, Laurel, Nebr. Filed Apr. 8, 1916. Serial No. 89,832. (Cl. 56—129.)



As a new article of manufacture, a harvester attachment comprising a main body having a flat foot upon the rear end thereof, said flat foot provided with an elongated longitudinally extending aperture, said body being substantially circular in cross section and projecting above the flat foot, a shoulder at the junction between said body and flat foot, said shoulder being adapted to rest against the front edge of a finger bar for assisting in holding said body against lateral twisting movement, securing means adapted to pass through said longitudinally extending aperture, the forward end of said body being curved upwardly at the center thereof and having an integral upwardly extending curved guarding bar secured to the forward end thereof and being formed integral therewith.

1,228,842. ELECTRIC WELDING-MACHINE. JAMES M. SPARKES, Peabody, Mass. Filed Jan. 17, 1916. Serial No. 72,383. (Cl. 219—4.)



1. In an electric-welding machine, the combination with two work-holding elements, one of which has two separated work-engaging faces adapted to engage one of the two pieces to be welded together at each side of the place where the weld is to be made, of means to move said elements relative to each other to bring the two pieces into contact, means operative automatically when the two elements are in a position to hold the two pieces separated from each other to connect said two faces to a source of current supply in series with each other whereby said first-named piece is preheated at the place to be welded and to connect said faces in parallel with each other and in series with the other work-holding element when said elements are in a position to hold the pieces of work in contact.

2. In an electric-welding machine, the combination with two work-holding electrodes, one of which presents an insulated section and two work-engaging faces, one of said faces being on said insulated section, of means connecting said electrodes to a working circuit, means to give said electrodes a relative movement toward and from each other, and means electrically connecting said insulated section to one electrode when the electrodes are in one position relative to each other and to the other electrode when said electrodes are in another position relative to each other.

3. The combination with two work-holding electrodes, one of which has an insulated section provided with a work-engaging face, of means for moving said electrodes toward and from each other, a working circuit connected to said electrodes, a swinging contact member carried by said insulated section, and means to establish an electrical contact between said contact member and one electrode when said electrodes are in one position relative to each other and between said contact member and the other electrode when the electrodes are in another position relative to each other.

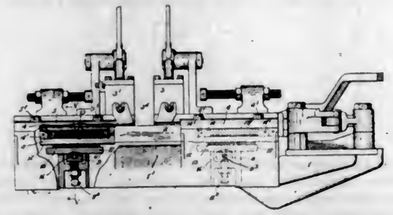
4. The combination with two work-holding electrodes, one of which has an insulated section provided with a work-engaging face, of means for moving said electrodes toward and from each other, a working circuit connected to said electrodes, a swinging contact member carried by said insulated section, and means to establish an electrical contact between said contact member and the other electrode when the electrodes are in position to bring the two pieces to be welded into contact with each other.

5. In an electric-welding machine, the combination with two work-holding electrodes, of a transformer having its secondary connected to said electrodes, means to move said electrodes relative to each other to bring two articles held thereby into welding contact, and automatic means to cause the current in the secondary of said transformer to flow through one of said articles only when the electrodes are in a position to hold said articles separated and to cause said current to flow through both articles when said electrodes are moved into a position in which the electrodes are in welding contact.

[Claims 6 to 13 not printed in the Gazette.]



1,228,843. WELDING-MACHINE. WILLIAM H. SPIRE, Cleveland, Ohio, assignor to The Steel Products Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 31, 1917. Serial No. 145,769. (Cl. 219—4.)



1. In apparatus for welding by electricity, the combination of a suitable frame and a frame-member; coöperating welding heads mounted thereon, respectively; bearing surfaces disposed intermediately said frame and frame-member and at an angle thereto; and means for relatively moving said frame and frame-member, said angularly disposed bearings providing both vertical and horizontal relative adjustment of said frame and frame-member when relatively moved.

14. In apparatus for welding by electricity, the combination of a main frame; a welding-head fixedly mounted longitudinally thereof; guide-blocks adjustable transversely of said frame; frame-members adjustable vertically of said frame; a platen movable longitudinally of the latter and supported by and intermediately of said blocks and frame-members; a second welding head mounted upon said platen; race-supports and bearings mounted intermediately of said platen and said blocks and frame-members, respectively, upon which the longitudinal movement of said platen is effected; and means for effecting said longitudinal movement.

21. In apparatus for welding by electricity, the combination of a suitable frame; a welding-head fixedly mounted longitudinally thereof; a second welding-head mounted so as to be reciprocable longitudinally of said frame; two pairs of longitudinal race-supports mounted in said frame and passing beneath said fixed welding-head, said race-supports being provided with roller-bearings, one pair of said race-supports being angularly positioned relatively to said frame; a movable platen mounted upon said rollers carrying said reciprocable welding-head, and extending beneath said fixed head, frame members for supporting said platen, race-supports and roller-bearings, all of the latter being oscillatorily mounted upon said members, some of said members being vertically adjustable; and means for adjusting said platen transversely of said frame.

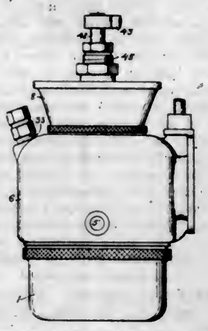
[Claims 2 to 13 and 15 to 20 not printed in the Gazette.]

1,228,844. CHECK-PROTECTOR. LOWELL H. STEPHENSON, San Francisco, Cal. Filed Mar. 13, 1916. Serial No. 83,849. (Cl. 101—22.)



A device of the class described, including a base, a top section hingedly mounted thereon, ears formed on the free ends of the base to support the said top section, an ink pad carried by said base, a metallic plate having notches formed thereon, bearing plates carried by the end walls of said top section, a shaft having the free extremities thereof mounted in the said bearing plates, a plurality of teeth mounted on the said shaft coöperating with the said plate for indenting a check when inserted between the said teeth and the metallic plate and drawn therethrough.

1,228,845. CARBURETER. ALFRED C. STEWART, Los Angeles, Cal. Filed Nov. 11, 1914. Serial No. 871,616. (Cl. 261—50.)



1. In a carbureter, a fuel chamber provided with a fuel inlet valve, a float in said chamber to close said valve when the fuel reaches a definite level in said chamber, a mixing chamber, an air inlet valve therefor, and means connected with said air inlet valve for forcibly opening said fuel inlet valve.

2. In a carbureter, a fuel chamber provided with a float-controlled fuel inlet valve, a mixing chamber, an air inlet valve therefor adapted to open under the suction in said mixing chamber, and provided with means tending to move it to closed position, a controlling device for forcibly moving said air inlet valve to open position, and means operated by said air inlet valve for opening said fuel inlet valve.

3. In a carbureter, a fuel chamber provided with an inlet valve, a float in said chamber adapted to close said valve when the float rises, spring operated means supplementing the action of the float, for forcibly holding the inlet valve closed and means operated by suction in the carbureter for acting on said spring operated means to nullify the action thereof on said fuel valve.

4. In a carbureter, a fuel chamber provided with a fuel inlet valve, a float for closing said valve when the fuel in the chamber reaches a definite level, spring operated means for forcibly operating said float to close said valve and manually operated means for acting on said spring operated means to relieve the fuel valve from the action

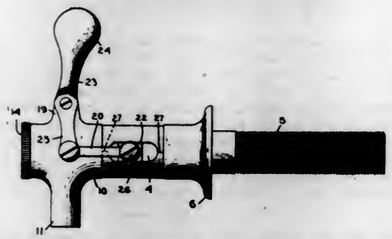
thereof and for acting on said float to cause said valve to open irrespective of the level of the fuel in the fuel chamber.

5. In a carbureter, a fuel chamber provided with a float-controlled fuel inlet valve, a mixing chamber provided with a spring-controlled air-inlet valve, and means operated by said air inlet valve to close said fuel inlet valve when the air inlet valve is closed.

[Claim 6 not printed in the Gazette.]

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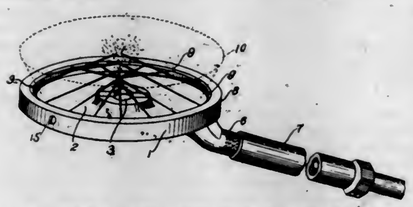
1,228,846. FAUCET. THEODORE G. STRATER, West Tisbury, Mass., assignor to Herman Strater & Sons, Boston, Mass., a Firm. Filed Apr. 15, 1916. Serial No. 91,444. (Cl. 137—4.)



In a faucet, the combination of a hollow head having a discharge member; a valve seat in said head; a tubular body portion secured to said head; a nipple secured to the body portion; a tubular valve; said head, tubular body portion and nipple internally forming a bearing for the longitudinal reciprocation of said valve; a collar on said valve; said body portion having an interiorly enlarged portion to permit collar reciprocation; lugs on said collar on opposite sides of the valve and projecting through longitudinal slots in the body portion, said slots permitting reciprocation of the lugs but preventing rotative movement thereof; links pivotally mounted on said lugs and movable substantially rectilinearly; a forked lever pivotally mounted on the head and having its forked ends pivotally secured to the respective links, and a handle on the lever operable to impart substantially rectilinear movement to the links whereby the valve-controlling force is applied substantially in parallelism with its longitudinal axis.

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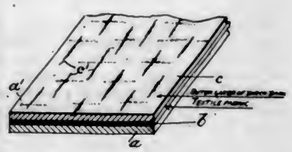
1,228,847. FOUNTAIN-BRUSH. FRANK TEMPLEMAN, Chicago, Ill. Filed Dec. 31, 1914. Serial No. 879,886. (Cl. 15—51.)



1. A fountain brush, comprising a brush and brush holder, said holder being provided with a conduit encircling the brush and having opposed jet orifices arranged to direct streams at different angles so as to meet at points in different planes more or less removed from the brush holder.

2. A fountain brush comprising a brush and brush holder, said brush being provided with radial rows of bristle tufts, and said holder being provided with a conduit encircling the brush and having opposed jet orifices arranged to direct streams between the rows of tufts at different angles so as to meet at points in different planes more or less removed from the brush holder.

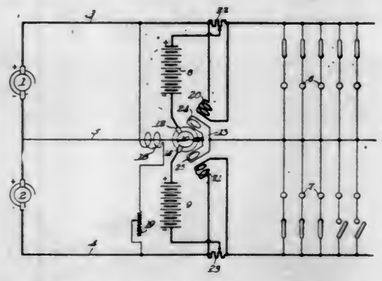
1,228,848. ARTIFICIAL LEATHER. SIMON TSCHOUMAKOFF. Petrograd, Russia. Filed July 19, 1916. Serial No. 110,153. (Cl. 154—46.)



A leather substitute consisting of superposed pieces of the outer layer of birch bark stuck onto a textile fabric interposed between said pieces, the lenticels of one piece being arranged at right angles to the lenticels of the other piece.

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1,228,849. SYSTEM OF ELECTRICAL REGULATION. WILLIAM A. TURBAYNE, Niagara Falls, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed June 2, 1913. Serial No. 771,193. (Cl. 171—310.)



1. In a three-wire system of distribution, a generating source, a pair of regulating batteries, a single booster provided with controlling windings causing said booster to coöperate with said batteries to maintain a balanced condition of load on the system and a predetermined constant load on the generating source.

2. In combination in a three-wire distribution system, a generating source, a regulating battery for each branch of the system, and a single booster provided with brushes connected to each battery, and field windings responding to circuit conditions in the system to cause said batteries to maintain a constant load on the generating source, and a balanced condition of load on the external circuits of the system.

3. In a three-wire system of distribution, a main source of supply, a regulating booster provided with three brushes, one brush connected to the neutral conductor of the system and one brush connected to each of the main leads of the system.

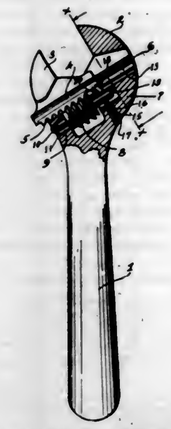
4. In a three-wire system of distribution, two main sources adapted to simultaneously supply current, said sources being connected in series, a neutral conductor connected to a point between said sources, a regulating booster provided with a field coil connected in series with the neutral conductor, whereby said coil will be magnetized in direction and magnitude depending upon the departure from a balanced condition of load in the external circuit.

5. In a three-wire system of distribution, a main source of supply, a regulating booster provided with a field coil of constant polarity and strength, and a pair of coils, acting in opposition thereto, energized proportional to the external load demands on each branch of the system.

[Claims 6 to 21 not printed in the Gazette.]



1,228,850. WRENCH. WILBUR S. UPSON, Mansfield, Ohio. Filed Mar. 6, 1916. Serial No. 82,284. (Cl. 81—157.)



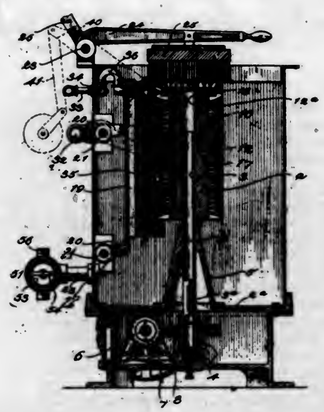
1. In a side jaw wrench, a handle made integral with a stationary jaw and an intermediate enlarged portion, said enlarged portion having a guideway formed therein in angular relation with respect to the handle and also having formed therein an intersecting angularly related aperture, a pin secured in the enlarged portion of the wrench, a spindle pivotally secured to said pin and adapted to extend across said intersecting aperture and to be moved to and from said guideway, a worm screw mounted upon said spindle, a movable jaw slidably mounted in said guideway and having a shoe thereon with a series of cog teeth, and yielding means adapted to normally maintain said worm screw in mesh with said cog teeth, but adapted to be withdrawn therefrom at the will of the operator, said last-mentioned means also performing the function of preventing the worm screw from turning under normal conditions because of the frictional yielding contact maintained between the parts by said yielding means and automatically taking up the wear thereof.

2. In a side jaw wrench, a handle made integral with a stationary jaw and an enlarged portion, a guideway formed integral in the enlarged portion in angular relation with respect to the handle which intersects an aperture formed in said enlarged portion and which is angularly related thereto, a pin secured to the wrench, a spindle pivotally secured to said pin in such a manner as to extend across the aperture and which is adapted to be moved to and from said guideway, a worm screw mounted on said spindle, a jaw slidably mounted in said guideway carrying a shoe having a series of cog teeth formed thereon and extending into said intersecting aperture, and yielding means adapted to normally maintain said cog worm in mesh with the teeth of the jaw, but which is arranged to be disengaged at the will of the user, said last mentioned means also performing the function of preventing the worm screw from turning under normal conditions because of the frictional yielding contact maintained between the parts by said yielding means and automatically taking up the wear thereof.

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1,228,851. APPARATUS FOR WASHING CONTAINERS. THEODORE L. VALERIUS, Fort Atkinson, Wis., assignor to Creamery Package Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed May 12, 1911. Serial No. 626,748. (Cl. 141—7.)

1. In an apparatus for washing large metallic cans, the combination of a tank open at its upper end, a rotary vertical spindle in said tank, brush means fixed on said spindle and adapted to have an inverted can pushed downwardly thereover, exterior brush means mounted in the tank for movement into and out of contact with the outer sides of the can while supported on the first mentioned brush means, a pump adapted to force water to said brush means, a valve for controlling the flow of the water from the pump, and a hand-actuated lever arranged to operate said valve and simultaneously move the exterior brush means into and out of can-engaging position.



2. In an apparatus of the character described, the combination of means for rotatably supporting a container, a rock shaft, brush means fixed to said rock shaft and adapted to move into and out of contact with said container, means for supplying water to said brush means, a valve controlling the water supply, brush means for the bottom of said container, a hand lever to which the last mentioned brush means is fixed, a connection between said hand lever and said valve, and a connection between said hand lever and said rock shaft.

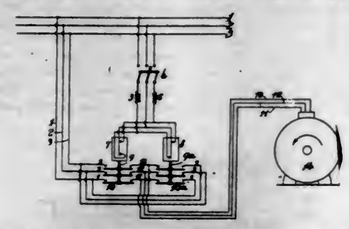
3. In an apparatus of the character described, the combination of means for rotatably supporting a container, a rock shaft, brush means fixed to said rock shaft and adapted to move into and out of contact with the sides of said container, means for supplying water to said brush means, a rotary valve for controlling the water supply, a second rock shaft, a hand lever fixed thereon, a brush carried by said hand lever and adapted to contact the bottom of the container, a lever fixed on said second rock shaft, a link connecting said lever with said rotary valve and a link connecting said lever with the first mentioned rock shaft.

4. In an apparatus of the character described, the combination of a plurality of rotary spindles, brush means fixed thereon and adapted to receive containers, means for supplying water to said brush means, a rock shaft, a hand lever non-rotatably mounted on said rock shaft, means connected with said rock shaft for controlling said water supply, and a brush carried by said hand lever and adapted to contact the bottom of containers, said hand lever being slidable on said rock shaft into position above any one of said spindles.

5. In an apparatus of the character described, the combination of brush means adapted to enter a container, movably mounted brush means adapted to contact the outer side wall of the container, means for supplying water to said brush means, a valve for controlling said water supplying means, a brush movable into contact with the bottom wall of the containers, and means connecting the last mentioned brush with said movably mounted brush means and said valve for simultaneous operation.

[Claims 6 to 26 not printed in the Gazette.]

1,228,852. CONTROL OF ALTERNATING-CURRENT MOTORS. THOMAS W. VARLEY, New York, N. Y. Filed June 18, 1914. Serial No. 845,785. (Cl. 175—294.)



1. A method of control of alternating current motors consisting in utilizing an even number of solenoid magnets each one-half being arranged to respond differently to the phase rotations of the source, to control the closure of the circuit and the rotation of the motor.

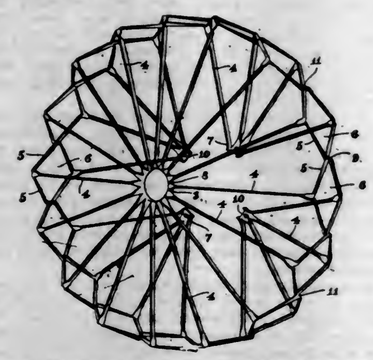
2. A method of control of alternating current motors consisting in utilizing an even number of solenoid magnets each one-half being arranged to respond differently to the phase rotations of the source but only one-half being actuated at any one time, to control the closure of the circuit and the rotation of the motor.

3. A method of control of alternating current motors consisting in utilizing an even number of solenoid magnets each one-half being arranged to respond differently to the phase rotation of the source, to control the closure of the circuit and the rotation of the motor, said magnets being automatically selective to maintain the right phase rotation in the motor.

4 A method of control of alternating current motors consisting in utilizing an even number of solenoid magnets each one-half being arranged to respond differently to the phase rotations of the source, to control the closure of the circuit and the rotation of the motor, and means for reversing the motor.

5. A method of control of alternating current motors consisting in utilizing an even number of solenoid magnets each one-half being arranged to respond differently to the phase rotations of the source, to control the closure of the circuit and the rotation of the motor, and means for reversing the action of the solenoids.

1,228,853. DEVICE OF EXPANDED METAL. THOMAS W. VARLEY, New York, N. Y. Filed Feb. 24, 1915. Serial No. 10,281. (Cl. 230—1.)



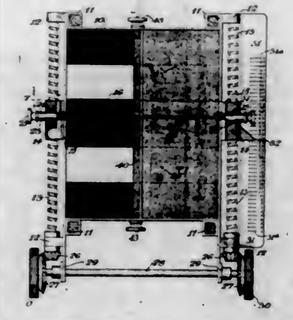
1. A guard for fans and the like having a front face comprising a central ring, and arms radiating therefrom, a rear face comprising a plurality of attachment means with arms radiating therefrom in groups and a central circular face integral with the arms of the front and rear faces, the whole being formed of a single piece of expanded metal.

2. A guard for fans and the like having a front face comprising a central ring and arms radiating therefrom, a circular chain-like face formed by splitting and expanding a portion of said arms and a rear face formed of a continuation of said arms, said arms at the rear being gathered in groups to a plurality of attachment means, and said groups being spaced from each other to permit application of the guard, the whole being formed of a single piece of expanded metal.

3. A guard for fans and the like having a front face comprising a central ring and arms radiating therefrom, a circular face formed by splitting and expanding a portion of said arms and a rear face formed of a continuation of said arms, said arms on said front and rear faces being twisted to present their edges to the vertical plane of the guard, the whole being formed of a single piece of expanded metal adapted to substantially inclose the fan.

[Claim 4 not printed in the Gazette.]

1,228,854. CARD-SELECTING DEVICE. THEODORE R. VINZENT and CLYDE E. WARREN, Alameda, Cal. Filed Oct. 20, 1915. Serial No. 57,016. (Cl. 129—16.1.)



1. In a card selecting device, the combination of a mass of data-bearing cards, each provided with a plurality of marginal keyhole slots, said slots being positioned uniformly with reference to the data contained on the cards, a holder for said cards, and means for removing from said holder all cards bearing coincident slots.

2. In a card selecting device, the combination of a mass of data-bearing cards, each containing a plurality of marginal slots positioned with reference to the data contained thereon, an invertible holder for said cards, and a key on said holder extending across the cards and adjustably movable to various positions thereon to register with any desired series of alined slots, whereby to permit the cards bearing those particular slots to fall below the other cards and upon said key when the holder is inverted.

3. In a card selecting device, the combination of a mass of data-bearing cards, each containing a plurality of keyhole slots positioned on the margins thereof and arranged uniformly with respect to the data contained on the cards, an invertible holder for said cards, and a removable rectangular rod carried on said holder and extending above said cards transversely thereof, said rod being adjustably movable to various positions on the holder to register with any desired series of alined slots in the cards whereby when the holder is inverted the cards bearing those particular slots will be permitted to fall below the other cards engaging the rod with their slots, whereupon by turning said rectangular rod in the enlarged portion of the slots the cards will be retained thereon for removal.

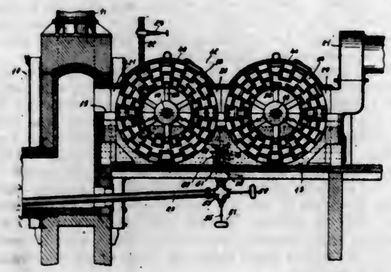
4. In a card selecting device, the combination of a mass of data-bearing cards, each containing a plurality of marginal slots positioned with reference to the data contained thereon, an invertible holder for said cards, a key on said holder extending across the cards and adjustably movable to various positions thereon to register with any desired series of alined slots, whereby to permit the cards bearing those particular slots to fall below the other cards and upon said key when the holder is inverted, and a guide for determining the location of the desired series of slots.

5. In a card selecting device, the combination of a mass of data-bearing cards, each containing a plurality of marginal slots positioned with reference to the data contained thereon, an invertible holder for said cards, a key on said holder extending across the cards and adjustably movable to various positions thereon to register with any desired series of alined slots, whereby to permit the cards bearing those particular slots to fall below the other cards and upon said key when the holder is inverted, and a guide for determining the location of the desired series of slots, said guide comprising an indicator finger carried by the adjustable rod, and a scale carried upon the holder adjacent to said finger.

[Claims 6 to 8 not printed in the Gazette.]



1,228,855. EVAPORATOR. ADOLPH W. WAERN, New York, N. Y., assignor to International Process Company, New York, N. Y., a Corporation of New York. Filed Aug. 11, 1916. Serial No. 114,323. (Cl. 127—9.)



1. An evaporator for receiving soda ash comprising a tank having a hollow central longitudinal partition open at its ends, a pair of baffle wheels rotatable on a transverse axis and dipping into the tank on opposite sides of the partition, and means for directing furnace gases through the baffle wheels.

7. An evaporator for recovering soda ash comprising a tank, a baffle wheel rotatable on a transverse axis and dipping into the tank, and a rotatable crusher in the tank near the lower part of said baffle wheel.

9. An evaporator for recovering soda ash comprising a tank, an outlet therefor, a baffle wheel rotatable on a transverse axis and dipping into the tank, and a rotary scraper over said outlet.

14. An evaporator for recovering soda ash comprising a tank, an outlet therefor, a baffle wheel rotatable on a transverse axis and dipping into the tank, a rotary scraper over said outlet, a discharge pipe connected with said outlet, and a manually operable scraper within said discharge pipe.

15. An evaporator comprising a liquid containing tank having a hollow central longitudinal partition providing an intermediate passage communicating with the tank at its respective ends and dividing the tank into a pair of spaced chambers, a plurality of pairs of baffle wheels, the wheels of each pair being mounted on a transverse axis on opposite sides of the partition in the respective chambers of the tank and dipping into the liquor in the tank, an outlet for said tank within said partition and between the pairs of baffle wheels, a pair of rows of transverse fingers in the tank in the side chambers of said tank under said transverse shaft, a pair of rotary crushers comprising radially disposed fingers on said shaft, a rotary scraper on said shaft within the partition and over said shaft, a discharge pipe connected with said outlet, and a manually operable scraper within said discharge pipe.

[Claims 2 to 6, 8, and 10 to 13 not printed in the Gazette.]

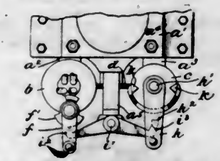
1,228,856. STRAPPING-MACHINE. OLIVER D. WASHBURN, Whitneyville, Conn. Filed Mar. 10, 1917. Serial No. 154,055. (Cl. 51—4.)



1. A strapping machine comprising a driven pulley, a tensioned pivotal lever, an idler carried by said lever, a belt extending over the driven pulley and idler, and a foot-treadle connected with the lever adapted to move the same and a brake adapted to be applied to said idler.

2. A strapping machine comprising a driven pulley, a spring-tensioned pivotally mounted lever, an idler carried by the upper end of said lever, a belt extending over the driven pulley and idler, a horizontally movable brake connected with the upper end of said lever adjacent to one end of the idler, a spring normally tending to retire the brake, a foot-treadle connected with the lever, and flexible connection extending from the brake under the foot-treadle to a fixed point, whereby when the treadle is depressed, the lever will be moved forward to release tension on the belt and the brake will be applied to arrest the movement of the idler.

1,228,857. REVERSING DEVICE FOR OIL-ENGINES. CARL W. WEISS, Brooklyn, N. Y. Filed June 1, 1916. Serial No. 101,132. (Cl. 123—41.)



1. In an internal combustion engine, in combination with a source of fuel, an independent source of compressed starting medium, means to control the fuel, independent means to control the compressed medium for starting and reversing, and devices operatively interposed between said means for locking one of said means against movement to a certain predetermined position relative to the other of said means when the other of said means is in predetermined position.

3. In an internal combustion engine in combination with a source of fuel, an independent source of compressed starting medium, means to control the fuel, independent means to control the compressed medium for starting and reversing, and devices operatively interposed between said means to lock the controlling means for the compressed medium against movement to a position in which the compressed medium would be admitted to oppose the fuel while the fuel is being admitted.

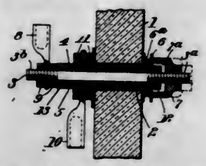
5. In an internal combustion engine in combination with a source of fuel, an independent source of compressed starting medium, means to control the fuel, means to control the compressed medium for starting and reversing, and a locking lever interposed between said means and operative to hold said means against movement to certain predetermined relative positions.

[Claims 2, 4, and 6 to 8 not printed in the Gazette.]

1,228,858. ELECTRIC SWITCH. ROGER S. WHITE, Washington, D. C. Filed Oct. 31, 1914. Serial No. 869,598 (Cl. 173—259.)

1. In an electric switch, a suitable base of insulating material, two terminals insulated from one another, one

terminal having an opening therethrough and the other comprising a stud projecting from the base through said opening and having a threaded end extending beyond the first mentioned terminal, and a metal nut having an opening through which said stud extends when the nut is at or near its closed position, said nut being adapted to make an annular contact with said first mentioned terminal.



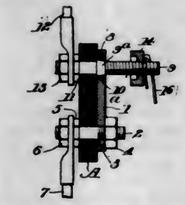
3. In an electric switch, a threaded conducting stud, a conducting tube surrounding and insulated from the stud, said tube having a contact surface at one end which surrounds the stud, a connecting member, having a threaded opening therethrough, adjustable on the stud into and out of engagement with said surface and adapted to make an annular contact therewith, and attaching devices for conductors on said stud and tube, respectively.

6. In an electric switch, a metal stud, threaded at both ends, a metal tube shorter than the stud and surrounding the same, said tube being insulated from the stud and threaded at both ends, threaded means on corresponding ends of the stud and tube for connecting conductors thereto, and a threaded head and threaded connecting device at the opposite ends of said tube and stud respectively, said connecting device adjustable into and out of engagement with said head.

[Claims 2, 4, and 5 not printed in the Gazette.]

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1,228,859. METER-SWITCH. ROGER S. WHITE, Washington, D. C. Filed Aug. 22, 1916. Serial No. 116,295. (Cl. 173—259.)



1. In a switch for meter test blocks, a suitable base, a switch terminal supported thereby, and a co-acting switch terminal comprising a threaded stud projecting from the base outwardly beyond the first mentioned terminal and a threaded contact member on said stud, said co-acting terminal having, in front of the first mentioned terminal, means for detachably connecting a meter wire thereto.

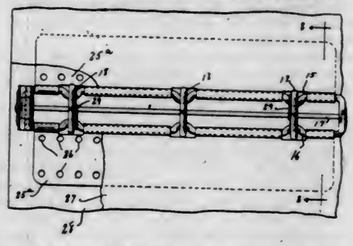
3. In a switch for meter test blocks, a suitable base, a switch terminal supported thereby, and a co-acting switch terminal comprising a threaded stud projecting from the base outwardly beyond the first mentioned terminal and having means in front of said latter terminal for the attachment of a wire and a threaded contact member on the stud, said member adjustable into locking engagement with the wire, when the latter is attached.

[Claim 2 not printed in the Gazette.]

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1,228,860. LOOSE-LEAF BOOK. RALPH G. WHITLOCK, Los Angeles, Cal. Filed July 6, 1916. Serial No. 107,764. (Cl. 129—17.)

1. In a device of the character described, a back frame composed of parallel side members having ends bent inwardly; a rod passing through said bent ends and hingedly connecting them; ring members connected to said side members, said ring members having outer portions the shape of a segment of a circle and shanks projecting inwardly and upwardly from said side members and being revolubly mounted on the rod connecting the ends of the side members; and springs coiled around said rod and having their ends bent around the side members.



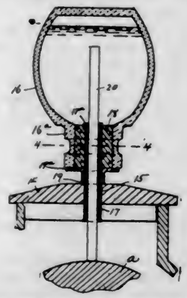
2. In a device of the character described, a back frame composed of parallel side members having ends bent inwardly; a rod passing through said bent ends and hingedly connecting them; ring members connected to said side members, said ring members having outer portions the shape of a segment of a circle and shanks projecting inwardly and upwardly from said side members and being revolubly mounted on the rod connecting the ends of the side members; springs coiled around said rod and having their ends bent around the side members; a fulcrum bar mounted on said rod; and an L-shaped opening lever pivotally mounted on said fulcrum bar.

3. In a device of the character described herein, the combination of a back frame having parallel side members hingedly connected by a rod extending from end to end and ring members mounted on the side members; with an L-shaped lever pivotally connected to said rod and adapted to be rocked so as to force the side members toward each other, and thereby open the ring members.

4. In a device of the character described, a metal back frame composed of side members hingedly connected; and ring members secured to said side members, said ring members being hingedly connected in pairs with the centers of the hinges lying above the plane of the centers of the side members.

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1,228,861. SHAFT-BEARING LUBRICATOR. ALBION P. WIGHT, Wakefield, Mass. Filed Aug. 2, 1916. Serial No. 112,685. (Cl. 184—84.)



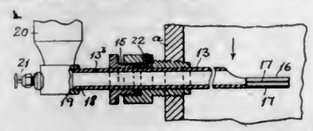
1. A bottle-holding and feed rod-guiding attachment for a shaft bearing, comprising a tube adapted to be inserted in a vertical opening in the upper portion of the bearing, and provided with an external stop shoulder limiting the entrance of the tube into said opening, and with an upwardly facing annular stopper seat above said shoulder, the tube being removably supported in an upright position by the bearing, and a compressible annular stopper surrounding the upper portion of the tube and contacting at its lower end with said seat, the stopper being adapted to have an air and oil tight fit in the neck of an inverted bottle, and being supported by said seat against pressure exerted in forcing the bottle neck upon the stopper, while the tube when engaged with the bearing supports the stopper and bottle and is adapted to guide a loose elongated oil-feeding rod.

2. A bottle-holding and feed rod-guiding attachment for a shaft bearing, comprising a tube adapted to be inserted in a vertical opening in the upper portion of the bearing, and provided with an external stop shoulder limiting the entrance of the tube into said opening, and with an upwardly facing annular stopper seat above said shoulder, the tube being removably supported in an upright position by the bearing, and a compressible annular stopper surrounding the upper portion of the tube and contacting at its lower end with said seat, the stopper being adapted to have an air and oil tight fit in the neck of an inverted bottle, and being supported by said seat against pressure exerted in forcing the bottle neck upon the stopper, while the tube when engaged with the bearing supports the stopper and bottle and is adapted to guide a loose elongated oil-feeding rod, the tube being provided with means whereby removal of the stopper from the tube by the removal of the bottle from the stopper, is prevented.



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1,228,862. OIL-ATOMIZER FOR STEAM-CONDUITS. ALBION P. WIGHT, Wakefield, Mass. Filed Aug. 3, 1916. Serial No. 113,006. (Cl. 184—56.)



1. An oil atomizer comprising a tubular conduit having its end portion cut away to provide a nozzle substantially U-shaped in cross section, said nozzle having one or more longitudinal slits for the passage of oil, and means for attaching said atomizer to a steam inlet pipe so as to permit rotary and sliding movements, independent of each other, of the nozzle in said pipe, said nozzle, when in use, having its open side facing the flow of steam through said pipe.

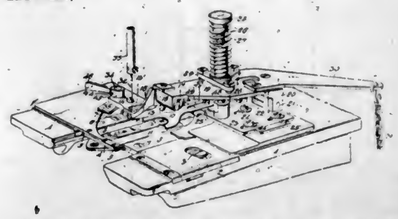
2. An oil atomizer comprising a tubular oil conduit terminal cut away at one side of its delivering or inner end to form a nozzle substantially U-shaped in cross section which is provided with longitudinal slits adapted to conduct small streams of oil from the inner to the outer surface of the nozzle, said terminal being formed at its outer or receiving end for engagement with an oil supply conduit, and an externally threaded sleeve embracing said terminal, adapted to engage an internally threaded orifice in a steam conduit, and provided with a stuffing box, the said terminal when in use being confined horizontally with the open side of its nozzle upward to cause oil to pass downwardly through the contracted passages of said nozzle and expose the oil to steam pressure tending to force it through said passages.

3. An oil atomizer comprising a tubular oil conduit terminal cut away at one side of its delivering or inner end to form a nozzle substantially U-shaped in cross section which is provided with contracted oil passages adapted to conduct small streams of oil from the inner to the outer surface of the nozzle, said terminal being formed at its outer or receiving end for engagement with an oil supply conduit, and an externally threaded sleeve embracing said terminal, adapted to engage an internally threaded orifice in a steam conduit, and provided with a stuffing box, said terminal having external means indicating the position of the open side of the nozzle, which open side faces the flow of steam through said steam conduits when the atomizer is in use.

4. An oil atomizer comprising a tubular oil conduit terminal cut away at one side of its delivering or inner end to form a trough-shaped nozzle, which nozzle is open throughout its length at one side and is provided with contracted oil passages adapted to conduct small streams of oil from the inner to the outer surface of the nozzle, said terminal being formed at its outer or receiving end for engagement with an oil supply conduit, and an externally threaded sleeve embracing said terminal, adapted to engage an internally threaded orifice in a steam conduit, and provided with a stuffing box, said sleeve having means whereby it may be adjustably clamped to said terminal to locate the nozzle in the central portion of the conduit, said nozzle, when in use, having its open side facing the flow of steam through said steam conduit.

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1,228,863. SEWING-MACHINE WORK-CLAMP. ALFRED R. WOOD, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Nov. 16, 1912. Serial No. 731,705. (Cl. 112—32.)



1. A work-clamp for sewing machines comprising separable clamping members, a fulcrum-pin carried by one of said members and disposed transverse to its work-engaging face, and an article-holder journaled upon said pin and adapted for movement thereon relatively to both of said clamping members and in a direction substantially parallel with their work-engaging faces.

2. A work-clamp for sewing machines comprising separable clamping members whose adjacent faces afford opposed work-gripping jaws, and an article-holder sustained by one of said members and affording a section laterally movable independently of the latter's work-gripping jaw with which said holder has a rigid connection whereby they are compelled to perform in unison opening and closing movements toward and from the other of said clamping members.

3. A work-clamp for sewing machines comprising separable clamping members whose adjacent faces afford opposed gripping jaws, a fulcrum-pin carried by and disposed in angular relation with the work-engaging face of one of said members, an article-holder having an aperture to receive said pin and having its exposed face flush with that of said member, and means for shifting said article-holder laterally relatively to both clamping members and substantially parallel with their work-engaging faces.

4. A work-clamp for sewing machines, comprising separable clamping members, and an article holder movable into and out of a position between the opposed faces of said clamping members in a direction substantially parallel with said faces.

5. A work-clamp for sewing machines comprising separable upper and lower clamping members with the clamping face of the upper member partially cut away to form a clearance space, a fulcrum-pin sustained by the upper clamping member, a holder-arm having an aperture to receive said pin and provided with a yielding fastener-cavity and adapted to lie within the clearance space of said upper clamping member, and means for shifting said holder-arm into and out of said clearance space so that said holder-arm will coöperate with said separable members in their clamping action upon the work.

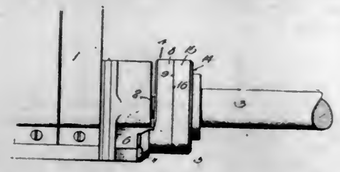
[Claim 6 not printed in the Gazette.]

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1,228,864. MAGNETO DRIVING MECHANISM. WARNER B. WRIGHTSMAN, Kokomo, Ind. Filed May 18, 1916. Serial No. 98,471. (Cl. 123—149.)

1. A device of the class described comprising a rotating disk adapted to be actuated by an internal combus-

tion engine, a second rotating disk adapted to be attached to the shaft of the magneto of said engine, said disks being arranged adjacent each other and having their axes coinciding, a volute spring arranged between said disks, one end of said spring being attached to one of said disks and the other end to the other disk, a latch mounted upon one of said disks to slide transversely of the same, a stationary stop arranged in the path of said latch and adapted to be engaged by the same to lock its respective disk against movement, and means carried by the other disk for disengaging said latch from said stop when the first disk has been retarded a predetermined amount.



2. A device of the class described comprising a rotating disk adapted to be actuated by an internal combustion engine, a second rotating disk having hub portions extending from the opposite sides thereof and adapted to be attached to the shaft of the magneto of said engine, a volute spring interposed between said members and having its opposite ends connected to the same, a stationary member having a stop thereon, a latch plate slidable on one side of one of said rotating members and having a longitudinal slot therein, to provide for the reception of one of said hub portions, a lug carried by said plate and adapted to engage said stop for locking the last referred to rotating member against movement, and a cam lug carried by the other rotating member and adapted to engage said plate upon the rotation of said other rotating member to disengage the first mentioned lug from said stop.

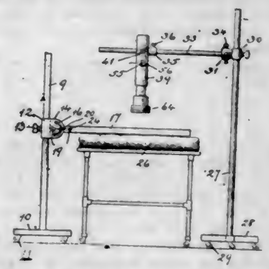
3. A device of the class described comprising a stationary plate having an annular flange on one side thereof, a rotating disk spaced from said plate and having an annular flange on one of its sides abutting the flange on said plate, to provide a closed housing, a second rotating disk arranged within said housing, a volute spring interposed between said disk and having its opposite ends connected to the same, a stop arranged on said plate, a latch slidable on the last named disk and adapted to engage said stop for locking said last named disk against movement, and a cam carried by the other disk and adapted to engage said latch when the former disk has been retarded a pre-determined amount.

4. A device of the class described comprising a pair of rotating members having elastic means operatively connecting the same together, a latch plate slidably mounted on one of said members and being heavier at one end than at the other, whereby it is caused to move into an inoperative position by centrifugal force when rotated rapidly, a lug carried at the heavier end of said plate, a stationary member having a notch in its outer side for receiving said lug when said plate is rotated slowly, whereby to retard the movement of the last mentioned rotating member, and a cam carried by the other rotating member and adapted to engage the other end of said plate when the former rotating member has been retarded a pre-determined amount.

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1,228,865. APPARATUS FOR APPLYING THERAPEUTICALLY-ACTIVE RAYS TO THE HUMAN BODY. ERNEST ZUEBLIN, Baltimore, Md. Filed Nov. 17, 1915. Serial No. 61,865. (Cl. 174—89.)

1. In an apparatus for applying therapeutically-active rays to the human body comprising an adjustably-sustained stationary electrode, an adjustably-sustained movable electrode said movable electrode having a chamber therein for the reception of a substance, a series of pins in said chamber, a glass applicator closing said chamber

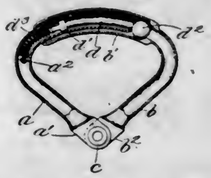


and connections on the said electrodes for connecting the same with a current supply.

[Claims 2 to 11 not printed in the Gazette.]

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1,228,866. BINDER-RING. SILVIO AMOROSO, Boston, Mass. Filed Mar. 11, 1916. Serial No. 83,646. (Cl. 129—24.)



1. A book binder ring embracing in its construction two pivotally connected arms and a bolt for interconnecting their free ends, said bolt having telescopic engagement with each arm and having detachable holding engagement with one of said arms, substantially as described.

2. A book binder ring embracing in its construction two opposed tubular arms, an interconnecting bolt telescopically mounted in one of said arms and having a detachable locking engagement with the free end of the other arm, substantially as described.

3. A book binder ring embracing in its construction two tubular arms, a sliding bolt mounted to telescope in one of said arms, means for normally retracting said bolt within said arm, the outer end of said connecting bolt being constructed to form a detachable interlocking engagement with the free end of the other arm, substantially as described.

4. A book binder ring embracing two arms pivotally connected together at their adjacent ends, their free ends being constructed to telescope one inside the other, and a detachable connecting bolt for connecting the free ends of said arms, substantially as described.

5. A ring embracing in combination two pivotally connected arms, means for detachably connecting their free ends, and means automatically drawing the free ends together, substantially as described.

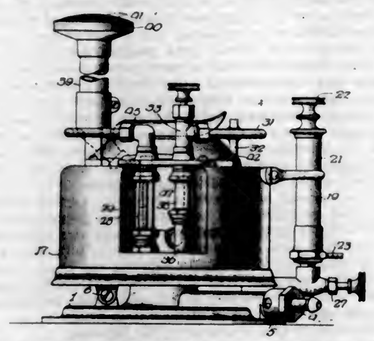
[Claims 6 to 8 not printed in the Gazette.]

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1,228,867. PORTABLE STEAM-GENERATOR. JOHN R. ANDERSON, Moline, Ill. Filed Oct. 22, 1915. Serial No. 57,387. (Cl. 122—28.)

1. A portable steam generator comprising in combination a water reservoir, a pump for supplying water and air under pressure to said reservoir, a heating coil, a heat insulating member between said coil and reservoir, a pipe connecting the lower portion of said reservoir with one end of said coil, a valve in said pipe to control the water supplied to said coil, means for heating said coil, and a perforated distributer head of greater cross-sectional area than said coil connected to the other end of said coil and freely open to the atmosphere to discharge the steam generated therein.





2. A portable steam generator comprising in combination a water reservoir, a pump for supplying water and air under pressure to said reservoir, a heating coil, a pipe connecting the lower portion of said reservoir with one end of said coil including a sight-feed glass, a valve in said pipe between said reservoir and sight feed glass to control the water supplied to said coil, means for heating said coil, and a member removably connected to the other end of said coil and freely open to the atmosphere to discharge the steam generated therein.

3. A portable steam generator comprising in combination a water reservoir, a pump for supplying water and air under pressure to said reservoir, a heating coil, heat insulating means surrounding said coil, a pipe connecting the lower portion of said reservoir with one end of said coil including a sight-feed glass, a valve in said pipe between said reservoir and sight-feed glass to control the water supplied to said coil, means for heating said coil, and a member connected to the other end of said coil and freely open to the atmosphere to discharge the steam generated therein.

4. A portable steam generator comprising in combination a heating coil, an annular water reservoir surrounding said coil, an annular heat insulating member between said coil and reservoir, a pump for supplying water and air under pressure to said reservoir, a pipe connecting the lower portion of said reservoir with one end of said coil, a valve in said pipe to control the water supplied to said coil, means for heating said coil, and a perforated distributer head of greater cross-sectional area than said coil connected to the other end of said coil and freely open to the atmosphere to discharge the steam generated therein.

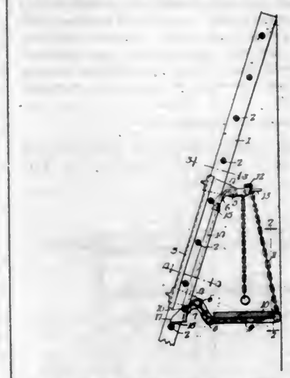
5. A portable steam generator comprising in combination a heating coil, an annular water reservoir surrounding said coil, a pump for supplying water and air under pressure to said reservoir, a pipe connecting the lower portion of said reservoir with one end of said coil including a sight-feed glass, a valve in said pipe between said reservoir and said sight-feed glass to control the water supplied to said coil, means for heating said coil, and a member connected to the other end of said coil and freely open to the atmosphere to discharge the steam generated therein.

[Claim 6 not printed in the Gazette.]

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1,228,868. LADDER-JACK. JOHN R. ANDERSON, Moline, Ill. Filed Aug. 4, 1916. Serial No. 113,051. (Cl. 20—85.)

1. A ladder jack comprising means to embrace one edge of a ladder leg, a member pivotally mounted on said means and having means thereon adapted to engage the other edge of said leg, a support for a stage or scaffold connected at one end to said member, and means connecting the free end of said support to the first mentioned means.



2. A ladder jack comprising means to embrace one edge of a ladder leg, a bell-crank lever pivotally mounted on said means and having a cam face adapted to engage the other edge of said leg, a support for a stage or scaffold pivotally connected to said bell-crank lever, and adjustable means connecting the free end of said support to the first-mentioned means.

3. A ladder jack comprising means to embrace one edge of a ladder leg, a member pivotally mounted on said means and having a cam face adapted to engage the other edge of said leg and an extension to engage a rung of the ladder, a support for a stage or scaffold connected at one end to said member, and means connecting the free end of said support to the first-mentioned means.

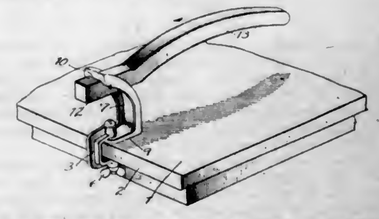
4. A ladder jack comprising means to embrace one edge of a ladder leg, a pair of members pivotally mounted on said means and having means thereon adapted to engage the other edge of said leg, a support for a stage or scaffold connected at one end to the lower of said members, and means connecting the free end of said support to the upper member.

5. A ladder jack comprising means to embrace one edge of a ladder leg, a pair of bell-crank levers pivotally mounted on said means and having cam faces adapted to engage the other edge of said leg, a support for a stage or scaffold connected at one end to the lower of said bell-crank levers, and means connecting the free end of said support to the upper bell-crank lever.

[Claims 6 to 10 not printed in the Gazette.]

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1,228,869. PRESSING-BOARD AND HOLDER. JOHN R. ANDERSON, Moline, Ill. Filed Aug. 4, 1916. Serial No. 113,052. (Cl. 68—10.)



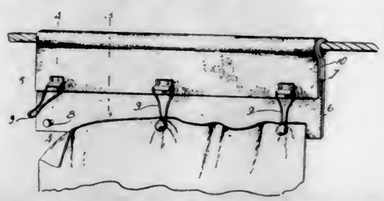
1. A device of the character described comprising in combination a clamp, a yoke having an opening therein and a foot pivotally mounted in said clamp and adapted to be secured thereby in engagement with a suitable support, and an ironing board having an extension adapted to be removably disposed in said opening, the top and bottom

edges of said opening being spaced longitudinally of said extension.

2. A device of the character described comprising a yoke having an opening therein, means for securing said yoke to a support, a pivoted connection between said yoke and means, and an ironing board having an extension adapted to be removably disposed in said opening, the top and bottom edges of said opening being spaced longitudinally of said extension.

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1,228,870. CLOTHES FASTENER AND PROTECTOR. LOUISA BAGANZ, New York, N. Y. Filed Aug. 14, 1916. Serial No. 114,894. (Cl. 24—137.)



1. In a device of the class described a body of cloth adapted to be folded upon itself to provide a pair of flaps, buttons on one of said flaps, loops carried by the other of said flaps for engagement with said buttons, and means for securing said body on a clothes line, substatnially as described.

2. In a device of the class described, a body of cloth adapted to be folded over a line to provide wide and narrow flaps respectively, buttons adjacent the extremity of said wide flap, loops carried by said narrow flap and projecting from the extremity of the latter for engagement with said buttons, a leaf formed of cloth secured along one edge to the under surface of said body and to the narrower of said flaps, the said leaf being adapted to be covered by said narrow flap, and coöperating fastening means upon said leaf and the wider of said flaps, substantially as described.

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1,228,871. THREAD-CUTTING MECHANISM FOR SEWING-MACHINES. WILLIAM L. BARRON, New York, N. Y., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Feb. 7, 1913. Serial No. 746,696. (Cl. 112—33.)



1. In a sewing machine in combination, a reciprocating needle and complemental stitch-forming mechanism, and mechanism for successively nipping the needle thread and severing the loose end at the beginning of a stitching cycle, said mechanism including a thread-drawing member and a nipping element moving relatively to and actuated by said thread-drawing member.

2. In a sewing machine in combination, a reciprocating needle and complemental stitch-forming mechanism, and mechanism for successively nipping the needle thread and severing the loose end at the beginning of a stitching cycle, and for holding said thread for a predetermined time after the loose end has been severed, the nipping device of said mechanism being mounted independently of the severing means.

3. In a sewing machine, in combination, a reciprocating needle and complemental stitch-forming mechanism, thread-severing mechanism, thread-nipping mechanism comprising a nipping wall and a nipping jaw independent of the severing mechanism and moving in a plane intersecting the said nipping wall, the said severing and nipping mechanism acting upon the thread to successively nip the same below the work-plate at the beginning of a stitching cycle, then to cut the loose end of said thread and to hold the end of the thread for a predetermined period.

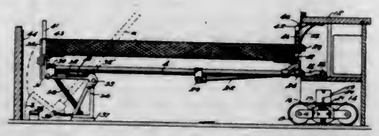
4. In a sewing machine, in combination, a reciprocating needle and complemental stitch-forming mechanism, a thread-nipping device comprising a movable jaw and a jaw coacting therewith, a thread-drawing member movable in a path entirely outside of the range of action of said jaws for drawing the needle-thread between said jaws, and means for closing said jaws upon the thread and holding them closed for a predetermined period.

5. In a sewing machine in combination, a reciprocating need and complemental stitch-forming mechanism, a thread-nipping device comprising a movable jaw and a jaw coacting therewith, means movable relatively to said jaws for drawing the needle-thread between the same, means for closing said jaws upon the thread and holding them closed for a predetermined period, and means for cutting the loose end of the thread while it is so held.

[Claims 6 to 18 not printed in the Gazette.]

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1,228,872. DISAPPEARING BED. JOHN C. BEACH and HENRY W. BEACH, San Francisco, Cal., assignors to Lachman Wall Bed Company, San Francisco, Cal., a Corporation of California. Filed June 2, 1914. Serial No. 842,444. (Cl. 5—54.)



1. The combination in a tiltable bed structure, of a pair of spaced fixed journals, links pivoted at one end of each to said journals, springs disposed so as to be operative as a check to the downward movement of the links, a bed frame pivotally connected at one end to the swinging ends of the links, and springs interposed between said links and the frame reactively operative upon said frame as it tilts from the vertical toward the links.

2. The combination in a titiable bed structure, of a pair of spaced fixed journals, links pivoted at one end of each to said journals, springs disposed so as to be operative as a check to the downward movement of the links, a bed frame pivotally connected at one end to the swinging ends of the links, means reactively operative upon said frame as it tilts from the vertical toward the links, and a control spring, attached at one end to said bed and at its other to a fixed part, for governing the movement of the bed as it approaches the horizontal.

3. The combination with a bed frame, of relatively stationary brackets, links fulcrumed on said brackets and pivotally connected at their swinging ends to the adjacent end of the bed frame, and a movable carrier connected to said bed frame, whereby when the carrier is moved horizontally away from said brackets, the bed frame is tilted from a vertical position to a horizontal position with a preliminary tilting movement at its point of pivotal connection to said links and with a subsequent movement coördinate with the links about the fulcra of the latter on the brackets.

4. The combination with a bed frame, of relatively stationary brackets, links fulcrumed on said brackets and pivotally connected at their swinging ends to the adjacent end of the bed frame, and a movable carrier connected to said bed frame, whereby when the carrier is moved horizontally away from said brackets, the bed frame is tilted from a vertical position to a horizontal position with a preliminary tilting movement at its point of pivotal connection to said links and with a subsequent movement coordinate with the links about the fulcra of the latter on the brackets, the bed frame being supported when in horizontal position by said brackets and said carrier.

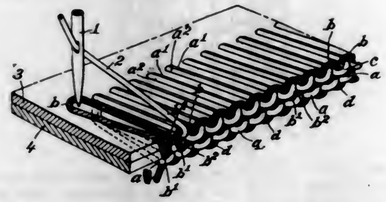
5. The combination with a bed frame, of relatively stationary brackets, links fulcrumed on said brackets and pivotally connected at their swinging ends to the adjacent end of the bed frame, and a movable carrier connected to said bed frame, whereby when the carrier is moved horizontally away from said brackets, the bed frame is tilted from a vertical position to a horizontal position with a preliminary tilting movement at its point of pivotal connection to said links and with a subsequent movement coordinate with the links about the fulcra of the latter on the brackets, the bed frame being supported when in horizontal position by said brackets and said carrier, the connection between the carrier and the bed frame consisting of knuckle-jointed links pivotally related at their ends to the respective parts.

[Claims 6 to 12 not printed in the Gazette.]



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1,228,873. OVERSEAM FOR SEWED ARTICLES. CHARLES EDWIN BENTLEY, New York, N. Y. Filed Aug. 16, 1916. Serial No. 115,220. (Cl. 112—34.)



1. The herein described overseam, comprising the combination with suitable fabric, of a depth-stitch thread passing through the fabric and having loops extended to the edge of the fabric on both faces of the latter; an edge-stitch thread having loops passed through certain of said loops of said depth-stitch thread, said loops of the edge-stitch thread being twisted so that certain strands thereof cross each other; and said edge-stitch thread being also passed around certain strands of said loops of the depth-stitch thread extending to the edge of the fabric on both faces thereof.

2. The herein described overseam, comprising the combination with suitable fabric, of a depth-stitch thread passing through the fabric and having loops extended to the edge of the fabric on both faces of the latter; an edge-stitch thread having loops passed through the lower loops of said depth-stitch thread, said edge-stitch thread being also passed around certain strands of said loops of the depth-stitch thread extending to the edge of the fabric on both faces thereof; and said loops of said edge-stitch thread being twisted so that certain strands thereof cross each other, whereby tension applied to the edge-stitch thread causes said loops of the depth-stitch thread on both faces of the fabric to be drawn close to each other at the edge of the overseam.

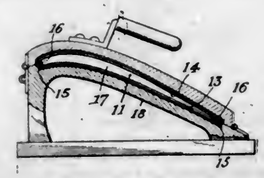
3. The herein described overseam, comprising the combination with suitable fabric of a depth-stitch thread which is passed in loops through the fabric during successive stitches, said loops being extended to the edge of the fabric on the lower side thereof; an edge-stitch thread having loops passed through said loops of the depth-stitch thread, said loops of the edge-stitch thread being twisted so that certain strands thereof cross each other; one of said loops of the depth-stitch thread being passed through one of said twisted loops of the edge-stitch thread previous to the time said loop of the depth-stitch thread is passed through and extended to the edge of the fabric on the lower side thereof, preparatory to the passage through said loop of said loop of the edge stitch thread forming part of a succeeding stitch, substantially as and for the purpose specified.

4. The herein described overseam, comprising the combination with suitable fabric, of a depth-stitch thread passing through the fabric and having loops extended to the edge of the fabric on both faces of the latter; an edge-stitch thread having loops passed through the lower loops of said depth-stitch thread; and said edge-stitch thread being also passed around certain strands of said loops of the depth-stitch thread extending to the edge of the fabric on both faces thereof.

5. A seam comprising a fabric, a thread 2, and a thread 5, the thread 2 passing through the fabric in a series of loops and the thread 5 passing through the fabric, or past the edge thereof in a series of loops, each loop of the thread 5 being twisted a quarter turn; each loop of the thread 2 being passed through one of said twisted loops of the thread 5 before passing through the fabric; and each loop of the thread 5 being passed through one of said loops of the thread 2 before passing through the fabric, or past the edge thereof.

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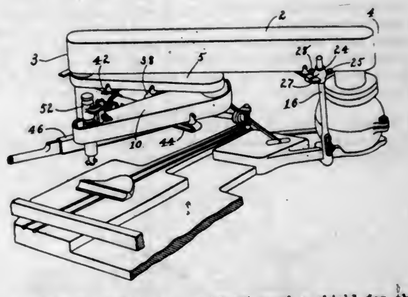
1,228,874. PROPELLER. CHARLES M. BERRY, New York, N. Y., assignor to The Reinforced Propeller and Insulating Company, Inc., New York, N. Y., a Corporation of New York. Filed July 31, 1915, Serial No. 42,907. Renewed Dec. 6, 1916. Serial No. 135,485. (Cl. 170—159.)



A propeller constructed of sheet metal sections having marginal flanges to form, when assembled, a hollow structure reinforced with a coating of carbonaceous material.

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1,228,875. BELT-GUARD. HENRY L. BOESIGER, Somerville, N. J. Filed Jan. 22, 1917. Serial No. 143,605. (Cl. 74—56.)



1. In a belt-guard the combination of a shield for the belt, means for supporting said shield including an upright member, means thereon for gripping a support, a member slidable on said upright member, a transverse member carried by and adjustably secured to said slidable member, and shield-supporting means adjustably secured to said transverse member.

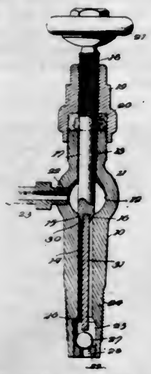
3. In a belt-guard the combination of a shield for the belt, means for supporting said shield including an upright member, means thereon for gripping a support, a bracket slidably mounted on said upright member, means for securing said bracket to the upright member, a transverse member, means for supporting said transverse member, a shield-supporting member pivotally mounted on

said transverse member, means for securing said shield-supporting member to said transverse member, and means for securing said shield-supporting member to said shield.

5. In a belt-guard the combination of a shield for the belt, means for supporting said shield including a transverse member, means for supporting said transverse member, and shield-supporting means adjustably secured to said transverse member.

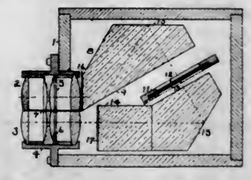
[Claims 2, 4, and 6 to 8 not printed in the Gazette.]

1,228,876. AUTOMATIC SAFETY GAGE-COCK. GEORGE W. BOLTON, Nashville, Tenn. Filed Feb. 25, 1916. Serial No. 80,427. (Cl. 137—138.)



A safety gage cock, including a casing enlarged to form an outlet chamber and an intake chamber in spaced relation and connected by a passage and with an inlet passage leading into the intake chamber and a discharge leading from the outlet chamber, said connecting passage having valve seats at its juncture with the chambers and said inlet passage having a valve seat at its juncture with the inlet chamber, a valve stem having a terminal valve adapted to engage the seat of the outlet chamber, a valve freely movable within the inlet chamber and adapted to alternately engage the valve seats associated with the intake chamber, and a rod adjustably connected to the valve stem and extending into the path of the freely movable valve, said rod adapted to be extended to hold the terminal valve disengaged from its seat and to hold the freely movable valve positively engaged with the seat of the intake passage.

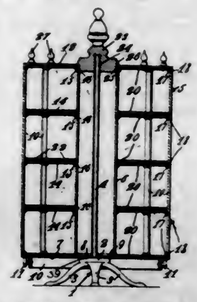
1,228,877. COLOR CINEMATOGRAPHY. PERCY D. BREWSTER, East Orange, N. J. Filed May 29, 1914. Serial No. 841,797. (Cl. 95—2.)



1. The process of making color cinematographic films, which consists in passing a pair of color-sensitive negative films simultaneously and in unison through the same film gate, reflecting the light received from the object to be photographed to the opposite sides of the pair of films in the film gate for the production of separate optical images of the object thereon, chemically treating the exposed films to produce photographic images of the object, arranging the two films on opposite sides of and in contact with a positive film sensitized on both sides and exposing the same to light, chemically treating the exposed positive film to produce photographic images of the object thereon, and coloring the two sides of the treated positive in two different colors.

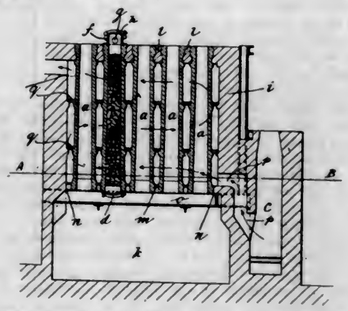
2. In a process of making color-cinematographic films, the steps comprising passing simultaneously and in unison through the same film gate a pair of color-sensitive negative films arranged face to face and permanently connected together along one edge, directing light from the object to be photographed to the opposite sides of the pair of films for the production of optical images of the object thereon, and chemically treating the two films to produce separate photographic images of the object.

1,228,878. REVOLVING LACE-CABINET. ALFRED L. BROUILLETTE, Campbell, Nebr. Filed Feb. 3, 1916. Serial No. 76,010. (Cl. 211—20.)



In a device of the class described, a supporting structure including a base and a shaft upstanding from the base; a bottom plate resting removably on the base, the shaft passing through the bottom plate; a tubular core supported by the bottom plate and having its inner wall spaced from the periphery of the shaft; an upper shelf secured to the core; an intermediate shelf secured to the core; upwardly extended ribs on the lower surface of the upper shelf, on the upper and lower surfaces of the intermediate shelf, and on the upper surface of the bottom plate, the inner ends of the ribs coacting with the core to adjust the outer ends of the ribs with respect to the peripheries of the shelves; and a removable cap having an opening in its lower face, the opening receiving the upper end of the shaft, the cap extending within the upper end of the core, to prevent a lateral movement of the core with respect to the shaft, and including an outstanding flange overhanging the upper shelf.

1,228,879. MANUFACTURE OF GAS. JULIUS BUEB, Dessau, Germany. Filed Oct. 11, 1913. Serial No. 794,549. (Cl. 48—210.)



1. The process of making gas consisting in distilling coal in a vertical retort at a temperature approximating the melting point of silica.

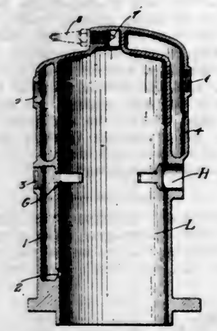


2. The process of making gas consisting of distilling coal in a vertical retort at a temperature above the disintegration point of fire-clay and below the melting point of silica.

3. The process of making gas consisting in distilling coal in a vertical retort and maintaining said retort at a temperature approximating the melting point of silica during the distilling process.

4. The process of making gas, consisting in distilling coal in a vertical retort, maintaining said retort at a temperature above the disintegration point of fire-clay and approximating the melting point of silica, admitting water vapor into the vertical retort toward the end of the distillation thereby generating water gas and reacting with water gas on the tar remaining in the coke.

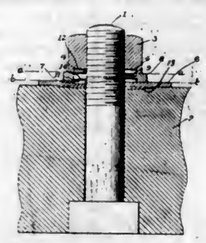
1,228,880. ENGINE-CYLINDER. WILLIAM F. A. BUEHNER, Newark, N. J., assignor to L. Weiscopf, New York, N. Y. Filed Nov. 24, 1915. Serial No. 63,204. (Cl. 123—193.)



An engine cylinder having a pocket formed interiorly at the upper end thereof, said pocket being substantially as wide as deep and the upper wall thereof being permanently closed, the side walls of the pocket continuing downwardly and rounding gradually outwardly into the upper end wall of the cylinder without diminution in the cross-sectional contour of the pocket, the walls of said pocket comprising a projection exteriorly at the end of the cylinder and being formed with an aperture for receiving a spark plug therethrough, said aperture being disposed to retain the spark plug in a position transverse to the length of the cylinder, a spark plug arranged in said aperture so that the electrodes of the spark plug stand substantially in the longitudinal axial line of the cylinder approximately midway of the depth of said pocket, and cooling means for the cylinder extending across the upper end of the cylinder exteriorly thereof and serving as cooling means for the walls of said pocket.

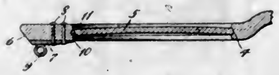
1,228,881. AUTOMATIC LOCK-NUT. RALPH W. BURNETT, Westwood, Cal. Filed Nov. 30, 1915. Serial No. 64,324. (Cl. 151—39.)

In combination with a bolt or the like, a base element through which the bolt extends, and having segmental teeth on its outer side around the bolt, each of said teeth having an inclined face, a nut on the bolt having corresponding segmental teeth on its inner side, a key washer between the base element and the nut, and through which the bolt extends, said key washer having a segmental enlargement at one side of the opening therein and presenting an inclined camming face on the side opposed to the nut and spaced from the inner surface of the key washer, said key washer being thicker than said segmental enlargement and an annular locking spring open at one side, arranged in the opening of the key washer and between the nut and the base element and having its ends sprung in opposite directions and respectively engaged with a tooth of the base element, and a tooth of



the nut, the said segmental enlargement of the key washer being arranged under one side of said locking spring.

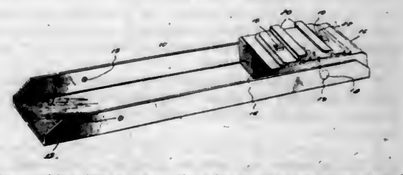
1,228,882. EYEGLASSES AND SPECTACLES. WILLIAM N. COOK, New York, N. Y., assignor to E. B. Meyrowitz, Inc., a Corporation of New York. Filed Feb. 24, 1914. Serial No. 820,492. (Cl. 88—47.)



1. In combination, a spectacle frame consisting of rims and a bridge of horn or like material, said rims being annular in shape and having grooves therein, rounded lenses mounted in said grooves, a projection on the outer half of each of said rims integral therewith and on a level with the bridge, a hinge-plate secured to the rear face of each of said projections, a temple hinged to each of said plates, each of said lenses having a notch in the edge thereof adjacent a hinge-plate and a projection on each hinge-plate extending from the inner end thereof and having it end fitting into the notch in the corresponding lens.

2. The combination with a spectacle frame comprising a bridge and a pair of rims connected therewith, each of said rims being annular in shape, continuous and unbroken throughout, and having an annular groove therein, of round lenses mounted in the grooves in said rims, each having a notch in its edge, and plates secured to said rims, each having a finger thereon which extends into the notch in the lens in said rim.

1,228,883. RAILROAD-TIE. BENJAMIN F. CORNELIUS, Norman, Okla. Filed May 23, 1916. Serial No. 99,446. (Cl. 238—5.)

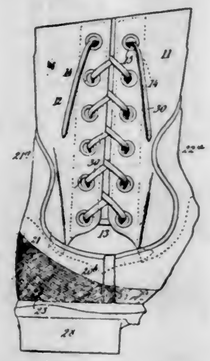


In combination a pair of rails, a channel shaped tie, a pair of blocks mounted therein at opposite ends, a metallic base plate upon each block, a pair of angle irons having portions resting upon said base plate, and portions engaging the flanges of said rails, two vertical threaded bolts projecting above said blocks and also through the pair of rail flange engaging angle irons, nuts engaging said threaded bolts and clamping said angle irons in position on said blocks, the side walls of said channel shaped tie being provided with openings, at op-

posite ends, said blocks having bores registering with said openings, and bolts of a lesser diameter than said openings and bores and passing therethrough so as to allow lateral play on the part of said blocks.

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1,228,884. SIDE-POCKET PAC. JOHN T. CROWLEY, Beacon Falls, Conn., assignor, by mesne assignments, to The Beacon Falls Rubber Shoe Company, a Corporation of Massachusetts. Filed June 16, 1915. Serial No. 34,375. (Cl. 36—4.)



1. An article of rubber footwear comprising a leg portion and a foot portion formed of fabric and gums and embodying stay portions and water-proof portions extending across the ankle, instep, front foot portions, and the lower part of the leg portion in a plurality of superposed layers, the outermost layers at the side of the leg portion being slitted from a point below the ankle upwardly to form flaps, means for adjustably connecting the flaps, the said leg portion layers inwardly of the above-mentioned outermost layers being slitted upwardly at the front and rear of the flap forming slit, said latter slits extending from points below the ankle, and webs uniting the respective edges of the portion between such slits to the adjacent flaps.

[Claim 2 not printed in the Gazette.]

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1,228,885. COMPOSITION FOR PREVENTING ACCUMULATION OF MOISTURE ON GLASS OR OTHER SMOOTH SURFACE. RALPH W. DARNER, Cleveland, Ohio, assignor to The Ohio Varnish Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 7, 1916. Serial No. 135,559. (Cl. 134—27.)

1. A composition of matter for preventing accumulation of moisture on glass, comprising aluminium stearate, naphtha, rosin oil, paraffin oil, and rotten stone in about the proportions mentioned.

2. A composition of matter for preventing accumulation of moisture on glass, comprising a mixture of aluminium stearate, naphtha, rosin oil, paraffin oil, and rotten stone.

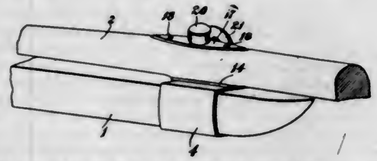
3. A composition of matter for preventing accumulation of moisture on smooth surfaces, comprising aluminium stearate, a condensation preventer, an attrition agent, and a solvent.

4. A composition of matter for preventing accumulation of moisture on smooth surfaces comprising aluminium stearate mixed with a condensation preventer and an attrition agent.

5. A composition of matter for preventing accumulation of moisture on smooth surfaces, comprising aluminium stearate, and an attrition agent.

[Claims 6 to 10 not printed in the Gazette.]

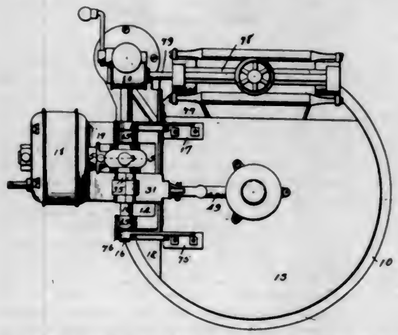
1,228,886. DOUBLETREE-COUPLING. EUGENE H. DECKER, Slater, Colo. Filed July 13, 1916. Serial No. 109,125. (Cl. 21—78.)



In a coupling of the character described, the combination with a doubletree and a swingletree, the swingletree having an opening provided with a pivot bolt, the doubletree also having an opening for receiving the end of the pivot bolt whereby the swingletree and doubletree may be pivotally connected together, a clip formed of a single piece of material bent substantially U-shaped for providing a spacing wall in contact with one side of the said doubletree, the said U-shaped clip including upper and lower arms extending at right angles from the said spacing wall and embracing the said doubletree and in engagement, respectively, with the upper and lower surface of the doubletree, the terminals of the said arms being provided with ears having openings formed therein, a retaining bolt extended through the openings and secured to the upper end of the said pivot bolt, the said retaining bolt being extended through the openings in the ears and in contact with the side of the doubletree opposite to the said spacing wall.

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1,228,887. GEARING DEVICE FOR POWER WASHING-MACHINES. ANDREW J. DINKEL, Clarinda, Iowa, assignor to Clarinda Lawn Mower Company, Clarinda, Iowa. Filed Oct. 12, 1915. Serial No. 55,573. (Cl. 74—50.)



1. In a device of the class described, a support, a fixed cover member thereon, a shaft on said fixed cover member, a source of power pivotally mounted on said shaft, and operatively connected therewith for transmitting power from the source of power to the shaft and at the same time permitting the source of power to be rotated around the shaft for a limited distance, means for connecting said shaft and said source of power including a gear casing, a power shaft mounted therein, a worm gear thereon, a gear on said first shaft, and adjustable means for longitudinally moving said worm gear.

2. In a device of the class described, a support, a fixed cover member thereon, a movable cover member thereon, a shaft on said fixed cover member, a source of power being pivotally mounted on said shaft, and operatively connected therewith for transmitting power from the source of power to the shaft and at the same time permitting the source of power to be rotated around the shaft for a limited distance, an upright shaft in said movable member a gear casing having bearings formed thereon receiving said first shaft, and means for operatively connecting said first shaft with said upright shaft whereby continuous rotary motion of the first shaft transmits alternate rotary motion to the second shaft.



3. In a device of the class described, means whereby continuous rotary motion of the horizontal shaft transmits alternate rotary motion to the vertical shaft, said means comprising a gear casing, a horizontal shaft rotatably mounted therein, a bevel gear on said shaft within said casing, an upright sleeve mounted in said casing, an upright shaft non-rotatably mounted in said sleeve, bevel gears rotatably mounted on said sleeve in mesh with said first bevel gear, an arm on said sleeve, a member mounted therein capable of limited rotary movement between the bevel gears on said sleeve, lugs extending upwardly and downwardly respectively from the member mounted in said arm, pins on said bevel gears on said sleeve extended toward said rotary member in said arm, said lugs being so arranged that when one of the lugs is in the path of one of the pins, the other lug is not in the path of the other pin, a pin projecting from said rotary member in said arm, and opposite stop members on said casing adapted to engage said last described member.

4. In a device of the class described, a shaft, a vertical shaft means whereby continuous rotary motion of the first shaft transmits alternate rotary motion to the vertical shaft, said means comprising a gear casing, in which said first shaft is rotatably mounted, a bevel gear on said first shaft within said casing, a sleeve mounted in said casing, an upright shaft non-rotatably mounted in said sleeve, bevel gears rotatably mounted on said sleeve in mesh with said first bevel gear, an arm on said sleeve, a member mounted therein capable of limited rotary movement between the bevel gears on said sleeve, lugs extending upwardly and downwardly respectively from the member mounted in said arm, pins on said bevel gears on said sleeve extended toward said member in said arm, said lugs being so arranged that when one of the lugs is in the path of one of the pins, the other lug is not in the path of the other pin, a pin projecting from said rotary member in said arm, opposite stop members on said casing adapted to engage the pins on the rotary member, and means tending to yieldingly hold said rotary member in said arm against movement.

5. In a device of the class described, means whereby continuous rotary motion of a horizontal shaft transmits alternate rotary motion to a vertical shaft, said means comprising a gear casing, having said horizontal shaft rotatably mounted therein, a bevel gear on said shaft within said casing, an upright sleeve mounted in said casing, an upright shaft non-rotatably mounted in said sleeve, bevel gears rotatably mounted on said sleeve in mesh with said first bevel gear, an arm on said sleeve, a member mounted therein capable of limited rotary movement between the bevel gears on said sleeve, lugs extending upwardly and downwardly respectively from said member, pins on said bevel gears on said sleeve extending toward said rotary member in said arm, said lugs being so arranged that when one of the lugs is in the path of one of the pins, the other lug is not in the path of the other pin, a pin projecting from said rotary member, and opposite stop members on said casing adapted to engage the pin on the rotary member, said arm having portions adapted to serve as stops for limiting the movement of the projecting pin on the rotary member.

[Claims 6 to 8 not printed in the Gazette.]

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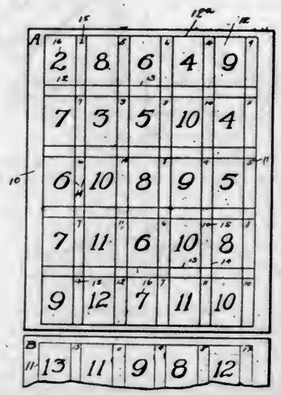
1,228,888. PREPARING OILS AND FATS FOR HYDROGENATION. CARL DREYMANN, Baltimore, Md. Filed Dec. 6, 1915. Serial No. 65,303. (Cl. 87—12.)

1. In the treatment of oils and fats to prepare the same for hydrogenation, the process comprising converting the free fatty acids of the oil or fat into neutral esters by heating with alcohol, a catalytic agent, and a dehydrating agent, leaving in the oil or fat the neutral esters so produced and then neutralizing any remaining free fatty acid or acids.

2. In the treatment of oils and fats to prepare the same for hydrogenation, the process comprising separating the glycerin from the fatty acids, converting the fatty acids into neutral esters, leaving in the oil or fat the neutral esters so produced, and then neutralizing any remaining free fatty acid or acids.

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1,228,889. COMBINATION DOMINO AND CHART DEVICE FOR SEAT WORK IN NUMBERS. STELLA EBERHART, Des Moines, Iowa. Filed July 24, 1916. Serial No. 111,098. (Cl. 35—2.)




1. In a device of the class described, a sheet having printed thereon numbers representing the sums of the addition of two other numbers, said numbers being arranged in regular spaces, dominoes of proper size to fit in said spaces having on their faces indicating characters to represent the numbers which have been added together to produce the numbers shown on said sheet.

2. In a device of the class described, a sheet, having a plurality of spaces arranged in rows, numbers in said spaces, a smaller number marked outside of each space corresponding with the number in the space, the number in each space representing the sum of two primary numbers, and a plurality of dominoes having indicating characters representing the numbers which have been added together to find the sums represented by the numbers in the spaces on said sheet.

3. In a device of the class described, a sheet, a plurality of spaces marked off thereon, said spaces being arranged in vertical and in horizontal rows, the said rows being spaced from each other, each of said spaces having therein, indicating characters representing the sum of two numbers and similar indicating characters adjacent to each of said spaces, and a sheet having thereon dominoes having indicating characters representing numbers which may be added together to make the sums represented by the indicating characters on first sheet.

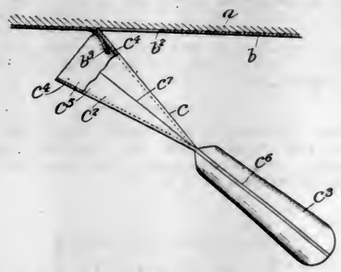
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1,228,890. SCRAPER. JOHN W. EGAN, Brooklyn, N. Y. Filed Feb. 12, 1916. Serial No. 77,995. (Cl. 72—137.)

1. A scraper comprising a hollow body portion formed of side walls, each of said walls terminating in a straight scraping edge, and a handle secured to said body portion.

2. A scraper comprising a hollow body portion formed of divergent side walls, each of said walls terminating in a straight scraping edge, a shank member integral with one of said side walls, and a handle secured to said shank.

3. A scraper comprising a hollow body portion formed of a continuous sheet of metal bent to form divergent



walls, the edges of the walls of the body portion forming straight scraping edges, a shank integral with one of said walls, and a handle secured to said shank.

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1,228,891. FLY-SWATTER. DAVID E. EMANUEL, Des Moines, Iowa. Filed Oct. 23, 1916. Serial No. 127,265. (Cl. 43—1.)



1. In a device of the class described, a handle device, comprising spaced members adapted to be firmly gripped between the palm and fingers of the hand, a spring device for connecting said spaced members at one end thereof, a striking device pivotally connected with the other end of one of said handle members, and means for connecting said striking device with the other end of the other handle member, whereby when the handle members are forced together against the tension of said spring device, the striking member may be moved.

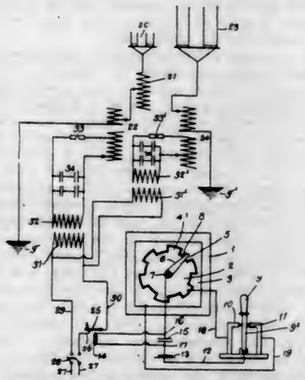
2. In a device of the class described, a striking member, a supporting device secured thereto including a disk having an extension provided with an elongated slot, a shaft on which said disk is rotatably mounted, a yoke extended over said disk having at its ends loops forming bearings for said shaft on opposite sides of the disk, a handle member operatively connected with one of said loops at one end having at its other end a resilient coil, a second handle member connected with said coil and having a right-angled extension received in said slot.

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1,228,892. RADIO-CONTROLLED TORPEDO. ARTHUR E. ERICSON, Manchester, Mass., assignor of one-fourth to Gurth A. Whipple, Binghamton, N. Y. Filed Jan. 20, 1916. Serial No. 73,099. (Cl. 250—2.)

1. In radio-controlled apparatus, the combination of instrumentalities at a sending station, comprising a constantly rotating contact-maker, contacts in two series, passed over by said contact maker in its rotation, the contacts of each series being connected together, and contacts of the two series being arranged alternately, a control relay, a switch, means for energizing said relay when said switch is in one position and while said contact maker engages contacts of one series, and for energizing said relay when said switch is in another position, and while said contact maker engages contacts of the other series, and means for transmitting radio impulses during the periods said relay is energized, substantially as set forth.

10. In a self-propelled device of the character described, the combination of an antenna, a pair of hollow masts, supporting the antenna, tubular conductors in said masts, loose connections between the antenna and the interiors of said tubular conductors, impulse receiving devices, and connections extending through said masts between said tubular conductors and said devices, substantially as set forth.

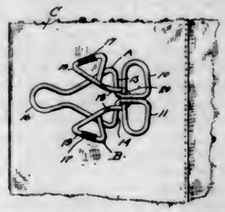


13. In radio-controlled apparatus, the combination of a steering gear, means for turning the same to left or right, a pair of electrical control means for said means, and means for energizing one or the other of said control means, including devices affected by radio impulses received, and including a constantly rotating contact maker and contacts of two series; and means for transmitting radio impulses from a distant point, together with control means therefor, including a contact maker rotating with said first contact maker, contacts similar to these passed over by said first contact maker, and a switch for completing a circuit through said second contact maker and contacts of one or the other series, substantially as set forth.

[Claims 2 to 9, 11, 12, and 14 not printed in the Gazette.]

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1,228,893. GARMENT-FASTENER. SARAH E. ESSLINGER, Sheffield, Iowa. Filed Feb. 19, 1915. Serial No. 9,471. (Cl. 24—228.)

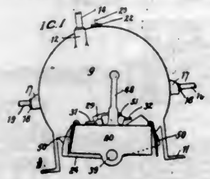


In a hook and eye, a hook member formed from a single length of wire bent upon itself and further bent to form a pair of attaching eyes at the terminals of the wire, and intermediate lateral V-shaped wings, said wings being disposed in offset relation to the attaching eyes, and an eye member formed from a single length of wire bent upon itself to form a shank, and having its terminals further bent to form attaching eyes, said shank having its outer end offset from its inner end to form locking shoulders which coöperate respectively with arms of the V-shaped wings.

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1,228,894. COMBINED MILKING-MACHINE RELEASER AND PULSATOR. THOMAS NOTON FLETCHER, Hamilton, New Zealand. Filed Jan. 5, 1917. Serial No. 140,718. (Cl. 31—97.)

1. In milking machine releasers, a fixed head or cover having a vacuum and milk connections passing through it and also the discharge aperture or apertures formed therein and a removable receiving vessel adapted to fit on to such head or cover and to make airtight connection therewith, substantially as herein specified.



2. In milking machine releasers, a fixed head or cover formed with a flange extending from its inner side and having the vacuum and milk connections passing through it, and a removable receiving vessel adapted to fit on to such head formed with an open end fitting within such flange and having a rim surrounding it engaging the edge of the flange and means whereby the receiving vessel may be held within the flange, substantially as herein specified.

3. In milking machine releasers of the class herein described and having reciprocally moving discharging vessels mounted upon a receiving vessel adapted in their movements to alternately connect with the receiving vessel and to open to the atmosphere, a pulsator apparatus combined with and operated by the movements of the discharging vessels and adapted to make operating connections for the teat cups alternately with the vacuum of the system and the atmosphere, substantially as described.

5. In milking machine releasers of the class herein described, a fixed head or cover, a receiving vessel mounted therein, said head being provided with a slide valve face on its front and discharge ports opening from such vessel through the slide valve face one at each end thereof, a pair of ports arranged in regular communication with the vacuum system opening through such slide valve face and a pair of air grooves or apertures in such face, in combination with a pair of receiving vessels mounted to rock reciprocally across the slide valve face and each having a discharge opening covered by a hinged flap valve, each of such vessels having a port and and aperture in its wall adjacent to the slide valve face adapted to engage respectively with the corresponding discharge port and vacuum port in such face at one limit of its movement, and at the other limit of its movement for the port to be disconnected from the discharge port and the aperture to engage with the air groove or port in the slide valve face, such movements and connections being at the same time reversely made in the other discharging vessel, substantially as herein specified.

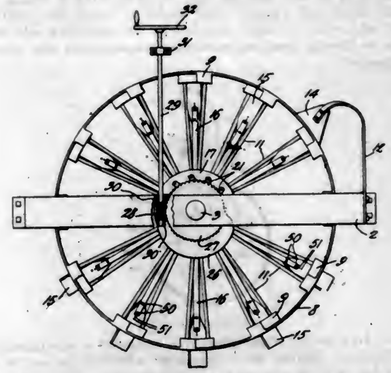
6. In a milking machine releaser of the class herein described and comprising a fixed head or cover, a receiving vessel mounted in such head or cover a slide valve face on the front of the head or cover and discharge chambers working in reciprocation upon the said slide valve face, pulsator means consisting in a portion of the slide valve face having a central chamber connected to the vacuum systems and opening through the front of the slide valve face and a side chamber on each or both sides of the central chamber also opening through the front of the slide valve face, a slide valve adapted to be mounted on the discharging vessels and move therewith so positioned and constructed as to alternately connect the central chamber with the side chamber and to uncover the side chamber opening on each complete reciprocation of the discharging vessels, and a pipe connection leading away from the side chamber, substantially as herein described.

[Claim 4 not printed in the Gazette.]

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1,228,895. TRACTOR-WHEEL. HENRY FOECKE, Crofton, Nebr. Filed Jan. 29, 1917. Serial No. 145,231. (Cl. 21—210.)

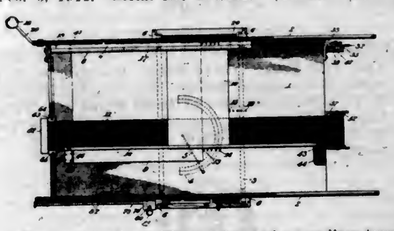
A tractor wheel comprising a rim; a hub; means for uniting the rim with the hub; spuds slidable in the rim; shafts journaled in the hub; a first crank arm and a second crank arm carried by each shaft, the first crank arm being pivoted to the inner ends of the spuds; projections mounted on the second crank arms; a cam mounted on



the hub, the projections coöperating with the cam; means for shifting the cam circumferentially of the hub; and hub-carried stops wherewith certain of the arms abut when the corresponding spuds are advanced.

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1,228,896. PLATEN AND PLATEN EQUIPMENT FOR TYPE-WRITING MACHINES. HARRY A. FOOTHORAP, Harrisburg, Pa., assignor to Elliott-Fisher Company, Harrisburg, Pa., a Corporation of Delaware. Filed Feb. 6, 1911. Serial No. 606,931. (Cl. 197—3.)



1. The combination with a platen and an endless transfer web, of relatively movable guides for said web, and means for effecting relative bodily movement of the guides to feed the web.

2. The combination with a platen, of an endless transfer web, means for moving a portion only of said web toward and away from the platen, and means whereby such movement of the web will effect a longitudinal feed thereof.

3. The combination with a platen, on an endless transfer web inclosing the platen, means for guiding a portion of said web in a substantially straight path, and means for swinging said substantially straight portion of the web toward and from the platen.

4. The combination with a platen, of an endless transfer web and guides for said web, one of said guides being movable to move a portion of the web toward and from the writing surface of the platen.

5. The combination with a platen, of an endless transfer web inclosing the platen, a plurality of guides for the web, and means for effecting relative movement of the guides to move a portion of the web toward and from the platen and to effect a longitudinal feed of said web.

[Claims 6 to 42 not printed in the Gazette.]

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1,228,897. WATER-MOTOR. HORACE E. FRAME, Brooklyn, N. Y. Filed July 31, 1915. Serial No. 42,875. (Cl. 253—137.)

1. In a device of the character described, a substantially cylindrical casing, the material of which is turned in at

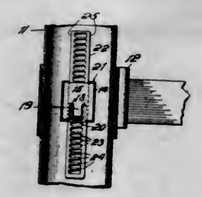
the top to form a bearing, a rotary element mounted within said casing and provided about its periphery with a plurality of blades, an angularly adjustable member mounted in said bearing and provided with a nozzle for directing fluid against said blades to cause the rotation of said rotary element, and means for adjusting said nozzle to thereby vary the direction of rotation of said rotary element.



2. In a device of the character described, a substantially cylindrical casing, the material of which is turned in at the top to form a bearing, a rotary element mounted within said casing and provided about its periphery with a plurality of blades, an angularly adjustable member mounted in said bearing and provided with a nozzle for directing fluid against said blades to cause the rotation of said rotary element, means for adjusting said nozzle to thereby vary the direction of rotation of said rotary element, and a neck portion secured to the top of the casing for inclosing said angularly adjustable member, said neck portion being provided with means for detachably securing the casing to a source of fluid supply.

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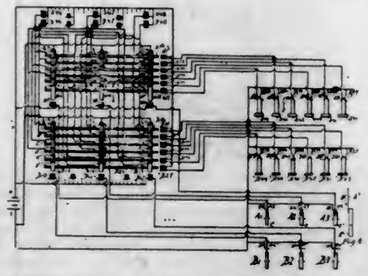
1,228,898. CORNER-FASTENING FOR METAL BEDS AND THE LIKE. LOUIS FRANK, Brooklyn, N. Y., assignor to Greenpoint Metallic Bed Company, Brooklyn, N. Y., a Firm composed of David Frank and William Lies, Brooklyn, N. Y., and John Troustine, New York, N. Y. Filed Jan. 3, 1916. Serial No. 69,810. (Cl. 5—55.)



1. In a metal bedstead or the like having tubular corner posts, chills each having a loop or eye projected through the side of the post and formed integrally with an inwardly deflected slightly yielding tongue, and a wedge bar entering said loop and engaging the inner wall of said post and having in its outer inclined face recesses and ribs between the same to interlock with said tongue, said recesses being set inwardly from the vertical edges of said bar, leaving the face of the bar with uniform edge surfaces to enter into frictional engagement with said loop or eye.

2. In a metal bedstead or the like having tubular corner posts, chills each having a loop of plate formation projected through the side of the post and having an upper portion and a lower inwardly deflected slightly yielding tongue, and a wedge bar entering said loop and engaging the inner wall of said post and having recesses in its outer inclined face to interlock with said tongue and also having surfaces to enter into binding engagement with the upper portion of said loop.

1,228,899. ELECTRIC ACTION FOR ORGANS. ELLIS F. FROST, Washington, D. C. Filed June 5, 1914. Serial No. 843,305. (Cl. 84—81.)



1. An electric organ-action comprising a source of electrical energy, note sounding devices, and circuit closers each including independently movable contacts and a switch-bar, each contact of a circuit closer connected to a different note sounding device, each note sounding device connected to a contact of each of several circuit closers, said note sounding devices connected in parallel to one pole of the source of electrical energy, and said switchbar connected to the other pole of the source of electrical energy.

2. An electric organ comprising a source of electrical energy, note sounding devices, circuit-closers each including independently movable contacts and a switchbar, each contact of a circuit closer connected to a different note sounding device, each note sounding device connected to a contact of each of several circuit closers, said note sounding devices connected in parallel to one pole of the source of electrical energy, said switchbars connected to the other pole of the source of electrical energy, electro-magnetic devices controlling a circuit closer, keys and drawstops and drawstop circuits and key circuits each including one of said electro-magnetic devices.

3. An electric organ-action comprising note sounding circuits, note sounding devices, circuit closers each including independently movable contacts and a switchbar, devices operating the contacts and other devices operating the switchbars, each circuit including a note sounding device and also the switchbar and a contact of each of several circuit closers.

4. An electric organ-action comprising note sounding circuits, note sounding devices, circuit closers each including independently movable contacts and a switchbar, devices operating the contacts and other devices operating the switchbars, each of the contact operating devices being common to a contact of each of several circuit closers, each circuit including a note sounding device and also the switchbar and a contact of each of several circuit closers.

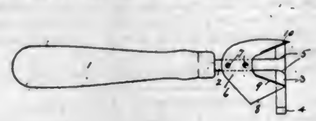
5. An electric organ comprising note sounding circuits, note sounding devices, circuit closers each including independently movable contacts and a switchbar, devices operating the contacts and other devices operating the switchbars, each of the contact operating devices being common to a contact of each of several circuit closers, each circuit including a note sounding device and also the switchbar and a contact of each of several circuit closers, keys and drawstops, key circuits each including a switchbar operating device, and drawstop circuits each including a contact operating device.

[Claims 6 to 16 not printed in the Gazette.]

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1,228,900. CAN-OPENER. EDWARD L. FUNK, Baltimore, Md. Filed Dec. 1, 1916. Serial No. 134,430. (Cl. 30—3.)

1. A can opener comprising a handle having a cross-piece at one end thereof and a shoulder on one end of said cross-piece, a cutting blade having a pointed cutting edge at one side back of said shoulder and two diverging cutting edges at the center projecting under said cross-piece.

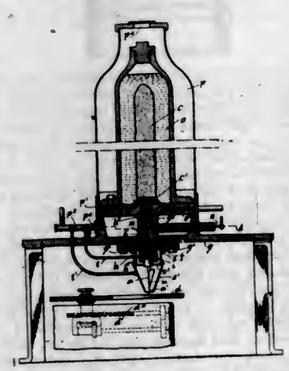


2. A can opener comprising a handle having a cross-piece at one end thereof and a shoulder on one end of said cross-piece, a cutting blade having a pointed cutting edge at one side back of said shoulder and two diverging cutting edges at the center projecting under said cross-piece and one of which is slightly bent at its outer end.

3. A can opener comprising a handle having a cross-piece at one end and two curved shoulders under said cross-piece, said cross-piece being provided with a shoulder on one end thereof, a cutting blade having a pointed cutting edge at one side back of said cross-piece and two diverging cutting edges at the centers projecting under said cross-piece, and one of which is slightly bent at its outer end.

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1,228,901. PROCESS FOR RECORDING SOUND. ROBERT L. GIBSON, Philadelphia, Pa. Filed Dec. 29, 1913. Serial No. 809,187. (Cl. 274—46.)



1. The method of forming a record of sound waves which consists in depositing upon a relatively moving surface a stream of fluid which readily solidifies and laterally vibrating said stream immediately before it strikes said surface to form thereon a ridge having therein lateral undulations corresponding to sound waves.

2. The method of producing a record of sound which consists in depositing upon a relatively moving surface, by a recording member, vibrated by sound waves and maintained out of contact with said surface, an undulatory ridge of approximately uniform width corresponding to sound vibrations.

3. The method of recording a sound which consists in projecting upon a relatively moving surface a stream of fluid adapted to readily congeal and form on said surface a ridge and causing sound impulses to vibrate said stream as it approaches said surface to cause said ridge to assume an undulatory form presenting a sound record in distinct relief.

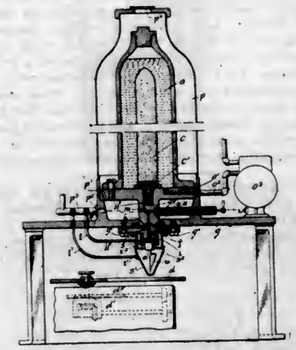
4. The process of forming a permanent sound record which consists in forming an original record by depositing upon a suitable relatively moving surface a substance adapted to maintain itself in a ridge, said ridge having lateral undulations corresponding to sound waves, and forming a permanent record from said original record.

5. The process of recording sound which consists in depositing, while fluid, a readily congealable substance upon a relatively moving surface, at a velocity substantially exceeding the rate of movement of said surface.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,902. APPARATUS FOR RECORDING SOUND. ROBERT L. GIBSON, Philadelphia, Pa. Filed Dec. 29, 1913. Serial No. 809,188. (Cl. 274—1.)



1. In a machine for recording sound, the combination of a stylus formed of a tube drawn to a fine point, thereby pressing a microscopic discharge orifice, means to vibrate the stylus under the influence of sound waves, pressure means to force through the stylus and project through its microscopic discharge orifice a readily solidifying fluid, and a moving member adapted to receive the material ejected from the stylus, thereby forming on said member a ridge having lateral undulations corresponding to sound waves.

3. In a machine for recording sound, the combination of a moving member, a hollow stylus having a microscopic discharge orifice in operative relation with the moving member, means to vibrate the stylus under the influence of sound waves, a chamber acting as a reservoir for a substance capable of forming a phonautographic ridge and communicating with the bore of the stylus, a straining medium interposed in the path of travel of said substance from the reservoir to the stylus discharge, and pressure means to force said substance from the reservoir through said strainer and out the stylus discharge orifice.

4. In a machine for recording sound, the combination of a hollow vibratory stylus, means to vibrate said stylus under the impulse of sound waves, means to project through said stylus a substance capable of forming a phonautographic ridge and comprising a sealed containing chamber having flexible walls, and a duct connecting said chamber with said stylus.

13. In a machine for recording sound, the combination of a hollow vibratory stylus, means to vibrate said stylus under the impulse of sound waves, means to project through said stylus a substance capable of forming a phonautographic ridge and comprising a container communicating with said stylus and having flexible walls, and means to apply pressure to the flexible walls of the container.

25. In a machine for recording sound, the combination of a container for a readily solidifying substance capable of forming a phonautographic ridge, a diaphragm, a hollow vibratory stylus operated by the diaphragm and having its bore communicating with the container, and means to heat the container and also the stylus substantially throughout the latter's length.

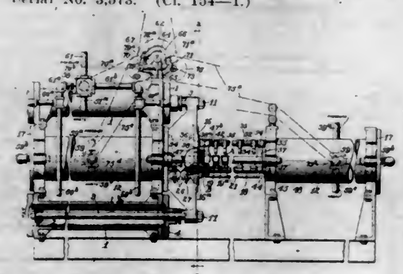
[Claims 2, 5 to 12, 14 to 24, and 26 to 29 not printed in the Gazette.]

1,228,903. STEEL TIE. JAMES H. GIDEON, Cavour, S. D. Filed June 30, 1915. Serial No. 37,302. (Cl. 238—5.)



In combination with a hollow railway tie having open ends, a plate connected to one of the sides of the tie at each end thereof and having a portion thereof bent around the end of the tie and provided with vertically spaced bearing sleeves, a closure plate for each end of the tie having one of its vertical edges provided with a bearing sleeve adapted to aline with the first mentioned sleeves, a pintle engaging in said sleeves for hingedly connecting said closure plate to the first named plate, and resilient latches carried by the other side of the tie and yieldably engaging the free ends of the closure plates.

1,228,904. APPARATUS FOR TREATING RUBBER FOOTWEAR. ALFRED A. GLIDDEN, Watertown, EDGAR P. DORMAN, Boston, and GEORGE L. FINCH, Brighton, Mass., assignors to Hood Rubber Co., Watertown, Mass., a Corporation of Massachusetts. Filed Jan. 21, 1915. Serial No. 3,573. (Cl. 154—1.)



1. An apparatus for compressing articles including plastic material comprising a receptacle having an open mouth, a reciprocating head arranged to close said mouth, a form carrier arranged to be moved into and out of said receptacle in unison with the movement of said head, and means for automatically admitting fluid under pressure to said receptacle when the same is closed.

2. An apparatus for compressing articles including plastic material comprising a receptacle arranged to be hermetically closed, a hollow form carrier insertible in and removable therefrom and having seats for the forms, the interior of the form carrier arranged to communicate with the interior of the forms and also with the exterior of the receptacle, means for supplying fluid pressure to said receptacle, means for holding the forms in place upon their seats and a rock shaft for operating said holding means.

3. An apparatus for compressing articles including plastic material comprising a receptacle adapted to be hermetically closed, a hollow form carrier insertible in and removable therefrom and having seats for the forms, the interior of the carrier being arranged to communicate with the interior of the forms and also with the exterior of the receptacle, means for supplying fluid pressure to said receptacle, means for holding each of the forms upon its seat, and means for simultaneously operating all of said holding means.

4. An apparatus for compressing articles including plastic material comprising a receptacle arranged to be hermetically closed, a hollow form carrier removable therefrom and having seats for the forms, hollow last engaging pins carried by said seats and communicating with the interior of the carrier and adapted to engage the forms and means for holding the forms on said pins.

5. An apparatus for compressing articles including plastic material comprising a receptacle adapted to be hermetically closed, a hollow form carrier removable therefrom and having seats for the forms provided with hollow nipples communicating with the interior of said carrier, and clamping means movable toward and from said nipples.

[Claims 6 to 17 not printed in the Gazette.]

1,228,905. ELECTRIC-SWITCH MECHANISM. DAVID D. GORDON, Chicago, Ill., assignor to The Yost Electric Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Nov. 6, 1915. Serial No. 60,046. (Cl. 173—354.)



1. In an electric switch, spaced contacts, and a bridging element mounted for oscillatory movements into and out of bridging connection with said contacts, said element having spaced side bars of insulating material rigidly connected at the inner or pivoted end of the element, and electrical conductive means carried by and connecting the outer ends of said bars for engaging and bridging said contacts when said element is in circuit bridging position.

2. In an electric switch, a bridging element having spaced electrically connected side arms forming contact parts, said element being mounted for rocking movements in a plane at right angles to the plane in which said side arms are spaced and having a cross-bar connecting said arms, said bar having an opening therethrough lengthwise of said element, a control member reciprocally movable lengthwise of said element and projected through said bar opening, said member and bar having parts which coöperate to lock the element against rocking movements until the member has been moved a predetermined extent, and means carried by said member and operable to impart quick shifting movements to said element when released for movement by the control member.

4. In an electric switch, a bridging element mounted for rocking movements and having electrically connected side arms forming contact parts and spaced transversely of the plane of rocking of the element, a control member mounted between the side arms of said element for reciprocatory movements lengthwise thereof and relative thereto and normally standing in one position of its movement, said member and element having parts which coöperate to lock the element against rocking movements except when the member has been moved a predetermined extent, and means actuated by movements of said member from normal position to store energy therein and to act on said element to move it first in one direction and then the other when successively released by said member.

[Claims 3, 5, and 6 not printed in the Gazette.]

1,228,906. ELECTRIC-SWITCH MECHANISM. DAVID D. GORDON, Chicago, Ill., assignor to The Yost Electric Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Sept. 18, 1916. Serial No. 120,780. (Cl. 173—354.)

1. In a switch of the class described, a pair of spaced contacts, a bridging-piece of U-form shiftable into and out of bridging connection with said contacts, a guide for said bridging-piece and with which it has sliding contact, and means having a revoluble member and a coiled compression spring connecting said member and bridging-piece and operable to impart successive shifting movements in reverse directions to said bridging-piece and to yieldingly hold the bridging-piece to said guide.





3. In an electric socket, a pair of spaced contacts, a stationary guide, a bridging-piece straddling said guide and slidingly shiftable thereon into and out of bridging connection with said contacts, a coiled compression spring bearing at one end against said bridging-piece to exert a yielding pressure thereon in one direction, and means for receiving the opposite end thrust of said spring and movable to shift the engaged end of the spring a predetermined distance lengthwise of said guide whereby the spring is caused to shift the bridging-piece in first one and then the opposite direction on said guide.

9. In a switch of the class described, a pair of spaced contacts, a frame having a standard rising from one end thereof and forming a guide adjacent to said contacts and having spaced standards rising from a different part thereof, a bridging-piece guided by said first standard for reciprocatory movements into and out of circuit connecting relation to said contacts, a shaft journaled in said spaced standards and having a crank at one end, a coiled compression spring connecting said crank and bridging-piece and operable by a turning of the shaft to impart successive snap shifting movements to the bridging-piece, and means operable to impart successive predetermined rotary movements to said shaft.

13. In an electric socket, two contacts spaced transversely of the socket, a bridging-piece movable into and out of bridging relation to said contacts, means guiding said bridging-piece for sliding movements lengthwise of the socket, a shaft journaled in said socket transversely thereof and having a crank arm, and a coiled compression spring connecting said bridging-piece and crank arm in end-thrust contact therewith and operable by a turning of said crank arm to impart snap shifting movements to said bridging-piece in first one and then the opposite direction on said guide.

18. In an electrical connecting member, an insulating body forming a switch receiving well, spaced stationary contacts and a guide standard in said well at one side of the longitudinal center of the socket, a bridging-piece engaging said standard for limited shifting movements lengthwise of the socket into and out of bridging connection with said contacts, a key shaft mounted in said body and having a crank arm in said well, and a coiled compression spring interposed between said crank arm and the bridging piece and operable upon a turning of the shaft to successively move said bridging piece into and out of contact with said stationary contacts to yieldingly hold the bridging piece to said guide.

[Claims 2, 4 to 8, 10 to 12, and 14 to 17 not printed in the Gazette.]

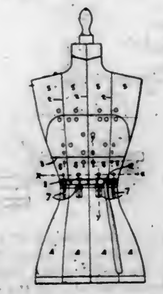
1,228,907. ELECTRIC-SWITCH MECHANISM. DAVID D. GORDON, Chicago, Ill., assignor to The Yost Electric Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Nov. 21, 1916. Serial No. 132,604. (Cl. 173—346.)



1. In a switch of the class described, a pair of spaced contacts, a guide standard disposed adjacent to and between said contacts, a bridging piece slidingly bearing against a side of said standard and having spurs extending around the respective side edges of the standard in guiding engagement therewith and having parts at opposite edges of the standard for contact with respective of said spaced contacts when the bridging piece is at one end of its movement, a shaft mounted transversely of said standard and having a crank arm at one end adjacent to said standard, and a coiled compression spring interposed between said bridging piece and crank arm in engagement with each and operable to impart snap switch movements first in one direction and then the other to the bridging piece when the shaft is turned.

2. In an electrical connecting member, a pair of spaced contacts, a guide disposed between said contacts, a bridging piece guided for circuit making and breaking movements by said guide, said bridging piece comprising a body part having spurs projecting transversely therefrom for engagement with said guide to prevent transverse movements of the bridging piece relative thereto and having arms projecting from opposite side edges in position to make contact with respective of said stationary contacts when the bridging piece is in one position of its movement, and means having a revoluble member and a coiled compression spring connecting said revoluble member and bridging piece and operable to impart successive snap shifting movements to said bridging piece to move it into and out of circuit bridging position.

1,228,908. DRESS-FORM. FRANK B. GRANGER, New York, N. Y., assignor to Hall-Borchert Dress Form Company, New York, N. Y., a Corporation of New Jersey. Filed June 8, 1914. Serial No. 843,657. (Cl. 223—18.)

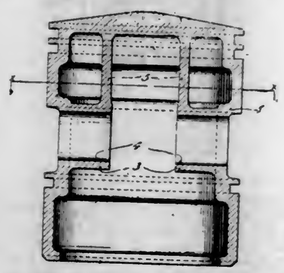


The combination with a dress form divided vertically in a plurality of places and also divided horizontally at

the waist thereby to present hip sections below the waist sections above the horizontal division, of a hinge connection between each hip section and the corresponding waist section, spring means connecting the waist sections and tending normally to force them outwardly thereby to expand the waist in all directions, and means acting on all of the waist sections to limit the expansive movement thereof.

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1,228,909. PISTON. CARL R. GREEN, Dayton, Ohio. Filed May 4, 1916. Serial No. 95,346. (Cl. 123—171.)



1. A hollow piston comprising a body, a head having a thickened central portion, and heat conveying and reinforcing members connected with said head at points spaced from the edges thereof and with said body at points remote from said head.

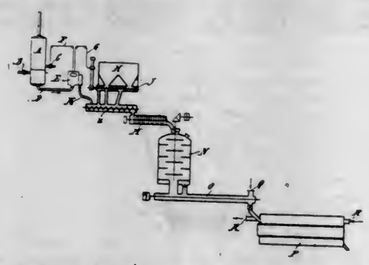
3. A hollow piston comprising a body, a head, bosses rigidly secured to and extending inwardly from said body, and struts connected at their respective ends with said piston head at points spaced from the circumference thereof and with the inner portions of the respective bosses.

5. A hollow piston having a cylindrical body, a head having a thickened central portion, said body having integral bosses extending inwardly therefrom to form bearings, and struts formed integral with said piston, each of said struts being connected at one end with said head at a point spaced from the circumference thereof, and at its other end with said body at a point remote from said head, and being spaced away from said body.

[Claims 2, 4, and 6 to 11 not printed in the Gazette.]

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1,228,910. PROCESS FOR THE MANUFACTURE OF DRY CRYSTALS OF SUGAR AND OTHER CRYSTALLINE SUBSTANCES. JEAN CHARLES GRIÈRE, Padua, Italy. Original application filed May 28, 1914, Serial No. 841,466. Divided and this application filed Jan. 5, 1916. Serial No. 70,441. (Cl. 127—17.)



1. A process for the crystallization of sugar and other dry soluble products of crystalline nature from a hot concentrated solution by the addition of a friable precipitant, consisting in continuously introducing the precipitant into a continuous stream of the raw solution, in such quantity that continuous precipitation of the dissolved substance with formation of a hot, moist paste composed of the precipitated substance, the precipitant and the solvent dispersed therethrough, takes place.

2. A process for the crystallization of sugar and other dry soluble products of crystalline nature from a hot concentrated solution by the addition of a friable precipitant, consisting in continuously introducing the precipitant into a continuous stream of the raw solution, in such quantity that continuous precipitation of the dissolved substance with formation of a hot, moist paste composed of the precipitated substance, the precipitant and the solvent dispersed therethrough, takes place, and kneading the paste while it is still hot.

3. A process for the crystallization of sugar and other dry soluble products of crystalline nature from a hot concentrated solution by the addition of a friable precipitant, consisting in continuously introducing the precipitant into a continuous stream of the raw solution, in such quantity that continuous precipitation of the dissolved substance with formation of a hot, moist paste composed of the precipitated substance, the precipitant, and the solvent dispersed therethrough, takes place, kneading the paste while it is still hot, subjecting the kneaded paste to moderate agitation in a current of warm air partly saturated with moisture, and exposing the thereby partly dried product to greater agitation in a current of cold air.

4. A process for the crystallization of sugar and other dry soluble products of crystalline nature from a hot concentrated solution by the addition of a friable precipitant, consisting in continuously introducing the precipitant into a continuous stream of the raw solution, in such quantity that continuous precipitation of the dissolved substance with formation of a hot, moist paste composed of the precipitated substance, the precipitant and the solvent dispersed therethrough, takes place, kneading the paste while it is still hot, subjecting the kneaded paste to moderate agitation in a current of warm air partly saturated with moisture, exposing the product to greater agitation in a current of cold air, interrupting the latter treatment when the product is dry but still warm, sifting the product, and continuing the cold air treatment until a thoroughly cooled granular product is obtained.

5. A process for the crystallization of sugar and other dry soluble products of crystalline nature from a hot concentrated solution by the addition of a friable precipitant, consisting in continuously introducing the precipitant into a continuous stream of the raw solution, in such quantity that continuous precipitation of the dissolved substance with formation of a hot, moist paste composed of the precipitated substance, the precipitant, and the solvent dispersed therethrough, takes place, kneading the paste while it is still hot, subjecting the kneaded paste to moderate agitation in a current of warm air partly saturated with moisture, exposing the thereby partly dried product to greater agitation in a current of cold air, treating the dried product with moist air to give it its natural amount of hygroscopic moisture, and simultaneously cooling the product.

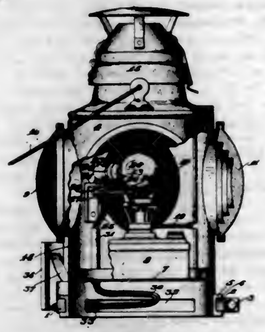
[Claims 6 to 11 not printed in the Gazette.]

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1,228,911. TRAIN LANTERN OR MARKER. JOSEPH F. HADDOCK, St. Louis, Mo. Filed Sept. 5, 1916. Serial No. 118,449. (Cl. 240—24.)

1. A railway marker comprising the combination of a rotatable casing having means for supporting a centrally-disposed liquid-fuel burning lamp, said casing having a substantially vertical wall with a plurality of distinctive translucent bull's-eyes disposed about the central axis of said casing, and carried in said vertical wall so as to move with said casing into several different signaling positions, an electric lamp, and a tubular arm carrying said lamp and having a tubular pivot supported adjacent said vertical wall, said arm constructed to hold said lamp normally substantially centrally in said case, and operating to swing laterally into an inactive position with said arm and lamp lying adjacent to the said vertical wall of the casing, and an electric cord passing through the tubular pivot in a longitudinal direction with the axis of the pivot and extending within said tubular arm to connect with said lamp.





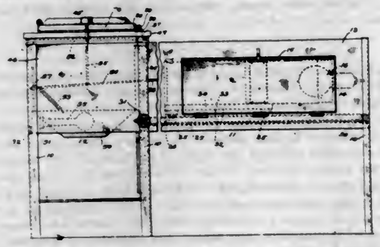
3. A railway marker comprising the combination of a casing having means for supporting a centrally-disposed liquid-fuel burning lamp, a plurality of distinctive translucent bull's eyes carried by said casing, means for rotatably supporting said casing to enable the bull's eyes to assume several different signaling positions, an electric lamp within said casing, a bracket carried within said casing and having an opening therethrough, an arm having a tubular pivot member passing through said opening, for movably supporting said electric lamp to enable the same to assume a substantially central position or an inactive position at one side, said pivot member being threaded, a clamping nut engaging said pivot member for clamping the same to said bracket, and means including a loose extension of electric cord and an extension passing to said lamp through said tubular pivot member for maintaining electric connection with said lamp in the different positions of said lamp and said bull's eyes.

5. In a railway marker, the combination of a railway oil lantern having distinctly colored bull's eyes, an electric lamp within the lantern, a bracket arm with a ring for rotatably supporting said lantern to enable the same to be rotated into different signaling positions, a fixed bracket having a gulding socket to receive and support said bracket arm; said bracket and said arm each having a pair of insulated contacts, said socket operating to guide one pair of the said contacts into engagement with the other pair when the said bracket arm is being mounted on the said bracket, said arm having a duct leading through said ring into the interior of said lantern, and electric cords connecting with the contacts on said arm, passing through said duct and connected with said electric lamp.

[Claims 2 and 4 not printed in the Gazette.]

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1,228,912. PHOTOGRAPHIC-PRINTING MACHINE. THOMAS E. HALLDORSON, Chicago, Ill. Filed July 15, 1915. Serial No. 40,023. (Cl. 88—24.)



1. A photographic machine comprising a projecting apparatus mounted for horizontal longitudinal movement; means for suitably holding a sensitized paper in front of said apparatus; an endless chain operatively mounted parallel with said apparatus and operatively connected therewith; a rod rotatably mounted adjacent said apparatus and parallel therewith; a wheel slidably but non-rotatably mounted on said rod and being operatively connected with the focusing mechanism of said projection apparatus; means adjacent said first mentioned means for operating said chain, and means for rotating said rod.

2. A photographic machine comprising a projecting apparatus mounted for horizontal longitudinal movement; means for suitably holding a sensitized paper in front of said apparatus; an endless chain operatively mounted parallel with said apparatus and operatively connected therewith; a square rod rotatably mounted adjacent said apparatus and parallel therewith; a wheel slidably but non-rotatably mounted on said rod and being operatively connected with the focusing mechanism of said projection apparatus; and means adjacent said first mentioned means for operating said chain and for rotating said rod.

3. An article of manufacture comprising an optical projecting apparatus horizontally mounted; a mirror removably mounted at substantially 45 degrees to the horizontal in the path of light of said apparatus; a plate horizontally mounted above said mirror; and a source of light below said mirror.

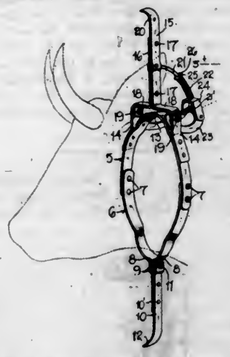
4. An article of manufacture comprising an optical projecting apparatus horizontally mounted; removable means for throwing upwardly a beam of light from said apparatus; a plate horizontally mounted above said means; a source of light below said means; and means for holding a sensitized paper on said plate.

5. An article of manufacture comprising an optical projecting apparatus horizontally mounted; a mirror removably mounted at substantially 45 degrees to the horizontal in the path of light of said apparatus; a plate horizontally mounted above said mirror; a source of light below said mirror; means for holding a sensitized paper on said plate; and means for sliding said apparatus horizontally.

[Claims 6 to 11 not printed in the Gazette.]

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1,228,913. CATTLE-POKE. WILLIAM R. HAYDEN, Indianola, Nebr. Filed Sept. 11, 1916. Serial No. 119,530. (Cl. 119—138.)



1. A cattle poke including a sectional body to embrace the neck of the animal, spaced bracket members fixed to said body, a bar pivotally mounted between said bracket members and having a forwardly projecting hook on its upper end, a guide fixed to said body, a rearwardly and downwardly curved rod secured at one end to said bar and movable through the guide, said rod having a lower pointed end to penetrate the neck of the animal, and a spring arranged upon said rod to yieldingly hold the bar in an upright position and prevent its rearward pivotal movement and retard the downward movement of said rod.

2. A cattle poke including a sectional body to embrace the neck of the animal, spaced bracket members fixed to said body, rigidly connected bars having portions angularly

extended in opposite directions and pivotally mounted upon the respective bracket members, one of said bars projecting longitudinally beyond the other and terminating in a forwardly curved hook, a U-shaped bar fixed to said body and extending rearwardly over the neck of the animal, a guide secured upon said U-shaped bar, a rod fixed at one of its ends to said pivoted bars and having its other end pointed to penetrate the neck of the animal, said latter end of the rod extending through coinciding openings in the guide and said U-shaped bar, and a coil spring arranged upon said rod to yieldingly hold the pivoted bars in an upright position and retard the downward movement of said rod through the guide.

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1,228,914. APPARATUS FOR RAISING SUNKEN SHIPS. EUGENE S. HAYFORD, New Orleans, La. Filed July 31, 1916. Serial No. 112,335. (Cl. 114—54.)



1. An apparatus for raising sunken ships, including a collapsible and inflatable envelop, means for supplying air thereto, and an auxiliary inflatable envelop mounted therein and constituting a buoyant support for the main envelop.

2. An apparatus for raising sunken ships, including a collapsible and inflatable envelop, means for supplying air thereto, an auxiliary inflatable envelop mounted therein and constituting a buoyant support for the main envelop, and means connected to one end of the main envelop for directing the same in to position.

3. An apparatus for raising sunken ships, including a collapsible and inflatable envelop, means for supplying air thereto, an auxiliary inflatable envelop mounted therein and constituting a buoyant support for the main envelop, and a compensating valve carried by the main envelop for permitting the escape of air due to the reduced pressure of the water.

4. An apparatus for raising sunken ships, including a collapsible and inflatable envelop, means for supplying air thereto, an auxiliary inflatable envelop mounted therein and constituting a buoyant support for the main envelop, and a compensating valve carried by the main envelop for permitting the escape of air due to the reduced pressure of the water, said valve including a diaphragm provided with a plurality of openings adjacent the circumference thereof, and means for holding the same for limited movement over its valve port.

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1,228,915. WALL-BED FOOT-RAIL CONNECTION. CLARENCE M. HENDERSON and EDGAR COCKS, Berkeley, Cal. Filed Nov. 17, 1915. Serial No. 61,916. (Cl. 5—18.)



In a foot support for a bed comprising two-part corner sockets each part being provided on its inner face with a pin and formed on its outer face with an integral bracket to which an end of the adjacent bed rail is secured, a bolt securing the parts of the socket together above the pins, a plug in each socket provided with grooves to receive slidably the pins, the upper end of each plug being rounded concentric with the upper ends of the grooves, the lower ends of the grooves being closed by a shoulder adapted to abut the lower end of the respective socket, and a foot extension carried by the shoulder of each plug.

1,228,916. PROCESS FOR PRODUCING YOGHURT BEER. WILHELM HENNEBERG, Berlin, Germany. Filed Apr. 27, 1914. Serial No. 834,799. (Cl. 195—20.)

1. Process for producing Yoghurt beer consisting in preparing a suitable wort, adding to said wort germs of Yoghurt and germs of yeast simultaneously, allowing the wort to be acidulated and fermented thereby at a temperature up to 30° C., substantially as described.

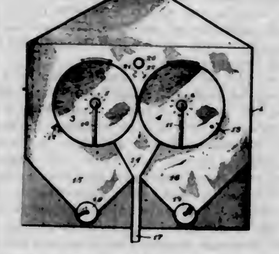
2. Process for producing Yoghurt beer consisting in preparing a suitable wort, adding to said wort germs of Yoghurt and germs of yeast simultaneously, allowing the wort to be acidulated and fermented thereby at a temperature up to 30° C., and then adding fresh Yoghurt cultures, substantially as described.

3. Process for producing Yoghurt beer consisting in preparing a suitable wort, adding to said wort germs of Yoghurt and germs of yeast simultaneously, allowing the wort to be acidulated and fermented thereby at a temperature below 30° C., and then adding fresh Yoghurt cultures after fermentation, substantially as described.

4. Process for producing Yoghurt beer consisting in preparing a suitable mash, adding to said mash germs of Yoghurt and of yeast simultaneously, allowing the mash to acidulate and clarify in such a manner that a considerable portion of the Yoghurt germs remains in the clarified wort, substantially as described.

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1,228,917. MANUFACTURE OF DRY EXTRACTS OF BEER, &c. HERMAN HEUSER, Chicago, Ill. Filed Dec. 20, 1916. Serial No. 137,960. (Cl. 195—1.)



1. A compound for conversion into alcohol-reduced beverages by dilution with water containing dry extract of a fermented beverage, dry fermentable substances and dry live yeast.

2. A compound for conversion into alcohol-reduced beer by dilution with water containing dry beer-extract, dry fermentable substances and dry live yeast.

3. A compound for conversion into alcohol-reduced beer by dilution with water containing dry beer-extract, dry fermentable carbohydrates and dry live yeast.

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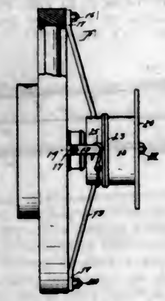
1,228,918. PULLING-JACK FOR MOTOR-VEHICLES. STEPHEN C. HICKMAN, Charlton, Iowa. Filed May 15, 1916. Serial No. 97,753. (Cl. 242—95.)

1. In a device of the class described, a hollow cylindrical member having slots in its walls, a plurality of bars, each extended through the walls of said cylindrical member at two points thereof, means for securing the outer ends of said bars to portions of a vehicle wheel, and means for preventing movement of said bars with relation to said cylindrical member whereby when the parts are assembled and mounted on the wheel, the cylindrical member is rigidly supported on said bars adjacent to said wheel with said cylindrical member concentric with said wheel.

2. In a device of the class described, a hollow cylindrical member having slots in its walls, a plurality of bars,



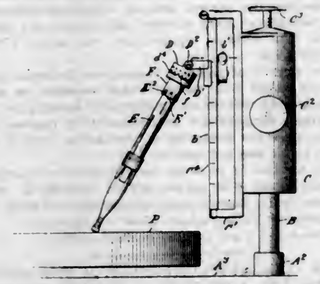
each extended through the wall of said cylindrical member at two points thereof, means for securing the outer ends of said bars to portions of a vehicle wheel, and means for preventing movement of said bars with relation to said



cylindrical member whereby when the parts are assembled and mounted on the wheel, the cylindrical member is rigidly supported on said bars adjacent to said wheel with said cylindrical member concentric with said wheel, a flexible device wound on said cylindrical member.

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1,228,919. APPARATUS FOR CUTTING AND POLISHING PRECIOUS STONES. FREDERICK E. HILLIARD, Brooklyn, N. Y., and WALTER GOUGH STEVENS, Palisades Park, N. J. Filed May 19, 1916. Serial No. 98,508. (Cl. 51—11.)



1. The combination of a stick-holder having a crown-piece at one end provided with an even number of projections spaced at equal distances apart and provided with a central projection, and a spacing member provided with a greater number of indents of even number and spaced an even distance from each other and adapted to engage with the teeth of the crown-piece, and provided with a central recess into which the projection on the crown-piece fits.

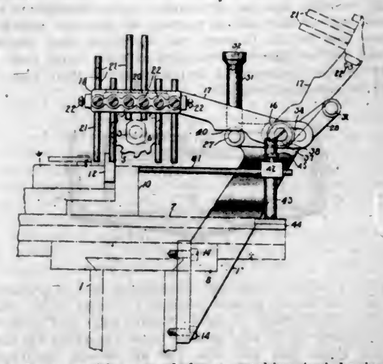
2. The combination of a stick-holder having a crown-piece at one end provided with a central projection, and a spacing device comprising a movable hinge element, a stationary hinge element, a rod provided with a thread at one end and a shoulder adjacent thereto which abuts one side of said movable elements to hold it in frictional contact with said stationary element.

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1,228,920. GUARD FOR MACHINERY. JOSEPH B. HOLDEN, Syracuse, N. Y. Filed Feb. 19, 1917. Serial No. 149,598. (Cl. 74—56.)

1. In a machine guard, the combination of a support and a series of guard rods, each independently adjustably mounted in said support.

5. In a machine guard, the combination of a pivoted supporting piece and a series of rods, said rods together constituting a fence, and said rods being individually adjustable for different kinds of work and said supporting piece being capable of turning about its pivot to inoperative position.

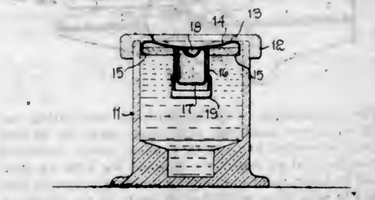


8. In a machine guard for a machine tool having a cutter and a traveling work table, the combination of a stationary guard over and about said cutter, and a guard for the under side of said cutter mounted on said traveling table, each of said guards comprising individually adjustable guard pieces to adapt the device for different jobs.

[Claims 2 to 4, 6, 7, and 9 to 13 not printed in the Gazette.]

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1,228,921. AUTOMATIC INK-WELL. CHARLES H. HOLDREDGE, Stonington, Conn. Filed Jan. 13, 1917. Serial No. 142,266. (Cl. 120—68.)



1. In an ink well, a floating member disposed within the well and adapted to float upon the top of the ink, said member being annular in form to provide a central opening and having a downwardly extending wall surrounding said opening but spaced therefrom, a float disposed within the space surrounded by the wall and having a central depression at its upper end, the upward movement of the float being limited by the projection of the annular member inward beyond the wall, and a ball swingingly mounted upon the barrel extending beneath it and limiting the downward movement of the float, said ball being movable out of the way of the float to thereby permit the float to be removed from the barrel.

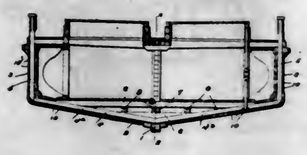
[Claim 2 not printed in the Gazette.]

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1,228,922. WOODEN BOAT. EDWARD S. HOUGH, Oakland, Cal. Filed Sept. 27, 1916. Serial No. 122,469. (Cl. 114—65.)

1. A ship frame in wood comprising a plurality of transverse bottom members of straight timbers meeting each other at the medial line of the vessel at their inner ends, substantially vertical side ribs of straight timbers, secured at the outer ends of said bottom timbers, transverse floor timbers secured at their outer ends to said bottom timbers, and longitudinal stringers intermediate of said bottom timbers and floor timbers.

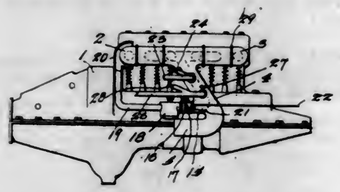
2. A ship frame, comprising a plurality of straight transverse bottom timbers meeting each other at the medial line of the vessel at their inner ends at less than a right angle, butt pieces securing the ends of said timbers and conforming to the angle formed by same, substantially vertical side ribs of straight timbers secured at the outer ends of said bottom timbers, longitudinal stringers above said bottom timbers, and transverse floor timbers above said stringers and secured at their outer ends to said bottom timbers and intermediate of their ends to said longitudinal stringers.



3. In a wooden boat, the combination with a plurality of skeleton bottom girders forming a bottom frame, continuous longitudinal stringers intersecting said girders, side ribs erected on said girders, outer sheathing for said bottom frame and side ribs, and an interior sheathing forming a double bottom therefor, substantially as described.

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1,228,923. INTERNAL-COMBUSTION ENGINE. PHILIP L. HOWE, Breezy Hill, Kans. Filed May 3, 1916. Serial No. 95,047. (Cl. 123—52.)



1. The combination with an internal combustion engine, of an outer manifold, said outer manifold having oppositely extending arms with exhaust ports connected to the engine and an angularly disposed leg with an open end, and an inner manifold forming the intake and having branches in said arms connected by ports to the engine, a leg to the intake manifold within the exhaust manifold leg, said leg having an exterior hollow boss in which the intake leg terminates, and a carbureter attached to said boss.

2. In a device of the character described, the combination with an explosive engine, of a horizontally disposed exhaust manifold secured thereon, an exhaust pipe extending downwardly from said exhaust manifold, an intake manifold positioned in spaced relation within said exhaust manifold, an intake pipe for said intake manifold projecting downwardly for a distance centrally within said exhaust pipe, and projecting laterally through one side wall thereof, means for supplying gasolene to said intake pipe, means for supplying carbureted kerosene to said laterally extending intake pipe, means for injecting a stream of water into said intake pipe, and means for independently controlling the gasolene, the carbureted kerosene, and the water, for regulating the character of the explosive mixture.

3. A manifold for explosive engines comprising an exhaust manifold, an exhaust pipe extending downwardly from the exhaust manifold, said exhaust pipe terminating in a horizontally disposed extension, an intake manifold disposed centrally within the exhaust manifold, and an intake pipe extending downwardly from the intake manifold and centrally within the exhaust pipe, said intake pipe projecting laterally through the wall of the exhaust pipe at a point intermediate the exhaust manifold and the exhaust pipe extension.

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1,228,924. DRAWN-LINK ELECTRIC FUSE. SLAUGHTER W. HUFF, Brooklyn, N. Y. Filed Aug. 21, 1914. Serial No. 857,904. (Cl. 175—273.)



1. In an electric fuse, a conducting link constructed of drawn wire having an intermediate portion cut away transversely through a portion of its thickness and thereby reducing its dimensions transverse to the direction of drawing and leaving a reduced portion of the original drawn metal with its structural character unchanged, corresponding in sectional area to the carrying capacity desired.

2. In an electric fuse, a link constructed of metal of round section drawn in the direction of the length of the link; the intermediate portion of said link being cut away from the cylindrical surface inward and thereby leaving a semi-cylindrical section of less transverse dimension than the end portions thereof, but of the same structural character.

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1,228,925. MAKING LOW-CARBON MANGANESE ALLOYS. ERNEST HUMBERT, Niagara Falls, N. Y. Filed Mar. 6, 1914. Serial No. 822,878. (Cl. 75—17.)

1. Reducing the carbon content of ferro-manganese by adding manganese oxid thereto and electrically heating the mass to a suitable temperature well above 1700 degrees centigrade.

2. The method of treating commercial ferro-manganese containing about 6% carbon which consists in adding manganese oxid thereto and electrically heating the mass to a suitable temperature well above 1700 degrees centigrade to cause the oxidation of the carbon until it is reduced to about one per cent. or less.

3. The method of treating commercial ferro-manganese containing about 6% carbon which consists in adding manganese oxid thereto and subjecting the mass to a temperature well above about 1700° centigrade.

[Claims 4 and 5 not printed in the Gazette.]

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1,228,926. CADMIUM COMPOUNDS OF THE ACRIDIN SERIES, AND A PROCESS OF MAKING THE SAME. PAUL HÜSSY and MAX HARTMANN, Basel, Switzerland, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Filed Apr. 7, 1917. Serial No. 160,556. (Cl. 23—24.)

1. The herein described process for the manufacture of cadmium compounds of the acridin series, consisting in acting on an acridin dyestuff with a soluble cadmium salt in presence of a solvent.

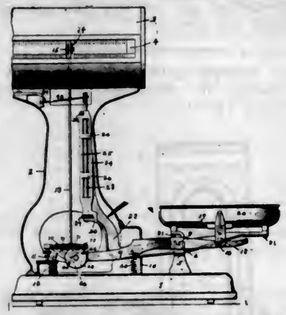
2. The described process for the manufacture of cadmium compounds of the acridin series, consisting in acting on an acridin dyestuff alkylated at the acridin nitrogen with a soluble cadmium salt, in presence of a solvent.

3. As a new product, the herein described cadmium compounds of the acridin series, constituting red to brown powders, soluble in water with orange-yellow colorations, in alcohol, acetic ether, glacial acetic acid and acetone to solutions showing after dilution a yellow-green fluorescence and in concentrated sulfuric acid with an intense green fluorescence.

4. As a new article of manufacture, the herein described cadmium compound of the 2:7-dimethyl-3:6-diamidoacridin, methylated at the acridin nitrogen, which constitutes a tile-red powder soluble in water with orange-yellow coloration, in alcohol, acetic ether, glacial acetic acid and acetone with a yellow-green fluorescence and in concentrated sulfuric acid with a green fluorescence.



1,228,927. SCALE. LOUIS JAENICHEN, Detroit, Mich., assignor to The Standard Computing Scale Company, Detroit, Mich., a Corporation of Michigan. Filed July 14, 1915. Serial No. 39,748. (Cl. 265—69.)



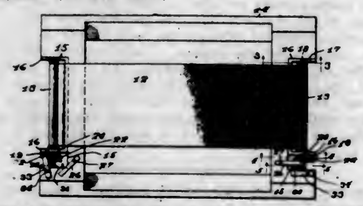
1. In a weighing scale, the combination of a base, a beam pivotally supported thereon, a load-resisting spring connected to the beam, a weight indicating mechanism, a rod for actuating the weight indicating mechanism, a member slidably mounted on said beam and pivotally connected to said rod, a cam for positioning the slidable member, and a spring to hold the slidable member in engagement with the cam.

2. In a weighing scale, the combination of a base, a beam pivotally supported thereon, a weight indicating mechanism, a two part rod connected to the indicator, a thermostat connecting the two parts of the rod, a pivot slidable on the beam and engaged by the adjacent end of the rod, and a cam mounted on the beam to position said pivot.

3. In a weighing scale, the combination of a base, a beam fulcrumed thereon, a pivot carrier slidably and revolubly mounted on one end of said beam, a pivot mounted on the pivot carrier, a cam to position said pivot, an indicator actuating rod mounted on said pivot and formed of two parts, a thermostat connecting said parts, and a weight indicator actuated by said rod.

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1,228,928. FEEDING MECHANISM FOR INKING-RIBBONS FOR PRINTING-PRESSES. EDWARD F. JOEHRENDT, Chicago, Ill. Field Aug. 7, 1916. Serial No. 113,432. (Cl. 101—336.)



1. In a device of the class described, the combination with a printing press whose type-bed and platen are brought into parallelism to produce printing impressions, of an inking-ribbon between the platen and type-bed, a roller for feeding said ribbon, a spring-actuated lever adjacent the roller and adapted to be moved by the platen to put its spring under tension when the press is operated to make an impression, a pawl on the lever to turn the roller after the separation of the type bed and platen, and a release pin to idle said pawl during the initial part of said separation.

2. In a device of the class described, the combination with a printing press whose type-bed and platen are brought into parallelism to produce printing impressions, of an inking-ribbon between the platen and type-bed, a frame having bearings, a roller for feeding said ribbon, a roller shaft in said bearings and projecting at one end, a lever pivotally mounted on the projecting end of the shaft and adapted to be moved in one direction by the platen when the press is operated to make an impression, a spring coiled about the projecting end of the shaft and connected to the lever and frame to be put under tension by said movement of the lever, and a pawl and ratchet connection between the lever and roller to rotate the latter when the spring is released.

3. In a device of the class described, the combination with a printing press having a type-bed and platen, one of said elements being movable with relation to the other to produce printing impressions, of an inking-ribbon between the platen and type bed, a roller for feeding said ribbon, a ratchet wheel on the roller, a spring-actuated lever operated by said other element of the press to put its spring under tension when the press is operated, a pawl on the lever to engage the ratchet, and means to idle the pawl during the initial part of the return of the lever until the type-bed and platen are separated.

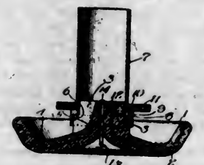
4. In a device of the class described, the combination with printing press having a type-bed and platen, of an inking-ribbon between the platen and type-bed, a frame, rollers for the ribbon on the frame, a lever pivoted on one of the rollers, a ratchet-wheel on the roller, a pawl on the lever for the ratchet-teeth, a cam to release the pawl from the ratchet-wheel when the lever is moved in one direction, and a spring engaging the lever and detachably engaging the frame under tension, and an arm pivoted on the frame to swing over the lever and detached end of the spring.

5. In a device of the class described, the combination with printing press having a type bed and platen, of an inking-ribbon between the platen and type-bed, a frame, rollers for the ribbon on the frame, a lever pivoted on one of the rollers, a ratchet-wheel on the roller, a pawl on the lever for the ratchet-teeth, a pin in the path of the pawl to release the latter from the ratchet-wheel when the lever is moved in one direction, a pin on the frame, a spring carried by the roller and engaging the lever at one end and detachably engaging the pin at its other end, and an arm pivoted to the frame to swing over the lever and detached end of the spring.

[Claim 6 not printed in the Gazette.]

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1,228,929. FEED-TROUGH. MARTIN N. JOHNSON, Moline, Ill. Filed Jan. 6, 1916. Serial No. 70,583. (Cl. 119—52.)



1. In a device of the character described, the combination of a circular trough of concrete having an upwardly projecting axial portion provided with a plurality of radially projecting wings integral therewith and forming with said axial portion a plurality of chutes, a hollow magazine supported on said wings and a guard ring supported above and extending above said trough.

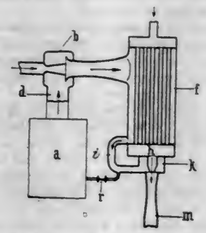
2. In a device of the character described, the combination of a circular trough of concrete having an integral upwardly projecting axial portion provided with a plurality of radially projecting wings, a hollow magazine supported on said wings, a guard ring supported above and extending over said trough, an axial opening in said upwardly projecting portion, and a pipe connected to said axial opening.

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1,228,930. APPARATUS FOR COOLING AIR, LIQUIDS, VAPORS, GASES, AND THE LIKE. EMIL JOSSE and Wilhelm Gensecke, Charlottenburg, Germany. Filed Oct. 28, 1911. Serial No. 657,204. (Cl. 62—152.)

1. In combination, a vaporizer for the production of low temperatures, a surface condenser, steam jet appara-

tus connected with said vaporizer and said surface condenser for removing vapors from the vaporizer and forcing them into the condenser, and water jet apparatus connected with said surface condenser and arranged to remove the condensed liquid and uncondensed vapors and air from the surface condenser.




2. In an apparatus for the production of low temperatures, a surface condenser having an outlet for the cooling medium, and a water jet apparatus connected with said outlet and operated by the said cooling medium after it has passed through said condenser, whereby condensed liquid and uncondensed vapors are removed from said condenser.

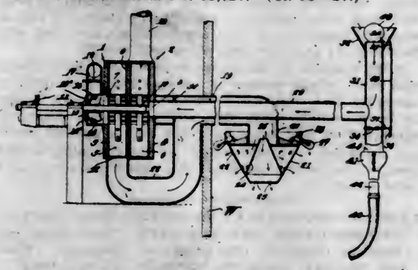
3. In combination, a vaporizer for the production of low temperatures, a condenser, steam jet apparatus connected with said vaporizer and said condenser for removing vapors from the vaporizer and forcing them into the condenser and means for admitting gas or vapor into said vaporizer.

4. In combination, a vaporizer for the production of low temperatures, a surface condenser, steam jet apparatus connected with said vaporizer and said surface condenser for removing vapors from the vaporizer and forcing them into the condenser, water jet apparatus connected with said surface condenser and arranged to remove the condensed liquid and uncondensed vapors and air from the surface condenser, and means for admitting a predetermined amount of gas or vapor into said vaporizer.

5. In combination, a vaporizer for the production of low temperatures, means for conducting a gas or vapor into said vaporizer, a surface condenser, steam jet apparatus connected with said vaporizer and said surface condenser for removing the vapors from the vaporizer and forcing them into the condenser, water jet apparatus connected with said surface condenser and arranged to remove the condensed liquid and uncondensed vapors and air from the surface condenser and means for conducting the said gas or vapor back to the vaporizer after it has become separated from the steam in the condenser.

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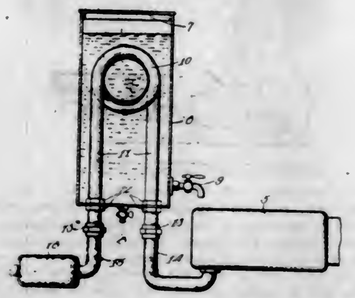
1,228,931. VENTILATING APPARATUS. JASON E. KIRK, Christiansburg, Va., assignor to Triangle Ventilation Corporation, a Corporation of New York. Filed Dec. 8, 1915. Serial No. 65,717. (Cl. 98—27.)



A ventilating apparatus embodying an air supply pipe having a depending end, a discharge head attached to said depending end, and a frusto-conical deflector secured within the head to direct air toward the side walls of said head and having an opening in its smaller end to receive air from said pipe, said head having apertures in its side walls surrounding said deflector and apertures in its bottom below said deflector.

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1,228,932. WATER-HEATING APPARATUS. JUSTUS LAUN, Chicago, Ill. Filed Jan. 29, 1916. Serial No. 75,094. (Cl. 123—198.)



1. In an apparatus for heating water, the combination with an engine, of a tank separate therefrom and independently mounted, means independent of the engine for supplying water to and discharging it from the tank, a conduit located within the tank and extended through the same at its inlet as well as its outlet portion, said conduit having communication at one of its ends with the exhaust of the engine.

2. In an apparatus for heating water, the combination with an engine, of a tank separated therefrom and independently mounted, means independent of the engine for supplying water to and discharging it from the tank, a conduit located within the tank and extended through the same at its inlet portion as well as its outlet portion and having communication at its inlet portion with the exhaust of the engine, and a muffler on said conduit.

3. In an apparatus for heating water, the combination with an internal combustion engine having a water jacket surrounding the same, of a tank separate from the engine and independently mounted, a pipe leading from the exhaust of the engine to and into the said tank and having a portion extended through the tank for the discharge of the exhausts of the engine, a pipe section carrying a muffler attached to the discharging end of said portion of said pipe, pipes connecting the upper and lower portions of the water jacket of the engine with the upper and lower portions of the tank, and means independent of the engine for supplying water to and discharging it from the tank.

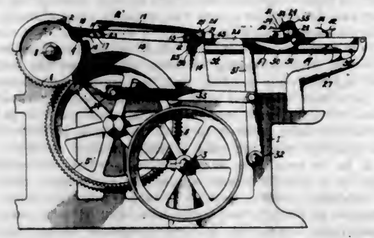
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1,228,933. SHEET-DELIVERY MEANS. HENRY L. LEILICH and JOHN P. BURGER, Delphos, Ohio, assignors, by mesne assignments, to The Delphos Printing Press Company, Delphos, Ohio, a Corporation of Ohio. Filed Sept. 24, 1913. Serial No. 791,515. (Cl. 271—84.)

1. In combination, sheet feeding means, rock fingers associated with said means for obstructing the feed of sheets thereby, a member reciprocally movable in advance of said fingers and relative thereto, sheet gripping fingers carried by said member and automatically operable to grip a sheet when the member is in one position of its movement and to release a sheet when the member is in another position of its movement, and connection between said fingers and member operable to move the fingers out of sheet obstructing position when the member is in sheet gripping position and to return the fingers to sheet obstructing position when the member is in sheet releasing position.



2. In combination, feed tapes, a guide frame disposed thereover, sheet obstructing fingers associated with said tapes to obstruct the feeding of sheets thereby, slideways extending forward from said tapes, a slide frame reciprocally movable on said ways relative to said frame and fingers, means for imparting reciprocatory movements to said slide frame, stationary and movable gripping fingers carried by said slide frame and influenced to normally stand in sheet engaging position, means for locking said gripping fingers in open position, means for releasing said locking means to permit a closing of the gripping fingers when the slide frame is in one position of its movement, means for opening the gripping fingers when the slide frame is at another position of its movement, and connection between said slide frame and sheet obstructing fingers for moving such fingers from sheet obstructing position when the slide frame is in sheet gripping position and to return said fingers to sheet obstructing position when the frame is in another position of its movement.



3. In a sheet delivery mechanism, spaced sets of delivery-tape wheels, delivery-tapes connecting said sets of wheels, a bar in advance of each set of wheels, arms projecting rearwardly from the forward bar between the tapes and having their rear end portions disposed below the adjacent tape portions and a guide-frame mounted above the tapes and said arms and having portions removably resting on said bars.

4. In a sheet delivery mechanism, guide members extending in the direction of delivery of sheets, a frame slidingly carried by said members, and having spaced parallel shafts one at least being mounted for rocking movements, coöperating sets of sheet gripping fingers projecting from said shafts, means for rocking the rocker shaft at a predetermined point in a movement of said frame to move the fingers carried by said shaft to open position, means for locking said rocker shaft in rocked position, and means coacting with said locking means at a predetermined point in a movement of the frame to move it into position to permit a return of the rocker shaft and its fingers to gripping position.

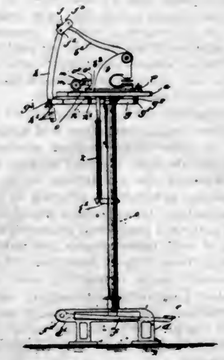
5. In a sheet delivery mechanism, tape delivery means, a member disposed in advance of said means to support the forward end of a sheet fed thereby, a rock-shaft mounted adjacent to said member, stop fingers projecting from said shaft and standing in advance of said member when the shaft is in one position, sheet delivery mechanism mounted for reciprocatory movements in advance of said member, and means automatically operable at predetermined points in the movements of said mechanism to rock said shaft to move said fingers into and out of sheet obstructing position.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,934. TREADLE-OPERATED MECHANISM FOR SEAL-PRESSES. PAUL LEO, Elizabeth, N. J. Filed May 29, 1916. Serial No. 100,467. (Cl. 74—81.)

1. A foot actuated device for operating seal presses, the same comprising a table, means thereon to removably retain a seal press, a pedestal, a table support extending from said pedestal, a trendle lever pivoted to said pedestal, a lever pivoted beneath the table, an adjustable arm pivoted to said last named lever and having means for adjustably engaging the seal press lever, a link between said levers for communicating the treadle movement to

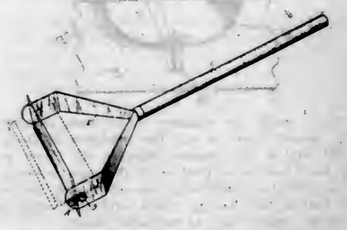


the seal press lever, and a spring to effect the return movement.

[Claims 2 and 3 not printed in the Gazette.]

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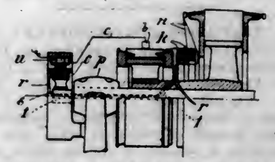
1,228,935. WEEDER. JAAKKO LILPAKKA, New Castle, Pa. Filed Feb. 23, 1915. Serial No. 10,039. (Cl. 55—45.)



A weeder comprising a handle, a spreadable frame secured to said handle and having its sides diverging therefrom in the plane of said handle and its free ends bent parallel with each other and apertured in alinement with each other, one of said frame ends being formed with a circle of perforations about its apertured portion as a center; a cutting blade extending transversely of said frame and provided upon its ends with pins received in the alined apertured portions of said frame ends to permit a rotary adjustment of the blade within its frame, and spurs carried by one end of said blade for releasable engagement with the perforations in the frame end.

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1,228,936. COMMUTATION DEVICE FOR DIRECT-CURRENT MACHINES AND THE LIKE. BURGER LJUNGSTRÖM and AXEL DANIEL WIDSTRÖM, Stockholm, Sweden; said Widström assignor to said Ljungström. Filed Feb. 24, 1913. Serial No. 750,262. (Cl. 171—228.)



1. The combination with an armature, of a commutator for said armature, leads connecting said armature and said commutator, an alternating current generator having a field magnet separate from the field magnet for said arma-

ture, and connections between said generator and said leads.

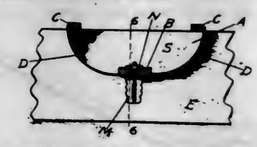
2. The combination with an armature, of a commutator for said armature, leads connecting said armature and said commutator, an alternating current generator having a field magnet separate from the field magnet for said armature, transformers whose secondary coils are connected into said leads, and connections between the primary coils of said transformers and said generator.

3. The combination with an armature of a commutator for said armature, leads connecting said armature and said commutator, an alternating current generator having a field magnet separate from the field magnet for said armature, means whereby the excitation of the field of said alternating current generator is affected by changes in the load on said armature, transformers whose secondary coils are connected into said leads, and connections between the primary coils of said transformers and said generator.

4. The combination with an armature, of a commutator for said armature, leads connecting said armature and said commutator, a source of alternating current separate from said armature, transformers each having one coil connected into one of said leads, and connections between the other coils of said transformers and said source of alternating current.

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1,228,937. MOLD FOR MANGER-CURBS. WILLIAM LOUDEN, Fairfield, Iowa. Filed Aug. 13, 1913. Serial No. 784,541. (Cl. 25—118.)




2. In a mold for manger curbs, two parallel mold boards spaced apart to suit the thickness of the curb to be built, and a core member between the upper portions of the mold boards adapted to fill the space between them, said core member comprising two side boards and a sheet-metal bottom and having cleats with projecting ends to rest on the upper edges of the mold boards.

4. A mold board for forming cement manger curbs in permanent position, comprising two opposed substantially parallel boards lying in substantially vertical planes, and placed apart a distance corresponding to the thickness of the manger curb, said boards having substantially horizontal upper and lower edges, the space between said boards being unincloesd at the bottom whereby the boards can be readily lifted away from manger after the cement is in place, and a core member fitting between the upper portion of said boards, said core member being hollow and comprising two spaced side members each lying against one of the boards, and a bottom member joining the lower edges of the sides and constituting an open top core, said bottom member being provided with means for supporting a stanchion anchor on the under side thereof, while the plastic cement is being placed between the mold boards whereby said anchor will be embedded in said cement.

[Claims 1 and 3 not printed in the Gazette.]

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1,228,938. TRAP-DOOR FOR VESTIBULE-CARS. LEO F. MCNALLY, Brooklyn, N. Y., assignor to Transportation Utilities Company, New York, N. Y., a Corporation of West Virginia. Filed Oct. 30, 1916. Serial No. 128,419. (Cl. 105—84.)

1. A hinge mechanism for trap doors, comprising a torsional spring formed of relatively wide, thin material, adapted to exert a rapidly decreasing force, means for rotatably supporting said trap door and for receiving the action of said spring thereon, for the elevation of said door, and a worm and gear adjusting mechanism engaging said spring and adapted to regulate the tension thereof.

2. A hinge mechanism for trap doors, comprising a fixed bracket, a supporting member journaled therein and provided with gear teeth thereon, a worm gear journaled in said bracket, engaging the teeth of said supporting member and adapted to rotate the same, a shaft loosely carried by said supporting member, a driving member carried at the opposite end of said shaft, a torsional spring secured to, and extending between, said supporting member and said driving member.



3. A hinge mechanism for trap doors, comprising a fixed bracket, a supporting member journaled therein and provided with gear teeth thereon, a worm gear journaled in said bracket, engaging the teeth of said supporting member and adapted to rotate the same, a shaft loosely carried by said supporting member, a driving member carried at the opposite end of said shaft, a torsional spring secured to, and extending between, said supporting member and said driving member, and in combination therewith, a trap door provided with a bearing member rotatably mounted upon said supporting member, and a pivotal member fixedly secured to said trap door, provided with an opening receiving said driving member therein.

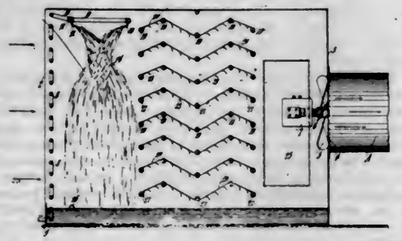
4. In an apparatus of the class described, the combination of a door, a hinge supporting mechanism therefor, a torsional spring member acting upon the door and adapted to forcibly move the same, and a worm and gear mechanism connected to said torsional spring member and adapted to accurately regulate the torsional tension thereof.

5. In an apparatus of the class described, the combination of a trap door, means for mounting the same for hinged movement, a torsional spring member acting upon said trap door and adapted to forcibly raise the same, a gear engaging said torsional spring, a worm meshing with said gear and adapted to rotate the same and to regulate and hold in adjusted condition the said torsional spring.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,939. COOLING AND VENTILATING APPARATUS. BERNARR MACFADDEN and ERNEST L. MOUMBLOW, New York, N. Y.; said Moumblow assignor to said Macfadden. Filed June 21, 1916. Serial No. 104,995. (Cl. 183—24.)



1. In a ventilating and cooling device, the combination of a casing open at one end and having an outlet at the other; means for producing a water spray near the open end of the casing; a group of combined eliminators-and-evaporators composed of absorbent material and disposed one above the other between said spray and said outlet and forming therebetween a series of sinuous paths open throughout and leading from said spray toward said outlet; and means for causing a draft of air through said casing.

2. In a ventilating and cooling device, the combination of a casing; means for producing a water spray in the casing; a group of combined eliminators-and-evaporators disposed in a series one above the other and each composed of a layer of absorbent material extending from side-to-side of the casing and arranged in zig-zag fashion, adjacent eliminators-and-evaporators forming zig-zag paths open throughout and leading from said spray; and means for causing a draft of air through said spray and thence through said paths.



3. In a ventilating and cooling device, the combination of a casing; means for producing a water spray therein; a group of combined eliminators-and-evaporators extending from side-to-side of the casing and extending in a series one above the other, each being composed of a layer of absorbent felt arranged in zig-zag fashion longitudinally of the casing and forming with the adjacent layer a zig-zag path open throughout and leading from said spray; and means for causing a draft of air through the spray and said paths.

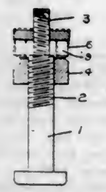
4. In a ventilating and cooling device, the combination of a casing open at one end and having an outlet at the other; a series of coils extending over the open end of the casing; a nozzle connected to said coils for producing a water spray near the open end of the casing; a group of combined eliminators-and-evaporators composed of absorbent material and disposed one above the other between said spray and said outlet and forming therebetween a series of sinuous paths open throughout and leading from said spray toward said outlet; and means for causing a draft of air to pass over said coils, through said spray and thence through said paths to said outlet.

5. In a ventilating and cooling device, the combination of a casing; means for producing a watery-spray therein; a group of combined eliminators-and-evaporators extending from side-to-side of the casing and extending in a series one above the other, each being composed of a layer of thick absorbent material arranged in zig-zag fashion so as to form inclined portions provided with U-shaped cut-outs forming flexible flaps, adjacent layers forming zig-zag paths open throughout and leading away from said spray; and means for forcing air through said spray and thence through said paths.

[Claims 6 to 9 not printed in the Gazette.]

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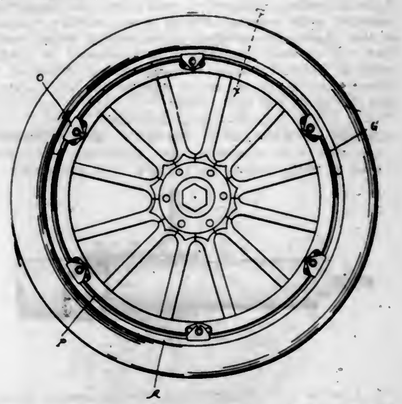
1,228,940. NUT-LOCK. LUCIEN ARMAND MANNY, Montreal, Quebec, Canada, assignor to Charles Isaac Giroux, Montreal, Quebec, Canada. Filed Jan. 26, 1917. Serial No. 144,759. (Cl. 151—17.)




The combination, with a bolt; of a pair of coöperating nuts threaded thereon and having their confronting inner faces formed with circular series of radial teeth, the teeth of both series being disposed in planes at right angles to the axes of the nuts, and the teeth of one series adapted to directly register with those of the other series; the outer nut having its inner face provided with a central recess of greater diameter than the adjacent portion of the bolt, and also having a radial cut at each corner, said cuts intersecting the series of teeth on said nut and extending inwardly through said inner face to the bottom of said recess and opening at opposite ends through the side walls of the recess and the nut so as to form a series of resilient members which are adapted to spread laterally when the two nuts are tightened together, thereby to cause the teeth on the free ends of said members to jam tightly into the teeth of the inner nut.

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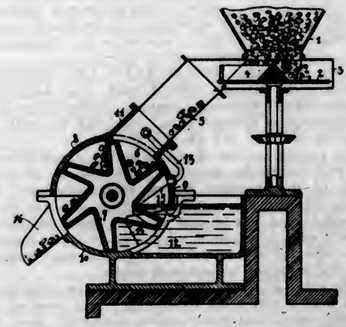
1,228,941. DEMOUNTABLE RIM. EDWIN R. MAURER, Detroit, Mich. Filed Apr. 5, 1913. Serial No. 759,023. (Cl. 152—21.)




The combination with a two-part rim, of a pin and a hook for engaging said pin respectively mounted upon the inner faces of the rim members, a pivot pin rigidly connected with the hook member and passing through the correlated rim member, and a washer mounted fast upon said pin adjacent the exterior face of the rim, whereby the pressure of a tire carried by the rim acts to prevent motion of the hook.

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1,228,942. RETORT-DISCHARGER. GEORG MERKEL, Munich, Germany. Filed Apr. 13, 1917. Serial No. 161,899. (Cl. 202—5.)



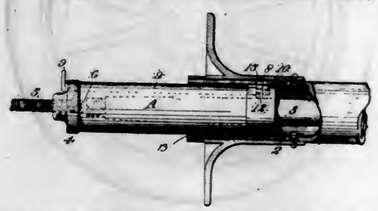
1. A retort discharge comprising the combination with a furnace, of a chute in communication with the discharge end of said furnace, a bucket cylinder, a casing for the said cylinder having openings of different sizes in its wall, a tank, the said cylinder and casing being partly within the said tank, and means of communication between the said casing, the tank and the furnace.

2. In a retort discharger, the combination with a furnace of a chute communicating with its discharge end, rotary means for feeding material from the furnace into the chute, a casing in communication with said chute, said casing having spaced openings in its wall, buckets

rotatable in said casing and adapted to successively communicate with said openings, a tank adapted to contain liquid in which a part of said casing and certain of the buckets are immersed, and means establishing communication between the tank, the casing and the chute.

3. In a retort discharger, the combination with a furnace of a chute communicating with its discharge end, means for feeding material from the furnace into the chute, a casing connected to said chute and comprising segments with openings therebetween, buckets rotatable in said casing the openings of the buckets being smaller than any of said segments, a tank adapted to contain liquid in which a part of said casing and certain of the buckets are immersed, and a pipe having ends opening into said chute and said casing.

1,228,943. SCREW-JACK. GEORGE E. MILLER, Oakland, and EDWIN B. CANTRELL, San Francisco, Cal. Filed Sept. 6, 1916. Serial No. 118,614. (Cl. 29—88.2.)



1. A screw jack comprising a tubular shaped housing open at one end and closed by a head at the opposite end, a screw rod centrally positioned in the head, a lug positioned adjacent the open end of the housing, a rod extending from end to end of the housing and a cam member on the rod engageable with the lug to project or retract the same.

5. In a jack for removing bushing bearings, a sleeve having a radial opening at its inner end, a bushing engaging pin slidable through said opening, a rod disposed interiorly of the sleeve and eccentric thereto and having means at one end to engage said pin for moving the latter outwardly beyond the sleeve periphery and interiorly thereof, the opposite end of the rod extending beyond the other end of the sleeve so as to be accessible for operation, and a screw borne by the center of the sleeve and engageable with the axle to effect withdrawal of the sleeve.

[Claims 2 to 4 and 6 not printed in the Gazette.]

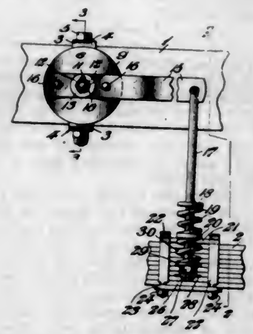
1,228,944. SPRING CONTROLLER OR GOVERNOR. WILLIAM S. MILLER, Philadelphia, Pa., assignor to Utility Shock Absorber Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 10, 1916. Serial No. 124,781. (Cl. 21—105.)

1. In a device of the character stated, the combination with two relatively movable parts and a connecting spring, of two members having their juxtaposed faces curving outwardly from their transverse axis and in friction engagement, one of said members being connected to one part and the other of said members being connected to the other of said parts, and spring means tending to move said members toward each other.

2. In a device of the character stated, the combination with a vehicle frame and its spring, of two members having their juxtaposed faces curving outwardly from their axis and in frictional engagement, resilient means to move said members toward each other, a connection from one of said members to the vehicle frame, and a connection from the other of said members to the spring.

3. In a device of the character stated, the combination with a vehicle frame and its spring, of two members having their juxtaposed faces curving outwardly from their diameter and in frictional engagement, a spring to retain said members in engagement, means to secure one of said members to the vehicle frame, and means to secure the other of said members to the first mentioned spring.

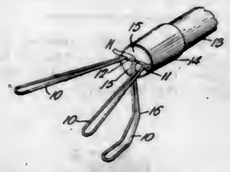
4. In a device of the character stated, the combination with a vehicle frame and its spring, of two members having their juxtaposed faces curving outwardly from their diameter and in frictional engagement, a spring to retain said members in engagement, means to secure one of said members to the vehicle frame, and means to resiliently secure the other of said members to the first mentioned spring.



5. In a device of the character stated, the combination with a vehicle frame and its supporting spring, of two members having their juxtaposed faces curving outwardly from their diameter and in frictional engagement, a spring to maintain such engagement, means to secure one of said members to the vehicle frame, an arm connected with the other of said members, and a bolt passing through said arm and connected with said supporting spring.

[Claims 6 to 9 not printed in the Gazette.]

1,228,945. CLOTHES-LIFTER. JUDSON HARLEY MISKIMEN, Glendive, Mont. Filed July 31, 1916. Serial No. 112,302. (Cl. 68—6.)



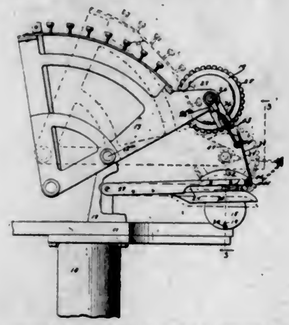
A clothes lifter, comprising a staff one end of which is provided with a transverse slot diametrically thereof, a plurality of strands of wire bent to form loops and having the terminals thereof disposed in parallel and seated within the slot with the extreme ends thereof abutting the closed end of the slot, the two outer loops being slightly bent to diverge from the ends of the staff and the intermediate loop being bent out of plane with the first two loops and a ferrule surrounding the end of the staff to clamp the terminals of the staff upon the terminals of the loops within the slot.

1,228,946. COMBINED GUARD AND TENSION ATTACHMENT FOR MARKING-MACHINES AND THE LIKE. CLARENCE C. MITCHELL, Cincinnati, Ohio, assignor to The National Marking Machine Company, Cincinnati, Ohio. Filed Sept. 28, 1914. Serial No. 863,996. (Cl. 101—95.)

1. The combination with a platen device and a type device, one being capable of movement toward the other, of a guard extended between said devices, said guard being constructed to permit an operator to view the space therebetween and to prevent the operator from inserting his hand therein and means for automatically moving said guard to position where it will not interfere with the movement of one of said devices toward the other.



2. The combination with a platen device and a type device, one being capable of movement toward the other, of a guard plate normally extended across the space between the type and platen when they are separated, in position to prevent an operator's hand from entering said space, and means for automatically moving said guard when the type and platen approach, so that the guard will not interfere with said movement.



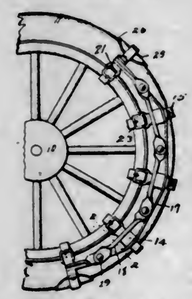
3. The combination with a platen device and a type device, one being capable of movement toward the other, and a guard plate normally extended across the space between the platen and type and moved by the said movable member when it approaches the other, to position where it will not interfere with said movement of the movable member.

4. In a machine of the class described, the combination of a platen, and type holding means, one part being capable of movement toward the other, with a guard device arranged at each side of the platen having a space to admit work to the platen and to serve as a guide for said work.

5. In a machine of the class described, the combination of a platen, and type holding means, one part being capable of movement toward the other, with a movable guard device arranged at each side of the platen having a space to admit work to the platen and to serve as a guide for said work, said guard devices being so operatively connected with said platen and said type holding means that when said last two parts are separated the guard devices are in proper position to admit work to the platen.

[Claims 6 to 12 not printed in the Gazette.]

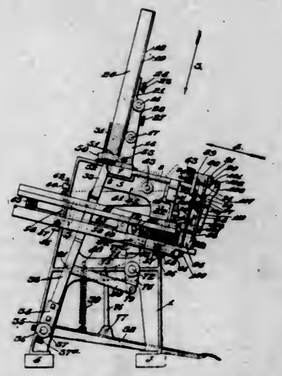
1,228,947. MOTOR-LIFT-OUT DEVICE. HUGH M. MITCHELL, Des Moines, Iowa, assignor to William B. Mitchell, Sr., Des Moines, Iowa. Filed July 31, 1916. Serial No. 112,420. (Cl. 152—14.)



1. In a motor lift out, a series of pairs of spaced parallel yokes adapted to extend across a tire and having laterally extending ends, the yokes of each pair being disposed one above the other and their ends being spaced from each other, a strip of pliable material extended between the said ends at each side of the tire, means for clamping said ends against the flexible strip, and means for securing said device to a wheel.

2. In a motor lift out, a series of pairs of spaced parallel yokes adapted to extend across a tire, and having laterally extended ends, a strip of pliable material extended between and secured to such ends, said strip being of greater width at its intermediate portions than at its ends.

1,228,948. HEEL-BUILDING MACHINE. JOHN E. MITCHELL and DENNIS PARKS, St. Louis, Mo. Filed Mar. 25, 1916. Serial No. 86,614. (Cl. 12—50.)



1. In a heel-building machine, in combination with a support for lifts and a holder for receiving heel-blanks and maintaining them under pressure, a carrier having a heel-former mounted thereon and adapted to be moved alternately to positions opposite said support and opposite and adjacent to the receiving end of said holder, whereby heel-blanks may be forced directly into said holder by pressure used to discharge the heel-blanks from said heel-former.

3. In a heel-building machine, in combination with a pasting device and a holder for receiving heel-blanks, and maintaining them in column formation, a carrier having a heel-former mounted thereon and adapted to be moved alternately to positions opposite said pasting device and said holder.

8. In a heel-building machine, in combination with a pasting device, holders of indeterminate length for receiving heel-blanks located on either side thereof, and a carrier having heel-formers mounted thereon and movable alternately in opposite directions to bring the respective heel-formers simultaneously opposite the pasting device and one of said holders.

18. In a heel-building machine, in combination with a pasting roller having circumferential grooves, a plurality of fixed slide rails passing through said grooves for supporting lifts passed over said pasting roller, a holder for receiving lifts having its bottom formed of a plurality of rails projecting beyond the end of the holder, a carrier, a heel-former pivotally mounted on said carrier and having its bottom formed of a plurality of bars, said carrier being movable in either direction to alternately position the heel-former opposite said pasting member and said holder, the upper edges of the bars of said heel-former in the former position being flush with the upper edges of said slide rails, and said bars in the latter position being adapted to pass between the projecting ends of the rails of said holder, means for arresting the movement of the carrier in the latter position with the upper surface of

said bars flush with the upper surface of said rails, and means for reciprocating said carrier when the heel-former is in either of the described positions.

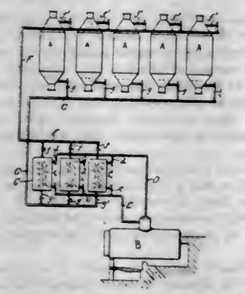
[Claims 2, 4 to 7, 9 to 17, and 19 to 23 not printed in the Gazette.]

1,228,949. BOW-GUIDE. LOUIS MOLLENHAUER, New York, N. Y. Filed June 23, 1916. Serial No. 105,415. (Cl. 84—72.)



A bow guide comprising a spring, clamps provided with openings in which the ends of the spring element are swiveled to permit the clamps to adjust themselves to the taper edges of a violin fingerboard.

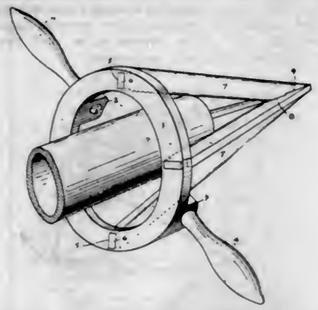
1,228,950. WOOD-PULP BOILER. EINAR MORTERUD, Jelöen, Norway. Filed Aug. 6, 1914. Serial No. 855,516. (Cl. 92—7.)



1. The combination with a plurality of digesters, of a plurality of heaters for the digesting fluid, a fluid supply pipe common to all the digesters and heaters, a return pipe common to all of said digesters and heaters, means to separately and selectively connect any of said digesters and heaters with said supply and return pipes, a steam generating apparatus, steam supply and return pipes connecting the latter with the heaters, and means to separately and collectively connect the heaters with the steam pipes.

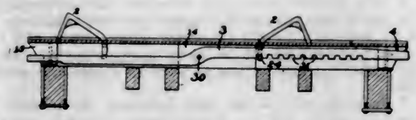
2. The combination with a plurality of digesters, of a plurality of heating drums for the digesting fluid, a heating coil in each drum, a steam supply pipe and a return pipe common to all of said coils, means to selectively connect said coils with said pipes, a fluid supply-pipe common to all the digesters and drums, valved pipes to selectively connect the fluid supply pipe with the tops of the drums and digesters, a fluid return-pipe common to all the digesters and drums, and valved pipes to selectively connect said fluid return-pipe with the bottoms of the digesters and drums.

1,228,951. CHASER AND REAMER. GEORGE Y. MORTON, San Francisco, Cal. Filed Dec. 18, 1916. Serial No. 137,555. (Cl. 77—73.)



A combined reamer and chaser comprising an annular base, and cutters extending from said base, each cutter having both inner and outer cutting surfaces, said cutters being integral with each other in pairs and slotted at their junctures, one of said slots being in the inner end of said juncture and the other in the outer end thereof, and each slot receiving the unslotted portion of the other juncture.

1,228,952. LOG-BUNK. ARTHUR B. MYHRE, Tacoma, Wash. Filed Oct. 23, 1916. Serial No. 127,046. (Cl. 105—173.)



1. The combination with a hollow bunk having a slot in its top web extending from near each end inward and terminating short of the center, and a flange projecting upwardly along each edge, a chock slidable lengthwise the channel formed by said flanges and having an anchor arm extending downward through the slot, said arm having a lateral projection at one side just beneath the top web of the bunk and another lateral projection from the lower end of said anchor arm, and a lever pivoted within and extending the length of the bunk and having notches engaging said latter projection of the anchor arm.

2. In a logging bunk, in combination, a frame in the form of a beam having separated vertical webs and a connecting top web, said top web having a central slot extending from near each end a material distance toward the center, said beam also having a vertical web extending lengthwise of the central part of the beam, chock blocks, each having bearing engagement with the top of the web and an anchor arm extending downward through the slot in the top web, said anchor arm having a lateral projection from its lower end, and locking levers located one at each side of the central web and pivoted, each to its respective side web and to the central web, said levers extending through the length of the bunk and having notches adapted to receive the side projection from the anchor arm.

3. The combination with a logging bunk having a top web provided with centrally placed longitudinal slots terminating short of its ends, and upwardly projecting flanges along its sides, chocks each having feet bearing upon the top web between said flanges and an anchor arm extending downward through one of said slots, said anchor arms having a lateral projection just beneath the top web and a second one at its lower end, and a locking lever for each chock pivoted upon the bunk and extending through the length of the bunk and having notches in one edge adapted

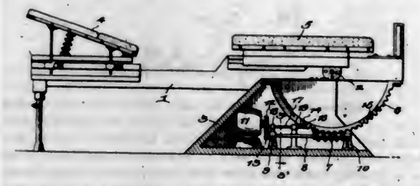


to receive the lowermost of said lateral projections from the anchor arm.

4. The combination with a logging bunk having a top web provided with centrally placed longitudinal slots terminating short of its ends, and upwardly projecting flanges along its sides, chocks each having feet bearing upon the top web between said flanges and an anchor arm extending downward through one of said slots, said anchor arms having a lateral projection just beneath the top web and a second one at its lower end, and a locking lever for each chock pivoted upon the bunk and extending through the length of the bunk and having notches in one edge adapted to receive the lowermost of said lateral projections from the anchor arm, and locking pins having seats in the bunk and adapted to engage said levers to hold them in locked position.

5. The combination with a logging bunk having a top web provided with centrally placed longitudinal slots terminating short of its ends, and upwardly projecting flanges along its sides, chocks each having feet bearing upon the top web between said flanges and an anchor arm extending downward through one of said slots, said anchor arms having a lateral projection just beneath the top web and a second one at its lower end extending from its opposite edge, and a locking lever for each chock centrally pivoted upon the bunk and having one end provided with a series of slots in its lower edge adapted to receive the lowermost of the lateral projections from the anchor arm, and means for locking said levers.

1,228,953. CHIROPRACTIC TABLE. FRANK M. NAYSMITH, Davenport, Iowa. Filed Dec. 14, 1914. Serial No. 877,229. (Cl. 128—16.)



1. A chiropractic table having a body mounted for angular movement in a vertical plane, an electric motor operatively connected thereto to effect said movement, two limit switches, and means operable by said body for actuating said switches alternately to stop said motor, said body when moved in one direction causing said means to operate one of the switches and hold it in open position until the body is moved in an opposite direction, when the body will again operate said means and cause the other switch to be operated.

2. A chiropractic table having a body mounted for angular movement in a vertical plane, an electric motor operatively connected thereto to effect said movement, two limit switches, means operable by said body for alternately actuating said switches, an electric circuit associated with said motor and limit switches, and a manually operated starting and reversing switch in circuit with said motor for completing the circuit with said limit switches.

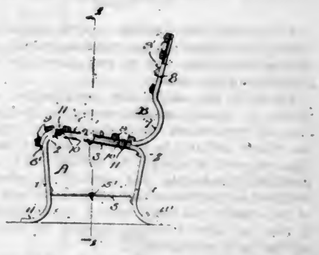
3. A chiropractic table having a body mounted for angular movement in a vertical plane, an electric motor operatively connected thereto to effect said movement, two limit switches, means movable with said body to alternately operate said switches to stop said motor, and a manually operated starting switch connected in circuit with said motor.

4. A chiropractic table having a body mounted for angular movement in a vertical plane, an electric motor operatively connected thereto to effect said movement, two limit switches, a shiftable rod for operating said switches, means movable with said body to reciprocate the said shiftable rod to alternately operate the limit switches to stop said motor, and a manually operated starting and reversing switch connected in circuit with said motor.

5. A chiropractic table having a body mounted for angular movement in a vertical plane, an electric motor operatively connected thereto to effect said movement, two limit switches, a shiftable member for opening and closing said switches alternatively, means movable with said body to operate said shiftable member to stop said motor, and a manually operated reversing switch connected in circuit with said motor to start the same.

[Claims 6 and 7 not printed in the Gazette.]

1,228,954. KNOCKDOWN BENCH. MICHAEL W. NEUENS, Port Washington, Wis., assignor to Western Implement Company, Port Washington, Wis. Filed Apr. 6, 1916. Serial No. 89,305. (Cl. 155—3.)



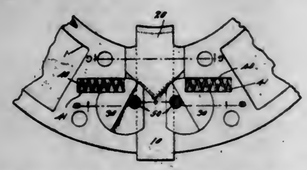
1. A knockdown seat comprising a pair of U-shaped leg members, a body member including angular straps and seat and back portions connecting the legs of the straps and means for detachably securing corresponding legs of the straps to the bight portions of the leg members whereby upon releasing said securing means the seat may be entirely disassembled.

2. A knockdown bench comprising U-shaped leg members, a body member comprising angular straps and seat and back portions connecting the legs of the straps, the bight portions of the leg members being inclined downwardly toward their rear ends, means for detachably securing corresponding legs of the body strap members to the bight portions of the leg members, the forward ends of said legs of the straps being downwardly directed, and said top member when detached from the leg member being adapted to assume nested relation with similar other top members.

3. A knockdown bench comprising end body straps each of which is formed from a single channel-iron strip having a straight seat stretch at one end, and an obliquely disposed straight back stretch at the opposite end, the flanges of the channel-iron being outwardly extended, seat and back members for securing the body straps together, leg straps for the body straps formed from channel-iron straps bowed downwardly to form legs having feet extending therefrom, and connected by bridge-pieces, the flanges of the channel-iron being upwardly extended for engagement with the downwardly extended flanges of the body strap seat stretches, spacing thimbles interposed between the opposed flanges of the seat stretches and bridge pieces, and bolts for detachably securing said elements together.

4. A knockdown bench comprising a pair of body straps formed from channel-iron strips having straight seat stretches terminating with downwardly curved arms the rear ends of the seat stretches being merged into waist bows having straight back sections extending therefrom, the channel-iron strips being bent with their flanges extending outwardly, leg straps for the support of the body straps, the leg straps being formed from channel-iron strips bent downwardly at their ends to constitute front and rear legs having outwardly extended feet, the upper ends of the leg sections being provided with curved knees provided with straight bridge stretches, the forward knees and bridge stretches being nested under the arms and straight seat stretches of the body straps, spacing thimbles interposed between the seat stretches and the bridge pieces of the respective body and leg straps, bolts for securing the same, and means for trussing the leg strips.

**1,228,955. DIE-STOCK.** IRA W. NONNEMAN, Warren, Ohio, assignor to The Borden Company, Warren, Ohio, a Corporation of Ohio. Filed Mar. 6, 1917. Serial No. 152,458. (Cl. 10—120.5.)



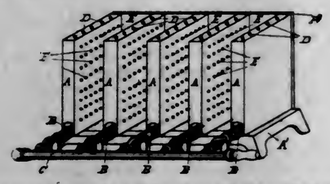
1. A device for cutting tapered threads comprising a frame, a recessive chaser carried thereby, and means engaging the thread cut by the chaser for controlling the recession of the chaser.

10. In a die stock, the combination of a revoluble frame, a chaser radially mounted therein and having tapered teeth at its inner edge, a bar lying parallel with the chaser radially in the frame and having a non-cutting edge adapted to occupy the thread cut by the chaser immediately following the chaser, a movable abutment mounted in the frame and limiting the outward movement of the chaser and itself moved by the outward movement of the bar, and a spring tending to hold the abutment against such movement.

18. In a die stock, the combination of a rotary frame, a set of chasers radially mounted in the frame and having thread-cutting teeth, a set of followers movably mounted in the frame, there being one follower for each chaser and the follower being provided with an edge adapted to engage the thread cut by the chaser without itself cutting, a series of movable abutments carried by the frame and controlling the position of the chaser, and means whereby said abutments may be moved by the followers but cannot be moved by the chasers.

[Claims 2 to 9 and 11 to 17 not printed in the Gazette.]

**1,228,956. GAS-COOKER.** JOSEPH HENRY NOONAN, Auckland, New Zealand. Filed Apr. 21, 1914, Serial No. 833,532. Renewed May 3, 1917. Serial No. 166,278. (Cl. 126—41.)



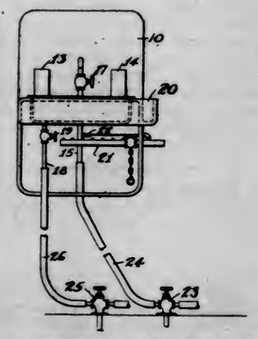
1. A cooking device of the character described comprising in combination a plurality of stationary heating chambers spaced apart and each comprising heat radiating perforated top and side walls, burners adapted to heat said chambers and walls, a grid-supporting member forming a wall of the cooking device and removable relatively to said heating chambers and a plurality of grids carried by said member and adapted when said member is placed in position to be interposed between said heating chambers.

5. A cooking device of the character described comprising in combination a plurality of stationary heating chambers spaced apart and closed excepting for perforations in their top and side walls, a movable grid supporting member forming a wall of the cooking device and carrying egg cooking framed grids adapted to be interposed between said chambers and having divisions suitable for carrying eggs.

6. A cooking device of the character described, comprising a base plate, a plurality of vertically arranged rectangular heating chambers fixed to said base plate and formed with perforations in their top and side walls, a gas supply pipe, a connection from said pipe to each of said heating chambers, means for controlling the supply of gas in each connection, a plate secured to the ends of the heating chambers and forming the back wall thereof, a removable grid supporting member forming the front wall of the cooking device, a handle of heat insulating material on the front of the grid supporting member for manipulating same, a series of grids carried by said grid supporting member and each comprising a fixed and a movable framed portion, and a plurality of handles located at the front of said grid supporting member and connected to said movable framed portions of the grids for operating same, substantially as herein described.

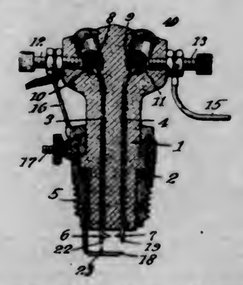
[Claims 2 to 4 not printed in the Gazette.]

**1,228,957. STERILIZER.** LEO F. O'BRIEN, St. Louis, Mo. Filed Oct. 23, 1915. Serial No. 57,588. (Cl. 126—350.)



A sterilizer comprising a back plate; an apertured shelf; a sterilized tank seated in one of the apertures in said shelf; liquid receptacles seated in other of said apertures and in such proximity to said sterilizing tank as to be heated by radiation from said tank; and heating means mounted beneath said tank and comprising a main gas-burner and a pilot-burner.

**1,228,958. SPARK-PLUG.** WILLIAM J. O'GORMAN, New York, N. Y. Filed June 14, 1916. Serial No. 103,651. (Cl. 123—169.)



1. A spark plug having two artificial breaks or gaps located in the circuit of the ignition gap and respectively at opposite sides thereof.

2. A spark plug having an artificial gap located in the ground or return side from the ignition points as and for the purpose described.

3. A spark plug having two artificial gaps located in the circuit of the ignition gap to either side of the latter and in chambers having openings through which the spark of the artificial gaps may be observed.

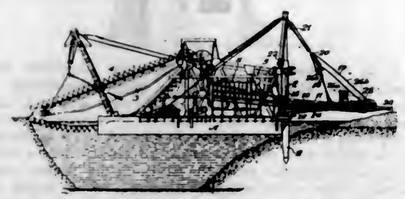


4. A spark plug the integral insulating body or core of which has two conducting wires or rods extending longitudinally therethrough and terminating at one end in points for the ignition gap and at their opposite ends in points for artificial gaps located in chambers formed in the head of said integral body and provided with observation openings.

5. A spark plug having an artificial spark gap located in a chamber in the head of the plug and wire gauze set in a frame removably fixed in an opening through which the sparking at the artificial gap may be observed.

[Claims 6 to 14 not printed in the Gazette.]

**1,228,959. METHOD AND APPARATUS FOR RECLAIMING DREDGED LAND.** EMERY OLIVER, Sacramento, Cal., assingor to Natomas Company of California, Natoma, Cal., a Corporation of California. Filed Dec. 7, 1915. Serial No. 65,489. (Cl. 37—24.)



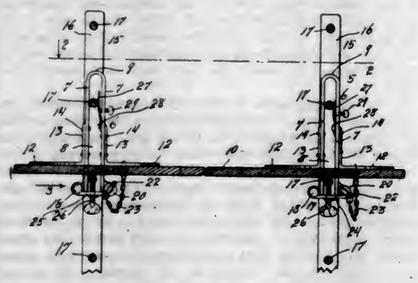
1. The combination with a dredge, of a pair of tail sluices, one mounted above the other, the upper being longer than the lower, a pivotal and turnable support for the inner end of said sluices, and means for swinging said sluices in a horizontal and vertical arc about the support.

3. The combination with a dredge, of means for separating the rocks and fines, means for depositing the rocks, means for dividing the fines, means for depositing a portion of the fines between said rocks, and means for depositing the remaining fines on top thereof.

5. The combination with a dredge, of a stacker, means for separating the coarse material in the dredged soil from the fines and delivering the coarse material to the stacker and dividing the fines into two parts, and a pair of tail sluices of different lengths, each of said sluices receiving a part of said fines, said stacker and the shorter of said tail sluices being of substantially the same length so as to deposit material at a common point.

[Claims 2 and 4 not printed in the Gazette.]

**1,228,960. LADDER-BRACKET.** CHARLES PARKER, Platteville, Colo. Filed June 16, 1916. Serial No. 103,917. (Cl. 20—85.)



1. A bracket composed of spaced bifurcated members open at one end, a supporting base connecting said members, and clamping means applied to the open extremities of said members.

2. A bracket composed of spaced bifurcated members open at one end, a supporting base connecting said members intermediate their extremities, and clamping means applied to the open extremities of said members and arranged to coöperate with the said base.

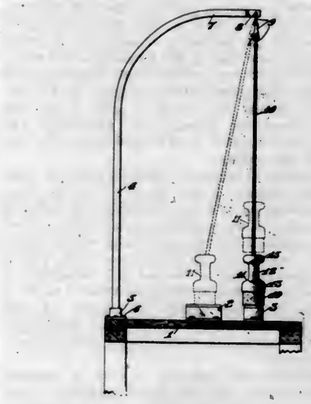
3. A bracket composed of spaced bifurcated members open at one end, a supporting base connecting said members above their open extremities, and clamping means applied to the open extremities of said members and cooperating with the base.

4. A bracket composed of spaced bifurcated members open at one end, a supporting base connecting said members and extending at right angles thereto, and clamping means applied to the open extremities of said members below the base and arranged to coöperate with the latter, substantially as described.

5. A bracket composed of spaced bifurcated members open at one end, a supporting base connecting said members, said base being composed of two parts arranged on opposite sides of the two members, and clamping means applied to the open extremities of said base and arranged to coöperate with the base for securing purposes.

[Claims 6 to 11 not printed in the Gazette.]

**1,228,961. LIFT-CUTTING MAUL.** DENNIS PARKS, St. Louis, Mo. Filed Jan. 7, 1916. Serial No. 70,749. (Cl. 164—29.)



1. A device of the character described comprising a maul having a substantially vertically elongated handle for raising the maul and striking downwardly in a substantially vertical plane, and a spring-pulled pendent supporting member attached to said maul substantially at the center of gravity thereof.

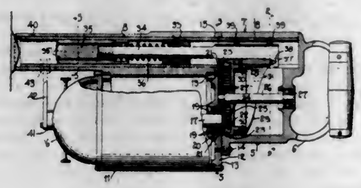
2. A device of the character described comprising a maul and a pendent spring connected at its lower end to said maul at approximately the center of gravity thereof.

3. A device of the character described comprising a maul provided with a downwardly-tapering opening, and a pendent spring extending into said opening and connected at its lower end to said maul at approximately the center of gravity thereof.

4. A device of the character described comprising a maul having a handle-portion and being weighted above and below said handle portion, and a pendent spring connected at its lower end to said maul at approximately the center of gravity thereof.

5. A device of the character described comprising a maul having a tubular handle, and resilient means including a cable suspended from above, and freely movable laterally below, the lower portion of said cable passing into said tubular handle and having a joint connection with said maul permitting a movement of said maul with respect to said cable about said joint.

1,228,962. POWER-OPERATED HAMMER. WALTER S. PAYNE, Lincoln, Nebr. Filed Apr. 17, 1916. Serial No. 91,773. (Cl. 78—27.)



1. In a power-operated hammer, a reciprocatory plunger, a spring urging said plunger in one direction, a rotatable cam having its axis of rotation disposed in spaced parallel relation to the longitudinal axis of said plunger, means for rotating said cam, and means connected to the plunger operatively engaged with the cam, said cam being constructed to move the plunger in one direction against the action of said spring and then suddenly release the plunger whereby its movement is reversed under the expansive action of the spring.

2. In a power-operated hammer, a hammer plunger, a rod connected thereto, a power shaft, a rotatably mounted disk geared to the power shaft, a cam plate detachably secured at one end to the periphery of said disk, a spring surrounding said rod and urging the hammer in one direction, and means on said rod coöperatively engaged with the cam, said cam being constructed to retract the plunger rod and hammer against the action of said spring and then suddenly release the plunger rod whereupon the power stroke of the hammer is delivered under the expansion action of the spring.

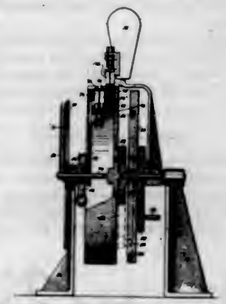
3. In a power-operated hammer, a hammer case, a hammer to reciprocate therein, a rod connected to the hammer, a spring surrounding said rod and urging the hammer in one direction, anti-friction rollers engaging one end of the rod and preventing a turning movement of the same, a rotatable cam, means for operating said cam, and a roller mounted upon one end of the rod and coöperatively engaged with the cam, said cam being constructed to move the roller in one direction against the action of said spring and then suddenly release the plunger, whereupon the power stroke of the hammer is delivered under the expansion of the spring.

4. In a power-operated hammer, a case, a plunger hammer to reciprocate in said case, a rod connected to the plunger hammer, a guide for the rod, a spring arranged between the guide and the hammer to move the hammer in one direction, means mounted in the case and engaged by the rod to prevent rotative movement of the latter, a rotatably mounted internal gear, a power shaft operatively engaged with said gear, a disk carried by the gear, a cam removably mounted upon said disk, and means on one end of the rod coöperatively engaged with said cam, whereby the rod is moved in one direction in the rotation of the cam and said spring placed under tension, said cam being so constructed as to suddenly release the rod and permit of the expansive action of the spring to deliver the power stroke of the hammer.

5. In a power-operated hammer, a casing, a plunger hammer mounted to reciprocate in said casing, a rod connected to the hammer, a guide in the casing for said rod, a spring arranged between said guide and the hammer and urging said hammer in one direction, said hammer being provided with a plurality of longitudinally extending air ducts, and operating means for the hammer including a rotatable cam and means on one end of said rod operatively engaged with the cam, said cam being constructed to move the rod and hammer in one direction against the action of said spring and then suddenly release the same to permit of the expansion of the spring and the delivery of the power blow of the hammer.

[Claims 6 to 11 not printed in the Gazette.]

1,228,963. APPARATUS FOR CONTROLLING MECHANISMS AT A DISTANCE. JACOB PEREPELKIN, St. Petersburg, Russia. Filed Feb. 3, 1912. Serial No. 675,485. (Cl. 172—239.)



1. In an apparatus of the character described, the combination with a transmitting device comprising a dial, an index hand adapted to travel over said dial, and means for operating said hand, of a receiving device comprising a dial and two hands, one of which is adapted to travel over the latter dial, an electric motor synchronously operated from the transmitting device, connections between the said motor and one of the hands of the receiving device, an electric motor adapted to actuate the mechanism to be controlled, an electric circuit in which the last-mentioned motor is included, and mechanism controlled by the movement of one of the hands of the receiving device to cause the last-mentioned motor to operate in one direction or another and at different speeds during the period that it is controlled and according to the degree and direction of movement of the index hand of the transmitting device.

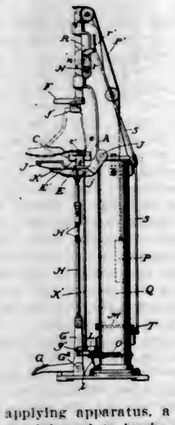
2. In an apparatus of the character described, the combination with a transmitting device comprising a dial, an index hand adapted to travel over said dial, and means for operating said hand, of a receiving device comprising a dial and two hands, one of which is adapted to travel over the latter dial, an electric motor synchronously operated from the transmitting device, connections between the said motor and one of the hands of the receiving device, an electric motor adapted to actuate the mechanism to be controlled, an electric circuit in which the last-mentioned motor is included, and mechanism controlled by the movement of one of the hands of the receiving device to cause the last-mentioned motor to operate in one direction or another and at different speeds during the period that it is controlled and according to the degree and direction of movement of the index hand of the transmitting device, said mechanism comprising an electrical resistance through which the circuit of the last-mentioned electric motor is adapted to be completed, and said resistance being also adapted to be cut out of the said circuit to permit the said motor to rotate at full speed.

3. In an apparatus of the character described, the combination with a transmitting device comprising a dial, an index hand adapted to travel over said dial, and means for operating said hand, of a receiving device comprising a dial and two hands, one of which is adapted to travel over the latter dial, an electric motor synchronously operated from the transmitting device, connections between the said motor and one of the hands of the receiving device, comprising a shaft and a gear wheel loosely mounted on said shaft and to which gear wheel one of the said two hands of the receiving device are connected, a disk loosely mounted on the said shaft and provided in one face with a curvilineal groove as described, connections between said disk and the mechanism to be controlled, a second disk fixedly mounted upon the said shaft, a toothed pinion carried by the latter



disk, a rack meshing with said pinion, a projection on the rack engaging within the said curvilineal groove, a lever pivotally carried by one of the hands of the receiving device and adapted to engage within slots in the disk last mentioned, a spring acting upon said lever as described, an electric motor adapted to actuate the mechanism to be controlled, an electric circuit in which the latter motor is included, contact plates included in the said circuit and arranged to be successively brought into contact with each other by the said lever when the latter is turned as set forth, and an electrical resistance adapted to be brought into and out of the circuit of the last-mentioned electric motor according to the degree of movement imparted to the pivoted lever by the slots in the disk.

1,228,964. HEEL-APPLYING APPARATUS. JOSEPH E. PERRAULT, Belmont, and HOWARD G. ELLIS, Watertown, Mass. Filed May 27, 1916. Serial No. 100,339. (Cl. 12—125.)



1. In a heel applying apparatus, a last engaging device, a pressure applying plate having upwardly projecting portions, a carrier plate having upstanding projections pivoted to said portions, a heel retaining device, and yieldable supports on said carrier for supporting the corners of said retaining device.

2. In a heel applying apparatus, a last engaging device, a pressure applying element, a carrying plate pivotally connected with said pressure element, a heel retaining plate having a heel receiving opening completely through the same, means yieldably supporting said retaining plate from said carrying plate at the corners thereof, and locking projections carried by said carrying plate and engaging recesses in the sides of the retaining plate midway of its points of yielding support, one of said projections being movable to permit removal of the retaining plate.

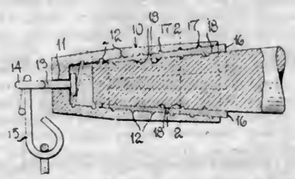
3. In combination a vertically movable last engaging device, a vertically movable carrier in opposition to said last engaging device, releasable means for locking said last engaging device against movement, means for moving said carrier toward the last engaging device and means for simultaneously operating the reverse movement of the carrier and releasing the last engaging device.

4. In combination a movable last engaging device, a carrier movable toward and from the last engaging device, means for moving the carrier toward the last engaging device and locking the same in pressure applying position, releasable means for holding the last engaging device in position and means for simultaneously releasing said pressure applying means and said last engaging means.

5. In combination a reciprocating slide bar carrying last engaging means, tension means for moving said slide bar away from last engaging position, pawl and ratchet mechanism for holding said slide bar in last engaging position against said tension means, a carrier plate, means for moving said carrier plate toward and from the last engaging means, and means whereby said pawl and ratchet mechanism is operated to unlock the slide bar simultaneously with the movement of the carrier plate away from the slide bar.

[Claims 6 to 8 not printed in the Gazette.]

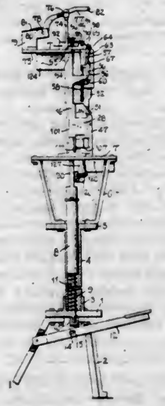
1,228,965. WHIFFLETREE-IRON. LYMAN Z. PIERCE, Macksville, Kans. Filed Jan. 2, 1917. Serial No. 140,207. (Cl. 21—78.)



1. A whiffletree iron comprising a hollow sleeve interiorly tapered toward one end, the small end being formed with a perforation, the interior face of the sleeve having screw threads, a swingletree hook operatively swiveled to the small end of the sleeve, and segmental longitudinally tapering clamping members adapted to be disposed within the sleeve and formed upon their exterior faces each with interrupted screw threads and upon their interior faces with lugs adapted to bite into the wood of the swingletree when the screw is screwed up.

2. A swingletree iron comprising a hollow sleeve interiorly tapered toward one end and formed at the latter end with a passage, the inner face of the sleeve having screw threads, an eye having a shank disposed in the passage and having swiveled engagement with the sleeve, and a plurality of longitudinally tapering transversely arcuate locking members disposed within the sleeve, having interrupted screw threads upon their outer faces and having projections upon their inner faces adapted to be engaged with and be forced into the wood of a swingletree when the sleeve is turned up.

1,228,966. SEWING-MACHINE. PETER RASMUSSEN and MANOEL F. GOULARTE, Selma, Cal. Filed July 5, 1916. Serial No. 107,627. (Cl. 112—20.)



1. A sewing machine including in combination, a needle bar mounted for rectilinear movement, a rotary shuttle carrier, an actuating element connected to the needle bar, said element and the shuttle carrier being provided

with co-acting means to intermittently rotate the carrier in the movement of the needle bar in each direction.

2. A sewing machine including in combination, a rectilinearly movable needle bar, a rotary shuttle carrier, a reciprocatory element connected to the needle bar to actuate the latter, and co-acting means on said element and the shuttle carrier to impart an interrupted rotation to the carrier in the movement of the needle bar in each direction.

3. A sewing machine including in combination, a reciprocatory needle bar, means for actuating the needle bar including a rectilinearly movable element provided with interrupted rack teeth, and a rotary shuttle carrier having a gear to mesh with the rack teeth, whereby an interrupted rotary movement is imparted to the carrier in the reciprocation of the needle bar.

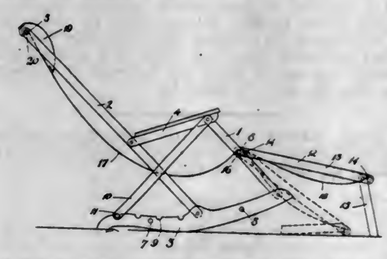
4. A sewing machine including in combination, a reciprocatory needle bar and means for actuating the same, a take-up arm pivotally mounted at one end, a rod having a sliding connection at one of its ends to the take-up arm, and operatively connected at its other end to the needle bar actuating means, and means co-acting with the take-up arm to yieldingly urge the same to its normal position.

5. A sewing machine including in combination, a reciprocatory needle bar and means for actuating the same, a take-up arm pivotally mounted at one of its ends, a rod having a sliding connection at one of its ends to the take-up arm, means connecting the other end of the rod to the needle bar actuating means whereby the rod has a limited movement relative to said actuating means, and a leaf spring co-acting with the pivoted end of the take-up arm to urge the same to its normal position.

[Claims 6 to 12 not printed in the Gazette.]

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1,228,967. FOLDING CHAIR. JOSEPH AUGUSTE RHO, Montreal, Quebec, Canada, assignor to J. Emilien Beauchamp, Montreal, Quebec, Canada. Filed Apr. 1, 1916. Serial No. 88,261. (Cl. 155—18.)

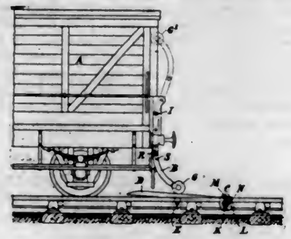


A folding chair comprising two forward and two rear upright members, said forward members being suitably secured by a cross bar intermediate of their height, and said rear upright members being secured by a cross bar at their upper end; rockers suitably secured by cross bars and adapted to be pivotally connected to the lower ends of said upright members, said rockers being provided with notches on the top of their rear portion; arm rests pivotally secured to said upright members, said arm rests terminating at said rear uprights; a seat made of flexible material between said uprights, secured to the cross bar in the upper end of said rear upright members at one end, and at the other end to the cross bar secured intermediate of the length of the forward upright members; shifting supports pivotally secured to the upper end of said forward uprights at one end and engaging the notches provided on the rockers, substantially as described.

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1,228,968. SIGNALING APPARATUS FOR RAILWAYS. JAMES THOMAS RIPLEY, Southport, England. Filed July 11, 1914. Serial No. 850,363. (Cl. 246—16.)

1. In an automatic fog signaling device for railways the combination of a long rocking lever or pivoted rail weighted at the back end, a spring propelled fog signal laying device, an abutment on this fog signal laying device which normally comes in contact with the side of the pivoted rail before the fog signal comes to the rail, but when the pivoted rail is out of normal position is capable of coming forward into the position formerly occupied by the rail, and thus allowing the fog signal and its carrier plate to rest on the rail.



2. A fog signaling device consisting of an oscillating rail actuated from the rear end of the train, a mechanism carrying the fog signal, and attached to the signaling system of the railway, a spring in the mechanism, a bar propelled by the spring normally resting against the pivoted rail except when actuated from the mechanism in the train, the force of the spring tending to cause it to slide in the position previously blocked by the pivoted rail whenever the pivoted rail is oscillated.

3. The improvement in signaling devices, which consists in an arm carried by the last vehicle of the train, a roller carried on said arm, a pivoted rail close to the main rail and weighted so as normally to come in contact with the roller when the train traverses the line alongside a fog signaling device placed outside the rails and connected with the ordinary signaling system, and connections between the pivoted rail and the fog signal device whereby whenever the pivoted rail is depressed a fog signal is placed on the main line.

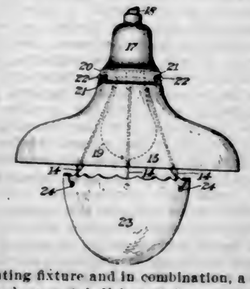
4. The improvement in signaling devices consisting in a pivoted arm fixed to the rear end of the train and adjustable to allow variations in height in the last vehicle, in combination with a fog signaling device placed outside the rails and connected with the ordinary signaling system, and devices between the pivoted arm and the fog signaling device whereby the fog signaling device may be operated by said arm.

5. The improvement in fog signaling devices, which consists in a jointed lever pivoted at the top and capable of adjustment vertically and attached to the last end of the train, a roller at the top end of this lever and a spring giving the roller a considerable play in height above ground, a pivoted rail against which the roller normally comes in contact when the train passes, and a fog signaling device actuated by this rail.

[Claims 6 to 8 not printed in the Gazette.]

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1,228,969. DEVICE FOR SUSPENDING LIGHT-TRANSMITTING BOWLS. JAMES T. ROBB, Bay Shore, N. Y. Filed Feb. 17, 1917. Serial No. 149,157. (Cl. 240—115.)

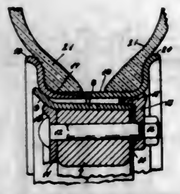


In a lighting fixture and in combination, a shade having an open neck, a metal disk seated upon the top of said neck and having a central opening corresponding with the opening in the neck of the shade, said disk having integral spaced right angled projections extending through the neck of the shade, a lamp socket, a cover for the same fitting over said disk and surrounding the neck of the shade, means for securing said shade to the socket cover, chains each attached at one end to one of said projections at its free end, a bowl, and means connected to the lower end of each chain for connection with said bowl and for suspending the same beneath said shade.



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1,228,970. WHEEL-RIM. JAMES T. RONALD, Seattle, Wash. Filed Apr. 10, 1916. Serial No. 90,270. (Cl. 152—21.)



1. A wheel rim of the class described, which embodies two bands separably joined together by a telescopic joint, and a plurality of self acting locks associated with said two bands and adapted automatically to lock said two bands together in response to the operation of forcibly uniting said two bands to complete said telescopic joint, the different parts of said self acting locks being so disposed that they cannot be unlocked while said two bands are operatively associated with a vehicle wheel, and means directly engaging the operative end of one of said locks to disengage the same from the companion member whereby the rim bands may be separated.

2. A wheel rim of the class described, which embodies two bands separably joined together by a telescopic joint; a plurality of self acting locks associated with said two bands and adapted automatically to lock said two bands together in response to the operation of forcibly uniting said two bands to complete said telescopic joint, the different parts of said self acting locks being so disposed that they cannot be unlocked while said two bands are operatively associated with a vehicle wheel; and a releasing element hinged to one rim band adapted to be moved to engage the lock element carried by the other band to disengage the locks.

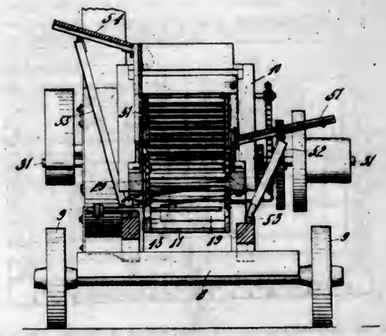
3. A wheel rim including band sections having overlapped adjacent edges, lugs carried by one of the rim bands and arranged in pairs, a plurality of T-shaped lock elements carried by the other band with the heads thereof associated with the pairs of lugs to hold the rim sections assembled, and swinging releasing elements adapted individually to be moved to engage and release the T-shaped elements from the lugs to disconnect the rim bands.

4. A wheel rim including band sections telescopically connected, pairs of retaining elements carried by one band section, members coöperating with each pair of retaining elements carried by the other band section, and means movable to a position between the members of each pair of retaining elements to engage said member to shift the same to inoperative position.

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1,228,971. CORN-HUSKER AND ENSILAGE-CUTTER AND SILO-FILLER. AUGUST ROSENTHAL, West Allis, Wis. Filed Sept. 20, 1912. Serial No. 721,348. (Cl. 130—5.)

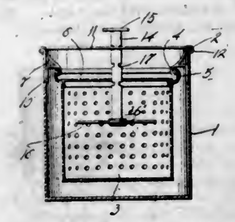
A silo filler comprising a frame, a combined corn husker and shredder mounted at one end of said frame, an ensilage cutter mounted on the other end of the frame, means disposed between the combined corn husker and shredder and the ensilage cutter for conveying the material from the husker and shredder to the ensilage cutter, a feed board mounted on the frame adjacent said conveying means for feeding other material to the conveying means to mix the same with the material from the combined shredder and husker previous to its passage through the



ensilage cutter, means for conveying the mixed fodder away from the ensilage cutter, and means for conjointly operating said husker, shredder, ensilage cutter, and said conveying means.

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1,228,972. WASHBOILER. HENRY WILLIAM SCHEILER, Lincoln, Ill., assignor of one-half to Stephen A. Foley, Lincoln, Ill. Filed Feb. 15, 1916. Serial No. 78,488. (Cl. 68—30.)



1. The combination with a boiler, of a bar supported upon the same, an article container suspended in said boiler, a rod extended through said bar and adapted to be adjusted vertically therein, a plurality of arms arranged in pairs crossing one another and loosely mounted upon the end of said rod, said arms being connected with one another, and a handle formed upon the upper end of said rod.

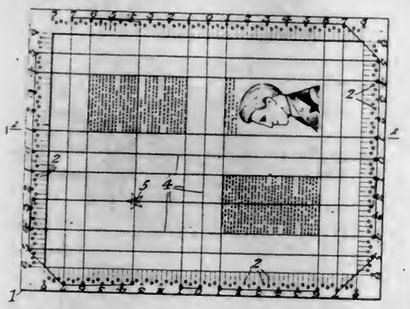
2. The combination with a receptacle, and a second receptacle supported therein and having a removable cover therefor which is provided with a central opening, a bar extending transversely across the first named receptacle and having a slot therein, a supporting rod extending through the openings in the bar and cover, and within the second mentioned receptacle having notches in its longitudinal edges thereof, and members carried by the bar adapted to be engaged with the contents of the last mentioned receptacle, the supporting rod being adapted to be arranged at right angles to the longitudinal center of the slot in the bar whereby certain of the notches in the supporting rod will be engaged with the walls of the slot.

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1,228,973. IMPOSITION-FRAME. CHARLES J. SCHERER, Brooklyn, N. Y. Filed Aug. 2, 1916. Serial No. 112,674. (Cl. 33—184.5.)

2. An imposition frame for use in registering printed forms and the like while upon the type carrying member of a printing press, said device comprising an independent

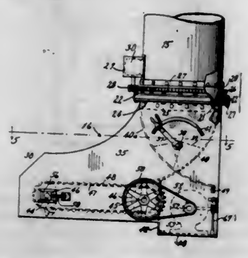
skeleton frame, the sides of which have a plurality of holes therein spaced at intervals, and arranged in diagonal rows removable pins adapted to be received in said holes, and a cord adapted to be stretched between the pins for the purpose described.



3. An imposition device comprising a frame, the sides of which are divided by holes into units of space, split expansible pins adapted to enter said holes and to normally fit loosely therein, and a cord adapted to be inserted between the split portions of a plurality of said pins, said cord serving to expand said pins and to cause them to be held tightly in said holes.

[Claim 1 not printed in the Gazette.]

1,228,974. LOAD-DISTRIBUTER. FREDERICK S. SCHLEGELMILCH, Ashtabula Harbor, Ohio. Filed Aug. 16, 1915. Serial No. 45,631. (Cl. 198—19.)



1. The combination of a chute, a swiveled support positioned at the end of the chute, a laterally extending conveyer carried by said support, and a movable deflector adapted to direct the material from the chute onto the conveyer or away from the conveyer.

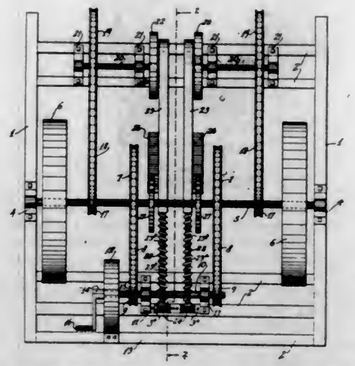
4. The combination of a chute, a support rotatably connected to the lower end thereof, a conveyer belt carried by said support, and a deflector within the support adapted to direct material either onto the belt or in the opposite direction to the outside of the support, said deflector being upwardly concaved and movable about an axis above it.

7. The combination of a chute, a support rotatably mounted at the lower end of the chute, said support having a pair of spaced side walls, a conveyer belt between said side walls, a motor in the lower part of the support between the side walls and connected with the conveyer belt, a deflector between the upper part of the side walls above the motor, said deflector comprising a plate-like member extending substantially across the support concaved outwardly and hanging from a pivot above it, and means for swinging the deflector on such pivot.

10. The combination of a chute, a swiveled support positioned at the lower end of the chute, an impelling belt carried by the support and adapted to receive material from the chute and move the same laterally therefrom, a deflector at the discharge end of the chute movably carried on the support, means for moving the deflector to either of two positions to direct material in opposite directions, a motor beneath said deflector and protected thereby when the deflector is in either position, and means connecting the motor with the belt for driving the same.

[Claims 2, 3, 5, 6, 8, and 9 not printed in the Gazette.]

1,228,975. SPRING-MOTOR. HERMAN F. SCHRAGE, Palatine, Ill. Filed July 14, 1915. Serial No. 39,789. (Cl. 185—37.)



1. A spring motor comprising a frame, a drive shaft carried thereby, a driving spring for said drive shaft, an intermediate shaft, fly wheels carried by said intermediate shaft, work shafs, power transmission mechanism connecting said drive shaft and intermediate shaft, power transmission mechanism connecting said intermediate shaft and said work shafts, eccentrics carried by said work shafts and means connecting said eccentrics and said intermediate shaft whereby power is transmitted directly and intermittently from the latter to the former members.

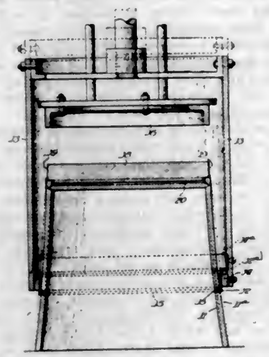
2. A spring motor comprising a frame, a drive shaft carried thereby, a driving spring for said drive shaft, an intermediate shaft, fly wheels carried thereby, work shafts, power transmission mechanism connecting said drive shaft and intermediate shaft, eccentrics carried by said work shafts and means connecting said intermediate shaft and work shafts whereby intermittent movement is imparted to the latter.

3. A spring motor comprising a frame, a drive shaft carried thereby, a driving spring for said drive shaft, an intermediate shaft, fly wheels carried thereby, work shafts, power transmission mechanism connecting said drive shaft and said intermediate shaft, eccentrics carried by said work shafts, telescoping shafts carried by said frame and connected to said eccentrics, springs carried by said telescoping shafts whereby they are yieldingly retained in extended or non-telescoped position and means carried by said intermediate shaft for intermittent engagement with said telescoping shafts to telescope the same.

4. A spring motor comprising a frame, a drive shaft carried thereby, a driving spring for said drive shaft, an intermediate shaft, fly wheels carried thereby, work shafts, power transmission mechanism connecting said drive shaft and said intermediate shaft, eccentrics carried by said work shafts, telescoping shafts carried by said frame and connected to said eccentrics, racks carried by said telescoping shafts, springs carried by said telescoping shafts whereby they are yieldingly retained in extended or non-telescoped position and cam gears fast on said intermediate shaft for intermittent engagement with said racks whereby said telescoping shafts are actuated.



1,228,976. APPLYING HOOPS. HORACE J. SCOTT, Hill City, Minn. Filed Apr. 6, 1916. Serial No. 89,275. (Cl. 147—7.)

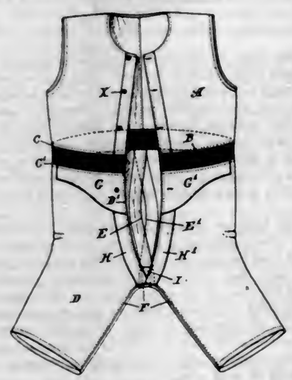


1. The method of hooping pails and the like provided with staves having a hoop-receiving groove, which consists in diametrically contracting the assembled staves of the formed pail, placing the hoop in the groove, and then permitting the pail staves to expand upon the hoop.

5. An improved device for applying endless hoops in circumferential grooves of tapering pails and the like comprising annular compressing means, the inner diameter of said means being no greater than the diameter of the bottom of the groove, means to advance the compressing means progressively from the small end of the pail toward the groove to contract the pail diametrically, and means to withdraw the pail from the action of the compressing means to permit the pail to expand upon the hoop.

[Claims 2 to 4, 6, and 7 not printed in the Gazette.]

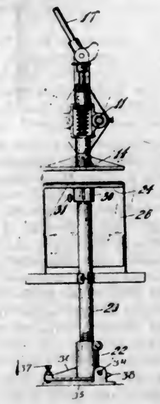
1,228,977. UNION-SUIT. JEREMIAH A. SCRIVEN, New York, N. Y. Filed Apr. 9, 1913. Serial No. 759,919. (Cl. 2—144.)



1. A union suit having a front opening from the neck to the crotch, the edges of said opening normally overlapping each other to an equal extent from the neck to a point below the waist, the lower terminal portion of said edges being positively spaced apart immediately above the crotch whereby the edges of said opening are prevented from overlapping at said point, a rear portion open from the crotch to the waist and a transverse seam to unite said rear portion with said front portion in the crotch.

2. A union suit having a front opening from the neck to the crotch, the edges of said opening normally overlapping each other to an equal extent from the neck to a point below the waist, the lower terminal portion of said edges being positively spaced apart immediately above the crotch being united by seams extending longitudinally of the garment and of said edges whereby the edges of said opening are prevented from overlapping at said point, a rear portion open from the crotch to the waist and a transverse seam to unite said rear portion with said front portion in the crotch.

1,228,978. PLATEN CONNECTION. FROST V. SIMPSON, Milwaukee, Wis., assignor to Kieckhefer Box Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 28, 1914. Serial No. 868,938. (Cl. 93—36.)



1. A press for sealing flaps of paper boxes and the like having a suitably operated plunger, a platen stem, a platen opposed to the plunger and having a socket loosely mounted on the end of the platen stem, means for bringing said platen and said plunger into and out of parallel alined relation, and a pin projecting into the interior of the socket and loosely entering an opening near the end of the stem to permit the platen to tilt and adapt itself to a variation in thickness of the material operated upon.

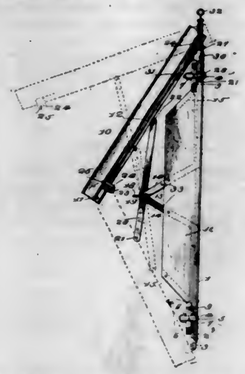
2. A press for sealing flaps of paper boxes and the like, comprising a suitably operated plunger, a pivotally mounted socket, a platen stem adjustably threaded in the socket, a platen opposed to the plunger and provided with a socket loosely mounted on the end of the platen stem, there being openings in the platen stem near the end thereof, and a thumb screw threaded in the socket of the platen and engaging one or another of the openings of the platen stem according to the threaded adjustment of the platen stem and permitting the platen to tilt in any direction to accommodate itself to a variation in thickness of the box flaps.

3. A device for sealing the flaps of fiber boxes and the like, comprising two platens, means for moving said platens into and out of parallel alined relation, yielding means for moving said platens toward each other when alined, and a universal mounting for one of said platens so that pressures may be substantially equally exerted throughout the area of said platens.

1,228,979. ROAD-GRADER. EDWARD W. SMITH, Owensboro, Ky. Filed Feb. 21, 1917. Serial No. 150,146. (Cl. 37—57.)

1. A road grader consisting of a landside, a blade hinged to the end of the landside, means for bracing the blade and forming a foot rest from the land-side, a reinforcing bar

extending longitudinally of and secured on the blade, and a guard rising from said reinforcing bar and approximately equal in length thereto.



2. A road grader comprising a land-side, a blade hinged thereto, a frame consisting of an angle bar secured to the land-side and having its ends converging laterally from the land-side and having a V-shaped central portion projecting from the landside, a platform secured upon the converging ends and central portion of said frame, and a connection between said frame and the blade.

3. In a road grader, the combination of a land-side, hinge lugs at the ends of the land-side, a blade, brackets secured to the rear side of the blade at the ends thereof and having a plurality of lugs projecting therefrom, said lugs being adapted to coact with the hinge lugs of the land-side and being provided with slots extending in the direction of the length of the blade, a hinge pin inserted through the lugs at one end of the land-side and the lugs at the adjacent end of the blade, and means for bracing the blade from the land-side.

[Claims 4 to 6 not printed in the Gazette.]

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1,228,980. STEERING-GEAR FOR MOTOR-VEHICLES. PAUL J. SMITH, Beech Creek, Pa. Filed May 11, 1916. Serial No. 96,910. (Cl. 21—193.)



1. The combination in a motor vehicle, of a body frame, a pair of steerable wheels thereunder, a transversely movable rack-bar supported by said body frame, screw and nut mechanism for controlling said rack-bar, a vertical shaft, a gear segment mounted on said vertical shaft and intermeshing with said rack-bar, a transverse bar centrally secured on said vertical shaft, bars pivoted at the ends of said transverse bar and adapted to control said steerable wheels, and hand wheel-shaft and gear mechanism adapted to operate said screw-and-nut mechanism, substantially as set forth.

2. The combination in a motor vehicle of a body frame, a pair of steerable wheels thereunder, a transversely movable rack-bar supported by said body frame, screw-shaft and nut mechanism for controlling said rack-bar, a vertical shaft, a gear segment mounted on said vertical shaft and intermeshing with said rack-bar, a transverse bar intermediately secured on said vertical shaft, bars pivoted at the ends of said transverse bar and adapted to control said steerable wheels, a steering shaft, a driven-shaft, intermeshing miter-gears on said steering and driven shafts, and intermeshing miter-gears on said driven shaft and said screw-shaft, substantially as set forth.

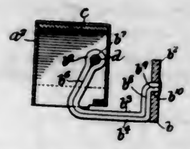
3. The combination in a motor vehicle steering gear, of a steering shaft, a pair of miter-gears loosely mounted on said steering shaft, clutch mechanism on said shaft between said gears adapted to alternately engage said gears, a shaft adapted to be driven thereby, a pair of miter gears of different diameters secured on said driven shaft intermeshing with the miter gears on said steering shaft, and lever and slide mechanism to operate said clutch mechanism, substantially as set forth.

4. The combination in a motor vehicle steering gear, of a steering shaft, a hand wheel secured thereon, a pair of gear wheels of different diameters rotatably secured on said shaft, a clutch ring slidably and non-rotatably secured on said shaft between said gears, a driven shaft, a pair of gear wheels of different diameters non-rotatably secured on said driven shaft and adapted to intermesh with the gears on said steering shaft, and means to slide said clutch ring, substantially as set forth.

5. The combination in a motor vehicle steering gear, of a steering shaft, a hand wheel secured thereon, a miter-gear wheel rotatably secured on said shaft, clutch teeth on the hub of said wheel, a clutch-ring slidably and non-rotatably secured on said shaft, clutch teeth on each end thereof, a bevel gear of less diameter than said miter-gear rotatably secured on said steering shaft under said clutch-ring, clutch teeth on the hub of said bevel gear, a driven shaft, a miter-gear non-rotatably secured thereon and intermeshing with the miter-gear on said steering shaft, a bevel gear pinion non-rotatably secured on said driven shaft and intermeshing with the bevel gear on said steering shaft, and means to slide said clutch-ring on said steering shaft between the gears thereon, substantially as set forth.

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1,228,981. HINGE. CHARLES J. SOSS, New York, N. Y., assignor of one-third to Henry Soss and one-third to Samuel Soss, New York, N. Y. Filed Dec. 27, 1916. Serial No. 139,113. (Cl. 16—5.)



1. A hinge butt or member comprising a plate-shaped head provided with an arm formed from a sheet of metal and comprising a central part at right angles to said head, and having one end portion parallel therewith and flush therewith and ranging transversely thereof and having a shank at right angles thereto secured centrally in said head, said arm being also provided with another end portion at an acute angle to the central portion and provided at its end with a ring or eye formed by bending said sheet of metal.

2. A hinge butt or member comprising a plate-shaped head and an arm comprising a central part at right angles to said head and having one end portion parallel with and flush with said head and secured centrally therein, and another end portion at an acute angle to the central portion and provided at its end with an eye or loop, said arm being formed by bending a sheet of metal centrally to form said eye or loop and then bringing the end portions of said sheet together and bending them successively to form the parts of said arm.

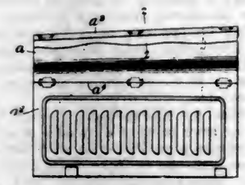
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1,228,982. HINGE. JOSEPH SOSS, New York, N. Y. Filed Nov. 29, 1916. Serial No. 134,015. (Cl. 16—105.)

1. The combination with two parts, one of which is movable and adapted to swing in a predetermined arc, said parts being each provided with flange plates at right angles thereto, of a hinge consisting of separate butt members secured to the inner side of said flange plates and



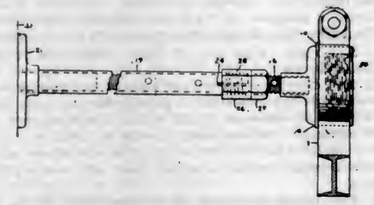
connected by folding and swinging parts movably connected therewith and with each other.



2. A hinge for connecting two parts, said parts being provided with flange plates at right angles thereto, and said hinge consisting of separate butt members adapted to be connected with said flange plates and which are united by separate sets of curved link members pivotally and slidably connected therewith, said butt members when in a closed position being separated by a narrow space to receive said flange plates.

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1,228,983. SHIPPING-JACK. JOSEPH W. SOUTHER, San Francisco, Cal. Filed Feb. 1, 1917. Serial No. 145,982. (Cl. 105—15.)



1. In means for securing an automobile in a freight-car, a socket piece having in opposite sides independent sockets, one of the said sockets being adapted to receive an end of an axle of an automobile, and means substantially in line with said axle and received in the other socket for pressing against said socket piece and against the side of the freight-car.

5. In means for securing an automobile in a freight-car, a frame composed of bars converging at their upper ends, their lower ends being adapted to rest upon the floor of the freight car and a tie bar connecting said converging bars, a socket piece, means for securing the socket piece on the upper end of said frame, said socket piece being threaded on one side to receive the end of an axle of the car and on the other side to receive an end of a brace, a brace, one end of which is received in said socket piece and a foot piece on said other end arranged to rest against a side of the freight-car.

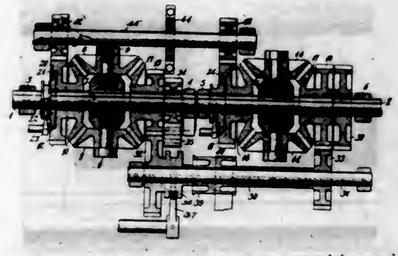
7. In means for securing an automobile in a freight-car, a socket piece for supporting an end of an axle of an automobile and having a socket, an internally threaded tube adapted to be supported at one end against the side of the freight car, a screw screwed in said tube and received in a socket in said socket piece and means for turning the screw.

9. In means for securing an automobile in a freight-car, a socket piece for supporting an end of an axle of an automobile and having a socket, an internally threaded tube adapted to be supported at one end against the side of the freight car, a screw screwed in said tube and received in a socket in said socket piece, the tube being split at the end surrounding the screw, and a clamping nut screwed on said tube for contracting said split end around the screw, and a lock nut screwed on said screw and bearing against said clamping nut.

[Claims 2 to 4, 6, and 8 not printed in the Gazette.]

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1,228,984. SPEED-CHANGING-GEAR MECHANISM. MANSON A. STEWART, Yankton, S. D. Filed Mar. 27, 1914. Serial No. 827,574. (Cl. 74—34.)



1. Speed changing gear mechanism comprising a driving shaft, a driven shaft, two sets of planetary gears respectively revoluble with said shafts, two gears meshing with each of said sets of planetary gears, and operative connections between each gear meshing with one set of planetary gears and a corresponding gear meshing with the other set.

2. Speed changing gear mechanism comprising a driving shaft, a driven shaft, two sets of planetary gears respectively revoluble with said shafts, two gears meshing with each of said sets of planetary gears, and operative connections between each gear meshing with one set of planetary gears and a corresponding gear meshing with the other set, the speed ratios of said operative connections being different.

3. Speed changing gear mechanism comprising a driving shaft, a driven shaft, two sets of planetary gears respectively revoluble with said shafts, two gears meshing with each of said sets of planetary gears, operative connections between each gear meshing with one set of planetary gears and a corresponding gear meshing with the other set, means for preventing rotation of one set of the operatively connected gears in one direction, and means for braking the other set of operatively connected gears.

4. Speed changing gear mechanism comprising a driving shaft, a driven shaft, two sets of planetary gears respectively revoluble with said shafts, two gears meshing with each of said sets of planetary gears, and operative connections between each gear meshing with one set of planetary gears and a corresponding gear meshing with the other set, and means for causing one of the gears meshing with each set of planetary gears to rotate with the shaft that revolves the said planetary gears.

5. Speed changing gear mechanism comprising a driving shaft, a driven shaft, two sets of planetary gears respectively revoluble with said shafts, two gears meshing with each of said sets of planetary gears, and operative connections between each gear meshing with one set of planetary gears and a corresponding gear meshing with the other set, and means for causing one of the gears meshing with one set of planetary gears to rotate with the shaft that revolves the said planetary gears.

[Claims 6 to 10 not printed in the Gazette.]

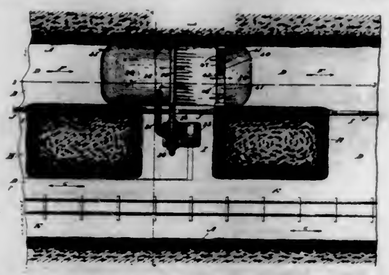
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1,228,985. MEANS FOR PREVENTING EXPLOSIONS IN MINES. AUDLEY HART STOW, Mayheury, W. Va. Filed Feb. 28, 1910. Serial No. 546,420. (Cl. 98—28.)

1. A method of preventing explosions in mines comprising saturating the air for the intake of the mine with watery moisture to produce, when such air reaches the cooler spaces of the mine, a condition of fog by moisture deposition around the bituminous dust particles causing them to adhere together and to the walls of the mine spaces.

2. A method of preventing explosions in mines comprising heating the air for the intake of the mine and saturating said air with watery moisture to produce, when such air reaches the cooler spaces of the mine, a

fog by moisture deposition around the bituminous dust particles causing them to adhere together and to the walls of the mine spaces.



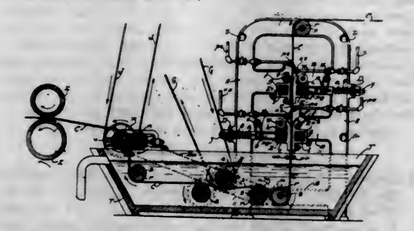
3. As a means for preventing explosions in mines the combination with the air intake means of a mine of means for producing a condition of moisture saturation in the air entering the mine, whereby when the said moisture-laden air reaches the cooler spaces of the mine a condition of fog is produced, securing a deposition of moisture around the bituminous dust particles and causing them to adhere together and to the walls of the mine spaces.

4. As a means for preventing explosions in mines the combination with the air intake means of a mine of means for producing a condition of moisture saturation in the air entering the mine and means for heating such air to increase its moisture content, whereby when the said moisture-laden air reaches the cooler spaces of the mine a condition of fog is produced, securing a deposition of moisture around the bituminous dust particles and causing them to adhere together and to the walls of the mine spaces.

5. As a means for preventing explosions in mines the combination with the air intake means of a mine of means for producing a condition of moisture saturation in the air entering the mine and means for discharging steam into said air, whereby when the said moisture-laden air reaches the cooler spaces of the mine a condition of fog is produced, securing a deposition of moisture around the bituminous dust particles and causing them to adhere together and to the walls of the mine spaces.

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1,228,986. MACHINE FOR WATERPROOFING FIBROUS MATERIALS. ALFRED O. TATE, Montreal, Quebec, Canada, assignor to Tate Electrolytic Waterproofing Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Mar. 19, 1915. Serial No. 15,444. (Cl. 204—1.)



1. A machine for making fibrous materials non-absorbent embracing one or more pairs of stationary electrodes of relatively large contacting surface area, in combination with means for applying an electrolytic agent on opposite sides of the material being treated as it is being advanced therethrough.

2. A machine for making fibrous materials non-absorbent embracing a plurality of electrodes of relatively large contacting surface area, in combination with means for subjecting the material to a different electrolytic agent on each side thereof, while it is being advanced therethrough.

3. A machine for making fibrous materials non-absorbent embracing a plurality of pairs of electrodes of relatively large contacting area, and a source of electrical energy having its opposing poles successively connected thereto in alternating order, together with means for subjecting the material to a different electrolytic agent on each side as it is successively advanced between the pairs of electrodes.

4. A machine for waterproofing fibrous materials embracing one or more pairs of electrodes of relatively large contacting surface area, combined with means for spraying the same with one or more electrolytic agents as it is advanced therethrough, together with a source of electrical energy having its poles connected to the opposite ends of said electrodes.

5. A machine for making fibrous materials non-absorbent embracing pairs of electrodes of relatively large contacting surface area, combined with means for spraying or moistening the material with one or more electrolytic agents as it is advanced therethrough, together with a source of electrical energy, and connections therefrom for varying the direction of current flow through the successive pairs of electrodes.

[Claims 6 to 18 not printed in the Gazette.]

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1,228,987. METHOD OF WATERPROOFING FIBROUS MATERIALS. ALFRED O. TATE, Montreal, Quebec, Canada, assignor to Tate Electrolytic Waterproofing Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Oct. 27, 1916. Serial No. 127,997. (Cl. 204—1.)

1. The described method or process of waterproofing fibrous materials consisting in permeating the mass thereof with a saponaceous liquid and a metal acetate and electrolytically incorporating therein a metal palmitate and a metal hydroxid which coact in the fibers of the material being treated to make them of a non-capillary nature.

2. The described method of waterproofing fibrous materials, consisting in impregnating the mass with a saponaceous liquid and an aluminum acetate, and subjecting the material to the action of an electric current between the electrodes, one of which is soluble.

3. The described method of waterproofing fibrous materials, consisting in first impregnating the mass with a saponaceous liquid, then wetting with aluminum acetate simultaneous with the subjection of the material to the action of an electric current between electrodes, one of which is soluble.

4. The described method of waterproofing fibrous materials, consisting in first impregnating the mass with a saponaceous liquid, then wetting with an aluminum acetate, and simultaneously electrolytically depositing aluminum hydroxid in the fibers between electrodes, one of which is formed of aluminum.

7. The method of waterproofing fibrous materials, which consists in impregnating said materials with a solution of sodium palmitate and aluminum acetate to precipitate aluminum hydrate and palmitate; and subjecting said impregnated fabric to the action of an electric current between aluminum electrodes to produce an excess of aluminum hydroxid and to drive the same into the fibers of said fabric, substantially as described.

[Claims 5 and 6 not printed in the Gazette.]

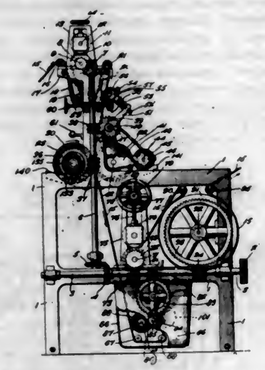
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1,228,988. MACHINE FOR WATERPROOFING FIBROUS MATERIALS. ALFRED O. TATE, Montreal, Quebec, Canada, assignor to Tate Electrolytic Waterproofing Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Oct. 27, 1916. Serial No. 127,998. (Cl. 204—5.)

1. In a machine of the kind described, means for first wetting the fabric to be treated with a saponaceous compound and means for subsequently applying a reagent adapted to combine with the saponaceous compound and



for simultaneously subjecting the fabric to the action of an electric current.



2. A machine for effecting the non-absorptivity of fibrous materials, comprising a reagent bath, means for passing the material through said bath, spraying means adapted to wet the material after the emergence from the bath, a plurality of rollers one of which is electrolytically soluble, said spraying means being adapted to wet the material at the time it is subjected to the action of the electrolyzed rollers.

3. A machine for effecting the non-absorptivity of fibrous materials, comprising means for first wetting the fabric to be treated with a saponaceous compound and for then passing it between a plurality of roller electrodes, spraying means in juxtaposition to said electrodes adapted to wet the material with a second reagent at the same time that the material is subjected to the electrolying action of the rollers.

4. A machine for effecting the waterproofing and the non-absorptivity of fibrous materials, comprising means for first impregnating said material with a reagent solution containing one of the waterproofing constituents, then subjecting said material to pressure to force said solution to penetrate the interstices of said material, in combination with spraying means adapted to wet the material with the other waterproofing constituent and with means for conveying the material between a pair of rollers forming a part of an electric circuit, said spraying means being so directed that the precipitate formed by the uniting of the constiutents occurs simultaneously with the action of the electric current upon the material.

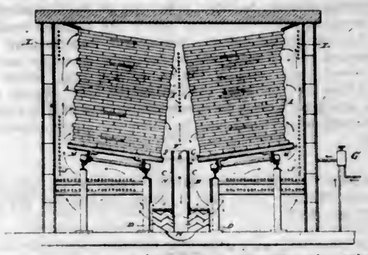
5. A machine for effecting the non-absorptivity of fibrous materials, comprising means for first wetting said material with one solution, then with a second solution, a pair of rotating electrodes between which said wet material is arranged to pass, one of said electrodes being covered with an absorbent pad, in combination with means for washing said material after it leaves said electrodes and for drying the washed material.

[Claims 6 and 7 not printed in the Gazette.]

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1,228,989. DRY-KILN FOR DRYING LUMBER AND OTHER MOISTURE-BEARING SUBSTANCES. HARRY DONALD TIEMANN, Madison, Wis. Filed Dec. 18, 1915. Serial No. 67,615. (Cl. 34—3.) (Dedicated to the public.)

1. In a dry kiln consisting of a closed chamber, the following sequence of parts: heating pipes arranged so as to produce an ascending column of heated air along one side of the pile of lumber; a pile of lumber so arranged that the heated air may pass freely through the pile in cooling, in a downward direction; said lumber being so piled as to leave a space on the opposite side of the pile through which the cooled air may descend; a vertical flue near the bottom of the pile, into which the cooled descending column of air may enter; a spray of water in this flue; means for regulating the temperature of this spray of water; baffle plates near the bottom of

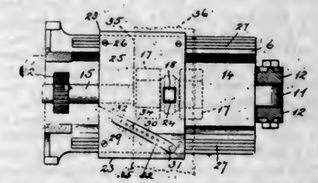


this flue for separating the mist from the air, substantially as described.

[Claims 2 and 3 not printed in the Gazette.]

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1,228,990. SAW LEVELING AND STRETCHING MACHINE. GEORGE S. TYLER, Baltimore, Md., assignor of forty-nine one-hundredths to George H. Welfel, Baltimore, Md. Filed Feb. 6, 1917. Serial No. 146,914. (Cl. 76—27.)



2. In a band-saw rolling machine, the combination with lower and upper rolls, of means for adjusting the rolls one with respect to the other; a gage-plate interposed in a plane between the rolls and a movable gage device on the gage-plate.

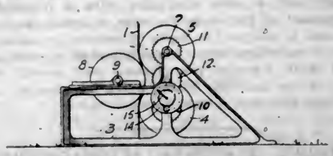
6. In a band-saw rolling machine, the combination with lower and upper rolls, of means for adjusting the rolls one with respect to the other; a gage-plate interposed between the rolls and having a slot through which one of said rolls projects; a gage-bar pivoted at one end with respect to the gage-plate and provided with a series of perforations, and a gage-pin for engaging one perforation at a time of the gage-bar.

8. A gage-plate for band-saw rolling machines comprising a plate having a flat surface with a slot therein to receive a roll; a gage-bar on the gage-plate and a gage-device to engage the gage-bar.

[Claims 1, 3 to 5, and 7 not printed in the Gazette.]

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1,228,991. MEASURING APPARATUS. DAN W. UBER, Sheffield, Pa. Filed Aug. 8, 1916. Serial No. 113,752. (Cl. 33—125.)

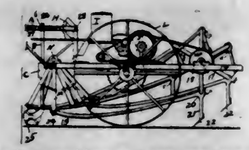


A measuring device for ascertaining the depth of wells or the like, by measuring the rope or cable of the well, and comprising a supporting frame adapted to be arranged above the well, a pair of similar rollers of the same diameter journaled in the frame, one above the other, and with their axes in the same vertical plane, a pressing roller journaled between the axes of the measuring rollers

and laterally with respect to the vertical plane through the axes, and at a distance less than the aggregate length of the radii of the said pressing roller and one of the measuring rollers, to cause a portion of the periphery of the pressing roller to extend inside the common tangent of the measuring rollers, means for constraining the measuring rollers to rotate in the same direction and at the same speed, said means comprising gear wheels on the rollers and an idler connecting the gear wheels, said idler and gear wheels being of the same diameter and an indicating device in connection with the lower measuring roller.

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1,228,992. HOEING-MACHINE. OTTO FRED ULLMAN, Severy, Kans. Filed Mar. 1, 1917. Serial No. 151,871. (Cl. 97—53.)



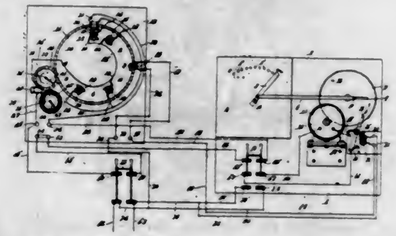
1. In a hoeing machine, a frame, an engine mounted thereupon, a main shaft housed in said frame, master wheels mounted on said shaft, a crank shaft housed in said frame, said shaft having a plurality of looped arms; gears driven by said engine for imparting rotary movement to said main and crank shafts; a shaft housed in said frame and a plurality of hingedly mounted rocker arms attached to said shaft; a series of hoe arms, each comprising a handle pivotally attached to one of said rocker arms, an elbow boxing engaging a looped arm of the crank shaft and a holder depending therefrom and a hoe blade attached to said holder, each elbow boxing of each of said hoe arms being adapted to follow the revolution of said crank shaft whereby the series of hoe blades are brought consecutively to an operative hoeing position adapted to enter and cultivate ground in the manner as specified; and a lever operating with a perpendicular shaft housed to the frame to raise or lower the rear of said frame to control the depth of penetration of said hoe blades.

2. In a hoeing machine, a frame, an engine mounted thereupon, a main shaft housed in said frame, master wheels mounted on said shaft, a crank shaft housed in said frame, said shaft having a plurality of looped arms; gears driven by said engine for imparting rotary movement to said main and crank shafts; a shaft housed in said frame and a plurality of hingedly mounted rocker arms attached to said shaft; a series of hoe arms, each comprising a handle pivotally attached to one of said rocker arms, an elbow boxing engaging a looped arm of the crank shaft and a holder depending therefrom and a hoe blade attached to said holder, each elbow boxing of each of said hoe arms being adapted to follow the revolution of said crank shaft whereby the series of hoe blades are brought consecutively to an operative hoeing position adapted to enter and cultivate ground in the manner as specified; and a lever operating with a perpendicular shaft housed to the frame to raise or lower the rear of said frame to control the depth of penetration of said hoe blades; a swiveling caster wheel attached to said perpendicular shaft, whereby the operator may control the direction of the machine during operation thereof; and a handle bar attached to said frame.

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1,228,993. ELECTRICAL AUTOMATIC CONTROL MECHANISM. MAX G. VANDY, Chicago, Ill. Filed Nov. 6, 1916. Serial No. 129,864. (Cl. 161—27.)

2. In an automatic control mechanism of the class described, the combination with a member to be moved, of a main electric circuit; actuating means interposed in said circuit adapted, when said circuit is closed, to be operated to effect actuation of said member; means for automatically making and breaking said circuit at predetermined intervals, said means comprising a clockwork; a plurality of normally open switches interposed in said circuit adapted, through the medium of said clockwork, to be closed at predetermined intervals; an additional normally closed switch interposed in said circuit; means adapted, upon operation of said actuating means to a predetermined extent, to open said additional switch; and electrical means for subsequently releasing said additional switch for the return thereof to closed position, substantially as described.



4. In an automatic control mechanism of the class described, the combination with a member to be moved, of a main electric circuit; actuating means interposed in said circuit adapted, when said circuit is closed, to be operated to effect actuation of said member; means for automatically making and breaking said circuit at predetermined intervals, said means comprising a clockwork; a plurality of normally open switches interposed in said circuit adapted, through the medium of said clockwork, to be closed at predetermined intervals; an additional normally closed switch interposed in said circuit; means adapted, upon operation of said actuating means to a predetermined extent, to open said additional switch; a normally open supplemental circuit; means interposed in said supplemental circuit adapted, upon closing of said supplemental circuit to release said additional switch to permit return of the same to closed position; and a switch controlled by said clockwork for closing said supplemental circuit at predetermined intervals, substantially as described.

5. In an automatic control mechanism of the class described, the combination with a member to be moved, of a main electric circuit; actuating means interposed in said circuit adapted, when said circuit is closed, to be operated to effect actuation of said member; means for automatically making and breaking said circuit at predetermined intervals, said means comprising a clockwork; a plurality of normally open switches interposed in said circuit adapted, through the medium of said clockwork, to be closed at predetermined intervals, an additional normally closed switch interposed in said circuit; means adapted, upon operation of said actuating means to a predetermined extent, to open said additional switch; a normally open supplemental circuit; means interposed in said supplemental circuit adapted, upon closing of said supplemental circuit to release said additional switch to permit return of the same to closed position; means for closing said supplemental circuit at predetermined intervals, said means comprising a normally open switch interposed in said supplemental circuit; and a hand on said clockwork for closing said last mentioned switch, substantially as described.

6. In an automatic control mechanism of the class described, the combination with a member to be moved, of an electric circuit, means interposed in said circuit adapted, when said circuit is closed, to effect actuation of said member; means for automatically making and breaking said circuit at predetermined intervals, said means comprising a clockwork; a plurality of switches interposed in said circuit; hands on said clockwork adapted to actuate said switches; additional switch mechanism interposed in said circuit and operable by said clockwork



to close and open the same at longer intervals than said before mentioned switches; and indicator hands and cooperating time graduations, arranged for coöperation with said last mentioned additional switch mechanism, substantially as described.

[Claims 1, 3, and 7 not printed in the Gazette.]

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1,228,994. SAFETY-CATCH. JOHN C. WACHA, Providence, R. I., assignor to George H. Cahoone Company, a Corporation of Rhode Island. Filed Dec. 18, 1916. Serial No. 137,525. (Cl. 24—158.)

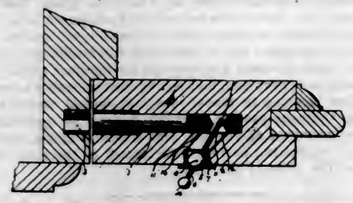


1. In a pin, the combination with the body and pin tongue, of a sleeve fixed to the body in the path of the tongue provided with a longitudinal slot and a vertical slot extending from the first slot, a helical spring within the sleeve, a tube slidably and rotatably mounted in the tube within the spring, and a thumb piece on the tube registering in the first slot.

[Claims 2 to 4 not printed in the Gazette.]

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1,228,995. BOLT MECHANISM. DANIEL WALTER, Hove, England. Filed Mar. 20, 1916. Serial No. 85,517. (Cl. 16—64.)



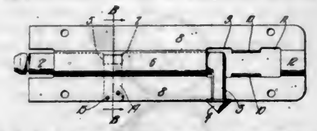
1. The combination with a door or the like, a bolt slidably mounted therein, of an operating lever consisting of a spherical intermediate portion, and diametrically oppositely extending arms projecting from said spherical portion, a cylindrical casing fitted into the face of the door and having a semi-spherical socket therein, the spherical portion of said lever pivotally mounted in said socket, one arm of said lever projecting inwardly and loosely engaging said bolt, the other arm projecting through the face of the door, a plate slidably mounted on the door and having a slot through which said last mentioned arm projects, said slot having perpendicular branch slots at each end, whereby the operating lever may be held in locked or unlocked position.

2. The combination with a slidable bolt, of an operating lever consisting of a spherical body portion rotatably mounted on a pivot, said pivot held in a cylindrical casing having a semi-spherical socket to receive said body portion of the lever, said lever having diametrically oppositely projecting arms, one arm engaging said bolt, the other arm projecting outwardly and forming a handle to operate the lever and spring means engaging the bolt engaging arm to hold same against normal shocks.

3. A bolt mechanism for doors comprising a bolt slidably mounted in the door and a passage extending from the bolt to the face of the door, a bushing fitted in said passage and having a guideway on its outer face, said bushing also having a semi-spherical socket therein and within the door body, an operating lever consisting of a spherical intermediate portion pivotally mounted within said socket and diametrically oppositely extending arms projecting from the spherical portion, one arm of said lever projecting inwardly and loosely engaging said bolt, the other arm projecting through the outer end of the bushing to constitute a handle, and a locking plate mounted in the guideway at the outside of said bushing to hold said handle in locked or unlocked position.



1,228,996. SLIDE-BOLT. ARTHUR A. WALTERS, Richmond, Melbourne, Victoria, Australia, assignor to Charles Jenkin Parnham, Melbourne, Victoria, Australia. Filed Mar. 3, 1917. Serial No. 152,301. (Cl. 16—65.)



1. In a lock, the combination, with a bolt casing having a transverse slot; of a bolt slidable in said casing, to project its outer end into, or withdraw it from, a keeper; said bolt being provided with a lateral handle which extends outwardly through said slot, and with a circumferential groove having a cam-shaped bottom wall; and a detent for coöperation with said groove adapted to automatically snap thereinto when the bolt is in its projected position, to lock said bolt against withdrawal; the cam wall of said groove being adapted to directly and automatically force said detent out of the groove when said bolt is rotated by manipulation of its handle while still maintaining its fully-projected position.

2. In a lock, the combination, with a bolt casing having front and read spaced, parallel, transverse slots and a pair of outwardly-projecting, longitudinal spurs connecting the same; of a bolt slidable in said casing to project its outer end into, or withdraw it from, a keeper; said bolt being provided with a lateral handle which extends outwardly of the casing and is engaged, in its projected and retracted positions, in the front and rear slots respectively, and being also provided with a circumferential groove having a cam-shaped bottom wall; and a detent for coöperation with said groove adapted to snap automatically therein when the bolt is in its projected position, to lock said bolt against withdrawal; the cam wall of said groove being adapted to force said detent out of the groove when said bolt is rotated by manipulation of its handle, said handle having a limited lateral movement in said front slot so as to bring said groove out of registration with said detent and thereby permit the withdrawal of the bolt.

3. In a lock, the combination, with a bolt casing having front and read spaced, parallel, transverse slots and a pair of outwardly-projecting, longitudinal spurs connecting the same; of a bolt slidable in said casing to project its outer end into, or withdraw it from, a keeper; said bolt being provided with a lateral handle which extends outwardly of the casing and is engaged, in its projected and retracted positions, in the front and rear slots respectively, and being also provided with a circumferential groove located intermediate the ends thereof and having a cam-shaped bottom wall; and a detent disposed within said casing for coöperation with said groove, adapted to snap automatically therein when the bolt is in its projected position, to lock said bolt against withdrawal; the cam wall of said groove being adapted to force said detent out of the groove when said bolt is rotated by manipulation of its handle, said handle having a limited lateral movement in said front slot so as to bring said groove out of registration with said detent and thereby permit the withdrawal of the bolt.

[Claims 4 and 5 not printed in the Gazette.]

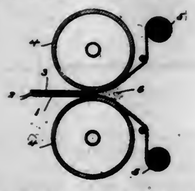
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1,228,997. LINOLEUM PRODUCT AND PROCESS OF MAKING THE SAME. JOSEPH W. WEAR, Philadelphia, Pa., assignor to Thomas Potter, Sons & Co., Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 24, 1917. Serial No. 144,147. (Cl. 154—40.)

1. The insole comprising a sheeted linoleum composition body, coatings of water-proof paint adhering to the faces thereof, and coverings of woven fabric adhering to said coatings.

2. The process which consists in passing sheets of fabric having water-proof coatings and linoleum composi-

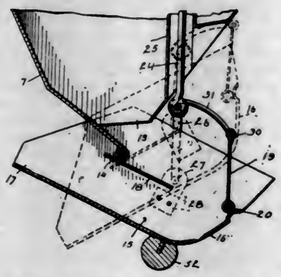
tion between heated calendering rolls with the coatings of said fabrics in contact with the composition fed between the sheets, and heating and pressing the sheets and composition so as to sheet the latter, soften the coatings and cause the same to adhere to the composition.



3. The process which consists in applying to a sheet of linoleum composition a fabric having a coating of waterproof paint in contact with the composition, subjecting the coating to sufficient temperature to soften it, and pressing the fabric and composition so as to cause the coating to adhere to the composition.

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1,228,998. ACETYLENE-GAS GENERATOR. FRANK A. WEBB, Protection, Kans. Filed Apr. 20, 1915. Serial No. 22,621. (Cl. 48—46.)

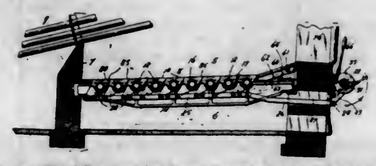


1. An acetylene gas generator including a carbid holder having an outlet in one of its sides near its lower end, a valve located below the lower end of said holder and extending in two directions beyond said side and having a receiving and a discharging end, means establishing a pivotal connection between said valve and holder at a point to one side of said outlet, said valve normally occupying an inclined position with its receiving end lowermost and on that side of the holder in which the outlet is located, means for raising said receiving end in the direction of said side of the holder to discharge the contents of the valve, a plate carried by said valve for cutting off the supply of carbid when said valve is in discharging position, a vertical rear wall hinged at its lower end to the receiving end of the valve, and means for supporting the upper end of said wall and for holding said wall against movement bodily in the direction of said side of the holder during the movement of the valve into discharging position whereby to prevent the packing of the carbid between said rear wall, said side of the holder and said plate so as to insure a free and complete discharge of the carbid from the valve.

2. An acetylene gas generator including a carbid holder having an outlet in one of its sides near its lower end, a valve located below the lower end of said holder and extending in two directions beyond said side and having a receiving and a discharging end, means establishing a pivotal connection between said valve and holder at a point to one side of said outlet, said valve normally occupying an inclined position with its receiving end lowermost and on that side of the holder in which the outlet is located, means for raising said receiving end in the direction of said side of the holder to discharge the contents of the valve, a plate carried by said valve for shutting off the supply of carbid when said valve is in discharging position, a vertical rear wall hinged at its lower end to the receiving end of said valve, and means connected to said raising means and to the upper end of said rear wall, said last named means supporting the upper end of said wall and holding said wall against movement bodily in the direction of said side of the holder during the movement of the valve into discharging position, whereby to prevent the packing of carbid between said rear well, said side of the holder and said plate so as to insure a free and complete discharge of the carbid from the valve.

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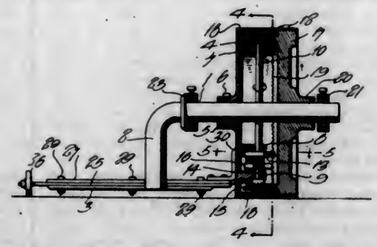
1,228,999. SHAKING-GRATE FOR FURNACES. HERMAN R. WEBER, Denver, Colo., assignor to The Economy Furnace Company, Denver, Colo., a Corporation of Colorado. Filed Sept. 13, 1915. Serial No. 50,293. (Cl. 126—176.)



In a grate the combination of grate bars, side and intermediate supporting bars in which the grate bars are journaled, the intermediate bar being composed of a body member having sockets open at the top to receive the grate bar journals, and a removable filler member applied to the top of the body member and having part sockets for the grate bar trunnions, and means for removably securing the filler member in place, said last named means comprising U-straps passing through registering openings in the two members of the bar, and a retaining pin passing through registering perforations formed in the body member and the arms of the strap.

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1,229,000. MOWING - MACHINE. WALTER F. WELCH, Jamaica, N. Y. Filed Sept. 21, 1916. Serial No. 121,449. (Cl. 56—19.)



1. A mowing machine comprising a horizontal shaft having a downwardly directed inner end, superimposed fixed and movable cutters carried by said end, a disk secured on the shaft and having bearings projecting toward the outer end thereof, a pair of alined shafts rotatably mounted in said bearings and extending transversely in respect to the other shaft, driving pinions on the outer ends of said alined shafts, mutilated gears on the inner ends thereof, a rack bar carried by the inner end of the movable cutter and adapted to be alternately engaged by said mutilated gears, and a driving wheel rotatably mounted on the shaft and having a gear ring meshing with said driving pinions.

2. A mowing machine comprising a horizontal shaft having a downwardly directed inner end, superimposed fixed and movable cutters carried by said end, a disk secured on the shaft and having upper and lower bearings projecting toward the outer end thereof, said shaft having



a bearing opening alined with said bearings, an operating shaft passing through said bearings and said opening, a driving pinion on the upper end of said shaft and a mutilated gear on the lower end thereof, an additional bearing projecting from the lower portion of the disk toward the outer end of the first named shaft, a stub shaft rotatably mounted in said additional bearing and alined with said operating shaft, a driving pinion on the lower end of said stub shaft, and a mutilated gear on the upper end thereof, a rack carried by the inner end of the movable cutter and adapted to be alternately engaged by the two mutilated gears, and a driving wheel rotatably mounted on the shaft and having a gear ring meshing with the two driving pinions.

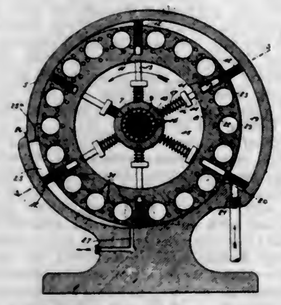
3. A mowing machine comprising a horizontal shaft having a downwardly directed inner end equipped on its lower terminal with an elongated shoe plate extending transversely of the line of travel of the machine, superimposed fixed and movable cutters mounted on said shoe plate, a wheel rotatably mounted on the horizontal portion of the shaft, and driving connections between said wheel and the movable cutter for reciprocating the latter.

4. A mowing machine comprising fixed and movable sickle bars coöperating with each other, a rack carried by one end of the movable sickle bar, a pair of alined shafts having mutilated gears on one end for alternate engagement with said rack to reciprocate said movable sickle bar, pinions on the other ends of said alined shafts, and a driving wheel having a gear ring meshing at diametrically opposite points with said pinions for simultaneously driving them in opposite directions.

5. A mowing machine comprising a wheel supported structure, a fixed and a movable sickle bar carried thereby, a rack bar secured to the movable sickle bar and having teeth on one side, a pair of mutilated gears for alternate engagement with said teeth to reciprocate the removable sickle bar, and means operable from one or more wheels of the aforesaid structure for simultaneously driving both gears in opposite directions.

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1,229,001. ROTARY INTERNAL - COMBUSTION ENGINE. HUGO C. WELL, New York, N. Y., assignor of forty one-hundredths to Frederick A. B. Meinhardt, New York, N. Y. Filed Sept. 19, 1914. Serial No. 862,493. (Cl. 123—16.)



1. In an engine of the class described, a rotor having chambers extending through the periphery of the rotor and air passages spaced from the chambers and extending through the sides of the rotor, a casing in which the rotor is disposed and provided with a chamber having an end wall and an exhaust, means for charging the chambers of the rotor with a combustible mixture, means for igniting the combustible mixture in the chambers in the rotor adjacent the chamber of the casing and ports in the casing with which the ends of the air passages in the rotor register periodically with the rotation of the rotor.

2. In an engine of the class described, a rotor having chambers which extend through the walls of the rotor, the rotor having portions separating the chambers from each other, there being guideways in the rotor, a casing in which the rotor is disposed and provided with a chamber having an abutment wall, with which the chambers in the rotor communicate, pistons in the guideways, means for moving the pistons into the chamber in the casing, means for charging the chambers of the rotor with a combustible mixture, means for igniting the combustible mixture in the chambers of the rotor adjacent the chamber in the casing and a port in the casing with which the chambers in the rotor communicate for the purpose specified.

3. In an engine of the class described, a stator having an abutment, a rotor having a chamber extending through an end of the rotor, a piston on the rotor disposed adjacent the chamber, means at the end of the rotor for igniting the combustible mixture in the chamber, the rotor having a channel permitting the escape of the gases of combustion from the rotor chamber to the space between the piston and the abutment, the adjacent surfaces of the stator and rotor being eccentric at one side for compressing between them a combustible mixture which may flow through the channel in the rotor to the rotor chamber.

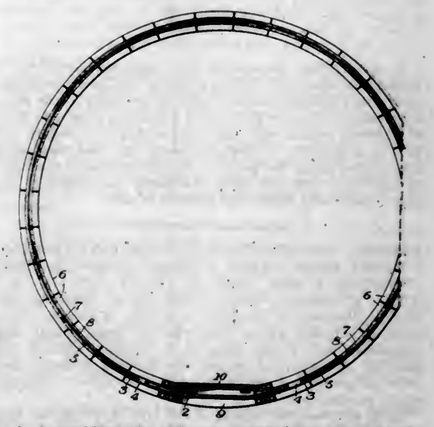
4. In an engine of the class described, a rotor having chambers extending through its periphery, a casing in which the rotor is disposed and provided with a chamber having an end wall and an exhaust, means for charging the chambers of the rotor with a combustible mixture, there being a groove in the casing extending from the chamber therein, and affording communication with the chambers in the rotor before they reach the chamber in the casing with the rotation of the rotor, and a piston on the rotor disposed periodically at the chamber in the casing to be acted on by expanding gases abutting against the end wall of the chamber in the casing.

5. In an engine of the class described, a stator having an abutment, a rotor having a chamber extending through the end of the rotor, a piston on the rotor disposed adjacent the chamber, and means at the end of the rotor for igniting the combustible mixture in the chamber, the rotor having a channel permitting the escape of the gases of combustion from the rotor chamber to the space between the piston and the abutment.

[Claims 6 and 7 not printed in the Gazette.]

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1,229,002. COMBINED TIE AND LADDER-RUNG MEMBER FOR SILOS AND THE LIKE. GILBERT B. WICKERSHAM, Pittsburgh, Pa., assignor to Diamond Forging & Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 1, 1914. Serial No. 864,524. (Cl. 72—6.)



1. A combined tie and rung member for silos and the like, comprising a piece of metal pipe having plugged end

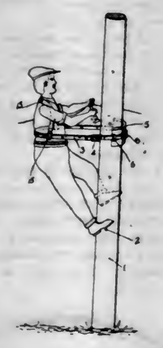
portions bent at an angle to the axis of the pipe to form a circular connecting boss, the cross sectional area of the metal at the end portions being substantially equal to the cross sectional area of the pipe and having flattened portions between said projections and the intermediate portion of the pipe, substantially as described.

2. A combined tie and rung member for silos and the like, comprising a piece of hollow metal pipe having plugs inserted in its end portions and said end portions bent at an angle to the axis of the pipe to form a circular connecting boss, the cross sectional area of the metal at the end portions being substantially equal to the cross sectional area of the pipe, and having flattened portions between said projections and the body of the pipe, the end portions of the pipe carrying said projections being also bent in a generally curved direction, substantially as described.

3. A combined tie and rung member for silos and the like, comprising a piece of metal pipe having plugged end portions bent at an angle to the axis of the pipe, the cross sectional area of the metal at the end portions being substantially equal to the cross sectional area of the pipe, and having flattened portions between the projections and the intermediate portion of the pipe, said flattened portions extending under the plugs, and the bottom thereof being approximately flush with the bottom of the central portion, the upper layer of each flattened portion at the ends being bent upon itself underneath the plug; substantially as described.

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1,229,003. CLIMBING-HARNESS. CHRISTIAN WINTER, Oskaloosa, Iowa. Filed Apr. 11, 1916. Serial No. 90,351. (Cl. 227—8.)



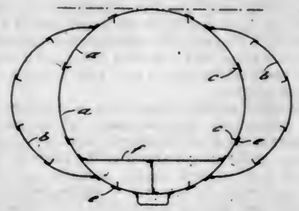
In a climbing harness of the character described, a supporting strap, a shoe over which said strap is fitted, said shoe extending substantially transversely of the pole, a plurality of lugs or projections extending from said shoe at different points, said lugs being arranged to engage the pole at a plurality of angles whereby the shoe may more freely slide along the pole and antifriction balls arranged in said lugs, said balls being constantly in position to engage a pole with which the harness is used.

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1,229,004. CONSTRUCTION OF SUBMARINE VESSELS. HAROLD EDGAR YARROW, Scotstoun, Glasgow, Scotland. Filed Aug. 1, 1916. Serial No. 112,612. (Cl. 114—16.)

1. In a submarine vessel, of the type in which the hull is approximately in the form of a tube of annular cross section, external plates connected by longitudinal and transverse butt straps adapted to sustain, without the addition of transverse frames, the bending moments and external pressure to which the vessel is exposed, substantially as described.

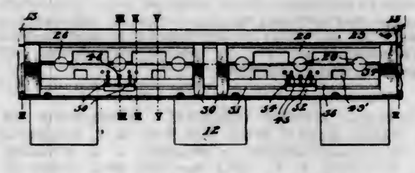
2. In a submarine vessel, of the type in which the hull is approximately in the form of a tube of annular cross section, external plates connected by longitudinal and transverse butt straps adapted to sustain, without the addition of transverse frames, the bending moments and external pressure to which the vessel is exposed, the ends of at least some of the plates being bent inward in order to provide for the attachment of the various fittings to the interior of the vessel without the provision of rivets passing through the hull, substantially as described.



3. In a submarine vessel, of the type in which the hull is approximately in the form of a tube of annular cross section, external plates connected by longitudinal and transverse butt straps which are flanged at each end and are adapted to sustain, without the addition of transverse frames, the bending moments and external pressure to which the vessel is exposed, substantially as described.

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1,229,005. RAIL-JOINT. JOHN ZAHURANEC, Newcomer, Pa. Filed Sept. 15, 1916. Serial No. 120,267. (Cl. 239—11.)



1. A device of the class described comprising in combination with rails having perforations therethrough, frusto-conical pins projecting through the said perforations, a securing plate having an open side positioned in contact with the said webs and having depending flanges provided with outwardly flaring semi-circular receiving-sockets overlying the said pins, socket plates having outwardly flaring sockets underlying the said pins and flanges and retaining wedge strips securely positioned beneath the said socket plates.

2. A device of the class described comprising in combination with rails having perforations therethrough, frusto-conical pins projecting through the said perforations, a securing plate having an open side positioned in contact with the said webs and having depending flanges provided with outwardly flaring semi-circular receiving sockets overlying the said pins, socket plates having outwardly flaring sockets underlying the said pins and flanges, retaining wedge strips securely positioned beneath the socket plates, spring-pressed locking pawls carried by the lower faces of the said socket plates, the upper face of the said wedge strips being provided with toothed portions having paths of movement transversely of the said pawls and releasing means for the said pawls.

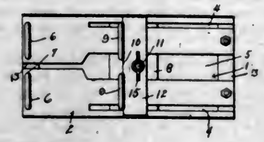
3. A joining means for rail ends comprising a fish plate engaging the webs of said rails at one side thereof, a securing plate having a cut-away tread portion, and engaging the opposite side of the said webs and having an open side adjacent thereto and being further provided with a base flange overlying the adjacent base flanges of the said rail ends, depending flanges carried by the said securing plate and having outwardly flaring receiving sockets terminating at the said open side of the said plate, headed securing pins extending through the said fish plate and rail webs and having frusto-conical portions projecting through the opening of the said securing plate and positioned within the said flange sockets, and retaining means for the said pins removably carried by the said securing plate.

4. A joining means for rail ends comprising a fish plate engaging the webs of said rails at one side thereof, a securing plate having a cut-away tread portion, and engaging the opposite side of the said webs and having an open side adjacent thereto and being further provided with a base flange overlying the adjacent base flanges of the said rail ends, depending flanges carried by the said securing plate and having outwardly flaring receiving sockets terminating at the open side of the said plate, headed securing pins extending through the said fish plate and rail webs and having frusto-conical portions projecting through the opening of the said securing plate and positioned within the said flange sockets, outwardly arranged spaced strengthening ribs upon the said securing plate, the said securing plate being provided with a mounting base having a central enlargement arranged between the said ribs and inclined upwardly toward the said open side of the securing plate, corner posts carried by the said mounting base and connecting with the said securing plate, flanges marginally of the open side of the said securing plate, and a retaining plate and a strip for the said pins removably mounted upon the said faces.

5. A joining means for rail ends comprising a fish plate engaging the webs of said rails at one side thereof, a securing plate having a cut-away tread portion, and engaging the opposite side of the said webs and having an open side adjacent thereto and being further provided with a base flange overlying the adjacent base flanges of the said rail ends, depending flanges carried by the said securing plate and having outwardly flaring receiving sockets terminating at the open side of the said plate, headed securing pins extending through the said fish plate and rail webs and having frusto-conical portions projecting through the opening of the said securing plate and positioned within the said flange sockets, outwardly arranged spaced strengthening ribs upon the said securing plate, the said securing plate being provided with a mounting base having a central enlargement arranged between the said ribs and inclined upwardly toward the said open side of the securing plate, corner posts carried by the said mounting bases and connected to the said securing plate, a socket plate positioned between the said ribs and beneath the said flanges and arranged with receiving sockets for the said pins at points beneath the sockets of the said flanges and having end notched portions in abutting engagement with the said posts, a tapered wedge strip flatly positioned upon the said base beneath the said socket plate and having corner notches in engagement with the said posts when the device is operatively positioned, and automatic locking means between the said socket plate and wedge strip.

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1,229,006. TIE-UP STAND FOR MAIL. JOHN A. ZERWER, Alma, Tex. Filed July 12, 1916. Serial No. 108,910. (Cl. 211—36.)

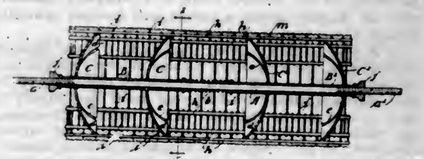


1. In a device of the class described, the combination with a base including a pair of verically spaced plates formed from a single sheet of metal, of a pair of speced guides extending upwardly from one end thereof, a plate mounted between the first mentioned pair of plates, spaced guides carried by said last mentioned plate, and means for arresting the movement of the guides in each direction.

[Claim 2 not printed in the Gazette.]



1,229,007. DANDY-ROLL. HERBERT ALBRO, West Springfield, Mass. Filed Mar. 1, 1917. Serial No. 151,707. (Cl. 92—48.)

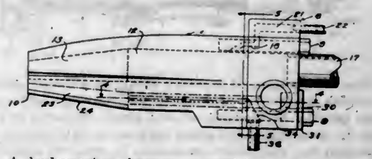


1. In a dandy roll, an expansible and contractible open-work frame comprising circular concavo-convex spring plates having radial slits extending from their outer edges toward but not entirely to, their centers, forming segmental sections having arc shaped outer edges, sets of longitudinal wires secured to the arc shaped edges of the sections, series of partially encircling wires, those of a given series being secured to a corresponding set of the longitudinal wires and being extended for overlapping and unattached relations with longitudinal wires of adjacent sets, and means for varying the degree of the convexity of the spring plates, to consequently vary their diametrical dimension and that of the dandy roll frame.

[Claims 2 to 4 not printed in the Gazette.]

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1,229,008. HYDROCARBON-BURNER. FRANK A. ALLINGER, Los Angeles, Cal., assignor of one-third to Christian Volz and one-third to Karl A. Lott, Los Angeles, Cal. Filed Dec. 27, 1915. Serial No. 68,664. Renewed Feb. 6, 1917. Serial No. 146,984. (Cl. 158—74.)



1. A hydrocarbon burner, comprising a body member formed with a tubular mixing chamber for fuel, means for delivering steam eccentrically to said tubular chamber, an expansion chamber connected with said mixing chamber, an air chamber with its outlet adjacent the outlet of said expansion chamber, said air chamber so arranged that the air discharged therefrom will follow a path inclined and meeting the path of fuel discharged from said expansion chamber, and steam ports connected to said air chamber to deliver steam thereinto and induce a flow of air therethrough.

2. A hydrocarbon burner, comprising a body member formed with complementary tubular mixing chambers arranged parallel to each other, means for delivering steam eccentrically to said tubular chambers, an expansion chamber with which said mixing chamber connects, an air chamber adjacent said expansion chamber and having an outlet disposed contiguous to said expansion chamber outlet, and directing air at an inclination to the fuel discharged.

3. A hydrocarbon burner, comprising a body member formed with complementary tubular mixing chambers arranged parallel to each other, means for delivering steam eccentrically to said tubular chambers, an expansion chamber with which said mixing chamber connects, an air chamber adjacent said expansion chamber and having an outlet disposed contiguous to said expansion chamber outlet, and directing air at an inclination to the fuel discharged, and steam ports connected to said air chamber to deliver steam thereinto and induce a flow of air therethrough.

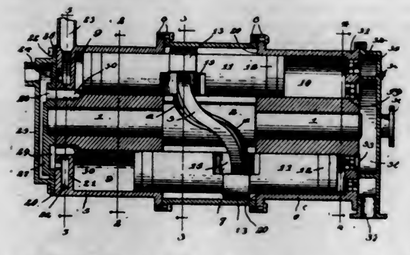
4. A hydrocarbon burner, comprising a body member formed with complementary tubular mixing chambers arranged parallel to each other, means for delivering oil to

said chambers, means for delivering steam eccentrically to each of said mixing chambers and in opposite directions, an expansion chamber communicating with said mixing chambers, an air chamber below said expansion chamber, said air chamber having a bottom wall inclined upwardly toward the expansion chamber.

5. A hydrocarbon burner, comprising a body member formed with complementary tubular mixing chambers arranged parallel to each other, means for delivering oil to said chambers, means for delivering steam eccentrically to each of said mixing chambers and in opposite directions, an expansion chamber communicating with said mixing chambers, an air chamber below said expansion chamber, said air chamber having a bottom wall inclined upwardly toward the expansion chamber, and steam ports connected to said air chamber to deliver steam thereto and induce a flow of air therethrough.

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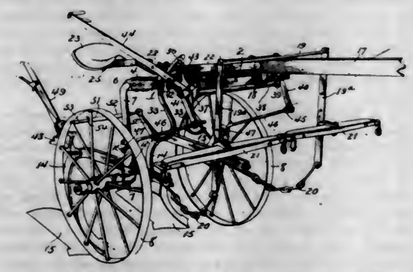
1,229,009. PUMPING-ENGINE. JESSE H. ALLISON, El Paso, Tex., assignor of twenty-five one-hundredths to Joseph F. Allison and ten one-hundredths to Edward Dugan, El Paso, Tex. Filed June 7, 1915. Serial No. 32,691. (Cl. 121—25.)



The combination of a rotary shaft, an annular series of cylinders encircling said shaft and having their major axes parallel to the axis of said shaft, reciprocatory pistons in said cylinders, shoes carried by said pistons and arranged for oscillatory movement in relation thereto on axes perpendicular to the path of movement of the pistons, said shoes being formed with diametrical slots, and a cam on said shaft having a spiral projecting thread designed and arranged in such coöperative relation to the slots of the shoes of said pistons that the cam and pistons alternately act to produce a rotary motion of the shaft and a reciprocatory movement of the pistons.

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1,229,010. CULTIVATOR. RUDOLPH J. ALTGELT, Buenos Aires, Argentina, assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Feb. 26, 1915. Serial No. 10,786. (Cl. 97—35.)



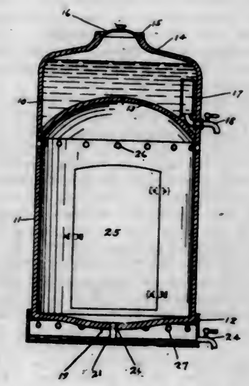
1. In a wheeled cultivator, the combination with a frame, arch axle members, and wheels, of cultivator beams attached directly to and supported by the upright portions of said arch axle members, a rock shaft mounted on the frame and provided with arms, connections between each of said arms and the upright portions of the respective arch axle members, an operating lever secured to said rock shaft, and means for locking said lever.

2. In a wheeled cultivator, the combination with a frame, crank axle members separately mounted on said frame, and wheels receiving the journal portions of said crank axle members, of a beam attached directly to and supported by the upright portion of each crank axle member, a rock-shaft provided with arms, rods connected with the respective crank-axle members, adjustable connections between each of said rods and one of the arms of the rock-shaft, and means for operating said rock shaft.

[Claims 3 to 9 not printed in the Gazette.]

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1,229,011. COMBINATION FOOD AND WATER COOLER. WILLIAM N. AMSBARY, Los Angeles, and THALES D. STEWART, Ocean Park, Cal. Filed Apr. 19, 1916. Serial No. 92,226. (Cl. 45—134.)



1. A food cooler comprising a cylindrical chamber made of porous walls, said chamber having a convex top and a dished bottom, a chamber supporting pan, a water sealed outlet port leading from the bottom of said chamber to the bottom of said pan, a lateral door in said chamber, a series of ventilating openings circumferentially arranged near the top of said chamber, a series of ventilating openings arranged in the lateral walls of said pan and below the bottom of said chamber, a drainage port in said pan and a source of water in contact with said convex top.

2. A food cooler comprising a chamber made of porous walls, said chamber having a convex top and a dished bottom, a chamber supporting pan, an outlet port leading from said bottom to said pan, a lateral door in said chamber, a series of ventilating openings arranged near the top of said chamber and a series of ventilating openings in said pan below the bottom of said chamber and a source of water in contact with the convex top of said chamber.

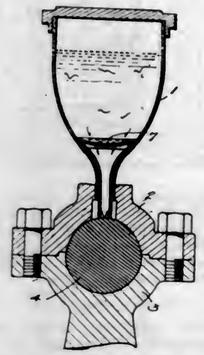
3. A food cooler comprising a chamber made of porous walls, a water compartment on the top thereof and separated therefrom by the porous top of said chamber, a series of ventilating openings arranged in the top of said chamber, said chamber having a dished bottom provided with a water sealed outlet port at its lowest point, a closed chamber supporting said first named chamber and provided with ventilating passages whereby the outer face of said bottom is cooled.

4. A food cooler comprising a cooling chamber made of porous walls, a water compartment in the top thereof and separated therefrom by a porous partition wall, said chamber being provided with a series of ventilating openings and having a bottom made of porous material provided with a water sealed outlet port, a closed chamber supporting said cooling chamber and provided with ventilating passages whereby the outer face of said bottom is cooled.

5. A food cooler comprising a cooling chamber having porous side walls and a porous bottom, a water compartment arranged at the top of said chamber, a water sealed outlet port in said bottom and a support for said chamber having ventilating passages near said bottom whereby the outer face of said bottom is cooled.

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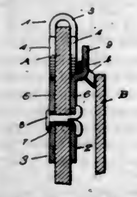
1,229,012. GREASE-CUP. HORACE E. ARGO, Oak Park, Ill. Filed Mar. 12, 1917. Serial No. 154,241. (Cl. 184—69.)



A device of the character specified, adapted for use with oil cups for oiling bearings for shafts and the like, and comprising a funnel-shaped member having a concave perforate top, the flaring portion of the said member being adapted to engage within the cup at the bottom thereof and to support the funnel-shaped member with the lower end thereof touching the part to be oiled, said lower end being notched to form a series of teeth or points for touching the object to be lubricated.

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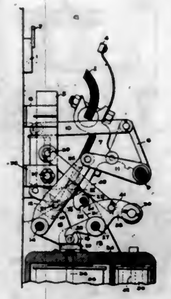
1,229,013. GARMENT-SUPPORTER. GEORGE W. ARMSTRONG, Salem, Oreg. Filed Feb. 21, 1917. Serial No. 150,237. (Cl. 24—73.)



A device of the class described comprising an inverted U-shaped member adapted to be hooked over the waist band of a pair of trousers and to have its sides disposed on opposite sides of the same, said sides of said member being composed of a pair of straps, the corresponding straps of each pair being integrally united with each other at their upper ends by comparatively wide portions forming the bend of said member, the lower ends of the straps of each pair being integrally united with each other by enlarged portions having registering apertures therein, a rivet having its ends disposed in said apertures, said rivet being adapted to extend through the waist band of the trousers to prevent the member from becoming disengaged with the same, and an upwardly extending hook integrally formed with the upper edge of the enlarged portion which unites the lower ends of the straps constituting the side of said member to be disposed upon the inner side of the waist band of the trousers to receive one of the supporting tabs of a nether garment.

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1,229,014. FIELD-CONTROL SWITCH. WINFIELD A. ATWOOD, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 28, 1913. Serial No. 776,282. (Cl. 175—281.)



1. In a control device, the combination with a main switch, actuating means for closing said switch, latching means for normally holding said switch closed, a pivotally mounted tripping member, and means for moving said tripping member about its pivot into a position to release said latching means and permit said switch to open, of an auxiliary switch, and a member pivotally connecting said tripping member and said auxiliary switch for always closing said auxiliary switch as said tripping member moves to tripping position prior to the release of said latching means and for opening said auxiliary switch prior to the closing of said main switch.

2. In a control device, the combination with a main switch, a pivotally mounted actuating member for closing said switch, latching means for normally holding said switch closed, and a pivotally mounted tripping member, means for moving said member in one direction about its pivot to trip said latching means, said actuating member acting to move said member in the other direction to return said member to initial position, and a connection between said auxiliary switch and said tripping member for closing said auxiliary switch prior to the release of said main switch and for opening said auxiliary switch before the closing of said main switch.

3. The combination with a main switch, an independently movable actuating member for closing said switch, means for moving said actuating member to switch closed position, latching means for holding said switch in closed position, and an independently movable tripping member for releasing said latching means, of an auxiliary switch, and means mechanically connecting said tripping member and said auxiliary switch for always closing said auxiliary switch before said tripping member reaches into tripping position.

4. The combination of two switches, actuating means for closing one of said switches, latching means holding the switch closed, a tripping member pivotally movable to trip said latching means, and a link pivotally connected between said tripping member and the other of said switches for transmitting the thrust of said tripping member to said other switch and closing it before said tripping member trips said latching means.

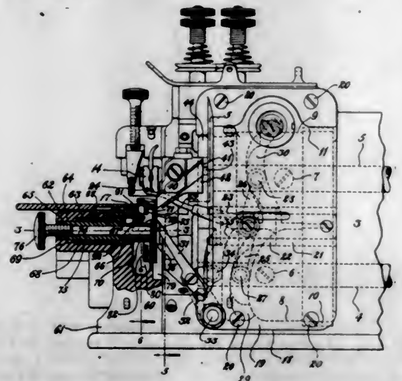
5. The combination with a double pole switch, an actuating member movable to close said switch, a latching toggle for holding said switch closed, and a separately mounted tripping member movable into position to collapse said toggle and permit said switch to open, of an auxiliary switch mounted between the poles of said double

pole switch, and a connection between said tripping member and said auxiliary switch for closing said auxiliary switch prior to the tripping of said double pole switch.

[Claims 6 to 15 not printed in the Gazette.]

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1,229,015. OVERSEAMING-MACHINE. SAMUEL W. AVIS, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a Corporation of Connecticut. Filed Oct. 19, 1915. Serial No. 56,713. (Cl. 112—6.)



1. In a sewing machine including feeding mechanism and trimming mechanism, an apertured feed element, a cutting element, and a stationary support for the cutting element extending laterally through the aperture in the feed element.

2. In a sewing machine including feeding mechanism and trimming mechanism, an apertured feeding element and an apertured cutting element, the feeding element extending into the aperture in the cutting element, and the cutting element extending laterally into the aperture in the feeding element.

3. In a sewing machine including feeding mechanism and trimming mechanism, an apertured feeding element, a cutting element, and an apertured support for the cutting element, the feeding element extending into the aperture in the support and the cutting element extending laterally into the aperture in the feeding element.

4. In a sewing machine including feeding mechanism and trimming mechanism, an apertured feeding element, a cutting element, a carrier for the cutting element, extending laterally through the aperture in the feeding element, and means for supporting the carrier on opposite sides of the feeding element.

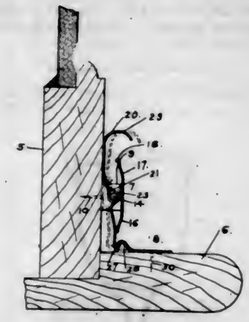
5. In a sewing machine including feeding mechanism and trimming mechanism, an apertured feeding element, a cutter blade, a support for the cutter blade extending through the aperture in the feeding element, means on one side of the feeding element for clamping the cutter blade and means on the other side for actuating the clamping means.

[Claims 6 to 20 not printed in the Gazette.]

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1,229,016. WINDOW LOCK AND LIFTER. MILTON M. BAGBY, Denver, Colo. Filed July 8, 1916. Serial No. 108,144. (Cl. 16—53.)

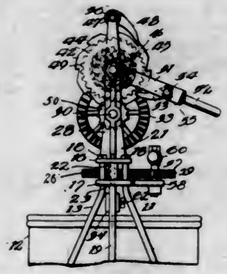
A window locking and raising device, comprising an integrally formed housing secured to the window frame, the upper and lower sides of said housing being open, a fulcrum pin horizontally disposed in said housing, a vertically disposed locking member extending through said housing, said locking member having a yoke intermediate its extremities in which said fulcrum pin is received, an interlocking member on the window casing, the lower extremity of said locking member having a hook thereon adapted to engage with the said interlocking member for locking the window in closed position, the upper extremity of said locking member being curved to form a part adapted to be engaged by the finger of the operator for actuating the locking member out of locking relation with



said interlocking member and for raising the said window, and the side of said housing having a depending wing extending longitudinally with said locking member and engageable by the lower part of said locking member for sustaining said locking member in position to be engaged by the interlocking part.

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1,229,017. CHURN-OPERATING DEVICE. JESSE R. BALLENGER, Inman, S. C. Filed Nov. 25, 1916. Serial No. 133,410. (Cl. 74—54.)



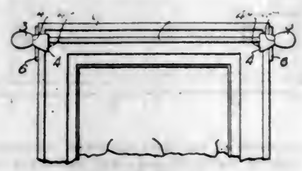
1. In a device of the class described, a support, a main driving shaft mounted for rotation relatively to said support, ratchet devices in spaced relation and mounted for rotation on said shaft, a stay uniting said ratchet devices, a spring disposed between said ratchet devices and connected at one end to the shaft and at the other end to said ratchet uniting stay, a yoke device including side portions in spaced relation mounted to oscillate on said shaft externally of the ratchet devices and held from lateral displacement thereby, and a pawl member pivoted between the sides of said yoke and engaging both of the ratchet devices.

[Claims 2 and 3 not printed in the Gazette.]

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1,229,018. CURTAIN-HANGER. CLARENCE BESAW, Hammond, N. Y. Filed Aug. 30, 1916. Serial No. 117,760. (Cl. 156—23.)

1. A curtain hanger including a pole having threaded ends, blocks slidably mounted upon the end portions of the pole and terminating at their inner ends in enlarged and vertically disposed square faces adapted to engage and confine the curtain, the outer ends of the blocks being rounded, knobs threaded upon the ends of the curtain pole and engaging the rounded outer ends of the blocks, horizontally disposed inwardly curved arms projecting rearwardly from the blocks, and vertically elongated jaws carried by the ends of the curved arms for engagement with the sides of a window casing to support the pole in operative position.



2. A curtain hanger including a pole, blocks applied to the ends of the pole, one of the blocks being slidable thereon, means for forcibly moving the said slidable block toward the opposite block, rearwardly projecting arms pivotally connected to the blocks, vertically elongated jaws carried by the arms and adapted to engage opposite sides of a window casing, and springs acting upon the jaws to hold them in operative position.

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1,229,019. AUTOMATIC SAFETY GATE-CLOSING DEVICE FOR FREIGHT-ELEVATORS. MATHEW F. BIERSDORF, Los Angeles, Cal. Filed Jan. 11, 1917. Serial No. 141,792. (Cl. 187—59.)



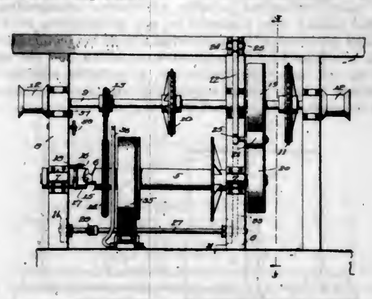
1. The combination with an elevator gate having a counterbalancing weight, of a lock adapted to be operated by the elevator for locking the weight down and holding the gate up, said lock comprising a housing adapted to be mounted in a pocket in the elevator shaft wall adjacent the weight well, a bell crank pivotally mounted in the housing, a locking dog pivotally mounted to one leg of the bell crank and adapted to swing through the wall of the housing into the weight well and hold the weight from going up, a roller plate pivotally mounted in the housing and carrying a pin for slidingly engaging the other leg of the bell crank and extending through the opposite side of the housing from the locking dog, a roller carried by the outer end of the roller plate, and a cam upon the elevator for engaging the roller; so that when the elevator is in position with the cam in engagement with the roller, with the gate elevated and the weight down, the locking dog will hold the weight down and hold the gate elevated.

[Claim 2 not printed in the Gazette.]

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1,229,020. GEARING FOR HOISTING APPARATUS. LEE JACKSON BLACK, Beaumont, Tex. Filed May 11, 1916. Serial No. 96,819. (Cl. 74—59.)

1. The combination of a driven shaft, clutch members on the driven shaft, one of said clutch members having a sliding and a driving connection with the shaft; and the other clutch member being loose on the shaft, a driving shaft, a driving connection between the driving shaft and the last-mentioned clutch member, and means for transmitting motion to the driven shaft at a higher rate of speed than the motion of the driving shaft, said means comprising pulleys on the driven shaft and the driving shaft, a friction wheel engageable with the pulleys, and means for controlling the friction wheel, the clutch members having coöperating parts to disengage said members when the driven shaft rotates at a higher rate of speed than the driving shaft.



2. The combination of a driven shaft, clutch members on the driven shaft, one of said clutch members having a sliding and a driving connection with the shaft, and the other clutch member being loose on the shaft, a driving shaft, a driving connection between the driving shaft and the last-mentioned clutch member, and means for transmitting motion to the driven shaft at a higher rate of speed than the motion of the driving shaft, said means comprising pulleys on the driven shaft and the driving shaft, a friction wheel engageable with the pulleys, and means for controlling the friction wheel, the clutch members having coöperating parts to disengage said members when the driven shaft rotates at a higher rate of speed than the driving shaft.

3. The combination of a driven shaft, a driving shaft, main and auxiliary driving connections between the shafts, the auxiliary driving connection imparting to the driven shaft a speed greater than the speed of the driving shaft, and clutch members included in the main driving connection, one of said clutch members having a sliding and a driving connection with the driven shaft, the contiguous portions of the clutch members being inclined to effect an automatic disengagement when the driven shaft rotates at a higher rate of speed than the driving shaft.

4. The combination of a driven shaft, clutch members on said shaft, one of the clutch members having a sliding and a driving connection with the shaft, and the other clutch member being loose on the shaft, a driving shaft, a driving connection between the driving shaft and the last-mentioned clutch member, and means for transmitting motion to the driven shaft at a higher rate of speed than the motion of the driving shaft, the clutch members having coöperating parts to disengage said members when the driven shaft rotates at a higher rate of speed than the driving shaft.

5. The combination of a driven shaft, clutch members on said shaft, one of the clutch members having a sliding and a driving connection with the shaft, and the other clutch member being loose on the shaft, a driving shaft, a driving connection between the driving shaft and the last-mentioned clutch member, and means for transmitting motion to the driven shaft at a higher rate of speed than the motion of the driving shaft, the contiguous portions of the clutch members being inclined to effect an automatic disengagement when the driven shaft rotates at a higher rate of speed than the driving shaft.

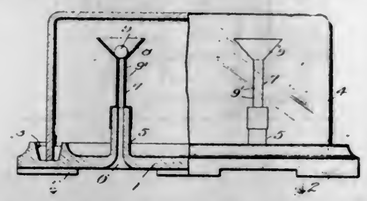
[Claim 6 not printed in the Gazette.]

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1,229,021. INSECT-TRAP. JEAN R. VAN J. BLINCK, Tampa, Fla., assignor of one-half to William Gebhard Brorein, Tampa, Fla. Filed Nov. 9, 1915. Serial No. 60,556. Renewed Mar. 1, 1917. Serial No. 151,813. (Cl. 43—22.)

1. An insect trap comprising a base of glass provided with legs and a groove extending completely around the

edge portion of its upper surface, a plurality of integral projections extending upward from the portion of said upper surface bounded by said groove, said projections being each provided with an opening extending through the base, perforated metallic extensions terminating in funnel-shaped tops mounted on said projections, each extension provided with an opening adapted to communicate with the funnel of its respective extension and the opening in its respective projection, a metallic sealing ball mounted in each funnel-shaped top, and a cover mounted in said groove and adapted to be sealed therein.



2. An insect trap comprising a base provided with legs and having a groove extending completely around the edge portion of its upper surface, a plurality of projections extending upward from the portion of said base bounded by said groove and provided with an opening extending through the base, extensions terminating in funnel-shaped tops mounted in said projections, each extension provided with an opening adapted to communicate with the funnel of its respective extension and the opening in its respective projection, a sealing ball in said funnel-shaped top, and a cover mounted in said groove and adapted to be sealed therein.

3. An insect trap comprising a base provided with legs and having a groove extending completely around the edge portion of its upper surface, a plurality of projections extending upward from the portion of said base bounded by said groove, and provided with an opening extending through the base extensions terminating in funnel-shaped tops mounted on said projections, each extension provided with an opening adapted to communicate with the funnel of its respective extension and the opening in its respective projection, a sealing member in said funnel-shaped top, and a cover mounted in said groove and adapted to be sealed therein.

4. An insect trap comprising a base having a peripheral groove and a plurality of integral hollow projections on its upper surface, hollow extensions terminating in funnel-shaped portions, the hollows in said projections and extensions registering, the hollows of said projections extending through the base, ball sealing members in said funnel-shaped projections, and a cover mounted in said groove.

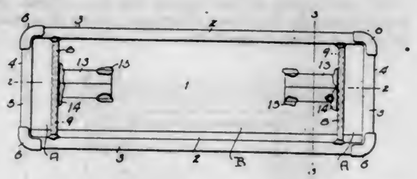
5. An insect trap comprising a base having a peripheral groove and a plurality of hollow projections in its upper surface, hollow extensions terminating in funnels, the hollows in said projections and extensions registering, the hollows of said projections extending through the base, sealing members in said funnels, and a cover mounted in said groove.

[Claims 6 to 8 not printed in the Gazette.]

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1,229,022. FLOWER-BOX. THOMAS P. BOLGER, Gloucester, Mass. Filed Apr. 16, 1915. Serial No. 21,645. (Cl. 47—41.)

1. A substantially rectangular flower box formed with opposed ends and opposed sides and having a length considerably greater than its width, vertically disposed walls arranged within the ends of the box and associated with the ends thereof to provide vertical drainage and air chambers which open through the top of the box and extend entirely from the top to the bottom of the box, and longitudinally extending arched drainage strips applied to the bottom of the box and communicating with the before mentioned vertical drainage and air chambers at the bottom thereof.

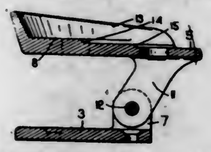


2. A receptacle of the class described comprising side, end and bottom walls, the side and end walls being of uniform depth, a partition associated with the receptacle and arranged therein, the said partition being disposed parallel with respect to one of the end walls and being spaced therefrom to provide an open ended water chamber which extends the full width and depth of the receptacle and opens through the top thereof, and a conducting member arranged within and extending along the bottom of the receptacle, said conducting member communicating with the lower end of the before mentioned water chamber and serving to distribute water to the receptacle.

[Claim 3 not printed in the Gazette.]

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1,229,023. FOOT-REST FOR AUTOMOBILE-ACCELERATORS. GEORGE W. BOYNTON, Boston, Mass. Filed Jan. 23, 1917. Serial No. 144,038. (Cl. 74—81.)



In a foot rest for automobile accelerators, the combination with a base piece constructed to be secured to the floor boards of an automobile, of a foot-supporting member pivoted to the base and having a shape to support the foot from the heel to the ball thereof, the heel portion of said support having end and side walls to hold the heel in position and also having two heel-positioning shoulders situated at different distances from said end wall.

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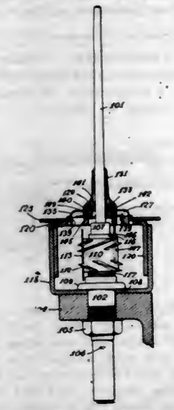
1,229,024. DENTAL INSTRUMENT. RAYMOND V. BRANDT, Germania, Iowa. Filed Jan. 14, 1916. Serial No. 72,098. (Cl. 32—10.)



In a dental instrument structure, the combination, of a handle having a reduced portion projecting longitudinally from one end of the same, an enlarged head formed upon the terminal of said reduced portion and having a concaved outer surface, said handle provided with an annular recess extending inwardly from one end and surrounding the inner end of said reduced portion, a sleeve adjustably connected to and inclosing said reduced portion, the inner end of said sleeve extending into said annular recess, a bit, a spherical head formed upon said bit and seated in said sleeve, said enlarged head adapted for clamping engagement with said spherical head for holding said bit in adjustable positions, said spherical head having a portion of its surface roughened for preventing accidental movement of said bit with respect to said reduced portion.



1,229,025. SPINDLE AND POWER-TRANSMITTING MECHANISM THEREFOR. HENRY L. BROWN, New York, N. Y., assignor to Brown Spin-Wright Company, New York, N. Y., a Corporation of New York. Filed Apr. 8, 1912. Serial No. 689,285. (Cl. 74—29.)



1. Power-transmitting mechanism; comprising a plurality of rotatable members; a device carried by one of said members and operable at times by centrifugal force to connect said members substantially positively for corotation in each direction, according to the direction of rotation of the driving member, another of said members having a portion to coöperate with said device in the formation of said connection, and serving also to control the operation of said connecting device and to throw it off upon arrest of one of said members.

2. Power transmitting mechanism; comprising a plurality of rotatable members, and an intermediate clutching member operable at times by centrifugal force to connect said rotatable members co-actuatively, said instrumentalities being constructed and arranged to permit the arrest of one of said rotatable members, and thereby to withdraw said clutching member from the action of centrifugal force, releasing said other rotatable member, regardless of the direction of rotation of said members.

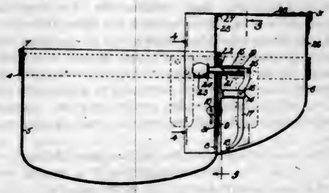
3. Power-transmitting mechanism; comprising a plurality of rotatable members recessed to receive a clutching member operable at times by centrifugal force to connect said rotatable members co-actuatively, and clutching members in said recesses, said clutching members being retirable into said recessed portion to avoid said connective operation when it is desired to check one of said rotatable members, said retirement being effective in each direction of rotation of said members.

4. Power-transmitting mechanism; comprising an inner rotatable member having a recess; a clutching member in said recess; and an outer rotatable member; said instrumentalities being constructed and arranged to permit said clutching member to connect said rotatable members co-rotatively under the action of centrifugal force when said members are rotated, and to cause retirement of said clutching member into non-connective position within said recess when the rotation of said inner member is checked, said retirement being effective in each direction of rotation of said members.

5. Power-transmitting mechanism; comprising an inner rotatable member having a recess; a ball in said recess; and an outer rotatable member; said instrumentalities being constructed and arranged to permit said ball to connect said rotatable members co-rotatively under the action of centrifugal force when said members are rotated, and to cause retirement of said ball into non-connective position within said recess when the rotation of said inner member is checked.

[Claims 6 to 9 not printed in the Gazette.]

1,229,026. SLOW-FEED MANGER. JOHN INGERSON BROWN, Westfield, Mass. Filed Dec. 9, 1916. Serial No. 135,992. (Cl. 119—53.)



A manger of the character described, comprising a bowl, a container for feeding material into the bowl, a stirring member pivotally mounted in the container and arranged with one end adjacent the discharge section of the container, a spring for normally holding the stirring member in a predetermined position, and a bar connected with the stirring member extending into the bowl, said bar being operable against the action of said spring whereby the stirring member is moved in one direction by the bar and in the opposite direction by the spring.

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1,229,027. BROOM. CHARLES BRUDSIG, Winnipeg, Manitoba, Canada, assignor to John L. Penner, Minneapolis, Minn. Filed Nov. 16, 1916. Serial No. 131,753. (Cl. 15—19.)

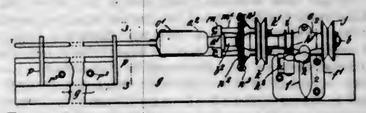


1. A refillable broom comprising a handle, a block secured thereto, a band secured to said block and encircling the same to form a socket, the lower edges of the side walls of said band having loops with rounded inner faces formed therein, a brush having a head fitting snugly within said socket and seated against said block, said head having a row of stitches extending across the same and positioned within said socket and above said loops when the parts are assembled, and spring members for entering said loops and squeezing said inner faces inwardly beneath and against said stitches, thereby locking said brush head within said socket.

[Claims 2 and 3 not printed in the Gazette.]

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1,229,028. APPARATUS FOR USE IN THE MANUFACTURE OF GLASS BOTTLES AND THE LIKE. LOUIS NAGLEE BRUNER, Zurich, Switzerland. Filed Sept. 6, 1913. Serial No. 788,456. (Cl. 49—23.)



1. In an apparatus for use in the manufacture of glass bottles and the like, the combination of a central plug for shaping the interior of the bottle mouth, dies or jaws revolving around same, a lip mold formed around the base of said central plug, wedges for moving said jaws outwardly, adjustable stops mounted on said jaws and on

which said wedges act, and springs for drawing said jaws inwardly, substantially as described.

2. In an apparatus for use in the manufacture of glass bottles and the like, the combination of a revolving central plug with a lip mold around the base thereof, revolving dies or jaws revolving oppositely to the plug for forming the exterior of the mouth and fitting close up to the lip mold, springs stretched directly between said jaws for drawing the latter inward toward the plug with an equal pressure, sliding wedges for controlling the movement of the jaws inwardly and outwardly, substantially as described.

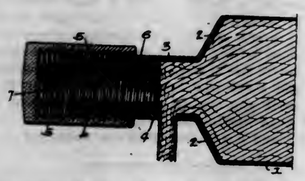
3. In an apparatus for use in the manufacture of glass bottles and the like, the combination of a central revolving plug and oppositely revolving jaws whereby the bottle mouths are shaped, means for adjusting the jaws independently and laterally of each other, spring means for causing the jaws to give an equal inward pressure, a headstock carrying said jaws and mounted at the front end of the apparatus, supports or rests for the stem of the bottle-holder also mounted at the front of the bed or frame of the apparatus, and means for manually controlling said jaws, substantially as described.

4. In an apparatus for use in the manufacture of glass bottles and the like, the combination of a central plug for shaping the interior of the bottle mouth, a revolving spindle carrying said plug at one end thereof, step-like jaws for forming the exterior of the bottle mouth, means for rotating said jaws and central plug simultaneously in opposite directions, springs stretched directly between said jaws for moving them together with an equal pressure on each, means for adjusting said springs, and wedges for moving said jaws apart, substantially as described.

5. In an apparatus for use in the manufacture of glass bottles and the like, the combination of a central plug for shaping the interior of the bottle mouth, a pair of jaws for forming the exterior of the bottle mouth, a central rotary spindle carrying said plug at one end and connected to a driving pulley at the other, a fixed hollow spindle mounted in a bearing and surrounding said central spindle, a rotary sleeve surrounding said spindle and carrying said jaws, means for driving said central spindle and sleeve, and wedges for moving said jaws apart, substantially as described.

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1,229,029. CLOSURE FOR COLLAPSIBLE TUBES. WILLIAM P. BURBAGE, Philadelphia, Pa. Filed Apr. 29, 1916. Serial No. 94,437. (Cl. 221—60.)



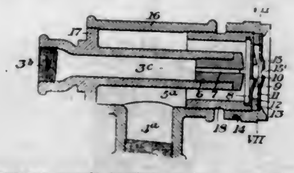
1. The combination of a container having a collapsible wall and a nozzle formed with a side delivery opening; a plunger slidable in the nozzle; a cap movable to cover or uncover the opening at will; a spring operative between the plunger and said cap; and means for preventing the plunger from moving out of the nozzle into the container.

2. The combination of a container having a collapsible wall and a nozzle formed with a side delivery opening; a plunger slidable in said nozzle under the pressure exerted by the contents of the container when its wall is collapsed to uncover the opening; means on the plunger for preventing it from passing out of the nozzle into the container; a cap mounted on the nozzle and movable to cover or uncover the delivery opening at will; and a spring operative between the plunger and the cap.

3. The combination of a container having a collapsible wall and an externally threaded nozzle having a side delivery opening; a sleeve slidably mounted in the nozzle, closed at its inner end and having an outwardly extending flange at its outer end whereby it is prevented from moving out of the nozzle into the container; a cap threaded on the nozzle and of a length capable of being screwed up to cover the delivery opening at will; with a spring mounted between the closed end of the sleeve and the cap.

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1,229,030. SPRAYER-NOZZLE. ROBERT E. CECIL, Sewickley, Pa., assignor to Air-Tight Steel Tank Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 13, 1913. Serial No. 800,767. (Cl. 137—80.)



1. A sprayer nozzle having an inner spraying member formed with two outwardly offset portions at opposite sides of the nozzle center and extending in a tangential direction, each of said portions having a discharge opening at its inner end, and another spraying member in front of the inner spraying member, said last mentioned member having a flat inner wall and a central recess of greater length than width and a central perforation, said recess having its inner surfaces converging toward said perforation, the length of said recess lying in the same direction as the offset portions of the inner spraying member and between said portions; substantially as described.

2. A sprayer nozzle having a chamber for the liquid to be sprayed, a plate or disk forming the front wall of said chamber and having portions thereof struck outwardly to form eccentrically located discharge openings arranged to discharge in a generally tangential direction, and another plate or disk in front of and separated from the first named disk, the latter having a central discharge orifice and a central recess of greater length than width on its inner face communicating with said discharge orifice, the length of said recess lying between the eccentrically located discharge openings in the other disk; substantially as described.

3. A sprayer nozzle having an inclosed chamber for the liquid to be sprayed, a plate or disk forming the front wall of said chamber and having a portion thereof struck outwardly to form an eccentrically located discharge opening arranged to discharge in a generally tangential direction, a second plate or disk in front of and separated from the said first named disk, the latter having a central discharge orifice with surfaces converging toward said orifice, said nozzle also having a connection for a liquid leading to the chamber, and means for introducing air into said chamber at a point adjacent to the center of the first disk to spray the liquid through the opening in the disk; substantially as described.

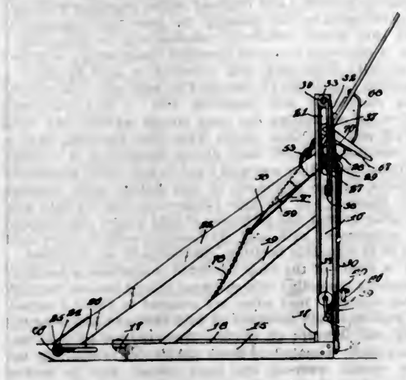
4. A sprayer nozzle having a central air chamber, means for admitting air to said chamber, an annular liquid chamber surrounding said air chamber, means for admitting liquid to said annular chamber, a disk member forming the front wall of the liquid chamber, there being a central opening from the air chamber extending into the liquid chamber, the air being arranged to impinge against said disk member, said disk member having a plurality of tangentially arranged openings on opposite sides of the air discharge opening, a second disk-like member in front of the first disk-like member, there being a chamber between said disk members, said last mentioned disk member having a central opening for the discharge of the combined oil and air; substantially as described.

5. A sprayer nozzle having a central air chamber, means for admitting air to said chamber, an annular liquid chamber surrounding said air chamber, means for admitting liquid to said annular chamber, a disk member forming the front wall of the liquid chamber, there being a central opening from the air chamber extending into the liquid chamber, the air being arranged to impinge against said disk member, said disk member having a plurality of tangentially arranged openings on opposite sides of the air discharge opening, and a second disk-like member in front of the first disk-like member, there being a chamber between said disk members, the last mentioned disk member having a central opening and a flat inner face, there being a recess in the central portions thereof, the walls of said recess converging toward the outlet opening; substantially as described.



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1,229,031. HAY-STACKER. HERBERT W. CHILDERS, Great Bend, Kans. Filed Feb. 21, 1917. Serial No. 150,128. (Cl. 57—53.)



1. In a hay stacker, a frame structure including horizontally slotted sills and vertically slotted uprights, inclined track rails having guide members guided in the slots of the sills and the uprights, a rod supported at the high ends of the track rails and having downwardly extending guide rods, brackets through which the guide rods are guided, a drum shaft supported on the uprights, and suitably guided flexible elements connecting the rod supported at the high ends of the track rails with the drum shaft.

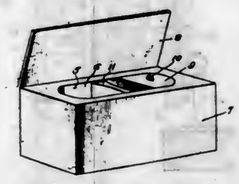
6. In a hay stacker, a frame structure having inclined track rails, and means for varying the inclination thereof including a horizontal rod carried by the high ends of the track rails and hoisting means connected therewith, said track rails being of tubular construction and provided with slots, in combination with a carriage comprising a main axle and an auxiliary axle connected together and spaced apart in parallel relation, said axles being terminally extended through the slots in the track rails and provided with wheels housed therein, and said main axle being provided with flanged pulleys, flexible hoisting elements terminally attached to the horizontal rod carried by the high ends of the track rails and adjustable therewith, said flexible elements being guided over the pulleys on the main axle of the carriage, pulleys on the horizontal rod over which said hoisting elements coming from the carriage are guided, and additional guide elements on the lower part of the frame structure over which the hoisting elements are guided prior to the attachment of power.

8. In a hay stacker of the class described, a carriage comprising main and auxiliary axles, head blocks pivoted on the main axle, angle bars secured on the head blocks and having forward extensions forming brackets provided with recesses, said angle bars being also provided with rearwardly extended portions, segmental members connected with the angle bars and including the auxiliary axle of the carriage, braces connecting the head blocks with the segmental members and constituting stop members to limit the swinging movement of the head blocks, brace bars bolted on the undersides of the segmental members and having portions extending forwardly beneath the bracket portions of the angle bars and other portions extended rearwardly and connected with the rearwardly extended portions of the angle bars, struts connected with said rearwardly extended portions of the angle bars and braces to form trussed arms, a platform structure supported on the bracket portions of the angle bars and including cross bars seated in the recesses of said bracket portions; in combination with a frame structure having inclined track rails over which the carriage is guided, hoisting means for said carriage, and flexible elements connecting the trussed arms with the frame structure to tilt the platform.

[Claims 2 to 5 and 7 not printed in the Gazette.]

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1,229,032. FIRELESS COOKER OR ROASTER. DRUCILLA COLLAR, Florence, Colo. Filed June 24, 1916. Serial No. 105,625. (Cl. 217—7.)



A fireless cooker comprising a body having a heating chamber opening through the top thereof, said body containing a filling forming a non-conductor of heat, a lid hinged to the body, a removable cover for the chamber, and a removable heat-insulating partition formed with oppositely arranged arcuate walls arranged within the chamber.

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1,229,033. ASH-SIFTER. JULIUS M. COLLINS, Brooklyn, N. Y. Filed May 23, 1916. Serial No. 99,342. (Cl. 83—60.)



1. An ash sifter comprising in combination, a casing, a plurality of relatively inclined screens mounted in said casing, said casing having a hopper mouth and a delivery spout, a chute hinged to said hopper mouth to drop backwardly therefrom, and means for locking a pail to said chute to be carried up therewith into operative position.

2. An ash sifter comprising in combination, a casing, a plurality of sifting elements within the casing, a chute hinged to said casing to drop backwardly therefrom, and means for locking a pail to said chute to be carried into an emptying position when the chute is lifted.

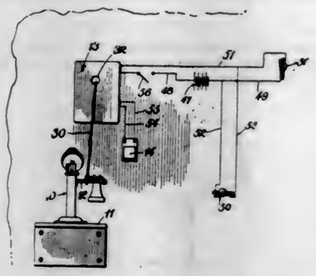
3. An ash sifter, comprising in combination, a casing, sifting elements within said casing, a chute hinged to said casing to be dropped backwardly therefrom, a flexible covering for the joint between said chute and said casing.

and means for locking a pail to said chute when the latter is carried into delivery position.

4. An ash sifter, comprising in combination, a sifter casing, a feed chute hinged to said casing, and means for limiting the relative movement of said chute, means for covering the mouth of a pail and locking the latter into dust-proof connection with the chute, and a gravity cut-off device for preventing the return of dust out of the chute after the pail has been removed.

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1,229,034. BURGLAR-ALARM. LEE A. COLLINS, Louisville, Ky. Filed Dec. 14, 1916. Serial No. 137,012. (Cl. 179—5.)



1. In an alarm, the combination with a telephone instrument including a receiver hook, of a weight, operative connection between the weight and instrument whereby falling of the weight will cause raising of the receiver hook, means normally holding the weight, an electrically operable audible signal in a normally open circuit, a circuit closer, electrically operated means for releasing the weight supporting means, a normally open circuit through said latter electrically operated means and the circuit closer, and means operable by the closing of this latter circuit through the circuit closer for subsequently breaking the circuit thus closed and closing a circuit through the signal device.

6. In an alarm system, the combination with a telephone instrument including a receiver hook, of a circuit closer, a circuit normally open at the circuit closer, means in the circuit adapted upon closing of the circuit to successively cause raising of the receiver hook and reopening of the circuit, an audible signal, and a normally open circuit through the signal adapted to be closed by reopening of the first circuit.

[Claims 2 to 5 not printed in the Gazette.]

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1,229,035. ELECTRICAL SIGNALING DEVICE. GUY W. COMER, Chicago, Ill., assignor to Auto-Signal Co., Chicago, Ill., a Corporation of Illinois. Filed Oct. 19, 1915. Serial No. 56,720. (Cl. 177—311.)



1. A device of the class described comprising a bracket; a signaling member rockingly supported by said bracket; an electric lamp carried by said signaling member; a make-and-break device for controlling the lamp circuit whereby the lamp circuit will be broken except when the signaling member is in signaling position, said device comprising a circular holder of insulating material fixed to said bracket; a pair of stationary contacts mounted on the periphery of said holder at opposite sides thereof; and a pair of elongated movable contacts fixed at corresponding ends to said signaling member, the opposite ends of said last mentioned contacts being adapted for engagement with the periphery of said holder for contact with said stationary contacts when said signaling member is in signaling position, substantially as described.

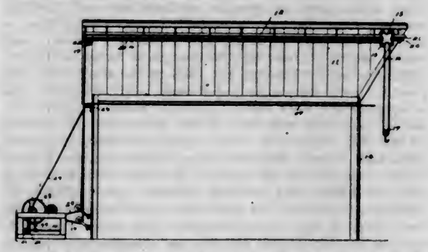
2. A device of the class described comprising a bracket; a signaling member rockingly supported by said bracket; an electric lamp carried by said signaling member; a made-and-break device for controlling the lamp circuit whereby the lamp circuit will be broken except when the signaling member is in signaling position, said device comprising a circular holder of insulating material fixed to said bracket; a pair of stationary contacts mounted on the periphery of said holder at opposite sides thereof; a pair of elongated movable contacts fixed at corresponding ends to said signaling member, the opposite ends of said last mentioned contacts being adapted for engagement with the periphery of said holder for contact with said stationary contacts when said signaling member is in signaling position; and resilient means engaging with said movable contacts for pressing the same into engagement with said holder periphery, substantially as described.

3. A device of the class described comprising a bracket; a laterally projecting tube mounted in said bracket; a signaling arm rockingly mounted on said tube; an electric lamp carried by said signaling arm; a make-and-break device for controlling the lamp circuit whereby the lamp circuit will be broken except when said signaling arm is in signaling position, said device comprising a circular holder of insulating material fixed to said tube; stationary contacts on the periphery of said holder upon opposite sides thereof; and movable contacts carried by said arm engaging against the periphery of said holder and adapted for engagement with said stationary contacts when said arm is in signaling position, substantially as described.

4. A device of the class described comprising a bracket; a laterally projecting tube mounted in said bracket through which electrical feed wires are adapted to pass; a signaling arm rockingly mounted on said tube and inclosing the outer end thereof; an electric lamp carried by said signaling arm; a make-and-break device for controlling the lamp circuit whereby the lamp circuit will be broken except when the signaling arm is in signaling position, said device comprising a circular holder of insulating material fixed to said tube; stationary contacts angularly disposed with relation to each other on the periphery of said holder with which said feed wires are connected; and movable contacts carried by said arm with which the lamp conductor wires engage, said movable contacts engaging against the periphery of said holder for contact with said stationary contacts when said signaling arm is in signaling position, substantially as described.

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1,229,036. HAY-HANDLING DEVICE. MAY CONNER, Garden Grove, Iowa. Filed Aug. 30, 1916. Serial No. 117,636. (Cl. 212—91.)



1. In a device of the class described, a track, a pulley at one end, a pair of pulleys at the other end, a flexible device extended over the first pulley and one of the pair of pulleys, a second flexible device extended over the other of the pair of pulleys, an operated mechanism adapted to reciprocate on said track and having the adjacent ends of the flexible devices secured thereto, means for selectively retracting each of said flexible devices, a flexible device extended adjacent to said track, and means for operatively connecting said last described flexible device with said retracting means whereby the latter may be selectively actuated and rendered inoperative.

2. In a device of the class described, a track having a moving element adapted to reciprocate thereon, flexible devices having one end secured to said element and having the other end adapted to be extended over pulleys whereby retraction of said flexible devices will selectively move said element to either end of the track, means for retracting said flexible devices, a flexible device extended adjacent to said track and parallel therewith and means for connecting last described flexible device with said retracting means whereby said means may be actuated to selectively retract the flexible devices and be rendered inoperative.



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1,229,037. METAL ALLOY. HUGH S. COOPER, Cleveland, Ohio, assignor to The Electro Metals Products Company, Cleveland, Ohio. Filed Aug. 14, 1915. Serial No. 45,526. (Cl. 75—1.)

1. An alloy for electrical uses, comprising silver and one or more of the metals of the platinum group and a metal of the cobalt-nickel group in substantially the proportions stated.

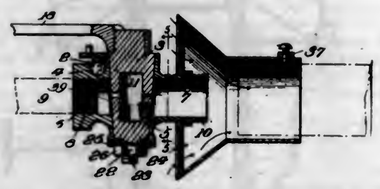
2. An alloy for electrical uses containing silver, palladium, and a metal of the cobalt-nickel group in the proportions substantially set forth.

3. An alloy for electrical contact purposes composed of silver, palladium, and cobalt in approximately the proportions stated as to make the alloy hard, heat resisting, non-oxidizing and a good electrical conductor.

4. A metal alloy composed of seventy per cent. of silver, twenty-five per cent. of palladium, and five per cent. cobalt.

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1,229,038. GAS PRESSURE REGULATING AND MIXING VALVE. CLYDE CORNELIUS, Pittsburgh, Pa. Filed Apr. 7, 1916. Serial No. 89,633. (Cl. 158—120.)



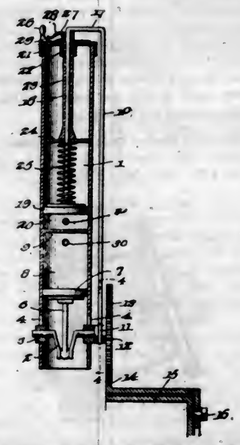
1. A gas and air mixing valve comprising a body portion, a revoluble core mounted therein, a gas outlet passage and a gas inlet passage adapted to be thrown into and out of communication by the core, the said core having a plurality of openings of different sizes therethrough, said openings arranged in pairs on opposite sides of the core, the body portion provided with restricted openings adjacent the core, whereby only one pair at a time can register with the inlet and outlet passages in the body portion.

2. A gas and air mixing valve comprising a body portion, a revoluble core mounted therein, a gas outlet passage, and an inlet passage adapted to be thrown into and out of communication by the core, the said core having a plurality of openings of the same size on one side thereof and a plurality of openings of different sizes on the other side thereof, said openings also arranged in pairs, each pair comprising a uniform size opening and a variated size opening, the body portion provided with restricted openings adjacent the core, whereby only one pair at a time can register with the inlet and outlet passages in the body portion.

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1,229,039. AUTOMATIC TIRE-PUMP. LESLIE FRED CRANE, Lansing, Mich. Filed Dec. 22, 1916. Serial No. 138,429. (Cl. 152—11.)

1. The combination with a pneumatic tire, and a wheel upon which said tire is mounted, of an air compressing pump embodying a barrel attached to and supported by one of the wheel spokes, an imperforate partition located between the ends of said barrel, an air compressing piston working in said barrel at one side of said partition, a crank shaft to which said piston is connected, a gear on said crank shaft, a driving gear with which the gear on the crank shaft is adapted to mesh, means for shifting the crank shaft bodily to throw the gear thereon into and out of mesh with the driving gear, said means comprising a pressure head located at the opposite side of

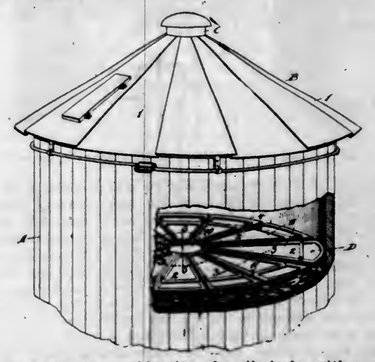


the partition in the pump barrel, a connection between said pressure head and said crank shaft, means for resisting the movement of said pressure head, a compressed air pipe leading from the piston chamber into the valve tube of the tire at the outer side of the valve, and a return pressure equalizing pipe extending from said valve tube into the chamber formed between the pressure head and said partition.

[Claims 2 and 3 not printed in the Gazette.]

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1,229,040. SILO-SEAL. FINIS B. CRAWFORD, Atlanta, Mo. Original application filed Jan. 28, 1916, Serial No. 74,771. Divided and this application filed June 3, 1916. Serial No. 101,501. (Cl. 217—86.)



1. In a silo, the combination of a silo body, with a seal therein composed of plates independently laid and detachably connected together to form a disk-like element resting on the top of the silage.

2. The combination of a silo body, a cover therefor, and a seal under the cover and resting on the silage, said seal

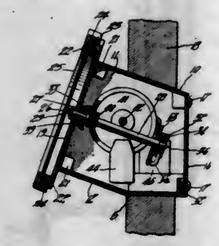
consisting of sector-shaped sections having tongue and groove interfitting joints permitting detachment of the sections, the inner edges of the sections forming an opening, and a plate closing the opening.

3. The combination of a silo body, with a seal therein, said seal being formed of approximately triangular sections arranged with their side edges together to form a disk-like element with an opening at the center, and a plate under the center of the disk-like element and on which the inner ends of the sections rest.

4. A seal for a silo, comprising a disk-like element composed of sector-shaped sections having interfitting edges whereby the sections are detachably connected together.

5. A seal for a silo, comprising a disk-like element composed of sector-shaped sections having interlocking radial edges, the inner ends of the sections forming an opening, and a plate for closing the opening.

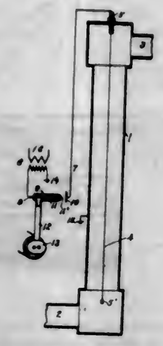
1,229,041. GRADE-INDICATOR FOR VEHICLES. DELBERT H. CROOK, San Pedro, Cal. Filed Apr. 10, 1916. Serial No. 90,175. (Cl. 33—220.)



2. In a grade indicator for vehicles, means for indicating the grade, comprising an indicator shaft having an indicator hand connected thereto, gravity-controlled means acting upon said indicating means, adjustable means for preventing undesirable vibration of said indicating means, and yieldable means tending to move said indicating means to the position normally assumed thereby when said vehicle is on a level grade, said yieldable means comprising a coiled spiral spring having its inner end connected to said shaft and its outer end fastened in fixed relation thereto.

[Claim 1 not printed in the Gazette.]

1,229,042. PROCESS FOR IMPROVING THE QUALITY AND YIELD OF HYDROCARBON GASES. JAMES GRANT DAVIDSON and ROBERT WILLIAM FORD, Vancouver, British Columbia, Canada. Filed Nov. 29, 1915. Serial No. 64,115. (Cl. 204—31.)



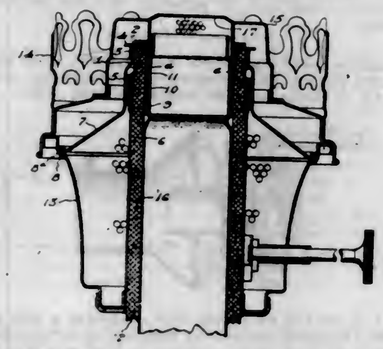
1. The process of treating a gas containing hydrocarbons which consists in subjecting it to the action of a high tension silent electrical discharge, in such manner as to convert hydrocarbon constituents in the gas into constituents of less molecular weight and less condensability, the energy required for such conversion of the hydrocarbon constituents being derived directly from the electrical discharge.

2. The process of treating a gas containing hydrocarbons which consists in subjecting it to the action of a high tension silent electrical discharge, in such manner as to break up hydrocarbons in the gas into hydrocarbons of less molecular weight and less condensability, the energy required for so breaking up hydrocarbons in the gas being derived directly from the electrical discharge.

3. The process of treating a gas containing hydrocarbons which consists in subjecting it to the action of a high tension silent electrical discharge to change the constitution of the hydrocarbons by means of the energy of such electrical discharge, in such manner as to increase the final volume of the gas produced from a given amount of material.

4. The process of treating a gas containing hydrocarbons which consists in passing it between electrodes and applying to such electrodes a surging high tension electric current, in such manner as to change the constitution of the gas by the energy of the electric discharge and to increase the percentage of fixed hydrocarbon constituents therein.

1,229,043. WICK-TUBE FOR HYDROCARBON-BURNERS. CORTLAND W. DAVIS and VICTOR S. JOHNSON, Chicago, Ill., assignors to The Mantle Lamp Company of America, Chicago, Ill., a Corporation of Illinois. Filed Aug. 22, 1914. Serial No. 858,070. (Cl. 67—38.)



1. In a device of the class described, a wick tube comprising a flame section and a fuel section, a non-heat conductor interposed between said sections, and a re-entrant flange on said flame section to engage said non-heat conductor.

3. A burner comprising an inner wick tube and an outer wick tube, each of said wick tubes having a plurality of sections, one section of each tube nearest the flame being supported from its adjacent section and out of contact therewith by insulating material.

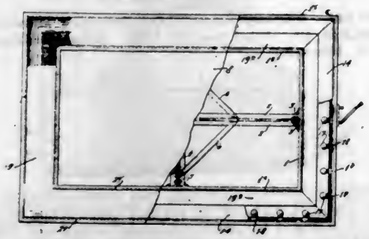
9. In a burner, a wick tube comprising a fuel section having an annular stop, a flame section separated from the fuel section and provided with an annular flange adapted to be formed around said stop, and insulating material to retain said flame section out of contact with said fuel section, said flange being provided with projections to engage said insulating material to clamp said material in position and prevent rotative movement of the flame section with relation to the fuel section.

[Claims 2 to 4 and 6 to 8 not printed in the Gazette.]

1,229,044. FRAME FOR MOVING-PICTURE SCREENS. LOUIS DAVIS, Streator, Ill. Filed Sept. 4, 1915. Serial No. 48,976. (Cl. 240—2.)

1. A frame for moving picture screens comprising spaced supports, a translucent face carried by said supports, said translucent face including a stippled coating of coloring material applied thereto, said stippled coating itself having applied thereover coatings of darker coloring material providing for a beveled effect, the latter coatings being stencilled over to provide a particular design upon said frame, a back carried by said supports, a primary reflector arranged between said back and face, a plurality of lamps disposed back of said primary reflector with relation to said face and a secondary reflector spaced from said primary reflector.





2. A frame for moving picture screens comprising spaced supports, a translucent face carried by said supports, said translucent face having applied thereto means to provide a particular design thereon, said design producing means being treated to simulate depth under the diffusing action of the reflected light, a back carried by said supports, a reflector arranged between said back and face, a plurality of lamps disposed back of said reflector with relation to said face and means arranged to receive the light from said reflector and diffuse it upon said translucent face.

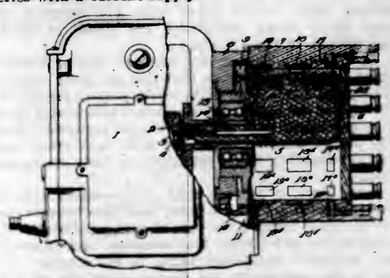
3. A frame for moving picture screens comprising spaced supports, a translucent face carried by said supports, means for rendering said face translucent, including coatings of coloring material applied thereto, said coatings of coloring material being treated to constitute a design, a back carried by said supports, a reflector arranged between said back and face, a plurality of lamps disposed back of said reflector with relation to said face and means arranged to receive the light from said reflector and diffuse it upon said face.

4. A frame for moving picture screens comprising spaced supports, a translucent face carried by said supports, a back carried by said supports, an adjustable primary reflector arranged between said back and face, a plurality of lamps disposed back of said primary reflector with relation to said face and a secondary adjustable reflector spaced away from said primary reflector, said translucent face comprising a stippled coating of coloring material, applied thereto, said stippled coating having applied thereover coatings of darker coloring material, said reflectors and lamps being adapted to deliver diffused rays of light upon said face.

5. A frame for moving picture screens comprising spaced supports, a translucent face carried by said supports, said translucent face including a stippled coating of coloring material applied thereto, said stippled coating having applied thereover coatings of darker coloring material, said reflectors and lamps being adapted to deliver diffused rays of light upon said face, a back carried by said supports, an adjustable primary reflector arranged between said back and face and preferably disposed at an angle to the latter member and a secondary reflector spaced from said primary reflector and preferably disposed in a plane at right angles thereto to receive light therefrom and to diffuse the same upon said face.

1,229,045. DISTRIBUTER FOR IGNITION SYSTEMS. WILLIAM WARREN DEAN, Stamford, Conn., assignor to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Sept. 25, 1916. Serial No. 122,142. (Cl. 123—149.)

1. A distributer for ignition systems including in combination a stationary part, a plurality of terminals carried by said part, each of which is adapted to be connected to a translating device, a plurality of spaced contacts associated with each terminal and means for connecting each terminal in succession through said contacts in series with a current supply.

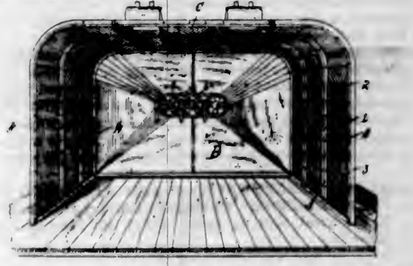


2. A distributer for ignition systems including in combination a stationary part, a plurality of terminals carried by said part, each of which is adapted to be connected to a translating device, a plurality of spaced contacts associated with each terminal, a rotating part, devices carried by said rotating part for connecting each terminal in succession through said contacts in series on the stationary part with a current supply.

3. A distributer for ignition systems including in combination a stationary part, a plurality of terminals carried thereby, each of which is adapted to be connected to a translating device, a plurality of spaced contacts associated with each terminal, a rotating part located within said stationary part, brushes carried by said rotating part and arranged so as to connect each terminal in succession through said contacts in series with a current supply.

[Claims 4 to 6 not printed in the Gazette.]

1,229,046. BOOTH. THOMAS A. DE VILBISS, Toledo, Ohio, assignor to The De Vilbiss Manufacturing Co., Toledo, Ohio, a Corporation of Ohio. Filed Dec. 6, 1915. Serial No. 65,433. (Cl. 189—1.)



1. In a booth, a pair of side members each of one-half inverted U-shape, said members having bars projecting beyond the inner sides of the tops thereof at the fronts of said members, a roof section having a bar extending at its ends beyond the sides of the section and abutting at its ends the ends of the first named bars, a bar having its ends extending across the abutting ends of said first named bar, and means to secure the last named bar to the bars of the members and the bar of the roof section.

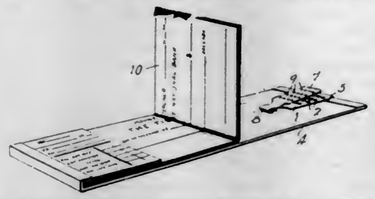
2. In a booth, side members having top portions, a roof section interposed between said top portions and composed of a central member having its sides doubled over to form ledges and extended vertically and doubled over to form tongues, panels seated on the ledges, and strips of inverted U-cross-section receiving the tongues and having lateral extensions engaged on top of the panels.

3. In a booth, a pair of side members each of one-half inverted U-shape, angle-irons bounding the front edges of said members, a roof panel between the top parts of said members, a bar secured to the roof panel and projecting beyond the sides of the same and seating on the horizontal parts of the angle irons and abutting the vertical parts of the angle-irons, and means to rigidly secure the bar to the angle-irons.

4. In a booth, a pair of side members each of one-half inverted U-shape, angle-irons bounding the front edges of said members and having parts which project beyond the inner sides of the tops of the members whereby said parts may be overlapped with the vertical and horizontal parts of the angle-irons in engagement with each other, and means to removably secure said parts in their overlapped positions.

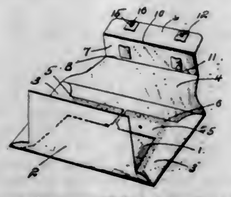
5. In a booth, a pair of rigid side members each of one-half inverted U-shape, a panel insertible between and removable from between the tops of said members, means to support the panel from said members, and means to secure the panel supporting means to the members and to secure the members to one another when the panel is removed, the tops of said members forming the entire roof when the panel is removed and forming a part of the roof when the panel is used.

1,229,047. CHECK-PROTECTOR. CHARLES E. DICK, Pickaway county, near Mount Sterling, Ohio. Filed Feb. 21, 1917. Serial No. 150,115. (Cl. 101—3.)



A check protector attachment for check books, including a flat base plate having a series of openings punched upwardly therethrough and surrounded by ragged edges, an extension projecting from one end of the base plate and returned under the same to provide a clamping arm for coöperation with the base plate to hold the device in position, a jaw arranged over the base plate, a looped integral neck connecting the jaw to the opposite end of the base plate, the edges of the looped neck being recessed to provide a finger hold and the sides of the neck being brought together at a point spaced from the looped portion thereof, the jaw having openings punched downwardly therethrough and surrounded by ragged teeth arranged for coöperation with the ragged teeth of the plate to mutilate a piece of paper inserted between the jaw and the plate.

1,229,048. SAFETY-ENVELOP AND FASTENING DEVICE THEREFOR. HERALD DICKERSON, Atlantic City, N. J. Filed Sept. 6, 1916. Serial No. 118,760. (Cl. 229—78.)



A safety envelop comprising a front, a back, end flaps secured to the back, a sealing flap, an inner fold, an inner flap, said inner fold and inner flap forming extensions of the sealing flap and being adapted to be arranged respectively on the outer side of the back and between the back and the front when the envelop is closed, and a clasp to fasten the inner fold, back, and inner flap together and thereby seal the envelop, said clasp comprising a pair of members respectively secured to the inner fold and inner flap, one of said members having a headed stud and the other having an opening to receive the stud and being also provided with a sealing tongue bent thereover, having a notch in its outer end and being adapted when straightened to engage said notched end under the head of the stud.

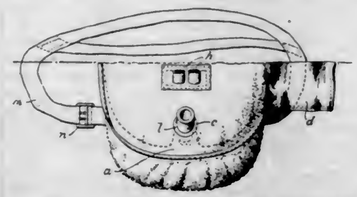
1,229,049. EXPLOSIVE SHELL. EDWARD S. DISSINGER, Reading, Pa. Filed Aug. 12, 1916. Serial No. 114,607. (Cl. 102—12.)



1. In a cartridge structure, the combination, of an outer casing, a projectile of ordinary construction carried by said casing, a receptacle positioned within said casing behind said projectile, said receptacle being constructed of relatively thin sheet metal, a metallic disk secured to the back end of said chamber for reinforcing the same, said chamber being charged with a high explosive gas under high pressure, and means for exploding said gas for forcing said projectile out of said casing.

2. In a cartridge structure, the combination, of an outer casing, a projectile of ordinary construction carried by said casing, a receptacle positioned within said casing behind said projectile, said receptacle being constructed of relatively thin sheet metal, a metallic disk secured to the back end of said chamber for reinforcing the same, said chamber being charged with a high explosive gas under high pressure, and means for exploding said gas for forcing said projectile out of said casing, and a valve structure for permitting the inlet of the gas into the chamber and preventing the exit of the gas from the chamber except on the explosion of the gas.

1,229,050. RESPIRATOR. ROBERT DONALD, London, England. Filed Mar. 29, 1917. Serial No. 158,432. (Cl. 128—13.)



1. A respirator comprising a porous bag adapted to contain chemicals for absorbing obnoxious and injurious gases and vapors, tubes leading from the interior of the bag to the nose, an exhalation non-return valve leading to the atmosphere, and a sleeve attached to the bag for the introduction of fresh charges to the same.

2. A respirator comprising a closed porous bag adapted to contain a filtering substance and chemicals adapted to absorb obnoxious and injurious gases and vapors, means for the introduction of fresh charges to the same, tubes leading from the interior of the bag to the nose, and an exhalation non-return valved tube extending through said bag and projecting therefrom at both ends, one end of said tube opening into the atmosphere and the other end being adapted to be supported in the mouth.

5. A respirator comprising inner and outer porous bags adapted to receive between them chemicals for absorbing injurious and obnoxious gases, tubes leading from the inner bag through the outer bag to the nose, and a sleeve connected to the outer bag for the introduction of fresh charges between the bags, the outer bag being formed with a pouch or flap to fit the wearer's chin.

[Claims 3 and 4 not printed in the Gazette.]



1,229,051. PINCUSHION. FRANCIS J. DOWLING, New York, N. Y. Filed Jan. 9, 1917. Serial No. 141,375. (Cl. 223—60.)



1. In a pin cushion, the combination of a support having a pit formed therein, a plurality of curved jaws having their shoulder portions bearing in said pit, each jaw having an inwardly and upwardly projecting knob, a member having hooks spanning the space between the knobs of the jaws and hooking over the same, means anchoring the last mentioned member to the support and causing the rolling of the jaws at their free edges toward one another, and a cushion embraced within said jaws.

2. In a pin cushion, the combination of a support having a pit formed in its upper surface and a hole extending downwardly from the center of the pit, a plurality of convex jaw members having rounded shoulder portions fitted within the opposite sides of the pit, the jaw members being adapted to roll around their points of contact with the support, toward the central axis thereof, means engaging the lower and inner edge portions of the jaws and serving to draw the same downwardly, causing the jaws to roll with their free edges toward each other, and a cushion arranged and held between the free edges of the jaws.

3. In a pin cushion, the combination of a rigid support having a pit formed in its upper surface with a rounded rim and a central hole therethrough, a plurality of bivalve shell-shaped jaws supported with their rounded shoulder portions in the curved rim of the pit, the knob portions of the jaws projecting inwardly toward the axis of the hole, a frog having hook-shaped ends engaging over and interlocking with said jaw knobs, screw means acting through the frog drawing it downwardly toward the bottom of the pit and causing the rolling of the free portions of the jaws toward one another, and a resilient cushion gripped between said free portions of the jaws.

4. In a device of the character set forth, the combination of a support having a pit formed therein, a plurality of jaws having rounded shoulder portions bearing in said pit; each jaw having inwardly and upwardly projecting knobs, a frog having hooks spanning the space between the knobs of the jaws and engaging over the same, adjustable anchoring means securing the frog to the support and causing the movement of the jaws at their outer free edges toward one another, and a member embraced within the jaws.

1,229,052. COFFEE PRODUCT AND METHOD OF MAKING THE SAME. WILLIAM J. EWING, Roland Park, Md., assignor to The Coffee Products Company, a Corporation of Maryland. Filed Dec. 22, 1916. Serial No. 138,328. (Cl. 99—11.)

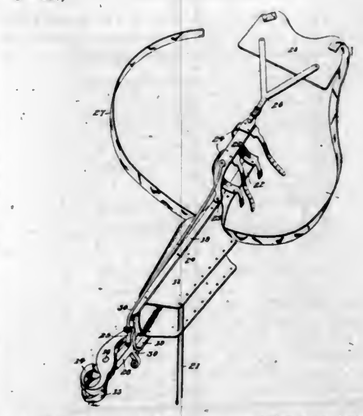
1. The method of preparing a coffee product which comprises treating roasted pulverized coffee with hot water to form a liquid extract of coffee, concentrating the extract to a sirupy consistency, mixing a relatively small percentage of water-soluble starch with the concentrated extract and drying the resulting product.

2. The method of preparing a coffee product which comprises treating roasted pulverized coffee with super-heated water, in a closed vessel, to form a liquid extract of coffee, concentrating the extract to a sirupy consistency, mixing a relatively small percentage of water-soluble starch with the concentrated extract and drying the resulting product.

3. A dry coffee product consisting essentially of coffee extract and water-soluble starch.

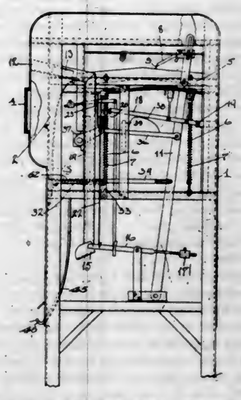
4. A dry coffee product consisting essentially of coffee extract and water-soluble tapioca starch.

1,229,053. ARTIFICIAL HAND. JOSZEF FEKETE, Linden, Mich. Filed Oct. 9, 1916. Serial No. 124,567. (Cl. 3—12.)



A hand member adapted for operative attachment to an arm comprising a cuff removably secured to the forearm, a pair of pliers having one jaw thereof provided with a U-shaped handle member secured longitudinally to the opposite sides of the said cuff, opposite plates secured to the upper arm and pivotally attached to the upper free ends of the said handle member, operating rods pivotally connected between the other jaw of the pliers and the said plates and a shoulder and body carried anchoring means for the device adjustably secured to the free end of one of said plates.

1,229,054. NEWSPAPER-VENDING MACHINE. JOHN P. FITE, Atlanta, Ga., and William Laughlin, Cleveland, Ohio. Filed Dec. 15, 1915. Serial No. 66,937. (Cl. 211—8.)



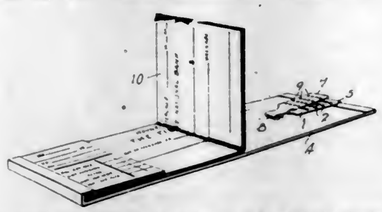
In a newspaper vending machine, the combination of a casing having a transparent portion in one side, a gravity

3. In a booth, a pair of side members each of one-half inverted U-shape, angle-irons bounding the front edges of said members, a roof panel between the top parts of said members, a bar secured to the roof panel and projecting beyond the sides of the same and seating on the horizontal parts of the angle irons and abutting the vertical parts of the angle-irons, and means to rigidly secure the bar to the angle-irons.

4. In a booth, a pair of side members each of one-half inverted U-shape, angle-irons bounding the front edges of said members and having parts which project beyond the inner sides of the tops of the members whereby said parts may be overlapped with the vertical and horizontal parts of the angle-irons in engagement with each other, and means to removably secure said parts in their overlapped positions.

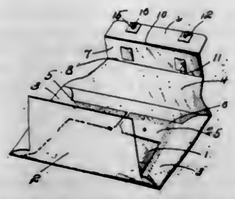
5. In a booth, a pair of rigid side members each of one-half inverted U-shape, a panel insertible between and removable from between the tops of said members, means to support the panel from said members, and means to secure the panel supporting means to the members and to secure the members to one another when the panel is removed, the tops of said members forming the entire roof when the panel is removed and forming a part of the roof when the panel is used.

1,229,047. CHECK - PROTECTOR. CHARLES E. DICK, Pickaway county, near Mount Sterling, Ohio. Filed Feb. 21, 1917. Serial No. 150,115. (Cl. 101—3.)



A check protector attachment for check books, including a flat base plate having a series of openings punched upwardly therethrough and surrounded by ragged edges, an extension projecting from one end of the base plate and returned under the same to provide a clamping arm for coöperation with the base plate to hold the device in position, a jaw arranged over the base plate, a looped integral neck connecting the jaw to the opposite end of the base plate, the edges of the looped neck being recessed to provide a finger hold and the sides of the neck being brought together at a point spaced from the looped portion thereof, the jaw having openings punched downwardly therethrough and surrounded by ragged teeth arranged for coöperation with the ragged teeth of the plate to mutilate a piece of paper inserted between the jaw and the plate.

1,229,048. SAFETY-ENVELOP AND FASTENING DEVICE THEREFOR. HERALD DICKERSON, Atlantic City, N. J. Filed Sept. 6, 1916. Serial No. 118,760. (Cl. 229—78.)



A safety envelop comprising a front, a back, end flaps secured to the back, a sealing flap, an inner fold, an inner flap, said inner fold and inner flap forming extensions of the sealing flap and being adapted to be arranged respectively on the outer side of the back and between the back and the front when the envelop is closed, and a clasp to fasten the inner fold, back, and inner flap together and thereby seal the envelop, said clasp comprising a pair of members respectively secured to the inner fold and inner flap, one of said members having a headed stud and the other having an opening to receive the stud and being also provided with a sealing tongue bent thereover, having a notch in its outer end and being adapted when straightened to engage said notched end under the head of the stud.

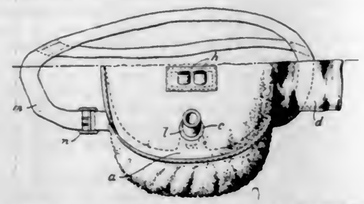
1,229,049. EXPLOSIVE SHELL. EDWARD S. DISSINGER, Reading, Pa. Filed Aug. 12, 1916. Serial No. 114,607. (Cl. 102—12.)



1. In a cartridge structure, the combination, of an outer casing, a projectile of ordinary construction carried by said casing, a receptacle positioned within said casing behind said projectile, said receptacle being constructed of relatively thin sheet metal, a metallic disk secured to the back end of said chamber for reinforcing the same, said chamber being charged with a high explosive gas under high pressure, and means for exploding said gas for forcing said projectile out of said casing.

2. In a cartridge structure, the combination, of an outer casing, a projectile of ordinary construction carried by said casing, a receptacle positioned within said casing behind said projectile, said receptacle being constructed of relatively thin sheet metal, a metallic disk secured to the back end of said chamber for reinforcing the same, said chamber being charged with a high evplosive gas under high pressure, and means for exploding said gas for forcing said projectile out of said casing, and a valve structure for permitting the inlet of the gas into the chamber and preventing the exit of the gas from the chamber except on the explosion of the gas.

1,229,050. RESPIRATOR. ROBERT DONALD, London, England. Filed Mar. 29, 1917. Serial No. 158,432. (Cl. 128—13.)



1. A respirator comprising a porous bag adapted to contain chemicals for absorbing obnoxious and injurious gases and vapors, tubes leading from the interior of the bag to the nose, an exhalation non-return valve leading to the atmosphere, and a sleeve attached to the bag for the introduction of fresh charges to the same.

2. A respirator comprising a closed porous bag adapted to contain a filtering substance and chemicals adapted to absorb obnoxious and injurious gases and vapors, means for the introduction of fresh charges to the same, tubes leading from the interior of the bag to the nose, and an exhalation non-return valved tube extending through said bag and projecting therefrom at both ends, one end of said tube opening into the atmosphere and the other end being adapted to be supported in the mouth.

5. A respirator comprising inner and outer porous bags adapted to receive between them chemicals for absorbing injurious and obnoxious gases, tubes leading from the inner bag through the outer bag to the nose, and a sleeve connected to the outer bag for the introduction of fresh charges between the bags, the outer bag being formed with a pouch or flap to fit the wearer's chin.

[Claims 3 and 4 not printed in the Gazette.]



1,229,051. PINCUSHION. FRANCIS J. DOWLING, New York, N. Y. Filed Jan. 9, 1917. Serial No. 141,375. (Cl. 223—60.)



1. In a pin cushion, the combination of a support having a pit formed therein, a plurality of curved jaws having their shoulder portions bearing in said pit, each jaw having an inwardly and upwardly projecting knob, a member having hooks spanning the space between the knobs of the jaws and hooking over the same, means anchoring the last mentioned member to the support and causing the rolling of the jaws at their free edges toward one another, and a cushion embraced within said jaws.

2. In a pin cushion, the combination of a support having a pit formed in its upper surface and a hole extending downwardly from the center of the pit, a plurality of convex jaw members having rounded shoulder portions fitted within the opposite sides of the pit, the jaw members being adapted to roll around their points of contact with the support, toward the central axis thereof, means engaging the lower and inner edge portions of the jaws and serving to draw the same downwardly, causing the jaws to roll with their free edges toward each other, and a cushion arranged and held between the free edges of the jaws.

3. In a pin cushion, the combination of a rigid support having a pit formed in its upper surface with a rounded rim and a central hole therethrough, a plurality of bivalve shell-shaped jaws supported with their rounded shoulder portions in the curved rim of the pit, the knob portions of the jaws projecting inwardly toward the axis of the hole, a frog having hook-shaped ends engaging over and interlocking with said jaw knobs, screw means acting through the frog drawing it downwardly toward the bottom of the pit and causing the rolling of the free portions of the jaws toward one another, and a resilient cushion gripped between said free portions of the jaws.

4. In a device of the character set forth, the combination of a support having a pit formed therein, a plurality of jaws having rounded shoulder portions bearing in said pit, each jaw having inwardly and upwardly projecting knobs, a frog having hooks spanning the space between the knobs of the jaws and engaging over the same, adjustable anchoring means securing the frog to the support and causing the movement of the jaws at their outer free edges toward one another, and a member embraced within the jaws.

1,229,052. COFFEE PRODUCT AND METHOD OF MAKING THE SAME. WILLIAM J. EWING, Roland Park, Md., assignor to The Coffee Products Company, a Corporation of Maryland. Filed Dec. 22, 1916. Serial No. 138,328. (Cl. 99—11.)

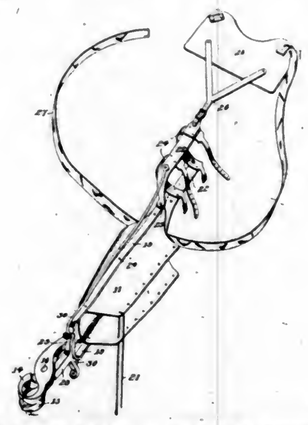
1. The method of preparing a coffee product which comprises treating roasted pulverized coffee with hot water to form a liquid extract of coffee, concentrating the extract to a syrupy consistency, mixing a relatively small percentage of water-soluble starch with the concentrated extract and drying the resulting product.

2. The method of preparing a coffee product which comprises treating roasted pulverized coffee with super-heated water, in a closed vessel, to form a liquid extract of coffee, concentrating the extract to a sirupy consistency, mixing a relatively small percentage of water-soluble starch with the concentrated extract and drying the resulting product.

3. A dry coffee product consisting essentially of coffee extract and water-soluble starch.

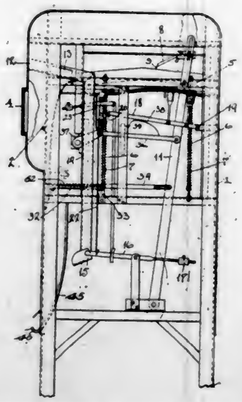
4. A dry coffee product consisting essentially of coffee extract and water-soluble tapioca starch.

1,229,053. ARTIFICIAL HAND. JOSZEF FEKETE, Linden, Mich. Filed Oct. 9, 1916. Serial No. 124,567. (Cl. 3—12.)



A hand member adapted for operative attachment to an arm comprising a cuff removably secured to the forearm, a pair of pliers having one jaw thereof provided with a U-shaped handle member secured longitudinally to the opposite sides of the said cuff, opposite plates secured to the upper arm and pivotally attached to the upper free ends of the said handle member, operating rods pivotally connected between the other jaw of the pliers and the said plates and a shoulder and body carried anchoring means for the device adjustably secured to the free end of one of said plates.

1,229,054. NEWSPAPER-VENDING MACHINE. JOHN P. FIFE, Atlanta, Ga., and William Laughlin, Cleveland, Ohio. Filed Dec. 15, 1915. Serial No. 66,937. (Cl. 211—8.)

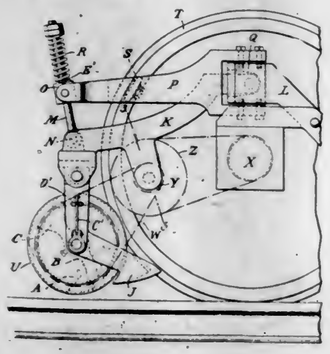


In a newspaper vending machine, the combination of a casing having a transparent portion in one side, a gravity

chute positioned behind the same, a magazine mounted above said chute, a pivoted plate positioned adjacent to such transparent portion and having its bottom normally maintained in contact with said side to maintain a newspaper thereagainst, means adapted to feed a newspaper from said magazine into said chute behind such transparent portion of said side, and other means adapted to swing said pivoted side of said chute away to permit the newspaper therein to discharge and to then actuate said feeding mechanism to move another newspaper into such chute.

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1,229,055. APPARATUS FOR RAILWAY SIGNALING. AUSTEN H. FOX and ARNOLD W. LENDEROTH, New York, N. Y. Filed May 9, 1916. Serial No. 96,305. (Cl. 246—25.)



1. In a railway signaling or controlling mechanism the combination with a car truck frame, of an arm depending therefrom, a circular detector magnet depending therefrom, a circular detector magnet casing rotatably supported by the arm in close proximity to the periphery of a car wheel and to the rail whereby the casing when encountering extraneous objects will be rotated thereby and liability to injury avoided.

2. In a railway signaling or controlling mechanism the combination with a car truck frame, of a support attached thereto which is movable vertically and horizontally, of a circular detector magnet casing rotatably mounted on and carried by said support in close proximity to the periphery of a car wheel and to the rail.

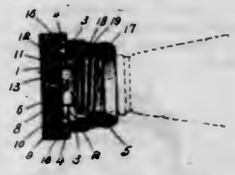
3. In an apparatus of the kind described, the combination with a car truck frame of a support attached thereto, a circular detector magnet casing mounted on said support in close proximity to the periphery of a car wheel and to the rail and means for imparting rotation to the casing from a rotating body on the truck.

4. In an apparatus of the kind described, the combination with a car truck frame of a support attached thereto, a circular detector magnet casing mounted on said support in close proximity to the periphery of a car wheel and to the rail, means for imparting rotation from a car axle to said casing and a yielding connection in said means whereby the casing may be rotated by an external source of power.

5. In an apparatus of the kind described, the combination with a car truck frame of a support attached thereto, a circular detector magnet casing carried thereby and in close proximity to the periphery of a wheel and to the rail, a train of sprockets and chains between the casing and a car axle for imparting a relatively slow movement of rotation to the casing in the same direction as that of the wheels.

[Claims 6 to 10 not printed in the Gazette.]

1,229,056. ELECTRIC-LAMP RECEPTACLE. MELCHOR HORTAL FREIXAS, Brooklyn, N. Y. Filed Sept. 30, 1916. Serial No. 123,099. (Cl. 173—340.)

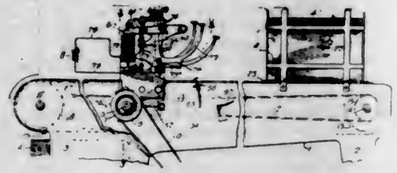


3. A receptacle of the class described comprising a base plate, a flange rising from the base plate inwardly of the periphery thereof and concentrically with respect thereto, said flange being cut away at diametrically opposite points, a shell seated upon the base within the flange, an annulus surrounding the shell, lugs formed on the annulus and arranged within the cut away portion of said flange, and a collar threaded onto the outer end of the shell and serving to hold the annulus upon the base.

[Claims 1, 2, 4, and 5 not printed in the Gazette.]

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1,229,057. CARD-PUNCHING DEVICE. JOHN WM. FRITCH and DELIA E. HOOPES, Washington, D. C., assignors of one-third to William H. Hoopes, Washington, D. C. Filed Oct. 11, 1916. Serial No. 125,100. (Cl. 164—113.)



1. A card punching machine comprising a table, an endless flexible member having a portion arranged to move along the top of the table, a card receptacle, means carried by said endless flexible member for extracting the cards one at a time from the receptacle, means carried by said flexible member for gripping the extracted card, a plurality of plungers, means for driving the endless flexible member to convey the card toward the plungers, means for automatically stopping the movement of the endless flexible member when the card has reached a predetermined position with respect to the plungers, means for automatically releasing the card from the endless flexible member, means for operating the plungers at will to punch the card, and means for manually effecting a step by step movement of the card.

4. A card punching device comprising a table having an opening, a carriage movable within the opening and having its top flush within the top of the table, an endless flexible member having a portion arranged to move along the top of the table, a card receptacle, means carried by the endless flexible member for extracting a card one at a time from the receptacle, means carried by said flexible member for gripping the extracted card, means for driving the endless flexible member, means for moving the carriage toward the receptacle, means for automatically stopping the movement of the carriage, means for automatically stopping the movement of the endless flexible member when the card is in the position above the carriage, means for automatically releasing the card from the endless flexible member and depositing it upon the carriage, and means for manually effecting a step by step movement of the carriage forwardly.

12. In a card punching device, a table having a longitudinal opening in its top, a carriage disposed in said opening and having its top flush with the top of the table, said carriage being movable back and forth in said opening, means for feeding a card upon the carriage at one end of its movement in one direction, and means for advancing the carriage step by step in the other direction.

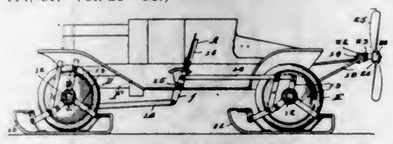
14. In a card punching device, a table having a longitudinal opening in its top, a carriage disposed in said opening and having its top flush with the top of the table, said carriage being movable back and forth in said opening, means for feeding a card upon the carriage at one end of its movement in one direction, means for advancing the carriage step by step in the other direction, a series of movable punching devices disposed in fixed relation with respect to the carriage, means for operating said punching devices selectively, and automatic means for returning the carriage to the position to receive another card.

[Claims 2, 3, 5 to 11, and 13 not printed in the Gazette.]



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1,229,058. SLEIGH ATTACHMENT. CHARLES J. FUSSNER, Brimfield, Ill. Filed Aug. 9, 1916. Serial No. 114,051. (Cl. 21—96.)



1. The combination with a motor vehicle, of front and rear wheel runners, lifting jacks pivotally mounted on the axles of the vehicle, an operating member, connections between the operating member and the lifting jacks, said connections extending outwardly beyond the rear wheels of the vehicle and inwardly of the front wheels of the vehicle, a pivotal connection between each lifting jack and the rear portion of the runner adjacent thereto and a bodily movable connection between each lifting jack and the forward portion of the runner adjacent thereto.

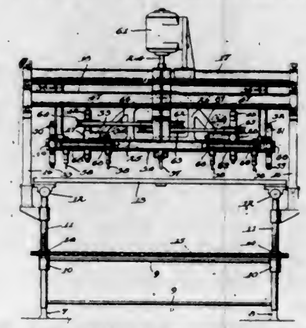
2. The combination with a motor vehicle, of front and rear wheel runners, lifting jacks pivotally mounted on the axles of the motor vehicle beyond the wheels, an operating member, connections from said member extending outwardly from the rear wheels of the vehicle and inwardly of the forward wheels thereof, said connections extending to the jacks, direct pivotal connections between each jack and the rear portion of the runner adjacent thereto, bodily movable members connecting each jack with the forward portion of the runner adjacent thereto, said bodily movable members of the forward runners being pivotally supported from the knuckles of the front wheels of the vehicle.

3. The combination with a motor vehicle, of forward sleigh runners therefor, jacks pivotally mounted on the forward vehicle axles beyond the wheels, said jacks having rearwardly-extending arms pivotally connected to the rear portions of the runners and forwardly-extending arms, links connecting the forwardly-extending arms to the forward portions of the runners, U-shaped members extending from the jacks over the wheels and swingingly connected to the knuckle joint, operating connections leading from said U-shaped members and additional U-shaped members pivotally connected to the links and to a projection from the steering knuckles of the wheels.

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1,229,059. WOOD-CARVING MACHINE. JOHN GALBRAITH, Swatara, Minn., assignor of one-half to Frank J. Widman, Chicago, Ill. Filed May 10, 1916. Serial No. 96,664. (Cl. 90—13.2.)

1. In a carving machine, the combination with a suitable framework, of a vertically extending axial member connected to the same, a pair of sidewise extending yokes on the same, a universal bracket swiveled on the end portion of each of said yokes, a floating bar, a bifurcated yoke on each universal bracket, a pivotal connection between the rear end of each bifurcated yoke and the floating bar, a pivotal connection between the front end of each bifurcated yoke and the corresponding universal bracket, means for retaining the floating bar against lateral displacement while permitting each portion of said bar to move freely in a vertical plane, a pair of forwardly extending brackets having their rear ends rigidly connected to the floating bar, a bifurcated arm swiveled on the forward end of each of said brackets, a control bar pivotally connected to the forward ends of said bifurcated arms, the said bifurcated arms lying parallel to each other, a tracing point on the control bar, suitable carving tools on the control bar, and means for driving the said carving tools in any position of the control bar, for the purpose specified.



2. In a carving machine, the combination with a suitable framework, of a vertically extending axial member carried by the framework, a pair of sidewise extending yokes swiveled on said axial member, a universal bracket swiveled on the outer extremity of each sidewise extending yoke, a floating bar lying to the rear of the sidewise extending yokes, a pair of bifurcated yokes having their rear ends pivoted to the floating bar and their forward ends pivoted to the universal brackets, a forwardly extending bracket on each side of the machine, each of said brackets having its rear end rigidly connected to the floating bar, a bifurcated arm pivotally connected to the forward end of each of said brackets, said bifurcated arms lying parallel to each other, a control bar pivotally connected to the forward ends of the bifurcated arms, a tracing point on the control bar, a suitable carving tool on the control bar, and means for driving said carving tool in any position of the control bar, for the purpose specified.

3. In a carving machine, the combination with a suitable framework, of a vertically extending axial member carried by the framework, a pair of sidewise extending yokes swiveled on said axial member, a universal bracket swiveled on the outer end of each of said yokes, a floating bar lying to the rear of said yokes, a bifurcated yoke in each side of the machine, each bifurcated yoke having its rear end pivoted to the floating bar and its forward end pivoted to the corresponding universal bracket, a pair of forwardly extending brackets having their rear ends rigidly connected to the floating bar, a pair of bifurcated arms having their rear ends pivoted to the forward ends of the said brackets, the said bifurcated arms always lying parallel to each other, a control bar pivotally connected to the forward ends of the bifurcated arms, an adjustable counter-balance on the floating bar, a tracing point on the control bar, a suitable carving tool on the control bar, and means for driving said carving tool in any adjusted position of the control bar, for the purpose specified.

4. In a carving machine, the combination with a suitable framework, of a vertically extending axial member carried by the framework, a pair of sidewise extending members pivotally mounted on said axial member, a universal bracket on the outer end of each of said sidewise extending members, a floating bar to the rear of the sidewise extending members, a link connection from each universal bracket to the floating bar, a forwardly extending member in each side of the machine, each of said forwardly extending members having its rear end rigidly connected to the floating bar, a bifurcated member corresponding to each of the said forwardly extending members, a pivotal connec-

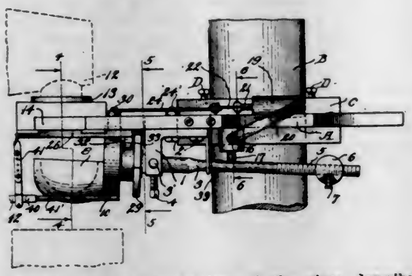
tion between each bifurcated member and the corresponding forwardly extending member, the forwardly extending members lying parallel to each other, a control bar, pivotal connections from the control bar to the bifurcated members, a tracing point on the control bar, a suitable carving tool on the control bar, and means for driving said carving tool in any adjusted position of the control bar, for the purpose specified.

5. In a carving machine, the combination with a suitable framework, of a vertically extending axial member, a pair of sidewise extending members pivoted to said axial member, a floating bar lying to the rear of the sidewise extending members, a pair of bifurcated yokes, a pivotal connection between each bifurcated yoke and the floating bar, a universal connection between each bifurcated yoke and the corresponding sidewise extending member, a forwardly extending member in each side of the machine, a rigid connection between each forwardly extending member and the floating bar, a bifurcated arm in each side of the machine, a pivotal connection between each bifurcated arm and the corresponding forwardly extending member, a control bar, a pivotal connection between each bifurcated arm and the control bar, a tracing point on the control bar, a suitable carving tool on the control bar, and means for driving said carving tool in any adjusted position of the control bar, for the purpose specified.

[Claims 6 to 13 not printed in the Gazette.]

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1,229,060. AUTOMATIC MOLD-CHARGING MECHANISM. ELMER E. GALLAHER, Gas City, and DOMINICK J. MCGRAIL, Marion, Ind. Filed July 28, 1915. Serial No. 42,375. (Cl. 49—5.)



1. Mold charging mechanism of the class described comprising, in combination, a weighing beam, a receiving cup extending from one end of the beam and having its longitudinal axis coincident with the longitudinal axis of said beam, counterbalance means on the other end of the beam, and movable means intermediate the cup and the counterbalance means adapted for actuation by the beam, whereby to discharge the cup.

2. Mold charging mechanism of the class described comprising, in combination, a weighing beam, a receiving cup rotatably mounted on an end portion of the beam, counterbalance means on the other end portion of the beam, and means for rotating the cup when said cup has received a predetermined amount of material, to discharge the cup simultaneously with the balancing thereof.

3. Mold charging mechanism of the class described comprising in combination, a weighing beam, counterbalance means thereon, a receiving cup comprising openable sections journaled on an end portion of the beam, and actuating means operatively conected to the journaled portions of the cup sections, for opening the same under control of the counterbalance means upon receipt of a predetermined amount of material in said cup.

4. Mold charging mechanism of the class described comprising, in combination, a weighing beam, a sectional glass receiving cup controlling movement of said beam upon reception of a predetermined amount of the glass material, shearing members for severing the stream of glass falling into the cup, separate means coaxially mounted on said beam for rotating the cup sections a partial revolution to open the same, actuating levers for said shearing members, an operative connection intermediate a lever and each of the rotating means for the cup sections, and means controlled by the beam for operating the shearing mechanism and said cup sections.

5. Charging mechanism for glass molds comprising in combination, a pivotal suporting member, a receptacle on said supporting member at one side of the pivot, balance means on the supporting member at the other side of the pivot, and means on the same side of the pivot as the receptacle tending to resist the downward movement of said receptacle.

[Claims 6 to 17 not printed in the Gazette.]

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1,229,061. CEILING AND FLOOR PLATE. ARTHUR C. GAYNOR, Bridgeport, Conn. Filed Nov. 29, 1916. Serial No. 134,194. (Cl. 126—317.)



3. A plate member of the character described having a semi-circular recess, upon one side of said recess a tongue having a locking notch, and upon the other side of said recess a housing having a slot in its meeting edge to receive the tongue of another member leaving attaching strips on opposite sides of the slot, one of said strips forming a locking catch to coöperate with the locking notch and said housing being provided with a spring which is raised when a tongue is passed into the housing.

4. A symmetrical plate of the character described comprising identical semi-circular halves, each having an integral off-set tongue projecting from one of the edges thereof to be joined to the edge of the counterpart half and a housing on its corresponding opposite edge, said housing comprising an integral flap folded rearwardly from the edge from which it projects and being slotted at said edge to receive the tongue on said other half, said tongue being provided with a locking notch in the edge thereof adapted to be sprung laterally into engagement with the end of the slot in said housing when said tongue is seated in said housing, and said housing further including an off-set portion engaging the tongue in said housing to yieldingly retain said tongue and said housing in locking engagement.

[Claims 1 and 2 not printed in the Gazette.]

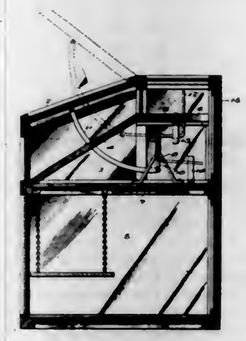
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1,229,062. SHOW-CASE. JOSIAH S. GEESY, York, Pa. Filed July 20, 1916. Serial No. 110,366. (Cl. 211—25.)

1. A show case having a forward top section hinged at its rear end to swing vertically, a shelf arranged in the rear portion of the case and having a kerf in its rear edge, a rest arranged in the case and extending forwardly and downwardly from the shelf and having its side edges spaced from the side walls of the case, standards fixed on the floor of the case and disposed below the shelf, a transverse rock shaft journaled in said standards and having cranks at its ends and also having a handle movable in the kerf of the shelf, and links interposed between and pivotally connected to the cranks on the shaft and the top section and movable in the spaces between the inclined rest and the side walls of the case.

2. A show case having a forward top section hinged at its rear end to swing vertically, a shelf arranged in the rear portion of the case and having a kerf in its rear edge, a rest arranged in the case and extending forwardly and downwardly from the shelf and having its side edges spaced from the side walls of the case, standards fixed on the floor of the case and disposed below the shelf, a transverse rock shaft journaled in said standards and having cranks at its ends and also having a handle that extends rearwardly from the shaft and then upwardly through the kerf in the shelf, a resilient keeper depending from the shelf and adapted to engage the rearwardly-extending portion of the handle, a resilient keeper rising from the floor of the case and adapted to engage the other portion of the handle, and links interposed between and pivotally connected to the cranks on the shaft and the top section and movable in the spaces between the inclined rest and the side walls of the case.





3. A shows case having a forward top section hinged at its rear end to swing vertically, a rock shaft supported above and in spaced relation to the bottom of the case and having cranks and also having an angular handle, links connecting said cranks with the top section, a resilient keeper rising from the floor of the case and adapted to engage the portion of the angular handle remote from the rock shaft, and a pendent resilient keeper suported in the case and adapted to engage the portion of the angular handle adjacent to the rock shaft.

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1,229,063. THRESHER OR SEPARATOR. FRANK GEMINDEN and FRANK KIEL, Moniteau county, Mo. Filed Jan. 14, 1916. Serial No. 72,093. (Cl. 130—24.)



1. In a thresher, the combination, of a vibratory grain pan, a plurality of riddles carried by said grain pan and movable therewith, an air blast fan positioned below said riddles and having its outlet arranged for blowing a blast of air upwardly through the riddles, an air blast guiding board hingedly carried by said grain pan and engaging the outlet of said fan for directing the passage of the air blast through said riddles, said board operable upon movement of said grain pan for changing the direction of the air blast.

2. In a thresher, the combination, of a vibratory grain pan, a plurality of riddles carried by said grain pan and movable therewith, said riddles being arranged in vertical spaced relation to each other, the two uppermost riddles being constructed for separating grain from straw, the lowermost riddle being constructed for sorting grain, means positioned beneath said sorting riddle for receiving the imperfect grain therefrom, a conveyer positioned beneath the delivery end of said sorting riddle, a guiding board for guiding the perfect grain from said sorting riddle and the lowermost of the said separating riddles to said conveyer, means for blowing a cleaning blast of air about said grain during travel from said riddles to said conveyer, means positioned beneath said riddles for blowing a blast of air upwardly through said separating riddles, means operable by the vibratory movement of said grain pan for regulating the direction of travel of the air blast from said last named means.

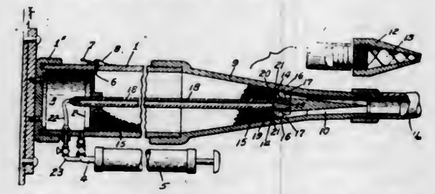
3. In a thresher, the combination, of a vibratory grain pan, a plurality of riddles carried by said grain pan and movable therewith, said riddles arranged in vertical spaced relation, the two uppermost riddles being constructed for separating grain from straw, a plurality of spaced fingers positioned for receiving straw from the uppermost of said riddles, a conveyer positioned beneath said fingers for receiving unthreshed grain heads and delivering them to a tailings conveyer.

5. In a thresher, the combination, of a vibratory grain pan, a plurality of riddles carried by said pan and movable therewith, said riddles arranged in vertical spaced relation, the two uppermost riddles being constructed for separating grain from straw, a plurality of spaced fingers positioned for receiving straw from the uppermost of said riddles, a conveyer positioned beneath said fingers for receiving unthreshed grain heads from the fingers and delivering them to a tailings elevator, an inclined guiding board leading from the delivery end of the second uppermost riddle to said conveyer for guiding tailings from the second riddle to the conveyer, a second conveyer positioned forwardly of first named conveyer, and a second guiding board positioned for guiding threshed grain from the second riddle to said second named conveyer.

[Claims 4 and 6 to 19 not printed in the Gazette.]

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1,229,064. METHOD OF EXTINGUISHING FIRES. GEORGE T. GILLETTE, Los Angeles, Cal. Filed Mar. 20, 1916. Serial No. 85,519. (Cl. 23—5.)



1. The method set forth of extinguishing fire which consists in projecting onto the same a stream of powdered diatomaceous earth.

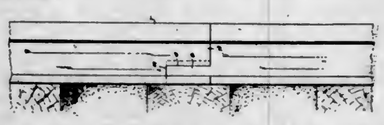
2. The method set forth of extinguishing fire which consists in projecting onto the same a stream of powdered diatomaceous earth by means of an air current.

3. The method of extinguishing fire set forth which consists in first consolidating diatomaceous earth; powdering the same and blowing the powdered material toward the fire and thereby introducing it to the fire to smother the same.

4. The method of extinguishing fire set forth which consists in blowing powdered diatomaceous earth toward the fire and thereby introducing it to the fire to smother the same.

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1,229,065. RAIL-JOINT. ALBERT GIMPEL, Mountain View, Mo., assignor of one-third to Mike Buyalos, Chesterfield, Va. Filed Oct. 24, 1914, Serial No. 868,425. Renewed Apr. 16, 1917. Serial No. 162,525. (Cl. 239—8.)

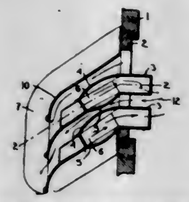


A rail joint comprising a rail section having an extended tenon at one end, the upper face of said tenon

being inclined downwardly in opposite direction from a central line, and a coöperating rail section having at one end in its base a longitudinally extended slot, the web of the rail being cut away upon each side corresponding to said slot leaving a depending portion of the web with its under face formed with a groove the walls of which are oppositely inclined from the center outward to correspond with the inclined walls of the upper face of said tenon, said tenon being received in the slot of the base of the rail section and the wedge shaped face of the tenon received in the wedge shaped groove of said depending portion.

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1,229,066. VENTILATOR. JOSEPH GREENBURG, Roxbury, Mass. Filed July 24, 1916. Serial No. 110,831. (Cl. 98—22.)



1. A ventilator for vehicle bodies positioned at an opening in the body and comprising a plurality of external vanes disposed longitudinally the body at said opening whereby air may be drawn from the body interior to the vane comprehended spaces; and an air conduit positioned opposite each space within said body and opening into the body, each conduit having its end portions extending into the adjacent vane comprehended space whereby, upon movement of the vehicle body in either direction, a portion of the air currents induced between adjacent vanes is deflected to the body interior and vitiated air is drawn therefrom by the undeflected currents.

2. A ventilator for vehicle bodies positioned at an opening in the body and comprising a pair of external vanes disposed longitudinally the body at said opening whereby air may be drawn from the body interior to the vane comprehended space, an air conduit within the body and open thereinto, and means in said vane comprehended space to deflect air into said conduit whereby, upon movement of the vehicle body, a portion of the air currents induced between the vanes is deflected to the body interior and vitiated air is drawn therefrom by the undeflected currents.

3. A ventilator for vehicle bodies positioned at an opening in the body and comprising a pair of external vanes disposed longitudinally the body at said opening whereby air may be drawn from the body interior to the vane comprehended space, an air conduit within the body and open thereinto, and an air duct in said space to deflect air into the conduit whereby, upon movement of the vehicle body, a portion of the air currents induced between the vanes is deflected to the body interior and vitiated air is drawn therefrom by the undeflected currents.

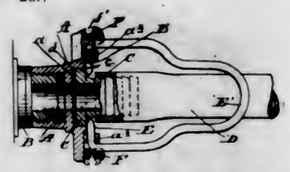
4. A ventilator for vehicle bodies positioned at an opening in the body and comprising a plurality of external vanes disposed longitudinally the body at said opening whereby air may be drawn from the body interior to the vane comprehended spaces; an air conduit within said body opposite each space, each conduit communicating with the body interior; and means in each of said vane comprehended spaces to deflect air into each of said conduits whereby, upon movement of the vehicle body, a portion of the air currents induced between each of the adjacent vanes is deflected to the body interior and vitiated air is drawn therefrom by the undeflected currents.

5. A ventilator for vehicle bodies positioned at an opening in the body and comprising external vanes disposed longitudinally the body at said opening whereby air may be drawn from the body interior to the vane comprehended spaces; an air conduit within said body opposite each space, each conduit communicating with the body interior; means in each of said vane comprehended spaces to deflect air into said conduits whereby, upon movement of the vehicle body, a portion of the air currents induced between each of the adjacent vanes is deflected to the body interior and vitiated air is drawn therefrom by the undeflected currents; and a flaring instrumentality secured to the ends of the external vanes to deflect air between the vanes.

[Claim 6 not printed in the Gazette.]

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1,229,067. HOSE-COUPLING. ALLIE GRIFFITH, Cleveland, Ohio. Filed Apr. 12, 1915. Serial No. 20,748. (Cl. 137—28.)



1. A hose coupling comprising a pair of independent coupling sections, lock means carried by one of said sections movable into and out of engagement with the other of said sections, a lever operable to actuate said lock means, and means disposed in the path of said lever, said means causing said lever to move said lock means, as and for the purpose set forth.

2. A coupling comprising two independent coupling sections, a locking member, an operating lever for said member, and means carried by one of said sections, said means being disposed in the path of movement of said lever to automatically actuate the said locking member, as and for the purpose set forth.

3. A coupling comprising two independent sections, a pair of locking members, a single operating lever having connection with each locking member, means formed upon one of said sections, the said means being disposed in the path of the said operating member, to simultaneously actuate said locking members, as and for the purpose set forth.

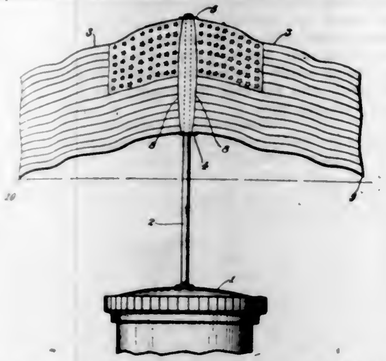
4. In a hose coupling, the combination with two separable portions, one having a recess and the other a head insertible therein, of oppositely positioned keepers upon said socket portion, bearings in which said keepers are mounted and in which they are rotatable and radially movable, a spring loop connecting said keepers, and serving as a means for rotating the same, and cams engaged by said loop and operating to force said keepers into engagement with said head, when said loop is revolved in one direction, the spring action of said loop serving to separate said keepers when revolved in the opposite direction.

5. In a hose coupling, in combination, two separable portions for hose and fixed connection respectively, one portion having a head and the other portion a recess therefor, radially movable keepers mounted upon the socket portion and engageable with said head, and rotatable upon said socket portion, a spring loop connecting said keepers, and serving as a lever to operate the same and cams mounted upon said socket portion, and engageable by said loop, said cams serving to force said keepers into engagement with said head, said cams provided with rest portions preventing involuntary movement of said loop.

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1,229,068. ANIMATED ATTACHMENT FOR RADIATOR-CAPS. WILLIAM PETER ROWAN, St. Louis, Mo., assignor, by mesne assignments, to A. T. Crawford and H. S. Fliesbach, Scotts Bluff, Nebr. Filed Apr. 27, 1917. Serial No. 164,887. (Cl. 46—14.)

1. A device of the class described, comprising a staff, and a flag extending laterally from and mounted to rotate about the axis of said staff, with said staff substantially parallel to the plane of said flag, said flag having means adapting it for rotation by air currents about said axis.

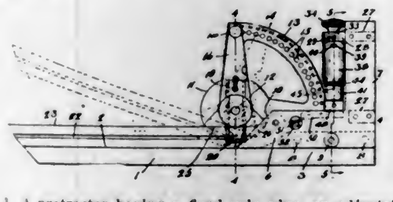


4. A device of the class described, comprising a staff, and an air vane mounted for rotation intermediate its ends about the axis of said staff, said vane having representations of a flag on opposite faces thereof and arranged in displaced relation along said axis.

[Claims 2 and 3 not printed in the Gazette.]

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1,229,069. PROTRACTOR. EDWIN V. HAGMAN, Revere, Mass. Filed May 15, 1916. Serial No. 97,505. (Cl. 33—102.)



1. A protractor having a fixed rule edge, an adjustable arm pivotally mounted thereon, a degree adjusting member with which the arm is relatively movable for adjustment and to which the arm is fixed when adjusted, said degree adjusting member being pivotally mounted on the fixed rule edge, a micrometer adjusting member mounted on the fixed rule edge and connected with the degree adjusting member for minute adjustment of said member and arm and a movable rule edge carried by the arm.

2. A protractor comprising a fixed rule edge, a degree scale rotatably supported thereon, an adjusting arm rotatably supported on the fixed rule edge and a movable rule edge secured to said arm, the position of the arm being movable with respect to the degree scale to vary the adjustment of the movable rule edge with respect to the fixed rule edge in degrees, said arm being fixed to the degree scale when adjusted, a micrometer adjuster secured to the fixed rule edge and connected to the degree scale to move the latter with the fixed arm and movable rule edge for minute adjustment.

3. A protractor comprising a fixed rule edge, a face plate secured to one side thereof, a back plate secured to the opposite side thereof, the face and back plate having alined angular extensions, a degree scale pivotally mounted on the back plate, an arm pivotally mounted on the back plate, a movable rule edge, clamping means connecting the movable rule edge to the arm, the arm with the movable rule edge being adjustable with respect to the degree scale to vary the angular inclination of the respective rule edges in degrees, said arm and movable rule edge being fixed to the degree scale when adjusted, a micrometer adjusting member supported by the angular portions of the face and back plate and a connection between the micrometer adjusting member and the degree scale to move the latter and the arm for minute angular and movable rule edge variation with the fixed rule edge.

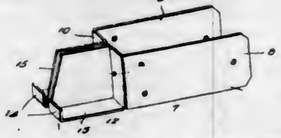
4. A protractor including a fixed rule edge, plates secured thereto, adjacent one end and having right angle portions, a degree scale pivotally mounted on one of the plates and formed with holes indicating degree adjustments, an arm arranged upon the pivot of the degree scale and formed with a member to engage any one of the holes in the degree scale and to fix the arm to the degree scale when adjusted, a guide secured upon the arm, a slide movable in the guide and formed with a lateral extension, a movable rule edge having a slot to receive the lateral extension of the slide, means for clamping the slide in the guide to arrange the movable rule edge in the fixed relation to the arm, and a micrometer adjusting member carried by the right angle portions of the plates and connected to the degree scale, said micrometer adjusting member moving the degree scale, arm, and movable rule edge for minute adjustments between said rule edges.

5. A protractor comprising a fixed rule edge, plates secured thereto adjacent one end and having right angle portions, a degree scale pivotally mounted on one of the plates and formed with holes indicating degree adjustments, an arm arranged on the pivot of the degree scale and having a member to engage any one of the holes in the degree scale, to secure the arm to the degree scale when adjusted, a movable rule edge carried by the arm, and movable therewith on the degree scale to vary the angular relation between the movable and fixed rule edges, and a micrometer adjustment carried by the right angle portions of the plates and comprising a micrometer screw mounted for rotary movement with respect to the plates, a scale gage fixed to the screw and bearing minute scale indications, a block slidable within the sleeve and having threaded coöperation with the micrometer screw, and a connection between the barrel and degree scale to move the degree scale, connected arm, and movable rule edge in the micrometer adjustment of the barrel.

[Claim 6 not printed in the Gazette.]

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1,229,070. JOIST OR BEAM SUPPORT OR ANCHOR. CALVIN F. HALL, Athens, Ill. Filed July 8, 1916. Serial No. 108,161. (Cl. 72—108.)



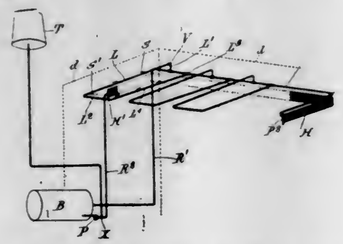
A joist anchor including a pair of joist engaging plates adapted for engagement with the sides of the joist adjacent one end, a joist engaging flange on the end of each plate and adapted for engagement with the end of the joist, and wall engaging wings projecting at right angles from the outer end of each flange and arranged in close parallel relation with each other, a wall engaging lip extending from the upper edge of each wing and arranged in the plane of the upper edge of the plates and flanges and terminating flush with the outer side faces of the adjacent plates, and an anchoring lug extending downwardly at right angles from the outer end edge of each lip and arranged in spaced parallel relation with the adjacent flanges.

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1,229,071. COMBINED HEATING AND SPRINKLER SYSTEM. WILBERFORCE BEECHER HAMMOND, Brookline, Mass., assignor, by mesne assignments, to Combined Heat and Sprinkler Company, a Corporation of Massachusetts. Filed June 26, 1916. Serial No. 105,937. (Cl. 169—20.)

1. In a combined hot water heating and sprinkler system, the combination with the characteristic elements of a hot water circulation system of a circulation loop extending laterally from said circulation system and joined

thereto at both ends of the loop, said loop comprising a relatively high-reaching riser at one end and a relatively low return connection at the other end and the pipes of the loop descending gradually from the level of the top of the riser to that at the return connection, and fire-protecting sprinklers mounted on the inclined pipes of the loop.

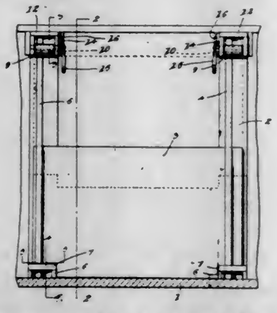


2. In a combined hot water heating and sprinkler system, the combination with the characteristic elements of a hot water circulation heating system, of a circulation loop extending laterally from said circulation system and joined thereto at both ends of the loop, said loop comprising a relatively high reaching riser at one end and a relatively low return connection at the other end, and the pipes of the loop descending gradually from the level of the top of the riser to that at the return connection, fire-protecting sprinklers mounted on the inclined pipes of the loop, and an air collecting chamber attached to the loop.

3. In a combined hot water heating and sprinkler system, the combination with a main hot water circulation circuit and means to maintain circulation therein, of a circulation loop connected with said main circuit at both ends of said loop, one of its connections being at a higher level than the other, to maintain independent gravity circulation in said loop, and fire-protecting sprinklers mounted on the said gravity circulation loop.

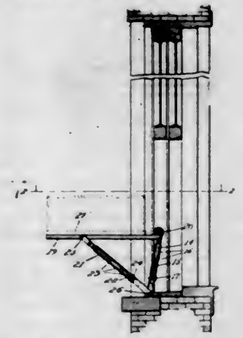
4. In a combined hot water heating and sprinkler system, the combination of a main hot water circuit and means to maintain circulation therein, a secondary circuit consisting of a loop connected at both ends with the main circuit, the connection nearer the source of main circuit circulation comprising a riser from the top of the main circuit pipe, and sprinklers mounted on the pipes of the secondary circuit.

1,229,072. CAR-DOOR. FRED J. HARDY, Corbettsville, N. Y. Filed Feb. 25, 1914. Serial No. 820,873. (Cl. 20—30.)



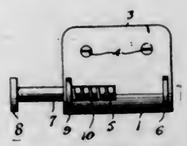
The combination with a car having a door opening, of casings located at the opposite sides of the upper portion of the door opening, cams mounted in the casings, horizontal plates located at opposite sides of the lower portion of the door opening and provided with slots having branches extending longitudinally and transversely of the car, vertical bars having their upper ends arranged in the casings in position to be engaged by the cams, said bars having their lower ends operating in the slots of the said plates and adapted to be placed in either branch to arrange them different distances from the side of the bar to accommodate doors of different thicknesses, the said cams being adapted to clamp the bars in either position, and pawls and ratchets for locking the cam in engagement with the bars.

1,229,073. WINDOW-PLATFORM SUPPORT. EDWARD F. HARRIS, Chicago, Ill., assignor, by mesne assignments, of one-fifth to Frank Harper, Chicago, Ill. Filed Feb. 7, 1914, Serial No. 817,124. Renewed Mar. 27, 1917. Serial No. 157,856. (Cl. 20—87.)



A device of the class described comprising a transverse member consisting of two telescoping tubes, there being transverse openings through the outer tube; a stop pin extending through said openings; a bearing plate rigidly secured to the outer end of the inner tube; a member threaded in the outer end of the outer tube; a bearing plate swiveled to the outer end of said threaded member; an operating rod slidable transversely in said threaded member; longitudinally extensible supports for said transverse member adapted to rest upon the window sill, said supports being connected with the tubes of said member by means of sleeves loosely engaging the same; platform supporting rods having sleeves at their inner ends loosely engaging the tubes of said transverse member; and a longitudinally extensible brace pivotally connected with each of said rods and with the lower end of the corresponding support, substantially as described.

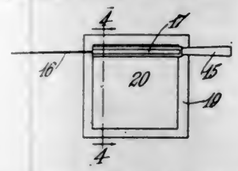
1,229,074. WINDOW-SHADE HOLDER. EPHRIAM G. HARRISON, Provo City, Utah. Filed Feb. 16, 1916. Serial No. 78,702. (Cl. 156—26.)



A window shade holder comprising a hollow body provided at its top with converging flanges which extend the full length of the body, said body having at its side and in the vicinity of the end thereof a longitudinally disposed slot, said body having at the same side an outstanding lug, a bar movably mounted in the body and provided at its outer end with an enlarged head, a handle lug mounted upon the bar and disposed through the slot and a spring located in the body and bearing at one end against the end of the same and at its other end against the side of the handle lug and being under tension with a tendency to normally hold the head of the bar away from the adjacent end of the body.



1,229,075. APPARATUS FOR HANDLING METALLIC LEAF. LEON MARTIN HARWOOD, Springfield, Mass. Filed July 3, 1916. Serial No. 107,375. (Cl. 175—265.)



1. A device for handling metallic leaf having dielectric material on its outer surface adapted to come in contact with the leaf, and a conductor positioned so that the dielectric material is between it and the leaf to be handled, said conductor adapted to be electrified, whereby the charge thereon may act inductively to attract the leaf.

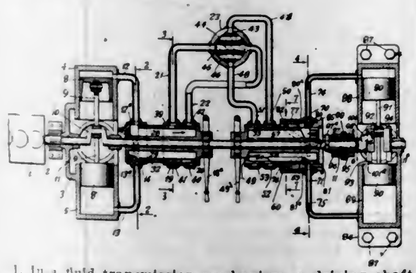
2. A device for lifting metallic leaf from the package, comprising, an attractor having conductors separated by insulating material and adapted to be electrified with opposite charges, both of said conductors adapted to attract and hold to the attractor the uppermost leaf of a package with a minimum inductive effect upon remaining leaves.

3. A device for handling metallic leaf, comprising, a suitable carrier, and two conductors mounted thereon and insulated one from the other, said conductors adapted to be oppositely electrified and brought into proximity with the leaf, whereby the latter is attracted and held to the carrier.

4. A device for handling metallic leaf, comprising, a suitable device and two conductors mounted thereon and insulated one from the other, said conductors having portions extending beyond an end of the device adapted to be oppositely electrified, whereby, when the conductors are brought into proximity with the leaf, the latter is attracted and held to the carrier.

5. A device for handling metallic leaf, comprising, two conductors, one insulated from the other to form a condenser arranged for charging, and an insulated handle portion by which the conductors may be positioned to attract a leaf, whereby the condenser may discharge through the leaf after the conductors have attracted it and the residual charge of the condenser used to hold the leaf to the device for handling.

1,229,076. VARIABLE-SPEED POWER-TRANSMISSION MECHANISM. FRANK A. HAYES, Pelham Manor, N. Y. Substitute for application Serial No. 754,798, filed Mar. 17, 1913. This application filed Mar. 12, 1915. Serial No. 13,864. (Cl. 138—22.)



1. In a fluid transmission mechanism, a driving shaft, a transmission shaft, a pump comprising two relatively movable elements, one of said elements being connected to the driving shaft and the other of said elements being connected to the transmission shaft, a motor comprising a stationary element and a relatively movable element, said movable element being operatively connected to the transmission shaft, and valve mechanism for conducting the fluid from the pump to the motor.

2. In a fluid transmission mechanism, a driving shaft, a pump casing coupled thereto, a transmission shaft, an element working in the pump casing connected to the transmission shaft, a stationary motor casing, an element working in said motor casing also connected to the transmission shaft, and valve mechanism for conducting the fluid from the pump to the motor.

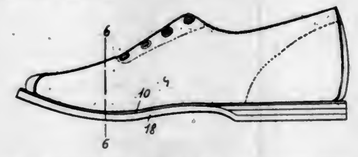
3. A fluid transmission mechanism comprising a driving shaft, a pump casing coupled thereto provided with radial cylinders, a transmission shaft having a crank, pistons working in the pump cylinders connected to the crank, a stationary motor casing provided with radial cylinders, a second crank on the transmission shaft, pistons working in the motor cylinders connected to said second crank, and valve mechanism for conducting the fluid from the pump to the motor.

4. A fluid transmission mechanism comprising a driving shaft, a pump casing coupled thereto, provided with cylinders, a transmission shaft having a crank, pistons working in the pump cylinders connected to the crank, a stationary motor casing provided with cylinders, an adjustable crank on the transmission shaft, pistons working in the motor cylinders connected to said adjustable crank, and valve-mechanism for conducting the fluid from the pump to the motor.

5. A fluid transmission mechanism comprising a driving shaft, a pump casing coupled thereto, provided with cylinders, a transmission shaft having a crank, pistons working in the pump cylinders connected to the crank, a stationary motor casing provided with cylinders, a second crank on the transmission shaft, pistons working in the motor cylinders connected to said second crank, valve mechanism for conducting the fluid from the pump to the motor, and means for cutting out of the fluid circuit some of the cylinders.

[Claims 6 to 31 not printed in the Gazette.]

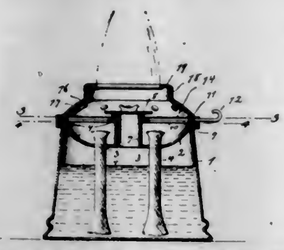
1,229,077. METHOD OF MAKING WELT-SHOES. GUSTAF E. HEDLUND, Lynn, Mass. Filed Oct. 23, 1913. Serial No. 796,869. (Cl. 12—142.)



1. The improvement in the art of making welt shoes which consists in stitching a welt strip to the edge of an unlasted and unturned fitted upper with the edges of said strip and upper flush; placing a last having a metal bottom and a flat inner sole attached thereto in said upper; pulling the edges of the attached welt and upper over the edge and against the bottom of said inner sole so that the outer edge of said strip will extend beyond said upper; driving tacks through the welt strip, upper, and inner sole against said metal bottom of the last whereby said tacks will be clenched into said inner sole; placing a filler on the bottom of said inner sole between the inner edges of said welt strip and upper; and finally attaching an outer sole to said welt strip with a plurality of heel lifts interposed between said welt strip and the rear end of said outer sole.

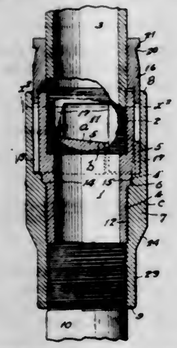
2. The improvement in the art of making welt shoes which consists in stitching a welt strip to the edge of an unlasted and unturned fitted upper with the edges of said strip and upper flush; placing a last having a metal bottom and a flat inner sole attached thereto in said upper; pulling the edges of the attached welt and upper over the edge and against the bottom of said inner sole so that the outer edge of said strip will extend beyond said upper; driving tacks through the welt strip, upper, and inner sole against said metal bottom of the last whereby said tacks will be clenched into said inner sole; and finally attaching an outer sole to said welt strip with a plurality of heel lifts interposed between said welt strip and the rear end of said outer sole.

1,229,078. ALCOHOL-LAMP. SOMA HERZOG, New York, N. Y. Filed Jan. 11, 1917. Serial No. 141,747. (Cl. 158—97.)



An alcohol lamp comprising a container, an annular apertured cup mounted thereon, wicks extending from the container into the cup, said cup having a central stem, a spreader mounted upon said stem, an annular disk centered upon the stem, and having a plurality of openings, a register having corresponding openings and rotatable on the stem, the openings in one of said parts being covered with wire gauze, and an annular cap mounted on the container, said cap having a plurality of main air orifices, an inner flange, and a plurality of auxiliary air orifices in said flange.

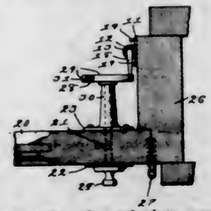
1,229,079. THREE-PIECE TUBULAR COUPLING. PAUL C. HILL, Los Angeles, Cal. Filed Nov. 20, 1915. Serial No. 62,633. (Cl. 137—28.)



A coupling comprising an inner tubular member internally threaded at one end and reduced and formed in a nipple at the other end and provided between the nipple and the internally threaded end with external lugs, the edges of which nearest the internally threaded end are inclined at slight pitch in one direction around said inner member; an outer tubular member constructed at one end to receive the inner member, and internally screw-threaded at the other end and provided between the receiving end and the internal threads with a seat in which said nipple fits and provided between said seat and the receiving end, with internal lugs the edges nearest said seat being adapted to engage the inclined edges of the lugs of the inner member when said members are relatively rotated for that purpose; and an intermediate member having wedging prongs inserted between the lugs to hold the lugs in close engagement with each other.

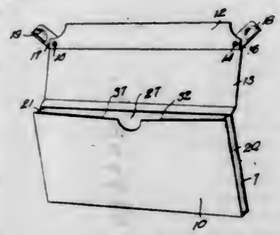
1,229,080. BURGLAR-ALARM. JOSEPH HLAVATY, Oklahoma, Okla. Filed Mar. 9, 1916. Serial No. 83,031. (Cl. 116—42.)

In a burglar alarm, the combination with a frame and a swinging closure hinged to one side of the frame, of a spring actuated plunger mounted upon the side of the frame to which the closure is hinged and formed with a lateral arm, a fixed pin over which the lateral arm of the plunger is adapted to be swung to hold the plunger against the action of the spring, alarm means adapted to be actuated by the plunger, a tubular bearing post projecting from the face of the closure at a point near the hinged edge thereof, a shaft extending through the closure and



tubular bearing post, a flanged plate applied to the shaft at the end of the tubular bearing post and offset from the face of the closure so that the flange thereof will have a lateral swinging movement and engage the arm of the plunger when the closure is opened, said flange having a cut-away portion, and means for rotating the shaft and plate to bring the cut-away portion of the flange opposite the arm of the plunger when it is desired to open the closure without sounding the alarm.

1,229,081. ENVELOP. PETER ALBERT HOFFMAN, Hastings, Minn. Filed Oct. 21, 1915. Serial No. 57,065. (Cl. 229—87.)



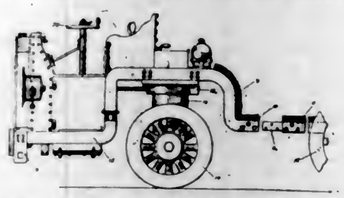
1. In an envelop of the character described, a body formed from two blanks folded and secured together, one of said blanks being folded for providing a bottom, two side members, a top member and an overlapping flap, and the other of said blanks being folded so as to provide a central body, end flaps and end members for the envelop, the body of said first mentioned blank and the end flaps being secured to the sides of the first mentioned flap in such a manner as to cause the ends provided by the second mentioned blank to be spaced inwardly from the ends of said sides.

2. In an envelop of the character described, a body formed from a single blank folded so as to produce two sides, a bottom, a top and a flap designed to overlap one of said sides, a separate member formed from a single blank folded so as to produce a side member, end members and a pair of flaps extending an appreciable distance across one of the first mentioned side members, the side member of said separate member being secured to one of the side members of the body whereby said ends are held in position, each of said flaps being left unsecured for part of its distance, and movable clips arranged on the flap of said body provided with a projecting member adapted to extend between the unsecured part of the flaps on said separate member and the side adjacent thereto, whereby the flap on the body is held in a folded position.

1,229,082. AUTOMOBILE TRACTOR-VEHICLE. OTIS A. HOLLIS, Pittsburgh, Pa., assignor, by mesne assignments, to Hollis Automatic Traction Jack Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Dec. 14, 1912. Serial No. 736,807. (Cl. 21—90.)

1. A self-propelling combined tractor and truck comprising a frame adapted for attachment of idle wheels at either end thereof, and having at intermediate positions a plurality of pairs of universally revoluble driving wheels, combined with an engine and gearing connected to said wheels and adapted to both drive and steer thereby.





2. A self-propelling combined tractor and motor truck comprising a frame having an upward recess therein and a detachable portion at one end carrying idle wheels, means to attach and detach idle wheels at the other end of the frame, and a plurality of pairs of driving wheels located in the recess of the frame and adapted to turn therein with a radius less than half the width of the machine, an engine and means to drive said wheels.

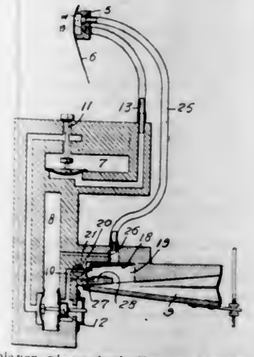
3. A self-propelling vehicle comprising a frame, one pair of idle wheels, two pairs of driving and steering wheels, the axle of each pair of driving wheels being less than the entire wheel base and means for positively driving said driving wheels in any position around a vertical axis, whereby the machine may be turned in place by the application of power in the direction of movement of the wheel required for steering.

4. A motor vehicle provided with two pairs of front driving wheels mounted with one-way clutches on axles universally revoluble on vertical axes outside the tread of the wheel, and means to positively drive said axles of said pairs of wheels, and thereby one only of said wheels.

5. A motor vehicle having idle rear wheels and two pairs of front driving wheels, each pair of driving wheels being mounted with one-way clutches on axles adapted to turn 360 degrees on a vertical axis, and means to positively drive the axle and one wheel only of each pair in any position, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

1,229,083. AUTOMATIC EXPRESSION CONTROL FOR PLAYER-PIANOS. MONROE S. HOWARD, Waukon, Iowa. Filed July 31, 1915. Serial No. 42,971. (Cl. 84—168.)



1. In a player piano including a tracker bar and a striking pneumatic and means connecting them whereby the striking pneumatic may be actuated for striking a note, said means including an exhaust chamber and a passage communicating with the exhaust chamber and with the striking pneumatic, the combination of a chamber communicating with the striking pneumatic and passage, a valve control pneumatic arranged within the chamber, a passage connecting the valve pneumatic with an auxiliary opening in the tracker bar and being provided with a bleed opening communicating with the exhaust chamber, an oscillatory cut-off valve arranged within the first passage, an arm operably connected with the valve, an eye arranged on the valve control pneumatic and loosely engaging the arm whereby the valve may be oscillated for opening and closing the first passage as the valve pneumatic is expanded and collapsed, a by-pass communicating with the first passage and with the striker pneumatic, a flap valve controlling the by-pass adjacent the striker pneumatic, and means whereby the auxiliary opening in the tracker bar may be uncovered to various degrees.

2. In a player piano including a tracker bar, exhaust chamber, striking pneumatic, and passage communicating with the exhaust chamber and striking pneumatic, the combination of a chamber communicating with the striking pneumatic and passage, a valve control pneumatic arranged within the chamber, a passage connecting the valve pneumatic with an auxiliary opening in the tracker bar and being provided with a bleed opening communicating with the exhaust chamber, an oscillatory cut-off valve arranged within the first passage, an arm operably connected with the valve, an eye arranged on the valve control pneumatic and loosely engaging the arm whereby the valve may be oscillated for opening and closing the first passage as the valve pneumatic is expanded and collapsed, and means whereby the auxiliary opening in the tracker bar may be uncovered to various degrees.

3. In a player piano including a tracker bar, striking pneumatic, exhaust chamber, and passage connecting the striking pneumatic and exhaust chamber, the combination of a chamber communicating with the striking pneumatic and passage, a valve control pneumatic arranged within the chamber, a passage connecting the valve pneumatic with an auxiliary opening in the tracker bar and being provided with a bleed opening communicating with the exhaust chamber, an oscillatory cut-off valve arranged within the first passage, connecting means between the valve and valve control pneumatic whereby the former may be actuated upon actuation of the latter, and means whereby the admission of air through the auxiliary opening may be controlled.

4. In a player piano including a tracker bar, a striking pneumatic, an exhaust chamber, and a passage communicating with the striking pneumatic and exhaust chamber, the combination of a cut-off valve arranged within the passage, a control pneumatic operably connected with the cut-off valve and arranged with respect to the striking pneumatic in such manner as to be exposed to the pressure attaining in the striking pneumatic, a passage communicating with the control pneumatic and with an auxiliary opening in the tracker bar, communicating means between the exhaust chamber and the valve control pneumatic whereby the latter may be collapsed when the auxiliary opening in the tracker bar is closed in order to maintain the cut-off valve in position for allowing communication through the passage, and means for controlling the admission of air through the auxiliary opening to said valve control pneumatic.

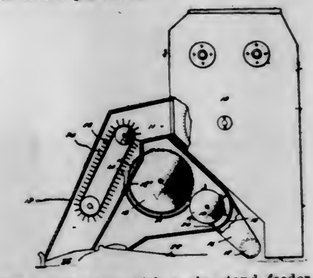
5. A player piano including a striking pneumatic, a passage through which air in the striking pneumatic may be exhausted, a cut-off valve for controlling communication through said passage, a valve control pneumatic operably connected with the cut-off valve, and exposed to the pressure in the striking pneumatic, a tracker bar having an opening with which the valve control pneumatic is in communication, means whereby the air within the valve control pneumatic may be exhausted when said opening is closed, and means for controlling admission of air through the opening to the valve control pneumatic.

[Claims 6 to 8 not printed in the Gazette.]

1,229,084. COTTON-GIN. EDWARD L. HUNTSMAN, Rochester, Tex. Filed June 19, 1916. Serial No. 104,541. (Cl. 13—12.)

1. The combination with a gin stand feeder and a gin stand, of a casing positioned between the feeder and the

stand and having two compartments therein one of which is arranged in communication with the outlet of the feeder and with the huller breast of the gin stand while the other compartment is arranged in communication with the first compartment and with the top of the cotton roll chamber of the gin stand, and coöperative means arranged in the compartments for separating the cotton from the burs so that the separated burs and cotton will be respectively delivered to the huller breast and the cotton roll chamber of the gin stand.



2. The combination with a gin stand feeder and a gin stand, of a separating attachment disposed between the feeder and the stand including a casing having two compartments therein, one of which is arranged in communication with the huller breast of the gin stand while the other is arranged in communication with the cotton roll chamber of the gin stand, a saw cylinder rotatably mounted in one compartment of the casing, a suction device connected to one end of the casing the suction of which removes the cotton from the cylinder, a perforated plate arranged in front of the suction device for preventing the passage of cotton therethrough, coöperative means mounted in the casing and interposed between the plate and the cylinder for directing the action of the suction to the top of the cylinder and for removing cotton from the plate and directing it to the cotton roll chamber of the gin stand feeder, and an endless conveyer for coöperating with the saw cylinder for carrying burs away from the cylinder and directing them into the huller breast of the gin stand.

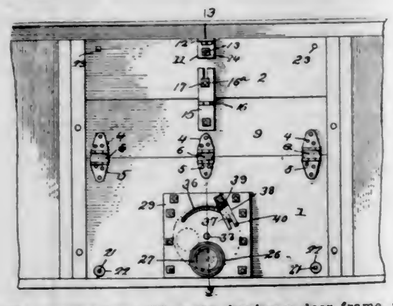
3. The combination with a gin stand feeder and a gin stand, of a casing arranged between the feeder and the stand and provided with two compartments one of which communicates with the huller breast of the gin stand while the other communicates with the cotton roll chamber of the gin stand, an endless conveyer mounted in the top compartment of the chamber for directing burs into the huller breast of the gin stand, a saw toothed cylinder rotatably mounted in the other of the compartments of the casing for engaging and separating cotton from the burs, a pipe extending from one end of the casing and through which there is a suction action for removing cotton from the cylinder, a perforated plate arranged in front of the pipe for preventing the passage of cotton therethrough, a shield mounted in the casing beneath the cylinder for preventing a suction action on the under surface of the cylinder, a coöperating roller arranged between the plate and the cylinder for directing the suction action to the top of the cylinder and for removing cotton from the perforated plate and directing it into the cotton roll chamber of the gin stand.

4. The combination with a gin stand cleaner feeder and a gin stand, of a casing arranged therebetween, a partition providing two compartments in the casing the upper of which communicates with the cleaner feeder and the huller breast of the gin stand while the lower compartment communicates with the cotton roll chamber of the gin stand, the partition being provided with an opening for establishing communication between the two compartments, ribs arranged across the opening, a saw toothed cylinder rotatably mounted in the lower compartment of the casing and having the teeth thereof projecting between the ribs into the upper compartment for engaging cotton which passes down the partition, a pipe extending from one end of the casing and through which there is a suction action for removing cotton from the cylinder, an arcuate shield extending through the partition and arranged beneath the toothed cylinder, means for preventing the passage of clean cotton through the pipe, means for directing the action of the suction to the top of the cylinder and for directing clean cotton into the cotton roll chamber of the gin stand, and conveying means mounted in the upper compartment of the casing for coöperating with the saw toothed cylinder and for carrying burs down the partition so that they may be deposited in the huller breast of the gin stand.

5. The combination with a cleaner feeder and a gin stand, of an attachment arranged therebetween including a casing, a partition providing two compartments in the casing the upper of which communicates with the feeder and with the huller breast of the gin stand while the lower compartment communicates with the cotton roll chamber of the gin stand, the partition being also provided with an opening establishing communication between the two compartments, ribs arranged across the opening, a toothed cylinder rotatably mounted in the lower compartment of the casing and having the teeth thereof projecting between the ribs into the upper compartment for separating cotton from the burs, a pipe extending from the casing and through which there is a suction action, a perforated plate arranged in front of the pipe for preventing the passage of cotton through the pipe, an arcuate shield connected to the partition and arranged between the toothed cylinder for preventing a suction action on the under surface of the cylinder, a roller rotatably mounted in the casing between the plate and the toothed cylinder, a plurality of flexible flaps arranged on the periphery of the roller for directing the action of the suction on the top of the cylinder and for removing cleaned cotton from the plate and directing it into the cotton roll chamber of the gin stand, and an endless conveyer mounted in the other compartment of the casing for coöperating with the saw toothed cylinder for moving burs away from the cylinder so that they may be fed into the huller breast of the gin stand.

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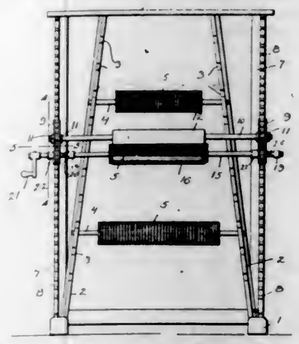
1,229,085. GRAIN-DOOR. WYATT M. INSKO, Carlisle, Ky. Filed Nov. 11, 1914. Serial No. 871,606. (Cl. 20—30.)



The combination with a car, having a door frame, and a grain door composed of upper and lower sections, the lower section being provided with a discharge opening, a plate mounted on the lower section of the door in spaced relation with the opening, and having an opening registering with the discharge opening, hinges connecting the sections of the grain door, said hinges being provided with elongated intermediate leaves spacing the upper section from the lower section, when the said upper section is swung downwardly, and an outwardly projecting extensible spout composed of tubular sections telescopically arranged, one of the sections being fixed to the said plate and the said sections collapsing to a size to permit the spout to be arranged in the space between the sections of the door.



1,229,086. WIRE-CLOTH RACK. ANTRUM W. JOHNSON, Warrenton, Mo. Filed Mar. 17, 1916. Serial No. 84,859. (Cl. 211—18.)



1. A wire cloth rack comprising feet, a pair of upwardly and inwardly extending supporting bars secured to said feet, cross beams secured to the upper ends of said supporting bars and extending to points beyond, vertically extending rack bars secured to the feet and to the ends of the cross beam, said supporting bars provided with upwardly directed notches, spindles journaled in said notches for supporting rolls of wire cloth, shoes slidably mounted on the rack bars, a pair of shafts journaled in said shoes, a measuring roller carried by one of said shafts, a friction roller carried by the other shaft and arranged adjacent the measuring roller to receive the end of the wire cloth, means for moving the friction roller and measuring roller in parallel alinement with any one of the rolls of wire cloth, and means for locking the measuring roller and friction roller in parallel alinement with the desired roll of wire cloth, and means for rotating the measuring roller to unwind and measure the wire cloth simultaneously.

2. A wire cloth rack comprising feet, supporting bars secured to said feet for supporting rolls of wire cloth of various widths, vertically extending rack bars secured to said feet, means for securing the ends of the rack bars and the supporting bars together, shoes slidably mounted on the rack bars, a pair of shafts journaled in said shoes, a measuring roller carried by one of said shafts, a friction roller carried by the other shaft, said rollers positioned adjacent each other to receive the end of the wide cloth therebetween, and means for rotating the measuring roller to unwind and measure the wire cloth simultaneously.

3. A wire cloth rack comprising feet, supporting bars secured to said feet for supporting rolls of various widths of wire cloth, vertically extending rack bars secured to the feet, means for securing the ends of the rack bars and supporting bars together, shoes slidably mounted on the rack bars, a shaft journaled in said shoes, pinions journaled on the shaft and within the shoes to travel upon the rack bars, a shaft journaled in the shoes, a friction roller carried by second mentioned shaft, a measuring roller carried by first mentioned shaft, for receiving the end of the wire cloth, means for rotating first mentioned shaft, means for locking the pinions of first mentioned shaft to cause said pinions to rotate therewith and travel upon the rack bars, and means carried by first mentioned shaft for an engagement with the pinions to lock said pinions against rotation.

4. A wire cloth rack comprising a pair of feet, supporting bars secured to said feet, means for supporting a plurality of wire cloth rolls of various widths thereon, a pair of rack bars secured to said feet, means for securing the ends of the rack bars and the supporting bars together, a pair of shoes slidably mounted upon the rack bars, a shaft journaled in said shoes, a measuring roller carried by said shaft, pinions journaled on said shaft and positioned within the shoes for an engagement with the rack bars, means for locking the pinions with the shaft, said shaft provided with grooves therein, collars carried by said shaft, pins carried by the collars for an engagement with the grooves for moving the collars laterally with the shaft for an engagement with the pinions and shoes to lock them against rotation, a shaft journaled in said shoes, a friction roller carried by second mentioned shaft for an engagement with the measuring roller to receive the end of the wire cloth between the friction roller and measuring roller, and means for rotating first mentioned shaft to unwind and measure the wire cloth simultaneously.

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1,229,087. FLEXIBLE CONDUIT. CHARLES A. JOHNSON, Galveston, Tex. Filed Sept. 9, 1916. Serial No. 119,293. (Cl. 137—90.)



1. A conduit made up of a plurality of flexible waterproof sections riveted together at the ends of the conduit, each section being reinforced, and a centrally disposed wire cloth liner within the conduit and riveted to said sections.

2. A conduit made up of a plurality of flexible waterproof sections riveted together at the ends of the conduit, each section having a steel wire mesh reinforcement, and the gage of the reinforcement of certain sections varying from the remaining sections.

3. A conduit made up of a plurality of flexible waterproof sections riveted together at the ends of the conduit, each section having a steel wire mesh reinforcement, the gage of the reinforcement of certain sections varying from the remaining sections, and a centrally disposed steel wire liner within the conduit and riveted to said sections.

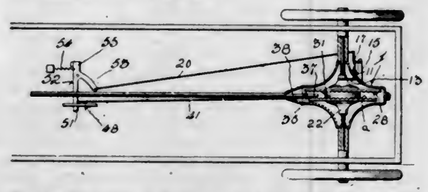
4. A conduit made up of a plurality of flexible waterproof sections, each section having a wire mesh reinforcement, and the reinforcement of certain sections terminating different distances short of the ends of the conduit.

5. A conduit made up of a plurality of flexible waterproof sections, each section having a wire mesh reinforcement, the gage of the reinforcement of certain sections varying from that of the remaining sections, and the reinforcement of certain sections terminating different distances short of the ends of the conduit.

[Claims 6 and 7 not printed in the Gazette.]

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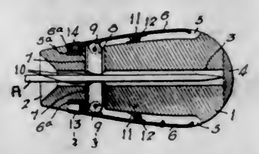
1,229,088. TRANSMISSION MECHANISM. JOHN C. JOHNSON, Cromwell, Iowa. Filed Mar. 12, 1915. Serial No. 13,945. (Cl. 74—58.)



In a power transmission mechanism, a casing having a slot therein, a change speed gear and reverse gear slidably mounted within the casing, a bracket carried by the casing, a bell crank lever pivoted to the bracket and having one arm extending through the slot in the casing and operatively connected to the gearing, a propeller shaft having one end extending into the casing and located between the change speed gear and the reverse gear, a spur gear mounted on the mentioned end of the shaft, springs interposed between the casing and the change speed

gear and reverse gear, the spring interposed between the change speed gear and the casing being of greater strength than the other spring so as to normally effect engagement between the change speed gear and the spur gear, and means operatively connected to the other arm of the bell crank lever and adapted when operated to rock the bell crank lever so as to cause disengagement of the change speed gear from the spur gear and to move the reverse gear into engagement with the spur gear.

1,229,089. HAT-PIN-POINT PROTECTOR. WILLIS JOHNSON, Gregory, Mo. Filed Dec. 1, 1916. Serial No. 134,451. (Cl. 24—155.)



1. A hat pin point protector including a body having an axial bore therein and provided with radial guide passages communicating with the bore, jaws mounted within the guide passages and projecting into the axial bore, finger levers operatively connected to the jaws for moving them into and out of operative position, and a locking ring rotatable upon the body and provided with means for engaging the finger levers to lock the device in operative position.

2. A hat pin point protector including a body having an axial bore therein and provided with radial guide passages communicating with the bore, jaws slidable within the radial guide passages and projecting into the axial bore, finger levers mounted upon the body and operatively connected to the jaws, a ring rotatable upon the body, and cam elements upon the ring for engagement with the finger levers to lock the device in operative position.

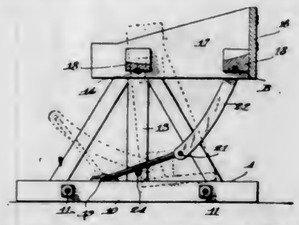
3. A hat pin point protector including a body having an axial bore therein and provided on its exterior with longitudinal channels, radial guide passages being provided between the channels and the axial bore, jaws slidable within the radial guide passages and projecting into the axial bore, and finger levers arranged within the channels and pivotally mounted at intermediate points in their lengths, one end of each of the finger levers being operatively connected to one of the jaws, while the opposite end thereof projects from the body portion in position to be conveniently engaged by the fingers.

4. A hat pin point protector including a body having an axial bore therein and provided upon its exterior with longitudinal channels, radial guide passages being provided between the channels and the axial bore, jaws slidable within the radial guide passages and projecting into the axial bore, finger levers arranged within the channels and pivotally mounted at intermediate points in their lengths, one end of each of the finger levers being operatively connected to a jaw, and a locking ring rotatable upon the body and provided with means for engaging the finger levers to lock the device in operative position.

5. A hat pin point protector including a body having an axial bore therein and provided on its exterior with longitudinal channels, radial guide passages being provided between the channels and the axial bore, jaws slidable within the radial guide passages and projecting into the axial bore, finger levers arranged within the channels and operatively connected to the jaws, one end of each of the finger levers being offset, a ring rotatable upon the body, and cam elements upon the ring adapted to be brought into engagement with the offset ends of the finger levers to lock the device in operative position.

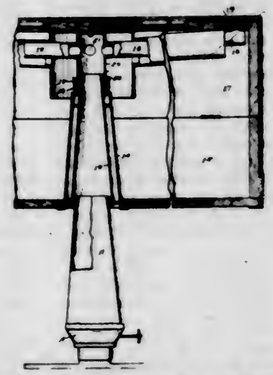
1,229,090. BARREL-LIFTING DEVICE. JOSEPH KARSTEN, Chokio, Minn. Filed Aug. 28, 1916. Serial No. 117,287. (Cl. 248—58.)

1. A device of the class described, a frame including spaced parallel standards, a reinforcing rod connecting said standards, a barrel support swingingly mounted on said rod, a crank shaft journaled on the frame, a connection between said shaft and the barrel support for moving the latter from a vertical to a horizontal position and vice versa on reverse movements of the shaft, and means for holding said support in its elevated or horizontal position.



2. A device of the class described, a frame including spaced parallel standards, a reinforcing rod connecting said standards, a barrel support swingingly mounted on said rod, a crank shaft journaled on the frame, a connection between said shaft and the barrel support for moving the latter from a vertical to a horizontal position and vice versa on reverse movements of the shaft, and a second reinforcing rod connecting said standards, said rod being disposed in the path of movement of said shaft to engage the latter and hold said support in its elevated or horizontal position.

1,229,091. GAS AND SMOKE SEALING DEVICE FOR INCUBATORS. JOHN H. KATE, Des Moines, Iowa, assignor, by direct and mesne assignments, to X Ray Incubator Company, Des Moines, Iowa, a Corporation of Iowa. Filed Aug. 30, 1916. Serial No. 117,664. (Cl. 119—39.)

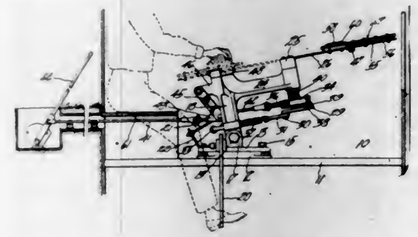


1. In an incubator having a stationary lower body portion and a hinged upper body portion, the combination of a hot air flue member in the lower body portion, a sealing cup surrounding the upper end thereof and designed to contain a material such as fine sand, and a flue member in the upper incubator member, having an open lower end designed when the hinged member is closed to enter the interior of the sealing cup between the lower flue member and the sides of the cup.

[Claims 2 to 4 not printed in the Gazette.]

1,229,092. BALL-TRAP. FRED KIMBLE, Los Angeles, Cal., assignor of one-half to Ansalem W. Bruner, Los Angeles, Cal. Filed June 8, 1916. Serial No. 102,455. (Cl. 124—6.)

1. In a target trap, the combination of a frame, a substantially vertically disposed shaft journaled therein, an oscillatory swinging throw arm rigidly mounted on said shaft, a pulley loosely mounted on said shaft, a coiled retractive spring surrounding said shaft and tending to return said pulley to its normal inoperative position, flexible pulley operating means attached to the periphery of said pulley, a crank arm fast to the lower end of said shaft, means on said pulley for engaging and turning said crank arm, a throw spring connecting said crank arm to said frame, a single pulling means connected to said flexible means and operable at a distance and adapted when moved in one direction, to put said throw spring under tension, a spring controlled latch engaging said throw arm when the same is in active position, and means operated by said pulling means on its return movement to release said latch subsequent to the winding of said flexible means around said puller.



2. In a target trap, the combination of a frame, a shaft journaled therein, an oscillatory swinging throw arm rigidly mounted on said shaft, flexible pulley operating means, resilient means engaging said pulley and tending to rotate the same to wind said flexible means around it, a crank fast to said shaft, means connected to said pulley to engage and rotate said crank, a throw spring connecting said crank to said frame, a single pulling means connected to said flexible means and operable at a distance, said pulling means being adapted when moved in one direction to put said throw spring under tension, a spring controlled latch engaging said throw arm when the same is in active position, and means operable by said pulling means on its return movement to release the latch subsequent to the winding of the flexible means around the pulley.

3. In a target trap, the combination of a frame, means for vertically adjusting the same, means for oscillating the same in a horizontal plane, a substantially vertically disposed shaft journaled in said frame, an oscillatory swinging throw arm fast to said shaft, a pulley loosely mounted on said shaft, resilient means tending to return said pulley to its normal inoperative position, flexible pulley operating means, a crank arm fast to said shaft, means connected to said pulley for engaging and rotating said crank arm, a throw spring connecting said crank arm to said frame, pulling means connected to said flexible means and adapted when moved in one direction to put said throw spring under tension, means for locking said throw arm in its active position, and means operated by said pulling means on its return movement to unlock said locking means subsequent to the winding of the flexible means around the pulley.

4. In a target trap, the combination of a frame, a shaft journaled therein, an oscillatory swinging throw arm fast to said shaft, a pulley loosely mounted on said shaft, resilient means tending to return said pulley to its normal inoperative position, flexible pulley operating means, a crank arm fast to said shaft, means connected to said pulley for engaging and rotating said crank arm, a throw spring connecting said crank arm to said frame, pulling means connected to said flexible means and adapted when moved in one direction to put said throw spring under tension, means operated by said pulling means on its return movement to unlock said locking means subsequent to the winding of the flexible means around said pulley, said unlocking means comprising a lever fulcrumed to said frame and pivoted to said pulling means.

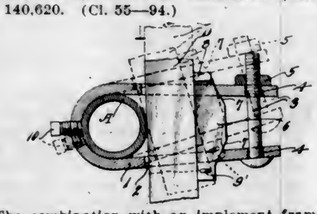
5. In a target trap, the combination of an oscillatory swinging throw arm, a target carrier connected thereto, said target carrier comprising a base plate, a slide rail having a strip of resilient material in spaced and parallel relation to said base plate and adapted to engage the edge of the target and a spring mounted in said slide rail between said base plate and said strip for frictionally engaging the side of said target.

[Claim 6 not printed in the Gazette.]





1,229,093. CLAMPING DEVICE. GEORGE C. KINSFATHER, Livingston, Mont. Filed Jan. 4, 1917. Serial No. 140,620. (Cl. 55—94.)



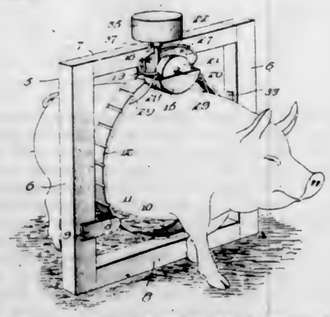
1. The combination with an implement frame supporting member, of a clamping device comprising a clip embracing the supporting member and adapted to receive a tool element to bear against the supporting member, clamping means for drawing the sides of the clip together, and means operable incident to movement of the sides to clamp the tool element against the supporting member.

6. The combination with an implement frame supporting member, of a clamping device comprising a clip embracing the supporting member and slotted to receive a tool element to bear against said supporting member, a removable member seated in the slot with the tool element having a cam surface coöperating with the side of the clip, and means for compressing the clip to cause said sides to ride on the cam surface aforesaid and thereby clamp the tool element.

9. The combination with an implement frame supporting member, of a clamping device comprising a yieldable clip of U-shape form, the sides of said clip being provided with diametrically opposite slots to receive a tool element to bear against said supporting member, a wedge element arranged transversely of the clip in the slots aforesaid and against the tool element, adjustable means connecting the ends of the sides for actuating the wedge member upon compression of said sides, and auxiliary means carried by said clip coöperative with the supporting member to hold the clamping device at adjusted positions.

[Claims 2 to 5, 7, and 8 not printed in the Gazette.]

1,229,094. HOG-OILER. BENJIMAN F. KNERR, Gresham, Nebr. Filed Oct. 7, 1916. Serial No. 124,337. (Cl. 119—157.)



1. In a liquid applying device for hogs, the combination with a frame, a hollow annular channeled member supported in said frame for rotary and lateral movements, and means for supplying a predetermined quantity of liquid to the inner circumference of said hollow annular channeled member.

2. In a liquid applying device for hogs, the combination with a frame, a hollow member supported in said frame for rotary and lateral movements, means for supplying a predetermined quantity of liquid to the inner circumference of the said hollow member, and means for preventing of a rotary movement of the hollow member in more than one direction while the lubricant is being applied to the hollow member.

3. In a liquid applying device for hogs, the combination with a frame provided with a series of bearing cleats, rollers journaled in said cleats, of a hollow annular member mounted upon said rollers for rotary and lateral movements, a cup supported on said frame and adapted to contain a predetermined quantity of liquid, and means associated with said cup for distributing the liquid therefrom to the inner circumference of said ring.

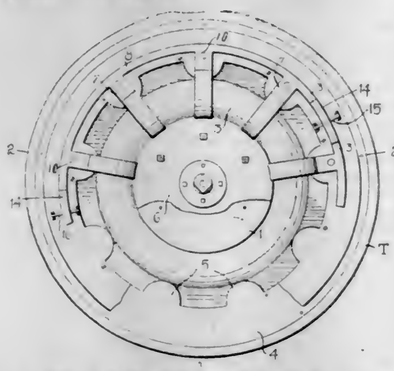
4. In a liquid applying device for hogs, the combination with a frame provided with a series of bearing cleats, rollers journaled in said cleats, of a hollow annular channeled member mounted upon said rollers for rotary and lateral movements, a cup supported on said frame and adapted to contain a predetermined quantity of liquid, and means associated with said cup for distributing the liquid contained therein to the inner circumference of said ring.

5. In a liquid applying device for hogs, the combination with a frame provided with a series of bearing cleats, rollers journaled in said cleats, of a hollow annular member mounted upon said rollers for rotary and lateral movements, a cup supported on said frame and adapted to contain a predetermined quantity of liquid, and means associated with said cup for distributing the liquid therefrom to the inner circumference of said ring, and means for preventing the hollow member being rotated more than one direction upon the distributing of the liquid thereon.

[Claims 6 to 10 not printed in the Gazette.]

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1,229,095. RESILIENT WHEEL. WILLIAM C. KOMPART, Bellaire, Ohio. Filed Oct. 25, 1916. Serial No. 127,646. (Cl. 152—46.)

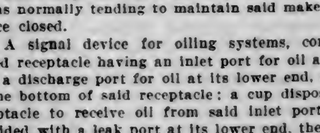


A resilient wheel consisting of a central member, a cushioning member surrounding said central member and in contact with the periphery thereof, an annular member concentric to the central member and spaced relatively thereto and in contact with the cushioning member, annular members carried by the central member and overlying the sides of the first named annular member, each of said last named annular members being provided with an outwardly offset portion, the first named annular member being provided with a radial flange bridged by said offset portion, a member slidably engaged with said flange, and spring means interposed between said slidable member and the opposite ends of the offset portion.

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1,229,096. REINFORCING DEVICE FOR PNEUMATIC TIRES. EMIL J. KREIS, Mendota, Ill. Filed July 19, 1916. Serial No. 110,033. (Cl. 152—26.)

1. The combination with a pneumatic tire comprising an outer casing, of a reinforcing element adapted for cooperation with said casing, said element consisting of a thin durable flexible body adapted to lie against the casing; gripping members arranged on said body; pointed ears on each of said members extending through said body and clenched at the reverse side thereof; and pointed ears on each of said members extending in the opposite direction adapted to pierce the tire casing, substantially as described.



2. The combination with a pneumatic tire comprising an outer casing, of a reinforcing element adapted for cooperation with said casing, said element consisting of a thin durable flexible body adapted to lie against the casing; metallic gripping members arranged on said body; integral pointed ears on each of said members extending through said body and clenched at the reverse side thereof; and integral pointed ears on each of said members extending in the opposite direction adapted to pierce the tire casing, substantially as described.

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1,229,097. OIL-FEED-SIGNAL DEVICE. FRANK P. LAMAR, Santa Ana, Cal. Filed May 13, 1916. Serial No. 97,321. (Cl. 200—35.)



1. A signal device for oiling systems, comprising a closed receptacle having an inlet port for oil at its upper end, and a discharge port for oil at its lower end; a cup disposed in said receptacle to receive oil from said inlet port, said cup provided with a leak port at its lower end, the side walls of said receptacle and cup being spaced to permit passage of oil and movement of said cup; resilient means tending to hold said cup in its upper position; and a control means for a perceptible signal operatively connected to said cup for operating said signal when the cup is in its upper position.

2. A signal device for oiling systems, comprising a closed receptacle having an inlet port for oil at its upper end, and a discharge port for oil at its lower end; a cup disposed in said receptacle to receive oil from said inlet port, said cup provided with a leak port at its lower end, the side walls of said receptacle and cup being spaced to permit passage of oil and movement of said cup; resilient means tending to hold said cup in its upper position; and a make and break device operatively connected to said cup and interposed in an electric circuit, said resilient means normally tending to maintain said make and break device closed.

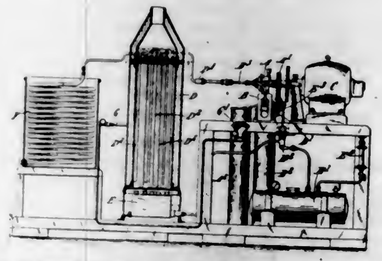
3. A signal device for oiling systems, comprising a closed receptacle having an inlet port for oil at its upper end, a discharge port for oil at its lower end, and a bore in the bottom of said receptacle; a cup disposed in said receptacle to receive oil from said inlet port, said cup provided with a leak port at its lower end, the side walls of said receptacle and cup being disposed to permit passage of oil and movement of said cup; a stem secured to said cup extending downwardly into said bore, and upwardly to form an electrical contact; a complementary contact insulated from and secured to the top wall of said receptacle; and resilient means tending to maintain said contacts in closed position.

4. A signal device for oiling systems, comprising a closed receptacle having an inlet port for oil at its upper end, a discharge port for oil at its lower end, a bore in the bottom of said receptacle, and a stem guide upon the upper wall of said receptacle; a cup disposed in said receptacle to receive oil from said inlet port, said cup provided with a leak port at its lower end, the side walls of said receptacle and cup being spaced to permit passage of oil and movement of said cup; a stem secured to said cup extending downwardly into said bore and upwardly into said guide forming an electrical contact; a complementary contact insulated from and secured to the top wall of said receptacle; and a helical spring disposed about said stem and abutting the lower wall of said receptacle and said cup tending to maintain said contacts in closed position.



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1,229,098. PROCESS AND APPARATUS FOR THE CONVERSION OF HEAVY HYDROCARBONS INTO LIGHTER HYDROCARBONS. FREDERICK LAMPLOUGH, London, England. Filed Dec. 16, 1912. Serial No. 737,069. (Cl. 196—26.)



1. In apparatus for converting heavy hydrocarbon oils into lighter oils, the combination of a retort, tubes containing bodies of nickel in compact extended form with continuous channels therethrough in such retort, a pump for forcing a heavy hydrocarbon oil at speed through said retort, a pump for forcing water at speed through said retort, means for heating the retort and the water and oil sent therein, to a temperature indicated by a dull red heat, and means for subsequently condensing the hydrocarbon vapors produced by the catalytic effect of the nickel surfaces.

2. In apparatus for converting heavy hydrocarbon oils into lighter oils, the combination of a retort, bodies of nickel each in compact form and having passages therethrough in said retort, a pump for forcing a heavy hydrocarbon oil through said retort, a pump for forcing water through said retort, driving means for said pumps, means for automatically maintaining the delivery of one pump in constant proportion to the delivery of the other at all speeds, a liquid-fuel burner for heating the retort, a third pump for delivering liquid fuel to the burner, adjustable means for driving this pump from the same driving means whereby the other two pumps are driven so that the fuel pump may be regulated to deliver the requisite proportion of fuel to maintain the proper supply of heat for the delivery of the other two pumps, and a condenser in circuit with the retort.

3. The process of converting the heavier constituents of petroleum into lighter constituents, which consists in passing said heavier constituents in the state of vapor together with steam, under pressure and at a temperature indicated at a low red heat over and in contact with nickel in compact extended form.

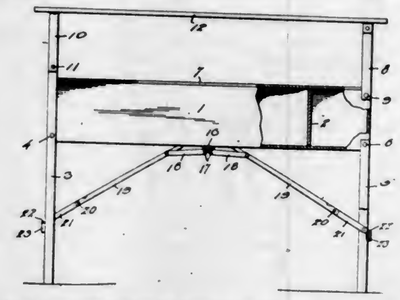
4. A process for converting the heavier hydro-carbons of petroleum into lighter hydro-carbons, which consists in passing said heavier hydro-carbons in a state of vapor together with steam, under pressure, and at a temperature indicated by a low red heat, at speed, over and in contact with bodies composed of nickel in compact extended form.

5. The herein described process for converting heavy hydrocarbon oils into light oils which consists in maintaining in a retort at a red heat, bodies consisting of solid nickel, and passing such heavy oils and an aqueous substance through said retort whereby said oils and aqueous substance are brought into intimate contact with the heated bodies composed of nickel in solid extended form aforesaid and thereby converted into lighter oils.

[Claim 6 not printed in the Gazette.]

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1,229,099. FOLDING TABLE. ALEXANDER D. LANE, Rapid City, S. D. Filed Sept. 30, 1916. Serial No. 123,057. (Cl. 45—11.)



1. A combined foldable table and cupboard, comprising a receptacle having hinged cover sections, folding legs connected with the receptacle, and a top connected with the receptacle and certain of the legs; the said connections being constructed and arranged to enable the top in the folded state of the device to rest in superimposed relation on the cover sections to retain said cover sections in their closed positions.

2. A combined foldable table and cupboard, comprising a receptacle having hinged cover sections, legs hinged at an intermediate point in their length to one end of the receptacle, legs hinged at their upper ends to the opposite end of the receptacle, braces interposed between the legs and the bottom of the receptacle and constructed and arranged to be flexed to permit of folding of the legs, brackets hinged to the upper ends of the first named legs, swinging supports hinged to the receptacle adjacent to the opposite end thereof, a top connected with said brackets and support and having hinged leaves on its side edges, and means for connecting said leaves together when they are swung inwardly on the top; the said top being capable of being arranged in superimposed relation on the cover sections of the receptacle.

3. A combined foldable table and cupboard comprising a receptacle, legs hinged at an intermediate point in their length to one end of the receptacle, legs hinged at their upper ends to the opposite end of the receptacle, braces interposed between the legs and the bottom of the receptacle and constructed and arranged to be flexed to permit of folding the legs, brackets hinged to the upper ends of the first-named legs, swinging supports hinged to the receptacle adjacent to the opposite end thereof, and a top connected with said brackets and supports.

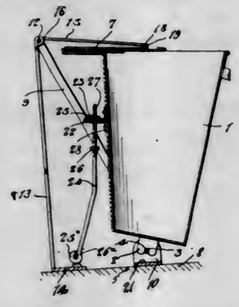
4. The combination in a table of the foldable type, of a body, legs hinged at an intermediate point in their length to one end of the body, legs hinged at their upper ends to the opposite end of the body, braces interposed between the legs and the underside of the body and constructed and arranged to be flexed to permit of folding of the legs, brackets hinged to the upper ends of the first named legs, swinging supports hinged to the body adjacent to the opposite end thereof, and a top connected with said brackets and supports.

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1,229,100. AUTOMATIC SANITARY BIN FOR GROCERS, &c. GROVER C. LENTS and JOSEPH LEE BEST, Turrell, Ark. Filed May 19, 1916. Serial No. 98,613. (Cl. 211—6.)

1. A device of the class described including a tiltable bin pivotally mounted at the bottom and arranged to

swing inwardly and outwardly, a cover slidably interlocked with the bin at the top thereof, movable means connected with the lid or cover for holding the same against inward and outward movement, and adjustable means connected with the bin for supporting the same at the limit of its inward and outward movement to relieve the lid or cover of the weight of the bin and contents and also to limit the opening movement of the bin.



2. A device of the class described including a tiltable bin pivotally mounted at the bottom and arranged to swing inwardly and outwardly, a cover slidably interlocked with the bin at the top thereof, movable means connected with the lid or cover for holding the same against inward and outward movement, a rod located in rear of the bin and having a hinged connection at its lower end and slidably connected at the upper portion with the bin and provided with spaced stops for limiting the inward and outward movement of the bin, whereby the lid or cover is relieved of strain.

3. A device of the class described including a rear frame having a base and spaced standards, a front frame comprising a base, and inclined bracing bars extending from the base of the front frame to the upper portions of said standards, a horizontal pintle rod carried by the front frame, a bin pivotally mounted on the said pintle rod and arranged to swing inwardly and outwardly, a lid or cover for the bin and link bars pivotally connected with the lid or cover and with the standards and a rod hinged to the base of the rear frame and slidably connected with the bin and having spaced stops for limiting the inward and outward movement of the said bin.

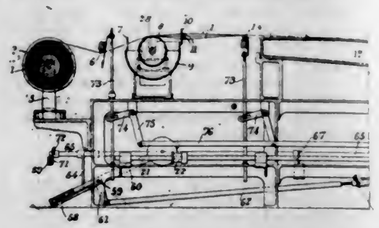
4. A device of the class described including a rear frame having a base and provided with spaced standards having eyes at their upper ends, a front frame composed of a base and side bars extending from the base of the front frame to the upper end of the said standards and provided with eyes registering with the said eyes, pintles arranged in the said eyes, a tiltable bin pivotally mounted on the base of the front frame, a cover slidably interlocked with the bin at the top thereof, bars hinged to the cover and connected with the standards by the said pintle and means for limiting the inward and outward movement of the bin.

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1,229,101. APPARATUS FOR TREATING ARTIFICIAL-SILK AND OTHER THREADS. MAURICE LINFOOT, Bocking Braintree, England, assignor to Courtaulds Limited, London, England. Filed Aug. 10, 1915. Serial No. 44,769. (Cl. 91—13.)

1. In apparatus for treating artificial silk, a treating roller, means for feeding a treating liquid thereto, guide means on opposite sides of the roller for holding the threads in contact with a small arc at the top of the roller to insure only momentary contact of the threads with the roller surface as they pass thereover, and automatic means for lifting said guides to move the thread out of engagement with the roller on the halt of the thread feed.

3. In apparatus for treating artificial silk, a treating roller, a heated drier over which the treated threads are passed, and means for automatically lifting the threads out of contact with the treating roller and drier upon the halt of the thread feed, substantially as described.

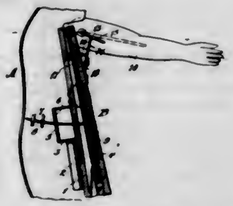


4. In apparatus for treating artificial silk, a heated drier, means for passing treated threads thereover in contact with portion of its superficial area, guards over which said threads pass at each end of the drier and means mechanically associated with the thread feed for automatically displacing said guards to lift the threads out of contact with the drier upon the halt of the thread feed.

[Claim 2 not printed in the Gazette.]

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1,229,102. TALKING DOLL. BURT E. LLOYD, New York, N. Y. Filed Dec. 14, 1916. Serial No. 136,918. (Cl. 46—40.)



1. A sound producing device comprising a sounding device, an air chamber having an aperture, and valves movable through the aperture to successively close and open the same.

2. In a sound producing device, a sounding element, an air chamber having an aperture through which sounds issue, and means for opening and closing the aperture, said means comprising a stem movable through the aperture and having spaced disks to close and open the aperture.

3. In a sound producing device, a sounding element, an air chamber having an aperture through which sounds issue, and means for opening and closing the aperture, said means comprising a stem movable through the aperture and having spaced disks to close and open the aperture, said aperture having a resilient lip which snugly hugs the disks in passing through the aperture.

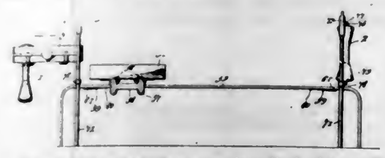
4. A sound producing device comprising a sounding element, an air chamber having an apertured part, and a valve part, said parts being relatively movable, one part having resilient means for effecting a stoppage of sound and also one element including spaced sound stopping portions.

5. A doll including movable arms, a sound-producing device including relatively movable parts, a lever fulcrumed on one of the parts, a member for actuating the lever by the relative movement of the said parts, a member connected with the arms of the doll and with which the lever has a wiping engagement, whereby the arms move simultaneously with the operation of the sound-producing device.

[Claim 6 not printed in the Gazette.]



1,229,[illegible]. MAIL-CATCHING DEVICE. LEWIS HENRY LLOYD, Bloomington, Ill. Filed Nov. 20, 1916. Serial No. 132,405. (Cl. 258—10.)



1. In a device of the character described, the combination of a fixed support for carrying a bag, a catching device carried by the train and including a head having a mouth for receiving the bag, inwardly inclined teeth in said mouth, a pair of pronged jaws for grabbing the bag and holding the same in said mouth, and a toggle joint for automatically operating said jaws to grasp the bag and for locking the jaws in closed position, substantially as described.

2. In a device of the character described, the combination of a fixed support for carrying a bag, a bag catching device adapted to be mounted on the train and including a head having a flaring mouth for receiving the bag, a pair of pivoted jaws for grasping the bag and holding it in said mouth, a pair of links connecting said jaws and pivoted for holding said toggle with the pivots in alinement whereby to lock the jaws in closed position, and other stops for limiting the outward movement of said jaws, substantially as described.

3. In a device of the character described, the combination with means on the railway car for holding the mail bag, of a track running longitudinally of the railway, a carriage supported to move on said track and having a flaring mouth for receiving the mail bag from the moving car, a pair of movable jaws in said mouth for grasping the mail bag, and a toggle joint for operating said jaws to close upon the mail bag, substantially as described.

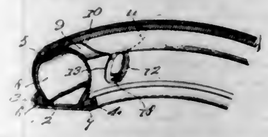
4. In a device of the character described, the combination with means on the car for holding the mail bag, a track disposed longitudinally of the railway, a carriage traveling on said track and having a mouth for receiving the mail bag from said car, a pair of pivoted jaws in said mouth for closing about and grasping the mail bag, a toggle joint for connecting said jaws and adapted to automatically close the same when struck by the mail bag, and stops for limiting the movement of said toggle joint and holding the same in a position to lock the jaws closed, substantially as described.

5. In a device of the character described, the combination with means on the car for holding the mail bag, a track disposed longitudinally of the railway, a carriage traveling on said track and having a mouth for receiving the mail bag from said car, a pair of pivoted jaws in said mouth for closing about and grasping the mail bag, a toggle joint for connecting said jaws and adapted to automatically close the same when struck by the mail bag, stops for limiting the movement of said toggle joint and holding the same in a position to lock the jaws closed, and other stops for limiting the opening movement of said jaws, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

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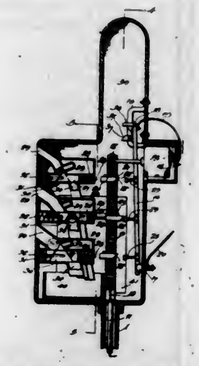
1,229,104. TIRE-PROTECTOR. LEWIS HENRY LLOYD, Bloomington, Ill. Filed Nov. 24, 1916. Serial No. 133,223. (Cl. 152—18.)



The combination of a tire shoe, and an inflatable inner tube within said shoe, of a protecting sheath removably fitting within said tire shoe and between the interior of the tread portion of the same and the inner tube, said sheath comprising an interconnected series of arcuate metallic sections transversely curved to conform to the inside of the tire shoe and having rounded ends, said sections being assembled in overlapping relations, arms extending inwardly from said overlapping ends and being curved in both directions of their width and thickness, certain of said arms having slots therein, and pins carried on the companion arms and extending through said slots for connecting said sections, substantially as described.

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1,229,105. LIQUID-DISPENSING DEVICE. RICHARD WADE LLOYD, Verndale, Minn. Filed July 6, 1916. Serial No. 107,819. (Cl. 194—82.)



1. An operating mechanism for liquid dispensers, comprising a movable operating member, means for moving the same to permit the discharge of liquid, stop means for limiting the movement of said member to a number of ranges, and coin controlled means for setting the stop means according to the value of the coin inserted and for simultaneously throwing the first-named means into operation automatically.

2. An operating mechanism for liquid dispensers, comprising a movable operating member, means for moving the same to permit the discharge of liquid, a plurality of projectable and retractable stops for limiting the movement of said member to a number of ranges, said stops also serving to throw the first-named means into operation when projected, and coin controlled devices for projecting said stops, one of said devices being provided for each stop and said devices being operable from coins of different values.

3. An operating mechanism for liquid dispensers, comprising a movable operating member, means for moving the same to permit the discharge of liquid, a plurality of projectable and retractable stops mounted on said member for limiting the movement thereof to a plurality of ranges, said stops also serving to throw the first-named means into operation when projected, and coin controlled devices for projecting said stops, one of said devices being provided for each stop and said devices being operable from coins of different values.

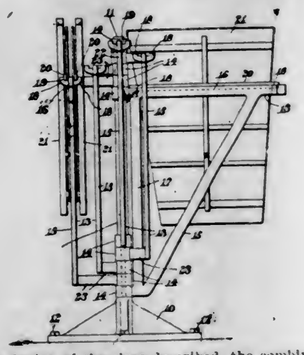
4. An operating mechanism for liquid dispensers, comprising a movable operating bar, means for moving the same endwise to permit the discharge of liquid, said bar having a plurality of longitudinally spaced bores opening through its edges, sliding stop pins mounted in said bores and adapted to limit the movement of the bar to a number of ranges, and a plurality of coin controlled devices for projecting said pins, one of said devices being provided for each pin and said devices being operable from coins of different values.

5. An operating mechanism for liquid dispensers, comprising a movable member, electric means for moving the

same to permit the discharge of liquid, a plurality of projectable and retractable stops for limiting the movement of said member to a number of ranges, any of said stops serving when projected to complete the circuit of the aforesaid electric means and also to break said circuit when the aforesaid member has moved the required amount, and a plurality of coin controlled devices for projecting the stops, one of said devices being provided for each stop and said devices being operable from coins of different values.

[Claims 6 to 12 not printed in the Gazette.]

1,229,106. SUPPORT FOR LINOTYPE-MAGAZINES. ROBERT SHERMAN MCCARTER, Cambridge, Mass. Filed July 13, 1916. Serial No. 109,803. (Cl. 211—20.)



1. In a device of the class described, the combination of a base; a vertical support thereon; a plurality of swinging brackets thereon in different horizontal planes, the inner ends of said brackets each being provided with a vertical member having a pair of ears inclosing and radiating from said support and the outer brackets having the outer portions thereof bent perpendicular to said ears and normally positioned parallel to the central bracket and at different distances therefrom; and a pair of notched lugs extending from the side of each bracket.

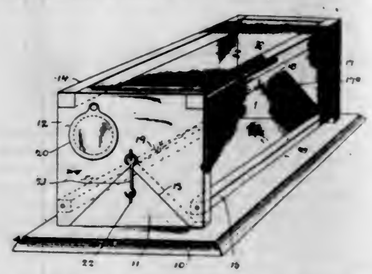
2. In a device of the class described, the combination of a broad base adapted to be secured to a floor; a vertical cylindrical support thereon; a plurality of vertical members each having a pair of ears inclosing said support; a horizontal member extending from each vertical member, one of said horizontal members being in the same vertical plane with said ears while the other horizontal members are perpendicular to their supporting ears; a brace member extending from the outer end of each horizontal member to the lower end of said vertical member; and a pair of notched lugs extending from and integral with each horizontal member.

4. In a device of the class described, the combination of a base; a vertical support thereon; and a plurality of brackets mounted to swing on said support, each bracket being composed of a flat sided vertical bar, a horizontal bar, notched lugs on a face thereof, an angular brace between said horizontal and vertical bars, and a pair of ears extending from the opposite ends of said vertical bar and inclosing said support, the ears of the central bracket being in the same vertical plane while those of the other brackets are perpendicular to the horizontal bar and of different lengths, whereby said horizontal members may be disposed in parallelism or at any desired angle to each other.

[Claim 3 not printed in the Gazette.]

1,229,107. FLY-TRAP. THOMAS F. MCDONOUGH, Jr., Glen Cove, N. Y. Filed Oct. 30, 1916. Serial No. 128,493. (Cl. 43—20.)

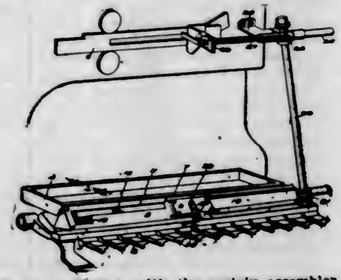
1. A fly trap comprising a flat base which serves as a feed board, triangular uprights spaced apart and rigidly secured to the base, a removable member having closed ends provided with ways shaped to fit over the aforesaid triangular uprights and with the parts of the ends at the sides of the uprights shaped to rest upon the base, said removable member having its sides and top screen covered,



and a screen covered triangular upwardly extending member in the bottom having a fly opening at the apex, and one of the ends of the said member having an opening therethrough and a door covering the opening.

[Claims 2 and 3 not printed in the Gazette.]

1,229,108. LINE AND SPACE INDICATING MECHANISM FOR TYPOGRAPHICAL MACHINES. PATRICK H. MCGRATH, Wollaston, Mass., assignor to Intertype Corporation, Brooklyn, N. Y., a Corporation of New York. Filed Nov. 25, 1914. Serial No. 873,876. (Cl. 199—9.)



1. The combination with the matrix assembler mechanism and the space mechanism of a typographical machine of the linotype class, of indicators operative respectively by the assembler and space mechanisms and cooperative with one another to indicate directly the length of a line of selected matrices and expanded spacers.

2. The combination with the assembler-slide of a typographical-machine, an indicating element, a rotary shaft operatively connected with said indicating element, a pinion loose on said shaft, a rack connected with the assembler-slide and in mesh with said pinion, and means for rigidly connecting said pinion with said shaft.

3. The combination with the assembler-slide and the space-bar of a typographical machine, of two independently movable indicating elements, means actuated by the assembler-slide, for operating one of said elements, and means actuated by the space-bar, for actuating the other indicating element.

4. The combination with the assembler-slide, the space-bar and the copy-carrier of a typographical-machine, of two independently movable indicating elements located between the space bar and the copy carrier, means actuated by the assembler-slide, for operating one of said indicating elements, and means actuated by the space-bar, for actuating the other indicating element.

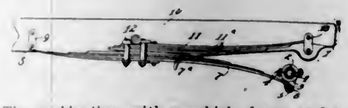
5. The combination with the assembler-slide, the space-bar and the copy-carrier of a typographical machine, of



two independently movable indicating elements mounted between the space-bar and the copy-carrier, for movement approximately in parallelism with the space-bar, means actuated by the assembler-slide for operating one of said indicating elements, and means actuated by the space-bar for operating the other indicating element.

[Claims 6 to 14 not printed in the Gazette.]

1,229,109. VEHICLE-SPRING. MICHAEL M. MCINTYRE, Cleveland, Ohio, assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 21, 1913. Serial No. 749,865. (Cl. 267—27.)



1. The combination, with a vehicle frame and axle, of a spring having a downturned end connected with the axle, a shackle connecting the opposite end of the spring to the frame, a substantially straight spring having its center pivotally connected to the center of the first mentioned spring, and shackles connecting the ends of the second spring to the frame.

2. The combination, with a vehicle frame and axle, of a spring having an end connected with the axle, means connecting the opposite end of the spring to the frame, a substantially straight spring having its center connected to the center of the first mentioned spring, and means connecting the ends of the second spring to the frame,

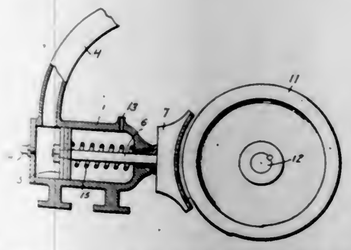
3. The combination, with a vehicle frame and axle, of a spring having a downturned end connected to the axle, a shackle connecting the opposite end of the spring to the frame, a tension spring connected to the frame and having a limited vibratory movement at the central portion thereof, and means pivotally connecting the central portions of the two springs.

4. The combination, with a vehicle frame and axle, of a spring having an end connected to the axle, means connecting the opposite end of the spring to the frame, a tension spring connected to the frame and having a limited vibratory movement at the central portion thereof, and means connecting the central portions of the two springs.

5. The combination, with a vehicle frame and axle, of a spring having one end connected with the axle and having its other end connected to the frame, a second spring having its opposite ends connected to the frame, and a rocking connection between the central portions of said springs.

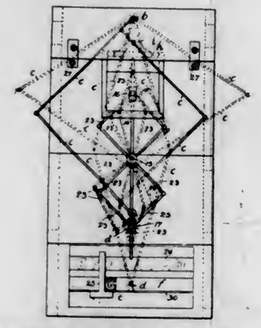
[Claims 6 to 18 not printed in the Gazette.]

1,229,110. SAFETY-BRAKE FOR AUTOMOBILES, &c. BOWMAN M. MCMEEKIN and HARRY N. DOWNS, Shelton, Conn. Filed June 5, 1915. Serial No. 32,436. (Cl. 188—3.)



In combination, an engine having a crank shaft and a fly wheel mounted thereon and an exhaust pipe for the engine, a cylinder arranged at right angles to the crank shaft and in the plane with the fly wheel, a pipe connecting the exhaust pipe to the cylinder adjacent one end thereof, a valve for directing exhaust from the exhaust pipe into the cylinder, a piston head slidable in said cylinder, a piston rod connected to the piston head and extending through one end of the cylinder, a brake shoe rigidly secured to the end of the piston rod and adapted to engage the periphery of the fly wheel upon pressure of the exhaust in the cylinder, and a spring mounted on the piston rod to move the piston head in the direction of the end of the cylinder that has the pipe connected thereto and is limited in its movement in said direction by the shoe abutting the end of the cylinder to prevent the piston head from passing a point beyond the pipe.

1,229,111. PANTOGRAPHIC APPARATUS. THOMAS MACDONALD, London, England. Filed Feb. 24, 1916. Serial No. 80,321. (Cl. 33—25.)



1. In pantographic apparatus of the kind referred to, a stationary base frame and two cross traveling frames superposed thereon, controllers for linking the two cross traveling frames together, and other controllers for linking the lower of the cross traveling frames to the stationary base frame, a table mounted on the upper of the said traveling frames, and means for holding a working tool above said table, substantially as and for the purpose hereinbefore set forth.

2. In pantographic apparatus of the kind referred to, a stationary base frame and two cross traveling frames superposed thereon, controllers for linking the two cross traveling frames together, and other controllers for linking the lower of the cross traveling frames to the stationary base frame, a table mounted on the upper of the said traveling frames, means for holding a working tool above said table, and means for positioning said tool relatively to said table, substantially as hereinbefore set forth.

3. In pantographic apparatus of the kind referred to, a stationary base frame and two cross traveling frames superposed thereon, controllers for linking the two cross traveling frames together, and other controllers for linking the lower of the cross traveling frames to the stationary base frame, a table mounted on the upper of the said traveling frames, means for holding a working tool above said table and means for insuring the taut control of the movements of the frames with little friction during the parallel travel thereof, comprising two loose bars, one carried by the base frame and the other by the lower cross traveling frame, bars fixed on the base frame and lower cross traveling frame, loose rollers between and in contact with said loose bars and fixed bars, and resilient and adjustable means for maintaining said rollers in contact with said bars, substantially as hereinbefore set forth.

4. In pantographic apparatus of the kind referred to, a stationary base frame and two cross traveling frames superposed thereon, controllers for linking the two cross traveling frames together, and other controllers for link-

ing the lower of the cross traveling frames to the stationary base frame, a table mounted on the upper of the said traveling frames, means for holding a working tool above said table and means for insuring the taut control of the movements of the frames with little friction during the parallel travel thereof, comprising two loose bars, one carried by the base frame and the other by the lower cross traveling frame, bars fixed on the base frame and lower cross traveling frame, loose rollers between and in contact with said loose bars and fixed bars, and resilient and adjustable means for maintaining said rollers in contact with said bars, consisting of screws carried by the lower cross traveling frame and the base frame, and springs between said screws and the aforesaid loose bars, substantially as and for the purpose hereinbefore set forth.

5. In pantographic apparatus of the kind referred to, a stationary base frame and two cross traveling frames superposed thereon, controllers for linking the two cross traveling frames together, and other controllers for linking the lower of the cross traveling frames to the stationary base frame, a table mounted on the upper of the said traveling frames, means for holding a working tool above said table, means for positioning said tool relatively to said table, comprising a pivoted radial bar situated above the level of the table, a carrier for the working tool and another carrier having a positioning point, said carriers being slidably mounted on said radial bar, and links connecting said carriers for insuring movements of the same in unison, substantially as and for the purpose hereinbefore set forth.

[Claims 6 and 7 not printed in the Gazette.]

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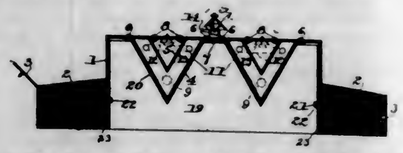
1,229,112. CURTAIN-STRETCHER. LYMAN P. MASON, Chicago, Ill. Filed Apr. 11, 1916. Serial No. 90,438. (Cl. 45—24.)



1. A curtain stretcher comprising a frame including side and end rails each embodying a series of sections formed with L-shaped meeting ends providing the same with a shoulder and a tongue, a headed pronged member loosely mounted within the meeting ends of the sections, positioning the pronged end exteriorly thereof for engagement with an opening in the adjacent end portion of the meeting ends of said sections, and a plate detachably connected with the meeting ends of said sections for detachably securing the headed fastening member thereto.

2. A curtain stretcher comprising a frame including side rails embodying a pair of end sections and an intermediate section, the meeting ends of the said end and intermediate sections being reduced to form the same of L-shaped configuration, presenting a tongue and a horizontally formed shoulder, each having a cylindrical bore, a headed fastening member disposed in one of said bores and projecting beyond said shoulder and in parallelism with said tongue and adapted to engage with the opening formed on the tongue of the adjacent section, means for detachably fastening the fastening members in active position, and a reinforcing plate connected on the meeting terminal portions of said sections.

1,229,113. BROODER. ERWIN MAURER, Jamaica, N. Y. Filed Aug. 19, 1916. Serial No. 115,754. (Cl. 237—14.)



1. In a brooder, the combination with an inclosure of a V-shaped heating chamber depending from the top of said inclosure and consisting of spaced V-shaped plates, means for supplying heated air to the lower portion of said V-shaped chamber between the apexes of the two plates, and means for permitting the escape of the heated air from said chamber.

2. In a brooder, the combination with an inclosure, of a V-shaped heating chamber depending from the top of the inclosure and consisting of spaced V-shaped plates, means for supplying heated air to said chamber, and an outlet for the heated air communicating with the upper portion of each branch of said V-shaped chamber.

3. In a brooder, the combination with an inclosure, of a V-shaped heating chamber depending from the top of the inclosure and consisting of spaced V-shaped plates, means for supplying heated air to said chamber between the apexes of the two plates, and an outlet for the heated air communicating with the upper portion of each branch of said V-shaped chamber.

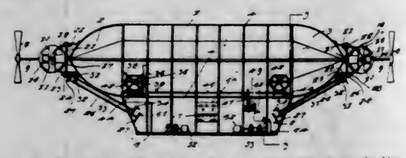
4. In a brooder, the combination with an inclosure, of a plurality of V-shaped heating chambers depending from the top of the inclosure and consisting of a single outer plate bent to form a plurality of V-shaped portions and connecting portions between said V-shaped portions, and inner V-shaped plates spaced from the V-shaped portions of the outer plates.

5. In a brooder, the combination with an inclosure, of a pair of V-shaped heating chambers depending from the top of the inclosure and consisting of a single outer plate bent to form two V-shaped portions and a connecting portion between said V-shaped portions, separate V-shaped inner plates arranged within and spaced from each of the V-shaped portions of the outer plate, and an exit for heated air from the interior of the inclosure below the heating chambers, said exit communicating with the portion of said inclosure between the two V-shaped chambers through the top of the inclosure and the connecting portion of said lower plate.

[Claims 6 to 8 not printed in the Gazette.]

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1,229,114. FLYING-MACHINE. FREDERICK A. MENG and LEE G. SCHRADER, Flint, Mich.; said Schrader assignor to said Meng. Filed June 2, 1916. Serial No. 101,322. (Cl. 244—25.)



1. A flying machine of the class described including a vertical shaft, means for mounting the same, a horizontally swinging bracket mounted on the shaft, a propeller support carried by the bracket and mounted for rotary movement on a horizontal axis, gearing connecting the vertical shaft with the support to swing the same vertically, a propeller shaft mounted on the propeller support and separate operating means connected with the bracket for imparting horizontal rotary movement to the same.

2. A flying machine of the class described including a vertical shaft provided with a worm, means for mounting



the shaft, an oscillatory bracket mounted on the said shaft, a propeller support carried by the said bracket and consisting of a worm wheel meshing with the said worm, a propeller carried by the said support, means for rotating the propeller and adjusting means including an operating shaft, and gearing for connecting the same with the said vertical shaft.

3. A flying machine of the class described including a vertical shaft provided with a worm, means for mounting the vertical shaft, a horizontally movable oscillatory bearing bracket pivoted on the said shaft, and provided with a horizontal arcuate rack bar, a vertical worm wheel mounted for rotary movement in the bearing bracket and meshing with the said worm, operating means including gearing for rotating the vertical shaft to turn the worm wheel, separate operating mechanism including a pinion meshing with the arcuate rack bar to swing the bearing bracket horizontally and a propeller carried by the worm wheel.

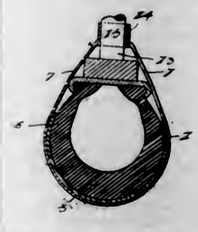
4. A flying machine of the class described including a vertical shaft provided with a worm, means for mounting the vertical shaft, a horizontally movable oscillatory bearing bracket pivoted on the said shaft, and provided with a horizontal arcuate rack bar, a vertical worm wheel mounted for rotary movement in the bearing bracket and meshing with the said worm, operating means including gearing for rotating the vertical shaft to turn the worm wheel, separate operating meshanism including a pinion meshing with the arcuate rack bar to swing the bearing bracket horizontally, a propeller shaft mounted on the worm wheel, an electric motor also carried by the worm wheel and connected with the propeller shaft and a propeller mounted on the propeller shaft.

5. A flying machine fo the class described including horizontal shafts extending laterally from the flying machine, propeller shafts carried by the outer portions of the laterally extending shafts and arranged at an angle to the same, propellers carried by the propeller shafts, means for rotating the propeller shafts independently of the laterally extending shafts, side longitudinal shafts and means for transmitting motion from the side longitudinal shafts to the laterally extending shafts having worm gearing, and means for adjusting the longitudinal shafts independently or simultaneously.

[Claims 6 to 8 not printed in the Gazette.]

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1,229,115. TIRE-ARMOR. JEFFERSON D. METCALF, Wisner, La., assignor of one-half to Eugene S. Poole, Coles, Miss. Filed Oct. 23, 1915. Serial No. 57,547. (Cl. 152—17.)

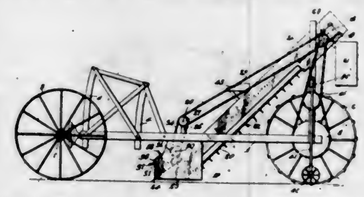


The combination with a wheel including spokes and a tire, of a metallic band surrounding the tire, a plurality of laterally projecting and staggeredly arranged extensions formed on each edge of said band and adapted to extend parallel with the spokes, and elongated heads formed on the ends of the extensions and bent about the spokes and fastened together to retain the band on the tire.

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1,229,116. TRENCH-DIGGER. WILLIAM H. METZLER, Syracuse, N. Y., and ROBERT METZLER, Odessa, Ontario, Canada. Filed Apr. 17, 1916. Serial No. 91,798. (Cl. 37—25.)

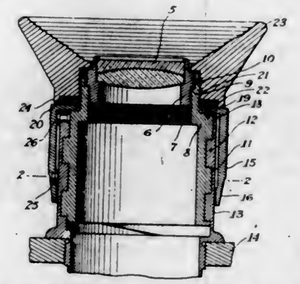
A ditching machine comprising a frame, wheels supporting the frame, curved guides mounted at the forward portion of the frame, a supplemental frame movably mounted between the guides, shafts journaled upon the supplemental frame, intermeshing gear wheels carried by the shafts and meshing with the guides, a wheel supported



axle pivotally connected with the supplemental frame, a digging share carried by the frame, a belt mounted for movement behind the digging share, and means for driving the belt from one of the supporting wheels of the frame.

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1,229,117. OPTICAL INSTRUMENT. JOSEPH MIHALYI, Rochester, N. Y., assignor to Crown Optical Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 22, 1916. Serial No. 116,251. (Cl. 88—34.)



1. In an optical instrument, a stationary sleeve, a tube rotatably and axially adjustable therein, an eyepiece mounting carried by said tube, a diopter ring adjustable on said tube, a clamping ring for holding the diopter ring in its adjusted position, and an eyecap piece secured to said tube and covering the clamping ring.

2. In an optical instrument, a stationary sleeve, a tube rotatably and axially movable therein and having an externally threaded portion, and a shoulder at the base of the externally threaded portion, a diopter ring having an interior flange rotatable on the shoulder of the tube, a clamping ring engaging said exteriorly threaded portion and said flange on the diopter ring, an eyecap engaging said exteriorly threaded portion, and an eyepiece carried by the rotatable and axially movable tube.

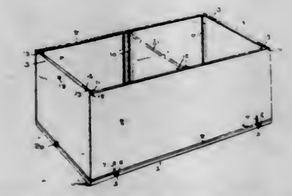
3. In an optical instrument, a stationary sleeve, a tube rotatably and axially adjustable therein, an eyepiece carried by said tube, a diopter ring adjustable on said tube, a stop on said diopter ring, and a stop on the stationary sleeve for coöperation with the stop on the diopter ring to limit the outward movement of the rotatably and axially movable tube.

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1,229,118. SHIPPING-CRATE. LEWIS MILLER, Oakdale, Tenn., assignor of one-half to William Judson Griffith, Oliver Springs, Tenn. Filed July 19, 1916. Serial No. 110,069. (Cl. 217—15.)

A shipping crate, comprising a lower frame, a bottom secured upon said lower frame, end walls hingedly mounted upon said bottom adjacent the ends thereof adapted to be folded inwardly and lie flat thereon when in collapsed position, side walls for the crate, eye screws upon said lower frame, L-shaped hinge bars upon said side walls coacting with said eye screws to removably hinge said side

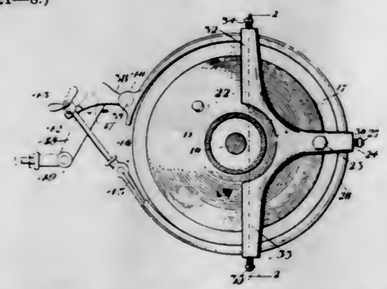
walls upon said lower frame to adapt said side walls to swing against the side edges of said hingedly mounted end walls, L-shaped spring latch members carried by the upper edges of said end walls for engaging the outer surfaces of said side walls for locking said side walls thereagainst, a



top for said crate and having a frame upon its under surfaces adapted to embrace and snugly engage the outer surfaces of said end walls and said side walls adjacent the upper edges thereof, and means for securing said top upon said crate.

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1,229,119. BRAKE. WILLIAM J. MILLER, Los Angeles, Cal. Filed June 21, 1916. Serial No. 105,025. (Cl. 21—8.)



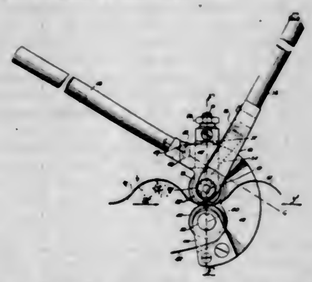
1. A brake attachment for a wheel construction; said wheel construction having an axle housing, a circular housing flange extending from the end of the axle housing, an axle in the axle housing, a wheel hub upon the axle against the end of the axle housing, and spokes extending from the hub and spaced from the housing flange; said attachment comprising a brake drum adapted to be mounted rigid with the hub and spokes and span the space to the housing flange, said brake drum being larger in diameter than the housing flange and there being an inwardly extending drum flange registering with the housing flange, a brake band for the drum, a spider secured to the housing flange and yieldingly supporting the brake band, and means for operating the brake band.

2. A brake attachment for a wheel construction; said wheel construction having an axle housing, a circular housing flange extending from the end of the axle housing, an axle in the axle housing, a wheel hub upon the axle against the end of the axle housing, and spokes extending from the hub and spaced from the housing flange; said attachment comprising a brake drum adapted to be mounted rigid with the hub and spokes and span the space to the housing flange, said brake drum being larger in diameter than the housing flange and there being an inwardly extending drum flange registering with the housing flange, and a brake band for the drum.

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1,229,120. APPLIANCE FOR SHEARING METAL. CHARLES ROBERT MONTGOMERY, Keynsham, near Bristol, England. Filed Sept. 21, 1914. Serial No. 862,851. (Cl. 164—84.)

1. An appliance for shearing corrugated or other formed sheets comprising a frame, means for holding said frame, a driven rotary cutter and a co-acting free rotary cutter mounted on said frame, each of said cutters having a plurality of parallel cutting edges spaced apart and said driven cutter being provided with a knurled or dentated portion between its cutting edges adapted to be impressed into the metal being operated upon, means whereby the metal between the edges of said free cutter is supported, and means carried by the frame whereby the strip of metal so sheared is deflected in advance of the frame to allow the free passage of the tool, substantially as described.



2. An appliance for shearing corrugated or other formed sheets comprising a frame, means for holding said frame, a driven rotary cutter and a co-acting free rotary cutter mounted on said frame, each of said cutters having two annular parallel cutting edges spaced apart, and said driven cutter being provided with a knurled or dentated portion between its cutting edges adapted to be impressed into the metal being operated upon, the said free cutter being provided with knurled or dentated portions around its periphery, and means carried by the frame whereby the strip of metal so sheared is deflected in advance of the frame to allow the free passage of the tool, substantially as described.

3. An appliance for shearing corrugated or other formed sheets comprising a frame, means for holding said frame, a driven rotary cutter and a co-acting free rotary cutter mounted on said frame, each of said cutters having a pair of annular parallel cutting edges spaced apart, and said driven cutter being provided with a knurled or dentated surface between its cutting edges adapted to be impressed into the metal being operated upon, a freely mounted bearing ring disposed between the edges of said free cutter, and means carried by the frame whereby the strip of metal so sheared is deflected in advance of the frame to allow the free passage of the tool, substantially as described.

4. An appliance for shearing corrugated or other formed sheets comprising a frame, means for holding and guiding said frame, a driven rotary cutter and a co-acting free rotary cutter mounted on said frame, each of said cutters having a pair of annular parallel cutting edges spaced apart, and said driven cutter being provided with a knurled or dentated surface between the cutting edges adapted to be impressed into the metal being operated upon, a pivoted handle, and means controlled thereby for intermittently rotating said driven cutter in one direction, means whereby the metal lying between the edges of said free cutter is supported, and means carried by the frame whereby the strip of metal so sheared is deflected in advance of the frame to allow free passage of the tool, substantially as described.

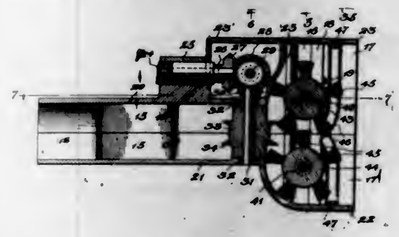
5. An appliance for shearing corrugated or other formed sheets comprising a frame reduced in thickness toward the rear or trailing edge, means for holding said frame, a driven rotary cutter and a co-acting free rotary cutter mounted on said frame, each of said cutters having a pair of annular parallel cutting edges spaced apart, and said driven cutter being provided with a knurled or dentated portion between the cutting edges adapted to be impressed into the metal being operated upon, means whereby the metal lying between the cutting edges of said free cutter is supported, and means carried by the frame whereby the strip of metal so sheared is deflected in advance of the frame to allow the free passage of the tool, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]



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1,229,121. PICKER-HEAD. JOHN MURPHY, Memphis, Tenn., assignor of one-half to George P. Schlocker, Memphis, Tenn. Filed June 29, 1916. Serial No. 106,719. (Cl. 56—117.)



1. In a picker-head having a mouth and a throat leading therefrom, the combination of a drive-shaft mounted longitudinally and exteriorly of the head and extending inside thereof, a pinion on the inner portion of said shaft, a drive-gear in mesh with said pinion, a counter-shaft on which said drive-gear is fast and mounted transversely of the head, a clearer-wheel shaft mounted substantially at right angles to said counter-shaft at the entrance of said throat, a clearer-wheel on said clearer-wheel shaft, a pinion fast on said clearer-wheel shaft in mesh with said drive-gear, oppositely-disposed brush-shafts mounted in said mouth substantially at right angles to said clearer-wheel shaft, coöperating brushes on said brush-shafts in contact with said clearer-wheel, gears on said brush-shafts in mesh with each other, and a gear on said counter-shaft in mesh with one of said brush-shaft gears.

2. A picker-head comprising a casing of abutting separable sections shaped to form a contracted discharge end and an enlarged mouth and a throat smaller than the mouth leading therefrom at the discharge end, rotatable picking-brushes in said mouth, a clearer-wheel in rear of said brushes at the entrance of said throat, and means whereby said brushes and wheel are rotated.

3. A picker-head comprising a casing comprehending a mouth and having opposed walls extending nearly to the entrance of the mouth, abutments at the ends of said walls, and removable opposed wall-extensions one attached to each of said abutments.

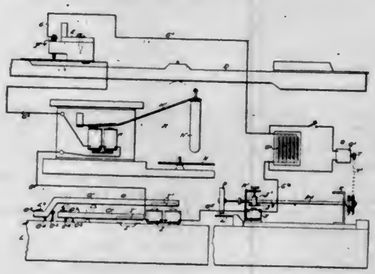
4. A picker-head comprising a casing comprehending a mouth and having opposed walls extending nearly to the entrance of the mouth, an abutment at the end of each of said walls, a wall-extension for each of said walls, a flange on each of said extensions removably secured to one of said abutments, there being a bearing in and between each pair of abutting abutments and flanges, in combination with a brush-shaft journaled in said bearings, a brush on said shaft and means whereby said shaft is rotated.

5. A picker-head comprising a casing shaped to form a contracted discharge end and an enlarged mouth and a throat smaller than the mouth leading therefrom to the discharge end, rotatable picking-brushes in said mouth, a clearer-wheel at the entrance of said throat in rear of and having its axis in a plane substantially at right angles to the axes of said brushes, and means whereby said brushes and wheel are rotated.

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1,229,122. ELECTRICAL PIANO ATTACHMENT. DONALD PATRICK MUSE, Junction City, Ark. Filed Aug. 17, 1915. Serial No. 45,898. (Cl. 84—81.)

1. In combination with a piano having keys and sounding devices controlled by the said keys, a second musical instrument of the violin type, fingering devices for fingering the strings of the said second musical instrument, string-playing devices adapted to engage the said strings to sound the same, orchestra bells, electric curcuits having circuit-closers controlled by the said piano keys, electric actuating devices connected with the said fingering devices, electric controlling devices for the said string-playing devices and electric actuating devices for sounding the orchestra bells, the said circuits being connected with the actuating and controlling devices to sound a string, and a bell in harmony with the corresponding sound of the piano on playing a piano key.



2. In combination with a piano having keys and sounding devices controlled by the said piano keys, a second musical instrument of the violin type, pivoted fingering levers for fingering the strings of the said musical instrument, electromagnets for actuating the said fingering levers, continually driven filamentous sounding wheels adapted to be moved into engagement with the said strings of the second instrument, electromagnets for moving the said sounding wheels into engagement with their strings, and electric circuits having circuit closers controlled by the said piano keys and electrically connected with the said electromagnet to sound a string of the second musical instrument in harmony with a string of the piano on playing a piano key.

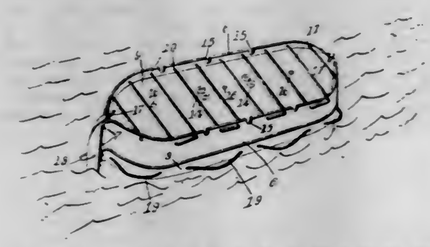
3. A musical instrument of the violin type having strings, fingering levers adapted to finger the said strings, an electromagnet for actuating each fingering lever, sounding wheels adapted to be moved into engagement with the said strings, continuously driven shafts having spring terminals carrying the sounding wheels, a movable bearing for each shaft, electromagnets, the armatures of which are secured directly to said bearings, normally open electric circuits for the said electromagnets, and means for closing the said circuits to simultaneously actuate a fingering device and a bearing for fingering a string and sounding the same string by the corresponding sounding wheel.

4. The combination with a violin, of pivoted fingering levers on opposite sides of the neck of the violin, an electro-magnet for operating each lever, a filamentous sounding wheel adapted to be moved into engagement with each string of the violin, continuously revolving shafts carrying the said wheels, a bracket provided with slots through which the shafts loosely project, electro-magnets, armatures for the magnets, yieldingly supported from the bracket and in which the said shafts are mounted.

5. The combination with a piano, of a violin, pivoted and spring-pressed fingering levers, each carrying a block at one end for engaging a string of the violin, electro-magnets, the armatures of which are carried by the other ends of the said levers, string-playing wheels adapted to engage the strings, continuously rotating shafts carrying said wheels, electro-magnets, the armatures of which carry bearings in which the ends of the shafts are mounted, and branch circuits having circuit-closers controlled by the keys of the piano, said branch circuits including said electro-magnets.

[Claims 6 to 8 not printed in the Gazette.]

1,229,123. LIFE-RAFT. LORING WILLIS MYERS, Lubec, Me. Filed Oct. 17, 1916. Serial No. 126,143. (Cl. 9—11.)



1. A raft embodying a cellular frame, floats in the cells thereof, side plates extending along the sides of the frame and attached to the ends thereof, upper and lower plates fitting against the frame within the edge portions of the side plates, the edge portions of the side plates projecting beyond the second mentioned plates, and means carried by the edge portions of the side plates and extending across the second mentioned plates.

2. A raft embodying a cellular frame, floats in the cells thereof, side plates extending along the sides of the frame and attached to the ends thereof, upper and lower plates fitting against the frame within the edge portions of the side plates, the edge portion of the side plates projecting beyond the second mentioned plates, and a flexible element threaded back and forth through the edge portions of the side plates across the second mentioned plates.

3. A raft embodying a cellular frame having a central longitudinal member with projecting ends, floats in the cells of the frame, and side plates extending along the sides of the frame and having their end portions fitting the ends of the frame and attached to the ends of said member.

4. A raft embodying a cellular frame having a central longitudinal member with porjecting ends, floats in the cells of the frame, side plates extending along the sides of the frame and having their end portions fitting the ends of the frame and attached to the ends of said member, and upper and lower plates fitting against the frame within the edge portions of the side plates.

5. A raft embodying a cellular frame having a central longitudinal member provided with projecting ends, side plates extending along the sides of the frame and having their end portions fitting the ends of the frame and secured to said projecting ends of said member, upper and lower plates fitting the frame and disposed snugly within the edge portions of the side plates, said edge portions of the side plates projecting beyond the upper and lower plates, and flexible elements threaded back and forth through the edge portions of said side plates across the upper and lower plates.

[Claim 6 not printed in the Gazette.]

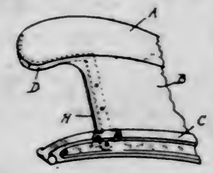
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1,229,124. AUTOMOBILE-FENDER. ROBERT M. NELSON, Detroit, Mich., assignor of three-fourths to Mary Phillips and one-fourth to George W. Maskers, Detroit, Mich. Filed Dec. 1, 1916. Serial No. 134,292. (Cl. 21—23.)

1. The combination with a fender having a curved portion and a depending front flange, of a support therefor extending beneath the curved portion directly adjacent the flanged end.

2. The combination with a fender having a curved portion and a depending front flange, of a support therefor extending beneath the curved portion directly adjacent the flanged end, and having a flange fitting inside of the fender flange.

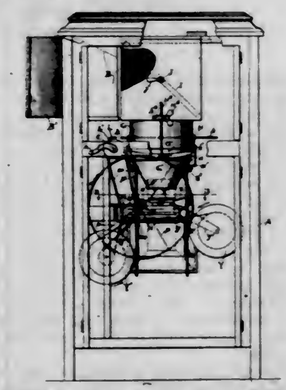
3. The combination with a fender having a curved portion and a depending front flange, of a support therefor extending beneath the curved portion directly adjacent the flanged end, and having a flange fitting inside



of the fender flange, the fender having a portion of lesser resistance located in the rear of the supported portion.

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1,229,125. MOVING-PICTURE MACHINE. NICHOLAUS T. NILSSON, Chicago, Ill., assignor of fifty one-hundredths to Samuel Evans, Chicago, Ill. Filed Mar. 27, 1916. Serial No. 86,986. (Cl. 88—18.)



1. In a moving picture machine, means to enlarge one of a plurality of pictures on a ribbon, means to present said enlarged picture to view in a substantially vertical plane, said ribbon being in a different plane, means to intermittently move said ribbon and successively bring said pictures into said different plane, a source of light positioned to one side of one edge of said ribbon, a movable shutter positioned in a vertical paine between said source of light and said ribbon, and means to give said shutter a timed movement relative to the movement of said ribbon.

2. In a moving picture machine, means to enlarge one of a plurality of pictures on a ribbon, means to present said enlarged picture to view in a substantially vertical plane, said ribbon being in a different plane, means to intermittently move said pictures into said different plane, a source of light to one side of one edge of said ribbon, means to direct light from said source of light to the picture which is being enlarged, a movable shutter positioned in a vertical plane between said source of light and said ribbon and means to give said shutter a timed movement relative to the movement of said pictures and ribbon.

3. A moving picture machine, comprising a cabinet provided with an aperture in one of the side walls thereof, said aperture adapted to admit light therethrough, means to enlarge one of a plurality of pictures on a ribbon, means to present said enlarged picture to view in a substantially vertical plane, said ribbon being in a different plane, means to intermittently move said ribbon and successively bring said pictures into said different plane, a source of light positioned outside of said cabinet, a movable shutter positioned in a vertical plane, and adjacent to said apertured side wall, and means to give said shutter a timed movement relative to the movement of said pictures and ribbon.



4. A moving picture machine, comprising a cabinet provided with an aperture in one of the side walls thereof, said aperture adapted to admit light therethrough, means to enlarge one of a plurality of pictures on a ribbon, means to present said enlarged picture to view in a substantially vertical plane, said ribbon being in a different plane, means to intermittently move said ribbon and successively bring said pictures into said different plane, a source of light positioned outside of said cabinet, a movable shutter positioned in a vertical plane, and adjacent to said apertured side wall, a reflector adapted to direct light entering said cabinet through said aperture on said picture which is being enlarged, and means to give said shutter a timed movement relative to the movement of said pictures and ribbon.

5. In a moving picture machine, a cabinet, light apertures in a side wall of said cabinet and means to close said apertures, and a walled aperture in one of the front walls of said cabinet, means to enlarge a positioned one of a plurality of pictures on a ribbon, means to present said enlarged picture to view in said walled aperture apparently in a substantially vertical plane, while said ribbon is in a different plane, means to intermittently move said ribbon to successively place said pictures in said position to be enlarged, a source of light outside of said cabinet, a reflector adapted to direct light entering said cabinet from said source of light through a determined one of said first named apertures to said positioned picture, a movable shutter in said cabinet positioned in a vertical plane adjacent to said side wall of said cabinet, and adapted to alternately cover and uncover said apertures, and means to give said shutter a timed movement relative to the successive movements of said ribbon.

[Claims 6 and 7 not printed in the Gazette.]

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1,229,126. BALING-PRESS. GEORGE W. NORTH, La Tuna, Tex., assignor of one-half to H. M. Andreas, El Paso, Tex. Filed June 2, 1916. Serial No. 101,394. (Cl. 100—20.)



1. In a baling press, the combination of a baling chamber, a plunger adapted to travel in said baling chamber, a rack associated with said plunger and having an angularly-disposed forward end, and a rotating cam gear adapted to strike the angular end of asid rack to start the plunger on its advance stroke, and to mesh with said rack to carry the plunger through the remainder of the advance stroke, substantially as described.

2. In a baling press, the combination of a baling chamber, a plunger fitted to operate in said baling chamber, an inclined rack associated with said plunger and having a forward angularly projecting end, and a rotating cam gear adapted to strike the angular end of said inclined rack, and to mesh with said rack to drive the plunger through its advance motion, substantially as described.

3. In a baling press, the combination of a baling chamber, a plunger arranged to operate in said baling chamber, an inclined rack associated with said plunger and having a forwardly and angularly-disposed end, a roller supported at the rear end of said inclined rack, and a rotating cam gear adapted to strike the angular end of said rack and to mesh with the same, said cam gear having a notch therein for receiving the roller at the end of said rack, substantially as described.

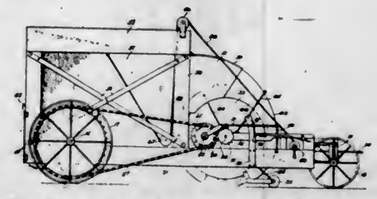
4. In a baling press, the combination of a baling chamber, a plunger fitted to travel in said baling chamber, a rod connected to said plunger and including a pair of longitudinally-extending sections secured together, an inclined rack clamped between the sections of said plunger rod, a rotating cam gear adapted to mesh with said inclined rack for driving the plunger through its advance motion, and means for returning said plunger to initial position, substantially as described.

5. In a baling press, the combination of a baling chamber, a plunger fitted to travel in said baling chamber, a rod connected to said plunger, and including a pair of longitudinally-extending members assembled together, an inclined rack embraced between the members of said plunger rod and having a forward angularly-disposed end thereon, a roller carried by the rear end of said inclined rack, a rotating cam gear having a notch therein adapted to engage said roller and arranged to strike the angular end of said inclined rack and to mesh with the same to drive the plunger through its advance motion, and means for returning the plunger to initial position after each advance actuation, substantially as described.

[Claims 6 to 31 not printed in the Gazette.]

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1,229,127. STREET-CLEANING MACHINE. MARSHALL L. OSBORNE, Waukomis, Okla. Filed Oct. 28, 1916. Serial No. 128,256. (Cl. 15—17.)



1. In a street sweeping machine, a wheeled frame, upstanding brackets at the sides thereof, shafts carried by said brackets, levers pivoted on the shafts, a cylindrical brush having a shaft journaled on the levers, means for securing the levers and the brush carried thereby at various adjustments, means including a transmission chain and interengaging clutch members for driving each of the shafts supported by the upstanding brackets, and intermeshing spur wheels on said shafts and the brush carrying shaft, the interengaging clutch members including each a slidable spring pressed member; in combination with shipping levers for said slidable spring pressed members and flexible elements connecting the shipping levers with the frame, said flexible elements lying each in the path of the brush supporting levers.

2. In a street sweeping machine, a wheeled frame having upstanding brackets, levers fulcrumed on said brackets, a cylindrical brush having a shaft journaled on the levers, and a partial casing consisting of a shield suitably supported and operable by the levers, links being provided to connect the levers with the shield.

3. In a street sweeping machine, a wheeled frame, upstanding brackets at the sides thereof, shafts supported by said brackets, levers fulcrumed on the shafts, a cylindrical brush having terminal heads and an axial shaft, said shaft journaled on the levers, a partial casing consisting of a shield having terminal flanges overhanging and contacting with the heads of the brush, brackets on said shield pivotally engaging the shafts carried by the upstanding brackets, and links connecting said shield with the levers.

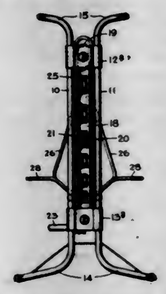
4. In a machine of the class described, a wheeled frame having upstanding brackets at the sides thereof, shafts carried by said brackets, levers fulcrumed on the shafts, a partial casing consisting of a shield of arcuate cross section having brackets pivotally engaging the shafts, links connecting the shield with the levers, a cylindrical brush having heads and provided with a shaft journaled on the levers, flanges on the shield overhanging and contacting with the heads of the brush, a shield hinged on the casing and overlapping the first-mentioned shield, and wings fixed on the casing and overlapping the flanges of the first mentioned shield.

5. In a machine of the class described, a wheeled frame having upstanding brackets at the sides thereof, shafts

carried by the brackets, levers fulcrumed on the shafts, a shaft journaled on the levers and carrying a cylindrical brush having heads at the ends thereof, a partial casing consisting of a shield having brackets pivoted on the shafts carried by the upstanding brackets, links connecting the shield with the levers, and a dust pan carried by the shield and by the brackets supporting the same.

[Claims 6 to 8 not printed in the Gazette.]

1,229,128. ELECTRIC HEATING DEVICE. LEON F. PARKHURST, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 18, 1915. Serial No. 34,927. (Cl. 219—19.)



1. In an electric heating device, a frame comprising a plurality of parallel metallic strips provided with registering slots all of which include a common plane, a continuous zigzag armored resistance wire having its folds received in said slots, and means for supporting an article to be treated on either side of the resistance unit.

2. An electric heating device comprising a frame formed of two upright continuous metallic loops secured together and flared outwardly at the bottom to form a base support for the device, and an electric heating unit mounted between said loops.

3. An electric heating device comprising a frame formed of two upright continuous metallic loops secured together in spaced relation, and flared outwardly at the bottom and at the top to form a base support for the device and for the atricle to be operated upon, respectively, and an electric heating unit mounted between said loops.

4. An electric heating device comprising a frame formed of two upright substantially rectangular wire loops secured together in spaced relation, transverse members secured to said loops, substantially vertical members secured in said transverse members and an electric heating unit supported in said members.

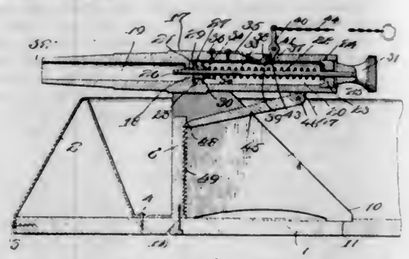
5. In an electric heating device, a frame comprising a plurality of substantially parallel supporting strips provided with registering slots, and an armored resistance conductor threaded back and forth through the slots of adjacent strips and against the top and bottom walls of said slots.

[Claims 6 to 8 not printed in the Gazette.]

1,229,129. SPRING-GUN. ROBERT A. PEACOCK, Delaware City, Del. Filed May 15, 1915. Serial No. 28,404. (Cl. 124—12.)

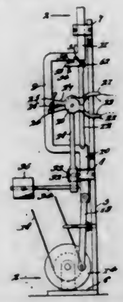
1. A projector, including a barrel, a discharge chamber in said barrel, a projecting member associated therewith, a block adjustably arranged upon said projecting member, a catch extending exteriorly of said barrel engageable with said block, said catch having a hooked projection thereon, and means carried by the barrel and engageable with said catch for releasing the same from the block to discharge a projectile.

2. A projector, including a barrel, a discharge chamber in said barrel, a projecting member arranged in the barrel, resilient means connected with the projecting member, means adjustably carried by the projecting member and engageable with the resilient means whereby the tension thereof may be varied, a catch supported upon said barrel and extending interiorly thereof adapted to be engaged with said adjustable means, said catch having a hooked projection thereupon, and a hooked arm pivotally supported upon said barrel and engaged with the hooked projection of the catch for releasing the same from the projecting means.



3. A projector, including a base, a barrel thereon having a longitudinal central bore, said bore divided into a pair of chambers, one of said chambers adapted to receive a projectile, a projecting means in the other of said chambers including an externally threaded rod, spring actuating means associated with said rod, a catch on said barrel engageable with said rod, said catch having a hooked projection thereon, adjustable means on the rod engageable with said catch, and a hooked arm pivotally supported upon said valve and engageable with said catch for releasing the rod.

1,229,130. HEEL-CUTTING MACHINE. STANLEY CRITTENDEN PEIGLER and COMMODORE THOMAS PEIGLER, Greenville, S. C. Filed Sept. 20, 1916. Serial No. 121,215. (Cl. 12—42.)



1. A heel cutting machine comprising, a main frame, provided with guides, a saw frame, carrying a saw, adapted to reciprocate on said guides, means for reciprocating said saw frame, a shoe holder mounted on said main frame in juxtaposition to the saw, means for pressing the shoe holder toward said saw, and means operated by said shoe holder, when the heel has been sawed through, for automatically stopping said saw frame and saw, substantially as described.

2. A heel cutting machine comprising, a main frame, provided with guides, a saw frame, carrying a saw, adapted to reciprocate in said guides, means for reciprocating said saw frame, a shoe holder mounted on said main frame in juxtaposition to the saw, a weighted arm for pressing the shoe holder toward said saw, and means operated by said weighted arm, when the heel has been sawed through, for automatically stopping said saw frame and saw, substantially as described.

3. A heel cutting machine comprising, a main frame, provided with guides, a saw frame, carrying a saw, adapted to reciprocate on said guides, means for reciprocating said saw frame, a shoe holder mounted on said



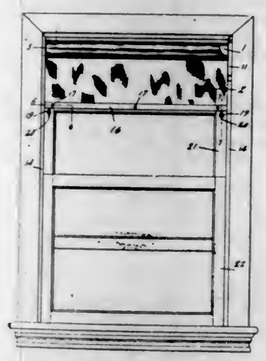
main frame in juxtaposition to the saw, adjustable means for setting said shoe holder at the desired distance from said saw, means for pressing the shoe holder toward said saw, and means operated by said shoe holder, when the heel has been sawed through, for automatically stopping said saw frame and saw, substantially as described.

4. A heel cutting machine comprising, a main frame, provided with guides, a saw frame, carrying a saw, adapted to reciprocate in said guides, means for reciprocating said saw frame, a shoe holder mounted on said main frame in juxtaposition to the saw, adjustable means for setting said shoe holder at the desired distance from said saw, a weighted arm for pressing the shoe holder toward said saw, and means operated by said weighted arm, when the heel has been sawed through, for automatically stopping said saw frame and saw, substantially as described.

5. A heel cutting machine comprising, a main frame, provided with guides, a saw frame, carrying a saw, adapted to reciprocate on said guides, means for reciprocating said saw frame, comprising a belt and fast and loose pulleys, a shoe holder mounted on said frame in juxtaposition to the saw, means for pressing the shoe holder toward said saw, and means operated by said shoe holder, when the heel has been sawed through, for automatically shifting said belt and stopping said saw frame and saw, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,229,131. VENTILATOR. WILLIAM PERROT, Ottawa, Ill. Filed Mar. 31, 1916. Serial No. 88,035. (Cl. 156—39.)



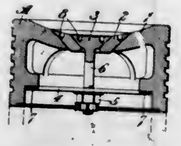
A device of the character described, comprising a pair of brackets embodying plates adapted to be secured to the jambs of a window casing within the upper ends of the sash ways of the lower sash, a roller whose terminals are engageable with said plates adjacent their upper ends, a screen wound upon the roller, a pair of bars secured together, the lower end of the screen being clamped between said bars, one bar being shorter than the other to fit snugly between the parting strips of the window, the ends of the other strip being adapted to overlap said parting strips, said plates having recesses for receiving the second mentioned bar, means for attaching one of said bars to the upper portion of the upper sash, the lower ends of said plates having flanges to limit the upward movement of the lower sash.

1,229,132. CANDLESTOCK. ROBERT PHILIP, Bofors, Sweden. Filed July 29, 1916. Serial No. 112,192. (Cl. 87—21.)

1. The herein described material for making candles which contains paraffin and salicylic acid.

2. The herein described material for making candles which comprises paraffin, stearin and salicylic acid.

1,229,133. PISTON FOR INTERNAL-COMBUSTION ENGINES. GEORGE D. POGUE, St. Louis, Mo. Filed Nov. 17, 1916. Serial No. 131,893. (Cl. 74—85.)



1. A piston for internal combustion engines provided with a top composed of a plurality of sections which are free to expand and contract without creating strains in the metal from which said sections are formed.

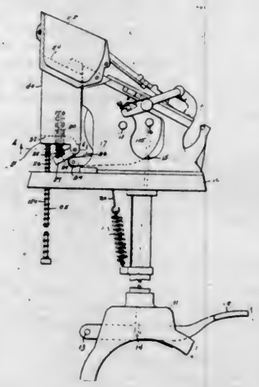
4. A piston for internal combustion engines having a top composed of a plurality of concentrically arranged sections, fitted one within the other and constructed in such a manner that the pressure in the cylinder forces said sections into intimate contact with each other, the top faces of said sections being substantially flush with each other.

8. A piston for internal combustion engines having a top composed of a plurality of concentrically arranged sections, each of which has a smooth beveled seat that receives the section which it surrounds, and a resilient means for clamping said sections together.

13. A piston for internal combustion engines whose top comprises a peripheral portion that is integrally connected to the piston, a central portion comprising a plurality of independently movable sections carried by said peripheral portion and fitted one within the other, and a resilient means that holds said sections together and also in operative position with relation to the peripheral portion of the top.

[Claims 2, 3, 5 to 7, and 9 to 12 not printed in the Gazette.]

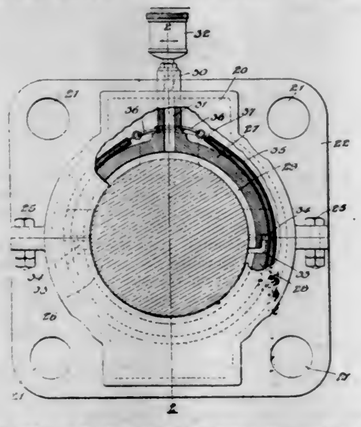
1,229,134. BUTTON-FEEDING MECHANISM. LORA E. POOLE, Anderson, Ind., assignor to Anderson Button Attaching Machine Company. Filed Sept. 28, 1916. Serial No. 122,734. (Cl. 218—12.)



1. A button attaching machine including a frame, a button chute, a button hopper at one end of said chute, a feeding plate adapted to be operated in said hopper, a spring extending upwardly therein, an arm pivoted in the lower end of said plate so as to engage said spring, and means on said machine for engaging said arm whereby said plate will be operated.

[Claim 2 not printed in the Gazette.]

1,229,135. SWAB-CUP. CLARENCE J. POORE and SAMUEL T. PEARSONS, Rutland, Vt., assignors to B. M. Jones & Co., Inc., Boston, Mass., a Corporation of Massachusetts. Filed Sept. 26, 1916. Serial No. 122,320. (Cl. 184—25.)



1. A swab ring composed of an upper semi-circular member with a grooved inner surface and having depending lugs on its diametral ends, a complementary, lower semi-circular up-turned member having its inner surface grooved in registry with the upper member and having in its diametral ends pockets to receive the said lugs on the upper member when the members are assembled upon a rod, and means for yieldably securing the members in coöperative position.

2. A swab cup comprising in combination with a reciprocating rod, a chamber embracing the rod, a swab ring embracing the rod and located within the chamber and being free to move a limited distance in the direction of the axis of the rod, said swab ring being provided with a continuous furrow in its contacting surface, and means connected to the ring to introduce a lubricant to the furrow.

5. The combination with a gland, of a chamber formed adjacent to the gland, a reciprocating rod mounted within the gland and chamber, a swab ring located within the chamber and embracing the rod, said swab ring being of less dimension longitudinally of the rod than the corresponding dimension of the chamber, and means connected to the ring for introducing a lubricant between the swab ring and the rod.

[Claims 3, 4, and 6 to 13 not printed in the Gazette.]

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1,229,136. SCRUBBING DEVICE. JAN PUCHALSKI and PAWEL KIELKOWICZ, Cleveland, Ohio. Filed Mar. 24, 1917. Serial No. 157,129. (Cl. 15—43.)



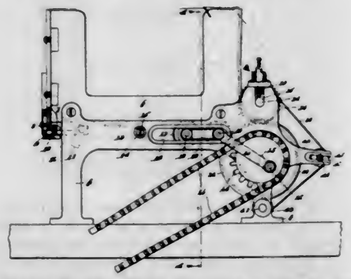
1. The combination with a frame, of spaced mop applying means secured beneath said frame, wringing rollers positioned on said frame above and between said means, a mop extending between said wringing rollers and movable therebetween, the lower end of said mop being arranged for position beneath either of said means and for position above and between said means, manually operable means for moving said mop up and down between the wringing rollers, a handle on said frame including spaced parallel bars, a cross bar slidable on the handle bars and having the upper end of the mop attached thereto, and means to move said cross bar upward on said handle bars.

2. The combination with a frame, of spaced mop applying means secured beneath said frame, wringing rollers positioned on said frame above and between said means, a mop extending between said wringing rollers and movable therebetween, the lower end of said mop being arranged for position beneath either of said means and for position above and between said means, manually operable means for moving said mop up and down between the wringing rollers, a handle on said frame including spaced parallel bars, a cross bar slidable on the handle bars and having the upper end of the mop attached thereto, means to move said cross bar upward on said handle bars, said means comprising a shaft extending between said handle bars, a handled crank on said shaft, winding drums fixed on said shaft, and flexible connections between said drums and cross bars.

3. In a device of the kind described, a frame, spaced handle bars secured to said frame and projecting upwardly and rearwardly therefrom, spaced mop applying means connected beneath and extending transversely of said frame, wringer rollers journaled in said frame, one of said rollers being provided with a sprocket, a cross bar slidable on the rear ends of the handle bars, a mop connected to said cross bar and extending beneath said wringer rollers, a shaft journaled at the upper ends of said handle bars, winding drums fixed on said shaft, flexible connections between said winding drums and cross bar, a handled crank on said shaft, a sprocket fixed on said shaft, and a chain connecting the last-mentioned sprocket and the sprocket on the wringer roller.

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1,229,137. PAPER-FEEDING DEVICE. HERMAN R. RAHN and FRANKLIN MEYERS, Chicago, Ill., assignors to Richard Harvey Wright, Durham, N. C. Filed July 19, 1916. Serial No. 110,066. (Cl. 271—41.)



1. A paper feeding device comprising a hopper; one or more feed rollers arranged to reciprocate relatively to said hopper in continuous contact with a stack of articles therein; and means for reciprocating said rollers and rotating the same during feeding motion to cause their contacting surfaces to move in the direction of the motion, substantially as described.

2. A paper feeding device comprising a hopper; one or more feed rollers arranged to reciprocate relatively to said hopper in continuous contact with a stack of articles therein and means for reciprocating said rollers and rotating the same during feeding motion to cause their contacting surfaces to move in the direction of the motion and freeing said rollers for idle rotation during the idle motion thereof, substantially as described.

3. A paper feeding device comprising a hopper having an open bottom; one or more feed rollers arranged to reciprocate under said hopper in contact with a stack of articles therein; and means for reciprocating said rollers and rotating the same during feeding motion to cause their contacting surfaces to move in the direction of the motion, substantially as described.

4. A paper feeding device comprising a hopper having an open bottom; one or more feed rollers arranged to reciprocate under said hopper in contact with a stack of articles therein; and means for reciprocating said rollers and rotating the same during feeding motion to cause their contacting surfaces to move in the direction of the motion and permitting said rollers to cease rotation during the idle motion thereof, substantially as described.

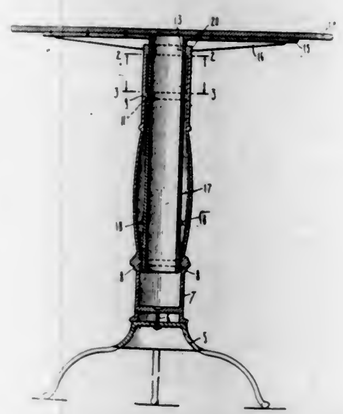
5. A paper feeding device comprising a hopper; one or more feed rollers arranged to reciprocate relatively to said hopper in contact with a stack of articles therein; means for reciprocating said rollers and rotating the same during feeding motion to cause their contacting surfaces to move in the direction of the motion; and supports in said hopper for the front side edges and the rear of a stack of articles therein, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]



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1,229,138. LUNCH-ROOM TABLE. EDWARD REISCHMANN, New York, N. Y. Filed Jan. 7, 1916. Serial No. 70,794. (Cl. 45—111.)

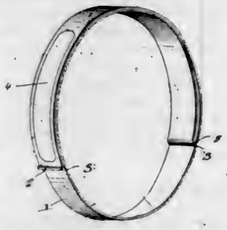


A lunch room table comprising, in combination, a hollow standard, a plunger adapted to slide therein, lugs carried by said plunger, near the lower end thereof, an inwardly projecting collar on the upper end of said standard, recesses in the top surface of said collar, in which said lugs are adapted to rest and be engaged, other inwardly projecting collars in said standard, adapted to hold said plunger firmly in vertical alinement with said standard, and a table top carried by said plunger, the respective proportions of said standard and plunger, and the respective positions of said lugs and collars being so calculated that when said plunger is in its lowest position, the table top be at standard height of a lunch room table for seated persons, the lower end of said plunger being engaged by the lowermost collar, and when said lugs are resting in said recesses, the table top be at standard height of a lunch room table for standing persons, the lower end of said plunger being engaged by a collar intermediate the uppermost and lowermost one.

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1,229,139. COMBINED FILM BINDER AND PROTECTOR. JOHN L. RITCHIE and GEORGE L. YASTE, Lonaconing, Md. Filed Nov. 11, 1916. Serial No. 130,929. (Cl. 206—53.)

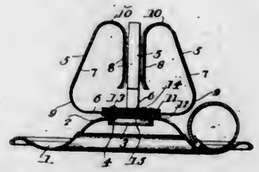
The combination with a reel for moving picture films, of a single strip of flat spring metal shaped to form a closed band and having overlapping ends, said band being of substantially the same width as the space between



the walls of the reel to form an adjustable outer protecting wall for the film and outwardly turned ends for said band.

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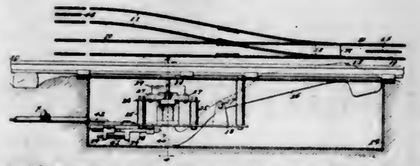
1,229,140. CANDLE-HOLDER. JOSEPH RITTER, Milwaukee, Wis. Filed Jan. 19, 1917. Serial No. 143,360. (Cl. 67—23.)



In a candle holder, a plurality of radially arranged spring candle grasping fingers each having a base member, an inclined portion, a curved portion connecting the base and inclined portions and also having a downwardly extending free end and candle engaging portion and a curved portion connecting the inclined portion and free end and candle engaging portion, the said free end portions of the springs being opposed and arranged in parallel relation, in combination with a supporting element having a recess, disks between which the base members of the springs are secured and an element extending downwardly from the lower disk and arranged in said opening or recess.

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1,229,141. RAILWAY-SWITCH OPERATOR. WILLIAM A. ROBINSON, New York, N. Y. Filed Aug. 25, 1916. Serial No. 116,789. (Cl. 104—24.)



1. The combination with a railway switch, of an operator comprising a transversely slidable switch carrier, a vertically movable plate carrying inclined uprights for moving said carrier in one direction, a trip adapted to be depressed by an element on a car consisting of a lever the inner end of which bears against the under side of said plate, and means for returning the parts to normal position when said trip is released.

2. The combination with a railway switch, of an operator comprising a transversely slidable switch carrier, a vertically movable plate carrying inclined uprights bearing against said carrier, a trip lever the outer end of which is adapted to be depressed by an element on a car and the inner end of which bears against the under side of said plate, means for locking said trip lever in depressed position to maintain the switch in operated

position, and means for returning said parts to normal positions when said locking means are released.

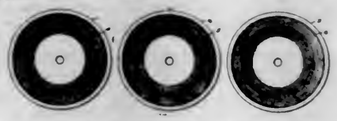
3. The combination with a railway switch, of a transversely movable carrier in operative connection with said switch, a vertically guided plate thereunder having inclined uprights bearing against said carrier to move the latter in the upward movement of said plate, a trip lever the outer end of which is adapted to be actuated by an element on a car and the inner end of which bears against the under side of said plate, means for locking said lever in switch operated position, and a spring for returning the parts to normal positions when said locking means are released.

4. The combination with a railway switch, of a transversely movable carrier in operative connection with said switch, a vertically guided plate having inclined uprights bearing against said carrier to move the latter in the upward movement of said plate, a trip lever the outer end of which is adapted to be depressed by an element on a car and the inner end of which bears against said plate, a spring latch for locking said lever in trip depressed position to maintain said switch in operated position, means operable by said car element for retracting said latch, and spring means for returning said parts to normal positions when said latch is retracted.

5. The combination with a railway switch, of a transversely movable carrier in operative connection with said switch, a vertically guided plate having inclined uprights bearing against said carrier to move the latter in the upward movement of said plate, a trip lever the outer end of which is adapted to be depressed by an element on a car and the inner end of which bears against the under side of said plate, a latch for holding said trip lever in depressed position, a supplemental trip adapted to be engaged by said car element for releasing said latch, and spring means for returning said switch and allied parts to normal positions when said supplemental trip is actuated.

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1,229,142. EDUCATIONAL APPLIANCE. OSCAR SAENGER, New York, N. Y. Filed Aug. 25, 1913. Serial No. 786,491. (Cl. 35—12.)



1. An educational appliance, comprising in combination, a predetermined number or series of related sound records bearing a predetermined succession of instructive examples of vocal production coupled each with instrumental accompaniment, said instructive examples being followed in contrasting relationship by the same time intervals and the same accompaniment alone, thereby to afford opportunity for attempted reproduction by the pupil of each vocal example during the succeeding time interval and with the aid of the succeeding accompaniment.

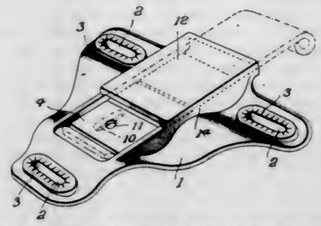
6. That method of musical instruction which comprises the following steps, namely, impressing upon a phonograph or other sound record a predetermined succession of instructive examples of vocal production, each coupled with instrumental accompaniment, and following said instructive examples in contrasting relationship by the same time intervals and the same accompaniment alone, thereby affording opportunity for attempted reproduction by the pupil of each vocal example during such succeeding time interval and with the aid of such succeeding accompaniment.

[Claims 2 to 5 not printed in the Gazette.]

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1,229,143. MOUNTING FOR FIRE DOORS AND SHUTTERS. FELIX L. SAINO, Memphis, Tenn. Filed July 7, 1916. Serial No. 108,071. (Cl. 16—112.)

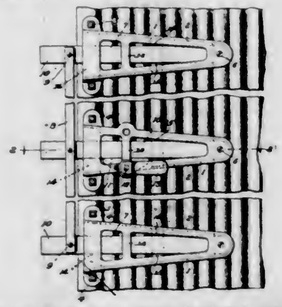
A hinge for mounting corrugated doors or shutters comprising a corrugated plate adapted to be adjustably secured on the door or shutter, said plate constructed with integral raised portions and the plate between said raised portions formed with a pair of inset web portions providing a recess, a web portion connecting said raised side



portions and overlying one of said webs and forming a socket therewith and leaving the other of said webs uncovered, a member adjustably fitting within said socket, and means for securing said member to the uncovered web portion, substantially as set forth.

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1,229,144. LOCKING DEVICE FOR FIRE DOORS AND SHUTTERS. FELIX L. SAINO, Memphis, Tenn. Original application filed May 26, 1915, Serial No. 30,611. Divided and this application filed July 7, 1916. Serial No. 108,072. (Cl. 70—44.)



A lock for shutters or doors having a corrugated surface comprising a triangular shaped plate constructed along two sides with angularly projecting portions having corrugated edges to fit the corrugated surface of the door or shutter to form a housing therewith, one end of the trianguar housing having a slot and the apex opposite thereto provided with a recess, a pair of parallel webs formed integrally with the plate and disposed transversely thereof between said slot and the recess, a latch fulcrumed on said plate within said recess and working between said webs and within the slot, a bolt journaled in said plate, a lifting block for the latch fulcrumed on said bolt within the housing and having contact with the latch thereat on either side of the bolt, and a hand operated lever secured to the bolt for actuating said lifting block to raise the latch, substantially as set forth.

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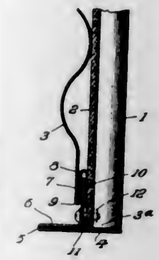
1,229,145. FLUE-STOPPER FOR FIRE DOORS AND SHUTTERS. FELIX L. SAINO, Memphis, Tenn. Filed July 27, 1916. Serial No. 111,628. (Cl. 189—46.)

1. The combination with a fire-proof door or shutter comprising adjacent walls forming a flue therebetween, of a plate detachably secured along an edge of one of said walls, said plate disposed laterally to one side of the wall and folded upon itself and disposed to the other side of the wall and providing a flue stopper, substantially as set forth.

2. The combination with a fire-proof door or shutter comprising adjacent sheet metal walls forming a flue and



the lower edge of one of said walls constructed to provide a channel, of a plate disposed transversely of said walls along the edge providing a flue stopper, said plate having a flange fitting within the channel of said wall, and means for securing said flange to the door or shutter, substantially as set forth.

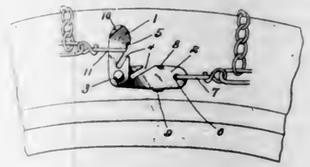


3. The combination with a fire-proof door or shutter comprising adjacent sheet metal walls forming a flue therebetween, the lower edge of one of said walls being folded upon itself to provide a channel, of a plate disposed transversely along the edge of said walls and providing a flue stopper, said plate being folded upon itself and formed with an upwardly projecting flange fitting within said channel, and a plurality of bolts passing through said flange and one wall of the door or shutter, substantially as set forth.

4. The combination with a fire-proof door or shutter comprising adjacent sheet metal walls arranged to form a flue between them, and the lower edge of one of said walls folded upon itself to provide a channel, of a draft stopper consisting of a plate folded upon itself and formed with an upwardly projecting flange fitting within said channel, said plate extending in one direction to cover the space between the two walls of the door and in the other direction to cover the space between the door and the adjacent wall of the building, and bolts securing said flange to a wall of the door or shutter, substantially as set forth.

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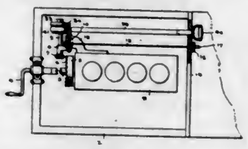
1,229,146. CONNECTOR FOR CHAINS OR THE LIKE. JOHN F. SAINT CLAIR, Old Washington, Ohio. Filed Apr. 6, 1916. Serial No. 89,462. (Cl. 24—68.)



A chain connector comprising a pair of members of plate like form, said members being pivotally connected at one end to each other and one of the members being of materially greater length than the other, the shorter member being formed with an inclined slot opening through one edge in a direction toward the pivotal connection of the members, the longer wall of this slot being formed with a series of recesses, the non-recessed portion of the wall being equal in length to the remaining wall of the slot, the other member having an inclined slot opening through one edge and extended toward the pivotal connection, the slots of the respective members opening through what are opposing edges of the members when said members are in closed relation.

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1,229,147. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. ANTON I. SANDBO, Rock Island, Ill., assignor of one-third to Henry W. Dammann and one-third to William Dammann, Rock Island, Ill. Filed Mar. 30, 1916. Serial No. 87,798. (Cl. 123—185.)



1. The combination with the crank shaft of a motor, of a belt wheel fixed to said motor, a gear fixed to the belt wheel, a pinion swingly mounted adjacent the belt wheel end coöperating with said gear, means to rotate said pinion whereby the crank shaft will be rotated, a rod connected to the pinion mounting to swing said pinion into or out of engagement with said gear, and a cam coöperating with said rod to move and hold the rod in operative position.

2. The combination with a crank shaft and a gear fixed thereto, of a pinion adapted to coöperate with said gear, a shaft carrying said pinion, a support for said shaft, a housing fixed on said support, a hollow drum rotatable on said shaft and disposed over the housing, a coil spring disposed in the housing and connected to the housing and to the said drum, means to manually rotate said drum in one direction, a ratchet fixed to said shaft, dogs mounted on the hollow drum adapted to engage said ratchet and rotate the shaft when the drum is rotated in one direction, and means coöperating with said dogs adapted to disengage the same from the ratchet wheel when reverse rotation is imparted to the crank shaft.

3. The combination with the crank shaft of a motor, and a gear fixed thereto, of a pinion adapted to intermesh with said gear, a shaft carrying said pinion, means to impart rotating motion to said shaft and pinion whereby the crank shaft will be rotated, a rod to swing said pinion into engagement with the gear, and a cam coöperating with said rod to move the rod and lock the pinion in mesh with said gear.

4. The combination with the crank shaft of a motor and a gear fixed thereto, of a pinion, a shaft to which said pinion is attached, a drum mounted on said shaft, a ratchet wheel fixed to said shaft, dogs pivotally mounted on said drum, one end of the dogs being adapted to engage the ratchet wheel and rotate the same in one direction when the drum is rotated, pawls pivoted to the opposite ends of said dogs, said pawls having teeth at their outer ends, a stationary ring member, teeth on the ring member adapted to be engaged by the teeth of the pawls and cause the pawls to disengage the dogs from the ratchet wheel when reverse rotation is imparted to said crank shaft, and means on the pawls adapted to engage parts of the ring member to release the teeth of the pawls from the teeth of the ring member.

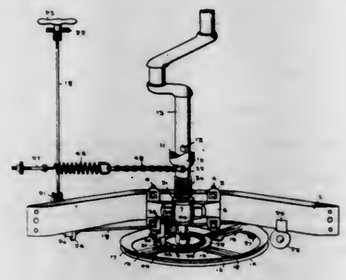
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1,229,148. ENGINE-STARTER. ANTON I. SANDBO, Rock Island, Ill. Filed May 16, 1916. Serial No. 97,807. (Cl. 123—185.)

1. The combination with the crank shaft of an engine, of a clutch mechanism, means carried by parts of said clutch mechanism and formed with a depression and having a plurality of teeth arranged in circular formation thereon with a number of the teeth omitted, a movably mounted toothed member for coöperation with said teeth and having means adapted to travel over the face of said first-named means, the teeth of said movably mounted member adapted to enter said depression during one movement.

2. The combination with the crank shaft of an engine, of a clutch, a portion of said clutch being reduced in diameter to form a hub, the end of the clutch adjacent the hub being spirally arranged, a spring, means to anchor

one end of the spring, and means to attach the opposite end of the spring to the clutch whereby when the clutch is rotated the spring securing means between the clutch and end of the spring will be wound upon the hub, and a spring having its terminal coil reduced in diameter to fit around the shaft and bear against the end of said hub.



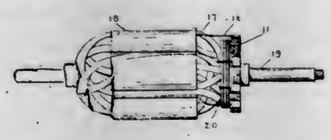
3. The combination with a clutch mechanism, and means to move the clutch mechanism into operative position, of a throwing wheel for the clutch, a disk on said throwing wheel, teeth arranged in circular formation on the disk, a pawl having a finger at one end adapted to engage the face of the disk until the pawl assumes a vertical position, to hold the clutch in inoperative position, and teeth on the pawl adapted to engage the teeth of the disk whereby the pawl will be operated upon the occurrence of reverse rotation to force the clutch into inoperative position, the teeth of said disk being interrupted as and for the purpose set forth.

4. The combination with the crank shaft of an engine, of a clutch mechanism, a disk carried by parts of said clutch mechanism, a plurality of teeth arranged in circular formation on said disk, said disk having a depression, a pivotally mounted pawl having teeth adapted to coöperate with the teeth of the disk, an angular extension on said pawl, and a forwardly extending finger at the end of the extension adapted to travel over the face of the disk, the teeth of the pawl being adapted to enter said depression when the pawl is being moved to a vertical position.

5. The combination with the crank shaft of an engine, of a clutch mechanism, a disk carried by parts of said clutch mechanism, said disk having a plurality of teeth arranged in circular formation thereon with some of the teeth omitted, and said disk formed with a depression, a pivotally mounted pawl having teeth for coöperation with the teeth of said disk, said pawl having an angular extension adapted to travel over the face of the disk, the teeth of the pawl being adapted to enter said depression as the pawl is being moved upwardly, and means for holding the pawl into its engagement with the disk at all times.

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1,229,149. COMMUTATOR. CARL J. SCHWARZE, Adrian, Mich., assignor to Schwarze Electric Company, Adrian, Mich., a Corporation of Michigan. Filed Mar. 28, 1916. Serial No. 87,188. (Cl. 200—12.)



1. A radial face commutator embodying a peripherally notched insulation disk provided with an annular series of holes therethrough, a pin through each hole, radially flanged end insulation segments, and terminal segments on the pins circumferentially spaced by the insulation segment flanges and having axial extensions engaging the peripheral notches of the disk.

4. A radial face commutator embodying an insulation base ring, a terminally flanged insulation segment, a terminal segment for the insulation segment, an assembling pin through the segment and ring, and an insulation ring parallel to the segment and concealing one end of the pin.

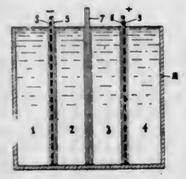
5. A commutator embodying an annular series of segmental terminals provided with axial extensions, insulation segment units each having a pair of diverging radial flanges, said units disposed in an annular series with the flanges abutting in pairs between the segmental terminals, and an insulation ring upon which the terminals and insulation segments are mounted.

6. A radial face commutator embodying a peripherally notched insulation disk, an anular series of terminals each provided with an axial extension disposed in a peripheral notch of the disk, and conductor leads connected to such extensions.

[Claims 2 and 3 not printed in the Gazette.]

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1,229,150. PROCESS FOR TANNING AND IMPREGNATING MATERIALS BY MEANS OF ELECTRICITY. BOTHO SCHWERIN, Frankfort-on-the-Main, Germany, assignor to Elektro-Osmose Aktiengesellschaft, (Graf Schwerin Gesellschaft,) Berlin, Germany, a Corporation. Filed Sept. 8, 1914. Serial No. 860,731. (Cl. 204—27.)



1. A process for introducing a substance into or onto a material, which process consists in confining the material and a liquid containing the substance in question between diaphragms of such electric charge that they permit migration through them of constituents of the liquid which injuriously affect electro-osmosis while retaining the substance in question, and passing an electric current through the liquid and diaphragm.

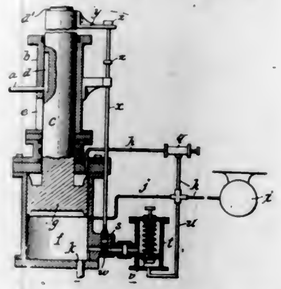
2. A process for introducing a substance into or onto a material, which process consists in first separating electro-osmotically by de-adsorption from the material constituents which hinder the introduction and then confining the material and a liquid containing the substance in question between diaphragms and passing an electric current through the liquid and diaphragms.

3. A process of introducing a substance into or onto a material, which process consists in confining the material as a partition dividing the space between diaphragms in a bath of liquid containing the substance in question, and passing an electric current through the liquid and diaphragms.

4. The process herein described which consists in introducing water into the chamber of a receptacle between one side of a hide disposed therein and a diaphragm of cellulose or the like, introducing dilute acid into a chamber between the hide and a negative diaphragm, passing a direct current between the diaphragms and causing the hide to become more strongly electro-positive, the basic residues passing through the negative diaphragm, charging a tanning liquor into a chamber between the cathode and the wall of the receptacle, causing the cathodic constituents to migrate through the cathodic diaphragm and the negative ions to migrate through the hide and the diaphragm first mentioned, and the tanning liquor to pass through the hide, and finally withdrawing the liquor from the chamber between the hide and the diaphragm first mentioned.



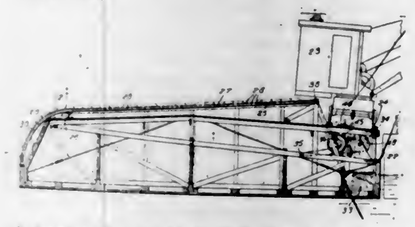
1,229,151. AUTOMATIC TRAIN-STOP. HIRAM GEE SEDGWICK, Mill Valley, Cal., assignor to The National Safety Appliance Company, a Corporation of California. Filed June 4, 1909, Serial No. 500,103. Renewed Dec. 9, 1916. Serial No. 136,092. (Cl. 246—59.)



In an automatic train stop, a brake controlling means on the locomotive, a pneumatic motor for operating the same and means for connecting the motor to a storage reservoir, means for governing the supply to the motor to cause the same to operate and apply the brakes, means for restoring the motor to operative position, these means embodying a cut off automatically opened and closed by the action of the motor.

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1,229,152. APPARATUS FOR LAUNCHING REVETMENT-MATS. DAVID MCDOUGALD SHEARER, Vicksburg, Miss. Filed Oct. 6, 1915. Serial No. 54,461. (Cl. 61—30.)



1. An apparatus for laying revetment mats comprising a plurality of mooring barges, a launching barge connected thereto, a material barge associated with said launching barge, means for transferring the mats from the material barge to said launching barge, means for controlling delivery of said mat from said launching barge, and means for moving said launching barge longitudinally of said mooring barges as the mat is being launched.

2. An apparatus for laying revetment mats comprising a plurality of mooring barges, a launching barge connected thereto, a material barge associated with said launching barge, means for transferring the mats from the material barge to said launching barge, means for controlling delivery of said mat from said launching barge, means for moving said launching barge longitudinally of said mooring barges, as the mat is being launched, and means for guiding said launching barge during its longitudinal movement.

3. An apparatus for laying revetment mats, comprising a plurality of mooring barges arranged transversely of the current or stream, a launching barge movable longitudinally of said mooring barges and in substantially parallel relation to the shore line, and means for launching the unit mats from said launching barge.

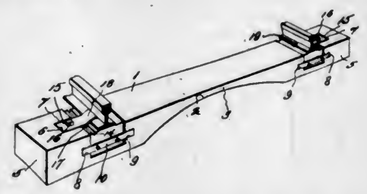
4. An apparatus for laying revetment mats, comprising a plurality of mooring barges arranged transversely of the current or stream, a launching barge movable longitudinally of said mooring barges and in substantially parallel relation to the shore line, means for launching the unit mats from said launching barge, and means including flexible members connecting said launching barge with one of said mooring barges for moving the former outwardly from the shore as the laying of the mat progresses.

5. An apparatus for laying revetment mats, comprising a plurality of mooring barges arranged transversely of the current or stream, a launching barge movable longitudinally of said mooring barges and in substantially parallel relation to the shore line, means for launching the unit mats from said launching barge, and a material barge from which the unit mats are transferred to said launching barge.

[Claims 6 to 9 not printed in the Gazette.]

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1,229,153. RAILROAD-TIE. FREDERICK C. SHEARER, Eagle Pass, Tex., assignor to U. S. Indestructible Tie Manufacturing Company, Eagle Pass, Tex., a Corporation of Texas. Filed Oct. 9, 1915. Serial No. 55,012. (Cl. 238—3.)

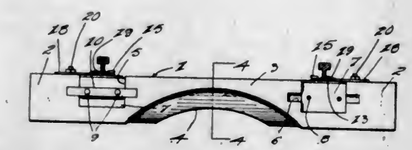


1. A railroad tie comprising a body, provided near opposite ends with chambers, the upper faces of said body provided with recesses communicating at one of their ends with the chambers, bars embedded in one side face of the body and extending longitudinally across the chambers, cushioning blocks positioned in said chambers and means extending through the bars and cushioning blocks to hold the cushioning blocks in place.

2. A railroad tie comprising a body provided near each end with chambers, bars embedded in one side face of the body and extending longitudinally across the chamber, recesses in the upper faces of said body and communicating at their inner ends with the chambers, cushioning blocks positioned in said chambers, bolts extending through the bars and blocks for holding the cushioning blocks in position, the said cushioning blocks having grooves in their upper faces, and means arranged in the recesses coöperating with the grooves for holding the rail in position upon the blocks.

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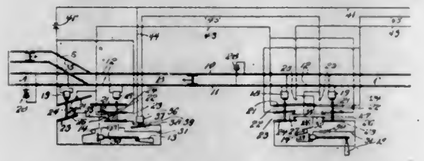
1,229,154. RAILWAY-TIE. FREDERICK C. SHEARER, Eagle Pass, Tex., assignor to U. S. Indestructible Tie Manufacturing Company, Eagle Pass, Tex., a Corporation of Texas. Filed Dec. 29, 1915. Serial No. 69,239. (Cl. 238—3.)



The combination with a railroad tie having cushion receiving chambers near opposite ends and being provided with recesses in its upper side communicating with said cushion receiving chambers, of blocks seated in said cushion receiving chambers, tie plates seated on the blocks and extending into the recesses, the outer ends of the tie plates being upturned and engaging the outer ends of the recesses to prevent the tie plates from moving outwardly,

bolts extending through the ties and tie plates and clamp plates seated on the tie plates and engaging the upturned portions, said clamp plates being held in place by the bolts.

1,229,155. ABSOLUTE AND PERMISSIVE BLOCK-SIGNALING. JUDSON SHOECRAFT, Eskridge, Kans. Filed June 24, 1916. Serial No. 105,593. (Cl. 246—30.)



1. In a block signal system, the combination with a trackway divided into blocks and motor operated signals at the meeting ends of the blocks normally held in clear position and capable of movement to danger position, of multiple control circuits for each signal motor, and a train controlled interlocking relay controlling each set of circuits and operable to break one of said circuits upon the presence of a train in one block and to break the other of said circuits and lock the first circuit open when the train enters the next adjacent block whereby a danger signal will be left behind the train.

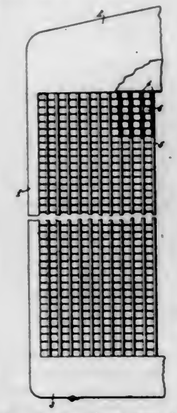
2. In a block signal system, the combination with a trackway divided into blocks, a siding, and siding switch points controlling communication between said trackway and siding, motor operated signals at the meeting ends of the blocks normally held in clear position and capable of movement to danger position, normally closed multiple control circuits for each motor, a train controlled interlocking relay controlling each set of said circuits and operable by the presence of a train in one block to break one of said circuits and when the train moves into the next adjacent block to break the other of said circuits and lock the first circuit open whereby the signal will be set at danger, and a remote controlled auxiliary relay controlling one of the control circuits of the set adjacent to the switch points.

6. In a block signal system, the combination with a trackway divided into blocks, and sidings arranged along the trackway and communicating therewith, of motor controlled signals at the meeting ends of the blocks normally held in clear position and capable of movement to danger position, multiple control circuits for each motor, train controlled relays controlling each set of said circuits whereby both circuits of a motor may be deënergized upon the presence of trains in adjacent controlling blocks, auxiliary relays controlling the advance control circuits of the sets adjacent to the respective sidings, and a controlling circuit for each of said auxiliary relays extending through alternate track relays back to the other siding whereby the advance control circuit adjacent to one siding may be opened by said auxiliary relay upon a train passing the other siding and approaching the first siding so that an opposing train in the vicinity of the siding having opened the other control circuit will receive a danger signal.

[Claims 3 to 5 not printed in the Gazette.]

1,229,156. RADIATOR FOR AUTOMOBILES. ISRAEL SILVER, New York, N. Y., assignor of one-half to Ida Mails, New York, N. Y. Filed Mar. 16, 1916. Serial No. 84,586. (Cl. 257—130.)

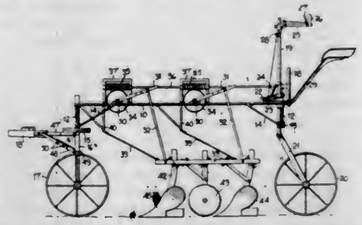
1. In a radiator of the character described, an inlet header, an outlet header, a plurality of conduit members, each of the conduit members having the open ends connected to said headers, spacing and retaining members arranged between successive conduits, said last mentioned members having slots at the ends, and clamping strips substantially U-shaped in cross section fitting over the vertical edges of the conduits and projecting into said slots so as to hold the spacing members in position.



2. In a device of the character described, an intake header and an outlet header, a plurality of conduits connecting said headers, each of said conduits being comparatively flat so as to allow only a thin sheet of water to pass, heat radiating members for spacing said conduits arranged between adjacent conduits, each of said last mentioned members being formed with slots on each side, and a strip substantially U-shaped in cross section fitting over the vertical edges of said conduits and into said slots so as to hold the heat radiating members in position.

3. In a radiator of the character described, an intake header, an outlet header, a plurality of conduits extending from one header to the other, spacing and heat radiating members arranged between successive conduits, each of said members being corrugated so that there will be portions resting against opposite conduits, the connecting web between said portions being slotted upon each edge, and a retaining strip or clamp substantially U-shaped in cross section fitting over the edges of said conduits and into said slots for holding the heat radiating and spacing members in position.

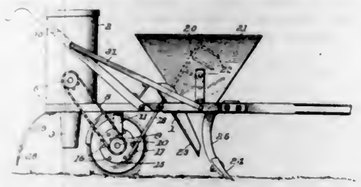
1,229,157. THREE-WHEELED CULTIVATOR. CLEMENT SIMONEAUX, Bellerose, La., assignor of one-half to John W. Newchurch, New Orleans, La. Filed Sept. 5, 1916. Serial No. 118,478. (Cl. 97—34.



In a cultivator of the character described, a main wheel-supported frame, a plurality of transverse shafts on the main frame, means for rotating said shaft in unison and in the same general direction and at substantially the same axial speed, arms extending upwardly and rearwardly from the shafts and arranged substantially in parallelism, an auxiliary frame adapted to carry ground engaging elements, lifting connections interposed between the arms and the auxiliary frame, said connections extending downwardly and rearwardly substantially in parallelism, and draft links interposed between the opposite end portions of the auxiliary frame and the main frame, said draft links extending upwardly and forwardly and arranged substantially in parallelism.

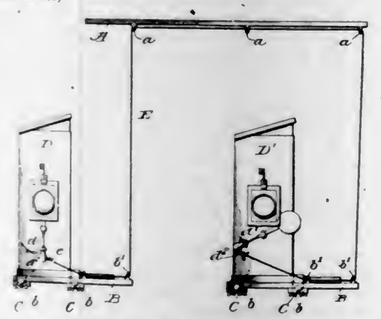


1,229,158. PLANTER. OSCAR C. SIMS, Palmetto, Ga. Filed June 23, 1914. Serial No. 846,815. (Cl. 111—73.)



In a planter structure, a supporting frame including side rails, upstanding angle brackets attached to said side rails adjacent to their forward ends, a fertilizer hopper attached to said angle brackets, a seed retaining and dispensing mechanism carried by said side rails rearwardly of said fertilizer hopper, a depending inverted U-shaped bracket attached to said side rails intermediate said fertilizer retaining hopper and said seed retaining and dispensing mechanism, an axle rotatably supported by said U-shaped bracket, a traction wheel mounted upon said axle, an arcuate guard plate carried by said supporting structure and extending over the upper portion of the rear part of said wheel and being positioned in close proximity to the periphery of the wheel for preventing the accumulation of dirt thereon and to prevent the wheel from throwing dirt rearwardly during its rotation, against the seed dispensing mechanism, a pair of depending rearwardly extending arcuate arms attached to the rear ends of said side rails, and a flat covering plate attached to the rear lower ends of said arcuate arms.

1,229,159. SHUTTER-OPERATING ATTACHMENT FOR TWIN MOTION-PICTURE MACHINES. JAMES E. SINGLETON and SAMUEL T. WHITE, Greenville, N. C. Filed July 10, 1916. Serial No. 108,349. (Cl. 88—16.6.)



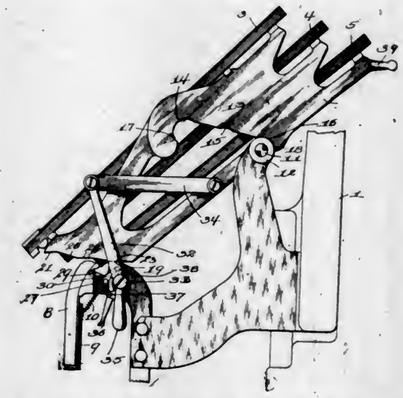
1. In combination with a pair of motion picture machines, means flexibly connecting the shutter-operating levers of the two machines, whereby the shutter of one machine may be opened and the shutter of the other machine simultaneously closed, said means extending overhead out of the way of the operator in passing around and between the two machines, and anti-friction devices over or around which said connection passes from one machine to the other.

5. An attachment for twin picture projecting machines comprising an overhead support carrying a series of anti-friction devices, a pair of supporting bars each carrying anti-friction devices and adapted for attachment to a pair of rods on which the lamp-house of a picture projecting machine is mounted, and a flexible connection between the shutters of said lamp-houses passing over the anti-friction devices carried by said overhead support and under and around the anti-friction devices carried by said supporting bars and having its free ends detachably secured to said levers.

6. In combination with twin motion picture machines arranged in separated relation and having movable shutters, shutter-operating means connecting the shutters of the two machines, whereby the shutter of one machine is opened and the shutter of the other machine simultaneously closed, for bringing the two machines into operation alternately; said means including a connection which extends overhead from one machine to the other in such manner that the end portions thereof are kept apart and the intermediate portion elevated out of the way of the operator in passing around and between the two machines.

[Claims 2 to 4 not printed in the Gazette.]

1,229,160. TYPOGRAPHICAL MACHINE. SAMUEL E. SPERRY, Woodhaven, N. Y., assignor to Intertype Corporation, Brooklyn, N. Y., a Corporation of New York. Filed Oct. 5, 1915. Serial No. 54,229. (Cl. 199—7.)



1. In a typographical machine, the combination with a relatively shiftable magazine carrying frame, of an assembler entrance adapted to receive matrices from any one of the magazines in use and reciprocable in an endwise direction transversely to the shifting movement of the magazine carrying frame, and means for shifting said assembler entrance into a position to clear the magazines preparatory to shifting of the latter.

2. In a typographical machine, the combination with a magazine carrying frame shiftable in a direction forwardly and rearwardly of the machine, of an assembler entrance having means for shifting it vertically in an endwise direction transversely to the direction of movement of the magazine carrying frame.

3. In a typographical machine, the combination with a magazine carrying frame shiftable in a direction forwardly and rearwardly of the machine, and means for shifting the magazine carrying frame, of an assembler entrance reciprocable in an endwise direction transversely to the direction of movement of the magazine carrying frame, and means combined with the means for shifting the magazine carrying frame for shifting the assembler entrance preparatory to shifting the magazine carrying frame.

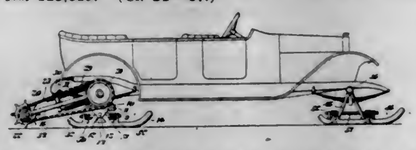
4. In a typographical machine, the combination with a magazine carrying frame shiftable to bring different magazines therein into operative position, and a handle for shifting said frame, of an assembler entrance shiftable vertically in an endwise direction to and from operative relation with any one of said magazines, and a grip as-

sociated with said handle and operatively connected to the assembler entrance for shifting the latter.

5. In combination, a plurality of inclined magazines, each having a series of escapements mounted thereon, a set of escapement actuating rods or bars, a set of supplementary escapement actuating rods pivoted to swing to and from operative position between said escapement actuating rods and the magazine escapements, an assembler entrance for the magazines, means for shifting the magazines to bring any one of them into operative position, and means for swinging the supplementary escapement actuating rods to clear the shifting magazines.

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1,229,161. SLED ATTACHMENT FOR AUTOMOBILES. ED STANLEY, Hart, Mich. Filed Oct. 14, 1916. Serial No. 125,619. (Cl. 21—47.)



1. The combination with the axle housing of an automobile, of a longitudinally divided sleeve-like clamp adapted to be fastened thereon, downwardly diverging legs on said clamp, a runner having an upwardly-extending knee, and a yoke connecting the clamp legs and the runner knee and having a pivotal connection with the knee of the runner, adapting the runner to rock in a fore and aft direction.

2. The combination with the rear axle housing of an automobile, of a support having a fixed relation to said housing, a runner attached to said support, a driving frame pivotally connected to said support and extending rearwardly therefrom, a traction wheel journaled in said driving frame and geared to and actuated by the driving axle of the vehicle, a lever pivotally mounted on said support, a rod extending rearwardly from an arm of said lever, a guide on the driving frame through which said rod is slidable, a frame depressing spring surrounding said rod, and means connecting said lever with said support, whereby the tension of said spring may be regulated.

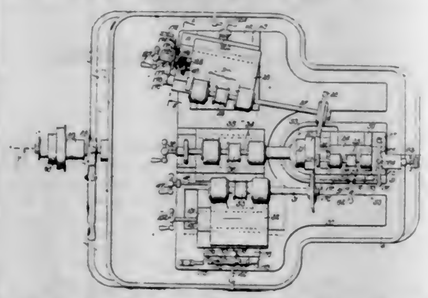
3. The combination with the rear axle housing of an automobile, of a sleeve-like clamp surrounding the same and having a fixed relation thereto, a runner attached to said clamp, a driving frame pivotally connected to said clamp and extending rearwardly therefrom, a traction wheel journaled in the rear end of said driving frame and geared to and actuated by the driving axle of the machine, a lever pivotally mounted between its ends on said clamp, a rod extending rearwardly from the upper arm of said lever, a guide on the driving frame through which said rod is slidable, a frame-depressing spring surrounding said rod, a contractile spring connecting the lower arm of said lever with the driving frame, and means connecting the lower arm of said lever with said lamp, whereby the tension of said contractile spring may be regulated for the purpose described.

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1,229,162. GRINDING-MACHINE. FRANK STARIN, Springfield, Mass. Filed Nov. 1, 1916. Serial No. 128,852. (Cl. 51—4.)

1. In a grinding machine for finishing a bearing ring, a revoluble chuck adapted to engage and hold the ring at one side thereof, a plurality of revoluble spindles at angles one to the other and carrying grinders, and actuating means for bodily and simultaneously moving the said spindles to engage one of the grinders with the outer peripheral face of the ring, to engage another grinder with the inner face of the ring, and to engage a third grinder with the other side of the ring.

3. In a grinding machine for grinding bearing rings, a revoluble holder for holding the ring at one side, a plurality of revoluble spindles carrying grinders, carriages on which the said spindles are mounted, actuating means for simultaneously imparting movement to the said carriages to engage one of the grinders with the outer peripheral face of the ring, to engage another grinder with the inner bearing face of the ring and to engage the third grinder with the other side of the ring, automatic feeding means for feeding the said carriages step by step for the grinders to make successive cuts on the corresponding faces of the ring, and stopping means to automatically throw the feed mechanism out of action.



5. In a grinding machine for grinding a bearing ring, a revoluble chuck adapted to hold the ring, a revoluble spindle carrying a grinder adapted to grind the inner face of the ring, a head stock in which the said spindle is journaled, a carriage mounted to travel toward and from the said chuck, a support pivoted on the said carriage and supporting the said head stock, the axis of the pivot of the said support intersecting the axis of said chuck at a right angle and intersecting the ball race of the bearing ring at the beginning of the curved portion of the ball race, and means for imparting a traveling motion to the said carriage and a swinging motion to the said support.

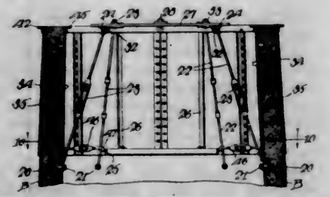
9. In a grinding machine for finishing a bearing ring, a head stock carrying a spindle provided with a grinding wheel for finishing the inner ball race of the ring, a support for the said head stock, a carriage, a pivot journaled in the carriage and on which the said support is secured, and means connected with the said pivot for moving the latter bodily forward and for imparting a turning motion to the pivot after the pivot has been advanced.

12. In a grinding machine for finishing a bearing ring, a carriage mounted to slide, a support adapted to carry a grinding tool, a pivot journaled in the said carriage and on which the said support is mounted to swing, a pinion secured on the said pivot, a rack in mesh with the said pinion, an eccentric disk, a revoluble disk provided with a diametrical slot, and a stud held adjustably in the said guideway and on which the said eccentric disk is mounted, and a pitman connecting the said stud with the said rack.

[Claims 2, 4, 6 to 8, 10, and 11 not printed in the Gazette.]

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1,229,163. CONCRETE BUILDING APPARATUS. CARL STIELER, Chicago, Ill. Filed Nov. 9, 1916. Serial No. 130,312. (Cl. 25—124.)



1. In concrete building apparatus, the combination with a frame, of inner and outer shells carried thereby, and legs one end of each of which is connected to the top of the frame and the other detachably connected to an anchor element on the inside of a previously molded wall section.

2. In concrete building apparatus the combination with a frame, of inner and outer shells carried thereby, and legs spaced about said frame and supporting it, said legs being anchored to the finished work and being adjustable to permit leveling of the frame.

3. In concrete building apparatus the combination with a frame, of inner and outer shells carried thereby and legs detachably connected at their lower ends to the finished work, said frame being carried on the upper ends of the legs and depending therefrom.

4. In concrete building apparatus the combination with a frame, of inner and outer shells depending from the upper portion of the frame, and longitudinally adjustable legs detachably connected at their lower ends to anchor elements on the inside of the finished work, and supporting the frame at its upper portion on their upper ends.

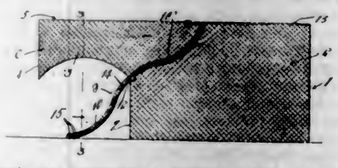
5. In concrete building apparatus the combination with a frame, of inner and outer shells depending from the upper portion of the frame, and legs comprising turnbuckles anchored at their lower ends to the finished work and supporting the frame at its upper portion on their upper ends.

[Claims 6 to 26 not printed in the Gazette.]



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1,229,164. HEN'S NEST. GEORGE W. SMITH, Clarksville, Okla. Filed Mar. 19, 1913. Serial No. 755,477. Renewed Oct. 2, 1916. Serial No. 123,448. (Cl. 119—50.)



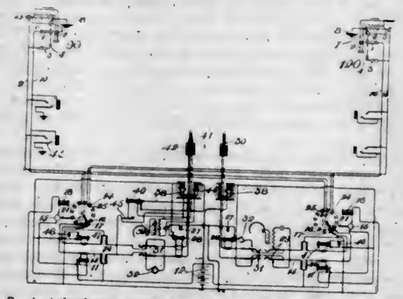
A hen's nest comprising a housing having an entrance formed in one end, the upper portion of said housing being extended at the entrance end to form an overhang disposed entirely outside of the limits of the bottom of the housing, and a platform having its central portion pivotally mounted in the lower portion of the entrance whereby one end of the platform will operate within the housing and the other end within the limits of the overhang, the first named end of the platform being engageable with the top and bottom of the housing in different positions thereof respectively, and the second named end of the platform being engageable with the ground and the top of the overhang in different positions.

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1,229,165. TELEPHONE-EXCHANGE SYSTEM. HAROLD D. STROUD, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Sept. 2, 1902, Serial No. 121,797. Renewed Aug. 7, 1905. Serial No. 273,197. (Cl. 179—27.)

1. In a telephone exchange system, the combination with a plurality of telephone lines extending from substations to an exchange, of cord connectors at the exchange for uniting telephone lines in telephonic connection, each connector having a manually operated terminal plug, while each line has a switch for receiving said plug, traveling switches also constituting terminals of said cord connectors, each of said switches being provided with a contact maker capable of assuming a plurality of selective positions, and multiplied terminals of said lines arranged in coöperative relation with said switches, substantially as described.

2. In a telephone exchange system, the combination with a plurality of telephone lines extending from substations to an exchange, of cord connectors at the exchange for uniting telephone lines in telephonic connection, each connector having a manually operated terminal plug, while each line has a switch for receiving said plug, traveling switches also constituting terminals of said cord connectors, multiplied terminals of said lines arranged in coöperative relation with said switches, and means for arresting said switches when connected with the terminals of a calling line, substantially as described.



3. A telephone exchange system including a telephone line, an operator's circuit, a manually controlled terminal connected thereto, a call signal for said circuit, and a constantly driven switch connected to said circuit with means for arresting the same when engaging said telephone line.

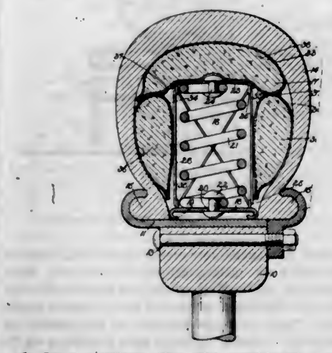
4. A telephone exchange system including calling and called subscribers' lines, link-circuits at the exchange having manually operated terminals for connecting with called lines, selective switches having active contacts at the other ends of said link-circuits, line contacts for said lines adapted to be engaged by said active contacts, and means at each substation for changing the electrical character of its line contacts to arrest travel of the active contacts of a selective switch when engaging them.

5. A telephone exchange system including calling and called subscribers' lines, link-circuits at the exchange having manually operated terminals for connecting with called lines, selective switches having traveling contacts at the other ends of said link-circuits, line contacts for said lines adapted to be engaged by said traveling contacts, and means at each substation for changing the electrical character of its line contacts to arrest travel of the traveling contacts of a selective switch when engaging them.

[Claims 6 to 121 not printed in the Gazette.]

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1,229,166. RESILIENT TIRE. SANDER SUSS, New York, N. Y. Filed Dec. 29, 1916. Serial No. 139,493. (Cl. 152—8.)



1. In a resilient tire, the combination with a flexible shoe, of an annular cushion member comprising inner and outer bands, a circular series of radially disposed springs having their ends secured to said bands, a stout

flexible cable laced circumferentially and transversely between the inner and outer bands to limit the relative lateral and circumferential movement thereof, and padding devices between the cushion member and the inner wall of the shoe substantially filling the space therebetween.

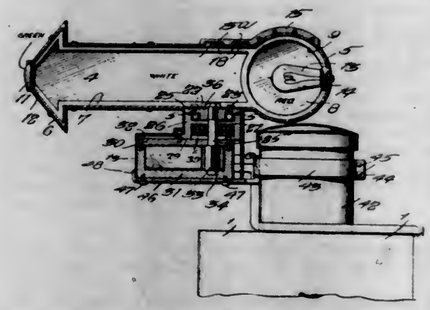
2. The herein described resilient tire construction comprising in combination a tough flexible shoe, a spring cushion within and spaced from the same and a padding device filling the space between the cushion and the inner wall of the shoe, said padding device comprising a plurality of annular sections, each section being hinged to the next along its edge and each section comprising a flexible jacket and a body of suitable light porous material.

3. The herein described cushioning device for resilient tires compriaing inner and outer parallel bands having an opening, each of the bands carrying on its face adjacent to the other band a multiplicity of eyes and both of the bands being provided with circumferential series of holes arranged in radial pairs and in the central plane of the tire, a circumferential series of springs extending between the bands and secured in said pairs of holes, a cable of strong flexible material laced through said eyes in diagonal direction both circumferentially and laterally to limit the relative circumferential and lateral movement of the bands, and a movable section filling the said opening, said movable section comprising inner and outer band portions, radial springs, and flexible cable lacings, substantially as set forth.

4. The herein described spring cushion for resilient tires comprising a metal band formed of sheet metal and having tubular edge beads turned inwardly toward the center of the wheel, said band having an opening, spring members secured to the central portion of said band, the securing means extending through the band into the space between the beads, and a movable band section hinged at one end to one end of the first band and movable inwardly toward the center thereof and also outwardly to complete the main band, latch devices extending between the free ends of the main band and movable section to hold them in alinement, and means coöperating with the outer ends of all of the spring elements to retain the same in operative relation to the inner band.

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1,229,167. INDICATOR FOR MOTOR-VEHICLES. BENJAMIN MINOSAKU TAKAHASHI, Harlowton, Mont. Filed Dec. 7, 1915. Serial No. 65,575. (Cl. 116—31.)



2. An indicator or signal for motor vehicles, adapted to be connected with the filling nipple of the hood, said signal comprising a supporting plate having means for connecting it to the nipple, a casing of semicircular shape supported by the plate, a vane pivoted at the center of the casing and mounted to swing from side to side, a shaft to which the vane is connected, said shaft moving with the vane and extending above the casing, and a signal casing connected with the shaft above the first-mentioned casing and mounted to swing with the shaft, said vane being operated by fluid under pressure, and means for supplying fluid to the casing.

3. An indicator for use with motor vehicles to indicate change of direction of motion of the said vehicle, comprising a signal casing having the approximate shape of an arrow, and having its opposite sides closed by translucent sheets and having an opening at its front and a sheet of translucent material closing the opening, a shaft secured at one end to the signal casing, a casing for the motive fluid, the shaft being journaled at its lower end in the casing, and said casing having a vane rigid with the shaft and adapted to be moved from side to side of the casing, fluid controlled means for supplying fluid to the casing at opposite sides of the vane for moving the same, and illuminating means within the signal casing, said sheet at the front of the casing being colored green and the sheets at the sides being white at the front of the casing and red at the rear of the casing.

5. An indicator for motor vehicles, comprising a hollow casing having the approximate outline of an arrow, and having openings in its opposite sides near the front of the casing corresponding to the outline of the casing, and having circular openings at the rear of the said first-named openings, and having an opening in its front at the apex, translucent sheets closing the openings at the front and at the sides, the circular sheets being colored red, the sheet in front being colored green and the other sheets being colored white, means within the casing for illuminating the same, a support for the casing adapted to be connected to the vehicle, said signal casing being connected to the support to swing in a horizontal plane toward either side of the vehicle, springs normally holding the signal casing in parallelism with the long axis of the vehicle, and fluid controlled means for swinging the signal to either side against the resistance of the springs, said means comprising a casing of segmental shape, a vane rigid with the signal pivoted within the casing at the center thereof and adapted to be swung from side to side by fluid under pressure, the springs in connection with the signal normally holding the vane in neutral position, and means under control of the driver for controlling the flow of fluid under pressure to the casing to move the signal.

6. An indicator for motor vehicles, comprising a hollow casing having the approximate outline of an arrow, and having openings in its sides near the front of the casing corresponding to the outline of the casing, and having circular openings at the rear of the said first-named openings and having an opening in its front at the apex, translucent sheets closing the openings at the front and at the sides, the circular sheets being colored red the sheet in front being colored green and the other sheets being colored white, means within the casing for illuminating the same, a support for the casing adapted to be connected to the vehicle, said signal casing being connected to the support to swing in a horizontal plane toward either side of the vehicle, springs normally holding the signal casing in parallelism with the long axis of the vehicle, and fluid controlled means for swinging the signal to either side against the resistance of the springs, said means comprising a casing of segmental shape, a vane rigid with the signal pivoted within the casing at the center thereof and adapted to be swung from side to side by fluid under pressure, the springs in connection with the signal normally holding the vane in neutral position.

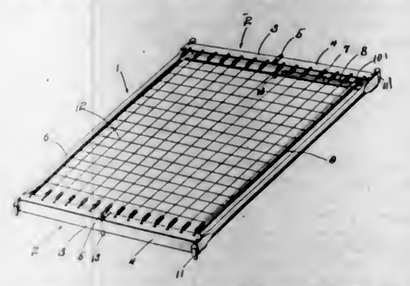
7. An indicator for indicating the direction of turn of motor vehicles, comprising a semi-circular casing, a vane pivoted in the casing to swing from side to side thereof, an indicator connected with the vane above the casing and swinging with the vane, springs in connection with the signal for normally holding the same in neutral position, and fluid controlled means for supplying fluid to the casing to move the vane in either direction, said means comprising a plurality of cylinders for attachment to the foot board of a vehicle and connected with the casing one at each side of the vane, a plunger in each cylinder having a stem extending through the upper end of the casing into the vehicle and provided with a head for engagement by the driver to depress the plunger, a spring for returning the plunger, and a check valve in connection with the piston for permitting the passage of air through the piston when it is moved upwardly.

[Claims 1 and 4 not printed in the Gazette.]



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1,229,168. BED. IVY MCTIMMONDS, Mitchell, Oreg. Filed June 9, 1916. Serial No. 102,732. (Cl. 5—65.)

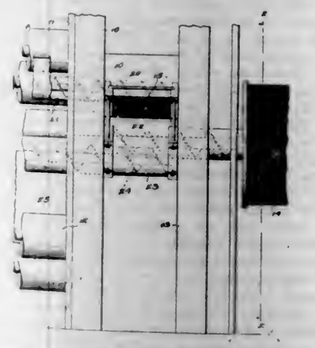


1. A bed bottom or spring comprising end members, each consisting of a pair of hingedly connected sections, so that one of said sections may be folded on the other, and a bar connecting the outer ends of each of the sections, and a third bar slidably connected to one pair of the sections so that the third bar may be arranged at one side of the bottom or spring, both when the same is in extended and in folded position.

2. A bed bottom or spring comprising channeled end members, each consisting of a pair of hingedly connected sections so that one of said sections may be folded on the other, the lower webs of one section of one end member and of the corresponding section of the other end member being each provided with a longitudinal slot, side bars connecting the outer ends of said sections and a third bar having down turned ends slidably engaged in said slots, said third bar being thus arranged for slidable movement on said slotted sections.

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1,229,169. SCALPER FOR SELF-CONTAINED FLOUR-MILLS. JULIUS J. TREFZ, Owensboro, Ky., assignor to The Anglo-American Mill Co., Owensboro, Ky., a Corporation of Kentucky. Filed July 3, 1916. Serial No. 107,387. (Cl. 83—12.)



1. In a self-contained flour mill having the usual break section and bolting section, and in combination, break rolls in said break section, a bolting reel in said bolting section, means directly between said sections and intermediate said rolls and reel to scalp the stock coming from the break rolls, and means to convey the stock from said break rolls to said scalping means.

2. In a self-contained flour mill and in combination, a plurality of sets of break rolls, a bolting reel, means directly between the break and bolting sections of the mill and intermediate said rolls and reel to scalp the stock coming from one set of break rolls, means to convey the stock from said break rolls to said scalper, means to convey the throughs to said bolting reel, and means to return the tailings to a second set of said break rolls.

5. In a self-contained flour mill and in combination, a plurality of sets of break rolls, a bolting reel, an inclined scalping screen directly between the break and bolting sections of said mill, a distributing hopper having an automatic feed gate above said screen, means to convey the stock from one set of said break rolls to said hopper, means to convey the throughs to said bolting reel, and means to return the tailings to a second set of said break rolls.

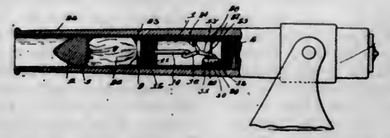
9. In a self-contained flour mill having the usual break section and bolting section and in combination, a plurality of sets of break rolls in said break section, a bolting reel in said bolting section, an inclined scalping screen located in the space between said break and bolting sections intermediate said rolls and reel, a distributing hopper above said screen, means to convey the stock from said break rolls to said hopper, means to convey the throughs to said bolting reel and means to return the tailings to a second set of break rolls.

10. In a self-contained flour mill having the usual break section and bolting section and in combination, break rolls in said break section, a bolting reel in said bolting section, a screen located in the space between said sections intermediate said rolls and reel to scalp the stock coming from the break rolls, a distributing hopper extending laterally across the screen and being substantially of a length equal to the width of the screen surface, an automatic feed gate on said hopper, a trough beneath said break rolls leading to said hopper, a screw conveyer in said trough and hopper for feeding the stock from the break rolls to said screen, a conveyer beneath said break rolls extending to said reel to convey the throughs to said bolting reel, and a conveyer to return the tailings to said first set of break rolls.

[Claims 3, 4, and 6 to 8 not printed in the Gazette.]

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1,229,170. TOY PROJECTILE. OSCAR ROBERT TROJE, Ensley, Ala. Filed Mar. 27, 1917. Serial No. 157,710. (Cl. 102—26.)



1. In a toy projectile, the combination of a shell, a piston movable therein, a cap closing the discharge end of the shell and displaceable therefrom by the action of said piston, means within said shell for propelling said piston, a stem extending from said piston, a trigger within said shell movable into and out of engagement with said stem for holding and releasing said piston, and means for automatically moving said trigger to its releasing position after the projectile has traveled a predetermined distance.

4. In a toy projectile, the combination of a shell, a piston movable therein, a cap closing the discharge end of the shell and displaceable therefrom by the action of said piston, means within said shell for propelling said piston, a stem extending from said piston, a trigger within said shell movable into and out of engagement with said stem for holding and releasing said piston, means for automatically moving said trigger to its releasing position after the projectile has traveled a predetermined distance, the last named means embodying a selfexpanding member, and a trigger operating member actuated by said selfexpanding member.

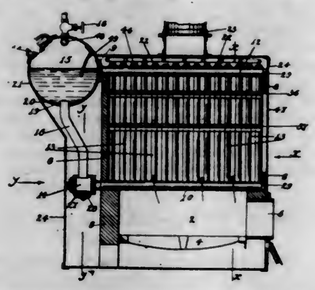
7. In a toy projectile, the combination of a shell, a piston movable therein, a cap closing the discharge end of the shell and displaceable therefrom by the action of said piston, means within said shell for propelling said piston, a stem extending from said piston, a trigger within said shell movable into and out of engagement with said stem for holding and releasing said piston, means for automatically moving said trigger to its releasing position after the projectile has traveled a predetermined distance, the last named means embodying a selfexpanding member, said trigger operating member serving to hold the selfexpanding member compressed for a predetermined length of time after the projectile starts on its path of travel, said selfexpanding member consisting of a hollow resilient ball having a vent.

9. In a toy projectile, the combination of a shell, a piston movable therein, a cap closing the discharge end of the shell and displaceable therefrom by the action of said piston, means within said shell for propelling said piston, and a trigger within said shell for holding and releasing said piston, said trigger being adapted to automatically release said piston when the projectile reaches the end of its path.

[Claims 2, 3, 5, 6, and 8 not printed in the Gazette.]

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1,229,171. WATER-TUBE BOILER. HENRY ALEXANDER TURNBULL, Surrey Hills, Victoria, Australia. Filed July 22, 1915. Serial No. 41,221. (Cl. 122—349.)

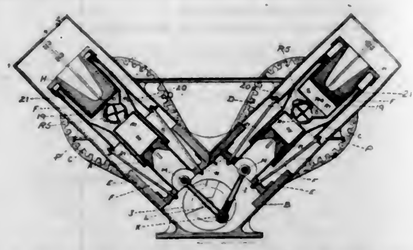


A water tube boiler, comprising an inner and outer lining, a combustion chamber in the lower portion of the inner lining, a plurality of heating elements each consisting of a plurality of vertical tubes and upper and lower headers with which the tubes are connected, the elements being arranged with their tubes in staggered relation and their headers on the same level and close together, the lower headers being arranged directly above the combustion chamber, horizontal baffle plates projecting from opposite sides of the inner lining and through which the tubes pass, a steam drum, a mud drum, and a plurality of down-comers connecting the steam and mud drums, the steam and mud drums and down-comers being outside of the inner lining.

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1,229,172. INTERNAL-COMBUSTION ENGINE. JAMES WALLACE TYGARD, Plainfield, N. J. Filed Nov. 5, 1912. Serial No. 729,576. (Cl. 123—65.)

1. In an internal combustion engine the combination of a two faced fixed piston with recessed ends of different cubical content capacity; a cylinder with heads adapted to enter the piston recesses, and slidable upon said fixed piston and guides in the frame; a power wheel and shaft connected to the cylinder; a frame carrying the shaft and the fixed piston; a chambered valve within the piston; means for operating the valve and to cause it to admit and receive the combustible charges pumped into the small recess of the piston and transfer the compressed combustible charges to the larger piston recess and allow the exit of the exhaust after ignition and expansion; and a means for igniting the compressed combustible charges as they are delivered into the expansion recess of the piston.



2. An internal combustion engine comprising a frame; a cylinder; a piston with recessed ends forming respectively a pump space and an expansion space fixed in the frame; a combined cross-head and cylinder-head attached to a cylinder connecting it to a power wheel and shaft; a power wheel and shaft mounted in the frame; a rotary inlet and outlet receiving and transfer valve transversely located in said fixed piston, and means for rotating the valve to cause it to admit the combustible fuel charge into the pump space within the piston and to receive it after compression and transfer it to the expansion space at the opposite end of the piston; an igniter adapted to ignite the combustible as it is delivered from the valve.

3. The combination in an internal combustion engine of an engine frame; a two faced piston held fixedly in the frame; a valve seat or trunnion extending transversely from its sides, and with recessed ends and ports leading from the recessed ends into the trunnion valve seat; a ported, chambered valve located in the trunnion valve seat; a cylinder with slotted sides adapted to allow its reciprocation upon and within the fixed piston; cylinder heads adapted to close the cylinder ends and form a connection by which it is caused to travel upon the fixed piston; a power-wheel and shaft carried by the frame and adapted to be rotated by the movement of the cylinder; means for rotating the valve in such manner that the cycle of action usually occurring in an internal combustion engine is so divided that suction and compression of the charge is performed in one end of the cylinder and ignition, expansion and exhaust in the other end.

4. An oil engine comprising a frame; a power-wheel, pitman and shaft carried by the frame; a cylinder structure with closed ends and slotted sides, a pitman connecting one of its ends to the power wheel; a piston with recessed ends of differing capacity, held stationary in the frame and within the cylinder transverse lugs or trunnions extending from its sides through the cylinder slots into the frame, ports leading from its recessed ends into a valve seat located in the trunnion; ports in the trunnion for the fuel inlet and exhaust outlet and cooling medium; a valve located in the valve seat and driven from the shaft; chambers or recesses in the valve, ports through the valve into the chambers adapted to co-act with the piston ports, and with fuel and exhaust ports in the valve seat, an ignition cavity located in one of the piston ports; adapted to receive the fuel under pressure through ports registering with ports in the valve and passages leading to the fuel supply; whereby charges compressed into the valve's receiving chambers in one piston end recess are transferred into the opposite piston end recess, and successively ignited and expanded as the measured fuel supply is projected into the heated compressions.

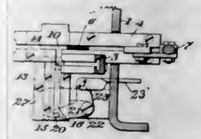
5. In an internal combustion engine the combination of a frame; a fixed piston within the frame; a compound cylinder structure movable on and co-acting with the piston; a power shaft and wheel connected to the cylinder and actuated by it; a rotatable valve located within the piston and actuated from the shaft in such manner as to conduct the fuel supply into one of the cylinder spaces and transfer it after compression into the other and opposite cylinder space and a means whereby the transferred fuel charge is ignited.

[Claims 6 to 12 not printed in the Gazette.]



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1,229,173. TACK-FEEDING MECHANISM FOR BUTTON-SETTING MACHINES. FRANK E. WARNER and WILLIAM T. LEGGETT, Waterbury, Conn., assignors to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Oct. 19, 1916. Serial No. 126,565. (Cl. 218—13.)

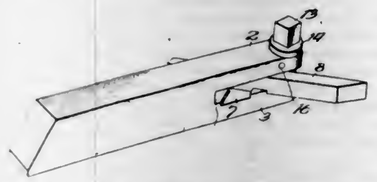


1. In a fastener-feeding mechanism for button setting machines, a fastener chute or raceway, a fastener-positioning mechanism located at the delivery end of such chute or raceway and comprising a feed trough, a reciprocating ejector therein, and a holder to which the fastener is delivered by the ejector, and means to transfer the fasteners one by one from such delivery end to the fastener-positioning mechanism, same comprising a checking-lever to arrest the fastener escaping from such delivery end and a reciprocating slide arranged crosswise of such delivery end and adapted to act upon the checking-lever to release the arrested fastener from the checking lever and transfer it to the fastener-positioning mechanism, and also to close such delivery end against the escape of other fasteners for the time being.

[Claims 2 to 5 not printed in the Gazette.]

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1,229,174. TOOL-HOLDER. WIN D. WILLIAMS, Philadelphia, Pa., assignor to The Right and Left Tool Holder Co., Philadelphia, Pa. Filed Aug. 15, 1916. Serial No. 115,029. (Cl. 29—99.)



1. A tool holder having spaced portions, the opposing faces of which constitute smooth tool clamping faces, one of said faces having diagonal tool receiving channels intersecting intermediate their ends, and a clamping bolt fitted through the spaced portions in the angle between the outer ends of the said channels and adjustable to draw the spaced portions into clamping engagement with a tool disposed in either channel.

2. A tool holder having spaced portions the opposing faces of which constitute tool clamping faces, one of said faces having diagonal intersecting tool receiving channels, a clamping bolt rotatably fitted through one of the said portions and otherwise held against movement relative thereto, the said bolt being adjustably threaded into the other said portion.

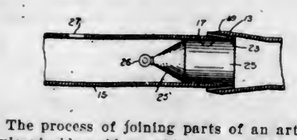
3. A tool holder having spaced portions the opposing faces of which constitute tool clamping faces, one of said portions having a threaded opening and the other portion having a cylindrical opening, a clamping bolt rotatably fitted within the opening in the second mentioned portion and adjustably threaded into the opening in the first mentioned portion, and means coacting with the bolt and with the second mentioned portion for preventing longitudinal movement of the bolt in said opening in the said second mentioned portion.

4. A tool holder having spaced portions the opposing faces of which constitute tool clamping faces, one of said portions having a threaded opening and the other portion having a cylindrical opening, a clamping bolt rotatably fitted in the opening in the second mentioned portion and adjustably threaded into the opening in the first mentioned portion, the said bolt having a circumscribing groove formed in its portion which occupies the opening in the second mentioned spaced portion, and a pin fitted through the second mentioned spaced portion and seating in said groove.

5. A tool holder having spaced portions the opposing faces of which constitute tool clamping faces, one of said portions having a threaded opening and the other portion having a cylindrical opening, a clamping bolt rotatably fitted in the opening in the second mentioned portion and adjustably threaded into the opening in the first mentioned portion, the said bolt having a circumscribing groove formed in its portion which occupies the opening in the second mentioned spaced portion, and a pin fitted through the second mentioned spaced portion and seating in said groove, the bolt being provided with a head bearing against the outer face of the second mentioned portion.

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1,229,175. MANUFACTURE OF VULCANIZED PLASTIC ARTICLES. WILLIAM G. CHRISTOPHERSON, Detroit, Mich., assignor to Morgan & Wright, a Corporation of Michigan. Continuation of application Serial No. 2,588, filed Jan. 16, 1915. This application filed Sept. 7, 1916. Serial No. 118,792. (Cl. 154—14.)



1. The process of joining parts of an article composed of vulcanizable rubber, which comprises applying layers of substantially non-vulcanizable rubber to the surfaces of the parts to be joined, vulcanizing said parts, applying to said layers a vulcanizing agent, and then causing the same to contact with each other whereby they are vulcanized together by said agent.

2. The process of making annular tubes which comprises applying to the ends of a tube of vulcanizable rubber, layers of substantially non-vulcanizable rubber, vulcanizing said tube, applying to said layers a vulcanizing agent, and uniting said ends by causing said layers to contact with each other whereby they are vulcanized together by said agent.

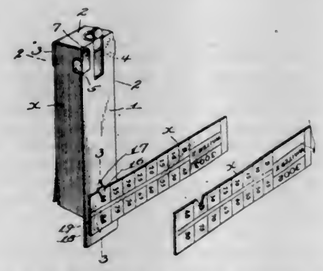
3. The process of manufacturing inner tubes consisting of forming a rubber tube with one flared end, applying to the outside thereof and the inside of the opposite end layers of substantially non-vulcanizable rubber, vulcanizing said tube, turning the vulcanized tube inside out, treating said layers with sulfur chlorid, telescoping the smaller end of the tube into the flared end to bring the treated layers into register, and pressing said layers together.

4. The process of making inner tubes consisting of forming a vulcanizable rubber tube, applying to the inner and outer surfaces respectively of opposite ends thereof a strip of substantially non-vulcanizable rubber, supplying said strips on their exposed surfaces with a protective covering, vulcanizing the tube, stripping off said covering, turning said tube inside out, treating said strips with a vulcanizing agent, and pressing said treated strips together.

5. The process of making a lapped joint of two ends of rubber tubing which consists in forming the tubing of rubber compound vulcanizable by heat, surfacing the two ends about their margins interiorly and exteriorly respectively with rubber adapted for cold curing, subject-

ing the tubing to a heated vulcanizing medium while maintaining the said ends protected from direct contact with said medium, subjecting the surfaces adapted for cold curing to the cold cure treatment and finally bringing the surfaces into contact and maintaining the contacting surfaces under pressure during vulcanization.

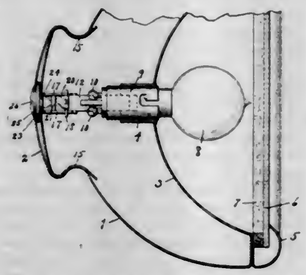
1,229,176. CHECK-NOTCHING DEVICE. CARL FEDDERN, Philadelphia, Pa., assignor to Globe Ticket Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 21, 1916. Serial No. 121,463. (Cl. 211—37.)



2. In a device of the character described, a support having a rigid tongue struck therefrom and doubled to overlie a side of the support, the free end of the tongue being pointed and the sides thereof forming sharp cutting edges, the base of the tongue forming a limiting stop to coöperate with an edge of a check or ticket inserted between the tongue and support.

[Claim 1 not printed in the Gazette.]

1,229,177. FOCUSING MECHANISM. CHARLES E. GODLEY, Detroit, Mich., assignor to Edmunds and Jones Corporation, Detroit, Mich., a Corporation of New York. Filed Dec. 30, 1916. Serial No. 129,915. (Cl. 240—44.)

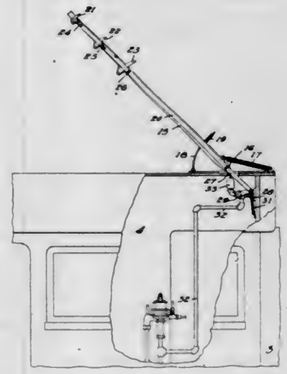


1. In a focusing device for a lamp having a casing and a reflector mounted therein, a lamp socket slidable in the reflector, a screw revolubly mounted in the casing, a spring to hold the screw in position formed from a flat piece of resilient metal bent to fit the casing and provided with a hole to permit the screw to pass through it, and means engaging the screw and socket to permit the screw to focus the lamp bulb.

7. In a focusing device, the combination of a cup-shaped lamp casing provided with a boss opposite its open end and with an interior rib at the line of connection between the boss and the main part of the casing and also provided with a circular hole in the boss, a reflector mounted in the casing and having a circular hole, a bulb-socket slidable in said hole in the reflector, a rearwardly extending bar connected to the socket and having an upturned end provided with an elongated hole, a helically twisted rod extending through said hole and adapted to move the bar back and forth when turned, a head on said screw revolubly mounted in the hole in the boss, a resilient supporting member having oppositely extending arms engaging the rib in the casing and engaging the head on the screw at the juncture of said arms to press the head into the hole in the boss and also having a bottom portion extending forwardly to form a support for the rear end of the bar, the edges of the bottom being bent up to form guides for the bar, and resilient means to hold the bar in position between said guides.

[Claims 2 to 6 not printed in the Gazette.]

1,229,178. ENGINEER'S CAB-SIGNAL. FRANK M. GREENE, Minneapolis, Minn. Filed Apr. 15, 1914. Serial No. 831,952. (Cl. 246—14.)



1. The combination, with an engineer's cab and a signaling device mounted therein, of means mounted on said cab and operatively connected with said signaling device, said means comprising members to be actuated for indicating a clear track, caution or danger, and a device extending over the track and beneath which the cab passes and capable of adjustment for actuating certain of said members for sounding the desired signal in the cab.

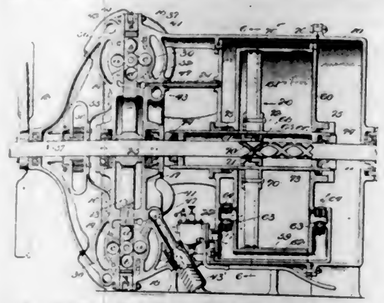
2. The combination, with a cab, of a fluid pressure operated signal therein, and a valve for controlling the passage of the fluid pressure to said signal, a sliding member projecting above said cab and operatively connected with said valve to open the same, a series of pivoted dogs connected with said member, the movement of one of said dogs opening said valve a predetermined distance to indicate caution and the other dog opening the valve a greater distance to indicate danger, and means supported above the track and extending across the same and adapted to be moved into the path of said dogs respectively for actuating the same.

3. A signaling device comprising means supported above the track and operated by the setting of a visual signal, in combination with a signaling device in the engineer's cab, and mechanism operatively connected with said signaling device and projecting above the cab to be positively actuated by said visual signal operated means, said mechanism including devices operable independently of one another for operating a predetermined signal.

4. A railway signal comprising an actuating element supported above the track for movement from an inoperative to an operative position, an engineer's signaling device mounted in the cab, a releasing mechanism connected therewith comprising members to be actuated for indicating a clear track, caution, or danger, and arranged to pass beneath said actuating element to be operated selectively through the adjustment of said actuating element for sounding the desired signal in the cab.



1,229,179. ROTARY ENGINE. ALVAH JEWEL HOWD, Nampa, Idaho, assignor of seventy one-hundredths to Edward H. Dewey and five one-hundredths to Laura E. McDermott, Nampa, Idaho. Filed Dec. 12, 1916. Serial No. 136,512. (Cl. 123—8.)



1. In a rotary engine, in combination, a casing having a plurality of separated cylinders formed in opposite walls thereof, a rotor turning therebetween, and revoluble pistons carried by said rotor successively engaging said cylinders, said pistons being mounted on fixed axes lying in the plane of the rotor.

5. In a rotary engine, in combination, a casing having a driven shaft, a rotor keyed to said shaft, a pair of spaced plates at opposite sides of said rotor normally held in fixed position, a series of separated cylinders in said plates adjacent the rotor, and piston members mounted on fixed axes carried by the rotor coacting with said cylinders first on one side and then on the other.

8. In a rotary engine, in combination, a driven shaft, a rotor keyed thereto, a pair of spaced plates adjacent the rotor, a series of cylinders in said plates, a ring surrounding said rotor and connecting the plates, passage ways from the cylinders of one plate to the cylinders of the other, spark plugs in said passage ways, and piston members carried by the rotor engaging opposite cylinders, said piston members comprising a plurality of diametrically oppositely disposed pistons revoluble about an axis lying in the plane of the rotor.

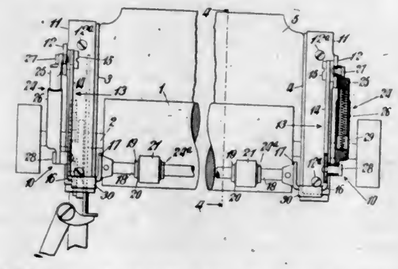
12. In a rotary engine, in combination, a driven shaft, a rotor carried thereby, revolubly mounted pistons carried by the rotor revoluble in a plane at right angles to the plane of the rotor, a plate having a series of cylinders adjacent the rotor with which the pistons are adapted to coact, and a source of compressed explosive mixture, said rotor having a series of ports corresponding to the series of cylinders adapted to permit a flow of the explosive mixture from its source to said cylinders.

16. In a rotary engine, in combination, a driven shaft, a pair of spaced plates, a series of cylinders in each of said plates, a rotor between the plates, a plurality of piston members each having a plurality of pistons revolubly mounted on said rotor adapted to turn in a plane at right angles to the plane of the rotor and successively coact with said series of cylinders, said rotor having a plurality of ports corresponding to the series of cylinders, a source of explosive mixture communicating with the cylinders, a ring surrounding said rotor and clamped between said plates having passages therein whereby opposite cylinders are placed in communication, spark plugs in said passages whereby explosions take place simultaneously in opposite cylinders, and a magneto on said driven shaft connected with said spark plugs.

[Claims 2 to 4, 6, 7, 9 to 11, 13 to 15, and 17 to 19 not printed in the Gazette.]

1,229,180. TYPE-WRITING MACHINE. ALFRED G. F. KUBOWSKI, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 2, 1916. Serial No. 129,051. (Cl. 197—135.)

1. In a typewriting machine, the combination with a platen and a paper-table, of a bail adjacent said platen, and rollers mounted on said bail, said bail hinged between the paper-table and the platen to swing from a forward horizontal position to a rearward horizontal position, and said rollers acting in the forward position of said bail to maintain a work-member smooth on said platen, and in the rear position of said bail occupying a position well in rear of said paper-table and acting to support a work-sheet in rear of the machine.



3. The combination with a pair of base-plates, of arms pivoted to said base-plates, each of said arms being bent sidewise to form a portion to engage said base-plates, each of said arms also being bent back on itself and downwardly to form an extension to clear said base-plates, a shaft mounted in said extensions connecting said arms to form a bail, and rollers mounted on said shaft.

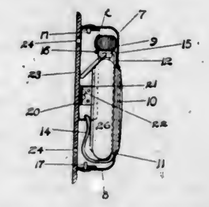
[Claim 2 not printed in the Gazette.]

1,229,181. METHOD OF TREATING THE COTTON-PLANT FOR THE RECOVERY OF ITS VALUES. MARK W. MARSDEN, Philadelphia, Pa., assignor to The Economic Power and Products Company, Philadelphia, Pa., a Corporation of Delaware. Filed Oct. 10, 1916. Serial No. 124,808. (Cl. 92—6.)

1. That improvement in the treatment of stock of the nature indicated for the recovery of its values, which consists in subjecting it as it comes from the field to the action of flowing water in order to remove the bolls and to loosen the field dirt, then subjecting it to continuous brushing and wetting to thoroughly remove the field dirt and loose coloring matter, and mechanically reducing the clean stock by first crushing and then shredding it.

[Claims 2 to 5 not printed in the Gazette.]

1,229,182. INCLUSIVE WATCH-HOLDER. ROSS M. G. PHILLIPS, West Haven, Conn., assignor of one-half to Ida Moeller Phillips, West Haven, Conn. Filed July 15, 1916. Serial No. 109,554. (Cl. 224—4.)



1. In a watch-holder, the combination with a base, of a concentric shell smaller in diameter than the said base but larger in diameter than the over-all diameter of the watch and formed with an opening for the exposure of the watch-face, yielding segments applied to the said base for centering the shell which fits over them, and means carried by the shell for engagement with the said segments, whereby the shell is removably attached to the base by its partial rotary movement with respect thereto.

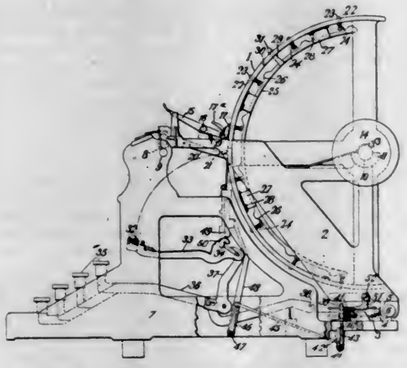
2. In a watch-holder, the combination with a base, of a concentric shell smaller in diameter than the same but

larger in diameter than the over-all diameter of the watch and provided in its face with an opening for the exposure of the watch-face, means for removably connecting the shell with the base, and means carried by the shell for engaging with the back and pendant of the watch for positioning the same.

3. In a watch-holder, the combination with a base, of a concentric shell smaller in diameter than the said base, but larger in diameter than the over-all diameter of the watch and provided in its face with an opening for the exposure of the watch-face, a pair of yielding segments applied to the base in position to have the shell fit snugly over them, locking means carried by the shell for engaging with the said segments on the partial rotation of the shell, and means carried by the shell for positioning the watch.

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1,229,183. TYPE-WRITING MACHINE. LYMAN R. ROBERTS, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Original application filed May 14, 1913, Serial No. 767,499. Divided and this application filed Feb. 21, 1916. Serial No. 79,550. (Cl. 197—144.)



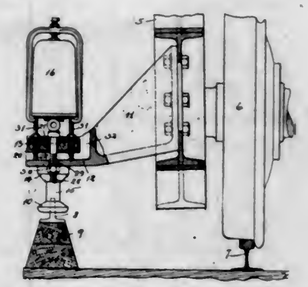
1. In a typewriting machine, the combination of a segmental platen mounted for rotation about a horizontal axis to bring the printing surface thereon above the axis to face upwardly for the assembling thereon of work-pieces, said surface being of such large curvature and area as to form a sheet-collating board or table permitting, while in said position, the assembling thereon of a main ledger or analogous sheet and other sheets or forms overlying one another in different positions on the table, printing mechanism, and line-space mechanism to rotate the platen step by step for bringing the work-sheets thereon line by line into printing position, and a carriage on which the platen is mounted for letter-feed travel in the direction of its axis.

2. In combination, a sheet-collating board curved to form a segment of sufficiently large diameter to permit the collation of sheets on all portions thereof simultaneously, the surface of said board being constructed to receive type-impressions, a set of types mounted to write upon the front of said collating board, and a letter-feeding carriage whereon said collating board is mounted to rotate about its axis.

3. In combination, a sheet-collating board curved to form a segment of sufficiently large diameter to permit the collation of sheets on all portions thereof simultaneously, the surface of said board being constructed to receive type-impressions, a set of types mounted to write upon the front of said collating board, and a letter-feeding carriage whereon said collating board is mounted to rotate about its axis, said segment being of substantially semi-cylindrical form.

[Claim 4 not printed in the Gazette.]

1,229,184. ADJUSTABLE SUPPORT FOR CONTACT-SHOES. THOMAS W. SCOTT and HAROLD V. RUDOLPH, Baltimore, Md., assignors to The American Train Control Company, Baltimore, Md., a Corporation of Maryland. Filed Nov. 23, 1916. Serial No. 133,053. (Cl. 191—49.)



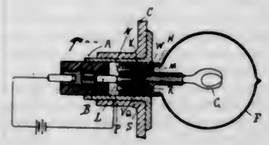
1. In an adjustable support for vehicle contact shoes, the combination with bracket means having spaced apart ledges, of a beam extending between and over said ledges; a plurality of adjusting screws at each end of the beam with their lower ends seating on said bracket-ledges whereby to move the beam vertically with respect to the ledges, and securing bolts to draw the beam and adjusting screws toward the ledges.

3. In an adjustable support for vehicle contact shoes, the combination with bracket means having spaced apart ledges, of a beam extending between and having its opposite ends projecting over said bracket-ledges; metal frames around each end of the beam and directly over said ledges; adjusting screws having threaded engagement with the metal frames whereby the latter may travel vertically thereon,—said adjusting screws having their ends seated on the ledges of the brackets; and a securing bolt for drawing the metal frame toward the bracket ledges to hold the adjusting screws seated on said ledges.

[Claims 2 and 4 not printed in the Gazette.]

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1,229,185. INCANDESCENT-ELECTRIC-LAMP PLUG. GEORGE J. STICHTENOTH, Cincinnati, Ohio, assignor of one-half to Henry Von Holle, Cheviot, Ohio. Filed Mar. 15, 1917. Serial No. 155,121. (Cl. 173—357.)



4. In an incandescent electric lamp a bulb, a filament located therein and provided with terminals at the exterior of the bulb, a plug of insulating material attached to said bulb where said filament terminals emerge, a series of four contact members carried by and insulated from each other by the insulating material of said plug, and conductors leading through the body of said plug to connect said contact members up in pairs with the terminals of said filament.

[Claims 1 to 3 not printed in the Gazette.]

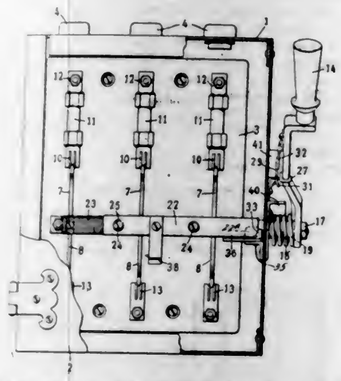
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1,229,186. SAFETY-SWITCH. ALEXANDER K. SUTHERLAND, New Britain, Conn., assignor to The Trumbull Electric Manufacturing Company, Plainville, Conn., a Corporation of Connecticut. Filed July 31, 1915. Serial No. 43,035. (Cl. 200—3.)

2. A safety switch consisting of a switch mechanism comprising a plurality of circuit controlling terminals and



a switch for opening and closing the connections for said terminals to complete or break a plurality of circuits, a single actuating device for moving the circuit controlling devices of the switch, a housing for said switch including a door therefor and means intermediate said door and housing and switch actuator for controlling the operation of the switch parts by the actuator.



3. In a device of the character described, a housing, terminals arranged therein, a switch mechanism and electrical connections controlled thereby with reference to the terminals, an actuator for the switch exteriorly arranged to the housing and normally locked against movement in one direction, locking and releasing devices intermediate the housing and switch parts for controlling the operation of the switch and interlocking devices appurtenant to the switch actuator for determining the cycle of operation thereof and of the switch and all controlled by the locking and releasing devices of the housing and its door.

7. In a device of the character described, a casing, a knife switch mounted therein and comprising a series of pivoted blades united by a common cross-bar, terminal connections for each set of blades, an actuator bar loosely connected with the common cross-bar of said blades, an actuating lever exteriorly mounted with reference to the casing and connected with the loosely connected actuator bar, a spring for normally holding said actuator and connected parts in predetermined position, a stop limiting the movement thereof under spring tension, interlocking parts permitting a movement of the actuator in one direction only under tension of the spring and by manual operation, a lock for the actuator bar normally preventing movement thereof, means for releasing said lock and means for compelling a predetermined cycle of operation of the actuator both under manual and automatic spring operations.

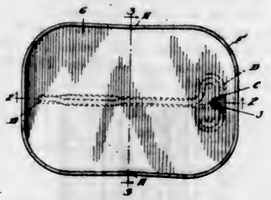
8. In a device of the character described embodying a housing having a door and a switch mechanism arranged therein, an actuating lever arranged exteriorly to the housing and connected for moving and controlling the position of the switch mechanism of interlocking members upon the door and switch mechanism for interiorly locking said door in closed postion during certain positioning of the switch mechanisms and an interlock between said door and switch mechanism preventing operation of the switch by its actuator except in predetermined manner and only when said door is in closed position.

9. In a device of the character described embodying a housing having a door and a switch mechanism arranged therein, an actuating lever arranged exteriorly to the housing for controlling and defining the position of the switch mechanism, of interlocking members one upon the door and one upon the switch mechanism for interiorly locking said door in closed position during certain positioning of the switch mechanisms and an interlock between said door and switch mechanism preventing operation of the switch through its actuator except when said door is in closed position, and a controlling gate for the actuator and a follower traversing said gate and mounted on the actuator whereby said actuator must be moved in a predetermined cycle of operation whether normally moved or moved by the spring-actuating means.

[Claims 1, 4 to 6, and 10 not printed in the Gazette.]

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1,229,187. CAN-LABELING. WILLIAM E. TAYLOR, East Orange, N. J., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed June 2, 1913. Serial No. 771,156. (Cl. 220—92.)

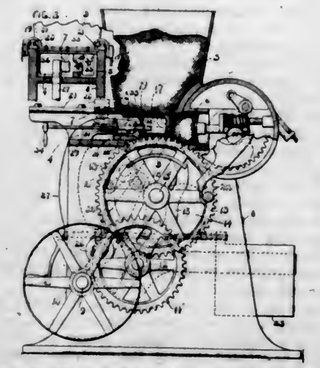


1. The combination with a can having a countersunk head, and an upstanding bendable seam around said head by which seam the can body and said head are united, of a resilient sheet metal label plate independent of said head and conforming to the countersunk portion thereof, and removably held in place by opposite sides of the said upstanding seam which are bent toward each other over the edges of the label plate, the edges of said plate being resiliently braced outward against the base of said seam.

2. The combination with a key-opening can having a countersunk head, and an upstanding bendable seam around said head by which seam the can body and said head are united, of a resilient sheet metal label plate independent of said head, removably held in place by opposite sides of the said upstanding seam which are bent toward each other over the edges of the label plate, the edges of said plate being resiliently braced outward against the base of said seam; the head being formed with a depressed recess, and a removable can-opening key held in said recess under the label plate.

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1,229,188. DOUGH-DIVIDING MACHINE. PAUL S. WARD, Cincinnati, Ohio. Filed June 26, 1912. Serial No. 705,907. (Cl. 107—15.)



1. In a machine of the character described, a plunger formed in separate parts, adjustable means for locking the parts together and operating means for the plunger projecting between the separate parts after they are locked together.

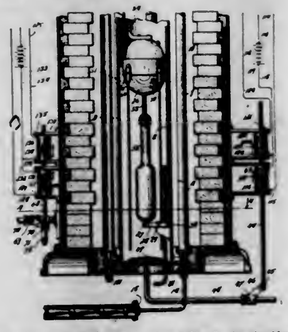
2. In a machine of the character described, an operating lever, a plunger formed in two separate parts, and

means comprising a lock bar for locking the parts together in different relative positions, the lever being adapted to engage the plunger between said separate parts to operatively connect the plunger and the lever.

3. In a machine of the character described, a reciprocating plunger formed in two parts, positively actuated means for reciprocating the plunger, and means for locking the parts of the plunger together in different relative positions and for thereby varying the throw of the plunger without varying the forward limit of its motion.

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1,229,189. APPARATUS FOR REFINING LIQUIDS AND GASES. JOHN N. WINGETT, Denver, Colo., assignor to Warren A. Haggott, trustee, Denver, Colo. Original application filed Apr. 23, 1915, Serial No. 23,321. Divided and this application filed June 21, 1915. Serial No. 35,236. (Cl. 196—25.)



1. Apparatus of the class described, including a retort provided with a treatment chamber, a hydrometer therein, an outlet conduit connected with the treatment chamber for drawing off the heavier oils, a valve therein normally closed, and an operative connection between the hydrometer and the valve for automatically controlling the latter as the gravity of the oil fluctuates in the treatment chamber.

2. Apparatus of the class described, including a retort provided with a treatment chamber, a hydrometer therein, an outlet conduit connected with the treatment chamber for drawing off the heavier oils, a valve therein normally closed; an operative connection between the hydrometer and the valve for automatically controlling the latter as the gravity of the oil fluctuates in the treatment chamber, said means including an electromagnet device, a circuit in which said device is located, a lever connected with the hydrometer, and a circuit-make-and-break device coöperating with said lever.

3. Apparatus of the class described including a retort provided with a centrally located treatment chamber surrounded by a combustion chamber, means for feeding the material to be treated through the combustion chamber to the treatment chamber, a hydrometer within the treatment chamber, a conduit connected with the bottom of the treatment chamber for drawing off the heavy oil product, a valve in said conduit, and an operative connection between the hydrometer and the valve for automatically controlling the latter as the gravity of the oil fluctuates in the treatment chamber.

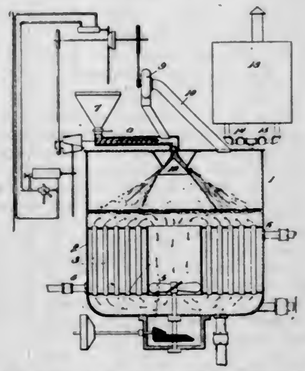
4. Apparatus of the class described including a retort provided with a centrally located treatment chamber surrounded by a combustion chamber, means for feeding the material to be treated through the combustion chamber to the treatment chamber, a hydrometer within the treatment chamber, a conduit connected with the bottom of the treatment chamber for drawing off the heavy oil product, a valve in said conduit, an operative connection between the hydrometer and the valve for automatically controlling the latter as the gravity of the oil fluctuates in the treatment chamber, said connection including a lever having one arm connected in operative relation with the hydrometer, an electromagnet device, a circuit in which the device is located, and a circuit-make-and-break device cooperating with the other arm of the lever.

5. Apparatus of the class described comprising a retort, a treatment chamber therein, a conduit connected with the lower part of the treatment chamber for drawing off heavy oils, a valve in said conduit, means for controlling said valve, including a hydrometer located within the treatment chamber, a lever having one arm connected in operative relation with said chamber, electromagnet devices arranged in opposing relation and connected in operative relation with the valve, and circuit-make-and-break devices coöperating with the opposite arm of the lever to alternately close the circuits of the electromagnet devices as the gravity of the oil rises and falls within the treatment chamber.

[Claims 6 to 11 not printed in the Gazette.]

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1,229,190. PROCESS OF PRECIPITATING SUGAR. ALPHONSE M. DUPERU, Oxnard, Cal. Filed May 20, 1914. Serial No. 839,839. (Cl. 127—17.)



1. The herein described process of precipitating sugar from impure aqueous solutions, consisting in circulating an aqueous solution upward through tubes and downward through a passageway arranged centrally of said tubes, and blowing finely divided lime against the columns of solution issuing upward from said tubes.

2. Apparatus for precipitating sugar from impure aqueous solutions comprising a cylindrical reaction tank, cooling means in said tank, means for circulating an impure aqueous sugar solution in said tank in such manner that the surface of the solution flows from the periphery to the center, and means for directing a stream of finely divided lime against the solution, said stream being directed downward and outward from the center of the tank.

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1,229,191. RAILWAY MAIL-CRANE. ALBERT HUPP, Washington, D. C., assignor to Hupp Automatic Mail Exchange Company, Washington, D. C., a Corporation of Delaware. Filed Oct. 29, 1913. Serial No. 798,080. (Cl. 258—23.)

1. In a mail crane, the combination of a post, spaced conical members adjustably secured thereon, a rotatable tube having its ends bearing on said members, and arms on said tube adapted to support a mail bag.

2. In a mail crane, the combination of a post, a tubular member rotatably supported thereby, bag supporting arms secured on said tubular member, a spring pressed latch extending into the said tubular member to coact with the post therein to hold the latter with said arms in position to deliver a bag, and a spring pressed member carried by one of said arms and operatively connected with said latch.



3. In a mail crane, the combination of a post, a tubular member rotatably supported thereby, bag supporting arms secured on said tubular member, a spring pressed latch coacting with said post and said tubular member to hold the latter with said arms in position to deliver a bag, and a spring pressed member mounted on one of said arms, so as to be moved by the bag when the latter is attached to the arm, and operatively connected with said latch.



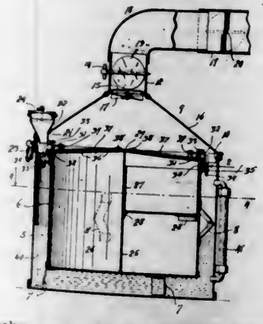
4. In a mail crane, the combination of a post, a tubular member rotatably supported thereby, bag supporting arms secured on said tubular member, a latch coacting with said post and said tubular member to hold the latter with said arms in position to deliver a bag, a member mounted on one of said arms and arranged to be moved by the bag when the latter is attached to the arm, and yieldable connecting means between said member and said latch.

5. In a mail crane, the combination of a post, a tubular member rotatably supported thereby, bag supporting arms secured on said tubular member, a latch carried by said tubular member and adapted to engage a part of said post to hold the tubular member with said arms in position to deliver a bag, a member slidably mounted on one of said arms and arranged to be moved by the bag when the latter is attached to the arm, and a spring coacting with said member and said latch to hold the latch in engagement with the post when a bag is attached to the arms and adapted to restore said member and release the latch when the bag is delivered.

[Claims 6 to 10 not printed in the Gazette.]

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1,229,192. COOKER. HELEN O. LARSON, Cheyenne, Wyo. Filed May 16, 1916. Serial No. 97,985. (Cl. 53—2.)



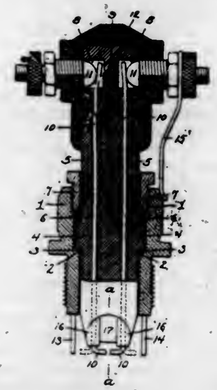
1. A cooker composed of inner and outer receptacles suitably spaced to form an interposed compartment adapted to receive water, the inner receptacle being divided into a number of compartments, a cover for the inner receptacle, the said cover having a distinct set of perforations for each compartment, pivoted plates mounted on the cover for controlling the respective sets of perforations, a cover for the outer receptacle comprising a hood terminating at its upper extremity in a reduced outlet member, a rotary fan mounted on the hood adjacent the outlet extremity thereof, and means for connecting the hood with a flue for the escape of the cooker vapors.

2. A cooker composed of inner and outer receptacles suitably spaced to form an interposed compartment adapted to receive water, a cover for the inner receptacle having sets of perforations formed therein, movable plates mounted on the cover for controlling the respective sets of perforations, a cover for the outer receptacle comprising a hood terminating at its upper extremity in a reduced outlet member, means for detachably connecting the hood with a flue for the escape of the cooker vapors and means in said outlet member for controlling the passage of vapors to the flue.

3. A cooker composed of inner and outer receptacles suitably spaced to form an interposed compartment adapted to receive water, a cover for the inner receptacle having sets of perforations formed therein, movable plates mounted on the cover for controlling the respective sets of perforations, a cover for the outer receptacle comprising a hood terminating at its upper extremity in a reduced outlet member, a movable damper within said outlet member for controlling the passage of the cooker vapors and means for detachably connecting the hood with a flue.

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1,229,193. SPARK-PLUG. MARTIN T. MINOGUE, Philadelphia, Pa. Filed May 26, 1914. Serial No. 840,973. (Cl. 123—169.)



1. The combination, in a spark plug, of an insulating body having oppositely disposed recesses therein, electrodes passing through bores in said insulating body and into said recesses, and a non-friable insulating cap which receives the outer end of the insulating body and has in its side walls threaded openings for the reception of threaded binding posts which bear upon those portions of the electrodes which project into the recesses in the insulating member.

2. The combination, in a spark plug, of an insulating body having two electrodes, and a binding post for each of said electrodes, one of said binding posts having a switch arm whereby it may be electrically connected to some part of the plug which serves as a terminal for one pole of the circuit, said plug having projecting terminals at opposite sides and said electrodes having projecting ends which can be directed toward or away from each other, so as to form a single spark between them, or so that each will form a separate spark with a plug terminal.

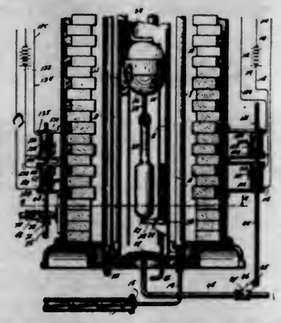
3. A spark plug having an insulating body projecting beyond the plug and into the explosion chamber, said projecting portion of the insulating body being wedge-shaped and presenting opposite sides converging toward a relatively narrow inner end, and electrodes projecting into the explosion chamber beyond the insulating body and having their terminals directed toward one another so-

means comprising a lock bar for locking the parts together in different relative positions, the lever being adapted to engage the plunger between said separate parts to operatively connect the plunger and the lever.

3. In a machine of the character described, a reciprocating plunger formed in two parts, positively actuated means for reciprocating the plunger, and means for locking the parts of the plunger together in different relative positions and for thereby varying the throw of the plunger without varying the forward limit of its motion.

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1,229,189. APPARATUS FOR REFINING LIQUIDS AND GASES. JOHN N. WINGETT, Denver, Colo., assignor to Warren A. Haggott, trustee, Denver, Colo. Original application filed Apr. 23, 1915, Serial No. 23,321. Divided and this application filed June 21, 1915. Serial No. 35,236. (Cl. 196—25.)



1. Apparatus of the class described, including a retort provided with a treatment chamber, a hydrometer therein, an outlet conduit connected with the treatment chamber for drawing off the heavier oils, a valve therein normally closed, and an operative connection between the hydrometer and the valve for automatically controlling the latter as the gravity of the oil fluctuates in the treatment chamber.

2. Apparatus of the class described, including a retort provided with a treatment chamber, a hydrometer therein, an outlet conduit connected with the treatment chamber for drawing off the heavier oils, a valve therein normally closed; an operative connection between the hydrometer and the valve for automatically controlling the latter as the gravity of the oil fluctuates in the treatment chamber, said means including an electromagnet device, a circuit in which said device is located, a lever connected with the hydrometer, and a circuit-make-and-break device coöperating with said lever.

3. Apparatus of the class described including a retort provided with a centrally located treatment chamber surrounded by a combustion chamber, means for feeding the material to be treated through the combustion chamber to the treatment chamber, a hydrometer within the treatment chamber, a conduit connected with the bottom of the treatment chamber for drawing off the heavy oil product, a valve in said conduit, and an operative connection between the hydrometer and the valve for automatically controlling the latter as the gravity of the oil fluctuates in the treatment chamber.

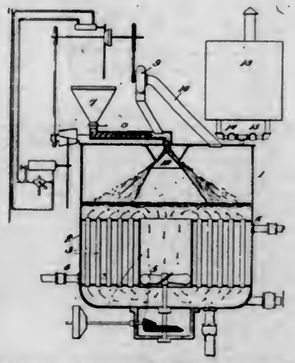
4. Apparatus of the class described including a retort provided with a centrally located treatment chamber surrounded by a combustion chamber, means for feeding the material to be treated through the combustion chamber to the treatment chamber, a hydrometer within the treatment chamber, a conduit connected with the bottom of the treatment chamber for drawing off the heavy oil product, a valve in said conduit, an operative connection between the hydrometer and the valve for automatically controlling the latter as the gravity of the oil fluctuates in the treatment chamber, said connection including a lever having one arm connected in operative relation with the hydrometer, an electromagnet device, a circuit in which the device is located, and a circuit-make-and-break device cooperating with the other arm of the lever.

5. Apparatus of the class described comprising a retort, a treatment chamber therein, a conduit connected with the lower part of the treatment chamber for drawing off heavy oils, a valve in said conduit, means for controlling said valve, including a hydrometer located within the treatment chamber, a lever having one arm connected in operative relation with said chamber, electromagnet devices arranged in opposing relation and connected in operative relation with the valve, and circuit-make-and-break devices coöperating with the opposite arm of the lever to alternately close the circuits of the electromagnet devices as the gravity of the oil rises and falls within the treatment chamber.

[Claims 6 to 11 not printed in the Gazette.]

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1,229,190. PROCESS OF PRECIPITATING SUGAR. ALPHONSE M. DUPERU, Oxnard, Cal. Filed May 20, 1914. Serial No. 839,839. (Cl. 127—17.)



1. The herein described process of precipitating sugar from impure aqueous solutions, consisting in circulating an aqueous solution upward through tubes and downward through a passageway arranged centrally of said tubes, and blowing finely divided lime against the columns of solution issuing upward from said tubes.

2. Apparatus for precipitating sugar from impure aqueous solutions comprising a cylindrical reaction tank, cooling means in said tank, means for circulating an impure aqueous sugar solution in said tank in such manner that the surface of the solution flows from the periphery to the center, and means for directing a stream of finely divided lime against the solution, said stream being directed downward and outward from the center of the tank.

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1,229,191. RAILWAY MAIL-CRANE. ALBERT HUPP, Washington, D. C., assignor to Hupp Automatic Mail Exchange Company, Washington, D. C., a Corporation of Delaware. Filed Oct. 29, 1913. Serial No. 798,080. (Cl. 258—23.)

1. In a mail crane, the combination of a post, spaced conical members adjustably secured thereon, a rotatable tube having its ends bearing on said members, and arms on said tube adapted to support a mail bag.

2. In a mail crane, the combination of a post, a tubular member rotatably supported thereby, bag supporting arms secured on said tubular member, a spring pressed latch extending into the said tubular member to coact with the post therein to hold the latter with said arms in position to deliver a bag, and a spring pressed member carried by one of said arms and operatively connected with said latch.



3. In a mail crane, the combination of a post, a tubular member rotatably supported thereby, bag supporting arms secured on said tubular member, a spring pressed latch coacting with said post and said tubular member to hold the latter with said arms in position to deliver a bag, and a spring pressed member mounted on one of said arms, so as to be moved by the bag when the latter is attached to the arm, and operatively connected with said latch.



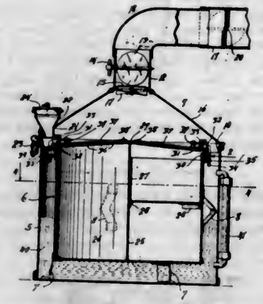
4. In a mail crane, the combination of a post, a tubular member rotatably supported thereby, bag supporting arms secured on said tubular member, a latch coacting with said post and said tubular member to hold the latter with said arms in position to deliver a bag, a member mounted on one of said arms and arranged to be moved by the bag when the latter is attached to the arm, and yieldable connecting means between said member and said latch.

5. In a mail crane, the combination of a post, a tubular member rotatably supported thereby, bag supporting arms secured on said tubular member, a latch carried by said tubular member and adapted to engage a part of said post to hold the tubular member with said arms in position to deliver a bag, a member slidably mounted on one of said arms and arranged to be moved by the bag when the latter is attached to the arm, and a spring coacting with said member and said latch to hold the latch in engagement with the post when a bag is attached to the arms and adapted to restore said member and release the latch when the bag is delivered.

[Claims 6 to 10 not printed in the Gazette.]

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1,229,192. COOKER. HELEN O. LARSON, Cheyenne, Wyo. Filed May 16, 1916. Serial No. 97,985. (Cl. 53—2.)



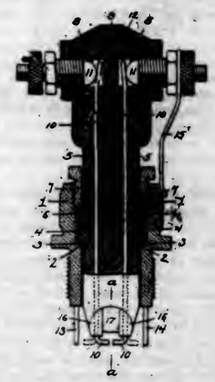
1. A cooker composed of inner and outer receptacles suitably spaced to form an interposed compartment adapted to receive water, the inner receptacle being divided into a number of compartments, a cover for the inner receptacle, the said cover having a distinct set of perforations for each compartment, pivoted plates mounted on the cover for controlling the respective sets of perforations, a cover for the outer receptacle comprising a hood terminating at its upper extremity in a reduced outlet member, a rotary fan mounted on the hood adjacent the outlet extremity thereof, and means for connecting the hood with a flue for the escape of the cooker vapors.

2. A cooker composed of inner and outer receptacles suitably spaced to form an interposed compartment adapted to receive water, a cover for the inner receptacle having sets of perforations formed therein, movable plates mounted on the cover for controlling the respective sets of perforations, a cover for the outer receptacle comprising a hood terminating at its upper extremity in a reduced outlet member, means for detachably connecting the hood with a flue for the escape of the cooker vapors and means in said outlet member for controlling the passage of vapors to the flue.

3. A cooker composed of inner and outer receptacles suitably spaced to form an interposed compartment adapted to receive water, a cover for the inner receptacle having sets of perforations formed therein, movable plates mounted on the cover for controlling the respective sets of perforations, a cover for the outer receptacle comprising a hood terminating at its upper extremity in a reduced outlet member, a movable damper within said outlet member for controlling the passage of the cooker vapors and means for detachably connecting the hood with a flue.

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1,229,193. SPARK-PLUG. MARTIN T. MINOGUE, Philadelphia, Pa. Filed May 26, 1914. Serial No. 840,973. (Cl. 123—169.)



1. The combination, in a spark plug, of an insulating body having oppositely disposed recesses therein, electrodes passing through bores in said insulating body and into said recesses, and a non-friable insulating cap which receives the outer end of the insulating body and has in its side walls threaded openings for the reception of threaded binding posts which bear upon those portions of the electrodes which project into the recesses in the insulating member.

2. The combination, in a spark plug, of an insulating body having two electrodes, and a binding post for each of said electrodes, one of said binding posts having a switch arm whereby it may be electrically connected to some part of the plug which serves as a terminal for one pole of the circuit, said plug having projecting terminals at opposite sides and said electrodes having projecting ends which can be directed toward or away from each other, so as to form a single spark between them, or so that each will form a separate spark with a plug terminal.

3. A spark plug having an insulating body projecting beyond the plug and into the explosion chamber, said projecting portion of the insulating body being wedge-shaped and presenting opposite sides converging toward a relatively narrow inner end, and electrodes projecting into the explosion chamber beyond the insulating body and having their terminals directed toward one another so

as to form the spark inwardly beyond but in line with the narrow end of the wedge.

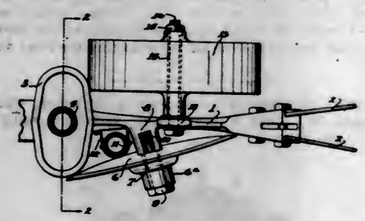
4. A spark plug having an insulating body, projecting beyond the same and into the explosion chamber, said projecting portion being wedge-shaped in cross section and having its narrowest portion at the end of the insulator, said wedge-shaped portion comprising opposite sides, and an intervening portion presenting a sharper wedge.

5. A spark plug having that end which projects into the explosion chamber with wedge-shaped side members and a smaller wedge-shaped central member, and electrodes extending farther into the explosion chamber than said side members and terminating beyond said central member.

[Claims 6 and 7 not printed in the Gazette.]

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**1,229,194. FURROW-OPENER FOR SEEDING-MACHINES.** CHARLES E. PATRIC, Springfield, Ohio. Filed Aug. 9, 1915. Serial No. 44,493. (Cl. 111—80.)



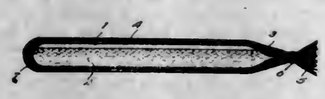
1. In a device of the character described, a support, a furrow opening shoe connected with said support, and a furrow opening disk journaled on said support, said shoe and disk being arranged in different planes relatively to the line of travel so as to open two separate furrows, said disk being arranged to open a furrow of greater depth than said shoe.

2. In a device of the character described, a support, a furrow opening shoe arranged along the bottom of said support, a furrow opening disk journaled at the side of said support, the arrangement being such that said shoe and disk will open two separate furrows, said disk being arranged to open a furrow of greater depth than said shoe, a seed conduit at the rear end of said shoe, and a fertilizer conduit associated with said disk.

3. In a device of the character described, a support, two separate furrow opening members connected with said support, the furrow opening portions of said members being located in different planes relatively to the line of travel so as to open two distinct furrows, one of said members being arranged to open a furrow of greater depth than the other, and means for feeding seed into one of the said furrows and fertilizer into the other.

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**1,229,195. SURGICAL SWAB.** THOMAS P. HAMILTON, Chicago, Ill., assignor to Bauer & Black, Chicago, Ill., a Corporation of Illinois. Filed Sept. 9, 1916. Serial No. 119,190. (Cl. 128—28.)



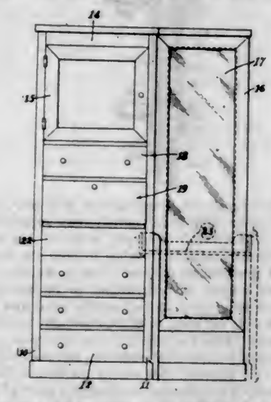
1. A surgical swab comprising an elongated friable liquid container, and a tubular circumferentially continuous textile sheath fabricated to receive and snugly inclose said container, said sheath extending beyond one end of the container to form a brush.

2. A surgical swab comprising an elongated friable liquid container, a tubular circumferentially continuous textile sheath fabricated to receive and snugly inclose said container, said sheath extending beyond one end of the container and raveled to form a brush.

3. A surgical swab comprising an elongated friable liquid container, a tubular textile sheath fabricated to receive and snugly inclose said container, said sheath extending beyond one end of the container and raveled to form a brush, the opposite end of the sheath being sealed and the whole sheath, except the brush, being impregnated with a liquid resistant material.

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**1,229,196. COMBINATION DRESSING-TABLE AND CHIFFONNIER.** LOUIS KREUTER, Los Angeles, Cal. Filed Sept. 11, 1916. Serial No. 119,584. (Cl. 45—5.)

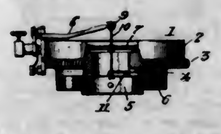


1. An article of furniture comprising a cabinet frame of the chiffonnier type, a full length mirror extending sidewise from the frame in line with the back, a dressing table slidingly mounted in the frame to pull out in front of the mirror, said dressing table being more or less walled all the way around so as to hold the toilet articles, and the space below the extended dressing table being clear to give an unobstructed view of the lower part of the mirror, and a writing desk slidingly mounted in the cabinet frame at a higher level than the dressing table and to pull out forwardly at right angles to the dressing table so that both may be extended for use at once; the remainder of the cabinet frame being devoted to drawers, wardrobe space, and the like.

2. An article of furniture, comprising a cabinet frame of the chiffonnier type, a full length mirror extending sidewise from the frame in line with the back, and a dressing table slidingly mounted in the frame to pull out in front of the mirror, said dressing table being more or less walled all the way around so as to hold the toilet articles, and the space below the extended dressing table being clear to give an unobstructed view of the lower part of the mirror.

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**1,229,197. SOUND-BOX FOR PHONOGRAPHS.** JOSEPH C. KULP, Linwood, N. J. Filed June 30, 1916. Serial No. 106,762. (Cl. 274—35.)



1. In a single sound box, the combination of a casing, a diaphragm mounted therein, a stylus bar oscillatably mounted on the casing and with one end extending to one side of and adjacent the diaphragm, a resilient member connected to the casing on the other side of the diaphragm, a flexible non-metallic member connecting the resilient member with the end of the stylus bar adjacent the diaphragm, said flexible member passing through and being fastened to the center of the diaphragm substantially as described.

2. In a single sound box, the combination of a casing, a diaphragm mounted therein, a stylus bar oscillatably mounted on the casing and disposed to one side of the diaphragm, a resilient member connected to the casing and disposed on the other side if the diaphragm, and a flexible means connecting the resilient member and stylus bar, said flexible means passing through, and being fastened to, the center of said diaphragm, substantially as described.

3. In a sound box, the combination of a casing, a diaphragm mounted therein, a stylus bar mounted to oscillate on the casing adjacent the diaphragm, a spring connected to the casing and disposed at the side of the diaphragm opposite to the stylus bar, and a flexible member connecting said spring and stylus bar, said flexible member passing through, and being fastened to the center of said diaphragm substantially as described.

4. In a sound box, the combination of a casing, a diaphragm mounted therein, a stylus bar mounted to oscillate on the casing, a spring bar rigidly mounted at one end on the casing, and a flexible member connecting the free end of said spring with said stylus bar, said flexible member passing through, and being fastened to, said diaphragm substantially as described.

5. In a sound box, the combination of a casing, a diaphragm mounted therein, a stylus bar mounted to oscillate on the casing, a spring bar rigidly mounted at one end on the casing, and a flexible fibrous member connecting the free end of said stylus bar with the free end of said spring bar, said flexible fibrous member passing through and being fastened to said diaphragm substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

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**1,229,198. CLASP.** TADEUSZ Z. MALLY, Chicago, Ill., assignor to George Plamondon, Wheaton, Ill.; Alfred D. Plamondon executor of said George Plamondon, deceased. Filed Apr. 7, 1913. Serial No. 759,319. (Cl. 24—248.)



1. In a clasp, the combination of a back member, of a locking member, and of a loop member by means of which said clasp members are operatively hinged together, said loop member comprising a single wire bent to form an upper, integral transverse member, a lower transverse member, which is divided between its ends into two parts, and lateral members connecting said transverse members, the parts of the lower transverse member providing the pintle for the hinge connection between the two clasp members, one of said parts including a trigger adapted to open the clasp, and a bar spaced above the lower transverse member and acting to rigidly connect said lateral members.

2. In a clasp, the combination of a back member, of a locking member, and of a loop member by means of which said clasp members are operatively hinged together, said loop member comprising a single wire bent to form an upper, integral transverse member, a lower, divided transverse member, and lateral members connecting said transverse members, the divided lower member providing the pintle for the hinge connection between the two clasp members, a bar spaced above the lower transverse member and acting to rigidly connect said lateral members, and a flexible backing strip connected at its lower end to the bottom of the back member of the clasp and being engaged at its upper end about said bar.

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**1,229,199. CLASP.** HENRY R. MATTHEI, Chicago, Ill., assignor to George Plamondon, Chicago, Ill.; Alfred D. Plamondon executor of said George Plamondon, deceased. Filed Apr. 10, 1915. Serial No. 20,537. (Cl. 24—248.)



1. In a clasp the combination of a back member provided with a shoulder, a toggle jointed latch member adapted for operative engagement with said shoulder and comprising upper and lower arms, a loop having laterally spaced side members and inwardly turned pintle members upon which the members of said clasp are hinged, the back clasp member and the upper arm of the toggle member being provided with complementary sleeves for engagement with said pintle members and said upper toggle arm being provided with shoulders located back of the side members of said loop which are adapted to be engaged by the laterally spaced side members of the loop to open the clasp.

2. In a clasp the combination of a back member provided with a shoulder, a toggle jointed latch member adapted for operative engagement with said shoulder and comprising upper and lower arms, a loop having side members and pintle members, said back clasp member and the upper arm of said toggle jointed member being provided with integral extensions bent to form complementary sleeves to receive the pintle member of said loop, the sleeve member of the upper arm of said toggle jointed latch member being provided back of the side member of said loop with laterally extending shoulders adapted for engagement with said side members, said loop having a limited inoperative movement but being adapted to be swung to bring said side members into engagement with said sleeve shoulder to open said clasp.

3. In a clasp the combination of a back member provided with a shoulder, a toggle jointed latch member adapted for operative engagement with said shoulder and comprising upper and lower arms, a loop on which said latch members are hinged, said loop providing side members and pintle members, a flexible backing member at the rear of the back member of said clasp, a plate connecting said side members of the loop and clamped upon the upper end of said flexible backing member and the lower end of said flexible backing member being brought forward and tucked under a hook forming the shoulder of said back member, said hook constituting an integral extension for the back member bent forward and back upon itself and being then clamped upon the end of the flexible backing member.

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**1,229,200. CLASP.** CLARENCE E. MEHLHOPE, HENRY R. MATTHEI, and TADEUSZ Z. MALLY, Chicago, Ill., assignors to George Plamondon, Wheaton, Ill.; Alfred D. Plamondon executor of said George Plamondon, deceased. Filed Apr. 7, 1913. Serial No. 759,323. (Cl. 24—252.)

1. In a clasp comprising a rigid shoulder-carrying back member and a toggle-jointed latch member hinged thereto,

a lever fulcrumed to swing upon an axis substantially coaxial with the axis of the hinge connecting the two clasp members, said lever having an arm constituting a trigger adapted for operative engagement with one of said clasp members to open the clasp, said lever being capable of a limited inoperative movement, and resilient means tending to force said clasp members apart.



2. In a clasp comprising a rigid lip carrying back-member, a toggle-jointed latch member and a loop providing a pintle for a hinged connection between said two clasp members, a trigger extending into the space between said back member and latch member of the clasp, said trigger member being integral with said loop and being adapted to open the clasp, and a spring coiled upon said pintle and having an end engaged against the inner face of the latch member and an end engaged against the front face of the back member.

3. In a clasp comprising a rigid lip carrying back-member, a toggle-jointed latch member and a loop providing a pintle for a hinged connection between said two clasp members, said toggle-jointed latch member comprising upper and lower arms, a trigger adapted to open the clasp extending into the space between said back member and the upper arm of said toggle-member, and being capable of limited movement between said members when the latch member is in closed position, and being made rigid with said loop, and a spring coiled upon said pintle and having an end engaged against the front face of said back member and against the rear face of said upper toggle-arm.

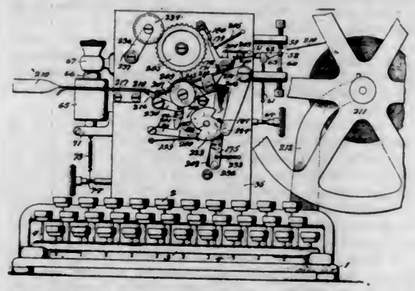
4. In a clasp comprising a rigid shoulder-carrying back member and a toggle-jointed latch member hinged thereto, the toggle-jointed latch member comprising upper and lower arms and means for hinging said arms together tending to cause them to assume a position concave toward the back member, a lever fulcrumed to swing upon an axis substantially coaxial with the axis of the hinge connecting the two clasp members, said lever having an arm cinstituting a trigger adapted for operative engagement with one of said clasp members to open the clasp, said lever being capable of a limited inoperative movement, and resilient means tending to force said two clasp members apart.

5. In a clasp comprising a rigid shoulder-carrying back member and a toggle-jointed latch member hinged thereto, the toggle-jointed latch member comprising an upper arm having an integral sleeve formed at its lower end and the ends of said sleeve being provided with converging cam surfaces, terminating in longitudinally extending shoulders and a lower arm consisting of a spring loop having a transverse end member and spaced lateral members with inwardly turned pintle parts engaging in the ends of said sleeve, a lever fulcrumed to swing upon an axis substantially coaxial with the axis of the hinge connecting the two clasp members, said lever having an arm constituting a trigger adapted for operative engagement with one of said clasp members to open the clasp, said lever being capable of a limited inoperative movement, and resilient means tending to force said clasp members apart.

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1,229,201. SELECTIVE SIGNALING APPARATUS. LOUIS MAXWELL POTTS, Baltimore, Md., assignor to Austin McLanahan, Baltimore, Md. Filed Oct. 11, 1913. Serial No. 794,633. (Cl. 178—23.)

1. Apparatus for electrical signaling, comprising a body having a natural period of motion, mechanical means to impart motion to said body, a series of movable mechanical selecting elements, and mechanical means controlled by said body to time the movement of said elements, said movement of said elements and the periodic motion of said body having a fixed phase relation.



2. Apparatus for electrical signaling, comprising a body having a natural period of motion and making a plurality of oscillations for each signal, electrical signaling means the timing of which is controlled by said body and mechanical means acting directly on said body to control the phase thereof with respect to the signaling current.

3. Apparatus for electrical signaling, comprising a spring controlled balance, and mechanical means to drive the same, in combination with means electrically operated to start said balance into motion at the commencement of a signal, and means automatically operating to positively stop and balance invariably in the same position at the end of a signal.

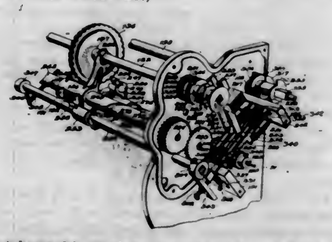
4. Apparatus for electrical signaling, comprising a spring controlled balance, and mechanical means to drive the same, in combination with mechanical means electrically operated to start said balance into motion at the commencement of a signal, and mechanical means automatically operating to positively stop said balance invariably in the same position at the end of a signal.

5. Apparatus for electrical signaling in which equal time intervals are allotted to each signal, comprising a balance and power operated escapement for imparting impulses thereto, mechanism to start said balance and stop it at the commencement and end respectively of each signal period, and each time at the same point in its travel, electrical means to operate the mechanism for starting said balance, and automatically acting mechanical means to operate the mechanism for stopping said balance.

[Claims 6 to 72 not printed in the Gazette.]

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1,229,202. TELEGRAPHIC RECEIVER. LOUIS MAXWELL POTTS, Baltimore, Md., assignor to Austin McLanahan, Baltimore, Md. Filed Jan. 8, 1914. Serial No. 811,035. (Cl. 178—23.)



1. A telegraphic receiver, comprising a type wheel shaft, a type wheel mounted on said shaft to travel longitudinally thereof and rotatable by said shaft on an axis substantially parallel to the line of printing, a second shaft, a print hammer mounted on said second shaft to travel longitudinally thereof and angularly movable thereby, and mechanism to move said type wheel and print hammer longitudinally of their respective shafts, to form the spaces between characters in words as well as between words in a line.

2. A telegraphic receiver, comprising a type wheel shaft, a type wheel mounted on said shaft to travel longitudinally thereof and rotatable by said shaft on an axis substantially parallel to the line of printing, a second shaft, a print hammer mounted on said second shaft to travel longitudinally thereof and angularly movable thereby, and mechanism to simultaneously move said type wheel and print hammer longitudinally of their respective shafts, to form the spaces between characters in words as well as between words in a line.

3. A telegraphic receiver, comprising a type wheel shaft, a type wheel mounted on said shaft to travel longitudinally thereof and rotatable by said shaft on an axis substantially parallel to the line of printing, a second shaft, a print hammer mounted on said second shaft to travel longitudinally thereof and angularly movable thereby, mechanism to move said type wheel and print hammer longitudinally of their respective shafts, and mechanism selectively controlled by the received signals and controlling the operation of said type wheel and print hammer moving mechanism, to form the spaces between characters in words as well is between words in a line.

4. A telegraphic receiver, comprising a type wheel shaft, a type wheel mounted on said shaft to travel longitudinally thereof and rotatable by said shaft on an axis substantially parallel to the line of printing, a second shaft, a print hammer mounted on said second shaft to travel longitudinally thereof and angularly movable thereby, a magnet, and means entirely mechanical and controlled by said magnet to move said type wheel and print hammer longitudinally of their respective shafts, to form the spaces between characters in words as well as between words in a line.

5. A telegraphic receiver, comprising a type wheel shaft, a type wheel mounted on said shaft to travel longitudinally thereof and rotatable by said shaft, a second shaft, a print hammer mounted on said second shaft to travel longitudinally thereof and angularly movable thereby, mechanism to move said type wheel and print hammer longitudinally of their respective shafts, to form the spaces between characters in words as well as between words in a line.

2. A telegraphic receiver, comprising a type wheel shaft, a type wheel mounted on said shaft to travel longitudinally thereof and rotatable by said shaft on an axis substantially parallel to the line of printing, a second shaft, a print hammer mounted on said second shaft to travel longitudinally thereof and angularly movable thereby, and mechanism to simultaneously move said type wheel and print hammer longitudinally of their respective shafts, to form the spaces between characters in words as well as between words in a line.

3. A telegraphic receiver, comprising a type wheel shaft, a type wheel mounted on said shaft to travel longitudinally thereof and rotatable by said shaft on an axis substantially parallel to the line of printing, a second shaft, a print hammer mounted on said second shaft to travel longitudinally thereof and angularly movable thereby, mechanism to move said type wheel and print hammer longitudinally of their respective shafts, and mechanism selectively controlled by the received signals and controlling the operation of said type wheel and print hammer moving mechanism, to form the spaces between characters in words as well is between words in a line.

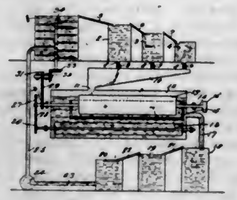
4. A telegraphic receiver, comprising a type wheel shaft, a type wheel mounted on said shaft to travel longitudinally thereof and rotatable by said shaft on an axis substantially parallel to the line of printing, a second shaft, a print hammer mounted on said second shaft to travel longitudinally thereof and angularly movable thereby, a magnet, and means entirely mechanical and controlled by said magnet to move said type wheel and print hammer longitudinally of their respective shafts, to form the spaces between characters in words as well as between words in a line.

5. A telegraphic receiver, comprising a type wheel shaft, a type wheel mounted on said shaft to travel longitudinally thereof and rotatable by said shaft, a second shaft, a print hammer mounted on said second shaft to travel longitudinally thereof and angularly movable thereby, mechanism to move said type wheel and print hammer longitudinally of their respective shafts, to form the spaces between characters in words as well as between words in a line.

[Claims 6 to 68 not printed in the Gazette.]

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1,229,203. METHOD OF PURIFYING AND SEPARATING FINELY-DIVIDED SUBSTANCES. GRAF BOTHO SCHWERIN, Frankfort-on-the-Main, Germany, assignor to Gesellschaft für Elektro-Osmose, M. B. H., Frankfort-on-the-Main, Germany, a Corporation. Filed Jan. 5, 1912. Serial No. 669,622. (Cl. 204—1.)

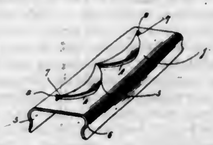


1. The process of separating finely divided substances which consists in separating a mass of substances into separate fractions, subjecting one of the said fractions to electro-osmosis, withdrawing the liquid between the electrodes of the electro-osmotic machine, and conveying the liquid so withdrawn to receptacles from which it is again conducted to said machine.

2. The process herein described, which consists in separating a mass of finely divided material into fractions in a series of receptacles, subjecting the fractions independently to electro-osmosis, conducting the weakened solution to a tank containing fresh material, and conducting the contents of the tank to said receptacles, for like treatment.

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1,229,204. WORK-HOLDER FOR HAND-EMBROIDERY. JAMES SANHAM WILSON, Covington, Ky. Filed Feb. 9, 1916. Serial No. 77,197. (Cl. 223—54.)



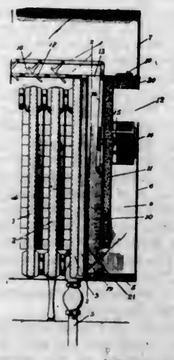
1. An embroidery frame and needle guide comprising top and bottom sections, each section substantially U-shaped in cross section, a design stamped out of the upper surface of the lower section, said top section provided with openings adapted to fit over the stamped out portions of the lower section, said sections adapted to be frictionally clamped together and have a cloth to be embroidered clamped therebetween and projecting through the opening of the top section, as and for the purpose specified.

2. A device of the class described comprising a pair of substantially U-shaped sections, one section adapted to snugly fit upon the other section, said lower section having a portion of its upper surface raised or struck up therefrom, said upper section provided with openings to receive the upstruck portion of the lower section when fitted thereon, said upstruck portion having an edge curved upwardly to define needle deflecting members, as and for the purpose specified.

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# REISSUES.

14,309. RADIATOR-CASING. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Nov. 24, 1916. Serial No. 133,265. Original No. 1,192,411, dated July 25, 1916, Serial No. 859,060, filed Aug. 28, 1914. (Cl. 236—6.)



1. A radiator casing comprising a radiator-receiving portion provided with dampers and a second portion adapted to be separated therefrom by an end section of the radiator, said second portion having a floor of insulating material and a top wall, a vertical partition of

insulating material dividing the space therein into a down-passage and an up-passage open to each other through said partition near said floor, one of said passages being in heat-interchanging relation with the end of the radiator and opening through said top wall, and the other passage being insulated from the radiator and opening through the end wall of the casing below said top wall to receive air from the room, and a thermostat located near the opening of the down-passage and operatively connected with said casing dampers.

2. A radiator casing comprising a radiator-receiving portion provided with dampers and a portion adapted to be separated therefrom by an end section of the radiator, means preventing conduction of heat from the walls of one casing portion to the other, said second portion having a floor of insulating material and a top wall, a vertical partition of insulating material dividing the space therein into a down-passage and an up-passage open to each other through said partition near said floor, one of said passages being in heat-interchanging relation with the end of the radiator and opening through said top wall, and the other passage being insulated from the radiator and opening through the end wall of the casing below said top wall to receive air from the room, and a thermostat located near the opening of the down-passage and operatively connected with said casing dampers.

3. A radiator casing comprising a radiator-receiving portion provided with dampers and a second portion adapted to be separated therefrom by the end section of the radiator, a hood surmounting both portions, heat insulating means preventing conduction of heat from the walls of one casing portion to the other, said second portion having a floor and a top wall both of insulating material, a vertical partition of insulating material dividing the space therein into a down-passage and an up-passage open to each other through said partition near the said floor, the up-passage being in heat-interchanging relation with said end section of the radiator and open to the hood through said top wall, and the down-passage being insulated from said radiator section and open below said top wall to receive air from the room, and a thermostat located in said down-passage near said opening and having connections with the casing dampers.

4. A radiator casing provided with dampers, a radiator therein having an end wall adapted to divide the casing into a radiator-receiving section and an extension thereof and provided with an inlet connection underneath the radiator, heat insulating means preventing conduction of heat from the walls of one casing section to the other, said extension section having a heat insulating floor located above and beyond said connection and a top wall, a vertical partition of heat insulating material dividing the extension space into a down-passage and an up-passage open to each other through said partition near the said floor, one of said passages opening through said top wall and in heat-interchanging relation with said radiator wall and the other insulated from the latter and open below said top wall to receive air from the room, and a thermostat located in said down-passage near said opening and having connections with the casing dampers.

5. A radiator casing provided with a hood and divided into a radiator-receiving chamber having openings into the hood, dampers controlling said openings, and an air circulating conduit open to said hood and having one portion in heat-interchanging relation with the first-named chamber and another portion out of heat-interchanging relation with said first-named chamber for receiving air from the room, and a thermostatic device in the inlet end of the last-named portion of said conduit for controlling said dampers by variation of temperature of air entering from the room.

6. In a device of the character described, the combination of a radiator, a casing for said radiator, dampers controlling the circulation of air through said casing, an air-passage having upper and lower openings and in heat-interchanging relation with said radiator, a conduit connected with the said lower opening, said conduit opening near its top exterior to said casing, means insulating said conduit from the heating influence of said radiator and said passage, and thermosensitive means located in said conduit and operatively connected to said dampers.

7. In a device of the character described, the combination of a radiator, a casing for said radiator, dampers controlling the circulation of air through said casing, an air passage closed against air circulation between said casing and passage, said passage having upper and lower openings and being in heat-interchanging relation with said radiator, a conduit connected with the said lower opening, said conduit opening near its top exterior to said casing, means insulating said conduit from the heating influence of said radiator and said passage and comprising a heat-insulating partition intermediate said passage and conduit and means preventing the conduction of heat between the walls of said casing and said conduit, and thermosensitive means located in said conduit and operatively connected to said dampers.

8. In a device of the character described, the combination of a radiator, a casing for said radiator, dampers controlling the circulation of air through said casing, an air-passage having upper and lower openings and in heat-interchanging relation with said radiator, a conduit connected with the said lower opening, said conduit opening near its top exterior to said casing, means insulating said conduit from the heating influence of said radiator and said passage and comprising a heat-insulating partition intermediate said passage and conduit, and thermosensitive means located in said conduit and operatively connected to said dampers.

9. In a device of the character described, the combination of a radiator, a casing for said radiator, dampers controlling the circulation of air through said casing, an air passage having upper and lower openings and in heat-interchanging relation with said radiator, a conduit connected with the said lower opening, said conduit opening near its top exterior to said casing, means insulating said conduit from the heating influence of said radiator and said passage and comprising means preventing the conduction of heat between the walls of said casing and said conduit, and thermosensitive means located in said conduit and operatively connected to said dampers.

10. In a device of the character described, the combination of a radiator, a casing for said radiator, dampers controlling the circulation of air through said casing, an air passage having upper and lower openings and in heat-interchanging relation with said radiator, a conduit connected with the said lower opening, said conduit opening near its top exterior to said casing, means insulating said conduit from the heating influence of said radiator and said passage and comprising a heat-insulating partition intermediate said passage and conduit and means preventing the conduction of heat between the walls of said casing and said conduit, and thermosensitive means located in said conduit and operatively connected to said dampers.

11. In a device of the character described, the combination of a radiator, a casing for said radiator, dampers controlling the circulation of air through said casing, an air passage having upper and lower openings and so positioned that the heating effect of said radiator induces an air circulation therethrough, a conduit connected with said lower opening, means insulating said conduit from the heating influence of said radiator and said passage, and thermosensitive means located in said conduit and operatively connected to said dampers.

12. In combination with a source of heat and means for controlling the same, thermosensitive means operatively connected with said controlling means, a conduit within which a temperature-responsive element of said thermosensitive means is disposed and within which it is concealed, said conduit having an inlet positioned to receive air at a level intermediate the upper and lower strata of air within the room with which it communicates, and means for inducing a circulation of air through said conduit and over said temperature-responsive element, said conduit being insulated from all other heating influences than the air circulating therethrough.

13. In combination with a source of heat and means for controlling the same, thermosensitive means operatively connected with said controlling means, a conduit within which a temperature-responsive element of said thermosensitive means is disposed and within which it is concealed, said conduit having an inlet positioned to receive air at a level intermediate the upper and lower strata of air within the room with which it communicates, and means for inducing a circulation of air through said conduit and over said temperature-responsive element, said temperature-responsive element being insulated from all other heating influences than the air circulating thereover.

14. A radiator casing comprising a radiator-receiving portion provided with dampers and a portion adapted to be separated therefrom by an end section of the radiator, means preventing conduction of heat from the walls of one casing portion to the other, an air passage in said second portion in heat-interchanging relation with the radiator, said passage having an outlet opening adjacent its upper end, a conduit communicating with the lower end of said passage, and a thermostat in said conduit operatively connected with said casing dampers.

15. A radiator casing comprising a radiator-receiving portion provided with dampers and a portion adapted to be separated therefrom by an end section of the radiator, an air passage in said second portion in heat-interchanging relation with the radiator, said passage having an outlet opening adjacent its upper end, a conduit in said second portion separated from said passage by a partition of heat-insulating material, said conduit communicating with the lower end of said passage, and a thermostat in said conduit operatively connected with said casing dampers.

16. A radiator casing comprising a radiator-receiving portion provided with dampers and a portion adapted to be separated therefrom by an end section of the radiator, an air passage in said second portion in heat-interchanging relation with the radiator, said passage having an outlet opening adjacent its upper end, a conduit communicating with the lower end of said passage, and a thermostat in said conduit operatively connected with said casing dampers and insulated from the heating influence of said passage and radiator.

17. A radiator casing comprising a radiator-receiving portion provided with dampers and a portion adapted to be separated therefrom by an end section of the radiator, means preventing conduction of heat from the walls of one casing portion to the other, an air passage in said second portion in heat-interchanging relation with the radiator, said passage having an outlet opening adjacent its upper end, a conduit in said second portion separated from said passage by a partition of heat-insulating material, said conduit communicating with the lower end of said passage, and a thermostat in said conduit operatively connected with said casing dampers.

18. In a device of the character described, the combination of a radiator, a casing for said radiator, dampers controlling the circulation of air through said casing, an extension of said casing provided with a vertical partition of insulating material dividing said extension into a passage in heat-interchanging relation with said radiator and a conduit communicating with said passage adjacent its lower end, said passage having an outlet opening adjacent its upper end and said conduit having an inlet opening adjacent its upper end, and thermosensitive means located in said conduit and operatively connected to said dampers.

19. In a device of the character described, the combination of a radiator, a casing for said radiator, dampers controlling the circulation of air through said casing, an extension of said casing provided with a vertical partition of insulating material dividing said extension into a passage in heat-interchanging relation with said radiator and a conduit communicating with said passage adjacent its lower end, said passage having an outlet opening adjacent its upper end and said conduit having an inlet opening adjacent its upper end, means preventing the conduction of heat between the walls of said casing and said extension, a floor of insulating material in said extension, and thermosensitive means located in said conduit and operatively connected to said dampers.

20. In a device of the character described, the combination of a radiator, a casing for said radiator, dampers controlling the circulation of air through said casing, an extension of said casing provided with a vertical partition of insulating material dividing said extension into a passage in heat-interchanging relation with said radiator and a conduit communicating with said passage adjacent its lower end, said passage having an outlet opening adjacent its upper end and said conduit having an inlet opening adjacent its upper end, means preventing the conduction of heat between the walls of said casing and said extension, a floor of insulating material in said extension, and thermosensitive means located in said conduit and operatively connected to said dampers.

21. In a device of the character described, the combination of a radiator, a casing for said radiator, dampers controlling the circulation of air through said casing, an extension of said casing provided with a vertical partition dividing said extension into a passage in heat-interchanging relation with said radiator and a conduit communicating with said passage adjacent its lower end, said passage having an outlet opening adjacent its upper end and said conduit having an inlet opening adjacent its upper end, means preventing the conduction of heat between the walls of said casing and said extension, and thermosensitive means located in said conduit and operatively connected to said dampers.

22. In a device of the character described, the combination of a radiator, a casing for said radiator, dampers controlling the circulation of air through said casing, an extension of said casing provided with a vertical partition dividing said extension into a passage in heat-interchanging relation with said radiator and a conduit communicating with said passage adjacent its lower end, said passage having an outlet opening adjacent its upper end and said conduit having an inlet opening adjacent its upper end, thermosensitive means located in said conduit and operatively connected to said dampers, and means insulating said thermosensitive means from the heating influence of said radiator and said passage.

23. In a device of the character described, the combination of a radiator, a casing for said radiator, dampers controlling the circulation of air through said casing, an upwardly directed air passage having an outlet adjacent its upper end and in heat-interchanging relation with said radiator, a downwardly directed conduit with which said passage is in communication, said conduit having an inlet adjacent its upper end, means insulating said conduit from the heating influence of said radiator and said passage, and thermosensitive means located in said conduit and operatively connected to said dampers.

24. In a device of the character described, the combination of a radiator, a casing for said radiator, dampers controlling the circulation of air through said casing, an upwardly directed air passage having an outlet adjacent its upper end and in heat-interchanging relation with said radiator, a downwardly directed conduit with which said passage is in communication, said conduit having an inlet adjacent its upper end and being in non-heat-interchanging relation with said radiator and said passage, and thermosensitive means located in said conduit and operatively connected to said dampers.

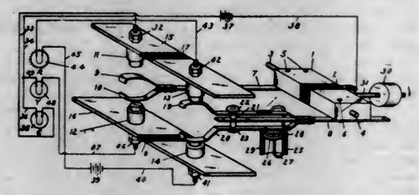
25. In a device of the character described, the combination of a radiator, a casing for said radiator, dampers controlling the circulation of air through said casing, an air passage having upper and lower openings and so positioned that the heating effect of said radiator induces an air circulation therethrough, a conduit connected with said lower opening, said conduit opening near its top exterior to said casing, means insulating said conduit from the heating influence of said radiator and said passage, and thermosensitive means located in said conduit and operatively connected to said dampers.

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14,310. CIRCUIT-CONTROLLER. WINTHROP K. HOWE, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed June 9, 1916. Serial No. 102,781. Original No. 1,180,720, dated Apr. 25, 1916, Serial No. 802,854, filed Nov. 25, 1913. (Cl. 175—281.)

1. In a circuit controller, in combination: an operating member having two extreme positions and an intermediate position; circuit controlling means governed by

said member and operated when said member is in either of said extreme positions; other circuit controlling means governed by said member and operated when said member is in its intermediate position; and means for preventing the operation of said other circuit controlling means when said member moves continuously from either extreme position to the other extreme position.



2. In a circuit controller, in combination: an operating member having an intermediate position and two extreme positions; a circuit controlling device; means governed by said member for preventing the closing of said circuit controlling device in the intermediate position of said member when said member moves continuously from either extreme position to the other extreme position.

3. In a circuit controller, in combination: an operating member having an intermediate position and two extreme positions; circuit controlling means governed by said member; means for coöperating with said circuit controlling means when said member is in its intermediate position; said circuit controlling means having a circuit closing condition in which it can coöperate with said last mentioned means and an ineffective condition, said circuit controlling means having a tendency to assume its circuit closing condition and being automatically governed by said member to assume its ineffective condition when said member is in either of its extreme positions; and means for preventing said circuit controlling means from changing from its ineffective condition to its circuit closing condition until after an elapse of time greater than the approximate time required for said member to move from either extreme position to the other extreme position.

4. A circuit controller comprising main and auxiliary conductive circuit controls, and an opposed pair of relatively fixed circuit closing contacts for each control, the main control being adapted to engage both of its contacts when the controller is in normal mid-position, said main control also being capable of contraction to then be narrower than the space between its two contacts, combined with means temporarily preventing full expansion of the contracted main control to its opposed contacts while the auxiliary control is passing from either one to the other of its opposed contacts.

5. A circuit controller comprising main and auxiliary conductive circuit controls, and an opposed pair of relatively fixed circuit closing contacts for each control, the main control being adapted to engage both of its contacts when the controller is in normal mid-position, said main control also being capable of contraction by pressure against either one of its opposed contacts to then be narrower than the space between its two contacts, combined with means temporarily preventing full expansion of the contracted main control to its opposed contacts while the auxiliary control is passing from either one to the other of its opposed contacts.

6. A circuit controller comprising main and auxiliary conductive circuit controls, and an opposed pair of relatively fixed circuit closing contacts for each control, the main control being adapted to engage both of its contacts when the controller is in normal mid-position at which time the auxiliary control is disengaged from both of its contacts, said main control also being capable of contraction to then be narrower than the space between its two contacts, combined with means temporarily preventing full expansion of the contracted main control to its opposed contacts while the auxiliary control is passing from either one to the other of its opposed contacts.

7. A circuit controller comprising a movable support, main and auxiliary conductive circuit controls held to said support, and an opposed pair of relatively fixed circuit closing contacts for each control, the main control being adapted to engage both of its contacts when the controller is in normal mid-position, said main control also being capable of contraction to then be narrower than the space between its two contacts, combined with means temporarily preventing full expansion of the contracted main control to its opposed contacts while the auxiliary control moved by the support is passing from either one to the other of its opposed contacts.

8. A circuit controller comprising a movable support, main and auxiliary conductive circuit controls held to said support, and an opposed pair of relatively fixed circuit closing contacts for each control, the main control being adapted to engage both of its contacts when the controller is in normal mid-position, and means balancing the controller in mid-position, said main control also being capable of contraction to then be narrower than the space between its two contacts, combined with means temporarily preventing full expansion of the contracted main control of its opposed contacts while the auxiliary control moved by its support is passing from either one to the other of its opposed contacts.

9. A circuit controller comprising a movable support including two relatively insulated parts, main and auxiliary conductive circuit controls held one to each of said parts, and an opposed pair of relatively fixed circuit closing contacts for each control, the main control being adapted to engage both of its contacts when the controller is in normal mid-position, said main control also being capable of contraction to then be narrower than the space between its two contacts, combined with means temporarily preventing full expansion of the contracted main control to its opposed contacts while the auxiliary control moved by the support is passing from either one to the other of its opposed contacts.

10. A circuit controller comprising main and auxiliary conductive circuit controls, and an opposed pair of relatively fixed circuit closing contacts for each control, the contacts at each side or face of the two controls being respectively held by two binding posts respectively fastened to relatively insulated portions of one fixed support, the main control being adapted to engage both of its contacts when the controller is in normal mid-position, said main control also being capable of contraction to then be narrower than the space between its two contacts, combined with means temporarily preventing full expansion of the contracted main control to its opposed contacts while the auxiliary control is passing from either one to the other of its opposed contacts.

11. In a circuit controller, the main control comprising two resilient fingers, combined with two opposed relatively fixed circuit closing contacts normally engaged by the fingers which are contractible toward each other by pressure against either opposed contact, and means carried by the contracted fingers and at times retarding or temporarily preventing their expansion to both contacts.

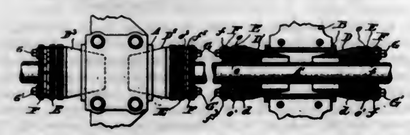
12. In a circuit controller, the main control comprising two resilient fingers, combined with two opposed relatively fixed circuit closing contacts normally engaged by the fingers which are contractible toward each other by pressure against either opposed contact, and a dash-pot comprising a vented cylinder held to one finger and a piston held to the other finger and movable in the cylinder thereby retarding expansion of the contracted fingers to both contacts.

13. In a circuit controller: two fixed contacts; electrical conducting resilient contacts electrically connected together positioned between the two fixed contacts and bridging the same; means for causing one of the resilient contacts at times to break contact with one of the fixed contacts, and at times to cause the other resilient contact to break contact with the other fixed contact; and means for preventing the resilient contacts from bridging the fixed contacts during a continuous movement of the resilient contacts from the position in which one resilient contact breaks contact with one fixed contact to a position in which the other resilient contact makes contact with the other fixed contact.

14. A circuit controller comprising main and auxiliary conductive circuit controls, and an opposed pair of relatively fixed circuit closing contacts for each control, the main control being adapted to engage both of its contacts when the controller is in normal mid-position, said main control also being capable of contraction to then be narrower than the space between its two contacts, combined with means temporarily preventing full expansion of the contracted main control to its opposed contacts while the auxiliary control is passing from either one to the other of its opposed contacts, three signal devices, a source of electric energy, means completing two respective circuits from said energy source through the auxiliary control and its two respective contacts to two of said signal devices for independently operating said devices, a second source of electric energy, and means completing a third circuit from said second energy source through the main control and its engaged contacts to the third signal device for independently operating it, substantially as herein set forth.

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14,311. TOOL FOR ALINING AND FINISHING SHAFT-BEARINGS AND THE LIKE. ALBERT A. MARTELL, Woonsocket, R. I., assignor to The Taft-Peirce Manufacturing Company, Woonsocket, R. I., a Corporation of Rhode Island. Filed Mar. 13, 1917. Serial No. 154,634. Original No. 1,135,460, dated Apr. 13, 1915, Serial No. 788,536, filed Sept. 8, 1913. (Cl. 77—55.)



1. A temporary bearing comprising an exteriorly conical bushing, a sleeve rotatably mounted within the conical bushing, and a second sleeve rotatably mounted within the first sleeve and having a bore eccentrically disposed with relation to the exterior of said second sleeve.

2. A device of the character described comprising a shaft adapted to carry a tool; a plurality of temporary bearings for said shaft, each comprising an exteriorly conical bushing, a sleeve rotatably mounted within the conical bushing, and a second sleeve rotatably mounted within the first sleeve and made with a shaft receiving bore eccentrically disposed with relation to the exterior of said second sleeve.

3. A device of the character described comprising a shaft adapted to carry a tool; a plurality of temporary bearings for said shaft, each comprising an exteriorly conical bushing, a sleeve rotatably mounted within the conical bushing, and a second sleeve rotatably mounted within the first sleeve and made with a shaft receiving bore eccentrically disposed with relation to the exterior of said second sleeve, and a tool for said shaft for operating upon the bearing to be finished.

4. A device of the character described comprising a shaft adapted to carry a tool; a plurality of temporary bearings for said shaft, each comprising an exteriorly conical bushing, a sleeve rotatably mounted within the conical bushing, and a second sleeve rotatably mounted within the first sleeve and made with a shaft receiving bore eccentrically disposed with relation to the exterior of said second sleeve and means for fastening the two sleeves together and to the bushing in their adjusted relative positions.

5. A device of the character described comprising a shaft adapted to carry a tool; a plurality of temporary bearings for said shaft, each comprising an exteriorly conical bushing, a sleeve rotatably mounted within the conical bushing, and a second sleeve rotatably mounted within the first sleeve and made with a shaft receiving bore eccentrically disposed with relation to the exterior of said second sleeve, said exterior being eccentric to the exterior of the first sleeve.

6. A temporary bearing comprising a member adapted for connection to a permanent bearing; a second member rotatably mounted in the first member; and a third member rotatably mounted in the second member and having a bore eccentrically disposed with relation to the exterior of said third member.

7. A device for alining and finishing shaft bearings and the like comprising, in combination, temporary bearing supports adapted to be inserted within the permanent bearings to be alined, a shaft, shaft bearings for said shaft and carried by said supports, means for adjusting said shaft bearings to adjust the axis of said shaft to a position coincident with the axis to which the permanent bearings are to be alined, and a forming tool carried by said shaft for alining said permanent bearings concentric with said axis.

8. In a device for alining and finishing shaft bearings and the like, the combination of a shaft bearing support constructed to be carried by permanent bearings that are to be alined, a forming tool shaft, a shaft bearing for said forming tool shaft, adjustable means carried by said support and adjustable to adjust the axis of the shaft to any point within a predetermined area within said permanent bearings, and a forming tool to shape the said permanent bearings concentric with the axis of the said shaft.

9. A temporary bearing comprising a member adapted for connection to a permanent bearing, a second member adjustably mounted relatively to the first member, and a third member adjustably mounted relatively to said second member, a forming tool shaft carried by said third member, and a forming tool upon said forming tool shaft.

10. A temporary bearing comprising an exteriorly conical bushing, a sleeve rotatably mounted within said conical bushing and having an opening eccentric to the opening in the conical bushing, and a second sleeve rotatably mounted within the opening in the first sleeve and having a bore eccentrically disposed with relation to the exterior of the second sleeve.

11. A device of the character described, comprising a shaft adapted to carry a tool, a plurality of temporary bearings for said shaft, each comprising an exteriorly conical bushing, a sleeve rotatably mounted within said conical bushing and being provided with an opening eccentric to the exterior of the sleeve, a second sleeve rotatably mounted within said first sleeve and having a shaft receiving bore eccentrically disposed with relation to the exterior of the second sleeve.

12. As an article of manufacture, a temporary bearing comprising a member adapted to be inserted in a permanent bearing, a work shaft bearing, and means carried by the member to permit the work shaft bearing to be adjusted relatively to the axis of the said member.

13. As an article of manufacture, a temporary bearing comprising a conical bushing adapted to be inserted in a permanent bearing, a work shaft bearing, and adjustable devices operatively connecting the bushing and the shaft bearing to permit of adjustment of the shaft bearing relatively to the conical bushing.

14. The method of alining permanent bearings, which method comprises extending the shaft of a forming tool through the permanent bearings to be alined; then temporarily rigidly supporting the said shaft by and within said permanent bearings; adjusting said shaft to render the axis of said shaft coincident with a predetermined mathematical line; and then operating the shaft to cause the forming tool to shape the interior of said bearings concentric with the said predetermined mathematical line.

15. The method of alining bearings, which method comprises extending the shaft of a forming tool through the bearings to be alined; then temporarily rigidly supporting the said shaft by and within the said bearings; and then operating the shaft to cause the forming tool to

shape the interior of said bearings concentric with the axis of the shaft.

16. The method of alining and finishing permanent shaft bearings, which comprises determining a line with which the permanent bearings are to be alined; supporting a reamer carrying shaft within the permanent bearings; alining the axis of the reamer carrying shaft with the said line; and then operating the reamer to ream the permanent bearings to aline the axis of the reamed bearings with the said line.

17. The method of alining and finishing permanent shaft bearings and the like, which comprises supporting a reamer carrying shaft by mounting temporary bearings within the permanent bearings; alining the axis of the reamer shaft with the line to which the axis of the permanent bearings are to be alined; operating the reamer shaft to seat the reamer in one of the permanent bearings; removing the temporary bearing from the permanent bearing being reamed after the reamer is securely seated therein and then continuing the reaming operation to completion; and then replacing the temporary bearing in the reamed bearing and proceeding with each bearing in like manner until all of the permanent bearings have been reamed.

18. The method of finishing and alining permanent shaft bearings, which comprises securing a plurality of adjustable temporary bearings within the permanent bearings; alining the axis of the temporary bearings with a line with which the permanent bearings are to be alined; mounting a reamer carrying shaft within the temporary bearings and operating the reamer carrying shaft to securely seat the reamer in a permanent bearing; then removing the temporary bearing from the permanent bearing being reamed; and then replacing the temparary bearing in the reamed bearing and proceeding with each bearing in like manner until all of the permanent bearings have been reamed.

19. The method of alining and reaming a plurality of permanent bearings, which consists in supporting a reamer shaft within the said permanent bearings; adjusting the reamer shaft so that the axis of the reamer shaft is coincident with the axis to which the permanent bearings are to be alined; and then operating the reamer shaft to form the permanent bearings concentric with the predetermined axis.

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14,312. DEVICE FOR CONNECTING OUTSIDE WIRES TO BUILDINGS. PHILIP C. RAGOTZKY, Philadelphia, Pa. Filed Mar. 7, 1917. Serial No. 153,215. Original No. 1,213,011, dated Jan. 16, 1917, Serial No. 107,741, filed July 6, 1916. (Cl. 173—28.)




1. A device for attachment to buildings to permit of the direct connection thereto of exterior wires, comprising a circumferentially grooved knob having one end face extending at an oblique angle to the plane of extension of the circular groove and provided with an orifice extending between the end faces at an oblique angle to the plane of extension of the groove.

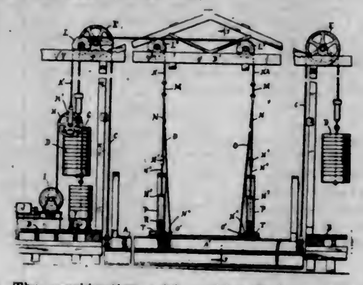
2. A device for attachment to buildings to permit of the direct connection thereto of exterior wires, comprising a circumferentially grooved knob having parallel end faces extending at an oblique angle to the plane of extension of the circular groove and provided with an orifice extending between, and substantially perpendicularly to, both end faces.

3. A device for attachment to buildings to permit of the direct connection thereto of exterior wires, comprising a circumferentially grooved knob having one end face extending at an oblique angle to the longitudinal direction of extension of the circular grooved face and provided with an orifice extending between the end faces, and perpendicular to the obliquely extending end face.

4. A device for attachment to buildings to permit of the direct connection thereto of exterior wires, comprising an integral circumferentially grooved knob having its end faces extending in parallel planes at oblique angles to the direction of longitudinal extension of the circular grooved face and provided with an orifice extending between said end faces at right angles thereto for the reception of a securing screw.

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14,313. FERRY-BRIDGE. FRANCIS L. DU BOSQUE, Great Neck, N. Y., assignor to The J. Edward Ogden Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 2, 1915. Serial No. 59,265. Original No. 1,118,113, dated Nov. 24, 1914, Serial No. 808,693, filed Dec. 26, 1913. (Cl. 14—71.)



1. The combination with a hinged ferry bridge, of means for mooring a ferryboat thereto and for equalizing the height of the bridge and boat, comprising a lifting element having one branch connected both to said bridge and to said boat to exert a horizontal force on the boat tending to hold the latter against the bridge and a lifting force on the bridge, and a second branch connected directly to the boat and adapted to exert a lifting force on the latter.

2. The combination with a hinged ferry bridge, of means for mooring a ferryboat thereto and for manipulating the bridge, comprising a pulley secured to the free end of the bridge, a stationary superstructure, a pulley mounted thereon, a counter-balancing weight, and a flexible element running over the last mentioned pulley and having one end connected to said counter weight and the other end depending from said overhead structure and bifurcated, with one branch of said bifurcated end passing under the first mentioned pulley and secured to the boat and the other branch attached directly to the boat.

3. The combination with a hinged ferry bridge, of means for mooring a ferryboat thereto and for manipulating the bridge, comprising a stationary superstructure, a pulley mounted thereon, a flexible element running over said pulley, a counter-weight, means adjustably connecting one end of said flexible elements to said counter-weight, the other end of said flexible element being bifurcated, and means for operatively connecting the one branch of said bifurcated end both to said bridge and to a boat moored thereto and the second branch of said bifurcated end to said boat only, so that the first mentioned branch may exert a horizontal force on the boat tending to hold the latter against the bridge and exert a lifting force on the bridge, and said second branch of said bifurcated end may exert a lifting force on the latter when the boat is held against the bridge.

4. The combination with a hinged ferry bridge, of means for mooring a ferry boat thereto and for manipulating the bridge, comprising a stationary superstructure, a pulley mounted thereon, a flexible element running over said pulley, a counter-weight, means adjustably connecting one end of said flexible element to said counter-weight, the other end of said flexible element being bifurcated, means for operatively connecting one branch of said bifurcated end both to said bridge and to a boat moored thereto and the second branch of said bifurcated end to said boat only, so that the first mentioned branch may exert a horizontal force on the boat tending to hold the latter against the bridge and exert a lifting force on the bridge while the other branch may exert a lifting force on the boat and means for connecting the first mentioned branch to the bridge to exert a lifting force on the latter, and when neither branch of said bifurcated element is connected to the boat.

5. The combination with a hinged ferry bridge device of means for mooring a ferry boat thereto and for equalizing the height of the bridge and boat, comprising a power applying mechanism including a bifurcated lifting element, means for connecting one branch of said bifurcated element both to said bridge and to said boat and the other branch to the boat only, so that the first mentioned branch may simultaneously exert a horizontal force on the boat tending to hold the latter against the bridge and a lifting force on the bridge, while the other branch may exert a lifting force only on the boat, and means for connecting the first mentioned branch of said bifurcated element to said bridge to exert a lifting force on the latter when neither branch of said bifurcated element is connected to said boat.

6. The combination with a hinged ferry bridge of means for mooring a ferryboat thereto and for manipulating the bridge, comprising parts secured to said bridge and bearing on a boat moored thereto and thereby preventing said bridge from moving to too low a level relative to said boat, a stationary superstructure, a pulley mounted thereon, a flexible element running over said pulley, a counter-weight, means adjustably connecting one end of said flexible element to said counter-weight, the other end of said flexible element being bifurcated, means for connecting one branch of said bifurcated end both to said bridge and to a boat moored thereto and for connecting the other branch to the boat only, so that the first mentioned branch may simultaneously exert a horizontal force on the boat tending to hold the latter against the bridge, and a lifting force on the bridge while the other branch may exert a lifting force on the boat and means for connecting the first mentioned branch to the bridge to exert a lifting force on the latter, and when neither branch of said bifurcated element is connected to the boat.

7. The combination with a hinged ferry bridge, of means for mooring a ferryboat thereto comprising a lifting element connected to said bridge and to said boat to exert a horizontal force on the boat tending to hold the latter against the bridge and a lifting force on the bridge.

8. The combination with a hinged ferry bridge, of means for mooring a ferryboat thereto and for manipulating the bridge, comprising a pulley on the bridge, a stationary superstructure, a pulley mounted thereon, a counterweight, and a flexible element running over said superstructure pulley and having one end connected to said counterweight and the other end depending from said overhead structure under the bridge pulley and connected to said boat to exert a horizontal force on the boat tending to hold the latter against the bridge and a lifting force on the bridge.

9. The combination with a hinged ferry bridge, of means for connecting a ferryboat therewith and for manipulating the bridge, comprising a stationary superstructure, a pulley mounted thereon, a counterweight, and a flexible element running over said pulley and having one end connected to said counterweight and the other end depending from said overhead structure and connected to the boat to exert a lifting force thereon.

10. The combination with a hinged ferry bridge, of means for connecting a ferryboat therewith and for manipulating the bridge, comprising a stationary superstructure, a pulley mounted thereon, a counter weight, and a flexible element running over said pulley and having one end connected to said counter weight and the other end depending from said overhead structure and connected to the boat to exert a lifting force thereon, said bridge being provided with overhanging projections whereby it is lifted with the boat, when the boat is lifted by said flexible element.

11. The combination with a hinged ferry bridge, of means for mooring a ferryboat thereto and for manipulating the bridge comprising a pulley secured to the bridge near its free end, and a lifting cable depending from an overhead support, extending under the pulley and adapted to be secured to a boat, whereby said cable exerts a lifting force on the bridge and tends to hold the boat against the bridge.

12. The combination with a hinged ferry bridge and a counter weight for supporting a portion of the weight of the bridge, of means for mooring a ferryboat thereto and for manipulating the bridge comprising a pulley secured to the bridge near its free end, and a lifting cable depending from an overhead support, extending under the pulley and adapted to be secured to a boat, whereby said cable exerts a lifting force on the bridge and tends to hold the boat against the bridge.

13. The combination with a hinged ferry bridge and means for supporting a portion of the weight of the bridge, of means for mooring a ferryboat thereto comprising a lifting element connected to said bridge and to said boat to exert a horizontal force on the boat tending to hold the latter against the bridge and a lifting force on the bridge.

14. The combination with a hinged ferry bridge of means for mooring a ferryboat thereto and for manipulating the bridge, comprising parts secured to said bridge and bearing on a boat moored thereto and thereby preventing said bridge from moving to too low a level relative to said boat, a stationary superstructure, a pulley mounted thereon, a flexible element running over said pulley, a counter-weight, means adjustably connecting one end of said flexible element to said counter-weight, means for connecting the flexible element both to said bridge and to a boat moored thereto so that the connection may simultaneously exert a horizontal force on both the bridge and boat tending to hold the latter against the bridge, and a lifting force on the boat.

15. The combination with a ferry bridge, of means for mooring a ferry boat thereto comprising a pulley in a vertical plane on said bridge, a cable passing around a portion of said pulley, and a counterweight, one end of said cable being connected with the counter-weight and means for connecting the other end of said cable with a ferry boat, whereby the ferry boat is yieldingly drawn toward said bridge.

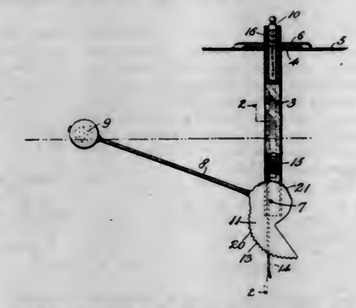
16. The combination with a ferry bridge, of means for mooring a ferry boat thereto comprising a pulley on said bridge, a cable passing around a portion of said pulley, and a counter-weight, one end of said cable being connected with the counterweight, means for connecting the other end of said cable with a ferry boat, whereby the ferry boat is yieldingly drawn toward said bridge, and means for controlling said counterweight when it is desired to disconnect said cable from the ferry boat.

17. The combination with a hinged ferry bridge, of means for mooring a ferry boat thereto and for manipulating the bridge, comprising a stationary superstructure, a pulley mounted thereon, a flexible element running over said pulley, a counter-weight, means adjustably connecting one end of said flexible element to said counter-weight, the other end of said flexible element being bifurcated, means for operatively connecting one branch of said bifurcated end both to said bridge and to a boat moored thereto and the second branch of said bifurcated end to said boat only, so that the first mentioned branch may exert a horizontal force on the boat tending to hold the latter against the bridge and exert a lifting force on the bridge and said second branch may exert a lifting force on the boat when the latter is held against the bridge, a support for said counter-weight, and means for adjusting the connection between said counterweight and said flexible element whereby said counterweight may be moved off said support and have all of its weight supported through said

flexible element, or may be permitted to remain on said support and have a portion only of its weight supported by said flexible element.

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14,314. LIQUID-GAGE. HARRISON D. FLEGEL, Racine, Wis., assignor, by mesne assignments, to The Akron-Selle Co., Akron, Ohio, a Corporation of Ohio. Filed Aug. 28, 1914. Serial No. 859,128. Original No. 1,067,477, dated July 15, 1913, Serial No. 752,932, filed Mar. 8, 1913. (Cl. 73—82.)



1. A gage for liquid containing tanks, comprising a reciprocable member, means normally maintaining said member at one limit of its movement, a float, and means connected to said float and arranged to limit the movement of said receprocable member away from its normal position to an amount depending upon the amount of liquid in said tank.

2. A gage for liquid containing tanks, comprising an upright member, a device slidable along said member, means normally maintaining said member at one point of its movement, a float, and means attached to said float and projecting into the path of movement of said device and arranged to limit the movement of the same away from its normal position to an amount depending upon the amount of liquid in the tank.

3. A gage for liquid containing tanks, comprising a float within the tank, means for guiding the float in its movements, a manually operable feeler member projecting through the tank wall, means normally maintaining said feeler member in a definite position, and means for arresting the movement of said feeler member away from said normal position at a point dependent upon the position of the float, whereby the liquid content of the tank may be indicated.

4. In a gage for liquid containing tanks, in combination, a supporting member, a float carried thereby, a feeler member movable along said supporting member and comprising manually operable means projecting outside of said tank whereby said feeler member may be shifted along said supporting member, means normally maintaining said feeler member in a definite zero position, and means for arresting the movement of said feeler member away from said zero position at a point dependent upon the position of the float.

5. In a gage for liquid containing tanks, in combination, a float adapted to follow the liquid level, a movable member supported independently of said float, manually operated means connected to said member and projecting outside of said tank and adapted to shift said movable member along a definite path, and means governed by said float for rendering the length of said path proportional to the amount of liquid in the tank, said member being normally maintained out of contact with said float governing means.

6. A gage for liquid containing tanks, comprising a substantially vertical guide member, a float, a manually operated feeler member supported for movement independently of said float and parallel to said guide member, and means connected to said float for restraining the movement of said feeler member in proportion to the amount of liquid in the tank, said feeler member being normally maintained out of contact with said means.

7. In a gage for liquid containing tanks, a manually reciprocable member, a float, and means connected to said float for limiting the movement of said member according to the amount of liquid in the tank, said member being normally maintained out of contact with said means.

8. A liquid-gage attachable to a tank to depend therein, and which comprises a vertical shell, a scale-slide guided in the shell through the upper end thereof, a plate in pivotal connection with the lower portion of said shell and having an upper circular ratchet-toothed edge and a similarly toothed lower eccentric edge with which said slide is alternately engageable, a rod extending from the plate between said edges thereof, and a float attached to the rod.

9. A liquid-gage attachable to a tank to depend therein, and which comprises a vertical shell longitudinally slotted at its lower end, a scale-slide guided in the shell through the upper end of the same and also longitudinally slotted at its lower end, a pivotally hung plate engaging the shell and slide slots and which has an upper circular ratchet-toothed edge and a similarly toothed lower eccentric edge with which said slide is alternately engageable, a rod extending from the plate between said edges thereof and a float attached to the rod.

10. A liquid-gage attachable to a tank and which comprises a vertical shell provided with an upper flange constituting a closure for an opening in a tank through which the shell depends, a scale-slide guided in said shell through the upper end of the same, a plate in pivotal connection with the lower portion of the aforesaid shell and having an upper circular ratchet-toothed edge and a similarly toothed lower eccentric edge with which said slide is alternately engageable, a rod extending from the plate between said edges thereof and a float attached to the rod.

11. A liquid-gage attachable to a tank to depend therein and which comprises a vertical shell having an upper stuffing-box end, a spring-controlled scale-slide guided in the shell through said upper end thereof, a plate in pivotal connection with the lower portion of said shell and having an upper circular ratchet-toothed edge and a similarly toothed lower eccentric edge with which said slide is alternately engageable, a rod extending from the plate between said edges thereof and a float attached to the rod.

12. A liquid-gage attachable to a tank and which comprises a vertical shell having an upper stuffing-box end and a lower longitudinal slot, a scale-rod guided in the shell through said upper end thereof and having a lower offset longitudinally slotted plate-extension, a pivotally hung plate engaging the slots of the shell and plate extension of the scale-rod, an upper circular edge of the pivotal plate and a lower eccentric edge of the same being ratchet-toothed for alternate engagement of said slide, a rod extending from said plate between the toothed edges thereof, and a float attached to the rod.



# DESIGNS.

50,860. LIGHTING-FIXTURE. HARRY C. ADAM, St. Louis, Mo. Filed Apr. 12, 1917. Serial No. 161,658. Term of patent 14 years.



The design for a lighting fixture, as shown.

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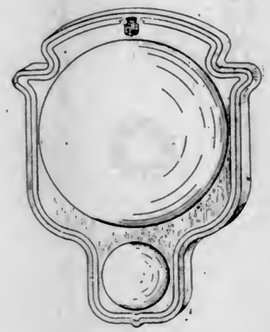
50,861. LIGHTING-FIXTURE. HARRY C. ADAM, St. Louis, Mo. Filed Apr. 12, 1917. Serial No. 161,659. Term of patent 14 years.



The design for a lighting fixture, as shown.

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50,862. LAMP-DOOR. WILLIAM F. ANKLAM, Detroit, Mich., assignor to C. M. Hall Lamp Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 18, 1917. Serial No. 163,089. Term of patent 14 years.



The ornamental design for a lamp door, substantially as shown.

50,863. LAMP-DOOR. WILLIAM F. ANKLAM, Detroit, Mich., assignor to C. M. Hall Lamp Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 18, 1917. Serial No. 163,090. Term of patent 14 years.



The ornamental design for a lamp door, substantially as shown.

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50,864. WATER-HEATER SHELL. CHARLES A. BACKSTROM, Crafton, Pa., assignor to Pittsburg Water Heater Company, a Corporation of New Jersey. Filed Mar. 28, 1917. Serial No. 157,022. Term of patent 14 years.



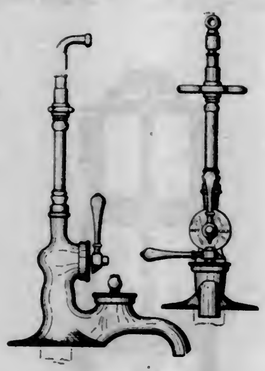
The ornamental design for a water heater shell, substantially as shown and described.

50,865. LIGHTING-FIXTURE. FREDERICK C. BAKER, Portland, Oreg. Filed Apr. 30, 1917. Serial No. 165,625. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

50,866. COMBINED FIXTURE AND VALVE. ANDREW J. BARR, Mansfield, Ohio, assignor of one-half to Herman E. Homberger, Mansfield, Ohio. Filed July 31, 1916. Serial No. 112,473. Term of patent 3½ years.



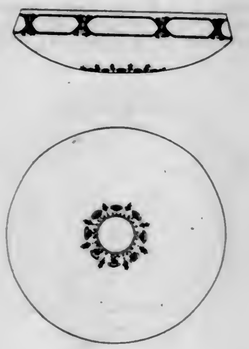
The ornamental design for a combined fixture and valve as shown.

50,867. WALL-BRACKET FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J. Filed Apr. 25, 1917. Serial No. 164,571. Term of patent 7 years.



The ornamental design for a wall bracket for lighting fixtures, as shown.

50,868. GLASS BOWL FOR A LIGHTING-FIXTURE. FRANK S. CROWELL, Toledo, Ohio, assignor to The Western Gas Fixture Co., Toledo, Ohio, a Corporation of Ohio. Filed Apr. 30, 1917. Serial No. 165,623. Term of patent 3½ years.



The ornamental design for a glass bowl for a lighting fixture, as shown.

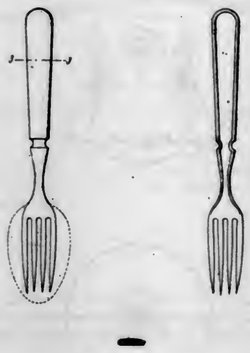


50,869. LIGHTING-FIXTURE ARM. FRANK S. CROWELL, Toledo, Ohio, assignor to The Western Gas Fixture Co., Toledo, Ohio, a Corporation of Ohio. Filed Apr. 30, 1917. Serial No. 165,624. Term of patent 3½ years.



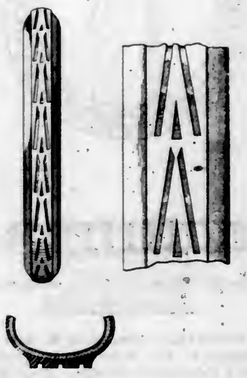
The ornamental design for a lighting fixture arm, as shown.

50,870. HANDLE FOR A FORK OR SIMILAR ARTICLE. GEORGE E. CURTISS, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 23, 1916. Serial No. 86,320. Term of patent 14 years.



The ornamental design for a handle for a fork or similar article.

50,871. TREAD FOR AUTOMOBILE-TIRES. FRANK T. FAIRCLOTH, San Francisco, Cal. Filed Apr. 16, 1917. Serial No. 162,571. Term of patent 14 years.



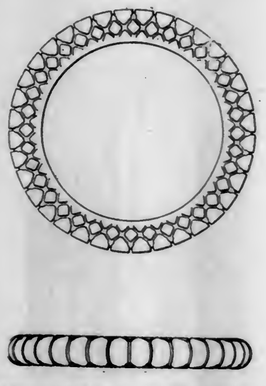
The ornamental design for a tread for automobile tires as shown.

50,872. BODY FOR AN OVAL BRACKET-BACK. CHARLES ERNEST JONES, Chicago, Ill. Filed Apr. 23, 1917. Serial No. 164,062. Term of patent 3½ years.



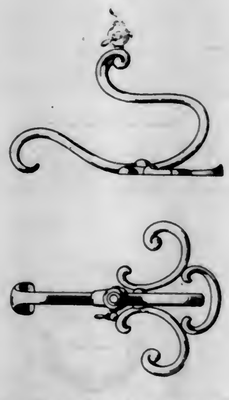
The ornamental design for a body for an oval bracket back, as shown.

50,873. TIRE. EUGENE A. JONES, Los Angeles, Cal. Filed Apr. 28, 1917. Serial No. 165,280. Term of patent 14 years.



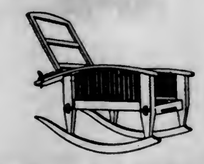
The ornamental design for a tire, as shown.

50,874. LAMP-STAND. FREDERICK K. MAERZ, Cleveland, Ohio, assignor to The Scott-Ullman Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 26, 1917. Serial No. 157,571. Term of patent 3½ years.



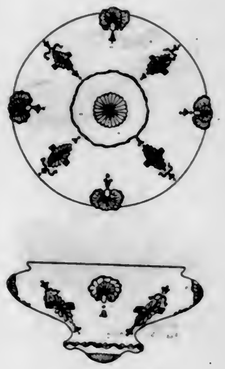
The ornamental design for a lamp stand as shown.

50,875. ROCKING-CHAIR. THOMAS J. MCCORMICK, New York, N. Y. Filed Mar. 14, 1917. Serial No. 154,879. Term of patent 14 years.



The ornamental design for a rocking chair, as shown.

50,876. GLASS BOWL FOR A LIGHTING-FIXTURE. ALFRED W. REISER, Toledo, Ohio, assignor to The Western Gas Fixture Co., Toledo, Ohio, a Corporation of Ohio. Filed Apr. 30, 1917. Serial No. 165,620. Term of patent 3½ years.



The ornamental design for a glass bowl for a lighting fixture, as shown.

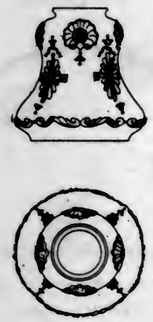
50,877. GLASS SHADE FOR ELECTRIC LIGHTS. ALFRED W. REISER, Toledo, Ohio, assignor to The Western Gas Fixture Co., Toledo, Ohio, a Corporation of Ohio. Filed Apr. 30, 1917. Serial No. 165,621. Term of patent 3½ years.



**The ornamental design for a glass shade for electric lights, as shown.**



50,878. GLASS SHADE FOR ELECTRIC LIGHTS. ALFRED W. REISER, Toledo, Ohio, assignor to The Western Gas Fixture Co., Toledo, Ohio, a Corporation of Ohio. Filed Apr. 30, 1917. Serial No. 165,622. Term of patent 3½ years.



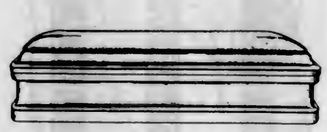
The ornamental design for a glass shade for electric lights, as shown.

50,879. PAIR OF FORCEPS. WALTER M. SHETLER, Litchfield, Nebr. Filed Apr. 11, 1916. Serial No. 90,511 Term of patent 14 years.



The ornamental design for a pair of forceps, as shown.

50,880. CASKET. CLARK L. SMITH, Spokane, Wash. Filed Feb. 19, 1917. Serial No. 149,687. Term of patent 7 years.



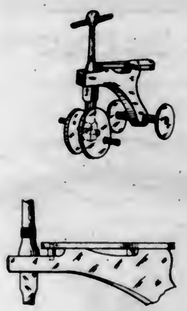
The ornamental design for a casket, substantially as shown.

50,881. TREAD FOR AUTOMOBILE-TIRES. EUGENE VON VARGYAS, Washington, D. C. Filed Jan. 9, 1917. Serial No. 141,371. Term of patent 14 years.



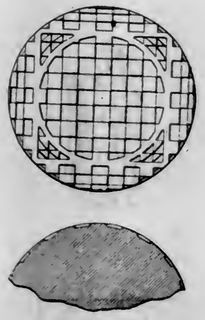
The ornamental design for the tread for automobile tires, as shown.

50,882. VELOCIPEDE FOR THE USE OF CHILDREN. HOMER W. CASE, Pittsburgh, Pa., assignor to Pittsburgh Toy Vehicle Company, Pittsburgh, Pa. Filed Jan. 16, 1917. Serial No. 142,769. Term of patent 3½ years.



The ornamental design for a velocipede for the use of children, as shown.

50,883. GOLF-BALL. JAMES PRINGLE COCHRANE, Edinburgh, Scotland. Filed Jan. 23, 1917. Serial No. 144,065. Term of patent 7 years.



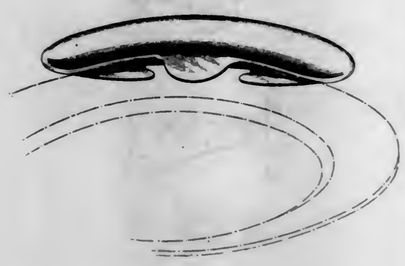
The ornamental design for a golf ball, as shown.

50,884. BUTTON, EMBLEM, OR OTHER INSIGNIA. GRACE E. FAIRCHILD, New York, N. Y. Filed Mar. 27, 1917. Serial No. 157,834. Term of patent 7 years.



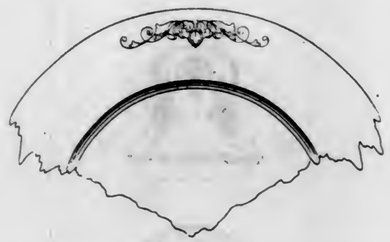

The ornamental design for a button, emblem or other insignia, as shown.

50,885. TRAY. ISIDOR FREID, Brooklyn, N. Y. Filed Mar. 20, 1917. Serial No. 156,209. Term of patent 7 years.



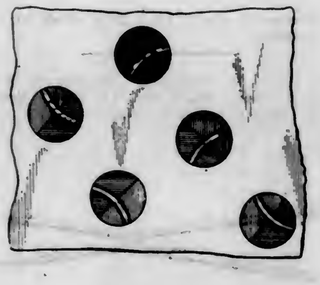
The ornamental design for a tray as shown.

50,886. PLATE OR SIMILAR ARTICLE. ALFRED H. GERLACH, Chicago, Ill., assignor to The Meyercord Company, Chicago, Ill. Filed Apr. 9, 1917. Serial No. 160,900. Term of patent 3½ years.



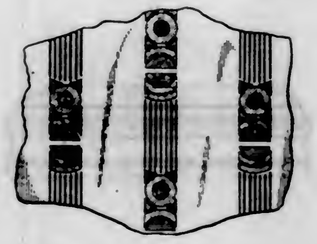
The ornamental design for an article of manufacture as shown.

50,887. TEXTILE FABRIC. ROBERT E. GODFREY, New York, N. Y. Filed Apr. 2, 1917. Serial No. 159,338. Term of patent 3½ years.



The ornamental design for a textile fabric as shown.

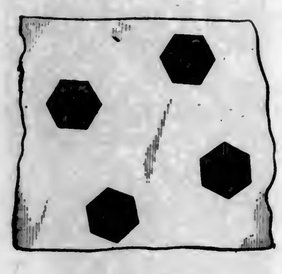
50,888. TEXTILE FABRIC. ROBERT E. GODFREY, New York, N. Y. Filed Apr. 2, 1917. Serial No. 159,339. Term of patent 3½ years.



The ornamental design for a textile fabric as shown.



50,889. TEXTILE FABRIC. ROBERT E. GODFREY, New York, N. Y. Filed Apr. 2, 1917. Serial No. 159,340. Term of patent 3½ years.



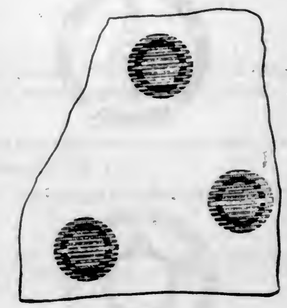
The ornamental design for a textile fabric as shown.

50,890. TEXTILE FABRIC. ROBERT E. GODFREY, New York, N. Y. Filed Apr. 2, 1917. Serial No. 159,341. Term of patent 3½ years.



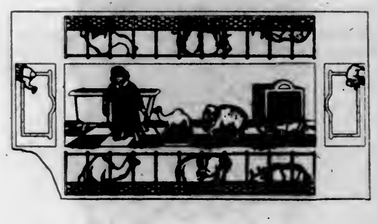
The ornamental design for a textile fabric as shown.

50,891. TEXTILE FABRIC. ROBERT E. GODFREY, New York, N. Y. Filed Apr. 2, 1917. Serial No. 159,342. Term of patent 3½ years.



The ornamental design for a textile fabric as shown.

50,892. LABEL. GEORGE S. HURST, Glastonbury, Conn., assignor to The J. B. Williams Company, Glastonbury, Conn., a Corporation of Connecticut. Filed Feb. 21, 1917. Serial No. 150,279. Term of patent 14 years.



The ornamental design for a label, as shown.

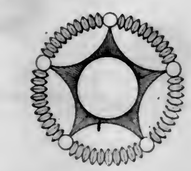
50,893. BADGE OR BUTTON. FREDERICK L. LONG, Cedargrove, N. J., assignor to National School Camp Association, Inc., New York, N. Y., a Corporation of New York. Filed Apr. 9, 1917. Serial No. 160,897. Term of patent 14 years.



The ornamental design for a badge or button, as shown.

50,894. ROSARY-MEDAL. FRANCIS J. MCLOUGHLIN, Brooklyn, N. Y. Filed Apr. 19, 1916. Serial No. 92,302. Term of patent 14 years.





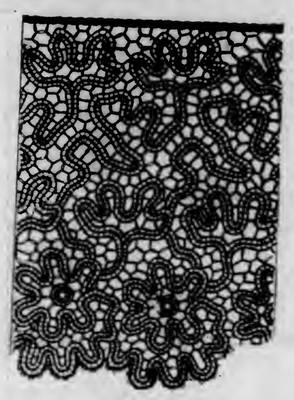
The ornamental design for a rosary medal, substantially as shown.

50,895. LACE. IDA P. RIEGER, New York, N. Y., assignor to Felix Meyer, New York, N. Y. Filed Apr. 23, 1917. Serial No. 164,069. Term of patent 3½ years.



The design for lace as herein shown.

50,896. LACE. IDA P. RIEGER, New York, N. Y., assignor to Felix Meyer, New York, N. Y. Filed Apr. 10, 1917. Serial No. 161,083. Term of patent 7 years.



The design for lace as herein shown.

50,897. LACE. IDA P. RIEGER, New York, N. Y., assignor to Felix Meyer, New York, N. Y. Filed Apr. 24, 1917. Serial No. 164,292. Term of patent 3½ years.



The design for lace as herein shown.



# TRADE-MARKS

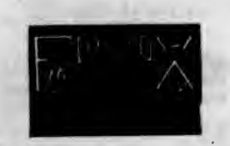
## PUBLISHED JUNE 5, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 73,906. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FOX AND FOX, Philadelphia, Pa. Filed Nov. 11, 1913.



*Particular description of goods.*—Pickles, Catsup, Cakes, Candies, and Ice-Cream.
*Claims use* since Sept. 11, 1908.

Ser. No. 85,455. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE STAFFORD COMPANY, Readville, Boston, Mass. Filed Mar. 26, 1915.

IDEAL

*Particular description of goods.*—Looms.
*Claims use* since Dec. 11, 1912.

Ser. No. 85,456. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE STAFFORD COMPANY, Readville, Boston, Mass. Filed Mar. 26, 1915.



*Particular description of goods.*—Looms.
*Claims use* since Dec. 11, 1912.

Ser. No. 87,444. (CLASS 32. FURNITURE AND UPHOLSTERY.) BARNEY SCHER, New York, N. Y. Filed June 19, 1915.



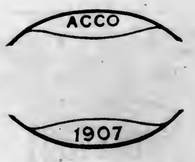
No claim being made to the name "Barney Scher."
*Particular description of goods.*—Kitchen and Parlor Chairs, Bedsteads, Rockers, Buffets, Dining-Room and Parlor Tables, Mirrors, and Desks.
*Claims use* since Jan. 1, 1915.

Ser. No. 92,382. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE WAHL-HENIUS RESEARCH LABORATORY, Chicago, Ill. Filed Jan. 24, 1916.

BRANNEW

*Particular description of goods.*—A Soft Drink.
*Claims use* since Jan. 19, 1916.

Ser. No. 92,489. (CLASS 10. FERTILIZERS.) AMERICAN CYANAMID COMPANY, New York, N. Y. Filed Jan. 29, 1916.




*Particular description of goods.*—A Chemical Compound for Agricultural Purposes.
*Claims use* since Oct. 1, 1915.

Ser. No. 92,817. (CLASS 37. PAPER AND STATIONERY.) THE ROSE PATCH & LABEL CO., Grand Rapids, Mich. Filed Feb. 12, 1916.

ROSE



No claim being made to the exclusive use of the words "Patented Process" and "Label."

*Particular description of goods.*—Blank Labels.

*Claims use* since Oct. 20, 1915.

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Ser. No. 92,831. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) GEO. L. CLAFLIN COMPANY, Providence, R. I. Filed Feb. 14, 1916.

"SEACO

No claim is made by applicant to the word "Standard."

*Particular description of goods.*—Hot-Water Bottles, Syringes, Ice-Caps, Invalid-Rings, Surgical Rubber Gloves, Breast-Pumps, and Atomizers.

*Claims use* since July 1, 1914.

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Ser. No. 93,862. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WEST COAST SOAP COMPANY, Oakland, Cal. Filed Mar. 24, 1916.

WHITE NAVY

*Particular description of goods.*—Soap.

*Claims use* since about 1901.

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Ser. No. 93,929. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) CONSOLIDATED CAR-HEATING CO., Albany, N. Y. Filed Mar. 28, 1916.

CONSOLCO

*Particular description of goods.*—Cooking-Stoves.

*Claims use* since Jan. 1, 1916.

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Ser. No. 94,065. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DUPREY-FAULMANN COMPANY, Detroit, Mich. Filed Apr. 3, 1916.

MASTER

*Particular description of goods.*—Mustard, Catsup, Jellies, Vinegar.

*Claims use* since Mar. 1, 1916.

Ser. No. 94,498. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THOS. CROSBEE & SONS, LTD., Birmingham, England. Filed Apr. 18, 1916.



APOLLO

*Particular description of goods.*—Electrical-Ignition Sparking Plugs, Electric Horns and Alarms, Electrical Lamps and Lighting Sets, Electrical Fusible Cut-Outs, Electric Switches, and Electric Accumulators and Batteries, Electric Dynamos, Electric Fans, and Electric Blowers.

*Claims use* since Dec. 21, 1912.

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Ser. No. 94,631. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EMIL J. SCHUENEMAN, Philadelphia, Pa. Filed Apr. 21, 1916.



The lines shown on the drawing are merely for shading purposes and do not represent color, no claim being made to the word "Dresden."

*Particular description of goods.*—Candy, and More Particularly Chocolates.

*Claims use* since Mar. 11, 1911.

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Ser. No. 94,672. (CLASS 12. CONSTRUCTION MATERIALS.) IMPERIAL ROOFING MFG. COMPANY, Chicago, Ill. Filed Apr. 24, 1916.




*Particular description of goods.*—Composition Roofing.

*Claims use* since Mar. 1, 1909.





Ser. No. 96,864. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed July 26, 1916. Under ten-year proviso.



*Particular description of goods.*—Toilet-Paper and Paper Towels.

*Claims use* since Nov. 13, 1890.

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Ser. No. 97,285. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEINWENDER-STOFFREGEN COFFEE CO., St. Louis, Mo. Filed Aug. 11, 1916.




*Particular description of goods.*—Coffee, Spices, and Flavoring Extracts for Food.

*Claims use* since about July 10, 1906, or earlier.

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Ser. No. 97,289. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) C. BAUER & SONS, Brooklyn, N. Y. Filed Aug. 11, 1916. Under ten-year proviso.

Bauer

*Particular description of goods.*—Pianos and Player-Pianos.

*Claims use* since December, 1894.

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Ser. No. 97,426. (CLASS 30. CROCKERY, EARTHENWARE, AND PORCELAIN.) LENOX, INCORPORATED, Trenton, N. J. Filed Aug. 18, 1916.




*Particular description of goods.*—Undecorated Tableware of Porcelain and Earthenware.

*Claims use* since Feb. 1, 1906.

Ser. No. 97,449. (CLASS 39. CLOTHING.) THE FAULTLESS RUBBER CO., Ashland, Ohio. Filed Aug. 19, 1916.

Wearever

*Particular description of goods.*—Household Rubber Gloves.

*Claims use* since January, 1906.

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Ser. No. 97,466. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) HERBERT A. SAGE, Detroit, Mich. Filed Aug. 21, 1916.

THE Operatone

*Particular description of goods.*—Phonographs.

*Claims use* since July 28, 1916.

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Ser. No. 97,898. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DE BOER & BACH, New York, N. Y. Filed Sept. 11, 1916.

D AND B

*Particular description of goods.*—Cutlery—viz., Steel Pocket, Pen, and Jack Knives, Scissors, and Razors.

*Claims use* since Jan. 1, 1916.

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Ser. No. 98,280. (CLASS 37. PAPER AND STATIONERY.) WATERS-WALCH MFG. CO., St. Louis, Mo. Filed Sept. 27, 1916.



*Particular description of goods.*—Writing-Paper and Envelops.

*Claims use* since May 13, 1912.

Ser. No. 98,775. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THOMSON MACHINE COMPANY, Belleville, N. J. Filed Oct. 19, 1916.

HEART of The BAKERY

*Particular description of goods.*—Dough-Mixing Machines, Dough Balling, Rounding-Up, or Handing-Up Machines, Proofing-Machines, Dough-Molding Machines, and Flour Blenders, Elevators, and Sifters for Bread-Making.
*Claims use* since 1913.

Ser. No. 99,128. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) GEORGE W. PARKER, Minneapolis, Minn. Filed Nov. 6, 1916.

SAN-DUZ-IT

*Particular description of goods.*—Mechanical Toys.
*Claims use* since Oct. 11, 1916.

Ser. No. 99,288. (CLASS 12. CONSTRUCTION MATERIALS.) THE UNITED STATES ASPHALT REFINING CO., New York, N. Y. Filed Nov. 13, 1916.

BITOSE

*Particular description of goods.*—Asphalt and Asphalt Paving Materials.
*Claims use* since March, 1907.

Ser. No. 99,305. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TRUE BLUE DRUG CO., Columbus, Ohio. Filed Nov. 14, 1916.

TRUE BLUE

*Particular description of goods.*—Aromatic Castor-Oil, Arnica Salve, Antiseptic Cones or Vaginal Suppositories, Asthma Treatment, Bronchial Lozenges, Blood-Tonic, Baby-Laxative, Baby Cough-Syrup, Croup Treatment, Camphor and Menthol Balm, Corn Remedy, Charcoal Waters, Carbolic Salve, Catarrh-Balm; Cascara, Aromatic; Diarrhea-Cordial, Eczema Treatment, Eye-Water, Extract Beef with Iron and Wine, Emulsion of Pure Cod-Liver Oil with Hypophosphites of Lime and Soda, Headache-Tablets, Healing-Cerate for Treating Sores and Ulcers; Household Liniment for External Use in Treating Sprains, Swollen Joints, Lame Back, Rheumatism, and Neuralgia; Kidney-Pills, Kidney Treatment, Indigestion-Tablets, Laxative Pellets, Laxative Quinin Tablets, Laxative Compound, Laxative Herbs, Larkspur Lotion, Liver-Granules, Lithia Tablets, Milk of Magnesia, Mints and Pepsin Tablets, Mints and Charcoal Tablets, Nervine Compound, Nerve-Tonic, Nutritive Cordial, Pile-Ointment, Pile Cones or Suppositories, Potash Tablets, Rat-Paste, Rheumatism-Treatment Tablets; Rose Cream, a Lotion for Chapped Hands; Santal-Compound Globules, Sore-Throat Treatment, Sulfur and Cream-Tartar Lozenges, Syrup of Hypophosphites, Tooth-Paste, Vegetable Compound as a Uterine Tonic, Vital Tonic for Nervous Disorders, White-Pine and Red-Spruce Compound Cough-Balsam, White-Pine and Wild-Cherry Compound, White-Pine Compound with Tar, White Oil for Constipation, Witch-Hazel Salve, and Worm-Chocolates.
*Claims use* since Oct. 1, 1915.

Ser. No. 99,316. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WHITNEY YEAST COMPANY, New York, N. Y. Filed Nov. 15, 1916.

ABC

*Particular description of goods.*—Yeast.
*Claims use* since Nov. 6, 1916.

Ser. No. 99,487. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Nov. 22, 1916.



Being a representation or portrait of Elizabeth Coyne, a living person, inclosed in a triangular figure.
*Particular description of goods.*—Cigarette-Paper.
*Claims use* since Jan. 8, 1916.

Ser. No. 99,489. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Nov. 22, 1916.



Being a representation or portrait of Elizabeth Coyne, a living person.
*Particular description of goods.*—Cigarette-Paper.
*Claims use* since Feb. 26, 1916.





Ser. No. 99,738. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AKTIEBOLAGET SVENSKA KULLAGERFABRIKEN, Gothenburg, Sweden. Filed Dec. 6, 1916.

HYPERBON

*Particular description of goods.*—Machines and Machine Parts—Namely, Toothed Wheels and Toothed Gearings.
*Claims use* since Mar. 15, 1916.

Ser. No. 99,797. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SCHLORER DELICATESSEN COMPANY, Philadelphia, Pa. Filed Dec. 8, 1916.

THE SCHLORER DELICATESSEN CO

The name "The Schlorer Delicatessen Co." is disclaimed.
*Particular description of goods.*—Foods and Ingredients of Foods—Namely, Mayonnaise and Olivenaise.
*Claims use* since May 17, 1915.

Ser. No. 99,832. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) AMERICAN WAGON COMPANY, Chicago, Ill. Filed Dec. 11, 1916.

8 IN 1

*Particular description of goods.*—Wagon and Truck Bodies.
*Claims use* since about Sept. 1, 1916.

Ser. No. 99,871. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) ELIJAH F. BALLARD, Dallas, Tex. Filed Dec. 12, 1916.

Slimax

The proprietor herein, E. F. Ballard, disclaims the word "Polish."
*Particular description of goods.*—A Certain Polish for Polishing Floor-Surfaces, Furniture, and Automobiles.
*Claims use* since on or about the 1st day of May, A. D. 1916.

Ser. No. 99,888. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DETROIT TWIST DRILL CO., Detroit, Mich. Filed Dec. 13, 1916.



*Particular description of goods.*—Drills, Reamers, Cutters, and Special Cutting-Tools.
*Claims use* since Jan. 1, 1908.

Ser. No. 99,896. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) MELODIUS PHONOGRAPH CO., New York, N. Y. Filed Dec. 13, 1916.



No claim being made to the word "Melodius" or the expression "Sounds the Sweetest."
*Particular description of goods.*—Phonographs.
*Claims use* since Nov. 20, 1916.

Ser. No. 99,944. (CLASS 39. CLOTHING.) PANTHER RUBBER MANUFACTURING COMPANY, Stoughton, Mass. Filed Dec. 14, 1916.



No claim is made to the words "Tri-Plug" or "Non-Slip," the representation of the three circles, or the heel-outline.
*Particular description of goods.*—Rubber Heels.
*Claims use* since Sept. 1, 1915.

Ser. No. 100,201. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE CHARLES WILLIAM STORES, INC., Brooklyn, N. Y. Filed Dec. 27, 1916.

BetsyRoss

*Particular description of goods.*—Sewing-Machines.
*Claims use* since Aug. 24, 1916.

Ser. No. 100,225. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) STEVENS PISTON RING COMPANY, Freeport, N. Y. Filed Dec. 28, 1916.

TESTE

*Particular description of goods.*—Piston-Rings.
*Claims use* since Sept. 20, 1916.

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Ser. No. 100,251. (CLASS 39. CLOTHING.) THE DREZWELL CO. INC., New York, N. Y. Filed Dec. 30, 1916.

Drezwellsley

No claim being made to the exclusive use of the slogan "Frocks for Every Young and Younger Woman" apart from the mark as shown in the specimens.
*Particular description of goods.*—Ladies', Intermediates', Misses', and Juniors' One and Two Piece Dresses, Waists, and Guimpes.
*Claims use* since December, 1914.

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Ser. No. 100, 344. (CLASS 10. FERTILIZERS.) WILLIAM B. TILGHMAN CO., Salisbury, Md. Filed Jan. 3, 1917. Under ten-year proviso.




*Particular description of goods.*—Fertilizer.
*Claims use* since Mar. 1, 1882.

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Ser. No. 100,345. (CLASS 10. FERTILIZERS.) WILLIAM B. TILGHMAN CO., Salisbury, Md. Filed Jan. 3, 1917. Under ten-year proviso.

TILGHMAN'S STANDARD FISH MIXTURE

*Particular description of goods.*—Fertilizer.
*Claims use* since Mar. 1, 1887.

Ser. No. 100,353. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INTERNATIONAL CLAY MACHINERY CO., Dayton, Ohio. Filed Jan. 4, 1917.




No claim being made to the words "International Clay Machinery Co." and "Dayton, Ohio, U. S. A."
*Particular description of goods.*—A General Line of Clay-Working Machinery, as Follows: Brick-Machines, Hollow-Ware Machines, Soft-Mud Brick-Machines, Disintegrators, Smooth-Roll Crusher, Four-Roll Crushers, Conical-Roll Crusher, Automatic Side-Cutting Tables, End-Cut Automatic Cutting-Tables, Semi-Automatic Cutting-Tables, Hand Brick-Cutting Tables, Hollow-Ware-Cutting Tables, Automatic Tile-Cutting Tables, Hollow-Ware Trimmer, Wet-Pan Emptiers, Cup-Elevator Fixtures, Waste-Clay-Elevator Fixtures, Chain-Clay-Elevator Fixtures, Belt Conveyers, Waste-Clay Conveyers, Hoists for Cars, Winding-Drum Fixtures, Pug-Mills, Clay-Granulators, Power Brick Re-Presses, Hand Brick Re-Presses, Pentagon-Roofing-Tile Press, Piano-Wire Screen, Revolving Screens, Brick-Molds, Dumping-Tables, Mold-Sanders, Turn-Tables, Portable Track, Clay-Feeders, Dry Brick-Presses, Special Dies for Brick and Hollow-Ware Machines, Drain-Tile Dies, Ornamental-Brick Dies, Fire-Brick Dies, Roofing-Tile Dies, Blunger-Mills, Chaser-Mills, Color-Mills, Fret-Cylinders, Glaze-Mills, Pottery-Printing Press, Pottery Pug-Mills, Slip-Pump, Wad-Mills, Whirlers, Jollies, Potters' Lathes, Lawn-Screens, Filler-Presses, Friction-Clutch Pulleys, Set-Collars, Shafting-Couplings, Pillow-Blocks, Beater-Engines, Hoists, Combined Pug-Mills and Disintegrators, Combined Brick-Machines and Pug-Mills.
*Claims use* since Nov. 15, 1916.

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Ser. No. 100,386. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) UNITED BRASS MANUFACTURING COMPANY, Cleveland, Ohio. Filed Jan. 5, 1917.

UNITED

*Particular description of goods.*—Cocks, Metallic Valves for General Purposes, and Faucets, Supply and Drain Pipes and Fittings.
*Claims use* since May 1, 1915.





Ser. No. 100,393. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE P. W. DRACKETT & SONS COMPANY, Cincinnati, Ohio. Filed Jan. 6, 1917.

THE P.W. D & SONS COMPANY

No claim being made to the letter "D" except in the connection shown in the drawing.
*Particular description of goods.*—Washing-Soda, Caustic Soda, Chlorated Lime, and Causticized Carbonate of Soda.
*Claims use* since November, 1915.

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Ser. No. 100,401. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NEW YORK GROCERY COMPANY, Newark, N. J. Filed Jan. 6, 1917.




*Particular description of goods.*—Coffee.
*Claims use* since June, 1902.

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Ser. No. 100,424. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE DUPLEX LIGHTING SYSTEM INCORPORATED, Chicago, Ill. Filed Jan. 8, 1917.

DUPLEXALITE

*Particular description of goods.*—Metal Reflectors for Lighting-Fixtures.
*Claims use* since July 22, 1916.

Ser. No. 100,463. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE ALEXANDER-KRAMER COMPANY, Dayton, Ohio. Filed Jan. 9, 1917.

ALKO AL-KO

No claim being made to the words "Toys," "Specialties," and "Trade-Mark."
*Particular description of goods.*—Toy Electric Motors.
*Claims use* since Dec. 1, 1916.

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Ser. No. 100,486. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917.

CREW LEVICK

*Particular description of goods.*—Illuminating, Lubricating, and Burning Oils and Greases.
*Claims use* since on or about July, 1915.

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Ser. No. 100,488. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917.




The panel-background is shown in the drawing colored red, having a dark border-line.
*Particular description of goods.*—Illuminating, Lubricating, and Burning Oils and Greases.
*Claims use* since on or about July, 1915.

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Ser. No. 100,598. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Jan. 13, 1917.




Comprising the words "Betty Wales, Ploshkin," with the doll figure, all inclosed in a rectangle, no claim being made to the exclusive right to the use of the words "Trade Mark."
*Particular description of goods.*—Tooth, Nail, Hair, Varnish, Wall, Whitewash, Paint, Shaving, Military, Clothes, Hat, Toilet, Shoe, Scrub, Ceiling, Floor, and Eyebrow Brushes; Brooms, Powder-Puffs; Dusters with Feather, String, Hair, or Bristle Ends; Mops, Bottle-Cleaning Brushes, Artists' Brushes, and Whisks.
*Claims use* since Jan. 5, 1917.

Ser. No. 100,708. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARY ABBIE HALL, Tulsa, Okla. Filed Jan. 18, 1917.




"Mary Abbie" being a fascimile of the applicant's first two names in her signature, no claim being made for the term "Trade Mark."

*Particular description of goods.*—Hair-Tonic and Scalp Treatment.

*Claims use* since Aug. 1, 1916.

Ser. No. 100,884. (CLASS 15. OILS AND GREASES.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Jan. 24, 1917.




Comprising the words "Betty Wales," "Ploshkin," and "Trade Mark," with the doll figure, all within a rectangular figure, no claim being made to the exclusive use of the words "Trade Mark."

*Particular description of goods.*—Candles, Type-Writer and Machine Oil, Lubricants, and Paraffin.

*Claims use* since Jan. 5, 1917.

Ser. No. 100,886. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Jan. 24, 1917.




Comprising the words "Betty Wales," "Ploshkin," and "Trade Mark," with the doll figure, all within a rectangular figure, no claim being made to the exclusive use of the words "Trade Mark."

*Particular description of goods.*—Ready-Mixed and Unmixed Paints, Stains and Varnishes, Enamels, Paint-Oils, Japan Driers and Polishers, Waterproof Paints, Paint-Remover, Polishes for Furniture, Pianos, and other Woodwork, White Lead, Primers and Fillers, Water-Paint of Cementlike Character, Calcimine, and Inorganic Paints.

*Claims use* since Jan. 5, 1917.

Ser. No. 100,904. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE SUNBEAM MOTOR CAR COMPANY LIMITED, Wolverhampton, England. Filed Jan. 24, 1917.

SUNBEAM-COATALEN

*Particular description of goods.*—Internal-Combustion Engines and Parts Thereof for Aeroplanes and Motor-Vehicles other Than Motor-Bicycles.

*Claims use* since the 30th day of March, 1915.

Ser. No. 100,918. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Jan. 25, 1917.




Comprising the words "Betty Wales, Ploshkin," with the doll figure, all inclosed in a rectangle, no claim being made to the exclusive right of the use of the words "Trade Mark."

*Particular description of goods.*—Cigarette-Papers, Tobacco-Pouches, Pipes and Pipe-Holders and Pipe-Stems, Tobacco and Snuff Boxes, Cigarette-Holders, Cigarette-Rollers, Cigar-Cases, Pipe-Cleaners, Humidors, Ash Pots, Receivers, and Trays.

*Claims use* since Jan. 5, 1917.

Ser. No. 101,009. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) W. A. KING, Brownsville, Tex. Filed Jan. 29, 1917.

SNAKE KING

*Particular description of goods.*—Live Animals, Birds, and Reptiles Not Intended for Food.

*Claims use* since June, 1910.

Ser. No. 101,021. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SCHOLL MANUFACTURING COMPANY, INC., Chicago, Ill. Filed Jan. 29, 1917.

Foot-eazer

*Particular description of goods.*—Arch-Supports.

*Claims use* since April, 1906.

Ser. No. 101,212. (CLASS 39. CLOTHING.) SAMUEL FLOERSHEIMER & BRO., New York, N. Y. Filed Feb. 7, 1917.

Floerstyle

*Particular description of goods.*—Female Wearing-Apparel—Namely, Outer Suits, Dresses, Coats, Skirts, Dress-Waists, Shirt-Waists, and Costumes.

*Claims use* since Jan. 11, 1917.





Ser. No. 101,215. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) PREMIER MOTOR CORPORATION, Indianapolis, Ind. Filed Feb. 7, 1917.

Premier

*Particular description of goods.*—Automobiles.

*Claims use* since on or about Jan. 1, 1903.

Ser. No. 101,273. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) NEW STAR POLISH M'F'G CO. INC., New York, N. Y. Filed Feb. 9, 1917.



*Particular description of goods.*—Shoe-Polishes.

*Claims use* since Nov. 15, 1916.

Ser. No. 101,274. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THEODORE B. NISBET, New York, N. Y. Filed Feb. 9, 1917.

J.H

*Particular description of goods.*—Automobile Wind-Shields.

*Claims use* since Feb. 11, 1915.

Ser. No. 101,322. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) CHATTANOOGA IMPLEMENT & MANUFACTURING CO., Chattanooga, Tenn. Filed Feb. 12, 1917.



*Particular description of goods.*—Sad-Irons.

*Claims use* since Feb. 1, 1917.

Ser. No. 101,326. (CLASS 37. PAPER AND STATIONERY.) FOX RIVER PAPER COMPANY, Appleton, Wis. Filed Feb. 12, 1917.

Old Faithful

*Particular description of goods.*—Bond-Paper, Bank-Note Paper, Document-Paper, Writing-Paper, Printing-Paper, and Envelops.

*Claims use* since Jan. 1, 1916.

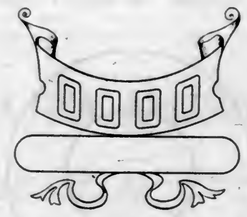
Ser. No. 101,419. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) COMMONWEALTH TOY CORPORATION, Merrimac, Mass. Filed Feb. 16, 1917.

WONDERWOOD

*Particular description of goods.*—Toys Consisting of Wooden Blocks for the Construction of Toy Buildings and other Articles.

*Claims use* since Dec. 20, 1916.

Ser. No. 101,429. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALEXANDER LERMAN, Philadelphia, Pa. Filed Feb. 16, 1917.



The Russian words being disclaimed.

*Particular description of goods.*—Wheat-Flour.

*Claims use* since about October, 1916.

Ser. No. 101,472. (CLASS 17. TOBACCO PRODUCTS.) CHARLES CHESTER BOGART, Middletown, N. Y. Filed Feb. 19, 1917.




*Parti ular description of goods.*—Cigars.

*Claims use* since Jan. 1, 1910.

Ser. No. 101,578. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RICE CEREAL & MILLING CO., Fort Wayne, Ind. Filed Feb. 21, 1917.

MADAME X

*Particular description of goods.*—Rice Powder, Face-Powder, and Talcum Powder.

*Claims use* since Dec. 16, 1915.

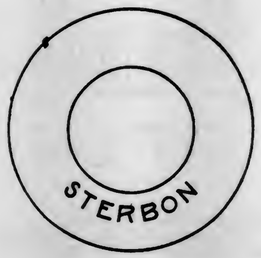
Ser. No. 101,634. (CLASS 39. CLOTHING.) JONAS WEINIG, New York, N. Y. Filed Feb. 23, 1917.




*Particular description of goods.*—Fur Collars and Muffs.
*Claims use* since Jan. 15, 1917.

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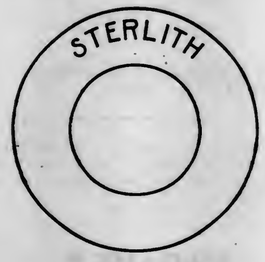
Ser. No. 101,801. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE STERLING GRINDING WHEEL CO., Tiffin, Ohio. Filed Feb. 28, 1917.




No claim being made to the exclusive use of the trademark legend, the word "Sterling," and the words "Silicon Carbide" except in connection with the mark as shown in the specimens.
*Particular description of goods.*—Grinding-Wheels.
*Claims use* since Jan. 5, 1917.

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Ser. No. 101,802. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE STERLING GRINDING WHEEL CO., Tiffin, Ohio. Filed Feb. 28, 1917.




No claim being made to the exclusive use of the trademark legend and the word "Sterling" except in connection with the mark as shown in the specimens.
*Particular description of goods.*—Grinding-Wheels.
*Claims use* since Jan. 5, 1917.

Ser. No. 101,848. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN HOMINY COMPANY, Indianapolis, Ind. Filed Mar. 3, 1917.




*Particular description of goods.*—Stock Foods.
*Claims use* since Nov. 29, 1916.

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Ser. No. 101,863. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE KEELEY-HANDY SYNDICATE, Chicago, Ill. Filed Mar. 3, 1917.




*Particular description of goods.*—Motion-Picture Films, Such Films Displaying the Subject-Matter of Comic, Women's, Scenic, and Magazine Sections or Supplements of Newspapers.
*Claims use* since Dec. 11, 1916.

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Ser. No. 101,907. (CLASS 38. PRINTS AND PUBLICATIONS.) THE FIRESTONE TIRE AND RUBBER COMPANY, Akron, Ohio. Filed Mar. 6, 1917.

MILESTONES

*Particular description of goods.*—A Monthly Publication Distributed for Advertising Purposes.
*Claims use* since Feb. 28, 1917.

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Ser. No. 101,908. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) GOLDSMITH, STERN & CO., New York, N. Y. Filed Mar. 6, 1917.

La Suprême

*Particular description of goods.*—Pearl Necklaces and Imitation Pearls.
*Claims use* since Feb. 28, 1917.





Ser. No. 101,958. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRY C. HAAK, Scranton, Pa. Filed Mar. 7, 1917.



*Particular description of goods.*—Headache-Powders and Remedies for Constipation, Liver Complaint, Sour Stomach, and Sallow Complexion.
*Claims use* since Jan. 11, 1917.

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Ser. No. 101,996. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN WYETH & BROTHER, INCORPORATED, Philadelphia, Pa. Filed Mar. 8, 1917.

PURNATOL

*Particular description of goods.*—A Medicinal Alterative-Eliminant Pharmaceutical Compound.
*Claims use* since Feb. 26, 1917.

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Ser. No. 102,043. (CLASS 39. CLOTHING.) THE A. NASH COMPANY, Cincinnati, Ohio. Filed Mar. 10, 1917.

RED N LETTER

*Particular description of goods.*—Outer Garments Comprising Men's Suits and Overcoats.
*Claims use* since Jan. 29, 1917.

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Ser. No. 102,081. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BERTHA LEIBBRANDT, San Francisco, Cal. Filed Mar. 12, 1917.



The portrait being that of applicant.
*Particular description of goods.*—Bread and a Germinated Breakfast Food.
*Claims use* since Mar. 1, 1917.

Ser. No. 102,089. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) NATIONAL STAMPING & ELECTRIC WORKS, Chicago, Ill. Filed Mar. 12, 1917.

STORM

KING

*Particular description of goods.*—Gasolene-Burning Lanterns.
*Claims use* since July 24, 1914.

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Ser. No. 102,119. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE KANSAS FLOUR MILLS COMPANY, Wichita and Kansas City, Kans. Filed Mar. 13, 1917.

"THE FINAL ARGUMENT"

*Particular description of goods.*—Wheat-Flour.
*Claims use* since Jan. 2, 1912.

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Ser. No. 102,145. (CLASS 39. CLOTHING.) JACOBUS BROS. & CO., New York, N. Y. Filed Mar. 14, 1917.

KLEVAKLAD

*Particular description of goods.*—Women's and Children's Outer Garments—viz., Coats, Suits, and Dresses.
*Claims use* since Feb. 27, 1917.

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Ser. No. 102,188. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HECKER-JONES-JEWELL MILLING COMPANY, New York, N. Y. Filed Mar. 16, 1917.




*Particular description of goods.*—Wheat-Flour and Rye-Flour.
*Claims use* since Aug. 15, 1914.

Ser. No. 102,230. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) STERLING METAL CO., Auburn, Ind. Filed Mar. 17, 1917.

STERITE

*Particular description of goods.*—Metal Alloy, a White, Non-Rusting, Non-Tarnishing, Non-Corrosive, Non-Erosive Metal Used in the Manufacture of Various Articles, Such as Knives, Forks, Kitchen Utensils, Surgical and Dental Instruments, Water, Oil, and Acid Meters, Cuspidors, Plumbing, Bath-Room Fixtures, Signs, Pumps, Journals, and Bearings, Sheet Metal, and Wire Tubes and Rods.
*Claims use* since Feb. 20, 1917.

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Ser. No. 102,259. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FLORENCE MAUD ROBINSON, London, England. Filed Mar. 19, 1917.



*Particular description of goods.*—Ointment for the Treatment of Bruises, Sprains, Bunions, Corns, Carbuncles, Ringworm, Inflammation of the Knee or Legs and Skin Eruption Due to External or Internal Poison, and Pills Acting Upon the Liver and Kidneys and for Purifying the Blood.
*Claims use* since June, 1911.

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Ser. No. 102,261. (CLASS 33. GLASSWARE.) JOHN E. RYAN, Boston, Mass. Filed Mar. 19, 1917.

FRACTO

*Particular description of goods.*—Non-Glare Devices for the Headlights of Automobiles.
*Claims use* since about Dec. 15, 1915.

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Ser. No. 102,509. (CLASS 32. FURNITURE AND UPHOLSTERY.) BERNARD GLOEKLER COMPANY, Pittsburgh, Pa. Filed Mar. 28, 1917. Under ten-year proviso.

GLOEKLER

*Particular description of goods.*—Butcher-Shop Furniture, Hotel-Kitchen Furniture, Counters, Display-Cases, Wall-Cases, Display-Racks, Meat Blocks and Tables.
*Claims use* since the year 1881.

Ser. No. 102,527. (CLASS 15. OILS AND GREASES.) MEXICAN PETROLEUM CORPORATION, Los Angeles, Cal. Filed Mar. 28, 1917.

P MEX T

*Particular description of goods.*—Fuel-Oils.
*Claims use* since Mar. 1, 1916.

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Ser. No. 102,530. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) S. B. PENICK & COMPANY, INC., New York, N. Y. Filed Mar. 28, 1917.

EMULSARIN

*Particular description of goods.*—A Composition for Use in the Preparation of Emulsions.
*Claims use* since Aug. 1, 1916.

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Ser. No. 102,543. (CLASS 6. CHEMICALS, MEDICINES AND PHARMACEUTICAL PREPARATIONS.) THE EDWARD WESLEY COMPANY, Cincinnati, Ohio. Filed Mar. 28, 1917.

Orchard White

*Particular description of goods.*—A Toilet Lotion for Use on the Skin.
*Claims use* since Oct. 24, 1916.

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Ser. No. 102,562. (CLASS 27. HOROLOGICAL INSTRUMENTS.) ROBT. H. INGERSOLL & BRO., New York, N. Y. Filed Mar. 29, 1917.

Radiolite

*Particular description of goods.*—Watches and Clocks.
*Claims use* since on or about Jan. 1, 1913.

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Ser. No. 102,569. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MILLER RUBBER COMPANY, South Akron, Ohio. Filed Mar. 29, 1917.



*Particular description of goods.*—Rubber Tires.
*Claims use* since Jan. 1, 1917.





Ser. No. 102,586. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARATHON LABORATORY, Chicago, Ill. Filed Mar. 30, 1917.

MARATHON



*Particular description of goods.*—Remedies for Coughs, Colds, Sore Throat, Hoarseness, Bronchitis, Impurities of the Blood, Syphilitic and Scrofulous Affections, Infections of the Urinary Tract, Gonorrhea, Gleet, Inflammation of the Bladder, Frequent or Burning Urination.
*Claims use* since Mar. 12, 1917, and the word "Marathon" has been continuously used in our business as a trade-mark since Sept. 7, 1916.

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Ser. No. 102,609. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE AROMINT COMPANY, Cincinnati, Ohio. Filed Mar. 31, 1917.

KOF NOT

*Particular description of goods.*—Candy Tablets.
*Claims use* since Mar. 15, 1917.

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Ser. No. 102,676. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY, JR., COMPANY, Chicago, Ill. Filed Apr. 2, 1917.

JUICY FRUIT

*Particular description of goods.*—Chewing-Gum.
*Claims use* since Sept. 10, 1914.

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Ser. No. 102,682. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) COLGATE & CO., New York, N. Y. Filed Apr. 3, 1917.

LIQUODENT

*Particular description of goods.*—Mouth-Washes and Dental Washes.
*Claims use* since Apr. 2, 1917.

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Ser. No. 102,717. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) CHAS. KAUFMANN & SONS, Santa Ana, Cal. Filed Apr. 4, 1917.

SILVER BEAM

*Particular description of goods.*—Automobile Spot-Lights.
*Claims use* since Dec. 24, 1914.

Ser. No. 102,718. (CLASS 39. CLOTHING.) MRS. A. R. KING, INCORPORATED, Philadelphia, Pa. Filed Apr. 4, 1917.

FIRST STEP

*Particular description of goods.*—Leather, Rubber, and Canvas Shoes.
*Claims use* since about Jan. 1, 1910.

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Ser. No. 102,722. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE WILLIAM S. MERRELL CHEMICAL COMPANY, Cincinnati, Ohio. Filed Apr. 4, 1917.

MERCO

*Particular description of goods.*—Ointments for the Relief of Headache.
*Claims use* since Mar. 30, 1917.

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Ser. No. 102,736. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ETCH-O-LITE COMPANY, INC., Pittsburgh, Pa. Filed Apr. 5, 1917.

ETCH-O-LITE

*Particular description of goods.*—Etching Solutions and Compounds.
*Claims use* since Sept. 5, 1915.

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Ser. No. 102,737. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ERNEST JOHN FAZAKERLEY, Chicago, Ill. Filed Apr. 5, 1917.

AZAK

*Particular description of goods.*—Preparation for Stomach, Liver, and Kidney Trouble, Rheumatism, and Catarrh, for Stiff Joints, Lame Back, Sore Throat, Preparation for Skin and Scalp Diseases, Eczema, Dandruff, Falling Hair, and All Skin Affections, Digestive Tablets, and Nerve-Tablets.
*Claims use* since Jan. 1, 1912.

Ser. No. 102,753. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEO. J. THOMASSEN, Des Moines, Iowa. Filed Apr. 5, 1917.

LAXATAX

*Particular description of goods.*—A Remedy for Constipation, Dyspepsia, Liver, Kidney, Stomach, and Bowel Disorders.
*Claims use* since Jan. 1, 1917.

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Ser. No. 102,756. (CLASS 39. CLOTHING.) L. WOHL & Co., New York, N. Y. Filed Apr. 5, 1917.

TOODLE-KID

Comprising the words "Toodle Kid."
*Particular description of goods.*—Children's Rompers, Dresses, and Play-Suits.
*Claims use* since Mar. 19, 1917.

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Ser. No. 102,799. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) GEORGE BORGFELDT & Co., New York, N. Y. Filed Apr. 7, 1917.

ACTIVE

*Particular description of goods.*—Building-Blocks and Construction Toys, Dolls, and Toy Animals, Toy Houses, and Toy Furniture Sets.
*Claims use* since Apr. 4, 1917.

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Ser. No. 102,807. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) E. I. HORSMAN Co., New York, N. Y. Filed Apr. 7, 1917.



*Particular description of goods.*—Dolls and Tennis-Rackets.
*Claims use* since prior to 1897.

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Ser. No. 102,813. (CLASS 39. CLOTHING.) ROSENBERG & COHEN, New York, N. Y. Filed Apr. 7, 1917.

ROSCO

*Particular description of goods.*—Ladies' Muslin and Silk Underwear.
*Claims use* since January, 1914.

Ser. No. 102,833. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MILL REMNANTS COMPANY, New York, N. Y. Filed Apr. 9, 1917.

-MIRECo-

*Particular description of goods.*—Wiping and Polishing Cloths.
*Claims use* since Jan. 15, 1910.

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Ser. No. 102,835. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) P. J. MCCOY & COMPANY, Newark, N. J. Filed Apr. 9, 1917.

ORPHEUS

*Particular description of goods.*—Phonographs and Phonograph Parts.
*Claims use* since Aug. 1, 1915.

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Ser. No. 102,838. (CLASS 32. FURNITURE AND UPHOLSTERY.) OSTERMOOR & Co., New York, N. Y. Filed Apr. 9, 1917. Under ten-year proviso.

OSTERMOOR

*Particular description of goods.*—Mattresses, Pillows, Bolsters, Cushions, and Bedsteads.
*Claims use* since December, 1874.

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Ser. No. 102,861. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KÁLMÁN ÉRDÉKY, Pittsburgh, Pa. Filed Apr. 10, 1917.

Clavecide

*Particular description of goods.*—A Remedy for Corns, Bunions, Chilblains, Frost-Bites, Callous, Ingrowing Nails.
*Claims use* since January, 1904.

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Ser. No. 102,927. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) BRAEBURN STEEL COMPANY, Braeburn, Pa. Filed Apr. 13, 1917.

WESCO

*Particular description of goods.*—Tool-Steel.
*Claims use* since Sept. 1, 1912.





Ser. No. 102,928. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) BRAEBURN STEEL COMPANY, Braeburn, Pa. Filed Apr. 13, 1917.

GYRO

*Particular description of goods.*—Tool-Steel.
*Claims use* since Mar. 1, 1914.

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Ser. No. 102,929. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) BRAEBURN STEEL COMPANY, Braeburn, Pa. Filed Apr. 13, 1917.

BT

*Particular description of goods.*—Tool-Steel.
*Claims use* since Apr. 25, 1905.

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Ser. No. 102,986. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) KEYSTONE SNAP FASTENER CORPORATION, Philadelphia, Pa. Filed Apr. 14, 1917.

KEYSTONE

*Particular description of goods.*—Snap-Fasteners.
*Claims use* since Feb. 1, 1917.

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Ser. No. 102,998. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WM. P. WALSH, Aberdeen, Wash. Filed Apr. 14, 1917.




*Particular description of goods.*—A Pulling Implement for Use in Splicing Wire Cables and the Like.
*Claims use* since Feb. 15, 1917.

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Ser. No. 103,006. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) BAUSCH & LOMB OPTICAL Co., Rochester, N. Y. Filed Apr. 16, 1917.

TELESTIGMAT

*Particular description of goods.*—Lenses for Optical and Scientific Use, Mangin Mirrors, Magnifiers, Prisms for Optical and Scientific Use, Search-Light Mirrors, Condensers, (Optical,) Lens-Barrels, Lens-Mounts, Microscopes and Parts and Repairs Therefor, Microscope-Micrometers, Microtomes, Range-Finders, Field-Glasses, Opera-Glasses, Telescopes, Transits, Levels, Sextants, Projection Apparatus and Parts and Repairs Therefor, Transit-Micrometers, Photographic Ray-Filters, Photographic Shutters, Photomicrographic Cameras, Alidades, and Theodolites.
*Claims use* since Feb. 7, 1916.

Ser. No. 103,014. (CLASS 39. CLOTHING.) COHN-GOLDWATER & COMPANY, Los Angeles, Cal. Filed Apr. 16, 1917.



*Particular description of goods.*—Overalls.
*Claims use* since Jan. 30, 1917.

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Ser. No. 103,029. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MODERN FLOUR MILLS, Macon, Ga. Filed Apr. 16, 1917.

THORO-BRED

*Particular description of goods.*—Self-Rising Wheat-Flour.
*Claims use* since about Apr. 18, 1914.

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Ser. No. 103,040. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PHILIP PHILLIPS, Orlando, Fla. Filed Apr. 16, 1917.



*Particular description of goods.*—Citrus Fruits.
*Claims use* since October, 1916.

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Ser. No. 103,048. (CLASS 15. OILS AND GREASES.) TIDE WATER OIL Co., New York, N. Y. Filed Apr. 16, 1917.

CLARION

*Particular description of goods.*—Refined Petroleum.
*Claims use* since Jan. 1, 1886.

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Ser. No. 103,049. (CLASS 15. OILS AND GREASES.) TIDE WATER OIL Co., New York, N. Y. Filed Apr. 16, 1917.

CHRYSOLEUM

*Particular description of goods.*—Lubricating-Oil.
*Claims use* since Mar. 1, 1887.

Ser. No. 103,063. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) EMILE JAMES, New York, N. Y. Filed Apr. 17, 1917.

Politype

Comprising the word "Politype."

*Particular description of goods.*—Sewing-Machines for Stitching Leather.

*Claims use* since January, 1885.

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Ser. No. 103,069. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) RUBBER INSULATED METALS CORPORATION, Richmond, Va., and Plainfield, N. J. Filed Apr. 17, 1917.

SUPERBAR

*Particular description of goods.*—Rubber Tires.

*Claims use* since Feb. 20, 1917.

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Ser. No. 103,078. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CLO-VO CHEMICAL CO., Seattle, Wash. Filed Apr. 18, 1917.

CLO-VO

*Particular description of goods.*—A Pile Remedy.

*Claims use* since Feb. 1, 1917.

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Ser. No. 103,089. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EARL I. RUNNER, Wheeling, W. Va. Filed Apr. 18, 1917.

PAMGIN

*Particular description of goods.*—A Medicinal Compound in Tablet Form Used for Nourishing the Blood, Nerves, and Tissues.

*Claims use* since June 15, 1916.

Ser. No. 103,110. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS W. GRISER, St. Louis, Mo. Filed Apr. 19, 1917

AR-LON

*Particular description of goods.*—Medicine Mixture for Indigestion, Gastritis, Weak Stomach, Bowel Trouble, Palpitation of Heart, Purifying Blood, Rheumatism, Anemia.

*Claims use* since Mar. 25, 1917.

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Ser. No. 103,193. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. W. YOUNGKEN, Philadelphia, Pa. Filed Apr. 21, 1917.

VER-NIT

*Particular description of goods.*—Liquid Shampoo.

*Claims use* since Mar. 1, 1916.

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Ser. No. 103,230. (CLASS 39. CLOTHING.) RICHMOND HOSIERY MILLS, Rossville, Ga. Filed Apr. 23, 1917.

BIG CHIEF

*Particular description of goods.*—Hosiery.

*Claims use* since 1912.

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Ser. No. 103,231. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE SYRUP PRODUCTS COMPANY, Baltimore, Md. Filed Apr. 23, 1917.

VER-VAC

*Particular description of goods.*—Non-Alcoholic Malt-less Beverages Sold as Soft Drinks.

*Claims use* since Oct. 1, 1916.

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Ser. No. 103,258. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LYSTER CHEMICAL COMPANY, Augusta, Me., and New York, N. Y. Filed Apr. 24, 1917.

MAGNECOL

*Particular description of goods.*—Medicinal Drugs, a Compound of Gualacol Sulfonate with Magnesium.

*Claims use* since Apr. 1, 1917.

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Ser. No. 103,259. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LYSTER CHEMICAL COMPANY, Augusta, Me., and New York, N. Y. Filed Apr. 24, 1917.

MAGNESOTE

*Particular description of goods.*—A Compound of Creosote Sulfonate with Magnesium for Medicinal Drugs.

*Claims use* since Apr. 1, 1917.





Ser. No. 103,261. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LYSTER CHEMICAL COMPANY, Augusta, Me., and New York, N. Y. Filed Apr. 24, 1917.

LYSTASOTE

*Particular description of goods.*—Medicinal Drugs, a Creosote Carbonate Preparation.

*Claims use* since Apr. 1, 1917.

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Ser. No. 103,262. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LYSTER CHEMICAL COMPANY, Augusta, Me., and New York, N. Y. Filed Apr. 24, 1917.

LYSTACOL

*Particular description of goods.*—Medicinal Drugs, a Preparation of Gualacol Carbonate.

*Claims use* since Apr. 1, 1917.

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Ser. No. 103,268. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RANDOLPH MARKETING CO., Los Angeles, Cal. Filed Apr. 24, 1917.

No-Vary

*Particular description of goods.*—Oranges and Lemons.

*Claims use* since Mar. 1, 1917.

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Ser. No. 103,292. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FELLOWS MEDICAL MANUFACTURING COMPANY, INC., New York, N. Y. Filed Apr. 25, 1917. Under ten-year proviso.

FELLOWS' Compound Syrup OF HYPOPHOSPHITES.

*Particular description of goods.*—Preparation of Hypophosphites.

*Claims use* since the year 1876.

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Ser. No. 103,293. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FELLOWS MEDICAL MANUFACTURING COMPANY, INC., New York, N. Y. Filed Apr. 25, 1917. Under ten-year proviso.



*Particular description of goods.*—A Preparation of Hypophosphites.

*Claims use* since the year 1876.

Ser. No. 103,338. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARENTOX COMPANY, Des Moines, Iowa. Filed Apr. 27, 1917.

ARENTOX

*Particular description of goods.*—A Fire-Retardant.

*Claims use* since Mar. 12, 1917.

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Ser. No. 103,349. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FULLER-MORRISSON COMPANY, Chicago, Ill. Filed Apr. 27, 1917.

MOR-O-SAN

*Particular description of goods.*—Talcum Powder.

*Claims use* since the month of December, 1916.

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Ser. No. 103,350. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FULLER-MORRISSON COMPANY, Chicago, Ill. Filed Apr. 27, 1917.



*Particular description of goods.*—Talcum Powder.

*Claims use* since the month of December, 1916.

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Ser. No. 103,354. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) KEYSTONE VARNISH COMPANY, Brooklyn, N. Y. Filed Apr. 27, 1917.

DEGRAH

*Particular description of goods.*—Enamel Paints and Varnish.

*Claims use* since about Jan. 16, 1917.

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Ser. No. 103,357. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MOTOR-STEAM GENERATOR CO., Philadelphia, Pa. Filed Apr. 27, 1917.

"Fogger"

*Particular description of goods.*—Steam-Supplying Attachment for Internal-Combustion Engines.

*Claims use* since Dec. 8, 1916.

Ser. No. 103,395. (CLASS 39. CLOTHING.) MEYER MAYERS INC., New York, N. Y. Filed Apr. 28, 1917.

MM

*Particular description of goods.*—Petticoats.
*Claims use* since about Jan. 1, 1915.

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Ser. No. 103,409. (CLASS 27. HOROLOGICAL INSTRUMENTS.) NELSON H. BROWN, Boston, Mass. Filed Apr. 30, 1917.

DISCUS

*Particular description of goods.*—Clocks and Movements Therefor.
*Claims use* since May 23, 1914.

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Ser. No. 103,412. (CLASS 27. HOROLOGICAL INSTRUMENTS.) NELSON H. BROWN, Boston, Mass. Filed Apr. 30, 1917.

N H B

*Particular description of goods.*—Clocks, Watches, and Movements Therefor.
*Claims use* since Dec. 13, 1916.

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Ser. No. 103,422. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DANIEL L. LEYERLE, Webb City, Mo. Filed Apr. 30, 1917.

BO-HO-YA

*Particular description of goods.*—A Preparation for the Treatment of Blood, Stomach, Liver, and Kidney Ailments.
*Claims use* since Jan. 1, 1916.

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Ser. No. 103,462. (CLASS 39. CLOTHING.) BEACON RUBBER COMPANY, Lynn, Mass. Filed May 2, 1917.

BEACON

*Particular description of goods.*—Rubber Heels and Rubber Soles.
*Claims use* since Jan. 27, 1915.

Ser. No. 103,478. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN VARGA, Linden, N. J. Filed May 2, 1917.



John Varga

Being my autographic signature and a portrait of myself.
*Particular description of goods.*—A Preparation for the Treatment of Cancer and Eczema.
*Claims use* since about Apr. 1, 1917.

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Ser. No. 103,494. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) L. C. BLANCKE CO. INC., New York, N. Y. Filed May 3, 1917.

"PARAMOUNT"

Comprising the word "Paramount."
*Particular description of goods.*—Steel.
*Claims use* since Mar. 1, 1916.

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Ser. No. 103,544. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed May 4, 1917.

SERO-VAR

*Particular description of goods.*—Varnish.
*Claims use* since Jan. 1, 1917.

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Ser. No. 103,545. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed May 4, 1917.

FURNI-FLOR

*Particular description of goods.*—Oil for Dustless Mops and Dust-Cloths.
*Claims use* since Jan. 1, 1917.





# TRADE-MARK REGISTRATIONS GRANTED

## JUNE 5, 1917.

116,872. ELECTRIC SIGNS. AMERICAN ADVERTISING ASSOCIATION, St. Louis, Mo.
Filed November 29, 1916. Serial No. 99,640. PUBLISHED FEBRUARY 13, 1917.

116,873. PREPARATION FOR TREATMENT OF KIDNEY AND BLOOD DISEASES. GREEN ASH, East Gadsden, Ala.
Filed February 10, 1917. Serial No. 101,283. PUBLISHED APRIL 3, 1917.

116,874. SALT, BLUING. AUSTIN, NICHOLS & CO., INC., Brooklyn and New York, N. Y.
Filed September 19, 1916. Serial No. 98,071. PUBLISHED APRIL 3, 1917.

116,875. MEDICINE IN TABLET FORM FOR THE TREATMENT OF KIDNEY AND BLADDER DISORDERS. ADOLFO ENRIQUE BESOSA, New York, N. Y.
Filed February 23, 1917. Serial No. 101,594. PUBLISHED APRIL 3, 1917.

116,876. CERTAIN NAMED CLOTHING AND PERSONAL WEAR. ANNA L. BLAKESLEE, Malden, Mass.
Filed August 10, 1916. Serial No. 97,238. PUBLISHED MARCH 27, 1917.

116,877. CLEANING FLUIDS. THE BLEECKER COMPANY, Hempstead, N. Y.
Filed February 19, 1917. Serial No. 101,476. PUBLISHED APRIL 3, 1917.

116,878. GLOVES AND MITTENS. THE BOSS MANUFACTURING COMPANY, Kewanee, Ill.
Filed March 2, 1917. Serial No. 101,826. PUBLISHED APRIL 3, 1917.

116,879. SOAP. A. BOURJOIS & CO., INC., New York, N. Y.
Filed January 15, 1916. Serial No. 92,222. PUBLISHED JANUARY 9, 1917.

116,880. RUBBER HEELS. JOHN H. BROWN, Marseilles, Ill.
Filed January 19, 1917. Serial No. 100,736. PUBLISHED APRIL 3, 1917.

116,881. FEET FOR HOSIERY. CARSON, PIRIE, SCOTT & CO., Chicago, Ill.
Filed January 19, 1916. Serial No. 92,231. PUBLISHED MARCH 27, 1917.

116,882. LIQUID FOR CLEANING VARNISHED AND ENAMELED SURFACES. GEORGE S. A. CASSIMUS, St. Louis, Mo.
Filed October 14, 1916. Serial No. 98,650. PUBLISHED APRIL 3, 1917.

116,883. WEIGHING-SCALES. JOHN CHATILLON & SONS, New York, N. Y.
Filed December 19, 1916. Serial No. 100,038. PUBLISHED APRIL 3, 1917.

116,884. DENTAL, MEDICAL, AND SURGICAL DISINFECTING FLUID. CLARKE-GUTHRIE CO., Philadelphia, Pa.
Filed October 23, 1916. Serial No. 98,828. PUBLISHED JANUARY 2, 1917.

116,885. MEDICINE FOR RHEUMATIC PAINS, GOUT, AND LUMBAGO. E. F. DAVIS, St. Louis, Mo.
Filed February 23, 1917. Serial No. 101,599. PUBLISHED APRIL 3, 1917.

116,886. CERTAIN NAMED CLOTHING FOR MEN AND WOMEN. JOHN P. DAVIS, Chicago, Ill.
Filed September 26, 1916. Serial No. 98,240. PUBLISHED MARCH 27, 1917.

116,887. CERTAIN NAMED ABRASIVE, DETERGENT, AND POLISHING MATERIALS. DURKEE-ATWOOD CO., Minneapolis, Minn.
Filed October 16, 1916. Serial No. 98,688. PUBLISHED MARCH 27, 1917.

116,888. METAL-POLISH FOR USE ON AUTOMOBILE-TRIMMINGS, HARNESS-TRIMMINGS, DOOR-KNOBS, AND BRASS. ECONOMIC PRODUCTS, INC., New York, N. Y.
Filed June 23, 1915. Serial No. 87,522. PUBLISHED APRIL 3, 1917.

116,889. ROMPERS AND CHILDREN'S SLEEPING-GARMENTS. ELDER MANUFACTURING CO., St. Louis, Mo.
Filed January 25, 1917. Serial No. 100,913. PUBLISHED MARCH 27, 1917.

116,890. SWEATERS AND SWEATER-COATS. ELDER MANUFACTURING CO., St. Louis, Mo.
Filed January 25, 1917. Serial No. 100,915. PUBLISHED MARCH 27, 1917.

116,891. NEGLIGÉE, WORK, AND UNDER SHIRTS. ELDER MANUFACTURING CO., St. Louis, Mo.
Filed January 25, 1917. Serial No. 100,917. PUBLISHED MARCH 27, 1917.

116,892. TONIC FOR HORSES AND LIVE STOCK. ROSS J. ELSON, New Haven, Ind.
Filed February 20, 1917. Serial No. 101,533. PUBLISHED APRIL 3, 1917.

116,893. PREPARATION FOR CURING APHTHÆ AND APHTHOUS FEVER. RAUL CARLOS ETCHEVERRY, Buenos Aires, Argentina.
Filed November 17, 1916. Serial No. 99,344. PUBLISHED APRIL 3, 1917.

116,894. WASHING COMPOUNDS IN THE FORM OF TABLETS. FARQUHAR-MOON MANUFACTURING COMPANY, Chicago, Ill.
Filed February 1, 1917. Serial No. 101,092. PUBLISHED MARCH 27, 1917.

116,895. ANTISEPTIC FLOOR-DRESSING. FREDERICK DISINFECTANT CO., Atlanta, Ga.
Filed February 17, 1917. Serial No. 101,443. PUBLISHED APRIL 3, 1917.

116,896. PREPARATIONS FOR THE TREATMENT OF CERTAIN NAMED DISEASES. ELBERT S. GLASS, Cleveland, Ohio.
Filed November 24, 1916. Serial No. 99,520. PUBLISHED APRIL 3, 1917.

116,897. METALLIC PARTICLES IN GRAIN, POWDERED, OR PULVERIZED FORM FOR RUBBING, POLISHING, AND GRINDING PURPOSES. THE GLOBE STEEL COMPANY, Mansfield, Ohio.
Filed December 30, 1916. Serial No. 100,255. PUBLISHED MARCH 27, 1917.

116,898. WOOLEN PIECE GOODS. HAGER, CLARK & CO., New York, N. Y.
Filed January 23, 1917. Serial No. 100,852. PUBLISHED MARCH 27, 1917.

116,899. TEXTILES—NAMELY, SHOE-CLOTH. HELBURN LEATHER COMPANY, Salem, Mass., assignor to Helburn Thompson Company, a Corporation of Massachusetts.
Filed January 24, 1917. Serial No. 100,892. PUBLISHED APRIL 3, 1917.

116,900. BREWED MALT BEVERAGES. HINCKEL BREWERY COMPANY, Albany, N. Y.
Filed December 14, 1916. Serial No. 99,940. PUBLISHED MARCH 27, 1917.

116,901. TALCUM POWDER. AURELIUS S. HINDS, Portland, Me.
Filed January 31, 1917. Serial No. 101,066. PUBLISHED APRIL 3, 1917.

116,902. HOSIERY. S. H. KRESS & COMPANY, New York, N. Y.
Filed August 26, 1915. Serial No. 88,822. PUBLISHED APRIL 3, 1917.

116,903. HOSIERY. S. H. KRESS & COMPANY, New York, N. Y.
Filed December 13, 1915. Serial No. 91,429. PUBLISHED APRIL 3, 1917.

116,904. CHEMISES MADE OF WOVEN MATERIAL. LEHMAN BROS. INC., New York, N. Y.
Filed February 8, 1916. Serial No. 92,716. PUBLISHED APRIL 3, 1917.

116,905. PREPARATION FOR THE TREATMENT OF RHEUMATISM. JOHN LEWIS, Iron River, Mich.
Filed January 15, 1917. Serial No. 100,625. PUBLISHED APRIL 3, 1917.

116,906. FABRIC GLOVES. LITTAUER BROTHERS, New York, N. Y.
Filed August 1, 1916. Serial No. 97,017. PUBLISHED APRIL 3, 1917.

116,907. CERTAIN PHARMACEUTICAL PREPARATIONS FOR TOILET PURPOSES. DANIEL LOWENSTEIN, New York, N. Y.
Filed October 4, 1916. Serial No. 98,416. PUBLISHED APRIL 3, 1917.

116,908. DYEWOOD EXTRACTS. MACANDREWS & FORBES COMPANY, Camden, N. J.
Filed February 17, 1917. Serial No. 101,451. PUBLISHED APRIL 3, 1917.

116,909. CATHARTICS. WILLIAM A. MCLEOD, South Bend, Ind.
Filed December 23, 1916. Serial No. 100,145. PUBLISHED APRIL 3, 1917.

116,910. SHEETS AND PILLOW-CASES. R. H. MACY & Co., New York, N. Y.
Filed Oct. 16, 1916. Serial No. 98,698. PUBLISHED MARCH 27, 1917.

116,911. SILKS IN THE PIECE. R. H. MACY & Co., New York, N. Y.
Filed October 16, 1916. Serial No. 98,700. PUBLISHED MARCH 27, 1917.

116,912. PERFUMES, TOILET WATERS, ROUGE, FACE-CREAMS, FACE AND SACHET POWDERS, AND DENTAL CREAM. MARICATTE ET CIE., Indianapolis, Ind.
Filed September 12, 1916. Serial No. 97,954. PUBLISHED APRIL 3, 1917.

116,913. COUPON-BOOKS OF ADDRESS-LABELS FOR USE ON ALL MANNER OF PACKAGES. CHANNING D. MEEKER, Bedford, Ohio.
Filed December 26, 1916. Serial No. 100,177. PUBLISHED MARCH 27, 1917.

116,914. LIGHT-WEIGHT RUBBERS. MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind.
Filed February 23, 1917. Serial No. 101,611. PUBLISHED MARCH 27, 1917.

116,915. LIGHT-WEIGHT RUBBERS. MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind.
Filed February 23, 1917. Serial No. 101,612. PUBLISHED MARCH 27, 1917.

116,916. LIGHT-WEIGHT RUBBERS. MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind.
Filed February 23, 1917. Serial No. 101,614. PUBLISHED MARCH 27, 1917.

116,917. COMPOSITION SOLES USED ON RUBBER AND WOOLEN FOOTWEAR. MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind.
Filed February 23, 1917. Serial No. 101,615. PUBLISHED MARCH 27, 1917.

116,918. SOFT DRINK OR BEVERAGE. NORTH WESTERN COMPANY, Chicago, Ill.
Filed March 6, 1917. Serial No. 101,936. PUBLISHED APRIL 3, 1917.

116,919. DEODORANT. PERIN, INC., New York, N. Y.
Filed January 17, 1917. Serial No. 100,682. PUBLISHED APRIL 3, 1917.

116,920. SILVER-POLISH. FREDERICK PINER, Los Angeles, Cal.
Filed October 6, 1915. Serial No. 89,689. PUBLISHED APRIL 3, 1917.

116,921. HOSIERY. RICE-STIX DRY GOODS COMPANY, St. Louis, Mo.
Filed December 11, 1915. Serial No. 91,402. PUBLISHED NOVEMBER 7, 1916.

116,922. LADIES' OUTER GARMENTS—VIZ., BLOUSES AND SPORT-COATS. SAMEK & LOBEL, New York, N. Y.
Filed December 26, 1916. Serial No. 100,183. PUBLISHED MARCH 27, 1917.

116,923. TENNIS-BALLS. THE SEAMLESS RUBBER COMPANY, New Haven, Conn.
Filed December 26, 1916. Serial No. 100,191. PUBLISHED MARCH 27, 1917.

116,924. LINIMENT FOR RHEUMATISM, SCALDS, BURNS, SPRAINS, AND BACKACHE. GEORGE J. SEIDENSPINNER, Cincinnati, Ohio.
Filed December 26, 1916. Serial No. 100,190. PUBLISHED APRIL 3, 1917.

116,925. REMEDY FOR LA GRIPPE, HAY-FEVER, ASTHMA, BRONCHITIS, COUGHS, AND STOMACH TROUBLES. THE S. SHEARER CO., Sinking Spring, Pa.
Filed February 21, 1917. Serial No. 101,580. PUBLISHED APRIL 3, 1917.

116,926. MEDICINES AND SPECIFICS FOR TREATING CERTAIN NAMED DISEASES. THE C. NELSON SMITH COMPANY, Milwaukee, Wis.
Filed May 24, 1915. Serial No. 86,867. PUBLISHED APRIL 3, 1917.

116,927. PERFUMES. FREDERICK STEARNS & CO., Detroit, Mich.
Filed February 5, 1917. Serial No. 101,181. PUBLISHED APRIL 3, 1917.

116,928. CERTAIN NAMED CHEMICALS AND PHARMACEUTICAL PREPARATIONS. STERLING PRODUCTS COMPANY, INC., Brooklyn, N. Y.
Filed January 12, 1917. Serial No. 100,560. PUBLISHED APRIL 3, 1917.

116,929. GROMETS, METAL WASHERS, RIVETS, NAILS, TACKS, AND ESCUTCHEON-PINS. EDWIN B. STIMPSON COMPANY, Brooklyn, N. Y.
Filed July 6, 1916. Serial No. 96,370. PUBLISHED JANUARY 30, 1917.

116,930. PREPARATION FOR USE IN THE TREATMENT FOR CONSTIPATION. THE TRACY COMPANY, INC., New London, Conn.
Filed January 22, 1917. Serial No. 100,832. PUBLISHED APRIL 3, 1917.

116,931. PREPARATION FOR USE IN THE TREATMENT FOR INDIGESTION. THE TRACY COMPANY, INC., New London, Conn.
Filed January 22, 1917. Serial No. 100,833. PUBLISHED APRIL 3, 1917.

116,932. LIGHT SHADES AND SCREENS MADE PRINCIPALLY BUT NOT WHOLLY OF GLASS. THOMAS GASKELL ALLEN, London, England.
Filed November 9, 1915. Serial No. 90,535. PUBLISHED APRIL 3, 1917.



116,933. MACHINERY-BELTING FORMED OF TEXTILE FABRIC. W. D. ALLEN MANUFACTURING COMPANY, Chicago, Ill.
Filed October 7, 1916. Serial No. 98,487. PUBLISHED APRIL 3, 1917.

116,934. CHEMICAL FIRE-EXTINGUISHERS. AMERICAN LA FRANCE FIRE ENGINE CO. INC., Elmira, N. Y.
Filed February 15, 1917. Serial No. 101,376. PUBLISHED MARCH 27, 1917.

116,935. CERTAIN NAMED ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES. CARL ANDERSON ELECTRIC CORPORATION, New York, N. Y.
Filed February 7, 1917. Serial No. 101,204. PUBLISHED MARCH 27, 1917.

116,936. COMPRESSED-FIBER SHEET-PACKING. ASBESTOS FIBRE & RUBBER CO., Trenton, N. J.
Filed December 11, 1916. Serial No. 99,833. PUBLISHED APRIL 3, 1917.

116,937. SILK PIECE GOODS. BENTLEY & TWOHEY SILK CO., New York, N. Y.
Filed September 11, 1916. Serial No. 97,893. PUBLISHED FEBRUARY 13, 1917.

116,938. HATS FOR MEN. F. BERG & Co., Orange, N. J.
Filed February 16, 1917. Serial No. 101,418. PUBLISHED APRIL 3, 1917.

116,939. RUBBER BOOTS AND SHOES. L. CANDEE & COMPANY, New Haven, Conn.
Filed June 12, 1913. Serial No. 71,059. PUBLISHED MARCH 27, 1917.

116,940. SOFT DRINK. CANTRELL & DAWSON, Guymon, Okla.
Filed January 31, 1917. Serial No. 101,060. PUBLISHED APRIL 3, 1917.

116,941. NECKTIES. CARTER & HOLMES, Chicago, Ill.
Filed February 1, 1917. Serial No. 101,085. PUBLISHED MARCH 27, 1917.

116,942. RUBBER TIRES FOR AUTOMOBILES AND OTHER VEHICLES. THE COLONIAL TYRE & RUBBER CO. INC., New York, N. Y.
Filed February 12, 1917. Serial No. 101,324. PUBLISHED APRIL 3, 1917.

116,943. ELECTRIC BATTERIES AND FLASH-LIGHTS. COLUMBIA ELECTRIC NOVELTY CORPORATION, New York, N. Y.
Filed February 15, 1917. Serial No. 101,389. PUBLISHED APRIL 3, 1917.

116,944. COAL. THE CONSOLIDATION COAL CO., Baltimore, Md.
Filed January 25, 1917. Serial No. 100,912. PUBLISHED APRIL 3, 1917.

116,945. SHOE STRINGS AND LACINGS, TAPES, AND GALLOONS. CORDO-HYDE COMPANY, Brockton, Mass.
Filed January 10, 1917. Serial No. 100,512. PUBLISHED APRIL 3, 1917.

116,946. LEATHER SHOES. CRADDOCK-TERRY COMPANY, Lynchburg, Va., and St. Louis, Mo.
Filed February 3, 1917. Serial No. 101,140. PUBLISHED MARCH 27, 1917.

116,947. MAGAZINE ISSUED SEMIMONTHLY. EARL STUDIOS, INC., New York, N. Y.
Filed January 3, 1917. Serial No. 100,331. PUBLISHED APRIL 3, 1917.

116,948. HOUSE ORGAN PUBLISHED INTERMITTENTLY. THE FARMERS' REVIEW, Chicago, Ill.
Filed December 2, 1916. Serial No. 99,678. PUBLISHED APRIL 3, 1917.

116,949. SETTINGS FOR PRECIOUS STONES. JOSEPH FRACKMAN COMPANY, INC., New York, N. Y.
Filed November 23, 1916. Serial No. 99,500. PUBLISHED MARCH 27, 1917.

116,950. FINGER-RINGS. GOLDSMITH, STERN & Co., New York, N. Y.
Filed February 1, 1917. Serial No. 101,094. PUBLISHED APRIL 3, 1917.

116,951. MAGAZINES ISSUED WEEKLY. FREDERICK C. GUNNING, New York, N. Y., assignor to Wid's Film & Film Folk, Inc., a Corporation.
Filed October 11, 1916. Serial No. 98,562. PUBLISHED MARCH 27, 1917.

116,952. AUTOMOBILE-HEATERS UTILIZING THE EXHAUST FROM EXPLOSIVE-ENGINES. THE HILL PUMP VALVE COMPANY, Chicago, Ill.
Filed January 26, 1917. Serial No. 100,960. PUBLISHED APRIL 3, 1917.

116,953. RAIN-COATS. FRANK W. HOWARD, New York, N. Y.
Filed February 19, 1917. Serial No. 101,490. PUBLISHED APRIL 3, 1917.

116,954. SIDEWALK GLASS LIGHTS. JEANNETTE GLASS CO., Jeannette, Pa.
Filed December 28, 1916. Serial No. 100,217. PUBLISHED APRIL 3, 1917.

116,955. LADIES' HATS AND BONNETS, TOQUES, CLOAKS, DRESSES, AND OUTER SUITS. JOSEPH, New York, N. Y.
Filed February 1, 1917. Serial No. 101,096. PUBLISHED MARCH 27, 1917.

116,956. CATALOGUES, FOLDERS, PRINTED BOOKS, VALENTINES, POST-CARDS, SHEET-MUSIC. S. S. KRESGE CO., Detroit, Mich.
Filed January 20, 1915. Serial No. 83,971. PUBLISHED APRIL 3, 1917.

116,957. CIGARS. ERNST LINDEN, Hamilton, Ohio.
Filed February 2, 1917. Serial No. 101,130. PUBLISHED APRIL 3, 1917.

116,958. PRINTING-PAPER AND WRITING-PAPER. HENRY LINDENMEYR & SONS, New York, N. Y.
Filed February 26, 1917. Serial No. 101,697. PUBLISHED APRIL 3, 1917.

116,959. CORNETS, TROMBONES, ALTOS, MELOPHONES, BARITONES, BASSES, AND SAXOPHONES. LYON & HEALY, Chicago, Ill.
Filed January 5, 1916. Serial No. 91,938. PUBLISHED APRIL 3, 1917.

116,960. MONTHLY PERIODICALS. MCKESSON & ROBBINS, INCORPORATED, New York, N. Y.
Filed January 27, 1917. Serial No. 100,995. PUBLISHED MARCH 27, 1917.

116,961. LADIES' DRESSES. MARION DRESS CO., New York, N. Y.
Filed February 21, 1917. Serial No. 101,572. PUBLISHED APRIL 3, 1917.

116,962. CATALOGUES OF NEWSPAPERS AND PERIODICALS. GEORGE W. MAY, Morgantown, W. Va.
Filed November 8, 1916. Serial No. 99,171. PUBLISHED APRIL 3, 1917.

116,963. CARDED AND COMBED COTTON YARNS. MAYS MILLS, INC., Mayworth, N. C.
Filed January 8, 1917. Serial No. 100,438. PUBLISHED APRIL 3, 1917.

116,964. DUPLICATING-INKS. MEUSER & MEUSER, Chicago, Ill.
Filed January 10, 1917. Serial No. 100,522. PUBLISHED APRIL 3, 1917.

116,965. HAIR-NETS. ANDERSEN MEYER & COMPANY, LTD., New York, N. Y.
Filed February 12, 1917. Serial No. 101,316. PUBLISHED MARCH 27, 1917.

116,966. CERTAIN NAMED TIRES, BELTING, HOSE, AND TIRE-SHOES. THE MIDLAND TIRE & RUBBER CO., Cleveland, Ohio.
Filed February 3, 1917. Serial No. 101,153. PUBLISHED MARCH 27, 1917.

116,967. CIGARETTES. DAVID DER H. MINASSIAN, New York, N. Y.
Filed January 15, 1917. Serial No. 100,626. PUBLISHED MARCH 13, 1917.

116,968. MONTHLY PERIODICAL. THE NATIONAL PETROLEUM PUBLISHING COMPANY, Cleveland, Ohio.
Filed October 16, 1916. Serial No. 98,702. PUBLISHED APRIL 3, 1917.

116,969. VELVETS AND VELVETEENS. NEW YORK MILLS CORPORATION, New York Mills, N. Y.
Filed April 1, 1916. Serial No. 94,040. PUBLISHED NOVEMBER 14, 1916.

116,970. CERTAIN NAMED WOMEN'S CLOTHING. NIAGARA SILK MILLS, North Tonawanda, N. Y.
Filed January 13, 1917. Serial No. 100,587. PUBLISHED MARCH 27, 1917.

116,971. WOOD, COAL, GAS, OIL, AND VAPOR STOVES AND RANGES. THE OHIO STATE STOVE CO., Columbus, Ohio.
Filed September 5, 1916. Serial No. 97,807. PUBLISHED MARCH 27, 1917.

116,972. WATCHCASES AND WATCH-MOVEMENTS. I. OLLENDORFF CO., New York, N. Y.
Filed February 24, 1917. Serial No. 101,658. PUBLISHED APRIL 3, 1917.

116,973. WATCHCASES AND WATCH-MOVEMENTS. I. OLLENDORFF CO., New York, N. Y.
Filed February 24, 1917. Serial No. 101,659. PUBLISHED APRIL 3, 1917.

116,974. NON-ALCOHOLIC BEVERAGE SOLD AS A SOFT DRINK. OMAHA BEVERAGE COMPANY, Omaha, Nebr.
Filed January 22, 1917. Serial No. 100,820. PUBLISHED MARCH 13, 1917.

116,975. BARRETTES. PACIFIC NOVELTY COMPANY, New York, N. Y.
Filed November 2, 1916. Serial No. 99,047. PUBLISHED JANUARY 2, 1917.

116,976. PAINT-THINNING MATERIALS. THE PEERLESS THINNER COMPANY, Baltimore, Md.
Filed February 27, 1917. Serial No. 101,754. PUBLISHED APRIL 3, 1917.

116,977. CIGARETTES. PUPULIDY BROTHERS, New York, N. Y.
Filed June 22, 1915. Serial No. 87,507. PUBLISHED APRIL 3, 1917.

116,978. LEATHER BELTING. LOOVA A. RANIVILLE, Grand Rapids, Mich.
Filed January 29, 1917. Serial No. 101,018. PUBLISHED APRIL 3, 1917.

116,979. MONTHLY MAGAZINE OR PERIODICAL. REALTY SERVICE PUBLISHING CO., Newark, N. J., by change of name to Realty Publishing Co., Newark, N. J., a Corporation of New Jersey.
Filed October 16, 1916. Serial No. 98,705. PUBLISHED MARCH 27, 1917.

116,980. BUTTONS FOR ATTACHMENT TO WEARING-APPAREL. ROCHESTER BUTTON COMPANY, Rochester, N. Y.
Filed January 3, 1917. Serial No. 100,339. PUBLISHED APRIL 3, 1917.

116,981. DRIERS FOR DRIVING OFF FREE MOISTURE FROM VARIOUS MATERIALS. RUGGLES-COLES ENGINEERING CO., New York, N. Y.; Chicago, Ill., and York, Pa.
Filed February 10, 1917. Serial No. 101,301. PUBLISHED APRIL 3, 1917.

116,982. TOILET-PINS, HOOKS, EYES, SAFETY-PINS, SHOE-LACES, CORSET-LACES, SNAP-FASTENERS, DRESSING-COMBS. SAMSTAG & HILDER BROS., New York, N. Y.
Filed January 21, 1916. Serial No. 92,304. PUBLISHED APRIL 3, 1917.

116,983. CORSET-LACES, LINGERIE-BRAID, TOILET-PINS, SAFETY-PINS, SOUTACHE BRAIDS, PIN-CUSHIONS, DOLL-CUSHIONS. SAMSTAG & HILDER BROS., New York, N. Y.
Filed January 26, 1916. Serial No. 92,425. PUBLISHED APRIL 3, 1917.

116,984. RAWHIDE AND LACE LEATHER. CHAS. A. SCHIEREN COMPANY, New York, N. Y.
Filed December 8, 1915. Serial No. 91,330. PUBLISHED MARCH 27, 1917.

116,985. SILK CLOTH IN THE PIECE, BOTH KNITTED AND TEXTILE. SCHUYLKILL SILK MILLS, Reading, Pa.
Filed December 27, 1916. Serial No. 100,212. PUBLISHED MARCH 27, 1917.

116,986. INNER TUBES FOR AUTOMOBILE AND MOTOR-CYCLE PNEUMATIC TIRES. SEMPLE RUBBER COMPANY, Trenton, N. J.
Filed January 13, 1917. Serial No. 100,593. PUBLISHED MARCH 27, 1917.

116,987. CLOCKS. SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed December 26, 1916. Serial No. 100,184. PUBLISHED MARCH 27, 1917.

116,988. CLOCKS. SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed December 26, 1916. Serial No. 100,185. PUBLISHED MARCH 27, 1917.

116,989. WOMEN'S, MISSES', JUNIORS', and GIRLS' SUITS AND COATS. MORRIS R. SILVERMAN, New York, N. Y.
Filed February 23, 1917. Serial No. 101,620. PUBLISHED APRIL 3, 1917.

116,990. LADIES' SHIRT-WAISTS. STERNFELD AND POLIN, Philadelphia, Pa.
Filed February 9, 1917. Serial No. 101,278. PUBLISHED APRIL 3, 1917.

116,991. LOGS. STEWART K. TAYLOR, Mobile, Ala.
Filed January 22, 1917. Serial No. 100,831. PUBLISHED MARCH 27, 1917.

116,992. LADDERS. THE JOHN S. TILLEY LADDERS CO., Watervliet, N. Y.
Filed April 23, 1915. Serial No. 86,165. PUBLISHED DECEMBER 14, 1915.

116,993. DESIGNS FOR PRINT-CLOTH, WALL-PAPER, AND THE LIKE. TOEPFER & SCHROFF, INC., New York, N. Y.
Filed February 7, 1917. Serial No. 101,217. PUBLISHED MARCH 20, 1917.

116,994. TABLET TRITURATES, COMPRESSED TABLETS, AND CHEMICAL ELEMENTS IN LOZENGE FORM FOR CERTAIN NAMED USES. THE TRACY COMPANY, INC., New London, Conn.
Filed January 22, 1917. Serial No. 100,834. PUBLISHED APRIL 3, 1917.

116,995. PREPARATION FOR USE IN THE TREATMENT FOR DYSPEPSIA. THE TRACY COMPANY, INC., New London, Conn.
Filed January 22, 1917. Serial No. 100,835. PUBLISHED APRIL 3, 1917.

116,996. FINGER-RINGS. THE TRAUB MANUFACTURING COMPANY, Detroit, Mich.
Filed February 26, 1917. Serial No. 101,716. PUBLISHED APRIL 3, 1917.

116,997. VETERINARY OINTMENT. TROY CHEMICAL CO., Binghamton, N. Y.
Filed February 5, 1917. Serial No. 101,184. PUBLISHED APRIL 3, 1917.

116,998. CORSETS AND BRASSIÈRES. TREO COMPANY, INC., New York, N. Y.
Filed February 28, 1917. Serial No. 101,807. PUBLISHED APRIL 3, 1917.

116,999. PRINTING, WRITING, AND WRAPPING PAPER. THE UNION PAPER & TWINE COMPANY, Cleveland, Ohio.
Filed February 19, 1917. Serial No. 101,522. PUBLISHED APRIL 3, 1917.

117,000. BEER. UNITED BREWERIES CO., Chicago, Ill.
Filed March 6, 1917. Serial No. 101,945. PUBLISHED APRIL 3, 1917.



117,001. LACQUER AND THINNERS. UNITED STATES LACQUER COMPANY, Brooklyn, N. Y.
Filed December 7, 1916. Serial No. 99,780. PUBLISHED APRIL 3, 1917.

117,002. RUBBERIZED AIRCRAFT FABRICS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed February 3, 1917. Serial No. 101,160. PUBLISHED MARCH 27, 1917.

117,003. RUBBER BOOTS AND SHOES AND FABRIC SHOES HAVING RUBBER SOLES ATTACHED THERETO BY VULCANIZATION. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed February 15, 1917. Serial No. 101,413. PUBLISHED MARCH 27, 1917.

117,004. RUBBER BOOTS AND SHOES AND FABRIC SHOES HAVING RUBBER SOLES ATTACHED THERETO BY VULCANIZATION. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed February 15, 1917. Serial No. 101,414. PUBLISHED MARCH 27, 1917.

117,005. RUBBER BOOTS AND SHOES AND FABRIC SHOES HAVING RUBBER SOLES ATTACHED THERETO BY VULCANIZATION. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed February 15, 1917. Serial No. 101,416. PUBLISHED MARCH 27, 1917.

117,006. COUGH-DROPS. THE VANOLA COMPANY, Winston-Salem, N. C.
Filed February 23, 1917. Serial No. 101,630. PUBLISHED APRIL 3, 1917.

117,007. BOOTS AND SHOES MADE OF LEATHER AND CANVAS. VELVET GRIP SHOE CO. INC., New York, N. Y.
Filed November 18, 1916. Serial No. 99,391. PUBLISHED MARCH 27, 1917.

117,008. METAL SAUCEPAN. THE WAGNER MANUFACTURING COMPANY, Sidney, Ohio.
Filed February 28, 1917. Serial No. 101,812. PUBLISHED APRIL 3, 1917.

117,009. CERTAIN NAMED PAPER AND STATIONERY. WANDERER-WERKE VORM. WINKLHOFER & JAENICKE AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany.
Filed April 12, 1913. Serial No. 69,764. PUBLISHED MARCH 27, 1917.

117,010. CORSETS. THE WARNER BROS. CO., Bridgeport, Conn.
Filed February 17, 1917. Serial No. 101,464. PUBLISHED APRIL 3, 1917.

117,011. CIGARS. THE WEIDEMAN CO., Cleveland, Ohio.
Filed February 14, 1917. Serial No. 101,375. PUBLISHED APRIL 3, 1917.

117,012. PREPARATION FOR THE TREATMENT OF CERTAIN NAMED DISEASES. MAX W. WEINBERG, Newark, N. J.
Filed September 27, 1916. Serial No. 98,278. PUBLISHED APRIL 3, 1917.

117,013. CARBONATED SOFT DRINKS AND SYRUP THEREFOR. WILBRAHAM SPRINGS CO., Springfield, Mass.
Filed February 17, 1917. Serial No. 101,467. PUBLISHED APRIL 3, 1917.

117,014. NON-INTOXICATING CEREAL BEVERAGE SOLD AS A SOFT DRINK. WILLOW SPRINGS BREWING CO., Omaha, Nebr.
Filed February 23, 1917. Serial No. 101,632. PUBLISHED APRIL 3, 1917.

117,015. FINGER-RINGS, LAVALLIÈRES, BRACELETS, AND BROOCHES. ALBERT WISS, Peekskill, N. Y.
Filed January 29, 1917. Serial No. 101,028. PUBLISHED APRIL 3, 1917.

117,016. FRUIT AND VEGETABLE COMPOUND FOR FLAVORING SOFT DRINKS. RIMAL ZIEVE, Minneapolis, Minn.
Filed February 19, 1917. Serial No. 101,527. PUBLISHED APRIL 3, 1917.

# TRADE-MARK REGISTRATIONS CANCELED.

80,014. BLENDED COFFEE AND COCOA. SAMUEL ZECHNOWITZ, New York, N. Y.
Registered October 25, 1910. Canceled May 17, 1917.

114,714. SAFETY-FUSE. COAST MANUFACTURING & SUPPLY CO., Livermore, Cal.
Registered January 2, 1917. Canceled May 5, 1917.

114,715. SAFETY-FUSE. COAST MANUFACTURING & SUPPLY CO., Livermore, Cal.
Registered January 2, 1917. Canceled May 5, 1917.

# LABELS

## REGISTERED JUNE 5, 1917.

20,136.—*Title:* "ANAHEIM SUPREME." (For Oranges.) ANAHEIM CITRUS FRUIT ASSOCIATION, Anaheim, Cal. Filed May 14, 1917.

20,137.—*Title:* "POWERENE." (For a Fuel Intensifier and Decarbonizer.) W. PORTER BARNES, Santa Rosa, Cal. Filed April 30, 1917.

20,138.—*Title:* "TWIN-SIX." (For Electric Batteries.) C. F. BURGESS LABORATORIES, Madison, Wis. Filed May 4, 1917.

20,139.—*Title:* "BURGESS BATTERIES FULL OF PEP." (For Electric Batteries.) BURGESS BATTERY COMPANY, Madison, Wis. Filed May 2, 1917.

20,140.—*Title:* "SERRA CALIFORNIA RIPE OLIVES." (For Olives.) CALIFORNIA ASSOCIATED OLIVE GROWERS, INC., San Francisco, Cal. Filed May 23, 1917.

20,141.—*Title:* "DODGE." (For Canned Oysters.) DODGE, SWEENEY & CO., San Francisco, Cal. Filed May 14, 1917.

20,142.—*Title:* "ELKO." (For a Non-Intoxicating Beverage.) ELK BREWING CO., Kittanning, Pa. Filed May 14, 1917.

20,143.—*Title:* "DIPLOMACY CHOCOLATES." (For Chocolate Candy.) GEO. HAAS & SONS. Filed May 16, 1917.

20,144.—*Title:* "YOUGHURT BULGARIAN FERMENT." (For Bottled Fermented Milk.) KNUDSEN'S LABORATORY, Los Angeles, Cal. Filed May 22, 1917.

20,145.—*Title:* "LADY LU'S LAXATIVE." For Cough-Syrup.) LUCINDA C. HUTCHINS, Philadelphia, Pa. Filed May 14, 1917.

20,146.—*Title:* "NEO-TONO." (For a Medicinal Tonic.) NEO-TONO MEDICINE COMPANY, Mayaquez, Porto Rico. Filed March 19, 1917.

20,147.—*Title:* "GERMICIDE OINTMENT." (For an Ointment.) OWL DRUG CO., Davenport, Okla. Filed April 25, 1917.

20,148.—*Title:* "SANNA." (For Cheese.) SANNA CO., INC., New York, N. Y. Filed May 7, 1917.

20,149.—*Title:* "PRIDE OF SCOTLAND COUNTY." (For Cantaloups.) HARRY WEINSTEIN, New York, N. Y. Filed February 28, 1917.

20,150.—*Title:* "WINO MARYAŃSKIE." (For Bitter Tonic.) HONYTONE MANUFACTURING CO., Boston, Mass. Filed March 9, 1917.

# PRINTS

## REGISTERED JUNE 5, 1917.

4,702.—*Title:* "KELLOGG'S WILL ALWAYS MAINTAIN QUALITY. YOU CAN BE SURE OF KELLOGG'S—THE ORIGINAL TOASTED CORN FLAKES—THE FLAKES THAT ARE DELICATE AND THIN. WHATEVER THE TIMES OR THE TENDENCY, THE QUALITY OF KELLOGG'S HAS OUR PLEDGE AND WARRANTY—THE FINEST CORN FLAKES POSSIBLE TO PRODUCE." (For Toasted Corn Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed May 23, 1917.

4,703.—*Title:* "JAP ROSE WITH THE TRUE ROSE ODOR." (For Talcum Powder.) JAMES S. KIRK & COMPANY, Chicago, Ill. Filed May 17, 1917.

4,704.—*Title:* "A SEAL OF SATISFACTION." (For Furniture.) C. S. REUTER, New York, N. Y. Filed March 30, 1917.

4,705.—*Title:* "WARD'S TIP-TOP BREAD." (For Bread.) WARD BAKING CO., New York, N. Y. Filed May 23, 1917.



# DECISIONS

OF THE

# COMMISSIONER OF PATENTS

AND OF

# UNITED STATES COURTS IN PATENT CASES.

## COMMISSIONER'S DECISIONS.

SAUNDERS *v.* NECKERMAN.

*Decided May 15, 1916.*

1. INTERFERENCE—PRIORITY—PIPE-DRAWING APPARATUS.

Where N. relied on his record date, December 14, 1910, priority awarded S., who reduced to practice by embodying the invention in issue in an operative machine prior to March 30, 1910.

2. SAME—SAME—REDUCTION TO PRACTICE.

Where the issue called for automatic engagement of the tong-reins by the draw-chain dogs and it is contended that the device was not automatic prior to the addition of a latch, subsequently added, to hold the reins in position for engagement, *Held* that the device in issue was no less automatic if the tongs were held in position to be engaged by the welder than is held by the latch. The reduction to practice of the issue was complete without the latch.

PIPE-DRAWING APPARATUS.

APPEAL from Examiners-in-Chief.

*Mr. Charles C. Linthicum* for the appellant.

*Mr. F. N. Barber* and *Messrs. Bakewell, Byrnes & Parmelee* for the appellee.

WHITEHEAD, *Assistant Commissioner:*

This is an appeal by Saunders from a decision of the Examiners-in-Chief reversing the decision of the Examiner of Interferences and awarding priority to Neckerman.

The invention in controversy relates to pipe-drawing apparatus, and the issue of the interference reads as follows:

1. In a pipe-drawing apparatus, a draw-bench, an endless draw-chain having travel thereon, a welding die, skelp-engaging tongs, and one or more forked dogs having endless travel with the draw-chain and adapted to engage the end of said tongs while the chain is traveling and pull the skelp through the welding die.

2. In a pipe drawing apparatus, a draw bench, an endless draw chain having travel thereon, a welding die, skelp engaging tongs and means having endless travel with the draw chain and adapted to engage the end of said tongs while the chain is traveling and pull the skelp through the welding die.

3. Pipe-drawing apparatus having tongs by which the pipe skelp is gripped and drawn through the welding bell comprising a draw-bench having an endless chain, means for actuating said chain, and means on the chain adapted to automatically engage with the tong reins and draw skelp gripped by the tongs lengthwise over the draw-bench.

4. Pipe drawing apparatus having tongs by which the pipe skelp is gripped and drawn through the welding bell comprising a draw-bench having an endless chain thereon, means for continuously driving the chain, and means automatically engaging with the tong reins adapted to grapple with the reins when the tongs are placed in position on the draw-bench and draw skelp in the grip of the tongs lengthwise over the draw-bench.

Neckerman has taken no testimony and is therefore restricted to his filing date, December 14, 1910, for his date of conception and constructive reduction to practice.

The Examiner of Interference held that the proofs offered on behalf of Saunders were sufficient to establish that he had reduced the invention to practice prior to Neckerman's filing date. The Examiners-in-Chief held that Saunders had established neither conception nor reduction to practice prior to that date.

In the prior processes of drawing pipe there was positioned in front of the furnace a draw-bench of considerable length, running longitudinally of which was an endless chain. A welder, who was stationed near this draw-bench, reached into the furnace with a pair of tongs, seized upon a piece of skelp, the edges of which had been heated to a welding temperature, placed a welding-bell over the tongs, and threw the tong-reins into position over the endless chain. Thereupon a boy known as the hook-runner placed a hook over the end of the tong-reins and into engagement with a link of the endless chain, so that by the motion of the chain the skelp was drawn through the welding-bell and the pipe formed. The hook-runner ran alongside of the draw-bench with his hand upon the hook until the pipe had been drawn entirely through the welding-bell. He then released the hook and returned to the other end of the draw-bench and repeated the operation. The pipe which had been thus drawn was rolled into a position where it passed through the sizing-rolls. The object of the present invention was to dispense with the hook-runner boy and provide automatic means for connecting the tongs and the draw-chain.

Saunders testifies that he conceived the invention in October, 1909, when they were having trouble with the hooker boys, and Hensen testifies that at that time Saunders told him that he thought he could do away with the hooker boys and that he wanted a sketch made of a forked hook which could be put into the chain, so the welder could let go of his end of the tongs and the hook would come around and catch the tongs automatically.

The testimony shows that the draw-bench at the No. 6 furnace at the national works of the National Tube Company was changed to incorporate Saunders's idea in the last week of March, 1910. A new chain provided with hooks was placed on the bench. These hooks carried rollers at their prongs, and means for guiding the chain on its return path underneath the bench was also provided. Two motors were installed, one for driving the chain and one for running the sizing-rolls, instead of the single

motor which was formerly employed on that bench. It also appears that this draw-bench was first tested on the day run of March 30, 1910, and that about three thousand pieces of pipe were produced.

The Examiners-in-Chief held that the records introduced in evidence indicated that the purpose of using separate motors to drive the chain and the sizing-rolls was in order that the chain might be stopped and started for each piece of pipe; that the testimony did not show that the chain was run continuously or that hooker boys were not subsequently used even with the chain having the hooks thereon; that it was not established that the device operated successfully until after an additional attachment was placed thereon, and that it was not shown that this attachment was installed before Neckerman's filing date.

The additional attachment was a device for holding the tong-reins in position at the time the hook came into position to seize them. It is shown in Saunders's application and consisted of a latch pivoted at the side of the draw-bench, attached to a rod running the length thereof and provided at its other end with a handle whereby it could be manually turned over the tongs when they were placed in position.

It is contended by Neckerman that the issue requires that the chain should be run continuously and the tong-reins automatically seized by the hook; that the testimony does not show that the chain was run continuously, and that the device did not operate automtically, since it was necessary either that the tong-reins be held in position by the latch above referred to or by the welder with another pair of tongs.

The contention as to the non-continuous running of the chains is based upon certain letters and shop orders which are in evidence, which state that the separate motor was installed for the chain in order that the chain might be stopped and started for each plate. The contention as to the non-automatic feature is based on the testimony of Snyder, who states (X-Q. 56) that it was seldom that more than one tong-hook could pass without catching, since the welder would take the tongs that he was about to use and hold the tongs which were ready for drawing in position so that the next tong-hook would grasp the tong-handles.

The means for holding the tongs in position is not made an element of the claims in issue, and it is not seen that the device is any less automatic if the tongs were held in position by the welder than it would be if the tongs were held in position by the device shown in Saunders's drawing, which is turned into position manually. Claims 3 and 4, however, which refer to the automatic engagement of the hook with the tong-rings, were added to the issue of the interference on Neckerman's own motion.

None of the witnesses states positively that the chain was run continuously. Saunders, however, testifies (Q. 16) that Snyder in writing the letter of December 20, 1909, which is in evidence, had the idea that it was necessary to stop the chain for each piece of pipe; but this was not the idea of the invention, and the intention was to have the chain running continuously, and both he and Snyder testify that the reason for providing the individual drives was so that if a defective pipe were produced the chain might be stopped without stopping the sizing-rolls.

Furthermore, the testimony of both Snyder and James W. Duncan indicates that the chain was run continuously, since they testify that sometimes the hook would go by the tongs without catching, and Snyder states that the welder had in some instances to hold the pipe in position with the next pair of tongs so that the hook would grasp the tong-handles. It is not seen that there would have been any trouble on this line if the chain had been run intermittently, since then the hooks would have been stationary at the time the tongs were laid on the chain and there would have been no necessity for holding the tong-reins in position.

It also appears that trouble was had with the rollers on the ends of the hooks, due to the fact that the pins upon which these rollers were mounted broke. The fact that this was avoided by dispensing with the rollers and using a different form of hook does not render the device any the less a reduction to practice. The rollers were merely for guiding the chain and were dispensed with because the pins wore out quickly.

It is argued that the testimony does not show that the hooker boys were not employed after the hooks were placed on the chains and that the records introduced in evidence would indicate that after various tests of the device it was found unsatisfactory and the hooker boys were retained. There is nothing, however, in the record to suggest that this was done except the statement of George Duncan on cross-examination that the old form of hook-runner hooks could be used on the present draw-chains.

The testimony shows that a large number of pieces of pipe were made on the first run with the hooks on the chains, and while this number is smaller than the number of pieces made on prior runs it appears that subsequently about the average number of pieces of pipe were made. That the chain was being used with the hooks thereon is clearly shown by the excerpts taken from Saunders's Exhibit No. 13, which is the daily furnace-record. There are various entries in this record showing that the hooks were in use between March, 1910, and the latter part of November, 1910.

It must be held, therefore, that Saunders has established an actual reduction to practice of the invention prior to Neckerman's filing date and that he is entitled to an award of priority.

The decision of the Examiners-in-Chief is reversed, and priority is awarded to Augustus M. Saunders.





## DECISIONS OF THE U. S. COURTS.

### Court of Appeals of the District of Columbia.

IN RE GOLD.

*Decided May 22, 1916.*

1. PATENTABILITY—APPARATUS FOR STEAM-HEATING.
   Claims for a car-heating apparatus *Held* unpatentable in view of the prior art.
2. SAME—SAME.
   The claims appealed are to substantially the same invention in terms of apparatus instead of process that was before the court in the case *in re Gold*, (38 App. D. C., 544; 180 O. G., 600,) and the decision there must be held controlling here.

*Mr. A. C. Fraser, Mr. E. E. Myers, Mr. L. S. Bacon,* and *Mr. J. H. Milans* for the appellant.

*Mr. W. R. Ballard* for the Commissioner of Patents.

VAN ORSDEL, *J.:*

This appeal is from the decision of the Commissioner of Patents rejecting applicant's claims for patent, of which the following are illustrative:

1. In a car-heating apparatus, the combination with a train-pipe and a radiator in the car with an intervening admission valve, and an outlet valve at the discharge from the radiator, of thermostatic means for controlling said valves, and manually operated means for rendering either valve inoperative whereby the heating system is convertible at will into an admission-pipe-pressure system or an atmospheric-pressure system.

3. In a car-heating apparatus, the combination with a train-pipe and a radiator in the car with an intervening admission valve, and an outlet valve at the discharge from the radiator, of thermostatic means for operating said valves located below the car in the path of the radiator discharge and subject to the temperature of said discharge and of the atmosphere outside of the car, and manually operated means for determining the control of one or the other of said valves by said thermostatic means, whereby the heating system is convertible at will into an admission-pipe-pressure system or an atmospheric-pressure system.

8. In a car-heating apparatus, the combination with a train-pipe and a radiator in the car, with an intervening admission valve, and an outlet valve at the discharge from the radiator, of a single thermostat with connections for controlling either of said valves alone, and manually operated means for determining which valve shall be controlled by said thermostat, comprising a handle movable between indicating marks corresponding respectively to the position for maintaining admission-pipe pressure and to the position for maintaining atmospheric pressure, whereby the system is convertible at will from either condition to the other without requiring adjustment.

Each of the tribunals of the Patent Office held the claims unpatentable in view of a patent to one Weber, issued May 14, 1899. Other patents are cited, but they are pertinent only as to minor details. The present case belongs to a long series of litigation in the Patent Office and this court. During the pendency of an interference between this applicant and one Fulton, involving the present invention, a demonstration of the Weber patent was made at Jersey City, N. J., at which the Primary Examiner in charge of applications in this art in the Patent Office was present. The Examiner embraced his conclusions in an affidavit which appears in this record and has figured extensively in the other litigation to which reference has been made.

Since the Jersey City demonstration of the Weber structure in December, 1910, this invention has been held unpatentable on the strength of the Weber patent six successive times,—by the three tribunals below in the Fulton-Gold case, and by the same tribunals in the present *ex parte* proceeding by Gold.

The issue of the Fulton-Gold interference was as follows:

In combination, an admission pipe carrying a supply of steam at pressure greater than atmospheric, and a steam heating system including an admission valve and an exhaust valve, both under automatic control by a single controller, and means for converting said system into an admission-pipe pressure system or an atmospheric-pressure system at will.

Substantially the same invention in terms of process, instead of apparatus, was before this court in interference in the case of *Egbert H. Gold* v. *Edward E. Gold*, (34 App. D. C., 229; 150 O. G., 570,) in which we affirmed the Commissioner in awarding priority to Edward E. Gold, the present applicant. Egbert H. Gold then prosecuted his claims for patent *ex parte*. The claims were rejected by all the tribunals of the Patent Office and, on appeal, by this court. (*In re Gold*, 38 App. D. C., 544; 180 O. G., 606.) In each case the rejection turned on the Weber patent.

In matter of adjustment the Weber structure and the one before us are very similar. Each contains an inlet and an outlet valve, and each is controlled by a single thermostat at the exhaust end of the system. Each operates the withdrawal of the valves from the control of the thermostat action by means of screws. Appellant regulates the operation of the valves by a handle, the extent of the movement of which is indicated on a dial; while the Weber structure shows a thumb-screw, the extent of the movement of which is regulated by adjustable jam-nuts shown in the drawing and referred to in the Examiner's affidavit of what was disclosed in the Jersey City test. Indeed, appellant's claim to patentability resolves itself to the admission of his counsel that—

the distinctive feature of appellant's invention is that the apparatus is convertible by a simple and practically instantaneous operation from the one extreme condition to the other.

With the jam-nuts mechanically adjusted, the conversion may be operated with equal rapidity in the Weber device.

Stress, however, is laid upon the fact that in the applicant's device the thermostat is located beyond the outlet-valve in the path of the radiator discharge and subject to the temperature of the atmosphere outside of the car. This point is conclusively disposed of by the Board of Examiners-in-Chief, as follows:

The patent to McElroy (April 7, 1908), discloses a car heating system in which the inlet and outlet valves are operated by a thermostat which is located beyond the outlet valve in the path of the radiator discharge and subject to the temperature of the atmosphere outside of the car. It is believed that claims 4 and 5 set forth nothing which is inventive in view of Weber, taken in connection with McElroy. The applicant points out that the McElroy patent alone does not satisfy these claims but this does not invalidate the same as a reference. The question is whether the addition to the Weber construction of the special features above mentioned which are disclosed by McElroy would amount to invention. We find no basis for the conclusion that it would.

Applicant has attempted to overcome the ruling of this court in the Egbert H. Gold case by some additional affidavits as to Weber's patent and his claims as distinguished from the claims before us, in that Weber did not have in mind an interconvertible system. This is not important.

A patentee who is the first to make an invention is entitled to his claim for all the uses and advantages which belong to it. (*Stow v. Chicago*, 104 U. S., 547, 550.)

It was also said in *Roberts* v. *Byer* (91 U. S., 150, 157) that—

It is no new invention to use the old machine for a new purpose. The inventor of a machine is entitled to the benefit of all the uses to which it can be put, no matter whether he had conceived the idea of the use or not.

The tribunals below were unanimous in holding the claims anticipated by the Weber patent. The issue here is not substantially different from the case of *in re Gold*, *supra*, where we held the Egbert H. Gold claim anticipated by the Weber structure as disclosed in the Jersey City test. The decision in that case must be held as controlling here.

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify these proceedings as by law required.

Affirmed.

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## Court of Appeals of the District of Columbia.

NECKERMAN *v.* SAUNDERS.

*Decided January 9, 1917.*

1. INTERFERENCE—PRIORITY—REDUCTION TO PRACTICE.
   Where N. relied on his record date, priority was awarded to S., who reduced the invention stated in the issue to practice in an operative machine prior to N.'s record date.
2. SAME—SAME—AUXILIARY DEVICES NOT IN ISSUE.
   Where S., having successfully operated the invention stated in issue prior to March 30, 1910, subsequently conceived an additional device, a holddown, to which claims not included in the interference have been allowed, N.'s contention that there would be no reduction to practice without the addition of the holddown is overruled. Since the holddown is not an element of the issue, the successful operation of a machine equipped as the S. machine was equipped prior to the addition of the holddown device constituted reduction to practice of the claims of the issue.

*Mr. C. P. Byrnes* and *Mr. G. H. Parmelee* for the appellant.

*Mr. C. C. Linthicum* for the appellee.

ROBB, *J.*:

Appeal from a decision of the Patent Office in an interference proceeding in which priority of invention was awarded Saunders.

The invention relates to a pipe-drawing apparatus and is expressed in four counts, of which we reproduce the 1st and 4th:

1. In a pipe-drawing apparatus, a draw-bench, an endless draw chain having travel thereon, a welding die, skelp-engaging tongs, and one or more forked dogs having endless travel with the drawchain and adapted to engage the end of said tongs while the chain is traveling and pull the skelp through the welding die.

4. Pipe drawing apparatus having tongs by which the pipe skelp is gripped and drawn through the welding bell comprising a draw bench having an endless chain thereon, means for continuously driving the chain, and means automatically engaging with the tong reins adapted to grapple with the reins when the tongs are placed in position on the draw-bench and draw skelp in the grip of the tongs lengthwise over the draw-bench.

The Examiner of Interferences thus describes the prior art and the invention of the issue:

In the process of pipe-drawing, a strip of metal heated in the furnace and known as a skelp, is drawn through a die into the hollow cylindrical form of the finished pipe. The drawing apparatus, old in the art, comprised a draw-bench with one end adjacent the furnace containing the heated skelp, an endless chain having travel upon the draw bench, and the welding die adjacent the furnace end of the bench and through which the skelp is drawn. Tongs are attached to the skelp, the reins of which are, in turn, attached to the draw chain, and thereby the skelp is drawn through the die until the complete pipe is formed. Heretofore, the end of the tong rein was manually attached to the endless chain on the draw-bench by an attendant. The object of the present invention is to provide an automobile attaching means so as to dispense with the operator performing this duty. This automatic means, as disclosed in the applications of both parties, comprises forked dogs upon the draw-chain arranged in position to engage the button upon the end of the tong rein and in the continued travel of the chain to exert the pulling action upon the tongs necessary to draw the skelp through the die.

Since Neckerman has taken no testimony, he is restricted to his filing date of December 14, 1910.

Saunders is one of the superintendents of the National Tube Company and highly skilled in the art. He introduced evidence which satisfied the Examiner of Interferences of a disclosure and reduction to practice of the invention in the spring of 1910. The Examiners-in-Chief, after ruling that the first three claims are satisfied by the device which Saunders built and operated and which the Examiner of Interferences ruled amounted to a reduction to practice, concluded that the evidence was not sufficient to warrant an acceptance of the Examiner's conclusion. That the Board was somewhat doubtful of the correctness of its conclusion is apparent from the following:

In closing this decision, we may confess to the fact that in studying the record we have been led to conjecture that Saunders may actually have reduced the invention to practice, as is claimed in his behalf, long prior to Neckerman's filing date.

The Assistant Commissioner, to whom Saunders appealed, found no difficulty in sustaining the view of the Examiner of Interferences.

The evidence very clearly shows that just prior to March 30, 1910, a draw-bench was equipped by Saunders with the device of the issue. We shall not review the evidence here, since that has been done by the tribunals of the Patent Office. We agree with the Examiner of Interferences and the Assistant Commissioner that this draw-bench was successfully operated and that the completion and utility of this invention was fully demonstrated.

The evidence shows that Saunders, some time subsequent to the installation of his device on a draw-bench, conceived the idea of so positioning a curved rod as to prevent the possible disengagement of the tong reins and chain. This additional feature was covered by claims allowed Saunders, but which were not included in this interference. Therefore, so far as this interference is concerned, the successful operation of a machine equipped as the Saunders machine was equipped prior to the addition of this so-called holddown device, constituted reduction to practice of the claims of the issue. And yet Neckerman's principal contention here is that there could be no reduction to practice without the addition of this holddown device. Since this device is not an element of the issue, we must assume, as indeed the evidence shows, that a draw-bench equipped in accordance with the claims as drawn would be operative. In other words, if the conditions were reversed and Saunders was the senior party relying, as does Neckerman, upon his filing date, he would be entitled to constructive reduction to practice upon the structure of the issue, irrespective of this auxiliary device. What we have said amounts to no more





than an affirmation of the oft-repeated rule that claims will be interpreted as drawn. (*Kirby* v. *Clements*, 44 App. D. C., 12; *Geltz* v. *Crozier*, 32 App. D. C., 324.)

The decision is affirmed.

Affirmed.

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## U. S. Circuit Court of Appeals—Sixth Circuit.

CLIPPER BELT LACER CO. *v.* E–W CO. ET AL.

*Decided November 14, 1916.*

237 Fed. Rep., 602.

1. PATENTS—CONSTRUCTION—MEANING OF TERMS USED—"INTEGRAL."
   The word "integral" as used in a patent claim in describing two parts of a device as integral is not necessarily used in its narrowest sense as meaning that they are structurally integral and constitute a single piece; but it may mean that they are permanently held together and are operatively or functionally integral.
2. PATENTS—VALIDITY AND INFRINGEMENT—BELT-STAPLING TOOL.
   The Mitchell and Gunn patent, No. 806,556, for a belt-stapling tool, claim 1 construed and in the light of the proceedings in the Patent Office, which indicate its scope, *Held* infringed.
3. PATENTS—CONSTRUCTION—MEANING OF WORDS USED.
   The meaning of a word as used in patent claims may vary with the context and with the circumstances.
4. PATENTS—EQUIVALENCY—RANGE OF.
   In comparing the rule that a claim limitation must be given effect and the rule that the use of an equivalent does not escape infringement the question is how far the patentee intended to restrict the range of equivalents.

APPEAL from the District Court of the United States for the Eastern District of Michigan; Arthur J. Tuttle, judge.

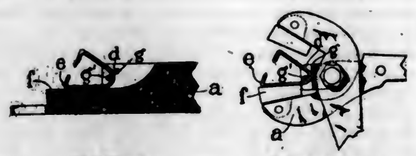
SUIT in equity by the Clipper Belt Lacer Company against the E–W Company and others. Decree for defendants, and complainant appeals. Reversed.

STATEMENT OF THE CASE.

The appellant brought suit below, alleging infringement of Patent No. 806,556, dated December 5, 1905, issued to Mitchell and Gunn, for a belt-stapling tool. The first claim of the patent is:

A tool or appliance for the purposes referred to, comprising a bracket formed with a stepped portion integral with the bracket, and having a series of slits formed in it adapted to receive jointing staples, and also having a hole formed transversely through the intermediate portions of the bracket between the slits, and a pin adapted to be passed through said hole substantially as and for the purposes described.

Illustrations prepared by complainant, showing the patent in suit and the defendants' goods, are here reproduced.



The Patent.



Defendants' Device.

In the patented device, the part *a* is shown as a base or anvil, evidently intended to rest upon any suitable support. Part of this plate is thicker than the remainder, leaving a square flange or shoulder, as shown. The upper face of the anvil therefore may be said to be stepped. In the raised portion are cut, side by side, a series of slots indicated by *d*. The portions not cut away remain to form partition walls between the slots. Transversely through these walls are bored holes indicated by *g* and *g'*. When the device is used, prepared staples of the form shown by *e* have their closed ends inserted in these slots with their bottoms resting on the stepped down part of the anvil. In this way, a series or gang of these staples is held upright and in position to have a belt end inserted between the prongs. When the series of staples has been so placed, a pin is inserted laterally through the series of holes, *g*, holding the staples against backward motion, and another pin through the series of holes, *g'*, holding them against forward motion. Then, after the belt end is in position, a suitable pressure or blow from above drives both prongs of the staple into the belt from above and from below and leaves the bend of the staple projecting free from the belt end. Another belt end having been similarly treated and each being thus provided with a series of projecting loops, these loops on the respective ends are overlaid and a pin passed through all of them, whereby the two ends become fastened together with a pivoted joint.

Defendants use pivoted jaws, both upper and lower jaws having the face portion pivoted so as to permit slight rocking and insure parallelism in the final pressure in spite of some variation of the belt thickness. Pivoted to the lower jaw—or, rather, carried by the same pivot which carries both jaws—is a forwardly projecting block practically rectangular and marked *d*, the front portion of which is provided with a series of vertical slots having partition walls left between them and pierced transversely by a hole for the reception of the provided pin, *g'*. This block may swing slightly up and down, and it results that when a larger size of staple is used, the bending point of which should be a little higher from the lower jaw, this block and the pin which it carries may rise somewhat, and there comes a feature of adjustability, not found in the patent.

The district court thought the patent was not infringed and this appeal was taken.

*Mr. Cyrus W. Rice* and *Mr. Luther V. Moulton* for the appellant. (*Mr. Lewis E. Flanders* of counsel.)

*Mr. W. J. Belknap* for the appellees.

Before WARRINGTON and DENISON, Circuit Judges, and SATER, District Judge.

DENISON, *Cir. J.*, (after stating the facts as above:)

The patented device is very simple. If only one staple is considered the device is seen to be a mere driving-guide of suitable shape, and its patentability would be, at least, doubtful; but the invention consists in providing a series of these, side by side, so that several staples can be driven at once and will be held and driven in that precise position necessary to bring all the extended loops in lateral alinement so that when the two belt ends are united and a pivot-pin inserted, every loop will bear on the pin. This might have been done by inserting in the slots and from the front a gang of formers all moving into position simultaneously and over which the staples could have been bent, but the insertion and withdrawing of such formers would have been difficult. Perhaps other means could be devised, but the idea of accomplishing this by a laterally-sliding pin, easily inserted after the staples were in place, and easily withdrawn after the staples were driven, was entirely new with the patentees and seems to have been a happy-thought solution. So far as this record indicates, no pins or other resisting means

had ever been placed in the inner bend of the partly-formed staple to serve during the remainder of the forming and during all the driving process, first as a forming-anvil, and then as a holding means, and there had never been any device for holding, alining, forming, and driving a series of staples of this class. We know nothing about the earlier clamping-tools to which the patent refers; they may well have been for a single staple. The use of a pin inserted laterally through a series of apertures was known in a device for weaving a continuous wire belt-lacing, which, after manufacture, was removed from the forming device and fastened to the belt end by some independent means. This hardly even suggested the use of a pin with a series of separate staples during the driving process.

This case is an appropriate one for giving some force to public use in determining whether the new step taken by the patentees was so simple and obvious that it cannot be called patentable invention. Fastening belt ends together by staples of this kind was known, but there was no tool of this class for doing the work. The patent was followed by a considerable sale, in the exact patented form, and if the invention was of the scope we have supposed, it is embodied in the later forms, which had a very large sale. We conclude that Mitchell and Gunn were entitled to a patent covering the use of this retaining-pin in this situation, whereby the series of otherwise independent slots were united into one combination for the purpose and with the result of getting perfect alinement; and the patent which they secured is entitled, so far as the language of its claim will permit, to a range of equivalents accomplishing this measure of monopoly.

The dissimilarity which we observe when such a plate or base as the patent shows is compared with a pair of pivoted jaws is only superficial. Not only is the lower or anvil member of a pair of jaws the plain equivalent of a separate plate having the same resisting and forming functions; but this very pivoted-jaw construction was proposed by the patentees as one form of using their invention. When they filed their application, they said that the necessary closing of the staples could be accomplished by hammering from above, or by applying a suitable pressure-plate, or by uniting their forming-plate with such a pressure-plate in the form of pivoted jaws; they say the separate base plate, used aloue, is the "simplest form" of their invention. Although they struck out this part of the description in supposed compliance with Patent Office objections, the original application serves to illustrate that the equivalency of a pivoted upper jaw and other means for pressing the staples home was apparent then as now.

(1) It is plain, also, that the defendants have adopted the substance of the invention, as above analyzed. We come, therefore, to the question whether, when we have invention of considerable merit, and adoption by the defendant of everything that was patentably new therein, the language of the claim has been so limited that the defendants' device is not within the monopoly. The answer to this question depends upon the force to be given to the word "integral," as found in the claim. If it means that the portion of the device upon which the lower leg of the staple rests horizontally, and which resists the downward pressure, and the portion which is raised higher and is slotted, so as to hold and guide the staples vertically, are integral with each other in the strictest sense of the word—*i. e.*, structurally integral—defendant does not infringe. If we speak of two parts of a cast metal structure as structurally integral, we mean that they are cast together in one piece, not that they are made separately and assembled, no matter how permanently. In defendants' device, the lower or anvil portion is cast separately and pivoted to the lower jaw; and its higher or slotted guide portion is formed separately and then pivoted to the same lower jaw, so as to be adjacent to the other coöperating portion. Each has a slight rocking motion on its pivot, and the two parts, therefore, have some motion relative to each other, and they are not integral with each other in the narrowest meaning of the word; but the word does not, necessarily, have only this meaning.

When we say "integral," we may be thinking of structure or we may be referring to performance and function. When two parts, though made separately, are permanently fastened together, so that they work in the same way as if they were a physical unit, they may well be said to be functionally integral. In this sense, they are to be distinguished from two parts which operate independently of each other, and in this sense, defendants' parts may be called integral. The lower part and the raised part are held permanently in the same substantial relation to each other, and neither part can be removed or made inoperative. The guiding-slots with openings for the pin are always ready to receive, hold, and position staples resting on the lower part, and during both the forming and the driving of the staples the two parts do not lack the smallest fraction of coöperation which they would have if they were structurally of one piece. True, they have an additional capacity. They have the strength and permanency of association and capacity to coöperate in resisting opposing strains, which would be found if they were made of one piece, and, in addition to this, they have some relative adjustment in one direction only. That this difference in functions is in addition, and not in substitution, is apparent from an exhibit in which these two parts and the jaw which carries them in defendants' tool have all been united rigidly by welding; and this modified device, for the appropriate size of staples, is just as operative as plaintiff's or defendants' unmodified device. It would be an equvalent variation from the patented form to give the raised portion a relative vertical sliding motion, but by means which prevented the two parts from being separated. Such a device, like defendants', would be structurally non-integral, but for every functional purpose integral. Are there sufficiently compelling reasons for adopting, in this case, the most limiting definition of the word?





(2) We find in the Patent Office proceedings no estoppel which requires the same strictness of construction as if integrality had been the feature upon which applicant and the Patent Office both relied to avoid the cited references and to import patentable novelty into a claim otherwise devoid of it. The claim, as first presented, contained no reference to integrality, and no reference to the hole and pin method of positioning and holding the staples, but claimed broadly a block with a stepped portion, and with the upper portion slotted to receive the staples. This was rejected on reference to Southwick, who had a device for uniting belt ends by driving vertically parallel legged staples, one leg into each end. It had a solid lower plate or die to receive and clench the lower staple ends, and the upper part, containing the staple-guides, was split vertically and centrally at right angles to the plane of the staples. The two halves of this guide were permanently pivoted at one end to the lower plate. In operation, the two belt ends were laid abutting each other on the lower plate. The upper guide-halves were then brought together and clamped into position and down on the belt ends, and the staples were then driven by staple-plungers, which followed them down through the guides. To meet this reference, applicants inserted in the claim the statement that the lower and the raised portions of their bracket were integral. If the Patent Office had thereupon granted the patent, there would have been a perfect case for applying, as far as it might go, the rule of estoppel; but it did not. It rejected the amended claim, and upon the same reference. Applicants' attorney then insisted upon this distinction, and said:

> It should be particularly noted that, in the present application, the stepped portion of the bracket is formed integrally therewith and is immovable on the base portion. This, I contend, forms a much simpler device than Southwick's and, I think, shows a patentable difference, such as is claimed in claim 1.

The Patent Office again rejected the claim upon the same citation. Thereupon applicants inserted the reference to the transverse holes and pin, and the patent issued. The reasons for the repeated rejections of the claim, after it was amended by inserting the word "integral," were not given by the Patent Office; but it must be assumed that the rejections were because of the familiar principle that there is, normally, no patentable difference between making an article in one piece or in two pieces. In this ruling the applicants acquiesced, and so we find applicants and Patent Office agreeing that the patentability of the invention over the references did not lie in the feature of integrality. It is evident that if the applicants had finally erased this reference to integrality, and left the claim in this particular the same as it was originally, the patent would have issued just the same. Neither is it now sought to give the claim such construction as would cover Southwick and similar devices. They are of a different class from the one in which both plaintiff and defendants are found. They do not contain at all the chief characteristics of the present invention; i. e., transverse holes and the pin for simultaneous positioning. The claim of estoppel by what occurred in the Patent Office must therefore be discarded; and the limiting reference to integrality must be treated both as unnecessary and as voluntary.

Although it cannot be arbitrarily disregarded because it was unnecessary and voluntary, and because it had nothing to do, and was not finally thought to have anything to do, with patentability, yet the defendants' stepped staple-holder, which is otherwise the full equivalent of the patented bracket, will not be denied such equivalency merely because the two portions are not, in every sense, integral, if they do, nevertheless, in any fair way, respond to that word. Although the Patent Office proceedings do not raise an estoppel, they do aid in determining the meaning of this limitation. It was intended by the applicants to distinguish from Southwick. In the applicants' device, the base or clenching face portion and the slotted portion were always and permanently held in a certain relation to each other, whereby the slotted portion was always in a position to receive and hold the series of staples ready for driving. From the beginning to the end of the using process, the slotted portion lay at the end of and stepped above the clenching-face. It could not be removed from that position, unless one destroyed the tool instead of using it. In Southwick, the upper slotted portions of the tool were necessarily removed from position and swung out of the way to allow the belt to enter, and when they were united to make a complete staple-guide, they were clamped in position over the lower plate and held rigidly in reference to each other only by a binding-screw or such other temporary adjustment as might be made. Both by the use of the word and by the communications addressed to the Patent Office, applicants showed that they intended "integral" to refer to a device having the characteristics of the former class as distinguished from the latter. They pointed out that, if one of the Southwick members were opened and turned away, it would be inoperative with such a staple as theirs, while, in their device, the slotted portion was immovable on the base portion, and they urged that they were justified in claiming a device in which the vertical slots for holding the staples are "stationary."

Applying this differentiation to defendants' tool, we see that it is to be classified with Mitchell and Gunn rather than with Southwick. In defendants' tool, the base portion and the slotted portion are permanently held together. The slotted portion lies at the end of and rises above the base portion, and is always ready to receive and hold staples. This mutual working relationship of the two parts cannot be changed, unless one destroys the tool instead of using it. The precise fixed lateral relationship of the two parts cannot, in any wise, be varied; such variation as there may be is vertical only. Interpreting the term by the intent thus evidenced, and by its entire immateriality in giving patentable invention, and by the very strong presumption that there could have been no intent to make the patent worthless through a provision that, by an improve-

ment, the patent would be avoided, we do not hesitate to conclude that the two parts of defendants' bracket are integral in that functional sense which is sufficient to bring them within the field to which the patentees confined themselves.

(3) We do not overlook our recent decision (*Michigan Co.* v. *Monarch Co.*, 233 Fed., 107; —— C. C. A., ——,) in which we considered this same word "integral," and held that it referred to, and so limited the patent to, structural integrality. The two cases only illustrate that the meaning of the same word may vary with the context and with the circumstances. In that case, the device comprised two members, and each member, several parts. The claim specified that one part should be integral with its member, and, in defendants' device, this part, constructed separately, was first permanently fastened to, and became a permanent part of, the other member. Such integrality as resulted between that part and that member, with reference to which the patent used the term, came only after both members had been assembled into permanent relationship. There, also, we interpreted the word with reference to the way which it distinguished from the reference which had been cited before the word was inserted in the claim, and, by all the circumstances, we were led to conclude that such ultimate functional integrality as there was did not satisfy the limitation as the applicant had intended it to mean. Somewhat similarly, in *Rowley Co.* v. *Columbus Co.* (220 Fed., 127, 134; 136 C. C. A., 81) we considered the limitation implied by the word "independently," and found that there was infringement, even though defendants' device was not independent in every sense, if it was independent to the extent necessary to get the result which the patentee had in mind when he selected the word. His selection—as here—was unfortunate, because his chosen word was capable of too broad a meaning. So the Circuit Court of Appeals of the Second Circuit, in *Thacher* v. *Transit Co.*, (234 Fed., 640; —— C. C. A., ——,) where the limiting force of the word "independent" was under consideration, and, applying the familiar rule that when two meanings are possible, the claim should be interpreted so as to give life to the patent, made a distinction between "independent mechanically" and "independent in action."

(4) The rule that a claim limitation must be given effect, and the rule that the use of an equivalent does not escape infringement, sometimes seem to have an uncertain line of demarcation; but, after all, the question is how far the patentee, by his action and by his choice of words, either did intend or must be deemed to have intended that the range of equivalents should not extend far enough to include defendants' device. We have frequently declined to give to a word or phrase in a claim its *prima facie* limiting effect, and we have felt at liberty so to decline when there was room for construction, but not when a specific meaning was clearly intended. For recent examples in this court of applying a liberal construction of claim language, so as to include devices which might seem beyond the claim, see *National Co.* v. *Mark*, (216 Fed., 507, 513; 133 C. C. A., 13,) *Schiebel Co.* v. *Clark*, (217 Fed., 760, 771; 133 C. C. A., 490,) *Frey* v. *Auto Co.*, (236 Fed., 916; —— C. C. A., ——,) October 3, 1916.

We conclude that defendants infringed the first claim of the patent, and thus it becomes unnecessary to consider whether their backwardly-resisting rear slot-wall is or is not the full equivalent of the patentees' backwardly-resisting pin, as specified in the second and narrower claim.

The judgment must be reversed, and the case remanded for the usual injunction and accounting.

## ADJUDICATED PATENTS.

(U. S. C. C. A.) The Barber patent, No. 781,802, for an internal-combustion engine, *Held* valid and infringed. *Barber* v. *Otis Motor Sales Co.*, 240 Fed. Rep., 723.

(U. S. D. C.) The Culmer patents, Nos. 635,429 and 635,430, the former for a process of making an asphaltic paving material and the latter for the product, *Held* valid and infringed. *Standard Asphalt & Rubber Co.* v. *Barber Asphalt Paving Co.*, 240 Fed. Rep., 749.

(U. S. C. C. A.) The Fessenden patent, No. 918,306, for an improved method of wireless signaling, claims 1 and 3 *Held* not to include regularity in the timing of sparks so as to produce a musical note, and, so construed, *Held* void for want of invention. *Kintner* v. *Atlantic Communication Co.*, 240 Fed. Rep., 716.

(U. S. C. C. A.) The Pitt patent, No. 778,070, for a loose-leaf binder, *Held* valid and infringed. *Irving-Pitt Mfg. Co.* v. *Trussell Mfg. Co.*, 240 Fed. Rep., 730.

(U. S. D. C.) The Plym patent, No. 852,450, for a structure for holding heavy plate-glass in position for store-windows, *Held* infringed. *Kawneer Mfg. Co.* v. *Detroit Showcase Co.*, 240 Fed. Rep., 737.

(U. S. D. C.) The Plym patent, No. 860,150, for store-front construction, *Held* infringed. *Kawneer Mfg. Co.* v. *Detroit Showcase Co.*, 240 Fed. Rep., 737.

(U. S. C. C. A.) The Strain reissue patent, No. 12,297, (original No. 730,412,) for a fruit-grader, *Held* not infringed by a modified machine made by defendant. *Riverside Heights Orange Growers' Ass'n* v. *Stebler*, 240 Fed. Rep., 703.

(U. S. C. C. A.) The Wise patent, No. 1,002,950, for an improved metallic frame for soda-fountain counters and other analogous structures, *Held* void for want of invention. *Wise Soda Apparatus Co.* v. *Bishop-Babcock-Becker Co.*, 240 Fed. Rep., 733.

(U. S. C. C. A.) The Warren patent, No. 727,505, for a pavement, construed, and *Held* not infringed. *Evans* v. *Warren Bros. Co.*, 240 Fed. Rep., 696.

### Adverse Decisions in Interference.

PATENT No. 1,162,844.

On May 4, 1917, a decision was rendered that Oscar Anderson was not the first inventor of the subject-matter covered by claims 5 and 6 of his Patent No. 1,162,844, subject, "Pneumatic milking-machines," and no appeal having been taken within the time allowed such decision has become final.

### Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., May 19, 1917.*

*Louis Kuntscher, his assigns or legal representatives, take notice:*

An interference having been declared by this Office between the application of The Favorita Co., of New York, N. Y., for registration of a trade-mark and trade-mark registered May 31, 1910, No. 78,106, to Louis Kuntscher, of Tarpon, Tex., and a notice of such declaration sent by registered mail to said Louis Kuntscher at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Louis Kuntscher, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
*First Assistant Commissioner.*





THE
# OFFICIAL GAZETTE
OF THE
# United States Patent Office.

Vol. 239—No. 2. TUESDAY, JUNE 12, 1917. Price—$5 per year.

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| Designs | 31—No. | 50,898 to No. | 50,928, inclusive. |
| Trade-Marks | 58—No. | 117,017 to No. | 117,074, inclusive. |
| Labels | None. | | |
| Prints | None. | | |
| Reissues | 1—No. | 14,315. | |
| Total | 978 | | |

### Amendment of Rules of Practice.

(ORDER No. 2,328.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., June 5, 1917.*

**Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, Rule 93 of the Rules of Practice in the United States Patent Office has been amended to read as follows:**

**93. An interference is a proceeding instituted for the purpose of determining the question of priority of invention between two or more parties claiming substantially the same patentable invention. IN ORDER TO ASCERTAIN WHETHER ANY QUESTION OF PRIORITY ARISES THE COMMISSIONER MAY CALL UPON ANY JUNIOR APPLICANT TO STATE IN WRITING THE DATE WHEN HE CONCEIVED THE INVENTION UNDER CONSIDERATION. ALL STATEMENTS FILED IN COMPLIANCE WITH THIS RULE WILL BE RETURNED TO THE PARTIES FILING THEM. IN CASE THE APPLICANT MAKES NO REPLY WITHIN THE TIME SPECIFIED, NOT LESS THAN TEN DAYS, THE COMMISSIONER WILL PROCEED UPON THE ASSUMPTION THAT THE SAID DATE IS THE DATE OF THE OATH ATTACHED TO THE APPLICATION. The fact that one of the parties has already obtained a patent will not prevent an interference, for, although the Commissioner has no power to cancel a patent, he may grant another patent for the same invention to a person who proves to be the prior inventor.**

**THOMAS EWING,**
**Commissioner.**

### PAYMENT OF TAXES, ANNUITIES OR FEES ON GERMAN PATENTS.

[Letters Patent—Germany.]

**By the President of the United States of America—**
**A Proclamation.**

**Whereas, the laws of the German Empire provide that Letters Patent granted or issued to citizens of other countries shall lapse unless certain taxes, annuities or fees are paid within stated periods;**

**And whereas, the interests of the citizens of the United States in such Letters Patent are of great value, so that it is important that such payments should be made in order to preserve their rights;**

**Now, therefore, I, Woodrow Wilson, President of the United States of America, by virtue of the powers vested in me as such, hereby declare and proclaim that citizens of the United States owning Letters Patent granted or issued by the German Empire are hereby authorized and permitted to make payment of any tax, annuity or fee which may be required by the laws of the German Empire for the preservation of their rights in such Letters Patent.**

**In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.**

**Done at the city of Washington, this 24th day of May, in the year of our Lord nineteen hundred and seventeen and of the Independence of the United States, the one hundred and forty-first.**

[Seal.] **WOODROW WILSON.**

By the President:
**ROBERT LANSING,**
*Secretary of State.*

[No. 1,372.]

### Disclaimer.

1,095,977.—*Samuel Brand*, Rockford, Ill. ARTICLE-POSITIONING MEANS. Patent dated May 5, 1914. Disclaimer filed June 2, 1917, by the assignees, *Howard D. Colman, Luther L. Miller*, and *Harry A. Severson*, copartners trading as *Barber-Colman Company*.

Enter this disclaimer—

"To claim 3 of said Letters Patent, which claim is in the following words:

"3. A receptacle for receiving bobbins provided with tips and heads, the heads of some of the bobbins being in alinement with the tips of adjacent bobbins, and means for selecting the tip of each bobbin irrespective of the position of the bobbin and causing said tip to be passed foremost through the receptacle."

### Adverse Decisions in Interference.

PATENT No. 1,181,697.

On April 28, 1917, a decision was rendered that Emerich Szarvasy was not the first inventor of the subject-matter covered by claims 1, 2, 4, and 5 of his Patent No. 1,181,697, subject, "Process for saponification of the chlorin derivatives of aliphatic hydrocarbons," and no appeal having been taken within the time allowed such decision has become final.

PATENT No. 1,185,134.

On May 12, 1917, a decision was rendered that Mason P. Rumney was not the first inventor of the subject-matter covered by claim 8 of his Patent No. 1,185,134, subject, "Vehicle-springs," and no appeal having been taken within the time allowed such decision has become final.

# APPLICATIONS UNDER EXAMINATION.

*Condition at Close of Business June 8, 1917.*

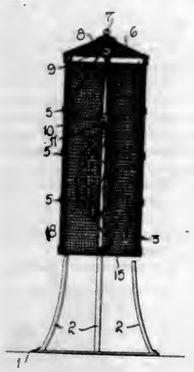
| Room No. | Divisions and subjects of invention. | Oldest new application and oldest action by applicant awaiting office action. | | No. of applications awaiting action. |
|---|---|---|---|---|
| | | New. | Amended | |
| 314 | 1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers. | Apr. 26 | May 9 | 224 |
| 128 | 2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco. | Feb. 20 | Mar. 12 | 410 |
| 175 | 3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working. | May 31 | Mar. 3 | 98 |
| 234 | 4. Conveyors; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists. | May 8 | May 24 | 174 |
| 167 | 5. Bookbinding; Harvesters; Jewelry; Music. | Feb. 14 | May 12 | 193 |
| 318 | 6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation. | Jan. 24 | Mar. 26 | 358 |
| 312 | 7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes | Feb. 7 | Mar. 3 | 669 |
| 131 | 8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports. | Jan. 23 | Apr. 20 | 927 |
| 142 | 9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps | Jan. 17 | May 16 | 407 |
| 235 | 10. Carriages and Wagons | Feb. 5 | May 7 | 786 |
| 154 | 11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus. | Apr. 21 | May 10 | 155 |
| 324 | 12. Journal-Boxes, Pulleys, and Shafting; Machine Elements | Mar. 27 | Apr. 12 | 599 |
| 329 | 13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning. | Mar. 12 | May 10 | 508 |
| 307 | 14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working. | Mar. 19 | Mar. 31 | 239 |
| 308 | 15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics. | May 10 | May 31 | 174 |
| 109 | 16. Electric Signaling; Radiant Energy; Telegraphy; Telephony | Dec. 26 | Apr. 16 | 600 |
| 303 | 17. Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting. | Mar. 8 | May 9 | 137 |
| 327 | 18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Lubrication; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves. | Apr. 4 | Apr. 24 | 254 |
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| 249 | 22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships. | Feb. 5 | Mar. 29 | 753 |
| 379 | 23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism. | Feb. 5 | Aug. 26 | 320 |
| 144 | 24. Apparel: Apparel Apparatus; Sewing-Machines; Garment Supporters | Apr. 3 | May 8 | 255 |
| 315 | 25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation. | May 7 | May 15 | 112 |
| 105 | 26. Electricity, Generation; Motive Power | Jan. 2 | Mar. 6 | 532 |
| 375 | 27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus | Apr. 23 | May 9 | 208 |
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| 278 | 32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration. | Dec. 2 | May 1 | 719 |
| 70 | 33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving. | Mar. 13 | Apr. 20 | 357 |
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| 57 | 35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet | Feb. 24 | May 24 | 510 |
| 264 | 36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring | Mar. 6 | May 25 | 568 |
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| 125 | 41. Railway Draft Appliances; Resilient Tires and Wheels | Mar. 20 | Apr. 23 | 298 |
| 244 | 42. Electricity, Conductors; Railway Signaling; Electricity-Transmission to Vehicles | Jan. 24 | May 8 | 341 |
| 382 | 43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers, Sewerage; Surgery; Water Purification. | Apr. 10 | Apr. 25 | 128 |
| | Oldest new case, Dec. 2; oldest amended, Aug. 26. | | | |
| | Total number of applications awaiting action | | | 16,361 |
| 163 | TRADE-MARKS, DESIGNS, LABELS AND PRINTS: | | | |
| | Trade-Marks | Mar. 24 | May 18 | 975 |
| | Designs | Apr. 27 | May 21 | 309 |
| | Labels and Prints | Mar. 24 | May 23 | 102 |



# PATENTS

## GRANTED JUNE 12, 1917.

1,229,205. BANANA-CARRIER. CHARLES P. ARTHUR, Hampton, Iowa. Filed July 22, 1916. Serial No. 110,719. (Cl. 45—71.)



1. A banana carrier, comprising a casing provided with a lower open end and a side opening door, a bottom insertible within the lower end of the casing, the casing being provided at its lower end with a band, keepers having hooked ends engaging over the upper edge of said band, and latches carried by the bottom and engageable with said keepers whereby the bottom may be detachably held within the lower end of the casing.

2. A banana carrier, comprising a foraminous casing provided with a lower open end and a side opening door, a bottom of foraminous material insertible within the lower end of the casing, the casing embodying bands, one of which is at the lower end of the casing, keepers having hooked ends engaging over the upper edge of the lowermost band, and latches carried by the bottom and engageable with said keepers whereby the bottom may be detachably held within the lower end of the casing.

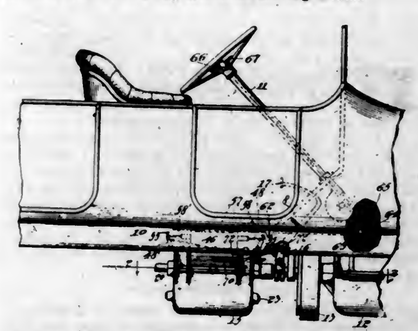
3. A banana carrier, comprising a casing provided with a lower open end and a side opening door, a bottom insertible within the lower end of the casing and embodying a band, latches carried by said band, and keepers carried by the casing at the lower end of the latter and formed with beveled hooks engageable with said latches, whereby the bottom may be detachably held within the lower end of the casing.

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1,229,206. GEAR-SHIFTING MECHANISM. STEAD A. ASQUITH, Waterloo, Iowa. Filed Feb. 1, 1915. Serial No. 5,512. (Cl. 74—58.)

1. In a gear shifter of the character described, the combination of a shifter-slide, members working oppositely toward and from said slide adapted and arranged suitably to move said slide to mid-position on their instroke, means for selectively connecting either of said members with said slide to move it on the outstroke of said member, a power lever, means to connect said power lever with said slide-moving members to move the latter on their instroke, and automatic means for releasing said slide moving members from said power lever-connection and imparting outstroke motion to said slide moving means.

2. Gear shifting means comprising, in combination, a pair of slides, each movable from neutral mid-position in either direction, opposed slide-moving means movable oppositely in unison longitudinally with respect to said slides, and adapted and arranged suitably to move said slides to neutral position on their instroke, selectively operable means for connecting either slide and the appropriate slide moving means for movement of said slide in selected directions on the outstroke of said moving means, and means for actuating said slide moving means.



3. Gear shifting means comprising, in combination, a pair of slides, each movable from neutral mid-position in either direction, opposed slide-moving means movable oppositely in unison longitudinally with respect to said slides, and adapted and arranged suitably to move said slides to neutral position on their instroke, selectively operable means for connecting either slide and the appropriate slide moving means for movement of said slide in selected directions on the outstroke of said moving means, a power lever, means for connecting said power lever to move the slide moving means on their instroke, and means automatically to release said slide moving means from the power lever and to move the slide-moving means on their outstroke.

4. In a gear shifting means, the combination of tubular slides carrying shifting arms, and movable from a neutral mid-position in either direction, opposed rocking arms beyond said slides, normally-disabled slide-engaging hooks on said rocker arms, extending into said slides, means for selectively controlling engagement of said hooks with the slides, and means for rocking said rocker arms oppositely in unison.

5. In a gear shifting means, the combination of tubular slides carrying shifting arms, and movable from a neutral mid-position in either direction, opposed rocking arms beyond said slides, normally-disabled slide-engaging hooks on said rocker arms, extending into said slides, means for selectively controlling engagement of said hooks with the slides, and means adapted for operation from the driver's station to rock said arms inward, and means automatically to disconnect said arms from the last said means and rock said arms outwardly.

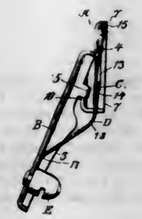
[Claims 6 to 10 not printed in the Gazette.]

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1,229,207. SUITCASE-HASP. GEORGE BAILEY, Shelton, Conn., assignor to Robert N. Bassett Company, Incorporated, Shelton, Conn., a Corporation of Connecticut. Filed Sept. 21, 1916. Serial No. 121,369. (Cl. 70—115.)

1. A device of the character described comprising rigidly connected front and back members, a hasp plate piv-

otally connected to one of said members, a stud projecting from said hasp plate and a sheet metal spring removably seated against one of said members, the said spring being arranged to slidably engage said hasp plate in proximity to said stud.

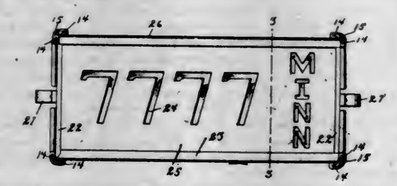


2. In a device of the character described rigidly connected front and back members, a hasp plate pivotally connected to one of said members and a sheet metal spring provided with a retaining flange which is seated against a shoulder on one of said members, the said spring being arranged to slidably engage said hasp plate.

3. A hasp for suit cases and like articles comprising rigidly connected front and back members, a hasp plate pivoted to said front member, a stud mounted on said hasp plate, the said back member being provided with an opening, and a flat spring passed through said opening, the said spring having one of its extremities seated against one of said members beyond said opening and its opposite extremity slidably engaging said hasp plate in proximity to said stud.

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1,229,208. DISPLAY DEVICE FOR AUTOMOBILE-LICENSE NUMBERS. CHARLES D. BAKER, New Richland, Minn. Filed Feb. 2, 1915. Serial No. 5,679. (Cl. 40—133.)

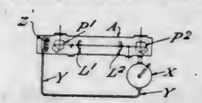



A device of the class described comprising a casing including a top, a bottom, a back and sides, flanges formed on certain of the edges of said top, bottom, back and sides, removable locking strips engaging adjacent flanges for retaining the parts of the casing in position, a number plate removably engaged in the front of the casing and having its side edges confined by the ends thereof and its lower edge confined by the front edge of the bottom, and an angle plate having one of its portions slidably connected with the front portion of the top of the casing, the ends of said portion of the angle plate engaging the locking strips carried by the ends of said top, said angle plate having its other portion engaged with the upper portion of said number plate.

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1,229,209. OPTICAL ADJUSTER FOR RANGE-FINDERS. ARCHIBALD BARR and WILLIAM STROUD, Anniesland, Glasgow, Scotland, assignors to Barr and Stroud, Limited, Glasgow, Scotland. Original application filed June 8, 1915, Serial No. 32,989. Divided and this application filed July 29, 1916. Serial No. 112,166. (Cl. 88—2.7.)

1. The method of increasing the accuracy of optical adjusters for use in connection with self contained base rangefinders by mixing and circulating the air inclosed in the apparatus through which different parts of the operative beams of light pass, substantially as set forth.



2. An optical adjuster for use in connection with a self contained base rangefinder having the whole or a part of the space traversed by the adjuster beams inclosed, associated with means for circulating and mixing the air contained within the said space.

3. An optical adjuster for use in connection with a self-contained base rangefinder having objective mark glasses with a space between them, a case inclosing the said space, and means for circulating the air within the space.

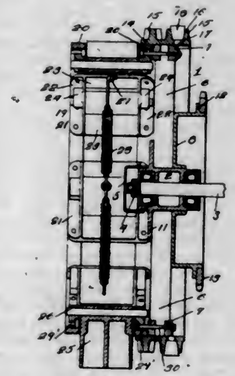
4. An optical adjuster for use in connection with a self contained base rangefinder having objective mark glasses with a space between them, a case inclosing the said space, and means for circulating the air within the space, associated with prisms forming parts of the adjuster placed inside the said case.

5. An optical adjuster for use in connection with a self contained base rangefinder having objective mark glasses and prisms, a case inclosing the said glasses and prisms, and an air circulating mechanism connected with the casing, for the purposes set forth.

[Claim 6 not printed in the Gazette.]

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1,229,210. TRACTION-WHEEL. JOHN B. BARTHOLOMEW, Peoria, Ill., assignor to Avery Company, a Corporation of Illinois. Filed Sept. 22, 1909, Serial No. 519,031. Renewed Nov. 4, 1916. Serial No. 129,632. (Cl. 21—208.)



1. The combination with a traction wheel having a ground engaging bearing surface, of a detachable auxiliary traction mechanism comprising a rim, the outer bearing surface of which is of smaller diameter than the bearing surface of the wheel, ground engaging devices movably mounted upon the auxiliary mechanism, and means for normally holding the said devices in retracted positions out of engagement with the ground, the said devices being automatically movable into their extended ground gripping positions upon engagement with the ground and slippage with respect thereto, substantially as set forth.

2. An auxiliary traction device for traction wheel comprising a frame, vanes pivotally connected to said frame and adapted to extend in a radial direction, and continuously operative devices tending to maintain all of said vanes in non-radial positions, substantially as set forth.

3. In an auxiliary traction device for traction wheels, the combination of an annular frame, ground engaging wings movably connected to said frame, means for holding the wings in normal inoperative positions, and the said holding means being capable of permitting the wings to move into their ground engaging positions upon the slippage of the wheel, substantially as set forth.

4. In a traction device, the combination of an annular frame, wings pivotally connected to said frame and adapted to assume radial positions, means for limiting the movement of the wings in one direction beyond the radial position, and continuously operative means tending to hold the wings normally in positions at angles to the radii through the pivotal axes, substantially as set forth.

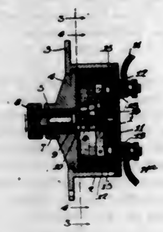
5. In a traction device, the combination of an annular frame, ground engaging wings pivotally connected to said frame and adapted to assume radial positions, continuously operative devices tending to maintain the wings in non-radial positions, and means for locking the said wings in their radial positions, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]



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1,229,211. COMBINATION LOCK AND SWITCH. BENNIE L. BECKNER, Anderson, Ind., assignor of one-third to Howard Witt and one-third to Frank H. Schlater, Anderson, Ind. Filed Sept. 23, 1916. Serial No. 121,707. (Cl. 175—282.)



1. A combination lock and switch comprising electrical terminal contacts, a permutation plate for covering the terminal contacts having openings to register with said contacts, and provided with an abutment stud, a switch bar slidable to make contact with the terminal contacts and rotatable in the path of the abutment stud of the permutation plate, means for rotating the switch bar to engage the permutation plate stud to bring the openings of the plate into register with the terminal contacts, means for sliding the switch bar to make contact with the terminal contacts, and designating means for indicating predetermined movements of the permutation plate and switch bar for adjustment of the parts to operative positions.

2. A combination lock and switch comprising electrical terminal contacts, a permutation plate for covering the terminal contacts, a switch bar for moving the permutation plate to uncover the terminal contacts and make contact with the terminal contacts, and means for operating the switch bar to effect movement of the permutation plate and make connection with the terminal contacts.

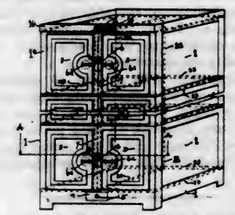
3. A combination lock and switch comprising electrical terminal contacts, a permutation plate for covering the terminal contacts and provided with an abutment stud, a switch bar provided with members for engagement with the stud of the permutation plate to uncover the terminal contacts and to make connection with the terminal contacts in a predetermined position, and means for operating the switch bar.

4. A combination lock and switch comprising electrical terminal contacts, a permutation plate for covering the terminal contacts formed with openings for exposing said contacts and provided with an abutment stud, a switch bar for engagement with the stud of the permutation plate for moving the plate to uncover the terminal contacts and for making connection with said terminals, a rotatable dial operatively connected with the switch bar to rotate the bar, means for moving the switch bar into and out of connection with the terminal contacts, and means for determining predetermined movements of the permutation plate and switch bar for bringing the parts into position for unlocking the switch and closing a circuit through the terminal contacts.

5. A combination lock and switch comprising electrical terminal contacts, a permutation plate for covering the terminal contacts formed with openings for exposing said contacts and provided with an abutment stud, a switch bar for engagement with the stud of the permutation plate for moving the plate to uncover the terminal contacts and for making connection with said terminals, a rotatable dial operatively connected with the switch bar to rotate the bar, and a spindle formed with a threaded portion upon which the switch bar is mounted for moving the bar into and out of connection with the terminal contacts.

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1,229,212. STORAGE-CABINET. EDWARD O. BENNETT, Oakland, Cal. Filed Apr. 19, 1916. Serial No. 92,294. (Cl. 194—1.)



1. A cabinet having a plurality of compartments, a door for each compartment, coin controlled locks for normally locking said doors in closed position, a coin receptacle in the lower part of said cabinet adapted to be locked against outside intrusion, tubes extending from the top of said cabinet adapted to engage said locks and lock the same in place, said tubes leading to said coin receptacle in the lower part of said cabinet adapted to deliver a coin to said receptacle, a block to which the upper ends of said tubes are fastened, means by which said tubes are raised and lowered out of adjustment and into adjustment with said locks, said tubes leading to said coin receptacle, and means by which said tubes are fastened against outside intrusion, substantially as shown and described.

2. A cabinet, a coin receptacle in the lower part of said cabinet, coin operative locks connected to said cabinet adapted to receive a coin placed therein, tubes by which said coin locks are secured to said cabinet, means by which said tubes are operated, a check locking and unlocking member, means by which said check locking and unlocking member is protected from breakage, said tubes extending from the top to the bottom of said cabinet and having openings in the sides thereof adapted to aline with the coin slots in said coin operative locks and deliver coins therethrough, to said receptacle fastened to the lower part of said cabinet, substantially as shown and described.

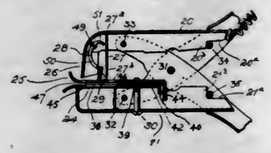
3. A cabinet, a coin receptacle in the lower part of said cabinet adapted to receive coins, coin locks fastened to said cabinet, tubes by which said coin locks are secured to said cabinet, said tubes also being adapted to convey coins to said receptacle, and means by which said tubes are held in place in said cabinet, substantially as shown and described.

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1,229,213. PAPER-FASTENING TOOL. WILLIAM A. BERNARD, New Haven, Conn., assignor to The William Schollhorn Company, New Haven, Conn., a Corporation of Connecticut. Filed Apr. 9, 1913. Serial No. 760,010. (Cl. 93—1.)

1. In a tool such as described, the combination of a channeled jaw having an open upper part, a die plate resting on the upper edge of said jaw and having a shank

with an opening therein, a stripper plate having a shank offset from the body portion thereof and resting on the shank of said die plate whereby the bodies of said die plate and stripper plate respectively are spaced apart, and a screw passing through the lower wall of the jaw and through the aforesaid opening in said die plate into threaded engagement with the shank of said stripper plate, said opening of the die plate shank being larger than the diameter of said screw to permit lengthwise adjustment of said die plate; substantially as described.

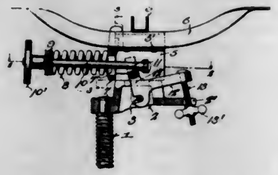


2. The combination with a jaw of substantially U-shaped cross-section, of a cutter comprising a plate having a shank fitted between the side walls of the jaw, and a pin or projection on said shank extending through and clenched in an opening in the intermediate wall of the jaw; substantially as described.

3. The combination with a jaw of substantially U-shaped cross-section, the opposite edges of said jaw being provided with notches, of a plate having a body portion set in said notches, a shank on said plate fitted between the side walls of the jaw, and a pin connecting the shank with the intermediate jaw wall; substantially as described.

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1,229,214. CHAIR-IRON. HARRY W. BOLENS, Port Washington, Wis. Filed Feb. 23, 1915. Serial No. 9,928. (Cl. 155—24.)



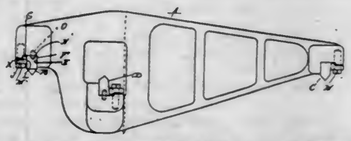
A chair iron comprising a spindle head provided with an aperture, a pivot shaft carried by the head adjacent and below said aperture, a spider, depending arms on the spider journaled on the shaft, a spring seating block carried by the spider, an angle lever including a short arm extended upwardly between the spider and spindle head and a long arm extending away from the spring seating block and an extension at its angle projecting through the aperture of the head and pivoted on the bolt, a spring extending outwardly from the seating block, a rod connected with the outer end of the spring and pivotally connected with the short arm of the lever and means for adjustably holding the long arm of the lever with respect to the spindle head.

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1,229,215. SCALE CONSTRUCTION. JOHN H. A. BOUSFIELD, St. Johnsbury, Vt., assignor to E. and T. Fairbanks and Company, St. Johnsbury, Vt., a Corporation of Vermont. Filed Mar. 15, 1916. Serial No. 84,447. (Cl. 265—49.)

1. The combination with a scale lever, of a plurality of knife-edge pivots therefor, said lever having a plurality of accurately-machined vertical walls spaced an exact distance apart and said pivots each having an accurately-machined vertical wall adapted to engage the machined wall of the lever, and mechanism for securing the pivots in position so that their distance apart is determined entirely by the machined walls.

2. The combination with a scale lever, of a knife-edge pivot therefor, said lever having an accurately-machined vertical wall and said pivot having an accurately machined vertical surface adapted to engage the machined wall of the lever, and means for clamping the machined surface of the pivot into contact with the machined wall of the lever.



3. The combination with a scale lever, of a knife-edge pivot therefor, said lever having a recess adapted to receive the body portion of the pivot, one wall of the recess being provided with an accurate surface and the adjacent surface of the pivot also being formed accurately, and a wedge member adapted to force said accurately-formed surfaces into contact with each other.

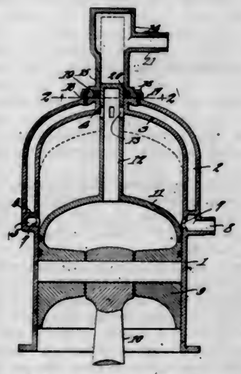
4. The combination with a scale lever, of a knife-edge pivot therefor, comprising a base portion and a side formed accurately at right angles thereto, the opposite side of said pivot being inclined toward the base, and a wedge member adapted to act upon the inclined surface of the pivot to force the accurately-formed surface of the pivot into contact with an accurately-formed surface on the lever.

5. The combination with a scale lever, of a knife-edge pivot therefor, said lever having a true vertical surface and said pivot member having a true vertical surface and an inclined surface, a wedge member bearing against the inclined surface, and means for adjusting the wedge member to bear against the inclined surface of the pivot member and force the vertical surface thereof into contact with the vertical surface on the lever.

[Claim 6 not printed in the Gazette.]

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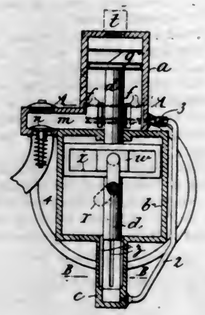
1,229,216. INTERNAL-COMBUSTION ENGINE. WYATT BOYD, Canton, Ohio. Filed Mar. 25, 1915. Serial No. 16,956. (Cl. 137—115.)



In a device of the character described, the combination of a cylinder having an opening at one end and a flat annular abutment surrounding said opening, a tubular member slidable snugly through said opening, an outstanding chamber having a reduced open end snugly receiving said tubular member and provided with an outturned flange resting upon said abutment, said reduced end having an annular rabbet surrounding said opening, securing elements engaged through said flange and taking into the abutment, and a packing ring disposed tightly between said abutment and rabbet and embracing said tubular member, the end of said tubular member being closed, said tubular member having an opening near its end movable past said packing ring into the cylinder and into said chamber beyond the reduced open end thereof.

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1,229,217. INTERNAL-COMBUSTION ENGINE. ARTHUR ROBERT BROUGHAM, West Hampstead, London, England. Filed Oct. 7, 1915. Serial No. 54,604. (Cl. 123—74.)



1. In a two-stroke cycle internal combustion engine, a piston, a working cylinder for said piston closed at both ends and the wall of which is formed with grooves near one end adapted to bridge the said piston when at one end of its stroke, a crank casing, a piston rod fixed to said piston and extending into said crank casing, a valve controlling the admission of explosive mixture to the grooved end of said cylinder, an exhaust valve at the other end of said cylinder, a crank within said crank casing, a block mounted on said crank, a link formed in one with said piston rod and within which said block can slide and a lubricant pump cylinder at the lower end of said crank casing, said pump cylinder forming a guide for the lower end of said piston rod which works therein and constitutes a lubricant pump piston.

2. In a two-stroke cycle internal combustion engine, a piston, a working cylinder for said piston closed at both ends and the wall of which is formed with grooves near one end adapted to bridge the said piston when at one end of its stroke, a crank casing, a piston rod fixed to said piston and extending into said crank casing, a valve controlling the admission of explosive mixture to the grooved end of said cylinder, an exhaust valve at the other end of said cylinder, a crank within said crank casing, a block mounted on said crank, a link formed in one with said piston rod and within which said block can slide, a lubricant pump cylinder at the lower end of said casing formed with longitudinal grooves that freely communicate with said crank casing, and a piston working in said pump cylinder connected to said piston rod.

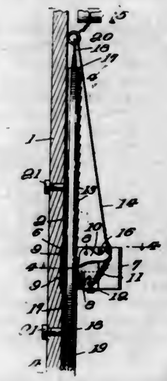
3. In a two-stroke cycle internal combustion engine, a piston, a working cylinder for said piston closed at both ends and the wall of which is formed with grooves near one end adapted to bridge the said piston when at one end of its stroke, a crank casing, a piston rod fixed to said piston and extending into said crank casing, a valve controlling the admission of explosive mixture to the grooved end of said cylinder, an exhaust valve at the other end of said cylinder, a crank within said crank casing, a block mounted on said crank, a link formed in one with said piston rod and within which said block can slide, a lubricant supply pipe adapted to deliver lubricant to the said crank within said casing, and a lubricant pump cylinder at the lower end of said crank casing, said pump cylinder forming a guide for the lower end of said piston rod which works therein and constitutes a lubricant pump piston.

4. In a two-stroke cycle internal combustion engine, a piston, a working cylinder for said piston closed at both ends and the wall of which is formed with grooves near one end adapted to bridge the said piston when at one end of its stroke, a crank casing, a piston rod fixed to said piston and extending into said crank casing, a valve controlling the admission of explosive mixture to the grooved end of said cylinder, an exhaust valve at the other end of said cylinder, a crank within said crank casing, a block mounted on said crank, a link formed in one with said piston rod and within which said block can slide, a lubricant supply pipe adapted to deliver lubricant to the said crank within said casing, a lubricant pump cylinder at the lower end of said crank casing, said pump cylinder forming a guide for the lower end of said piston rod which works therein and constitutes a lubricant pump piston, and a pipe connecting said pump cylinder to said working cylinder.

5. In a two-stroke cycle internal combustion engine, a piston, a working cylinder for said piston closed at both ends and the wall of which is formed with grooves near one end adapted to bridge the said piston when at one end of its stroke, a crank casing, a piston rod fixed to said piston and extending into said crank casing, a valve controlling the admission of explosive mixture to the grooved end of said cylinder, an exhaust valve at the other end of said cylinder, a crank within said crank casing, a block mounted on said crank, a link formed in one with said piston rod and within which said block can slide, a lubricant supply pipe adapted to deliver lubricant to the said crank within said casing, a lubricant pump cylinder at the lower end of said crank casing, said pump cylinder forming a guide for the lower end of said piston rod which works therein and constitutes a lubricant pump piston, a pipe connecting said pump cylinder to said working cylinder, and a non-return valve in said pipe.

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1,229,218. EXTENSION-FOOT FOR STEP-LADDERS. CARROL A. BRYANT, Livermore, Me. Filed Nov. 15, 1916. Serial No. 131,439. (Cl. 228—5.)



2. In an extension foot for stepladders, the combination with a guideway, of a leg, angular in cross-sectional shape, slidable therein, provided with exterior teeth or the like in its angle or ridge, there being a hollow space between the leg and guideway, a housing or the like, attached to and forming a part of the guideway and straddling the angular slidable leg, a spring actuated releasable dog mounted in, and protected by, the housing and engageable with the teeth aforesaid, and a contractile coil spring lying in the space between the leg and the guideway and connected to the leg, said spring being housed by the leg and adapted for retracting the leg.

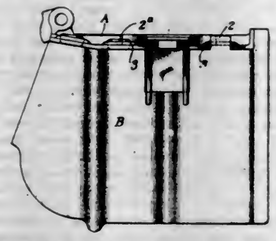
3. In an extension foot for stepladders, the combination with a guideway, of a cross sectionally arched extension leg slidably related thereto, releasable means for locking the leg in different positions in relation to the

guideway, and a contractile coil spring lying inside the leg and located between it and the guideway, said spring being connected to the leg.

5. In an extension foot for stepladders, the combination with a guide-way, of an extension leg, angular in cross-sectional shape having its longitudinal edge slidably engaged with the guideway, there being a hollow space between the leg and the guide-way, a coil spring extending longitudinally of the leg and guide-way between them and connected to said leg, and releasable locking means for the leg.

[Claims 1 and 4 not printed in the Gazette.]

1,229,219. METHOD OF MAKING JOURNAL-BOXES. ALBERT O. BUCKIUS, Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio. Filed Jan. 12, 1914. Serial No. 811,555. (Cl. 29—166.)

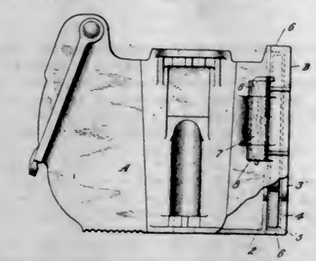


1. The method of making a journal box which consists in forming the top of the box out of cast steel with a plurality of slots therein, applying the top of the box thus formed to a preformed part having a plurality of projections thereon, the metal of the projections being heated before assembly, and upset while heated to form with the slots an interlock between the bottom and top of the box.

2. The method of making a journal box which consists in fitting together preformed top and cellar portions having slot and projection engagements, the slots being flared outwardly, the projections being preheated, and thereafter interlocking the heated projections in the slots by pressing down their ends to substantially fill the slots.

3. The method of making a journal box which consists in separately preforming the top and bottom portions of the box, the top having a plurality of outwardly flaring slots and the bottom having projections of progressively less cross section than the slots, applying the top to the bottom with the projections in the slots, and then filling the slots with metal and thereby providing a dovetailed connection between the parts.

1,229,220. JOURNAL-BOX. ALBERT O. BUCKIUS, Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 15, 1916. Serial No. 114,956. (Cl. 64—10.)



1. In journal box mechanism, a removable dust-guard housing comprised of a single piece and embracing a dust-guard, said dust-guard housing being secured to the journal box by wedging means.

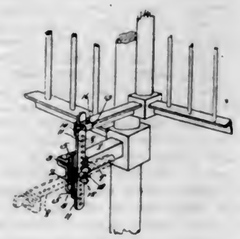
2. In journal box mechanism, a removable dust-guard housing containing a dust-guard, lugs on the journal box and on the housing having registering openings, and a key for insertion through said openings to hold the parts in operative position.

3. In journal box mechanism, a removable dust-guard housing containing a dust-guard, lugs on the journal box and on the housing having registering openings, and a key coöperating with wedging faces in said openings to wedge the parts in operative position.

4. In a journal box mechanism, a journal box, a removable dust-guard housing, the rear end of the journal box comprising the inner end of the dust-guard chamber, and the dust-guard housing comprising the top, sides and rear of said chamber, and a dust-guard in said chamber insertible in said housing from the forward open side thereof, said housing being attached to the journal box by wedging means.

5. In journal box mechanism, a removable dust-guard housing containing a dust-guard, the journal box and the housing having registering openings, and a spring key having bearings in the opposite sides of such openings to hold the housing tightly against the journal box.

1,229,221. BED AND CRIB COUPLING DEVICE. HUDSON H. BUGELE, St. Louis, Mo. Filed May 3, 1916. Serial No. 95,212. (Cl. 5—59.)



1. A coupling device for a crib and bed comprising a pair of clamping plates, one being inverted L-shaped to engage the inside of the side rail of the bed, the other being flat to engage the exterior of the side rail of the bed, means for holding the clamping plates together, an upright adjustably connected to one of said clamping plates and having means at its upper end to engage and support the side rail of the crib.

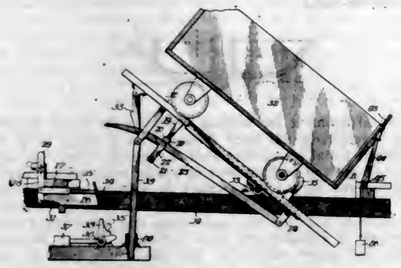
2. A coupling device for a crib and bed comprising a pair of clamping plates, one being inverted L-shaped to engage the inside of the side rail of the bed, the other being flat to engage the exterior of the side rail of the bed, means for holding the clamping plates together, an upright plate arranged adjacent the flat clamping plate, said upright plate having a series of apertures, means passing through the flat clamping plate and any one of the apertures of the upright plate to hold the upright plate in adjusted vertical positions, said upright plate having means at its upper end to engage the side rail of a crib for supporting the same.

3. A coupling device for a crib and bed comprising a pair of clamping plates, one being inverted L-shaped to engage the inside of the side rail of the bed, the other being flat to engage the exterior of the side rail of the bed, means for holding the clamping plates together, an upright adjustably connected to one of said clamping plates and having means at its upper end to engage and support the side rail of the crib, and means on one of the edges of the flat clamping plate to hold the upright plate in a horizontal position with one of its edges flush with the side rail of the bed when not in use, and assisting to hold the upright plate in vertical position when in use.



4. A coupling device for a crib and bed comprising a pair of clamping plates, one being inverted L-shaped to engage the inside of the side rail of the bed, the other being flat to engage the exterior of the side rail of the bed, means for holding the clamping plates together, an upright plate arranged adjacent the flat clamping plate, said upright plate having a series of apertures, means passing through the flat clamping plate and any one of the apertures of the upright plate to hold the upright plate in adjusted vertical positions, said upright plate having means at its upper end to engage the side rail of a crib for supporting the same, one edge of the flat clamping plate having a laterally extending angular lug to overlie one edge of the upright plate and assist in holding the same in a vertical position when in use, said lug acting to hold the upright plate in a horizontal position with one of its edges substantially flush with the side rail of the bed when not in use.

1,229,222. CROSSOVER-DUMP. EDWARD E. BULL, Whitwell, Tenn. Filed Oct. 19, 1914. Serial No. 867,346. (Cl. 214—11.)

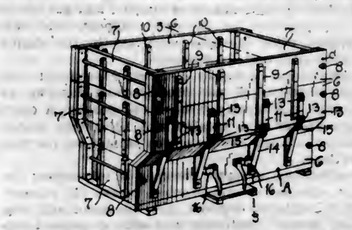


1. In a car dump in combination, a section of track transversely pivoted along a line in advance of its center, wheel stops carried by said track section normally standing out of the path of the wheels of a car, a bar 23 pivotally supported at its forward end to said track section and operatively connected to said car stops, a latch 25 upon which the free end of said bar 23 normally rests and by which said car stops are held in inoperative position, said latch 25 being rigidly supported against downward movement so as to hold said bar up and being adapted to yield upward to permit said bar to pass upward from below it, a lever 28 connected to said latch and adapted to be actuated by a forward movement of the car to withdraw said latch 25, pivoted latches 33 and fixed stops 34 for engagement therewith to hold the movable section of the track in normal position, levers 38 weighted to hold them out of operation, a shaft 36 having an arm in position to be struck by said bar 23 when the latch 25 is withdrawn and to turn the shaft 36 and levers 38 in a direction to push the latches 33 out of engagement with their stops so as to release the movable section of the track and allow the same to tilt, the track section being so balanced that the momentum of the car striking the stops will tilt such section and car forward to cause the dumping of the latter, whereupon the weight of the parts will swing the track section and car back to normal position, the latches 33 engaging the stops 34 to hold the rear end of the track section down and said latch 25 serving as a stop to engage the end of the bar 23 and cause the swinging of the car stops 15 out of the path of the wheels so that the car may move forward.

[Claim 2 not printed in the Gazette.]

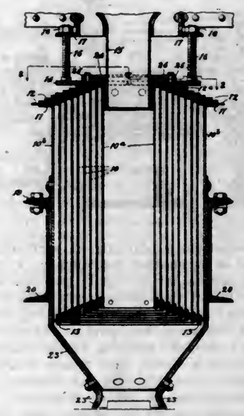
1,229,223. WAGON-BOX. WILLIAM R. BURR, Cresco, Iowa. Filed May 6, 1916. Serial No. 95,914. (Cl. 21—7.)

A wagon box including a bed and side walls secured thereto, supplementary side walls each consisting of two sections one of which is laterally inclined with respect to the other, said sections having abutting engagement at their contiguous longitudinal edges, strap irons securely fixed to the inner and outer faces of said supplementary side wall sections and tying the same together, said strap irons projecting angularly from the free longitudinal edge of the laterally inclined wall section and in spaced relation



to each other and adapted to receive the side walls of the wagon body between them, whereby the supplementary wall sections may be removably mounted in the upper edges of said body walls, and an obliquely inclined brace bar secured to the lower free end of each outer strap iron, the upper end of the brace bar being secure to the strap iron contiguous to the contacting edges of the supplemental wall sections.

1,229,224. TELESCOPING-CHUTE STRUCTURE. HENRY A. CARPENTER and ARTHUR W. WARNER, Sewickley, Pa., assignors to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Sept. 16, 1914. Serial No. 862,031. (Cl. 193—40.)



1. In combination, a telescopic sectional chute, a supply member entered therein, means for supporting the chute with its opposite ends independently supported under normal conditions and with a common support under abnormal conditions, said means including an end-section support surrounding the supply member and movable independently thereof and relatively thereto under abnormal conditions.

2. In combination, a telescopic sectional chute, a supply member entered therein, means for supporting the chute with its opposite ends independently supported under normal conditions and with a common support under abnormal conditions, said means including an end-section support surrounding the supply member and movable independently thereof and relatively thereto under abnormal conditions, and means for adjusting the end-section support relatively to the supply member.

3. In combination, a fixed supply member, a telescoping sectional chute, and means for supporting the chute with its opposite ends independently supported under normal conditions and with a common support under abnormal conditions, said means including a fixed support, an end-section support surrounding the supply member, and means interposed between said last mentioned supports, comprising rods carried by the end-section support and projecting through and supported by the fixed support, said end-section support being movable relatively to the supply member under abnormal conditions.

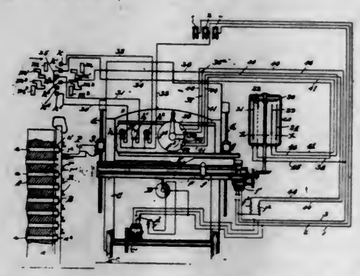
4. In combination, a supply member, a sectional telescopic chute external of said member and forming an extension of the passageway through the member, a chute support exteranl of said member and adjustable lengthwise thereof, and joint closing means carried by the telescoping sections.

5. In combination, a supply member, a telescoping sectional chute external of said member, means for supporting the chute with its opposite ends independently supported under normal conditions and with a common support under abnormal conditions, said means including an end-section support movable relative to the supply member under such abnormal conditions, and dust-proofing packing structures movable with such end-section support.

[Claims 6 to 12 not printed in the Gazette.]

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1,229,225. CONTROL MECHANISM FOR CHARGING AND DISCHARGING MACHINES. HENRY A. CARPENTER and ARTHUR W. WARNER, Sewickley, Pa., assignors to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Dec. 19, 1914. Serial No. 878,108. (Cl. 202—5.)



1. In combination, a plurality of vertically alined retorts adapted to be charged individually, a charging machine having means for vertically positioning a charger relative to either of the retorts, and complemental means carried by the charging machine and the retort setting and rendered active by the travel of the machine for indicating the alinement position of the charger relative to a predetermined retort, said means including an element adjustable vertically with the charger.

20. In combination, a retort structure, a traveling charging machine having a charger, and complemental means carried respectively by said structure and machine for indicating the alinement of charger and retort, said means including a movable member carried by the machine, and a member projecting from the structure into the path of the machine-carried member, said structure-carried member acting to move the machine-carried member under the travel movements of the machine, said structure-carried member having a configuration to vary the movements of the machine-carried member.

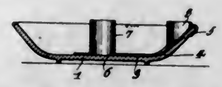
28. In combination, a retort structure, a traveling charging machine having a motor-operated charger and also carrying indicating means, circuits for said indicating means for controlling the operations of the motor, and complemental means carried respectively by said structure and machine for controlling the making and breaking of said circuits, said means including a movable member carried by the machine and having interruptions in said circuits, and a member projecting from the structure into the path of the machine-carried member, said structure-carried member acting to move the machine-carried member to close said interruptions under the travel movements of the machine, the movement of said machine-carried member to a predetermined position serving to close the interruptions of both circuits to provide concurrent action of the indicating and motor-control circuits.

30. In a retort charging machines, means for indicating the alining position of the charger and retort to be charged during travel of the machine, said means including a circuit, an indicator in said circuit, and a make-and-break device in said circuit shiftable under the machine travel movements, said device normally retaining the circuit broken, the shifting movements of the device completing the circuit to operate the indicator.

[Claims 2 to 19, 21 to 27, 29, and 31 to 54 not printed in the Gazette.]

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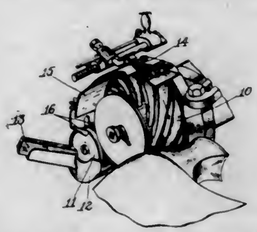
1,229,226. DISH ATTACHMENT. HARRY E. CARY, Oakland, Cal. Filed Sept. 22, 1915. Serial. No. 52,040. (Cl. 65—65.)



An attachment for holding artichoke on dishes including a relatively flat body formed from a single strip of resilient metal engageable with the center of the dish and having one end portion bent upwardly at an obtuse angle thereto and curved transversely to conform to the inside of the dish, a flange for engaging the edge of the dish formed by bending the upstanding end upon itself and curving it transversely into uniformly spaced relation with the under surface of the upstanding portion, the flat portion of the body being provided with an opening, a vertically arranged stem receiving collar formed with the body about the opening, and a pocket formed on the upper surface of the upstanding portion for receiving dressing adapted to be used on the artichoke.

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1,229,227. PROCESS OF MANUFACTURING SHOES. JAMES CAVANAGH, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Sept. 30, 1914, Serial No. 864,274. Divided and this application filed Sept. 25, 1915. Serial No. 52,645. (Cl. 12—147.)



1. That improvement in methods of making shoes which consists in attaching to a shoe an unfinished wood heel having its fibers running substantially parallel to the tread face of the heel, smoothing the heel to produce a satin-like surface on the wood, coloring the periphery of the heel with a substance containing a material adapted to bind together the fibers of the wood in the surface of the heel, subjecting the heel in the presence of heat to rubbing pressure which works said material into the surface of the heel and finishing the surface to produce a luster.



2. That improvement in methods of making shoes which consists in attaching to a shoe an unfinished wood heel having its fibers running substantially parallel to the tread face of the heel, smoothing the heel, applying to the smooth surface a coloring matter in which is incorporated a wax, softening the wax by heat and forcing it into the surface of the heel by rubbing pressure and polishing the heel.

3. That improvement in methods of making shoes which consists in attaching to a shoe an unfinished wood heel having its fibers running substantially parallel to the tread face of the heel, smoothing the periphery of the heel, applying to the periphery of the heel a wax which is adapted to bind together the wood fibers in the surface of the heel, softening the wax by heat and forcing it into the surface of the heel by rubbing pressure.

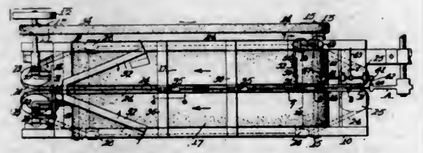
4. That improvement in methods of making shoes which consists in attaching to a shoe an unfinished wood heel with the fibers running substantially parallel to the tread face, smoothing the heel, spreading over the entire periphery of the heel a coloring material containing carnauba wax, drying the coat of coloring matter, rubbing the colored and wax-coated surface and applying thereon additional melted carnauba wax which is maintained in melted condition while being applied to the heel by the rubbing means and treating the colored and wax-coated surface of the heel to produce a surface appearance on the wood harmonizing with that of a shoe vamp.

5. That improvement in methods of making shoes which consists in attaching to a shoe an unfinished wood heel having its fibers substantially parallel to the tread face of the heel, smoothing the heel, spreading over the periphery of the heel a liquid coloring matter, drying the coating of liquid coloring matter, rubbing the colored surface and applying carnauba wax with an instrument heated to a temperature sufficient to maintain wax in the melted condition on the surface being rubbed, and then rubbing the wax to produce a surface appearance of more or less luster on the wood to harmonize with that of the shoe vamp with which the heel is to be used.

[Claims 6 to 8 not printed in the Gazette.]

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1,229,228. BOBBIN-TENDER. DANIEL L. CHANDLER, Ayer, Mass., assignor to Fitchburg Bobbin Cleaning Machine Co., Fitchburg, Mass., a Corporation of Massachusetts. Filed July 25, 1916. Serial No. 111,239. (Cl. 214—14.)



1. In a machine for feeding bobbins to a bobbin stripper, the combination of two belts running substantially edge to edge in opposite directions, one of them being below and adapted to receive the bobbins directly from, the other, and an oscillating shuffler for moving the bobbins from one to the other.

2. In a machine for feeding bobbins to a bobbin stripper, the combination of a pair of belts running in the same direction and spaced apart, and a second pair of belts located between them and located at an angle to each other to form a trough for receiving bobbins and running in the opposite direction.

3. In a machine of the character described, the combination of a pair of belts running in the same direction and spaced apart, a second pair of belts located between them and located at an angle to each other to form a trough for receiving bobbins and running in the opposite direction, the first named pair of belts being located above the second pair at the end toward which the first pair of belts are running and below them at the other end, whereby they can transfer bobbins to the central pair of belts.

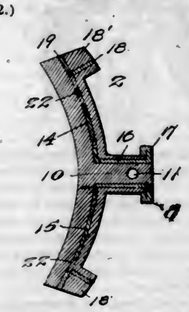
4. In a machine of the character described, the combination of a belt, a second belt located adjacent thereto for receiving bobbins and running in the opposite direction, the first named belt being located above the second one at the end toward which the first belt is running and below it at the other end, whereby it can transfer bobbins to the second belt, and movable means at the high point of the first belt for moving the bobbins on the surface thereof toward the second belt.

5. In a machine of the character described, the combination of a pair of wide belts forming a surface for the reception of bobbins, said belts being spaced apart, a pair of feeding belts located between them running in the opposite direction and arranged to form a trough for receiving bobbins, and means whereby bobbins placed on the first named belts will be transferred into the trough and fed thereby in the opposite direction.

[Claims 6 to 16 not printed in the Gazette.]

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1,229,229. RAILWAY-BRAKE. WILLARD R. CHANDLER, Sumter, S. C. Filed Jan. 16, 1917. Serial No. 142,686. (Cl. 188—82.)



1. The combination with a brake head having a T-slot therein, of a brake shoe formed with a corresponding T-lug, said lug having a pair of backing plates embedded therein and each plate having a projecting end forming part of the T-lug.

2. The combination with a brake head having a T-slot and a bridge thereacross, of a brake shoe formed with a corresponding T-lug, said shoe having a pair of disconnected backing plates therein formed with interlocking openings for keys of cast metal, and the ends of said plates projecting from the shoe to form part of the T-lug.

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1,229,230. HAND-STRAP. CHARLES C. CHAPPELLE, New York, N. Y. Filed Oct. 28, 1916. Serial No. 128,190. (Cl. 105—35.)



1. A hand strap comprising a body portion formed in a mold and an insert anchored in said body portion by

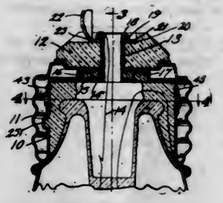
the casting thereof, and means for securing suspension strips to said insert.

2. A hand strap comprising a body portion formed of a wood composition of acid and formaldehyde cast in a mold, and an insert of metal anchored in said casting and provided with means for receiving suspension strips.

3. A hand strap comprising a body portion of a composition of bakelite and provided with a metal insert anchored in the body portion in the casting of said hand strap, and provided with means for receiving a suspension strip.

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1,229,231. LAMP LOCKING-BASE. WILLIAM A. CHEW, Atlantic City, N. J. Filed Oct. 23, 1916. Serial No. 127,240. (Cl. 173—356.)



1. An electric lamp having a base comprising an outer socket engaging shell, and an inner bulb carrying shell, a swivel connection between said shells including a frangible washer adapted to be fractured by relative outward movement of said parts, and seating and unseating means, the members of which are carried respectively by said shells, and the members of one means being cut out of operative relation when the members of the other means are in operative relation.

9. An electric lamp base comprising an outer socket engaging shell, and an inner bulb carrying shell adapted for relative rotary and outward movements, a swivel connection between said shells including a thimble detachably engaging one of said shells, seating means consisting of a single tongue pawl carried by one of said shells, and a beveled projection on the other shell normally arranged in the path of said pawl, and unseating means consisting of outward and inward projections respectively from the inner and outer shells, and normally arranged in different transverse planes and adapted to be disposed in a common transverse plane by relative outward movement of the shells.

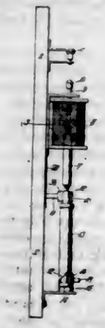
[Claims 2 to 8 not printed in the Gazette.]

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1,229,232. ELECTRIC TIME-SWITCH. ALFRED M. COATES, Middle Brighton, Melbourne, Victoria, Australia. Filed Mar. 29, 1916. Serial No. 87,512. (Cl. 161—25.)

1. In an electric time switch, an air cylinder, an air-tight flexible plunger adapted to reciprocate within the cylinder, circuit making and breaking means on the outside of said cylinder operated by said plunger, said cylinder having one end freely open to the atmosphere and provided at its opposite end with a narrow longitudinal slot having a hollow cover to form a by-pass for the air around the plunger to suddenly break the circuit to prevent burning of the circuit terminals, said cylinder being also provided at the by-pass with an air escape screw for regulating the speed of the plunger and circuit making parts.

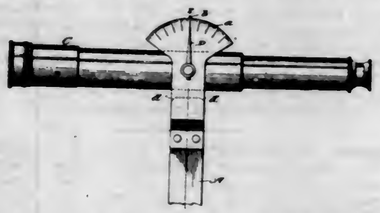
2. In an electric time switch, an air cylinder, a plunger within the cylinder and having a plunger rod connected thereto, a contact bridging piece carried by said plunger rod and insulated therefrom, a long contact strip and a short contact strip mounted to be engaged by the ends of the contact bridging piece, said air cylinder being provided with a by-pass and an air escape regulating screw at one end to suddenly break the contact of the bridging piece with the short contact strip to prevent burning of the terminals and regulate the speed of the plunger respectively, a solenoid, a core within the solenoid connected to the plunger rod, a lift-rod carried by said core, a spring plate, a stationary contact, a high resistance and



a push button in circuit with said solenoid, said spring plate adapted to be lifted from said contact by said lift-rod to cut in said high resistance to prevent burning of the push button terminals.

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1,229,233. MEASURING INSTRUMENT. JOHN L. CONNER, Washington, D. C. Filed July 28, 1916. Serial No. 111,916. (Cl. 33—71.)



1. In a measuring instrument of the character described, the combination of a support which includes a normally perpendicular upwardly presented sector having a graduated scale reading right and left of a vertical zero line; a telescope having trunnions disposed below said scale upon which trunnions the telescope is oscillatable; and a pointer fixed to one of said trunnions and normally perpendicular to the longitudinal axis of the telescope and projecting upwardly and arranged to turn to the right or left of a vertical line by and in response to the direction of oscillation of the telescope upon its trunnions.

[Claim 2 not printed in the Gazette.]

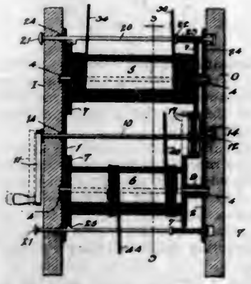
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1,229,234. SASH CONTROL. JOHN DAVID COOGLE, Corsicana, Tex., assignor of one-half to James B. Cooksey, Corsicana, Tex. Filed Sept. 6, 1916. Serial No. 118,759. (Cl. 16—53.)

1. A sash movable in upright guides; combined with a control therefor including a cord leading over pulleys and attached to the sash vertically above its center of gravity, a second cord attached to one of the stiles of said sash, a pulley journaled on the sash guide and at such location that when the sash is in closed position the cord end extends substantially perpendicularly from the sash edge to the respective pulley; and means including a drum mounted in the sash guide adjacent to said stile to which the cords are attached and wound in similar direction, a shift gear for operating the drum, and a detent for locking the drum at any position and a yielding rod on which said detent is secured and having a button at the face of the guide.



4. In a sash control, the combination with sashes and their casing in which the sashes are slidably mounted, of a pair of parallel vertically spaced winding drums within the casing, vertical, spaced bearing plates supporting the spindles of the drums, a shift gear engageable with the drums alternately and having a crank projecting through

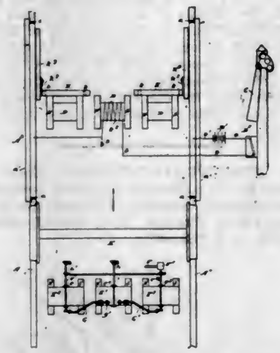


the casing, sash cords connecting the upper drum to the upper sash, sash cords connecting the lower drum to the lower sash and push buttons having shafts axially and yieldingly movable in said plates, locking wheels on said drums, and lugs on said shafts respectively for automatically locking said wheels and the drums.

[Claims 2 and 3 not printed in the Gazette.]

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1,229,235. SYSTEM OF RAILWAY CONTROL. ARTHUR RAINSFORD CRADDOCK, Christchurch, New Zealand. Filed July 15, 1915. Serial No. 40,112. (Cl. 246—58.)



1. In a system of railway control, the combination of a railway track and a train traveling thereupon, a constantly magnetized track magnet, a second track magnet with means for magnetizing and demagnetizing the second track magnet, normally demagnetized cores carried by the train and positioned to pass in inductive relation to the respective track magnets, governing mechanism carried by the train, and means for positively actuating said governing mechanism to impart a maximum restriction upon the running of the train when a magnetic condition is induced in one of the cores, but to permit free running of the train when a magnetic condition is induced in both cores.

2. In a system of railway control, the combination of a railway track and a train traveling thereupon, a constantly magnetized track magnet, a second track magnet with means controlled by a track signal for magnetizing and demagnetizing the second track magnet, normally demagnetized cores carried by the train and positioned to pass in inductive relation to the respective track magnets, governing mechanism carried by the train, and means for positively actuating said governing mechanism to impart a maximum restriction upon the running of the train when a magnetic condition is induced in one of the cores, but to permit free running of the train when a magnetic condition is induced in both cores.

3. In a system of railway control, the combination of a railway track and a train traveling thereupon, a constantly magnetized track magnet, a track electro-magnet in circuit with the track rails whereby its circuit may be closed by the passage of the train, a track signal having means for opening and closing the circuit of the electro-magnet, normally demagnetized cores carried by the train and positioned to pass in inductive relation to the respective track magnets, governing mechanism carried by the train, and means for positively actuating said governing mechanism to impart a maximum restriction upon the running of the train when a magnetic condition is induced in one of the cores but to permit free running of the train when a magnetic condition is induced in both cores.

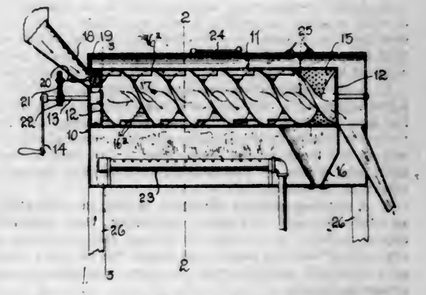
4. In a system of railway control, the combination of a railway track and a train traveling thereupon, a constantly magnetized track magnet, a second track magnet, a track signal, means for magnetizing the second track magnet when the track signal indicates "proceed," and for demagnetizing said track magnet when the track signal indicates "stop;" normally demagnetized cores carried by the train and positioned to pass in inductive relation to the track magnets, a brake, and magnetically controlled connections governing the brake and constructed to apply the brakes when a magnetic condition is induced in one of the cores, but not to apply the brakes when a magnetic condition is induced in both cores.

5. In a system of railway control, the combination of a railway track and a train traveling thereupon, a constantly magnetized track magnet, a second track magnet with means for magnetizing and demagnetizing the second track magnet, normally demagnetized cores carried by the train and positioned to pass in inductive relation to the respective track magnets, a brake, means for applying the brake when a magnetic condition is induced in one of the cores, and a stop effective when a magnetic condition is induced in both cores to positively prevent the brake from being applied.

[Claims 6 to 12 not printed in the Gazette.]

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1,229,236. INSECT-EXTERMINATOR. NEAL CROSS, Ardmore, Okla., assignor of one-half to Frank S. Gates, Ardmore, Okla. Filed Jan. 24, 1917. Serial No. 144,251. (Cl. 48—5.)



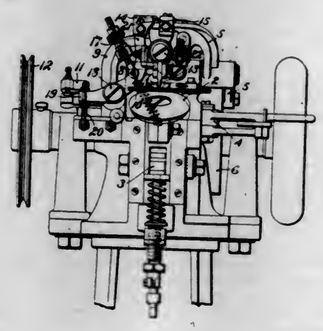
1. Means for treating material to exterminate insects therein comprising a rotatable drum imperforate for the greater portion of its length but having perforations at one end and being open at this end, a hopper disposed beneath the perforated portion of the drum, a heater casing surrounding the drum, a heater disposed within the casing, a hopper discharging into the inlet end of the drum, means for rotating the drum, and means for controlling the heat within the casing.

3. Means for treating material to exterminate insects therein comprising a shaft, a drum mounted thereon to rotate therewith and open at its outer end, the drum being imperforate for the greater portion of its length perforated at its outlet end, a hopper disposed beneath the perforated end of the drum, a casing surrounding the drum and extending below it, a burner disposed within the casing and extending beneath the imperforate portion of the drum, ribs disposed upon the interior face of the drum and extending longitudinally, a feeding device comprising a helical blade concentric to the shaft of the drum, and rotatable therewith, a hopper discharging into the inlet end of the drum, and means driven by the shaft for feeding material from the hopper into the drum.

[Claim 2 not printed in the Gazette.]

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1,229,237. STITCH-SEPARATING MACHINE. JAMES H. CUSHING, South Weymouth, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 2, 1916. Serial No. 123,321. (Cl. 12—41.)



1. A stitch-separating machine, having, in combination, an automatically adjustable indenting tool, means for actuating the tool to indent the work, and means for invariably presenting the tool to the work in a single, predetermined position prior to its indenting stroke whatever its position relative to the work may be at other times in the cycle of operations.

2. A stitch-separating machine, having, in combination, a work support, a vertically and angularly movable indenting tool, means for actuating the tool to indent and feed the work, and means for preventing angular movement of the tool on its return after the feeding movement.

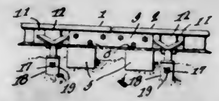
3. A stitch-separating machine, having, in combination, a work support, a vertically and angularly movable indenting tool, means for actuating the tool to indent and feed the work, means for positioning the tool substantially normal to the work at the completion of the feeding movement, and means for maintaining such position during its return to indenting position.

4. A stitch-separating machine, having, in combination, an automatically adjustable indenting tool, actuating means therefor to provide for finding and indenting the stitch intervals, and means for setting the tool in a single, predetermined position prior to each operation of said actuating means.

5. A stitch-separating machine, having, in combination, a work support, means for indenting the stitch intervals and for feeding the work across the work support including an indenting tool movable both vertically and angularly, means permitting angular movement of the tool in finding the stitch intervals, and means for temporarily locking the tool in a position normal to the work between each stitch-interval-finding and indenting operation.

[Claims 6 to 8 not printed in the Gazette.]

1,229,238. RAIL-ANCHORING DEVICE. SARAH J. DAWSON, Albany, Mo. Filed Jan. 29, 1916. Serial No. 75,138. (Cl. 238—4.)



1. The combination with a cross tie having a rail secured thereto, of rail anchoring means including a support anchored independently of said tie at one side of and independently of the rail, and a rigid connection between said support and said rail.

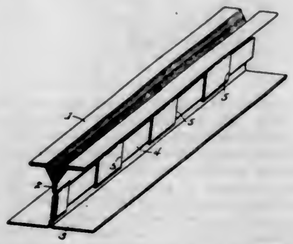
2. The combination with a cross tie having a rail secured thereto, of rail anchoring means including a support anchored independently of said tie at one side of and independently of the rail, and a Y-shaped rigid connector having its shank adjustably engaged with said support and its arms adjustably engaged with said rail.

3. A rail anchoring means including a support anchored outside of the rail and adjacent thereto, an adjustable rigid connection, a threaded shank upon the outer end of said connection, passing through the said anchored support and secured thereto, a pair of diverging arms upon the inner ends of said connection, and threaded shanks upon the inner end of said arms extending through the said rail and secured thereto.

4. A rail anchoring means including a support anchored outside of the rail and adjacent thereto, an adjustable rigid connection, a threaded shank upon the outer end of said connection passing through the said anchored support and secured thereto, a pair of diverging arms upon the inner end of said connection, a bar extending beneath said rail and the opposite rail, said bar having its ends bent to engage the said rails at opposite points, and plates disposed upon the outside of said rails provided with outwardly struck portions for the reception of said ends, a pair of threaded shanks upon the ends of said diverging arms, and a plate disposed upon the inside of the adjacent rail; the said threaded shanks extending through the adjacent outside plate, through the rail and through the said inside plate and being provided with nuts upon the inner ends thereof.

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1,229,239. STRUCTURAL MEMBER. EDGAR K. DAY, Wheeling, W. Va., assignor, by mesne assignments, to Whitaker-Glessner Company, Wheeling, W. Va., a Corporation of West Virginia. Filed Oct. 27, 1915. Serial No. 58,146. (Cl. 189—37.)



A structural member composed of sheet-metal and comprising a head, a base, and a web connecting said head and said base, said web being composed of two engaging thicknesses of metal which have a series of registering slits provided therein, and a longitudinally disposed sheet-metal strip threaded from side to side through said slits for rigidly uniting said two thicknesses, the metal between adjacent slits being alternately pressed laterally outward in opposite directions to afford a substantially direct passageway for said uniting strip.



1,229,240. BODY-ELEVATING DEVICE. EDGAR K. DAY, Wheeling, W. Va., assignor of one-half to Alexander Bolton, Wheeling, W. Va. Filed June 26, 1916. Serial No. 105,811. (Cl. 5—43.)



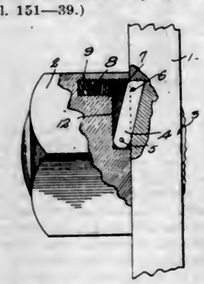
1. A body-elevating device of the character described, comprising a member adapted to rest upon a bed, a body-rest normally disposed in close overlying relation to said member and having downturned curved flanges for embracing and shielding the edges of said member, said body-rest having a suitably located opening therethrough, and manually operated means connected to said member and to said body-rest whereby the latter may be elevated and lowered with respect to the former.

2. A body-elevating bed accessory, comprising a member adapted to rest upon a bed and embodying a receptacle-support, a body-rest normally disposed in close overlying relation to said member, said body-rest having an opening adjacent to one end thereof located over said support, a plurality of transversely disposed crank-rods interposed between said body rest and said member and having pivotal relation to both thereof, levers for imparting a partial rotation to said rods for elevating and lowering said body rest, and means for adjusting the positions of said levers, said means including clutch elements and adjustable resilient means for holding said levers in engagement with said elements.

3. A body-elevating device of the character described, comprising a member adapted to rest upon a bed, a body-rest normally disposed in close overlying relation to said member and having downturned curved flanges for embracing and shielding the edges of said member, said body-rest having a suitably located opening therethrough, a plurality of transversely disposed crank-rods interposed between said body rest and said member and having pivotal relation to both thereof, levers loosely mounted upon said rods whereby the latter may be partially rotated for elevating and lowering said body-rest, and clutch-like means for interlocking said levers with said rods.

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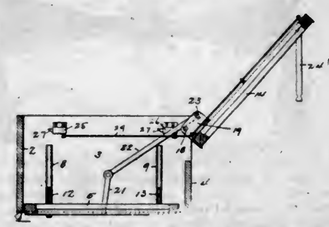
1,229,241. NUT-LOCK. JOHN DE PAUL and RAYMOND DI FALCO, Koppel, Pa. Filed July 3, 1916. Serial No. 107,396. (Cl. 151—39.)



In a device of the class described, the combination of a nut, provided with a groove running parallel with its inner face, said nut provided with a pocket extending at right angles to its inner face, a pawl pivotally mounted within said groove, a spring carried within said pocket, said spring adapted to press upon the free end of said pawl, said pawl provided with a knob carried upon its upper face and adjacent its free end, said spring adapted to engage said knob so as to positively keep said spring in engagement with the free end of said pawl, said pawl provided upon its free end with an aperture, and a pin adapted to go through an aperture provided upon said nut and through the aperture provided upon said pawl whereby said pawl may be held out of engagement with a fish plate, said pin also adapted to pass over said knob so as to keep said pawl in a locked position without injuring said spring.

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1,229,242. FOLDING BED. JOSIAH A. DEWEY, San Francisco, Cal., assignor to Dewey Davenport Company, San Francisco, Cal., a Corporation of California. Filed Jan. 25, 1915. Serial No. 4,190. (Cl. 5—51.)



1. In furniture of the class described, two superposed bed frames, the upper frame being pivotally supported adjacent its forward side and being movable about said pivot through a predetermined arc independent of the lower frame, and means including a link pivoted to said upper frame at a point outside the pivotal axis of said frame and operative by the further movement of the upper frame for moving the lower frame.

2. In furniture of the class described, a lower bed frame, an upper bed frame arranged in superposed relation therewith, pivots supporting the upper frame at its forward side, a link pivotally connected at each end of the lower frame at the center, and a link connecting each of said center links with the upper frame, said last named links being convertible into supporting levers for said lower frame as the upper bed frame is moved about its pivot.

3. In furniture of the class described, a lower bed frame adapted to be raised, an upper bed frame arranged in superposed relation with said lower frame adapted to be rotated about a horizontal axis, and links connected to said lower bed frame and pivoted to said upper bed frame at a point outside said axis whereby the initial movement of the upper frame about said axis is independent of the lower frame and the further movement of the upper frame converts said links into levers which operate to raise the lower frame.

4. In furniture of the class described, a stationary structure, guides arranged on said structure, a lower bed frame movable in said guides, an upper bed frame arranged above said lower frame and pivoted to said structure, and means connecting said upper and lower bed frames whereby the downward movement only of the upper frame causes an upward movement of the lower frame and the upward movement only of the upper frame causes a downward movement of the lower frame.

5. In furniture of the class described, a stationary structure, guides arranged on said structure, a lower bed frame movable in said guides, an upper bed frame arranged above said lower bed frame and pivoted to said structure, links connected to said lower frame, and links connecting said first named links with the upper bed frame, said second links being arranged to engage the pivots of the upper frame after the upper frame has been moved past the vertical position in its unfolding movement.

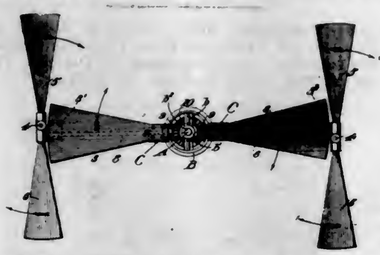
[Claims 6 to 8 not printed in the Gazette.]

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1,229,243. PROPELLER. STEVEN EBERHARDT, Martinez, Cal. Filed Jan. 12, 1912. Serial No. 670,886. (Cl. 170—159.)

1. A propeller comprising a main shaft carrying main propeller blades extending at right angles thereto on oppo-

site sides thereof, auxiliary propeller blades mounted on the outer ends of said main propeller blades and disposed at right angles to said main propeller blades, and means for rotating said auxiliary propeller blades operable by the rotation of said main propeller blades, substantially as set forth.



2. A rotary propeller mechanism comprising main propeller blades, auxiliary propeller blades attached to the outer ends of each of said main propeller blades and adapted to revolve therewith, and means for rotating said auxiliary propeller blades on their own axes during the revolution of the propeller, substantially as set forth.

3. A propeller mechanism comprising a main propeller and an auxiliary propeller rotatably mounted on the outer end of the main propeller blade with its axis at right angles to the plane of said main propeller blade, substantially as set forth.

4. A propeller mechanism comprising main propeller blades, auxiliary propeller blades rotatably mounted on the outer extremities of said main propeller blades to rotate in a plane therewith, and means for rotating said auxiliary propeller blades by the revolution of said main propeller blades, substantially as set forth.

5. In a propeller mechanism, the combination of a main driving shaft, a series of radially disposed propeller blades secured to rotate therewith, an auxiliary propeller blade journaled on the outer extremity of each of said main propeller blades to extend at right angles therewith, and shafts journaled on said main propeller blades and geared to the main shaft and to the axes of the auxiliary propeller blades, whereby the revolving of said main shaft and propeller will also operate said auxiliary propeller blades, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

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1,229,244. TIRE-PROTECTOR. GEORGE P. F. ECKERT, Wilkes-Barre, Pa. Filed Apr. 1, 1916. Serial No. 88,352. (Cl. 152—14.)



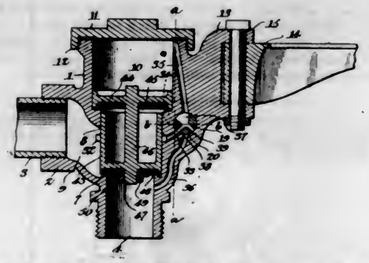
1. The combination with a tire; of a protector comprising links and flattened rings interconnected to form a continuous flexible network of open meshes, each mesh being formed of several links and rings, the links of each mesh arranged at varying angles to the direction of rotation of the tire, and each comprising an integral piece of metal having an elongated wear face, arms extending from the wear face and bent over underneath the wear face to lie substantially parallel therewith in opposed relation so that the distance between the arms and the wear face is less than the width of the flattened rings, and accommodates the thickness of the rings, the free ends of the arms being spaced apart from each other a sufficient distance to permit the entrance of the rings edgewise therebetween and at right angles to the link, after which the rings are turned while still adjacent the space between the free ends of the arms, to lie substantially parallel with the link, the width of the rings being greater than the distance between the free ends of the arms.

2. The combination with a tire; of a protector comprising interconnected links and rings forming a net work of open meshes, each mesh being formed of several links and rings, the links of each mesh arranged at varying angles to the direction of rotation of the tire, and having substantially hexagonal wear faces, the angular side edges of which grip the road at any angle at which the tire may skid, the links and rings adapted for relative movement, the rings each lying in contact with the tire, the broad wear faces of the links lying in planes outside the rings.

3. A tire protector comprising a plurality of interconnected links and rings arranged to form a continuous net work of open meshes arranged in parallel series circumferentially of the tire, each mesh being formed of several links and rings, the links of each mesh arranged at varying angles to the direction of rotation of the tire, the rings lying in contact with the tire; the links terminating at opposite ends in arms bent over substantially parallel with the under surface of the wear face, the ends of the arms spaced apart just sufficiently to permit swaged portions of the rings to pass between the ends of the arms; the width of the rings from their inner to their outer circumferences being slightly greater than the space between the arms and the under surfaces of the wear faces, to prevent the rings from swinging at right angles to the links, and the thickness of the rings being less than the space between the arms and the under surfaces of the wear links to enable the links to swivel or tilt relatively to the rings when the wheel is skidding.

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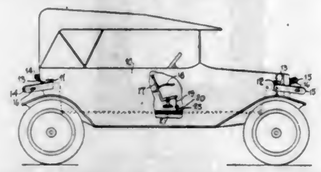
1,229,245. FIRE-HOSE VALVE. WILLIAM H. EDDY, Superior, Wis. Filed Jan. 7, 1916. Serial No. 70,849. (Cl. 137—4.)



In a valve of the class described a valve casing having inlet and outlet members, a cylindrical bore with which the inlet and outlet members communicate, a pressure chamber of greater diameter than and communicating with one end of the cylindrical bore, the casing being further provided with a duct around the wall of said bore, a passage leading from said duct, a transverse bore to which said passage extends, a passage leading from said transverse bore to the outlet, a passage leading from said bore to the upper end of the pressure chamber, a passage leading from said bore to the lower end of the pressure chamber, a valve shaped to fit in the first named bore of the casing and movable to open and to close the outlet, a pressure actuated member connected to the valve and arranged for operation in the pressure chamber, and a controlling valve mounted for turning movement in the transverse bore, said controlling valve having a segmental port in constant communication with the passage which leads to the upper end of the pressure chamber, a port to connect said port with the passage leading to the outlet, a port to connect said segmental port with the passage leading from the duct and also having a pair of connected ports to establish communication between said duct and the first named passage when said valve is turned to establish communication between the upper end of the pressure chamber and the outlet.

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1,229,246. AUTOMOBILE DIRECTION-SIGNAL. HENRY CARL EGGERS, Portsmouth, N. H. Filed Aug. 26, 1916. Serial No. 117,074. (Cl. 116—31.)



1. In a car, a body having openings on each side at its forward end, and openings on each side at its rear end, a pair of semaphore arms disposed behind the forward openings, a pair of semphore arms disposed behind the rear openings, and manually operable means on each side of the body for projecting the semaphore arms on that side, said means being operatively connected to the corresponding semaphore arms.

3. In a car, a body having openings on each side at its forward end, and openings on each side at its rear end, a pair of semaphore arms disposed behind the forward openings, a pair of semaphore arms disposed behind the rear openings, flexible shafts disposed on each side of the body, manually operable means for rocking each shaft independently of the other shaft, arms at each end of the shaft extending to the semaphores, and a housing through which each flexible shaft passes.

[Claim 2 not printed in the Gazette.]

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1,229,247. VARNISH-REMOVING COMPOSITION. CARLETON ELLIS, Montclair, N. J., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed Mar. 21, 1917. Serial No. 156,390. (Cl. 87—5.)

1. A paint and varnish remover comprising a composite mixture of solvent hydrocarbons of coal tar consisting mainly of solvent naphtha incorporated with a wax precipitatnt consisting mainly of an alcoholic body and having a waxy retarder of evaporation held in film-forming condition by the presence of carbon bisulfid.

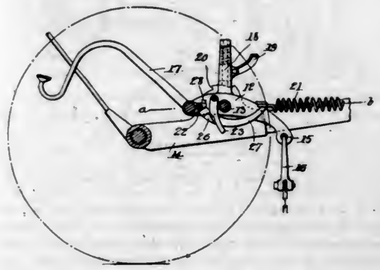
2. A paint and varnish remover comprising a composite mixture of solvent hydrocarbons of coal tar consisting mainly of solvent naphtha, having a relatively low solvent action on waxy material, a wax precipitant consisting mainly of an alcoholic body miscible with said solvent naphtha, a relatively small quantity of carbon bisulfid, and a waxy retarder of evaporation held in film-forming condition by the presence of carbon-bisulfid.

3. A paint and varnish remover comprising a hydrocarbon of coal tar, having substantially less solvent action on wax than benzol, incorporated with denatured alcohol, carbon bisulfid and paraffin wax, the proportion of said carbon-bisulfid being adjusted with respect to the amount of paraffin wax, whereby the latter is maintained in a satisfactory film-forming condition.

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1,229,248. MOWING-MACHINE. JOHANN GEORG FAHR, Gottmadingen, Germany, assignor to the Firm of Maschinenfabrik Fahr A.-G., Gottmadingen, Germany. Filed Oct. 27, 1914. Serial No. 868,906. (Cl. 56—74.)

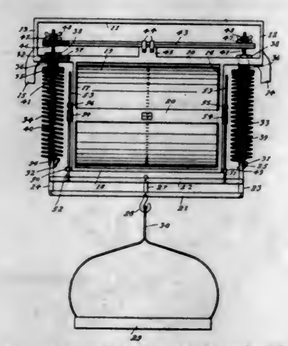
1. In a mowing machine, the combination with the frame, the seat of the operator mounted thereon, and the cutting mechanism, of means for lifting the cutting mechanism, and means located in position for operation by the foot of the operator for actuating the lifting mechanism for lifting the cutting mechanism from its lowermost or normal position to its uppermost or upright position, said foot operated means comprising means for locking the lifting mechanism in an intermediate position, a single foot operated member, means for coupling the foot operated member to the lifting mechanism for operation in lifting direction for moving the cutting mechanism first from lowermost or normal position to intermediate position, means operative when the lifting mechanism has been locked in intermediate position to return the foot lever into initial position, and means for again coupling the foot lever to the lifting mechanism for moving the cutting mechanism from intermediate to uppermost position.



2. In a mowing machine, the combination with the frame, the seat of the operator mounted thereon, and the cutting mechanism, of mechanism for lifting the cutting mechanism, and means located in position for operation by the foot of the operator for actuating the lifting mechanism for lifting the cutting mechanism from its lowermost or normal position to its uppermost or upright position, said foot operated means comprising means for locking the lifting mechanism in an intermediate position, a single foot operated member, means for coupling the foot operated member to the lifting mechanism for operation in lifting direction for moving the cutting mechanism first from lowermost or normal position to intermediate position, means operative when the lifting mechanism has been locked in intermediate position to return the foot lever into initial position, means for again coupling the foot lever to the lifting mechanism for moving the cutting mechanism from intermediate to uppermost position, and means operative when the cutting mechanism is being returned from uppermost into initial position to disconnect the foot operated member from said coupling means operative for moving the cutting mechanism from intermediate position to uppermost position.

3. In a mowing machine, the combination with the frame, the seat of the operator mounted thereon, and the cutting mechanism, of mechanism for lifting the cutting mechanism, and means located in position for operation by the foot of the operator for actuating the lifting mechanism for lifting the cutting mechanism from its lowermost or normal position to its uppermost or upright position, said foot operated means comprising means for locking the lifting mechanism in an intermediate position, a single foot operated lever jointed to the lifting mechanism and having an extension beyond its pivot adapted to engage the lifting mechanism for moving the cutting mechanism from initial or normal position into intermediate position, a spring actuated link jointed to said extension and tending to return the foot operated lever when depressed into initial position, a locking pawl connected with the lifting mechanism and located in position for locking engagement with said extension when the lifting mechanism is in intermediate position, a lug on the link operative when the cutting mechanism is being returned from uppermost or upright position to initial or normal position to throw said pawl out of locking engagement with the extension.

1,229,249. SPRING-BALANCE SCALE. DAVID L. FAIRCHILD, Elmhurst, Ill., assignor to Helen O. Fairchild, Elmhurst, Ill. Filed Aug. 10, 1914. Serial No. 855,948. (Cl. 265—49.)



1. A scale comprising a framework embodying a top beam and depending arms, an indicating cylinder journaled in said depending arms, a thermostatic bar secured midway of its length to said framework, a load support having operative connection with the cylinder, and counterbalancing springs for the load support and the load carried thereby, all of said springs being connected with the load support and some of said springs being connected with the top beam and others of said springs being connected with the thermostatic bar at its ends respectively.

2. A scale comprising a framework embodying a top beam and depending arms, an indicating cylinder journaled in said depending arms, a thermostatic bar secured midway of its length to said top beam, a load support having operative connection with the cylinder, and counterbalancing springs extending on either side of the cylinder and connected with said thermostatic bar at its ends respectively.

3. A scale comprising a framework embodying a top beam and depending arms, a thermostatic bar secured to said top beam centrally in respect to said bar and said cylinder, a load support having operative connection with the cylinder, and counterbalancing springs for the load support and the load carried thereby extending past each end of the cylinder and connected with the respective ends of the thermostatic bar.

4. A scale comprising an indicating mechanism, a load support, counterbalancing springs on each side of said indicating mechanism for the load support and load carried thereby, and a thermostatic bar rigidly supported at its middle portion and having its ends connected with some of said springs to compensate for changes in the condition of said springs due to changes in temperature to which the springs are subjected.

5. A scale comprising a framework embodying a top beam and depending arms, a thermostatic bar secured to said top beam centrally in respect to said bar and said cylinder, a load support having operative connection with the cylinder, and sets of counterbalancing springs for the load support and the load carried thereby extending past the ends of the cylinder, a spring of each set being connected to the top beam and another spring of each set being connected to the ends of the thermostatic bar.

[Claims 6 to 11 not printed in the Gazette.]

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1,229,250. FIREPROOF SAFE. FRANK W. FINKHOUSEN, Wren, Ohio. Filed May 1, 1916. Serial No. 94,848. (Cl. 109—2.)

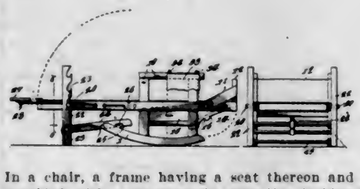
In a safe, the combination with outside and inside metallic casings, of a door casing mounted on the outside casing, means for insulating the outside casing and the door casing from inside casing, a door including a metallic frame hinged to the door casing, a plate carried by said frame, a second plate carried by but in spaced relation to the frame, insulating material disposed between said plate and between the last mentioned plate and the



frame, a plate secured to the last mentioned plate and adapted to close the inner casing and insulating material disposed between the last mentioned plate and the adjacent plate on the door frame.

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1,229,251. COMBINATION-CHAIR. EDWARD J. FLOYD, Douglas, Ga. Filed Jan. 5, 1916. Serial No. 70,524. (Cl. 155—6.)



1. In a chair, a frame having a seat thereon and further provided with a transversely extending locking bar, a hinged back connected with the frame and capable of assuming a horizontal position, pins extending laterally from the side bars of the back, supporting legs having notches therein to accommodate the pins on the back when in a horizontal position, locking members pivotally connected with the supporting legs and adapted for engagement with the transverse locking bar to retain the supporting legs and frame against movement with respect to each other.

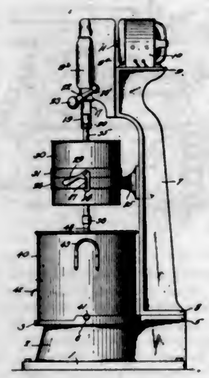
2. The combination with a chair having a hinged back thereon capable of being supported in vertical and horizontal positions, of rods pivotally connected upon the opposite sides of the back, and a mirror carried by the rods, said mirror constituting a head rest when the back is arranged in a horizontal position.

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1,229,252. VEGETABLE-PREPARING MACHINE. JOHN EDWARD GLOEKLER, Pittsburgh, Pa. Filed Aug. 1, 1916. Serial No. 112,541. (Cl. 146—9.)

1. In a power vegetable-preparing machine, a frame having a pedestal and an upright rising back of the pedestal and also having a recessed flange on the pedestal and an opening between the ends of the flange at the front of the pedestal, a receptacle arranged on the pedestal and within the flange thereof and having trunnions seated in the recesses of the flange; a revoluble agitator in the receptacle, and means carried by the frame upright and detachably engaging the agitator for revolving the latter.

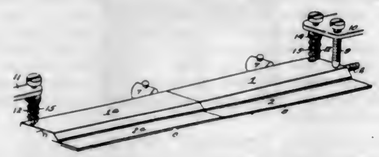
2. In a machine for the purpose described, a frame having a pedestal and an upright at the back of the pedestal and extending upwardly from the horizontal plane of the pedestal, a receptacle on the pedestal, a receptacle disposed above the first-named receptacle and having a foraminous diaphragm at its bottom and also having a central aperture in said diaphragm, exterior means connecting the second-named receptacle with the upright of the frame, a vertically movable and rotatable shaft extending downwardly through the aperture in the foraminous diaphragm and having agitating means movable in



the second-named receptacle, means carried by the frame for rotating said shaft, and a shaft mounted in the first-named receptacle and detachably engaged with the lower end of the first-named shaft and provided in said receptacle with agitating means.

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1,229,253. CUTTER-BAR FOR LAWN-MOWERS. CHARLES JACOB GOBLE, Somerville, N. J. Filed Aug. 5, 1916. Serial No. 113,376. (Cl. 56—19.)



1. In a lawn mower, the combination with a rotary cutting member of a cutter bar having a plurality of sections co-acting with said cutting member.

2. In a lawn mover, the combination with a rotary cutting member of a cutter bar having a plurality of sections co-acting with said rotary cutting member, each section being so mounted as to be adjustable to the rotary cutting member.

3. In a lawn mower, the combination with a rotary cutting member of a cutter bar composed of a plurality of independent sections, and means for adjusting the sections of the cutter bar to said rotary cutting member.

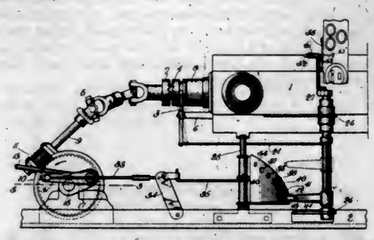
4. In a lawn mower, the combination with a rotary cutting member of a cutter bar composed of a plurality of independent sections, means for adjusting the sections of the cutter bar to said rotary cutting member, and means for regulating the pressure of the sections on said rotary cutting member.

5. In a lawn mower, the combination with a rotary cutting member of a pivotally mounted cutter bar having a plurality of independent sections, and means for adjusting the cutting edge of the cutter bar to said rotary cutting member.

[Claims 6 to 16 not printed in the Gazette.]



1,229,254. MEANS FOR ADJUSTING A VEHICLE-SPRING TO VARIOUS LOADS. JOHN F. GOODWIN, Charlestown, Mass., assignor to Sarah N. Eastman, special administratrix of William E. Eastman, deceased. Filed Nov. 4, 1916. Serial No. 129,624. (Cl. 267—1.)



1. In a power-driven vehicle, a metal vehicle-spring, a power motor; means operatively connecting said spring and said motor, to control the relations between said spring and said vehicle; and means to automatically disconnect said motor from said operatively connecting means, whenever said spring moves into a predetermined position.

2. In a power-driven vehicle, a vehicle-spring; a power motor; means to transform the rotary power of said motor to longitudinal power; means to connect said spring with said latter means; clutch mechanism to connect and to disconnect said motor from said driven means; and automatic means whereby said clutch mechanism may be disconnected from said driven means when the spring has attained a certain predetermined position.

3. In a power-driven vehicle, a spring; a motor-driven shaft; means to convert the rotary movement of said shaft to a reciprocating longitudinal movement; connections between said means and said spring; a pin reciprocated by said means; a pivoted arm having a spring catch to lock with said pin in one of its movements and pass by it in its opposite movement; a clutch to disconnect said shaft from said means; apparatus to connect said pivoted arm with said clutch, whereby said shaft may be automatically disconnected from said means; and manually operated mechanism to connect said clutch with said means and to move said pivoted arm and catch into the path of the reciprocating pin.

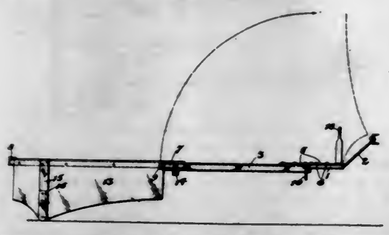
4. In a power-driven vehicle, a spring; a motor-driven shaft; means to convert the rotary movement of said shaft to a reciprocating longitudinal movement; connections between said means and said spring; a number of pins, each reciprocated by said means in a plane parallel with that of each of the other pins; a pivoted arm movable in an axis perpendicular to the plane of movement of the pivoted arm, said arm having a spring catch to lock with any one of said pins in one of its movements and to pass by it in its opposite movement; a clutch to disconnect said shaft from said means; apparatus to connect said pivoted arm with said clutch, whereby said shaft may be automatically disconnected from said means; manually operated mechanism to connect said clutch with said means and to move said pivoted arm and catch into the path of any one of the reciprocating pins; and a device for locking said mechanism in a position corresponding to that of the engaging catch and the particularly selected pin.

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1,229,255. COMBINED BED AND PARCEL-CARRIER. JASPER C. GOIN, Dahlgren, Ill. Filed June 12, 1916. Serial No. 103,290. (Cl. 5—51.)

1. A device of the character described, comprising an inner frame part, hinges connecting the inner frame part with the running board of an automobile and enabling it to be moved to horizontal position or to vertical position at the outer side edge of the running board, an outer frame part pivoted to the inner frame part and arranged to form

a continuation thereof when the inner frame part is horizontal and to fold against the outer side of the inner frame part when in vertical position, means for interlocking the inner and outer frame parts in horizontal position, means for supporting said frame parts vertically at the outer side of the running board, and side walls carried by one of said frame parts extending toward and terminating close to the automobile body, said side walls being shaped to form complete end closures for the space between said frame parts and the automobile body when said frame parts are in vertical position.

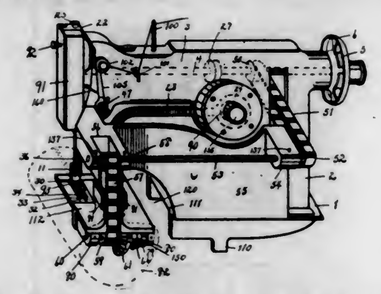


2. In an automobile, the combination with the running board thereof, of an inner frame part, hinges connecting the inner frame part with the running board and enabling said frame part to be moved to vertical position at the outer edge of the running board, or to horizontal position in alinement with the running board as desired, an outer frame part pivoted to the inner frame part and arranged to fold against the outer side of the inner frame part in vertical position and to be extended into horizontal continuation of the inner frame part, bed springs supported by said frame parts and arranged to fold in conformity therewith when the frame parts are folded as aforesaid, means for holding said frame parts in substantially horizontal alinement, means in connection with the outer frame part and with the running board for supporting said frame parts in folded position vertically at the outer edge of the running board, and side walls carried by one of said frame parts and extending toward the automobile body when said frame parts are in vertical position, said side walls terminating close to the automobile body and being shaped to form complete end closures of the space between said frame parts and the automobile body.

3. The combination with the running board of an automobile, of an inner frame part, hinges connecting the inner frame part and the running board and enabling said frame part to be moved from horizontal position to vertical position, an outer frame part hinged to the inner frame part and arranged to fold against the outer side of the inner frame part when the latter is moved to vertical position, arms in connection with the running board, and brackets on the outer frame part arranged to engage said arms to support said frame parts folded together in vertical position.

4. The combination with the running board of an automobile, of an inner frame part, hinges connecting it with the running board enabling it to be moved to horizontal position or to vertical position at the outer side edge of the running board, an outer frame part pivoted to the inner frame part and arranged to form a continuation thereof when the inner frame part is horizontal and to fold against the outer side of the inner frame part when in vertical position, springs supported by the inner and outer frame parts, a supporting device for the intermediate portion of the springs when said frame parts are folded together in vertical position, side walls carried by the outer frame part and extending toward the body of the automobile when in vertical position, said side walls terminating close to the automobile body and being shaped to form complete end closures of the space between said frame parts and the automobile body, devices for fastening the frame parts together in vertical position, and devices in connection with the running board for holding the frame parts in vertical position.

**1,229,256. SEWING-MACHINE.** JOHN W. GURLEY, Yorkville, N. Y., assignor of one-half to W. O. Welskotten, Utica, N. Y. Filed Oct. 21, 1914. Serial No. 867,879. (Cl. 112—24.)

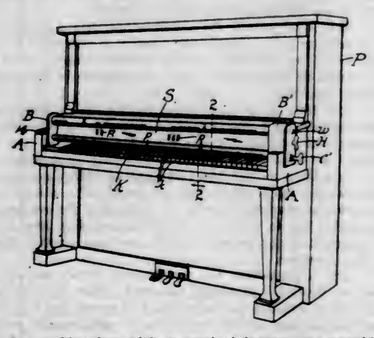


1. In a sewing machine, the combination with a master shaft, a needle, means connected with said master shaft for vertically reciprocating and transversely vibrating said needle, a presser foot, a feed dog, arms for elevating and longitudinally actuating said feed dog, whereby to advance a fabric to said needle, cams for actuating said arms, and belts connected with said master shaft to revolve said cams, whereby to sew a fabric of any given length.

2. In a sewing machine, the combination of a frame having a depending portion carrying the looper and feed mechanism, a needle, means for vertically reciprocating and transversely vibrating said needle, a presser foot, a feed dog, arms for elevating and longitudinally actuating said feed dog, whereby to advance the fabric to the needle, and belts for actuating said means for moving said looper and feed dog, whereby a tube of indefinite length may be sewed by said machine.

3. In a sewing machine, the combination of a frame having a depending portion carrying the looper and feed mechanism, a needle, means for vertically reciprocating and transversely vibrating said needle, a presser foot, a feed dog, arms connected with said feed dog, means for actuating said arms, whereby to elevate and longitudinally reciprocate said feed dog, cams for actuating said arms, a shaft for supporting said cams, and belts connecting said shaft with the means for actuating said needle, whereby to revolve said shaft to actuate the feed dog.

**1,229,257. PIANOFORTE ATTACHMENT.** HUGO PAUL HAANEL, Jr., St. Louis, Mo. Filed July 19, 1916. Serial No. 110,099. (Cl. 84—130.)



1. In combination with a musical instrument provided with a keyboard, brackets fixed at each end of said keyboard, a pair of rollers mounted between said brackets, one of said rollers being positioned in close proximity to the keyboard and having a sheet or roll normally wrapped thereon, said roll being provided with suitable indicator strips, means for causing the roll to unwind from one roller and onto the other, whereby the said strips pass over the keyboard.

2. In combination with a musical instrument provided with a keyboard, an indicator roll mounted adjacent the keyboard, a roller mounted above the roll, means for causing the roll to unwind from itself and onto the roller, indicator strips on the roll, and adapted to bear momentarily on the keyboard during the unwinding of the roll.

3. In combination with the keyboard of a pianoforte, an indicator-roll positioned in close proximity to said keyboard, means for effecting an unwinding of the roll, and indicator strips on the roll, said fingers being adapted to bear on the keyboard during the unwinding of the roll.

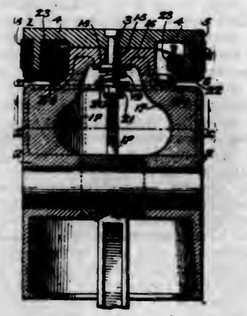
4. A roll consisting of a sheet of suitable material, provided with indicator strips anchored at one end to said sheet and free to drop below the plane of said sheet on unwinding of the roll.

5. A roll consisting of a sheet of suitable material, provided with indicator strips formed in the sheet and attached at one end thereto.

[Claims 6 to 12 not printed in the Gazette.]



**1,229,258. PISTON AND RING PACKING.** JACKSON O. HAAS, Philadelphia, Pa. Filed Apr. 1, 1915. Serial No. 18,510. (Cl. 121—108.)

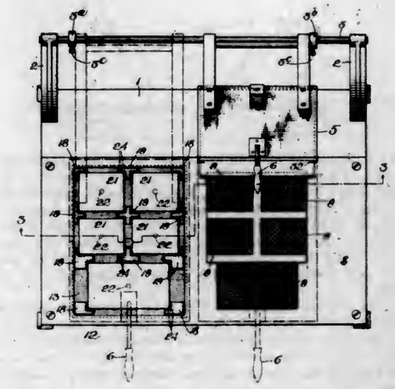


1. A piston formed of a separable top and bottom, having in its side a groove the walls of which are inclined with respect to the opposite ends of said piston, a packing ring adapted to occupy said groove, and a resilient device adapted to connect said bottom and top, and permit the rotation of the latter one on the other.

2. A piston formed of a cylindrical body having on its upper head an outturned flange, a lower head having an outturned flange, said body having between said flanges a groove, the opposite walls of which are substantially parallel with each other and oppositely inclined with respect to the opposite ends of said body, a plurality of spiral rings on said body adapted to occupy said groove with their convolutions in contact with each other, said lower head of the piston being freely mounted on the upper head thereof, and means for rotatingly and resiliently connecting said heads.

3. A piston formed of a cylindrical body having at its upper portion an outturned flange, a lower portion having an outturned flange, said body having between said flanges a groove, the opposite walls of which are substantially parallel with each other and oppositely inclined with respect to the opposite ends of said body, shoulders on the inner edges of said flanges approximately opposite each other, a plurality of spiral rings on said body adapted to occupy said groove with their convolutions in contact with each other, the upper terminal of one of said rings being adapted to abut the adjacent shoulder on the upper flange and to be secured to said flange at said shoulder to prevent shifting of the rings around the body yet permitting expansion thereof, the lower terminal of the other ring being adapted to abut the adjacent shoulder of the lower flange and to be secured to said flange at the shoulder thereof and means permitting limited rotation of the lower flange around said body and allowing expansion of the ring.

**1,229,259. SAMPLE-PASTING MACHINE.** WALTER C. HADLEY, New York, N. Y. Filed Oct. 6, 1915. Serial No. 54,454. (Cl. 216—14.)

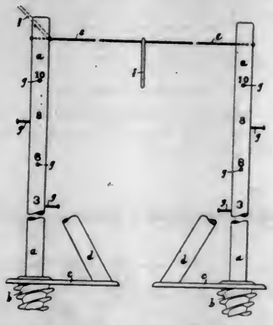


1. In apparatus for making sample cards:—a card holder; means for applying paste to a card in the holder; resilient means for supporting and retaining one or more stacks of patches; means whereby the card holder may engage said latter means, and bring said pasted card into contact with the top patch of each stack of patches; a pneumatic blast for separating that patch in the stack, next to the patch pasted to, and picked up by the pasted card in the card holder; and means to control the blast while the top patch is being removed from its stack.

2. In apparatus for making sample cards:—a pivoted card holder; means for applying paste to a card in the holder; a patch box to contain and hold one or more stacks of patches; means whereby the card holder may bring the pasted card into contact with the top patch of each stack; means whereby said box is resiliently mounted in the direction of the axes of the stacks; resilient patch supporting plates, serving as the bottom of the patch box, to standardize the pressure exerted by the card against the top patch of each stack of patches, a pneumatic blast for separating that patch in the stack, next to the patch pasted to and picked up by the card in the card holder; a valve to control said blast; and means connecting said valve and said patch box, whereby the operation of the patch box will seasonably open and close said valve.

3. In apparatus for sample cards:—a card holder; means for applying paste to a card in the holder; a patch box resiliently mounted, to contain one or more stacks of patches, the upper edge of said box having outlets from air channels in said box, and adjacent to the top patches of the stack or stacks; means whereby the card holder may bring the pasted card into contact with the top patch of each stack; a source of air under pressure; a valve communicating with said source; flexible channels connecting said valve with said air channels in the patch box; and means connecting said box with said valve, whereby the operation of said box will seasonably open and close said valve.

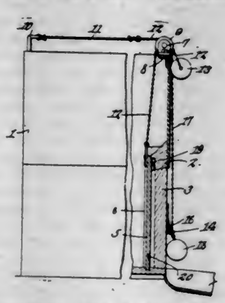
1,229,260. TOY OR APPLIANCE FOR PLAYING A GAME. ROBERT WALLACE HAIGH, Manchester, England. Filed Aug. 12, 1916. Serial No. 114,547. (Cl. 46—59.)



1. A device for playing an indoor or outdoor game comprising in a pair of vertical pillars or posts fixed at a distance apart from each other, a cord or cable, wire or rod secured to and stretched between the pillars at a suitable distance from the upper ends of the latter and a ring located on the cord adapted to be propelled from one pillar to the other with the object of causing the ring to pass over and down the opposite pillar substantially as described.

2. In a game apparatus, a pair of stationary uprights, a track secured between the upper parts of the uprights and arranged at a predetermined distance from their tops, and a ring located on the track and adapted to pass over the tops of the uprights when thrown skilfully against them.

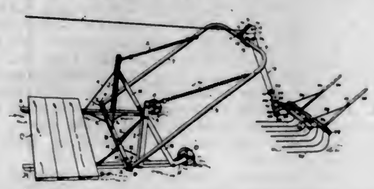
1,229,261. DEVICE FOR PROTECTING CRUDE-OIL TANKS. LUKE HANNON, Hennessey, Okla. Filed May 16, 1916. Serial No. 97,851. (Cl. 220—124.)



1. The combination with a tank having a discharge opening, of an inner door closing said opening, means tending to open said door, an outer door closing said opening and opening outward, means for holding the outer door in closed position, means tending to move the second mentioned means to releasing position, and combustible means for preventing the first and third mentioned means from operating.

2. The combination with a tank having an outlet opening in one wall adjacent its bottom, of an inner sliding door closing said opening, an outer door hinged to the tank to close said opening and adapted to open outwardly, guiding means carried by the tank adjacent its upper edge above said opening, a flexible element attached to the inner door and passing over said guiding means, a weight connected to said flexible element to raise the inner door, a latch for holding the outer door in closed position, means tending to release said latch, a flexible element attached to the latch and extending over the guiding means, and a combustible element attached to the aforesaid flexible elements, extending across and attached to the tank to normally prevent the doors from being opened.

1,229,262. LOADING-MACHINE. BENNIE P. HANSON and NELS I. NELSON, Bancroft, Iowa. Filed Oct. 19, 1915, Serial No. 56,696. Renewed Nov. 11, 1916. Serial No. 130,922. (Cl. 214—10.)



1. A loading device, comprising a base member, a supporting frame pivotally mounted upon said base member, a housing rigidly mounted upon said frame and having a plurality of pulleys therein, a cable riding over said pulleys and carrying a lifting device, a rake having a looped portion thereon, means riding in said looped portion and connected to said lifting device, and means carried by said lifting device adapted to lock in said housing when said lifting device is in elevated position.

2. A loading device, comprising a rake consisting of a number of tooth bars, a plurality of cross beams assembling said tooth bars, handles attached to one of said cross beams, bracing members connected at one end to another of said cross beams, and at their opposite ends to said handles to brace the same, looped means upon said brake, connecting means riding in said looped means, and a lifting device connected to said connecting means to lift said rake.

3. A loading device, comprising a pivoted support having a rigidly mounted housing thereon containing pulleys, said housing having apertures therethrough, a cable riding over said pulleys and carrying a lifting device, said lifting device having an extended pin adapted to be seated in said apertures to lock said lifting device in elevated position, a rake having a looped portion, and a flexibly mounted connecting means riding in said looped portion removably connected to said lifting device to raise said rake upon the operation of said lifting device.

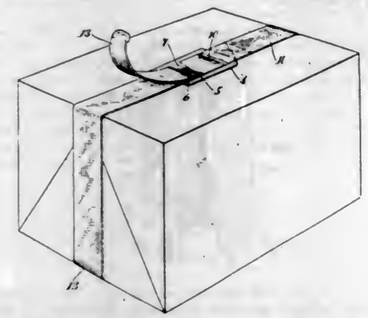
4. A loading device, comprising supporting means, lifting means, locking means carried by said lifting means for locking said lifting means to said support when in elevated position, a rake having an elongated looped portion, and flexible means riding in said looped portion removably hooked to said lifting means adapted to raise said rake upon the operation of said lifting means.

5. A loading device, comprising a base member provided with transporting wheels, a supporting frame upon said base member, means for pivotally mounting said supporting frame upon said base member, means for resiliently supporting said supporting frame upon said base member, a housing upon said supporting frame provided with apertures, pulleys within said housing, a cable for traveling over one of said pulleys, a lifting device carried by said cable, a rake having a loop, means for traveling in said loop and connected to said lifting device, and means carried by said lifting device adapted to lock in the apertures of said housing when said lifting device is in elevated position.

1,229,263. STRAP-FASTENER. FREDERICK C. HARRIMAN, Ardsley-on-Hudson, Irvington, N. Y. Filed May 8, 1916. Serial No. 95,995. (Cl. 24—169.)

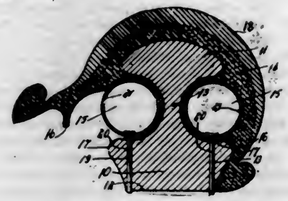
1. In a strap fastener, a buckle consisting of a flat metallic plate, one end of which has a wide elongated slot in which dips an undulated ribbonlike tongue extending laterally to said plate, and the other end of which has a narrow elongated slot extending in the same direction as the other slot.





2. In a strap fastener, a buckle consisting of a flat metallic plate, from one end of which is cut an undulated tongue dipping into a wide elongated slot, said tongue being located nearer the inner than the outer edge of said slot, and the other end of which plate has a narrow elongated slot extending in the same direction as the other slot.

1,229,264. PNEUMATIC TIRE. VERGIL HENSLEY, Vallejo, Cal. Filed Aug. 23, 1916. Serial No. 116,466. (Cl. 152—22.)

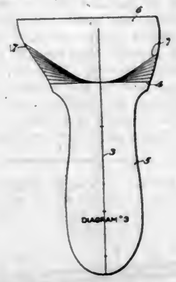


A tire consisting of a substantially I-shaped core, the flanges of the I-shaped core forming tread and rim portions connected by the web of the I, a reinforcing cover extending over the tread flanges and then under the tread flanges down along the sides of the web, said cover further extending outward along the flanges of the rim portion of the core, said cover further extending from the tread flanges outwardly and then inwardly to the rim flanges to provide circular apertures between the two portions of the cover, the last-mentioned portion butting against the first-mentioned portion on top of the rim flanges and following the rim flanges to the rim portion of the core, the two portions of the cover being separated along their lines of meeting on the rim flanges, and a tread fixed to the reinforcing portion of the tire.

1,229,265. SOLE-GAGE FOR BOOTS AND SHOES. JOHN J. HEYS, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 3, 1915. Serial No. 37,917. (Cl. 33—3.)

1. A sole gage conforming approximately to the contour of that portion of a lasted shoe bottom adjacent to the ball line and having a series of lines diverging from the center to opposite edges of the gage and arranged to permit any two lines extending to opposite edges of the gage to be combined to indicate an appropriate ball line for a shoe bottom.

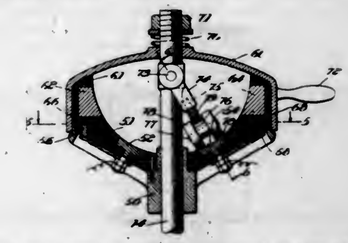
2. A transparent sole gage shaped to conform approximately to the contour of a lasted shoe bottom and having a base line adapted to be positioned at approximately the junction of the shank and forepart of the shoe and a series of lines diverging from a median point in the base line to opposite edges of the gage to indicate the appropriate ball line for any style of shoe bottom.



3. A transparent sole gage conforming approximately to the contour of a lasted shoe bottom and having a center line extending lengthwise of the gage, a base line intersecting the center line and extending across the gage and adapted to be positioned at approximately the junction of the shank and forepart of the shoe, and a series of lines radiating from the intersection of the center line and base line to the opposite edges of the gage.

4. A sole gage having a portion at one end corresponding in shape and size to the insole of a lasted shoe and a portion at the opposite end extended in width and corresponding to the ball portion of the outsole, and a series of lines extending from the center transversely of the gage to opposite edges of the gage and arranged to indicate the proper ball line for different styles of shoes.

1,229,266. IGNITION SYSTEM FOR INTERNAL-COMBUSTION ENGINES. JOHN TEN EYCK HILLHOUSE, New York, N. Y. Filed June 3, 1911. Serial No. 631,117. (Cl. 123—117.)



2. In an ignition system, a distributer having two sets of contacts, one of said sets being fixed and the other adjustable relative to said fixed set, said sets of contacts being connected together in parallel, and automatic means for rendering one or the other of said sets operative.

4. In an ignition system, a distributer having a vertical rotary shaft, a contact arm pivotally connected therewith and arranged to have a vertical movement under the action of centrifugal force, a fixed contact and an adjustable contact above the fixed contact, said contact arm being arranged to pass over the fixed contact when the the rotary shaft is moved slowly, and over the adjustable contact when said shaft moves at a higher rate of rotation.

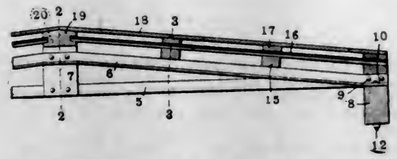
12. In an ignition system, a distributer having a vertical rotary shaft, a contact arm pivotally connected therewith, a spindle axially rotatable in said arm, a pair of rollers, a pivot therefor transverse to said spindle and offset from the axis thereof near the end of the spindle; a two-part cup-shaped housing having its inner surfaces corresponding with the radius of the contact arm, the lower part of said housing being stationary and the upper part rotarily adjustable relative to said lower part, a

series of contacts set in the lower part of the housing, a similar series of contacts set in the upper part of the housing, sliding contacts connecting said two series of contacts together in parallel, and a spring arranged to hold the two parts of the housing together at said sliding contacts; said rollers being arranged to pass over the series of contacts in the lower part of the housing when the shaft is rotating slowly, and over the series of contacts in the upper part of the housing when said shaft moves at a higher rate of rotation, and a spring arranged to press said rollers against the contacts.

[Claims 1, 3, 5 to 11, and 13 not printed in the Gazette.]

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1,229,267. CARLINE. LOUIS A. HOERR, St. Louis, Mo. Filed Feb. 15, 1915. Serial No. 8,226. (Cl. 108—5.6.)

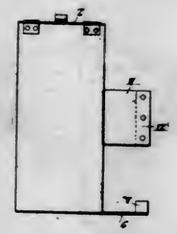


1. A carline comprising a tie beam, and a truss beam, said tie beam being formed of angle iron, the end of said tie beam having its horizontal flange separated from its vertical flange and spread to form a fastening member.

2. A carline comprising a tie beam, and a truss beam, both of said beams being formed of angle iron, the ends of said beams having their horizontal flanges separated from their vertical flanges and spread to form fastening members.

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1,229,268. MILK-BOTTLE RECEPTACLE. JOHN HOEY, New York, N. Y. Filed Aug. 28, 1916. Serial No. 117,317. (Cl. 232—42.)



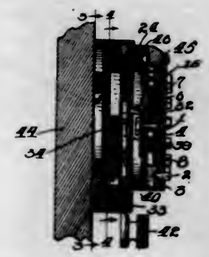
1. A receptacle adapted to be mounted upon a door and having means formed on one bottom edge thereof and engageable with the bottom edge of the door, and means formed on one vertical edge and engageable with the free vertical edge of the door for locking the receptacle upon the door when the latter is in closed position.

2. In combination a receptacle, laterally extending plates formed upon two of the adjacent edges of the receptacle and disposed at right angles to each other, the plate upon the vertical edge being L-shaped and offset from the receptacle, and strips secured to each of the plates.

3. A device of the class described comprising a receptacle having a hinged lid, means for locking the lid in closed position, laterally extending plates formed on the receptacle and disposed at right angles with relation to each other, and strips formed on the confronting faces of the plates.

4. In combination, a rectangular receptacle, a laterally extending plate formed on one bottom edge thereof, a second laterally extending plate formed on one vertical edge of the receptacle at the same side as the first plate, and strips formed on each of the plates.

1,229,269. KEYLESS LOCK. CHARLES W. HORN, Chicago, Ill. Filed Oct. 31, 1913. Serial No. 798,397. (Cl. 70—54.)



1. In a device of the class described a lock, a plurality of flat locking members associated therewith, a spring plate contacting the inner ends of said locking members to hold the same in initial position, and mechanism for causing said lock to open automatically when certain of said locking members are actuated.

2. In a device of the class described a plurality of flat non-rotatable movable locking members, mechanism controlled thereby to permit an automatic opening of the lock when the proper ones of said locking members are actuated and to prevent opening of the lock when any of the other of said locking members are actuated, and a radially slotted guide plate adjusted to guide and hold said locking members in position.

3. In a device of the class described a radially notched rotatable locking element, a plurality of flat locking members having notches with inclined edges adapted to retain the same in position, said locking element adapted to be released by the actuation of proper ones of said locking members, a tapered lug on each of said locking members for limiting the outward movement thereof and also serving when other than the proper ones of said locking members are actuated to lock said locking element irrespective of the actuation of the proper locking members, and mechanism acting to automatically move the locking element into release position when released by said locking members.

4. In a device of the class described, a slidable locking bolt, a radially notched rotatable locking element controlling the movement thereof, certain predetermined flat notched members for permitting release of the same, means automatically moving said element into unlocked position when released, other similar notched members which when actuated prevent release of said locking element, and means acting to rotate said locking element when released to permit the locking bolt to move into released position.

5. In a device of the class described a rotatable locking element, flat non-rotatable means retaining the same in locking position, certain of said means capable of actuation to release said locking element, and the other of said means acting to prevent release of said locking element if actuated, and a flat radially slotted plate adapted to guide said means and hold the same in spaced relation to one another.

[Claims 6 to 39 not printed in the Gazette.]

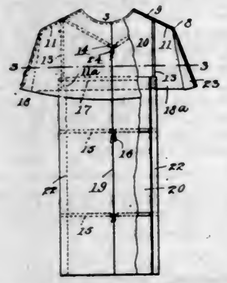
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1,229,270. WATERPROOF CLOAK. FRANK W. HOWARD, New York, N. Y. Filed Sept. 20, 1913. Serial No. 790,862. (Cl. 2—60.)

1. A waterproof cloak consisting of a cape having a neck opening, having a forward apron and a rear apron connected to said forward apron, and a skirt connected at the middle portion only of its rear side to the rear apron, and connected at its forward side to the forward apron, said skirt being of considerably less width than said aprons, said cloak having arm openings between the ends of said aprons and the upper edges of said skirt, said cape and said skirt being divided longitudinally throughout their length at the front of said cloak.



2. A waterproof cloak consisting of a cape having a neck opening, having a forward apron and a rear apron connected to said forward apron, and a skirt attached at its rear side to the rear apron, and attached at its forward side to the forward apron, said skirt being of considerably less width than said aprons so as to form arm openings under the ends of said aprons and over the sides of said skirt, said cape and said skirt being divided longitudinally throughout their length at the front of said cloak, said cape having shoulders adjacent said neck opening, and reinforcing strips extending from the said shoulders downwardly and attached below the shoulders to said cloak.



3. A waterproof cloak consisting of a cape having a neck opening, having a forward apron and a rear apron and having a plaited portion connecting the said aprons at the sides, and a skirt attached at its rear side to the rear apron, and attached at its forward side to the forward apron, said skirt being of considerably less width than said aprons so as to form arm openings between the ends of said aprons and over the sides of said skirt, said cape and said skirt being divided longitudinally throughout their length at the front of said cloak.

4. A waterproof cloak adapted to be formed of waterproof paper, consisting of a cape having a neck opening, having a forward apron and a rear apron, said cape having plaited portions at the sides thereof adjacent the shoulders and connecting said aprons, and a skirt extending downwardly from said cape, said cloak having armholes below said plaited portions, said skirt having sides with downwardly extending plaits adapting said skirt to fold, and adapting the same to open out when a body is enveloped by said skirt.

5. A waterproof cloak formed of a frangible waterproof material having shoulders and a neck opening therebetween, and having substantially vertical free edges at the front, reinforcing strips attached on said shoulders, extending downwardly in an inclined direction at the front and attached to said cloak at the said free edges, said strips having free extensions projecting beyond said free edges to enable the ends of the strips to be tied together to attach the said free edges together.

[Claims 6 to 11 not printed in the Gazette.]

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1,229,271. UMBRELLA. FRANK W. HOWARD, New York, N. Y. Filed Aug. 28, 1914, Serial No. 859,067. Renewed Nov. 23, 1916. Serial No. 133,092. (Cl. 135—28.)

1. In an umbrella, in combination, a stick, a plurality of ribs having integral extensions extending longitudinally and lying against the sides of the stick, said ribs having flat portions adjacent the stick at which the ribs flex in opening and closing the umbrella, and means for clamping said extensions against the side of said stick.

2. In an umbrella in combination, a stick, a plurality of ribs having integral flexible extensions extending longitudinally and lying against the sides of said stick and constructed to flex at the point of connection with said stick to permit the opening and closing of the umbrella, and a sleeve fitting tightly over said extensions and forcing the same into said stick, to secure said extensions to said stick and prevent lateral movement of said extensions.



3. In an umbrella in combination, a stick, a plurality of ribs having integral flattened flexible extensions extending longitudinally of and lying against the sides of said stick and constructed to flex to permit the opening and closing of the umbrella, and a sleeve fitting tight over said extensions forcing the said extensions into the wood of the stick and thereby securing the same to said stick.

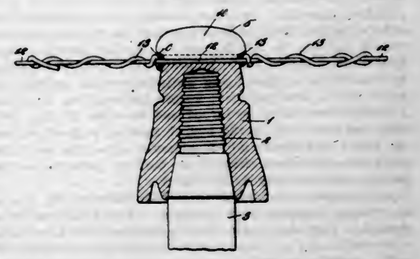
4. In an umbrella, in combination, a stick, a plurality of ribs having flat flexible integral extensions extending longitudinally of and lying fintly against the side of the stick, a sleeve engaging over said extensions for securing the same to said stick, said sleeve having an outwardly turned lip at the lower end thereof permitting the outward flexing of said flexible extensions and permitting an outward movement of the flexible extensions at a point between the lip and the stick in opening the umbrella.

5. An umbrella runner consisting of a collapsible sleeve to encircle the stick, and a helical coil around said sleeve and extending along the same for controlling the contact of the said sleeve with the umbrella stick.

[Claims 6 to 14 not printed in the Gazette.]

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1,229,272. INSULATOR. JOHN J. IRWIN, Cleveland, Ohio. Filed Dec. 30, 1916. Serial No. 139,808. (Cl. 173—313.)



1. An insulator comprising a body portion having a downwardly facing ledge adapted to be engaged by a tie wire, and having also a transverse groove for the reception of a line wire, the bottom of the groove being spaced below the plane of the ledge a distance substantially equal to the combined thicknesses of the tie wire and line wire.

5. In a wire supporting device of the character set forth, the combination of an insulator body having a circumferential downwardly facing ledge that is adapted to be engaged by a tie wire, and having also a transverse groove in its upper end for the reception of a line wire, the bottom of the groove being spaced below said ledge a

distance substantially equal to the combined thicknesses of the tie wire and line wire, and a tie wire which passes about the body above the line wire and in engagement with the ledge and is crossed over itself on one side of the body and continues about the same in both directions to where its opposite ends are twisted spirally about the line wire and away from the insulator in such condition as to permit the line wire to remain undistorted by the insulator or tie wire.

[Claims 2 to 4 and 6 not printed in the Gazette.]

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1,229,273. GRAIN-SAMPLER. THOMAS LISTER JAMES, Higher Tranmere, and WILLIAM HENRY BEESON, Rock Ferry, England. Filed Nov. 6, 1915. Serial No. 60,092. (Cl. 83—15.)



1. The improved apparatus for ascertaining the temperature of and for taking samples from granular or the like material stowed in bulk, consisting of a tubular drill open at one end and closed at the other and having near the closed end a through port, said drill being provided with a helical propeller; means for rotating the drill; a bucket adapted to be introduced into the tubular drill until the open top of the bucket reaches a point beyond the port; and means which normally close the port and adapted to be moved clear of the port by contact with the bucket; substantially as described.

2. In apparatus for ascertaining the temperature of and for taking samples from granular or the like material stowed in bulk, in combination; a tubular drill arranged in sections adapted to be non-rotatably coupled together, the lowermost section being provided with a helical propeller and a through port; means for rotating the drill; a bucket adapted to be introduced into the tubular drill until the open top of the bucket reaches a point beyond the port; and means which normally close the port and adapted to be moved clear of the port by contact with the bucket; substantially as described.

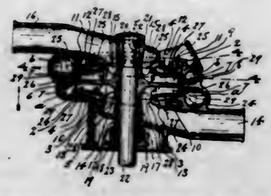
3. In a device for ascertaining the temperature of and for taking samples from granular or the like material stowed in bulk, in combination; a tubular drill fitted with a propeller and a through port; means for rotating the drill; a sleeve normally adapted to close the port; and a bucket adapted to be introduced into the drill to pass into the said sleeve and to move it clear of the said port; substantially as described.

4. In a device for ascertaining the temperature of and for taking samples from granular or the like material stowed in bulk, in combination; a tubular drill fitted with a propeller and a through port; means for rotating the drill; a sleeve provided with a detent; a bucket adapted to be introduced into the drill and to enter the said sleeve, said bucket being provided with elastically controlled means adapted to engage said detent, and with means which engage the sleeve and move it clear of the port, the engagement of the said elastically controlled means with the detent being adapted as the bucket is withdrawn to return the sleeve to the normal position in which it closes the said port; substantially as described.

5. In a device for ascertaining the temperature of and for taking samples from granular or the like material stowed in bulk, in combination; a tubular drill fitted with a propeller and a through port; means for rotating the drill; a sleeve provided with a detent; elastically controlled means connected to the tubular drill adapted to engage the said detent and to elastically hold the sleeve in the position in which it closes the port; a second detent on the sleeve; a bucket adapted to be introduced into the drill and provided with means adapted to engage the said sleeve and to move it in opposition to the said elastically controlled means into a position in which the port is open, said bucket being provided with elastically controlled means adapted to engage the said second detent in opposition to the first mentioned elastically controlled means and to move the sleeve into a position in which the port is open, and as the bucket is withdrawn to return the sleeve into the position in which it closes the port; substantially as described.

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1,229,274. DUPLEX CENTRIFUGAL PUMP. ROBERT K. JACK, Nutley, N. J. Filed Aug. 8, 1916. Serial No. 113,688. (Cl. 253—191.)



1. In a device of the kind described, a casing provided with a pair of annular chambers spirally enlarged from their points of beginning toward their points of discharge, annular passages formed at the juncture of said annular chambers with the main body of said casing, the point of beginning and point of discharge of one of said annular chambers being respectively diametrically opposite the point of beginning and point of discharge of the other annular chambers, a rotary impeller mounted within said casing adapted to discharge fluid through said annular passages into said respective annular chambers to forcibly eject said fluid from the latter at their discharge points, and means for delivering fluid to said impeller.

2. In a device of the kind described, a casing provided with a pair of annular chambers spirally enlarged from their points of beginning toward their points of discharge, annular passages formed at the juncture of said annular chambers with the main body of said casing, the point of beginning and point of discharge of one of said annular chambers being respectively diametrically opposite the point of beginning and point of discharge of the other annular chamber, said casing being provided in its sides with intake ports, intake or suction pipes connected with said casing so as to communicate with said intake ports, and a rotary impeller having radially disposed curved impeller vanes mounted within said casing in communication with said intake ports, said impeller being adapted to discharge the fluid received through said intake ports peripherally through said annular passages into said respective annular chambers to forcibly eject said fluid from the latter at their discharge points.

3. In a device of the kind described, a casing provided with a pair of annular chambers spirally enlarged from their points of beginning toward their points of discharge, annular passages formed at the juncture of said annular chambers with the main body of said casing, the point of beginning and point of discharge of one of said annular chambers being respectively diametrically opposite the point of beginning and point of discharge of the other annular chamber, said casing being provided in its sides with intake ports, intake or suction pipes connected with said casing so as to communicate with said intake ports, a rotary impeller having side walls, a central wall dividing the interior of said impeller transversely of its axis to form two interior chambers open at the periphery of said impeller respectively to communicate with said respective annular passages leading to said annular chambers of said casing, radially disposed curved impeller vanes extending through each interior chamber of said impeller, and the side walls of said impeller having centrally disposed entrance ports communicating respectively with said intake ports of said casing.

4. In a device of the kind described, a casing providing a centrally disposed chamber, a fixed wall of said casing inclosing one side of said central chamber, a removable cover-portion closing the other side of said central chamber, said casing being provided with a pair of annular chambers spirally enlarged from their points of beginning toward their points of discharge, discharge pipes connected with said casing and extending outwardly from the respective points of discharge of said annular chambers, said casing being further provided with a pair of annular passages affording communication between said central chamber and said respective annular chambers, the point of beginning and point of discharge of one annular chamber being respectively diametrically opposite the point of beginning and point of discharge of the other annular chamber, a rotary impeller mounted within said casing adapted to discharge fluid through said annular passages into said respective annular chambers to forcibly eject said fluid through said discharge pipes, a driving shaft for operating said impeller, means connected with said casing and its cover-portion for journaling said shaft, and means for delivering fluid to said impeller.

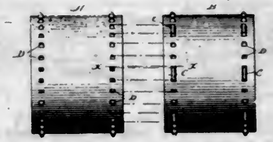
5. In a device of the kind described, a casing providing a centrally disposed chamber, a fixed wall of said casing inclosing one side of said central chamber, a removable cover-portion closing the other side of said central chamber, said casing being provided with a pair of annular chambers spirally enlarged from their points of beginning toward their points of discharge, discharge pipes connected with said casing and extending outwardly from the respective points of discharge of said annular chambers, said casing being further provided with a pair of annular passages affording communication between said central chamber and said respective annular chambers, the point of beginning and point of discharge of one annular chamber being respectively diametrically opposite the point of beginning and point of discharge of the other annular chamber, said casing being provided respectively in its side wall and cover-portion with centrally disposed intake ports, intake or suction pipes connected respectively with said casing and its cover-portion so as to communicate with said intake ports, a rotary impeller mounted within said central chamber of said casing, the same having radially disposed curved impeller vanes, said impeller being adapted to discharge the fluid received through said intake ports peripherally through said annular passages into said respective annular chambers to forcibly eject a stream of such fluid through the respective discharge pipe of each annular chamber, a driving shaft for said impeller, and means connected with said casing and its cover-portion for journaling said shaft.

[Claim 6 not printed in the Gazette.]

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1,229,275. MOTION-PICTURE APPARATUS. CHARLES FRANCIS JENKINS, Washington, D. C., assignor to The Graphoscope Company, Washington, D. C., a Corporation of Delaware. Filed Apr. 6, 1916. Serial No. 89,323. (Cl. 88—17.)

1. A film feeding sprocket drum having at regular intervals special teeth in circumferential extent exceeding the extent of the perforations of standard film longitudinally thereof, but each having its forward face precisely in the plane which would be occupied by the forward face of a tooth were all the teeth those of a standard sprocket drum.



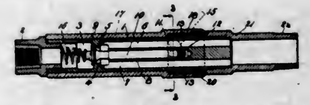
2. A film feeding sprocket drum having teeth of unequal circumferential extent, the forward faces of all being in position to engage the forward sides of the corresponding perforations of standard film.

3. A film feeding sprocket drum having sets of teeth each in form and location like the corresponding teeth of standard film, the sets alternating with teeth of greater circumferential extent each having its forward face in the plane which would be occupied by the forward face of a standard tooth in a corresponding standard drum.

4. A film having sets of standard perforations, the sets alternating with perforations each equal in linear extent to the space occupied by a plurality of consecutive perforations of standard film.

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1,229,276. THROTTLE-VALVE FOR PNEUMATIC TOOLS. FRANCIS A. JIMERSON, Athens, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Nov. 18, 1915. Serial No. 62,100. (Cl. 136—11.)

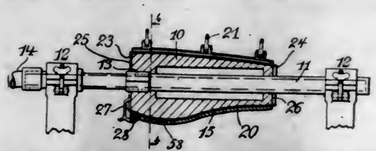


1. In a throttle for pneumatic tools, a cylindrical member having fluid passages therethrough, a valve seat therein, a spring operated valve seating on said valve seat and opening against the fluid flow, said valve having an elongated operating stem, a central web between said fluid passages, a bore in said web forming a guide for said valve stem and a slot extending through said web from the inner end of and at right angles to said bore to the outside of said member, a pin in said slot engaging said valve stem and means to move said pin and valve stem to open said valve.

2. In a throttle for pneumatic tools, a cylindrical member having fluid passages therethrough, a valve seat therein, a spring operated valve seating on said valve seat and opening against the fluid flow, said valve having an elongated operating stem, a central web between said fluid passages, a bore in said web forming a guide for said valve stem, a slot extending through said web from the inner end of and at right angles to said bore to the outside of said member, a pin in said slot engaging said valve stem and means to move said pin and valve stem to open said valve comprising a cam rotatably mounted on the outside of said member.

3. In a throttle for pneumatic tools, an inned cylindrical member having fluid passages therethrough, a spring operated valve therein having an elongated stem, a web between said fluid passages, a bore in said web forming a guide for said valve stem, a diametrical slot extending through said web from the inner end of said bore, a pin in said slot projecting from both sides of said inner cylindrical member, a double cam sleeve rotatably mounted on said inner member and arranged to move said pin to open said valve, an operating sleeve sliding over said cam and pin and holding said pin in position and means to hold said operating sleeve and cam together and prevent relative movement.

1,229,277. APPARATUS FOR MAKING LEGGINGS. HELGE JOHANNESEN, Brooklyn, N. Y. Filed Jan. 26, 1917. Serial No. 144,593. (Cl. 69—8.)



1. A device for making leggings comprising a form, a plurality of shaping members for shaping certain portions of the legging on said form, means for clamping said members to said form, a molding member, means for registering the latter on said form and means for clamping it thereto after the said shaping members have been removed.

3. A device for making leggings comprising a form, means for rotatably supporting the same, a plurality of shaping members, means for clamping the same on said form to pre-shape the legging thereon, a molding member of the shape of a finished legging, means for registering said molding member on said form and means for clamping said member thereto.

5. A device for molding leggings comprising a form, means for shaping the leggings on the same, a lining adapted to be placed over the shaped legging after said means have been removed, a molding member shaped to fit said lining when the latter is over the legging comprising a plurality of sections hinged together, means for clamping said molding member in position and means for registering said molding member with the said form.

[Claims 2 and 4 not printed in the Gazette.]

1,229,278. ATHLETIC SHOE. NICOLAI B. JOHNSON, Chicago, Ill. Filed Feb. 5, 1916. Serial No. 76,252. (Cl. 36—59.)



1. The combination of a foot-ball shoe and a tread therefor; said tread comprising a metallic plate, means for fastening said plate to said shoe, non-metallic cleats, and means for fastening said cleats directly to said plate independently of the sole of said shoe.

2. The combination of a foot-ball shoe and a tread therefor, said tread comprising a metallic plate, means for fastening said plate to said shoe, non-metallic cleats and means for riveting said cleats directly to said plate, the edges of said sole extending beyond the edges of said plate.

3. A shoe tread comprising a metallic plate and cleats fixed to said plate, said cleats being formed of water-proof vulcanized fiber.

4. A shoe tread, means for fastening said tread to the sole of a shoe; and elongated cleats fixed to said plates extending to and parallel with the outer long edges thereof, the outer sides of said cleats being substantially perpendicular to said plates.

5. The combination of a shoe and a tread for said shoe, said tread comprising a metallic plate; said plate extending outside continuously over approximately the entire surface of the sole of the shoe; and horizontally elongated cleats riveted to said plate; the outer long sides of said cleats being substantially flush with the outer edges of said plate and extending substantially perpendicular therefrom, said cleats being composed of vulcanized fiber.

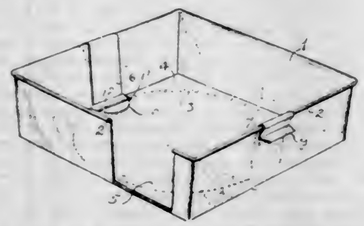
[Claims 6 and 7 not printed in the Gazette.]

1,229,279. LUMBER-GUIDE. NICOLAS JOHNSON, Eureka, Cal. Filed Jan. 29, 1917. Serial No. 145,197. (Cl. 214—6.)



In a device of the class described, a pair of side rails; a roller journaled in the upper ends of the side rails; a rod connecting the side rails near the roller and constituting means for preventing the side rails from springing apart and releasing the roller; a bar connecting the side rails and located below the rod, the bar being of polygonal cross section; and an outstanding support disposed substantially at right angles to the plane defined by the rails, the support being provided at its outer end with a depending prong, and being provided at its inner end with a polygonal head mounted against rotation on the polygonal bar, but slidable longitudinally thereon, to permit the prong to be adjusted with respect to the side rails.

1,229,280. CAKE-PAN. MARY B. JONES, Springfield, Ohio. Filed June 21, 1915. Serial No. 35,393. (Cl. 53—6.)



1. A receptacle, a removable bottom therefor, arms projecting upward from said bottom, inverted U-shaped bights formed in the arms, said bights having contracted orifices within which the edge of the receptacle is engaged, and laterally projecting extensions adjacent to the bights affording leverage for the flexing of said bights to facilitate the engagement and disengagement of the receptacle therewith.

2. In a kitchen utensil, a receptacle having a beaded edge, a removable bottom in said receptacle, upward extending arms carried by the bottom, said bottom being supported independent of said arms, resilient bights in said arms clasping the edge of the receptacle to normally lock the bottom against removal and handle extensions beyond the bights by which the bights may be flexed to facilitate their engagement with and disengagement from the receptacle.

3. A receptacle, a removable bottom therefor, arms projecting upward from said bottom having therein inverted U-shaped flexible bights the mouths of which are contracted, within which contracted bights the edge of the receptacle is gripped.

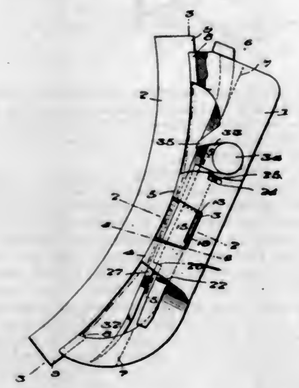
4. In a kitchen utensil, a receptacle, a removable bottom for said receptacle having a slot therein, and an L-shaped member projecting upward from the bottom in substantially parallel relation with the side of the receptacle having its lateral arm engaged in the slot in the bottom.

5. In a kitchen utensil, a receptacle, a removable bottom therefor having a slot therein adjacent to the edge of said bottom, the material intermediate the slot and edge of the bottom being projected above the plane of the bottom, and a lifting member engaged beneath the elevated portion of the bottom and extending thence upward to the top edge of the receptacle.

[Claim 6 not printed in the Gazette.]



1,229,281. SAFETY-LOCK FOR BRAKE-SHOES. EDWIN KARI, Superior, Wis. Filed Dec. 18, 1916. Serial No. 137,632. (Cl. 188—28.)



1. In a safety lock for brake shoes, the combination with a brake head, of a brake shoe having a key lug adapted to engage the brake head, a main locking key for securing the key lug to the brake head, and a supplemental or safety key carried by the brake head and adapted to engage the key lug.

2. In a safety lock for brake shoes, the combination with a brake head, of a brake shoe having a key lug adapted to engage the brake head, a main locking key for securing the key lug to the brake head, a supplemental or safety key carried by the brake head and adapted to engage the key lug, and means for interlocking the main and safety keys.

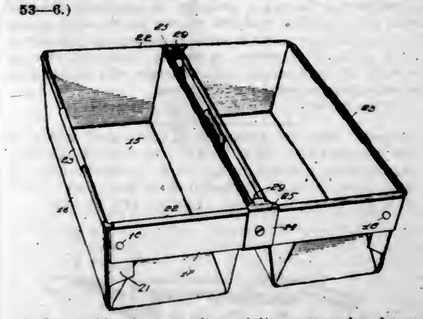
3. In a safety lock for brake shoes, the combination with a brake head, of a brake shoe having a key lug adapted to engage the brake head, a main locking key for securing the key lug to the brake head, a supplemental or safety key carried by the brake head and adapted to engage the key lug, and a movable interlocking device operated by the safety lock adapted to hold the main key against removal.

4. In a safety lock for brake shoes, the combination with a brake head, of a brake shoe having a key lug adapted to engage the brake head, a main locking key for securing the key lug to the brake head, and a safety locking key, movable independently of the main key, which is adapted to engage or release the key lug and to hold the latter independently of the main key.

5. In a safety lock for brake shoes, the combination with a brake head having main bridges and a cross bridge, there being a socket intermediate the main bridges, of a main locking key, a supplemental or safety locking key, and a brake shoe having a key lug adapted to be received in the socket aforesaid and to be engaged and locked by the cross bridge, the main key, and the safety key.

[Claims 6 and 7 not printed in the Gazette.]

1,229,282. BAKING-PAN. EDWARD KATZINGER and SIDNEY C. KATZINGER, Chicago, Ill., assignors to Edward Katzinger Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 25, 1916. Serial No. 86,534. (Cl. 53—6.)

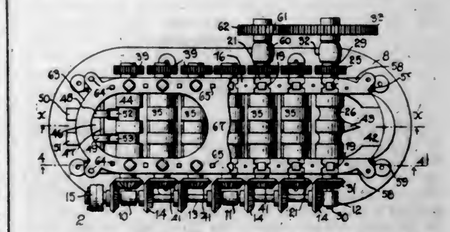


1. In combination, a substantially rectangular frame; a plurality of pans disposed in the frame with portions engaging the latter; locking members engaging the frame and corners of the pans; and tying members removably securing the locking members to the frame and holding said locking members in clamping relations with the pans.

8. In combination, a substantially rectangular frame; a series of baking pans having wired rims and disposed in the frame with the rims resting on the frame; projections at the ends of the frame engaging the remote sides of the end pans of the series; members engaging the frame and adjacent corners of the pans; tie rods extending between the pans and holding said members in positions for clamping the pans tightly in the frame; and means intermediate the ends of the adjacent edges of the pans spacing intermediate portions of said adjacent edges apart.

[Claims 2 to 7 and 9 not printed in the Gazette.]

1,229,283. PUDDLE-BILLET ROLLING AND FINISHING MILL. DAVID KAUFFMAN, Sr., Pottstown, Pa. Filed Apr. 15, 1916. Serial No. 91,474. (Cl. 80—35.)



1. A rolling mill comprising a hollow base having upstanding side walls, each of the side walls being formed with a longitudinally extending passage, the walls being vertically slotted at a plurality of points, the slots intersecting said passages, upper and lower boxes disposed in each slot, upper and lower rolls having their shafts disposed in the boxes, rods disposed in said passage and lon-

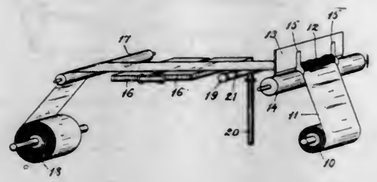
gitudinally shiftable therealong, each of said rods being formed with a plurality of spaced angularly disposed faces engaging each upper box whereby to raise or lower the upper boxes by longitudinally shifting said rods, and means for holding the upper boxes in engagement with said angularly disposed faces of the rods.

2. A rolling mill comprising a hollow base having upstanding side walls, the walls being vertically slotted and each wall being formed with a longitudinally extending passage intersecting said slots, a plurality of lower bearing boxes disposed in the bottoms of said slots below the passage, a plurality of upper bearing boxes disposed in the upper portions of said slots, a plurality of rolls having their shafts disposed in the lower boxes, and a plurality of rolls having their shafts disposed in the upper boxes, members mounted in the passages for longitudinal movement and having a plurality of angularly disposed faces, each engaging with one of said upper boxes, means for longitudinally shifting and adjusting said members, and a plurality of screws extending downward through the walls of the base and into the upper ends of said slots and engaging the upper bearing boxes.

[Claims 3 and 4 not printed in the Gazette.]

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1,229,284. POROUS RUBBER FABRIC AND METHOD OF PRODUCING THE SAME. ARTHUR B. KEMPEL, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed July 20, 1916. Serial No. 110,335. (Cl. 91—68.)



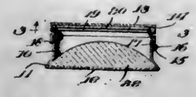
1. A textile fabric open or porous at the interstices between the threads, and gum-coated on the rest of its surface.

6. The process of making water-proof, porous, textile fabric which consists in coating and partially impregnating the threads of the fabric with rubber cement to an extent sufficient substantially to embed the projecting fibers and overcome the capillarity of the threads, perforating the coating at the interstices by fluid pressure, evaporating the solvent in the cement, and vulcanizing the rubber.

[Claims 2 to 5 not printed in the Gazette.]

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1,229,285. VANITY-BOX. WILLIAM G. KENDALL, Newark, N. J. Filed Mar. 22, 1916. Serial No. 85,968. (Cl. 132—34.)



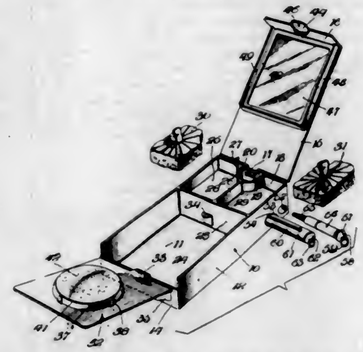
1. A vanity box including a box proper, a cover having an encircling flange hinged to the box in such a manner that the flange encircles the upper edge of the box when the cover is closed, the flange of said cover being formed with an instruck annular bead intermediate its height forming a stop to limit the closing of the cover, a removable element located against the inner face of the cover, and a split resilient locking ring engaging between the peripheral edge of the element and the bead to lock the element in place.

3. A vanity box including a box body having a bottom and a peripheral wall, the lower portion of the peripheral wall being upwardly and inwardly inclined and the remaining greater portion of the wall being vertical whereby rouge positioned in the box and pressed against the bottom will have a portion of it forced beneath the upwardly and inwardly inclined portion of the peripheral wall of the box to anchor the cake formed by the pressure exerted in the box and to provide a puff receiving space above the cake, and a cover for the box body.

[Claim 2 not printed in the Gazette.]

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1,229,286. COMBINATION VANITY-CASE. WILLIAM G. KENDALL, Newark, N. J. Filed Jan. 25, 1917. Serial No. 144,510. (Cl. 132—32.)



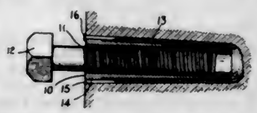
1. A vanity case including a receptacle, a cover for the receptacle, and a hinged member carried by the receptacle to be disposed therein or to be swung out of the receptacle, said member being adapted to hold an article of toilet upon each face.

6. A vanity case including a receptacle, a vertical partition wall extending transversely of the receptacle and providing at one side a main compartment, a false bottom secured in that portion of the receptacle at the other side of the partition wall, a longitudinal partition wall between the first partition wall and adjacent wall of the receptacle and resting on the false bottom whereby with the first partition wall and false bottom supplemental compartments are provided capable of receiving powder puffs, a leaf hinged to the receptacle and adapted in one position to lie within the main compartment, powder cake supporting means upon opposite sides of the leaf, a cover for the receptacle, and tubular housings extending across the receptacle in the space between the true bottom and false bottom and reinforcing it, the housings each opening at one end through the wall of the receptacle and being adapted to receive rouge and pencil holders.

[Claims 2 to 5 and 7 not printed in the Gazette.]

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1,229,287. WALL-SOCKET. JOSEPH KENNEDY, New York, N. Y., assignor to The Clements Company, New York, N. Y., a Corporation of New York. Original application filed Aug. 14, 1913, Serial No. 784,672. Divided and this application filed Mar. 9, 1915. Serial No. 13,166. (Cl. 72—105.)



1. A wall socket comprising a hollow circumferentially continuous sleeve of hard metal, an external flange at the outer end thereof, a similar sleeve of soft metal surrounding the unflanged portion of the hard metal sleeve, said socket being provided with longitudinally disposed grooves passing through said flange and into the outer portion of the soft metal sleeve.



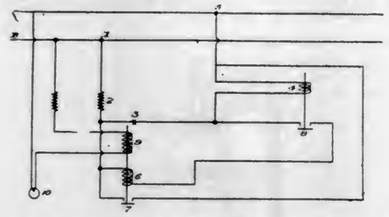
2. A wall socket comprising a hollow circumferentially continuous sleeve of hard metal, the cross-section of which is a curved plane of non-uniform diameter, an external flange at the outer end thereof, a similar sleeve of soft metal surrounding the unflanged portion of the hard metal sleeve, said socket being provided with longitudinally disposed grooves passing through said flange and into the outer portion of the soft metal sleeve for a part of its length and means within said sleeve for receiving the thread of a bolt.

3. A wall socket comprising a hollow circumferentially continuous tapered sleeve of hard metal, the cross-sections of which are curved planes of non-uniform diameter, an external flange at the outer end thereof, a lining of soft metal adapted to receive the threads of a bolt, an outer covering of soft metal surrounding the unflanged portion of the sleeve, said socket being provided with longitudinally disposed grooves passing through the flange and into the outer portion of said outer covering for a part of its length.

4. A wall socket comprising a hollow circumferentially continuous sleeve of hard metal, the outer surface of which is tapered, an external flange at the outer end of said sleeve, an external sleeve of soft metal surrounding the unflanged portion of the hard metal sleeve, said socket being provided with longitudinally disposed grooves passing through said flange and into the outer portion of the soft metal sleeve.

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1,229,288. ELECTRIC WELDING. OTIS ALLEN KENYON, New York, N. Y. Filed Mar. 3, 1917. Serial No. 152,315. (Cl. 219—8.)



1. In electric welding, a welding arc circuit and electro-responsive means for opening the arc circuit at a point external to the arc at a predetermined arc voltage.

4. In electric welding, a welding arc circuit, and electro-responsive means for shunting the current around the arc at a predetermined arc voltage before breaking the arc, and then opening the arc circuit.

10. In electric welding, a welding arc circuit adapted to be closed at the arc before current is passed therethrough, means for opening the arc circuit at a point external to the arc at a predetermined arc voltage, and means under control of the welder to stop the arc at will.

[Claims 2, 3, and 5 to 9 not printed in the Gazette.]

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1,229,289. GAGE. JESSE E. KEPPEL, St. Louis, Mo. Filed Nov. 24, 1915. Serial No. 63,193. (Cl. 73—54.)

1. In a device of the class described, two opposed valve-casings, said valve-casings having alined openings in their meeting ends and valve-seats surrounding said openings, valve-members in said valve-casings arranged and adapted to coöperate with said valve-seats to shut off the flow from said valve-casings, tubular members fitted slidably in said alined openings of the valve-casings and projecting normally inward beyond said valve-seats so as to hold said valve-members away from said valve-seats and having openings arranged and adapted to permit flow from said valve-casings when in such relation, means for effecting self-releasable seals between said tubular members and the adjacent ends of said valve-casings, a gage tube having sealed connections at its ends with the outer ends of said tubular members, and a device movable on one of said tubular members longitudinally thereof and coöperating with the end of the valve-casing for holding the cooperating parts in normal assembled relation and making the said seals effective.



2. In a device of the class described, two opposed valve-casings, said valve-casings having alined openings in their meeting ends and valve-seats surrounding said openings, valve-members in said valve-casings arranged and adapted to coöperate with said valve-seats to shut off the flow from said valve-casings, a tubular member fitted slidably in the opening of one of said valve-casings and projecting normally inward beyond the valve-seat thereof so as to hold the valve-member away from said valve-seat and having openings arranged and adapted to permit flow from the valve-casing when in such relation, said tubular member having an annular enlargement at its outer end, and a releasable sealing ring surrounding said tubular member between said enlargement and the end of said valve-casing, a tubular member fitted slidably in the alined opening of said other valve-casing and being arranged, adapted and coöperating at its inner end with the valve-member in said valve-casing in a manner similar to said first-mentioned tubular member, a gage tube having sealed connections at its ends with the outer ends of said tubular members, and an annular member movable on said second-mentioned tubular member longitudinally thereof and cooperating with the end of the valve-casing with an interposed releasable sealing ring so as to hold the cooperating parts in normal assembled relation and making the said seals effective.

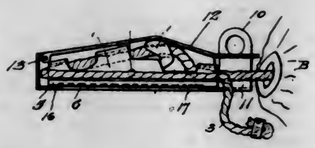
3. In a device of the class described, two opposed valve-casings, said valve-casings having alined openings in their meeting ends and valve-seats surrounding said openings, valve-members in said valve-casings arranged and adapted to coöperate with said valve-seats to shut off the flow from said valve-casings, a tubular member fitted slidably in the opening of one of said valve-casings and projecting normally inward beyond the valve-seat thereof so as to hold the valve-member away from said valve-seat and having openings arranged and adapted to permit flow from said valve-casing when in such relation, said tubular member having an annular enlargement at its outer end, a releasable sealing ring between said enlargement and the end of said valve-casing, said tubular member having a recess in its outer end, and a packing bushing in said recess, a tubular member fitted slidably in the alined opening of said other valve-casing and being arranged, adapted and coöperating at its inner end with the valve-member in said valve-casing in a manner similar to said first-mentioned tubular member, said second-mentioned tubular member having a recess in its outer end, and a sealing ring in said recess, a gage tube having one end fitted in the packing bushing in the outer end of said first-mentioned tubular member and its opposite end abutting the sealing ring in the outer end of said second-mentioned tubular

member, and a packing gland on said gage tube engaging the adjacent end portion of said second-mentioned tubular member, said tubular member being screw-threaded externally in the region of the valve-casing, a jam nut on said screw-threaded portion of said tubular member in cooperative relation to the end of said valve-casing, and a releasable sealing ring interposed between said jam nut and the end of said valve-casing.

4. In a device of the class described, two opposed valve-casings, said valve-casings having alined openings in their meeting ends, valve-seats surrounding said openings, and opposed valve-seats, valve-members movable in said valve-casings between the first-mentioned and second-mentioned valve-seats thereof, said valve-members being arranged and adapted to coöperate with said first-mentioned valve-seats to shut off the flow from said valve-casings, and said valve-members and said second-mentioned valve-seats being relatively arranged and adapted so as to permit flow when in coöperative relation, tubular members fitted slidably in said alined openings of the valve-casings and projecting normally inward beyond the first-mentioned valve-seats thereof so as to hold said valve-members away from said valve-seats and having openings arranged and adapted to permit flow from said valve-casings when in such relation, means for effecting self-releasable seals between said tubular members and the ends of said valve-casings, a gage tube having sealed connections at its ends with the outer ends of said tubular members, and a device movable on one of said tubular members longitudinally thereof and coöperating with the end of the valve-casing for holding the coöperating parts in normal assembled relation and making the said seals effective.

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1,229,290. MAIL-BAG LOCK. JOHN A. KIDWELL, Columbus, Ohio. Filed June 2, 1916. Serial No. 101,316. (Cl. 24—132.)



The combination with a separable housing adapted to inclose a mail bag fastener and having an open end for passage of a fastening cord, said housing having a slotted bottom plate and said plate adjacent the open end having bent portions forming a brace portion and a flat eyelet portion, the latter located centrally at the open end of the housing and provided with a braced portion integral with the bottom plate, of a hasp adapted to close over and coact with the fastener to prevent disengagement of the cord, said hasp comprising a plate pivoted at the closed end of the housing and formed with a slotted free end to fit over the eyelet.

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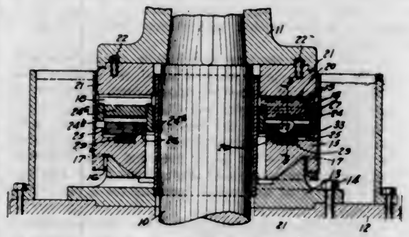
1,229,291. THRUST-BEARING. ALBERT KINGSBURY, Pittsburgh, Pa. Filed Aug. 16, 1916. Serial No. 115,123. (Cl. 64—25.)

1. A bearing comprising a tiltable bearing shoe, a plurality of members each adapted to pivotally support said shoe, and means for selecting one of said pivot members.

2. A thrust bearing comprising a tiltable bearing shoe, a plurality of members each adapted to pivotally support said shoe, and means automatically dependent upon the direction of bearing operation for selecting one of said pivot members.

3. A thrust bearing comprising a plurality of tiltable bearing shoes, a pair of pivotal members for each shoe, each member being adapted to pivotally support the shoe, and means for selecting a corresponding pivot for each shoe.

4. A thrust bearing comprising a plurality of bearing shoes, a pair of rolling bearings for each shoe, each rolling bearing being adapted to constitute a pivot for one of the shoes, and means automatically dependent upon the direction of bearing rotation for selecting a corresponding rolling bearing for each shoe.

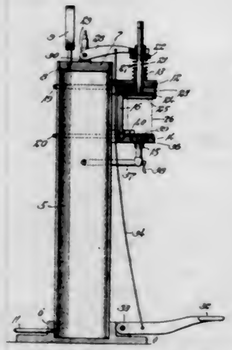


5. A thrust bearing comprising a rotatable member having an annular bearing surface, a plurality of bearing shoes having coöperating bearing surfaces, a pair of rolling bearing members for each shoe, and means for permitting a rotative movement of the shoes relative to the rolling bearings, whereby the shoes may be selectively pivoted on one or the other of its rolling bearings.

[Claims 6 to 9 not printed in the Gazette.]

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1,229,292. CAN-STRAIGHTENING MACHINE. JACQUES J. KIRKBY, Clymer, N. Y. Filed Sept. 18, 1914. Serial No. 862,367. (Cl. 153—32.)



1. A can straightening machine including an air cylinder, a can basket including an integral top, bottom and connecting portion, said portion being shaped to fit the cylinder, means for attaching the top and bottom of said basket to said cylinder, means slidable through the top to grip the can, independently operable means to center the can upon the bottom, air conducting means between said basket and the cylinder, and multiple way control means interposed on said air conducting means.

11. A can straightening machine including a cylinder forming an air chamber, a can basket removably positioned on said cylinder and including an integral, top, bottom and intermediate portion, the latter arching away from said cylinder, a stem slidable through said top, a recessed head carried by said stem, air tight lining means for said head and said bottom, resilient means normally supporting said head, adjusting means for said resilient means, a lever pivoted to contact with said adjusting means, air inlet means for said bottom, a valved multiple control interposed on said air inlet between said chamber, said basket and the atmosphere, centering means for said basket bottom, and a manually operable lever to actuate the first said lever in moving said head against the tension of said resilient means.

17. A can straightening machine including a pressure cylinder, a can basket removably positioned upon said cylinder, an apertured bottom for said basket formed with a central boss, an apertured top for said basket formed with a similar boss, a rod slidable through second said boss, a gripping head carried by said rod, resilient means surrounding said rod to normally prevent contact of said head with cans supported by said basket, means adjustable upon said rod and in contact with said resilient means to determine the position of said head, air conducting means leading from said cylinder through said bottom boss, and a multiple-way control means for manual operation in admitting the fluid of pressure into said basket or the exhaust therefrom into the atmosphere.

25. A can straightening machine including a pressure cylinder, a can basket removably postitioned upon said cylinder, an apertured bottom for said basket, an apertured top therefor, an intermediate portion connecting said bottom and top, a rod slidable through said top, a recessed gripping head carried by said rod, means normally maintaining said head in contact with said basket top, a lever pivoted to said cylinder and controlling movement of said head against the action of said resilient means, a base for said cylinder, a foot lever pivoted to said base, connections between the intermediate portions of both levers, means carried by said bottom and intermediate basket portion to center a can in said basket, air conducting means between said cylinder and said bottom, and a manually operable valve lever interposed on said air conducting means to control the admission and exhaust of air into and from said basket.

[Claims 2 to 10, 12 to 16, and 18 to 24 not printed in the Gazette.]

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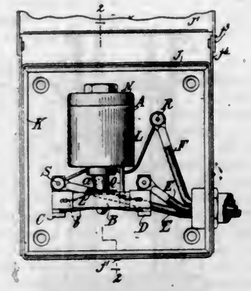
1,229,293. REINFORCED-CONCRETE DOOR AND WINDOW FRAME CONSTRUCTION. EDMUND L. KLINGENSMITH, Pierson, Iowa. Filed Aug. 21, 1915. Serial No. 46,620. (Cl. 72—98.)



A device of the class described comprising a door frame formed of plastic material and including spaced jambs having their outer side longitudinal edges convex and their inner side longitudinal edges straight, a lintel resting on the upper ends of the jambs, a sill upon which the lower ends of the jambs are supported, the forward inner edges of the jambs, lintel and sill being rabbeted and adapted to form a seat for a door, spaced longitudinal reinforcing members embedded in the jambs and having their opposite ends projecting beyond the adjacent ends of the jambs and embedded in the lintel and sill, respectively, a third reinforcing rod embedded in each jamb between the first mentioned rods and spaced from the convex faces of the jambs, and spaced longitudinal reinforcing rods embedded in the lintel and having their opposite ends bent inwardly in parallel relation to the adjacent ends of the lintel and partially around the projecting ends of the longitudinal reinforcing rods in the jambs.

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1,229,294. AUTOMATIC SWITCH. FRANK A. KUNTZ, Richmond Hill, N. Y., assignor to Gold Car Heating & Lighting Company, New York, N. Y., a Corporation of New York. Filed Aug. 19, 1915. Serial No. 46,283. (Cl. 175—281.)



1. An automatic switch comprising an electromagnet, having the terminals of its coil adapted for connection in an electric circuit, a magnetic movable member, a pair of stationary contacts adapted to be connected in an electric circuit and lying within the magnetic field, a bridge magnetically connected to the movable member of said magnet and adapted to close the circuit through the said contacts when the magnet is deënergized, and adapted to break the circuit through said contacts as the magnet is energized, said last mentioned circuit normally remaining closed until broken by said bridge, said bridge formed of magnetic material and serving to extend the magnetic field to the vicinity of the contacts and acting as a magnetic blow out to extinguish the arcs when the magnet is energized.

2. An automatic switch comprising an electromagnet, having the terminals of its coil adapted for connection in an electric circuit, a magnetic core, a pair of stationary contacts adapted to be connected in an electric circuit, a magnetic metal bridge piece magnetically connected to the core and serving to extend the magnetic field to the vicinity of the contacts and adapted when the magnet is deënergized to make electrical connection with said contacts and close an electric circuit therethrough, and when the magnet is energized to break said circuit and to blow out the arcs, said last mentioned circuit normally remaining closed until broken by said bridge.

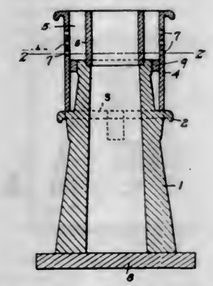
3. An automatic switch comprising a magnet, a movable magnetic core, a pair of stationary contacts adapted to be connected to an electric circuit, a bridge constructed of magnetic metal and magnetically connected to the core of the magnet, said bridge adapted when the magnet is deënergized to close the circuit through said contacts and when the magnet is energized to break said circuit and blow out the arcs.

4. An automatic switch comprising a magnet, a movable magnetic core, a pair of stationary contacts adapted to be connected in an electric circuit, a bridge constructed of magnetic metal and magnetically connected to the core of the magnet, and serving to extend the magnetic field to the vicinity of the contacts, a spring brush carried by the bridge and adapted when the magnet is deënergized to close the circuit through said contacts and when the magnet is energized to break said circuit.

5. An automatic switch comprising an electromagnet, a central plunger therefor, an electric circuit connected to the coil of said electromagnet, a pair of separated contacts adapted to be connected in an electric circuit, a bridge adapted to make and break connection with said

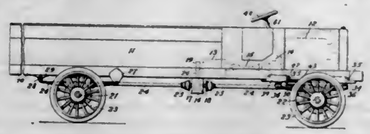
contacts, said bridge formed of magnetic metal and attached to the said plunger and serving to extend the magnetic field to the vicinity of said contacts whereby when the magnet is deënergized the bridge closes the circuit through said contacts, and when the magnet is energized is withdrawn and breaks said circuit and acts as a magnetic blow out to destroy the arcs.

229,295. INGOT-MOLD. ANDREW LAITSCH, Pittsburgh, Pa. Filed Nov. 25, 1916. Serial No. 133,283. (Cl. 22—139.)



A mold tapering toward the top and thinner at the upper end than at the lower end, having lugs near the upper end, in combination with an auxiliary casting, constituting a combustion chamber surrounding the upper end of said mold, in combination with an extension to said mold formed of refractory material, the said space between the said extension and the walls of said auxiliary casting forming a chamber for the reception of fuel, for the purpose of maintaining a high temperature at the upper end of the mold, whereby piping is prevented.

1,229,296. VEHICLE. ARTHUR M. LAYCOCK, Wilkes-Barre, Pa. Filed July 7, 1915. Serial No. 38,484. (Cl. 21—90.)



1. In a vehicle, the combination of a frame, an axle adapted to swing to steer the vehicle, supporting members between said axle and frame and pivotally connected with the former, cross links pivotally connected with said members and said frame, and means for swinging said axle.

2. In a vehicle, the combination of a frame, an axle adapted to swing to steer the vehicle, supporting springs pivotally connected with said axle and having a sliding connection with said frame, cross links pivotally connected with said springs and said frame, and means for swinging said axle.

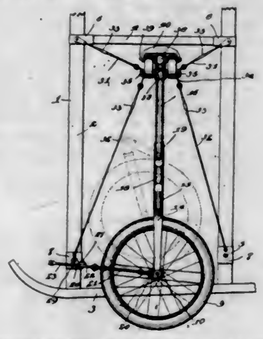
6. In a vehicle, the combination of a frame, an axle adapted to swing to steer the vehicle, supporting springs between said axle and frame, vertical pivots connecting said springs with said axle and means for maintaining said springs in parallel relation to each other.

13. In a motor vehicle, the combination of a frame, an axle, supporting springs arranged longitudinally of the vehicle between said axle and said frame, a motor carried by said frame, a propeller shaft having universal joint connections with said axle and with the motor mechanism, vertical pivots between said springs and said axle, said pivots being arranged in a transverse plane between the center of the axle and the universal joint between the axle and the propeller shaft and means for maintaining said springs in parallel relation to each other.

14. In a vehicle, the combination of a frame, an axle, springs arranged longitudinally of the vehicle between said frame and said axle, said springs having a sliding connection at their ends with said frame, vertical pivots between said springs and said axle, vertical pivots on said frame midway between said springs, a lever arranged transversely of the vehicle and mounted on one of the said last named pivots and having its ends connected with one end of each of said springs, independently movable links connecting the other ends of said springs with the other of said last mentioned pivots, said lever and said links maintaining said springs in parallel relation and means for swinging said axle.

[Claims 3 to 5 and 7 to 12 not printed in the Gazette.]

1,229,297. UNDERCARRIAGE OR CHASSIS FOR FLYING-MACHINES. GEORGE LEHBERGER, Newark, N. J. Filed July 21, 1916. Serial No. 110,580. (Cl. 244—2.)



1. In a launching and landing gear for flying machines, the combination, with a frame structure, of wheeled carrying frames, each including a rod composed of jointed sections, means yieldingly backing the jointed rods of the wheel carrying frames, manually operable means for simultaneously rendering the joints of the rod flexible or inflexible, connecting means between the wheels to adapt them to have lateral motion in unison, and means for imparting steering motions to said connecting means.

2. In a launching and landing base for flying machines, the combination with a frame structure, of wheel carrying frames, each including a rod composed of sections and a link joining said sections together, means yieldingly backing the rods of the wheel carrying frames, manually operable means engageable with rod sections and their connecting links for simultaneously rendering the rods flexible or inflexible, connecting means between the wheels adapting them for lateral movements in unison, and steering mechanism coupled to said connecting means.

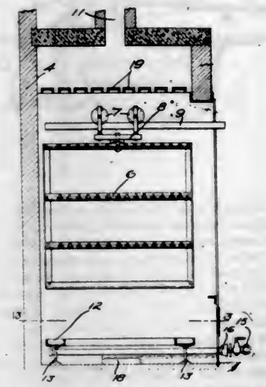
3. In a launching and landing base for flying machines, the combination with a frame structure, of wheel carrying frames, each including a rod composed of sections pivotally united by a connecting link, sleeves slidable on the rods for rendering the jointed connections thereof flexible or inflexible, means yieldingly connecting the wheel carrier frames, and means for simultaneously moving the wheels laterally for steering actions.

4. In a launching and landing base for flying machines, the combination, with a frame structure, of wheel carrying frames, each including a jointed rod, means slidably mounting and yieldingly backing each supporting rod, means for holding the joints of the rods normally rigid, said means being operative to release the joints for a pivotal motion of the rods to move the wheels into and out of operative position, and means for swinging the wheels laterally upon the rods for steering actions.



5. In a launching and landing base for flying machines, the combination, with a frame structure, of wheel carrier frames pivoted for vertical and lateral swinging motions of the frame structure, and including rods provided with pivot joints, means slidably supporting said rods upon the frame structure, means for yieldingly backing said rod, and means for swinging the wheel frames laterally in unison, and means for rendering the joints of the rods flexible or inflexible.

1,229,298. SMOKE-HOUSE. CONRAD T. LENZKE, Minneapolis, Minn. Filed Oct. 2, 1916. Serial No. 123,287. (Cl. 34—19.)

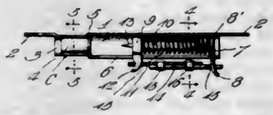


2. In a smokehouse, a pan for containing sawdust, or the like, located above the floor of the house and provided with a central air passage, in combination with burners located below the bottom of said pan.

3. In a smokehouse, a pan for containing sawdust, or the like, located above the floor of the house and provided with a central air passage, in combination with burners located below the bottom of said pan, and air conduits leading from the atmosphere and terminating adjacent to the central opening of said pan for supplying air thereto.

[Claims 1 and 4 to 8 not printed in the Gazette.]

1,229,299. AUTOMATIC FIRE-ALARM. FREDERICK W. LINDEMANN, St. Paul, Minn. Filed Aug. 24, 1916. Serial No. 116,686. (Cl. 116—11.)

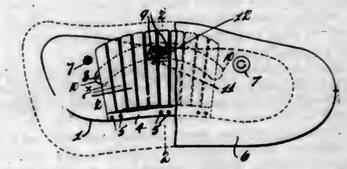


1. An automatic fire alarm comprising a longitudinally slotted casing provided with attaching means, a spring pressed plunger mounted in said casing and carrying a firing pin at its front end, means for supporting a blank cartridge in the path of said pin, a finger projecting from said plunger through the slot in said casing, a fixed upstanding lug at the rear of said slot, a sectional strip provided at its ends with openings, one of which is engaged with said lug and the other with said plunger finger, whereby the plunger spring is held normally in contracted position, the sections of the strip being secured together by a fusible connection.

2. An automatic fire alarm comprising a cylindrical casing having apertured ears at its opposite ends, a cartridge support arranged at the front end of said casing, said casing having a slot therein, a plunger mounted in said casing to move in the same direction as said slot and having a hook-shaped finger projecting through said slot, a shank carried by said plunger, a coiled spring encircling said shank and bearing at one end against said plunger, a plate in said casing against which the other end of said coiled spring bears, a hook-shaped lug extending from said plate through said slot, a firing pin carried by said plunger and positioned to engage a blank cartridge adapted to be mounted on said support, and a sectional strip provided at its ends with openings, one of which is engaged with said lug and the other with said plunger finger, said strip being of a length sufficient to hold the plunger retracted against the tension of its spring, the sections of said strip being arranged in overlapping relation and secured together by a connection fusible at a predetermined temperature.

3. An automatic fire alarm comprising a sheet metal blank rolled to form a casing with its side edges spaced apart to form a longitudinal slot and one end reduced and shouldered to form a cartridge chamber, attaching elements at the ends of said casing, a strip extending across the rear end of the casing and having one end removably engaged therewith and its other end extending through said slot, a spring pressed plunger mounted in said casing, a firing pin carried by the front end of said plunger, a finger projecting from said plunger through the slot in said casing, a shank extending from its rear face, a coiled spring on said shank bearing at one end against the plunger and at its other end against said strip, and a connecting and restraining element engaged with said finger and strip and having a fusible portion between its ends.

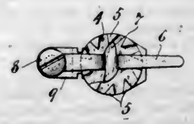
1,229,300. ARCH-SUPPORT. LEON LOBEL, New York, N. Y. Filed July 21, 1916. Serial No. 110,498. (Cl. 36—71.)



1. In an arch-support, the combination of a base-plate and a series of arch-supporting fingers, with an alining plate arranged transversely to said fingers and attached thereto also curved above said plate and a coiled supporting spring interposed between said base-plate and said alining plate and consisting of a series of superposed convolutions, the uppermost convolution being attached to said alining plate, in order that the swinging of said spring may be prevented.

2. In an arch-support, the combination of a base-plate and a series of arch-supporting fingers, with an alining-plate arranged transversely to said fingers and attached thereto, also curved above said base plate and a spiral supporting spring interposed between said base-plate and said alining-plate and attached at its upper end to the latter in order that the swinging of said spring may be prevented.

1,229,301. REGISTER-ACTUATING MECHANISM. SYVER LOE, Minneapolis, Minn. Filed Aug. 6, 1914. Serial No. 855,393. (Cl. 74—1.)

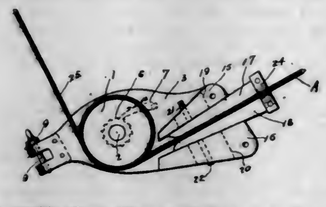


In a mechanism for converting reciprocating movement into step by step rotary movement, the combination with an escapement wheel and a vibratory escapement lever operative thereon to produce a step by step rotary move-

ment thereof, of a rotated wheel laterally spaced from said escapement wheel, and a serrated hub located between and rigidly connecting said rotated wheel and escapement wheel and serving the function set forth.

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1,229,302. GUY-LINE TIGHTENER. NEIL MCDONALD, Pender Harbour, British Columbia, Canada. Filed Oct. 9, 1916. Serial No. 124,643. (Cl. 24—136.)



1. The combination with a vertical post guy line and direction changing means for the lower end of the said line, of a pair of adjustable wedges mounted adjacent said means and between which the free end of the line is passed after the direction is changed to be gripped by the said wedges when adjusted, and means controlled by the strain on the line to control said wedges and to force them into closer contact with the line as the strain increases.

2. The combination with a vertical post guy line and direction changing means for the lower end of said line, of a pair of adjustable wedges mounted adjacent said means and between which the free end of a guy line wound around the sheave may be passed to be gripped by said wedges when adjusted, and a clamp adapted to be secured to said guy line so as to bear on the large ends of the adjusted wedges.

3. The combination with a vertical post guy line and direction changing means for the lower end of said line, of a pair of suitably supported superposed guide members adjacent said means converging inwardly at their inner ends, a pair of wedges fitted slidably between said guides and between which the free end of a guy line wound around the sheave may be passed, and a clamp secured to said guy line so as to bear on the large ends of the said wedges whereby strain on the line tends to draw the wedges toward the converging ends of the said guides.

4. A guy line tightener comprising, a pair of parallel plates connected together at both ends, means for changing the direction of the line mounted between said plates, a pair of wedges adjustably mounted between said plates at one end thereof and between which the free end of the line is passed after the direction is changed, the small ends of said wedges being adjacent the said direction changing means and their large ends normally projecting beyond one end of the said plates, and a clamp on the guy line adapted to bear on the large ends of the wedges when said wedges are adjusted to grip the guy line.

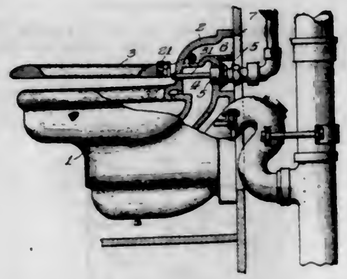
5. A guy line tightener comprising, a plate provided on its inner face at one end with an inwardly converging guideway, a second plate arranged parallel to and shorter than the first plate and connected thereto at one end, the other end of said second plate being provided with a normally closed hinged portion adapted to be detachably secured to the side of the said guideway, means for changing the direction of the line mounted between said plates, and a pair of wedges slidably mounted in said guideway and between which the free end of the guy line is passed after its direction is changed.

[Claims 6 to 12 not printed in the Gazette.]

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1,229,303. WATER-CLOSET. PATRICK J. MADDEN, Chicago, Ill. Original application filed June 6, 1913, Serial No. 772,132. Divided and this application filed Mar. 22, 1915. Serial No. 16,074. (Cl. 4—28.)

1. In a water closet the combination with a bowl and a seat, said bowl having a projection extending upward above the level of the seat, of a hinge-connection between said seat and projection, said hinge-connection having a pair of arms projecting rearward from the seat, and a horizontal pintle upon which the rear ends of said arms are mounted, the projection being perforated horizontally to provide a bearing through which said pintle extends, and a buffer of elastic material surrounding the pintle within said bearing.



2. In a water closet the combination with a bowl and a seat, said bowl having at the back thereof a hollow projection extending upward above the level of the seat, of a hinge-connection between them, said hinge-connection having a pair of arms projecting rearward from the seat and straddling said upward projection, a horizontal pintle upon which the rear ends of said arms are mounted, the opposite side walls of said hollow projection having alined perforations providing a bearing for said pintle, and elastic sleeves surrounding the pintle within said perforations and forming buffers for cushioning the strain of the pintle upon said projection.

3. In a device of the class described the combination with a bowl and a seat, said bowl having at the back thereof a hollow projection extending upward above the level of the seat, of a hinge-connection between the bowl and seat, said hinge-connection having a pair of arms projecting rearward from the seat and straddling said hollow projection, the rear ends of said arms having eyes, a pintle upon which said eyes are mounted, the opposite side walls of said upward projection having alined perforations providing a bearing for said pintle and elastic sleeves surrounding the pintle within said perforations and forming buffers for cushioning the strain of the pintle upon said projection, said perforations being flared at their outer ends and enlarged to provide recesses and the outer ends of the elastic buffer sleeves being of complementary shape, nuts turned onto the projecting ends of said pintle and adapted to engage the outer ends of the buffer sleeves for compressing them and forcing them into the recesses aforesaid and into the perforations.

4. In a device of the class described, the combination with a bowl and a seat, of a hinge-connection, said hinge-connection comprising a central rod or shaft, a tube surrounding it with a slip fit, elastic sleeves surrounding the said tube, the bowl having alined perforations through which said tube passes and within which said buffer sleeves are located, the outer ends of said perforations being flared to provide recesses and the outer ends of said buffer sleeves being of complementary shape, flanged nuts turned onto the outer ends of the tube and engaging the outer ends of the buffer sleeves, arms projecting rearward from the seat and having eyes mounted upon said rod, or shaft, and nuts turned onto the extremities of said rod or shaft for holding the eyes in place.

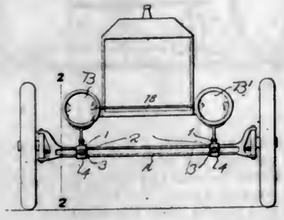
5. In a device of the class described the combination with a bowl, a seat, and a valve device supported by the bowl in rear of the seat and having a forwardly projecting horizontal valve-stem, of a hinge-connection between the bowl and seat, said hinge-connection having arms projecting rearward from the seat, a pintle by which the rear ends of the arms are supported, and a bell-crank lever fulcrumed to the rear side of the seat and having an arm extending downward from its fulcrum and engaging the forward end of said valve-stem.

[Claims 6 to 19 not printed in the Gazette.]



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1,229,304. DIRIGIBLE-HEADLIGHT BRACKET. HARRY A. MALTZ, Ithaca, N. Y. Filed Apr. 22, 1916. Serial No. 92,934. (Cl. 240—62.)



1. The combination with a vehicle having a steering mechanism, of a headlight bracket pivoted intermediate its ends to said vehicle, the said bracket comprising a pair of extensible arms, means for connecting one of said arms to a movable part of said steering mechanism, and means for supporting a lamp on the other of said arms.

2. The combination with a vehicle having the usual axle and steering rod, of a bracket pivoted upon said axle, said bracket comprising extensible arms, means for securing said arms in their various positions of adjustment, a lamp yoke carried by one of said arms, and means for connecting the other of said arms to said steering rod.

3. The combination with a vehicle having the usual axle and steering rod, of a bracket pivoted upon said axle, a pin projecting upwardly from said steering rod, one end of said bracket being forked and engaged with said pin, and means upon said bracket for supporting a lamp.

4. The combination with a vehicle having the usual axle and steering rod, a bracket adapted to be secured to said axle, an arm pivoted upon said bracket, means upon said arm for supporting a lamp and a connection between the other arm and said steering rod whereby movements of the latter may be transmitted to said arm.

5. The combination with a vehicle having the usual axle and steering rod, a bracket detachably secured to said axle, a pin on said bracket, an arm pivotally mounted upon said pin and extending at one end adjacent said steering rod, a bracket detachably secured to said steering rod and having an upwardly projecting pin, the adjacent end of said arm being forked and engaged with said pin, and means upon said arm for supporting a lamp.

[Claim 6 not printed in the Gazette.]

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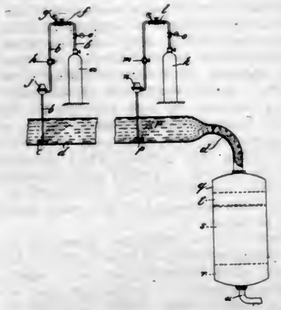
1,229,305. TREATMENT OF WATER, SEWAGE, AND THE LIKE. STEPHEN HENRY MENZIES, London, England. Filed Sept. 27, 1916. Serial No. 122,412. (Cl. 210—1.)

1. A process for the treatment of water, sewage and so forth consisting in diffusing chlorin in the water and subsequently removing any free excess of chlorin by the diffusion into the water of a gas in a low state of oxidation.

2. A process for the treatment of water, sewage and so forth consisting in diffusing chlorin in the water and subsequently removing any free excess of chlorin by the diffusion into the water of sulfur dioxid gas.

3. A process for the treatment of water, sewage and so forth consisting in passing free chlorin into the water, then diffusing into the water thus treated an excess of sulfur dioxid gas to remove any free chlorin, and then passing the water through an oxygenating agent.

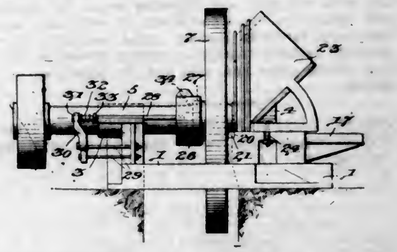
4. A process for the treatment of water, sewage and so forth, consisting in passing chlorin into the water,



removing free chlorin therefrom by the diffusion into the water of sulfur dioxid gas and then reoxygenating the water by passing it through manganese permutit.

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1,229,306. THRUST-BEARING. CHARLES W. MERCER, Georgetown, S. C. Filed Feb. 15, 1915. Serial No. 8,286. (Cl. 64—25.)



1. In a machine of the character described, the combination of a rotary shaft, a revoluble member mounted on the shaft, a thrust collar loosely mounted on said shaft adjacent said revoluble member, and spring held means coöperating with said thrust collar to normally hold said thrust collar in one extreme position and permit axial movement of the revoluble member.

2. In a machine of the character described, a rotary shaft, bearing standards and bearings for said shaft, a revoluble member mounted on said shaft, a thrust collar loosely mounted on said shaft adjacent said revoluble member, rods on either side of said shaft engaging with and extending from said thrust collar, supporting bearings for said rods, springs on said rods abutting against said supporting bearings, and adjusting means secured to said rods for tensioning said springs, axial movement of said revoluble member causing a similar axial movement of said thrust collar and subsequent movement of said springs, which latter permit axial movement of the revoluble member and tend to normally hold said revoluble member in one extreme position.

3. In a machine of the character described, a rotary shaft, bearing standards and main bearings for said shaft, a thrust collar loosely mounted on said shaft, an annular boss adjacent to said thrust collar and rotated by said shaft, rods substantially parallel to and on either side of said shaft engaging with and extending from said thrust collar, supporting bearings for said rods, springs mounted in conjunction with said rods, and adjusting means for tensioning said springs, axial movement of said annular boss causing a similar axial movement of said thrust collar and subsequent movement of said

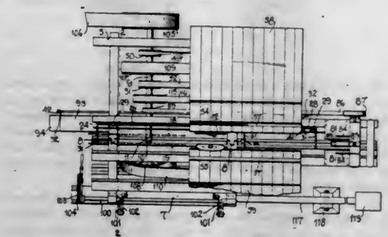
springs whereby axial movement of said rods, thrust collar and boss is permitted.

4. In a machine of the character described, a rotary shaft, bearing standards and main bearings for said shaft, a thrust collar loosely mounted on said shaft, an annular boss adjacent to said thrust collar and rotated by said shaft, rods substantially parallel to and on either side of said shaft engaging with and extending from said thrust collar, to a point beyond one of the main bearings, supporting bearings for said rods on the opposite side of said main bearing from said thrust collar, springs mounted in conjunction with said rods, and adjusting means for tensioning said springs, axial movement of said annular boss causing a similar axial movement of said thrust collar and subsequent movement of said springs whereby axial movement of said rods, thrust collar and boss is permitted.

5. In a machine of the character described, a main frame, main bearings mounted on either side of said main frame, a rotary shaft supported on said bearings, a revoluble member mounted on said shaft and between said bearings, a thrust collar loosely mounted on said shaft adjacent said revoluble member, an annular boss between said revoluble member and said thrust collar and rotated by said shaft, rods substantially parallel to and on either side of said shaft engaging with and extending from said thrust collar to a point beyond one of said main bearings, supporting bearings for said rods mounted on and carried by said main frame and on the opposite side of said main bearing from said thrust collar and revoluble member, springs mounted in conjunction with said rods, and adjusting means for tensioning said springs on the opposite side of said main bearing from said revoluble member, axial movement of said revoluble member causing a similar movement of said boss, thrust collar and rods and the tensioning of said springs.

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1,229,307. STAVE-JOINTING MACHINE. WALTER S. MINOR, Cunningham, Tenn. Filed Oct. 23, 1916. Serial No. 127,232. (Cl. 147—28.)

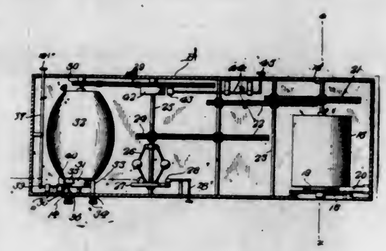


1. In a stave jointing machine, a stave carriage consisting of two sections coupled together for traveling movement as a unit, one of said carriage sections being angularly adjustable with respect to the other and the other carriage section having an operating movement in a single plane, manually operable means to variably space the adjustable carriage section from the opposed carriage section, means for actuating the traveling carriage, and means for securing a stave in position upon the carriage sections.

10. In a stave jointing machine, a stave carriage, means for moving said carriage, means to co-act with the carriage and exert an initial impulse on the same in its operative movement, a latch member co-acting with a part on the carriage to hold the carriage in its starting position against the action of the last named means, and an element connected to said latch member and adapted to be engaged and actuated by the stave when the stave is arranged in position upon the carriage to operate said latch member, whereby the carriage is released.

[Claims 2 to 9 and 11 to 27 not printed in the Gazette.]

1,229,308. ELECTRIC GENERATOR. JOHN C. MORGAN, Los Angeles, Cal. Filed Apr. 25, 1916. Serial No. 93,530. (Cl. 171—76.)



1. The combination with a case, a motor arranged interiorly of the case and having a drive shaft, an electric generator within the case and having an armature, a pivotal brush working against the armature, a binding post supporting said pivotal brush and adapted to be connected with one wire of an electric circuit, a resilient brush working against the armature, a normally open switch having one part carried by the case and the other part carried by the resilient brush, a binding post on the part of the switch carried by the case and adapted to be connected with the other wire of the electric circuit, a lever pivoted within the case and projected exteriorly thereof for operation upon the part of the switch carried by the resilient brush to bring said part into engagement with the other part of the switch on the case for closing the electric circuit, and connections between the motor and generator.

2. The combination with a case, a motor arranged interiorly of the case and having a drive shaft, an electric generator within the case and having an armature, a pivotal brush working against the armature, a binding post supporting said pivotal brush and adapted to be connected with one wire of an electric circuit, a resilient brush working against the armature, a normally open switch having one part carried by the case and the other part carried by the resilient brush, a binding post on the part of the switch carried by the case and adapted to be connected with the other wire of the electric circuit, a lever pivoted within the case and projected exteriorly thereof for operation upon the part of the switch carried by the resilient armature to bring said part into engagement with the other part of the switch on the case for closing the electric circuit, connections between the motor and generator, a governor shaft included in the connection, a centrifugal governor on said governor shaft and having a brake disk, a shoe pivoted within the case and engageable with the disk, an operating screw connected with the shoe and adjustably threaded in the case from without the same.

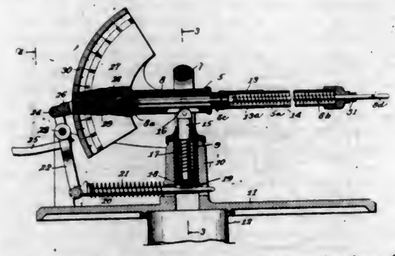
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1,229,309. GOLF-PRACTISING MACHINE. FRANK L. MORSE, Ithaca, N. Y. Filed Aug. 29, 1913. Serial No. 787,268. (Cl. 265—22.)

1. In a golf practising machine, the combination of a pivotally mounted barrel, a movable member mounted on said barrel and adapted to be attached to the golf ball, and means for indicating the angle to which the barrel is turned during the flight of the ball.

2. In a golf practising machine, the combination of a barrel or support mounted in universal bearings, a movable member mounted on said support and adapted to be attached to the golf ball, and means for indicating the angles of deflection and elevation of said barrel.

3. In a golf practising machine, the combination of a longitudinal tubular guide, a plunger mounted to slide therein, and adapted to be attached to the golf ball, a resistance spring for said plunger, an indicator slidably mounted on said guide but detached from the plunger, and a clamp at the outer end of said guide for locking the plunger in its projected position.



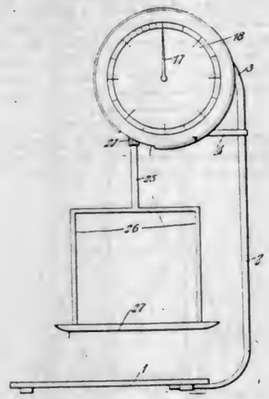
4. In a golf practising machine, the combination of a longitudinal guide, a plunger mounted to slide on said guide and adapted to be attached to the golf ball, a resistance spring for said plunger, and a dash pot for cushioning the return of the plunger.

5. In a golf practising machine, the combination of a longitudinal guide, a plunger slidably connected with said guide, and adapted to be attached to the golf ball, a resistance spring for said plunger, a clamp for locking the plunger in its outer position, and a dash pot at the inner end of the barrel for cushioning the return of the plunger when the clamp is released.

[Claims 6 to 16 not printed in the Gazette.]

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1,229,310. PLATFORM-SCALE. MICHAEL J. NEARY, Victoria, British Columbia, Canada. Filed May 2, 1916. Serial No. 94,912. (Cl. 265—61.)



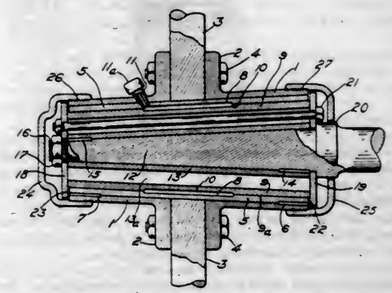
1. In a platform scale, a base, a standard thereon, a housing on said standard having a shaft therein, said shaft having a pinion mounted thereon, a segmental gear pivotally mounted in said housing and meshing with said pinion, a weight carried by said segmental gear, a yoke pivotally associated with said segmental gear, said yoke having a platform associated therewith, a movement limiting means associated with said yoke and said segmental gear.

2. In a platform scale, a base, a standard thereon, a housing on said standard, a shaft concentrically mounted in the housing, a pinion mounted on said shaft, a shaft eccentrically mounted in said housing and the segmental gear mounted thereon for engagement with said pinion, a yoke pivotally associated with the segmental gear, a platform pivotally connected with the said yoke, there being a recess formed in the segmental gear providing a movement limiting means for the said platform, the yoke being reduced at its upper portion to engage the said recess.

3. In a platform scale, a base, a standard thereon flexed at its upper end, a housing carried by said standard, a brace member connected with the housing and said standard, a segmental gear having a weighted portion extending parallel to the segmental gear teeth, and a pinion meshing with said gear and a platform pivotally carried by the segmental gear and pendant therefrom to receive the object to be weighed.

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1,229,311. ENLARGED SPINDLE AND WHEEL-HUB. HILMER NELSON, San Jose, Cal. Filed Feb. 8, 1916. Serial No. 76,993. (Cl. 21—4.)

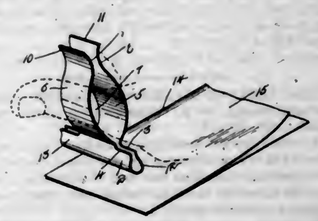


1. In an enlarged spindle and wheel hub the combination of an outer casing made of metal in two parts, each part having a flange, said flanges being adapted to fasten spokes therebetween, an enlarged axle-box, means by which the same is fastened to the inside of said outer casing, an axle spindle extension tube comprising the axle skein and the outer axle skein, means by which said axle spindle is fastened to said axle skein which is an integral part of said axle spindle extension tube connected thereto by a plurality of webs cast longitudinally between said axle skein and said outer axle skein, adapted to form a bearing for said hub, as and for the purpose described.

2. In an enlarged spindle and wheel hub the combination of an outer casing made of metal in two parts, each part having a flange, said flanges being adapted to fasten spokes therebetween, an axle spindle extension tube, comprising the axle skein, and the outer axle skein, means by which an axle spindle is fastened thereto, a plurality of webs cast longitudinally between said axle skein and said outer axle skein, adapted to form an enlarged outer axle skein, washers at the ends of said axle skeins, means by which said washers are drawn rigidly against the ends of said axle skeins, means by which said outer axle skein is lubricated, as and for the purpose described.

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1,229,312. DEVICE FOR CREASING PAPERS. ALPHONSE NEWHOUSE, San Francisco, Cal. Filed Jan. 4, 1916. Serial No. 70,213. (Cl. 120—8.)

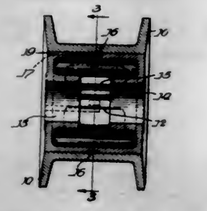


The described device consisting of a ring having a creaser formed thereon, said ring being open and resilient

for self adjustment to a finger and consisting of a pair of opposing clips having flaring lips, said creaser extending beyond said clips on both sides having creasing surfaces formed arcuate.

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1,229,313. PLACER-DREDGE TUMBLER. WESLEY GROFF NICHOLS, Chicago Heights, Ill., assignor to American Manganese Steel Company, Chicago, Ill., a Corporation of Maine. Filed Oct. 2, 1915. Serial No. 53,767. (Cl. 64—17.)



1. A dredge tumbler of relatively great size and weight, comprising, in combination, a spool and a drum, said drum being constructed in the form of a skeleton cylinder, the peripheral surface of which is interrupted by spaces, said drum and spool having interengaging lugs and recesses, and a key for positively locking said parts against relative movement, substantially as described.

2. In a dredge tumbler, the combination of a hollow cylindrical shell having an axial sleeve providing a shaft opening, the peripheral surface of the cylinder being interrupted by a series of spaces, the shell being provided with keyways on its surface, and a spool having an axial opening and provided with lugs projecting into said opening, said lugs being adapted to engage with said keyways, and means for permanently securing said spool and drum in engagement.

3. In combination, a spool and a drum, the drum slidably engaging with said spool, said drum being cylindrical in shape and provided with a central aperture therethrough, said drum having otherwise imperforate ends and being provided with slots in its periphery, and a cored interior portion, the surface between said slots being provided with keyways having enlarged ends, said spool being provided with a cylindrical central aperture, and with lugs on the surface thereof engaging with said keyway in said drum, substantially as described.

4. A dredge tumbler of relatively great size and the principal component parts of which are composed of alloy steel, comprising in combination a one-piece spool and a one-piece skeleton drum upon which said spool is adapted to be permanently mounted, the walls composing the spool being of substantially uniform thickness at all points, said drum having an axial hub which is interrupted at a point intermediate its ends, and means for permanently uniting said drum and spool, substantially as described.

5. A drum, a spool mounted thereon, said spool having an aperture and being provided with lugs, said drum being provided with keyways engaging with said lugs and interlocking therewith, said drum having an axial shaft opening and provided with otherwise imperforate ends and a skeleton body and slidably insertible in said spool, substantially as described.

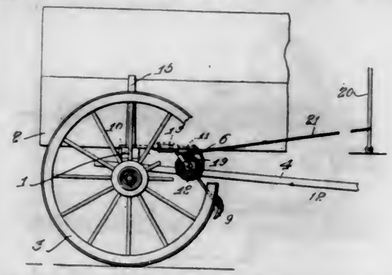
[Claims 6 and 7 not printed in the Gazette.]

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1,229,314. VEHICLE-BRAKE MECHANISM. STELLA M. NOANERG, Pringle, S. D. Filed Oct. 19, 1915. Serial No. 56,707. (Cl. 21—8.)

1. A vehicle brake, including a shaft, a brake beam hung from said shaft and operable by the rotation of the latter, rigid supporting means at the end of said shaft, yieldable supporting means at the other end of said shaft, and means for rotating the said shaft.

2. A vehicle brake comprising a brake beam having shoes, a supporting shaft adapted to operate the beam, a rigid support for one end of the shaft, a combined adjustable and resilient support for the other end of the shaft, and means for operating the shaft.



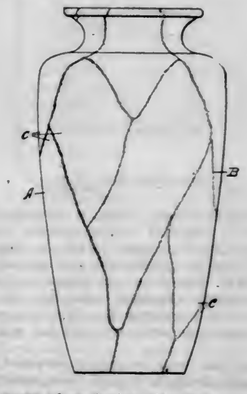
3. A vehicle brake, including a shaft, a brake beam hung from said shaft and operable by the rotation of the latter, a rigid support for said shaft adjacent one extremity, operating means for the shaft, a yieldable support on the opposite extremity of said shaft, adjusting means for said yieldable support, said yieldable support both serving to return said brake beam to inoperative position and to support said shaft.

4. A vehicle brake, the combination of the frame, a shaft, a brake beam supported and operable by the rotation of said shaft, a spiral spring for rotating said shaft after an application of the brake to release the brake, the spring having its inner extremity connected with said shaft, an arm supported on the frame, a connection engaging the spring, a turn buckle between the connection and frame support, said turn buckle being adapted to support and form the adjusting element for the spring.

5. A vehicle brake, the combination of a shaft, a rigid support for one end of the shaft, a helical spring having one end connected to the other end of the shaft and forming a yieldable support therefor, means for adjusting the tension of the spring, a support disposed centrally of the shaft, a brake beam capable of flexure mounted on the support, and brake shoes on the ends of the beam.

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1,229,315. PROCESS OF PRODUCING GLASSWARE PRESENTING BRECCIATED-MARBLE EFFECTS. HARRY NORTHWOOD, Wheeling, W. Va. Filed Jan. 30, 1917. Serial No. 145,436. (Cl. 41—26.)



1. The process of producing glassware presenting brecciated marble effects, which consists in treating a formed article of opaque glass to produce a dull lusterless surface of approximately the texture of carved statuary marble, then tracing upon said surface in a contrasting color a network of irregular fine lines which are so disposed relatively as to intersect one with another at divers angles and to simulate discolored lines of fracture defining numerous irregularly shaped component fragments.

2. The process of producing glassware presenting brecciated marble effects, which consists in treating a formed article of opaque glass to produce a dull lusterless surface of approximately the texture of carved statuary marble, then tracing upon said surface in a contrasting color a network of irregular fine lines having a relatively scattered arrangement in which they intersect one with another to define numerous variform fragmentary blocks or patches in similitude to discolored or calcareous lines of fracture of brecciated marble, and finally firing the article to fix the applied lines thereon.

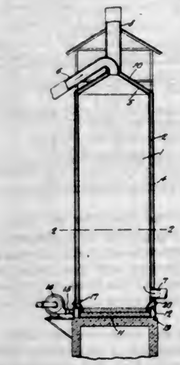
3. The process of producing glassware presenting brecciated marble effects, which consists in treating a formed article of opaque glass to a corrosive liquid bath to produce a dull lusterless marble-like surface, then applying to said surface a network of lightly traced lines in glass color, said lines being distributed scatteringly and in such relation that they intersect at divers angles, simulating the fragment-defining fractures presented by brecciated marble, and finally firing the article to fix said lines thereon.

4. The process of producing glassware presenting brecciated marble effects, which consists in treating a formed article of opaque glass to the corrosive effects of a hydrofluoric acid bath for producing a dull lusterless surface finish, then applying to said surface a network of finely traced irregular lines in glass color, said lines being distributed scatteringly and in such relation that they intersect at divers angles, said lines simulating the fragment-defining lines of fracture appearing in brecciated marble, and finally firing the article to fix said lines thereon.



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1,229,316. PROCESS FOR PRODUCTION OF SULFURIC ACID IN LEAD CHAMBERS. THOMAS C. OLIVER, Charlotte, N. C. Filed Feb. 7, 1917. Serial No. 147,203. (Cl. 23—1.)



1. Apparatus for use in the production of sulfuric acid, including a chamber having lead walls, a housing extending around and over said chamber and providing separate air passages along the outer surface of the wall of the chamber, an outlet flue in communication with the upper ends of the passages, and means for directing air into the lower ends of the passages.

5. Apparatus for use in the production of sulfuric acid, including a lead chamber, a housing surrounding said chamber and forming separate air passages extending upwardly along the outer surface of the walls of the lead chamber, a reservoir at the lower end of said chamber, there being an annular air space about the reservoir, said passages having openings adjacent the lower ends thereof for establishing communication with the external atmosphere and with the annular air space, separate means for controlling the passage of air through the respective openings, and means for directing air under pressure into the annular air space.

6. Apparatus for use in the production of sulfuric acid, including a lead chamber, and a means for creating a natural draft of air along the outer surface of the walls of the lead chamber.

8. Apparatus for use in the production of sulfuric acid, including a lead chamber, and separate means for setting up a natural and forced circulation of air respectively along the outer surface of the walls of the chamber.

[Claims 2 to 4, 7, 9, and 10 not printed in the Gazette.]

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1,229,317. BLOCK FOR LIVE STOCK. GEORGE L. OWENS, Sioux City, Iowa. Filed Jan. 20, 1917. Serial No. 143,487. (Cl. 167—10.)

1. A stock block containing salts possessing water of crystallization and capable of acting under pressure to set, when pressure is removed, into a substantially solid and unit mass or block.

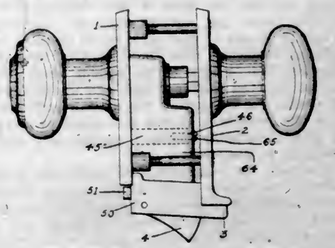
2. A medicated block comprising a highly compressed intimate mixture of common salt and soluble salts of medicinal value containing water of crystallization, such salts being of a nature adapted to act so as to produce a bond under heavy pressure.

12. A stock block having the major portion of stock salt and a remainder of condimental and medicinal substances comprising vegetable and mineral ingredients, certain of said substances being capable of action to provide a bond, the whole being initimately mixed and formed into a solid and substantialy unitary mass or block substantially free of all inert material.

[Claims 3 to 11, 13, and 14 not printed in the Gazette.]

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1,229,318. LOCK. ALBERT A. PAGE, East Haven, and HERBERT G. COLLINS, New Haven, Conn., assignors to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Sept. 27, 1911. Serial No. 651,597. (Cl. 70—91.)



1. In a lock, the combination of inside and outside escutcheons or side plates, a face plate carried by the outside escutcheon, a pivoted latch bolt projecting through said face plate, a standard projecting inward from the inner face of the outside escutcheon and having a notch therein at its free end, a spindle pivoted to the latch bolt and engaging the notch in said standard so as to be guided thereby, a spring interposed between said standard and the latch bolt head for projecting said bolt, a yoke connecting with the bolt, hubs for operating said bolt by means of said yoke mounted adjacent the outside escutcheon, a cover plate for holding said latch retracting parts in their proper operative positions having a wall supported against said standard and overlying the yoke and hubs, means for detachably securing said cover plate to the outside escutcheon and against said standard, and knobs on the respective escutcheons for operating the respective hubs; substantially as described.

2. In a lock, the combination of inside and outside escutcheons or side plates, a face plate carried by the out-

side escutcheon, a pivoted latch bolt projecting through said face plate, a standard projecting inward from the inner face of the outside escutcheon and having a notch therein, a spindle pivoted to the latch bolt and engaging the notch of said standard so as to be guided thereby, a spring interposed between said standard and the bolt head, a yoke connected with the latch bolt, inner and outer hubs for operating said latch bolt by means of said yoke, knobs on the respective escutcheons for operating said hubs, an intermediate hub for operating said yoke, a lock in the outside knob operatively connected with said intermediate hub, a cover plate for holding the latch retracting parts in their proper operative positions, and means for attaching said cover plate to the outside escutcheon so that it abuts the free end of said standard; substantially as described.

3. In a lock, the combination of inside and outside escutcheons, a face plate carried by one of said escutcheons, a pivoted latch bolt projecting through said face plate, a standard projecting from the inner face of one of said escutcheons, a spindle connected with the latch bolt and guided in said standard, a spring interposed between said standard and the bolt head, a yoke connected with the latch bolt, inside and outside hubs for operating said latch bolt by means of said yoke associated with one of said escutcheons, knobs on the respective escutcheons for operating the respective hubs, a third hub associated with the first two hubs and likewise adapted to operate said yoke, a lock in the outside knob operatively connected with said third hub, a cover plate for holding the latch retracting parts in proper operative positions between it and the escutcheon having the standard, and means for detachably securing said cover plate to said escutcheon and holding it in contact with said standard; substantially as described.

4. In a lock, the combination of inside and outside escutcheons, a face plate carried by one of said escutcheons, a pivoted latch bolt projecting through said face plate, a standard projecting from the inner face of one of said escutcheons, and having a notch in its free end, a spindle pivoted to the latch bolt, and guided in said notch, a spring embracing the spindle and interposed between said standard and the bolt head, a yoke connected with the latch bolt, inside and outside hubs for operating said latch bolt by means of said yoke, knobs on the respective escutcheons connected with the respective hubs, a third intermediate hub, a lock in the outside knob, means of connection between said lock and said intermediate hub, and a closure for supporting the several latch retracting parts on the escutcheon having said standard and including a plate detachably clamped against said standard; substantially as described.

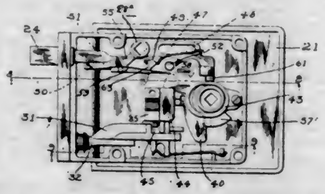
5. In a lock, the combination of inside and outside escutcheons, a face plate carried by the outside escutcheon, a pivoted latch bolt projecting through said face plate, a standard projecting inward from the inner face of the outside escutcheon and having a notch at its free end, a spindle pivoted to the latch bolt and engaging said notch so as to be guided thereby, a spring embracing said spindle and interposed between said standard and the bolt head, a yoke connected with the latch bolt, inside and outside hubs for operating said bolt by means of said yoke, associated with the outside escutcheon at the rear of said standard, said yoke straddling said standard, and a cover plate for holding the latch retracting parts in their proper operative relation detachably secured to the outside escutcheon and overlying the free end of said standard to hold the latch bolt spindle in position therein; substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

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1,229,319. LOCK. ALBERT A. PAGE, East Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Aug. 17, 1915. Serial No. 45,998. (Cl. 70—91.)

4. In a lock, the combination of a latch bolt, a dead bolt, a hub for protracting and retracting the dead bolt, and a separate latch bolt retracting hub operable by said dead bolt hub; substantially as described.



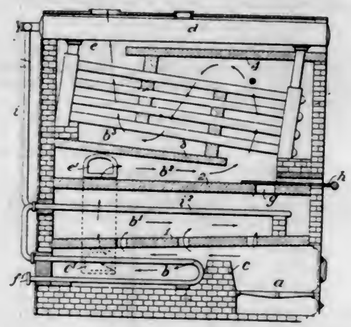
5. In a lock, the combination of two bolts, a hub for retracting one of said bolts, a hub for retracting the other bolt, said second hub being operable by said first hub when the former occupies a definite position, and means for shifting the second hub relatively to the first hub; substantially as described.

6. In a lock, the combination of two bolts, a hub for retracting one of said bolts, a hub for retracting the other bolt and for operating the first named hub, one of said bolts adapted to shift one of said hubs into and out of coöperation with the other hub; substantially as described.

[Claims 1 to 3 and 7 to 15 not printed in the Gazette.]

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1,229,320. FURNACE. EDGAR PECKHAM, Westminster, London, England. Filed Mar. 14, 1917. Serial No. 154,841. (Cl. 110—97.)



1. In a furnace of the character set forth, in combination, a fire box, and a plurality of superposed horizontally arranged flues of refractory material through which pass the products of combustion, said flues being tapered in the direction of the passage of the combustion products therethrough to provide constricted outlets for the purpose described.

2. In a furnace of the character set forth, in combination, a fire box, a plurality of superposed horizontally arranged flues of refractory material through which pass the products of combustion, said flues being tapered in the direction of the passage of the combustion products therethrough to provide constricted outlets, and horizontally arranged fluid conduits disposed in certain of said flues.

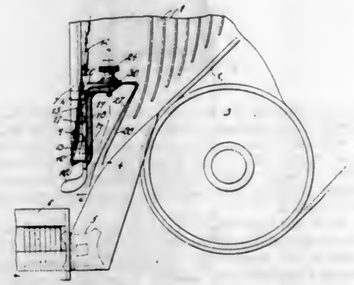
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1,229,321. TYPOGRAPHICAL MACHINE. WILLIAM M. RAPP, Collingswood, N. J. Filed July 13, 1916. Serial No. 108,973. (Cl. 199—7.)

1. The combination in a typographical machine, of a supporting structure, a member adjustably secured to said supporting structure and having a portion forming a guide for the space bands, and a matrix-controlling member adjustably connected to said first member, substantially as described.



2. The combination in a typographical machine, of a supporting structure, a member adjustably secured to said supporting structure, and having a portion forming a guide for the space bands, a matrix controlling member adjustably connected to said first member and adjustable transversely to the direction of adjustment of said first member, substantially as described.



3. The combination in a typographical machine including an assembling block, a space band chute, means for assembling the space bands and matrices within the assembling block, of a rigid plate adjustably secured adjacent the space band chute and having a portion intermediate said chute and the assembling means, and resilient means adjustably secured to said plate and designed to be engaged by the matrices during their progress toward the assembling means, substantially as described.

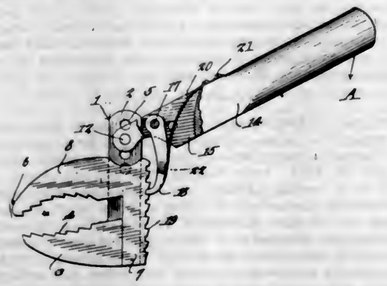
4. The combination in a typographical machine, of a supporting structure, a member having a portion in line with the space band chute and adjustably secured with respect thereto, an arm on said member extending at an angle thereto, and a spring adjustably mounted on said arm, said spring being adapted to be engaged by the matrices during their progress toward the assembling means, substantially as described.

5. The combination in a typographical machine, of a supporting structure, a slotted plate having a portion for guiding the space bands to the assembling means, means extending through said slot in the plate for adjustably securing said plate to the supporting structure, an arm on and extending at an angle to said plate, a bent flat spring adjustably secured to said arm and extending toward the space band guiding portion of said plate, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

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1,229,322. RATCHET NUT AND PIPE WRENCH. DAVID W. REIP, Lothair, Mont. Filed Jan. 12, 1917. Serial No. 142,024. (Cl. 81—127.)



A wrench including a main member comprising a shank and a fixed jaw projecting from the shank, the shank being disposed at an obtuse angle to the jaw; an auxiliary member comprising a shank having a rack on its outer edge, and a fixed jaw projecting from the shank of the auxiliary member and disposed at an acute angle to said shank, the shanks extending in opposite directions, and being slidably interengaged for relative right line movement, the jaw of the auxiliary member having an opening through which the free end of the shank of the main member passes; a lever pivoted to the free end of the shank of the main member; a dog pivoted to the lever and coacting with the rack, the dog extending longitudinally of the shanks to receive an endwise thrust when the wrench is in use; and spring means coöperating with the dog to hold the same in approximate parallelism to the shanks.

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1,229,323. MEANS FOR SUPPORTING THE ROOFS OF MINE-ENTRIES. JAMES J. RODY, Cleveland, Ohio. Filed Dec. 9, 1912. Serial No. 735,867. (Cl. 61—16.)

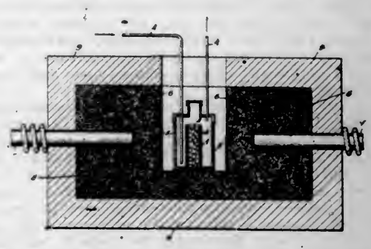


1. Method of supporting a roof of a mine gallery consisting of providing a flexible member, maintaining the arc of the crown of the member at its normal curvature, flexing the ends of said member to permit of entry into steps formed in the side walls of the gallery and allowing said ends to spring into said steps whereby the crown is maintained in close contact with said roof.

2. The herein described method of supporting the roof of a mine entry, consisting in cutting channels in the side walls of the entry, arching a flexible plate to a fixed curvature, flexing the ends of said plate inward, seating the arched plate against the roof of the entry, and springing the ends of said plate outward into said channels and in wedged position against said side walls to maintain the plate in constant close contact with said roof.

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1,229,324. PROCESS FOR TREATING SILICA. ISRAEL ROSENBLUM, Swampscott, Mass. Filed Mar. 31, 1917. Serial No. 158,953. (Cl. 204—64.)



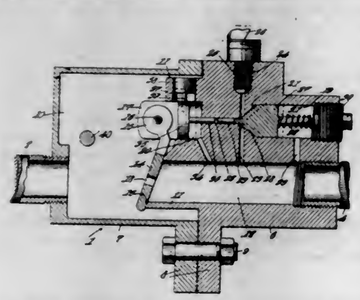
1. A process of treating quartz in an electric furnace in a graphite crucible in the presence of oxygen-free nitrogen gas.

3. A process of treating quartz in a graphite crucible in an electric furnace by forming a protective layer on said crucible through the interaction of a portion of the material to be treated and the lining of the crucible and then raising the temperature for the liquefaction of the quartz.

6. A process of producing a new composition of matter by treating quartz in a graphite crucible in an electric furnace from 1400 to 1700 degrees centigrade in the presence of oxygen-free nitrogen gas.

[Claims 2, 4, and 5 not printed in the Gazette.]

1,229,325. SAFETY-VALVE FOR AIR-BRAKES. MICHAEL H. RYAN, San Bernardino, Cal. Filed Feb. 14, 1916. Serial No. 78,238. (Cl. 188—1.)



1. A valve structure adapted to be interposed between a train pipe and triple valve having a swinging valve to prevent an unrestricted flow of air from the train pipe to the triple valve and having an aperture to establish communication between the train pipe and triple valve, said valve swinging open freely when air flows from the triple valve to the train pipe.

2. A valve structure adapted to be interposed between a train pipe and triple valve, having an inclined valve seat, a suspended swinging valve adapted to gravitate against said seat for preventing the unrestricted flow of air from the train pipe to the triple valve, said valve having a restricted aperture.

3. A valve structure adapted to be interposed between a train pipe and triple valve, comprising a body having two sections secured together, one section having a chamber, and the other having an extension projecting into said chamber, the last mentioned section having a passage opening through said extension, the extension having a valve seat surrounding said passage, and a valve carried by said extension normally seatable against said seat to provide for a restricted flow of air from said chamber to said passage.

4. A valve structure adapted to be interposed between a train pipe and triple valve, comprising a body having two sections secured together, one section having a chamber, and the other having an extension projecting into said chamber, the last mentioned section having a passage opening through said extension, the extension having a valve seat surrounding said passage, said seat being inclined, and a swinging suspended valve pivoted to said extension to normally swing against said seat and having a restricted aperture.

5. A valve structure of the character described having a chamber to communicate with a train pipe and a chamber to communicate with a triple valve, a valve providing a restricted flow of air from the first mentioned to the second mentioned chamber and an unrestricted flow of air from the second mentioned to the first mentioned chamber, an acoustic signal communicating with the second mentioned chamber, a valve for normally cutting off communication between said signal and second mentioned chamber, and means operated by air pressure in the first mentioned chamber to open the last mentioned valve.

[Claims 6 and 7 not printed in the Gazette.]

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1,229,326. GOLF-BAG. JOHN E. SCHANK, Chicago, Ill. Filed July 6, 1915. Serial No. 38,372. (Cl. 224—45.)

1. In a golf-bag bottom, the combination with the body material, of a metallic bottom cap having a deep annular channel into which the body material extends, said channel having its upper edge contracted to clamp the body material and bottom cap together by pressing the body material directly between the two walls of the channel, and a cushion secured on the top of the metal inside of the bag.

2. In a golf-bag bottom, the combination with the tubular body material, of a sheet-metal bottom cap composed of a disk having a downwardly turned flange, and an upwardly turned flange connected thereto of lesser width pressed against the inclosed body material to clamp it between the two flanges, for the purpose described.



3. In a golf-bag bottom, the combination with the body material, of a sheet-metal bottom composed of a disk having annular corrugations therein and a downwardly turned flange, and an upwardly turned flange connected thereto of lesser width pressed against the inclosed body material to clamp it between the two flanges, for the purpose described.

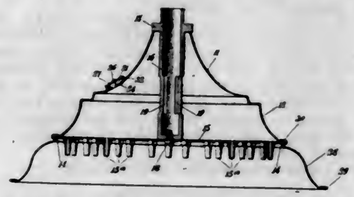
4. In a golf-bag bottom, the combination with the canvas body material *a*, of the outer reinforcing strip *b* sewed thereto at its upper edge, the inner reinforcing strip *c* interposed between the canvas *a* and the leather *b*, a sheet-metal bottom cap *d* having the flanges *g* and *j* for the purpose described, and the cushion *k* secured on the top of the bottom cap.

5. As a new and useful article of manufacture, a reinforcing cap for golf-bag bottoms, consisting of a metallic disk having a downwardly extending annular flange, and an upwardly extending annular flange of less width joined thereto and adapted to have its upper edge turned inward, substantially as and for the purpose described.

[Claim 6 not printed in the Gazette.]

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1,229,327. SPRAY-HEAD FOR SHOWER-BATHS. MILTON SCHNAIER, New York, N. Y., assignor to Milton Schnaier Contracting Corp., a Corporation of New York. Filed July 9, 1913. Serial No. 778,011. (Cl. 137—83.)

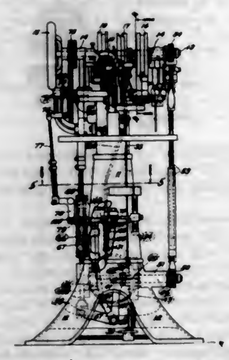


A spray head comprising a hollow body having a tapering upper portion and a flaring lower portion, a perforated plate secured to said lower portion, a distributing nozzle arranged within said hollow body and having a shoulder engaging the upper edge of said upper portion, said nozzle having openings formed in its wall, said nozzle having a closed inner end engaging the inner surface of said plate, and means securing said plate to the inner end of said nozzle, substantially as specified.

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1,229,328. SEWING-MACHINE. AUGUST R. SCHOENKY, Somerville, Mass., assignor to Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Jan. 27, 1914. Serial No. 814,631. (Cl. 112—20.)

1. In a sewing machine, the combination of stitching mechanism, mechanism including a driven shaft for operating the stitching mechanism, an adjustable work-engaging member, adapted to be firmly clamped upon the work, automatic connections timed with the stitching cycle for unclamping said member during each stitch, and reclamping it, and maintaining it clamped as the stitch is set, a stop motion operative after the formation of a plurality of stitches for slowing the forward rotation of the driven shaft and then bringing it from its forward rotation to a final stop in a definite position, automatically operating connections for unclamping without lifting said member during the final forward shaft movement in the stopping operation by said stop motion, and means subsequently operable at will for lifting said member.



2. In a sewing machine, the combination of stitching mechanism, mechanism for driving the stitching mechanism, an adjustable work-engaging presser-foot, means for clamping said presser-foot upon the work, mechanism for stopping the machine, a presser foot unclamping device, means for intermittently operating the unclamping device during stitching, a single means for operating both the stopping mechanism and the unclamping device and means subsequently operable at the will of the operator for removing said presser-foot from the work.

3. In a sewing machine, the combination of stitching mechanism, mechanism for driving the stitching mechanism, an adjustable work-engaging presser-foot, means for clamping said presser-foot upon the work, mechanism for stopping the machine, a presser foot unclamping device, means for intermittently operating the unclamping device during stitching, a single means for operating both the stopping mechanism and the unclamping device, the same being operable at will and means subsequently operable at the will of the operator for removing said presser-foot from the work.

4. In a sewing machine, the combination of stitching mechanism, mechanism for driving the stitching mechanism, an adjustable work-engaging member, means for clamping said member upon the work, an unclamping device, means for intermittently operating the unclamping device during stitching, a stopping means, and connections actuated by said stopping means for actuating said unclamping device, whereby said member is unclamped as the stitching ceases, and means subsequently operable at the will of the operator for removing said member from the work.

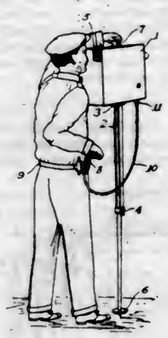
5. In a sewing machine, the combination of stitching mechanism, mechanism for driving the stitching mechanism, an adjustable work-engaging member, means for clamping said member upon the work, an unclamping device, a stopping means for slowing and finally stopping the stitching mechanism from its forward drive in a definite position, and a controller having separate connections for operating both said stopping means and unclamping device, whereby said member is unclamped as the forward drive of the machine ceases.

[Claims 6 to 14 not printed in the Gazette.]

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1,229,329. CINEMATOGRAPH. ARTHUR R. SELDEN, Rochester, N. Y. Filed July 18, 1916. Serial No. 109,890. (Cl. 88—16.)

1. In combination with a cinematograph, means for supporting the cinematograph so that the latter may swing freely both vertically and horizontally to direct the lens on the object and operating means for said cinematograph comprising a driving member supported independently of the cinematograph and a flexible shaft connecting said driving member with the driving shaft of the cinematograph.



2. In combination with a cinematograph, means for supporting the cinematograph so that the latter may swing freely both vertically and horizontally to direct the lens on the object, and a handle piece by which the cinematograph is sustained in the desired position.

3. In combination with a cinematograph, means for supporting the cinematograph so that the latter may swing freely both vertically and horizontally about a point located below the bottom of the casing of the cinematograph to direct the lens on the object.

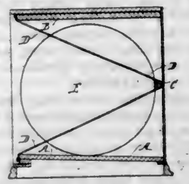
4. In combination with a cinematograph, a rigid support rigidly secured at its upper end to the cinematograph and having its lower end adapted to serve as a pivot about which the cinematograph may swing freely both horizontally and vertically to direct the lens on the object and a guard at the lower end of the support to prevent the penetration of the ground by the support.

5. In combination with a cinematograph, a rigid support rigidly secured at its upper end to the cinematograph and having its lower end adapted to serve as a pivot about which the cinematograph may swing freely both horizontally and vertically to direct the lens on the object, and a handle on the casing of the cinematograph by which the position of the cinematograph about the pivot may be sustained.

[Claims 6 to 8 not printed in the Gazette.]

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1,229,330. GRAMOPHONE-RECORD HOLDER. WILLIAM JEMSON SHARPLES, Gisborne, New Zealand. Filed Dec. 11, 1916. Serial No. 136,213. (Cl. 211—16.)



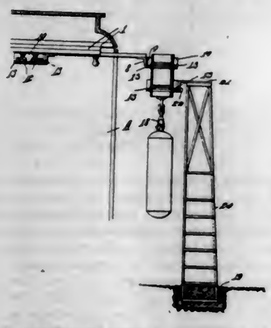
1. A gramophone disk record holder constructed of a rearwardly and downwardly sloping shelf, a top board arranged at a distance above such shelf, a bar fixed about medially between the shelf and top board at the rear of the holder and cords or wires extending in parallel lines from the front edge of the shelf around the said bar, and forward to the front edge of the top board, substantially as specified.

2. A gramophone disk record holder constructed with a bottom shelf, a top board arranged at a distance above

such shelf, a bar fixed medially between the shelf and top board and at the rear of the holder, metal bars secured respectively along the front edges of the said shelf and top board and each formed with teeth projecting laterally from its outer edge and spaced at regular intervals apart and a cord or wire extending from the front of the top board rearward around the rear bar and then forward to the front of the shelf and looped around the teeth of the respective bars upon the fronts of the said top board and shelf, substantially as specified.

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1,229,331. MAIL CATCHING AND DELIVERING APPARATUS. PHILLIP A. SHAVER, Puente, Cal. Filed Dec. 8, 1916. Serial No. 135,836. (Cl. 258—17.)



1. A mail transferring device comprising, a mail bag supporting device mounted within a mail car and adapted to project from either side thereof, a supporting plate carried by the end of the mail bag supporting device, right angular sleeves fastened to the supporting plate, and spring clips having right angular end portions embraced by the said right angular sleeves.

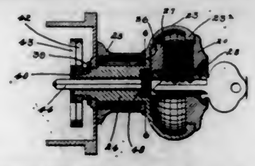
3. A mail transferring device comprising, a mail bag supporting device mounted within a mail car, one end of the mail bag supporting device carrying a length of angle iron having one flange depending vertically from the end of the mail bag supporting device, retaining plates comprising right angularly bent members each having one of their flanges fastened to the depending flange of the said angle iron, the proximate faces of the other flanges being in engagement, spring clips, means for attaching the spring clips to the said retaining plates, the said means including fastening elements projected through the engaging portions of the retaining plates and connected to the said means.

5. A mail transferring device comprising, a mail bag supporting device, retaining plates carried by the mail bag supporting device, said plates having projecting flanges which latter have their proximate faces in engagement, right angular sleeves connected to the said retaining plates, the said sleeves being arranged in pairs on each side of said retaining plates, and a spring clip carried by each of said sleeves.

8. A mail transferring device comprising, a mail bag supporting device, retaining plates carried by the mail bag supporting device, said plates having projecting flanges which latter have their proximate faces in engagement, right angular sleeves connected to the said retaining plates, the said sleeve being arranged in pairs on each side of said retaining plates, a spring clip carried by each of said sleeves, each clip being constructed from a length of wire having one end bent at right angles and embraced by one of the said sleeves, a carrier adapted to be embraced by the said clips, the said carrier being provided with mail bag attaching elements, the said carrier having annular grooves, the said clips being received in the said grooves when the carrier is engaged by the clips.

[Claims 2, 4, 6, and 7 not printed in the Gazette.]

1,229,332. LOCK. JOHN H. SHAW, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Jan. 29, 1914. Serial No. 815,229. (Cl. 70—91.)



1. The combination of an escutcheon, a pin tumbler lock fixed to the same, and a bolt operating member rotatable about said pin tumbler lock; substantially as described.

2. The combination of an escutcheon, a pin tumbler lock fixed to the same, and a bolt operating member rotatable about said pin tumbler lock, and passing through the escutcheon; substantially as described.

3. The combination with an escutcheon, of a pin tumbler lock secured thereto and rigid therewith, and a knob section inclosing said pin tumbler lock and rotatable relatively to the same; substantially as described.

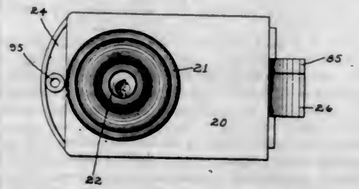
4. The combination with an escutcheon, of a pin tumbler lock secured to and rigid with said escutcheon and located in front of said escutcheon, and a knob shell having a rotatable bearing on said pin tumbler lock; substantially as described.

5. The combination with an escutcheon, of a pin tumbler lock having a fixed part with radial pin tumblers, and a movable key plug, means for securing the fixed part of said pin tumbler lock to said escutcheon at the front of the latter, and a knob shell rotatable about said pin tumbler lock; substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

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1,229,333. LOCK. JOHN H. SHAW, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Feb. 12, 1914, Serial No. 818,397. Renewed Jan. 11, 1917. Serial No. 141,917. (Cl. 70—91.)



1. In a lock, the combination of a pair of escutcheons, a knob carried by each escutcheon, a face plate carried by one of said escutcheons, inwardly projecting walls formed integral with said escutcheon and constituting, in conjunction with said escutcheon and with said face plate, a casing, said casing being of less depth from the edge of the door than the other escutcheon, said other escutcheon being extended horizontally back of said casing, and provided at that point with an opening for a screw to engage the material of the door, a latch bolt projecting through said face plate, retracting mechanism for said bolt housed in said casing, and including hubs operatively connected with the respective knobs, and a third hub, a lock in one of the knobs operatively connected with said third hub, a cover plate for said casing located between said escutcheons and overlying said hubs to hold them in place in said casing, and means for securing said cover plate in position; substantially as described.

2. In a lock, the combination of a pair of escutcheons, a knob carried by each escutcheon, a face plate carried by one of said escutcheons, inwardly projecting walls formed integral with said escutcheon and constituting, in conjunction with said escutcheon and with said face plate, a casing to partially house a latch-retracting mechanism, said walls formed with integral screw sockets, screws engaging said sockets, and the other escutcheon, and providing for the adjustable interconnection of the escutcheons, a latch bolt projecting through said face plate, latch-retracting mechanism in said casing, including hubs operatively connected with the respective knobs, and a third hub, a lock in one of said hubs operatively connected with said third hub, a cover plate for said casing overlying said hubs to hold them in position in said casing, and means for securing said cover plate in position; substantially as described.

3. In a lock, the combination of a pair of escutcheons, a knob carried by each escutcheon, a face plate carried by one of said escutcheons, inwardly projecting walls formed integral with said escutcheon and constituting, in conjunction with said escutcheon and with said face plate, a casing to partially house a latch-retracting mechanism, said casing of less depth from the edge of the door than the other escutcheon, said other escutcheon being extended horizontally back of said casing, and provided with an opening at that point for a screw to engage the material of the door, the walls of said casing having screw sockets associated therewith, screws engaging said sockets and the other escutcheon, and providing for the adjustable interconnection of the escutcheons, a latch bolt projecting through said face plate, latch-retracting mechanism in said casing, including hubs operatively connected with the respective knobs, and a third hub, a lock in one of said knobs operatively connected with said third hub, and a cover plate for said casing overlying said hubs, and confining the latter in said casing; substantially as described.

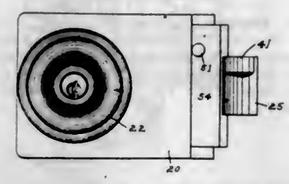
4. In a lock of the union type, the combination of a side plate, a latch bolt, a latch bolt stem, a cover plate, and a bracket on said side plate, guiding said stem and supporting said cover plate.

5. In a lock of the union type, the combination of a side plate, a face plate, a latch bolt projecting through the face plate, a standard projecting inward from the side plate, a rod guided in the standard and connected with said latch bolt, a spring interposed between the latch bolt and the standard, and means for retracting the bolt.

[Claims 6 to 10 not printed in the Gazette.]

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1,229,334. LOCK. JOHN H. SHAW, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Feb. 12, 1914. Serial No. 818,398. (Cl. 70—91.)



1. In a lock, a normally protracted latch bolt, means normally deadlocking the same in protracted position, means for releasing the latch bolt as the door is being closed and means for deadlocking said releasing means; substantially as described.

2. In a lock, a normally protracted latch bolt, means normally deadlocking the same in protracted position, means for releasing the latch bolt as the door is being closed, and means for deadlocking said releasing means automatically by the closing of the door; substantially as described.

3. In a lock, a normally protracted latch bolt, means normally deadlocking the same in protracted position, means for releasing the latch bolt as the door is being closed, means for deadlocking said releasing means automatically by the closing of the door, and means for retracting said latch bolt, operatively connected with both of said deadlocking means; substantially as described.

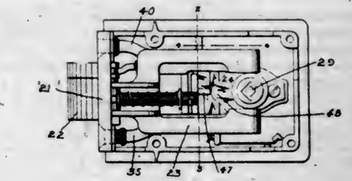
4. In a lock, a normally protracted latch bolt, means normally deadlocking the same in protracted position, means for releasing the latch bolt as the door is being closed, means for deadlocking said releasing means, a knob for retracting the latch bolt, and means of connection between said knob and both of said deadlocking means to cause the retraction of the bolt by said knob when the door is closed; substantially as described.

5. In a lock, a normally protracted latch bolt, a deadlocking lever normally deadlocking said latch bolt in its protracted position, a releasing bolt acting on said deadlocking lever to release the latch bolt as the door is being closed, and means for deadlocking said releasing bolt; substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

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1,229,335. LOCK. JOHN H. SHAW, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Feb. 12, 1914. Serial No. 818,399. (Cl. 70—91.)



1. In a lock, a latch bolt, inner and outer manual retracting devices therefor, manually movable stop work for the outer retracting device, key mechanism for retracting the latch bolt, and means for normally preventing a releasing movement of said stop work, and for preventing such releasing movement when the key mechanism is operated, said preventing means being movable into an inoperative position when said inner manual retracting device is operated; substantially as described.

2. In a lock, a latch bolt, inner and outer knobs for retracting the same, manually movable stop work associated with the outer knob, key mechanism for retracting the latch bolt, and means releasable by the inner knob only for blocking the movement of the stop work from operative into inoperative position; substantially as described.

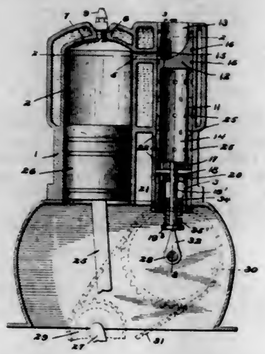
3. In a lock, a latch bolt, inner and outer manual retracting devices therefor, manually operable stop work accessible at the face of the lock for dogging the outer retracting device, key mechanism for retracting the latch bolt, means to lock said stop work against a releasing movement, and means operated by the inner retracting device, but unaffected by said key mechanism, to shift the locking mechanism for the stop work to an inoperative position; substantially as described.

4. In a lock, a latch bolt, inner and outer manual retracting devices therefor, manually operable stop work associated with the outer retracting device, and including a dogging member and a releasing member, key mechanism for retracting the latch bolt, means to lock the releasing member of said stop work against movement in one direction, and means operated by the inner manual retracting device, but unaffected by said key mechanism, for releasing said locking means; substantially as described.

5. In a lock, a latch bolt, inner and outer retracting hubs therefor, manually operable stop work to dog and release the outer hub, key mechanism for retracting the latch bolt, and means to prevent a releasing movement of said stop work except when said inner hub is operated; substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

1,229,336. VALVE FOR GAS-ENGINES. WILLIAM J. SHEAFFER, Liverpool, Pa., assignor of one-third to Emmett E. Barner, Liverpool, Pa. Filed Mar. 20, 1916. Serial No. 85,445. (Cl. 123—84.)



In an explosive engine, the combination with a cylinder and a reciprocable piston carried therein, of a plurality of tubular valve chambers adjacent to said cylinder having a channel communicating between the explosion chamber in the cylinder and each of said sleeve chambers at right angles to the pistons, a sleeve reciprocably carried in each of said valve chambers having an opening in its outer end, a block removably carried in its inner end having longitudinal channels through same, a lubricant chamber located between said cylinder and valve chambers having openings into said valve chambers, a plurality of annular grooves surrounding said sleeves having orifices communicating with the interior of the sleeve, whereby lubricant is communicated from the lubricant chamber to the valve chambers, distributed longitudinally by the annular grooves and discharged through the orifices in the walls of the sleeves and the channels in the end blocks, and means for alternately reciprocating said sleeve valves in timed relation to the action of the piston, substantially as described.

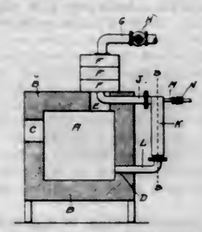
1,229,337. PAINT COMPOSITION. OTTO HUGO SHULTZ, Windsor, Ontario, Canada, assignor of two-tenths to Fred M. Bill and two-tenths to Roy M. Foster, Edmonton, Alberta, Canada, and two-tenths to Leonard R. Benson, Windsor, Ontario, Canada. Filed Mar. 14, 1916. Serial No. 84,206. (Cl. 134—45.)

1. A paint composition containing the reaction products of lead monoxid or litharge, silicate of sodium, methylated spirits, common salt, alum, lead acetate, zinc sulfate, potassium acetate, gum arabic, common rosin, oxalic acid, caustic soda and water.

2. A paint composition containing the reaction products of lead monoxid or litharge, 8 ounces; silicate of sodium, 16 ounces; methylated spirits, 40 ounces; common salt, 8 ounces; alum, 8 ounces; lead acetate, 16 ounces; zinc sulfate, 32 ounces; potassium acetate, 1½ ounces; gum arabic, 8 ounces; common rosin, 24 ounces; oxalic acid, 4 ounces; caustic soda, 32 ounces; and water, 6,400 ounces.

1,229,338. METHOD OF PRODUCING FUEL-GAS. MAX SKLOVSKY, Moline, Ill., assignor to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed Sept. 8, 1914. Serial No. 860,709. (Cl. 158—117.5.)

1. The method of producing a gaseous fuel for heating furnaces, which consists in preheating air to a temperature high enough to substantially wholly vaporize fuel oil, passing the air so heated through a vaporizing chamber at high velocity, and introducing fuel oil into the stream of air flowing continuously through said vaporizing chamber, whereby the oil will be vaporized and thoroughly mixed with the heated air, and combustion in the vaporizing chamber will be prevented.



2. The method of producing a gaseous fuel for heating furnaces, which consists in preheating air to a temperature high enough to substantially wholly vaporize fuel oil, passing the air so heated at high velocity through a vaporizing chamber of substantially uniform cross-sectional area throughout its length, and introducing fuel oil into the stream of air flowing continuously through said vaporizing chamber, whereby the oil will be vaporized and thoroughly mixed with the heated air, and combustion in the vaporizing chamber will be prevented.

3. The method of producing a gaseous fuel, which consists in heating air to a temperature of more than 500° F., and introducing fuel oil into and thoroughly mixing it with the heated air, meanwhile causing the stream of air to flow at a velocity greater than the speed of travel of ignition back along the advancing stream of the mixture.

4. The method of producing a gaseous fuel, which consists in heating air to a temperature of more than 500° F., passing the air so heated at high velocity through a vaporizing chamber, and thoroughly mixing fuel oil with the air as it passes through said vaporizing chamber in the correct proportions to insure substantially complete combustion without the use of extraneous air.

5. The method of producing a gaseous fuel and supplying the same to a combustion chamber, which consists in heating air to a temperature high enough to substantially wholly vaporize fuel oil, forcing the air so heated toward the combustion chamber in a continuous stream flowing at high velocity, vaporizing fuel oil and mixing it with the heated air by introducing it into the stream of air on its way to the combustion chamber, the velocity of the stream being meanwhile kept high enough to prevent ignition of the mixture, and then introducing the mixture into the combustion chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,229,339. RAILWAY-CROSSING GATE. EMERY H. SMITH, Burton, Mich., assignor, by direct and mesne assignments, of one-fourth to Frank T. Wright, Middlebury, Mich., and one-fourth to John A. Homer, Owosso, Mich. Filed Nov. 2, 1915. Serial No. 59,274. (Cl. 269—5.)

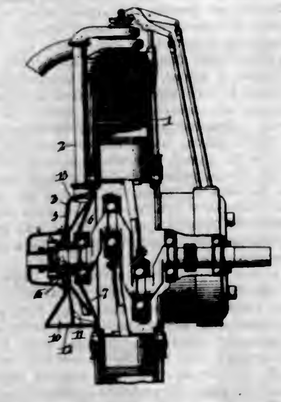


1. A railroad crossing gate comprising a standard, a gate pivoted to the upper end of the standard, a disk rotatably mounted near the lower end of the standard, a segment pivoted near the track, a lever connected to the segment and adapted to be moved downwardly by a train, a cable secured to the gate and passing around the disk and being secured to the segment whereby upon downward movement of the lever the gate will be lowered, spring means for normally urging the gate upwardly, a pawl carried by the disk and arranged to engage one of the ties of the track along which the device is used to hold the gate in its lowered position and a lever pivoted on the same tie and adapted to be actuated upon the passage of the train over the road to release the pawl and permit the gate to rise to open position.

2. A railroad crossing gate including a standard adapted to be placed beside a railroad track, a disk member pivoted near the upper end of the standard, a disk rotatably mounted near the lower end of the standard, a counter balancing weight for the gate member, a spring connected to the standard near its upper end and to the gate member intermediate its ends to normally exert upward pull on said gate member to hold the same in open position, a cable attached to the gate member near the points where the spring is attached, said cable passing beneath the disk, a lever pivoted at the side of the track at a point distant from the standard, a segment on said lever, the end of the cable opposite that attached to the gate member being attached to the segment, the lever being adapted to be engaged by trip members carried by a train to cause the segment to partially rotate and exert pull on the cable to move the gate to closed position against the tension of the spring, a pawl pivoted to the disk and adapted to engage one of the ties of the track when the gate is in its lowered position, a spring for holding said pawl in such engagement, a rocking arm on the tie, a finger on the arm extending beneath the pawl and adapted when said arm is rocked to release the pawl, an actuating arm on the rocking arm adapted to be engaged by one of the wheels of a train to cause said arm to rock and release the pawl and a spring beneath the actuating arm to hold the same in inoperative position.

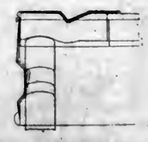


1,229,340. INTERNAL-COMBUSTION ENGINE. JOHN W. SMITH, Philadelphia, Pa. Filed Sept. 12, 1916. Serial No. 119,615. (Cl. 123—141.)



In combination an internal combustion engine with radially arranged cylinders; an annular induction case centrally mounted near the plane of these cylinders; induction tubes connecting the periphery of the induction case with the cylinders; a centrifugal fan rotating in said fan casing; an inlet opening for the induction case offset from the plane in which said tubes enter it, delivering an explosive mixture in the central region of the fan casing, and a baffle plate interposed within the induction case to deflect the incoming mixture toward the center of the same, with a by-pass at the lower edge of the said baffle plate, whereby fluid driven by the fan from the mixture toward the periphery of the fan casing is allowed to escape, and again come into contact with the incoming mixture.

1,229,341. CAP OR COVER FOR JARS, BOTTLES, GLASSES, OR THE LIKE. ROBERT SORGAN, New York, N. Y. Filed Mar. 11, 1916. Serial No. 83,447. (Cl. 215—11.)



1. The combination with a receptacle of a closure therefor, comprising a top, a downwardly depending unbroken rim portion, having a plurality of inwardly extending closely adjacent projections, having a slight elasticity, the annular inner pre-attachment diameter of which is less than the outer diameter of the rim of the receptacle, and the interior contacting surface of the rim adapted to be slightly expanded over the receptacle, the inner diameter of said projections in said extended position being substantially equal to the outer diameter of the rim of said receptacle, said closure being retained thereon in said expanded and tensioned position by frictionally binding contacts with said rim of the receptacle.

2. The combination with a receptacle of a closure therefor, comprising a top, a downwardly depending unbroken rim portion, having a plurality of inwardly extending closely adjacent projections, having a slight elasticity, the annular inner pre-attachment diameter of which is less than the outer diameter of the rim of the receptacle, and the lower edge of said rim portion being turned upon itself to form a strengthening and stiffening portion, the interior contacting surface of the rim adapted to be slightly expanded over the receptacle and be retained thereon in said expanded position by frictional contact with said rim of the receptacle.

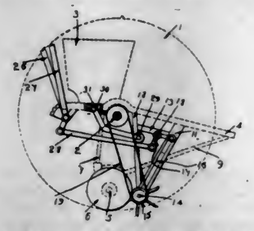
3. The combination with a receptacle of a closure therefor, comprising a top, a downwardly depending unbroken rim portion provided with a plurality of indentations, slightly spaced apart forming projections on the interior of the said rim, the inner pre-attachment diameter of which is less than the outer diameter of the rim of the receptacle, the said plurality of projections rendering the rim slightly elastic, the interior contacting surface of the rim adapted to be slightly expanded over the receptacle, the inner diameter of said projections in said extended position being substantially equal to the outer diameter of the rim of said receptacle, said closure being retained thereon in said expanded and tensioned position by frictionally binding contact with said rim of the receptacle.

4. An improved receptacle closure, comprising a top, a downwardly depending unbroken rim portion, having a slight elasticity, the lower edge of the said rim portion being turned upon itself to form a strengthening and stiffening portion, the said rim being provided at one part with a cut out portion disposed adjacent the said strengthending rim portion, the interior contacting surface of the rim adapted to be slightly expanded over the receptacle to be capped, the closure adapted to be removed from the receptacle by breaking of the said strengthening portion of the rim at the said cutout portion thereof.

5. The combination with a receptacle having a plain substantially cylindrical rim portion, of a closure therefor, comprising a top, a downwardly depending rim portion having a plurality of inwardly extending closely adjacent projections having a slight elasticity, the annular inner surfaces of said projections being inclined inwardly and upwardly, and being of a pre-attachment diameter less than the outer diameter of the rim of the receptacle, the interior contacting surface of the rim adapted to be slightly expanded over the receptacle, said projections adapted to assume an uninclined contacting position with respect to said rim of said receptacle to be retained thereon in said expanded position by frictional contact with said rim of the receptacle.

[Claim 6 not printed in the Gazette.]

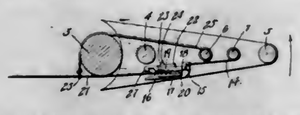
1,229,342. SEEDING ATTACHMENT. JOHN BYRON STEELE and HUGH FOLLIS, Orillia, Ontario, Canada. Filed Feb. 21, 1914. Serial No. 820,301. (Cl. 97—25.)



1. A seeding device including an axle and supporting wheels non-revolubly mounted thereon, disks secured to said device, cleaning members provided with spokes carried by said device before said disks and having their spokes extending between adjacent disks, said members operatively connected to said axle, a clutch device carried by said axle for actuating said members and means for raising or lowering said members, substantially as described.

2. A seeding device including an axle and supporting wheels non-revolubly mounted thereon, disks secured to said device, cleaning members provided with spokes carried by said device before said disks and having their spokes extending between adjacent disks, said members operatively connected to said axle, a clutch device carried by said axle for actuating said members, and lever mechanism for raising or lowering said members as desired.

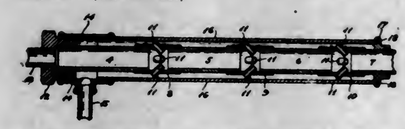
1,229,343. WIRE-STRETCHER. FILO S. STEVENS, Ashville, N. Y. Filed Mar. 9, 1916. Serial No. 83,113. (Cl. 254—162.)



1. A wire fence stretcher comprising, a frame having a curved portion adapted to engage the side of a fence post, a windlass journaled in the frame and having a flexible element wound thereabout, means on the flexible element for engaging the ends of the fence to be stretched, and for holding the fence against one side of the post, a second windlass, journaled in the frame and having a flexible element wound thereabout, the end of which is passed partly around the opposite side of the fence post, means on said element for engagement with the fence to be stretched so that the strain of the fence wire at one side of the post will be neutralized by a component of said strain, which passes around the opposite side of the post to prevent displacement of the frame relative to the post.

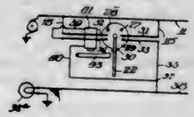
[Claims 2 and 3 not printed in the Gazette.]

1,229,344. PNEUMATIC SPRAYER. HOWARD L. STEVENS, Everett, Wash. Filed Aug. 1, 1916. Serial No. 112,609. (Cl. 91—45.)



A pneumatic device of the class described, which embodies a series of sections of pipe disposed with their axes in the same line and spaced from each other; a coupling disposed to extend between and connect the adjacent end portions of adjacent ones of said sections; a plurality of tubes disposed to extend obliquely through the wall of each of said couplings to project into the passageway therethrough; a valve-controlled suction pipe; an annular coupling disposed to connect said suction pipe with one end of said series of sections of pipe, said annular coupling being provided with an external screw-thread; a collar disposed on the other end portion of said series of sections of pipe; a larger pipe disposed to surround said series of sections of pipe and said couplings in a position concentric therewith to form an annular space between the inner surface of said larger pipe and the outer surfaces of said series of sections of pipe; a T fitting screwed on to the exterior screw-thread of said annular coupling and disposed to extend to and connect with the adjacent end of said larger pipe, the other end of said larger pipe engaging with said collar tightly to close said annular space; a valve-controlled pipe connected with the side entrance of said T fitting and disposed to extend to and connect with a source of compressed air; a hose having one of its ends connected to that end of said series of pipes adjacent to said collar; and a nozzle connected with the other end of said hose.

1,229,345. DIRECTIONAL TROLLEY-CONTACTOR. SAMUEL S. STOLP, Chicago, Ill., assignor to The Railroad Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 11, 1915. Serial No. 13,796. (Cl. 246—54.)



1. In a directional signal system, an electric circuit including therein a signal, contactor mechanism arranged to be actuated to close the circuit by cars passing in either direction, a single signal wire connecting the contactor and signal and means to render the contactor mechanism effective to operate the signal when actuated by cars passing in one direction only, whereby the signal will indicate the direction of car travel.

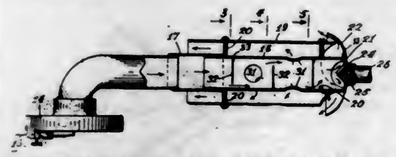
5. In a directional signal system, an electric circuit including therein a signal, contactor mechanism arranged to be actuated by cars passing in either direction and including a pair of contacts through which the circuit is alternatively completed according to the direction of car travel, a single signal wire leading from the contactor mechanism to the signal, resistance included in the circuit from one of the contacts to the signal wire, and a direct connection between the other contact and the signal wire whereby the current will be rendered of different efficiency through the two circuits and the signal will be operated by a car passing in one direction and not by a car passing in the opposite direction.

11. In a directional signal system, an electric circuit including therein a signal, a single signal wire, contactor mechanism arranged to be actuated by cars passing in either direction and comprising a box of non-magnetic material mounted above the trolley wire in electric contact therewith and adapted to contain oil, a pair of contacts, one member of each contact connected to the box and the other insulated therefrom, a magnet coil within the box, a connection between one of the insulated contact members and the signal wire by way of the coil, a direct connection between the other insulated contact member and the signal wire, a barrel having a pair of cams arranged to close the contacts alternatively as the barrel is rotated in one direction or the other, an arm depending from the barrel in the path of the trolley and acting by gravity to yieldingly maintain the barrel normally with its cams in a neutral position, and a projection carried by the barrel and arranged to be engaged by the armature of the coil to snub the swinging barrel and prevent double contact, the contact making elements submerged in the oil, whereby the signal will be operated by a car passing in one direction and not by a car passing in the opposite direction.

[Claims 2 to 4 and 6 to 10 not printed in the Gazette.]



1,229,346. PHONOGRAPH. REINHOLD THOMAS, Brooklyn, N. Y. Filed Nov. 30, 1915. Serial No. 64,214. (Cl. 274—16.)



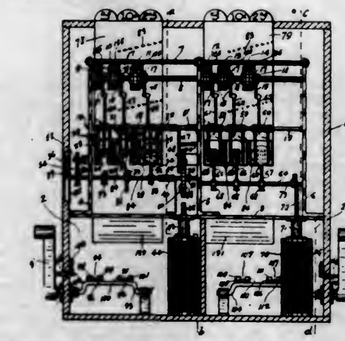
1. In a device of the kind described, a sound-box or reproducer, a sound-conveying tube connected therewith and provided with an opening in its wall, and a second tubular member sleeved about the first and held in spaced relation thereto, both ends of said outside tube being open.

5. In a device of the kind described, a sound-box or reproducer, a sound-conveying tube connected thereto, a second tube sleeved about the first and held in spaced relation thereto, both ends of both tubes being open, a sound reflector carried by one of said tubes and adapted to reflect the sounds coming from both of the tubes, and a pivotally movable support to which said reflector is connected.

11. In a device of the kind described, a sound-box or reproducer, a sound-conveying tube connected thereto and having an opening in its wall, a second tube sleeved about the first and held in spaced relation thereto, and a gong-shaped reflector overlying both of the tubes and connected to one of them, the ends of both tubes having portions spaced away from the reflector, and a pivotally movable support to which said combination of elements is connected, said gong-shaped reflector having its mouth directed toward said tubes and being arranged concentrically therewith, said reflector member having a cone-shaped portion on its inner face centrally thereof.

[Claims 2 to 4, 6 to 10, and 12 to 15 not printed in the Gazette.]

1,229,347. TELEPHONE-CALL-REGISTERING DEVICE. VICTOR THOMPSON, Vancouver, British Columbia, Canada. Filed Apr. 14, 1916. Serial No. 91,130. (Cl. 179—6.5.)



1. A telephone call registering device, comprising a coin chute having a vertical open fronted coin seat at its lower end adapted to receive and support a coin on edge, a circuit closure held closed by the edge of the coin occupying said seat, and means operated by a step-by-step mechanism for engaging the rear side of the coin and dislodging it from the seat.

2. A telephone call registering device, comprising a coin chute the lower end of which is formed as an open-fronted coin seat adapted to receive and support a coin on edge, a circuit closed by a coin occupying said seat, the edge of the coin resting on the circuit closure, a manually operated switch located in the circuit, and means operated step-by-step at each closing of the circuit for engaging the rear side of the coin and dislodging it from the seat.

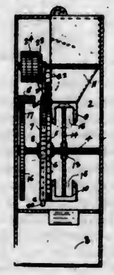
3. A telephone call registering device, comprising a coin chute having a coin seat at its lower end, a circuit closed by the coin occupying said seat, electro-magnetic means for dislodging the coin from said seat, and mechanically operated means for registering each dislodgment of the coin.

4. A telephone call registering device, comprising a coin chute having a coin seat at its lower end, said seat having an opening in the back and bottom thereof, a circuit closed by the coin occupying said seat, a rotatably mounted finger disposed so as to pass through the opening in said seat, and manually operated electro-magnetic means for actuated said finger by a step-by-step movement.

5. A telephone call registering device, comprising a coin chute having a coin seat at its lower end, said seat having an opening in the back and bottom thereof, a circuit closed by the coin occupying said seat, a rotatably mounted finger disposed so as to pass through the opening in said seat, manually operated electro-magnetic means for actuating said finger by a step-by-step movement, and signaling means adapted to operate coincident with each step-by-step movement of the finger.

[Claims 6 to 22 not printed in the Gazette.]

1,229,348. TELEPHONE-CALL-REGISTERING DEVICE. VICTOR THOMPSON, Vancouver, British Columbia, Canada. Filed May 16, 1916. Serial No. 97,808. (Cl. 235—100.)



1. A telephone call registering device, comprising a serrated traveling disk, two diametrically located coin holding frames on said disk normally stationary when unoccupied, means for imparting a step-by-step movement to the disk and means for indicating the successive movements of the said serrations.

2. A telephone call registering device, comprising a coin chute, a traveling disk, two transverse coin holding frames carried diametrically opposite on said disk and the mouths of which face outwardly, and external manual means for imparting a step-by-step movement to said disk when one seat is occupied so as to carry the other seat into radial alinement with the mouth of said chute.

3. A telephone call registering device, comprising, a coin chute, a traveling disk having on one side diametrically opposed coin seats the mouths of which face outwardly and on its periphery diametrically opposed projections, means for imparting a step-by-step movement to said disk when one or other of the seats is occupied so as to carry them successively into radial alinement with the mouth of said chute, and registering means adapted to be operated by the respective projections coincidently with such alinement of the respective seats.

4. A telephone call registering device, comprising, a coin chute, a rotatably mounted shaft, a ratchet wheel secured to said shaft, a pawl and lever for actuating said wheel, a disk rotatably mounted on said shaft having on one side diametrically opposed coin seats the mouths of which face outwardly, each said seat having an opening closed by the coin occupying the seat, and a plurality of radial

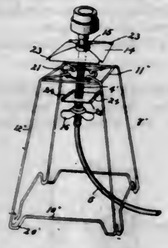
fingers secured to said shaft, there being as many fingers as there are teeth in the ratchet wheel, any one of said fingers being adapted to engage the coin occupying the seat so as to move the seat and the disk when the ratchet wheel is actuated.

5. A telephone call registering device, comprising, a coin chute, a rotatably mounted shaft, a ratchet wheel secured to said shaft, a pawl and lever for actuating said wheel, a disk rotatably mounted on said shaft provided on its periphery with a plurality of teeth equal in number to the teeth in the ratchet wheel, a plurality of fingers secured to said shaft, there being as many fingers as there are teeth in the ratchet wheel, and operator signaling mechanism operable by any of the respective teeth of the said disk.

[Claims 6 to 13 not printed in the Gazette.]

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1,229,349. STAND FOR LAMPS AND OTHER ARTICLES. PAUL J. TIMBERLAKE, Jackson, Mich. Filed July 10, 1915. Serial No. 39,074. (Cl. 248—41.)



1. A stand for a lamp or other object, comprising a frame having an intermediate portion adapted to support and give shape to a fabric covering, a cap adapted to fit the upper end of the frame, a stem extending through the frame and cap arranged to support a lamp or other object, and a nut having screw-threaded engagement with the said stem for securing the latter in place.

2. A stand for a lamp or other object, comprising a frame, a fabric cover supported by the frame and secured thereto, a cap adapted to fit over the upper end of the frame, a standard or stem extending upward from the frame through the said cap adapted to support the lamp or other object, and a nut having screw-threaded engagement with the said standard for securing the cap in place upon the frame.

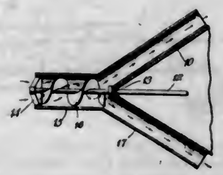
3. A stand for a lamp or other object, comprising a frame, a fabric cover supported by the frame and secured thereto, a cap adapted to fit over the upper end of the frame, a standard or stem extending upward from the frame through the said cap adapted to support the lamp or other object, a nut having screw-threaded engagement with the said standard for securing the cap in place upon the frame, and a spring tension member with which the nut engages, holding the parts under tension when united by the nut.

4. A stand for a lamp or other object, comprising a frame having a lower piece, an upper piece, and upright connecting pieces between these, spaced apart, a fabric covering the said frame and secured to the upper and lower pieces thereof, and a cap for covering the upper end of the said frame, the upper edges of the fabric covering being below the edges of the said cap.

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1,229,350. SPIRAL PROPELLER FOR SHIPS. JOHN J. TOBIN, Sayre, and FRANK J. GALLAGHER, Wilkes-Barre, Pa. Original application filed Oct. 28, 1915, Serial No. 58,418. Divided and this application filed June 22, 1916. Serial No. 105,238. (Cl. 115—14.)

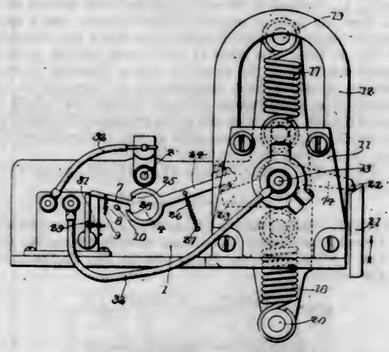
In ship propulsion, the combination with a ship hull, of a tubular housing extending longitudinally in advance of the bow of the ship and in line with the keel thereof, a spider mounted in the forward end of the housing, a propeller shaft extending through the bow of the ship and axially of the first housing and journaled in the spider, a



propeller mounted upon the shaft, and tubular housings communicating at their forward ends with the first housing and extending rearwardly along the sides of the bow of the ship and exteriorly thereof.

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1,229,351. IGNITION SYSTEM. HARRY RANDOLPH VAN DEVENTER, Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Dec. 28, 1916. Serial No. 139,322. (Cl. 123—149.)



1. An ignition system including a make-and-break igniter, a magneto, actuating mechanism for the magneto, means for closing the igniter contacts, locking mechanism for holding the contacts closed, and electromagnetic means controlled by the ignition current generated by the magneto for releasing the locking mechanism to permit the contacts to open.

2. An ignition system including a make-and-break igniter, a magneto, actuating mechanism for the magneto, means operated by said actuating mechanism for closing the igniter contacts, locking mechanism for holding the contacts closed, and electromagnetic means controlled by the ignition current generated by the magneto for releasing the locking mechanism to permit the contacts to open.

3. An ignition system including a stationary igniter contact, a movable igniter contact, a spring for normally holding said contacts separated, a magneto for furnishing an ignition current to said igniter contacts, actuating mechanism for said magneto, devices controlled by said actuating mechanism for moving said contacts into engagement, means for locking the contacts in engagement, and an electromagnet controlled by the ignition current generated by the magneto for releasing the movable contact to permit the spring to open the contacts.

4. An ignition system including a stationary igniter contact, a movable igniter contact, a spring for normally holding said contacts separated, a lever, a spring for operating said lever, said lever being constructed and arranged so as to move the contacts into engagement, a

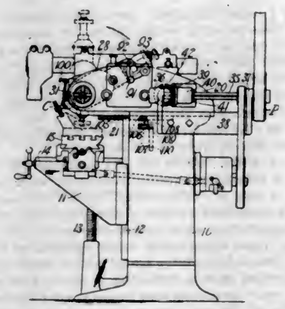


magneto, a tripping device for said magneto, said tripping device coöperating with said lever for moving the same against the action of the spring so as to permit the contacts to be separated, means for locking the contacts in closed position, and an electromagnet for releasing the contacts to permit the spring controlling the same to separate the contacts.

5. An ignition system including a stationary igniter contact, a movable electrode carrying a movable igniter contact, an arm projecting from said movable electrode, a spring connected to said arm for normally separating the contacts, a lever mounted on said electrode and having means for engaging the arm for moving the same in a direction to close the contact, a spring for moving said lever, said spring being of greater tension than the spring for separating the contacts, whereby said lever will close the contacts, a trip lever operated by the engine for moving said lever to permit the contacts to be separated, means for locking the contacts in engagement when closed, an electromagnet controlled by the ignition current for releasing the movable electrode to permit its actuating spring to separate the contacts.

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1,229,352. MILLING-MACHINE. CHARLES E. VAN NORMAN, Springfield, Mass., assignor, by mesne assignments, to Van Norman Machine Tool Company, Springfield, Mass., a Corporation of Massachusetts. Filed Jan. 22, 1910. Serial No. 539,463. (Cl. 90—17.)



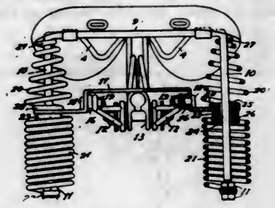
1. In a milling machine, the combination, with a base or column, of a head or frame horizontally adjustably movable on the base, a work holding slide adjustably mounted on a vertical face of said column, a tool spindle holder mounted on the frame and revolubly adjustable in a plane parallel with the line of movement of the head, a tool spindle mounted in said holder, an actuating shaft located transversely of the movement of said head and gear engagement with said spindle, a driving shaft mounted on said base, change gear mechanism interposed between the said driving and actuating shafts, and means for adjustably increasing or diminishing the distance between the face of said column and the actuating shaft and spindle and for maintaining the relative gear connections between the driving and actuating shafts.

[Claims 2 to 9 not printed in the Gazette.]

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1,229,353. BICYCLE-SADDLE SPRING-SUPPORT. JAMES C. WALKER, Toledo, Ohio, assignor to Wolverine Leather Goods Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 14, 1916. Serial No. 119,998. (Cl. 208—100.)

1. A bicycle saddle support comprising in combination with the saddle base, a main support flexibly connected thereto at one end and terminating at the opposite end in a transverse support, a stem hingedly secured at one end to said saddle base and extending freely through said transverse support, a compressible coiled spring surrounding said stem in bearing engagement therewith at one end and seated at its opposite end upon said transverse support, and an expansible and contractible coiled spring surrounding said stem and secured axially at one end to said transverse support and at its opposite end to the free end of said stem.



2. A bicycle saddle support comprising in combination with the saddle base, a main support yieldably connected thereto at one end and having the opposite end thereof deflected laterally in opposite directions and terminating in transverse supports, a yoke hingedly connected transversely to said saddle base and having two lateral stems extending freely through the ends respectively of said transverse supports, two compressible coiled springs embracing said stems respectively in bearing engagement at one end each with said yoke and seated at their opposite ends upon the respective ends of said transverse supports, two expansible and contractible coiled springs surrounding said stems respectively and connected axially thereto at one end each, and tubular bolts freely embracing said stems and axially connecting the opposite ends of said springs with the respective ends of said transverse supports.

3. A bicycle saddle support comprising in combination with the saddle base and main support, a transverse support secured to said main support and projecting therefrom at opposite ends, a transverse yoke hingedly connected to the saddle base and having two lateral stems extending freely through the respective ends of said transverse support, two compressible coiled springs embracing said stems respectively in engagement at one end each with said yoke and seated at the opposite end upon the respective end of said transverse support, two expansible and contractible coiled springs surrounding said stems respectively and connected thereto at one end each, and means freely embracing said stems and axially connecting the opposite ends of said springs with the respective ends of said transverse support.

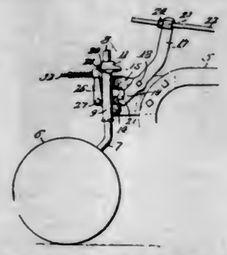
4. In a bicycle saddle, the combination with a saddle base and main support, of a transverse support mounted on said main support and extending therefrom at opposite ends, a transverse yoke hingedly connected to said saddle base and having two depending stems extending freely through the respective ends of said transverse support, a tubular bolt mounted in each end of said transverse support and freely embracing the stem thereon, two compression coiled springs surrounding said stems respectively in bearing engagement at one end each with said yoke and seated at the opposite end upon the respective end of said transverse support, and two expansive and contractive coiled springs surrounding said stems respectively each connected at one end to the respective end of said support by said tubular bolt and secured at its opposite end to the corresponding stem of said yoke.

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1,229,354. PLOW. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Original application filed Dec. 16, 1915, Serial No. 67,202. Divided and this application filed Apr. 29, 1916. Serial No. 94,419. (Cl. 97—36.)

1. In a plow, the combination of a plow-carrying frame, a sleeve bracket pivotally mounted on the frame on a horizontally disposed axis, a spindle journaled in said

sleeve bracket so as to caster on an upright axis, a furrow wheel mounted on the lower end of the spindles, a lever pivoted on the frame and coöperable with the sleeve bracket so as to rock the same on its pivot by movement of the lever, and means connected with said spindle adapted to be brought into locking engagement with the lever to prevent rotative movement of the spindle in the sleeve bracket when the frame has been moved to lowered position.



2. In a plow, the combination of a plow-carrying frame, a furrow wheel, means connecting the furrow wheel to the frame so that the furrow wheel may caster about an upright axis and may be moved to raised and lowered positions with respect to the frame, a lever mounted on the frame and coöperating with said means to effect movement of the wheel to said raised and lowered positions, and means operating between the lever and wheel-connecting means for automatically locking the wheel against castering when the wheel has been moved to raised position.

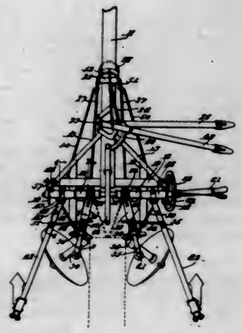
3. In a plow, the combination of a plow-carrying frame, a rear furrow wheel, an upright spindle upon the lower end of which the furrow wheel is mounted, means connecting the spindle to the frame in such manner as to permit the spindle to rock backwardly and forwardly on a horizontally disposed axis located intermediate its ends and to allow the wheel to caster about the longitudinal axis of the spindle, a lever pivoted on the frame and arranged to coöperate with said means for moving the spindle about said horizontal axis and means operable between the spindle and said lever for locking the spindle to prevent castering when the wheel has been raised with respect to the frame.

4. In a plow, the combination of a plow-carrying frame, an upright sleeve bracket pivotally mounted thereon to swing forwardly and backwardly relatively thereto, a spindle journaled in the sleeve bracket, a furrow wheel mounted on the lower end of the spindle, a lever pivoted on the frame and engaging the sleeve bracket for rocking the same on its pivot, means fixed to the spindle for engaging said lever when the furrow wheel has been moved to raised position with respect to the frame and thereby serving to lock the spindle to prevent castering and for disconnecting from said lever when the wheel has been moved to lowered position, a part pivoted on the sleeve bracket, a part secured to the spindle and coöperating with said pivoted part, and means yieldingly urging the pivoted part into engagement with the other part to yieldingly hold the spindle against rotation in the bracket.

5. In a plow, the combination of a plow-carrying frame, an upright sleeve bracket pivotally mounted thereon to swing forwardly and backwardly relatively thereto, a spindle journaled in the sleeve bracket, a furrow wheel mounted on the lower end of the spindle, a lever pivoted on the frame and engaging the sleeve bracket for rocking the same on its pivot, means fixed to the spindle for engaging with the lever when the furrow wheel is moved to raised position with respect to the frame whereby to prevent rotative movement of the spindle in its bracket and to be released from said lever when the wheel is lowered, and means coöperating between the bracket and spindle for yieldingly resisting rotative movement of the spindle in the bracket.

[Claim 6 not printed in the Gazette.]

**1,229,355. LISTER-CULTIVATOR.** LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Aug. 7, 1916. Serial No. 113,611. (Cl. 97—31.)



1. In a lister cultivator, the combination of a frame, a pair of tool-carrying frames pivotally connected at their forward ends on upright axes to the frame on each side of the medial line thereof, the inner tool-carrying frame of each pair being equipped at its rear end with a disk and the outer frame with a cultivator shovel, and means adjustably connecting the frames of each pair whereby the frames may be relatively adjusted laterally and each pair moved in unison laterally on its axis.

2. In a lister cultivator, the combination of a draft tongue, a transverse member connected with the rear end thereof, a pair of tool-carrying frames independently and pivotally connected at their forward ends on upright axes to said member on each side of the tongue, the inner tool-carrying frame of each pair being equipped at its rear end with a disk and the outer frame with a cultivating shovel, and operating means including a lever, and connections between said lever and said tool-carrying frames whereby said pairs of frames may be adjusted as a unit laterally toward and from each other.

3. In a lister cultivator, the combination of a frame, a transverse bar, a plurality of sleeve brackets rotatably mounted on said bar, a tool-carrying frame pivotally connected at its forward end on an upright axis to each of said brackets and equipped at its rear end with a cultivating tool whereby the tools may be swung vertically on said transverse bar and horizontally on said upright axes, means for maintaining the tool-carrying frames in predetermined relative relation with respect to lateral swinging movement, and means operable between the transverse bar and said tool-carrying frames to swing the latter horizontally upon rocking said bar.

4. A lister cultivator comprising a draft tongue, a transverse bar rigidly attached to the rear end of the tongue and provided with rearwardly extending ends, a transverse rocking bar mounted on said ends of the transverse bar, a plurality of tool-carrying frames pivotally mounted on the rocking bar, a connection between said rocking bar and the tool-carrying frames for adjusting the same upon rocking movement of the bar, and means for rocking the bar.

5. In a lister cultivator, the combination of a frame, a transverse rocking bar mounted thereon, a cultivating device comprising a pair of tool-carrying members independently pivotally mounted on the rocking bar and also pivoted on upright axes whereby the tool-carrying members may be swung laterally on said pivots and vertically on the rocking bar, a connection between each tool-carrying member and the rocking bar whereby the tool-carrying members will be moved laterally toward and away from each other by rocking the bar, and means for rocking said bar and holding it in fixed position.

[Claims 6 to 18 not printed in the Gazette.]

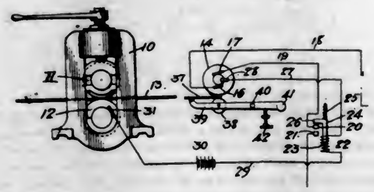


**1,229,356. WEATHER-BOARDING GAGE.** OWEN C. WATKINS, Middletown, Ohio, assignor of one-half to Thomas E. Reed, Middletown, Ohio. Filed Dec. 13, 1916. Serial No. 136,751. (Cl. 33—82.)



A weatherboarding gage comprising, a vertical bar having a true straight front edge and a true straight side edge, a first jaw disposed at the rear of the upper end of the bar and projecting transversely of the side edge of the bar, a front extension of said first jaw having its front surface in the plane of the front edge of the bar, a second jaw disposed at the lower end of the bar and projecting from the side edge of the bar a distance equal to the projection of the first jaw from that edge and having its front surface in the plane of the front edge of the bar, and a third jaw disposed at the rear of the bar and projecting transversely of the bar in the direction opposite that of the first jaw and having its lower surface in the plane of the lower surface of the first jaw and at right angles to the side edge of the bar, combined substantially as set forth.

**1,229,357. APPARATUS FOR COILING MATERIAL.** WILLIAM R. WEBSTER, Bridgeport, Conn., assignor to Bridgeport Brass Company, Bridgeport, Conn., a Corporation of Connecticut. Original application filed Jan. 9, 1913, Serial No. 741,074. Divided and this application filed June 29, 1914. Serial No. 847,979. (Cl. 242—78.)

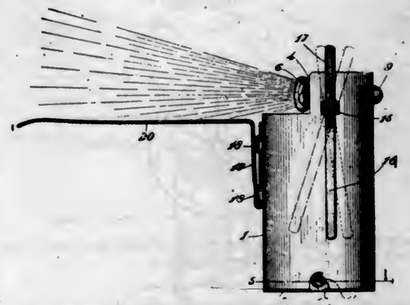


1. In an automatic blocker, a block, means to magnetize the same, and a flexible carrier which wraps around the block when the same is magnetized and confines the non-magnetic material between the carrier and block; substantially as described.

5. In an automatic blocker, the combination of a rotary block, a carrier, a presser element supporting said carrier in contact with the block at the lower part thereof so that the advancing strip in being fed toward the lower portion of the block will move over said carrier, and electromagnetic means for clamping the strip to the block by means of said carrier automatically controlled by contact of the forward end of the strip with said carrier; substantially as described.

[Claims 2 to 4 not printed in the Gazette.]

**1,229,358. DIAGNOSTIC INSTRUMENT.** HERMANN WEDER, Sr., and CHARLES H. WOLFF, Philadelphia, Pa. Filed Oct. 13, 1913. Serial No. 794,874. (Cl. 128—43.)



1. In a diagnostic instrument including an electric-lamp, an incasing shell formed with a battery-cell chamber and at one end with a smaller chamber above and communicating with the battery-cell chamber, the smaller chamber having an upright wall formed with a lamp-bulb receiving socket, a push-button operable through an opening in one wall of the smaller chamber and provided at its inner end with an insulating tip spaced from the terminal of a lamp-bulb fitting in the socket provided therefor in the same chamber, and a battery-cell occupying the larger chamber and having a contact-plate to project into the smaller chamber and lie between the insulated tip of the push-button and terminal of the lamp-bulb, the insulated tip and cell contact-plate being unattached to each other, substantially as described.

2. In a diagnostic instrument including an electric-lamp, a shell formed with a battery-cell chamber, a lamp-bulb receiving socket formed in one wall of the shell, a push-button operably mounted in an opening in the wall of the shell, an insulating tip carried by the inner end of the push-button, and a battery-cell occupying the chamber of the shell and having a contact-plate to project between the terminal of a lamp-bulb fitting in the socket provided therefor and the insulated tip of the push-button, said contact-plate and insulated tip being unattached to each other and adapted to engage one with the other and permitting withdrawal of the cell and its contact-plate away from the insulated tip.

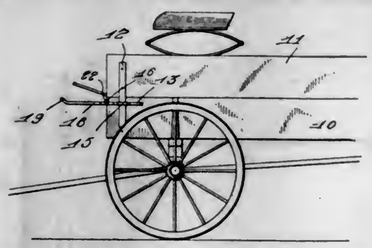
3. In a diagnostic instrument including an electric lamp, a battery-cell incasing shell formed at one end with a lamp-bulb receiving chamber having an upright front wall set back from the front wall of the shell and provided with a lamp-bulb receiving socket, a battery-cell in the incasing shell and circuit closure contacts, and a tiltable lens supported from the side of the shell to one side and back of the front wall of the lamp-bulb receiving chamber, substantially as described.

4. In a diagnostic instrument including an electric lamp, a battery-cell incasing shell elliptical in cross section and formed at one end with a lamp-bulb receiving chamber above the rear portion of the shell, said chamber having an upright front wall set back from the front wall of the shell, a clip applied to the front wall of the shell to support a diagnostic implement, a lamp-bulb extended through the front wall of the lamp-bulb receiving chamber, a battery cell in the incasing shell provided with a contact-plate in alinement with the terminal of the lamp-bulb, and a push-button carrying an insulating button in line with the contact-plate, substantially as described.

**1,229,359. HARNESS-RACK.** WILLIAM H. WEDDLE, Rainbow, Tex. Filed Oct. 9, 1914. Serial No. 865,877. (Cl. 21—128.)

A wagon attachment comprising a pair of hinged members, one of said members attached to the body of a wagon,

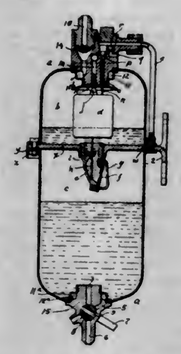
said last mentioned member provided with keeper means for one of the standards on the side extension pieces of a



wagon, and means on the other of said members to receive and retain a harness thereon.

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1,229,360. VACUUM FEED SYSTEM. FREDERICK WEINBERG, Detroit, Mich. Filed Nov. 15, 1915. Serial No. 61,535. (Cl. 158—36.)



1. In an apparatus of the kind described, a vacuum chamber having an aperture in its upper wall, a vacuum producing passage, a pressure equalizing passage, a plug closing said aperture, a passage extending vertically from said chamber in said plug and communicating with the vacuum producing passage, a passage extending vertically from said chamber in said plug and communicating with the pressure equalizing passage, a float in said chamber, a valve on said float adapted to close the lower end of the first mentioned vertically extending passage, an outwardly opening non-return valve adapted to close the last mentioned vertically extending passage and a rod extending from said float into the last named vertically extending passage adapted to unseat said valve.

2. In an apparatus of the kind described, a vacuum chamber having an aperture in its upper wall, a vacuum producing passage, a pressure equalizing passage, a plug closing said aperture, a passage extending vertically from said chamber in said plug, and communicating with the vacuum producing passage, a passage extending vertically in said plug and communicating with the pressure equalizing passage, a float in said chamber, a valve on said float adapted to close the lower end of the first mentioned vertically extending passage, an outwardly opening non-return valve adapted to close the last mentioned vertically extending passage and a rod extending from said float into the last named vertically extending passage adapted to unseat said valve, a passage in said plug opening to the outer air at the side thereof and opening to said equalizing passage and provided with an automatic inwardly opening check valve.

3. In an apparatus of the kind described, a vacuum chamber having an aperture in the upper wall, a vacuum producing passage, a pressure equalizing passage, a plug closing said aperture, a passage extending vertically from said chamber in said plug, and communicating with the vacuum passage, a passage extending vertically from said chamber in said plug and communicating with the pressure equalizing passage, a float in said chamber, a valve on said float adapted to close the lower end of the first mentioned vertically extending passage, an outwardly opening non-return valve adapted to close the last mentioned vertically extending passage, and a rod extending from said float into the last named vertically extending passage adapted to unseat said valve, and a fuel supply passage in said plug opening into said chamber.

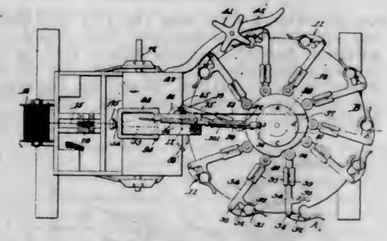
4. In an apparatus of the kind described, the combination of a disk *x*, a bell-shaped shell secured with its open end upon said disk and closed thereby, an inverted bell-shaped shell below said disk having its open end secured against and closed by said disk, a space between said disk and the flange of the lower bell-shaped shell, and a pipe *s* constituting an equalizing passage communicating with said space and with the upper portion of the chamber formed by the first mentioned shell.

5. In an apparatus of the kind described, a reservoir *o*, a plug extending through the lower end of said reservoir and a short distance upward into said reservoir, a discharge orifice extending from the upper end of said plug and adapted to convey the liquid fuel to a carbureter, a passage extending from the side of said plug at the lower end of said reservoir and opening to the outside of said plug, and a cock located in said plug and adapted to close either one of said passages and open the other of said passages.

[Claims 6 to 15 not printed in the Gazette.]

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1,229,361. MACHINE FOR TYING VALVE-SACKS. SETH A. WELLMAN, Mason City, Iowa. Filed June 19, 1916. Serial No. 104,502. (Cl. 140—93.)



1. A carrier having sack holders, means for intermittently moving the same, a twister having wire-engaging means, an oscillatory shuttle for engaging the wire and traversing a path around a sack neck in the holder presented by the carrier, and mechanism for intermittently actuating the shuttle during the interval of rest of the carrier.

2. A carrier having sack holders, means for intermittently moving the same, a twister having wire-engaging means, an oscillatory shuttle for engaging the wire and traversing a path around a sack neck in the holder presented by the carrier, and mechanism for intermittently actuating the shuttle during the interval of rest of the carrier, said shuttle having an orbital arm and a reversible body carried thereby and provided with wire-engaging means.

3. A carrier having sack holders, means for intermittently moving the same, a twister having wire-engaging means, an oscillatory shuttle for engaging the wire and traversing a path around a sack neck in the holder presented by the carrier, and mechanism for intermittently actuating the shuttle during the interval of rest of the carrier, said shuttle having an orbital arm, a body reversibly mounted upon said arm, and wire cutting and engaging means carried by said body.

4. A carrier having sack holders, means for intermittently moving the same, a twister having wire-engaging means, an oscillatory shuttle for engaging the wire and traversing a path around a sack neck in the holder presented by the carrier, and mechanism for intermittently actuating the shuttle during the interval of rest of the carrier, said shuttle having an orbital arm, a clamp-carrying body reversibly mounted upon the arm, and means for limiting the movement of the body relative to the arm.

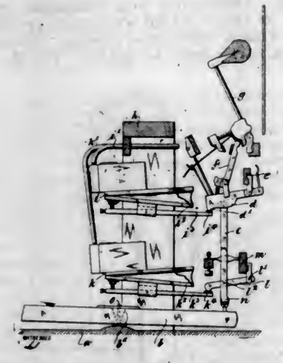
5. A carrier having sack holders, means for intermittently moving the same, a twister having wire-engaging means, an oscillatory shuttle for engaging the wire and traversing a path around a sack neck in the holder presented by the carrier, and mechanism for intermittently actuating the shuttle during the interval of rest of the carrier, said shuttle having an orbital arm, a block reversibly mounted upon said arm and carrying a wire-engaging clamp, and means for limiting the movement of said block relative to the arm, the same including a follower pivotally connected with the block, and stops on the latter for engagement with said follower.

[Claims 6 to 9 not printed in the Gazette.]



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1,229,362. PLAYER-PIANO. JOHN A. WESER, New York, N. Y. Filed Feb. 5, 1915. Serial No. 6,200. (Cl. 84—233.)

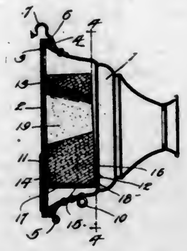


1. In a player piano, the combination of a series of abstracts, a plurality of pneumatics for actuating certain of said abstracts, a second plurality of pneumatics for actuating certain others of the abstracts and disposed below said first named plurality of pneumatics, rocker arms pivotally connected to all of said abstracts and having their ends extended beyond the faces thereof, said rocker arms being arranged in plurality at different levels to correspond to the plurality of pneumatics, and fingers carried on the movable members of all of said pneumatics and directly engaging the free ends of said rocker arms respectively.

2. In a player piano, the combination of abstracts, hammers actuated thereby, a plurality of pneumatics for actuating certain of said abstracts, another plurality of pneumatics disposed below said first-named plurality for actuating the remaining abstracts, rocker arms pivotally connected to the first named of said abstracts and in substantially the same horizontal plane with the first named of said pneumatics, other rocker arms pivotally connected to the last named of said abstracts and lying in substantially the same horizontal plane with the last named of the pneumatics, a support for the first named of said rocker arms, an independent support below the first named support for the second named of said rocker arms, and fingers carried on the movable members of the abstracts for directly engaging the free ends of the respective rocker arms through equal leverages.

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1,229,363. FUME-DISSEMINATOR. LEONIDAS D. WEST, Denver, Colo. Filed Nov. 15, 1916. Serial No. 131,418. (Cl. 167—3.)



1. A fume disseminator comprising a frusto-cone-shaped casing disposed horizontally and open at both ends to permit a current of air to pass therethrough, an openwork screen hinged to and extending from the larger inlet end of said casing, a pan extending into the casing from and carried by the lower edge of said screen, an absorbent element resting in said pan and extending over part of the area of the screen in the path of the air current, and a hook at the upper edge of said inlet end of the casing for suspending the latter from a fan guard.

2. A fume disseminator comprising a casing having both of its ends open to permit the passage of a current of air therethrough, an openwork screen extending across the inlet of said casing, an upwardly opening pocket in the casing carried by the lower portion of said screen, and a block of absorbent material resting at its lower edge in said pocket and extending over part of the area of the screen, said lower edge of the block being inclined transversely to permit only the inner corner of said edge to rest on the bottom of the pocket, thus tilting the block against and holding it in contact with the screen.

3. A fume disseminator comprising a circular casing open at both ends to permit the passage of a current of air therethrough, a circular openwork screen for one end of said casing, a circular rim for said screen hinged to the casing, a plate extending across the lower portion of said screen and secured to said rim, another plate curved in longitudinal section and straight in transverse section secured at one of its longitudinal edges to the inner face of said first named plate, a third plate secured to and extending upwardly from the other longitudinal edge of said second plate and forming with the aforesaid plates a pan, and a circular block of absorbent material resting on the second plate between the others and extending over a part of the area of the screen.

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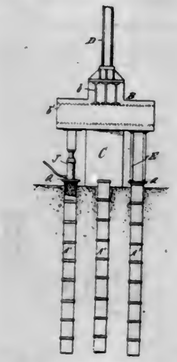
1,229,364. METHOD OF PROVIDING SUBSTRUCTURES FOR STRUCTURES. LAZARUS WHITE, New York, N. Y. Filed Feb. 19, 1917. Serial No. 149,439. (Cl. 72—77.)

1. The method of erecting buildings, which consists in starting the building on a support, continuing the erection of the building, and progressively subjecting suitably sunk footings to load derived from said support.

2. The method of erecting buildings, which consists in providing a sustaining means and support thereon arranged to provide a free space between the support and the ground, erecting the building progressively on said support, and progressively subjecting suitably sunk footings to load derived from said support.

3. The method of constructing foundations for buildings, which consists in sinking a plurality of footings, erecting the building on a suitable support, and, as such

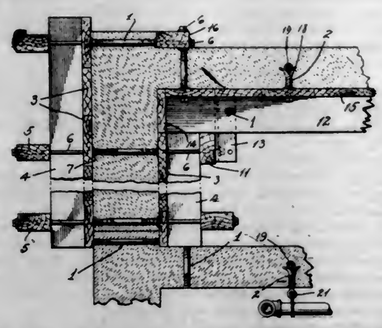
erection proceeds, progressively transferring the weight of the building to the respective footings.



4. The method of constructing foundations for buildings, which consists in sinking a plurality of footings, constructing a suitable support extending over such plurality of footings, commencing the erection of the building on said support, continuing such erection, and at intervals during such erection transferring load on the support to the respective footings.

5. The method of constructing foundations for superstructures, which consists in sinking a plurality of footings, constructing a suitable support, commencing the erection of the superstructure on said support, proceeding with the erection until the weight on the support is sufficient to give the desired reaction, inserting a jack between the support and a footing, applying load by means of said jack to the footing and a corresponding reaction to the support, whereby the footing is loaded, maintaining said footing under load until settlement thereof ceases, inserting columns between the footing and the support, wedging the columns to transmit the desired load to the corresponding footing without freeing the footing from load, continuing the erection of the superstructure until additional weight thereby brought on the support is sufficient to give the desired reaction for bringing into bearing another footing, jacking down said footing and inserting columns and wedging as before and continuing in the same manner until the weight of the completed superstructure is distributed as desired to the footings.

1,229,365. STRUCTURAL FASTENER. CRIS. W. WIEGAND, Los Angeles, Cal. Filed July 21, 1913. Serial No. 780,097. (Cl. 25—131.)



1. A structural fastener comprising a tubular spacing member having a crimped end portion whereby holding means is provided interiorly in said fastener.

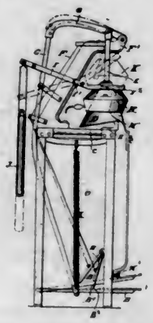
2. A structural fastener comprising a tubular spacing member having its end portions crimped and formed with spiral indentations whereby securing screw threads are formed upon the inner surface thereof, said threads being adapted to receive and hold screw threaded bolts.

3. A structural fastener and spacing member having its walls contracted and bent to form interior threads and formed with outwardly end flaring portions constituting anchoring means, said fastener forming spacing means for the structure and coöperating bolts adapted to screw into the ends of said member for fastening articles to said fastener.

4. The combination with forming boards, beams and securing bolts, of a tubular structural fastening device adapted to space said forms from each other, and having reduced crimped end portions formed with securing threads in the same for receiving the ends of said bolts, and washers interposed between the forms and the ends of said fasteners.

5. A structural forming apparatus comprising the combination with forming boards and holding beams, of structural spacing members adapted to positively space and hold the said boards and beams preparatory to the forming of a concrete structure, and having reduced screw threaded end portions forming abutment ends, beam holding plates, and tap bolts adapted to screw into either or both ends of said spacing members, whereby forming boards, beams and plates may be held against the ends of said spacing members according as each or all may be used.

1,229,366. APPLIANCE FOR PRESSING THE COLLARS OF ARTICLES OF WEARING-APPAREL. WILLIAM WILKIE, Dennistoun, Glasgow, Scotland. Filed Mar. 19, 1917. Serial No. 155,906. (Cl. 68—9.)



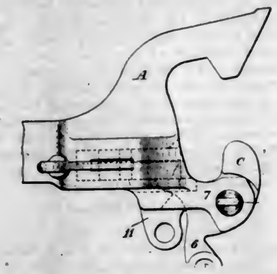
1. In appliances for pressing and shrinking wearing apparel, a conical stationary presser plate mounted on the table of the machine, around which the article under treatment is placed, a curved movable plate for shaping and pressing the collar of said article under treatment, and a conical movable heated presser plate enveloping the beforementioned presser plates for exerting pressure in the pressing, operating substantially as and for the purposes hereinbefore described and illustrated on the accompanying sheet of drawings.

2. In appliances for pressing and shrinking wearing apparel, a framework of taper formation, a treadle inserted in said framework, a table surmounting said framework, a stationary presser plate mounted on said table, an overhead bracket bolted to said table, a long curved lever mounted at its upper end in said bracket, and connected at its lower end with the treadle bar, a depending bar pivoted to the upper part of said curved lever, a conical movable heated plate movable above and engaging with the stationary presser plate, means by which said movable presser plate is raised and lowered consisting of a forked lever pivoted to the bracket bolted to table aforesaid and controlled by a depending weight, and a spring fitted beneath the table of the machine and attached to the treadle



bar which is designed to raise the ram or bar from engagement with the stationary presser plate, substantially as and for the purposes hereinbefore described and illustrated on the accompanying sheet of drawings.

1,229,367. CAR-COUPLING. JOHN WILLISON, Derby, England, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 8, 1914. Serial No. 865,633. (Cl. 213—17.)



1. A car coupler adapted to intercouple with couplers of the Master Car Builders' type and of another type, said coupler comprising a head, a movable knuckle conforming to the Master Car Builders' contour, said coupler head having alternative fulcrums, said knuckle being adapted to pivot in one of said fulcrums when in operative position and in the other of said fulcrums when in inoperative position.

2. A car coupler adapted to intercouple with couplers of the Master Car Builders' type and of another type, said coupler comprising a head, and a movable knuckle conforming to the Master Car Builders' contour, the coupler head having a front fulcrum and a rear fulcrum, the knuckle being adapted to rotate about the front fulcrum when in operative position and about the rear fulcrum when in inoperative position.

3. A car coupler adapted to intercouple with couplers of the Master Car Builders' type and of another type, said coupler comprising a head, a movable knuckle, the coupler head having a bifurcated jaw in which the knuckle is adapted to seat, and a pivot pin to secure the knuckle in operative position in said jaw, the said knuckle being adapted, upon removal of the pivot pin, to be swung outwardly through said bifurcation into inoperative position.

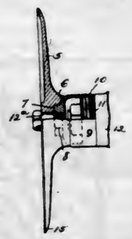
4. A car coupler adapted to intercouple with couplers of the Master Car Builders' type and of another type, said coupler comprising a head, and a movable knuckle, the coupler head having a bifurcated jaw in which the knuckle is secured by a pivot pin when in operative position, said knuckle having also a rear extension upon which it is adapted to be moved out of operative position upon withdrawal of the pivot pin.

5. A car coupler adapted to intercouple with couplers of the Master Car Builders' type and of a different type, said coupler comprising a head, a knuckle pivoted to the coupler head, and a gravity movable lock, said lock operating in a longitudinally-extending inclined recess and being adapted, when the knuckle has been swung into inoperative position by removal of the pivot pin, to intercouple with a coupler of a different type by lateral movement and by overlapping of the locks.

[Claims 6 and 7 not printed in the Gazette.]

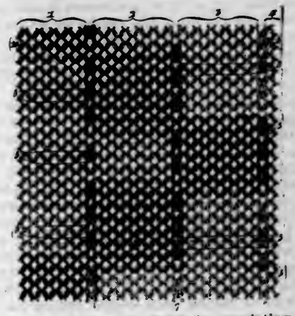
1,229,368. WINDING ATTACHMENT FOR VEHICLE-WHEELS. ARTHUR G. WILSON and CARL OSCAR OLESON, Valley City, N. D. Filed June 30, 1916. Serial No. 106,890. (Cl. 242—95.)

1. The combination with a vehicle wheel having a hub, said hub including a hub cap, of a disk of much greater diameter than the hub cap and means for securing said disk to said hub cap, in such position that the disk serves to guide a cable upon said hub cap and hub.



2. In the device of the character described, the combination with the hub cap having an angular portion, of a disk of much greater diameter than the hub cap having an angular recess to fit upon said portion and means traversing said disk and the hub cap for holding the disk upon the hub cap.

1,229,369. KNIT FABRIC. WALLACE WILSON, Philadelphia, Pa. Filed July 22, 1915. Serial No. 41,217. (Cl. 66—4.)



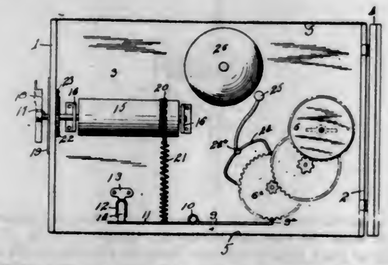
1. A vertically striped knit fabric, consisting of a succession of vertical selvaged webs, each with their selvage loops interknit simultaneously with the corresponding selvage loops of adjacent webs, in combination with horizontal stripes in said selvage webs formed by variation of the thread in successive courses thereof.

2. A vertically striped knit fabric, consisting of a succession of selvaged webs, each with their selvage loops interknit simultaneously with the corresponding selvage loops of adjacent webs to form suture wales, in combination with horizontal stripes in said selvaged webs formed by variation of the thread in successive courses thereof, the yarn which forms the last course of a given stripe of one selvaged web passing across to the adjoining web, and forming the first course of the ensuing stripe of that web, and alone forming the loop of that course in the intervening suture wale.

1,229,370. THERMOSTATIC ALARM. EMIL WINTERER, Manchester, N. H. Filed June 21, 1916. Serial No. 104,993. (Cl. 116—11.)

1. In a thermostatic alarm, the combination of a bell, a striker pivotally mounted adjacent said bell, a gear train connected to the striker and adapted to cause vibration of the same, an escapement control lever pivoted at its center and normally engaging said gear train to lock the same against operation, a fixedly mounted plug socket above the outer end of said lever, a fusible plug mounted in said socket and engaging the said lever, a tension spring se-

cured to the lever between its pivot point and its outer end, a reel mounted above the lever, flexible means secured to the reel so as to be wound thereon, said means being also secured to the spring, and means for securing the reel in rotary adjustment.

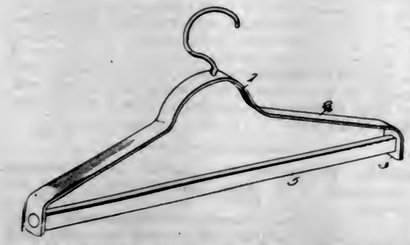


2. In a thermostatic alarm, the combination of a casing, a bell mounted within the casing, a striker adjacent the bell, a train of gear connected to said striker and adapted to vibrate the same, an escapement control lever pivotally mounted intermediate its ends within the casing and having one end normally in engagement with said gear train so as to lock the same against operation, a plug socket fixedly mounted within the casing above the other end of the lever, a fusible plug mounted in the socket and confined between the same and the lever, a rotary adjustable reel, and connections between the reel and the lever for varying the upward pressure exerted by the lever on the fusible plug in accordance with the adjustment of the reel.

3. In a thermostatic alarm, the combination of a casing, a bell mounted within the casing, a striker pivotally mounted adjacent the bell, a gear train connected to the striker and adapted to cause vibration of the same, an escapement control lever pivoted intermediate its ends having one end normally engaging said gear train so as to lock the same against operation, a plug socket fixedly mounted above the other end of the lever, a fusible plug mounted in the socket and engaging the lever, a tension spring secured to the lever intermediate its pivotal axis and the end thereof in engagement with the plug, a reel mounted above the lever, a flexible element secured to the reel so as to be wound thereon and having its free end secured to the upper end of the spring, a ratchet wheel secured on the shaft of the reel, and a pawl mounted on one end of the casing and in engagement with the ratchet wheel for securing the reel in rotary adjustment.

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1,229,371. GARMENT-HANGER. GEORGE WORDINGHAM, Milwaukee, Wis. Filed July 19, 1916. Serial No. 110,107. (Cl. 211—13.)



1. In a garment hanger, a shoulder member having terminal portions extending in a downward direction, a suspension means connected with the said member, a trousers bar extending between the said terminal portions, the said terminal portions being provided each with an opening passing solely from face to face of said portion and the trousers bar being provided at its ends with tenons fitting the said openings, the said trousers bar being flat sided and disposed vertically, and securing elements driven into the said terminal portions of the shoulder member through the lower edges thereof and passing vertically through the said tenons.

2. In a garment hanger, a shoulder member comprising a flat strip formed to the required shape and having approximately vertically depending terminal portions each formed with an opening, suspension means for the shoulder member, a trousers bar extending between the said terminal portions of the shoulder member, the said bar being reduced at each end to form a tenon, and a vertically disposed shoulder at the inner end of the tenon, the said tenons being fitted in the openings in the terminal portions of the shoulder member and the said shoulders of the trousers bar contacting the inner faces of the said terminal portions of the shoulder member, and securing elements driven upwardly through the lower ends of the terminal portions across the openings therein and through the said tenons, the trousers bar being flat sided and substantially vertically disposed.

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1,229,372. POTATO-DIGGER AND PULVERIZER. FREDERICK WRIGHT, Summerside, Prince Edward Island, Canada. Filed July 16, 1915. Serial No. 40,313. Renewed Nov. 27, 1916. Serial No. 133,811. (Cl. 55—109.)



1. In a machine of the class described, the combination with a frame, of an axle pivotally mounted thereon, wheels on the said axle, a digging mechanism pivotally mounted on the frame and means for simultaneously adjusting the axle and digging mechanism.

2. In a machine of the class described, the combination with a frame, of a digging mechanism mounted thereon, the said mechanism including a plow share having a V-shaped opening therein and a plurality of vertically extending spaced plates projecting from the rear thereof, arms extending upwardly from said share, a lever mounted on said frame and a rod connecting the lever and one of the said arms.

3. In a machine of the class described, the combination with a frame, of a digging mechanism pivotally mounted thereon, an axle pivotally mounted on the frame, wheels on the said axle, a frame rotatably mounted on the first mentioned frame and having a plurality of fingers thereon, means for simultaneously adjusting the digging mechanism, the wheels and the said last mentioned frame.

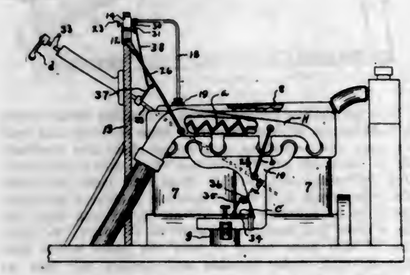
4. In a machine of the class described, the combination with a frame, of a digging mechanism mounted thereon, the said mechanism including a plow share and a plurality of spaced plates extending rearwardly therefrom, a circular frame rotatably mounted on the first mentioned frame and having a plurality of fingers adapted to move above the said plow share and means for simultaneously adjusting the said digging mechanism and the circular frame to vary the distance between the same.

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1,229,373. FEED-CONTROLLING MEANS FOR INTERNAL-COMBUSTION ENGINES. JOHN O. YEISER, Jr., Omaha, Nebr. Filed June 8, 1916. Serial No. 102,417. (Cl. 123—25.)

1. The combination with the intake manifold, the exhaust manifold and the carbureter of an internal combustion engine, said carbureter having a movable valve for permitting hydrocarbon to pass to the intake manifold, of a water container, a conducting pipe in communication with and extending above said water container, a valve casing in communication with said conducting pipe, a valve in the valve casing, a second conducting pipe communicating with the intake manifold and valve casing and having a spirally formed part disposed in the exhaust manifold, a second valve in the valve casing, devices connecting the second valve with the valve of the carbureter for causing a movement of said second valve coincidently with the movement of the valve of said carbureter.



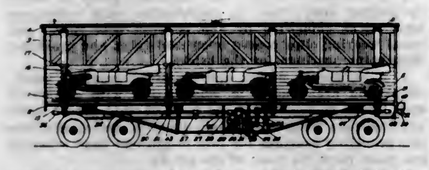


2. In combination with the water jacket, the intake manifold, the exhaust manifold and the throttle rod of the carbureter, a conducting pipe in communication with said water jacket, a valve casing above the water jacket in communication with the conducting pipe, a valve in the valve casing for the control of said conducting pipe, a second conducting pipe traversing the exhaust manifold and communicating with the intake manifold and valve casing, a second valve in the valve casing, and devices connecting the second valve and said throttle rod for causing actuation of said second valve when said throttle rod is actuated.

3. In an internal combustion engine, the combination of a carbureter, an intake manifold, an exhaust manifold, said carbureter being provided with a rotatable valve-rod for actuation of its valve, a water-container, a conducting pipe in communication with said water-container, a valve-casing having a compartment in communication with said conducting pipe, a valve in said valve-casing for controlling said conducting pipe a second conducting pipe in communication with a second compartment of said valve-casing and with said intake-manifold, said second conducting pipe having a spirally formed part circumscribed by said exhaust-manifold, a second valve in said valve-casing for controlling said second conducting pipe, a link adjustably connected at one end with said second valve, the opposite end of said link being connected to said carbureter valve-rod for actuation of said second valve when said valve-rod is rotated.

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1,229,374. LIFT-DECK FOR FREIGHT-CARS. JOSEPH C. YOUNGBLOOD, Atwood, Kans. Filed Feb. 12, 1917. Serial No. 148,289. (Cl. 105—15.)



1. In a car comprising a floor, a deck adapted for support on said floor, cylinders mounted vertically at opposite sides of said deck, pistons in said cylinders, means for operatively connecting the pistons with said deck, and means for actuating the pistons within the cylinders to raise the deck from the floor.

2. In a car comprising a floor, a deck adapted for support on said floor, cylinders mounted vertically at opposite sides of said deck, pistons in said cylinders, hanger arms operatively connecting the pistons with said deck, and means for actuating the pistons by a fluid pressure to raise said deck.

5. In a car comprising a floor, a deck mounted on said floor, cylinders mounted vertically along opposite sides of said deck, pistons in said cylinders, hanger arms operatively connecting said pistons with the said deck, a pressure medium supply tank, a force pump, a conduit connecting said pump with the supply tank and having a check valve therein for preventing back flow from the pump, a main conduit, branch conduits leading from the main conduit to each of said cylinders, a conduit leading from said pump into the main conduit and having a check valve therein for preventing back flow to the pump, and means for actuating the pump to force a pressure medium from the supply tank through said conduits into said cylinders to actuate the pistons upwardly, for the purpose set forth.

16. In a car of the character described, cylinders mounted along opposite sides of said car in transverse paired relation and having oppositely disposed vertical slots in their upper portions, a deck mounted on said car floor comprising cross beams extending between said paired cylinders and longitudinal floor plates mounted on said cross beams, pistons mounted in said cylinders, rods extending upwardly from said pistons within said cylinders having apertures therethrough in alinement with the cylinder slots for receiving locking pins, pins mounted at the upper ends of said rods and having ends extending outwardly from said cylinders and slidable in said cylinder slots, hanger arms suspended from said pins and connected with said deck cross beams, a pressure medium supply tank, a pump, a main distributing conduit, conduits connecting the pump with the said supply tank and with the distributing conduit having valves therein for preventing a back flow of the pressure medium therein, branch conduits leading from the main conduit to each of said cylinders, control valves in said branch conduits, means for manually or mechanically actuating the pump to force a pressure medium from said tank through said conduits to said cylinders to actuate the pistons upwardly, and a drain conduit leading from said distributing conduit to said supply tank having a control valve therein, for the purpose set forth.

[Claims 3, 4, and 6 to 15 not printed in the Gazette.]

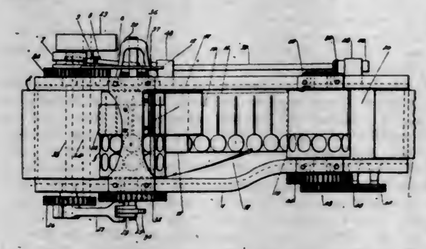
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1,229,375. CANDY-WHISTLE MACHINE. MORRIS ZWERDLING, New York, N. Y. Filed July 11, 1916. Serial No. 108,737. (Cl. 107—4.)

1. In a candy whistle machine, the combination of a suitable frame two pairs of molding rolls mounted in said frame, the first pair of said rolls being placed one above the other and provided with two rows of companion cavities which extend peripherally around their surfaces adjacent each other and longitudinal grooves in the upper roll connecting with the first row of mold cavities on it, means for delivering sticks singly into said grooves, means for driving each stick along the grooves into the first half of the candy whistle molded in the cavities, means for rotating said rolls with regular intervals of rest and motion, means to convey the molded candy with the sticks attached to the first row, means for placing the second row of candies on the top of the first, means for driving a conveyer with the slightly joined halves of the candy whistle to and between the second pair of rolls, said rolls being placed one above the other and having companion cavities which extend peripherally around their surfaces and corresponding to the cavities of the conveyer and serving to press together the slightly joined halves of the candy whistle.

2. In a candy whistle machine the combination of a suitable frame, two pair of rolls mounted in said frame, the first pair of said rolls being placed one above the

other and provided with two rows of companion cavities which extend peripherally around their surfaces adjacent each other and longitudinal grooves in the upper roll connecting with the first row of mold cavities on it, means for delivering sticks singly into said grooves, means for driving each stick along the grooves into the first half of the candy whistle while the rolls are at rest, means to connect the rolls for simultaneous movement with the same surface speed and with regular intervals of rest and motion, means for driving a conveyer at the same surface speed as that of the first pair of rolls, means for placing the second half of the candy whistle upon the first and means for driving the second pair of rolls at the same surface speed, as that of the conveyer, said rolls being placed one above the other and having companion cavities which extend peripherally around their surfaces and corresponding to the cavities of the conveyer.



3. In a candy whistle machine the combination of a suitable frame, a pair of rolls to mold two halves of the candy whistle, means for placing sticks into the first half of the candy, means for placing the second half of the candy upon the first, means for conveying the slightly joined candy, a pair of rolls for pressing together the slightly joined halves of the candy and means for carrying the finished candies away thereby cooling them off.

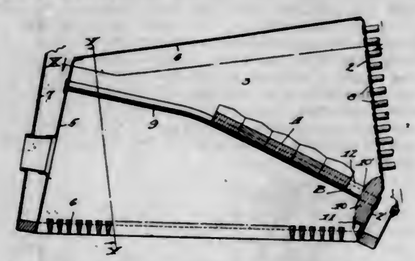
4. In a candy whistle machine the combination of a suitable frame, two pairs of rolls mounted in said frame the first pair of said rolls being placed one above the other and provided with two rows of companion cavities which extend peripherally around their surfaces adjacent each other and longitudinal grooves in the upper roll connecting with the first row of mold cavities on it, said cavities being of such a shape as to form two halves of a candy whistle which will be formed upon folding the halves one upon the other leaving the central hole slightly closed.

5. In a candy whistle machine the combination of a suitable frame, means for forming two halves of a candy whistle, said halves being slightly connected together, a conveyer with cavities along one edge adapted to receive one half of the candy with the stick inserted into it, the other half of the candy being engaged simultaneously by a curved surface alongside of said conveyer in order that it may rise from a horizontal position to a vertical, where gravity will act upon it to drop it upon the first half, means to press together the slightly joined halves of the candy and means for cooling off the finished product.

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1,229,376.. LOCOMOTIVE-BOILER FIRE-BOX. JOHN L. NICHOLSON, Chicago, Ill., assignor to American Arch Company, New York, N Y., a Corporation of Delaware. Filed Dec. 28, 1915. Serial No. 69,017. (Cl. 110—87.)

1. A locomotive firebox, in combination with a refractory mass covering and protecting the throat sheet thereof and terminating at the lower edge of the flue sheet, and a refractory arch springing substantially from said mass but separated therefrom by a cinder opening, said arch terminating short of the rear wall of the firebox and there being a main gas passage rearward of the arch, the function of said mass being to heat the gases which pass through said cinder opening and protect the flues as described.



2. A locomotive firebox having a slanting throat sheet, in combination with a refractory mass covering and resting upon and protecting said throat sheet and terminating at the lower edge of the flue sheet, and a refractory arch springing substantially from said mass but separated therefrom by a cinder opening, said arch terminating short of the rear wall of the firebox and there being a main gas passage rearward of the arch, the function of said mass being to heat the gases which pass through said cinder opening and protect the flues as described.

3. A locomotive firebox, its grate, throat sheet and water circulating tubes, in combination with a refractory mass arranged against said throat sheet and extending from the grate to the lower flues, and a refractory arch supported by said tubes and springing substantially from said mass, but separated from said mass by a cinder opening, said arch terminating short of the rear wall of the firebox and there being a main gas passage rearward of the arch, substantially as and for the purpose described.

4. A locomotive firebox, its throat sheet, and water circulating tubes springing therefrom, in combination with a refractory mass upon said throat sheet extending both above and below said tubes, and terminating at the lower edge of the flue sheet, and a refractory arch supported by said tubes and springing substantially from said mass, but separated from said mass by a cinder opening, said arch terminating short of the rear wall of the firebox and there being a main gas passage rearward of the arch, substantially as and for the purpose described.

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1,229,377. PROTECTION FOR ARCH-TUBES. LE GRAND PARISH, Mountainview, N. J., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 8, 1916. Serial No. 71,060. (Cl. 110—87.)



1. A locomotive firebox and contained group of water-circulating arch tubes, in combination with refractory arch bricks supported by and between said tubes, and metal wearing clips spaced upon said tubes and providing three-point bearings for the bricks.

2. A locomotive firebox and contained group of water-circulating arch tubes, in combination with refractory arch bricks supported by and between said tubes, metal wearing clips clasped upon said tubes in spaced relations and providing bearings for said bricks and thus relieving the tubes from the wear of the bricks.

3. A locomotive firebox and contained group of water circulating arch tubes, in combination with refractory arch bricks supported by and between said tubes, metal wearing clips spaced upon said tubes and providing bearings thereon for said bricks, and said clips being provided with brick anchoring projections upon their tops, which engage the bricks and prevent the lifting thereof from the tubes.



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1,229,378. LOCOMOTIVE-FIRE-BOX ARCH. LE GRAND PARISH, Mountainview, N. J., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 8, 1916. Serial No. 71,061. (Cl. 110—87.)

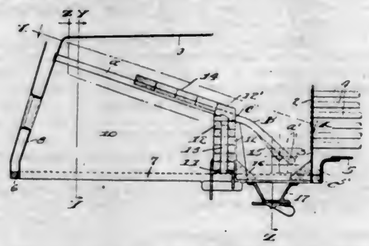


1. A locomotive firebox and contained group of water-circulating arch tubes, in combination with refractory arch bricks supported by and between said tubes, and thin wearing strips of initially pliable, non-metallic refractory material interposed between said tubes and bricks.

2. A locomotive firebox and contained group of water-circulating arch tubes, in combination with refractory arch bricks supported by and between said tubes, and thin initially pliable wearing strips composed of material differing from both bricks and tubes, and adhesively attached to the tubes to receive the wear of the bricks.

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1,229,379. LOCOMOTIVE-BOILER FURNACE. ALFRED H. WILLETT, West New York, N. J., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 8, 1916. Serial No. 71,063. (Cl. 122—68.)



The improvement herein described, comprising a locomotive firebox, its mud ring, throat sheet, and side sheets, in combination with a cross wall in said firebox rearward of said throat sheet, a combustion chamber being formed between said wall and throat sheet, a floor forming the bottom of said combustion chamber, a plurality of water-circulating arch tubes having their forward ends secured in the side sheets at points forward of said wall and rearward of said throat sheet, said tubes extending thence upwardly and rearwardly beyond said wall, and an arch extending rearwardly from said wall and composed of refractory bricks resting upon said tubes.

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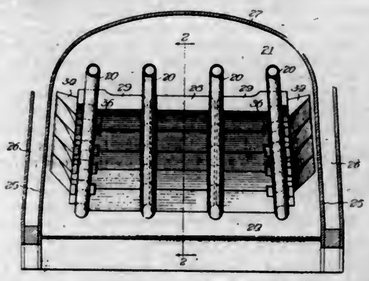
1,229,380. LOCOMOTIVE-FURNACE ARCH. JOHN P. NEFF, East Orange, N. J., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 8, 1916. Serial No. 71,064. (Cl. 110—87.)



The herein described improvement, comprising a locomotive firebox, its side sheets and inclined water-circulating arch tubes, in combination with an arch body of refractory bricks supported by said arch tubes and substantially co-extensive therewith, rows of marginal-brick-supporting studs provided in said side sheets substantially in the plane of said tubes, and marginal bricks, each presenting an acute angled end having its vertex against a side sheet and having a plane surface resting upon one of said studs, and each also presenting a diagonally opposite acute angled end having a plane surface upon and against the adjacent arch tube, substantially as and for the purposes described.

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1,229,381. LOCOMOTIVE-ARCH. ENOCH P. STEVENS, Chicago, Ill., assignor, by mesne assignments, to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 31, 1913, Serial No. 757,822. Renewed Jan. 10, 1916. Serial No. 71,378. (Cl. 110—87.)



1. In a locomotive arch construction, the combination with a fire-box having a plurality of arch tubes extending therethrough, of a plurality of rows of bricks supported on said tubes, and a row of cantaliver bricks extending into the space between each of the outer tubes and the side sheets of the fire-box, said cantaliver bricks being out of contact with said side sheets, substantially as described.

2. In a locomotive arch construction, the combination with a fire-box having a plurality of arch tubes extending therethrough, of a plurality of main rows of bricks supported on said tubes, and a row of cantaliver bricks extending into the space between each of the outer tubes and the side sheets of the fire-box, each of said cantaliver bricks being supported by the joint action of the bricks of the adjacent main row and an outer arch tube and being out of contact with said side sheets, substantially as described.

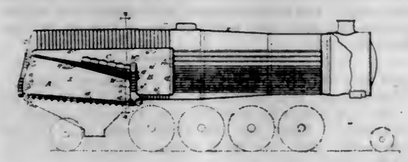
3. In a locomotive arch construction, the combination with a fire-box having a plurality of arch tubes extending therethrough, of a plurality of main rows of bricks supported on said tubes, a row of cantaliver bricks extending into the space between each of the outer tubes and the side sheets of the fire-box, each of said cantaliver bricks having a tongue extending therefrom, and means for forming locking engagement between said tongue and the bricks of the adjacent main row, substantially as described.

4. In a locomotive arch construction, the combination with a fire-box having a plurality of arch tubes extending therethrough, of a plurality of main rows of bricks supported on said tubes, and a row of cantaliver bricks extending into the space between each of the outer tubes and the side sheets of the fire-box, each of said cantaliver bricks engaging the bricks of the adjacent main row and being out of contact with said side sheet, substantially as described.

5. In a locomotive arch construction, the combination with a fire-box having a plurality of arch tubes extending therethrough, of a plurality of rows of bricks supported on said tubes, a row of cantaliver bricks extending into the space between each of the outer tubes and the side sheets of the fire-box, said cantaliver bricks being out of contact with said side sheets, and means for preventing lateral movement of said arch, substantially as described.

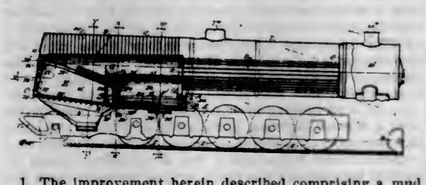
[Claims 6 to 15 not printed in the Gazette.]

1,229,382. WOOTEN-TYPE LOCOMOTIVE-BOILER. JAMES T. ANTHONY, East Orange, N. J., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 8, 1916. Serial No. 76,946. (Cl. 122—64.)



A locomotive boiler containing a firebox having a barrel combustion chamber or extension forward of its throat sheet, in combination with the cross water leg positioned in the mouth of said extension, and in open communication with the bottom and side water spaces or legs of the firebox, and there remaining a gas passage above the top of said cross water leg, a plurality of water circulating arch tubes extending upwardly and rearwardly from the approximate top of said cross water leg, and a refractory brick arch composed of bricks supported by said tubes, said arch extending rearwardly from said cross water leg and from side to side of the firebox proper, substantially and as to the purpose specified.

1,229,383. STEAM-LOCOMOTIVE. JAMES T. ANTHONY, East Orange, N. J., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 8, 1916. Serial No. 76,947. (Cl. 122—64.)



1. The improvement herein described comprising a mud ring composed of two sections arranged end to end and one narrower than the other.

2. The improvement herein described comprising a mud ring composed of two sections arranged end to end and one narrower than the other, there being an intermediate cross bar which is common to both sections.

3. The improvement herein described comprising a mud ring composed of two sections arranged end to end and one narrower than the other, there being an intermediate cross bar which is common to both sections, and said cross bar being of greater width than the other parts of the mud ring.

4. The improvement herein described comprising a locomotive mud ring composed of a narrow front section of substantially rectangular form and a substantially rectangular wide rear section integral with said front section.

5. The improvement herein described comprising a locomotive mud ring composed of a narrow front section of substantially rectangular form and a substantially rectangular wide rear section integral with said front section, and said sections together forming an obtuse angle.

[Claims 6 to 24 not printed in the Gazette.]

1,229,384. LOCOMOTIVE-ARCH CONSTRUCTION. ENOCH P. STEVENS, Chicago, Ill., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 10, 1916. Serial No. 77,517. (Cl. 110—87.)

1. The improvement herein described comprising the side sheet and an arch tube of a locomotive firebox, in combination with a main marginal brick extending from said tube toward said side sheet, and a substantially wedge shaped key brick interposed between the end of said main brick and said side sheet and forming the abutment for the outer end of said main brick.



2. The improvement herein described comprising the side sheet and an arch tube of a locomotive firebox, in combination with a marginal brick extending from said tube toward said side sheet, and a substantially wedge shaped key brick interposed between the end of said main brick and said side sheet and forming the abutment for the outer end of said main brick and the abutting portions of said bricks being interlocked, substantially as described.

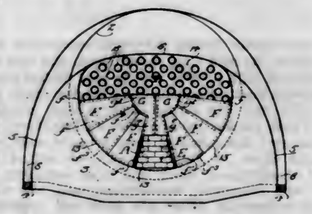
3. The improvement herein described comprising the side sheet and arch tube of a locomotive firebox, in combination with a main marginal brick extending from said tube toward said side sheet, and a substantially wedge shaped, stepped, adjustable key brick interposed between the end of said main brick and said side sheet and forming the abutment for the outer end of said main brick.

4. The improvement herein described comprising the side sheet and arch tube of a locomotive firebox, in combination with a main marginal brick extending from said tube toward said side sheet, and a substantially wedge shaped, stepped, adjustable key brick interposed between the end of said main brick and said side sheet and forming the abutment for the outer end of said main brick and the abutting portions of said bricks being interlocked, substantially as described.

5. A marginal arch brick supplement, comprising a substantially wedge shaped, stepped key brick, having an interlocking groove in its brick abutment face, substantially as described.

[Claim 6 not printed in the Gazette.]

1,229,385. WOOTEN-TYPE FIRE-BOX. ALFRED H. WILLETT, West New York, N. J., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 11, 1916. Serial No. 77,642. (Cl. 110—87.)



1. A locomotive firebox having a combustion chamber extension forward of its grate and throat sheet, in combination with an upright refractory wall erected on the floor and against the sides of said extension, said wall being composed of a plurality of radially positioned sector bricks and a central key brick.

2. A locomotive firebox having a combustion chamber extension forward of its grate and throat sheet, in combination with an upright refractory wall erected on the floor and against the sides of said extension, said wall being composed of a plurality of radially positioned sector bricks and a central key brick, and said key brick serving to interlock the sector bricks.

3. A locomotive firebox having a combustion chamber extension forward of its grate and throat sheet, in combination with an upright refractory wall erected on the floor and against the sides of said extension, said wall being composed of a plurality of radially positioned sector bricks and a central key brick, the latter comprising complementary halves.

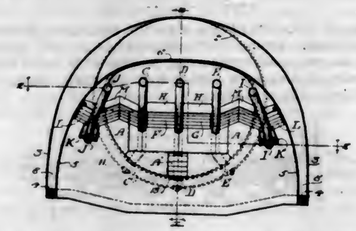
4. A locomotive firebox having a combustion chamber extension forward of its grate and throat sheet, in combination with an upright refractory wall erected on the floor and against the sides of said extension, said wall being composed of a plurality of radially positioned and interlocked sector bricks and a central key brick, the latter comprising complementary interlocked halves.

5. A locomotive firebox having a combustion chamber extension forward of its grate and throat sheet, in combination with an upright refractory wall erected on the floor and against the sides of said extension, said wall being composed of a plurality of radially positioned sector bricks and a central key brick, the latter comprising complementary halves abutting on a vertical plane.

[Claims 6 to 9 not printed in the Gazette.]



1,229,386. WOOTEN-FIRE-BOX ARCH. ALFRED H. WILLETT, West New York, N. J., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 11, 1916. Serial No. 77,643. (Cl. 122—71.)



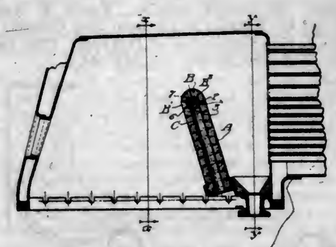
1. A locomotive boiler firebox having a barrel combustion chamber or extension and having a throat sheet which rises at the sides of said extension, in combination with inclined arch tubes which extend rearwardly from the portions of said throat sheet at the sides of said extension, other arch tubes extending upwardly and rearwardly from the floor of said extension, a refractory cross wall in said extension and an arch body composed of bricks supported by said tubes.

2. A locomotive boiler firebox having a barrel combustion chamber or extension and having a throat sheet at the sides of said extension, in combination with inclined arch-brick-supporting water-circulating tubes which extend rearwardly from said throat sheet at the sides of said extension, said tubes being curved upwardly adjacent said throat sheet, saddle bricks fitted upon the curved portions of said tubes, a cross wall in said extension, and a refractory arch body which extends from one said tube and its saddle brick to the other tube and saddle brick.

3. A locomotive boiler firebox having a barrel combustion chamber or extension and having a throat sheet which rises at the sides of said extension, in combination with inclined arch supporting water circulating tubes which extend rearwardly from the portions of said throat sheet at the sides of said extension, said tubes being curved upwardly adjacent said throat sheet, saddle bricks conformed to and resting upon respective curved portions of said tubes, other arch tubes extending upwardly and rearwardly from the floor of said extension, a refractory cross wall in said extension and an arch body composed of bricks supported by all said tubes and said saddle bricks.

4. A locomotive boiler firebox having a barrel combustion chamber or extension and having a throat sheet which rises at the sides of said extension, in combination with inclined arch tubes which extend rearwardly from the portions of said throat sheet at the sides of said extension, a refractory cross wall in said extension and a refractory arch body having parts supported by said tubes.

1,229,387. AIR-ADMISSION WALL FOR LOCOMOTIVE FIRE-BOXES. ALFRED H. WILLETT, West New York, N. J., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 11, 1916. Serial No. 77,644. (Cl. 110—76.)



1. A firebox cross wall and its refractory coping brick, together containing an air duct and a lateral discharge opening, in combination with a metal deflector smaller than, and arranged in, and spaced from the walls of said opening and guarding said coping brick, substantially as described.

2. A firebox cross wall and its refractory coping brick, together containing an air duct and a lateral discharge opening, in combination with a metal deflector arranged in said opening and guarding said coping brick, and said deflector being formed to interlock said coping brick and wall, substantially as described.

3. A firebox wall body containing an air duct, in combination with a coping brick containing a cavity that forms a lateral discharge opening for said duct, a metal deflector positioned in said cavity and smaller than the same but interlocked with said coping brick and said deflector having a tubular shank in said duct, and whereby the coping brick is interlocked with said wall body.

1,229,388. LOCOMOTIVE-ARCH. LE GRAND PARISH, Mountainview, N. J., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 11, 1916. Serial No. 77,645. (Cl. 110—87.)



1. A locomotive firebox arch-body-brick, having diagonally opposed socketed ends, in combination with arch tubes supporting said ends, a firebox side sheet adjacent one of said tubes and a marginal brick having its inner end shaped to fit the opposed socket of the body-brick and held therein while its outer end rests against said side sheet, as and for the purposes described.

2. A locomotive arch-body-brick having diagonally opposed arch tube sockets in its ends and also provided with diagonally opposed inclined end surfaces, as and for the purposes described.

3. An arch-body-brick having diagonally opposed arch tube sockets in its ends and also provided with diagonally opposed inclined end surfaces, each said inclined surface being transversely curved, as and for the purposes described.

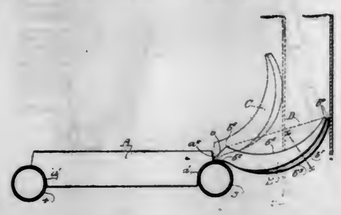
4. An arch-body-brick having diagonally opposed arch tube sockets in its ends and also provided with diagonally opposed inclined end surfaces, each said socket containing a recess and each said inclined surface being transversely curved, as and for the purposes described.

5. An arch-body-brick having diagonally opposed arch tube sockets in its ends and also provided with diagonally

opposed inclined surfaces, and a curved surface, $a^2$, merging each inclined surface with the respective extreme end of the brick, as and for the purposes described.

[Claims 6 to 11 not printed in the Gazette]

1,229,389. MARGINAL BRICK. ENOCH P. STEVENS, Chicago, Ill., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 11, 1916. Serial No. 77,646. (Cl. 110—87.)



1. A marginal brick for locomotive fire-box arches having its bottom substantially conformed to a single arc of a circle extending from end to end thereof, save that the inner end of said brick is provided with a downturned bearing-rib for co-action with an arch tube and the end of an arch body brick thereon.

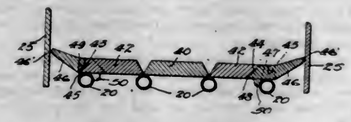
2. A marginal arch brick of crescent-like form in side elevation and having its inner end formed for engagement with the top of an arch tube and the end of an arch body brick.

3. A marginal arch brick of crescent-like form in side elevation and having a bearing rib at its inner end adapted for engagement with the top of an arch tube and the end of an arch body brick thereon.

4. A marginal arch brick of crescent-like form having a middle bearing rib on its bottom and at its inner end provided with a bearing rib at right angles to said middle rib whereby the inner end of said brick is adapted for support by an arch tube and for engagement with an arch body brick resting thereon.

5. A marginal arch brick of crescent like form having a middle bearing rib on its bottom and at its inner end provided with a bearing rib at right angles to said middle rib adapting said end for engagement with the top of an arch tube and an arch body brick thereon, and the inner end of said brick being formed at an obtuse angle to the top of the brick whereby the inner end of said brick is adapted for support by an arch tube and engagement with an arch body brick resting thereon.

1,229,390. LOCOMOTIVE-ARCH. ENOCH P. STEVENS, Chicago, Ill., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Original application filed Mar. 31, 1913, Serial No. 757,822. Renewed Jan. 10, 1916, Serial No. 71,378. Divided and this application filed Feb. 11, 1916. Serial No. 77,647. (Cl. 110—87.)



1. In a locomotive arch construction, the combination with a fire-box having a plurality of arch tubes extending therethrough, of a plurality of main rows of bricks supported on said tubes, and a row of cantaliver bricks in the space between each of the outer tubes and the side sheets of the fire-box, each of said cantaliver bricks being supported by the bricks of the adjacent main row, and being out of contact with said side sheets, substantially as described.

2. In a locomotive arch construction, the combination with a fire-box having a plurality of arch tubes extending therethrough, of a plurality of main rows of bricks supported on said tubes, a row of cantaliver bricks in the space between each of the outer tubes and the side sheets of the fire-box; said row of cantaliver bricks being supported by the bricks of the adjacent main row and being out of contact with said side sheets, and means for preventing lateral movement of said arch, substantially as described.

3. In a locomotive arch construction, a firebox side sheet and a water-circulating arch tube adjacent thereto, in combination with a main arch brick and a cantaliver brick separably interlocked with and upon the end of said main brick.

4. In a locomotive arch construction, a firebox side sheet and a water-circulating arch tube adjacent thereto, in combination with a main arch brick and a cantaliver brick hooked upon the end of said main brick above said tube.

5. In a locomotive arch construction, two main bricks arranged side by side as upon an arch tube, in combination with a cantaliver brick having its end in abutment with both said main bricks and hooked upon both.

[Claims 6 to 8 not printed in the Gazette.]

1,229,391. CANTALIVER-MARGIN FOR LOCOMOTIVE-ARCHES. ENOCH P. STEVENS, Chicago, Ill., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 11, 1916. Serial No. 77,648. (Cl. 110—87.)



1. The locomotive firebox and its contained arch tubes, in combination with a refractory arch body supported by said tubes and composed of a plurality of longitudinal rows of bricks, the outer end of each brick in each outer row having upon its top a cantaliver-brick-engaging stop, cantaliver bricks adapted for support from their inner ends only and each having upon its inner end a down-turned hook for engagement with the stop upon a respective body brick, and each cantaliver brick also having upon its inner end a depending stop portion which contributes to its support.

2. In a locomotive firebox arch, a body brick having an upstanding stop on its end, in combination with a cantaliver marginal brick formed with a down-turned hook on its inner end to engage over said stop on the body brick and provided with a depending stop portion for co-action with an arch tube to support said cantaliver brick.

3. In a locomotive firebox arch, a body brick having an upstanding stop on its end, in combination with a cantaliver marginal brick formed with a down-turned hook on its inner end to engage over said stop on the body brick and provided with a depending stop portion for co-action with the end of the body brick and an arch tube to support said cantaliver brick.

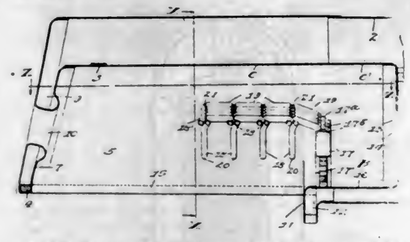
4. In a locomotive firebox arch, a cantaliver marginal brick formed with a down-turned hook on its inner end to engage a body brick, and provided with a depending stop portion for co-action with the end of a body brick and the outer side of an arch tube to support said cantaliver brick.

1,229,392. ARCH CONSTRUCTION FOR SHALLOW FIRE-BOXES. JOHN P. NEFF, East Orange, N. J., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 24, 1916. Serial No. 80,311. (Cl. 110—87.)

1. The improvement herein described, comprising a locomotive firebox, in combination with a cross wall therein

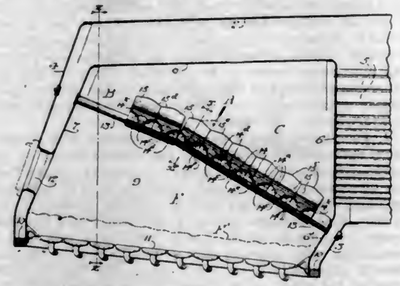


rearward of its flue sheet and forward of its grate, and an overhanging arch extending rearwardly from said wall and composed of a plurality of transverse rows of bricks together with a plurality of longitudinally spaced pairs of oppositely inclined transverse water-circulating arch tubes which connect the side sheets of the firebox and support said bricks.



2. The improvement herein described, comprising a locomotive firebox, in combination with a cross wall therein rearward of its flue sheet and forward of its grate, and an overhanging arch extending rearwardly from said wall and composed of a plurality of transverse rows of bricks together with a plurality of longitudinally spaced pairs of oppositely inclined transverse water-circulating arch tubes which connect the side sheets of the firebox and support said bricks, the tubes of each said pair being in a single vertical plane and offset at the middle to avoid the intersection of one by the other.

1,229,393. LOCOMOTIVE-FIRE-BOX ARCH. JOHN L. NICHOLSON, Chicago, Ill., assignor to American Arch Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 15, 1916. Serial No. 84,466. (Cl. 110—87.)



1. A locomotive boiler firebox, in combination with a refractory arch extending upwardly and rearwardly from the lower part of the flue sheet of the firebox to a point which restricts the opening between the arch and the crown sheet to an area not exceeding and preferably less than the aggregate area of the flues and said arch containing preferably uniformly distributed upwardly and transversely extending passages whereby the lack of area in the passage at the rear end of the arch is compensated and the products from the fire chamber are subdivided into conflicting longitudinal and transverse streams in the space above the arch and rearward of the flue sheet.

2. A locomotive boiler firebox in combination with a refractory arch extending upwardly and rearwardly from the lower part of the flue sheet of the firebox and containing preferably uniformly distributed upwardly and transversely extending passages whereby the products from the fire chamber are subdivided into conflicting longitudinal and transverse streams in the space above the arch and rearward of the flue sheet.

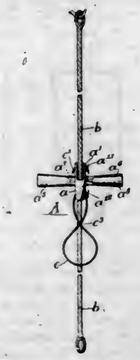
3. A locomotive boiler firebox and its arch tubes, in combination with a refractory arch extending upwardly and rearwardly from the lower part of the flue sheet of the firebox and composed of rows of bricks resting upon said tubes and containing preferably uniformly distributed upwardly and transversely extending passages whereby the products from the fire chamber are subdivided into conflicting longitudinal and transverse streams in the space above the arch and rearward of the flue sheet.

4. A locomotive-boiler firebox and its arch tubes, in combination with a refractory arch in said firebox and composed of high and low rows of bricks resting upon said tubes and the high bricks having openings in their ends, whereby some of the products from the fire chamber are allowed to pass through the arch and conflicting longitudinal and transverse streams are set up in the space above the arch and rearward of the flue sheet.

5. A locomotive boiler firebox and longitudinal arch tubes therein, in combination with a refractory arch composed of longitudinal rows of bricks resting on said tubes, alternate rows of said bricks being elevated above the others and containing upwardly and transversely extending passages whereby the lack of area in the passage at the rear end of the arch is compensated and the products from the fire chamber are subdivided into conflicting longitudinal and transverse streams in the space above the arch.

[Claims 6 to 16 not printed in the Gazette.]

1,229,394. PORTABLE FIRE-ESCAPE. SAMUEL ABRAMSON, Philadelphia, Pa. Original application filed June 8, 1916, Serial No. 102,411. Divided and this application filed July 15, 1916. Serial No. 109,433. (Cl. 227—29.)



1. A fire-escape, comprising a housing provided with corner, grooved formations, opposite corner, grooved pulleys, handle-bars formed with said housing and handle bars pivoted thereto and extending into said housing and forming clutches to engage a rope coursing through said housing in contact with said formations and pulleys.

2. A fire-escape, comprising a housing having grooved corner formations opposite each other, corner grooved revoluble pulleys having openings to engage tightening means of the housing, handle-bars formed integral with said housing and handle-bars pivoted to said fixed-bars and extending into said housing to form clutches to engage a rope in its coursings through said housing and said bars located opposite the respective grooved formations of said housing.

1,229,395. GARMENT-FASTENER. WILLIAM HENRY ALLEN, Birchfields, Birmingham, England, assignor to Henry Ernest Keating, Birmingham, England. Filed June 24, 1916. Serial No. 105,753. (Cl. 2—122.)

1. In a pair of trousers the combination of two buttons each adapted for use separately for securing the braces, one provided with a male part and the other formed fe-

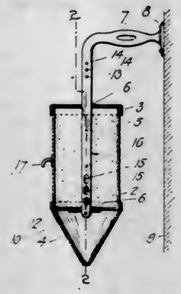
male so that when the two buttons engage the trousers are folded along the correct crease line.



2. In a pair of trousers the combination of two buttons each adapted for use separately for securing the braces, one provided with a male part having an external peripheral groove and the other formed female and having an internal wire spring adapted to co-act with the aforementioned groove so that when the two buttons are thus engaged the trousers are folded along the correct crease line.

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1,229,396. POWDER-DISPENSING DEVICE. NICHOLAS ANDRES and EDWARD ANDRES, Denver, Colo. Filed Jan. 19, 1916. Serial No. 72,987. (Cl. 221—105.)



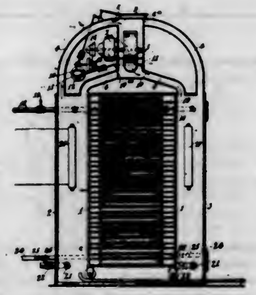
1. A powder-dispensing device comprising a container-member having an opening in its bottom, a straight rod-member slidingly fitted in said opening and normally closing the same, said rod-member having a series of powder-carrying recesses spaced longitudinally along the same and normally disposed within the container-member, and means for mounting said device so as to permit of a vertical movement of one member relative to the other, whereby one or more of said recesses pass through said opening and outside the container-member.

2. A powder-dispensing device comprising a container-member having an opening in its bottom, a straight rod-member slidingly fitted in said opening and normally closing the same, said rod-member having a series of powder-carrying recesses spaced longitudinally along the same and normally disposed within the container-member, means for mounting said device so as to permit of a vertical movement of one member relative to the other, whereby one or more of said recesses pass through said opening and outside the container-member, and adjustable means for varying the extent of said movement according to the number of recesses it is desired to pass outside the container-member.

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1,229,397. PROCESS AND APPARATUS FOR DRYING EDIBLE PASTES. ALBERT M. AUSTIN, Piermont, N. Y. Filed May 5, 1910. Serial No. 559,638. Renewed Nov. 11, 1916. Serial No. 130,920. (Cl. 34—39.)

1. In a drying apparatus the combination with a receptacle containing the goods to be dried, of a rotating fan having its suction and discharge communicating with the interior of said receptacle, and means operated with the fan for directing the discharge of said fan against different portions of the goods alternately and for different periods of time, said means including a device for controlling the period during which the current is directed against each end of the goods.



2. In the art of drying open ended tubular edible paste, the process which consists in constantly circulating a body of drying air about the tubes of paste, said air being alternately forced into and drawn from each end of the tubes, the forcing of the air into one end of the tubes taking place substantially simultaneously with the drawing of the air from the opposite end of the tubes, the air being directed against one end of the tubes for a longer period of time than against the opposite end whereby the air is progressively advanced through the tubes.

3. In a drying apparatus, the combination with a receptacle substantially divided into two compartments by the goods to be dried, of an air-circulating device having an intake and an exhaust, a pair of conduits leading from said intake, one conduit to each of said compartments and a pair of conduits leading from said exhaust, one to each of said compartments, a valve in each of said conduits and a means coupled with said valves for simultaneously opening one compartment to the exhaust while opening the other compartment to the intake and closing the first mentioned compartment to the intake while closing said other compartment to the exhaust.

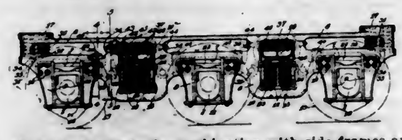
4. In a drying apparatus, the combination with a receptacle substantially divided into two compartments by the goods to be dried, of a fan, a pair of conduits leading from the discharge of the fan, one conduit to each of said compartments and a second pair of conduits leading to the suction of the fan, one conduit from each of said compartments, a valve for each of said conduits, a cam, means connecting said cam with each of said valves for simultaneously opening one compartment to the suction while opening the other compartment to the discharge of the fan and closing the first mentioned compartment to the discharge of the fan, while closing said other compartment to the suction of the fan and a driving means coupled with said cam and said fan.

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1,229,398. CAR-TRUCK. FRANKLIN L. BARBER and CHARLES S. WALTON, Chicago, Ill., assignors to Standard Car Truck Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 28, 1917. Serial No. 165,077. (Cl. 105—244.)

1. In a car truck, the combination with side frames and journal boxes, of equalizing levers intermediately fulcrumed on the journal boxes, abutments between the outer ends of the equalizing levers and side frames, bell-crank levers having one of their arms connected to the inner ends of said equalizing levers, and compression springs interposed between the other arms of the bell-crank levers.

2. In a car truck, the combination with side frames and journal boxes, of equalizing levers intermediately fulcrumed on the journal boxes, springs affording abutments interposed between the outer ends of the equalizing levers and side frames, bell-crank levers having one of their arms connected to the inner ends of said equalizing levers, and compression springs interposed between the other arms of the bell-crank levers.

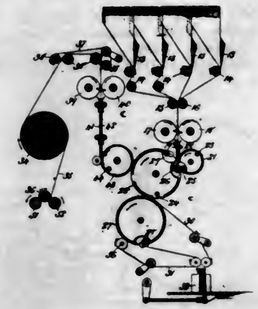


3. In a car truck, the combination with side frames and journal boxes, of equalizing levers intermediately fulcrumed on the journal boxes, abutments between the outer ends of the equalizing levers and side frames, bell-crank levers, links connecting one of the arms of the bell-crank levers with the inner ends of the equalizing levers, and compression springs interposed between the other arms of said bell-crank levers.

[Claims 4 to 9 not printed in the Gazette.]

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1,229,399. COMBINED COVER AND CENTER-PAGE-INSERT SHEET FEEDING AND FOLDING MECHANISM. HOWARD M. BARBER, Stonington, Conn., assignor, by mesne assignments, to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 2, 1906. Serial No. 337,101. (Cl. 270—44.)



1. Means for cutting a sheet from a previously printed combined cover and center page insert web, feeding means for said sheet, means for cutting a group of sheets from another previously printed web, feeding means for said group, means for associating the combined cover and center page insert sheet with the said group of sheets and means for submitting the same to a plurality of folding operations.

2. Means for cutting a sheet from a previously printed combined cover and center page insert web, feeding means for said sheet, means for cutting a plurality of groups of sheets from another previously printed web, feeding means for said groups, means for associating the combined cover and center page insert sheet with the said groups of sheets, and means for submitting the same to a plurality of folding operations.

3. Means for cutting a sheet from a previously printed combined cover and center page insert web, means for feeding said sheet to a predetermined point, means for cutting a group of sheets from another previously printed web and feeding it to said predetermined point, means for associating said group with the combined cover and center page insert sheet, and means for submitting the same to a plurality of folding operations.

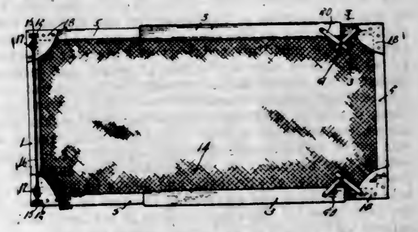
4. Means for cutting and feeding a plurality of groups of sheets from a web fed from a press, to a predetermined point, means for cutting sheets from a roll of previously printed combined cover and center page insert web, and feeding them one at a time into position to be associated with the assembled plurality of groups of sheets cut from the previously printed web and means for submitting the same to a plurality of folding operations.

5. Folding cylinders, means for cutting a sheet from a previously printed combined cover and center page insert web and feeding it to one of the folding cylinders, means for cutting a group of sheets from another previously printed web and feeding it to said folding cylinders, means for associating said group with said combined cover and center page insert sheet and means for folding the so associated sheets together.

[Claims 6 to 12 not printed in the Gazette.]

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1,229,400. WINDOW-SCREEN. HENRY BAUKNECHT, Midland, Mich. Filed Nov. 13, 1916. Serial No. 131,029. (Cl. 156—39.)

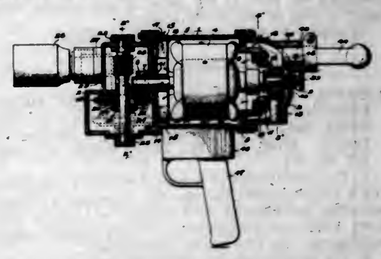


1. A folding screen, comprising in combination, opposing end sections and intermediate sections which are relatively slidable, a roller carried by one of the end sections, a length of screening mounted on the roller and secured within the opposing section, serrated locking wheels carried by the roller and extending beyond the sides of the sections, and a spring bar carried by the section and having its ends resiliently engaged in said wheels.

2. A folding screen, comprising in combination, opposing end sections and intermediate sections which are relatively slidable, a roller carried by one of the end sections, a length of screening mounted on the roller and secured within the opposing section, serrated locking wheels carried by the roller and extending beyond the sides of the section, a spring bar carried by the section and having its ends resiliently engaged in said wheels, and locking devices for expanding the parts into window engaging position.

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1,229,401. DRILL-GEARING. SAMUEL D. BLACK, Baltimore, and ALONZO G. DECKER, Orangeville, Md. Filed Mar. 23, 1916. Serial No. 86,237. (Cl. 74—26.)



1. A power drill comprising a casing, a motor within said casing, a chuck spindle extending into said casing, and driving connection between said spindle and the driving element of said motor, located within said casing and comprising two frictionally connected disks, the periphery of one of which engages a face of the other, means to shift

one of said disks with respect to the other to vary the speed ratio of the said chuck spindle with respect to that of said motor element, vanes on one of said disks arranged to create a flow of air within said casing past said motor, said casing being provided with intake and outlet passages for said air.

2. A portable power drill comprising a casing, a motor within said casing, a chuck spindle extending into said casing, and driving connection between said spindle and the driving element of said motor, located within said casing and comprising two frictionally connected disks, the periphery of one of which engages a face of the other, supporting handles secured to said casing, and means to shift one of said disks with respect to the other to vary the speed ratio of the said chuck spindle with respect to that of said motor element, said shifting means including hand controlled actuating means located adjacent one of said handles.

3. A portable power drill comprising a casing built up of separable sections or compartments, one of which constitutes a central section open at each end, and the other two of which constitute end sections removably attached to the respective ends of the central section and opening thereinto, an electric motor mounted in the central section, a chuck spindle extending into one of the end sections, a pair of frictionally connected disks within said casing, one of which is driven by the driving element of said motor, and the other of which is geared to said chuck spindle, the periphery of one of said disks engaging a face of the other of said disks, and means to move one of said disks toward and away from the axis of rotation of the other disk for changing the ratio of the speed of said spindle with respect to that of said motor element.

4. A portable power drill comprising a casing, an electric motor mounted in said casing and having a hollow armature shaft, a chuck spindle extending into said casing, a pair of frictionally connected disks within said casing, one of which is driven by the driving element of said motor, and the other of which is geared to said chuck spindle, the periphery of one of said disks engaging a face of the other of said disks, a hand grip secured to said casing, and means including a rod having one end adjacent said hand grip and extending into the bore of said armature shaft to move one of said disks toward and away from the axis of rotation of the other disk for changing the ratio of the speed of said spindle with respect to that of said motor element.

5. A portable power drill comprising an electric motor having a hollow armature shaft, a chuck spindle, a pair of frictionally connected disks, one of which is driven by the driving element of said motor, and the other of which is geared to said chuck spindle, the periphery of one of said disks engaging a face of the other of said disks, and means including a rod extending into the bore of said armature shaft to move one of said disks toward and away from the axis of rotation of the other disk for changing the ratio of the speed of said spindle with respect to that of said motor element.

[Claims 6 to 8 not printed in the Gazette.]

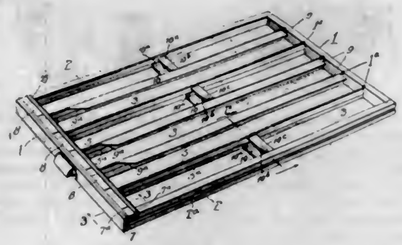
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1,229,402. COMPARTMENT OR TICKET DRAWER. LEONARD J. BLADES, Chicago, Ill., assignor to National Ticket Case Company, Chicago, Ill., a Corporation of Illinois. Filed July 17, 1912. Serial No. 709,880. (Cl. 45—7.)

1. The combination of a drawer having a compartment, and a holder slidable therein and comprising a forwardly-extending overhanging strip adapted to hold the articles down within the compartment and side flanges adapted to bear against the side of the compartment.

2. The combination of a drawer having a compartment provided with shoulders along its sides, and a holder slidable therein and comprising a strip having along the opposite edges of its bottom upwardly-bent side flanges adapted to engage under said shoulders whereby the holder is normally locked against disengagement and adapted to slide within the compartment.

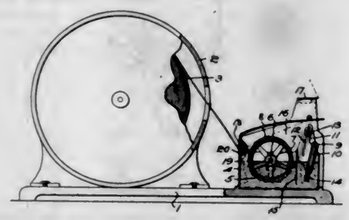
3. The combination of a drawer having a compartment, and a holder slidable therein and comprising a bottom having opposite upturned flanges bearing against opposite walls of said compartment, an end wall rising from said bottom and a flange on the end wall extending over said bottom.



4. The combination of a drawer having a compartment provided with a horizontal shoulder on the inner face of its side walls, and a holder slidable therein and comprising a bottom having opposite upturned and normally outwardly flared flanges bearing against said walls and engaging under said shoulders, an end wall rising from said bottom and a flange thereon extending over said bottom.

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1,229,403. STRIP-SERVING DEVICE. PHILIP W. BLAKE, Boston, Mass., assignor to National Binding Machine Company, Boston, Mass., a Corporation of Maine. Filed Jan. 2, 1909. Serial No. 470,467. (Cl. 91—14.5.)



1. A strip serving apparatus comprising a strip support from which the strip may be served by draft by the operator, strip severing means, a reservoir, a primary moistener in operative relation to the reservoir and to the strip, and a supplemental moistener also in operative relation to the reservoir, thereby to obtain liquid therefrom and having means to present said moistener to the strip in such manner as to effect an even distribution of the liquid, to supply lacking liquid, and to remove excess liquid.

2. A strip serving apparatus comprising a strip support from which the strip may be served by draft by the operator, strip severing means, a reservoir, a primary moistener in operative relation to the reservoir and to the strip, a supplemental moistener also in operative relation to the reservoir thereby to obtain liquid therefrom and having means to present said moistener to the strip in such manner as to effect an even distribution of the liquid and to remove excess liquid, to supply lacking liquid, and means to hold said supplemental moistener in fixed position.

3. A strip serving apparatus comprising a strip support from which the strip may be served by draft by the operator, strip severing means, a reservoir, a rotatable primary moistener, and a fixed secondary moistener for the purpose set forth, both said moisteners being operatively positioned with respect to said reservoir to obtain liquid therefrom.



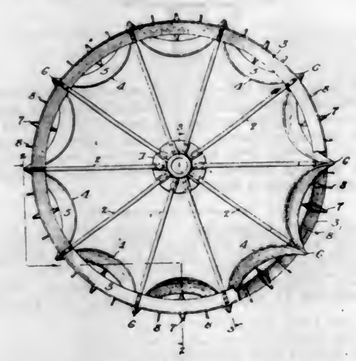
4. A strip serving apparatus comprising a strip support from which the strip may be served by draft by the operator, strip severing means, a reservoir, a rotatable moistener, and a fixed supplemental moistener having adjusting means, both said moisteners being operatively positioned with respect to said reservoir to obtain liquid therefrom.

5. A strip serving apparatus comprising a strip support from which the strip may be served by draft by the operator, strip severing means, a reservoir, a primary moistener, and a fixed supplemental moistener having adjustment means therefor, both said moisteners being operatively positioned with respect to said reservoir to obtain liquid therefrom.

[Claims 6 to 14 not printed in the Gazette.]

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1,229,404. TRACTION-WHEEL. LEOPOLD S. BOLD, La Farge, Wis. Filed Nov. 18, 1916. Serial No. 132,012. (Cl. 21—207.)



1. In a traction wheel the combination of inwardly converging spaced rims provided with cross cleats and adapted to compact soft ground toward the central plane of the wheel, and a series of inwardly concaved webs between said rims adapted to compact ground between the rims transversely to the cleats.

2. In a traction wheel the combination of inwardly converging spaced rims and a series of hypocycloidal webs between the rims, the rims and webs adapted to compact soft ground on which the wheel bears in directions transverse to each other.

3. In a traction wheel the combination of inwardly converging spaced rims, and hypocycloidal webs between the rims, having on their outer sides faces diverging inwardly and laterally from the central plane of the wheel, lateral openings being left between the webs and rims for the escape of soft ground.

4. In a traction wheel the combination of a pair of inwardly converging spaced circular rims, a series of hypocycloidal webs located between the rims and forming at their intersections transverse cleats extending across and outwardly beyond the rims.

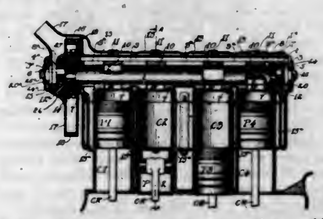
5. In a traction wheel the combination of a pair of inwardly converging spaced rims, a series of hypocycloidal webs located between the rims and forming at their intersections outwardly extending cleats across the treads of the rims, and transverse cleats extending outwardly from the central portions of the webs across the treads of the rims.

[Claims 6 and 7 not printed in the Gazette.]

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1,229,405. ROTARY VALVE FOR INTERNAL-COMBUSTION ENGINES. CHARLES M. BRADLEY, Harvey, Ill., assignor of one-half to James B. Ellis, Harvey, Ill. Filed Dec. 19, 1914. Serial No. 878,062. (Cl. 123—59.)

1. In an internal combustion engine, the combination of a plurality of cylinders, a valve casing extending across said cylinders and having ports communicating with each of said cylinders and adapted for the admission of gases to and the discharge thereof from said cylinders and having other ports leading respectively to inlet and exhaust passages, and a cylindrical valve rotatably mounted in said casing and having passages formed therein arranged to register with said ports so as to successively open communication between said cylinders and the respective inlet and exhaust passages, said casing having a longitudinally disposed oil passage extending substantially throughout the length thereof and having slots elongated in the direction of said oil passage and providing communication between said passage and the periphery of said valve substantially throughout that part of the valve which is intermediate said valve passages, said casing also having a plurality of oil supply ducts connecting with said oil passage at points intermediate said elongated slots through each of which oil is adapted to be continuously supplied to said passage.



3. In an internal combustion engine, the combination of a cylinder, a valve casing having separate inlet and exhaust ports and a common port for the admission of gases to and the discharge thereof from the cylinder, a hollow cylindrical valve rotatably mounted in said casing and having a passage formed therein adapted to successively open communication between said common port and said inlet and exhaust ports, a water jacket surrounding said valve casing and communicating with the water jacket of said cylinder, said cylindrical valve communicating at one end with the water jacket of said valve casing and forming the outlet passage for the cooling fluid, and means for packing the ends of said valve for preventing the leakage of cooling fluid from said water jacket into said engine cylinders, said casing having grooves formed therein inwardly of said packing means and having a duct leading therefrom to the outside whereby any seepage of cooling fluid through said packing is drained away.

4. In an internal combustion engine, the combination of a cylinder, a valve casing having separate inlet and exhaust ports and a common port for the admission of gases to and the discharge thereof from the cylinder, a hollow cylindrical valve rotatably mounted in said casing and having a passage formed therein adapted to successively open communication between said common port and said inlet and exhaust ports, a water jacket surrounding said valve casing and communicating with the water jacket of said cylinder, said cylindrical valve communicating at one end with the water jacket and forming the outlet passage for the cooling fluid, packing glands threaded externally so as to screw into said valve, an annular flange on said glands adapted to fit into the adjacent part of said valve casing and engage packing between said flange and the end of said valve, said water jacket having openings in the rear wall thereof in alinement with said valve seat through which said glands are adapted to be inserted or removed, plates for closing said openings, and plugs threaded into said plates and adapted to be removed to permit said glands to be reached for adjustment.

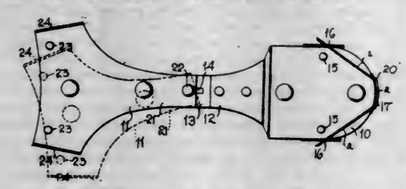
[Claim 2 not printed in the Gazette.]

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1,229,406. ICE-CREEPER. RAY A. BREHM, Palmyra, Pa. Filed Mar. 21, 1917. Serial No. 156,399. (Cl. 36—63.)

1. A creeper of the character described comprising a sole section and a heel section, provided with sole and

heel clamping members respectively, the clamping members being slotted and the sections having pins passing through said slots, the arrangement being such that the clamping members may be longitudinally or pivotally adjusted, calks mounted upon the heel and sole sections, and straps for engaging the creeper with the shoe.

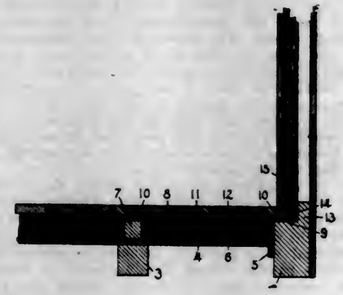


4. In a creeper of the character described, a sole section and a heel section, each formed of a relatively thin metallic plate and each formed with a tang, the tangs extending toward each other and being pivotally and slidingly connected, clamps mounted upon the sole section at opposite sides thereof and adjustable toward or from each other, a strap connecting said clamps, heel clamps mounted upon the bed section and adjustable toward or from each other, a strap engaging said clamps, relatively thick calk supporting plates riveted to the bottom of the heel section and of the sole section respectively and having screw-threaded openings, and calks having screw-threaded shanks engageable in said openings and having shoulders bearing against the under faces of said plates.

[Claims 2 and 3 not printed in the Gazette.]

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1,229,407. INSULATING-FLOOR. ALFRED G. BROWN, Los Angeles, Cal., assignor to Union Fibre Company, Winona, Minn., a Corporation of Minnesota. Filed Apr. 17, 1914. Serial No. 832,506. (Cl. 20—6.)



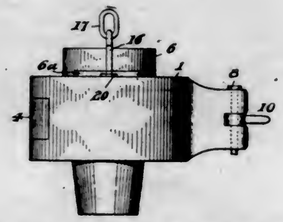
6. An insulating floor for refrigerator cars comprising in combination, side sills, sills arranged at intervals between said side sills, sheets of waterproofed heat insulating material cut and fitted to the spaces between all of said sills, including the side sills, sections of said insulating material also cut and fitted upon said sills and providing bearing surfaces above the level of the insulating material between the sills, and a finish floor laid upon said bearing surfaces.

7. An insulating floor for refrigerator cars, comprising in combination, side sills, sills arranged at intervals between said side sills, said side sills having recessed shoulders forming bearing surfaces in alinement with the upper surfaces of said intervening sills, sheeted, waterproofed, heat insulating material cut and fitted to the spaces between all of said sills including the side sills, sections of said insulating material also cut and fitted to said bearing surfaces upon the side sills and the upper surfaces of the other sills, and covering the same, a flooring laid over said insulating material on said sills and recessed shoulders, said flooring and the insulating material upon said recessed shoulders forming an insulating joint with the side construction of the car.

[Claims 1 to 5 not printed in the Gazette.]

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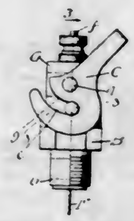
1,229,408. COMBINATION-CLAMP. STEVE BULLUM, Tulsa, Okla. Filed Nov. 27, 1916. Serial No. 133,676. (Cl. 24—136.)



A clamp of the type described, including a pair of hinged jaws, with means for the retention thereof in clamping position, gripping members positioned within said jaws and having guide-ways projecting laterally therefrom, bolts extending from said jaws through said guide-ways, said gripping members being provided with shoulders engaging the ends of said jaws.

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1,229,409. SPARK-PLUG. MORTON G. BUNNELL, Chicago, Ill., assignor to George C. Mastin, Chicago, Ill., and Edward W. Stees, Rockford, Ill.; Mabel C. Putnam executrix of said George C. Mastin, deceased. Filed Feb. 11, 1916. Serial No. 77,573. (Cl. 123—169.)



1. A spark plug comprising a metal socket-member adapted to be attached to the cylinder of an internal-combustion-engine, an insulator adapted to enter said socket-member, a metal jacket inclosing the outer portion of said insulator and adapted to enter the socket-member, a bail provided with hub-portions, means to pivot said hub-portions upon the opposite sides of said jacket, lateral projections on the socket-member, means carried by said hub-portions to engage said projections and thereby hold said insulator and jacket tightly within the socket-member when said bail is moved in one direction, and means on said hub-portions to engage said projections and thereby partially withdraw said insulator and jacket from the socket-member when said bail is moved in the opposite direction.

2. The spark plug (substantially as set forth in claim 1), said bail being arranged to swing from one side of the plug to the other to connect or disconnect said jacket and socket-member, and said engaging means on the hub-portions of the bail consisting of the opposite edges of an eccentrically curved slot.

3. The spark plug (substantially as set forth in claim 1), the axis of said bail being at right angles to the length of said insulator and disposed out of line with said projections longitudinally of said insulator.



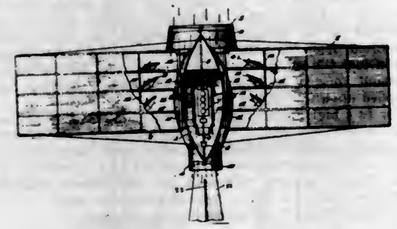
4. The spark plug (substantially as set forth in claim 1), said jacket being removable from the outer end of said insulator, and retaining means on the outer end of said insulator to engage the end of said jacket, said socket-member and jacket entirely inclosing said insulator.

5. The spark plug (substantially as set forth in claim 1), said socket-member having a plurality of shoulders forming seats therein, said insulator having a shoulder for engaging one of said seats, the inner end of said jacket engaging another of said seats, and said insulator having a shoulder for engaging the inner end of said jacket.

[Claims 6 to 11 not printed in the Gazette.]

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1,229,410. AEROPLANE. JOHN R. CAMPBELL, Austin, Tex. Filed Jan. 4, 1916. Serial No. 70,134. (Cl. 244—18.)



1. An aeroplane having in combination front and rear propellers, lateral planes, a casing surrounding the rear propeller and a system of air conduits associated with each plane, open to the atmosphere at various points under the plane and connected to said casing for communication therewith.

2. An aeroplane having in combination front and rear propellers, lateral planes, a casing surrounding the rear propeller, air trunk means extending from a point in the rear of the front propeller to said casing and communicating therewith, and a system of air conduits associated with each plane, open to the atmosphere at various points under the plane and connected to said air trunk means for communication therewith.

3. An aeroplane having in combination front and rear propellers, lateral planes, an open-ended casing surrounding the front propeller, a second casing surrounding the rear propeller, air trunk means extending from a point adjacent the rear end of the first casing to the second casing and communicating with the latter, and a system of air conduits associated with each plane, open to the atmosphere at various points under the plane and connected to said air trunk means for communication therewith.

4. An aeroplane having in combination front and rear propellers, lateral planes, a casing surrounding the rear propeller, a system of air conduits associated with each plane, open to the atmosphere at various points under the plane and connected to said casing for communication therewith, and a deflector combined with each atmospheric opening of said system of conduits.

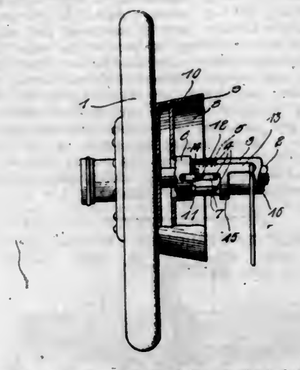
5. An aeroplane having in combination a front propulsion propeller, open-ended air trunk means extending from a point immediately in the rear thereof to a point in the rear of the aeroplane, a propeller casing forming a continuation of said air trunk means at the rear thereof, a second propulsion propeller arranged within said propeller casing and means for reversing the rotation of one of said propellers.

[Claims 6 to 10 not printed in the Gazette.]

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1,229,411. VEHICLE-BRAKE. CHARLES ALBERT CARPENTER, Columbus Junction, Iowa. Filed Nov. 6, 1916. Serial No. 129,797. (Cl. 74—13.)

The combination with a device having a fixed cylindrical member, one of the ends of which is reduced slightly in diameter and provided with circumferentially spaced longitudinally extending channels adjacent the reduced end forming fingers between said channels, a sleeve mounted upon the reduced end of said member and having circumferentially spaced longitudinally extending fingers at its free end received slidably in the channels in said member, a cone-shaped braking member carried by said sleeve, a cone-shaped brake drum carried by a rotating



part of the device, a pair of levers pivoted at one of their ends to two diametrically opposite first mentioned fingers, ears at the pivoted ends of said levers, links connecting said ears with the diametrically opposite sides of said sleeve, a U-shaped member partially encircling said cylindrical member and having its ends integrally connected to said levers, and a link connected to the free end of one of the levers for operating the same.

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1,229,412. RESILIENT WHEEL. LE ROY B. CARRIS, Clay county, Iowa. Filed Mar. 15, 1916. Serial No. 84,459. (Cl. 152—8.)



1. In a resilient wheel embodying a felly, shoes encircling the felly and spaced therefrom, helical springs interposed between the felly and shoes, chairs for receiving the inner ends of the springs, such chairs being disposed in pairs and the chairs of each pair having hooks at their outer ends and obliquely disposed hooked extensions at their inner ends, the hooked portions of such oblique extensions overlapping, and transverse supporting members engaging the hooked ends of the chairs for retaining them in place.

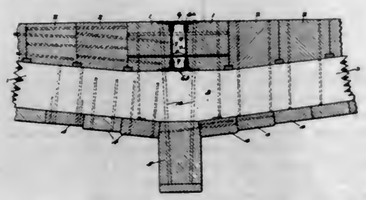
2. In a resilient wheel embodying a felly, side rings, transversely disposed pins supported by means of the side rings, shoes, radially disposed helical springs forming cushioning means for the shoes, and chairs for the inner ends of the springs, such chairs being provided in pairs and each pair of chairs having hooks at their outer ends to engage over certain transverse pins and provided at their inner ends with obliquely disposed hooked extensions having their hooked portions overlapped and engaging over the other transverse pins.

3. In a resilient wheel, sectional side rings, cushioning means disposed between the side rings, shoes yieldably supported by the cushioning means, and couplings arranged between the side rings and connecting the ends of adjacent sections of the side rings, such coupling means also acting as spacers and provided at their opposite edges with lugs to engage the contiguous ends of adjacent ring sections.

4. In a resilient wheel embodying a felly, side rings projecting beyond the felly, shoes, a pair of helical springs disposed radially between each of the shoes and felly, a pair of chairs for the springs of each of the shoes, such chairs having their outer ends hooked and their inner ends formed with oblique hooked extensions having their hooked portions overlapped, pins supported in the rings and engaging the outer hooks of each pair of chairs, an intermediate pin supported by the rings and engaging the overlapped ends of the hooked extensions of the chairs, and transversely disposed connecting means between the rings arranged between the springs and opposite the overlapped hooked ends of the said chairs.

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1,229,413. SHIP CONSTRUCTION. RICHARD CHILCOTT, Portland, Oreg. Filed Dec. 26, 1916. Serial No. 138,878. (Cl. 114—82.)



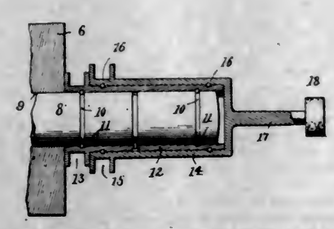
1. In ship construction, in combination with the floor ceiling timbers and keel, a steel girder extending lengthwise of the ship above the keel thereof and having its top plate substantially flush with the top surface of the floor, holding bolts extending through the web portion thereof and the floor timbers at the opposite sides, and holding bolts connecting said girder and said keel, substantially as described.

4. In ship construction, in combination with the floor timbers, floor frames and keel, a keelson comprising an iron girder formed of one or more steel webs between the floor timbers and above the middle of the floor frames, with bolts extending cross-wise through said girder and said floor timbers, and vertical bolts connecting said girder through the middle of the floor frames with the keel.

[Claims 2, 3, and 5 not printed in the Gazette.]

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1,229,414. FLOATING SPINDLE-BEARING. JAMES M. CLARK, 3d, Bridgeport, Conn. Filed Sept. 9, 1916. Serial No. 119,258. (Cl. 64—10.)



1. In a high speed spindle bearing of the class described, the combination with a central spindle, of a hollow shaft rotatably mounted thereon, an outer shaft mounted upon the hollow shaft and having an extended central shaft formed integral therewith, and means for independently driving each of said shafts.

2. In a high speed spindle bearing of the class described, the combination with a central spindle, of a hollow shaft rotatably mounted thereon and adapted to be independently operated, an outer shaft mounted upon the hollow shaft and adapted to be independently driven and having an extended central shaft formed integral therewith, and a cutting tool carried upon the said extension.

3. In a high speed spindle bearing of the class described, the combination with a central spindle, of a hollow shaft inclosing the spindle and having an extended central shaft formed integral therewith, a cutting tool carried upon the said extension, and one or more hollow shafts intermediate of said spindle and hollow shafts, and separate means for operating the intermediate shafts.

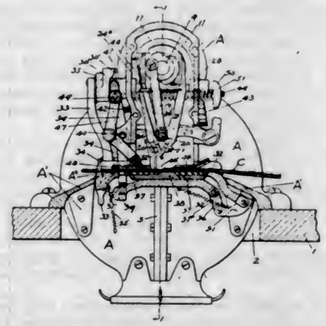
4. In a floating spindle bearing of the class described, the combination with a boring head, of a spindle carried thereby, a hollow shaft rotatably mounted thereon and adapted to be independently operated, an outer shaft mounted upon the hollow shaft and having a closed end to inclose the spindle and hollow shaft and having an extension formed integral therewith, and a cutting tool carried upon the said extension.

5. In a high speed spindle bearing of the class described, the combination with a central spindle, of a hollow shaft rotatably mounted thereon, an outer shaft mounted upon and inclosing the hollow shaft and having a central extension formed integral therewith and belt wheels mounted upon each of said shafts for operating the same.

[Claims 6 and 7 not printed in the Gazette.]

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1,229,415. CARPET-PICKING MACHINE. CHARLES A. CONNAN, Portland, Oreg. Filed Apr. 25, 1914. Serial No. 834,345. (Cl. 26—2.)



1. In a carpet picking machine, two picking levers pivotally mounted together adjacent their ends upon the same axis and provided at their pivoted ends with two picking jaws, means for oscillating said levers longitudinally, and rotating means operating between the opposite ends of said levers to intermittently move said jaws together into biting engagement with each other.

2. In a carpet picking machine, two picking levers pivotally mounted together adjacent their ends upon a common pivotal support and provided at their pivoted ends with two picking jaws, means for oscillating said pivotal support and said picking levers to and from the work, and a continuously rotating element operating by direct engagement with the upper ends of said picking levers to intermittently move said jaws together into biting engagement with each other.

3. In a carpet picking machine, the combination with picking levers and picking jaws and means for oscillating and operating the same, of means for regulating the oscillating stroke of said picking levers comprising a cam disk of various thicknesses adapted to be adjusted to different stop positions, substantially as described.

4. In a carpet picking machine, two picking jaws with means for oscillating and operating the same, and means projecting beyond the contacting surfaces of said jaws and adapted to engage the body of the carpet, whereby to operate as a stop to prevent the jaws from biting the body of the carpet.

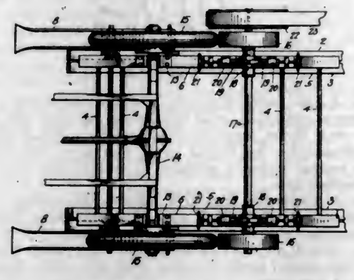
5. In a carpet picking machine, two picking jaws with means for oscillating and operating the same in the picking operation, one of said jaws projecting beyond the other whereby the latter bites against the side of the former, and the former acts as a stop to prevent any biting of the body of the carpet.

[Claims 6 to 13 not printed in the Gazette.]



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1,229,416. POWER-TRANSMISSION APPARATUS. HOMER P. CURTIS, Denver, Colo., assignor to Auto Power Generator & Appliance Co., a Corporation of Colorado. Filed Oct. 13, 1915. Serial No. 55,646. (Cl. 21—90.)



1. Power transmission apparatus comprising in combination with a support, a seat for an axle of a motor-vehicle, a pivoted track for guiding a set of wheels of a motor vehicle driven thereonto, to a position in which their axle is above the seat, a stop which normally obstructs a pivotal movement of the track by the weight of the vehicle, and which is removable to permit of a downward movement of the track whereby the axle of the vehicle wheels supported thereon is permitted to move into the seat, a rotary friction element engaging a vehicle wheel on an axle occupying the seat, and motion transmission means in operative connection with said element.

2. A power transmission apparatus comprising in combination with a support, a normally slanting track extending in opposite directions from a pivotal axis about which it has a movement, a seat for an axle of a motor-vehicle, on the support above the normally uppermost portion of said track at one side of its pivotal axis, a rotary friction-element mounted on the support and adapted to engage a vehicle-wheel on an axle occupying said seat, and motion-transmission means in operative connection with said element.

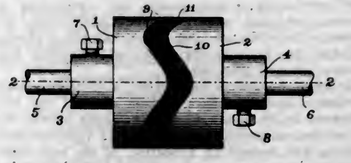
3. A power transmission apparatus comprising in combination with a support, a normally slanting track extending in opposite directions from a pivotal axis about which it has a movement and composed of independently movable rails, a seat for an axle of a motor-vehicle, on the support above the normally uppermost portion of said track at one side of its pivotal axis, a rotary friction-element mounted on the support and adapted to engage a vehicle-wheel on an axle occupying said seat, and motion transmission means in operative connection with said element.

4. A power-transmission apparatus comprising in combination with a support, a normally slanting track extending in opposite directions from a pivotal axis about which it has a movement, and composed of rails which are laterally adjustable to vary the gage of the track, a seat for an axle of a motor-vehicle, on the support above the normally uppermost portion of said track at one side of its pivotal axis, a rotary friction-element mounted on the support and adapted to engage a vehicle wheel on an axle occupying said seat, and motion-transmission means in operative connection with said element.

5. A power transmission apparatus comprising a supporting structure including two connected side-members, a normally slanting track extending in opposite directions from a pivotal axis about which it has a movement, and composed of two rails disposed exteriorly of said side-members, seats for an axle of a motor-vehicle on said side-members above the normally uppermost portion of the track at one side of its pivotal axis, a rotary friction-element on the side-members, for engagement with the wheels on an axle occupying said seats, and motion-transmission means in operative connection with said element.

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1,229,417. COUPLING. LEO DAFT, Rutherford, N. J., assignor to Electro-Chemical Rubber and Manufacturing Company, a Corporation of New Jersey. Filed May 19, 1914. Serial No. 839,485. (Cl. 64—13.)



1. A coupling comprising two disks of rigid material having wave-like lateral faces adapted to be secured respectively to the two shafts to be coupled together, and a disk of yieldable material having wave-like lateral faces interposed between the said first mentioned disks so that the contacting wave-like lateral faces are in contact substantially throughout, the wave-like faces being so constructed that only compressive stress is exerted on said disk of yieldable material by the transmission of power from one of said shafts to the other.

2. A coupling comprising two disks adapted to be secured respectively to the two shafts which are to be coupled together, and a yieldable disk interposed between and contacting with the adjacent lateral faces of said first-mentioned disks, the contacting lateral faces of all of said disks being wave-like surfaces.

3. A coupling comprising two disks of rigid material adapted to be secured respectively to the two shafts to be coupled together, and a disk of yieldable material interposed between and connected to the adjacent faces of said first mentioned disks, the connecting faces of all of said disks being wave like surfaces.

4. A coupling comprising two disks of rigid material adapted to be secured respectively to the two shafts to be coupled together and a disk of yieldable material interposed between and connected to the adjacent lateral faces of said first mentioned disks, the connecting lateral faces of all of said disks being wave-like surfaces.

5. A coupling comprising two metallic disks adapted to be secured respectively to the two shafts which are to be coupled together, and a rubber disk interposed between and connected to the adjacent faces of said metallic disks, the connecting faces of all of said disks being wave like surfaces.

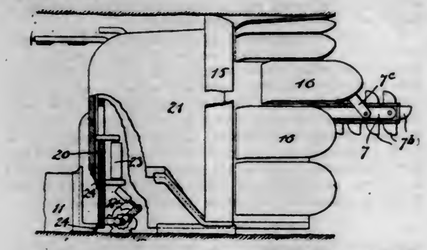
[Claims 6 to 12 not printed in the Gazette.]

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1,229,418. MINING APPARATUS. TRIMBLE DE ROODE, New York, N. Y. Filed Dec. 29, 1911. Serial No. 668,410. (Cl. 61—44.)

1. In an apparatus for mining, protecting means forming a working space open at the front, means for transferring and depositing to the rear of said protecting means a portion of the material excavated, means for restraining said material at the rear of said protecting means, said

restraining means having an outlet passage communicating with the rear of the working space, and means for transferring a portion of the excavated material through said passage.



2. In an apparatus for mining, a protecting means forming a working space open at the front, means for transferring a portion of the excavated material from the working space to and depositing the same at the rear of said protecting means, means for restraining said deposited material, said last mentioned means having a passage therethrough, and means extending through said passage for transferring from said working space the balance of said material.

3. In an apparatus for mining, a protecting means furnishing a working space therein open at the front and arranged to be advanced and including a rear bulkhead, means for excavating in front of said bulkhead and transferring and depositing a portion of the excavated material in a wet state to the rear of and against the bulkhead to aid in progressively advancing the latter.

4. In an apparatus for mining, a protecting shield furnishing a working space open at the front for excavation, hydraulic means for cutting away the material at the front of the shield, said shield having a protected outlet at its rear of less cross sectional area than the cross sectional area of the working space within the shield, and hydraulic means for transferring a part of the material excavated and depositing the same directly behind the shield as the same is advanced, and for transferring a portion of said excavated material through said rear opening.

5. In an apparatus for mining, a movable shield open at the front having a rear outlet arranged at one side of the center thereof, means for excavating material in front of said shield, a protected passageway extending from said rear outlet, means for depositing excavated material at the rear of said shield and around said protected passage, and means for turning said shield in its direction of travel.

[Claims 6 to 21 not printed in the Gazette.]

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1,229,419. STRING-MAKER'S PEG. HARRY L. DIEHL, Chicago, Ill. Filed Nov. 8, 1915. Serial No. 60,460. (Cl. 30—9.)



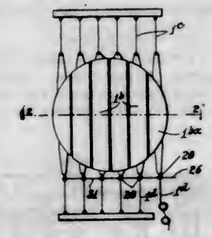
1. A string maker's peg consisting of a main branch, means near the rear end thereof for rigidly supporting it, said main branch being approximately elliptical in cross-section, a movable branch hinged at the forward end to the main branch, the main branch being cut away at the edge to receive the movable branch, the movable branch supplementing the main branch at the cut-away portion thereof to thereby round out the configuration, and spring mechanism for normally holding said branches expanded.

2. A string maker's peg having two branches hinged together, means for yieldingly holding said branches divergent; and a cutting blade fastened to one of said branches and facing toward the forward end of the peg.

3. A bifurcated string maker's peg having two branches hinged together, means for yieldingly holding said branches divergent, means for rigidly supporting one of said branches, and cutting means fastened to the rigidly supported branch and having a cutting edge both above and below the branch on which it is supported.

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1,229,420. REFLECTOR. THOMAS BULLITT DIXON, New York, N. Y. Original application filed July 19, 1915, Serial No. 40,694. Divided and this application filed Aug. 1, 1916. Serial No. 112,486. (Cl. 88—1.)



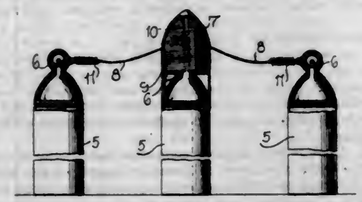
1. A low-inertia large-area reflector comprising a plurality of reflecting strips located side by side, mountings for such strips providing substantially parallel axes of oscillation for the several strips, and means for causing the several strips to oscillate in unison, each about its individual axis.

2. A low-inertia large-area reflector, comprising a plurality of reflecting strips, and a fiber suspension for each such strip, several fiber suspensions arranged to provide axes of oscillation which are parallel, and means connecting the several strips to cause them to oscillate together.

3. A low-inertia large-area reflector comprising a plurality of reflecting strips, independent fiber suspensions for the several strips providing substantially parallel axes of oscillation, each such strip provided with a transverse bracket, and traces connecting the several brackets to cause the several strips to oscillate together.

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1,229,421. PROJECTILE. DAVID GRIFFIN DOWNS, Estherville, Iowa, assignor of one-half to George E. Groves, Estherville, Iowa. Filed Dec. 24, 1915, Serial No. 68,548. Renewed Mar. 21, 1917. Serial No. 156,462. (Cl. 102—26.)



1. A projectile of the character described including spaced members, and a flexible element having a coiled portion carried by one of said members, said element being connected to the remaining members.

2. A projectile of the character described including a series of projectiles proper, cable sections yieldably connected at their ends to said projectiles, and explosive combs attached to each of the cable sections.

3. A projectile of the character described including a series of spaced projectiles proper, cables connecting the projectiles to each other, inflammable means carried by each of the cables, and a combustible agent carried by each of said projectiles to be supplied to the inflammable means.

4. A projectile of the character described including a plurality of projectiles proper each being hollow, a container in each projectile, said containers being adapted to contain a combustible fluid, cables connecting the projectiles to each other, a foraminated cylinder on each of said cables, an inflammable material secured upon each cylinder, and conduits to supply the combustible fluid from the projectiles to the interior of said cylinders.

5. A projectile of the character described including a spaced series of projectiles proper, one of said projectiles being provided with a housing, and a cable having a coiled portion contained within said housing, the extremities of the cable being connected to the other projectiles.

[Claim 6 not printed in the Gazette.]



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1,229,422. PROCESS OF MAKING FIBER FOR PAPER, &c. VIGGO DREWSEN, Brooklyn, N. Y. Filed Mar. 12, 1915, Serial No. 13,863. Renewed Feb. 27, 1917. Serial No. 151,378. (Cl. 92—11.)

1. The process of making paper fiber from cornstalks which consists in boiling the raw fibrous material for five to six hours under a pressure of about sixty to seventy pounds per square inch in the absence of substantial proportions of free caustic or strong acid in an aqueous solution of sufficient sodium monosulfite to represent about 25% of the dry weight of the raw fibrous material and remain alkaline to litmus throughout the disintegrating process, until the connective tissue is dissolved or removed and a soft strong fibrous material produced which may be directly used for paper making.

2. The process of making paper fiber from cornstalks which consists in boiling the raw fibrous material for five to six hours under pressure in the absence of substantial proportions of free caustic or strong acid in an aqueous solution of sufficient sodium monosulfite to remain alkaline to litmus throughout the disintegrating process, until the connective tissue is dissolved or removed and a soft strong fibrous material produced.

3. The process of making paper fiber from cornstalks, bagasse or similar fibrous material which consists in boiling the raw fibrous material for five to six hours under a pressure of 40 to 120 pounds per square inch in the absence of substantial proportions of free caustic in an aqueous solution of sufficient sodium monosulfite to represent about 25% of the dry weight of the raw fibrous material and remain alkaline to litmus throughout the disintegrating process, until the connective tissue is dissolved, loosened or removed and produce soft strong fibrous material including pith material which may be directly used for paper making.

4. The process of making paper fiber from cornstalks, bagasse or similar fibrous material which consists in boiling the raw fibrous material for five to six hours under a pressure of 40 to 120 pounds per square inch in the absence of large proportions of free caustic in an aqueous solution of sufficient sodium monosulfite to remain alkaline to litmus throughout the disintegrating process, until the connective tissue is dissolved or loosened or removed and produce soft strong fibrous material including pith material which may be directly used for paper making.

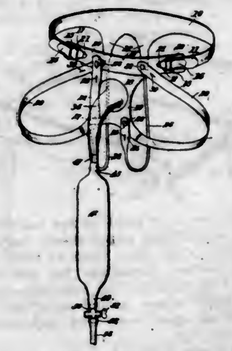
5. The process of making paper fiber from cornstalks, bagasse or similar fibrous material which consists in boiling the raw fibrous material under pressure in the absence of large proportions of free caustic in an aqueous solution of sufficient sodium monosulfite to remain alkaline to litmus throughout the disintegrating process, until the connective tissue is dissolved, loosened or removed and produce soft strong fibrous material including pith material.

[Claims 6 to 8 not printed in the Gazette.]

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1,229,423. DRAINAGE APPLIANCE. ERNEST G. ECKENRODE, Baltimore, Md. Filed June 11, 1913. Serial No. 773,134. (Cl. 128—51.)

1. In a drainage appliance, a body piece provided with a pouch, a supporting band having its ends pivotally connected to said body piece, and means swiveled to said pouch to carry off drainage therefrom.



2. In a drainage appliance, a body piece provided with a pouch, and means swiveled to said pouch to carry off drainage therefrom.

3. In a drainage appliance, a body piece provided with a pouch, a receptacle swiveled to said pouch, and a drainage tube swiveled to the lower end of said receptacle.

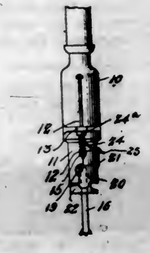
4. In a drainage appliance, a body piece provided with a centrally disposed opening having a flange depending therefrom to form an inner neck, a pouch secured to said body piece in spaced relation to the inner neck, and reinforcing means arranged within the pouch and extending substantially the length of the latter to hold the pouch in distended position.

5. In a drainage appliance, a body piece provided with a centrally disposed opening having a flange depending therefrom to form an inner neck, a pouch secured to said body piece in spaced relation to the inner neck, and reinforcing means arranged to hold the pouch in distended position, and a flexible connection between the upper end of said reinforcing means and the pouch.

[Claims 6 to 17 not printed in the Gazette.]

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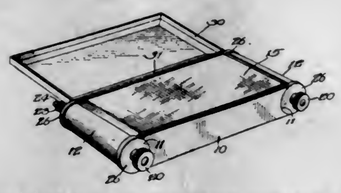
1,229,424. TOOL-RETAINER FOR DRILLING-MACHINES. WALMAC E. EDWARDS, Goldfield, Nev. Filed Nov. 7, 1916. Serial No. 130,053. (Cl. 121—20.)



2. In a drilling engine, the combination with the forward head of the drilling engine, of a yoke engaging about one side of said head and having a forwardly projecting portion slotted to receive the shank of a tool therethrough, a pivotal support for the yoke carried upon said head, said yoke being adapted to be swung about said support to engage and disengage the forward end thereof with the tool, and a locking member carried by the head adapted to engage the yoke when swung into engagement with the tool to hold the yoke from disengagement therefrom.

[Claims 1 and 3 to 5 not printed in the Gazette.]

1,229,425. INKING-PAD FOR HAND-STAMPS. CHARLES S. ELLIS, Chicago, Ill. Filed May 19, 1916. Serial No. 98,510. (Cl. 91—54.5.)



1. An inking device for hand stamps comprising a base having a flat non-yielding upper stamp supporting face, reels at the ends of the base, flush at their upper sides with said flat surface, mountings for said reels which are vertically fixed relatively to each other and to said face, and an inked ribbon wound about said reels and stretching between them over and supported on said stamp supporting face.

2. An inking device for hand stamps comprising a relatively thick base provided at its ends with cylindric recesses and provided with a flat non-yielding upper stamp supporting face; reels mounted to rotate in said recesses and of a diameter substantially equal to the thickness of the base, and an inked ribbon wound upon said reels and stretched across the flat upper surface of the support.

3. An inking device for hand stamps comprising a relatively thick base member; a sheet metal member comprising an intermediate ribbon backing portion which rests on the base member and is formed at the ends of the base to provide reel cases; reels rotatively mounted in said cases, and a ribbon wound upon said reels and supported on the intermediate portion of the sheet metal member between said reel cases.

4. In an inking device for hand stamps, a sheet metal member composed of an intermediate solid ribbon support and end reel cases, reels rotatively mounted in said cases, and a ribbon wound upon the reels and stretched across the intermediate support between the reels, and upwardly exposed throughout the extent of said ribbon support.

5. An inking device for hand stamps comprising a base, a sheet metal member composed of an intermediate non-yielding ribbon support resting on said base and end reel cases; reels rotatively mounted in said cases, and a ribbon wound upon the reels and stretched across the intermediate support between the reels, the end walls of said reel cases being removable to permit the reels with the ribbon thereon to be removed from the cases, with means for fastening the end walls to the cases.

[Claims 6 and 7 not printed in the Gazette.]

1,229,426. TOWING CRIB OR HULL. FREDERICK A. EMERICK, Oswego, N. Y. Filed Dec. 9, 1916. Serial No. 136,002. (Cl. 9—15.)

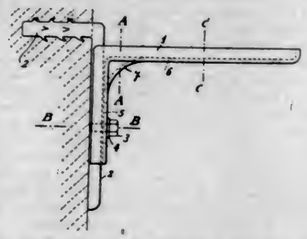


1. A floatable towing crib comprising bottom, side and end members spaced apart and fastened together, and provided at one end with a series of floatable detachable gate members that are arranged to be floated out of position; and means for holding the gate members severally in gate-forming position, such means including upwardly and inwardly inclined posts provided with gate-member-engaging hooks and means for temporarily locking the hooks in place.

2. A floatable towing crib comprising a hull having a water-admission opening; an end gate for an otherwise open end of the hull; and means for holding the gate in position; said gate comprising a plurality of floatable members arranged to be floated out of position, and the hull tapering from its gate end to its other end.

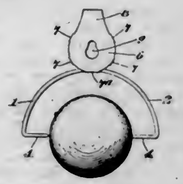
3. A floatable towing crib comprising bottom, side and end members spaced apart and fastened together, and provided at one end with a series of flotable detachable gate members that are arranged to be floated out of position; and means for holding the gate members severally in gate-forming position; and cross-beams connecting side beams of the crib; and cross-irons uniting said side beams and being located along the upper sides of the cross-beams for protection thereof.

1,229,427. BRACKET-SUPPORT OR THE LIKE. FRITZ ERISMANN, Lucerne, Switzerland. Filed Apr. 1, 1916. Serial No. 88,371. (Cl. 248—19.)



A device of the character described, comprising in combination, a bar, a barbed stem at the end of said bar adapted to be driven into a wall, a bracket comprising two members of U-shaped cross-section in the channel of which said bar is guided and rectangularly disposed to each other, a rib pressed out of the material of the bracket for stiffening the same at the meeting edge of the rectangularly disposed members, a bolt extending through holes of the bracket members into said bar, and a nut and washer on said bolt, substantially as described and for the purpose set forth.

1,229,428. GOLF-BALL HANGER. THORALF FABRITIUS, Beacon, N. Y. Filed Mar. 3, 1917. Serial No. 152,181. (Cl. 91—60.)



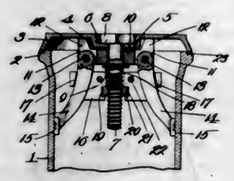
1. A device of the class set forth, comprising a plate having an aperture adapted to receive the end of a support, a downwardly facing hook formed integrally with said plate, a pair of outwardly and downwardly extending resilient arms rigidly secured to said plate at their upper ends, and a pair of alined inwardly facing clamping jaws carried by the lower ends of said arms.

3. A golf-ball hanger comprising a body portion formed by bending a length of resilient wire to form a central loop and a pair of resilient arms extending outwardly and downwardly from said loop, the lower ends of said arms being turned inwardly to form alined ball-engaging members, and a metal plate formed with an integral downwardly facing hook, said plate being provided with lugs bent around said loop at opposite sides of the loop and with a lug bent around said arms at their point of intersection, whereby said hook-carrying plate is rigidly held to one side of the loop against relative movement and the resilient arms are rigidly locked together at their upper ends.

[Claim 2 not printed in the Gazette.]



1,229,429. CLOSURE FOR CURB-BOXES. JOHN P. FARLEY, Kansas City, Mo. Filed Nov. 18, 1916. Serial No. 132,213. (Cl. 137—13.)

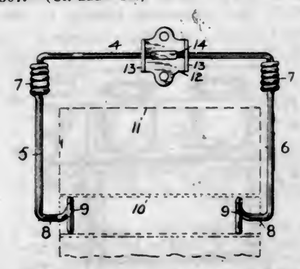


1. The combination with a curb box of a cap fitting thereon, a headed bolt extending vertically down through the cap and into the box, a cross-head journaled loosely on the bolt below the cap and non-rotatable with respect thereto, means secured to the bolt for holding the cross head against the underside of the cap, a pair of downwardly diverging jaws pivoted to opposite ends of the cross-head, a nut engaging the bolt below the cross-head, and a bar fitting slidingly on the bolt and provided with opposite channels receiving the nut and preventing rotatable movement thereof and provided also with downwardly diverging end openings loosely receiving the swinging jaws intermediate the ends thereof.

2. The combination with a curb-box, of a cap fitting thereon and provided centrally with a recess at its upper side and with a depending boss diametrically bifurcated, a bolt journaled in and extending through the cap and boss thereof and provided with an angular head occupying said recess and bearing upon the cap, a cross head fitting in the bifurcation of the boss and journaled on said bolt, the opposite ends of said cross-head being bifurcated and provided at opposite sides of the bifurcations with upwardly projecting arms engaging the underside of the cap, a pair of swinging jaws pivoted in the bifurcated ends of the cross-head, means secured to the bolt for preventing downward movement of the cross-head on the bolt, a cross bar fitting loosely on the bolt below the cross-head and provided with downwardly diverging openings through which said jaws extend, the inner walls of said openings being adapted to impart outward swinging movement to the jaws when said bar is moved upward and the outer walls of said openings being adapted to impart inward swinging movement to the jaws when said cross bar is moved downward, said cross bar being provided with opposite parallel channels, and a nut fitting non-rotatably in said channels and engaging said bolt and adapted when the latter is turned in one direction or the other to impart vertical movement in one direction or the other to said crossbar.

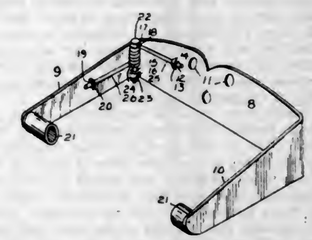
3. A closure cap for curb boxes or the like, comprising a cap having a central opening and a central depending boss, the latter being bifurcated at its lower end, a vertical bolt extending rotatably through the cap and boss thereof and provided with an angular head at its upper end engaging the upper side of the cap, a cross head fitting rotatably on the bolt and within the bifurcation of the boss and provided at its ends with bifurcations and arms projecting upwardly from opposite sides of said bifurcations and engaging the underside of the cap, a pair of jaws pivotally connected at their upper ends in the bifurcations of the cross head, means secured to the bolt for preventing downward movement thereon of said cross head, a bar provided with a central opening loosely receiving the bolt and with a pair of downwardly diverging openings through which said jaws loosely extend and provided also with a pair of parallel horizontal channels at opposite sides of and communicating with said central opening, and a non-corrosive nut engaging the bolt and fitting non-rotatably in the channels of said bar.

1,229,430. PAPER-HOLDER. ARTHUR J. FARRELL, Pittsburgh, Pa. Filed Oct. 18, 1916. Serial No. 126,307. (Cl. 211—31.)



A roll paper holder comprising a yoke-shaped element including an intermediate portion and a pair of arms each having its free end bent inwardly at an angle, said angular end having its free terminus merging into a vertically disposed circular loop surrounding said inner terminus, said loop providing bearings for a roll of paper, said element further having inherent means to permit of an arm being sprung away and toward the other of the arms, said inherent means being in the form of a coil extending in a direction of the length of the arm and forming a continuation of the intermediate portion of the arm.

1,229,431. PAPER-HOLDER. ARTHUR J. FARRELL, Pittsburgh, Pa. Filed Oct. 18, 1916. Serial No. 126,308. (Cl. 211—31.)

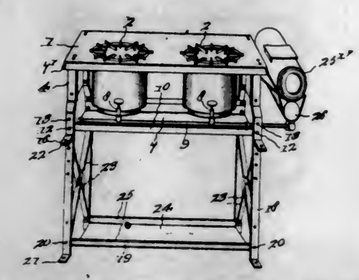


A roll paper holder comprising a yoke-shaped element including an intermediate portion and a pair of supporting arms, each of said arms having its free end provided with an inwardly extending bearing for one end of a roll of paper, said element at that point of mergence between an arm and the intermediate portion having a pair of inwardly extending integral retaining members arranged in parallelism, a pin extending through said members and connected therewith, a coil spring mounted on said pin between said members and having both ends thereof extended, means for slidably connecting one of the extended ends of said spring against the inner face of said intermediate portion, and means for slidably connecting the other extended end of said spring to the inner face of said arm whereby the latter will have a tendency to spring toward the other of said arms.

1,229,432. COLLAPSIBLE STOVE. GUY W. FERDON, Cresskill, N. J. Filed Oct. 19, 1916. Serial No. 126,573. (Cl. 126—44.)

1. In a knock-down fluid fuel stove, in combination, a top plate, inwardly folding legs pivoted at their upper

ends to said top plate, a bottom pan, a feeding pipe and burners attached to said pan, means whereby said pan may be removably secured to the lower ends of said legs so as to hold the top plate, the pan with its attachments and the legs rigid for use, a table provided with upwardly extending legs, foldable downwardly upon said table, and means whereby said table legs may be removably secured to the said inwardly folding legs whereby the table is maintained in rigid supporting relation to the other parts.



2. In a knock-down stove, in combination, a top plate, a grate secured to said plate, a pair of brackets bolted to the underside of said plate at each end thereof, a pair of flat legs braced together and pivoted to each pair of brackets so as to fold close down upon the under side of the plate, said legs being provided with perforations at their lower ends, and a pan carrying a burner provided with upturned side flanges, there being perforations through said flanges adapted to register with the perforations in said legs, whereby said legs may be removably and rigidely secured together, said legs being provided with broad outwardly extending feet.

3. In a knock-down stove, in combination, a top plate, infolding legs hinged to the under side of said plate, a pan carrying burners, said pan being secured to said legs beneath said plate, a stove-supporting stand or table provided with down-folding legs or supports, a removable bracing shelf on said table, the plate, the pan and the table adapted to constitute three flat parallel units of little thickness, whereby they may all be packed together in a package of comparatively little thickness.

5. In a knock-down stove, in combination, a top plate provided with grates fixed thereon, infolding legs, hinged to the under side of said plate, a burner carrying pan adapted to be secured to the lower ends of said legs when the latter are down turned, a fuel supply for said burners, said legs provided with feet, a table or bench provided with down folding legs, feet on the upper ends of said legs to register with the feet of the plate legs, means for securing said feet together, said plate, pan and table constituting three elements of similar length and breadth, and adapted to be united into a package comparable with the thickness of the fuel supply means.

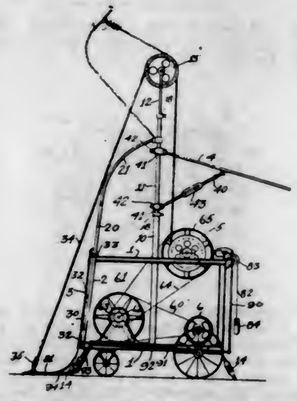
6. In a knock-down fluid fuel stove, in combination, a top plate, inwardly folding pairs of legs hinged to the underside of said top plate, there being bolt holes through said legs at their lower ends, a pan carrying burners and provided with upturned flanges with holes registering with the holes in the legs, whereby the parts may be detachably bolted together, and cross irons secured to said plate, said irons being bent at points to form feet acting to help support the pan.

[Claims 4 and 7 to 9 not printed in the Gazette.]

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1,229,433. PACKAGE-HOIST. JOHN W. FLAHERTY, Seattle, Wash. Filed May 23, 1916. Serial No. 99,279. (Cl. 214—3.)

1. A package elevator comprising upwardly extensible posts, rope pulleys carried by the upper ends of said posts, guide bars extending upwardly and curving laterally at their upper ends toward the posts, said guides being composed of extensible posts, a package receiving apron having guiding engagement by its upper end with said guides, and hoist cables passing over the rope pulleys and downward to a connection with the lower outer part of the apron.



2. A package elevator comprising upwardly extensible posts, rope pulleys carried by the upper ends of said posts, guide bars extending upwardly and curving laterally at their upper ends toward the posts, said guides being composed of extensible posts, a package chute adjustable upon the posts and extending from just below the connection of the guides therewith.

3. A package elevator comprising upwardly extensible posts, rope pulleys carried by the upper ends of said posts, guide bars extending upwardly and curving laterally at their upper ends toward the posts, said guides being composed of extensible posts, a package receiving apron having guiding engagement by its upper end with said guides, and hoist cables passing over the rope pulleys and downward to a connection with the lower outer part of the apron, a cable hoisting means mounted toward the base of the posts, and means for automatically controlling the operation of the cable hoist.

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1,229,434. SILENCER. JAMES FLOCKHART, Denver, Colo. Filed Apr. 14, 1916. Serial No. 91,191. (Cl. 210—15.)



1. A silencer comprising in combination with a supply pipe, a casing through which the fluid is adapted to pass in an upward course, an upper and lower dome-shaped chamber in said casing, means for retarding the passage of fluid therethrough, the supply pipe projecting upwardly into the casing and provided with downwardly inclined ports for discharging the fluid downwardly against the wall of the lower dome-shaped chamber.

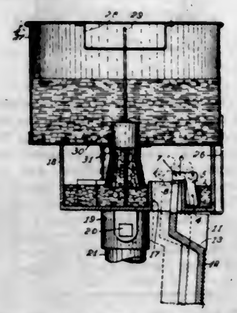
2. A silencer comprising in combination with a supply pipe, a casing, and means located therein for retarding the passage of fluid therethrough, said means including a plurality of porous diaphragms suitably spaced from one another, each consisting of a pair of metal disks having perforations of equal size formed therein and an interposed strainer comprising disks of woven and metal fabric respectively, the first named disks being so arranged that their perforations are staggered when the parts are assembled, whereby the fluid in passing through the casing in a given direction, is caused to move at right angles to its path of travel intermediate of the diaphragms.

3. A silencer comprising in combination with a supply pipe, a casing having a cylindrical portion, means located therein for retarding the passage of fluid therethrough, said means including a pair of perforated disks fitted into the cylindrical portion of the casing, the perforations of one disk being so disposed in relation to the perforations of the other as to preclude the possibility of their coming into alinement or registration during rotation.



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1,229,435. HOG-OILER. WILLARD M. FLYNN, Waterloo, Iowa. Filed July 29, 1916. Serial No. 112,054. (Cl. 119—157.)



1. In combination, a reservoir, a tank supported in inverted position upon the reservoir to deliver its contents thereinto below a vacuum permitting the maintaining of a constant level of fluid within the reservoir, said reservoir having a port in its bottom surrounded by raised marginal walls extending partly to the top of the reservoir, a bar mounted swingingly to be positioned to one side, in a limited movement, of its center of gravity, the upper end of the bar extending through said port, an angular link pivoted to the top of said bar, and a cup pivotally mounted above its center of gravity on said link, and adapted when the bar is moved upwardly, to drag over the marginal wall of said port, tilting, to deliver its contents downwardly upon the bar, said cup automatically being returned to its first position within the fluid in the reservoir for refilling when the bar is released and returns under the influence of gravity to its first position.

2. In combination, a supporting standard, a reservoir mounted on said standard, provided in its bottom with a port having marginal walls raised part way to the top of the reservoir, means for supplying fluid to said reservoir adapted to maintain it at a constant level therein lower than the height of the marginal walls of said port, a bar pivoted to the base of said standard, its upper end extended through said port, an angular linking-connection pivoted to the top of said bar, an invertible cup having a delivery-orifice in one side and pivotally mounted on said linking-connection, said bar having a bend below said port to supply an inclined offset therein, and having fluid-spreading-ridges arranged on its surface below said bend, said bar having roughened marginal ribs at each side of said spreading ridges, the bar when in its lowered position causing said linking-connection to swing said cup into a filling position in the fluid in the reservoir, and when moved to its upper position to cause the linking-connection to move the cup across the marginal wall of the port, to thereby tilt the cup and cause it to deliver its contents through its delivery-orifice upon the sloping offset part of the bar, the bar returning by gravity to its first lowered position when released.

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1,229,436. BOTTLE-CLOSURE. ALVAN FOOTE FOSS, Montreal, Quebec, Canada. Filed June 23, 1916. Serial No. 105,369. (Cl. 215—14.)

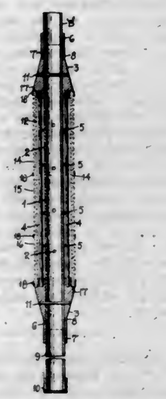


1. In a bottle closure, a disk having a lug projecting from the edge thereof and said lug having cuts extending inwardly from the side edges of the lug and terminating at the continuation line of the edge through the lug.

2. In a bottle cap, a piece of cardboard having a lug projecting therefrom and fillets formed in the corners produced by the intersection of the sides of the lug and the outer edge of the cap, said fillets being separated from the lug by oblique cuts which terminate at the continuation line of the edge of the cap through the lug.

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1,229,437. STRAINER. WILLIAM H. FOSTER, Bartlesville, Okla. Filed Oct. 9, 1916. Serial No. 124,581. (Cl. 210—16.)



1. A strainer of the character described comprising an elongated hollow member having its intermediate portion provided with perforations, sleeves secured to the perforate member in predetermined spaced relation, rods connecting said sleeves, and a pervious cylinder interposed between the sleeves and surrounding the rods and perforate member.

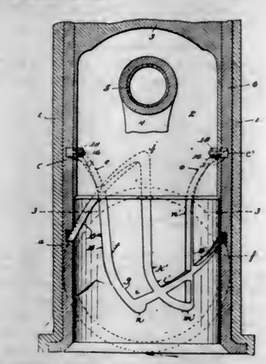
[Claims 2 and 3 not printed in the Gazette.]

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1,229,438. INTERNAL-COMBUSTION ENGINE. HOWARD S. FARCH, Brooklyn, N. Y. Filed Aug. 31, 1912. Serial No. 718,085. (Cl. 123—76.)

1. An internal combustion engine including a cylinder having an auxiliary exhaust port and an air inlet port, said ports being in diametrical opposition, a sleeve valve rotatable inside of the cylinder, the sleeve valve having an auxiliary exhaust opening and an air opening, said openings being out of diametrical opposition, the sleeve

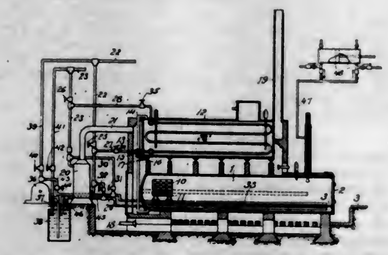
valve having a pair of grooves on the inside surface, a piston movable inside of the sleeve valve, and rollers on the piston movable in the respective grooves, whereby the sleeve valve is rotated to momentarily move the air opening into registration with the air port as the piston begins the exhaust stroke.



2. An internal combustion engine including a cylinder having a main exhaust port at its upper end, a sleeve valve rotatable inside of the cylinder the sleeve valve having a single opening registrable with the main exhaust port, the sleeve valve having grooves on its inside surface, a piston reciprocable inside of the sleeve valve, and rollers on the piston movable in the grooves said grooves including diagonal and vertical sections whereby the speed of rotation of the sleeve valve is accelerated as the single opening approaches the exhaust port and the piston performs its working stroke, and momentarily stopped as the single opening registers with the exhaust port and the piston performs a part of its exhaust stroke.

3. An internal combustion engine including a cylinder having inlet and exhaust ports at its upper end, and an auxiliary exhaust port and an air inlet port at its lower end, a piston having a valve rotating roller, a sleeve valve disposed between the piston and the cylinder said valve having openings registrable with the respective cylinder ports, said valve having a groove for receiving the roller, the groove including curved and diagonal stroke sections varying in degrees of extension, and vertical stroke-sections having curved termini, the stroke-sections of the groove obtaining the rotation, acceleration of rotation and stopping of the valve in succession as the various ports and openings are moved into registration and the piston performs its strokes.

1,229,439. METHOD OF TREATING POROUS BLOCKS. CLAUD E. FULLER, Kansas City, Mo. Filed Oct. 20, 1916. Serial No. 126,805. (Cl. 99—12.)



1. The method consisting in impregnating a porous block with a liquid which solidifies at ordinary temperatures, and then subjecting the block to a vacuum before the liquid solidifies.

2. The method consisting in impregnating a porous block, while subjected to pressure greater than atmospheric, with a liquid which solidifies at ordinary temperatures, and then subjecting the block to a vacuum before the liquid solidifies.

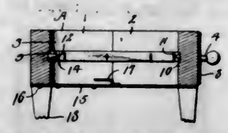
3. The method consisting in impregnating a porous block with liquid bitumen, and then subjecting the block to a vacuum before the liquid solidifies.

4. The method consisting in impregnating a porous block with liquid asphalt, and then subjecting the block to a vacuum before the liquid solidifies.

5. The method consisting in impregnating a porous block with a liquid which solidifies at ordinary temperatures, then subjecting the block to a vacuum before the liquid solidifies, and then subjecting the block to pressure until solidification occurs.

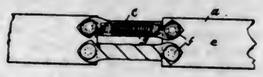
[Claims 6 to 26 not printed in the Gazette.]

1,229,440. CUSHION-FORM. FRED GERO, Saranac Lake, N. Y. Filed Aug. 11, 1914. Serial No. 856,186. (Cl. 155—43.)



A form for the manufacture of seat cushions and the like comprising a frame having internally the shape of the marginal edge of the finished cushion, said frame being open at the top and the opposite bars thereof being formed with internal longitudinal intersecting and communicating grooves located between the top and bottom edges thereof and forming seats to contain edge clamping strips for the cushion, said frame being divided between opposite bars thereof into a pair of sections the meeting faces of which are intersected by said grooves, and means for separably securing said sections together.

1,229,441. DRIVING-BELT. AQUILA H. GRIFFIN and GEORGE GRIFFIN, Paterson, N. J., assignors of one-tenth to John W. Steward, Paterson, N. J. Filed Jan. 2, 1917. Serial No. 140,044. (Cl. 24—32.)



4. A driving belt formed for the major portion of its circumference of relatively inelastic material having a gap therein and including elastic means spanning said gap and a helical member wrapped around said means and also spanning said gap, and a common means to secure the elastic means and said member to said material at each side of said gap.

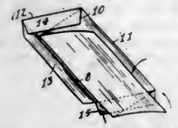
5. A driving belt formed for the major portion of its circumference of relatively inelastic material having a gap therein, a metallic spring in the gap, gap spanning members of softer material than the spring, each end of the spring being interposed between said members, and means, penetrating said members and each end of the spring, to clamp them to said material at each side of the gap therein.

[Claims 1 to 3 not printed in the Gazette.]

1,229,442. STATIONERY. CHARLES C. GRUHLER, Bellevue, Ky. Filed Oct. 6, 1915. Serial No. 54,451. (Cl. 229—92.7.)

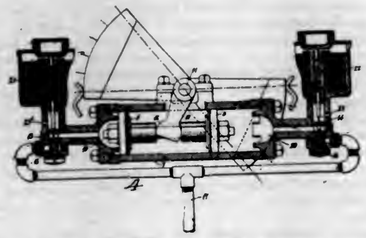
An envelop formed out of a letter sheet which has been folded in opposite directions along two lines so as to produce three substantially equal-sized superposed parts and of which sheet the middle and the lower part before folding constitute the writing face and after folding lie with their face sides against each other, the part above them, being the top part of the sheet before folding, bearing a printed letterhead also on the writing face side of the sheet and which part after folding of the sheet forms also the face of the envelop, this top part having on each of its three free edges a pasting flap gummed on the rear





side of the sheet and whereby this top part after the sheet is folded is secured against the rear side of the lower part with the middle part of the sheet between them, thereby closing the envelop in a manner that when the flaps are cut for opening the envelop the severed flaps are all on the rear side of the sheet so as to avoid defacing of the writing face which bears the message and leaving the same entirely clear.

1,229,443. ACCELERATOR AND SYSTEM OF CONTROL. ARTHUR J. HALL and LYNN G. RILEY, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 5, 1912. Serial No. 724,065. (Cl. 138—2.)



1. The combination with fluid operated means comprising a cylinder and a piston, of electro-responsive means for successively unbalancing and balancing fluid pressures on opposite sides of the piston in accordance with the movements thereof, whereby a step-by-step movement thereof is effected.

2. The combination with fluid-actuated means comprising a pair of pistons and cylinders in which the pistons operate, of means dependent upon the position of said pistons for controlling the fluid pressure in each of the cylinders for producing step-by-step movements of said pistons in either direction or for arresting the movements thereof.

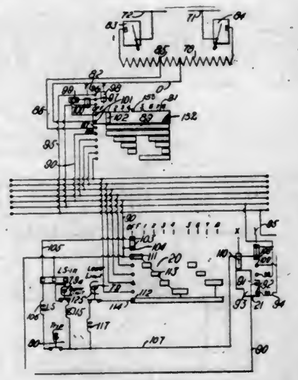
3. The combination with fluid-actuated means comprising a pair of pistons, cylinders in which the pistons operate, and independent means for controlling the fluid pressure in each of the cylinders to produce either a movement of the pistons in the one or the other direction or to hold the pistons in any predetermined position, of means operatively connected to the pistons for independently governing the controlling means.

4. The combination with fluid-actuated means comprising a pair of pistons and cylinders in which said pistons operate, of valves for controlling the fluid pressure in the respective cylinders, and automatic means dependent upon the position of said pistons for governing the action of both of said valves.

5. The combination with fluid-actuated means comprising a pair of pistons and cylinders in which the pistons operate, of valves for controlling the fluid pressure in the respective cylinders, one of said valves being normally open and the other normally closed, and means for actuating both or one of the valves to produce either a predetermined movement of the pistons or to hold said pistons in a predetermined position.

[Claims 6 to 51 not printed in the Gazette.]

1,229,444. CONTROL SYSTEM. ARTHUR J. HALL, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 23, 1913. Serial No. 796,867. (Cl. 172—179.)



1. In a system of control, the combination with an electric motor, a controller adapted to occupy a plurality of positions for governing said motor, an electrically controlled fluid operated power device for actuating said controller by the continued application of fluid pressure, and a master controller for governing the operation of said power device, of electro-responsive means dependent upon the motor current for automatically governing a control circuit of said power device.

2. In a system of control, the combination with an electric motor, a controller adapted to occupy a plurality of positions for governing said motor, an electrically controlled fluid operated power device for actuating said controller by the continued application of fluid pressure, and a master controller for governing the operation of said power device, of automatic means for governing a control circuit of said power device in accordance with predetermined conditions of the motor circuit.

3. In a system of control, the combination with an electric motor, a controller adapted to occupy a plurality of positions for governing said motor, an electrically controlled fluid operated power device for actuating said controller by the continued application of fluid pressure, and a master controller for governing the operation of said power device, of a current-limit device having an energizing coil in said motor circuit, and a switching device in the energizing circuit of said actuating power device for effecting an automatic acceleration of said motor.

4. In a control system, the combination with an electric motor, a controller for governing said motor, electro-pneumatic means for actuating said controller by steps by the continued application of fluid pressure, a master controller for manually controlling said actuating means, and an auxiliary control drum associated with said controller for governing an energizing circuit of said actuating means, of an electro-responsive device connected in said motor circuit and dependent upon the current traversing said circuit for acting in conjunction with said auxiliary control

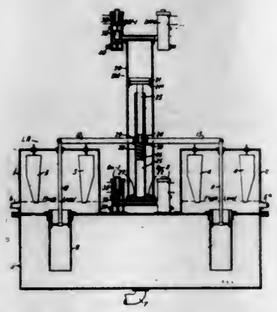
drum for automatically governing the energizing circuit of said actuating means.

5. In a control system, the combination with an electric motor, a controller for governing said motor, and an electrically controlled fluid operated device for actuating said controller and comprising a cylinder, a movable piston and means for admitting fluid to one side of said piston and for releasing it from the other side thereof for actuating said controller, and for admitting fluid to both sides of the piston to hold said controller stationary, of means responsive to the current traversing said motor circuit for automatically governing the operation of said electrically controlled actuating device.

[Claims 6 to 42 not printed in the Gazette.]

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1,229,445. CONTROL APPARATUS. ARTHUR J. HALL, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 7, 1916. Serial No. 76,599. (Cl. 138—2.)



1. The combination with a movable member, of actuating means therefor comprising an operating cylinder, a pair of movable pistons disposed therein, means for normally producing materially different fluid pressure on said pistons to bias them to a predetermined position, means for reversing the unbalanced fluid-pressure conditions to effect normal movements of said member, and means for permitting an initial movement of one piston prior to the normal joint movements of the two pistons.

2. The combination with a movable member, of actuating means therefor comprising an operating cylinder, a pair of movable pistons disposed therein, means for normally producing relatively high fluid-pressure conditions on the outer face of one piston and atmospheric-pressure conditions on the outer face of the other piston, means for reversing the unbalanced fluid-pressure conditions to effect normal movements of said member and means for permitting a relatively rapid initial movement of said other piston during the reversal.

3. The combination with a fluid-containing cylinder and a pair of movable pistons disposed therein, of means for effecting a predetermined normal movement of said pistons, and means coöperating with said first means for effecting a relatively rapid initial movement of one of said pistons.

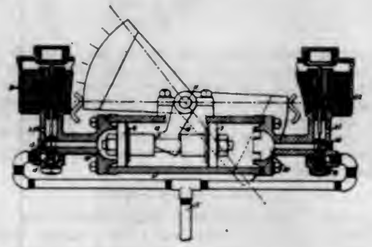
4. The combination with a movable member, of fluid-pressure-operated means normally biased by unbalanced-pressure conditions to a predetermined position, means for reversing the unbalanced action to effect normal movement of said member, and means for permitting a relatively rapid independent movement of said member before the completion of the reversal.

5. The combination with a movable member of an operating mechanism therefor comprising a cylinder, a plurality of piston members traveling therein, means for normally producing unbalanced-pressure conditions on the outer faces of said piston members to bias said movable members to a predetermined position, means for reversing the unbalanced action to effect normal movement of said member, and means disposed intermediate said piston members for permitting an initial relatively rapid movement of said movable member before the completion of the reversal.

[Claims 6 to 18 not printed in the Gazette.]

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1,229,446. ACCELERATOR AND SYSTEM OF CONTROL. ARTHUR J. HALL and LYNN G. RILEY, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Original application filed Oct. 5, 1912, Serial No. 724,065. Divided and this application filed Sept. 27, 1916. Serial No. 122,378. (Cl. 172—179.)



1. In a control system, the combination with a plurality of electric motors, a plurality of independently actuated motor-circuit switches for arranging said motors for series and parallel operation, an accelerating resistor, and a master switch, of a fluid actuator for the accelerating drum comprising a cylinder, a piston operatively connected to the drum, and means dependent upon the master switch for governing the fluid pressure in the cylinder.

2. In a control system, the combination with an electric motor, a plurality of control switches, an accelerating resistor, a control drum for governing the resistor, and a master switch, of a fluid actuator for the control drum comprising a piston operatively associated therewith, a cylinder in which the piston operates, and magnet-actuated valves for controlling the supply of fluid to the cylinder, the operation of both of said valves being dependent upon the master switch and upon the control drum.

3. In a control system, the combination with an electric motor, a plurality of control switches, an accelerating resistor, a control drum for governing the resistor, and a master switch, of a fluid actuator for the control drum comprising a piston operatively connected thereto, a cylinder in which the piston operates, and magent actuated valves for controlling the supply of fluid to the cylinder, said valves being operatively dependent upon the master switch and upon the control drum and being adapted, when their actuating magnets are deënergized, to admit fluid at one end of the cylinder only, whereby the control drum is biased to one extreme position.

4. In a control system, the combination with an electric motor, a plurality of control switches and a master controller, of an accelerating controller having a plurality of main circuit stationary and movable contact members, and a fluid-actuator for the movable members comprising a piston operatively connected thereto, a cylinder in which the piston operates, a pair of valves for governing the supply of fluid to opposite ends of the cylinder, one of said valves being normally closed and the other normally open, and means dependent upon the positions of the master controller and the accelerating controller for governing the valves.

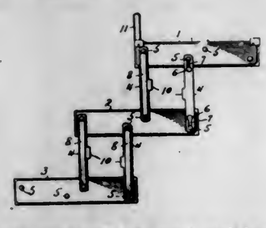
5. In a control system, the combination with an electric motor, a plurality of control switches and a master controller, of an accelerating controller having a plurality of main circuit stationary and movable contact members, and a fluid-actuator for the movable members comprising a piston operatively connected thereto, a cylinder in which the piston operates, a pair of valves for governing the supply of fluid to opposite ends of the cylinder, one of said valves being normally closed and the other normally open, and means dependent upon the positions of the master controller and the accelerating controller for governing the valves to produce a step-by-step movement of the accelerating controller.

[Claims 6 to 38 not printed in the Gazette.]

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1,229,447. TRAY MECHANISM. MARY M. HAMMOND, Kansas City, Mo. Filed Oct. 2, 1914. Serial No. 864,591. (Cl. 211—28.)



1. In a tray mechanism, two trays, each having at one end an outwardly extending pivot pin, a link having means for detachably pivotally engaging said pins, and releasable means for retaining said link engaged with said pins.

2. In a tray mechanism, two trays, each having at one end an outwardly extending pivot pin, a link having means for detachably pivotally engaging said pins, and a flexible member having means for engaging said pins for retaining said link engaged with said pins, said flexible member being adapted to be flexed from a position in which it operatively engages said pins to a position in which it will be released from the pins.

3. In a tray mechanism, two trays, each having at one end an outwardly extending pivot pin provided at its outer end with a head, a link pivotally and detachably engaging said pivot pins at the inner sides of said heads, and a locking member releasably engaging said pins between said link and said heads for retaining the link in engagement with said pins.

4. In a tray mechanism, two trays each having at one end an outwardly extending pivot pin, a link pivotally and detachably engaging said pivot pins and a flexible locking member which in the operative position engages said pins and retains the length in operative engagement with said pins, the ends of said member having notches for receiving said pins when the member is in the extended operating position, the pins having heads at the outer sides of said link and said member for retaining said member engaged with said pins, the flexible member being adapted to be bent to a position in which it will be released from said pins.

5. In a tray mechanism, two trays, each having at one end an outwardly extending pivot pin provided at its outer end with a head, a link having two longitudinal slots adjacent to the respective ends of the link, the slots being provided at their inner ends with enlargements through which said heads may be passed, the outer ends of said slots being of less width than the respective diameters of said heads, and releasable means for engaging said pins for retaining the pins in the narrow outer ends of said slots.

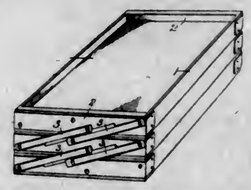
[Claims 6 to 10 not printed in the Gazette.]

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1,229,448. TRAY. MARY M. HAMMOND, Kansas City, Mo. Filed June 28, 1915. Serial No. 36,611. (Cl. 211—28.)

1. A plurality of trays having hinging means connecting them by which the trays may be swung from positions in the same horizontal plane to positions disposed one above the other, each of the trays having a bottom disposed above the lower edges of the tray.

2. A plurality of trays having hinging means connecting them by which the trays may be swung from positions in the same horizontal plane to positions one above the other, each tray having a bottom disposed above the lower edges of the tray, and a cushion secured to the under side of said bottom.

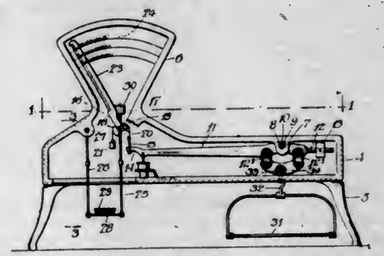


3. A plurality of trays having hinging means connecting them by which they may be swung to and from a position in which they are disposed one above the other, each tray having a bottom and a cushion secured to the under side of said bottom, the bottom and cushion being above the lower edges of the tray.

4. A display tray provided with side and end walls, a bottom disposed above the lower edges of said walls, and a cushion secured to the under side of the bottom.

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1,229,449. SCALE. CLARENCE H. HAPGOOD, Toledo, Ohio, assignor to Toledo Scale Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 6, 1913. Serial No. 793,661. Cl. 265—62.)



1. In a counting scale, a pivoted beam, a pan connected thereto, a pendulum comprising a pair of supporting rods, a connection between the lower end of said rods adapted to support a sample of the articles to be counted and a connection from one of said rods to the beam.

2. A counting scale comprising a beam, a scale pan supported by the beam, a pair of pendulum rods or links independently pivoted, a cross member connecting the rods or links and adapted to support a sample of the articles to be counted, a segment rigidly connected to one of the rods and a strap connecting the segment and the lever.

3. In a weighing scale and in combination with the beam thereof, a pendulum having a pair of side rods adjustable in length and a connecting member pivoted to the side rods, and a connection from the beam to one of said side rods.

4. In a weighing scale and in combination with the beam thereof, a pendulum having a rod pivoted intermediate its ends, a rod spaced from the first-mentioned rod, a member connecting said rods on one side of the pivot, the first-mentioned rod being provided with counterbalancing means on the other side of its pivot, and a connection from one of said rods to the beam.

5. In a counting scale, a fulcrumed beam, a pan suspended from the beam and connected thereto on opposite sides of the fulcrum, a pendulum comprising a pair of pivoted rods, a platform pivotally connected to said rods and adapted to support a sample of the articles to be counted, and a connection from the beam to one of the rods.

[Claims 6 and 7 not printed in the Gazette.]

1,229,450. COMBINATION SAW SET AND SHARPENER. HUGH C. HARRIS, Coeur d'Alene, Idaho. Filed May 8, 1916. Serial No. 96,069. (Cl. 76—31.)



1. In a saw sharpener, a frame, a file holder reciprocable in said frame, holding gage jaws adjustably pivoted to said frame and adapted to straddle the saw blade, and supporting gages adjustable on said gage jaws for engagement with the ends of the saw teeth for supporting the frame at the desired elevation, substantially as described.

2. In a saw sharpener, a longitudinally slotted frame, gage jaws for straddling the saw blade, devices connecting said gage jaws to the frame for independent longitudinal adjustment of the jaws along said frame or angular adjustment of the jaws with respect to said frame, and a file carrier reciprocable in said frame, substantially as described.

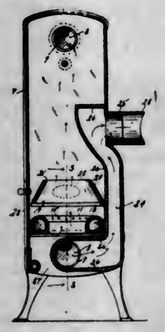
3. In a saw sharpener, a longitudinally slotted frame, gage jaws for straddling the saw blade, devices connecting said gage jaws to said frame for independent longitudinal adjustment along said frame or angular adjustment with respect to said frame, a file carrier reciprocable in said frame, and an extensible saw abutment adjustably mounted on said gage jaws, substantially as described.

4. In a saw sharpener, a longitudinally slotted frame, gage jaws for straddling the saw blade, devices connecting said gage jaws to the frame for independent longitudinal adjustment along the frame or angular adjustment of said jaws with respect to the frame, an abutment for the saw comprising end portions adjustably mounted on said jaws, each end portion having an abutment portion hinged thereto, and means slidably connecting said abutment portion for extensibility of the latter when said gage jaws are independently adjusted out of line with each other along said frame, substantially as described.

5. In a saw sharpener, a frame, file holding means movable on said frame, jaws for straddling a saw to hold said frame in selected position with respect to said saw, and an abutment extending between said jaws for supporting that portion of the saw to be filed, substantially as described.

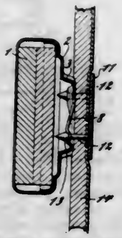
[Claims 6 to 8 not printed in the Gazette.]

1,229,451. GAS HEAT-RADIATOR. AUGUST J. HARTFIELD, Los Angeles, Cal., assignor to Helen A. Hartfield, Los Angeles, Cal. Filed July 8, 1916. Serial No. 108,099. (Cl. 126—91.)



A ventilating gas heat radiator comprising a central burner section having a partition wall dividing the same into a combustion chamber and a waste gas offtake flue, a gas burner disposed in the lower part of the combustion chamber, a baffle plate arranged above said burner and provided with upwardly converging walls and having an open top, said central burner section having an air inlet port below said burner and having auxiliary air inlet ports opposite the baffle plate, a plurality of radiator sections arranged at the sides of the central burner section and connected so that at their upper parts they are in open communication with the upper part of said combustion chamber and at their lower parts they are in open communication with said waste gas offtake flue.

1,229,452. BUTTON. JOSEPH HEINEMAN, New York, N. Y. Filed Aug. 16, 1916. Serial No. 115,212. (Cl. 24—104.)



1. The combination of a button and a keeper therefor, one of said parts comprising a plate having a plurality of arcuate slots therein with enlarged entrance openings, and having inclined surfaces extending along said slots above the plane of said plate, and the other of said parts having a plurality of projections thereon adapted to fit within said slots, the said projections having shoulders thereon adapted to engage said inclined surfaces for drawing said parts toward each other when one of them is turned.

2. The combination of a button and a keeper therefor, one of said parts comprising a plate having a plurality of arcuate slots therein with enlarged entrance openings, and having inclined surfaces extending along said slots above the plane of said plate, and the other of said parts having a plurality of projections thereon adapted to fit within said slots, the said projections having shoulders thereon adapted to engage said inclined surfaces for drawing said parts toward each other when one of them is turned, and means engaging said projections for resisting the turning movement of said parts.

3. The combination of a button and a keeper therefor, one of said parts comprising a plate having a plurality of arcuate slots therein with enlarged entrance openings, and having inclined surfaces extending along said slots above the plane of said plate, and the other of said parts having a yielding base and a plurality of projections thereon adapted to fit within said slots, the said projections having shoulders thereon adapted to engage said inclined surfaces for drawing said parts toward each other when one of them is turned.

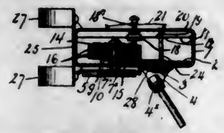
4. The combination of a button and a keeper therefor, one of said parts comprising a plate having a plurality of slots therein, and having inclined surfaces extending along the length of said slots above the plane of said plate, and the other of said parts having a plurality of headed projections thereon adapted to fit within said slots, the said projections having shoulders thereon adapted to engage the inclined or cam surfaces on said plate.

5. The combination of a button and a keeper thereor, one of said parts comprising a plate having a plurality of slots therein, the surface of the plate being inclined along the length of and on opposite sides of said slots, and the other of said parts having a plurality of headed projections thereon adapted to fit within said slots, the said projections having shoulders thereon adapted to engage the inclined or cam surfaces on said plate, and means for locking the projections in said slots.

[Claims 6 to 10 not printed in the Gazette.]



1,229,453. AUTOMOBILE-HORN. JOSEPH J. HERLBAUER, Richmond Hill, N. Y. Filed Apr. 5, 1916. Serial No. 88,997. (Cl. 116—1.)

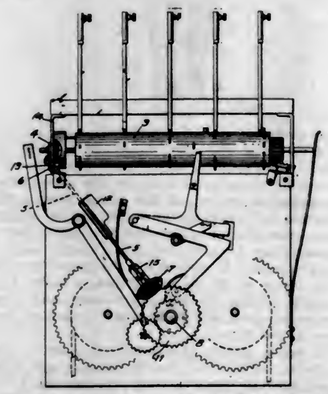


1. In an automobile horn, the combination of a cup-shaped containing member composed of a bottom and a flangeless circular wall perpendicular thereto, agitating means contained therein and surrounded by said perpendicular wall, a cupped face member, securing devices passing through the bottoms of said containing member and of said face member, a diaphragm clamped between opposing surfaces on said members, the portions of the members presenting said opposing surfaces and the periphery of said diaphragm being in line with the body of said perpendicular wall of said cup-shaped containing member.

2. In an automobile horn, the combination of a cup-shaped member, a face member, a diaphragm lying between said two members, means contained in said cup-shaped member for agitating said diaphragm, and means for securing said cup-shaped member and said face member together, said securing means passing within the inner walls of said two members and engaging the face of one and the bottom of the other, said diaphragm having centering projections located within and engaging the walls of said cup-shaped member.

3. In au automobile horn, the combination of a cup-shaped member, a face member, a diaphragm lying between said two members, means contained in said cup-shaped member for agitating said diaphragm, and means for securing said cup-shaped member and said face member together, said securing means passing within the inner walls of said two members said diaphragm having centering projections located within and engaging the walls of the casing formed by said members and said securing means passing through openings in said diaphragm within said casing.

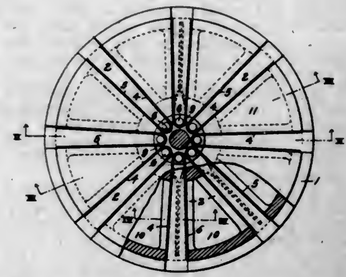
1,229,454. SYNCHRONIZING MECHANISM FOR CHIME-CLOCKS. WALTER J. HERSCHEDE and CHARLES COHAN, Cincinnati, Ohio, assignors to The Herschede Hall Clock Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 11, 1916. Serial No. 130,698. (Cl. 58—13.)



1. A clock comprising time indicating and chime ringing mechanisms, and a mechanism adapted to synchronize the movement of the time indicating and chime ringing mechanisms, and containing a synchronizing gear, a gear mounted on the front plate of the clock and rotated by a shaft of the time indicating mechanism, a shaft extending through the front plate from the first to the second mentioned gear, and gears mounted on the shaft, meshing with the first and second mentioned gears.

2. A clock comprising a time indicating mechanism, a chime ringing mechanism, and a mechanism adapted to synchronize the movements of the time indicating and chime ringing mechanisms, said synchronizing mechanism containing a synchronizing gear, a gear mounted adjacent to the front plate of the clock and rotated by the minute shaft of the time indicating mechanism, a shaft having its upper end located between the front and back plates of the clock and having its lower end extending through and beyond the front plate of the clock, and gears secured to the shaft, meshing with the first and second mentioned gears.

1,229,455. VALVE. HARRY D. HILDEBRAND, Pittsburgh, Pa. Filed May 4, 1916. Serial No. 95,332. (Cl. 103—66.)



1. A valve mechanism for pumps having in combination two resilient valves adapted to move in opposite directions in their opening and closing movements, each valve being controllable by the other as regards its opening movement.

2. A valve mechanism for pumps having in combination two oppositely arranged ports, valves controlling said ports, each valve being adapted to serve as a stop to limit the opening movement of the other.

3. A valve mechanism for pumps having in combination two oppositely arranged ports, resilient wings adapted to normally close said ports, and to operate as stops, the one for the other, as regards their opening movements.

4. A valve mechanism for pumps having in combination two oppositely arranged ports, two valves yieldingly held in closed position and adapted to be operated by oppositely applied fluid pressure, and to abut the one against the other in their opening movements.

5. A valve mechanism for pumps having in combination two oppositely arranged ports, two normally closed resilient valves, adapted to be shifted to open position and into the range of movement of each other by oppositely applied fluid pressure.

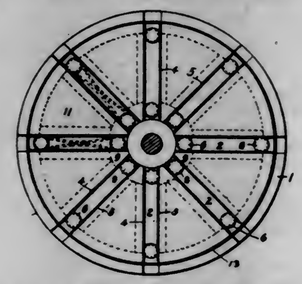
[Claims 6 to 9 not printed in the Gazette.]

1,229,456. VALVE. HARRY D. HILDEBRAND, Pittsburgh, Pa. Filed May 4, 1916. Serial No. 95,333. (Cl. 103—66.)

1. A valve mechanism for pumps, etc., having in combination two oppositely disposed valve seats having ports therethrough, valves consisting of thin metal strips supported in operative relation to said seats, said valves being adapted to limit the opening movements of one another.

2. A valve mechanism for pumps, etc., having in combination two oppositely disposed valve seats having ports therethrough, valves consisting of thin metal strips, and

means for so supporting the valves in operative relation to said seats as to permit of their being bent to open the ports and to move longitudinally when bending.



3. A valve mechanism for pumps, etc., having in combination two oppositely disposed valve seats having ports therethrough and valves consisting of thin metal strips supported in operative relation to said seats, the seats and valves being arranged in such relation that each valve will serve as a stop to limit the opening movement of the other valve.

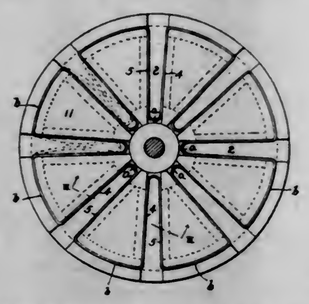
4. A valve mechanism for pumps, etc., having in combination two valve seats having ports therethrough, two independent valves consisting of thin pieces of metal, said valves being simultaneously movable to and from their seats and adapted to abut one against the other in their opening movements.

5. A valve mechanism for pumps, etc., having in combination a valve seat having a port therethrough, a valve consisting of a thin resilient metal strip, pins arranged transverse of the strip adapted to maintain it in operative relation to the port and permit the ends of the strip to move longitudinally in the opening and closing movements of the valve.

[Claim 6 not printed in the Gazette.]

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1,229,457. VALVE. HARRY D. HILDEBRAND, Pittsburgh, Pa. Filed May 4, 1916. Serial No. 95,334. (Cl. 103—66.)



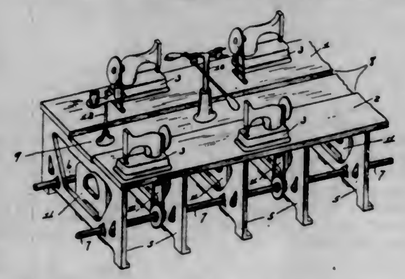
1. A valve mechanism for pumps having in combination a plurality of ports, and a plurality of flexible resilient wings, controlling said ports, said wings being formed by portions of a continuous strip of metal.

2. A valve mechanism for pumps, having in combination a block provided with a plurality of grooves, ports or openings formed through the side walls of the grooves, wings controlling said ports formed by a continuous strip of flexible resilient metal.

3. A valve mechanism for pumps having in combination a block provided with a plurality of grooves, ports or openings formed through the side walls, valves consisting of pairs of wings, the wings of each pair connected at one end, and connections from the opposite ends of each pair to a wing of a pair in an adjacent groove.

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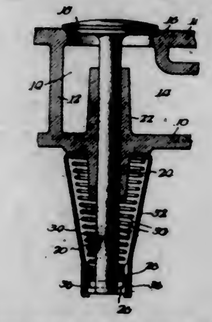
1,229,458. LIGHTING MECHANISM FOR MACHINE-TABLES. CHARLES A. HINSDILL, Troy, N. Y. Filed Jan. 15, 1917. Serial No. 142,513. (Cl. 240—2.)



The combination with a floor; of a pair of machine-tables arranged side by side with an intervening space; a plurality of supports erected from the floor each extending transversely of and supporting both of said machine-tables; a table supporting lighting fixtures located between said machine-tables independently thereof; and supports for said lighting-fixture table erected from the floor independently of said machine-tables and their supports.

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1,229,459. SUCTION-VALVE HOLDER. FRANKLIN G. HOBART and CHARLES B. JAHNKE, Beloit, Wis., assignors to Fairbanks, Morse & Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 9, 1915. Serial No. 55,106. (Cl. 103—66.)



2. In a device of the class described, a case having a port or passageway therein to be closed, a valve closing said port, a valve stem extending from said valve, a compression spring engaging a collar on the valve stem and bearing against a portion of the engine case, a supplemental spring mechanism mounted on a plate interposed between the compression spring and the case having members engaging the sides of said collar on the valve stem to retard the movement thereof, for the purposes set forth.

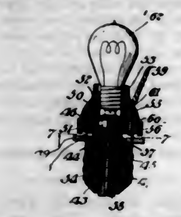
4. In a device of the class described, a valve, a valve seat, a spring urging the valve to its seat, and a spring device arranged to apply a frictional resistance to the movement of the valve.

5. In a device of the class described, a valve, a valve seat, a spring urging the valve to its seat, and a spring device arranged to apply a frictional resistance to the movement of the valve, said valve seating spring reacting against the device to hold the latter in place.

[Claims 1, 3, and 6 to 9 not printed in the Gazette.]



1,229,460. INDICATING ELECTRIC CONNECTOR. CHARLES HORN, Millbourne, Pa., assignor, by mesne assignments, to Harvey Hubbell, Inc., Bridgeport, Conn., a Corporation of Connecticut. Filed May 18, 1914. Serial No. 839,354. (Cl. 173—334.)

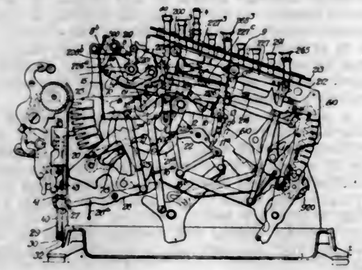


1. The combination of an insulating body, a contact comprising a resilient tongue fixed to said body, an insulating cap containing a chamber and a passage, a conductor having an inclined bearing disposed in said chamber in engagement with said tongue, a conductor by which said body and cap are engaged together, wires passing through said passage and connected with said conductors, a socket in said cap, and a lamp in said socket, said socket engaging one of said conductors and said lamp engaging the other of said conductors.

2. The combination of an insulating body, a threaded conducting sleeve swiveled thereon, a conducting ring on said body in engagement with said sleeve, said ring having a conducting member projecting therefrom, an insulating cap containing a chamber, a lamp socket in said chamber, a conductor fixed to said cap in said chamber for connecting said socket with said projecting member, a screw passing through said socket and through said insulating body, a conductor fixed to said cap in said chamber and engaging said screw, wires passing from said conductors through said cap, and a lamp in circuit with said socket and screw.

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1,229,461. ADDING-MACHINE. ALLEN A. HORTON, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed July 22, 1914. Serial No. 852,367. (Cl. 235—60.)



1. In a machine of the class described the combination of registering wheels; type-carrying actuators therefor; keys supplying stops to variously measure movements of actuators; settable means for repeatedly depressing keys; means for positioning the actuators under control of the wheels for the printing of a total; a prime mover; and means for setting the last-mentioned means thereby in automatic succession to operation of the wheel actuators under control of the key stops, with provisions for restraining the aforesaid key-depressing means during the totaling operation.

2. In a machine of the class described the combination of registering wheels; reciprocating type-carrying actuators therefor; means for engaging and disengaging the wheels and actuators; keys supplying stops to measure movements of the latter; settable means for repeatedly depressing keys; means for keeping the wheels and actuators engaged during movement of the latter in both directions as controlled in extent by backward rotation of wheels to zero for subtotaling purposes; a prime mover; and means for setting the last-mentioned means thereby in automatic succession to operation of the wheel actuators under control of the key stops, with provisions for restraining the aforesaid key-depressing means during the totaling operation.

3. In a machine of the class described the combination of registering wheels; reciprocating type-carrying actuators therefor; carrying mechanism including trip pawls serving also as zero stops; means for engaging and disengaging the wheels and actuators; keys supplying stops to measure movements of the latter; settable means for repeatedly depressing keys; means for keeping the wheels and actuators engaged during movement of the latter in both directions as controlled in extent by backward rotation of wheels to zero for subtotaling purposes; a prime mover; and means for setting the last-mentioned means in an operation of the prime mover immediately succeeding one wherein the actuators are under control of the key stops and restraining the key-depressing means during such operation and during the next operation of the prime mover which effects the totaling.

4. In a machine of the class described the combination of registering wheels; type-carrying actuators therefor; keys supplying stops to variously measure movements of actuators; settable means for repeatedly depressing keys; means for positioning the actuators under control of the wheels for the printing of a total; printing mechanism; a prime mover; and means for setting the last-mentioned means thereby in automatic succession to operation of the wheel actuators under control of the key stops, with provisions for restraining the aforesaid key-depressing means during the totaling operation and for automatically disabling the printing mechanism in a preceding operation.

5. In a machine of the class described the combination of registering wheels; reciprocating type-carrying actuators therefor; carrying mechanism including trip pawls serving also as zero stops; means for engaging and disengaging the wheels and actuators; keys supplying stops to measure movements of the latter; settable means for repeatedly depressing keys; means for keeping the wheels and actuators engaged during movement of the latter in both directions as controlled in extent by backward rotation of wheels to zero for subtotaling purposes; a prime mover; means for setting the last-mentioned means in an operation of the prime mover immediately succeeding one wherein the actuators are under control of the key stops and restraining the key-depressing means during such operation and during the next operation of the prime mover which effects the totaling; printing mechanism; and means for automatically disabling it during the first of said three operations of the prime mover and enabling said mechanism for the third of said operations.

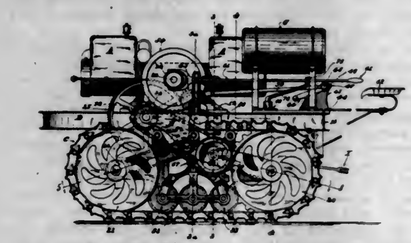
[Claims 6 to 21 not printed in the Gazette.]

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1,229,462. TRACTION-ENGINE. ORLEY C. HOUGHTON, Chicago, Ill., assignor to Bullock Tractor Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 8, 1915. Serial No. 1,205. (Cl. 21—114.)

1. In a traction engine, the combination, of a chassis, a motor mounted on said chassis, said motor having an operating shaft transversely of said chassis, a truck on each side of said chassis, an endless-track band on said truck, and means for operating said endless-track bands, said latter means including a friction driving member affixed to said transverse shaft, a second, friction driven, member mounted loosely on said transverse shaft, means constructed to operatively connect said friction-driving member to said friction driven member, a gear pinion fixedly connected to said friction driven member, a triangular frame pivotally connected at one of its angles to said chassis, a spur-gear wheel mounted at the second angle of said triangular frame, a sprocket-wheel fixedly connected to said spur-gear wheel, a driving belt connect-

ing said sprocket-wheel to said endless-track bands, means for connecting and disconnecting said friction driving and driven members, a gear pinion mounted at the third angle of said frame, and means constructed to rock said frame to disengage said spur-gear wheel from the first mentioned gear pinion and to engage said second gear pinion with said first mentioned gear pinion.



2. In a traction engine, the combination, of a chassis, a motor mounted on said chassis, a truck at each side of said chassis, an endless-track band on said truck, mechanism in said truck constructed to move said endless-track, and mechanism constructed to operate said latter mechanism, including a main driving shaft, friction clutch mechanism on said driving shaft, a gear pinion operatively connected to said friction clutch mechanism, a triangular frame, said frame being pivotally connected to said chassis at one of its angles, a spur-gear wheel rotatably mounted in said triangular frame at its second angle, a driving member fixedly connected to said spur-gear wheel, a second gear pinion mounted in said triangular frame at its third angle, said latter pinion being constantly in mesh with said spur-gear wheel, and means constructed to oscillate said triangular frame to disengage said spur-gear wheel from the first-mentioned gear pinion and to cause engagement of the second gear-pinion with said first-named gear pinion.

3. In a traction engine, having endless-track bands on which said traction engine is constructed to move, means for reversing the direction of movement of said traction engine including a motor-driven main shaft, friction-driven mechanism on said main shaft, a gear pinion fixedly connected to said friction-driven mechanism, a substantially triangular frame pivotally mounted at one of its angles to said traction engine, a spur-gear wheel, a shaft at the second angle of said triangular frame on which said spur-gear wheel is rotatably mounted, a gear pinion fixedly connected to said spur-gear wheel, a second gear-pinion, a shaft mounted in said triangular frame at its third angle, said latter pinion being rotatably mounted on said latter shaft and constantly in mesh with said spur-gear wheel, and mechanism constructed to oscillate said triangular frame to break connection between said spur-gear wheel and the first mentioned gear pinion and to establish connection between said two gear pinions.

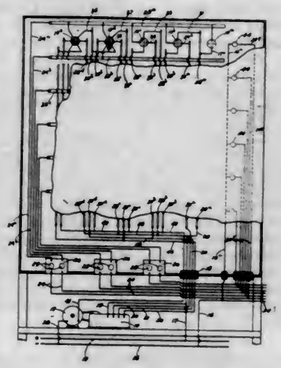
4. In a traction engine, the combination, with a chassis, of a motor mounted thereon, a truck at each side of said chassis, an endless-track on each truck, mechanism constructed to connect and disconnect said motor to and from said endless tracks, including rearwardly extending hand levers, brake-mechanism constructed to retard and arrest the movement of said endless tracks, and means for automatically actuating the brake-mechanism by the operation of said hand-lever, including a brake-pulley, a brake shoe on said brake-pulley, a brake shaft, an arm on said shaft connecting with said brake shoe, an upwardly extending arm on said brake-shaft, a cranked shaft, there being at the lower end of said crank shaft an arm, and a rod connecting the latter arm to the said upwardly extending arm, the terminal member of said cranked shaft being constructed to contact with said hand-lever to move the crank-shaft in one direction.

5. In a traction engine, the combination, of a chassis, a motor mounted on said chassis, a truck on each side of said chassis, an endless self-laying track-band on each truck, independent mechanism for operating said endless track-bands from said motor, including rearwardly extending handle bars, a platform at the rear end of said chassis, vertical bearings on said platform, a cranked shaft in each bearing, an arm at the lower end of each said cranked shafts, a brake-rim connected with each operating mechanism, a brake-band on said brake-rim, a brake-shaft, an arm at one end of said brake-shaft connected to said brake-band, an upstanding arm at the other end of said brake-shaft, and a rod connecting the arm on the cranked shaft to the upstanding arm on the brake-shaft, the upper end of said cranked shaft contacting with said handle bar.

[Claims 6 to 13 not printed in the Gazette.]

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1,229,463. ELECTRIC SIGNALING SYSTEM. HARVEY HUBBELL, Bridgeport, Conn. Filed Aug. 10, 1916. Serial No. 114,198. (Cl. 177—348.)



1. A signaling system of the character described comprising a plurality of electric circuits, a grouped set of electrically actuated signals in said circuits, a grouped series of selective circuit making and breaking devices, an automatic circuit making and breaking device in and common to at least a part of said circuits, and means controlled by each of certain selective circuit making and breaking devices for inter-connecting and simultaneously energizing a plurality of circuits.

2. A signaling system of the character described comprising a plurality of electric circuits, a grouped set of electrically actuated signals in said circuits, a grouped series of selective circuit making and breaking devices, an automatic circuit making and breaking device including its actuating motor in and common to at least a part of said circuits, and means controlled by each of certain selective circuit making and breaking devices for inter-connecting and simultaneously energizing a plurality of circuits.

3. A signaling system of the character described comprising a plurality of electric circuits, each including at least one signal in each of a plurality of separated and corresponding groups thereof, a grouped series of selective circuit making and breaking devices, an automatic circuit making and breaking device in and common to at least a part of said circuit, and means controlled by each of certain selective circuit making and breaking devices for inter-connecting and simultaneously energizing a plurality of circuits.

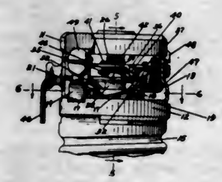
4. A signaling system of the character described comprising a plurality of electric circuits, each including at least one signal in each of a plurality of separated and corresponding groups thereof, a grouped series of selective circuit making and breaking devices, an automatic circuit making and breaking device including its actuating motor in and common to at least a part of said circuits, and means controlled by each of certain selective circuit making and breaking devices for inter-connecting and simultaneously energizing a plurality of circuits.

5. A signaling system of the character described comprising a plurality of electric circuits, each of said circuits including at least one signal in each of a plurality of separated and corresponding groups thereof and each of at least a part of the signals in each group being common to a plurality of said circuits, a grouped series of selective circuit making and breaking devices, an automatic circuit making and breaking device in and common to at least a part of said circuits, and means controlled by each of certain selective circuit making and breaking devices for inter-connecting and simultaneously energizing a plurality of circuits.

[Claims 6 to 16 not printed in the Gazette.]

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1,229,464. PULL-SOCKET. HARVEY HUBBELL, Bridgeport, Conn. Filed Nov. 29, 1916. Serial No. 134,211. (Cl. 173—354.)



1. In a structure of the character described, in combination, a rotatable contact plate, an oscillatable operating plate by which the contact plate is actuated, an oscillatable operating lever having a loose connection with the operating plate by which the latter is actuated, and a tension spring, intermediate the operating lever and the operating plate, the tension of which is increased by actuation of the operating lever.

2. In a structure of the character described, in combination, a block provided with inclines each terminating in an abrupt shoulder, a rotatable contact plate having spring arms adapted to engage said inclines, an oscillatable operating plate by which the contact plate is actuated, an oscillatable operating lever having a loose connection with the operating plate by which the latter is actuated, and a tension spring, intermediate the operating lever and the operating plate, the tension of which is increased by actuation of the operating lever, said spring causing the spring arms of the contact plate to jump forward when they pass off the shoulders.

3. In a structure of the character described, in combination, a rotatable contact plate, an oscillatable operating plate by which the contact plate is actuated, and which is provided with spaced apart lugs, an oscillatable operating lever having a lug adapted to coöperate with the lugs on the operating plate, and a tension spring connected to said lever and plate and normally under tension, the tension of said spring being increased by actuation of the operating lever, substantially as described, for the purpose specified.

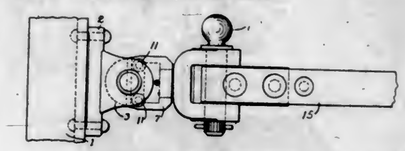
4. In a structure of the character described, in combination, a block provided with inclines each terminating in an abrupt shoulder, a rotatable contact plate having spring arms adapted to engage said inclines, an oscillatable operating plate by which the contact plate is actuated, an oscillatable operating lever having a loose connection with the operating plate by which the latter is actuated, an operating spring acting on the operating lever, and a tension spring connected to the operating lever and to the operating plate and normally under tension, the tension of which is increased by actuation of the operating lever, substantially as described, for the purpose specified.

5. In a structure of the character described, the combination, with a contact plate and an operating plate by which the contact plate is actuated, of an operating lever having a loose connection with the operating plate, an operating spring acting on the operating lever, and a tension spring intermediate the operating lever and the operating plate, the tension of which is increased by actuation of the operating lever.

[Claim 6 not printed in the Gazette.]

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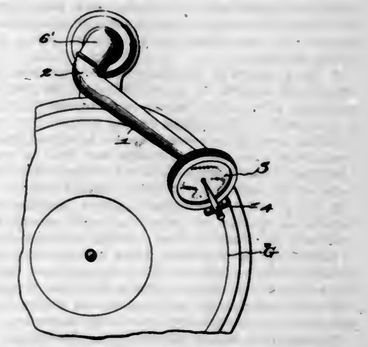
1,229,465. COUPLING. WARREN R. HUDSON, Troy, Ohio, assignor to The Troy Wagon Works Company, Troy, Ohio, a Corporation of Ohio. Filed Jan. 26, 1917. Serial No. 144,673. (Cl. 21—114.)



In a coupling of the character described, a link, a yoke-shaped member pivotally connected therewith, a shank extending beyond the yoke-shaped member having a circular head near its outer extremity, a pair of separable socket members having an enlarged recess near the extremity thereof adapted to receive said head, means for fastening said members together, a plate with alined ears, and a coupling pin for connecting said socket members to said plate for the purpose specified.

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1,229,466. TONE-ARM. FRANK W. HUTCHINGS, New Haven, Conn. Filed Jan. 12, 1916. Serial No. 71,670. (Cl. 274—24.)



1. A tone arm of the Columbia type with offset neck, having a sound box carrying head, at one end thereof, the axis of said head forming an acute angle with a vertical plane passing through the main longitudinal axis of the tone arm.

4. An attachment for tone arms of the Columbia type, comprising a main tone arm member, and a sound box mounted thereon in such a position that a vertical plane through the stylus bar will be tangent to the record groove at the point of contact of the stylus point and groove.

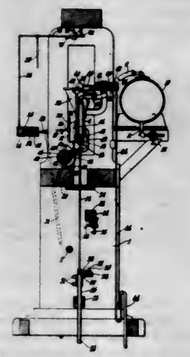
[Claims 2 and 3 not printed in the Gazette.]

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1,229,467. CARTRIDGE-LOADING MACHINE. CLARENCE EUGENE JACK, Louviers, Colo., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 22, 1915. Serial No. 29,737. (Cl. 86—20.)

1. In a cartridge loading machine, tamping means, a cross-head adapted to carry the same, and means for avoiding friction between the cross-head and the tamping

means when the tamping means has been thrown out of operation, comprising compressed air operated connections between the cross-head and the tamping means.



2. In a cartridge loading machine, tamping means, a cross-head adapted to carry the same, and means for avoiding friction between the cross-head and the tamping means when the tamping means has been thrown out of operation comprising a cylinder and piston connection between the cross-head and the tamping means.

3. In a cartridge loading machine, tamping means, a cross-head adapted to carry the same, and means for avoiding friction between the cross-head and the tamping means when the tamping means has been thrown out of operation comprising a cylinder and piston connection between the cross-head and the tamping means and compressed air connections for forcing the piston forwardly in the cylinder.

4. In a cartridge loading machine, tamping means, a cross-head adapted to carry the same, having means to maintain the tamping means at any elevation to which it is moved by the explosive being tamped, and means for avoiding friction between the cross-head and the tamping means when the tamping means has been thrown out of operation, comprising compressed air operated connections between the cross-head and the tamping means.

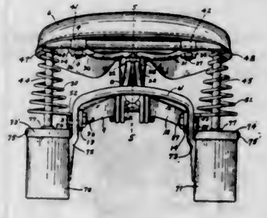
5. In a cartridge loading machine, tamping means, a cross-head adapted to carry the same, having means to maintain the tamping means at any elevation to which it is moved by the explosive being tamped, and means for avoiding friction between the cross-head and the tamping means when the tamping means has been thrown out of operation comprising a cylinder and piston connection between the cross-head and the tamping means.

[Claims 6 to 46 not printed in the Gazette.]

1,229,468. SADDLE FOR MOTOR-CYCLES OR BICYCLES. HARRY A. JACKSON, Elyria, Ohio, assignor to The Superior Metal Products Company, Elyria, Ohio, a Corporation of Ohio. Filed Aug. 23, 1915. Serial No. 46,843. (Cl. 208—15.)

1. In a saddle for bicycles, motor cycles and the like, the combination of a saddle seat and a saddle truss connected together at their front ends, a yoke connected to the rear end of the seat consisting of a cross bar and a pair of depending arms, a compression spring surrounding each arm operatively connected at one end with the yoke and at the other with the truss and adapted to compressingly yield when excessive pressure is applied to the seat or truss and to expand to normal when such pressure is released, a second pair of compression springs, each having at one end operative connection with the yoke arm and a support for each of said second springs mounted on the truss, said second pair of compression springs also adapted to compressingly yield when excessive pressure is applied to the seat or truss and to expand to normal when released.

2. In a saddle for bicycles, motor cycles and the like, the combination of a saddle seat and a saddle truss, means to connect the front end of the truss to the front end of the seat, a pair of compression springs operatively connected at one end to the seat and at the other end to the truss and adapted to compressingly yield when excessive pressure is applied to the seat or truss and to expand to normal when released, a pair of arms depending from said seat, a second pair of compression springs each operatively connected at one end to one of said arms, supports for the other ends of said compression springs mounted on the truss, said springs adapted to compressingly yield between the truss and seat when excessive pressure is applied to either the truss or seat and to expand to normal when said pressure is released.



3. In a saddle for bicycles, motor cycles and the like, the combination of a saddle seat and a saddle truss, means to connect the front end of the truss to the front end of the seat, a pair of compression springs operatively connected at one end to the seat and bolted at the other end to the truss, said springs adapted to compressingly yield when excessive pressure is applied to either the truss or the seat and to expand to normal when such pressure is released, a pair of depending arms connected to the rear part of the seat, a second pair of compression springs each operatively connected at one end to one of said arms and depending supports for the other ends of said compression springs connected to said truss, said second pair of compression springs being also compressed when excessive pressure is applied either to the truss or the seat and adapted to expand when such pressure is released.

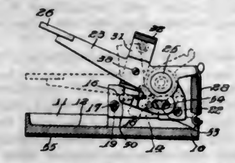
4. In a saddle for bicycles, motorcycles and the like, the combination of a saddle seat and a saddle truss, means to connect the front end of the truss to the front end of the seat, a yoke connected to the rear end of the seat consisting of a cross bar and a pair of vertical depending arms, a pair of coil compression springs, each connected at one end to the truss, each surrounding one of said arms and operatively connected at the other end with the yoke, said springs adapted to compressingly yield when excessive pressure is applied either to the seat or truss and to expand to normal when such pressure is released, a second pair of compression springs, each operatively connected at one end to one of said depending arms and supports depending from said truss for the other ends of said second pair of compression springs, said second pair of compression springs adapted also to compressingly yield when excessive pressure is applied to either the seat or truss and to expand when such pressure is released.

5. In a saddle for motorcycles, bicycles or the like, the combination of a saddle seat and a saddle truss, means to connect the front ends of said truss and said seat together, a pair of depending spring supports one connected to each of the rear corners of said truss, a pair of vertically depending arms one connected to each of the rear corners of said seat, a pair of compression springs, each supported at one end from said support and operatively connected at the other end to the lower end of said arm, and a second pair of compression springs surrounding said arms, each operatively connected at one end to said truss and at the other end to the upper end of one of said depending arms.

[Claims 6 to 20 not printed in the Gazette.]

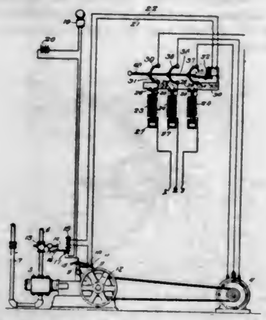


1,229,469. CUTTER FOR SOUND-REPRODUCING STYLI. ELDRIDGE R. JOHNSON, Merion, Pa., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Nov. 18, 1912. Serial No. 731,955. (Cl. 144—146.)



In a stylus cutter, the combination of a stationary blade having a cutting edge and a guiding surface flush with the active edge of said blade and extending on a side of the cutting edge of said stationary blade, a blade carrier mounted to move in a plane substantially parallel to the said guiding surface of said stationary blade, a cutting blade secured to said carrier and disposed in a plane making a slight angle with the plane of said guiding surface of said stationary blade, said blade on said carrier being relatively long and having one of its short ends secured to said carrier and its opposite short end provided with a cutting edge, and means carried by said carrier and disposed between said blade and said carrier to flex said blade laterally to adjust and regulate the pressure between said blades.

1,229,470. ELECTRIC CONTROL SYSTEM. NELS JOLEEN, Chicago, Ill. Filed Apr. 10, 1914. Serial No. 830,911. (Cl. 103—94.)



1. In a refrigerating system motor protective apparatus comprising in combination a pump, an induction motor for driving said pump to normally pump fluid, a valve to control the flow of fluid to said pump, means directly responsive to the speed of the motor and operative upon a predetermined drop below normal of the speed of said motor to control the closure of said valve to relieve the pump of load to thereby permit the motor when relieved of load to regain its normal speed, and means for manually restoring said valve to its operative position to permit the flow of fluid to said pump.

2. In a refrigerating system motor protective apparatus comprising in combination a pump, an induction motor for driving said pump to normally pump fluid, a valve to control the flow of fluid to said pump, a governor directly responsive to the speed of the motor and operative upon a predetermined drop below normal of the speed of said motor to control the closure of said valve to relieve the pump of load to thereby permit the motor when relieved of load to regain its normal speed, and means for manually restoring said valve to its operative position to permit the flow of fluid to said pump, and electromagnetic means interposed between said valve and said governor.

1,229,471. EXHAUST ATTACHMENT FOR GAS-ENGINES. EL DORADO JONES and RAY P. UPTON, Moline, Ill., assignors, by mesne assignments, to Cook Muffler Co., a Corporation of Illinois. Filed Aug. 3, 1914, Serial No. 854,657. Renewed Sept. 27, 1916. Serial No. 122,548. (Cl. 123—194.)



1. In an exhaust attachment for gas engines, the combination of a casing, a spiral bladed propeller wheel arranged transversely in said casing, an inlet head having an inlet neck disposed in longitudinal alinement with the propeller wheel, and a series of baffle plates disposed back of said propeller wheel, substantially as set forth.

2. In an exhaust attachment for gas engines, the combination of a casing, a spiral bladed propeller wheel arranged transversely in said casing, an inlet head having a marginal inlet neck disposed in alinement with an outer portion of the propeller wheel, said inlet head having a flaring cavity, and a transverse partition in said cavity and disposed between said inlet neck and the center of the inlet head, substantially as set forth.

3. In an exhaust attachment for gas engines, the combination of a casing, a spiral bladed propeller wheel arranged transversely in said casing, an inlet head having a marginal inlet neck disposed in alinement with an outer portion of the propeller wheel, said inlet head having a flaring cavity, and a semi-annular partition arranged transversely in said cavity between said inlet neck and the center of the inlet head, substantially as set forth.

4. In an exhaust attachment for gas engines, the combination of a casing, a spiral bladed propeller wheel arranged transversely in said casing, an inlet head having a marginal inlet neck disposed in alinement with an outer portion of the propeller wheel, said inlet head having a flaring cavity, and a transverse partition in said cavity and disposed between said inlet neck and the center of the inlet head, said partition having spaced relation at its forward end to the wall of the inlet head to provide an auxiliary passage between the cavity of the inlet neck and that of the inlet head, substantially as set forth.

5. In an exhaust attachment for gas engines, the combination of a casing, a spiral bladed propeller wheel arranged transversely in said casing, an inlet head having a marginal inlet neck disposed in alinement with an outer portion of the propeller wheel, said inlet head having a flaring cavity, and a semi-annular partition arranged transversely in said cavity between said inlet neck and the center of the inlet head, said partition having spaced relation at its forward end to the wall of the inlet head to provide an auxiliary passage between the cavity of the inlet neck and that of the inlet head, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,229,472. PROCESS OF CURING, PACKING, AND PRESERVING FISH. EDWIN P. JULIEN, Seattle, Wash. Filed Nov. 28, 1916. Serial No. 133,974. (Cl. 99—8.)

1. The process of preparing packages containing prepared edible portions of fish which consists in the re-

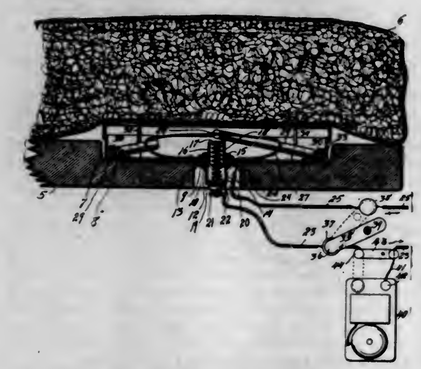
moval of the head and entrails; smoking the edible portions; removing from the body of the smoked edible portions the skin, bones and the dry skin-like surface portion of the inner side of said body; reducing said body to a form that is adapted to be disposed within containers that are adapted to be hermetically sealed; cooking said skin, bones and the dry skin-like portion of the inner side of the fish together with water and seasoning condiments for a length of time sufficient to cause the water to extract the nutritious oil and juices contained therein; straining the contents; and submerging the fish so prepared within the strained fluid.

2. The process of preparing the edible portions of fish as an article of food which consists in the removal of the head and entrails; smoking the edible portions; removing from the body of the smoked edible portions the skin, bones and dry skin-like surface portion of the inner side of said body; reducing said body to a form that is adapted to be disposed within a suitable receptacle; cooking said skin, bones and the dry skin-like surface portion of the inner side of the fish together with water and seasoning condiments for a length of time sufficient to cause the water to extract the nutritious oil and juices contained therein; straining the contents; and submerging the fish so prepared within the strained fluid.

3. The process of preparing edible portions of fish as an article of food which consists of smoking said edible portions and reducing them to a pulpy mass, and submerging said pulpy mass in a seasoned preservative fluid disposed within a suitable container.

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1,229,473. AUTOMATIC MAKE-AND-BREAK DEVICE. PATRICK S. KEENAN, Denver, Colo. Filed Mar. 30, 1916. Serial No. 87,708. (Cl. 200—35.)



1. A make and break device, comprising a support having a central opening, a vertical contact slidably mounted therein and located in one branch of an electrical circuit, a second contact arranged in the other branch of the circuit and composed of two hinged members normally spring supported intermediate their hinges out of engagement with the first named contact but movable downwardly into engagement therewith when subjected to pressure.

2. A make and break device, comprising a contact composed of spring spaced telescoping members mounted on the support and located in one branch of the electrical circuit, a second contact arranged in the other branch of the circuit and composed of two hinged members normally spring supported intermediate their hinges above and out of engagement with the first named contact but vertically movable to engage the latter, substantially as described.

3. A make and break device composed of a casing having a central opening, a contact suspended in said opening, and located in one branch of the electrical circuit, a second contact in the other branch of the circuit composed of two hinged members which extend from their hinges toward each other, a spring connecting the contact portions of said members and normally supporting the same above the first named contact but movable downwardly under suitable pressure into engagement therewith, and means for normally insulating the two contacts from each other.

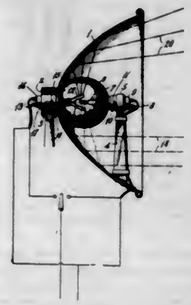
4. A make and break device, comprising a metallic casing having a central opening formed in its lower surface, a contact slidably mounted therein and insulated therefrom, the said contact and casing being respectively located in the two branches of an electrical circuit, a second contact composed of two members hingedly connected with the casing and extending toward each other, their adjacent extremities being normally spring supported above the first named contact but movable into engagement therewith under the influence of pressure in a downward direction.

5. In a device of the class described, the combination of a metallic casing, a contact centrally mounted in the casing and insulated therefrom, said contact and casing being respectively located in the two branches of an electrical circuit, a second contact composed of two members hingedly connected with the said casing and extending from their hinges toward each other, their adjacent extremities being normally spring supported above the first named contact, and a top casing member having depending parts engaging the said hinged members of the second contact and movable vertically for circuit closing purposes.

[Claims 6 to 8 not printed in the Gazette.]

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1,229,474. HEADLIGHT. HARRIE B. KENYON, Detroit, Mich., assignor to James M. Richardson, Highland Park, Mich. Filed Aug. 22, 1912. Serial No. 716,561. (Cl. 240—41.)



1. In a headlight, the combination of a reflector having a focal center, an incandescent electric lamp bulb mounted in the reflector and provided with a pair of filaments, one of the filaments being of high candle power and positioned with its heated portion at the focal center of the reflector so that the rays therefrom are projected in substantially parallel beams, and the other filament being of lower candle power and positioned in symmetrical relation to the first filament and away from the focal center so that the rays therefrom are projected in diverging beams and electric circuits for heating either filament at will.

2. In a headlight, the combination of a reflector having a focal center, an incandescent electric lamp bulb mounted in the reflector and provided with two filaments, one of which is positioned with its heated portion at the focal center of the reflector so that the rays therefrom are projected in substantially parallel beams, and the other filament arranged symmetrically in relation to the first in the plane that passes through the focal center perpendicularly to the reflector axis so that the rays therefrom are projected in diffused diverging beams and electric circuits for heating either filament at will.

3. In a headlight, the combination of a parabolic reflector having a tubular axial socket and a standard within the reflector having a bearing boss in alinement with the socket, with an incandescent electric lamp bulb mounted in the socket and standard and provided with a filament of high candle power at the focal center of the reflector and a filament of low candle power adjacent the other filament.

4. In a headlight, the combination of a parabolic reflector, a tubular socket on the reflector in axial alinement therewith, and a standard on the reflector having a bearing boss in alinement with the socket, with an incandescent electric lamp bulb having oppositely disposed sockets detachably mounted in the bearing boss and reflector socket, a filament of high candle power in the lamp at a focal center of the reflector, and a filament of low candle power in the lamp adjacent the other filament.

5. In a headlight, the combination of a parabolic reflector, a tubular axial socket extending rearwardly therefrom, and a standard on the interior of the reflector having a bearing boss alined with the socket, with an incandescent electric lamp bulb, oppositely disposed sockets on the bulb detachably engaging the bearing boss and the reflector socket, a filament in the lamp at the focal center of the reflector, and a filament of different candle power than the focal filament mounted in the lamp adjacent to the latter.

[Claims 6 to 9 not printed in the Gazette.]

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1,229,475. TOWEL-HOLDER. CHARLES J. KERN, Buffalo, N. Y., assignor to Inventors Product Company, Inc., a Corporation of New York. Filed May 6, 1916. Serial No. 95,859. (Cl. 211—31.)



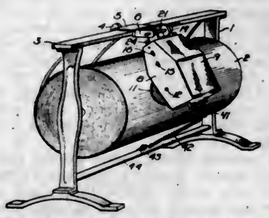
In a towel dispensing device, a holder, a shaft fixedly mounted in said holder, a stamped sheet metal plate rotatably mounted on said shaft and adapted to support a roll of toweling material, said plate having a central aperture with a notch leading into said aperture, a pin on the shaft, one side of said plate being normally in contact with one side of said pin, means for rotating said plate, the said notch permitting the pin to clear the said plate and permit the said plate to rotate until the opposite side of the plate contacts with the other side of said pin, thereby permitting a single revolution of said plate and allowing a predetermined length of toweling to be unwound from said roll, a spring having one end attached to said shaft and its other end attached to the said plate, whereby the plate is returned to its normal position upon the severing of the unwound material from the roll.

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1,229,476. ROLL-PRINTING DEVICE. ISAAC W. KING, Kansas City, Mo., assignor to The Automatic Advertising & Sales Company, Kansas City, Mo., a Corporation of Missouri. Filed Sept. 30, 1915. Serial No. 53,397. (Cl. 101—126.)

1. The combination with a suitable stand, of a housing pivotally mounted on said stand, a printing roller carried by and projected from the housing, and a plurality of spring members of relative different strength connecting the housing with the frame, whereby one of the springs may act as a relay to the other in effecting substantially constant pressure of a printing roller on a body carried in the frame when said body is varied in diameter substantially as set forth.

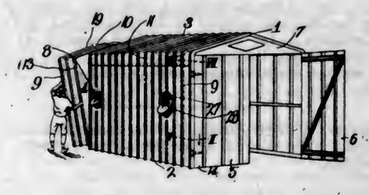
2. The combination with a roll paper frame, of a housing pivotally mounted on said frame, a printing roller rotatably mounted in the housing and projecting therefrom to contact a roll carried in the frame, a spring attached to the housing, and a spring attached to the frame and connected with the housing spring, the said springs being



of relative different strength whereby a substantially even tension of the printing roller against the roll held in the frame may be maintained as the diameter of the frame roll diminishes.

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1,229,477. SHEET-METAL BUILDING. ANDREW A. KRAMER, Kansas City, Kans. Filed Mar. 3, 1916. Serial No. 81,835. (Cl. 189—2.)

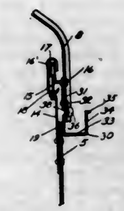


1. A building comprising side wall and roof members, each composed of initially independent strips of sheet metal, corrugated transversely and box ribbed longitudinally, the roof sections being bent to form a ridge through the body portions and box ribs, and the box ribs on the roof nesting with the box ribs on the side wall sections.

2. A sheet metal structure comprising side wall and roof sections, made of initially independent sheets of metal, corrugated transversely and box ribbed longitudinally, the roof strips being bent to form ridge and edge portions, the side wall and roof strips having box ribs along their longitudinal edges, with the edge ribs on one section nesting with like ribs on an adjacent section and with the ribs of the roof strip nested with ribs of the side wall sections.

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1,229,478. SHEET-METAL BUILDING. ANDREW A. KRAMER, Kansas City, Kans. Filed July 21, 1916. Serial No. 110,501. (Cl. 189—2.)



1. In a building having a side opening and a wall member having a lower edge terminating above the opening, a trough having an inner wall member lying along the inner face of the building wall member and attached

thereto, whereby the trough is supported from the building wall member and the said building wall member projected into the trough substantially as set forth.

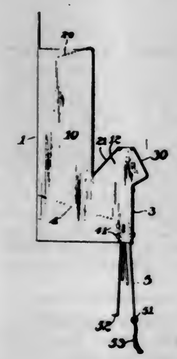
2. In a building having a side opening and comprising a wall member having a free edge terminating at the top of said opening, and having a transverse corrugation adjacent said free edge, a drain trough having a rear wall lying along the inner face of said building wall and having a corrugation seated within the corrugation of said side wall, and means for attaching the rear wall of the trough to the side wall of the building, whereby the trough is supported from the side wall, with the lower edge of the side wall located within the trough for the purpose set forth.

3. In a building having a side opening and comprising a side wall member having a free edge at the top of the opening, a door hanger carried by the side wall, a door carried by said hanger, a trough having a rear wall lying along the inner face of said wall member and bridging the space between said side wall member and the suspended door, and means for attaching the rear wall of said trough to the side member of the building.

4. In a building comprising a side opening and a roof provided with a downturned portion, forming a part of the side wall of the building and having a free edge terminating at the top of said opening, a hanger carried by the said downturned roof portion, a door carried by said hanger, and a trough having a rear wall projected between the side wall member of the building and said door and attached to the side wall member whereby the door may move along the inner wall of the trough and the side member drain into said trough substantially as set forth.

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1,229,479. MATCH-BOX. YAICHI KUROKAWA, Seattle, Wash. Filed Oct. 21, 1916. Serial No. 126,884. (Cl. 206—23.)



1. A match box comprising a case having a vertical guideway, a match carrier mounted in said guideway and composed of a metal plate bent upon itself to form front and back sides and exteriorly concaved at the bend to form a match receiving hollow, one side of said carrier having a stop lug limiting its upper movement, means for engaging said match carrier to pull it down, and a spring between the sides of said carrier and engaging the case at the ends of the carrier and acting as a stop to limit the downward movement of the carrier and to normally hold the carrier in raised position.

2. A match box comprising a case having a main storage compartment and an auxiliary compartment extending laterally from the lower part of the main compartment, the top and bottom of said auxiliary compartment having openings of a size to pass a match laterally, a match carrier mounted to reciprocate within said openings and to be withdrawn to bring its upper edge near the bottom of the match box, means acting to normally hold said match carrier in position to present a match at said upper opening and means for drawing said match carrier downward within the box.

3. A match box comprising a case having a main storage compartment and an auxiliary compartment extending laterally from the lower part of the main compartment, the top and bottom of said auxiliary compartment having openings of a size to pass a match laterally, the bottom of said box being inclined to cause the matches to move by gravity to said lower opening.

4. A match box comprising a case having a main storage compartment and an auxiliary compartment extending laterally from the lower part of the main compartment, the top and bottom of said auxiliary compartment having openings of a size to pass a match laterally, the bottom of said box being inclined to cause the matches to move by gravity to said lower opening, a match carrier having separated front and back plates connected at the top and exteriorly hollowed on top to form a match receiving hollow, said carrier being mounted to reciprocate through the bottom opening and to present matches at the upper opening, a spring lying between the front and back sides of said carrier and engaging the sides of the case, and means for engaging said carrier to pull it down and means for limiting its upward movement.

5. A match box having a plate forming the back and sides thereof, a second plate covering most of the top and front and having an upwardly and outwardly inclined lower end section, a third plate covering the remainder of the front and leaving a match discharging slot between it and the second plate, a fourth plate forming the bottom and turned down at its forward end to leave a slot between it and the third plate and a match carrier mounted to vertically reciprocate in the latter slot and to present a match to the first slot.

[Claim 6 not printed in the Gazette.]

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1,229,480. ROLLING SPRING METAL. ALFRED M. LANE, St. Louis, Mo., assignor to Monarch Metal Weather Strip Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 20, 1915. Serial No. 67,738. (Cl. 80—60.)



2. The process if bending springy sheet metal strips which comprises passing said strips cold through successive pairs of gripping and bending rolls, each succeeding pair of rolls being driven at a peripheral speed slightly greater than that of the preceding pair, whereby each strip is stretched slightly between successive pairs of rolls.

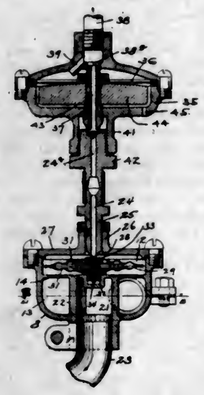
6. The process of bending over the edges of spring metal strips which comprises bending up the middle portion of the strip to convex form simultaneously with bending up the margins at an angle thereto, bending in said margins and reducing the convexity of said middle portion and subsequently flattening the convex middle portion and margins into parallel planes.

[Claims 1 and 3 to 5 not printed in the Gazette.]

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1,229,481. APPARATUS FOR CONTROLLING THE FLOW OF FUEL TO INTERNAL-COMBUSTION ENGINES. THOMAS C. LEAKE, San Francisco, Cal., assignor to Leake Motor Fuel Economy Company, San Francisco, Cal., a Corporation of California. Filed Mar. 24, 1915. Serial No. 16,775. (Cl. 261—39.)

1. An attachment for an internal combustion engine having a manifold, consisting of means for introducing liquid hydrocarbon directly into said manifold, means for heating the hydrocarbon before it enters the manifold, means operated by a rise in temperature of the hydrocarbon for cutting off the direct supply thereon to the manifold, and a normally closed valve arranged in the said introducing means and adapted to be opened by the suction produced by the turning over of the engine.



2. In a device of the character described, a casing having two separated chambers therein in thermal communication, one chamber being arranged for the passage of fuel to the engine and the other chamber being arranged for the passage of exhaust gases from the engine, a flexible walled closed casing in the fuel chamber adapted to increase its volume with an increase in temperature and means arranged in said flexible casing for varying its minimum volume.

3. In a device of the character described, a casing having two separated chambers therein in thermal communication, one chamber being arranged for the passage of fuel to the engine and the other being arranged for the passage of exhaust gases from the engine, a hollow nipple provided with a conical end arranged in said fuel chamber, a flexible walled closed casing in the fuel chamber adapted to expand with an increase in temperature, and a soft metal plug on said casing adapted to be seated on said conical end to close the passage in said nipple when said casing expands.

4. In a device of the character described an annular exhaust gas chamber having a tangential inlet and a central outlet, a fuel chamber arranged above said annular chamber and separated therefrom by a relatively thin wall having a corrugated surface whereby the heat of the exhaust gases is communicated to the fuel in the fuel chamber, and a flexible walled closed casing in the fuel chamber overlying said corrugated surface.

5. In a device as described an annular exhaust gas chamber, a fuel chamber overlying said annular chamber and separated therefrom by a relatively thin corrugated wall, a cone surface having an outlet port therein in said fuel chamber, a flexible walled closed casing in the fuel chamber adapted to expand with an increase in temperature and a soft metal plug on said casing adapted to be seated against said cone surface to close said port when the said casing expands.

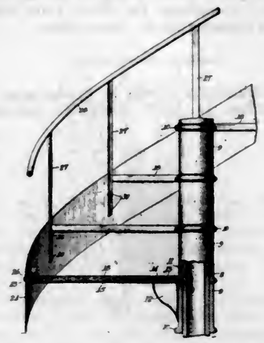
[Claim 6 not printed in the Gazette.]

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1,229,482. SPIRAL STAIRWAY. ADRIEN LECLAIR, Chicago, Ill. Filed Aug. 18, 1913, Serial No. 785,277. Renewed Mar. 15, 1917. Serial No. 155,138. (Cl. 189—44.)

1. A spiral stairway comprising in combination a post, or mast, a plurality of sleeves thereon, treads supported by said sleeves, and means whereby a portion of said treads are confined between the post and sleeve.

4. A spiral stairway comprising in combination a post axial thereto, a sleeve thereon provided with a bracket integral therewith and a tread supported by the said bracket and provided with means confining the end of the tread between the sleeve and the post.



6. A spiral stairway comprising in combination a post axial thereto, a plurality of sleeves on said post provided at the lower end with a slot, a tread projected through said slot and supported on the end of the adjacent sleeve, means whereby the tread is held between the sleeve and post and means for preventing an axial movement of said tread.

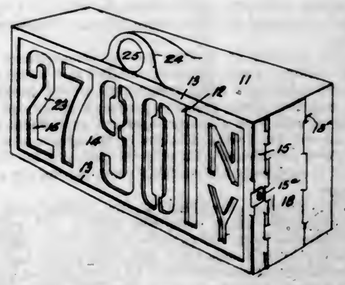
9. A spiral stairway comprising in combination a post axial thereto, sleeves thereon, each of which is provided with a bracket at one end and at opposite end with a slot opposing the bracket of the adjacent sleeve mounted thereon, a sheet metal tread supported by said bracket, projecting through said slot and provided with an upward bend or tongue wedged between the sleeve and post.

10. A spiral stairway comprising in combination a post axial thereto, a plurality of sleeves in an engagement with each other, a bracket integral with and projecting from each sleeve, a slot at the bottom of said sleeve, a bent sheet metal step supported upon said bracket and provided with a tongue wedged between and tightened by the sleeve, post, and step, a plate bolted to and connecting the several steps.

[Claims 2, 3, 5, 7, and 8 not printed in the Gazette.]

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1,229,483. COMBINED SIGNAL AND LICENSE-PLATE. EDWARD LIBBY, Montreal, Quebec, Canada. Filed May 22, 1916. Serial No. 99,226. (Cl. 40—132.)




A combined signal and license plate, comprising a casing, a license plate having openings therein in the form of letters and numerals, a colored transparent screen behind said plate, a source of light within the casing,

whereby light escaping through the screen and openings of the plate will constitute both a signal and an indication of the license number, a pair of independently operable closures for the casing connected thereto by a hinge common to both closures, one confining the license plate and screen, and the other giving access to the interior of the casing without unconfining the license plate and screen, and a keyless fastening for the other closure.

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1,229,484. GARMENT. HENRY M. LINDENTHAL, Chicago, Ill. Filed Feb. 12, 1917. Serial No. 148,046. (Cl. 2—97.)



In a vest comprising a front and back and provided with the usual lower side pockets and connecting side seams, a pair of straps secured at one end to said side seams and adapted to be readily connected together at their opposite ends either across the front or back of the vest, one surface of said straps being of the same goods as the back of the vest and the opposite surface being of the same goods as the front of the vest, said straps being adapted when connected together across the front of the vest to tend to hold the lower front pockets in closed position.

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1,229,485. PROCESS OF MAKING PLASTIC COMPOSITIONS. WILLIAM G. LINDSAY, Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y., a Corporation of New Jersey. Original application filed May 23, 1912, Serial No. 699,234. Divided and this application filed July 10, 1915. Serial No. 39,190. (Cl. 106—40.)

1. The process of making plastic compositions from acetyl cellulose which comprises mixing said acetyl cellulose with chloroform and a monohydric alcohol having not more than two carbon atoms to produce a gelatinous mass.

2. The process of making plastic compositions from acetyl cellulose which comprises mixing said acetyl cellulose with chloroform and a monohydric alcohol having not more than two carbon atoms to produce a gelatinous mass, and mixing therewith a solid substance which is a solvent for actyl cellulose in the presence of said chloroform and alcohol.

6. The process of making plastic compositions from acetyl cellulose which comprises mixing said acetyl cellulose with chloroform and a monohydric alcohol having not more than two carbon atoms to produce a gelatinous mass, mixing therewith an alkylated aromatic sulfonamid which is a solvent for acetyl cellulose in the presence of said chloroform and alcohol, allowing the excess of the volatile solvent to evaporate and suitably manipulating the resulting mass.

9. The process of making plastic compositions from acetyl cellulose which comprises mixing 100 parts of acetyl cellulose with 100 parts of a chloroform ingredient to produce a gelatinous mass, said chloroform ingredient comprising chloroform and from 10 to 20 parts of a monohydric alcohol having not more than two carbon atoms, and mixing therewith from 30 to 40 parts of an aromatic sulfonamid which is a solvent for said acetyl cellulose in the presence of said chloroform and alcohol.

[Claims 3 to 5, 7, and 8 not printed in the Gazette.]

1,229,486. PROCESS OF MAKING ACETYL-CELLULOSE PLASTIC COMPOUNDS. WILLIAM G. LINDSAY, Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y., a Corporation of New Jersey. Original application filed May 24, 1912, Serial No. 699,539. Divided and this application filed July 10, 1915. Serial No. 39,193. (Cl. 106—40.)

1. The process of making plastic compounds from acetyl cellulose of the variety which is freely soluble in acetone, which comprises:—mixing said acetyl cellulose with trichlorethylene and methyl alcohol to produce a gelatinous mass.

8. The process of making plastic compounds from acetyl cellulose of the variety which is freely soluble in acetone, which comprises:—mixing said acetyl cellulose with trichlorethylene and methyl alcohol in about equal volumes thereof to produce a gelatinous mass, mixing therewith a solid substance which is a solvent for said acetyl cellulose in the presence of said trichlorethylene and methyl alcohol, allowing the excess of volatile solvent to evaporate and suitably manipulating the resulting mass.

[Claims 2 to 7 and 9 not printed in the Gazette.]

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1,229,487. SOLVENT FOR ACETYL CELLULOSE AND PROCESS. WILLIAM G. LINDSAY, Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y., a Corporation of New Jersey. Original application filed May 23, 1912, Serial No. 699,234. Divided and this application filed June 6, 1916. Serial No. 102,000¼. (Cl. 106—40.)

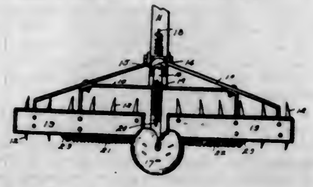
1. The composition of matter which comprises acetyl cellulose, an aryl acetamid, chloroform, and a monohydric alcohol having not more than two carbon atoms.

5. The composition of matter which comprises acetyl cellulose, tetrachlorethyl acetamilid, chloroform, and a monohydric alcohol having not more than two carbon atoms.

[Claims 2 to 4 not printed in the Gazette.]

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1,229,488. COIL-SPRING SEAT FOR DISKS. MILTON EMANUEL LINDSKOOG, Kiron, Iowa. Filed Aug. 3, 1915. Serial No. 43,485. (Cl. 155—25.)



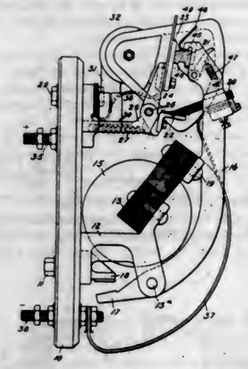
In a device of the class described, a frame, a seat supporting member, a universal joint for supporting the lower end of said seat supporting member on the frame, said seat supporting member extending upwardly and rearwardly from said point, a spring secured to said seat supporting member rearwardly of said joint near the upper portion of said member, and to said frame, in front of said joint, a seat on the upper end of said member, springs operatively connected with said seat and extending laterally on the opposite sides thereof, and secured to said frame for yieldingly holding said seat against lateral tilting, said first spring being so arranged as to cushion the rebound of said seat when the seat has been moved laterally from its normal position.

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1,229,489. SWITCH. ALEXANDER J. LOGUIN, West Allis, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Sept. 6, 1910. Serial No. 580,522. (Cl. 175—282.)

1. In a switch, a movable member carrying a contact, a pivoted element carrying a contact engageable with the contact carried by said movable member, and means comprising parts associated with said movable member and said pivoted element for causing movement of the contact carried by said pivoted element prior to engagement between said contacts.





2. In a switch, a member movable about a pivot and carrying a contact, a pivoted element carrying a contact coöperative with said first mentioned contact, and a part associated with said movable member and coöperative with a part associated with said pivoted element to cause movement of the contact carried by said pivoted element prior to engagement between said contacts.

3. In a switch, a movable member carrying a contact, a pivoted element carrying a contact coöperative with said first contact, and a part associated with said movable member and coöperative with a portion of said pivoted element on the side of the pivotal point thereof opposite to that on which the contact carried thereby is disposed and engageable with such portion of said pivoted element prior to the engagement of said contacts for causing positive movement of the contact carried by said pivoted element into engagement with said first contact.

4. In a switch, a movable member carrying main and auxiliary contacts, a pivoted element carrying main and auxiliary contacts coöperative with said first contacts, the auxiliary contact on said pivoted member being disposed on the opposite side of the pivotal point thereof from the main contact carried thereby, said auxiliary contacts being engageable prior to engagement of said main contacts and being effective to cause an increase in the pressure with which said main contacts engage.

5. In a switch, a movable member, main and auxiliary contacts carried by said movable member, a pivoted element, and contacts mounted on said pivoted element at different distances from the pivotal point thereof and cooperative with the contacts carried by said movable member, the pressure between said auxiliary contacts when in closed position affecting the pressure with which the main contacts engage each other.

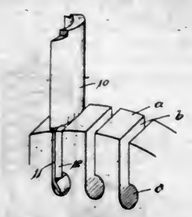
[Claims 6 to 16 not printed in the Gazette.]

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1,229,490. TURBINE. WILLIAM J. A. LONDON and ROBERT C. ALLEN, Hartford, Conn., assignors to The Terry Steam Turbine Company, Hartford, Conn., a Corporation of Connecticut. Filed Sept. 19, 1912. Serial No. 721,126. (Cl. 253—77.)

1. In a blade fastening device the combination with a rotor having transverse slots in its periphery, of a blade having a root of irregular cross section adapted to fit into said slot, and a filler adapted in shape to fit in said slot at one side of the root.

2. In a device of the character described, the combination with a rotor having transverse slots in its periphery, of a blade provided with a root of reduced size and of irregular cross section, a filler adapted in shape to fit the irregular side of said root and with the root to closely fill the slots in the rotor, said blade overlying said filler.



3. In a device of the character described, the combination with a rotor having transverse slots in its periphery, of a blade and means for fastening said blade to said rotor comprising a blade root and a filler having correspondingly shaped contacting faces and adapted to fit snugly in the slots.

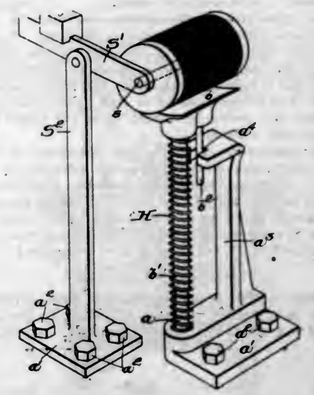
4. In a turbine a rotor having its periphery transversely slotted, blades overlying said slots and seated against the face of the rotor, each blade provided with a root fitting said slot, and means for bending the end of said root when the blade is driven into position, to lock the blade in place.

5. In a turbine a rotor having transverse peripheral slots the walls of which are inclined at the bottom, blades overlying said slots and seated against the face of the rotor, each blade being provided with a root adapted to fit within the slots and be deflected by the said incline when the blade is seated, and a relatively shorter filler located in each slot back of the roots.

[Claims 6 and 7 not printed in the Gazette.]

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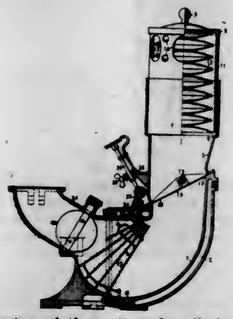
1,229,491. SUPPORT FOR BOBBINS OR COPS. JOHN O. MCKEAN, Westfield, Mass., assignor to Foster Machine Company, Westfield, Mass., a Corporation of Massachusetts. Filed May 1, 1916. Serial No. 94,585. (Cl. 242—130.)



1. In a supporter for spools or the like, the combination of a spool-sustaining support; a spring sustaining said support and means engaging the spool to guide the spool in movements in a direction to and from the support and retain it in proper relation to the support while the spool is unwound.

2. In a supporter for spools or the like, the combination of a support; a spool receiving spindle, mounted upon one end of a pivoted beam; that beam and a weight adjustable upon either side of the beam pivot to increase or decrease the pressure of the spool upon the support.

1,229,492. CHARGE-PREPARING APPARATUS. WILLIAM R. MCKEEN, Jr., Omaha, Nebr., assignor to McKeen Motor Car Company, Omaha, Nebr., a Corporation of New Jersey. Filed July 1, 1909. Serial No. 505,407. (Cl. 261—14.)



1. In apparatus of the nature described, in combination, means forming a chamber, a plurality of screens disposed in converging relation in said chamber, means adapted to lead air into said chamber, and means adapted to lead a hydrocarbon upon said screens adjacent their converging ends.

2. In apparatus of the nature described, in combination, a casing provided with a chamber; a foraminous diaphragm in said chamber, composed of converging screens; a conduit adapted to lead air into said chamber; and means adapted to deliver a hydrocarbon upon said diaphragm.

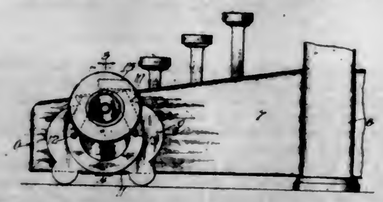
3. In apparatus of the nature described, in combination, a conduit, means adapted to admit air thereto, a source of hydrocarbon supply, and a connection adapted to lead hydrocarbon from said source of supply by gravity into said conduit, said connection being formed and positioned to act as a siphon with certain levels of hydrocarbon in said source of supply.

4. In apparatus of the nature described, in combination, means forming a chamber, a plurality of upwardly converging screens in said chamber, means adapted to lead air into said chamber, a source of hydrocarbon supply having a normal level above the upper ends of said screens, and means adapted to lead hydrocarbon by gravity from said source of supply upon the upper end portions of said screens.

5. In apparatus of the nature described, in combination, carbureting means, a conduit adapted to lead air thereto, a casing upon said conduit, a second casing adapted to fit removably in said first casing and provided with lateral ports for the admission of air, and a screen member in said second casing through which the air is led.

[Claims 6 to 11 not printed in the Gazette.]

1,229,493. IMPLEMENT-HOLDER FOR TYPE-WRITING MACHINES. ISAAC H. MALLIN, Chicago, Ill. Filed Oct. 18, 1915. Serial No. 56,512. (Cl. 197—181.)

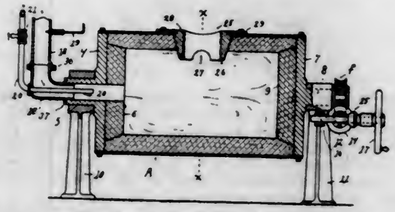


1. A typewriter implement holder comprising a non-magnetic plate having upper and lower flanges in combination with a magnet secured thereto, said non-magnetic plate interposed between the typewriter frame and magnet and removably attached to the side of the machine, substantially as described.

2. A typewriter implement holder consisting of a magnet in combination with a flanged non-magnetic plate secured thereto interposed between the magnet and typewriter frame and removably attached to the side of the machine, substantially as described.

3. A typewriter implement holder comprising in combination a non-magnetic plate provided with upper and lower flanges and a magnet secured thereto, said non-magnetic plate interposed between the typewriter frame and magnet and removably attached to the side of the machine for maintaining a disk eraser within convenient reach of the operator, as and for the purpose set forth.

1,229,494. METAL-MELTING FURNACE. DWIGHT S. MARFIELD, Cincinnati, Ohio, assignor to The Buckeye Products Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 2, 1917. Serial No. 140,224. (Cl. 263—33.)



1. A furnace having a melting chamber provided at one end with a burner opening and in a wall at substantially right angles thereto with a port for charging and pouring, said port having an annulus at its inner end projecting into said chamber and adapted to baffle the combustible gases as they sweep along the wall of said chamber toward said port.

2. A furnace having a melting chamber and rotatably mounted upon substantially horizontal bearings, an inlet port for fuel and air through one of said bearings, a charging and pouring port leading through the wall of said chamber at substantially right angles to the axis of rotation, said charging port having an annulus at its inner end projecting into said chamber and adapted to baffle the combustible gases as they sweep along the wall of said chamber toward said charging port.

[Claims 3 and 4 not printed in the Gazette.]

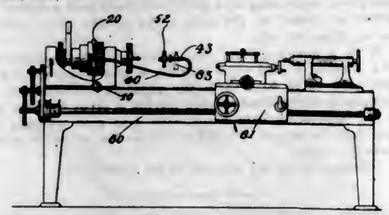
1,229,495. GARTER. WALTER MATTER, Mansfield, Ohio. Filed Mar. 27, 1916. Serial No. 86,928. (Cl. 241—5.)



A means for securing a relatively fixed end of the elastic web portion of the garter to the pad thereof, comprising a nonelastic loop secured to the pad and a link plate formed with approximately parallel slots, one slot adapted to receive the loop member and both slots adapted to receive one terminal of the elastic web, the elastic web having its normally free end downwardly threaded through the free slot, across beneath the loop plate and upwardly through the slot receiving the loop member, across the top of the plate and downwardly through the remaining slot and outwardly from said slot beneath the plate, and a tip secured to the plate-connected end of the web to rest upon the upper portion of the plate beneath the web and between the slots, the slots in the plate being of a size to be approximately filled by the portion of the web and loop passed therethrough, the loop and web presenting an uninterrupted bearing surface for the bottom of the plate, whereby the loop and web prevent contact of the metal of the link plate with the person of the wearer.



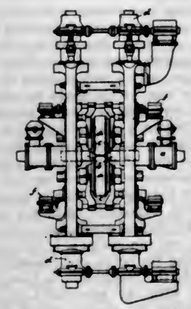
1,229,496. LATHE GRINDING ATTACHMENT. LOUIS MATULA, Cleveland, Ohio. Filed Aug. 8, 1916. Serial No. 113,741. (Cl. 51—4.)



1. In a grinder of the class described, the combination with an annular rotary element and a fixed support, of a block adjustably slidable on said fixed support, means for clamping said block to said support, a segmental bracket carried by said block having teeth upon its arcuate upper edge, a lever pivoted to said bracket, a pawl, and means for operation thereof, combined with said lever, a bracket adjustable longitudinally on said lever, a friction disk pivotally carried by said bracket, means for pressing said disk against said rotary element, a flexible shaft driven by said friction disk, an abrading wheel operatively connected with said flexible shaft and means for manually controlling said abrading wheel.

2. In a grinder, the combination with an annular rotatable element and a fixed support, of a block movable on said support, means for clamping said block thereto, an arcuate bracket carried by said block, a manually operated lever pivoted on said block, a friction disk engageable with said rotary member, means for normally pressing said disk tensionally against said rotatable element, an abrading wheel, a mounting therefor, said mounting being adapted for manual operation, and connections between said abrading wheel through said operating means to said disk.

1,229,497. ART OF ROLLING. NORBERT METZ, Düdelingen, Luxemburg. Filed Oct. 3, 1916. Serial No. 123,602. (Cl. 80—34.)



1. In a rolling mill for rolling I-beams, the combination in one single frame of two horizontal rolls rotatable in vertical direction and two vertical rolls rotatable in horizontal direction with rolling collars slidable on the shafts of the horizontal rolls and projecting into circular recesses in the faces of the vertical rolls.

2. In a rolling mill for rolling I-beams, the combination in one single frame of two horizontal rolls rotatable in vertical direction and two vertical rolls rotatable in horizontal direction with rolling collars slidable on the shafts of the horizontal rolls and projecting into circular recesses in the faces of the vertical rolls, the said collars being provided with flanges adapted to partially overlap the horizontal rolls.

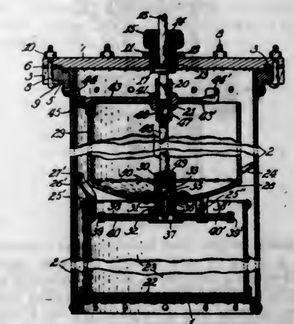
1,229,498. PACKING-RING. MATHEW MORATTA, Princeton, Ind. Filed Apr. 28, 1916. Serial No. 94,145. (Cl. 121—108.)



1. A packing ring comprising a main body portion and engaging end portions, one of said end portions provided with a base less in height than one-half the height of said main body portion, a wall flush with the internal periphery of the ring and above the said base, the width of said wall being less than one-half the width of said main body portion, the outer face of said wall converging inwardly with respect to the inner peripheral face toward said base and the other end portion provided with a tongue engaging the top of said base and the outer lateral face of said wall, with surface contact.

2. A packing ring comprising a main body portion and engaging end portions, one of said end portions provided with a base and a wall flush with the internal periphery of the ring and above the said base, the outer face of said wall converging inwardly with respect to the inner peripheral face toward said base, and the other end portion provided with a tongue engaging the top of said base, said tongue provided with an inner face diverging downwardly with respect to its outer peripheral face, said inner side face engaging said outer face of said wall, with surface contact.

1,229,499. ACETYLENE-GAS GENERATOR. DANIEL W. MUNDEN, Indianapolis, Ind., assignor to Louis Wagschal, Indianapolis, Ind. Filed July 13, 1914, Serial No. 850,616. Renewed Nov. 28, 1916. Serial No. 133,988. (Cl. 48—4.)



1. An acetylene gas generator including a closed receiver, a water-reservoir supported in the receiver and comprising a bottom and a side wall, the bottom being provided with a valve casing having a nipple thereon extending below the bottom, a plurality of perforated pipes having communication with the nipple and extending radially therefrom, the pipes providing supporting

feet for the reservoir, and a feed-valve arranged in the valve casing.

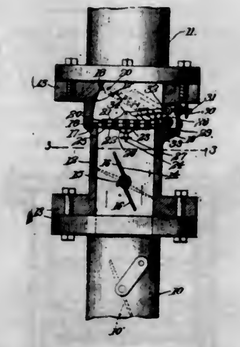
2. An acetylene gas generator including a cylindrical receiver, a water-reservoir in the receiver, means for supporting the water-reservoir above the bottom of the receiver, a center guide having arms secured to the upper portion of the reservoir, the arms having guide projections projecting beyond the reservoir approximately to the wall of the receiver, a valve casing connected to the bottom of the reservoir, and a valve in the casing having a stem extending through the center guide.

3. An acetylene gas generator including a cylindrical receiver, a carbid-vessel comprising a bottom and a side wall, the bottom of the carbid-vessel being supported in the receiver, a plurality of combined supporting and guiding devices secured to the inner side of the upper portion of the wall of the carbid-vessel and extending upward and over the top of the wall approximately to the cylindrical receiver wall on an inclined angle, a water-reservoir removably supported upon the devices, and a feed-valve connected with the bottom of the water-reservoir.

4. An acetylene gas generator including a receiver body comprising a bottom and a side wall, a carbid-holding vessel in the receiver body removably supported on the bottom thereof, a water-holding reservoir removably supported by the carbid-holding vessel in the receiver body and provided in its upper portion with a guideway, a feed-valve in the reservoir having a vertical stem guided in the guideway, the stem having a squared socket in its upper end, a cover removably secured and sealed to the top of the side wall of the receiver body and provided with a packing box having a joint-seat in its inner end, and an operating rod extending movably through the packing box and having a collar thereon provided with a valve face normally in contact with the joint-seat, the rod having a pointed squared portion extending removably into the socket of the valve stem.

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1,229,500. AUTOMATIC REGULATING-VALVE FOR INTERNAL-COMBUSTION ENGINES. EDWARD C. NEWTON, Marysville, Cal. Filed Sept. 8, 1914. Serial No. 860,684. (Cl. 137—152.)



1. In a device of the class described, the combination of a conduit, a valve in said conduit balanced against the flow therethrough, a grid valve member pivotally mounted in said conduit, means operatively connecting said valve and member whereby one is actuated by the other, and a valve member coöperating with said grid valve member to close the openings therein as the grid valve member moves from its seat.

2. In a device of the class described, the combination of a conduit, a valve in said conduit for controlling the flow therethrough, a grid valve member operatively connected with the said valve, a second grid valve member mounted on the first grid valve member, and means whereby the ports through said grid valve members are closed as the first of said grid valve members moves from its seat.

3. In a device of the class described, the combination of a conduit, a pivotally mounted grid valve therein, a grid coöperating with said valve, a normally stationary pivot, and a rod connecting said pivot with said grid whereby the grid is moved on said grid valve as the latter is moved from its seat.

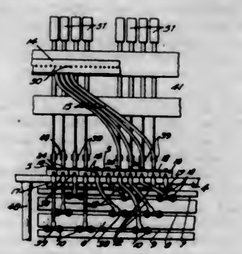
4. In a device of the class described, the combination of a conduit, a grid valve in said conduit, a grid cooperating with said grid valve to control the openings therethrough, an adjustable, normally stationary pivot, and a rod connecting said pivot with said grid whereby the latter is moved on the grid valve as the grid valve is moved from its seat.

5. In a device of the class described, the combination of a conduit, a grid valve therein, a grid coöperating with said grid valve to control the passage therethrough, an adjustable screw-threaded rod having a pivot thereon, and a rod connecting said pivot with said grid whereby the grid will be moved on said valve as the latter is moved from its seat.

[Claims 6 to 8 not printed in the Gazette.]

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1,229,501. PNEUMATIC PLAYER-ACTION. FRANK E. NICHOLS, Mount Carmel, and EARL W. FELTIS, Norwood, Ohio. Filed Feb. 17, 1916. Serial No. 78,796. (Cl. 84—233.)



1. In combination in a player action, a striking pneumatic, a vacuum chest, a valve unit mounted on the chest and communicating with the chest and the pneumatic, a tracker board, a tube connecting the tracker board and the valve unit, means for adjustably mounting the pneumatic relatively to the chest and valve unit, an operative connection between the pneumatic and the wippen of a piano action, and adjustable means for alining the connection with the wippen and the pneumatic after the pneumatic has been adjusted.

2. A player-action comprising a striking pneumatic, a vacuum chest, a valve unit communicating with the chest and operatively connected with the pneumatic, a tracker board, a tube connecting the tracker board and the valve unit, a slotted plate, and means secured to the pneumatic and occupying the slot of the plate to adjustably mount the pneumatic thereon and at a right angle thereto.

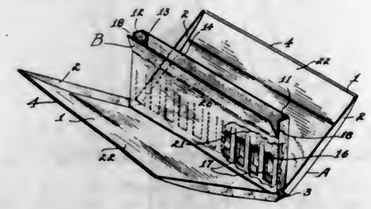
3. In combination in a player action, a striking pneumatic, a slotted plate, means secured to the pneumatic and occupying the slot of the plate to adjustably mount the pneumatic thereon, a shallow vacuum chest having alined openings in the top and bottom thereof, casings on the top and bottom, concentric with the openings in the chest, a flexible diaphragm closing the bottom opening, a valve disk closing the top opening, a valve stem mounting the disk and having its lower end extending through the chest and engaging the diaphragm, a tube connecting the top valve casing with the pneumatic, a tracker board, and a tube connecting the tracker board with the bottom casing.

4. In a player action, the combination of a series of striking pneumatics, a vacuum chest, a valve unit for each pneumatic mounted on the chest and communicating with the chest and its pneumatic, a tracker board, and tubes connecting the tracker board and the valve units, a vertical slotted plate, means occupying the slot of the plate and secured to the pneumatics, adapted to mount the pneumatics adjustably at right angles thereto, a bar located adjacent to the slotted plate, stickers operatively connected with the pneumatics and the wippens of a piano action to be operated, and clamps mounted on the bar and operatively connected with the stickers, adapted to aline the stickers with the wippens after the pneumatics have been adjusted.

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1,229,502. CIGARETTE-CASE. VICTOR NIVOIS, Brooklyn, N. Y. Filed Apr. 17, 1916. Serial No. 91,607. (Cl. 206—41.)



1. A cigarette case comprising a pair of cover sections and a holder adapted to be inclosed thereby, said holder comprising a box-like body portion formed from a single blank of material and having a series of cigarette engaging members extending inward from one wall thereof and adapted to contact the cigarettes adjacent the cigarette inner ends, said members having a length configuration to provide contact with a cigarette at a point spaced from the member free end.

4. A cigarette case comprising a pair of hinged cover sections, and a holder adapted to be inclosed thereby, said holder including a body portion having one of the walls thereof separated from and movable relative to the adjacent end walls of the holder at its upper portion, said wall also having a series of inwardly extending cigarette engaging members formed integral therewith and adapted to contact the cigarettes adjacent the cigarette inner ends.

9. A cigarette case comprising a pair of cover sections, and a holder adapted to be inclosed within the cover sections, said holder having a wall thereof formed with a row of inwardly projecting cigarette engaging members, each member being adapted to contact a cigarette adjacent the inner cigarette end to clamp the cigarette against the opposite wall of the holder, said members having a length configuration to provide contact with a cigarette at a point spaced from the member free end.

13. A cigarette case comprising a pair of hinged cover sections, and a holder adapted to be inclosed thereby, said holder including a body portion having one of the walls thereof separated from and movable relative to the adjacent end walls of the holder at its upper portion, said movable wall being adapted to serve as a guide flange by means of which the cigarettes may be guided during insertion and removal from the holder.

[Claims 2, 3, 5 to 8, 10 to 12, and 14 not printed in the Gazette.]

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1,229,503. SAFETY DEVICE FOR AVIATORS. KNUTE W. OLSON, St. Paul, Minn. Filed Aug. 28, 1916. Serial No. 117,387. (Cl. 244—1.)

1. In a safety device for aviators, comprising, a belt adapted to be secured about the waist of the aviator, straps extended from said belt, straps adapted to be secured about each leg of said aviator, having depending straps therefrom and means for detachably engaging the free ends of said extending and depending straps to hold said aviator in an aeroplane, said holding means being adapted to simultaneously release said straps and thereby release said aviator.

2. In a safety device for aviators, comprising, means for holding the aviator about the waist and by each leg, means for connecting said holding means to the frame of an aeroplane to securely hold said aviator in said aeroplane and means for simultaneously releasing said connecting means to free said aviator from engagement with said aeroplane.



3. In a safety device of the class described, comprising, a belt for encircling the waist of an aviator, bands adapted to encircle the legs of said aviator, straps connecting said belt and bands to the frame of an aeroplane to securely hold said aviator in said aeroplane and means for simultaneously releasing all of said straps thereby releasing said aviator from said aeroplane substantially as described.

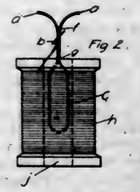
4. In a safety device of the class described, comprising a belt for encircling the waist of an aviator, bands adapted to encircle the legs of said aviator, straps connecting said belt to said bands to prevent them sliding off the legs of said aviator, straps connecting said belt and bands to the frame of an aeroplane to securely hold said aviator in said aeroplane and means for simultaneously releasing all of said straps thereby releasing said aviator from said aeroplane substantially as described.

5. In a device of the class described, comprising, a belt adapted to encircle the waist of an aviator, bands adapted to encircle the legs of said aviator, straps connecting said belt and bands to the frame of an aeroplane to securely hold said aviator in said aeroplane, snaps on the end of said straps, said snaps being adapted to engage on the frame of said aeroplane to detachably hold said aviator to said aeroplane and means for simultaneously releasing all of said snaps, thereby releasing said aviator from said aeroplane substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

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1,229,504. THREAD CUTTER AND HOLDER. OSCAR A. OLSON, Ames, Iowa. Filed Mar. 29, 1917. Serial No. 158,445. (Cl. 30—14.)



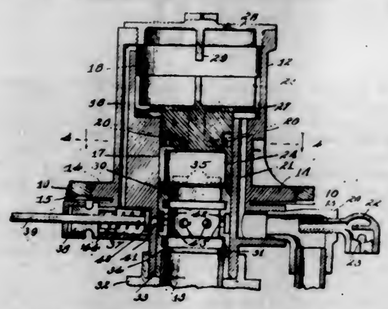

1. A thread cutter and end holder, comprising a single strip folded over at its lower end, and having spaced resilient arms extending upwardly from said lower end and designed to be received within and frictionally engage a spool, parallel arms extending upwardly from said first arms and designed to be pressed together in vertical position when the device is assembled in a spool, said last described arms having sharp edges, and having at their upper ends outwardly spread portions forming guide members.

2. A thread cutter and end holder comprising a single strip folded over at its lower end, and having spaced resil-

lent arms extending upwardly from said lower end and designed to be received within and frictionally engage a spool, parallel arms extending upwardly from said first arms and designed to be pressed together in vertical position when the device is assembled in a spool, said last described arms having sharp edges, and having at their upper ends outwardly spread portions forming guide members, one of said second arms having an opening therein, the other of said second arms having a tongue formed therefrom and extended through said opening, said tongue having a sharpened upper edge.

[Claim 3 not printed in the Gazette.]

1,229,505. FLUSHING APPARATUS. JOHN E. OSMER, Owosso, Mich. Filed Dec. 23, 1915. Serial No. 68,308. (Cl. 4—5.)



1. In a flushing apparatus, the combination with a closed water tank and discharge pipe, of a valve structure comprising a body having an outlet connecting said tank and pipe and also having an inlet for supplying the tank with water, and a valve member in said body movable by water pressure, across said outlet and inlet to alternately open and close the same, whereby the inlet is closed when the outlet is opened, and vice versa.

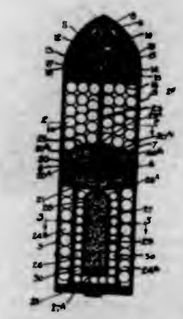
2. In a flushing apparatus, the combination with a closed water tank and discharge pipe, of a valve structure comprising a body having an outlet port connecting said tank and pipe and also having a combined air and water inlet passage for supplying the tank with air and water, and a pressure actuated valve member in said body movable across said port and passage to alternately open and close the same.

3. A flushing valve comprising a body having two alined bores of different sizes therein, the lower end of the smaller bore having a discharge outlet, the upper end of the large bore being closed, a differential piston having two spaced heads slidable in the respective bores, the body having discharge ports communicating with the smaller bore, said ports being normally closed by the lower piston-head, the body also having tank supply ports normally open to the space between said piston heads and controlled by the lower piston head, the body further having a water supply passage communicating with said space, the larger piston head having a port therethrough to permit the water to pass to the bore above said head, the body further having a by-passage extending from the upper bore above the larger piston-head and communicating at its lower end with the space beneath the lower piston-head, and a manually-operable valve controlling said by-passage and arranged to permit the escape of water from the space above the piston, whereby the pressure of the water will raise the piston to open said discharge ports and close said supply ports.

4. A differential flush valve adapted to be connected to a flush tank and comprising a body having a bore therein, a supply port opening from said bore into said tank, and a discharge port from said tank to said bore, and a water-pressure-operated piston slidable in said bore to open and close the said ports.

5. In a flushing apparatus the combination with a closed tank, of a controlling valve associated with said tank and comprising a body portion having a supply passage connected to a source of water under pressure, a discharge passage, a tank discharge port and a tank supply port, said ports communicating with their respective passages, and a differential valve member in said body portion operable by the water in said supply passage and movable across said ports to alternately open and close one of said ports and simultaneously close and open the other of said ports whereby water is admitted to said tank or discharged therefrom.

1,229,506. SHELL. JOSEPH PAIL, Jr., Prague, Alberta, Canada. Filed Jan. 21, 1916. Serial No. 73,325. (Cl. 102—29.)



1. A triple action shell comprising a head chamber, a base chamber, an explosive charge and shrapnel balls in each chamber and a bomb in the base chamber, said bomb having an independent explosive charge in communication with the explosive charge of the base chamber, said charges and bomb arranged for successive explosion.

4. A triple action shell comprising a cylindrical body, a diaphragm within said body dividing the interior thereof into head and base chambers, an opening in said diaphragm, explosive charges on both sides of said diaphragm, said charges communicating through said opening, shrapnel balls in said chambers, a bomb in said base chamber having an independent explosive charge directly communicating with said explosive charge in said base chamber, said charges and bomb arranged for successive explosion.

[Claims 2, 3, 5, and 6 not printed in the Gazette.]

1,229,507. HAY-STACKER. EZRA E. PARKER, Gering, Nebr. Filed Oct. 4, 1916. Serial No. 123,751. (Cl. 212—44.)

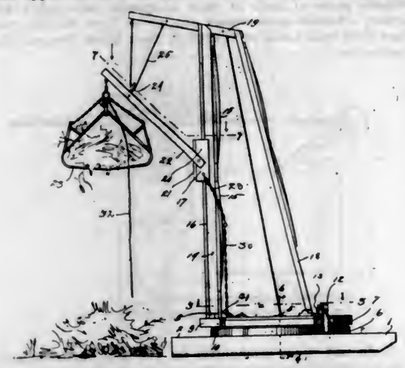
1. A hay loader comprising in combination, a base, a platform rotatable upon said base, spars having oppositely extending guideways rising from said platform, a carriage movable upon said guideways, a grapple fork carried by said carriage, a fixed beam carried by the upper ends of said spars and overhanging the grapple fork, a cable extended from said carriage to said fixed beam and thence downwardly through said platform, and means operating from the free end of said cable for raising said carriage.

2. A hay loader, comprising in combination, a base, a rotary platform on said base, a derrick structure rising from said platform so as to be rotatable therewith, a carriage vertically movable on said derrick structure, vertically swinging arms mounted upon the carriage, a grapple carried by the extremities of the arms, means for raising said carriage upon the derrick structure, and means for adjustably limiting the upward movement of the carriage.

3. A hay loader comprising in combination, a base, a trackway carried by said base, a platform rotatable upon said trackway, spars having oppositely extending guide

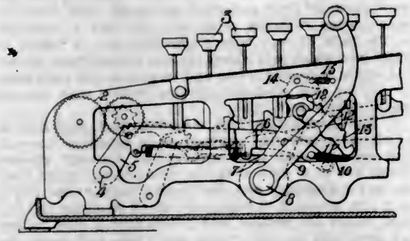


ways rising from said platform, means for bracing said spars, a carriage movable upon said guideways, a grapple fork carried by said carriage, a fixed beam carried by the upper end of said spars and overhanging the grapple



fork, a cable extending from said carriage to said fixed beam, and thence centrally through said platform, and means operating upon the free end of said cable for raising said carriage.

1,229,508. FULL-STROKE MECHANISM AND OVER-THROW-PREVENTER FOR ADDING-MACHINES. WALTER J. PASINSKI, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed July 30, 1915. Serial No. 42,097. (Cl. 74—14.)



1. The combination with a reciprocating handle, of means checking its movement when driven beyond desired speed, and coöperating means for compelling full movement in one direction before reversing.

2. The combination with a movable handle, of a rack and pawl one of which is carried by the handle and the other of which is fixed, the pawl being pivoted intermediate its ends and spring-held in camming relation to the teeth of the rack at one end and adapted under momentum to engage the teeth at its other end and thereby arrest the motion of the handle, together with provisions for compelling a full stroke of the handle.

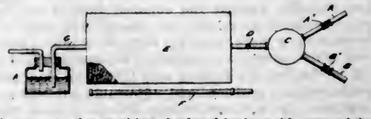
3. The combination with a movable handle, of a rack and pawl one of which is carried by the handle and the other of which is fixed, the pawl being pivoted intermediate its ends and spring-held in camming relation to the teeth of the rack at one end and adapted under momentum to engage the teeth at its other end and thereby arrest the motion of the handle together with means for tumbling the pawl to constitute it a means for compelling a full stroke of the handle.

4. The combination with a movable handle, of a rack and pawl one of which is carried by the handle and the other of which is fixed, the pawl being pivoted intermediate its ends and spring-held in camming relation to the teeth of the rack at one end and adapted under momentum to engage the teeth at its other end and thereby arrest the motion of the handle, the rack having a deep terminal notch for the first mentioned end of the pawl to enter as the handle completes a stroke in one direction, said pawl-end then serving, through coaction with the rack-teeth, to compel a full stroke of the handle in the opposite direction.

5. The combination with an oscillating handle, of a segmental rack carried thereby and having widely spaced teeth with forward facing abrupt edges, said rack having a deep notch beyond the series of teeth; a pivoted pawl with a cam-nose on one side of its pivot and a relatively abrupt nose on the other side of its pivot; and a spring holding the cam-nose normally in the path of the rack-teeth, the abrupt nose adapted under momentum to engage the abrupt edges of the rack teeth and thereby arrest the handle, and the cam-nose adapted to enter the deep notch of the rack as the handle completes its initial stroke and to then coöperate with the rack-teeth to compel a complete return stroke of the handle.

[Claim 6 not printed in the Gazette.]

1,229,509. PROCESS OF MANUFACTURE OF HYDROCHLORIC ACID. ARNOLD H. PETER, New York, N. Y., assignor to Royal Baking Powder Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 12, 1912. Serial No. 690,247. (Cl. 23—1.)



1. A process for making hydrochloric acid comprising the conversion of chlorin into hydrochloric acid by means of water-vapor and carbon at a temperature lower than red heat.

2. A process for making hydrochloric acid comprising the conversion of chlorin into hydrochloric acid by means of water-vapor and carbon at a temperature between the boiling point of water and red heat.

3. A process for making hydrochloric acid comprising forming an approximately colorless mixture of chlorin and water-vapor and conducting said mixture over carbon at a temperature between the boiling point of water and red heat.

4. A process for making hydrochloric acid, comprising forming a mixture of chlorin and such an amount of water-vapor that the mixture shows substantially no green color when observed against a white background, and treating such mixture with carbon at a suitable temperature.

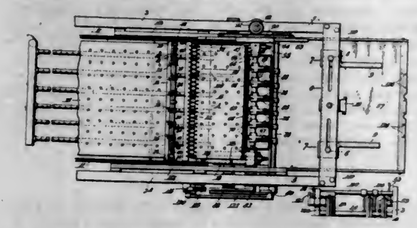
5. A process for making hydrochloric acid comprising forming a mixture of chlorin and water-vapor in approximately the proportion by weight of three to seven, and conducting said mixture over carbon at a suitable temperature.

[Claims 6 and 7 not printed in the Gazette.]

1,229,510. GUMMED-BLANK AND UNWRAPPED-BOX REGISTERING MECHANISM. MELVILLE E. PETERS, GEORGE H. FATH, and ALBERT F. MILLER, Denver, Colo. Filed Feb. 8, 1916. Serial No. 76,992. (Cl. 101—86.)

1. Gummed blank and box registering mechanism, comprising the combination of gummed blank conveying mechanism, with a table arranged to receive and hold the blank in a predetermined position, means for guiding a box centrally against the gummed side of the blank, comprising a gummed blank conveying mechanism, a table arranged to receive the blanks from said conveyer mechanism, and a plurality of air suction air inlet apertures in said table connected to operative air suction force producing mechanism for holding said blanks on said table in a predetermined position.

2. Gummed blank and box registering mechanism, comprising the combination of a gummed blank conveying mechanism, with a table arranged to receive and hold the blank in a predetermined position, means for guiding a box centrally against the gummed side of the blank, a table arranged to receive the blanks from said conveyer mechanism, a plurality of air suction air inlet apertures in said table connected to operative air suction force producing mechanism for holding said blanks on said table in a predetermined position, and adjustable box end and side engaging clips arranged over said table to guide the boxes centrally onto the blanks on said table.



3. Gummed blank and box registering mechanism, comprising the combination of a gummed blank conveying mechanism, with a table arranged to receive and hold the blank in a predetermined position, means for guiding a box centrally against the gummed side of the blank, a table arranged to receive the blanks from said conveyer mechanism, a plurality of air suction air inlet apertures in said table connected to operative air suction force producing mechanism for holding said blanks on said table in a predetermined position, and adjustable box end and side engaging clips arranged over said table to guide the boxes centrally onto the blanks on said table.

4. In a gummed blank and unwrapped box registering table, the combination with the conveyer, said conveyer being provided with blank gripping and holding means and with a stopping station, said conveyer being provided with a blank releasing mechanism at its stopping station, of a plurality of air suction blank gripping tubes arranged to engage said conveyer at its stopping station and grip and raise a blank therefrom, a table reciprocally mounted adjacent to said blank gripping and lifting tubes, means for reciprocally moving said tubes over said table, means for lowering said tubes to deposit the blank on said table in a predetermined position, means including an air suction force connected with said table for gripping the blanks as they are deposited on its surface by said air suction tubes, and means including box guiding clips for placing a box centrally on the blank on said table, whereby said box is adhesively glued to said blank.

5. The combination of the gummed blank conveyer with a reciprocating table adapted to receive the gummed blanks in a predetermined position, means including adjustable guides for manually guiding a box against a blank on said table, and means including a plurality of air suction operating tubes for gripping the blanks on the conveyer and transmitting them to their predetermined position on said table.

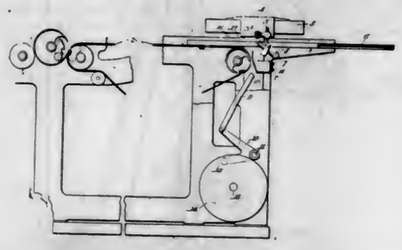
[Claims 6 to 9 not printed in the Gazette.]

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1,229,511. WIPER MECHANISM FOR THE ENDS OF GUM-COATED SUCTION-TUBES. MELVILLE E. PETERS, GEORGE H. FATH, and ALBERT F. MILLER, Denver, Colo. Filed Apr. 28, 1916. Serial No. 94,204. (Cl. 101—36.)

1. A wiper mechanism for gummed blank transmitting tubes comprising means whereby said tubes grip and transmit a gummed blank intermittently, and means including a wet wiper mechanism arranged to be moved into bearing contact with the blank engaging ends of said tubes after the transmission of each gummed blank.

2. A mechanism for wipingly removing the gum from the gum coated ends of intermittently operating blank gripping and transmitting tubes, comprising a reciprocating tube and a wiper member for each tube, a liquid receptacle in the path of said wipers provided with a supply of a suitable gum removing solution into which said wipers move at each of their reciprocal movements and means whereby said wipers are moved into rubbing contact with said tubes after each of their blank transmitting movements.



3. In wet wiper mechanism for the gum coated ends of blank transmitting air suction tubes, the combination of a cam and lever actuated reciprocal movement wiper, a reciprocal wiper roller in the return movement path of the gum coated end of each air suction tube, a receptacle provided with a supply of water into which each wiper roller dips at each cycle of its reciprocal movement, and cooperatingly timed means by which said wiper roller engages and is engaged by the return movement of said blank transmitting tubes.

4. In a wet wiper mechanism for gummed coated blank gripping, transmitting and releasing tubes, the combination of a plurality of reciprocating tubes arranged to pick up and forwardly advance a gummed blank on the forward stroke of their reciprocal movement, with vertically reciprocating swinging wiper for each tube, a receptacle in the path of said wipers provided with a supply of water into which said wipers dip and are soakingly wetted, and means including a cam and lever actuated mechanism for moving said wiper into rubbing contact with the gum coated ends of said tubes.

5. The combination with the air suction operating intermittently operating gummed blank gripping, transmitting and releasing tubes arranged to transmit gummed blanks one at a time, with the reciprocating wiper arms, the water absorbing and distributing roller at the end of each arm arranged to engage the blank engaging end of a tube, means for wetting said rollers during each reciprocal movement of said rollers and arms, and means for moving said wetted rollers in rolling engagement and contact with said tubes after they release each blank.

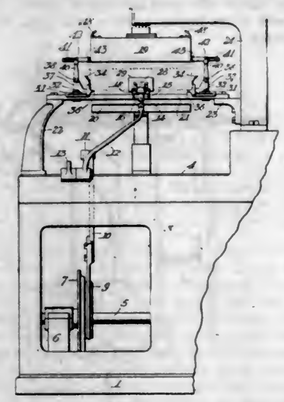
[Claims 6 to 8 not printed in the Gazette.]

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1,229,512. BOX-FEEDING MECHANISM FOR BOX-WRAPPING MACHINES. MELVILLE E. PETERS, GEORGE H. FATH, and ALBERT F. MILLER, Denver, Colo. Filed Apr. 28, 1916. Serial No. 94,207. (Cl. 93—36.)

1. In an automatic box feeding mechanism, the combination with the box receiving plunger of a box wrapping machine, of a box supporting guideway, and means including a cam and rock arm actuated reciprocating plate for intermittently moving a box along said guideway to said plunger, and means including adjustable stop and box centering guides for guiding each box into the path of said plunger, and means including a reciprocating and resilient box supporting lip mechanism actuated to support a box in alinement with said plunger by engagement therewith.

2. In a box feeder for box wrapping machines, the combination with the plunger, of the box receiving slideway, the box pushing plunger arranged to reciprocate therein, resilient controlled reciprocal means including an extension edge supporting shelf for protecting the overhanging edges of extension edge boxes, and means including box stopping guiding and centering guides for directing each box into the path of said plunger.



3. In a box feeder for box wrapping machines, the combination with the plunger, of the box receiving slideway, the box pushing plunger arranged to reciprocate therein, and resilient controlled reciprocal means including an extension edge supporting shelf for protecting the overhanging edges of extension edge boxes, said means also including a bearing plate on said plunger and an adjustable plunger engaging guide arm and roller arranged to control the reciprocal movements of said extension edge supporting shelf.

4. In a box feeder for box wrapping machines, the combination with the plunger, of the box receiving slideway, the box pushing plunger arranged to reciprocate therein, and resilient controlled reciprocal means including an extension edge supporting shelf for protecting the overhanging edges of extension edge boxes, said means also including a bearing plate on said plunger and an adjustable plunger engaging guide arm and roller arranged to control the reciprocal movements of said extension edge supporting shelf, and cam actuated means for operating said box pushing plate.

5. In an automatic box feeding mechanism for box wrapping machines, the combination of the table frame and the upper plunger, with a box feeding mechanism comprising a guideway adapted to receive boxes, and a box pushing reciprocal mechanism arranged to deliver boxes one at a time under said upper plunger, and means including resilient guides for supporting the box below the plunger and for releasing said box when said plunger enters it on the downward stroke of its reciprocal movement.

[Claims 6 to 13 not printed in the Gazette.]

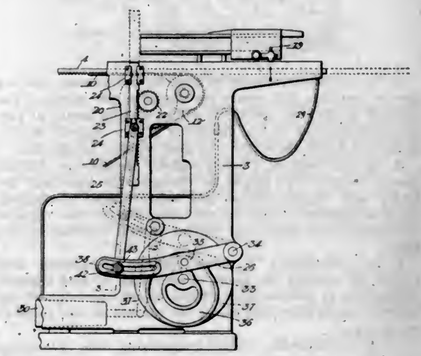
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1,229,513. BLANK RECEIVING AND DELIVERING TABLE. MELVILLE E. PETERS, GEORGE H. FATH, and ALBERT F. MILLER, Denver, Colo. Filed Apr. 28, 1916. Serial No. 94,209. (Cl. 101—36.)

1. In a blank delivering table for blank gumming machines, the combination of a table made of a sheet or blade of aluminum, provided with a blank receiving station, means for imparting a variable throw stroke from the blank receiving point of the table forward a predetermined distance varying with the size of the blank on the table, whereby said blank is moved and delivered by said table into a box receiving position, means on said table including air suction inlet apertures for gripping the blank at its blank receiving station, by an air suction force, and for holding and releasing it at its box receiving station.



2. In a blank delivering table for blank gumming machines, the combination of a table made of a sheet or blade of aluminum, provided with a blank receiving station, means for imparting a variable throw stroke from the blank receiving point of the table forward a predetermined distance varying with the size of the blank on the table, whereby said blank is moved and delivered by said table into a box receiving position, means on said table including air suction inlet apertures for gripping the blank at its blank receiving station by an air suction force, and for holding and releasing it at its box receiving station, said table being provided with recesses in its advance moving edge adapted to permit said blank to be gripped and held in box receiving relation when released by said table and said table has moved on its return stroke from under said blank.



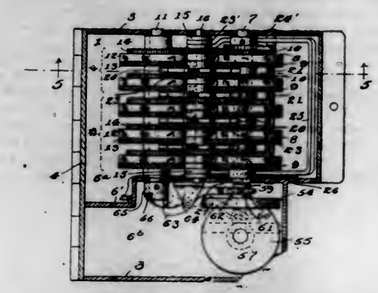
3. A gummed blank receiving and delivering table, comprising a table made of aluminum having a smooth flat top, means on said table for gripping a blank at a predetermined blank receiving station, and means for delivering the blank at any predetermined desired point of delivery to receive a box in wrapping relation to it.

4. In a gummed blank receiving and delivering table, the combination with a blank gumming machine, provided with means for gumming blanks of different predetermined sizes and for conveying them to a table receiving station, with a blank receiving and delivering table of aluminum or other suitable material, said table being provided with an air suction blank gripping plurality of air inlet apertures in said table arranged to grip the blanks one at a time at the table's blank gripping station and to hold to it while being forwarded to its delivery point, means including a cam actuated air pump operatively connected to said air suction blank gripping apertures of said table, arranged in timed sequence to the blank receiving movements of said table for gripping, holding and releasing said blank as desired, and means including gearing and adjustable variable stroke cam actuated mechanism for reciprocating said table from its blank receiving station to any predetermined blank and box registering and wrapping relation.

5. In a blank receiving and delivering table for blank gumming machines, the combination of the blank delivering table, slideways on said gumming machine, rearwardly extending rack bars mounted in said slideways, a shaft, gears on said shaft meshing with said rack bars, a pinion on said shaft, a vertical reciprocating rack bar meshing with said pinion, means for varying the throw of said rack bar whereby a variable throw forward stroke may be imparted to said table, and means including a cam actuated lever mechanism operatively secured to the lower part of said rack bar.

[Claim 6 not printed in the Gazette.]

1,229,514. METER. THOMAS HAINES PIBBSON, New York, N. Y. Filed Mar. 31, 1916. Serial No. 88,143. (Cl. 235—91.)



1. In combination, a meter register mechanism, driving means therefor, and means for changing the speed of the register mechanism relatively to the driving means at predetermined times in the operation of the register mechanism and under the control of said register mechanism.

2. In combination, a meter register mechanism, driving means therefor, and means for changing the gear ratio between said driving means and said register mechanism at predetermined times in the operation of the register mechanism and under the control of said register mechanism.

3. In combination, a meter register mechanism, and means for varying the speed of operation of said register mechanism at predetermined times in the operation of the register mechanism, and under the control of said register mechanism.

4. In combination, meter registering and recording mechanism embodying register wheels and recorder wheels, means for operating the recorder wheels synchronously with the register wheels, driving means connected to said register wheels, and means operable from one of said recorder wheels for changing the speed of said register wheels relatively to said driving means at a predetermined time in the operation of the registering and recording mechanism.

5. In combination, meter registering and recording mechanism, driving means for said mechanism, and means operable from one of said recorder wheels for changing the speed of said register and recorder wheels relatively to said driving means at a predetermined time in the operation of the registering and recording mechanism.

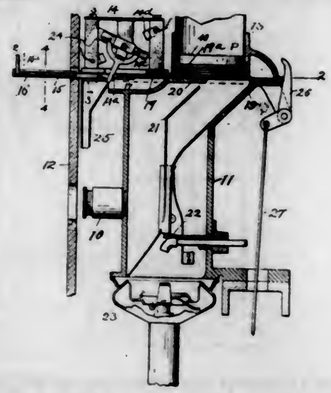
[Claims 6 to 9 not printed in the Gazette.]

1,229,515. COIN-CONTROLLING MECHANISM FOR AUTOMATIC PHOTOGRAPHING-MACHINES. GEORGE N. PIPER, Cleveland, Ohio, assignor, by mesne assignments, to F. E. Stewart, trustee, Cleveland, Ohio. Filed Apr. 16, 1913. Serial No. 761,447. (Cl. 194—80.)

1. A coin controlled mechanism for a machine having a magazine adapted to contain articles said mechanism including a part which controls the delivery of articles from said magazine said mechanism also including parts adapted to be operatively connected by an interposed coin thereby when actuated to cause the delivery of an article from the magazine, and a member adapted to engage one of the parts of the mechanism to positively move the said members to original position after they have been operated.

2. A coin controlled mechanism for a machine having a magazine adapted to contain articles said mechanism including a sliding part adapted to control the delivery of articles from the magazine, and a second sliding part adapted to be connected with the first sliding part by an interposed coin, and means adapted to positively engage and move one of the sliding parts at the completion of predetermined functions.

3. A coin controlled mechanism for a machine having a magazine, an operating motor and motor controlling switch said mechanism including parts adapted to be operatively connected by an interposed coin and when actuated serving to operate the switch and to cause the delivery of an article from the magazine, and means engaging one of the aforesaid parts thereby to return the said part to its initial position and cause the opening of the switch.

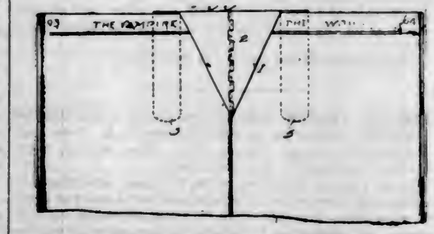


4. A coin controlled mechanism for a machine having a magazine adapted to contain articles, a motor and motor controlling switch, said mechanism comprising slides adapted to be operatively connected by an interposed coin and having a portion which causes delivery of an article from the magazine, and another portion operatively connected to the said switch, and means for positively engaging one of the said slides to return it to initial position and thereby cause the switch to be opened.

5. A coin controlled mechanism for a machine having a magazine, an operating motor and motor controlling switch said mechanism including parts adapted to be operatively connected by an interposed coin and when actuated serving to operate the switch and to cause the delivery of an article from the magazine, means for locking one of the said parts when the said parts have been operated, and means for positively engaging one of said parts to move the same to initial position and also moving the switch to original position and causing the locking means to release.

[Claims 6 to 11 not printed in the Gazette.]

1,229,516. BOOK-MARK. ROSS O. PIERCE, Michigan City, Ind. Filed Feb. 21, 1917. Serial No. 150,148. (Cl. 11—12.)



In a book marker of the character described the combination with a body portion comprising a pair of longitudinally extending hingedly connected sections, offset portions formed on the upper edge of said body, and a plurality of spring arms extending from the offset portions in the same direction as the body, the spring arms and hingedly connected sections coöperating to hold the marker in the desired position.



1,229,517. BURNER. JOHN W. PORTER, St. Louis, Mo., assignor to Reliance Oil and Gas Burner Company, a Corporation of Missouri. Original application filed May 8, 1916, Serial No. 96,196. Divided and this application filed July 24, 1916. Serial No. 110,871. (Cl. 158—11.)



1. A gas burner, comprising a base casting, a supply passage disposed about said base casting, supports between the base casting and said supply passage, a jet passage arranged above said supply passage, and connections between said supply passage and said jet passage including mixing devices.

2. A burner comprising a base, a series of radial brackets integrally formed with said base, a gas supply passage encompassing said base and supported by said brackets, a gas inlet pipe to said supply passage, a jet passage having a series of perforations extending radially therethrough, a plurality of hollow hemispherical castings having openings in the bottom wall thereof disposed between said two passages, and passages from the first-named supply passage to said castings and from said castings to said jet passage, substantially as specified.

3. A gas burner comprising a base casting, an annular continuous tubular conduit supported by said base casting, a gas supply pipe entering said conduit, hollow extensions in the upper wall of said conduit disposed at equally spaced intervals, angular nipples connected into the side walls of said extensions, hollow mixing devices supported by said nipples, an annular tubular passage above said mixing devices having discharge openings therein, and nipples connecting said last-named passage and said mixing devices, substantially as specified.

4. A gas burner, comprising a base casting, a supply conduit, connections between the supply conduit and the base casting, a jet conduit arranged above said supply conduit, said conduit having jet discharge openings therethrough, mixing devices between the supply conduit and said jet conduit having air openings in the bottom wall thereof, and connections between the mixing devices and said supply conduit and between said mixing devices and said jet conduit.

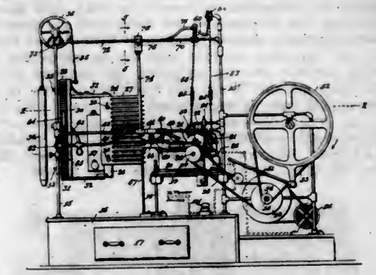
5. A burner, comprising a supply conduit, a gas supply passage entering therein, extensions disposed at equal intervals from the upper wall of said conduit constituting hollow separate chambers, angular nipples connected into the side walls of said extensions, mixing devices supported by said nipples, a jet conduit and connections between said jet conduit and said mixing devices, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

1,229,518. GRAPHOPHONE. WILLIAM C. POTTS, Harrisburg, Pa. Filed Nov. 15, 1916. Serial No. 131,485. (Cl. 274—10.)

1. In combination with a graphophone having a record-receiving table, a main frame, a magazine mounted on said frame to one side of said table and constructed to support a plurality of records with their opposite edges projecting beyond its sides, a reciprocating means mounted to slide on said frame and adapted to engage the projecting edges of said records successively to bodily shift them back and forth between said magazine and table, and an elevating means embodying pivoted cam-arms, connected together mounted on said frame and carrying a pivoted pawl in engagement with said magazine and adapted to be operated by said reciprocating means for vertically adjusting the magazine.

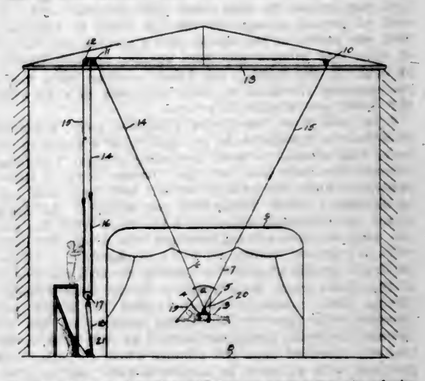
5. In combination with a graphophone having a record-receiving table and a tone-arm pivoted for horizontal and vertical movements, a main frame, a vertically-adjustable record magazine mounted on said frame, a reciprocating means for shifting said records successively back and forth between said magazine and table, a rod pivoted to said frame provided with a curved portion forming a cam on one end and having a flexible connection with said tone-arm, and an operating means on said reciprocating means for vertically moving said pivoted rod to raise and lower said tone-arm from and to said table.



14. In a machine of the class set forth, a gramophone embodying a record-receiving table, a record magazine vertically movable with respect to said table and arranged at one side thereof, record-carrying means provided with record-grasping devices adapted to frictionally engage the record at diametrically opposite sides to enable them to slip past the record, means for reciprocating said record-carrying means together with its record-grasping devices to shift said record-grasping devices from a point beyond the magazine to a point beyond the center of the record-receiving table, and means on the magazine and gramophone for limiting the travel of the record in each direction and to allow the record-grasping devices to slip past the record.

[Claims 2 to 4, 6 to 13, and 15 to 18 not printed in the Gazette.]

1,229,519. MEANS FOR THEATRICAL LEVITATION. ERICH RACH, New York, N. Y. Filed Apr. 27, 1916. Serial No. 93,816. (Cl. 46—70.)



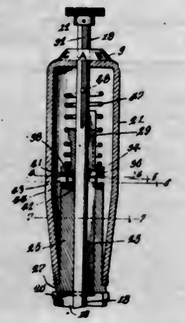
1. In a system for theatrical purposes, two sets of rigging placed parallel to each other, one near the front and the other near the back part of the stage, means in each of said sets of rigging to move a body suspended thereon positively vertically and horizontally in a given plane and means consisting in the coupling of said separate sets of rigging for changing the plane of movement of which said body is susceptible, at the will of the operator or operators, within the limits determined by the position of said separate sets.

2. In a system for theatrical purposes, a rigging for suspending and moving a body, the same including a run-

ning line attached to the body, and an operating member having a running engagement with a bight of said line, and an operative station adjacent to which the operating member may be anchored, the elements of the bight being movable in opposite directions relative to the point of said running engagement.

3. In a system for theatrical purposes, a plurality of riggings for suspending and moving a body, each having a running line attached to the body, and an operating member having a running engagement with a bight of the line, and operating stations adjacent to which the operating members may be anchored, the elements of the bight being movable in opposite directions relative to the point of said running engagement.

1,229,520. PERMUTATION-LOCK FOR LATCH-LEVERS. WARREN J. REAGAN, Admire, Kans. Filed Oct. 30, 1916. Serial No. 128,532. (Cl. 70—90.)



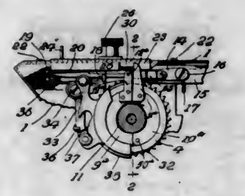
1. A lock of the character described comprising a housing, a plunger passing through the housing, a rib extending from the plunger within the housing, a sleeve positioned in the housing about the plunger and held against rotation within the housing and provided with a groove to receive the rib of said plunger, locking disks rotatably carried by said sleeve and provided with cut-outs to permit passage of the rib when in alinement with the groove of the sleeve, and a turning cup mounted upon said plunger and held against rotation thereon by said rib, the turning cup being provided with means for engaging the disks to move the disks to a set position when said plunger is rotated.

2. A latch lever comprising a tubular body, a hollow head for the tubular body provided with a notch in its lower end portion, a latch actuating plunger extending through the head and into the tubular body, a sleeve positioned upon the plunger within said head and provided with a tooth fitting into the notch of the head, means for releasably connecting the head with the hollow body, the sleeve being provided with a longitudinally extending groove leading from its passageway, a rib extending from the plunger for passing through the groove of the sleeve when the plunger is moved longitudinally, locking disks rotatably mounted upon the sleeve and provided with grooves permitting passage of the rib through the disks, abutments carried by said disks, a setting cup mounted upon the plunger above the disks and provided with a cutout to receive the rib, and an abutment extending from the setting cup to engage the abutments of the disks and move the disks to a set position when the plunger is rotated in the head.

6. A latch lever comprising a tubular body, a hand grip connected with the body, an actuating plunger passing through the body and hand grip, a latching tooth, a yoke slidably mounted upon the plunger and having arms engaging the latching tooth, means engaging the latching tooth and yieldably holding the latching tooth in a raised position, and locking means for the plunger.

[Claims 3 to 5 not printed in the Gazette.]

1,229,521. LINE-SPACER FOR TYPE-WRITING MACHINES. RICHARD C. RHEA, Whiteville, Tenn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 31, 1916, Serial No. 75,386. Renewed Oct. 18, 1916. Serial No. 126,290. (Cl. 197—123.)



1. In a type-writer spacing mechanism the combination of the platen having a wheel, a friction clutch comprising a pair of pivotally connected and separable members adapted to engage said wheel, an arm carried by one of said clutch members, a reciprocable bar pivotally connected to said arm for actuating the clutch to operate the platen, an arm carried by the other clutch member, and an adjustable stop coöperable with the second clutch arm to limit the turning movement of the platen, substantially as described.

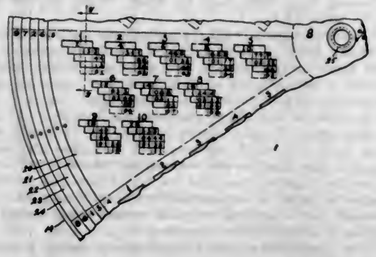
2. In a type-writer spacing mechanism the combination of the platen having a flanged wheel, a friction clutch comprising a pair of separable semi-disk members arranged concentric with and adapted to engage the flange of said wheel, arms carried by said disk members respectively, a reciprocable bar pivotally connected to one of said arms for actuating the clutch to operate the platen, and an adjustable stop coöperable with the second clutch arm to limit the turning movement of the platen, substantially as described.

8. The combination of a platen, and means to line-space the platen, comprising a manually-operated driver, a clutch moved idly by the driver during its driving stroke, and means to arrest the movement of said clutch, to permit the driver to actuate the clutch and cause it to hold the platen.

9. The combination with a rotary platen, of a manually-operated driver, means connecting the driver with the platen for rotating the latter, a stop clutch connected to the driver to be rotated thereby with the platen, a clutch-operating device carried with the clutch and movable relatively thereto to actuate the clutch, and a stop in the path of said device to arrest it and cause said relative movement, thereby causing the clutch to grip the platen or a part rotating therewith, and thus arrest the platen and driver.

[Claims 3 to 7 and 10 to 24 not printed in the Gazette.]

1,229,522. COMPUTING DEVICE. CARL R. RINGS, Mount Vernon, Wash. Filed June 6, 1916. Serial No. 102,102. (Cl. 235—78.)



1. A computing device comprising a plurality of superposed sheets mounted on a central pivot, and each sheet bearing interest calculations and having openings therein adapted to be brought into registry, the openings successively decreasing in size downwardly.

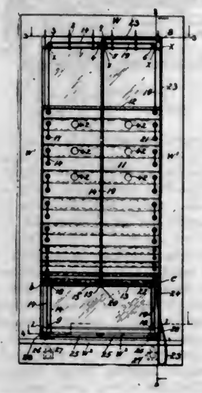
2. A computing device comprising a plurality of superposed sheets mounted on a central pivot, and each sheet bearing interest calculations, the said sheets having openings therein adapted to be brought into registry whereby notations on the several sheets may be observed through a single opening in the upper sheet.

3. A computing device including a plurality of superposed sheets, each bearing interest calculations, the sheets above the lower one having openings of successively enlarged areas, the openings in the upper sheet being of a configuration to permit a simultaneous reading of series of numbers in columnar indented formation.

4. A computing device including a plurality of superposed sheets, each bearing interest calculations, the sheets having openings adapted to be brought into registry whereby notations on the several sheets arranged in indented columnar formation may be observed through a single opening in the upper sheet.



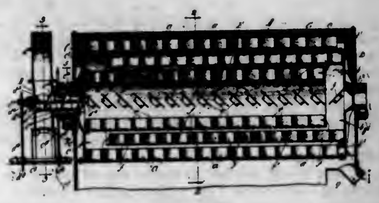
1,229,523. ADJUSTABLE CLOSURE FOR WINDOW OR OTHER OPENINGS OR PASSAGES. FRANK N. ROEHRICH, Jersey City, N. J., assignor to George B. French, New York, N. Y. Filed May 29, 1915. Serial No. 31,096. (Cl. 156—16.)



1. The combination of the frame-work of an opening with an adjustable closure therefor; flexible supporting guides for the closure; bearings for the guides at both ends of the closure, the bearings at one end being mounted on an awning bar; a stationary lock-forming device at a portion of the frame-work opposite each end of the awning bar; foldable struts carried by each end portion of the awning bar; supplementary locking devices carried by each end portion of the awning bar and severally constructed to interlock with the stationary locking devices, the locking devices carried by the awning bar being severally operatively connected with the struts; and stationary means for holding the free ends of the struts to hold the awning bar in awning-forming position.

2. The combination with top and bottom corner bearings, of a pair of bearings intermediate the top corner bearings; a flexible closure having stiff top and bottom members; a pair of cords an end of each of which is attached to and extends downwardly from an end portion of the bottom member, thence over one of the bottom corner bearings, thence upwardly through a series of holes in the corresponding margin of the closure, thence over one of the top corner bearings, thence to and over one of the intermediate bearings, and thence downwardly to an intermediate portion of the bottom bar; the portions of each cord running from the intermediate bearings to an intermediate portion of the bottom bar being opposed to the closure between its edges; and the portion of each cord which runs through the marginal holes of the closure being reeved in and out therethrough; a lateral projection on the bottom bar between the ends thereof; a cord attached thereto and extending upwardly over a top bearing therefor; said top bearing; said latter cord extending therefrom to and over a top corner bearing therefor; said top corner bearing; the said cord extending thence downwardly into an accessible position for raising and lowering the bottom of the closure; and means for holding the free end of said cord in a desired position.

1,229,524. ROTARY DRIER. NILS M. ROSENDAHL, Winthrop Harbor, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Nov. 5, 1914. Serial No. 870,444. (Cl. 34—5.)



1. A rotary drier comprising a horizontally disposed drum, bearings for supporting said drum for rotation about a longitudinal axis, said drum having an axial inlet and peripheral outlet openings for the materials, instrumentalities within said drum for causing the materials to travel back and forth from one end of the drum to the other during the rotation thereof, a trunnion rigid with one end of said drum to support the latter on one of said bearings and forming an intake, for the inlet opening, a device externally engaging said trunnion to rotate said drum, and rotary means engaging the other bearing to support and axially close the rear end of said drum, said instrumentalities including concentric cylinders attached respectively to opposite ends of said drum, causing the materials to travel away from said axis, a housing for inclosing said drum, said housing having end walls disposed between said bearings and the ends of said drum, the other end of each cylinder being unsupported.

2. A rotary drier comprising a horizontally disposed drum, bearings for supporting said drum for rotation about a longitudinal axis, said drum having an axial inlet and peripheral outlet openings for the materials, instrumentalities within said drum for causing the materials to travel back and forth from one end of the drum to the other during the rotation thereof, a trunnion rigid with one end of said drum to support the latter on one of said bearings and forming an intake, for the inlet opening, a device externally engaging said trunnion to rotate said drum, and rotary means engaging the other bearing to support and axially close the rear end of said drum, said instrumentalities including concentric cylinders attached respectively to opposite ends of said drum, causing the materials to travel away from said axis, a drive shaft below said trunnion, a connection between said device and said shaft, one of said bearings being disposed between said device and the end of said drum, the other end of each cylinder being unsupported.

3. A rotary drier comprising oppositely arranged rotary heads, a cylindric imperforate drum arranged horizontally and having its ends secured to said heads, concentrically arranged imperforate cylinders in said drum, secured endwise to said heads, devices to rotate one of said heads, a plurality of longitudinal rows of feed plates secured to the inner surface of said drum, similar rows of feed plates secured to the inner surface of each cylinder, said plates being disposed at angles oblique to the length of each row, with spaces between adjacent rows, thereby to feed the materials back and forth in the direction of said rows.

means to deliver the materials through said devices to one end of the inner cylinder, one head having outlets for the materials, and a suction connection associated with said means to draw air through said drum and cylinders.

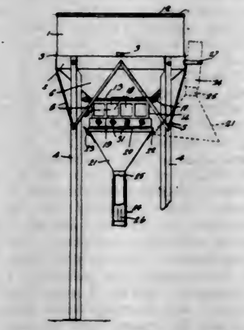
4. A rotary drier comprising oppositely arranged rotary heads, a cylindric imperforate drum arranged horizontally and having its ends secured to said heads, concentrically arranged imperforate cylinders in said drum, secured endwise to said heads, devices to rotate one of said heads, a plurality of longitudinal rows of feed plates secured to the inner surface of said drum, similar rows of feed plates secured to the inner surface of each cylinder, said plates being disposed at angles oblique to the length of each row, with spaces between adjacent rows, thereby to feed the materials back and forth in the direction of said rows, means to deliver the materials to one end of the inner cylinder, one head having outlets for the materials, and a suction connection associated with said means to draw air through said devices from said drum and cylinders, said heads being each secured to one of said cylinders, so that each cylinder is supported only at one end thereof, and whereby the cylinders can be untelescoped by merely disconnecting said heads from the drum.

5. A rotary drier comprising oppositely arranged rotary heads, a cylindric imperforate drum arranged horizontally and having its ends secured to said heads, concentrically arranged imperforate cylinders in said drum, secured endwise to said heads, devices to rotate one of said heads, a plurality of longitudinal rows of feed plates secured to the inner surface of said drum, similar rows of feed plates secured to the inner surface of each cylinder, said plates being disposed at angles oblique to the length of each row, with spaces between adjacent rows, thereby to feed the materials back and forth in the direction of said rows, means to deliver the materials to one end of the inner cylinder, one head having outlets for the materials, and a suction connection associated with said means to draw air through said drum and cylinders, said outlets and means being at opposite ends of the drum, and each cylinder being shorter than said drum.

[Claims 6 to 9 not printed in the Gazette.]

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1,229,525. DISPENSING-CABINET. DAVID M. ROSS, Youngstown, Fla. Filed Dec. 1, 1916. Serial No. 134,376. (Cl. 211—8.)



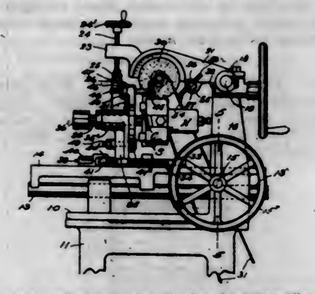
1. A dispensing cabinet embodying a stand having legs and an upper frame, a casing fitted within said frame and having portions seating thereon, the hopper bottom having a lower series of discharge openings, the casing having a plurality of bins communicating with said openings, a depending spout attached to said hopper bottom and having passages communicating with said openings, said spout having windows for said passages to expose the material therein, valves for controlling the discharge of the materials from said passages, and means suspended from said spout for directing the material from all of said passages to a receptacle therebelow.

4. A dispensing cabinet embodying a horizontal plate having a series of openings and a depending marginal apron, a plurality of bins having means for conducting material to said openings, a funnel adapted to fit said apron, rectangular frames slidable through one wall of said apron and having webs at their inner end portions providing valves for said openings, stems carried by the opposite wall of said apron slidably engaging the inner ends of said frames, and coiled wire expansion springs upon said stems confined between the last mentioned wall of the apron and the inner ends of the frames, to move the valves under said openings.

[Claims 2 and 3 not printed in the Gazette.]

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1,229,526. GRINDING-MACHINE. HARRY B. ROSS, Seattle, Wash., assignor to Philbrick Cutter Head Company, Seattle, Wash., a Corporation of Washington. Filed Apr. 1, 1916. Serial No. 88,210. (Cl. 51—7.)



1. In a grinding machine of the class described, a tiltable frame, a grinding wheel, a spindle therefor journaled in said frame, means to drive said spindle to rotate the wheel, a bar adapted to serve as a track element for the last named means, means for reciprocating said frame, and means for adjusting the inclination of the track-bar to impart selective vertical movements to the grinding wheel during the travel of the same with said frame.

2. A grinding machine having in combination, a power driven grinding wheel arranged for axial movements, a carriage, means to reciprocate said carriage rectangular to the axis of said wheel, a turret rotatably mounted on said carriage, means to adjustably secure said turret in selected rotary positions, a work-supporting arbor journaled in said turret, gaging means engageable with the work for regulating the rotary positions of the arbor and the work, and means to impart axial movements to the grinding wheel to effect the grinding of the work.

3. A grinding machine having in combination, a grinding wheel, a spindle therefor arranged for vertical and axial movements, means to effect such movements of the spindle independently or together, means to drive the spindle, a reciprocatory carriage, a rotary support for the work, and means to secure said support in adjusted rotary positions.

4. In a grinding machine, the combination with the grinding wheel, a reciprocatory carriage, and means to effect such movement of the carriage, of a work-supporting turret rotatably mounted on said carriage, said turret comprising a disk element having peripheral teeth, a post extending upwardly from said disk element, and a horizontally disposed arbor journaled in said post for supporting the work and adjustable means engaging the teeth of said disk element whereby the turret may be adjustably secured in selected rotary positions.

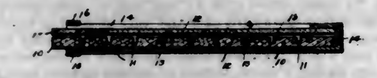
5. In a grinding machine, the combination with the grinding wheel, means to drive said grinding wheel, a reciprocatory carriage, and means to effect such movement of the carriage, of a work-supporting turret rotatably mounted on said carriage, said turret comprising a disk element having peripheral teeth, a post extending upwardly from said disk element, a horizontally disposed arbor journaled in said post for supporting the work at one end thereof, means provided at the other end of the arbor and engageable with the aforesaid means for rotating the arbor, and adjustable means engaging the teeth of said disk element whereby the turret may be adjustably secured in selected rotary positions.

[Claims 6 to 12 not printed in the Gazette.]



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1,229,527. LANTERN-SLIDE. THOMAS N. RUNDLE, Paton, Iowa. Filed Apr. 11, 1916. Serial No. 90,473. (Cl. 40—135.)



A slide comprising a rigid transparent glass plate, having a plurality of spaced grooves in one surface, a plurality of indicating characters having flanges adapted to be received in said grooves, a transparent non-heat conducting sheet adjacent to said indicating characters and a three-sided frame comprising inwardly opening channel shaped members adapted to receive the edges of said plate and sheet on three sides thereof.

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1,229,528. WOODEN DOWEL. MAX RÜPING, Berlin, Germany. Filed Mar. 2, 1915. Serial No. 11,522. (Cl. 85—1.)



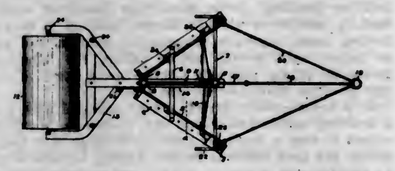
1. A wooden dowel composed of sections, the fibers of one section extending longitudinally to the dowel, the fibers of another section transversely to the dowel.

2. A wooden dowel composed of a plurality of sections, the fibers of adjacent sections running at right angles to each other whereby the fibers of alternate sections extend parallel to the axis of the dowel, and the fibers of the intermediate section extend at right angles to the axis of the dowel.

3. A wooden dowel composed of a plurality of sections, the section in which the bore-hole of the dowel is formed being essentially at right angles to the axis of the dowel, and the fibers of the adjacent sections extending essentially parallel to the axis of the dowel.

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1,229,529. ROAD-DRESSING MACHINE. ARTHUR E. SCHENCK, Hamilton, Ohio. Filed Nov. 11, 1916. Serial No. 130,780. (Cl. 37—5.)

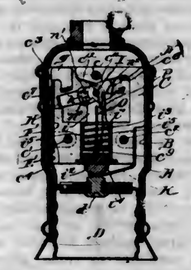


1. A road-dressing machine comprising, an A-shaped dressing-frame with its apex rearward and open, a roller-frame and roller to the rear of the dressing-frame, a tongue projecting rigidly from the roller-frame and connected with the dressing-frame in a manner to permit of relative angular motion of the roller frame and the dressing-frame, draft-members flexibly and independently connected to the tongue and to the front of the dressing-frame, and mechanism for swinging the front end of the tongue sidewise relative to the dressing-frame, combined substantially as set forth.

2. A road-dressing machine comprising, a pair of dressing members separated from each other at their heels and diverging forwardly, standards rigidly connecting the front and rear portions of the dressing-members, a roller-frame and roller at the rear of the pair of dressing-members, a tongue projecting rigidly from the roller-frame and forwardly through the rear one of said standards and adapted for horizontal oscillation with said rear standard as a pivot, a steering-shaft mounted in bearings carried by said standards, a reel on said steering-shaft, a flexible connector wound upon said reel and having its ends engaging the forward portion of the tongue and having intermediate portions engaging sheaves rigidly connected with the dressing-members, and draft-members flexibly connected with the tongue and with the forward ends of the dressing-members, combined substantially as set forth.

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1,229,530. MEANS FOR OPERATING SWITCH MECHANISMS. RALPH A. SCHOENBERG, New York, N. Y. Filed Aug. 13, 1915. Serial No. 45,406. (Cl. 173—346.)



1. A device of the character described comprising a pivotally supported rocker made with a switch point and with two shoulders, one at each side of said point; a spring connected with said rocker; an endwise movable laterally flexible blade coöperating with the switch point and shoulders of said rocker, a reciprocating carrier for said blade; a pair of contacts and a movable supported bridge member connected with and operated by said rocker.

4. A device of the character described comprising a pivotally supported rocker made with a switch point and two shoulders, one at each side of said point; a buckling spring connected with said rocker; an endwise laterally movable flexible blade coöperating with the switch point and shoulders of said rocker; a pair of contacts; a movably supported bridge member connected with said rocker with provision for limited relative movement, and a lamp holder longitudinally movable to operate said blade, alternate inward movements of said holder acting through said blade to shift the rocker in one direction and the other inward movements of said holder acting through said blade to shift said rocker in the opposite direction.

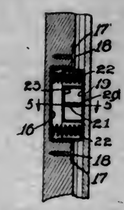
[Claims 2 and 3 not printed in the Gazette.]

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1,229,531. SASH-SPRING. HARRY H. SCHROYER, Chicago, Ill., assignor to The Acme Supply Company, a Corporation of Illinois. Filed Mar. 12, 1913. Serial No. 753,767. (Cl. 16—19.)

1. In a device of the class described loosely interfitting cup members one inverted within the other, one member apertured and the other slotted in both of the side walls of each thereof, a pin engaged in said apertures and slots to retain said members together, springs loosely engaged in each end of said interfitting members, and a bridge mem-

ber sprung within one of said cup members adapted to space said springs in proper relation.



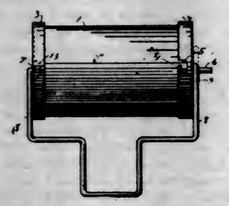

2. In a device of the class described, cup members, spiral springs, a pin holding said members engaged to one another, and means bridging said pin sprung within one of said members adapted to space said springs in proper relation.

3. In a device of the class described the combination with a window sash, of a cup member disposed longitudinally thereof and recessed thereinto, another cup member inverted thereinto and having a sliding relation therewith, said first mentioned cup member having apertures therein and said second mentioned cup member having slots therein disposed to register with said apertures, a pin extending transversely through said interfitting cup members engaged in the apertures of the one and also in the slots of the other of said cup members, spiral springs disposed at each end of said interfitting cup members bearing against each thereof to normally impel the same apart, and a spacing member mounted within said second mentioned cup member to maintain said springs properly positioned with respect to one another.

4. In a device of the class described interfitting cup members, the one having slots therein and the other having apertures therein, a pin extending transversely through said cup members engaging through said respective slots and apertures to permit a simultaneous pivotal and sliding movement of one of said cup members with respect to the other, springs disposed within said cup members acting normally to resist pivotal and sliding movement therebetween, and means bridging said pin to hold said springs in position.

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1,229,532. ASH-CAN. WILLIAM SEEHASE, Holland, Mich. Filed May 6, 1916. Serial No. 95,906. (Cl. 220—115.)



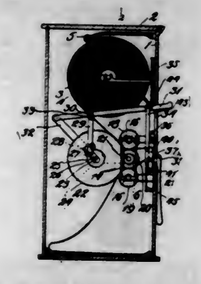
1. In a dustless ash can, a cylindrical body, a bottom having a peripheral flange formed thereon to pass over the end of the body, said bottom having a small round opening in the radial center thereof, a cover having a flange turned thereon to pass down over the top of the can body, said flange having locking notches formed in opposite sides of the cover, pins projecting from the body in position to be passed into said notches to lock the cover firmly onto the body, a pin projecting outward from the radial center of the cover, and a bail arranged so that one end will pass into the hole in the bottom, and the other end may be looped over the pin on the cover.

2. In a dustless ash can, a cylindrical body, a bottom having the edges turned at right angles to form a flange around the end of the body, a hub projecting upward from the radial center of the bottom, the bottom and said hub having a central hole therein, a cover having the edges turned at right angles to form a flange to extend downward over the end of the can body and having notches therein, pins projecting outward from the upper end of the body to pass into the notches and engage the lips to hold the cover firmly upon the body, and a bail having a pintle formed on one end to enter the hole in the bottom of the can, and a loop formed on the other end of the bail, and a pin projecting from the radial center of the cover to enter said loop to so secure the bail to the can that the can may be rolled thereby over any appropriate surface.

3. In combination with an ash can, a cover having a flange passed downward over the body of the can forming a hoop thereon, means for locking the cover firmly upon the can, a pin projecting from the center of the cover, a bottom having a flange formed to extend upward over the body of the can, the center of the bottom thickened and having a hole extending therein, a bail, a pintle formed at one end of the bail to enter the hole in the center of the bottom, a loop formed at the other end of the bail to engage the pin on the cover so the can may be readily rolled over suitable surfaces thereby.

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1,229,533. TOWEL-CABINET. IRA H. SHATTUCK, Los Angeles, Cal. Filed Apr. 3, 1916. Serial No. 88,739. (Cl. 45—32.)



1. A towel cabinet comprising a casing, a toweling supply roll within said casing, a plurality of rollers to feed and take up the toweling and leave exposed for use a length of said toweling, geared means for operating said rollers, a lever to operate said geared means arranged for a predetermined movement independent of said geared means, a locking means for the toweling held in normally locked position by the normal position of said lever, and means to actuate said locking means during the independent movement of said lever.

2. A towel cabinet having a door provided with a slot, a toweling supply roll within said cabinet, a plurality of rollers to feed a length of toweling through said slot and return the used toweling to the cabinet, geared means to actuate said rollers, a lever, means operatively connected with said lever to operate said geared means, said lever having a predetermined movement independent of said means, a locking means to close the slot in said door, and lock the toweling, means operatively connected with and held by, said lever when in normal position to hold said locking means normally in operative position, and means to unlock said locking means during the independent movement of, and hold said locking means unlocked during the operative movement of said lever.

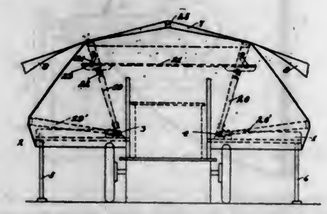
3. A towel cabinet having a door provided with a slot, a toweling supply roll within said cabinet, a plurality of rollers to feed a length of toweling through said slot and return the used toweling to the cabinet, a train of gears to actuate said rollers, a handle, means operatively connected with said handle to operate said gears, a plurality of shutters to close the slot in said door, and lock the toweling, and means connected to said shutters and controllable by said handle to operate said shutters simultaneously.



4. A towel cabinet having a door provided with a slot, a toweling supply roll within said cabinet, a plurality of rollers to feed a length of toweling through said slot and return the used toweling to the cabinet, a train of gears to actuate said rollers, a handle, means operatively connected with said handle to operate said gears, a plurality of shutters to close the slot in said door and lock the toweling, a bar connected with said shutters, and having one end operatively connected with said handle whereby to close said shutters and lock the toweling, when said handle is moved in one direction, and a spring on said bar to cause said shutters to be opened when said handle is moved in another direction.

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1,229,534. OUTING-TRAILER. WILLIAM P. SHATTUCK, Minneapolis, Minn. Filed Jan. 15, 1916. Serial No. 72,266. (Cl. 21—7.)



1. The combination with a trailer having a pair of supporting wheels and a body, of a cot, a shelter tent, link members connecting said cot with said body, whereby said cot may be swung from a position within and across said body to a position extending outwardly from said trailer, supporting bows hinged on said body for supporting said shelter tent, whereby said shelter tent may be raised to a position covering said trailer and said cot, when said cot is in an outwardly extending position, or folded over said cot when said cot is in an inboard position.

2. The combination with a trailer having a pair of supporting wheels and a body, of a cot, a shelter tent, connecting means between said cot and said body, whereby said cot may be disposed either within said body or in an extended position without said body, supporting bows for said shelter tent hinged to said body, said bows being adapted to fold over said cot when it is disposed within said body, or to be extended above said cot when said cot is disposed outboard of said body.

3. The combination with a trailer having a pair of supporting wheels and a frame, of a bed, an arm hinged to said frame at one end and to said bed intermediate of the ends of said arm, leaving an extension beyond said bed hinge, a support hinged to the outer portion of said bed, and a link extended from the hinged point of said support to a hinged connection on the extension of said arm attaching said bed and said frame.

4. In an outing trailer, the combination of a body, a shelter tent, two oppositely disposed bows hinged on said body for supporting said shelter tent, said bows being adapted to fold one above the other within said trailer body or to be extended upwardly and laterally beyond said body.

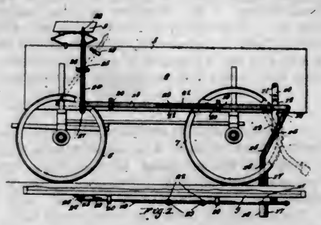
5. In an outing trailer the combination of a trailer body, a shelter tent, right and left hand bows supporting said shelter tent on said body and hinged to said body and adapted to fold one within the other to a traveling position, or extend upwardly and laterally beyond said body for a camping position.

[Claims 6 and 7 not printed in the Gazette.]

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1,229,535. VEHICLE-CHOCK. HOWARD A. SHAW, Yonkers, N. Y. Filed Mar. 10, 1915. Serial No. 13,458. (Cl. 21—8.)

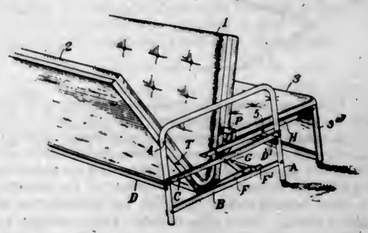
In a vehicle chock, a hanger adapted to be secured to the side of the vehicle body and to depend therefrom near the rear of said body, said hanger being offset, an angular lever intermediately pivoted on the lower end of said hanger, a chock carried by the angular portion of said lever for insertion between the vehicle wheel and the ground, a bracket attached to the sides of the body at the forward portion thereof, an operating lever intermediately pivoted to said bracket and having a slotted lower end, guide-brackets attachable to the sides of the body along the lower edge thereof, rods connected through the slots of



the levers and having longitudinal slots near their inner ends, said ends overlapping to aline the slots, adjustable clamping means engaged through the slots for holding said rods in longitudinally adjusted positions to vary the length thereof and a catch to hold the operating lever in an inoperative position when pulled rearwardly to disengage the chock from between the wheel and the ground.

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1,229,536. FOLDING-BED STRUCTURE. GEORGE F. SISBOWER, East Orange, N. J., and LOUIS EDWARD PITTONI, New York, N. Y., assignors to New York Couch Bed Company, New York, N. Y., a Corporation of New York. Filed Nov. 19, 1912. Serial No. 732,366. (Cl. 5—46.)



1. As an improvement in a folding bed structure, two spaced apart movable sections each upholstered on one side, and a third section interposed between and movably connected with the first mentioned sections, said third section being upholstered on both sides and coöperating alternately with the first mentioned sections to present two separate usable upholstered surfaces.

2. An improved folding bed structure comprising a supporting frame, a horizontally movable section, supports for the inner side of said section, said supports slidably engaging said frame, a second section pivotally attached to said frame, and a third section pivotally connected to said slidable supports and movably connected with the second section.

4. The combination in a folding bed-structure of two swinging sections and one horizontally movable section, one of the swinging sections being hinged to the framework of the structure and the other one hinged at an intermediate point in its width to the horizontally movable section.

6. The combination in a folding bed-structure of two swinging sections hinged together at their adjacent edges to form a bed when extended in their horizontal position, a support for one section when in said position formed by a third horizontally moving section, and an auxiliary support at an intermediate point in the width of the

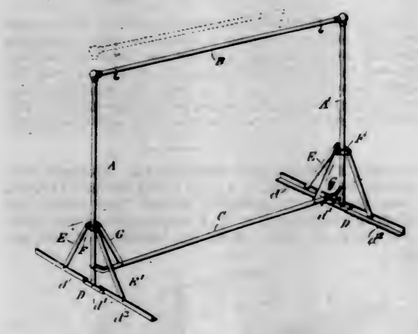
frame of the structure formed by a vertical bar resting on a bar of the said framework and pivoted to one of the two swinging sections.

9. The combination in a folding bed-structure of end frames, each having a horizontal trackway, a horizontally movable section having legs and casters on one edge and its other edge adapted to travel on said trackways, two swinging sections, one hinged to the main frame, the other to the horizontally movable section, a link joining the adjacent edges of the swinging sections, a supporting bar hinged to one of the swinging sections and reaching therefrom to a cross-bar on the end frame and adapted to bear thereon and a connecting device between said supporting bar and the horizontally movable section.

[Claims 3, 5, 7, and 8 not printed in the Gazette.]

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1,229,537. FOLDABLE HAMMOCK-STAND. GEORGE F. SISBOWER, East Orange, N. J., and LOUIS E. PITTONI, New York, N. Y., assignors to New York Couch Bed Company, New York, N. Y., a Corporation of New York. Filed Nov. 19, 1913. Serial No. 801,887. (Cl. 5—32.)



1. A folding hammock stand comprising two upright posts each having its lower end provided with a foldable base, a connecting rod hinged to said posts near the bottoms thereof above said bases, a detachable ridge pole for uniting the upper ends of said posts, and an operating bar for each base actuated by a movement of the upright.

2. In a folding hammock stand, the combination with a foldable upright post, of a foldable base therefor, a slide movable on said post and connected with said base, and means actuated by folding movement of the post for operating the slide to adjust said base.

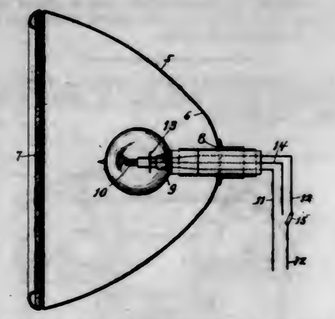
3. A folding hammock stand comprising two upright posts each having its lower end provided with a foldable base, a connecting rod jointed to said posts near the bottoms thereof above said bases, a detachable ridge pole for uniting the upper ends of said posts, and operating devices for said bases connected with said connecting rod, whereby folding of the post on the rod will also fold the base.

4. A folding hammock stand comprising two upright posts each having its lower end provided with a foldable base, a connecting rod jointed to said posts near the bottoms thereof above said bases, slides mounted on said posts and operatively connected with the respective bases, links operatively connecting said slides with said connecting rod, and a detachable ridge rod for uniting the upper ends of said posts.

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1,229,538. AUTOMOBILE-LAMP. HARVEY H. SLATER, Kenosha, Wis., assignor to James M. Richardson, Detroit, Mich. Filed Apr. 17, 1913. Serial No. 761,681. (Cl. 240—41.)

1. In a headlight, the combination of a reflector having a focal center, an incandescent electric lamp bulb in the reflector, means located wholly at the rear of the focal center for supporting the bulb, said bulb being provided with a pair of filaments, one of which is positioned with its heated portion at the focal center of the reflector so that the rays therefrom are projected in substantially parallel beams, and the other filament positioned with its heated portion adjacent to but spaced apart from the focal center, so that the rays are projected in diverging beams, and electric circuits whereby one of the filaments may be heated independently of the other.



2. In a headlight, the combination of a reflector having a focal center and an optical axis, an incandescent electric lamp bulb in the reflector, means located wholly at the rear of the focal center for supporting the bulb, said bulb being provided with a pair of filaments, one of the filaments being of relatively high candle power and being located substantially in the focal center of the reflector, the other filament being of lower candle power and being removed from the first mentioned filament along the optical axis of the reflector, and electric circuits for heating the filaments, said circuits being arranged to heat one of the filaments independently of the other filament at will.

3. In a headlight, the combination of a reflector having a focal center and an optical axis, an incandescent electric lamp bulb in the reflector, means located wholly at the rear of the focal center for supporting the bulb, said bulb being provided with a pair of filaments, one of the filaments being of relatively high candle power and being located substantially in the focal center of the reflector, the other filament being of lower candle power and being removed from the first mentioned filament rearwardly along the optical axis of the reflector, and electric circuits for heating the filaments, said circuits being arranged to heat one of the filaments independently of the other filament at will.

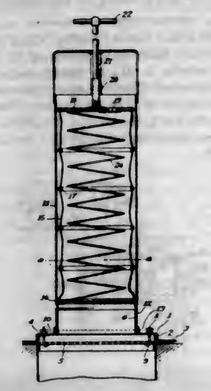
4. In a headlight, the combination of a reflector having a focal center and an optical axis, an incandescent electric lamp bulb in the reflector, means located wholly at the rear of the focal center for supporting the bulb, said bulb being provided with a pair of filaments, one of the filaments being of relatively high candle power and being located substantially in the focal center of the reflector, the other filament being of lower candle power and being removed from the first mentioned filament along the optical axis of the reflector, said last mentioned filament extending substantially around the axis in a curved line, and electric circuits for heating the filaments, said circuits being arranged to heat one of the filaments independently of the other filament at will.

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1,229,539. BLOWER FOR CLEANING FURNACE-FLUES. WALTER P. SPARBOOM, Rochester, N. Y. Filed June 27, 1916. Serial No. 106,168. (Cl. 230—2.)

A blower for cleaning furnace flues comprising a valveless head provided with yielding sealing means for abutting a register, means on said head for detachably engaging the register to hold the head in position, a circular flange on said head, and an air compressor having a cylindrical casing formed at one end to fit the flange of the head, and a movable piston member provided with an air

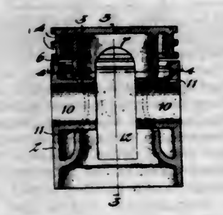




valve which opens when said member moves away from the register.

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1,229,540. PISTON FOR EXPLOSIVE-ENGINES. EDWARD O. SPILLMAN, North Tonawanda, N. Y. Filed Nov. 11, 1916. Serial No. 130,823. (Cl. 74—85.)



1. A piston comprising a head-section, a guide-section forming a cross head, means connecting said sections and located at a distance from their walls, and a wrist-pin bearing supported on said cross head and isolated from said connecting means by a non-conducting gap.

2. A piston comprising a head-section, a guide-section forming a cross head and having its wall isolated from the wall of the head-section by a non-conducting gap, a web arranged lengthwise within said sections and connecting the same, and a wrist-pin bearing supported on said cross head and isolated from said web by a non-conducting gap.

3. A piston comprising a head-section, a guide-section isolated from the head-section by a non-conducting gap, an internal web connecting said head-section with said guide-section, and wrist-pin bearings mounted on said guide-section, said web being provided in opposite sides with openings for the passage of said wrist-pin bearings which are larger in diameter than the bearings, to leave a non-conducting gap between said last-named parts.

4. A piston comprising a head-section, a guide-section isolated from the head-section by a non-conducting gap, a tubular web arranged lengthwise within said sections and connecting the same and provided within the guide-section with openings, and wrist-pin bearings mounted on said guide-section and extending inwardly through said openings, the bearings being isolated from the edges of said openings by non-conducting gaps.

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1,229,541. GRIPPING DEVICE FOR TRACTOR-WHEELS. ALEXANDER STEWART, Clintonville, Wis., assignor to Four Wheel Tractor Co., Clintonville, Wis. Filed Dec. 26, 1916. Serial No. 138,922. (Cl. 21—214.)



1. The combination with a wheel rim, of a plurality of elongated calk bars, the tread surface of the rim being loosely connected therewith to permit creeping movement and an axial twisting of the same upon propulsion of the wheel, said bars being provided with angular scraping edge portions for positive engagement with the tread surface of the rim.

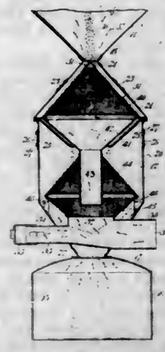
4. The combination with a wheel rim, of a pair of securing members on the opposite edges of the rim, an elongated calk bar, said bar having angular scraping edge portions, and a loose connection between each securing member and the adjacent end of the bar to permit axial twisting of the latter upon propulsion of the wheel to provide a positive scraping of the rim.

6. The combination with a wheel rim, of a plurality of securing members on the opposite edges of the rim, a plurality of alternately oppositely inclined elongated calk bars, each of said bars having an annular scraping edge portion, an eye on each end of each bar, and a loop link connecting each eye and the adjacent securing member to permit axial twisting of the bars upon propulsion of the wheel to provide a positive scraping of the rim.

[Claims 2, 3, and 5 not printed in the Gazette.]

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1,229,542. SEPARATOR. EDGAR M. STEWART, Lang, and HUGH H. MCKENNA, Los Angeles, Cal., assignors of one-third to Thomas Thorkildsen, Los Angeles, Cal. Filed Oct. 10, 1916. Serial No. 124,911. (Cl. 83—56.)



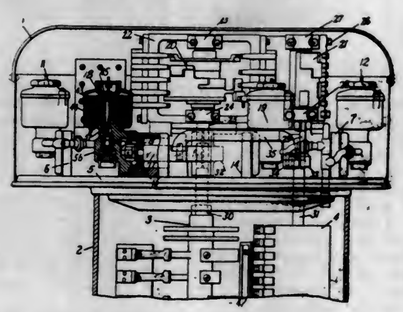
2. A separator comprising a cylindrical shell with a conical top having an inlet opening at the apex; a conical primary screen fitting concentrically inside said top; an imperforate conical return member secured to the bottom of said primary screen; an imperforate diverson cone secured at its outer edge to the inner walls of said shell and concentrically located close to said return member; a secondary screen secured to said return member inside said shell; a tube secured to the bottom of said re-

turn member and projecting downwardly to a point near the bottom of said secondary screen; means for creating a partial vacuum inside said screens; and a valve means for regulating the amount of air admitted to the space surrounding said secondary screen inside said shell.

[Claim 1 not printed in the Gazette.]

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1,229,543. SYSTEM AND APPARATUS FOR CONTROLLING FLUID-MOTORS. NORMAN W. STORER, Pittsburgh, and ARTHUR J. HALL, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 5, 1912. Serial No. 724,063. (Cl. 138—2.)



1. The combination with a fluid actuator comprising a cylinder and a piston movable therein, of means for admitting fluid to one end of the cylinder and for releasing it at the other end to effect forward movements of the piston, and for admitting fluid to both ends of the cylinder to stop the said forward movement and to maintain the piston stationary, said means being adapted to normally bias said piston to its initial position.

2. The combination with a fluid actuator comprising a cylinder and a piston movable therein, of means for admitting fluid to one end of the cylinder and for releasing it at the other end to effect forward movements of the piston, and for admitting fluid to both ends of the cylinder to stop the said forward movement and to maintain the piston stationary, said means being caused to release fluid from one end of the cylinder and to admit fluid to the other end thereof in order to bias the piston to one of its extreme positions.

3. The combination with a fluid-actuator comprising a cylinder and a piston movable therein, of valves governing the admission and release of fluid to and from the respective ends of the cylinder, electromagnets for respectively actuating the said valves, and means governing the circuits of the electro-magnets whereby one thereof is continuously energized to admit fluid to one end of the cylinder, and whereby the other is energized to release fluid from the other end thereof to permit a forward movement of the piston and is deënergized to stop the said forward movement, both electromagnets being deënergized to return the piston to its initial position.

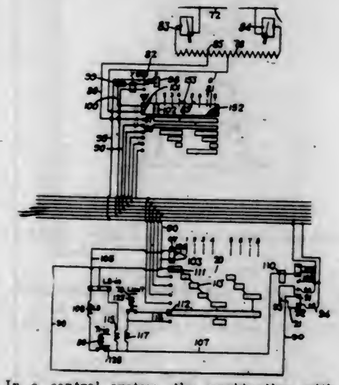
4. The combination with a fluid-actuator comprising a cylinder and a piston movable therein, of valves governing the admission and release of fluid to and from the respective ends of the cylinder, electromagnets for respectively actuating the said valves, and means governing the circuits of the electromagnets whereby one thereof is continuously energized to admit fluid to one end of the cylinder, and whereby the other is energized to release fluid from the other end thereof to permit a forward movement of the piston and is deënergized to stop the said forward movement.

5. The combination with a fluid actuator comprising a cylinder and a coöperating movable piston, of means for admitting fluid to one end of said cylinder and for releasing it from the other end thereof to effect a movement of said piston in one direction and for subsequently admitting fluid to the second end of said cylinder to arrest the movement of said piston, said means being adapted to bias said piston to its initial position.

[Claims 6 to 25 not printed in the Gazette.]

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1,229,544. SYSTEM AND APPARATUS FOR CONTROLLING ELECTRIC MOTORS. NORMAN W. STORER, Pittsburgh, and ARTHUR J. HALL, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Original application filed Oct. 5, 1912, Serial No. 724,063. Divided and this application filed Sept. 27, 1916. Serial No. 122,383. (Cl. 172—179.)



1. In a control system, the combination with a plurality of electric motors, an accelerating resistor, a controller for arranging the circuits of said motors and said resistor for series and parallel operation, and electrically governed fluid-actuated means for effecting movements of said controller and embodying a movable piston, of a master controller for manually controlling the energizing circuits of said electrically governed fluid-actuated means, and an auxiliary control device associated with said motor circuit controller and having interlock contact members corresponding to each position of said motor circuit controller for intermittently making and breaking an energizing circuit of said electrically governed fluid actuated means to effect successive balancing and unbalancing of fluid pressures on the opposite sides of said piston to cause a step-by-step movement of said motor circuit controller through all of its positions.

2. In a control system, the combination with an electric motor, an accelerating resistor, a main controller for adjusting the circuit connections of said motor and said resistor, and an electrically controlled fluid-operated device for actuating said controller and comprising a movable piston, a cylinder therefor, and means for admitting fluid to one side of said piston and for releasing it from the other side thereof for actuating said controller, and for admitting fluid to both sides of said piston to arrest movements thereof, of means mechanically associated with said piston for intermittently affecting said fluid-releasing means and causing a step-by-step movement of said main controller.

3. In a control system, the combination with a plurality of electric motors, an accelerating resistor, a main controller for adjusting the circuit connections of said motors and said resistor for series and parallel operation, and an actuator for said main controller comprising a cylinder, a movable piston, and electrically controlled valves at each end of said cylinder for admitting and releasing an operating fluid to and from said cylinder, of a manually operated master controller for governing the circuits of said electrically controlled valves, and an auxiliary control device mechanically associated with said main controller for governing the operation of said electrically controlled valves.



4. In a control system, the combination with a plurality of electric motors, an accelerating resistor, a main controller for adjusting the circuit connections of said motors and said resistor for series and parallel operation, and an actuating device for said controller comprising a cylinder, a movable piston, and electrically controlled valves governing the admission and release of an operating fluid at the respective sides of said piston, of a manually operated master controller and an auxiliary interlock controller associated with said motor circuit controller for alternately energizing and deënergizing certain of said valves for effecting a step-by-step movement for said main controller.

5. In a control system, the combination with a plurality of electric motors, an accelerating resistor and a main controller for arranging the circuits of said motors and said resistor for series and parallel operation, and an actuating mechanism for said controller comprising a piston, a cylinder and valve magnets for governing the admission and release of fluid to and from the respective ends of said cylinder, of an auxiliary controller operatively connected to said main controller for successively deënergizing certain of said valve magnets in each position of said main controller for effecting successive steps through all of its positions, and a master switch coöperating with said auxiliary controller for governing the operation of said magnet valves.

[Claims 6 to 22 not printed in the Gazette.]

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1,229,545. BEATING-ENGINE. PETER R. THOM, Appleton, Wis., assignor to Valley Iron Works Company, Appleton, Wis., a Corporation of Wisconsin. Filed Mar. 16, 1916. Serial No. 84,551. (Cl. 92—24.)

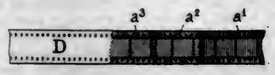


1. A beating engine, comprising a vat provided with a stationary reducing member and a back fall, a rotary member positioned above the reducing member and adjacent to the back fall, and a deflecting member interposed between the back fall and the rotary member for deflecting material from said rotary member toward the back fall.

[Claims 2 to 5 not printed in the Gazette.]

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1,229,546. FILM FOR MOTION-PICTURES. JOHN EDWARD THORNTON, Rochester, N. Y., assignor to John Owden O'Brien, Manchester, England. Filed Nov. 26, 1912. Serial No. 733,633. (Cl. 88—19.5.)

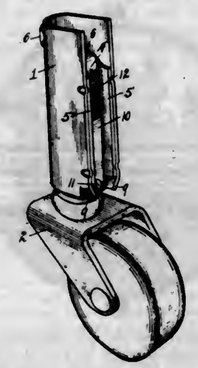



1. A film for motion pictures, consisting of a plurality of layers each containing that portion of a picture represented by a certain color, each layer being colored with a complementary color, the layers being superposed and secured together in proper relation to constitute a complete picture in natural colors.

2. A film for motion pictures, consisting of a plurality of layers, each layer having sections each containing that portion of a picture represented by a certain color, each layer being colored with a complementary color, the layers being superposed and secured together in proper relation to constitute a series of complete pictures in natural colors.

3. A film for moving pictures comprising three layers, each layer containing that portion of a picture represented by a certain color and being colored by a complementary color, the layers being superposed and secured together in proper relation to constitute a complete picture in natural colors, the combined thickness of the film thus produced being less than six one-thousandths of an inch.

1,229,547. CASTER-HOLDING MEANS FOR FURNITURE-LEGS. CLEMENT R. UHL, Toledo, Ohio. Filed Nov. 3, 1916. Serial No. 129,294. (Cl. 16—4.)



1. A leg having its lower end channel-form in cross-section, a member fixed in said leg and coöperating therewith to form a caster stem receiving socket, and spring means carried by said member and projected therefrom into the caster receiving socket to serve as a caster stem retaining means.

2. A leg having its lower end channel-form in cross-section, a plate set into the channel of the leg to coöperate therewith to form a caster stem receiving socket, said plate having side flanges extending outward therefrom in contact with the side walls of the leg channel and fixedly secured thereto, and a tongue projecting from the inner end of said plate across the upper end of said socket.

3. A leg having its lower end channel-form in cross-section, a plate fixed in the leg channel to coöperate therewith to form a caster stem receiving socket, and tongues transversely projecting from the side walls of the leg channel and engaging said plate to assist in holding it in position within the leg channel.

4. A leg having its lower end channel-form in cross-section, a plate set into said leg to coöperate therewith to form a caster stem receiving socket, said plate having side flanges projecting outward therefrom and fixed to respective side walls of the leg channel and having a tongue projecting transversely from its upper end across the socket through the crown portion of the leg and angled without said crown portion to engage the outer side thereof.

5. A leg having its lower end U-shaped in cross-section, a plate set into said leg to coöperate therewith to form a caster stem receiving socket, said plate having side flanges projecting outward therefrom and fixed to respective side walls of the leg channel, and having a tongue projecting transversely from its upper end across the socket and fixed to the crown portion of the leg channel, and tongues projecting inward from the leg side walls at the lower ends thereof and engaging the upper side of said plate.

[Claim 6 not printed in the Gazette.]

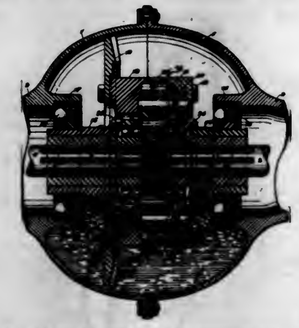
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1,229,548. GEARING. THOMAS G. VAN SANT, Poplar Bluff, and VICTOR H. VAN SANT, St. Louis, Mo. Filed Sept. 11, 1916. Serial No. 119,340. (Cl. 74—34.)

1. Differential gearing comprising a support having series of recesses therein, series of pairs of pinions in said support, the pinions of each pair meshing within said recesses and operating to compress oil or grease within said recesses, and driving gears driven by said pinions.

2. In a differential gearing, the combination with axially alined shafts and a gear upon each of said shafts, of a pinion support carried by and revoluble relative to said shafts, said support having compression chambers formed therein, sets of intermeshing pinions in said support within said chambers operable to compress oil or lubricant

within said chambers, and gears upon said axle shafts entrained with said pinions.



3. In a differential gearing, the combination of a housing arranged to contain oil or grease, axially alined axle shafts extending into said housing, gears upon said axle shafts within the housing, a differential pinion support supported by said axle shafts within the housing, said support having compression chambers formed therein, pump impeller pinions in said pinion support within said chambers, and pinion members in connection with said impeller pinions meshing with said gears, respectively.

4. The combination with axially alined axle shafts, a differential gear housing, and a driving gear within said housing, of a differential pinion support in connection with said driving gear, said support having chambers formed therein, pump impeller pinions carried by said support and operating within said chambers, pinions in connection with said impeller pinions, and gears in connection with the axle shafts meshing with said last-named pinions.

5. Differential gearing for automobiles, comprising a housing arranged to contain oil or grease, a pinion support within said housing, said support having compression chambers formed therein, a driving gear in connection with said pinion support, pairs of pump impeller pinions in said chambers, driving pinion members in connection with said impeller pinions, and gears meshing with said driving pinions for driving the axle shafts of the automobile.

[Claims 6 to 22 not printed in the Gazette.]

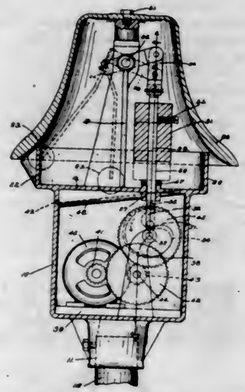
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**1,229,549. SIGNAL-BELL FOR RAILROAD SERVICE.** EUGENE W. VOGEL, Oak Park, Ill., assignor to Chicago Railway Signal and Supply Company, Carpentersville, Ill., a Corporation of Illinois. Filed May 18, 1914. Serial No. 839,463. (Cl. 116—40.)

1. In a signaling apparatus for railroad or like service, the combination with a closed casing, the top of which is formed with a gland, of a bell supported on said casing, a rocking member pivotally mounted within the bell, a clapper secured to said rocking member, mechanism within said casing for operating the clapper comprising a weighted vertically operating rod which is connected to said rocking member and extends through the gland in the top of the casing; and the top of the casing being formed with a downwardly inclined drain channel in the path of travel of said clapper.

2. In a signaling apparatus for railroad or like service, the combination with a closed casing, the top of which is formed with a gland, of a bell supported on said casing, a clapper pivotally mounted within the bell, mechanism within said casing for operating the clapper comprising an operating rod which extends through the gland in the top of the casing; the top of said casing being formed with a flange which comes up close to the bell and with a drain channel, disposed beneath the clapper and extending in the path of travel thereof.

3. In a signaling apparatus for railroad or like service, the combination with a closed casing, the top of which is formed with a gland, of a bell supported on said casing, a clapper pivotally mounted within said bell, an operating rod which extends through said gland, a cam, and mechanism for rotating the same within said casing, a weight on the end of the operating rod outside of the casing, and a buffer on the top of the casing surrounding said rod, against which the weight strikes on its down stroke so as to arrest the movement of the operating rod before coming into contact with said cam.



4. In a signaling apparatus for railroad or like service, the combination with a closed casing, the top of which is formed with a gland, with upstanding flanges and with a drain channel, of a supporting frame on the top of said casing, a bell secured to said supporting frame so that it comes close to said flange, a rocking element mounted on said frame, a clapper affixed to said rocking element, an operating rod extending through said gland, means for connecting the same to said rocking element, a weight on said operating rod, a cam in said casing adapted to intermittently raise and release said operating rod, an electric motor in said casing, a train of reducing gears adapted to drive said cam from said motor, and a buffer on the top of said casing surrounding said operating rod against which the weight strikes, on the down stroke of the rod, so as to prevent the end of said operating rod from coming into contact with said cam.

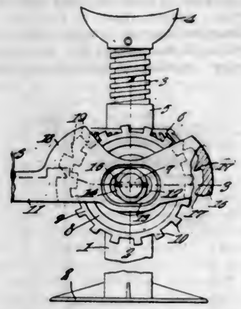
5. In a railway signal bell the combination of a casing provided with a door; an electric motor, a revoluble cam having a curved cam surface less than a complete circle, and a train of gears between the motor and the cam, all completely housed in and protected from the weather by said casing; a bell removably attached to the outside of the casing; a clapper and mechanism for pivotally supporting the same arranged within the bell and comprising a shaft extending through the wall of the casing provided with a roller to travel on said cam; and a weight operatively connected with said shaft to throw the clapper against the bell when said roller rides off said cam surface.

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**1,229,550. LIFTING-JACK.** GEORGE F. VOIGHT, San Francisco, Cal. Filed Oct. 9, 1916. Serial No. 124,602. (Cl. 254—103.)

1. In a jack, a standard, a screw movable vertically relative thereto, a nut threaded upon the screw and seating upon the standard, said nut having a gear, the standard having an outstanding pintle, a gear rotatable upon the pintle and meshing with the aforesaid gear, and a lever fulcrumed and slidable longitudinally upon said pintle, the lever having portions alternately engageable with the second mentioned gear when the lever is shifted longitudinally, in order that the second mentioned gear can be rotated in either direction when the lever is oscillated.



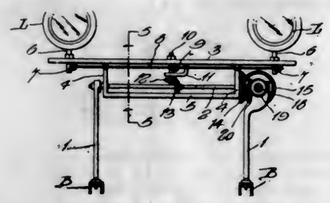


2. In a jack, a standard, a screw movable vertically relative thereto, a gear threaded upon the screw and seating upon the standard, the standard having an outstanding pintle, a gear rotatable upon the pintle and meshing with the aforesaid gear, the second mentioned gear having an outstanding rim provided with teeth, and a lever having a longitudinal slot engaging the pintle, the lever having teeth alternately engageable with the aforesaid teeth when the lever is shifted longitudinally, whereby the second mentioned gear can be rotated in either direction by the oscillation of the lever.

3. In a jack, a hollow standard having an outstanding pintle adjacent its upper end, a screw within the standard projecting out of the upper end thereof, a nut threaded upon the screw and seating upon the upper end of the standard, said nut having a bevel gear, a bevel gear rotatable upon the pintle and meshing with the aforesaid gear, the last mentioned gear having an outstanding rim provided with teeth, an oscillatory lever having a slot engaging said pintle whereby the lever can be shifted longitudinally, the lever having teeth alternately engageable with the aforesaid teeth when the lever is shifted longitudinally, the lever holding the first mentioned gear upon the pintle, and retaining means upon the pintle holding the lever thereon.

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**1,229,551. DIRIGIBLE HEADLIGHT.** CLAYTON VON CULIN, New York, N. Y., and GEORGE WATSON BEACH, Saybrook, Conn. Filed Sept. 25, 1916. Serial No. 122,135. (Cl. 240—61.)



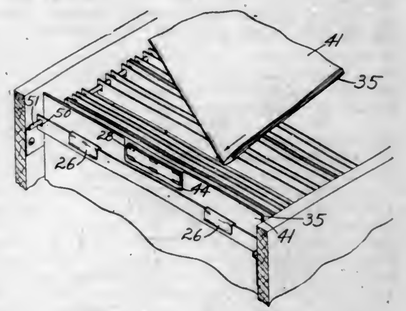
1. A dirigible headlight comprising an elongated rocking support to extend transversely across the front of an automobile, and a pair of horizontally swinging lamp brackets mounted on said support; in conbination with a beveled gear secured to said support on the axis thereof, a shaft extending longitudinally of the support and passing through said gear, operating connections between said shaft and the lamp brackets for swinging the latter upon turning of said shaft, a beveled gear on said shaft adjacent the aforesaid gear, a pair of telescoping shafts to extend to a point adjacent the driver's seat, and beveled gears on said telescoping shafts meshing with the aforesaid gears.

2. A dirigible headlight comprising a pair of brackets to be secured to an automobile, a shaft extending between and rotatably supported by said brackets, a horizontally elongated support above said shaft having depending bearings mounted on the latter, a beveled gear secured to one of said bearings and having its axis alined with the axis of the shaft, a pair of horizontally swinging lamp brackets mounted on the ends of the support, operating connections between these brackets and the shaft for swinging them when said shaft is rotated, a second beveled gear secured to said shaft adjacent the aforesaid gear, and a pair of telescoping shafts having beveled gears meshing with the aforesaid gears, the innermost of said shafts being rotatably supported by one of the first mentioned brackets.

3. A dirigible headlight comprising a support, a pair of horizontally swinging lamp brackets thereon, crank arms extending in the same direction from said brackets, a vertical rock shaft between said brackets and having oppositely extending crank arms, a link connecting one crank arm of the shaft with the arm of one lamp bracket, a second link connecting the other crank arm of said shaft with the other lamp bracket, and means for turning said rock shaft.

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**1,229,552. VERTICAL FILE.** CHESTER I. WAGNER, Akron, Ohio. Filed Mar. 11, 1914. Serial No. 824,074. (Cl. 129—16.)



1. A filing device comprising a beam, a support therefor, a folder, and hooks thereon adapted to hook over the beam.

2. A filing device comprising a supporting frame, a plurality of beams attached to and supported thereby, folders, and means for detachably suspending one of them from each of the beams.

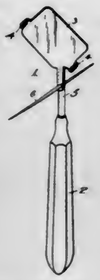
3. A filing device comprising a supporting frame, a plurality of beams, means which attaches the beams to the frame but permits lateral movement of each beam with reference to the other and to the frame, folders, and means for suspending them from the beams.

4. A filing device comprising a supporting frame, flanged metallic strips secured to opposite sides thereof, beams having notches in each end mounted on the strips, the flanges thereof passing through said notches, thereby permitting the beams to slide on the strips but normally preventing their detachment therefrom; folders, and means for suspending them from the beams.

5. A filing device comprising a supporting frame, metallic members attached at opposite sides thereof, beams mounted to slide on said members, whereby they are supported; folders, and means for suspending them from the beams.

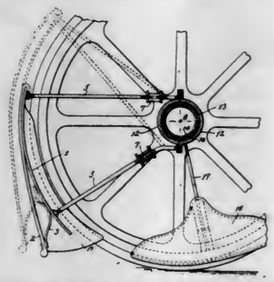
[Claims 6 to 27 not printed in the Gazette.]

1,229,553. DENTAL FILM-HOLDER. HARRY F. WAITE, Whitestone Landing, N. Y. Filed Apr. 24, 1916. Serial No. 93,346. (Cl. 250—34.)



In a device of the class described, a film holder having a part adapted to hold a film, a perforated shank extending therefrom with the axis of the perforation substantially perpendicular to the plane of the plate held by the film holder, and a stick inserted in said perforation whereby the direction in which rays should be thrown on the film in the film holder is indicated.

1,229,554. LIFE-GUARD FOR ATTACHMENT TO MOTOR AND OTHER VEHICLES. DANIEL WALTER, Hove, and ARTHUR WALTER LEE, Portslade, England. Filed Jan. 29, 1916. Serial No. 75,190. (Cl. 105—131.)



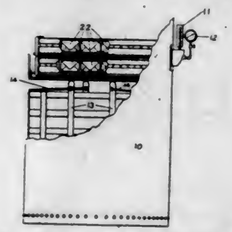
1. The combination with the axle and wheel of a vehicle, of a guard member loosely supported by the axle and arranged in front of the wheel and counterbalance means connected with said guard member and acting to normally maintain the same in an operative position with respect to the wheel, said counterbalance means permitting of swinging movement of the guard member, for the purpose set forth.

2. The combination with the axle and wheel of a vehicle, of a member loosely mounted upon the axle, a guard member carried by said first named member and arranged in advance of the wheel, a rod carried by said first member and a weight slidably mounted upon said rod for the purpose set forth.

1,229,555. METHOD OF TREATING FISH. ISIDOR J. WARNER, Lake View, N. Y. Filed Aug. 3, 1914. Serial No. 854,717. (Cl. 99—11.)

1. A method of treating fish comprising the cleaning of the fish to be treated, the separate wrapping of each individual fish to be treated in an oil absorbing wrapper, subjecting the package thus prepared to live steam and hot water until a sufficient temperature has been attained to kill all animal life, and draining the oil from the fish.

2. A method of treating fish comprising the cleaning of the fish to be treated, the separate wrapping of each individual fish to be treated in a suitable oil absorbing wrapper, the packing of such wrapped fish in a plurality of trays, suitably spaced apart to prevent deformation of the fish, then treating said wrapped fish to live steam and hot water until the animal life has been destroyed therein, and then draining the oil from the fish.

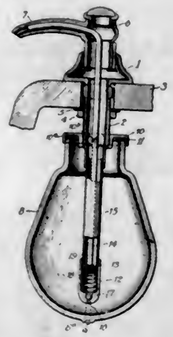


3. A method of treating fish comprising the cleaning of the fish to be treated, the separate wrapping of each individual fish in suitable oil absorbing wrappers, packing a plurality of such wrapped fish on an open bottom tray, the protecting of such packed and wrapped fish by separators, packing a plurality of such prepared trays in crates, treating such packed crates in an inclosed container to live steam and hot water until the animal life has been killed therein, then removing said treated fish from said container, and draining the oil from such fish.

4. A method of treating fish comprising the clamping of the fish to be treated, the separate wrapping of each individual fish in suitable oil absorbing wrappers, packing such wrapped fish in a container so as to prevent their deformation, then treating such wrapped fish in said container to live steam and hot water until all animal life has been killed therein, then removing such treated fish from said container, and then draining the oil from said fish.

5. A method of treating fish comprising the cleaning of the fish to be treated, the separate wrapping of each individual fish in suitable oil absorbing wrappers, packing such fish in such a way as to prevent their deformation in a closed container, then treating such fish in said container to live steam and hot water until all animal life has been killed therein, then removing such treated fish from said container, and then draining the oil from said fish.

1,229,556. LIQUID-SOAP-DISPENSING DEVICE. EARL G. WATROUS, Chicago, Ill. Filed May 21, 1915. Serial No. 29,504. (Cl. 221—94.)



1. A liquid soap dispensing device comprising a base portion having a stem, a combined button and spout movably mounted in such base portion, a liquid soap receptacle removably secured to and supported by the stem, a pump arranged in such receptacle and including a hollow piston rod extending through said base portion and said spout.

2. In combination with a suitable support, a liquid soap dispensing device comprising a base portion clamped to the support, a combined button and spout movably mounted in such base portion and arranged on one side of the support, a liquid soap receptacle connected with and supported by said base portion and arranged on the other side of the support, and pump mechanism arranged within the receptacle and communicating with said spout.

3. In combination with a suitable support, a liquid soap dispensing device comprising a base portion having a stem extending through the support and clamped thereto, a combined button and spout movably mounted on and supported by such base portion and arranged on one side of the support, a liquid soap receptacle removably connected with said stem and arranged on the other side of the support, and pump mechanism arranged within the receptacle and communicating with said spout.

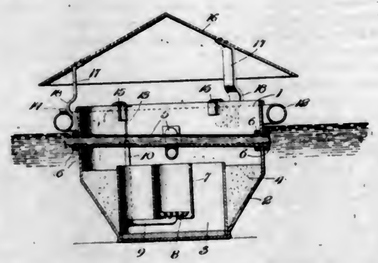
4. In combination with a suitable support, a liquid soap dispensing device comprising a base portion having a stem extending through the support and clamped thereto, a combined button and spout movably mounted in such base portion and arranged on one side of the support, a cap removably connected with said stem, a wire frame connected with the cap, a liquid soap receptacle arranged within the wire frame and having its top closed by the cap, said receptacle being arranged on the other side of the support, and pump mechanism arranged within the receptacle and communicating with said spout.

5. A liquid soap dispensing device comprising a base portion having a stem, a combined button and spout movably mounted in such base portion, a liquid soap, receptacle, a cap therefor attached to the stem, a wire frame passing around the body of the receptacle and having its free ends connected with the cap, and pump mechanism arranged in such receptacle and communicating with said spout.

[Claims 6 to 9 not printed in the Gazette.]



1,229,557. TANK-HEATER. MARION C. WEAVER, Bushnell, Ill. Filed Jan. 6, 1917. Serial No. 141,006. (Cl. 126—360.)

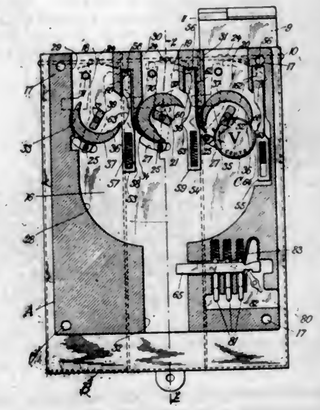


1. A tank heater comprising a body, hangers engaged over the upper edge of the body, a fuel reservoir externally encircling the body and supported by said hangers, a burner within the body, a fuel pipe leading from said reservoir to the burner, and water tubes extending through the body above the burner and below the fuel reservoir.

2. In a tank heater, the combination of a body, a reservoir encircling and supported from the upper end of the body, a burner within the body, a connection between the burner and the reservoir, a cover, and brackets secured to the cover and depending therefrom to engage between the body and the reservoir and having offset portions resting on the reservoir whereby to support the cover over and in spaced relation to the body.

[Claim 3 not printed in the Gazette.]

1,229,558. MULTIPLE-COMPARTMENT COIN-OPERATED VENDING-MACHINE. JOHN A. WEBSTER, Rutherford, N. J., assignor to Autosales Gum and Chocolate Company, New York, N. Y., a Corporation of New York. Filed Sept. 3, 1912. Serial No. 718,243. (Cl. 194—65.)



1. In a coin-controlled vending machine, a casing having a plurality of compartments and a lid for each compartment, a locking device for each lid, a separate pivoted coin-carrying disk associated with each locking device for operating the same through the medium of the deposited coin, a separate coin-slot leading to each coin-carrying disk, and a single rotary member for simultaneously rotating all of said disks.

2. In a coin-controlled vending machine, a casing having a plurality of compartments and a lid for each compartment, a locking device for each lid, a pivoted coin-carrying member associated with each locking device for operating the same through the medium of the deposited coin, a separate coin-slot leading to each coin-carrying member, a single hand-operated part for simultaneously rotating all of said members, and spring-pressed slot-closing means controlled by each locking device for automatically closing the associated slot when said device is in operated position.

3. In a coin-controlled vending machine, a casing having a plurality of compartments and a lid for each compartment, a locking device for each lid, a pivoted coin-carrying member associated with each locking device for operating the same through the medium of the deposited coin, each locking device remaining in operated position, a separate coin-slot leading to each coin-carrying member, a single hand-operated part for simultaneously rotating all of said members, and a common restoring element for all of said locking devices.

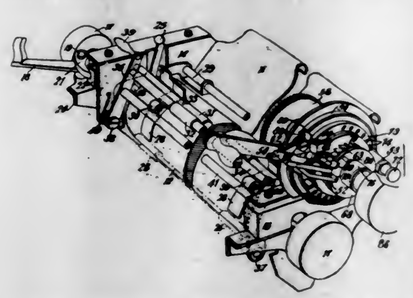
4. In a coin-controlled vending machine, a casing having a plurality of compartments and a lid for each compartment, a locking device for each lid, a pivoted coin-carrying member associated with each locking device for operating the same through the medium of the deposited coin, a separate coin-slot leading to each coin-carrying member, a single hand-operated part for simultaneously rotating all of said members, spring-pressed slot-closing means controlled by each locking device for automatically closing the associated slot when said device is in operated position, and a common restoring element for all of said locking devices.

5. In a vending machine, provided with a lid and a coin-slot, a locking member for said lid, means for frictionally holding said member in normal or locking position, mechanism for operating said member into releasing position through the medium of the deposited coin, and a

slot-closer carried by said means for automatically closing the slot when said locking member is in operated or in releasing position.

[Claims 6 to 31 not printed in the Gazette.]

1,229,559. TYPE-WRITING MACHINE. LESTER A. WERNERY, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 27, 1916. Serial No. 111,547. (Cl. 197—128.)



1. In a typewriting machine, the combination with a platen, of mechanism coöperating therewith to feed a work piece thereover through a predetermined fixed distance, including means for rotating the platen through a variable angle and thereby advancing the work piece a corresponding distance less than said fixed distance, and means operable at a single operation while the platen is at rest to advance the work piece through the remainder of said fixed distance.

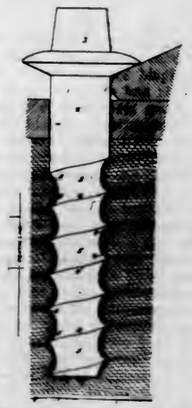
16. In a typewriting machine, the combination with a rotary platen, of feed rolls coöperating therewith to feed a work piece over the platen, a feeding couple separate from the platen for feeding a second work piece, a gear train between the platen and said feeding couple for actuating the latter as the platen is rotated, a drive shaft, gearing connecting the drive shaft to the feeding couple whereby said shaft is rotated from the platen, a driver to actuate said drive shaft and thereby actuate said feeding couple, means controlled by said driver to disconnect the feeding couple from the platen while maintaining the driving connection from the driver to the feeding couple, whereby the latter is actuated by the driver to feed said second work piece while the platen and the first mentioned work piece remain at rest, and means to determine the distance through which the feeding couple is rotatable by a single operation of driver, said distance being complemental to the distance through which the feeding couple is rotated from the platen.

26. In a typewriting machine, the combination with a platen, of feed rolls running on the platen, line spacing mechanism to rotate the platen, a feeding couple, a gear train connecting said feeding couple to be driven by the platen, separate driving means for said couple comprising a drive shaft geared to said couple, a driver normally disconnected from said shaft and at rest during the rotation of the shaft by the platen, stops to limit the throw of the driver, the driver having a limited movement free from the said shaft, and a gage to determine the position at which the driver during its throw is connected to the drive shaft, said gage set by the platen so that the distance through which the feeding couple is actuated by the driver is complemental to the distance through which said couple is actuated by the platen, one of said stops being adjustable to vary distance through which the feeding couple may be actuated during the successive operations of the platen and driver.

27. In a typewriting machine, the combination with a platen, of a drive shaft to rotate the platen, a ratchet wheel on said shaft, a driving crank loose on the shaft, a dog on said crank to drive the ratchet wheel, a stop to limit the throw of the crank, and a locking latch carried by said crank, said stop being in the path of said latch, said dog being provided with a holding surface into engagement with which the latch is moved by said stop as the driver completes its movement, whereby overthrow of the drive shaft is prevented.

[Claims 2 to 15, 17 to 25, and 28 to 45 not printed in the Gazette.]

1,229,560. SCREW. GEORGE W. WHITEMAN, Philadelphia, Pa. Filed July 1, 1916. Serial No. 107,085. (Cl. 85—46.)



1. A screw having a stem with the usual helical thread, with a continuous concavely curved recess between the turns of said thread; the concaved surface adjacent one side of the thread being broader than the concaved surface adjacent the other side of the thread throughout the length of the latter.

2. A screw having a stem with the usual helical thread having a sharp edge, with a continuous concaved recess between the turns of said thread, said concaved recess including a plurality of arcuate surfaces having radii of different length and lying adjacent the thread; the arcuate surface adjacent one side of the thread being broader than the arcuate surface adjacent the other side of the thread throughout the length of the latter.

3. A screw having a stem with a helical thread of relatively large pitch, with a rounded recess or depression between the turns of said thread, the curvature of said recess being greater adjacent the under side of the thread.

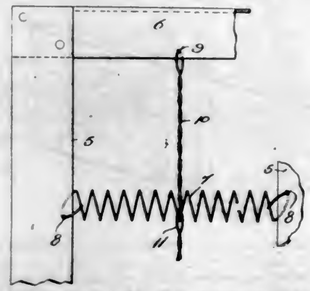
4. A screw having a continuous helical thread, and a concaved groove continuous with said thread and lying between the same throughout the extent of said screw; said groove formed by curved surfaces having radii of different length which join a cylindrical portion of the stem, the surface of said cylindrical portion lying tangent to both of said curved portions.

5. A screw having a continuous helical thread of the same diameter throughout its length with a concaved groove continuous with said thread and lying between the same throughout the extent of said screw, said groove having curved surfaces adjacent the thread whose radii differ in length and which join a cylindrical portion of the stem, the plane of which cylindrical portion is tangent to both of said curved portions.

1,229,561. ADJUSTABLE BED-SPRING. JOHN H. WILLEMS, Kenosha, Wis. Filed Aug. 5, 1916. Serial No. 113,220. (Cl. 5—29.)

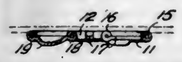
1. A bed spring of the class described comprising in combination, a frame, a series of transversely extending coil springs connected at their opposite ends with the opposite rails of the frame, said springs being adapted to be axially twisted to vary the tension thereof, and a series of longitudinally extending flexible, non-resilient tie members connected with the frame and the springs to prevent excessive sagging of the latter, each of said members being formed from a pair of twisted wires, the portions engaging said coil springs being spaced apart to form loops to loosely receive the same, the position of said tie members being unchanged by varying the tension of said coil springs.





2. A bed spring of the class described comprising in combination, a frame having a series of openings formed in its opposite rails adjacent the inner edges thereof, a series of transversely extending coil springs having their opposite end convolutions engageable through the openings in the side rails from the under side thereof, their extremities being directed inwardly beyond the adjacent edges of the rails and disposed under the upper portions of the said end convolutions for the purpose set forth, the tension of said springs being varied by axially twisting the same, and a series of longitudinally extending tie members disposed through the openings in the end rails, each being formed from a pair of twisted wires, the portions adjacent the convolutions, being spaced apart to form loops for loosely receiving said springs, the position of said tie members being unchanged by varying the tension of said coil springs.

1,229,562. SNAP-FASTENER. WILLIAM R. WILLETTS, Montreal, Quebec, Canada. Filed Jan. 25, 1915, Serial No. 4,208. Renewed Apr. 3, 1917. Serial No. 159,564. (Cl. 24—217.)



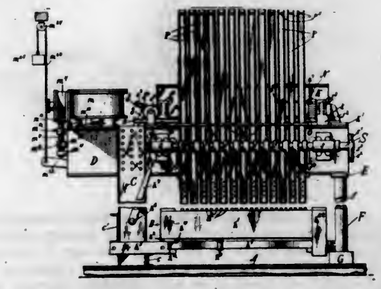
1. A one piece female member for snap fasteners, comprising outer and inner thickened peripheral rims inclosing a flat body portion, a plurality of resilient male member gripping fingers formed by cutting slots through the inner rim and the body clear to the outer rim and integral ribs struck up radially on each finger extending between the inner and outer rims and tapering in depth from adjacent the outer rim sharply toward the outer rim and gradually toward the inner rim.

3. In a snap fastener, male and female members engageable by movement toward one another, integral radially disposed ribs formed on adjacent faces of said members and arranged to intermesh during engagement of the fasteners, and formed to engage and separate the fastener members upon relative revolution thereof.

[Claims 2 and 4 not printed in the Gazette.]

1,229,563. COMPRESSING APPARATUS. JAMES N. WOOD, Blackshear, Ga., assignor to The Wood Concentrator Company, a Corporation of South Carolina. Filed Mar. 29, 1915, Serial No. 17,838. Renewed Jan. 4, 1917. Serial No. 140,649. (Cl. 100—19.)

1. A compressing apparatus comprising means including an abutment for supporting the material to be compressed, a plurality of means for compressing said material, means for moving said compressing means toward and nearer to the abutment during each cycle of operation, and means for retaining said compressing means on their compression stroke.



2. A compressing apparatus comprising means for supporting the material to be compressed, a plurality of means for compressing said material, means for operating said compressing means, and independent means for retaining said compressing means on their compression stroke.

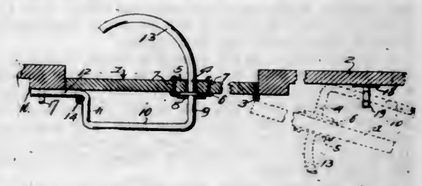
3. A compressing apparatus comprising means including an abutment for supporting the material to be compressed, a plurality of plungers for compressing said material, means for moving said plungers toward and nearer to the abutment during each cycle of operation, and means for retaining said plungers on their compression stroke.

4. A compressing apparatus comprising means for supporting the material to be compressed, a plurality of plungers for compressing said material, means for operating said plungers, and means for retaining said plungers on their compression stroke, said retaining means being independent of the operating means.

5. A compressing apparatus comprising means including an abutment for supporting the material to be compressed, a plurality of means for compressing said material, and means for moving said compressing means toward and nearer to the abutment during each cycle of operation and consecutively over the pressing area of the material undergoing pressure.

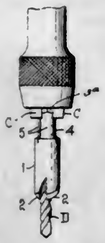
[Claims 6 to 62 not printed in the Gazette.]

1,229,564. LATCH. HANS L. AAGAARD, Hamlin, Iowa. Filed Oct. 5, 1916. Serial No. 123,939. (Cl. 70—44.)



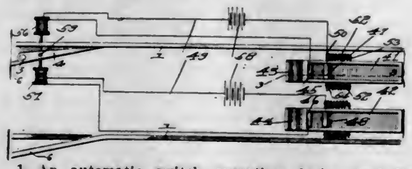
A latch member bent from a single rod having a journal portion to extend at right angles through an aperture in a door, a hand hold extending at an angle from one end of said journal portion, a latch terminal extending from the free end of said hand hold and offset therefrom, and a hand hold terminal extending from the other end of the journal portion and curved on a relatively large radius toward said latch terminal, a collar secured upon the journal portion to bear against one side of the door, said latch terminal and collar being in substantially the same plane, and a plate attachable to a door for receiving said collar and holding it against the door.

1,229,565. COUNTERSINK. VICTOR AHLGREN, East Rockford, Ill. Filed May 6, 1916. Serial No. 95,915. (Cl. 77—66.)



A counter-sinking attachment for drills comprising a tubular body, the bore of which has a uniform diameter for the entire length of the body, one end of the body being cylindrical and having its extremity formed to provide cutters, the body above said cylindrical portion being reduced in diameter to provide an elongated annular recess, the body above the recess being transversely enlarged and upwardly tapered, said upwardly tapered portion being many sided in cross section, the reduced portion and the many sided portion of the body together forming a shank and being divided by longitudinal slits, the slits intersecting the bore and being disposed mid-way between the corners of the square portion of the shank.

1,229,566. SWITCH-POINT OPERATOR. RAFAEL ALCOLEA, New Orleans, La. Filed Feb. 24, 1915. Serial No. 10,340. (Cl. 104—155.)



1. An automatic switch operating device, including guide ways, a fixed contact arranged in each of said guide ways, movable contacts arranged in each of said guide ways, and means for engaging the movable contact with said fixed contact.

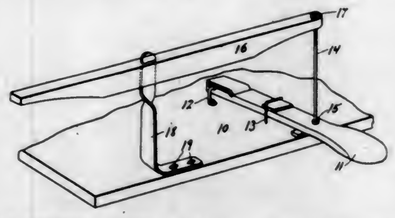
2. An automatic switch operating device, including guide ways, a fixed contact arranged in said guide ways, a movable contact arranged within said guide ways, electro magnetic means associated with the switch point and connected with said contacts, and means for engaging the movable contact with said fixed contact.

3. An automatic switch operating device, including a body portion, a guide-way formed in said body portion, a fixed contact arranged in said guide-way, a movable contact disposed in the guide-way, means for engaging the movable contact with the fixed contact, and means arranged adjacent said fixed contact for causing the engaging means to be automatically released from the movable contact, at times.

4. An automatic switch operating device, including a body portion, a guide-way formed in said body, a fixed contact arranged in said guide-way, a movable contact in the guide-way, means for engaging the movable contact with the fixed contact, and a curved abutment arranged adjacent said fixed contact for causing the engaging means to be automatically released from the movable contact, at times.

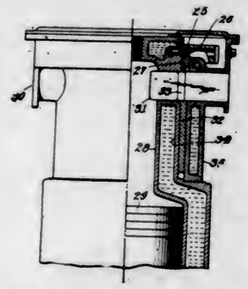
5. An automatic switch operating device, including, in combination with electro-magnetic means arranged in proximity to the switch point, a body portion, a guide-way formed in said body portion, a fixed contact arranged in said guide-way, a movable contact in the guide-way, means for engaging the movable contact with the fixed contact to magnetize said electro-magnetic mass for operating the switch point, and a curved abutment arranged adjacent said fixed contact for causing the engaging means to be released from the movable contact, at times.

1,229,567. PEDAL FOR MUSICAL INSTRUMENTS. JOHN AMMON, New York, N. Y., assignor to Henry Christman, New York, N. Y. Filed June 14, 1913. Serial No. 773,614. (Cl. 74—81.)



In combination with a pedal lever, a resilient bearing having an upright body portion provided at its upper end with an entering portion, and a seating at the base of said entering portion, said seating formed by a twist in said body portion.

1,229,568. INTERNAL-COMBUSTION ENGINE. JOSEPH A. ANGLADA, New York, N. Y., assignor, by mesne assignments, to Emil M. Lowy, New York, N. Y. Filed Feb. 24, 1916. Serial No. 80,112. (Cl. 123—80.)



1. In an internal combustion engine, a ported cylinder, a ported valve member coaxial with the cylinder, means for rotating the valve member, a seat member therefor, means for reciprocating the valve member relatively to the seat member, including a cam way formed on one member and a projection on the other member, operating in the cam way.

2. In an internal combustion engine, a ported cylinder, a ported valve member coaxial with the cylinder and having a continuous cam way, a seat member, a projection on the seat member operating in said cam way to reciprocate said valve member, and means for rotating said valve member.

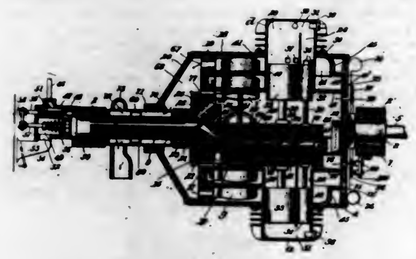
3. In an internal combustion engine, a cylinder having a ported end of reduced diameter, a revoluble ported valve member coaxial with the cylinder outside of said end, a seat member for the valve member, a continuous cam way on one of said members, and means on the other member operating in said cam way to reciprocate said valve member during rotation thereof.

4. In an internal combustion engine, a cylinder, a water jacketed ported valve outside of said cylinder, means for continuously rotating the valve, and means for displacing the valve.



5. In an internal combustion engine, a ported cylinder, a ported valve, said valve being water jacketed inside and outside, means for rotating the valve, and means for reciprocating the valve.

1,229,569. ROTARY ENGINE. BENJAMIN F. AUGUSTINE, Buffalo, N. Y. Filed July 24, 1916. Serial No. 111,054. (Cl. 123—44.)



1. In a gas engine, the combination of a pair of cylinders arranged side by side and in open communication, one of said cylinders having intake ports controlled by its piston and the other of said cylinders having exhaust ports controlled by its piston, a fuel supply chamber connected to said intake ports, a pumping mechanism for maintaining a charge of vaporized fuel and air in the supply chamber, and means for heating the supply chamber for gasifying the vaporized fuel in the supply chamber that the inrushing mixture will scavenge the cylinder when the piston of the intake cylinder uncovers the intake ports and establishes communication with the heated supply chamber.

2. In a rotary gas engine, the combination of a crank shaft, a pair of cylinders in open communication with each other and mounted to revolve about said crank shaft with their axes in planes substantially perpendicular to the axis thereof, pistons operating in said cylinders and connected to the crank shaft, a supply chamber connected to the inlet ports of one of said cylinders, means independent of the pistons for producing a flow of fuel and air to said supply chamber, means for heating the fuel and air in the supply chamber, and means for ignition.

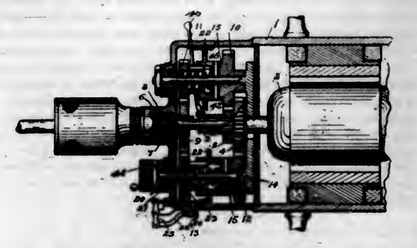
3. In a rotary gas engine, the combination of a crank shaft, a pair of cylinders in open communication with each other and mounted to revolve about said crank shaft with their axes in planes substantially perpendicular to the axis of the shaft, one of said cylinders having intake ports and the other cylinder having exhaust ports, a piston in each cylinder controlling the ports thereof, a fuel supply chamber connected to the said intake ports, means for maintaining the supply chamber charged with a supply of vaporized fuel and air, and means for heating the supply chamber from the exhaust gases.

4. A gas engine including in combination, a cylinder, a piston therein, a fuel-supply chamber adjacent the cylinder, said cylinder having intake ports uncovered by the piston, said intake ports having a combined area substantially equal to the cross sectional area of the cylinder, means for supplying said chamber continuously with a mixture of vaporized fuel and air, and means for heating said supply chamber to gasify the vaporized fuel and air prior to the supplying of the same to the cylinder.

5. In a rotary gas engine, the combination of a plurality of cylinders and pistons, a rotary fuel supply chamber connected to the cylinders, means for maintaining the supply chamber constantly charged with fuel and air, and means for heating the fuel and air in the rotary supply chamber.

[Claims 6 to 80 not printed in the Gazette.]

1,229,570. AUTOMATIC POWER CUT-OFF. FRANK J. BACKSCHEIDER, Cincinnati, Ohio. Filed Aug. 31, 1912. Serial No. 718,100. (Cl. 74—46.)



1. In a device of the character specified, a clutch comprising a driving and a driven member, means normally to hold said members in fixed relative position with reference to each other to transmit power, the engaging faces of said clutch members being adapted to cause said members to change such relative position under abnormal friction, an annular bearing surface on one of said clutch members, and means for controlling the power supplied to said driving member, said means being arranged to be operated by said bearing surface upon the change in the relative position of the members of said clutch.

2. In a device of the character specified, a clutch comprising a driving and a driven member, means normally to hold said member in fixed relative position with reference to each other under tension to transmit power, the engaging faces of said clutch members being adapted to cause said members to change such relative position under abnormal friction, means to adjust said tension, an annular bearing surface on one of said clutch members, and means for controlling the power supplied to said driving member, said means being arranged to be operated by said bearing surface upon the change in the relative position of the members of said clutch.

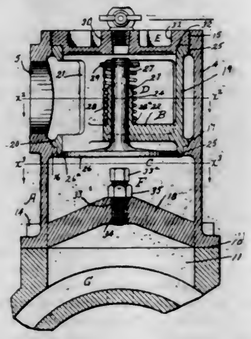
3. In a device of the character specified, a clutch comprising a driving and a driven member, said members being adapted to be placed in and out of engagement, a spring, said spring being adapted normally to hold said members in fixed relative position with reference to each other under tension to transmit power, the engaging faces of said clutch members being adapted to cause said members to change such relative position against the tension of said spring under abnormal friction, an annular bearing surface on one of said clutch members, and means for controlling the power supplied to said driving member, said means being arranged to be operated by said bearing surface upon the change in the relative position of the members of said clutch.

4. In a device of the character specified, a clutch comprising a driving and a driven member, said members being adapted to be placed in and out of engagement, a spring, said spring being adapted normally to hold said members in fixed relative position with reference to each other under tension to transmit power, the engaging faces of said clutch members being adapted to cause said members to change such relative position against the tension of said spring under abnormal friction, means to adjust the tension of said spring, an annular bearing surface on one of said clutch members, and means for controlling the power supplied to said driving member, said means being arranged to be operated by said bearing surface upon the change in the relative position of the members of said clutch.

1,229,571. VALVE. JOHN P. BARKER, Los Angeles, Cal., assignor to Los Angeles Motor Car Company, Los Angeles, Cal., a Corporation of California. Filed Aug. 28, 1916. Serial No. 117,267. (Cl. 137—82.)

1. In an internal combustion motor intake valve, a valve casing adapted to communicate with the interior of

a cylinder of an internal combustion motor at one end of such casing and adapted for connection with an intake pipe at another zone in the said casing, a removable valve cage fitted in said casing and provided with an annular valve seat, a puppet valve comprising a disk and stem portion mounted in said valve cage and adapted for coaction with said seat, a removable plug for maintaining said valve cage in position in said valve casing, and means for limiting the travel of the valve in a direction away from its seat; said limiting means comprising a support in said valve casing and extending into the path of travel of said valve, and a member adjustable with respect to said support and adapted to arrest said valve in its travel whereby said valve and cage may be removed and access had to said limiting means to adjust the same upon removal of the plug.



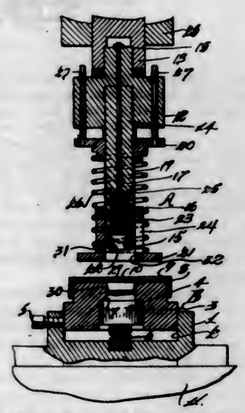
2. In an internal combustion motor intake valve, a valve casing adapted to communicate with the interior of a cylinder of an internal combustion motor at one end of such casing and adapted for connection with an intake pipe at another zone in the said casing, a removable valve cage fitted in said casing and provided with an annular valve seat, a puppet valve comprising a disk and stem portion mounted in said valve cage and adapted for coaction with said seat, a removable plug for maintaining said valve cage in position in said valve casing, and means for limiting the travel of the valve in a direction away from its seat; said limiting means comprising a support in said valve casing and extending into the path of travel of said valve, and a member adjustable with respect to said support and adapted to arrest said valve in its travel whereby said valve and cage may be removed and access had to said limiting means to adjust the same upon removal of the plug; said adjustable member being accessible for adjustment only after removal of said plug and withdrawal of said valve cage with the valve carried thereby.

3. In a valve for internal combustion motors, a casing having an orifice for communication with an internal combustion motor cylinder and an orifice at an angle thereto adapted for communication with an intake pipe, a cylindrical valve supporting cage in said casing, an annular seat for said valve supporting cage, a plug adapted to be applied to said valve casing and between which and said annular seat said valve supporting cage is clamped, a relatively thin puppet valve having a stem supported in said valve cage, a spring co-acting with said stem to hold said thin valve in contact with an annular seat provided on said valve supporting cage, and means in said casing for adjustably limiting the travel of said valve; said valve limiting means comprising a support springing from the internal walls of said valve casing, and a member threaded into said support and extending into the path of valve travel and provided with locking means to lock the same in any position of adjustment; said plug sealing said valve casing and said threaded member and said valve being accessible only after removal of said plug.

4. In an internal combustion motor intake valve, a valve casing adapted to communicate with the interior of the cylinder of an internal combustion motor at one end of such casing and adapted for connection with an intake pipe at another zone in said casing, a removable valve cage fitted in said casing and provided with an annular valve seat, a puppet valve comprising a disk and a stem portion mounted in said valve cage and adapted for coaction with said seat, a removable plug for maintaining said valve cage in position in said valve casing, and means for limiting the travel of the valve in a direction away from its seat; said limiting means comprising a support in said valve casing and extending into the path of travel of said valve, and a member adjustable with respect to said support and adapted to arrest said valve in its travel whereby said valve and cage may be removed and access had to said limiting means to adjust the same upon removal of the plug; said limiting means being entirely independent of said valve.

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1,229,572. DIE FOR BLANKING OUT BUTTONS. JACOB S. BIRNZWEIG, New York, N. Y. Filed June 26, 1916. Serial No. 105,841. (Cl. 113—42.)



1. A stamping device, consisting of a support, a holder removably secured thereto, a movable female die carried by the holder, the holder being provided with a shoulder to limit the upward movement of the female die, yieldable means to oppose the movement of the female die, a removable cap carried by the female die holder having a central opening surrounding the female die, and a male die to cooperate with the female die.

2. A stamping device, consisting of a support, a post carried thereby, a male die removably secured to said post, a vertically movable cutter surrounding the male die, means to operate the male die, and means to operate said cutter at a predetermined point in the operation of the male die, and a female die coöperating with the male die.

3. A stamping device consisting of a support, a post carried thereby, a male die removably secured to said post, a movable cutter surrounding said male die, a plate secured to said cutter, movable pins to depress said plate to operate said cutter, a spring to return said plate and cutter after the operation thereof, and a female die cooperating with the male die.

4. A stamping device consisting of a support, a post carried thereby, a male die removably secured to said post, a movable cutter surrounding said male die, a plate secured to said cutter, movable pins to depress said plate to operate said cutter, a spring to return said plate and cutter after the operation thereof, a movable abutment, slidably mounted on said post, a spring interposed between said abutment and the plate on said cutter, and a female die to coöperate with said male die.



5. In a stamping device, a support, a male die carried thereby, a movable cutter surrounding the male die, a slidable abutment adjacent the male die and cutter, and a spring tending to force said cutter and abutment in opposite directions.

[Claims 6 and 7 not printed in the Gazette.]

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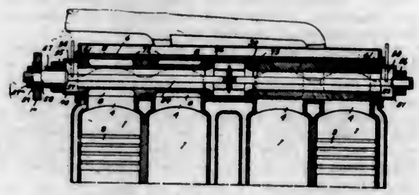
1,229,573. FEED-BAG. PETER W. BOLI, Wilkinsburg, Pa. Filed Oct. 12, 1916. Serial No. 125,142. (Cl. 119—65.)



A nose bag for animals comprising a vertical nose piece, a horizontal rearwardly extending arm connected to the bottom of the nose piece, stiffening means extending longitudinally of the bottom of the rearwardly extending arm, a neck connected with the rear end of the rearwardly extending arm, two vertically arranged reservoirs connecting with the upper end of the neck, the reservoirs extending one on each side of the animal's neck, a strap connecting the tops of these reservoirs over the animal's neck and a strap holding the vertical nose piece in operative engagement with the animal's nose, the nose piece having air inlets adjacent the animal's nostrils.

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1,229,574. INTERNAL-COMBUSTION ENGINE. EUGENE M. BOURNONVILLE, Jersey City, N. J. Filed Sept. 23, 1915. Serial No. 52,155. (Cl. 123—59.)



1. In an internal combustion engine, comprising a series of cylinders, a casing having a cylindrical valve seat bore extending lengthwise of said series, a rigid cylindrical rotary valve floating on an oil film in said bore with freedom for unforced longitudinal play under working conditions, and means for driving the valve while permitting play thereto.

2. In an internal combustion engine, comprising a series of cylinders, a casing extending lengthwise of said series, being formed with a cylindrical valve seat bore, a rotary valve comprising separate rigid cylindrical sections, each having means for controlling the intake and exhaust of one or more cylinders, each of said valve sections floating in said bore with freedom for independent unforced longitudinal play, and an independent coaxial drive shaft having means for turning the valve sections and permitting their play.

3. In an internal combustion engine, comprising a series of cylinders, a valve casing extending lengthwise of the series and formed with a cylindrical valve seat bore, a hollow rotary valve comprising separate rigid cylindrical sections turning in said bore, a central independent drive shaft, and a member on said drive shaft between the ends of two valve sections formed to drive said sections simultaneously while permitting independent longitudinal and transverse play thereof, the valve sections being free to move in either longitudinal direction.

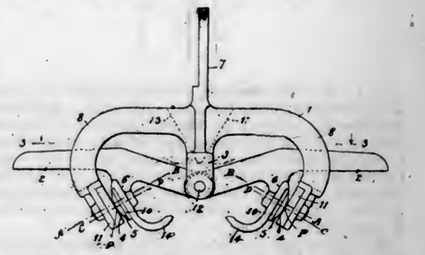
4. In an internal combustion engine, comprising a series of cylinders, a valve casing extending longitudinally of said series and formed with a cylindrical valve seat bore, a hollow rotary valve therein comprising separate rigid cylindrical sections, and an independent driving shaft within the valve having means at the middle thereof for simultaneously driving the sections on either hand with freedom for relative play, the valve sections being free to move in either longitudinal direction.

5. In a multicylinder internal combustion engine, a valve casing extending longitudinally of the series of cylinders and formed with a cylindrical valve seat bore, rigid cylindrical rotary valve sections in said bore, and driving means disposed between the sections for driving the same independently of each other, the said valve sections being free to play longitudinally in the valve seat bore relatively to the driving means during the operation of the engine.

[Claims 6 to 18 not printed in the Gazette.]

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1,229,575. HANGER. LIONEL F. BOWERS, Columbia, Pa., assignor to Columbia Manufacturing Company, Columbia, Pa., a Corporation of Pennsylvania. Filed July 19, 1915. Serial No. 40,676. (Cl. 57—9.)



1. In a hanger, the combination of an arm having a downward extending extremity providing an inclined plane surface, a gripping lever pivotally mounted below said arm and having a rounded surface to make contact with the first surface, and a flattened portion below the lever curving away from the second named surface toward the pivoted end of the lever, said portion facilitating the separation of said surfaces when the article is to be inserted between them to be supported by the hanger.

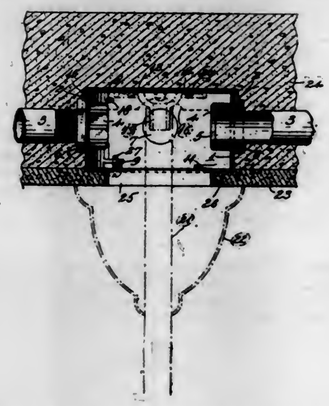
2. A hanger comprising a normally horizontal arm, a lever pivotally mounted adjacent one end of said arm and below the same, the other end of said arm extending downward and being inclined toward the pivoted end of the lever, the other end of the lever extending beyond the inclined end of said arm, said inclined end comprising a plane inclined surface, and a projection carried by the lever presenting a rounded surface to make contact with the first named surface, the extremity of the projection being flattened and curved away from the inclined end of the arm toward the pivoted end of the lever.

3. A hanger comprising a body in the form of an inverted yoke, the arms of which incline toward each other at their extremities, a pair of perforated lugs located centrally of said yoke between said arms, a pair of levers having their ends pivotally mounted between said lugs and extending in opposite directions beyond said arms and above the lower ends thereof, said arms each presenting at their lower ends an inclined plane surface to said levers, and each of said levers having a projection presenting rounded surfaces to make contact with the first surfaces,

said projections having their outer ends broadened and curved away from the adjacent ends of the arms toward said lugs, the pivoted ends of said levers being located above the points of contact between said surfaces, and the inclination of said plane surfaces being such that perpendiculars thereto at the points of contact with the rounded surfaces will pass above the pivoted ends of the levers.

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1,229,576. OUTLET-BOX. JOHN C. BOYTON and ORIS H. NICKERSON, Cleveland, Ohio. Filed Jan. 25, 1913. Serial No. 744,129. (Cl. 247—5.)

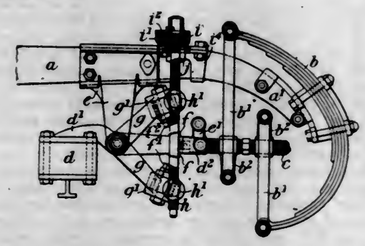


1. A box of the character specified comprising a casing having inwardly projecting lugs adjacent one end thereof and openings adjacent the opposite end thereof, a member coöperating with said casing and having a skirt adapted to be slipped over the last mentioned end of said casing and having threaded apertures arranged to aline with the aforesaid openings, and screws threaded through said aperture and adapted to project freely into the openings in said casing.

2. A box of the character specified comprising a casing having inwardly projecting lugs adjacent to and spaced from one end thereof, screws threaded into said lugs, and a bushing having a flange adapted to abut against said casing end and provided within said flange with key-hole slots for the reception of the heads of said screws.

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1,229,577. ANTIROLLING DEVICE FOR MOTOR AND OTHER VEHICLES. MICHAEL MARY BROPHY, Margate, England. Filed Apr. 24, 1916. Serial No. 93,278. (Cl. 267—8.)



1. The combination with a vehicle, of a lever carried by the axle of the same, means including a shock absorbing device connecting said lever to the vehicle chassis, and stops coöperating with said lever for preventing undue rolling motion of the chassis, under the influence of the shock absorbing device.

2. In a motor or other vehicle the combination with the framing of a pair of arms carrying stops and of a lever connected with the axle of the vehicle and carrying abutments operating in connection with such stops, means being provided for adjusting the said stops with relation to one another, substantially as described.

3. In a motor or other vehicle the combination with the framing of a pair of arms carrying stops and of a lever connected with the axle of the vehicle and carrying abutments operating in connection with such stops, means being provided for adjusting the said stops with relation to one another, and also for adjusting the stops with relation to the abutments upon the lever, substantially as, and for the purposes, described.

4. In a vehicle, a chassis, an axle, a lever rigidly mounted upon said axle and provided with abutments, means including a shock absorbing device connecting said lever with the chassis, and adjustable stops coöperating with said lever for preventing undue rolling motion of the chassis, under the influence of the shock absorbing device.

5. In a vehicle, a chassis, axles beneath the same, levers rigidly mounted upon said axles and provided with abutments, means including springs connecting the chassis to the levers, stops coöperating with said abutments for limiting the movement of the levers, and means carried by the chassis for adjusting said stops.

[Claims 6 to 8 not printed in the Gazette.]

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1,229,578. LOOM-SHUTTLE. DAVID BROWN, Lawrence, Mass. Filed Oct. 16, 1916. Serial No. 125,842. (Cl. 139—27.)



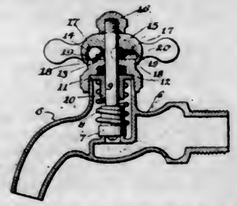
1. A loom shuttle having a pivotally mounted spindle adapted to receive either a wooden bobbin or a paper cop-tube, a pair of fingers supported adjacent the pivoted end of said spindle, one having its end-portion spring-actuated to engage the bobbin base to lock a bobbin on the spindle, and the other having its end-portion spring-actuated to clamp a cop-tube against the spindle, and means to hold said fingers out of their operative positions when the spindle is swung out of the shuttle.

2. A loom shuttle having a pivotally mounted spindle adapted to receive either a wooden bobbin or a paper cop-tube, a pair of spring fingers mounted adjacent the pivoted end of said spindle, one of said fingers being arranged to clamp a cop-tube against the spindle and the other to lock a bobbin on the spindle and to yield independently of the cop-tube clamping finger, and means to force said fingers from their operative positions when the spindle is moved from its normal position.

[Claims 3 to 6 not printed in the Gazette.]

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1,229,579. SELF-CLOSING FAUCET. MICHAEL B. BROWN, Cleveland, Ohio. Filed Sept. 28, 1916. Serial No. 122,590. (Cl. 137—4.)



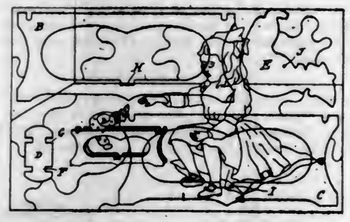
In a self closing faucet, in combination, a valve and its stem, a rotary cupped handle on the stem, having inclined



ball ways, and an annular groove in the wall of said cup, balls resting against said ways, and a ball retainer in said cup comprising a single sheet of spring metal having notches in its edge to receive the balls and flexible rim portions between the notches and engaging with a snap action in the groove.

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1,229,580. PUZZLE. THEODORE BROWN, Streatham, London, England, assignor to Sidney Charles Harper, London, England. Filed Nov. 24, 1915. Serial No. 63,307. (Cl. 46—41.)

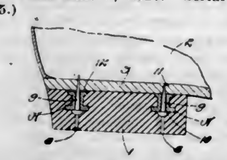


1. A puzzle comprising a board, having printed upon one of its sides, a picture delineating a number of separable pieces of different outline, certain of these pieces having inter-engaging elements whereby they may be assembled to form a mechanical toy.

2. A puzzle comprising a board having printed upon one of its sides, a picture said board being composed of a number of suitably shaped and separable pieces, certain of these pieces being provided with notches in their edges, and other pieces adapted to engage the notches, whereby to construct a mechanical toy having height, breadth and width.

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1,229,581. MEANS FOR ATTACHING A RESILIENT CUSHION TO A RIGID BASE. ROBERT BUTLER, Boston, Mass. Filed Mar. 2, 1917. Serial No. 151,912. (Cl. 36—35.)



1. In combination with a resilient cushion, a plurality of tubular studs embedded in the cushion, the lower ends of which are a considerable distance above the wearing face of the cushion and the upper ends of which extend nearly to the upper or attaching face of the cushion, the cushion being adapted for attachment to a rigid base by nails whereby when the cushion is attached to the base the cushion may be compressed to cause the upper ends of the studs to engage with the under face of the base.

8. In combination with a cushion heel, a plurality of tubular studs embedded in the heel, the lower ends of which are in the interior of the heel a considerable distance above the tread face and below the attaching face of the heel, the upper ends of which extend upward to a short distance below the upper or attaching face of the heel, and the upper face of the heel being formed with recesses leading to the upper ends of the studs.

[Claims 2 to 7 not printed in the Gazette.]

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1,229,582. METHOD OF MAKING BRICKS. FRANK W. BUTTERWORTH, Danville, Ill. Original application filed Aug. 19, 1915, Serial No. 46,236. Divided and this application filed Mar. 11, 1916. Serial No. 83,530. (Cl. 25—1.)

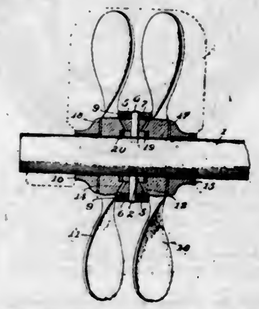
1. The method of manufacturing bricks, or the like, which consists in shaping ceramic material into a moving ribbon, forming minute indentations in the surface of said ribbon, and picking relatively small amounts of material from the surface of said ribbon at the outer ends of said indentations.

5. The method of manufacturing bricks, or the like, which consists in shaping ceramic material into a moving ribbon, removing thin layers of material from the upper surface and sides of said ribbon, forming minute indentations in the surfaces of said ribbon from which said layers have been removed, and picking relatively small amounts of material from the surface of said ribbon at the outer ends of said indentations.

[Claims 2 to 4 not printed in the Gazette.]

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1,229,583. MEANS FOR PROPULSION. HORACE M. CAKE, Washington, D. C. Filed June 29, 1910. Serial No. 569,509. (Cl. 115—37.)



1. A mechanism for propelling ships or the like which consists in two propellers mounted upon a single propeller shaft, means operatively connecting each propeller with said propeller shaft in such manner that each of said propellers will at all times automatically deliver one-half the energy transmitted by the propeller shaft.

13. In a propulsion mechanism for ships or the like, the combination of a propeller shaft, a transmission head fixedly mounted upon said propeller shaft, compensating gears carried by said header, an annular ring mounted upon said header in such manner as to protect said compensating gears, propellers mounted for rotation about said propeller shaft, annular gears formed upon said propellers, and thrust block mechanism carried by said propeller shaft, substantially as described.

18. A mechanical movement comprising two vanes, a driving shaft extending continuously through both of said vanes, a bearing for said driving shaft, and compensating means acted upon by said driving shaft and acting upon said vanes, whereby both vanes are driven in the same direction.

[Claims 2 to 12 and 14 to 17 not printed in the Gazette.]

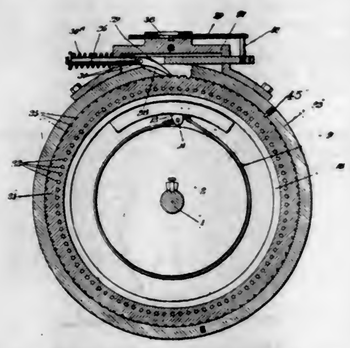
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1,229,584. STARTER FOR PRIME MOVERS. WALTER S. CARPENTER, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed June 8, 1912. Serial No. 702,608. (Cl. 123—179.)

1. In a starter for prime movers, the combination of a shaft, a casing having an annular cylinder formed therein, a disk loosely mounted on said shaft and entering said cylinder through a slot, a piston in said cylinder carried by said disk, an abutment in said cylinder, a friction wheel fast on said shaft, a clutch-strap and lever, the strap surrounding said wheel, and the lever being connected to said disk.

2. In a starter for prime movers, the combination of a shaft, a casing having an annular cylinder formed therein, a disk loosely mounted on said shaft and entering said cylinder through a slot, a piston in said cylin-

der carried by said disk, an abutment in said cylinder, a friction wheel fast on said shaft, a clutch-strap and lever, the strap surrounding said wheel, the lever being connected to said disk, and an exhaust port in said cylinder on the opposite side of said piston from said abutment, said piston loosely fitting said cylinder.



3. A starter for prime movers, comprising a shaft, an annular cylinder concentric with said shaft, a piston and an abutment in said cylinder, means for holding and exploding a cartridge, means for conducting the gases of combustion between said piston and abutment, and means for admitting said gases to eject a previously discharged cartridge.

4. A starter for prime movers, comprising a shaft, an annular cylinder concentric with said shaft, a piston and an abutment in said cylinder, a clutch connection between said piston and said shaft, an annular magazine adapted to contain cartridges, means for holding one chamber of said magazine in line with a passage leading between said piston and abutment, means for firing a cartridge in said chamber, and means for advancing said magazine to bring a fresh cartridge into firing position, said means for advancing being connected with said firing means so as to be operated thereby.

5. A starter for prime movers, comprising a shaft, an annular cylinder concentric with said shaft, a piston and an abutment in said cylinder, a clutch connection between said piston and said shaft, an annular magazine adapted to contain cartridges, means for holding one chamber of said magazine in line with a passage leading between said piston and abutment, means for firing a cartridge in said chamber, and means for conducting the gases of combustion to the position of the previously discharged cartridge to eject the latter.

[Claims 6 to 21 not printed in the Gazette.]

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1,229,585. SHOE. JAMES CAVANAGH, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 30, 1914. Serial No. 864,274. (Cl. 36—34.)



1. In a shoe, a heel constructed of wood the peripheral surface of which has been provided with a film coating of carnauba wax so finished that its appearance harmonizes with that of the vamp of the shoe.

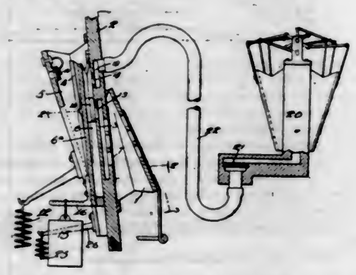
2. A shoe heel made of stained wood, the peripheral surface of said heel on its sides and rear end being satin-like and having the surface fibers bound down by a coating of carnauba wax burnished so that the wood has a surface appearance harmonizing with that of a leather shoe vamp.

3. In a shoe a wood heel having a peripheral surface coated with a film of wax forced into the surface of the wood by rubbing pressure in the presence of heat, whereby the cross-grained portions of the peripheral surface are rendered identical in appearance with the straight-grained portions.

4. In a leather shoe, a wood heel provided with a leather top lift, the peripheral surface of said heel and top lift having a satin-like surface coated with a film of carnauba wax whereby the periphery of the top lift and the cross-grained and straight-grained portions of the peripheral surface of the wooden heel are rendered identical in appearance with one another and with the vamp of the shoe.

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1,229,586. AIR-MOTOR-GOVERNING DEVICE. MELVILLE CLARK, Chicago, Ill., assignor to Melville Clark Piano Company, a Corporation of Illinois. Filed Nov. 13, 1916. Serial No. 130,946. (Cl. 230—36.)



1. In an automatic playing mechanism, an air motor governing device comprising in combination with an exhaust means, a collapsible chamber having an exhaust port through which it communicates with the exhaust means; a valve operated by the collapse of the chamber for seating at the exhaust port; means yieldingly resisting the collapse of the chamber; a second collapsible chamber having an exhaust port through which it communicates with the first collapsible chamber; a valve operated by the collapse of said second chamber for seating at said last mentioned exhaust port, means yieldingly resisting the collapse of said second collapsible chamber, and an exhaust connection from said last mentioned collapsible chamber to the air motor.

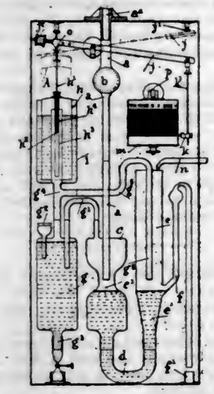
2. In an automatic playing mechanism, an air motor governing device comprising in combination with an exhaust means, a collapsible chamber having an exhaust port through which it communicates with the exhaust means; a valve operated by the collapse of the chamber for seating at the exhaust port; means yieldingly resisting the collapse of the chamber; a second collapsible chamber having an exhaust port through which it communicates with the first collapsible member; a valve operated by the collapse of said second chamber for seating at said last mentioned exhaust port; weight-operated means yieldingly resisting the collapse of said second collapsible chamber, and an exhaust connection from said last mentioned collapsible chamber to the air motor.

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1,229,587. INSTRUMENT FOR RECORDING PERCENTAGE VOLUMES OF CONSTITUENT GASES. WALTER WILLIAM CROSWELLER, Crumpsall, Manchester, England. Filed Mar. 27, 1916. Serial No. 86,912. (Cl. 23—3.)

1. In a gas analyzing and recording instrument a gas burette, a power vessel connected directly by a branch to the gas burette and a siphon arranged with its inlet end within the power vessel so as to constantly leave a charge of water in the gas burette and power vessel below such inlet end substantially as described.



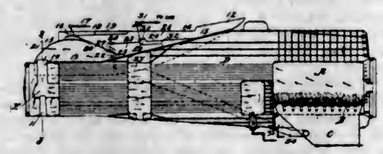


4. A gas analyzing and recording instrument consisting of a gas burette, a water power vessel, means governed by the water power vessel, for alternately inspiring and expelling gas samples, into and out of such gas burette, means to enable the gas burette to hold constantly a quantity of water charged with soluble gas, an absorption vessel communicating with the gas burette, a float chamber in communication with the absorption vessel and with the power vessel, a float in the float chamber, a pivoted lever one end of which is actuated by the float, a pen recording device carried on the other end of the pivoted lever, and a clockwork drum to carry a chart on which the results of the analyses are recorded substantially as described.

[Claims 2 and 3 not printed in the Gazette.]

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1,229,588. SPARK-ARRESTER. CHARLES W. CROWELL, Biscoe, N. C. Original application filed Apr. 5, 1911, Serial No. 619,051. Divided and this application filed Apr. 6, 1914, Serial No. 829,920. Renewed June 3, 1915. Serial No. 31,971. (Cl. 110—119.)



4. The combination of a boiler having an outlet at its front end, a stack comprising a successive series of chambers and extending rearward on the outside of the boiler with a discharge opening at its rear end, and a controllable air passage leading into the stack at a point in rear of the front thereof.

5. The combination of a boiler having an outlet at its front end, a stack comprising a successive series of chambers and extending rearward on the outside of the boiler with a discharge opening at its rear end, and a controllable pressure-relieving passage between one of said chambers and another.

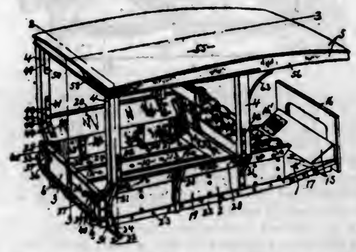
7. A spark arrester having a front chamber, a chamber in rear thereof and a stack chamber and provided with means for delivering sparks or cinders to a receptacle and with an air inlet pipe.

10. The combination of a boiler having an outlet at its front end, and a stack comprising a chamber in communication with said outlet at its front end and extending rearward therefrom and having an outlet at its rear end, said chamber and the portion of the stack rearwardly thereof being carried downward over each side of the boiler.

[Claims 1 to 3, 6, 8, 9, and 11 not printed in the Gazette.]

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1,229,589. VEHICLE-BODY. FRANCIS G. DAVIS, Watertown, N. Y., assignor to H. H. Babcock Company, Watertown, N. Y., a Corporation of New York. Filed Oct. 13, 1915. Serial No. 55,631. (Cl. 21—7.)



1. In a vehicle body, the combination of a platform, vertically disposed side boards abutting against the longitudinal edges of the platform and provided with flanged members engaging the upper and lower faces of said edges and bolted thereto, said side boards being provided with wings inclining upwardly and outwardly from their upper edges, and braces having portions thereof interposed between the meeting edges of the wings and main bodies of the sides and other portions secured, respectively, to the inner faces of the main bodies and to the outer faces of the wings.

2. In a vehicle body of the character described, the combination of a platform, opposite upright side boards abutting against the longitudinal edges of the platform, wings inclining upwardly and outwardly from the upper edges of the side boards, and metal reinforcing strips bolted to the inner faces of the side boards and terminating in flanges bolted to the upper faces of the adjacent edges of the platform, the intermediate portions of said strips being extended across and between the meeting edges of the side pieces and wings, and their upper portions secured to the outer faces of the wings.

4. In a vehicle body of the character described, the combination of a platform, side boards abutting against the opposite longitudinal edges of the platform, wings inclining upwardly and outwardly from the upper edges of the side boards, and braces extending across and between the meeting edges of the wings and side boards and having their upper portions bolted to the outer faces of the wings and their lower portions bolted to the inner faces of the side boards and provided with inwardly projecting flanges bolted to the upper faces of the adjacent edges of the platform, the upper portions of the braces being returned downwardly at the outer sides of the side boards and bolted thereto.

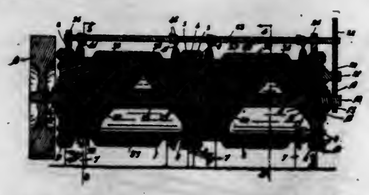
[Claims 3, 5, and 6 not printed in the Gazette.]

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1,229,590. ROTARY GAS-ENGINE. GEORGE SAMUEL DAWE, Plymouth, England. Filed May 25, 1916. Serial No. 99,770. (Cl. 123—8.)

1. An internal combustion engine comprising a sectional casing, a partition dividing the sections of the casing and connected therewith, a shaft journaled within said casing, a sleeve slidably mounted upon said shaft, each of the said sections having a chamber formed therein, the opposite ends of said sleeve terminating within said chambers, a piston carried by each end of said sleeve and arranged at an angle of about 50° therewith, said pistons adapted to revolve within said chambers, an inlet and exhaust port leading to said chambers at each side of said pistons, valves arranged within said inlet and exhaust ports, and

a timing mechanism connecting said shaft with said inlet and exhaust valves whereby upon the rotation of said shaft the valves will be operated substantially as and for the purpose set forth.



2. An internal combustion engine comprising a cylindrical casing, a partition arranged within said casing forming a chamber on each side of said partition, a piston adapted to revolve within each chamber, means for jointly connecting said pistons, a shaft journaled within said casing, said pistons adapted to revolve upon said shaft and jointly slide in a longitudinal direction thereupon substantially as and for the purpose set forth.

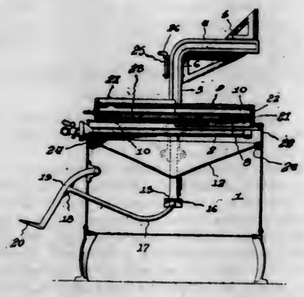
3. In an internal combustion engine comprising a casing having chambers arranged therein, a shaft journaled within said casing, a sleeve keyed to said shaft, pistons rigidly connected to the opposite ends of said sleeve and adapted to revolve within said chambers and means whereby upon the rotation of said shaft the pistons will be caused to jointly slide upon said shaft for the purpose specified.

4. A rotary internal combustion engine comprising a casing, a partition for dividing said casing into two chambers, the end walls of the casing and the side walls of the partition being inclined, a shaft journaled within said casing, a sleeve keyed to said shaft and adapted to slide thereupon, a piston carried by each end of said sleeve and adapted to revolve within said chambers, whereby upon the rotation of said shaft the opposite faces of said piston will lie parallel with said inclined walls when adjacent thereto substantially as and for the purpose specified.

5. A rotary internal combustion engine comprising a cylindrical casing, a partition for dividing the sections of the casing into chambers, a shaft journaled within said casing, pistons slidably mounted upon said shaft and adapted to revolve within said chambers, inlet and exhaust ports leading to said chambers on each side of said pistons, valves arranged within said inlet and exhaust ports, a timing shaft journaled upon said casing and operatively connected to the first mentioned shaft, and cams carried by said timing shaft adapted to actuate said valves substantially as and for the purpose set forth.

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1,229,591. BROILER. BERTRAND DE GANNER, St. Louis, Mo. Filed Apr. 1, 1916. Serial No. 88,344. (Cl. 126—41.)



1. An apparatus for the purpose set forth comprising a support, vertically disposed guides secured in the support and having rearwardly extending arms at their upper ends, a broiler plate disposed between said guides and provided at its ends with trunnions arranged to slidably engage the guides and said arms, and a vertically movable yoke engaging the trunnions adjacent the guides and freely removable from the trunnions to permit the same to slide on the arms.

2. The combination of vertically disposed guides, a broiler plate arranged between and slidably engaging the guides, a yoke disposed below the plate and having transversely disposed concave seats on the under side of its lower intermediate portion and having upturned ends supporting the broiler plate adjacent the guides, a lever arranged in advance of the yoke, and pusher arms extending from the lever and having their extremities engaging the said transverse concave seats.

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1,229,592. PROCESS OF PRESERVING EGGS. FRANCISCO ESPAILLAT DE LA MOTA, San Pedro de Marcoris, Dominican Republic. Filed June 27, 1916. Serial No. 106,283. (Cl. 99—8.)

1. The process of preparing eggs for preservation, which consists in providing the egg with a fatty coating, and then covering said fatty coating with an air and moisture proof protective coating.

2. The process of preparing eggs for preservation, which consists in providing the egg with a fatty coating containing a perfuming substance, and then covering said coating with an air and moisture proof protective covering.

3. The method of preparing eggs for preservation, which consists in coating the egg with a fatty mixture of lard and an edible oil combined with a perfuming substance, and enveloping the same with an air and moisture proof protective coating.

4. The process of preparing eggs for preservation which consists in coating the surface of the egg with a fatty substance, and then enveloping the same in an air and moisture proof impervious covering.

5. The process of preparing eggs for preservation which consists in first coating an egg with a perfumed fatty vehicle, and then coating the same with a colloidal substance.

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1,229,593. METHOD OF SEPARATING A SULFONIC ACID OF A HYDROCARBON OF THE AROMATIC SERIES FROM SULFURIC ACID AND OF CONVERTING THE SULFONIC ACID INTO A SALT. LOUIS M. DENNIS, Ithaca, N. Y. Original application filed Dec. 18, 1915, Serial No. 67,535. Divided and this application filed Nov. 6, 1916. Serial No. 129,658. (Cl. 23—24.)

1. A method of separating a sulfonic acid of a hydrocarbon of the aromatic series from sulfuric acid consisting in treating a mixture of the acids with a solvent which is relatively insoluble in water and in which sulfuric acid is relatively insoluble, separating the solution of sulfonic acid in the solvent from sulfuric acid and substantially freeing the solvent from the sulfonic acid by treating the same with water to dissolve and retain the sulfonic acid.

2. A method of separating a sulfonic acid of a hydrocarbon of the aromatic series from sulfuric acid consisting in treating a mixture of the acids with an organic solvent which is relatively insoluble in water and in which sulfuric acid is relatively insoluble, separating the solution of sulfonic acid in the organic solvent from sulfuric acid and substantially freeing the solvent from the sulfonic acid by treating the same with water to dissolve and retain the sulfonic acid.

3. A method of separating a sulfonic acid of a hydrocarbon of the aromatic series from sulfuric acid consisting in treating a mixture of the acids with benzene, separating the benzene solution of sulfonic acid from the sulfuric acid and substantially freeing the benzene from the sulfonic acid by treating the same with water to dissolve and retain the sulfonic acid.



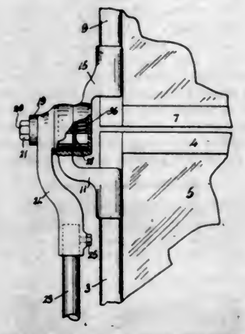
4. A method of separating benzene sulfonic acid from sulfuric acid consisting in treating a mixture of the acids with benzene, separating the benzene solution of benzene sulfonic acid from the sulfuric acid and substantially freeing the benzene from the benzene sulfonic acid by treating the same with water to dissolve and retain the sulfonic acid.

5. A method of making a salt of a sulfonic acid of a hydrocarbon of the aromatic series consisting in treating a mixture of the sulfonic acid and sulfuric acid with a solvent which is relatively insoluble in water and in which the sulfuric acid is relatively insoluble, separating the solution of sulfonic acid in the solvent from sulfuric acid, treating the solution with water to dissolve and retain the sulfonic acid and treating said aqueous solution with a suitable compound capable of reacting on the sulfonic acid in aqueous solution to form a salt.

[Claims 6 to 14 not printed in the Gazette.]

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1,229,594. SECTIONAL WIND-SHIELD FOR AUTOMOBILES. FREDERICK A. DILLINGHAM, Troy, Ohio, assignor to The Troy Carriage Sun Shade Company, Troy, Ohio, a Corporation of Ohio. Filed Jan. 8, 1912. Serial No. 669,996. (Cl. 21—148.)



1. In a wind shield, the combination of fixed supports, a plurality of shield sections mounted in said supports, each independently adjustable into various angular positions, with coaxial pivotal connection for each section with the fixed supports, and means for securing said sections in their different positions of adjustment.

2. In a wind shield, the combination of fixed supports, a pair of shield sections, provided with supporting brackets, means for hinging said brackets coaxially to the fixed supports to give independent angular adjustment for said sections, and means for securing said sections in their different positions of adjustment.

3. In a wind shield, the combination of fixed supports, a pair of shield sections, provided with supporting brackets, means for hinging said brackets coaxially to the fixed supports to give independent angular adjustment for said sections, and means for securing said sections in their different positions of adjustment, with the brackets for one of said sections pivotally connected therewith to permit said angular adjustment out of the plane of the other section.

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1,229,595. DENTAL APPLIANCE. ERNEST A. DU BRUL, New York, N. Y. Filed Nov. 9, 1916. Serial No. 130,371. (Cl. 32—16.)

1. In a device of the character described, the combination with means for holding a cotton roll, of a resilient prop connected at one end to said means, and a channeled plate connected to the other end of the prop and adapted to fit against the teeth of the jaw opposite to that engaged by the cotton roll.

2. A dental appliance comprising a piece of wire bent upon itself to form a pair of spaced props for holding the mouth open, a cross piece connecting said props, and a clasp for a dam roll at the free end of each prop, in combination with a plate connected to said connecting piece for the purpose specified.



3. A dental appliance comprising a piece of wire bent upon itself to form a pair of spaced props for holding the mouth open, a cross piece connecting said props, and a clasp for a dam roll at the free end of each prop, in combination with a plate hinged to said connecting piece for the purpose specified.

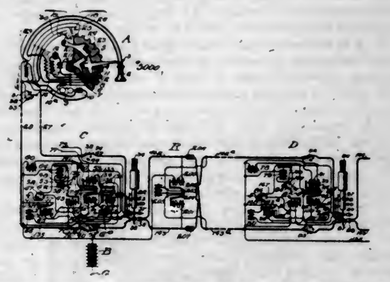
4. A dental appliance comprising a prop for holding the mouth open, said prop consisting of two sections connected by a spring hinge, means at the free end of one member of said prop for holding a dam roll in place, and a plate hinged to the free end of the other member of the prop to engage the opposite jaw and automatically accommodate itself to the angle thereof.

5. A dental appliance comprising a prop for holding the mouth open, and a clasp at one end of the prop for holding a dam roll, said clasp consisting of two arms adapted to embrace the roll between them, and a hook on one arm to detachably engage the other arm for locking the clasp around the roll.

[Claim 6 not printed in the Gazette.]

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1,229,596. NON-GROUNDED REPEATER SYSTEM. EDWARD D. FALES, Chicago, Ill., assignor, by mesne assignments, to Automatic Electric Company, a Corporation of Illinois. Filed June 4, 1907. Serial No. 377,183. (Cl. 179—18.)



1. A telephone system comprising an automatic trunk-selecting switch having step-by-step motion, a trunk line leading thereto, a repeater for controlling said automatic switch, circuits controlled by said repeater, each circuit including the two sides of the trunk line in series, a subscriber's line, and line circuits for controlling said repeater, each line circuit including the two sides of the subscriber's line in series, said repeater comprising a relay in bridge of the talking circuit, which talking circuit includes the said trunk line.

2. A telephone system comprising an automatic switch, a trunk line leading thereto, relays for controlling said automatic switch, circuits controlled by said relays, each circuit including the two sides of the trunk line in series, and means by which a calling subscriber controls the said relays to operate the said automatic switch, one of said relays operating at one time and the other at another time for the purpose set forth.

3. A telephone system comprising a trunk line, relays at one end of said trunk line, relays at the other end of

said trunk line, circuits controlled by said last-mentioned relays to operate the first-mentioned relays, each circuit including the two sides of the trunk line in series, and means for controlling the energizing of the said last-mentioned relays, one of said last mentioned relays operating at one time and the other at another time for the purpose set forth.

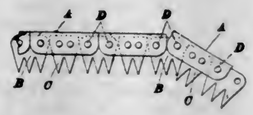
4. A telephone system comprising a trunk line, a relay in bridge at each end of said trunk line, a circuit controlled by one relay to energize the other relay, said circuit including the two sides of the trunk line in series, suitable means for controlling the said one relay, and a switch-operating magnet controlled by the said other relay.

5. In a telephone system, a repeater, a pair of line relays for said repeater, a battery connected in series between said relays, parallel circuits for controlling said relays, a resistance, a normally closed switch in one circuit, said resistance being sufficiently high to permit but one of said relays to energize, and a normally open switch in the other circuit adapted to be closed to energize said other relay, and said normally closed switch adapted to be opened to deënergize the first one of said relays.

[Claims 6 to 31 not printed in the Gazette.]

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1,229,597. CHAIN OR FLEXIBLE SAW. WILLIAM CHARLES FARRER, Sheffield, England. Filed Nov. 17, 1915. Serial No. 61,984. (Cl. 143—135.)



1. A flexible chain saw comprising a plurality of links of U-form in cross section, a toothed member having its body inserted in and rigidly secured to each link, and an additional toothed member having its body embraced by and pivotally connected with two of the links.

2. A flexible chain saw comprising a plurality of toothed members, a link formed by a longitudinally bent blank extending across the edge of each of said members opposite that which is toothed and projecting over the faces of said member, means rigidly connecting each of said members to the embracing link, the link projecting beyond both ends of said member, an additional toothed member extending between two links and embraced by both thereof, and a pivotal connection between the last said member and each of the links into which it extends.

3. A flexible chain saw comprising a plurality of links each formed by a metal blank bent to provide two sides and a connecting back that extends throughout the length of said sides, a toothed member of less length than the link inserted between and rigidly secured to the sides of each link, and an additional toothed member embraced by two adjacent links and pivotally connected with both thereof.

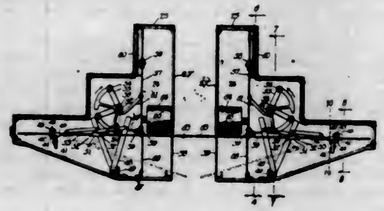
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1,229,598. COTTON-PICKING MACHINE. HARVEY L. FISHER, Chicago, Ill., assignor to Donaldson & Fisher Company, Chicago, Ill., a Corporation of Arizona. Filed Aug. 22, 1912. Serial No. 716,384. (Cl. 56—118.)

1. In a machine for picking cotton plants, a truck or carriage, a frame, picker mechanism mounted thereon and means flexibly connecting said frame to the carriage to permit lateral movement of the former with relation to the latter.

2. In a machine for picking cotton from the plant, a truck or carriage, a frame, picker mechanism mounted on the frame and flexible links connecting the frame to the carriage and permitting lateral and vertical motions relative thereto.

3. In a cotton-picking machine, a truck or carriage, a pair of casings spaced apart laterally of the machine and each carrying a picker mechanism and flexible connections from the casings to the carriage permitting lateral and vertical motion of the former with relation to the latter.



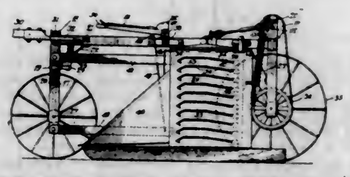
4. In a machine for picking cotton, a truck or carrier, a casing mounted thereon, a substantially vertical series of picker fingers longitudinally movable in the casing transversely of the path of movement of the machine, means for longitudinally reciprocating the fingers with respect to the casing and maintaining the same stationary in retracted position, and movable means arranged adjacent to the retracted position of the fingers adapted to remove and carry away the cotton therefrom.

5. In a cotton picking machine, a casing having a wall extending longitudinally of the machine, provided with a substantially vertical series of openings, picker fingers mounted adjacent said openings, means for projecting and retracting the fingers therethrough and maintaining them stationary in retracted position, the fingers being normally substantially perpendicular to said wall, movable means arranged adjacent the retracted position of the fingers and adapted to remove and carry away cotton therefrom.

[Claims 6 to 30 not printed in the Gazette.]

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1,229,599. COTTON-PICKING MACHINE. HARVEY L. FISHER, Chicago, Ill., assignor to Donaldson & Fisher Company, Chicago, Ill., a Corporation of Arizona. Filed Aug. 22, 1912. Serial No. 716,385. (Cl. 56—118.)



1. In a machne for picking cotton, a truck, cotton-picking mechanism mounted thereon comprising, a plurality of superposed sets of picking fingers, means for successively projecting the fingers of each set into contact with the cotton plants to be picked and moving them rearwardly of the machine without changing the axial direction of the fingers.

2. In a cotton picking machine, a truck or carriage, cotton picking mechanism mounted thereon comprising a plurality of superposed independently mounted sets of fingers, means for successively projecting the fingers of each set into contact with the cotton plants to be picked, and moving them rearwardly of the machine at a speed substantially equal to the speed of the forward movement of the machine.

3. In a cotton-picking machine, a truck or carriage, a cotton-picking mechanism mounted thereon comprising a plurality of superposed sets of fingers, means for successively projecting the fingers of each set into contact with the cotton plants and moving them along with the same without changing the axial direction of the fingers, the speed of rearward movement of the fingers being equal to the speed of forward movement of the device as a whole.



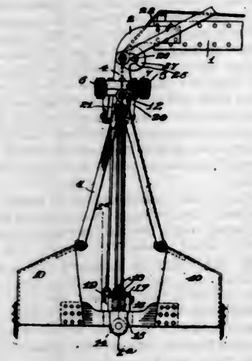
4. In a cotton-picker machine, a truck or carriage, cotton-picking mechanism mounted thereon comprising a plurality of superposed sets of picker fingers, means for maintaining the picker fingers substantially parallel to each other and projecting them successively into and withdrawing them from contact with the plant and for carrying them laterally with respect to their axial direction and rearwardly of the machine.

5. In a cotton-picking machine, a carriage or truck, cotton-picking mechanism mounted thereon comprising a plurality of superposed pairs of carrying devices movable in parallel paths, picker fingers each mounted upon both carrier devices of each pair and movable laterally thereby rearwardly of the machine.

[Claims 6 to 41 not printed in the Gazette.]

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1,229,600. EXCAVATING-MACHINE. JOHN G. FOGARTY, Carthage, N. Y., assignor to John Fogarty Co., Inc., Rochester, N. Y., a Corporation of New York. Filed Nov. 14, 1912. Serial No. 731,258. (Cl. 37—14.)



1. In a hoisting machine, the combination with a boom having a support provided with a circular base, of a carrier embodying a flange in engagement with the upper face of the base, the base having a series of openings extending transversely of its periphery, the carrier having an opening adapted to be alined with one of said openings in the base, a pin coöperating with the openings in the carrier and base respectively, and a bucket suspended from the carrier.

2. A hoisting machine comprising a boom, a support connected therewith having a circular base, a carrier having a flange in rotative engagement with the base, a bucket suspended from the carrier, arms extending beneath the carrier, pulleys mounted upon the arms, a holder connected with the bucket, pulleys on the holder and a cable connected with the holder and extending over each of the pulleys and through the carrier and support to the boom.

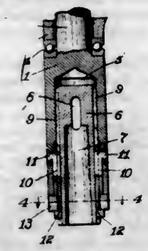
3. A hoisting machine comprising a boom, a support connected therewith having a circular base, a carrier having a flange in rotative engagement with the base, a holder beneath the carrier, buckets pivotally connected with the holder upon opposite sides thereof, links connecting the buckets with the carrier, pulleys mounted upon the carrier and holder and a cable having one end secured upon the holder and extending over the pulleys through the center of the carrier to the boom.

4. In an excavating machine, the combination with a boom, of a support pivoted on said boom and having a centrally disposed opening in its base, a carrier rotatively mounted on the support and provided with an opening in alinement with said opening in the support, a bucket mounted on the carrier and a bucket cable passing from the boom through said openings in the support and carrier and extending downwardly toward the bucket in a vertical line.

5. In an excavating machine, the combination with a boom, of a support mounted on said boom and having a centrally disposed opening in its base, a carrier mounted on the support having an opening in alinement with the opening in the support, a bucket comprising a pair of bucket members pivoted together, connecting rods secured to said bucket members and pivoted to the aforesaid carrier, a pulley mounted on the under side of the carrier, and a bucket cable passing from the boom through said openings in the support and carrier extending downwardly toward the bucket in a vertical and coöperating with the aforesaid pulley on the carrier.

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1,229,601. DRILL. WILLIAM R. FOX, Grand Rapids Mich. Original application filed Jan. 23, 1914, Serial No. 813,855. Divided and this application filed Oct. 30, 1915. Serial No. 58,892. (Cl. 77—55.)

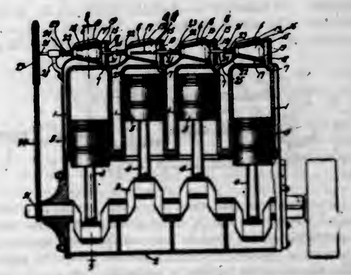


1. In a drill, the combination of a spindle, driving connections therefor, a socket in the lower end of said spindle, a drill carrying member slidable longitudinally in said socket, said member being provided with grooved longitudinal keyways, keys secured to the inner wall of said socket and disposed in the grooved keyways of said member, said keys being provided with notches in the lower ends thereof, an adjusting nut carried by said notches, the lower portion of said drill carrying member being provided with screw threads adapted to be engaged by said adjusting nut for adjusting said collet longitudinally of the spindle, all coacting substantially as described for the purpose specified.

[Claims 2 to 6 not printed in the Gazette.]

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1,229,602. INTERNAL-COMBUSTION ENGINE. DANIEL HIGHBERGER FRANCIS, Grand Junction, Colo. Filed Dec. 27, 1915. Serial No. 68,771. (Cl. 123—59.)



1. In an explosion engine, a cylinder having a conical housing, and a conical valve seated in said housing and having a passage for controlling the intake and exhaust, there being an auxiliary explosion chamber within said housing at the larger end of said valve, and said valve and housing having coöperating means independent of said passage for the intake and exhaust of gas to and from said chamber simultaneously with the cylinder.

2. In an explosion engine, a cylinder having a conical housing, a conical valve seated in said housing and having a passage for controlling the intake and exhaust, said housing having an auxiliary explosion chamber therein at the larger end of said valve, said cylinder having a passage establishing communication between it and said chamber, and said valve and housing having coöperating means independent of said passage for the intake and exhaust of gas to and from said chamber simultaneously with the cylinder.

3. In an explosion engine, a cylinder having a conical housing, said housing having intake and exhaust ports, there being means of communication between said housing and cylinder, a conical valve seated in said housing and having means for establishing communication between said ports and first mentioned means, there being an auxiliary explosion chamber in said housing at the larger end of said valve, and said valve having means independent of the aforesaid means of said valve for establishing communication between said ports and chamber simultaneously when said ports are brought into communication with the cylinder.

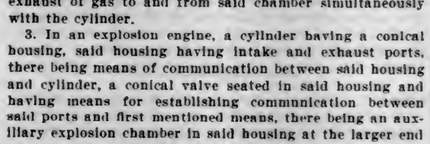
4. In an explosion engine, a cylinder having a conical housing, said housing having intake and exhaust ports, there being means of communication between said housing and cylinder, a conical valve seated in said housing and having means for establishing communication between said ports and first mentioned means, there being an auxiliary explosion chamber in said housing at the larger end of said valve, and said valve having independent means for establishing communication between said ports and chamber simultaneously when said ports are brought into communication with the cylinder, the cylinder having a passage establishing communication between it and said chamber.

5. In an explosion engine, a cylinder having a conical housing, said housing having intake and exhaust ports, said cylinder having intake and exhaust ports establishing communication between it and said housing, a rotatable conical valve seated in said housing and having a passage to establish communication between the intake and exhaust ports alternately, there being an auxiliary explosion chamber within the housing at the larger end of said valve, said housing having auxiliary intake and exhaust ports in communication with its first mentioned intake and exhaust ports, and the larger end of the valve having passages communicating with said chambers and adapted to register with the auxiliary ports to establish communication between said chamber and first mentioned ports when said first mentioned ports are brought into communication with the cylinder.

[Claims 6 to 13 not printed in the Gazette.]

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1,229,603. OPERATING MECHANISM FOR ROTARY TOOLS. CLARENCE W. FULLER, Yonkers, N. Y. Filed July 29, 1916. Serial No. 111,973. (Cl. 74—54.)



1. In a device of the class described, a frame, a spindle journaled therein, a clutch member secured to the spindle, a coöperating drum clutch member loosely mounted on the spindle, a clutch actuating device pivotally mounted on the frame, and having a plurality of arms, one of which arms is adapted to engage the drum clutch member and move the same into engagement with the spindle clutch member, a flexible element adapted to be wound on the drum and to engage an arm of the clutch actuating device whereby upon movement of the flexible element to unwind it from the drum, the clutch actuating device will be operated to engage the clutch members and rotate the spindle in one direction, and means to rotate the drum clutch member in the opposite direction to rewind the flexible element on the drum.

2. In a device of the class described, a frame, a spindle journaled therein, a clutch member secured to the spindle, a coöperating drum clutch member loosely mounted on the spindle, a clutch actuating device comprising a slidable plate having means to engage a drum clutch member and move the same into operative engagement with the spindle clutch member, a flexible element adapted to be wound on the drum and to engage a portion of the slidable plate whereby upon movement of the flexible element in one direction, said clutch actuating device will be operated to move the clutch members into engagement to rotate the spindle in one direction, and means to rotate the drum clutch member in the opposite direction to rewind the flexible element thereon.

3. In a device of the class described, a frame, a spindle journaled therein, a plurality of clutch members secured to the spindle, each of said clutch members having associated therewith a loosely mounted drum clutch member adapted to rotate the spindle in opposite directions, and a clutch actuating device adapted to engage each of the drum clutch members to move them into engagement with the spindle clutch members, and a flexible element adapted to be wound on each of the drum clutch members to have engagement with its respective clutch actuating device, whereby upon the movement of a flexible element in one direction it will serve to rotate its drum and actuate its respective clutch actuating device to rotate the spindle in the direction of movement of the drum, and means connected with the drum clutch members to rotate them in a direction opposite to that in which they are moved by the flexible element.

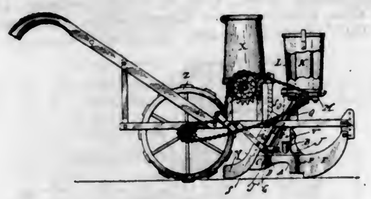
4. In a device of the class described, a frame, a spindle journaled thereon, a clutch member secured to the spindle, a coöperating drum clutch member loosely mounted on the spindle, a spring coiled around the spindle and connected with the drum and frame to maintain the drum clutch member separated from the fixed clutch member and to rotate the drum clutch member in one direction, a flexible element adapted to be wound upon the drum and to have engagement with a clutch actuated device, whereby upon drawing upon the flexible element, the drum clutch member engages the fixed clutch member and rotates the drum against the action of the spring and thereby rotates the spindle in one direction and upon the release of the flexible element the clutch members will be automatically disengaged to prevent rotation of the spindle in an opposite direction.

5. In a device of the class described, a frame having a spindle journaled therein, a clutch member secured to the spindle, a coöperating drum clutch member loosely mounted on the spindle and adapted to be reciprocated thereon toward a fixed clutch member, a clutch actuating device mounted on the frame and comprising a slidable plate having an arm to engage the movable drum clutch member for moving the same into operative engagement with the spindle clutch member, and a flexible element extending through the frame and between a portion of the slidable plate and the frame and thereafter wound on the drum, whereby upon drawing upon said flexible element in one direction, said clutch actuating device will operate to move the clutch members into engagement to rotate the spindle in one direction, and means carried by the spindle to rotate the drum clutch member in the opposite direction to rewind the flexible element thereon.

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1,229,604. CORN-PLANTER. STEPHEN H. GARST, Moline, Ill., assignor to D. M. Sechler Implement & Carriage Co., Moline, Ill. Filed Aug. 9, 1916. Serial No. 113,854. (Cl. 111—80.)

1. A seed planter runner provided with a forward furrow-opening portion, intermediate side portions cut out from their lower edges to a substantial depth to provide deep openings in the runner for the soil to fall into the furrow from the walls thereof, said intermediate side portions extending rearwardly in outwardly lying sides which join said intermediate side portions by substantial curvatures whereby the soil is drawn into the furrow as the runner advances.



5. In a seed planter, the combination with a runner having a rearward extension the sides of which are recessed, of a standard mounted on said runner, a swinging feed spout mounted in said standard, and means for adjusting said spout for deep or shallow planting.

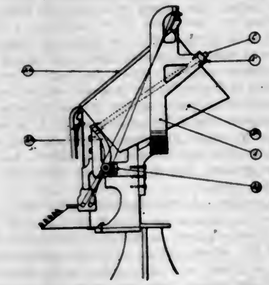
6. In a seed planter, the combination with a runner having a rearward extension recessed as described, of a standard mounted thereon having a pocket in the side thereof for the insertion of a feed spout, a swinging feed spout on the interior of said standard, and means for adjusting said swinging feed spout for deep or shallow planting.

9. In a seed planter, a runner having a furrow-opening portion, and the sides of which adjacent to the furrow-opening portion are cut-out to provide openings in the sides of the runner through which the soil may fall into the furrow, and the rear portion of said runner terminating in dirt scrapers which travel on the outside of the furrow, a plurality of shiftable feed spouts, and means for supporting said feed spouts in different positions relative to the side portions of the runner having said openings.

[Claims 2 to 4, 7, and 8 not printed in the Gazette.]

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1,229,605. TYPOGRAPHICAL OR LINE-CASTING MACHINE. JOHN W. GRAHAM, Hinton, W. Va. Filed May 12, 1915. Serial No. 27,607. (Cl. 199—7.)



1. In a typographical machine the combination of a plurality of removable magazines, housed on a spider or rack, said rack made in the general form of a truncated, triangular pyramid, and means whereby said rack may be rotated to bring the magazine into operative position.

2. In a typographical machine the combination of a plurality of removable magazines, a spider or rack in which said magazines are housed, said rack made in the general form of a truncated, triangular pyramid, a shaft permitting rotation of said rack, bearings affixed to the frame of the machine, one at the front and one at the back, supporting said shaft, whereby the spider or rack can be revolved to bring any desired magazine into operative position.

3. In a typographical machine the combination of a plurality of removable magazines having projecting strengthening bars, a spider or rack in which said magazines are housed constructed in the general form of a truncated, triangular pyramid, angle iron rests supporting said magazines, having slots to engage the projecting ends of said strengthening bars of the magazines, adapted to hold said magazines in place, both horizontally and vertically.

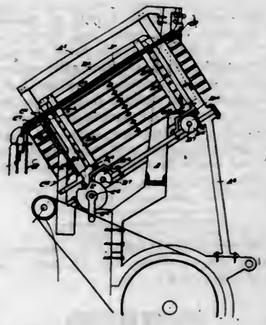
4. In a typographical machine the combination of a plurality of removable magazines, a rotatable rack to house said magazines being made in substantially the form of a truncated polyhedron, a centrally and longitudinally disposed shaft upon and about which said rack is adapted to turn, and rack bars attached to the said rack to hold the magazines in place.

5. In a typographical machine the combination of a plurality of removable magazines, a rack to house said magazines being made in substantially the form of a truncated triangular pyramid, and rack bars attached to said rack to hold the magazines in place having slots therein to be engaged by said magazines.

[Claims 6 to 9 not printed in the Gazette.]

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1,229,606. LINOTYPE OR SLUG-CASTING MACHINE. JOHN W. GRAHAM, Hinton, W. Va. Filed July 12, 1915. Serial No. 39,381. (Cl. 199—7.)



1. In a typographical machine the combination of a plurality of shiftable magazines, a lock retaining the same against shifting, means to shift the said magazines, means to successively release the lock and operate the power shifting mechanism, and means for applying the power including a movable shaft, a cam on the said shaft and means actuated thereby for releasing the lock.

2. In a typographical machine, the combination of a plurality of shiftable magazines, a frame to house said magazines including a transverse bar, locking means adapted to lock the frame against shifting, lock releasing rods mounted on said transverse bar leading toward each other from the locks, and a wedge-shaped cam member adapted to be inserted between the adjacent ends of said rods.

3. In a typographical machine the combination of a plurality of shiftable magazines, a locking device to lock the said magazines against shifting, normally idle power driven shifting mechanism for the said magazines, means for applying the power including a movable shaft, a cam on the said shaft, and connections for releasing the lock, between the cam and the lock.

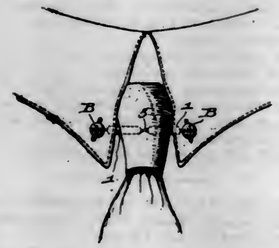
4. In a typographical machine the combination of a plurality of shiftable magazines, a locking device to lock the said magazines against shifting, normally idle power raising and lowering mechanism for the said magazines including, a clutch mechanism, a movable clutch applying shaft, a cam movable with the said shaft, and connections to release the lock, between the cam and the lock.

5. In a typographical machine the combination of a plurality of shiftable magazines, a locking device to lock the said magazines against shifting, and having a shiftable releasing rod, an additional shifting rod having a cam

to actuate the first named rod, normally idle power driven raising and lowering mechanism, including a movable power applying member, and means carried by the said member to shift the aforesaid additional rod.

[Claims 6 to 18 not printed in the Gazette.]

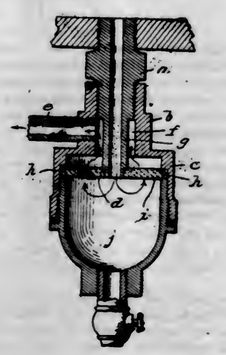
1,229,607. SOFT-COLLAR BUTTON. ART HADLEY, Providence, R. I. Filed Jan. 26, 1917. Serial No. 144,750. (Cl. 24—102.)



1. In a soft collar button, a pair of tubular casings contracted at their inner ends and having outer end perforated walls, a link having a head on each end received in the casings and engaged with said contracted ends thereof to allow of universal movement of each casing, a stem in each casing slidable through the perforations in the end wall thereof and having disks on their inner ends, coil springs encircling the stems and engaged with the disks and said end walls, said stems having their outer ends curved, and heads having universal connections with the curved ends of the stems.

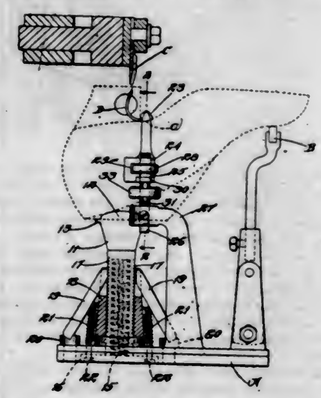
[Claims 2 to 6 not printed in the Gazette.]

1,229,608. GASOLENE-STRAINER. GEORGE SAMUEL HALE, Tekoa, Wash. Filed Dec. 13, 1916. Serial No. 136,619. (Cl. 210—16.)



A device of the class set forth, comprising a cup member, a chambered cap member removably secured thereto, and a felt straining disk, one of said members being provided with an internal annular shoulder against which one face of the outer margin of said straining disk engages and the other member being provided with an annular edge which is adapted to be screwed into the first mentioned member to engage the opposite marginal face of said disk to clamp the same in position against said shoulder, an outlet pipe connected with the interior of said cap member, and an inlet pipe having its discharge mouth flush with the underside of said disk and adapted to supply fluid to said cup member.

1,229,609. SUPPORT FOR SHOE-MACHINES. CHARLES A. HAMEL and FELIX E. VALOIS, Haverhill, Mass., assignors to Hamel Shoe Machinery Company, Lynn, Mass., a Corporation of Massachusetts. Filed Aug. 10, 1915. Serial No. 44,704. (Cl. 12—127.)



1. In a machine of the character described, a rigid shank guide which is adapted to engage the shank of the shoe, a rigid shoe support which is oscillatable in a horizontal plane on a fixed vertical axis to turn the shoe in a lateral direction whereby the shoe may be moved under the shank guide and out from under the shank guide as desired and which is movable vertically to bring the shoe against the under side of the shank guide, and means for holding the shoe support rigidly and thereby holding the shoe rigidly against the shank guide to prevent vertical movement of the shoe either up or down while being operated upon.

2. In a machine of the character described, a rigid shank guide which is rigidly supported and which is adapted to engage the shank of a shoe in fixed relation thereto during the operation of the machine, a rigid shoe support which is movable in a vertical direction to bring the shoe lower than the shank guide and which is oscillatable in a horizontal direction on a fixed vertical axis to bring the shoe beneath the shank guide or out from under the shank guide as desired, means whereby when the shoe is on its support under the shank guide it is moved up against the said guide, and means whereby the shoe support is rigidly held in its upward position, holding the shoe rigidly against the shank guide while the shoe is being operated upon.

3. In a machine of the character described, a shank guide adapted to engage the shank of a shoe to be operated upon, a last support, a spring to move the last support toward the shank guide, said last support being oscillatable in a plane at right angles to its line of movement toward the shank guide and being notched part way around its periphery and being smooth for a part way around its periphery, and a prop which engages the notches in the last support when the last support is in position for the shank guide to extend over the shank of the shoe and which engages the smooth part of the last support when the last support is turned to bring the shoe out from under the said guide.

4. In a machine of the character described, a shank guide adapted to engage the shank of a shoe to be operated upon, a last support, a spring to move the last support toward the shank guide, said last support being notched on two sides thereof, said notches being arranged in staggered relation to each other, and props which engage respectively the two series of notches in the last support.

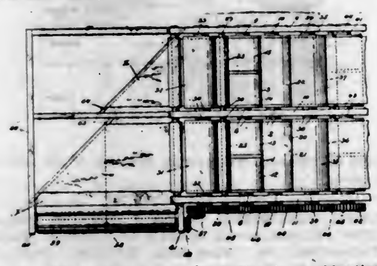
5. In a machine of the character described, a shank guide adapted to engage the shank of a shoe to be operated upon, a last support having a tubular stem, a spring



inclosed within said tubular stem to move the last support toward the shank guide, said tubular stem having a vertical series of notches in its outer face, and a prop which engages the said notches to hold the last support rigidly in its elevated position.

[Claims 6 to 8 not printed in the Gazette.]

1,229,610. PRINTING-PRESS. JOHN R. HAYS, Brooklyn, N. Y. Filed May 11, 1916. Serial No. 96,740. (Cl. 101—117.)



1. A rotary printing press including in combination a printing couple comprising a form cylinder of mutiplate length divided intermediately by a journal bearing and an impression cylinder of like construction, and a frame supporting the cylinder shafts at each end and at such intermediate bearing, a full width paper supply roll, a slitter slitting the web longitudinally and means for directing one part of the slit web to one side of the printing couple and the other part of the web to the other side of the printing couple.

2. A rotary printing press including in combination a printing couple comprising a form cylinder of multiplate length divided intermediately by a journal bearing and an impression cylinder of like construction, a frame supporting the cylinder shafts at each end and at such intermediate bearing, a full width paper roll arranged substantially lengthwise of the press and means for directing one part of the slit web to one side of the printing couple and the other part of the web to the other side of the printing couple.

3. A rotary printing press including in combination a printing couple comprising a form cylinder of multiplate length divided intermediately by a journal bearing and an impression cylinder of like construction, a frame supporting the cylinder shafts at each end and at such intermediate bearing, a full width paper supply roll, a slitter slitting the web longitudinally and a turning bar directing one part of the slit web into one half of the printing couple and a turning bar directing the other part of the slit web into the other part of the printing couple.

4. A rotary printing press including in combination a printing couple comprising a form cylinder of multiplate length divided intermediately by a journal bearing and an impression cylinder of like construction, a frame supporting the cylinder shafts at each end and at such intermediate bearing, a full width paper roll arranged substantially lengthwise of the press and a turning bar directing one part of the slit web into one half of the printing couple and a turning bar directing the other part of the slit web into the other part of the printing couple.

5. A rotary printing press including in combination three upright parallel frame members extending lengthwise of the press, a printing couple comprising a form cylinder of multiple circumference and length divided intermediately by a journal bearing and an impression cylinder of like construction, said cylinders having the end bearings of their shafts supported in the outside upright frame members and their intermediate bearings supported in the central upright frame member and driving gears for said cylinders located externally to the length of the cylinders.

[Claims 6 to 14 not printed in the Gazette.]

1,229,611. METHOD OF PROCESSING ALUMINUM SKIMMINGS, SCREENINGS, SLAGS, OR ANALOGOUS MATERIALS. PAUL R. HERSMAN, Milwaukee, Wis., assignor, by mesne assignments, to William F. Jobbins, Incorporated, Aurora, Ill., a Corporation of Illinois. Filed Nov. 14, 1912. Serial No. 731,347. (Cl. 23—13.)

1. A method of utilizing aluminum skimmings, screenings, slags and the like which consists in mixing the same with a reducing agent, heating the mixture in a closed retort without access of nitrogen to a temperature at which aluminaum nitrid is formed and then exposing it to an atmosphere containing nitrogen.

2. A method of utilizing aluminum skimmings, screenings, slags and the like which consists in mixing the same with a reducing agent, heating the mixture in a closed retort without access of air to a temperature at which aluminum nitrid is formed and then exposing it to the air.

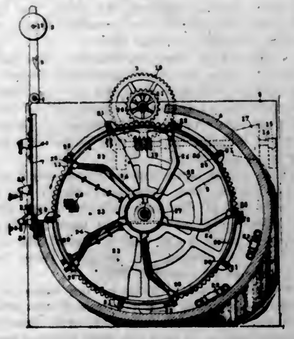
3. A method of utilizing aluminum skimmings, screenings, slags and the like which consists in mixing the same with a reducing agent, heating the mixture without access of nitrogen to a temperture of approximately 1200° centigrade, and then exposing it to an atmosphere containing nitrogen.

4. A method of utilizing aluminum skimmings, screenings, slags and the like which consists in mixing the same with a liquid hydrocarbon, heating the mixture in a closed retort without access of nitrogen to a temperature at which nitrid of aluminum is formed and then exposing it to an atmosphere containing nitrogen.

5. A method of utilizing aluminum skimmings, screenings, slags and the like which consists in mixing the same with a reducing agent, heating the mixture in a closed retort without access of air to a temperature such that when the same is exposed to the air an automatic heating action takes place and then exposing the mixture to the air.

[Claims 6 and 7 not printed in the Gazette.]

1,229,612. DYEING-MACHINE. HENRY HIGGS, Amsterdam, N. Y., assignor to Klauder-Weldon Dyeing Machine Company, Amsterdam, N. Y., a Corporation of New York. Filed Mar. 9, 1914. Serial No. 823,354. (Cl. 8—19.)



1. In dyeing apparatus or the like, in combination, a rotary member comprising a plurality of compartments adapted to contain material, said compartments comprising longitudinally extending concavo-convex walls, transverse end walls and peripheral walls, and a vat in which said member is disposed for rotation adapted to contain liquor to a point where the said longitudinally extending walls are subsequently continuously submerged during a complete rotation of said member.

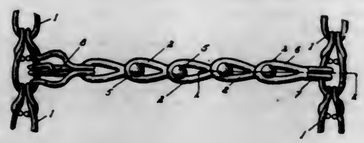
2. In dyeing apparatus or the like, in combination, a rotary member comprising a plurality of compartments adapted to contain material, said compartments compris-

ing longitudinally extending concavo-convex perforate walls, transverse end walls and peripheral walls, and a vat in which said member is disposed for rotation adapted to contain liquor to a point where the said longitudinally extending walls are substantially continuously submerged during a complete rotation of said member.

3. In dying apparatus or the like, in combination, a rotary member comprising a plurality of compartments adapted to contain material, said compartments comprising longitudinally extending concavo-convex walls, the concavity of one wall facing the convexity of an adjacent wall, transverse end walls and peripheral walls, and a vat in which said member is disposed for rotation adapted to contain liquor to a point where the said longitudinally extending walls are substantially continuously submerged during a complete rotation of said member.

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1,229,613. TIRE-CHAIN. CHAUNCEY W. HODGES, Grand Rapids, Mich. Filed June 26, 1916. Serial No. 105,909. (Cl. 152—14.)



1. In a tire chain, the combination of a pair of side members and cross members connected thereto comprising links having loops at one end and laterally projecting neck portions at the other engaging the loops of the adjacent links and terminating in spherical heads of such size as to prevent their passing through the loops, said heads being case hardened and constituting tread members, the links being engaged and disengaged by passing their loop ends through the loops of coacting links.

2. In a tire chain, the combination of a pair of side members and cross members connected thereto comprising links having loops at one end and laterally projecting neck portions at the other engaging the loops of the adjacent links and terminating in heads of such size as to prevent their passing through the loops, the links being engaged and disengaged by passing their loop ends through the loops of coacting links.

3. In a tire chain, the combination of a pair of side members and cross members connected thereto comprising links having loops at one end and laterally projecting neck portions at the other engaging the loops of the adjacent links and terminating in heads of such size as to prevent their passing through the loops, said heads constituting tread members.

4. A chain comprising links having loops at one end and laterally projecting neck portions at the other engaging the loops of the adjacent links and terminating in heads of such size as to prevent their passing through the loops, said heads being case hardened, the links being engaged and disengaged by passing their loop ends through the loops of coacting links.

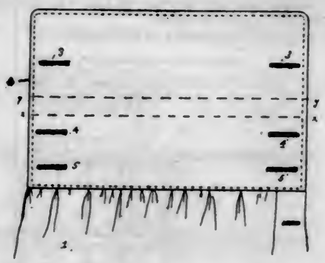
5. A chain comprising links having loops at one end and laterally projecting neck portions at the other engaging the loops of the adjacent links and terminating in heads of such size as to prevent their passing through the loops, said heads being case hardened.

[Claim 6 not printed in the Gazette.]

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1,229,614. FOLDABLE CUFF OR WRISTBAND. THOMAS J. HOGAN, Portland, Me. Filed Sept. 30, 1916. Serial No. 122,955. (Cl. 2—79.)

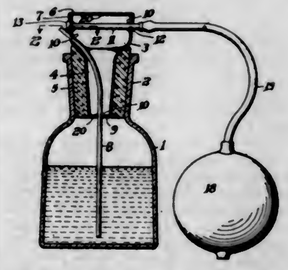
A folding cuff or wristband provided with a plurality of cuff buttonholes above the folding lines and a cuff buttonhole below the folding lines adapted by changing the folding line to register with either buttonhole on the other side of the folding line, the holes being spaced apart relative to each other so that when the cuff is



folded its free edge will overlap the edge of the sleeve in all cases.

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1,229,615. ATOMIZER. JAMES J. HOLLAND, Philadelphia, Pa., assignor of one-half to George H. Killian, Philadelphia, Pa. Filed Aug. 15, 1916. Serial No. 115,038. (Cl. 128—2.)



1. An atomizer, comprising a shell, a liquid tube projecting through one side wall of the shell, and having its outlet end outside of the shell, an air tube projecting through one wall of the shell, and a nozzle secured to the other wall of the shell and to the air tube and directing the air across the outlet end of the liquid tube.

2. An atomizer comprising a shell, a liquid tube projecting through the shell and secured thereto, an air tube projecting through one wall of the shell, a nozzle projecting through the other wall of the shell and secured in the air tube, said nozzle having a restricted orifice adjacent the outlet end of the liquid tube.

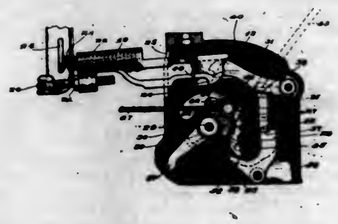
3. An atomizer comprising a shell, a liquid tube projecting through one wall of the shell, an air tube projecting transversely of the shell, a nozzle having a tapering end projecting through the shell and into the end of the air tube and solder securing said tubes and nozzle to the shell.

4. An atomizer comprising a shell, said shell adapted to be positioned in the open end of a receptacle, a liquid tube projecting through the bottom and one side of said shell, an air tube located transversely of the shell and having its discharge end located in proximity to the outlet end of the liquid tube, a cap secured on the open end of the shell and vent openings in said cap and in the bottom of the shell.

5. An atomizer comprising a hollow shell having a reduced lower end, a hollow stopple, secured around the reduced end of the shell, liquid and air tubes secured in the shell, and projecting through the side wall thereof above the stopple, and a cap secured over the open end of the shell.



1,229,616. SWITCH-CONTROLLING MECHANISM FOR SELF-RAKE REAPERS. LUD HOLLAND-LETZ, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Jan. 2, 1912. Serial No. 669,026. (Cl. 56—94.)



1. A switch controlling mechanism for self rake reapers including, in combination, a series of revolving rakes, rake actuating means, means for controlling the path of movement of said rakes including a pivoted switch, means for locking said switch against movement in one direction, means operatively connected with said rake actuating means for automatically releasing said switch locking means at predetermined periods and at certain unvarying points in the path of movement of said rakes, the point of movement of said automatic switch releasing means being controlled by said rake actuating means and supplemental latch controlling means actuated by said lock releasing means.

2. A switch controlling mechanism for self-rake reapers including, in combination, revolving rakes, a rake driving shaft, a rake switch, means for normally holding said switch in an open position, a switch latch operative to retain said switch in a closed position, means operatively connected with said rakes for periodically and automatically releasing said latch, said means including a pivot toothed lever and an actuating pawl therefor operable in a step by step manner in unison with said revolving rakes whereby said latch is automatically released at regular recurring predetermined intervals, and means for temporarily disengaging said actuating pawl and supplemental latch controlling means actuated by said latch releasing means.

3. A switch controlling mechanism for self-rake reapers including, in combination, revolving rakes, a rake driving shaft, a rake switch, a spring operative to normally move said switch to an open position, a switch latch operative to retain said switch in a closed position, means connected with said rakes and operative in a manner to periodically release said latch, said means including a rocking toothed latch tripping lever adapted to engage with said latch, a pawl mechanism adapted to engage with said latch tripping lever in a manner to rock said lever in a step by step manner in a direction to release said latch, and supplemental latch controlling means actuated by said latch tripping lever.

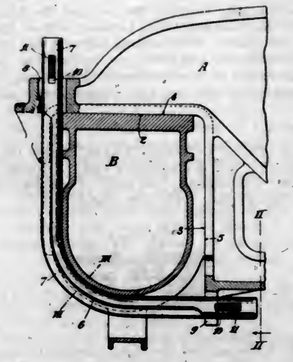
4. A switch controlling mechanism for self-rake reapers including, in combination, revolving rakes, rake actuating means, means for controlling the path of movement of said rakes including a switch, a switch controlling latch, a latch releasing mechanism controlled by the movement of said rakes, and supplemental latch controlling means actuated by said latch releasing mechanism.

5. A switch controlling mechanism for self-rake reapers including, in combination, revolving rakes, rake actuating means, means for controlling the path of movement of said rakes including a switch, a switch controlling latch, a latch releasing member controlled by the movement of said rakes, and a supplemental latch controlling bell crank actuated directly by said latch releasing member.

[Claims 6 to 10 not printed in the Gazette.]

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1,229,617. JOURNAL-BOX-SECURING MECHANISM. PLINY J. HOWARD, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio. Filed Sept. 17, 1914. Serial No. 862,154. (Cl. 105—243.)

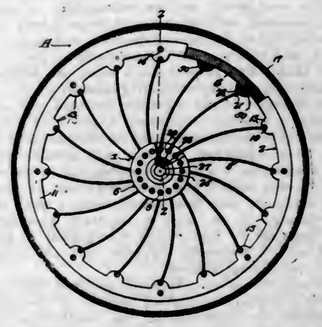


1. In a journal box securing mechanism, a truck side frame having two bearing faces at an angle to each other, a journal box seated on said faces, a strap arranged to hold the box against said faces, and wedging means coöperating with each end of the strap, each such wedging means being adapted to draw an end of the strap and with it the journal box in a direction substantially at right angles to one of said bearing faces.

[Claims 2 to 4 not printed in the Gazette.]

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1,229,618. SPRING-WHEEL. GUY HUNTER, Billings, Mont. Filed July 11, 1916. Serial No. 108,672. (Cl. 152—50.)



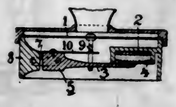
1. A wheel including a hub, tangentially arranged spring spokes and a rim, said hub comprising a member having a flange at one of its ends, a cap secured to its other end, the spokes having their opposite ends bent to provide loops and said loops being connected with the spokes proper, a tubular member in each of the loops, the inner ends of the spokes adapted to be received between the flange of the hub and the cap of said hub, means passing through the said cap and said hub and through the tubular members upon the said inner ends of the spokes for securing the spokes to the sub, flexible cushion blocks disposed between the flange and the cap of the hub and contacting with the spokes, the rim comprising a plurality of connected sections, and means, passing through the outer

sections and through the tubular members in the outer ends of the spokes for securing the spokes to the rim.

2. A wheel including a hub, a rim and spring spokes between the hub and rim, said rim comprising side members and a filler member between the sides, spaced alining ears upon the inner edge of the rim, the spokes being disposed tangentially between the rim and the hub and having their ends rounded, roller members within the rounded ends of the spokes, bolts passing through the roller members for connecting the spokes to the hub and to the rim, and compressible members disposed between the ears of the side members of the rim and receiving the ends of the spokes.

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1,229,619. DEVICE FOR TRANSMITTING OR TRANSFORMING MICROMOVEMENTS. JONAS ALBERT JOHNSEN, Christiania, Norway. Filed Dec. 31, 1915. Serial No. 69,541. (Cl. 179—108.)



1. In a device of the character specified, the combination with a primary oscillating member, of means for transmitting or transforming the oscillations of said member, a lever interposed between said member and said means comprising a lever arm having one of its ends attached to said means and an enlargement at the other end of said arm, said enlargement being a body of great mass relatively to the mass of the lever, means to pivotally support said enlargement substantially at the center of gravity of the lever system and a connection between said lever and said primary oscillating member.

2. In a device of the character specified, the combination with a primary oscillating member, of means for transmitting or transforming the oscillations of said member, a lever interposed between said member and said means comprising a lever arm having one of its ends attached to said means and an enlargement at the other end of said arm, said enlargement being a body of great mass relatively to the mass of the lever, means to pivotally support said enlargement substantially at the center of gravity of said enlargement and a connection between said lever and said primary oscillating member.

3. In a device of the character specified, the combination with a primary oscillating member, of means for transmitting or transforming the oscillations of said member, a lever interposed between said member and said means comprising a lever arm having one of its ends attached to said means and an enlargement at the other end of said arm, said enlargement being a body of great mass relatively to the mass of the lever, yieldingly supported bearings by which said enlargement is pivotally carried, and a connection between said lever and said primary oscillating member.

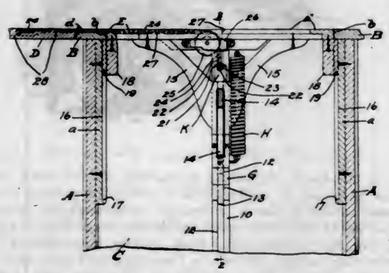
4. In a device of the character specified, the combination with a primary oscillating member, of electrodes for transmitting or transforming the oscillations of said member, a lever interposed between said member and said electrodes, said lever comprising a lever arm having one of its ends contacting with one of said electrodes and an enlargement at its opposite end said enlargement being a body of great mass relatively to the mass of the lever, yieldingly supported bearings in which said enlargement is pivotally carried, and a connection between said lever and said primary oscillating member.

5. In a device of the character specified, the combination with an oscillatory diaphragm, of means for transmitting or transforming the oscillations of said diaphragm, a lever interposed between said diaphragm and said means, said lever comprising a lever arm having one of its ends contacting with said means and an enlargement at its opposite end, said enlargement being a body of great mass relatively to the mass of the lever, yieldingly supported bearings in which said enlargement is pivotally carried, and a spring actuated contact connection between said lever and said diaphragm.

[Claims 6 to 11 not printed in the Gazette.]

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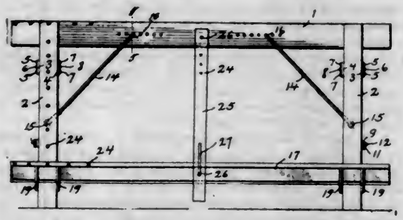
1,229,620. CABINET FOR SEWING-MACHINES, TYPEWRITERS, &c. GUSTAV KLIMO, Cleveland, Ohio, assignor to The Theodor Kunditz Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 14, 1916. Serial No. 114,716. (Cl. 45—27.)



In a cabinet for a sewing machine, type-writer, etc., two laterally spaced standards, a horizontally arranged top resting on said standards and provided between the upper extremities of said standards with an opening extending vertically therethrough, and a vertically movable platform which in its extreme position engages said opening, the aforesaid standards being provided at their inner sides with vertically arranged bars having recesses which extend vertically downwardly from the upper extremities of said bars and which have lower end walls, the aforesaid top extending over the upper ends of said recesses, and the platform being provided at its under side with bars extending transversely of the bottom of the platform and having portions thereof engaging said recesses in either extreme position of the platform, said portions of the last-mentioned bars resting on the aforesaid end walls of said recesses in the extreme lower position of the platform, and said last-mentioned bars having their end-portions abutting against the under side of the aforesaid top in the extreme upper position of the platform.

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1,229,621. CURTAIN-STRETCHER. ANDREW W. KNITTEL, New Castle, Pa. Filed Feb. 7, 1916. Serial No. 76,529. (Cl. 45—24.)



1. In a curtain stretcher the combination of a frame member provided with sockets and supported by four legs, plates attached to the upper portions of the legs securely fastened at one end by two screws and at the other end by one screw, thereby forming a pivot for the leg when the frame is folded or when the stretcher is being set up, a locking device fastened to the legs near the base of the legs, brace rods hinged on the inner side of the legs and formed to fit into the sockets along the side of the upper portion of the frame, clamps for holding lower members of the frame in position, the lower frame



members provided with a beveled edge carrying pins along said beveled edge, said lower frame members slidably arranged upon the outer portion of legs, the legs being slidably arranged in connection with upper frame member, a strip carrying pins fastened at the center of the upper frame member and also at the center of the lower frame member, said strip provided with an elongated slot at its lower end, an attaching member formed to slide within said slot when the lower member of frame is either lowered or raised.

2. In a curtain stretcher the combination of a beam member provided with sockets and supported by four legs said legs constructed in pairs, companion plates positioned near the upper end of said legs, said plates being fastened at one end by two screws and at the other by one screw, forming a pivot for legs when the frame is folded or when the stretcher is set up for operation, brace rods fastened to the inner side of one of the pair of legs in such a manner as to form a pivot, the other ends of said rods being L-shaped and adapted to fit into the sockets along the side of above mentioned beam as set forth for the purpose specified.

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1,229,622. SLATE-SPLITTING TOOL. VINCENT F. LAKE, Pleasantville, N. J. Filed Aug. 2, 1909, Serial No. 510,841. Renewed Sept. 19, 1916. Serial No. 121,088. (Cl. 125—19.)



1. A slate splitting tool including a plurality of blades having their spliting edges arranged substantially in the same plane, said blades being resilient transversely to said plane.

2. A slate splitting tool including in combination a plurality of resilient blades with their splitting edges in substantially the same plane but the edge of one of said blades being in advance of the edge of another of said blades.

3. A slate splitting tool having a plurality of blades arranged in the same plane, said blades being of different sizes, and also being resilient transversely to said plane.

4. A slate splitting tool having a plurality of splitting blades arranged side by side, one or more of said blades being longer and wider than the others, said blades being transversely flexible relatively to each other.

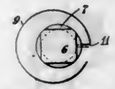
5. A slate splitting tool having a plurality of splitting blades arranged side by side, the inner blades being wider than the outer and having their splitting edges arranged in advance of the splitting edges of the outer edges, said blades being transversely flexible relatively to each other.

[Claims 6 to 8 not printed in the Gazette.]

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1,229,623. YIELDING FASTENING FOR JOINTS. FRANK LAMBERT, Brooklyn, N. Y. Filed July 3, 1916. Serial No. 107,224. (Cl. 85—50.)

1. The combination with two joint members, of means for connecting said members comprising screws provided with collars having substantially cylindrical sides and taper lower surfaces, and having heads upon such collars of no greater diameter than such collars, and a split washer beneath each such collar having a bore initially smaller than the diameter of such collar.



2. The combination with two joint members, of means for connecting said members comprising a screw and a split washer, the screw provided with an enlargement engaging one surface of the washer, the washer having a bore which is eccentric to the washer as a whole, such bore being of a less diameter than the maximum diameter of said enlargement of the screw, the engaging surfaces of the said washer and enlargement of the screw so formed relatively that separation of the two joint members relatively causes the washer to spread and to ride on, and, if the separation continue far enough, ride over, the said enlargement of the screw.

3. A yield member for joints comprising a split washer, the sides of which increase progressively in strength from the gap of the washer backward.

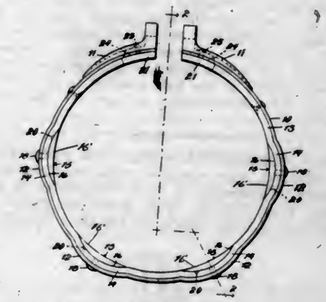
4. A yield member for joints comprising a split washer, the sides of which increase progressively in width from the gap of the washer backward.

5. A yield member for joints comprising a split washer the sides of which are of less strength near the gap of the washer than elsewhere.

[Claim 6 not printed in the Gazette.]

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1,229,624. BRAKE-BAND. CLYDE W. LANDERS, Tacoma, Wash. Filed May 17, 1916. Serial No. 98,151. (Cl. 74—37.)



1. In a device of the character described, a band having portions of its material bent outwardly at spaced intervals to form outwardly bulging pockets, a fibrous strip arranged upon the inner surface of the band and having portions of its material bent outwardly at spaced intervals to fit within the outwardly bulging pockets, metallic segments engaging the inner side of the outwardly bent portions of the fibrous strip, and means to attach the segments to the band.

2. In a device of the character described, a band provided with outwardly bulging pockets arranged at spaced intervals, an absorbent strip disposed upon the inner surface of the band and having portions thereof projecting into the pockets, metallic segments engaging the strip adjacent the pockets and having their inner surfaces substantially flush with the inner surface of the strip, and means to attach the segments to the band.

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1,229,625. SPRING-WHEEL. GEORGES LAPORTE, Hawkesbury, Ontario, Canada. Filed Aug. 28, 1916. Serial No. 117,123. (Cl. 152—29.)

1. A spring wheel comprising a hub, a plurality of spokes carried thereby, a leaf spring carried by each of

said spokes, an L shaped bar pivotally connected to the opposite ends of each spring, a felly spaced from said spokes, and means projecting from said felly adapted to rest upon said bars for the purpose set forth.

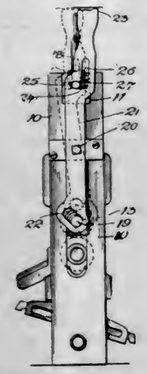


2. A spring wheel comprising a hub, a plurality of L shaped spokes extending therefrom, leaf springs connected to said spokes, an L shaped bar pivotally connected to the opposite ends of each leaf spring, a felly, said felly comprising a plurality of spaced blocks, a rod extending inwardly from each of said blocks and adapted to extend through said spokes, an adjustable jack carried by each rod for contacting with said L shaped bars, and a plurality of overlapping plates connected to each side of the felly substantially as and for the purpose specified.

3. A spring wheel comprising a hub, a plurality of spokes extending radially therefrom, angular portions formed with the outer ends of said spokes, a felly spaced from said spokes, projections carried by said felly and adapted to extend through said angular portions of the spokes, springs carried by one face of said spokes, a bar pivotally connected to each of said spokes, a connection between one end of said bars and said springs, and said projections carried by the felly adapted to normally rest upon said bars substantially as and for the purpose specified.

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1,229,626. CLOTHES-WRINGER. NIS PETER LAURITZEN, Sandusky, Ohio, assignor to The American Wringer Company, Woonsocket, R. I., a Corporation of Rhode Island. Filed Feb. 21, 1916. Serial No. 79,519. Renewed Nov. 18, 1916. Serial No. 132,233. (Cl. 68—32.)



1. A clothes wringer embodying a fixed roll, a coöperating roll movable toward and away from the fixed roll, means for maintaining a tension upon the movable roll and means operated by said movable roll for releasing the said tension means when said movable roll is moved to an abnormal position.

3. A clothes wringer embodying a fixed roll, a coöperating roll movable toward and away from the fixed roll, means for maintaining a tension upon the said movable roll, and means with which one of the rolls has connection and operating automatically at a predetermined point in the separating movement of the rolls for releasing the said tension.

6. A clothes wringer embodying a tension controlled roll, springs confined against the ends thereof, a pressure member, a shiftable element mounted upon the wringer frame and operating to lock the pressure member to maintain the springs under tension, and means for automatically shifting said element to unlock said member to release the tension of the springs upon the roll, the said element and roll being provided one with an inclined face and the other with a projection, one movable over the other for shifting said element.

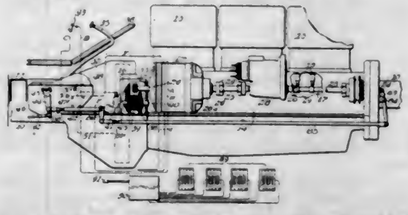
12. A clothes wringer having pressure rolls and pressure means for said rolls including a movably mounted member carrying means for adjusting said pressure means, movable latches for holding said movable member in predetermined position within said frame, and means actuated by the separation of said rolls for moving said movable latches out of the path of travel of said movably mounted member for releasing said pressure means.

14. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having pressure screws for adjusting said pressure means, said top bar having projections at its ends, pivoted hooks mounted on the side bars of said frame coöperating with said projections for holding said top bar in predetermined position within said frame, said hooks having goose necks at their upper ends adapted to receive said projections when released by said hooks for limiting the upward movement of said top bar, said hooks having tail portions arranged in the path of travel of one of the pressure roll shafts on the separation of said rolls for moving said hooks out of engagement with said projections for releasing said top bar.

[Claims 2, 4, 5, 7 to 11, 13, and 15 to 18 not printed in the Gazette.]

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1,229,627. STARTING MECHANISM. ALLEN LOOMIS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 19, 1912. Serial No. 715,951. (Cl. 74—58.)



1. In a mechanism of the class described, the combination with a clutch casing, a clutch therein, and an operating rock shaft for said clutch, of sliding gears, gear shifter mechanism for sliding said gears, a casing for said mechanism mounted on said clutch casing, and means connecting said rock shaft and said mechanism.

2. In a mechanism of the class described, the combination with a clutch casing, a clutch therein, and an operating rock shaft for said clutch, of sliding gears, gear shifter mechanism including an operating shaft for sliding said gears, a casing for said mechanism mounted on said clutch casing, and a flexible connection from said rock shaft to said operating shaft.

3. In a mechanism of the class described, the combination with a clutch casing, a clutch therein, and an operating rock shaft for said clutch, of sliding gears, gear shifter mechanism including an operating shaft for sliding said gears, said shaft being approximately in alinement with said rock shaft, a casing for said mechanism mounted on said clutch casing, and a flexible coupling connecting said rock shaft and said operating shaft.

4. The combination with a motor and clutch casing, of a shifter mechanism and housing therefor mounted on the motor and clutch casing, and removable therefrom, and operating connections between the clutch and the shifter mechanism.

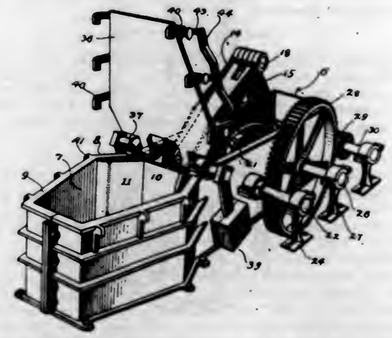
5. The combination with a motor and clutch casing, of a shifter mechanism and housing therefor mounted on the motor and clutch casing and removable therefrom, and flexible operating connections between the clutch and the shifter mechanism.

[Claims 6 to 13 not printed in the Gazette.]



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1,229,628. BALING-PRESS. JOHN LOWRIE, Cleveland, Ohio; Amelia Lowrie executrix of said John Lowrie, deceased. Filed Apr. 29, 1916. Serial No. 94,376. (Cl. 100—9.)



1. In a baling press, the combination of a baling chamber with converging walls, a plunger having forwardly projecting hinged wings bearing against said walls and adapted to be swung inwardly when the plunger is advanced, by the inclination of said walls, and means to operate the plunger.

2. In a baling press, the combination of a baling chamber with converging side walls, a plunger working in said chamber and comprising a head and forwardly projecting leaves hinged to the opposite edges of said head and bearing at their free ends against said walls and adapted to be swung inwardly thereby, and means to operate the plunger.

3. In a baling press, the combination of a baling chamber, a plunger therein, and means carried by the plunger and actuated by the advance thereof to apply lateral pressure to material in the chamber.

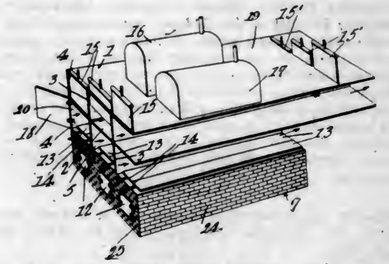
4. In a baling press, the combination with a frame and a baling chamber connected thereto, of a plunger, and operating mechanism connected thereto and including shafts having bearings in the sides of the frame, and bearing brackets for the outer ends of said shafts, spaced from the sides of the frame.

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1,229,629. CONDENSER FOR SMELTER-FUMES. GUSTAV P. LUEDKE, Chatham, Ill. Original application filed Apr. 22, 1912, Serial No. 692,525. Divided and this application filed Mar. 16, 1914. Serial No. 824,991. (Cl. 257—241.)

1. In a device of the class described, a foundation having a compartment; upper and lower chambers disposed above the compartment; a dumping bottom forming a partition between the lower chamber and the compartment; a damper controlling the forward end of the lower chamber; and dampers controlling both ends of the upper chamber.

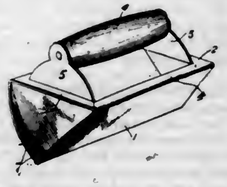
2. In a device of the class described, a foundation having compartments; pairs of upper and lower chambers disposed above the compartments; a dumping bottom forming a partition between the lower chamber of each pair and one compartment; dampers controlling the forward



ends of the lower compartments; dampers controlling the forward and rear ends of the upper compartments; and heat abstracting elements disposed above the upper compartments, the heat abstracting elements being of different sizes.

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1,229,630. CORNER-TROWEL. JOHN A. MCCASKEY, Hagerhill, Ky. Filed Sept. 29, 1916. Serial No. 122,889. (Cl. 72—136.)

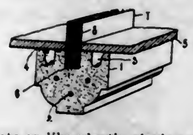


1. A corner trowel comprising a hollow prismatic shell having an open top, marginal longitudinal and transverse bars around the opening and a handle carried by the said trowel.

2. A corner trowel formed from a single piece of sheet metal and comprising a hollow prismatic shell provided with an open top, marginal longitudinal and transverse bars around the opening and a handle carried by the said trowel.

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1,229,631. GLAZING-BAR. THOMAS R. MCDOWALL and SAMUEL G. PERKINS, London, England. Filed Feb. 17, 1915. Serial No. 8,777. (Cl. 72—99.)



1. In a concrete or like plastic glazing or analogous bar having a groove therein the sides of which are substantially parallel to one another, the combination of a sheet material flashing partly disposed within said groove and partly external thereto said external part being adapted to secure the glazing light upon the bar, and a substantially parallel sided fixing strip adapted to maintain the said flashing on the bar, said strip being finally introduced into said groove and initially removed therefrom.

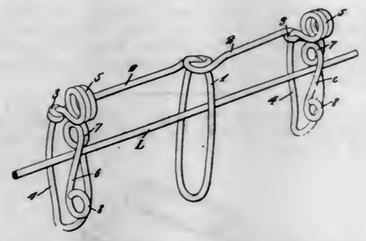
2. In a concrete or like plastic glazing or analogous bar having a groove therein the sides of which are substantially parallel to one another, the combination of flashing of sheet material partly disposed within said groove said flashing comprising a strip of flexible metal having flanged

external portions adapted to contact with the glazing light and maintain same in position, and a substantially parallel sided fixing strip adapted to maintain the said flashing on the bar, said strip being finally introduced into said groove and initially removed therefrom.

3. In a concrete or like plastic glazing or analogous bar having a groove therein the sides of which are substantially parallel to one another, the combination of a metal trough disposed within said groove for the purpose of facilitating the insertion and removal of the flashing, a flexible metal flashing partly disposed within said trough and having flanged portions external to said trough to contact with the glazing light and maintain same in position, and a substantially parallel sided fixing strip adapted to maintain the said flashing on the bar, said strip being finally introduced into said trough and initially removed therefrom.

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1,229,632. CLOTHES-PIN. ARTHUR C. MCKINNEY, Klondike, Tex. Filed Jan. 22, 1916. Serial No. 73,754. (Cl. 24—139.)



A clothes pin formed of a single length of spring wire bent to form an elongated line receiving loop, an arm extending from the loop and merging into an eye, a loop integral with and depending from the eye, one side of the loop being extended through the eye and merging into a laterally extending spring coil, and a spring finger extending from the coil and formed of one end of the wire, said spring finger including a stop coil adjacent the spring coil and extending toward the depending loop, and a terminal eye extending outwardly away from the depending loop, said finger being substantially S-shaped and the sides of the depending loop being bowed laterally toward the finger and having a finger receiving space therein, the stop coil on the finger constituting means for engaging a gripped line to support the clothes pin and hold the spring coil away from the line and the fabrics thereon, the terminal of the finger and the bowed portions of the depending loop constituting fabric engaging members.

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1,229,633. SURGICAL DEVICE. WILLIAM JOHN MANNING, Washington, D. C. Filed June 28, 1916. Serial No. 106,501. (Cl. 128—52.)



1. A finger guard consisting of a plurality of strips of pliable metal, wire or other suitable material twisted about each other upon their approximate medial centers in such a manner, that a plurality of extensions result, which upon being bent or contoured to the finger extend in a substantially parallel relation, said guard or device being adapted to be held in place on the member by adhesive strips, cord, or other suitable means.

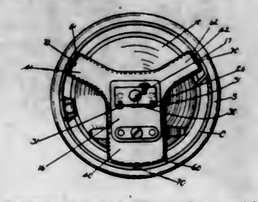
2. A finger guard consisting of a plurality of strips of pliable metal, wire or other suitable material, twisted about each other upon their approximate medial centers in such a manner that a plurality of extensions result, which upon being bent or contoured to the finger extend in a substantially parallel relation in combination with a finger cot or stall for the protection of the finger, or member, in a manner described.

3. A finger guard consisting of a plurality of strips of pliable metal, wire or other suitable material, twisted about each other upon their approximate medial centers in such a manner that a plurality of extensions result, which upon being bent or contoured to the finger extend in a substantially parallel relation in combination with a finger covering, cot or stall, that in itself may be reinforced, stiffened and rendered non-pliable on its various aspects for added protection to a member.

4. A finger guard consisting of a plurality of strips of pliable metal, wire, or other suitable material, twisted, strengthened by solder, or by welding at their approximate medial centers in such a manner that a plurality of extensions result, which upon being bent or contoured to the finger extend in a substantially parallel relation upon a member, or in combination with a finger covering, cot or stall, as described.

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1,229,634. TELEPHONE-TRANSMITTER. RAY H. MANSON, Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y., a Corporation of New York. Filed Aug. 17, 1914. Serial No. 857,057. (Cl. 179—124.)



1. In a telephone transmitter, the combination of a base, a diaphragm, a pair of electrodes, one of which is connected to the diaphragm, a support for the other electrode, relatively flexible means to connect the support to the base, a stiffening flange along the edge of said support, and means to associate said electrodes together in transmitter relation.

5. In a telephone transmitter, the combination of a base, a diaphragm, an electrode and means to connect it to the diaphragm, a second electrode, means associating said electrodes together in transmitter relation to each other, a support for the second electrode and means normally inoperative to exert pressure upon said diaphragm for automatically adjusting said second electrode.

8. In a telephone transmitter, the combination of a base, a diaphragm, a pair of electrodes, and means to associate said electrodes in transmitter relation to each other, means to connect one of the electrodes to the diaphragm, a shank connected to the rear electrode, supporting means for the rear electrode including a perforated member, the shank extending into the perforation in said last named member and means to exert a yielding pressure upon the side of said shank.

[Claims 2 to 4, 6, 7, and 9 to 12 not printed in the Gazette.]

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1,229,635. SNAP-SWITCH. FREDRICH W. MARSCHKE and WILLIAM A. MARSCHKE, Indianapolis, Ind. Original application filed Dec. 24, 1915, Serial No. 68,498, now Patent No. 1,221,345. Divided and this application filed Sept. 11, 1916. Serial No. 119,391. (Cl. 175—287.)

1. An electric switch, comprising the combination of a movable switch member, two tension springs acting in opposite directions on said movable switch member, a movable operating member between which and said movable switch member one of said springs is connected, coöperating projections on said movable switch member and said movable operating member for preventing the opening or closing movement of said movable switch member as the movable operating member travels through an intermediate portion of its movement in either direction, and a second switch member coöperating with the first.





3. An electric switch, comprising the combination of a pivoted switch member, a second switch member coöperating with said pivoted switch member, two tension springs acting on said switch member and tending to throw it in opposite directions, a pivoted operating member biased in one direction and between which and said pivoted switch member one of said tension springs is connected, and two coöperating projections carried by said pivoted switch member and said pivoted operating member and interlocking to prevent movement of said pivoted switch member during the movements of said pivoted operating member in either direction until such movement of the pivoted operating member is nearly completed.

6. An electric switch, comprising the combination of a pivoted switch member, a second switch member coöperating with said pivoted switch member, two springs acting on said switch member and tending to throw it in opposite directions, a pivoted operating member between which and said pivoted switch member one of said springs is connected, and two coöperating projections carried by said pivoted switch member and said pivoted operating member and interlocking to prevent movement of said pivoted switch member during the movement of said pivoted operating member in either direction until such movement of the pivoted operating member is nearly completed.

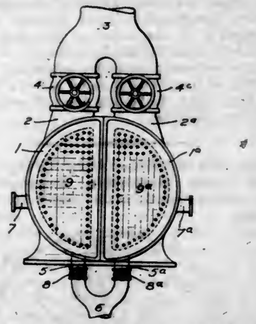
7. An electric switch, comprising the combination of a shaft, a switch blade carried thereby, a switch contract coöperating with said switch blade, a member fixed on said shaft and having two projecting arms, a pivoted operating member, a tension spring interconnecting said pivoted operating member and one of said arms, a tension spring acting in the opposite direction on said shaft from said first tension spring, and two cooperating projections carried by said pivoted operating member and by said second arm and interlocking to prevent movement of said shaft in either direction during an intermediate part of the movement of said operating member in either direction.

8. An electric switch, comprising the combination of a shaft, a switch blade carried thereby, a switch contact coöperating with said switch blade, a member fixed on said shaft and having two projecting arms, a pivoted operating member, a spring interconnecting said pivoted operating member and one of said arms, a spring acting in the opposite direction on said shaft from said first spring, and two coöperating projections carried by said pivoted operating member and by said second arm and interlocking to prevent movement of said shaft in either direction during an intermediate part of the movement of said operating member in either direction.

[Claims 2, 4, and 5 not printed in the Gazette.]

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1,229,636. CONDENSING APPARATUS. HOLBERRY MENSFORTH, Manchester, England, assignor to The British Westinghouse Electric & Manufacturing Company, (Ltd.,) London, England. Filed June 26, 1915. Serial No. 36,538. (Cl. 257—28.)



1. Steam condensing apparatus comprising two separate cylindrical condensers having their diametric plane faces in juxtaposition, a steam inlet for each condenser, branched from a common steam main, and a separate condensate discharge pipe for each condenser.

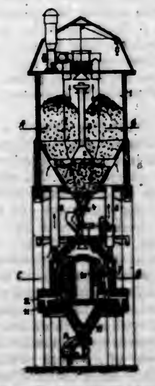
2. A condenser having a semi-cylindrical shell, tubes running longitudinally thereof, and a stay for the flat lateral wall of the condenser shell extending across the interior of the condenser and at right angles to the tubes.

3. A condenser having a semi-cylindrical shell, a stay for the flat wall of the shell, located within the condenser between the flat wall and the cylindrical wall thereof and extending transversely across the condenser at an angle to the axis of the condenser.

4. A condenser having a semi-cylindrical shell, a stay for the flat wall of the shell, located within the condenser between the flat wall and the cylindrical wall of the condenser.

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1,229,637. PROCESS OF DISTILLING AND EXSICCATING WATERY COMBUSTIBLES. GEORG MERKEL, Munich, Germany. Filed Apr. 13, 1917. Serial No. 161,898. (Cl. 44—3.)



1. The herein described method of producing solid fuel from watery combustibles, which consists in first expos-

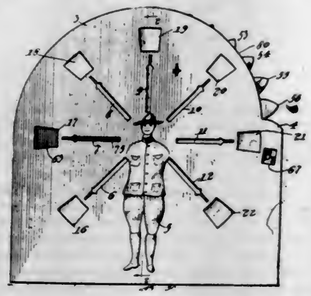
ing the combustibles to the action of a current of moist air at a high temperature but lower than the boiling point of water, and then distilling the material while excluding atmospheric air therefrom.

2. The herein described method of producing solid fuel from watery combustibles, which consists in feeding such combustibles in one direction and passing therethrough in an opposite direction a moist current of air and gases at a high temperature but lower than the boiling point of water, and then distilling the material.

3. The herein described method of producing solid fuel from watery combustibles, which consists in first exposing the material to the action of air until the moisture content of such material has been reduced to between fifty and fifty-five per cent., thereafter subjecting said material to the action of a current of moist air at a high temperature but lower than the boiling point of water, and finally distilling such material.

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1,229,638. SEMAPHORE-INSTRUCTOR. JOSEPH E. MEYERS, Camp Stotsenburg, Pamponga, Philippine Islands. Filed Sept. 2, 1916. Serial No. 118,215. (Cl. 35—12.)



1. A semaphore instructor having a screen in which are flag openings located in the different flag positions, a rotating disk behiud said screen, said disk having the letters of the alphabet marked thereon, and color sectors marked upon said disk in position to be exhibited behind the proper flag opening or openings when the disk is brought to a position corresponding to the letter intended to be represented.

2. A semaphore instructor having a screen provided with flag openings located in the different flag positions, and having a sight aperture and a rotating disk behind said screen, said disk having the letters of the alphabet marked thereon in a circle, whereby the rotating of the disk will bring different letters to view through the sight aperture, and color sectors marked upon said disk in position to be exhibited behind the proper flag opening or openings when a given letter appears through the sight aperture.

3. A semaphore instructor having a screen provided with seven flag openings located in the standard flag positions around a common center, said screen being also provided with a sight aperture; a disk mounted upon said screen and rotatable upon an axis coincident with said center, said disk having spur teeth and having letters arranged in a circle concentric with the axis of rotation, whereby the rotation of the disk will bring the letters opposite to the sight aperture in the screen, said disk having color sectors marked thereon in position to be exhibited through said flag openings, and a shoulder formed on the screen for arresting the user's finger when the latter is in engagement with a tooth on the disk.

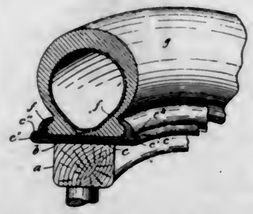
4. A semaphore instructor having the figure of a sender portrayed on the front of a screen and having seven flag openings arranged in a circle centered near the shoulders of the sender, a disk mounted on the back of the screen, said disk having color sectors marked thereon, and said disk being rotatable about an axis concentric with the center of the circle upon which the flag openings are arranged, said disk having spur teeth by which the disk may be rotated, said teeth having the letters of the alphabet marked thereon, and said screen covering the disk and its teeth except at the upper right portion of the screen when the screen is held in normal position looking at the sender, said screen being cut away at said upper right portion for permitting the teeth to project.

5. A semaphore instructor having a screen in which are seven flag openings located in the standard flag positions, and a rotating disk mounted behind said screen, said disk having the letters of the alphabet marked thereon, and also having color sectors marked thereon for showing through said flag openings, said sectors being six in number.

[Claims 6 to 8 not printed in the Gazette.]

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1,229,639. DEMOUNTABLE AND SEPARABLE VEHICLE-WHEEL RIM. HORACE MOTE, Cleveland, Ohio. Filed Mar. 30, 1912. Serial No. 687,361. (Cl. 152—21.)



1. In a device of the class described, the combination with a wheel and its felly, of a demountable tire and rim therefor; the latter comprising two endless retaining rings and a split annular base-portion having an interior channel adapted to be contracted to fit over said felly and two laterally-positioned channels adapted to accommodate the retaining rings, substantially as set forth.

2. In a device of the class described, the combination with a wheel and its felly, of a demountable tire and rim therefor; the latter comprising two endless retaining rings and a transversely split rolled annular base-portion having an interior channel adapted to be contracted to fit over said felly and two exterior, laterally-positioned channels adapted to accommodate the retaining rings, substantially as set forth.

3. In a device of the class described, the combination with a wheel and its felly, of a demountable tire and rim therefor; the latter comprising two endless retaining rings and a transversely split rolled annular base portion having an interior channel adapted to be contracted to fit over said felly and two exterior, laterally-positioned channels adapted to accommodate the retaining rings, and suitable means for expanding and contracting said annular base-portion, substantially as set forth.

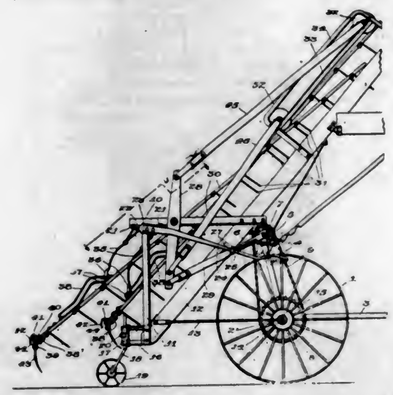
4. In a device of the class described, the combination with a wheel and its felly, of a demountable tire and rim therefor; the latter comprising two endless retaining rings and a split annular base-portion having an interior channel adapted to be contracted to fit over said felly and two laterally-positioned peripheral channels adapted to accommodate the retaining rings; the sides of the inner channel respectively forming inner side walls for the peripheral channels, and screw-mechanism rotatably connected near the ends of said base-portion, substantially as set forth.

5. In a demountable and separable rim for vehicle wheels, a laterally split base-portion shaped to provide an interior channel adapted to accommodate the felly, and two over-turned lateral annular flanges, of two endless retaining rings adapted to fit respectively within the overturned flanges, and a screw-device for expanding and contracting said base portion, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]



1,229,640. HAY-LOADER. EDWARD MOWRY, Sterling, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Aug. 23, 1913. Serial No. 786,840. (Cl. 56—64.)



1. In a hay loader, a frame, a plurality of longitudinally movable rising and falling rake gangs carried thereon, operating means for imparting a raking and upward and downward movement to said gangs, and curved cam means on the gangs coöperating with said operating means for maintaining their rakes substantially parallel to the ground during their raking movement.

2. In a hay loader, a frame, a plurality of longitudinally movable rising and falling rake gangs carried thereon, operating means for imparting a raking and upward and downward movement to said gangs, and means including upwardly extending curved cam members carried on said rake members and coöperating with said operating means for maintaining said rakes in parallel relation to the ground during their raking movement.

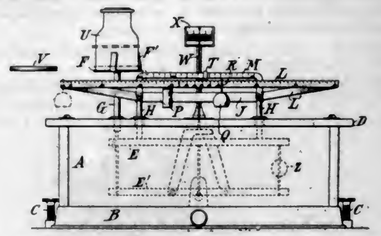
3. In a hay loader, a frame, a plurality of longitudinally movable rising and falling rake gangs carried thereon, operating means for imparting a raking and upward and downward movement to said gangs including a reversely curved lever, and operative connections between said operating means and said rake gangs coöperating therewith in maintaining said gangs substantially parallel to the ground during their raking movement.

4. In a hay loader, a frame, a plurality of longitudinally movable rising and falling rake gangs carried thereon, operating mechanism therefor including meshing segments, a cam track carried on each of said rakes having a peaked portion at its upper end, and connecting members movable with said segments and engaging said cam tracks to maintain said gangs substantially parallel to the ground during their raking movement.

5. A hay loader including, in combination, an elevator frame, separate gangs of longitudinally movable rising and falling rakes, a transverse shaft journaled upon said frame and provided with cranks at opposite ends thereof, vertically arranged levers pivotally connected with said frame at opposite sides thereof, pitmen connecting one end of said levers with said cranks and opposite ends thereof with the separate gangs of rakes, transverse rock shafts mounted upon said frame and connected with said rakes, and means for rocking said shafts in opposite directions, said means including intermeshing gear segments secured to opposite ends of said shafts and levers connected with said cranks, said levers having reversed curved portions at their front ends that coöperate with the associated parts of the mechanism in controlling the path of movement of the rakes.

[Claims 6 to 13 not printed in the Gazette.]

1,229,641. SCALE FOR DETERMINING SPECIFIC GRAVITIES. MAX MUNZNER, Arlington, N. J., assignor to The Torsion Balance Company, New York, N. Y., a Corporation of New York. Filed Dec. 20, 1915. Serial No. 67,794. (Cl. 265—42.)



1. A specific gravity scale comprising a balance beam, a scale pan hung thereon adapted to receive a prescribed volume of the material to be weighed, and counterbalancing means applied to said beam to balance the weight of the material of minimum specific gravity to be weighed, said beam having a beam member having successive notches and graduated at said notches to successive specific gravity readings commencing with said minimum, and a fractional beam member having a range of graduations corresponding on a larger scale to the range between successive readings of said first-named member, a counterbalance weight adapted to hang from the successive notches of said notched beam member, and a counterbalance weight adjustable along said fractional beam member.

2. A specific gravity scale comprising a balance beam, a scale pan supported thereby, a permanent weight applied to said balance beam to counterbalance a material of the minimum specific gravity to be weighed, a beam member graduated in specific gravity readings commencing with said minimum, and counterbalancing means adapted to counterpoise said permanent weight and thereby to balance the scale in the absence of any material being weighed.

3. A specific gravity scale comprising a balance beam, a scale pan supported thereby, a permanent weight applied to said balance beam to counterbalance a material of the minimum specific gravity to be weighed, a beam member graduated in specific gravity readings commencing with said minimum, and a slug adapted, when applied, to balance the scale in the absence of any material being weighed, the weight of said slug corresponding to that of the prescribed volume of said material of minimum specific gravity.

4. A scale comprising a balance beam, a scale pan supported thereby, a container adapted to hold a prescribed volume of material to be weighed, a permanent weight adapted to counterbalance said material if of minimum specific gravity, a counterweight or slug adapted, when applied, to counterbalance said permanent weight when such material is absent, and a tare weight movable to counterbalance said container when empty.

5. In a scale, a graduated beam member and a suspended counterweight hung therefrom with two opposite points of contact to form a frictional engagement adapted to suppress swinging movements of the counterweight.

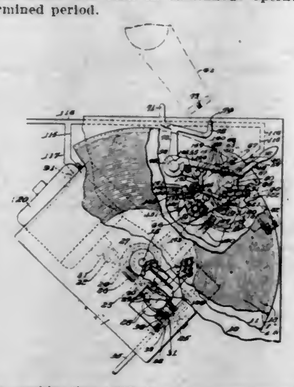
[Claims 6 and 7 not printed in the Gazette.]

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1,229,642. STOP MECHANISM FOR TALKING-MACHINES. HENRY H. MURRAY, Riverton, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed May 13, 1914. Serial No. 838,241. (Cl. 74—46.)

1. The combination with a rotary member, of a motor for actuating said member, an element arranged to move with respect to said member, means controlled by the movement of said element to cause the stoppage of said rotary member, and secondary means automatically actuated independently of said element, to stop said member.

2. The combination with a rotary member, of a motor for actuating said member, an element arranged to move with respect to said member, means controlled by the movement of said element to cause the stoppage of said rotary member, and secondary means automatically actuated independently of said element, to stop said member after said motor has been in continuous operation for a predetermined period.



3. The combination with a rotary member, of a motor for actuating said member, an element arranged to move with respect to said member, means controlled by the movement of said element to cause the stoppage of said rotary member, secondary means automatically actuated independently of said element to stop said member, means to reset said first-mentioned means, and means actuated by said means to also reset said secondary means.

4. The combination with a rotary member, of an electric motor for rotating the same, an element arranged to move with respect to said member, means controlled by the movement of said element to break the circuit current by which said motor is energized, and means automatically actuated independently of said element to break said circuit after said motor has been in continuous operation for a predetermined period.

5. The combination with a rotary member, of an electric motor for rotating the same, an element arranged to move with respect to said member and independently of said motor, means controlled by the movement of said element to break the circuit by which said motor is energized, and means, automatically actuated independently of said element to break said circuit after said motor has been in continuous operation for a predetermined period.

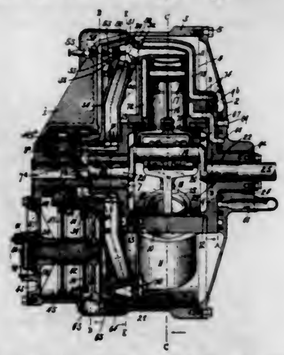
[Claims 6 to 10 not printed in the Gazette.]

1,229,643. ROTARY ENGINE. HUBERT A. MYERS, Toledo, Ohio, assignor of one-half to Arthur S. Hickok, Toledo, Ohio. Filed Apr. 4, 1914. Serial No. 829,492. (Cl. 123—44.)

1. In a rotary engine, a rotor having a cylinder provided with a fluid inlet port, a rotary valve concentric to said rotor, said valve having means for taking fuel in at its center and discharging it without its center into the cylinder port periodically during a running of the engine, and means actuated by a running of the motor for driving said valve at a speed which is differential to the speed of rotation of the rotor.

2. In a rotary engine, a rotor having a cylinder provided with an inlet port, a rotary member operable to control the periodical admission of fluid to the cylinder through said port and having means enabling it to act by its rotation as a pump for forcing fluid into the cylinder, and means operable during a running of the motor to rotate said member at a speed which bears a predetermined ratio to the speed of rotation of the rotor.

3. The combination with a rotary motor having a revoluble cylinder provided with an inlet port, of a rotary element, serving as a valve for periodically opening said port to the source of fluid supply and having means for forcing fluid into the cylinder through its port.

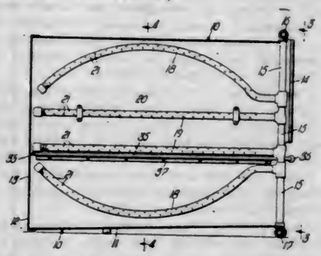


4. In an internal combustion engine, the combination with a rotor having a cylinder provided with an inlet port, of rotatable means operable during a running of the engine to periodically open the inlet port of the cylinder and having means to pump a charge therein.

5. In an internal combustion engine, the combination with a rotor having a cylinder provided with a charge inlet port, of a valve rotatable concentrically and differentially relative to the rotor during a running thereof and operable to periodically open said charge port and having means to pump a charge therein.

[Claims 6 to 49 not printed in the Gazette.]

1,229,644. TRAY-WASHER. RALPH A. NESMITH, Los Angeles, Cal., assignor of one-half to William Hugh Sibbald, Los Angeles, Cal. Filed Nov. 13, 1916. Serial No. 130,937. (Cl. 141—9.)



1. A washer of the character described, comprising an open ended upright casing, spray pipes situated upon the opposite side walls of the casing, means for supplying either hot water or steam to said spray pipes, a longitudinally movable spring retracted frame in the casing adapted to be moved outwardly to withdraw a tray or the like from the casing, and flexible closure flaps across the upper part of the open end of the casing.

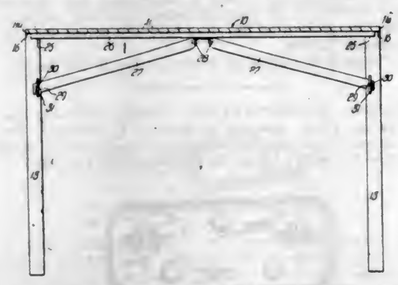
2. A washer of the character described, comprising an open ended upright casing, spray pipes situated on the opposite side walls of the casing, and a longitudinally movable spring retracted frame within the casing embodying a rod extending along one side of the casing from the open end to its rear end, extending across the rear end of the casing and then extending forwardly along the other side wall, so as to engage the back edge of a tray or the like standing on edge in the casing.

1,229,645. FOLDING TABLE. RALPH A. NESMITH and WILLIAM HUGH SIBBALD, Los Angeles, Cal. Filed Nov. 13, 1916. Serial No. 130,973. (Cl. 45—116.)

1. A folding table, embodying a flexible top having stiff side strips at opposite sides, legs hinged one at each corner

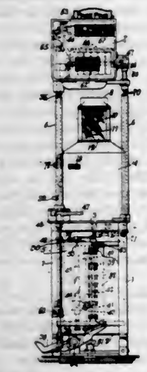


of the top to said side strips, said legs having recesses at their upper ends, and edge strips for supporting the flexible top along its opposite edges, said edge strips engaging at their ends in said leg recesses, braces connected between the legs and the side strips, and braces connected between the edge strips and the legs.



2. A folding table, embodying a flexible top composed of parallel slats flexibly secured together, legs hinged one to each end of the two outermost slats so as to fold up under said slats, braces pivoted to said legs and slidingly connected with said slats, means to set said braces, the upper end of each leg having a recess directly under the slats, two edge strips adapted to fit into said recesses and to support the ends of the slats, and braces pivoted to the edge strips and releasably connected with the legs.

1,229,646. FARE-RECORDING MECHANISM. WILFRED I. OHMER and DAVID B. WHISTLER, Dayton, Ohio, assignors to The Recording and Computing Machines Company, Dayton, Ohio, a Corporation of Ohio. Filed Aug. 31, 1912. Serial No. 718,001. (Cl. 235—44.)

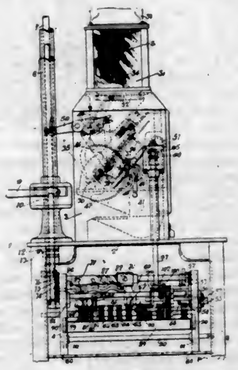


6. In a fare recording mechanism, an indicator adapted to count the fares of all kinds received, a fare box, automatic register actuating devices in said fare box, a counter to which said devices are operatively connected, a fare recorder provided with counters to register the fares of various kinds and under the control of the operator, whereby the counter of said fare box acts as a check upon the counters of said recorder, and an actuating device common to said indicator, fare box and recorder to cause the actuation of the same.

10. In a fare recording mechanism, a fare box having automatic registering mechanism beyond the control of the conductor, a recorder provided with registering mechanism, whereby the mechanism of the fare box and recorder serve to check each other to insure accuracy, a fare indicator to indicate the different classes of fares, and means which manually set said fare recorder and said indicator to cause them, respectively, to record and indicate fares of various denominations, and means common to said fare box, recorder and indicator for actuating the same after the recorder and indicator have been set.

[Claims 1 to 5, 7 to 9, and 11 not printed in the Gazette.]

1,229,647. FARE-RECORDING MECHANISM. WILFRED I. OHMER and DAVID B. WHISTLER, Dayton, Ohio, assignors to The Recording and Computing Machines Company, Dayton, Ohio, a Corporation of Ohio. Filed Oct. 9, 1912. Serial No. 724,719. (Cl. 234—4.)

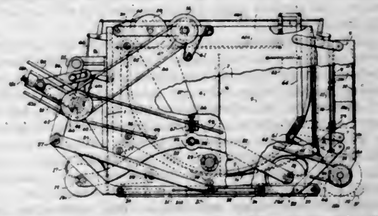


1. In a fare recording mechanism, a cash counter, means controlled by the conductor for adding to said cash counter the value of the cash fares received, a fare box in which the fares are deposited by the passengers, a second cash counter and devices beyond the control of the conductor to add to said second cash counter the value of each cash fare deposited in said fare box, whereby said recording mechanism preserves two records of the cash received, said records being derived from different sources, and means to make a record from each of said total cash counters.

11. In a fare recording mechanism, a counter mounted on an axis, setting means under the control of the conductor for setting said counter to register a specified fare, a second counter mounted on said axis and adapted to check the first-mentioned counter, means beyond the control of the conductor for operating said last-mentioned counter, and means for actuating said first-mentioned counter and the means beyond the control of the conductor to cause said counters to register the fares.

[Claims 2 to 10, 12, and 13 not printed in the Gazette.]

1,229,648. COMBINATION SCRUBBING AND MOPPING MACHINE. FRED OLANDER, Chicago, Ill. Filed Sept. 10, 1914. Serial No. 861,009. (Cl. 15—14.)



1. In a scrubbing and mopping machine, in combination, a supporting frame and water carrying receptacle, a support therefor, means for vertically adjusting the frame

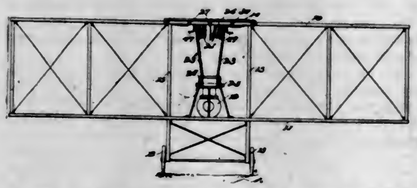
on the support, a soap container movably mounted on the front of said frame, and having downwardly extending side portions, a rotatable scrubbing brush mounted in said side portions, valve controlled means for feeding water from the receptacle, a mop supporting frame movably mounted on the base of said supporting frame and pivotally connected to the soap container, wringer rolls mounted in said supporting frame, a mopping belt operatively engaging said mop supporting frame and said wringer rolls, means for moving said mop frame forward and raising the brush and soap container, and means for operating said wringer rolls and scrubbing brush.

2. The combination in a scrubbing and mopping machine of a tank having downwardly extending sides, a support therefor, means for vertically adjusting said tank on the support, a sliding mop carrying frame having front and rear rollers slidably mounted on the base of the sides of the tank, a soap container movably mounted on the tank, a rotatable scrubbing brush mounted on and below the soap container, means connecting said mop frame to the soap container, mop driving wringer rolls, a mop on the mop frame and engaging said wringer rolls, means for operating the wringer rolls and the scrubbing brush, and means for controlling the forward and rearward movement of the mop frame.

3. In a machine of the class set forth a tank having downwardly extending side portions, a horizontally movable mop carrying frame mounted thereon, a soap container movably mounted on said tank, a rotatable scrubbing brush mounted on said container and in front of said mop frame, means connecting the soap container and mop frame adapted to raise the container when the mop frame is moved forward beneath the brush, means for operating said mop frame forward and backward, mop driving wringer rolls, a mop operatively engaging said rolls and supported on said frame, a push bar for said tank, and driving mechanism mounted thereon and operatively connected to said wringer rolls and the scrubbing brush.

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1,229,649. SAFETY APPLIANCE FOR AEROPLANES. LAFAYETTE PACE, Lafollette, Tenn. Filed Feb. 20, 1917. Serial No. 149,973. (Cl. 244—21.)



1. The combination of an aeroplane having a top sustaining plane; of a detachable section interposed in said plane, latch devices for securing the detachable section to the top plane, releasing means for the latches, suspension lines carried by said section, a ring carried by the lines, a seat suspended from the ring, a transverse shaft carried by the ring and projecting from opposite sides thereof, and pivoted guide planes carried by the projecting ends of the shaft.

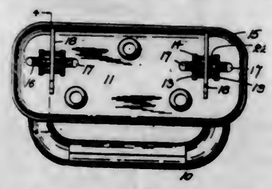
5. The combination with the frame of an aeroplane having a top sustaining plane; of a detachable section interposed in said plane, suspension lines carried by said section, latches carried by the suspension lines, rocking bars carried by the aforesaid frame, keeper pins for the latches on said bars, a pair of controlling members extending from the bars; means for locking said members together, and a seat carried by the suspension lines.

11. The combination with the frame of an aeroplane having a top sustaining plane; of a detachable section interposed in said plane, suspension lines carried by said section, latches carried by the suspension lines, rocking bars carried by the aforesaid frame, keeper pins for the latches on said bars, means for swinging the bars to release the latches, a seat carried by the suspension lines, cross bars carried by the frame and extending between the rocking bars, keeper pins on the cross bars, certain ones of the aforesaid lines having latches engageable with said keeper pins, said latches extending across the top of the cross bars, and the latter having a longitudinal groove, the latches being shaped to seat in the grooves, and retaining lines carried by the first-mentioned lines and extending along the grooves of the cross bars and across the last-mentioned latches.

[Claims 2 to 4 and 7 to 10 not printed in the Gazette.]

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1,229,650. CASKET-HANDLE. ALBERT A. PAGE, East Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed June 29, 1916. Serial No. 106,641. (Cl. 16—103.)



1. In a casket handle or the like, the combination of a socket plate having slots, an arm having a forked end passing through said slots, a pivot pin extending through the forked end of the arm and securing it against withdrawal from the plate, a member at the rear of the plate directed transversely with respect to said pivot pin for preventing rearward movement thereof, and means of connection between said member and said plate located at a point beneath the arm when the latter is in the pendant position; substantially as described.

2. In a casket handle or the like, the combination of a socket plate having slots, a ball having a forked end passing through said slots, a pivot pin extending through the forked end of the ball and securing it against withdrawal from the plate, a member at the rear of the plate directed transversely with respect to said pivot pin for preventing rearward movement thereof, and means located at a point beneath the ball for locking said member to the plate, said locking means comprising a tongue or extension on said member passing through and riveted in an opening in the socket plate; substantially as described.

3. In a casket handle or the like, a socket plate having parallel slots, a forked arm having plates passing through said slots, a pivot pin extending through said plates, at the rear of the socket plate, and a bridge member riveted to the socket plate and engaging said pivot pin to prevent rearward movement thereof; substantially as described.

6. In a casket handle or the like, the combination of a socket plate, a ball having an end passing through said socket plate, a pivot pin passing through the ball at the rear of the socket plate to secure it against withdrawal from said plate in a forward direction, said socket plate having a depression at the rear thereof in which said pivot pin is located, a bridge member at the rear of the socket plate for confining said pin in said depression, said bridge member consisting of a metal piece presented edgewise toward the rear surface of the socket plate and bearing thereon, and means of connection between said bridge member and the front wall of the socket plate located beneath said depression and at a point which is situated back of the ball when the latter is in the pendant position; substantially as described.

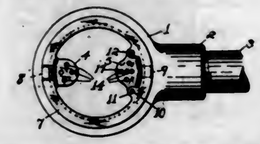
7. In a casket handle or the like, a socket plate having parallel slots, a forked plate presenting parallel portions passing through said slots, a pivot pin extending through said parallel portions at the rear of the socket plate, the latter being provided at the rear with a depression for seating said pin, a bridge piece at the rear of the plate bearing at one edge against the rear surface of the plate on opposite sides of said depression, and rigid means of connection between said bridge piece and the socket plate located at a point remote from said depression; substantially as described.

[Claims 4 and 5 not printed in the Gazette.]



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1,229,651. MEANS FOR ATTACHING ELECTRICAL APPLIANCES TO CONDUIT OUTLET-BOXES. JOHN E. PARKER, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed June 19, 1911. Serial No. 633,984. (Cl. 247—5.)



1. The combination with a conduit outlet box having an opening, of means for attaching an electrical appliance having fastening screws to the box, said means comprising members having parts for interlocking with the margin of the wall around said opening, the members being formed with holes for said screws, one of said members being fixed and the other movable relatively to the fixed member into and out of interlocking engagement with said margin and thereby permitting said means to be moved to carry the other of said members into and out of interlocking engagement with said margin, substantially as and for the purpose described.

2. The combination with a conduit outlet box having an opening, of means for attaching an electrical appliance having fastening screws to the box, sand means comprising members having parts for interlocking with the margin of the wall around the opening, the members being formed with holes for said screws, and one member being pivoted and movable on its pivot into and out of interlocking engagement with said margin to permit said means to be shifted bodily to engage and disengage the other of said parts and the margin, substantially as and for the purpose specified.

3. The combination with a conduit outlet box having an opening, of means for attaching an electrical appliance having fastening screws, said means comprising members provided with lugs offset from the body for engaging the inner face of the margin of the wall around the opening, the members being also provided with a plurality of holes for said screws, one of the members being fixed, and the other being pivoted to the body, substantially as and for the purpose set forth.

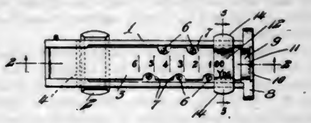
4. The combination with a conduit outlet box having an opening, of means for attaching an electrical appliance having fastening screws to the box, said means comprising members extending into the opening and formed with holes for the screws, and a body carrying said members and arranged to overlie the margin of the wall around the opening, said means being formed with lugs offset from the body and arranged to extend under and engage the inner side of said margin, one of the lugs being provided on one of said members and said member being pivoted and movable on its pivot for carrying its lug into and out of interlocking engagement with said margin, substantially as and for the purpose described.

5. The combination with a conduit outlet box having an opening, of means for attaching an electric appliance having fastening screws to the box, said means comprising a body for resting on the margin of the wall around the opening and members arranged to extend into the opening below the plane of the outer surface of said margin around said opening, and formed with holes for the screws and also with raised surfaces extending toward said plane for engaging the bottom of the electric appliance thereby bracing said members and holding the same from tilting during the turning of the screws into the holes of said members, substantially as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

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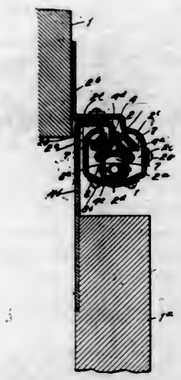
1,229,652. ADJUSTABLE REAR SIGHT FOR FIREARMS. HANS PAULSON, Orting, Wash. Filed Oct. 27, 1916. Serial No. 128,078. (Cl. 33—58.)



A firearm sight embodying a channel-shaped base, a tongue disposed therein and pivoted thereto, a sight member carried by the tongue, staggered upstanding screws carried by the base within the same and adjacent to its side flanges, the side edges of the tongue having notches for accommodating said screws, and a transverse slide fitted upon the tongue and having bent back lugs engaging under the edge portions of the tongue and outstanding finger pieces projecting over the flanges of the base, the slide being seatable upon said screws between said lugs.

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1,229,653. DOOR-HANGER. RAFFORD PITT, New Rochelle, N. Y. Filed May 4, 1915. Serial No. 25,682. (Cl. 16—91.)



1. A door hanger embodying a stationary member adapted to be secured to the wall of a building, and a member movable relatively thereto adapted to be attached to a door, the stationary member comprising a strip of sheet metal bent to form intermediate the edges of said strip a track portion having ball raceways and an integral securing and dust-shielding flange at one longitudinal edge thereof, the other longitudinal edge being so disposed with relation to the securing flange as to provide an operating slot for the movable member, the said movable member also being provided with raceways registering with the raceways in the stationary member to form ball channels and balls suitably retained in said ball channels substantially as and for the purpose specified.

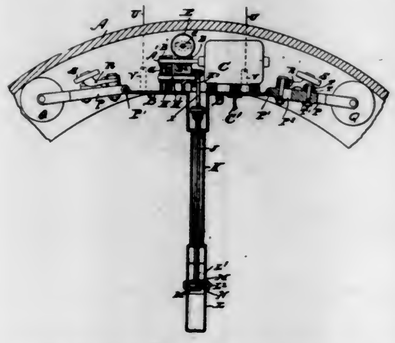
2. A door hanger embodying a stationary member adapted to be secured to the wall of a building, and a member movable relatively thereto adapted to be attached to a door, the stationary member comprising a strip of sheet metal bent to form intermediate the edges of said strip a track portion having ball raceways and an integral securing and dust-shielding flange at one longitudinal edge thereof, the other longitudinal edge being free and so disposed with relation to the securing flange as to provide an operating slot for the movable member, the said movable member also being formed from a single strip of sheet metal bent intermediate its longitudinal edges to provide longitudinal raceways adapted to register with the raceways in the stationary track portion to form ball channels, an integral securing flange at one longitudinal

edge projecting through said operating slot and connected to the door, and the opposite longitudinal edge of said movable member being free; said movable and stationary members having their secured and free edges extending in opposite directions, and balls suitably retained within said ball channels.

3. A door hanger embodying a stationary member adapted to be secured to the wall of the building, and a member movable relatively thereto adapted to be attached to the door, the stationary member comprising a single strip of sheet metal bent to provide a vertically-extending securing and dust-shielding flange, a horizontally-extending upper raceway, a vertically-disposed web portion and a horizontally-disposed lower raceway; the movable member also comprising a single strip of sheet metal bent to provide a horizontally-disposed raceway, registering with the upper raceway in the stationary member, a vertically-disposed web portion, a horizontally-disposed raceway registering with the lower raceway of the stationary member and a securing flange extending downwardly below said stationary member, and balls suitably retained between the said raceways.

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1,229,654. TIRE-ADVERTISING DEVICE. STOYAN K. RADKOFF, Detroit, Mich. Filed Dec. 1, 1916. Serial No. 134,403. (Cl. 40—126.)



1. In a device of the character described, in combination with a tire casing, a frame, a motor supported by the frame, a traction roll journaled in the frame against which the tire casing bears, and means driven by said motor for actuating the traction wheel, whereby the tire casing may be rotated around the motor.

6. In combination with a tire casing, a device of the character described, comprising a frame, a motor supported by the frame, means actuated by the motor for rotating the tire casing around the motor, a pair of swinging arms pivoted in the frame, and means actuated by said motor for operating the swinging arms.

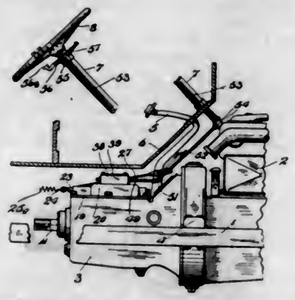
[Claims 2 to 5 and 7 not printed in the Gazette.]

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1,229,655. GEAR-SHIFT. BAYARD E. RICHARDSON, Grand Rapids, Mich., assignor to Mechano Gear Shift Co., Grand Rapids, Mich., a Corporation of Michigan. Filed Feb. 23, 1915. Serial No. 9,937. (Cl. 74—58.)

1. In combination, sliding gears, shifting rods movably mounted, shifting devices engaging with the gears and loosely mounted on the rods, means to move the rods, and selective mechanism for causing the operative connections of a shifting device with a rod to thereby shift a gear of the transmission.

2. In combination, sliding gears, shifting devices connected therewith, spaced apart shifting rods loosely carrying the shifting devices, means for simultaneously moving the rods in opposite directions, and selective means for causing the operative connection of any shifting device with any shifting rod.



3. In combination, sliding gears, shifting devices connected therewith, each including a tubular member having a sleeve at each end thereof, spaced apart shifting rods loosely received in the sleeves, each rod having notches therein, catches in the tubular members normally adapted to engage in a notch in a shifting rod, means to normally hold the catches away from the notches, means to release any desired catch, and means to movably operate the shifting rods.

4. In combination, sliding gears, shifting devices connected therewith, shifting rods slidably mounted adjacent the gears on which the shifting devices are loosely mounted, a pedal, means connecting the pedal and one of the shifting rods for slidable operation of the rod on movement of the pedal, means connecting the shifting rods whereby as one is slidably moved, the other is similarly moved in the opposite direction, and selective means for connecting any shifting device with any rod.

5. In combination, gears movably mounted, shifting devices connected thereto, shifting rods slidably mounted and loosely carrying the shifting elements, means to slidably operate one of the shifting rods, means to cause the simultaneous slidable movement in the opposite direction of the other shifting rod, catches carried by the shifting devices one for each rod adapted to engage with the shifting rods but normally held out of engagement, and means to selectively cause the engagement of a catch with its associated shifting rod.

[Claims 6 to 15 not printed in the Gazette.]

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1,229,656. COMPOSITION OF BEVERAGES. NATHAN ROSEWATER, Cleveland, Ohio. Filed Aug. 2, 1915. Serial No. 43,287. (Cl. 99—11.)

1. As a new composition of matter, a nonalcoholic beer beverage containing the essential carbohydrate constituents of beer wort, and a small proportion of a xanthin substance.

2. As a new composition of matter, a nonalcoholic beer beverage containing the essential carbohydrate constituents of beer wort, and a small proportion of caffein.

3. As a new composition of matter, a nonalcoholic beer beverage containing the essential carbohydrate constituents of beer wort, a small proportion of xanthin substance, and the acetate of a base which is normally present in the human body.

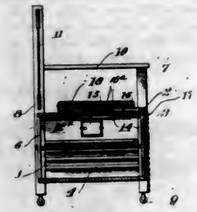
4. As a new composition of matter, a nonalcoholic beer beverage containing the essential carbohydrate constituents of beer wort, a small proportion of caffein, and the acetate of a base which is normally present in the human body.

5. As a new composition of matter, a nonalcoholic beer beverage containing the essential carbohydrate constituents of beer wort, a small proportion of a xanthin substance, the acetate of a base which is normally present in the human body, and minute proportions of the extractive of a pungent condiment.

[Claims 6 to 9 not printed in the Gazette.]



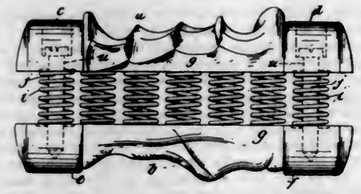
1,229,657. BEDROOM-CHAIR. KATE ROSS, Lincoln, Ill. Filed Feb. 11, 1916. Serial No. 77,662. (Cl. 155—11.)



A chair of the class described having a box, a seat forming the cover for the box and provided with an opening and a closure for said opening and a supplemental seat hinged to the front side of the box and adapted to be arranged on the first named seat or turned downwardly on the front side of the box at will.

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1,229,658. DUMB-BELL. EUGEN SANDOW, London, England. Filed Sept. 4, 1913. Serial No. 788,080. (Cl. 46—68.)



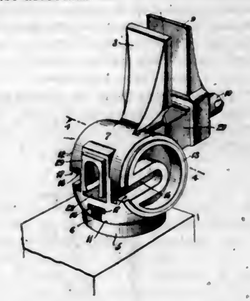
1. A dumb-bell, having a grip-portion provided with a surface having projections and depressions to conform with the shape of the user's hands when in the gripping position, for the purpose of evenly distributing the gripping pressure over the inner surface of the user's hand, substantially as set forth.

2. A spring-grip dumb-bell comprising in combination two longitudinal halves, each of which has a bar with half bells at its ends, headed studs passing through holes in one half and secured to the other half, springs between said halves, to urge them apart, projections and depressions forming a counter-part of the user's fingers when in the gripping position applied to the bar portion of one of the longitudinal halves of the dumb-bell, and projections and depressions forming a counter-part of the user's palm and the ball of his thumb when the dumb-bell is grasped, applied to the bar portion of the other longitudinal half, substantially as described and for the purpose set forth.

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1,229,659. WOODWORKING-VISE. EDMUND A. SCHADE and JOSEPH M. HANCE, New Britain, Conn., assignors to The Stanley Rule & Level Company, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 11, 1917. Serial No. 141,798. (Cl. 81—41.)

1. In a vise, a substantially circular supporting base, a vise head having a substantially circular base portion for engagement with the circular supporting base, said supporting base and the base portion on the head having substantially circular engaging portions rotatably confining the vise head on the supporting base, said circular base portion on the head having an open ended undercut slot extending centrally thereinto, a holding bolt centrally located on the supporting base and having a head engageable in said undercut slot, securing means engaging said bolt to cause said bolt to seat the base portion of the vise head firmly on the supporting base and spring means for yieldingly supporting the bolt with the head thereof in an upraised position when the vise head is detached therefrom, to thereby enable the ready engagement of the vise head with the head of the supporting bolt and with the supporting base aforesaid.

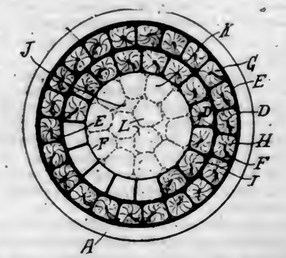


4. A vise, comprising a supporting base, having an upstanding annular flange, a vise head having substantially circular base portions on different sides thereof rotatably fitting within the upstanding annular flange on the supporting base, said vise head further having undercut grooves extending radially inward through the circular base portions aforesaid, substantially to the centers thereof and said undercut grooves being open at the outer ends thereof, a pivot bolt located centrally of the supporting base and having an enlarged head engageable in the undercut grooves, securing means engaging the pivot bolt to cause the head of said bolt to draw the circular base portion of the vise head down to a firm seat within the upstanding flange of the supporting base and coöperating relatively movable clamping jaws on the vise head.

[Claims 2 and 3 not printed in the Gazette.]

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1,229,660. CIGAR-PACKAGE. ANTHONY SCHNEIDER, Whippany, N. J., assignor to American Cigar Company, New York, N. Y., a Corporation of New Jersey. Filed May 29, 1916. Serial No. 100,544. (Cl. 131—11.)

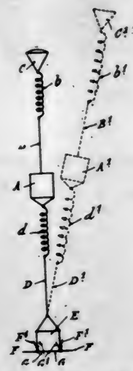


1. A cigar package comprising a container having a removable top and also having a series of cigar receiving cells or pockets therein for maintaining the cigars in upright position, said cells being positioned to form a substantially continuous wall bounding a central unobstructed space of fixed dimensions for the reception of other cigars which are adapted to be supported in upright position by contact with the cells and with each other.

2. A cigar package comprising a container having a row of cigar receiving cells or pockets located adjacent the inner wall of the container, a second row of cigar receiving cells or pockets independent of and located within the confines of the first mentioned row of cells or pockets, said second row of cells or pockets being positioned to form a space at the center of the container for the reception of other cigars.

3. A cigar package comprising a transparent container having a plurality of continuous rows of cigar receiving pockets arranged concentrically therein, the innermost of said rows forming a space at the center of the container for the reception of cigars and a web or band constituting a label arranged in contact with the inner face of the adjacent wall of the container and of such height as to conceal the pockets or cells from view while exposing the upper portions of the cigars to view.

1,229,661. APPARATUS FOR STABILIZING THE POSITION OF SUBMERGED FLOATING MINES. EUGÈNE SCHNEIDER, Le Creuzot, France. Filed Feb. 11, 1916. Serial No. 77,710. (Cl. 102—3.)



1. In a submarine mine, in combination with the mine proper and its stabilizer, connections therebetween comprising an elastic medium.

5. In a submarine mine, in combination with the mine proper, a stabilizer connected thereto comprising a frame and means movably connected therewith and adapted to move to a position adjacent said frame during descent of the stabilizer and adapted to move to a position projecting from said frame during ascent of the stabilizer.

10. In a submarine mine, in combination with the mine proper, a stabilizer connected thereto comprising a polygonal frame and clacks hinged to inner faces thereof to fold inwardly.

15. In a submarine mine, in combination with the mine proper, a stabilizer of box-like structure connected to said mine and adapted to receive the lower end thereof, said stabilizer comprising means adapted to fold upward during descent thereof and to unfold downward during ascent thereof, and means for retaining said last-named means in folded relation to the stabilizer, said retaining means being rendered inoperative by separation of said mine and stabilizer.

20. In a submarine mine, in combination with the mine proper, a stabilizer, and connections comprising an elastic medium between said mine and stabilizer, said stabilizer comprising a frame and means connected therewith adapted to fold inwardly during descent of the stabilizer and adapted to unfold outwardly during ascent of the stabilizer.

[Claims 2 to 4, 6 to 9, 11 to 14, 16 to 19, and 21 not printed in the Gazette.]

1,229,662. GAS-CHECK PAD FOR GUN BREECH-BLOCKS AND PROCESS OF MAKING SAME. EUGÈNE SCHNEIDER, Le Creuzot, France. Filed Dec. 9, 1916. Serial No. 136,119. (Cl. 106—9.)

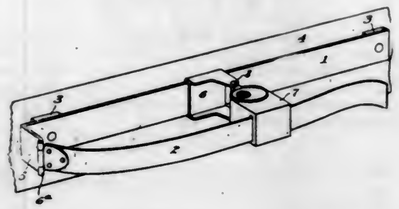
1. A gas check pad for guns comprising asbestos, water-insoluble soap incorporated therewith and a fatty substance to impart plasticity thereto.

4. A gas check pad for guns comprising 80 parts of asbestos, 20 parts of colza-oil lime-soap containing about 8 per cent. of lime and a fatty substance to impart plasticity thereto.

9. The process of making gas check pads consisting in incorporating asbestos with colza-oil lime-soap prepared by heating colza-oil with about 13% of its weight of slaked lime, combining the excess of lime with additional colza-oil to reduce the lime in the soap to about 8% and then mixing the product with vaseline to render the pad plastic.

[Claims 2, 3, and 5 to 8 not printed in the Gazette.]

1,229,663. ARTICLE-LOCK. WILLIAM F. SCHWARTZ, Rochester, N. Y. Filed Sept. 11, 1916. Serial No. 119,378. (Cl. 45—13.)



1. An article lock comprising a pair of clamping members, one of which is hinged to the other, and a key-controlled grip device adjustable on both members toward and from the hinge to hold them against separation.

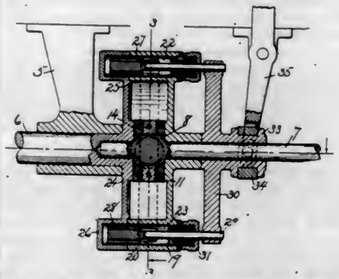
3. An article lock comprising two clamping members, one of which is rigid and the other of which is flexible and is secured to the rigid member at one end, the other end being free, and a device adjustable on the rigid member toward and from the secured end of the flexible member and carrying means for gripping the flexible member.

5. An article lock comprising two clamping members, one of which is rigid and the other of which is flexible and is secured at one end to the rigid member, its other end being free, a slide movable on the rigid member toward and from the secured end of the flexible member, and a grip device for engaging the flexible member, said grip device being pivotally connected to the slide.

7. An article lock comprising a flexible metallic tape member secured at one end, and a device for gripping said tape member away from its secured end, said grip device being pivotably mounted to permit the grip device to shift to accommodate itself to the position of the tape member.

[Claims 2, 4, and 6 not printed in the Gazette.]

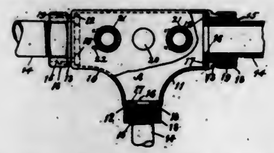
1,229,664. CLUTCH. WILBUR L. SHEPARD, Elmwood, Conn. Filed May 17, 1916. Serial No. 98,225. (Cl. 192—18.)



A clutch including a body, cylinders oppositely arranged on said body and having fluid passages extending between them, pistons located in said cylinders, a shaft extending into the body, a member secured to the shaft within said body, piston rods connecting said member and said pistons, a cap secured to the body and having portions of valve chambers therein, the other portions of said valve chambers being formed in said body, and valves located in said chambers to control the flow of fluid through said passages that open into said valve chambers.



1,229,665. FITTING FOR ELECTRICAL CONDUITS. KLAAS SIXMA, Brooklyn, N. Y. Filed May 5, 1914. Serial No. 836,451. (Cl. 247—1.)

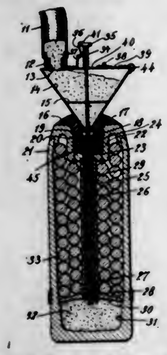


1. In a conduit fitting of the kind described the combination with a sectional body provided with a tubular tapered nipple, a conduit fitted in the nipple, a threaded bushing to engage the conduit, and a lock nut mounted on the threads of the bushing and coacting with the tapered portion of the nipple.

2. In a conduit fitting of the kind described the combination with a sectional body provided with a tubular tapered nipple, a threaded conduit fitted in the nipple, a threaded bushing to engage the threads of the conduit, a lock nut to engage the threads of the bushing and coact with the tapered portion of the nipple.

3. In a conduit fitting of the kind described the combination with a sectional body provided with a tubular tapered nipple, a threaded conduit fitted in the nipple, a bushing having exterior and interior threads the latter for engagement with the threads of the conduit, a lock nut to engage the exterior threads of the bushing and coact with the tapered portion of the nipple.

1,229,666. SHRAPNEL-LOADING MACHINE. PETER STEPANOFF, Petrograd, Russia. Filed Apr. 29, 1916. Serial No. 94,306. (Cl. 86—20.)



1. In shrapnel loading machines, a series of interchangeable jolting supports each adapted to receive a shrapnel shell, a series of powder feed connections to be removably secured to shrapnel shells and each comprising a feed hopper, a connected supply hose to supply powder thereto, a connector cap secured to said feed hopper and formed with a neck having a partial thread to be screwed into the fuse socket of the shell, a feed tube removably secured to said neck and adapted to extend within the ignition tube of the shell adjacent the powder chamber at the base of the shell, a constricted throat formed at the end of said feed tube, a conical cut-off detector valve mounted within said feed tube to coöperate with said throat in determining the filled condition of the powder chamber, a stem on said valve extending through said hopper, a return spring to normally hold said stem in raised position, a head on said stem and a spring retainer coöperating with said head to hold the connected cut-off valve in raised open position or in close position substantially closing the constricted throat of said fed tube during transfer of said feeding connection from one shell to another.

5. In shrapnel shell loading machines, a powder feed connection to be removably secured to a shell and comprising a feed hopper, a connected supply hose to supply powder thereto, a connector cap secured to said feed hopper to be screwed into the fuse socket of the shell and provided with a feed tube adapted to extend within the ignition tube of the shell and with a constricted throat through which the powder is discharged into the shell, a cut-off valve mounted to coöperate with said throat and spring retainer means to hold said cut-off valve in open position or in closed position substantially closing said constricted throat during transfer of the feeding connection from one shell to another.

[Claims 2 to 4 and 6 to 8 not printed in the Gazette.]

1,229,667. HAND-OPERATED SHOVEL. KARL STIMECZ, Cincinnati, Ohio. Filed Aug. 9, 1916. Serial No. 114,004. (Cl. 7—1.)



1. A handle for tools comprising a relatively straight portion having a tool secured to each end thereof, one of said tools constituting at all times a continuation of said straight portion, and the other of said tools being pivotally connected to the opposite end of said portion, said pivotally connected tool having a gripping depression formed in one side adapted to constitute a hand hold, and having a relatively flat portion constituting a rest for the hand of the user.

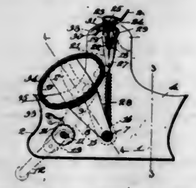
2. A handle for tools comprising a relatively straight portion, means for securing the tool in position thereon, and a tool member pivotally mounted on the opposite end from said first mentioned tool and adapted to constitute a continuation of said handle or extend at substantially right angles thereto, said member being gradually enlarged toward one end to form a hand hold, and having a flat portion constituting a rest for the hand of the user.

3. A handle for tools comprising a relatively straight portion adapted to receive the tool on one end, means for detachably securing the tool in position thereon, a tool member pivotally mounted on the opposite end of said portion and adapted to constitute a continuation thereof or to extend at substantially right angles thereto, and means for locking said member in either position, said member being gradually enlarged toward one end to form a hand hold, and having a flat portion constituting a rest for the hand of the user.

1,229,668. SHARPENING DEVICE. HENRY C. STRACK, Owego, N. Y. Filed May 11, 1916. Serial No. 96,757. (Cl. 51—16.)

1. A device of the character described, having a support for a razor blade, an oscillatory frame, a bed piece

carried by the frame, there being a stropping surface on one side of the bed piece and a honing surface on the opposite side of the bed piece, means for automatically alining the surface of the bed piece with the edge of the blade, and means for oscillating the frame.



2. A device of the character described, having a support for a razor blade, an oscillatory frame, a bed piece carried by the frame, there being a stropping surface on one side of the bed piece and a honing surface on the opposite side of the bed piece, a convex table on the frame for automatically alining the surface of the bed piece with the edge of the blade, and means for oscillating the frame.

3. A device of the character described, having a body, a support for a razor blade pivoted in the body, a shaft, a frame carried on the shaft, said frame carrying a sharpening surface, an operating spindle, and connections between the spindle and shaft whereby the rotation of the spindle will oscillate the shaft and with it the sharpening surface to oscillate the blade support.

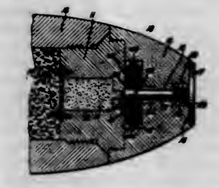
4. A device of the character described, having a body, a support for a razor blade pivoted in the body, a shaft, a frame carried on the shaft, said frame carrying a sharpening surface, an operating spindle, connections between the spindle and shaft whereby rotation of the spindle will oscillate the shaft and with it the sharpening surface to oscillate the blade support, and independent means operable by the rotation of the spindle for rocking the blade support.

5. A device of the character described, having a body, a support for a razor blade pivoted to the body, a spring for securing a blade in position in the support, a frame carried on the shaft, said frame carrying a sharpening surface, an operating spindle, connections between the spindle and shaft whereby rotation of the spindle will oscillate the frame and engage the sharpening surface with a blade carried in the support, the engagement of the sharpening surface with the blade acting to oscillate the blade support, and a spring for holding the blade in engagement with the surface.

[Claims 6 to 11 not printed in the Gazette.]

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1,229,669. SENSITIVE PERCUSSION-FUSE. EDWIN R. STUART, U. S. Army. Filed May 6, 1916. Serial No. 95,815. (Cl. 102—39.)



1. In a fuse for projectiles, a spring-pressed firing pin movable in the direction of the axis of the projectile, locking means normally locking the firing pin against outward movement and mounted to slide transversely by centrifugal force, and a fulminate carrier mounted to slide transversely by centrifugal force, the fulminate carrier being provided with an aperture at one side of the fulminate into which fits the inner end of the firing pin to normally lock the fulminate carrier against transverse movement.

2. In a fuse for projectiles, a firing pin slidable in the direction of the axis of the projectile, the firing pin having a collar at its inner end, a spring pressing the firing pin, a pair of blocks mounted to slide transversely and having necks at their inner ends engaging the said collar to hold the firing pin locked in retracted position against the tension of its spring, and a fulminate carrier mounted to slide transversely and provided with an aperture engaged by the inner end of the said firing pin to lock the carrier against movement until the firing pin is released by the said locking blocks.

3. In a fuse for projectiles, a firing pin slidable in the direction of the axis of the projectile, the firing pin having a collar at its inner end, a spring pressing the firing pin, a pair of blocks mounted to slide transversely and having necks at their inner ends engaging the said collar to hold the firing pin locked in retracted position against the tention of its spring, a fulminate carrier mounted to slide transversely and provided with an aperture engaged by the inner end of the said firing pin to lock the carrier against movement until the firing pin is released by the said locking blocks, and means to limit the sliding movement of the fulminate carrier to locate the fulminate in the path of the firing pin.

4. In a fuse for projectiles, a fuse body, a firing pin mounted on said fuse body and having a striking plate at its forward end, and automatic locking means normally locking the said firing pin in a retracted position in the said body, the said locking means being slidable in a direction transverse to the axis of the projectile and being adapted by centrifugal force, on the rotation of the projectile, to release the said firing pin, a spring for moving the firing pin forward when released to cause the striking plate to project beyond the general outline of the fuse body, and a laterally movable fulminate carrier for moving the fulminate into the path of the firing pin when the latter is released, whereby upon the impact of the projectile, the firing pin will be driven inward against the fulminate thereby detonating the fuse and projectile.

5. In a fuse for projectiles, a fuse body having a recess in its forward end, a firing pin mounted to slide in the fuse body and provided at its forward end with a head adapted to be seated in the said recess, automatic locking means normally locking the said firing pin in retracted position in the said body and adapted to be actuated during the flight of the projectile, to release the firing pin, means for moving the firing pin when released, to project its head beyond the fuse body, and a fulminate carrier having a fulminate adapted to be engaged by the firing pin when the latter is driven inward by contact of the projectile with the target.

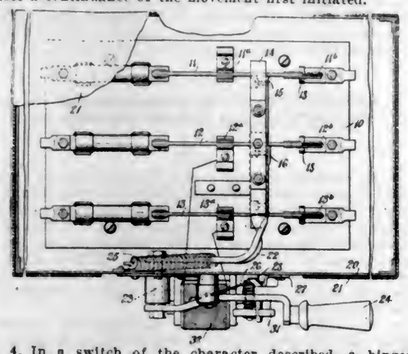
[Claims 6 and 7 not printed in the Gazette.]

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1,229,670. STARTING-SWITCH. ALEXANDER K. SUTHERLAND, New Britain, Conn., assignor to The Trumbull Electric Manufacturing Company, Plainville, Conn., a Corporation of Connecticut. Filed May 11, 1916. Serial No. 96,805. (Cl. 200—3.)

1. In a switch of the character described the combination of three movable main switch blades, a series of switch contacts adapted to be engaged by said blades in the initial movement thereof, a second series of contacts having contact surfaces adapted to be engaged by said blades in a later movement thereof and a series of short circuiting blades movable in the same planes with the main blades respectively and disposed to engage said same contact surfaces of the second series of contacts and to connect said series of contacts prior to engagement by said main blades.

2. In a switch of the character described, the combination with relatively stationary and movable members, of a spring carried by one of said members and an inclined abutment on the other of said members for engagement by said spring in the relative movement of the two members toward each other, a stop shoulder for the spring located in advance of the spring supporting surface of the abutment, a shoulder at one edge of said stop shoulder to limit the lateral movement of the spring on said stop shoulder, said limiting shoulder being laterally offset from the supporting surface of the abutment to enable the spring when engaging the stop shoulder to move laterally far enough to clear the supporting surface of the abutment and said limiting shoulder further being of a height such that upon a limited reverse movement of the members the spring will be free of the limiting stop and will exert its tension to clear said stops and thereby enable a continuance of the movement first initiated.



4. In a switch of the character described, a hinged blade, a stationary contact, an insulating member carried by said blade, a shorter blade carried by said insulating member beneath and in the same plane as said first blade, said contact having a lateral extension at its upper end adapted to be engaged successively by said blades, and an insulating guard secured along the face of said contact beneath said extension.

5. In a starting switch, the combination of two sets of stationary contacts and two sets of movable contacts, one set of movable contacts being insulated from the other set of movable contacts, one set of stationary contacts being disposed to be engaged successively by both sets of movable contacts, a casing inclosing said stationary and movable contacts, operating means extending through the wall of the casing and mechanically connected with the movable contacts and an automatic stop comprising a member carried by the switch operating means and a member supported on the wall of the casing arranged to be engaged by the member on the operating means to stop the movement of said operating means but arranged to release said operating means upon a slight backward movement of said operating means.

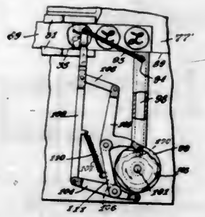
11. In a starting switch, the combination of two sets of stationary contacts and two sets of movable contacts, one set of movable contacts being insulated from the other set of movable contacts, one set of stationary contacts being arranged to be engaged by one set of movable contacts and the other set of stationary contacts being arranged to be engaged successively by both sets of contacts, an operating handle mechanically connected to said movable contacts for operating the same, and an automatic stop comprising stationary and movable parts arranged to stop the movement of the operating handle and the movable contacts in one position but arranged to become disengaged upon a slight backward movement of said operating handle, and arranged when thus disengaged to permit the completion of the movement of the operating handle and the movable contacts, means for automatically returning the operating handle and movable contacts from any position to open circuit position when the operating handle is released.

[Claims 3, 6 to 10, and 12 not printed in the Gazette.]

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1,229,671. COATING-MACHINE. WILLIAM J. SWARTZ and EDWARD H. WAUGH, Seattle, Wash., assignors to Automatic Candy Machine Company, Seattle, Wash., a Corporation of Washington. Filed May 19, 1913. Serial No. 768,557. (Cl. 107—27.)

1. In an apparatus of the character described, a carrier plate, means for giving said plate an intermittent feed movement, a depositing nozzle, and nozzle controlling means comprising a plurality of pivoted levers connected to move the nozzle in differing directions, and a single cam means actuating said levers from points angularly separated upon the cam.



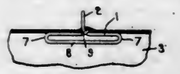
2. A pattern forming device of the character described, comprising a movable nozzle, a lever secured to and controlling the movement of the nozzle, two pivoted levers having actuative connection with the nozzle controlling lever at points respectively separated lengthwise the lever, and a single cam acting upon said pivoted levers at points angularly separated upon the cam.

3. A pattern forming device of the character described, comprising a movable discharge nozzle, means for delivering the pattern forming material thereto, a cut-off device controlling the flow of said material, a cam-disk controlling said cut-off, a former cam rotative with said disk, a plurality of pivoted levers actuated by the former cam from separated points upon its periphery, and actuating connections from said pivoted levers to the nozzle.

4. In an apparatus of the character described, a pattern forming member, a lever connected with and adapted to move the pattern forming member, a plurality of levers connected with the first named lever, and a removable pattern cam for actuating all said last named levers each from a point thereon angularly separated from the others.

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1,229,672. PORTIÈRE-HOLDER. HELENE L. SWENEY, Boston, Mass. Continuation of application Serial No. 130,257, filed Nov. 8, 1916. This application filed May 14, 1917. Serial No. 168,348. (Cl. 156—21.)



1. A portière holder formed from a single piece of wire bent to present a thin flat skeleton frame portion having an extended straight upper edge, each end of said wire bent back toward the center of said frame and in the plane thereof, the said ends being twisted together and one end projecting above the straight upper edge in the form of an upstanding hook adapted to penetrate, and project above, the folded edge of the portière, with the frame portion lying within the folded edge of, and supporting, the portière.

2. A portière holder presenting a thin flat frame portion with an extended straight upper edge to lie within the folded edge of, and support, the portière, and a hook upstanding from the central portion of said edge adapted to penetrate and project above the folded edge.

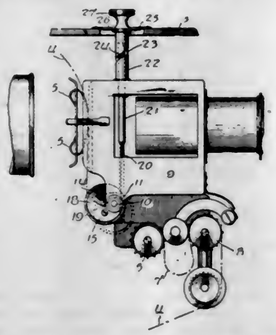
3. A portière holder presenting a thin flat skeleton frame portion with curved ends and an extended straight upper edge to lie within the folded edge of, and support, the portière, and a hook upstanding from the central portion of said edge adapted to penetrate and project above the folded edge.

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1,229,673. CINEMATOGRAPH. VICTOR W. THOMAS, Chicago, Ill., assignor to C. L. Peyton, Chicago, Ill. Filed June 26, 1916. Serial No. 105,790. (Cl. 88—18.)

1. In a cinematograph having a film pathway, means for moving film through said pathway, an arbor disposed

transversely of and adjacent said pathway, a spool eccentrically mounted upon said arbor, a pulley rotatably mounted upon said spool, and means for rotatably adjusting said spool relative to its axis.



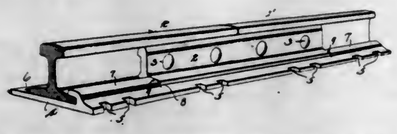
2. In a cinematograph having a film pathway, means for moving film through said pathway, an arbor disposed transversely of and adjacent said pathway, a spool eccentrically mounted upon said arbor, a pulley rotatably mounted upon said spool, and means for rotatably adjusting said spool relative to its axis comprising a gear fixed to said arbor, a rack bar coacting with said gear, a rotatable sleeve having a spiral slot therein, and a pin upon said rack bar adapted to coact with said spiral slot.

3. In a cinematograph a film pathway, means for moving film therethrough, an eccentrically journaled roller adapted to be engaged by the film between said pathway and said film moving means, and devices for rotating the journal of said roller including a pinion on said journal, a reciprocable rack bar engaging said pinion, and means for reciprocating said rack.

4. In a cinematograph a film pathway, means for moving film therethrough, an eccentrically journaled roller adapted to be engaged by the film between said pathway and said film moving means, and devices for rotating the journal of said roller including a pinion on said journal, a reciprocable rack bar engaging said pinion, and a rotatable sleeve telescopically engaging said rack bar, and means operatively connecting said rack bar and sleeve whereby the rotation of the latter is adapted to reciprocate said rack bar.

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1,229,674. RAIL-JOINT SUPPORT AND FASTENING. McLEOD THOMSON, Atlantic City, N. J., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Feb. 19, 1916. Serial No. 79,258. (Cl. 239—6.)



1. An anticreeper construction for rails including, in combination with the rails, the track ties and the joint bars fastened to the rails, a rail supporting and fastening base of greater length than the joint bars and projecting beyond the ends of the latter and engaging the ties next beyond the joint ties, said base being provided at one side edge only with upstanding holding abutments engaging the ends of one joint bar.

2. An anticreeper construction for rails including, in combination with the track ties, the rails and the joint bars fastened to the rails of separate base members of a greater length than the joint bars and projecting beyond the latter to engage the ties next beyond the joint ties, each of said base members being provided at one side edge portion only with upstanding flange elements engaging over the rail flange and having an abutting engagement with the ends of one joint bar.

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1,229,675. GUN-SILENCER AND RECOIL-REDUCER. EUGENE W. THOMPSON, New London, Conn. Filed Mar. 2, 1916. Serial No. 81,767. (Cl. 89—31.)



1. In combination with a gun barrel having an elongated chamber substantially immediately beyond the bore of the breech of the barrel and provided with a cylindrical bore beyond said chamber and being of a diameter intermediate the diameters of the chamber and the bore of the breech of the barrel, a series of bushings or sleeves arranged axially in the cylindrical bore, and means threaded into the muzzle end of the barrel for retaining the sleeves or bushings in place.

2. In combination with a gun barrel having an elongated chamber substantially immediately beyond the bore of the breech of the barrel and provided with a cylindrical bore beyond said chamber and being of a diameter intermediate the diameters of the chamber and the bore of the breech of the barrel, a series of bushings or sleeves arranged axially in the cylindrical bore, and means threaded into the muzzle end of the barrel for retaining the sleeves or bushings in place, said chamber adjacent the bore of the breech of the barrel having radial tongues, having their inner ends spaced apart corresponding to the diameter of the bore of the breech.

3. In combination with a gun barrel having an elongated chamber substantially immediately beyond the bore of the breech of the barrel and provided with a cylindrical bore beyond said chamber and being of a diameter intermediate the diameters of the chamber and the bore of the breech of the barrel, a series of bushings or sleeves arranged axially in the cylindrical bore, and means threaded into the muzzle end of the barrel for retaining the sleeves or bushings in place, said bushings or sleeves having chambers of diameters larger than the diameter of the bore of the breech of the barrel, and provided with passages of diameters corresponding to the diameter of the bore of the breech of the barrel, said passages of the sleeves or bushing being arranged alternately with the chambers of the sleeves or bushings.

4. In combination with a gun barrel having an elongated chamber substantially immediately beyond the bore of the breech of the barrel and provided with a cylindrical bore beyond said chamber and being of a diameter intermediate the diameters of the chamber and the bore of the breech of the barrel, a series of bushings or sleeves arranged axially in the cylindrical bore and means threaded into the muzzle end of the barrel for retaining the sleeves or bushings in place, said bushings or sleeves having chambers of diameters larger than the diameter of the bore of the breech of the barrel, and provided with passages of diameters corresponding to the diameter of the bore of the breech of the barrel, said passages of the sleeves or bushings being arranged alternately with the chambers of the sleeves or bushings, said sleeves or bushings in their walls having perforations, to permit the gases to escape in advance of the projectile.

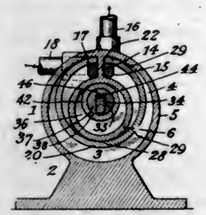
5. In combination with a gun barrel an elongated chamber substantially immediately beyond the bore of the breech of the barrel and provided with a cylindrical bore beyond said chamber and being of a diameter intermediate the diameters of the chamber and the bore of the breech of the barrel, a series of bushings or sleeves arranged axially in the cylindrical bore, and means threaded into the muzzle end of the barrel for retaining



the sleeves or bushings in place said chamber adjacent the bore of the breech of the barrel having radial tongues, having their inner ends spaced apart corresponding to the diameter of the bore of the breech, said bushings or sleeves having chambers of diameters larger than the diameter of the bore of the breech of the barrel, and provided with passages of diameters corresponding to the diameter of the bore of the breech of the barrel, said passages of the sleeves or bushings being arranged alternately with the chambers of the sleeves or bushings, said sleeves or bushings in their walls having perforations, to permit the gases to escape in advance of the projectile.

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1,229,676. PUMP. FRANCIS D. TICE, Niantic, Conn. Filed July 28, 1915. Serial No. 42,246. (Cl. 103—44.)



1. In a mechanism of the class described, a casing comprising an interior annular cylinder-chamber having an end wall forming its closed side and an outer and inner annular wall and divided by a fixed partition or head extending across the width of the chamber, a piston comprising a plate or head closing the open side of said cylinder-chamber and having projecting from its inner face an annular flange provided with a recess receiving said partition or head, inlet and outlet ports entering said cylinder-chamber respectively at opposite sides of said partition or head, a rotary shaft extending transversely of said casing and axially with relation to the annulus of the cylinder-chamber and having a bearing in the end wall thereof, a cheek-plate closing the side of the casing opposite said end wall and forming a bearing for the plate or head of the piston, said shaft having also a bearing in said cheek-plate, and a block or enlargement carried by and extending across the portion of said shaft which crosses the width plane of the cylinder-chamber between the end wall and said cheek-plate and having a cylindrical periphery eccentric to the axis of the shaft, whereby said block has a bearing between said end wall and cheek-plate, said piston having a central circular bearing projecting inwardly from its head plate and receiving and co-extensive with the width of said block or enlargement between said end wall and cheek-plate, whereby the piston has an eccentric mounting with relation to the cylinder-chamber and co-extensive with the entire width plane thereof intermediate of the shaft bearing to operate its annular flange in a gyratory movement.

2. In a mechanism of the class described, a casing comprising an interior annular cylinder-chamber having an end wall forming its closed side and an outer and inner annular wall and divided by a fixed partition or head extending across the width of the chamber, a piston comprising a plate or head closing the open side of said cylinder-chamber and having projecting from its inner face an annular flange provided with a recess receiving said partition or head, inlet and outlet ports entering said cylinder-chamber respectively at opposite sides of said partition or head, a rotary shaft extending transversely of said casing and axially with relation to the annulus of the cylinder-chamber and having a bearing in the end wall thereof, a cheek-plate closing the side of the casing opposite said end wall and forming a bearing for the plate or head of the piston, said shaft also having a bearing in said cheek-plate and having an angular enlargement projective laterally with relation to the axis of the shaft, and a disk-piece or block having a cylindrical periphery and a recess receiving said angular enlargement and having its cylindrical periphery extending across the width plane of the cylinder between the end wall thereof and said cheek-plate, whereby said block is mounted with its cylindrical periphery eccentric to the axis of the shaft and has a bearing between said end wall and cheek-plate, said piston having a central circular bearing concentric with the piston flange and receiving said disk-piece or block and co-extensive with the periphery thereof between said end wall and cheek-plate, whereby the piston has an eccentric mounting with relation to the cylinder-chamber and co-extensive with the entire width plane thereof intermediate of the shaft bearings to operate its annular flange in a gyratory movement.

3. In a mechanism of the class described, a casing comprising an interior annular cylinder-chamber having an end wall forming its closed side and an outer and inner annular wall and divided by a fixed partition or head extending across the width of the chamber, a piston comprising a plate or head closing the open side of said cylinder-chamber and having projecting from its inner face an annular flange provided with a recess receiving said partition or head, inlet and outlet ports entering said cylinder-chamber respectively at opposite sides of said partition or head, a rotary shaft extending transversely of said casing and axially with relation to the annulus of the cylinder-chamber and having a bearing in the end wall thereof, a cheek-plate closing the side of the casing opposite said end wall and forming a bearing for the plate or head of the piston, said shaft also having a bearing in said cheek-plate and having an angular enlargement projective laterally with relation to the axis of the shaft and extending entirely across the portion of the shaft which crosses the width plane of the cylinder-chamber between the end wall thereof and the cheek-plate, and a disk-piece or block co-extensive with the length of said angular enlargement and having a cylindrical periphery and a recess receiving said angular enlargement, whereby said block is mounted with its cylindrical periphery eccentric to the axis of the shaft and said block and angular enlargement have a bearing between said end wall of the cylinder chamber and the cheek-plate, said piston having a central circular bearing projecting inwardly from its head plate and receiving and co-extensive with the width of said disk-piece or block, whereby the piston has an eccentric mounting with relation to the cylinder-chamber and co-extensive with the entire width plane thereof intermediate of the shaft bearings to operate its annular flange in a gyratory movement.

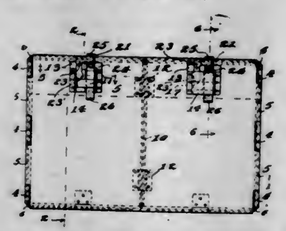
4. In a mechanism of the class described, a casing comprising an interior annular-chamber having an end wall forming its closed side and an outer and inner annular wall and divided by a fixed partition or head extending across the width of the chamber, a piston comprising a plate or head closing the open side of said cylinder-chamber and having projecting from its inner face an annular flange provided with a recess receiving said partition or head, inlet and outlet ports entering said cylinder-chamber respectively and directly at opposite sides of said partition or head and co-extensive with the width of the cylinder-chamber, a rotary shaft extending transversely of said casing and axially with relation to the annulus of the cylinder-chamber and having a bearing in the end wall thereof, said shaft having an angular enlargement projective laterally with relation to the axis of the shaft and extending across the portion of the shaft which crosses the width plane of the cylinder-chamber, a disk-piece or block co-extensive with the length of said angular enlargement and bearing against the end wall of the cylinder chamber and having a cylindrical periphery and a recess slidably receiving said angular enlargement, whereby said block is removably mounted with its cylindrical periphery eccentric to the axis of the shaft, said piston having a central circular bearing projecting inwardly and extended from a cylindrical perforation in the head-plate of the piston and receiving and co-extensive with the width of said disk-piece or block, whereby the piston has an eccentric

mounting with relation to the cylinder-chamber to operate its annular flange in a gyratory movement therein, and a removable side wall oppositely located with relation to said end wall of the casing and constituting a cheek-plate at the outer side of the head-plate of the piston and forming a bearing therefor and for the end of said disk-piece or block and for the shaft.

5. In a mechanism of the class described, a casing comprising an end wall forming the closed side of an annular cylinder-chamber and a side wall forming the outer annular wall of said chamber and an interior wall forming the inner annular wall of said chamber and a fixed partition or head dividing said annular cylinder-chamber, a piston comprising a plate or head closing the open side of said cylinder-chamber and having projecting from its inner face an annular flange provided with a recess receiving said partition or head, an inlet port provided in the end wall of said casing at one side of said partition or head and immediately adjacent thereto, an outlet port provided in the end wall of said casing at the opposite side of said partition or head and immediately adjacent thereto, said ports extending substantially across the complete width area of the cylinder-chamber between its outer and inner annular walls and at right angles to said piston-flange, a rotary shaft extending transversely of said casing and axially with relation to the annulus of the cylinder-chamber and having a bearing in the end wall thereof, said shaft having an angular enlargement projective laterally with relation to the axis of the shaft, a disk-piece or block having a cylindrical periphery and a recess slidably receiving said angular enlargement, whereby said block is mounted with its cylindrical periphery eccentric to the axis of the shaft, said piston having a central circular bearing projecting inwardly from its head plate and receiving said disk-piece or block, whereby the piston has an eccentric mounting with relation to the cylinder-chamber to operate its annular flange in a gyratory movement therein, and a side wall oppositely located with relation to said end wall of the casing and constituting a cheek-plate at the outer side of the head-plate of the piston, said cheek-plate forming a bearing for the head-plate of the piston and the disk-piece or block and also for the shaft.

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1,229,677. COLLAPSIBLE CRATE AND LOCK. BAKER M. TOMBERLIN, Santa Rosa, Cal. Filed Mar. 31, 1915. Serial No. 18,283. (Cl. 220—17.)



1. In a folding crate, the combination with a collapsible structure having hinged members collapsible on each other, and a sliding bolt having a hinged hook carried by one end and adapted to engage and lock some of the parts in their unfolded position and some of the parts in their folded position, the said bolt having an extension disposed to engage other of the parts of the crate when folded and to clamp them against hook engaged parts.

2. In a folding crate, the combination with a collapsible structure, of a lock adapted to engage parts of the structure for locking them in an open position and to engage other parts of the structure for locking them in a folded position, means for locking them in a folded position, and means for locking the locking means in its locking positions.

3. In a folding crate, the combination with a collapsible structure, of a sliding bolt carried thereby and having means adapted to engage and lock parts of the structure in its open position and also to engage and lock parts of the structure in its closed position, a lever for shifting the bolt, and means on the bolt cooperating with the lever to lock the bolt.

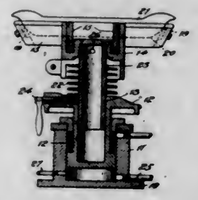
4. In a folding crate, the combination with a collapsible structure, of a sliding bolt carried thereby and having means adapted to engage and lock parts of the structure in its open position and also to engage and lock parts of the structure in its closed position, and a lever for shifting the bolt, and means for locking the lever against movement.

5. In a folding crate, the combination with a collapsible structure, of a sliding bolt, a hook pivotally carried thereby and adapted to engage and lock certain of the parts of the structure in their unfolded position and to engage and lock other of the parts of the structure in their folded position, and a lever engaging the bolt for actuating the same, the lever having a portion adapted to engage the hook for retaining the hook against pivotal movement.

[Claim 6 not printed in the Gazette.]

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1,229,678. MOLD-SUPPORT. HENRY TSCHERNING, Freeport, Ill., assignor to Arcade Manufacturing Company, Freeport, Ill., a Corporation of Illinois. Filed Dec. 20, 1916. Serial No. 137,980. (Cl. 22—90.)



1. In apparatus of the class described, the combination with a flask sustaining device including a body portion and tilting bars mounted thereon to receive directly a flask to be supported, of a vertically adjustable support for said device, and a spring interposed between the two and normally carrying the weight of said device and its load.

3. In devices of the class described, the combination with a vertically adjustable suitably recessed approximately horizontal frame, of a tilting member slidingly supported at its ends in the recessed frame, and adapted to tilt when downward pressure is applied at one end only of the member.

4. In devices of the class described, the combination with a frame provided with parallel recesses each having at its ends downwardly converging smooth surfaces, of independent bars located in said recesses, respectively, and each having rounded ends supported by and in sliding contact with the corresponding surfaces, whereby the bars may tilt independently to fit against the face of a superposed flask.

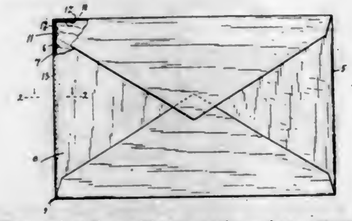
7. The combination with independent parallel bars adapted to support by their end portions, only, an inverted flask and each having suitable end bearing-surfaces, of a member having downwardly converging faces in position to support said bearing surfaces, respectively, means supporting said member and permitting it to rock in a plane transverse to said bars, and devices for raising and lowering said means.

8. The combination with a fluid cylinder and plunger rod for lowering an inverted mold to separate it from the pattern, of a rigid frame sustained by the plunger rod and provided with suitable ways having inclined end surfaces, bar-like mold sustaining devices having their ends resting against said surfaces, respectively, and free to move thereon, and secondary analogous mold supporting devices similarly supported upon the devices first mentioned.

[Claims 2, 5, and 6 not printed in the Gazette.]



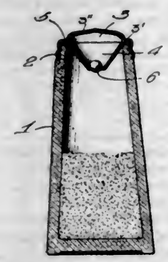
1,229,679. ENVELOP-OPENER. RUDOLPH URCHNIAK, West Allis, Wis. Filed Oct. 14, 1914. Serial No. 866,577. (Cl. 229—86.)



The combination with an envelop, of an opener therefor consisting of a length of thread having a handle portion, and anchored portion and a medial cutting portion, the cutting portion extending within and along the crease of one of the folds of the envelop, the anchored portion of said thread extending at right angles from the cutting portion into the crease of an adjacent fold, and the handle portion projecting outwardly from the envelop, the cutting and anchored portions of the thread being glued to the respective portions of the envelop which they engage approximately throughout their length, the cutting portion of the thread being so lightly glued to the portion of the envelop which it engages as to freely separate therefrom when pulled at an angle and the anchored portion being more securely glued to the portion of the envelop which it engages to maintain its anchorage while the envelop is being opened by the angular pull of the thread.

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1,229,680. CONDIMENT-HOLDER. JEAN J. VANDERVEER, Brattleboro, Vt. Filed Mar. 30, 1916. Serial No. 87,761. (Cl. 65—57.)



The combination with a salt shaker including the usual perforated cap threaded on the shaker body; of a gasket clamped between said shaker body and the cap to prevent the entrance of moisture, a funnel-shaped moisture excluding member formed integrally with said gasket and depending therefrom into the upper end of the shaker body, the lower end of said member being formed with a circular opening, and a heavyweight ball confined in the space between said member and the cap to normally close the opening in the former to prevent the entrance of moisture and to strike the cap when the shaker is in use to jar any collected salt from said cap.

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1,229,681. EMULSIFIABLE LIQUID OR SOLID SOLUTION AND METHOD OF MAKING IT. RAYMOND VIDAL, Paris, France. Filed July 3, 1912. Serial No. 707,548. (Cl. 87—5.)

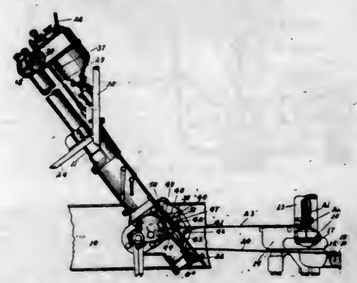
1. A clear solution, emulsifiable with water, containing an aqueous solution of an alkaline compound of castor oil, a hydroxylated aromatic compound and at least an equal amount of an organic liquid insoluble in water.

2. The herein described process of making clear solutions emulsifiable with water, which consists in treating an organic compound insoluble in water with a solution of an alkaline compound of castor oil in the presence of a hydroxylated aromatic compound, the quantity of said organic compound being at least equal to that of the alkaline compound of castor oil.

3. The herein described process of making clear solutions emulsifiable with water, which consists in mixing and heating together, a solution of an alkaline compound of castor oil, the organic compound insoluble in water which is to be dissolved, and a hydroxylated aromatic compound.

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1,229,682. MOTOR-VEHICLE. JESSE G. VINCENT, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 6, 1913. Serial No. 788,493. (Cl. 21—90.)



1. In a motor vehicle the combination with the steering column, a control rod mounted thereon, and a device at the upper end of the steering column for actuating said rod, of a carbureter having a plurality of valves, rods for controlling said valves, levers to which said rods are connected, and means on said control rod for yieldingly engaging one of said levers and for positively engaging the other of said levers.

2. In a motor vehicle, the combination with the steering column, a control rod mounted thereon, and a device at the upper end of the steering column for actuating said rod, of a carbureter having a plurality of valves, rods for controlling said valves, levers to which said rods are connected, a spring device on said control rod for engaging one of said levers and a rigid device on said rod for engaging the other of said levers.

3. In a motor vehicle, the combination with the steering column, a control rod mounted thereon, and a device at the upper end of the steering column for actuating said rod, of a carbureter having a plurality of valves, rods for controlling said valves, levers to which said rods are connected, and means on said control rod for engaging said levers *seriatim*.

4. In a motor vehicle, the combination with the steering column, and the carbureter having a plurality of air valves, and independent connections from said valves to the steering column, of means on the steering column for controlling said valves *seriatim*.

5. In a motor vehicle, the combination with the steering column, and the carbureter having a plurality of valves, of independent connecting rods from said valves to the steering column, levers on the steering column to which said rods are connected, and a common means for actuating said levers *seriatim*.

[Claim 6 not printed in the Gazette.]

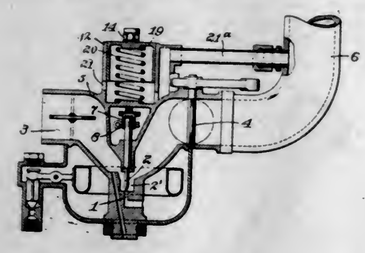
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1,229,683. CARBURETER. JOHN VODICKA and ADOLPH F. YOUNG, Charlevoix, Mich., assignors to Eureka Carburetter Co., Charlevoix, Mich., a Corporation of Michigan. Filed Jan. 6, 1916. Serial No. 70,642. (Cl. 261—48.)

1. In combination, in a carbureter, a throttle valve, a fuel valve, an air intake directing the air past the fuel valve, means for holding the fuel valve open initially and

means in connection, independently of the main air inlet, with the manifold beyond the throttle valve for moving the fuel valve toward closed position under the action of the suction existing in the connection between the throttle valve and the engine, substantially as described.

2. In combination, in a carbureter, a throttle valve, a main air intake, a fuel valve, an auxiliary air intake between the throttle and the engine and means subjected to the suction in the connection between the throttle and the engine for controlling the fuel inlet valve and the auxiliary air intake, in accordance with the regulation of the throttle, substantially as described.



3. In combination, in a carbureter, a throttle valve, a main air intake, a fuel valve, an auxiliary air intake, said fuel valve and auxiliary air intake being initially open, and means for controlling the fuel valve and the auxiliary air intake, said means, for closing said auxiliary air intake and fuel valve being subjected to the suction pressure existing between the throttle valve and the engine, substantially as described.

4. In combination a throttle valve, a main air intake, a fuel valve past which the main air is directed, an auxiliary air intake connected with the manifold between the throttle and the engine, and means subjected to the suction of the air passing through the said auxiliary air intake to the manifold beyond the throttle valve, said means having a closing action on the auxiliary air intake and the fuel valve under the suction existing in the manifold beyond the throttle valve, substantially as described.

5. In combination, a throttle valve, a fuel valve, an air intake directing the air past the fuel valve, means for operating the fuel valve automatically, including a member subjected to the suction of the engine and closing under said suction, said means including an adjustment for setting the fuel valve in open position for low speed, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

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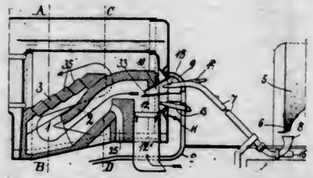
1,229,684. PROCESS FOR THE PREPARATION OF A PHOSPHATE FERTILIZER. VITTORIO VOLPATO, Milan, Italy. Filed Oct. 27, 1916. Serial No. 127,996. (Cl. 71—7.)

1. A process of rendering available the phosphoric acid of phosphate rock which comprises mixing the ground phosphate rock with a smaller quantity of a mixture of alkali earth metal carbonate, alkali metal carbonate and alkali metal sulfate, heating the mixture to about 750° C., and then treating the product with water.

2. A process of rendering available the phosphoric acid of phosphate rock which comprises mixing the ground phosphate rock with a smaller quantity of a mixture of dolomite, sodium carbonate and sodium sulfate, heating the mixture to about 750° C., and then treating the product with water.

3. A process of preparing an assimilable phosphatic fertilizer consisting in roasting a mixture comprising 100 parts of phosphorite containing about 60% tricalcium phosphate and about 6 parts of a mixture of 40% dolomite, 25% sodium carbonate and 35% sodium sulfate, at a temperature of about 750° C., and thereafter treating the calcined mass with water.

1,229,685. FURNACE FOR PULVEROUS FUEL. KARL HJALMAR VILHELM VON PORAT, Stocksund, Sweden. Filed July 15, 1913. Serial No. 779,161. (Cl. 110—28.)



1. In a furnace for burning pulverous fuel, a channel, built of refractory material, a vault above said channel, means for introducing the fuel into said channel, free spaces on both sides of the channel between the walls of the channel and the furnace wall, the vault extending over the front part of the channel and the said free spaces so as to form backwardly leading channels on both sides of the first channel, means for causing the gases to pass said backwardly leading channels for the purpose of being cooled before passing forwardly over the vault.

2. In a furnace for burning pulverous fuel, a channel, built of refractory material, a vault above said channel, means for introducing the fuel into said channel, free spaces on both sides of the channel between the walls of the channel and the furnace wall, the vault extending over the front part of the channel and the said free spaces so as to form backwardly leading channels on both sides of the first channel, means for causing the gases to pass said backwardly leading channels for the purpose of being cooled before passing forwardly over the vault, and an independent firing device for the purpose of igniting the fuel at the beginning of the supply or at intervals.

3. In a furnace for burning pulverous fuel, a channel, built of refractory material, a vault above said channel, means for introducing the fuel into said channel, free spaces on both sides of the channel between the walls of the channel and the furnace wall, the vault extending over the front part of the channel and the said free spaces so as to form backwardly leading channels on both sides of the first channel, means for causing the gases to pass said backwardly leading channels for the purpose of being cooled before passing forwardly over the vault, an independent fire box, and means for causing both the gases resulting from the burning of the pulverous fuel as well as the gases coming from the fire box to pass both the upper and lower sides of the vault.

4. In a furnace for burning pulverous fuel, a downwardly extending vault having a channel therein, means for introducing the fuel into the upper end of said channel, a second vault overlapping but spaced from the first mentioned vault, means for igniting the fuel, free spaces on both sides of the first mentioned vault between this latter and the furnace wall, the last mentioned vault extending over the front part of the channel and the free spaces so as to form backwardly leading channels on both sides of the first channel, means for causing the gases to pass said backwardly leading channels for the purpose of being cooled before passing forwardly over the vault.

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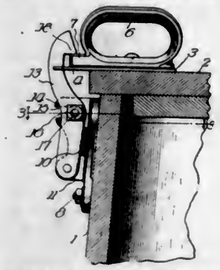
1,229,686. WASHING-MACHINE. WILLIAM H. VOSS, Davenport, Iowa. Filed Jan. 24, 1914. Serial No. 814,072. (Cl. 70—3.)

1. A clamp for washing machines or the like comprising a bracket mounted on one part thereof, a hooked device pivoted on said bracket and adjustable with relation thereto, a plate pivoted upon another part substantially at right angles to the hook and having a portion adapted to engage with said hook whereby said parts may be firmly clamped together.

2. In a washing machine, a tub, a removable lid thereon, a bracket secured to the side of the tub and including a guide, a forked hooked member pivoted to the bracket and



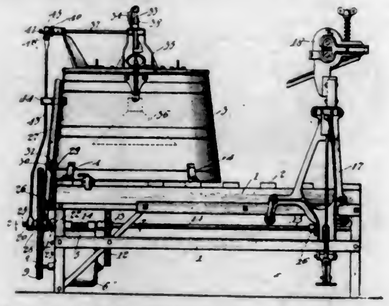
embracing said guide, means for adjusting said hook member with relation to said guide, a second guide on the lid, a plate pivotally mounted at right angles to the hook



above said second guide and having a cam portion adapted to engage with the hook upon the hooked member, all for the purpose described.

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1,229,687. GEARING FOR WASHING-MACHINES. WILLIAM H. VOSS, Davenport, Iowa. Filed Mar. 15, 1915. Serial No. 14,347. (Cl. 74—50.)



1. In a gearing for washing machines, a platform, a driving shaft mounted therein, a support, an oscillating and reciprocating shaft in said support, a second shaft oscillating on an axis lying along its length for operating said first oscillating shaft, and a driving connection between the driving shaft and the second oscillating shaft.

4. In a gearing for washing machines, a support, a shaft adapted to reciprocate and oscillate in the support, a rocking shaft adapted to operate said first shaft, a main shaft underneath the support and connections from the main shaft to the rocking shaft to drive the same, including a clutch.

9. In apparatus of the class described, a driving shaft, a vertical shaft, a rocking shaft to operate said vertical shaft, a crank on said driving shaft, a clutch device interposed between said crank and said driving shaft, a connection between said crank and said rocking shaft and a lever for throwing said clutch.

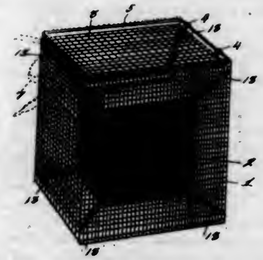
[Claims 2, 3, and 5 to 8 not printed in the Gazette.]

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1,229,688. EGG-CRATE. SIDNEY C. WALLACE, Chicago, Ill. Filed Apr. 14, 1916. Serial No. 91,083. (Cl. 150—0.5.)

1. A shipping crate comprising an outer casing constructed from a heavy cotton cord textile stiffened fabric, an inner casing constructed from a corresponding textile fabric, and means connected to and extending from the corners of the outer casing toward and connected to the corners of the inner casing, for yieldably suspending the inner casing spaced upon all sides from the inner surface of the outer casing.

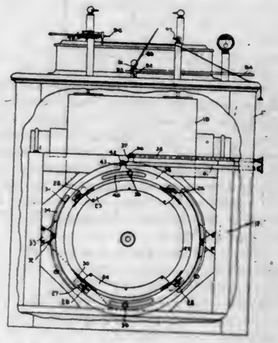
2. A shipping crate comprising an outer casing constructed from a textile stiffened fabric, provided with an open end, a textile fabric closure for said open end, an inner casing constructed from a stiffened textile fabric provided with an open end, clamping members carried



by the open end of the inner casing to hold the contents of the inner casing in place, yieldable means connected to and extending from the corners of the outer casing toward and connected to the corners of the inner casing, for suspending the inner casing spaced upon all sides from the inner surface of the outer casing.

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1,229,689. CURRENT TRANSFORMING AND RECTIFYING APPARATUS. JULIUS B. WANTZ, Chicago, Ill., assignor, by mesne assignments, to Victor Electric Corporation, Chicago, Ill., a Corporation of New York. Filed Nov. 5, 1914. Serial No. 870,391. (Cl. 175—364.)



1. In apparatus of the character set forth, the combination of a source of alternating-current supply, and rectifying means comprising current-conducting shoes spaced apart, and each formed of relatively adjustable sections, certain of said shoes being connected with said supply, a rotary member carrying current-conducting members adapted to coöperate with said shoes, and means for driving said rotary member in synchronism with said alternating current.

3. In apparatus of the character set forth, the combination of a source of alternating-current supply, and rectifying means comprising current-conducting shoes spaced apart and extending in substantially the same plane, each of said shoes being formed of relatively adjustable sections and certain of said shoes being connected with said supply, a rotary member carrying current-conducting members extending in substantially the same plane and adapted to coöperate with said shoes, and means for driving said rotary member in synchronism with said alternating current.

7. In apparatus of the character set forth, the combination of current-conducting shoes spaced apart and

each formed of relatively adjustable sections, and a rotary member carrying current-conducting members adapted to coöperate with said shoes.

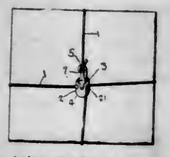
11. In apparatus of the character set forth, the combination of a ring rotatably mounted and carrying current-conducting members, a second ring rotatably supported on said first-named member and carrying current-conducting members, said first-named and last-named current-conducting members being arranged in sets to form sectional shoes spaced apart, and a rotary member carrying current-conducting members adapted to coöperate with said shoes, said first and second named rings being adjustable together about the axis of said rotary member.

13. In apparatus of the character set forth, the combination of a source of alternating-current supply, a transformer connected with said source, rectifying means connected with the secondary of said transformer, sparking terminals connected with the opposite sides of the line leading from the secondary of the transformer to said rectifying means and spaced apart to cause the transformed current to traverse the gap between said terminals when the voltage across the secondary of said transformer exceeds a predetermined intensity.

[Claims 2, 4 to 6, 8 to 10, 12, and 14 not printed in the Gazette.]

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1,229,690. PACKAGE-TYING DEVICE. JACOB J. WASKOM, Louisville, Ky. Filed Mar. 13, 1916. Serial No. 83,842. (Cl. 24—134.)



1. In a package tying device, a base plate, means for securing a cord to one end thereof, said plate being provided at the opposite end with a cord receiving recess, a laterally disposed slot extending from the edge of the plate into said recess and a spring pressed dog provided with a jaw coöperating with the wall of said recess to clamp said cord, the wall of said recess and the face of said jaw being forwardly and upwardly inclined, and the wall of said recess being smooth and the coöperating face of the jaw being transversely and longitudinally serrated, substantially as described.

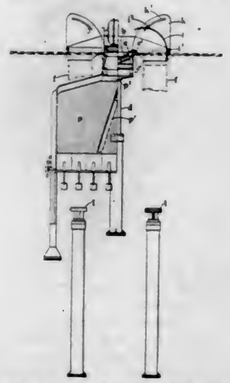
2. In a package tying device, a cord holder comprising a base plate provided at one end with a cord receiving recess, a plate secured to said base plate and provided with integral upturned ears, a dog having a jaw coöperating with said recess and provided with ears pivotally connected to the aforementioned ears, an aperture in the last mentioned plate forming with the base plate a recess, a spring having one end seated in said recess and the other end engaging said dog, substantially as described.

3. A package tie comprising a base plate provided at one end with a cord receiving recess, said base plate being substantially thicker at the cord receiving end to provide a greater bearing surface for said cord, a plate secured to said base plate, and provided with upturned ears, a dog provided with ears pivotally connected to the aforementioned ears, said dog having one end substantially thickened to coöperate with said cord receiving recess, an aperture in said plate forming with said base plate a recess, a spring having one end in said recess and the other end engaging said dog, substantially as described.

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1,229,691. APPARATUS FOR DISCHARGING COKE. STEPHEN NEWCOMBE WELLINGTON, London, England. Filed Oct. 30, 1916. Serial No. 128,471. (Cl. 214—1.)

1. An apparatus for discharging coke from the receptacle in which it has been quenched, comprising a frame having a mouth adapted to lie over the upper end of the receptacle, a curved plate or wall mounted over the said mouth, a ram adapted to move upwardly through the length of the receptacle, and a conveyer mounted to run within the frame and to receive the coke on its deflection

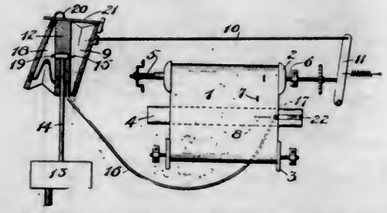


by the curved plate or wall aforesaid and to quickly carry the coke away on its discharge on to the conveyer, substantially as described.

[Claims 2 to 4 not printed in the Gazette.]

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1,229,692. PNEUMATIC NOTE-SHEET-TRACKING DEVICE. FRANK C. WHITE, Meriden, Conn., assignor to The Wilcox & White Company, Meriden, Conn., a Corporation of Connecticut. Filed Dec. 29, 1915. Serial No. 69,132. (Cl. 84—161.)



In a pneumatic player mechanism, a tracker board, music roll mechanism adjacent thereto and arranged to hold a perforated music sheet thereon, one of said parts being shiftable laterally relatively to the other to properly position said sheet on the tracker, a spring for moving the shiftable part in one direction and a shifter pneumatic for moving said part in an opposite direction on the collapse of said pneumatic, a brake for said shifter pneumatic, a pneumatic control for said brake, a passage from said exhauster to each of said pneumatics, the passage to the brake controlling pneumatic being freer than the passage to the shifter pneumatic, and a vent leading to said shifter pneumatic from the tracker board at a point adjacent to the edge of the music sheet, and arranged to be opened and closed thereby.

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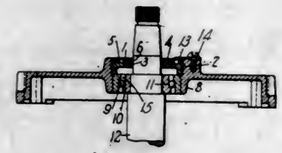
1,229,693. ADJUSTING DEVICE FOR BEARINGS AND PROCESS OF MANUFACTURING THE SAME. CHARLES E. WILSON, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 11, 1914. Serial No. 837,799. (Cl. 29—156.)

1. In an adjusting device, the combination with a disk provided with a threaded portion, of a perforated plate member attached thereto.

2. In an adjusting device, the combination with a disk having a screw-threaded portion, of a recessed plate member welded to said disk.



3. In an adjusting device, the combination with a disk having a screw-threaded flange integral therewith, of a recessed plate member welded to said disk.



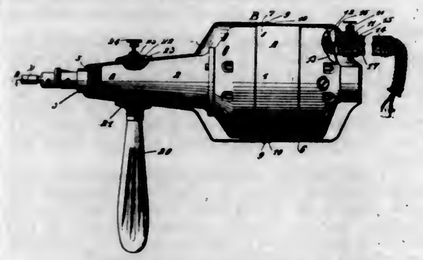
4. In an adjusting device, the combination with a disk having a peripheral screw-threaded portion, of a recessed plate member spot welded to said disk.

5. The process of manufacturing an adjusting device which consists in forming a threaded member by punching, forming a recessed member by punching, and then welding said members together.

[Claim 6 not printed in the Gazette.]

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1,229,694. SURGICAL-MOTOR CASING. WILLIAM A. WINTER, East Orange, N. J., assignor to The Kny-Scheerer Corporation, a Corporation of New York. Filed Apr. 28, 1916. Serial No. 94,125. (Cl. 74—56.)



1. A portable motor having a structural casing in combination with a removable sterilizable inclosing shell, said shell comprising two joinable parts; a bayonet joint for joining said parts; and means for anchoring said parts against turning relatively to said structural casing.

3. The combination with a surgical motor having various structural parts, of a sterilizable inclosing shell comprising two parts; means for securing one of said shell-parts to a structural part of said motor; means requiring a rotation of said second shell-part for securing said second shell-part in position; and means comprising an electric connector for preventing a reverse rotation of said second shell-part.

5. A two-part sterilizable shell forming a complete inclosure for a surgical motor; having a tubular extension forming a duct through said shell to permit the entrance of and to fit about a removable electrical plug.

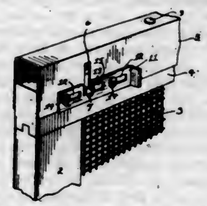
6. In surgical motors a sterilizable shell having an inturned flange 5; a tool-chuck having a flange 32 which by coöperation with flange 5 holds the chuck in operative position when said shell is in place; and a movable catch for holding said chuck against removal from said shell when said shell is removed from said motor.

[Claims 2 and 4 not printed in the Gazette.]

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1,229,695. WINDOW-SCREEN. PETER J. WOLFE, Columbus, Ohio. Filed July 11, 1916. Serial No. 108,685. (Cl. 156—38.)

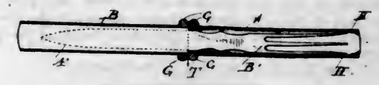
In a window screen, a rectangular body framework, a U-shaped channel member slidably embracing one side of said framework, said member having a slot in one of its legs, a pin carried by the side rail of said framework and projecting through said slot, a locking element carried by said member arranged to slide at right angles to



said slot, said element being provided with a bayonet slot whereby said pin may be engaged to hold said member and said frame immovable.

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1,229,696. COMBINATION KNIFE AND FORK. EDWARD D. WOODS, Cleveland, Ohio, assignor to Koren Manufacturing Company, Cleveland, Ohio. Filed Aug. 23, 1916. Serial No. 116,431. (Cl. 30—9.)

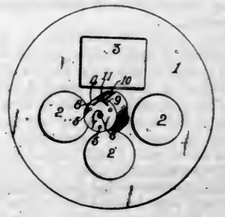


1. A combination knife and fork equipment comprising, a pair of hollow tubular handles each open at both ends to permit circulation of cleansing fluid therethrough, a knife blade having its shank end secured to one inner side of its respective handle leaving an unobstructed longitudinal opening therethrough at the other side, a fork having its shank secured to one inner side of its respective handle leaving a longitudinal opening throughout said handle, the knife and fork respectively insertible in the openings in the opposite handles and overlapping each other when the parts are assembled.

2. A compact equipment composed of eating utensils comprising, a pair of tubular handles having unobstructed longitudinal openings extended entirely therethrough to permit circulation of a cleansing medium, a knife secured to one inner side of one handle, and a fork secured to one inner side of the other handle, said knife and fork each spaced from one side of its respective handle to permit the insertion of the other of said respective members, in said unobstructed opening and integral lateral extensions at the meeting edges of said tubular handles.

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1,229,697. REEL. HARRY PORTER ALLEN, Austin, Tex., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Sept. 19, 1913. Serial No. 790,651. (Cl. 242—74.)



1. A film reel comprising a hub or drum, said drum being provided with a longitudinal slot for the reception of the end portion of a film, and a pair of outwardly extending members disposed in said slot and adapted to engage said end portion of the film, said members being so positioned as to automatically disengage themselves from the film when the latter is completely unwound from said drum, substantially as described.

2. A hub or drum for film reels, said drum being provided with a longitudinal slot for the reception of the

end portion of a film, and outwardly extending means disposed in said slot adapted to engage said end portion of the film, said means being so positioned as to automatically disengage the film when the latter is completely unwound from said drum, substantially as described.

3. A film reel comprising a hub or drum having a longitudinal slot for the reception of the end of a film, said slot being substantially greater in width than the thickness of the film, and a pair of outwardly extending spaced pins secured to the hub or drum and located substantially centrally of said slot, substantially as described.

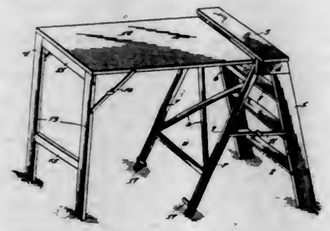
4. A film reel comprising a hub or drum having a longitudinal slot for the reception of the end of a film, said slot being substantially greater in width than the thickness of the film, and a pair of spaced pins extending substantially radially of the hub or drum and located substantially centrally of said slot, the outer ends of the pins being substantially coincident with the outer surface of the hub or drum, substantially as described.

5. A film reel comprising a hub or drum having a longitudinal slot for the reception of the end of a film, and a pair of outwardly and substantially radially extending spaced pins fixedly mounted in said slot adjacent the ends thereof for engaging the usual perforations in the edge portions of the film, the distance between said pins and one side of the slot being sufficient to permit the film to disengage said pins without appreciably bending the film, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

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1,229,698. COMBINATION STEP-LADDER AND IRONING-BOARD. JACOB ARBESS and SAMUEL BRISKER, Montreal, Quebec, Canada. Filed Jan. 2, 1917. Serial No. 140,119. (Cl. 228—32.)



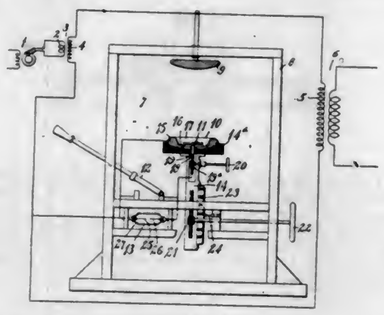
1. A combination step ladder and ironing board comprising a step ladder consisting of a step portion and a prop portion, a rod extending transversely of said prop portion for pivotally connecting the ladder to the step portion, an ironing board pivotally connected to said rod supporting legs carried by one end of said ironing board and said ironing board and supporting legs adapted to rest within said prop portion when in their folded position for the purpose specified.

2. A convertible article of furniture of the character described comprising a step ladder consisting of a step portion, a rod carried by said step portion and extending transversely thereof, a prop portion pivotally connected to said rod, an ironing board, a pair of hooks carried by said ironing board and adapted to be detachably and pivotally connected to said rod, supporting legs hingedly connected to the outer end of said ironing board, said supporting legs and ironing board adapted to rest within said prop portion when in their folded position and latch members carried by said prop portion for locking said ironing board within said prop portion for the purpose specified.

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1,229,699. HIGH-POTENTIAL-MEASURING DEVICE. JAMES C. ARMOR, Ingram, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 3, 1911, Serial No. 606,425. Renewed Apr. 30, 1915. Serial No. 25,078. (Cl. 171—95.)

1. The combination with a source of electrical energy and a plurality of condensers connected in series across said source, of a spark gap device connected in parallel relation to one of said condensers to indicate when the voltage of said source has a predetermined maximum value.



2. The combination with a source of high-potential electrical energy and two relatively variable condensers of widely different capacities connected in series across said source, of a discharge gap device connected in parallel with the condenser of larger capacity for indicating when the source of potential has a predetermined maximum value.

3. The combination with a source of high-potential electrical energy, of means for determining when the potential thereof has reached a predetermined maximum value comprising a condenser of variable capacity, a second condenser of relatively large capacity connected in series therewith, and a spark gap device at which discharges may occur, connected in multiple circuit with said larger condenser.

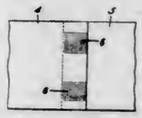
4. A high-potential measuring device comprising a stationary terminal member, a coöperating adjustable terminal member in electro-static relation therewith, an auxiliary terminal member adjustably related to said adjustable member, and a discharge gap device electrically connected to said adjustable terminal members.

5. A high-potential measuring device comprising cooperating and relatively adjustable terminal members in electro-static relation, an auxiliary terminal member adjustably associated with one of said terminal members, and a spark gap device connected to said auxiliary terminal member and to the terminal member with which it is associated.

[Claims 6 to 15 not printed in the Gazette.]

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1,229,700. ELECTRIC WELDING PROCESS. CARL B. AUEL, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 10, 1914. Serial No. 876,483. (Cl. 219—10.)



1. A process of preparing a thin sheet or ribbon of oxidizable metal for welding that comprises breaking the coating of oxid on the said sheet at a large number of closely adjacent points over substantially the area to be welded without substantially distorting or weakening the said sheet or ribbon.

2. A process of preparing a thin sheet or ribbon of oxidizable metal for welding that comprises forming a large number of relatively small projections over substantially the area to be welded in such a manner as to break the surface coating of oxid without substantially distorting or weakening the said sheet or ribbon.

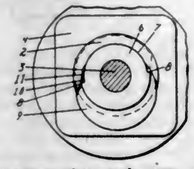
3. A process of preparing a thin sheet or ribbon of readily oxidizable metal for welding that comprises forming a large number of relatively small indentations in one side of the said sheet and over substantially the area to be welded, and thereby producing a like number of relatively sharp projections upon its other side, to break the surface coating of oxid.

4. A process of welding a thin sheet or ribbon of metal having surface scale adhering thereto that comprises breaking the said scale at a large number of relatively small points over substantially the area to be welded, whereby clean metal surfaces are exposed at the said points, placing the said treated surface against another metal surface and applying electric current and pressure.

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1,229,701. LOCK FOR AXLE-NUTS. JOHN H. BANKA, Battle Creek, Mich. Filed Mar. 30, 1916. Serial No. 87,734. (Cl. 151—27.)



1. The combination of an axle arm, of an axle skein therefor, an axle nut threaded on said skein, an axle skein retaining bolt threaded into said arm, an eccentric collar and a stop disk arranged on said bolt, said stop disk being provided with a segmental notch, the ends of the notch constituting stops, and a locking disk eccentrically mounted on said collar for rotative adjustment thereon so that when adjusted to one position it overlaps said axle nut and when adjusted to another position it lies within the circle of its bore, said locking disk being provided with a double cam terminating in a stop lug projecting into the notch of said stop disk to coact with said stops thereof, the cam being adapted to engage said disk when said stop lug is engaged with either stop of said stop disk.

3. The combination of a nut, a support member projecting beyond the nut, an eccentric collar and a stop disk arranged on said support member, said stop disk being provided with a pair of stops, and a locking disk eccentrically mounted on said collar for rotative adjustment thereon so that when adjusted to one position it overlaps said nut and when adjusted to another position it lies within the circle of its bore, said locking disk being provided with a stop lug coacting with the stops of said stop disk and with a cam adapted to engage said stop disk when said stop lug is engaged with either stop of said stop disk.

[Claim 2 not printed in the Gazette.]

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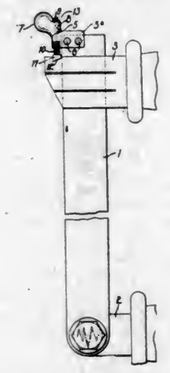
1,229,702. [WITHDRAWN.]

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1,229,703. LATCHING DEVICE. HAROLD G. BAXTER, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 9, 1914. Serial No. 843,942. (Cl. 175—282.)

1. The combination with a stationary and a movable member, of means for locking said members in engagement, a relatively stationary cam member mounted on the movable member, and a rotatable cam member operatively connected to the locking means and adapted to cooperate with the stationary cam member to release the said locking means when the rotatable cam member is turned.

2. In a knife-blade switch, the combination with cooperating contact members, of an eye member attached to the movable contact member, a locking means for engaging the stationary contact member when the switch is closed, a relatively stationary cam member mounted on the movable contact member, a rotatable cam member adapted to coöperate with the stationary cam member to actuate the locking means when it is turned, and a hook member adapted to actuate the rotatable cam member when it is inserted in the eye member.



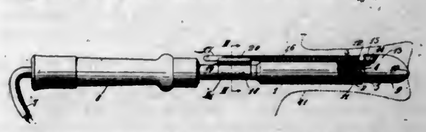
3. In a knife-blade switch, the combination with stationary contact members, and a coöperating knife-blade member, of an eye member and a stationary cam member mounted on the knife-blade member, a bolt for normally engaging said stationary contact member when the switch is closed, a rotatable cam member adapted to coöperate with the stationary cam member to release the bolt, and an operating hook member adapted to actuate the rotatable cam member when it is inserted in the eye member.

4. A latching device for a knife-blade switch comprising a bolt carried by the movable member of the switch and adapted to engage the stationary member, a relatively stationary cam member mounted on the movable member of the switch, and a rotatable cam member operatively connected to the bolt and adapted to coöperate with the stationary cam member to disengage the bolt from the stationary member of the switch when the rotatable cam member is rotated.

5. In a knife-blade switch, the combination with stationary and movable contact members, of a bolt for locking the contact members in engagement, a relatively stationary cam member mounted on the movable contact member, and a rotatable cam member operatively connected to the bolt and adapted to coöperate with the stationary cam to release the said bolt when the rotatable cam member is rotated.

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1,229,704. THERMOMETER-CAUTERY. WILLIAM D. BERRY, Muskogee, Okla., assignor to The Kny-Scheerer Corporation, a Corporation of New York. Filed Aug. 18, 1916. Serial No. 115,613. (Cl. 73—52.)



1. The combination with the elongated heating element of a cautery, of an operating tip of heat conducting metal having a base formation for ready attachment to said heating element, and a part projecting laterally beyond a side portion of said heating element, said projecting part being provided with a rearwardly opening cavity; a thermometer projecting into said cavity and extending outwardly therefrom along said heating element; and a

clip for staying such portion of said thermometer to said heating element.

3. A detachable operating tip for cauteries, comprising a formation at its rear for attachment to and detachment from the heating element of the cautery; and a body portion having a laterally positioned cavity opening to the rear for the purpose of seating a thermometer.

[Claim 2 not printed in the Gazette.]

1,229,705. TROLLEY-WIRE HANGER FOR CATENARY SYSTEMS. GLENN HENRY BOLUS, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed July 3, 1916. Serial No. 107,348. (Cl. 191—41.)



1. In a trolley hanger the combination of a yoke member for attaching to a suspension cable, a trolley wire clamp and a connecting rod uniting the yoke and clamp and engaging the suspension cable; the yoke member consisting of a U shaped body, both ends of which are provided with openings therethrough whose axes coincide, and one of the openings being screw threaded.

10. In a trolley wire hanger the combination with a suspension cable of a yoke member having a U shaped body for removably engaging over a cable, the yoke member having a threaded aperture at one end, a connecting rod threaded through the aperture and passing through an aperture in the other end of the yoke member and being adapted to be adjusted into engagement with the cable beyond the last named end to coöperate with the inner face of the yoke body to clamp the cable and also adapted to be adjusted away from the cable so that its extremity will stand in substantially the same horizontal plane as the last mentioned end of the yoke body to permit the cable to have free movement within the U shaped body and at the same time preventing displacement from the cable, and a trolley clamp attached to the free end of the connecting rod.

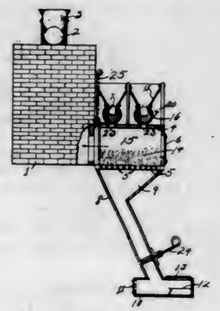
14. A trolley wire hanger comprising a yoke member for engaging the suspension cable, a trolley wire clamp and a connecting member, the two ends of the yoke member being screw threaded and connected to one end of the connecting member.

17. In a messenger wire clamp the combination of a yoke member and a clamping member to engage the messenger wire; the yoke member consisting of a U shaped body, the extreme ends of which are provided with openings adapted to encircle one end of the clamping member to form a closed loop for a messenger wire.

[Claims 2 to 9, 11 to 13, 15, 16, and 18 to 22 not printed in the Gazette.]

1,229,706. FURNACE. DAVID R. BONE, Oglesby, Tex. Filed Aug. 22, 1916. Serial No. 116,218. (Cl. 110—23.)

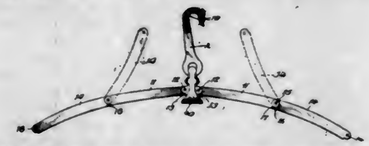
1. A heat producing apparatus comprising a furnace provided with grate bars, means for feeding fuel to said furnace, a combined ash and heated air chute depending from said furnace, a fire-box at the termination of said chute, and grate bars for maintaining a fire in said fire-box.



4. A heat producing and heat conserving apparatus comprising a furnace in communication with a kiln, grate bars for supporting fuel in said furnace, stokers for feeding fuel to said furnace, means for excluding cold air from said furnace, and means for preheating air and feeding the same to said furnace consisting of a chute depending from said grate bars for receiving ashes from said grate bars and a fire-box at the termination of and communicating with said chute, and means for maintaining a fire in said fire-box for heating air and forcing the same up said chute into said furnace.

[Claims 2, 3, 5, and 6 not printed in the Gazette.]

1,229,707. GARMENT-HANGER. RANSOM Y. BOYER, Bloomington, Ill., assignor of one-half to John B. Farquhar, Chicago, Ill. Filed July 30, 1915. Serial No. 42,709. (Cl. 211—13.)



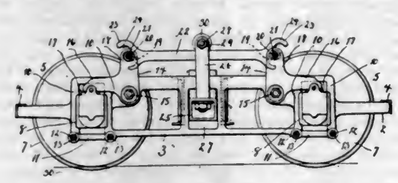
A garment hanger embodying a body portion, one end of which is shaped to form one jaw of a clamp, a coöperating jaw pivotally connected with the body, arm sections pivotally connected to the body adjacent the clamp, the pivots of the arms projecting laterally beyond the face of the arms and the body, a second arm section pivotally connected with the extremities of the first recited arm section, the outer arm sections having recesses adjacent their extremities and adapted to receive the pivots of the first recited arm section when the sections are folded with respect to each other, stops for limiting the unfolding movement of the arm sections, the pivots between the arm sections projecting laterally beyond the faces of the arms, there being recesses in the body for receiving the projecting portions of the last recited pivots when the arm sections are all folded with respect to the body, for yieldingly securing the parts in folded relation, and means whereby the body may be suspended.

1,229,708. SPRINGLESS OR FLOATING SUSPENSION FOR VEHICLES. GIUSEPPE BRAVI, Allentown, Pa., assignor of one-half to Sante T. Alleva, Norristown, Pa. Filed Nov. 29, 1915. Serial No. 63,911. (Cl. 105—240.)

1. A springless or floating suspension comprising a truck having side pieces, journal boxes, bell crank levers pivoted to the side pieces and coacting with adjacent journal boxes, means coacting with each pair of bell crank levers pivoted to the same side piece, whereby said bell



crank levers will be actuated in unison and in opposite directions, and a bolster suspended from said means.

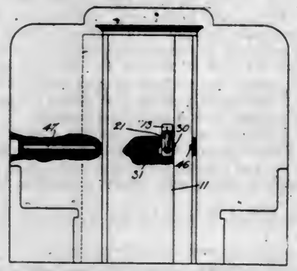


2. A springless or floating suspension comprising a truck having side pieces, journal boxes, bell crank levers pivoted to the side pieces and coacting with adjacent journal boxes, means coacting with each pair of bell crank levers pivoted to the same side piece, whereby said bell crank levers will be actuated in unison and in opposite directions, a bolster, and means for swingingly suspending said bolster from said first named means.

3. A springless or floating suspension for vehicles comprising a truck having side pieces, spaced journal box slides situated at each end of said side pieces, means for closing the space between said slides, wheel sets including journal boxes slidably mounted between said slides, spaced bell crank levers pivoted to the side pieces and coacting with adjacent journal boxes and an equalizing bar having bearing faces at angles to the longiutdinal center coacting with each pair of spaced bell crank levers pivoted to the same side piece.

4. A springless or floating suspension for vehicles comprising a truck having side pieces, spaced journal box slides situated at each end of said side pieces, means for closing the space between said slides, wheel sets including journal boxes slidably mounted between said slides, spaced bell crank levers pivoted to the side pieces, the horizontal arms of said bell crank levers coacting with adjacent journal boxes, an anti-friction roller mounted between the vertical arms of each pair of spaced bell crank levers, an equalizing bar having bearing faces at angles to its longitudinal center coacting with the rollers carried by the spaced bell crank levers pivoted to the same side piece, a hook at each end of the bearing faces to prevent the accidental displacement of the equalizing bar, a bolster the ends of which project through the side pieces, U shaped hangers for suspending said bolster from the equalizing bar, and an anti-friction roller carried by each hanger coacting with the equalizing bar.

1,229,709. LOCK MECHANISM FOR SLIDING DOORS. FRANK M. BRINCKERHOFF, Englewood, N. J., assignor to James L. Howard & Company, Hartford, Conn., a Corporation of Connecticut. Filed Feb. 1, 1912. Serial No. 674,672. (Cl. 70—102.)



1. The combination, in latch mechanism for sliding doors provided with adjacently disposed latches for different positions of the door, of a keeper for one of said positions, mounted on the door casing in the plane of the door and extending within the door through its rearward edge for engagement with one of said latches.

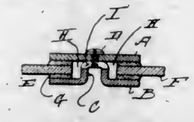
2. The combination, in latch mechanism for sliding doors, of a latch casing, a plurality of latches, mounted in the casing, for different positions of the door, and a keeper for one of said positions mounted in and concealed by the door casing and extending within the door through its rearward edge for engagement with one of said latches.

3. The combination, in latch mechanism for sliding doors of hollow shell construction, of a latch and keeper for an open position of the door, the latch being mounted within the door shell adjacent to the front edge of the door and the keeper being mounted within the door casing and extending within the shell of the door through its rearward edge into engaging relation with the latch.

4. The combination, with a sliding door, of a latch for an open position of the door, and a keeper pivotally supported by the door casing and extending into the door through its rearward edge.

5. The combination, with a sliding door, of a latch for an open position of the door, a keeper pivotally supported by the door casing and extending into the door through its rearward edge, and a guide carried by the door for supporting and guiding the latch-engaging end of the keeper.

1,229,710. MUNNION FOR FIREPROOF WINDOW-SASHES. HARRY E. CAMPBELL, New York, N. Y. Filed Jan. 15, 1917. Serial No. 142,377. (Cl. 189—78.)

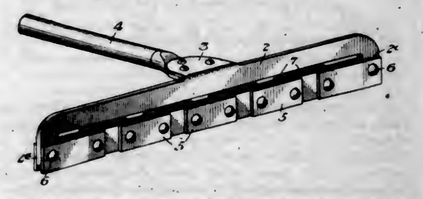


1. A sash munnion, comprising two parallel metal plates, one of said plates having a struck up longitudinal rib or projection, and means for securing the other of said plates to the outer face of said rib, the said rib having a plurality of transverse openings.

2. A sash munnion, comprising two parallel metal plates, one of said plates having a struck up longitudinal rib or projection, and means for securing the other of said plates to the outer face of said rib, the said rib having a plurality of recesses on its outer face forming air passages between said face and said last-named plate.

3. A sash munnion, comprising two parallel metal plates, one of said plates having a struck up longitudinal rib or projection secured to the other plate and having transverse openings, and panes between said plates and on opposite sides of said rib, there being clearances between the inner edges of said panes and said rib communicating with said transverse openings.

1,229,711. SCRAPER FOR GLASS FLATTENING STONES. ORLANDO B. CARNAHAN, Monongahela, Pa., assignor to Window Glass Machine Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed July 12, 1916. Serial No. 108,952. (Cl. 15—32.)



1. A scraping tool for glass flattening stones, comprising a holder, and a sectional scraping blade connected to the holder at the end portions and having the sections flexibly connected to permit of its vertical flexing, substantially as described.

2. A scraping tool for flattening stones having a holder and a jointed scraping blade supported thereby, each section of said blade comprising a plurality of scraping members arranged side by side, substantially as described.

3. A scraping tool for flattening stones having a holder and a jointed scraping blade each section of which comprises a plurality of edgewise disposed scraped blades, substantially as described.

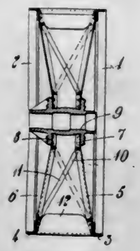
4. A scraping tool for flattening stones, comprising a holder and a jointed scraper blade, each section of said blade comprising a plurality of edgewise disposed scraper members, the members of each section being pivotally connected to the members of adjacent sections, and the end sections being pivotally connected to the holder, substantially as described.

5. A scraping tool for flattening stones, comprising a holder and a jointed scraping blade, the sections of said blade consisting each of a plurality of edgewise disposed substantially parallel scraping members, the members of adjacent sections being staggered with respect to each other, substantially as described.

[Claim 6 not printed in the Gazette.]

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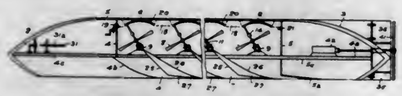
1,229,712. TRACTION-WHEEL. GUNNAR ELIAS CASSEL, Stockholm, Sweden, assignor to Artur Leffler, Djursholm, Sweden. Filed Nov. 9, 1915. Serial No. 60,527. (Cl. 21—216.)



A traction wheel, forming a framework open on all sides and comprising two side rings of angle metal, one flange of each ring forming a plane running surface at the periphery of the wheel, members of angle metal rigidly connecting said rings at intervals within the periphery of the wheel, the operative surface of each of said members forming oblique angles with the radius of the wheel, and spokes of angle metal connected with the side rings between said connecting members, substantially as and for the purpose set forth.

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1,229,713. MECHANICAL AIR-BORNE SHIP. GEORGE ALBERT CHADDOCK, Broad Green, Liverpool, England. Filed Apr. 24, 1916. Serial No. 93,295. (Cl. 244—19.)



1. A mechanical air and water-borne ship of substantially cylindrical section, tapered ends to said ship, inclosed compartments at the ends of the ship platformed and bulkheaded off from the remainder of the vessel, a central portion in the vessel open above and below, and longitudinal pontoons extending throughout the ships's sides.

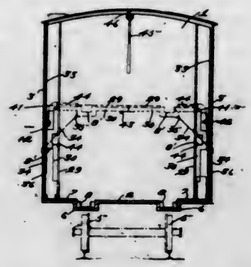
4. A mechanical air and water-borne ship of substantially cylindrical section, tapered ends to said ship, inclosed compartments at the ends of the ship platformed and bulkheaded off from the remainder of the vessel, a series of trunkways at the lower open part of such central portion, the thwartship inclosing sides of such trunkways being arranged as a series of planes, a series of propellers disposed in the central portion, means for varying the angular inclination of the propellers, longitudinal pontoons extending throughout the ship's sides, elevating and depressing planes horizontally disposed at the bow and stern of the ship, a vertically disposed rudder at the stern, and means for operating the planes and the rudder.

6. In an air ship, a body having its upper and lower portions open throughout its length, means positioned centrally of the body and throughout its length for propelling the air ship, and means for adjusting the propelling means for controlling the movements of the ship.

[Claims 2, 3, 5, 7, and 8 not printed in the Gazette.]

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1,229,714. FREIGHT-CAR. CHARLES CLARK and JOSEPH MANNING, San Francisco, Cal. Filed Oct. 11, 1916. Serial No. 124,985. (Cl. 105—15.)



1. In a freight car having a floor, lineally disposed parallel channel members carried thereby and adapted to receive the wheels of a vehicle, and means associated with said channel members for securing said vehicle wheels therewithin.

4. In a freight car, a floor having lineally disposed parallel channels formed therein and adapted to receive the wheels of a vehicle, and hinged cover members for covering said channels to provide an unbroken floor when said channels are not used for the reception of vehicle wheels.

7. In a freight car a floor having lineally disposed parallel channels formed therein and adapted to receive the wheels of a vehicle, adjustable chocks adapted to block said wheels to prevent rotation thereof within said channels, and means for adjustably securing said chocks within said channels.

20. In a freight car having side walls, a roof, and a floor, a second floor positioned above the first floor and divided lineally into two sections, a pivotal connection between each of said sections and the car wall adjacent thereto, whereby said second floor sections may be moved from a horizontal position to a vertical position parallel with and adjacent to the walls of said car, means associated with the roof of the car for elevating the object therein to enable the sections of said second floor to be raised to a horizontal position, and means for supporting said floor sections in said horizontal position.

21. In a freight car, a floor having lineally disposed channels formed therein and adapted to receive the wheels of a vehicle, and devices positioned within said channels and adapted to secure said vehicle to prevent movement thereof.

[Claims 2, 3, 5, 6, 8 to 19, and 22 not printed in the Gazette.]

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1,229,715. DRINKING-FOUNTAIN ATTACHMENT. FRANKLIN D. CLARK, National Home, Wis. Filed Aug. 30, 1916. Serial No. 117,581. (Cl. 137—110.)

As an article of manufacture a drinking fountain attachment comprising a hollow hemispherical head portion,



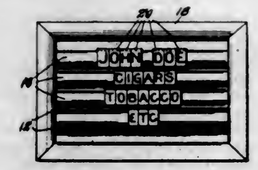
a substantially straight tube extending centrally from said head portion and adapted for insertion in the mouth



of the user and a plurality of spacing projections on the inner surface of the head.

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1,229,716. CHANGEABLE SIGN. WARREN L. CLARK, New York, N. Y. Filed Apr. 3, 1916. Serial No. 88,719. (Cl. 40—142.)




1. In a changeable sign, a series of superimposed rails, and supporting blocks arranged behind each rail near the ends thereof, the lower portions of the blocks for each rail bearing upon the supporting blocks for the next adjacent lower rail to space said rails apart.

2. In a sign, a series of rails formed of sheet metal having their upper and lower edges bent in the same direction so as to occupy substantially parallel inclined planes, and supporting blocks positioned behind each rail near the ends thereof, the lower portions of the blocks for each rail bearing upon the supporting blocks for the next adjacent lower rail to space said rails apart.

3. In a changeable sign, a series of superimposed rails, supporting blocks arranged behind each rail near the ends thereof, the lower portions of the blocks for each rail bearing upon the supporting blocks for the next adjacent lower rail to space said rails apart, and a series of character bearing plates provided with hooks on their upper ends, which hooks are adapted to engage the upper edges of said rails.

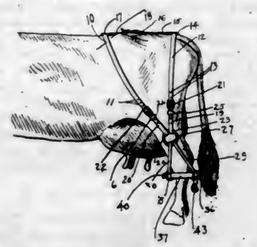
4. In a sign, a series of rails formed of sheet metal having their upper and lower edges bent in the same direction so as to occupy substantially parallel inclined planes, supporting blocks positioned behind each rail near the ends thereof, the lower portions of the blocks for each rail bearing upon the supporting blocks for the next adjacent rail to space said rails apart, and a series of character bearing plates provided with hooks on their upper ends, which hooks are adapted to engage the upper edges of said rails.

5. In a changeable sign, a series of superimposed rails, combined spacing and supporting blocks located behind each rail near the ends thereof, and each block being provided with a depending portion which is adapted to engage the next adjacent lower block.

[Claim 6 not printed in the Gazette.]

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1,229,717. RESTRAINING-DEVICE. ERNEST J. COLBOURN, Shelbina, Mo. Filed Mar. 28, 1916. Serial No. 87,286. (Cl. 119—126.)



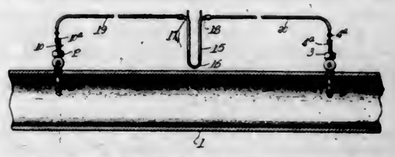
1. In a hopple, a harness adapted to be applied and mounted on the rear limbs of an animal, a plurality of diverging members connected to the lower ends thereof, and a chain joining and closely connecting the diverging members whereby the animal is prevented from moving either of its rear limbs.

2. In a hopple, a harness comprising front and rear body straps, said harness adapted to be applied and mounted on the rear limbs of an animal, a plurality of diverging members connected to the lower ends thereof, and a chain joining and closely connecting the diverging members to encircle the rear limbs of an animal to prevent one limb being moved independently of the other.

3. In a hopple, a harness comprising forward and rear body straps, said harness adapted to be applied and mounted on the rear limbs of an animal, a short strap adjustably connected with each end of each of the body straps, a shackle mechanism carried by the last named straps to encircle the rear limbs of an animal whereby one limb is prevented from moving independently of the other.

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1,229,718. APPARATUS FOR MEASURING THE FLOW OF A LIQUID STREAM. EDWARD S. COLE, New York, N. Y. Filed Jan. 14, 1914. Serial No. 811,985. (Cl. 73—167.)



1. The combination with a pipe or conduit, of a pair of devices situated a distance apart along the length of said pipe or conduit, and provided with members projecting into the interior of the pipe or conduit, said members having side apertures and a duct or passage communicating with said apertures, and means connected with the ducts or passages of said devices for indicating the loss of head or pressure at said devices.

2. The combination of a supporting rod having a duct or passage, a device carried by said rod and provided with apertures and also with a duct or passage communicating with said apertures, and also communicating with the duct or passage in said supporting rod, said device being mounted for adjustment relatively to said supporting rod while at the same time maintaining the duct or passage therein in communication with the duct or passage in said rod.

3. A pressure receiving device comprising a member adapted for insertion into a flowing stream and provided with side apertures, and also with a duct or passage communicating with said apertures, said member being mounted for swinging movement or adjustment to vertically adjust said apertures, and means for swinging the same.

4. A pressure receiving device comprising a member adapted for insertion into a flowing stream and provided

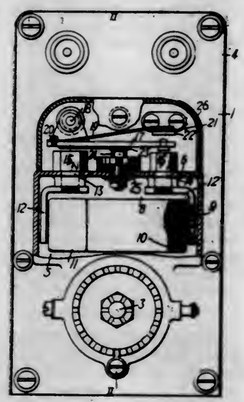
with side apertures, and a duct or passage communicating with said apertures and extending to one end of said member, said member being pivotally mounted at the end to which said duct or passage is extended to permit its being swung up and down in the flowing stream, and means for swinging said member.

5. A pressure receiving device comprising a member adapted for insertion into a flowing stream, said member being provided with side apertures, and a passage or duct extending upwardly to its upper end and connected with said side apertures, and a tube to which the upper end of said member is connected, said duct or passage being in communication with the bore of said tube.

[Claims 6 to 10 not printed in the Gazette.]

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1,229,719. CUT-OUT. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 2, 1913. Serial No. 758,311. (Cl. 175—281.)



1. In combination, a casing member, a cutout having pole pieces bent at right angles and extending inwardly, means for attaching said pole pieces to said casing, said means forming an extension for said pole pieces, an armature for said cutout, and a detachable cover for said armature and said extensions.

2. A cut out comprising a casing, a core member, pole pieces bent at right angles and a coil within said casing, members extending through said casing at right angles to said core member and connected to said pole pieces, and a movable armature member coacting with said extending members.

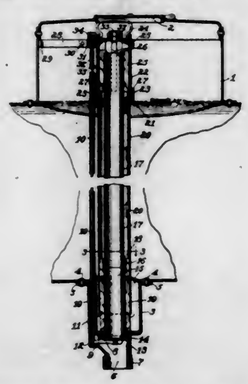
3. A cut out comprising a casing having a chamber, a core member and pole pieces inclosed and supported by said casing, extensions for said pole pieces projecting through said casing, a movable armature member coacting with said extensions, and a removable cover for said armature member.

4. A cut out comprising a supporting member, a core member, means for connecting said core member to said supporting member, said means comprising members bent at right angles and members extending through said casing, a coil surrounding said core member, a contact member upon and insulated from said supporting member, an armature member coacting with said connecting means, and a contact member carried by the armature member for coacting with the other contact member.

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1,229,720. TANK-SIPHON. PARKER COOK, Washington, D. C., and WILLIAM E. WINE, Toledo, Ohio. Filed July 7, 1916. Serial No. 107,951. (Cl. 137—21.)

1. A pipe adapted to pass through the bottom of a tank and also extending upward above the fluid level of said tank, said pipe being normally closed at its lower end, an enlarged casing fitting over the upper end of said pipe and capable of vertical movement to thereby form a vacuum in said pipe and means independent of the casing for opening the lower portion of said pipe to thereby siphon the contents of said tank.



2. In combination with a tank car provided with a dome, a pipe adapted to pass through the bottom of said tank car and also extend upward into the said dome, an enlarged casing fitting over the upper end of said pipe and capable of vertical movement to thereby form a vacuum in said pipe and means independent of the casing for opening the lower portion of said pipe to thereby siphon the contents of said tank car.

3. In combination with a tank car provided with a dome and dome cover, a pipe adapted to pass through the bottom of said tank car and also extend upward above the fluid level of said tank into said dome, an enlarged casing in said dome and fitting over the upper end of said pipe and capable of vertical movement to thereby form a vacuum in said pipe, means for opening the lower portion of said pipe to siphon the contents of said tank and means connected to the said casing to prevent a vacuum in said pipe when said dome cover is in its normal position.

4. In combination with a tank car provided with a dome and dome cover, a tubular portion extending through the bottom of said tank car and extending upwardly into said dome, said tubular portion normally closed at its lower end, said pipe open at its upper end, a casing open at its lower end and fitting over the upper end of said passageway, said casing capable of vertical movement to form a vacuum in said tubular portion, said casing provided with a valve in its upper end, said valve provided with means obstructing the closing of said dome unless the valve is in its open position, and means at the lower end of said tubular portion for opening the same to thereby siphon the contents of said tank.

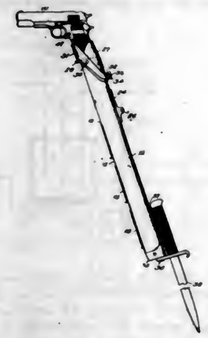
5. A tank siphon comprising a base member, a cap member, a pipe extending upwardly from said base member, said cap member inclosing said upwardly extending pipe and provided with a downwardly extending casing also surrounding said pipe and said casing open at its lower end, a valve in said base member independent of said cap for normally closing the upwardly extending pipe, said cap and casing capable of vertical movement to thereby form a vacuum in said pipe member.

[Claims 6 to 16 not printed in the Gazette.]

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1,229,721. FIREARM. CHARLES JOHN COOKE, Hongkong, China. Filed Feb. 17, 1917. Serial No. 149,234. (Cl. 42—73.)

1. A firearm provided with a magazine chamber, in combination with a support for said arm also provided with a magazine chamber communicating directly with the first mentioned chamber whereby magazines may be guided in their passage from one to the other of said chambers.



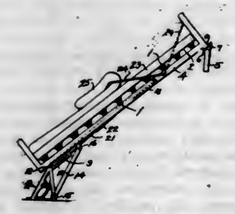
2. A firearm provided with a magazine chamber, in combination with a support for said arm also provided with a magazine chamber communicating directly with the first mentioned chamber and of corresponding cross sectional interior dimensions, whereby magazines may be guided in their passage from one to the other of said chambers.

12. A firearm having a depending handle and a suitable support for said arm, in combination with a clamping member fixed with relation to said support, and a second clamping member pivotally connected with the first mentioned clamping member and adapted to embrace the handle of the firearm.

[Claims 3 to 11 and 13 not printed in the Gazette.]

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1,229,722. BED. PETER C. CRESO, Spanaway, Wash. Filed July 5, 1916. Serial No. 107,703. (Cl. 5—54.)

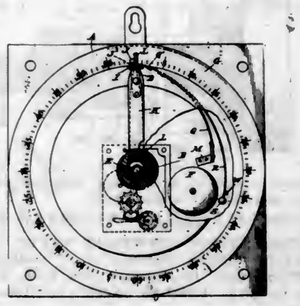


In a device of the class described, the combination of a pair of pivot pins suitably supported above the floor; an upending bed frame having legs at its foot end and its other end resting on said pivot pins; a pair of guide bars connected to the bed frame and forming slots therewith, wherein the said pivot pins may slide; a pair of springs each attached at one end to one of the said pivot pins and to one side member of the bed frame whereby said springs tend to pull the foot of the bed toward the pivot pins; and a pair of links each pivoted at their lower ends near the floor and at their upper ends to the frame at a point removed from said pivot supported end, whereby when said bed is open said bed is pushed outward from the pivot and the spring is stretched and whereby when the bed is being closed said spring counterbalances the weight thereof.

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1,229,723. ALARM APPARATUS. LORING B. DAVIS, Reno, Nev. Filed June 13, 1916. Serial No. 103,469. (Cl. 161—6.)

An alarm apparatus, comprising a spring-pressed rotatable post with clockwork escapement mechanism regulating the same, a pointer fixed to said post and movable over the dial, a bell, a bar secured to the post and having a lateral projection, a curved leaf spring mounted within the casing and having a portion thereof in the path of said projection whereby the leaf spring is moved toward the center of the casing as the pointer returns to its normal position, a hammer upon the free end of said leaf spring adapted to vibrate against the bell after the projection upon said bar passes beyond the free end of the leaf spring, and means for limiting the movement of said pointer and bar in either direction.



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1,229,724. VULCANIZED RUBBER AND PROCESS OF PRODUCING THE SAME. ETIENNE DE MEEUS, Beacon Falls, Conn., assignor, by mesne assignments, to The Beacon Falls Rubber Shoe Company, Boston, Mass., a Corporation of Massachusetts. Filed July 10, 1914. Serial No. 850,163. (Cl. 18—53.)

1. The process of vulcanizing, comprising adding a base of the aromatic series to a mixture of rubber and sulfur, and heating.

2. The process of vulcanizing, comprising adding a base of the aromatic series of para construction to a mixture of rubber and sulfur, and heating.

3. The process of vulcanizing, comprising adding to a mixture of rubber and sulfur a substance of the aromatic series containing one or more benzene groups in which two of the hydrogens have been substituted by amins or an equivalent group or chain, and heating.

4. The process of vulcanizing, comprising adding to a mixture of rubber and sulfur, a base of the aromatic series in which the anilin function or radical is in position para, with another radical or with the atom of carbon or triphenylmethane, and heating.

5. The process of vulcanizing, comprising adding to a mixture of rubber and sulfur, one of the described aromatic accelerating substances or equivalents, and heating.

[Claims 6 to 10 not printed in the Gazette.]

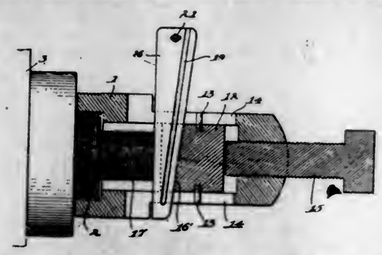
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1,229,725. REMOVER FOR WHEELS OR THE LIKE. BERNARDO DOMINGUEZ, Chicago, Ill. Filed Apr. 8, 1916. Serial No. 89,854. (Cl. 29—85.)

1. A device for the removal of a wheel or the like from a shaft, comprising a body adapted for engagement with the hub of the member to be removed; a wedge mounted for movement transversely of said body for engagement with the end of the shaft; and an abutment member adjustably mounted in said body for coöperation with said wedge, substantially as described.

5. A device for the removal of a wheel or the like from a shaft, comprising a body adapted for engagement with the hub of the member to be removed; a wedge mounted for movement transversely of said body for engagement with the end of the shaft; an abutment for coöperation with said wedge; and a pin and groove connection be-

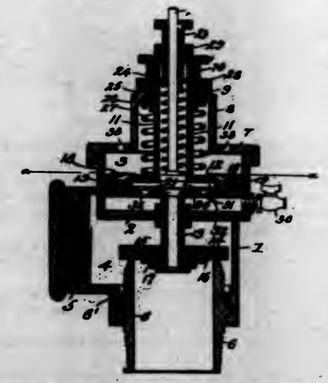
tween said wedge and said abutment being provided for locking said wedge against movement relative to said



abutment except in a direction longitudinally of said wedge, substantially as described.

[Claims 2 to 4 and 6 to 13 not printed in the Gazette.]

1,229,726. SAFETY AIR-RELIEF VALVE. FREDERICK WILLIAM EBELING, Hoboken, N. J., assignor to King & Wotherspoon, Incorporated, New York, N. Y. Filed Oct. 13, 1915. Serial No. 55,630. (Cl. 137—53.)

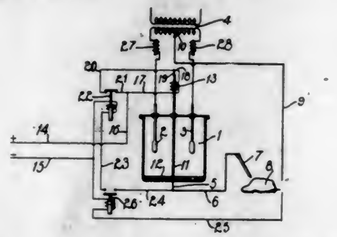


1. In a positive acting safety relief valve, a casing comprising an upper and a lower compartment, the upper compartment adapted to receive a hollow spring actuated piston and a piston rod, ports arranged in the hollow piston and communicating with said upper compartment, a hollow stem connected to the said piston and adapted to operate a valve in the lower compartment, and a spring actuated valve in the hollow piston coacting with a valve seat in said piston to close communication between the hollow stem and the ports in the piston.

2. In a positive acting safety valve, a casing comprising an upper and a lower compartment, the upper compartment adapted to receive a hollow spring actuated piston and a piston rod, ports arranged in the hollow piston and communicating with said upper compartment, a hollow stem connected to the said piston and adapted to operate a valve in the lower compartment, a spring actuated valve in the hollow piston coacting with a valve seat in said piston to close communication between the hollow stem and the ports in the piston, and a venting device in the upper casing for venting the chamber below the said piston.

1,229,727. WELDING SYSTEM. EARL E. EBY, Wilkinsburg, and SIDNEY W. FARNSWORTH, Pittsburgh, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 15, 1914. Serial No. 866,789. (Cl. 219—8.)

1. An arc welding system comprising welding electrodes, a main welding circuit including the said electrodes, auxiliary means for supplying current to establish a preliminary arc between the said electrodes, and means operated by the tension across the said preliminary arc for energizing the said main welding circuit.



2. An arc welding system comprising welding electrodes, a main welding circuit including the said electrodes and a vapor rectifier, an auxiliary rectifier-starting circuit and means for establishing a preliminary arc between the said electrodes by means of the current in the said rectifier starting circuit and for thereafter starting the rectifier and thereby energizing the main welding circuit.

3. An arc welding system comprising a source of alternating-current supply, a vapor rectifier having main electrodes and an auxiliary starting electrode, a main welding circuit adapted to receive direct current from the said rectifier, and an auxiliary circuit for establishing a preliminary welding arc and for thereafter starting the said rectifier.

4. An arc welding system comprising a source of alternating-current supply, a vapor rectifier having main electrodes and an auxiliary starting electrode, a main welding circuit adapted to receive direct current from the said rectifier, an auxiliary circuit for drawing a preliminary welding arc and for thereafter starting the said rectifier, and a reactance device interposed between the said source of alternating-current supply and the said rectifier.

5. An arc welding system comprising a source of alternating-current supply, a vapor rectifier having main electrodes and an auxiliary starting electrode, an auxiliary circuit including the said auxiliary electrode and means for moving the said auxiliary electrode under predetermined conditions to start the said rectifier, welding electrodes, means for supplying direct current from the said rectifier to the said electrodes, means for supplying current from the said auxiliary circuit to the said welding electrodes for establishing a preliminary arc therebetween, and means operated by the tension across the said preliminary arc for energizing the said electrode-operating means, whereby the rectifier is started and the main welding current supplied to the said electrodes.

[Claims 6 to 17 not printed in the Gazette.]

1,229,728. WELDING SYSTEM. EARL E. EBY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 15, 1914. Serial No. 866,809. (Cl. 219—8.)

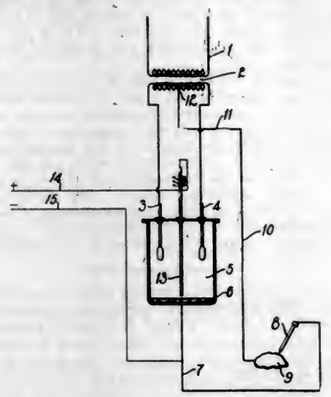
1. A welding system comprising welding electrodes, an alternating-current circuit, means for converting the alternating current in the said circuit into direct current and supplying such direct current to the said electrodes, and a reactance device in the said alternating-current circuit for stabilizing the direct current of the said electrodes.

2. A welding system comprising welding electrodes, an alternating-current circuit, means for converting the alternating current in the said circuit into direct current and for supplying such direct current to the said electrodes, and a transformer of high reactance in the said alternating-current circuit.

3. A welding system comprising an alternating-current circuit, means for converting the alternating current in the said circuit into direct current, and a transformer in



the said alternating-current circuit having sufficient reactance to stabilize the said direct current.



4. A welding system comprising welding electrodes, an alternating-current circuit, a rectifier for converting the alternating current in the said circuit into direct current, and means for supplying the resulting direct current to the said electrodes.

5. A welding system adapted to be operated by means of alternating current and comprising a vapor rectifier.

[Claims 6 to 10 not printed in the Gazette.]

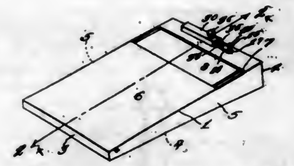
1,229,729. VESSEL-PROPELLING DEVICE. CALVIN H. EDINGER, Fairview, W. Va. Filed July 6, 1916. Serial No. 107,851. (Cl. 115—12.)



In a vessel propelling apparatus, the combination of a conduit arranged adjacent the bottom of the vessel from the stem to the stern and a steam supply pipe, of a coupling connection between the steam supply pipe and the conduit, a nozzle mounted in said coupling connection and provided at its lower end with a right angle extending portion having a jet opening, means for partially rocking said nozzle to turn the jet opening toward the stem or the stern of the vessel, said coupling connection comprising a cap plate secured to the conduit, a sleeve surrounding the lower portion of the nozzle and connected to the cap plate, a second sleeve surrounding the nozzle at its upper end portion, and between which second sleeve and the first sleeve said rocking means is interposed, a coupling sleeve connected to the second sleeve and in turn connected to the steam pipe, and means connecting the coupling sleeve and the cap plate.

1,229,730. PAD-HOLDER. THOMAS P. EDWARDS, Hazel Green, Wis. Filed Mar. 23, 1916. Serial No. 86,242. (Cl. 45—69.)

1. In a pad holder, the combination of a hollow body having an opening in its upper wall and a compartment below the opening, of a pad support in said compartment to support the pad through and in registration with the opening, spring tensioning means to cause the support to rise as the pad diminishes in thickness, said spring tensioning means including a U-shaped guide on the under face of the support, in which the free ends of the spring tensioning means are guided, a bell crank lever pivotally mounted in one end of the body and having one arm pivotally connected to the support, a housing on the top of the body having guides, a slide mounted in said guides and having a slot connection with the other arm of said lever, and provided with an inclined cam, and a thumb screw engaging said cam and designed to be intermittently unscrewed, to permit the action of the spring means to elevate the clamping support as the pad diminishes in thickness.



2. In a pad holder, the combination of a hollow body having an opening in its upper wall and a compartment below the opening, of a pad support in said compartment to support the pad through and in registration with the opening, means to cause the support to rise as the pad diminishes in thickness, a bell crank lever pivotally mounted in one end of the body and having one arm pivotally connected to the support, a housing on the top of the body having guides, a slide mounted in said guides and having a slot connection with the other arm of said lever, and provided with an inclined cam, and a thumb screw engaging said cam and designed to be intermittently unscrewed, to permit the action of the raising means to elevate the support as the pad diminishes in thickness.

1,229,731. LOCK. LEO EHRLICH, St. Louis, Mo., assignor to Lyman T. Hay, St. Louis, Mo. Filed Dec. 15, 1916. Serial No. 137,111. (Cl. 70—18.)



1. In a lock, a spring-pressed bolt, means including tumblers associated with said bolt for holding the same in different locking positions, and coöperating means for moving the bolt against the tension of its spring away from the engaging tumblers so as to remove the same from the stress of the spring while the bolt is in locking position.

4. A lock comprising a movable bolt in combination with tumblers arranged in pairs for controlling the movement of the bolt, manually operable means for actuating the tumblers, and a shutter or guard coöperating with the bolt for giving access to said manually operable means.

8. A lock comprising a movable bolt which is normally under stress of yielding pressure in combination with tumblers for controlling the movement of said bolt, and means for relieving the tumblers of stress transmitted from the bolt whereby the latter can not be released by the difference in the "feel" of the tumblers.

9. In a lock, the combination of a bolt, tumblers therefor, manually operable means for controlling the tumblers, means for locking the bolt against movement when the tumblers are positioned to release the bolt, and means

connected to said last mentioned means for restoring the manually operable devices to normal position when the bolt is released.

13. In a lock of the class described, a spring-pressed bolt, tumblers for controlling the movement of the bolt, and independent means for holding the bolt, said means being adapted to isolate the tumblers from the bolt while the tumblers are being operated.

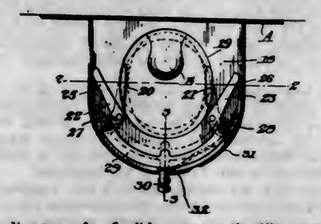
[Claims 2, 3, 5 to 7, 10 to 12, 14, and 15 not printed in the Gazette.]

1,229,732. HOOF-TRIMMER. THOMAS ERICKSON, Reardon, Wash. Filed July 24, 1916. Serial No. 111,096. (Cl. 168—48.)



In a trimming tool of the class described, the combination with a sleeve having open tool and handle ends and said sleeve having a uniform internal diameter, of a trimming tool having a shank longitudinally slidable into the tool end of said sleeve, means loosely connecting said shank with said sleeve and positively limiting projection of the shank outwardly and inwardly of said sleeve beyond predetermined points, a spring interposed between the tool end of said sleeve and said tool and normally acting to project said tool from said sleeve to the outward limit permitted by said means thereby affording play for slight movement of said sleeve toward said tool in opposition to the said spring to impinge the tool tightly against the part to be trimmed, and a hammer rod slidable into the handle end of said sleeve for direct impact upon the end of the shank wholly independently of said spring, said hammer rod having a handle for manual reciprocation of said hammer rod and said rod being of sufficient length to dispose said handle beyond engagement with the handle end of said sleeve when said rod impacts against said shank whereby the full force of a blow by said rod will be imparted to said shank independently of said sleeve, substantially as described.

1,229,733. CUP-DISPENSER. CHARLES ERRETT, New York, N. Y. Filed Dec. 15, 1916. Serial No. 137,208. (Cl. 211—8.)



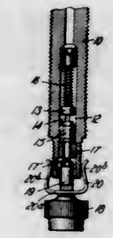
1. A dispenser for flexible cups or the like comprising means for supporting a stack of cups, and means for compressing the end cup of the stack to cause separation therefrom.

4. A dispenser for flexible cups or the like comprising means for supporting a stack of cups, a pair of compressing members adapted to be inserted between the lips of the two end cups of the stack and means for actuating said members.

7. A dispenser for flexible cups or the like comprising a supporting member having a pair of tongues struck out therefrom, a tubular supporting member for cups adapted to be embraced by the tongues, a supporting shelf on the supporting member, mechanism on the supporting shelf including a pair of compressing members adapted to engage and compress the end members of the stack of cups in the tubular supporting member, and means on the lower part of the supporting member adapted to hold the cup discharged.

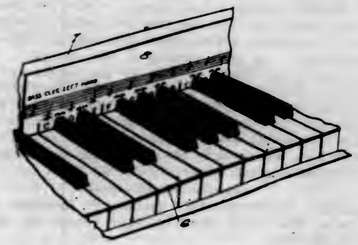
[Claims 2, 3, 5, and 6 not printed in the Gazette.]

1,229,734. MEANS TO DEFLATE INNER TUBES. HENRY NORTH EVERSOLE, HUGH R. CAWTHON, and HENRY ISAAC OWEN, Fulton, Mo.; said Cawthon and said Owen assignors to said Henry North Eversole and Frank R. Eversole, St. Louis, Mo. Filed Feb. 1, 1916. Serial No. 75,539. (Cl. 152—12.)



The combination with a valve for pneumatic tires, of a cap for closing and protecting the valve, said cap having at its outer end a tip for unseating of the valve, said tip having an aperture therein and a substantially U-shaped clip, having the portion connecting its members secured in the aperture of the tip with said members projecting at opposite sides of the tip and in the direction of the end thereof.

1,229,735. PIANO-KEYBOARD CHART AND GUARD. DAVID E. FORCE, Jersey City, N. J. Filed June 15, 1916. Serial No. 103,806. (Cl. 84—150.)

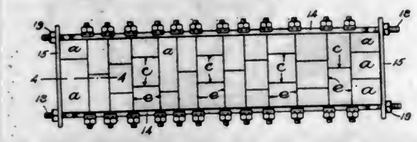


A two-piece reversible piano key-board chart and piano guard comprising two longitudinal strips, said strips being of different materials and closely secured together back to back to present the appearance of a single integral strip, one side of said combined and secured strips having musical indicia thereon, said indicia comprising two staves respectively bearing the bass and treble clefs and notes on the staves, said notes spaced longitudinally so that they



may be brought into registry with the corresponding keys of a piano, the opposite side of said combined strip being of material serving as a shield to protect the piano and adapted to be used as a finger guard and embellishment when said strip is reversed, said combined strip being freely removable and having a thickness to snugly fit between the inner ends of the black keys and the adjacent longitudinal board of the piano.

1,229,736. REINFORCED DIE-BLOCK. WILLIAM R. FORSYTH, Swampscott, Mass. Filed Aug. 3, 1916. Serial No. 113,011. (Cl. 164—58.)



1. In combination, a built-up die block comprising a series of built-up sections abutting against each other, the abutting faces of said sections having registering grooves extending transversely of the block, each pair of such grooves forming a bolt-receiving hole, bolts arranged in said holes and fitting closely against the top and bottom surfaces of the latter, and means coacting with said bolts to clamp the sections transversely.

2. In combination, a built-up die block comprising a series of built-up sections abutting against each other, the abutting faces of said sections having registering grooves extending transversely of the block, each pair of such grooves forming a bolt-receiving hole having flat top and bottom surfaces, bolts arranged in said holes, said bolts having flat top and bottom surfaces fitting closely against said surfaces of said holes, and means coacting with said bolts to clamp said sections transversely.

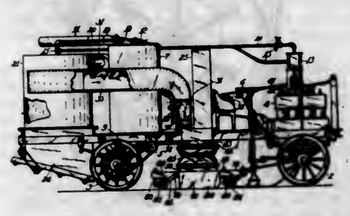
3. In combination, a built up die block comprising a series of built-up sections abutting against each other, the abutting faces of said sections extending from top to bottom, said faces having transverse grooves each of which registers with one in the next section to form a bolt-receiving hole, a pair of bars extending parallel to said series and lying respectively against the upstanding sides of the block, means arranged to coact with said bars and to bear against the ends of the block to keep said sections pressed against each other, each said bar having a single slot registering with a plurality of said bolt-receiving holes, bolts extending through said holes and slots, said bolts and holes fitting closely, and nuts coacting with said bolts and bearing against said bars to cause the latter to clamp said sections.

4. In combination, a built-up die block comprising a series of built-up sections abutting against each other, the abutting faces of said sections extending from top to bottom, said block having a plurality of transverse bolt-receiving holes traversing the joints between said sections, a pair of bars extending parallel to said series and lying against the upstanding sides of said block, means arranged to coact with said bars and to bear against the ends of said block to keep said sections pressed against each other, each said bar having a single slot registering with said bolt-receiving holes, bolts extending through said holes and slots, said bolts and holes fitting closely, and nuts coacting with said bolts and bearing against said bars to cause the latter to clamp said sections.

5. In combination, a built-up die block comprising a series of built-up sections abutting against each other, the abutting faces of said sections having rectangular grooves extending transversely, each such groove registering with one in the next section to form a rectangular bolt-receiving hole traversing the joint between the sections, a rectangular bolt arranged in and conforming to each such hole, a pair of bars arranged parallel to said series and lying against the upstanding sides of the block, means arranged to coact with said bars and to bear against the ends of the block to keep said sections pressed against each other, each said bar having a single slot registering with said holes, the ends of said bolts extending through said slots, and nuts coacting with said bolts and arranged to keep said bars pressed against said upstanding sides.

[Claims 6 and 7 not printed in the Gazette.]

1,229,737. PNEUMATIC STREET-CLEANER. ROBERT W. FURNAS, Indianapolis, Ind.; Frank A. Hamilton and Lelia F. Hamilton executors of said Robert W. Furnas, deceased. Filed Oct. 22, 1915. Serial No. 57,366. (Cl. 15—17.)



1. A pneumatic street-cleaner including an outer gathering-chamber, an inner chamber, a separate separator, a suction-conduit connected with the inner chamber and also directly connected with and discharging unobstructedly into the separator, a separate conducting-pipe connected with the separator and the outer gathering-chamber, and means in the outer gathering-chamber at the end of the conducting-pipe adapted for forcibly drawing air directly from the conducting-pipe into the outer gathering-chamber.

2. A pneumatic street-cleaner including an outer gathering-chamber, a separate separator, an exhaust-fan rotatably arranged in the higher portion of the gathering-chamber to discharge broadcast into the interior of the gathering-chamber, a separate conducting-pipe connected with the separator and the gathering-chamber adjacent to the exhaust-fan for the passage of air from the separator directly to the exhaust-fan, a suction-conduit connected with the separator and extending into the gathering-chamber, and an inner chamber in the gathering-chamber connected to the suction-conduit and provided therein with means adapted for dividing air into currents and directing the currents to the suction-conduit.

3. A pneumatic street-cleaner including an outer chamber and an inner chamber, a separator, a suction-conduit connected with the inner chamber and the separator, means carried under the inner chamber for dividing currents received from the outer chamber into different currents and directing these currents through the inner chamber to the suction conduit, an exhaust-fan in the outer chamber, and a conduit connected with the separator and the exhaust-fan.

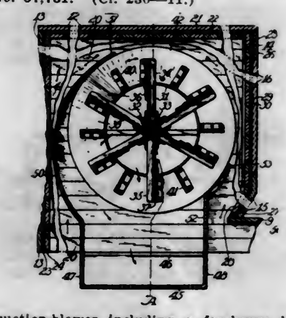
4. A pneumatic street-cleaner including an inner gathering-chamber comprising an inclined top that has a straight higher front portion and relatively narrow end portions, the under side of the top having a plurality of dividers thereon that extend from the lower portion toward but not to the front of the higher portion of the top and also obliquely each toward a common medial plane, the outer ones of the dividers being successively shorter and nearer than the others to the front portion of the top.

5. A pneumatic street-cleaner including a movably supported platform, a separator mounted upon the platform, an outer chamber comprising an upper portion carried upon the platform and a lower portion below the platform, the upper portion of the outer chamber having an exhaust-fan therein that operates partially in the space within the outer chamber, a conduit connected

with the separator and the outer chamber adjacent to the exhaust-fan, an inner chamber, and a conduit connected with the inner chamber and the separator.

[Claims 6 to 15 not printed in the Gazette.]

1,229,738. SUCTION-BLOWER FOR STREET-CLEANERS. ROBERT W. FURNAS, Indianapolis, Ind.; Frank A. Hamilton and Lelia F. Hamilton executors of said Robert W. Furnas, deceased. Filed Oct. 25, 1915. Serial No. 57,731. (Cl. 230—11.)



1. A suction-blower including a fan-house having an open bottom, and a fan structure rotatably mounted in the fan-house relatively near to the open bottom thereof and comprising a plurality of radial arms, fan blades secured to the arms respectively, and two side plates secured to opposite sides respectively of the fan blades.

2. A suction-blower including a fan-house having an open bottom, and a fan structure rotatably mounted in the fan-house relatively near to the open bottom thereof, comprising a plurality of radial arms, fan blades secured to the arms respectively, two side plates secured to opposite sides respectively of the fan blades and having each an outer portion that extends outward and convergently each toward the other beyond the ends of the fan blades and a conduit extending from the outer portions of the side plates and through the open bottom of the fan-house.

3. A suction-blower including a fan-house comprising sides and ends and also a roof, a fan structure rotatably mounted between the sides of the fan-house and comprising fan blades and also two side plates secured to opposite sides respectively and extending outward beyond the outer ends of the fan blades, and a conduit connected with the lower portion of the fan-house and having two side portions that extend upward into the fan-house in contact with the sides thereof and approximately to opposite portions respectively of the two side plates of the fan structure.

4. In a suction-blower, the combination of a fan-house comprising two sides and two ends and also a roof, a fan structure rotatably supported to operate in the fan-house and comprising radial blades and two annular side plates secured to opposite sides respectively of the blades, each side plate extending outward beyond the outer ends of the blades, a conduit connected with the lower portions of the two sides of the fan-house, a partition in the fan-house between one end thereof and the fan structure and connected to one side of the conduit, the partition being curved and positioned eccentrically to the side plates, the upper portion of the partition extending over approximately to the side plates, and a second partition in the fan-house connected to the opposite side of the conduit and extending upward approximately to the side plates.

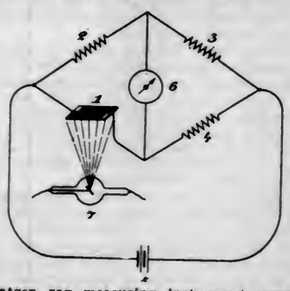
1,229,739. HOT-WATER OR STEAM HEATING EGG-CUP. GERTRUDE SMITH FURRY, Valdosta, Ga. Filed Nov. 15, 1916. Serial No. 131,530. (Cl. 53—1.)

In a heating egg cup, a base formed to receive eggs, a hollow neck rising upwardly and centrally therefrom and formed integrally therewith and swelling outwardly into a substantially egg shaped hollow body open at its top, an egg receptacle corresponding in shape with and



removably fitting into said body, and having means at its upper portion to support the same on the body in spaced relation thereto, and a cover for the receptacle.

1,229,740. MEASURING INSTRUMENT FOR RÖNTGEN RAYS. ROBERT FÜRSTENAU, Berlin, Germany. Filed Jan. 28, 1914. Serial No. 814,980. (Cl. 250—84.)



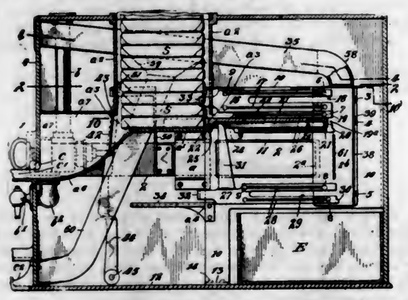
A Röntgen ray measuring instrument comprising in combination a Wheatstone bridge having a selenium cell for exposure to the rays in one of its two parallel resistance branches, and a galvanometer connected across from an intermediate point of one resistance branch to an intermediate point of the other resistance branch; the relative resistance of the branch containing the selenium cell being of a magnitude to cause the current to flow through the galvanometer in one direction when said cell is exposed to Röntgen rays and in the reverse direction when not exposed, whereby the indicator of said galvanometer is returned to its normal position immediately after discontinuing the exposure of the selenium cell to the rays.

1,229,741. TOKEN-CONTROLLED VENDING-MACHINE. GONZALO ANCIRA GARCIA, Guadalajara, Mexico. Filed Aug. 24, 1916. Serial No. 116,593. (Cl. 194—80.)

1. The combination with an actuator mechanism comprising a manually-accessible handle, a resetting arm, a head having a plurality of laterally projecting token-engaging lugs, and a spring against the resistance of which the handle is manually moved; of a plurality of endwise-movable token-engaging push-bars an end of each of which is opposed to a token-engaging lug, such end having an open lengthwise-extending lug-receiving recess; means for supporting the push-bars severally, such means comprising a lengthwise slot in the push-bar and a pin therethrough and carried by said head, such pin and slot connection serving to move the push-bar rearwardly during completion of a rearward movement of the head; a token-way structure open at its upper end for admission of tokens and having opposed vertical spaces for reciprocation



through such spaces of the token-engaging lugs and of the push-bars, all the foregoing being constructed and operating to secure an endwise movement of one or more push-bars on the interposition of a token or tokens between said lugs and push-bars in said token-way and to permit a token-carrying movement of said lugs and push-bars for carrying the engaged tokens out of said token-way, the spring exerting its pull first to move the lug and pin carrying head away from the opposed ends of the push-bars in order to release the engaged token br tokens when they have been carried out of the token-way and on release of the handle, and thereafter by coöperation of said pins and slots to reset the push-bars in their initial working positions; a solid-merchandise-feeder carried by a token-engaging push-bar; a solid-merchandise-container having from its lower portion a chute connection with an opening in the casing of the machine and comprising a bottom above which in the walls of the container are opposed spaces one for entrance of the feeder and the other for ejection of solid merchandise from said container; a liquid-measuring mechanism having an accessible delivery device; a work-lever in the path of certain of said push-bars and located to be acted on during a manual movement of said handle, such work-lever being also in the path of the resetting arm and located to be acted on by the pull of the spring on the release of the handle; and, carried by one of said push-bars, a feeder-actuating arm.



2. The combination with an actuator mechanism comprising a manually-accessible handle, a resetting arm, a head having a plurality of laterally projecting token-engaging lugs, and a spring against the resistance of which the handle is manually moved; of a plurality of endwise-movable token-engaging push-bars an end of each of which is opposed to a token-engaging lug, such end having an open lengthwise-extending lug-receiving recess; means for supporting the push-bars severally, such means comprising a lengthwise slot in the push-bar and a pin therethrough and carried by said head, such pin and slot connection serving to move the push-bar rearwardly during completion of a rearward movement of the head; a token-way structure open at its upper end for admission of tokens and having opposed vertical spaces for reciprocation through such spaces of the token-engaging lugs and of the push-bars, all the foregoing being constructed and operating to secure an endwise movement of one or more push-bars on the interposition of a token or tokens between said lugs and push-bars in said token-way and to permit a token-carrying movement of said lugs and push-bars for carrying the engaged tokens out of said token-way, the spring exerting its pull first to move the lug and pin carrying head away from the opposed ends of the push-bars in order to release the engaged token or tokens when they have been carried out of the token-way and on release of the handle, and thereafter by coöperation of said pins and slots to reset the push-bars in their initial working positions; a solid-merchandise-feeder carried by a token-engaging push-bar; a solid-merchandise-container having from its lower portion a chute connection with an opening in the casing of the machine and comprising a bottom above which in the walls of the container are opposed spaces one for entrance of the feeder and the other for ejection of solid merchandise from said container; a liquid-measuring mechanism having an accessible delivery device; a work-lever in the path of certain of said push-bars and located to be acted on during a manual movement of said handle, such work-lever being also in the path of the resetting arm and located to be acted on by the pull of the spring on the release of the handle; and, carried by one of said push-bars, a feeder-actuating arm.

3. The combination with an actuator mechanism comprising a manually-accessible handle, a resetting arm, a head having a plurality of laterally projecting token-engaging lugs, and a spring against the resistance of which the handle is manually moved; of a plurality of endwise-movable token-engaging push-bars an end of each of which is opposed to a token-engaging lug, such end having an open lengthwise-extending lug-receiving recess; means for supporting the push-bars severally, such means comprising a lengthwise slot in the push-bar and a pin therethrough and carried by said head, such pin and slot connection serving to move the push-bar rearwardly during completion of a rearward movement of the head; a token-way structure open at its upper end for admission of tokens and having opposed vertical spaces for reciprocation through such spaces of the token-engaging lugs and of the push-bars, all the foregoing being constructed and operating to secure an endwise movement of one or more push-bars on the interposition of a token or tokens between said lugs and push-bars in said token-way and to permit a token-carrying movement of said lugs and push-bars for carrying the engaged tokens out of said token-way, the spring exerting its pull first to move the lug and pin carrying head away from the opposed ends of the push-bars in order to release the engaged token or tokens when they have been carried out of the token-way and on release of the handle, and thereafter by coöperation of said pins and slots to reset the push-bars in their initial working positions; a solid-merchandise-feeder carried by a token-engaging push-bar; a solid merchandise-container having from its lower portion a chute connection with an opening in the casing of the machine and comprising a bottom above which in the walls of the container are opposed spaces one for entrance of the feeder and the other for ejection of solid merchandise from said container; a liquid-measuring mechanism having an accessible delivery device; a work-lever in the path of certain of said push-bars and located to be acted on during a manual movement of said handle, such work-lever being also in the path of the resetting arm and located to be acted on by the pull of the spring on the release of the handle; and, carried by one of said push-bars, a feeder-actuating arm; the push-bars being three in number and mounted one above the other, the intermediate push-bar carrying the feeder and the bottom push-bar carrying the feeder-actuating arm, the intermediate push-bar being sufficiently shorter than the other push-bars not to contact with the work-lever, and the top and bottom push-bars being constructed to contact with the work-lever, all constructed and operating to deliver either a solid and also a measure of liquid, or a solid without a measure of liquid.

3. The combination with an actuator mechanism comprising a manually-accessible handle, a resetting arm, a head having a plurality of laterally projecting token-engaging lugs, and a spring against the resistance of which the handle is manually moved; of a plurality of endwise-movable token-engaging push-bars an end of each of which is opposed to a token-engaging lug, such end having an open lengthwise-extending lug-receiving recess; means for supporting the push-bars severally, such means comprising a lengthwise slot in the push-bar and a pin therethrough and carried by said head, such pin and slot connection serving to move the push-bar rearwardly during completion of a rearward movement of the head; a token-way structure open at its upper end for admission of tokens and having opposed vertical spaces for reciprocation through such spaces of the token-engaging lugs and of the push-bars, all the foregoing being constructed and operating to secure an endwise movement of one or more push-bars on the interposition of a token or tokens between said lugs and push-bars in said token-way and to permit a token-carrying movement of said lugs and push-bars for carrying the engaged tokens out of said token-way, the spring exerting its pull first to move the lug and pin carrying head away from the opposed ends of the push-bars in order to release the engaged token or tokens when they have been carried out of the token-way and on release of the handle, and thereafter by coöperation of said pins and slots to reset the push-bars in their initial working positions; a solid-merchandise-feeder carried by a token-engaging push-bar; a solid merchandise-container having from its lower portion a chute connection with an opening in the casing of the machine and comprising a bottom above which in the walls of the container are opposed spaces one for entrance of the feeder and the other for ejection of solid merchandise from said container; a liquid-measuring mechanism having an accessible delivery device; a work-lever in the path of certain of said push-bars and located to be acted on during a manual movement of said handle, such work-lever being also in the path of the resetting arm and located to be acted on by the pull of the spring on the release of the handle; and, carried by one of said push-bars, a feeder-actuating arm; the measuring device comprising a cylinder having an upper intake port and an under delivery port, one port being near one end and the other near the other end of the cylinder; and a reciprocable plunger working in the cylinder and having transversely through it a measure-forming hole, said plunger being connected to the work-lever.

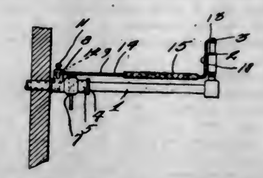
4. The combination with an actuator mechanism comprising a manually-accessible handle, a resetting arm, a head having a plurality of laterally projecting token-engaging lugs, and a spring against the resistance of which the handle is manually moved; of a plurality of endwise-movable token-engaging push-bars an end of each of which is opposed to a token-engaging lug, such end having an open lengthwise-extending lug-receiving recess; means for supporting the push-bars severally, such means comprising a lengthwise slot in the push-bar and a pin

therethrough and carried by said head, such pin and slot connection serving to move the push-bar rearwardly during completion of a rearward movement of the head; a token-way structure open at its upper end for admission of tokens and having opposed vertical spaces for reciprocation through such spaces of the token-engaging lugs and of the push-bars, all the foregoing being constructed and operating to secure an endwise movement of one or more push-bars on the interposition of a token or tokens between said lugs and push-bars in said token-way and to permit a token-carrying movement of said lugs and push-bars for carrying the engaged tokens out of said token-way, the spring exerting its pull first to move the lug and pin carrying head away from the opposed ends of the push-bars in order to release the engaged token or tokens when they have been carried out of the token-way and on release of the handle, and thereafter by coöperation of said pins and slots to reset the push-bars in their initial working positions; a solid-merchandise-feeder carried by a token-engaging push-bar; a solid-merchandise-container having from its lower portion a chute connection with an opening in the casing of the machine and comprising a bottom above which in the walls of the container are opposed spaces one for entrance of the feeder and the other for ejection of solid merchandise from said container; a liquid-measuring mechanism having an accessible delivery device; a work-lever in the path of certain of said push-bars and located to be acted on during a manual movement of said handle, such work-lever being also in the path of the resetting arm and located to be acted on by the pull of the spring on the release of the handle; and, carried by one of said push-bars, a feeder-actuating arm; and a three-way token-receiving chute, two branches of which discharge into the token-way structure, and the other branch of which connects a bottom slot in one branch of the chute with an accessible opening in a wall of the casing.

5. The combination of a work-lever with a plurality of endwise-movable token-engaging push-bars arranged one above the other and constructed and located to be brought into engagement with the work lever; an intermediate endwise-movable token-engaging push-bar so constructed and located as not to be brought into engagement with the work lever, each push-bar having a lengthwise extending pin-receiving closed slot and an open lengthwise-extending lug-receiving slot; a projecting feeder carried by such intermediate push-bar; the bottom push-bar having an upstanding finger to engage the feeder; a merchandise container for said feeder; a merchandise-delivering apparatus connected with the work-lever; and an actuator mechanism comprising a manually operable handle, a resetting arm in the path of the work-lever, a pin and token-engaging lug carrying head, and a spring; said pin working in said closed slot and said lug being enterable in said open slot; and a token-way structure open at its top for reception of tokens, and also open at its edges for reciprocation therethrough of token-engaging ends of the push-bars and of the lugs.

[Claims 6 to 12 not printed in the Gazette.]

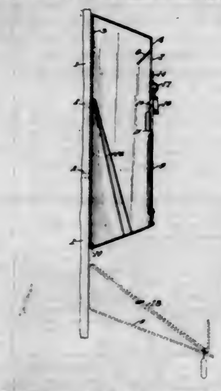
1,229,742. SELF STOVE-LIGHTER OR PILOT-LIGHT. CHARLES L. GISLER, Sistersville, W. Va. Filed Dec. 10, 1915. Serial No. 66,101. (Cl. 67—16.)



1. In combination with a gas burner, a pilot tube having one end extending upwardly terminating in a spreading hollow substantially semi-spherical pilot light casing having its under wall concaved and provided with perforations and arching over the gas outlet of said burner to ignite the gas from the burner.

2. In combination with a gas burner, a pilot tube having an extensible section having one end extending upwardly, said upwardly extending portion terminating in a spreading hollow substantially semi-spherical pilot light casing having its under wall concaved upwardly, said concaved wall provided with perforations and arching over the gas outlet of the burner to ignite the gas from the burner, and means for holding said extensible section, whereby said upwardly extending portion may be maintained in such parallelism with the burner, as to hold the pilot light casing over the gas outlet of the burner.

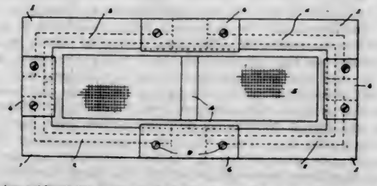
1,229,743. MAIL-BOX. ALBERT GLOSS, Chicago, Ill. Filed July 24, 1916. Serial No. 110,961. (Cl. 232—58.)



1. In a mail box, a hinged door adapted to open outwardly and downwardly, a lever pivotally carried by said door and adapted to serve as a stop for the contents of the box when the door is in open position, and a weight carried by said lever whereby the same is retained in operative or vertical position.

2. In a mail box, a hinged door adapted to open outwardly and downwardly and formed with a longitudinal slot and with a transverse recess registering with said slot, a lever pivotally supported in the recessed portion of said door and adapted when the door is in open position to serve as a stop for the contents of the box, and a weight carried by said lever and adapted to swing through the recessed portion of said door, when the same is open, to retain said lever in upright or operative position.

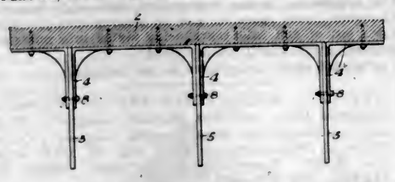
1,229,744. ADJUSTABLE DOOR-SCREEN. PURSIFER F. GUIE and JEROME S. LONG, Manheim, Pa.; said Guie assignor to said Long. Filed Oct. 28, 1915. Serial No. 58,316. (Cl. 156—38.)



An adjustable screen frame, comprising four corner sections formed with screen receiving grooves, and transverse slots in their ends, a screen adapted to fit within said grooves and be slidably adjustable therein, means for clamping said corner sections upon said screen, comprising clamp plates secured upon each side of the abutting ends of said corner sections and held together by screws passing through the transverse slots.

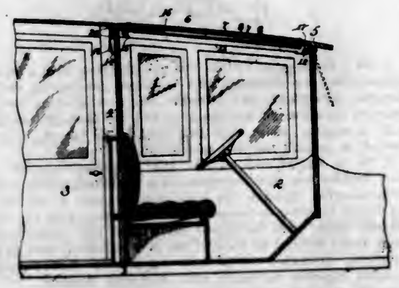


1,229,745. PARTITION STRUCTURE FOR TOILET-ROOMS. CHARLES H. HAHN, Pittsburgh, Pa. Filed June 24, 1914. Serial No. 847,151. (Cl. 4—12.)



Partitions for toilet rooms, comprising a plurality of slabs, a wall bracket for each of the slabs secured to a wall and engaging the bottom of the slab and supporting the slab above the floor leaving the floor space beneath the slab free and unobstructed, a wall bracket between the tops of adjacent slabs, each bracket having a horizontal base member secured to a wall and arms at the ends thereof extending forwardly at right angles to the wall and secured to the adjacent slabs leaving the space between such slabs free and unobstructed, the length of said top brackets being equal to the distance which it is desired to have between slabs, whereby the slabs are readily spaced a predetermined distance apart when they are erected, and said forwardly extending arms extending along the slabs a sufficient distance to stiffen and support them against lateral strains; substantially as described.

1,229,746. AUTOMOBILE. HENRY S. HALE, Philadelphia, Pa. Filed Mar. 11, 1916. Serial No. 83,485. (Cl. 21—125.)



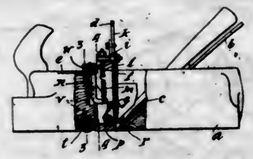
1. An automobile body having a rear inclosed compartment provided with a vertical glass window at the front wall thereof and said body having an overhanging roof extending forward of the vertical glass window, and said forwardly projecting roof having a substantially horizontal window positioned in advance of the vertical window, whereby an occupant in the inclosed compartment may have a line of vision through the vertical window and the horizontal window upon scenery well in advance of the automobile and also at a greatly higher elevation.

2. An automobile body having a rear inclosed compartment provided with a vertical glass window at the front wall thereof and said body having an overhanging roof extending forward of the vertical glass window, and said forwardly projecting roof having a substantially horizontal window positioned in advance of the vertical window, whereby an occupant in the inclosed compartment may have a line of vision through the vertical window and the horizontal window upon scenery well in advance of the automobile and also at a greatly higher elevation, in combination with horizontally adjustable means arranged on the roof at the under side of the horizontal window for controlling the extent of exposure thereof.

3. An automobile body having a rear inclosed compartment with a glass front and an overhanging forwardly projecting roof, combined with a window arranged in the forwardly projecting portion of the roof, means for controlling the extent of exposure of the said window on the under side comprising two curtains respectively supported at forward and rear ends of the window, and means for adjusting the said curtains in opposite directions.

4. An automobile body having a rear inclosed compartment with a glass front and an overhanging forwardly projecting roof, combined with a window arranged in the forwardly projecting portion of the roof, and means for controlling the extent of exposure of the said window on the under side, said means having devices extending into the rear compartment whereby said exposure may be controlled therefrom.

1,229,747. APPARATUS FOR MAKING CORRUGATED AND CREASED WOODEN SHAVINGS. AUGUST LORENZ HELLERMANN, Dusseldorf, Germany. Filed Apr. 2, 1917. Serial No. 159,307. (Cl. 145—8.)



1. In an apparatus for making corrugated and creased wooden shavings, a passage or throat through which said shavings pass, a cutter for separating said shavings from the wood, and a resilient resistance arranged in the path of said shavings and movable lengthwise of said passage.

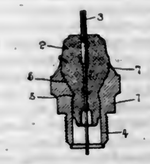
2. In an apparatus for making corrugated and creased wooden shavings, a passage or throat through which said shavings pass, a cutter for separating said shavings from the wood, and a resilient part movable lengthwise of said passage engaging that side of said cutter on which the shavings are moving.

14. An apparatus for making corrugated shavings, comprising a cutter for paring said shavings from the material, a passage or throat, and a yielding resistance arranged in the path of said shavings and movable obliquely with reference to the longitudinal axis of said passage.

15. An apparatus for making corrugated shavings, provided with a cutter for paring shavings from the material, a passage or throat through which the shavings are expelled, and a yielding flap pivoted at one side of said passage and adapted to engage the free end of the shaving in said passage, the radius connecting the center of the pivot axis with the point of the flap initially engaged by the free end of the shaving, being approximately perpendicular to the longitudinal axis of said passage.

[Claims 3 to 13 not printed in the Gazette.]

1,229,748. SPARK-PLUG. GUSTAVE L. HERZ, New York, N. Y. Filed Jan. 31, 1917. Serial No. 145,683. (Cl. 123—169.)



1. A spark plug comprising a shell and an insulator cast therein, the shell bore having two tapered portions whereby the insulator has a gas-tight connection therewith because of its wedging action in the tapered portions, under pressure.

2. A spark plug comprising a shell and an insulator cast therein, the shell bore having two tapered portions connected by a flaring portion whereby the insulator is

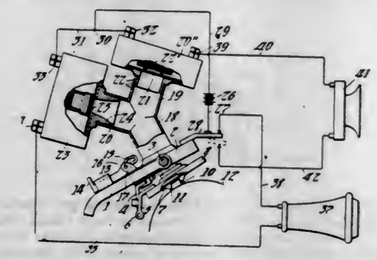
interlocked to the shell and has a gas-tight connection therewith because of its wedging action in the tapered portions, under pressure.

3. A spark plug comprising a shell and an insulator cast therein, the shell bore having two tapered portions at different distances from the longitudinal axis of the plug, whereby the insulator has a gas-tight connection therewith because of its wedging action in the tapered portions, under pressure.

[Claims 4 and 5 not printed in the Gazette.]

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1,229,749. PHONOGRAPH. NEWMAN H. HOLLAND, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Sept. 17, 1914. Serial No. 862,138. (Cl. 179—100.1.)



1. The combination of vibratory means, a recording stylus and a reproducing stylus in operative relation to said means, means for impressing vibrations corresponding to sound waves upon said vibratory means, means for conveying vibrations from said vibratory means, and unitary means for rendering said vibration impressing means operative or inoperative and for causing said recording stylus to be moved respectively into or out of operative position, substantially as described.

2. The combination of vibratory means, a recording stylus and a reproducing stylus in operative relation to said means, means for impressing vibrations corresponding to sound waves upon said vibratory means, means for conveying vibrations from said vibratory means, and unitary means for rendering said vibration conveying means operative or inoperative and for causing said reproducing stylus to be moved respectively into or out of operative position, substantially as described.

3. The combination of vibratory means, a recording stylus and a reproducing stylus in operative relation to said means, means for impressing vibrations corresponding to sound waves upon said vibratory means, means for conveying vibrations from said vibratory means, and unitary means for rendering said vibration impressing means operative and said vibration conveying means inoperative and for causing said recording stylus to be moved into operative and said reproducing stylus into inoperative position, or for rendering said vibration impressing means inoperative and said vibration conveying means operative and for causing said recording stylus to be moved into inoperative position and said reproducing stylus into operative position, substantially as described.

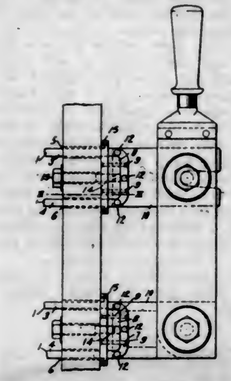
4. The combination of vibratory means, a recording stylus and a reproducing stylus in operative relation to said means, electrically operable means for impressing vibrations corresponding to sound waves upon said vibratory means, means for conveying vibrations from said vibratory means, and unitary means for rendering said vibration impressing means operative and said vibration conveying means inoperative and for moving said recording stylus into and said reproducting stylus out of operative position, substantially as described.

5. The combination of vibratory means, a recording stylus and a reproducing stylus in operative relation to said means, means for impressing vibrations corresponding to sound waves upon said vibratory means, electrically operable means for conveying vibrations from said vibratory means, and unitary means for rendering said vibration impressing means inoperative and said vibration conveying means operative and for moving said recording stylus out of and said reproducing stylus into operative position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

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1,229,750. KNIFE-BLADE SWITCH. FREDERICK BRERETON HOLT, Antrobus, England, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 28, 1915. Serial No. 47,883. Renewed Aug. 25, 1916. Serial No. 116,837. (Cl. 175—282.)



1. In a knife-blade switch, the combination with a base member and jaw members, of a U-shaped conducting strip inserted through the base member, and a conducting block inserted between the base member and the U-shaped strip, said U-shaped strip and the conducting block being slotted to receive the jaw members.

2. In a knife-blade switch, the combination with a base member and jaw members, of a U-shaped conducting strip inserted through the base member, and a conducting block inserted between the base member and the U-shaped strip, said U-shaped strip and the conducting block being slotted to receive the jaw members, said jaw members, U-shaped strip and conducting block being sweated together to insure good electrical contact.

3. The combination with a base member, of a U-shaped member inserted therein, a conducting block disposed between the U-shaped member and the base member, and a plurality of conducting members disposed in slots cut in the said block and in the U-shaped member.

4. The combination with a base member, of a U-shaped member inserted therein, a conducting block disposed between the U-shaped member and the base member, means for securing the block to the base member, means for securing the U-shaped member to the block member, a plurality of conducting strips disposed in slots cut in the said block and in the U-shaped member, and means for securing the said strips in position.

5. The combination with a base member, of a U-shaped member having portions of its legs inserted through the base member, a conducting member disposed between the U-shaped member and the base member, and conducting strips disposed in corresponding slots in the conducting member and in the U-shaped member.

[Claims 6 to 14 not printed in the Gazette.]

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1,229,751. PAPER RECEPTACLE. HENRY A. HOUSE, Bridgeport, Conn. Filed May 8, 1915. Serial No. 26,692. (Cl. 229—3.)

1. A paper receptacle having its bottom, sidewall, and lip integral, and its sidewall and lip plaited to form sections of a plurality of thicknesses of paper pressed into permanent plaits tapering from the top toward the bottom of the sidewall with the edge of the lip formed by the widest part of the plaited sections, and the lip compressed upon itself for permanently holding the plaits of the sidewall at the lip portion thereof, the lip being in unbroken continuity with the sidewall, and circumferentially plaited transversely to the longitudinal plaits of the sidewall.

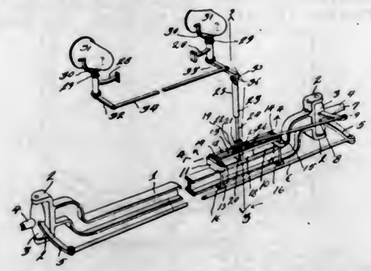


4. A receptacle of the character described, formed from a plurality of superposed layers of unparaffined paper, and an intermediate layer of paraffined paper, the side walls of said cup consisting of compressed plaits, the said cup having an upset and compressed rim, the plaits of the said unparaffined layers of paper being caused to adhere by the inherent sizing of the said paper.

[Claims 2, 3, and 5 not printed in the Gazette.]

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1,229,752. DIRIGIBLE-LAMP MECHANISM. LEWIS INGHRAM, Fairview, W. Va. Filed Dec. 15, 1916. Serial No. 137,178. (Cl. 240—62.)



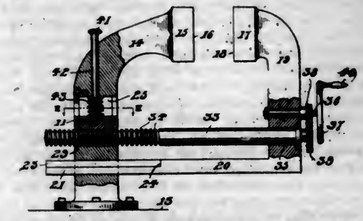
1. In a dirigible lamp mechanism, the combination of a front axle and knuckle hubs pivotally mounted in its opposite ends, of a connection between said knuckle hubs, a pair of plates mounted upon the axle, spacing means for said plates, one of said plates having a guide slot, a member mounted between said plates and having means guided in said slot, a rod connecting said member and one of the knuckle hubs, and a connection between said member and said lamps, whereby as the knuckle hubs turn in one direction, the lamps correspondingly move.

2. In a dirigible lamp mechanism the combination of a front axle and knuckle hubs pivotally mounted in its opposite ends, of a connection between said knuckle hubs, a pair of plates mounted upon the axle, spacing means for said plates, one of said plates having a guide slot, a member mounted between said plates and having means guided in said slot, a rod connecting said member and one of the knuckle hubs, and a connection between said member and said lamps, whereby as the knuckle hubs turn in one direction, the lamps correspondingly move, said connections between the lamps and said member having means to permit of the vertical vibration and the forward and transverse thrusts of the body of the vehicle.

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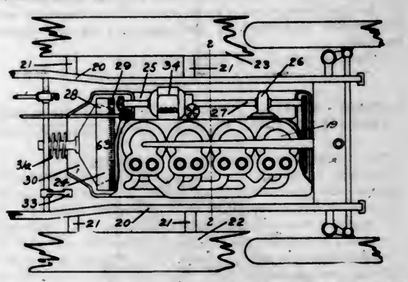
1,229,753. QUICK-ACTION VISE. JOHN KAROLLE and GEORGE CSVERCSKO, Flint, Mich. Filed Sept. 28, 1916. Serial No. 122,636. (Cl. 81—36.)

A vise of the type described including a fixed post having a fixed jaw-forming upper end, said post having a chamber with a smooth-faced groove in the bottom thereof, said post also having a transverse perforation therethrough below said chamber, a bar slidable in said perforation and having at one end an arm having a jaw-forming upper end positioned opposite the fixed jaw, a shaft carried by said arm having a threaded portion received by said smooth-faced groove, actuating means for said shaft controlled from said jaw-forming arm, a block of Maltese-cross-like formation having a lower thread-faced groove for engaging the threaded portion of said shaft, said block-member being positioned within said chamber, with its resultant reduced forward and rear end terminals received and guided in vertical slots in the corresponding portions or walls of said chamber, said shaft-engaging block having a releasing rod-member extending upwardly through said post and equipped with a resilient member delivering its pressure upon said shaft-engaging block for the forcible retention of the latter in engagement with said shaft.



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1,229,754. ELECTRIC MACHINE. CHARLES F. KETTERING and WILLIAM A. CHRYST, Dayton, Ohio, assignors to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed Mar. 7, 1913. Serial No. 752,733. (Cl. 123—179.)



1. In a starting system for internal combustion engines, the combination with an electric machine, adapted to be operated as a generator at a determined ratio, relative to the engine speed; an ignition system operable at a constant speed ratio, relative to the engine speed; and a clutch having driving and driven members for automatically connecting the electric machine to the engine to operate the same as a generator, when the engine attains a predetermined speed, said driving member of the clutch having provisions for operating said ignition system at a determined ratio, relative to the engine speed throughout the operation of the engine, regardless of the operation of the electric machine.

2. In a device of the character described, the combination with an engine; of an electric machine; means for connecting the engine and machine together and operable at a predetermined speed of the engine, to actuate the electric machine as a generator, said electric machine comprising an end housing provided with a plurality of connected chambers, one of which contains said independent connection; an ignition system comprising timing and distributing mechanism positioned in another of said cham-

bers; and driving connections between said independent connection and the timing and distributing mechanism for operating the timing and distributing mechanism concurrently with the operation of the engine.

3. In a device of the character described, the combination with an engine; of an electric machine; a frictional clutch for connecting said electric machine and the engine, to operate the electric machine as a generator, when the engine attains a predetermined speed, said frictional clutch comprising an outer casing, and an inner cam; frictional members interposed between said cam and the interior face of said outer casing; the exterior face of said outer member having a spiral gear secured thereto; an ignition system, comprising timing and distributing mechanism and coöperating with the spiral gear formed on said outer casing, whereby said timing and distributing mechanism will be operated concurrently with the engine.

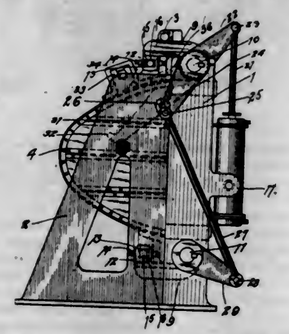
4. In a device of the character described, the combination with an engine, of an electric machine capable of operation as a motor and as a generator, said machine including an armature shaft; means for connecting one end of said armature shaft to the engine, when the electric machine operates as a motor at one ratio of speed, and connecting devices operable to couple up the opposite end of said armature shaft to the engine, to operate the electric machine as a generator at a different speed ratio; an ignition system including movable parts; and driving mechanism associated with the said connecting devices for operating the movable parts of the ignition system at a determined speed ratio relative to the speed of the engine, regardless of whether the electric machine is operating as a motor or as a generator.

5. In a device of the character described, the combination with an engine, of an electric machine; a clutch unit comprising driving and driven members for connecting the electric machine and engine together, whereby to operate the electric machine as a generator when the engine has reached a determined speed; an ignition system comprising movable parts; and driving connections between the driven member of said clutch unit and the movable parts of the ignition system will be operated concurrently with the engine regardless of the operation of the electric machine.

[Claim 6 not printed in the Gazette.]

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1,229,755. FILTER. HERBERT N. KILBY, Cleveland, Ohio. Filed Jan. 13, 1915. Serial No. 2,069. (Cl. 220—124.)



1. In a filter, a separable two part casing, one of said parts being pivotally supported to close upon the other part, a locking means indepnedent of said pivotal support disposed adjacent opposite lines of jointure of the parts of said casing, and means for successively releasing the locking means adjacent the various lines of jointure.

2. In a filter a separable two part casing, one of said parts being pivotally supported to close upon the other part, a locking means independent of said pivotal support disposed adjacent opposite lines of jointure of the parts of said casing, means for successively releasing the locking means adjacent the various lines of jointure, and a single operating unit for actuating said locking means.

3. In a filter, a separable two part casing, one of said parts being pivotally supported to close upon the other part, a locking means independent of said pivotal support disposed adjacent opposite lines of jointure of the parts of said casing, and means for successively releasing the locking means adjacent the various lines of jointure and moving one of the parts of said casing away from the other.

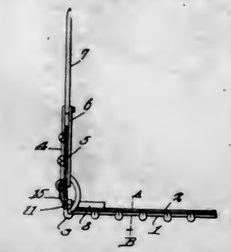
4. In a filter, a separable two part casing, one of said parts being pivotally supported to close upon the other part, a locking means independent of said pivotal support disposed adjacent opposite lines of jointure of the parts of said casing, means for successively releasing the locking means adjacent the various lines of jointure and moving one of the parts of said casing away from the other, and a single operating unit for actuating said locking and moving means.

5. In a filter, a separable two part casing, the parts being arranged to close one upon the other, a locking means disposed adjacent opposite lines of jointure of the parts of said casing, operating means for said locking means, and lost motion connecting means between said locking and operating means whereby said locking means are successively operated.

[Claims 6 to 17 not printed in the Gazette.]

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1,229,756. VERTICAL CUTTER ATTACHMENT FOR MOWING-MACHINES. OTTO KLUGE, Golconda, Ill. Filed Mar. 13, 1916. Serial No. 83,969. (Cl. 56—30.)



1. The combination with a finger bar and a sickle bar mounted for reciprocation relative thereto, of a housing fixedly connected to the finger bar, a shaft mounted for rotation in the housing and supported above the sickle bar, said shaft having a spiral groove, a stud upon the sickle bar and adapted to work within the groove, a disk at the end of the shaft and beyond the finger bar, and a pitman operated by the disk.

2. The combination with a finger bar and a sickle bar mounted for reciprocation relative thereto, of an inverted U-shaped housing secured to the finger bar and closed at the bottom by the sickle bar, a shaft mounted for rotation within the housing and above the sickle bar and having a spiral groove, a stud upon the sickle bar and projecting into the groove, a disk revoluble with the shaft, and a pitman actuated by the disk.

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1,229,757. REED-HOLDER. GEORGE O. KNAPP, Newark, N. J. Filed Sept. 19, 1916. Serial No. 120,919. (Cl. 46—46.)

1. A reed holder comprising a cup-shaped portion with a partition bent inwardly from its closed end and forming an opening which extends from a chordal line to the side wall.

2. A reed holder comprising a cylindrical portion having one end closed and the other open and having a partition bent inwardly from its closed end and forming an opening bounded by said partition and the side wall of the cylindrical portion.



3. A reed holder comprising a cup-shaped portion with a partition bent inwardly from its closed end to lie longitudinally of the holder and forming an opening which extends from a chordal line to the side wall.



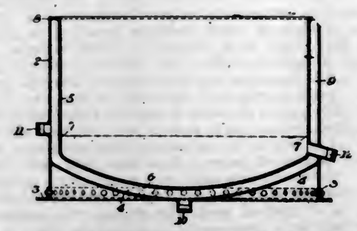
4. The combination with a reed holder comprising a cup-like portion having a partition bent inwardly from its closed end and forming an opening bounded by said partition and the side wall, of a reed having a trough-like body and flat tongue fitted in said opening between said partition and wall of the holder.

5. The combination with a reed holder comprising a cup-like portion having a partition bent inwardly from its closed end and forming an opening bounded by said partition and the side wall, of a reed having a trough-like body and flat tongue fitted in said opening between said partition and wall of the holder with the rounded side of the body against the side wall of the holder and the tongue against said partition.

[Claims 6 to 9 not printed in the Gazette.]

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1,229,758. RENDERING-KETTLE. LUTHER L. KNOX, Avalon, Pa. Filed July 6, 1914. Serial No. 849,044. (Cl. 220—142.)



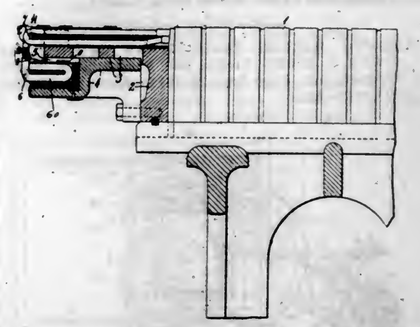
1. A steam jacketed rendering kettle having inner and outer members, the outer member being formed of a sheet metal cylinder and a sheet metal head, the edge of said head being welded to the inner face of the cylinder to form a smooth joint at the junction of the cylinder and the head, the inner member being formed of a sheet metal cylinder and a sheet metal head of dished form, said head having an annular flange merging into the dished portion of the head, there being a butt-welded joint between the end of the annular flange on the head and the end of the inner cylinder to form a smooth inner surface on the inner member at the junction of the head of the cylinder, the upper edge of the cylinder of the inner member having an annular flange supported on and secured to the upper edge of the cylinder of the outer member, substantially as described.

2. A steam jacketed rendering kettle having inner and outer members, the outer member being formed of a sheet metal cylinder and a sheet metal head, the edge of said head being welded to the inner face of the cylinder to form a smooth joint at the junction of the cylinder and the head, the inner member being formed of a sheet metal cylinder and a sheet metal head of dished form, said head having an annular flange merging into the dished portion of the head, there being a butt-welded joint between the end of the annular flange on the head and the end of the inner cylinder to form a smooth inner surface on the inner member at the junction of the head and cylinder, the upper edge of the cylinder of the inner member having an annular flange, the annular flange being flush with the outer face of the cylinder of the outer member and welded to the upper edge of said cylinder to form inner and outer walls, which are unbroken by projecting flanges, substantially as described.

3. A steam jacketed rendering kettle having inner and outer members, the outer member being formed of a sheet metal cylinder and a dished sheet metal head, the edge of said head being welded to the inner surface of the cylinder above the lower end thereof to form a smooth joint at the junction of the cylinder and head, the cylindrical portion of the outer member extending below the head to form a support for the kettle, there being an annular flange connected to the bottom of the cylinder portion of the outer member to form a foot therefor, the inner member being formed of a sheet metal cylinder and a sheet metal head of dished form, said head having an annular flange merging into the dished portion of the head, there being a butt-welded joint between the end of the annular flange on the head and the end of the inner cylinder to form a smooth inner surface on the inner member at the junction of the head and cylinder, the upper edge of the cylinder of the inner member having an annular flange supported on and secured to the upper edge of the cylinder of the outer member, substantially as described.

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1,229,759. SUPPORT FOR ARMATURE CROSS-CONNECTORS. GEORGE H. KRAUSKOPF, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 15, 1913. Serial No. 742,144. (Cl. 171—206.)



1. In a dynamo-electric machine, the combination with a rotatable member embodying an end-plate provided with an integral, longitudinally projecting, annular flange, and a winding comprising a plurality of conductors, of a supporting ring partially engaging the inner surface of said flange, a plurality of strap cross-connectors disposed on edge and associated with said conductors, the convergent halves of each connector being disposed inwardly in a longitudinal direction, means for permanently attaching the same to the unengaged portion of said supporting ring, and means for attaching said supporting ring to said end-plate.

2. In a dynamo-electric machine, the combination with a rotatable member embodying an end-plate provided with an integral, longitudinally projecting, annular flange, and a winding comprising a plurality of conductors, of a supporting ring, of substantially Z-shape in cross-section, a portion of which engages the inner surface of said flange and forms a longitudinally-disposed annular recess, a plurality of strap cross-connectors disposed on edge and connected to said conductors, the halves of each connector being centrally convergent and disposed within said annular recess, means for binding said cross-connectors to said supporting ring, and means for attaching said supporting ring to said end-plate.

3. In a dynamo-electric machine, the combination with a rotatable member embodying an end-plate provided with an integral, longitudinally projecting, annular flange, and a winding comprising a plurality of conductors, of a supporting ring of substantially Z-shape in cross-section and

having one leg which is fitted tightly within said flange, a plurality of strap corss-connectors disposed on edge and connected to said conductors and severally having the convergent halves disposed inwardly in a longitudinal direction and symmetrically located upon the other leg of said supporting ring, means for securely binding said cross-connectors thereto, and means for attaching said supporting ring to said end-plate.

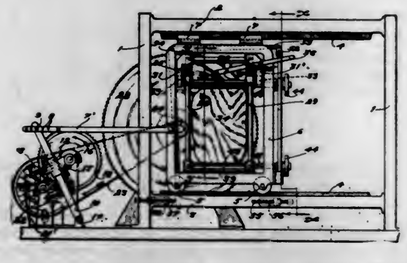
4. In a dynamo-electric machine, the combination with a rotatable member provided with a winding comprising a plurality of conductors, of an end-plate attached to said member, provided with an integral, longitudinally-projecting annular flange, a ring member having a portion which engages the inner surface of said flange and another portion which is adapted to form an annular recess with said flange for receiving cross-connectors for said conductors, and means for attaching said ring member to said end-plate.

5. In a dynamo-electric machine, the combination with a rotatable member provided with a winding comprising a plurality of conductors, of an end plate attached to said member and provided with an integral, longitudinally-projecting annular flange, a ring of substantially Z-shape in section and having one leg fitted tightly within said flange and the other leg forming an annular recess with said flange for receiving cross-connectors for said conductors, and means for removably attaching said ring to said end-plate.

[Claims 6 to 14 not printed in the Gazette.]

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1,229,760. BARREL-HEADING-SAW MECHANISM. JULIUS J. KROHN, Arcata, and FREDERICK J. DAVIS, Oakland, Cal. Filed Sept. 26, 1914. Serial No. 863,696. (Cl. 143—12.)



2. A machine of the class described comprising a material carrying carriage composed of spaced shafts, a guide extending across said carriage and mounted on said shafts, the said guide having downwardly extending arms, a material engaging bracket mounted on the shafts, and having a sliding engagement with the downwardly extending arms of the guide, substantially as described.

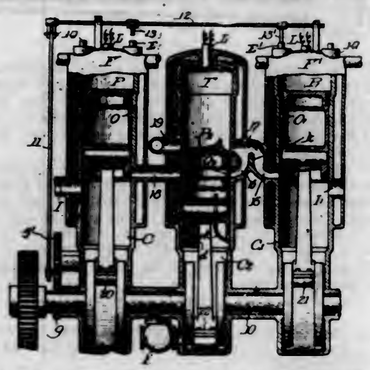
[Claims 1 and 3 not printed in the Gazette.]

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1,229,761. INTERNAL-COMBUSTION ENGINE. EDWIN GERARD LANCASTER, Chicago, Ill. Filed May 15, 1913. Serial No. 767,801. (Cl. 123—59.)

1. In an internal combustion engine, two combustion cylinders, a crankshaft, two separate closed crankcases each connected to one of said cylinders, two pistons each connected to said crankshaft, and also operatively connected to one of said two cylinders, means of communication connecting both of said crankcases with one of said cylinders, said two pistons and said means constructed to deliver charges of gaseous fluid at predetermined periods, from both of said crankcases into one of said cylinders, and means for supplying fuel and air to the other of said cylinders.

2. In an internal combustion engine, two combustion cylinders, one constructed for a two stroke and the other for a four stroke thermo-dynamic cycle, a common crankshaft, two closed crankcases each one in connection with one of said cylinders, means of communication connecting said two crankcases with each other and with the two stroke cycle cylinder, a piston in each of said cylinders, connected to said crankshaft, constructed to deliver, at predetermined periods, charges of gaseous fluid from both of said crankcases to said one of said cylinders, and means for supplying air and fuel to the other of said cylinders.



3. In an internal combustion engine, the combination of one two stroke cycle cylinder with two four stroke cycle cylinders, a closed crankcase connected to each of said four stroke cycle cylinders, a third crankcase connected to said two stroke cycle cylinder, means of communication connecting said crank cases of said four stroke cycle cylinders with said crankcase of said two stroke cycle cylinder and the latter to said two stroke cycle cylinder, three pistons, one in each of said cylinders, and constructed to deliver, in conjunction with said means, periodical charges of gaseous fluid from said four stroke cycle crankcases into said two stroke cycle crankcase and from the latter into said two stroke cycle cylinder.

4. In an internal combustion engine, two combustion cylinders, one a four stroke cycle and the other a two stroke cycle cylinder, a crankshaft, a separate crankcase for each of said cylinders, a conduit adapted for intermittent communication with each of said crankcases and with said two stroke cycle combustion cylinder, and pistons operatively connected to said cylinders and said crankshaft and constructed alternately to establish and interrupt said communications.

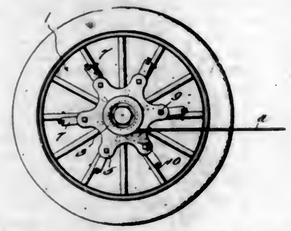
5. In an internal combustion engine, two combustion cylinders, a first one constructed to operate at a four stroke and a second one to operate at a two stroke cycle, a crankshaft, a first and a second separate closed crankcase connected to said first and to said second cylinder respectively, means of communication between said crankcases and between said two stroke cycle crankcase and its appertaining cylinder, two pistons operatively connected to said cylinders and crankshaft and constructed to deliver air at predetermined intervals from said first into said second crankcase and explosive gaseous fluid from the latter into its appertaining cylinder.

[Claims 6 and 7 not printed in the Gazette.]

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1,229,762. EMERGENCY DRAFT-WINDLASS. JOHN H. LANGE, Muscatine, Iowa, assignor of one-half to William H. Schwab, Muscatine, Iowa. Filed July 28, 1916. Serial No. 111,855. (Cl. 242—95.)

1. An attachment for driving wheels of motor vehicles, comprising a drum, an enlarged head portion having a plurality of radially disposed ways formed in one face thereof arranged adjacent said drum, a plurality of laterally extending fingers arranged on the head portion, arms slidably arranged in said radially disposed ways, means for securing said arms in adjusted positions in the radially disposed ways, and spoke engaging hooks carried on the outer ends of said arms.



2. An attachment for driving wheels of motor vehicles comprising a cable winding drum having a plurality of radially extending fingers arranged adjacent one end thereof, slidable arms carried by the fingers, and laterally adjustable hooks arranged adjacent the outer extremities of said slidable arms for securing said drum to the wheel.

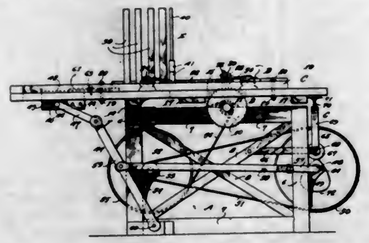
3. An attachment for driving wheels of motor vehicles, comprising a cable winding drum, a plurality of radially extending fingers arranged adjacent one extremity of said drum, slidable arms carried by said fingers, means for securing said arms in an adjusted position, laterally adjustable hooks carried by the outer extremities of said arms, and means for securing said hooks in an adjusted position.

4. An attachment for driving wheels of motor vehicles, comprising a cable winding drum, a plurality of radially extending fingers arranged adjacent one extremity of said drum and having longitudinally disposed undercut grooves formed in one face thereof, slidable arms receivable by said undercut grooves, set screws for securing said arms in an adjusted position, laterally adjustable hooks carried by the outer extremities of said arms for engagement with the spokes of the wheel, and set screws engageable with portions of said hooks whereby the same may be secured in an adjusted position.

5. An attachment for driving wheels of motor vehicles, comprising a cable winding drum, a plurality of radially extending fingers arranged adjacent one extremity of said drum, longitudinally disposed undercut grooves formed on one face of said fingers, slidable arms receivable by said undercut grooves, set screws for securing said arms in an adjusted position, laterally adjustable hooks carried in the outer extremities of said slidable arms, means for securing said hooks in an adjusted position, and a plurality of distended spoke abutting fingers arranged adjacent said laterally distended fingers for preventing relative movement of the drum.

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1,229,763. HANDHOLD-RABBETING MACHINE. JASPER LATHIM, Castella, Cal. Filed June 23, 1914. Serial No. 846,839. (Cl. 144—136.)



1. A hand hold rabbeting machine comprising in combination, a suitable frame, cutting mechanism carried thereby, a work support pivotally carried by said frame, means for controlling the path of movement of the work with respect to said support, a cam carried by said frame, an element actionable by movement of said cam, and a second element having a screw threaded shank in engagement with said last mentioned element and a head upon which said oscillatable work support freely rests, substantially as and for the purpose set forth.

3. In a hand hold rabbeting machine, the combination of a suitable base, cutting mechanism carried thereby including a circular saw, a work support movable with respect to said cutting mechanism, a guide element extending parallel to the plane of said saw at one side thereof, adjustable upon said work support, a roller, means for yieldably mounting said roller upon said guide element to lie over said work support adjacent the said saw, and adjustable means for limiting the approach of said roller to the plane of said work support, substantially as and for the purpose set forth.

5. In combination with a frame having a rotary cutting means thereon, of a work supporting frame pivoted to said first named frame and adapted to move toward and away from the latter, the said work supporting frame being adapted to have work fed thereover, means for moving said supporting frame, a spring arm on said supporting frame, a roller carried by said spring and adapted to yieldably engage the work during the cutting operation to press the same into engagement with the cutting means, and a screw for adjusting the roller toward and away from the work, substantially as described.

[Claims 2 and 4 not printed in the Gazette.]

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1,229,764. VEHICLE-INDICATOR. EDWARD E. LAWLER, Pinckney township, Lewis county, N. Y. Filed Dec. 18, 1916. Serial No. 137,536. (Cl. 116—31.7.)



1. In direction indicators for vehicles, the combination with the mud-guard and the dash, of an indicator plate pivotally mounted on the top of the mud-guard ahead of the body of the vehicle, a shaft secured to said plate, a crank adjustably secured to said shaft, a rod pivoted to said crank and piercing the dash and also a guard-plate carried by the dash, said guard-plate having a key-hole and said rod having a notch for engaging the said key-hole for locking the indicator in the operated position.

3. In indicators for vehicles, the combination with the mud-guards and the dash of the vehicle, of a pair of plane indicators disposed transversely upon said mud-guards adapted to lie horizontally and parallel to the top sides of the mud-guards when idle and to stand up-right when operated for indicating turning movements of the vehicle, brackets for pivotally supporting said indicators, a rod for operating each indicator, and means carried by the dash and pierced by said rods for locking the indicators in the upright position.

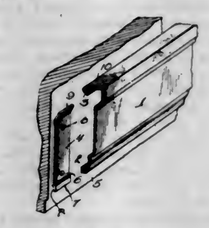
[Claim 2 not printed in the Gazette.]

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1,229,765. SHEET-METAL MOLDING. EDWARD G. LEHMAN, Canton, Ohio. Filed May 18, 1916. Serial No. 98,315. (Cl. 189—85.)

1. A metal molding having an inturned flange on one edge and an inturned flange retracted at an acute angle on the other edge, and securing cleats for the molding

having one end shaped to positively engage the flange on the one edge of the molding, and the other end diagonally deflected to slidably engage the retracted flange on the other edge of the molding for wedging and pressing the acute angle of the retracted flange of the molding against an adjacent wall.



2. A metal molding having an inturned flat flange on one edge and an inturned flange retracted at an acute angle on the other edge, and securing cleats for the molding having one end offset for receiving and positively holding the flat flange of the molding and the other end diagonally deflected for slidably engaging the retracted flange of the molding to wedge and press the acute angle of the retracted flange against an adjacent wall.

3. A metal molding corner cap having inturned flanges on its inner edges and inturned flanges retracted at acute angles on its outer edges, and a corner cleat having its inner ends shaped to positively engage the inturned flanges of the corner cap and its outer ends diagonally deflected to slidably engage the retracted flanges of the corner cap for wedging and pressing the acute angle of the retracted flange against an adjacent wall.

1,229,766. DEVICE FOR CATCHING ROLLING BALLS, TO BE USED IN THE GAME OF INDOOR GOLF-PUTTING. EUGENE MCLEAN LONG, New York, N. Y. Filed Jan. 26, 1917. Serial No. 144,660. (Cl. 46—4.)



1. In a device of the class described, a set of filaments arranged to form an inclosure and means for supporting them so that a ball may roll over any of them and be brought to rest at a place within the inclosure.

2. In a device of the class described, an inclined set of filamenta arranged to form an inclosure, and means for supporting them so that a ball may roll over any of them and be brought to rest at a place within the inclosure.

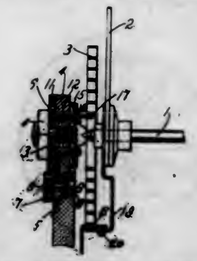
3. In a device of the class described, a set of filaments arranged to form an inclosure, and means for supporting the same so that their free ends bound the inclosure and limit the movement of a ball when placed therein.

[Claims 4 to 9 not printed in the Gazette.]

1,229,767. ELECTRICAL MEASURING INSTRUMENT. PAUL MACGAHAN, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 29, 1913. Serial No. 781,748. (Cl. 171—95.)

1. In an electrical measuring instrument, the combination with a rotatable shaft, of a spring having one end attached to the rotatable shaft, a pinion, a gear wheel in engagement with the said pinion, and means connected to the said gear wheel for restraining the same and for operatively connecting the other end of the spring thereto.

2. In an electric measuring instrument, the combination with a rotatable member, of a pinion, a gear wheel having a projection and adapted to be rotated through any angle, and a bearing for the rotatable member, said bearing being mounted in the gear wheel projection.



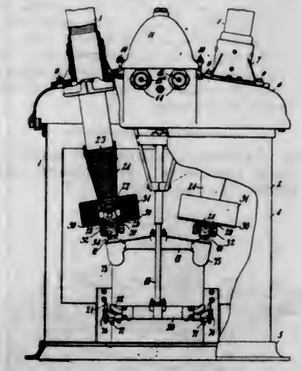
3. In an electrical measuring instrument, the combination with a rotatable member, of a pinion, a gear wheel having a projection and adapted to engage the pinion, a jewel bearing for the rotatable member that is mounted in the gear wheel projection, and means for restraining the gear wheel in any position.

4. In an electrical measuring instrument, the combination with a rotatable shaft, of a pointer attached to the said shaft, a projecting arm on the said shaft, a spring having one end attached to the said projecting arm, a pinion, a gear wheel in engagement with the said pinion, and means connected to the said gear wheel for restraining the same and for operatively connecting the other end of the said spring to the said gear wheel.

5. In an electrical measuring instrument, the combination with a rotatable member, of a supporting member, a pinion journaled in said supporting member, a gear wheel having a cylindrical projection thereon and adapted to be rotated through any angle, said projection being journaled in the said supporting member, and a bearing for the said rotatable member carried by the projection on the said gear wheel.

[Claims 6 to 9 not printed in the Gazette.]

1,229,768. CIRCUIT-INTERRUPTER. JOSEPH N. MAHONEY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 11, 1913. Serial No. 784,083. (Cl. 175—282.)



1. A circuit interrupter comprising stationary terminal members, reactors surrounding the said terminal members, and means for connecting the said reactors in the circuit before, and disconnecting the same after, the circuit is closed and opened, respectively.

2. In a circuit interrupter, the combination with stationary terminal members, of reactors surrounding the said terminal members, and an operating mechanism for connecting the said reactors in the circuit before, and disconnecting the same after, the circuit is closed and opened, respectively.

3. In a circuit interrupter, the combination with terminal members, of impedance devices surrounding the said terminal members, and means for connecting the said impedance devices in circuit before, and disconnecting the same after, the circuit is closed and opened, respectively.

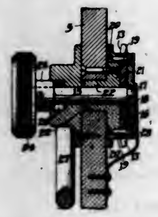
4. A circuit interrupter comprising terminal members, reactors surrounding the said terminal members, main and auxiliary stationary contact members mounted on the said terminal member and electrically connected to the said reactors, movable main and auxiliary contact members, and means for operating the said movable contact members to effect engagement of the auxiliary contact members before, and disengagement after, the main contact members.

5. A circuit interrupter comprising terminal members, reactors surrounding the said terminal members, stationary main and auxiliary contact members supported by the said terminal members and electrically connected to the said reactors, movable main and auxiliary contact members for engaging the said stationary contact members, and an operating means for the said movable contact members.

[Claims 6 to 10 not printed in the Gazette.]



1,229,769. WINDOW-REGULATOR. JOHN E. MARSDEN, Philadelphia, Pa. Filed June 18, 1914. Serial No. 845,806. (Cl. 16—53.)



1. The combination with a window, of means for moving the same comprising a window driving wheel, a rotatable and longitudinally movable shaft, a stationary member having locking notches, a member carried by and secured against rotation with respect to said shaft, said shaft carrying said wheel and extending therethrough, a locking pin carried by said second named member and extending through said wheel and adapted to engage in said notches, and a spring engaging the end of said shaft and opposing withdrawal of said pin from said notches.

2. The combination with a window, of means for moving the same comprising a window driving wheel, a rotatable and longitudinally movable shaft, a stationary member having locking notches, a member carried by and secured against rotation with respect to said shaft, said shaft carrying said wheel and extending therethrough, a locking pin carried by said second named member and extending through said wheel and adapted to engage in said notches, said pin forming a driving connection between said member and said wheel.

3. The combination with a window, of means for moving the same comprising a window driving wheel, a rotatable and longitudinally movable shaft, said driving wheel disposed in fixed angular relation with respect to said shaft, a stationary member having locking notches, a member carried by and secured against rotation with respect to said shaft, and a locking pin carried by said second named member and adapted to engage in said notches.

4. The combination with a window, of means for moving the same comprising a window driving wheel, a rotatable and longitudinally movable shaft, a stationary member having locking notches, and locking means rotatable and movable longitudinally in fixed relation with said shaft and connecting said shaft with said wheel and adapted to engage in said notches.

1,229,770. METAL UTENSIL. ALBERT L. MARSH, Detroit, Mich., assignor to Hoskins Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 19, 1917. Serial No. 143,369. (Cl. 75—1.)



1. As an article of manufacture a metal utensil of the character which is exposed in use to the destructive action of molten brasses, bronzes and the like formed of an alloy comprising iron and chromium.

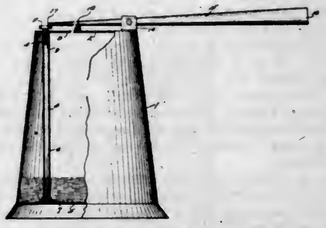
3. As an article of manufacture a metal utensil of the character which is exposed in use to the destructive action of molten brasses, bronzes and the like formed of an alloy comprising iron and approximately 25 per cent. chromium.

5. As an article of manufacture a metal utensil of the character which is exposed in use to the destructive action of molten brasses, bronzes and the like formed of an alloy comprising iron, upward of 15 per cent. chromium and a relatively small percentage of manganese.

6. As an article of manufacture a metal utensil of the character which is exposed in use to the destructive action of molten brasses, bronzes and the like formed of an alloy comprising iron, approximately 25 per cent. chromium and approximately 2 per cent. manganese.

[Claims 2 and 4 not printed in the Gazette.]

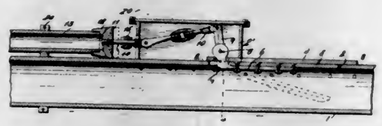
1,229,771. LIQUID-SPRAYER. ARTHUR MATTERN, Williamsport, Pa. Filed Jan. 27, 1917. Serial No. 144,914. (Cl. 137—67.)



In a liquid sprayer, a liquid container having an orifice in its top, a tube having one of its ends in engagement with an apertured portion of said top and extending into the interior of said container, closing means arranged in the upper end of said tube for varying the size of the opening therein, a tubular member fulcrumed upon said container top and having one of its ends projected over

said closing means, and a spring connecting said container top and tubular member whereby one end of the latter is yieldingly retained in engagement with said closing means.

1,229,772. VALVE. HENRY L. MILLER and NIELS P. NIELSEN, Port Aransas, Tex. Filed Apr. 3, 1915. Serial No. 19,034. (Cl. 37—9.)



1. In a device of the class described, the combination of a straight suction tube, a water supply pipe positioned upon said suction tube, said water supply pipe extending throughout its entire length substantially parallel to said suction tube, clamping bands passing about said suction tube and said supply pipe for holding said supply pipe upon said suction tube, one end of said water supply pipe communicating with the interior of said suction tube, the remaining end of said supply pipe being open, a valve seat carried upon the open end of said water supply pipe, a valve movably mounted upon said seat, a fin pivotally mounted within said suction tube, means connecting said fin to said valve, said fin being adapted to normally be retained in an elevated position when the device is in operation due to the force of the impact of the water passing through said suction tube with great velocity, whereby said means will hold said valve upon said seat, the elongated construction of the device facilitating its submerging within a comparatively shallow stream, whereby when the velocity of water within the suction tube decreases said fin will fall so as to cause said means to remove said valve from said seat, thereby permitting water from the stream to pass into the open end of said pipe and then be directed into said suction tube so as to dislodge soft materials which may be clogged within the suction tube.

2. In a device of the class described, the combination of a suction tube, a water supply pipe positioned upon said suction tube, said water supply pipe extending throughout its entire length evenly with said tube, one end of said water supply pipe communicating with the interior of said suction tube, the remaining end of said water supply pipe being open, a valve seat carried upon the open end of said water supply pipe, a valve movably mounted upon said seat, a fin pivotally mounted upon said suction tube, link means adjustably connecting said fin to said valve, said fin being adapted to be held in an elevated position for holding said valve upon said seat when the velocity of water passing through said suction tube is greatest owing to the force of the impact of the water upon said fin, said fin being adapted to fall when said velocity decreases, whereby said adjustable link means will remove said valve from said seat for permitting water to pass into the open end of said pipe and be directed therethrough into said suction tube so as to dislodge soft material which may be clogged within said suction tube, and a housing carried upon said suction tube, and fitting over said adjustable link means, whereby foreign objects within the stream will not become entangled with the link means or will not engage the same, whereby the device will operate efficiently at all times.

3. In a device of the class described, the combination of a suction tube, a water supply pipe carried upon said suction tube, said water supply pipe extending evenly throughout its entire length with said tube, one end of said supply pipe communicating with the interior of said suction tube, the remaining end of said supply pipe being open and having a valve seat carried thereon, a valve movably mounted upon said seat, a fin pivotally mounted upon said suction tube, an arm connected to said fin, an adjustable link means connected to said arm, said adjustable link means also being connected to said valve, the entire device being adapted to be submerged in a stream of water, said fin being adapted to be held in an elevated position due to the great velocity of the water passing therethrough, whereby said valve at this time will be retained upon said seat, said fin being adapted to fall when the velocity of water decreases, whereby said arm will cause said link means to remove said valve from said seat so as to permit the passage of water into the open end and through said pipe into said suction tube for dislodging soft material therein, and an inclosed housing carried upon said suction tube and fitting over the arm of said fin and said adjustable link means, whereby foreign objects within the stream will not be entangled or engaged by the arm or link means, whereby the device will be in a condition to operate efficiently at all times when in use.

1,229,773. COLLAR-BUTTON. FRED MILOS, Chicago, Ill. Filed Oct. 2, 1916. Serial No. 123,241. (Cl. 24—91.)

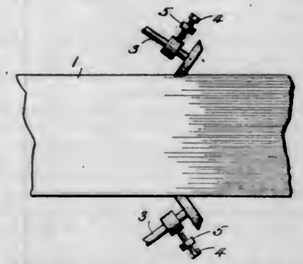


1. In a device of the character described, the combination of a base provided with a slot, a stud fixedly secured to said base adjacent one end of said slot, and a movable stud supported in said slot and adapted to be adjustably secured at any desired position between the ends of said slot, said movable stud comprising a member disposed behind said slot having a threaded projection extending through said slot and a button-hole-engaging portion threadedly engaging said projection whereby said movable stud is securely clamped in selected position.

2. In a device of the character described, the combination of a base comprising two strips secured together at their edges, the upper strip being provided with a slot, a stud fixedly secured to said base adjacent one end of said slot, and a stud comprising a member disposed between said strips and having a projection extending through said slot, and a button-hole-engaging portion mounted on said extension to selectively clamp said upper strip in predetermined adjusted position, said studs being each adapted for engagement with complementary button-holes of a shirt band.

3. In a device of the character described, the combination of a base comprising two metal strips secured together at their edges, the upper strip being provided with a slot, a stud fixedly secured to said base adjacent one end of said slot, and a stud comprising a member disposed between said strips and having a projection extending through said slot, a body portion mounted on said extension and a head removably secured to said extension, said studs being each adapted for engagement with complementary button-holes of a shirt band.

1,229,774. ART OF WELDING TUBES. JOHN C. MOON, St. Louis, Mo. Filed Nov. 27, 1916. Serial No. 133,711. (Cl. 78—92.)

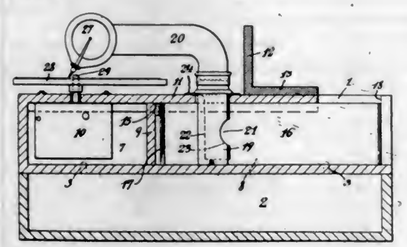


1. The hereindescribed art of preparing flat metal blanks which are to be formed into welded tubes which consists in simultaneously beveling and removing the feathers or burs from the edges of the blank before it is curled to bring said edges together.

2. The hereindescribed method of preparing tubes to be welded consisting in beveling the edges of a section of sheet metal, and then bending said section of metal to bring the beveled edges together to form a substantially V-shaped open seam along which the welding operation is effected.



1,229,775. PHONOGRAPH. FRANK S. MOORE, Brooklyn, N. Y. Filed Mar. 29, 1916. Serial No. 87,397. (Cl. 274—2.)



1. In a phonograph, a body portion having top and bottom walls, a sound amplifying chamber wholly within said body portion and comprising said top and bottom walls of the body portion and collapsible side walls, a tone-arm and an extension from said tone-arm projecting into said sound amplifying chamber within said side walls.

2. In a phonograph, a body portion having top and bottom walls, a sound amplifying chamber wholly within said body portion and comprising said top and bottom walls of the body portion and removable, collapsible side walls, a tone-arm and a removable extension from said tone-arm projecting into said sound amplifying chamber within said side walls.

3. In a phonograph, a sound amplifying chamber wholly within the body portion of the phonograph, collapsible side walls therefor, a tone-arm and an extension from said tone-arm projecting into said sound amplifying chamber adjacent said side walls.

4. In a phonograph, a sound amplifying chamber wholly within the body portion of the phonograph, removable, collapsible side walls therefor, a tone-arm and an extension from said tone-arm projecting into said sound amplifying chamber adjacent said side walls.

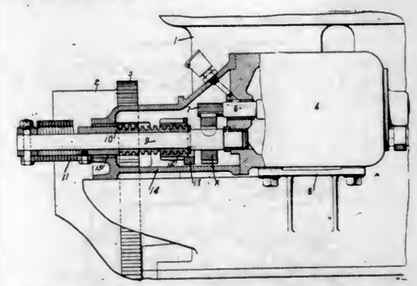
5. In a phonograph, a casing, a sound amplifying chamber within the casing, a tone-arm extension having an opening in its side wall, loosely mounted in the casing and projecting into the sound amplifying chamber, a sleeve for said tone-arm extension having an opening in its side wall and rotatable relative to said tone-arm extension and a tone-arm mounted on said tone-arm extension.

[Claims 6 to 8 not printed in the Gazette.]

1,229,776. STARTING MECHANISM FOR GAS-ENGINES. JOHN P. NIKONOW, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 29, 1914. Serial No. 879,488. (Cl. 74—7.)

1. In a starting mechanism, the combination with a motor, a driving shaft operatively connected thereto, a hollow shaft surrounding the driving shaft and having a screw-threaded portion, a pinion for coacting with said screw threaded portion, and means for connecting said shafts, of a housing for said pinion having a bearing for said hollow shaft between said connecting means and the screw-threaded portion, and a gear wheel coacting with said pinion.

2. In a starting mechanism, the combination with a motor, a driving shaft operatively connected thereto, a hollow shaft rotatably mounted on the driving shaft and having a screw-threaded portion, a spring for connecting said shafts, and a pinion for coacting with said screw-threaded portion, of a housing for said pinion having a bearing for said hollow shaft between said spring and said screw-threaded portion, and a gear wheel for coacting with said pinion.

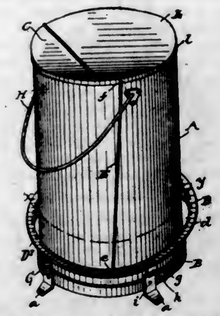


3. In a starting mechanism, the combination with an engine, a gear wheel operatively connected thereto, and a pinion, of means for actuating said pinion into and out of mesh with the gear wheel, said means comprising a hollow screw-threaded shaft, a shaft within the hollow shaft, a spring for connecting said shafts, a bearing for said hollow shaft at an intermediate portion, and means for actuating the other shaft.

4. In a starting mechanism, the combination with a pair of coacting gear wheels, of means for shifting one of said wheels, said means comprising a motor, a driving shaft, a hollow shaft rotatably mounted thereon, and having a screw-threaded portion at its inner end, means for connecting said shafts at their outer ends, and a housing having a bearing for said hollow shaft at an intermediate portion.

5. In a starting mechanism, the combination with a pair of coacting gear wheels, of means for shifting one of said wheels, said means comprising a motor having a driving shaft, a hollow shaft rotatably mounted thereon and having a screw-threaded portion at its inner end, means for connecting said shafts at their outer ends, and a housing for inclosing the shiftable gear wheel and having a gearing at its outer end for supporting said shafts.

1,229,777. GARBAGE-RECEPTACLE. JOHN M. OBERHOLTZER, Wooster, Ohio. Filed June 19, 1916. Serial No. 104,627. (Cl. 220—115.)



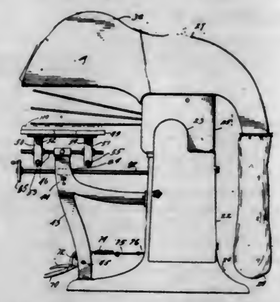
2. In a device of the character described, the combination with a body, a lid hinged thereto, a circumferential treadle bar surrounding said body, a pair of fulcrums for

said treadle bar on opposite sides of said body, a pair of rods mounted opposite each other, each in operative engagement with said lid and said bar, resilient means for actuating said bar in one direction, means, including opposite segments of said bar for actuating the latter in the opposite direction either in front or at the rear of said body, and a ball or handle mounted on said body above the rear segment of said treadle bar and accessible therefrom, substantially as set forth and for the purpose specified.

[Claim 1 not printed in the Gazette.]

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1,229,778. SANITARY BEATING-MACHINE. RALPH OLLEO, Keyport, N. J. Filed June 7, 1916. Serial No. 102,321. (Cl. 15—8.)



1. In a beating machine, the combination of a support, spaced brackets mounted on said support, a rod adjustably mounted in each bracket, a pair of grooved wheels rotatably and slidably mounted on each rod, a table, spaced legs depending from each end of the table, spaced rods connecting corresponding legs and engaged in the grooves of related wheels above and below the latter, and a beating mechanism mounted on the support and coöperating with the table.

2. In a beating machine, the combination of a support, a bracket swingingly mounted on said support, a beating element pivoted on said bracket, a cam rotatably mounted on the support and coöperating with the beating element to oscillate same, and means for adjusting the bracket toward and away from the cam.

3. In a beating machine, the combination of a support, an oscillating beating element adjustably mounted on the support, a cam rotatably mounted on the support and cooperating with the beating element to oscillate same, and means for adjusting the beating element toward and away from the cam.

4. In a beating machine, the combination of a pivoted U-shaped yoke, a cam rotatable between the arms of the yoke and operating to oscillate the latter, and a beating element oscillated by the movement of the yoke.

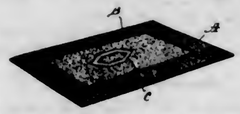
5. In a beating machine, the combination of a support, a bracket swingingly mounted on said support, a U-shaped yoke pivoted on said bracket, a cam rotatably mounted on the support between the arms of the yoke and operating to oscillate the yoke, a beating element oscillated by the movement of the yoke, and means for adjusting the bracket toward and away from the cam.

[Claims 6 to 8 not printed in the Gazette.]

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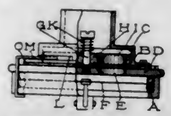
1,229,779. PROCESS OF DYEING RUGS. WALTER E. OLSON, Chicago, Ill. Original application filed May 20, 1914, Serial No. 839,830. Divided and this application filed Dec. 18, 1915. Serial No. 67,610. (Cl. 101—129.)

The method of forming a border and pattern on a rug by employment of a liquid dye sprayed upon the rug and guards, which consists in first placing a guard upon the rug to shield the latter at the place where the pattern is to be formed; then spraying a dye over the entire upper side of the rug; then placing a guard on the upper side of the rug spaced from the edge thereof along which the border is to be formed; then spraying additional dye upon the portion of the rug between said member and the adjacent edge of the rug; and then repeating the latter operation along each edge of the rug until the border is completed, substantially as described.



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1,229,780. SOUND-BOX FOR TALKING-MACHINES. WALTER OPEL, Leipzig, Germany. Filed Mar. 5, 1915. Serial No. 12,237. (Cl. 274—27.)

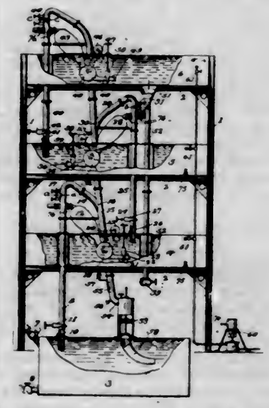



1. A sound box for talking machines in which the regulation of the tone is effected by superposed perforated disks, comprising the sound box casing with perforated rear wall, a box shaped enlargement provided on the rear wall of the sound box casing and adapted to house a perforated disk, a central shaft for said disk within the box and enlargement, and a spring on said shaft adapted to press the perforated disk against the perforated rear wall of the sound box.

2. A sound box for talking machines, comprising the sound box casing with perforated rear wall, a box shaped enlargement provided on the rear wall of the sound box casing, a central shaft within said casing and enlargement, and means on said central shaft for regulating the tone.

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1,229,781. LIQUID-ELEVATING APPARATUS. EUGENE O'SULLIVAN, South Bethlehem, Pa. Filed Oct. 8, 1915. Serial No. 54,732. (Cl. 103—52.)



1. A liquid elevating apparatus including in combination multistage liquid levels, independent conduits communicating with each successive liquid level for conveying the liquid, means located in each of said conduits for forcing the liquid therefrom, another conduit connected to and communicating with the said independent conduits, and means including a vacuum producing device connected to the said last mentioned conduit, for raising the liquid to the successive levels.

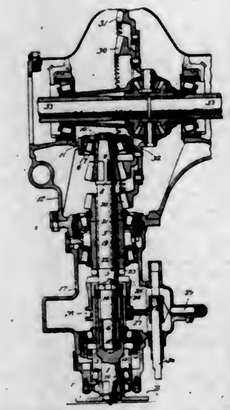
3. A liquid elevating apparatus including in combination superimposed liquid levels, independent conduits communicating with each successive liquid level for conveying the liquid, a chamber communicating with each independent conduit near the upper end thereof, means provided in the discharge end of said chamber including a pump for forcing the liquid therefrom, another conduit communicating with the said independent conduits, and means including a vacuum producing device connected to the said last mentioned conduit for elevating the liquid to the next successive liquid level.

6. A liquid elevating apparatus including in combination superimposed liquid levels, conduits communicating with the said levels for conveying the liquid successively from one level to the next upper level, a chamber communicating with each of the said conduits near the upper end thereof, the said chamber comprising a substantially elliptical and angularly disposed compartment for receiving the liquid from the conduit and discharging it into the liquid level, means provided in the lower end of the chambers for forcing the liquid therefrom, another conduit communicating with the aforesaid conduits, and means including a vacuum producing device connected to the said last mentioned conduit for elevating the liquid in the aforesaid conduits.

[Claims 2, 4, 5, and 7 not printed in the Gazette.]

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1,229,782. TRANSMISSION-GEARING. IRVIN H. PLECKHARP, Columbus, Ohio. Filed Mar. 2, 1916. Serial No. 81,632. (Cl. 74—59.)

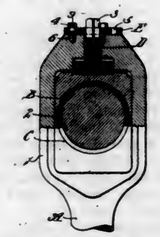


1. In combination, a primary driving member having a central bore within its inner end, a high-speed drive-shaft in alinement therewith and having its outer end entering and bearing within the bore of the inner end of said primary driving member, clutch jaws formed on said high-speed drive-shaft adjacent its outer end, a relatively long low-speed sleeve surrounding the high-speed shaft and having clutch jaws formed in its outer end spaced from the jaws of the shaft, said sleeve being free of all connections with the said shaft, a pair of external bearings mounted on opposite ends of the sleeve for directly supporting the same, a bevel pinion carried by the inner end of the sleeve, a bevel pinion on the inner end of the shaft, concentric bevel gears mounted on a shaft at right-angles to the drive-shaft and meshing each with one of the said pinions, and an overhanging clutch member slidable upon the inner end of the primary driving member and having clutch jaws adapted to selectively engage with the jaws of the high-speed shaft or the low-speed sleeve.

[Claim 2 not printed in the Gazette.]

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1,229,783. RETAINING MEANS FOR BOLTS AND SIMILAR DEVICES. GEORGE D. POGUE, St. Louis, Mo. Filed Feb. 17, 1917. Serial No. 149,349. (Cl. 151—32.)



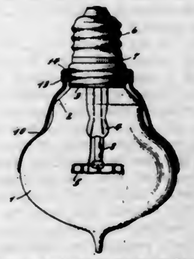
1. The combination of a stationary part provided with a group of holes, an adjustable part provided with a group of holes, and a plurality of devices that are adapted to be inserted in alined holes in said parts to hold said adjustable part in adjusted position, the number of holes in each of said groups being divisible by a third number represented by the number of devices that are arranged in the alined holes in said parts.

4. The combination of a bolt adjustably mounted in a stationary part and provided with a non-circular-shaped head, a member that is adapted to be arranged in engagement with the head of said bolt and provided with a group of equally spaced holes arranged concentrically about the axis of the bolt, a group of tapped holes in said stationary part arranged in different spaced relation to the holes in said member but concentric with the axis of the bolt, retaining devices that are adapted to be inserted through the holes in said member and screwed into said part, and means for preventing said retaining devices from working loose.

[Claims 2 and 3 not printed in the Gazette.]

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1,229,784. SHADE FOR ELECTRIC INCANDESCENT LAMPS. FREDERICK R. POPE, Willesden, London, England, assignor, by mesne assignments, to Duhrssen & Pfaltz, Inc., a Corporation of New York. Filed Mar. 4, 1915. Serial No. 11,963. (Cl. 240—108.)



1. In an electric incandescent lamp, a lamp bulb, a base comprising a screw plug and a threaded part of larger diameter than the screw plug and separated therefrom, said part being interposed between said plug and the bulb.

2. In an electric incandescent lamp, a lamp bulb, a base comprising a screw plug and a threaded part of larger diameter than the screw plug interposed between said plug and bulb, and a layer of insulation separating said plug from said part.

3. In combination, an incandescent lamp comprising a base and a bulb, said base consisting of a screw plug and a threaded part interposed between the plug and the bulb of larger diameter than the plug, a shade and a metallic collar engaging said shade threaded on said part.

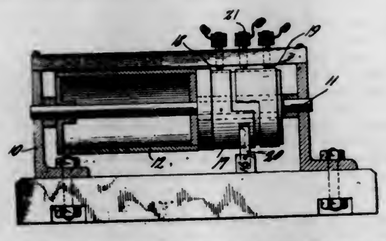
4. In combination, an incandescent lamp comprising a base and a bulb, said base consisting of a screw plug and a threaded part interposed between the screw plug and the bulb of larger diameter than the plug, a shade and a metallic collar substantially U-shaped in cross section threaded on said part and engaging the edge of the shade surrounding the opening therein.

5. In combination with an incandescent lamp having a threaded sleeve thereon, of a detachable shade supported on the bulb of said lamp and having a relatively large bearing surface thereon adjacent its lower end, said shade having a neck portion and an annular flange connected therewith, said flange increasing slightly in diameter as it approaches said neck and a collar threaded on said sleeve having a spaced annular flange engaging said flange on said neck to force the contacting surfaces of said shade and bulb into firm engagement with each other and to force said flange on said collar into firm engagement with said flange on said shade.

[Claim 6 not printed in the Gazette.]

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1,229,785. WATER-STAGE INDICATOR. DELBERT W. PROBSTEL, Treadwell, Alaska. Filed Mar. 31, 1914. Serial No. 828,558. (Cl. 200—34.)



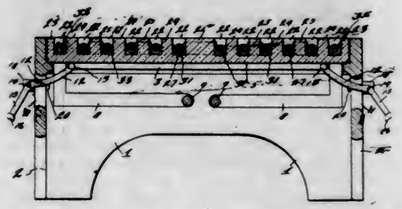
1. A commutator for an indicator device, having a pair of rings provided with a pair of opposite segments projecting toward the opposite rings, each segment extending through almost one-half of a circle, a pair of brushes contacting continuously with said rings and connected to positive and negative poles of a source of electrical energy, and three equally spaced brushes coöperating with and contacting the segments between said rings, whereby one segment is engaged by one of the last mentioned brushes while the other is engaged by the other two of the last mentioned brushes.

2. In a device of the character described, a frame having a base and an arch, a shaft mounted for rotation within the arch, a commutator carried by the shaft and having a pair of rings provided with a pair of opposite segments projecting toward the opposite rings, each segment extending through almost one-half of a circle, three brushes carried by the arch, two of them contacting continuously with the two rings and the third being engageable with the segments between the rings, and a pair of leaf spring brushes carried by the base and contacting with said segments between the rings, the third brush and last mentioned brushes being spaced equally apart so that one of them always engages one segment while the other two engage the other segments.

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1,229,786. ELECTRIC STOVE. JOHN WILLIAMS PURNELL, Morristown, Tenn., assignor of one-half to E. B. Fisher, Morristown, Tenn. Filed Jan. 12, 1917. Serial No. 141,993. (Cl. 219—19.)

1. In an electric stove for cooking or heating, a main supporting structure having electrical connectors embedded in its surface and terminating at one end in resilient connections for transmitting current to the heating elements, a supplementary supporting structure for the heating elements, said supplementary structure having a series of ribs so disposed as to form a zig-zag recess wherein the heating elements lie, a series of heating elements interposed between said ribs, channel-shaped connectors engaging said ribs and electrically connecting the heating elements, angle plate connectors for electrically joining the heating elements with the connectors on the main supporting structure, and bell-crank levers pivotally supported on the main structure and operative so as to lift out the supplementary supporting structure and thereby disengage the connections between the heating elements and the source of electrical supply.



2. In an electric stove for cooking and heating; the combination with a main supporting structure and a supplementary supporting structure; the former having electrical connectors attached thereto, the latter having a series of transverse ribs; of a series of individual heating elements interposed between the ribs; channel shaped connectors engaging the ends of the ribs and electrically connecting the heating elements in sequence; and angle plate connectors electrically connecting the heating elements with connectors on the main supporting structure.

3. In an electric stove for cooking and heating; a main supporting structure having electrical connectors on the inner face of one side, one connector at each end thereof, a terminal contact forming a part of each of said connectors; a supplemental supporting structure, provided with a series of transverse ribs, each alternate rib having its end unattached from the opposite sides of the supplemental structure; a series of individual heating elements interposed between said ribs; channel shaped connectors engaging the alternate unattached ends of the ribs and electrically connecting said heating elements in sequence; and angle plate connectors, one connected to one end of each end heating element, thereby electrically connecting the end heating elements and said terminal contacts of the connectors on the main supporting structure.

4. In an electric stove for cooking and heating, a main supporting structure having electrical connectors seated in the inner face of one side and terminating at one end in resilient connections for transmitting current to the heating elements, a supplementary supporting structure for the heating elements, said supplementary structure having a series of ribs so disposed as to form a zig zag recess for the reception of the heating elements, a series of heating elements interposed between said ribs, channel-shaped connectors engaging said ribs and electrically connecting the heating elements, and angle plate connectors for electrically joining the heating elements with the connectors on the main supporting structure.

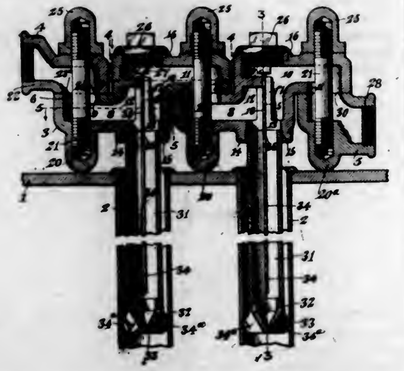
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1,229,787. FEED-WATER HEATER OR SUPERHEATER FOR FIRE-TUBE BOILERS. JOHN W. PURVIS, Detroit, and LORNE W. STEEVES, Jackson, Mich. Filed Dec. 15, 1915. Serial No. 67,023. (Cl. 122—423.)

1. A feed water heater comprising a series of fittings pivotally connected together with certain of the fittings provided with water legs adapted to enter the fire tubes of the steam boiler in spaced relation to the walls thereof, the course of the water through the fittings and through the water legs being in one continuous series.



2. A feed water heater comprising a series of fittings pivotally connected together with certain of the fittings provided with water legs adapted to enter the fire tubes of the steam boiler in spaced relation to the walls thereof, and said fittings having connecting means about which the fittings may be turned into different angular relations one to the other, the course of the water through the fittings and through the water legs being in one continuous series.



3. A feed water heater consisting of a series of fittings pivotally connected end to end in a continuous series with terminal fittings adapted to receive inlet and outlet connections for feed water and each of the intermediate fittings being provided with an extension constituting a water leg of a size to be inserted in a fire tube of a boiler, the course of the water through the fittings and water legs being in one continuous series.

4. A feed water heater comprising a series of connected fittings each with a passage therethrough and at the meeting ends having matching engaging faces with pivot connections about which the fittings may be set one relative to the other into different angular relations, certain of the fittings being each provided with a water leg adapted to enter a fire tube of the boiler, the course of the water through the fittings and water legs being in one continuous series.

5. A feed water heater comprising a series of connected fittings each with a passage therethrough and at the meeting ends having matching engaging faces with pivot connections about which the fittings may be set one relative to the other into different angular relations and certain of the fittings being each provided with a water leg adapted to enter a fire tube of the boiler, said water leg comprising a tubular member connected at one end to the fitting and at the other end provided with a closing and centering means, and means within the tube for directing water entering the tube into outflowing and return streams and constituting a division means between the inlet and outlet ends of the fitting, the course of the water through the fittings and water legs being in one continuous series.

[Claims 6 to 11 not printed in the Gazette.]

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1,229,788. GARDEN IMPLEMENT. AARON FRENCH RAMSEY, Aurora, Ill. Filed Oct. 8, 1915. Serial No. 54,799. (Cl. 30—9.)

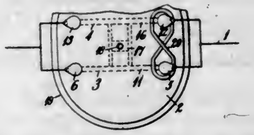
An implement comprising a shank having a rib extending longitudinally thereof, a stud mounted on the shank beyond one side of the rib, a nut screwthreaded upon the stud, a blade pivoted on the stud and provided with notches located at its edge adjacent the rib, there being provided upon the shank and blade and around the stud inter-engaging corrugations, there being further provided upon the shank and adjoining the side of the rib a lug adapted to enter one of the notches of the blade, said lug



being located beyond the outer ends of the said corrugations.

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1,229,789. CIRCUIT-INTERRUPTER. KARL C. RANDALL, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 9, 1914. Serial No. 844,092. (Cl. 175—294.)



1. The combination with a plurality of parallel-connected circuit interrupters, of a close-magnetic-circuit magnetizable member surrounding the conductors of the interrupters for equalizing the currents traversing the same.

2. The combination with a plurality of parallel-connected circuit interrupters, of a magnetizable member having substantially the shape of the figure eight for magnetically connecting adjacent interrupters to equalize the currents traversing the same.

3. The combination with two circuit interrupters operatively connected in parallel, of a closed-magnetic-circuit magnetizable member surrounding similar conductors of the interrupter for equalizing the currents traversing the same.

4. The combination with a plurality of circuit interrupters operatively connected in parallel, of a closed-magnetic-circuit magnetizable member surrounding one of the conductors of each circuit interrupter for equalizing the currents traversing the same.

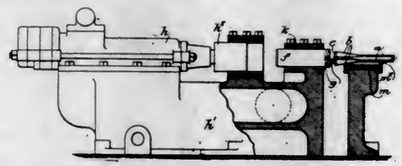
5. In a double-pole parallel-connected circuit interrupter, the combination with coöperating contact members and terminal bushings for the circuit interrupter conductors, of a magnetizable member having substantially the shape of the figure eight surrounding the terminal bushings for equalizing the currents traversing the conductors and the contact members.

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1,229,790. METHOD OF MANUFACTURING DRILL-BITS. SAMUEL V. RAWLINGS, Calumet, Mich. Filed June 6, 1910. Serial No. 565,196. (Cl. 76—108.)

1. The method of shaping cross drill-bits which consists in forming centrally protuberant cutting edges upon the flaring wings of the bit by heating the same to soften the metal thereof, and simultaneously upsetting and com-

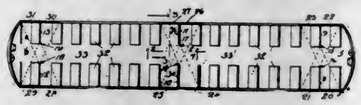
pacting the softened metal of the wings, while unconfined, along lines extending substantially at right angles to the protuberant cutting edges and converging to the axis of the drill bit, substantially as described.



2. The method of shaping cross drill bits which consists in forming centrally protuberant, curved, V-shaped, cutting edges upon the flaring wings of the bit by heating the same to soften the metal thereof and simultaneously upsetting and compacting the softened metal of the wings, while unconfined, along lines radial with respect to the curved cutting edges and converging to the axis of the drill bit, substantially as described.

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1,229,791. PASSENGER-CAR. HAROLD ROWNTREE, Kenilworth, Ill., assignor to National Pneumatic Company, New York, N. Y., a Corporation of West Virginia. Original application filed Oct. 29, 1912, Serial No. 728,376. Divided and this application filed Apr. 24, 1915. Serial No. 23,618. (Cl. 105—19.)



1. A car having a longitudinal central aisle and side doorways and doors opposite each other on opposite sides of the aisle, and a control device for the doors of each doorway, the control device for the doors on one side of the aisle being located opposite the central portion of the doorways on the other side of the aisle.

2. A car having a longitudinal central aisle and side doorways and doors at the ends of the car, a control device for the doors of each doorway, the control device for the doors of one doorway being located adjacent the opposite doorways on the opposite side of the aisle.

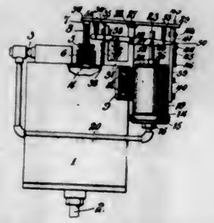
3. A car having a longitudinal central aisle and side doorways and doors located opposite each other at the ends and also intermediate the ends of the car, a control device for the doors of each doorway, the control device for the doors of one doorway being located adjacent the opposite doorways on the opposite side of the aisle.

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1,229,792. AUTOMATIC CONTROL MEANS FOR AIR-PRESSURE PUMPS. HARVEY J. RUSSELL, North Bend, Oreg. Continuation of application Serial No. 793,759, filed Oct. 6, 1913. This application filed Nov. 27, 1915. Serial No. 63,874. (Cl. 230—24.)

1. The combination with a pressure-producing pump provided with a relief valve, of a cylinder associated with the pump, a piston in the cylinder having a piston rod projecting therefrom, a rock lever connected to the piston rod for actuation thereby, another lever having one end in position to engage the relief valve and open it, spring connections between each end of the first-named lever and the corresponding ends of the second-named lever, and latches in the path of the first-named lever on opposite sides of its pivot and arranged in the path of the first-named lever, for actuation thereby.

2. The combination with a pressure-producing pump having a relief valve, of a cylinder associated with the pump, a piston mounted in the cylinder, a spring in the cylinder tending to hold the piston at one limit of its stroke, connections between the pressure side of the pump and the cylinder on the side of the piston remote from the spring, a piston rod carried by the piston and extending to the exterior of the cylinder, a rock lever connected on one side of its pivot to the piston rod, another rock lever having one end in position to engage and open the relief valve, elastic connections between opposite ends of the first-named lever and the corresponding opposite ends of the second-named lever, and latches in the path of the second-named lever on opposite sides of its pivot and also in the path of the first-named lever on opposite sides of its pivot and operating to alternately latch and release the second-named lever at the limits of its rocking movements, said latches being in the path of the first-named lever for alternate actuation thereby to the unlatched position.



3. The combination with a pressure-producing pump having a relief valve, of a cylinder associated with the pump, connections between the pressure side of the pump and the cylinder, a diaphragm in the cylinder in position to be acted upon by fluid under pressure entering the cylinder through the connections with the pump, a piston in the cylinder on the side of the diaphragm remote from the pressure connections, a spring in the cylinder tending to move the piston toward the diaphragm, a piston rod for the piston extending to the exterior of the cylinder, a rock lever connected to the piston rod for actuation thereby, latches in the path of the opposite ends of the rock lever for alternate actuation thereby, another rock lever having its opposite ends positioned to move in alternation into engagement with the latches, and springs between the opposite ends of the first-named lever and the corresponding opposite ends of the second-named lever, said second-named lever having one end in position and having a range of movement to open the relief valve.

4. An automatic control for pressure producing pumps provided with relief valves, comprising a pressure responsive member movable in one direction under pressure produced by the pump and having means imparting to it a normal constraint in the other direction, a rock member controlled by the pressure responsive means, another rock member adapted to open the relief valve, latches for the second rock member in position to latch it at opposite extremes of its movement, and spring connections between the first-named rock member and the second-named rock member on opposite sides of the axis of rocking of the rock members, the first-named rock member being in operative relation to the latches to actuate them and timed in movement with respect to the latches to put the second-named rock member under tensional strain to move in one direction or the other previous to unlatching it to such movement.

5. A device for the purpose described, comprising a cylinder, a piston therein, a piston rod connected to the piston and of a length to extend beyond the cylinder, a diaphragm in the cylinder in position to engage the piston, means for directing fluid under pressure against the diaphragm to move the piston, a spring in the cylinder imparting to the piston a constraint in opposition to pressure established within the cylinder, a rock lever mounted exterior to the cylinder and connected to the piston rod, another rock lever adjacent to the first-named rock lever, springs connecting the corresponding ends of the two levers together, a spring controlled latch lever in the path of one end of the first-named lever and having a latch nose in the path of the corresponding end of the second-named lever, and another spring controlled latch lever having one end in the path of the other end of the first-named lever, and a nose in the path of the corresponding end of the second-named lever, whereby rocking movements of the first-named lever to cause a corresponding rocking of the second-named lever through the spring connections and said rocking movements of the first-named lever to cause the unlatching of the second-named lever after the elastic tendency has been imparted thereto.

[Claim 6 not printed in the Gazette.]



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1,229,793. SCREW-DRIVER. CHARLES A. RYAN, Marion, N. Y. Filed Apr. 26, 1916. Serial No. 93,713. (Cl. 145—52.)



The herein described attachment for screw drivers comprising a sleeve member formed with a longitudinal groove extending through both of its ends and one of its sides, the inner wall provided by the groove being rounded throughout, and the rear wall of the sleeve, at one of the ends thereof being rounded toward the open side of said sleeve, a dog having one of its ends pivotally secured in the said open side of the sleeve and its opposite end rounded toward the referred to rounded end of the sleeve, said dog having its inner face formed with a round groove throughout the length thereof, a substantially U-shaped spring straddling the sleeve and dog and having one of its arms secured to the sleeve and its other arm secured to the dog, whereby to normally force the dog within the groove of the sleeve, the connecting member for the sleeve having a central opening to receive the shank of the screw driver, and a tail member providing a handle arranged angularly upon the arm of the spring connected with the dog.

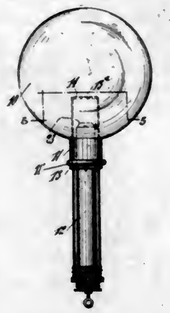
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1,229,794. ILLUMINATED TOY BALLOON AND LIGHTING EFFECT. ARTHUR SALZER, New York, N. Y. Filed July 20, 1916. Serial No. 110,261. (Cl. 240—8.4.)

1. A device of the character described comprising a balloon member composed of a flexible body having a tubular neck, a tubular member having a translucent portion projected through and beyond said neck into said body and provided with a valved orifice, and an illuminating member disposed within said tubular member, projecting into said balloon member, terminating below the inner end of said tubular member and provided at its inner end within said tubular member with a lamp bulb; said tubular member being adapted to serve the triple purpose of lamp holder, balloon support and inflating tube.

2. In a device of the character described, a balloon, a transparent chamber extending into said balloon, and provided with means to provide inflation of the balloon and escape of air therefrom, and an electric light disposed within said transparent chamber adapted to illuminate the balloon.

3. In a device of the character described, a balloon, a transparent chamber extending into said balloon and provided with means to provide inflation and escape of the air therefrom, an electric light in said chamber spaced



from the walls thereof, and adapted to illuminate said balloon, said chamber adapted to prevent the heating and expansion of the air within said balloon by said electric light.

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1,229,795. SNAP-FASTENER. HENRY R. SANDHOLZER, Richmond Hill, N. Y. Filed Aug. 31, 1916. Serial No. 117,820. (Cl. 24—226.)



1. A member for a two-part fastener, the two parts of which are duplicates, such member consisting of a sheet metal blank having a part bent or folded back substantially parallel with the other part, a transverse aperture in the fastener at the bend therein, and a tongue constituting a prolongation of the free end of one part of a width less than the length of said slot.

2. A fastener of the kind described comprising a part to be attached to the article to be fastened, an elongated slot cut through said part, a free end portion bent back over said part, said free end portion terminating in a tongue of a width less than the length of said slot, with shoulders at the base of said tongue on each side to engage the metal in the bend at each end of said slot.

3. A fastener of the kind described consisting of a sheet metal blank having a part bent or folded back substantially parallel with the other part, a transverse aperture in the fastener at the bend therein, a tongue constituting a prolongation of the free end of one part of a width less than the length of said slot, and a projection on the face of said bent over part between said aperture and the tongue.

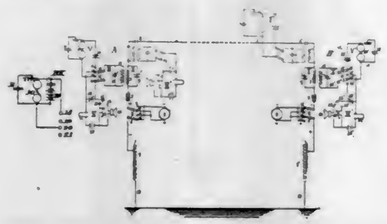
4. A fastener of the kind described comprising a part to be attached to the article to be fastened, an elongated slot cut through said part, a free end portion bent back over said part adjacent to the slot cut therein, said free end portion terminating in a tongue of a width less than the length of said slot, with shoulders at the base of said tongue on each side to engage the metal in the bend at each end of said slot, and a rib on the inner face of said bent over end between said slot and said shoulders with the crown of the rib slightly nearer the shoulders than the slot.

5. A fastener of the kind described, comprising a main portion, an auxiliary leaf portion bent back over the main portion, and an elongated slot cut through the material

of the fastener and arranged laterally of the fastener so that the center line of the slot substantially coincides with the line on which the leaf is bent.

[Claims 6 to 10 not printed in the Gazette.]

1,229,796. TELEGRAPH AND TELEPHONE SYSTEM. JOSEF SCHIESSLER, Baden, near Vienna, Austria. Original application filed Feb. 7, 1912, Serial No. 675,990. Divided and this application filed May 22, 1914. Serial No. 840,236. (Cl. 178—63.)



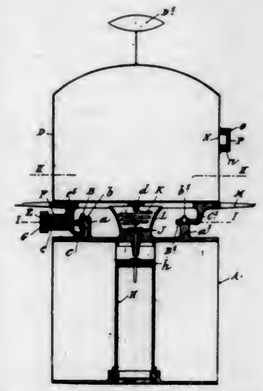
1. In a telegraph and telephone system, a pair of condensers, a line included between said condensers, a grounded generator for each condenser, means to change the polar connection of each generator to said condensers whereby the positive pole of one generator and the negative pole of the other generator may be connected to said condensers and vice versa according to the direction of transmission over said line, a local circuit at each end of the line arranged to superimpose conductive current on that portion of the line between the generator and condenser, said local circuits including means to adjust them to resonance with one another.

2. In a telegraph and telephone system, a pair of condensers, line included between them, a grounded generator connected to each condenser, an oscillating circuit including an adjustable capacity included between each generator and its pertaining condenser, a local circuit including means to impress upon said oscillating circuit current undulations in accordance with signals, a local receiving circuit at each end of said line including a capacity and receiving means, and a switch controlling the operative relation of the sending or the receiving circuits to the oscillating circuit, and means to reverse the terminal connections of the generators to line.

3. In a telephone and telegraph system, a line having a certain capacity, an adjustable self induction at each end of the same to form an oscillating circuit, means to close said circuit, a condenser inserted at each end of the line, generators producing a high voltage current for charging the line connected with terminals of different polarity at the ends of the line, said generators being inserted permanently into the oscillation circuit, a signaling device for superimposing oscillating signaling currents upon the permanent high voltage current charge of the line and a receiver operated by the said oscillating signaling currents.

4. In a telegraph and telephone system, a line having a certain capacity, adjustable self inductions at each end of the line to form an oscillation circuit, means to close said circuit, condensers at each end of the line, generators connected with the oscillation circuit with terminals of different polarities at opposite ends of the same to impress a high voltage charging upon it, additional self inductions connected in series with the line each having an adjustable condenser connected in parallel therewith to form an oscillation circuit tuned to a definite frequency, further self inductions forming part of an oscillation circuit at each station and tuned to a definite frequency inductively connected with said additional self inductions of the charged line, a vibration generator and a signaling device in connection with each of the latter oscillation circuits, and switches adapted to connect said oscillation circuits with a receiving arrangement.

1,229,797. SUBMARINE MINE. EUGÈNE SCHNEIDER, Le Creuzot, France. Filed Feb. 11, 1916. Serial No. 77,709. (Cl. 102—8.)



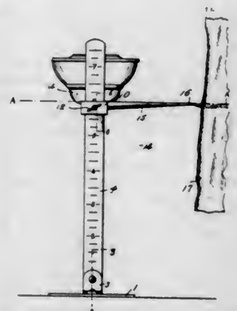
1. In a submarine mine, in combination with the mine proper, a float, means normally maintaining said mine and float in unitary relationship but adapted to become disengaged upon relative movement of the mine and float, and means adapted to fire the mine upon separation of said mine and float.

10. In a submarine mine, in combination with the mine proper, a float, members providing horizontal bearing surfaces on one of said elements, vertical rollers on the other of said elements, said members and rollers when engaged adapted to maintain said elements in unitary relationship but adapted to be disengaged by relative rotation of said elements, centering means for said elements comprising members providing vertical bearing surfaces on one of said elements and horizontal rollers engaged therewith on the other of said elements, and means adapted to fire the mine upon separation of said elements.

19. In a submarine mine, in combination with the mine proper, a float, means normally maintaining said mine and float in unitary relationship, and means for firing the mine upon separation of said mine and float, said means comprising a tensile member connected to said mine and float, a funnel within which said tensile member is normally coiled, and percussion means operated by said tensile member upon becoming taut.

[Claims 2 to 9 and 11 to 18 not printed in the Gazette.]

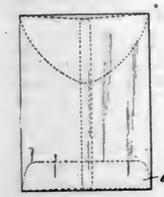
1,229,798. MEASURING DEVICE. ANNA SCHUSTER, Gower, Mo. Filed Apr. 8, 1916. Serial No. 89,837. (Cl. 33—9.)



A device of the class described comprising a base, said base provided with an elongated slot, a bracket positioned upon each side of said slot and carried by said base, a standard pivotally secured between said brackets, said standard provided with a depending end adapted to work in said slot and abutting against one end of said slot for limiting the swing of said standard in one direction, said standard capable of being swung downwardly in the opposite direction, and a bellows adjustably mounted upon said standard.



1,229,799. FLAT PACKAGE. ROY W. SEXTON, Wytheville, Va. Filed Jan. 11, 1917. Serial No. 141,749. (Cl. 206—49.)



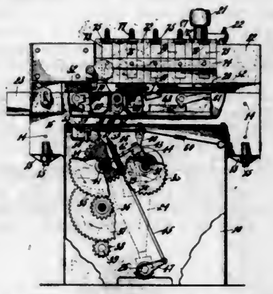
1. A dispensing package for embroidery forms comprising, a flat opaque label having a friction surface; a single embroidery form of a size smaller than said label lying face up in frictional contact upon said friction surface and otherwise free to move across said label; and an envelop of transparent air-excluding material completely inclosing both said label and said embroidery form and maintaining said frictional contact for all positions of the three part unit comprising the label, the embroidery form and the envelop but aiding a haphazard positioning of said embroidery form upon said label.

2. A dispensing package for embroidery forms comprising a flat label having a friction surface; a single embroidery form of a size smaller than said label lying face up in frictional contact upon said friction surface, and otherwise free to move across said label; an envelop of transparent air-excluding material completely inclosing said embroidery form and the friction surface of said label and tending to maintain said frictional contact for all positions of the three-part unit comprising the label, the embroidery form and the envelop but aiding an initial haphazard positioning of said embroidery form upon said label; a plurality of said three-part units superposed one on another and forming a stack of substantially uniform thickness because of the haphazard distribution of the embroidery forms, and a pocket for holding said stack in assembled relation and exerting pressure upon said stack to increase said frictional contact between the embroidery form and label of each said three-part unit.

1,229,800. END-MATCHER. WILLIS S. SHERMAN, Milwaukee, Wis. Filed Aug. 15, 1912. Serial No. 715,150. (Cl. 144—91.)

1. A woodworking machine, comprising a frame having a horizontal feedway, a reciprocating feeding mechanism having successively effective work engaging means for moving work through the horizontal feedway step by step, each step of movement of the work being greater than the width of the work, and a fixed saw in the path of the work in its travel through the feedway and so positioned as to have the work left between its cutting edges at the end of one step of the feed thereof, whereby the work is not left at rest in position to be engaged by the saw teeth.

2. A woodworking machine for operating on the end of strips of material, comprising a frame having a horizontal bearing surface on the top thereof, a top frame secured to said frame and having a horizontal bearing surface on the bottom thereof, the bearing surfaces of the two frames forming a feedway between them for the travel of strips of lumber and the like, spring pressed pressure bars positioned at one edge of the bearing surface of the upper frame and at the other edge of the bearing surface of the lower frame, means for moving the work through the feedway, and a cutter in the path of the work in its travel through the feedway.



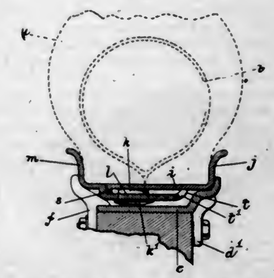
3. A woodworking machine, comprising a frame provided with a horizontal feedway having top and bottom bearing surfaces for supporting strips of lumber and the like by means of the end thereof, means for feeding the lumber through the feedway, a yielding swinging guide at the portion of the feedway through which the strips are introduced to form a stop for positioning the work in the feedway, and a cutter in the path of the work through the feedway.

4. A woodworking machine, comprising a frame provided with a feedway having bearing surfaces for supporting a strip of lumber or the like, a pair of feeding means for engaging the strip of lumber at distant points within the feedway, said feedway having a contracted portion for clamping the end of the strip in its travel and for coöperating with the feeding means for squaring the work in the line of travel, and a cutter in the path of travel of the work.

5. A woodworking machine, comprising a frame provided with a feedway with bearing surfaces for supporting a strip of lumber or the like, a slide fitting within the frame, a suitably operated pivotally mounted lever, a link connection between the lever and the slide by which the oscillations of the lever produce reciprocations of the slide, dogs on the slide, a connection between the link and the dogs for moving them into and out of the feedway for engagement with the work to feed the work through the feedway, and a cutter in the path of the work in its travel through the feedway.

[Claims 6 to 12 not printed in the Gazette.]

1,229,801. DEMOUNTABLE RIM FOR VEHICLE-WHEELS. AMOS H. SMITH, New York, N. Y. Filed June 16, 1915. Serial No. 34,348. (Cl. 152—21.)



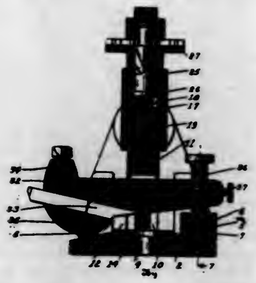
1. A demountable rim for vehicle wheels embodying therein two separable, circular sections each having tire engaging means and a base flange, the base flange of one of said sections being adapted to extend across and bear

upon the base flange of the other, the inner of said base flanges having a plurality of slots therein opening outwardly of said flange, and the outer of said base flanges having a valve stem opening therethrough, a plurality of inwardly extending studs carried by the outer of said base flanges and adapted respectively to coöperate with a slot in the inner of said base flanges, semi-spherical heads on said studs whereby the lower face of the inner base flange is spaced away from the wheel felly, and operative connections between each of said rim sections and the wheel felly, whereby circumferential movement of one of said sections relatively to the other is prevented.

[Claims 2 to 7 not printed in the Gazette.]

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1,229,802. TOOL-HOLDER FOR LATHES AND LIKE MACHINES. HERBERT O. SPADE, Kalamazoo, Mich. Filed Nov. 5, 1914. Serial No. 870,323. (Cl. 82—36.)



1. In a structure of the class described, the combination of a recessed post member having inwardly projecting flanges at the front of the recess and provided with a base adapted for attachment to a lathe carriage, a pair of cylindrically curved rests on said post base, a rest block having a curved seat in rocking engagement with one of said rests, the curve of the seat exceeding that of a half circle whereby the seat may be engaged with the rest when presented longitudinally thereto, a retaining button for said rest block, a tool holder provided with a curved transverse seat at its head adapted to coact with the other rest of said post member and with a rest at its tail adapted to coact with said rest block, said tail rest being threaded for adjustment, the curve of said tool holder rest seat exceeding that of a half circle whereby it may be engaged with the rest when presented longitudinally thereto, said tool holder being beveled on its outer side at its upper edge, a clamping member arranged in said post recess and provided with a downwardly facing beveled jaw coacting with said beveled edge of said tool holder and with a transverse pin engaging behind the said flanges of said post, the inner end of said clamping member being adapted to rest against the upper end of the recess, a non-rotatable internally threaded clamping block mounted on said post for longitudinal adjustment to act on said clamping member, and a clamping screw rotatably mounted on said post to coact with said clamping block.

2. In a structure of the class described, the combination of a recessed post member having inwardly projecting flanges at the front of the recess and provided with a base adapted for attachment to a lathe carriage, a cylindrically curved rest on said post base, a tool holder provided with a curved transverse seat at its head adapted to coact with the rest of said post member, the curve of said tool holder rest seat exceeding that of a half circle whereby it may be engaged with the rest when presented longitudinally thereto, said tool holder being beveled on its outer side at its upper edge, a clamping member arranged in said post recess and provided with a downwardly facing beveled jaw coacting with said beveled edge of said tool holder and with a transverse pin engaging behind the said flanges of said post, the inner end of said clamping member being adapted to rest against the upper end of the recess, a non-rotatable internally threaded clamping block mounted on said post for longitudinal adjustment to act on said clamping member, and a clamping screw rotatably mounted on said post to coact with said clamping block.

3. In a structure of the class described, the combination of a recessed post member having inwardly projecting flanges at the front of the recess and provided with a base adapted for attachment to a lathe carriage, a pair of cylindrically curved rests on said post base, a rest block having a curved seat in rocking engagement with one of said rests, the curve of the seat exceeding that of a half circle whereby the seat may be engaged with the rest when presented longitudinally thereto, a retaining button for said rest block, a tool holder provided with a curved transverse seat at its head adapted to coact with the other rest of said post member and with a rest at its tail adapted to coact with said rest block, said tail rest being threaded for adjustment, the curve of said tool holder rest seat exceeding that of a half circle whereby it may be engaged with the rest when presented longitudinally thereto, said tool holder being beveled on its outer side at its upper edge, a clamping member arranged in said post recess and provided with a downwardly facing beveled jaw coacting with said beveled edge of said tool holder and with a transverse pin engaging behind the said flanges of said post, the inner end of said clamping member being adapted to rest against the upper end of the recess, and a clamping screw for said clamping member.

4. In a structure of the class described, the combination of a recessed post member having inwardly projecting flanges at the front of the recess and provided with a base adapted for attachment to a lathe carriage, a cylindrically curved rest on said post base, a tool holder provided with a curved transverse seat at its head adapted to coact with the rest of said post member, the curve of said tool holder rest seat exceeding that of a half circle whereby it may be engaged with the rest when presented longitudinally thereto, said tool holder being beveled on its outer side at its upper edge, a clamping member arranged in said post recess and provided with a downwardly facing beveled jaw coacting with said beveled edge of said tool holder and with a transverse pin engaging behind the said flanges of said post, the inner end of said clamping member being adapted to rest against the upper end of the recess, a non-rotatable internally threaded clamping block mounted on said post for longitudinal adjustment to act on said clamping member, and a clamping screw rotatably mounted on said post to coact with said clamping block.

5. In a structure of the class described, the combination of a recessed post member having inwardly projecting flanges at the front of the recess, a pair of cylindrically curved rests on said post member, a rest block having a curved seat in rocking engagement with one of said rests, a tool holder beveled on the outer side at its upper edge and provided with a curved transverse seat at its head adapted to coact with the other rest of said post member, and with a rest at its tail adapted to coact with said rest block, said tail rest being threaded for adjustment, a clamping member arranged in said post recess and provided with a downwardly facing beveled jaw coacting with said beveled edge of said tool holder and with a transverse pin engaging behind the said flanges of said post, the inner end of said clamping member being adapted to rest against the upper end of the recess, and a clamping screw for said clamping member.

[Claims 6 to 15 not printed in the Gazette.]

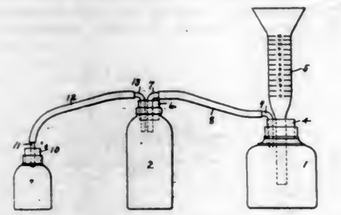
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1,229,803. SOIL-TESTER. HARRY M. SPAHR, Baltimore, Md. Filed Mar. 2, 1917. Serial No. 151,961. (Cl. 23—3.)

1. A soil tester comprising a water container, a gage having one end projecting into said water container, a soil container having communication with the water container, an acid container, and a flexible tube connecting the soil container and the acid container whereby the latter may be tilted independently of the soil tester.



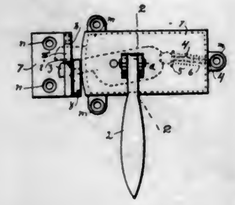
2. A soil tester comprising a water container, a gage having one end projecting into said water container, a soil container having communication with the water container, an acid container outside the soil container having communication with and adapted to be tilted independently of the soil container.



3. A soil tester comprising a water container, a stopper for said water container, a gage having one end projecting through said stopper and into said water container, an angle joint having one end projecting through said stopper and into the water container, a soil container, a stopper for said soil container, two angle joints each of which has one end projecting through the stopper of the soil container, a tube connecting one of said angle joints of the soil container with the angle joint in the water container stopper, an acid container, a stopper for said acid container, and a flexible tube connecting one of the angle joints of the soil container with the acid container, whereby latter may be tilted independently of the soil container.

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1,229,804. REFRIGERATOR-LATCH. JASPER H. STANFIELD, Grand Rapids, Mich., assignor of one-half to Frank C. Pangborn, Grand Rapids, Mich. Filed Jan. 22, 1917. Serial No. 143,839. (Cl. 70—44.)



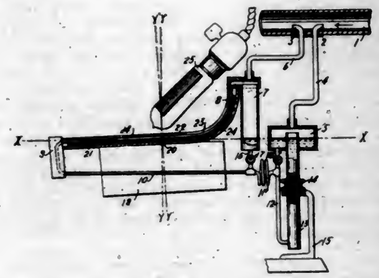
1. In a refrigerator latch, a casing, a latch located longitudinally of the casing and pivotally connected therewith, said latch having a notch in the back end, a slide mounted longitudinally of the casing and made to engage the end of the latch in the notch, a spring arranged to force the slide firmly against the end of the latch, a catch mounted in connection with said latch, an eccentric pivotally mounted on the catch, and means connected with the eccentric whereby it will be made to clamp the latch by the action of the latch upon the catch.

3. In combination with a refrigerator latch, a catch, an eccentric pivotally mounted on the catch and arranged to be engaged by the latch and clamp the latch firmly in place between the eccentric and the wall of the catch.

5. In combination, a refrigerator latch, a catch, an eccentric pivotally mounted on the catch and arranged to be actuated by the latch to clamp the latch in place, and means for returning the eccentric into normal position when released from the latch.

[Claims 2 and 4 not printed in the Gazette.]

1,229,805. FLUID-FLOW METER. WILBUR W. STEVENSON, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 11, 1914. Serial No. 850,297. (Cl. 234—19.)



1. A fluid-flow meter comprising a U-tube having a parabolic portion, a fluid within said U-tube for indicating, by a difference in level of the fluid in the parabolic portion, the differential pressure caused by the flow of a fluid in a conduit, and a sensitized rotatable disk adapted to record the variations in the level of the fluid in the parabolic portion of the U-tube.

2. A fluid-flow meter comprising a U tube operatively connected to a conduit and having a parabolic portion, a fluid within said U tube for indicating, by a difference in level in the parabolic portion, the flow in said conduit, and a sensitized surface adapted to record the variations in level of the fluid in said U tube.

3. In a measuring instrument, the combination with a U-tube operatively connected to a conduit and having a substantially curved portion, and a fluid in the U-tube, of a sensitized rotatable member, and means for exposing the said sensitized member through the curved portion of the said U-tube to produce a record of the difference in level of the fluid in the curved portion of the U-tube.

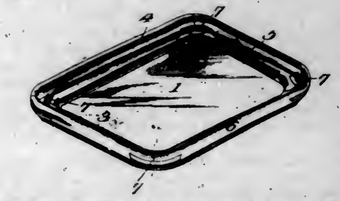
4. In a measuring instrument, the combination with a U tube operatively connected to a pipe and having a substantially transparent curved portion, of a sensitized rotatable screen, and means for exposing said sensitized screen through the curved portion of the said U tube to produce a record of the height of the fluid in said U tube.

5. In a measuring instrument, the combination with a U-tube operatively connected to a conduit and having a substantially curved portion, and a fluid in the U-tube, of a sensitized rotatable member having uniform scale divisions, and means for exposing the said sensitized member through the curved portion of the said U-tube to produce a record of the difference in level of the fluid in the U-tube.

[Claims 6 to 14 not printed in the Gazette.]

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1,229,806. TRAY. FRANKLIN I. STÖBER, Brooklyn, N. Y. Filed Aug. 7, 1916. Serial No. 113,543. (Cl. 65—53.)



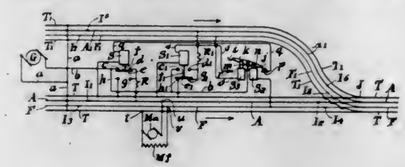
1. A tray composed of a laminated bottom having sides formed of molding strips, each molding strip being provided with a curved end portion abutting against the curved end portion of the adjacent strip, the abutting

ends of the molding strips being transversely notched, and horizontally disposed dowels arranged within the said notches having outer end portions of a greater width than the inner end portions, the end of said dowels being flush with the inner and outer faces of said molding strips.

2. As a new article of manufacture, a tray composed of a bottom having side and end molding strips secured upon the marginal edges thereof, each molding strip being provided with a curved end portion abutting against the adjacent molding strip, the curved ends of said molding strip being transversely notched, and horizontally disposed dowels secured within said notches provided with parallel horizontally disposed upper and lower faces, the outer end of each dowel having its edges disposed in parallel horizontal planes and the inner end of said dowel having its upper and lower edges formed on convexed or curved lines, the outer end of said dowel being convexed and the inner end concaved to conform to the curvature of the inner and outer faces of the molding at the joint thereof.

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1,229,807. AUTOMATIC ELECTRIC-RAILWAY SYSTEM. KENNETH E. STUART, Philadelphia, Pa. Filed Feb. 21, 1916. Serial No. 79,513. (Cl. 104—210.)



2. In an electric railway system, a car, a motor thereon, a source of current, an armature contact conductor and a field contact conductor extending along the path of travel of said car, said contact conductors divided into insulated sections, and electromagnetic switching mechanism associated with one of said sections of field contact conductor and controlled by current delivered therefrom through a motor on a car arriving in said section for connecting the armature contact conductor of said section with said source of current.

4. In an electric railway system, the combination with a section of main track and a section of branch track having a junction therewith, of cars, motors thereon, main and branch section of contact conductors for supplying energy to the car motors, and automatic means for completing a braking circuit through the motor of a moving car upon either one of said track sections when the other of said track sections is occupied by a car.

6. In an electric railway system, the combination with branch tracks, of a main track having a junction with said branch tracks, insulated sections of contact conductors associated with said branch tracks, cars, motors thereon receiving energy through said contact conductors, and a tumbler switch controlled by that car first entering either branch section for bringing the other branch section into condition for braking a car.

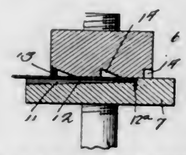
12. In an electric railway system, the combination with a plurality of track sections, insulated sections of contact conductors associated with said track sections, cars, motors thereon receiving energy through said contact conductors, and switching mechanism common to said track sections and controlled in response to the presence of a car on either to bring another into condition for braking a car.

14. In an electric railway system, the combination with a section of main track and a section of branch track having a junction therewith, of cars, motors thereon, main and branch sections of contact conductors for supplying energy to the car motors, and means including an automatically operated switching mechanism controlled through each of said contact conductor sections for bringing a car to rest on one of said track sections when the other of said track sections is occupied by a car.

[Claims 1, 3, 5, 7 to 11, 13, and 15 to 20 not printed in the Gazette.]

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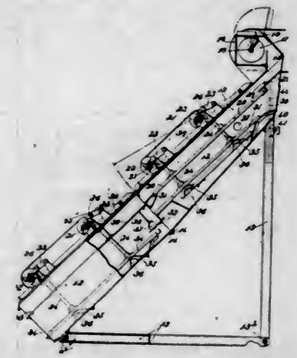
1,229,808. LOCK-NUT. BENJAMAN F. STUMP, Dunbar, Nebr., assignor of one-half to H. S. Westbrook, Dunbar Nebr. Filed May 15, 1916. Serial No. 97,675. (Cl. 151—13.)



In a device of the kind described, means for locking a nut having ratchet teeth to a washer having a slot in its upper face provided with a recess at its inner end, said means comprising a strip of spring metal doubled intermediate its ends and bent away from the doubled portion to form two alined ends, the terminal portion of one end being bent away from the side from which the doubled portion projects, whereby the strip forms a spring pawl, said strip being of such dimensions as to house within the slot with the bent terminal fitting the recess.

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1,229,809. SCREENING OR SEPARATING MACHINE. THOMAS L. STURTEVANT, Quincy, and THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignors to Sturtevant Mill Company, a Corporation of Maine. Filed June 10, 1916. Serial No. 102,830. (Cl. 83—56.)



1. In a separator, a screen box or casing consisting of a plurality of sections detachably secured together, each section being provided with screens which are mounted for being percussively jarred, and each section being also provided with jarring mechanism for said screens, combined with a feed box which is a permanent part of the upper section or unit, a rotary conveyer mounted in said feed box, and a shaft by which said conveyer is carried and from which shaft the operating shafts, forming parts of the jarring mechanisms of both of said sections or units, are driven.

2. In a separator, the combination with an inclined screen box or casing, of separated screens in the upper and lower portions of said casing, and retarding means between said screen for checking the descent of the material from the upper screen before the same is delivered to the lower screen, said retarding means comprising a shelf receiving material discharged from the upper screen and a depending retarding plate for checking the downward travel of the material and diverting it to said shelf on which it is momentarily detained.

3. In a separator, the combination with an inclined screen box or casing and screens within the same, of a feed box arranged at the upper end of said casing and of a greater length than the width of said casing, said feed box extending laterally beyond the casing, and a rotary conveyer in said feed box which is also of greater length than the width of said screens and which also extends laterally beyond the casing at the end thereof at which the material enters.

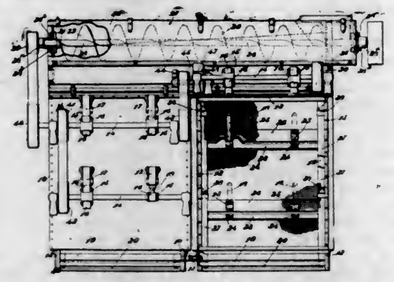
4. In a separator, the combination with an inclined screen box or casing and screens within the same, of a feed box arranged at the upper end of said casing and provided with a hopper opening near one end, the said feed box extending laterally beyond said casing at its end having the hopper opening, and a rotary conveyer within said feed box and of greater length than the width of said casing, the end of said conveyer, at the entering end of the material, extending laterally beyond the casing and being beneath said hopper opening.

5. In a separator, the combination with an inclined screen box or casing, of separated screens in the upper and lower portions of said casing, and retarding means between said screens for checking the descent of the material from the upper screen before the same is delivered to the lower screen, said retarding means comprising a shelf receiving material discharged from the upper screen and a depending retarding plate for checking the downward travel of the material and diverting it to said shelf, said box or casing having in its side an observation hole adjacent said shelf so that the working of said retarding means may be observed from the outside of said box or casing.

[Claims 6 and 7 not printed in the Gazette.]

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1,229,810. SCREENING OR SEPARATING MACHINE. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Nov. 25, 1916. Serial No. 133,399. (Cl. 83—56.)



1. In a vibrating separator, the combination with a plurality of inclined screen sections or units arranged side by side and detachably secured together, said sections or units being individually complete, having its own casing and jarring mechanism and being provided with inclined screens, of a feed box and a conveyer or distributer mounted at the upper ends of said inclined screen sections or units and common to them all, so as to supply and distribute material to be screened to all of said sections or units.

2. In a vibrating separator, the combination with a plurality of inclined screen sections or units arranged side by side and detachably secured together, said sections or units being each individually complete, having its own casing and jarring mechanism and being provided with inclined screens, of a feed box and a conveyer or distributer mounted at the upper ends of said inclined screen sections or units and common to them all, so as to supply and distribute material to be screened to all of said sections or units, each screen section or unit being provided with a hinged cover, jarring operating mechanism mounted on said cover, and a common source of power from which the jarring mechanisms for the several screen sections or units are operated.

3. In a vibrating screening or separating machine, the combination with a plurality of complete screen sections or units arranged side by side and detachably secured together, each casing of a screen section affording a complete compartment, inclined screens in said compartments, and a screen jarring mechanism for each of said sections or units, of a feed box and distributer common to the several screen sections or units and adapted to supply and distribute material to them all, said feed box being formed in sections corresponding to the sections or units of the separator.

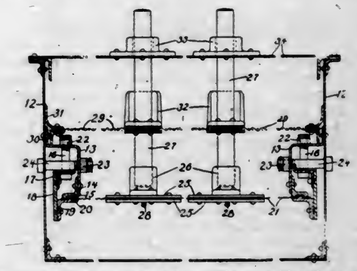
4. In a vibrating screening or separating machine, the combination with a plurality of screen sections or units arranged side by side and detachably secured together, each casing of a screen section affording a complete compartment, inclined screens in said compartments, and a screen jarring mechanism for each section or unit, of a feed box and distributer common to the several screen sections or units and adapted to supply and distribute material to them all, said feed box and distributer being formed in sections corresponding to the sections or units of the separator.

5. In an inclined separator, the combination with a plurality of screen sections or units arranged side by side and detachably secured together, each of said sections or units having a complete casing and being provided with screens and with a hinged cover, of means, extending within the casings of said sections or units, for jarring said screens, jarring operating mechanism mounted on the said cover and comprising rotary shafts, and a driving mechanism for said shafts so arranged that either of the covers of the sectional separator may be raised without lifting the others or without removing the power connections for their jarring operating mechanisms.

[Claims 6 to 10 not printed in the Gazette.]

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1,229,811. SCREENING OR SEPARATING MACHINE. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Dec. 12, 1916. Serial No. 136,420. (Cl. 83—56.)



1. In a vibrating separator, the combination with a screen casing, of supports attached to said casing, clamping means sustained by said supports, and wire mesh screen clothing removably held near its edges by said clamping means, said screen clothing being provided with protecting plates of lesser length than its width.

2. In a vibrating separator, the combination with a screen casing, of supports attached thereto, clamping means, sustained by said supports, for removably holding fine wire mesh screen clothing, and a coarse or scalper screen having at its edges frame parts removably sustained by said supports.

3. In a vibrating separator, the combination with a screen casing, of supports attached thereto, clamping means, sustained by said supports, for removably holding fine wire mesh screen clothing, means for stretching said screen clothing, and a coarse or scalper screen having at

its edges frame parts removably sustained by said supports.

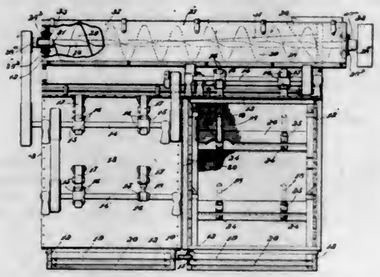
4. In a vibrating separator, the combination with a screen casing, of supports attached to the sides thereof and having dependent resilient parts, lower clamping members sustained by said supports, wire mesh screen clothing having its edges extended between said clamping members, and means, sustained by said supports, for bodily adjusting said lower clamping members vertically for gripping and releasing the edges of said wire mesh screen clothing.

5. In a vibrating separator, the combination with a screen casing, of supports attached to the sides thereof and having dependent resilient parts, upper clamping members attached to said depending parts, lower clamping members sustained by said supports, wire mesh screen clothing having its edges extended between said clamping members, and means, sustained by said supports, for bodily adjusting said lower clamping members vertically for gripping and releasing the edges of said wire mesh screen clothing, one of each pair of said clamping members being provided with a groove, and the other of each pair of said clamping members being provided with a rib extending into said groove.

[Claims 6 to 13 not printed in the Gazette.]

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1,229,812. SCREENING OR SEPARATING MACHINE. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Dec. 12, 1916. Serial No. 136,552. (Cl. 83—56.)



1. In a separator, the combination with a plurality of inclined separator sections or units comprising complete casings arranged side by side and detachably secured together and each provided with its own inclined screen or screens and its own jarring mechanism, of a feed box and distributer common to said sections or units, said feed box being removably mounted at the upper ends of said sections or units, and being thus adapted to supply material to all of the same.

2. In a separator, the combination with a plurality of inclined separator sections or units comprising complete casings arranged side by side and detachably secured together and each provided with its own screen or screens and its own jarring mechanism, of a feed box formed in sections corresponding in length to the width of said screen sections or units, and a distributer common to said sections or units, said feed box being removably mounted at the upper ends of said sections or units, and being thus adapted to supply material to all of the same.

3. In a separator, the combination with a plurality of inclined separator sections or units comprising complete casings arranged side by side and detachably secured together and each provided with its own inclined screen or screens and its own jarring mechanism, of a feed box and distributer common to said sections or units and both formed in detachable sections corresponding in length to the width of said separator sections or units, said feed box being removably mounted at the upper ends of said sections or units, and being thus adapted to supply material to all of the same.

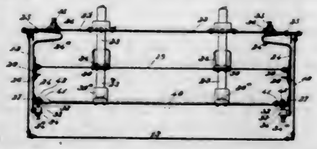
4. An inclined separator provided at its upper end with a feed box having a door at its front, a rotary distributer mounted in said feed box, and removable slides at the ends of said feed box in front of said distributer, so that the latter may be inserted or removed from the front of said feed box when said door is opened.

5. An inclined separator provided at its upper end with a feed box having a door at its front, a rotary distributer mounted in said feed box and removable slides at the ends of said feed box in front of said distributer, so that the latter may be inserted or removed from the front of said feed box when said door is opened, said slides being held in place in front of the journals of said distributer by said door when the latter is closed.

[Claims 6 to 9 not printed in the Gazette.]

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1,229,813. SCREENING OR SEPARATING MACHINE. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Dec. 29, 1916. Serial No. 139,555. (Cl. 83—56.)



1. In a separator, the combination with a casing provided with a cover at its top, of a screen member, means for resiliently supporting said screen member from said cover so that it may spring upwardly and downwardly, and means for percussively jarring said screen member.

2. In a separator, the combination with a casing provided with a cover at its top, of a plurality of screen members, means for resiliently supporting said screen members from said cover, so that they may spring upwardly and downwardly, and means for percussively jarring one or more of said screen members.

3. In a separator, the combination with a casing provided with a cover at its top, of a screen member, means for resiliently supporting said screen member from said cover, so that they may spring upwardly and downwardly, and means for percussively jarring said screen member, the operating mechanism for the jarring means being mounted on said cover.

4. In a separator, the combination with a casing provided with a cover at its top, of a plurality of screen members, means for resiliently supporting said screen members from said cover, so that it may spring upwardly and downwardly, and means for percussively jarring one or more of said screen members, the operating mechanism for the jarring means being mounted on said cover.

5. In a separator, the combination with a casing provided with a cover at its top, of a screen member, means for resiliently supporting said screen member from said cover, independently of said casing, means for percussively jarring said screen member, and screen clothing stretching and tensioning means also supported by said cover.

[Claims 6 to 15 not printed in the Gazette.]

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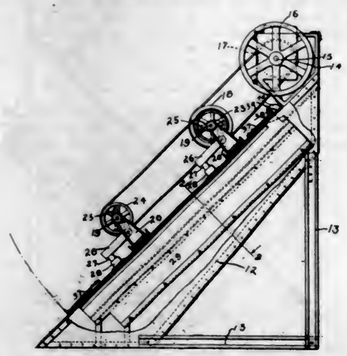
1,229,814. SCREENING OR SEPARATING MACHINE. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Dec. 30, 1916. Serial No. 139,938. (Cl. 83—56.)

1. In a separator, the combination with a screen casing and a screen or screens mounted therein, of mechanism, arranged above and entirely outside of said casing, for percussively jarring said screen or screens.

2. In a separator, the combination with an inclosing casing provided with a cover, of a screen or screens supported from said cover within said casing, and mechanism, entirely outside of said casing and above said cover for percussively jarring said screen or screens.



3. In a separator, the combination with an inclosing casing provided with a hinged cover, of a screen or screens supported from said cover within said casing, and mechanism, entirely outside of said casing and above said cover, for percussively jarring said screen or screens.



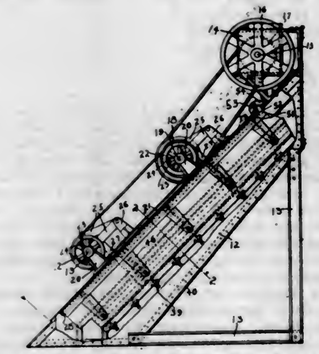
4. In a separator, the combination with an inclosing casing provided with a cover, of a screen or screens supported by said cover within said casing, a cover-frame adapted to rest on said casing and having flexible dust-tight connections with said cover, and mechanism for percussively jarring said cover.

5. In a separator, the combination with an inclosing casing provided with a hinged cover, of a screen or screens supported by said cover within said casing, a cover-frame adapted to rest on said casing and having flexible dust-tight connections with said cover, and mechanism for percussively jarring said cover.

[Claims 6 to 12 not printed in the Gazette.]

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1,229,815. SCREENING OR SEPARATING MACHINE. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Jan. 3, 1917. Serial No. 140,417. (Cl. 83—56.)



1. In a separator, the combination with a casing provided with a cover, of rods connected with said cover, side plates suspended from said rods, screen members supported by said side plates, and percussively acting jarring devices for said screen members.

2. In a separator, the combination with a casing provided with a cover, of elastic rods connected with said cover, side plates suspended from said rods, screen members supported by said side plates, and percussively acting jarring devices for said screen members.

3. In a separator, the combination with a casing provided with a hinged cover, of rods connected with said cover, side plates suspended from said rods, screen members supported by said side plates, and percussively acting jarring devices for said screen members.

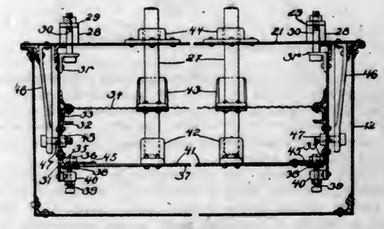
4. In a separator, the combination with a casing provided with a cover, of elastic rods connected with said cover, side plates suspended from said rods, screen members supported by said side plates, tensioning means, for stretching screen clothing, suspended from said cover and percussively acting jarring devices for said screen members.

5. In a separator, the combination with a casing provided with a hinged cover, of rods connected with said cover, side plates suspended from said rods, screen members supported by said side plates, tensioning means, for stretching screen clothing, suspended from said cover, and percussively acting jarring devices for said screen members.

[Claims 6 to 11 not printed in the Gazette.]

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1,229,816. SCREENING OR SEPARATING MACHINE. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Jan. 3, 1917. Serial No. 140,418. (Cl. 83—56.)



1. In a separator, the combination with a screen casing provided with a cover, of spring members mounted above and supported by said cover, and one or more screen members suspended in said casing from said spring members.

2. In a separator, the combination with a screen casing provided with a hinged cover, of spring members mounted above and supported by said cover, and one or more screen members suspended in said casing from said spring members.

3. In a separator, the combination with a screen casing provided with a cover, of springs mounted above and supported by said cover, rods sustained by said springs and passing through said cover, side plates supported by said rods, and one or more screen members supported by said side plates.

4. In a separator, the combination with a screen casing provided with a hinged cover, of springs mounted above and supported by said cover, rods sustained by said springs and passing through said cover, side plates supported by said rods and one or more screen members supported by said side plates.

5. In a separator, the combination with a screen casing provided with a cover, of spring members mounted above and supported by said cover, one or more screen members suspended in said casing from said spring members, and means for percussively jarring said screen member or members.

[Claims 6 to 10 not printed in the Gazette.]

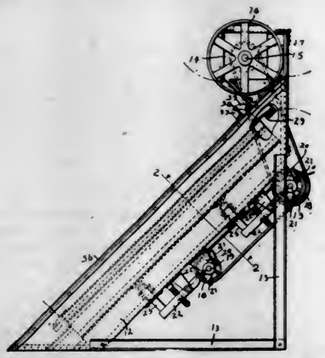
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1,229,817. SCREENING OR SEPARATING MACHINE. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Jan. 8, 1917. Serial No. 141,182. (Cl. 83—56.)

1. In a separator, the combination with a screen box or casing provided with a cover, of a relatively coarse

or scalper screen suspended in said casing from said cover, a relatively fine wire mesh screen supported in said casing, and means for percussively jarring said fine screen.

2. In a separator, the combination with a screen box or casing provided with a cover, of a relatively coarse or scalper screen suspended in said casing from said cover, a relatively fine wire mesh screen elastically supported in said casing, and means for percussively jarring said fine screen.



3. In a separator, the combination with a screen box or casing provided with a cover, of a relatively coarse or scalper screen suspended in said casing from said cover, a relatively fine wire mesh screen supported in said casing, and means, arranged below said casing, for percussively jarring said fine screen.

4. In a separator, the combination with a screen box or casing provided with a cover, of a relatively coarse or scalper screen suspended in said casing from said cover, a relatively fine wire mesh screen elastically supported in said casing, and means, arranged below said casing, for percussively jarring said fine screen.

5. In a separator, the combination with a screen box or casing provided with a cover, of a relatively coarse or scalper screen suspended in said casing from said cover, a relatively fine wire mesh screen supported in said casing, and means for percussively jarring said fine screen, said means comprising rebounding hammers or strikers and revolving tappets for operating said hammers or strikers.

[Claims 6 to 15 not printed in the Gazette.]

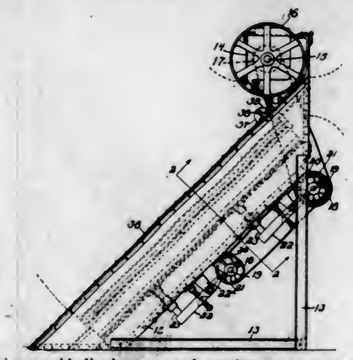
1,229,818. SCREENING OR SEPARATING MACHINE. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Jan. 8, 1917. Serial No. 141,183. (Cl. 83—56.)

1. In a separator, the combination with a screen casing provided with a cover, of a screen supported in said casing from said cover, a second screen in said casing and supported independently of said first-named screen, and imperforate vibrating means, acting from below, for jarring said last-named screen.

2. In a separator, the combination with a casing provided with a cover, of a relatively coarse or scalper screen supported in said casing from said cover, vibrating means acting from below said casing, and a relatively fine screen supported by said vibrating means.

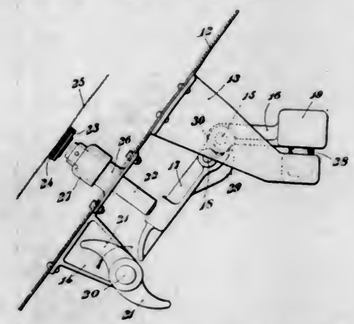
3. In a separator, the combination with a casing provided with a cover, of a relatively coarse or scalper screen supported in said casing from said cover, vibrating means acting from below said casing, elastic or resilient diaphragms connected with the bottom of said casing, and a relatively fine screen supported by said vibrating means.

4. In a separator, the combination with a casing provided with a cover, of a relatively coarse or scalper screen supported in said casing from said cover, elastic or resilient diaphragms connected with the bottom of said casing, pins below said diaphragms and connected therewith,



pins above said diaphragms and serving to support said fine screen, and hammers or strikers acting from below on said first-named pins.

1,229,819. JARRING MECHANISM FOR SCREENING OR SEPARATING MACHINES. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Jan. 10, 1917. Serial No. 141,587. (Cl. 83—56.)



1. In a separator, the combination with a screen to be percussively jarred, of gravity-impelled hammers acting from below, and impact bars interposed between said hammers and said screen and through which the force of the blows of said hammers are delivered to said screen.

2. In a separator, the combination with a screen to be percussively jarred, of gravity-impelled hammers acting from below and each formed in two parts jointed together, and impact bars interposed between said hammers and said screen and through which the force of the blows of said hammers are delivered to said screen.

3. In a separator, the combination with a screen to be percussively jarred, of gravity-impelled hammers acting from below, impact bars interposed between said hammers and said screen and through which the force of the blows of said hammers are delivered to said screen, and revolving tappets for depressing the striking parts of said hammers.

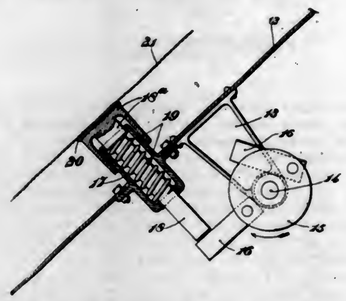
4. In a separator, the combination with a screen to be percussively jarred, of gravity-impelled hammers acting from below and each formed in two parts jointed together, impact bars interposed between said hammers and said screen and through which the force of the blows of said hammers are delivered to said screen, and revolving tappets for depressing the striking parts of said hammers.



5. In a separator, the combination with a screen to be percussively jarred, of gravity-impelled hammers acting from below and each formed in two parts jointed together, and one of which parts is weighted, impact bars interposed between said hammers and said screen and through which the force of the blows to said hammers are delivered to said screen, and stops for limiting the downward movements of said weighted parts of said hammers.

[Claims 6 to 8 not printed in the Gazette.]

1,229,820. JARRING MECHANISM FOR SCREENING OR SEPARATING MACHINES. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Jan. 10, 1917. Serial No. 141,588. (Cl. 83—56.)



1. In a separator, the combination with a screen, of impact bars by which said screen is supported and rotating hammers acting intermittently from below on said impact bars.

2. In a separator, the combination with a screen, of yieldingly-mounted impact bars by which said screen is elastically supported and rotating hammers acting intermittingly from below on said impact bars.

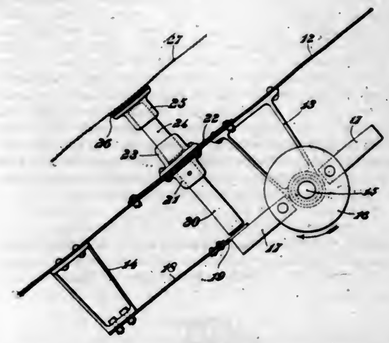
3. In a separator, the combination with a screen casing part provided with supports, of impact bars passing through said supports and provided with heads, springs interposed between said heads and the bottoms of said supports, a screen elastically supported by the said spring-mounted impact bars, and hammers acting at intervals on said impact bars.

4. In a separator, the combination with a screen casing part provided with supports, of impact bars passing through said supports and provided with heads, springs interposed between said heads and the bottoms of said supports, a screen elastically supported by the said spring-mounted impact bars, hammers acting at intervals on said impact bars, and revolving disks to which said hammers are hinged or pivoted.

1,229,821. JARRING MECHANISM FOR SCREENING OR SEPARATING MACHINES. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Jan. 10, 1917. Serial No. 141,589. (Cl. 83—56.)

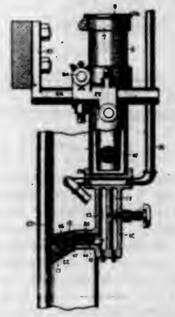
1. In a separator, the combination with a casing part provided with elastic diaphragms, of pins connected with said diaphragms, revolving hammers for acting on said pins, springs connected with said casing part and provided with impact plates interposed between said pins and hammers, impact bars sustained by said diaphragms, and a screen elastically supported from said diaphragms through said impact bars.

2. In a separator, the combination with a casing part provided with elastic diaphragms, of pins connected with said diaphragms, revolving hammers for acting on said pins, rotating disks by which said hammers are carried and to which they are hinged or pivoted, springs connected with said casing part and provided with impact plates interposed between said pins and hammers, impact bars sustained by said diaphragms, and a screen elastically supported from said diaphragms through said impact bars.



3. In a separator, the combination with an elastically supported screen, of hammers, acting from below, for jarring said screen, devices loosely mounted relative to said screen, and through which the impact of said hammers is to be transmitted to said screen, and impact members interposed between said devices and said hammers.

1,229,822. LUBRICATOR. OLOF SWANSON, Denver, Colo. Filed Aug. 16, 1916. Serial No. 115,172. (Cl. 184—3.)



1. A lubricator comprising a lubricant container, a discharge nozzle therefrom, a filler of fibrous material carried by the nozzle and adapted to contact with the surface to be lubricated, and a member free to vibrate in the nozzle lying in the path of the flow of the lubricant, said member also adapted to engage the surface to be lubricated.

2. A lubricator comprising a lubricant container, a nozzle, a fibrous filler on the surface of the nozzle adapted to contact with the surface to be lubricated, and means free to vibrate in the nozzle adapted to supply lubricant to the face of the nozzle.

3. A lubricator comprising a lubricant container, a discharge nozzle therefor having a bore through which lubricant is to be discharged, a pin in the bore mounted to slide and turn in the bore and adapted to project through either end of the bore, a washer free to move on said pin for engaging the inner end of the bore of the nozzle and adapted to prevent flow through the bore when the pin is not disturbed.

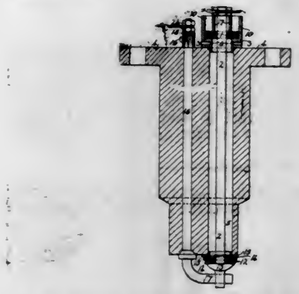
4. A lubricator comprising a lubricant container, a nozzle, a fibrous filler on the surface of the nozzle adapted to contact with the surface to be lubricated, means free to vibrate in the nozzle, and means for preventing the flow through the nozzle carried by said means adapted to vibrate.

5. A lubricator comprising a lubricant container, a discharge nozzle therefor having a bore through which the lubricant is discharged, a fibrous filler on the surface of the nozzle adapted to contact with the surface to be lubricated and located below the bore of the nozzle, a pin loosely mounted in said bore and adapted to project through either end of the nozzle, and a washer free to move on said pin and adapted to engage the inner end of the nozzle's bore, the outwardly projecting end of the pin being adapted to come in contact with the surface to be lubricated whereby the same is set into vibration substantially as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

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1,229,823. IGNITION APPARATUS OF GAS-ENGINES. CLAUDE SPENCER SYDENHAM, Kilmarnock, Scotland. Filed Feb. 17, 1914. Serial No. 819,197. (Cl. 123—153.)



1. In ignition apparatus the combination of a plug having a cavity; an oscillatory electrode in said cavity; with means including a bearing rotatably supporting the electrode and spaced away from the walls of the cavity, said bearing having in it a ventilating passage opening into said cavity.

2. In ignition apparatus the combination of a supporting structure having a cavity; an electrode extending therethrough; means for supporting said electrode including an insulating washer holding the electrode spaced away from the walls of the cavity in which it is mounted; and a structurally independent metal collar having a rust proof coating mounted on the insulating washer surrounding but spaced away from the electrode.

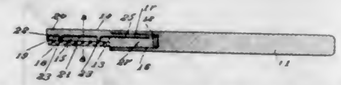
3. In ignition apparatus the combination of a plug having an opening therethrough; an electrode passing through said opening; insulating washers adjacent each end of the electrode; with removable cup shaped journal members receiving the washers and engaging the plug in positions to hold the electrode spaced away from the walls of the opening.

4. In ignition apparatus the combination of a plug having an opening therethrough; an electrode passing through said opening; insulating washers adjacent each end of the electrode; with cup shaped journals receiving the washers and engaging the plug in positions to hold the electrode spaced away from the walls of the opening; there being ventilating passages through the walls of the outer journal opening into the space surrounding the electrode.

5. In ignition apparatus the combination of a plug having two openings therethrough; an uninsulated electrode passing through and closely fitting one of said openings and having a projecting foot; journals adjacent the ends of the other opening; insulating washers mounted respectively in said journals; an electrode passing through the opening and held by the washers away from the walls thereof in position to be engaged by the foot of the first electrode, said second electrode having a head at that end adjacent the foot of the other electrode; and means at the opposite end of the second electrode engaging one of the insulating washers to clamp the journals, washers and electrode in place, there being ventilating passages through the outer one of the journals opening into the cavity in which the second electrode is mounted.

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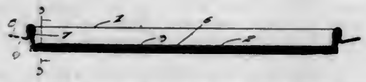
1,229,824. CUTTER FOR REMOVING HAIR FROM CAVITIES. BERNARD TEWELOW and SOLOMON TEWELOW, Baltimore, Md. Filed Mar. 11, 1915. Serial No. 13,786. (Cl. 30—12.)



In a safety cutter for removing hair from the cavity of the human nostrils and ears the combination with a handle having a threaded socket in one end, of a back plate holder having a concave inner side and a convex outer side and provided at one end with a shank which latter has a concave inner side and a threaded convex outer side; a guard also having a concave inner side and a convex outer side and provided with a shank which projects from one end thereof which latter shank has a convex inner side and a threaded convex outer side and a normally flat spring blade between the back plate holder and the guard, and said blade also having a flexible shank at one end which projects between the inner concave side of the plate holder and the inner convex side of the guard and said three shanks projecting into the socket of the handle and the threads on the plate holder shank and the guard shank engaging the threads in the handle-socket and clamping the shank of the blade between them.

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1,229,825. CAKE-PAN. WILLIAM E. TOMLINSON, Canton, Ohio. Filed Dec. 31, 1915. Serial No. 69,670. (Cl. 53—6.)



The combination with a cake pan, of a false bottom located within the pan and having the side edges thereof spaced from the side walls of the pan, a strip provided with a pair of parallel slots to form an intermediate offset portion and a pair of parallel outer members to receive the false bottom between the offset portion and the parallel outer members, the ends of said strip being bent upwardly and downwardly in an inclined plane to slidably engage the upper edges of the side walls of the pan, and laterally projecting extensions formed on the downwardly inclined ends of the strip to form handles for sliding the strip on the bottom.

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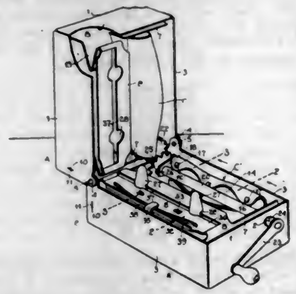
1,229,826. RAZOR-STROPPER. BERNHARD TROSKY, Brooklyn, N. Y. Filed Nov. 7, 1916. Serial No. 129,983. (Cl. 51—16.)

1. A stropper comprising a casing composed of hingedly connected sections, blade holding bars on the sections, a plate on one bar and formed with a clip extending over one edge of such bar, a blade thrust spring disposed under the clip, and a shoulder on the bar associated with the clip and against which a blade is held by the spring.

2. A stropper comprising a casing, stropping means in the casing, blade holding bars, one bar having a longitudinal shoulder, a clip on the same bar, and a spring



positioned under the clip and having a free resilient end arranged to bear on a blade engaged under the clip for clamping the blade against the shoulder.



3. A stropper comprising a casing composed of hingedly connected sections, a frame in each section and fastened only at one end therein, lugs on the other ends of the frames for engaging the adjacent end walls of the casing sections, a stropping element in each frame, blade-engaging means on the frames, and means for operatively connecting the stropping means with each other.

4. A stropper comprising a casing composed of upper and lower sections formed from sheet metal blanks, with struck-up end and side walls, hinges connecting the side walls of the upper and lower sections together, frames in the sections, the side walls adjacent the hinged ends of the sections being provided with non-circular apertures, lugs on the frames engaging in the said apertures for retaining the frames in the sections, additional lugs on both ends of the frames for engaging the end walls of the casing sections, stropping means on the frames, and blade-holding means on the frames.

5. A stropper comprising hingedly connected sections, frames in the sections and each having a blade-engaging bar, said bars having stud-receiving apertures, a plate fastened to one of the bars and having threaded openings, and studs provided with threaded portions removably engaging the threaded openings.

[Claims 6 to 10 not printed in the Gazette.]

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1,229,827. GOLD-TESTING DEVICE. RAYMOND D. VERCLER, Los Angeles, Cal. Filed Nov. 7, 1916. Serial No. 130,044. (Cl. 88—14.)



1. A gold testing needle structure, comprising a one piece body member of disk form having a circumferential series of arms or needles projecting radially therefrom, and gold points of varying degrees of fineness carried by respective arms or needles, and each arm having thereon indicia representing the degree of fineness in gold of the point carried thereby.

2. A gold testing needle device comprising a disk of relatively base metal of suitable gage in the form of a spider having relatively short arms projecting radially therefrom and constituting the bodies of the needles, and a needle point of gold on each arm, the points varying in fineness in gold and the arms having indicia thereon indicating the degree of fineness of the respective points.

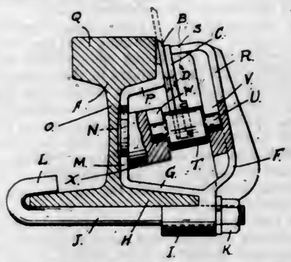
3. A gold testing needle device comprising a disk of sheet metal with arms radiating therefrom and each terminating in a tongue, and a series of gold needle points, one for each tongue, and each provided with a groove receiving the tongue of the respective arm or needle, the device having indicia indicating the degree of fineness in gold of the respective points.

4. A gold testing needle device comprising a disk of sheet metal with a peripheral series of radial arms projecting therefrom and each arm terminating in a dovetail tongue, and a series of gold points each individual to a respective arm and provided with a dovetail groove for receiving the tongue of the arm, with the points soldered to the arms, the arms having indicia thereon denoting the degree of fineness in gold of the respective gold points.

5. A gold testing needle device comprising a disk of sheet metal with a peripheral series of radial arms projecting therefrom and each arm terminating in a dovetail tongue, and a series of gold points each individual to a respective arm and provided with a dovetail groove for receiving the tongue of the arm, with the points soldered to the arms, the arms having indicia thereon denoting the degree of fineness in gold of the respective gold points, and the device having a central opening therethrough of a size to seat the ball of the thumb of the user.

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1,229,828. GUIDE-BRACKET FOR DETECTOR-BARS. EUGENE W. VOGEL, Oak Park, Ill., assignor to Chicago Railway Signal & Supply Company, Carpentersville, Ill., a Corporation of Illinois. Filed Oct. 5, 1916. Serial No. 123,806. (Cl. 246—57.)



1. The combination with a rail, detector bar and cam plate secured to the bar, of a roller to support the bar and coöperate with the cam plate to raise the bar when moved longitudinally, which roller is provided with journals at opposite ends, and a guide bracket provided with means for attaching it to the rail and formed with bearings for the roller journals.

4. The combination with a rail detector bar and cam plate secured to the bar, of a guide bracket for the bar comprising a base portion, a jaw adapted to fit over one edge of the rail base, a web which lies alongside of the vertical web of the rail and adapted to be secured thereto and formed with an outward projection formed with a bearing recess open at the top, and an upstanding web terminating in a guide lip extending close to the cam plate of the detector bar and formed with a bearing recess, and a roller to coöperate with said cam plate formed with integral journals adapted to extend into the aforesaid bearing recesses.

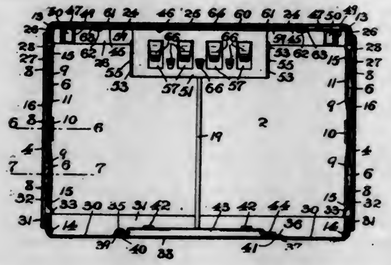
[Claims 2 and 3 not printed in the Gazette.]

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1,229,829. SAVINGS-BANK OR COIN-REPOSITORY. BENNO VOM EIGEN, Newark, N. J., assignor to August Goertz & Co., a Corporation of New Jersey. Filed Sept. 12, 1916. Serial No. 119,733. (Cl. 232—4.)

1. In a coin-repository, a main casing comprising side-members, formed with registering end-portions, lugs extending from said registering end-portions, the lugs upon one side-member resting directly upon the lugs of the

other side-member, a connector-plate provided with perforations through which said lugs are inserted and bent over thereon, for permanently securing said side-members in their connected relation, and means connected with said connector-plate at its respective end-portions for securing in position within the ends of the casing the closing end-sections of the coin-repository.



2. In a coin-repository, a main casing comprising side-members formed with registering end-portions, means connected with said registering end-portions, for permanently securing said side-members in their connecting relation, a spring-like retaining means within said casing and secured in position by said means for connecting the said registering end-portions, and end-portions provided with means adapted to be brought into holding engagement with said spring-like retaining means.

3. In a coin-repository, a main casing comprising side-members formed with registering end-portions, means connected with said registering end-portions, for permanently securing said side-members in their connected relation, spring-like retaining plates within said casing and secured in position by said means for connecting the said registering end-portions, said retaining plates being provided with lug-receiving openings, and end-sections provided with flanges and retaining lugs extending from said flanges, said retaining lugs being adapted to be sprung into retaining engagement with the lug-receiving openings of said retaining plates.

4. In a coin-repository, a main casing comprising side-members having abutting edge-portions, binding lugs connected with and extending from said abutting edge-portions, and connector-plates disposed over said abutting edge-portions, said connector-plates being formed with openings for entrance of said lugs therethrough, said lugs being in binding holding engagement with said connector-plates, combined with a coin-slot-provided top end-section connected with one end-portion of said connector-plate, and an open and gate-provided bottom end-section connected with the other end-portion of said connector-plate.

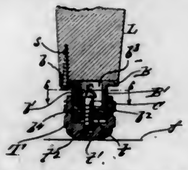
5. In a coin-repository, a main casing comprising side-members having abutting edge-portions, binding lugs connected with and extending from said abutting edge-portions, and connector-plates disposed over said abutting edge-portions, said connector-plates being formed with openings for entrance of said lugs therethrough, said lugs being in binding holding engagement with said connector-plates, a spring-like retaining means connected with each connector-plate, and end-sections provided with means adapted to be brought into holding engagement with said spring-like retaining means.

[Claims 6 to 15 not printed in the Gazette.]

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1,229,830. FURNITURE-TREAD. VALENTINE VON DER LIN, New York, and SIMON J. VON DER LIN, Brooklyn, N. Y. Filed Sept. 18, 1916. Serial No. 120,595. (Cl. 46—13.)

1. The furniture tread herein described, comprising a base plate, means for attaching the same to a furniture leg or support, a hollow peripherally-screw-threaded supporting post on said base formed with an inturned shoulder, an internally-threaded tread member U-shaped in longitudinal cross section engaging with said threaded supporting post, the closed end of said tread member forming a central axial contact surface for the purpose set forth, and an axially positioned coupling member attached to the closed bottom of the tread member and extending upward into the hollow supporting post and provided with a retaining shoulder opposed to the interned retaining shoulder on said supporting post.

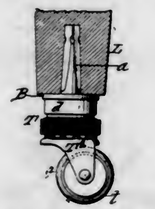


2. The furniture tread herein described, comprising a base plate, means for attaching the same to a furniture leg or support, a hollow peripherally-screw-threaded supporting post on said base formed with an inturned shoulder, an internally threaded tread member U-shaped in longitudinal cross section engaging with said threaded supporting post, the closed end of said tread member forming a central axial contact surface for the purpose set forth, and an axially positioned coupling member consisting of a screw stud engaging the closed bottom of the tread member and extending upward into the hollow supporting post and formed with a head over-lapping the inturned retaining shoulder on the said supporting post.

3. The furniture tread herein described, comprising a base plate, means for attaching the same to a furniture leg or support, a hollow peripherally-screw-threaded supporting post on said base formed with an inturned shoulder, an internally threaded tread member engaging with said threaded supporting post, and an axially positioned coupling pin attached to the tread member and extending upward into the hollow supporting post and provided with a retaining shoulder opposed to the inturned retaining shoulder on said post.

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1,229,831. FURNITURE-TREAD. VALENTINE VON DER LIN and SIMON J. VON DER LIN, New York, N. Y. Filed Nov. 7, 1916. Serial No. 129,920. (Cl. 16—73.)



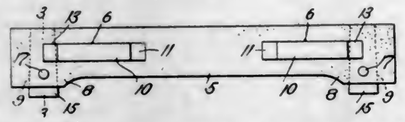
1. Means for attaching and adjusting furniture treads as herein set forth, comprising an internally screw threaded tread member, a hollow peripherally threaded post on which said tread member is adjustable, said hollow post being formed with an inturned shoulder, an axially positioned coupling pin screwing into the tread member and extending upward into said hollow supporting post and provided with a retaining head opposed to said inturned retaining shoulder on the hollow post, and an attachment-stud screwing into said hollow post and formed with an axial recess to accommodate the retaining head and upper portion of said coupling pin.

2. Means for attaching and adjusting furniture treads as herein set forth, comprising an internally screw threaded tread member, a hollow peripherally threaded post on which said tread member is adjustable, said hollow post being formed with an inturned shoulder, an axially positioned coupling pin screwing into the tread member and extending upward into said hollow supporting post and provided with a retaining head opposed to said inturned retaining shoulder on the hollow post, an attachment-stud screwing into said hollow post and formed with an axial recess to accommodate the retaining head and upper portion of said coupling pin, and an annular dust-guard flange over-lapping the upper edge of the tread member, for the purpose described.

3. Means for attaching and adjusting furniture treads as herein set forth comprising an internally screw-threaded tread member, a caster pivotally mounted on a trunnion secured to said tread-member, said trunnion, a hollow peripherally threaded post on which said tread member is adjustable, said hollow post being formed with an inturned shoulder, an axially positioned coupling pin screwing into said caster trunnion and extending upward into said hollow supporting post and provided with a retaining head opposed to said inturned retaining shoulder on said hollow post, and an attachment-stud screwing into said hollow post and formed with an axial recess to accommodate the retaining head and upper portion of said coupling pin, for the purpose described.

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1,229,832. RAILWAY-TIE. WILSON WADSWORTH, Hewins, Kans. Filed Jan. 8, 1917. Serial No. 141,189. (Cl. 238—8.)



1. A railway tie comprising a body portion having an elongated longitudinally extending recess and a transverse opening communicating therewith, a rail block mounted in said recess, and a locking member extending through said transverse opening and engaging the adjacent end of said rail block whereby to prevent displacement thereof.

2. A railway tie comprising a body portion having an elongated longitudinally extending recess and a transverse opening communicating therewith, a rail block mounted in said recess, and a locking member extending through said transverse opening and engaging the adjacent end of said rail block whereby to prevent displacement thereof, and a locking pin extending through said body portion and said locking member.

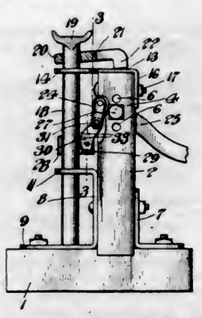
3. A railway tie comprising a body portion having a longitudinal recess and a transverse tapered opening communicating therewith, a rail block mounted in said recess and having a portion thereof underlying said opening, and a tapered locking member mounted in said transverse opening and extending above said underlying portion of said rail block.

4. A railway tie comprising a body portion having a longitudinally extending recess, one end of which is beveled, said body portion being provided with an enlarged end having a transverse tapered opening communicating with said recess, a rail block mounted in said recess and having a beveled end for engagement with the beveled end of said recess and its opposite end provided with a recess registering with said transverse opening in said beveled portion, and a tapered locking member mounted in said transverse opening and projecting through said recess.

5. A railway tie comprising a body portion having a longitudinally extending recess, one end of which is beveled, said body portion being provided with an enlarged end having a transverse tapered opening communicating with said recess, a rail block mounted in said recess and having a beveled end for engagement with the beveled end of said recess and its opposite end provided with a recess registering with said transverse opening in said beveled portion, a tapered locking member mounted in said transverse opening and projecting through said recess and a locking pin extending through said enlarged portion and said locking member for retaining the latter in locking position.



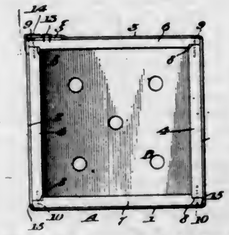
1,229,833. JACK. PAUL WAGNER, Saco, Mont. Filed June 6, 1916. Serial No. 101,973. (Cl. 254—106.)



In a device of the class described, a base having an opening therein, a bracket on said base, a standard on the base having connection with said bracket and braced thereby, a plate on said standard having an arm connected with the base and provided with an opening registering with the opening in the base, a second arm on said plate overlying the first mentioned arm and having an opening therein registering with the opening in the first mentioned arm and base, a lifting bar passing through the openings in said arms and to extend within the opening in the base, and means for operating said lifting bar.

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1,229,834. KNOCKDOWN BOX. HARRISON B. WALTER, Danville, Ill., assignor to National Fibre Box Company, Danville, Ill. Filed Mar. 20, 1914. Serial No. 826,021. (Cl. 217—12.)



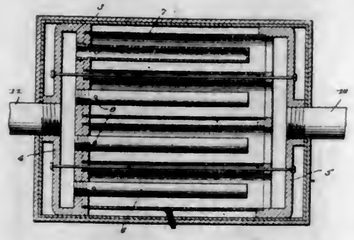
A knock-down box comprising a scored blank, which provides a bottom, two sides and top, battens of slightly less length than the width of the sides and having square ends secured to the ends of said sides, and box ends having battens secured at opposite edges prior to being inserted within said box, the ends of said battens mortised or notched to receive the ends of the battens on the sides when the ends are inserted in the box, said mortised and square ended battens fitted together and nailed, whereby to complete the box.

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1,229,835. MOTOR-VEHICLE HEATER. ROBERT E. WARDLOW, Cincinnati, Ohio. Filed Mar. 14, 1914. Serial No. 824,724. (Cl. 257—136.)

A radiator comprising opposed chambered inlet and outlet headers in spaced relation to each other, a plurality of sets of tubes each set comprising an outer tube and an inner tube concentric in relation to each other, the inner tube of each set being in communication at one end only with the inlet header and closed at the opposite end, the respective outer tube entirely inclosing the inner tube and being fastened at its ends to both headers and in communication at one end only with the outlet header, the inner tube of each set having a lateral vent near its receiving end which communicates with the respective outer

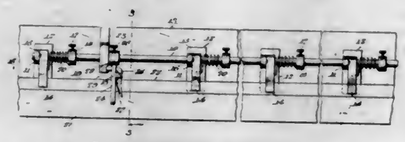
tube permitting the imperforate end portion of the inner tube to trap a portion of the fluid which acts as a turbulent



cushion for the remainder of the fluid passing through the radiator.

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1,229,836. EMBROIDERY-FRAME CLAMP. ANTHONY WARTA, Annville, Pa. Filed Dec. 29, 1916. Serial No. 139,611. (Cl. 112—7.)



1. An embroidery machine frame clamp comprising a rotatable shaft, clamping plates adapted to be secured to the frame of the machine, bearings carried by said plates, clamping dogs carried by said shaft and coöperating with said plates, springs engageable with said dogs, means for adjusting the tension of said springs and means securing said clamps in an operative or inoperative position.

2. An embroidery machine frame clamp comprising stationary clamping members, a rotatable shaft having bearings in said stationary clamping members, movable clamping members carried by said shaft and adjustably tensioned thereon and means for securing said clamps in an operative or inoperative position.

3. An embroidery machine frame comprising combined stationary clamping and bearing members, a shaft rotatably mounted in said members, clamping dogs mounted upon said shaft and springs carried by said shaft and engaging said dogs to urge them in the direction toward the stationary clamping members.

4. An embroidery machine frame comprising combined stationary clamping and bearing members, a shaft rotatably mounted in said members, clamping dogs mounted upon said shaft in a manner to permit of a limited radial movement thereon and springs carried by said shaft and engaging said dogs to urge them in a direction toward the stationary clamping members.

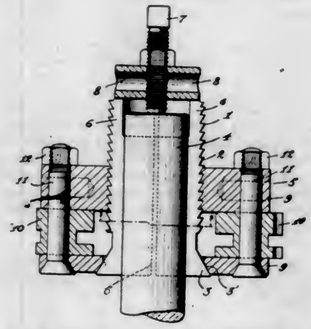
5. An embroidery machine frame comprising combined stationary clamping and bearing members, a shaft rotatably mounted in said members, clamping dogs mounted upon said shaft, springs mounted upon said shaft and engaging said dogs and adjustable collars also mounted upon said shaft and engaging said springs, whereby the tension of the springs may be adjusted.

[Claim 6 not printed in the Gazette.]

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1,229,837. BUSHING. EDWARD H. WAUGH, Seattle, Wash., assignor to John W. Winningham, Seattle, Wash. Filed July 22, 1912. Serial No. 710,942. (Cl. 74—8.)

1. The combination with a shaft member, of a member to be secured thereto against relative rotation, a sleeve interposed between the members and having a portion that tapers from one end inwardly, and a smaller exteriorly threaded portion screwed into the second member, said sleeve having slits from one end through the threaded portion and terminating short of the other end, the smaller threaded portion projecting beyond the member in which it is placed and having means whereby it can be turned.



2. The combination with a shaft member, of a member to be secured thereto against relative rotation, a sleeve interposed between the members and having an enlarged tapered portion and a smaller exteriorly threaded portion screwed into the second member, said sleeve having slits from one end through the threaded portion and terminating short of the other end, said other end being closed and projecting beyond the member in which it is placed, and a screw threaded through said closed end and bearing against the end of the shaft member.

3. The combination with a shaft member, of a member to be secured thereto and comprising spaced elements, one of which has a tapered bore, another of said spaced elements having internal screw threads, means connecting the elements to hold them against relative rotation, a sleeve interposed between the members, said sleeve having a tapered portion engaged in the tapered bore of one element and having an externally threaded portion screwed into the bore of the said other element, said sleeve furthermore being longitudinally split, said sleeve also constituting suplemental means for drawing the elements toward each other.

4. The combination with a shaft member, of a split sleeve thereon having ratchet threads and a tapered portion, and a member surrounding the sleeve and mounted directly thereon, said member comprising spaced elements, means connecting the elements for drawing them toward each other, one of said elements being located on the tapered portion of the sleeve, another of said elements having a threaded engagement with said sleeve, and said sleeve constituting supplemental means for securing the spaced elements together.

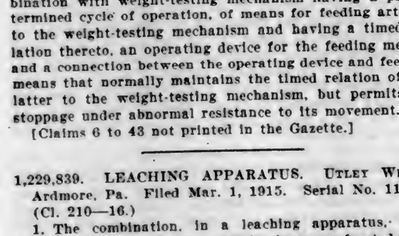
5. The combination with a shaft member and a member to be secured thereon, of a sleeve having a non-tapered clamping section interposed between said members and slit lengthwise, said clamping section of the sleeve and one of the members having threaded engagement, said member and a part of the sleeve having other surfaces engaging to resist axial movement.

[Claims 6 to 11 not printed in the Gazette.]

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1,229,838. WEIGHT-TESTING MACHINE. EDWARD H. WAUGH, Seattle, Wash., assignor to Smith Cannery Machines Company, Seattle, Wash., a Corporation of Washington. Filed Nov. 20, 1912. Serial No. 732,540. (Cl. 83—92.)

1. In apparatus of the character set forth, the combination with a weight-testing mechanism having a predetermined cycle of operation, of article-moving means associated therewith and having a timed relation thereto, an operating device for said moving means, and a connection between the operating device and moving means that normally maintains the timed relation of the latter to the weight-testing mechanism, but permits its stoppage under abnormal resistance to its movement.



2. In apparatus of the character set forth, the combination with a weight-testing mechanism having a predetermined cycle of operation, of article-moving means associated therewith and having a timed relation thereto, an operating device for said moving means, and a connection between the operating device and moving means that normally maintains the timed relation of the later to the weight-testing mechanism, but permits its stoppage under abnormal resistance to its movement and automatically returns it to such timed relation when said abnormal resistance is removed.

3. In apparatus of the character set forth, the combination with companion weight-testing mechanisms having alternating predetermined cycles of operation, of article-moving means alternately coöperating with said mechanisms and having a timed relation therewith, an operating device for said moving means, and a connection between the operating device and moving means that normally maintains the timed relation of the latter to the weight-testing mechanisms, but permits its stoppage under abnormal resistance to its movement.

4. In apparatus of the character set forth, the combination with companion weight-testing mechanisms having alternating predetermined cycles of operation, of article-moving means alternately coöperating with said mechanisms and having a timed relation therewith, an operating device for said moving means, and a connection between the operating device and moving means that normally maintains the timed relation of the latter to the weight-testing mechanisms, but permits its stoppage under abnormal resistance to its movement, and automatically returns it to said timed relation when said abnormal resistance is removed.

5. In apparatus of the character set forth, the combination with weight-testing mechanism having a predetermined cycle of operation, of means for feeding articles to the weight-testing mechanism and having a timed relation thereto, an operating device for the feeding means, and a connection between the operating device and feeding means that normally maintains the timed relation of the latter to the weight-testing mechanism, but permits its stoppage under abnormal resistance to its movement.

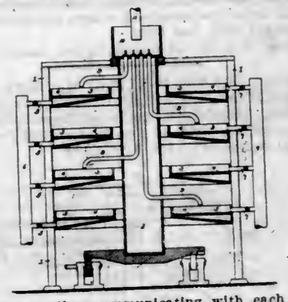
[Claims 6 to 43 not printed in the Gazette.]

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1,229,839. LEACHING APPARATUS. UTLEY WEDGE, Ardmore, Pa. Filed Mar. 1, 1915. Serial No. 11,364. (Cl. 210—16.)

1. The combination, in a leaching apparatus, of a series of superposed pans, each having a perforated false bottom, means for conveying the material to be leached to said pans, a pair of discharge pipes, one communicating with each of the pans below the false bottom and the other communicating with each of the pans above said false bottom, and valved connections through which such communications are effected.

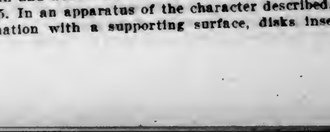
2. The combination, in a leaching apparatus, of a series of superposed pans, each having a perforated false bottom, means for feeding to said pans material to be leached, means for rotating one of said elements in respect to the other, a pair of discharge pipes, one communicating with each of the pans below the false bottom



thereof and the other communicating with each of the pans above said false bottom, and valved connections through which such communications are effected.

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1,229,840. BEAN-SNIPPER. FRED WEGNER, Fairport, N. Y., assignor to George W. Cobb, Montclair, N. J. Filed Feb. 9, 1916. Serial No. 77,143. (Cl. 146—7.)



1. The combination with a movable conveyer having open ended pockets, guards at opposite sides of the conveyer closing the ends of the pockets, each guard being provided with a recess and an opening therethrough leading from the recess, of cutters located in said recesses opposite said opening, and means for moving articles placed in said pockets alternately in opposite directions to project their extremities into said recesses and in positions to be carried into engagement with the cutters.

2. The combination with a horizontally movable conveyer having open ended pockets extending transversely thereof, and guards at opposite sides of the conveyer for guiding the latter and closing the ends of said pockets each having an opening, the opening in one of the guards being located in rear of the opening in the other guard, relatively to the direction of movement of said conveyer, of cutters arranged in said opening and coöperating with the ends of the walls of the pockets, and means adapted to coöperate with articles placed in the pockets for shifting them longitudinally therein to first engage one cutter and subsequently engage the other cutter during the continuous movement of the conveyer.

3. The combination with a table, an endless conveyer passing around the table composed of spaced pusher heads and connecting chain links, sprocket wheels at the ends of the table around which the chains pass and rounded portions on the ends of the table coöperating with the heads as the latter pass onto and off of the table top, of guards at opposite sides of the conveyer having guideways, means carried by the heads coöperating with the guideways to hold the heads in an upright position during their passage between the guards, cutters at opposite sides of the conveyer and means for imparting endwise movement to articles lying in front of the heads to position them so that the heads will carry said articles into engagement with the cutters.

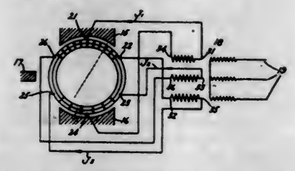
4. In an apparatus of the character described, the combination with a support, disks rotatable in opposite directions and a cutter located relatively to each disk, of means for carrying articles into successive engagement with and across said disks and between the cutters.

5. In an apparatus of the character described, the combination with a supporting surface, disks inset in said

surface and means for rotating the disks in opposite directions, of a cutter arranged relatively to each disk and means for carrying articles longitudinally of the supporting surface between said cutters and successively into engagement with said disks.

[Claims 6 to 10 not printed in the Gazette.]

1,229,841. DYNAMO-ELECTRIC MACHINE. WILHELM WEILER, Pankow, and HERMANN NEHLSEN, Niederschönhausen, Germany, assignors to General Electric Company, a Corporation of New York. Filed July 16, 1915. Serial No. 40,341. (Cl. 171—123.)



1. In a dynamo-electric machine, the combination with an armature of main field poles and commutating poles, said armature being provided with a commutator, a plurality of pairs of collector rings and a winding to which said commutator and collector rings are electrically connected, the separate rings of each pair being connected to points on said winding having a displacement different from 180 electrical degrees and the corresponding rings of different pairs being connected to equidistant points on said winding.

2. In combination, a dynamo-electrical machine comprising an armature, means to produce a main field and means to produce a commutating field, and a polyphase source of current, said armature being provided with a commutator, a plurality of pairs of collecting rings adapted to be connected to said polyphase source, and a winding to which said commutator and collector rings are electrically connected, the separate rings of each pair being connected to points on said winding having a displacement different from 180 electrical degrees and the corresponding rings of different pairs being connected to equidistant points on said winding.

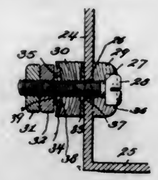
3. In a dynamo-electric machine, the combination with an armature of means to produce a main field and means to produce a commutating field, said armature being provided with a winding, a commutator, and a plurality of pairs of collector rings which are connected to said winding so that the winding is divided into as many phases as there are pairs of rings and so that one phase is connected between each pair of rings, the extremities of the portions of the winding connected between each pair of rings having an angular displacement different from 180 electrical degrees.

4. In a dynamo-electric machine, the combination with an armature of means to produce a main field and means to produce a commutating field, said armature being provided with a winding, a commutator, and a plurality of pairs of collector rings which are connected to said winding so that the winding is divided into as many phases as there are pairs of rings, and so that one phase is connected between each pair of rings, the extremities of the portions of the winding connected between each pair of rings having an angular displacement different from 180 electrical degrees and the corresponding extremities of said portions being equidistant from each other.

1,229,842. SELF-DRAINING ATTACHMENT FOR GAS-METERS. HENRY P. WESTCOTT, Erie, Pa. Filed June 5, 1916. Serial No. 101,839. (Cl. 183—4.)

1. The combination with a gas meter, of a self-draining attachment therefor comprising contiguously arranged transmitting absorbent elements respectively disposed in spaced relation interiorly and exteriorly of and in part bearing against the walls of the meter.

2. The combination with a gas meter, of a self-draining attachment comprising contiguously arranged transmitting absorbing elements secured adjacent to each other on opposite sides of the wall of the meter.



3. The combination with a gas meter having a drain opening in a wall thereof, of a self-draining attachment for a condensed product comprising transmitting absorbing elements applied in operative relation to opposite sides of the wall adjacent to and around the said drain opening.

4. The combination with a gas meter having a drain opening in a wall thereof, of a self-draining attachment for a condensed product comprising transmitting absorbing elements applied in operative relation to opposite sides of the wall adjacent to and around the said opening, and securing means extending through the absorbing elements and said opening.

5. The combination with a gas meter having a drain opening in a wall thereof, of a self-draining attachment for a condensed product comprising transmitting absorbing elements applied in operative relation to opposite sides of the wall adjacent to and around the said opening, a securing device extending through the absorbing elements and opening, and means interposed between one of the elements and the outer side of the wall around the securing means to prevent the escape of gas.

[Claims 6 to 10 not printed in the Gazette.]

1,229,843. COMBINATION-TOOL. CALVIN B. WHITAKER, Kansas City, Mo. Filed Oct. 5, 1916. Serial No. 123,917. (Cl. 55—43.)

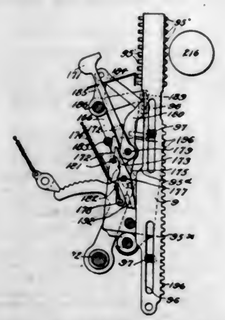


In a device of the class described, in combination, a ferrule having a tapered and polygonal shaped recess in one end thereof and a threaded bore communicating therewith, a shank disposed in said bore and having threads thereon engaging the threads in the bore, an angular enlargement on said shank, a nut carried by said shank and having a groove therein and a chamber receiving said enlargement, a tapered and polygonal portion on said nut disposed in said recess, a cap threadedly connected with said ferrule and having an opening therein receiving said nut, and a flange on said cap extending within the groove in said nut.

1,229,844. PRINTING MECHANISM FOR ADDING-MACHINES. NELSON WHITE, Springfield, Oreg., assignor to International Money Machine Company, Terre Haute, Ind., a Corporation of Indiana. Original application filed Mar. 20, 1913, Serial No. 755,817. Divided and this application filed Oct. 17, 1914. Serial No. 867,178. (Cl. 235—58.)

1. In printing mechanism for adding machines, the combination of type carriers, means controlling differential positioning of said type carriers, a hammer section comprising hammers coöperative with the type carriers, drivers for said hammers, means tending to actuate the drivers to cause firing of the hammers, restraining means for the hammer drivers, a frame carrying said restraining means, a platen, a feeding device for said platen, operating means including a lever to actuate said feeding device, a connection between the frame and lever, and means to actuate the lever and thereby operate the frame to effect release of the hammer drivers from the restraining means and platen feed movement.





2. In a machine of the class described, the combination of type carriers, means for adjusting said type carriers to printing positions, a rocking frame, hammers and hammer drivers mounted on said frame, catches normally restraining said drivers and also carried by the frame, and means for rocking said frame to impart bodily movement to the catches to release the hammer drivers therefrom.

3. In printing mechanism for adding machines the combination of type carriers, means controlling differential positioning of said carriers, a hammer section comprising a pivoted frame, hammers mounted upon the axis of said frame for coöperation with the type carriers, hammer drivers co-axially mounted with respect to said hammers and interlocked with the latter, means to operate the hammer drivers for impression purposes, restraining devices for said hammer drivers also mounted on said frame, and means whereby the hammer drivers may be released from said restraining devices to effect printing action.

4. In printing mechanism for adding machines the combination of type carriers, means controlling differential positioning of said carriers, a hammer section comprising a pivoted frame, hammers mounted upon the axis of said frame for coöperation with the type carriers, hammer drivers co-axially mounted with respect to said hammers and interlocked with the latter, means to operate the hammer drivers for impression purposes, restraining devices for said hammer drivers also mounted on said frame, means whereby the hammer drivers may be released from said restraining devices to effect printing action, a platen, feeding means for said platen including a lever, connecting means between said frame and the previously mentioned operating means for causing the movement of the frame and restraining devices thereon, and means intermediate the said frame and said lever feeding device whereby the movement of the former is imparted to the latter.

5. In a machine of the class described, printing mechanism comprising a set of vertically sliding type carriers, means for operating said carriers to differentially position the same for printing action, a second set of type carriers each of which corresponds with one of the carriers of the first mentioned set, gearing operatively connecting the various corresponding carriers of the two sets aforesaid, said gearing comprising a series of superposed transmission shafts and overlapping gears on said shafts, the carriers being provided with rack portions to engage the gears, and means supporting the type carriers for sliding movement and for holding their rack portions in coöperation with the gears aforesaid including horizontally disposed guide rods, the carriers being formed with alined slots receiving said guide rods and in which the guide rods operate incident to the movement of the carriers.

[Claim 6 not printed in the Gazette.]

1,229,845. BAG-FRAME FASTENER. LUDWIG WIDLAK, Newark, N. J., assignor to Rosenband Manufacturing Co., a Corporation of New Jersey. Filed Sept. 15, 1916. Serial No. 120,209. (Cl. 70—116.)



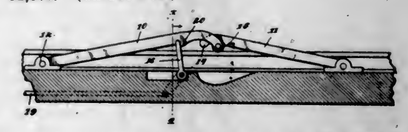
1. In a device of the kind described, the combination with pivoted frame-sections of an upwardly bowed loop-member secured to one of said frame-sections, a raised catch-lug connected with the same frame-section and spaced longitudinally from said loop-member, a catch-plate secured to another frame-section, a laterally projecting convex latch-tongue connected with one end of said catch-plate, a laterally projecting catch-member having a concave depression on its under side connected with the other end of said catch-plate, said latch-tongue being adapted to spring beneath and then engage said loop member and said catch-member being adapted to spring over and engage said catch-lug when said respective frame-sections are closed together.

2. In a device of the kind described, the combination with a pair of pivoted frame-sections of an upwardly bowed loop-member secured to each frame-section, an inwardly directed end of each loop-member being turned upwardly, a ball-catch connected with the extremity of each upwardly turned end of said loop-members adapted to spring past and mutually engage each other when said frame-sections are closed, a raised catch-lug connected with each frame-section and spaced longitudinally from said loop-member thereof, a reversible frame-section pivotally connected with said pair of pivoted frame-sections, a catch-plate secured to said reversible frame-section, oppositely and laterally projecting convex latch-tongues connected respectively with opposite ends of said catch-plate, and oppositely and laterally projecting catch-members having receiving depressions on their under sides connected respectively with opposite ends of said catch-plate, and extending in a direction laterally opposite to that of the latch-tongue, for the purposes described.

4. In combination with a pair of pivoted frame-sections, a loop-member mounted upon one of said frame-sections, and a catch-plate mounted upon the other frame-section, said catch-plate being provided with a latch-tongue adapted to be brought into holding engagement with said loop-member, and a catch-member upon said catch-plate, said catch-member extending in a direction opposite from that of the latch-tongue and serving as a fingerpiece.

[Claim 3 not printed in the Gazette.]

1,229,846. AUTOMATIC TRAIN-STOP. HARRY WILSON, St. Helens, Oreg. Filed Apr. 17, 1916. Serial No. 91,676. (Cl. 246—59.)

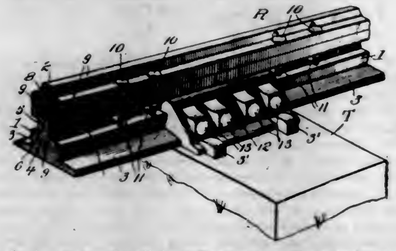


1. In an automatic train stop a pair of rods one having one of its ends pivotally connected to a stationary support and its remaining end formed into a hook, the other having one of its ends pivoted to a stationary support and its other end recessed for the reception of said hook, a roller supporting the hook within the recess, and means acting on one of said rods for moving the rods about their pivot.

2. In an automatic train stop a pair of rods one having one of its ends pivotally connected to a stationary support and its remaining end formed into a hook, the other having one of its ends pivoted to a stationary support and

its other end recessed for the reception of said hook, a roller supporting the hook within the recess, a pivoted plate formed with a recess for receiving one of the rods and means for giving movement to said plate.

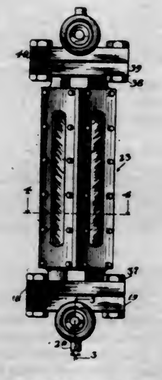
1,229,847. RAILWAY-RAIL. HARRY W. WINNER, Lock Haven, Pa. Filed Mar. 24, 1917. Serial No. 157,122. (Cl. 239—16.)



1. A compound rail including base sections and tread sections, said base sections having their upper surfaces grooved longitudinally, said tread sections comprising a plurality of bearing surfaces, one of which being received in the groove of the tread section, others resting upon the upper surface of the base section and secured thereto, and the remaining portion of the said tread section providing a bearing for the wheels of the rolling stock.

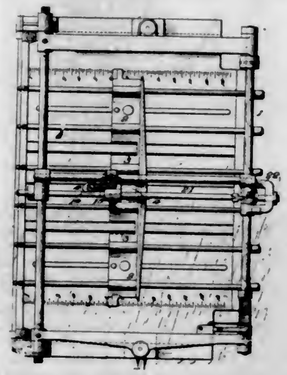
2. In a compound rail, a base section and a tread section, said base section having its web grooved longitudinally upon the outer sides thereof and its upper surface channeled longitudinally throughout the length of the said section, said tread comprising a plurality of bearing surfaces, one of which being received in the channel of the base, two of the said tread sections resting upon the top of the base at the opposite sides of the channel, securing elements passing through the last mentioned surfaces and through the top of the base and entering the channels in the sides of the base, and nut members within the said channels receiving the said securing elements and contacting with the inner walls of the channels.

1,229,848. WATER-GAGE FOR BOILERS. FREDRIC S. YOUNG, Los Angeles, Cal. Filed May 31, 1916. Serial No. 100,903. (Cl. 73—54.)



A water gage comprising an upper horizontally disposed communicating pipe, a lower communicating pipe parallel therewith, upper and lower cut-off valves adapted to obstruct each of said pipes respectively, a vertically disposed gage member connectively united to each of said cut-off valves, means for detachably mounting said gage member in relation to said valves, said means comprising a pair of oppositely extending apertured fastening lugs on each end of said gage member, corresponding pairs of lugs on said valves, and bolts securing said pairs of lugs together.

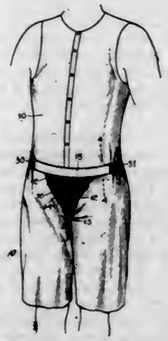
1,229,849. GRAB-TYPE RECTIFIER. JOHN J. ZEITZ, Warren, Ohio, assignor to The American Folding Machine Company, Warren, Ohio, a Corporation of Ohio. Filed Dec. 6, 1915. Serial No. 65,300. (Cl. 271—60.)



1. A rectifier for sheet feeding mechanism comprising a fixed forward guide, and a gripping device adapted to engage a sheet fed toward said guide, said gripping device having a swiveled stud adapted to contact with the sheet.

2. A rectifier for sheet feeding mechanism comprising a guide having a recess, and a gripping device adapted to engage the forward edge of a sheet being fed toward said guide, said device being adapted to enter said recess to bring the sheet into contact with said guide and having a lever and a rotatable stud carried by said lever, and means for tripping said lever.

1,229,850. COMBINED UNDERGARMENT AND JOCK-STRAP. HENRY ZETOSCH, New York, N. Y. Filed Dec. 23, 1916. Serial No. 138,572. (Cl. 128—38.)



1. A garment, comprising an undergarment and jock strap, the undergarment having at the abdomen a cut-out portion extending from the waist line to the crotch, a suspensory member closing the said cut-out portion, a waistband attached to the said undergarment and to which the upper edge of the said suspensory member is secured, and back straps connecting the crotch end of the suspensory member with the said waistband at the back thereof.



2. A garment, comprising an undergarment and a jock strap, the undergarment having at the abdomen a cut-out portion extending from the waist line to the crotch, a suspensory member of open mesh fabric and having its sides attached to the side walls of the said cut-out portion, a waist-band attached to the undergarment and to which the upper edge of the said suspensory member is attached, and converging back straps connecting the crotch end of the suspensory member with the back of the said waistband.

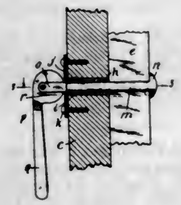
3. A garment, comprising an undergarment and a jock strap, the undergarment having at the abdomen a cut-out portion extending from the waist line to the crotch, a suspensory member of open mesh fabric and having its sides attached to the side walls of the said cut-out portion, a waistband attached to the undergarment and to which the upper edge of the said suspensory member is attached, and converging back straps connecting the crotch end of the suspensory member with the back of the said waistband, the said waistband being adapted to be opened at the junction of one of the said back straps with the waistband.

4. A garment, comprising an undergarment and a jock strap, the undergarment having at the abdomen a cut-out portion extending from the waist line to the crotch, a suspensory member of open mesh fabric and having its sides attached to the side walls of the said cut-out portion, a waistband attached to the undergarment and to which the upper edge of the said suspensory member is attached, and converging back straps connecting the crotch end of the suspensory member with the back of the said waistband, the said back straps being secured to the undergarment and the portion of the latter intermediate the back straps being detached at one side at the corresponding back strap, the said waistband being adapted to be opened at the junction of the waistband with the last-named back strap to provide a sanitary back flap adapted to be opened and closed.

5. A garment, comprising an undergarment and a jock strap, the undergarment having at the abdomen a cut-out portion extending from the waist line to the crotch, a suspensory member closing the said cut-out portion, a waistband attached to the said undergarment and to which the upper edge of the said suspensory member is secured, and back straps connecting the crotch end of the suspensory member with the said waistband at the back thereof, the said waistband having elastic detachable portions at the sides and the said back straps having elastic detachable portions.

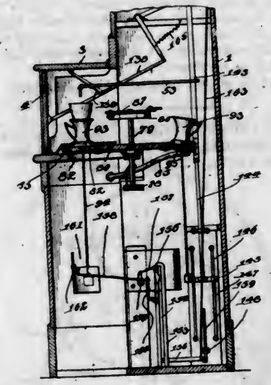
[Claims 6 and 7 not printed in the Gazette.]

1,229,851. SILO-DOOR LOCK. LEWIS R. ABERCROMBIE, Portland, Oreg. Filed Feb. 4, 1916. Serial No. 76,212. (Cl. 70—3.)



In a door fastening for silos, the combination of a hole in the silo adjacent the door opening, a bushing extending partially through the hole, a shaft longitudinally and rotatably mounted in the bushing, a packing gland at the outer end of said bushing, a plate bearing against the outer end of the packing gland, and a cam lever pivoted on the outer end of said shaft, the cam being adapted to bear on said plate, and a lateral toe on the inner end of said shaft.

1,229,852. AUTOMATIC LIQUID-DISPENSING MACHINE. BOYD ABERNATHY, Murphy, N. C., assignor of one-half to A. A. Fain, Murphy, N. C. Filed Apr. 3, 1916. Serial No. 88,617. (Cl. 225—21.)



1. In automatic liquid dispensing apparatus, a syrup container, a carbonated water container, measuring devices connected to said containers respectively, a discharge spout connected to said measuring devices, valves controlling communication between said containers and measuring devices and between said measuring devices and spout and normally in positions to cut off communication between said containers and measuring devices and establish communication between said measuring devices and spout, and means for operating said valves to establish communication between said containers and measuring devices.

2. In automatic liquid dispensing apparatus, a syrup container, a carbonated water container, measuring devices connected to said containers respectively, a discharge spout connected to said measuring devices, valves controlling communication between said containers and measuring devices and between said measuring devices and spout and normally in positions to cut off communication between said containers and measuring devices and establish communication between said measuring devices and spout, means for operating said valves to establish communication between said containers and measuring devices, and means for restoring said valves to normal positions whereby communication between said measuring devices and containers will be cut off and the liquid in said measuring devices delivered to said discharge spout.

3. In automatic liquid dispensing apparatus, syrup containers, a carbonated water container, measuring devices connected to said containers respectively, a discharge pipe common to said measuring devices, valves controlling communication between said containers and measuring devices and between said measuring devices and spout, and normally in positions to cut off communication between said containers and measuring devices and establish communication between said measuring devices and spout, means whereby said carbonated water valve may be operated in the operation of any one of said syrup valves, and means for selectively operating said syrup valves.

4. In automatic liquid dispensing apparatus, syrup containers, a carbonated water container, measuring devices connected to said containers respectively, a discharge pipe common to said measuring devices, valves controlling communication between said containers and measuring

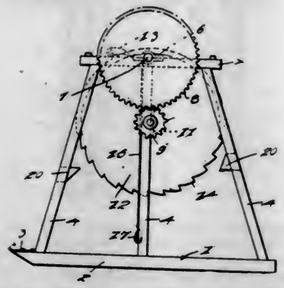
devices and between said measuring devices and spout, and normally in position to cut off communication between said containers and measuring devices and establish communication between said measuring devices and spout, means whereby said carbonated water valve may be operated in the operation of any one of said syrup valves, and coin controlled mechanism for selectively operating said syrup valves.

5. In automatic liquid dispensing apparatus, a delivery pipe having an inlet end and a discharge end, a horizontal turn table below the discharge end of said delivery pipe and rotatable about a vertical axis, and cup holders on said turn table movable into alinement with the discharge end of said pipe successively.

[Claims 6 to 45 not printed in the Gazette.]

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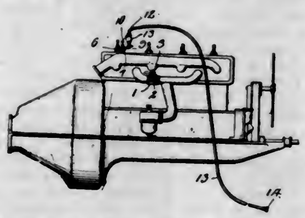
1,229,853. STUMP-PULLER. HENRY S. ADAMS and JOHN T. MINCHER, Viburnum, Mo. Filed Mar. 1, 1916. Serial No. 81,511. (Cl. 254—146.)



In a stump puller, a supporting structure including a pair of runners, a plurality of upstanding braces carried by said runners, a cable carrying drum rotatably carried by said braces, a shaft rotatably carried by certain of said braces, a ratchet mounted upon said shaft, a pair of outwardly extending fulcrum blocks carried by certain of said braces below the center of said ratchet, said fulcrum blocks being disposed upon opposite sides of the center of the ratchet, and a lever adapted to be placed upon either of said fulcrum blocks and in engagement with one tooth of said ratchet for rotating the ratchet upon pivotal movement of the lever.

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1,229,854. TIRE-PUMP. JOHN W. AKER, Lancaster, Ky. Filed June 26, 1916. Serial No. 105,925. (Cl. 123—198.)

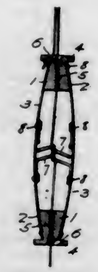


1. A device for inflating automobile tires consisting of a cylinder of a multi-cylindered automobile engine, a fuel intake for the cylinder, a valve casing having an air port in the fuel intake of the said cylinder, a three-way valve in the casing, a spark plug including a tubular sleeve which is connected with the said cylinder, a valve pipe for the tubular sleeve, and a flexible tube connected with the said pipe and having a nipple and to engage with the valve of the tire to be inflated.

2. A device for inflating automobile tires including one cylinder of a multi-cylindered engine for an automobile, a valve casing having an air inlet connected with the valve intake of the manifold of the engine leading to the said cylinder, a valve in the casing whereby to close the fuel passage and open the air inlet, a spark plug having a tubular sleeve surrounding the same connected with the said cylinder of the automobile engine, a valved outlet pipe for the said sleeve, a chamber connected with the outlet pipe, pipe members having oppositely rounded ends at the inlet and outlet passage of the chamber, and a flexible tube connected with the outlet of the chamber.

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1,229,855. SLACK-ADJUSTER. CLINTON B. ALEXANDER, Washington, D. C. Filed Feb. 23, 1916. Serial No. 79,971. (Cl. 24—115.)



1. A reversible line adjuster comprising end members each provided with a longitudinal opening and a second opening adjacent thereto, spring side members attached to the end members and provided with complemental gripping members, one end of the line being adapted to be fastened in the second opening and the other adapted to pass through the longitudinal opening and the gripping members.

2. A reversible line adjuster comprising end members each provided with a longitudinal opening and a second opening adjacent thereto, spring side members attached to the end members and provided with a plurality of opposed complemental gripping members, one end of the line being adapted to be fastened in the second opening and the other adapted to pass through the longitudinal opening and the gripping members.

3. A reversible line adjuster comprising end members each provided with a longitudinal opening and a second opening adjacent thereto, spring side members attached to the end members and provided with complemental gripping members, said gripping members being adapted to interlock and are formed with angular shaped openings whereby they are adapted to grip lines of different diameter, one end of the line being adapted to be fastened in the second opening and the other adapted to pass through the longitudinal opening and the gripping member.

4. A line adjuster comprising end members having a longitudinal opening therein, spring side members attached to said end members and a plurality of opposed interlocking gripping members carried by said side members intermediate their ends.

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1,229,856. HIGH-FREQUENCY ALTERNATOR. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 22, 1915. Serial No. 35,711. (Cl. 171—252.)

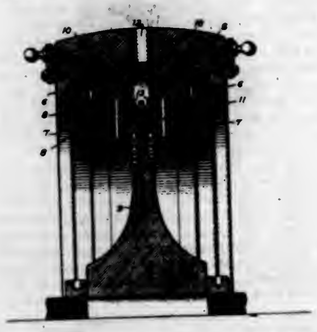
1. A high frequency inductor alternator comprising a stator core of laminated magnetic material having slots and teeth, a winding carried in said stator slots, and a rotatably mounted inductor having a plurality of magnetic poles adjacent said winding and separated therefrom by a small air gap, the widths of the stator teeth and rotor poles being such that as the inductor rotates



the number of rotor poles opposite any stator tooth alternates between

$$\frac{n+1}{2} \text{ and } \frac{n-1}{2},$$

where $n$ is any odd numeral greater than 1.



2. A high frequency alternator comprising a circular stator core of laminated magnetic material having radially positioned slots and teeth, a winding carried in said stator slots, a rotatably mounted inductor having a plurality of magnetic poles adjacent said winding and separated therefrom by a small air gap, the widths of the stator teeth and rotor poles being such that as the inductor rotates the number of rotor poles opposite any stator tooth alternates between

$$\frac{n+1}{2} \text{ and } \frac{n-1}{2},$$

where $n$ is any odd numeral greater than 1, and an exciting winding adapted to magnetize said rotor poles.

3. A high frequency alternator comprising a stator carrying a pair of circumferentially laminated rings having opposite faces lying in adjacent radial planes, each of said rings having radially positioned slots and teeth on said opposite faces, a winding carried in the slots of each of said rings, a solid magnetic inductor adapted to be driven at high speed having its periphery extending between said opposite faces and having a plurality of magnetic poles adjacent said windings and separated therefrom by small air gaps, the widths of the stator teeth and rotor poles being such that as the inductor rotates the number of rotor poles opposite any stator tooth alternates between

$$\frac{n+1}{2} \text{ and } \frac{n-1}{2},$$

where $n$ is any odd numeral greater than 1, and an exciting winding adapted to magnetize said rotor poles.

4. A high frequency inductor alternator comprising a stator core of laminated magnetic material having slots and teeth, a winding carried in said stator slots, a rotatably mounted inductor having a plurality of magnetic poles adjacent said winding and separated therefrom by a small air gap, the widths of the stator teeth and rotor poles being such that as the inductor rotates the number of rotor poles opposite any stator tooth alternates between

$$\frac{n+1}{2} \text{ and } \frac{n-1}{2},$$

where $n$ is any odd numeral greater than one, and a short-circuited winding carried by said inductor for minimizing the effect of armature reaction.

5. A high frequency alternator comprising a circular stator core of laminated magnetic material having radially positioned slots and teeth, a winding carried in said stator slots, a rotatably mounted inductor adapted to be driven at high speed and having a plurality of magnetic poles adjacent said winding and separated therefrom by a small air gap, the widths of the stator teeth and rotor poles being such that as the inductor rotates the number of rotor poles opposite any stator tooth alternates between

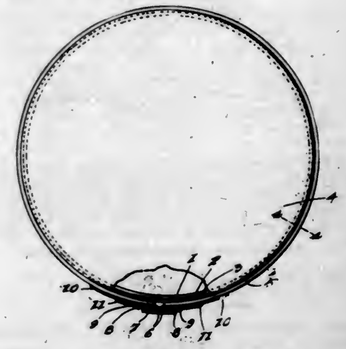
$$\frac{n+1}{2} \text{ and } \frac{n-1}{2},$$

where $n$ is any odd numeral greater than 1, non-magnetic blocks of high electrical conductivity secured to said inductor between said magnetic poles, and means electrically connecting the ends of said blocks to form a low resistance short-circuited winding for minimizing the effect of armature reaction.

[Claims 6 to 12 not printed in the Gazette.]

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1,229,857. EMBROIDERY-HOOP. GRACE G. ALYEA, Chicago, Ill., assignor of one-half to Emery T. Alyea, Minneapolis, Minn. Filed June 15, 1914. Serial No. 845,208. (Cl. 45—24.)



A device of the class described including an inner hoop having an exterior peripheral groove and provided with a cushioning ring fitted in the groove and projecting therefrom, an outer split hoop provided with spaced grooves in its inner face located opposite the cushioning ring to coact therewith to clamp the material, a pair of oblong metallic straps secured to the ends of the outer ring at the outer face thereof, said straps having their central portions struck outwardly forming integral longitudinal tongues connected at their inner ends with the straps and having their outer ends free and pressing tightly against the main portion of the straps, said tongues being bowed outwardly adjacent their inner connected ends forming combined attaching and guard loops which present inclined faces at their outer sides, and a helical spring located between and having its ends attached to said loops, said spring extending across the split ends of the outer hoop and holding the grooves and the cushioning ring in close contact with the material to force the latter into the grooves.

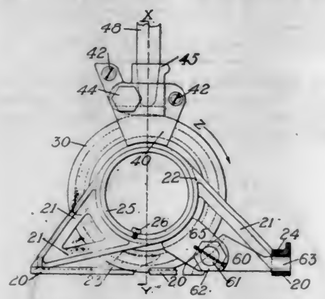
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1,229,858. WINDLASS. CIPRIANO ANDRADE, Jr., New York, N. Y. Filed Mar. 8, 1917. Serial No. 153,297. (Cl. 254—176.)

1. In windlasses, a sheave, a cable carried on the sheave, a member adapted to move in a path substantially concentric with the axis of the sheave, said member locking directly with the sheave to prevent any radial motion of the member away from the sheave, and a pawl mounted on said member, said pawl being adapted to hold the cable between the pawl and the sheave, or to release said cable at will.

8. In windlasses, a sheave, a cable carried on the sheave, a member adapted to move in a path substantially concentric with the axis of the sheave, said member locking directly with the sheave to prevent any radial motion of the member away from the sheave, a pawl mount-

ed on said member, said pawl being adapted to hold the cable between the pawl and the sheave, or to release said cable at will; a second member whose concentric motion with reference to the axis of the sheave is limited by the second pawl hereinafter mentioned, said second member locking directly with the sheave to prevent any radial motion of the said second member away from the sheave, a second pawl mounted on said second member, said second pawl being adapted to hold the cable between the

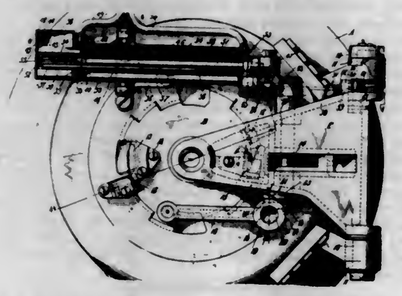


second pawl and the sheave, or to release said cable at will, and means for holding the free end of said second pawl against circumferential motion in either direction with reference to the sheave; the first mentioned member being adapted to transmit a tripping pressure to the second pawl, whereby said second pawl may release said cable.

[Claims 2 to 7 not printed in the Gazette.]

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1,229,859. POWER-OPERATED BREECH MECHANISM. DORSEY F. ASBURY, Washington, D. C., assignor to United States Ordnance Company, Washington, D. C., a Corporation of Virginia. Filed Oct. 4, 1915. Serial No. 53,962. (Cl. 89—20.)



1. In a gun, the combination of a movable carrier, a rotatable breech plug, a motor for moving the carrier and rotating the plug, said motor including a reciprocating element, and a brake device including a reciprocating element rigidly connected to and movable with the reciprocating element of the motor during the entire stroke of the latter in either direction to control all movements of the plug and carrier due to said motor or gravitation.

2. In a gun, the combination of a movable carrier, a rotatable breech plug, a motor for moving the carrier and rotating the plug, said motor including a cylinder and a piston, and a brake device including a piston rigidly connected to and movable with the motor piston during the entire stroke of the latter in either direction to control all movements of the plug and carrier due to said motor or gravitation.

3. In a gun, the combination of a movable carrier, a rotatable breech plug, a motor for moving the carrier and rotating the plug, said motor including a cylinder and piston, and a brake device disposed within the cylinder and including a piston rigidly connected to and movable with the motor piston during the entire stroke of the latter in either direction to control all movements of the plug and carrier due to said motor or gravitation.

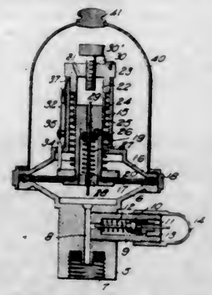
4. In a gun, the combination of a movable breech mechanism, a motor for moving the breech mechanism to open and closed positions, said motor including a cylinder and piston one of which is connected to the gun and the other to the breech mechanism, and a brake device including a piston rigidly connected to and moving with the motor piston during the entire stroke of the latter in either direction.

5. In a gun, the combination of a movable carrier, a rotatable breech plug, a motor for moving the carrier and rotating the plug, said motor including a cylinder and piston, and a hydraulic brake device disposed within the cylinder and including a piston rigidly connected to and movable with the motor piston during the entire stroke of the latter in either direction to control all movements of the plug and carrier due to said motor or gravitation.

[Claims 6 to 27 not printed in the Gazette.]

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1,229,860. AIR-VALVE. HERVEY BOWES ASHELMAN and JOHN SANDFORD JOHNSON, Fargo, N. D. Filed Nov. 10, 1915. Serial No. 60,690. (Cl. 137—28.)



An air valve comprising a casing, a diaphragm therein adapted to be dished by air pressure, a sleeve carried by said diaphragm, a reinforcing member for the diaphragm, means carried by the sleeve retaining the reinforcing means on the diaphragm, guiding means for the sleeve, a spring for resisting the dishing of the diaphragm, a valve mechanism within the sleeve, and a screw carried by the guiding means for engaging the valve mechanism after a predetermined displacement of the sleeve whereby the air which dishes the diaphragm is permitted to escape.

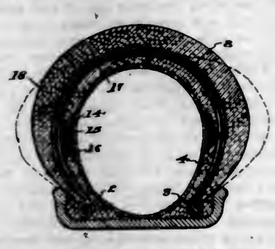
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1,229,861. PUNCTURE-PROOF PNEUMATIC TIRE. GUSTAV AUBERLIN, Vallejo, Cal. Filed Nov. 15, 1916. Serial No. 131,558. (Cl. 152—18.)

1. In a tire casing, an inner, flexible, metal armor, comprising a pair of rings, one on each side of the tire, an inner set of interspaced, U-shaped, metal bands pivotally secured to said rings, and an outer set of interspaced U-shaped metal bands overlying the inner set of bands and having their ends reduced and pivotally secured to the rings.

2. In a tire casing, an inner, flexible, metal armor, comprising a pair of rings, an inner set of interspaced, U-shaped, metal bands secured to said rings, a fabric covering for each band, an inner and outer fabric covering strip inclosing the entire set of inner bands, means securing said inner and outer covering strips to each other between the bands and to the latter to secure the bands in their spaced positions, an outer set of U-shaped, interspaced, metal bands overlapping the inner set of bands, said outer set being also secured to the rings, a fabric covering for each individual band in the outer set, and an outer and inner fabric strip inclosing the entire inner and outer set.



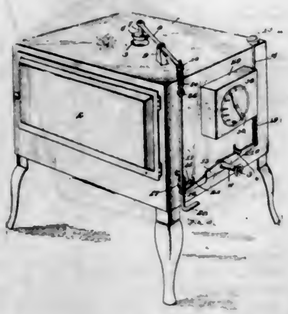


3. In a tire, the combination with a suitable body of reinforcing members therein, consisting of arched steel bands arranged in two circumferential concentric series, and a single ring on each side of the tire to which the adjacent ends of both series of arches are pivotally connected in common.

4. In a tire casing, an armor comprising a pair of side rings, and a plurality of resilient and arcuate metal bands having their ends connected to the side rings, certain of said bands being longer and of greater diameter than the others to be disposed outwardly of the latter.

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1,229,862. TIME-CONTROLLED TRIP MECHANISM FOR FIRELESS COOKERS. CLIFFORD BARGAMIN, Newport News, Va. Filed Apr. 19, 1916. Serial No. 92,176. (Cl. 161—16.)

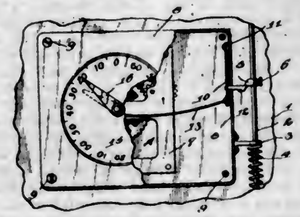


In time controlled trip mechanism, a casing, a slidable, spring thrust, setting and actuating member, a slidable latch within said casing but movable through an opening in one wall thereof to hold and release said actuating member, said latch having a lateral projection at one end, clock mechanism within said casing including a dial, a disk within said casing fast on a rotary arbor of the clock mechanism and disposed in a plane parallel to the path of movement of said latch, and a post on said disk adapted to strike against the head of the latch to slide the latter out of holding engagement with said setting and actuating member.

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1,229,863. TIME-CONTROLLED MECHANISM. CLIFFORD BARGAMIN, Newport News, Va. Filed Sept. 14, 1916. Serial No. 120,131. (Cl. 161—16.)

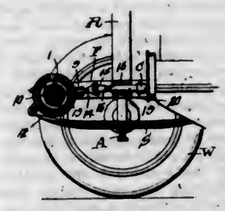
1. The combination with a controlling member having a shoulder, of time controlled trip mechanism embodying a self-setting latch having a shoulder movable into and out of engagement with the shoulder of said controlling member for holding and releasing the latter, a spring motor embodying a spring, a spring winding arbor, a flexible connection wound upon said arbor and attached to said latch, a dial, and a pointer fast on said arbor and also serving as a means for turning said arbor to wind the spring, simultaneously slack said flexible connection and permit the latch to reset itself.



2. The combination with a controlling member having a shoulder, of time controlled trip mechanism embodying a self-setting latch having a shoulder movable into and out of engagement with the shoulder of said controlling member for holding and releasing the latter, a spring motor embodying a spring winding arbor and an escapement lever, a flexible connection wound upon said arbor and attached to said latch, a dial, a pointer fast on said arbor and also serving as a means for turning said arbor to wind the spring motor, simultaneously slacking said flexible connection and permitting the latch to reset itself, and a stop arm fast on said arbor and movable into and out of engagement with said escapement lever, for the purpose of stopping the motor when the pointer returns to zero.

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1,229,864. AUTO-EXTRACTOR. GEORGE O. BATCHELDER, Macomb, Ill., assignor of one-half to Lawrence Burke, Jr., Macomb, Ill. Filed Mar. 20, 1917. Serial No. 156,144. (Cl. 254—166.)



1. In an automobile extractor, the combination with a rope, a winding drum therefor, a rod on which the drum is rotatably mounted, detachable connections between said rod and the frame bars of the motor vehicle, and an arch whose ends embrace said rod and whose center has a bearing; of a beveled gear on said drum, a driving shaft mounted near its front end in said bearing and having a pinion engaging said gear, its body being in three sections, a universal joint between two of said sections, a telescopic connection between two other said sections, means for normally distending these sections, and means for detachably connecting the rearmost section with the main shaft of the engine of the motor vehicle.

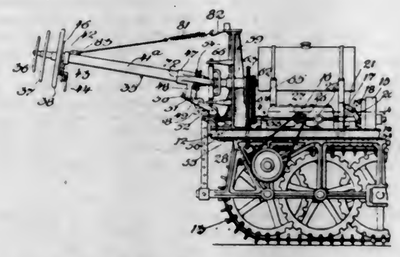
[Claim 2 not printed in the Gazette.]

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1,229,865. CONTROL MECHANISM FOR TRACTORS AND THE LIKE. HARRY H. BATES, Joliet, Ill., assignor to Bates Machine Company, Joliet, Ill., a Corporation of Illinois. Continuation in part of application Serial No. 812,506, filed Jan. 16, 1914. This application filed Dec. 13, 1915. Serial No. 66,520. (Cl. 21—114.)

1. In an apparatus of the class described, the combination with a suitable frame, of a ring pivoted to said frame and adapted to swing about a vertical axis, a supporting

member having its inner end pivoted to said ring and adapted to swing about a horizontal axis intersecting said vertical axis, a spring for sustaining the outer end of the supporting member, a tube rotatably mounted within said supporting member, a hand wheel connected to the outer end of said rotatably mounted tube, means for locking said hand wheel in any desired position, a drum connected to the inner end of said rotatably mounted tube, a pintle beneath the aforementioned ring, a bar having one end pivoted to said pintle and its outer end slidably connected to the supporting member, a pulley on said bar adapted to transmit a rope or the like from the pintle to the drum, a tube rotatably mounted within the first mentioned rotatably mounted tube, a hand wheel connected to the outer end of said second mentioned rotatably mounted tube, a universal joint connected to the inner end of said tube, a rod extending through the second mentioned rotatably mounted tube, a hand wheel on the outer end of said rod, and a universal joint connected to the inner end of said rod, both of said universal joints working on the point of intersection of the horizontal and vertical axes of the first mentioned ring, substantially as described.



2. In an apparatus of the class described, the combination with a suitable frame, of a supporting member, means for connecting the inner end of said member to said frame to permit the member to swing about a horizontal axis and about a vertical axis, both of said axes intersecting each other, a pair of rotatable tubes concentrically mounted within said supporting member and extending throughout the length of the same, a hand wheel mounted on the outer end of one of said tubes, means for locking said hand wheel in desired position, a drum on the inner end of said tube, a pintle mounted beneath the point of intersection of the horizontal and vertical axes about which the supporting tube may swing, means for transmitting a rope or the like from said drum to said pintle, a hand wheel connected to the outer end of the other rotatable tube, a universal joint connected to the inner end of said tube, a rod concentrically mounted with respect to all of said tubes, a hand wheel on the outer end of said rod, and a universal joint connected to the inner end of said rod, both of said universal joints working substantially on the point of intersection of the first mentioned horizontal and vertical axes, substantially as described.

3. In an apparatus of the class described, the combination with a suitable frame, of a supporting member, means for connecting the inner end of the same to the frame to permit said member to swing about either a horizontal or a vertical axis, the horizontal and vertical axes intersecting each other, a pair of tubes concentrically and rotatably mounted within the supporting member and extending throughout the length of the same, hand wheels secured to the outer ends of said rotatable tubes, a drum connected to the inner end of one of said tubes, means for transmitting a rope from said drum to a desired point on the frame, a universal joint connected to the inner end of the other of said tubes, a rod concentrically and rotatably mounted within said tubes and extending throughout the length of the same, a hand wheel connected to the outer end of said rod, and a universal joint connected to the inner end of said rod, both of the aforementioned universal joints working substantially on the point of intersection of the horizontal and vertical axes, substantially as described.

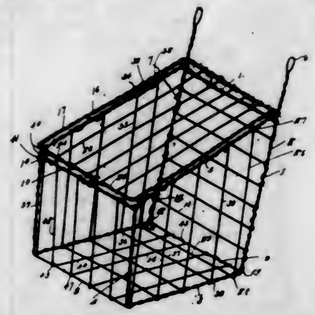
4. In an apparatus of the class described, the combination with a suitable frame, of a supporting member, means for connecting the inner end of said member to the frame to permit said member to swing about a horizontal and a vertical axis, both of said axes intersecting each other, a plurality of rotatable members concentrically mounted within said supporting member, suitable hand wheels or the like connected to the outer ends of said members, and universal joints connected to the inner ends of said members, said universal joints working substantially on the point of intersection of the aforementioned horizontal and vertical axes, substantially as described.

5. In an apparatus of the class described, the combination with a suitable frame, of an elongated supporting member, means for connecting the inner end of said supporting member to the frame to permit the supporting member to swing about a horizontal and about a vertical axis, a plurality of members rotatably and concentrically mounted within said supporting member, suitable hand wheels or the like connected to the outer ends of said members, and universal joints connected to the inner ends of said members, said universal joints working substantially on the point of intersection of the aforementioned horizontal and vertical axes, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

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1,229,866. HEN'S NEST. MYRTIE MAY BEBB, Carpenter, Wyo. Filed Dec. 20, 1916. Serial No. 138,123. (Cl. 220—136.)



A nest comprising a pair of spaced parallel frames, having top, bottom, front and rear bars, the rear bars extending upwardly beyond the top bars, loops formed at the upper ends of the rear bars, transversely extending bars holding the rear bars in spaced parallel relation, a wire connected across between the rear bars of the frames to form a rear panel, a wire connected across the side, bottom and front bars of the frames upon the side, bottom and front panels of the device, and a lid comprising a frame having a filler formed of a single piece of wire extending between the upper and lower bars of the lid.

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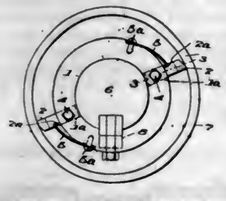
1,229,867. TOOL-SETTING DEVICE FOR STEREOTYPE-PLATE-BORING MACHINES. LOUIS H. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed June 5, 1916. Serial No. 101,707. (Cl. 77—56.)

1. In combination, a holder, an adjustable cutter therein, a spring adapted to project the cutter when the latter is released; and means for fastening the cutter.

2. In combination, a holder, an adjustable cutter thereon, a spring adapted to project the cutter when the latter is released; and means for fastening the cutter; with a removable gage adapted to limit the projection of the cutter when released.



3. In combination, a holder, a plurality of cutters mounted thereon; springs adapted to project the cutters when they are released; and means for fastening the cutters.



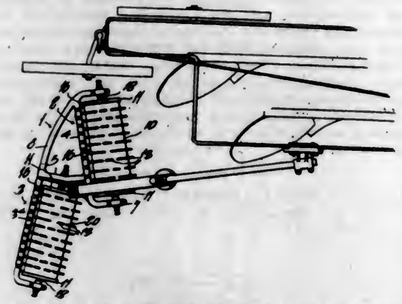
4. In combination, a cutter head, a plurality of cutters mounted thereon, springs adapted to project the cutters when the cutters are released; and means for fastening the cutters; with a removable gage adapted to limit the projection of the cutters when released.

5. In a machine for boring tubular plates the combination of a cutter head having radial slots, cutters mounted in said slots and movable independently radially of the cutter head, springs for projecting the cutters when the latter are released, and means for fastening the cutters in position.

[Claims 6 and 7 not printed in the Gazette.]

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1,229,868. EARTHWORKING IMPLEMENT. [illegible] RANDALL BLACK, Toulon, Ill. Filed Sept [illegible], 1916. Serial No. 120,791. (Cl. 55—24.)



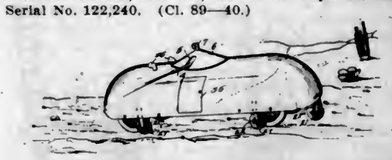
1. An earth working roller having a plurality of longitudinally spaced peripheral rows of teeth, the teeth of each row being peripherally alined and each tooth being in the form of a substantially rectangular flat metal strip projecting radially from the roller, and arranged lengthwise around the circumference thereof, the teeth of each row having their ends spaced slightly apart and their flat faces arranged at right angles to the longitudinal axis of the roller, the teeth of one row being in staggered relation to those of adjacent rows.

2. An earth working roller having a plurality of peripherally arranged, longitudinally spaced, rows of teeth, the teeth of each row being in peripheral alinement and each tooth being in the form of a flat arcuate metal strip having squared outer corners and roller engaging prongs extending laterally from the concave inner edge of the strip and in the same plane therewith, shoulders formed at the bases of said prongs to limit their insertion in the roller, said shoulders being spaced from the concave edge of the strip to form a space between said edge and the periphery of the roller, said teeth being arranged lengthwise around the periphery of the roller, with the spaces between their prongs disposed parallel with the longitudinal axis of the roller, the teeth in one row being in staggered relation to those of adjacent rows.

3. The combination with a supporting frame, a roller revolubly mounted therein and having a plurality of longitudinally spaced annular rows of flat teeth with annular earth receiving chambers between them, the flat faces of the teeth being arranged in a plane at right angles to the longitudinal axis of the roller, one member of said frame being in the form of a flat bar disposed in a plane above the plane of the longitudinal axis of said roller and extending longitudinally relatively thereto, of a plurality of cleaners carried by said bar and extending into said chambers, each cleaner consisting of a transversely slotted attaching plate for adjustable connection with the lower face of said bar and having laterally spaced cleaning fingers extending from one edge thereof at an obtuse angle, the space between said fingers being sufficient for the passage between the fingers of the teeth of one of said rows, one finger extending into the chamber at one side of the row straddled by the cleaner, and the other into the chamber at the other side of said row.

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1,229,869. ARMORED AUTOMOBILE. ERASMUS MANFORD BLACKSHER, Brewton, Ala. Filed Sept. 26, 1916. Serial No. 122,240. (Cl. 89—40.)



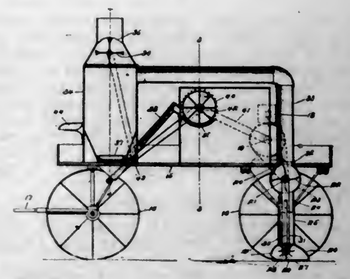
1. In combination with an automobile, an armor casing fitting over and outside of the automobile, said casing having a central opening in its top and a turret having a tapered protecting cover mounted to rotate in the opening, the cover extending over the casing at the edge of the opening, means for rotating the turret with respect to the casing, means on the casing for supporting the turret for rotation, a yielding connection between the frame of the automobile and the casing at the sides and ends of the frame, wheels for supporting the casing, said wheels being arranged in pairs at the sides and at the ends, a journal pin mounted to slide vertically on the casing at each wheel and having a fork between whose arms the wheel is journaled, a spring normally pressing each journal pin downward, the arms of the forks of the wheels at the ends being curved.

4. In combination with an automobile, an armor casing fitting over and outside of the automobile, and a yielding connection between the frame of the automobile and the casing at the sides and ends of the frame, and wheels for supporting the frame and yieldingly connected therewith.

[Claims 2 and 3 not printed in the Gazette.]

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1,229,870. MACHINE FOR SAVING SEEDS. WARD J. BLAKESLEE, Filer, Idaho. Filed Nov. 19, 1915. Serial No. 62,365. (Cl. 56—2.)



1. In a device of the class described, a seed pick-up consisting of a vertically movable tubular member having

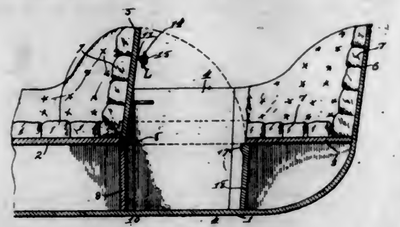
a ground engaging hood, a beater supported for rotation within the hood, means for rotating the beater and means for setting up suction in the tubular member.

2. In a device of the class described, a fan casing having an inlet and an outlet spout, a driven fan within the casing, a tubular extension telescoping on the inlet spout and having a ground engaging hood, and a driven revolving beater within the hood.

3. A fan casing having an outlet and an inlet tube, a driven fan in said casing, a tubular extension telescoping on the inlet tube and having a ground engaging hood, and a driven revolving beater supported within the hood on brackets depending from and connected with the inlet tube.

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1,229,871. CONVERTIBLE SEAT AND BED STRUCTURE FOR VEHICLES. WILHELM F. BOOCK, Pipestone, Minn. Filed June 23, 1914. Serial No. 846,851. (Cl. 21—43.)



1. In combination with a back rest, a plurality of movable devices to secure said back rest against movement, a taut elongated element engaging and bridging said devices and preventing movement thereof, said element dually functioning as a fastening for said devices and as a rack, and means to permit slackening of said element to permit movement of said devices.

2. In combination with a back rest, a plurality of turnable latches to secure said back rest against movement, an elongated flexible belt, said latches having open handles, said belt extending through the openings of said handles, said belt dually functioning as a fastening to secure said devices against turning and as a rack, and a separable fastening to connect the ends of said belt.

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1,229,872. NUT-LOCK. EDWARD L. BORDWELL, Marysville, Cal. Filed Aug. 16, 1916. Serial No. 115,254. (Cl. 151—15.)

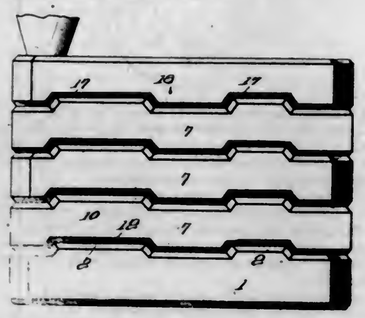


In combination with a threaded bolt having at its end a shaft extension which is threaded, a primary nut having a threaded aperture adapted to engage the thread upon the bolt, said primary nut being provided at its outer face with a recess having a curved bottom wall, and a lock nut having a threaded aperture adapted to engage the thread upon the shaft extension, said lock nut being provided with a curved face adapted to engage the curved bottom wall of the recess when the lock nut is applied to the said shaft extension whereby the primary nut is jammed in position on the bolt.

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1,229,873. MULTIPLE MOLD. GEORGE W. BOWERS, Mannington, W. Va. Filed Sept. 15, 1916. Serial No. 120,348. (Cl. 25—119.)

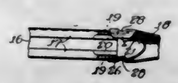
1. A multiple mold, composed of a rectangular base section having vertically disposed lugs at its ends and a vertically disposed flange along one of its edges, an intermediate section having a recess in its under face formed of marginal flanges, said intermediate section being provided with recesses to receive said lugs, and vertically disposed lugs, and a top section having a recess in its under face and provided with depending lugs fitting in the recesses of the intermediate section, said top section being provided with a pouring hole and an air vent, the intermediate section being provided with a runner and an air vent in alinement with the air vent and pouring hole of the top section.



2. A mold of the kind described formed of a plurality of superposed plaster Paris slabs comprising a base section, an intermediate section and a top section, having tongues and grooves and lugs and recesses for positioning said sections, said top section and intermediate section having recesses in their under faces, the bottom section and intermediate section being provided with embossed portions on their upper faces, said top section having a pouring hole and an air vent, said intermediate section having an air vent in alinement with the air vent of the top section, and a runner formed in the intermediate section in vertical alinement of the pouring hole in the top section.

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1,229,874. CURTAIN-HANGER. JAMES H. BOYE, Chicago, Ill. Filed Mar. 30, 1916. Serial No. 87,836. (Cl. 156—19.)



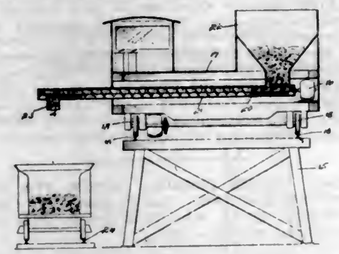
1. In a curtain hanger, the combination with a substantially flat rod, of a spring wire loop secured to and projecting from an end of said rod, and a supporting bracket having a flat receiving head or socket for said wire loop, the upper and lower edges of said wire loop and socket being formed with rounded laterally offset portions that coöperate to effect a yieldable locking engagement of said parts with capacity for a limited vertical play of the rod relatively to its supporting bracket.

2. In a curtain hanger, the combination with a substantially flat rod, of a spring wire loop of a generally semi-oval form secured to and projecting from an end of said rod, and a supporting bracket having a flat receiving head or socket for said wire loop, the upper and lower edges of said socket being indented to form locking lugs and the opposite sides of said wire loop also being indented to form locking notches coöperating with said lugs to yieldably retain said loop engaged with said socket.

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1,229,875. TRAIN-COALING DEVICE. JOHN M. BRIGGS, Martins Ferry, Ohio. Filed Nov. 14, 1916. Serial No. 131,304. (Cl. 214—7.)

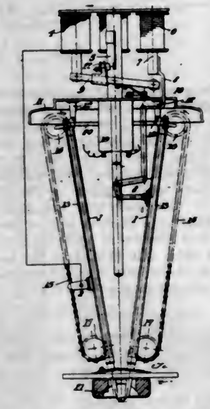
1. In a device of the class described, a trestle, a carrier movable thereon, said carrier having a hopper, a tubular casing communicating with the hopper and extending beyond one side of the carrier, said casing having a discharge spout, and a driven feed screw in said casing.



2. In a device for supplying coal to moving trains, a railroad track, a trestle erected alongside and in parallel relation to the track, a carrier traveling on the trestle, a source of supply on the carrier, a tubular casing communicating with the source of supply and extending beyond the side of the carrier, said casing having a discharge spout positioned directly above the railroad track, and motor driven means for conveying material through the tubular casing in the direction of the spout.

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1,229,876. MAGAZINE ARC-LAMP. JAMES BROCKIE, Forest Hill, London, England. Filed Feb. 16, 1914. Serial No. 819,015. (Cl. 176—63.)



4. In a magazine arc lamp, the combination of means for feeding carbons toward one another in pairs, said means being operative to feed a new pair of carbons to supplant a pair of burning carbons when the latter have been fed to a predetermined point, an electro-magnetic device connected in series with the carbons and operative to cause the points of the new carbons to move into and out of engagement when said electro-magnetic device is deënergized and energized, respectively, a second electro-magnetic device embodying a short-circuiting switch connected in shunt with the carbons to extinguish the arc between the burning carbons and to control the operation of said series electro-magnetic device, and means operative by the carbon-feeding means for controlling the circuit of said second electro-magnetic device to cause operation of the latter, when a new pair of carbons has been fed to a predetermined position, to extinguish the arc between the burning carbons and to deënergize the first-mentioned series electro-magnetic device to cause contact of the points of the new carbons.

[Claims 1 to 3, 5, and 6 not printed in the Gazette.]

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1,229,877. METHOD OF LABELING AN ARTICLE. FREDERICK HENRY BRONNER, Portland, Oreg., assignor to The Irwin-Hodson Company, Portland, Oreg., a Corporation of Oregon. Filed Mar. 23, 1917. Serial No. 156,987. (Cl. 40—2.)

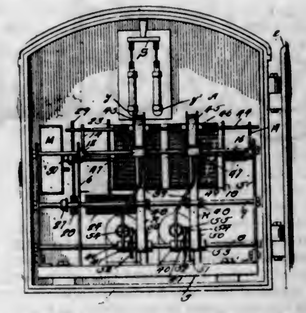



1. The method of labeling an article which consists in providing its body with parallel slits, cementing the label to a strip of transparent celluloid, and then forming the long edges of the label, under heat, with angular lips, and cementing said lips in said slits.

[Claims 2 to 4 not printed in the Gazette.]

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1,229,878. HEADWAY-RECORDER. CYRUS B. BUCHANAN and CHARLES C. JOHNSON, Richmond, Va. Filed Nov. 23, 1914. Serial No. 873,613. (Cl. 234—12.5.)



1. In a recording device, the combination with a frame; of a drum rotatably mounted in said frame and supported for bodily swinging and axial movements with respect to the frame, said drum being adapted to carry a record sheet, marking mechanism located adjacent the drum, and means for actuating the marking mechanism at certain times to mark upon the record sheet on the drum.

2. In a recording device, the combination with a rotatable shaft, a pinion carried thereby and mechanism for rotating the shaft, of a rotatable drum adapted to carry a record sheet and movable longitudinally with respect to said shaft, a circular gear rack for the drum adapted to mesh with the pinion, whereby said drum will be rotated when the pinion shaft is rotated, and means for bodily swinging said drum to move the rack thereof into and out of engagement with the pinion.

3. In a recording device, the combination with a suitable frame, of a rotatable shaft carrying a pinion, mechanism for rotating the pinion carrying shaft, a drum shaft including a threaded section, a record sheet carrying drum axially movable upon the drum shaft and having a threaded hub section engageable with the threaded section of the drum shaft, a circular rack carried by said drum and adapted to mesh with the pinion, a rock shaft and connections between the rock shaft and the drum shaft whereby said drum shaft may be swung to move the circular rack of the drum into and out of engagement with the pinion.

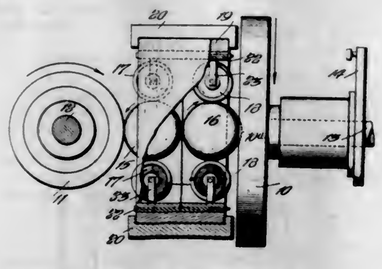
4. In a recording device, the combination of a rotatable, axially movable drum adapted to carry a record sheet, a motor, power transmission mechanism interposed between the motor and the drum for driving the latter, means for bodily swinging said drum into and out of driven relation relative to the power transmission mechanism, and marking mechanism located adjacent the drum and adapted at certain times to mark upon the record sheet carried by the drum.

5. In a recording device, the combination with a frame, of a rock shaft carried thereby, a drum shaft and a spool shaft connected with the rock shaft to rock with the latter, an axially rotatable drum mounted on the drum shaft and adapted to carry a record sheet, means for driving the drum, a ribbon spool carried by the spool shaft, a second ribbon spool around which and the first mentioned spool a printing ribbon is adapted to travel, and a printing device arranged in juxtaposition to the printing ribbon and adapted to be moved at certain times into contact with the ribbon to print upon the record sheet carried by the drum.

[Claims 6 to 12 not printed in the Gazette.]

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1,229,879. FRICTION-GEARING. WILLIAM E. BUFFAT, Knoxville, Tenn. Filed Mar. 14, 1916. Serial No. 84,107. (Cl. 74—26.)



1. In a friction gearing, the combination with a driving member and a driven member whose axes lie in a common plane, of friction connections therebetween including a pair of spherical members having parallel axes disposed in the said common plane of the driving and driven members, casters disposed in a series around each of said connecting members radially thereof and in contact therewith beyond the vertical plane of the axis thereof, whereby to normally hold the connecting members in contact with one another, a frame to which said casters are connected, a second frame in which said first frame is loosely supported, and guides in which said last named frame is slidably disposed whereby to permit of adjusting movements of the connecting members between the driving and driven members.

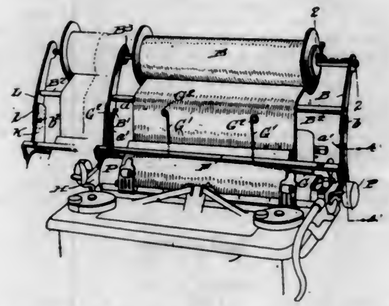
2. In a friction gearing, the combination with driving and driven members whose axes lie in a common plane, of friction connections therebetween including a pair of spherical connecting members having parallel axes disposed in the said common plane of the axes of said driving and driven members and in contact with one another, a series of radially disposed casters around each of the said connecting members and in contact therewith, whereby to support the same, and a frame in which said casters are supported, movable within the space between the driving and driven members, for the purpose described.

3. In a friction gearing, the combination with driving and driven members whose axes lie in a common plane, of friction connections therebetween including spherical connecting members in contact with one another, and with the driving and driven members, said connecting members having parallel axes disposed in the said common plane of said driving and driven members, and an adjustable support in which the said connecting members are mounted and rotatable in all directions.

4. In a fraction gearing, the combination with driving and driven members whose axes lie in a common plane, of friction connections therebetween including spherical connecting members in contact with one another, and with the driving and driven members, said connecting members having parallel axes disposed in the said common plane of said driving and driven members, and a support in which the said connecting members are mounted and movable in all directions, said support being movable in the space between the driving and driven members.

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1,229,880. PAPER-FEEDING DEVICE FOR TYPEWRITING MACHINES. JAY P. BURKS and CHARLES M. YOUNG, Helena, Ark. Filed Oct. 2, 1915. Serial No. 53,839. (Cl. 197—133.)

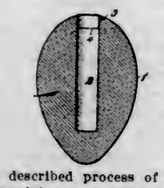


1. A paper feed attachment for typewriting machines comprising a foldable frame adapted to be attached to the carriage of the machine, a rectangular shaft removably supported at its ends in said frame, and adapted to support a strip of paper formed into a hollow roll, disks having central rectangular openings and capable of longitudinal movement only, with respect to the shaft, resilient means carried by said disks and engaging the shaft to hold the disks yieldingly thereon and against the ends of the paper roll, and stationary cylindrical trunnions projecting inwardly from said disks into the bore of the hollow paper roll to center and rotatably support the same.

[Claim 2 not printed in the Gazette.]

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1,229,881. MEDICATED EGG. JOHN G. BURNS, Pulaski, Tenn. Filed Apr. 12, 1917. Serial No. 161,490. (Cl. 119—46.)



1. The herein described process of making medicated eggs consists in mixing a suitable plaster composition and forming a chamber therein by the insertion of a plunger coated with a soapy solution.

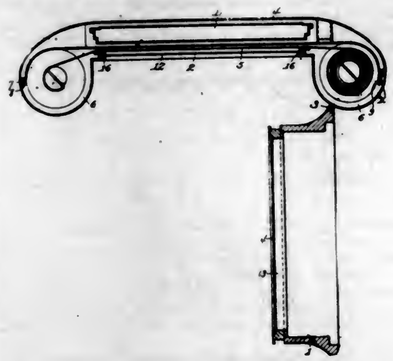
4. A medicated nest egg made of plaster of Paris, cement and flowers of sulfur.

6. A medicated nest egg formed of a plastic material, molded in the shape of an egg body and having a liquid containing chamber, said body being formed of cement, and plaster of Paris and a small quantity of soapy material to render the walls of the chamber porous.

[Claims 2, 3, and 5 not printed in the Gazette.]



1,229,882. FILM-CAMERA. OSCAR CALLAWAY and GEORGE R. HELSLEY, Wellsburg, W. Va. Filed June 16, 1915. Serial No. 34,419. (Cl. 95—32.)

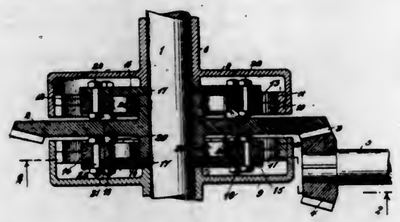


1. A film camera comprising a casing having a roll film-containing compartment extending forwardly at each end therefrom, said casing being designed for receiving a light excluding member in front of the film space thereof and between the forwardly extending film-containing compartments, a body portion having a hinged connection at one end with the forward and inner side portion of one film-containing compartment and having its other end free whereby the free end of the casing with its other compartment may be swung from the body portion to serve as a dark screen therefor, said casing when closed against the body portion receiving the latter in a nesting manner between the forwardly extending compartments.

[Claim 2 not printed in the Gazette.]

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1,229,883. DIFFERENTIAL MECHANISM. FREDERICK CARLISLE, Monticello, N. Y. Filed Jan. 30, 1917. Serial No. 145,417. (Cl. 74—7.)



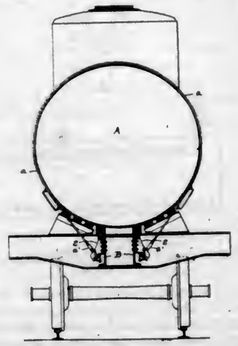
1. A differential mechanism comprising a driving element, a pair of driven elements having ratchet teeth, a set of oppositely acting pawls associated with each driven element, a carrying means for the pawls, lost motion connection between the carrying means and the driving element, means for throwing the pawls into engagement with their associated ratchet teeth, and means on the driving element engageable with one pawl of each set during the initial movement of the driving element in either direction for holding such engaged pawls released from the ratchet teeth.

4. A differential mechanism comprising a driving element, carriers disposed at opposite sides thereof, a set of pawls movably mounted on each carrier, means for connecting the carriers together, driven elements having surfaces engageable by the pawls, means tending to throw the pawls outwardly into engagement with the said surfaces, means on the driving element for releasing one pawl of each set and permitting the other pawl of each set to move to operative position, and a supporting axle passing through the driving and driven elements and on which the said carriers are mounted.

[Claims 2 and 3 not printed in the Gazette.]

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1,229,884. BAND-ANCHOR FOR TANK-CARS. EDWARD G. CAUGHEY, Sewickley, Pa. Filed Mar. 20, 1917. Serial No. 156,199. (Cl. 105—264.)



1. A tank band anchor comprising a body portion having a slot therein adapted to receive a band terminal between downwardly extending bearing portions on each side of said slot, and means coöperating with said terminal and said bearing portions to retain and prevent outward movement of said terminal.

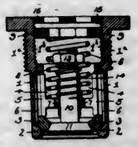
2. A tank band anchor comprising a body portion having a slotted portion extending downwardly at an angle for the reception of the band terminal and its nut.

9. In combination with a car underframe member, a tank band anchor having a base secured to said member at each side of a central clearance slot and provided with a pair of downwardly and outwardly disposed bracing cheeks having inclined bearing portions and retaining lugs at each side of said slot, and adapted to receive and retain a washer when used in connection with the terminal of a tank band and its holding nut.

[Claims 3 to 8 not printed in the Gazette.]

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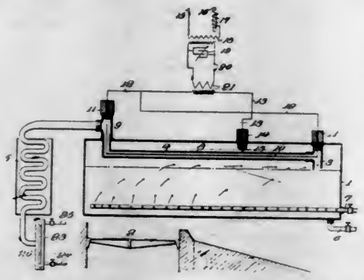
1,229,885. COMBINED DISCHARGE AND VACUUM VALVE. RICHARD U. CHADWICK, Philadelphia, Pa. Filed Mar. 14, 1917. Serial No. 154,808. (Cl. 137—53.)



The combination, in a combined discharge and vacuum valve, of a casing open at its ends, a barrel slidably mounted within and guided by the walls of said casing, a discharge valve formed at the inner end of said barrel and adapted to a seat within said casing, a vacuum valve adapted to a seat on the inner face of said discharge valve, springs for normally maintaining said valves against their seats, said springs being located within said barrel and so disposed that they will at no time interfere with a free flow of fluid through the casing from end to end, means whereby the tension of said springs may be adjusted, said means and said springs being readily accessible from the outside when the valve is in position, said barrel being provided with openings in its sides and said casing having grooves in its inner

face, these openings and grooves coöperating to permit free flow around said discharge valve and through said barrel when said discharge valve is lifted from its seat.

1,229,886. SYNTHETIC PRODUCTION OF HYDROCARBON COMPOUNDS. LOUIS BOND CHERRY, Kansas City, Mo. Filed Feb. 21, 1916. Serial No. 79,763. (Cl. 204—31.)



1. The method of causing re-arrangement of the molecular structures of liquid hydrocarbon compounds to produce a product of the same series but of different gravity and boiling point by subjecting such compounds while in a vaporized state to the silent discharge of a high frequency oscillating bipolar electric current or its equivalent, substantially as described.

2. The method of causing a re-arrangement of the molecular structure of a hydrocarbon compound to vary its percentage of hydrogen without loss of carbon which consists in subjecting such compound to the silent discharge of a high frequency oscillating bipolar electric current in the presence of a different compound of the same series and while said compounds are maintained under a vaporizing temperature, substantially as described.

3. In the electrochemical method of treating liquid hydrocarbon compounds, that step which consists in subjecting such compounds to the silent discharge of a high frequency oscillating bipolar electric current, in the simultaneous presence of a vaporizing temperature and an agent for supplying hydrogen to unite with said compound to produce a final product of different gravity and boiling point from the compound originally treated, substantially as described.

4. The method of producing a relatively high gravity hydrocarbon product by the addition of hydrogen to a comparatively low gravity hydrocarbon liquid without loss of carbon, which comprises subjecting said liquid while being maintained in a hot vaporized state to the silent discharge of a high frequency bipolar oscillating electric current in the presence of a hot hydrogen supplying gaseous agent.

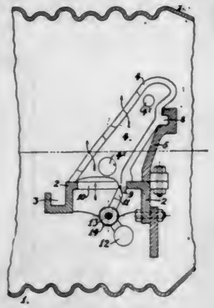
5. The method of treating liquid hydrocarbon compounds which consists in vaporizing the same and then passing the same while heated through the silent discharge of a high frequency bipolar oscillatory electric current and then condensing the same.

[Claims 6 to 27 not printed in the Gazette.]

1,229,887. FURNACE FIRE-BRIDGE. JAMES HOLLINGSWORTH CLEGG, Wallasey, England. Filed Sept. 27, 1916. Serial No. 122,538. (Cl. 110—75.)

1. In combination, a fire bridge plate, a plurality of bars supported on the fire bridge plate, and a pivoted weighted latch engaging the lower ends of the bars, the weight serving to hold the end of the latch in engagement with the bars to prevent displacement of the latter on the fire bridge plate.

2. In combination, a fire bridge plate formed with an opening, a plurality of bars supported on the bridge plate over the opening therein, each bar having a heel which extends into the opening and which engages one wall of said opening, a pivoted latch located under the bridge plate and having its end engaging the front edges of the heels to hold the bars against displacement, and a weight attached to the latch to retain the latter in operative position.



3. In combination, a bridge plate formed with an opening and provided with a vertical support in rear of the opening, said support having a groove, a plurality of bars supported on the bridge plate, each bar having a transverse lug and a depending portion, the lugs engaging in the groove and the depending portions extending into the opening, and a weighted pivoted lever below the bridge plate, the end of the lever engaging the lower edges of the lugs and the weight on the lever acting to hold said lever in operative position.

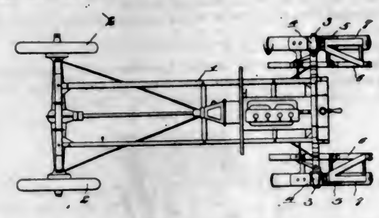
1,229,888. ANIMAL-HOLDING DEVICE. CHARLES J. COLE, Springfield, Ill. Filed June 5, 1914. Serial No. 843,250. (Cl. 119—153.)



The herein described animal holding device comprising a rigid staff having at its upper end an arm rest, at its lower end an integral eye whose axis is transverse to the length of the staff, and at its midlength a guide; a cord attached at one end to the lower side of the eye and formed into a bight standing in a plane at right angles to the plane of such eye, the cord passing from such bight through the upper side of the eye and leading thence up alongside the staff and through said guide; and a handle at the upper end of the cord below said arm rest.



1,229,889. AUTOMOBILE SLED-RUNNER. LUCIUS J. COLLINS, Minneapolis, Minn. Filed Dec. 29, 1916. Serial No. 139,664. (Cl. 21—47.)



1. In combination with a vehicle having power driven wheels and steering spindles, runners mounted upon the spindles, the said runners including inner runner members adapted to travel in lines within the paths of movement of the power driven wheel, the said runners also including outer runner members which move in the paths of movement of the power driven wheel of the vehicle.

2. In combination with a vehicle having power driven wheels and a steering spindle, runners mounted upon the spindle, the said runners including inner relatively narrow runner members adapted to travel in lines within the paths of movement of the power driven wheel, the said runner also including relatively broad outer runner members adapted to travel in the paths of movement of the power driven wheels of the vehicle.

3. In combination with a vehicle having power driven wheels and a steering spindle, runners mounted upon the spindles and including relatively narrow inner runner members adapted to travel in lines within the paths of movement of the power driven wheels of the vehicle, said runner also including relatively broad transversely convexed runner members which move in the paths of movement of the power driven wheels of the vehicle.

4. A runner adapted to be applied to the spindle of a power driven vehicle comprising a sleeve, a frame attached to the sleeve, a relatively broad runner member attached to the outer portion of the frame, a relatively narrow runner member attached to the inner portion of the frame, said runner members being parallel with each other and spaced from each other.

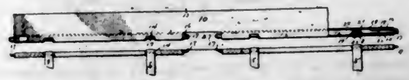
1,229,890. GARMENT-PROTECTOR. CLAUDE A. CONOVER, Newburgh, N. Y. Filed June 3, 1916. Serial No. 101,475. (Cl. 45—118.)



1. A garment protector, comprising a bag open at its top, a drawstring therefor, a frame in the upper portion of said bag, means for suspending said frames, a frame intermediate the height of said bag, adjacent its bottom, means joining said frames, and means for permanently securing the lower frame to said bag, said bag presenting a box-like lower portion below said lower frame when the upper bag portion has been dropped to permit arrangement of the lower portions of garments suspended from the upper frame previous to drawing up the upper portion of said bag from its lowered position.

2. A garment protector, comprising a bag open at its top, a drawstring therefor, a frame in the upper portion of said bag, means for suspending said frame, a frame adjacent the lower end of said bag in permanent connection with said bag, and flexible strips joining opposite ends of said frames, the lower portion of said bag below said lower frame presenting a box formation, when the upper bag portion has been dropped, for arranging the lower portions of garments suspended from said upper frame previous to drawing up said lowered portion of said bag to inclose the garments.

1,229,891. LOOSE-LEAF BINDER. CHARLES M. COTT, Columbus, Ohio. Filed Aug. 5, 1916. Serial No. 113,286. (Cl. 129—24.)



1. A loose leaf binder comprising a plurality of leaf retaining posts, a metal carried by the cover and an individual retaining element for each of the posts movably supported upon said metal, one of said retaining elements being arranged to engage its respective post upon inward movement of said element and another of said elements being arranged to engage its post upon outward movement thereof.

2. A loose leaf binder comprising a plurality of leaf retaining posts, a metal carried by the cover and an individual retaining element for each of the posts movably supported upon said metal, some of said retaining elements having finger grasps disposed at the outer ends of the metal and others of said retaining elements having finger grasps disposed toward the central portion of the metal.

5. A loose leaf binder comprising a pair of covers, a plurality of leaf retaining posts uniting said covers, a metallic housing carried by each of the covers and a plurality of post retaining elements slidably disposed in said housing, each of said post retaining elements comprising a post traversing arm and a locking member, and the housing being formed to be engaged by said locking member, said means being operable when the retaining elements have been moved to an inaccessible position within the housing, to lock said elements against movement and in a post engaging position.

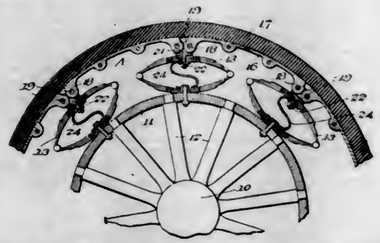
10. In a loose leaf binder the combination with a metallic plate bent to form a housing along its edge and having a cut away portion, of a leaf retaining post adapted to enter said cut away portion and a post retaining element slidable in said housing and formed of a resilient rod or wire bent to form two substantially parallel arms, one of which is shaped to engage the post and unite it to the housing and the other of which is shaped to form a locking member, and the housing being formed to be engaged by said locking member at such a point that when the locking member engages the housing the post retaining element lies in an inaccessible position within the housing.

12. In a loose leaf binder the combination with a metal bent to form a housing along its edge, said housing having a cut away portion, a leaf retaining post adapted to enter said cut away portion and a resilient post engaging element slidable in said housing and having a portion adapted to traverse said post and a laterally extending member, said housing having a slot formed in its wall within which said laterally extending member travels and an additional slot with which said laterally extending member engages when the retaining element has been moved to an inaccessible position within the housing, the

housing being provided with an opening through which the release of said laterally extending member from the first named slot may be effected.

[Claims 3, 4, 6 to 9, and 11 not printed in the Gazette.]

1,229,892. SPRING-WHEEL. THOMAS J. CROWE, Dallas, Tex. Filed Oct. 23, 1915. Serial No. 57,501. (Cl. 152—8.)



In a spring wheel, a rigid inner felly, springs mounted upon the felly at intervals thereof, U-shaped clips supported upon the springs and having bolt extensions passed through the springs, nuts on the bolt extensions for securing the same in the springs, an outer flexible rim formed from a plurality of sectors, each made in two parts, pivot ears at the ends of the two parts of each sector and engaged in the U-shaped clips, pivots passed through the U-shaped clips and ears, and wings formed on the clips and overlapping opposite sides of the springs to hold the springs in circumferential alinement with each other.

1,229,893. AUTOMATIC ADVANCING-GEAR. JOHN E. CROWELL, Union county, N. C. Filed July 15, 1916. Serial No. 109,486. (Cl. 123—97.)



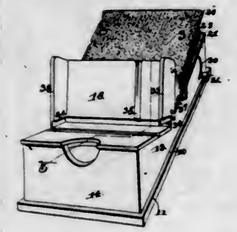
1. In an internal combustion engine, the combination with the crank shaft and the cam shaft for operating the valves, of gearing connecting the two shafts and including a rim gear, a plate fast with the cam shaft to rotate therewith, and having the rim gear mounted thereon, and centrifugally operated members pivoted at one of their ends to the said plate, and having their opposite ends loosely connected with the rim gear, said members acting to advance the cam shaft in the direction of its rotation upon acceleration of the speed of the engine.

5. In combination, a rotary valve operating member, a disk rotatable with the valve operating member, a rotary driven member mounted on the disk, and centrifugally operated connecting means between the disk and the driven member to advance the valve operating member in the direction of rotation of the rotary driven member.

9. In an internal combustion engine, the combination of a rotatable cam shaft, a cover disk secured to the end of the cam shaft having an annular shoulder, a rim gear partly supported on said shoulder, said rim gear having inwardly projected and diametrically opposite teeth, segments fulcrumed on the cover plate and having shoulders adapted to engage the rim gear, each of the segments having a notch for engagement with a tooth, said engagement acting as a pivotal point, and buffer springs mounted on the segments and engaging the rim gear for retarding the outward movement of the segments on their pivotal points under centrifugal action.

[Claims 2 to 4 and 6 to 8 not printed in the Gazette.]

1,229,894. HOLDER FOR LOOSE-LEAF BINDERS. FRANK HOWARD CRUMP, Los Angeles, Cal. Filed Sept. 1, 1916. Serial No. 118,040. (Cl. 129—1.)



1. A holder of the character described, having its upper supporting surface formed with forward and rear portions sloping inwardly and downwardly from its opposite ends and having centrally located portions abruptly inclined upwardly and toward one another from the lower inner ends of the sloping end portions, each of said sloping end portions having a cover hingedly connected thereto and upwardly movable.

5. A holder of the character described, having its upper supporting surface formed with forward and rear portions sloping inwardly and downwardly from its opposite ends and having centrally located portions abruptly inclined upwardly and toward one another from the lower inner ends of the sloping end portions, one of said abruptly inclined portions having side guide pieces projecting therefrom along the adjacent sloping surface, and a guide strip parallel and adjacent to one of said guide pieces.

6. A holder of the character described having an upper supporting surface including inclined portions, substantially at right angles to one another, a hinged cover on one of said inclined portions having a pivoted depending spring controlled rack member, a fixed stop into and out of engagement with which the said rack is shiftable on its pivot, and a handle connected to the rack.

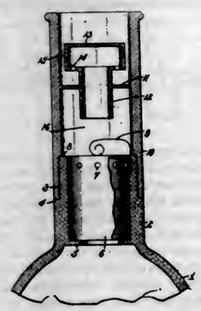
9. The combination with sheets having a plurality of holes adjacent their binding edges uniformly spaced with each other and a single notch at their binding edges, of binder members including covers and binding posts and means for locking said binding posts into said binder members, said posts being removably associated with said binder members, and of a binder holder adapted to support said binder members including covers and said sheets when said binding posts have been removed, said binder holder being provided with an offset block which engages the notch in the sheets when in a laterally offset relation and which engages one side of the sheets when in an alined body, said sheets having a plurality of holes registering whether in an alined body or in a laterally offset relation, said binder holder being provided with means for supporting one end of one of the binder covers together with the sheets at an acute angle to offset the upper edges of the sheets, said binder holder being provided with adjustable side sheet guides to the left and to the right side of the offset block, preventing lateral movement of sheets thrown to said side guides.

14. In a binder holder, the combination with sheets having a plurality of holes adjacent their binding edges uniformly spaced with each other and a single notch open at their binding edges, of binder members having holes therein and including covers, and binding posts and means for locking said binding posts into the holes of said binder members, means for holding the binder members and sheets in a position in which the holes in the binder members register with a plurality of holes in the sheets whether the sheets are in an alined body or in a laterally offset relation, said binder holder being provided with an offset block which engages the notch in the sheets when in a laterally offset relation, and which engages one side of the sheets when in an alined body, and said binder holder having openings to receive the said binding posts when the latter are released from the said binder members.

[Claims 2 to 4, 7, 8, and 10 to 13 not printed in the Gazette.]



1,229,895. NON-REFILLABLE BOTTLE. FRANCISCO QUINTANO CUESTA, Habana, Cuba. Filed May 13, 1916. Serial No. 97,268. (Cl. 215—65.)



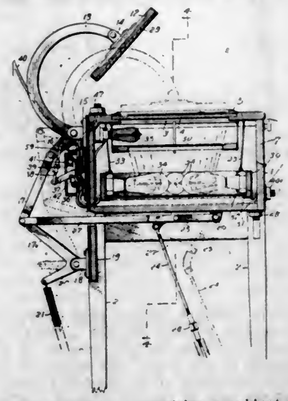
1. In a bottle of the character described, a neck, a valve arranged in said neck, an auxiliary neck connected to the first mentioned neck, said auxiliary neck being formed with a guard arranged above said valve, said guard being provided with an annular dividing web which merges into the auxiliary neck and into a tubular section which extends above and below the web, and a disk-shaped hollow member merging into the upper part of said tubular member, said disk-shaped hollow member having apertures facing said web.

2. In a bottle of the character described, a neck portion, a cylindrical valve member arranged in said neck portion formed with a closed top and an open bottom, the sides of said valve member being formed with a plurality of apertures below the top, a spring rigidly secured at one end to said neck portion and formed with a coil resting substantially centrally of said top for resiliently holding the valve member in a lowered or closed position, and means arranged above the valve and the spring acting as a guard therefor.

3. In a bottle of the character described, a neck portion provided with a projection, a valve member arranged in the neck portion and normally resting on said projection, said valve member having a closed upper end and depending parts acting as guides, a spring connected to said neck portion and extending to near the center of said valve member for normally holding said valve member so that the closed upper end will close said neck portion, an auxiliary neck connected with said neck portion, and a guard arranged in said auxiliary neck.

1,229,896. PRINTING-MACHINE. EDWARD DAKE, Medford, Wis. Filed July 3, 1916. Serial No. 107,369. (Cl. 95—73.)

1. A printing machine comprising a cabinet having a printing opening in its top and a sheet of glass held in the opening, a frame inclosing the sheet and having guides at its end, gage strips engaging the guides at their ends and movable transversely of the glass printing plate, a frame arranged below the printing plate and having a sheet of ground glass, means on the top of the cabinet for raising and lowering the frame, an electrically controlled illuminating device below the frame for supplying white light, an electrically controlled illuminating device near the top of the cabinet for supplying red light, a platen mounted to swing toward and from the printing plate, means for moving the platen, a switch for controlling the supply of current to the illuminating devices, and means operated by the movement of the platen for operating the switch to alternately connect the illuminating devices in circuit.



2. A printing machine comprising a cabinet having an opening in its top and a plate of glass closing the opening, a platen mounted to move toward and from the plate, an open frame below the opening, a sheet of translucent material closing the frame, means for raising and lowering the frame, and means at the top of the cabinet for raising and controlling the said raising and lowering means.

3. A printing device comprising a cabinet having an opening in its top, a plate of glass closing the opening, a platen mounted to move toward the plate, means for moving the platen, said moving means comprising a curved arm pivoted at one end to the rear of the cabinet and connected at the other end to the platen, and having an angular lug at the first named end, a toggle lever arranged between the lug and the cabinet, a spring normally holding the toggle in broken condition, and means connected with the joint of the toggle for straightening the same.

4. A printing device comprising a cabinet having an opening in its top, a plate of glass closing the opening, a platen mounted to move toward the plate, means for moving the platen toward the plate, a spring for returning the platen, a frame supporting a sheet of translucent material below the opening, means for raising and lowering the frame, and lighting means suspended below the frame.

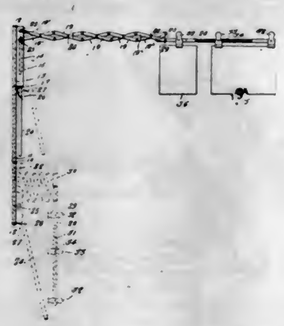
5. A printing machine comprising a cabinet having a printing opening in its top and a sheet of glass held in the opening, an electrically controlled illuminating device below the frame for supplying white light, an electrically controlled illuminating device near the top of the cabinet for supplying red light, a platen mounted to swing toward and from the printing plate, means for moving the platen, a switch for controlling the supply of current to the illuminating devices, and means operated by the movement of the platen for operating the switch to alternately connect the illuminating devices in circuit.

[Claims 6 and 7 not printed in the Gazette.]

1,229,897. EXTENSIBLE SIGN-HOLDER. WILLIAM J. DAMARIN, New Orleans, La., assignor of one-half to Edmond H. Rivas, New Orleans, La. Filed Oct. 9, 1916. Serial No. 124,701. (Cl. 248—1.)

1. In a sign holder, the combination of a supporting part, an extensible part on the supporting part, a sign

support on the outer end of the extensible part adapted to be swung down into a vertical lowered position upon said end of the extensible part when the latter is retracted to receive a sign, and adapted to be raised into a horizontal position by the extending of said part to display the sign.



2. In a sign holder, a vertical fixed part, a vertically adjustable member slidably mounted on said fixed part, and a horizontally extensible part mounted on said member and adapted to hold a sign, said extensible part being independently adjustable of the vertically movable member to hold the sign in various extended positions, and the vertically movable member being adjustable independently of the extensible part to hold the sign at the desired height when extended.

3. In a sign holder, a vertical fixed part, a vertically movable part mounted on the fixed part, an extensible part mounted on the vertically movable part and adapted to support a sign upon its outer end, and a handle connected to the vertically movable and extensible parts and adapted to be operated to move both of said parts and adjust the sign vertically and horizontally.

4. In a sign holder, a vertical fixed part, a slidable part mounted for adjustment on the vertical part, an extensible part carried by the slidable part, a sign support on the outer end of the extensible part, securing means for holding the slidable part on the fixed part, and a handle connected to the extensible part and to the slidable part for adjusting the same, and having connection with said securing means for releasing the same prior to the adjustment of the parts.

5. In a sign holder, a vertical guideway adapted for securement to a vertical support, a slide mounted for vertical adjustment in said guideway, a lazy tongs having one arm at one end secured to a fixed pivot at the top of the guideway, a lever pivoted to slide on the guideway and having pivotal connection with the opposite arm at said end of the lazy tongs, sign-engaging means carried upon the other end of the lazy tongs, and securing means for the slide to hold it in adjusted position upon the guideway, said securing means having connection with said lever and adapted to be released thereby prior to the adjustment of the slide and the lazy tongs.

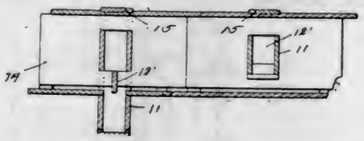
[Claims 6 to 8 not printed in the Gazette.]

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1,229,898. SYSTEM OF IRRIGATION. RICHARD J. D'AQUIN, French Settlement, La. Filed Aug. 11, 1915. Serial No. 44,994. (Cl. 137—66.)

1. In an irrigation system, two conduits arranged in intersecting relation, said conduits being of unequal depth whereby at the point of intersection the bottom of the shallow conduit is spaced above the bottom of the deeper conduit, said shallow conduit having a port in the bottom thereof for establishing communication between the two conduits, a partition in the shallow conduit so disposed with reference to said port as to direct into the deeper conduit a portion of the water flowing through the shallow conduit.

2. In an irrigation system, two conduits arranged in intersecting relation, said conduits being of unequal depth whereby at the point of intersection the bottom of the shallow conduit is spaced above the bottom of the deeper conduit, said shallow conduit having a port in the bottom thereof for establishing communication between the two conduits, a partition in the shallow conduit so disposed with reference to said port as to direct into the deeper conduit a portion of the water flowing through the shallow conduit, and covers for said conduits arranged in spaced relation.

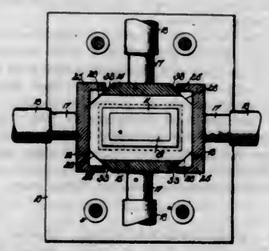


3. In an irrigation system, two conduits arranged in intersecting relation and having sides and bottoms, means for spacing said bottoms from the lower edges of said sides, said conduits being of unequal depth whereby at the points of intersection the bottom of the shallow conduit is spaced above the bottom of the deeper conduit, said shallow conduit having a port in its bottom for establishing communication between the two conduits, and a partition in the shallow conduit so disposed with reference to said port as to direct into the deeper conduit a portion of the water flowing through the shallow conduit.

4. In an irrigation system, two conduits arranged in intersecting relation and having sides and bottoms, means for spacing said bottoms from the lower edges of said sides, said conduits being of unequal depth whereby at the points of intersection the bottom of the shallow conduit is spaced above the bottom of the deeper conduit, said shallow conduit having a port in its bottom for establishing communication between the two conduits, a partition in the shallow conduit so disposed with reference to said port as to direct into the deeper conduit a portion of the water flowing through the shallow conduit, and covers for said conduits arranged in spaced relation.

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1,229,899. MOLD. JAMES DARLING, Kenova, W. Va. Filed Dec. 6, 1916. Serial No. 135,348. (Cl. 25—101.)



1. A mold, comprising a bed, a top mold member, side mold members set on and movable on the bed, the said side mold members having inwardly projecting portions beveled in an upward and inward direction, and the said top mold members having beveled edges fitting the said beveled portions of the said side mold members, the said bed, top and side mold members forming a closed chamber adapted to confine the material therein, and means for simultaneously imparting movement to the said mold members to press the material until it reaches a predetermined density.

2. A mold, comprising a bed, a top mold member and side mold members set on and movable on the bed, the said side mold members having inwardly projecting portions beveled in an upward and inward direction and the said top mold members having beveled edges fitting the said beveled portions of the said side mold members, the said side mold members being arranged in pairs and the mold members of a pair being disposed opposite each other, the side mold members of one pair having side flanges, the inner faces of which are beveled and the two oppositely disposed side members of another pair having beveled side edges engaging the beveled faces of the said flanges, the said bed, top and side mold members forming a closed chamber adapted to confine the material therein, and means for simultaneously imparting movement to the said mold members to press the material until it reaches a predetermined density.

3. A mold, comprising a bed, a top mold member and side mold members set on and movable on the bed, the said side mold members having inwardly projecting portions beveled in an upward and inward direction and the said top mold members having beveled edges fitting the said beveled portions of the said side mold members, the said side mold members being arranged in pairs and the mold members of a pair being disposed opposite to each other, the mold members of one pair having side flanges, the inner faces of which are beveled in an outward direction and the mold members of an adjacent pair having beveled side edges engaging the beveled faces of the said flanges and the inward portions of this pair of mold members having spring-pressed sliding plates engaging the beveled face portions of the adjacent mold members, the said bed, top and side mold members forming a closed chamber adapted to confine the material therein, and means for simultaneously imparting movement to the said mold members to press the material until it reaches a predetermined density.

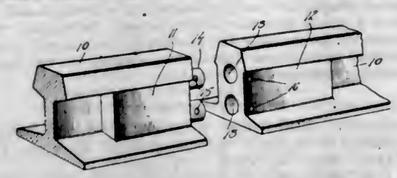
4. A mold having movable side mold members arranged in pairs and provided at the sides with contacting beveled faces, the contacting faces of one pair being adapted to slide on the contacting faces of the other pair, the said mold members having closing heads beveled at their inner faces, the sides of the heads of one pair of mold members being beveled and slidable on the beveled faces of the heads of the other pair of mold members.

5. A mold having movable side mold members provided at the sides with contacting beveled faces, the mold members being arranged in pairs and the mold members of a pair being disposed opposite each other, the contacting faces of one pair being adapted to slide on the contacting faces of the other pair the said mold members having closing heads beveled at their inner faces, the sides of the heads of one pair of mold members being beveled and slidable on the beveled faces of the heads of the other pair of mold members and a closing mold member having beveled edges slidably engaging the beveled faces of the heads of the said side mold members.

[Claims 6 to 10 not printed in the Gazette.]

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1,229,900. RAIL-JOINT. JOHN R. DAVENPORT, Eldon, Mo. Filed Jan. 11, 1917. Serial No. 141,852. (Cl. 239—8.)



A rail joint comprising adjoining rail sections having the webs thickened at the rail ends, one rail end being provided in the thickened end portion with upper and lower longitudinally extending sockets, upper and lower pins formed integral with an extending from the end of the second rail section and fitting into the sockets of the first rail section, and fasteners passing transversely through the first rail sections and through said pins to releasably hold said pins in said sockets.

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1,229,901. AUTO-PULLER. CHARLES DAVIS, Cortland, Ohio. Filed Apr. 22, 1916. Serial No. 92,971. (Cl. 21—114.)

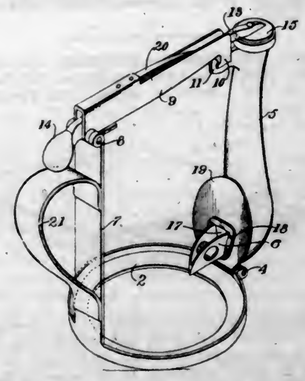


1. A track of the character described comprising side chains, cross chains connected with one side chain and provided with eyes through which the second side chain passes, a ring at one end of each of said side chains, and a hook at the opposite end of each of said side chains, said hooks engaging said rings to provide closed ends for the track connecting the track with a wheel and with a ground engaging element when the track is in use, the hook of one side chain engaging the eye of the second side chain to connect the side chains when the second side chain is drawn through the eyes of the cross chains.

2. A track of the character described comprising side chains, means for releasably connecting the end portions of the side chains, and cross chains connected with one of the side chains and provided with eyes through which the second side chain passes.

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1,229,902. CAN-CONTAINER AND SERVER. THOMAS J. DAVIS, San Francisco, Cal. Filed July 5, 1916. Serial No. 107,573. (Cl. 221—23.)



3. In a can container, a frame, pouring means having can perforating means associated therewith to puncture the can to enable removal of its contents, hinged means having means associated therewith to perforate the can to admit air thereto, and pivoted means borne by said hinged means to conjointly seal said last named perforating means and to simultaneously seal the outlet of said pouring means.

4. In a can container, a frame having a base and an upright on one side of the base, a spout hinged at its lower end to the base opposite the upright and having can perforating means, a top member hinged at one end

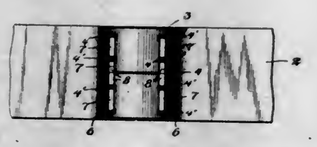
to the top of the upright and having means for perforating the can top, said top member being of channel form and having its top portion removed adjacent the free end thereof, an arm pivoted to the top member between the sides thereof and having means to seat on top of the mouth of the pouring spout, and a spring connected to the top of the top member and engaged with said arm, said arm being movable upwardly through the space provided by the removal of said top portion of the channel top member.

6. In a can container, a frame, pouring means on the frame having can perforating means associated therewith to puncture the can to enable removal of its contents, hinged means connected to the frame and movable independent of the pouring means to perforate the can to admit air thereto, means borne by the hinged means and movable therewith and disposed to automatically seal the pouring mouth upon the hinged means being moved to operative position, and means to allow movement of the sealing means independent of the hinged means.

[Claims 1, 2, and 5 not printed in the Gazette.]

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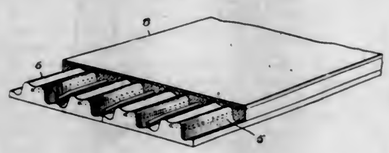
1,229,903. BELT-FASTENER. WILLIAM P. DAVIS, Salt Lake City, Utah. Filed Mar. 4, 1916. Serial No. 82,136. (Cl. 24—31.)



The combination of a plate having a weakening line and openings at opposite sides of said line, a belt on the meeting ends of which the plate is placed, and fastening means passing through the end portions of the belt and through the plate openings and extending across the weakening line of the plate and thereby reinforcing the plate.

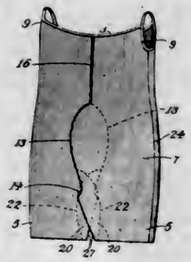
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1,229,904. REINFORCED CONCRETE OR PLASTIC SLAB. ROBERT L. DAY, Huntington, W. Va. Filed May 23, 1916. Serial No. 99,381. (Cl. 72—68.)



A reinforced plastic slab adapted to be produced at a factory having general stock, and various sizes and furnished to the market for use; or adapted to be constructed in close proximity to the construction upon which it is to be used, comprising a member having one of its faces formed with outwardly projecting spaced parallel ribs, a reinforcing element in its flat surface, consisting of finely meshed wire screening, a reinforcing element in each of the ribs consisting of a single length of iron rod having its ends bent upwardly and each of said ribs having a central longitudinally extending depression, and a similar raised portion in the spaces between said ribs, a superimposed filler mass adapted to be placed on said slabs and to settle on and between the said ribs, said mass also being provided with reinforcing elements that substantially correspond to those of the ribbed slabs.

1,229,905. UNDERGARMENT. ELLEN W. DECKER and MARCUS A. MYERS, New York, N. Y., assignors to Julius Kayser & Co., New York, N. Y., a Corporation of New York. Filed Dec. 30, 1916. Serial No. 139,864. (Cl. 2—144.)



1. An undergarment cut to shape from flat warp knitted piece goods comprising a one piece front, a two piece back, front and rear openings, overlapping flaps added to the front at the front opening and which act as a closure therefor, and each piece of the back having a projecting part integral therewith which parts overlap and form a closure for the rear opening.

4. An undergarment cut to shape from flat warp knitted piece goods comprising a one piece front, a two piece back, front and rear openings, each of the back pieces having a projecting part integral therewith extending to substantially the waist line of the garment which parts overlapping each other form the closure for the rear opening, and flaps added to the front at the front opening and forming part of the leg portion and which overlapping act as a closure for the front opening.

[Claims 2 and 3 not printed in the Gazette.]

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1,229,906. COMBINED CONTAINER AND EDUCATIONAL TOY. WILLIAM MORE DECKER, Buffalo, N. Y. Filed Dec. 30, 1915. Serial No. 69,358. (Cl. 46—40.)



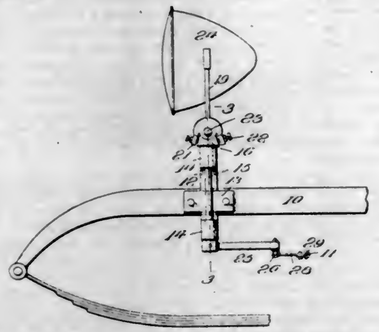

A combined powder receptacle and educational toy, comprising a pedestal adapted to receive printed matter, and a figure surmounting the pedestal, the pedestal and the figure being hollow and communicating with each other to form a goods container which extends throughout the height of the pedestal and the figure, the pedestal being provided in its bottom with a filling opening and the figure having a dispensing cap in its top.

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1,229,907. DIRIGIBLE HEADLIGHT MECHANISM. BROWN F. DE GRAW, Springfield, Ohio. Filed Oct. 13, 1915. Serial No. 55,667. (Cl. 240—57.)

1. In mechanism of the character described, a lamp supporting post provided with a head having laterally directed shoulders and formed with a seat, a lamp mounting pivotally connected to the head and received within said seat, arms depending from the said mounting at opposite sides of the head and confronting said shoulders, and means carried by the arms and arranged to coact with said shoulders in the plane of pivotal movement of the mounting for adjusting the said mounting with respect to the post.

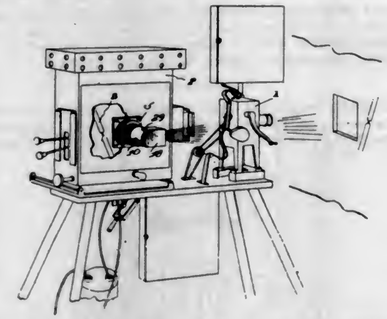




2. In mechanism of the character described, a lamp supporting post having a head cut away to provide a seat, a lamp mounting provided with a bearing portion received within said seat and pivotally connected to the head, arms projecting from opposite sides of the bearing portion of the said mounting and confronting opposite sides of the head, and set screws carried by the said arms in the plane of pivotal movement of the mounting and arranged to engage opposite side faces of the head for adjusting the said mounting with respect to the post.

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1,229,908. PROJECTING APPARATUS. WILBUR E. DE WITT, Salt Lake City, Utah. Filed May 13, 1916. Serial No. 97,411. (Cl. 88—24.)



1. In apparatus of the class described, an apertured plate, a lens casing extending from the plate, a lens mounted within the said casing and located opposite the aperture in the said plate, a reflector casing adjustably assembled with the lens casing, a reflector mounted within the reflector casing, and means for angularly adjusting the said reflector about the axis of the lens.

2. In apparatus of the class described, the combination with a casing housing an arc light and provided in one wall with an aperture, of an apertured plate supported upon the said wall in spaced relation thereto, the aperture of the plate being located opposite the aperture in the said wall of the casing, a lens casing extending from the said plate, a lens within the casing, a reflector casing adjustably fitted to the lens casing, and a reflector mounted within the reflector casing in position opposite the said lens.

3. In apparatus of the class described, the combination with a casing housing an electric arc light and provided in one wall with an opening, of a plate adjustably mounted upon the said wall of the casing and having an opening located opposite the opening in the said wall of the casing, a lens casing supported by the said plate, and a reflector mounted within the second mentioned casing opposite the lens, the said reflector being adjustable angularly about the axis of the lens.

4. In apparatus of the class described, the combination with a casing housing an electric arc light and provided in one wall with an opening, of a plate adjustably mounted upon the said wall of the casing and having an opening located opposite the opening in the said wall of the casing, a lens casing supported by the said plate, and a reflector mounted within the second mentioned casing opposite the lens, the reflector being angularly adjustable about the axis of the lens.

5. In apparatus of the class described, the combination with a casing housing an electric arc light and provided in one wall with an opening, of a plate adjustably mounted upon the said wall of the casing and having an opening located opposite the opening in the said wall of the casing, a lens casing supported by the said plate, a reflector mounted within the second mentioned casing opposite the lens, the reflector being angularly adjustable with relation to the lens and being provided with a guide, and an arm mounted for swinging movement and having a finger engaging the said guide.

[Claims 6 to 11 not printed in the Gazette.]

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1,229,909. STAY-BOLT FOR BOILERS. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Oct. 19, 1914. Serial No. 867,414. (Cl. 85—1.5.)



1. A stay bolt having a flattened and tapered shank, the cross sectional area of the latter being approximately uniform throughout its length.

2. A stay bolt having a flattened tapered and twisted shank, the cross sectional area of the latter being approximately uniform throughout its length.

3. A stay bolt threaded at one end and provided with an enlarged head at the other end, the portion of the shank between the threaded end and the head being flattened and tapered and of approximately the same cross sectional area throughout its length.

4. A stay bolt cylindrical and threaded at one end and provided with an enlarged head at its opposite end, the shank or portion of the bolt between the threaded end and head being flattened and tapered and of approximately the same cross sectional area throughout its length and gradually merging into the cylindrical threaded end, the latter being of less diameter than the head.

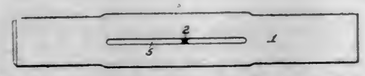
5. A stay bolt having an enlarged head at one end, the other end being cylindrical and threaded, the shank of the bolt being flattened, tapered and twisted, and of approximately the same cross sectional area throughout its length, and gradually merging into the cylindrical threaded end.

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1,229,910. STAY-BOLT FOR BOILERS. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Nov. 30, 1914. Serial No. 874,820. (Cl. 85—1.5.)

1. As a new article of manufacture, a stay bolt shank composed of a plurality of members, the said members being welded together at points intermediate the ends,

thus leaving slots between the ends of the bolts and the intermediate welds.



2. As a new article of manufacture, a stay bolt shank composed of a plurality of members welded together at isolated points intermediate its ends, thus leaving slots between the ends of the bolts and the intermediate welds, the said shank being turned into spiral shape.

3. As a new article of manufacture, a stay bolt composed of two heads and an intermediate shank the latter being slotted clear through and then welded at isolated points adjacent the outer margins of the slots, the said shank being twisted into spiral form.

4. A stay bolt slotted intermediate its ends the side walls of the slot being welded at isolated points intermediate the ends of the slot.

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1,229,911. NUT. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Mar. 27, 1915. Serial No. 17,523. (Cl. 85—32.)



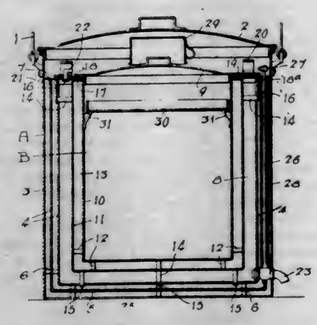
1. As a new article of manufacture a nut having an integral spring flange intermediate its ends and projecting beyond the rear end so as to engage a fish plate or other part.

2. As a new article of manufacture, a nut having a continuous, integral peripheral spring flange intermediate its ends, the said flange projecting rearwardly beyond the inner end of the nut to engage a fish plate or other part.

3. As a new article of manufacture a nut having an integral spring flange on its peripheral surface adjacent its inner end, the said flange being bent toward the outer end of the nut and then rearwardly and terminating in a plane beyond the inner end of the nut.

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1,229,912. DINNER-PAIL. WILLIAM H. DONCASTER, Brownington, Vt. Filed Jan. 31, 1917. Serial No. 145,686. (Cl. 220—138.)



1. A dinner pail including an outer shell open at the top thereof, an inner food compartment fitted removably within the outer shell and spaced therefrom to provide a liquid receiving chamber between the two members, an annular closure for the liquid receiving chamber, said annular closure engaging the outer shell and overlapping the food compartment to retain the latter in position, and locking means upon the outer shell for engaging the annular cover to retain the latter in position.

2. A dinner pail including an outer shell open at the top thereof and having a double walled construction with an upwardly facing interior shoulder toward the top thereof, a double walled food compartment fitted removably within the outer shell and spaced therefrom to provide a liquid receiving space between the two members, said food compartment being provided with an upwardly facing shoulder, means for holding the food compartment and outer shell in a properly spaced relation, an annular closure having a flanged outer edge which engages the outer shell while the inner edge thereof overlaps the before mentioned shoulder of the food compartment and coöperates therewith to hold the food compartment in position, and locking members mounted upon the outer shell for engagement with the annular closure to hold the latter in operative position.

3. A dinner pail including a double walled outer shell open at the top thereof, a double walled food compartment fitted removably within the outer shell and spaced therefrom to provide a liquid receiving chamber between the two members, means for maintaining the food compartment in a properly spaced relation to the outer shell, said food compartment being formed with an upwardly facing shoulder, an annular closure for the liquid receiving chamber, said annular closure being formed with a flanged outer edge which engages the outer shell while the inner edge thereof projects over the shoulder of the food compartment and coöperates therewith to hold the food compartment in position, swinging wings mounted upon the outer shell and arranged to be swung over the annular closure to hold it in position, and resilient flanges upon the swinging wings for frictionally engaging the annular closure.

4. A dinner pail including a double walled outer shell open at the top thereof, said outer shell having positioning depressions in its bottom, a double walled food compartment fitted removably within the outer shell and spaced therefrom to provide a liquid receiving chamber between the two members, said food compartment being formed with an upwardly facing shoulder, spacing arms projecting from the food compartment and arranged to engage the before mentioned positioning depressions in the bottom of the outer shell, an annular closure for the liquid receiving chamber, said annular closure being constructed for coöperation with the shoulder of the food compartment to hold the latter in position, and means for locking the annular closure in operative position.

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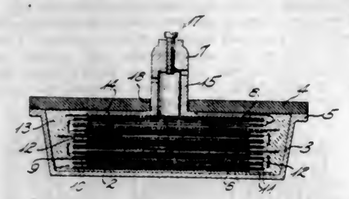
1,229,913. SHOE-COLLAR. FREDERICK RUSSELL DONISTHORPE and ALFRED COLTMAN, county of Leicester, England. Filed July 5, 1916. Serial No. 107,684. (Cl. 36—1.)



A turnover shoe collar of a length sufficient to extend substantially around the counter portion of a shoe, said collar comprising a fabric face and a leather lining, said fabric face and leather lining having inturned edges, and an insertion secured between and extending slightly outside said inturned edges, said collar being adapted to be attached to the rear portion of a shoe by suitable fastening means and to extend a substantial distance above the upper edge of the shoe.



1,229,914. ELECTRICAL CONDENSER. PHILIP DUBILIER, New York, N. Y., assignor, by mesne assignments, to Dubilier Condenser Co., Inc., a Corporation of New York. Filed May 2, 1916. Serial No. 94,943. (Cl. 250—41.)



2. The combination of a condenser and a pair of terminals therefor, one of said terminals constituting part of an inclosing casing, and the other terminal including a compression element, the terminals being arranged to compress the condenser between them, and being of relatively small mass and relatively large surface.

3. The combination of condenser elements and a casing therefor, the casing comprising a metallic body, and an insulating closure compressing said elements relatively highly within said casing, said casing constituting a terminal of the condenser.

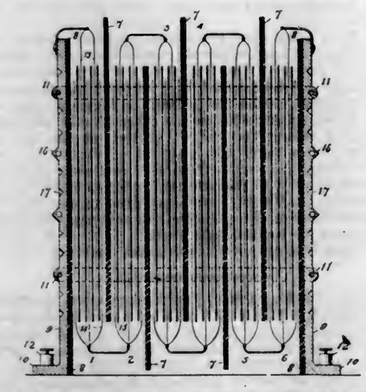
11. In a condenser, a casing having an insulating wall, a group of condenser elements therein, and a terminal therefor having a portion projecting through said wall, said portion being constructed to radiate heat.

16. In a condenser, a casing constituting one of the condenser terminals, an insulating cover therefor, a group of condenser elements therein, and a second condenser terminal having a bearing surface pressed by said cover into engagement with said elements, and having a portion projecting through said cover, said projecting portion being designed to radiate heat and having a ventilating passage therein.

[Claims 1, 4 to 10, and 12 to 15 not printed in the Gazette.]

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1,229,915. ELECTRICAL CONDENSER. WILLIAM DUBILIER, New York, N. Y., assignor, by mesne assignments, to Dubilier Condenser Co., Inc., a Corporation of New York. Filed Jan. 18, 1916. Serial No. 72,837. (Cl. 250—41.)



1. A high tension condenser unit consisting of sections for dividing the potential among them beyond brush discharge voltage, and comprising incasing means for providing heat radiating and conducting surfaces associated with said sections.

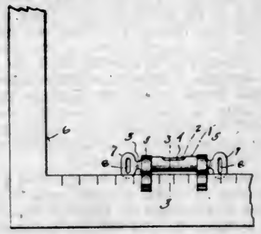
2. A condenser unit consisting of a plurality of sections alternately connected together at one end, means for insulating said sections from each other and projecting beyond the same alternately at the opposite ends and means comprising heat radiating surfaces for holding the unit together.

3. A condenser unit comprising sections, and insulating plates between the sections, said plates being arranged to project alternately in opposite directions, whereby the terminals of the sections can be joined together alternately in pairs.

[Claims 4 to 17 not printed in the Gazette.]

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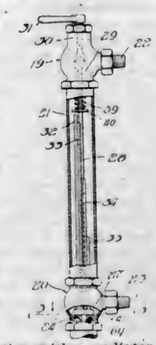
1,229,916. LEVEL ATTACHMENT. NORMAN DUNCAN, Bryn Mawr, Pa. Filed June 1, 1916. Serial No. 101,070. (Cl. 33—207.)



A device of the class described comprising a casing, a spirit tube located in the casing, plaster fillings engaged in the ends of the casing to retain the tube therein and offset plates carried by the ends of the casing, said plates having slots formed therein for engagement by securing devices, and resilient clips secured to the ends of said casing.

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1,229,917. APPARATUS FOR STEAM-HEATING. HERBERT A. DURR, Chicago, Ill. Filed July 5, 1916. Serial No. 107,574. (Cl. 257—48.)



1. The combination with a radiator and a single pipe for the delivery of steam and removal of water of condensation to and from the radiator, of a valve mechanism interposed between said pipe and said radiator, said valve mechanism comprising upper and lower connections in communication with the interior of the radiator, a tubular member joining the interior portions of said connections, a horizontal partition in the lower connection, there being an arcuate slotted opening in said partition, another opening in said partition adjacent to one end of said arcuate slotted opening, a disk rotatably mounted on the upper surface of said partition, said disk having a plurality of perforations extending through its body, said perforations being located in arcuate position corresponding to the afore-mentioned arcuate slotted

opening, a steam tube upstanding from the end one of said openings, and a series of condensation tubes upstanding from selected ones of the other openings, said condensation tubes being of selectively decreasing elevation commencing with the condensation tube next in order to the steam tube, and means for rotating the disk with respect to the partition, substantially as described.

2. The combination with a radiator and a single pipe for the delivery of steam and removal of water of condensation to and from the radiator, of a valve mechanism interposed between the pipe and the radiator, said valve mechanism comprising an elongated valve member having its upper and lower ends in communication respectively with the upper and lower portions of the radiator, a horizontal partition in the lower portion of the valve mechanism, there being an arcuate slotted opening in said partition, a disk rotatably mounted on the upper surface of the partition, there being a plurality of openings extending through said disk, said openings lying in arcuate fashion corresponding to the arcuate slotted opening, a steam pipe upstanding from the end one of said disk openings, condensation pipes upstanding from selected ones of the other disk openings, the condensation pipes being of selectively decreasing elevation commencing with the condensation pipe next adjacent to the steam pipe, and means for turning the disk into selected positions, substantially as described.

3. The combination with a radiator and a single pipe for the delivery of steam and the removal of water of condensation to and from the radiator, of a valve device interposed between the pipe and the radiator, said valve device comprising an elongated member having its upper and lower ends in communication with the upper and lower portions of the radiator, a horizontal partition in the lower portion of the valve device, there being an elongated opening extending through said partition, a disk movably mounted on the upper surface of the partition, there being a plurality of openings extending through said disk, a plurality of pipes upstanding from the openings of the disk, the end one of said pipes being a steam pipe, and the other pipes, being of progressively decreasing elevation, and being water pipes, and means for moving the disk over the surface of the partition to bring said pipes successively into communication with the elongated opening, substantially as described.

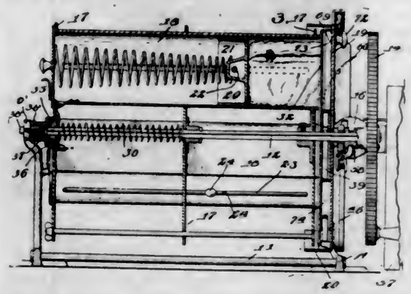
4. The combination with a radiator and a single pipe for the delivery of steam and the removal of water of condensation to and from the radiator, of a valve device between the pipe and the radiator, said valve device including an elongated vertical tubular member having its upper and lower ends in communication with the upper and lower portions of the radiator, a partition in the lower portion of said valve device, there being an arcuate sloted opening in said partition, a disk rotatably mounted on the upper surface of the partition, there being a plurality of openings extending through said disk and located in arcuate fashion corresponding to the arcuate slotted opening of the partition, a plurality of pipes connected to the disk and upstanding from the aforesaid openings, the end pipe being a steam pipe of maximum height, and the other pipes being water pipes of progressively decreasing height, and means for rotating the disk over the face of the partition, substantially as described.

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1,229,918. BREAD-CUTTING MACHINE. CARL D. DYE, Edmonton, Alberta, Canada. Filed Sept. 27, 1916. Serial No. 122,500. (Cl. 146—12.)

1. In a machine of the class described, a frame, shafts journaled in said frame, a plurality of loaf carrying cylinders mounted for rotation about one of said shafts, a stationary disk disposed in advance of the open end of said cylinders, a spring pressed plunger arranged within each cylinder for feeding the loaves against said disk, means for holding any of said plungers fixed within its cylinder in any location, a knife carried by the other of said shafts for rotation between the cylinders and disk, and means for rotating said shafts.

2. In a machine of the class described, a frame, shafts journaled in said frame, a plurality of loaf carrying cylinders mounted for rotation about one of said shafts, a stationary disk disposed in advance of the open end of said cylinders, a spring pressed plunger arranged within each cylinder for feeding the loaves against said disk, said cylinders having parallel slots, a headed bolt passed through the slots and plunger of each cylinder, a nut on the free end of the bolt whereby said plunger can be held fixed within the cylinder, a knife carried by the other of said shafts for rotation between the cylinders and disk, and means for rotating said shafts.



3. In a machine of the class described, a frame, shafts journaled in said frame, a plurality of cylinders mounted on one of said shafts for rotation therewith, a stationary disk disposed in advance of said cylinders and having an inwardly directed flange extending over the open end of said cylinders, a spring pressed plunger arranged within each cylinder, a knife mounted on the other of said shafts for rotation between said cylinders and disk, and means for rotating the shafts.

4. In a machine of the class described, a frame, shafts journaled in said frame, a series of loaf carrying cylinders mounted for rotation with one of said shafts, a stationary crescent-shaped disk disposed in advance of said cylinders, means for feeding each loaf against said disk, a non-cutting disk mounted on the other of said shafts and normally disposed in a plane with the crescent-shaped disk, a knife mounted on said shaft for rotation therewith and disposed in spaced relation to the non-cuting disk, said knife rotating between the cylinders and said crescent-shaped disk, and means for rotating said shafts.

5. In a bread slicing machine, a frame, shafts journaled in said frame, a plurality of loaf carrying cylinders mounted on one of said shafts for rotation therewith, a stationary crescent-shaped disk disposed in advance of said cylinders, means for feeding the loaves against said disk, a non-cutting disk on the other of said shafts and extending within the cut-out portion of the crescent-shaped disk, a knife disk mounted on the shaft, means for adjusting the knife disk toward and away from said non-cutting disk, to regulate the thickness of the slice to be severed, said knife disk being fixed to the shaft for rotation between the cylinders and said stationary disk, and means for rotating said shaft.

[Claims 6 to 40 not printed in the Gazette.]

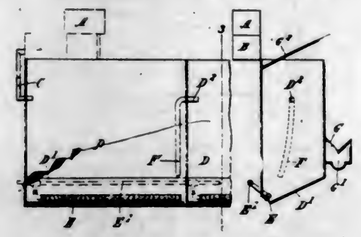
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1,229,919. SEPARATION OF CASEIN AND ALBUMIN FROM CREAMERY-SEWAGE. GEORGE EBRILL, Blackrock, and THOMAS KIERSEY, Dublin, Ireland, assignors to Ebrill's Process Limited, Dublin, Ireland. Filed Dec. 4, 1916. Serial No. 135,045. (Cl. 99—11.)

1. A process for the extraction from creamery waste of casein and albumin contained therein in solution consisting in, adding a substance to precipitate out of solution the material to be extracted and blowing a gas, in an extremely finely-divided state through the liquid to float the precipitate before the latter has time to settle.



2. A process for the extraction from creamery waste of casein and albumin contained therein in solution consisting in, first rendering the creamery waste acid and then adding an alkali to the acidulated waste to precipitate the albumin out of solution, and blowing a gas, in an extremely finely-divided state through the liquid to float the precipitate before the latter has time to settle.



3. A process for the extraction from creamery waste of casein and albumin contained therein in solution consisting in, first adding an acid to precipitate the casein out of solution, blowing a gas, in an extremely finely-divided state through the liquid to float the precipitate before the latter has time to settle, removing the froth thus created which contains the casein and then adding an alkali to precipitate the albumin out of solution, again blowing a gas, in an extremely finely-divided state (such as is obtainable by forcing it through carbon) through the liquid to float the precipitate before the latter has time to settle, and finally removing the froth thus created with the albumin in it.

4. A process for the extraction from creamery waste of casein and albumin contained therein in solution consisting in, adding a substance to precipitate out of solution the material to be extracted and while the said creamery waste and added substance are in a container having a sloping baffle so situated that a free space is provided between the discharge side of the container and the upper edge of the baffle, blowing a gas, in an extremely finely-divided state through the liquid to float the precipitate before the latter has time to settle so that it is discharged in the form of froth through the free space provided between the discharge side of the container and the said baffle.

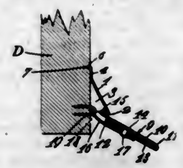
5. A process for the extraction from creamery waste of casein and albumin contained therein in solution consisting in, adding a substance to precipitate out of solution the material to be extracted, and while the said creamery waste and added substance are in a container having a sloping baffle so situated that a free space is provided between the discharge side of the container and the upper edge of the baffle which upper edge is higher than the discharge side of the container, blowing a gas, in an extremely finely-divided state through the liquid to float the precipitate before the latter has time to settle so that it is discharged in the form of froth through the free space provided between the discharge side of the container and the said baffle.

[Claims 6 and 7 not printed in the Gazette.]

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1,229,920. WEATHER-STRIP. LOUIE ENDER, Watertown, S. Dak. Filed Jan. 27, 1916. Serial No. 74,641. (Cl. 20—65.)

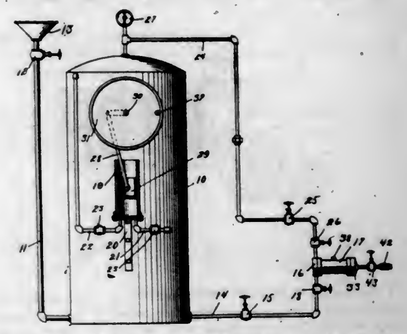
A weather strip embodying an elongated transversely-inclined relatively-thick plate, a covering plate doubled on a longitudinal line to provide upper and lower portions overlying and underlying the first mentioned plate with the bend of the covering plate adjacent to the lower edge of the first mentioned plate, the edge of the lower portion of the covering plate being bent back upwardly over the upper edge of the first mentioned plate, said upper portion of the covering plate extending over said bent back edge and being adapted to be hinged to a supporting member, tongues overlapping said lower portion of the covering plate and projecting beyond said



bent back edge, and rivets engaging through said tongues, lower portion of the covering plate and first mentioned plate and covered by said upper portion of the covering plate.

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1,229,921. OIL-BURNER. ROBERT A. EVANS, Mogollon, N. Mex. Filed Nov. 29, 1916. Serial No. 134,195. (Cl. 158—47.)



1. In an oil burner, a tank provided with an oil inlet, an oil outlet pipe leading from the lower portion of the tank, means for providing compressed air in the upper portion of said tank, an air outlet pipe leading from the upper portion of the tank, a mixing chamber having in one end inlets for the air and oil pipes communicating with an annular groove forming a pocket, a cylinder in the chamber provided with grooves leading from the pocket to a second pocket in the opposite end portion of the mixing chamber and intercrossing at points intermediate the length of the cylinder, and an outlet pipe for the mixed air and oil leading from the second pocket.

2. In an oil burner, a source of air and oil supply, pipes leading therefrom, a mixing chamber having a hollow body, heads at the ends of the body, the head at one end being provided with a pocket communicating with the inlets for the air and oil pipes, and the head at the opposite end of the body being provided with a pocket communicating with an outlet, and means to break the air and oil into streams and lead to the pocket of the second head with the streams of air and oil intersecting.

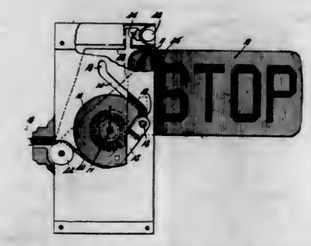
3. In an oil burner an air and oil supply tank having oil in the lower portion thereof and compressed air in the upper portion thereof, an oil outlet pipe leading from the tank, an air outlet pipe leading from the tank, a mixing chamber having a hollow body, heads at the ends of the body, the head at one end being provided with an annular groove in its inner face communicating with inlets for the air and oil pipe and the head at the opposite end of the body being provided with a pocket communicating with an outlet, and means to break the air and oil into streams and lead the same to the pocket of the second head with the streams of air and oil intersecting.

4. In an oil burner, a supply tank having oil in the lower portion thereof and compressed air in the upper portion thereof, an oil outlet pipe leading from the tank, an air outlet pipe leading from the tank, a mixing chamber having a housing provided at one end with air and oil inlets communicating with a pocket, a cylinder within the housing provided with longitudinally extending grooves leading from the pocket and intersecting and communicating with the pocket in the opposite end of the mixing chamber, and an outlet pipe leading from the second pocket of the housing.

5. An oil burner including a source of air and oil supply, pipes leading therefrom, and a mixing chamber having a body, a cylinder in the body provided with mixing grooves extending longitudinally thereof in intersecting relation, a head for said body provided with air and oil inlets communicating with a pocket having communication with the grooves of said cylinder, and a head for the opposite end of the body provided with a pocket to receive the mixed air and oils, the pocket of the second head communicating with an outlet.

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1,229,922. VEHICLE-SIGNAL. ABRAM VAN AKEN FELTEN, Danbury, Conn. Filed Mar. 29, 1916. Serial No. 87,485. (Cl. 116—31.)



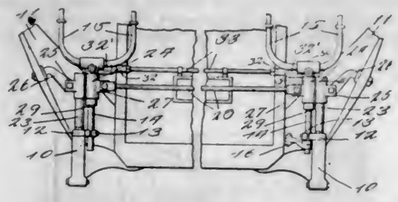

1. In a device of the class described, a housing having an open edge, an arm pivotally mounted in said housing to swing out from the open edge, a disk mounted to devolve in the housing, a link connected to the disk, a pin carried by said link, said housing having a diagonal slot through which said pin projects to engage the arm, means for actuating the disk whereby the arm is moved out of the housing, and resilient means associated with the disk for restoring the same to normal position whereby the arm is restored into the housing.

2. In a device of the class described, a housing, an arm pivotally mounted in said housing to swing out therefrom, a disk mounted to revolve in the housing, a link connected to the disk with one of its ends, a pin carried by the other end of the link, said housing having a diagonal slot through which said pin projects, said arm having a slot also engaged by said pin, means for revolving the disk whereby the arm is moved, and resilient means associated with the disk tending to maintain the same in a predetermined position, whereby the arm is adapted to be maintained in the housing.

3. In a device of the class described, a housing, an arm in the housing mounted to swing out therefrom, a member mounted to rotate in the housing, a link connected to said member, a pin associated with the link engaging said arm, said housing having guiding means for said pin, means for actuating said member mounted to rotate, and resilient means for restoring said arm to its normal position.

4. In a device of the class described, a housing having an open edge, an arm pivotally mounted in said housing to swing out from the opening, a revoluble disk in the housing, a link pivotally connected to the disk and engaging the arm, said housing having means for guiding the movement of the link, means for rotating the disk, and a resilient member for restoring the disk to its normal position.

1,229,923. DIRIGIBLE HEADLIGHT FOR AUTOMOBILES. RALEY C. FERGUSON, Glendive, Mont. Filed Dec. 18, 1916. Serial No. 137,638. (Cl. 240—62.)



1. The combination with the chassis and front guards of an automobile of bearing blocks mounted on the chassis, brackets carried by the guards, standards carried by the blocks, means carried by each bracket engaging with a standard, a vertical lamp stem disposed in each of the bracket carried means and supported in the said bearing block, rigid connections between the said bracket carried means, and a moving means connecting the lamp stems.

[Claim 2 not printed in the Gazette.]

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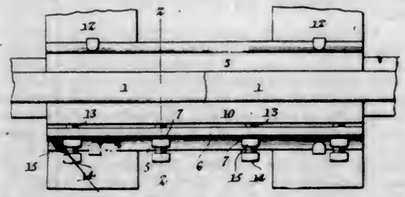
1,229,924. MANUFACTURE OF PAPER AND THE LIKE. CHARLES WILLIAM FISH, Rawcliffe, near Goole, England, assignor to The Amber Size & Chemical Company, Limited, London, England. Filed Dec. 28, 1916. Serial No. 139,403. (Cl. 92—21.)

1. In the process of sizing pulp for the manufacture of paper or the like using niter cake and alumina salts for fixing the size, the addition of the niter cake separate from the alumina salts and only after the size and the alumina salts have been incorporated in the pulp, substantially as described.

[Claim 2 not printed in the Gazette.]

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1,229,925. MEANS FOR CONNECTING THE ENDS OF RAILWAY-RAILS. WILLIAM FLANAGAN, Richey, Miss., assignor of one-half to Henrietta A. Moore, Morton, Miss. Filed Sept. 24, 1915. Serial No. 52,481. (Cl. 239—6.)



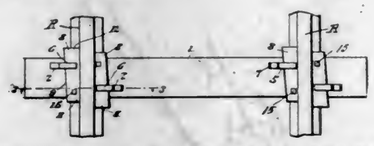
In a device for the purpose set forth, a chair member including a base having spaced sides, one of the said sides being vertically straight and the other being shaped to conform to the shape of the side of a rail, and the base, from the last mentioned side being channeled longitudinally to receive the base of the rail and the elevated portion of the chair base being beveled flush with the upper surface of the base flange of the rail, a splice block disposed between the said straight side of the chair and the side of the rail adjacent thereto, said splice block having its upper and lower faces beveled from its outer face inwardly to its inner face, the beveled surfaces being of a substantially similar pitch, whereby either of said surfaces may be brought to engage with the underface of the head of the rail or the base flange of the rail and the beveled surface upon the base of the chair member, the outer and wider face of the splice block having spaced



depressions, and bolt members passing through threaded openings in the straight side of the rail chair and having their ends received within the said depressions.

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1,229,926. RAILWAY-RAIL FASTENER. WILLIAM FORBES, Woodbury, Conn., and JOSEPH T. HUBBARD, Port Chester, N. Y. Filed Feb. 27, 1917. Serial No. 151,302. (Cl. 238—4.)



1. In combination with a tie having openings therein, U-shaped members in the openings and projecting above the top of the tie, wedge members also within the openings and contacting with the U-shaped members for retaining the same upon the tie, and rails disposed upon the tie between the upper portions of the said U-shaped members, of means comprising wedging elements disposed between the upper portion of the U-shaped members and the rails, and means coöperating between the said wedge members and the said rails for securing the wedge members upon the rails.

2. In combiantion with a tie having hook-shaped members upon the top thereof and rails disposed between and out of contact with the said hook-shaped members, of wedge plates designed to be forced between the hooks and the base flanges of the rails, each of said wedge plates including an outer straight surface having its inner edge beveled from one of its ends to its opposite end, a flange formed upon the said straight surface and having its edge beveled from one of its ends to its opposite ends, and its underface likewise beveled from one of its ends to its opposite end, an adjustable element associated with the flange, and said element designed to frictionally contact with the flanges of the rails to bind the element upon the rails and to secure the rails upon the tie.

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1,229,927. DEVICE FOR KEYING PULLEYS TO SHAFTS. EDWARD E. FORSHEY, Parkersburg, W. Va. Filed Mar. 25, 1916. Serial No. 86,674. (Cl. 64—18.)



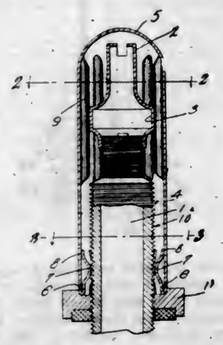
A pulley comprising companion sections adapted to engage around a shaft and having their meeting faces provided with pairs of alined slots tapered toward one end of the pulley, one of the sections having lugs formed on one end thereof and located adjacent the smaller ends of the slots, tapered keys removably inserted within the slots for moving the sections toward each other and for holding the same in assembled position, and means adjustable through the lugs and engaging the smaller ends of the keys and adapted to prevent accidental outward movement of the keys.

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1,229,928. VALVE-GUARD. WALTER L. FRAZER, San Diego, Cal. Filed Oct. 26, 1916. Serial No. 127,887. (Cl. 152—12.)

1. In a device of the class described, a valve including a body and a tip; and a cap housing the valve, the cap being provided adjacent one end with longitudinal ribs engaging the tip, and being provided at its other end with internal resilient tongues engaging the body.

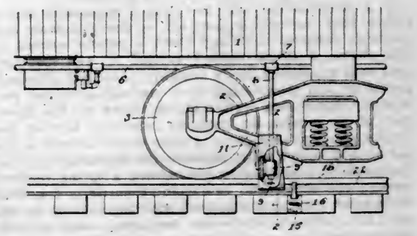
2. In a device of the class described, a valve including a body and a tip; and a cap housing the valve, the cap being provided adjacent one end with longitudinal ribs engaging the tip, and being provided at its other end with internal



tongues flexed intermediate their ends to bear on the body of the valve, the inner ends of the tongues bearing slidably on the interior of the cap.

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1,229,929. TRAIN-STOPPING APPARATUS. MAX FRIEDMAN, Yonkers, N. Y. Filed Sept. 1, 1916. Serial No. 118,093. (Cl. 246—59.)



1. In an automatic train stopping apparatus the combination of a brake pipe, a valve communicating therewith, a casing inclosing said valve and having alining slots formed therein, and a handle in operable relation with said valve and located within the casing and adapted to swing in a horizontal plane and to extend across said slot when said valve is closed.

[Claim 2 not printed in the Gazette.]

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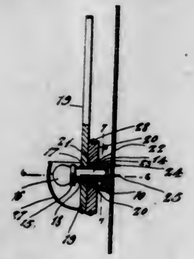
1,229,930. GAGE. SAMUEL FRIEDMAN, Brooklyn, N. Y. Filed Oct. 26, 1915. Serial No. 58,032. (Cl. 33—178.)



1. A gage for gaging rotating work, comprising a supporting member adapted to be held by the operator, and a cylindrical gage member, one of the members having a reduced end and the other member being in the form of a ring and mounted to turn on the said reduced end, the members being approximately of the same diameter.

[Claims 2 to 5 not printed in the Gazette.]

1,229,931. SAFETY-SIGNAL. CHARLES R. FUNK and LEWIS H. SMITH, Emporia, Kans. Filed July 14, 1916. Serial No. 109,326. (Cl. 177—311.)



1. A direction indicator including a supporting bar, a hollow shaft secured to said supporting bar, a sleeve rotatably mounted upon said hollow shaft, a pointer nonrotatably secured to said sleeve, a pulley secured to said pointer, a spring contact carried by and insulated from said supporting bar, a plurality of contact pins adapted to intermittently and successively engage said contact spring during swinging movement of said pointer, an electric connection between said contact pins and said sleeve, a lamp socket secured to the end of said hollow shaft opposite said supporting bar, an electric lamp secured in said socket, means normally retaining said pins in contact with said spring contacts, and an electrical conductor extending longitudinally of said hollow shaft and engaging the center electrode of said electric lamp.

2. A direction indicator including a supporting bar, a hollow shaft secured to said bar, a sleeve slidably and rotatably mounted upon said shaft, a pointer carried by said sleeve, a spring contact carried by and insulated from said supporting bar, a plurality of contact pins supported by said sleeve adapted to intermittently and successively engage said contact spring during the free movement of the pointer, an electrical connection between the contact pins and said sleeve, a lamp socket secured to the end of said hollow shaft opposite the supporting bar, an electric lamp supported in said socket, a spring confined between the socket and said pointer normally retaining the contact pins in engagement with the contact spring, and an electrical conductor extending longitudinally through said hollow shaft and engaging the center electrode of said lamp.

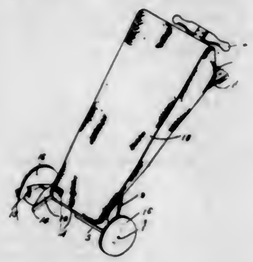
1,229,932. METALLIC RAIL-TIE. ROBERT T. FUTCH, Lillie, La. Filed Jan. 18, 1917. Serial No. 143,056. (Cl. 238—5.)



The combination with a rail tie, of hollow extensions formed on the opposite ends of the tie and having their upper ends disposed below the upper side of the tie, rail seats disposed above the extensions, flanges depending from the rail seats and extending into the extensions, and a plurality of vertically disposed springs located within the extensions and extending between the flanges and having the upper ends thereof engaging the under sides of the rail seats, for the purpose specified.

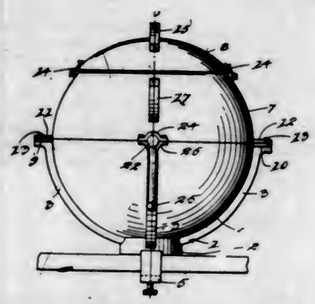
1,229,933. TRUCK. ALMA A. GAHEN, Teaneck, N. J. Filed June 10, 1916. Serial No. 102,906. (Cl. 21—65.)

1. A shopping truck comprising a central handle bar, a handle at one end of said bar, diagonal cross bars pivoted centrally to the handle bar, links connecting the ends of the cross bars with the ends of the handle bar, wheels at the ends of the cross bars opposite the handled end of the handle bar, and hooks for supporting a shopping bag on the truck.



2. A shopping truck comprising a handle bar having a longitudinal slot formed centrally thereof, a handle at one end of the bar, cross bars pivoted together centrally, a bolt forming the pivot of said bars, said bolt extending through the slot, a thumb nut on the end of the bolt for holding the truck in its open or closed position, links connecting the ends of the cross bars with the handle bar, wheels on the ends of the cross bars opposite the handle, and hooks near opposite ends of the cross bars for supporting a shopping bag on the device.

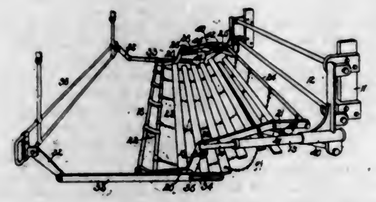
1,229,934. BREAD-MIXER. CHARLES GENSHEIMER, Philadelphia, Pa. Filed Dec. 13, 1913. Serial No. 806,509. (Cl. 259—109.)



In a bread mixer, the combination with a supporting frame having a base portion and a plurality of spaced arms radiating from said base and curved upwardly therefrom, said base portions having a rounded depression in its upper surface, said spaced arms having horizontally disposed terminals, of a spherical mixing chamber fitted snugly within the depression in said base and upwardly curved arms, said mixing chamber comprising a bottom semi-spherical section, a pair of oppositely disposed lugs on the upper edge of the section adapted to engage certain of the horizontally disposed terminals of the opposed supporting arms, and an intermediate section having a pair of oppositely disposed lugs thereon in spaced relation to the lower edge thereof and adapted to engage the lugs and the bottom section, a mixing member mounted within the spherical chamber and rotatably journaled in certain other of the opposed supporting arms, and securing means inserted through the lugs on the bottom and intermediate sections and the horizontally disposed terminals of the supporting arms, whereby said sections are securely fastened together and to said supporting frame.



1,229,935. CAR-FENDER. JOHN P. GERAGHTY, Jersey City, N. J. Filed Oct. 28, 1916. Serial No. 128,189. (Cl. 105—130.)



1. A car fender, comprising a gate at the front end of the car, a fender proper arranged a distance in the rear of the said gate and normally in a raised position relative to the track, the said fender being connected with the said gate and adapted to move simultaneously with the latter and the said fender being mounted to move into receiving position with the front end of the fender in close proximity to the track when the gate strikes an obstruction during the forward motion of the car, and locking means for the said fender and controlled by the latter, the said locking means locking the fender in lowermost position until the weight of the obstruction on the fender releases the said locking means and causes the fender to return to raised position.

2. A car fender, comprising a gate at the front end of the car, a fender proper arranged a distance in the rear of the said gate and normally in a raised position relative to the track, the said fender having a fender frame and a flexible apron mounted on the frame, the said fender frame being mounted to swing up and down and to slide bodily in a longitudinal direction, the said fender frame being pivotally connected with the said gate and adapted to move simultaneously with the latter when the gate strikes an obstruction during the forward movement of the car, and a locking device controlled from the said fender apron and adapted to engage the said fender frame to lock the fender frame when in lowermost position until the weight of the obstruction on the fender apron releases the said locking device and causes the fender to return to normal raised position.

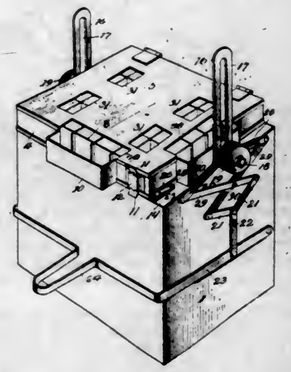
3. A car fender, comprising a gate suspended from the front end of the car and mounted to swing rearwardly, a fender proper arranged a distance in the rear of the said gate and mounted to swing up and down and to slide bodily in a longitudinal direction, and a link connection pivotally connected with the said gate and having a limited sliding connection with the said apron to impart a downward swinging motion to the apron when the gate strikes an obstruction during the forward movement of the car and to then move the fender bodily rearward, the said gate then being free to swing into final uppermost position independent of the fender.

4. A car fender, comprising a gate suspended from the front end of the car and mounted to swing rearwardly, a fender proper arranged a distance in the rear of the said gate and mounted to swing up and down and to slide bodily in a longitudinal direction, a link connection pivotally connected with the said gate and having a limited sliding connection with the said apron to impart a downward swinging motion to the apron when the gate strikes an obstruction during the forward movement of the car and to then move the fender bodily rearward, the said gate then being free to swing into final uppermost position independent of the fender, a locking device adapted to lock the said fender when in rearmost receiving position, and a releasing device mounted on the said fender and adapted to unlock the said locking device to allow the fender to return to normal uppermost position.

5. A car fender, comprising a gate suspended from the front end of the car and mounted to swing rearwardly and upwardly, a fender proper arranged a distance in the rear of the said gate and normally in a raised position relative to the track, the said fender having a fender frame and a flexible apron mounted on the said fender frame, the latter being made in a front section and a rear section, the frame sections being mounted to swing on a common center and the front section being pivotally connected with the said fender to impart a downward swinging motion to the said forward frame section when the gate strikes an obstruction during the forward movement of the car, and means to lock the said frame sections together at the time the front frame section is swung into lowermost position.

[Claims 6 to 8 not printed in the Gazette.]

1,229,936. EGG-TESTER. ROBERT W. GILPIN, Codell, Kans. Filed Dec. 19, 1916. Serial No. 137,824. (Cl. 99—6.)



1. In an egg tester, the combination of an illuminating chamber, an egg containing chamber adapted to cover the illuminating chamber, guides on the illuminating chamber, members on the egg containing chamber arranged to play in said guides, and means acting upon said members to move the same along the guides and thereby carry the egg containing chamber to or from the illuminating chamber.

2. In an egg tester, the combination of an illuminating chamber, an egg chamber adapted to cover the illuminating chamber, guides rising from the illuminating chamber, members extending from the egg holding chamber and engaging said guides, lazy tongs mounted on the illuminating chamber and connected with said members, and means on the illuminating chamber for actuating said lazy tongs.

3. In an egg tester, the combination of an illuminating chamber, an egg containing chamber comprising a tray having egg-receiving openings, a body to which said tray is hinged and adapted to inclose the eggs, a lid hinged to said body, and means for moving said egg-containing chamber to and from the illuminating chamber.

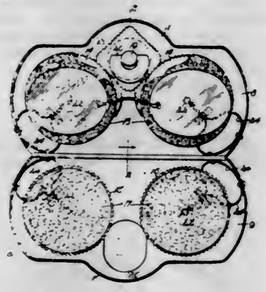
4. In an egg tester, an egg containing chamber comprising an inclosing body, a cover hinged to said body and adapted to extend over one side of the same, and a tray hinged to the body and adapted to extend over the opposite side of the same, said tray being constructed with egg-receiving openings, and means for holding the cover and the tray normally against the respectively adjacent sides of the body.

5. In an egg tester, the combination of an illuminating chamber, an egg inclosing body having open offsets on some of its sides, a support on the illuminating chamber for one of said offsets, an egg tray hinged to the said

inclosing body and adapted to cover one side of the same, and a lid hinged to the inclosing body and adapted to cover the opposite side of the same.

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1,229,937. EYEGLASS-CASE. RINALDO A. GOELKEL, New York, N. Y. Filed Dec. 6, 1916. Serial No. 135,344. (Cl. 206—5.)



1. The combination of a case having pivotally connected coacting sections; a plurality of movable rubbing members mounted therein; and means extending exterior to said sections for moving said rubbing members.

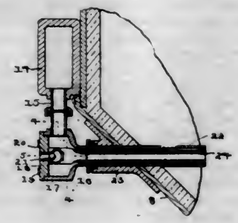
2. The combination of a case embodying pivotally connected coacting sections; a plurality of rotary wiping members, said members being disposed in pairs permanently held in said sections; means for rotating said wiping members, said means embodying a handle extending outside said sections; and means for reciprocating with said wiping members in unison with the rotary movement imparted thereto.

3. The combination of pivotally connected coacting case sections; a plurality of padded rotary members, said members being disposed in pairs and one pair being held in each of said sections; a plurality of bearings for said rotary members; a plurality of resilient supports for said bearings; and a manually operable irregular driving member for rotating said members and for simultaneously spreading said members relatively.

4. The combination of a plurality of pivotally connected coacting case sections; a plurality of rotary padded wheels, said wheels being disposed in pairs, and one pair being permanently mounted in one of said sections; a plurality of bearings for said wheels; spring supports for said bearings for permitting said bearings and wheels to rove; and an irregularly shaped driving wheel for rotating said padded wheels, said driving wheel being adapted to spread relatively said padded wheels while revolving the same.

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1,229,938. TWYER. GEORGE D. GOLDEN, Clarkdale, Ariz. Filed July 19, 1916. Serial No. 110,141. (Cl. 266—41.)



1. In a twyer structure, a hollow body having an open outer end, a removable closure for said open end, a main blast conducting tube connected with said body, and an auxiliary blast conducting tube having its outer end apertured and extended into proximity to the closure to facilitate removal of the auxiliary blast conducting tube through the open end of the body.

2. In a twyer structure, a hollow body, a main blast conducting tube connected therewith, and an auxiliary blast conducting tube removably supported in the first-mentioned tube and disposed in spaced relation from end to end of the latter to provide an air chamber.

3. In a twyer structure, a hollow body, a main blast conducting tube connected therewith, and an auxiliary blast conducting tube arranged within the main blast conducting tube and terminating, at its inner end, in proximity to the adjacent end of the main blast tube.

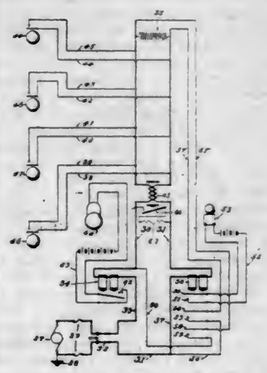
4. In a twyer structure, a hollow body, a main blast conducting tube connected therewith, a removable plate associated with said hollow body, and an auxiliary blast conducting tube removably positioned in the first-mentioned tube and secured in position by said plate.

5. In a twyer structure, a hollow body, a tubular blast conducting member connected with said body, a removable plate associated with said hollow body, and an auxiliary blast conducting tube associated with said tubular member arranged in concentrically spaced relation within the latter and being secured in position by said removable plate.

[Claims 6 to 9 not printed in the Gazette.]

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1,229,939. ELECTRICAL THERMOSTAT AND CIRCUIT. ALBERT GOLDSTEIN, New York, N. Y., assignor to Simon B. Hess, New York, N. Y. Filed Nov. 18, 1914. Serial No. 872,680. (Cl. 177—355.)



1. An electrical alarm system comprising a source of current, a metallic circuit in series with such current source, circuit closing devices in normally open bridges across such metallic circuit, a resistance across the two sides of the circuit beyond the farthest circuit closing device in such circuit, signaling means responsive to increased current flow from a cross upon such circuit, signal producing means responsive to cessation of the current from a break upon such circuit, such means being functioned so that the first named means will be responsive only from the effect of a cross and the last named means will be responsive to a cessation of current from a break upon such circuit, and means to condition the circuit so that the first named means will be responsive to the effect of a cross, notwithstanding the presence of said cessation of current in the second mentioned means, due to a break upon such circuit.

2. An electrical alarm system comprising a source of current grounded at its negative pole, a metallic circuit in series with such current source, circuit closing devices in normally open bridges across such metallic circuit, a resistance across the two sides of the circuit beyond the farthest circuit closing device in such circuit, signaling means responsive to increased current flow from a cross upon such circuit, means responsive to an interruption of the current from the presence of a ground, said signaling means, and the last named means being functioned so that the first named means will be responsive only from the effect of a cross and the last named means will be responsive only from the presence of a ground, and means to condition the circuit so that the first named means will be responsive to the effect of a cross, notwithstanding the presence of said cause of interruption.

3. An electrical alarm system comprising a source of current grounded at its negative pole, a metallic circuit in series with such current source, circuit closing devices in normally open bridges across such metallic circuit, a resistance across the two sides of the circuit beyond the farthest circuit closing device in such circuit, a signaling means responsive to increased current flow from a cross upon such circuit, a signal producing means responsive to cessation of the current from a break or ground upon such circuit, such means being functioned so that the first named means will be responsive only from the effect of a cross and the last named means will be responsive only from the effect of an interruption of the current, from the presence of a ground or break, and means to condition the circuit so that the first named means will be responsive to the effect of a cross, notwithstanding the presence of either of said causes of interruption.

4. An electrical alarm system comprising a source of current grounded at its negative pole, a metallic circuit in series with such current source, circuit closing devices in normally open bridges across such metallic circuit, a resistance across the two sides of the circuit beyond the farthest circuit closing device in such circuit, a signaling means responsive to increased current flow from a cross upon such circuit, a signal producing means responsive to cessation of the current from a break upon such circuit and means responsive to an interruption of the current from the presence of a ground, such means being functioned so that the first named means will be responsive only from the effect of a cross and the last named means will be responsive only from the effect of an interruption of the current, from the presence of a ground or break, and condition the circuit so that the first named means will be responsive to the effect of a cross, notwithstanding the presence of either of said causes of interruption.

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1,229,940. COMBINED TONGUE AND LACE PROTECTOR FOR SHOES. JOAQUIN ALFRED GOMES, South Weymouth, Mass. Filed Mar. 23, 1917. Serial No. 156,887. (Cl. 36—1.)



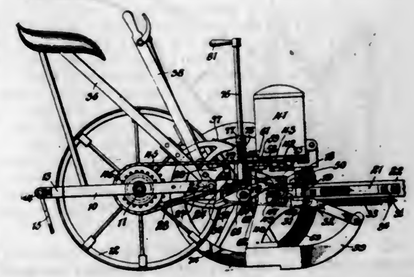
1. In combination with a shoe having a laced opening, a tongue and protector having its inner end connected to the shoe adjacent the end of said opening, a bow member attached to the outer end of the tongue, the outer part of the tongue being adapted to be folded upon itself so as to first form the central part of the bow, and to be again folded upon itself to cover the laced opening, and means for fastening the folded tongue to secure it and the bow in position, substantially as described.

2. In combination with a shoe having a laced opening, a fastening member connecting the inner end of the tongue to the shoe adjacent the end of said opening, a bow member attached to the outer end of the tongue, and a second fastening member attached to the free end of the tongue, said free end of the tongue being adapted to be folded upon itself so as to form part of the bow, and to be again folded upon itself to cover the laced opening, said fastening member being then in position to be engaged with the first fastening member to secure the tongue in position, substantially as described.

[Claims 3 to 5 not printed in the Gazette.]

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1,229,941. CHECK-ROW PLANTER. SEBASTIAN L. GOODIN, Farber, Mo., assignor of one-half to August F. Tuepker, Farber, Mo. Filed Feb. 11, 1916. Serial No. 77,752. (Cl. 111—28.)



1. The combination with a planter having a main frame, a runner frame having boots and hinged to the main frame, and an adjusting lever connecting the two frames, of a marker shaft in vertical alinement with the delivery end of said boots and adjustably fixed on the runner frame for adjustment relatively thereto and adapted for simultaneous adjustment therewith with respect to the main frame, markers on the ends of said shaft, and a tappet carried by the shaft for actuating the check shaft of the runner frame.

4. The combination with a planter, of a pair of depending supports carried by said planter and having serrations in their rear faces, bearing blocks having base flanges provided with transverse serrations in their inner faces for engagement against said supports and intermeshing with the serrations thereon, clamping bolts adapted to bind said blocks in adjusted positions upon the supports, and a marker shaft journaled in said blocks and provided with marker wheels and adapted to be raised and lowered with respect to the ground upon the adjustment of said blocks.

7. The combination with a planter having a main frame with supporting wheels, a runner frame adjustably mounted relatively to said main frame, boots mounted upon said runner frame, a marker shaft fixedly adjustable on said runner frame to various positions in vertical alinement with the discharge openings of said boots, marker wheels fixed to said marker shaft, and means for rotating said marker shaft to adjust the wheels and adapted to engage said marker shaft to rotate the same irrespective of the position to which the shaft has been adjusted.

[Claims 2, 3, 5, and 6 not printed in the Gazette.]

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1,229,942. CLASP. CHARLES A. GOOZEY, Providence, R. I., assignor to B. A. Ballou & Co., Inc., Providence, R. I., a Corporation of Rhode Island. Filed Sept. 11, 1916. Serial No. 119,367. (Cl. 24—81.)

1. A clasp comprising two members pivotally connected to form a pair of coöperating jaws at one end

thereof, a second pair of coöperating jaws also formed on said members, one of said second pair being raised from

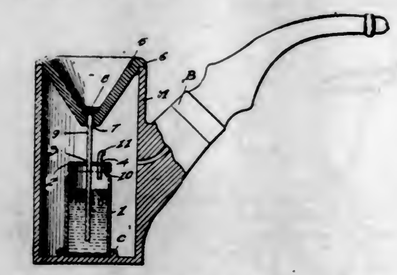


the face of one and the other jaw from the face of the other member.

[Claims 2 to 4 not printed in the Gazette.]

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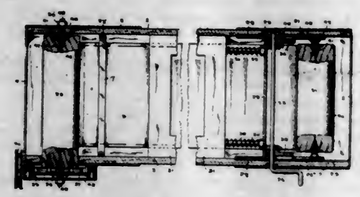
1,229,943. PIPE. CLARENCE J. GRAHAM and JOSEPH A. FARRIS, Chicago, Ill. Filed Dec. 14, 1915. Serial No. 66,773. (Cl. 131—12.)



The combination with the bowl and the stem of a smoking pipe, of an auxiliary bowl fitted within the main bowl and having a passage in the lower end thereof, a liquid holding receptacle detachably positioned within the main bowl and underlying the auxiliary bowl, an inlet pipe having one end extending into the passage in the auxiliary bowl and having its opposite end extending into the receptacle and having the terminal of the last-mentioned end located adjacent the lower wall of the liquid holding receptacle, an outlet pipe located within the main bowl of the pipe and having one end communicating with the interior of the receptacle and its opposite end positioned in line with the bore of the pipe stem, and means carried by the lower wall of the main bowl of the pipe and engaging the liquid holding receptacle for holding the latter against movement.

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1,229,944. ADVERTISING-DISPLAY DEVICE. WILLIAM F. GRAHAM and SAMUEL C. HAWTHORNE, Lincoln, Nebr. Filed Apr. 13, 1916. Serial No. 90,918. (Cl. 40—96.)



1. In a display device, the combination with a casing having visual spaces therein, a pair of rollers in said casing, and means to rotate one of said rollers, of a plurality of sign sections, said sections having loops at each end provided with inwardly extending recesses, rods disposed through said loops, cross bars pivotally connected together at one end and adapted to embrace the meeting ends of said sign sections, means disposed between said cross bars and carried by one of said cross bars and adapted to engage through said section recesses between the inner ends of said recesses and the rods extending therethrough, and means to lock the free ends of the cross bars together over the loop ends of said sign sections.

2. In a display device, the combination with a casing having visual spaces therein, a pair of rollers in said casing and means to rotate one of said rollers, of a plurality of sign sections, said sections having loops at their opposite ends provided with spaced inwardly extending recesses, rods disposed through said loops, a cross bar provided with a cut away portion intermediate its ends, tongues rigid with said cross bar and disposed in said cut away portion, said tongues being also arranged in opposed relation and adapted to project through said section recesses between the inner ends of said recesses and the rods extending therethrough, another cross bar pivotally connected at one end to one end of the first mentioned cross bar, and means to lock the free ends of said cross bars together over the loops ends of said sections.

3. In a display device of the class described, the combination with a casing, and a driven roller in one end thereof, of a bracket slidably mounted in the other end of said casing, a roller rotatably mounted in said bracket, an endless sectional belt surrounding said rollers, spring tension means serving to keep said belt taut, and a cam adapted to engage said bracket to move it inwardly and longitudinally of the casing to slacken said belt.

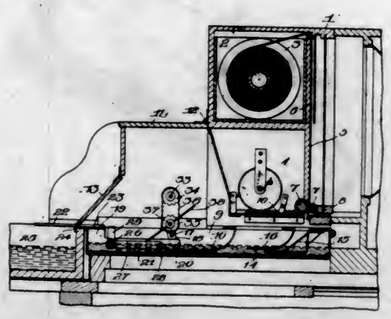
4. In a display device of the class described, the combination with a casing, and a driven roller in one end thereof, of bearing plates mounted on the inner opposed surfaces of said casing, a bracket slidably mounted between said bearing plates, a roller rotatably mounted in said bracket, an endless sectional belt surrounding said rollers, spring tension means serving to normally keep said belt taut, and a hand operable cam adapted to engage said bracket to move it inwardly and longitudinally of the casing to slacken said belt.

5. In a display device of the class described, the combination with a casing, and a driven roller in one end thereof, of a substantially U-shaped bracket slidably mounted in the other end of said casing, a roller rotatably mounted in said bracket, an endless sectional belt surrounding said rollers, spring tension means arranged within said casing and adapted to bear against said U-shaped bracket and serving to keep said belt taut, and a hand operable cam adapted to engage said bracket to move it inwardly and longitudinally of the casing against said tension means to slacken said belt.

[Claim 6 not printed in the Gazette.]

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1,229,945. PHOTOGRAPHIC DEVELOPING APPARATUS. JOHN S. GREENE, Rochester, N. Y., assignor to Commercial Camera Company, Providence, R. I., a Corporation of Rhode Island. Filed Dec. 4, 1915. Serial No. 65,120. (Cl. 95—13.)



1. In a photographic developing apparatus, the combination with a dark chamber, a developing container and a fixing container therein arranged in juxtaposition to the developing container but exteriorly of the dark chamber, of a wringing device arranged between the containers but accessible from the exterior of the dark chamber adapted to permit a print to be drawn therethrough as it is passed from one to the other of said containers.



3. In a photographic developing apparatus, the combination with a liquid container, a carrier having a normal position within the container and adapted to be shifted to an elevated position and a print wringer on said carrier.

7. In a photographic developing apparatus, the combination with a liquid container, of a carrier consisting of a tray adapted to normally lie in a submerged print receiving position within the container and movable to an elevated print delivering position, of a wringing roll carried by the tray, means for holding it spaced from the bottom of the latter when the tray is in its first mentioned position but permitting it to move into operative wringing position with reference thereto when the tray is raised to delivering position, and means for feeding a print into the tray beneath the roll while the latter is in inoperative position.

[Claims 2, 4 to 6, and 8 to 11 not printed in the Gazette.]

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1,229,946. TORTILLA-MAKING MACHINE. REFUGIO GUTIÉRREZ, San Antonio, Tex. Filed Aug. 30, 1916. Serial No. 117,749. (Cl. 107—60.)



1. In a tortilla making machine, a cooker comprising a rotary cooking surface composed of a series of cooking plates, means for heating said plates, and means for tilting the plates to turn and dump the cakes.

2. In a machine for making tortillas, a cooker comprising a rotary body formed of an annular series of plates, means for heating said plates, means for tilting the plates to turn and dump the cakes, and means for intermittently turning the cooker.

3. In an apparatus for making tortillas, a cooker comprising a rotary stove having a cooking surface consisting of a series of spaced plates, means for heating said plates, means for tilting the same at prescribed intervals for cake turning and dumping operations, and pawl and rack mechanism for intermittently operating said stove.

4. In a machine for making tortillas, a rotary stove comprising an annular series of tilting plates, means for heating the plates, means for successively tilting each plate to turn the cake thereon on to another plate, means for subsequently tilting each plate to a dumping position, means for tilting the plate in advance of the dumping plate to a non-interfering position, and means for rotating the stove.

5. In a machine for making tortillas, a cooker having a cooking surface for successively receiving the cakes, and means for operating portions of said surface in the motion of the cooker for turning and discharging the cakes.

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1,229,947. ATHLETE'S GUARD. FRANK HAGGERTY, Chicago, Ill., assignor of one-fourth to Charles Izenstark, Chicago, Ill. Filed Jan. 22, 1917. Serial No. 143,803. (Cl. 2—190.)

1. A device of the class described comprising a guard arranged to fit against the back of the wearer; guards hingedly connected with the opposite sides of said back guard; hip guards hingedly connected with said side guards and depending therefrom; and means for securing the device about the body of the wearer, substantially as described.



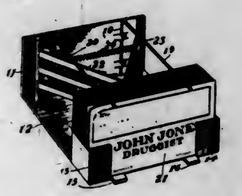
5. A device of the class described comprising a padded back guard arranged to fit against the back of the wearer; padded side guards arranged at opposite sides of said back guard; straps on the outer face of said back guard; elastic straps connecting said side guards and passing under said back straps; supplemental looped elastic connections between the adjoining edges of said back and side guards; padded hip guards hingedly connected with said side guards and depending therefrom; stiffening boards embedded in each of said guards; and means for securing the device about the body of the wearer, substantially as described.

6. A device of the class described comprising a back guard; side guards; a flexible connection between said side guards slidably connected with said back guard; and supplemental looped flexible connections between said side and back guards, substantially as described.

[Claims 2 to 4 and 7 not printed in the Gazette.]

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1,229,948. LABEL-HOLDER. LINCOLN HALL, Los Angeles, Cal. Filed June 12, 1916. Serial No. 103,266. (Cl. 211—37.)

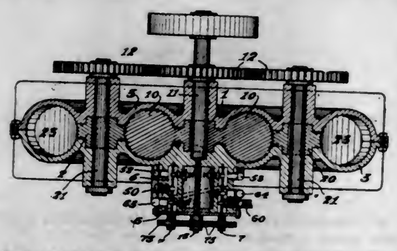



1. A laber holder, comprising a base plate, label positioning uprights, a pair of yieldable binding members adapted to force the labels against said uprights, and a pair of horizontally-swinging vertically adjustable label retaining arms adapted to secure the labels against vertical movement while the foremost label is being withdrawn from the holder.

2. A label holder, comprising a base plate, a pair of upturned label retaining tangs disposed along the front end of said base plate, a pair of horizontally swinging label binding members pivotally mounted at the rear end of said base plate, means whereby said binding members will be held resiliently and adjustably against the rear of a pack of labels, and means for insuring the pack of labels against vertical movement while a label is being withdrawn therefrom.

3. A label holder, comprising a base plate, a pair of oppositely disposed vertically extending tangs at the forward end of said base plate, a vertically disposed back plate along the rear edge of the base plate, a pair of resiliently held binding members pivotally mounted at the rear of the base plate and adapted to intermesh with each other while their outer ends bear against a label pack, horizontally swinging vertically adjustable label retaining arms adapted to lie over the pack, whereby a single label may be removed from the pack without disturbing the remaining labels therein.

1,229,949. ROTARY ENGINE. EDWARD HARRIGAN, Tacoma, Wash. Filed Nov. 23, 1915. Serial No. 63,135. (Cl. 123—13.)



1. A gas engine having rotative piston and abutment members, a casing having chambers for said members, a primary expansion chamber, an ignition chamber and an exhaust chamber, channels connecting said expansion and exhaust chambers with the piston chamber, and a valve in each of said channels.

2. A gas engine having rotative piston and abutment members, a casing having chambers for said members, a primary expansion chamber and an exhaust chamber in annular form, an ignition chamber within the expansion and exhaust chambers, valves connecting the ignition chamber with each of the surrounding chambers, and ports connecting each of the expansion and exhaust chambers with the piston chamber.

3. A gas engine having rotative piston and abutment members, a casing having chambers for said members, a primary expansion chamber, an ignition chamber and an exhaust chamber, channels connecting said expansion and exhaust chambers with the piston chamber, a valve in each of said channels, and rotative shafts having cams thereon for actuating said valves.

4. A gas engine having rotative piston and abutment members, a casing having chambers for said members, a primary expansion chamber and an exhaust chamber in annular form, an ignition chamber within the expansion and exhaust chambers, valves connecting the ignition chamber with each of the surrounding chambers, ports connecting the expansion and exhaust chambers with the piston chamber, and two ports connecting each of said annular chambers with the piston chamber adjacent the common axial plane defined by the piston and rotor shafts, and at opposite sides of the chamber cylinder, the pair of said ports leading from the same side of the chamber cylinder communicating with the piston chamber at opposite sides of the axial plane.

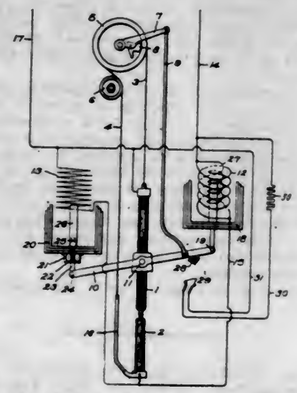
5. An explosive engine of the character described comprising a piston chamber, a piston rotatable therein, an explosion chamber separate from the piston chamber, and surrounding the rotative axis of the piston, two annular chambers surrounding opposite ends of the explosion chamber, one serving successively as an admission and as a primary expansion chamber, and the other as a compression and as an exhaust chamber, ports communicating between the explosion chamber and the expansion and exhaust chambers, valves adapted to control said ports, shafts passing through said annular chambers, and cams on said shafts controlling said valves.

[Claims 6 and 7 not printed in the Gazette.]

1,229,950. ARC-LAMP. CHARLES E. HARTHAN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 12, 1915. Serial No. 45,144. (Cl. 176—55.)

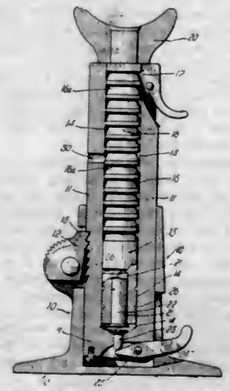
1. In an arc lamp, a feeding mechanism for the lamp comprising an actuating member and series and shunt magnets, and a lost motion connection between the armature of the shunt magnet and the actuating member for moving said member in either direction.

2. In an arc lamp, a feeding mechanism comprising an actuating member and series and shunt magnets, and a lost motion connection between the armature of the shunt magnet and said actuating member for moving said member in either direction, the connection between the armature and said member being normally inoperative and the armature normally floating in the field of the magnet.



3. In an arc lamp, a feeding mechanism for the lamp comprising an actuating member and series and shunt magnets, and a lost motion connection between the armature of said shunt magnet and said member comprising a pin carried by the one and a strap carried by the other and inclosing the pin whereby the actuating member is moved in either direction by a movement of the armature of the shunt magnet.

1,229,951. JACK. TRACY B. HATCH, South Pasadena, Cal. Filed July 5, 1916. Serial No. 107,487. (Cl. 254—1.)



1. A jack embodying a relatively stationary cylinder and a removable plunger therein, means to hold an explosive charge in the plunger, and means to detonate the charge.

2. A jack embodying a relatively stationary cylinder and a movable and removable plunger therein, means to adjustably support the cylinder, means to hold an explosive charge in the end of the plunger, and means to detonate the charge.

3. A jack embodying a relatively stationary cylinder and a movable or removable plunger therein, means to catch and hold the plunger against downward movement, means to hold an explosive charge in the end of the plunger, and means to detonate the charge.

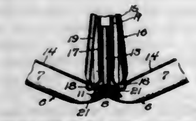


4. A jack embodying an upright relatively stationary cylinder and a plunger therein, adapted to move upwardly in the cylinder, means to hold the plunger against downward movement while allowing its upward movement, means for adjustably supporting the cylinder, and means to cause expansion of a fluid in the cylinder below the plunger.

5. A jack embodying an upright relatively stationary cylinder and a plunger therein projecting from the upper end of the cylinder, ratchet means to catch and hold the plunger against downward movement, means for adjustably supporting the cylinder, the lower end of the plunger having a bore for reception of an explosive shell, and firing means carried by the cylinder in operative relation to a shell in said plunger bore.

[Claims 6 to 10 not printed in the Gazette.]

1,229,952. CASE FOR CIGARETTES AND THE LIKE. THOMAS F. HATHAWAY, Elgin, Ill., assignor to Illinois Watch Case Co., Elgin, Ill., a Corporation of Illinois. Filed Jan. 26, 1917. Serial No. 144,751. (Cl. 206—41.)

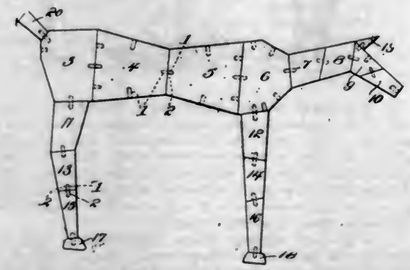


1. In a case of the kind described, the combination of two covers each formed with complementary joints, a pintle extended through the joints to form a pivotal connection between the covers, a coiled spring arranged upon the pintle with the ends thereof exerting pressure in the direction of the covers to open the same, pins extended radially into the case, a holder mounted on the pins, and members depending from the holder on opposite sides of the pintle and adapted to engage with the covers, the ends of the spring being engaged with the members to maintain the holder in central position between the covers, substantially as described.

3. In a case of the kind described, the combination of two covers each formed with complementary joints, a pintle extended through the joints to establish a pivotal connection between the covers, a torsional spring arranged upon the pintle having its ends exerting an opening tendency on the covers, a holder loosely arranged between the covers, guiding means for maintaining the holder in a fixed position longitudinally of the pintle, and lugs formed on the holder one on each side of the pintle adapted to rest against the covers, there being an opening in each lug within which an end of the torsional spring may lie to maintain the holder adjacent the pivotal end of the case and centrally between the covers, substantially as described.

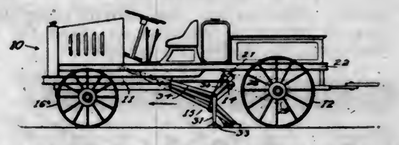
[Claims 2 and 4 not printed in the Gazette.]

1,229,953. FIGURE TOY. FRED W. HEATLIE, Kentland, Ind. Filed July 25, 1916. Serial No. 111,240. (Cl. 46—40.)



A figure toy comprising blocks adapted when certain of the edges thereof are brough to aline and removably connected to represent the complete outline of the figure of an animal and when certain other edges of the blocks are brought together to represent the outlines of other and different animals, including the polygonal or six-edged blocks 3 and 6, the trapezoidal blocks 4, 5, 13, 15 and 20, the trapezial blocks 7, 8, 9, 10, 11, 12, 14, 16, 17, and 18, and the substantially triangular blocks 19 and 21.

1,229,954. WALKING ATTACHMENT FOR MOTOR-CARS. HARRY K. HEDGES, Los Angeles, Cal. Filed Nov. 6, 1916. Serial No. 129,769. (Cl. 21—90.)

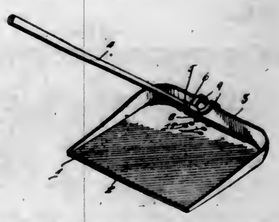


1. In a propulsion mechanism for motor vehicles, the combination with a power plant, of a crank shaft disposed transversely of the vehicle frame and adapted to be driven by said power plant, pitman rods pivotally secured to each of the cranks of said shaft, leg members adapted to be pivotally suspended from the free end of said pitman rods, and means whereby rotation of said crank shaft will act to propel the vehicle.

2. In a propulsion mechanism for vehicles, the combination with a power plant mounted thereupon, of a crank shaft disposed transversely of said vehicle frame and adapted to be driven by said power plant, a pitman rod pivotally secured to each of the cranks of said shaft, a downwardly depending leg member pivotally secured to the free end of said pitman rod, a foot pivotally secured at the lower end of said leg and adapted to bear upon the ground during the act of propulsion, and means whereby the rotation of said crank shaft will act upon the pitman rod and the leg to propel the vehicle.

3. In a propulsion mechanism for vehicles, the combination with a power plant, of a crank shaft mounted transversely of the vehicle frame and adapted to be rotated by the power plant, a pitman rod pivotally secured to each of the cranks of said shaft, a leg pivotally secured to the free end of each of said pitman rods and adapted to depend downwardly, a foot pivotally secured to the lower end of each of said legs, and a thrust rod secured at one end to the frame of the vehicle and at its other end to the pivotal mounting of the leg in relation to the pitman rod, whereby rotation of the crank shaft will act to exert a force of propulsion upon the vehicle.

1,229,955. HAND MANURE-SCRAPER. LOUIS HELLER and ELO NEESE, Round Top, Tex. Filed July 3, 1916. Serial No. 107,433. (Cl. 55—41.)

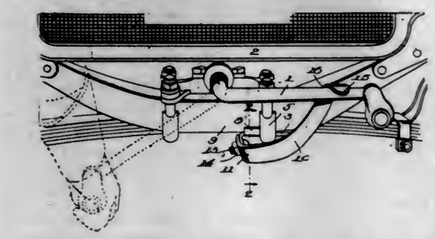


1. In a device of the class described the combination of a scraper, a handle fixedly secured to said scraper and extending forwardly over said scraper at an angle of 45 degrees therefrom, a shank struck from a single sheet of metal securing said handle to said scraper, rivets fixedly securing said shank to said scraper, said rivets being substantially elliptical in cross section, whereby said shank will not be weakened because of the greater marginal space allowed.

2. As a new article of manufacture, a shank for holding a scraper to a handle, said shank being struck from a sheet of metal so as to form a sleeve, said sleeve in its blank form being rectangular in shape, a neck provided upon said sleeve, a yoke connected to said neck, said yoke terminating in divergingly extending fingers, said fingers provided with a plurality of elliptical shaped openings whereby the fingers may be fixedly secured to the bottom portion of a shovel and the yoke bent around its flange after which the sleeve may be rolled so as to form a socket to receive a handle.

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1,229,956. ATTACHMENT FOR MOTOR-VEHICLES. JAMES D. HENDERSON, Monmouth, Ill. Filed Nov. 4, 1916. Serial No. 129,465. (Cl. 123—185.)

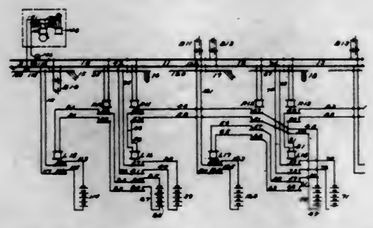


1. An attachment of the character specified, comprising a bracket for attachment to the body of a vehicle adjacent to the crank shaft, said bracket having a depending oblique portion, a spring holder having an angular portion extending transversely of the depending oblique portion and adjustably connected therewith, said holder curving upwardly, outwardly and forwardly to disengage the crank from the engine shaft and to brake the same and having a hook at its upper end for engagement by the cranking shaft to hold the same from movement in the reverse direction and to hold the same in inoperative position.

2. An attachment of the character specified comprising an arm having means for connecting the same to a motor vehicle adjacent to the crank, said arm having a cam surface for moving the crank shaft longitudinally away from the engine shaft and having a hook at the end of the cam surface, the cam surface being shaped to move the crank into the hook and merging smoothly into the hook.

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1,229,957. CAB-SIGNAL SYSTEM. ROBERT J. HEWETT, Westfield, N. J. Filed Jan. 5, 1916. Serial No. 70,362. (Cl. 246—27.)



1. In a railway signal system, a trackway divided into blocks, means for indicating the home and distant positions along the trackway with respect to each block, a cab signaling mechanism on the cab adapted to give a single indication, and means along the trackway for actuating said signaling mechanism on the cab when the car or train approaches a home or distant position and the block is clear.

2. In a railway signal system, a trackway divided into blocks, means defining home and distant positions along the trackway with respect to each block, a cab signaling mechanism carried by the cab and adapted to give a single indication indicating "proceed," and means along the trackway for actuating said signaling mechanism when the car or train approaches a home or distant position and the corresponding block is clear, whereby the failure to receive a "proceed" indication indicates to the engine-man to proceed at caution or to stop the train depending upon whether the train is approaching a distant or home position.

3. In a railway signal system, a trackway divided into blocks, means for indicating the home and distant positions along the trackway with respect to each block, a cab signaling mechanism on the cab, and means along the trackway for controlling said cab signaling mechanism, the signal received in the cab being the same when a train approaches a home or distant position whereby such signal indication in the cab must be interpreted in accordance with whether the train is approaching a home or a distant position.

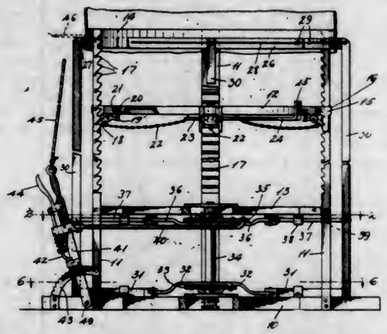
4. In a railway signal system, a trackway divided into blocks, stationary home and distant markers for each block spaced along the trackway, a cab signaling mechanism on the cab adapted to give a single indication, and means along the trackway for actuating said cab signaling mechanism when the car or train approaches a home or distant marker, said signal indications being the same when approaching a home or distant marker and are interpreted in accordance with whether the train is approaching a home or a distant marker.

5. In a railway signal system, a trackway divided into blocks, a home and distant marker for each block, a cab signaling mechanism on the cab adapted to give a single positive indication indicating "proceed," and means along the trackway for actuating said cab signaling mechanism only when the car or train approaches a home or distant marker and the block corresponding to the said marker is clear.

[Claims 6 to 9 not printed in the Gazette.]

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1,229,958. SKIRT-MARKER. ELLA M. HITCHCOCK and EDD C. HOLLER, Los Angeles, Cal. Filed June 5, 1913. Serial No. 771,791. (Cl. 33—10.)



1. A garment marker comprising a support for a person, a continuous integral garment supporting band, segmental clamps outside the band adapted to press upon and grip a garment against said continuous integral band, substantially parallel adjustable arms carrying said clamps, adjusting means connected with the intermediate parts and the lower parts of said arms for advancing or retracting them in parallel relation.

2. A garment marking device comprising a band for holding the garment in spread form, clamps adapted to grip the garment against said band and direct a marking substance around the same and means within the control



of the person wearing the garment for setting said clamps simultaneously when standing erect.

3. A garment marking apparatus comprising an adjustable support, a ring capable of holding the garment in spread form and clamps under the control of the operator when standing erect upon said support for gripping the garment against said ring, the clamps directing the location of the mark upon said garment.

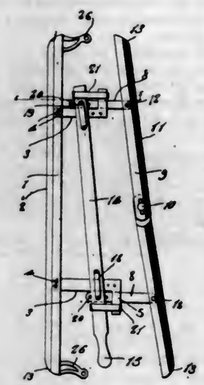
4. A garment marking apparatus comprising a frame having graduated standards and a garment engaging member mounted thereon, a person supporting platform adjustably mounted upon said standards, clamps adapted to force a garment against the said garment engaging member, standards carrying said clamps, parallel operating means for drawing said clamps simultaneously toward the garment engaging member to grip the garment and means for bridging the spaces between the ends of said clamps.

5. A garment marking apparatus comprising a frame having rack standards therein, a platform having adjustable means for engaging the said racks of said standards for supporting the platform at different heights, a garment engaging band carried by said standards, segmental clamps for holding a garment against said band bars carrying said clamps and means for moving said bars in and out radially of the apparatus, for holding or releasing the garment.

[Claims 6 to 9 not printed in the Gazette.]

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1,229,959. COMBINED TROUSERS HANGER, STRETCHER, AND CREASER. HENRY C. HUBERT, St. Louis, Mo. Filed Mar. 29, 1916. Serial No. 87,508. (Cl. 223—19.)



1. A combined trousers stretcher and creaser comprising a pair of relatively spaced creasing and stretching bars, arms secured to one of the bars, relatively spaced plates secured to the arms and extending at right angles thereto, an adjusting bar carried by said arms, adjusting arms pivotally secured to the other bar and extending between said plates, means formed on the adjusting bar for slidably receiving the adjusting arms, said adjusting arms provided with a plurality of openings therein, leaf springs secured to the adjusting bar, pins carried by said leaf springs for an engagement with the openings in the adjusting arms, tension means connected to the adjusting bar and to the plates for normally holding the bars apart, and means for supporting the bars vertically to crease and stretch a trousers leg.

2. A combined trousers stretcher and creaser comprising a pair of relatively spaced creasing and stretching bars, said creasing bars provided with their outer edges beveled to form creasing edges, said bars consisting of two sections, means for hinging said sections together to allow one section to be folded upon the other section, arms secured to the inner edges of one of the bars, adjusting arms pivotally secured to the other bar, means formed on the arms for slidably receiving the adjusting arms, an adjusting bar carried by said arms, means for adjustably securing the adjusting arms to the adjusting bar, tension means connected with the adjusting bar and with the means for securing the adjusting arms to the arms to normally hold said creasing and stretching bars apart, said adjusting bar consisting of two sections, means of hinging said sections together, and means for holding the sections of the creasing and stretching bars in a rigid position.

3. A combined trousers stretcher and creaser comprising a pair of relatively spaced creasing and stretching bars, means formed on the outer edge of the bars to provide creasing edges, said bars consisting of two sections, the sections of one of the bars secured together by a flexible means, means for securing the sections of the other bar together, means for adjustably securing the bars together, tension means for normally holding the bars apart, means for holding the bars in a rigid position, and means for supporting the bars vertically to crease and stretch a trousers leg.

4. A combined trousers stretcher and creaser comprising a pair of relatively spaced creasing and stretching bars, arms pivoted to one of said bars, an adjusting bar secured to said arms, arms secured to the other creasing and pressing bar and slidably received by the adjusting bar, and tension means connected to the last mentioned arms and adjusting bar to force the creasing and pressing bars apart.

5. A combined trousers stretcher and creaser comprising a pair of relatively spaced creasing bars, arms pivoted to one of said bars, an adjusting bar adjustably secured to said arms, arms secured to the other bar and slidably received by said adjusting bar, and tension means connected to the second mentioned arms and to the adjusting bar for forcing the bars apart.

[Claim 6 not printed in the Gazette.]

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1,229,960. METAL ARTICLE AND PROCESS OF MAKING SAME. CHAD H. HUMPHRIES, Kearney, N. J., assignor to The Commercial Research Company, Long Island City, N. Y., a Corporation of New York. Filed Sept. 28, 1914. Serial No. 863,897. (Cl. 75—1.)

1. As a new material, a hard, dense relatively conductive, mechanically homogeneous fine-grained metallic mass mainly composed of particles of a metal of the tungsten class but also containing another and bonding metal of lower melting point, said mass being substantially non-ductile but malleable to an extent which will permit swaging hot or cold.

2. As a new material, a hard, dense relatively conductive, mechanically homogeneous fine-grained metallic mass mainly composed of particles of tugsten but also containing another and bonding metal of lower melting point, said mass being substantially non-ductile but malleable to an extent which will permit swaging hot or cold.

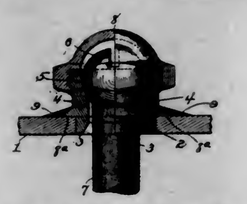
3. As a new material, a hard, dense relatively conductive, mechanically homogeneous fine-grained metallic mass mainly composed of particles of a metal of the tungsten class but also containing a little nickel as a bonding material, said mass being substantially non-ductile but malleable to an extent which will permit swaging hot or cold.

4. As a new material, a hard, dense relatively conductive, mechanically homogeneous fine-grained metallic mass mainly composed of particles of tungsten but also containing a little nickel as a bonding material, said mass being substantially non-ductile but malleable to an extent which will permit swaging hot or cold.

5. As a new material, a metallic mass composed of fine-grained tungsten with its particles bonded and united by a relatively small amount of lower melting metal in a dense hard malleable but substantially non-ductile body.

[Claims 6 to 21 not printed in the Gazette.]

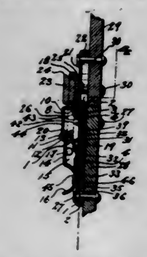
1,229,961. FLEXIBLE STAY-BOLT CONNECTION FOR BOILERS. CHARLES HYLAND, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Jan. 7, 1916. Serial No. 70,841. (Cl. 85—1.5.)



1. In stay bolt connection for boilers, the combination of a boiler plate having an opening through the same, and a stay bolt sleeve having an integral shoulder to rest on the outer face of the plate and an integral flange conforming in size and shape to the opening in the plate and resting within the latter, the shoulder being secured to the plate by welding.

2. In stay bolt connection for boilers, the combination of a boiler plate having a bolt opening, a stay bolt sleeve having a shoulder and a flange, the latter conforming in size and shape to the opening in the plate and resting within said opening and the flange resting on the outer face of the plate, the said shoulder having a beveled upper face, and secured to the plate by welding.

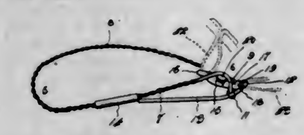
1,229,962. TRUNK-FASTENER. JOSEPH S. ISIDOR, Newark, N. J., assignor to The R. Neumann Hardware Co., a Corporation of New Jersey. Filed Jan. 12, 1917. Serial No. 141,926. (Cl. 70—115.)



1. A fastening catch comprising an upper section and a lower section, a catch-member on said upper section, a lever-member pivoted to said lower section, a hasp-member pivoted to said lever-member and controlled by the latter to position the same for engagement or disengagement relative to said catch-member, a key-controlled lock-mechanism associated with said lower section, comprising a pivoted locking-tumbler, a key-post above said locking-tumbler, means on the upper end of said locking-tumbler engageable by the bit of a key to throw said locking-tumbler into either operative or released position, and means connected with said lever-member adapted to be engaged by the lower end of said locking-tumbler to prevent manipulation of said lever-member, combined with a spring-pressed yieldable stop-pawl having a pair of stop-nosings thereon, and a stop-nosing on said locking-tumbler adapted to be engaged by one or the other of said stop-nosings of said stop-pawl to hold said locking-tumbler in either locked or released position.

2. A fastening catch comprising an upper section and a lower section, a catch-member on said upper section, a lever-member pivoted to said lower section, a hasp-member pivoted to said lever-member and controlled by the latter to position the same for engagement or disengagement relative to said catch-member, a key-controlled lock-mechanism associated with said lower section, comprising a pivoted locking-tumbler, a key-post above said locking-tumbler, a pair of key-engageable projections on the upper end of said locking-tumbler for oscillating the latter, a latch-piece on the lower end of said locking-tumbler, a latch-stud having a receiving slot connected with said lower member, the receiving slot of said latch-stud being adapted to receive said latch-piece of said locking-tumbler to prevent manipulation of said lever-member, a spring-pressed yieldable stop-pawl having a pair of stop-nosings thereon, and a stop-nosing on said locking-tumbler adapted to be engaged by one of the other of said stop-nosings of said stop-pawl to hold said locking-tumbler in either locked or released position.

1,229,963. SEWING APPLIANCE. SAMUEL D. JACKSON, Lumpkin, Ga. Filed Feb. 29, 1916. Serial No. 81,195. (Cl. 112—22.)



1. A sewing appliance including a handle member, a shuttle, means pivotally securing said shuttle in said handle member, and a plate carried by said handle having a curved end engaging one end of said shuttle.

2. A sewing appliance including a handle member, a shuttle, means pivotally securing said shuttle to said handle member, a plate secured to said handle member having a curved end engaging one end of said shuttle, and spring means for engaging and loosening said shuttle in said securing means.

3. A sewing appliance including a shuttle, holding means pivotally receiving said shuttle, a handle member carried by said holding means, a plate carried by said handle member having a curved end engaging one end of said shuttle, and spring means for engaging the pointed end of said shuttle to loosen the latter in said holder.

4. A sewing appliance comprising a handle having a loop formed on one end, a shuttle pivoted on said loop, said loop being bent to form an anchoring member, a plate secured to said anchoring member, and means for attaching the plate to the handle.

5. A sewing appliance comprising a handle having a loop formed on one end, a shuttle pivoted on said loop, said loop being bent to form an anchoring member, a plate pivoted to said anchoring member, and a cylindrical extension formed on the plate and surrounding a portion of the handle.

1,229,964. LIQUID COATING COMPOSITION. SIEGMUND JACOBS, Cicero, Ill., assignor of one-third to Charles Petrasek, Cicero, Ill. Filed Sept. 21, 1916. Serial No. 121,506. (Cl. 134—54.)

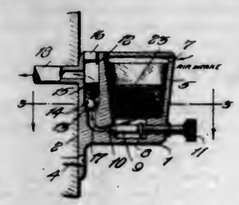
1. A paint oil comprising Pará rubber 2 ounces; gasolene 32 ounces; petroleum 32 ounces; and oil of turpentine 224 ounces.

2. A liquid coating composition comprising Pará rubber, gasolene, petroleum, oil of turpentine, linseed oil, China wood oil, white lead, red lead, sulfate of zinc, and lead acetate.

1,229,965. ATTACHMENT FOR INTERNAL-COMBUSTION ENGINES. ROBERT L. JENKINS, Richmond, Va. Filed Mar. 12, 1917. Serial No. 154,159. (Cl. 137—26.)

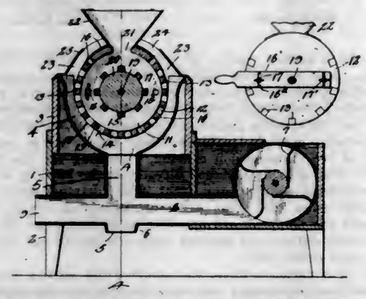
1. An attachment for internal combustion engines, comprising a body portion, having a recess constituting a cup, and an auxiliary recess communicating with the bottom of the cup, an inlet valve disposed within said recess, the opposite end of the inlet valve extending through the base of the cup, said body portion having a vertically disposed valve chamber, a valve in said chamber, a conduit communicating with the recess at one end and with the valve chamber at the other, and a pipe establishing communication between said valve chamber and the cylinders of the engine.





2. An attachment for internal combustion engines comprising a body portion having a vertically disposed valve chamber, a recess constituting a cup and an auxiliary recess communicating with said first named recess at the lower end thereof, a conduit joining the valve chamber with said auxiliary recess, a needle valve disposed within the auxiliary recess and having a conical seat at the end of said conduit, the stem of the said needle valve extending through the base of the body portion and terminating in a hand wheel, a ball valve for closing one end of said conduit, means for cushioning the ball valve disposed within the valve chamber, and a pipe for establishing communication between the valve chamber and the cylinders of the engine.

1,229,966. PEANUT SHELLER OR HULLER. HENRY R. JERNIGAN, Ariton, Ala. Filed July 10, 1916. Serial No. 108,453. (Cl. 130—30.)

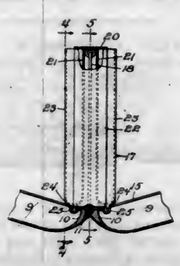


1. In a peanut shelling or hulling machine, the combination of an inner hulling drum having a slatted surface, an outer hulling drum having a slatted surface, said drums being provided with end heads, a shaft extending through said heads, a cylinder mounted upon said shaft to rotate within the inner drum, and means journaled upon the shaft and operatively mounted upon one of the drum heads for adjustment for shifting said drums to adjust their slats with relation to one another whereby to vary the sizes of the openings between the slats of the outer drum.

2. A hulling machine comprising an inner slatted drum, an outer slatted drum, said drums being provided with end heads, one of the end heads of the inner drum having bolts extending therefrom, and the adjacent end head of the outer drum having segmental slots for the passage of said bolts, a shaft extending through the drums and their heads, a cylinder mounted upon said shaft within the drums, a lever pivotally mounted upon the shaft in proximity to the slotted head and having slots receiving said bolts, whereby the drums may be relatively adjusted axially, and nuts upon the bolts for clamping the same in adjusted position.

3. In a peanut shelling or hulling machine, the combination of an inner hulling drum having a slatted surface, an outer hulling drum having a slatted surface, a shaft extending through said drums, a beater mounted upon said shaft to rotate within the inner drum, and means journaled upon the shaft and operatively associated with one of the drums for shifting said drums to vary the sizes of the openings between the slats of the other drum.

1,229,967. CASE FOR CIGARETTES AND THE LIKE. JOHN E. JOHNSON, Elgin, Ill., assignor to Illinois Watch Case Co., Elgin, Ill., a Corporation of Illinois. Filed Jan. 26, 1917. Serial No. 144,724. (Cl. 206—41.)



1. In a case of the kind described, the combination of two covers, a holder, a frame slidingly arranged within the holder, a common pivotal connection between the covers and frame, and tension means connected to the holder and frame tending to draw the holder toward the pivotal connection, the covers being arranged to engage the holder on opposite sides thereof at all times whereby the holder is centralized in position between the covers, substantially as described.

2. In a case of the kind described, the combination of two pivotally connected covers, a holder, a frame slidingly arranged within the holder and pivotally connected to the case, and tension means connected to the frame and holder and tending to draw the holder toward the pivotally connected end of the frame, the holder being arranged to engage on opposite sides of the frame with the covers at all times whereby the position of the holder is centralized, substantially as described.

6. A case of the kind described comprising, in combination, two pivotally connected covers, a holder between the covers, and a spring connected with the holder exerting tension toward the pivotal connection between the covers for yieldingly maintaining the holder against the pivoted ends of the covers to normally open the covers, substantially as described.

8. A case of the kind described comprising, in combination, two pivotally connected covers, a holder between the covers movable toward and from their pivotal connection, and a spring for opening the covers connected with the holder for yieldingly holding the same in place, substantially as described.

[Claims 3 to 5 and 7 not printed in the Gazette.]

1,229,968. THROTTLE-VALVE MECHANISM FOR LOCOMOTIVES. JOSHUA J. JONES, Schenectady, N. Y. Filed Feb. 19, 1917. Serial No. 149,632. (Cl. 74—17.)



1. The combination, with a locomotive boiler, of an outside operated throttle valve; a throttle lever; and operating connections coupled positively to said throttle valve, to said throttle lever, and to each other, said con-

nections including automatically operable means for compensating variation of boiler length under expansion and contraction.

5. The combination, with a locomotive boiler, of an outside operated throttle valve; a throttle lever; a fulcrum bracket fixed to the boiler, intermediate the throttle valve and throttle lever; a double armed compensating lever journaled in said fulcrum bracket; a throttle rod section coupling one of the arms of said lever to the throttle valve; and a throttle rod section coupling the opposite arm of said lever to the throttle lever.

[Claims 2 to 4 not printed in the Gazette.]

1,229,969. BULLET-LUBRICATOR. JOHN KASCHENBACH, Wilkes-Barre, Pa. Filed July 21, 1916. Serial No. 110,601. (Cl. 86—19.)



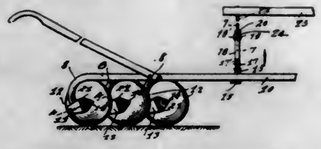
1. A bullet lubricator including a receptacle having a lubricant chamber and provided at one end thereof with a wall and open at the other end, and a plunger fitting in the receptacle and arranged to compress the lubricant between it and the said wall and provided with a bullet receiving opening adapted to permit the bullet of a cartridge to be exposed to the grease or lubricant, said plunger being movable inwardly by the pressure of a cartridge against it, whereby the lubricant is forced into contact with the bullet.

2. A bullet lubricator of the class described including a receptacle adapted to contain a lubricant and a plunger arranged within the receptacle at the mouth or opening thereof and provided with a bullet receiving opening and having a tapered extension forming a continuation of the walls of the bullet receiving opening and provided with apertures.

3. A bullet lubricator including a receptacle of tubular form provided at one end with an end wall and having a removable cap at the other end and a plunger arranged within the receptacle at the open end thereof and conforming to the configuration of the same, said plunger being provided with a bullet receiving opening fitting the bullet and adapted to expose the same to the contents of the receptacle, said plunger being movable inwardly by a cartridge as the lubricant is consumed and the pressure of the cartridge serving to force the lubricant against the bullet of the cartridge.

4. A bullet lubricator of the class described including a receptacle adapted to contain a lubricant, a plunger arranged within the receptacle at the mouth or opening thereof and consisting of a disk having a bullet receiving opening and provided with a cup-shaped forwardly projecting tapered extension, and an absorbent backing for the disk surrounding the said extension, the latter being provided with apertures.

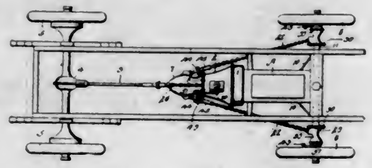
1,229,970. CULTIVATOR ATTACHMENT. JOEL R. KELLEY, Owasso, Okla. Filed Oct. 20, 1915. Serial No. 56,874. (Cl. 97—37.)



1. The combination with a cultivator beam, of standards depending from the beam, brackets clamped to said standards, and having flat faces provided with bolt sockets, said faces being formed to hold cultivator shovels in operative position, and brackets also formed to be bolted upon the faces of said clamps, and consisting of angularly disposed plates one of which is bolted to the faces of the clamps, and cultivator disks mounted upon the second arms of said brackets, said cultivator disks being provided with tubular hubs upon their rear faces and bolts passed through the disks and the hubs and secured to said brackets, the ends of said hubs extending through the second arms.

2. The combination with a cultivator having a downwardly extending implement supporting standard, a clamp mounted on said standard in rotary vertical adjustable relation, said clamp having a bearing face provided with bolt sockets, a bracket consisting of a pair of plates disposed at an acute angle, one of said plates being shaped to be bolted upon said bearing face, and a cultivator disk mounted upon the opposite plate and including a tubular hub secured to the rear face of the disk and a bolt passed through the disk and hub and having a fixed bearing in the last mentioned plate.

1,229,971. FOUR-WHEEL DRIVE FOR AUTOMOBILES. CHARLES WILLIAM KENNEDY, Clarence, Mo., assignor of one-half to Wilber Jackson, Macon, Mo. Filed Dec. 19, 1916. Serial No. 137,843. (Cl. 21—90.)



1. In a motor vehicle, the combination with a vehicle frame, and an engine mounted thereon, of transmission gearing located directly behind the engine, a drive shaft extending from said transmission gearing rearwardly to the rear differential gearing of the rear driving axle, front differential gearing located in close proximity to and in rear of the transmission gearing, a housing for the front differential gearing fastened directly to the housing of the transmission gearing, and front wheel driving shafts extending from the front differential gearing divergently toward the front wheels to which said shafts are geared, the front differential gearing being located at one side of the main drive shaft.

3. In a motor vehicle, the combination with a vehicle frame, and an engine mounted thereon, of transmission gearing located directly behind the engine, a drive shaft extending from said transmission gearing rearwardly to the rear differential gearing of the rear driving axle, front differential gearing located in close proximity to and in rear of the transmission gearing, a housing for the front diffrential gearing fastened directly to the housing of the transmission gearing, front wheel driving shafts extending from the front differential gearing divergently toward the front wheels to which said shafts are geared, the front differential gearing being located at one side of the main drive shaft, said front differential gearing embodying a master gear, a driving pinion meshing therewith, and a manually controlled clutch for connecting said pinion to and disconnecting the same from said main driving shaft.

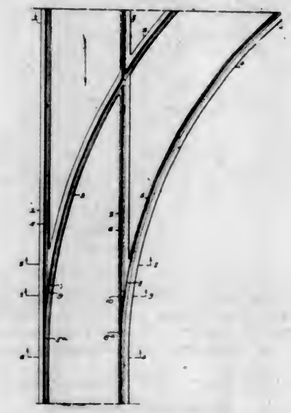
[Claim 2 not printed in the Gazette.]

1,229,972. SWITCH CONSTRUCTION. EUSTACHIUS J. KING, Philadelphia, Pa. Filed Nov. 3, 1916. Serial No. 129,371. (Cl. 104—12.)

1. A switch consisting of intersecting main and branch tracks having fixed points and formed with flange receiving grooves, of which those in front of the switch and in the branch track are deeper than those of the main track.

2. A switch consisting of intersecting main and branch tracks having fixed points and formed with flange receiving grooves, of which those of the main track in front of the switch and of the branch track are of a depth greater than the height of a wheel flange, while those beyond the switch are of a depth less than the height of such flange.

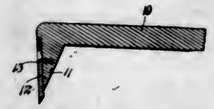
3. The combination in a switch of a main track and a



branch track connected to said main track, said tracks being grooved; the grooves in each of the main tracks including a relatively deep portion and also a shallow portion gradually merging into said deep portion, and the grooves of the branch track forming a continuation of and being of substantially the same depth as the deep grooves of the main track.



1,229,973. HORSESHOE. FREDRICK A. KINGHAN, Eagle Grove, Iowa. Filed Mar. 10, 1916. Serial No. 83,379. (Cl. 168—29.)



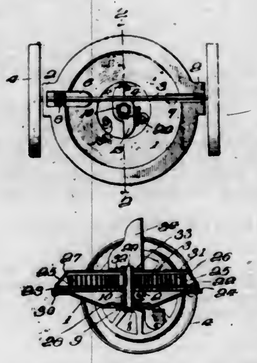
The combination with an animal shoe having heel calks formed with a projecting shoulder, of a wearing plate having a substantially rectangular outline to cover the rear face of the calk to which the plate is welded, said plate having its upper edge engaging beneath said shoulder of the calk flush with the outer surface of the shoulder, the opposite end of said plate projecting an appreciable distance beneath said calk and beveled to provide a sharp edge, and a substantially V-shaped tang cut from the plate approximately central thereof, and bent at a right angle to be embedded in said calk.

1,229,974. SPRING-MOTOR FOR MECHANICAL TOYS. HARRY T. KINGSBURY, Keene, N. H. Filed July 22, 1916. Serial No. 110,755. (Cl. 185—37.)

1. A motor of the character described, comprising a plate, means for supporting an axle, a shaft rotatably supported in said plate, a pawl carried by the shaft, ratchet teeth carried by the plate, a spring secured to the shaft, and having driving means for rotating said axle.

2. A motor of the character described, comprising a plate, an axle rotatably supported by said plate, a shaft rotatably supported on said plate at right angles to the axle, a pawl carried by the shaft and made of flat spring metal parallel with the plate, said plate having ratchet teeth formed therein, and a spring having one end secured to the shaft and the opposite end having driving means for rotating the axle.

3. A motor of the character described, comprising a plate, a wheel supporting axle rotatably mounted in said plate, a shaft rotatably supported in said plate, a spring metal pawl carried by the shaft, ratchet teeth carried by the plate, a spring having one end secured to said shaft, and means carried by the opposite end of the spring for rotating the axle.

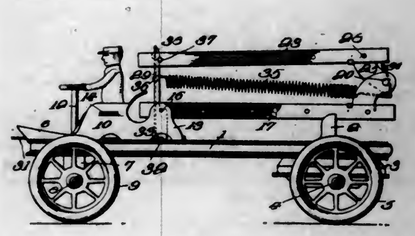


4. A motor of the character described, comprising a plate, a drive axle rotatably supported by the plate and parallel therewith, a shaft rotatably supported in the plate at right angles thereto, a spring metal pawl carried by the shaft, ratchet teeth carried by the plate, a spring having one end secured to said shaft and means carried by the opposite end of the spring for rotating said axle.

5. A motor of the character described, comprising a plate, an axle rotatably mounted thereon, a rotatable shaft supported by the plate, a spring metal pawl carried by the shaft, ratchet teeth struck up from the metal of the plate and engaging the pawl, and a spring secured to the shaft and having means for driving said axle.

[Claims 6 to 10 not printed in the Gazette.]

1,229,975. TOY LADDER-TRUCK. HARRY T. KINGSBURY, Keene, N. H. Filed July 22, 1916. Serial No. 110,758. (Cl. 46—48.)



1. A toy ladder truck, comprising a ladder pivoted thereto and formed of pivotally connected sections, a catch for holding the ladder sections in their folded horizontal position, and a spring connected to the inner end of the outer section below its pivot and normally holding the sections in their extended vertical position.

2. A toy ladder truck, comprising a ladder pivoted thereto and formed of pivotally connected sections, a catch for holding the ladder sections in their folded horizontal position, and a spring connected to the latch and

the inner end of the outer ladder section below its pivot with the other section and normally holding the sections in their extended vertical position.

3. A toy ladder truck, comprising a ladder pivoted thereto and formed of pivotally connected sections, an intermediately pivoted catch engaging the rung of the outer section of the ladder and holding the sections in their folded horizontal position, and a spring normally holding the sections in their extended vertical position.

4. A toy ladder truck, comprising a ladder pivoted thereto and formed of pivotally connected sections, an intermediately pivoted catch engaging the rung of the outer section of the ladder and holding the sections in their folded horizontal position, a spring normally holding the sections in their extended vertical position, and means for releasing the catch and extending beyond the forward end of the truck.

5. A toy ladder truck comprising a ladder pivoted thereto and formed of pivotally connected sections, a catch for holding the ladder sections in their folded horizontal position, and a spring connecting the inner end of the outer section below the pivot and the catch and normally holding the sections in their extended vertical position.

[Claims 6 to 14 not printed in the Gazette.]

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1,229,976. PAPER-HANGER'S PROP. MICHAEL KLAIS, Central City, Colo. Filed May 31, 1916. Serial No. 100,924. (Cl. 216—4.)



1. A prop comprising a sleeve, a foot piece adjustably mounted therein, a staff slidably mounted in the sleeve and provided at its side with a groove, a spring connected at one end with the staff and at its other end with the sleeve and lying in the groove and a shoulder piece carried by the staff.

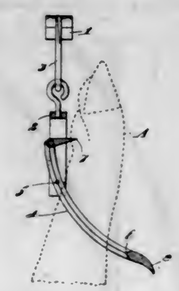
2. A prop comprising a sleeve, a foot piece adjustably mounted therein, a staff slidably mounted therein and provided with a groove located at its side, a spring secured at one end to the sleeve and at its other end to the staff and housed in the groove and a shoulder piece pivotally mounted upon the staff.

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1,229,977. SUPPORTING DEVICE. JOHN C. KLENK and JOHN J. CRONIN, Chicago, Ill. Filed May 3, 1916. Serial No. 95,044. (Cl. 24—249.)

3. A gambrel stick comprising a yoke; supporting members provided at the respective ends of said yoke and connected therewith for swinging about horizontal axes positioned intermediate the ends thereof, said members having openings therein adapted, when said members are in operative position, to receive and grip inserted portions of the object suspended, substantially as described.

4. A gambrel stick comprising a yoke; bails depending from the respective ends of said yoke; and supporting members mounted in said bails for free swinging about

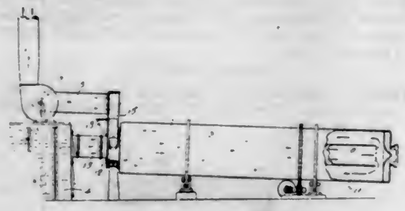


horizontal axes intermediate the ends thereof, said members having openings therein adapted, when said members are in operative position, to receive and grip inserted portions of the object to be suspended, substantially as described.

[Claims 1 and 2 not printed in the Gazette.]

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1,229,978. DRIER. WILLIAM JACOB KUNTZ, York, Pa. Filed Jan. 19, 1917. Serial No. 143,249. (Cl. 34—6.)



1. In a drier, a feed head having an internal cylindrical shell, a drying drum having an inner shell, an extension secured to said inner shell of the drum and projecting into the feed head at one side and into the said cylindrical shell thereof, and a gas conveying flue leading into the opposite side of the feed head and into said shell extension.

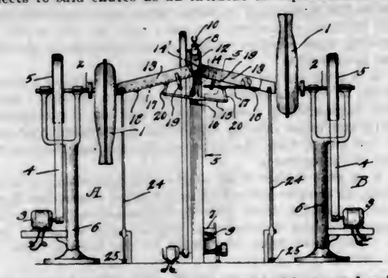
2. In a drier, a feed head having an internal cylindrical shell, a drying drum having an inner shell, an extension secured to said inner shell of the drum and projecting into the feed head at one side and into the said cylindrical shell thereof, and a gas conveying flue leading into the opposite side of the feed head and into said shell extension, the feed head having an enlarged opening around the said flue to admit air between the same and the said extension and into the inner shell of the drum.

[Claims 3 to 8 not printed in the Gazette.]

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1,229,979. FEED MECHANISM FOR MECHANICAL BALL-PITCHERS. JAMES M. KYLE, Spokane, Wash., assignor to Smith-Upton Co., Spokane, Wash., a Corporation of Washington. Filed Dec. 30, 1915. Serial No. 69,429. (Cl. 193—44.)

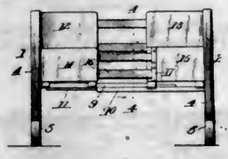
In feeding mechanism of the class described, the combination of oppositely inclined connected chutes, depressible bottom members for the chutes, a rocking lever connected at its opposite ends to said bottom members, a separating member carried by the rocking lever intermediate its ends and shiftable to cause alternate feeding of objects to said chutes as an incident to depression of the



bottom members by the weight of said objects, and guiding means for the bottom members.

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1,229,980. CONVERTIBLE CHAIR. LILLIE M. S. LEAVITT, Mountainview, N. H. Filed Aug. 17, 1916. Serial No. 115,386. (Cl. 155—6.)



1. A convertible chair comprising sides, bottom plates carried one by each side and arranged to slide one over the other and each of a length equal to the distance between the sides when in closed position, a back piece carried by each of the sides and consisting one half of the back when in closed position and longitudinal strips carried by one of the back pieces arranged to slide in guides carried by the other back piece.

2. A convertible chair comprising sides, bottom plates carried one by each side and arranged to slide one over the other and each of a length equal to the distance between the sides when in closed position, a back piece carried by each of the sides and consisting one half of the back when in closed position, longitudinal strips carried by one of the back pieces arranged to slide in guides carried by the other back piece, and a front piece hinged to each of the bottom plates and longitudinal strips carried by one of the front pieces arranged to slide in guides carried by the other front piece.

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1,229,981. APPARATUS FOR STRAIGHTENING METALLIC WIRES, RODS, AND TUBES OF CIRCULAR CROSS-SECTION. CARL AUGUST ALBERT LEHMANN, Bienne, Switzerland. Filed Mar. 15, 1916. Serial No. 84,430. (Cl. 153—37.)



1. Apparatus for straightening metallic wires, rods and tubes of circular cross section, comprising in combination a rotary die carrier, means for rotating the same, and a series of annular straightening dies mounted in said carrier, positioned out of the axis of rotation thereof alternately to one and the opposite side, obliquely placed relatively to the said axis of rotation and having rings freely rotatable around their axes with their inner faces in contact at one place with the surface of the work piece, in such a manner that, when the die carrier is being rotated, the said rings are caused to freely roll upon the surface of the work piece, producing simultaneously the straightening and automatic feeding movement of the work piece, substantially as described.

2. Apparatus for straightening metallic wires, rods and tubes of circular cross section, comprising in combination a rotary carrier, means for rotating the same, supports engaged in said carrier, straightening rings mounted in said supports, and means for holding said supports in such a position that their straightening rings are placed out of the axis of rotation of said carrier alternately to the one and the opposite side, said rings being ball-raced in their support to freely rotate around their axes with their inner faces in contact at one place with the surface of the work piece and being further obliquely placed to the axis of rotation of the said carrier, for the purpose of straightening and simultaneous automatic feeding of the work piece through the action of the freely rolling rings, substantially as described.

3. Apparatus for straightening metallic wires, rods and tubes of circular cross section, comprising in combination a rotary carrier, means for rotating the same, supports engaged in said carrier, straightening rings mounted in said supports, and means for holding said supports in such a position that their straightening rings are placed out of the axis of rotation of said carrier alternately to the one and the opposite side, said rings being ball-raced in their support to freely rotate around their axes with their inner faces in contact at one place with the surface of the work piece, and being further obliquely placed on the axis of rotation of said carrier alternately to the left-hand and right-hand side, for the purpose of straightening and simultaneous automatic feeding of the work piece through the action of the freely rolling rings, substantially as described.

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1,229,982. MATCH-BOX. DANA LEONARD, Waterloo, Iowa. Filed June 24, 1916. Serial No. 105,634. (Cl. 206—28.)



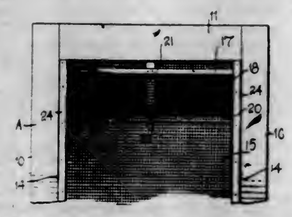
The herein described match box comprising an upright rectangular receptacle having a transverse slot in its front wall of a width and length to permit the passage of but a single match, the upper and lower edges of the slot having registering recesses, a sheet metal delivering member hinged to the rear wall of the receptacle and inclined downward and forward through such slot, and an upturned flange at the front end of said member spaced from the front wall a distance sufficient to permit the retention of but a single match, the front end of the member and its flange being provided with a recess registering with those in the wall, for the purpose set forth.

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1,229,983. WINDOW OR DOOR SCREEN. WILLIAM R. LEONARD, Covington, Ky., assignor of one-half to John Hachmeister, Covington, Ky. Filed May 3, 1916. Serial No. 95,175. (Cl. 156—37.)

1. In a screen, a frame including lateral members, a top cross bar, the outer faces of said lateral members

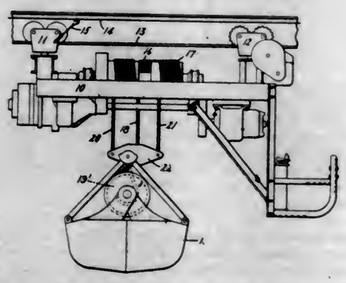
being rabbeted, a screen disposed within said rabbeted portions, beads holding the screen in place and disposed within the plane of the outer face of the frame, the inner corners of the cross bar and of the lateral members being rabbeted, a trap screen having its lateral and upper margins disposed in said rabbets, the lower margin of the trap screen being outwardly inclined, beads or moldings disposed within said rabbeted portions of the screen holding the trap screen in place, and a supporting member disposed midway between the side bars, extending vertically upward and having a flat outer face bearing against the outer screen and being gradually thickened toward its lower end to thereby support the lower edge of the inner screen in angular relation to the main screen, and means for holding the screens to said supporting members.



2. In a screen, a frame defining an opening, a screening member extending across the opening on one side of the frame but terminating short of the upper end of the opening, the upper edge of said screening member being turned outward and downward, a U-shaped metallic strip applied to said downwardly turned edge and extending entirely across the upper end of the screen and attached at its ends to the sides of the frame, and a trap screen disposed on the opposite side of the frame at the upper end thereof extending downward from the upper edge of the frame opening to a point considerably below the upper edge of the outer screen, the lower edge of the trap screen bound by a U-shaped metallic binding member and extending entirely across the screen opening and engaging the side bars of the frame, and a supporting member disposed between the first-named screen and trap screen and supporting the same in spaced relation, the binding strip on the trap screen being attached to the lower end of the supporting member.

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1,229,984. ELECTRICALLY-CONTROLLED HOIST. SAM H. LIBBY, East Orange, N. J., assignor to General Electric Company, a Corporation of New York. Filed May 1, 1914. Serial No. 835,690. (Cl. 254—185.)



1. A grab bucket hoist or the like, comprising a lacing drum, an electric motor having driving connections therewith, a holding drum and means whereby the motor operates the holding drum so as to support the bucket during loading and lift it during hoisting.

2. A grab bucket hoist or the like comprising a lacing drum and a holding drum, an electric motor having a positive driving connection with one of said drums, electromagnetically controlled friction clutch mechanism between the motor and the other drum, and means whereby the friction connection transmits more or less power depending upon whether or not the electromagnetic mechanism is energized.

3. A grab bucket hoist or the like, comprising a lacing drum, an electric motor having a positive driving connection therewith, a holding drum, and an electromagnetically controlled driving connection for transmitting more or less power from the motor to the holding drum at the will of the operator.

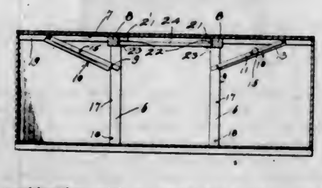
4. A grab bucket hoist or the like comprising a lacing drum, an electric motor having a driving connection therewith, a holding drum, and electromagnetically controlled means whereby a greater or less amount of power may be transmitted from the motor to the holding drum at the will of the operator.

5. A grab bucket hoist or the like comprising a lacing drum, an electric motor having a driving connection therewith, a holding drum, and magnetic clutch mechanism provided with means for effecting the transmission of a greater or less amount of power between the motor and the holding drum at the will of the operator.

[Claims 6 to 12 not printed in the Gazette.]

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1,229,985. GRAIN-DOOR. WILLIAM T. LINN, Arkansas City, Kans. Filed July 31, 1914. Serial No. 854,360. (Cl. 20—32.)



The combination with a car having a door opening, of vertical guides pivoted at their upper ends to the car at opposite sides of the door opening at the upper portion thereof, said guides being arranged to swing upwardly in opposite directions longitudinally of the car and away from the door opening to arrange them at the top of the car out of the way, means located at the lower ends of the guides for securing them in their vertical position and also in their position at the top of the car, spaced transversely disposed supporting members secured to the top of the car and forming a horizontal track, a grain door operating in the vertical guides, and short segmental guides fixed to the car at the top thereof above the vertical guides and extending above the plane of the track formed by the transverse supporting members for guiding the grain door onto the latter.

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1,229,986. GARMENT. LAURA K. LITCHFIELD, New York, N. Y. Filed July 19, 1916. Serial No. 110,072. (Cl. 2—145.)

1. A garment comprising a skirt embodying a lower portion formed of two thicknesses of fabric, a short bloomer section integral with the under layer of said lower portion, said bloomer section having leg openings, and means for forming a short crotch in said bloomer section between said leg openings.

2. A garment as characterized comprising a skirt portion; a bloomer portion, said bloomer portion conforming in shape to and forming a lining for the lower section of said skirt portion, said bloomer portion having leg openings formed therein in spaced relation, said openings being formed in the area within the attachment of the bloomer portion and skirt portion.

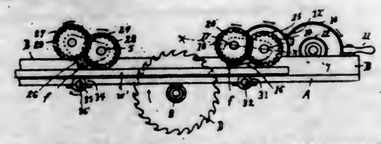
3. A garment as characterized having a skirt portion; a bloomer portion, said bloomer portion being in part shaped to conform with and to form a lining for the lower section of said skirt portion, said bloomer portion having leg openings formed therein; and means for permanently attaching the bloomer portion and skirt portion at a point



sufficiently high on said skirt portion to prevent the unsupported part of said bloomer portion extending below the lower edge of said skirt portion.

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1,229,987. FEEDING MECHANISM. GEORGE LITTLEFORD, Fort Thomas, Ky. Filed Sept. 18, 1916. Serial No. 120,879. (Cl. 143—55.)



1. In combination with a tool to operate upon the stock, a support on which to feed the stock, and a stock feeding mechanism comprising a positively driven member to feed the stock forward to the tool, a member pivotally supported relative to the shaft of said positively driven member to be displaced from its normal position by the stock in its passage to the tool, a return feed member carried by and displaced with said pivotally supported member by the passage of the stock, said return feed member returning to its normal position after the passage of the stock in the forward direction and thereby engaging a portion of the stock to feed it in the opposite direction.

3. In combination with a plurality of tools to successively act upon the stock to be treated, means to automatically feed a first section of the stock past the successive tools, and a return feed mechanism adjacent to the first of said tools to automatically engage and feed a second section of the stock in the reverse direction to the feed of said first stock section, and comprising a supporting member carried rotatably relative to said forward feed member and in position to be engaged by the first stock section, and a return feed member rotatably mounted thereon and movable therewith through engagement with the first stock section.

5. In combination with a stock severing tool, a support on which to feed the stock, positively driven means to feed the first section of the stock to and away from said severing tool, a positively driven return feed member normally in position to engage a second section of the stock to feed it in the opposite direction, a roller carried by said stock support to support said second stock section and rotatable in only one direction, and means engaged by said first stock section to displace said return feed member out of engagement with the stock until after the stock has been severed.

7. In combination with a stock severing tool, a support on which to feed the stock, a plurality of feed shafts, rotary driven stock forward and return feeding members



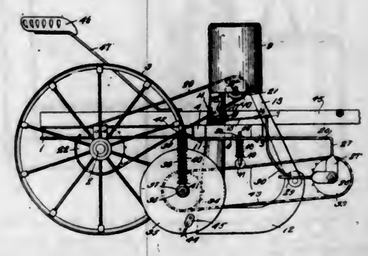
employed in pairs in advance of and in rear of said tool, said forward feed members being mounted upon said feed shafts in position to engaging a first section of the stock to feed the stock forward, and said return feed members being located in position normally to engage a second section of the stock to feed it in the opposite direction to said first section, and pivotally supported members movable relative to said feed shafts, and to which said return feed members are journaled to be engaged by said first stock section to displace said return feed members out of engagement with said second stock section until after the stock sections have been severed.

9. In combination with a stock severing tool, a support on which to feed the stock, having an adjustable stock gage, a positively driven forward feed member to engage and feed a first stock section between said tool and said stock gage, a positively driven return feed member located at the opposite side of said tool in position to normally engage a second stock section to feed it in the opposite direction to that of said first stock section, and a member rotatably mounted concentrically with the axis of rotation of said forward feed member, and projecting into the path of travel of said first stock section, and upon which said return feed member is rotatably mounted.

[Claims 2, 4, 6, and 8 not printed in the Gazette.]

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1,229,988. CORN-PLANTER. GEORGE H. LORSCH, Florence, Nebr. Filed Nov. 25, 1916. Serial No. 133,415. (Cl. 111—6.)



2. In corn planters, the combination of a seed hopper, a seed discharge tube communicating therewith, a valve slidably mounted in said tube, a rockably mounted tripping shaft, a rod pivotally connected to the valve at one end, a tension spring connected to the valve rod at one end and to a fixed member at the other end, a depending arm secured on the tripping shaft, a shaft rotatably mounted in front of and parallel with the tripping shaft, a tripping arm secured on said rotatable shaft and adapted to engage the depending arm of the tripping shaft when said rotatable shaft is rotated, a sprocket wheel keyed on the rotatable shaft, a pair of spaced vertically movable bars, expansion springs mounted about said bars and acting to normally hold the same in depressed position, a drive wheel rotatably mounted between said rods, a sprocket wheel carried by said drive wheel and in alinement with the sprocket wheel keyed on the said rotatable shaft, driving connections between said sprocket wheels, and a marker carried by said drive wheel.

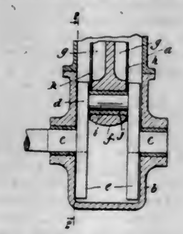
[Claims 1 and 3 not printed in the Gazette.]

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1,229,989. TWO-STROKE INTERNAL-COMBUSTION ENGINE. ARCHIBALD MONTGOMERY LOW, London, England. Filed Sept. 7, 1915. Serial No. 49,341. (Cl. 123—73.)

1. In a crank case compression engine the combination with two crank disks of a connecting rod of a width equal to that of the space between said disks, and side plates of resilient packing material secured to the sides of said connecting rod and contacting with the disks.

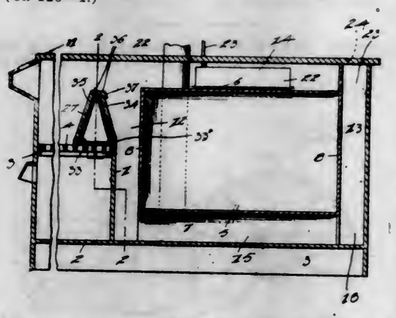
2. In a crank case compression engine the combination with two crank disks of a connecting rod of a width equal to the space between said disks and side plates of leather



on said rod contacting with the disks and adapted to reduce leakage of gas between said rod and disks.

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1,229,990. COOK-STOVE. COY D. MCCORMACK, Waynoka, Okla. Filed Mar. 1, 1916. Serial No. 81,479. (Cl. 126—1.)



In a stove, the combination with the fire box and a grate therein, of an elongated hollow body positioned within the fire box and resting on the grate and forming the rear wall of the fire box, longitudinally extending flanges located at the lower edges of the side walls of the body, protector plates mounted on the flanges and arranged in spaced relation with the side walls of the body, one of the protector plates having its upper edge curved downwardly and engaging over the upper edges of the body and the other protector plate.

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1,229,991. OIL-RETAINER FOR BARRELS OF FIREARMS. FREDRICK J. MCGAVISK, Grand Haven, Mich. Filed Oct. 30, 1916. Serial No. 128,567. (Cl. 42—91.)



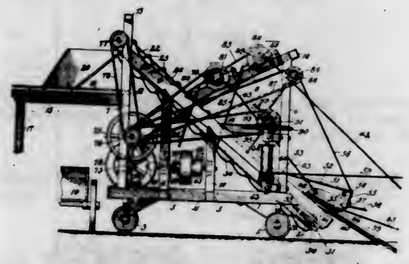
1. An oil retainer for firearm barrels comprising a shell removably engaged in the breech of the barrel, a plug yieldably connected with the shell for engaging the bore of the barrel, and means removably engaged with the barrel for closing the muzzle thereof.

2. An oil retainer for firearm barrels comprising a shell removably engaged in the breech of the barrel, said shell having its priming opening unobstructed, disks mounted in the shell, a coil spring disposed between the disks, one of said disks being disposed adjacent the priming opening, a rod threaded in the other disk, the outer end of said rod having a plug carried thereby for yieldably engaging the bore of the barrel, the disk adjacent the priming opening serving to receive the impact of the firing pin of the hammer, and means for closing the muzzle end of the barrel.

3. An oil retainer for gun barrels comprising a plate for closing the muzzle of the barrel, plates hingedly connected to said plate, means for detachably connecting the plates to the barrel, and means removably engaged with the breech end of the barrel, said means operating in conjunction with the plate to trap oil within the barrel.

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1,229,992. EXCAVATOR AND LOADER. JOHN MCGIRR, De Kalb, Ill., assignor, by direct and mesne assignments, of four-tenths to Jacob Ginsburg and one-tenth to George P. Hambrecht, Grand Rapids, Wis. Filed Oct. 9, 1913. Serial No. 794,280. (Cl. 214—10.)



1. In a machine of the character described, a main frame, a skid mounted upon said main frame, a shovel, means for moving said shovel to and from said skid, means for engaging the contents of the shovel to unload the same, and actuating means for moving said unloading means out of the path of movement of said shovel.

2. In a machine of the character described, a main frame, a shovel, means for moving said shovel to and from said main frame for the purpose of unloading the same, a device pivoted at one end to said main frame, the opposite end of said device being provided with downwardly extending fingers adapted to engage the load upon the shovel at the rear thereof, and means for moving said load engaging device around its pivot as an axis.

3. In a machine of the character described, a conveyer, a skid at the lower end of said conveyer, a shovel, means for moving said shovel to and from said skid, means for engaging the contents of the shovel to unload the same, and means for moving said contents engaging means out of the path of said shovel.

4. In a machine of the character described, a conveyer arranged to elevate material, a shovel, means for moving said shovel to and from the conveyer, an unloading device pivotally mounted at one end above said conveyer and provided at its opposite end with depending fingers arranged to engage the contents of the shovel whereby said contents will be automatically raked from the shovel on the return movement of the latter.

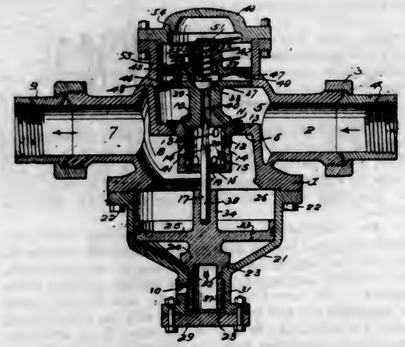
5. A machine of the class described including a conveyer arranged to elevate the material, a shovel, means for carrying the shovel to and from the conveyer, a gravity acting unloading device mounted at the said conveyer for upward and downward movement and provided with means for engaging the contents of the shovel, and hoisting mechanism located above and connected with the unloading device.

[Claims 6 to 16 not printed in the Gazette.]

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1,229,993. ENGINE DRIFTING-VALVE. VINCEN P. MCVOY, Mobile, Ala., assignor of one-half to Joseph M. Walsh, Mobile, Ala. Filed Feb. 3, 1916. Serial No. 75,962. (Cl. 137—53.)

1. In a drifting valve for locomotives, a double piston, a check valve carried thereby, and a piston-controlled check valve carried by said double piston with means for permitting the exhaust from the space between said pistons.



2. In a drifting valve for locomotives, a double piston, a check valve movable therewith and having a depending portion with ports, a valve seated on said piston and having a stem with escape passages, and a piston for actuating said valves.

3. In a drifting valve for locomotives, a check valve, separated pistons movable therewith, a valve movable in the space between said pistons, and means for permitting the exhaust from the space between said pistons.

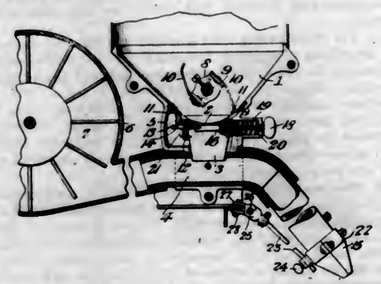
4. In a drifting valve for locomotives, a check valve, separated pistons movable therewith, a valve movable in the space between said pistons, means for permitting the exhaust from the space between said pistons, and a check valve movable with said pistons.

5. In a drifting valve for locomotives, a check valve, separated pistons movable therewith, a valve movable in the space between said pistons, means for permitting the exhaust from the space between said pistons, a check valve movable with said pistons, and a check valve for moving the stem of the first-named valve in one direction.

[Claims 6 to 25 not printed in the Gazette.]

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1,229,994. POISON-DISTRIBUTER. ALLEN MCWHORTER, Riverton, N. J. Filed Aug. 24, 1916. Serial No. 116,639. (Cl. 43—14.)



1. In a poison distributer, a supply member, the base thereof having therein an exit port, a wiper in said member, a head adapted to carry said wiper, means for rotating said head, said wiper being formed of a plate of suitable resilient material and adapted to drag from said head over the wall of the port with its outer end portion following the body of the wiper, said end portion having an elbow thereon at the terminal of the plate.



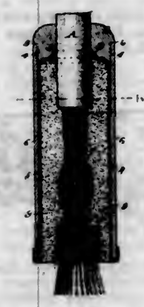
3. In a poison distributer, a supply member, a wiper therein, means for rotating the latter, the bottom of said member having therein an exit-port over which said wiper is adapted to ride, a valve on the device for said port, means for operating said valve in opposite directions to adjust the extent of discharge of the poison from said member and means for resiliently connecting the frame of said valve with an adjacent portion of said supply member.

5. In a poison distributer, a supply member, the same having in its bottom an exit port, a discharge nozzle on the frame of the device in communication with said port, and means for adjusting the direction of said nozzle, said means consisting of a shackle on said nozzle, a knuckle, a rod connectible with said shackle and a member of said knuckle, the other member of the latter being connectible with the frame of the device and tightening members for said rod and knuckle.

[Claims 2 and 4 not printed in the Gazette.]

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1,229,995. CABLE-POTHEAD. GEORGE F. MAINER, San Francisco, Cal. Filed Mar. 20, 1916. Serial No. 85,344. (Cl. 247—12.)



1. In combination with a metal covered cable, a relatively thick collar having a bore to receive the cable so that the collar will be held against lateral movement by the length of the walls formed by the bore, said collar being formed with a countersunk groove which extends into the body of the collar, a sleeve threaded over the collar, a paper lining in the sleeve, solder in the groove engaging the cable, and insulating compound in the sleeve and engaged with the lining so as to be held by the latter out of contact with the sleeve.

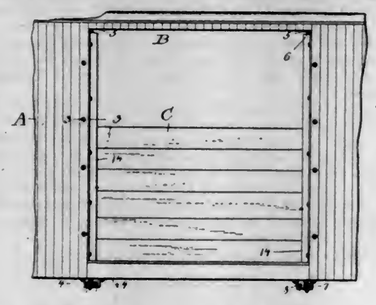
2. In a cable pot head, a collar having a bore to receive the cable and having a solder-receiving groove in its inner end extending into the bore, solder in the groove engaging the cable, a sleeve threaded over the collar, a filler in the sleeve, and a lining between the sleeve and filler to allow removal of the sleeve and filler upon melting of the solder.

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1,229,996. GRAIN-CAR DOOR. JOE MALY, Dwight, Nebr. Filed Apr. 26, 1915. Serial No. 24,017. (Cl. 20—28.)

In combination with a door casing and a door, a pair of cleats arranged upon the vertical edges of the casing, said cleats each comprising a single length of material, the vertical edges of said cleats being secured to the confronting and inner sides of the vertical portions of the casing, the intermediate portion of each of the cleats being bent longitudinally to provide the laterally extending abutting portions, the cleats being then bent longitudinally at right angles and coöperating with the casing to form a chamber, said chamber being provided with openings at spaced intervals, shafts rotatably mounted within each of the chambers and having wings formed thereon, said wings ex-

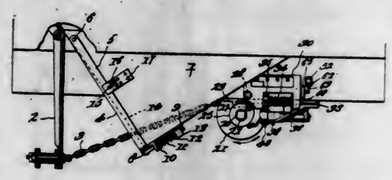
tending through said openings, and clamping bars mounted upon each of the wings and engageable with said door



to force the door in engagement with the abutting portions of said cleats.

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1,229,997. LOCK FOR HOPPER-DOORS. WILLIAM T. MANNING, Govans, Md. Filed Jan. 29, 1917. Serial No. 145,182. (Cl. 105—185.)



1. Mechanism for locking hopper doors comprising an operating shaft journaled transversely beneath the car and operable from both sides thereof, a winding drum carried by said shaft, a chain connecting said drum to the door, a cam carried by said shaft, a spring-impressed locking bar adapted to engage said cam, and anti-friction rollers carried by said cam and by the car body engaging the top and bottom of said locking bar when in the locked position, substantially as described.

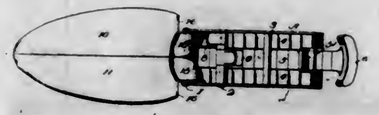
2. Mechanism for locking hopper doors comprising an operating shaft journaled transversely beneath the car and operable from both sides thereof, a winding drum carried by said shaft, a chain connecting said drum to the door, a cam carried by said shaft, a spring-impressed locking bar adapted to engage said cam, and antifriction rollers carried by said cam and by the car body engaging the top and bottom of said locking bar when in the locked position, with spindles for said rollers revolubly mounted in their respective bearings, substantially as described.

21. Apparatus for closing hopper doors comprising an operating shaft, a drum mounted thereon, and a chain connecting said drum and said door, with bent strips hinged to the sides of the hopper and fitting snugly against the sides of and masking the edge of the opening in the hopper, and also abutting against the inner face of the door when closed, with means for pressing said plates toward the door, substantially as described.

22. Apparatus for closing hopper doors comprising an operating shaft, a drum mounted thereon, and a chain connecting said drum and said door, with bent strips hinged to the sides of the hopper and fitting snugly against the sides of and masking the edge of the opening in the hopper, and also abutting against the inner face of the door when closed, with a link pivoted to and connecting the lower ends of said strips, and a spring pressing said link toward the hopper door, substantially as described.

[Claims 3 to 20 not printed in the Gazette.]

1,229,998. SHOE-STRETCHER. CHARLES G. MARKER, Denver, Colo. Filed Feb. 5, 1916. Serial No. 76,433. (Cl. 12—131.)



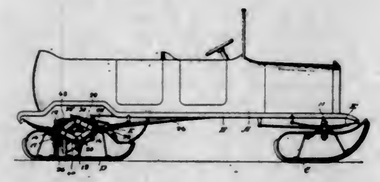
1. A shoe-stretcher comprising a frame, substantially U-shaped in cross-section, last-sections secured to said frame, a heel portion slidably mounted in said frame, and a step by step mechanism slidably mounted in said frame for spreading said last-sections or operating said heel portion.

6. The combination with a frame having three pins thereacross, one having gravity-pawls pivoted thereon, of last-sections detachably hooked to one of the pins, rack-bars slidably supported upon the bottom of the frame adapted to be locked by said pawls, one having means for spreading the last sections apart, and the other having means for engaging the heel of the shoe to be stretched, and means coöperating with one of said pins on said rack-bars, whereby the rack or racks may be forced endwise by the swinging of the lever.

[Claims 2 to 5 not printed in the Gazette.]

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1,229,999. MOTOR-SLEIGH. MICHAEL P. MARONG, Rock Glen, N. Y. Filed Feb. 16, 1917. Serial No. 149,062. (Cl. 21—47.)



1. The combination with a sleigh having rear runners, of propelling mechanism including spaced parallel shafts journaled between said runners, one of said shafts being yieldably supported, each shaft having a series of crank portions adjacent its opposite ends, propelling arms depending from said cranks, and motor operated means for simultaneously rotating said shafts for the purpose described.

2. The combination with a sleigh having rear runners, of propelling mechanism including spaced parallel shafts journaled between said runners, one of said shafts being yieldably supported, each shaft having a series of crank portions adjacent its opposite ends, propelling arms depending from said crank portions, a swivel connection between the said propelling arms of the respective shafts, and motor operated means for rotating said shafts as and for the purpose described.

3. The combination with a sleigh having rear runners, of propelling mechanism including spaced parallel shafts journaled between said runners, vertically disposed guide members carried by the runners, bearings for one of said shafts being yieldably mounted in said guides, each of said shafts having a series of crank portions adjacent its opposite ends, propelling arms depending from said crank portions, the arms of the respective shafts being connected in pairs, and motor operated means for simultaneously rotating said shafts for the purpose described.

6. The combination with a sleigh having rear runners, of vertically disposed guide members carried by said runners, bearings yieldably mounted in said guides, spaced parallel crank shafts mounted for rotation, one of said shafts being journaled in said bearings, each of said



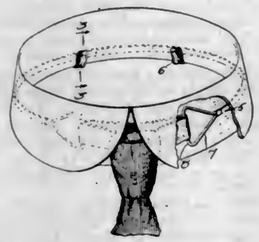
shafts having crank portions, propelling arms depending from said crank portions, and manually operable means for adjusting said bearings and their associated parts to vary the distance of the propeller arms from the ground or surface, and means for holding said parts in adjusted position.

7. The combination with a sleigh having rear runners, of vertically disposed guide members carried by the runners, bearing blocks yieldably mounted in said guides, spaced parallel shafts mounted for rotation, one of said shafts being journaled in said bearings, each of said shafts having crank portions, propelling arms depending from said crank portions, and means for holding said bearings against casual displacement in event said yieldable supporting means becomes broken.

[Claims 4 and 5 not printed in the Gazette.]

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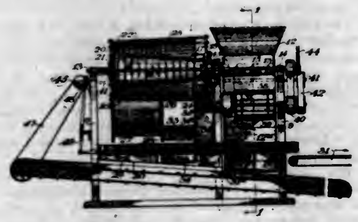
1,230,000. NECKTIE-ADJUSTER. WINFIELD S. MARR, Hildreth, and JOHN E. NELSON, Holdredge, Nebr. Filed Oct. 6, 1915. Serial No. 54,391. (Cl. 24—50.)



A necktie adjuster comprising a flexible metallic band having necktie receiving loops carried at its ends, and clasps carried by the band at points spaced from its ends and adapted to engage the fold of a collar, such clasps being secured to the band at points adjacent the upper ends of the clasps whereby to entirely conceal the adjuster between the folds of the collar and whereby to properly position the loops with respect to the height of the collar to acquire proper adjustment of the tie knot.

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1,230,001. ALMOND-HULLER. FRANCIS L. MARTENETTE, Chico, Cal. Filed Feb. 10, 1916. Serial No. 77,412. (Cl. 146—3.)



1. In an almond huller, hulling mechanism comprising a high-speed, rotatable beater, a low-speed imperforate conical drum inclosing the same, and open at its ends, whereby the nuts are fed longitudinally therethrough and out of the larger end of the drum, a screening cylinder inclosing said drum and rotatable therewith, said screening cylinder being provided with a variable mesh and an open discharge end opposite to the discharge end of the drum whereby to separate the hulled nuts from the hulls and the unhulled nuts from the others, a shaker screen to receive the hulled nuts from said cylinder, a waste conveyer to receive the hulls from said cylinder, and a return conveyer to receive the unhulled nuts therefrom.

2. In an almond huller, hulling machanism, screening and separating mechanism therefor to separately discharge the hulled nuts, the hulls and the unhulled nuts, a deflector for each discharge area of said screening and separating mechanism, a shaker screen for the first deflector, a waste conveyer for the second deflector, and a return conveyer for the third deflector, means in connection with said third deflector for shifting hulled nuts passing therethrough, and a supplemental deflector below said third deflector for discharging the hulled nuts onto said shaker screen.

3. In a nut huller, mechanism for removing the hulls from the nuts, means for separating the hulled nuts from the hulls, means for separating any unhulled nuts from the hulled nuts and the hulls, means for delivering the hulled nuts, the hulls and the unhulled nuts separately, and means for automatically conveying the delivered unhulled nuts back into the hulling mechanism.

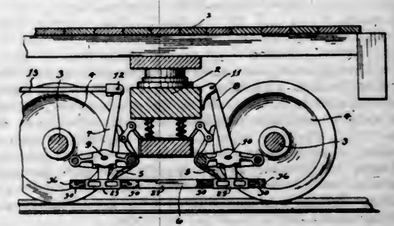
6. In a huller, a supporting structure, a shaker screen thereon, an underlying conveyer, a hulling mechanism including a rotary screen arranged above the shaker screen and provided with a variable mesh, an inclined deflector disposed beneath one discharge area of the rotary screen and leading to the shaker screen, and a second deflector disposed inclinedly opposite to the first deflector beneath the rotary screen and leading to the conveyer.

9. In a huller, a supporting structure, a shaker screen thereon, an underlying conveyer, a hulling mechanism including a rotary screen arranged above the shaker screen and provided with a variable mesh, a feed hopper for the hulling mechanism, means for delivering an air blast through one side of the hopper, a conduit leading from the opposite side of the hopper down to the conveyer, a deflector arranged beneath the rotary screen and leading to the conveyer, and a second deflector arranged beneath the rotary screen and leading to the shaker screen.

[Claims 4, 5, 7, and 8 not printed in the Gazette.]

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1,230,002. BRAKE MECHANISM. SAMUEL A. MATHERS, Chillicothe, Ohio. Filed Sept. 27, 1916. Serial No. 122,531. (Cl. 188—24.)



1. In a brake mechanism, a bottom truck rod between the lower ends of the live and dead levers comprising a connector member, releasable means for operatively connecting the lower end of both of said levers to said member, and means operable under impact to disconnect said releasable means to free said members from the lower ends of both of said levers.

2. In a brake mechanism, a bottom truck rod between the lower ends of the live and dead levers comprising a connector structure connecting the lower ends of both of said levers, and means operable under impact to release said structure from the ends of said levers at substantially the same time to allow the connector structure to drop onto the roadbed.

3. In a brake mechanism, a bottom truck rod between the lower ends of the live and dead levers comprising a connector member, releasable means for operatively connecting the lower end of both of said levers to said mem-

ber, and a releaser member movably mounted in connection with said connector member, said releaser member being movable in either a forward or rearward direction upon striking an obstruction to free said connector member from both of said levers to allow it to drop to the roadbed.

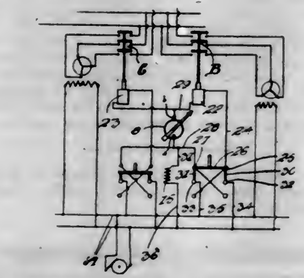
4. In a brake mechanism, a bottom truck rod between the lower ends of the live and dead levers comprising a connector member, dogs operating in conjunction with said member for operatively connecting it to the lower end of both of said levers, and a releaser member mounted in conjunction with said connector member to move in either a forward or rearward direction upon striking an obstruction to withdraw said dogs to free said connector member from both of said levers to allow it to drop to the roadbed.

5. In a brake mechanism, a bottom truck rod between the lower ends of the live and dead levers comprising a connector member slotted at their lower ends, dogs movable through said member and into said apertures to couple said levers to said member, a four sided releaser member extending around said connector member, and a cam structure on said releaser member operable, when the releaser member is moved in either a forward or rearward direction, to withdraw said dogs from their operative engagement with said levers.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,003. SAFETY ATTACHMENT FOR SYNCHROSCOPES. PLINY E. MEANS, Tyrone, N. Mex. Filed Aug. 6, 1915. Serial No. 44,045. (Cl. 171—118.)

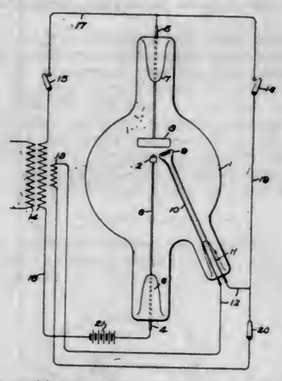


1. In a synchroscope, a dial, a hand movable over the face of the dial, a bridging contact carried by said hand, an arm pivoted to the side of the synchroscope, a ring centrally of the arm, a pair of contacts arranged at diametrically opposite points on said ring and in such a position that when the hand indicates synchronism the bridging contact will bridge the diametrically arranged contacts and a solenoid for moving the diametrically arranged contacts into engagement with the bridging contact when the device is set in operation.

2. The combination with a synchroscope having a movable bridging contact and fixed contacts coöperating therewith normally out of the path of the bridging contact, of magnetic means for moving the latter contacts into said path, a source of current and a controlling switch for energizing said magnetic means, a main switch and connections establishing a circuit comprising the source, the fixed contacts, the main switch and the controlling switch.

3. A synchroscope comprising a casing, a dial on said casing, an arm pivoted to the side of the casing and extending across the face of the dial, a ring centrally of the arm, a pair of diametrically opposed contacts on said ring, a link pivoted to the free end of the arm, a solenoid operating on said link to swing the arm on its pivot, said solenoid tending to move the arm away from the dial, a hand movable over the face of the dial and bridging contacts on the hand adapted to engage the first mentioned contacts when the hand indicates synchronism and when the solenoid is energized.

1,230,004. INCANDESCENT CATHODE DEVICE. GEORGE S. MEIKLE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 18, 1915. Serial No. 51,470. (Cl. 250—27.)



1. The combination of a source of alternating current, a rectifier comprising a sealed envelop, a gas filling therein, a main cathode adapted to operate at incandescence, a main anode, connections between said main electrodes and said source, an auxiliary incandescent electrode spaced away from said main electrodes, and means for starting and operating an arc between the auxiliary electrode and the main cathode.

2. A rectifier comprising a sealed container, main electrodes therein of materially different heat-dissipating capacities, the electrode of smaller heat-dissipating capacity being substantially rod-shaped and consisting of refractory material, a filamentary electrode adapted to be independently heated spaced away from said main electrodes, a filling of inert gas for said container having a pressure great enough to suppress electrical disintegration of a cathode when operating at incandescence, means for heating the filamentary electrode to incandescence and connections for operating an arc between said filamentary electrode and the main cathode.

3. The combination of a sealed container, a filling of inert gas therein, a main anode of large heat-dissipating capacity, a main cathode having a tip of materially smaller heat dissipating capacity than said anode, an auxiliary electrode spaced away from said main electrodes, independent electrical connections for operating an arc between said auxiliary electrode and the main cathode, and means for simultaneously supplying said main electrodes with current alternating in potential.

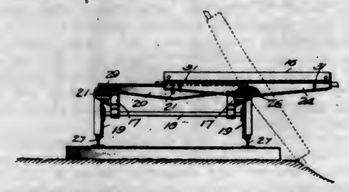
4. The combination of an envelop, a filling of ionizable gas therein, a main cathode of highly refractory material, a main anode, a source of alternating current, connections between said main electrodes and said source, an auxiliary electrode, means for heating the same, and means for connecting said auxiliary electrode to the terminal of said alternating current source which is connected to the anode whereby an electric discharge will occur between the auxiliary electrode and the main cathode.

5. The combination of an envelop, a main cathode, an anode, a source of alternating current, connections between said main electrodes and said source, an auxiliary electrode, means for producing a discharge between the auxiliary electrode and the main cathode whereby said cathode may be heated and an arc automatically started between said main electrodes.

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1,230,005. SIDE-DUMPING HAND-CAR. JAMES GUSTAVUS MEREDITH, Lynchburg, Va. Filed Dec. 23, 1916. Serial No. 138,535. (Cl. 105—190.)

1. A dumping hand car comprising a wheeled frame including longitudinal bolsters, pairs of spaced parallel cross beams extending above and secured to the bolsters, rollers journaled in the spaces between the said beams, a platform having lower transverse ribs resting on the rollers and laterally shiftable thereon, hooks projecting outwardly from the bolsters and upturned, parallel cross beams carried by the lower surface of the platform, and provided with intermediate cross bars engageable with the said hooks to form fulcrums at opposite sides of the wheeled frame, upon which the platform is tiltable.



2. A dumping hand car comprising a wheeled frame including longitudinal bolsters, pairs of spaced parallel cross beams extending above and secured to the bolsters, rollers journaled in the spaces between the said beams, a platform having lower transverse ribs resting on the rollers and laterally shiftable thereon, hooks projecting outwardly from the bolsters and upturned, parallel cross beams carried by the lower surface of the platform and provided with intermediate cross bars engageable with the said hooks to form fulcrums at opposite sides of the wheeled frame, upon which the platform is tiltable, said cross beams of the platform depending upon opposite sides of the said hooks.

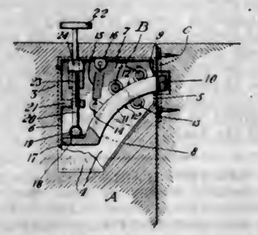
3. A dumping hand car comprising a wheeled frame including longitudinal bolsters, pairs of spaced parallel cross beams extending above and secured to the bolsters, rollers journaled in the spaces between the said beams, a platform having lower transverse ribs resting on the rollers and laterally shiftable thereon, hooks projecting outwardly from the bolsters and upturned, parallel cross beams carried by the lower surface of the platform, and provided with intermediate cross bars engageable with the said hooks to form fulcrums at opposite sides of the wheeled frame, upon which the platform is tiltable, said hooks projecting substantially in the vertical plane of the wheels of the said frame, and extending between the parallel beams of the platform.

4. A dumping hand car comprising a wheeled frame, a laterally shiftable platform carried by the frame and tiltable at opposite sides of the frame, and means for locking said platform in its normal and laterally shifted positions.

5. A dumping hand car comprising a wheeled frame, a laterally shiftable platform carried by the frame and tiltable at opposite sides of the frame, means for locking said platform in its normal and laterally shifted positions, and means for securing said locking means in inoperative position.

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1,230,006. LATCH. HUGH MEYERS, Grundy Center, Iowa. Filed Nov. 10, 1916. Serial No. 130,671. (Cl. 70—42.)



1. In a latch, a casing, spaced guide rollers therein, a curved latch bolt mounted to slide between said rollers and supported thereby, means for normally holding said latch bolt in active position, latch bolt retracting means, and a channeled foot on said latch bolt engaged by said retracting means.

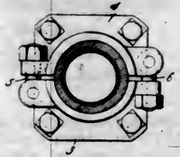
2. In a latch, a casing, spaced guide rollers therein, a latch bolt having a curved portion mounted to slide between said rollers and contacting therewith, a foot on said latch bolt having a channel therein, means for normally holding said latch bolt in active position, and a latch bolt actuating rod having a bearing ball thereon received in said channel.

3. In a latch, a casing, spaced guide rollers therein, a latch bolt having a curved portion mounted to slide between said rollers and contacting therewith, a foot on said latch bolt having a longitudinally extending channel therein, a latch bolt extending rod having a bearing ball at one end thereof received in said channel, and means for holding said foot in engagement with said ball.

4. In a latch, a casing, spaced rollers therein, a latch bolt having a curved portion mounted to slide between said rollers and contacting therewith, a foot on one end of said latch bolt having a longitudinally extending channel therein, means for normally holding said latch bolt in active position, a latch bolt actuating rod mounted to slide in said casing and engaging said foot, and a sleeve adjustably mounted on said rod.

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1,230,007. COMBINED Y-VALVE AND HOSE CONNECTION. FOSTER MILLIKEN, Lawrence, N. Y. Filed Feb. 19, 1916. Serial No. 79,346. (Cl. 137—75.)



1. In a device of the character described, a Y-connection provided with a metallic casing divided longitudinally into parts, an integrally constructed rubber lining for said casing covering the interior thereof, said lining being provided with a flange at its base and a flange at the outer end of each of the arms, said flanges overlapping flanges on said casing, means for clamping a rubber lined hose against the flange on said base, and independent means for clamping a rubber lined hose against each of the flanges of said arms whereby material flowing into the Y-connection may be distributed without coming in contact with metal.

2. In a device of the character described, a casing provided with an intake section and a plurality of radiating arms therefrom, and a lining of rubber covering the interior of said casing, said lining having its top and bottom thickened at the point where said intake section and said arms merge.

3. In a device of the character described, a casing provided with an intake section, and a plurality of radiating arms, and a lining of rubber covering the interior of said casing, said lining having its top and bottom thickened at the point where the arms and intake section merge and also thickened where the arms merge opposite and in line with said intake section.

4. In a device of the character described, a casing provided with an intake section and a plurality of radiating arms, said intake section being bulged outwardly on opposite sides at the point where the intake section and the arms merge, and a lining of rubber for said casing, said lining having an intake opening and radiating openings, all of said openings having the same diameter whereby the part of the lining adjacent the bulged portion of the casing is thicker than the remaining part.

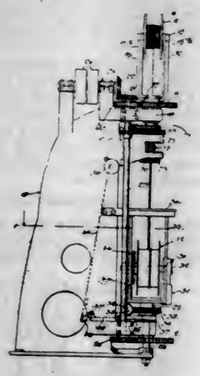
5. In a device of the character described, the combination with a collapsing hose, of a valve therefor, said valve

comprising a seat formed at each end so as to substantially fit the curvature of the hose and at the center to be broadened out, means for collapsing the hose against the broadened-out portion of the seat, and fulcrum members for connecting said means with said seat so that the valve may be used in any position.

[Claim 6 not printed in the Gazette.]

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1,230,008. MACHINE FOR ARMORING CABLES. GEORGE E. MIRFIELD and FRANK H. NULLMEYER, Youngstown, Ohio, assignors, by mesne assignments, to The Youngstown Sheet and Tube Company, Youngstown, Ohio, a Corporation of Ohio. Filed July 1, 1915. Serial No. 37,536. (Cl. 28—6.)



1. In a cable armoring machine, the combination of two frames arranged to revolve about a common axis, a shaft on which each frame is mounted, means connected with each shaft for revolving the frames in unison, a cable supply reel mounted in one frame and a cable receiving reel mounted in the other, each reel being arranged to revolve in its frame about an axis at right angles to the frame axes, whereby the cable is revolved as it passes from one reel to the other, means for revolving the receiving reel about its axis at variable speeds, and means between the two reels connected with the frame revolving means for applying armor to the cable at a fixed speed relative to the revolving speed of the cable, the engagement of the armor with the cable serving to control the feeding movement of the cable to a fixed speed relative to its revolving speed, substantially as described.

[Claims 2 to 4 not printed in the Gazette.]

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1,230,009. MEANS FOR REELING CABLES. GEORGE E. MIRFIELD and FRANK H. NULLMEYER, Youngstown, Ohio, assignors, by mesne assignments, to The Youngstown Sheet and Tube Company, Youngstown, Ohio, a Corporation of Ohio. Filed July 1, 1915. Serial No. 37,537. (Cl. 242—54.)



1. In a device of the class described, the combination of a reel, means for rotatably supporting the reel, means permitting said reel supporting means to turn freely in either direction about an axis at right angles to the axis of rotation of the reel, whereby the cable is free to untwist during the movement off from said reel, a shipping reel, means for winding the cable from said first mentioned reel onto the shipping reel, and a guide roller interposed between the two reels in position to occasion a bending or flexing of the cable around the surface of the guide roller during its passage from one reel to the other.

2. A device for removing twist from a cable, comprising a mounting for rotatably supporting a reel, means permitting said mounting to turn freely in either direction about an axis at right angles to the axis of revolution of said reel, and a guide roller for the cable passing off from said reel, substantially as described.

3. A device for removing twist from a cable, comprising a frame adapted to rotatably support a reel, a base member, a connection between said base member and frame, allowing said frame to turn in either direction about an axis at right angles to the axis of rotation of said reel, a second frame, and a guide roller for said cable passing from said reel and carried by said second frame, substantially as described.

4. In a device of the class described, the combination of a reel, means for rotatably supporting the reel, means permitting said reel and supporting means to turn freely in either direction about an axis at right angles to the axis of rotation of the reel, whereby the cable is free to untwist during the movement of said reel, a shipping reel, means for winding the cable from said first mentioned reel onto the shipping reel, and a guide member interposed between the two reels and adapted to afford a point of frictional contact with the traveling cable to restrict the untwisting action to the strand of cable intermediae said guide member and the first mentioned reel, substantially as described.

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1,230,010. ORNAMENT. KANZABURO MIYASAKI, Los Angeles, Cal. Filed Sept. 30, 1916. Serial No. 123,109. (Cl. 41—10.)



1. An article of the character described comprising a base cut to provide a body portion and laterally extending lobes, upper lobes secured to the base at points adjacent to the body portion thereof, and a plurality of petals formed from folded flexible fabric secured to the upper faces of the lobes and providing a covering therefor, and puffs made from fabric material and mounted upon the body portion and certain of said lobes.

2. An article of the character described comprising a base cut to provide a body portion and laterally extending lobes, upper lobes secured to the base at points adjacent to the body portion thereof, a plurality of petals formed from folded flexible fabric secured to the upper faces of the lobes and providing a covering therefor, puffs made from fabric material and mounted upon the body portion and certain of said lobes, certain of the said petals and puffs being colored distinctive from each other.

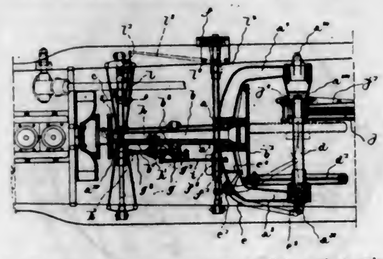
3. An article of the character described comprising a base cut to provide a body portion and laterally extending lobes, upper lobes secured to the base at points adjacent to the body portion thereof, a plurality of petals formed from folded flexible fabric secured to the upper faces of the lobes and providing a covering therefor, puffs made from fabric material and mounted upon the body portion and certain of said lobes, certain of the said petals and puffs being colored distinctive from each other, and feathers carried by the front end of the body portion constituting the head.

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1,230,011. FRICTION-GEARING. CHARLES M. P. MONTBARBON, deceased, Neuilly, by Henri Waël, administrator, Levallois-Perret, France, and GUSTAVE EMILE CHÉDAU, Levallois-Perret, France. Filed Jan. 18, 1915. Serial No. 2,945. (Cl. 74—26.)

2. Friction gearing comprising driving and driven members, a pivoted lever having connection with one of said members for moving said members into frictional engagement, and means exerting constant force on said lever and shiftable along the length of said lever, whereby the force of contact between said members may be varied.





5. Friction gearing comprising a disk and a wheel, the latter being shiftable radially relative to the disk, a pivoted lever having connection with said disk for moving the same into frictional engagement with the wheel, means exerting a constant force on said lever and shiftable along the length of the lever, and a connection between said wheel and force exerting means, whereby the force of contact between the disk and wheel is varied as the latter is shifted relative to the disk.

13. In a device of the character described, the combination of a frame having one end formed with oppositely projecting arms, a shaft supported in the outer ends of said arms and extending substantially transversely of the frame, a second shaft longitudinally journaled in the frame, a friction disk mounted on one end of said second shaft, a friction wheel slidably mounted on said first-mentioned shaft for frictional engagement with the disk, said second shaft being slidable endwise in said frame, whereby said friction members may be moved out of engagement, means for normally exerting pressure on said shaft to effect the engagement of said disk and wheel and means for varying the force of contact between said disk and wheel according to the position of said wheel upon its shaft.

[Claims 1, 3, 4, and 6 to 12 not printed in the Gazette.]

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1,230,012. FIREARM. ROBERT A. MOORE, New York, N. Y., assignor to The Moore Rifle and Arms Company, Inc., New York, N. Y. Filed Aug. 16, 1915. Serial No. 45,780. (Cl. 42—18.)



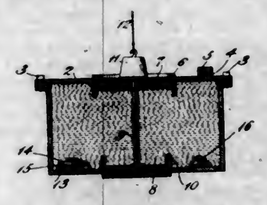
1. In a firearm, breech mechanism including a breech cylinder and a breech bolt adapted for movement in said cylinder and stop mechanism coöperative with said breech bolt to variably limit the movement of the latter and including a pair of stops mounted on the cylinder at right angles to the breech bolt and movable into and out of engagement with respect to the latter, and actuating means for said stops including a rotative member intermediate the stops and interlocking with the latter in such a manner as to shift the stops in opposite directions as an incident to movement of said rotative member.

2. In a firearm, breech mechanism including a breech cylinder and a breech bolt adapted for movement in said cylinder and stop mechanism coöperative with said breech bolt to variably limit the movement of the latter and including a pair of stops mounted on the cylinder at right angles to the breech bolt and movable into and out of engagement with respect to the latter, and actuating means for the stops consisting of a rotative member parallel with and located between the stops, said member being formed with cam grooves, and the stops having projections entering the cam grooves whereby the stops will be shifted longitudinally in respect to the rotative member as an incident to rotation of the latter.

3. In a firearm, breech mechanism including a breech cylinder and a breech bolt adapted for movement in said cylinder and stop mechanism coöperative with said breech bolt to variably limit the movement of the latter and including a pair of stops mounted on the cylinder at right angles to the breech bolt and movable into and out of engagement with respect to the latter, actuating means for said stops including a rotative member intermediate the stops and interlocking with the latter in such a manner as to shift the stops in opposite directions as an incident to movement of said rotative member, and a finger piece connected with said rotative member at its outer end and located exterior to the breech cylinder, and yieldable detent means intermediate said finger piece and the breech cylinder.

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1,230,013. HYDRAULIC PRESS. JOSEPH MORWITZ, Philadelphia, Pa. Filed July 8, 1916. Serial No. 108,177. (Cl. 138—10.)



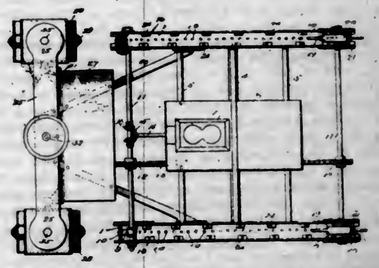
1. A device of the character stated, comprising a fluid container, an upper piston having its under surface contacting with the fluid, a lower piston having its upper surface contacting with the fluid, said pistons being connected and having their fluid contacting surfaces of different pressure areas, and means to exert pressure against one of said pistons.

2. A device of the character stated, comprising a fluid container, an upper and a lower interconnected piston having different pressure areas contacting with the fluid, and means to exert a pressure against the piston having the greater pressure area.

3. A device of the character stated, comprising a fluid container, an upper and a lower piston in said fluid container, a rod connecting said pistons, said pistons having different pressure areas contacting with the liquid, means to increase the effective weight of said pistons, and means to which the pressure of the liquid is imparted.

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1,230,014. TRACTOR. JOSEPH MOSCA, Rouse, Colo. Filed Sept. 22, 1916. Serial No. 121,615. (Cl. 21—114.)



1. A tractor comprising a pair of elliptical supports, a rigid connection between said supports, an endless band on each support and having holding cleats on its outer face, each support having guide flanges for the band, said

supports having their long axes horizontal, shafts arranged at the ends of the said long axes, said shafts having sprocket wheels and the supports having recesses for receiving the wheels, and the bands having openings for engagement by the spurs of the wheels to propel the bands, means for driving the shafts, a wheeled front truck for guiding the supports, means at each support for freeing the openings of the adjacent bands, and means for lubricating each band.

3. In a tractor, a propelling means comprising an endless band having outstanding cleats, a fixed support upon which the band is mounted, and means for moving the band circumferentially of the support, said support being substantially elliptical and arranged with its long axis horizontal, driving means comprising sprocket wheels at the ends of the long axis, the band having openings for engagement by the spurs of the wheels, and means for lubricating the band.

5. In a tractor, a pair of rigidly connected fixed supports, an endless band mounted to move circumferentially of each support, means for driving the band, means for lubricating the band, and a front truck having wheels at its ends mounted to swing together to guide the said truck, said truck being rigidly connected to the supports.

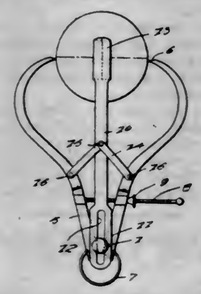
6. In a tractor, a pair of rigidly connected fixed supports, an endless band mounted to move circumferentially of each support, means for driving the band, means for lubricating the band, and means for guiding the tractor.

8. In a tractor, a support having a rounded periphery, and an endless band mounted to move on the periphery, means for moving the band, said band having holding cleats, means on the support for guiding the band, said band having openings, and the moving means comprising sprocket wheels engaging the openings, and means adjacent to the band for cleaning the openings.

[Claims 2, 4, and 7 not printed in the Gazette.]

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1,230,015. CENTERING-TOOL FOR CIRCULAR OBJECTS. JAMES E. MURRAY, Kansas City, Mo. Filed June 9, 1916. Serial No. 102,721. (Cl. 33—191.)

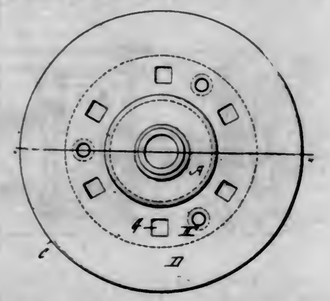


The combination with a pair of calipers comprising a pair of caliper arms pivoted together at one end, the opposite ends of said caliper arms being pointed, means to adjust the pointed ends of the caliper arms to various distances between the same, a blade carrying arm slidably attached to the pivot of the caliper arms and extending in a plane arranged centrally between the pointed ends of the caliper arms, links pivoted to the caliper arms and to the blade carrying arm intermediate their ends for holding the blade carrying arm centered and a blade at the end of the blade carrying arm having its edge disposed axially of the blade carrying arm.

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1,230,016. VEHICLE-WHEEL. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 14, 1916. Serial No. 136,862. (Cl. 21—69.)

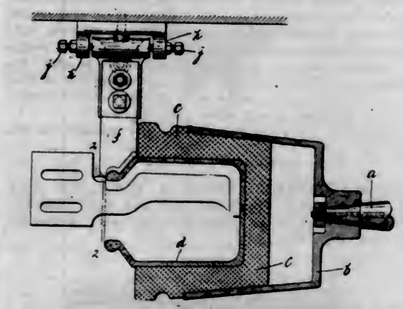
1. A brake drum, having in its face a central opening, a hub seated in said opening, a flange on said hub bearing against the rear side of said drum face and having openings, struck up projections on said drum face entering said flange openings, and means for clamping together said drum face and said flange.



2. A brake drum, having in its face a central opening, a hub seated in said opening, a flange on said hub bearing against the rear side of said drum face and having openings, struck up projections on said drum face entering said flange openings, and bolts passing through said drum face and said flange.

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1,230,017. APPARATUS FOR THE MANUFACTURE OF EARTHENWARE VESSELS. HENRY OAKES, Tamworth, England, assignor to George Skey and Company Limited, Tamworth, England. Filed Nov. 29, 1916. Serial No. 134,125. (Cl. 25—24.)



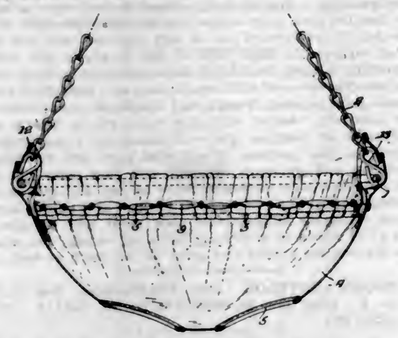
1. In a machine of the character described, the combination of a mold holder with a mold therein and external and internal knives adapted to form the outside and the inner face of a work piece in said mold respectively, and means for hingedly suspending the externally working knife, substantially as described.

2. In a machine of the character described, the combination of a mold holder with a mold therein and cooperating knives working on the outer and inner faces of a work-piece within said mold, and a bracket, lugs on said bracket between which the externally operating knife is adjustably and hingedly secured, and a lug on said bracket at right angles to said first named lugs and an adjustable stop in said lug for limiting the operation of the hingedly suspended knife, substantially as described.

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1,230,018. BABY-JUMPER. CLARENCE R. PATTEN, Tacoma, Ohio, assignor to C. R. Patten & Co., Waverly, Va. Filed Nov. 21, 1916. Serial No. 132,658. (Cl. 155—44.)

2. In a device of the class described, a continuous integral frame member, suspension elements, connecting means carried thereby and permanently connected with the said frame member, a pocket having an open hem to receive the said frame member, and means for closing the hem, the said hem having portions housing and covering the said connection.



4. In a device of the class described, a continuous frame member, a pocket having its marginal portion folded over the sides of the frame member to form a hem receiving the said frame member, and means for supporting the frame member including suspension members extending at their lower ends into the hem and permanently connected to the said frame.

[Claims 1 and 3 not printed in the Gazette.]

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1,230,019. HOSE-BAND. ORVIE W. PATTON, Los Angeles, Cal. Filed Oct. 27, 1915. Serial No. 58,131. (Cl. 137—28.)



1. A hose band, consisting of a plate, said plate having relatively long tongues at one end and bearings for rotatable pins at the other end, spurs on said plate arranged for engaging the hose, and independent rotatable pins disposed in said bearings one for each tongue, each pin provided with an eye at its end and having means for engaging the tongue.

2. A hose band, comprising a band adapted to encircle a hose, said band having a tongue at one end, the other end thereof bent under upon itself to form a bight, a slot in said band at the bight, said slot arranged to receive said tongue, spurs on the bent over portion of said band arranged for engaging the hose, and a rotatable pin disposed in said bight, said pin provided with means for engaging said tongue and having an eye at its end so that upon rolling said tongue upon said bight the inner edge of said slot will be moved into frictional engagement with said tongue.

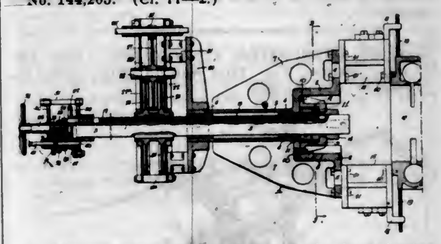
3. A hose band, comprising a plate, said plate having a plurality of tongues at one end, the other end thereof bent upon itself to form a bight, a plurality of apertures in said plate at the bight arranged to receive said tongues, spurs on said plate arranged for engaging the hose, and independent rotatable pins disposed in said bight, each pin provided with means for engaging one of said tongues.

4. A hose band, comprising a plate, said plate having a plurality of tongues at one end, the other end thereof bent upon itself to form a bight, a plurality of apertures in said plate at said bight arranged to receive said tongues, spurs on the bent portion of said plate arranged for engaging the hose, and independent rotatable pins disposed in said bight, each pin provided with means for engaging one of said tongues.





1,230,020. BORING-HEAD. HOWARD A. PEDRICK, Bala, Pa., assignor to Pedrick Tool and Machine Company, Philadelphia, Pa., a Firm consisting of Albert D. Pedrick and Howard A. Pedrick. Filed Jan. 24, 1917. Serial No. 144,205. (Cl. 77—2.)



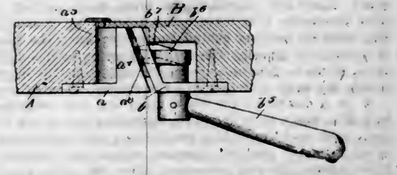
1. The combination in a boring head of a frame having a recess at one end; a boring bar rotatably mounted in said frame and passing through the recess; a feed screw carried by the bar; a feed nut within the recess engaging said screw; means for turning the boring bar; and means for rotating the feed screw.

4. The combination in a boring head of a frame having a recess; a boring bar rotatably mounted in said frame and passing through the recess; a collar in the recess; a feed nut engaged by the collar; means for preventing longitudinal movement of the collar and nut while permitting them to turn with the bar; a feed screw carried by the bar and engaged by the nut; means for rotating the bar; and means for turning the screw independently of the bar to feed the latter at will.

[Claims 2, 3, and 5 to 10 not printed in the Gazette.]

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1,230,021. FASTENING DEVICE. CHARLES J. PEMBROKE, Rochester, N. Y. Filed Jan. 18, 1915. Serial No. 2,821. (Cl. 70—49.)



1. In a fastening device, the combination with a stationary frame and a movable closure, of a socket member mounted on the closure having a tapered circular socket, a tapered circular centering member carried by the frame and arranged to enter said socket, a locking lever mounted on the closure, the centering member having a recess therein forming a shoulder and the socket member being provided with an opening adapted to be alined with said recess, and a cam on the closure connected to said lever and operable through said opening to engage the shoulder on the centering member and effect a wedging action thereagainst.

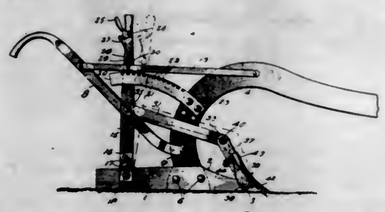
2. In a fastening device, the combination with a stationary frame and a movable closure, of a tapered circular socket member on one of said parts, a tapered circular centering member on the other of said parts and arranged to enter the socket member, a shoulder formed on one of said members, a locking lever mounted on the closure, and a cam operated by said lever and having engagement with the shoulder to hold the closure against movement.

3. In a fastening device, the combination with a stationary frame and a movable closure, of a socket member mounted on the closure having a tapered socket of substantially circular cross section throughout, a tapered pin of substantially circular cross section throughout carried by the frame and arranged to enter said socket, the tapered pin having a recess at one side forming a shoulder and the socket member having an opening adapted to coincide with

said recess, and locking means arranged on the closure and including a spindle having a handle at one end and a cam at its opposite end which is operable through said opening to engage the shoulder on the pin and effect a wedging action to force the tapered pin into the tapered circular socket.

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1,230,022. SWEEP-STOCK ATTACHMENT. JOHN POLASEK, Caldwell, Tex. Filed Mar. 15, 1916. Serial No. 84,488. (Cl. 97—26.)



1. In a device of the class described, the combination of a land bar, a plow beam fixedly secured to said land bar, a lever pivotally and adjustably mounted upon said land bar, plow point supporting standards pivotally mounted upon said land bar, a link connecting said lever to said plow point supporting standards, and a plow point adjustably mounted upon said standards, whereby upon the movement of said lever said standards may be moved so as to adjust said plow point when desired.

2. In a device of the class described, the combination of a land bar, a plow beam fixedly secured to said land bar intermediate its ends, a lever pivotally mounted upon said land bar adjacent its rear end, means for retaining said lever in an adjusted set position, plow point supporting standards pivotally mounted upon said land bar adjacent its forward end, a link connecting said lever to said plow point supporting standards, a plow point carried upon said standards, said lever being adapted to be moved by the operator walking behind the device when the same is in operation, whereby the link will swing said standards so as to move said plow point for adjusting the depth to which the same may dig into the ground when in use.

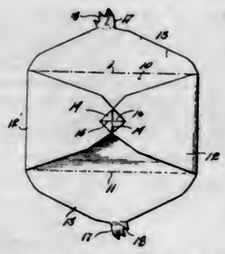
3. In a device of the class described, the combination of a land bar, a lever having a bifurcated lower end fitting upon said land bar, means for holding said bifurcated end in an adjusted position thereon, means for holding said lever against pivotal movement after the same has been moved to a set position, a link comprising parallel side members clamping upon each side of said plow beam and embracing the sides of said lever, means for holding said link in engagement with said lever, plow point supporting standards pivotally mounted upon said land bar adjacent its forward end, the forward ends of said members being welded together to form a forwardly extending tongue fitting between the upper ends of said standards, means for pivotally connecting said standards to said tongue, and a plow point carried upon said standards whereby upon the swinging of said lever said link will swing said plow point supporting standards so as to move said plow point for predetermining the depth to which the plow point will dig when in use.

4. In a device of the class described, the combination of a land bar having a plow beam and handles mounted thereon, a lever pivotally mounted upon said land bar, means for releasably retaining said lever in adjusted set position, a link pivotally secured to said lever, a pair of parallel plow point supporting standards pivotally connected to the forward end of said land bar, said link fitting between the upper ends of said standards and being pivotally secured thereto, and a plow point adjustably mounted upon said standards, whereby upon the swinging of said lever said link will swing said standards so as to move said plow point, whereby said plow point will be caused to dig into the ground at a great depth or may be swung so as to prevent the same from digging into the ground when not so desired.

5. In a device of the class described, the combination of a land bar having a plow beam and handles mounted thereon, a lever pivotally mounted upon said land bar, means for releasably retaining said lever in an adjusted set position, a link pivotally secured to said lever, a pair of parallel plow point supporting standards pivotally connected to the forward end of said land bar, said link fitting between the upper ends of said standards and being pivotally secured thereto, a plow point fitting upon the forward portions of said standards, a bolt carried by said plow point passing through said standards, a nut carried by said bolt, whereby said plow point will be held in an adjusted set position upon said standards, a lug formed upon the rear portions of said plow point and extending between said standards, whereby said plow point will be held against side movement when in use, and said lever being adapted to be swung so as to cause said link to move said standards whereby the plow point will be moved so as to extend in a different angle for causing the same to dig into the ground to a great or less depth as desired.

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1,230,023. ENVELOP. JOHN POSTOLOWSKI, New York, N. Y. Filed Jan. 29, 1917. Serial No. 145,115. (Cl. 229—80.)

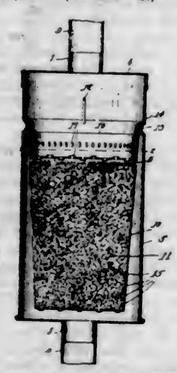


1. A blank for envelops consisting of a rectangular portion, end and top and bottom flaps defined from the body portion by fold lines, tabs on opposite flaps defined from the flaps by V-shaped slits and each having a medial fold line extending in the direction of the length of the flap, said tabs having their under surface provided with a gummed field, other tabs on opposite flaps arranged in staggered relation and provided with serrated outer portions, the under side of the last-mentioned tabs being provided with a gummed field.

[Claim 2 not printed in the Gazette.]

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1,230,024. CISTERN STRAINER AND FILTER. JAMES W. PRITCHARD, La Grange, Ky. Filed Oct. 13, 1916. Serial No. 125,417. (Cl. 210—4.)

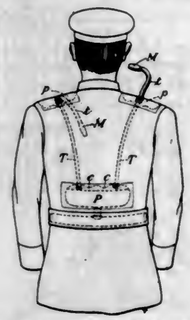


A cistern strainer and filter, comprising a casing having a top inlet and a bottom outlet, and provided at the top with an internal circumferential bead, a filtering material holder in the casing, said holder seating removably on the aforesaid bead and having bottom outlet perforations, and a perforated tray mounted in the top of the holder, said holder having an internal circumferential bead on which the tray removably seats.



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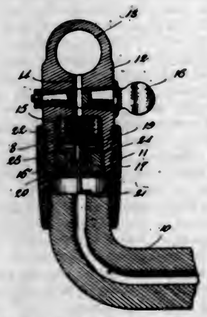
1,230,025. PERSONAL EQUIPMENT FOR CARRYING PURPOSES. JAMES ALFRED PUGH, Cardiff, Wales. Filed Sept. 21, 1916. Serial No. 121,492. (Cl. 2—190.)



Personal equipment comprising a pneumatic waist-belt, a pneumatic back-pad parallel with the waist-belt, two pneumatic shoulder-pads, all corrugated on that one of their faces which is presented toward the wearer in use, and air-pipes connecting the back-pad with the waist-belt and with the shoulder-pads respectively.

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1,230,026. SAFETY GAS-COUPLING DEVICE. BARZILLAI PULLEN, Camden, N. J., assignor to Alexander Leckey, Camden, N. J. Filed June 23, 1916. Serial No. 105,488. (Cl. 137—30.)



1. A device of the character described, comprising a sleeve, a coupling element removably connected to the sleeve, a casing having connection with the gas supply and connected with the sleeve, a valve chamber in the casing, a plug provided with channels and disposed in the casing to effect communication between the valve chamber and coupling element, a spring actuated valve in the valve chamber for closing the channels in the plug, a stem extended from the valve, a foot on the stem and normally engaged by the coupling element to retain the valve in open position and an apertured gasket on the plug and fitting into a depression in the face thereof, the apertures in the gasket registering with said channels, said gasket forming a seat for said valve.

2. A device of the character described, comprising a sleeve, a coupling element removably connected to the sleeve, a tubular casing connected with the sleeve and to a gas supply, a valve chamber in the casing, a plug provided with longitudinal channels and threaded into the valve chamber of the casing, said channels permitting gas to flow from the valve chamber into the coupling element, a slidably mounted valve having a portion thereof extending into the valve chamber and another portion engaged by the coupling element to normally hold said valve open relative to said channels and a spring having one end abutting against a wall of the valve chamber and the other end abutting against the valve for moving the valve into closed position when the coupling element is disengaged from the valve.

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1,230,027. EYE-TESTING APPARATUS. FRANK WELLINGTON PUTMAN, Newport, R. I. Filed Mar. 23, 1916. Serial No. 86,148. (Cl. 88—20.)



1. In an apparatus for the purpose described, a cabinet having an opening, a sliding panel normally closing the opening, means for operating the panel, said panel having openings, different colored transparent plates for each of the openings, a shutter for each of the openings, charts in the cabinet, and means for illuminating the cabinet.

2. In an apparatus for the purpose set forth, a cabinet, illuminating means in the cabinet, charts in the cabinet, a slidable panel for the cabinet having spaced openings arranged in a line with each other, a transparent plate of a different color for each of the openings, and means for closing said openings.

3. In an apparatus for the purpose set forth, a cabinet having lamps therein whose rays are reflected to the rear of the cabinet, charts in the cabinet at the rear thereof, a slidable panel at the front of the cabinet having a plurality of apertures, a plate of different colored transparent material for each of the apertures, a slidable shutter for each of the plates, and each of the said shutters having an aperture adapted to be arranged in a line with each of said openings.

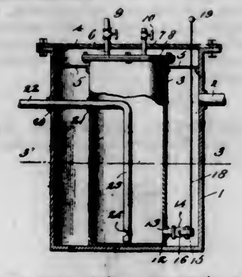
4. In an apparatus of the class described, a cabinet, lamps within the cabinet, reflectors for the lamps directing the rays of light to the rear of the cabinet, a chart upon the rear of the cabinet, the front of the cabinet having an opening, a slidable panel closing the opening, said panel having openings arranged opposite the chart, a transparent plate of different color for each of the openings, a shutter for each of the plates provided with an aperture registering with the opening when the said shutter is in one position, and friction means for sustaining the shutters in any desired position.

5. In an apparatus of the class set forth, a cabinet, vertically movable charts in the cabinet, lamps having reflectors directing the rays of light toward the charts, a slidable panel for the front of the cabinet having spaced openings, a transparent plate of a different color for each of the openings, the said openings being disposed opposite

the chart, and means for individually or simultaneously closing any or all of the said openings.

[Claims 6 to 13 not printed in the Gazette.]

1,230,028. PNEUMATIC PUMP. EDWARD E. RARDON, Hamilton, Kans. Filed Feb. 13, 1915. Serial No. 7,988. (Cl. 103—8.)



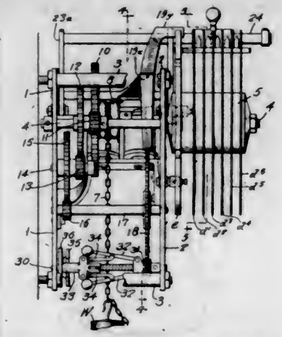
A pump, an outer tank or receptacle, a water supply pipe secured to and communicating with said receptacle adjacent the upper end thereof, a removable cover secured to the upper end of said receptacle, an inner tank positioned within the outer tank and resting upon the inner side of the bottom wall thereof, and means for rigidly securing the inner tank to the walls of the outer tank concentrically related thereto, pipes extending through the cover into the inner receptacle and communicating therewith, means for controlling passage through these pipes, said inner tank provided adjacent its lower end with an inlet opening, a pipe arranged in said inlet opening and communicating therewith, a valve arranged in said pipe, an arm connected with said valve, a rod connected with said arm and extending upwardly through the removable cover of the outer tank and its outer end constituting a handle whereby the valve may be operated for controlling the supply from the outer tank into the inner tank, said outer and inner tank provided adjacent their upper ends with alined openings the conduit extending through said openings having one end positioned at the inner tank with its opposite end located on the exterior of the outer tank said conduit being substantially L-shaped and having its longer arm positioned within the inner tank and terminating adjacent the bottom thereof in the inner end provided with an opening permitting of the inlet of the water to the conduit thus conveying it from the inner tank as and for the purpose specified.

1,230,029. VESSEL-LIFTER. RICHARD J. REECE, Parkersburg, W. Va. Filed Sept. 8, 1915. Serial No. 49,555. (Cl. 37—111.)



A vessel lifter comprising a pair of strands of wire, each of said strands having a coil formed intermediate its ends, said coils being superposed, a pivot pin extending through said coils and pivotally connecting said strands of wire, a flat circular plate formed on each end of said pivot pin and spaced from said coils to provide relative lateral movement of said coils, oppositely curved jaws formed on each of said strands of wire, and handles formed on the opposite ends thereof for the purpose described.

1,230,030. TRAIN SIGNALING AND STOPPING DEVICE. KENT REGER, Buckhannon, W. Va. Filed May 6, 1915. Serial No. 26,281. (Cl. 177—381.)



1. In a train signaling and stopping device, a selector switch comprising a plurality of movable conducting disks having a common axis, each of said disks being provided with a recess on its periphery, the recesses of the disks being disposed in successive steps with respect to their angular disposition around their common axis, a single conducting arm arranged to engage the periphery of any of said disks, an insulating disk having a series of radially extending notches at the periphery of the disks, an actuating mechanism for rotating all of said disks including an escapement wheel, means normally in engagement with said escapement wheel for stopping the rotation of said insulating disks, and electromagnetic means for withdrawing the said stopping means clear of the escapement wheel and thereby permitting the rotation of the disks.

2. In a train signaling and stopping device, a selector switch comprising a plurality of movable conducting disks having a common axis, each of said disks being provided with a recess on its periphery, the recesses of the disks being disposed in successive steps with respect to their angular disposition around their common axis, a single conducting arm arranged to engage the periphery of any of said disks, an insulating disk having a series of radially extending notches at the periphery of the disks, an actuating mechanism for rotating all of said disks, including an escapement wheel, a lever having one end arranged to engage said escapement wheel for stopping the actuating mechanism, an electro-magnet acting on the opposite end of the lever for raising the same, and an arm carried by said lever and arranged to extend over and rest upon the periphery of said insulating disks.

3. In a train signaling and stopping device, a selector switch comprising a plurality of conducting disks, said disks being mounted to rotate on a common axis, each of said disks being provided with a single recess in its periphery, the recesses of the disks being disposed in successive steps with respect to their angular disposition around their common axis, and a single conducting arm arranged to engage the periphery of any of said disks.

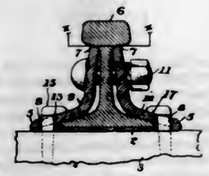
4. In a train signaling and stopping device, a selector switch comprising a plurality of conducting disks, said disks being mounted to rotate on a common axis, each of said disks being provided with a single recess in its periphery, the recesses of the disks being disposed in successive steps with respect to their angular disposition around their common axis, a single conducting arm arranged to engage the periphery of any of said disks, means for rotating the disks, the rotation of the disks serving to bring the conducting arm eventually into registration with the recess in the periphery of the disk.

5. In a train signalling and stopping device, a selector switch comprising a plurality of conducting disks, said disks being mounted to rotate on a common axis, each of said disks being provided with a recess in its periphery, the recesses of the disks being disposed in successive steps with respect to their angular disposition around their common axis, a single conducting arm arranged to engage the periphery of any of the disks, means for rotating the disks, and electro-magnetic means for stopping the rotation of the disks, said electro-magnetic means being energized by current through the disks and the conducting arm whereby when the recess in the disk is in registration with the conducting arm the current will be cut off and the rotation of the disks will be stopped.

[Claims 6 to 15 not printed in the Gazette.]



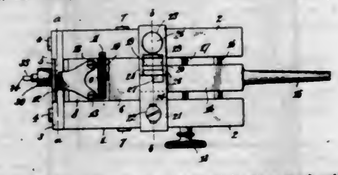
1,230,031. RAIL-JOINT. GEORGE C. RICHARDS, Berkeley, Cal. Filed Sept. 20, 1916. Serial No. 121,163. (Cl. 239—6.)



1. A rail joint including a tie plate having an upwardly extending flange on each side thereof, fish-plates formed of resilient metal so as to be sprung to engage at their upper edges with the lower sides of the rail heads and at their lower side edges with said flanges, said fish-plates being formed of bowed plates having L-shaped cross sectional configurations connected by gradually curved parts and having their vertical legs inclined outwardly and downwardly with respect to the rail webs so as to leave space between the curved parts of the fish-plates and the juncture of the rail webs and bases, and bolts passing through the fish plates and rail webs to effect regulable clamping of the fish plates.

2. A rail joint including a tie plate having rigid side abutments, fish plates formed of resilient metal so as to be sprung to engage at their upper side edges with the upper sides of the rail heads and at their lower side edges with the abutments, said fish plates being bowed so as to have vertical legs spaced from the rail webs and to have horizontal parts which seat only on the outer side parts of the rail bases whereby to leave free space between the juncture of the rail webs and bases, and bolts passing through the fish plates and rail webs to effect regulable clamping of the fish plates.

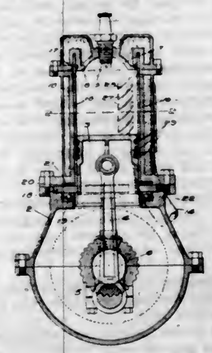
1,230,032. WATCHMAKER'S JEWELING-TOOL. ZALA RIDDLE, Dunsmuir, Cal. Filed Apr. 26, 1915. Serial No. 24,044. Renewed Jan. 23, 1917. Serial No. 144,050. (Cl. 29—10.)



1. A watch maker's jeweling tool having a chuck at its outer end for a double edged bit and also having a fixed gage jaw at its outer end, a movable block mounted in the body and having a jaw, means to adjust said block and its jaw, a block mounted in the body for transverse movement and having a jaw on one side and also provided at its outer end with a shank whereby the tool may be attached to a chuck, means to adjust the last named block, a plate extending across the body and the last named block and adjustable transversely of said body and block, said plate having an L-slot in the larger portion of which the jaw of said last named body is arranged, and a gage wire extending across the inner end of the L-arm of said slot and spaced from said last named block.

2. A watch maker's jeweling tool comprising a body having a slot near its outer end and a second slot extending at its inner end, a jaw at the outer end and on one side of the body, a chuck at said end of the body having a double edged bit, a block mounted for movement in the first named slot of the body and having a jaw to move therewith toward and from the first named jaw, a screw shaft to operate said block and having an operating wheel, a second block mounted for transverse movement in the second slot of the body, provided at its inner end with a shank adapted to be engaged by a lathe chuck, said second block also having a jaw on one side near its outer end, a screw for adjusting said second block in the second slot and thereby relatively moving the body transversely with respect to said second block, and a plate extending across the body and said second block, adjustable transversely thereof, provided with an L-slot, in the larger portion of which said jaw of the second block is arranged, said plate being further provided with a gage wire extending across the inner end of the L-arm of its slot and spaced from the said second block.

1,230,033. INTERNAL-COMBUSTION ENGINE. ANDREW L. RIKER, Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y., a Corporation of West Virginia. Filed July 27, 1911. Serial No. 640,770. (Cl. 123—80.)



1. An internal combustion engine having a cylinder, a piston, a prolonged port opening in said cylinder extending for substantially the distance of piston travel and adapted to be rendered progressively available or unavailable by piston movement, and means apart from said piston for opening and closing said port opening.

2. An internal combustion engine having a cylinder, a piston, a succession of admission ports extending substantially the entire length of piston travel and adapted to be rendered progressively available by movement of the piston and means apart from the piston for uncovering said ports on each alternate forward stroke of the piston, but for closing them on the succeeding forward and the intermediate reverse piston strokes.

3. An internal combustion engine having a cylinder, a piston, a succession of admission ports in said cylinder extending for substantially the entire distance of piston travel and adapted to be rendered progressively available by the piston on forward movement thereof, and means

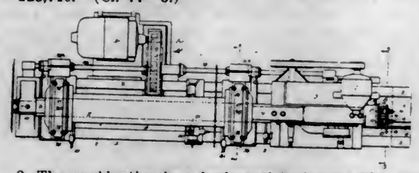
for opening and closing said ports independently of the piston.

4. An internal combustion engine having a cylinder, a piston, a succession of admission ports in said cylinder extending for substantially the entire distance of piston travel and adapted to be rendered progressively available by the piston on forward movement thereof, and means comprising a ported rotary sleeve for opening and closing said ports independently of the piston.

5. An internal combustion engine having a cylinder, a piston, a succession of ports in said cylinder extending for substantially the distace of piston travel and adapted to be rendered progressively available by the piston, a ported slide valve between the piston and cylinder adapted to uncover said cylinder ports and a piston ring for said piston split along a plane transverse to the plane of the ring and substantially tangential thereto.

[Claim 6 not printed in the Gazette.]

1,230,034. BORING-MACHINE. ERNEST J. ROLLINGS, Philadelphia, Pa. Filed Oct. 31, 1916. Serial No. 128,740. (Cl. 77—3.)



2. The combination in a horizontal boring machine, of a base; a head slidably mounted on the base; a boring bar secured to the head; a fixed bearing at the opposite end of the machine on which the outer end of the boring bar is supported when in the working position; chucks mounted on the base and carrying the work through which the boring bar extends, the boring bar being recessed at each side; a tool carriage mounted in each recess; two longitudinal screws on the boring bar, one exposed in one recess and the other in the other recess; means on each carriage for engaging its screw so as to feed the carriage longitudinally; means on the head for driving the screws; a longitudinal cam bar located in each recess; a tool post; means for holding the tool post in engagement with the cam bar so that as the carriage is traversed by the screw the tool moves in conformity with the shape of the cam bar and makes a cut in the work corresponding to the contour of the cam bar.

11. The combination in a boring machine, of a boring bar cruciform in cross section forming longitudinal recesses at each side; guides in the recesses; tool carriages mounted on the guides; and means for traversing said tool carriages.

14. The combination in a boring machine, of a boring bar having a deep V-shaped recess at each side; a longitudinal guide within each recess; a cam bar located at the base of each recess; a tool carriage mounted in each guide; and a tool post mounted in each carriage and controlled by the cam bar.

[Claims 1, 3 to 10, 12, 13, and 15 to 17 not printed in the Gazette.]

1,230,035. THERMOMETER-SUPPORT. THOMAS ROYSTON, Madison, Wis. Filed Aug. 9, 1916. Serial No. 113,978. (Cl. 73—52.)

1. In combination with a casing extending through a plurality of compartments or throughout several stories of a building and having openings throughout the length thereof to communicate with the various compartments, spindles mounted at the ends of the casing, a thermometer, and an endless cable in which the thermometer is connected extended around the spindles to thus be moved to and held adjacent any one of the openings.

3. In combination with a casing arranged to extend up through a plurality of stories of a building and provided with openings formed throughout its length in offset relation to establish communication from the casing to each of the various floors, thermometers arranged within the casing for each of the various off-set openings, said casing provided with a plurality of viewing openings arranged at a common point, spindles mounted adjacent to the upper and lower end of said casing, and cables mounted over



said spindles having the thermometers connected therein in such relation that by manipulation of the cables the thermometers may be moved from the viewing openings to the corresponding off-set openings to be affected by the atmospheric temperature of the air upon the floor with which the pre-determined opening communicates and may be then again returned to the viewing opening to have the temperature indication read.

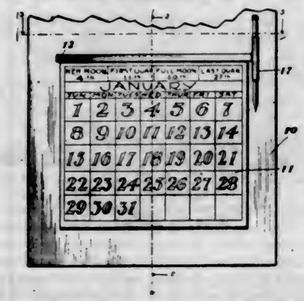
[Claim 2 not printed in the Gazette.]

1,230,036. FOLDER FOR SEWING-MACHINES. HYMAN RUBIN, Brooklyn, N. Y. Filed Sept. 12, 1916. Serial No. 119,661. (Cl. 270—35.)



In a folder, a guide for strips to be folded having two independent guide sections each adapted to fold one edge of a strip, a body portion associated with each of said guide sections, pins carried by one of said body portions and engaging the other of said body portions whereby the two guide sections are maintained in proper register, coil springs on the pins between the body portions normally tending to separate the guide sections, and a set screw binding the two body portions whereby the distance between the sections may be adjusted for various widths of strips to be folded.

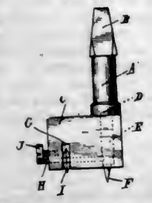
1,230,037. CALENDAR. NELLIE RYAN, Buena Park, Cal. Filed May 22, 1916. Serial No. 99,082. (Cl. 40—119.)




A combination calendar and diary comprising a flat support of sheet material, a horizontal binder bracket secured thereto, a calendar pad having its upper marginal edge secured in said bracket, said pad comprising a series of calendar sheets, each sheet having a calendar printed on the front side thereof and diary entry lines on the opposite side to correspond to said calendar days, said bracket being spaced from said flat support and forming a slot therewith, through which the sheet of the calendar may be turned to lie between the last sheet of the calendar and said flat support.



1,230,038. HOLING-BIT. WILLIAM SAY, London, England. Filed Nov. 13, 1916. Serial No. 131,139. (Cl. 164—82.)



1. A holing bit for cutting circular holes in sheet metal and adapted for use with an ordinary brace or chuck, consisting of a crank arm having a slot opening through the lower edge thereof adjacent to one end and also provided with a hole coaxial with the bit, a pointed stem or drill positioned in the said hole of the crank arm and having a point eccentric thereto, a cutting wheel rotatably mounted in the slot of the crank arm and projecting below the lower edge of the latter, and a device extending through and operatively supporting the cutting wheel and engaging and holding the stem in fixed position.

2. A holing bit for cutting circular holes in sheet metal and adapted for use with an ordinary brace or chuck, consisting of a bit having a crank arm with a slot opening through the lower edge thereof, a cutting wheel mounted in the slot of the crank arm, a stem disposed in the crank arm in vertical position and having a lower eccentric point below the crank arm, and axial means for the cutting wheel extending into the crank arm and also serving to secure the stem against movement.

3. A holing bit for cutting circular holes in sheet metal and adapted for use with an ordinary brace or chuck consisting of a bit having a slotted crank arm a cutting wheel pivoted in the slot of the crank arm a hole in the crank arm co-axial with the bit, a stem positioned within the hole of the crank arm and having a point eccentric thereto a pin engaging a hole in the crank arm at right angles to the slot and forming an axle for the cutting wheel and a means of engaging the stem, a screw engaging the crank arm with its head engaging the end of the pin to hold it and the stem firmly in position.

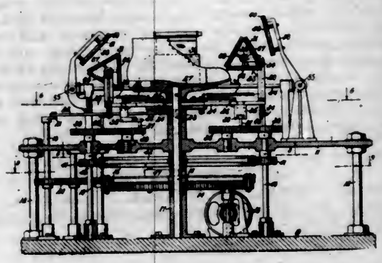
1,230,039. SHOE-POLISHING MACHINE. WILLIAM C. SCHADE, Jersey City, N. J. Filed June 14, 1916. Serial No. 103,670. (Cl. 15—61.)

1. In a shoe-polishing machine, the combination of a foot rest, a brush frame mounted to oscillate in a horizontal plane, and brushes carried by the frame and mounted to oscillate on a vertical axis.

2. In a shoe-polishing machine, the combination of a brush frame mounted to oscillate in a horizontal plane, slides reciprocating in the frame, and a brush carried by each slide and mounted to oscillate on said slide on a vertical axis.

3. In a shoe-polishing machine, the combination of a frame mounted to oscillate in a horizontal plane, slides mounted to reciprocate in the frame in a plane parallel to the plane of oscillation, a brush carried by each slide and mounted to oscillate on a vertical axis, and yielding means for resisting the oscillation of the brush and adapted to move the slides into the frame.

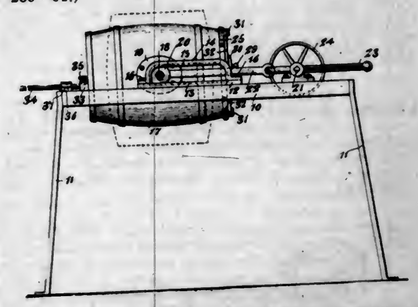
4. In a shoe-polishing machine, the combination of a foot rest, a frame mounted to oscillate in a horizontal plane, slides reciprocating in the frame in a plane parallel to the plane of oscillation, a brush carrier associated with each slide and mounted to oscillate thereupon on a vertical axis, yielding means connecting the brush carrier to the frame for resisting the oscillating movement thereof and to move the slide into the frame, a brush revolubly mounted in each of the carriers, and means for yieldingly locking the brush to the carrier to prevent the turning thereof.



5. In a shoe-polishing machine, the combination of a foot rest, a frame mounted to oscillate in a horizontal plane, slides mounted to reciprocate in the frame in a plane parallel to the plane in which the frame oscillates, a brush carrier secured to each slide to oscillate on a vertical axis, yielding means from the carrier to the frame to resist the oscillating movement of the carrier and to draw the slide into the frame, means for oscillating the frame intermittently, means for forcing the slides out of the frame against the resistance of the yielding means when the frame stops, a multisurfaced brush revolubly mounted in each carrier, means for yieldingly locking the brush to the carrier, and means for revolving the brush in the carrier after the slide has been forced out from the frame to present a different surface of the brush in operative relation to the foot rest, said means for forcing the slides out of the frame adapted to release the same before the frame begins to oscillate.

[Claims 6 to 21 not printed in the Gazette.]

1,230,040. CHURN. FREDERICK CHARLES SCOTT, Detroit, Mich. Filed Aug. 1, 1916. Serial No. 112,616. (Cl. 259—91.)



1. In a churn, a frame provided with horizontally arranged elongated guides, a receptacle having trunnions pivotally and slidably mounted on said guides, means for reciprocating said receptacle back and forth on said guides, and means for maintaining said receptacle against rotation on its trunnions during the reciprocation thereof and allowing the pivotal movement thereof for filling and emptying the receptacle when desired.

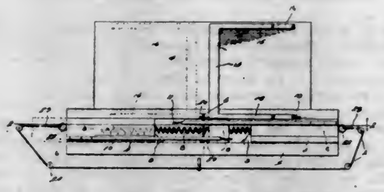
3. In a churn, a frame, guides mounted on opposite sides of the frame, a receptacle fitting in the frame and having trunnions slidably and rotatably engaging said guides, and anti-friction means rotatably carried by the trunnions and engaging the guides for holding the receptacle from lateral movement in the frame.

10. In a churn, a frame, provided with horizontally arranged elongated guides, an elongated receptacle provided with trunnions arranged centrally thereon, pivotally and slidably mounted in said guides and arranged lengthwise of the frame, means for reciprocating said receptacle back and forth on said guides, a cover for one end of said receptacle, anti-friction devices loosely mounted on said trunnions and interposed between the same and said guides, and detachable means for maintaining said receptacle against rotation around its trunnions as an axis and to keep the same in a horizontal position during the reciprocation thereof, but to allow when detached the pivotal movement thereof around its axis for filling and emptying the receptacle, as desired.

[Claims 2 and 4 to 9 not printed in the Gazette.]

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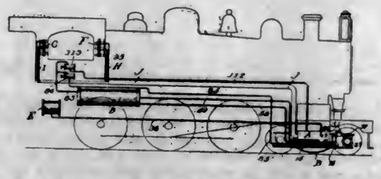
1,230,041. MUSIC-LEAF TURNER. CHARLIE SEALE, Eustis, Fla. Filed Nov. 19, 1915. Serial No. 62,348. (Cl. 84—17.)



A music leaf turner comprising a base, a back board secured thereto and extending upwardly therefrom, a horizontal guide secured to the back board in spaced parallel relation to the base, guides secured to the base and in spaced parallel relation to the back board, blocks slidable within the guides, a retractile coil spring connecting the blocks and normally urging the same toward each other, stops to limit the inward movement of the blocks, a pin extending upwardly from the base board and centrally thereof, frames, flanges at the lower ends of the frames, ears extending longitudinally from the flanges and pivotally mounted on the pin, downwardly and inwardly inclined walls at the outer edges of the flanges, outwardly extending flanges at the lower ends of the walls, and arms on the base blocks extending toward the walls and carrying latches to engage said walls.

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1,230,042. RAILWAY-CAB SIGNALING SYSTEM. HIRAM G. SEDGWICK, Mill Valley, Cal., assignor to The National Safety Appliance Company, a Corporation of California. Filed July 29, 1911, Serial No. 641,287. Renewed May 10, 1917. Serial No. 167,801. (Cl. 246—59.)



1. In an apparatus of the class set forth, the combination of a railway vehicle carrying a pair of shoes, one at each side of the vehicle, each shoe being adapted to be shifted varying distances by road-bed obstacles, a set of visual signals at the front of the vehicle cab and another set of signals at the rear of the cab, means for operating each set of signals independently by the movement of either one of said shoes, and means for automatically shifting one or the other set of signals into action by the change of direction of movement of the vehicle, whereby when the vehicle is moving forwardly the front set of signals will be subject to actuation by one of the shoes and when the vehicle is moving rearwardly the other or rear set of signals will be made subject to the other shoe.

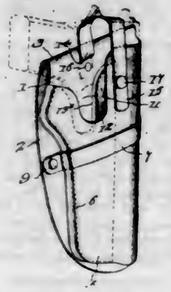
2. In an apparatus of the class set forth, the combination of a railway vehicle provided with a cab, a set of signals at the front of the cab and an independent set of signals at the rear of the cab, means for actuating each set of signals independently according to the direction of movement of the vehicle, said means embodying a series of pneumatic tubes extending to each set of signals, a fluid pressure source connected to said tubes, a shiftable valve adapted to connect either set of tubes with said source of pressure, and means for shifting this valve operated by the change in direction of rotation of one of the vehicle axles.

4. In an apparatus of the class set forth, the combination of a road bed shoe or obstacle and means for setting it at different points, a railway vehicle carrying a shoe adapted to be shifted varying distances by the aforesaid shoe or obstacle, a series of signal devices and means on the vehicle whereby the movement of the shoe thereon will be translated into different signals, said means embodying a graduated stop means for limiting the movement of the shoe on the vehicle to prevent it moving to a greater distance than the road bed shoe or obstacle is set for.

[Claim 3 not printed in the Gazette.]

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1,230,043. PISTOL-HOLSTER. WALTER H. SHELTON, El Paso, Tex., assignor to The Shelton-Payne Arms Company, El Paso, Tex., a Corporation. Filed Nov. 13, 1916. Serial No. 131,091. (Cl. 224—2.)



2. A pistol holster including a body, a flap forming with said body a pistol sheath, a strip in said sheath having a slot for receiving the magazine-releasing pin of the pistol and a beveled edge for conforming to the pistol barrel, said strip adapted to engage the magazine and hold the pistol handle outwardly so as to be free of the wearer's body, substantially as described.

3. A pistol holster of the character described including a blank forming a body and having a base made in one piece with the upper edge thereof and folded over rearwardly on said body, means for attaching the body and base together, said blank also having formed in one piece therewith and at one side thereof a flap, said flap being bent over on the front face of said body and forming therewith a case in which the pistol is received, a strip extending lengthwise in said case at one side thereof and having a beveled edge next the pistol barrel for conforming substantially to the curvature thereof, said strip being adapted to engage the magazine and hold the pistol

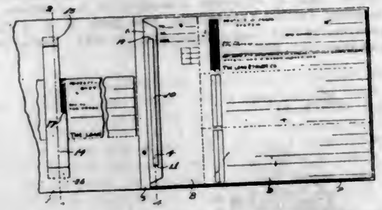


with the handle extending outwardly at an angle to the body of the wearer, means for securing said flap and strip to said body, said strip having a slot therein for receiving the magazine-releasing pin, said flap having a slot therein for admitting the finger of the wearer to the pistol trigger, and a relatively narrow strap for engaging over the pistol hammer to hold the same in place in the holster, substantially as described.

[Claim 1 not printed in the Gazette.]

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1,230,044. CHECK-BOOK. JOHN F. SHOEMAKER, Des Moines, Iowa. Filed Oct. 18, 1915. Serial No. 56,485. (Cl. 11—3.)

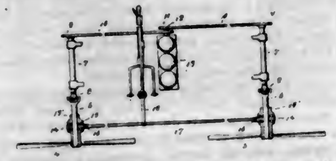


1. A check book provided at the inner face of one of its covers with a cutter consisting of a strip of thin material connected at its ends with the cover within the marginal edges of the latter, said cutter being arranged in close proximity to the inner face of the cover and permitting a check to be passed between it and the said cover.

[Claims 2 to 4 not printed in the Gazette.]

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1,230,045. FLYING-MACHINE. VLADIMIR SKRIVANEK, Fort Wayne, Ind. Filed Feb. 25, 1913, Serial No. 750,634. Renewed Nov. 25, 1916. Serial No. 133,487. (Cl. 244—14.)

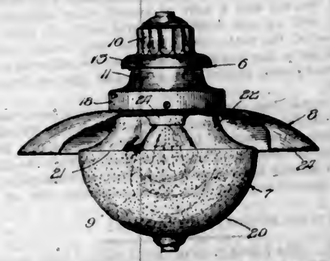


1. In a flying machine, the combination of a main frame, a supporting surface carried by the main frame, relatively short and long head and tail frames respectively projecting from the main frame, propelling mechanism mounted upon the head frame at a point wholly in advance of a perpendicular line intersecting the horizontal transverse axis of the machine and the centers of gravity and pressure when the machine is balanced, an aviator's seat mounted upon the head frame at a point in rear of such perpendicular line, propelling mechanism at the extremity of the tail frame, the said propelling mechanisms each embodying a driving motor and universally adjustable propellers, and the rear propelling mechanism being arranged for coöperative action with the weight of the aviator to balance the weight of the forward propelling mechanism and maintain and establish coincidence between a perpendicular line intersecting such axis and the centers of gravity and pressure when the machine is in flight, and adjusting means disposed at a point between the aviator's seat and such perpendicular line for transmitting adjusting motions to the respective propellers.

2. In a flying machine, the combination of a main frame having a supporting surface and a head frame extending in advance thereof, bearings upon said head frame, a pair of horizontal longitudinally extending shafts journaled upon said head frame on opposite sides of the longitudinal center of the machine, a motor mounted upon said head frame mainly in advance of said supporting surface, sprocket gears upon the shaft of said motor, sprocket gears upon the said longitudinally extending shafts, driving chains connecting the sprocket gears on the motor shaft with the sprocket gears on the longitudinally extending shafts, propeller shafts universally joined to said longitudinally extending shafts at points in advance of the head frame, hubs fixed to said propeller shafts and carrying propellers, collars fixed to said propeller shafts in spaced relation to said hubs, collars loosely mounted on the propeller shafts between the hubs and collars, anti-friction bearings between the loose collars and the coacting hubs and fixed collars, a horizontal and transverse link bar pivotally connecting the loose collars, whereby the propeller shafts may be simultaneously adjusted laterally or vertically in either direction from a normal position, a horizontal rearwardly extending universally joined lever pivotally connected with said link bar whereby the same may be moved in an endwise or vertical direction, said lever having a handle extending inwardly beyond the motor and gearing, means for locking said lever in adjusted position, and an aviator's seat mounted upon the main frame adjacent to and in rear of said lever.

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1,230,046. LIGHTING-FIXTURE. ESMOND M. SMITH, Chicago, Ill. Filed Feb. 11, 1916. Serial No. 77,636. (Cl. 240—92.)



1. In a device of the class described the combination with a cap, of a socket secured within the same, a ring mounted on the lower portion of the cap, said ring being provided with a downwardly depending flange, a lighting element connected into the socket, a globe surrounding the lighting element and having its upper portion connected to the flange, the lower portion of said globe being formed substantially on the surface of a sphere the center whereof lies within the lighting element, and the upper portion of the globe being formed on a reversed curve having its line of junction with the aforementioned sphere lying substantially in a plane which passes through the lighting element, a shade surrounding the upper portion of the globe, a suitable connection between the shade and flange, a supplemental reflector above the lighting element and within the globe, and means for securing said supplemental reflector in such position, substantially as described.

7. In a fixture of the class described, a single-piece globe, the lower portion whereof is substantially semi-spherical and provided with a surface adapted to reflect the rays of light upwardly, while the upper portion is disposed within the vertical planes of the sides of the lower portion and is substantially bell-shape and made of transparent material to permit passage of direct rays of light, said upper portion being formed with a double ogee curvature whereby a reflector-receiving portion and an attaching rim are provided at the upper end thereof.

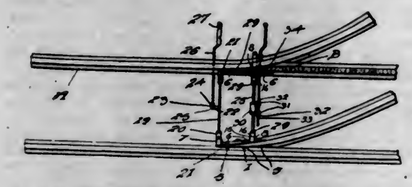
[Claims 2 to 6 and 8 to 14 not printed in the Gazette.]

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1,230,047. CONNECTING DEVICE FOR SWITCH-POINTS. ROBERT W. SNAPP, Petersburg, Va., assignor of one-half to Clifford S. Edmunds, Petersburg, Va. Filed Oct. 23, 1915. Serial No. 57,548. (Cl. 104—96.)

1. The combination with a pair of switch points and the connecting bars for the switch points, of plates adjustably

mounted on the switch points, means for holding the plates in their adjusted position and means for connecting the plates to the connecting bars.



2. The combination with a pair of switch points and the connecting bars for the switch points, of plates carried by the points and each of the plates having a pair of laterally extending arms thereon, the arms forming each pair being arranged one above the other, and means for connecting the arms to the connecting bars.

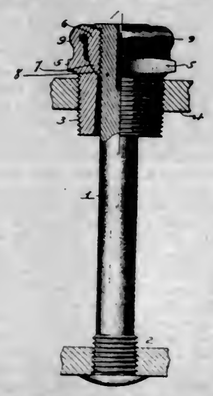
3. A connecting device of the character described, comprising an elongated plate, arms extending outwardly from the plate and including an inclined portion and a horizontally disposed portion, and angular shaped ribs carried by the arms and connected to the plate.

4. A connecting device of the class described comprising an elongated plate having an elongated slot adjacent one end thereof and a pair of spaced slots adjacent the opposite end, an arm formed integral with the first mentioned end of the plate, and a second arm formed integral with the plate and located between the spaced slots at the second mentioned end of the plate and spaced from the said end.

5. A connecting device of the class described comprising a plate, laterally extending arms carried by the plate, a U-shaped frame carried by one of the arms, and a flange formed on the last mentioned arm and coextensive therewith and having the opposite ends thereof integrally connected, respectively, to the plate and one side of the frame.

[Claim 6 not printed in the Gazette.]

1,230,048. STAY-BOLT FOR BOILERS. BENJAMIN E. D. STAFFORD and ETHAN I. DODDS, Pittsburgh, Pa., assignors to Flannery Bolt Company, Pittsburgh, Pa. Filed Feb. 27, 1915. Serial No. 11,080. (Cl. 85—1.5.)

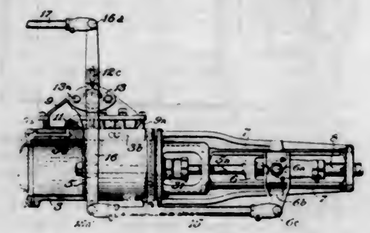


1. In stay bolt construction, a sleeve externally threaded and provided with an internal seat, and a yielding member projecting outwardly from the outer end of said sleeve, and provided with a shoulder to engage the seat within the sleeve, the said yielding member adapted to support the outer end of the stay bolt.

2. In stay bolt construction, a sleeve externally threaded and provided with an internal seat, and a yielding member projecting outwardly from the outer end of said sleeve, and also projecting inwardly into the sleeve and provided with a shoulder to rest on the seat in said sleeve, and also provided with means for the attachment of the stay bolt.

3. In stay bolt construction, a two part sleeve, one part of which is externally threaded and provided at its outer end with a seat, and the other part made to yield and secured by threads to the outer end of first mentioned part, the said yielding part having a shoulder to rest on the seat in the externally threaded part and also provided with internal thread for the attachment of a stay bolt.

1,230,049. STEAM-ENGINE VALVE REVERSING-GEAR. HAL R. STAFFORD, Plainfield, N. J., assignor to Economy Devices Corporation, New York, N. Y., a Corporation of New York. Filed Feb. 19, 1917. Serial No. 149,388. (Cl. 121—98.)



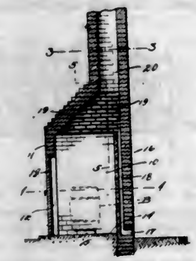
1. In a valve reversing mechanism, the combination of a fluid pressure motor; a reciprocatory actuating valve controlling the supply and exhaust of motive fluid to and from said motor; a floating lever; manually operable means for moving said lever; automatically operable means for moving said lever by the motor, in an opposite direction; an oscillatory member interposed between and coupled to the floating lever and the actuating valve; and means, interposed between said oscillatory member and the actuating valve, for preventing displacement or disturbance of movement of said valve.

2. In a valve reversing mechanism, the combination of a fluid pressure motor; a valve chest; an actuating valve fitted to reciprocate in said chest and control the supply and exhaust of fluid to and from said motor, said valve having vertical lateral recesses; a floating lever; manually operable means for moving said lever; automatically operable means for moving said lever by the motor in an opposite direction; a rock shaft journaled in the valve chest, transversely to the actuating valve; an arm coupling said rock shaft to the floating lever; an arm depending from said rock shaft and having a forked lower end embracing the actuating valve; pins fixed in and projecting inwardly from the forks of said arm, and blocks journaled on said pins and engaging the lateral recesses of the actuating valve.

3. In a valve reversing mechanism, the combination of a reversing cylinder; a piston fitted therein; a piston rod secured to said piston; a valve chest having admission ports communicating with opposite ends of the cylinder, and an exhaust port; a laterally recessed actuatng valve fitted to traverse longitudinally in the valve chest and control said ports; a bearing fixed in the valve chest, transversely to the actuating valve; a rock shaft journaled in said bearing; a floating lever; manually operable means for moving said lever; means, actuated by the piston rod of the reversing cylinder, for moving said lever in opposite direction; an arm fixed to the rock shaft, exterior to the valve chest, and coupled to the floating lever; an arm fixed on said shaft, within the valve chest and fitting over the actuating valve; and blocks journaled on said arm and engaging the lateral recesses of the actuating valve.



1,230,050. BARREL-SMOKING OVEN. FRANCISZEK STANKOWSKI, Baltimore, Md. Filed Dec. 11, 1916. Serial No. 136,318. (Cl. 34—19.)



1. A barrel smoking oven comprising a chamber having a hearth, hermetically closing doors at the front of the chamber, an air inlet flue opening into the upper part of the chamber, and a smoke flue extending upward from the top of said chamber and having a cross sectional area not greater than one-ninth the floor area of the chamber, the air inlet flue having a cross sectional area not greater than one-sixth the cross sectional area of the smoke flue.

[Claim 2 not printed in the Gazette.]

1,230,051. DISPLAY-RACK. BERNHARD STERN, New York, N. Y. Filed Aug. 16, 1916. Serial No. 115,203. (Cl. 211—23.)



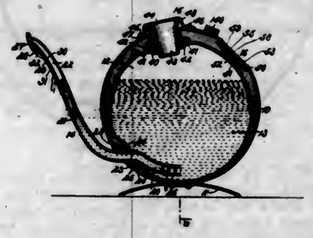
1. In a display rack, a plurality of overhead tracks each mounted to revolve on a vertical axis, merchandise carriers suspended from the tracks to revolve on a vertical axis and movable in said tracks, means for maintaining said tracks in alinement and preventing their rotation, whereby the merchandise carriers may be moved from one track into the other, substantially as and for the purpose set forth.

2. In a display rack, a plurality of overhead tracks each revoluble on a vertical axis, frames suspended from said tracks to revolve on a vertical axis, and locking means for preventing the rotation of the tracks and for maintaining the adjacent tracks in alinement whereby the frames may be moved from one track into the adjacent one.

3. In a display rack, overhead tracks each mounted to revolve on a vertical axis, a plurality of frames suspended from the track each revoluble on a substantially vertical axis, flexible means connecting the frames and forming a chain thereof, a panel associated with each frame, a yielding member adjacent the upper end of the frame on each face thereof, and locking means for the adjacent tracks to maintain them in alinement and prevent their turning, whereby the frames may be moved from one track into the other, substantially as and for the purpose set forth.

4. In a display rack, a pair of standards, a beam connecting the standards at the upper ends thereof, a plurality of brackets suspended from the beam, each bracket to revolve on a substantially vertical axis, T-shaped members, rollers associated with said T-shaped members and engaging the brackets, frames suspended from the T-shaped members to revolve thereon, a removable panel associated with each frame, and a yielding bar associated with each face of the panel adjacent the upper end of the frame, flexible means connecting said frames and forming a chain thereof, means for locking the ends of the tracks adjacent the standards, and means for locking the adjacent ends of tracks.

1,230,052. VISCOUS-FLUID APPLIER. LEMUEL LESTER STEVENSON, Emporia, Kans. Filed May 25, 1916. Serial No. 99,857. (Cl. 221—74.)



1. A viscous fluid applier, comprising a casing provided at one side with a flexible diaphragm, a collapsible receptacle within the casing and adapted to contain a viscous fluid to be applied, an outlet spout leading from the said receptacle and extending through the said casing to the outside thereof, and an air admission valve arranged on the said casing and adapted to admit air to the casing on the collapsing of the said receptacle.

2. A viscous fluid applier, comprising a casing open at one side and provided at this open side with a grooved annual flange, a diaphragm covering the said opening and having its edge secured in the groove of the said flange, a collapsible receptacle within the said casing and adapted to contain the viscous fluid, a spout leading from the said receptacle and extending through the said casing to the outside thereof, a filling device on the said receptacle and extending through the casing to the outside thereof, and an air admission valve held on the said casing for admitting air to the casing.

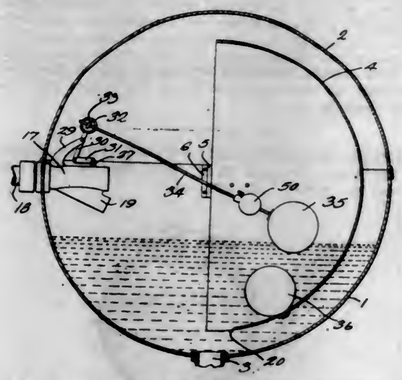
3. A viscous fluid applier of the type described, comprising a casing open at one side and provided at this side with a grooved annual flange, a diaphragm extending over the opening and formed of a plurality of layers of pliable materials having their edges engaging the said grooved flange, stiffening disks on the said diaphragm; a spring attached to the flange and pressing against the inner face of the diaphragm, fastening means for securing the edges of the diaphragm layers to the grooved flange, a collapsible receptacle within the casing and an outlet spout leading therefrom and extending through the casing to the outside thereof.

4. In a viscous fluid applier, the combination of a casing having a diaphragm at one side, a collapsible receptacle within the said casing and having an outlet spout extending through the casing to the outside thereof, and an air admission valve attached to the casing and having means to retard the admission of air and thus assist in controlling the flow of the fluid from the receptacle.

5. A viscous fluid applier, comprising a casing having a diaphragm at one side, a collapsible receptacle within the said casing and having an outlet spout extending through the said casing to the outside thereof, and an air admission valve held on the said casing and having a flexible valve member provided with incisions normally closed and adapted to open on a suction action from within the casing.

[Claims 6 to 9 not printed in the Gazette.]

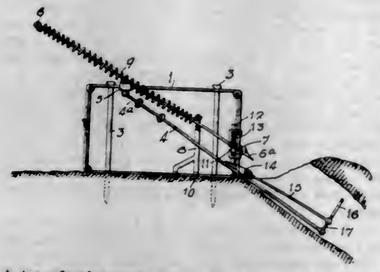
**1,230,053. FLUSHING-TANK.** HENRY STOFFEL, Tulsa, Okla. Filed Mar. 12, 1917. Serial No. 154,190. (Cl. 4—5.)



1. A device of the character described embodying a tank having a lower outlet, a tiltable receptacle within the tank, and a float carried by the receptacle in position to be moved below the pivot of the receptacle and past the vertical plane thereof when the receptacle is tilted, for holding it tilted until the water flows therefrom.

[Claim 2 not printed in the Gazette.]

**1,230,054. GOPHER-TRAP.** JOHN W. STRATTON, Linn, Kans. Filed Mar. 7, 1917. Serial No. 153,057. (Cl. 43—21.)

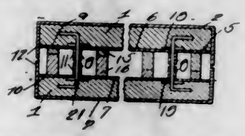


1. A trap for burrowing animals, including a frame, a trigger supporting arm projecting from the frame and adapted to be inserted in the mouth of a burrow, a spring actuated dart mounted upon the frame and arranged to be projected into the burrow, a sliding detent for holding the dart against the action of the spring, a trigger mounted upon the trigger supporting arm, a wedge at one end of the sliding detent, and an operative connection between the wedge and the trigger.

4. A trap for burrowing animals, including a frame, an inclined trigger supporting arm projecting downwardly from the frame and adapted to be inserted into the mouth of a burrow, said arm being provided at its upper end with an extension which adjustably engages the frame to admit of the inclination of the arm being adjusted, a spring actuated dart mounted upon the frame and arranged to be projected into the mouth of the burrow, a guide for the dart upon the frame, a second adjustable guide engaging the dart and movable to vary the inclination thereof, a detent for holding the dart against the action of the spring, a swinging trigger pivotally mounted upon the lower end of the trigger supporting arm, a plunger connected to the swinging trigger, and a wedge carried by the plunger and operatively engaging the detent.

[Claims 2 and 3 not printed in the Gazette.]

**1,230,055. BUILDING-FORM.** JOE A. STUBKJAER, Billings, Mont., assignor to Tubular Wall Company, Billings, Mont., a Corporation of Montana. Filed Apr. 12, 1915, Serial No. 20,808. Renewed Apr. 20, 1917. Serial No. 163,389. (Cl. 25—131.)

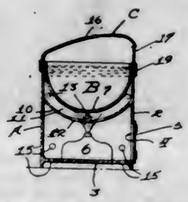


1. A wall form comprising outer forms, inner forms arranged in spaced relation to the outer forms, the said inner forms composed of a plurality of sections, means for expanding the sections and means for limiting the spreading movement constructed and arranged to maintain the members of the wall thereafter in spaced relation.

3. A wall form comprising an outer form constructed and arranged to control the formation of the outer faces of a poured wall, and means to control the formation of the inner faces of the said wall comprising vertically arranged forms consisting of spaced plates with angularly extending flanges on the edges thereof, the edges of which flanges contact, pairs of wedge members arranged between the said plates to spread the same, vertically arranged strips located adjacent the junctures of the forms, said strips having cut out portions in the edges thereof, and notches in the said cut out portions, and transversely arranged strips having notches therein engaging the notches in the vertical strips and constructed and arranged to prevent the transverse displacement of the first mentioned strips and thereafter brace the members of the wall.

[Claim 2 not printed in the Gazette.]

**1,230,056. WATERING-TANK.** JOHN WARD, Baker, Oreg. Filed May 8, 1916. Serial No. 96,044. (Cl. 126—347.)



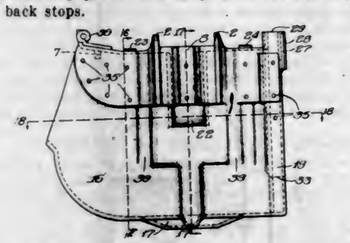
A watering tank for live stock comprising an elongated substantially semi-cylindrical trough, having a closure member provided with an opening through which access to the interior may be had, a leg for supporting said trough at one end, a housing for supporting said trough at its other end, a jacket spaced from and surrounding the outer surface of said trough throughout its several dimensions, said jacket having a communicating opening with said housing and being provided with vents at a point remote from said housing, and a heater positioned within said housing, the heat therefrom passing through the opening in said jacket, thence entirely throughout the length thereof about the surface of said trough and out through the vents to atmosphere.

**1,230,057. PRESSED-STEEL JOURNAL-BOX.** WILLIAM ERASTUS WILLIAMS, Chicago, Ill. Filed July 13, 1915. Serial No. 39,549. (Cl. 64—10.)

1. A journal box made of top and cellar portions adapted to be joined together in vertical lines, the edges of one overlapping the edges of the other and interlocked as to end thrust, said top having suitable holes and the cellar having corresponding projections secured in said holes.

2. A journal box composed of top and cellar sections, the top section overlapping the top edges of the cellar and the cellar sheet extending up the entire vertical sides of the box on the inside of the top section and formed with shoulders that act as the back stops and said top sections being provided with projections which engage said back stops.





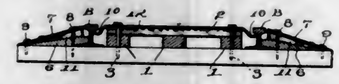
3. A journal box formed of top and cellar sections, the top section provided with guide ribs on the outside and front stops and thrust projections on the inside, the cellar section telescoping the inside of the top section in a vertical line and provided with shoulders for forming the back stop, said shoulders adapted to be supported against thrust by the supporting projections of the top section.

4. A journal box made of top and cellar sections adapted to be overlapped and interlocked in a vertical line, the cellar section passing up on the inside of the side walls of the top section, said cellar flush with the sides of the top section and offset to pass inside the top section where the parts meet.

5. A journal box composed of a top section and a cellar section, the top section made of a rolled bar with guide flanges thereon and bent transversely of the flanges to form vertical sides extending part way down the box, a cellar made of a sheet of metal and drawn up to form and telescoped on the inside of the top section.

[Claims 6 to 13 not printed in the Gazette.]

**1,230,058. RAILROAD GRADE-CROSSING.** MOSES A. WOOLDRIDGE, Wyaconda, Mo. Filed Oct. 2, 1916. Serial No. 123,309. (Cl. 104—14.)

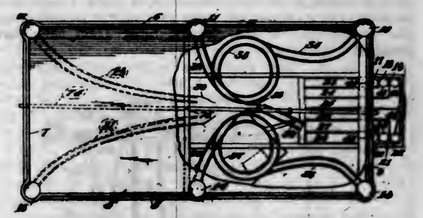


1. A railroad grade crossing, comprising ties and rails, bars located between and along the outer surfaces of the rails and extending parallel therewith, of a plate supported on the bars between the rails, and inclined plates connected to the bars located along the outer surfaces of the rails, and means passing through the plates, and bar and into the ties for fastening them in place.

2. A railroad crossing, comprising ties and rails, bars located between and along the outer surfaces of the rails and extending parallel to the rails, a plate supported on the bars between the rails, the edges of the plate being bent so that they are located beneath the tread of the rail, inclined plates engaging the ends of said bars and resting on the ties for forming a protection for the ends of the plate, inclined plates supported on the bars located on the ties along the outer surface of the rails, and means passing through said plates and bars and into the ties for fastening the bars and plates in position.

**1,230,059. POCKET-BILLIARD TABLE.** MARION A. ANDREWS, Yuma, Ariz. Filed Mar. 4, 1915, Serial No. 12,155. Renewed Jan. 27, 1917. Serial No. 144,996. (Cl. 46—12.)

1. The combination with a pocket billiard table having ball pockets, of a rack disposed at one end of and extending beyond the table sufficient to expose all of the balls therein to view, horizontal ball display runways in the exposed portion of said rack, runways leading from said pockets, a selector mechanism connecting said runways and said rack, discharge means for said rack, and a carrier drawer slidingly mounted below and upon said rack.



2. The combination with a pocket billiard table having ball pockets, of a rack disposed at one end of and extending beyond the table sufficient to expose all of the balls therein to view, horizontal ball display runways in the exposed portion of said rack, runways leading from said pockets, a selector mechanism connecting said runways and said rack, discharge means mounted on said rack, a ball receptacle detachably mounted on said rack to receive said balls, and means for controlling the passage of balls into said receptacle.

3. The combination with a pocket billiard table having ball pockets, of runways leading from said pockets to a common runway, a ball rack provided with independent runways mounted on said table, a swinging runway for progressively connecting the common runway with the independent runways, a cam mechanism for moving said swinging runway, and an intermittent grip device for moving said cam mechanism.

4. The combination with a pocket billiard table having ball pockets, of runways leading from said pockets to a common runway, a ball rack provided with independent runways mounted on said table, a swinging runway for progressively connecting the common runway with the independent runways, a cam follower operatively secured to said swinging runway, a cam for moving said cam follower, and an intermittent grip device for moving said cam.

5. The combination with a pocket billiard table having ball pockets, of runways leading from said pockets to a common runway, a ball rack provided with independent runways mounted on said table, a swinging runway for progressively connecting the common runway with the independent runways, a lever operatively secured to said swinging runway, a cam follower mounted upon said lever, a cam for moving said cam follower, and an intermittent grip device for moving said cam.

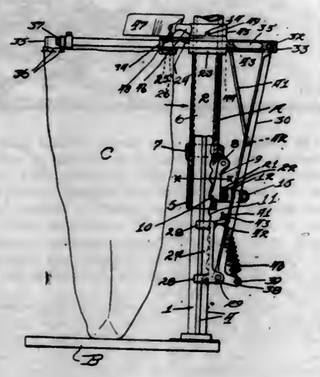
[Claims 6 and 7 not printed in the Gazette.]

**1,230,060. BAG-HOLDER.** CARL G. G. BERGSTROM, St. Paul, Minn., assignor of one-half to George D. E. Bergstrom, Minneapolis, Minn. Filed Apr. 24, 1916. Serial No. 93,071. (Cl. 83—26.)

1. A device of the kind described comprising a stand, an element rigidly mounted on said stand and adapted to engage a portion of the mouth of a bag, a stand, an element rigidly mounted on said stand and adapted to engage a portion of the mouth of a bag, another element slidably mounted upon said first element and adapted to engage the mouth portion of said bag, a bell crank lever having its angle pivoted upon said stand and one arm movably connected to said slidably mounted element and a spring connected to the end of the other arm of said bell crank and to said stand and adapted to releasably urge the movable bag mouth engaging element into outermost position and hold the mouth of the bag distended.

2. A device of the kind described, comprising, a base, a standard mounted on said base, a bag holding element rigidly carried by said standard, a second bag holding element, carriage mechanism comprising a pair of spaced

members slidably supported by said rigid element and carrying at their corresponding ends said second element, a member reciprocably disposed upon said standard, means connecting the free ends of said spaced members with said reciprocable member whereby movement of said second element is communicated to said reciprocable member, and means cooperating with said aforesaid means for urging said second element away from said rigid element.



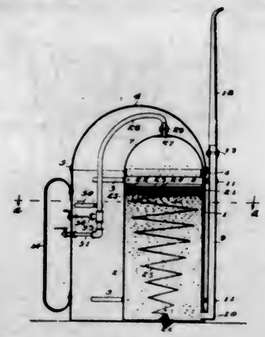
3. A device of the kind described, comprising, a base, a standard mounted on said base, a bag holding element rigidly carried by said standard, a second bag holding element, carriage mechanism comprising a pair of spaced members slidably supported by said rigid element and carrying at their corresponding ends said second element, a member reciprocably disposed upon said standard, means connecting the free ends of said spaced members with said reciprocable member whereby movement of said second element is communicated to said reciprocable member, and spring means cooperating with said aforesaid means for urging said second element away from said rigid element.

4. A device of the kind described, comprising, a base, a standard mounted on said base, a bag holding element rigidly carried by said standard, a second bag holding element, carriage mechanism comprising a pair of spaced members slidably supported by said rigid element and carrying at their corresponding ends said second element, a member reciprocably disposed upon said standard, means connecting the free ends of said spaced members with said reciprocable member whereby movement of said second element is communicated to said reciprocable member, and means pivotally attached at one end to said standard and at the other end to said connecting means for eliminating binding tendency of said parts during their respective movements.

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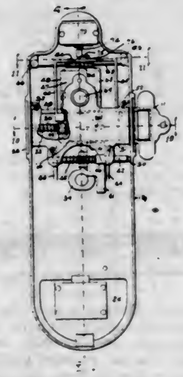
1,230,061. OIL-CAN. JOSEPH A. BLANCHETTE, Ste. Anne des Chimes, Manitoba, Canada. Filed Feb. 25, 1916. Serial No. 80,506. (Cl. 221—78.)

In an oiler of the class described, a compressed air reservoir, means to supply the same with compressed air, an oil reservoir, a piston in the oil reservoir, a discharge nozzle leading from the lower end of the oil reservoir, a spring to raise the piston, a pipe connected to the upper end of the oil reservoir and having a valved air inlet arranged in the compressed air reservoir to admit compressed air to the upper portion of the oil reservoir from the air reservoir, and a valved air outlet for the said pipe to discharge compressed air from the oil reservoir into the outer air, the valves for said air inlet and air outlet having operating means arranged at one side of the air reservoir, and a handle for the said reservoir on the same side thereof, the said oil reservoir being arranged in the said compressed air reservoir.



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1,230,062. COIN-CONTROLLED LOCK. GEORGE G. F. BOSWELL, Indianapolis, Ind., assignor to Universal Coin Lock Company, Indianapolis, Ind., a Corporation. Filed Mar. 13, 1916. Serial No. 83,820. (Cl. 194—78.)



1. A coin controlled lock having a spring actuated bolt, means for guiding the coin to a position to engage and withdraw said bolt, a bar for stopping said coin in position to engage said bolt and for laterally moving said coin to withdraw the bolt, and knob operated means for moving said bar to cause the withdrawal of the bolt.

2. A coin controlled lock having a spring actuated bolt and with a lug on it, means for guiding the coin to a position adjacent said lug and between it and the outer end of the bolt, a bar for engaging the lower part of the coin and also the edge of the coin next to the outer end of the bolt, and knob operated means for moving said bar inwardly and thus through the coin casing causing the withdrawal of the bolt.

3. A coin controlled lock having a spring actuated bolt and with a lug on it, means for guiding the coin to a position adjacent said lug and between it and the outer end of the bolt, a bar for engaging the lower part of the coin and also the edge of the coin next to the outer end of the bolt, knob operated means for moving said bar inwardly and thus through the coin causing the withdrawal of the bolt, and a spring for returning said bar after the knob operated means is released.



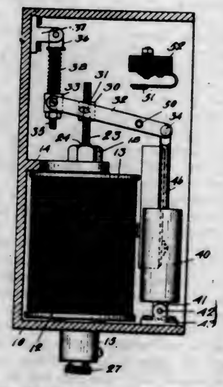
4. A coin controlled lock having a spring actuated bolt and with a lug on it, means for guiding the coin to a position adjacent said lug and between it and the outer end of the bolt, a bar for engaging the lower part of the coin and also the edge of the coin next to the outer end of the bolt, knob operated means for moving said bar inwardly and thus through the coin causing the withdrawal of the bolt, a spring for returning said bar after the knob operated means is released, and means for forcing the bolt inward as the door is closed for moving the lug on the bolt away from said bar to permit the escape of the coin.

5. A coin controlled lock having a spring actuated bolt and with a lug on it, means for guiding the coin to a position adjacent said lug and between it and the outer end of the bolt, a bar for engaging the lower part of the coin and also the edge of the coin next to the outer end of the bolt, knob operated means for moving said bar inwardly and thus through the coin causing the withdrawal of the bolt, a spring for returning said bar after the knob operated means is released, means for forcing the bolt inward as the door is closed for moving the lug on the bolt away from said bar to permit the escape of the coin, and means for adjusting the position of said bar for stopping coins of the desired dimensions.

[Claims 6 to 15 not printed in the Gazette.]

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1,230,063. TIME-LIMIT RELAY. GEORGE A. BURNHAM, Saugus, Mass., assignor to Sears B. Condit, Jr., Brookline, Mass. Filed Apr. 14, 1913. Serial No. 760,870. (Cl. 175—270.)



1. A selective time-limit device for controlling electric circuits comprising means to operate a switch which is inversely responsive to overloads of different current values up to a predetermined current value and other means associated with the aforesaid means to operate the switch which is definitely responsive to overloads of higher current values only, substantially as described.

2. A selective time-limit device for controlling electric circuits comprising electro-magnetically operated means to operate the switch, including a solenoid and a timing-element, inversely responsive to overloads of different current values up to a predetermined current value, and means associated with the aforesaid means and arranged to be set in condition for actuation by said solenoid only on overloads of higher current values, to operate the switch at the end of a definite period of time regardless of the current value of the overload, substantially as described.

3. A selective time-limit device for controlling electric circuits comprising electro-magnetically operated means to operate a switch including a solenoid and a timing-element, inversely responsive to overloads of different current values up to a predetermined current value, and a spring arranged to be set in condition for actuation by said solenoid only on overloads of higher current values, and which operates the switch at the end of a definite period of time regardless of the current value of the overload, substantially as described.

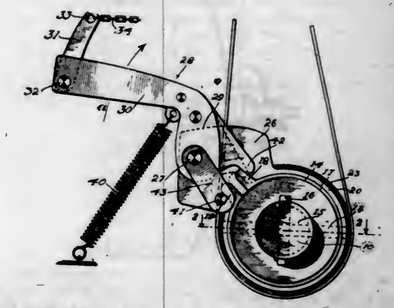
4. In a time-limit controlling apparatus for electric circuits, the combination of means variably responsive to overloads of different current values up to a predetermined current value for controlling the operation of a switch at the end of correspondingly variable periods of time, and other means associated with the aforesaid means and responsive only to overloads of higher current value for controlling the operation of the switch at the end of a definite period of time, regardless of the current value of the overload, substantially as described.

5. In a time-limit controlling apparatus for electric circuits, the combination of means variably responsive to overloads of different current values up to a predetermined current value for controlling the operation of a switch at the end of correspondingly variable periods of time, and other means operated by the aforesaid means only upon overloads of higher current values, for controlling the operation of the switch at the end of a definite period of time regardless of the current value of the overload, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

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1,230,064. STARTER FOR INTERNAL-COMBUSTION ENGINES. WILLIAM H. CARD and JOSEPH J. CUSHMAN, Los Angeles, Cal. Filed July 27, 1916. Serial No. 111,599. (Cl. 74—53.)



1. In an engine starter, the combination with an engine crank shaft, of a starter sleeve secured thereon, a fixed clutch member secured thereover, a loose clutch member adapted to rotate upon and move along said fixed member, means whereby the loose clutch member may be rotated upon the sleeve, a shoulder formed at the outer end of said sleeve, and means acting between said shoulder and the loose clutch member and actuated by said clutch rotating means to force the loose clutch member into engagement with the fixed member.

2. In an engine starter, the combination with an engine crank shaft, of a fixed clutch member having a cone-shaped recess in one side thereof and concentric with the crank shaft upon which it is secured, a loose clutch cone slidably mounted in relation to the cone-shaped recess, a sleeve upon which said cone is adapted to rotate, an annular conical shoulder adjacent the outer end of said cone, a split conical cup adapted to bear between the conical shoulder and the cone, means whereby the cone may be rotated, and means acting simultaneously with the rotation of the cone whereby the split conical cup will be contracted around the conical shoulder and will act to force the cone into engagement with the fixed clutch member to rotate the engine shaft.

3. In an engine starter, the combination of an engine crank shaft, a fixed clutch member thereon, a second clutch member slidably mounted on said shaft, means loosely mounted on said shaft for moving said second clutch member longitudinally along said shaft in fric-

tional engagement with said fixed clutch member, means pivoted to said loose clutch member for simultaneously actuating said first named means and imparting a partial rotation to said second clutch member, and resilient means tending to move said pivoted means into normal inoperative position.

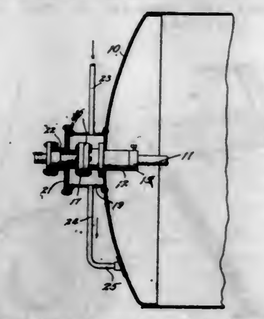
4. In an engine starter, the combination with an engine crank shaft, a fixed clutch member thereon, a second clutch member slidably mounted on said shaft, means for moving said second clutch member, longitudinally along said shaft in frictional engagement with said fixed clutch member, means for simultaneously actuating said first named means and imparting a partial rotation to said second clutch member, and means tending to move said last named means into normal inoperative position.

5. In an engine starter, the combination with an engine crank shaft, a fixed clutch member thereon, a second clutch member slidably mounted along said shaft, means for moving said second clutch member longitudinally along said shaft in frictional engagement with said fixed clutch member, and means imparting a partial rotation to said second clutch member.

[Claim 6 not printed in the Gazette.]

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1,230,065. STUFFING-BOX. GENTRY CASH, Whiting, Ind., assignor to Standard Oil Company, Whiting, Ind., a Corporation of Indiana. Filed Dec. 14, 1916. Serial No. 137,043. (Cl. 137—115.)



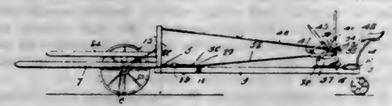
1. In combination, a container, a stuffing-box extending to the outside of said container, and means for supplying a liquid medium to the container said liquid serving as a cooling medium for the stuffing-box.

2. In combination, a container, a stuffing-box extending to the outside of said container, a housing inclosing the outer end of said stuffing-box, and means for supplying a liquid medium to the container said liquid serving as a cooling medium for the stuffing-box.

3. In combination a container, a shaft entering the same, a stuffing-box forming a joint between the said container and shaft, a housing inclosing the outer end of the said stuffing-box, a second stuffing-box forming a joint between said housing and said shaft, and means for introducing fluid into the said container through the chamber formed by the said housing.

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1,230,066. HAY RAKE OR STACKER. WILBUR L. CLEVELAND, Lamar, Colo. Filed Jan. 17, 1917. Serial No. 142,900. (Cl. 56—69.)



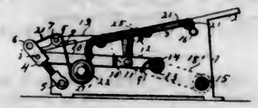
2. A hay rake comprising a plurality of spaced tooth bars, a rod longitudinally shiftable in each of said bars, each bar being provided with a chamber in its forward end an an opening in the top of the bar communicating with said chamber, spaced rollers mounted in the chamber, a curved retaining rod movable between said rollers and connected to the end of the shiftable rod, and means for actuating the rods in said bars to project the retaining rods above the upper surfaces of the bars.

3. A hay rake comprising a plurality of spaced rake bars, a rod longitudinally shiftable in each of said bars, each bar having a chamber in its forward end and an opening in the top of the bar at the forward end of the chamber, a second opening in the bottom of said bar at the rear end of said chamber, a curved retaining rod connected at one end to the shiftable rod, guide means for the retaining rod in said chamber, and means for actuating the shiftable rods to simultaneously project the retaining rods above the upper surfaces of the tooth bars.

[Claim 1 not printed in the Gazette.]

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1,230,067. CIGAR-WRAPPING MACHINE. JOHN H. DEAN, Grand Rapids, Mich. Filed Dec. 14, 1914. Serial No. 877,606. (Cl. 131—42.)



1. In a cigar wrapping machine, a frame having a table, an inclined guideway secured to the frame at each edge of the table, carriages mounted on said guideways, to slide longitudinally thereon, a roller revolubly mounted in said carriages and extending across the machine, an adjustable supporting rod extending across the end of the machine back of the roller, actuating arms pivotally mounted on the frame, connecting rods pivotally connected with said arms and with the carriages, an adjusting rod revolubly secured in the frame, an apron secured at one end to the supporting rod and at the other end to the adjusting rod, and means for operating the apron to wrap binders around the cigars.

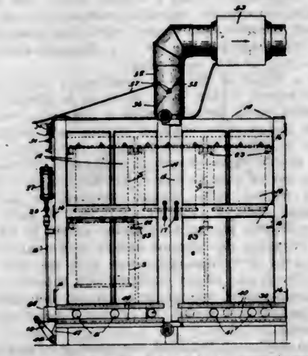
2. In a cigar wrapping machine, a frame having a table thereon, a guideway at each side of the frame adjacent to the edges of the table and inclined from the horizontal, carriages mounted on the guideways to slide longitudinally thereof, a roller rod extending across the frame and secured to the carriages, a roller revolubly mounted on said rod between the carriages, a shaft revolubly mounted near the front end of the frame, actuating arms mounted on said shaft, connecting rods pivotally connected at one end to the arms and at the other ends to the carriage connecting rod, an adjustable supporting rod at the back end of the machine, an adjusting rod at the front end of the machine below the edge of the table, an apron secured at one end to the supporting rod and at the other end to the adjusting rod and made to lie on the table with a downwardly extending loop between the end of the table and the roller, a lever for actuating the arms and the carriages, and means connected with the lever whereby the supporting rod may be made to reciprocate forward and backward to adjust the tension of the apron when wrapping binders around cigars.

3. In a cigar wrapping machine, a frame having a table thereon, a guideway at each side of the frame adjacent to the edges of the table, carriages mounted on the guideways to slide longitudinally thereon, a roller supporting rod mounted on the carriages, a roller mounted on said rod between the carriages, a shaft mounted in the front end of the machine near the bottom, an arm mounted on each end of the shaft outside of the frame, a lever integral with one of said arms, a connecting rod connecting each arm with one end of the roller rod, a cam on one of said arms, arms pivotally connected with the back end of the frame and extending upward, a supporting rod mounted in the upper ends of said arms and extending across the frame, a shaft revolubly mounted in the frame near the center of the sides, an arm projecting backward from the center of said shaft, a connecting rod pivotally connected at one end with said arm and at the other end with the supporting rod arms, and a spring connected with said shaft and the frame to hold the shaft and arm in normal position, a post extending downward from the table back of the said arm, an arm extending forward from one end of said shaft, a roller on the end of said arm in position to be made to engage and be operated by the cam on the actuating arm to give the shaft an oscillating movement and the supporting rod a reciprocating movement forward and backward with a pause between each forward and backward movement of the lever.

4. In a cigar wrapping machine, a frame having a table thereon inclining from the horizontal and having one end curved downward, a guideway at each edge of the table, carriages mounted to slide longitudinally on said guideways, a rod secured in said carriages with its ends projecting beyond the outer surfaces thereof, a roller mounted on said rod between the carriages and extending across the machine, a shaft revolubly mounted in the front lower corner of the frame, an arm mounted on each end of said shaft, one of said arms extended to form a lever for actuating said machine, connecting rods pivotally connected at one end to said arms and at the other ends to the roller rod, a cam mounted on the lever extended arm, a rod supporting arm pivotally connected at one end to the back end of the frame, a supporting rod secured in the free ends of said arms and extending across the machine, a post extending downward from the table, a shaft revolubly mounted in the frame forward of the post, an arm projecting backward from said shaft directly under the post, a connecting rod pivotally connected at one end with said arm and at the other end with the supporting rod arms, an arm on one end of said shaft outside of the frame, a roller mounted on one end of said arm in position to engage the cam and actuate the shaft to cause the supporting rod to reciprocate horizontally from the movements of the lever arm, an adjusting rod across the front end of the frame below the edge of the table, means for loosening said rod for free revoluble movement and for securing it firmly against its revoluble movement, an apron secured at one end to the supporting rod and at the other end to the adjusting rod to lie upon the table and the roller forming a loop in the apron to receive cigars.

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1,230,068. APPARATUS FOR WATERPROOFING SIZED SHEETS. STERLING ELLIOTT, Newton, Mass. Filed Dec. 28, 1914. Serial No. 879,282. (Cl. 91—60.)



1. Apparatus of the kind described, comprising a housing adapted to receive and hold suspended a plurality of sized sheets, and to be tightly closed to produce a confined chamber, means for liberating a quantity of formaldehyde gas in said chamber, and means for causing a mild circulation of air to said chamber consisting of a blower having a connection through restricted openings, spaced apart about the top of said chamber, and a series of pipes extended across said chamber adjacent the bottom, opening at their ends to the atmosphere, and having correspondingly restricted openings spaced apart throughout their length, means for closing said pipe, and means for closing said blower connection at will, substantially as described.

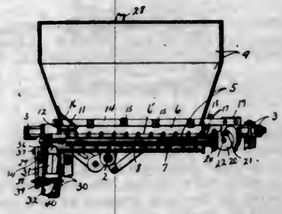
2. Apparatus of the kind described, comprising a housing adapted to receive and hold suspended a plurality of sized sheets, and to be tightly closed to produce a confined chamber, means for liberating a quantity of formaldehyde gas in said chamber, and means for causing a mild circulation of air through said chamber, consisting of a blower having a connection through restricted openings spaced apart, about one side of said chamber, and a series of pipes extending across said chamber adjacent an opposite side thereof with correspondingly restricted openings facing toward the adjacent side, means for closing said pipes, and means for closing said blower connection at will, substantially as described.

3. Apparatus of the kind described, comprising a chamber adapted to receive a plurality of sheets to be treated and to be tightly closed, a relatively small container having provision to be heated and placed within the chamber so as to give off gaseous vapor into said chamber when the contents thereof is heated, and means arranged outside of the chamber and extended thereinto for delivering a predetermined quantity of a volatile liquid to said container, substantially as described.

4. Apparatus of the kind described, comprising a chamber adapted to receive a plurality of sheets to be treated and to be tightly closed, a relatively small container having provision to be heated and placed within the chamber so as to give off gaseous vapor into said chamber when the contents thereof is heated, and means arranged outside of the chamber and extended thereinto for delivering a predetermined quantity of a volatile liquid to said container, said means including a closing valve.

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1,230,069. FERTILIZER-DISTRIBUTER. WILLIAM E. GILROY, Utica, N. Y., assignor to Eureka Mower Company, a Corporation of New York. Filed Sept. 11, 1915. Serial No. 50,231. (Cl. 221—120.)



1. A fertilizer distributer comprising a framework embodying supporting wheels, a hopper mounted on said framework, a screw conveyer within the hopper, a reciprocating agitator within the hopper above the screw conveyer, a rotary shaft, means driven from a wheel for rotating said shaft, a gear on the shaft, a gear upon the screw conveyer meshing with the gear upon the shaft for transferring rotary movement from the shaft to the screw conveyer and means mounted on and rotating with said shaft for reciprocating said agitator.

2. A fertilizer distributer comprising a framework embodying supporting wheels, a hopper mounted on said framework, a screw conveyer within the hopper, a reciprocating agitator within the hopper above the screw conveyer, a rotary shaft, means driven from a wheel for rotating said shaft, a gear on the shaft, a gear upon the screw conveyer meshing with the gear upon the shaft for transferring rotary movement from the shaft to the screw conveyer, a member mounted on said shaft and hav-

ing an eccentric surface for engagement with said agitator to reciprocate the same upon rotation of said shaft.

3. A fertilizer distributer comprising a framework embodying supporting wheels, a hopper mounted on said framework, a screw conveyer within the hopper, a reciprocating agitator within the hopper above the screw conveyer, a rotary shaft, means driven from a wheel for rotating said shaft, a gear on the shaft, a gear upon the screw conveyer meshing with the gear upon the shaft for transferring rotary movement from the shaft to the screw conveyer, a member mounted on said shaft having an eccentric surface, said agitator provided with a pair of spaced projections separated from but adapted for alternate contact with said eccentric surface whereby the agitator is reciprocated upon rotation of said shaft.

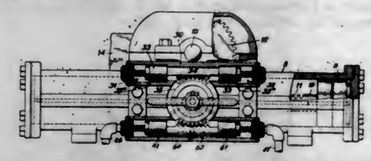
4. A fertilizer distributer comprising a wheel-supported framework, a pair of spaced hoppers supported upon opposite sides of said framework, a rotary screw conveyer in each of said hoppers, said conveyers having their axes substantially perpendicular to the axis of rotation of said wheels, a pair of independent rotary shafts mounted adjacent the hopper and having their axes substantially parallel with the axis of rotation of the wheels, a gear mounted on each shaft, a gear on each screw conveyer meshing with the gear on the respective adjacent shaft, means actuated by respective wheels, and including a clutch mechanism for positively driving said shafts independently of each other either separately or in unison.

5. A fertilizer distributer comprising a wheel-supported framework, a pair of spaced hoppers supported upon opposite sides of said framework, a screw conveyer in each of said hoppers, separate connections between the adjacent wheel and its respective screw conveyer for transmitting movement from the wheel to the conveyer, and a clutch in each of said connections.

[Claims 6 to 14 not printed in the Gazette.]

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1,230,070. MOTOR FOR FLUID-PRESSURE DOOR-OPERATING DEVICES. ALBERT GOTTSCHALK, New York, N. Y., assignor to National Pneumatic Company, Chicago, Ill., a Corporation of West Virginia. Filed Aug. 2, 1912. Serial No. 712,850. (Cl. 121—45.)



1. The combination with a motor and fluid pressure supply connections thereto, of a manually operative valve located at a distance from said motor for controlling said connections, said valve having two open positions, and means operated by the fluid pressure in said connections for automatically closing said valve from either of its open positions.

2. The combination with a motor and fluid pressure supply connections thereto, of a valve means for controlling the supply of fluid from said connections to said motor, a fluid pressure mechanism for shifting said valve to open the supply, and a manually operative valve located at a distance from the motor for controlling the flow of fluid to said valve shifting means, and means operated by the fluid pressure in said connections for automatically shifting the latter valve from open to closed position.

3. The combination with a motor and fluid pressure supply connections thereto, a valve for controlling the supply of fluid from said connections to said motor, and a piston device for shifting said valve to open position, of means operating upon movement of the actuating motor of the end of its stroke, to shift said valve to closed position, and a manually operative valve for controlling the pressure on said piston device.

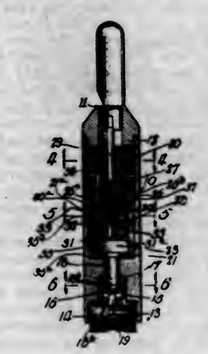
4. The combination with a motor and fluid pressure supply connections thereto, a valve for controlling the supply of fluid from said connections to said motor, and a piston device for shifting said valve to open position, of mechanism actuated by the pressure of the fluid admitted to the motor to shift said valve to closed position, and a manually operative valve for controlling the pressure on said piston device.

5. The combination with a motor and fluid pressure supply connections thereto, a valve for controlling the supply of fluid from said connections to said motor, of a pinion for operating the valve, a piston device with a rack engaging one side of the pinion to open the valve, and another piston device with a rack engaging another part of the pinion and operated by the fluid pressure exhausted from said motor to close the valve.

[Claim 6 not printed in the Gazette.]

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1,230,071. PNEUMATIC-TIRE-ALARM DEVICE. LEWIS E. HAWK, Chicago, Ill., assignor of one-third to Earl R. Kilpatrick, Chicago, Ill. Filed May 17, 1915. Serial No. 28,614. (Cl. 137—69.)



1. In an alarm device of the kind described, a casing adapted for attachment to the inlet valve of a pneumatic tire, means providing a piston valve chamber in said casing, a spring controlled piston valve plug movable in said chamber, the wall of said chamber being provided with a passageway adapted to span the piston valve when the same is depressed beyond a certain point, and a gasket of elastic compressible material forming the top wall of said valve chamber, said piston valve plug being provided with a knife-edge annular rib of a diameter equal to the pressure area of said valve plug.

2. In a device of the kind described, a casing adapted for attachment to the inlet valve on a pneumatic tire, said casing being provided with a chamber, means providing a piston valve chamber within said casing chamber, and a spring controlled piston valve plug movable in said piston valve chamber, said valve chamber comprising a ported tubular sleeve, having annular ribs at its top and bottom ends, elastic compressible gaskets in said casing chamber, one at each end of said tubular sleeve, a thimble having an annular groove in its bottom surface engaging the topmost gasket, said annular groove being located in vertical alinement with the ribs on said tubular sleeve, and means engaging said thimble for causing compression of said gaskets against the ribbed ends of said tubular sleeve and the grooved bottom surface of said thimble.

3. In a device of the kind described, a casing adapted for attachment to the inlet valve of a pneumatic tire, means providing a piston valve chamber in said casing, gaskets of elastic compressible material forming the top and bottom walls of said chamber, a spring controlled piston valve plug movable in said chamber, said valve plug comprising a plurality of disks mounted upon a valve stem, the topmost disk being provided with a knife-edge annular rib of a diameter equal the diameter of said pressure chamber, the other disks being of a smaller diameter and the bottommost disk being provided with an annular knife-edge rib, and flexible washers interposed between said disks, said washers projecting beyond the periphery of the bottommost disks and down between said disks and the wall of said pressure chamber, the annular knife-edge rib on said piston disks being adapted to seat in said elastic compressible gaskets, when said piston valve is at either limit of movement in said pressure chamber.



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1,230,072. AUTOMOBILE-WASHER. JAMES PIERSON JOHNSON, Toronto, Ontario, Canada. Filed Jan. 31, 1916. Serial No. 75,410. (Cl. 15—51.)



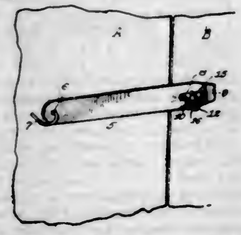
1. In a device of the class described, a mop head comprising a tubular member having a series of annular ribs having cross notches formed on the exterior periphery thereof, a mop body extending around the tubular member, and binding means securing the mop body to the tubular member intermediate of the annular ribs to prevent either sliding or rotation of the mop body.

2. In a device of the class described, a mop head comprising a lower tubular member and an upper tubular member spaced apart to form an annular intermediate opening and a hooded member carried by the upper tubular member, a bottom wall for the hooded member having a central opening into which the lower tubular member extends and is secured and having perforations formed around such central opening adapted to direct water from the exterior of the hood on to the interior of the mop body.

[Claim 3 not printed in the Gazette.]

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1,230,073. HASP-FASTENER. JOHN C. MORGAN, Los Angeles, Cal. Filed Oct. 9, 1916. Serial No. 124,645. (Cl. 70—83.)



A hasp fastener comprising the combination of a keeper provided with an opening, a hasp provided with an opening to receive said keeper, and mounted to be swung over the latter into locking position, and a catch pivotally mounted in the opening of said keeper, the said catch balanced to normally dispose itself with its longitudinal axis vertical, and having an inclined surface for engagement by said hasp when moving into locking position to swing said catch into a horizontal position so that it may pass through the opening in said hasp.

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1,230,074. PLUM-BOB APPARATUS. JONATHAN PERKINS, San Diego, Cal. Filed May 29, 1916. Serial No. 100,563. (Cl. 33—217.)



1. In an apparatus of the class described, the combination of a plumb bob, consisting of a cylinder, a pointed weight secured in the lower end thereof, a plug in the upper end thereof, a pendulum of slightly smaller diameter than the inner surface of said cylinder suspended centrally in said plug and adapted to swing against the inner sides of said cylinder, a cable secured to said plug for suspending said plumb bob and means for mounting said cable.

2. In an apparatus of the class described, the combination of a plumb bob, consisting of a cylinder, a pointed weight secured in the lower end thereof, a plug in the upper end thereof, a pendulum of slightly smaller diameter than the inner surface of said cylinder suspended centrally in said plug and adapted to swing against the inner sides of said cylinder, a cable secured to said plug for suspending said plumb bob and means for mounting said cable, consisting of a frame, a drum revolubly mounted therein upon which said cable is mounted and means for supporting said frame.

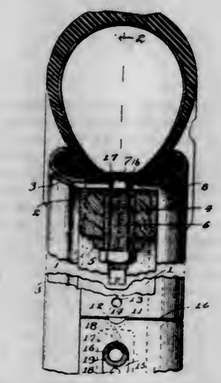
3. In an apparatus of the class described, the combination of a plumb bob consisting of a cylinder, a pointed weight secured in the lower end thereof, a plug secured in the upper end thereof, a pendulum suspended centrally on the lower side of said plug, the large portion being slightly smaller in diameter than the inner surface of said cylinder and adapted to strike against the inner side of said cylinder and means for suspending said pendulum consisting of a cable secured centrally on the outer surface of said plug, a drum upon which the other end of said cable is wound, a frame in which said drum is revolubly mounted and means for supporting said frame in a normally horizontal position against the structure to be plumbed.

4. In an apparatus of the class described, the combination of a plumb bob consisting of a cylinder, a pointed weight secured in the lower end thereof, a plug secured in the upper end thereof, a pendulum suspended centrally on the lower side of said plug, the large portion being slightly smaller in diameter than the inner surface of said cylinder and adapted to strike against the inner side of said cylinder and means for suspending said pendulum, consisting of a cable secured centrally on the outer surface of said plug, a drum upon which the other end of said cable is wound, a frame in which said drum is revolubly mounted, means for supporting said frame in a normally horizontal position against the structure to be plumbed and means on said frame for readily determining the distance said plumb bob is suspended from the structure to be plumbed.

5. In an apparatus of the class described, the combination of a plumb bob consisting of a cylinder, a pointed weight secured in the lower end thereof, a plug secured in the upper end thereof, a pendulum suspended centrally on the lower side of said plug, the larger portion being slightly smaller in diameter than the inner surface of said cylinder and adapted to strike against the inner side of said cylinder and means for suspending said pendulum consisting of a cable secured centrally on the outer surface of said plug, a drum upon which the other end of said cable is wound, a frame in which said drum is revolubly mounted, means for supporting said frame in a nor-

mally horizontal position against the structure to be plumbed, means on said frame for readily determining the distance said plumb bob is suspended from the structure to be plumbed and means on said frame for engaging said cable whereby said plumb bob may be suspended at any elevation desired from the supporting frame.

1,230,075. WHEEL. LOUIS H. PERLMAN, New York, N. Y. Filed June 24, 1916. Serial No. 105,692. (Cl. 152—21.)



1. In a demountable rim, the combination, of separable rim sections, and lock receiving means retaining the sections against axial separation but leaving them free for radial separation.

2. In a demountable rim, the combination, of separable sections, and lock receiving means fixed to one of the sections and extending through the other in position for preventing axial separation of the sections while leaving the last named section free for radial separation.

3. In a demountable rim, the combination, of an uncut section and a cross cut section having lapping web portions, and a lock receiving shank fixed to the uncut section and extending through the cut section for leaving the cut section free for radial movement relative to the uncut section.

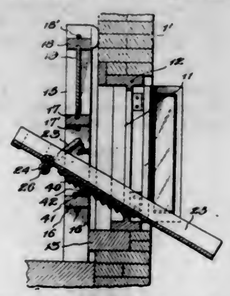
4. In a demountable rim, the combination, of an uncut section and a cross cut section having lapping web portions, and a lock receiving shank fixed to the uncut section and extending through the cut section for leaving the cut section free for radial movement relative to the uncut section, the shank being formed with a lock receiving recess.

5. In a demountable rim, the combination, of an uncut section and a cross cut section having lapping web portions, and a lock receiving shank fixed to the uncut section and extending through the cut section for leaving the cut section free for radial movement relative to the uncut section, the shank being formed with a head overlying the outer face of and connected to the web of the uncut section.

1,230,076. COAL-CHUTE AND WINDOW-GUARD. JOHN R. ROSCOE, Fort Dodge, Iowa. Filed Nov. 17, 1916. Serial No. 131,972. (Cl. 193—33.)

2. A device of the character described comprising a frame having an opening therethrough, a chute having swinging connection with the frame and positioned for sliding movement of its upper end through said opening at times, a ratchet bar connected to the underside of the chute, and a transverse plate carried by the frame at the lower side of the opening having an inwardly extending flange to engage said bar.

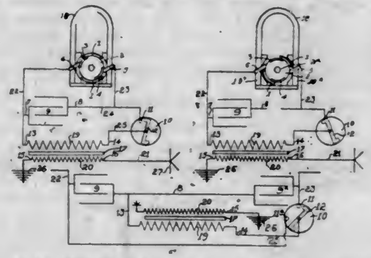
3. A device of the character described comprising a frame having an opening therethrough, a horizontal shaft revolubly mounted across the opening, having a crank portion including a horizontal eccentric chute carrying portion, a chute mounted pivotally upon the horizontal eccentric portion for lateral oscillation, and means on the chute and frame to hold the chute against longitudinal movement in the frame at various positions.



4. A portable chute and window guard comprising a frame having an opening therethrough, a chute, a swinging connection pivoted on the chute and the frame the said connection having movement in an arc permitting free reciprocation of the chute in the opening, and the chute having one end close enough to the point of attachment thereto of the swinging connection for movement to present its upper end through said opening at times, for movement as described to lie in close parallel relation with and against the frame at other times, and means to secure the chute in position in the opening.

[Claim 1 not printed in the Gazette.]

1,230,077. IGNITION SYSTEM FOR INTERNAL-COMBUSTION ENGINES. GUY H. SILVA, San Diego, Cal. Filed Mar. 16, 1916. Serial No. 84,713. (Cl. 123—148.)



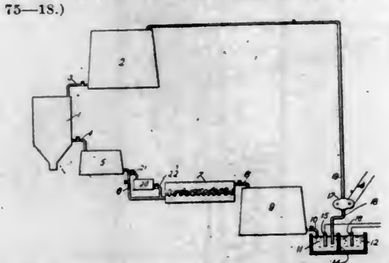
1. In an ignition system, a current source comprising a magneto generator provided with permanent magnetic fields, an armature with oppositely disposed poles, a commutator with oppositely disposed segments seventy degrees long, two brushes so positioned relatively to said commutator to collect current generated by the armature at the highest peak of wave, condensers, the terminals of each connected to each brush of the magneto generator, a transformer with one terminal of the primary winding connected to one terminal of the condenser, the other terminal of the condenser connected to a timer of the contact, a switch comprising a revoluble arm with a contact point on each oppositely disposed end adapted to engage with said contact twice in each revolution, said switch connected to a terminal of the condenser, whereby two sparks are produced with each revolution of said condenser.

2. In an ignition system, a current source comprising a magneto generator with permanent magnetic fields, a two-pole armature, a commutator with two segments oppositely disposed, two brushes so positioned in connection with said commutator to collect current generated by the armature at the highest peak of wave, a pair of condensers connected in series, each condenser connected to a brush of the magneto generator, a conductor connecting said condensers, the primary winding of a transformer connecting with said conductor, the other side of said primary winding electrically connected to a double contact revoluble switch and a pair of contacts with which said switch engages, the terminal of one connecting with one of the brushes of said magneto generator and with one of said condensers and the terminal of the other contact connecting with the other switch of said magneto generator and with the said other condenser.



3. In an ignition system, a current source comprising a magneto generator with permanent magnetic fields, a two-pole armature, a commutator with two segments oppositely disposed, two brushes so positioned in connection with said commutator to collect current generated by the armature at the highest peak of wave, a pair of condensers connected in series, each condenser connected to a brush of the magneto generator, a conductor connecting said condensers, the primary winding of a transformer connecting with said conductor, the other side of said primary winding electrically connected to a double contact revoluble switch and a pair of contacts with which said switch engages, the terminal of one connecting with one of the brushes of said magneto generator and with one of said condensers and the terminal of the other contact connecting with the other switch of said magneto generator and with the said other condenser and the secondary winding of said transformer grounded from one terminal and the other terminal connected with a distributer.

1,230,078. PROCESS FOR EXTRACTING COPPER FROM ITS ORES. HENRY BYRON SLATER, Los Angeles, Cal. Filed July 28, 1915. Serial No. 42,343. (Cl. 75—18.)



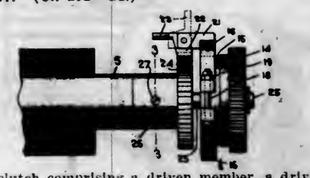
1. The process of extracting copper from ores containing copper together with an alkaline earth metal compound capable of precipitating iron from its solutions, which consists in leaching the ore with a solution containing ferric chlorid, and a metallic chlorid serving to retain cuprous chlorid in solution whereby the copper is dissolved and a portion of the iron is precipitated, removing the solution from the ore, precipitating the copper from the solution by the action of metallic iron, in such manner as to restore to the solution a quantity of iron substantially equivalent to that lost in leaching, and then regenerating the solution by the action of free chlorin.

2. The process of extracting copper from ore containing native copper together with an alkaline earth metal compound capable of precipitating iron from its solutions, which consists in leaching the ore with a solution containing ferric chlorid together with a metallic chlorid serving to retain cuprous chlorid in solution whereby the copper is dissolved and a portion of the iron is precipitated by the action of the base metal compound, removing the solution from the ore, precipitating the copper from the solution by the action of metallic iron, in such manner as to restore to the solution a quantity of iron substantially equivalent to that lost in the leaching operation, and then regenerating the solution by the action of free chlorin.

3. The process of extracting copper from ores containing native copper together with calcite, which consists in leaching the ore with a solution of ferric chlorid and calcium chlorid, whereby the copper is dissolved, a portion of the iron is precipitated and calcium chlorid is taken into solution, removing the solution from the ore, precipitating the copper from the solution by the action of metallic iron in such manner as to restore to the solution a quantity of iron substantially equivalent to that lost in the leaching operation, regenerating the solution by the action of free chlorin, and using the regenerating solution of leaching fresh ore, the calcium chlorid in the regenerated solution being utilized for retaining the cuprous copper in solution.

4. The process of extracting copper from ores containing copper together with a calcium compound, which consists in leaching the ore with a solution of ferric chlorid and sodium chlorid, so as to dissolve the copper of the ore, and to cause precipitation of a portion of the iron of the ferric chlorid and solution of a portion of the calcium of the ore as calcium chlorid, removing the solution from the ore, precipitating the copper by the action of metallic iron, in such manner as to restore to the solution a quantity of iron substantially equivalent to that lost in the leaching operation, and regenerating to produce a solution for repetition of the process, such solution containing calcium chlorid, serving as a carrier for cuprous chlorid in place of sodium chlorid lost in the leaching operation.

1,230,079. CLOTH-ROLL CLUTCH. ALFRED BURNS, Easthampton, Mass., assignor to West Boylston Manufacturing Company, Easthampton, Mass., a Corporation of Massachusetts. Filed Dec. 24, 1914. Serial No. 878,857. (Cl. 192—14.)



1. A clutch comprising a driven member, a driving element, means mounted upon said driving element in frictional engagement therewith and revolubly actuated thereby, and coupling means movably mounted upon said frictional means, said means being movable to connect said frictional means and said driven member whereby the latter may be differentially actuated.

3. A clutch, comprising a driven member, a driving element, a drum carried by said element, a clamping member on said drum adaptable to rotate therewith, means carried by said clamping member for adjusting the tension of said member whereby, when resistance to rotation of said driven member passes a predetermined point, said clamping member automatically slips on said drum and the driven member is differentially driven by said driving element, a toothed wheel secured to and revoluble with said driven element, means carried by said clamping member adapted to engage and actuate said toothed wheel or to be disengaged therefrom, whereby said driven member may be freely revoluble without adjustment of said clamping member tension.

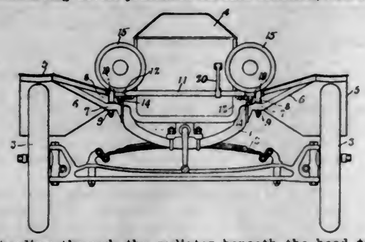
6. A clutch, comprising a driving element, a driven member, a toothed wheel thereon, an adjustable friction band carried by the driving element, lugs on said band, a latch pivotally mounted on said lugs and adapted to engage said toothed wheel when in operative position, and adapted to be raised into inoperative position to permit the driven member to be freely rotated.

[Claims 2, 4, and 5 not printed in the Gazette.]

1,230,080. LIGHT FOR VEHICLES. GEORGE F. DEADY and GEORGE H. HOLLAND, Dayton, Ohio, assignors to The Auto Safety Light Company, Dayton, Ohio. Filed Oct. 28, 1916. Serial No. 128,194. (Cl. 240—61.)

1. The combination, with an automobile having a hood, fenders and brace rods therefor, of upwardly and forwardly directed brackets mounted on said brace rods at

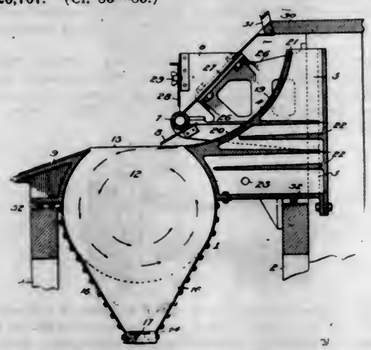
each side of the hood and projecting in front thereof, an illuminating device journaled on said brackets, and means



extending through the radiator beneath the hood to the dash for actuating said illuminating device to tilt it.

[Claims 2 to 6 not printed in the Gazette.]

1,230,081. ORE CONCENTRATOR OR SEPARATOR. WILLIAM H. MUNROE, Ashland, Ala., assignor of one-fourth to G. A. Mattison and one-fourth to A. B. Conklin, Ashland, Ala. Filed Oct. 20, 1916. Serial No. 126,767. (Cl. 83—85.)



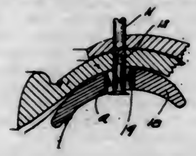
1. In an apparatus for concentrating minerals or ores, the combination with a longitudinally wide and deep flotation tank having an unobstructed interior for containing liquid, the width and depth being proportioned to permit bodily circulation of the liquid therein under impulse of the feed, of a curved spilling apron arranged to deliver a stratum of liquid under impetus across the upper surface of the liquid in the flotation tank, and means for feeding the ore to be separated into the path of travel of the aforesaid stratum of liquid.

3. In an apparatus for concentrating mineral or ores, the combination with a longitudinally wide and deep flotation tank having an unobstructed interior for containing liquid, the width and depth thereof being proportioned to permit bodily circulation of the liquid therein under impulse of the feed, of a downwardly curved spilling apron arranged to deliver a stratum of liquid under impetus across and in line with the upper surface of the liquid in the flotation tank, and means for delivering the ore in a thin layer into the path of travel of the aforesaid stratum of liquid, said means being located in close proximity to the upper open end of the flotation tank.

6. In an apparatus for concentrating minerals or ores, the combination with a flotation tank having an open upper end and an unobstructed interior, the upper portion of which is oppositely curved to permit bodily circulation of the liquid therein under impulse of the feed and the lower portion of which is constructed to collect the heavier deposits of ore, of a curved spilling apron arranged to deliver a stratum of liquid under impetus across the upper surface of the liquid in the flotation tank, and means for feeding the ore to be separated into the path of travel of the aforesaid stratum of liquid.

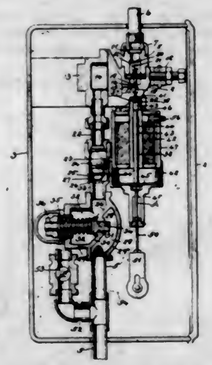
[Claims 2, 4, and 5 not printed in the Gazette.]

1,230,082. RIVET-SETTING DEVICE. JOSEPH N. NEWSOM, St. Louis, Mo., assignor, by direct and mesne assignments, of one-half to C. E. Andrews, St. Louis, Mo., and one-half to Hollis Christopher, Decatur, Ill. Filed Oct. 1, 1915. Serial No. 53,495. (Cl. 218—1.)



In a device of the class described, the combination with, a work support and anvil comprising a base plate, a bracket projecting upwardly and outwardly from one side of said plate, and a curved plate integral with the upper end of said bracket, there being an aperture formed through said curved plate near one edge thereof, of a punch comprising a handle, a tubular member projecting from one end thereof, a stem removably seated in the end of said tubular member and a pointed head carried by said stem, the largest diameter of which head is equal to the diameter of the tubular member.

1,230,083. ELECTROPNEUMATIC VALVE FOR AIR-BRAKES. THOMAS W. SCOTT, Baltimore, Md., assignor to The American Train Control Company, Baltimore, Md., a Corporation of Maryland. Filed Jan. 31, 1914. Serial No. 815,626. (Cl. 246—58.)



1. In an air-brake valve device for vehicles, the combination with a vehicle having an air-brake system, of a connection subject to train-line pressure of the said system; a connection subject to main-reservoir pressure of said system; valve means having one side subject to reservoir pressure and another side subject to train-line pressure,—said valve means holding the train-line connection closed, and means interposed betwen said valve means and the train-line to limit the reduction in train-line pressure and prevent an emergency application of the brakes when said valve means has been opened to vent the train-line.

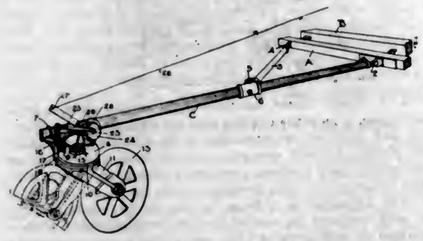
2. In an air-brake valve device for vehicles which latter travel on tracks, the combination with a vehicle having an air-brake system, of a train-line connection with the air-brake system; a connection from the main reservoir of the said air-brake system; means for normally holding the train-line connection closed by pressure from the reservoir; valve means for controlling the reservoir pressure to the said closing means of the train line; an electro-magnet to control said valve means; a circuit on the vehicle which includes the said electro-magnet; means for automatically controlling said circuit and electro-magnet, and automatic means in the train-line connection to limit the reduction of train-line pressure and automatically prevent an emergency application of the brakes when the train-line holding means is opened.

3. In an air-brake valve device for vehicles which latter travel on tracks, the combination with a vehicle having an air-brake system, of a cylinder on the vehicle having a movable piston-head; a connection between one side of the head in said cylinder and the train-line pressure of the air-brake system; automatic means for normally retaining said head to prevent escape of air from the train line, said means including an electro-magnet; a circuit including said electro-magnet to keep the latter energized and automatic means in the said connection to limit the reduction in train-line pressure and automatically prevent an emergency application of the brakes when the said head is moved to open the train line.

4. In an air-brake valve device for vehicles which travel on tracks, the combination with a vehicle having an air-brake system of a cylinder on the vehicle having a movable piston head therein; an air-brake train line connection with the cylinder and at one side of the piston head; an air-brake reservoir connection with the cylinder and at the other side of the piston head normally hold the said piston head to prevent the escape of air from the train line; means for automatically controlling the reservoir connection to the cylinder and automatic means to limit the reduction in train-line pressure and automatically prevent an emergency application of the brakes when the piston head is moved to vent the train-line.



1,230,084. PLOW-GUIDE. HERMAN STRACK, Long Prairie, Minn., assignor to Hansmann Manufacturing Company, Long Prairie, Minn. Filed Jan. 10, 1913. Serial No. 741,222. (Cl. 97—81.)



1. In a steering mechanism for plows, the combination with the steering axle of a forwardly projecting frame, a plate fixed in horizontal position on said frame, a rotary plate carried by said fixed plate, a caster carried by said rotary plate and adapted to be set at predetermined angles thereto, a dog pivoted on said fixed plate and having a locking engagement with said rotary plate, a rotary element carried by said fixed plate, a connecting rod connecting said dog with said rotary element and arranged to pull the latter out of locking engagement with said rotary plate as said rotary element is actuated, means for rotating said rotary element in step by step order to alternately swing said dog into locking and unlocking position, and means to hold said rotary element in each of its step by step positions.

2. In a steering mechanism for plows, the combination with the steering axle of a traction engine, of a forwardly extending tongue supported by said axle, a horizontal fixed plate carried by the extremity of said tongue, a rotary plate carried by said fixed plate and supporting a pilot wheel, said pilot wheel being adapted to be adjusted at a predetermined angle to said tongue, a dog pivoted on said fixed plate for locking said rotary plate at the above mentioned predetermined angle and pawl and ratchet mechanism for said dog actuated to carry said dog to hold the latter alternately in released or locked position.

1,230,085. HEAT-INSULATING MATERIAL AND PROCESS OF PRODUCING THE SAME. HAROLD S. ASHENHURST, Chicago, Ill., assignor of four-fifths to James J. Reynolds, Chicago, Ill. Filed Oct. 30, 1916. Serial No. 128,433. (Cl. 106—18.)

1. A new composition of matter in the form of a solid, having a distinctly cellular structure and containing a silicate in the form of asbestos as the major constituent, aluminum hydrate and calcium sulfate, substantially as described.

2. A new composition of matter in the form of a cellular solid body having a specific gravity of substantially .4 and containing a silicate in the form of asbestos as the major constituent, aluminum hydrate and calcium sulfate, substantially as described.

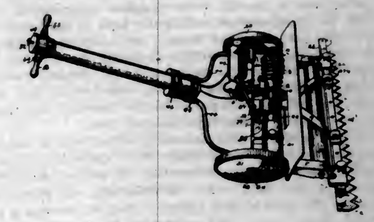
3. A new composition of matter having a distinctly cellular structure and a specific gravity less than 1 and composed principally of finely divided asbestos and calcium sulfate.

4. A composition of matter having a pronounced cellular structure and a specific gravity less than 1 and composed of asbestos in a comminuted condition and a substance which hydraulically sets following the reaction by which the cellular structure is formed.

5. A composition of matter having a pronounced cellular structure and a specific gravity less than 1 and composed of asbestos in a comminuted condition, aluminum hydrate and a substance which hydraulically sets following the reaction by which the cellular structure is formed.

[Claims 6 and 7 not printed in the Gazette.]

1,230,086. LAWN-MOWER. LINDEN P. CARHART, Brooklyn, N. Y. Filed Jan. 12, 1916. Serial No. 71,691. (Cl. 56—19.)



1. A hand propelled lawn mower having means independent of the traction mechanism for operating the cutting mechanism, said means comprising a reciprocating engine and a frame rigidly connected to the piston of said engine and to the movable part of said cutting means.

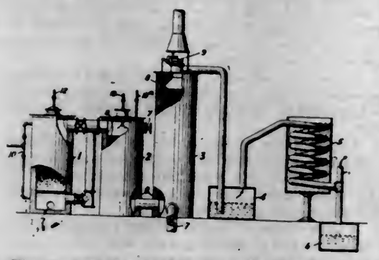
2. A hand propelled lawn mower having a reciprocating cutting means and a reciprocating means independent of the traction wheels for operating the cutting means, comprising an internal combustion engine a rigid connection between the piston of said engine and said cutting means to obtain a unitary unidirectional movement of said piston and cutting means and a resilient means for obtaining a reverse movement of said piston and said cutting means.

3. A hand propelled mowing machine comprising a reciprocating cutting device and a reciprocating engine the piston of which is rigidly connected to said cutting device and adapted to operate said cutting device in the direction and to the extent of the movement of the piston of the engine as herein specified.

4. A lawn mower having a cutting member, one part of which is adapted to be reciprocated, an engine arranged parallel to said cutting member, and having its piston rod rigidly attached to the movable part of said cutting member and adapted to move said movable part in one direction and a resilient member in line with said engine

and parallel to said cutting member and adapted to move the movable part of said cutting member in another direction all arranged for the purpose set forth.

1,230,087. MANUFACTURE OF TOLUOL. OWEN BROOKE EVANS, Philadelphia, Pa., assignor to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 24, 1915. Serial No. 10,280. (Cl. 23—24.)



1. The process of manufacturing toluol which consists in preheating a checker-brick chamber by internal combustion to a temperature sufficiently high to materially increase the percentage of toluol, subjecting naphtha of gas drip origin substantially as herein described to the heat of said chamber thereby forming a gas carrying toluol vapor, leading the gas and toluol vapor from the chamber, and recovering the toluol, substantially as described.

2. The process of manufacturing toluol which consists in preheating a checker-brick chamber by internal combustion to atemperature sufficiently high to materially increase the percentage of toluol, and subjecting naphtha of gas drip origin substantially as herein described in the presence of water gas to the heat of said chamber thereby forming a hydrocarbon gas carrying toluol vapor, and leading the gas and toluol vapor from the chamber, and recovering the toluol, substantially as described.

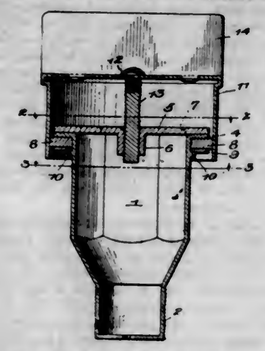
3. The process of manufacturing toluol which consists in heating a chamber to a temperature sufficiently high to materially increase the percentage of toluol, subjecting naphtha of gas drip origin substantially as herein described to the heat of said chamber thereby forming a gas carrying toluol vapor, and recovering the toluol, substantially as described.

4. The process of manufacturing toluol which consists in heatingf a chamber to a temperature sufficiently high to materially increase the percentage of toluol, subjecting naphtha of gas drip origin substantially as herein described in the presence of water gas to the heat of said chamber thereby forming a hydro-carbon gas carrying toluol vapor, leading the gas and toluol vapor from the chamber vapor, and recovering the toluol, substantially as described.

5. The process of manufacturing toluol which consists in heating naphtha of gas drip origin substantially as herein described to a temperature sufficiently high to materially increase the percentage of toluol therein, and recovering the toluol.

1,230,088. GREASE-CUP. EDWARD N. GARRISON, Bridgeport, Conn. Filed Sept. 16, 1915, Serial No. 50,933. Renewed May 5, 1917. Serial No. 166,767. (Cl. 184—38.)

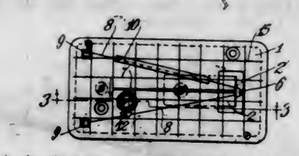
1. A grease cup comprising a body polygonal in cross section and having a contracted nipple formed with a central discharge opening, a peripheral flange provided on the upper end of the body, a plate secured to the flange and formed with a central threaded opening and a surrounding series of grease openings, a leather washer engaging the under side of the flange and extending beyond the latter, a clamping ring securing the leather ring in place, a cap snugly receiving the leather ring, a screw fixed to and depending within the cap for engaging the threaded



opening of the plate whereby on turning of the cap the same will move longitudinally of the body, and means on the cap for turning the latter.

[Claims 2 and 3 not printed in the Gazette.]

1,230,089. SWITCH. WALTER L. HAMILTON, Holyoke, Mass., assignor to Henry C. Avery, Holyoke, Mass. Filed Mar. 13, 1915. Serial No. 14,109. (Cl. 200—31.)



1. A circuit closer, comprising, in combination, a suitable base, a movable contact arm pivotally mounted thereon and forming one terminal of an electrical circuit to be closed, a fixed contact on said base and insulated therefrom, said contact arranged in the path of said arm and forming the other terminal of the circuit to be closed, a wire arranged in V-form having its two ends secured to said base and its central portion in engagement with a portion of said movable arm, and a heat resisting element on a portion of said wire, all constructed and arranged so that a sudden change in temperature will expand certain portions of said wire more rapidly than other portions, whereby a movement of the wire results to turn said arm to engage said fixed contact.

2. A circuit closer, comprising, in combination, a suitable base, a movable contact arm, arranged to form one terminal of an electrical circuit to be closed, a knife edge support for said arm, a fixed contact on said base and insulated therefrom, said contact arranged in the path of said arm and forming the other terminal of the circuit to be closed, a wire having its central portion in engagement with a portion of said arm and its two ends secured to said base in spaced relation, and a heat insulating tube surrounding a portion of said wire, all constructed and arranged so that unequal expansion is caused in certain portions of said wire, whereby a movement of the wire is caused to turn said arm into engagement with said fixed contact.

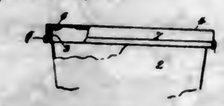
3. A circuit closer, comprising, in combination, a suitable base, a yieldable upright secured thereto, a movable arm adapted to form one terminal of a circuit to be closed, a member secured to said arm having knife edges to engage said upright, a wire bent into V-form having its central portion in engagement with said member and its two ends fixed in spaced relation to said base, a tube of heat resisting material on one limb of said V-shaped wire, and a fixed contact arranged on said base in the path of



said arm, said fixed contact being insulated from said base and adapted to form the other termini of the circuit to be closed, all constructed and arranged so that one limb of said V-shaped wire is expanded by a sudden rise in temperature more rapidly than the other limb, whereby a movement of the wire is caused to turn said arm to engage said fixed contact and close the circuit.

4. A circuit controller, comprising, in combination, a suitable base, a movable contact arm pivotally mounted thereon and forming one terminal of an electrical circuit to be controlled, a fixed contact on said base arranged in the path of said arm and forming the other terminal of said circuit, a wire arranged in V-form having its two ends secured to said base and its central portion in engagement with a portion of said movable arm, and a heat resisting element on a portion of said wire, all constructed and arranged so that a sudden change in temperature will expand certain portions of said wire more rapidly than other portions, whereby a movement of the wire results to turn said arm relatively to said contact to control said electrical circuit.

1,230,090. PAPER RECEPTACLE. HENRY A. HOUSE, Bridgeport, Conn. Filed Apr. 24, 1913. Serial No. 763,241. (Cl. 229—4.)



1. A paper receptacle pressed from a single sheet of seamless paper, having its side walls bent upward from the bottom substantially perpendicular to the bottom, and plaited to form sections of a plurality of thicknesses of paper, these sections of a plurality of thicknesses of paper gradually tapering from the top toward the bottom with the plurality of thicknesses of paper pressed together, and a rim for the lip of the cup formed substantially by the widest part of the plaited sections of a plurality of thicknesses, compressed under heat and moisture into a compact form, for reinforcing and strengthening the top of the receptacle.

2. A paper receptacle pressed from a single sheet of seamless paper, having its side walls bent upward from the bottom substantially perpendicular to the bottom, and plaited to form sections of a plurality of thicknesses of paper, these sections of a plurality of thicknesses of paper gradually tapering from the top toward the bottom and a rim for the lip of the cup formed substantially by the widest part of the plaited sections of a plurality of thicknesses, compressed under heat and moisure into a compact form, for reinforcing and strengthening the top of the receptacle.

3. A paper receptacle pressed from a single sheet of seamless paper, having its side walls bent upward from the bottom substantially perpendicular to the bottom, and plaited to form sections of a plurality of thicknesses of paper, these sections of a plurality of thicknesses of paper gradually tapering from the top toward the bottom, a rim for the lip of the cup formed substantially by the widest part of the plaited sections of a plurality of thicknesses, compressed under heat and moisture into a compact form, for reinforcing and strengthening the top of the receptacle and a cover having a rim compressed under heat and moisture into a compact form snugly fitting the compressed rim of the receptacle.

1,230,091. FOOD COMPOSITION. JOSEPH MOSES WARD KITCHEN, East Orange, N. J. Filed Nov. 20, 1916. Serial No. 132,288. (Cl. 99—11.)

1. The method of producing the food composition herein described, which consists in, (1) skimming milk, (2) adding to the skim milk pulverized cocoa seed and a pulverized cereal, and (3) partly eliminating water from the admixed materials under a decreased atmospheric pressure.

3. The method of producing the food composition herein described, which consists in, admixing skim milk, pulverized cocoa seeds and a thickening material, and eliminating water from the admixed material under a lessened atmospheric pressure.

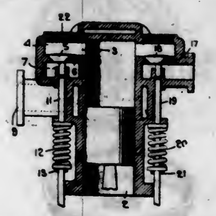
5. As a new food composition, partly dehydrated skim milk, pulverized cocoa seed and a cereal.

6. The method of producing the food composition herein described, which consists in, mixing skim milk and powdered cocoa seeds and dehydrating the admixture under decreased atmospheric pressure whereby a thorough emulsion is secured.

7. As a new food composition skim milk, powdered cocoa seeds and a cereal.

[Claims 2, 4, and 8 to 10 not printed in the Gazette.]

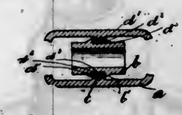
1,230,092. INTERNAL-COMBUSTION ENGINE. JACOB RUPERT SCOTT, North Weymouth, Mass., assignor of two-tenths to Edward H. Kavanagh and two-tenths to James W. Colgan, Weymouth, Mass. Filed Aug. 8, 1913. Serial No. 783,775. (Cl. 123—35.)



In an internal combustion engine comprising a plurality of cylinders and pistons therefor, fuel supplying means, a heating chamber intermediate said fuel supplying means and said cylinders located at one side of and adjacent to said cylinders and having a common wall with said cylinders, inlet ports leading from said heating chamber to said cylinders, valves for said ports, a port leading from said fuel supplying means to said heating chamber, a suction operated valve for said last mentioned port, all of said valves being located upon the same side of the cylinders whereby the explosive mixture will be trapped in said intermediate chamber and heated preparatory to its introduction into the cylinders.

# REISSUES.

14,315. BEARING. STEFAN ORBÁN, New York, N. Y. Filed Apr. 4, 1916. Serial No. 88,960. Original No. 1,105,097, dated July 28, 1914, Serial No. 817,004, filed Feb. 6, 1914. (Cl. 64—52.)



1. The combination with a journal box and a stationary frame, of opposite sets of metal strips or shims interposed between the said box and frame and a split ring carrying said metal strips or shims.

2. The combination with a journal box and a stationary frame, of opposite sets of metal strips or shims and a split ring surrounding the latter, said shims and split ring being interposed between the journal box and the stationary frame.

3. In a bearing, the combination with a frame and journal box, of shims and a ring covering such shims, said shims and ring being used for the compensation of worn off parts of the bearing.

# DESIGNS.

50,898. LACE TRIMMING. MAX N. AARON, Philadelphia, Pa., assignor to Friedberger-Aaron Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 4, 1917. Serial No. 166,483. Term of patent 3½ years.



The ornamental design for a lace trimming, as shown and described.

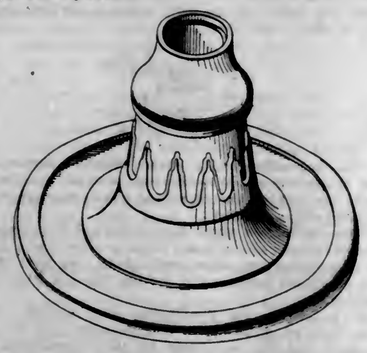
50,899. NUTCRACKER. ROBERT C. ABT, Chicago, Ill. Filed Apr. 9, 1917. Serial No. 160,901. Term of patent 14 years.





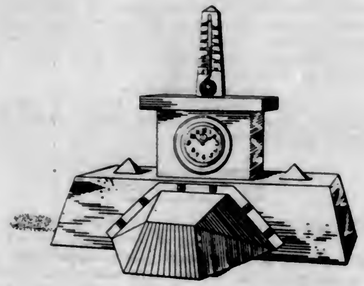
The ornamental design for a nutcracker, as shown.

50,900. CHAIR-PEDESTAL. JAMES BARKER, Philadelphia, Pa., assignor to Mary Emma Barker, Rydal, Pa. Filed Apr. 18, 1916. Serial No. 92,049. Term of patent 14 years.



The ornamental design for a chair pedestal, substantially as shown and described.

50,901. COMBINATION DESK ARTICLE. EDWARD H. BINNS, Pittsburgh, Pa. Filed Feb. 8, 1917. Serial No. 147,503. Term of patent 14 years.



The ornamental design for a combination desk article, as shown.

50,902. RING OR SIMILAR ARTICLE. MARTIN L. BOWDEN and MARTIN L. BOWDEN, Jr., Brooklyn, N. Y. Filed Mar. 16, 1917. Serial No. 155,340. Term of patent 7 years.

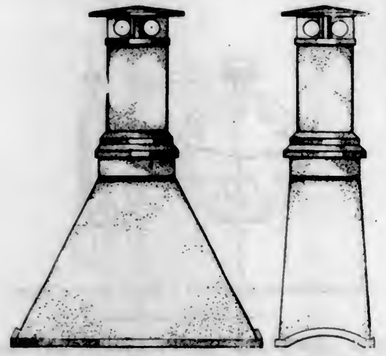




The ornamental design for a ring or similar article as shown.



50,903. CONCRETE SMOKE-JACK. HOWARD E. BURNS, Chicago, Ill., assignor to The C. F. Massey Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 30, 1917. Serial No. 158,752. Term of patent 14 years.



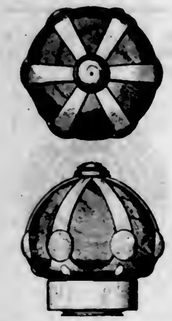
The ornamental design for concrete smoke jack as shown.

50,904. INSECT-TRAP. JOSEPH CZERNA, Goshen, Conn. Filed Apr. 26, 1917. Serial No. 164,810. Term of patent 3½ years.



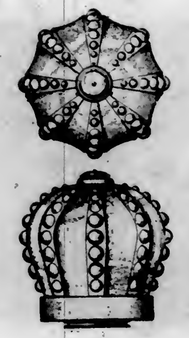
The ornamental design for an insect trap as shown.

50,905. LAMP-CASING. JOHN L. DAWES, Pittsburgh, Pa. Filed Apr. 5, 1917. Serial No. 160,007. Term of patent 7 years.



The ornamental design for a lamp casing as shown.

50,906. LAMP-CASING. JOHN L. DAWES, Pittsburgh, Pa. Filed Apr. 27, 1917. Serial No. 165,034. Term of patent 7 years.



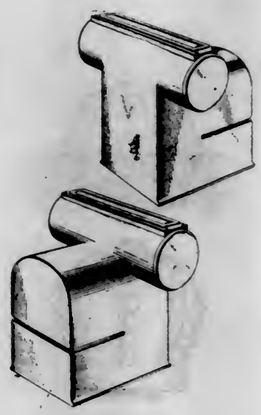
The ornamental design for a lamp casing, as shown and described.

50,907. SALT-SHAKER. DAVID FRISHMAN, New York, N. Y., assignor to E. & J. Bass Inc., New York, N. Y., a Corporation. Filed Jan. 22, 1917. Serial No. 143,883. Term of patent 3½ years.



The ornamental design for a salt shaker as shown.

50,908. CASING FOR MEASURING-MACHINES OR THE LIKE. JOHN C. GEBHART, St. Louis, Mo., assignor to Frank Low, St. Louis, Mo. Filed Mar. 14, 1917. Serial No. 154,883. Term of patent 14 years.



The ornamental design for a casing for measuring machines or the like, as shown.

50,909. HERRING-BONE GRASS FLOOR-COVERING. BYWATER HUDSON, St. Paul, Minn. Filed Mar. 31, 1916. Serial No. 88,177. Term of patent 14 years.



The ornamental design for herringbone grass floor covering, as shown.

50,910. WATCHCASE. FREDERICK EBEN HYATT, St. Davids, Pa., assignor to The Keystone Watch Case Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 25, 1916. Serial No. 133,496. Term of patent 7 years.



The ornamental design for a watch case, as shown.

50,911. WATCHCASE. FREDERICK EBEN HYATT, St. Davids, Pa., assignor to The Keystone Watch Case Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 25, 1916. Serial No. 133,498. Term of patent 7 years.



The ornamental design for a watch case, as shown.

50,912. AEROPLANE. HOWARD J. KELLEY and CHARLES H. GARRETT, Jr., Kansas City, Mo.; said Garrett assignor to said Kelley. Filed June 21, 1915. Serial No. 35,459. Term of patent 7 years.



The ornamental design for an aeroplane, as shown.

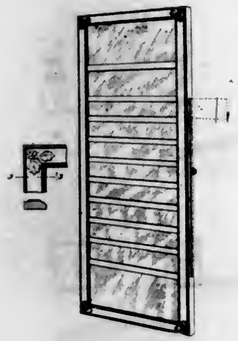
50,913. BADGE. FRANCIS XAVIER KIRSCH, Warwick, N. D. Filed Feb. 19, 1917. Serial No. 149,676. Term of patent 7 years.




The ornamental design for a badge as shown.

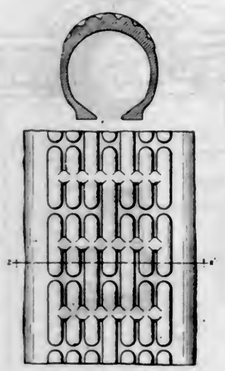


50,914. ADVERTISING MENU-FRAME. SAM PHILIPSON, St. Louis, Mo. Filed Apr. 16, 1917. Serial No. 162,567. Term of patent 7 years.



The ornamental design for an advertising menu frame, as shown.

50,915. PNEUMATIC TIRE. HARRY KING RAYMOND, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Apr. 12, 1917. Serial No. 161,666. Term of patent 14 years.



The ornamental design for a pneumatic tire as shown.

50,916. RUG. ROBERT F. RIDDELL, Manhasset, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed Apr. 21, 1917. Serial No. 163,721. Term of patent 7 years.



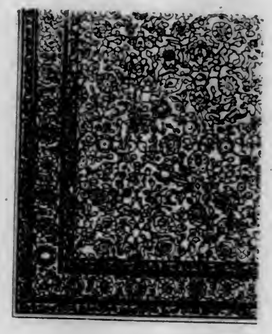
The ornamental design for a rug, substantially as shown.

50,917. RUG. ROBERT F. RIDDELL, Manhasset, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed Apr. 21, 1917. Serial No. 163,723. Term of patent 7 years.



The ornamental design for a rug, substantially as shown.

50,918. RUG. ROBERT F. RIDDELL, Manhasset, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed Apr. 21, 1917. Serial No. 163,724. Term of patent 7 years.



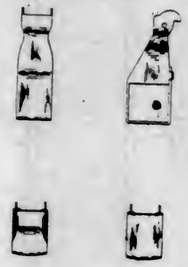
The ornamental design for a rug, substantially as shown.

50,919. RUG. ROBERT F. RIDDELL, Manhasset, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed Apr. 21, 1917. Serial No. 163,725. Term of patent 7 years.



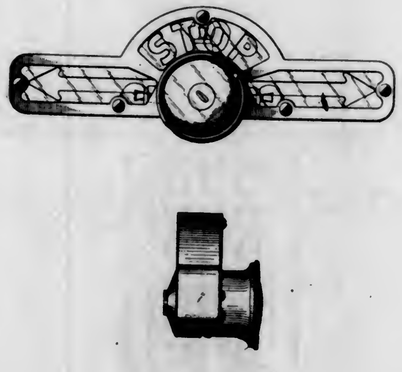
The ornamental design for a rug, substantially as shown.

50,920. CASKET-HANDLE ARM. EDWARD R. SARGENT, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Sept. 14, 1916. Serial No. 120,198. Term of patent 14 years.



The ornamental design for a casket handle arm, substantially as shown.

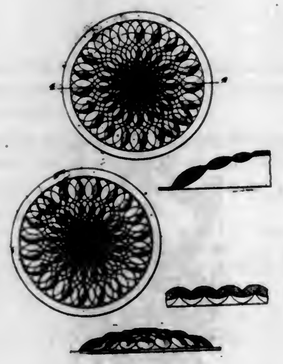
50,921. REAR-END SIGNAL DEVICE FOR AUTOMOBILES. GOTTFRIED E. SCHWEIZER, Bridgeport, Conn. Filed Jan. 30, 1917. Serial No. 145,536. Term of patent 3½ years.




The ornamental design for a rear end signal device for automobiles as shown.

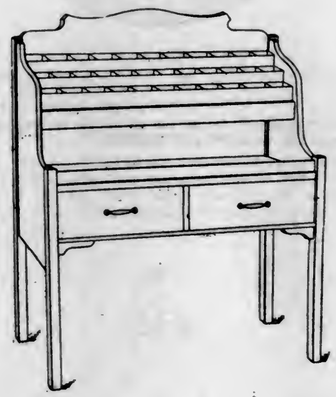


50,922. LAMP-LENS. ELMER J. SMITH and HARRY W. ATKINSON, Tarentum, Pa. Filed Apr. 23, 1917. Serial No. 164,067. Term of patent 7 years.



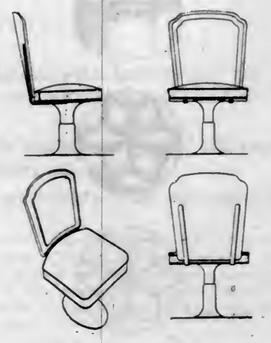
The ornamental design for a lamp lens, as shown.

50,923. CABINET. FRED W. TOBEY, Grand Rapids, Mich., assignor to Alfred J. Brown Seed Co., a Corporation of Michigan. Filed Apr. 28, 1917. Serial No. 165,283. Term of patent 7 years.



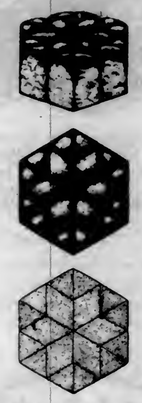
The ornamental design for a cabinet as shown.

50,924. CHAIR. JOHN WADE, St. Paul, Minn. Filed Apr. 23, 1917. Serial No. 164,064. Term of patent 7 years.



The ornamental design for a chair, as shown.

50,925. LOAF OF BISCUIT. ASHLEY F. WARD, Boston, Mass., assignor to The A. F. Ward Machinery Co., Boston, Mass., a Corporation of Massachusetts. Filed Feb. 19, 1915. Serial No. 9,459. Term of patent 7 years.



The ornamental design for a loaf of biscuit, substantially as shown.

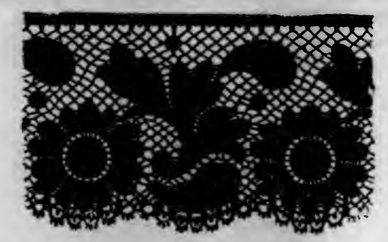
50,926. LOAF OF BISCUIT. ASHLEY F. WARD, Boston, Mass., assignor to The A. F. Ward Machinery Co., Boston, Mass., a Corporation of Massachusetts. Filed Dec. 10, 1915. Serial No. 66,208. Term of patent 7 years.



The ornamental design for a loaf of biscuit, substantially as shown.

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50,927. LACE. CHARLES J. WATTERS, Philadelphia, Pa., assignor to North American Lace Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1917. Serial No. 162,771. Term of patent 3½ years.



The ornamental design for a lace, substantially as shown.

50,928. PRINTED FABRIC. HARRY WEARNE, New York, N. Y. Filed Feb. 9, 1917. Serial No. 147,720. Term of patent 7 years.



The ornamental design for an article of manufacture, substantially as shown and described.



# TRADE-MARKS

## PUBLISHED JUNE 12, 1917.

**The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.**

**Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.**

**As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.**

Ser. No. 79,623. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN COMMERCIAL CO., Paris, France. Filed July 8, 1914.

EXPOSITION

*Particular description of goods.*—Canned Fruits and Vegetables and Dried Fruits.
*Claims use* since Jan. 1, 1913.

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Ser. No. 84,080. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) GENERAL ELECTRIC COMPANY, Schenectady, N. Y. Filed Jan. 25, 1915.

IVANHOE

*Particular description of goods.*—Lighting-Fixtures Comprising Metal Shades and Reflectors.
*Claims use* since Aug. 1, 1914.

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Ser. No. 84,473. (CLASS 39. CLOTHING.) THE BEACON FALLS RUBBER SHOE COMPANY, Beacon Falls, Conn., assignor to The Beacon Falls Rubber Shoe Company, Boston, Mass., a Corporation of Massachusetts. Filed Feb. 12, 1915.



*Particular description of goods.*—Boots and Shoes Made Partly or Wholly of Rubber—Namely, Rubber-Soled Shoes with Canvas Uppers Vulcanized or Cemented Thereon.
*Claims use* since Jan. 27, 1913.

Ser. No. 84,474. (CLASS 39. CLOTHING.) THE BEACON FALLS RUBBER SHOE COMPANY, Beacon Falls, Conn., assignor to The Beacon Falls Rubber Shoe Company, Boston, Mass., a Corporation of Massachusetts. Filed Feb. 12, 1915.

MARATHON

*Particular description of goods.*—Boots and Shoes Made Partly or Wholly of Rubber—Namely, Rubber-Soled Shoes with Canvas Uppers Vulcanized or Cemented Thereon.
*Claims use* since Sept. 18, 1908.

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Ser. No. 88,520. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GENERAL ELECTRIC COMPANY, Schenectady, N. Y. Filed Aug. 10, 1915.

NELA

No claim is made to the representation of an incandescent electric lamp apart from the mark shown in the drawing. The word "Nela" and the circumferential band are lined to indicate shading.
*Particular description of goods.*—Electric Incandescent Lamps.
*Claims use* since June 5, 1915.

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Ser. No. 89,306. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE USONA MANUFACTURING COMPANY, Toledo, Ohio. Filed Sept. 18, 1915.

Kwik-lite

*Particular description of goods.*—Electric Batteries.
*Claims use* since Mar. 25, 1915.

Ser. No. 93,341. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE ROBERT MITCHELL FURNITURE CO., Cincinnati, Ohio. Filed Mar. 6, 1916.

MARVOLINE

*Particular description of goods.*—A Liquid Cleaning Compound for White Woodwork and Enamels.
*Claims use* since September, 1915.

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Ser. No. 93,871. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ABRAHAM GORDON GOLDBERG, Boston, Mass. Filed Mar. 25, 1916.



No claim is made to the words "Diamond Wash."
*Particular description of goods.*—A Liquid Wash Used for Cleaning Diamonds and other Precious Stones.
*Claims use* since Mar. 1, 1916.

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Ser. No. 93,995. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) Mrs. JNO. J. MEDLIN, Monroe, Ga. Filed Mar. 30, 1916.

LOCALINE

*Particular description of goods.*—A Female Specific Recommended for Inflammation, Congestion, and Falling of the Womb, Ulceration, Polypus, Tumors, Leucorrhea, Profuse and Difficult Menstruation, Congestion and Tumors of the Ovaries.
*Claims use* since September, 1895.

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Ser. No. 94,141. (CLASS 17. TOBACCO PRODUCTS.) CAREFREE CIGAR COMPANY, New York, N. Y. Filed Apr. 4, 1916.

CAREFREE

*Particular description of goods.*—Cigars.
*Claims use* since Mar. 15, 1916.

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Ser. No. 94,332. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WILLIAM LEA & SONS COMPANY, Wilmington, Del. Filed Apr. 11, 1916.

POUTAXAL F

*Particular description of goods.*—Wheat-Flour.
*Claims use* since about 1876.

Ser. No. 94,343. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BARBARA RUTH VAN LOENEN, Los Angeles, Cal. Filed Apr. 11, 1916.

Angel City APCC

*Particular description of goods.*—Prepared Cheese Made with Rennet.
*Claims use* since Apr. 22, 1915.

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Ser. No. 95,537. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) A. HENRIETTE SPILKER, Oak Park, Ill. Filed May 29, 1916.

Udorma

Consisting of the word "Udorma."
*Particular description of Goods.*—Shaving-Creams.
*Claims use* since Oct. 16, 1914.

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Ser. No. 95,562. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE PIONEER CORPORATION, Chicago, Ill. Filed May 31, 1916.

ERADIUM

*Particular description of goods.*—Pendants for Electric Pull-Switches, Electric-Push-Button Devices, and Electric Push-Buttons, Treated so as to be Luminous.
*Claims use* since Oct. 6, 1915.

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Ser. No. 95,847. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LJUSNE-WOXNA AKTIEBOLAG, Ljusne, Sweden. Filed June 13, 1916.

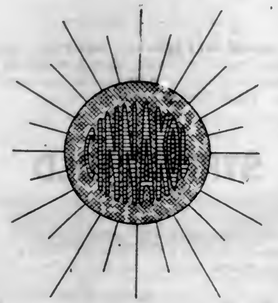
ELLWE

*Particular description of goods.*—Steam-Hammers, Spring-Hammers, Steam-Engines, Gasolene-Motors, Crude-Oil Motors, Rock-Oil Motors, Explosion-Motors, Internal-Combustion Engines, Winches, Capstans, Rolling-Mills, Crushing-Mills, Adjustable Lubricators, and Timber Elevators.
*Claims use* since Dec. 18, 1915.





Ser. No. 95,930. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CINNAKOL CHEMICAL SALES CO., Bayonne, N. J. Filed June 17, 1916.



The disk and radiating lines being printed in orange color and the word "Cinnakol" being printed in blue.
*Particular description of goods.*—Disinfectants, Germicides, Insecticides, Deodorants, Fungicides, Antiseptics, Surgical Dressings, Dentifrices, Veterinary Remedy for Treating Glanders and Carbuncle, and Poultry Remedies for Treating Roup, Colds, and Chicken-Pox, and Perfumery.
*Claims use* since June, 1915.

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Ser. No. 98,000. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) P. D. BALLARD, Citronelle, Ala. Filed Sept. 15, 1916.




*Particular description of goods.*—Leather-Dressing.
*Claims use* since July, 1915.

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Ser. No. 98,223. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SHOEMAKER COMPANY, Oakwood, N. Y. Filed Sept. 25, 1916.

SH-O-CO

The words "Alfalfa" and "Horse Feed" are disclaimed.
*Particular description of goods.*—Feed for Farm Stock.
*Claims use* since Sept. 1, 1916.

Ser. No. 98,225. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SHOEMAKER COMPANY, Oakwood, N. Y. Filed Sept. 25, 1916.

SH-O-CO

The words "Alfalfa," "Special," and "Horse Feed" are disclaimed.
*Particular description of goods.*—Feed for Farm Stock.
*Claims use* since Sept. 1, 1916.

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Ser. No. 98,896. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BIG FOUR MILLING COMPANY, Cleveland, Ohio. Filed Oct. 26, 1916.

Fourota

*Particular description of goods.*—Horse, Mule, Cattle, Poultry, Hog, and Sheep Food.
*Claims use* since about Apr. 1, 1913.

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Ser. No. 99,015. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OLIVOINT CHEMICAL COMPANY, San Francisco, Cal. Filed Oct. 31, 1916.

OLIVOINT

*Particular description of goods.*—For Skin Irritations in All Parts of the Body, for Sunburn, Windburn, and Poison-Oak, for Cuts, Wounds, and General Household and Surgical Use.
*Claims use* since Oct. 16, 1904.

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Ser. No. 99,046. (CLASS 15. OILS AND GREASES.) LYMAN D. PETTIT, St. Joseph, Mich. Filed Nov. 2, 1916.



The trade-mark consists of the portrait of the applicant, Lyman D. Pettit.
*Particular description of goods.*—Lubricants.
*Claims use* since Mar. 1, 1916.

Ser. No. 99,468. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) EDUARD LOKESCH & SOHN, Prague-Holeschowitz, Austria-Hungary. Filed Nov. 22, 1916.



The said trade-mark consists of a representation of a golden rod, which is used in the form shown in the accompanying drawing. The essential feature of the said trade-mark is the representation of a golden rod.

*Particular description of goods.*—Snap-Fasteners of All Kinds, Snap-Fastener Tapes, Hair-Pins, Non-Ornamental Hat-Pins Made of Steel; Buttons of All Kinds Made of Non-Precious Metals and Used as Fastening Devices—Namely, Fancy Buttons Used for Ornamenting Ladies' Apparel, Trouser-Buttons and Glove-Buttons, Collar-Buttons, Cuff-Buttons—and Necktie-Clasps Made of Non-Precious Metals, Trimming-Buttons Made of Non-Precious Metal Used as Ornamental Devices for Clothing, Not Used for Fastening; Collar-Supporters, Dress-Shields, Tapes, Steel Needles Used for Hand-Sewing, Brass Pins Used as Fastening Devices, Placket-Fasteners, Safety-Pins, Hooks and Eyes, Buckles Made of Non-Precious Metals Used as Fastening Devices for Clothing.

*Claims use* since May 4, 1915.

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Ser. No. 99,492. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & Co., Prague-Wrschowitz, Austria-Hungary. Filed Nov. 22, 1916.



Being a portrait of Elizabeth Coyne, a living person. No claim is made to the exclusive use of the representation of a snap-fastener as shown in the drawing.

*Particular description of goods.*—Hair-Pins, Non-Ornamental Hat-Pins Made of Steel, Buttons of All Kinds Made of Non-Precious Metals and Used as Fastening Devices—Namely, Fancy Buttons Used for Ornamenting Ladies' Apparel, Trouser-Buttons and Glove-Buttons, Collar-Buttons, Cuff-Buttons—and Necktie-Clasps Made of Non-Precious Metals, Trimming-Buttons Made of Non-Precious Metal Used as Ornamental Devices for Clothing, Not Used for Fastening; Collar-Supporters, Dress-Shields, Tapes, Steel Needles Used for Hand-Sewing, Brass Pins Used as Fastening Devices, Placket-Fasteners, Safety-Pins, Hooks and Eyes, Buckles Made of Non-Precious Metals Used as Fastening Devices for Clothing.

*Claims use* since Oct. 9, 1912.

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Ser. No. 99,582. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) J. E. RHOADS & SONS, Philadelphia, Pa., and Wilmington, Del. Filed Nov. 27, 1916.

**STRONGHOLD**

*Particular description of goods.*—Leather Belting; Round Leather Belting; Cut Leather Lacing; Combined Leather and Fabric Belting; Leather Valves, and Leather Washers.

*Claims use* on leather belting since July 27, 1916; on round leather belting since Aug. 8, 1916; on cut leather lacing since July 31, 1916; on combined leather and fabric belting since Aug. 14, 1916; on leather valves since Sept. 14, 1916, and on leather washers since Aug. 4, 1916.

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Ser. No. 99,583. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) J. E. RHOADS & SONS, Philadelphia, Pa., and Wilmington, Del. Filed Nov. 27, 1916.




*Particular description of goods.*—Combined Leather and Fabric Belting; Round Leather Belting; Cut Leather Lacing; Leather Valves, and Leather Washers.

*Claims use* on combined leather and fabric belting since Feb. 25, 1907; on round leather belting since July 31, 1916; on cut leather lacing since July 27, 1916; on leather valves since Sept. 14, 1916, and on leather washers since Aug. 4, 1916.

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Ser. No. 99,614. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. W. ZUCK & SONS, Erie, Pa. Filed Nov. 28, 1916.

**Krackly**

Comprising the word "Krackly," no claim being made to the exclusive use of the word "Krisp" except as shown in the specimen.

*Particular description of goods.*—Lettuce.

*Claims use* since Nov. 1, 1915.





Ser. No. 99,905. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FELIX VAAL, Rotterdam, Netherlands. Filed Dec. 13, 1916.

**NAVAL**

*Particular description of goods.*—Peppermint.

*Claims use* since Apr. 30, 1915.

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Ser. No. 100,072. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) SIEDLE STUDIOS, New York, N. Y. Filed Dec. 20, 1916.



*Particular description of goods.*—Stage-Settings, Scenery, and Theatrical Properties.

*Claims use* since 1908.

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Ser. No. 100,081. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HENRY PLENGE, Charleston, S. C. Filed Dec. 21, 1916.

**VIGORONE**

*Particular description of goods.*—Soda-Water.

*Claims use* since Mar. 31, 1897.

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Ser. No. 100,093. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GERBER & Co., Thoune, Switzerland. Filed Dec. 22, 1916.




*Particular description of goods.*—Cheese.

*Claims use* since Sept. 1, 1916.

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Ser. No. 100,140. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CURTISS AEROPLANE AND MOTOR CORPORATION, Buffalo, N. Y. Filed Dec. 23, 1916.

**Curtiss**

*Particular description of goods.*—Internal-Combustion Engine.

*Claims use* since Jan. 1, 1909.

Ser. No. 100,325. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELIZABETH B. HINCKLEY, New York, N. Y. Filed Jan. 2, 1917.

**CON-LAX**

*Particular description of goods.*—A Mixture of Uncooked Grain Used as a Cereal Food.

*Claims use* since about Aug. 1, 1916.

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Ser. No. 100,357. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MOTO-PEP MANUFACTURING CO., Youngstown, Ohio. Filed Jan. 4, 1917.

**Moto-Pep**

*Particular description of goods.*—A Gasolene Intensifier and Decarbonizer.

*Claims use* since July 1, 1913.

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Ser. No. 100,364. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BACHMEIER & Co. INC., New York, N. Y. Filed Jan. 5, 1917.

**BACO**

*Particular description of goods.*—Dyes.

*Claims use* since Apr. 1, 1916.

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Ser. No. 100,385. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE TITANIUM ALLOY MANUFACTURING COMPANY, New York, N. Y. Filed Jan. 5, 1917.



*Particular description of goods.*—Compositions Containing Titanium or its Compounds Employed as Purifiers in Metallurgical Operations.

*Claims use* since Feb. 1, 1913.

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Ser. No. 100,403. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RALSTON PURINA COMPANY, St. Louis, Mo. Filed Jan. 6, 1917.

**BRANZOS**

*Particular description of goods.*—Cereal Food.

*Claims use* since on or about Nov. 9, 1916.

Ser. No. 100,412. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WATERLOO AND CEDAR FALLS UNION MILL COMPANY, Waterloo, Iowa. Filed Jan. 6, 1917.

OFTEN BUTTERED NEVER BETTERED

*Particular description of goods.*—Wheat-Flour.
*Claims use* since about Jan. 1, 1911.

Ser. No. 100,467. (CLASS 37. PAPER AND STATIONERY.) GEORGE BORGFELDT & Co., New York, N. Y. Filed Jan. 9, 1917.

SKOOKUM

*Particular description of goods.*—Paper, Stationery, Stationery Sundries, Desk-Set Supplies, and Stationery Supplies—Namely, Cards for Correspondence, Writing-Paper, Envelops, Writing-Pads, Blank Books, Memorandum-Books, Blotting-Paper, Hand-Blotters, Paper-Cutters, Paper-Knives, Envelop-Openers, Book-Marks, Paper-Weights, Ink-Wells, Pen-Points, Penholders, Fountain-Pens, Lead-Pencils, Fancy and Novelty Pencils, Pencil-Boxes, School-Rulers, Thumb-Tacks, Envelop and Stamp Moisteners, Paper-Fasteners, Rubber Erasers, Composition Erasers, School-Slates, and Fancy Wrapping and Tissue Papers.
*Claims use* since Oct. 6, 1916.

Ser. No. 100,573. (CLASS 39. CLOTHING.) ESHELL BRONSTON, New York, N. Y. Filed Jan. 13, 1917.

INTERNATIONAL

No claim being made to the exclusive right to the use of the words "Exclusive Styles," "Panama," and "New York."
*Particular description of goods.*—Panama Hats.
*Claims use* since July 1, 1916.

Ser. No. 100,642. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JAMES PRINGLE COCHRANE, Edinburgh, Scotland. Filed Jan. 15, 1917.

MARVO

The trade-mark consists of the word "Marvo."
*Particular description of goods.*—Golf-Club Shafts and Golf-Clubs.
*Claims use* since Sept. 19, 1916.

Ser. No. 100,683. (CLASS 39. CLOTHING.) SHEARSTON-LOWELL MFG. CO. INC., Lockport, N. Y. Filed Jan. 17, 1917.

Apron

No claim being made to the exclusive use of the word "Apron" apart from the mark shown in the specimens.
*Particular description of goods.*—Aprons.
*Claims use* since Dec. 6, 1916.

Ser. No. 100,691. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS J. VREDEVELD, Zeeland, Mich. Filed Jan. 17, 1917.

PUR-GA-SHUN

*Particular description of goods.*—Salve for Cuts, Bruises, Boils, Burns, Chapped Hands, Sores, Chilblains.
*Claims use* since Nov. 15, 1916.

Ser. No. 100,699. (CLASS 37. PAPER AND STATIONERY.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Jan. 18, 1917.

Betty Wales

Comprising the words "Betty Wales" and "Ploshkin," together with the doll figure and the rectangular border.
*Particular description of goods.*—Writing-Paper, Lead-Pencils, Penholders, Paper Toweling and Napkins, Non-Coated Type-Writing Paper, Leaf-Paper in Scrap-Books and Manifold Sales-Books, Book-Paper, Book-Covers, Toilet, Wall, and Document Paper, Fountain-Pens, and Wrapping-Paper.
*Claims use* since Jan. 5, 1917.





Ser. No. 100,705. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Jan. 18, 1917.

Betty Wales

Comprising the words "Betty Wales, Ploshkin," with the doll figure, together with rectangular border.
*Particular description of goods.*—Pianos and Piano-Players, Records for Pianos, Music-Boxes, and Phonographs, Note-Sheets, Talking-Machines, Violin, Guitar, Banjo, Piccolo, Horn, Cornet, Trombone, Flute, Lute, Strings for Musical Instruments, Drums, and Organs.
*Claims use* since Jan. 5, 1917.

Ser. No. 100,734. (CLASS 39. CLOTHING.) SAMUEL C. APPLEFELD, Baltimore, Md. Filed Jan. 19, 1917.

APPLE

*Particular description of goods.*—Men's and Boys' Suits, Overcoats, and Trousers.
*Claims use* since Feb. 5, 1905.

Ser. No. 100,795. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHICAGO CONCENTRATED FOOD CO., Chicago, Ill. Filed Jan. 22, 1917.

VESTA VESTA

No claim being made to the words "Brand" and "Common Sense Food."
*Particular description of goods.*—Brans, Meals, Toasts, Rusks, Biscuits, Crackers, and Cookies.
*Claims use* since Jan. 17, 1917.

Ser. No. 100,878. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Jan. 24, 1917.

Betty Wales

Comprising the words "Betty Wales" and "Ploshkin," with the doll figure, all within a rectangular border, no claim being made to the exclusive right to the use of the words "Trade Mark."
*Particular description of goods.*—Fixtures for Electric Lights, Electric Fans, Electric Cooking Apparatus, and Electric Chafing-Dishes, Electric Hot-Plates, Electric Laundry-Irons, Spark-Plugs, Electric Heating-Pads, Storage and Dry Batteries, Electric Vacuum-Cleaners.
*Claims use* since Jan. 5, 1917.

Ser. No. 100,882. (CLASS 30. CROCKERY, EARTHENWARE, AND PORCELAIN.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Jan. 24, 1917.

Betty Wales

Comprising the words "Betty Wales, Ploshkin," and the doll figure, all within a rectangular figure, no claim being made to the exclusive right to the use of the words "Trade Mark."
*Particular description of goods.*—Crockery, Earthenware, Porcelain and China Dishes, and Kitchen-Receptacles.
*Claims use* since Jan. 5, 1917.

Ser. No. 100,921. (CLASS 11. INKS AND INKING MATERIALS.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Jan. 25, 1917.

Betty Wales

Comprising the words "Betty Wales, Ploshkin," with the doll figure, inclosed in a rectangular border.
*Particular description of goods.*—Carbon-Paper, Type-Writer Ribbons, Ink Compounds, Type-Ink, Stamp-Pads, Writing, Printing, and Drawing Ink, Marking-Ink, Duplicating-Ink, Gloss-Finishes, Reducers and Driers Used in Connection with Printing-Inks, Indelible Ink, Ink-Powder, Marking-Paste, Combination Ink-Paste, and Engraving-Ink.
*Claims use* since Jan. 5, 1917.

Ser. No. 101,397. (CLASS 39. CLOTHING.) THE HAT MANUFACTURERS SUPPLY COMPANY LIMITED, Stockport, Chester county, England. Filed Feb. 15, 1917.

*Particular description of goods.*—Hats and Caps.
*Claims use* since about the year 1908.

Ser. No. 101,402. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) POLYGON PRODUCTS CO., Boston, Mass. Filed Feb. 15, 1917.

TASGON

*Particular description of goods.*—Rust-Penetrant.
*Claims use* since Dec. 5, 1916.

Ser. No. 101,422. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE GREGORY RUBBER CO., Akron, Ohio. Filed Feb. 16, 1917.

Zephyr

*Particular description of goods.*—Play-Balls.
*Claims use* since Jan. 15, 1917.

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Ser. No. 101,458. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) PLAY-O-LITE CO. INC., Buffalo, N. Y. Filed Feb. 17, 1917.

PLAY O LITE

*Particular description of goods.*—Electric Lamps for Illuminating the Front of Pianos.
*Claims use* since Jan. 2, 1917.

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Ser. No. 101,524. (CLASS 39. CLOTHING.) WEIL & WEIL, INC., New York, N. Y. Filed Feb. 19, 1917.

Fleur de Lis

*Particular description of goods.*—Ladies' Waists for Outer Wear.
*Claims use* since January, 1907.

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Ser. No. 101,530. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HERMAN S. BELBER, Philadelphia, Pa. Filed Feb. 20, 1917.




The portrait shown is fanciful.
*Particular description of goods.*—Hair-Remover.
*Claims use* since about Jan. 4, 1916.

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Ser. No. 101,541. (CLASS 39. CLOTHING.) HOLLAND SHOE CO., Holland, Mich. Filed Feb. 20, 1917.



*Particular description of goods.*—Leather Boots and Shoes and Boot and Shoe Soles of Leather.
*Claims use* since about Apr. 17, 1916.

Ser. No. 101,555. (CLASS 15. OILS AND GREASES.) PIERCE OIL CORPORATION, New York, N. Y., and St. Louis, Mo. Filed Feb. 20, 1917.



Applicant herewith disclaims the printed matter appearing in connection with the specimen of its trade-mark—to wit, "Pierce Oil Corporation. Aceite Brilliante."
*Particular description of goods.*—Petroleum Products Consisting of Gasolene, Kerosene, Lubricating-Oils, Lubricating-Grease, and Paraffin-Wax.
*Claims use* since Feb. 1, 1886.

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Ser. No. 101,556. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RICE CEREAL & MILLING CO., Fort Wayne, Ind. Filed Feb. 20, 1917.




*Particular description of goods.*—Rice and a Prepared Rice Used as a Breakfast Cereal.
*Claims use* since about Dec. 16, 1915.

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Ser. No. 101,561. (CLASS 15. OILS AND GREASES.) JOHN R. ANDERSON & COMPANY, New York, N. Y. Filed Feb. 21, 1917.

JRACO

*Particular description of goods.*—Mineral Waxes, and Particularly Electrotypers' Wax.
*Claims use* since Jan. 2, 1917.

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Ser. No. 101,674. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CHEYENNE CREAMERY COMPANY, Cheyenne, Wyo. Filed Feb. 26, 1917.

MEADOW QUEEN

*Particular description of goods.*—Butter.
*Claims use* since Dec. 15, 1916.





Ser. No. 101,695. (CLASS 43. THREAD AND YARN.) KING COTTON MILLS CORPORATION, Richmond, Va. Filed Feb. 26, 1917.



*Particular description of goods.*—Hosiery-Yarns.
*Claims use* since Aug. 31, 1916.

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Ser. No. 101,852. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) COAST MANUFACTURING AND SUPPLY COMPANY, Livermore, Cal. Filed Mar. 3, 1917.




The words "Safety Fuse," "100 Feet," and "Keep Cool & Dry" are not claimed herein.
*Particular description of goods.*—A Safety-Fuse.
*Claims use* since July 1, 1916.

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Ser. No. 101,913. (CLASS 41. CANES, PARASOLS, AND UMBRELLAS.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Mar. 6, 1917.




Comprising the words "Betty Wales, Ploshkin," with the doll figure, all within a rectangular figure.
*Particular description of goods.*—Canes, Parasols, and Umbrellas.
*Claims use* since Jan. 5, 1917.

Ser. No. 101,985. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) FRENCH BATTERY & CARBON CO., Madison, Wis. Filed Mar. 8, 1917.




*Particular description of goods.*—Dry-Cell Batteries for Use in Portable Electric Hand-Lamps and for Portable Electric Hand-Lamps.
*Claims use* since Feb. 15, 1917.

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Ser. No. 102,017. (CLASS 12. CONSTRUCTION MATERIALS.) JAMES T. TAYLOR, Fort Worth, Tex. Filed Mar. 9, 1917.

DOVELOCK

Consists of the word "Dovelock."
*Particular description of goods.*—Hollow Tiles or Building-Blocks.
*Claims use* since Jan. 1, 1917.

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Ser. No. 102,062. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) E. B. MEYROWITZ, INC., New York, N. Y. Filed Mar. 10, 1917.

OTOPHONE

*Particular description of goods.*—A Mechanical Device Used as an Aid to Hearing.
*Claims use* since Jan. 1, 1907.

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Ser. No. 102,110. (CLASS 7. CORDAGE.) GEO. B. CARPENTER & CO., Chicago, Ill. Filed Mar. 13, 1917.

Old Colony

*Particular description of goods.*—Manila Rope and Cordage.
*Claims use* since 1898.

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Ser. No. 102,117. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GEORGE W. KEMP, Muncie, Ind. Filed Mar. 13, 1917.

"Airdrive"

*Particular description of goods.*—Gasolene-Engines.
*Claims use* since Dec. 1, 1916.

Ser. No. 102,138. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAE HEALTH LABORATORIES, Detroit, Mich. Filed Mar. 14, 1917.

**ALKIA**

*Particular description of goods.*—A Medicinal Preparation for Internal Uses for the Treatment of the Stomach, Blood, Liver, Kidney, Bladder, and Intestinal Disorders, and for Cases of Rheumatism, Catarrhal Affections, Dyspepsia, Gout.
*Claims use* since Jan. 31, 1917.

Ser. No. 102,139. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAE HEALTH LABORATORIES, Detroit, Mich. Filed Mar. 14, 1917.

**RODELL**

*Particular description of goods.*—A Preparation for External Use in the Treatment of Foot Troubles, Rheumatism, Gout, Skin Affections, Lumbago, Sciatica, Obesity.
*Claims use* since Jan. 31, 1917.

Ser. No. 102,142. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) M. HEMINWAY & SONS SILK CO., Watertown, Conn., and New York, N. Y. Filed Mar. 14, 1917.

**YUTO**

Comprising the word "Yuto."
*Particular description of goods.*—Silk Fabrics.
*Claims use* since Feb. 1, 1916.

Ser. No. 102,187. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HECKER-JONES-JEWELL MILLING COMPANY, New York, N. Y. Filed Mar. 16, 1917.




No claim is made to the words "Hecker-Jones-Jewell Milling Co."
*Particular description of goods.*—Wheat-Flour and Rye-Flour.
*Claims use* since July 15, 1914.

Ser. No. 102,211. (CLASS 37. PAPER AND STATIONERY.) THE HEINN CO., Milwaukee, Wis. Filed Mar. 17, 1917.



*Particular description of goods.*—Temporary Binders or Loose-Sheet Holders, Photograph, Post-Card, Scrap-Book, and Film Albums, Filing-Books, Sheet-Holders, and Sheets or Leaves for Loose-Leaf Binders or Books and Albums.
*Claims use* since about February, 1912.

Ser. No. 102,313. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) B. HELLER & CO., Chicago, Ill. Filed Mar. 21, 1917.



No claim being made to the words "$1000.00 Guaranteed" appearing on label.
*Particular description of goods.*—A Bedbug-Destroyer.
*Claims use* since June 18, 1914.

Ser. No. 102,332. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) J. W. ESHELMAN & CO., New York, N. Y. Filed Mar. 22, 1917.




*Particular description of goods.*—Pillow-Cases, Dresser-Scarfs, Doilies, Sheets.
*Claims use* since Mar. 19, 1917.

Ser. No. No. 102,392. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ESTATE OF JOHN A. WILLIS, Columbia, S. C. Filed Mar. 23, 1917. Under ten-year proviso.

**TOZER**

*Particular description of goods.*—Steam-Engines.
*Claims use* since 1870.





Ser. No. 102,441. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) STEWART HARTSHORN CO., East Newark, N. J. Filed Mar. 26, 1917.



Consists of the facsimile signature of Stewart Harshorn.
*Particular description of goods.*—Shade-Cloth.
*Claims use* since Mar. 7, 1917.

Ser. No. 102,444. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) STEWART HARTSHORN CO., East Newark, N. J. Filed Mar. 26, 1917.




The name "Stewart Hartshorn" is a facsimile of the signature of Stewart Hartshorn.
*Particular description of goods.*—Shade-Cloth.
*Claims use* since Mar. 7, 1917.

Ser. No. 102,446. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) WILLIAM F. HITCHCOCK, Rochester, N. Y. Filed Mar. 26, 1917.

**PHONOMOTOR**

*Particular description of goods.*—Electric Motors and Electric-Motor Driving Mechanisms for Sound-Reproducing Machines.
*Claims use* since Dec. 14, 1914.

Ser. No. 102,449. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE KETTLE RIVER COMPANY, Minneapolis, Minn. Filed Mar. 26, 1917.

**NAVIOL**

*Particular description of goods.*—Preservative for Impregnating Wood.
*Claims use* since Jan. 12, 1917.

Ser. No. 102,450. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE KETTLE RIVER COMPANY, Minneapolis, Minn. Filed Mar. 26, 1917.

**PENETROL**

*Particular description of goods.*—Preservative for Impregnating Wood.
*Claims use* since Jan. 29, 1917.

Ser. No. 102,495. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MARY A. PETERS, Cincinnati, Ohio. Filed Mar. 27, 1917.

**OCCIDENTAL**



*Particular description of goods.*—Textile Rugs, Carpets, and Mats.
*Claims use* since Feb. 15, 1916.

Ser. No. 102,506. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) CHAVANT MFG. CO., Jersey City, N. J. Filed Mar. 28, 1917. Under ten-year proviso.

COMPOSITE CLAY

**PLASTELINE**

*Particular description of goods.*—Plastic Modeling-Clay.
*Claims use* since 1892.

Ser. No. 102,518. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE INDIA RUBBER, GUTTA PERCHA, AND TELEGRAPH WORKS CO., LTD., London, England. Filed Mar. 28, 1917.

**SILVER KING BLACK LINE**

*Particular description of goods.*—Golf-Balls.
*Claims use* since April, 1916.

Ser. No. 102,519. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE INDIA RUBBER, GUTTA PERCHA, AND TELEGRAPH WORKS CO., LTD., London, England. Filed Mar. 28, 1917.

**SILVER KING RED LINE**

*Particular description of goods.*—Golf-Balls.
*Claims use* since April, 1916.

Ser. No. 102,520. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE INDIA RUBBER, GUTTA PERCHA, AND TELEGRAPH WORKS CO., LTD, London, England. Filed Mar. 28, 1917.

**SILVER KING GREEN LINE**

*Particular description of goods.*—Golf-Balls.
*Claims use* since April, 1916.

Ser. No. 102,521. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE INDIA RUBBER, GUTTA PERCHA, AND TELEGRAPH WORKS CO., LTD., London, England. Filed Mar. 28, 1917.

**SILVER KING YELLOW LINE**

*Particular description of goods.*—Golf-Balls.
*Claims use* since April, 1916.

Ser. No. 102,552. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ROBERT C. CANTWELL, Jr., Wilmington, N. C. Filed Mar. 29, 1917.

Sani-Sweep

*Particular description of goods.*—Sweeping Componnd.
*Claims use* since Aug. 15, 1916.

Ser. No. 102,563. (CLASS 12. CONSTRUCTION MATERIALS.) RICHARD KELLY, New York, N. Y. Filed Mar. 29, 1917.

KELOID

*Particular description of goods.*—Felt Roofing, Asphalt Roofing, Composition Roofing, Asbestos Roofing, Asbestos Plate-Roofing.
*Claims use* since June, 1916.

Ser. No. 102,613. (CLASS 39. CLOTHING.) BURNHAM-MUNGER-ROOT DRY GOODS CO., Kansas City, Mo. Filed Mar. 31, 1917.

MOVIE

No claim being made to the word "Suits."
*Particular description of goods.*—Overalls.
*Claims use* since about Mar. 23, 1917.

Ser. No. 102,616. (CLASS 38. PRINTS AND PUBLICATIONS.) DOMESTIC SUGAR PRODUCERS, INC., New York, N. Y. Filed Mar. 31, 1917.

FACTS ABOUT SUGAR

*Particular description of goods.*—A Trade Periodical Published Weekly.
*Claims use* since July, 1914.

Ser. No. 102,625. (CLASS 39. CLOTHING.) HELEN G. MILLER AND MABEL GRAY, Washington, D. C. Filed Mar. 31, 1917.

MARY ELLEN

*Particular description of goods.*—Frocks.
*Claims use* since Aug. 15, 1916.

Ser. No. 102,633. (CLASS 39. CLOTHING.) SHAPERO, LEWIS & CO., New York, N. Y. Filed Mar. 31, 1917.

Essanelle

No claim is made to the exclusive right to the use of the word "Dress."
*Particular description of goods.*—Ladies' and Misses' Dresses.
*Claims use* since Jan. 1, 1917.

Ser. No. 102,659. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE MONITOR STOVE & RANGE CO., Cincinnati, Ohio. Filed Apr. 2, 1917.

HARVEST

*Particular description of goods.*—Hot-Air Furnaces.
*Claims use* since Nov. 27, 1916.

Ser. No. 102,687. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MECHANICAL RUBBER COMPANY, New York, N. Y.; Chicago, Ill., and Cleveland, Ohio. Filed Apr. 3, 1917.

M

*Particular description of goods.*—Floor-Gaskets, Siphon-Valve Washers, Fuller Balls, Valve-Disks, and Glass-Gage Washers Made of Rubber or Rubber and Fabric.
*Claims use* since Aug. 1, 1911.

Ser. No. 102,702. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Apr. 3, 1917.

Bugville Closeups!

*Particular description of goods.*—Newspaper-Sections.
*Claims use* since Feb. 5, 1917.

Ser. No. 102,703. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Apr. 3, 1917.

The Joys and Glooms of Life

*Particular description of goods.*—Newspaper-Sections.
*Claims use* since Oct. 21, 1916.





Ser. No. 102,742. (CLASS 38. PRINTS AND PUBLICATIONS.) JOHNSON & DICKSON, INC., New York, N. Y. Filed Apr. 5, 1917.

ARTVERTISING

*Particular description of goods.*—Advertising Literature and other Printed Matter Set Up and Printed by Applicant.
*Claims use* since Nov. 5, 1916.

Ser. No. 102,744. (CLASS 39. CLOTHING.) KOPS BROS., New York, N. Y. Filed Apr. 5, 1917.

MARVELACE

*Particular description of goods.*—Brassières, Ladies' Underwaists, and Corsets.
*Claims use* since Mar. 15, 1917.

Ser. No. 102,746. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) B. P. MAZA & Co., Chicago, Ill. Filed Apr. 5, 1917.

Mazaco

*Particular description of goods.*—Stomach Remedy, (for Constipation, Dyspepsia, Indigestion, Loss of Appetite,) Ointment, (for Cuts, Sores, Bruises, Burns, Chapped and Cracked Hands, Boils, Ulcers,) and Cough-Syrup, (for Coughs, Colds, Whooping-Cough, Sore Throat, Hoarseness, Bronchitis.)
*Claims use* since Mar. 23, 1917.

Ser. No. 102,766. (CLASS 38. PRINTS AND PUBLICATIONS.) CHALMERS PUBLISHING COMPANY, New York, N. Y. Filed Apr. 6, 1917.

MOVING PICTURE WORLD

*Particular description of goods.*—A Monthly Periodical.
*Claims use* since Jan. 1, 1907.

Ser. No. 102,770. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) DOMESTIC SOAP MFG. CO., New York and Long Island City, N. Y. Filed Apr. 6, 1917.

PIONEER

*Particular description of goods.*—Scouring-Soap.
*Claims use* since the year 1897.

Ser. No. 102,773. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EGYPT SILK MILLS CORPORATION, Egypt, Pa., and New York, N. Y. Filed Apr. 6, 1917.

PYRAMID

*Particular description of goods.*—Piece Goods in Silk, Known as Broad Silks.
*Claims use* since Apr. 1, 1915.

Ser. No. 102,793. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ACME MILLING COMPANY, Talbott, Tenn. Filed Apr. 7, 1917.

ACME

*Particular description of goods.*—Cornmeal, Milled Corn-Grits, and Rye-Meal.
*Claims use* since Mar. 1, 1917.

Ser. No. 102,800. (CLASS 38. PRINTS AND PUBLICATIONS.) EDWARD LYMAN BILL, INC., New York, N. Y. Filed Apr. 7, 1917.

The TALKING MACHINE WORLD

*Particular description of goods.*—A Periodical Published Monthly.
*Claims use* since Jan. 15, 1905.

Ser. No. 102,817. (CLASS 38. PRINTS AND PUBLICATIONS.) AUTOMOBILE CLUB OF ROCHESTER, Rochester, N. Y. Filed Apr. 7, 1917.

ROCHESTER MOTORIST

*Particular description of goods.*—Monthly Magazine.
*Claims use* since Feb. 28, 1917.

Ser. No. 102,824. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) BAUER-HANCOCK CO., Anderson, Ind. Filed Apr. 9, 1917.

SULTANO

*Particular description of goods.*—A Cleaning Compound, Especially Prepared for Treating Oriental and Domestic Carpets and Rugs, Tapestries, and Upholstering, Silks, Laces, and other Fine Fabrics, Hardwood Floors, Painted Walls, and Enameled Woodwork.
*Claims use* since Dec. 28, 1916.

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Ser. No. 102,830. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) B. HELLER & Co., Chicago, Ill. Filed Apr. 9, 1917.



No claim being made to the words "$1000.00 Guaranteed" except in association with the mark as shown.
*Particular description of goods.*—An Ant-Destroyer.
*Claims use* since July 26, 1911.

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Ser. No. 102,883. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GENEVA CUTLERY COMPANY, Geneva, N. Y. Filed Apr. 11, 1917.

Genco

*Particular description of goods.*—Razors; Butcher, Pocket, Table, and Kitchen Knives; Scissors, Shears, and Parts Thereof.
*Claims use* since January, 1916.

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Ser. No. 102,902. (CLASS 12. CONSTRUCTION MATERIALS.) CONCRETE ENGINEERING COMPANY, Omaha, Nebr. Filed Apr. 12, 1917.

CECO

*Particular description of goods.*—Structural Iron and Steel Building Materials.
*Claims use* since Apr. 1, 1914.

Ser. No. 102,931. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SIDNEY BLUMENTHAL & CO. INC., New York, N. Y. Filed Apr. 13, 1917.

Kerami

*Particular description of goods.*—Pile Fabrics in the Piece.
*Claims use* since Feb. 15, 1917.

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Ser. No. 102,946. (CLASS 39. CLOTHING.) MAX LOBL, New York, N. Y. Filed Apr. 13, 1917.

LUCIE

*Particular description of goods.*—Gloves.
*Claims use* since Jan. 1, 1913.

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Ser. No. 102,948. (CLASS 39. CLOTHING.) MAX LOBL, New York, N. Y. Filed Apr. 13, 1917.

JEANNETTE

*Particular description of goods.*—Gloves.
*Claims use* since Jan. 1, 1917.

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Ser. No. 102,949. (CLASS 39. CLOTHING.) MAX LOBL, New York, N. Y. Filed Apr. 13, 1917.

M&G

*Particular description of goods.*—Gloves.
*Claims use* since Jan. 1, 1917.

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Ser. No. 102,950. (CLASS 39. CLOTHING.) MAX LOBL, New York, N. Y. Filed Apr. 13, 1917.

ML

*Particular description of goods.*—Gloves.
*Claims use* since Jan. 1, 1913.

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Ser. No. 102,951. (CLASS 39. CLOTHING.) MAX LOBL, New York, N. Y. Filed Apr. 13, 1917.

MADELEINE

*Particular description of goods.*—Gloves.
*Claims use* since Jan. 1, 1917.

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Ser. No. 102,952. (CLASS 39. CLOTHING.) MAX LOBL, New York, N. Y. Filed Apr. 13, 1917.

REGORD

*Particular description of goods.*—Gloves.
*Claims use* since Jan. 1, 1917.





Ser. No. 102,953. (CLASS 39. CLOTHING.) MAX LOBL, New York, N. Y. Filed Apr. 13, 1917.

ANNETTE

*Particular description of goods.*—Gloves.
*Claims use* since Jan. 1, 1913.

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Ser. No. 102,954. (CLASS 39. CLOTHING.) MAX LOBL, New York, N. Y. Filed Apr. 13, 1917.

LISETTE

*Particular description of goods.*—Gloves.
*Claims use* since Jan. 1, 1913.

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Ser. No. 103,015. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE COMBINATION RUBBER MFG. CO., Bloomfield, N. J. Filed Apr. 16, 1917.

INDESTRUCTENE

*Particular description of goods.*—Rubber Belting, Rubber Water-Hose, Garden-Hose, Cotton Rubber-Lined Milled Hose, Cotton Rubber-Lined Fire-Hose, Rubber Fire-Hose, Steam-Hose, Brewers' Hose, Oil-Hose, Air-Hose, Acid-Hose, Sand-Blast Hose, Suction-Hose, Dredging-Sleeves, Sheet-Rubber Packing, and Rubber Gaskets.
*Claims use* since Oct. 1, 1886.

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Ser. No. 103,058. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SIDNEY BLUMENTHAL & CO. INC., New York, N. Y. Filed Apr. 17, 1917.

MUSKATEX

*Particular description of goods.*—Pile Fabrics in the Piece.
*Claims use* since Jan. 10, 1917.

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Ser. No. 103,060. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FOLLMER, CLOGG & CO., New York, N. Y. Filed Apr. 17, 1917.

MANOR

*Particular description of goods.*—Broad Silk.
*Claims use* since Apr. 12, 1917.

Ser. No. 103,080. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EVERETT, HEANEY & CO., New York, N. Y. Filed Apr. 18, 1917.



*Particular description of goods.*—Cotton Goods in the Piece.
*Claims use* since Mar. 5, 1917.

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Ser. No. 103,081. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) UNITED STATES WIRE MAT COMPANY, Decatur, Ill. Filed Apr. 18, 1917.

USCO

*Particular description of goods.*—Fly-Killers or Hand Devices for Killing Flies and other Insects.
*Claims use* since Apr. 1, 1917.

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Ser. No. 103,088. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LOUIS ROESSEL & CO., New York, N. Y. Filed Apr. 18, 1917.

Florivel

*Particular description of goods.*—Velvets, Velveteens, Corded Velvets, Corduroys, and other Pile Fabrics.
*Claims use* since Dec. 15, 1916.

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Ser. No. 103,102. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BOERICKE & TAFEL, Philadelphia, Pa. Filed Apr. 19, 1917.

HERBALSAJNG

*Particular description of goods.*—A Remedy for Impure Condition of the Blood.
*Claims use* since May 1, 1916.

Ser. No. 103,107. (CLASS 17. TOBACCO PRODUCTS.) 44 CIGAR COMPANY, Philadelphia, Pa. Filed Apr. 19, 1917.




The photo illustration being that of Benjamin Lipschutz, the president of the corporation.
*Particular description of goods.*—Cigars, Cigarros, Cheroots, and Cigar-Clippings.
*Claims use* since Feb. 16, 1897.

Ser. No. 103,143. (CLASS 17. TOBACCO PRODUCTS.) GENERAL CIGAR CO., INC., New York, N. Y. Filed Apr. 20, 1917.




No claim being made to the representation of a cigar.
*Particular description of goods.*—Cigars.
*Claims use* since Feb. 13, 1917.

Ser. No. 103,162. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) BURGESS BATTERY COMPANY, Madison, Wis. Filed Apr. 21, 1917.

**TWIN-SIX**

*Particular description of goods.*—Electric Batteries.
*Claims use* since Mar. 3, 1917.

Ser. No. 103,163. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) BURGESS BATTERY COMPANY, Madison, Wis. Filed Apr. 21, 1917.

**SUPER-SIX**

*Particular description of goods.*—Electric Batteries.
*Claims use* since Mar. 3, 1917.

Ser. No. 103,210. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JAMES S. KIRK & COMPANY, Chicago, Ill. Filed Apr. 23, 1917. Under ten-year proviso.

COLOGNE BOUQUET

*Particular description of goods.*—Soap.
*Claims use* since Mar. 1, 1888.

Ser. No. 103,243. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BELL-LOIDS CHEMICAL CO., West New York, N. J. Filed Apr. 24, 1917.

Bell-Loids

*Particular description of goods.*—A Tonic Laxative.
*Claims use* since Oct. 26, 1916.

Ser. No. 103,257. (CLASS 38. PRINTS AND PUBLICATIONS.) MARY HOZA, Uniontown, Pa. Filed Apr. 24, 1917.

**OZAR**

*Particular description of goods.*—A Medicine-Booklet.
*Claims use* since Mar. 17, 1917.

Ser. No. 103,282. (CLASS 12. CONSTRUCTION MATERIALS.) THE BEAVER COMPANY, Buffalo, N. Y. Filed Apr. 25, 1917.

***SEALTITE***

*Particular description of goods.*—Wall-Board.
*Claims use* since Oct. 31, 1916.

Ser. No. 103,291. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FELLOWS MEDICAL MANUFACTURING COMPANY, INC., New York, N. Y. Filed Apr. 25, 1917.



The facsimile signature appearing upon the drawing is the facsimile signature of James I. Fellows, the founder of the applicant's business.
*Particular description of goods.*—A Preparation of Hypophosphites.
*Claims use* since July 1, 1868.





Ser. No. 103,294. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FELLOWS MEDICAL MANUFACTURING COMPANY, INC., New York, N. Y. Filed Apr. 25, 1917.



The facsimile signature appearing upon the drawing is the facsimile signature of James I. Fellows, the founder of the applicant's business.
*Particular description of goods.*—Laxative Tablets.
*Claims use* since May 28, 1915.

Ser. No. 103,298. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) INTERSTATE COTTON OIL REFINING CO., Sherman, Tex. Filed Apr. 25, 1917.

**Blue Bonnet**

*Particular description of goods.*—Laundry Soap.
*Claims use* since Apr. 5, 1917.

Ser. No. 103,307. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN T. STANLEY CO. INC., New York, N. Y. Filed Apr. 25, 1917.

DE PARADIS

Comprising the words "de Paradis."
*Particular description of goods.*—Toilet Soap.
*Claims use* since June, 1908.

Ser. No. 103,330. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) W. B. JACOBS, Emlenton, Pa. Filed Apr. 26, 1917.

CRYSOL

*Particular description of goods.*—Laxative Mineral Oils.
*Claims use* since Apr. 2, 1917.

Ser. No. 103,376. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) WELSBACH CO., Gloucester City, N. J. Filed Apr. 28, 1917.

**"C-C"**

*Particular description of goods.*—Pilot-Light Tips and Incandescent Gas-Lamps, Including Burners and other Metal Lamp Parts, and Incandescent Mantles.
*Claims use* since Apr. 18, 1917.

Ser. No. 103,387. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SIDNEY BLUMENTHAL & CO. INC., New York, N. Y. Filed Apr. 28, 1917.

UNGAVA

*Particular description of goods.*—Pile-Fabric Seal Plush in the Piece.
*Claims use* since Aug. 2, 1916.

Ser. No. 103,389. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FORSTMANN & HUFFMANN CO., Passaic, N. J. Filed Apr. 28, 1917.

**Chamoisine**

Comprising the word "Chamoisine."
*Particular description of goods.*—Woolen and Worsted Piece Goods.
*Claims use* since Sept. 19, 1916.

Ser. No. 103,394. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) INTERSTATE CHEMICAL COMPANY, Jersey City, N. J. Filed Apr. 28, 1917.

**KEYSAN**

*Particular description of goods.*—Soaps.
*Claims use* since Feb. 6, 1917.

Ser. No. 103,400. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EARL I. RUNNER, Wheeling, W. Va. Filed Apr. 30, 1917.

**HYPO-COD**

*Particular description of goods.*—A Medicinal Tonic and Nutrient Employed in the Treatment of Phthisis, Bronchitis, Coughs, Hoarseness, Nervous Debility, and other Diseases Requiring Reconstructive Treatment; also Used in General Convalescence.
*Claims use* since Mar. 17, 1917.

Ser. No. 103,415. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRENCH AND LESLIE, Aberdeen, S. D. Filed Apr. 30, 1917.

**SURE-SHOT**

*Particular description of goods.*—A Preparation for Destroying Bots and Worms.
*Claims use* since Apr. 23, 1917.

Ser. No. 103,420. (CLASS 38. PRINTS AND PUBLICATIONS.) RUDOLPH KEITEL, Chicago, Ill. Filed Apr. 30, 1917.

**The Brewers Bulletin**

*Particular description of goods.*—A Trade Journal and Market-Paper Issued Triweekly.
*Claims use* since Apr. 3, 1914.

Ser. No. 103,432. (CLASS 38. PRINTS AND PUBLICATIONS.) CHARLES SCRIBNER'S SONS, New York, N. Y. Filed Apr. 30, 1917.

SCRIBNER'S
*Fifth Avenue Section*

*Particular description of goods.*—A Title to a Section of the Advertising-Pages of *Scribner's Magazine*.
*Claims use* since Oct. 23, 1914.

Ser. No. 103,437. (CLASS 12. CONSTRUCTION MATERIALS.) THE AGRICULTURAL AND COMMERCIAL LIME COMPANY, Canton, Ohio. Filed May 1, 1917.

HERCULES

*Particular description of goods.*—Mason's Hydrated Lime.
*Claims use* since May 29, 1915.

Ser. No. 103,473. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MASSACHUSETTS COTTON MILLS, Lowell and Boston, Mass. Filed May 2, 1917.

LOWMASS

*Particular description of goods.*—Ginghams and Shirtings in the Piece, Made of Colored Cotton Yarns.
*Claims use* since Feb. 5, 1917.

Ser. No. 103,479. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WHITTENTON MANUFACTURING COMPANY, Taunton, Mass. Filed May 2, 1917. Under ten-year proviso.



*Particular description of goods.*—Ginghams, Cotton Dress Goods, and Cotton Blankets.
*Claims use* since 1887.

Ser. No. 103,512. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed May 3, 1917.

*The Doctor Says*
By Brice Belden M.D.

The name "Brice Belden M. D." being written in the facsimile signature of Arthur E. Jameson of 2 Duane street, New York, N. Y.
*Particular description of goods.*—Newspaper-Sections.
*Claims use* since Apr. 29, 1917.

Ser. No. 103,539. (CLASS 37. PAPER AND STATIONERY.) NEENAH PAPER COMPANY, Neenah, Wis. Filed May 4, 1917.

PRESTIGE

*Particular description of goods.*—Ledger-Paper.
*Claims use* since Dec. 8, 1916.

Ser. No. 103,566. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) DELGADO MILLS, Wilmington, N. C. Filed May 5, 1917.

WINOCA

*Particular description of goods.*—Ginghams.
*Claims use* since about Apr. 14, 1917.

Ser. No. 103,589. (CLASS 38. PRINTS AND PUBLICATIONS.) JOSEPH D. BATES, Springfield, Mass. Filed May 7, 1917.

**Practical Retail Advertising**

*Particular description of goods.*—A Monthly Publication.
*Claims use* since June, 1916.

Ser. No. 103,656. (CLASS 12. CONSTRUCTION MATERIALS.) UNITED STATES SPOT GROUND CORPORATION, Omaha, Nebr. Filed May 8, 1917.




*Particular description of goods.*—Grounds.
*Claims use* since Feb. 2, 1917.

Ser. No. 103,736. (CLASS 37. PAPER AND STATIONERY.) THE EVANS DOLLAR PEN COMPANY, Waterloo, Iowa. Filed May 12, 1917.

Do#ar

*Particular description of goods.*—Fountain-Pens.
*Claims use* since Apr. 24, 1917.





Ser. No. 103,797. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE QUAKER KOLA COMPANY, Wilmington, Del. Filed May 14, 1917.

QUAKO

*Particular description of goods.*—A Non-Alcoholic Beverage Sold as a Soft Drink and Syrup for the Manufacture of Such Beverage.
*Claims use* since Mar. 26, 1917.

Ser. No. 103,867. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LAMBERT PHARMACAL COMPANY, St. Louis, Mo. Filed May 16, 1917.

LISTERINE

*Particular description of goods*—Tooth-Paste.
*Claims use* since October, 1912.

# TRADE-MARK REGISTRATIONS GRANTED

## JUNE 12, 1917.

117,017. COFFEE. ALEJANDRO ANGEL & Co., New York, N. Y.
Filed December 16, 1916. Serial No. 99,978. PUBLISHED MARCH 27, 1917.

117,018. CHEWING-GUM. AMERICAN CHICLE Co., New York, N. Y.
Filed January 18, 1917. Serial No. 100,696. PUBLISHED MARCH 27, 1917.

117,019. BUTTER. BEAU-SITE COMPANY, New York, N. Y.
Filed November 22, 1916. Serial No. 99,460. PUBLISHED FEBRUARY 13, 1917.

117,020. WHEAT-FLOUR. BEELAND-NICHOLSON WHOLESALE Co., INC., Greenville, Ala.
Filed December 14, 1916. Serial No. 99,913. PUBLISHED MARCH 20, 1917.

117,021. CHOCOLATES AND CONFECTIONS. PAUL F. BEICH Co., Bloomington, Ill.
Filed February 19, 1917. Serial No. 101,474. PUBLISHED MARCH 27, 1917.

117,022. CANNED SALMON. BOOTH FISHERIES COMPANY, Chicago, Ill.
Filed January 9, 1917. Serial No. 100,468. PUBLISHED MARCH 27, 1917.

117,023. COATS. JACOB BUCKMAN, New York, N. Y.
Filed January 20, 1917. Serial No. 100,769. PUBLISHED APRIL 10, 1917.

117,024. PASTE FOR CAKES, COOKIES, PIE, CANDY, AND ICE-CREAM. CALIFORNIA BAKERS SPECIALTY Co. INC., Los Angeles, Cal.
Filed February 8, 1917. Serial No. 101,229. PUBLISHED MARCH 27, 1917.

117,025. OINTMENT FOR THE RELIEF OF CERTAIN NAMED AFFECTIONS. SHERMAN D. CLEGG, Wheeling, W. Va.
Filed February 20, 1917. Serial No. 101,532. PUBLISHED APRIL 10, 1917.

117,026. PERFUMES, TOILET POWDERS, TOILET WATERS, AND SACHETS. COLGATE & Co., Jersey City, N. J., and New York, N. Y.
Filed January 31, 1917. Serial No. 101,057. PUBLISHED APRIL 10, 1917.

117,027. BREAD. DAVIDSON BAKING Co., Seattle, Wash.
Filed September 30, 1916. Serial No. 98,326. PUBLISHED MARCH 20, 1917.

117,028. PHONOGRAPHS AND PHONOGRAPH-RECORDS. FRED A. DENNETT, Port Washington, Wis., assignor to United Phonographs Corporation, Port Washington, Wis., a Corporation of Wisconsin.
Filed October 27, 1916. Serial No. 98,922. PUBLISHED JANUARY 9, 1917.

117,029. SUGAR-OF-MILK TABLETS. DISC CHEMICAL COMPANY, Newark, N. J.
Filed July 13, 1916. Serial No. 96,539. PUBLISHED APRIL 10, 1917.

117,030. CANNED VEGETABLES, CANNED FRUITS, AND CANNED FISH. EMERY FOOD COMPANY, Chicago, Ill.
Filed February 19, 1917. Serial No. 101,482. PUBLISHED MARCH 27, 1917.

117,031. BANANAS. ESTES AND SON, Van Wert, Ohio.
Filed January 31, 1916. Serial No. 92,556. PUBLISHED JUNE 27, 1916.

117,032. TEA. J. A. FOLGER & COMPANY, San Francisco, Cal.
Filed February 10, 1917. Serial No. 101,290. PUBLISHED MARCH 27, 1917.

117,033. CALCINED MAGNESIA. FRAZAR & COMPANY, New York, N. Y.
Filed January 22, 1917. Serial No. 100,799. PUBLISHED APRIL 10, 1917.

117,034. CERTAIN NAMED FOODS. GENANT & FLACHSLAND, Syracuse, N. Y.
Filed February 20, 1912. Serial No. 61,621. PUBLISHED MARCH 20, 1917.

117,035. CATARRH TREATMENT AND REMEDY FOR TREATING CERTAIN NAMED DISEASES. JACOB L. GREENBAUM, Toledo, Ohio.
Filed February 20, 1917. Serial No. 101,537. PUBLISHED APRIL 10, 1917.

117,036. WOOLEN PIECE GOODS. HAGER, CLARK & Co., New York, N. Y.
Filed February 28, 1917. Serial No. 101,782. PUBLISHED APRIL 10, 1917.

117,037. INDIGESTION, FLATULENCY, VERTIGO, HEARTBURN, ACID STOMACH, AND ACUTE INDIGESTION. FREDERICK S. HANF, New York, N. Y.
Filed February 15, 1917. Serial No. 101,398. PUBLISHED APRIL 10, 1917.

117,038. HAIR-NETS. MOSES HERZOG, New York, N. Y.
Filed March 16, 1917. Serial No. 102,186. PUBLISHED APRIL 10, 1917.

117,039. REMEDY FOR RHEUMATISM. ELLEN HICKEY, Los Angeles, Cal.
Filed January 23, 1917. Serial No. 100,853. PUBLISHED APRIL 10, 1917.

117,040. CONDENSED MILK. HOLLAND FOOD CORPORATION, New York, N. Y.
Filed November 27, 1916. Serial No. 99,573. PUBLISHED JANUARY 23, 1917.

117,041. YEAST-FLOUR. HO-MAYDE PRODUCTS Co., Detroit, Mich.
Filed February 26, 1916. Serial No. 93,127. PUBLISHED FEBRUARY 6, 1917.

117,042. EXTRACT OF LEMON FOR FLAVORING FOODS. THE HOME PRODUCTS COMPANY, Newburgh, N. Y.
Filed January 9, 1917. Serial No. 100,494. PUBLISHED MARCH 27, 1917.

117,043. TALCUM POWDER, PERFUME, COLD-CREAM, SACHET-POWDER, TOILET WATER, AND FACE-POWDER. JAMES S. KIRK & COMPANY, Chicago, Ill.
Filed May 24, 1916. Serial No. 95,397. PUBLISHED APRIL 10, 1917.

117,044. PREPARATION FOR THE TREATMENT OF DIARRHEA AND DYSENTERY. GUST KROUSER, Parsons, Pa.
Filed March 4, 1915. Serial No. 84,935. PUBLISHED APRIL 10, 1917.

117,045. CERTAIN KNITTED, NETTED, AND TEXTILE FABRICS. LESHER, WHITMAN & Co., INC., New York, N. Y.
Filed March 16, 1917. Serial No. 102,190. PUBLISHED APRIL 10, 1917.

117,046. PREPARED FOOD PRODUCT MADE FROM FLOUR AND EGGS SIMILAR TO NOODLES IN ITS USES. MAAS BAKING CO., New York, N. Y.
Filed January 25, 1917. Serial No. 100,931. PUBLISHED MARCH 27, 1917.

117,047. POWDERS FOR TREATING CERTAIN NAMED AFFECTIONS. ALBERT F. MARKS, Park Falls, Wis.
Filed October 13, 1916. Serial No. 98,636. PUBLISHED FEBRUARY 6, 1917.

117,048. FRESH OYSTERS. J. H. MICHAELS CO., New York, N. Y.
Filed December 8, 1916. Serial No. 99,795. PUBLISHED APRIL 3, 1917.

117,049. ICE-CREAM, BUTTER, MILK, AND SWEET CREAM. MONO SERVICE CREAM CO., Knoxville, Tenn.
Filed September 5, 1916. Serial No. 97,805. PUBLISHED MARCH 20, 1917.

117,050. CANNED TOMATOES, CORN, PEAS, PORK AND BEANS, WAX-BEANS, AND REFUGEE-BEANS. MUELLER WILD CO., Milwaukee, Wis.
Filed December 18, 1916. Serial No. 100,013. PUBLISHED MARCH 27, 1917.

117,051. COFFEE IN PACKAGES. NAAS-SANDERSON CO., Evansville, Ind.
Filed October 18, 1915. Serial No. 89,924. PUBLISHED JANUARY 23, 1917.

117,052. ORANGES, GRAPE-FRUIT, LEMONS, AND ALL CITRUS FRUITS. NOCATEE CITRUS GROWERS' ASSOCIATION, Nocatee, Fla.
Filed September 28, 1916. Serial No. 98,297. PUBLISHED JANUARY 9, 1917.

117,053. CLOCKS AND WATCHES AND THE WORKS FOR THE SAME. NORTH AMERICAN WATCH CO. INC., Mansfield, Ohio.
Filed October 19, 1916. Serial No. 98,772. PUBLISHED APRIL 3, 1917.

117,054. BATHING-SUITS AND SWEATERS. D. NUSBAUM & CO., New York, N. Y.
Filed February 19, 1917. Serial No. 101,502. PUBLISHED APRIL 10, 1917.

117,055. BISCUITS. PACIFIC COAST BISCUIT COMPANY, Seattle, Wash.
Filed June 8, 1916. Serial No. 95,719. PUBLISHED MARCH 27, 1917.

117,056. RICE. PANAMA RICE MILLING CO., New Orleans, La.
Filed December 7, 1916. Serial No. 99,772. PUBLISHED MARCH 20, 1917.

117,057. CONDIMENTS. JOSÉ QUEVEDO, New York, N. Y., assignor to Johnsen & Kildal, Inc., New York, N. Y., a Corporation of New York.
Filed February 19, 1917. Serial No. 101,507. PUBLISHED MARCH 27, 1917.

117,058. MEDICINE AS A REMEDY FOR DISEASES OF THE LUNGS, COUGHS, CATARRH, AND ASTHMA. K. S. RAMASHAUSKI, Chicago, Ill.
Filed September 14, 1916. Serial No. 97,991. PUBLISHED APRIL 10, 1917.

117,059. COUGH-DROPS. OSCAR A. RATHER, Milwaukee, Wis.
Filed September 25, 1916. Serial No. 98,221. PUBLISHED APRIL 10, 1917.

117,060. UNDERWEAR, AS FOLLOWS: SHIRTS, DRAWERS, AND UNION-SUITS. ROBERT REIS & CO., New York, N. Y.
Filed February 27, 1917. Serial No. 101,755. PUBLISHED APRIL 10, 1917.

117,061. LACE. RICHMOND LACE WORKS, Alton, R. I.
Filed January 2, 1917. Serial No. 100,312. PUBLISHED FEBRUARY 13, 1917.

117,062. POULTRY FOOD. RUSSIA CEMENT COMPANY, Gloucester, Mass.
Filed January 10, 1917. Serial No. 100,524. PUBLISHED APRIL 3, 1917.

117,063. LUMINOUS COMPOUNDS. SCHLESINGER RADIUM CO., Denver, Colo.
Filed January 10, 1917. Serial No. 100,528. PUBLISHED APRIL 10, 1917.

117,064. STOCK FOODS. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed December 15, 1916. Serial No. 99,970. PUBLISHED MARCH 27, 1917.

117,065. WHEAT-FLOUR. SEATTLE GRAIN CO., Seattle, Wash.
Filed January 3, 1917. Serial No. 100,342. PUBLISHED MARCH 20, 1917.

117,066. SILK PIECE GOODS AND RIBBONS. SMITH & KAUFMANN, New York, N. Y.
Filed February 24, 1917. Serial No. 101,662. PUBLISHED APRIL 10, 1917.

117,067. RICE, RICE-BRAN, AND RICE-POLISH USED FOR A STOCK FOOD. STUTTGART RICE MILL COMPANY, Stuttgart, Ark.
Filed December 11, 1916. Serial No. 99,866. PUBLISHED MARCH 20, 1917.

117,068. OVERALLS FOR MEN, WOMEN, BOYS, AND GIRLS. MARSHALL W. TAYLOR, Philadelphia, Pa.
Filed February 28, 1917. Serial No. 101,808. PUBLISHED APRIL 10, 1917.

117,069. CHOCOLATE COATING FOR CONFECTIONERS AND BAKERS. THE TOURAINE COMPANY, Boston, Mass.
Filed February 19, 1917. Serial No. 101,519. PUBLISHED MARCH 27, 1917.

117,070. MACARONI. VINELAND PRESERVING COMPANY, Jersey City, N. J.
Filed January 30, 1917. Serial No. 101,052. PUBLISHED APRIL 3, 1917.

117,071. CERTAIN NAMED FOODS. THE W. H. WEBB PACKING CO., Bloomingdale, Ind.
Filed February 19, 1917. Serial No. 101,525. PUBLISHED MARCH 27, 1917.

117,072. CERTAIN NAMED CLOTHING FOR WOMEN. CAROLYN T. WINDMULLER, New York, N. Y.
Filed February 6, 1917. Serial No. 101,203. PUBLISHED APRIL 10, 1917.

117,073. CANVAS BOOTS AND SHOES. WOODBURY SHOE COMPANY, Beverly, Mass.
Filed February 28, 1917. Serial No. 101,810. PUBLISHED APRIL 10, 1917.

117,074. CREAMERY-BUTTER. YORKSHIRE CREAMERY CO., Ottumwa, Iowa.
Filed January 22, 1917. Serial No. 100,838. PUBLISHED MARCH 20, 1917.



# DECISIONS
OF THE
# COMMISSIONER OF PATENTS
AND OF
# UNITED STATES COURTS IN PATENT CASES.

## DECISIONS OF THE U. S. COURTS.

### Court of Appeals of the District of Columbia.

SAURER *v.* GROEBLI.

*Decided May 22, 1916.*

1. INTERFERENCE—REASONABLE DILIGENCE.
Where it is shown that G. conceived and disclosed the invention and made tentative drawings about February, 1910, made other drawings or sketches in October of the same year, constituting a disclosure of the invention, made further drawings in April, 1911, which clearly disclose every element of the invention, at which time he considered the invention complete and turned the papers over to his solicitor for preparation of the application, *Held* that since the invention is of an intricate nature, and detail of its very essence, G. acted in good faith in perfecting his invention and exercised reasonable diligence.

2. SAME—PRIORITY.
Where S. relies for conception, disclosure, and constructive reduction to practice upon an application filed by him in Germany on November 17, 1910, and G. conceived and disclosed the invention about February, 1910, and was reasonably diligent in perfecting the same and filing an application therefor, *Held* that priority of invention was properly awarded to G.

*Mr. Henry Orth, Jr.*, for the appellant.

*Mr. Paul Finckel* for the appellee.

ROBB, *J.*:

This appeal is from a decision of the Patent Office in an interference proceeding awarding priority of invention to Groebli, the senior party.

The invention is for improved mechanism for punching jacquard-cards, used in automatic embroidering-machines, and is defined in eleven counts, which are sufficiently illustrated by count 1, reading as follows:

1. In a punching machine, measuring mechanism, adapted to measure distances on a pattern, perforating mechanism for perforating a card, a plurality of selecting devices adapted to control the perforating elements to determine the location of the perforations, said selecting devices being adapted to operate alternately upon the same perforating elements, and intermediate mechanism adapted to transfer the motion of the measuring mechanism alternately to the different selecting devices upon different operations of the machine.

Saurer, a resident of Switzerland, relies for conception, disclosure, and constructive reduction to practice, upon an application filed by him in Germany on November 17, 1910, his application herein having been filed November 14, 1911. The Examiner of Interferences and the First Assistant Commissioner ruled that this foreign application, containing a single diagrammatic view with a brief paragraph of description, does not sufficiently disclose the invention in issue, and therefore awarded priority to Groebli. These tribunals pointed out that in the present application of Saurer he has largely amplified his specification and drawings, and that it required invention thus to work out a result which he may have had in mind when he filed his German application but which, as they thought, he did not definitely disclose. The Board of Examiners-in-Chief entertained the view that this German application sufficiently disclosed the invention of the issue but further found that, although Groebli was first to conceive and disclose it, he was lacking in diligence because five months elapsed between his disclosure and the making of the drawings for the use of his attorney in filing his application.

While we were impressed with the soundness of the view of the Examiner of Interferences and the Assistant Commissioner on the first of the above-suggested questions, we think the decision safely may be rested upon the second. Mr. Groebli probably has contributed more to the development of this art than any other inventor and is very skilled therein, having taken out many patents appertaining thereto. The record demonstrates not only his great ability but his thoroughness in the matter of detail. It is clearly proven that he conceived and disclosed the invention about February, 1910, when he made what may be termed tentative drawings. In October of the same year, or just prior to the filing of Saurer's application, he made other drawings or sketches, all of which are in evidence. He was a very busy man and had no one, according to his uncontradicted testimony on this point, "who could by any possibility" assist him in the preparation and development of this invention. While there is no doubt that the sketches made in October constituted a disclosure of the invention, Mr. Groebli testified that he did not then consider "that the invention was completed"; that he was of the opinion—

that certain points would have to be worked out in greater detail and other points might require modifications.

He further testified that he had the invention on his mind during the interval between October, 1910, and April, 1911.

Finally, at that time,

said the witness—

my ideas had become definite enough and I was able to complete the invention to the point where I considered it sufficient as a basis for a patent application, and without further delay, I turned the papers over to my patent solicitor, who attended to the work of preparing the application with proper diligence, so that the application was ready for my signature a few days before July 4th, 1911, on which date I sailed for Europe.

Counsel for Saurer object that the mental attitude of Groebli ought not to be considered on the question of diligence. They contend that there is no way to meet such evidence. While generally speaking, their position is sound, we think the circumstances here constitute an exception to the rule. That much progress was made by Mr. Groebli between October and April in working out and perfecting the details of his invention is evidenced by the April drawings, which fully and clearly disclose its every element. Those drawings, therefore, furnish tangible proof that this consumption of time was fruitful of results. We many times have ruled that an inventor is to be commended, rather than criticized, for fully perfecting the details of his invention before filing an application; and where, as here, it clearly appears that the one who first conceived and disclosed the invention has acted in good faith in perfecting it, and consumed no more time for that purpose than reasonably was necessary, the award of priority should go to him. Especially is this true in a case like this, where the invention is of an intricate nature, and minute detail of its very essence.

A review of all the evidence convinces us that Mr. Groebli was reasonably diligent, and we therefore affirm the decision.

Affirmed.

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## U. S. Circuit Court of Appeals—Eighth Circuit.

FETZER *v.* DEMPSTER MILL MFG. CO.

*Decided November 20, 1916.*

238 FED. REP., 368.

PATENTS—INVENTION—TRUCK MECHANISM.

The Fetzer reissue patent, No. 12,653, (original No. 723,662,) for truck mechanism, *Held* void for lack of patentable invention.

APPEAL from the District Court of the United States for the District of Nebraska; Page Morris, Judge.

*Mr. Samuel W. Banning* and *Mr. Thomas A. Banning* for the appellant.

*Mr. Robert H. Parkinson* for the appellee.

Before HOOK and CARLAND, Circuit Judges, and AMIDON, District Judge.

AMIDON, *Dis. J.:*

This is a suit in equity, brought by Fetzer, as plaintiff, charging infringement of Reissue Patent No. 12,653, dated March 21, 1907. The trial court dismissed the bill upon the ground that the patent was void for want of patentable invention. The decision is clearly right. The patent is for an improvement in truck mechanism, and the drawings show that it was intended for an improvement in tongue-trucks. The evidence shows that such trucks were old in the art, and had been used for many years for precisely the same function as that for which they are used in the Fetzer structure. All he did was to transfer a tongue-truck from harvesters, where they had been formerly used, and perhaps would have their highest use on account of the side draft of harvesters. Mr. Fetzer, by reason of the increase in the size of press-drills, discovered that there was need of a tongue-truck on those farm implements, and transferred the truck from harvesters to press-drills, with only such slight mechanical adaptations as would occur to any mechanic.

The judgment is affirmed.

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## Supreme Court of the United States.

THE HART STEEL COMPANY AND GUILFORD S. WOOD *v.* THE RAILROAD SUPPLY COMPANY.

*Decided May 21, 1917.*

1. RES ADJUDICATA.

"The doctrine of *res judicata* is not a mere matter of practice or procedure inherited from a more technical time than ours. It is a rule of fundamental and substantial justice, 'of public policy and of private peace,' which should be cordially regarded and enforced by the courts to the end that rights once established by the final judgment of a court of competent jurisdiction shall be recognized by those who are bound by it in every way, wherever the judgment is entitled to respect."

2. SAME—SUITS IN DIFFERENT CIRCUITS—SUBJECT-MATTER THE SAME AND PARTIES IN PRIVITY.

When the identity of the subject-matter and issues of two suits brought in different circuits is admitted and the privity of the defendants is clear and the ruling effect of the decree in one circuit is properly presented to the court of coördinate jurisdiction, *Held* to be error in the court not to sustain the motion to affirm the decree.

ON WRIT of certiorari to the United States Circuit Court of Appeals for the Seventh Circuit.

*Mr. Frank F. Reed, Mr. Francis M. Phelps, Mr. Edward S. Rogers,* and *Mr. Frederick P. Fish* for the petitioners.

*Mr. Taylor E. Brown, Mr. C. C. Linthicum,* and *Mr. Clarence E. Melhope* for the respondent.

Mr. Justice CLARKE delivered the opinion of the Court.

This suit is here on certiorari to review the decision of the Circuit Court of Appeals for the Seventh Circuit.

On December 9, 1908, the respondent herein, The Railroad Supply Company, as owner of three United States patents, viz., Nos. 538,809, 691,332 and 721,644, filed a bill in the District Court for the Northern District of Illinois against The Hart Steel Company and Guilford S. Wood, praying that the defendants be restrained from infringing certain designated claims of its patents, which are described in their specifications as covering new and useful improvements in railway-tie plates. This case will be hereinafter referred to as the First Case.

Three months later, on March 26, 1909, the same plaintiff commenced a second suit against The Elyria Iron & Steel Company in the District Court for the Northern District of Ohio, praying for the same relief with respect to the same claims of the same patents as in the First Case.





The two bills differed only as to the parties defendant. The Elyria Iron & Steel Company, the defendant in the Second Case, was a manufacturing corporation and was the owner of all of the capital stock of the Hart Steel Company, the defendant in the First Case, which was the selling agent of the Elyria Company, and Wood was its manager.

The same defenses being relied upon in the two cases, the evidence was taken in the first one, and by stipulation a carbon copy of it was filed in the second, and the same exhibits were used in the two.

The claimed infringement consisted in the manufacture of a single order of tie-plates by the Elyria Company and the sale of them by the Hart Company, with Wood as its manager, to the Atchison, Topeka & Santa Fe Railroad Company.

Such proceedings were had in the First Case that on December 18, 1911, the Circuit Court for the Northern District of Illinois decided that the construction or device sold by the defendants did not infringe the claims of the plaintiff's patents relied upon, and dismissed the bill for want of equity.

In the Second Case such proceedings were had that on March 4, 1912, the District Court for the Northern District of Ohio entered precisely the same decree as was entered in the First Case.

Each case was appealed to the appropriate circuit court of appeals and on April 7, 1914, that court for the sixth circuit, in a carefully-considered opinion, found the claims of the patents relied upon void for want of novelty and invention and affirmed the decision of the district court. A petition for rehearing was denied on the 30th day of the following June.

On the 6th day of October, 1914, the first day of the next ensuing term of the Circuit Court of Appeals for the Seventh Circuit, the defendants in the first suit, which was still pending undetermined, filed a motion praying that court to affirm the decree of the circuit court, upon the ground that all of the issues in the case had been fully and finally determined and adjudicated by the Circuit Court of Appeals of the Sixth Circuit in the Second Case between the plaintiff and The Elyria Iron & Steel Company, with which the moving defendants The Hart Steel Company and Guilford S. Wood were in privity. In support of this motion a copy of the record and journal entries in the Second Case was filed which showed that the two records were "identical."

The record shows that this motion to affirm the decree of the circuit court was argued orally on October 6, 1914, and was on the same day denied, but no reason appears in the record for such denial.

Subsequently the case was argued on its merits and on January 5, 1915, the Circuit Court of Appeals for the Seventh Circuit found the plaintiff's patents valid and infringed and, reversing the decision of the circuit court (then the district court) remanded the case with an order for an accounting.

The Hart Steel Company and Wood as petitioners in this Court, assign as error the overruling by the Circuit Court of Appeals of the Seventh Circuit of their motion to affirm the decision of the circuit court in their favor.

It is apparent from the foregoing statement that the question presented to the Circuit Court of Appeals of the Seventh Circuit by the petitioner's motion to affirm was whether or not the decree of the Circuit Court of Appeals of the Sixth Circuit was a final determination of the issues presented in the case pending and not yet argued in the Circuit Court of Appeals of the Seventh Circuit so as to be *res judicata* and binding on that court because of the identity of the subject-matter and the claims and because of the privity of the parties.

The doctrine of *res judicata* is fully applicable to cases of patent infringement, (Rob. on Pats., sec. 983; Walk. on Pats., sec. 468,) and while the record does not show the grounds upon which the motion to affirm was overruled, it does show that the motion was argued, was considered by the court and denied. If authority be needed to the point that the claim thus made for the effect of the judgment of the Circuit Court of Appeals of the Sixth Circuit was presented properly and in time it may be found in *Stout* v. *Lye*, (103 U. S., 66;) *Sheldon* v. *Patterson*, (55 Ill., 507;) *Howard* v. *Mitchell*, (14 Mass., 241.)

There can be no doubt from the record before us that the Elyria Company owned all of the capital stock of the Hart Company, that the latter company was a mere sales agent of the former, that Wood was the salaried manager of the latter, that both the Hart Company and Wood were agents subject to the control of the Elyria Company and that in selling the tie-plates and as defendants in the litigation they acted wholly under the authority and in the interest of their principal. Identity of interest could not be clearer or closer than it was between the defendants in the two cases—they represented precisely the same, single interest, and the Hart Company and Wood as agents of the Elyria Company were obviously and necessarily privies to the judgment rendered against it. (*Bank of Kentucky* v. *Stone*, 88 Fed., 383, affirmed *Kentucky Bank Cases*, 174 U. S., 408; *Emery* v. *Fowler*, 39 Me., 329; *Castle* v. *Noyes*, 14 N. Y., 326; *Emma, &c., Co.* v. *Emma & Co. of New York*, 7 Fed., 401.)

With the identity of the subject-matter and issues of the two cases admitted, the privity of parties to them clear, and the question of the ruling effect of the decree of the Circuit Court of Appeals for the Sixth Circuit presented in an appropriate manner to the Circuit Court of Appeals of the Seventh Circuit, a court of coördinate jurisdiction, we cannot doubt that the latter court fell into error in not sustaining the motion of the petitioners to affirm the decision of the circuit court. The defendants should not have been put to further expense, delay and trouble after the motion was presented. The question is ruled by *Kessler* v. *Eldred*, (206 U. S., 285;) *Brill* v. *Washington R. & E. Co.*, (215 U. S., 527.) and *Russell* v. *Place*, (94 U. S., 606.)

This doctrine of *res judicata* is not a mere matter of practice or procedure inherited from a more technical time than ours. It is a rule of fundamental and substantial justice, "of public policy and of pri-

vate peace," which should be cordially regarded and enforced by the courts to the end that rights once established by the final judgment of a court of competent jurisdiction shall be recognized by those who are bound by it in every way, wherever the judgment is entitled to respect. (*Kessler* v. *Eldred, supra.*)

The conclusion which we have reached in the Second Case, (*The Railroad Supply Company*, petitioner, v. *Elyria Iron & Steel Company*, respondent,) this day decided, with respect to the merits of the patents involved in this litigation is such that it leaves our decision in this case uncomplicated by the one in that. The decree of the Circuit Court of Appeals is reversed.

Mr. Justice DAY did not take any part in the decision of this case.

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### Supreme Court of the United States.

THE RAILROAD SUPPLY COMPANY, Petitioner, *v.* THE ELYRIA IRON AND STEEL CO.

*Decided May 21, 1917.*

1. PATENTS—INVENTION—RAILROAD-TIE PLATES.
   The Wolhaupter patents, Nos. 538,809, 691,332, and 721,644, reviewed in connection with the prior art and *Held* to be wanting in patentable invention thereover.
2. PATENTABILITY—INVENTION—CHANGE IN FORM.
   The patents in suit give a somewhat different form to features which are perfectly familiar in the prior art and similarly grouped in prior patents, but without giving them any new function or accomplishing any new result. *Held* this is a mere carrying forward of the original thought and does not constitute patentable invention.

ON WRIT of certiorari to the United States Circuit Court of Appeals for the Sixth Circuit.

*Mr. Taylor E. Brown*, *Mr. C. C. Linthicum*, and *Mr. Clarence E. Melhope* for the petitioner.

*Mr. Frank F. Reed*, *Mr. Edward S. Rogers*, and *Mr. Frederick P. Fish* for the respondent.

Mr. Justice CLARKE delivered the opinion of the court.

On March 26, 1909, The Railroad Supply Company, petitioner, commenced this suit against The Elyria Iron & Steel Company in the Circuit (now District) Court for the Northern District of Ohio, claiming infringement, of claim No. 8 of United States Letters Patent No. 538,809, granted May 7, 1895, of claims No. 1, 2 and 3 of Patent No. 691,332, granted January 14, 1902, and of claims No. 7 and 9 of Patent No. 721,644, granted February 24, 1903. All of these patents granted to B. Wolhaupter were acquired by the petitioner, and each of the three purported to describe a new and useful improvement in railroad-tie plates.

Such proceedings were had in the case that on March 4, 1912, the district court decided that the petitioner's patents were not infringed by the device manufactured and sold by the defendant.

On appeal to the Circuit Court of Appeals for the Sixth Circuit, that court on April 7, 1912, affirmed the decree of the district court dismissing the bill, and held in its opinion that the claims of the patents relied upon were void for want of patentable novelty. This decree is now here for review on certiorari.

A railroad-tie plate, sometimes called a "wear-plate," is a rectangular piece of metal, originally with both surfaces flat, designed to be placed upon the tie immediately under the rail, for the purpose of protecting the tie from the wear, which in soft wood is very great, incident to the vibration of the rail caused by passing engines and trains and for the purpose of holding the rail more firmly in place than it could otherwise be held by the spikes without the plate, thereby preserving the gage of the track.

In the early days of railroading when engines and cars were small and light, when speed was comparatively slow and when hardwood, which held the spikes firmly in place, was abundant and cheap, such plates were little used; but the increase in weight of rails and rolling-stock, the higher speed of trains and the necessary use of the cheaper soft woods for ties have brought them into extensive use. The general use of these plates with heavy rolling-stock and traffic presented the problem of making them as strong and inexpensive as possible and in a form such that they would adhere firmly to the ties while doing the least possible damage to the fiber of the wood.

The statement of this problem shows convincingly that even at the beginning it offered a very limited field for invention, if, indeed, it presented any field at all for the exercise of that inventive genius which it is the policy of the law to protect and reward with a monopoly for seventeen years.

The claims of the patents declared on are as follows: Claim 8 of Patent No. 538,809 reads:

> A railway-tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described.

It would be difficult to write in more general terms a description of any plate, whether channeled, corrugated, grooved or ribbed on both sides.

Claims Nos. 1 and 2 of Patent No. 691,332, differ so slightly that No. 1 will suffice:

> A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, substantially as described.

Claims 7 and 9 of Patent No. 721,644 are so similar that only No. 7 need be quoted:

> A tie-plate provided in its rail-supporting surface with transverse grooves or channels, and at one margin of said supporting surface with a transverse rail-abutting shoulder.

Wolhaupter, the grantee of the three patents was a civil engineer employed by a railroad company and he testifies that he first turned his attention to tie-plates for the purpose of improving them "in the year 1893 or early in 1894" and the earliest of his three patents in suit is dated May 7, 1895.

The earliest patent for a "wear" or tie plate by that specific name, which is shown by this record, was issued in 1881 and between that date and the date of the issuing of the first patent in suit to Wolhaupter in 1895 twenty-six patents were issued, and in the seven years between 1895 and 1902, when





Wolhaupter's second patent in suit was issued, nineteen more patents were issued for various forms of this simple device.

Thus it is seen that Wolhaupter came late into this narrow, and even then much exhausted, field of investigation and in his first patent, (not here in suit) dated December 11, 1894, he claims invention for placing one, or permissibly two, "elongated divided ridges" on the under side of such a plate to engage the tie and on the upper side a series of ridges parallel with those on the lower side, but adapted after being rolled to being cut away to form a seat for the rail. There is no claim as to the relative positions of the ridges on the two faces of the plate.

In his second patent (the first in suit), his claim of invention is for "one or more" flanges "more or less sharpened" (not divided now) on the under side of the plate to engage the tie, and on the upper side a series of flanges (ridges) on which the rail may rest. The flanges (ridges) on the upper surface must not be placed vertically above the flanges or ridges on the lower and there is no provision for cutting them away for a rail-seat as in the first patent. The dominating thought of this patent is the cutting of the plate "on a diagonal line with relation to the rail-flange," but as this form of plate is not claimed by the patentee in his later patents, and as no merit is claimed for it in the testimony in the record, it will be neglected.

In his third patent Wolhaupter's inventive genius placed the flanges on the under side parallel with and directly beneath those on the upper side of the plate, instead of between them as in the second patent, or regardless of either position as in the first.

In his fourth patent the flanges on the lower side are given a position "transverse" to the ridges on the upper side.

In the first three of petitioner's patents the flanges on both surfaces of the plate are for use parallel to the grain of the tie and transverse to the length of the rail. In the fourth patent the flanges on the under side are described in the specifications and drawings as transverse to, but in claim four as parallel to the grain of the tie.

The minute and obviously wholly tentative variations, thus described, in the plates in the Wolhaupter patents, are fairly illustrative of the slight differences in form given to this simple device on which this record shows forty-five separate patents were granted during the twenty-two years between 1881 and 1903.

This discussion of the record and reference to the respondent's patents brings us to the question, Do the claims of these patents describe an "invention or discovery" or "a new and useful * * * manufacture * * * or improvement thereof," such as our patent laws were designed to protect?

We have seen that long before Wolhaupter's patents, tie-plates were used for the purposes for which his plates were designed. It was certainly obvious that if wedge-shaped flanges, or ribs or claws, or other downward projections, were placed on the under side of such plates they would penetrate the ties when weight was put upon them and thus assist in holding the rail in place.

Very certainly it was also general knowledge before 1895 that if one wished to reduce the weight of a plate without loss of strength this could be done by using channel-iron, angle-iron or corrugated iron, or, which comes to the same thing, by having the plate made with flanges or ribs, (*Service Railroad Co.* v. *Hamilton, &c., Co.*, 8 Canadian Exch. Repts., 381,) and the placing of flanges on the upper side of such plates to engage the outer flange of the bottom of the rail, and thus to receive the lateral thrust caused by the flanges of the wheels tending to spread the rails, was also obvious and well known before Wolhaupter's patents.

To the obviousness of the elements necessary to the solution of this problem must be added the state of the art, if such it may be called, when Wolhaupter, late in 1893 or early in 1894, began, as he says, the investigation of tie-plates and "familiarized himself with the literature of the subject." He testifies that he had seen the tie-plates of Servis (patented 1881, No. 249,407; 1884, No. 294,816) and of Goldie (patented 1887, No. 356,760; 1890, No. 426,530; 1891, No. 457,584; 1891, No. 457,585, and 1892, No. 485,030) and he is presumed by the law to have had all prior patents before him when he applied for his patent. (*Duer* v. *Corbin Cabinet Lock Co.*, 149 U. S., 216, 223; *Mast, Foos & Co.* v. *Stover Mfg. Co.*, 177 U. S., 485, 493.)

In the plates of Servis, Wolhaupter saw a plate with "a flange or flanges formed on the lower side" to engage the tie lengthwise of the grain of the wood and, of course, transverse to the rail, and in the Goldie patents he saw in No. 457,584 "a triangular tooth like projection" extending downward from the bottom of the plate and a raised shoulder on the upper side to receive the lateral thrust of the edge of the rail-flange, and in Patent No. 485,030 he saw a plate with two downward-projecting ribs to engage the tie, with a shoulder on the upper side to receive the thrust of the rail, and with a "transverse depression" in the upper surface, and bearings or flanges on each side of this depression to receive and support the base of the rail.

We thus have Wolhaupter confessing that before he applied for a patent he had knowledge of tie-plates with "ridges," "flanges" and "teeth" projecting downward from the under side of them to engage the tie, differing at most only in form, and in this but slightly, from the similar downward-projecting flanges "more or less sharpened" which appear in all three of his patents in suit; that he had knowledge of plates with a shoulder on the upper surface to receive the thrust of the side of the bottom of the rail, not differing from the "rail abutting shoulder" shown in all three of his patents, and that he also had knowledge of the latest Goldie patented plate, with the upper surface "channeled" by having a depression extending across the plate under the central portion of the bottom of the rail and with a bearing on each side of it to support the rail.

It is thus made very clear that the only appearance even of novelty or of invention in the Wolhaupter plates is in their having flanges on the upper surface, on which it is intended the rail shall rest, for downward-extending flanges on the under side and the rail-abutting shoulder on the upper side are found in earlier patents in almost precisely the form which he gave to them. But such flanges on the upper surface of the Wolhaupter plate cannot constitute of themselves patentable invention or novelty, for it is very clear, as we have already said, that a resort to channels, grooves and corrugations was a familiar method of reducing the weight and thereby the cost of iron plates without decreasing their strength, long before the Wolhaupter patents, and this form was, therefore, one to which any skilful mechanic would turn to accomplish the purpose that Wolhaupter claimed for it, and that others did so resort to this form is sufficiently shown by reference to the Wells patent, No. 203,570 (1878), the Wilson patent, No. 522,867 (1894) and the Dunham patent, No. 469,386 (1892).

With these facts before him the most that can be said for the patents in suit is that they gave a somewhat different form to three features which were perfectly familiar and were similarly grouped in prior forms of tie-plates but without giving to any of them any new function and without accomplishing by them any new result. This brings the patents within the principle so often declared that—

> the mere carrying forward of the original thought, a change only in form, proportions or degree, doing the same thing in the same way, by substantially the same means, with better results, is not such an invention as will sustain a patent. (*Roberts v. Ryer*, 91 U. S., 150; *Belden Mfg. Co. v. Challenge Corn Planter Co.*, 152 U. S., 100; *Market Street Railway Co. v. Rowley*, 155 U. S., 621, 629.)

The device involved in these patents is so simple and familiar in all of its forms that a description of it seems sufficient to visualize it to the reader, but cuts of it in various forms may be found in the reported decisions of this case (*Railroad Supply Co. v. Elyria Iron & Steel Co.*, 213 Fed., 789) and in the report of the case, involving the same claims of the same patents, in the seventh circuit, to be found in *Railroad Supply Co. v. Hart Steel Co.*, (193 Fed., 418, and 222 Fed., 261; C. D., 1915, p. 226.)

Clearly persuaded as we are that the slight variations claimed for the patents in suit from the plates which had gone before do not constitute patentable invention we cannot consent to further extend this discussion by a minute comparison of them with earlier patents appearing in the record, but we content ourselves with adopting as comment not to be improved upon in such a case as we have here the following from a former decision of this Court:

> The design of the patent laws is to reward those who make some substantial discovery or invention, which adds to our knowledge and makes a step in advance in the useful arts. Such inventions are worthy of all favor. It was never the object of those laws to grant a monopoly for every trifling device, every shadow of a shade of an idea, which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufactures. Such an indiscriminate creation of exclusive privileges tends rather to obstruct than to stimulate invention. It creates a class of speculative schemers who make it their business to watch the advancing wave of improvement, and gather its foam in the form of patented monopolies, which enable them to lay a heavy tax upon the industry of the country, without contributing anything to the real advancement of the arts. It embarrasses the honest pursuit of business with fears and apprehensions of concealed liens and unknown liabilities to lawsuits and vexatious accountings for profits made in good faith. (*Atlantic Works v. Brady*, 107 U. S., 192, 200.)

We add that each of the patents of the petitioner being in terms for an "improvement in tie-plates," the state of the "prior art" as described in this opinion requires that they be limited strictly to the form described in the claims, and we therefore also fully agree with the circuit court of appeals that the patents in suit, even if they had proved valid, would not have been infringed by the plates manufactured by the defendant.

The decree of the circuit court of appeals is affirmed.

Mr. Justice DAY did not take any part in the decision of this case.

## ADJUDICATED PATENTS.

(U. S. D. C.) The Ashley reissue patent, No. 13,659, (original No. 37,504,) for a design for inkstand, in which claim covered design consisting of low, broad, flat base surmounted by low dome, is infringed by inkstand having those features, though they are so ornamented as to enable casual observer to distinguish between two inkstands. *Ashley v. Samuel C. Tatum Co.*, 240 Fed. Rep., 979.

(U. S. C. C. A.) The Emerson patent, No. 777,615, for a convertible sound-box, *Held* void for lack of invention. *American Graphophone Co. v. Gimbel Bros.*, 240 Fed. Rep., 971.

(U. S. C. C. A.) The Kraemer patent, No. 899,874, for a talking-machine, *Held* void for lack of invention. *American Graphophone Co. v. Gimbel Bros.*, 240 Fed. Rep., 971.

(U. S. C. C. A.) The Macdonald patent, No. 714,651, claim 6, for a sound-record for talking-machines, *Held* not infringed. *American Graphophone Co. v. Gimbel Bros.*, 240 Fed. Rep., 974.

(U. S. C. C. A.) The Macdonald patent, No. 957,694, for a disk sound-reproducing machine, *Held* not infringed if valid. *American Graphophone Co. v. Gimbel Bros.*, 240 Fed. Rep., 971.

(U. S. C. C. A.) The Rowell and Little patent, No. 844,190, for a machine for making pill-boxes, *Held* valid and infringed. *E. N. Rowell Co. v. William Koehl Co.*, 240 Fed. Rep., 953.

(U. S. C. C. A.) The Snell patent, No. 842,262, for a concrete-mixer, *Held* valid and infringed. *Waterloo Cement Machinery Corp. v. Engel*, 240 Fed. Rep., 976.

(U. S. C. C. A.) The Weber patent, No. 743,207, for an incandescent-electric-lamp socket, claims 3 and 6 *Held* void and claims 2, 7, and 9 valid, but not infringed. *Weber Electric Co. v. National Gas & Electric Fixture Co.*, 240 Fed. Rep., 965.

## Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., May 19, 1917.*

*Louis Kuntscher, his assigns or legal representatives, take notice:*

An interference having been declared by this Office between the application of The Favorita Co., of New York, N. Y., for registration of a trade-mark and trade-mark registered May 31, 1910, No. 78,106, to Louis Kuntscher, of Tarpon, Tex., and a notice of such declaration sent by registered mail to said Louis Kuntscher at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Louis Kuntscher, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
*First Assistant Commissioner.*





THE
# OFFICIAL GAZETTE
OF THE
# United States Patent Office.

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| Designs | 35—No. | 50,929 to No. | 50,963, | inclusive. |
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| Total | 961 | | | |

### Amendments to Rules of Practice.

(ORDER NO. 2,331.)

Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, Rule 77 of the Rules of Practice in the Patent Office is amended by adding thereto the following paragraph:

"Whenever, during a time when the United States is at war, publication of an invention by the granting of a patent might, in the opinion of the Commissioner, be detrimental to the public safety or defense or might assist the enemy or endanger the successful prosecution of the war, he may suspend action on the application therefor."

so that the rule as amended will read as follows:

"77. If an applicant neglect to prosecute his application for one year after the date when the last official notice of any action by the office was mailed to him, the application will be held to be abandoned, as set forth in Rule 171.

"Suspensions will only be granted for good and sufficient cause, and for a reasonable time specified. Only one suspension may be granted by the Primary Examiner; any further suspension must be approved by the Commissioner.

"Whenever action upon an application is suspended upon request of an applicant, and whenever an applicant has been called upon to put his application in condition for interference, the period of one year running against the application shall be considered as beginning at the date of the last official action preceding such actions.

"Whenever, during a time when the United States is at war, publication of an invention by the granting of a patent might, in the opinion of the Commissioner, be detrimental to the public safety or defense or might assist the enemy or endanger the successful prosecution of the war, he may suspend action on the application therefor."

THOMAS EWING,
*Commissioner.*

### Amendment of Rules of Practice.

(ORDER NO. 2,328.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., June 5, 1917.*

Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, Rule 93 of the Rules of Practice in the United States Patent Office has been amended to read as follows:

93. An interference is a proceeding instituted for the purpose of determining the question of priority of invention between two or more parties claiming substantially the same patentable invention. IN ORDER TO ASCERTAIN WHETHER ANY QUESTION OF PRIORITY ARISES THE COMMISSIONER MAY CALL UPON ANY JUNIOR APPLICANT TO STATE IN WRITING THE DATE WHEN HE CONCEIVED THE INVENTION UNDER CONSIDERATION. ALL STATEMENTS FILED IN COMPLIANCE WITH THIS RULE WILL BE RETURNED TO THE PARTIES FILING THEM. IN CASE THE APPLICANT MAKES NO REPLY WITHIN THE TIME SPECIFIED, NOT LESS THAN TEN DAYS, THE COMMISSIONER WILL PROCEED UPON THE ASSUMPTION THAT THE SAID DATE IS THE DATE OF THE OATH ATTACHED TO THE APPLICATION. The fact that one of the parties has already obtained a patent will not prevent an interference, for, although the Commissioner has no power to cancel a patent, he may grant another patent for the same invention to a person who proves to be the prior inventor.

THOMAS EWING,
*Commissioner.*

### Adverse Decisions in Interference.

PATENT NO. 1,139,695.

On May 8, 1917, a decision was rendered that Charles J. Marth was not the first inventor of the subject-matter covered by claims 2 and 6 of his Patent No. 1,139,695, subject, "Gearing," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,151,160.

On May 19, 1917, a decision was rendered that John Louis Brown was not the first inventor of the subject-matter covered by claims 1, 2, 3, 4, 5, 6, 7, and 8 of his Patent No. 1,151,160, subject, "Alloys and processes of producing the same," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,064,086.

On April 22, 1917, a decision was rendered by the Court of Appeals of the District of Columbia affirming the decision of the Commissioner of Patents that Alexander T. Porter and Herbert E. Rider were not the first inventors of the subject-matter covered by claims 1, 2, and 8 of their Patent No. 1,064,086, subject, "Method of producing a fuel vapor."

### Briefs in Appealed Cases.

All briefs filed in this Office should have conspicuously printed thereon a statement designating the particular tribunal of the Patent Office to which the brief is addressed.

# APPLICATIONS UNDER EXAMINATION.

*Condition at Close of Business June 15, 1917.*

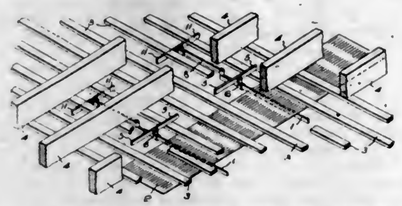
| Room No. | Divisions and subjects of invention. | Oldest new application and oldest action by applicant awaiting office action. New. | Amended | No. of applications awaiting action. |
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| 154 | 11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus. | Apr. 21 | May 14 | 170 |
| 324 | 12. Journal-Boxes, Pulleys, and Shafting; Machine Elements | Apr. 2 | Apr. 12 | 616 |
| 329 | 13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning. | Mar. 15 | May 18 | 515 |
| 307 | 14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working. | Mar. 20 | Mar. 31 | 243 |
| 308 | 15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics. | May 17 | June 1 | 168 |
| 109 | 16. Electric Signaling; Radiant Energy; Telegraphy; Telephony | Dec. 29 | Apr. 23 | 594 |
| 303 | 17. Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting. | Mar. 8 | May 25 | 131 |
| 327 | 18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Lubrication; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps, Steam-Engines; Steam-Engine Valves. | Apr. 13 | Apr. 24 | 264 |
| 236 | 19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels | Feb. 16 | Mar. 28 | 486 |
| 179 | 20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking. | May 28 | May 28 | 146 |
| 182 | 21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling. | Feb. 26 | Apr. 28 | 395 |
| 249 | 22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships. | Feb. 13 | Apr. 16 | 760 |
| 379 | 23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism. | Feb. 21 | Aug. 26 | 316 |
| 144 | 24. Apparel; Apparel Apparatus; Sewing-Machines; Garment Supporters | Apr. 12 | May 8 | 246 |
| 315 | 25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation. | May 17 | May 18 | 120 |
| 105 | 26. Electricity, Generation; Motive Power | Jan. 11 | Mar. 6 | 526 |
| 375 | 27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus | May 2 | May 9 | 209 |
| 63 | 28. Internal-Combustion Engines | Mar. 6 | Apr. 20 | 309 |
| 147 | 29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools. | Jan. 30 | Apr. 30 | 368 |
| 152 | 30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines | Mar. 8 | May 23 | 347 |
| 172 | 31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt. | Apr. 12 | May 11 | 237 |
| 278 | 32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration. | Dec. 8 | May 1 | 939 |
| 70 | 33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving. | Mar. 15 | Apr. 21 | 331 |
| 304 | 34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners. | Jan. 19 | May 5 | 254 |
| 57 | 35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet | Mar. 1 | May 31 | 479 |
| 264 | 36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring | Mar. 19 | May 29 | 528 |
| 107 | 37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications. | Jan. 22 | Apr. 17 | 582 |
| 378 | 38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells | May 9 | May 7 | 114 |
| 321 | 39. Water Distribution | Feb. 20 | Apr. 11 | 414 |
| 280 | 40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles. | Apr. 3 | May 24 | 417 |
| 125 | 41. Railway Draft Appliances; Resilient Tires and Wheels | Mar. 20 | Apr. 23 | 325 |
| 244 | 42. Electricity, Conductors; Railway Signaling; Electricity-Transmission to Vehicles | Jan. 24 | May 14 | 332 |
| 382 | 43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers, Sewerage; Surgery; Water Purification. | Apr. 14 | May 2 | 132 |
| | Oldest new case, Dec. 8; oldest amended, Aug. 26. | | | |
| | Total number of applications awaiting action | | | 16,180 |
| 163 | TRADE-MARKS, DESIGNS, LABELS AND PRINTS: | | | |
| | Trade-Marks | Apr. 6 | May 18 | 928 |
| | Designs | May 15 | May 28 | 266 |
| | Labels and Prints | June 5 | June 2 | 35 |



# PATENTS

## GRANTED JUNE 19, 1917.

1,230,093. SUPPORT FOR SHEET MATERIAL IN BUILDING CONSTRUCTION. BENJAMIN ADEY, Newton Center, Mass. Filed Oct. 17, 1916. Serial No. 126,211. (Cl. 72—128.)



1. A device for supporting a metal lath sheet while the latter is being fastened to the wooden strips of a ceiling, comprising a plurality of supports provided each with a supporting arm, the latter having one free end to permit the introduction of the metal lath sheet laterally over the same, suspension means connected to the opposite end of the arm comprising a pair of oppositely disposed lateral arms at a suitable height and position to be inserted between and to overlie transversely the adjacent strips to which the sheet metal is to be attached, a hanger for detachably securing said lateral arms to the supporting arm, an extension detachably secured to the supporting arm, a pair of oppositely disposed lateral arms on the extension adapted to underlie transversely the said strips and hold the said supporting arm against tipping, said arms being hinged to said extension to render the same collapsible, and an attachment adapted to be substituted for said extension whereby said arm when required may be secured to an upright stud.

3. A supporting device for building purposes comprising a supporting arm, a pair of oppositely disposed lateral arms secured to one end of said supporting arm at a level above the same, an extension and a pair of oppositely disposed lateral arms on said extension at a level between that of the supporting arm and the first set of lateral arms.

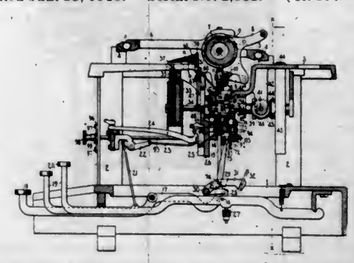
4. A device for supporting sheet material to be fastened to a ceiling comprising one or more supports provided each with a supporting arm, suspension means secured to one end of said arm and adapted to overlie one or more of the wooden strips on said ceiling, and means secured to an extension of said arm adapted to underlie one or more of said strips to hold the arm in sheet supporting position, the opposite end of said arm being free from connection with any suspension member whereby the sheet material may be inserted laterally over the same.

8. A device for supporting sheet material to be fastened to a ceiling comprising a supporting member having one end free of connection to the ceiling, whereby the sheet material may be inserted laterally over the same, means for supporting said member through its opposite end comprising suspension means adapted to overlie one or more of the wooden strips on said ceiling, and an extension adapted to underlie said strips to prevent the arm from tipping.

13. A support for holding metal lath sheets in close proximity to a ceiling to which it is to be fastened comprising a supporting arm, a suspension device at one end of said arm, a detachable extension for the arm carrying means to prevent the tipping movement of said arm on said suspension device, and an attachment adapted to be substituted for said extension whereby the arm may be secured to an upright stud.

[Claims 2, 5 to 7, and 9 to 12 not printed in the Gazette.]

1,230,094. TYPE-WRITING MACHINE. EDWIN E. BARNEY, Ilion, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Jan. 15, 1915. Serial No. 2,351. (Cl. 197—157.)



1. In a typewriting machine, the combination of a ribbon vibrator, a bell crank operating lever, an upright lever for actuating said operating lever, printing keys operative on said upright lever, and means extending to the front of the machine for varying the effect of said printing keys on said bell crank operating lever, said means comprising devices for shifting said upright lever laterally.

10. In a typewriting machine, the combination of a platen, a shift rail, ribbon spools, a ribbon vibrator, an operating lever, means for actuating said lever, and a sheet-metal bracket detachably fixed to said rail and having under said rail ears on which said lever is pivoted and further carrying forward of said rail a guide screw which coöperates with a slot in the vibrator and also provided with ribbon guide fingers arranged one at each side of said vibrator and extending upward, the portions of the ribbon extending from the vibrator to the spools passing behind said fingers.

35. In a typewriting machine, the combination with a ribbon vibrator and mechanism for varying the throw of said vibrator, of variable stop devices for variably limiting both the movement of the vibrator toward the printing point and also its movement away from the printing point.

[Claims 2 to 9 and 11 to 34 not printed in the Gazette.]

1,230,095. PAPER. JAMES E. BAUM, Jr., Chicago, Ill. Filed Feb. 11, 1916. Serial No. 77,602. (Cl. 92—40.)

1. As an article of manufacture, paper in sheet or web form having a coating of uncombined silica in a state of impalpable powder.

2. As an article of manufacture, paper in sheet or web form having a coating of uncombined silica in a state of impalpable powder, and a binder by which the silica particles are held closely together and to the paper fibers to provide a smooth surface.

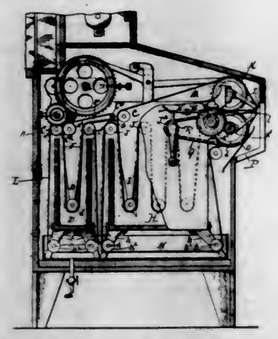
3. As an article of manufacture, paper in sheet or web form coated with a compound composed essentially of silica in a state of impalpable powder mixed with clay in such proportions as to impart a moderate degree of gloss and a very smooth surface.

4. As an article of manufacture, paper in sheet or web form coated with a compound composed essentially of uncombined silica in a state of impalpable powder mixed with a coloring matter and sufficient size to act as a binder between the materials and with the fiber and form a very smooth surface.

5. As an article of manufacture, paper having its fiber associated with impalpable powder of uncombined silica, and calendered to a smooth surface.

[Claim 6 not printed in the Gazette.]

1,230,096. DEVELOPING APPARATUS. GEORGE C. BEIDLER, Oklahoma, Okla. Filed Nov. 8, 1907. Serial No. 401,277. (Cl. 95—90.5.)



1. In a developing apparatus, a conveyer to which film will adhere when wet, means for causing a separation of the conveyer and film, permitting the film to gravitate, a second conveyer consisting of two sections between which the film is fed, means for causing the sections of the conveyer to diverge, and means for causing the sections of the conveyer to travel in a sharp curve to cause a separation of the film and conveyer.

2. In a developing apparatus, means for carrying film through tanks, means for driving the carrying mechanism, means for locking and releasing the driving mechanism, means for arresting the carrying mechanism at predetermined intervals, and means for tripping the arresting means when the driving mechanism is released.

3. In a developing apparatus, a conveyer, mechanism for driving the conveyer, a power transmitting device, means for automatically arresting the mechanism, and means for tripping the arresting mechanism upon releasing the power transmitting device.

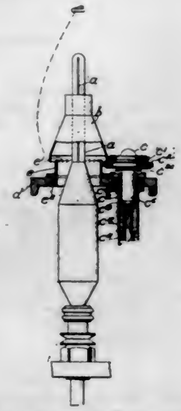
4. In a developing apparatus, a conveyer, means for moving the conveyer, means for applying power to the conveyer moving mechanism, means for arresting the conveyer moving means, means for tripping the arresting mechanism upon releasing the power applying device.

5. In a developing apparatus, a conveyer, mechanism for moving the conveyer, a crank handle for driving the mechanism, a shaft on which the crank handle has a limited rotary movement independent of the shaft, means for moving the crank handle longitudinally of the shaft as it is rotated, means for causing the shaft to take motion from the crank handle, means for arresting the conveyer mechanism at predetermined intervals, and a tripping mechanism under the control of the crank handle for releasing the arresting means.

[Claims 6 to 8 not printed in the Gazette.]

1,230,097. DEVICE FOR SPINNING AND TWISTING TEXTILE FIBERS. VICTOR BELANGER, Marshfield, Mass., assignor to New Era Spinning Co., Boston, Mass., a Corporation of Massachusetts. Filed Apr. 7, 1911, Serial No. 619,476. Renewed Nov. 6, 1916. Serial No. 129,894. (Cl. 118—49.)

1. In a cap spinning device the combination with a rotary spindle, of a rotary reciprocatory yarn-engaging cap mounted thereon and driven thereby, an external bearing member supporting the cap axially and having lateral bearing engagement with the cap and located to allow the revolving yarn to pass between itself and the cap substantially as described.



2. In a cap spinning device the combination with a rotary spindle, of a rotary reciprocatory yarn-engaging cap mounted thereon and driven thereby, an external rotary bearing member provided with two bearing faces extending substantially prependicular to each other and affording respectively axial and lateral support for the cap while allowing the revolving yarn to pass between the cap and the bearing member at each revolution.

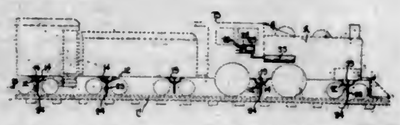
3. In a cap spinning device the combination with a rotary spindle, of a rotary reciprocatory yarn-engaging cap mounted thereon and driven thereby combined with means for affording both lateral and axial support to said cap while allowing the yarn to revolve around the outside of said cap substantially as described.

4. A combination with a rotary spindle of a rotary reciprocatory yarn-engaging cap mounted thereon and driven thereby an external rotary bearing member arranged to afford both axial and lateral support to said cap while allowing the yarn to revolve around the exterior of said cap said bearing member being yieldingly mounted substantially as described.

5. In a cap spinning device the combination with a rotary spindle, of a rotary reciprocatory yarn-engaging cap mounted thereon, and driven thereby, an external bearing member formed with two bearing surfaces angularly disposed with relation to each other and affording both lateral and axial support for said cap, the lateral bearing face being formed of yielding material, substantially as described.

[Claims 6 to 26 not printed in the Gazette.]

1,230,098. AUTOMATIC BRAKE-ACTUATING DEVICE FOR RAILWAY-TRAINS. RAYMOND BELOFF, Cleveland, Ohio. Filed Aug. 23, 1916. Serial No. 116,536. (Cl. 188—2.)



1. In a train the combination with an air brake system, of a valve controlling the application of the brakes, means urging this valve in a position to apply the brakes, electromagnetic means normally holding the valve in a closed position, a vertically movable circuit breaker mounted upon the train and disposed in a position over the rails upon which the train operates, said circuit breaker in its normal position closing the circuit through said electromagnet and the source of energy but when raised by depression of the car relative to the rails breaking said circuit.

2. In a railway car the combination with an air brake system, of a valve controlling the application of the brakes, means urging the valve into position to apply the brakes, electromagnetic means for holding the valve in a closed position, the electromagnetic means being disposed in a normally closed circuit with a source of energy, a circuit breaker carried upon the car and depending therefrom comprising a plunger having a head disposed above the rail upon which the car travels, said plunger in its downward position closing the circuit through the magnetic devices, and a spring normally holding the plunger in a depressed position but yielding to permit the plunger to be raised to its circuit breaking position.

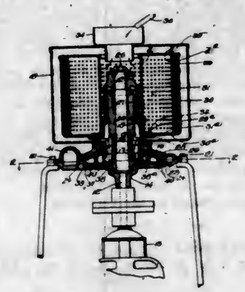
3. The combination with a car having an air brake system, of a valve chamber mounted upon the car and connected with said air brake system, a valve in said chamber controlling the application of the brakes, a spring urging the valve to a position to apply the brakes, and an electromagnet normally holding the valve in a position to prevent the application of the brakes, said electromagnet being connected in a normally closed circuit with a source of electricity, and means for normally closing said circuit but adapted to break it comprising a yoke supported upon the car and depending therefrom, a plunger slidable through the yoke, a plate having an aperture through which the plunger passes, contact members supported upon the plate and in circuit with the electromagnet and the source of power, said plunger having at its upper end a sleeve normally closing the circuit between said contact members, and an insulating sleeve adapted when the plunger is raised to break said circular, a collar limiting the downward movement of the plunger and engaging with the yoke, and a spring urging said plunger downward, said plunger at its lower end being provided with a transversely extending head.

4. The combination with a car including an air brake system, of a valve chamber connected at its opposite ends in said system and having an intermediate apertured septum, a valve operating through said septum and controlling communication between two ends of the casing, said valve having a stem extending through the casing, a spring urging the valve to an open position, an armature carried on the other end of the valve, an electromagnet coacting with the armature and normally holding the valve closed, said electromagnet being in a normally closed circuit with a source of energy, said circuit including spaced contact members, a member supporting the contact members and attached to the bottom of the car, an apertured yoke, a plunger movable through said yoke and normally having its upper end disposed between the contact members and closing the circuit therethrough, said plunger having an insulating sleeve disposed below the upper end of the plunger so that when the plunger is raised the circuit between the contact members will be broken, a collar limiting the downward movement of the plunger, and a spring urging the plunger downward, the plunger at its lower end having a transversely extending head, the plunger being disposed over a rail upon which the car moves.

5. In a train, the combination with an air brake system, of a valve controlling the application of the brakes normally held in a position to prevent the application of the brakes but movable to a position to permit the application of the brakes, means urging the valve into one of these positions, electromagnetic means which when energized urges the valve to the other of these positions, a circuit closing device mounted upon the train and disposed in a position over the rails on which the train operates, said device in one position closing the circuit through the magnetic means and in another position breaking said circuit, and said circuit closing device being adapted to be shifted by a depression of a car relative to the rails.



1,230,099. LIQUID FILTERING AND DELIVERING APPARATUS. FORREST E. BINGHAM, New Bedford, Mass. Filed Nov. 8, 1916. Serial No. 130,165. (Cl. 210—25.)



1. A liquid filtering and delivering apparatus comprising, in combination, a centrifugal filter basket, a fixed curb inclosing the basket and having a central filtered liquid outlet in its bottom, a fixed centrifugal pump casing having a liquid inlet communicating with the curb outlet, and a marginal delivering outlet, a rotor inclosed by said casing and adapted to force liquid from the inlet to the outlet thereof, and a driving spindle engaged with said basket and rotor to simultaneously rotate the same.

2. A liquid filtering and delivering apparatus comprising a fixed casing having a rotor chamber and a liquid conducting passage surrounding said chamber, and provided with a marginal outlet, a fixed curb located above said casing and having an outlet communicating with the central portion of said chamber and permitting filtered liquid to flow by gravity from the curb to the rotor chamber, a vertical spindle extending through said chamber into the curb, a centrifugal filter basket located in said curb, and a rotor located in said chamber, said basket and rotor being connected with the spindle to rotate therewith, and the rotor and casing constituting a centrifugal pump whereby liquid thrown centrifugally outward by the basket in the curb, and flowing therefrom to the rotor chamber, is forced centrifugally outward to said passage and through the filter to said marginal outlet.

3. A liquid filtering and delivering apparatus comprising a fixed casing having a rotor chamber and a liquid conducting passage surrounding said chamber and provided with a marginal outlet, a fixed curb located above said casing and having an outlet communicating with the central portion of said chamber and permitting filtered liquid to flow by gravity from the curb to the rotor chamber, a vertical spindle extending through said chamber into the curb, a sleeve attached to the upper end of the spindle and having a tubular flanged extension projecting downwardly to a point near the bottom of the curb, an annular centrifugal filter basket supported by the said extension and rotated thereby, and a rotor located in said chamber and attached to the spindle to rotate therewith, said rotor having buckets formed to throw filtered liquid centrifugally outward from the chamber.

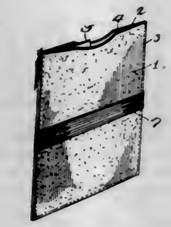
4. A liquid filtering and delivering apparatus comprising a fixed casing having a rotor chamber, a liquid conducting passage surrounding the chamber and provided with a marginal delivering outlet, said casing being composed of a lower section having a lower bearing and an upper section having an enlarged central opening, an upper bearing formed to conduct liquid into said opening, and a seat surrounding said opening, a curb having an apertured bottom attached to said seat, the opening constituting an outlet through which filtered liquid may flow by gravity from the curb to the rotor chamber, a vertical spindle journaled in said bearings, and extending through said chamber and opening into the curb, a centrifugal filter basket located in said curb and a rotor located in said chamber, said basket and rotor being connected with the spindle to rotate therewith.

5. A liquid filtering and delivering apparatus comprising a fixed casing having a rotor chamber and a liquid conducting passage surrounding said chamber and provided with a marginal outlet, a fixed curb located above said casing and having an outlet communicating with the central portion of said chamber and permitting filtered liquid to flow by gravity from the curb to the rotor chamber, a vertical spindle extending through said chamber into the curb, a centrifugal filter basket located in said curb and a rotor located in said chamber and composed of a flat annular bottom portion having a tapering hub attached to the spindle, a dished annular top portion and tangential buckets subdividing the space between the bottom and top portions into tangential passages adapted to deliver liquid at the periphery of the rotor.

[Claim 6 not printed in the Gazette.]

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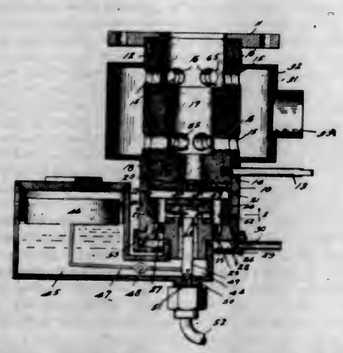
1,230,100. BILL-FOLD. FRED M. BLANCHARD, Boston, Mass. Filed July 31, 1916. Serial No. 112,357. (Cl. 150—38.)



In an article of the class described, a relatively stiff back, a relatively stiff front, an elastic strap extending transversely of the outer face of the back and having its end portions passed about the lateral edges of the said back and inserted between the lateral edges of the back and front, and lines of stitching uniting the said lateral edges of the back and front, the said lines of stitching passing also through the inserted ends of the strap.

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1,230,101. PROCESS OF CARBURETING AIR. TURNER D. BOTTOME, Indianapolis, Ind. Filed Nov. 24, 1915. Serial No. 63,148. (Cl. 48—219.)



1. The process of carbureting air, which consists in maintaining a vacuum within a chamber, admitting air to be carbureted into such chamber through a hole of variable size, admitting a mixed stream of air and fuel from a supplemental passageway through a restricted passage into said chamber, admitting both fuel and air into said supplemental passage through holes of variable size, and varying the sizes of the first-named air inlet hole and the fuel inlet hole proportionately.

2. The process of carbureting air, which consists in maintaining a vacuum within a chamber, admitting air to be carbureted into such chamber through a hole of variable size, admitting a mixed stream of air and fuel from a supplemental passageway through a restricted passage into said chamber, and admitting both fuel and air into said supplemental passage through holes of variable size.

3. The process of carbureting air, which consists in maintaining a vacuum within a chamber, admitting air to be carbureted into such chamber through a hole of variable size, admitting a mixed stream of air and fuel from a supplemental passageway through a restricted passage into said chamber, admitting both fuel and air into said supplemental passage through holes of variable size, and varying the sizes of the first-named air inlet hole and the fuel inlet hole proportionately and the size of the second-named air inlet hole inversely.

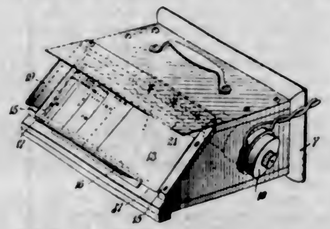
4. The process of carbureting air, which consists in maintaining a partial vacuum in a chamber, admitting air directly to such chamber, varying the amount of such air to vary the vacuum in such chamber inversely as the amount of air through a wide range, admitting fuel and a relatively small quantity of air into a supplemental chamber having a contracted connection with the first chamber so that the vacuum in the second chamber varies through a relatively very small range as compared with that in the first chamber, and varying the size of the fuel admission opening to said second chamber substantially in proportion to that of the air inlet opening to the first chamber.

5. The process of carbureting air, which consists in maintaining a partial vacuum in a chamber, admitting air directly to such chamber, varying the amount of such air to vary the vacuum in such chamber inversely as the amount of air through a wide range, admitting fuel and a relatively small quantity of air into a supplemental chamber having a contracted connection with the first chamber so that the vacuum in the second chamber varies through a relatively very small range as compared with that in the first chamber, and varying the size of the admission opening for the small quantity of air for the second chamber in inverse sense to the size of the air admission opening to the first chamber, so that the vacuum in the second chamber is maintained still more nearly constant.

[Claims 6 to 16 not printed in the Gazette.]

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1,230,102. READING-BOX FOR PUNCHED CARDS. ALFRED W. BOTTUM, Englewood, N. J. Filed Dec. 22, 1916. Serial No. 138,519. (Cl. 88—14.)



1. Apparatus for the reading of tabulating cards which have had certain of the original values punched therefrom comprising an unpunched indicator card bearing indications in duplicate of all the original values of the punched cards, means for supporting said indicator card in position to be illuminated by a source of light and means for automatically registering the punched cards with the punched out value locations thereon in line with the indications on the indicator card representing the orginals of such punched out values.



3. Apparatus for the reading of tabulating cards which have had certain of the original values punched therefrom comprising an unpunched indicator card bearing indications in duplicate of all the original values of the punched cards, a light source, means for supporting the indicator card in position to be illuminated by said light source and means for automatically registering the punched cards with the punched out value locations thereon in line with the indications on the indicator card representing the originals of such punched out values.

5. Apparatus for the reading of tabulating cards which have had certain of the original values punched therefrom comprising a box having an inclined front side provided with an opening therein, a lamp in said box, an unpunched indicator card framed in the opening in the front of said box and bearing indications in duplicate of all the original values of the punched cards and means for automatically registering the punched cards with the punched out value locations thereon in line with the indications on the indicator card representing the originals of such punched out values.

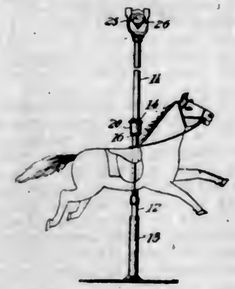
7. Apparatus for the reading of tabulating cards which have had certain of the original values punched therefrom comprising a box having an inclined front wall provided with an opening therein, an unpunched indicator card framed in said opening and bearing indications in duplicate of all the original values of the punched cards, a lamp in said box, end and side gages at the front of the box at the end and side of the indicator card for registering the punched sheets on the indicator card and a light shield overstanding the upper portion of the indicator card and provided with a light reflective surface on its under side for reflecting the light from the lamp down upon the head portion of the punched card resting against the end and side gages.

9. Apparatus for reading tabulating cards which have had certain of the original values punched therefrom, comprising a box having an opening in one side thereof, an unpunched indicator card framed in said opening and bearing indications in duplicate of all the original values of the punched cards, and gages for registering a punched card over the indicator card.

[Claims 2, 4, 6, 8, and 10 not printed in the Gazette.]

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1,230,103. PORTABLE HORSE-HANGER AND COUPLING FOR CAROUSELS. CHARLES H. BOWDITCH, Erdenheim, Pa., assignor to Henry B. Auchy, Erdenheim, Pa. Filed Mar. 31, 1916. Serial No. 87,949. (Cl. 46—27.)



1. In a carousel or other structure, the combination with sections of a hanger-rod, of a section of a yielding sleeve carried by each section of the hanger-rod and projection from the end thereof, and a coupling sleeve adapted to be driven over the sleeves when they are brought together.

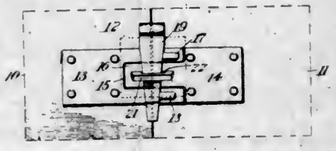
2. In a carousel or other structure, the combination of opposing sections of a hanger-rod, sectional yielding sleeves attached to each section of the hanger-rod and projecting beyond the end of the corresponding section and serving to substantially inclose the sections when brought together, and a coupling sleeve adapted to be driven down upon the inclosing sections.

6. In a carousel or other structure, the combination with a crank-shaft and a hanger-rod depending below the crank-shaft, of a bearing for the crank-shaft and the supports of the hanger-rod having a downwardly projecting web to form a stop against the upward movement of the hanger-rod.

[Claims 3 to 5 not printed in the Gazette.]

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1,230,104. CORNICE-LOCK FOR CAROUSELS. CHARLES H. BOWDITCH, Erdenheim, Pa., assignor to Henry B. Auchy, Erdenheim, Pa. Filed Mar. 31, 1916. Serial No. 87,950. (Cl. 46—27.)



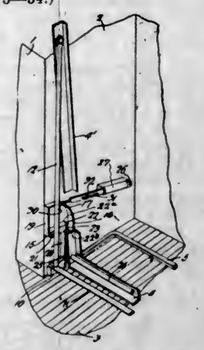
1. In a lock for joining sectional rims and carousel arms and similar structures, the combination of complementary plates, a recess in one plate and a hasp-tongue in the other plate fitting the recess, a slot in the hasp-tongue, projections on one of the plates, a staple-tongue passing through the slot in the hasp-tongue, and a wedge shaped key passing through the slot in the staple-tongue and engaging the projections.

2. In a lock for sectional rims and carousel arms and similar structures, the combination of a plate having a slot, a plate having a tongue to pass into the slot in the other plate and having a slot in its end, projections on one of the plates whose faces are in different planes, a staple-tongue passing through the slot in the plate tongue, and a wedge-shaped key passing through the slot in the tongue and engaging the faces of the projections.

3. In a lock for joining three parts, the combination of a recessed plate carried by one part, a plate on the second part having a tongue fitting the recess in the first part and slotted, a plate carried by the third part and having a tongue passing through the slot in the second part, bearings on the first part and a key passing through the slot in the tongue of the third plate and engaging the bearings on the first plate.

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1,230,105. WALL-BED. MORRIE BRAND, San Francisco, Cal., assignor of one-half to Oroson P. Brown, San Francisco, Cal. Filed Sept. 30, 1915. Serial No. 53,375. (Cl. 5—54.)



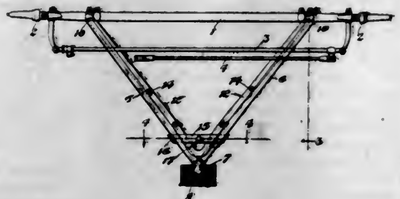
1. In a device of the class described, a support; an arm pivoted to the support; a bed frame movable for raising and lowering, the arm being pivoted to the inter-

mediate portion of the bed frame; a cam pivoted to the support; a projection on the frame; and means for supporting the cam in the path of the projection when the frame is lowered, the cam being adapted to swing upwardly in engagement with the projection, when the frame is lowered, thereby to act as a means for upholding the frame during the movement of the frame, and when the frame is in a lowered position.

2. In a device of the class described, a support; a guide attached to the support and having an opening on its lower side, the guide including a front flange and a rear wall merging into a top; a bed frame; an arm pivoted at one end to the support and pivoted at its other end to the frame intermediate the ends of the frame; a cam disposed above the opening, one end of the cam resting on the front flange; means for pivotally supporting the other end of the cam; a projection on the frame and adapted to be inserted into the guide through the opening, the cam being liftable to permit the insertion of the projection through the opening, the projection being adapted to move vertically between the flange and the rear wall, the flange-supported end of the cam lying in the path of the projection as the projection moves upwardly when the bed is lowered, whereby the cam will sustain the rear end of the frame.

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1,230,106. RADIUS-ROD SUPPORT. ADOLPH R. BROCKSMITH, St. Louis, Mo. Filed Jan. 16, 1915. Serial No. 2,589. (Cl. 21—182.)



1. The combination with an axle, a support, two radius rods connected to said support and diverging toward their forward ends, and brackets connected to the upper side of the axle and to the ends of said radius rods, of a V-shaped bar having the ends of the arms thereof attached to the under side of the axle below the ends of said radius rods and having the apex thereof between said rods, flanges on said bar adjacent to the apex thereof bearing upon said radius rods, and a clamping device holding said bar between said radius rods and the flanges of said bar upon said radius rods.

2. The combination with an axle body, a support, two radius rods having their ends connected to said support and diverging toward said axle body, brackets connected to the ends of said radius rods and mounted upon said axle body, and depending portions on said brackets projecting through said axle body and extending below the lower side thereof, of a V-shaped bar, elements holding the extremities of said V-shaped bar in engagement with the depending portions of said brackets against the under side of said axle body below the ends of said radius rods, the apex of said V-shaped bar extending between said radius rods adjacent to said support, flanges on said bar bearing upon the upper sides of said radius rods, a metallic connection connecting the arms of said V-shaped bar, a bracket bearing against the sides of said radius rods, and a member connecting said connection and said bracket effectively to hold the flanges of said bar upon said radius rods and hold said bracket against the under sides of said radius rods.

3. The combination with an axle body, a support, and two radius rods having adjacent ends connected to said support and diverging toward said axle body, of a V-shaped bar having its ends against the under side of said axle body below the ends of said radius rods, elements connecting said radius rods and said bars and holding the ends of said radius rods above said axle body and the ends of said bar against the under side of said axle body, flanges adjacent to the apex of said bar bearing upon said radius rods, flanges on said bar bearing against the inner sides of said radius rods, and a releasable clamp device binding said bar in connection with said radius rods as aforesaid.

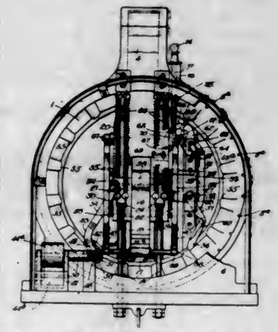
4. The combination with an axle body, a support, and two radius rods having adjacent ends connected to said support and diverging toward said axle body, of a V-shaped T bar, elements binding the ends of said bar against the under side of said axle body and holding the ends of said radius rods above said axle body, a buffer device supported by said radius rods adjacent to said support, a raised portion on said T bar extending between and bearing against said radius rods adjacent to said buffer device, and means connecting said buffer device and said bar.

5. The combination with an axle body, a support, two radius rods having adjacent ends connected to and diverging from said support toward said axle body, and a buffer element secured between said radius rods, of a V-shaped T bar having its ends below said axle body, elements fastening the ends of said radius rods above said axle body, and the ends of said T bar below said axle body and below the ends of said radius rods, a raised portion on said V-shaped T bar between said radius rods, and means connecting said raised portion to said buffer device.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,107. MACHINE FOR AFFIXING AND PRINTING TAGS. CARLTON W. BROWN, Groton, Conn. Filed June 14, 1915. Serial No. 34,047. (Cl. 90—88.)



1. A machine for affixing identifying tags, the combination with a rotary carrier provided with a pocket; of means operating on one side of the tag for inserting a tag in said pocket; means for advancing said carrier to a position where the article to which the tag is to be affixed is adjacent to said pocket; means operating on the other side of the tag for ejecting said tag from said pocket into engagement with the said article, and a reciprocating plunger movable in a direction transverse to the axis of the carrier, and constituting the sole actuating device for the means which operate on the opposite sides of the tag respectively.

2. In a machine for affixing identifying tags, the combination with a carrier provided with a pocket; or means operating on one side of the tag for inserting the tag in said pocket; means for advancing said pocket to a position where the article to which the tag is to be affixed is adjacent to said pocket at the outside of the carrier; means operating on the other side of said tag for ejecting said tag from said pocket; and a single operating device for the means for inserting and ejecting the tag respectively; and an affixing anvil adjacent to the pocket at the outside of the carrier.



3. In a machine for affixing identifying tags, the combination with a rotary carrier provided with a plurality of pockets each of which extends through the periphery of the carrier; of a plunger operating from the outside of said carrier and adapted to insert a tag into a pocket from the outside; means for moving said carrier intermittently to advance the tags; a plunger operating from the inside of the carrier to enter the pocket from the rear and eject the tag and act upon the same; and a single reciprocating member to operate both of said plungers.

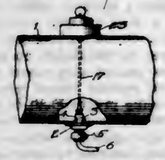
4. In a machine for affixing identifying tags, the combination with a rotary carrier provided with a plurality of pockets each of which extends through the periphery of the carrier; of a plunger operating from the outside of said carrier and adapted to insert a tag into a pocket from the outside; means for moving said carrier intermittently to advance the tags; a plunger operating from the inside of the carrier to enter the pocket from the rear and eject the tag and act upon the same; a reciprocating member common to both of said plungers; and a printing plunger coöperating therewith.

5. In a machine for affixing identifying tags, the combination with an annular carrier provided with a plurality of pockets; of means for feeding tags to said carrier; a reciprocating frame adapted to be reciprocated diametrically with relation to the carrier between feed movements thereof; a shaping plunger at one end of said reciprocating frame adapted to enter a pocket in the carrier from the outside; a plunger also carried by said reciprocating frame adapted to enter the pocket from the inside; and a clenching anvil coöperating with said second plunger.

[Claims 6 to 22 not printed in the Gazette.]

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1,230,108. COMBINED FUEL-VALVE AND SWITCH-LOCK. GUSTAVE BURKHARDT, Chicago, Ill. Filed Mar. 15, 1916. Serial No. 84,269. (Cl. 123—198.)



1. In a device of the character described, the combination of a closed fuel container, an outlet therefrom, rotatable means held against longitudinal movement in said outlet to control the flow of fuel from said container, rigid means connected to said rotatable means and extending through said container, whereby said rotatable means may be actuated to open and close said outlet, and key-controlled means operatively connected to said rigid means to prevent rotation of said rotatable means when said outlet is closed.

2. In a device of the character described, the combination of a closed fuel container, an outlet therefrom, rotatable means held against longitudinal movement in said outlet to control the flow of fuel from said container, rigid means connected to said rotatable means, and extending through said container whereby said rotatable means may be actuated to open and close said outlet, a rotatable cylinder secured to said container opposite said outlet and operatively connected to said rigid means, and key-controlled means to normally prevent rotation of said cylinder.

3. In a device of the character described, the combination of a closed fuel container, an outlet therefrom, rotatable means held against longitudinal movement in said outlet to control the flow of fuel from said container, a rod connected to said rotatable means and extending diametrically through said container, whereby said rotatable means may be actuated to open and close said outlet, and a cylinder lock secured to said container opposite said outlet and operatively connected to said rod.

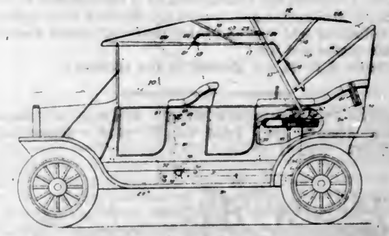
4. In a device of the character described, the combination of a closed fuel container, an outlet therefrom, rotatable means held against longitudinal movement in said outlet to control the flow of fuel from said container, a rod connected to said rotatable means and extending through said container, whereby said rotatable means may be actuated to open and close said outlet, a member secured to said container opposite said outlet, a cylinder lock operatively connected to said rod, and means for securing said lock to said member.

5. In a device of the character described, the combination of a closed fuel container, an outlet therefrom, a rotatable valve plug in said outlet to control the flow of fuel from said container, a rod connected to said valve plug and extending through said container, whereby said valve plug may be rotated to open and close said outlet, a member secured to said container opposite said outlet, a rotatable lock cylinder operatively connected to said rod, key-controlled means to normally prevent rotation of said cylinder, and means for securing said cylinder to said member and for preventing removal of said cylinder except when the latter is in a predetermined angular position.

[Claims 6 to 18 not printed in the Gazette.]

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1,230,109. VEHICLE. CHARLES L. BYRON, Winnetka, Ill. Filed Jan. 11, 1915. Serial No. 1,589. (Cl. 21—62.)



1. In a vehicle, the combination of a top, means for raising said top, means for locking said top, and unitary means for controlling said raising and locking means.

3. In a vehicle, the combination of a top, means for raising and lowering said top, means for locking said top, and unitary means for cotrolling said raising, lowering and locking means.

5. In a vehicle, the combination of a body, a top mounted thereon and movable to and from an operative position, fluid pressure means for actuating said top, a valve for controlling the action of the fluid pressure, means for locking said top, and means for controlling said valve and locking means.

7. In a vehicle, the combination of a top having a bow with a toothed member, a piston with a toothed portion in mesh with said toothed member, a cylinder in which said piston reciprocates to raise and lower said top, a source of fluid pressure supply, a valve for controlling the supply of fluid pressure from said source to said cylinder, a lock for said top, and means for controlling said valve and lock.

[Claims 2, 4, and 6 not printed in the Gazette.]

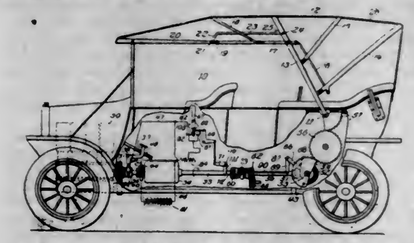
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1,230,110. VEHICLE. CHARLES L. BYRON, Winnetka, Ill. Filed Mar. 26, 1915. Serial No. 17,112. (Cl. 21—62.)

1. In a vehicle, the combination of a top adapted to be actuated, a motor therefor, a connection between said top and motor, means for controlling said motor and said connection, and other means for controlling said connection under certain conditions.

2. In combination, a vehicle body, a top mounted thereon and movable to and from an operative position, an

engine for propelling the vehicle, and power means for actuating said engine and for moving said top.



3. In a vehicle, the combination of a top adapted to be actuated, a power engine, a starter for said engine, and for actuating said top, means for controlling the starting of said power engine by said starter, means for controlling the actuation of said top by said starter, and an interlock between said two controlling means.

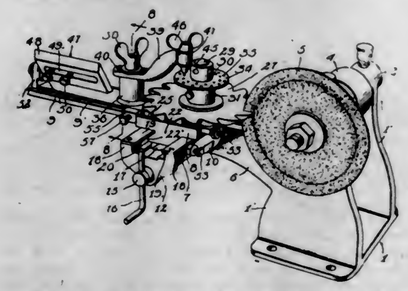
4. In combination, a vehicle body, a top mounted thereon and movable to and from an operative position, an engine for propelling the vehicle, power means for actuating said engine and for moving said top, and means for controlling the transmission of power from said power means to said engine and top.

5. In a vehicle, the combination of a top adapted to be actuated, a power engine, means for starting said engine and actuating said top, and interconnected control means for the engine and top.

[Claims 6 to 12 not printed in the Gazette.]

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1,230,111. GRINDING-MACHINE. WILLIAM I. CALLAWAY, Atlanta, Ga. Filed Oct. 3, 1916. Serial No. 123,537. (Cl. 51—7.)



1. In a grinding machine, the combination with a rotary grinder, a cutter carrier relatively movable with respect to the grinder, and capable of rotatably supporting a circular cutter; of a gaging mechanism cooperating with said cutter and governing its rotary movement, embodying an annular member concomitantly revoluble and concentrically situated in a plane coincident with that of said cutter, said member having a circular series of regularly spaced openings, said spacing being proportional to that of the cutter teeth, and a reciprocatory plunger adapted to enter said openings, whereby to properly position the cutter teeth relative to the grinder, substantially as and for the purpose set forth.

2. In a grinding machine, the combination with a rotary grinder, a cutter carrier relatively movable with respect to the grinder, and capable of rotatably supporting a circular cutter; of a gaging mechanism cooperating with said cutter and governing its rotary movement, embodying an annular member concomitantly revoluble and concentrically situated in a plane coincident with that of said cutter, said member having a circular series of regularly spaced openings, said spacing being proportional to that of the cutter teeth, and a spring pressed reciprocatory plunger adapted to enter said opening, whereby to operatively position the cutter teeth relative to the grinder, substantially aa and for the purpose set forth.

3. In a grinding machine, the combination with a rotary grinder, a cutter carrier movable transversely and longitudinal of the rotary axis of said grinder, and means in connection with said carrier to horizontally and rotatably support a circular cutter; of a gaging mechanism cooperating with the cutter and governing its rotary movement, embodying an annular member concomitantly revoluble and concentrically situated in a plane coincident with that of said cutter, said member having a circular series of regularly spaced openings, said spacing being proportional to that of the cutter teeth, and a vertically movable spring pressed plunger adapted to enter said openings to properly position the cutter teeth relative to the grinder, substantially as and for the purpose set forth.

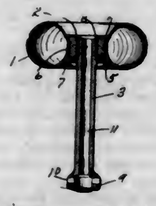
4. In a grinding machine, the combination with a rotary grinder, a cutter carrier movable transversely and longitudinally with respect to the rotary axis of said grinder, and means in connection with said carrier to rotatably and horizontally support a circular cutter; of a gaging mechanism coöperating with the cutter to enable a step by step rotary movement thereof, embodying a sleeve keyed to and concentrically mounted upon the cutter, an annular flange surrounding the upper end of said sleeve, and having therein a circular series of regularly spaced openings, the spacing of said openings being proportional to that of the cutter teeth, and a vertically movable spring pressed plunger adapted to enter said openings, whereby to properly position the cutter teeth relative to the grinder, substantially as and for the purpose set forth.

5. In a grinding machine, the combination with a rotary grinder, a cutter carrier movable transversely and longitudinally with respect to the rotary axis of said grinder, and a cutter carrying shaft situated upon said carrier in a plane at right angles thereto, and capable of rotatably supporting a circular cutter; of a gaging mechanism to enable a step by step rotation of the cutter, embodying a sleeve, circumscribing said shaft and having its lower end keyed to the cutter, an annular flange surrounding the upper end of said sleeve, and provided with a circular series of regular spaced openings, the spacing of said openings being proportional to that of the cutter teeth, and a vertically movable spring pressed plunger adapted to enter said openings, whereby to properly position the cutter teeth relative to the grinder, substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

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1,230,112. VAGINAL SUPPORT. DANIEL G. CAREY, Elmira, N. Y. Filed Jan. 14, 1916. Serial No. 72,126. (Cl. 128—21.)



1. A vaginal support comprising a sealed pneumatic ring, a core fitted in the center of the ring and curved coincident thereto, the transverse axis of the core being disposed below the transverse axis of the ring with the upper and lower edges thereof terminating within the upper and lower edges of the ring, and a balancing stem projecting axially from the center of the core.

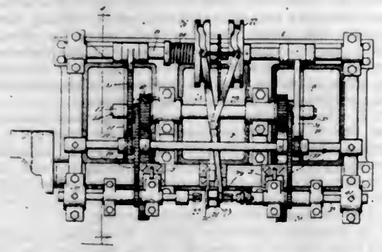
2. A vaginal support comprising a sealed hollow flexible ring inflated with air, a core fitted centrally in said ring and curved coincident thereto, the transverse axis of the core being disposed below the transverse axis of the ring with the upper and lower edges thereof terminating within the upper and lower edges of the ring, and a hollow balancing stem projecting axially from the center of the core.

3. A vaginal support comprising a flexible ring, a rigid core fitted centrally in the ring and curved coincident thereto, the transverse axis of the core being disposed below the transverse axis of the ring with the upper and lower edges thereof terminating within the upper and lower edges of the ring, and a rigid stem secured to and projecting axially from the center of the core.

4. A vaginal support comprising a flexible ring, a rigid core fitted centrally in the ring and curved coincident thereto, the transverse axis of the core being disposed below the transverse axis of the ring with the upper and lower edges thereof terminating within the upper and lower edges of the ring, and a rigid stem having screw connection with the core and projecting axially therefrom.

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1,230,113. NUT-TAPPING MACHINE. ARTHUR W. CARLSON, Chicago, Ill., assignor to Grip Nut Company, Chicago, Ill., a Corporation of Illinois. Filed July 23, 1914. Serial No. 852,559. (Cl. 10—130.)



1. In a machine of the character described the combination with nut supporting means, tapping means for forming differential threads upon a nut adjacent said supporting means, and mechanism for moving one of said means relative to the other to differentially thread the nut, substantially as described.

2. In a machine of the character described, the combination with nut supporting instrumentalities, of a plurality of taps, for forming differential threads upon a positioned nut, means for moving one of said taps a limited distance for threading only a portion of the positioned nut and for withdrawing said tap after its operation, and means for moving the other tap to thread the portion of the nut untouched by said first mentioned tap and for withdrawing said tap at a predetermined time, substantially as described.

3. In a machine of the character described, the combination with nut supporting instrumentalities, of alternately acting nut taps for forming differential threads upon a positioned nut adjacent said supporting instrumentalities, mechanism for moving one of said taps a predetermined limited distance for threading a portion of the positioned nut on one side and for withdrawing said tap after its operation, and mechanism for moving the other tap a predetermined distance to thread the opposite portion of the nut untouched by the first mentioned tap and for withdrawing said last mentioned tap after its operation, substantially as described.

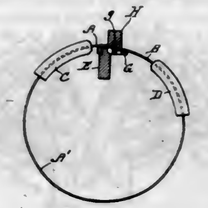
4. In a machine of the character described, the combination with nut supporting instrumentalities, of alternately acting nut taps for forming differential threads upon a positioned nut adjacent said supporting instrumentalities, mechanism for moving one of said taps a predetermined limited distance for threading a portion of the positioned nut on one side and for withdrawing said tap after its operation, and mechanism for moving the other tap a predetermined distance to thread the opposite portion of the nut untouched by the first mentioned tap and for withdrawing said last mentioned tap after its operation, and means for varying the extent of movement of each of said taps.

5. In a machine of the character described, the combination with nut supporting instrumentalities, of opposed alternately acting taps, for forming differential threads upon a nut, mechanism for rotating and moving one of said taps a limited distance for threading only a portion of the positioned nut and for withdrawing said tap after its operation, and mechanism for rotating and moving the opposed tap to thread the portion of the nut untouched by said first mentioned tap and for withdrawing the same after its operation, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

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1,230,114. ART OF ELECTRIC WELDING. SPENCER C. CARY, Brooklyn, N. Y. Original application filed Feb. 19, 1917, Serial No. 149,401. Divided and this application filed Mar. 31, 1917. Serial No. 158,814. (Cl. 219—10.)



1. In the art of electrically welding thin metal, the improvement which consists in initially positioning the marginal portions of thin metal contiguous to each other, removing from said marginal portions narrow strips of metal so as to bring the resulting edges into parallelism, lapping the trimmed edges of the marginal portions by a lap uniform throughout the width of the metal and affording resistance uniformly to the flow of an electric heating current, and applying electric heat and pressure to the lapped margins of said metal to produce a continuous seam.

3. In the art of electrically welding thin metal, the improvement which consists in trimming the marginal portions of the thin metal to bring into parallelism the contiguous edges of said marginal portions, effecting a relative movement between said marginal portions and positioning the same into lapping contact, said lapping contact being uniform in width across the metal and thereby affording resistance to the flow of electrical current uniformly across the resulting seam, and feeding electrical current and simultaneously therewith applying pressure to the lapping marginal portions of the metal to effect the union thereof by a continuous seam.

5. In the art of electrically welding thin metal, the improvement which consists in bending thin metal to a desired form, retaining the marginal portions of the metal in fixed relation to each other in suitable work holders, thereafter trimming said marginal portions and securing parallelism between the same, moving said marginal portions relatively to each other and into lapping contact to attain uniformity on the overlap and to afford resistance uniformly to the flow of a heating current, and applying electric heat and pressure to the lapped marginal portions of the metal.

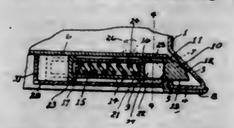
[Claims 2 and 4 not printed in the Gazette.]

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1,230,115. GRAVE-VAULT. HUBERT D. CLARK, Columbus, Ohio. Filed Mar. 31, 1916. Serial No. 88,152. (Cl. 27—7.)

A grave vault comprising a top member, a base member whose marginal portions are bent down substantially at right angles, said marginal portions being provided with a series of cut outs, and latch bolts carried by said base member and arranged to engage the top member, said latch bolts being designed to pass through said cut outs,

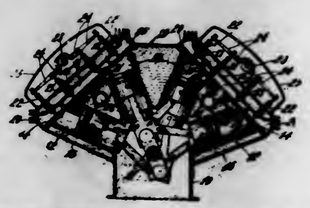
a depending lug on said bolts arranged to engage the edge of said cut outs to form a stop limiting the outward movement of the bolts, said bolts having a horizontally



disposed cut out portion through a substantial portion of their lengths, a spring located in each of said cut out portions and arranged to bear on one end of its respective bolt, and a Z-shaped clip extending into each of said cut out portions and rigidly carried by one of said members against which the opposite ends of said springs bear.

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1,230,116. MULTIPLE-CYLINDER GAS-ENGINE. ANGELO ROBERT CLAS, Sheboygan Falls, Wis. Filed Oct. 27, 1915. Serial No. 58,121. (Cl. 123—55.)



1. A multiple cylinder gas engine having a plurality of rows of cylinders arranged at an angle to each other, the outer ends of the cylinders of two rows on each side of the engine terminating in a common plane, and a single head for each side of the engine secured thereto along such plane and provided with reciprocating valves for all of the cylinders of said rows.

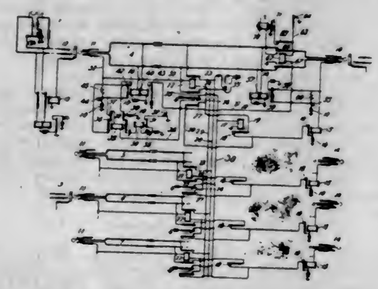
2. A multiple cylinder gas engine, comprising a plurality of rows of cylinders symmetrically arranged in pairs of rows at an angle to each other on each side of the engine, the outer ends of the cylinders of each pair of rows terminating in a common plane, a single water jacket surrounding all of the cylinders and having its edges terminating in said planes, and a single head for each pair of rows of cylinders closing the ends thereof and engaging the edges of the water jacket and having a water jacket with its edges terminating in a meeting plane to communicate with the single water jacket of the cylinders.

3. A multiple cylinder gas engine having a plurality of rows of cylinders arranged in pairs and radiating from a crank shaft, the outer ends of the cylinders of each pair of rows terminating in a common plane, a single water jacket inclosing all of the cylinders and having its edges terminating in the planes of the ends of the cylinders, a head for each pair of rows of cylinders comprising an intake passageway and an exhaust passageway and having a plane bottom face to fit against the ends of all the cylinders of said rows and against the edges of the water jacket, and suitably actuated intake and exhaust valves in the head controlling openings connecting the intake passageway and the exhaust passageway with the interior of the cylinders, there being a partition through each head forming on one side thereof a water jacket communicating with the water jacket around the cylinders.

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1,230,117. TELEPHONE-EXCHANGE SYSTEM. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Nov. 6, 1915. Serial No. 59,972. (Cl. 179—70.)

1. A telephone exchange system comprising telephone lines, link circuits for interconnecting the lines, an operator's telephone set, a switching device for each link circuit operating upon connection thereof with the telephone line to connect therewith the operator's telephone set, and a common switching mechanism operating upon the actuation of one switching device to disable all other switching devices.



2. A telephone exchange system comprising telephone lines, link circuits for interconnecting the lines, an operator's telephone set, an electromagnetic switching device for each link circuit operating upon connection thereof with a telephone line to connect therewith the operator's telephone set, and a common electromagnetic switching mechanism actuated upon the operation of one switching device to disable all other switching devices.

3. A telephone exchange system comprising telephone lines, link circuits for interconnecting the lines, an operator's telephone set, a listening relay for each link circuit operating upon connection thereof with a telephone line to connect therewith the operator's telephone set, and a common relay actuated upon the operation of one listening relay to disable all other listening relays.

4. A telephone exchange system comprising telephone lines, link circuits for interconnecting the lines, an operator's telephone set, a switching device for each link circuit operating upon connection thereof with a line to connect the operator's telephone set therewith, a common switching mechanism operating upon the actuation of one switching device to disable all other switching devices, and switching means operating upon connection of the link circuit in use with another line to restore the switching device thereof and the common switching mechanism to normal position.

5. In a telephone exchange system, a plurality of subscribers' lines, a plurality of link circuits for interconnecting said subscribers' lines, supervisory signals for said link circuits, an operator's telephone set, switching means for automatically including said operator's telephone set with said link circuits, common switching means for automatically preventing the inclusion of said operator's telephone set with more than one of said link circuits at the same time, and switching means for automatically rendering a characteristic operation of the supervisory signal of a second link circuit connected for answering another subscriber's line during the time the operator's telephone set is included with another one of said link circuits.

[Claims 6 to 13 not printed in the Gazette.]

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1,230,118. REMOVABLE SPUR FOR SHOES. CARL G. CLIFFORD, Manila, Philippine Islands. Filed Oct. 27, 1916. Serial No. 128,125. (Cl. 36—66.)

1. In a device of the class described, the combination with a circular frame, having a disk element and a raised marginal ring, said marginal ring containing screw threads, and means for securing said frame to a shoe, of a ring engageable within the threads of said ring, means for holding said latter ring in position, means for engaging or disengaging said latter ring from said frame, and a plurality of spurs integrally formed with the last named ring.



2. In a device of the class described, the combination with a cylindrical frame having a closed bottom, means for securing said frame in position, a screw threaded stud engaged at the center of said frame, a plate removably engaged in said frame and also with said stud, means for engaging or disengaging said plate, an armed ring having outwardly extending spurs at the ends of the arms, of means for engaging or disengaging said armed ring within said frame, and a spring detent combined therewith, said detent being engageable within an opening formed within said frame.



3. In a device of the class described, the combination with a circular frame, and a base formed therewith, said base having means for attachment to a support, of a disk screw threaded into said frame, means for raising or lowering said disk, means preventing the removal of said disk a ring engageable in said frame, means for locking said ring when in an engaged position, and a plurality of spurs extending outwardly from said ring.

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1,230,119. HANGER FOR WALL-RADIATORS. SAMUEL COCKERHAM, Cleveland, Ohio. Filed Aug. 10, 1915. Serial No. 44,700. (Cl. 248—30.)

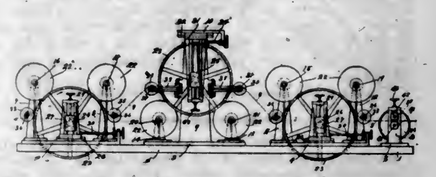


1. A hanger for a wall radiator comprising a bracket member having a central vertical portion and horizontal end portions provided with means for securing them to a wall, said central portion being provided with a longitudinally extended slot near its lower end and a key hole slot at its upper end, a lower hook shaped supporting member having an arm provided with a T-head arranged to extend through the longitudinal slot and have frictional engagement with the rear surface of the vertical portion and an upper supporting member comprising a vertical shank portion freely slidable in the upper horizontal portion of the bracket member, said shank portion having a hook shaped portion at its upper end and an arm provided with a T-head at its lower end, said arm being adapted to extend through the key hole slot near the upper end of the vertical portion of the bracket member.

2. A hanger for a wall radiator comprising a bracket member having a central vertical portion and horizontal end portions provided with means for securing them to a wall, said central portion being provided with a longitudinally extending slot near its lower end and a key hole slot at its upper end, the inner face of said central portion being serrated at each side of the longitudinally extending slot, a lower hook shaped supporting member having an arm provided with a T-head arranged to extend through the longitudinal slot and engage with the serrations on the inner face of the bracket member and an upper supporting member comprising a vertical shank portion freely slidable in the upper horizontal portion of the bracket member, said shank portion having a hook shaped portion at its upper end and an arm provided with a T-head at its lower end, said arm being adapted to extend through the key hole slot near the upper end of the vertical portion of the bracket member.

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1,230,120. MACHINE FOR CLEANING MOTION-PICTURE FILMS. HARDES M. COLBYSON and ABRAHAM S. DWORSKY, Minneapolis, Minn. Filed Mar. 20, 1916. Serial No. 85,266. (Cl. 15—8.)



In a film cleaning machine, the combination with a platen roller and a pair of coöperating buffing wheels, of means for adjusting said platen roller, both vertically and horizontally toward and from the coöperating buffing wheels.

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1,230,121. PRIMER-RETAINER FOR DYNAMITE-CARTRIDGES. HARRY COMSTOCK, Mineville, N. Y. Filed Feb. 6, 1917. Serial No. 146,966. (Cl. 102—6.)



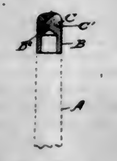
1. A primed explosive cartridge or shell comprising the shell, an explosive contained therein, a cap or primer, a

fuse therefor, and a cord located and anchored between the explosive and the interior surface of the shell, said cord having an end portion tied to the fuse.

6. As a new article of manufacture, a paper shell or cartridge adapted to be directly loaded with an explosive, having a pair of cords or the like extending the full length of the shell and permanently attached thereto, said cords being provided with free tying portions at their opposite ends, one pair of tying portions being adapted to be secured together across the end of the shell, the other pair of tying portions being adapted for securement to the fuse.

[Claims 2 to 5 not printed in the Gazette.]

1,230,122. BILLIARD-CUE TIP. JAMES J. CONNELL, Detroit, Mich. Filed Jan. 26, 1917. Serial No. 144,747. (Cl. 46—9.)



1. In a device of the character described, a thimble formed of substantially hard rubber adapted to receive the end of a cue, having an outwardly projecting stem, and an annular rubber tip formed of relatively soft rubber mounted upon said stem.

2. In a device of the character described, a thimble formed of substantially hard rubber provided with an outwardly projecting tapering stem, and a rubber tip of relatively soft rubber having a tapering hole to receive said stem.

[Claims 3 and 4 not printed in the Gazette.]

1,230,123. DEVICE FOR REMOVING STONES OR SEEDS FROM FRUITS OR VEGETABLES. ALMA G. CONNELLY, Cleveland, Ohio. Filed Mar. 10, 1916. Serial No. 83,278. (Cl. 146—6.)



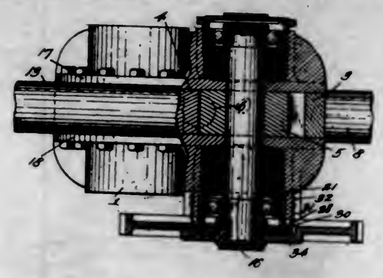
A device for removing pits from fruits comprising a handle portion and an integrally formed pit-removing portion, the pit-removing portion comprising an oval dish shaped member having a centrally arranged slot in the bottom thereof and in line with the axis of the handle and dividing the dish shaped portion into two prongs, the adjacent sides of the prongs being provided with cutting edges and the rim of the dish having a cutting edge, for the purpose set forth.

1,230,124. STUFFING-BOX STRUCTURE FOR PUMPS AND THE LIKE. MAURICE N. CONNOR, Buffalo, N. Y., assignor to Frank W. Carter, Buffalo, N. Y. Filed Feb. 20, 1914. Serial No. 819,901. (Cl. 64—10.)

1. In a combined bearing and stuffing box structure, a shaft, a casing having a packing recess surrounding said shaft, a gland nut arranged in said recess, and a ball bearing structure arranged between said nut and the shaft.

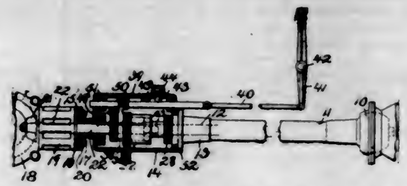
2. In a combined bearing and stuffing box structure, a shaft, a bearing support surrounding said shaft and having a cylindrical extension forming a packing recess, a gland nut engaging in said extension, packing arranged between said nut and said supporting member, a ball race fitted loosely within the nut, a ball race secured to the shaft, balls arranged between said races, and means for holding said gland nut in any adjusted position.

3. In a combined bearing and stuffing box structure, a shaft, a bearing supporting member surrounding said shaft, a cylindrical extension forming a part of said member and containing a packing recess, a gland nut



threaded into said extension, packing arranged between said nut and said bearing supporting member, a ball race having a sliding fit within said nut, a ball race secured to the shaft, balls arranged between said races, and means for holding said nut in any adjusted position.

1,230,125. SPEED-CHANGING DEVICE FOR AUTOMOBILES. EUGENE L. CONORD, Elizabeth, N. J. Filed Dec. 7, 1916. Serial No. 135,532. (Cl. 74—58.)



1. In a vehicle, a drive shaft, a housing for the drive shaft, a short shaft, a housing from which the short shaft projects, studs projecting from the latter housing, a casing secured to said studs and secured to the housing of the drive shaft, the drive shaft and the short shaft abutting, one of said shafts being reduced on one end and fitting in a recess in the other, a jack-shaft in the casing, sliding gears on the short shaft, a clutch member to which said sliding gears are secured, a gear on the driving shaft, a clutch member secured to the last-mentioned gear and with which the clutch member on the short shaft can be engaged and through which it can slide, and gears on the jack-shaft adapted to be engaged each by one of the gears on the sliding clutch member according to which direction the sliding clutch member is moved from the fixed clutch member.

2. In a transmission, a casing, shafts projecting into said casing, said shafts being alined and one recessed to receive a reduced end of the other, a clutch member fixed to the recessed end and embracing it to form a strengthening portion, and a sliding clutch member on the other shaft and adapted to move into and out of engagement with the fixed clutch member.

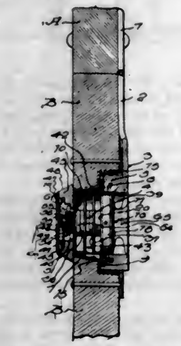
3. In a transmission, a casing, shafts projecting into said casing, said shafts being alined and one recessed to receive a reduced end of the other, a clutch member fixed to the recessed end and embracing it to form a strengthening portion, the said clutch member having a set of spaced lugs thereon, a sliding clutch member with lugs to fit in the spaces between the lugs of the fixed clutch member and capable of sliding to both sides thereof, a jack-shaft in the casing, a gear on the jack-shaft, a gear on the recessed shaft, said gears being in constant mesh, gears on the sliding clutch member, and gears on the jack-shaft rotating with the constantly meshing gear on the jack-shaft, said gears on the jack-shaft being disposed so



that the clutch member gears are between them when the clutch members are in engagement, one of said jack-shaft gears being adapted to be engaged by one of said clutch member gears according to the direction the clutch member is slid.

[Claims 4 to 6 not printed in the Gazette.]

1,230,126. PERMUTATION TRUNK-LOCK. EMERY P. CRANDALL, Washington, D. C. Filed Apr. 30, 1915. Serial No. 24,970. (Cl. 70—55.)



1. In a permutation lock of the character described the combination with a bolt; a spindle, and means affording a positive connection between said bolt and spindle, of an operating member mounted upon said spindle and movable independently with respect thereto, co-acting tumblers disposed upon said spindle, a spring actuated detent seated in the latter for coöperation with said tumblers and operating member and means in connection with said spindle to cause the detent to move uniformly therethrough substantially as and for the purpose set forth.

2. In a permutation lock of the character described the combination with a bolt; of a rotatably mounted spindle having one extremity connected with said bolt, said spindle having therein a recess and slot communicating therewith, an operating member disposed on the free end of said spindle and independently movable with respect thereto, concentrically mounted co-acting tumblers carried by said spindle for coöperation with said operating member, and a spring actuated detent seated in said recess and adapted to project through said slot and operatively engage said tumblers and operating member substantially as and for the purpose set forth.

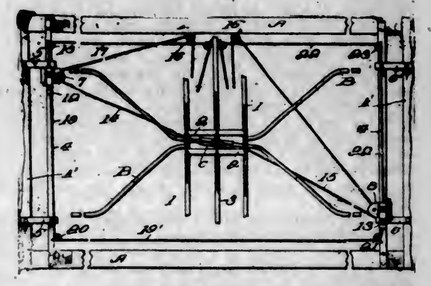
3. In a permutation lock of the character described the combination with a pair of diametrically disposed spring actuated bolts, and means for actuating the latter; of a rotatably mounted spindle having one extremity connected with said means, said spindle having therein a longitudinally extending slot, a spring actuated detent slidably mounted in said slot and adapted to project therethrough, a laterally extending shoulder formed on said detent, guiding means in connection with one end of said spindle to receive said shoulder, whereby the latter is guided uniformly through said spindle, and a tumbler mechanism for coöperation with said detent substantially as and for the purpose set forth.

4. In a permutation lock of the character described the combination with a spring actuated bolt and means for operating the same; of a revolubly mounted spindle having one extremity operatively connected with said means, said spindle having therein a longitudinally extending slot, a laterally extending shoulder formed on one edge of said detent and projecting through the transversely extending slot formed in the free end of said spindle, whereby to cause said detent to be actuated uniformly through said spindle, an operating member mounted upon the free end of said spindle and independently movable with respect thereto, co-acting tumbler plates concentrically mounted upon said spindle for coöperation with said operating member, said tumblers and operating member having therein means to engage said detent substantially as and for the purpose set forth.

5. In a permutation lock of the character described the combination with a spring actuated bolt and means for operating the same; of a revolubly mounted spindle operatively connected at one extremity with said means, said spindle having therein a longitudinally extending slot, a spring actuated detent operatively disposed within said slot, an operating member secured to the free end of said spindle and independently movable with respect thereto, tumblers concentrically mounted upon said spindle, for coöperation with said operating member, said tumblers and operating member having therein means to engage said detent, and means in connection with said spindle to cause said detent to move uniformly therethrough substantially as and for the purpose set forth.

[Claims 6 to 27 not printed in the Gazette.]

1,230,127. HAY-MOWING APPARATUS. ALPHA B. CULP, Wakarusa, Ind. Filed Feb. 9, 1917. Serial No. 147,621. (Cl. 104—180.)



1. In a mowing apparatus, the combination with tracks, of a switch member located in proximity to and adapted to register with said tracks, shifting pulley-blocks arranged to slide transversely of the tracks at the opposite ends thereof, said pulley-blocks being connected to the switch-member and diagonally opposite to each other when in their operative position, and means for releasing and simultaneously shifting the pulley-blocks in opposite directions to the other side of the track.

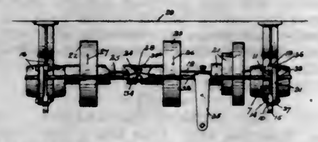
4. In a mowing apparatus, the combination with tracks, of a switch member located in proximity to and adapted to registed with said tracks, guide bars arranged transversely of the tracks at each end thereof, shifting pulley-blocks slidably mounted upon said guide bars, stop blocks at each end of the guide bars, latches carried by the shifting pulley-blocks and adapted to engage said stop-blocks, means connecting the latches of the respective blocks whereby the same are released and simultaneously shifted in the opposite direction to the other side of the tracks, said shifting pulleys being connected to the switch-member in such a manner as to turn the switch into registry with the tracks when the shifting pulleys are actuated.

[Claims 2 and 3 not printed in the Gazette.]

1,230,128. COUNTER-SHAFT. HUBERT DALTON, New York, N. Y. Filed Oct. 7, 1916. Serial No. 124,284. (Cl. 192—1.)

1. In apparatus of the kind described, the combination with the counter-shaft and clutch on the counter-shaft, of a pair of hangers for the counter-shaft, a pair of spaced brackets, a clutch actuator, a movable support for the clutch actuator supported by the brackets, and means carried partially by the hangers and partially by the brackets for selectively mounting the brackets on the hangers to dispose the clutch actuator in either of two working positions relative to the clutch.

5. In apparatus of the kind described, the combination with the counter-shaft and the loose pulley and the clutch thereon, of a pair of spaced hangers, a pair of journal boxes one for each hanger, co-acting means on the hangers and journal boxes whereby each journal box may be arranged on its hanger in either one of two positions by a two-point suspension, a pair of brackets one for each hanger, co-acting means on the brackets and on the hangers whereby each bracket may be arranged on its hanger in either one of two positions, a rod supported by the brackets, and means carried by the rod and adapted to be moved thereby to actuate the clutch in either of said two positions of the brackets.



8. In apparatus of the kind described, the combination with the counter-shaft and the loose pulley thereon and the clutch, of a pair of spaced hangers, a pair of journal boxes one for each hanger, co-acting means on the hangers and journal boxes whereby each journal box may be arranged on its hanger in either one of two positions by a two-point suspension, a pair of brackets one for each hanger, co-acting means on the brackets and on the hangers whereby each bracket may be arranged on its hanger in either one of two positions, said means including two apertured lugs on each bracket and three apertured lugs on each hanger, a rod supported by the brackets, and means carried by the rod and adapted to be moved thereby to actuate the clutch in either of said two positions of the brackets.

15. The combination with a counter-shaft and a pulley and clutch member carried thereby, of a pair of hangers adapted to be mounted in a vertical or a horizontal position, a pair of journal boxes each carried by one of the hangers, means for securing each journal box upon its hanger in either of two positions one of which is displaced angularly from the other, a pair of brackets each adapted to be secured to one of the hangers in either of two positions one of which is displaced angularly from the other, a slide-rod carried by the brackets, and means on the slide-rod for actuating the clutch member.

[Claims 2 to 4, 6, 7, and 9 to 14 not printed in the Gazette.]

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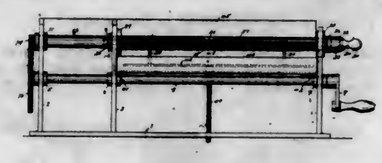
**1,230,129. PEDAL FOR CYCLES AND LIKE VEHICLES.** GUSTAVE CLÉMENT D'ARTOIS and GEORGES DÉSIRÉ LOIZON, Ozoir la Ferrière, France. Filed Mar. 27, 1913. Serial No. 757,135. (Cl. 208—70.)



1. Balancing device for the pedals of cycles or the like comprising an angularly bent perforated plate adapted to be secured to the back part of a pedal, a box secured to said plate and exchangeable means within said box for regulating the balancing power of the device to suit the weight to be balanced.

2. Balancing device for the pedals of cycles or the like comprising an angularly bent perforated metal plate adapted to be secured to the back bar of a pedal, a box secured to said plate and calibrated metal plates or disks within said box separated by felt layers and exchangeable for regulating the balancing power of the device to correspond to the weight to be balanced.

**1,230,130. SPOOLING-MACHINE FOR MUSIC-ROLLS.** GEORGE HOWLETT DAVIS, West Orange, N. J. Filed Mar. 29, 1915. Serial No. 17,757. (Cl. 242—55.)



1. In a machine for spooling music sheets, the combination of a mandrel, means for rotating said mandrel, means upon said mandrel for gripping the end of a music sheet thereto to wind the same thereon, and means for applying a continuous strip of liquid adhesive to a convolution of said music sheet after a few turns of the same have been wound upon said mandrel.

2. In a machine for spooling music sheets, the combination of a mandrel, means upon said mandrel for gripping the end of a music sheet thereto, means for rotating said mandrel to wind the sheet thereon, and manually operated means for applying a strip of adhesive material to a convolution of said music sheet as the same is wound upon said mandrel.

3. In a music sheet spooling machine, the combination of a plurality of upright standards, a mandrel mounted in said standards, means for rotating said mandrel, a circumferential groove in said mandrel and a gripping device located in said groove for gripping the end of a music sheet to said mandrel, means associated with said mandrel for releasing said gripping device to permit the removal of a coiled music sheet therefrom, and means for applying a strip of adhesive material to a convolution of said music sheet as the same is wound upon said mandrel.

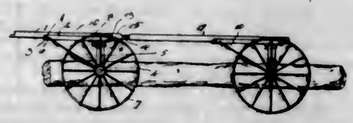
4. In a music sheet spooling machine, the combination of a plurality of upright standards, a horizontal mandrel mounted in said standards, manually operated means for rotating said mandrel, a gripping device mounted upon said mandrel for clamping the end of a music sheet thereto, a tank containing a liquid adhesive material located beneath said mandrel, and manually operated means for applying a band or strip of said liquid adhesive to the outer convolution of a music sheet as the same is being wound upon said mandrel.

5. In a machine for spooling music sheets, the combination of an expanding mandrel, means for rotating said mandrel, means upon said mandrel for gripping the end of the music sheet, and means for applying a band of liquid adhesive material to the surface of the music sheet as the same is wound upon said mandrel.

[Claims 6 to 14 not printed in the Gazette.]

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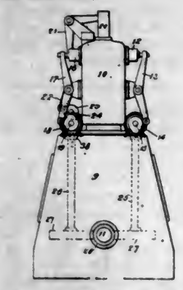
**1,230,131. LOG-HAULING TRUCK.** JOSEPH S. DAVIS, Yanceyville, N. C. Filed Sept. 6, 1916. Serial No. 118,742. (Cl. 21—33.)



In a log truck, the combination of a carriage consisting of an arched element, wheels supporting said element, a channeled beam secured to said arch at its uppermost point and extending forwardly therefrom and a tongue pivoted to the forward end of the beam and adapted to fold between the sides of the channeled beam, and a locking device carried by the tongue and adapted to engage over the rear end of said beam.



**1,230,132. REVERSIBLE INTERNAL-COMBUSTION ENGINE.** GREGORY C. DAVISON, New London, Conn., assignor to Electric Boat Company, New York, N. Y., a Corporation of New Jersey. Filed May 5, 1915. Serial No. 25,903. (Cl. 123—41.)



1. A reversible internal combustion engine of the Diesel type comprising the combination of a cylinder, a piston reciprocating therein, a crank-shaft to which the piston is connected, inlet, exhaust and spray valves for the cylinder, three cams for operating said valves, means for causing the crank-shaft to rotate said cams, and means for shifting the cams predetermined but different amounts relatively to the crank-shaft to position the cams for operation of the engine in the reverse direction; substantially as described.

2. A reversible internal combustion engine comprising the combination of a cylinder, a piston reciprocating therein, a crank shaft to which the piston is connected, three valves for the cylinder, three cams each adapted to actuate one of the valves, means for causing the crank shaft to rotate said cams, and a single means for shifting the three cams angularly predetermined amounts, one of them an amount different from the others, to position the cams for operation of the engine in the reverse direction; substantially as described.

3. A reversible internal combustion engine of the Diesel type, comprising the combination of a cylinder, a piston reciprocating therein, a crank shaft to which the piston is connected, inlet, exhaust and spray valves for the cylinder, three cams each operating one of said valves, three shafts each carrying one of the cams, means for causing the crank shaft to rotate all of the cam-shafts, and a single means for shifting all three of the cam-shafts angularly predetermined amounts relatively to the crank shaft to position the cams for operation of the engine in the reverse direction; substantially as described.

4. A reversible internal combustion engine of the Diesel type comprising the combination of a cylinder, a piston reciprocating therein, a crank shaft to which the piston is connected, inlet, exhaust and spray valves for the cylinder, three cams for operating said valves, means for causing the crank shaft to rotate said cams, and means for shifting the three cams angularly relatively to the crank shaft predetermined amounts, one of them an amount different from the others, to position the cams for operation of the engine in the reverse direction; substantially as described.

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**1,230,133. CUFF-HOLDER.** FRED P. DE WILDE, Sheboygan, Wis. Filed Jan. 6, 1916. Serial No. 70,557. (Cl. 24—43.)

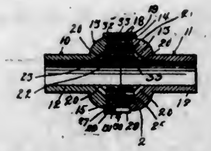


3. A cuff holder, comprising a spring member of a general U-form with cuff buttons on its ends, one side of the spring member near the U-bend thereof being provided with a flexible loop, a clamping member engaging the said side of the spring member between the U-bend and the loop and also engaging the other side of the spring member near the U-bend, and a rubber cushion between one end of the engaging member and the spring member, one end of the clamping member being detachable from its engagement with the spring member.

[Claims 1, 2, 4, and 5 not printed in the Gazette.]

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**1,230,134. COUPLING DEVICE.** CHARLES A. DE YARMAN, Garo, Colo. Filed Sept. 30, 1915. Serial No. 53,422. (Cl. 137—28.)

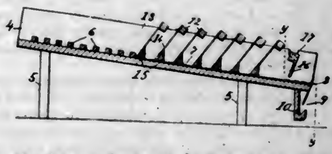


1. A coupling comprising two interlocking members each having a circular channel therein, and a longitudinal bore, each of the members having inclined passages extending from the bore into the circular channel, said channel being provided with grooves in its outer wall at each end thereof and a hollow gasket disposed in the said channel and having its open end disposed over the passages of the coupling whereby the fluid pressure will enter the gasket and distend the same into intimate contact with parts of the couplings, said gaskets having peripheral ribs engaging said grooves and the ends of said gaskets abutting each other.

2. The combination with a two-part coupling having auxiliary passages for fluid pressure to pass therethrough, of a gasket consisting of a pair of concentrically arranged walls and a connecting end wall disposed between the coupling members in position to receive fluid pressure therein so that the gasket will extend into intimate contact with the parts of the coupling, the outer wall having peripheral ribs at its ends.

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**1,230,135. AMALGAMATOR.** WILLIAM W. DILL, Seattle, Wash. Filed Oct. 23, 1916. Serial No. 127,253. (Cl. 83—68.)



1. A slanting copper-faced amalgamating table; obstructing plates with spaces between them in successive lines across over the table, the plates of each line being located opposite the spaces between the plates of the adjacent line, the whole width of the lower portion of each plate of one line slanting obliquely to the right along the table, and the corresponding portion of each plate of the next line slanting obliquely to the left.

2. In an amalgamator, a slanting, copper-faced table; a series of plates depending upon the table in successive lines across it, the line of contact of the whole width of each plate with the table slanting obliquely to the line of the table, the slant of one line of plates being to the right and of the next line to the left.

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**1,230,136. EYEGLASSES OR SPECTACLES.** DANIEL D. DRAPER, Lincoln, Nebr. Filed July 21, 1916. Serial No. 110,587. (Cl. 88—54.)

In eye glasses or spectacles, a rim frame, and a compound lens fitted therein comprising a plurality of inde-

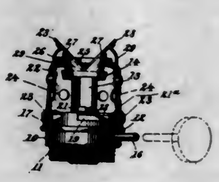
pendent lens members having peripheral portions conjointly engaging said rim frame, said lens members being



compounded so as to have one face plane and the width of an ordinary single lens.

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1,230,137. LONG-TIME BURNER. FREDERICK W. DRESSEL, New York, N. Y., JULES DAWANS, Lyndhurst, N. J., and GUSTAV EKLUND, New York, N. Y., assignors to The Dressel Railway Lamp Works, New York, N. Y., a Corporation of New York. Filed Aug. 10, 1912. Serial No. 714,339. (Cl. 67—53.)



1. A lamp burner comprising a base having a plurality of recesses therein, a wick tube mounted in said base, a supporting member, a flame spreader carried thereby, and means arranged upon said supporting member to engage with certain of the recesses in said base to hold said flame spreader in one position relatively to said wick tube, and to engage with other of said recesses to hold said flame spreader in a different position relatively to said wick tube, substantially as specified.

2. A lamp burner comprising a base, a wick tube arranged thereon, a cup secured to the top of said wick tube, a cone secured to said base having a series of air inlet openings therein, a contracted neck extending from said cup to the top of said cone, and a pair of inclined plates arranged partly within, and partly without said cone, substantially as specified.

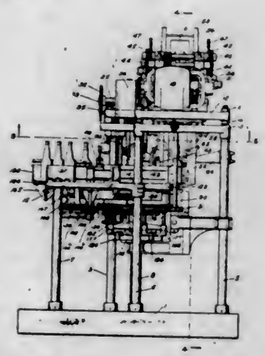
3. A lamp burner comprising a base, having a plurality of recesses therein, a wick tube centrally mounted in said base, a cone, a flame spreader secured in said cone, and members arranged in said cone adapted to engage with certain of the recesses in said base to hold said cone attached thereto and support said flame spreader horizontally in one position relatively to said wick tube, and to engage with other of said recesses to support said flame spreader horizontally in a different position relatively to said wick tube, substantially as specified.

4. A lamp burner comprising a base, a wick tube centrally mounted in said base, a cup secured to the top of said wick tube and having air vents in its bottom, a cone having a series of air inlets adjacent to its base, a contracted neck extending from said cup to the top of said cone, a pair of inclined plates arranged partly within, and partly without said cone, and means for securing said cone to said base horizontally in a plurality of positions whereby to vary the angle of longitudinal axis of said inclined plates relatively to said wick tube, substantially as specified.

5. A lamp burner comprising a base, a wick tube centrally mounted in said base, a cup secured to the top of said wick tube and having air vents in its bottom, a cone having a circular series of air inlets adjacent to its base, a pair of longitudinal spreader plates arranged at an angle to each other in the top of said cone above said wick tube, a cap secured to said base having several sets of slots therein, and studs on said cone adapted to engage with one set of said slots to support said spreader plates in one position relatively to said wick tube, and to engage with other of said sets of slots to support said spreader plates in other positions relatively to said wick tube, substantially as specified.

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1,230,138. LABELING-MACHINE. OTTO EICK, St. Louis, Mo. Filed Oct. 30, 1912. Serial No. 728,677. (Cl. 216—13.)



1. In a labeling machine for bottles and the like, the combination of a suitable supporting frame; a table mounted to rotate upon a substantially vertical axis therein; means for rotating said table continuously; a bottle clamp mounted on said rotating table and adapted to clamp a bottle thereon in an upright position; a feed mechanism supported by said frame and adapted to insert bottles into said clamp as the table rotates; a mechanism carried by said frame and adapted to apply labels to bottles carried on said table; and a discharge device adapted to receive bottles from said clamp and to discharge them from the machine.

2. In a labeling machine for bottles and the like, the combination of a suitable supporting frame; a table mounted to rotate upon a substantially vertical axis therein; means for rotating said table continuously; a bottle clamp carried by said table and adapted to clamp a bottle in an upright position thereon; a feed mechanism supported by said frame and adapted to insert bottles into said clamp; mechanism for applying adhesive to a label and positioning it in the path of a bottle carried by the table; a holding device turning with the table and adapted to hold said label against the bottle; suitable wipers; and a discharge device adapted to receive bottles from said clamp and discharge them from the machine.

3. In a labeling machine for bottles and the like, the combination of a suitable supporting frame; a table mounted to rotate upon a substantially vertical axis therein; means for rotating said table continuously; a bottle clamp carried by said table and adapted to clamp a bottle in an upright position thereon; a feed mechanism carried by said frame and adapted to insert bottles into said clamp; a picker frame adapted in one position to hold a label in the path of a bottle carried by the table; mechanism for supplying adhesive and labels to the picker frame when in another position; means for moving the picker frame alternately between the two positions aforesaid; a holding device turning with the table and adapted to clamp to the bottle a label held by the picker frame and to assist in stripping it from the latter; suitable wipers; and a discharge mechanism adapted to receive bottles from said bottle clamp.



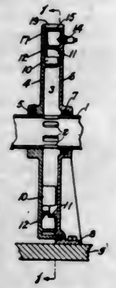
4. In a labeling machine for bottles and the like, the combination of a suitable supporting frame; a table mounted to rotate upon a substantially vertical axis therein; means for rotating said table continuously; a bottle clamp carried by said table and adapted to clamp a bottle in an upright position thereon; a feed mechanism carried by said frame and adapted to insert bottles into said clamp; a picker frame adapted in one position to hold neck and body labels in the path of bottles carried by the table; mechanism for supplying adhesive and labels to the picker frame when in another position; means for moving the picker frame alternately between the two positions aforesaid; a holding mechanism rotating with the table and adapted to hold to the bottles labels positioned by the picker frame and to assist in stripping them from the picket frame; suitable wipers for the body labels; a pair of swinging, serially actuated neck label wipers; and a discharge mechanism adapted to receive bottles from the bottle clamp.

5. In a labeling machine for bottles and the like, the combination of a suitable supporting frame; a table mounted to rotate upon a substantially vertical axis therein; means for rotating said table continuously; a bottle clamp carried by said table and adapted to clamp a bottle in an upright position thereon; a feed mechanism carried by said frame and adapted to insert bottles into said clamp; a picker frame adapted to position labels in the path of bottles carried by the table; means for supplying adhesive and labels to the picker frame; a label holder arm adapted to rotate with the table but capable of a limited rotary motion relatively thereto to move into and out of label holding relation with a bottle; a cam mechanism actuated by the rotation of the table and adapted to produce such relatively movement of the label holder arm; suitable wipers; and a discharge mechanism adapted to receive bottles from the bottle holders.

[Claims 6 to 41 not printed in the Gazette.]

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1,230,139. EXPLOSIVE TURBINE-ENGINE. GEORGE D. EIGHMIE, New York, N. Y. Filed Jan. 11, 1916. Serial No. 71,422. (Cl. 123—9.)



1. In an internal combustion engine, a pair of disks, one revolving and one stationary, between which there is a central mixing chamber and a circumferential explosion chamber, the revolving disk carrying a series of fan blades in the mixing chamber and at its periphery a series of vanes, an inlet valve for allowing the explosive mixture to pass from the fan into the explosion chamber, said valve consisting of overlapping triangularly-shaped flanges, one on the stationary disk and one on the revolving disk whose edges engage and disengage so as to open a passage at times and close it at other times, and a valve between the explosion chamber and the peripheral vanes, by means of which the force of the explosion acts against the vanes and imparts a rotary motion to the revolving disk.

2. In an internal combustion engine, a pair of disks, one revolving and one stationary, between which there is a central mixing chamber and a circumferential explosion chamber, the revolving disk carrying a series of fan blades in the mixing chamber and at its outer periphery a series of vanes, an inlet valve for allowing the explosive mixture to pass from the fan into the explosion chamber, said valve consisting of concentric flanges, one on the stationary disk and one on the revolving disk, whose contiguous edges are inclined to the plane of the disk so that during the revolution of the disk said edges will separate at times to provide a passage and will come together at other times to close the passage, and a valve between the explosion chamber and the peripheral vanes, by means of which the force of the explosion acts against the vanes and imparts a rotary motion to the revolving disk.

3. In an internal combustion engine, a pair of disks, one revolving and one stationary, between which disks there is a mixing chamber near the center and an explosion chamber near the circumference, the revolving disk having peripheral vanes outside of the explosion chamber, an inlet valve for allowing the explosive mixture to pass from the mixing chamber into the explosion chamber and consisting of angular flanges, one on the stationary disk and one on the revolving disk, whose edges engage and disengage so as to open a passage at times and close it at other times, and an exhaust valve between the explosion chamber and the peripheral vanes, and consisting of angular flanges, one on the stationary disk and one on the revolving disk, whose edges engage and disengage so as to allow a passage to be opened at times and closed at other times, whereby the force of the explosions may be exerted against the peripheral vanes to impart rotary motion to the revolving disk.

4. In an internal combustion engine, a pair of disks arranged parallel to each other, one revolving and one stationary, the revolving disk carrying a series of fan blades, and at its outer periphery a series of vanes, an inlet valve for allowing the explosive mixture to pass from the fan into the explosion chamber, said valve means consisting of a flange on the stationary disk and a contiguous flange on the revolving disk, the edges of which flanges separate at times so as to provide a passage between them, an exhaust valve means between which and the inlet valve means is the explosion chamber, said exhaust valve means consisting of a flange on the stationary disk contiguous to the outer vanes of the revolving disk, and also a flange on the revolving disk, the edges of which flanges separate at times to provide a passage between them through which the force of the explosion may act against the turbine vanes and then exhaust to atmosphere.

5. In a rotary explosive engine, the combination of a revolving disk, having a peripheral flange formed with vanes, and having also a series of fan blades, a stationary disk parallel to the revolving disk and between which and the revolving disk is a central mixing chamber and a circumferential explosion chamber, an inlet valve between the mixing chamber and the explosion chamber consisting of cylindrical overlapping flanges, one on the revolving disk and one on the stationary disk, each flange consisting of one or more triangular sections whose edges engage and disengage so as to open a passage at times and close it at other times, and an exhaust valve between the explosion chamber and the peripheral vanes and consisting of overlapping cylindrical flanges, one on the stationary disk and one on the revolving disk, and each flange having one or more triangular sections whose edges engage and disengage so as to open passages at times and close them at other times.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,140. PUPPET-VALVE. ROBERT L. ELLERY, Toledo, Ohio, assignor, by mesne assignments, to Pfanstiehl Company, Inc., a Corporation of New York. Filed Mar. 10, 1917. Serial No. 153,792. (Cl. 137—32.)

1. A puppet valve for internal combustion engines having a high speed steel head and a chrome vanadium steel stem, the union between said head and said stem being of solid homogeneous metal throughout.

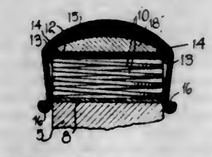
2. A puppet valve for internal combustion engines having a tungsten steel head and a stem of chromium and



vanadium alloy steel, the juncture of the head and stem metals being solid and homogeneous throughout.

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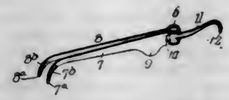
1,230,141. RESILIENT WHEEL-TIRE. SAMUEL E. ERHARD and CLARENCE D. ERHARD, Trinidad, Colo. Filed Feb. 24, 1917. Serial No. 150,791. (Cl. 152—8.)



The combination with a wheel having a felly, of two series of cushioning springs, means for detachably clamping the two series of springs upon the periphery of the wheel felly, a casing, means for detachably securing the casing to the edges of the wheel felly, an annular, resilient band extending around said springs and having inwardly projecting flanges on its edges holding the series of springs against relative transverse movement, the side walls of the casing being held in spaced relation to the springs by said flanges, said resilient band being also provided with outwardly projecting, annular ribs on its opposite edges, and fiber blocks disposed between the casing and the ribs on said band.

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1,230,142. TWEEZERS. JAMES W. ERRINGER, Chicago, Ill. Filed Sept. 14, 1916. Serial No. 120,174. (Cl. 81—14.)

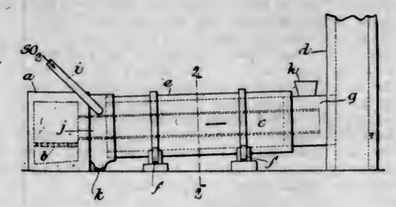


1. Tweezers comprising a pair of integral pick-up fingers bent transversely of their longitudinal dimension to form a rounded spring member, and an integral tamping arm, struck out from one of the pick-up fingers and extending tangentially of and past the spring member in a direction opposite from that of the pick-up fingers.

2. Tweezers comprising a pair of pick-up fingers consisting of a single member bent transversely between its ends, to form a spring, said pick-up fingers having lateral enlargements adjacent to said spring, and a tamping arm struck out from one of said enlargements and said spring, said arm extending tangentially of and beyond the spring in a direction opposite from that of said finger.

3. The method of forming combined tweezers and a tamping bar from a single metal blank, which consists in stamping the blank to form a tweezer finger at each of the portions thereof, and an enlarged central portion, cutting out from said central portion a tamping bar integrally joined to the blank, and thereafter centrally bending one of the fingers of the blank, adjacent the point of juncture of said bar, to cause the fingers to lie in substantial parallelism, and the tamping bar to lie in substantially the plane of the other finger, substantially as described.

1,230,143. METHOD OF TREATING ORES OR METAL-BEARING PRODUCTS. FREDERIC A. EUSTIS, Milton, Mass. Filed May 8, 1916. Serial No. 96,050. (Cl. 75—17.)



1. The method of treating an oxidized iron ore or metal-bearing product containing one or more of the metals, nickel, cobalt, aluminum or manganese, for the purpose of rendering a relatively large amount of such metals soluble while rendering a relatively small amount of the iron soluble, which consists in heating the material in the presence of an atmosphere containing an excess of sulfur dioxid gas and bringing the material under treatment and the gas into intimate contact.

2. The method of treating an oxidized iron ore or metal-bearing product containing one or more of the metals, nickel, cobalt, aluminum or manganese, for the purpose of rendering a relatively large amount of such metals soluble while rendering a relatively small amount of the iron soluble, which consists in heating the material in the presence of an atmosphere containing an excess of previously dried sulfur dioxid gas, and bringing the material under treatment and the gas into intimate contact.

3. The method of treating an oxidized iron ore or metal-bearing product containing one or more of the metals, nickel, cobalt, aluminum or manganese, for the purpose of rendering a relatively large amount of such metals soluble while rendering a relatively small amount of the iron soluble, which consists in heating the material in the presence of an atmosphere containing an excess of sulfur dioxid gas mixed with a relatively small amount of air and bringing the material under treatment and the gas into intimate contact.

4. The method of treating an oxidized iron ore or metal-bearing product containing one or more of the metals, nickel, cobalt, aluminum or manganese, for the purpose of rendering a relatively large amount of such metals soluble while rendering a relatively small amount of the iron soluble, which consists in first drying the material to be treated, and then heating the material in the presence of an atmosphere containing an excess of sulfur dioxid gas and bringing the material under treatment and the gas into intimate contact.

5. The method of treating an oxidized iron ore or metal-bearing product containing one or more of the metals, nickel, cobalt, aluminum or manganese, for the purpose of rendering a relatively large amount of such metals soluble while rendering a relatively small amount of the iron soluble, which consists in heating the material in the presence of an atmosphere containing an excess of sulfur dioxid gas and bringing the material under treatment and the gas into intimate contact, and thereafter leaching the material with a suitable solvent used boiling hot, and continuing the boiling to precipitate iron.

[Claim 6 not printed in the Gazette.]

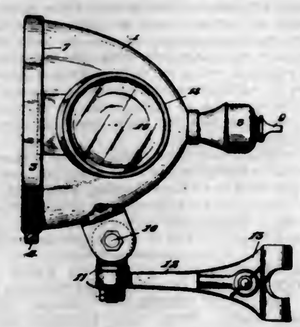
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1,230,144. MIRRORSCOPE FOR AUTOMOBILES OR OTHER VEHICLES. JULIAN H. FAW, New York, N. Y. Filed Aug. 24, 1916. Serial No. 116,579. (Cl. 240—41.)

1. The combination with an automobile spotlight including a lamp casing, of a rear-view mirror, means for detachably securing said mirror upon the outer peripheral surface of the lamp casing, said means permitting the adjustment of said mirror annularly of the lamp casing



to various angular locations with relation to the axis of the light.



3. In combination with an automobile spotlight having a convexly-curved shell, of a convexly-curved mirror mounted upon and coincident with said shell and means for detachably and adjustably securing the mirror to the shell, whereby the mirror may be adjusted annularly of the shell.

7. The combination with an automobile spotlight, of a rear-view mirror fitted adjustably upon one side thereof, said mirror being provided with front and rear extensions which adjustably engage front and rear portions, respectively, of the lamp body, to admit of the mirror being annularly shifted upon the lamp about the axis thereof.

[Claims 2 and 4 to 6 not printed in the Gazette.]

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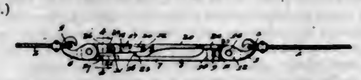
1,230,145. ROLLER-BEARING. EDWARD S. FOLK, Canton, Ohio. Filed Apr. 6, 1917. Serial No. 160,108. (Cl. 64—62.)



An integral metal cage for roller bearings having a series of spaced, longitudinally disposed slots formed therein, outwardly disposed flanges provided along the edges of said slots, and an outwardly turned annular bead formed upon each edge of said cage adapted to surround the pintles of the rollers.

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1,230,146. COUPLING. ALFRED S. FRIEZE, Fossil, Oreg. Filed Nov. 29, 1916. Serial No. 134,022. (Cl. 24—68.)



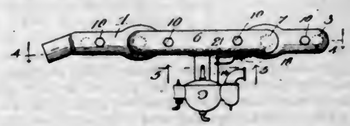
2. In a coupling, the combination with a main bar, of a connecting member secured to one end of the bar, a head having slidable engagement with the other end of the bar and completely detachable therefrom, a connecting member secured to the head, a lever pivotally secured to the bar and adapted to have detachable locking engagement with the latter and a link pivotally secured to the head and adapted to detachably engage the lever whereby the head can be drawn into fixed engagement with the bar.

3. In a coupling, the combination with a bar member having a connecting portion at one end thereof, of a head member having a connecting portion and having sliding engagement with the bar, said members being locked against pivotal movement relative to each other when in engagement and an unlocking lever pivoted to one member and detachably engaging the other.

[Claims 1 and 4 not printed in the Gazette.]

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1,230,147. MEANS FOR SUPPLYING FUEL MIXTURE TO GAS-ENGINES. HENRY J. GAISMAN, Woodmere, N. Y. Filed Mar. 13, 1916. Serial No. 83,753. (Cl. 261—39.)



1. The combination of a manifold having a passage for mixture, means to heat said passage, a carbureter communicating with said passage, a valve to control the flow of fuel in the carbureter for the mixture, and a thermal element operatively connected with said valve and controlled by the temperature of the mixture due to its thermal relation to said heating means.

2. The combination of a manifold having a passage for exhaust gases, a passage for mixture in thermal relation thereto, a carbureter communicating with the second named passage, a valve to control the flow of fuel to the carbureting chamber and a thermal element connected to said valve and controlled by the resultant temperature due to the thermal relation of the mixture to the exhaust gases.

3. The combination of a manifold having a passage for mixture, means to heat said passage, a carbureter communicating with said passage, a valve to control the flow of fuel in the carbureter for the mixture, a thermal element operatively connected with said valve and controlled by the temperature of the mixture due to its thermal relation to said heating means, and means for adjusting the valve with respect to the thermal element.

4. The combination of a manifold having a passage for mixture, means to heat said passage, a carbureter communicating with said passage, a valve to control the flow of fuel in the carbureter for the mixture, a thermal element operatively connected with said valve and controlled by the resultant temperature of the mixture due to its thermal relation to said heating means, means for adjusting the valve with respect to the thermal element, and a spring interposed between the thermal element and the valve for retaining the valve in set position.

5. The combination of a manifold having a passage for exhaust gases and a passage for mixture in thermal relation thereto, a carbureter communicating with the second named passage and having a fuel orifice, a valve to control the flow from said orifice, and a thermostat operatively connected with said valve and controlled by the resultant temperature due to the thermal relation of the mixture to the exhaust gases for causing movement of the valve to reduce the flow from the orifice when the thermostat is heated.

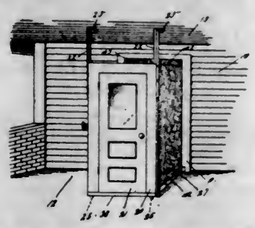
[Claims 6 and 7 not printed in the Gazette.]

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1,230,148. STORM-DOOR. BURTON HERBERT GEDGE, Anderson, Ind. Filed Mar. 22, 1916. Serial No. 85,767. (Cl. 20—2.)

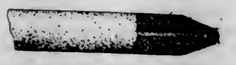
1. A storm door, comprising a door frame, a door mounted therein, said door frame being provided with downwardly projecting pins for projecting into holes in the porch floor and with rearwardly projecting fingers for projecting rearwardly into eyes in the porch ceiling,

spacing bars from points on the door frame, said spacing bars being provided with downwardly projecting fingers for projecting downwardly into eyes on the house wall, and canvas walls and ceiling mounted on said door frame and spacing bars.



2. A storm door, comprising a door frame, a door mounted therein, said door frame being provided with downwardly projecting pins for projecting into holes in the porch floor and with fingers for projecting into eyes in the porch ceiling, spacing bars from points on the door frame, said spacing bars being provided with fingers for projecting into eyes on the house wall, and canvas walls and ceiling mounted on said door frame and spacing bars.

1,230,149. WRITING IMPLEMENT OR DEVICE. WILLIAM C. GEER, Akron, Ohio. Continuation in part of application Serial No. 75,099, filed Jan. 29, 1916. This application filed Apr. 9, 1917. Serial No. 160,869. (Cl. 106—5.)

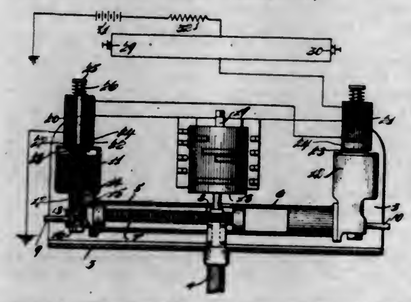


1. A writing implement, comprising a body susceptible of being worn away by friction, said body being cellular and the cells being filled with ink.

12. A writing implement, consisting of a body composed of a mixture of carnauba wax and finely-ground pumice-stone, the body having a series of small cells distributed throughout the same, said cells being filled with writing fluid.

[Claims 2 to 11 not printed in the Gazette.]

1,230,150. AUXILIARY DEVICE FOR AUTOMATIC ELECTRIC CONTROL SYSTEMS. JAMES V. GERAGHTY, New York, N. Y.; Julia M. Geraghty administratrix of said James V. Geraghty, deceased. Filed Jan. 5, 1916. Serial No. 70,346. (Cl. 137—4.)



1. An auxiliary device for motor control systems, which comprises, in combination with the valve magnets for controlling the operation of said system, manually controlled means mounted on said magnets, and operable by said motor control system, for actuating said valves at will.

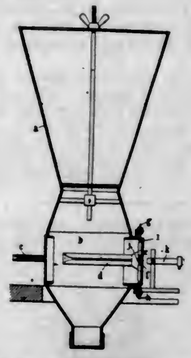
5. An auxiliary device for motor control systems, which comprises, in combination with the valve magnets for controlling the operation of said system, valve stems projecting beyond the cores of said magnets, and means, controlled by the operator, and operable by said motor control system, to move said projecting ends inwardly at will.

6. An auxiliary device for motor control systems, which comprises in combination with the valve magnets for controlling the operation of said system, an electromagnetic devices connected with the main circuit to actuate said valves at will.

9. An auxiliary device for motor control systems, which comprises in combination with the valve magnets for controlling the operation of said system, a solenoid mounted on each of said valve magnets and connected with the main circuit to actuate said valves at will.

[Claims 2 to 4, 7, 8, and 10 not printed in the Gazette.]

1,230,151. PROCESS FOR COVERING WITH A PROTECTIVE PLASTIC COATING FLATTENED STRIPS AND PRODUCT THEREOF. EDGAR GUICHARD, Etampes, France. Filed Sept. 9, 1914. Serial No. 860,854. (Cl. 91—68.)



1. A process for covering flattened strips consisting in coating the strips with material by a single operation so that the thickness of the covering at the edges is greater than in the middle.

2. A process for covering flattened strips consisting in coating the strips with plastic material by a single operation so that the thickness of the covering decreases uniformly from the longitudinal edges toward the middle of the strip.

3. A process for covering flattened strips which consists in covering the strips with plastic material, scraping off the excess of material from the strip in such a way that a larger quantity of the covering substance will remain on the edges of the strip than on the face thereof and the covering formed will greatly increase from the middle to the edges of the strip.

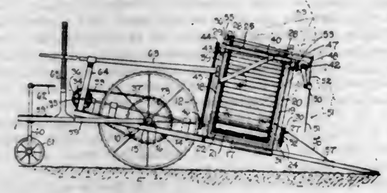
4. A process for coating flattened strips which consists in covering the strips with plastic material, then scraping off the excess of plastic material to form a coating on the strip, the thickness of which increases gradually from the middle to the edges of the strip, then drying the strip, the coating at the edges being of such a thickness that under contraction its thickness will not become less than the thickness of the coating in the middle of the strip.

5. A flattened strip having a seamless, incasing coating, the cross section of which coating gradually increases from the middle to the edges thereof.

1,230,152. COMBINED HAY RAKE AND LOADER. JAMES A. HADLEY, Swanlake, Idaho. Filed Nov. 1, 1916. Serial No. 128,960. (Cl. 56—61.)

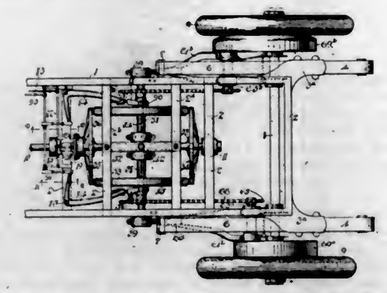
A rake and elevator comprising a wheeled supporting frame, a transversely extending carrier mounted at the forward end of the frame and extending upward at one end, gathering fingers supported in front of the carrier, a cranked shaft operatively supported upon the frame of the machine and having a plurality of cranked portions extending transversely across the gathering fingers at the rear end thereof and adjacent the carrier, a sleeve rotatably





mounted on each cranked portion of the shaft and each sleeve having an upward extension, rake teeth adjustably mounted in said sleeves, links operatively connected to each upward extension and pivotally supported at their rear ends, means for raising or lowering the forward end of the frame, and means for operating the carrier and the crank shaft.

1,230,153. DRIVING-GEARING FOR VEHICLES. ALONZO W. HALL, Plymouth, Ohio. Filed May 4, 1911. Serial No. 625,031. (Cl. 74—26.)



1. In a self propelled vehicle, in combination, a main shaft, a pair of opposed friction plates carried by said shaft, a transverse shaft between said plates, a friction disk on said transverse shaft and mounted between said plates within the peripheries thereof, a driven wheel operatively connected to said transverse shaft, and means for shifting said main shaft in the direction of its length to bring either of said plates into driving contact with said friction disk for operating said driven wheels in either direction.

2. In a self propelled vehicle, in combination, a main shaft, a pair of opposed friction plates carried by said shaft, a transverse shaft between said plates, a friction disk slidably but not rotatably sleeved on said transverse shaft and mounted between said plates within the peripheries thereof, a driven wheel operatively connected to said transverse shaft, means for shifting said main shaft in the direction of its length to bring either of said plates into driving contact with said friction disk for operating said driven wheels in either direction, and means for shifting said disk along said transverse shaft for varying the speed of such operation.

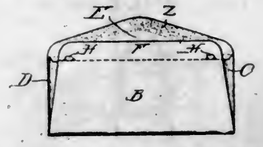
3. In a self propelled vehicle, in combination, a main shaft, a pair of opposed friction plates carried by said shaft, a transverse shaft on each side of said main shaft between said plates, a friction disk on each of said transverse shafts and mounted between said plates within the peripheries thereof, a pair of driven wheels, means for transmitting the motion of each of said transverse shafts to one of said driven wheels, said means being so designed as to cause said wheels to rotate in the same direction, and means for shifting said main shaft in the direction of its length to bring either of said plates into driving contact with both of said friction disks for rotating said driven wheels in either direction.

4. In a self propelled vehicle, in combination, a main shaft, a pair of opposed friction plates carried by said shaft, a transverse shaft on each side of said main shaft between said plates, a friction disk slidably but non-rotatably sleeved on each of said transverse shafts and mounted between said plates within the peripheries thereof, a pair of driven wheels, means for transmitting the motion of each of said transverse shafts to one of said driven wheels, said means being so designed as to cause said wheels to rotate in the same direction, means for shifting said main shaft in the direction of its length to bring either of said plates into driving contact with both of said friction disks for rotating said whels in either direction, and means for simultaneously shifting said disks toward and from each other along said transverse shafts for varying the speed of such rotation.

5. In a self propelled vehicle, in combination, a main shaft, a friction plate carried by said shaft, a transverse shaft on each side of said main shaft, a friction disk on each of said transverse shafts and adapted to have its edge brought into contact with the face of said plate, said friction disks being disposed within the periphery of said plate, a driven wheel operatively connected to each of said transverse shafts, and means adapted to automatically equalize the pressure of said disks against said plate.

[Claims 6 to 19 not printed in the Gazette.]

1,230,154. ENVELOP. WALTER F. HAMMELL, Chicago, Ill., assignor, by mesne assignments, to Neostyle Envelope Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 13, 1913. Serial No. 806,435. (Cl. 229—76.)



1. An envelop having front and back portions, and an end portion interposed between said front and back portions, the back portion being provided with a locking flap folded inwardly toward the front portion and against the back, whereby the end portion is embraced between said back and flap, the locking flap and end portions being provided respectively with a coöperating aperture and projection whereby they may be brought into engagement.

2. An envelop having front and back portions and an end portion, the back portion being provided with a locking flap folded inwardly toward the front portion and against the back whereby the end portion is embraced between said back and flap, the locking flap and end portions having coöperating aperture and projection engagement, and the front being provided with a sealing flap having an adhesive for engaging the back of the envelop, and covering said aperture and projection engagement.

3. An envelop having front and back portions and an end portion, the back portions being provided with a locking flap folded inwardly toward the front portion and against the back whereby the end portion is embraced between said back and flap, the locking flap and end portions having coöperating aperture and projection engagement, and the front being provided with a sealing flap having an adhesive for engaging the back portion only, the end portion being left free from adhesive engagement with any part of the envelop, whereby it may readily be withdrawn.

4. An envelop having front and back portions and a pair of oppositely disposed end portions, the back being provided with a locking flap folded inwardly toward the front portion and against the back, whereby one of the end portions is embraced between said back and flap, said

locking flap and one of said end portions having coöperating aperture and projection engagement, said back being also provided with an adhesive engagement with one of said end portions, the other end portion being left free to be pulled out.

5. An envelop having front and back portions and a pair of oppositely disposed end portions, the back being provided with a locking flap folded inwardly toward the front portion and against the back, whereby one of the end portions is embraced between said back and flap, said locking flap and one of said end portions having coöperating aperture and projection engagement, the front being provided with a sealing flap having an adhesive for engagement with said back portion only, one of the end portions being left free from adhesive engagement so that it may be pulled out.

[Claims 6 to 17 not printed in the Gazette.]

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1,230,155. TRIPLE-PISTON DEEP-WELL PUMP. LORENZO T. HAMMOND, Cotuit, Mass. Filed Feb. 16, 1916. Serial No. 78,759. (Cl. 103—82.)



1. In a device of the class described, the combination of a tube; three alined plungers therein, each plunger being provided with a valve normally closed; a threaded nut secured to the under side of the lower plunger; a check valve at the bottom of said tube provided with a threaded projection adapted to be screwed into said nut and extend therethrough; a movable member carried by the lower plunger adapted to be engaged by said projection and open the valve in said plunger; operating members secured to said plungers; and projections on the operating members of the lower and intermediate plungers for opening the valves in the intermediate and upper plungers respectively when the latter plungers are moved into contact with the first mentioned plungers.

2. In a device of the class described, the combination of a tube; three alined plungers therein, each plunger being provided with a valve normally closed; a threaded nut secured to the under side of the lower plunger; a check valve at the bottom of said tube provided with a threaded projection adapted to be screwed into said nut and extend therethrough; a movable member carried by the lower plunger adapted to be engaged by said projection and open the valve in said plunger; operating members, secured to said plungers; and annular cam projections on the operating members of the lower and intermediate plungers for opening the valves in the intermediate and upper plungers respectively when the latter plungers are moved into contact with the first mentioned plungers.

3. In a device of the class described, the combination of a tube; three alined plungers therein, each plunger being provided with a valve normally closed; operating members secured to said plungers; and annular cam projections on the operating members of the lower and intermediate plungers for opening the valves of the intermediate plungers respectively when the latter plungers are moved into contact with the first mentioned plungers.

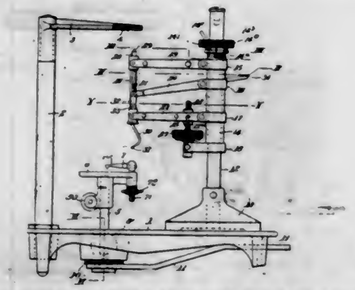
4. In a device of the class described, the combination of a tube; three alined plungers therein, each plunger being provided with a valve normally closed; operating members secured to said plungers; annular cam projections on the operating members of the lower and intermediate plungers for opening the valves of the intermediate plungers respectively when the latter plungers are moved into contact with the first mentioned plungers; and means for opening the valves of the lower plunger when it is about to reach its extreme lowest position.

5. In a device of the class described, the combination of a tube; three alined plungers therein, each plunger being provided with a valve normally closed; operating members secured to said plungers; annular cam projections on the operating members of the lower and intermediate plungers for opening the valves of the intermediate plungers respectively when the latter plungers are moved into contact with the first mentioned plungers; and a movable member carried by the lower plunger for opening the valves thereof when said plunger is about to reach its extreme lowest position.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,156. DENTAL SURVEYING APPARATUS. RUDOLPH L. HANAU, New York, N. Y., assignor to Frederick Lester Stanton, New York, N. Y. Filed Apr. 19, 1915. Serial No. 22,429. (Cl. 33—24.)



1. The combination with a supporting means for a sheet of paper, of means for holding an article to be surveyed, an indicator and means to support the same, means for vertically adjusting the indicator, whereby it may be brought into contact with a point on the article, and an axially movable member on said indicator for marking the point on the paper.

2. The combination with a supporting means for a sheet of paper, of means for holding an article to be surveyed, an indicator and means to support the same, means for vertically adjusting the indicator, whereby it may be brought into contact with a point on the article, means for indicating the altitude of said point, and an axially movable member on said indicator for marking the location of said point on the paper.

3. The combination with means for holding an article to be surveyed, of a swinging member, a support therefor, an indicator carried by the swinging member and adapted to be brought into contact with a point on the article, means for moving said swinging member to bring the indicator into contact with said point and means for indicating the relative altitude of the indicator in different vertical positions.

4. The combination with means for holding an article to be surveyed, of a standard, a pair of arms pivotally connected to said standard, an indicator, means for pivotally carrying the indicator at the outer ends of said arms whereby said indicator may be brought into contact with a point on the article, a screw carried by the standard and having threaded connection with one of the arms for moving the indicator into contact with said point, said screw having a scale thereon, and a pointer on the arm for coöperating with said scale for indicating the altitude of said point.

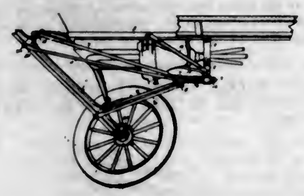
5. The combination with means for holding an article to be surveyed, of a standard, a pair of arms pivotally connected to the standard, a sleeve pivotally carried by the outer ends of said arms, an indicator on one end of said sleeve and adapted to be brought into contact with a point on the article, means for indicatnig the relative altitude of the indicator in different vertical positions, a plate for holding a sheet of paper above the article supporting means, and an axially movable rod fitted in said sleeve for marking said point on the paper.

[Claim 6 not printed in the Gazette.]



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1,230,157. RADIUS-ROD. FREDERICK E. HARPST, Lufkin, Tex. Filed Oct. 31, 1916. Serial No. 128,717. (Cl. 21—182.)



1. A device of the character described including two upper and two lower members secured at their forward ends to the front axle of the vehicle, said members converging and their rear ends being secured together forming a truss the lower members being fixed relative to the front axle and the upper members being adjustable relative thereto, a hanger secured to the vehicle frame and a yieldable connection between the rear ends of said members and said hanger.

2. A device of the character described including a truss structure composed of two upper and two lower members connected at their forward ends to the front axle of a vehicle and their rear ends converging and being secured to a cross head, means for adjusting the forward ends of the upper members relative to the axle, a hanger having a bearing, a bearing member secured to the cross head and operating through said bearing and a yieldable member interposed between said cross head and bearing.

3. A radius rod composed of side members attached at their forward ends to the front axle of a vehicle and their rear ends converging and being secured together, a bearing secured to and depending from the vehicle frame, a bearing member secured to the rear ends of the said side members and operating through said bearing and a plurality of yieldable members of unequal resistance interposed between said radius rod and said bearing.

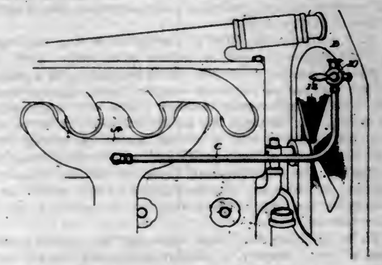
4. A device of the character described including a truss composed of two upper and two lower members connected at their forward ends to the front axle of the vehicle and their rear ends converging and being pivoted to a cross head, a hanger having a bearing, a bearing member pivoted to the cross head and operating through said bearing, and a yieldable member interposed between said cross head and bearing.

5. A device of the character described including a truss whose arms are connected at their free ends to the front axle of the vehicle, a central hanger depending from the vehicle and having a bearing, a bearing member secured to said truss and operating through said bearing and a yieldable member interposed between said truss and bearing.

[Claim 6 not printed in the Gazette.]

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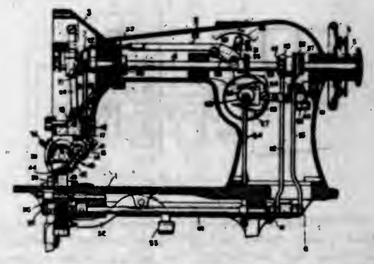
1,230,158. ATTACHMENT FOR GASOLENE-ENGINES. GEORGE D. HARTLETT, Glenbrook, Conn., assignor of one-half to Edward C. Belling, New York, N. Y., and one-half to Hart-Bell Carbon Remover Company, Inc., New York, N. Y., a Corporation of New York. Filed Feb. 4, 1915. Serial No. 6,019. (Cl. 123—25.)



An attachment for gasolene engines comprising a pipe leading from the radiator to the intake manifold with a discharge nipple projecting into said intake manifold and formed with a small "drip" outlet, and a valve for controlling communication between said radiator and said manifold formed with a casing having a cup-shaped top, said valve being formed to be turned to establish communication either between radiator and the intake manifold, or betwen said cup-shaped receptacle and the intake manifold, substantially as set forth.

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1,230,159. BLINDSTITCH SEWING-MACHINE. THOMAS J. HAYES, Boston, Mass., assignor to Arbetter Felling Machine Company, Boston, Mass., a Corporation of Maine. Filed Aug. 14, 1913. Serial No. 784,687. (Cl. 112—24.)



1. In a machine for blind stitching having a work support, a curved oscillating needle, and complemental stitch forming mechanism located above said work support, and means for feeding the work across said support, means for supporting the needle comprising a sliding carriage having a downwardly projecting bracket, an inclined pivot on said bracket, a needle bar pivotally mounted thereon so that the plane of oscillation of the needle is obliquely and uniformly inclined to the work support, means for reciprocating said carriage and means for oscillating the needle to produce two rows of stitches.

2. In a machine for blind stitching for felling the edge of a superimposed layer or layers to a main layer of material comprising a curved oscillating needle and complemental stitch forming mechanism, a movable needle-guide and means for causing the same to enter beneath the edge of the superimposed fabric sufficiently to permit the needle to penetrate and emerge from the same at points beneath the displayed edge thereof, whereby the ends of the stitch, or the ends of the portion of the thread embedded in the superimposed layer or layers, are beneath the upper surface thereof.

3. In a machine for blind stitching, comprising a work support, a curved oscillating needle and complemental stitch forming mechanism located above said work support, means for feeding the work across said support, a sliding carriage upon which said oscillating needle is mounted, means for reciprocating said carriage, a needle-guide secured to said carriage and partaking the lateral movements of the needle.

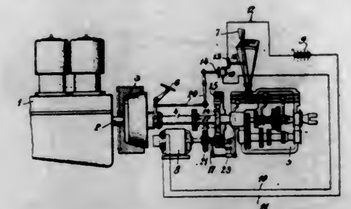
4. In a machine for blind stitching for felling the edge of a superimposed layer or layers to a main layer of material, comprising a curved needle oscillating in a plane obliquely inclined to the work support, and complemental stitch forming mechanism located above said work support, means for moving the needle laterally relative to said work support, and a needle guide partaking the lateral movement of the needle adapted to pass beneath the edge of the superimposed layer or layers, whereby the points of entrance and emergence of the needle and consequently the ends of the stitch are beneath the upper surface thereof.

5. In a machine for blind stitching for felling comprising a work support, a curved oscillating needle and complemental stitch mechanism located and operating above said work support, means for feeding material across said work support, a presser foot having a bifurcated end forming toes, a projection extending upwardly and laterally from the inner side of the outer toe, a relatively movable needle-guide adapted to cooperate with said projection to support the edge of the superimposed layer so that the needle is caused to enter and emerge from the under surface of the superimposed layer.

[Claims 6 to 13 not printed in the Gazette.]

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1,230,160. STARTING INTERNAL-COMBUSTION ENGINES. OTTO HEINS, Edgewater, N. J., assignor to Bosch Magneto Company, New York, N. Y., a Corporation of New York. Filed Oct. 28, 1912. Serial No. 728,164. (Cl. 172—239.)



1. The method of reducing the maximum power output required from a motor in starting an internal combustion engine from rest to initiate the normal cycle of operations of the engine, which consists in utilizing the motor to first rotate a separate rotatable element disconnected from the engine until a suitable amount of energy of rotation is stored in the rotating parts, and then increasing the power output of the motor and using the increased power output together with the stored energy to start the engine; substantially as described.

2. In apparatus for starting internal combustion engines from rest to initiate the normal cycle of operations thereof, a starting motor, a rotatable element in which the power output of the motor may be accumulated in the form of energy of rotation, a driving connection between the motor and the rotatable element, and means for simultaneously increasing the effective power output of the motor and connecting the motor and the rotating element to the engine to start it; substantially as described.

3. In apparatus for starting internal combustion engines from rest, a rotatable element effective at normal speed to store sufficient kinetic energy to form a substantial part of the power required to start the engine from rest, a clutch for connecting the rotatable element to the engine, a starting motor having a driving engagement with the rotatable element and adapted to rotate the latter at said normal speed, and power increasing means operative during the starting period to increase the effective output of the motor; substantially as described.

5. In apparatus for starting internal combustion engines from rest, a rotatable element effective at normal speed to store sufficient kinetic energy to form a substantial part of the power required to start the engine from rest, a starting motor, a driving connection between the motor and the rotatable element whereby the motor is adapted to rotate the latter at said normal speed, a clutch for operatively connecting the rotatable element to the engine while the rotatable element is being driven by the motor, and means operative upon clutching the rotatable element to the engine to increase the effective power output of the motor; substantially as described.

5. In apparatus for starting internal combustion engines from rest, an intermediate driving shaft 4, a starting motor, a disengageable driving connection between the motor and the shaft 4, a clutch for connecting the shaft 4 to the engine and for disconnecting it therefrom, and means automatically disconnecting the motor from the shaft 4 at all times that the speed of the latter is greater than a predetermined value; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

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1,230,161. VALVE. FOSTER J. HERRON, Sherodsville, Ohio. Filed Aug. 11, 1916. Serial No. 114,447. (Cl. 123—190.)



1. In an internal combustion engine, a rotary valve in the form of a cylinder having transversely extending passages, and a packing device associated with the valve adjacent each passage comprising pairs of rings adjacent the ends of the passages, each ring being offset at one portion of its circumference, the diametrically opposed point of each ring being severed, and the pairs of rings being disposed with the offset portion of one disposed in the severed portion of the other, and bars connecting the rings of opposed pairs, said bars being disposed adjacent the longitudinal edges of the passages to form a packing therefor.

[Claim 2 not printed in the Gazette.]

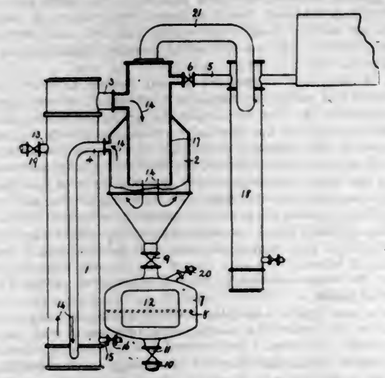
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1,230,162. PROCESS FOR SEPARATING SODIUM CHLORID FROM LIQUORS CONTAINING IT AND SODIUM NITRATE IN SOLUTION. ISIDORE BERKWOOD HORSBAWM, London, and JAMES L. GRIGIONI, Richmond, England. Filed May 20, 1915. Serial No. 29,443. (Cl. 23—13.)

1. An evaporation process for separating sodium chlorid from liquors containing it and sodium nitrate in solution, consisting in concentrating and raising the temperature of the liquor to the point at which sodium chlorid is insoluble in the nitrate solution and maintaining the liquor at such temperature while the sodium chlorid is settling, which latter is then removed and washed.

2. An evaporation process for separating sodium chlorid from liquors containing it and sodium nitrate in solution, consisting in concentrating and raising the temperature of the liquor to the point at which sodium chlorid is insoluble in the nitrate solution and maintaining the liquor at such temperature while the sodium chlorid is settling and thereafter filtering off the hot nitrate containing liquor without reducing its temperature.

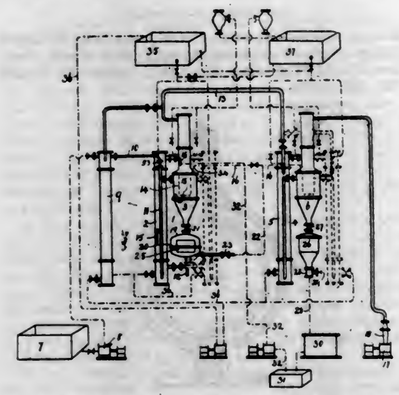
3. A continuous process for desalting liquor containing sodium chlorid and sodium nitrate in solution, consisting in providing a constant flow of the liquor to be desalted to an evaporator at a rate faster than that at which the evaporation therein is being effected—while maintaining the temperature of the liquor at a point at which sodium chlorid is insoluble in the solution—so that a constant deposition of the sodium chlorid takes place



and an average level of the liquor is maintained notwithstanding intermittent removal from the evaporator of the deposited sodium chlorid and of desalted liquor.

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1,230,163. PROCESS OF RECOVERING SODIUM NITRATE FROM LIQUORS CONTAINING IT AND SODIUM CHLORID IN SOLUTION. ISIDORE BERKWOOD HORSBAWM, London, and JAMES L. GRIGIONI, Richmond, England. Filed May 20, 1915. Serial No. 29,444. (Cl. 23—13.)



1. A two-stage evaporation process for recovering sodium nitrate from liquors containing it and sodium chlorid in solution during the first of which the liquor in a suitable evaporator is concentrated and its boiling point raised to a temperature at which substantially the whole of the sodium chlorid will be rendered insoluble, and while maintaining said liquor at such temperature transferring the hot supernatant and desalted liquor to another evaporator and therein immediately subjecting it to further evaporation by boiling to thereby bring about the crystallization of the sodium nitrate.

2. A process for recovering sodium nitrate from liquors containing it and sodium chlorid in solution, consisting in insolubilizing the sodium chlorid by concentrating and raising the boiling point of the liquor to the point at which sodium chlorid is insoluble in the nitrate solution and, after allowing the sodium chlorid to settle, subjecting the desalted liquor to further evaporation by boiling.

3. A process for recovering sodium nitrate from liquors containing it and sodium chlorid in solution, consisting in desalting the liquor by concentrating it and raising its boiling point at one pressure to substantially the point at which sodium chlorid is insoluble in the nitrate solution, and thereafter subjecting the desalted liquor to further evaporation by boiling at a desired less pressure.

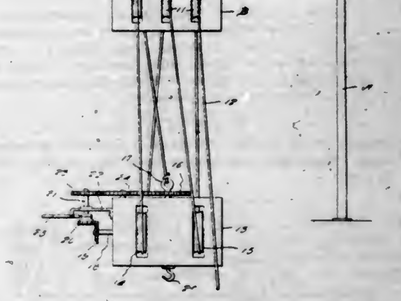
4. A process for recovering sodium nitrate from liquors containing it and sodium chlorid in solution, consisting in insolubilizing the sodium chlorid by concentrating and raising the boiling point of the liquor in an evaporator working at one pressure to substantially the point at which sodium chlorid is insoluble in the nitrate solution and thereafter transferring the desalted liquor to another evaporator working at a desired less pressure and therein subjecting the liquor to further evaporation by boiling.

5. A process for recovering sodium nitrate from liquors containing it and sodium chlorid in solution, consisting in a two-stage evaporation of the liquor, during the first of which the liquor is concentrated in an evaporator working at one pressure and its boiling point raised to the point at which sodium chlorid is insoluble in the nitrate solution, and during the second of which, the desalted liquor, after having been transferred to another evaporator working at a less pressure, is subjected to further evaporation by boiling, the necessary heat being provided by the hot vapor given off in the first evaporator.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,164. BLOCK AND TACKLE. WILLIAM HOOD, Hempstead, N. Y. Filed Sept. 16, 1916. Serial No. 120,489. (Cl. 254—188.)



1. The combination with a tackle and hoisting cable working therein, of a controlling device comprising a block, pulleys arranged within the block over which the cable is trained, a rotary element supported upon the block and having a connection with one end of the cable and means connecting one of the pulleys in the block with the rotary element for imparting movement to the latter when the cable is active.

2. The combination with a tackle and hoisting cable working therein, of a controlling device comprising a block, pulleys arranged within the block over which the cable is trained, a rotary element supported upon the block and having a connection with one end of the cable and means connecting one of the pulleys in the block with the rotary element for imparting movement to the latter when the cable is active, and means for throwing the connecting means between the pulley and rotatable element into and out of action.

3. In a tackle having a hoisting cable, rotatable means carried upon the tackle and having connection with one

end of the cable for rotating said end of the cable when active, means on the tackle for controlling the first named means to render the same inoperative upon the cable and guides in the tackle for the cable.

4. In a tackle having a hoisting cable working therein, of a controlling device comprising rotatable means having connection with the cable for rotating the free end thereof, guides for the said cable and connections between one of the guides and the rotatable means to operate the same when the cable is active to rotate said means.

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1,230,165. SHUTTER FOR ORGAN SWELL-BOXES. ROBERT HOPE-JONES, North Tonawanda, N. Y.; Cecil Hope-Jones, temporary administrator of the personal estate of said Robert Hope-Jones, deceased. Filed Feb. 12, 1914. Serial No. 818,195. (Cl. 84—23.)



1. A shutter for sound proof boxes, consisting of a plurality of spaced plates, connected together at their central portions and disconnected at their lateral edges, the adjacent plates having different vibration frequencies.

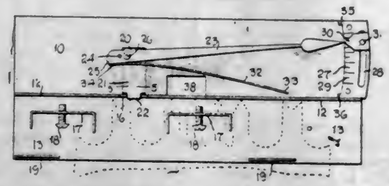
2. A shutter for sound proof boxes, consisting of a plurality of plates, and spacing members interposed between adjacent plates and secured thereto, said spacing members together with the included portion of a plate affording a bearing support.

3. A shutter for sound proof boxes, consisting of a plurality of plates and spacing members interposed between the plates remote from the lateral edges thereof, the plates being disconnected at their lateral edges and the portions of adjacent plates at the same side of the spacing members extending laterally different distances from said members.

4. A shutter for sound proof boxes, consisting of a plurality of plates composed of a series of laminations and spacing members extending longitudinally of the plates remote from the lateral edges, and secured thereto, said spacing members together with the included portion of a plate affording a bearing support.

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1,230,166. SAW-GAGE. RICHARD C. HUNGER, Manning, Oreg. Filed May 13, 1916. Serial No. 97,393. (Cl. 76—46.)



1. A saw gage comprising a body having a flange cut away at one point and adapted to rest upon the teeth of a saw, saw supporting ribs mounted on the face of the body, a raker tooth-engaging member shiftably mounted on the body above the cut-away portion of the flange and resiliently urged through said opening of the flange, a pointer operatively mounted upon the body and operatively connected to the tooth engaging member, and a scale over which the pointer moves.

2. A saw gage comprising a body having a flange cut away at one point, the flange being adapted to rest upon the teeth of a saw to permit the projection of a raker tooth through the cut-away portion of the flange, a raker tooth-engaging member slidably mounted on the body above the flange and resiliently urged downward through the opening in the flange, a pointer pivotally mounted upon the body and pivotally connected to the sliding member, the pivotal connection of the pointer to the body and to the sliding member being adjacent each other, a scale mounted on the body over which the free end of the pointer moves, and an indicating member shiftable along said scale.

3. A saw gage comprising a body having a flange cut away at one point, the flange being adapted to rest upon the teeth of the saw to permit the projection of a raker tooth through the opening in the flange, the body having a vertical slot disposed above the opening in the flange, a slide mounted in said slot, a pointer pivotally mounted upon the body extending across the face thereof and pivotally connected to the slide, the butt end of the pointer extending beyond its pivotal connection with the body, a spring mounted upon the body, extending across the face of the slide and having its free end formed with a lug engaging beneath the butt end of the pointer whereby to urge the slide downward, and a scale over which the pointer moves.

4. A saw gage comprising a body having a flange cut away at one point, the flange being adapted to rest upon the teeth of a saw, a flat slotted plate disposed against the tooth contacting face of the flange and extending across said cut-away portion, the body having a rectangular file guiding opening disposed opposite said plate.

5. A body consisting of upper and lower webs and having an outwardly projecting flange at the intersection of said webs, the flange being cut away at its middle, the flange being adapted to rest against the edges of the saw teeth, a slotted plate disposed across the opening in the flange and bearing against the tooth contacting face thereof, the upper web having a file opening disposed in line with the slot of said plate and the lower web being formed with saw supporting ribs.

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1,230,167. CONTINUOUS-FLOW WATER-HEATER. JAMES DOWSON JACKSON, Sydney, New South Wales, Australia. Filed Sept. 23, 1915. Serial No. 52,230. (Cl. 122—155.)



1. In a continuous flow water heater, concentric water passages, a bifurcated flue passage formed between said water passages, the limbs of said flue passage being of equal length and cross-sectional area, a common supply connected at the bottom of said water passages, a fire box arranged in a space forming the continuation of said flue passage, and an exit communicating at the top of said flue passage.

2. In a continuous flow water heater, concentric water passages whereby an annular chamber is formed, peripheral partitions to form a series of bifurcated flue passages, the limbs of said flue passages being of equal length and cross-sectional area, the fire box communicating at the bottom with said flue passages and an exit connected at the top to said flue passages.

3. In a continuous flow water heater, concentric water passages, a bifurcated flue passage within the annulus to form opposite water passages, a horizontal fire box at the junction of said flue passage, and a flue exit disposed at the top end of said flue passage and in the same vertical plane as said fire box, said flue exit having the same cross-sectional area as the bifurcated flue passage.

4. An improved continuous flow water heater, comprising a pair of concentric water passages, a water jacket communicating with the outer of said water passages, a fire box within said water jacket, a bifurcated flue passage originating at said fire box and surrounding the inner of said water passages, an exit connected to said flue passage, a horizontal flue interposed in the connection between the exit and said flue passage, said horizontal flue being of equal cross-section and sectional areas of the bifurcated flue passages and being in communication with the atmosphere, water supply pipes connected to said water jacket and to the inner of said water passages, and a common delivery conductor connected to said water passages.

5. In a continuous flow water heater, concentric water passages whereby an annular chamber is formed, partitions to form a vertical series of bifurcated flue passages, said partitions having staggered projections on opposing faces so as to provide circuitous paths for the heat passing therethrough, a fire box communicating at the bottom with said flue passages, and an exit connected at the top to said flue passages.



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1,230,168. COTTON-PICKING NEEDLE. BILLIE JOHNSON, Temple, Tex. Filed Oct. 13, 1916. Serial No. 125,444. (Cl. 56—118.)



1. A needle for cotton picking machines, including a tongue having opposed convex faces describing portions of a cylindrical surface concentric with the longitudinal axis of the tongue, there being a longitudinal slot extending through the tongue and between said faces, and a blade secured within the slot and having opposed series of teeth curved toward the free end of the tongue and having their terminals in the cylindrical surface of the convex faces of the tongue, there being a guard disk at that end of the blade within the free end portion of the tongue, the diameter of the disk being equal to the greatest diameter of the tongue.

2. In a cotton picking machine, a picking needle including a cylindrical body, a tongue extending therefrom, there being a longitudinal slot within the tongue, a blade secured within the slot and having opposed series of teeth curved in the direction of the free end of the tongue, the points of the teeth being flush with the surface of the body portion of the needle, and a guard within the free end portion of the tongue and of a diameter equal to the diameter of the body.

3. In a cotton picking machine, a picking needle including a cylindrical body, a tongue extending therefrom, there being a longitudinal slot within the tongue, a blade secured within the slot and having opposed series of teeth curved in the direction of the free end of the tongue, the points of the teeth being flush with the circumference of the body portion of the needle, and a guard within the free end portion of the tongue and of a diameter equal to the diameter of the body, those portions of the tongue at opposite sides of the series of teeth being shaped transversely to define agee curves.

4. A needle for cotton picking machines including a cylindrical body, a tongue projecting from one end of the body and having its opposed faces flush with the circumference of the body, said tongue having a longitudinal slot therein, a blade secured in the slot and having oppositely extending series of teeth, the teeth of each series being curved in the direction of the free end of the tongue and having their points in line with the periphery of the body, there being longitudinal recesses within the tongue adjacent each side of each series of teeth, and a guard within the free end portion of the tongue and of a diameter equal to the diameter of the body.

5. In a cotton picking machine, a needle including a cylindrical body having a tongue, there being a longitudinal slot within the tongue, oppositely extending series of curved teeth carried by the tongue and having their points in line with the periphery of the body, and a guard at the free end of the tongue and of a diameter equal to the body.

[Claim 6 not printed in the Gazette.]

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1,230,169. FIRE-ESCAPE. CHARLES W. JOHNSON, Orange, Mass. Filed Mar. 15, 1915. Serial No. 14,440. (Cl. 227—28.)

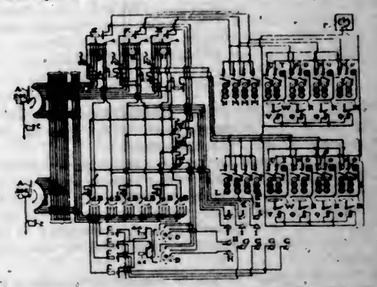


1. A friction block having a support securing means midway on its length, and having a series of transverse apertures disposed *en echelon*, said apertures being communicant by grooves arranged alternately at opposite sides of the block said block having end apertures disposed at right angles to the transverse apertures.

2. A friction block having a support securing means midway of its length, and having a series of transverse apertures spaced from each other both longitudinally and laterally of the block, and end apertures entering upon the side face of the block extending out of a common edge face at right angles to the face at which they enter the block whereby a rope reeved through all of the apertures will have its end portions emerge therefrom in substantially parallel lines.

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1,230,170. TELEPHONY. MORTON L. JOHNSON, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 5, 1913. Serial No. 759,026. (Cl. 179—27.)



1. A telephone exchange system including telephone lines extending from stations to an exchange; automatically operating switches for responsive devices; automatically operating switches for connecting calling telephone lines with idle operators' re-

sponsive devices; and additional automatically operating switches selectable by the aforesaid automatically operating switches when all of the responsive devices are in service and operating to connect operators' responsive devices with calling lines when such operators' responsive devices are freed.

2. A telephone exchange system including telephone lines extending from stations to an exchange; groups of link connectors for uniting lines in conversation; operators' responsive devices each common to the link connectors of a group; automatically operating switches for connecting calling telephone lines with idle operators' responsive devices; and additional automatically operating switches selectable by the aforesaid automatically operating switches when all of the responsive devices are in service and operating to connect operators' responsive devices with calling lines when such operators' responsive devices are freed.

3. A telephone exchange system including telephone lines extending from stations to an exchange; extensions for said telephone lines; automatically operating switches for connecting calling telephone lines with said extensions; and additional automatically operating switches selectable by the aforesaid automatically operating switches when all of the line extensions have been appropriated and operating to connect telephone line extensions with calling lines when such extensions are freed, there being means operated by the additional automatically operating switches for connecting the extensions with calling lines independently of the additional automatically operating switches.

4. A telephone exchange system including telephone lines extending from stations to an exchange; operators' responsive devices; automatically operating switches for connecting calling telephone lines with idle operators' responsive devices; and additional automatically operating switches selectable by the aforesaid automatically operating switches when all of the responsive devices are in service and operating to connect operators' responsive devices with calling lines when such operators' responsive devices are freed, there being means operated by the additional automatically operating switches for connecting the operators' responsive devices with calling lines independently of the additional automatically operating switches.

5. A telephone exchange system including telephone lines extending from stations to an exchange; groups of link connectors for uniting lines in conversation; operators' responsive devices each common to the link connectors of a group; automatically operating switches for connecting calling telephone lines with idle operators' responsive devices; and additional automatically operating switches selectable by the aforesaid automatically operating switches when all of the responsive devices are in service and operating to connect operators' responsive devices with calling lines when such operators' responsive devices are freed, there being means operated by the additional automatically operating switches for connecting the responsive devices with calling lines independently of the additional automatically operating switches.

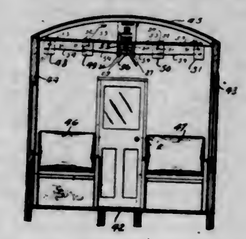
[Claims 6 to 26 not printed in the Gazette.]

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1,230,171. TRAIN CASH-REGISTER. AMEDEE B. JOHNSTON, San Francisco, Cal. Filed Apr. 20, 1916. Serial No. 92,422. (Cl. 235—30.)

1. A cash register for trains comprising a register, a plurality of sets of counter wheels therein, means to operate one or the other sets of counter wheels, an operating mechanism for said register extending through the car in which the register is installed, and a plurality of combined indicator and operating slides adjacent the several seats in the car.

2. A cash register for trains comprising a register having indicator wheels therein for tickets and for cash, a rod extending longitudinally of the car in which the register is installed for operating the register, and an indicator slide adjacent each seat in the car for operating said rod and for showing that the passenger has paid his fare.



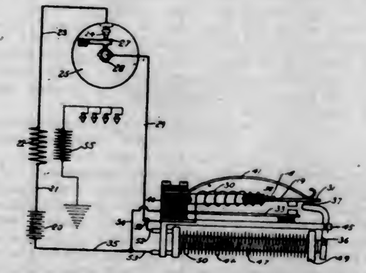
3. A cash register for trains comprising a register having a series of counter wheels therein for tickets and for cash, means for making the score of the cash counter wheels larger or smaller dependent upon the throw of the operating mechanism, a rod extending longitudinally of the car for operating the register mechanism, and a combined indicator and operating mechanism adjacent the several seats of the car, said operating mechanism consisting of a plurality of slides, a pivotally mounted bell crank lever and operating arms with which said slides are adapted to contact to move the operating rod in one direction or the other as may be required for the indication of tickets or cash.

4. A cash register for trains comprising a register having registering mechanism therein for cash and for tickets, a rod extending through the car, a combined operating mechanism and indicator adjacent the seats, said operating mechanism having a bell crank lever, the ends of which are connected by means of links to arms on said longitudinally extending shaft, slides carrying indicators, pins carried by said slides, and pivoted arms with which said arms contact for the operation of the cash register.

5. A train register comprising a register having counter wheels therein, and operating mechanism therefor extending through the car, said operating mechanism having indicators adjacent the several seats of the car for designating the persons who have paid.

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1,230,172. AUTOMATIC CIRCUIT-CONTROLLING DEVICE. JAMES H. KIEFER, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed Aug. 24, 1911. Serial No. 645,887. (Cl. 175—275.)



1. In a circuit controlling device, the combination with a source of electrical energy, and a main circuit connected therewith; of an automatic circuit breaker located in said main circuit and including a resistance which increases its resistance with increases of its temperature, said resistance operating upon said automatic circuit breaker to break the circuit through said resistance, upon an abnormal flow of current therethrough; said circuit breaker having provisions whereby the circuit through the resistance will be held open until the current in the main circuit is broken, when said provisions operate to re-establish the circuit through the resistance.

2. In a circuit controlling device, the combination with a source of electrical energy, and a main circuit connected therewith; of an automatic circuit breaker located in said main circuit and including an iron wire resistance connected in the main circuit, said circuit breaker also including a thermal device operated by the heating of the iron wire resistance to break the circuit through said resistance, upon an abnormal flow of current therethrough; said circuit breaker having provisions whereby the circuit through the resistance will be held open until the current in the main circuit is broken, when said provisions operate to reëstablish the circuit through the resistance.

3. In a circuit controlling device, the combination with a source of electrical energy; a main circuit connected therewith; a make and break device adapted to open and close the main circuit; of a member having a positive coefficient of resistance connected with said circuit; a thermostatic circuit breaker controlled by said member to break the circuit through said member, upon an abnormal flow of current therethrough; and means operable by current from the main circuit to maintain open the circuit through the member having a positive coefficient of resistance until the main circuit is broken.

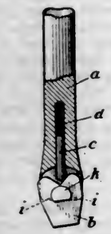
4. In a circuit controlling device, a make and break device located in said circuit and adapted to close and open said circuit; an automatic circuit breaker also located in said circuit and including provisions operable to break said circuit when an abnormal flow of current occurs therethrough, due to the retention of the make and break device in circuit closing position; and means operable by the circuit current to maintain said circuit breaker in open position, but to close said circuit breaker when said make and break device moves into its position to break the circuit.

5. In a circuit controlling device, a thermo-electrical means normally in series with an electrical circuit and adapted to break said circuit, upon an abnormal flow of current therethrough; and electrically controlled means operable upon the opening of this circuit by said thermal means, for maintaing said circuit in open condition throughout the abnormal flow of current.

[Claims 6 to 9 not printed in the Gazette.]

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1,230,173. SCREW-DRIVER. ADOLPH KREMER, New York, N. Y. Filed Jan. 13, 1915. Serial No. 1,981. (Cl. 145—50.)




1. In a screw driver, a shank, a blade pivotally attached to the end of said shank and detachable from said shank upon pivotal movement beyond a predetermined extent, a yielding member carried by said shank and engaging said blade to yieldingly hold it in alinement with said shank but permitting a pivotal movement of the blade to an extent somewhat less than necessary to detach said blade from said shank, said blade and said member having coöperating parts shaped to engage and resist movement of the blade beyond said permitted movement.

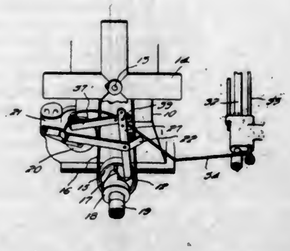
8. In a screw driver, a shank having a slotted end, a blade in said slot, trunnions projecting from the opposite faces of said blade, the ends of said slotted shank being provided with bearings for said trunnions, said bearings being open on the lower edge through an angular distance less than 180° and said trunnions being cut away on their lower face whereby the blade may be released from the shank when angularly turned beyond a predetermined extent, and locking means permitting while in locking position angular movement of the blade within such extent, but preventing movement beyond such angular extent until positively released.

9. In a screw driver, a shank having a slotted end, a blade pivotally mounted in said slot, the upper edge of said blade being shaped to present a central depression with cam faces rising on each side of said depression, a spring-pressed pin engaging the edge of said blade to hold the same yieldingly in alinement with the axis of the shank, and stops formed on said blade at the outer edges of said cam faces for positively preventing rotation of the blade beyond a predetermined extent.

[Claims 2 to 7 not printed in the Gazette.]

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1,230,174. SPARK-RETARDER FOR FORD ENGINES. WILLIAM G. KROUSE, Wyoming, Iowa. Filed Nov. 23, 1916. Serial No. 133,039. (Cl. 123—186.)

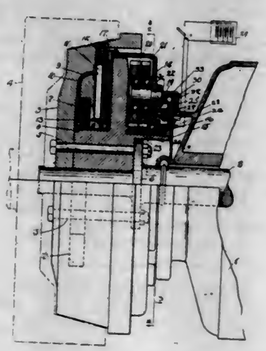


1. In a device of the class described, the combination with an internal-combustion engine having a crank shaft, an ignition timer, fan shaft and a belt for imparting motion from said crank shaft to said fan shaft, a cranking spindle having a clutch for detachable engagement with said crank shaft, of a bearing bracket member mounted on one end portion of said engine and having an arm extending to form a guide for said belt, a rock arm pivoted on said bearing and having the lower end thereof disposed in the path of movement of said clutch and adapted to be actuated thereby, and means connecting the other end of said rock arm with the ignition timer whereby to prevent advancement of the spark when cranking the engine.

2. In a device of the class described, the combination with an internal-combustion engine having a crank shaft, cranking spindle and clutch, an ignition timer, and a cooling fan driven from said crank shaft, of a bearing bracket mounted on the forward end of said engine and provided with an extension to form a belt guide, a rock arm pivoted on said bracket, a brace for said bracket, the lower end of said rock arm being disposed in the path of movement of said clutch member, a link member connected with the timer and with the upper end of said rock arm, and a manipulating rod for the timer bent to form connecting means for said link and the timer.

3. In a device of the class described, the combination with an internal combustion engine having a crank shaft, cranking spindle and clutch, an igniting timer, of a bracket member having an extension to form a belt guide, a rock arm pivotally mounted on said bracket and adapted to be disposed adjacent the cranking spindle of the engine, and a link adjustably connecting the upper end of said rock arm with the igniting timer of the engine, whereby to retard the ignition of the engine when starting and eliminate back-firing.

1,230,175. ELECTRIC MECHANISM FOR STARTING AUTOMOBILES AND THE LIKE. CYRUS B. KURTZ, Grinnell, Iowa. Filed Feb. 10, 1913, Serial No. 747,252. Renewed Dec. 1, 1916. Serial No. 134,508. (Cl. 172—239.)



1. The combination with a combustion engine and a re-action member; of a field connected to said combustion engine, an armature arranged to cut the lines of magnetic force of said field, and a mechanical driving connection between said field and re-action member, said connection being controlled by the operation of said armature.

2. The combination with a combustion engine and a reaction member; of rotatable dynamo electric members, one being connected to said combustion engine, and differential mechanism connected to each of said dynamo electric members and to said re-action member, and electrical connections adapted to operate said dynamo members.

3. In mechanism of the character described the combination of a rotatable field member, and a rotatable member arranged to continuously cut the lines of magnetic force of said field member, a non-rotatable gear member, and gearing connecting said field and armature members, said armature member carrying a gear engaging said non-rotatable gear member to produce rotation of said field member.

4. In mechanism of the character described, the combination of a rotatable field member; a rotatable armature member arranged to continuously cut the lines of magnetic force of said field member; a gear member adapted to turn in one direction only; and pinions carried by said armature member and engaging said field member and gear, respectively, said pinions being adapted to produce a relative rotation between said field and armature members.

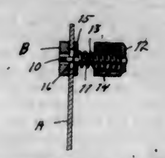
5. In mechanism of the character described, the combination of a rotatable field member; a rotatable armature member arranged to continuously cut the lines of magnetic force of said field member; gear teeth on said field member; a co-axial gear; a clutch coöperating with said gear to permit its rotation in one direction only; and pinions carried by said armature member and meshing with the teeth on said field member and gear respectively, the ratios between said pinions and the respective gears wherewith they mesh being different.

[Claims 6 to 8 not printed in the Gazette.]

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1,230,176. LICENSE-TAG HOLDER. JAMES FRANK LAMBERT, Pittsburgh, Pa. Filed Dec. 26, 1916. Serial No. 138,825. (Cl. 24—221.)

2. A clamp for securing together two members having registering slots, said clamp including a bar or shank adapted to extend through said slots, a transverse head at one end of said bar and held against return movement through said slots after insertion and rotation of said bar, a coil spring encircling said bar and prevented from movement through said slots, and means at the opposite end of said bar for seating one end of said spring, said

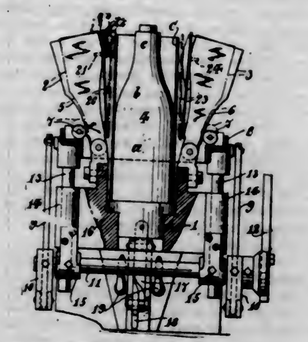


members being clamped between said anchor head and the opposite end of said spring.

[Claims 1 and 3 to 5 not printed in the Gazette.]

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1,230,177. MANUFACTURE OF PAPER BOTTLES. JOHAN GUSTAF V. LANG, New York, N. Y., assignor to Greenfield Paper Bottle Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 28, 1915. Serial No. 53,039. (Cl. 93—60.)



1. A machine for making paper bottles comprising in combination a mold having the shape or configuration of a bottle, loop-forming members arranged about the mold, and means for forcing said forming-members toward the mold, said forming members having at the free ends thereof thin sheet metal plates which extend laterally on each side of the forming members and which sheet metal plates can yield relatively to the forming members.

2. A machine for making paper bottles comprising in combination a mold having the shape or configuration of a bottle and arranged with the neck portion of the bottle uppermost, a series of loop-forming arms arranged about said mold and provided opposite the neck portion of said mold with sheet metal plates which can spring or yield relatively to said forming arms, said sheet metal plates being arranged so as to extend into the spaces between said loop-forming means to leave just sufficient room between each two adjacent plates for the paper which connects the loop portion to the rest of the paper that constitutes the neck of the bottle.

3. A machine for making paper bottles comprising in combination a mold having the shape or configuration of a bottle and arranged with the throat portion of the mold uppermost, a series of loop-forming members arranged about the mold, and means for forcing the loop-forming members toward the mold, said loop-forming members having upon the portion opposite the throat portion of the mold thin sheet metal plates which extend into the spaces between said loop-forming members, said thin sheet metal plates being mounted on said forming members so that the outer ends of the thin metal plates can approach each other, and spring means tending to force said metal plates into extended position.

4. A press for making paper bottles comprising in combination an inner mold having the shape or configuration of a bottle, a series of loop-forming arms surrounding said mold, sheet metal plates secured to said arms and extending into the spaces between them, and yieldable members secured to said arms the lower ends of which yieldable members are adapted to move relatively toward said arms as the arms are forced toward the mold.

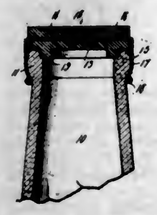
5. A machine for making paper bottles comprising in combination a frame, a mold having the shape of configuration of a bottle and mounted upon said frame with the neck or throat portion of the mold extending upwardly, a series of forming members having their lower ends pivotally mounted on said frame, each of said forming members having at its upper free end a sheet metal plate which extends into the spaces on the opposite sides of the forming member carrying said sheet metal plate, each of said forming members also having a yieldable member the upper portion of which is secured to its forming member and the lower portion of which can be forced toward the forming member as the latter approaches the mold.

[Claims 6 to 9 not printed in the Gazette.]



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1,230,178. CLOSURE FOR CONTAINERS. TRUMAN T. LAYNG, Banff, Alberta, Canada. Filed Apr. 28, 1916. Serial No. 94,222. (Cl. 215—94.)



A closure of the class described comprising a reversible air-tight cap formed of two pliable disks of the same diameter arranged in superposed relation whereby their peripheral edges are disposed flush with each other when assembled, said disks being constructed of non-corrodible, non-checkable material, and one having an annular extension on its outer face to fit the mouth of the container, a skirt of flexible rubber, with one edge secured between said disks and spacing the disks slightly apart at their centers to provide for yielding of the container-engaging disk relatively to the other, said skirt converging toward its free end and provided with a bead at the edge of said end, said skirt when in operative position projecting below the lower disk and adapted to be rolled upwardly with the roll engaging the periphery of the upper disk which operates as a support for said roll to prevent tearing strains and undue stretching of the skirt when not in use, thereby prolonging the life of the closure.

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1,230,179. REFRIGERATOR. HARRY C. LEONARD, Grand Rapids, Mich., assignor to Grand Rapids Refrigerator Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Aug. 13, 1915. Serial No. 45,417. (Cl. 182—13.)

1. In a construction of the character described, a cylindrical member provided with an outturned flange at its upper end and a screw-threaded section below the flange adapted to be inserted through an opening in the lining of a refrigerator, said flange being adapted to bear against the upper side of said lining, a second member having an outturned flange at its upper end and a screw-threaded section below the flange adapted for location below the lining and screwed on to the first member whereby its flange may bear against the lining, a drain pipe, a hollow housing adapted to be entered into the upper end of said cylindrical member and secured to the end of the drain pipe and having openings above the lower end of the drain pipe, and an outwardly projecting bead on the housing bearing against the upper side of the flange on the cylindrical member.

2. In a construction of the character described, a cylindrical member provided with an outturned flange at its upper end and with a screw-threaded section below the flange, said section being adapted for insertion through an opening in a refrigerator lining, a second member having an outturned flange at its upper end and a screw-threaded section below the flange adapted for location below the lining and screwed on to the first member, a drain pipe, and a housing secured to the drain pipe adapted for insertion into the first member, said housing having an outstanding bead for bearing against the flange of the cylindrical member when the housing is inserted into said member.



3. In a construction of the character described, a cylindrical member provided with an outturned flange at its upper end adapted to be inserted through an opening in a refrigerator lining, means adapted to engage against the underside of the lining and connecting with said member for firmly securing it in rigid relation to the lining, a drain pipe, a housing secured at the end of the drain pipe, said housing inserting into the cylindrical member, and an outwardly projecting bead formed on the housing resting on the flange of said member.

4. In a construction of the character described, a cylindrical member provided with an outturned flange at its upper end inserted through the opening, said flange resting on the upper side of the lining, means for securing the cylindrical member in position, a drain pipe, a housing provided with openings therein above the end of the drain pipe secured to said drain pipe, said housing being inserted in the cylindrical member, and a stop formed on the housing to limit the insertion of the housing into the cylindrical member.

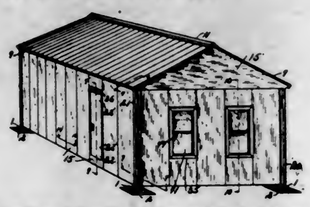
5. In a construction of the character described, a cylindrical member adapted to be inserted through an opening in a refrigerator lining, means for binding the said member in position against the lining, a drain pipe, a substantially semispherical housing member secured to the drain pipe above the lower end thereof and having a bead formed around it, and a second semispherical housing member inserted partially within the first housing member and connected firmly thereto, said second member having openings therein above the lower end of the drain pipe, said housing at the end of the drain pipe being inserted in the cylindrical member with the bead thereof resting against the upper edge of said cylindrical member.

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1,230,180. PORTABLE HOUSE. HOWARD M. LEONARD, Jackson, Mich., assignor to Ruby Manufacturing Company, Jackson, Mich. Filed Feb. 26, 1912. Serial No. 680,104. (Cl. 189—2.)

1. In a portable house, the combination of suitable corner posts; stringers of angle iron detachably secured thereto with a vertical portion of the iron outwardly disposed; interchangeable wall sections of sheet metal with

ribs on the backs thereof formed of folds of said metal embracing reinforce bars, with slots conformed to the vertical projecting portions of the said stringers adapted to be disposed thereon, said wall sections being provided with interlocking tongues and grooves formed by the folds of sheet metal at their meeting edges; and means for securing said wall sections on said stringers.

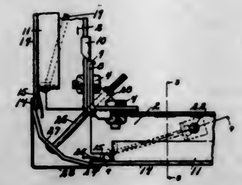


2. In a portable house, the combination of suitable corner posts; stringers of angle iron, detachably secured thereto with a vertical portion of the iron outwardly disposed; wall sections of sheet metal with ribs on the backs thereof embracing reinforce bars, with slots conformed to the vertical projecting portions of the said stringers adapted to be disposed thereon, said wall sections being provided with interlocking tongues and grooves at their meeting edges; and rafters of angle bar, detachably secured to the upper ends of said posts, substantially as described.

3. In a portable house, the combination of suitable corner posts; stringers of angle iron, detachably secured thereto with a vertical portion of the iron outwardly disposed; wall sections of sheet metal with ribs on the backs thereof embracing reinforce bars, with slots conformed to the vertical projecting portions of the said stringers adapted to be disposed thereon, said wall sections being provided with interlocking tongues and grooves at their meeting edges; rafters of angle bar, detachably secured to the upper ends of said posts; and sheet metal cornice secured to said rafters and conformed to engage the grooves on the upper ends of said wall sections, substantially as specified.

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1,230,181. WALL STRUCTURE. HOWARD M. LEONARD, Jackson, Mich., assignor to Ruby Manufacturing Company, Jackson, Mich. Filed Feb. 26, 1912. Serial No. 680,107. (Cl. 189—2.)

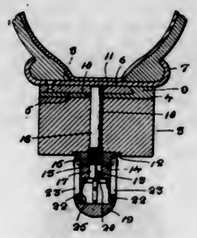


1. The combination of interchangeable sheet metal sections; sheet metal tongues secured to the sides of said sections projecting beyond the edge thereof to form tongue and groove joints between the adjacent sections; corner posts; a corner finishing section of sheet metal folded upon itself to form side grooves to receive the edges of the interchangeable side sections, and with its edges folded to form tongues engaging the grooves of the interchangeable side sections; clip members disposed diagonally across the corners engaging said corner finishing section at said grooves and clamping the same against the said side sections; and diagonal screw bolts through the said clip members and corner post disposed with nuts inside for clamping the same in position, all coacting as described and for the purpose specified.

2. The combination of interchangeable sheet metal sections; corner posts; a corner finishing section of sheet metal folded upon itself to form side grooves to receive the edges of the interchangeable side sections; clip members disposed diagonally across the corners to engage said corner finishing section at said grooves and clamp the same against the said side sections; and a diagonal screw bolt through the said clip members and corner post disposed with nuts inside for clamping the same in position, all coacting as described and for the purpose specified.

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1,230,182. DEMOUNTABLE-RIM LOCK. EINAR LINDBERG, Rice Lake, Wis. Filed July 14, 1916. Serial No. 109,348. (Cl. 152—21.)



1. The combination with the wheel, of a band encircling the wheel felly fastened thereto and formed at one side with an annular rabbet, and transversely extending grooves intersecting said rabbet, a tire carrying rim formed with an annular groove to fit said rabbet and also formed with transversely extending tongues to fit the aforesaid grooves, the felly being formed with holes extending radially therethrough and intersecting said grooves, and the tire carrying rim being formed with sockets in said tongues in line with the holes in the felly, locking pins adapted to be inserted through said holes and into said sockets, base plates secured to the felly and having said pins threaded through the same, a head on each of said locking pins, and pivoted arms carried by said head and movable through an arc of substantially ninety degrees.

2. The combination with a wheel, and a demountable rim, of rim locking means carried by said wheel, each rim locking device comprising a plate fastened to the inner face of the wheel felly, a locking pin threaded through said plate and movable in the direction of its length to engage the demountable rim for the purpose of locking and releasing the same, a notched locking boss on said plate, a head fast on said locking pin, arms pivotally attached to said head, and means for yieldingly holding said arms substantially at right angles to the length of the locking pin and also for holding the free ends of said arms in engagement with the notched boss.

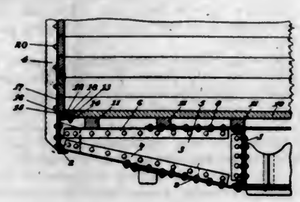
3. The combination with a wheel, and a demountable rim, of rim locking means carried by said wheel, each rim locking device comprising a plate fastened to the inner face of the wheel felly, a locking pin threaded through said plate and movable in the direction of its length to engage the demountable rim for the purpose of locking and releasing the same, a notched locking boss on said plate, a head fast on said locking pin, arms pivotally attached to said head, and means for yieldingly holding said arms substantially at right angles to the length of the locking pin and also for holding the free ends of said arms in engagement with the notched boss, said head being provided with an annular guard flange which encircles said boss.

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1,230,183. CAR CONSTRUCTION. CHARLES A. LINDSTRÖM, Pittsburgh, Pa., assignor to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Apr. 9, 1914. Serial No. 830,716. (Cl. 105—192.)

1. In a railway car, the combination with the floor and side wall, of a side sill, a substantially Z section sub-sill resting on said side sill and interposed between said floor and wall.





2. In a railway car, the combination with the side sill, and floor and side wall, of a substantially Z section sub-sill interposed between said floor and wall, said sub-sill engaging the flange of the side sill.

3. In a railway car, the combination with the side sill, and floor and side wall, of a substantially Z section sub-sill interposed between said floor and wall, said sub-sill engaging the flange of the side sill to prevent lateral movement of the sub-sill on the side sill.

4. In a railway car, the combination with the side sill, and floor and side wall, of a substantially Z section sub-sill supported by said side sill, said sub-sill engaging with a groove in said side wall, and with a rabbet in said floor.

5. In a railway car, the combination with the side and side sill, of a sub-sill having a downwardly projecting portion engaging with said sill, and having an upwardly projecting portion engaging with said side, and flooring boards, the ends of which are rabbeted and secured to said sub-sill.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,184. COFFEE SUBSTITUTE. WILLIAM A. LORENZ, Hartford, Conn. Filed Aug. 2, 1916. Serial No. 112,715. (Cl. 99—11.)

1. A composition for making a beverage consisting of granulated roasted cotton seeds and granulated roasted vegetable coloring and flavoring matter.

2. A composition for making a beverage consisting of granulated roasted cotton seeds, granulated roasted cereal, and granulated roasted fruit.

3. A composition for making a beverage consisting of granulated roasted cotton seeds, granulated roasted rye, and granulated roasted figs.

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1,230,185. 1-IODO-2.3-DIHYDROXYPROPANE AND PROCESS OF MAKING SAME. RICHARD LÜDERS, Steglitz, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed June 15, 1915. Serial No. 34,193. (Cl. 23—24.)

1. The process of preparing 1-iodo-2.3-dihydroxypropane, which consists in treating α-chlorhydrin with iodids of alkali metals.

2. The process of preparing 1-iodo-2.3-dihydroxypropane, which consists in treating α-chlorhydrin with iodids of alkali metals at a temperature not exceeding 90° C.

3. The process of preparing 1-iodo-2.3-dihydroxypropane, which consists in treating α-chlorhydrin with iodids of alkali metals at a temperature not exceeding 90° C. while excluding light.

4. The process of preparing 1-iodo-2.3-dihydroxypropane which consists in treating α-chlorhydrin with sodium iodid.

5. The process of preparing 1-iodo-2.3-dihydroxypropane which consists in treating α-chlorhydrin with sodium iodid at a temperature not exceeding 90° C., while excluding light.

[Claim 6 not printed in the Gazette.]

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1,230,186. CLOTHES-LINE-SUPPORTING DEVICE. JOHN LUTZ, Jersey City, N. J., assignor of one-third to John H. Best, Galvá, Ill. Filed Jan. 3, 1917. Serial No. 140,365. (Cl. 68—3.)



1. A clothesline supporting device for windows, comprising supporting plates adapted to be secured to the frame of the window, one of said plates being provided with a plurality of apertures, a bar adapted to be mounted in one of said apertures and to be adjustably connected with the other of said plates, a block adjustably mounted on said bar, means for locking said block in any desired position of adjustment, an arm movably mounted in said block, and means in said block for locking said arm in different positions.

3. In a clothesline support for windows, a bar mounted in connection with said window and adjustable at right angles thereto, a member adjustably mounted on said bar, an arm movably mounted in said member, and means in said member for locking said arm in different positions.

4. In a clothesline supporting device for windows, a bar mounted in connection with said window and adjustable at right angles thereto, a block adjustably mounted on said bar, an arm movably mounted in said block, said arm being adapted to support a pulley around which an endless line passes, one part of said line passing through said block and the other part thereof being detachably connected with said block.

[Claims 2 and 5 not printed in the Gazette.]

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1,230,187. CHAIR-LEG ATTACHMENT. JAMES T. MCCLELLAND, Kings Mills, Ohio. Filed Oct. 1, 1914. Serial No. 864,491. (Cl. 155—26.)

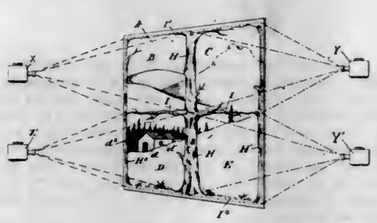


1. In a chair leg attachment, a floor engaging member, relatively movable clamping members hingedly connected to said floor engaging member at substantially diametrically opposite points, each of the said clamping members being substantially semi-circular in cross section and closed at one end to engage with the top face of the floor engaging member when moved into a vertical position, the said clamping members when thus moved forming a substantially cylindrical tapering socket into which the chair leg is fitted, and a means mounted for contact with the exterior surface of the clamping members to maintain said members in firm frictional contact with the chair leg, substantially as described.

2. In a chair leg attachment, a floor engaging member, having a flat upper surface, relatively movable clamping

members hingedly connected to said floor engaging member at diametrically opposite points, each of said clamping members being substantially semi-circular in cross section and closed at the lower end to engaging member when said clamping members are moved to vertical position thereby forming a rigid connection between the said members, the said clamping members when thus moved forming a substantially cylindrical tapering socket in which the chair leg is fitted, and means for maintaining said members in firm frictional contact with the chair leg.

1,230,188. METHOD OF AND APPARATUS FOR DISPLAYING PICTURES. LANGDON MCCORMICK, New York, N. Y. Filed Sept. 20, 1915. Serial No. 51,709. (Cl. 88—24.)

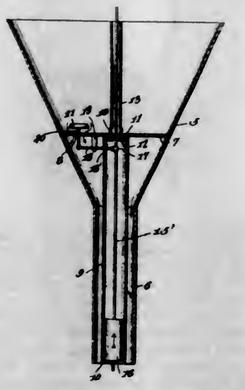


1. The method of projecting pictures, which consists in projecting a plurality of pictures on different portions of a screen surface, and providing a picture element between said portions of the screen surface to serve as a division for said portions and to merge into the plurality of projected pictures for forming therewith a composite picture.

2. A screen for the projection of pictures, comprising a screen surface and a permanent picture element thereon for dividing the same into a plurality of exhibition fields.

3. A screen for the projection of pictures, comprising a screen surface and a picture element thereon for dividing the same into sections each adapted to receive a projected picture.

1,230,189. FUNNEL. ROBERT L. MCCOY, Sergeants Bluff, Iowa. Filed Oct. 18, 1913. Serial No. 796,072. (Cl. 226—33.)

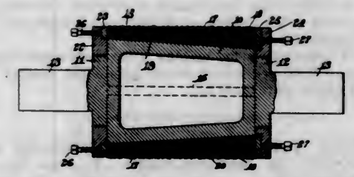


1. In an automatic funnel, a valve arranged in the body of said funnel, a concentric float housing in the spout of the funnel, a float movable in the housing, means for connecting the float with the valve for closing the same at predetermined periods, and an air tube arranged concentrically of the funnel and the housing and communicating with and secured to said housing, said connecting means extending through the air tube and above the same to facilitate the gripping of the same for holding the valve in a closed position.

2. In combination with a funnel having a spout, a plate fixedly arranged in said funnel adjacent the apex end thereof, said plate provided with a central opening therein and an opening adjacent said central opening, a housing concentrically mounted in said spout and extending upwardly therethrough into engagement with the inner face of said plate, an air tube passing through the central opening of said plate and having engagement with the upper end of said housing, a float operatively mounted in said concentric housing, the upper end thereof extending through said air tube, and a valve engaging over said second mentioned opening and having connection with said float as and for the purpose set forth.

3. The combination with a funnel having a spout, said spout being of a uniform diameter throughout its length, a plate fixedly carried in said funnel in proximity of the apex end thereof, said plate provided with a concentric and an eccentric opening, an elongated cylindrical housing concentrically mounted in said spout, one end thereof being partly closed and the opposite end open, said partly closed end extending upwardly through said spout and into engagement with the inner face of said plate, an air tube centrally mounted in the funnel, the one end thereof extending through the concentric opening and having engagement with the partly closed end of the housing, a float movably mounted in said housing, a rod, the one end of which is in engagement with said float and the opposite end extending through said air tube to a point above the same to facilitate gripping thereof, a rock shaft fulcrumed at a point eccentric on said plate, the one end being in engagement with said float rod, and a valve closure pivotally carried by the opposite end of said shaft for closing said eccentric opening when the float is operated, as and for the purpose set forth.

1,230,190. IMPRESSION-ROLL. JAMES W. MCINDOE and ARTHUR E. WHITNEY, Winchester, Mass. Filed May 3, 1916. Serial No. 96,952. (Cl. 101—178.)



1. An impression roll having a plurality of peripheral projections of different heights and lengths and of varying thickness.

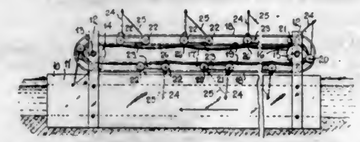
2. An impression roll consisting of a cylinder having peripheral projections, a tubular support therefor having a tapered bore, a coneshaped arbor on which said tubular support is mounted, flange threaded to and movable lengthwise of said arbor for positioning said support thereon, an annular plate on the inner face of said flange, and members threaded to said flange and bearing against said annular plate.

3. An impression roll consisting of a cylinder having peripheral projections, a tubular support therefor having a tapered bore, a coneshaped arbor on which said tubular support is mounted, a flange on said arbor, a plate movable on said flange, and members threaded to said flange and bearing against said annular plate.

4. An impression roll having a plurality of peripheral projections of different heights, lengths and thicknesses separated by portions in the same cylindrical plane and alined lengthwise of said roll.



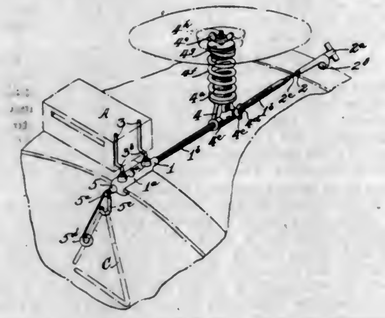
1,230,191. WATER-MOTOR OR PROPELLER. HUGH P. MAGONE, Anaconda, Mont. Filed June 7, 1916. Serial No. 102,280. (Cl. 170—84.)



1. A motor of the character described including supporting members, oppositely disposed shafts mounted thereon, wheels mounted upon said shafts, sprocket chains passing over the wheels, a pair of tracks mounted upon said supports comprising inner and outer track members, said tracks extending parallel to each other and parallel to the path of the sprocket chains, carriages comprising forward and rear axles, wheels mounted upon the axles and operatively engaging said track members, links pivotally connecting the axles, blades attached to the forward axles and normally extending perpendicularly to the sprocket chains, braces extending from the blades to the rearmost axles, said sprocket chains being operatively connected to the forward axles, said connection permitting the blades to rotate with respect to said sprocket chains.

[Claims 2 to 4 not printed in the Gazette.]

1,230,192. DRUM TRAP-HOLDER. GEORGE A. MANNING, Elkhart, Ind., assignor to C. G. Conn, Elkhart, Ind. Filed Dec. 8, 1915. Serial No. 65,794. (Cl. 84—10.)



1. A trap holder drum rod comprising a main portion and an adjustable portion, provided, respectively, with hooks to engage the edges of the drum rings; said main portion embodying in its structure a rigidly associated head upon which its ring-hook is formed, and a rigidly united shank; said head being extended in the circumferential direction of the cylindrical surface of the ring upon which it is to bear, and being provided with outwardly projecting means for holding an instrument; said instrument-holding means comprising a pair of posts rotatably socketed in said head, and constructed with offsets which vary the positions of the receiving ends of the posts when the posts are rotated in their sockets.

2. In a drum trap holder, the combination of main and adjustable members having hooks for engaging the rings of a drum; said main member being constructed with a head extended in the circumferential direction of and providing a broad bearing face for a cylindrical surface of the drum, and a shank rigidly united with said head; and an instrument holder mounted upon said shank and comprising a bracket constructed at its outer end with a seat for the instrument to be mounted thereon, and at its inner end with a pair of spaced eyes through which the shank is threaded, and a clamping eye rod projecting through the bracket and constructed at its inner end with an eye threaded upon the shank between the eyes of the bracket, and having its outer end protruded in position to receive means for drawing it relatively to the bracket.

1,230,193. RAILWAY-SIGNAL. ALONZO C. MATHER, Chicago, Ill. Filed Apr. 7, 1914. Serial No. 830,157. (Cl. 246—26.)

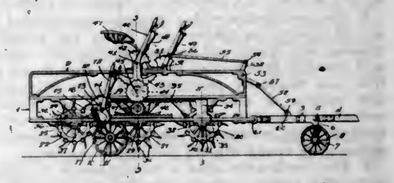


1. In a device of the class described, a suitable track forming an electric conductor, a vehicle to travel on said track, a voltammeter on the vehicle, an electrical conductor parallel to the track divided into successive sections insulated from one another to form blocks along the track, a connection between each block section and the track rail, a trolley wheel on the vehicle to make electrical contact with said sectional conductor and suitable conductors to form an electric circuit on the vehicle starting at the track, through the voltammeter, through the generator through the trolley wheel and thence to the sectional conductor.

2. In a device of the class described, a suitable track forming an electric conductor, a vehicle to travel on said track, an electrical conductor paralleling the track and divided into separate successive sections insulated from each other to form signal blocks along the line of the track, a connection between each block section and the track rail, an electric current generator on the vehicle, a voltammeter on the vehicle, and suitable electrical conductors to form a circuit on the vehicle between the track and the sectional conductor including the generator and the voltammeter whereby the presence of a second vehicle in the same block is indicated on both of said vehicles.

3. In a device of the class described, a semaphore comprising a pivoted arm, a magnet to move said arm, a battery, a switch, the windings of said magnet being in a circuit with the battery and the switch, a small magnet to control the position of the switch, a suitable track comprising two rails, a third rail paralleling the tails of the track comprising sections of suitable length and electrically insulated from one another to form signal blocks all along the track, the windings of said small magnet being in an electric circuit with one of said track rails and the third rail, a vehicle to travel on said track, a generator on the vehicle, a voltammeter on the vehicle, and suitable conductors electrically connected to one rail of the track and to the third rail to bring the generator and the voltammeter in the same circuit with the windings of said small magnet.

1,230,194. HARROW. THEODORE G. MATTSON, Bremen, N. D. Filed July 7, 1915. Serial No. 38,544. (Cl. 55—11.)

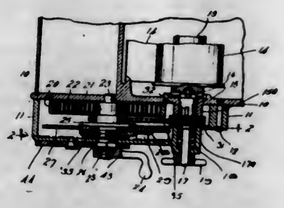


1. In a machine of the character described, a main frame, a cylinder mounted to rotate from a fixed axis, relatively adjustable rotary cylinders, a rack bar for each adjustable cylinder, and a single element mounted to engage the respective rack bars for simultaneously moving the adjustable cylinders.

4. In a machine of the character described, a main frame, supporting wheels therefor, a cylinder mounted to rotate from a fixed axis, cutting teeth projecting from the outer surface of said cylinder, relatively adjustable rotary cylinders, curved teeth projecting from the outer surface of said last mentioned cylinders, a rack bar for each adjustable cylinder, a guide means for each rack bar, a single rotary element mounted to engage each rack bar to simultaneously move the adjustable cylinders either toward or from said first mentioned cylinder, a means to raise and lower the supporting means relatively to the frame for moving the several cylinders bodily into and out of engagement with the ground, a wheeled truck pivoted to and forwardly of the frame, and means mounted on the main frame and engaging the truck for raising and lowering the wheels thereof during adjustment of the supporting wheels to permit engagement of the several cylinders with the ground, substantially as described.

[Claims 2 and 3 not printed in the Gazette.]

1,230,195. SPRING-TENSION MECHANISM. JOHN L. MAUCH, Humboldt, Ariz. Filed June 5, 1916. Serial No. 101,819. (Cl. 185—39.)



1. The combination with a spring, of a shaft connected to said spring, a rotatable transmission member loosely mounted on said shaft, and means controlled by the turning of said shaft in opposite directions, respectively, for clamping said member to said shaft for rotation therewith and for unclamping the same.

2. The combination with a spring, of a shaft connected to said spring and having a flange and a threaded portion, a rotatable member loosely mounted on said shaft between said flange and threaded portion, means for holding said member against turning in one direction, and a nut on said threaded portion for clamping said member to said flange and for unclamping the same when said shaft is turned in the direction against which said member is held from turning.

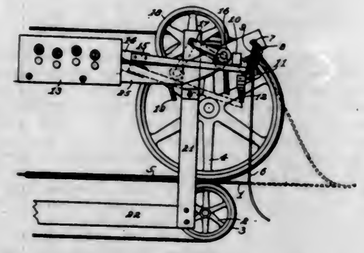
3. The combination with a spring, of a shaft connected to said spring and having a flange and a threaded portion, a transmission member loosely mounted on said shaft between said flange and threaded portion, a nut on said threaded portion for clamping said member to said flange, and a spring connecting said nut and shaft and tending to turn said nut in a direction to clamp said member.

4. The combination with a spring and an operated member, of connections between said spring and member for winding said spring and for transmitting the tension of said spring to said member to move the same in one direction, and means for positively preventing movement of said member in the opposite direction but permitting movement thereof in said first-named direction, said connections being constructed and arranged to permit said spring to be wound without moving said member.

5. The combination with a roller adapted to receive a strip, of a spring, a shaft connected to said spring and having a flange and a threaded portion, a transmission member loosely mounted on said shaft between said flange and threaded portion and operatively connected with said roller, means to prevent movement of said transmission member in a direction to unwind said strip, a nut on said threaded portion for clamping said transmission member to said flange, and a spring connecting said nut and shaft and tending to turn said nut in a direction to clamp said transmission member.

[Claims 6 to 12 not printed in the Gazette.]

1,230,196. COUNTING-MACHINE. DAVID F. MERRIMAN and CHARLES W. HARRIS, Waterloo, Iowa. Filed June 12, 1916. Serial No. 103,293. (Cl. 235—91.)



1. In a counting machine having a registering device, a trigger supported movably to be swung in one direction by the impact thereon of an object to be counted, and to return to its initial position by gravity, said registering device having a resilient actuating arm, a continuously rotatable crank located out of the path of movement of said register-arm, a deflecting plate and movable elements connected to said trigger and set thereby when moved by said impinging object to move said register-arm against and about said deflecting plate and into the path of movement of said crank to cause the latter to actuate the register by shifting said arm, releasably.

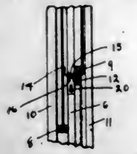
2. In a counting machine having a registering device, a trigger mounted to be moved by impact thereon of an object to be counted, said registering device having an operating arm formed of a plate spring, a rotatable crank adjacent to and rotatable in a plane parallel to said spring-arm, and means connected to said trigger adapted to move the spring-arm into the path of rotation of said crank, releasably, when the trigger is moved in one direction by an impact and then returned by gravity.

3. A counting machine, comprising a registering device, a spring-arm adapted to swing to actuate said device and yieldable laterally, a crank rotatable in a plane parallel to said spring-arm to one side thereof, and means for pushing the spring-arm laterally into the path of movement of said crank to permit the latter to push it down to actuate the registering device, consisting of a trigger suspended to swing in a vertical plane, a rock-shaft on which said trigger is mounted having two laterally-spaced arms on one end adjacent to the outer end of said spring-arm, the outermost arm having a shifting-block on its lower end with convex rear face, said block adapted to swing downwardly before said spring-arm and push the latter back into the path of rotation of said crank when said shaft is rocked in one direction by the swinging of said trigger, the second arm on said shaft located behind said spring-arm and acting as an abutment therefor when the trigger is not operated and swinging to release the spring-arm when the shifting-block swings to push back the spring-arm, and a fixed rearwardly curved hanger below said spring-arm with its upper end in advance of the spring-arm and its lower end in the rear thereof, adapted to serve as an abutment when the spring-arm is rocked downwardly by contact with said crank to hold it in engagement with the crank until released therefrom when the spring-arm has passed below the lower end of the abutment to move back to its initial position.

4. In a device of the character described, a depending swinging finger, a register having a movable actuating arm, a fixed concavo-convex plate, a rotating crank having a crank-pin, and means operatively connected to said finger for moving the said actuating arm into the path of said crank-pin along the concave face of said plate, to return along the convex face of the plate to its first position out of the path of the crank-pin.



1,230,197. WINDOW-PROTECTING ATTACHMENT. STERRETT E. MCNULTY, Washington, D. C. Filed Oct. 1, 1915. Serial No. 53,604. (Cl. 156—38.)



1. A device for closing the passage of a window against insects, consisting of a holding frame, means for securing the holding frame to the parting strips of a window casing, and a flexible strip carried by the holding frame and having free longitudinal yielding edge portions projecting laterally of the holding frame for engagement with the window sashes.

2. A window protecting device consisting of a holding frame, a flexible strip carried by the holding frame and having yieldable longitudinal edge portions projecting laterally of the holding frame, said frame including relatively adjustable supporting members for attaching the frame to the parting strips of a window casing.

3. A window protecting device consisting of a holding frame, a flexible strip carried by the holding frame and having freely yieldable longitudinal edge portions projecting laterally of the holding frame and adapted to slidably contact with the panes of window sashes, and means for securing the ends of said holding frame to the window casing to support said strip for slidable contact with the window sashes.

4. A window protecting attachment consisting of companion holding frames slidably connected to each other, and a flexible strip secured to each holding frame, the edges of said flexible strips being held close to each other, said strips being adapted to slide on each other when the frames are shifted on each other.

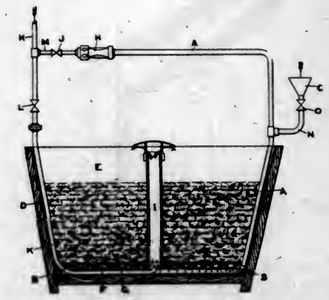
5. A window protecting device consisting of a flexible strip, a pair of holding bars narrower than the flexible strip, means for clamping the strip to the bars, and means on said bars for supporting the bars and the strip in horizontal position in a window casing, said means having an extensionable connection with said bars.

[Claims 6 to 12 not printed in the Gazette.]

1,230,198. MACHINE OR APPARATUS FOR DYEING, WASHING, AND THE LIKE. JOHN HENRY MILNES, Huddersfield, England. Filed Dec. 7, 1916. Serial No. 135,696. (Cl. 8—19.)

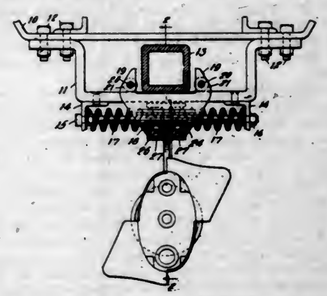
1. In dyeing apparatus and the like of the type having the ordinary upper and lower compartments, intermediate perforated plate, central circulating tube, and steam supply main, the employment in combination therewith of an auxiliary pipe designed to introduce an auxiliary supply of air into the lower compartment and to pass same upward through the perforated plate for the purpose of lifting the material, said auxiliary air supply being controlled by a steam operated air injector having a branch connection from the steam supply main, and said auxiliary air supply and ordinary steam supply being utilizable either separately or concurrently, substantially as herein set forth.

2. In dyeing apparatus and the like of the type having the ordinary upper and lower compartments, intermediate perforated plate, central circulating tube, and steam supply main, the employment in combination therewith of an auxiliary pipe designed to introduce an auxiliary supply of air into the lower compartment and to pass same upward through the perforated plate for the purpose of lifting the material, said auxiliary air supply being controlled by a steam operated air injector having a branch connection from the steam supply main, and said auxiliary



air supply and ordinary steam supply being utilizable either separately or concurrently, and a dye liquor inlet funnel and branch pipe applied to the auxiliary air supply pipe.

1,230,199. DRAW-BAR-CENTERING DEVICE AND CARRIER. JOHN R. MITCHELL, Evanston, Ill., assignor to William H. Miner, Chazy, N. Y. Filed May 10, 1915. Serial No. 27,010. (Cl. 213—42.)



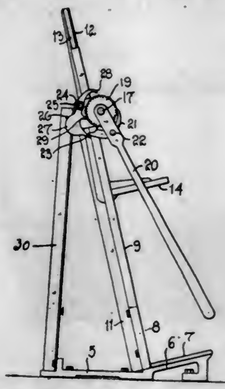
1. In car construction, the combination with a draw bar, of a carry iron beneath the draw bar and arranged to directly support the latter, a member having anti-friction rollers, slidably mounted with respect to said carry iron and supported thereby, said member having upstanding projections on each side of the draw bar shank adapted to engage the latter, and spring means for normally maintaining said member in central position.

2. In car construction, the combination with a carry iron adapted to support the weight of a draw bar, of a member slidable with respect to said carry iron and having upstanding shoulders located at the sides of the draw bar shank, a carrier for air and steam automatic connector secured to said member, and means for adjustably securing said carrier to said member in any pre-determined position.

1,230,200. CLOTH-BOLT PRESS. FRED E. MOREY, Baraboo, Wis. Filed June 19, 1916. Serial No. 104,458. (Cl. 100—5.)

1. In a press of the character described, a base, spaced pairs of guides fixed at their lower ends to said base, rack bars mounted to travel in said guides, a shaft operatively mounted upon the upper ends of said guides, pinions fixed upon said shaft meshing with the respective rack bars, an angularly disposed presser arm on the lower

end of each rack bar, and manually operable means for rotating said shaft to move the rack bars downwardly in the guides.



2. A press of the character described having a supporting base, spaced pairs of upwardly inclined guides fixed at their lower ends to said base, rack bars mounted in said guides, angularly disposed presser arms on the lower ends of said rack bars, a bar connecting said guides adjacent to their upper ends, a shaft rotatably mounted upon said bar, pinions fixed upon said shaft and meshing with the respective racks, uprighta centrally fixed at their upper ends to said bar and at their lower ends to the base, and manually operable means for rotating said shaft in one direction to move the rack bars downwardly in the guides.

3. In a press of the character described, a supporting frame, spaced rack bars vertically movable in said frame and each having a presser arm, a shaft mounted upon the frame, pinions fixed on said shaft meshing with the respective rack bars, a ratchet secured to one end of said shaft, a lever oscillatably mounted on said shaft, a dog fulcrumed in said lever and normally engaged at one end with the teeth of the ratchet to rotate the shaft in the movement of the lever in one direction, and a second dog fulcrumed upon the frame and having a weighted end provided with a tooth to engage the ratchet and prevent the reverse rotation of the shaft when the lever is moved in an opposite direction.

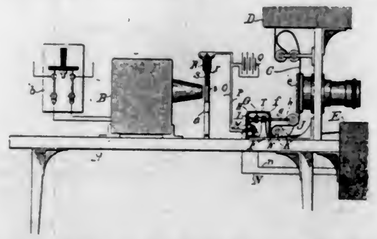
4. In a press of the character described, a supporting frame, spaced racks vertically movable in said frame each provided with a presser arm on its lower end, a shaft mounted upon said frame, pinions fixed upon said shaft and meshing with the respective racks, a ratchet secured to one end of said shaft, a lever oscillatably mounted upon the shaft, a dog fulcrumed in said lever engaging the ratchet at one of its ends to rotate the shaft when the lever is moved in one direction, and a second dog fulcrumed upon the frame and operatively engaging the ratchet to hold the shaft against reverse rotation in the movement of the lever in an opposite direction, the dog on the lever operatively engaging the second named dog upon the release of the lever, whereby the latter dog is operatively engaged with the ratchet to hold the shaft against reverse rotation.

5. In a press of the character described, a supporting frame, spaced racks vertically movable in said frame each provided with a presser arm on its lower end, a shaft mounted upon said frame, pinions fixed upon said shaft to one end of said shaft, a lever oscillatably mounted upon the shaft when the lever is moved in one direction, and a dog fulcrumed upon said frame having a weighted end provided with a tooth to engage the ratchet and hold the shaft against reverse rotation when the lever is moved in an opposite direction, the dog on said lever operatively engaging the weighted end of the second named dog to move the other end of said dog into locking engagement with the ratchet and also hold the dog on the lever in operative engagement with the ratchet when said lever is released.

[Claims 6 to 8 not printed in the Gazette.]

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1,230,201. SAFETY DEVICE FOR MOVING-PICTURE MACHINES. HOUSTON S. MORTON, Detroit, Mich. Filed Aug. 2, 1916. Serial No. 112,813. (Cl. 88—17.)



1. In a safety device for moving picture machines, the combination with a lamp, of a film, a shutter movable between the lamp and film, a roller supported by the film, means actuated by the falling of the said roller for operating the shutter, a guide roller arranged below the said film-supported roller, the said film passing under the said film-supported roller and around the said guide roller, and a displaceable bearing for the guide roller whereby excessive strain upon the film draws the guide roller from beneath the film-supported roller allowing the same to fall.

2. In a safety device for moving picture machines, the combination with a lamp, of a film, a shutter movable between the lamp and film, a roller supported by the film, an electric switch operated by the falling of the roller, electro-magnetic means controlled by the said switch for operating the said shutter, a guide roller arranged below the said film-supported roller, the said film passing under the said film-supported roller and around the said guide roller, and a displaceable bearing for the guide roller whereby excessive strain upon the film draws the guide roller from beneath the said film-supported roller and allows the same to fall.

3. In a safety device for moving picture machines, the combination with a lamp, of a film, a shutter movable between the lamp and film, a roller supported by the film, means actuated by the falling of the said roller for operating the shutter, a guide roller arranged below the said film-supported roller, the said film passing under the said film-supported roller and around the said guide roller, a support, a slot in the said support, a bearing for the guide roller removably seated in the said slot, and a spring acting upon the said bearing for holding the same yieldingly in the said slot whereby an excessive strain upon the film draws the bearing from the slot and the guide roller from beneath the film-supported roller allowing the same to fall.

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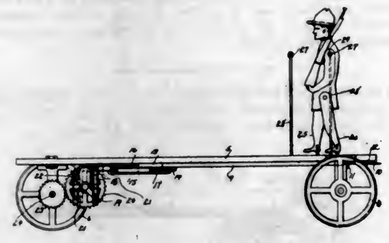
1,230,202. FIGURE WHEELED TOY. ALOYSIUS MOZDZIERZ, New Haven, Conn. Filed Sept. 22, 1916. Serial No. 121,600. (Cl. 46—45.)

1. A wheeled toy comprising a platform formed with two longitudinal slots, a bar arranged beneath each of said slots and guided for longitudinal movement, two transverse slides one connected to each of said bars, means for moving said slides, and a figure having two members one connected to each of said bars.

2. A wheeled toy comprising a platform formed with longitudinal slots, a series of bars arranged beneath said slots, two transverse slides, alternate bars connected to one slide, and the remaining bars connected to the other slide, means for moving the slides and bars back and forth, and a figure connected to each pair of bars.



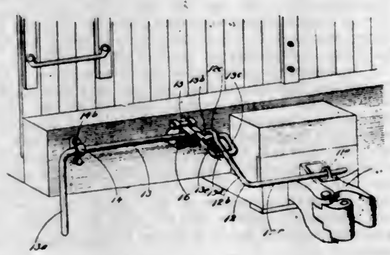
3. A wheeled toy comprising a platform formed with longitudinal slots, bars beneath said slots, two transversely arranged slides beneath said platform, alternate bars connected with one of said slides, the remaining bars connected with the opposite slide, a double crank connected with the respective slides, a figure connected to each pair of slides, and a horizontal bar supporting said figures.



4. A wheeled toy comprising a platform formed with a series of longitudinal slots arranged in pairs, a bar beneath each of said slots, said bars guided for longitudinal movement, two transversely arranged slides also guided for movement in the direction of the bars, alternate bars connected to one of said slides, the intermediate bars connected to the other slide, said bars formed at their rear ends with pins, a bracket to support said pins, a gear wheel, a crank connected with each side of said gear wheel, said cranks extending in opposite directions, connections between one crank and one slide, and between the other crank and the other slide, and means for turning said gear wheel.

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1,230,203. UNCOUPLING DEVICE. GEORGE C. MURRAY, Chicago, Ill., assignor to Keyoke Railway Equipment Company, a Corporation of Delaware. Filed Feb. 2, 1914. Serial No. 815,988. (Cl. 213—59.)



An uncoupling mechanism comprising an operating rod rotatably mounted on a car, said operating rod being provided with an offset portion and a reversely bent portion spaced therefrom, and an uncoupling rod adapted to engage the coupler-pin to said car, said uncoupling rod being fulcrumed on said offset portion of said operating rod, said reversely bent portion of said operating rod being arranged to contact with and operate said uncoupling rod upon proper movement of said operating rod.

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1,230,204. WELDING-TORCH. EVAN RUPERT NASH, Hanford, Cal. Filed July 20, 1916. Serial No. 110,376. (Cl. 158—27.4.)

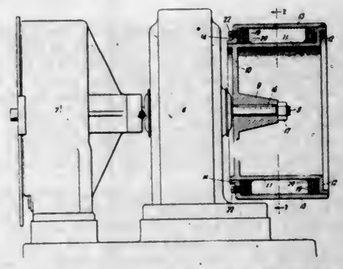
A detachable fire-proof protector for welding torches, comprising a molded tubular sheath of refractory heat insulating material for positioning on the torch head over the burner tip end thereof and for closely surrounding and inclosing the said head and when in position extending from a point adjacent the rear of said head to the nose



of the burner tip, and means for engaging said sheath for securing the same in position on the head.

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1,230,205. FLUCTUATION-DAMPING MEANS FOR ROTATABLE MEMBERS. HAROLD WILLIAM NICHOLS, East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 22, 1915. Serial No. 16,000. (Cl. 74—6.)



1. A fly-wheel having a unitary chamber containing a liquid and sectional walls substantially parallel to the path of movement of said chamber.

5. A fly-wheel having concentric with its axis a chamber containing a liquid, a plurality of flat rings, and means for maintaining said rings separated from one another to form radial sectional walls in said chamber.

[Claims 2 to 4 not printed in the Gazette.]

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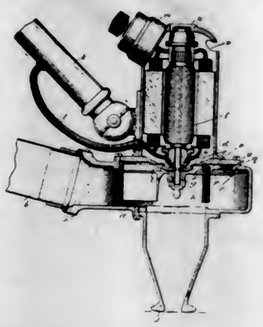
1,230,206. SUCTION-PRODUCER. HENRY C. NIEMEYER, Racine, Wis., assignor, by mesne assignments, to Richmond Radiator Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 27, 1911. Serial No. 623,590. (Cl. 230—11.)

1. In a suction producing apparatus, the combination with a casing, of a wall separating said casing into two chambers, suction producing mechanism in one of said chambers, a motor casing in communication with the other of said chambers, means in said other chamber for causing air to pass through said motor casing, and a motor in said motor casing operatively connected to drive said mechanism and said means.

2. In a suction producing apparatus, the combination with a casing having an inlet orifice and an outlet orifice and an additional orifice, of a motor placed in the current of air passing through said additional orifice, a wall in the casing in position to form a chamber in free communication with said inlet and outlet orifices and a chamber in communication with said additional orifice but not in direct communication with said outlet orifice, and a fan in each chamber driven by said motor.

3. In a suction producing apparatus, the combination with a casing having an inlet orifice and an outlet orifice

and an additional orifice, of a motor placed in the current of air passing through said additional orifice, a wall in the casing in position to form a chamber in free communication with said inlet and outlet orifices and a chamber in communication with said additional orifice but not in direct communication with said outlet orifice, and a fan in the first mentioned chamber driven by said motor.



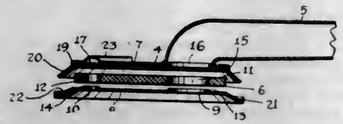
4. In a suction producing apparatus, the combination with a casing having an inlet orifice and an outlet orifice and an additional orifice, of a motor placed in the current of air passing through said additional orifice, a wall in the casing in position to form a chamber in free communication with said inlet and outlet orifices and a chamber in communication with said additional orifice and with the first mentioned chamber only at a region remote from said outlet orifice, and a fan in each chamber driven by said motor.

5. In a suction producing apparatus, the combination with a casing having a main inlet orifice and an outlet orifice and an additional inlet orifice, of a motor placed in the current of air passing through said additional orifice, a wall in the casing in position to form two partially separated chambers one of which is in free communication with said main inlet and outlet orifices and the other of which is in communication with said additional inlet orifice and with the first mentioned chamber, and a fan in each chamber driven by the motor.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,207. POURING DEVICE. CHARLES R. NORMAN, Brooklyn, N. Y., assignor to Tide Water Oil Company, Bayonne, N. J., a Corporation of New Jersey. Filed May 1, 1916. Serial No. 94,536. (Cl. 221—20.)



1. A pouring device for oil cans comprising a thin case composed of upper and lower disk members, and a spout-carrying turntable and a packing disk held frictionally between the case members, the lower case member comprising a flat circular elevated floor supporting the packing disk and a wide marginal flange sloping downward and outward at a low angle from said floor, and the upper case member having a flat circular top next the turntable, a low circular side wall wherein the turntable is rotatably guided, and a wide marginal flange similar to the flange of the lower case member but sliping at a somewhat steeper angle so as to be in converging relation thereto, the flanges being united by crimping at the outer edges, whereby the turntable and packing disk are caused to be clasped resiliently and tightly between the top and floor of the case.

2. A pouring device for oil cans, comprising a thin case composed of upper and lower disk members with a spout-carrying turntable and a packing disk held between the case members, the turntable, packing disk and lower case member being apertured for the passage of air and liquid, and the upper case member having a cut-out in which the spout may turn and a curved grooved venting channel pressed up from the material of the member and terminating in said cut-out.

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1,230,208. COMBINED MOP HEAD AND WRINGER. ERNEST V. OLANDER, Grand Rapids, Mich. Filed Oct. 21, 1916. Serial No. 126,913. (Cl. 15—43.)



1. In a mop, the combination of a handle, a head on the handle adapted to support one end of a mop cloth, a longitudinally slidable support on the handle, a shaft rotatably mounted in the support and adapted for engagement with the opposite end of said mop cloth, and a gear element on the shaft for connection with the handle to turn the shaft and twist the cloth upon the movement of the support.

2. In a mop, the combination of a handle having a head thereon for engagement with one end of the mop cloth, a bracket pivotally supported from said handle, and a rotatable shaft mounted in said bracket and adapted for engagement with the opposite end of the mop cloth to twist the same, said bracket being adapted to swing into various angles relatively to the handle to follow the looping of the cloth during the twisting of the same.

3. In a mop, the combination of a handle having a head thereon for engagement with one end of a mop cloth, a longitudinally movable support mounted on the handle and having a pivoted part, a shaft rotatably mounted in the pivoted part and adapted for engagement with the opposite end of said mop cloth, said support being adapted to be shifted to stretch said mop cloth, and said pivoted part being adapted to swing and follow the looped mop cloth during the movement of the support, and a connection between the handle and the shaft for rotating the latter and twisting the cloth during the stretching of the same.

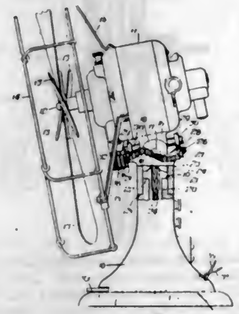
4. In a mop, the combination of a handle having a head thereon for engagement with one end of a mop cloth, a support slidably mounted on the handle, a bracket pivotally connected with said support, a shaft rotatably mounted in said bracket and adapted for engagement with the opposite end of the mop cloth, and means on the handle adapted to turn said shaft to twist the mop cloth upon the sliding movement of said support.

5. In a mop, the combination with a handle having a head thereon for engagement with one end of a mop cloth, a sleeve mounted to slide longitudinally on the handle, a bracket pivoted to the sleeve, a mop-engaging loop mounted for rotation in the bracket, said loop being adapted for engagement with the opposite end of said mop cloth, and means between the mop-engaging loop and the handle for turning the loop upon the sliding movement of the sleeve, said bracket being adapted to follow the loop of the cloth during the twisting of the same.

[Claims 6 and 7 not printed in the Gazette.]



1,230,209. GEAR. GUSTAF OLSON, Chicago, Ill., assignor of one-half to Louis Greenberg and one-sixth to Willard M. McEwen, Chicago, Ill. Filed Oct. 2, 1915. Serial No. 53,694. (Cl. 74—34.)



1. The combination with a pivotally mounted member having a rotative member mounted thereon, of a track member of wave-like form, a roller on said pivotally mounted member and adapted to travel on said wave-like track member, said track member being provided on its outer margin with a plurality of gear teeth, the outer edges of which and the bottom surfaces of the spaces between said gear teeth being curved longitudinally on arcs of circles substantially concentric with the arc of the circle defining the path of tilting movement of said pivotally mounted member as said roller travels over said track member, and a gear wheel rotatably mounted on said pivotally mounted member and having operative connection with said rotative member, said gear wheel being in mesh with the gear teeth on said track member.

2. The combination with a pivotally mounted member having a rotative member mounted thereon, of an annular track member of wave-like form, a roller on said pivotally mounted member and adapted to travel on said wave-like track member, said track member being provided on its outer margin with a plurality of gear teeth, the outer edges of which and the bottom surfaces of the spaces between said gear teeth being curved longitudinally on arcs of circles concentric with the arc of the circle defining the path of tilting movement of the pivotally mounted member as the roller travels over said wave-like member, and a gear wheel rotatably mounted on said pivotally mounted member and having operative connection with said rotative member, said gear wheel being in mesh with the gear teeth on said track member.

3. The combination with a pivotally mounted member having a rotative member mounted thereon, of an annular track member of wave-like form, a roller on said pivotally mounted member and adapted to travel on said wave-like track member, a rotative driving member mounted on said pivotally mounted member and having operative connection with said rotative member, said driving member having driving engagement with the outer annular edge of said track member, said driving member being moved bodily up and down over the outer annular edge of said track member as the roller travels over the wave-like track member, and the outer annular edge of said track member being curved longitudinally concentric with the arc of the circle defining the path of tilting movement of said driving member.

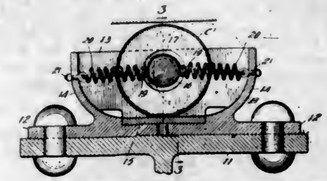
4. A gear member of the character described, comprising an annular flange of wave-like form, said flange being provided with gear teeth around its outer edge; the outer edges and the surfaces at the bottom of the spaces between said gear teeth being curved longitudinally.

5. A gear member of the character described, comprising a sleeve having an outwardly extending annular flange of wave-like form, said flange being provided around its outer edge with a plurality of gear teeth, the outer edges of which and the surfaces at the bottom of the spaces between said gear teeth being curved longitudinally.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,210. SIDE BEARING FOR RAILWAY-CARS. CALVIN B. PATCH, Glenellyn, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 15, 1916. Serial No. 109,444. (Cl. 64—86.)



1. In a roller side bearing, the combination with a base casting, of a pair of spaced roller members within said base casting and movable in unison, springs on each side of said roller members, a central axle member extending between the roller members, said springs extending to said axle member and into the space between the roller members.

2. In a roller side bearing, the combination with a base casting, of a pair of spaced roller members, a journal extending between said roller members to thereby move the same in unison, and springs extending between the base casting and said journal, the inner ends of said springs being located between the said roller members.

3. In a roller side bearing, the combination with a base casting, of a pair of spaced roller members, a journal extending between said roller members to thereby move the same in unison, and springs extending between the base casting and said journal, the inner ends of said springs being located between the said roller members, the journal being detachably connected with the roller members.

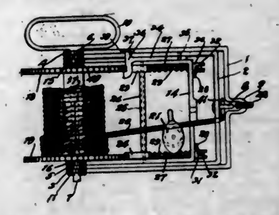
4. In a roller side bearing, the combination with a hollow base casting, of two roller members mounted within said base casting, a journal extending between and connecting said roller members, and springs on opposite sides of said journal, said springs being attached at their inner ends to the journal and at their outer ends to the base casting.

5. In a roller side bearing, the combination with a hollow base casting, of two roller members mounted within said base casting, a journal extending between and connecting said roller members, and springs on opposite sides of said journal, said springs being attached at their inner ends to the journal and at their outer ends to the base casting, and means for adjusting the tension of said springs.

[Claim 6 not printed in the Gazette.]

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1,230,211. PULLING DEVICE. WILLIAM J. PAUL, Grand-View, Manitoba, Canada. Filed Jan. 8, 1917. Serial No. 141,310. (Cl. 254—164.)



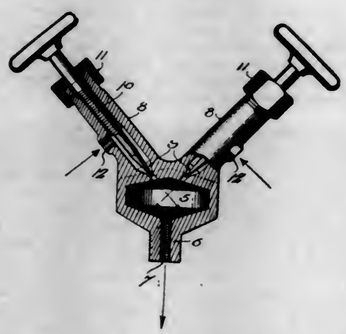
1. In a device of the class described a two part foldable frame, pivots for said parts, a pulling drum carried by

said frame, ratchet wheels on said drum, a yoke bar carried by the frame pivots, pawls on said bar co-acting with said ratchets, and means for securing the frame parts and the yoke together.

2. In combination, a two part pivoted foldable frame having cables attached to the opposite ends thereof, a winding drum rotatably mounted in the frame and having one of the cables connected thereto, ratchet wheels at the ends of the drum, a yoke bar spanning the drum and pivotally attached to the frame, spring pressed dogs carried by the yoke bar and engaging the teeth of the ratchet wheels, an operating handle secured to the yoke bar, a dog carried by the frame and engaging one of the ratchet wheels to prevent retrograde turning of the drum and wedge means on one frame part for securing the frame parts and yoke together when in folded positions.

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1,230,212. OIL-BURNER. CHARLES PETRAN and CHARLES G. JUNEAU, Milwaukee, Wis. Filed Apr. 6, 1916. Serial No. 89,284. (Cl. 137—26.)

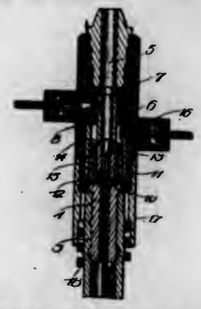


A mixer of the class described comprising a relatively large mixing chamber having its opposite end walls conical shaped, the side wall portions being cylindrical and of a diameter approximately twice the distance between the apices of the end wall, a boss extending from the center of one of said end walls and having a bore extending therethrough into the chamber at the apex of one of the end walls to form an outlet port having a diameter of less than one-fifth of the side wall portion, a pair of outwardly divergent arms fixed to the opposite wall of the chamber, each having a bore extending longitudinally therethrough and communicating with the chamber on each side of the apex of the end wall opposite the outlet port to form inlet ports the axes of the bores of the arms intersecting in the center of the chamber substantially midway between the apices thereof, whereby fluid from the inlet ports will impinge on the opposite wall of the chamber on each side of the outlet port, said arms each having an inlet extending into the bore thereof, the inner ends of said bores of the arms inwardly of the last mentioned inlets being restricted to form valve seats, and a valve in each of said arms for coaction with the valve seats.

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1,230,213. INSULATED PIPE-JOINT. OSCAR H. PIEPER and ALPHONSE F. PIEPER, Rochester, N. Y. Filed Oct. 4, 1915. Serial No. 53,952. (Cl. 173—365.)

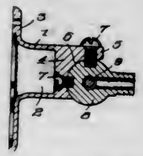
1. In an insulated pipe joint, the combination with a hollow connection having a surrounding insulating member attached thereto, a conducting member secured to the insulating member, a second conducting portion in engagement with the first named conducting portion and having an interiorly formed shoulder, an insulating sleeve secured within the last named conducting portion against the shoulder and provided with a second shoulder, and a second hollow connection abutting the last mentioned shoulder and having a tapered end fitting a corresponding seat on the first mentioned hollow connection.



2. An insulated pipe joint comprising a pair of hollow connections having engagement with each other and formed of conducting material, insulating sleeves attached to the hollow connections, conducting members secured to the insulating sleeves and having engagement with each other, whereby the hollow connections can be brought into tight engagement with each other, and a portion on one of the insulating sleeves extending around the conducting members whereby the latter are arranged between the respective insulating sleeves aforesaid.

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1,230,214. SUPPORT FOR VALVE-HOUSINGS. OSCAR H. PIEPER and ALPHONSE F. PIEPER, Rochester, N. Y. Filed Oct. 30, 1915. Serial No. 58,941. (Cl. 137—111.)



1. The combination with a cylindrical valve housing, of supporting means therefor comprising a base portion and an offset portion projecting beyond the base portion and connected therewith by a curved surface for engaging the housing, and securing devices adapted to pass through the base and offset portions for engaging the housing at independent points.

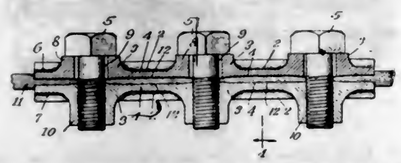
2. The combination with a cylindrical valve housing, of supporting means therefor comprising a base portion and an offset portion projecting beyond the base portion and connected therewith by a curved surface for engaging the housing, and screws passing through the base and offset portions and arranged substantially at right angles to each other for engaging the housing at independent points.

3. The combination with a cylindrical valve housing, of supporting means therefor comprising a pedestal having a hollow portion surmounted by a base and offset portion projecting beyond the base, and connected therewith by a curved surface for engaging the housing, the base having an opening communicating with said hollow portion through which a screw may be inserted into the opening to engage the housing, and the offset portion also having an opening to receive a screw for engaging the housing in spaced and angular relation to the first mentioned screw.

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1,230,215. GUY-CLAMP. HENRY W. PLEISTER, Westfield, N. J., assignor to Henry B. Newhall. Filed May 13, 1916. Serial No. 97,297. (Cl. 24—125.)

6. A guy clamp formed of two members, each member having rigid portions in the form of truncated cones whose bases lie in the bearing surface of said members, and intermediate said rigid portions comparatively flexible or yielding areas, bolts passing through the rigid portions, the bases of said truncated cones being extended to span the weakened areas and to extend beyond the vertical axes of the wire strand to be clamped, thereby transmitting the pressure of the bolt about the circumference of the strand with greatest force at a point nearest the center of said bolts, and with least force at a point equidistant between the bolts.



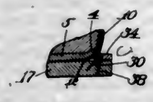
7. A malleable iron guy clamp formed of two members, each having alternately rigid and comparatively flexible or yielding areas, and means passing through the rigid areas to clamp them together.

8. A malleable iron guy clamp formed of two members, each having alternately rigid portions in the form of truncated cones with their bases in the respective bearing surface of the members, and comparatively flexible or yielding areas between the rigid portions whereby great bending limit is obtained, and means passing through the rigid portions to clamp the members together.

[Claims 1 to 5 not printed in the Gazette.]

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1,230,216. SHOE. ADAM H. PRENZEL, Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Oct. 12, 1912, Serial No. 725,478. Patent No. 1,117,088, dated Nov. 10, 1914. Divided and this application filed Sept. 23, 1914. Serial No. 863,129. (Cl. 36—16.)



1. A stitch-down shoe comprising an upper having an outturned flange, a sole located inside said upper and supporting the upper upon the inside above the plane of the flange, and a second sole having a margin extending beyond the edge of the first sole and to which the flange is secured, the angle of the upper being located between the lower face of the first sole and the upper face of the second sole, and said second sole being also secured to said first sole.

2. A stitch-down shoe comprising an upper having an outturned flange, an insole having an inclined marginal face, an outsole having a margin projecting beyond the edge of the insole and between which and the inclined marginal face of the insole the angle of the upper is located, staples securing the upper in said location, and a welt covering the heads of the staples and said upper flange and united to the upper and outsole by stitches.

3. A shoe comprising an upper having an outturned flange at the shank and about the forepart, an insole over the heel end of which the counter and heel end of the upper are lasted, a second sole having a margin projecting beyond the edge of the insole, the angle of the outturned part of the upper being located between the lower face of the insole and the upper face of said second sole, means inserted through the vertex of said angle for securing said upper to the second sole in said location, and means for securing the second sole to the insole.

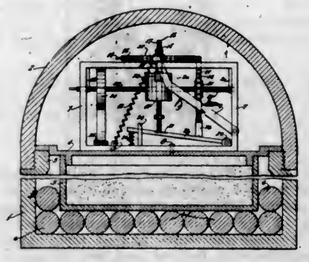
4. A stitch-down shoe comprising an upper having an outturned flange, an insole, a lining which is turned in and secured upon the bottom of the insole, an outsole having a margin projecting beyond the edge of the insole in the angle between which and the insole the angle of the upper is located, staples securing the upper in said location, and a welt covering the heads of the staples and said upper flange and united to the upper and outsole by stitches.

5. A shoe comprising an upper having an outturned flange at the shank and about the forepart, an insole over which the counter and heel end of the upper are lasted, an outsole having upon its upper face a raised portion extending substantially to the front end of the turned-in part of the upper and abutting the outturned part of the upper, and a welt laid upon the outturned upper and abutting said raised portion of the sole, said welt, upper and sole being permanently secured together.

[Claims 6 to 8 not printed in the Gazette.]

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1,230,217. PROJECTILE. RUBEN QUIST, Lohrville, Iowa. Filed Nov. 6, 1915. Serial No. 59,981. (Cl. 102—36.)



1. In a projectile comprising a powder reservoir, a frame carried thereby, a spring-pressed hammer carried by said frame to explode the powder, means carried by said frame normally engaging said hammer to retain the same in inoperative position, a spring shaft journaled in said frame, a toothed wheel fast upon said shaft, a plunger shaft journaled in said frame, means associated with said plunger shaft and frame whereby the former is yieldingly retained in adjusted relation, said means also engaging said toothed wheel to retain the same in set position, a second toothed wheel slidably keyed upon said plunger shaft and in mesh with the first named toothed wheel, a finger carried by said second toothed wheel for engagement with the said hammer-engaging means, and a handle adapted for releasable engagement with said plunger shaft to rotate the same to set the mechanism.

2. In a projectile comprising a powder reservoir, a frame carried thereby, a spring-pressed hammer carried by said frame to explode the powder, means carried by said frame normally engaging said hammer to retain the same in inoperative position, a spring shaft journaled in said frame, a toothed wheel fast upon said shaft, a plunger shaft journaled in said frame, means associated with said plunger shaft and frame whereby the former is yieldingly retained in adjusted relation, said means comprising a weight and yoke, fast and loose respectively, on said shaft, said yoke normally engaging said weight, connection between said last named means and said toothed wheel for normally retaining the latter in set position, a second toothed wheel slidably keyed on said plunger shaft in mesh with said first named toothed wheel, a finger carried by said first named toothed wheel for engagement with said hammer-engaging means, and a handle adapted for engagement with said plunger shaft to rotate and set the same.

3. In a projectile comprising a powder reservoir, a frame carried thereby, a spring-pressed hammer carried by said frame to explode the powder, means carried by said frame normally engaging said hammer to retain the same in inoperative position, a spring shaft journaled in said frame, a toothed wheel fast upon said shaft, a plunger shaft journaled in said frame, a weight and yoke, fast and loose respectively, upon said shaft and normally in embraced relation, a recessed lever engaging said

plunger shaft to yieldingly retain the same in normal or raised position, a dog carried by said recessed lever to normally engage said toothed wheel to lock the same against rotation, a second toothed wheel slidably keyed upon said plunger shaft in mesh with said first named toothed wheel, a finger carried by said wheel for engagement with the said hammer-engaging means, and a handle adapted to engage said plunger shaft to rotate and set the same.

1,230,218. OUTLET-BOX. JOSEPH G. RAQUETTE, Cleveland, Ohio. Filed Dec. 10, 1915. Serial No. 66,130. (Cl. 247—5.)

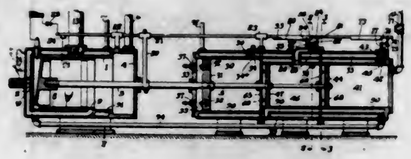


1. An outlet box, comprising a body consisting of a back and two end members, said end members at one side having notched ears extending laterally therefrom beyond the side of the box in planes parallel therewith and spaced inwardly therefrom, and at their opposite sides being provided with notched ears bent inwardly at right angles to their planes, a side plate for the first named side of the box whose front edge enters the notches in said parallel ears and whose other edge has a recessed ear lying outside of the back of the box, a screw passing through the recess of said last named ear into a threaded opening in the back of the box, a side plate for the second named side of the box whose front edge is provided with notched ears entering the right angled ears of the body and whose opposite edge has an ear lying within the back of the box, and a screw passing through an opening in the back of the box and threaded into said last named ear.

2. An outlet box, comprising a body consisting of a back and two end members, said end members at one side having notched ears extending laterally therefrom beyond the side of the box in planes parallel therewith and spaced inwardly therefrom, and at their opposite sides being provided with notched ears bent inwardly at right angles to their planes, the back of said box at the second named side having a recessed ganging ear extending beyond the side of the box in a plane parallel with its back and spaced outwardly therefrom, a side plate for the first named side of the box whose front edge enters the notches in said parallel ears and whose other edge has a recessed ear lying outside of the back of the box, a screw passing through the recess of said last named ear into a threaded opening in the back of the box, a side plate for the second named side of the box whose front edge is provided with notched ears entering the right angled ears of the body and whose opposite edge has an ear lying within the back of the box, and a screw passing through an opening in the back of the box and threaded into said last named ear.

3. In an outlet box, a body consisting of a back and two end members, said end members at one side having notched ears extending laterally therefrom beyond the side of the box in planes parallel therewith and spaced inwardly therefrom, and at their opposite sides being provided with notched ears bent inwardly at right angles to their planes, the back of said box at the first named side being provided with a threaded opening and at the second named side with a plain opening and a recessed ganging ear extending beyond the side of the box in a plane parallel with its back and spaced outwardly therefrom.

1,230,219. AIR-COMPRESSOR AND MOTOR. ARTHUR REALL, Philadelphia, Pa., assignor to Reall Portable Compressor Company, Philadelphia, Pa. a Corporation of Delaware. Filed Oct. 24, 1914. Serial No. 868,368. Renewed Nov. 13, 1916. Serial No. 131,180. (Cl. 230—32.)



1. In an apparatus of the character described, the combination of a plurality of cylinders, pistons in said cylinders, means for driving the said pistons in one direction to compress air in one or more of said cylinders, means for conducting a portion of the air so compressed to a point outside of said cylinders, and means whereby a portion of the compressed air is permitted to act upon one or more of said pistons to drive the same in the opposite direction.

2. In an apparatus of the character described, the combination of a plurality of cylinders, pistons in said cylinders, means for driving the said pistons in one direction, means whereby air is introduced into and compressed in one of said cylinders, means for conducting the air under compression from said cylinder to a point outside of said cylinders, and means for permitting a portion of the said air under compression into another of said cylinders to drive the said pistons in the opposite direction.

3. In an apparatus of the character described, the combination of a plurality of cylinders, pistons in said cylinders, a power device for driving the said pistons in one direction, means for permitting air under atmospheric pressure into one or more of said cylinders, which air is placed under compression by one or more of the said pistons, means for conducting a portion of the air under compression to a point outside of the said cylinders, and means for controlling the admission of a portion of the said compressed air into another one of the said cylinders for acting upon the piston in said other cylinder for driving the said pistons in the opposite direction and for placing the said power device in its initial condition.

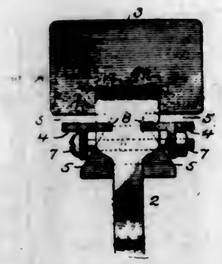
4. In an apparatus of the character described, the combination of an explosive engine having a piston and a piston rod connected to the latter, a plurality of cylinders into which the said piston rod extends, pistons secured to said piston rod, which pistons are situated in the said cylinders, means for admitting air into one or more of said cylinders and compressing the same therein, means for conducting a portion of the said air to a point outside the said cylinders, and means for permitting a portion thereof to enter another one or more of said cylinders to act upon the piston or pistons therein to return the same to initial position.

5. In an apparatus of the character described, the combination of a plurality of cylinders, a piston rod extending into the said cylinders, pistons situated in said cylinders and secured to said piston rod, means for permitting air to enter one of the said cylinders, means for driving the said pistons in one direction to compress the air in said cylinder, one or more of the said cylinders having an annular chamber surrounding the same, means for permitting air under compression to enter the said annular chamber, means for conducting the air from said annular chamber to a point outside of the said cylinder, and means for permitting the air to flow from the said annular chamber to one of the said cylinders for driving the said pistons and piston rod in the opposite direction.

[Claims 6 to 12 not printed in the Gazette.]



1,230,220. VEHICLE-WHEEL. THOMAS RHODUS, Chicago, Ill., assignor to Charlotte C. Rhodus. Filed Nov. 1, 1915. Serial No. 58,955. (Cl. 152—29.)



1. In a wheel, the combination of a wheel center, an annular tread member comprising a series of blocks and a pair of rigid laterally alined holding rings associated with said blocks, and connecting means between said tread member and the wheel center, said connecting means being adapted to hold said tread member against sidewise movement while permitting sidewise adjustment of said holding rings, substantially as set forth.

2. In a wheel, the combination of a wheel center, an annular tread member comprising a series of blocks having circumferential recesses in their opposite sides and a pair of rigid laterally alined holding rings associated with said blocks, and connecting means between said tread member and the wheel center aforesaid, all portions of said blocks except the portions in said recesses being held away from contact with said holding rings, substantially as set forth.

3. In a wheel tread, the combination of an annular tread member comprising a series of blocks, a pair of rigid laterally alined holding rings associated with said series of blocks, said blocks extending laterally inside of said rings and beyond the parts of said rings which are nearest the centers of said rings, substantially as set forth.

4. In a wheel tread, the combination of an annular member comprising a series of blocks formed with circumferential recesses in their opposite sides, a pair of rigid laterally alined holding rings associated with said blocks, each of said rings being formed with a depressed part held away from said blocks by and between two projecting contact faces, both of said faces having contact with said blocks wholly in said recesses, substantially as set forth.

5. In a wheel, the combination of a wheel center, an annular tread member comprising a series of blocks, a pair of rigid laterally alined holding rings having contact with said blocks, and a series of connecting means between said wheel center and said tread member and extending into recesses in said blocks, said connecting means having engagement with said holding rings, substantially as set forth.

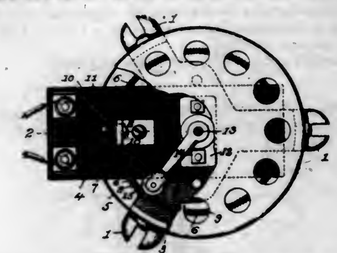
[Claims 6 to 12 not printed in the Gazette.]

1,230,221. RHEOSTAT. THOMAS RHODUS, Chicago, Ill. Filed Oct. 2, 1916. Serial No. 123,214. (Cl. 219—55.)

1. In a rheostat, the combination of a flat curved core, a resistance element wound around the core, means for yieldingly holding the core in position, and a circumferentially adjustable non-expansible contact arm pivoted centrally of said core and adapted in its adjustment to displace said core laterally, substantially as set forth.

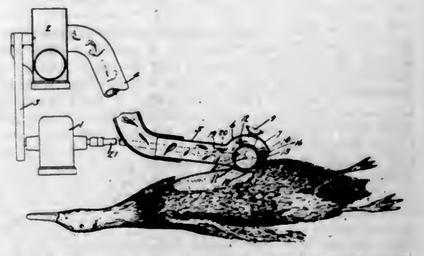
2. In a rheostat, the combination of a flexible flat curved core, a resistance element wound around the core, means for supporting said core in position, and a circumferentially adjustable non-expansible contact arm pivoted centrally of said core and adapted in its adjustment to displace said core laterally, substantially as set forth.

3. In a rheostat, the combination of a flat curved core, a resistance element wound closely upon the core, means for supporting said core in position, a rolling contact element adapted to make contact with the flat side of said resistance element, and a circumferentially adjustable



non-expansible contact arm pivoted centrally of said core and adapted in its adjustment to move said rolling contact element circumferentially, substantially as set forth.

1,230,222. FEATHER-PICKING MACHINE. OTTO G. RIESKE, Toronto, Ontario, Canada. Filed Nov. 29, 1915. Serial No. 64,102. (Cl. 17—30.)



1. A picking machine comprising a case provided with a mouth opening, means for producing a partial vacuum in said case, and a picking means including a movable element having an internal cavity and peripheral air passages leading thereto, which peripheral passages are movable from the exterior to the interior of said case whereby the feathers, or the like, will be drawn against the exterior portion of the said movable member and will be drawn off from that portion thereof that is within said case.

2. A portable picking machine comprising a case provided with a mouth opening and having a part adapting it to be held and carried in the hand, power driven picking means within said case adjacent to the mouth opening thereof, a stationary power device and suction fan, a flexible conveyer tube connecting the intake of said fan to said portable case, and a flexible driving shaft connecting said power device to the power driven picking means of said case.

3. In a feather picking machine, the combination with a casing having an open mouth, of a hood movably mounted on said casing for varying the size of the said mouth and coöperating main and auxiliary picking rollers working in the mouth of said casing, the former being journaled to the said casing and the latter to the adjustable hood thereof.

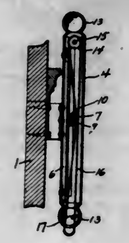
4. In a feather picking machine, the combination with a casing having an open mouth, of a hood movably mounted on said casing for varying the size of the said mouth and coöperating main and auxiliary picking rollers working in the mouth of said casing, the former being journaled to the said casing and the latter to the adjustable hood thereof, and a comb applied to said casing and projecting beyond that part of the mouth thereof that is opposite the said hood.

5. In a feather picking machine, the combination with a casing having an open mouth, of a hood movably mounted

on said casing for varying the size of the said mouth, coöperating main and auxiliary picking rollers working in the mouth of said casing, the former being journaled to the said casing and the latter to the adjustable hood thereof, and a pneumatic conveyer having a suction tube connected to said casing.

[Claims 6 to 16 not printed in the Gazette.]

1,230,223. CURTAIN-SUPPORT. AUGUSTA E. ROBERT, Oakland, Cal. Filed Sept. 7, 1916. Serial No. 118,824. (Cl. 156—27.)

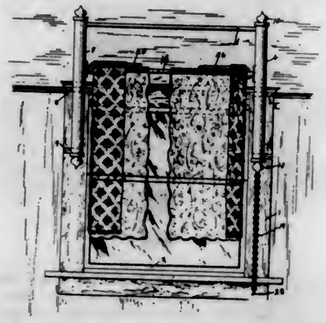


1. In a window curtain support the combination of a pair of slotted tubular members; a rack bar rigid with each member; means securing said members midway of their length to the window frame whereby said members are made to project above said frame; a shaft extending between said members through the slots thereof, and provided with a pinion on each end engaging said rack bars; a pair of guide members located inside said tubular members through which said shaft passes, and having tubular extensions movable up and down in said slots; a main curtain rod mounted on said extension; a sprocket wheel mounted on said shaft; a sprocket chain passing over said sprocket wheel adapted to raise and lower said guides, and main curtain rod; and means supporting said sprocket chain at the upper end of said tubular guide, substantially as described.

2. In a window curtain support the combination of a pair of tubular members provided with slots; a rack bar rigid with each member; means to secure said members to the frame of the window; a shaft extending between said members through the slots thereof and provided with a pinion on each end engaging said rack bars; a pair of guide members carried by said shaft in which the latter is journaled and having tubular extensions movable up and down in said slots; a main curtain rod mounted on said extensions; a sprocket wheel mounted on said shaft in one of said tubular members; a sprocket chain passing over said sprocket wheel adapted to raise and lower said guides and main curtain rod; means supporting said sprocket chain at the upper end of said tubular guide; and means to secure said chain in any desired position, substantially as described.

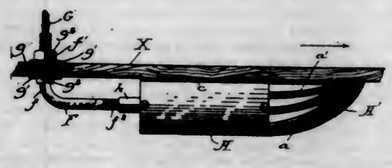
1,230,224. CURTAIN-SUPPORT. AUGUSTA E. ROBERT, Oakland, Cal. Filed Nov. 16, 1916. Serial No. 131,780. (Cl. 156—27.)

1. In a window curtain holder the combination of a pair of slotted tubular members adapted to extend above the window; means for securing said members to the frame of said window; a shaft connecting said members above said window; a sprocket wheel located inside one of said members and secured to one end of said shaft; a pulley located inside the other of said members and secured to the other end of said shaft; a pair of slotted slide members movable up and down in the slots of said tubular members, each of which is provided with an extension; a sprocket chain passing over said sprocket wheel and secured to one of said extensions; a cord passing over said pulley and secured to the other of said extensions; a curtain rod joining said slide members; and means to secure said sprocket chain in any desired position to which it may be adjusted, substantially as described.



2. In a window curtain holder the combination of a pair of slotted tubular members; means for securing said members to the frame of a window; a shaft connecting said members at their upper ends; a sprocket wheel located inside one of said members and secured to one end of said shaft; a pulley located inside the other of said members and secured to the other end of said shaft; a pair of slotted slide members movable up and down in the slots of said tubular members, and each provided with an extension; a sprocket chain passing over said sprocket wheel and secured to one of said extensions; a cord passing over said pulley and secured to the other of said extensions; a curtain rod joining said slide members; a pair of drapery holding rods pivotally supported from said slide members; and means to secure said sprocket chain in any desired position to which it may be adjusted, substantially as described.

1,230,225. MEANS FOR OPERATING SHIPS' LOGS. GEORGE E. ROBERTSON, Huntington, N. Y. Filed May 29, 1913. Serial No. 770,566. (Cl. 73—122.)

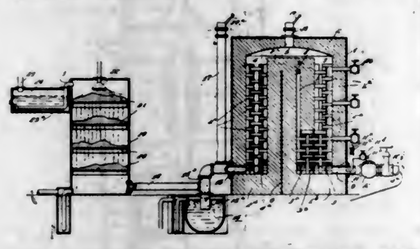


1. In a device of the class described, the combination of an imperforate casing the forward part of which is provided with a weed-excluding grating, a tubular incasing member extending rearwardly from said imperforate casing, said tubular incasing member being provided with an elbow, means for fixedly attaching the elbow to a boat, means for connecting said tubular incasing member to said casing, a rotator supported within said imperforate casing, and a flexible shaft extending loosely through the tubular incasing member and the elbow thereof, said flexible shaft being operated by the rotator.

2. In a device of the class described, an imperforate casing substantially U-shaped in cross section and provided at the forward portion with a weed-excluding grating, said casing and the grating being provided with a marginal attaching flange, in combination with supporting bearings fixedly secured within the imperforate casing, a rotator the shaft of which is journaled in said bearings, a tubular incasing member provided at its rear with a threaded elbow, means for fixedly attaching said elbow to a boat, means for coupling the tubular incasing member to one of said bearings, and a flexible shaft extending through the incasing member and the elbow thereof, said flexible shaft being driven by the rotator shaft.



1,230,226. PROCESS OF MANUFACTURING COMBUSTIBLE FLUIDS. JAMES R. ROSE, Edgeworth, Pa. Filed Nov. 29, 1915. Serial No. 64,099. (Cl. 48—213.)



1. The process of producing combustible fluid which comprises injecting into a generator, by a stream of hydrogen under pressure, liquid or gaseous hydrocarbon, supplying to such mixture in the generator a liquid hydrocarbon of different series from that injected by the hydrogen, and subjecting the mixture of the three fluids in such generator to the action of highly heated refractory material.

2. The process of producing combustible fluid which comprises injecting into a generator, by a stream of hydrogen under pressure, liquid or gaseous hydrocarbon, supplying to such mixture in the generator a liquid hydrocarbon of different series from that injected by the hydrogen, and subjecting the mixture of the three fluids in such generator to the action of heat sufficient to disassociate the hydrocarbon fluids and to produce with the gaseous constituents thereof and the hydrogen a gaseous compound.

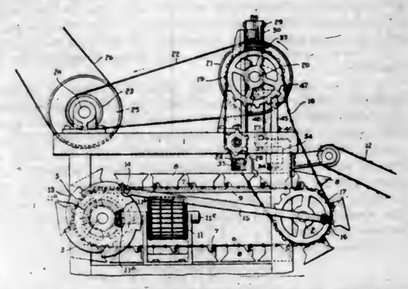
3. The process of producing a combustible fluid which comprises injecting into a generator, by a stream of hydrogen gas under pressure, liquid or gaseous hydrocarbon, adding to the mixture thus produced within the generator a hydrocarbon liquid, subjecting the mingled fluids to the action of highly heated refractory material in the generator, removing from the gaseous fuel thus produced any free carbon that may be therein, scrubbing the gas after such removal of carbon, and conducting the gas thus produced through liquid hydrocarbon thereby to enrich the same.

4. The process of producing a combustible fluid which comprises supplying to a generator hydrogen gas and liquid or gaseous hydrocarbon, adding to the mixture thus produced within the generator a hydrocarbon liquid, subjecting the mingled fluids to the action of heat sufficient to disassociate the hydrocarbon fluids and to produce from the gaseous constituents thereof and the hydrogen a gaseous compound, and conducting the said compound thus produced through liquid hydrocarbon thereby to enrich the same.

5. The process of producing combustible fluid which includes the introduction into a generator of hydrogen and liquid or gaseous hydrocarbon, supplying to such mixture in the generator a liquid hydrocarbon of different series from that supplied with the hydrogen, and subjecting the mixture of the three fluids in such generator to the action of highly-heated refractory material.

1,230,227. TRIMMING OR SNIPPING MACHINE. EDWARD A. SALTER, North Rose, N. Y. Filed Jan. 8, 1917. Serial No. 141,229. (Cl. 140—7.)

1. In a machine of the class described, an endless conveyer having transverse guides thereon, buckets movable on said guides, and means for shifting said buckets in opposite directions on the guides, and means for cutting off the ends of the article contacting with opposite walls of the buckets.



2. In a machine of the class described, an endless conveyer, buckets movably mounted on the conveyer, and a device entering the buckets to contact with the articles therein in order to cause them to contact with a wall of the bucket for the severing of such end.

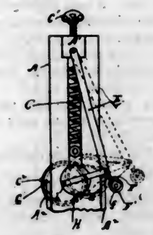
3. In a machine of the class described, an endless conveyer, bottomless buckets carried by the conveyer and movable transversely of the path of travel of the conveyer, and a table over which said buckets are carried to close the bottoms thereof, means for shifting the buckets in opposite directions on the conveyer, and means for cutting off the ends of beams coöperating with opposite ends walls of the buckets.

4. In a machine of the class described, buckets movably mounted on the conveyer, and two pushers, one acting successively on the buckets to shift them in one direction and the other acting successively on the buckets to shift them in the other direction, and means for cutting off the ends of the articles contacting with opposite walls of the buckets.

5. In a machine of the class described, an endless conveyer, buckets on the conveyer, mechanism for feeding said conveyer step-by-step, means for causing the articles to be brought alternately against opposite end walls of the buckets, and cutting devices entering said buckets while the latter are stationary to cut the ends of the articles within the bucket against the end walls.

[Claims 6 to 26 not printed in the Gazette.]

1,230,228. CLOTHES-WRINGER. PAUL H. SCHENDLER, Erie, Pa. Filed Feb. 5, 1917. Serial No. 146,657. (Cl. 68—32.)



1. In an apparatus of the class described, a clothes wringer, a plate adapted to reciprocate adjacent to the intake side thereof, and means operated by the shaft of one of the wringer rolls to cause said plate to reciprocate, substantially as described.

3. In an apparatus of the class described, a clothes wringer, press-rolls therein, a reciprocating member supported upon the frame of said wringer adjacent to the intake side of said rolls, and crank and pitman mechanism secured upon the axis of one of said rolls adapted

to cause said member to reciprocate toward and away from said rolls, substantially as described.

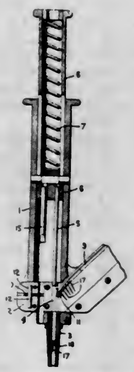
4. In an apparatus of the class described, a pair of press-rolls, a reciprocating member adjacent to the intake side of said rolls, a roller mounted in the outer edge of said member, and means to cause said member to reciprocate toward and away from said rolls, substantially as described.

6. In an apparatus of the class described, a clothes wringer, press-rolls mounted thereon, pivot-pins secured upon the end posts of said frame, straps pivoted upon said pins, a plate secured between the free ends of said straps, eccentric mechanism mounted upon the axis of one of said rolls, and engaging said plate, whereby said plate will be caused to reciprocate inwardly toward the meeting point of said press-rolls and therefrom, during the operation of said rolls, substantially as and for the purpose set forth.

[Claims 2 and 5 not printed in the Gazette.]

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1,230,229. HAND-TACKING DEVICE. AUGUST R. SCHORNKY, Somerville, Mass., assignor to Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Mar. 16, 1917. Serial No. 155,187. (Cl. 1—46.)



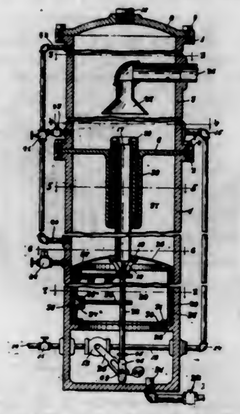
1. In a hand tacker, the combination with a casing or frame having a driver passage, of a reciprocating driver operating in said passage, a plunger for operating the driver, a tack-receiving chute leading to said passage, an oscillatory pick-off for delivering tacks singly to said passage from said chute, a cam carried by the plunger and operating during the driving movement thereof to move the pick-off backwardly, a spring acting on the pick-off and giving the latter its forward tack-delivering movement as the plunger rises, and tack-retaining means located in the driver passage and situated to retain a tack delivered to the passage in such a position that when the driver is brought into engagement with the tack the cam will be in a position to engage the pick-off.

[Claims 2 and 3 not printed in the Gazette.]

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1,230,230. REFRIGERATING APPLIANCE. ROY J. SCOTT, Canton, Ohio. Filed Oct. 28, 1914. Serial No. 869,015. (Cl. 62—8.)

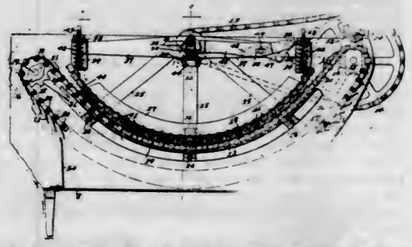
A refrigerating appliance comprising of a cylindrical body having three compartments, the lower compartment being closed by a bell set in a cylindrical pocket filled with mercury forming a seal from center compartment, a web collar attached to said bell, a pipe attached to said web collar extending upwardly from said collar and a smaller bell attached to top of said pipe, said smaller bell projects downwardly into a cylindrical pocket filled with mercury forming a seal between upper and center compartments, an inlet pipe for liquid refrigerant and containing an expansion valve, connected with said upper compartment, a liquid refrigerant outlet pipe connected with said lower compartment leading to a refrigerating coil, a refrigerant



vapor pipe discharging into said upper chamber, a vapor outlet from said upper chamber and a rod connected at one end to said web collar and at the other end to said expansion valve.

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1,230,231. WASHING-MACHINE. FRANCIS COLLINGE SHEARING, San Jose, Cal. Filed Oct. 11, 1916. Serial No. 124,997. (Cl. 68—20.)



1. The combination with a tub, of a washing machine including a conveyer for the articles to be washed, means for moving said conveyer vertically, a rubber, means for moving said rubber vertically, and means for moving said rubber longitudinally of said conveyer.

2. The combination with a tub, of a washing machine including a conveyer for the articles to be washed, a rubber, means for moving said conveyer and rubber toward and from each other, and means for moving said rubber longitudinally of said conveyer.

3. The combination with a tub, of a washing machine including a conveyer provided with pivotal overlapping leaves presenting an upper corrugated rubbing surface, a rubber, and means for operatively moving said conveyer and rubber with respect to each other.

4. The combination with a tub, of a washing machine including a conveyer formed of endless chains having corrugated leaves pivoted therebetween and adapted to overlap each other to present a rubbing surface permitting the upward passage of water therethrough only, a rubber, means for moving said conveyer and rubber toward and from each other, and means for moving said rubber longitudinally of said conveyer.

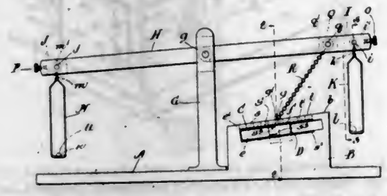
5. The combination with a tub, of a washing machine including a drive shaft provided with cranks, a frame vertically movable by said cranks, a conveyer supported in said frame, a rubber, means for moving said rubber vertically in directions opposite to said conveyer, and means for moving said rubber longitudinally of said conveyer.

[Claims 6 and 7 not printed in the Gazette.]



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1,230,232. WEIGHING-BALANCE. WALTER SIMS, Pawtucket, R. I. Filed Oct. 18, 1916. Serial No. 126,418. (Cl. 265—49.)



1. In a weighing balance, the combination of a base, an inclined guideway on the base, a post on the base, a balance arm on the post, a hanger on one end of the arm, a weight slidably mounted in the guideway, and a member pivotally connecting the other end of the arm with the weight.

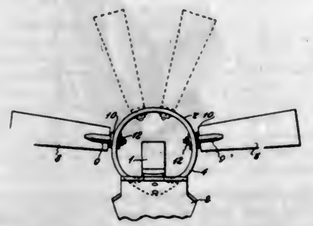
2. In a weighing balance, the combination of a base, an inclined guideway on the base having scale graduations, a post on the base, a balance arm on the post, a hanger on one end of the arm, a weight slidably mounted in the guideway having scale graduations, and a flexible member connecting the other end of the arm with the weight.

3. In a weighing balance, the combination of a base, an inclined guideway on the base having scale graduations, a post on the base, a balance arm on the post, a hanger on an end of the arm, a weight slidably mounted in the guideway having vernier scale graduations, a flexible member connecting the other end of the arm with the weight.

4. In a weighing balance, the combination of a base, an inclined guideway on the base, a post on the base, a balance arm on the post, a weighing hanger on one end of the arm, a counter balance hanger on the other end of the arm, a weight slidably mounted in the guideway, and a flexible member connecting the weight with a portion of the arm adjacent the second hanger.

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1,230,233. WING-SWEEP ATTACHMENT FOR PLOWS. M. T. SKINNER, Cleburne, Tex. Filed Aug. 28, 1916. Serial No. 117,174. (Cl. 97—9.)

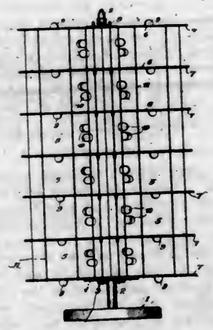


1. In a wing sweep attachment for plows a continuous ring having the front portion of its periphery inclined and extended upward and its rear or body portion slotted to receive the sweeps, combined with means for adjustably attaching the upwardly extending front portion of the ring to the standard of the plow.

2. In a wing sweep attachment for plows a continuous ring having its front portion inclined and extended upward and its rear or body portion slotted to receive the sweeps, the exterior face of the body portion being vertically ribbed in combination with a sweep having a shank detachably locked to the slotted body of the ring and a washer having its inner face vertically ribbed, said washer arranged on the shank of the sweep adjacent to the outer ribbed face of the ring and interlocking with said ribbed face combined with means for adjustably attaching the upwardly extending front portion of the ring to the standard of the plow.

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1,230,234. DISPLAY-RACK. FRANK A. STECHER, Rochester, N. Y., assignor to Stecher Lithographic Co., Rochester, N. Y., a Corporation of New York. Filed Feb. 5, 1915. Serial No. 6,352. (Cl. 40—68.)

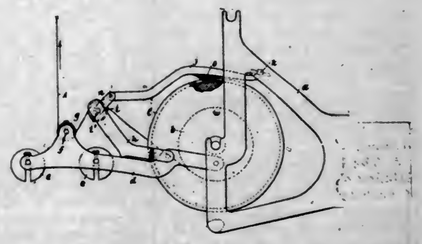


1. In a display rack, the combination with a series of vertical walls arranged one above the other, of horizontal partitions disposed between the vertical walls and provided with a series of slots, the vertical walls having tabs or extensions in engagement with the slots, said horizontal partitions extending laterally beyond the vertical walls and forming shelves, and retaining wires extending vertically through the said shelves and in front of the vertical walls.

2. In a display rack, the combination with a series of vertical walls arranged one above the other, of horizontal partitions disposed between the vertical walls and provided with a series of slots, the vertical walls having tabs or extensions in engagement with the slots, said horizontal partitions extending laterally beyond the vertical walls and forming shelves, retaining wires extending vertically through the said shelves and in front of the vertical walls, and spacing members formed on the vertical walls intermediate the horizontal partitions and consisting of integral struck-out portions.

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1,230,235. LET-OFF MECHANISM. WILLIAM STRITTMATTER and HERMAN SCHIMMEL, Weehawken, N. J. Filed Sept. 11, 1916. Serial No. 119,349. (Cl. 139—58.)



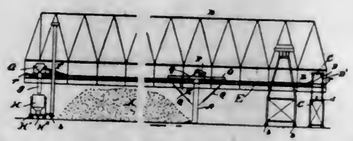
1. A let-off mechanism for looms including a frame, a beam journaled therein on a horizontal axis, a gravity-actuated lever-structure fulcrumed in the frame also on a

horizontal axis, the warp being adapted to engage said lever structure and move the same counter to gravity-action, and a brake member consisting of a lever extending over the beam and fulcrumed at one end in the frame and operatively connected at its other end with said lever structure and bearing against said beam between its ends.

[Claim 2 not printed in the Gazette.]

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1,230,236. APPARATUS FOR RAISING AND CONVEYING COAL, &c. FRANCIS LEE STUART, Baltimore, Md. Filed May 20, 1916. Serial No. 98,889. (Cl. 214—1.)



1. The combination with a movable bridge, of a belt conveyer thereon, a tripper associated with said conveyer delivering material therefrom and movable endwise on the bridge, a reclaiming elevator, a truck on which said reclaiming elevator is supported, a track on the bridge by the side of the conveyer and parallel therewith on which said truck travels, a chute carried by and movable with the truck which receives material from the reclaiming elevator and discharges onto said conveyer, means at one end of the bridge for delivering to the conveyer on the bridge, and means at the opposite end of the bridge which receives material delivered by said conveyer.

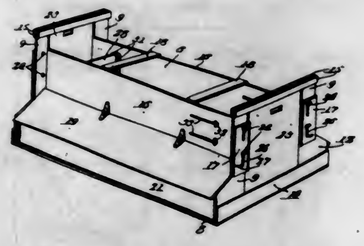
2. The combination with a movable bridge, of a belt conveyer thereon, a tripper associated with said conveyer delivering material therefrom and movable endwise on the bridge, a reclaiming elevator, a truck on which it is supported, a track by the side of the belt conveyer and parallel with the belt conveyer on which said truck travels, a chute carried by and movable with the truck which receives material from the reclaiming elevator and discharges onto the belt conveyer, a main conveyer belt delivering to one end of the belt conveyer on the bridge, and a belt conveyer at the opposite end of the bridge to which the tripper on the bridge delivers.

3. The combination with a movable bridge, of a belt conveyer thereon, a tripper associated with said conveyer for delivering material at any desired point below the bridge, a main conveyer belt, a tripper associated therewith and connected with one end of the bridge to move at all times therewith and to deliver to the bridge conveyer, a hopper at the opposite end of the bridge connected to move at all times therewith and to which the tripper on the bridge is adapted to deliver, a truck supporting the hopper and moving with the bridge, and a conveyer belt below the hopper which receives material therefrom.

4. The combination with a movable bridge, of a belt conveyer thereon and extending from end to end thereof, a tripper mounted to move endwise on the bridge and associated with the belt thereon, a main conveyer belt, a tripper associated therewith and which delivers to one end of the belt conveyer of the bridge, a reclaiming elevator delivering to said last-mentioned conveyer, a hopper connected with the bridge to move at all times therewith, and a belt conveyer over which said hopper is mounted to move.

5. The combination with a movable bridge, of a reclaiming elevator comprising a continuously moving series of buckets, a frame therefor, a truck supported on the bridge and to which the bucket frame is connected, means for adjusting the inclination of the bucket frame, a truck at the lower end of the bucket frame, and a plow on said last mentioned truck comprising a front piece adapted to enter a pile of material, and an endless conveyer belt which delivers to the buckets.

1,230,237. FARROWING-BOX. LESTER STURM, Roscoe, Ill. Filed July 19, 1916. Serial No. 110,183. (Cl. 119—20.)

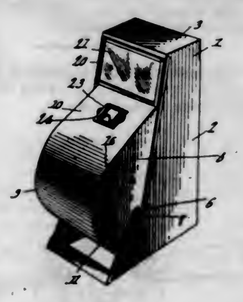


1. A farrowing box having a central compartment, side wing compartments and passage openings at opposite ends of the central compartment, the tops of the side wing compartments being hinged to the side walls of the central compartment and free to move bodily vertically therewith, and means allowing the said side walls to be vertically adjustable whereby to vary the height of said compartments.

2. A farrowing box comprising a retangular base, a pair of spaced upright standards secured to each end thereof and their lower portions constituting end walls of side wing compartments, movable closures for the openings between the standards of each pair, spaced upright walls interposed between the standards of each pair constituting side walls of a central compartment and having end pieces engaging and detachably secured to the outer sides of the standards, means for rigidly securing said end pieces to the standards, and lids hingedly attached to the side walls and forming the top of the side wing compartments.

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1,230,238. DISPENSING-BIN. WILLIAM G. TEMPLETON, Colorado Springs, Colo. Filed Sept. 2, 1914. Serial No. 859,871. (Cl. 211—6.)

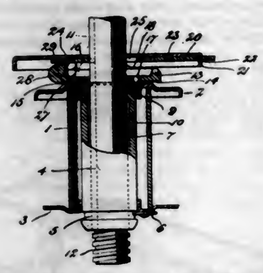


1. The combination with a supporting structure having a vertical back wall, of a pivotal bulk-holder having an arcuate bottom from the extremities of which tangential front and rear walls converge along straight lines toward a meeting point or apex, the holder being mounted eccentrically, the rear wall of the holder having an access opening extending from its upper extremity and of sufficient size to receive a bulk removing element, the side walls of the holder having straight free edges in the same plane with the outer face of the rear wall of the holder, said edges and face being movable to position flat against the vertical wall of the supporting structure to seal the access opening.

[Claim 2 not printed in the Gazette.]



1,230,239. REVOLVING CHAIR. CHARLES J. TRAVERS, Milwaukee, Wis. Filed July 24, 1916. Serial No. 110,848. (Cl. 155—41.)



1. In a chair-iron, the combination with a revoluble sleeve, standards extending upwardly therefrom, and a hand-wheel secured to the standards above the upper end of the sleeve and having an opening alining with that of the sleeve, of a grooved adjusting-standard threaded in the sleeve and extending through the opening in the hand-wheel, a movable locking-plate between the hand-wheel and sleeve having an opening receiving the adjusting-standard, said locking-plate having one edge of its opening provided with a locking-lug for engaging the groove of the adjusting-standard and its opposite rear corners provided with depending ears engaging the standards of the sleeve, a lug formed on the upper end of the sleeve and positioned between said ears of the locking-plate, and a flat spring bearing at its middle against the lug of the sleeve and at its opposite terminals against the rear edges of the ears of the locking-plate.

2. In a chair-iron, the combination with a revoluble sleeve, standards extending upwardly therefrom and provided with opposite guides, and a lug formed on the upper end of the sleeve between said guides, of a hand-wheel having an opening alining with the opening in the sleeve and secured to the standards, a longitudinally grooved, adjusting-standard threaded in the sleeve and extending through the opening in the hand-wheel, a reciprocating locking-plate located between the hand-wheel and the upper end of the sleeve and provided at its rear corners with depending ears engaging the opposite guides of the standards and having an opening receiving the adjusting-standard and formed with a lug for engaging the longitudinal groove thereof, and a flat spring bearing near its middle against the lug of the sleeve and having its opposite terminals engaging the depending ears of the locking-plate.

3. In a chair-iron, the combination with a revoluble sleeve terminating at its upper end in an enlarged annular head provided with a cavity adapted to receive a lubricant and having the wall of the cavity provided with an orifice leading to the underside or bearing-portion of said head, whereby a stored lubricant will be fed to said bearing-portion, of an adjusting-standard threaded in the sleeve and having a longitudinal groove, a hand-wheel surmounting the sleeve and adapted to move therewith, and means for removably locking the sleeve and adjusting-standard.

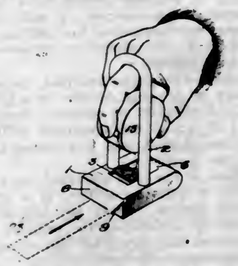
4. In a chair-iron, the combination with a revoluble sleeve terminating at its upper end in an enlarged head from the opposite sides of which rise short standards and between the latter a lug, and a hand-wheel fastened to the standards and provided with a depending peripheral flange provided with a narrow slot, of an adjusting-standard longitudinally grooved and threaded in the sleeve, a wedge-shaped locking plate mounted to reciprocate between the standards and between the hand-wheel and the upper end of the sleeve, the outer end of said locking-plate approximating the narrow slot of the hand-wheel and projecting through and beyond the same and in rear of said slot having an opening approximating the diameter of the adjusting-standard and elongated in one direction and provided with a locking-lug engaging the groove of the standard and at its rear opposite sides having depending ears, and a flat spring bearing intermediate its ends against the lug of the sleeve and at its terminals against the depending ears of the locking-plate, whereby the latter is normally forced against the rear edges of the standards and the locking-lug of the plate is in engagement with the groove of the adjusting-standard.

5. In a chair-iron, the combination with a revoluble sleeve terminating at its upper end in a head, and a hand-wheel secured rigidly to and spaced from said sleeve, of an adjusting-standard longitudinally grooved and threaded in the sleeve, opposite stops and an intermediate lug extending upwardly from the head, a locking-plate located in the space between the hand-wheel and the upper end of the sleeve and provided at opposite sides with depending ears adapted to engage with the opposite stops of the head, said plate having an opening slightly elongated and receiving the adjusting-standard and at its edge having a locking-lug adapted to engage the groove of the adjusting-standard, and a flat spring bearing at an intermediate point against the lug of the head and at its terminals against the ears of the locking-plate.

[Claims 6 to 8 not printed in the Gazette.]

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1,230,240. AUTOMATIC APPLYING AND SEALING DEVICE. GEORGE W. TYLER, Boston, Mass. Filed Aug. 30, 1913. Serial No. 787,487. (Cl. 216—21.)



1. A device of the class described, having a base portion provided with tape guiding means, a liquid containing receptacle in said base as a part of tape moistening means, tape applying means, and tape cutting means, and a removable handle portion provided with tape carrying means.

2. A device of the class described, having a base portion provided with a receptacle to contain liquid, tape guiding means on one side of said receptacle, tape moistening means carried by the liquid containing receptacle, and tape applying means carried by the base at the other side of said receptacle, and a U-shaped handle supported on the base and adapted to carry a roll of tape, said handle being hollow to constitute a supply reservoir for the liquid receptacle in the base.

3. A device of the class described, having a base portion provided with tape guiding, tape moistening, tape applying and tape cutting means, and a handle portion provided with tape carrying means and a liquid supply reservoir, and means to adjust said handle relatively with the base portion, whereby the supply of liquid to the moistening means is regulated.

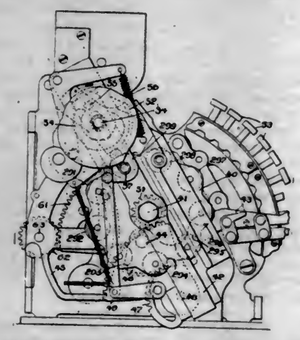
4. A device of the class described, having a base portion provided with tape guiding means, tape moistening means, tape applying means, and tape cutting means, having a handle, said handle being hollow and provided with a liquid supply reservoir to supply said moistening means, and being detachably secured to the base portion.

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1,230,241. PRINTING MECHANISM FOR CASH-REGISTERS. EDWARD J. VON PEIN, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed July 18, 1914. Serial No. 851,762. (Cl. 235—8.)

1. In a machine of the class described, the combination with a plurality of printing devices, of a differentially

movable element, means carried by said differentially movable element for controlling the printing devices in desired combinations, and means for differentially operating the movable element.



2. In a machine of the class described, the combination with a plurality of printing devices, of a differentially rotatable element, means carried by said differentially rotatable element for controlling the printing devices in desired combinations, and means for differentially rotating said rotatable element.

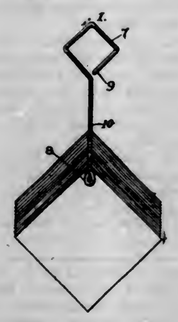
3. In a machine of the class described, the combination with a plurality of printing devices, of a differentially rotatable shaft, a plurality of elements carried by said shaft arranged to control the operations of the printing devices in various combinations, and means for differentially rotating the shaft.

4. In a machine of the class described, the combination with a plurality of printing devices, of a differentially movable element, means carried by said differentially movable element for controlling the printing devices in desired combinations, and means for controlling the movement of the differentially movable element.

5. In a machine of the class described, the combination with a plurality of printing devices, of a differentially movable element, means carried by said differentially movable element for controlling the printing devices in desired combinations, and manipulative means for controlling the movement of the differentially movable element.

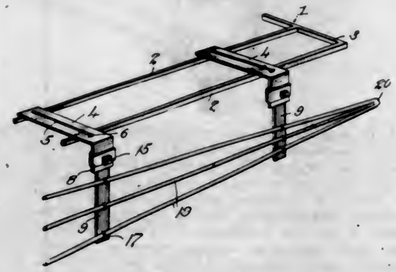
[Claims 6 to 42 not printed in the Gazette.]

1,230,242. SHEET-HOLDER. HENRY WILLIAM VON UNRUH, Cincinnati, Ohio. Filed Aug. 28, 1916. Serial No. 117,205. (Cl. 211—2.)



A sheet holder comprising a wire having a loop at one end and a knob at the opposite end, with a shank between said loop and knob, said loop having its end out of alinement with the shank, whereby perforated sheets may be slipped over the end, around said loop and onto said shank in engagement with said knob, the lower end of the shank adjacent to the knob being bent outwardly and downwardly to hold the sheets in stepped relation to one another.

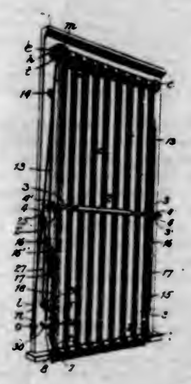
1,230,243. CULTIVATOR ATTACHMENT. RALPH E. WAKEMAN, Kents Hill, Me. Filed Jan. 28, 1916. Serial No. 74,836. (Cl. 97—33.)



6. The combination with a cultivator frame including parallel bars, of supporting plates having longitudinal slots therein, U-shaped clamping members engaged about the bars of the cultivator frame, detachable bolts extending through the slots in the plates and engaged with the U-shaped clamping members whereby the plates may be adjusted horizontally with respect to the cultivator frame, and a plurality of foliage raising rods carried by the supporting plates arranged one above the other and connected at their forward ends.

[Claims 1 to 5, 7, and 8 not printed in the Gazette.]

1,230,244. AWNING. WILLIAM WALGER, Chicago, Ill. Filed June 19, 1913. Serial No. 774,519. (Cl. 156—44.)

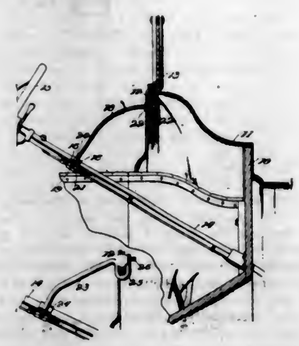


1. An awning, comprising a curtain, a roller on which said curtain is mounted to roll, means for turning the roller to wind the curtain thereon, upwardly and downwardly slidable supports on opposite sides of the curtain, awning-extending arms, each pivotally secured at one end on one of said slidable supports and connected at the other end with the lower portion of the curtain; the same being movable with the lower end of the curtain into lowered upright position, and fastening members adapted to have detachable interlocking connection with said arms, when the latter are in lowered upright position, for holding the arms and the lower end of the curtain from both upward and outward movement.

2. An awning, comprising a curtain, a roller on which said curtain is mounted to roll, means for turning the roller for winding the curtain thereon, awning-extending arms pivotally mounted on opposite sides of the curtain and connected with the lower end thereof, said arms being movable with the lower end of the curtain into lowered upright position, each of said arms being provided with a series of notches, and fastening members having detachable interlocking connection with the notches in said arms, for holding the latter and the curtain in their lowered upright position and from both upward and outward movement.



1,230,245. STEERING-POST BRACE. LESLIE D. WALKER, Clarinda, Iowa. Filed Nov. 8, 1916. Serial No. 130,210. (Cl. 21—90.)



1. A steering post brace for motor vehicles including an attaching member connected with the steering post, and coacting brace rods connected to the said member at opposite sides of the said post and extending upwardly and forwardly therefrom with the outer extremities of the said brace rods attached to the cowl of the vehicle upon opposite sides of the plane of the said post for supporting the post against movement in all directions.

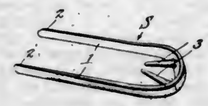
2. A steering post brace for motor vehicles including coacting attaching clips embracing the steering post, brace rods extending through said clips, and means upon the said rods for clamping the clips about the steering post with the said rods attached to the cowl of the vehicle at points spaced upon opposite sides of the plane of the said post.

3. A steering post brace for motor vehicles including a brace rod engaged at one extremity with the steering post and formed at its opposite extremity with a hook engaged with the cowl of the vehicle for supporting the free extremity of the steering post.

4. A steering post brace for motor vehicles including a brace rod engaged at one extremity with the steering post and formed at its opposite extremity with a hook engaging the cowl of the vehicle for supporting the free extremity of the steering post with respect to the cowl, and means adjustable upon the hook for connecting the rod with the cowl.

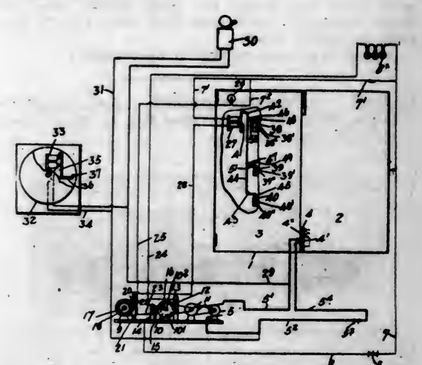
5. A steering post brace for motor vehicles including a brace rod engaged at one extremity with the steering post and formed at its opposite extremity with a bowed portion engaged with the cowl of the vehicle for supporting the free extremity of the steering post.

1,230,246. ROPE-HANDLE-SECURING STAPLE. HERMAN WEGWART, Burlington, Wis., assignor to Badger Basket & Veneer Co., Burlington, Wis. Filed Nov. 28, 1913, Serial No. 803,595. Renewed Aug. 5, 1916. Serial No. 113,382. (Cl. 85—49.)



A bendable rope handle securing staple having rope engaging prongs projecting from its bend between its edges and converging toward one another within the staple.

1,230,247. BURGLAR-ALARM. LOUIS WEITZMAN, Toronto, Ontario, Canada. Filed July 1, 1916. Serial No. 107,115. (Cl. 177—314.)



1. In a burglar alarm, the combination with an outer and inner door, a camera having its lenses extending through the inner door from its inner face, electro-magnetic means for operating the camera shutter, a motor, a circuit therefor, means for closing the motor circuit by the opening of the outer door, a normally open circuit through which the electro-magnetic means is energized, and means operated by the rotation of the motor for closing such electro-magnetic circuit at a predetermined period.

2. In a burglar alarm, the combination with an outer and inner door, a camera having its lenses extending through the inner door from its inner face, electro-magnetic means for operating the camera shutter, a motor, a circuit therefor, means for closing the motor circuit by the opening of the outer door, a normally open circuit through which the electro-magnetic means is energized, means operated by the rotation of the motor for closing such electro-magnetic circuit at a predetermined period, an incandescent light located in proximity to the camera lenses, and means for automatically lighting such light prior to the operation of the camera shutter.

3. In a burglar alarm, the combination with an outer and inner door, a camera having its lenses extending through the inner door from its inner face, an incandescent light located in proximity to the camera lenses, a motor, a normally open motor circuit, means operated by the opening of the outer door for closing the motor circuit, and means operated by the rotation of the motor for first lighting the incandescent light and subsequently operating the camera

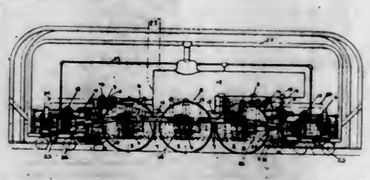
4. In a burglar alarm, the combination with an outer and inner door, a camera having its lenses extending through the inner door from its inner face, an incandescent light located in proximity to the camera lenses, a motor, a normally open motor circuit, means operated by the opening of the outer door for closing the motor circuit, a normally open circuit extending through the incandescent light, a rotating disk of conducting material to which one end of the open circuit is electrically connected, a contact finger forming the terminal of the other open end of the circuit, a block of insulating material freely intervening between the finger and the face of the disk, electro-magnetic means for operating the camera shutter, a normally open circuit therefor, a rotating disk driven from the motor, an electric connection between the terminal of the electro-magnetic circuit and the disk, a band of insulating material surrounding the periphery of such disk having an open portion, a projection extending from the disk through such open portion, and a finger forming the other terminal of the electro-magnetic circuit bearing upon the pehiphery of the disk.

5. In a compartment having an inner door having an orifice therein and an outer door, a camera carried by the inner face of the inner door having its lenses opposite such orifice and having the usual shutter lever, and means operated by the opening of the outer door for operating the shutter lever.

[Claims 6 to 8 not printed in the Gazette.]

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1,230,248. LOCOMOTIVE-ENGINE. JOHN F. WENTWORTH, Rochester, N. H. Filed Jan. 11, 1915. Serial No. 1,671. (Cl. 105—17.)



1. The combination in a locomotive, of a frame, floating axle boxes, springs, drivers, driving rods, trucks, and internal combustion engine cylinders of the reversing type having starting and exhaust valves for the starting cycle with means for operating said valves and a steam supply for starting said engine by steam pressure.

2. The combination in a locomotive, of a conventional arrangement of frame, drivers, axle boxes, trucks, etc., internal combustion cylinders secured to said frame, pistons with connecting rods directly connected with the driving wheels or axles, cams and mechanism whereby all the valves of said cylinders may be operated to run the engine either forward or backward, starting valves provided for said cylinders, a steam supply for starting or reversing said locomotive and a steam pipe or pipes connecting said steam supply with starting valves.

3. The combination in a locomotive, of a frame, floating axle boxes, springs for boxes, cylinders secured to frame, pistons connected to the driving wheels or axles by connecting rods, starting, admission, exhaust and fuel valves for said cylinders, means for operating said valves, a steam boiler for supplying steam during the starting cycle for starting the engine, for heating the train, etc.

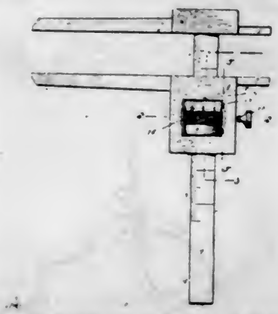
4. The combination in a locomotive, with a conventional type and arrangement of frame, floating axle boxes, springs, driving wheels and axles, with an internal combustion plant comprising cylinders secured to the frame, pistons, connecting rods secured to the driving wheels or driving wheel axles, valves for the regular operation of said engine and especial starting valves whereby the locomotive may be started by the admission of steam to the internal combustion cylinders, mechanism whereby the proper functioning of the valves may be obtained and whereby the engine may be reversed or run in either direction and a special type boiler of relative large water capacity and small heating surface whereby the energy may be furnished for starting of the train from the heat units stored in the boiler.

5. In a locomotive the combination of a conventional type of locomotive frame, internal combustion engine cylinders, of the self starting and reversing type, secured to the end of said frame in a horizontal position, pistons for said cylinders to be directly connected to the axles or drivers, means for storing energy for starting or reversing said locomotive.

[Claims 6 to 9 not printed in the Gazette.]

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1,230,249. SLIDE-MICROMETER. LOUIS WENZEL, Elizabeth, N. J. Filed Jan. 23, 1917. Serial No. 143,889. (Cl. 33—165.)



1. A slide micrometer comprising a graduated toothed beam, a slide movable along the same, a non-rotatable member flanking the beam, a pointer on said member, a transversely movable nut carried by the slide and encompassing said beam and non-rotatable member, said nut being graduated opposite the pointer, and means for throwing said nut into operative engagement with said beam.

2. A slide micrometer comprising a graduated toothed beam, a slide movable along the same, a pair of cores flanking the beam, a post carried by one of said cores, a transversely movable nut carried by the slide and encompassing said beam and cores, said nut being graduated opposite the post, and means for throwing said nut into operative engagement with said beam.

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1,230,250. TRUCK. ENOCH WHALLEY, Willimansett, Mass. Filed May 12, 1916. Serial No. 97,049. (Cl. 254—10.)



1. The combination, in a truck, of relatively movable upper and under sections provided with fixed and movable engaging members, elevating means for said upper section, means to actuate either or both of said sections to raise said upper section through the medium of said elevating means, said engaging members being so arranged that they are engaged when said upper section is brought into elevated position, and an independently-movable track-forming member carried adjacent to said fixed member, for said movable member normally out of track-forming position, but arranged to be actuated by said movable member into such position, when said upper section is actuated to advance said movable member and carry it away from said fixed member, and then actuated to draw back said movable member.

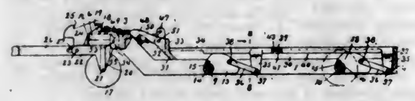
2. The combination, in a truck, of a carriage having a fixed part, a platform adapted to be actuated forward, means to elevate said platform as it is actuated forward, a member on said platform for engaging said fixed part to hold said platform in its forward elevated position, and a movable track-forming member carried adjacent to said fixed part in position to be engaged by said first-named member when the latter is moved beyond said fixed part by the actuation of said platform beyond its normal forward elevated position, the subsequent return of said platform toward its rearward lowered position causing the first-named member to move said track-forming member into position to guide the first named member away from said fixed part and permit the platform to move rearwardly and downwardly.

3. The combination, in a truck, with a carriage having a fixed part, and a releaser pivotally mounted adjacent to said part, of a platform provided with a hook adapted to engage said fixed part, when said platform is advanced, elevating and depressing means for said platform, and means to actuate said platform forward, on said first-mentioned means, said releaser being in the path of said hook, when the latter is advanced beyond said fixed part, and adapted to swing against said part and provide a track for said hook, when said platform is permitted to move rearwardly, whereby said hook is disengaged from said fixed part.

4. The combination, in a truck, with a carriage having a head, a releaser pivotally attached to said head, rock-shafts journaled in said carriage, and lifters secured on said rock-shafts, each of said lifters having a plurality of bearings, of a platform mounted on said carriage, and provided with studs which are in the paths of said bearings, and further provided with a hook adapted to engage said head, when said platform is advanced to locking position, and to tilt said releaser into operative position, when said platform is advanced to releasing position and permitted to move rearwardly, and means to actuate said platform forward.

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1,230,251. TRUCK. ENOCH WHALLEY, Willimansett, Mass. Filed Sept. 26, 1916. Serial No. 122,224. (Cl. 254—5.)



1. In a truck, relatively movable upper and under sections, a plurality of rocking lifting members mounted in said under section and adapted to support said upper section, anti-friction rollers interposed between the bearing parts of said upper section and said members, and means, pivotally connected with said upper section and with said members to operate or control said members from said upper section, when and accordingly as the latter is actuated forward or permitted to move backward.

2. In a truck, relatively movable upper and under sections, a plurality of lifting cams mounted in said under section and adapted to support said upper section, anti-friction members interposed between the bearing parts of said upper section and said cams, lugs carried by said upper section, and connecting-rods pivotally attached to said lugs and to said cams.

3. In a truck, relatively movable upper and under sections, a plurality of lifting cams mounted to rock in said under section, and adapted to support said upper section, anti-friction trucks arranged in said upper section over said cams, said anti-friction trucks comprising frames equipped with rollers for each cam, and means to operate or control said cams, from said upper section, when and accordingly as the latter is actuated forward or permitted to move backward.

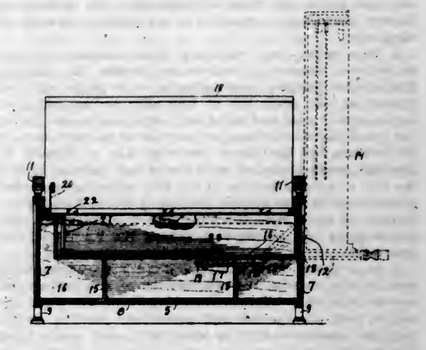
4. The combination, in a truck, with a carriage, and lifting cams mounted to rock in said carriage, of a platform mounted above said cams, said platform being provided with lugs, connecting-rods between said lugs and said cams, means to actuate said platform forward, and stop members for said platform at either end of its longitudinal travel, the construction and arrangement of parts being such that said platform, when actuated forward by said actuating means, and through the medium of said lugs and said connecting rods, rocks said cams to elevate said platform.

5. The combination, in a truck, with a carriage, and lifting cams mounted to rock in said carriage, of a platform mounted above said cams, said platform being provided with front and rear lugs, connecting-rods between said lugs and cams, and means to actuate said platform forward, the construction and arrangement of parts being such that said platform, when actuated forward by said actuating means, and through the medium of said lugs and said connecting-rods, rocks said cams to elevate said platform, and said carriage having a part that is in the path of said rear lugs, and with the latter serves as a back stop for said platform.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,252. WARDROBE SEAT-BOX. GEORGE HENRY WHEARY, Racine, Wis. Filed Mar. 13, 1915. Serial No. 14,059. (Cl. 155—20.)



2. A wardrobe seat box, comprising a box-like member having an open top and end portions which project above the seat portion of the member, one of said end portions formed of two hinged together parts, a seat cover hinged at one of its side edge portions to the box-like member and movable to closed position between the two upstanding end portions, a wardrobe tray member positioned within the box-like member and connected at one end to and movable with the hinged end portion, said tray member having an open top facing outwardly from the box member when swung to vertical position.

[Claim 1 not printed in the Gazette.]

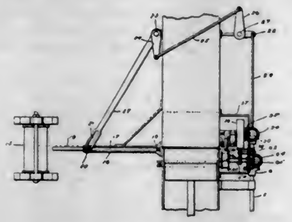
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1,230,253. BALING-PRESS. FREDRICK ST. CLAIR WIER, Lacon, Ill. Filed Nov. 18, 1912, Serial No. 732,000. Renewed Nov. 18, 1916. Serial No. 132,202. (Cl. 100—20.)

1. In a baling press having a press box, and means to form a bale therein, the combination of a wire carrying means adapted to operate transversely of the press box and to feed wire across said press box, twisting mechanism and means adapted to be rotated to take up slack wire, said means being idle at times to permit the release of said slack wire.

2. In a baling press having a press box, and means to form a bale therein, the combination of a wire carrying means adapted to operate transversely of the press box and to feed wire across said press box, twisting mechanism and means to take up slack wire, said means including a drum and means to rotate said drum at intervals, said operating means being disconnected from said drum

at intervals to permit said drum to run idly and unwind the slack wire.



3. In a baling press having a press box, and means to form a bale therein, the combination of a wire carrying means adapted to operate transversely of the press box and to feed wire across said press box, twisting mechanism and means to take up slack wire, said means including a drum and means to rotate said drum at intervals, said operating means including gears connected to drive said drum and a segmental gear positioned so as to operate said gears and drum at intervals, said drum being thereby permitted to run idle at intervals to unwind the slack wire.

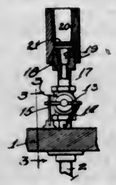
4. In a baling press having a press box and a plunger or follower adapted to reciprocate therein, the combination of wire carrying means adapted to be projected transversely of said press box to feed wire across said press box, means to hold and twist said wire, said means including a member for holding one portion of the wire member for holding one portion of the wire and a member for grasping another portion of the wire and twisting it with the first mentioned portion of the wire to form a tie, means to sever said last mentioned portion of the wire and means to take up slack from the free portion of said wire, said means being idle at times to permit the release of said slack wire.

5. In a baling press having a press box, and means to form a bale therein, the combination of a wire carrying means adapted to operate transversely of the press box and to feed wire across said press box, twisting mechanism and means to take up slack wire, said means being idle at times to permit the release of said slack wire, and including a drum having a flange provided thereon, means formed on said flange to engage the wire and means for guiding the wire while being wrapped about said drum.

[Claims 6 to 15 not printed in the Gazette.]

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1,230,254. DENTAL CASTING-MACHINE. ELMER E. WIGHTMAN, Chicago, Ill. Filed Mar. 10, 1916. Serial No. 83,258. (Cl. 22—73.)



1. In an apparatus of the class described, a suction producing means, mechanism in communication therewith adapted to receive a mold flask sealingly attached thereto, a valve located therebetween, means for moving said valve to open position, and a latch adapted to retain said valve in closed position against the power of said moving means.

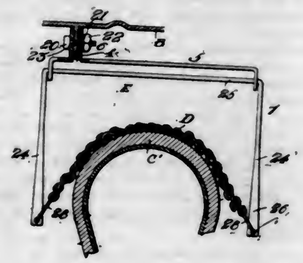
2. In an apparatus of the class described, a suction producing means, mechanism in communication therewith adapted to receive a mold flask sealingly attached thereto, a valve located therebetween, a spring for moving said valve to open position, and a latch adapted to retain said valve in closed position against the tension of said spring.

3. In an apparatus of the class described, a suction pump, its piston, a treadle for operating said piston in one direction, springs for operating said piston in the return direction, a mold flask sealingly connected directly with said pump, and a quick operating valve self-opening when released to establish immediate communication between said pump cylinder and said flask.

4. In an apparatus of the class described, a suction producing means, and a head connected thereto having its exterior surface tapered conically and converging upwardly and having its interior cored out in a downward converging taper, either of said tapered portions adapted to receive a mold flask.

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1,230,255. TIRE-GUARD. ERIC EDWIN ARTHUR WILD, Minneapolis, Minn. Filed July 20, 1916. Serial No. 110,328. (Cl. 208—151.)



1. A tire guard comprising in combination, a support including downwardly extending arms disposed in spaced relation and provided with alined perforations, a hanger carried by said support including two downwardly extending arms and a connection therebetween, said connection extending through the said perforations of said arms of said support to be pivotally carried thereby, and a chain with end portions pivotally connected with the lower portions of the said arms of said hanger.

2. A tire guard comprising in combination, a support, a hanger pivotally carried by said support, said hanger formed of a single piece of metal shaped to provide downwardly extending arms and a connection therebetween engaging said support, and a chain with end portions pivotally connected with the said arms of said hanger at the lower portions thereof.

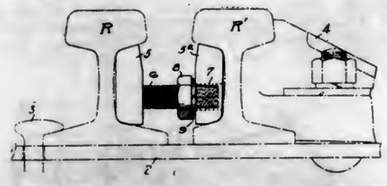
3. A tire guard comprising in combination, a support, a hanger pivotally carried by said support, said hanger formed of a single piece of wire flattened at ends and shaped to provide downwardly extending arms and a connection therebetween engaging said support, and a chain with end portions pivotally connected with the said arms of said hanger at the lower portions thereof.

4. In combination with a vehicle body and wheel including a tire, of a support carried by said body, an inverted U-shaped hanger pivotally carried by said support and disposed above the axis of rotation of said wheel, and a chain carried by said arms of said hanger and engaging the tire of said wheel, said hanger permitting said chain to engage said tire during relative movement of said body with respect to said wheel, and to engage said tire with the arms of said hanger tangent to said tire regardless of the direction of rotation of said wheel.

5. A tire guard comprising in combination, a support including downwardly extending arms disposed in spaced relation, two arms pendantly carried by the said arms of said support, and a chain with end portions pivotally connected with the lower portions of said second mentioned arms.



1,230,256. RAIL-SEPARATOR. THOMAS G. WILLSON, Swissvale, and ALBERT H. MARANDA, Pittsburgh, Pa. Filed Sept. 30, 1916. Serial No. 123,026. (Cl. 239—18.)

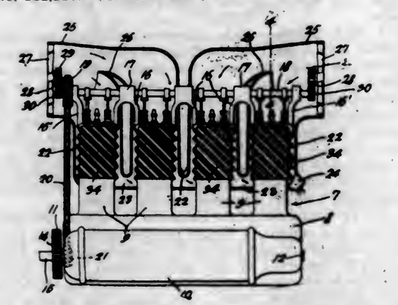


1. A member adapted for use as part of a rail separator, comprising a screw, and a block cast around the head of the screw.

2. A member adapted for use as part of a rail separator, comprising a screw having a feathered head, and a block cast around the head of said screw, whereby the screw and the block constitute an integral member the parts of which are prevented from relative turning by the feathering of the screw head.

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1,230,257. AUTOMOBILE-ENGINE. HARRY WILLIAM WISTNER, Ogden, Utah. Filed Nov. 18, 1916. Serial No. 132,117. (Cl. 123—171.)



1. An air cooling device for engines embodying air jackets to inclose the cylinders of an engine and united at one end to provide a discharge manifold for the air, the other ends of the jackets extending angularly and merging into a funnel, the adjacent walls of the jackets being united by a portion curved toward said funnel for dividing the air.

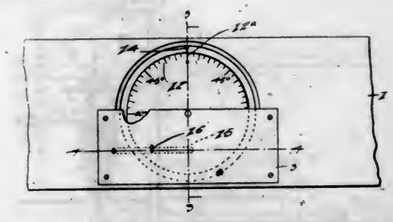
2. The combination with the cylinders of an engine, of air jackets inclosing them and united at one end to provide a discharge manifold for the air, the other ends of the jackets extending angularly and merging into a funnel, and a fan rotatable within the mouth of the funnel for forcing air into the same, the adjacent walls of the jackets being united by a portion curved toward the funnel for dividing the air.

3. The combination with the cylinders of an engine, of air jackets inclosing them and united at one end to provide a discharge manifold for the air, the jackets being arranged in sets, the jackets of each set having angularly extending portions at their other ends merging into a funnel, the funnels of the two sets of jackets extending in opposite directions, and fans rotatable within the mouths of the funnels for forcing air into the same, from opposite directions.

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1,230,258. LEVEL. WILLIAM P. WOOD, Roseberry, British Columbia, Canada. Filed May 5, 1916. Serial No. 95,609. (Cl. 33—215.)

1. In a level structure, the combination, of a body provided with a centrally disposed recess, side plates forming closures for substantially one-half of said recess, a pin supported by said side plates, a disk rotatably mounted upon said pin and having its upper half hollow and its lower half solid, and graduations formed upon each side of said disk about the periphery thereof, and an indicating finger carried by said body and adapted for coaction with said graduations, and means carried by said body for engagement with one side of said disk for arresting movement of the disk.



2. In a level structure, the combination, of a body provided with a central opening, side plates forming closures for portions of said openings, a pin carried by said side plates and extending through the openings, a disk rotatably mounted upon said pin, said disk having its upper half section hollow and its lower half section solid for weighting the disk, graduations formed upon the sides of said disk about the periphery of the same, graduations formed upon the periphery of said disk, an indicating finger carried by said body for coaction with said graduations, and transparent panes forming closures for the upper section of said opening, said body being provided with an opening positioned directly above the uppermost portion of said disk.

3. In a level structure, the combination, of a body provided with a central opening, side plates forming closures for portions of said openings, a pin carried by said side plates and extending through the openings, a disk rotatably mounted upon said pin, said disk having its upper half section hollow and its lower half section solid for weighting the disk, graduations formed upon the sides of said disk about the periphery of the same, graduations formed upon the periphery of said disk, an indicating finger carried by said body for coaction with said graduations, and transparent panes forming closures for the upper section of said opening, said body being provided with an opening positioned directly above the uppermost portion of said disk, a flat spring carried by said body and engaging one side of said disk, and a pin slidably carried by said body and engaging said spring for moving said spring into frictional engagement with said disk for retarding movement of the disk.

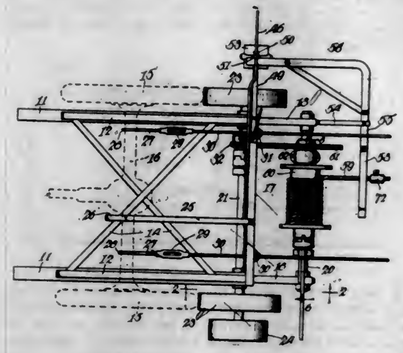
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1,230,259. AUTOMOBILE-POWER-TRANSMITTING APPARATUS. CHARLES D. WRIGHT, Toledo, Ohio. Filed July 3, 1916. Serial No. 107,260. (Cl. 21—90.)

1. In a power transmitting apparatus, the combination with a supporting frame having means for supporting the rear axle of a motor-driven vehicle with its wheels from the ground, of a shaft transversely journaled on the frame in parallelism with the axle of the vehicle, one or more pulleys mounted on said shaft to contact with one or more of the wheels of the vehicle, another shaft journaled on the frame in parallelism with the first named shaft and geared thereto and a clutch mechanism mounted on the first named shaft for supplying or shutting off power to the last named shaft.

2. In a power transmitting apparatus, the combination with a supporting frame having inclined rails or tracks for raising and supporting the rear axle of a motor driven vehicle with its wheels from the ground, of a shaft transversely journaled on the frame in parallelism with the axle of the vehicle, one or more pulleys on said axle to contact with at least one of the wheels of the vehicle, means to hold the axle of the vehicle in a given position

on the frame, another shaft journaled on the frame in parallelism with the first named shaft and geared thereto, and a clutch and brake mechanism mounted on the first named shaft for supplying or shutting off power to the last named shaft.



3. In a power transmitting apparatus, the combination with a supporting frame, of a shaft horizontally journaled thereon, of means to support the rear axle of a motor driven vehicle on said frame with its wheels from the ground, means on said shaft to frictionally engage at least one of the vehicle wheels, a drum journaled in parallelism with said shaft, and means to operate the drum from the first shaft through independent clutches.

4. In an automobile transmitting apparatus, the combination with a supporting frame, of a driven shaft journaled thereon, a second shaft journaled in parallelism with the first named shaft and geared thereto, an automatic clutch, and an independent manually operated hand clutch and a drum for engagement therewith on the last named shaft.

5. In a power transmitting apparatus, the combination with a main frame having at each side thereof a forwardly inclined rail, of a driving shaft horizontally and transversely journaled on the frame, a pulley on said shaft, means on the frame to hold the axle of a motor driven vehicle in a given position on said rails substantially parallel with respect to said shaft and its pulley, a driven-shaft journaled on said frame in parallelism with the driving-shaft and geared thereto, a drum mounted on the driven shaft, and means operated by the rotation of said drum to stop the same.

[Claims 6 to 9 not printed in the Gazette.]

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1,230,260. SPRING CONSTRUCTION. LEONARD A. YOUNG, Highland Park, Mich. Filed Aug. 21, 1916. Serial No. 115,959. (Cl. 5—29.)

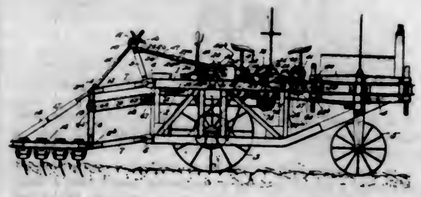


1. In a spring construction, the combination of a plurality of coiled springs, the top coils of which are provided with card-board plates having the capacity to be fitted within the coils and so shaped on the margins as to hold themselves to the coils.

2. In a spring construction, the combination of a plurality of coiled springs, plates fitting into the top whirls of the springs, and each plate peripherally notched to allow the substance intervening between the notches to be alternately disposed above and below the wire of the top whirl.

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1,230,261. TILLING-MACHINE. WILLIAM C. ZELLE, St. Louis, Mo., assignor to Plantation Equipment Company, St. Louis, Mo., a Corporation of Missouri. Filed June 17, 1912. Serial No. 704,036. (Cl. 97—30.)



1. In a machine of the character described, a tractor having a body frame, a hinged parallelogram frame pivotally connected to said body frame and projecting from the rear thereof, an implement holder frame adjustably supported from said parallelogram frame, an arm pivotally mounted on the body frame of said tractor to swing vertically, an adjustable link connecting said parallelogram frame and said arm, and means for swinging said arm, said means having a determinate range of movement.

2. In a machine of the character described, the combination with a traveling carriage, of an implement holder, means for supporting said implement holder on said carriage in a particular working position relative to the ground, said means including an adjusting device for varying the location of the implement holder above the ground without disturbing its particular working relation, and a device coöperating with said adjusting device to support said holder and being yieldable in one direction to permit independent vertical movement of the carriage downward and the implement holder upward.

14. In a machine of the character described, the combination of a tractor, a hinged parallelogram frame pivotally connected to said tractor, an implement carrier frame pivotally connected to said parallelogram frame, an adjustable brace connection between said carrier frame and said parallelogram frame, and means for raising and lowering said parallelogram frame.

17. In a machine of the character described, the combination with a tractor, of an implement carrier frame supported thereby, mechanism mounted on said tractor for raising and lowering said implement carrier frame, and adjustable and yieldable means connecting said carrier frame with said mechanism, said mechanism during the movement of lowering said carrier frame automatically stopping at a predetermined point to place said carrier frame at a predetermined position relative to the ground.

21. In a machine of the character described, a tractor having a body frame, a hinged parallelogram frame pivotally connected to said body frame, earth-working implements supported by said parallelogram frame, and resilient means operable by power derived from the motor which drives said tractor for raising and lowering said parallelogram frame, said means during the movement of lowering said parallelogram frame automatically stopping at a predetermined point.

[Claims 3 to 13, 15, 16, and 18 to 20 not printed in the Gazette.]

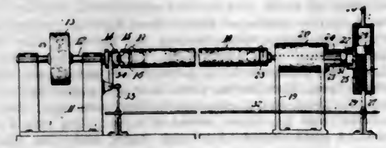
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1,230,262. MACHINE FOR WRAPPING RUBBER TUBES. IRVIN ZWISLER, East Palestine, Ohio, assignor to The McGraw Tire & Rubber Company, East Palestine, Ohio, a Corporation of Ohio. Filed Apr. 26, 1915. Serial No. 24,097. (Cl. 242—55.)

2. In a tube-wrapping machine, the combination of a removable tube mandrel, a vertically disposed air cylinder, a transverse cylinder communicating with the air cylinder, a separable cone-bearing connected with the piston in the transverse cylinder, a clutch at the opposite end of the mandrel, and means for simultaneously operating the clutch and the governing parts of the air supply.

[Claim 1 not printed in the Gazette.]





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1,230,263. CUT-OUT ALPHABET TOY. WILLIAM H. S. ALEXANDER, Haddonfield, N. J. Filed Aug. 23, 1916. Serial No. 116,491. (Cl. 46—40.)




1. As a new article of manufacture, a toy in the form of a picture block having the name of the picture displayed thereon in large letters with an independent initial letter of such name displayed in much larger size; such block having a contour corresponding to the object portrayed and being divisible into a plurality of sections; said sections having common identifying matter thereon whereby they may be distinguished from those of another block.

2. As a new article of manufacture, a set of toys in the form of picture cards or blocks, each having the name of the picture displayed thereon in large letters with an independent initial letter of such name displayed on the respective blocks in much larger size; each of said cards or blocks having a different contour corresponding to the object portrayed and being divisible into a plurality of sections; the sections of each of said blocks or cards having common identifying matter thereon whereby they may be distinguished from the sections of other blocks or cards.

3. As a new article of manufacture, a toy in the form of a picture block having the name of the picture displayed thereon in large letters with an independent initial letter of such name displayed in much larger size; such block having a contour corresponding to the object portrayed and being divisible into a plurality of sections; each of said sections carrying one letter of the name of the picture.

4. As a new article of manufacture, a toy in the form of a picture block shaped to represent an animal, bird, flower, or the like and divisible into a number of sections; each section carrying one letter of the name of the pictured object and said block having its back provided with common identifying means for the several sections whereby they may be distinguished from other picture blocks of the same character.

5. As a new article of manufacture, an educational toy in the form of a picture card or block having a contour corresponding to the object portrayed and the name of the object or picture displayed thereon in large letters, such block being divisible into a plurality of sections equaling the number of letters in the name and each of said sections carrying one letter of the name of the picture or object portrayed.

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1,230,264. TRANSOM CONTROL. GEORGE W. BAIRD, Washington, D. C. Filed Jan. 10, 1917. Serial No. 141,643. (Cl. 16—28.)



1. A transom opening and closing mechanism consisting of a plate adapted to be secured to the door frame above the transom and adjacent to one side of the transom and door opening, means for securing said plate to the door frame, a screw stud secured in said plate, of a pulley mounted on said stud to lie flatwise against said plate parallel to the plane of the door frame, a flexible sustaining pull member taking over said pulley, forwardly projecting ears on said plate, a guide pulley mounted between said ears to lie in a plane at right angles to that containing said first mentioned pulley, said flexible pull member adapted to pass between said lugs in engagement with said guide pulley, a bracket having a member secured to the transom and extending outwardly therefrom toward said guide pulley, the end of said bracket adapted to lie in close proximity to said guide pulley when the transom is closed, said flexible pull member being secured at one end to said bracket, the other end of said flexible guide member extending down to a place in convenient reach, and means on the door frame for engaging said flexible pull member to hold the same and maintain the transom open or closed according to the position at which it is desired to adjust the same.

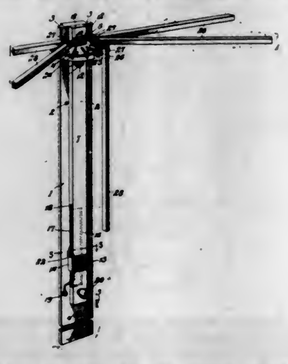
[Claim 2 not printed in the Gazette.]

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1,230,265. CLOTHES-DRYING RACK. EDWARD H. BARTON, Spokane, Wash., assignor of one-half to Ammon D. Barr, Spokane, Wash. Filed Dec. 2, 1915. Serial No. 64,772. (Cl. 68—34.)

1. In a clothes drying rack, the combination with a bracket of substantially semicircular form having a depending peripheral flange, said bracket being provided with a series of radial slots which extend outwardly in a horizontal direction and then downwardly into said flange forming a vertical extension, said bracket being also provided with entrance openings which communicate by necks of smaller diameter than the openings with said slots at an intermediate point thereof, and clothes drying arms provided at their inner ends with depending rigid headed pins, the diameter of the heads of the pins being less than the diameter of the entrance openings, but greater than the diameter of the necks and the slots, whereby said arms may be detached from the bracket by sliding the pins from the slots through the necks and into the openings, said arms being maintained in either a horizontal position when in engagement with the horizontal portion of the slots, or in a vertical position when extended out into the vertical portion of the slots, said arms also having a pivotal movement in the slots.

2. In combination with a post provided with longitudinal rabbets, an elevating bar movable along the face of the post and of less width than the same, a guide loop for the passage of the bar provided on the post near the lower end, a bracket mounted on said bar and provided with an opening for the reception of the latter, means provided at said opening for detachably connecting the bracket to the bar, rearwardly and inwardly extending lugs provided on the rear face of the bracket to engage in



the rabbets of the post, said lugs serving to connect the bracket and bar to the post at the upper end of the latter, clothes supporting arms, and means for detachably connecting the clothes supporting arms to the bracket, whereby the arms may be detached from the bracket, the bracket detached from the elevating bar, and the latter detached from the post, leaving only the post in position upon a wall or other support.

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1,230,266. PROCESS FOR TANNING OF FISH-SKINS OR THE LIKE. KRISTIAN BENDIXEN, Copenhagen, Denmark, assignor to Firm Skindfabriken Unicum, Kr. Bendixen, P. Bendixen & Co., Copenhagen, Denmark. Filed Feb. 19, 1912. Serial No. 678,473. (Cl. 149—4.)

1. A process for tanning and permanently rendering soft and pliable fish skins and the like consisting in softening the skins, treating them for about three days in a depilatory solution, then treating them for a further period of about three days in a solution of water and slaked lime, turning the hides during such treatments, agitating the hides for a brief period in a solution of water and hydrochloric acid and then bating them in a mill containing water, poultry dung and any preferred chemical bating compound substantially as described.

2. A process for tanning and permanently rendering soft and pliable fish skins and the like consisting in softening the skins, treating them for about three days in a solution of water and sodium sulfid, then treating them for a further period of about three days in a solution of water and slaked lime, turning the hides twice daily during such treatments, agitating the hides for about five minutes in a solution of water and hydrochloric acid and then bating them in a mill containing water, poultry dung and a chemical bating compound substantially as described.

3. A process for tanning and permanently rendering soft and pliable fish skins and the like consisting in softening the skins, treating them for about three days in a depilatory solution, then treating them for a further period of about three days in a solution of water and slaked lime, turning the hides daily during such treatments, agitating the hides for a brief period in a solution of water and hydrochloric acid, bating them in a mill containing water, poultry dung and a chemical bating compound, then removing them into pure lukewarm water, then into a solution of hydrochloric acid and water and then placing them in a tanning vat to which tanning material is added every third day until the skins are completely tanned substantially as described.

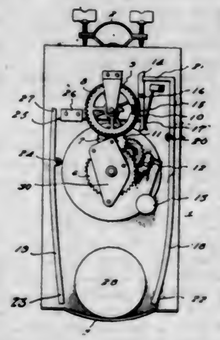
4. A process for tanning and permanently rendering soft and pliable fish skins and the like consisting in softening the skins, treating them for about three days in a solution of water and sodium sulfid, then treating them for a further period of about three days in a solution of water and slaked lime, turning the hides at least twice daily during such treatments, agitating the hides for about five minutes in a solution of water and hydrochloric acid, then bating them in a mill containing water, poultry dung and a chemical bating compound, then removing them into pure lukewarm water, then into a solution of hydro-chloric acid and water and then placing them in a tanning vat to which tanning material is added every third day until the skins are completely tanned substantially as described.

5. A process for tanning and permanently rendering soft and pliable fish skins and the like consisting in softening the skins, treating them for about three days in a depilatory solution, then treating them for a further period of about three days in a solution of water and slaked lime, turning the hides at least during such treatments, agitating the hides for a brief period in a solution of water and hydrochloric acid, then bating them in a mill containing water, poultry dung and a chemical bating compound, then washing them in pure lukewarm water and afterward with a solution of hydrochloric acid and water and then milling them in a mill containing a suitable solution of salt to which a suitable chrome tanning material is added, the milling being then continued until the skins are fully tanned substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

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1,230,267. BURGLAR-ALARM. JOHN OTTO BENEKE, New Orleans, La., assignor of one-half to Daniel M. Pitard, New Orleans, La. Filed May 1, 1915. Serial No. 25,171. (Cl. 116—44.)



1. In an alarm device for door knobs and the like, means to secure the device for rotative movement simultaneously with its supporting element, a signal, rotatable means to sound the signal, a lever serving as a trip to control the signal, a plurality of oppositely positioned levers to actuate the trip, and a freely movable element interposed between the trip actuating levers to alternately engage said levers for releasing the trip when the supporting element has been moved from a predetermined position.

2. In an alarm device for door knobs and the like, means to support the alarm device from a rotatable element, such as a door knob, a signal, rotatable means to sound the signal, a trip adapted to control said rotatable means, a plurality of levers arranged in spaced relation to actuate said trip, and a movable weighted disk interposed between said trip levers to alternately engage one or the other of said levers when the alarm supporting device is moved from a predetermined position to release said trip and the signal actuating means.

3. In a device of the class described, a base having an arcuate flange, a trip mounted on the base and operating



to control a signal, a plurality of levers arranged to actuate said trip, and a freely movable element on said arcuate flange positioned between said trip levers to engage one or the other of said levers to release the trip when the base is moved from a predetermined position.

4. In a device of the class described, a base having a signal device mounted thereon and a trip to control said signal device, a plurality of spaced levers arranged to actuate said trip, and a weighted element positioned between said levers for oscillatory movement and adapted to engage one or the other of said levers to release the trip and actuate the alarm when the base is moved from a predetermined position.

5. In a device of the class described, a base having a revoluble element to actuate a signal, a trip to engage means on said revoluble element, whereby the signal may be operated intermittently, a plurality of trip levers arranged in substantially parallel relation and a movable element interposed between said trip levers to engage one or the other of said levers to release the trip from engagement with the revoluble element.

[Claims 6 to 8 not printed in the Gazette.]

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1,230,268. TRUCK-BOLSTER. SAMUEL A. BENNER, Pittsburgh, Pa. Filed Sept. 19, 1913, Serial No. 790,656. Renewed Nov. 11, 1916. Serial No. 130,921. (Cl. 105—107.)



1. A truck bolster formed of a rolled section having a pressure member formed of a continuous upwardly opening channel portion and a tension member formed of a continuous downwardly opening channel member, said tension member being sheared from and bent downwardly intermediate the ends of said section.

2. A truck bolster formed of a rolled section having a pressure member consisting of a continuous upwardly opening channel portion and a tension member formed of parallel continuous downwardly opening channel members extending along either side of said pressure member, said tension member being sheared from the rolled section intermediate the ends thereof and bent downwardly to form truss members.

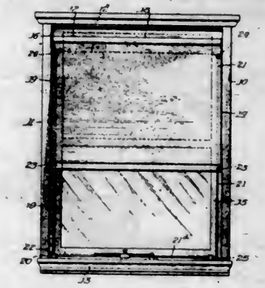
3. A truck bolster formed from a single rolled section comprising a continuous upwardly opening channel member extending centrally of said section and a tension member formed of continuous downwardly opening channel members extending longitudinally along either side of said pressure member, said tension member being sheared from the body of the section intermediate the ends thereof and upon either side of said pressure member and bent downwardly to form truss members.

4. A truck bolster formed from a rolled section comprising a continuous upwardly opening channel member extending centrally along said section, and continuous downwardly opening channel portions extending longitudinally upon either side of said upwardly disposed channel portion, said downwardly opening channel portions being sheared from the body of the section intermediate the ends thereof and bent downwardly to form tension members.

5. A truck bolster formed of a rolled channel having a pressure member formed of a single continuous upwardly opening channel portion extending centrally from end to end of said section, and a tension member formed of two continuous downwardly opening channel members on either side of said pressure member, said tension members being sheared from and bent downwardly intermediate the ends of said section, and a strengthening member interposed between said pressure and tension members adjacent the center of the bolster body.

[Claim 6 not printed in the Gazette.]

1,230,269. WINDOW-SHADE. LOUISE H. BOCH, Chicago, Ill. Filed Oct. 2, 1915. Serial No. 53,670. (Cl. 156—26.)



1. In a device of the class described, a frame providing a window opening, a bar hinged in the top of said opening, a curtain or shade mounted on said bar, a U-shaped frame dependent from said bar, means for guiding a shade on said U-shaped frame and means associated with said window frame for holding said U-shaped frame in adjusted position, substantially as described.

2. In a device of the class described, the combination of a frame providing a window opening, a bar pivoted at the top of said opening and extending substantially entirely across said opening, a window shade secured to said bar, a pair of rods secured to and depending vertically from said bar, said rods being joined at their lower extremities by a horizontal bar, a pivot bearing for one of said rods, said rods providing means for guiding said shade in its vertical sliding movement and means for holding in adjusted position the shade and the frame in which it is mounted, substantially as described.

3. In a device of the class described, the combination of a window frame, a wooden bar hinged in the upper portion of said frame, a U-shaped metal frame depending from said wooden bar, one of the vertical members of said metal frame being pivoted at its lower end, a shade mounted on said wooden member and adapted to be guided by said U-shaped frame, and means for securing said U-shaped frame in normal and other selected positions, substantially as described.

4. In a device of the class described, the combination of a window frame, a shade frame mounted wholly within said window frame and pivoted at one edge to said window frame, a shade mounted on and guided by said shade frame, and means at the lower portion of the window frame for adjustably securing said shade frame in a plurality of positions, substantially as described.

5. In a device of the class described, the combination of a window frame, a shade frame mounted wholly within said window frame, said shade frame comprising two horizontal and two vertical members and being mounted for pivotal movement from one edge of said shade frame, a shade mounted on and guided by said shade frame and means for holding said shade frame in a plurality of adjusted positions, substantially as described.

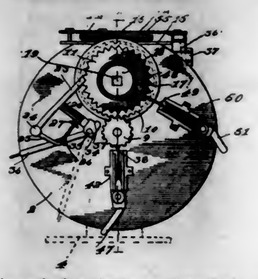
[Claim 6 not printed in the Gazette.]

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1,230,270. FISHING-REEL. JOHN S. BRANYAN and ALBERT M. RUNG, Harrisburg, Pa. Filed May 17, 1916. Serial No. 98,027. (Cl. 242—84.5.)

1. A device of the class described, including a main frame, a reel revoluble therein, a driving gear carried by said main frame, a pinion associated with said reel and engaged by said driving gear, a warning device engaging said pinion, a ratchet carried by said gear, and locking means engaging said ratchet.

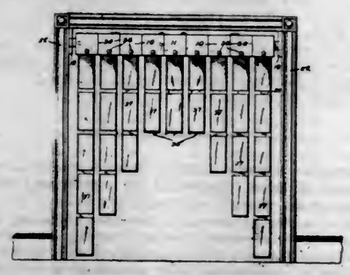
2. A device of the class described, including a main frame, a reel revoluble therein, a pinion carried by said reel, a gear engaging said pinion, a second gear engaging said first gear, retarding and locking means for said gear, driving means therefor, and guiding and distributing means associated with said frame.



3. A device of the character described, including a main frame, a reel revoluble in said main frame, a pinion carried by said reel, a gear carried by said frame engaging with said pinion, a crank engageable with said gear, a ratchet associated with said gear, locking means engageable with said ratchet, warning means associated with said pinion and engageable therewith, friction brake means engaging said gear, a second gear carried by said frame, said second gear engaging said first gear, an oscillatable rod associated with second said gear, and distributing means carried by the free end of said rod.

4. A device of the class described, including the combination of a frame, a reel revoluble therein, a pinion carried by said reel, a gear carried by said frame engageable with the said pinion, the gear member being provided with a ratchet toothed portion, a locking brake therefor comprising, an arm for engagement with the said ratchet toothed portion, said arm having a portion thereof extending laterally at a right angle to the said arm, the end of said extension being bent into engagement with a spring which normally maintains the arm in engagement with the ratchet wheel, the arm and extension member being pivotally mounted on a trunnion formed integral with the frame, a block formed on said frame, a crosshead slidably mounted on the block, for slidable engagement with the said arm, an extension provided on the frame, a pin member formed on the free end of said extension and integral therewith, an extension formed on the block, a spring member interposed between the extension and said block, a cam pivotally mounted on the frame member adjacent said cross head providing means for disengaging the said arm member from the ratchet wheel.

1,230,271. SECTIONAL PORTIÈRE. LOUIS W. BRUEGGEMAN, Milwaukee, Wis. Filed Apr. 3, 1915. Serial No. 18,948. (Cl. 156—10.)



1. A portière comprising a plurality of separable portions, each portion including an independent rigid section, said sections adapted to be connected one to another endwise for self-support and to extend across a window or door frame, and means projecting from the extremities of the connected sections for supporting the portière in position.

2. A portière comprising end portions and an intermediate portion, each portion including a rigid section, the ends of which sections are connected one to another endwise to extend across a window or door frame and form a unitary article, means projecting from the extremities of said connected portière sections for supporting the same, and locking means between the sections.

3. A portière comprising a plurality of separable portions, each portion including a rigid section, which sections are adapted to be connected one to another endwise to extend across a window or door opening, each of said sections being formed of spaced parallel bars and a tubular member sustained between said parallel bars at each end thereof, a telescopic support for connecting the adjacent ends of said sections, and projecting members at the extremities of the connected sections for supporting the same.

4. A portière comprising end sections and an intermediate section separably connected together to extend across a door or window opening, each of said sections being formed of two parallel strips connected together, each strip having a facing groove to seat a telescopic connecting member for the adjacent section, fastening means between the sections for holding them securely after being connected, and means projecting from the ends of the connected sections for sustaining the portière and depending strips.

5. In a portière structure, end sections, manually operative slidable means for supporting one end of each section, each of said sections being formed to represent a number of assembled unit sections, intermediate unit sections, projecting means vertically supporting adjacent sections, latch means preventing lateral displacement of the adjacent sections, and dependent portière strips secured to each of said real or simulated unit sections extending uniform distances from said unit sections and varying distances from said simulated sections.

[Claims 6 to 10 not printed in the Gazette.]

1,230,272. FLIER. CHARLES T. BURLIN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Aug. 9, 1913. Serial No. 783,850. (Cl. 118—57.)



1. A flier comprising a neck turned from cylindrical stock, and two legs formed of flat sheet metal rolled or folded into round leg-form, the material or said leg portions being overlapped to provide two thicknesses of the sheet metal at their junction with the neck.

2. A flier comprising a shouldered neck and two leg portions rolled up into round form from flat sheet metal, the sheet metal of said leg portions being overlapped to produce double thickness at the neck junction and apertured at that point to receive the neck, said double thickness portion being secured to the said neck against the shoulder thereof.

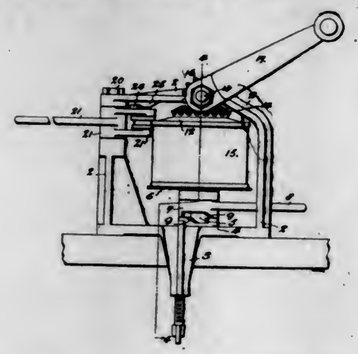


3. A flier comprising a neck and two legs rolled up into rounded form from flat sheet metal which is apertured to receive the neck, the sheet metal of said leg portions being overlapped to produce double thickness at the neck junction, and a ring spacing the rolled legs near their lower ends.

4. A flier composed of two legs both rolled up out of a single strip of sheet metal, the junction between the legs being flattened and apertured, a supplementary apertured bridge section united to such flattened portion and a neck in both apertures.

5. A flier composed of a main section comprising two leg portions rolled up out of a single flat blank of sheet metal with an intervening flat portion between the rolled portions, a brace section having leg portions and adapted to reinforce the said flat portion, one of the leg portions of the said brace section being longer than the other leg portion thereof.

1,230,273. CAN-SEAMING MACHINE. FRANK W. BURPEE, South Bellingham, Wash. Filed June 17, 1916. Serial No. 104,272. (Cl. 113—23.)



1. A hand-operated double-seaming machine for cans which comprises the combination with a suitable frame having provision for removably securing it to a bench or the like, of a flexible resilient chuck plate, means for rotatably mounting said chuck plate by a rigid support at its center so that it does not yield at the central point but is adapted to be bowed down beyond the point where it is supported, said mounting means being located on the lower part of the frame and susceptible of endwise movement on its axis of rotation, a driving chuck plate rotatably mounted in the upper part of the frame in axial alinement with the lower chuck plate, said driving chuck plate having a depending annular portion adapted to engage the cover of a can sustained on the lower plate and rotate the can, means for endwise moving the lower chuck plate to press the cover of a can on it into driving contact with the driving chuck plate, means for manually rotating the driving chuck plate, a seaming roller, and means for manually pressing said seaming roller on the combined edges of the cover and can.

4. A hand operated double-seaming machine for cans which comprises the combination with a suitable frame having provision for securing it to a support, of a can chuck plate rotatably mounted on the lower part of the frame and susceptible of endwise movement on its axis of rotation, a driving chuck plate rotatably mounted in the upper part of the frame in axial alinement with the lower chuck plate, said driving chuck plate being adapted to engage the cover of a can on the lower plate and rotate the can, means for endwise moving the lower chuck plate to press the cover of a can on it into driving engagement with the driving chuck plate, a lever pivotally mounted on the frame to move in a plane approximate that of the can cover seam, the inner end of said lever having seam forming rollers rotatably mounted in it at approximately equal radial distances from the fulcrum of the lever, said rollers being located one on each side of the center line between the fulcrum of the seaming roller lever and the axis of rotation of the can, and stops limiting movement of the axis of each seaming roller adjacent to said line.

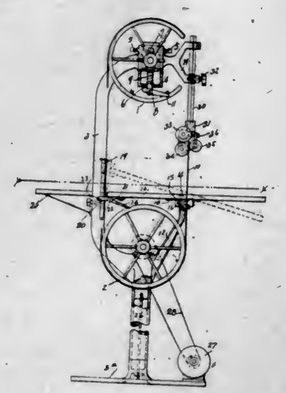
[Claims 2 and 3 not printed in the Gazette.]

1,230,274. SUBAQUEOUS GOLD-SAVING APPARATUS. SAMUEL CALDWELL, Oakland, Cal. Filed June 10, 1916. Serial No. 102,895. (Cl. 83—76.)



A subaqueous gold saving apparatus for permanently positioning in the body of a stream, comprising an open-topped chamber, a grizzly over the open top thereof, and unobstructed at its opposite ends to permit of the free flow of material thereover, a portion of said grizzly being inclined upwardly from one end of said chamber, an apron extending laterally from the opposite sides of the inclined portion of said grizzly and provided with converging walls for directing material carried by the stream flow and received on said apron on to said grizzly, a flexible sealing strip secured at one end to said apron and contacting at its free edge with the stream bed, a suction pipe communicating with the rear of said chamber and through which the material trapped in said chamber is removed and conveyed to a point distant from the stream, means for creating a suction in said pipe, a fluid injector connecting with the interior of said pipe adjacent its connection with said chamber and directed toward said suction means, and a gate valve for controlling the passage of material from said chamber into said suction pipe.

1,230,275. BAND-SAW. JOHN A. CARLSON, Seattle, Wash. Filed Sept. 13, 1915. Serial No. 50,532. (Cl. 143—132.)

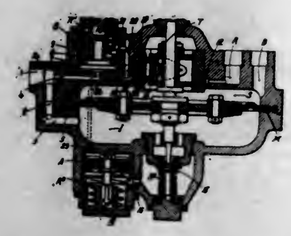


In a device of the class described, the combination of a hinged tilting table, self indicating locking means for securing the said table in a horizontal position and for indicating whether said table be in said horizontal position or at an angle thereto, said means including a sliding gate in said table, a bar secured to the under side of said gate and adapted to coöperate when said table is in a horizontal position with registering holes in lugs, one of said lugs being integral with the table and the other with

a table supporting frame, a spring which automatically prevents the closing of said gate when the said table is in an angular position with respect to the horizontal.

1,230,276. [WITHDRAWN.]

1,230,277. PNEUMATIC BRAKE. FRANÇOIS JULES CHAPSAL, Paris, and ALFRED LOUIS EMILE SAILLOT, La Garenne-Colombes, France. Filed Feb. 27, 1914. Serial No. 821,375. (Cl. 188—1.)



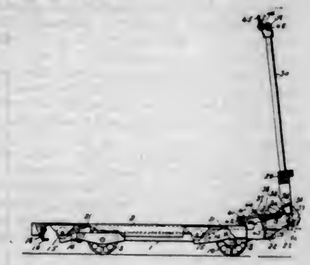
1. In an air-brake system for railway trains, the combination with the train pipe and an air reservoir, of an accelerator comprising a valve and means to open the same upon a reduction of pressure in the train pipe, and means to control the discharge of air from said valve to the atmosphere comprising a second valve, and a piston controlling the movement of said second valve, said piston being subject on one side during application of the brakes to the pressure of air in said reservoir and at the other side to the pressure of the air in the train pipe.

2. In an air-brake system for railway trains, the combination with the train pipe and an air reservoir, of an accelerator comprising a valve and means to open the same upon a reduction of pressure in the train pipe, means to control the discharge of air from said valve to the atmosphere comprising a second valve, and a piston controlling the movement of said second valve, said piston being subject on one side during application of the brakes to the pressure of air in said reservoir and at the other side to the pressure of the air in the train pipe, means to supply air from the train pipe to said reservoir, and a valve to cut off communication between the train pipe and said reservoir when the pressure in the train pipe is reduced to a predetermined limit.

3. In an air-brake system for railway trains, the combination with the train pipe and an air reservoir, of an accelerator comprising a valve and means to open the same upon a reduction of pressure in the train pipe, a second valve also operated by said means, means to control the discharge of air from said first-named valve to the atmosphere comprising a third valve, and a piston controlling the movement of the same, said second valve serving to place one side of said piston in communication with said reservoir upon a reduction of pressure in the train pipe and said piston being subject at its other side to the pressure of air in the train pipe.

1,230,278. TRUCK. JOHN LOUCIEN CHESNUTT, Kansas City, Mo. Filed July 6, 1915. Serial No. 38,113. (Cl. 254—5.)

1. A truck provided with a top frame and a bottom frame, an oscillatory member pivoted to one of said frames, means actuated by said oscillatory member for lifting the top frame when said member is swung in one direction, releasable means for holding said member from retraction after it has been swung in said direction to a predetermined position, a draft handle pivoted to one of said frames, releasable means actuated by the draft handle for engaging and swinging said oscillatory member, and means, operable only when said swinging means is engaged with said member, for releasing said holding means from said member.



2. A truck provided with a top frame and a bottom frame, an oscillatory member pivoted to one of said frames, and provided with an abutment and a notch, a draft handle pivoted to one of said frames independently of said member, means actuated by said member for lifting the top frame when said member is moved in one direction, a pawl carried by said draft handle and adapted to consecutively enter said notch and engage said abutment for consecutively swinging said member to two positions when said handle is oscillated, means for releasably holding said member from retraction from either of said two positions, and means operable only when said pawl is engaged with said abutment or is in said notch for releasing the holding means from said member.

3. A truck provided with a top frame and a bottom frame, an oscillatory member pivoted to one of said frames, a draft handle, means actuated by the draft handle for swinging said member, draft means connecting said member and said other one of said frames for moving the top frame longitudinally when said member is swung in either direction, said draft means having bearings at different points on said member when the member is in certain different positions, and means supported by the bottom frame and supporting the top frame by which the top frame is moved upwardly when it is moved longitudinally of the bottom frame.

4. A truck having a top frame and a bottom frame, an oscillatory member pivoted to one of said frames, means actuated by said member for lifting the top frame when said member is swung in one direction, a draft handle pivoted to one of said frames, a pawl for holding the oscillatory member from retraction, controlling means carried by the handle for forcing said pawl out of engagement with said member, means for forcing said controlling means into operative engagement with said pawl, a second pawl carried by said handle and adapted to engage with said member, and manually operated means carried by said handle for simultaneously withdrawing the second pawl from engagement with said member and for withdrawing said controlling means from engagement with the first named pawl.

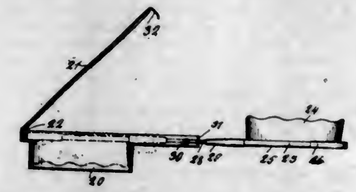
5. A truck having a top frame and a bottom frame, an oscillatory member having a notch, two links respectively pivoted to the oscillatory member and to said top frame and pivoted to each other, one of said links being adapted to enter said notch and operatively engage said member so as to be moved longitudinally of the bottom frame thereby when the links are out of alinement with each other, and means for oscillating said oscillatory member.

[Claims 6 to 12 not printed in the Gazette.]

1,230,279. TOOTH-BRUSH. CHARLES J. COFFEY, Chicago, Ill. Filed Sept. 8, 1914. Serial No. 860,581. Renewed Feb. 17, 1917. Serial No. 149,377. (Cl. 15—39.)

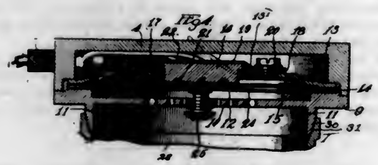
1. The combination with a casing, of a brush-head supporting plate, a clamping screw for securing the brush-head on said plate, a pivotal connection between the screw and the casing to allow the screw and the plate to be swung into and out of the casing, and a closure for the casing.





2. The combination with a casing, of a brush-head supporting plate having a marginal flange at its forward end, the opposite side portions of said flange converging, a screw carried by the rear end of the plate, said screw being adjustable toward the forward end of the plate, a pivotal connection between the screw and the casing to allow the screw and the plate to be swung into and out of the casing, and a closure for the casing.

1,230,280. SOUND-TRANSMITTING APPARATUS. ALBERT E. COY, Chicago, Ill., assignor to The Magniphone Company, a Corporation of Arizona. Filed Sept. 14, 1914. Serial No. 861,553. (Cl. 179—180.)



1. In a sound transmitter of the type described, the combination of a diaphragm, damping means adapted for contact with said diaphragm and adjustable in the area of said contact with the area increasing from a point of slight vibration of the diaphragm toward a point of greater vibration thereof, substantially as set forth.

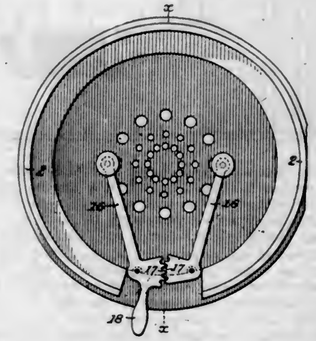
2. In a sound transmitter of the type described, the combination of a diaphragm, damping means adapted for contact with said diaphragm and adjustable from the outer edge of said diaphragm toward the center as pressure on the diaphragm is increased, substantially as set forth.

3. In a sound transmitter of the type herein described, the combination of a diaphragm, adjustable damping means adapted for contact with said diaphragm, a transmitter casing formed with an annular outstanding neck, a thumb piece located within said annular neck for manually operating said adjustable damping means, substantially as set forth.

4. In a sound transmitter of the type described, the combination of a diaphragm, a resilient damper finger attached adjacent to the margin of said diaphragm with its free end adapted for contact with the diaphragm, and means for changing the location and pressure of said free end of the damper finger upon the diaphragm, substantially as set forth.

5. In a sound transmitter of the type described, the combination of a diaphragm, a resilient damper finger attached adjacent to the margin of said diaphragm with its free end adapted for contact with the diaphragm, and means for regulating the location of and pressure on the point of contact of said free end of the damper finger upon the diaphragm, the same comprising a temper screw having bearing in the casing of the transmitter and abutting against the damper finger, substantially as set forth.

1,230,281. SOUND-TRANSMITTING APPARATUS. ALBERT E. COY, Chicago, Ill., assignor to The Magniphone Company, a Corporation of Arizona. Original application filed Sept. 14, 1914, Serial No. 861,553. Divided and this application filed July 8, 1916. Serial No. 108,164. (Cl. 179—180.)

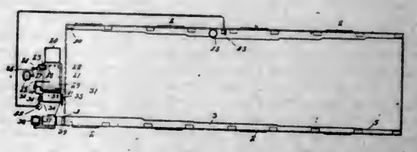


1. In a sound transmitter of the type described, the combination of a diaphragm, damping means adapted for contact with said diaphragm, a casing, an aperture in said casing, a handle connected through said aperture with said damping means, said handle being adapted for moving said damping means back and forth upon the diaphragm, substantially as set forth.

2. In a sound transmitter of the type herein described the combination of a diaphragm, a plurality of damping means pivotally arranged adjacent to the margin of the diaphragm with their free ends adapted for contact with said diaphragm and one common means for moving said plurality of damping means back and forth upon the diaphragm, substantially as set forth.

3. In a sound transmitter of the type herein described, the combination of a diaphragm, a plurality of damping means pivotally arranged adjacent to the margin of the diaphragm with their free ends adapted for contact with said diaphragm and adjustable to and from the central portion of said diaphragm, and means for imposing simultaneous movement on said plurality of damping means, the same comprising gear formations associated with the pivot portions of said damping means, substantially as set forth.

1,230,282. DRYING APPARATUS. CHARLES H. CURRIER, Newark, N. J. Filed Sept. 15, 1916. Serial No. 120,225. (Cl. 34—19.)

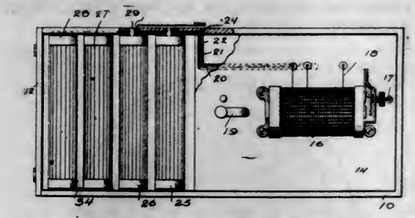


1. In apparatus of the class described, a kiln, inlet and outlet air ducts therefor located on opposite sides thereof, both sets of ducts opening downwardly toward the floor of the kiln, and means for supplying conditioned air under pressure to the inlet ducts.

2. In apparatus of the class described, a kiln and inlet and outlet air ducts therefor located on opposite sides thereof and arranged transversely of the kiln, said ducts opening downwardly toward the floor of the kiln.

[Claims 3 to 5 not printed in the Gazette.]

1,230,283. ELECTROMEDICAL DEVICE. ALBERT H. DAVIDSON and WILLIAM CLIFFORD MCKELLAR, Huntington, W. Va. Filed Mar. 30, 1917. Serial No. 158,683. (Cl. 174—89.)

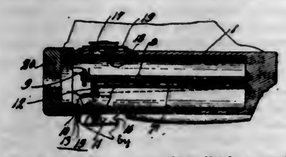


1. In an electro-medical device, the combination of a series of four or more parallel rollers, means for supporting the rollers, and a high tension circuit having its opposite sides connected alternately to the rollers.

3. In an electro-medical device, the combination of a base, a series of rollers mounted in the top of the base to provide an upper rolling supporting surface for the base, said rollers being provided with longitudinal corrugations extending transversely of the base, a cover for the base including an end portion adapted to be opened to expose the upper surfaces and the end of the series of rollers, and a high tension circuit having its opposite sides connected alternately to the rollers.

[Claim 2 not printed in the Gazette.]

1,230,284. DENTAL-RUBBER-DAM HOLDER AND CUTTER. OTTO B. ELKINS and MARSHAL S. SMITH, Abbeville, Ga., assignors of one-fourth to Nathaniel Statham, Abbeville, Ga. Filed July 6, 1916. Serial No. 107,828. (Cl. 211—32.)



1. In a device of the class described, a casing, a roll supporting axle rotatably mounted in said casing, a spring connected to rotate said axle in one direction, and means reciprocable longitudinally relatively to said axle for locking said axle against rotation when said reciprocable means are moved in one direction and for releasing the axle when said means are moved in the opposite direction, whereby a step by step rotary movement may be imparted to said axle.

2. In a device of the class described, a casing, a roll supporting axle rotatably mounted in said casing, a spring connected to turn said axle in one direction, coöperating means carried by said axle and casing for normally holding said axle against turning by said spring, one of said means being reciprocable longitudinally relatively to said axle for imparting a step by step movement to said axle.

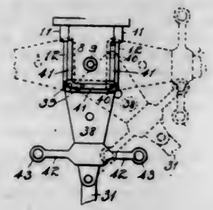
3. In a device of the class described a supporting structure, a spring actuated roll-carrying axle mounted to rotate therein, means for locking said axle from turning against the tension of its spring, and means reciprocatory in a plane parallel with the axis of said axle for intermittently releasing said locking means whereby a step-by-step rotation is imparted to said axle.

4. In a device of the class described, a supporting structure, a spring actuated roll-carrying axle mounted to rotate therein, means for locking said axle from turning against the tension of its spring, including a ratchet wheel fixed to said axle, and a stud carried by said supporting structure and movable to engage alternate teeth of said wheel whereby an intermittent rotary movement is imparted to said axle.

5. In a device of the class described, a supporting structure, a roll carrying axle mounted to rotate therein, a spring connected to turn said axle in one direction, a ratchet wheel fixed to said axle and having alternating teeth arranged out of peripheral alinement with each other, a pin normally engaging said ratchet wheel for holding said axle against turning by said spring, said pin being reciprocable longitudinally relatively to said axle for intermittently releasing said ratchet wheel for imparting a step by step movement to said axle.

[Claims 6 to 9 not printed in the Gazette.]

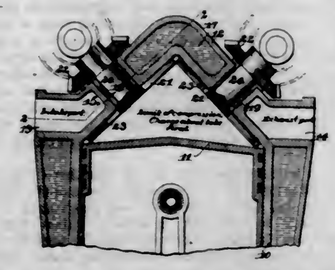
1,230,285. GATE-HINGE. ALEXANDER D. ELLIOTT, Viola, Ill., assignor to Gustave Wenzelmann, Galesburg, Ill. Filed Sept. 18, 1913. Serial No. 790,501. (Cl. 16—49.)



1. In combination, a hinge-member provided with a horizontally arranged way which is substantially in the shape of three sides of a square, and a hinge-member having pins adapted to travel in said way.

2. In combination, a hinge-member comprising a horizontally arranged plate and a rod surrounding three sides thereof and spaced therefrom whereby to provide a non-arcuate way, and a hinge-member having pins adapted to travel in said way.

1,230,286. INTERNAL-COMBUSTION ENGINE. PAUL CARLTON ELLIOTT, Lawrence, Kans. Filed Oct. 19, 1916. Serial No. 126,504. (Cl. 123—80.)



1. In an internal combustion engine, the combination with a cylinder having a head provided with intake and exhaust ports, an inlet chamber formed in said head and communicating with said inlet port, the head having oppositely disposed inlet openings connecting the inlet chamber with the explosive chamber of the cylinder, an exhaust chamber also formed in said head and having similar openings communicating with the explosive chamber, and valves for controlling the motive fluid in the cylinder.

2. In an internal combustion engine, the combination with a cylinder having a head provided with intake and exhaust ports, an inlet chamber formed in said head and communicating with said inlet port, an exhaust chamber also formed in said head, and rotary valves including disks mounted in said cylinder head and arranged at substantially right angles to each other for controlling the motive fluid in said cylinder.

3. In an internal combustion engine, the combination of a cylinder having a head provided with inlet and outlet ports and having the inner walls thereof arranged at an angle, and rotary valves mounted in said head and including disks, the planes of which are at an angle, and the peripheries of which are adjacent.

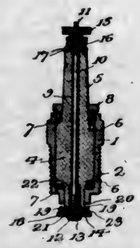
4. In an internal combustion engine, the combination of a cylinder having a head provided with inlet and outlet ports and having the inner walls thereof arranged at an angle, and rotary valves mounted in said head and including disks, the planes of which are at an angle.

5. In an internal combustion engine, the combination of a cylinder having a substantially conical head provided with intake and exhaust ports, an inlet and an exhaust chamber formed in said head and communicating respectively with the intake and exhaust ports, the inner walls of said cylinder head being arranged at an angle and having openings connecting the inlet and exhaust chambers with the explosive chamber of the cylinder, and rotary valves, including disks, mounted to turn on the inner walls of the cylinder head and having openings adapted to register with the openings in the cylinder head.

[Claim 6 not printed in the Gazette.]



1,230,287. SPARK-PLUG. GEORGE L. FREEMAN, Ticonderoga, N. Y., assignor of one-half to Richard F. Hayes, Ticonderoga, N. Y. Filed Feb. 4, 1916. Serial No. 76,210. (Cl. 123—169.)

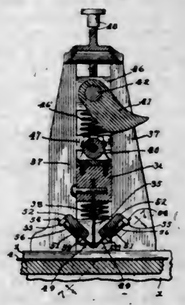


1. A spark plug of the character described including in combination a stationary terminal, an adjustable rod extending through said stationary terminal, a movable terminal carried by said rod, said movable terminal comprising a disk having a cone-shaped upper surface formed to slope downwardly toward the edge of said disk from the center, and upwardly extending sparking points arranged near the edge of the said cone-shaped upper surface and spaced from the stationary terminal.

2. A spark plug of the character described including in combination a stationary terminal, a rod extending through said stationary terminal, a head formed on the lower end of said rod, an adjustable washer threaded on said rod and spaced from the aforesaid head, and a movable terminal loosely mounted between the said washer and head, said movable terminal having a sloping upper surface and sparking points spaced from the stationary terminal.

1,230,288. CAKE-CUTTING MACHINE. EARL S. GABRIEL and DE OTIS LOMBARD, Indianapolis, Ind.; said Lombard assignor to said Gabriel. Filed Mar. 19, 1914. Serial No. 825,817. (Cl. 107—21.)

1. In a cake cutting machine, in combination with a conveying apron, a vertically reciprocable cutting blade extending transversely of the apron, flat scraper plates, one mounted on each side of said blade and having the plane thereof inclined upwardly at an angle to the plane of said blade, yielding pressure means for forcing said scraper members against said blade and supports on which said scrapers are slidably mounted, substantially as described.

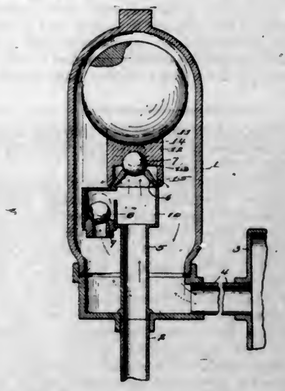


2. In a cake cutting machine, in combination with a conveying apron, a vertically reciprocable cutter blade extending transversely of the apron, flat scraper plates one on each side of said cutter blade and having the planes thereof lying at acute angles to the plane of the blade, a support on which each plate is movably mounted and a spring interposed between said plate and said support, substantially as described.

3. In a cake cutting machine, in combination with a vertically reciprocable transverse cutting blade, a conveying apron, driving mechanism, a cam for forcing said cutting blade downwardly toward the apron, a support in which said cam is mounted and means for adjusting said support relatively to the blade for the purpose of obtaining a greater or less degree of throw of said cam, substantially as described.

4. In a cake cutting machine, in combination with a conveying apron, a vertically reciprocable cutting blade extending transversely of said apron, a sliding member in which said blade is mounted, a bracket for said member, a spring interposed between said member and a fixed part of the machine, a roller carried by said member, a cam mounted in said bracket above said roller and adapted to operate the latter, an adjustable block in which said cam is mounted and a spring interposed between said adjustable block and the bracket, substantially as described.

1,230,289. RELIEF-VALVE. EDMUND F. GEBHARDT, Easton, Pa. Filed Sept. 7, 1915. Serial No. 49,332. (Cl. 137—53.)



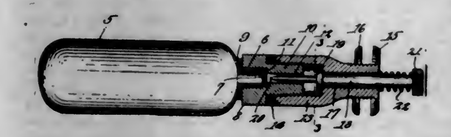
1. A relief valve organization comprising a casing having separate inlet and outlet connections, a pipe within

said casing forming a continuation of the inlet connection and having at its upper end a valve seat which functions as an outlet into said casing, a spherical valve normally closing said outlet and engaging upon said seat, a block having in its under face a recess conforming to and fitting over said valve and having a depending annular apron, the latter centering said block and permitting a limited measure of play thereof about said valve as a fulcrum, the block having a concave recess in its upper face, and a spherical weight resting upon the block and engaging the concave recess thereof, the width of the casing being so selected that the weight has normally no contact with the casing and the displacement of said weight in any lateral direction as far as the center of said valve is prevented by the wall of the casing which surrounds said weight.

2. A relief valve organization comprising a casing having separate inlet and outlet connections, a pipe within said casing forming a continuation of the inlet connection and having at its upper end a valve seat which functions as an outlet into said casing, a ball valve engaging said seat, a block having a rolling fit on said ball valve, and a spherical weight centered on said block.

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1,230,290. LIFE-PRESERVER. BERTHA A. GEIGER, Chicago, Ill., assignor, by direct and mesne assignments, of one-half to William F. Geiger, Chicago, Ill., and one-half to Edmund W. Lawrence, Mount Vernon, N. Y. Filed Feb. 23, 1916. Serial No. 79,932. Renewed Mar. 28, 1917. Serial No. 158,115. (Cl. 9—19.)



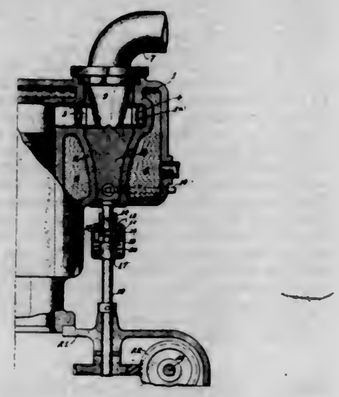
1. The combination with an inflatable life preserver, of an inflating-gas container having an outlet, a closure for the oulet, a cap mounted over the closure, said cap having a gas passage, means carried by the cap for attaching the same to the life preserver, said means having a gas passage opening into the life preserver and communicating with the first-mentioned gas passage, and a puncturing device for the closure slidably mounted in said passages.

2. The combination with an inflatable life preserver, of an inflating-gas container having an outlet, a closure for the outlet, a cap mounted over the closure, said cap having a gas passage, means carried by the cap for attaching the same to the life preserver, said means having a gas passage opening into the life preserver, and communicating with the first-mentioned gas passage, and a puncturing device for the closure slidably mounted in said passages and having an actuating extension passing into the life preserver.

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1,230,291. INTERNAL-COMBUSTION-ENGINE VALVE. JOHN GOOD, Brooklyn, N. Y. Filed Jan. 27, 1916. Serial No. 74,553. (Cl. 123—177.)

1. An internal combustion engine valve comprising a rotary valve-member composed of functionally independent but structurally integral parts or portions, one a ported part and the other a journal part, in combination with a valve casing for said member composed of a ported part having its wall surface parallel with, and in imperfectly contacting relation to the corresponding ported surface of said rotary member whereby said opposing surfaces may function as the sealing means of the valve without lubrication, and a part constituting a lubricated seat supporting said valve-member journal maintaining the said imperfectly contacting surfaces in concentric alinement with each other notwithstanding wear, and a water-jacket surrounding said casing journal seat capable of rapidly abstracting heat from the journal therein and operating to maintain a moderate temperature throughout the whole of said rotary valve member.



2. An internal combustion engine valve comprising a rotary valve-member composed of functionally independent but structurally integral parts, one a ported part and the other a tapered journal part, in combination with a valve casing for said member composed of a ported part having its wall surface concentric with, and in imperfectly contacting relation to, the corresponding ported surface of said valve member whereby said opposing surfaces may function as the sealing means of the valve without lubrication, and a part constituting a lubricated tapered seat for said tapered valve-member journal, and having an extended area in heat-transferring contact therewith whereby a moderate temperature is maintained in said valve member by transfer of heat therefrom through said seat.

3. A rotary valve for internal combustion engines comprising a rotary valve-member having a tapered journal part and a casing therefor providing the seat for such journal part, the coacting ported surfaces of said member and casing being disposed in dry-running and substantially pressureless contact, and the seating surfaces thereof being in oil film contact, and a heat-dissipating means immediately around said lubricated seat.

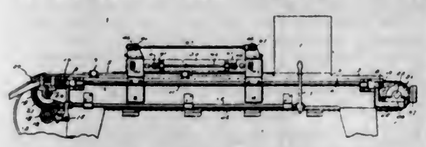
4. A rotary valve for internal combustion engines comprising a rotary valve-member and a casing therefor, the ported wall surfaces of said member and causing being dry-running parts operating as the means for sealing the valve and disposed at one end of the valve structure, and the seating portions of said valve-member and casing being disposed at the other end of the valve structure and constituted by lubricated axially tapered seating surfaces on said member and casing respectively, subject only to inappreciable lateral displacement from wear and affording an ample path for escape of heat from the dry-running ported part of said valve member, through the seat surface of the casing, and a heat-dissipating medium surrounding the seat of the casing.

5. In an internal combustion engine, a rotary valve comprising a casing and a rotary valve member provided with opposing dry-running port sealing surfaces and axially tapered lubricated seating surfaces providing a heat escape-path capable of keeping the ported part of the valve member at a low temperature, and the said valve member having increasing cross-sectional solid metallic area from the end of its ported parts to its seated part, and means outside the casing for absorbing the transmitted heat.

[Claims 6 to 14 not printed in the Gazette.]



1,230,292. MACHINE FOR SHAPING THE BACKS OF BOOK-COVERS. JAMES C. GOURLEY, Hartford, Conn., assignor to The Smyth Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Feb. 19, 1916. Serial No. 79,320. (Cl. 11—2.)



1. A machine for shaping the backs of book covers or cases having means for engaging the sides of the opened cases and feeding the cases edgewise through the machine, means engaging the insides of the backs of the cases as they are fed for imparting the desired form to the backs, and means engaging the outsides of the backs adjacent to the junction of the backs and sides for holding the backs down closely to the forming means as the cases are carried along.

2. A machine for shaping the backs of book covers or cases having means for engaging the sides of the opened cases and feeding the cases edgewise through the machine, a fixed forming bar for engaging the insides of the backs of the cases as they are fed, and creasers for stretching the backs of the cases over the forming bar as the cases are carried along.

3. A machine for shaping the backs of book covers or cases having a magazine for receiving a stack of opened cases, means for feeding the cases successively edgewise out of the magazine, a fixed forming bar over which the cases are fed for shaping the backs of the cases, and creasers for stretching the backs of the cases over the forming bar as the cases are carried along.

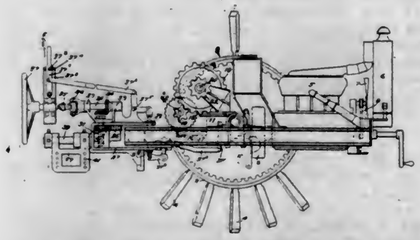
4. A machine for shaping the backs of book covers or cases having means for engaging the sides of the opened cases and feeding the cases edgewise through the machine, a former over which the cases are fed for shaping the backs of the cases, means for heating the former, and creasers for stretching the backs of the cases over the former as the cases are carried along.

5. A machine for shaping the backs of book covers or cases having means for engaging the sides of the opened cases and feeding the cases edgewise through the machine, a former over which the backs of the cases are fed, and creasers in contact with which the backs pass and under which the sides pass as the cases are fed.

[Claims 6 to 21 not printed in the Gazette.]

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1,230,293. COUPLING AND STEERING MEANS FOR TRACTORS. RUSH E. HAMILTON, Geyserville, Cal., assignor to Hamilton Tractor Company, San Francisco, Cal., a Corporation of California. Filed Feb. 5, 1916. Serial No. 76,340. (Cl. 21—114.)



1. In combination with a two wheeled tractor, of a wheeled member to be drawn thereby, a connection between the tractor and wheeled member comprising a yoke carried by the tractor and pivoted to swing on a vertical axis, a clevis carried by the yoke and pivoted to swing on a horizontal axis, and a rigid connection between the wheeled member to be drawn and the clevis.

2. A connection for uniting a tractor and a wheeled member or implement to be drawn thereby, the same comprising a yoke carried by one of the members and pivoted thereto, to swing on a vertical axis, a clevis carried by the yoke and pivoted to swing on a horizontal axis, and a rigid connection between the other member and the clevis.

3. In combination with a two wheeled tractor, of a wheeled member to be drawn thereby, a segmental rack carried at the rear of the tractor, a yoke carried by the tractor and extending over said segmental rack and pivoted to swing on a vertical axis, a connection between said wheeled member and yoke, a rotatable gear carried by said yoke and engaging said segmental rack, and a steering member associated with said gear and extending adjacent to an operator's station on said wheeled member.

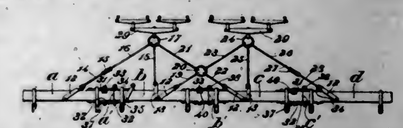
7. In combination with a two wheeled tractor, a wheeled member to be drawn thereby and capable of carrying an operator, a pivoted connection between said tractor and wheeled member, said connection permitting said tractor and wheeled member to swing relative to each other on a vertical axis and to oscillate relatively to each other on a horizontal axis and maintaining said tractor and wheeled member horizontally disposed relatively to each other, steering means carried by the coupling member and tractor for moving the same relatively to each other on the vertical connection between the same, and steering connection for operating said steering means and extending in proximity to the operator's station on the wheeled member.

9. In combination with a tractor, a wheeled member to be drawn thereby and capable of carrying an operator, a pivoted connection between the wheeled member and tractor, said connection permitting said tractor and wheeled member to swing relatively to each other on a vertical axis, a steering mechanism between the pivoted connection and the tractor, tractor controlling means, said tractor controlling means and said steering mechanism adapted to swing with said wheeled tractor on the movement of said pivoted connection.

[Claims 4 to 6 and 8 not printed in the Gazette.]

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1,230,294. DRAFT-EVENER FOR HARROWS. HANS CHRISTIAN HANSEN, JENS ANDREAS NORRE, and JORGEN ALFRED REIMER, Elk Horn, Iowa. Filed Aug. 1, 1916. Serial No. 112,625. (Cl. 55—84.)



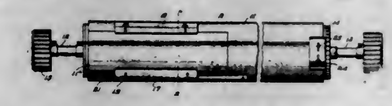
1. A harrow draw-bar consisting of a plurality of sections pivotally connected together by detachable joints, combined with means for rendering said joints rigid when desired, said draw-bar being provided with a series of clevis hooks some of which are at a right angle to the draw-bar, and others of which are inclined relative to said draw-bar, combined with a series of draft rods having jointed connections opposite each of said joints, two draft rings connected by said rods with said clevis hooks on said draw-bar, and a third draft ring disposed between the said two draft rings and also connected with certain of said clevis hooks; said draft rods being all disconnectible from said draft rings and clevis hooks; whereby a four-section draw-bar may be reduced to a three, two, or one-section draw-bar quickly and readily and without the use of tools, and without disturbing the evenness or balance of the draft.

2. A harrow draw-bar consisting of a plurality of sections attached together by disconnectible joints, each of which comprises two plates fixed to the adjacent ends of

two draw-bar sections, said plates overlapping each other and being pivotally connected, and a locking pin passing through all of said plates and serving to render the joint rigid when desired, one of said plates being provided with a pin having a winged head, and the other of said plates being provided with a slot through which said winged head may pass so that when said locking pin is removed one harrow section may be disjointed from another by a lateral movement of one harow section relative to the other.

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1,230,295. PLATEN FOR TYPE-WRITERS. LYNN J. HARRINGTON, Philadelphia, Pa., assignor to L. C. Smith & Bros. Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 6, 1910. Serial No. 585,720. (Cl. 197—136.)



1. A cylindrical typewriter platen having clips for holding a removable segmental cylindrical surface section thereon, and means for positioning a card or stencil over said removable section.

2. A typewriter platen having a segmental section of its cylindrical covering material removable, clips connected with the platen and overlapping said removable section for securing the same in operative position, and means for positioning a card over said removable section both laterally and longitudinally.

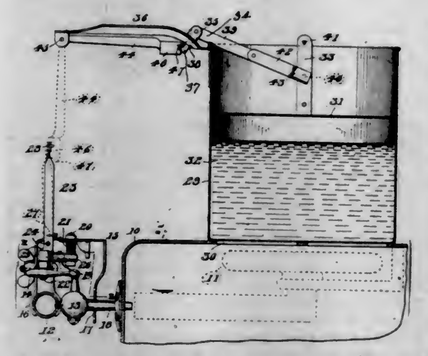
3. A rotatable typewriter platen provided with a removable segmental cylindrical cover section and with stops for limiting the rotary movement of the platen to prevent the removable section from being turned away from the printing point.

4. A typewriter platen provided with a removable segmental cylindrical cover section and a card holding device adjacent thereto for sustaining the card over the removable section.

5. A rotatable typewriter platen having a removable segmental cylindrical cover section, a card holding device for holding a card over said removable cover section, and stops for preventing the card from being turned away from the printing point.

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1,230,296. AUTOMATIC BOILER. JOHN HILDEBRAND, Bridgeport, Conn. Filed Jan. 22, 1917. Serial No. 143,633. (Cl. 53—1.)



3. A float operated shut-off for gas stoves comprising in combination with a stove having a burner with a gas supply pipe and valve connections, an operating handle for the said valve, a bracket removably clamped to the said pipe, a spring-operated trip pivoted to the said bracket provided with a depending finger adapted to move said handle to close the valve, a detent member for said trip provided with an angular beveled foot, such trip being provided with an ear adapted for seating back of the said foot when the trip is set, a return spring for the said detent member, a boiler positioned over said burner, and automatic means for releasing said detent member carried by said boiler and operable upon a pre-determined amount of boiling of the contents of said boiler.

[Claims 1 and 2 not printed in the Gazette.]

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1,230,297. HEAT-INSULATING MATERIAL AND METHOD OF MAKING SAME. CHARLES E. HITE, Philadelphia, Pa. Filed Aug. 18, 1916. Serial No. 115,649. (Cl. 106—20.)

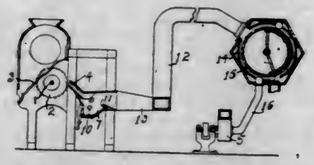
1. The method which consists in forming a fluid or semi-fluid mass by suspending the particles of a powdered mineral material in a previously prepared viscous liquid agent until the material becomes self-sustaining, and then evaporating the moisture, thereby producing a body provided with air cells.

8. A heat insulating body composed of mineral particles formed into a porous self-sustaining mass by first suspending the particles in a liquid paste until the mass has set in a suitable mold, and then evaporating the moisture therefrom.

[Claims 2 to 7 not printed in the Gazette.]

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1,230,298. PROCESS OF GINNING, CLEANING, AND BLEACHING COTTON. WESLEY A. J. HODO, Cleburne, Tex., assignor of one-half to B. D. Cramer, Fort Worth, Tex. Filed Mar. 27, 1917. Serial No. 157,646. (Cl. 13—9.)



2. A process of ginning and cleaning cotton which consists of stripping the lint cotton from the ginning elements by means of suction, treating the cotton so stripped to a whirling body of air in a chamber closed except to the action of the suction and thereafter removing the cotton from said chamber by said suction.

4. A process of cleaning ginned cotton which consists of removing the cotton from the ginning elements by means of suction, treating the cotton so removed to a whirling body of air in a chamber closed except to the action of the suction and thereafter removing the cotton from said chamber by said suction.

5. In a ginning operation, a process of treating the cotton which consists of separating the cotton from the saw teeth by means of suction, subjecting the cotton so separated to a whirling body of air in a chamber closed except to the action of the suction, and thereafter removing the cotton from said chamber by said suction.

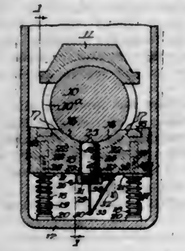
[Claims 1 and 3 not printed in the Gazette.]

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1,230,299. LUBRICATOR. THOMAS J. HOLMES, Chicago, Ill. Filed Jan. 15, 1917. Serial No. 142,411. (Cl. 64—24.)

1. In a lubricating device for a bearing, the combination of a friction piece having a friction surface thereon substantially conforming to the bearing surface of the bearing to be lubricated, means adapted yieldingly to force said friction piece normally toward said bearing whereby the friction surface thereon is maintained against the bearing surface of the bearing when the device is normally in use, said friction piece having a recess for holding a lubricant whereby such lubricant may contact the bearing within the area of the friction surface of said friction piece, said recess opening into a chamber in said friction piece adapted to contain a piston, and a spring pressed piston in said chamber adapted to force the lubricant against the bearing surface to be lubricated when the device is normally in use.





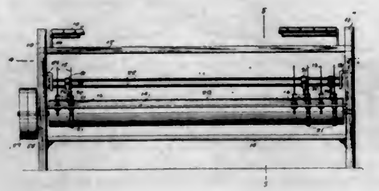
5. In combination with a journal bearing or the like, a friction piece having a friction surface thereon substantially conforming to the bearing surface of said bearing, means for yieldingly maintaining said friction piece with its friction surface against the bearing surface of said bearing, said friction piece having a recess adapted to contain a lubricant, said recess having an opening substantially surrounded by portions of said friction surface, spring means for forcing a lubricant in said recess through said recess opening, and means for holding said spring means in retarded position, as for charging the device with lubricant.

9. In combination, a car journal box, a journal and a journal block coöperatively arranged in said box, a lubricator block in said box having a friction surface substantially conforming to the curvature of said journal, means for yieldingly pressing said lubricator block with the friction surface thereof against said journal, said lubricator block having a recess for a lubricant, said recess opening into the friction surface of said lubricator block, spring means associated with said recess for pressing the lubricant therein against said journal, and means for releasably holding said spring means in retracted position, said last mentioned means being such that the jarring of the car when the same is running will operate said holding means to release said spring means.

[Claims 2, 4, 6 to 8, and 10 to 12 not printed in the Gazette.]

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1,230,300. SPINNING AND TWISTING MACHINE. LEON H. HORNER, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed July 15, 1913. Serial No. 779,074. (Cl. 118—48.)



1. A spinning frame having rows of spindles at opposite sides, a driving cylinder disposed between them, a tape trained about the cylinder and about one or more spindles of each row, and a support extending longitudinally over said cylinder in combination with tape-tensioned and guiding means mounted on such support and comprising a tape pulley on each side of the cylinder, both pulleys coöperating with the same tape.

2. In a spinning frame, a driving cylinder, a horizontal girder structure over the cylinder, band-guiding and tensioning devices supported from said girder structure at opposite sides of the cylinder, and a spindle band in contact with the cylinder and with spindles at both sides of the frame and also trained on the band-guiding and tensioning devices at both sides of the cylinder.

3. In a spindle drive for spinning machines, the combination with the spindles, a driving cylinder, and a spindle band trained on said cylinder and on spindles at opposite sides of the frames, of a girder structure over the cylinder, and tensioning devices mounted on the girder comprising band guides at opposite sides of the cylinder, one of such guides being urged toward the tape, which is trained on both of the guides.

4. In a spindle drive for spinning machines, the combination with the spindles, a driving cylinder, and a spindle band engaging the cylinder and spindles on opposite sides of the frame, of a longitudinal support over the cylinder, oppositely-projecting arms on said support, a fixed band-guide mounted on one of said arms, and a yieldingly pressed band-guide and tensioning device on the other arm.

5. In a spinning frame having spindles, a driving cylinder and spindle bands, a longitudinal support over the driving cylinder, arms projecting laterally from said support in both directions, band guides carried by said arms at opposite sides of the cylinder, and band-guide-urging means for imparting tension to the bands.

[Claims 6 to 11 not printed in the Gazette.]

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1,230,301. BED-CHAIR. ANNA S. JOHNSON, Pierce City, Mo. Filed Aug. 26, 1914. Serial No. 858,682. (Cl. 155—11.)



1. A bed chair including a seat, a back removably connected to said seat, removable arms each having a bayonet slot in the rear end to engage and lock with a slotted portion of said back, fixed depending posts at the forward ends of said arms seated at their lower ends in grooves in the sides of the seat, and fastening means on both sides of said seat extending across the grooves therein to engage reduced portions of said posts and hold them in place.

3. A bed chair including a seat, a back removably connected to said seat having upright side bars with reduced lower ends to engage the seat, and transverse grooves on opposite sides above said lower ends, removable arms each having a bayonet slot in its rear end to engage the grooved portions of the side bars and lock said arms in place, fixed depending posts at the forward ends of the arms fitting at their lower ends in vertical grooves in the sides of the seat, and a resilient fastening means secured on each side of the seat across the vertical groove and engaging a circular groove in the post to hold the latter seated in the vertical groove.

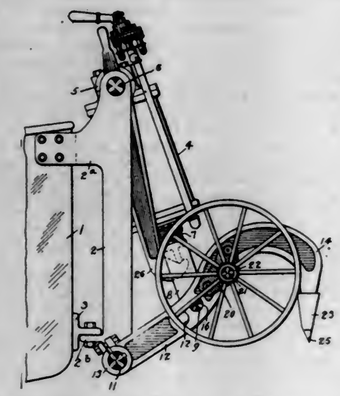
[Claims 2 and 4 not printed in the Gazette.]

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1,230,302. SCARIFYING DEVICE FOR ROAD-ENGINES. HENRY D. JONES, Springfield, Ohio, assignor to The Kelly-Springfield Road Roller Company, Springfield, Ohio, a Corporation of Ohio. Filed Nov. 11, 1916. Serial No. 130,867. (Cl. 37—50.)

2. In a scarifying attachment for road engines, a series of pivoted scarifying devices, means for raising and low-

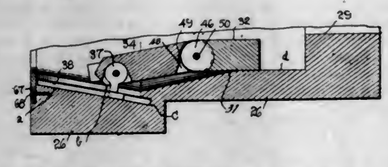
ering and applying pressure thereto, a gage wheel bracket secured to each of the outside devices so that each of said brackets may be reversed end for end, and a gage wheel journaled on each of said brackets at a point at one side of a line drawn between the centers of the securing means for the same so that said gage wheels may be adjusted relative to the scarifying device to regulate the depth of penetration.



5. In a scarifying attachment for road engines, a series of pivoted scarifying devices, said devices being provided with two series of alined openings, a shaft arranged to be extended through either one of said series of openings, one series of openings being closer to the pivotal point of said devices than the other series of openings, a bracket secured to each of the outside devices by removable attaching means, and a stud on each bracket, a gage wheel journaled on said stud, said stud being so positioned with respect to the attaching means that by reversing the bracket end for end the gage wheel may be adjusted to correspond to either series of alined openings.

[Claims 1, 3, and 4 not printed in the Gazette.]

1,230,303. DRILL-FORMING DIE. OSCAR C. JULIEN, Montreal, Wis. Filed Apr. 26, 1916. Serial No. 93,755. (Cl. 76—5.)



1. In a mechanism for upsetting the ends of rods, an angular rod clamping die including members longitudinally movable and coincidently angularly shiftable in relation to the longitudinal axis of the die.

3. In a mechanism for upsetting the ends of rods, a rod clamping die, and means associated with the clamping die for supporting and at all times engaging the side faces of the rod against bending while the rod is being upset, said means being movable radially outward and longitudinally by and with the expansion of the head of the rod as it is being upset.

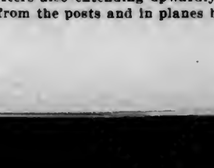
8. In a mechanism for upsetting the ends of rods, a clamping die having a chamber formed therein, the side walls of the chamber extending inward divergently for a distance equal to the upsetting head to be formed on the rod, the walls then converging to a diameter equal to that of the opening of the chamber and then extending inward with a uniform diameter, a sleeve supported within the clamping die for longitudinal movement, and a plurality of rod supporting members pivotally mounted on the sleeve for radial swinging movement.

14. In a mechanism for upsetting the ends of rods, a hollow rod clamping die formed of opposed sections, the sections having coacting rod seats, means for forcing said sections toward each other to clamp a rod within said seats, a dolly mounted for reciprocation within the hollow clamping die, means for striking blows upon the dolly, and means disposed within the dolly engaging the side face of the rod at all times while it is being upset and supporting the rod against bending, said means being movable into varying angular relation to the axis of the clamping die, as the rod is upset and radially expanded.

17. In a mechanism for upsetting and radially expanding the ends of rods, a rod clamping member, and means carried by the clamping member engaging the end of the rod to be expanded and supporting said end at all times, said means being movable radially by and with the radial expansion of the rod as its end is upset.

[Claims 2, 4 to 7, 9 to 13, 15, and 16 not printed in the Gazette.]

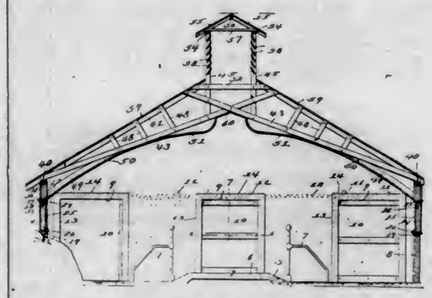
1,230,304. HEADLIGHT-DIMMER. THOMAS F. KIERNAN, Salida, Cal. Filed July 7, 1916. Serial No. 107,977. (Cl. 240—45.)



1. The combination of a lamp including a body portion having a lens included in its wall, a reflector shell within the body portion and spaced from the latter, and a dimmer member pivoted to the body portion and constantly confined within same, said dimmer member being movable between the body portion and the reflector shell.

2. The combination of a lamp including a body portion having a lens, a reflector shell within the body portion and spaced from the latter, a dimmer member pivoted to the body portion and constantly confined within same, and means for moving the dimmer member to a position between the reflector shell and the lens.

1,230,305. DAIRY-BARN. ABRAHAM B. KLAY, Modesto, Cal. Filed May 25, 1916. Serial No. 99,918. (Cl. 20—1.)



1. In a dairy barn, the combination of a base wall, posts extending upwardly from the base wall at intervals at opposite sides of the barn, main rafters extending upwardly and inwardly at an incline and supported by the posts, false rafters also extending upwardly and inwardly at an incline from the posts and in planes below the main



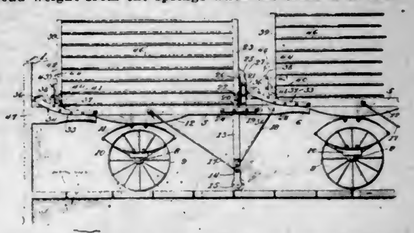
rafters, the outer ends of the false rafters being secured to the sides of the main rafters adjacent to the posts, braces extending from the inner sides of the posts below the main and false rafters to points about midway of and secured to the lower edges of the false rafters, the false rafters being longer than the main rafters and crossed and secured to each other at the center of the barn structure, the extremities of the false rafters at the center of the barn structure being connected to the inner extremities of the main rafters, a central ventilator structure disposed over the crossed portions of the false rafters and having the latter and the main rafters secured thereto, and a closely jointed ceiling secured against the braces and the false rafters and entirely inclosing the lower portions of the roof structure elements up to the base of the ventilator to prevent dust and dirt from falling from the roof structure into the interior of the barn and at the same time leaving a ventilating opening at the center of the ceiling, the roof rafters being provided with a top roof closure.

2. In a dairy barn, the combination of a base wall, posts rising from the base wall at opposite sides, main rafters supported by the upper extremities of the posts and extending at an inward and upward angle of inclination, false rafters also supported by the posts and secured to the main rafters and extending inwardly and upwardly at an angle of inclination below the main rafters and intersecting and crossing at the center of the roof structure, ventilator posts footed on the false rafters at opposite sides of the points of crossing of said rafters, the extremities of the false rafters extending through the posts in reverse directions and terminally secured to the main rafters adjacent to said ventilator posts, cross plates extending through the ventilator posts and also terminally secured to the main rafters, the ventilator posts having slats between the same at the opposite sides and also provided with a roof covering, a ceiling applied and secured below the false rafters and terminating on opposite sides of the center of the roof structure to provide an opening between the ventilator posts, the latter opening being closed by a screen, the ceiling inclosing the roof structure elements and preventing the falling of accumulated dust and dirt into the interior of the barn, and a roof closure mounted on the main rafters and extending up to the ventilator posts, openings being formed between the upper portions of the posts rising from the base wall above the ceiling inclosing the roof structure elements.

3. In a dairy barn, the combination of a base wall, posts rising from and supported by the base wall at opposite sides of the barn, main roof rafters extending upwardly from and supported by the upper ends of said posts, a ventilator in the center or apex of the roof against which the main rafters are secured, false rafters also supported by the upper ends of the posts and secured to the main rafters and extending inwardly below the latter rafters and intersecting and crossing at the lower portion of the ventilator and also engaging opposite parts of the said ventilator, the lower portion of the ventilator structure being also footed on the false rafters, braces extending from the wall posts upwardly to the intermediate portion of and secured against the lower edges of the false rafters, a closely jointed ceiling secured against the braces and portions of the false rafters and continuing inwardly to the lower central portion of the roof below the ventilator where a ventilating opening is formed, a screen covering over the said ventilating opening, the ceiling wholly inclosing the lower portion of the roof to prevent dust and dirt from falling therefrom into the interior of the barn, and a top covering for the roof, the roof providing between the ceiling and the top covering an air ventilating space whereby air is conducted to the ventilator and the central ventilating opening.

1,230,306. WARE-TRUCK. ABRAHAM B. KLAY, Modesto, Cal. Filed May 26, 1916. Serial No. 100,141. (Cl. 21—122.)

1. A ware truck having carrying wheels and spring cushioning means between the wheels and body thereof, and means forming part of the organization of the truck for engagement with a supporting means for relieving the load weight from the springs when the truck is at rest.



2. A ware truck having carrying wheels and springs introduced between the latter and the body of the truck, and engaging means at opposite extremities of the truck for relieving the springs of the load weight of the truck.

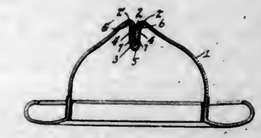
3. A ware truck having carrying wheels for propelling the same and springs introduced between the wheels and the body of the truck, supporting means at one end of the truck, and movable means at the opposite end of the truck, the movable means at one end of one truck being operative to engage the supporting means at the opposite end of a similar adjacent truck.

4. A ware truck having a body, carrying wheels and springs between the wheels and body, and coöperating terminal means for engagement with a supporting means for relieving the springs of the load weight of the truck.

5. A ware truck having a body, carrying wheels and springs between the wheels and body, rollers at one end of the body, and supporting means at the opposite end of the body for engagement by the end rollers of an adjacent similar truck.

[Claims 6 to 18 not printed in the Gazette.]

1,230,307. CREASE-RETAINING DEVICE FOR HATS. EUGENE KORN, San Francisco, Cal. Filed Feb. 24, 1917. Serial No. 150,638. (Cl. 2—108.)

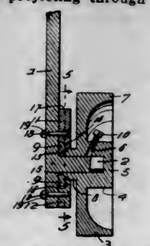


A crease-retaining device for hats formed of a single flat piece of metal having relatively long lateral wings joined by a relatively short center portion, said center portion being bent upon itself to cause said wings to lie substantially parallel with each other and to cause the device to assume a U-shaped cross-section adapted to embrace the crease of a hat; a continuous outwardly turned reinforcing flange formed around the entire edge of said device; and inwardly facing substantially conical projections carried by said wings for engaging the material clamped therebetween.

1,230,308. PLOW-WHEEL. FRANK G. LOBF, Casco township, St. Clair county, Mich. Filed May 29, 1916, Serial No. 100,671. Renewed Apr. 30, 1917. Serial No. 165,606. (Cl. 64—10.)

1. In a device of the class described, a standard having an outwardly projecting axle; a wheel including an outer hub closed at its outer end and provided with a peripheral oil hole, a tread rim overhanging the oil hole, and an inner hub having a circumscribing rib, the axle being received in both hubs; a closure for the oil hole; an upper retainer and a lower retainer applied to the inner face of the standard and having abutting ends provided with coöperating notches receiving the inner hub, the retainers having coacting recesses receiving the rib of the inner hub for rotation, the upper end of the upper retainer

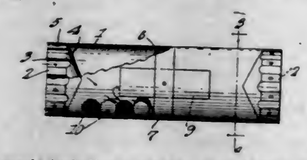
being pointed to form a dirt deflector; studs carried by the retainers and projecting through the standard; and



clamping devices on the studs and engaging the standard to bind the retainers closely against the standard.

[Claim 2 not printed in the Gazette.]

1,230,309. PUZZLE. HUGH MCNALLY, Richland Center, Wis. Filed Nov. 29, 1916. Serial No. 134,148. (Cl. 46—41.)



1. A puzzle including a tubular body divided into communicating departments, movable bodies of different specific gravities within the body, means for obstructing the movement of the movable bodies from one compartment to the other, and means for directing air under pressure through the compartments to convey the lighter movable bodies from one compartment and past the obstructing means to the other compartment.

2. A puzzle including a tubular body, a partition therein dividing the body into separate compartments, a tube projecting in opposite directions from the partition and into the body, movable bodies of different specific gravities within the body, and means for directing air under pressure through the compartments and the tube to convey the lighter movable bodies from one compartment and through the tube to the other compartment.

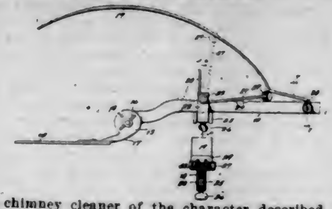
3. A puzzle including a tubular body, a partition therein dividing the body into separate compartments, a tube projecting in opposite directions from the partition and into the body, movable bodies of different specific gravities within the body, means for directing air under pressure through the compartments and the tube to convey the lighter movable bodies from one compartment and through the tube to the other compartment, and deflecting means concentric with the body and spaced from but extending across the ends of the tube.

4. A puzzle including a tubular body, end closures therein having air passages, a partition within the body and dividing it into separate compartments, a tube extending through and projecting from opposed faces of the partition, and deflecting means upon the inner face of each of the end closures.

5. A puzzle including a tubular body, end closures therein having air passages, a partition within the body and dividing it into separate compartments, and a tube extending through and projecting from opposed faces of the partition.

1,230,310. CHIMNEY-CLEANER. FRANK T. MACDONALD, South Penobscot, Me. Filed July 26, 1916. Serial No. 111,389. (Cl. 15—41.)

1. A chimney cleaner of the character described, comprising a body portion, a cleaning element secured to the forward end thereof, a pressure member pivotally connected with the body portion and adapted to swing toward and away from the same, yielding means carried by the body portion and serving to move the pressure member outwardly, and adjusting means arranged inwardly of the pressure member and out of contact therewith and serving to regulate the action of the yielding means so that such yielding means is capable of swinging the pressure member outwardly for a greater distance.

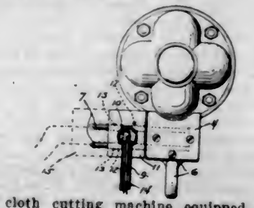


2. A chimney cleaner of the character described, comprising a body portion, a cleaning element, means for angularly adjustably connecting the cleaning element with the forward end of the body portion, a pressure member pivotally connected with the body portion and adapted to swing toward and away from the same, yielding means carried by said body portion and serving to move the pressure member outwardly, and adjusting means arranged inwardly of the pressure member and out of contact therewith and serving to regulate the action of the yielding means so that such yielding means is capable of swinging the pressure member outwardly for a greater distance.

3. A chimney cleaner of the character described, comprising a body portion, a cleaning element secured to the forward end thereof, a pressure member connected with the body portion and movable laterally toward and away from the same, a carriage slidably mounted upon the body portion to be adjusted longitudinally thereof, and a yielding element secured to the carriage and contacting with the pressure member.

4. A chimney cleaner of the character described, comprising a body portion, a cleaning element secured to the forward end thereof, a pressure member connected with the body portion and movable laterally toward and away from the same, and yielding means longitudinally adjustably mounted upon the body portion to be shifted longitudinally thereof and adapted to act upon the pressure member at different distances from its pivot.

1,230,311. LAMP-SUPPORT AND TERMINAL FOR CLOTH-CUTTING MACHINES. WILLIAM J. MARSHALL, Newark, N. J., assignor to H. Maimin Co., Inc., a Corporation of New York. Filed Jan. 16, 1917. Serial No. 142,638. (Cl. 240—2.)



4. In a cloth cutting machine equipped with a detachable lamp support, a first block of insulating material secured on the machine, a pair of projecting metallic posts set in the block so as to be insulated from each other and from the machine, and a second block of insulating material secured on the lamp support, this second block having a pair of transverse apertures so arranged that the posts may be passed through the apertures in the second block to mount the second block on the first block to arrange the lamp on the lamp support in a selected disposition relative to the field of operation of the machine, these transverse apertures being provided with metallic contacts wired to the lamp on the support and so arranged that when the second block is mounted on the first block the lamp is wired to the two posts, the posts being long enough to pass through and protrude beyond said apertures and being so spaced and conformed that the socket element of a standard plug-and-socket may be positioned on the protruding portions of the posts and thus connect the two posts to a source of electric current to close a lighting circuit for the lamp.

6. A detachable lamp mounting for a cloth cutting machine, including a multi-plug member, a coöperant socket member, and an auxiliary socket member adapted to be secured to the lamp support and provided with a plurality of transverse apertures through which may be passed the plugs of the plug member, these plugs being long enough to pass through said apertures in the auxiliary socket member and engage with the other socket member.

7. A lamp mounting for cloth cutting machines, comprising the combination of a plug member having a plurality of metallic posts and two socket members adapted to be positioned on the posts; one of said members being secured to the machine and another being adapted to be wired to a source of electric current; and a lamp support to which the third member is secured.

[Claims 1 to 3, 5, and 8 not printed in the Gazette.]



1,230,312. RELEASING-PENHOLDER. OLAF MATHISON, Crookston, Minn. Filed Nov. 16, 1915. Serial No. 61,798. (Cl. 120—101.)



1. In a releasing penholder, a handle, a rotatable sleeve immovable longitudinally with respect to said handle, a nib-holding non-rotatable sleeve movable longitudinally with respect to said sleeve, and a means affixed to said handle preventing longitudinal movement of said first mentioned sleeve and preventing rotation of the second mentioned sleeve, substantially as described.

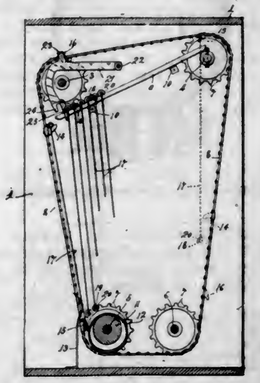
2. In a releasing penholder, a handle, an interiorly threaded rotatable sleeve immovable longitudinally with respect to said handle, a nib-holding exteriorly threaded non-rotatable sleeve movable longitudinally with respect to said handle through rotation of said first mentioned sleeve, and a member affixed to said handle for engagement with both of said sleeves to prevent longitudinal movement of the first mentioned sleeve and rotation of the second mentioned sleeve, substantially as described.

3. In a releasing pen-holder, a handle, an interiorly threaded rotatable sleeve immovable longitudinally with respect to said handle, said sleeve having a recess formed therein, an exteriorly threaded nib-holding sleeve mounted within said rotatable sleeve for fitting engagement therewith, said nib-holding sleeve being non-rotatable and movable longitudinally with respect to said handle, and a member affixed to said handle interiorly of said rotatable sleeve to engage therewith and prevent longitudinal movement thereof, and to engage with said nib-holding sleeve to preclude rotation thereof, substantially as described.

1,230,313. ADVERTISEMENT-DISPLAYING MACHINE. LOUIS F. W. MEESE, Minneapolis, Minn. Filed Jan. 3, 1916. Serial No. 69,777. (Cl. 40—78.)

1. In a machine of the kind described, the combination with a plurality of cards, of laterally spaced endless belts and driving and guiding means therefor, including front and rear upper belt guiding wheels, inclined tracks for supporting said cards, extending from said rear guide wheels to points below said front guide wheels and terminating in position to discharge said cards onto the downwardly moving sides of said belts, catch lugs on said belts to receive upper portions of said cards, and pick-up hooks on said belts for engagement with lower portions of the cards, said hooks serving to invert the cards and deliver the same back onto the upper ends of said rails.

2. In a machine of the kind described, the combination with a plurality of cards, of laterally spaced endless belts and driving and guiding means therefor, including front and rear upper belt guiding wheels, inclined tracks for supporting said cards, extending from said rear guide wheels to points below said front guide wheels and terminating in position to discharge said cards onto the downwardly moving sides of said belts, catch lugs on said belts to receive upper portions of said cards, and pick-up hooks on said belts for engagement with lower portions of said cards, said hooks serving to invert the cards and deliver the same back onto the upper ends of said rails, and an escapement device for controlling the discharge of the cards from the lower ends of said rails, said belts having cam lugs for operating said escapement with the properly timed action.



3. In a machine for displaying cards, the combination with inclined rails and a plurality of cards adapted to be supported thereon, of laterally spaced endless belts, upper and lower guiding wheels for said belts arranged to move the same completely around the said rails and to cause the downwardly moved portions of said belts to incline to points backward of the lower ends of said rails, catch lugs on said belts for receiving upper portions of the cards from the lower ends of said rails, and pick-up hooks on said belts for taking up the cards at their lower ends and delivering the same onto the upper ends of said rails.

4. In a machine for displaying cards, the combination with inclined rails and a plurality of cards adapted to be supported thereon, of laterally spaced endless belts, upper and lower guide wheels for said belts arranged to move the same completely around the said rails and to cause the downwardly moved portions of said belts to incline to points backward of the lower ends of said rails, catch lugs on said belts for receiving upper portions of the cards from the lower ends of said rails, and pick-up hooks on said belts for taking up the cards at their lower ends and delivering the same onto the upper ends of said rails, escapement levers controlling the discharge of the cards from the lower ends of said rails, and cam lugs on said belts for operating said escapement levers with properly timed actions.

1,230,314. FLUSHING-CUSPIDOR. STANISLAW MOZUR, Erie, Pa. Filed July 28, 1916. Serial No. 111,826. (Cl. 4—40.)

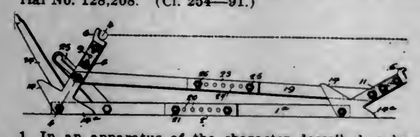
A flushing cuspidor of general jar-like contour, having bodily formed in itself an upper-edge circular tubular rim, said tubular rim having formed in its bottom a plurality of jet-openings, said openings having their walls deflected, *i. e.* inclined laterally as contradistinguished from radial lines, to deliver the water passing therethrough in a swirling action, said cuspidor having formed upon the inner wall of its neck portion a plurality of similarly deflected or inclined ribs with their lower ends terminating about at the center of the contracted portion of said neck

and converging toward each other at said lower ends to aid the swirling action of the water passing, from said



delivery openings of the tubular rim, therebetween at that point.

1,230,315. AUTOMOBILE-JACK. THOMAS J. NASH, Lincoln, Nebr., assignor to National Manufacturing Co., Incorporated, Lincoln, Nebr. Filed Oct. 28, 1916. Serial No. 128,208. (Cl. 254—91.)



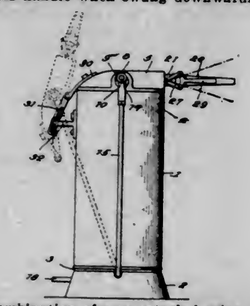
1. In an apparatus of the character described, a base frame, cross rods in the base frame at each end, a pair of front uprights secured to the cross rod in the front end of the frame, one at each side of the frame, a second pair of uprights mounted on the cross rod at the rear of the frame, one at each side of the frame, longitudinal connecting rods connecting the front and back uprights, transverse connecting rods for the respective front and back pairs of uprights, a lever on the front cross rod that is mounted in the base frame for turning the same to move the uprights from one position to the other, said uprights having angled foot portions, the floor engaging faces of the front upright making approximately equal angles with the front uprights whereby the front upright may be extended to the front or the rear of a vertical position, the floor engaging faces of the foot portions of the rear uprights making respectively, right and acute angles with said rear uprights whereby the rear upright may assume a vertical position or a position to the rear of the vertical.

[Claims 2 and 3 not printed in the Gazette.]

1,230,316. LOCK FOR RECEPTACLE-CLOSURES. GEORGE R. NAPIER, Macon, Ga. Filed Aug. 23, 1915. Serial No. 46,899. (Cl. 220—124.)

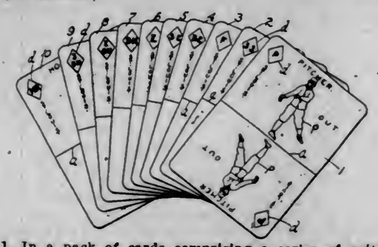
1. The combination of a receptacle having an open end, a closure for said end having a bearing extending throughout its width, a shaft mounted rotatably in said bearing and having eccentrics at its ends extending beyond said bearing, one of said eccentrics being elongated, an operating handle pivoted to this eccentric and adapted to swing downwardly, a pair of links having bearings at one end receiving said eccentrics, the other ends of said links being pivotally connected to the container adjacent the closed end thereof, and a U-shaped spring clip carried by one of said links to receive the aforesaid handle when swung downwardly.

2. The combination of a receptacle having an open end, a closure for said end having a bearing extending throughout its width, a shaft mounted rotatably in said bearing and having eccentrics at its ends extending beyond said bearing, one of said eccentrics being elongated, an operating handle pivoted to this eccentric and adapted to swing downwardly, a pair of links having bearings at one end receiving said eccentrics, a shaft extending across the closed end of the receptacle on the exterior thereof and joined rigidly at its ends with the other ends of said links, one or more bearings for said last named shaft, and a U-shaped spring clip carried by one of the links to receive the aforesaid handle when swung downwardly.



3. The combination of a receptacle having an open end, a closure for said end adapted to move laterally therefrom, a pair of links pivotally connected therewith at one end, eccentric locking means connecting the other ends of said links with the closure, a longitudinally slotted link pivotally connected to one edge of the closure and spaced laterally from the receptacle, a rigid arm extending laterally from said receptacle, and a pin projecting from said arm through the slot of the last named link for slidably connecting the latter with the arm.

1,230,317. PLAYING-CARDS. THEODOR NORPOTH, St. Louis, Mo., assignor of one-fourth to T. G. Ehrhardt, California, Mo. Filed Oct. 2, 1916. Serial No. 123,394. (Cl. 46—25.)



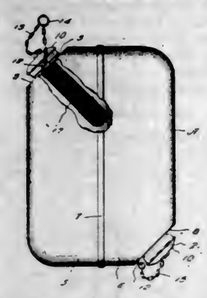

1. In a pack of cards comprising a series of suits, a suitable number of cards in each suit, said cards being horizontally divided into halves, the halves being similarly marked in opposing relation, one of said markings being adjacent the outer edge of each half of the card, another being disposed along the left hand margin of each half of said card when the half is in its normal position, the former marking designating the value of the card, the latter designating the denomination of the suit, said first mentioned marking being supplemented by an abbreviation disposed along the margin above the marking giving the denomination, some of said cards being further marked by the word "Out" or its equivalent, substantially as set forth.

3. In a pack of cards comprising a series of suits, a suitable number of cards in each suit, said cards having markings adjacent the upper narrow edge of the card, further markings being disposed along the left hand margin of each card when the card is held upright, the former marking designating the value of the card, the latter designating the denomination of the suit, said first mentioned marking being supplemental by an abbreviation disposed along the margin above the marking giving the denomination.

[Claims 2, 4, and 5 not printed in the Gazette.]



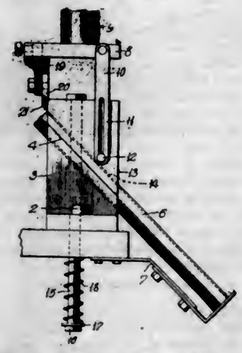
1,230,318. COMBINATION WATER-BOTTLE AND SYRINGE. ROBERT I. PARKS, Washington, D. C. Filed July 10, 1916. Serial No. 108,402. (Cl. 128—47.)



1. An article of the class described, comprising a substantially rectangular hollow body having a pair of upper and lower diagonally opposed flat corners, cap attaching flanges secured to the outer faces of said flat corners, the upper flat face having a relatively large opening therethrough within the adjacent cap attaching flange, a nipple secured to the lower flat face within the adjacent cap attaching flange and projecting beyond the same, and caps detachably mounted on said flanges for sealing the upper flange and for sealing the open end of said nipple.

2. An article of the character described, comprising a hollow body provided with upper and lower flattened faces having openings therethrough, cap attaching flanges secured upon the outer sides of said flat faces, a reticulated receptacle fitting through the opening of said upper flat face and projecting into the hollow body, a nipple secured to the lower flat face within said flange, and caps detachably mounted on said flanges for sealing the upper flange and holding said receptacle in place and for engagement with the open end of said nipple to seal the same.

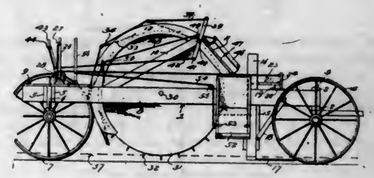
1,230,319. MITERING-DIE. PETER PAULSON and JULIUS M. RICHTER, Detroit, Mich. Filed Nov. 10, 1916. Serial No. 130,535. (Cl. 164—51.)



1. A device for mitering short lengths of tubes comprising a stationary die, a movable die thereon, said dies having angularly disposed grooves confronting faces for holding a tube, rods carried by said movable die and extending through said stationary die adapted for holding said movable die normally on said stationary die, a cutter head above said movable die reciprocable to and from said movable die, a cutter blade carried thereby movable against front vertical faces of said dies, and means connecting said cutter head and said movable die at the sides thereof so that said movable die may be moved relative to said stationary die.

2. In a device for mitering short lengths of tubes, a table, a stationary die thereon, a movable die on said stationary die, said dies having confronting angularly disposed and grooved faces adapted for holding a tube, an angularly disposed adjustable stop carried by said table adapted for holding one end of the tube with the other end of the tube between the dies and with an end edge of the tube flush with the front vertical faces of said dies, rods carried by said movable die extending through said stationary die below said table, means on said rods holding said movable die normally on said stationary die, a cutter head, a cutter blade carried thereby and movable at the front vertical faces of said dies for entering an end edge of the tube therebetween, and links connecting the sides of said cutter head and said movable die so that said movable die may be raised after a predetermined movement thereof away from said stationary die.

1,230,320. SOD-REMOVER. GEORGE H. PAYNE, Yuma, Ariz. Filed Sept. 25, 1916. Serial No. 122,137. (Cl. 97—38.)



1. In a sod remover, a main frame; a collecting drum journaled on the main frame; a sod knife vertically adjustable on the main frame in front of the drum; means for raising and lowering the sod knife; a scraper mounted to move on the main frame and coacting with the periphery of the drum; means for adjusting the position of the scraper with respect to the periphery of the drum; a table carried by the frame; a collector receiving the sod from the drum and discharging onto the table; a deflector mounted to swing on the table; means for holding the deflector in adjusted positions to cause the deflector to discharge toward opposite sides of the main frame; chutes carried by opposite sides of the main frame and receiving the material from the deflector; closures for the chutes; and means for manipulating the closures.

2. In a device of the class described, a main frame; a knife carried by the main frame; a drum journaled on the main frame to the rear of the knife; a scraper mounted to swing on the main frame and coacting with the periphery of the drum; means for adjusting the position of the scraper with respect to the drum; and means for receiving the material from the drum.

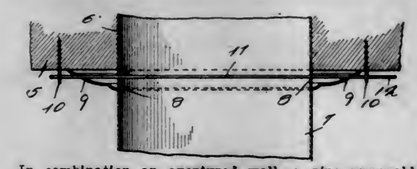
3. In a device of the class described, a main frame; a sod knife carried by the frame; a sod collecting drum journaled on the frame to the rear of the knife; a plurality of scrapers connected movably with the frame and coacting with the periphery of the drum; a connection uniting all of the scrapers; and means for operating the connection to cause an adjustment in the position of all of the scrapers with respect to the periphery of the drum.

4. In a device of the class described, a main frame; a sod knife carried by the main frame; a sod collecting drum journaled on the main frame to the rear of the knife; a table carried by the frame; a collector receiving the material from the drum and discharging on the table; a deflector pivotally mounted on the table and movable to discharge the sod toward one side of the frame or toward the other side of the frame; and means for operating the deflector.

5. In a device of the class described, a frame; a sod knife vertically movable on the frame; means for raising and lowering the sod knife; a sod collecting drum journaled on the frame to the rear of the knife; a scraper movably mounted on the frame and coacting with the periphery of the drum; means for adjusting the position of the scraper with respect to the drum; a deflector mounted on the frame and tiltable to discharge toward opposite sides of the frame; means for receiving the sod from the drum and discharging the sod against the deflector; and means for operating the deflector to cause the same to discharge toward opposite sides of the frame.

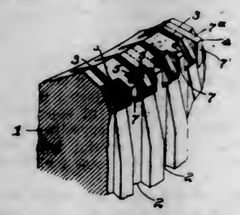
[Claim 6 not printed in the Gazette.]

1,230,321. STOVEPIPE-FASTENER. CARL A. PEDERSEN, Wilson, Ark. Filed Mar. 6, 1917. Serial No. 152,671. (Cl. 126—318.)



In combination an apertured wall, a pipe removably mounted therein and provided with diametrically opposite apertures, a collar surrounding the pipe provided with apertures alining with the apertures in the pipe, eye forming members secured in the wall at opposite sides of the pipe and in alinement with the apertures, and a retaining member passed through said alining eyes and apertures.

1,230,322. NEEDLE-CARRIER FOR KNITTING-MACHINES. ALBERT M. PIGEON, Norristown, Pa., assignor to Wildman Mfg. Co., Norristown, Pa., a Corporation of Pennsylvania. Filed June 6, 1916. Serial No. 101,984. (Cl. 66—26.)



1. A needle carrier having grooves for needles and grooves for web holders, with means forming a part of the needle carrier structure adjacent the verge for preventing the new yarn becoming caught in the web holder grooves, substantially as described.

2. A needle carrier having needle grooves with supports at the verge of the same for the needle backs and the old fabric loops, with spaces between said supports extending rearwardly of the plane of the verge and web holder grooves opening into said spaces, substantially as described.

3. A needle carrier having grooves for the needles and grooves for instruments and recesses at the verge of the carrier into which the last mentioned grooves open, said recesses being in the carrier in rear of the plane of the needle backs, substantially as described.

4. In combination a needle carrier having guide grooves for needles and guide grooves for web holders, the lower fabric supporting surfaces of the web holders being no higher than the top of the carrier, and means forming a part of the needle carrier structure to prevent the yarn catching in the grooves of the web holders, substantially as described.

5. In combination a needle carrier having guide grooves for needles and guide grooves for web holders, the lower fabric supporting surfaces of the web holders being no higher than the top of the carrier, and means to prevent the yarn catching in the grooves of the web holders, said means consisting of the recesses at the verge of the carrier into which the web holder grooves open, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,230,323. SPRING-BEARD NEEDLE. ALBERT M. PIGEON, Norristown, Pa., assignor to Wildman Mfg. Co., Norristown, Pa., a Corporation of Pennsylvania. Filed June 6, 1916. Serial No. 101,985. (Cl. 66—5.)



1. A spring beard needle having a flexible back, the rear face of which is substantially flat, and its front face rounded, a nose of circular cross section and a beard rounded on its outer or front face and a substantially flat inner face, substantially as described.

2. A spring beard needle having the upper portion of its stem back of the beard inclined rearwardly in relation to the main part of the stem, its rear face cut away, a stiffened nose and a flexible beard, substantially as described.

3. A spring beard needle having a flexible beard, a flexible stem portion back of the beard wider than deep in cross section, and a nose of circular cross section and non-flexible, substantially as described.

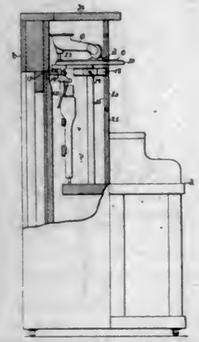
4. A spring beard needle having its back or stem lying opposite the beard of reduced thickness in respect to the main part of the stem, said reduced portion having its rear face curved longitudinally and of minimum thickness at a point intermediate the length of said reduced portion or below the point of juncture of said portion with the nose of the needle, substantially as described.

5. A spring beard needle having its back or stem in rear of the beard of reduced thickness, said portion having its rear face curved longitudinally and of minimum thickness at a point intermediate the length of said reduced portion or below the point of juncture of said portion with the nose of the needle, said nose being circular in cross section and of one diameter throughout the semicircular bend forming said nose.

1,230,324. COMBINATION PIANO AND SOUND-REPRODUCING INSTRUMENT. ELZEAR PLANTE, Fall River, Mass., assignor to Edmond Coté, Fall River, Mass. Filed June 13, 1916. Serial No. 103,556. (Cl. 84—193.)

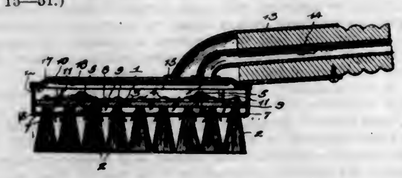
1. The combination with an upright piano having a casing provided with an opening in its front wall and with means for covering and uncovering said opening, a support or base for a record-carrying table pivoted within the said casing to be turned into a substantially vertical position substantially parallel with said opening and into a substantially horizontal position at an angle to said opening, said record-carrying table being movable with said support, a motor located in said casing for rotating said record-carrying table, and a tone-arm pivoted within said casing and movable over said table when the latter is in its horizontal position.





2. The combination with an upright piano having a casing provided with an opening in one of its walls, a support or base for a record-carrying table pivoted within said casing to be turned from a substantially vertical position into a substantially horizontal position and arranged with relation to said opening to enable a portion of the record-carrying table carried by said support to move through said opening when said support is turned, a motor for rotating said record-carrying table, and a tone arm pivoted within the casing out of the path of movement of the record-carrying table and having its free end movable into and out of the path of movement of said record-carrying table and over the latter when the record-carrying table is in its horizontal position.

1,230,325. FOUNTAIN-BRUSH. JOHN H. PRIDE, Cincinnati, Ohio, assignor to Oscar A. Berman, Cincinnati, Ohio. Filed July 19, 1916. Serial No. 110,118. (Cl. 15—51.)



1. A fountain brush comprising a body, bristles secured in the body, a wire arranged on the upper face of the body and securing the bristles in the body, individual metal caps inclosing the secured ends of the bristles to render them waterproof, means for supplying water to the body, and passages provided in the body between the bristles for delivering the water to the latter.

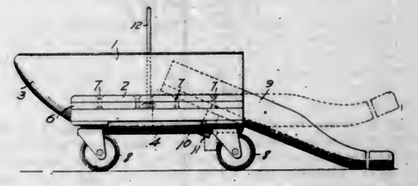
2. A fountain brush comprising a body having a plurality of perforations, tufts secured to the body between the perforations, and a casing for the body having individual openings through which the bristles extend, said casing openings being of larger diameter than the tufts whereby water flowing therethrough will have free exterior passage about each tuft.

3. A fountain brush comprising a casing having an inlet and a plurality of tuft-receiving perforations, a baffle interposed between the inlet and said perforations, and tufts passing through the casing perforations, and said baffle and secured to the upper face of the latter, the anchored ends of the tufts being capped against the passage of water therethrough.

4. A fountain brush comprising a casing having a perforated bottom wall and a surrounding side wall, a baffle provided with perforations staggered relative to those of the casing, means securing the baffle directly and in spaced relation to the bottom wall of the casing, tufts carried by the baffle and extending through the perforations of the casing, and a removable cover for the casing detachably secured to the baffle in spaced relation thereto and inclosing the baffle securing means.

5. A fountain brush comprising a casing having a perforated bottom wall, a cover for the casing having a water inlet, a baffle in the casing, tufts carried by the baffle and protruding through the casing perforations, means securing the baffle to the bottom wall of the casing in spaced relation thereto, and means securing the cover to the baffle for removal.

1,230,326. TRUCK FOR HANDLING AUTOMOBILES. DAVID C. PUDERBAUGH, El Dorado, Pa. Filed June 16, 1916. Serial No. 103,966. (Cl. 21—65.)



1. A truck comprising an upper member having lateral and longitudinal extensions at each side thereof and an upwardly and outwardly projecting rear portion, a bottom member provided with lateral and longitudinal extensions fastened to the extensions of said upper member, and a caster at each end and each side fixedly secured to the extensions of said bottom member.

2. A truck comprising an upper member having lateral and longitudinal extensions at each side thereof, a bottom member having a concaved central portion and provided with lateral and longitudinal extensions riveted to the extensions of the upper member, and a series of casters riveted to the extensions of the said bottom member.

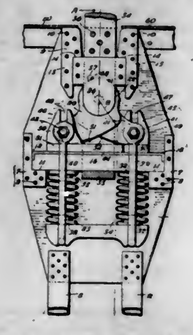
3. A truck comprising an upper member having lateral and longitudinal extensions at each side thereof, a bottom member having a concaved central portion and lateral and longitudinal extensions fixedly secured to the extensions of the upper member and provided with an opening therethrough near its front end portion, in combination with an inclined plane provided with a projection at its central portion near the rear end thereof adapted to be fitted in said opening, and a series of casters fixedly secured to the extensions of the said bottom member.

4. A truck comprising an upper member having lateral and longitudinal extensions at each side thereof, a bottom member having a concaved central portion and lateral and longitudinal extensions riveted to the extensions of the upper member and provided with an opening therethrough near its front end portion, in combination with an inclined plane having a concaved upper surface and provided with an integral projection near the rear end thereof adapted to be fitted within said opening, and a series of casters riveted to the extensions of the said bottom member.

5. A truck comprising an upper member having lateral and longitudinal extensions at each side thereof and an upwardly and outwardly rear portion, a bottom member provided with lateral and longitudinal extensions fixedly secured to the extensions of the upper member and having a concaved central portion and an opening therethrough near the rear end thereof, in combination with an inclined plane having a concaved upper surface and an integral projection near the rear end thereof adapted

to be fitted within said opening with the rear portion of said inclined plane resting upon the upper front portion of said bottom member, and a caster at each end and each side portion fixedly secured to the extensions of the bottom member.

1,230,327. FRICTION DRAFT-GEAR. GEORGE W. RAMSEY, Peoria, Ill. Filed Mar. 22, 1911. Serial No. 616,191. (Cl. 213—64.)



1. A device of the class described including a draw bar, a car under frame, resilient means, lever arms with a shifting fulcrum for increasing the effective resistance of said resilient means as the thrust or pull upon said draw bar is increased, and friction shoes at all times sustaining the full draw-bar load.

2. A device of the class described including a draw bar, a car under frame, resilient means, lever arms with shifting fulcrums, means connecting said lever arms with said resilient means, whereby the effective resistance of said resilient means is increased as the thrust or pull upon said draw bar is increased, and friction shoes at all times sustaining the full draw-bar load.

3. A device of the class described, having in combination a front follower, a rear follower, a friction shoe slidable at right angles to the movement of said followers, said friction shoe being provided with a friction surface directly sustaining the draw-bar load and at right angles to the said direct draw bar load, means to slide said friction shoe when either of said followers are moved, and spring mechanism resisting the movement of said followers.

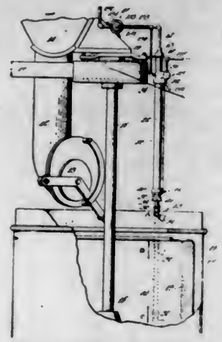
4. A device of the class described including a draw-bar, resilient members, rocking members, means operatively connecting said resilient members with said rocking members, friction shoes interposed between said rocking members and said resilient members, said friction shoes at all times sustaining the full draw-bar load, and means to slide said friction shoes when said resilient members are compressed.

5. In a device of the class described, the combination of follower stops, follower plates adapted to coöperate with said follower stops, resilient members, lever arms with shifting fulcrums for increasing the effective operation of said resilient members and to limit the movement of said follower plates, and the friction shoes between said lever-arms and one of said follower plates, said friction shoes having a movement opposite to the movement of said shifting fulcrums.

[Claims 6 to 21 not printed in the Gazette.]

1,230,328. AUTOMATIC SUGAR-WASHER AND WATER-MEASURER FOR THE SAME. JOSEPH SAILER, Oxnard, Cal. Filed May 5, 1915. Serial No. 26,171. (Cl. 210—28.)

1. An automatic sugar washer comprising a film nozzle, means for feeding a washing fluid through said nozzle against the charge of sugar, means for holding said nozzle in its extreme upper position so that it is entirely out of the basket, and means for reciprocating said nozzle back and forth from its lower position inside said basket to an intermediate position near the top of the basket.



2. An automatic sugar washer comprising a film nozzle, means for feeding a washing fluid through said nozzle against the charge of sugar, means for holding said nozzle in its extreme upper position so that it is entirely out of the basket, means for reciprocating said nozzle back and forth from its lower position inside said basket to an intermediate position near the top of the basket, and means for automatically shutting off the flow of washing fluid to said nozzle when a certain predetermined amount of such fluid has passed through said nozzle.

3. An automatic sugar washer for use in a centrifugal separator comprising a main cylinder, a main piston sliding in said cylinder, a nozzle carried by said main piston, means for supplying water to said nozzle, valve means for applying pressure to said main piston to raise or lower same, and means by which the movement of said main piston automatically actuates said valve means.

4. An automatic sugar washer for use in a centrifugal separator comprising a main cylinder, a main piston sliding in said cylinder, a nozzle carried by said main piston, means for supplying water to said nozzle, valve means for applying pressure to said main piston to raise or lower same, an auxiliary piston, means by which said auxiliary piston actuates said valve means, and means by which said main piston automatically controls the pressure on said auxiliary piston.

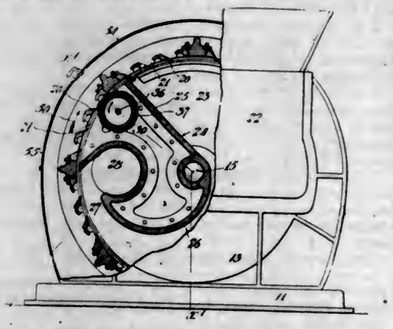
5. An automatic sugar washer for use with a centrifugal separator comprising a vertical pipe so placed as to project inside a charge of sugar carried in said separator, a nozzle secured to said pipe in such a position that it may throw a washing fluid against said charge of sugar, means for supplying a washing fluid to said pipe, automatic means for raising and lowering said pipe vertically, and means by which said pipe actuates said automatic means.

1,230,329. BEET-CUTTER. JOSEPH SAILER, Oxnard, Cal. Filed Sept. 5, 1916. Serial No. 118,578. (Cl. 146—11.)

1. In a beet cutter; a stationary structure forming a beet receiving chamber; a series of rotating knives so placed as to cut the beets in said chamber; a knife rotating shaft; means for securing said knives to said knife rotating shaft; and involute casting located in said chamber having a brush cavity formed therein adjacent to said knives; a brush in said cavity; and means by which an operator can force said brush against said knives for the purpose of cleansing said knives.

2. In a beet cutter; a stationary structure forming a beet receiving chamber; a series of rotating knives so placed as to cut the beets in said chamber; a knife rotating shaft; means for securing said knives to said knife rotating shaft; an involute casting located in said chamber having a brush cavity formed therein adjacent to said knives; a cylindrical brush so mounted that an operator can force it against said knives; and means for rotating said brush to cleanse said knives.





3. In a beet cutter; a stationary structure forming a beet receiving chamber; a series of rotating knives so placed as to cut the beets in said chamber; a knife rotating shaft; means for securing said knives to said knife rotating shaft; an involute casting located in said chamber having a brush cavity formed therein adjacent to said knives; a cylindrical brush so mounted that an operator can force it against said knives; and means for rotating said brush to cleanse said knives.

4. In a beet cutter; a series of rotating knives arranged around the periphery of a cylinder in which the beets to be cut are placed; a cylindrical brush located inside said knives in such a position as to contact with them; means for rotating said brush at a faster peripheral speed and in the same direction as said knives; means for protecting said brush from said beets; and means by which an operator can force said rotating brush against said knives.

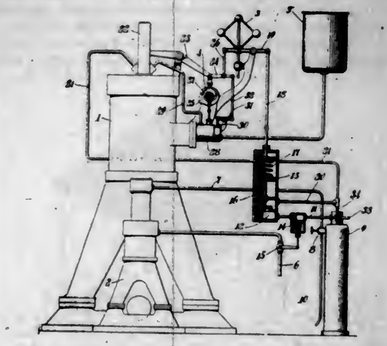
5. In a beet cutter; a stationary structure forming a beet receiving chamber; a series of rotating knives so placed as to cut the beets in said chamber; a knife rotating shaft; means for securing said knives to said knife rotating shaft; an involute casting located in said chamber having a brush cavity formed therein adjacent to said knives; a cylindrical brush so mounted that an operator can force it against said knives; and power transmitting means for rotating said brush to cleanse said knives, said power transmitting means being inoperative when said brush is out of contact with said knives.

1,230,330. AIR-SUPPLY SYSTEM FOR COMBUSTION-ENGINES. ROBERT SCHLAEPFER, Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 21, 1914. Serial No. 862,829. (Cl. 123—103.)

1. An air supply system for internal combustion engines comprising the combination with the engine, its fuel valve, air compressor, storage reservoir and air injection line leading to the fuel valve, of an automatic pressure regulator in said air injection line for regulating the pressure of the air passing to the fuel valve, and means on the high-pressure side of said regulator for controlling the operation of the air compressor.

2. An air supply system for internal combustion engines, comprising the combination with the engine, its compressor, storage reservoir and air injection line, of a governor-controlled pressure regulator for said air injection line and means for controlling the output of the compressor in accordance with the pressure in the storage reservoir.

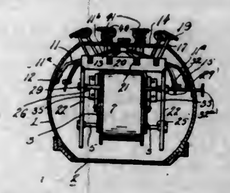
3. In a combustion engine, the combination of the engine governor, a fuel pump controlled thereby, an air compressor driven by the engine, a storage reservoir for the air compressor and serving the fuel valve of the engine, in combination with a pressure regulator controlled by the engine governor and means subject to the pressure on the high-pressure side of the regulator for controlling the pressure in the storage reservoir.



4. In apparatus of the kind described, the combination with the fuel injection valve, the air line leading thereto, of a driven engine governor, a valve in said air line, a spring acting on said valve and mechanical connections whereby the governor varies the tension of the spring.

5. In apparatus of the kind described, the combination of the fuel air injection line, a spring-loaded pressure regulator thereon, an engine governor controlling the tension of the spring thereof, an air compressor and means whereby the air pressure in one part of the pressure regulator controls the intake passage to the compressor.

1,230,331. REGISTER. MATH N. SCHNEIDER, North Milwaukee, Wis. Filed Oct. 12, 1916. Serial No. 125,227. (Cl. 197—6.)



1. In registers, the combination of a casing, a plurality of radially disposed upwardly inclined print bars pivotally mounted within the casing, the bars being so relatively disposed that, when in normal position, their upper ends are closely adjacent and disposed in circular arrangement, a locking screw threaded through the top of the casing and adapted to engage between the inner ends of the print bars, a roll rotatably mounted within the casing beneath the inner ends of the print bars, a strip passed about the roll, means for depressing any one of the print bars optionally, and means for simultaneously causing movement of the said strip when a print bar is depressed.

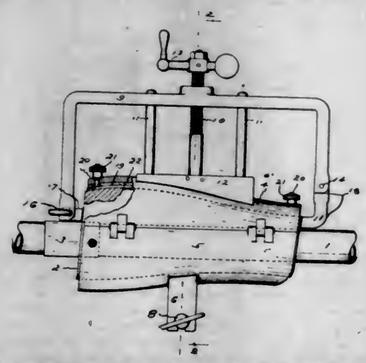
[Claims 2 to 6 not printed in the Gazette.]

1,230,332. PUTTEE-SHAPING APPARATUS. KALMAN F. SENTIVANY, Hartford, Conn. Filed Feb. 9, 1917. Serial No. 147,594. (Cl. 69—8.)

1. A leather shaping apparatus having a forming block, a mold having a back and side sections with its interior shaped to conform to the exterior of the forming block, means hinging the side sections of the mold to the back section, a frame, a hand rotated screw coöperating with the frame for pressing the back section of the mold against the forming block, and means for drawing the side sections of the mold together and causing them to press against the forming block.

2. A leather shaping apparatus having a hollow forming block, means for heating the forming block, a sectional

mold with its interior shaped to conform to the exterior of the forming block, means hinging the sections of the mold together, two sections of the mold having opposed free longitudinal edges, means for positively forcing a section of the mold against the forming block, and means arranged to link together said free edges of the mold and positively draw the sections against the forming block.

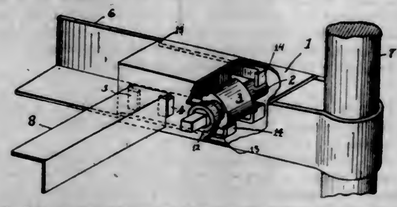


3. A leather shaping apparatus having a forming block, a mold having a back and side sections with its interior shaped to conform to the exterior of the forming block, means hinging the side sections of the mold to the back section, means for pressing the back section of the mold against the forming block, and a screw attached to one side section and carrying a nut adapted to engage the other side section for drawing the side sections of the mold together and causing them to press against the forming block.

9. A leather shaping apparatus having a forming block, a sectional mold with its interior shaped to conform to the exterior of the forming block, means hinging the sections of the mold together, two sections of the mold having free longitudinal edges, means for pressing a section of the mold against the forming block, and means for drawing the sections of the mold together and causing them to press against the forming block, the mold sections being so constructed and shaped that when drawn together about the forming block the end edges and free longitudinal edges of the mold provide the pattern by which the shaped leather may be trimmed to finished outline.

[Claims 4 to 8 and 10 not printed in the Gazette.]

1,230,333. CORNER-FASTENING FOR BEDS AND OTHER ARTICLES OF FURNITURE. WOODFORD SHANNON, Louisville, Ky. Filed Nov. 14, 1912. Serial No. 731,809. (Cl. 5—55.)



1. In a corner fastening, a supporting element, a tubular female element adapted to receive said supporting element in either one of two positions, and eccentric rotatable means associated with one of said elements, for locking said supporting element in said female element.

2. In a corner fastening, a tubular female element adapted to receive a male element in either of two positions, a primary male supporting element adapted to enter said female element bodily and directly to position of lodgment by motion in one direction along the common axes of said elements, and means within said female element for locking it therein.

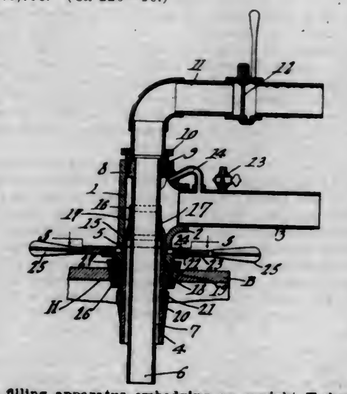
3. In a corner fastening, a female element, an eccentric therein, and a male element provided with bearings adapted to engage said eccentric and recessed to permit its passage beyond the shaft of said eccentric.

4. In a corner fastening, a female element, a male element having a resilient inward extension, and an eccentric in said female element adapted, after resilient displacement of said extension, to engage it and detachably lock said male element to said female element.

5. In a corner fastening, a female element, an eccentric therein, and a male element provided with bearings adapted to engage said eccentric and provided with stops adapted to operate against the walls of said female element.

[Claims 6 and 7 not printed in the Gazette.]

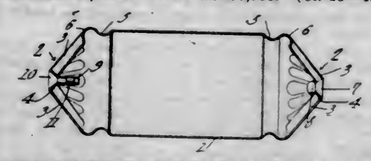
1,230,334. BARREL-FILLING APPARATUS. FREDERICK LYNN SHELOR, Salem, Va. Filed Feb. 2, 1916. Serial No. 75,798. (Cl. 226—10.)



1. A filling apparatus embodying an upright T-shaped head, a depending nozzle threaded to the lower end thereof, a coupling threaded within the upper end of said head and having a tapered aperture, and a second nozzle extending through and supported by the first mentioned nozzle and having a tapered portion at its upper end fitted within said tapered aperture.

2. A filling apparatus embodying an upright head having an opening between its ends, a depending outer nozzle having its upper end engaged within the lower end of the head, a second nozzle projecting through the aforesaid nozzle and having its upper end connected to the upper end of the head, and an annular valve slidable upon the inner nozzle and seatable upon the upper end of the outer nozzle.

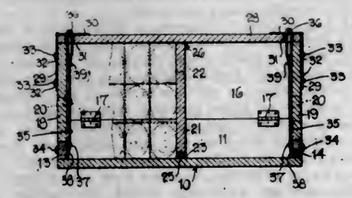
1,230,335. FLOAT. JOHN H. SHEPHERD, Elyria, Ohio. Filed Jan. 31, 1916. Serial No. 75,383. (Cl. 43—4.)



A float embodying a shell having an indrawn crimped end providing a frusto-conical aperture, and a frusto-conical plug seatable snugly in said aperture and having a rounded head at its smaller end of slightly greater diameter than said smaller end to snap through the aperture when the plug is forced into the same.



1,230,336. FOLDING EGG-CRATE. FRANK STANDIFORD, Livermore, Cal. Filed Sept. 18, 1916. Serial No. 120,862. (Cl. 217—15.)

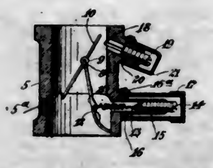


1. A folding egg box comprising a bottom having oppositely disposed relatively rigid side sections, one of said side sections being taller than the other, relatively rigid end sections extending upward from the bottom, side sections hingedly connected to the first named side sections, end sections hingedly connected to the first named end sections, a partition hingedly connected to the bottom and adapted to be turned up to space the side sections from each other and divide the box, a cover having hasps on its extremities, members carried by the hinged end sections adapted to engage said cover when the hinged end sections are turned to a vertical position to thereby connect the cover to the bottom of the box, and means on the hinged end sections engaging said hasps.

3. In a folding crate, bottom, sides and ends, the sides and ends being hingedly connected to the bottom so as to be folded inward upon the bottom, a cover, means for detachably engaging the cover with the end sections when the latter are turned to a vertical position, and means disposed inward of the ends detachably engaging the cover with the bottom of the box when the end sections are turned to said vertical position to thereby relieve the strain on the end members, said means being foldable inward onto the bottom of the box when the end sections are folded inward parallel to the bottom.

[Claim 2 not printed in the Gazette.]

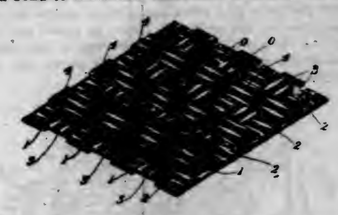
1,230,337. GOVERNOR. EMIL F. STOFFEL, Pontiac, Mich. Filed Aug. 17, 1916. Serial No. 115,399. (Cl. 137—152.)



A governor adapted for mounting between the intake manifold of an internal combustion engine and the carbureter thereof, comprising a connection, an offset pivoted throttle valve within said connection, an arm at the pivot of said throttle valve and extending downwardly in the connection to engage a wall of the connection to limit the opening movement of said valve, a screw carried by said connection, a spring connecting said screw to said arm and adapted to hold said throttle valve normally open, a thimble carried by said connection inclosing said screw, an adjustable stop carried by said connection and adapted to limit the closing movement of said throttle valve, and a thimble carried by said connection and inclosing said adjustable stop.

1,230,338. LAMINATED, COHESIVE, INTERWOUND, BONDED FABRIC. LAWRENCE A. SUBERS, East Cleveland, Ohio. Filed July 21, 1914. Serial No. 852,173. (Cl. 154—52.)

1. In a laminated fabric, a series of spaced, parallel, cohering, interwound, laminated fabric bands, each band composed in turn of crossed series of spaced, parallel, cohering, interwound fibrous elements, between the several series of which a layer of solid adhesive material is interposed, and which is exposed upon the exterior sides thereof in spaced positions, the solid adhesive upon the exterior sides of adjoining bands cohering in said fabric and serving as a bond to unite said bands into a unitary structure.



2. In a laminated fabric, a series of spaced, parallel, cohering and interwound, laminated, fabric bands, each band composed of series of parallel, cohering, interwound flexible, fibrous elements, one spaced series of elemnets crossing another spaced series of elements at a predetermined angle, providing spaced diamond shaped openings interspersed throughout the bands, some of said diamond shaped openings being positioned in the outer surface of each band, and a solid adhesive filling all said openings, the adhesive filling the said surface openings in one band cohering to the adhesive filling the surface openings in adjacent bands and serving as a bond to unite the bands into a unitary structure.

3. In a laminated fabric, a series of spaced, parallel, cohering interwound, laminated fabric bands, each band composed in turn of cross series of spaced, parallel, cohering interwound fabric elements, the elemente in each individual band being arranged in layers, and crossing each other at an angle, and a layer of solid adhesive material interposed between adjacent layers of fibrous elements, said adhesive layer separating and cushioning said fibrous elements at crossing points and being exposed along the exterior side of each band in spaced positions, the solid adhesive upon the exterior sides of adjoining bands cohering in said fabric and serving as a bond to unite said bands into a unitary structure.

4. As an article of manufacture, a laminated fabric comprising a series of laminated, spaced, interwound, fabric bands, each of said bands comprising spaced, parallel, flexible elements interwound in layers, the elements in one layer crossing those of another, and in which bands fluid adhesive is incorporated to cause the fibrous elements in said bands to cohere, said bands having interspersed and surface openings therein, said openings filled with a solid adhesive and said solid adhesive also forming a cushion of material thickness between said elements at their crossing points, the adhesive in the several contacting bands cohering to form a bond for the fabric.

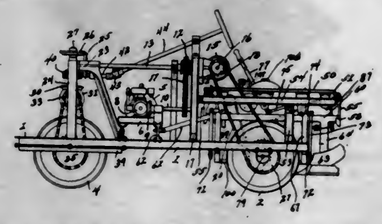
5. As an article of manufacture a laminated fabric comprising a series of spaced, parallel, cohering, interwound, laminated fabric bands, each band composed of crossed series of spaced, parallel, cohering, interwound fibrous elements, between the several series of which a layer of solid adhesive material is interposed, and which is exposed upon the exterior sides thereof in spaced positions, said exposed portions of the adhesive material being of a thickness substantially equal to the thickness of the surface portions of fabric on each side thereof.

[Claim 6 not printed in the Gazette.]

1,230,339. POWER-PLOW. HOWARD M. SWEET, Detroit, Mich., assignor, by mesne assignments, to A. T. Harrow Tractor Company, a Corporation of Michigan. Filed Nov. 5, 1914. Serial No. 870,361. (Cl. 97—70.)

1. In a power operated plow, a self-propelled power apparatus provided with a main frame, a secondary framework carried above the main frame, a platform on said secondary frame, a series of releasable supports pivotally

secured to both the front and rear of the secondary frame, a series of plows provided with plow beams having forward and rear ends adapted to be engaged by the supports individual thereto, a lever through operation of which the said front supports may be simultaneously disengaged to drop the forward ends of the plow beams, a draw-bar for each plow beam, adjustable means limiting the depth to which the plow may enter the ground, means for applying the power of the device to raise the plows out of the ground and the plow beams to engagement by the supports, and automatic means for releasing the plows and beams from actuation by the lifting means.



2. In a power operated plow, a self-propelled power apparatus provided with a main frame, a secondary framework carried above the main frame and provided with a platform, a series of plows provided with beams having notched forward and rear ends, a series of forward and rear spring controlled latch members each adapted to engage a notched end of the plow beam, a lever through operation of which the forward latch members may be simultaneously disengaged to drop the forward end of the plow beams whereby the plows may enter the ground point first, a draw beam pivotally attached to each plow beam by means of which it may be drawn through the ground, adjustable means for limiting the exent to which the plows may enter the ground, means for applying the power of the device to simultaneously raise the plows out of the ground and the plow beams to engagement by the supporting latch members, automatic means for releasing the plows from actuation by the lifting means, and manual means for raising the plows singly.

3. In a power operated plow, a self-propelled power apparatus provided with a main frame, a secondary framework carried above the main frame provided with a platform, a series of plows provide with beams having notched forward and rear ends, a series of forward and rear spring controlled latch members each adapted to automatically engage a notched end of the plow beam a lever through operation of which the said forward latch members may be simultaneously disengaged to drop the front ends of the plow beams whereby the plows may enter the ground point first, a draw beam pivotally attached to each plow beam by means of which it may be drawn through the ground by forward movement of the device, adjustable means for limiting the extent to which the plows may enter the ground, means for applying the power of the apparatus to the raising means, and means individual to each plow beam for guiding the beam while the plow is being lowered into or raised out of the ground, said means being adapted to hold the plows from sidewise movement, automatic means for disengaging the power device from the raising means, said automatic means including an adjustable device whereby the power is not disengaged until the plow beams have been engaged by the supporting latch members.

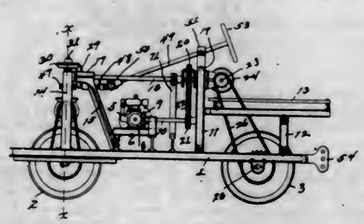
4. In a power operated plow, a self-propelled power apparatus provided with a main frame, a secondary framework carried above the main frame at the rear thereof and provided with a platform, a series of plows carried in the secondary framework provided with beams having notched forward and rear ends, means for raising the plows, a series of forward and rear spring controlled latch members each adapted to automatically engage the notched ends of the plow beams, a lever through operation of which the forward latch members may be simultaneously disengaged from the plow beams, and a series of levers each individual to a forward latch member through operation of which a single latch member may be disengaged from the forward end of the corresponding plow beam, the operation of releasing the plow beams at the forward end allowing the plows to enter the ground point first.

5. In a power operated plow, a main frame, a single forward steering wheel and a pair of rear wheels supporting said frame, a power plant adapted to drive the said wheels, a secondary frame supported on the main frame above the rear wheels, a platform carried by said secondary frame, a series of plows provided with beams, a series of forward and rear releasable supports for said plow beams carried at the front and rear respectively of said secondary frame for holding the plows in inoperative position, means for releasing the plows from said supports to operative position, adjustable means for limiting the extent to which the plows may enter the ground, and means for raising the plows from the ground to engagement by the supports, said means comprising a pair of lifting beams positioned below the said plow beams near the front and rear ends thereof respectively, a cable attached to each end of each lifting beam, differential, segmental pulleys loose on the shaft of the rear wheels at each side of the device and so secured together as to operate in unison, the cables attached to the ends of the forward lifting beam being attached to and adapted to ride in the groove of the pulleys of lesser radius, and the cables attached to the ends of the rear lifting beam being attached to and adapted to ride in the groove of the pulleys of greater radius, the cables attached to the pulleys of greater radius being loose when out of operation and the cables attached to the pulleys of lesser radius being taut, and means for clutching the said pulleys to the driving wheels to raise the said beams attached to the cables and the plows and plow beams carried thereby, the taut cables attached to the pulleys of lesser radius enabling the front ends of the plow beams to be raised prior to the rear ends thereof, the pulleys of greater radius operating subsequent to the pulleys of shorter radius and adapted to raise the rear ends of the plow beams more rapidly than the front ends so that the said beams lie in a horizontal plane when raised to engagement by the supports, and automatic means for releasing the segmental pulleys from the driving wheels when the plow beams have been engaged by the supports.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,340. TRACTOR. HOWARD M. SWEET, Detroit, Mich., assignor, by mesne assignments, to A. T. Harrow Tractor Company, a Corporation of Michigan. Filed Nov. 5, 1914. Serial No. 870,362. (Cl. 21—114.)



1. A tractor comprising a frame work, front and rear driving units therefor, a power plant, a shaft extending longitudinally of the frame work formed of two parts in axial alinement, a differential gear group interposed between adjacent ends of the shaft, a jack shaft at the rear of the machine, a differential gear group in the jack shaft driven by one part of the driving shaft, the rear driving unit being operated by the jack shaft and the front driving unit being operatively connected with the other part of the driving shaft.

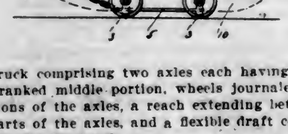
2. A tractor comprising a frame work, a single forward and a pair of rearwardly positioned supporting wheels, a power plant carried by the frame work, a driving shaft of two parts in axial alinement extending longitudinally of the frame work, the front part being operatively connected with the forward driving unit and the rear part connected with mechanism adapted to differentially drive the two rear driving wheels, a differential gearing interposed between the two parts of the driving shaft, means connecting the power plant with the last named differential gearing, and means for turning the single forward wheel about its vertical axis.

3. A tractor comprising a frame work, a single forward and a pair of rearwardly positioned supporting wheels therefor, a shaft extending longitudinally of the frame work formed of two parts in axial alinement the front part being operatively connected with the forward driving wheel, means including a jack shaft for differentially driving the two rear wheels, said means being in geared relation with the rear part of the driving shaft, a differential gear group interposed between the two parts of the drive shaft, a power plant connected with said differential group, said forward wheel being arranged to be turned about a vertical axis, and means for turning said front wheel.

4. A tractor comprising a frame work, a single forward and a pair of rearwardly positioned supporting wheels therefor, vertically positioned frame members extending upwardly at the front and rear of said frame work, a drive shaft extending longitudinally of the frame work supported by the vertically positioned frame members, said driving shaft being formed of two parts in axial alinement, a jack shaft supported by said rear vertical frame member, a differential gear group interposed in said jack shaft, said gear group being operatively connected with the rear part of the driving shaft, a differential gear group interposed between adjacent ends of the drive shaft, a power plant operatively connected with said last named differential gear group, the forward part of the drive shaft being operatively connected with the forward supporting wheel, said forward supporting wheel being arranged to be turned about a vertical axis, and means operable at will for turning said wheel.

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1,230,341. TRUCK. OBED R. THOMAS, Rossie, Iowa. Filed Mar. 8, 1917. Serial No. 153,361. (Cl. 21—65.)



1. A truck comprising two axles each having a downwardly cranked middle portion, wheels journaled on the end portions of the axles, a reach extending between the middle parts of the axles, and a flexible draft connection attached to the front axle.

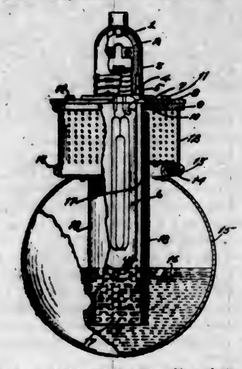
2. A truck comprising two axles each having a rectangular downwardly cranked middle portion adapted to receive the runners of a sleigh, wheels journaled on the end portions of the axles, a reach extending between the middle parts of the axles, and a flexible draft connection attached to the front axle and provided with a fastening device for coupling it to the front end portion of the sleigh.

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1,230,342. ELECTRIC DISINFECTOR AND DEODORIZER. ROYDEN THORNBERG, San Francisco, Cal. Filed Feb. 19, 1917. Serial No. 149,393. (Cl. 219—38.)

1. A device for the described purpose comprising an electric lamp; a socket therefor; a receptacle surrounding said lamp and removably associated with said socket, said receptacle being adapted to contain volatile material; a perforated tube surrounding said lamp within said receptacle; and a wick carried by said tube and adapted to conduct said volatile material into proximity with said lamp.

4. A device for the described purpose comprising a receptacle adapted to contain volatile material; a perforated tube within said receptacle; a wick carried by said tube,

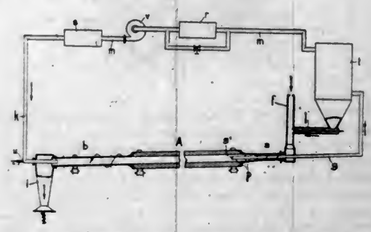


the lower end of said wick extending into said volatile material; and an electric heating element positioned within said tube.

[Claims 2, 3, and 5 not printed in the Gazette.]

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1,230,343. APPARATUS FOR THE MANUFACTURE OF CRUDE CALCIUM CYANAMID. NOBILE CARLO TOMMASI, Basel, Switzerland, assignor to the Firm of Elektrizitätswerk Bonza, Gampel and Basel, Switzerland. Filed Jan. 5, 1917. Serial No. 140,796. (Cl. 23—13.)

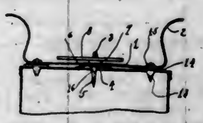


1. In an apparatus for the manufacture of crude calcium cyanamid, a rotary furnace of reaction, having a calcium carbid feed device and a calcium cyanamid discharge device, and a nitrogen circulating system between the ends of the furnace, including heating and cooling devices outside the furnace as well as nitrogen displacing means to keep the nitrogen in constant, controlled circulation through said heating and cooling devices outside the furnace for temperature regulating purposes, substantially as described.

[Claims 2 and 3 not printed in the Gazette.]

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1,230,344. SANITARY CAN-PERFORATOR. DANIEL E. TWEEDDALE, Manteca, Cal., assignor of one-half to Leslie W. Sanford, Manteca, Cal. Filed July 24, 1916. Serial No. 110,869. (Cl. 220—67.)



1. A can perforator comprising a bow-shaped spring member having upturned ends, such spring member having a cutter turnably mounted in the center thereof, and adjustable cone-shaped cutters on either side of such central cutter.

2. A can perforator comprising a support, a cutter turnably mounted centrally on the support, means for fixing the cutter in the head of the can, and a perforating member carried by the support on either side of the cutter.

3. A can perforator comprising a support, a cutter turnably mounted centrally on the support, the upper ends of the cutter being beveled whereby the cutter may be turned into frictional engagement with the underside of the head of the can after the cutter has been projected therethrough, and a perforating member carried by the support on either side of the cutter.

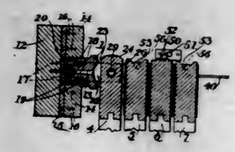
4. A can perforator comprising a support, a cutter turnably mounted centrally on the support and arranged for frictional engagement with the underside of the top of the can when the cutter has been projected therethrough, a packing disk interposed between the cutter and the support, and a perforating member carried by the support on either side of the cutter.

5. A can perforator comprising a support, a cutter mounted centrally on the support, the support being provided with elongated slots on either side of the cutter, a packing disk mounted between the cutter and the support, a perforating member adjustably mounted in each slot, and a packing disk interposed between each perforating member and the support.

[Claim 6 not printed in the Gazette.]

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1,230,345. FOLDING PARTITION. GEORGE W. URMSON, Jersey City, N. J., assignor to Grace M. Alberts, Jersey City, N. J. Filed Nov. 24, 1915. Serial No. 63,194. (Cl. 20—20.)



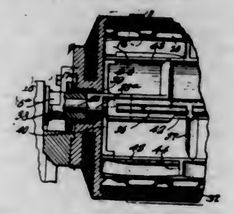
1. The combination with a folding partition comprising sections hinged together in separate pairs, of means for guiding the free ends of said sections along the line into which the partition is designed to be extended, a catch projecting from the edge of one section of each pair and arranged within the planes of the sides of said section, there being cavities in the edges of the adjacent sections for housing said catches when the sections are extended, and fixed pins so positioned as to be engaged by said catches when the sections are folded for preventing them from being moved along the line of extension until they are unfolded.

2. The combination with a folding partition comprising sections hinged together in separate pairs, of means for guiding the free ends of said sections along the line into which the partition is designed to be extended, a catch projecting from the edge of one section of each pair and arranged within the planes of the sides of said section, a stop plate on the face of the other section of each pair to be engaged by the catch on the next pair of sections after the first pair of sections has been folded and the second pair is moved up to it, and fixed pins so positioned as to be engaged by said catches when the sections are folded for preventing said sections from being moved along the line of extension until they are unfolded.

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1,230,346. ICE-CREAM FREEZER. THEODORE L. VALERIUS and OLAF LARSEN, Fort Atkinson, Wis., assignors to Creamery Package Manufacturing Company, a Corporation of Illinois. Filed Jan. 13, 1913. Serial No. 741,626. (Cl. 259—9.)

1. An ice cream freezer comprising a base, a freezing cylinder mounted thereon, agitating means in said cylinder comprising two sections arranged for independent rotation, a clutch collar passing axially through one of the heads of the cylinder, said collar having clutch faces on both ends thereof, one of said agitator sections being arranged to engage the inner clutch face of the collar, a shaft rotatably mounted in the collar and permanently attached at its inner end to the other agitator section, a gear jack comprising a support removably mounted on said base and having a plurality of bearings coaxial with said cylinder, two gears independently supported in said bearings, and means for driving said gears, one of the gears having a clutch connection with the outer end of said collar, the other gear being non-rotatably associated with said shaft, the latter passing through both gear wheels, and the gear jack as a unit being withdrawable from said base and from the shaft.



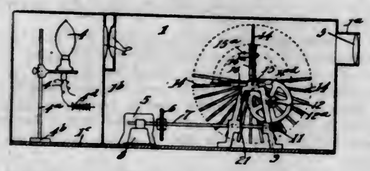
3. An ice-cream freezer comprising a freezing cylinder, a gear jack comprising three alined bearings, two wheels each having two sleeves rotatably mounted in two of said bearings, and means for rotating said wheels in opposite directions, a shaft extending through said sleeves and connected to a sleeve of one of said wheels, agitating means in the cylinder connected to said shaft, and agitating means in the cylinder arranged to be driven by a sleeve of the other wheel.

7. An ice cream freezer having, in combination, a cylinder, a rear head secured to the cylinder, a stuffing-box bearing in said rear head, a front head detachably secured to the cylinder, a tubular driving element rotatably supported in said stuffing-box bearing, an agitator within the cylinder and rotatably supported at its front end by the front head, said agitator comprising a section having a detachable clutch engagement with the inner end of said driving element, and another section having a shaft rotatably and withdrawably supported in said driving element, and means for rotating said driving element, said shaft being detachably connected at a point outside the cylinder to said rotating means.

[Claims 2 and 4 to 6 not printed in the Gazette.]

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1,230,347. APPARATUS FOR AUTOMATICALLY CONTROLLING STEREOPTICONS. ISAAC A. VANCIL and WALTER F. FULKERSON, San Diego, Cal. Filed Feb. 27, 1917. Serial No. 151,193. (Cl. 88—27.)



1. In an apparatus of the class described, the combination of a plurality of slide holders revolubly mounted relatively to each other, means for simultaneously moving one of said holders to a vertical position and another to an approximate horizontal position, and means for illuminating the slide in the holder which is in vertical position.

6. In an apparatus of the class described, the combination of a plurality of slide holders revolubly mounted relatively to each other on a horizontal axis, a bell crank lever pivotally mounted on the same axis to one side of said slide holders, a finger pivotally mounted in each extended end of said lever adapted to be moved to engagement with said slide holders, means for moving said fingers into and out of engaging position, revoluble means for engaging said means, a slot in said lever for simultaneously revolving said lever and turning said fingers into engaging positions, means for disengaging said fingers, means for revolving said lever in the reverse direction simultaneously, means for stopping said lever in its reverse revolution in its proper position whereby said slide holders are intermittently held in a vertical position a predetermined length of time, and means for illuminating the slide in said vertical positioned slide holder.

[Claims 2 to 5, 7, and 8 not printed in the Gazette.]



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1,230,348. ADVERTISING APPARATUS. SYDNEY WADMAN, Boston, Mass., assignor to The Animated Advertising Company, a Corporation of Massachusetts. Filed Feb. 13, 1914. Serial No. 818,553. (Cl. 40—132.)




1. An advertising apparatus, comprising a display screen bearing a pictorial representation, a screen behind said display screen and bearing one or more pictorial representations, means for illuminating the pictorial representation on the display screen from behind, means for illuminating from behind one or more picture bearing portions of the rear screen at desired intervals, and means for hiding the same from view until illuminated, one or more of the pictorial representations on the rear screen being so positioned that upon illumination each appears as an addition to the pictorial representation on the display screen.

2. An advertising apparatus comprising a display screen bearing a pictorial representation, behind the display screen a rear screen bearing a pictorial representation, means for illuminating from behind the pictorial representation on the display screen, means for hiding from view the pictorial representation on the rear screen except when the same is illuminated from behind, and means for illuminating at desired intervals selected portions of the pictorial representation on the rear screen.

3. An advertising apparatus comprising a display screen bearing a pictorial representation, a rear screen bearing a pictorial representation, a portion of which is a substantial duplicate of the pictorial representation on the display screen and so positioned that the two register in outline, lights behind said portion of the rear screen for illuminating the pictorial representation on the display screen and its duplicate on the rear screen, a compartment behind another portion of the pictorial representation on the rear screen, means for illuminating the compartment at desired intervals, and between the said two screens, a screen for hiding from view the pictorial representation on the rear screen except when the same is illuminated from behind as aforesaid.

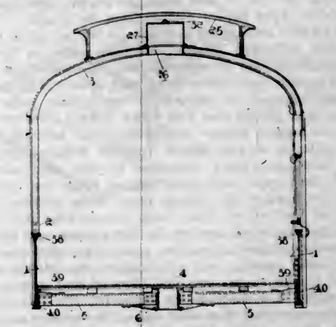
4. An advertising apparatus comprising a pictorial representation visible without illumination, means for illuminating the same from behind, a pictorial representation behind said first pictorial representation, means for illuminating the same at desired intervals, and means for hiding it from view except when illuminated, said second pictorial representation being so positioned with reference to the first pictorial representation as to appear upon illumination as an addition thereto.

5. An advertising apparatus comprising a translucent display screen of fabric bearing a pictorial representation, a rear screen of fabric bearing a pictorial representation, means fo illuminating from behind the pictorial representation on the display screen, means for illuminating from behind at predetermined intervals selected portions of the pictorial representation on the rear screen, and between the two screens a screen for hiding from view the pictorial representation on the rear screen except when the same is illuminated.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,349. METAL CAR. AARON N. WARFIELD, London, Ontario, Canada. Filed May 1, 1915. Serial No. 25,331. (Cl. 105—201.)

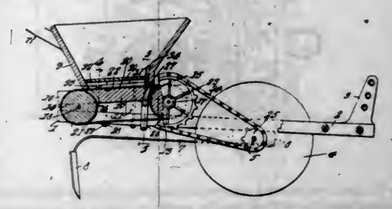


1. In a metal car, the combination with web plate side girders each having uninterrupted walls provided with a top compression member and a bottom tension member; floor beams secured to the sides of said girders; and side posts having the lower ends thereof join the top compression members of the web side girders at points intermediate the floor and roof of the car.

2. In a metal car, the combination with central longitudinal box girders forming the backbone of a floor construction; web plate side girders having uninterrupted walls throughout the area thereof and each provided with a top compression member and a bottom tension member; floor beams connecting the sides of the box girder with the sides of the side girders adjacent the bottom tension member; plate girders extending transversely of the side plate girders toward the box girders; and side posts having the lower ends thereof joined the top ecompression members of the web side girders at points intermediate the floor and roof of a car.

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1,230,350. PEANUT-PLANTER. FERNIE A. WATERS, Graceville, Fla. Filed June 24, 1916. Serial No. 105,715. (Cl. 221—128.)



1. A planter embodying a frame, a ground wheel therefor, a hopper having a bottom plate mounted upon the frame, a pair of pulley wheels, an endless belt trained around said pulley wheels and having apertures, an operative connection between one pulley wheel and the ground

wheel, the bottom plate having an upper longitudinal groove in which the upper run of the belt is movable, said bottom plate having an opening over which the apertures of the belt move in succession, a spout secured to and depending from the bottom plate and extending from said opening thereof, and means within the lower portion of the hopper above the belt for restricting the flow of seed onto the belt.

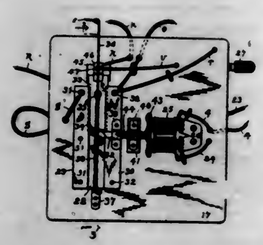
2. A planter embodying a hopper, a bottom plate therefor having an upper longitudinal groove, a belt movable in said groove and having apertures, said bottom plate having an opening adjacent one end of the hopper from which the seed drop from said apertures, a brush carried by the hopper and having downwardly projecting bristles contacting with the belt adjacent said opening, and a plate supported above the bottom plate and belt to restrict the flow of seed from the hopper onto the belt at that end of the hopper remote from the brush.

3. A planter embodying a hopper, a bottom plate therefor having an upper longitudinal groove and an opening extending from said groove adjacent one end of the hopper, an endless belt movable in said groove and having apertures adapted to register in succession with said opening, said groove and belt being located adjacent one side of the hopper, a plate within the lower portion of the hopper adjacent to and spaced from the bottom plate, the second mentioned plate extending to said side and the ends of the hopper and being spaced from the opposite side of the hopper, the bottom plate being inclined, said opening of the bottom plate being located near the upper end thereof, a brush carried by the hopper and having downwardly projecting bristles contacting with the belt adjacent said opening, and cleats upon the bottom plate adjacent to and at the opposite sides of said groove, the second mentioned plate being supported by said cleats, the cleats extending from said end of the hopper and terminating short of the other end to provide an opening between the plates adjacent the last mentioned end of the hopper, the bottom plate having a trough extending past the last mentioned opening in the belt to facilitate the flow of seed onto the belt.

4. A planter embodying a hopper having a bottom plate, a belt movable over said plate and having apertures, a brush carried by the hopper at one wall thereof having downwardly projecting bristles contacting with the belt where it passes out of the hopper, and means within the lower portion of the hopper above the belt for restricting the flow of seed onto the belt at a point remote from the brush.

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1,230,351. SAFETY DEVICE FOR MOTION-PICTURE MACHINES. HARRY E. WATSON, Richmond, Ind., assignor of one-half to Frank B. Thompson, Richmond, Ind. Filed Nov. 6, 1916. Serial No. 129,666. (Cl. 88—17.)



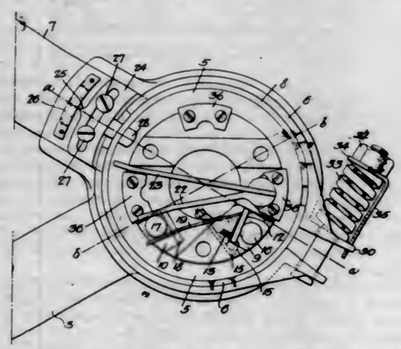
1. In an electrically operated motion picture machine, the combination with a main power circuit, of a circuit breaker normally closing said main circuit, a normally open secondary circuit connected with said circuit breaker and said main circuit, and automatic means for closing said secondary circuit whereby to actuate said circuit breaker for the opening of said main circuit, said automatic means comprising a metal film roller forming one terminal of said secondary circuit, and a movable contact member forming the other terminal of said secondary circuit and normally held out of contact with said metal film roller by the film in its passage over the roller.

3. In combination with an electrically operated motion picture machine having a film operated thereby and means for projecting a light upon the film, a mechanism of the nature set forth incorporated in the electric circuit extending from the source of power to said machine and comprising an electro-magnet, a latch adapted to be operated by the magnet, a plunger held in the electric circuit by said latch, a secondary circuit for magnetizing the magnet, terminal contacts for the secondary circuit located at both sides of the light path of the machine, the same being in contact with the film and pressing the film against the metal rollers over which the film operates, and means whereby when the film is broken or damaged one of said terminals will contact with one of said metal rollers to complete the secondary circuit and energize the magnet thereby causing the latch to release the plunger and allowing the plunger to drop out of the main circuit and thereby cut off the power which operates the machine, all substantially as shown and described.

[Claims 2 and 4 not printed in the Gazette.]

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1,230,352. SHOCK-ABSORBER. JOHN W. WATSON, Wayne, Pa. Filed June 11, 1914. Serial No. 844,538. (Cl. 21—105.)



1. The combination of a shock absorber of two relatively rotatable members for attachment to the parts whose motion is to be retarded; a device for opposing the rotation of said members; and an independent element operative to delay the action of said device until one of the members has moved to within a predetermined distance of the other.

2. The combination in a shock absorber of two relatively movable members for attachment to the parts whose motion is to be retarded; a device for interposing a frictional resistance to the movement of said members either toward or from each other; and an independent element operative to delay the action of said device when the members move together until one of the parts is within a predetermined distance of the other.

3. The combination in a shock absorber of two relatively rotatable members for attachment to the parts whose motion is to be retarded; a device for opposing the relative rotation of one of said members in one direction; and an independent element operative to delay the action of said device when said rotation occurs in the opposite direction until one of said members has moved to within a predetermined distance of the other.

4. The combination in a shock absorber of two relatively movable members for attachment to the parts whose motion is to be retarded; means for opposing movement of said members in either direction; two independent devices for causing operation of said means when the members move toward or from each other respectively; and an independent element operative to delay the action of one of said devices until one of the members has moved freely to within a predetermined distance of the other.

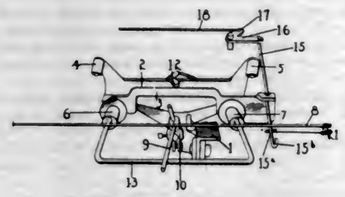
5. The combination in a shock absorber of two relatively movable members for attachment to the parts whose motion is to be retarded; means for opposing a frictional resistance to the movement of said members in either direction; two independent devices for respectively causing operation of said means; and independent elements for delaying the action of said devices until one of the parts has moved to within a predetermined distance of the other.

[Claims 6 to 22 not printed in the Gazette.]



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1,230,353. CHECK-ROW DEVICE FOR CORN-PLANTERS. WILLIAM M. WEBB, Springfield, Ohio. Filed Oct. 11, 1915. Serial No. 55,249. (Cl. 111—47.)



1. In a corn planter, wire guiding and discharging devices including a pivoted operating lever, means for supporting the same in a substantially horizontal position when said devices are in discharging position, manually operated mechanism for returning said devices to operative position together with means for engaging and returning the wire to proper position in said devices.

2. In a corn planter, a laterally movable operating lever, laterally movable guide rolls, a support for said lever associated with said rolls, wire engaging means to place the check row wire on said rolls, and manually operated devices for swinging said rolls and lever to operative position and for holding the wire within the forks of the lever.

3. In a corn planter, separable guides for a wire and a pivoted operating lever associated therewith, means for supporting said lever in a substantially horizontal position in the separated position of said guides, and manually operated mechanism for returning said guides and lever to operative position, said mechanism including wire engaging means arranged to place the wire in proper position in said guides and lever upon the return of the same to operative position.

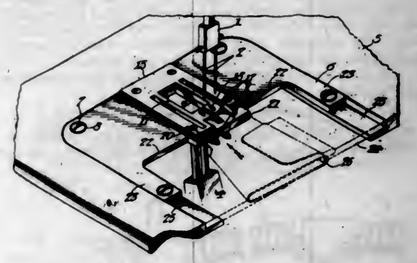
4. In a corn planter, a pivoted laterally swinging operating lever, a pair of guides on each side of said lever, one guide of each pair being pivotally supported so as to be capable of separating from its corresponding guide for the purpose of discharging the wire, a support connected with said separable guides for supporting said lever in the separated position of said guides, means for holding said guides and lever in a substantially horizontal position in the separated condition of the same, and mechanism under the control of the operator for returning the parts to operative position, said mechanism including means for engaging the wire and placing the same in proper position in said guides and lever.

5. In a corn planter, a stationary bracket, a laterally movable bracket pivoted to said stationary bracket, two pairs of guide rollers on the respective brackets, a pivoted operating lever between said pairs of guide rolls, a support for said lever connected with said movable bracket, a stop for said movable bracket to hold the guide rolls thereon and said lever in a substantially horizontal position when separated from said main bracket, and manually operated mechanism for returning said parts to operative position including wire engaging means for guiding the wire into proper position in said lever and guide rolls.

[Claims 6 to 8 not printed in the Gazette.]

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1,230,354. RENEWABLE THROAT-PLATE FOR SEWING-MACHINES. ALBERT H. WEIS, Nyack, N. Y., assignor to Lucius N. Littauer, Gloversville, N. Y. Filed July 21, 1915. Serial No. 41,024. (Cl. 112—29.)



1. A throat plate comprising a bottom plate and a renewable one-piece top plate of less size than said bottom plate and resting throughout its area on the top of said bottom plate, said bottom and top plates having one or more registering needle openings and each of said plates having integral bars forming, when juxtaposed, registering feed slots.

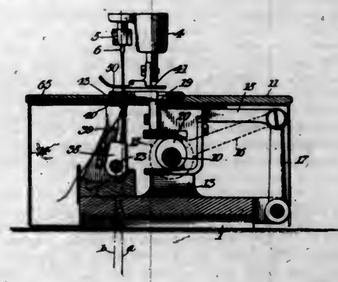
10. A throat plate having a needle opening provided with a groove extending therefrom and only partially through the plate and forming adjacent to its underside a looper thread strand retainer.

24. A throat plate having a needle opening and a groove extending partway only through the plate and communicating with said needle opening and forming a looper thread strand retainer.

[Claims 2 to 9, 11 to 23, and 25 not printed in the Gazette.]

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1,230,355. LOOPER MECHANISM FOR SEWING-MACHINES. JOHN P. WEIS and ALBERT H. WEIS, Nyack, N. Y., assignors to Lucius N. Littauer, Gloversville, N. Y. Filed Aug. 28, 1915. Serial No. 47,743. (Cl. 112—5.)



1. The combination of feeding mechanism, a needle, a throat plate having a groove and thread retaining means carried by a wall of said groove for retaining the looper thread so as to permit the needle to pass between the looper thread and the body of the looper, a looper constructed and positioned to coöperate with said retaining means, means for moving said looper into the needle loop

in a line substantially parallel with the line of feed and for withdrawing the looper from the needle loop, and means for giving the said looper a lateral movement.

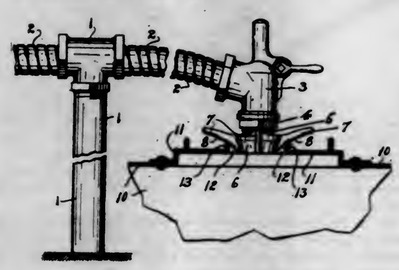
12. In a sewing machine the combination of a throat plate having a needle slot, a needle, a looper, means for operating said needle and looper, and looper thread retaining means forming a continuation of the needle slot for engaging the looper thread and positioning the same for the entrance of the needle between said thread and bottom of the looper, said looper constructed and positioned to coöperate with said looper thread retaining means.

25. In a sewing machine having a throat plate provided with a needle opening, the combination of a needle, a looper thread retaining means located in the throat plate to one side of the needle slot and comprising a slot opening into the needle slot, a looper constructed and positioned to coöperate with said thread retaining means, and means for operating the needle and looper.

[Claims 2 to 11, 13 to 24, and 26 to 29 not printed in the Gazette.]

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1,230,356. LIQUID-DELIVERING DEVICE. ABRAM W. WHEATON, Newark, N. J. Filed Jan. 19, 1917. Serial No. 143,290. (Cl. 137—4.)



1. The combination with a movable delivery pipe of a faucet-valve connected with the free end of said pipe, and means connected with the outlet end of said faucet-valve for engaging the marginal edges of a filling opening with which said faucet-valve may be registered, to support said faucet-valve in operative relation to said filling opening, comprising horizontally radiating supporting arms extending outwardly from the outlet end of said faucet-valve, the under side of said supporting-arms being inclined upwardly and outwardly from the point of juncture with said faucet-valve, and adapted to centralize the latter in said filling opening and accommodate the same to filling openings of various sizes.

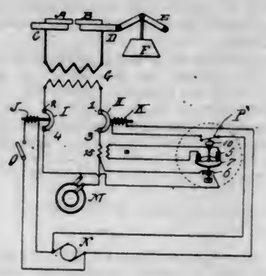
2. The combination with a movable delivery pipe of a faucet-valve connected with the free end of said pipe, an exteriorly threaded extension connected with the outlet end of said faucet-valve, a supporting frame capable of conducting electricity comprising an interiorly threaded annular main body adapted to screw on said threaded extension, and horizontally radiating supporting arms extending outwardly from said main body, the under side of said supporting arms being inclined upwardly and outwardly from the point of juncture thereof with the main body.

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1,230,357. DEVICE FOR CONTROLLING ENERGY DELIVERED TO WELDING-ELECTRODES. HARRY R. WOODROW, New York, N. Y., assignor to Thomas E. Murray, New York, N. Y. Filed Nov. 17, 1915. Serial No. 61,864. (Cl. 219—4.)

1. In combination with welding electrodes and a source of energy communicating therewith, means automatically operating to disconnect said source when a predetermined amount of energy has passed to said electrodes.

2. In combination with welding electrodes and a source of energy communicating therewith, means automatically operating to disconnect said source when a predetermined amount of energy has passed to said electrodes, and to measure said amount.



3. In combination with welding electrodes a source of welding current, and a watt-meter relay in circuit with said source and controlling said circuit.

4. In combination with welding electrodes, a source of welding current, a watt-meter relay in circuit with said source, and means controlled by said relay for opening said circuit when a predetermined amount of energy has passed to said electrodes.

5. In combination with welding electrodes, a source of welding current, a watt-meter relay in circuit with said source, a switch in said circuit, and a switch controlled by said relay and operating to open said first-named switch when a predetermined amount of energy has passed to said electrodes.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,358. PROCESS OF TREATING LEATHER FOR GLOVES. ALBERT AARON and GEORGE M. JONES, Gloversville, N. Y., assignors to Edwin L. Meyers, Wallace E. Meyers, and David F. Meyers, a Copartners constituting Louis Meyers & Son, New York, N. Y. Filed Aug. 30, 1916. Serial No. 117,632. (Cl. 149—7.)

1. The improvement in the art of treating tanned leather for gloves which comprises, first, tanning the leather, then removing the grain from the outer side of the leather and the face from the inner side of the skin in the absence of moisture and in then applying a suitable coloring solution to the leather.

2. The improvement in the art of treating tanned leather for gloves which comprises, first, tanning the leather, then applying a rotating dry abrasive wheel to the two faces of the leather whereby the grain is removed and the flesh side is smoothed and in then immersing the leather in a suitable coloring solution.

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1,230,359. AUTOMOBILE-DOOR. CHARLES C. ADELSPERGER, Union City, Ind., assignor to Union City Body Company, Union City, Ind., a Corporation of Indiana. Filed Feb. 6, 1914. Serial No. 816,896. (Cl. 21—125.)



1. A door comprising a main wooden frame, plates attached to one face of said main frame and provided with edges projecting beyond the main frame, and a face plate overlying said plates and their fastening means and attached to the said projecting edges by a returned overlap of the edge of the face plate embracing the projections of the first mentioned plates.

2. A door comprising a main wooden frame, plates attached to one face of said main frame and provided with edges projecting beyond the main frame, and a face plate overlying said plates and their fastening means and attached to the said projecting edges.

6. In a vehicle door, a frame, a metallic strip secured to the side of said frame by fastening devices and projecting in substantially straight lines beyond the edge of the same, a metal panel also arranged at the side of said frame to completely cover the same with a portion thereof overlapping said strip and covering said fastening devices, and means for securing said strip and panel together.

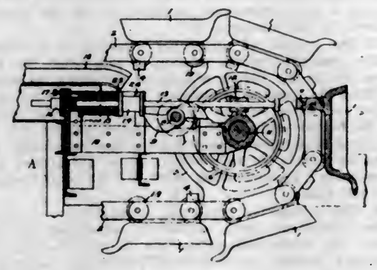
7. In a vehicle door, a door frame, metallic strips secured to one side of said frame by fastening devices and projecting in substantially straight lines beyond a plurality of the edges thereof, a metal panel arranged at the side of said frame so as to cover the same and also having a plurality of its edges overlapping said strips and covering said fastening devices, and means for securing said panel and strips together.

8. Means for securing sheathing to a frame embodying, in combination, a flat metal strip, means for securing said strip upon one face of the frame with one edge of the strip protruding beyond the edge of the frame, and a sheet of metal sheathing laid upon the same face of said frame to which the strip is attached, said sheathing being of greater area than the area of the frame, so that a portion of the sheathing extends beyond the edge of the frame and the free edge of the strip, the extended portion of said sheathing being bent over to embrace the projecting portion of the strip for the purpose of securing the sheathing to the frame, whereby both the sheathing and the devices for securing it into position are wholly at one and the same side of the frame, with the securing devices entirely concealed.

[Claims 3 to 5 not printed in the Gazette.]

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1,230,360. CASTING-MACHINE. HENRY ALINDER, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Feb. 28, 1916. Serial No. 81,542. (Cl. 22—94.)



1. In combination, a mold having a casting discharge opening, means for feeding molten material into said mold, and means for delivering a blow against said mold, said blow-delivering means being located remote from said discharge opening.

3. In combination, a mold having a discharge opening, means for feeding molten material into said mold, and means for delivering a blow against said mold on the side thereof opposite said discharge opening.

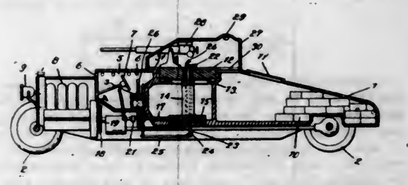
4. In combination, a mold, means for feeding molten material into said mold, mechanism for tilting said mold, and means for delivering a blow against said mold substantially above the mid portion thereof when in tilted position, whereby an upper portion of said material is freed to swing by gravity away from said mold when the same is further tilted.

6. In combination, a mold, means for feeding molten material into said mold, a sprocket for changing the angular position of said mold, bearings for said sprocket, and means for delivering a blow against said mold in a direction away from said sprocket bearings.

[Claims 2, 5, and 7 not printed in the Gazette.]

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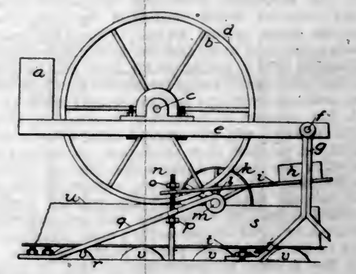
1,230,361. AUTOMOBILE. JOHN H. ALLEN, New York, N. Y., assignor to Armored Motor Car Corporation, New York, N. Y., a Corporation of New York. Filed Sept. 23, 1914. Serial No. 863,155. (Cl. 89—40.)



The combination with a wheeled vehicle, of a gun turret mounted thereon and an engine, means for driving said vehicle from said engine, a gear fixed with respect to said turret below the same adjacent the floor of the vehicle, a worm in mesh with said gear and means for releasably connecting said worm with the engine for driving the same.

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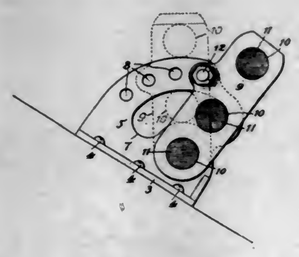
1,230,362. MACHINE FOR PRODUCING ORNAMENTED BRICK. NEAL ALLEN, Pittsburg, Kans. Filed Jan. 23, 1917. Serial No. 143,993. (Cl. 25—1.)



1. In a machine for producing eccentric irregular figures upon the smooth face of a column of plastic clay as it moves forward from the dies of a brick-making machine, a round rod of proper dimensions, mounted in bearings supported by a suitable frame attached to column table, means for rotating said rod reversely to the direction of the continuously moving column of plastic clay, said rod arranged to contact with and across a face of said clay column, means for regulating the pressure of said rod against said face, means for smoothing said disturbed face to orignal outline, as specified and described.

2. In a machine for ornamenting a face of a continuously moving column of plastic clay as described, by matting and breaking up said face, a rotating rod, arranged to contact with and across the smooth face of the said continuously forward moving column, said rod being rotated reversely to the direction of the said moving column, means for regulating the pressure of said rod against said moving column, means for smoothing the lacerated and roughened surface, means for imparting a textile or cordage-like effect to the raised portions of the relief-like sections of the ornmented face, as specified and set forth.

1,230,363. SNOW-GUARD. WILLIAM J. BAIRD, Paterson, N. J. Filed Feb. 15, 1916. Serial No. 78,481. (Cl. 108—27.)



A snow-guard comprising the combination of a base, a bracket fixed to and extending upwardly from the base and having a hole in its lower portion and an arcuate slot concentric to said hole and a series of holes outside of said slot arranged in arcuate disposition concentric to said lower hole, a standard having a lower hole arranged to register with said lower hole of said bracket and to receive a rod disposed therein and having other rod-receiving holes one of which registers with said arcuate slot, there being in said standard a bolt-hole arranged to register with any of said arcuately-disposed holes of said bracket, and a bolt disposed in said bolt-hole and in one of said last-mentioned holes.

1,230,364. PROCESS OF PREPARING OR TREATING COCOANUT AND PRODUCT OBTAINED THEREBY. FRANKLIN BAKER, Jr., Philadelphia, Pa. Filed May 11, 1916. Serial No. 96,920. (Cl. 99—8.)

1. The process of preserving cocoanut in a natural moist condition, which consists in separating the milk from the kernel, cutting, grating, or shredding the kernel, packing the same in receptacles, hermetically sealing the receptacles with a portion of the milk, and then subjecting the hermetically sealed receptacles to a high temperature sufficient to kill the bacteria present in the cocoanut.

2. The process of preserving cocoanut in a natural moist condition with the original milk, which consists in separating the milk from the kernel, cutting, grating, or shredding the kernel, packing the same in receptacles, heating the milk, introducing a portion of the heated milk into the receptacles with the prepared kernel, hermetically sealing the receptacles, and then subjecting the hermetically sealed receptacles to a high temperature sufficient to kill the bacteria present in the cocoanut.

3. The process of preserving cocoanut in a natural moist condition with the original milk, which consists in separating the milk from the kernel, cutting, grating or shredding the kernel, packing the same in receptacles, heating the milk, introducing a portion of the heated milk into the receptacles with the prepared kernel, hermetically sealing the receptacles in which the cocoanut kernel and milk is placed, and then subjecting the hermetically sealed receptacles to a temperature approximating 220° F., for approximately one-half hour.

4. The process of preserving cocoanut in a natural moist condition with the original milk, which consists in separating the milk from the kernel, cutting, grating or shredding the kernel, packing the shredded cocoanut in receptacles, heating the milk of the cocoanut to a temperature of approximately 212° F., introducing a portion of the heated milk into the shredded mass of the kernel, hermetically sealing the receptacles in which the shredded cocoanut and milk are placed, and then subjecting the hermetically sealed receptacles to a high temperature sufficient to kill the bacteria present in the cocoanut and the milk thereof.

5. The process of preserving cocoanut in a natural moist condition with the original milk, which consists in separating the milk from the kernel, cutting, grating or shredding the kernel, packing the shredded cocoanut in cans, heating the milk of the cocoanut to a temperature approximating 212° F., introducing a portion of the heated cocoanut milk into the shredded mass of the kernel, hermetically sealing the cans in which the shredded cocoanut and milk are placed, then subjecting the hermetically sealed cans to a high temperature approximating 220° F. for a period of time approximating one-half hour, and finally cooling the contents of the filled cans.

[Claims 6 to 9 not printed in the Gazette.]

1,230,365. PROCESS OF PREPARING OR TREATING COCOANUT. FRANKLIN BAKER, Jr., Philadelphia, Pa. Filed June 17, 1916. Serial No. 104,210. (Cl. 99—8.)

1. The process of preserving cocoanut in a natural moist condition, which consists in cutting, grating, or shredding the kernel, packing the same in suitable receptacles, subjecting the open receptacles to steam under pressure and at a temperature approximating 220° F., to destroy bacteria present in the cocoanut, hermetically sealing said receptacles, and then subjecting said sealed receptacles for a short period of time to a sterilizing temperature not exceeding 250° F.

2. The process of preserving cocoanut in a natural moist condition, which consists in cutting, grating or shredding the kernel, packing the same in suitable receptacles, subjecting the open receptacles to steam under pressure at a temperature not exceeding 250° F. to destroy bacteria present in the cocoanut, hermetically sealing said receptacles and maintaining them under sterilizing conditions, and then subjecting said sealed receptacles for a short period of time to a temperature not exceeding 250° F.

1,230,366. PROCESS OF PREPARING OR TREATING COCOANUT AND PRODUCT OBTAINED THEREBY. FRANKLIN BAKER, Jr., Philadelphia, Pa. Filed June 17, 1916. Serial No. 104,211. (Cl. 99—8.)

1. The process of preserving cocoanut in a natural moist condition, which consists in separating the milk from the cocoanut kernel, cutting, grating, or shredding the kernel, packing the same in receptacles, providing a solution of sugar and water, heating the same, introducing a portion of the heated sugar solution into the receptacles with the prepared cocoanut kernel, hermetically sealing said receptacles, and then subjecting the hermetically sealed receptacles to a high temperature sufficient to kill the bacteria present in the cocoanut.

2. The process of preserving cocoanut in a natural moist condition, which consists in separating the milk from the kernel, cutting, grating, or shredding the kernel, packing the same in receptacles, providing a solution of sugar and water, heating the same, introducing a portion of the heated sugar solution into the receptacles with the prepared kernel, hermetically sealing said receptacles, and then subjecting the hermetically sealed receptacles to a temperature approximating 220° F., for approximately one-half hour.

3. The process of preserving cocoanut in a natural moist condition, which consists in separating the milk from the kernel, shredding the kernel, packing the shredded cocoanut in receptacles, providing a solution of sugar and water, heating such solution to a temperature approximating 212° F., introducing a portion of the sugar solution into the shredded mass of the kernel, hermetically sealing the receptacles in which the shredded cocoanut and sugar solution are placed, and then subjecting the hermetically sealed receptacles to a high temperature sufficient to kill the bacteria present in the cocoanut and the sugar solution.

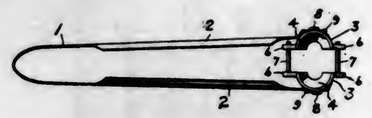
4. The process of preserving cocoanut in a natural moist condition, which consists in separating the milk from the kernel, shredding the kernel, packing the shredded cocoanut in cans, providing a solution of sugar and water, heating such solution to a temperature approximating 212° F., introducing a portion of the sugar solution into the shredded mass of the kernel, hermetically sealing the cans in which the shredded cocoanut and sugar solution are placed, then subjecting the hermetically sealed cans to a high temperature approximating 220° F., for a period of time approximating one-half hour, and finally cooling the contents of the filled cans.

5. The process of preserving cocoanut in a natural moist condition, which consists in separating the milk from the kernel, shredding the kernel, packing the shredded cocoanut in cans or other receptacles, providing a solution of sugar and water, heating such solution to a temperature approximating 212° F., introducing a portion of the heated sugar solution into the shredded mass of the kernel, hermetically sealing the receptacles in which the shredded cocoanut and sugar solution are placed, then subjecting the hermetically sealed cans to a high temperature approximating 220° F. for a period of time approximating one-half hour, increasing the temperature to approximately 250° F. for a short period of time, and finally cooling the contents of the filled cans.

[Claims 6 to 8 not printed in the Gazette.]

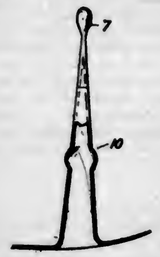


1,230,367. TOOL FOR USE IN TUBULATING HOLLOW GLASS ARTICLES. RALPH BARBER, Jr., Millville, N. J., assignor to Victor Durand, Jr., Vineland, N. J., trading as Vineland Flint Glass Works. Filed Jan. 13, 1917. Serial No. 142,197. (Cl. 49—72.)



A tool for use in making tubulatures on hollow glass articles comprising in combination bow spring tongs, a mold having an opening through it at right angles to the plane of the tongs and consisting of two mold sections respectively attached to the shanks of the tongs and provided with ears, and guide pins coöperating with the ears, substantially as described.

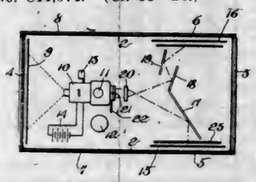
1,230,368. PROCESS OF TUBULATING GLASS BOTTLES, RETORTS, AND THE LIKE. RALPH BARBER, Jr., Millville, N. J., assignor to Victor Durand, Jr., Vineland, N. J., trading as Vineland Flint Glass Works. Filed Jan. 13, 1917. Serial No. 142,198. (Cl. 49—84.)



1. In the process of tubulating hollow glass articles by dropping molten glass on the wall of the article while hot from its initial heat to locate the tubulature and soften the underlying glass and by blowing both the applied and softened glass into a hollow projection by the application of air pressure from within the article, the improvement which consists in applying a mold to the hollow projection while it retains its initial heat, and converting the projection into a tubulature by shaping it in the mold by a continuation of the application of air pressure from within the article.

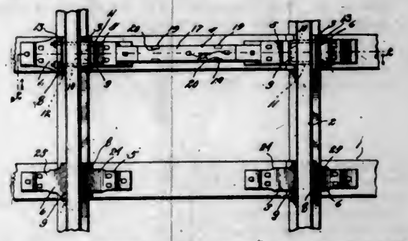
2. In the process of tubulating hollow glass articles by dropping molten glass on the wall of the article while hot from its initial heat to locate the tubulature and soften the underlying glass and by blowing both the applied and softened glass into a hollow projection by the application of air pressure from within the article, the improvement which consists in preparing the projection by elongating it, applying a mold to the prepared hollow projection while it retains its initial heat, and converting the projection into a tubulature by shaping it in the mold by a continuation of the application of air pressure from within the article.

1,230,369. DISPLAY APPARATUS AND VEHICLE THEREFOR. HARRY I. BAYERS, Boston, Mass., assignor to Animated Advertising Co., Boston, Mass., a Corporation of Massachusetts. Filed June 12, 1914. Serial No. 844,674. (Cl. 88—24.)



Display apparatus having mechanism to project three views of the same object from a single source of light, and means to display said views on a plurality of transparent screens simultaneously, one view being alined with the original projection and the other views being projected on screens at angles to the line of original projection, the projection on one of said screens being thrown by a plurality of reflecting surfaces to rectify the image displayed.

1,230,370. TIE-BAR FOR RAILS. JOHN A. BENDER, Lykens, Pa. Filed Dec. 7, 1916. Serial No. 135,607. (Cl. 238—5.)



1. As a new article of manufacture, a tie bar for rails comprising a pair of overlapping sections, one of said sections having recesses formed in its side edges, vertically disposed lugs carried by the side edges of the other section for detachably engaging the recesses, and means for positively holding the sections against accidental disengagement.

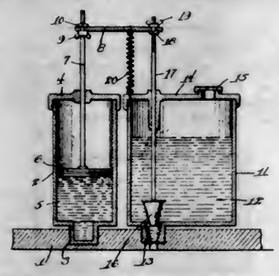
2. In combination with a pair of rail chairs, a tie bar consisting of a pair of upper and lower sections, one of said sections having recesses formed in its sides, and lugs carried by the other section for detachably engaging the recesses, means passable through the sections for securing the bar to the tie, said sections having their outer ends detachably engaged with the chairs.

3. In combination with a pair of rail chairs, a tie bar consisting of a pair of sections, said sections being arranged in overlapping relation, means carried by the side edges of the sections for interlocking engagement, said sections having their outer ends detachably engaged with the chairs, and means passable through the sections for securing the same to a tie.

4. The combination with a pair of rail chairs, of a tie bar connecting the chairs, said chairs consisting of sections including heads, one of said heads having grooves

formed therein, a U-bolt engaged in the grooves and having its legs passed through the web of the rail and the head of the other section, and clamping nuts engaged on the legs.

1,230,371. AUTOMATIC LUBRICATOR. SIMON PETER BILYEU, Sacramento, Cal. Filed Sept. 18, 1914. Serial No. 862,397. (Cl. 184—68.)



1. A lubricator comprising a mercury cylinder, a closed extension on said cylinder, a piston within the cylinder, an oil cylinder having an open extension, a valve for closing said extension, a bar connecting the piston and valve, and a spring secured to the bar and oil cylinder.

2. A lubricator comprising a mercury cylinder having a closed extension, a piston within the cylinder, a rod connected to the piston and extending beyond the top thereof, an oil cylinder having an open extension, a valve for closing said extension, a rod secured to said valve and extending beyond the top of the cylinder, a bar adjustably secured to the valve rod and piston rod, and a spring secured to the bar and oil cylinder.

1,230,372. ELECTRIC SWITCH. AUGUSTUS JESSE BOWIE, Jr., San Francisco, Cal. Filed Dec. 9, 1909. Serial No. 532,236. (Cl. 175—282.)



1. The combination with a switch comprising contacts, of diverging horns adjacent to said contacts, respectively, and of a movable member mounted on a pivot insulated from ground, said member comprising main and auxiliary contactors adapted to engage the said contacts, the auxiliary contactor sliding upwardly on the horn with which the arc is formed in opening the switch.

2. The combination with a switch comprising insulating bases, of contacts mounted on said bases, of diverging horns fixed in position and adjacent to said contacts, and of a movable member comprising main and auxiliary contactors, said member being pivoted on one of said insulating bases and being adapted to engage the said contacts, the auxiliary contactor sliding upwardly on the horn with which the arc is formed in opening the switch.

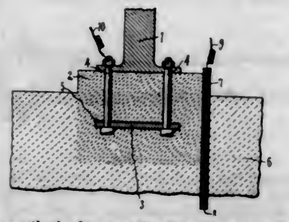
3. The combination with a switch comprising main and auxiliary contacts, of diverging horns adjacent to said main contacts, and of a movable member comprising main auxiliary contactors, said member being adapted to engage the said contacts, one end of said member moving in an upward and lateral direction between said horns on opening the switch, the auxiliary contactor sliding upwardly on the horn with which the arc is formed in opening the switch.

4. The combination with a switch comprising main contacts of a movable member adapted to engage therewith, and of a pair of diverging horns adapted to distend and break the arc, and of a rock shaft for operating said movable member, and of a link for transmitting motion from said rock shaft to said movable member, and of insulating means mounted on said rock shaft and located between said rock shaft and said link.

5. The combination with a switch comprising contacts, of a movable member adapted to engage said contacts, and of a pair of diverging horns adapted to distend and break the arc, and of a rock shaft for operating said movable member through a link, and of insulating means mounted on said rock shaft and adapted to operate said link, and of an auxiliary shaft adapted to operate said rock shaft through a crank mounted on said auxiliary shaft and a link connected therewith.

[Claims 6 to 8 not printed in the Gazette.]

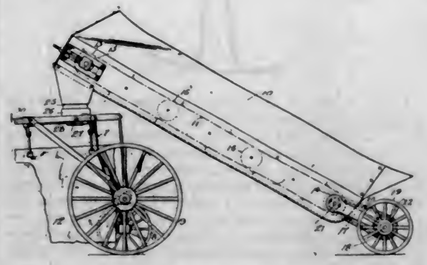
1,230,373. METHOD OF AND MEANS FOR PREVENTING THE DISINTEGRATION OF CONCRETE STRUCTURES. HAROLD P. BROWN, Montclair, N. J. Filed June 8, 1912. Serial No. 702,629. (Cl. 72—77.)



1. The method of preventing the disintegration of reinforced concrete structures by electrolysis, consisting in jetting premixed waterproof concrete, together with the impelling fluid under high pressure, to wit: from thirty to sixty pounds pressure to the square inch, on the reinforcing element or elements of the concrete structure to form a dense waterproof coating thereon and subsequently embedding the said elements in mass concrete.

2. Means for preventing the disintegration of concrete structures and masses, including a metallic element, consisting of a layer of jetted concrete of such density as to render it waterproof, surrounding the metallic element and itself embedded in the concrete structure or mass.

1,230,374. MACHINE FOR USE IN GATHERING COTTON. THOMAS E. BROWN, New York, N. Y., and CARL T. WESTLIN, Arlington, N. J., assignors to Cotton Machinery Company, New York, N. Y., a Corporation of New York. Filed Mar. 12, 1914. Serial No. 824,330. (Cl. 214—1.)



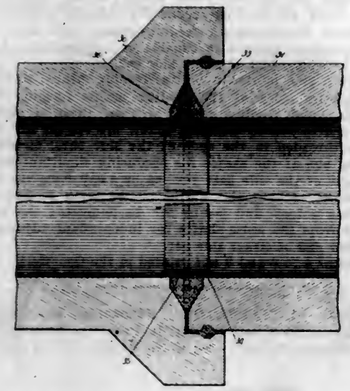
1. In a machine for use in gathering cotton, a supporting frame, a receptacle having a tubular chute depending from its forward end, a support mounted on wheels and in which said chute is vertically journaled for swivel movement about a vertical axis, the receptacle being inclined rearwardly and downwardly from said support, means for supporting the other end of the receptacle on the ground, and a carrier operating in said receptacle.

2. In a machine for use in gathering cotton, a support mounted on wheels, a bearing ring pivotally mounted therein upon a horizontal axis, a receptacle having a tubular chute vertically journaled in said bearing ring for horizontal swiveling movement about a vertical axis, said receptacle being inclined rearwardly and downwardly from said support and resting at its lower end upon the ground, a carrier operating in said receptacle and means for operating said carrier.

3. In a machine for use in gathering cotton, a supporting frame mounted upon wheels, a receptacle having a tubular delivery chute depending from the forward end thereof a horizontally pivoted bearing in which said chute is swivelly journaled vertically to allow vertical and horizontal movement, said receptacle extending downwardly and rearwardly from said frame, means to support the lower rear end of said receptacle on the ground, and a carrier operating in said receptacle.



1,230,375. PIPE-JOINT. HOWARD E. BURNS, Chicago, Ill., assignor to C. F. Massey Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 11, 1916. Serial No. 136,231. (Cl. 137—29.)



1. In a spigot and faucet pipe joint the provision of an annular wedge shaped recess formed between the pipe sections and having its apex directed outwardly away from the interior of the pipe and its opposite side communicating with the interior of the pipe, a grout filling in said recess, and a mastic filler between the pipe sections and disposed around the apex of the recess whereby expansion of the grout filling produces compression of the mastic filler to provide a tight joint between the pipe sections.

2. In a pipe joint the provision of an annular wedge shaped grout filling having its apex directed away from the interior of the pipe and its opposite side subjected to pressure within the pipe and a mastic filler between the pipe sections and disposed around the apex of the wedge shaped filling whereby expansion of the grout filling produces compression of the mastic filler to provide a tight joint between the pipe sections.

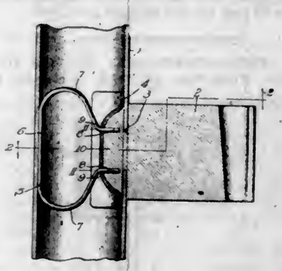
3. In a spigot and faucet joint the provision of an annular wedge shaped recess formed between the pipe sections and having its apex directed outwardly away from the interior of the pipe and its opposite side communicating with the interior of the pipe, a bituminous coating on the walls of the recess, a grout filling in the recess, and a mastic filler between the pipe sections and disposed around the apex of the recess whereby it is caused to expand and provide a tight joint between the pipe sections when compressed by the wedge shaped grout filling.

4. In a spigot and faucet joint the provision of an annular wedge shaped recess formed between the pipe sections and having its apex directed outwardly away from the interior of the pipe and its opposite side communicating with the interior of the pipe, a bituminous coating on the walls of the recess, a grout filling in the recess, a mastic filler between the pipe sections and disposed around the apex of the recess whereby it is caused to expand and provide a tight joint between the pipe sections when compressed by the wedge shaped grout filling, and a locking key between the pipe sections to prevent relative longitudinal movement of the pipes.

5. A spigot and faucet pipe joint containing a mastic filler between the ends of the pipe sections and an expansible wedge shaped grout ring arranged when subjected to pressure within the pipe to force the mastic filler tightly into engagement with the ends of the pipe sections and the flange of the female pipe section.

[Claims 6 to 9 not printed in the Gazette.]

1,230,376. METAL JOINT. JOHN BURNS, Kenosha, Wis., assignor to the Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed June 14, 1913. Serial No. 773,613. (Cl. 5—55.)

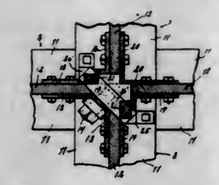


1. The combination with a hollow post having an aperture in its side, of a mold cup in the post fitting over said aperture, a spring having its ends projecting through the openings in the rear of the mold cup and having its intermediate portion abutting against the opposite wall of the post, and a filling cast through said aperture into the cavity formed by the cup.

2. The combination of a hollow post with a perforation in its side, a mold plate fitting within said post and having an inwardly depressed portion forming a cavity registering with said perforation, said depressed portion having a pair of apertures spaced apart in a direction parallel with the axis of the post, a resilient wire member having its ends entering said apertures and with its intermediate portion engaging the wall of said post opposite said perforation for resiliently maintaining said plate in position, and a metal filling cast through said perforation in the cavity formed by said plate.

3. The combination of a hollow post with a perforation in its side, a mold plate fitting within said post and having an inwardly depressed portion forming a cavity registering with said perforation, said depressed portion having a pair of apertures spaced apart in a direction parallel with the axis of the post, a C-shaped resilient wire member having its ends reversely bent to enter said aperture and with its intermediate portion engaging the wall of said post opposite said perforation for resiliently maintaining said plate in position, and a metal filling cast through said perforation in the cavity formed by said plate.

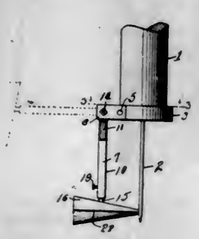
1,230,377. RAILWAY-CROSSING. JOHN W. BURNS and WILLIAM BEACH, Los Angeles, Cal.; said Burns assignor of one-half of his right to Grover C. Brothers, Los Angeles, Cal. Filed Nov. 25, 1916. Serial No. 133,824. (Cl. 104—116.)



1. In a railway crossing, the combination of main rails, plates connecting adjacent ends of the main rails, bars pivotally mounted on said plates, crossing rails separated from the main rails by gaps, and upright blocks movably fitted in said gaps and having their lower ends bearing on the bars substantially as and to effect the purpose set forth.

2. The combination with a railway crossing having main rails and crossing rails and gaps between the main rails and the crossing rails, of plates connecting adjacent ends of the main rails, bars pivotally mounted on said plates and disposed obliquely to the ends of adjacent main rails, and upright blocks movably fitted in said gaps and having their lower ends pointed and bearing on the bars substantially as and for the purpose set forth.

1,230,378. NEEDLE-THREADER. WILLIAM D. BURNS, Bangor, Me. Filed Sept. 19, 1916. Serial No. 121,047. (Cl. 112—18.)



1. A needle threader comprising a needle threader support carrying a needle, a clamp embracing the said support and including straight side arms engaged with a flat surface formed on the said support, the said arms having openings formed therein, a fastening element received in the openings for moving the said arms to tighten and loosen the said clamp, lugs extending in spaced relation from the said arms, suspending means carried by the arms and disposed in parallel relation to the needle, and means carried by the suspending means for receiving a thread to guide the latter through the eye of the said needle.

[Claims 2 and 3 not printed in the Gazette.]

1,230,379. GLUE-JOINTER ADJUSTMENT. ANGELO ROBERT CLAS, Sheboygan Falls, Wis., assignor to Falls Machine Company, Sheboygan Falls, Wis., a Corporation of Wisconsin. Filed June 26, 1916. Serial No. 105,819. (Cl. 144—90.)

1. In a glue jointer, a central feeding means, side bars on opposite sides thereof, and a screw adjusting means having threaded engagement with both ends of both side bars for moving them simultaneously toward or away from the feeding means, said side bars forming with the feeding means work clamping guides of equal widths in the various adjustments.

2. In a glue jointer, a central endless feed chain, a side bar on either side thereof containing spring pressed rollers for holding work against the feed chain, and an adjusting means having threaded engagement with both ends of both side bars for moving them simultaneously toward or away from the feed chain to form equally variable work feeding clamping guides between them.



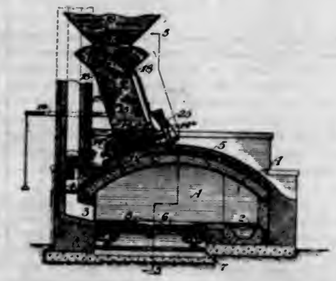
3. In a glue jointer, a central feeding means, side bars on opposite sides thereof having bearing means for engaging work and holding it against the feeding means, cross shafts having threaded engagement with the ends of the two side bars, a longitudinal shaft having helical gear connections with the cross shafts, and means for turning one of the shafts for producing simultaneous adjustment of the side bars toward or away from the feeding means to form equally varying work clamping feed guides between them.

7. In a glue jointer, a central feeding means, side bars on opposite sides of the feeding means forming work clamping and feeding guides therewith, a screw adjusting means for threaded engagement with both ends of both side bars for moving them simultaneously toward or away from the feeding means for equally varying the widths of the two work feeding guides, said screw adjusting means being also capable of independent adjustment for either end of either side bar.

9. In a glue jointer, a central feeding means, side bars on opposite sides of the feeding means forming work clamping and feeding guides between them, a pair of cross shafts geared together, screw sleeves on the cross shafts threaded in the ends of the side bars, means for turning one of the shafts for producing simultaneous adjustment of the side bars toward or away from the feeding means to vary the widths of the work feeding and clamping guides, and means for disconnecting the screw sleeves from the cross shafts for independent adjustment of either end of either side bar.

[Claims 4 to 6 and 8 not printed in the Gazette.]

1,230,380. INCINERATOR. FREDERICK H. COLLINS, San Francisco, and MARTIN L. PELLETT, Berkeley, Cal. Filed Mar. 15, 1916. Serial No. 84,305. (Cl. 110—12.)



1. An incinerating apparatus, comprising a main chamber, a fireplace located in one side of said chamber, a car at the other side of said chamber, a drying chamber located above said main chamber at a point above the position of the car when in said main chamber, gates at the bottom of said drying chamber for controlling communication between said drying chamber and said main chamber, gates at the top of said drying chamber, the space between said top and bottom gates being adapted to measure the charge introduced into said main chamber upon the car therein, and a supply hopper above the drying chamber.

2. In a garbage crematory of the character disclosed, a chamber having a fuel combustion space interiorly located at one side, a track extending into the chamber at one side of said fuel combustion space and at a level below said combustion space, a car in said chamber movable on said track, a drying chamber located above the car, means for controlling the charge in said drying chamber, and a plurality of draft flues connecting with the side of the chamber opposite the combustion space.

3. In a garbage crematory of the character described, a chamber containing a fuel grate and a car parallel with each other and upon opposite sides of the chamber, an approximately vertical drying chute extending above the car having doors at each end, means for charging the chute, and means to open and close the doors to deliver garbage upon the car.

4. In a garbage furnace, a main chamber, a fuel combustion space communicating with said main chamber, a drying chute leading to said main chamber and adapted to receive heat from said combustion space, doors for controlling communication between said drying chute and said main chamber, doors for closing the outer end of said drying chute, a car located in the furnace below said drying chute to receive the charge of material from said drying chute, said car being also located in such position with relation to said combustion space that the heated gases therefrom pass over the car and through the material thereon to complete the drying of the material.



1,230,381. SOUND-ABSORBING MATERIAL AND METHOD OF MAKING SAME. JOHN COMERMA, New York, N. Y., assignor, by mesne assignments, to John Carra, New York, N. Y. Filed Nov. 10, 1915. Serial No. 60,723. (Cl. 106—24.)



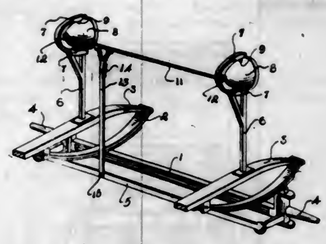
1. A sound-absorbent material for walls, floors and ceilings consisting of particles of body material and a binding substance bonding said particles to each other only at their points of contact so as to form a cellular material.

8. In the method of producing a sound absorbing material of the kind described the steps which consists in taking particles of cork, moistening said particles and then mixing said moistened particles with a dry binder.

[Claims 2 to 7 not printed in the Gazette.]

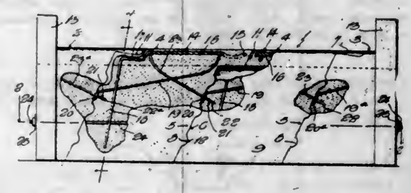
1,230,382. LAMP ATTACHMENT FOR AUTOMOBILES. HENRY W. COWAN, Hudson Falls, N. Y. Filed Nov. 24, 1915. Serial No. 63,274. (Cl. 240—62.)

A lamp attachment for automobiles, comprising in combination a pair of standards adapted to be mounted on the frame of the automobile, lamps pivotally mounted on said standards on vertical pivots and having rearwardly extended lugs, a rod extending between said lamps, links vertically pivoted to the rod and horizontally pivoted to said lugs, and a hinged sectional rod secured to the first mentioned rod, and secured to the steering mechanism of the automobile, the last mentioned rod being arranged to



actuate the first mentioned rod as the automobile is steered.

1,230,383. CULVERT. WILLIAM J. COX, Monmouth, Ill. Filed May 8, 1916. Serial No. 96,151. (Cl. 72—52.)



1. An arched culvert section formed of plastic material and having at the ends of its crown a dovetail and a dovetail socket, and a reinforcing rod embedded in said section, said rod being bent between its ends to form a loop positioned in the dovetail, the ends of said rod being twisted together and extending along the crown of the arch of the socket, said ends diverging at this point, extending along the edge of said socket and projecting downwardly within the sides of the arch.

2. In combination, a pair of arched tile sections disposed end to end and having an interlocking connection to prevent one from shifting endwise from the other, and interengaging ribs and grooves extending radially across the abutting ends of said sections to prevent relative turning thereof.

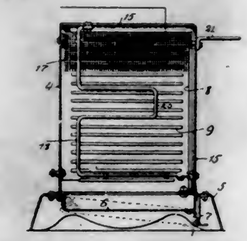
3. In combination, a pair of arched tile sections disposed end to end, an interlocking dove-tail connection between the abutting ends of said sections at the crown thereof to prevent one section from moving endwise from the other, and interengaging ribs and grooves extending radially across the abutting ends of the two sections to prevent relative turning thereof.

4. A reinforcement for an arched tile section having a dove-tail at one end and a dove-tail notch at the other end of its crown, said reinforcement being formed of a single rod bent upon itself at its center to form a loop to extend into the dove-tail, the two halves of said rod being twisted together throughout the inner portions of their lengths to extend along the ridge of the arch from one end thereof to the other, said halves being then bowed outwardly to reinforce the edges of the dove-tail notch and then bent downwardly for reception in the sides of the arch.

1,230,384. ELECTRIC TOASTER. JOHN F. DELAHANT, New York, N. Y. Filed Oct. 19, 1916. Serial No. 126,514. (Cl. 219—19.)

1. An electric toaster, comprising a base, vertical side walls and an end wall, heating elements supported between said side walls and separated by a space for the reception of the object to be toasted, and a door hinged

at its lower portion to said base and formed of two members disposed at right angles and covering the gap between said side walls.



2. An electric toaster, comprising a base, vertical side walls and an end wall, heating elements supported between said side walls and separated by a space for the reception of the object to be toasted, a door hinged at its lower portion to said base and formed of two members disposed at right angles and covering the gap between said side walls, and a holder for the object to be toasted secured upon the inner side of said door.

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1,230,385. CEILING-PLATE. JOHN R. DONNELLY, Austin, Tex. Filed Jan. 11, 1916. Serial No. 71,402. (Cl. 126—317.)



1. The combination with a pipe which is subject to longitudinal expansion or contraction or both, and a fixed surface, of a plate surrounding the pipe, said plate having an opening for the passage of the pipe and a recess on the edge of the opening, a clip secured to the pipe and capable of longitudinal movement thereon, said clip having an ear adapted to pass through the recess, and a spring carried by the plate and adapted to engage with the ear.

2. The combination with a pipe which is subject to longitudinal expansion or contraction or both, and a fixed surface, of a plate surrounding the pipe, a clip frictionally engaging with the pipe, a plurality of ears on the clip, the said plate having a central opening surrounding the pipe, and a plurality of recesses communicating with said opening, said recesses being in line with the ears, and a plurality of springs carried by the plate and frictionally engaging with the ears.

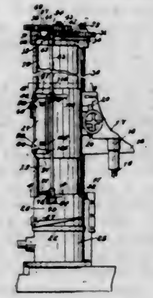
3. The combination with a pipe which is subject to longitudinal expansion or contraction, and a fixed surface; of a plate surrounding the pipe, a clip engaging the pipe, ears on the clip, and a plurality of springs secured to the plate, a loop in each spring, said loops frictionally engaging the ears on the clip.

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1,230,386. DRILLING-MACHINE. HENRY DRESES, Cincinnati, Ohio. Filed Nov. 8, 1915. Serial No. 60,296. (Cl. 77—28.)

1. In a metal drilling machine, the combination with a column and a drill-arm, of means comprising a rock-shaft for adjusting said drill-arm to height on said column, and means for clamping said drill-arm in adjusted positions to said column, said first-named means having lock-connection with said second-named means comprising a collar on said rock-shaft, means for shifting said collar with said drill-arm lengthwise on said rock-shaft, and locking means coacting with said collar, said lock-connection releasable by manipulation of said second-named means.

2. In a metal drilling machine, the combination with a column and a drill-arm, of adjusting means adjusting said drill-arm to height on said column, clamping means clamping said drill-arm in adjusted positions to said column, and locking means for locking said adjusting means in inactive relation operatively disposed between said adjusting means and said clamping means comprising a locking collar having operative connection with said adjusting means and adjustable to height with said drill-arm, and a coacting locking and unlocking part therefor controlled by said clamping means, and constructed and arranged for placing said locking means in locked relation by clamping movement of said clamping means and in unlocked relation by unclamping movement of said clamping means.



3. In a metal drilling machine, the combination with a column and a drill-arm, of adjusting means adjusting said drill-arm to height on said column comprising a train of gearing including a movable member movable for active or inactive relation in said train of gearing, a rock-shaft for moving said movable member, clamping means for clamping said drill-arm to said column in adjusted positions, said clamping means comprising an arm, a collar rotatable with said rock-shaft, and slot and pin connection between said clamping arm and said collar arranged for coactive relation during clamped relation of said clamping means and for release during unclamping relation of said clamping means.

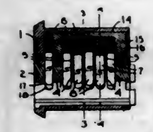
4. In a metal drilling machine, the combination of a column, a drill-arm comprising a split-bearing about said column, means for raising and lowering said bearing axially on said column, and clamping means for clamping said bearing to said column in adjusted positions comprising a clamp-screw and a nut therefor, constituting a pair of clamping members, bearings at the respective sides of the split in said bearing for said clamp-screw, and a pluri-part washer between one of said clamping members and one of said clamp-screw bearings comprising a ball-bearing between the parts of said washer, said washer and said one of said clamp-screw bearings having rounded contact faces between them providing coacting abutting faces of extended area irrespective of the parallelism of the axial lines of said clamp-screw bearings.

5. In a metal drilling machine, the combination of a column, a base, a drill-arm on said column swingable so as to project in different directions laterally over said base, adjusting means comprising a rock-shaft parallel with said column for adjusting said drill-arm to height on said column, clamping means clamping said drill-arm in adjusted positions to said column, and locking means locking said adjusting means and said clamping means together during maintenance of clamped relation of said clamping means, said locking means comprising a collar having operative connection with said rock-shaft to rotate therewith and move longitudinally thereof, and a coacting locking and unlocking part having operative connection with said clamping means, said locking means swinging and movable up and down with said drill arm.

[Claim 6 not printed in the Gazette.]



1,230,387. CYLINDER-LOCK. ELI EPSTEIN, Leominster, Mass. Filed Jan. 29, 1917. Serial No. 145,044. (Cl. 70—47.)



1. In a cylinder lock, the combination with a casing, of a plug rotatably mounted therein, said plug and casing having tumbler-pin-receiving pockets, and tumbler pins in said pockets, each pin comprising a plurality of sections and some at least of the pins having their sections connected.

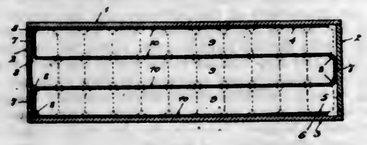
2. In a cylinder lock, the combination with a casing, of a plug rotatably mounted therein, said plug and casing having tumbler-pin-receiving pockets, and tumbler pins in said pockets, each pin comprising two sections and some at least of the pins having their sections connected.

3. In a cylinder lock, the combination with a casing, of a plug rotatably mounted therein, said plug and casing having tumbler-pin-receiving pockets, and tumbler pins in said pockets, each pin comprising a plurality of sections, and the end pins having their sections connected.

[Claims 4 to 7 not printed in the Gazette.]

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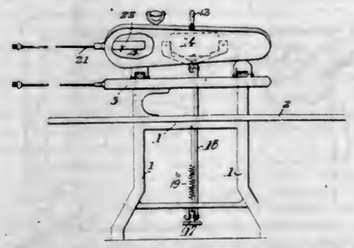
1,230,388. MARKER FOR CIGARS AND THE LIKE. SAMUEL FELD, New York, N. Y. Filed Jan. 11, 1917. Serial No. 141,759. (Cl. 131—11.)



A device of the class described comprising a cigar box, a flat sinuous ribbon or tape extending from end to end in said box in a series of folds with narrow portions of said ribbon between the folds secured to each end of the box, weakened portions on said strip adjacent the points where said strip is secured to the ends of the box and adjacent the folds, substantially long portions of said strip intermediate the weakened portions extending between the layers of the cigars in the box, the lower end of the strip beneath the layers of cigars being secured to the bottom of the box.

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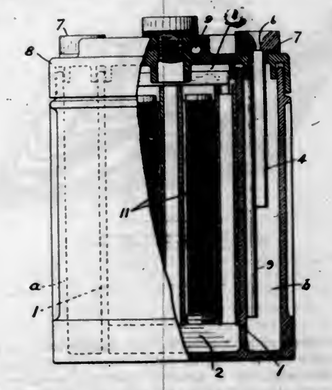
1,230,389. STEAM PRESSING-MACHINE. CHARLES FINKEL and IRA COHEN, Seattle, Wash. Filed Jan. 31, 1916. Serial No. 75,263. (Cl. 68—9.)



In a steam pressing machine including a frame and buck, the combination of a steam generating head hinged to said frame; said head including a tank with a perforated bottom, a similarly perforated plate within said tank and normally covering the perforations of said tank, means for moving said plate until the perforations of said plate and tank register, whereby the steam generated in the head is released when the holes are in register.

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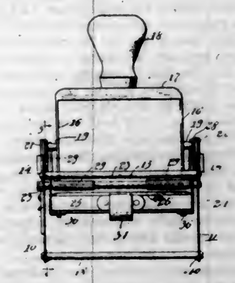
1,230,390. PORTABLE BATTERY. LOUIS H. FLANDERS, Jenkintown, Pa. Filed Mar. 22, 1917. Serial No. 156,580. (Cl. 204—53.)



A storage battery cell sub-divided into plate and gas spaces and chambers provided with ventilation tubes or passages communicating with the air and opening and extending into the middle portions of the chambers, and having in its cover oppositely disposed vent tubes or passages one of which opens to the gas space of the cell at or adjacent to one corner and extends and opens into one chamber near the end thereof and whereof the other opens to the gas space of the cell at or adjacent to the diagonally opposite corner and extends and opens into the other chamber near the end thereof, substantially as described.

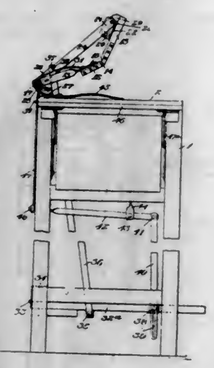
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1,230,391. SELF-INKING HAND-STAMP. HARRY S. FOLGER and TOREY ROSS, Chicago, Ill. Filed Jan. 8, 1915. Serial No. 1,071. (Cl. 101—161.)



A frame providing guides, a stamp having slides adapted to reciprocate in the guides and a handle by which it is moved, a pad pivotally supported upon the frame, connections between the stamp and the pad to cause them to move simultaneously, a spring serving to elevate the stamp in its frame, a shaft serving as a support for the spring and a pivot for the pad, means by which the shaft may be turned to adjust the tension of the spring, and a locking device secured to the frame and serving to hold the shaft at a desired adjustment.

1,230,392. PHOTOGRAPHIC-PRINTING MACHINE. WILLIAM F. FOLMER, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 18, 1914. Serial No. 877,852. (Cl. 95—73.)



1. In a photographic printer, the combination with a printing table and a swinging platen board adapted to cooperate therewith, of a pivoted operating member arranged to turn on a different center from the platen board, for forcing the latter against the table, said member having a connection with the platen board comprising a member having an L-shaped cam slot permitting sliding movement of the member during the latter's movement on its pivot and a relatively transverse movement toward the platen board while the latter is in coöperation with the table and a resilient member flexed between the operating member and the platen board during said last mentioned movement.

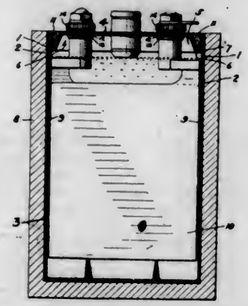
3. In a photographic printer, the combination with a printing table and a swinging platen adapted to cooperate therewith and comprising a heel board and a toe board hinged together, of a pivoted operating member for forcing the platen against the table, said member having a sliding connection with the toe board, permitting sliding movement of the member during the relative movement of the two boards on their hinge and said member also having a relatively transverse movement toward the toe board while the latter is in coöperation with the table, a resilient member interposed between the operating member and the toe board during said last mentioned movement, and abutments on the toe board and the operating member adapted to coöperate when the operating member is retracted to carry both the heel board and the toe board of the platen away from the table.

9. In a photographic printer, the combination with a printing table and a light box beneath the same, of a platen adapted to coöperate with the table, an operating member therefor arranged above the table, a treadle arranged beneath the light box and an actuating member connected to the treadle and to the operating member and extending through the light box and table.

12. In a photographic printer, the combination with a printing table, an electric lamp arranged beneath it and having circuit connections, a switch in said circuit, a platen above the table adapted to coöperate therewith and a treadle, of an actuating member for the platen connected to the treadle, an operating member for the switch connected to the treadle to be moved thereby during a part of the travel of the treadle and a second operating member for the switch adapted to be actuated independently of the treadle.

[Claims 2, 4 to 8, 10, and 11 not printed in the Gazette.]

1,230,393. SECONDARY OR STORAGE BATTERY. BRUCE FORD, Philadelphia, Pa. Filed Feb. 11, 1915. Serial No. 7,468. (Cl. 204—29.)



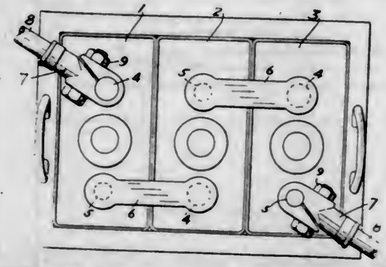
1. In a storage battery the combination of a jar, an inverted dished cover having a marginal flange of which the rim contacts with the inside wall of the jar below the top thereof, an outer box having inner side walls arranged to contact with the outside walls of the jar to support the latter and keep them up to the rim of the cover flange, and a plate structure secured to the cover to positively position it in respect to the top of the jar, substantially as described.

4. In a storage battery the combination of a jar having flat and straight inside and outside walls, a dished cover having a marginal flange of which the rim contacts with the flat inside wall of the jar below the top thereof, an outer box having flat faced inner side walls arranged to contact with the flat outside walls of the jar to support the latter and keep them up to the rim of the cover flange, a plate structure, means engaging the plate structure and cover to hold the latter down, means engaging the plate structure and cover to hold the latter up, and a sealing compound interposed between the jar walls and flange and cover, substantially as described.

6. In a storage battery the combination of a jar, a dished cover having a marginal flange of which the rim contacts with the inside wall of the jar below the top thereof, an outer box having inner side walls arranged to contact with the outside walls of the jar to support the latter and keep them up to the rim of the cover flange, a plate structure, a flange on the structure and a gasket and a nut for connecting and sealing the plate structure and cover, and a sealing compound interposed between the jar walls and flange and cover, substantially as described.

[Claims 2, 3, and 5 not printed in the Gazette.]

1,230,394. STORAGE BATTERY. BRUCE FORD, Philadelphia, Pa. Filed, Apr. 24, 1916. Serial No. 93,088. (Cl. 204—29.)

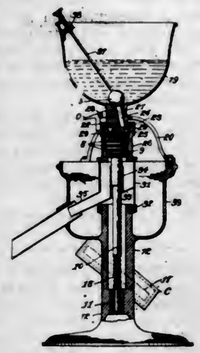


1. A storage battery consisting of a plurality of cells having terminal posts, the posts of like polarity of end and intermediate cells being alike, intermediate connectors integrally burned at each end to posts of different cells, and line connectors detachably clamped to one terminal post of each end cell.

2. A storage battery equipment consisting of a unitary structure comprising a plurality of cells having intercell connections burned at each end to the posts of cells and having end cell terminals consisting of posts, in combination with connectors forming part of lines and adapted to be detachably clamped to the posts of end cells in different radial positions, substantially as described.



1,230,395. APPARATUS FOR TREATING MILK AND OTHER LIQUIDS. ALFRED FORNANDER, New York, N. Y., assignor to Edgar T. Wallace, New York, N. Y. Filed July 2, 1912. Serial No. 707,189. (Cl. 99—2.)



1. An apparatus for treating milk and other liquids, comprising a pair of concentric cone surfaces one of which is roughened and one of which is rotatable, and means to introduce the liquid about the axis of rotation and through the action of centrifugal force forcibly feed the same between said surfaces.

2. An apparatus for treating milk and other liquids, comprising a pair of concentric cone surfaces one of which is roughened and rotatable, and means to introduce the liquid about the axis of rotation and through the action of centrifugal force forcibly feel the same between said surfaces.

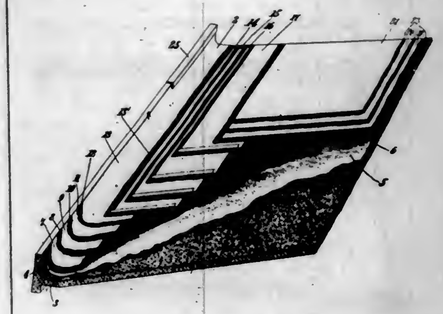
3. An apparatus for treating milk and other liquids, comprising a pair of concentric and spaced apart roughened cone surfaces one of which is rotatable, said liquid being introduced to the axis of said cone-surfaces and through the action of centrifugal force fed between said surfaces.

4. An apparatus for treating milk and other liquids, comprising a receptacle for the liquid to be treated; and a pair of concentric and spaced apart roughened cone surfaces one of which surfaces is rotatable; the liquid being delivered from the receptacle to the axis of rotation of the inner surface and forcibly fed therefrom between the surfaces through the action of centrifugal force as the inner surface is rotated.

5. An apparatus for treating milk and other liquids, comprising a receptacle for the liquid to be treated; and a pair of concentric and spaced apart roughened cone surfaces the inner surface of which is rotatable; said cone surface being arranged so that as it is rotated it will draw the liquid from the receptacle about its axis of rotation and forcibly feed it therefrom between the surfaces by forces set up through the rotation of said surface.

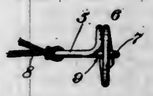
[Claims 6 to 24 not printed in the Gazette.]

1,230,396. COMPOSITE ROOFING. FRANK L. FOSTER, Cleveland, Ohio, assignor to The Philip Carey Mfg. Co., a Corporation of Ohio. Filed Apr. 6, 1915. Serial No. 19,609. (Cl. 108—6.)



In a roof, a masonry foundation comprising a sloping water-shed portion and a portion extending upwardly therefrom and forming a gutter therewith and a covering for said foundation comprising a plurality of superimposed strips or plies of waterproofed fibrous material laid longitudinally of said gutter and extending across said gutter from the upper edge thereof, each successive strip or ply from the lower ply or strip upwardly being of greater width than the preceding strip or ply, a plurality of additional superimposed strips or plies of waterproofed fibrous material laid longitudinally of said gutter and overlapping said first-named strips or plies, each successive ply or strip from the lower ply or strip upwardly having less overlap, said last-named strips or plies extending onto said water-shed portion and a plurality of strips or plies of waterproofed fibrous material, extending over said water-shed portion in the direction of slope thereof, all of said strips or plies being laid in adhesive material and arranged to form a continuous covering for said roof having a gutter with an unobstructed and substantially uninterrupted surface extending in the direction of flow of water therein.

1,230,397. SHOCK OR BUNDLE TIER. CHARLES G. FRAVEL, Gahanna, Ohio. Filed Aug. 18, 1913. Serial No. 785,286. (Cl. 24—131.)

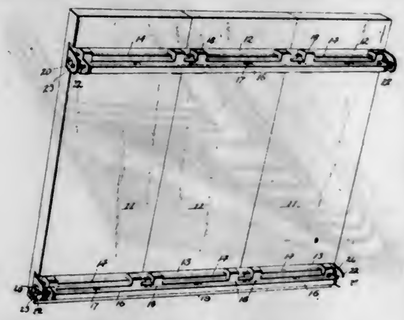


A shock or bundle tier made of a single piece of wire bent to form a U-shaped shank member to which one end of the tying cord is secured and a circular cord receiving coil member, the portions of which are lapped on each other, said coil member standing in a plane at right angles to the plane of the shank member, one leg of the U-shaped shank member extending integrally from the rim of the coil member at one side of the axis thereof and the other leg of said U-shaped shank member bent around the lapped portions of the coil member at the opposite side of the axis thereof and binding said lapped portions of the coil tightly together.

1,230,398. DRAWING-BOARD. WILBUR L. FULTON, Omaha, Nebr. Filed Jan. 22, 1916. Serial No. 73,636. (Cl. 45—131.)

1. In a drawing board, the combination of a plurality of separable sections capable of being assembled edge to edge to present a suitable drawing-supporting surface;

cross bars extending transversely to said sections; interengaging members carried by said cross bars and each of said sections for releasably connecting said sections to said cross bars; and means for forcing said sections edgewise into contact and holding the same in engagement with said cross bars.



2. In a drawing board the combination of a plurality of separable sections capable of being assembled edge to edge to present a suitable drawing-supporting surface; transverse battens on each of said sections; cross bars adapted to slide longitudinally into locking relation with the battens of a plurality of assembled sections; and clamping means for forcing said sections into close edge contact and for holding the same in engagement with said cross bars.

3. In a drawing board, the combination of a plurality of sections capable of being assembled edge to edge to present a suitable drawing-supporting surface; transverse battens having overhanging flanges mounted on the backs of each of said sections; cross bars having projecting portions adapted to slide longitudinally into engaging relation with the overhanging flanges of the battens on a plurality of assembled sections; and clamps carried by said cross bars for forcing said sections into close edge contact.

4. In a drawing board, the combination of a plurality of sections capable of being assembled edge to edge to present a suitable drawing-supporting surface; cross bars extending transversely to said sections; a straight edge carried by one of said cross bars, and extending along the ends of the sections when assembled; and releasable interlocking means between said sections and cross bars for holding said sections in assembled relation.

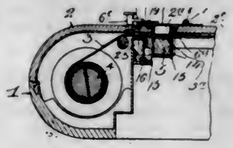
5. In a drawing board, the combination of a plurality of sections capable of being assembled edge to edge to present a suitable drawing-supporting surface; transverse battens having overhanging flanges mounted on the backs of each of said sections; cross bars having projecting portions adapted to slide longitudinally into engaging relation with the overhanging flanges of the battens on a plurality of assembled sections; a straight edge carried by one of said cross bars and extending along the ends of said sections; and clamps carried by said cross bars for forcing said sections into close edge contact.

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1,230,399. PHOTOGRAPHIC APPARATUS. HENRY J. GAISMAN, New York, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 29, 1912. Serial No. 687,018. (Cl. 95—1.1.)

1. A casing for holding sensitized material for photographic exposure, provided with means adapted to coöperate with a stylus to cause markings on a portion of the sensitized material in autographic characters while said material is protected from the action of antinic light and also provided with means for exposing the marked portion of the sensitized material to the action of actinic light, admitted otherwise than through the aperture by which the photographic exposure is made.

2. A holder for sensitized film provided with means for permitting access to the back of the contained film, a member for causing the reproduction upon the face of the film of markings applied against the back of the film, and means for admitting light through said member to the adjacent face of the film.



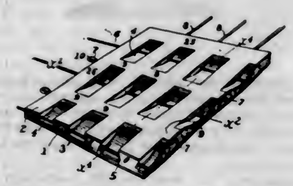
24. A camera having an opening adjacent a portion of its contained film, a member within the camera opposite said opening and provided with a translucid face in front of a portion of said film, said camera having an opening to admit light to said member, a cover for the first named opening, and means to admit light at will through the second named opening.

59. In a holder for photographic film the combination with a casing having an opening through which a limited area of the film is made accessible from the exterior for the application of indicia, and a closure for said opening, of a clamping device for engaging the film and holding it stationary when the closure is open.

[Claims 3 to 23, 25 to 58, and 60 to 66 not printed in the Gazette.]

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1,230,400. PLASTER-BOARD. ELMER T. GALLEY, Huntington Park, Cal. Filed Jan. 31, 1914. Serial No. 816,130. (Cl. 72—124.)



1. A plaster board comprising a cement body having a surface provided with dovetail mortises, and a face plate upon said surface provided with slits opening through said face plate to the dovetail mortises.

2. A plaster board comprising a back plate, a face plate having slits spaced in pairs, the portion of the plate between the adjacent slits of each pair being indented, and a body between and adhering to said plates.

3. A plaster board comprising a body having a surface provided with mortises, a face plate on said surface having slits spaced in pairs, the portion of the plate between the adjacent slits of each pair being indented, and wires extending through said body and through the slits from mortise to mortise, said wires holding the indented portions against the bottoms of the mortises.

4. A plaster board comprising a body having a surface provided with dovetailed mortises, said mortises being expanded at their bottoms and contracted at their inlets, and a face plate provided with slits adjacent the sides of said mortises, the intermediate portion of said face plate being indented into said mortises so that plaster can enter sidewise through the slits and come into contact with the exposed side portions of the body so as to strongly adhere thereto.

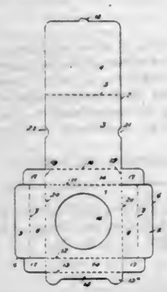
5. A plaster board comprising a body having a surface provided with mortises, a face plate on said surface having slits spaced in pairs, the portion of the plate between the adjacent slits of each pair being indented, a back plate on said body provided with openings, and wires extending through said body and through the slits from mortise to mortise, said wires holding the indented portions against the bottoms of the mortises and one end of each wire projecting from an edge of the plate and the other end of each wire being bent at right angles to the body part of the wire and projecting through the openings of the back plate.

[Claims 6 to 17 not printed in the Gazette.]



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1,230,401. DISPLAY-BOX. LEO F. GOLD, New York, N. Y., assignor to International Folding Paper Box Co., New York, N. Y., a Corporation of New York. Filed Dec. 12, 1916. Serial No. 136,520. (Cl. 229—33.)

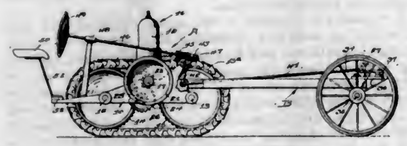


2. A device of the type described for containing merchandise, including a body portion having extending laterally therefrom an elongated flap which body portion forms the front or face and which elongated lateral flap is foldable along a given line, the resultant folds forming the merchandise holding flap and the bottom, respectively, said body portion being additionally folded, the resultant flaps forming the sides, said body portion also being formed with projecting tabs at each corner, one of said side forming flaps being provided with a locking flap having a tongue resting upon said merchandise holding flap and said corner projecting tabs being foldable to engage said merchandise holding flap edgewise.

[Claim 1 not printed in the Gazette.]

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1,230,402. TRACTION-VEHICLE. LESLIE S. HACKNEY, St. Paul, Minn. Filed July 27, 1914. Serial No. 853,300. (Cl. 21—114.)



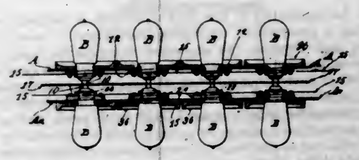
1. In a tractor, a traction carriage comprising a frame, tread supporting wheels on said frame, a flexible caterpillar tread on said wheels, an engine on said frame in operative connection with said tread for driving the same, a driver's seat on the frame, a steering and balancing frame oscillatable vertically on said carriage frame, steering wheels knuckled on said steering frame in positions forward of and at either side of said tread and, actuating means accessible from said driver's seat and in operative connection with said steering wheels.

2. In a tractor, a traction carriage comprising a frame, tread supporting sprocket wheels in said frame, a flexible tread geared with and adapted to travel with the peripheries of said sprocket wheels, an engine on the frame geared with one of said wheels, a steering and balancing frame oscillatable vertically on said first mentioned frame, and a pair of guide wheels on said steering frame arranged forward of and on opposite sides of said tread.

3. In a tractor, a traction carriage comprising a frame, a single traction and supporting device for said carriage, a combination steering and balancing frame tiltable vertically upon said carriage frame, wheels on said combination frame, a steering arm on the carriage frame adapted to be manipulated therefrom and a rod pivoted in said steering arm and operatively connected with said wheels for guiding the same, said pivotal connection between said arm and rod being arranged to rest in the rotative axis of said combination frame, when said wheels are directed to guide the carriage in a straight course.

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1,230,403. CHANGEABLE ELECTRIC SIGN. THOMAS CHRISTIAN HANSEN, Chicago, Ill. Filed Dec. 6, 1916. Serial No. 135,320. (Cl. 40—130.)



1. An electric sign, including, front and rear sides, there being in one or both of said sides a series of horizontally disposed rows of openings in parallel spaced relationship, the openings being in vertical alinement, a nonconducting element connected with each hole, said element being removably secured to said side, a lamp socket for each hole, said lamp socket being secured in said nonconducting element, an electrical conductor, connected to each lamp socket in one row, there being as many electrical conductors as there are rows of sockets, a second electrical conductor, said second electrical conductor being constructed to serve opposing lamps in said sign, and supports in said sign, to sustain the latter electrical conductor in prearranged position in said sign.

4. In an electric changeable sign, the combination, of front and rear walls, said walls being in parallel spaced relationship, there being in said walls a series of horizontally disposed rows of openings, the openings in said rows being in vertical alinement, lamp sockets in said openings, electrical conductors in said sign and connected to said sockets, incandescent lamps in a multiplicity of said sockets but not in all of them, said lamps being so arranged as to spell letters and characters, a second series of horizontally disposed electrical conductors, connected to supply all of the openings, and a reflector for each of said lamps, said reflectors being removably held in position by said lamps, said reflectors being fitted with media of an elastic nature to separate said reflectors from said lamps.

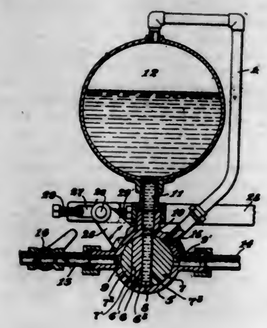
[Claims 2 and 3 not printed in the Gazette.]

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1,230,404. MEANS FOR REGULATING FUEL MIXTURES FOR INTERNAL-COMBUSTION ENGINES. PHILIP D. HIBNER, Seattle, Wash. Filed July 18, 1916. Serial No. 109,989. (Cl. 123—138.)

1. In apparatus of the class described, the combination with a closed reservoir for liquid, a valve having a passageway therein, a casing for the valve, said casing being provided with a port communicating with said reservoir, an air inlet port, and an exhaust port, communicative connection between said reservoir and the interior of the casing between the first-named port and said exhaust

port, and means to actuate the valve to cause the way thereof to be successively brought into communication with the respective ports and likewise with the aforesaid connection.



2. In apparatus of the class described, a two-part valve having a passageway extending diametrically through the valve and between the aforesaid valve parts, means for adjustably moving one of said valve parts with respect to the other part for regulating the capacity of said passageway, a casing for the valve, said casing being provided with two circumferentially spaced fluid inlet ports and a discharge port, and means to actuate said valve whereby the way thereof is alternately brought into register with one of said inlet ports and to make communicative connection between the other inlet port and said discharge port.

3. In apparatus of the class described, an oscillatory valve having a passageway extending diametrically therethrough, a casing for the valve, said casing being provided with two circumferentially spaced fluid inlet ports and a discharge port, means to oscillate said valve whereby the way thereof is alternately brought into register with one of said inlet ports and to make communicative connection between the other inlet port and said discharge port, and adjustable devices provided on the valve-operating means whereby the latter becomes inoperable to influence the valve for predetermined lengths of time when the valve passageway is brought into register with each of said inlet ports.

4. In apparatus of the class described, a casing having inlet and outlet openings, means for delivering air and liquid to the respective inlets, and a power-actuating means provided in said casing and having a passageway extending diametrically therethrough to accommodate the liquid and transfer the same into position to be expelled through said outlet opening by means of a current of air admitted through the inlet opening therefor, said means being adjustable to vary the capacity of said passageway with respect to the liquid.

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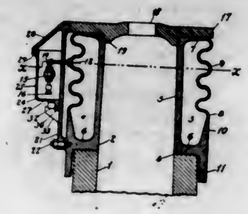
1,230,405. INGOT-MOLD. SAMUEL E. HITT, Elyria, Ohio, and JOSEPH I. PEYTON, Johnstown, Pa. Filed Nov. 29, 1916. Serial No. 134,092. (Cl. 22—147.)

1. An ingot mold, a removable head therefor constituting a vacuum chamber, and having means of compensating the difference of expansion and contraction between the inner and outer walls of the said vacuum chamber.

2. An ingot mold, a removable head therefor constituting a vacuum chamber with corrugated outer wall, an aperture in said chamber and means of closure of the said aperture.

3. An ingot mold, a removable head therefor constituting a vacuum chamber with corrugated outer wall, an aperture in said chamber, a valve closure for said aperture and means for protecting the said valve.

4. An ingot mold, a removable head therefor constituting a vacuum chamber with corrugated outer wall, an aperture in said chamber, a valve closure for said aperture, means for protecting the said valve and a cover for protecting the top of the said vacuum chamber.

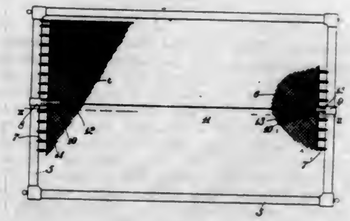


5. An ingot mold, a removable head therefor constituting a vacuum chamber with corrugated outer wall, an aperture in said chamber, a valve closure for said aperture, a hooded base 21 secured to the chamber bottom 6, a cover 17 for the vacuum chamber, the said base 21 arranged for vertical movement relatively to the said cover 17.

[Claim 6 not printed in the Gazette.]

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1,230,406. BED-SPRING-DIVIDING MEMBER. WILLIAM H. HOLMES, Columbus, Ohio. Filed June 13, 1916. Serial No. 103,392. (Cl. 5—41.)



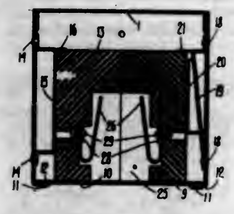
1. Means for dividing a bed spring longitudinally substantially as described consisting of a detachable strand applied beneath the mattress and adapted to have supporting contact therewith, means for attaching one end of said strand to one end of the spring frame and means for attaching the other end of the strand to the opposite end of said frame including a hook and a coöperating lever for engaging the strand with said hook and disengaging the strand therefrom.

2. Means for dividing a bed spring longitudinally substantially as described consisting of a detachable strand applied beneath the mattress and adapted to have supporting contact therewith, means for attaching one end of said strand to one end of the spring frame and means for attaching the other end of the strand to the opposite end of said frame including a hook and a lever fulcrumed in said hook for engaging the strand with said hook and disengaging the strand therefrom.

3. Means for dividing a bed spring longitudinally substantially as described consisting of a detachable strand applied beneath the mattress and adapted to have supporting contact therewith, means for attaching one end of said strand to one end of the spring frame and means for attaching the other end of the strand to the opposite end of said frame including a hook and a coöperating lever for engaging the strand with said hook and disengaging the strand therefrom and means on said lever for retaining the strand engaged with the lever when disengaged from the hook.



1,230,407. ELECTRICAL SWITCH. BRYSON D. HORTON, Detroit, Mich. Filed Mar. 24, 1915. Serial No. 16,611. (Cl. 173—338.)



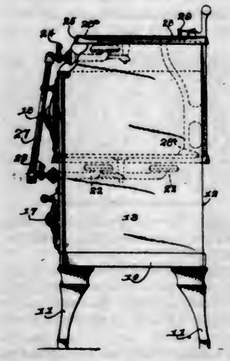
1. In an electrical switch, the combination of a metallic housing, a removable contact carrying base, adjustable means for positioning and holding the base therein, said means comprising a wall piece having an inclined surface, a laterally extending flange provided with a slot formed upon said wall piece, an L-shaped member, and a fastening element carried by said member and adapted to coöperate with the slot of said flange, whereby the L-shaped member may be adjusted relative to the wall piece, so as to rigidly hold the base in position.

2. In an electrical switch, the combination of a metallic housing, a removable contact carrying base, adjustable means for positioning and holding the base therein, said means including a pair of opposing wall pieces, each provided with alining members for limiting the movement of said base, one of said wall pieces having an inclined surface provided with a laterally extending flange having a slot formed therein, and an L-shaped member provided with a fastening element adapted to coöperate with the slot in said flange, whereby the base member may be rigidly held in position.

3. In an electrical switch, adjustable means for retaining a contact-carrying base in operative position, said means comprising a wedge shaped adjustable device adapted to coöperate with the side of the base to hold it in rigid position.

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1,230,408. GAS-RANGE. HARRY W. HUNTER and MARTIN W. LONGFELLOW, Baltimore, Md., assignors to The Baltimore Gas Appliance and Manufacturing Co., Baltimore, Md., a Corporation of Maryland. Filed Sept. 7, 1915. Serial No. 49,284. (Cl. 126—39.)



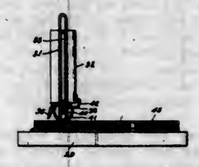
1. An improved gas range comprising a body provided with superposed baking and broiling ovens, a cooking top located above the uppermost oven and spaced therefrom, said cooking top being provided with inwardly beveled peripheral portions and a heating portion, burners located in the space between said cooking top and the ovens.

4. An improved gas range comprising a body provided with superposed baking and broiling ovens, a partition wall forming end walls for said oven, a cooking top located above the uppermost oven and spaced therefrom, said cooking top being provided with inwardly beveled peripheral portions and a heating portion, a side extension projecting from said partition wall and provided with burners, a warming oven coinciding with said side extension and located below said burners, burners for said baking and broiling ovens, and burners located in the space between said cooking top and the ovens.

[Claims 2 and 3 not printed in the Gazette.]

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1,230,409. DEVICE FOR APPLYING ADHESIVE MATTER. HIDETARO ICHIHARA, Port Blakely, Wash. Filed June 6, 1916. Serial No. 102,105. (Cl. 93—68.)



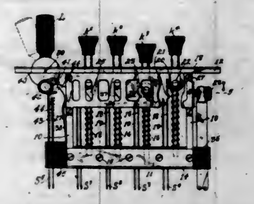
1. A device of the class described comprising a base, vertical guide-standards carried thereby, an adhesive applying receptacle slidably associated with said standards, the bottom of said receptacle having an opening therein, and a swinging gate closure and swinging adhesive roller interchangeably associated with said opening, and exteriorly positioned relative to the receptacle.

2. An adhesive applying device having an exit opening therein, movable means for sealing said opening, and adhesive applying means movable to a position adjacent the opening upon removal of the sealing means, the sealing and adhesive applying means being swingingly mounted on opposite sides of said opening and moving in opposed directions.

3. Means for applying adhesive including base-supported standards, an adhesive receptacle, side lugs carried by the receptacle for sliding engagement with said standards, there being an opening in said receptacle, a tensioned flap-valve adapted to close said opening, and a tensioned roller movable to a position adjacent said opening when the flap-valve is opened, the valve and roller being positioned exteriorly of the receptacle.

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1,230,410. OPERATOR'S KEY. WILLIAM KAISLING, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Original application filed Mar. 7, 1907, Serial No. 361,130. Divided and this application filed Apr. 15, 1912. Serial No. 690,968. (Cl. 179—177.)



1. In a selective ringing key, the combination with a plurality of longitudinally reciprocating plungers having ringing and indicating positions and associated sets of contact springs adapted to be individually actuated thereby, of transversely extending detents respectively provided upon said plungers, a universal slide-bar equipped with

angularly disposed recesses and under-cut points associated with said detents to hold said plungers when moved to an indicating position, a set of spring contacts for said slide-bar, and coöperating means between said plungers and slide-bar whereby said set of contacts is operated upon movement of any plunger to its ringing position.

2. A telephone key comprising longitudinally reciprocating actuating keys having fully depressed and intermediate positions, sets of spring contacts for said keys, catch projections for said keys, a sliding catch-bar adapted to engage the catch projection of an actuated key and hold it in its intermediate-position, a set of contacts controlled by said catch-bar, and means whereby said catch-bar is transversely moved to operate its set of contacts when any key is moved to its fully depressed position.

3. A telephone key comprising longitudinally reciprocating actuating keys, sets of spring contacts for said keys, a catch bar adapted to coöperate with said keys for holding them in an actuated position, means for slidingly supporting said catch bar in operative relation to said keys whereby said bar is transversely moved when any of said keys are depressed, a common set of contacts under the exclusive control of said catch bar, and means whereby said catch bar is transversely moved to operate said common set of contacts each time one of said plungers is depressed.

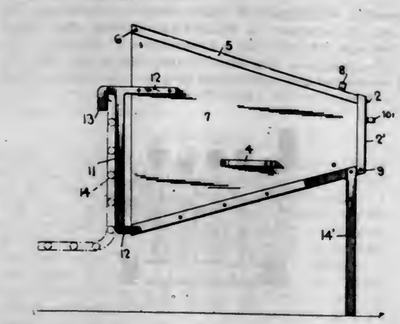
4. A telephone key comprising longitudinally reciprocating actuating keys having laterally projecting catch pins, sets of spring contacts for said keys, a catch bar slidingly supported and adapted to engage the catch pin of an actuated key to hold it in an operated position, means to prevent the transverse movement of the catch pins, a set of contacts common to said keys, means for independently operating said set, said catch bar when moved to engage the catch pin of an actuated key being adapted to restore said common set of contacts, and an auxiliary set of contacts under the exclusive control of said catch bar.

5. A key comprising actuating plungers, sets of spring contacts for said plungers, a common slidably mounted plate for locking said plungers when moved to an actuated position, means normally holding said plate in a locking position whereby when a plunger is depressed said plate is moved out of its normal position and is restored by said means to hold the actuated plunger, and a common set of contacts under sole control of said plate and actuated thereby when a plunger is depressed.

[Claims 6 to 15 not printed in the Gazette.]

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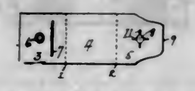
1,230,411. SAD-IRON HEATER. GEORGE W. KEPLINGER, Nortonville, Ky. Filed Oct. 28, 1915. Serial No. 58,361. (Cl. 126—336.)



The combination in a heater for sad irons of a casing having a bottom and side walls converging toward their outer ends, a closure pivoted to the upper side of said casing and closing the same, a closure pivoted to the outer end of the casing and engaging the first mentioned closure for completely closing the outer end of the casing, the inner end of said casing being opened, brackets secured to the opposite sides of the casing and including vertical members having outwardly directed arms secured to the sides of the casing and a hook at the upper end for engaging a grate or the like, legs secured to the opposite ends of the casing for resting upon the floor to support the outer end thereof, and a shelf disposed within said casing.

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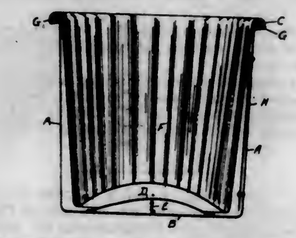
1,230,412. MARKING-TICKET. EARL L. KINCH, Waterbury, Conn., assignor to Waterbury Buckle Company, Waterbury, Conn., a Corporation of Connecticut. Filed Mar. 31, 1916. Serial No. 87,942. (Cl. 40—23.)



A marking ticket comprising a strip of material adapted to encircle an article to be marked, one end being narrowed to form a tongue, the other end being slotted to receive the tongue, the length of the slot being equal to the width of the tongue where the two intersect, a button on the strip adjacent to the slot, the strip being perforated at a point directly over the button when the tongue is in the slot, said perforation being adapted to engage the button.

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1,230,413. NIGHT-SOIL PAN AND DESTROYABLE LINING THEREFOR. GEORGE EDWARD KINCH, Quirindi, New South Wales, Australia. Filed Oct. 14, 1915. Serial No. 55,849. (Cl. 4—33.)



2. The combination with a nightsoil pan of a liner fitted loosely therein so as to leave a space between its lower end and the pan bottom, and means normally lying inoperatively within said space but movable to engage the lower end of the liner to eject said liner when the pan is inverted.

4. The combination with a nightsoil pan of a liner fitted loosely therein so as to leave a space between its lower end and the pan bottom, means normally lying inoperatively within said space but movable to engage the lower end of the liner to eject said liner when the pan is inverted, and a by-pass for admitting air to the space between the lower end of the liner and the pan bottom.

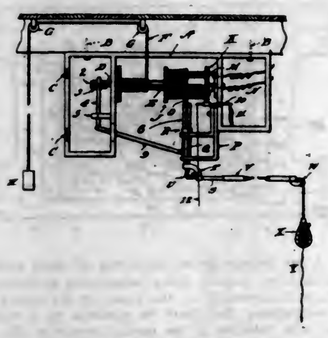
[Claims 1 and 3 not printed in the Gazette.]

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1,230,414. TAKE-UP DEVICE FOR LAMP-CORDS. JACOB A. KNAPP, Tremont, Ill. Filed Jan. 8, 1917. Serial No. 141,300. (Cl. 248—10.)

1. The combination with a suitable supporting frame for attachment to a support, of a drum rotatably mounted on the frame, a cable arranged to wind upon the drum, and including a weight, an arm having a permanent substantially horizontal position supported opposite said drum, and adapted to swing, a lamp cord arranged to wind on the drum and including a lamp, and means for conducting an electric current to said cord.

3. In combination with a suitable frame, a drum rotatably mounted on the same, a cable adapted to wind upon the same, including a weight, an arm disposed permanently in a substantially horizontal position suspended on the frame with one terminal opposite the drum and adapted to swing and including a tubular vertical extension constituting a support for the arm, a lamp cord extending through said vertical extension and extending along the arm and arranged to wind upon the drum, and connections on said drum for conducting current to the cord at its end of the drum.

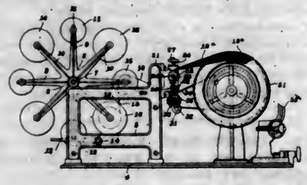


4. The combination with a suitable frame, of a drum rotatably mounted thereon, a cable arranged to wind thereon including a weight, a lamp cord also arranged to wind upon the drum, and mechanism in control of the cord and operated by the drum in its rotation adapted to guide the said cord upon the drum whereby to dispose the same in an even winding on said drum.

[Claims 2 and 5 to 7 not printed in the Gazette.]

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1,230,415. TIRE-MACHINE. FRANKLIN W. KREMER, Carlstadt, N. J. Filed Dec. 12, 1914. Serial No. 876,948. (Cl. 154—10.)



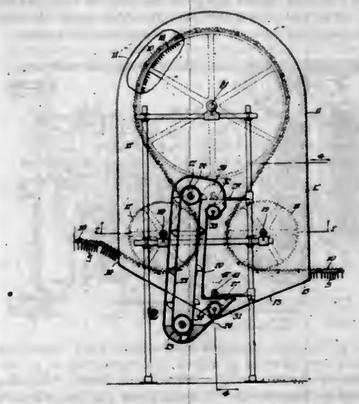
1. A device of the character described comprising a rotating mandrel, a pair of rollers for engaging a rubberized fabric and feeding the same on to said mandrel, means for adjusting one of said rollers relatively to the other, gearing members connecting said rollers together so as to render positive their movements relatively to each other, and mechanism connected with said mandrel and driven thereby, said mechanism also being connected to said gear members for driving said rollers, the proportions of the parts being such that said fabric, after leaving said rollers and before contacting with said mandrel, is stretched.

2. A tire machine comprising a rotating mandrel, a sprocket wheel connected to rotate therewith, a supplemental shaft having a sprocket wheel thereon, a sprocket chain connecting said sprocket wheel, a removable gear wheel on said supplemental shafts, and a pair of fabric clamping rollers geared up with said gear wheel and with each other.

3. A tire building machine embodying a power driven ring core, a stock roll for carrying sheeted tire material, feed rolls geared together for delivering the material from the stock roll in a circuitous path to the ring core, a drive shaft geared to the feed rolls for rotating the feed rolls, means for driving the ring core, and means for positively driving said drive shaft from said core driving means.



1,230,416. MEANS FOR TREATING MATCH-SPLINTS WITH POWDERED MATERIAL. FREDERICK W. LANE, Chico, Cal., assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 19, 1916. Serial No. 126,503. (Cl. 91—59.)



1. In a match machine having a splint carrier, a chamber having an inlet and outlet for the carrier, means for guiding the carrier with its splints upwardly within the chamber, and means for effecting a fall of anti-glowing powder upon the upwardly traveling splints within the chamber.

2. In a match machine having a splint carrier, a chamber having an inlet and outlet for the carrier, means for guiding the carrier, with its splints, upwardly and downwardly within the chamber, and means for supplying powder to and among the splints during their upward and downward travel within the chamber.

3. In a match machine having a splint carrier, a chamber having an inlet and outlet for the carrier, means for guiding the carrier, with its splints, in a loop-like path within the chamber, and means embraced by the loop of the carrier for effecting a fall of anti-glowing material upon and among the splints on the oppositely-moving lower portions of said loop.

4. In a match machine having a splint carrier, a chamber having an inlet and outlet for the carrier, means for guiding the carrier, with its splints, in a loop-like path within the chamber, an elevator-leg, means for feeding anti-glowing powder from the bottom of said chamber to the lower portion of the elevator-leg, and means for feeding the powder from the top of the elevator-leg to the interior of the chamber and discharging it upon and among the splints on the lower portions of the loop of the carrier.

5. In a match machine having a splint carrier, a chamber having an inlet and outlet for the carrier, means for guiding the carrier, with its splints in a loop-like path within the chamber, an elevator-leg having upper and lower troughs extending transversely of the chamber, the upper trough being embraced by the loop of the carrier, means for feeding anti-glowing powder from the lower trough to the bottom of the elevator-leg, and means for feeding the powder from the top of the elevator-leg to and along the upper trough.

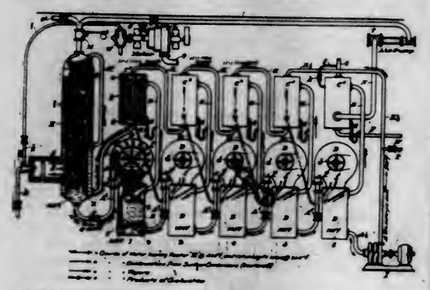
[Claims 6 to 10 not printed in the Gazette.]

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1,230,417. PROCESS OF EMPLOYING HEAT FOR THE PRODUCTION OF POWER. SAMUEL MORRIS LILLIE, Philadelphia, Pa. Filed Apr. 15, 1914. Serial No. 831,892. Renewed July 17, 1916. Serial No. 109,811. (Cl. 60—4.)

1. The process of obtaining power from heat consisting in bringing hot gaseous products of combustion of a

fuel into inmate contact with a liquid and thereby heating it to a higher temperature; in separating the uncondensed gaseous products of combustion from the heated liquid; in leading this heated liquid into a space in which the pressure is lower than the boiling pressure of the liquid at the said higher temperature, and in using vapor formed from the liquid on entering the space of said lower pressure in a motor for the production of power.



2. The process of obtaining power from heat consisting in bringing hot gaseous products of combustion of a fuel into intimate contact with a liquid and thereby heating it to a higher temperature; in separating the uncondensed gaseous products of combustion from the heated liquid; in leading this heated liquid into a space in which the pressure is lower than the boiling pressure of the liquid at the said higher temperature, and in using the liquid entering the space of said lower pressure in a motor for the production of power.

3. The process of obtaining power from heat consisting in bringing the hot gaseous products of combustion of a fuel into intimate contact with a liquid in a vessel, and thereby heating the liquid to a higher temperature; in separating the uncondensed gaseous products of combustion from the heated liquid; in leading this heated liquid into a space in which the pressure is lower than the boiling pressure of the liquid at the said higher temperature; and in using for the production of power the liquid entering the space of the said lower pressure, and the steam flashed from the liquid due to the lower pressure.

4. The process of obtaining power from heat consisting in bringing hot gaseous products of combustion of a fuel into intimate contact with a liquid and thereby heating it to a higher temperature; in separating the uncondensed gaseous products of combustion from the heated liquid; in leading this heated liquid into a space in which the pressure is lower than the boiling pressure of the liquid at the said higher temperature; in using the liquid on entering the space of said lower pressure in a motor for the production of power; in reheating the unvaporized liquid by intimate contact with gaseous products of combustion and again leading it to suitable motors for the production of power.

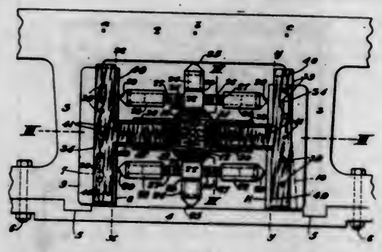
5. The process of obtaining power from heat consisting in bringing the hot gaseous products of combustion of a fuel into intimate contact with a liquid in a closed vessel, and thereby heating the liquid to a higher temperature; in separating the uncondensed gaseous products of combustion from the heated liquid, and in leading the uncondensed gaseous products of combustion from the said closed vessel into a motor operating under lower pressure than that existing in the said closed vessel and thereby obtaining power from the said gaseous products of combustion.

[Claims 6 to 20 not printed in the Gazette.]

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1,230,418. DEVICE FOR LAYING OFF SHOES AND WEDGES. JOSEPH D. LOGAN, Darragh, Pa. Filed Mar. 20, 1915. Serial No. 15,946. (Cl. 33—191.)

1. A flat templet device for laying off shoes and wedges of locomotive journal boxes having a shaft arranged transversely to the plane of said device, means for centralizing the device in position in a locomotive frame with relation to the normal center of the journal to be mounted in said box, and arms mounted on said shaft provided with openings defining lines on the shoes and wedges parallel to the plane of the flat templet.



2. A flat templet device for laying off shoes and wedges of locomotive journal boxes comprising a central shaft arranged transversely to the plane of the device, means for centralizing the shaft in position in a locomotive frame with relation to the normal center of the journal to be mounted in said box, and arms mounted on said shaft having longitudinally adjustable portions provided with openings defining lines on the shoes and wedges parallel to the plane of the flat templet.

3. The combination with a locomotive journal box housing frame adapted to provide a mounting for shoes and wedges, of a flat templet device having adjustable bracing portions adapted to be set with relation to the locomotive frame and provided with a central shaft arranged transversely to the plane of the device, and marking frames mounted on said shaft.

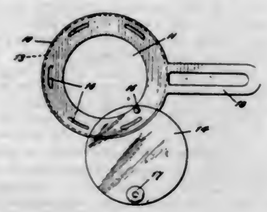
4. In combination, a centralizing shaft, a hub therefor provided with extensible locating arms, and arms fixedly positioned with relation to said shaft and provided with adjustable templets having marking holes.

5. In combination, a shaft, a hub having devices whereby to locate and fix said shaft in the normal center of a locomotive journal box, and an adjustable templet mounted on the shaft in a plane at right angles to said center.

[Claims 6 to 11 not printed in the Gazette.]

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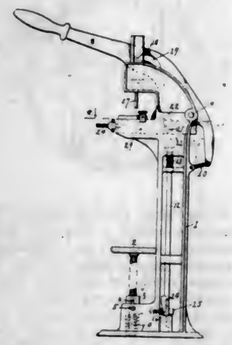
1,230,419. COVER FOR COOKING-POTS. ELLA H. LOWE, Tarrytown, N. Y. Filed May 5, 1915. Serial No. 25,956. (Cl. 53—8.)



A cover for cooking pots and the like, comprising a metallic supporting plate having a centrally disposed opening and a flat upper surface, means for retaining said plate on a pot against lateral movement, a transparent cover pivotally secured to said plate adjacent the edge of the circular opening therein and adapted to be swung to cover and uncover said opening, means on said cover for swinging the same to open and closed position and a U-shaped handle extending from one edge of the plate and integral therewith, said handle having a flat upper surface lying in the same horizontal plane as the flat upper surface of the supporting plate and forming in effect a continuation thereof, the junction between the said plate and handle being located ajacent the pivotal point of the cover and plate thereby adapting said handle to serve as a support for said cover when the latter is in open position substantially as and for the purpose described.

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1,230,420. CORKING-MACHINE. JACOB WILLIAM LÜCK, Brooklyn, N. Y., assignor to Oscar Heyman & Company, New York, N. Y., a Corporation of New York. Filed Feb. 11, 1914. Serial No. 818,063. (Cl. 226—6.)



1. In a bottle corking machine, the combination of a standard, a slide in the foot thereof, a bottle support adjustably mounted in the slide, a locking bolt in the foot adapted to engage the slide, operating mechanism, a cam face thereon, a rod one end of which bears against the cam face and a wedge on the rod adjacent to the locking bolt whereby said bolt will engage the slide on the movement of the operating mechanism.

2. Cork compressor mechanism comprising a main frame, a second frame slidably mounted therein, a U-shaped block mounted in the second frame, means for longitudinally adjusting the position of said U-block, a bearing pin within the main frame provided with eccentric pivots, means for adjusting the position of said pin and a pair of jaws swingingly mounted on said pin.

3. A cork compressor mechanism comprising a main frame, a compressor frame slidably mounted therein, a U-shaped block mounted in the compressor frame, a bearing pin having its ends mounted in the main frame and occupying a fixed position with respect to the slidable compressor frame, and a pair of compressor jaws both of which are pivotally mounted on said pin.

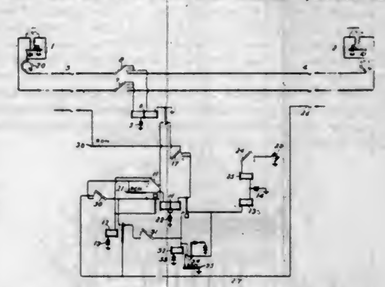
4. A cork compressor mechanism comprising a main frame, a compressor frame slidably mounted therein, a U-shaped block carried by the compressor frame, means for adjusting said block longitudinally of the frame, a bearing pin having its ends mounted in the main frame and occupying a fixed position with respect to the slidable frame, said pin also being in the path of movement of the U-block carried by the frame, a pair of concentric spring-opened compressor jaws mounted on said bearing pin and having an actuating engagement with the U-shaped block in the slidable frame.

5. A cork compressor mechanism comprising a main frame, a compressor frame slidably mounted therein, an adjustable block carried by the compressor frame and having a notch of variable width, a pin having its ends mounted in the main frame in a fixed position with respect to the slidable frame, and having an eccentric bearing portion, a knob carried by said pin for rotatably adjusting the same in its bearings in the main frame, and a pair of spring tensioned compressor jaws concentrically mounted on the eccentric bearing portion of said pin, and having an actuating engagement with the sides of the notch in said block carried by the main frame.

[Claims 6 to 8 not printed in the Gazette.]

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1,230,421. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. ALBEN E. LUNDELL, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 28, 1915. Serial No. 36,738. (Cl. 179—18.)



1. In a telephone exchange system, incoming lines and outgoing lines, a selector switch for extending an incoming line toward an outgoing line, an impulse receiving mechanism associated with said selector switch, a normally disconnected electromagnetic means controllable by said impulse receiving mechanism for operating said selector switch, two magnets, and means for connecting into circuit said electromagnetic means upon the first operation of one of said magnets while the other one of said magnets is in normal condition.

2. In a telephone exchange system, incoming lines and outgoing lines, a selector switch for extending an incoming line toward an outgoing line, a line relay associated with said selector switch, a normally disconnected electromagnetic means controllable by said line relay for operating said selector switch, a quick and a slow acting electromagnet and means for connecting into circuit said electromagnetic means upon the first actuation of said quick acting magnet, while said slow-acting magnet remains in normal condition.

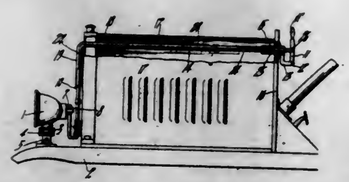
3. In a telephone exchange system, incoming lines and outgoing lines, a selector switch for extending an incoming line toward an outgoing line, a line relay associated with said selector switch, a normally disconnected electromagnetic means controllable by said line relay for operating said selector switch, a quick and a slow acting electromagnet, means operative upon the first actuation of said line relay for operating said quick acting magnet, and means for connecting into circuit said electromagnetic means upon the first actuation of said quick acting magnet while said slow acting magnet is in normal condition.

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1,230,422. UNIVERSAL DIRECTION CONTROL FOR VEHICLE-HEADLIGHTS. ROWLAND LYTTLE, Los Angeles, Cal., assignor of one-half to Edward Jesurun, Palo Alto, Cal. Filed Apr. 24, 1916. Serial No. 93,141. (Cl. 240—61.)

1. A universal directing means for a vehicle headlight comprising a universal bearing support for the headlight, a rotatably mounted rigid tubular member, a lever hinged on said tubular member to turn therewith in transverse movement of the lever, and to turn thereon in movement of the lever in a plane parallel to the axis of said tubular member, and a member extending longitudinally within said tubular member and guided therein, and connected to the bearing support for the headlight and to said lever, to turn the headlight vertically in movement of the lever in a plane parallel to the axis of said tubular member, and said tubular member being adapted to turn the headlight horizontally in transverse movement of the lever.

2. The combination of two vehicle headlights, universal bearing supports therefor, a member extending crosswise of the vehicle and pivotally connected to said bearing supports to operate the headlights in unison in both horizontal and vertical movements, a tubular member mounted to rock on its longitudinal axis, a lever hinged on said tubular member to rock therewith but to turn thereon in a plane parallel to said longitudinal axis of said tubular member, a sliding member extending longitudinally within said tubular member and sliding therein, and connected to said lever to be operated by the movement of said lever in a plane parallel to the axis of the tubular member, and means connecting said tubular member and said sliding member to the aforesaid member extending crosswise of the vehicle and connected to the universal supports for the headlights to operate the headlights horizontally in rocking movement of said tubular member and to operate the headlights vertically in the longitudinal sliding movement of said sliding member.



3. Universal bearing supports for the headlights, a bar pivotally connected thereto to operate the same in unison, a rockingly mounted tubular member connected to said bar to turn the headlights horizontally, a lever pivotally mounted on said rocking member to move at right angles to the plane of rotation of said rocking member, a flexible member connected to said lever and extending within said rocking member and connected to the headlight to turn the same vertically on movement of said lever on said rocking member, said lever being connected to the rocking member to rock the same on movement of the lever in the plane of rotation of the rocking member.

4. Universal bearing supports for the headlights, a bar pivotally connected thereto to operate the same in unison, a rocking member formed as a rigid tube, means connecting said rocking member to the said bar to swing the headlights horizontally on rocking movement of said rocking member, a flexible member sliding longitudinally within said rocking member and connected to the headlight to operate the same vertically on longitudinal movement of said flexible member, and a lever mounted on said rocking member to rock said rocking member in one direction of movement of said lever, said lever being connected to the flexible member to operate the same longitudinally in another direction of movement of said lever.

5. A universal directing means for vehicle headlights, comprising a universal bearing support for the headlight, a rocking tubular member having a tubular arm, a flexible member connected to operate said headlight and extending through the tubular arm and through the tubular rocking member, and a lever pivotally mounted on said rocking member and adapted to rotate the rocking member by movement of the said lever in one direction and connected to operate said flexible member by pivotal movement of said lever on said rocking member.

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1,230,423. FIRE-EXTINGUISHER. HARRY M. MCCASLIN, Elmira, N. Y., assignor to American La France Fire Engine Company, Inc., Elmira, N. Y., a Corporation of New York. Filed Apr. 12, 1916. Serial No. 90,688. (Cl. 169—17.)

1. In an extinguisher, the combination of a fluid container, a pump casing, a reversible rotary pump operating in said casing, means communicating between said pump casing and the container, a discharge nozzle and valved passage ways leading from opposite sides of said casing to said discharge nozzle.



4. In an extinguisher, the combination of a liquid container, a discharge nozzle, a reversible rotary pump arranged between the container and discharge nozzle, inlet and outlet passage ways leading into and out of opposite sides of the pump, means for operating said pump, a valve controlling the inlet passage ways between the pump and container and having two open positions, pump operating means, and means actuated by said operating means adapted to move said valve into its closed or its two open positions.

9. In an extinguisher, the combination of a liquid container, a pump casing communicating with said container, a discharge nozzle leading respectively from said pump casing, a rotary pump operating in said casing, a crank for operating said pump, a rotary valve, between the pump casing and container, operating upon an axis approximately parallel to the axis of rotation of said crank, an arm projecting from said valve approximately parallel with said crank, and a pin carried by said crank adapted to engage said valve arm.

12. In an extinguisher, the combination of a liquid container, a pump casing communicating with said container, a discharge nozzle leading from said pump casing, a rotary pump operating in said casing, a crank for operating said pump, a valve arranged between the pump casing and container, a pair of spaced spring arms secured upon said valve and formed with oppositely curved outer ends, said spring arms being located approximately parallel to said crank, and a pin carried by said crank adapted to engage said spring arms for operating said valve.

[Claims 2, 3, 5 to 8, 10, 11, and 13 not printed in the Gazette.]

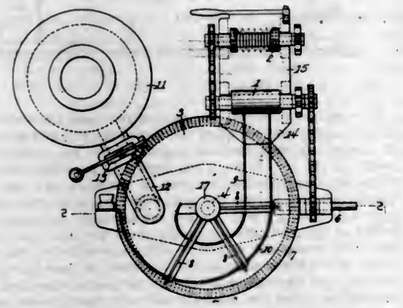
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1,230,424. GLASS-FEEDING TABLE. WILLIAM H. MCSWAIN, Moundsville, W. Va., and HARRY W. MCSWAIN, Detroit, Mich. Filed Oct. 6, 1916. Serial No. 124,064. (Cl. 49—3.)

1. The combination with a set of rolls for forming sheet glass, of apparatus for feeding glass to said rolls, said apparatus comprising a horizontal table disposed adjacent to said rolls, means for rotating said table at a uniform speed, a pair of guides suspended over said table, said guides having their inner end portions disposed to form an intervening passageway upon the surface of and tangential with respect to said table, and means for supplying molten glass to said table in a continuous stream.

2. The combination with a set of rolls for forming sheet glass, of apparatus for feeding glass to said rolls, said apparatus comprising a horizontal table disposed adjacent to said rolls, means for rotating said table at a uniform speed, a pair of guides suspended over said table, said guides being arranged to form an intervening passageway upon the surface of the table, the inner end of said passageway being tangential with respect to the table and at a right angle to said rolls, and means for depositing molten glass in a continuous stream within the outer end of said passageway.





3. The combination with a set of rolls for forming sheet glass, of apparatus for feeding glass to said rolls, said apparatus comprising a horizontal table disposed adjacent to said rolls, means for rotating said table at a uniform speed, a pair of guides suspended over said table, said guides being arranged to form an intervening passageway upon the surface of the table, said passageway being curved and eccentric at its outer end, and being straight and tangential to said table at its inner end for guiding material directly to said rolls, and means for depositing molten glass in a continuous stream within the outer end of said passageway.

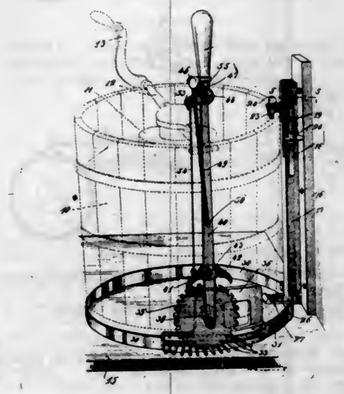
4. The combination with a set of rolls for forming sheet glass, of apparatus for feeding glass to said rolls, said apparatus comprising a horizontal table disposed adjacent to said rolls, means for rotating said table at a uniform speed, a pair of guides suspended in stationary positions over said table and close to the surface of the latter, said guides having their outer end portions arcuately curved and disposed to form a curved passageway adjacent to the edge of said table, and having their inner end portions straight and in parallelism to form a straight continuation of said passageway which leads off said table substantially at a tangent to the latter and in direct feeding alinement with said rolls, and means for depositing molten glass on said table adjacent to the outer end of said passageway.

5. The combination with a set of rolls for forming sheet glass, of apparatus for feeding glass to said rolls, said apparatus comprising an upright shaft located in front of and laterally with respect to said rolls, a table rotatable on said shaft, means for depositing molten glass on said table adjacent to the edge of the later, a pair of guides supported over said table and forming therebetween a passageway for said glass over said table, the inner end of said passageway being straight and substantially tangential with respect to said table and leading directly from the latter to said rolls, and the outer end of said passageway being curved and adapted to receive therein the deposited glass as said table rotates.

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1,230,425. TUB-SECURING SUPPORT. THOMAS S. MORTON, Tuxedo Park, N. Y. Filed Oct. 20, 1916. Serial No. 127,854. (Cl. 248—41.)

1. In a support for securing tubs, the combination with a platform, an upright standard rigidly engaged therewith and means for securing said standard to a vertical support, of a hook slidable in said standard, said hook being adapted to engage with the upper edge of a tub, means for securing said hook in an adjusted position, means at the bottom of said standard engageable with the lower edge of the tub, means for engaging the tub circumferentially near its bottom with said platform, and means for tightening or loosening said engaging means.



2. In a support for securing tubs, the combination with a platform and a standard rising therefrom, of means for engaging the top of a tub to said standard, a pair of straps attached at one end to said standard, said straps encircling the tub at the bottom, pins secured upon one of said straps, a gear operatively engaging with said pins, a lever having pawls engageable with the teeth of said gear, and means combined with said lever whereby said gear may be turned in either direction thereby tightening or loosening said straps with relation to the tub.

3. In a support for securing tubs, the combination with a platform, a standard rigidly affixed near one edge of said platform, means combined with the upper end of said standard adapted to adjustably engage the upper edge of said tub, means at the bottom of said standard engageable with the lower edge of said tub, a flexible band attached at one end to said standard and partially encircling the tub, a second flexible band attached upon the opposite side of said standard, a bracket combined therewith, said bracket slidably receiving the free end of the first mentioned band, teeth set in the first mentioned band, a gear pivotally supported in said bracket engaging with said teeth, a lever fulcrumed on said bracket, a double ended pawl carried by said lever, said pawl being engageable with the teeth of said gear and adapted to convey rotary motion upon oscillating said lever, and means carried by said lever for causing either end of said pawl to engage with said gear, whereby said bands may be retracted or expanded relative to the body of the tub.

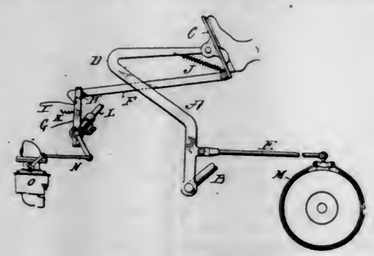
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1,230,426. CONTROLLING APPARATUS FOR MOTOR-CARRIAGES. THOMAS E. MURRAY, Jr., Brooklyn, N. Y. Filed Oct. 18, 1916. Serial No. 126,250. (Cl. 74—81.)

1. A controlling apparatus for motor carriages, comprising a brake, a fuel supply regulator, a single operating member, and means connected to said operating member and to said fuel supply regulator and said brake for actuating said regulator and said brake each independently of the other.

4. A power and brake-controlling apparatus for motor carriages, comprising a pivoted brake-controlling lever, a pivoted power-controlling lever having a transverse opening, a pedal pivoted on said brake-controlling lever, and a link pivoted to said pedal and extending through said opening and having a shoulder engaging with said power-controlling lever; whereby said pedal may be tilted on its pivot to cause said shoulder to engage with said power-control-

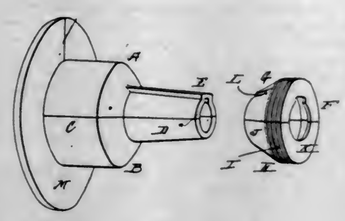
ling lever to operate the same, and whereby when said pedal is moved to actuate said brake-controlling lever, said link is caused to slide freely through said opening in said



power-controlling lever without operating said power-controlling lever.

[Claims 2, 3, and 5 not printed in the Gazette.]

1,230,427. SHEET-METAL HUB. THOMAS E. MURRAY, New York, N. Y. Filed Jan. 10, 1917. Serial No. 141,545. (Cl. 21—31.)



1. A tubular hub of sheet metal formed of two longitudinally divided half sections homogeneously united at their registering edges and comprising a tube, a contracted tube in front thereof, and an externally threaded sleeve secured at the outer end of said contracted tube.

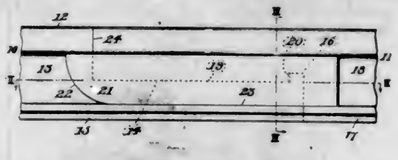
2. A tubular hub of sheet metal formed of two longitudinally divided half sections homogeneously united at their registering edges and comprising a rear tube, a contracted tube in front thereof, and a threaded sleeve separately formed and receiving said contracted tube.

3. A tubular hub of sheet metal formed of two longitudinally divided half sections homogeneously united at their registering edges and comprising a tube, a contracted tube in front thereof, and a threaded sleeve also formed in two longitudinally divided half sections electrically welded together and receiving said contracted tube.

4. A tubular hub of sheet metal formed of two longitudinally divided half sections homogeneously united at their registering edges and comprising a tube, a contracted outwardly tapered tube in front thereof, a hollow longitudinal rib on said last-named tube, a threaded sleeve, a wall at the outer end of said sleeve, and, in said wall, an opening receiving the end of said outwardly tapered contracted tube.

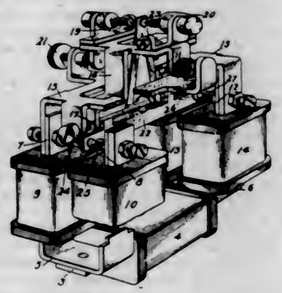
5. A tubular hub of sheet metal formed of two longitudinally divided half sections homogeneously united at their registering edges and comprising a tube, a contracted outwardly tapered tube in front thereof, a hollow longitudinal rib on said last-named tube, a threaded cylindrical sleeve having an integral tapered extension fitting on said contracted tube, and a front wall at its outer end having an opening receiving and closed by the extremity of said contracted tube.

1,230,428. RAIL-JOINT. JOHN NOVAK, Buffalo, N. Y. Filed Jan. 10, 1916. Serial No. 71,255. (Cl. 239—8.)



In a rail joint, a rail end having the head thereof terminating short of the end of the web of the rail and having its projecting web portion substantially one-half the height of the web beneath the head and provided with a relatively short upstanding stud in its outer end, and a second rail end having the lower portion of its web cut-away and having a web portion substantially one-half the height of the rail web depending from the head to reinforce the same and provided with a relatively shallow socket in its lower edge and at its inner end, said second rail end also having a pair of integral parts extending in parallelism along the opposite sides of the rail end and projecting a short distance beyond the same, the base flange of the second rail end terminating at the inner end of said web portion and the lower outer corners of said plates being rounded to bear against and ride over the base flange of the first rail end to permit insertion of the plates beneath the head of the first rail end.

1,230,429. ELECTROMAGNETIC DEVICE. JOEL C. R. PALMER, New Rochelle, and FRANK J. HOLMES, New York, N. Y., assignors, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 8, 1915. Serial No. 32,845. (Cl. 175—327.)



2. An electromagnetic device comprising a magnet having two north and two south polar extensions forming two sets of north and south poles, an armature having one end extending between said north polar extensions and the other end extending between said south polar extensions and adapted to move toward one set of north and south poles or toward the other set of north and south poles, and a path of low magnetic reluctance between said polar extensions of like polarity.

4. An electromagnetic device comprising a magnet having two north and two south poles forming two sets of north and south poles, a pivoted armature intermediate said poles and adapted to move toward one set of north and south poles or toward the other set of north and south poles, and windings on said poles for simultaneously strengthening one of said sets of north and south poles and weakening the other set of north and south poles.

5. An electromagnetic device comprising a magnet, a U-shaped polar extension on each pole of said magnet, a winding on each limb of each of said polar extensions, and an armature extending between said limbs of like polarity and pivotally mounted to move between said limbs in a direction transverse to the field of said magnet.

[Claims 1, 3, and 6 not printed in the Gazette.]



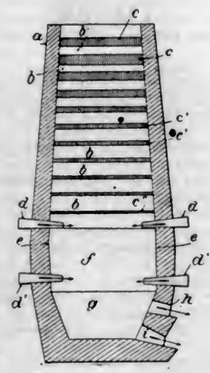
1,230,430. FURNACE-LINING AND METHOD OF MAKING SAME. GEORGE W. PATNOE, Maple Grove, Ohio, assignor, by mesne assignments, to The Dolomite Products Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 16, 1915. Serial No. 61,821. (Cl. 106—9.)

1. A refractory material for furnace-linings and the like consisting of the granular product resulting from the calcination of a mixture of finely divided magnesian limestone and a small percentage of argillaceous matter, substantially as described.

11. The method of making a refractory material for furnace-linings and the like, which consists in adding to magnesian limestone from two to five per cent. of argillaceous matter in the form of silica, alumina and iron oxid, grinding the mixture until it substantially all passes a 100-mesh sieve, and thereupon calcining such mixture at a temperature of 2600 degrees to 3000 degrees F. until it is reduced to a dense sintered mass resistant to air and moisture, substantially as described.

[Claims 2 to 10 not printed in the Gazette.]

1,230,431. ART OF FUSING ORES. RAOUL PIERRE PICTET, Paris, France. Filed Oct. 29, 1913, Serial No. 798,056. Renewed May 12, 1917. Serial No. 168,316. (Cl. 75—75.)



1. The process of smelting ores to obtain the uncarbonized metal or metal having a given degree of carbonization, which consists in stacking a furnace with layers of ore of a previously ascertained composition, alternating with layers of carbon, the amount of carbon in said layers being calculated to be consumed to the desired extent and to completely reduce the ore before reaching the fusing zone, and introducing at the said fusing zone of the furnace a mixture of oxygen, nitrogen and carbonic oxid calculated to produce the temperature required to bring the gangue of the ore to complete fusion.

2. The process of smelting ores to obtain the uncarbonized metal or metal having a given degree of carbonization, which consists in stacking a furnace with layers of ore of a previously ascertained composition, alternating with layers of carbon, the amount of carbon in said layers being calculated to be consumed to the desired extent and to completely reduce the ore before reaching the fusing zone, introducing at the said fusing zone of the furnace a mixture of oxygen, nitrogen and carbonic oxid calculated to produce the temperature required to bring the gangue of the ore to complete fusion, and introducing air into the furnace above said zone.

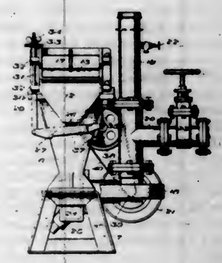
[Claims 3 to 5 not printed in the Gazette.]

1,230,432. CIGAR-HOLDER. ELIE HILAIRE PLAMONDON, Montreal, Quebec, Canada. Filed July 5, 1916. Serial No. 107,496. (Cl. 24—170.)



In a device of the character described comprising a buckle consisting of a single sheet of metal forming a body portion having a central rectangular opening therein, vertically extending flanges formed with said body portion at the opposite sides of said opening, a rectangular sheet metal tongue, trunnions formed with one end of said tongue and pivotally connected to said vertically extending flanges, said tongue adapted to rest upon said flanges, the opposite or free end of said tongue being notched, a connecting loop secured to one end of said body portion and a reinforcing strip formed with the opposite or free end of said body portion substantially as and for the purpose specified.

1,230,433. JIG. ROBERT HALLOWELL RICHARDS, Boston, Mass. Filed Mar. 31, 1916. Serial No. 88,083. (Cl. 83—58.)



1. The combination of a jig including the usual screen; a chamber for receiving the heavier materials flowing from said screen; a depending discharge tube leading from said chamber; a pan into which said tube dips, said pan having a barrier for retaining a bed of discharging material around the depending end of said tube; and means for reciprocating said pan toward and from the end of said tube while the jig is in operation.

3. The combination of a jig including the usual screen; a chamber for receiving the heavier materials flowing from said screen; a depending discharge tube leading from said chamber; a pan into which said tube dips; a swinging link supporting one end of said pan; means for adjusting said link to move said pan toward and from the end of said tube; a rotatable member having a crank pin journaled in the other end of said pan; and means for rotating said member.

4. The combination of a jig including the usual screen; a chamber for receiving the heavier materials flowing from said screen; a depending discharge tube leading from said chamber; a pan into which said tube dips, said pan having a barrier for retaining a bed of discharging material around the end of said tube; and means for oscillating said pan with a compound movement in an endless loop path toward and from the end of said tube and transversely with reference thereto while the jig is in operation.

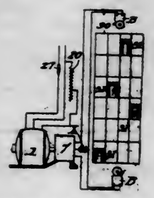
6. The combination of a stratifying separator; a chamber for receiving the heavier materials flowing from said separator; a depending discharge tube leading from said chamber; a pan into which said tube dips, said pan having a barrier for retaining a bed of discharging material around the depending end of said tube; and means for reciprocating said pan toward and from the end of said tube while the jig is in operation.

10. The combination of a stratifying separator; a chamber for receiving the heavier materials flowing from said separator; a depending discharge tube leading from said chamber; a pan into which said tube dips; a swinging support for one end of said pan; a crank directly connected to the other end of said pan to support the same; and means for rotating said crank.

[Claims 2, 5, and 7 to 9 not printed in the Gazette.]

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1,230,434. AUTOMATIC TIMER FOR STARTING ELEVATORS. GEORGE H. ROWE, Berwyn, Ill., assignor to L. E. King, Berwyn, Ill. Filed Aug. 14, 1913. Serial No. 784,688. (Cl. 177—336.)



1. A signaling device for a plurality of elevators, comprising a distinctive signal for ascending and a distinctive signal for descending, one signal serving for all elevators in each case, means for operating each of said signals at the same regular intervals, means for varying the length of said intervals, and means for varying the relative timing of the ascending and descending signals independently of the said adjustment of their timing interval.

2. A signaling device for elevators comprising two signals only, means for operating each of said signals at predetermined intervals in accordance with the number of cars operating, and independent means for adjusting the period between the operation of one of said signals and the operation of the other of said signals to vary the relative periods of rest of said cars when reversing their direction of travel.

3. A signaling system for a plurality of elevators, comprising a single electrically actuated ascend signal, a single electrically actuated descend signal, circuits therefor, means for periodically closing said circuits at intervals which may be varied to accord with the number of cars in use and means for adjusting the period between the operation of successive signals, to provide for variation in the volume of traffic.

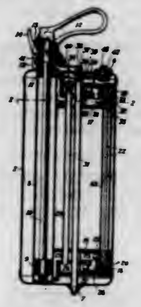
4. The combination with a bank of elevators, of a signal at the bottom of the bank for starting all the elevators upward at equal intervals, and a signal at the top of the bank for starting all the elevators downawrd at the same equal intervals, a source of current having two parallel circuits therefrom in each of which one of said signals is included, a rotatable timing device and coöperating contacts for closing said respective circuits, a shunt-wound motor for rotating said timing device, said motor operating with a weak field and having a resistance in the field circuit, a graduated scale calibrated to indicate time intervals, a pointer associated with said scale and controlling said resistance, and a switch for opening the motor circuit concurrently with the adjustment of said resistance whereby when any new adjustment of the field strength is made, the motor magnetization builds up from a minimum to the desired value, resulting in the same speed of armature rotation for successive adjustments to the same point on the scale, and insuring uniform timing of said elevators.

5. In a timing device for elevators, a pair of relatively fixed contacts, a pair of movable contacts, circuits therefor comprising signals, each of said movable contacts being adapted to engage one of said fixed contacts to close a circuit, one of said circuits operating to give the signal to ascend and the other of said circuits operating to give the signals to descend, a shunt motor for driving said movable contacts, a variable resistance in the field circuit of said motor to control the timing of said signals and means permitting adjustment of the relative arrangements of the various contacts to vary the relative periods of said ascending and descending signals.

[Claim 6 not printed in the Gazette.]

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1,230,435. FIRE-EXTINGUISHER. EDWARD S. SAVAGE, Rochester, N. Y. Filed Feb. 26, 1914. Serial No. 821,196. (Cl. 169—17.)



5. A fire-extinguisher having, in combination, a liquid-reservoir provided with a discharge-orifice and an outlet-passage leading thereto, the reservoir being divided into two chambers and provided with filling-openings through which said chambers may be separately filled with different liquids; and a manually-operable pump connected with said chambers of the reservoir, and adapted to force liquid therefrom alternatively.

9. In a syringe, the combination with a reservoir having an outlet, of a piston chamber in the reservoir having intake ports adjacent opposite ends and discharge ports adjacent opposite ends connected to the discharge outlet of the reservoir; a piston to reciprocate in said chamber; and an intake tube extending longitudinally of the reservoir with its ends adjacent the side and opposite ends of the reservoir connected to the intakes of the piston chamber.

11. In a syringe, the combination with a reservoir having an outlet, of a piston chamber arranged in said reservoir with its longitudinal axis parallel to and at one side of the longitudinal axis of the reservoir, said piston chamber having opposite ends connected to the outlet of the reservoir; a piston to reciprocate in said chamber; and an intake tube extending longitudinally of the reservoir with its ends adjacent to the opposite ends of the reservoir, said intake tube being connected to the opposite ends of the piston chamber and being arranged on that side of the longitudinal axis of the reservoir opposite the piston chamber.

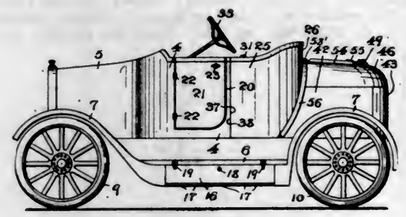
[Claims 1 to 4, 6 to 8, and 10 not printed in the Gazette.]

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1,230,436. INTERCHANGEABLE VEHICLE. WILLIAM M. SCHLUER, Orange, N. J., assignor of one-third to Mary C. Schluer, Montclair, N. J. Filed May 31, 1916. Serial No. 100,753. (Cl. 21—43.)

1. In a vehicle of the character set forth, the chassis of the vehicle, a main body comprising a flooring, permanently fixed side-members, a movably disposed seat-member, and a means of separable retaining connection between the said fixed side-members and the said seat member, combined with auxiliary side-members, an end-member, said auxiliary side-members and the end-member being removably disposed with relation to the said main body and the flooring.





2. In a vehicle of the character set forth, the chassis of the vehicle, a main body comprising a flooring, permanently fixed side-members, a movably disposed seat-member, a means of separable retaining connection between the said fixed side-members and the said seat-member, and means connected with said seat-member and with the said flooring for securing the seat-member in its fixed adjusted relation upon the said flooring, consisting of oppositely disposed tubular elements, a bolt extending into and through each tubular element, said bolts having screw-threaded end-portions extending through elongated openings with which the said flooring is provided, and tightening nut-like members into which the said end-portions of the bolts are screwed.

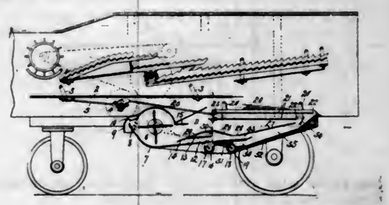
3. In a vehicle of the character set forth, the chassis of the vehicle, a main body comprising a flooring, permanently fixed side-members, a movably disposed seat-member, a means of separable retaining connection between the said fixed side-members and the said seat-member, combined with auxiliary side-members, an end-member, said auxiliary side-members and the end-member being removably disposed with relation to the said main body and the flooring, and a hood mounted upon said auxiliary side-members and said end-member.

4. In a vehicle of the character set forth, the chassis of the vehicle, a main body comprising a flooring, permanently fixed side-members, a movably disposed seat-member, a means of separable retaining connection between the said fixed side-members and the said seat-member, and means connected with said seat-member and with said flooring for securing the seat-member in its fixed adjusted relation upon the said flooring, combined with auxiliary side-members, an end-member, said auxiliary side members and the end-member being removably disposed with relation to the said main body and the flooring, and a hood mounted upon said auxiliary side-members and said end-member.

5. In a vehicle of the character set forth, the chassis of the vehicle, a main body comprising a flooring, permanently fixed side-members, a movably disposed seat-member, a means of separable retaining connection between the said fixed side-members and the said seat-member, and means connected with said seat-member and with the said flooring for securing the seat-member in its fixed adjusted relation upon the said flooring, consisting of oppositely disposed tubular elements, a bolt extending into and through each tubular element, said bolts having screw-threaded end-portions extending through elongated openings with which the said flooring is provided, and tightening nut-like members into which the said end-portions of the bolts are screwed, combined with auxiliary side-members, an end-member, said auxiliary side-members and the end-member being removably disposed with relation to the said main body and the flooring, and a hood mounted upon said auxiliary side-members and said end-member.

[Claims 6 to 13 not printed in the Gazette.]

1,230,437. GRAIN-CLEANING MEANS FOR THRESHING-MACHINES. HENRY H. SCHUETTE, Napoleon, Ohio. Filed Apr. 17, 1916. Serial No. 91,756. (Cl. 130—15.)



1. In a machine of the class described, a grain-trough and a tailing-trough, a shaker-frame having a grain-bottom and a tailing-bottom leading respectively to said grain and tailing-troughs and having means above said bottoms for delivering grain dropping therein to said grain-bottom and coöperating with both said bottoms to form a blast passage, and means for directing a blast through said passage and also over said grain directing means.

2. In a machine of the class described, a shaker-frame having a grain-bottom at its rear end and a tailing-bottom extending from a point below said grain-bottom and forward thereof in inclined relation and also having a plurality of riddles above said bottoms, a means above said bottoms for directing to the grain bottom grain falling thereon from said riddles and coöperating with both said bottoms to form a blast passage, and means for regulating the amount of blast directed through said passage.

3. In a machine of the class described, blast creating means having main and auxiliary blast discharge passages in superimposed relation, grain and tailing-troughs disposed below the plane of discharge of the blast from said means, a shaker-frame disposed in the path of discharge of air from said means and having main and auxiliary blast passages in register, respectively, with the main and auxiliary passages of said means, said shaker frame having separate grain and tailing-bottom parts which respectively direct grain and tailings to said grain and tailing-troughs and which form portions of the bottom wall of the auxiliary passage in said shaker frame.

4. In a machine of the class described, grain and tailing-troughs, a shaker-frame having separate grain and tailing-bottoms for delivering grain and tailings, respectively, to said troughs, a partition disposed over both said bottoms for directing grain falling thereon to said grain-bottom, a riddle carried by the frame over said partition, means for directing an air blast through said shaker-frame both above and below said partition, and means for regulating the passage of the blast through said frame below said partition.

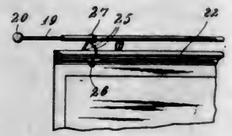
5. In a machine of the class described, separate grain and tailing troughs, a shaker frame having separate grain and tailing bottoms in its lower portion for delivering grain and tailings, respectively, to said troughs and also having a plurality of riddles disposed above said bottoms, a partition disposed between said bottoms and riddles for catching the grain falling through said riddles, said partition having its opposite end portions oppositely inclined and provided with grain delivery openings adjacent to the inner ends of said inclines, said openings being disposed over the grain bottom, and means for directing an air blast in regulated proportions above and below said partition through said shaker frame.

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1,230,438. HANGER. ANDREW L. SLOAN, Passaic, N. J. Filed Mar. 6, 1916. Serial No. 82,853. (Cl. 24—73.)

A two pronged support hook comprising a single piece of spring wire, the central upper portion of which is formed into an open loop adapted to be suspended by engagement with a rail, an open ring extending from said loop, said open ring being adapted to resiliently engage

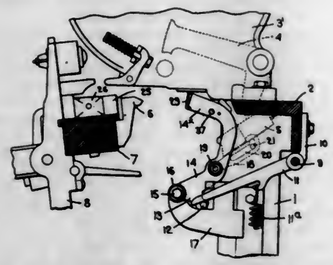
and support an article passed therethrough and reëntrantly turned, outwardly curved, open hooks formed at the adjacent ends of said ring, each of said hooks being



engageable with articles to be supported, all of said elements being disposed in the same plane.

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1,230,439. SHUTTLE-FEELER FOR LOOMS. ISAAC SNOW, Lawrence, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Apr. 25, 1916. Serial No. 93,533. (Cl. 139—85.)



1. A shuttle feeler for automatic filling replenishing looms comprising an arm movable toward the lay to feeling position upon call for filling replenishment, a relatively movable member carried thereby and extending beyond and across the end of said arm having means adapted to be positioned in the path of the lay upon engagement of an improperly positioned shuttle whereby the feeler will be actuated by the further movement of the lay through said means to prevent operation of the transferring mechanism.

3. A shuttle feeler for automatic filling replenishing looms comprising an arm movable toward the lay to feeling position upon call for filling replenishment and a shuttle engaging plate pivotally mounted upon and extending beyond the end of said arm, having an integral downward extension adapted to be positioned in the path of the lay upon engagement of said plate with an improperly positioned shuttle, whereby the feeler will be actuated by the movement of the lay to prevent operation of the transferring mechanism.

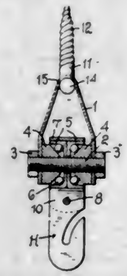
4. A shuttle feeler for automatic filling replenishing looms comprising an arm movable toward the lay to feeling position upon call for filling replenishment, and a shuttle engaging plate yieldably mounted upon said arm having a flange overlying the end of said arm, said plate being provided with a downward extension adapted to be positioned in the path of the lay upon engagement of said plate with an improperly positioned shuttle whereby the feeler will be actuated through the engagement of the latch with the lay and the flange with the end of the feeler.

6. A shuttle feeler for automatic filling replenishing looms comprising an arm movable toward the lay to feeling position upon call for filling replenishment, a shuttle engaging plate pivotally mounted at the end of said arm having a downward extension or flange adapted to be positioned in the path of the lay, means including a counterweight for rocking said plate upon its pivot to cause its end to extend beyond the end of the feeler arm and the latch normally to be removed from the path of the lay whereby engagement of said plate with an improperly positioned shuttle will position the latch in the path of the lay.

[Claims 2, 5, and 7 not printed in the Gazette.]

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1,230,440. HANGER. ROBERT J. STEELE, Newport News, Va., assignor of one-half to Walter C. Tucker, Raleigh, N. C. Filed Sept. 20, 1916. Serial No. 121,282. (Cl. 248—24.)



1. As a new article of manufacture, a hanger consisting of a substantially U-shaped frame, a shaft disposed through the free extremities of said frame, cones mounted upon said shaft between the outer ends of the frame, reversely disposed cups surrounding the shaft and affording raceways, anti-friction members mounted in said cups and contacting with the cones, a clamping strap disposed around the periphery of the cups and terminating in ears, a hook member having a shank extending between the ears of the clamping strap, and securing means passing through said straps and shank of the hook member.

2. As a new article of manufacture, a hanger consisting of a substantially U-shaped frame, a shaft disposed through the free extremities of said frame, cones mounted upon said shaft between the outer ends of the frame, reversely disposed cups surrounding the shaft and affording raceways, anti-friction members mounted in said cups and contacting with the cones, a clamping strap disposed around the periphery of the cups and terminating in ears, a hook member having a shank extending between the ears of the clamping strap, and securing means passing through said straps and shank of the hook member, the outer end of the shank of the hook member being straight and contacting with the periphery afforded by the cups.

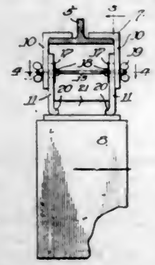
3. As a new article of manufacture, a hanger comprising a substantially U-shaped frame, a shaft supported by the free end portions of said frame, the base of the frame being provided with a slot disposed longitudinally of the shaft, a hook member mounted for rocking movement upon the shaft, and a shank disposed through the slot of the frame, the outer end portion of said shank being provided with securing means and the inner end of said shank being provided with a cross head extending transversely of the slot of the frame and of a length in excess of the width of said slot, said shank being of a length in excess of the distance between the bend of the frame and the connected portion of the hook member.

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1,230,441. HANGER. ENOCH P. STEVENS, Chicago, Ill. Filed June 14, 1915. Serial No. 33,938. (Cl. 248—31.)

1. In a hanger, the combination with a pair of carrier members, of a pair of adjustable members, each of said adjustable members being provided with a plurality of adjustment surfaces, and locking means carried by said carrier members, whereby said adjustable members may be supported in a plurality of positions with relation to said carrier members.

2. In a hanger, the combination of a pair of carrier members, a shaft extending between said carrier members, a pair of pawls mounted on said shaft adjacent to said carrier members, and a pair of adjustable members having ratchets adapted to be engaged by said pawls, whereby said adjustable members may be supported in predetermined positions.

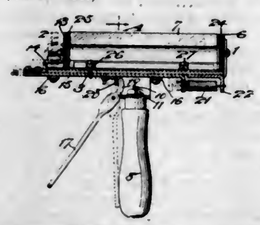


3. In a hanger, the combination of a pair of carrier members, a shaft extending between said carrier members, a pair of pawls mounted on said shaft adjacent to said carrier members, a pair of adjustable members having ratchets adapted to be engaged by said pawls, whereby said adjustable members may be supported in predetermined positions, and means for clamping each of said adjustable members to a corresponding carrier member.

4. In a supporting device, the combination with a beam having a flange on its lower edge, of a hanger comprising a pair of angularly disposed carrier members supported by said flange, and a pair of adjustable members carried by said carrier members and adjustable with respect thereto, both angularly and in a vertical plane, said adjustable members having means thereon for engaging an object to be supported.

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1,230,442. HOLDER FOR TILES. CHRISTIAN W. SVENDSEN, Matawan, N. J. Filed Dec. 15, 1915. Serial No. 66,951. (Cl. 91—60.)



1. A holder for tiles to be coated comprising a bottom for protecting the back exterior surface of the tile and means constructed to coact with said bottom and yieldingly embrace the tile to protect the sides and ends of the tile while being coated.

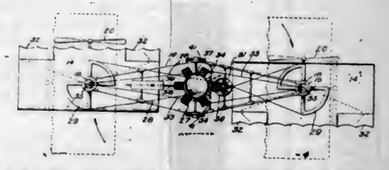
8. A holder for tiles to be coated, comprising means for removably holding the tile with only its surface to be coated, exposed, said means comprising a fixed member having side, front and rear walls, said walls being provided with yielding inner surfaces, a reciprocating member having a side wall, said wall being provided with a yielding inner surface, means for moving the reciprocating member in one direction and a spring-actuated means interposed between said members for moving the reciprocating member in another direction.

[Claims 2 to 7 not printed in the Gazette.]

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1,230,443. AIRCRAFT. JOHN P. TARBOX, Buffalo, N. Y., assignor to Tarbox Safety Aircraft Company, a Corporation of Delaware. Filed July 2, 1913. Serial No. 776,979. (Cl. 244—15.)

1. An air craft comprising a main frame and two lifting surfaces connected thereto at points longitudinally spaced apart and for relative horizontal angular movement with respect to each other, means connected with said frame and having operative connections with said surfaces for adjusting said surfaces with respect to each other in various positions from positions in which they face in opposite directions to positions in which they face in the same direction, and for holding said surfaces in an adjusted position for flight, and driving means propelling said surfaces in the directions in which they face.



2. An air craft comprising a main frame and two lifting surfaces connected thereto at points longitudinally spaced apart and for relative horizontal angular movement with respect to each other, each of said surfaces having a propeller rotatable about a relatively fixed horizontal axis transversely thereof, means for driving said propellers, and means connected with the said frame for shifting said surfaces with respect to each other from positions in which they face and are driven in opposite directions to positions in which they face and are driven in the same direction.

3. An air craft comprising a main frame and two lifting surfaces connected thereto at points longitudinally spaced apart and for relative horizontal angular movement with respect to each other, said surfaces having substantially equal lifting power when driven at the same speed and being connected with said frame substantially at their centers of pressure, a seat for an operator, means connected with said frame and operable from said seat for adjusting said surfaces with respect to each other from positions in which they face in opposite directions to positions in which they face in the same direction, and means for driving said surfaces in the directions in which they face.

4. In combination, a rotary frame, a support for a passenger swivelly connected thereto, a surface inclined to the line of vertical advance connected with said passenger support and acted upon by the air through which said surface passes to counteract the tendency of said passenger support to rotate with said supporting frame, and supporting surfaces mounted on said frame and controlled from said passenger support to operate as a convertible helicopter and aeroplane.

5. An air craft comprising a main frame and two lifting surfaces connected thereto at points longitudinally spaced apart and for relative horizontal angular movement with respect to each other, a swivel seat for the operator, means connected with said frame and operable from said seat for adjusting said surfaces in opposite angular directions with respect to each other to bring them into various positions from positions in which they face in opposite directions to positions in which they face in the same direction, and for holding said surfaces in an adjusted position for flight.

[Claims 6 to 17 not printed in the Gazette.]

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1,230,444. SURGICAL ADHESIVE STRIP. CHARLES W. TEED, Sidney Center, N. Y., assignor of one-half to James A. Holley, Walton, N. Y. Filed Oct. 17, 1916. Serial No. 126,139. (Cl. 128—28.)

1. An adhesive plaster strip, composed of longitudinally alined fabric sections spaced apart from each other and designed to be transversely divisible, the transverse weft threads and a portion of the longitudinal warp threads of the fabric being omitted at intervals and the balance of the longitudinal warp threads continued across the spaces between the sections to provide transverse ventilating air spaces.

2. An adhesive plaster strip, composed of longitudinally alined fabric sections spaced apart from each other by intervals of varying widths, the transverse weft threads and a portion of the longitudinal warp threads of the fabric being omitted at intervals and the balance of the longitudinal warp threads continued across the spaces between the sections to provide transverse ventilating air spaces.



3. An adhesive plaster strip, composed of longitudinally alined adhesive fabric sections of varying dimensions spaced apart from each other by intervals of varying widths, the transverse weft threads and a portion of the longitudinal warp threads of the fabric being omitted at intervals and the balance of the longitudinal warp threads continued across the spaces between the sections, to connect the sections and provide transverse ventilating air spaces.

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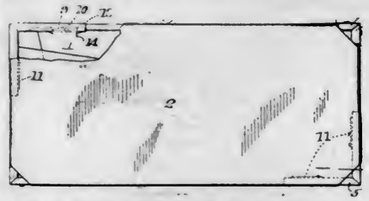
1,230,445. SURGICAL ADHESIVE STRIP. CHARLES W. TEED, Sidney Center, and JAMES A. HOLLEY, Walton, N. Y. Filed Dec. 2, 1916. Serial No. 134,679. (Cl. 128—28.)



1. An adhesive plaster strip, composed of longitudinally alined adhesive sections spaced apart from each other, and openwork thread connections between the sections to provide transverse ventilating air spaces, said thread connections being embedded in the adhesive coating of said sections.

2. An adhesive plaster, composed of adhesive sections spaced apart from each other, and openwork threads between and connecting the sections providing ventilating air spaces, said threads being embedded in the adhesive coating of said sections.

1,230,446. ADJUSTABLE MATTRESS. VERNON S. THIRLWALL, Ancon, Canal Zone, assignor of one-half to Egerton Shaw Humber, Panama, Canal Zone. Filed Sept. 30, 1915. Serial No. 53,297. (Cl. 5—13.)



1. A mattress comprising a frame including side bars and end bars united to form relatively adjustable sections, capable of lengthwise and sidewise expansion and contraction, a flexible covering for the frame having opposed side and end flaps adapted to project inwardly beneath the corresponding frame bars, and independent adjustable means for securing the corresponding flaps together.

2. A mattress comprising a frame including side bars and end bars united to form relatively adjustable sections, means for permitting extension of said sections but adapted to prevent retrograde movement thereof, a flexible covering for the frame having opposed side and end flaps adapted to project inwardly beneath the corresponding frame bars, and independent adjustable means for securing the corresponding flaps together.

3. A mattress comprising a frame including side bars and end bars united to form relatively adjustable sections, means for permitting extension of said sections but adapted normally to prevent retrograde movement thereof, a flexible covering for the frame having opposed side and end flaps adapted to project inwardly beneath the corresponding frame bars, independent adjustable means for securing the corresponding flaps together, and means by which the first-named means may be rendered inoperative to permit contraction of the frame.

4. A mattress comprising a frame including side bars and end bars united to form relatively adjustable sections, a tubular sleeve secured fixedly to the end of one frame bar at each joint for the slidable reception of the adjacent bar end, rack teeth provided upon the said bar end, a spring-pressed pawl provided upon the sleeve for engagement with the said teeth to permit expansion of the same alone normally, a supporting device carried by the pawl and adapted to be interposed between the latter and the sleeve to secure the pawl in inoperative position out of engagement with the rack teeth and to permit contraction of the frame, said supporting device being accessible from the interior of the frame, and an adjustable covering of flexible material for the frame which extends around the outer sides of the frame bars.

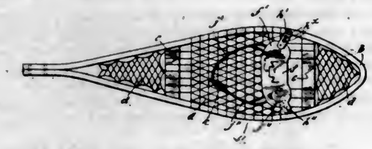
5. A mattress comprising a frame including side bars and end bars, each side bar being united fixedly with an adjacent end bar to form an angular frame section including one corner of the frame, tubular angle sleeves forming the other diagonally opposite corners of the frame and adapted to slidably receive the adjacent bar ends in their corresponding arms, releasable means for normally permitting extension adjustment of each bar end in the corresponding sleeve arm, a flexible covering for the frame having side and end flaps extending inwardly beneath the side and end bars of the frame, and independent means for securing co-acting flaps adjustably together.

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1,230,447. SNOW-SHOE HARNESS. ORLEY C. TUTTLE, Old Forge, N. Y. Filed Mar. 6, 1917. Serial No. 152,537. (Cl. 46—67.)

1. A snowshoe-harness including snowshoe-stringing; a flexible toe-piece fastened thereto and shaped to fit around the forepart of the foot and protect the stringing under the ball of the foot; a clasp for detachably fastening said toe-piece over the foot; and a heel-strap fastened to said toe-piece and arranged to pass around the heel part of the foot.

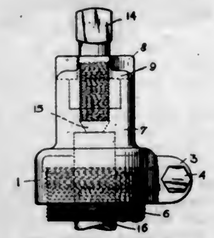




2. A snowshoe-harness including snowshoe-stringing; a flexible toe-piece fastened thereto and shaped to fit around the forepart of the foot and protect the stringing under the ball of the foot; a two-part clasp one part of which is fastened to one side of said toe-piece and formed with holes and the other part of which is fastened to the opposite side of said toe-piece and is formed with a stud adapted to engage in said holes in succession and having a recess with the walls of which the first-named part engages in locking position; and a heel-strap fastened to said toe-piece and stringing and arranged to pass around the heel part of the foot.

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1,230,448. WHEEL-PULLING DEVICE. WALTER I. TUTTLE, Providence, R. I. Filed Mar. 6, 1916. Serial No. 82,375. (Cl. 29—85.)



1. A wheel puller comprising in combination, a unitary device having a collar portion adapted to make threaded engagement with the hub of a wheel and a portion extending away from said collar portion, a member slidably mounted in said second portion of said device, and a member threaded through said slidable member and having a portion adapted to engage an axle and a portion by which it can be turned.

2. A wheel puller comprising in combination, three members, two of which are slidably related one to the other and the third of which is threaded to one of the first two, one of said members being adapted to engage the end of an axle and another of said members comprising a portion adapted to make threaded engagement with a hub upon said axle, an outer supporting portion, and a pair of connecting portions spaced one from the other to provide substantial openings upon opposite sides.

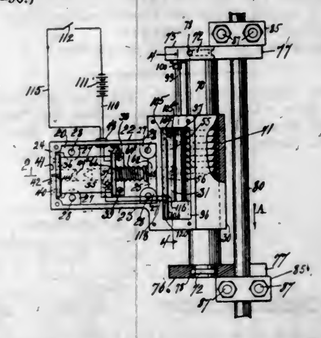
3. A wheel puller comprising, in combination, a unitary device having a collar portion adapted to make threaded engagement with a hub, an outer supporting portion and a portion formed to connect said first portions and shaped to provide an angular guide on its inner surface extending substantially parallel to the axis of said hub, a nut mounted to slide in said guide and held from rotation thereby, and a bolt threaded through said nut and positioned to engage an axle within said hub.

4. A wheel puller comprising, in combination, a unitary device having a collar portion adapted to make threaded engagement with the hub of a wheel, an outer portion and a pair of connecting portions spaced one from the other to provide substantial openings upon opposite sides, a member slidably mounted in said connecting portions and held thereby against rotation, and a member threaded through said sliding member having a portion adapted to engage an axle in said hub and a portion by which it can be turned.

5. A wheel puller comprising, in combination, a unitary member having a split internally threaded collar portion, an outer portion and a pair of connecting portions spaced one from another upon opposite sides and formed to provide guides on their inner surfaces, a nut slidably mounted in and interlocking with said guide portions, a bolt threaded through said nut in position to engage an axle in said hub and extending outwardly beyond said first member, and means adapted to clamp said collar portion of said first member about said hub.

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1,230,449. ELECTRICAL LOCKING DEVICE. STEPHEN G. VAN DERBECK, Hackensack, N. J., and HARRY B. MURDOCK, New York, N. Y., assignors to Duplex Lock Co., Inc., New York, N. Y., a Corporation of New York. Filed June 24, 1916. Serial No. 105,616. (Cl. 70—90.)



1. In a locking device of the character described the combination of a casing, a solenoid in said casing, a plunger in said solenoid and operated thereby, a latch arm connected to the plunger, a sleeve formed with the said casing, a sliding bar in said sleeve having notches, one of said notches engaged by the latch arm, forked plates on the ends of said bar, the brake rod of a vehicle engaged by said plates and stop blocks on the said brake rod coacting with said plates.

2. In a locking device of the character described the combination of a sliding bar having keeper notches formed therein, a latch arm pivoted adjacent to said bar, a spring to lock the latch bar with said notches, a solenoid when energized unlocking the latch arm from said notches, a sleeve with a rod slidably guided adjacent to said bar, an electric conductor carried by said sleeve, a plate carried on the bar in the path of said rod moving the latter at predetermined positions of said bar, an electric circuit for the solenoid, and electric conductor bars in circuit with said electric circuit and in the path of the conductor carried by the said sleeve.

3. In a locking device of the character described the combination of a sliding bar having notches, a latch arm pivoted adjacent to said bar with the swinging end thereof contacting with said bar, a solenoid in the device, a plunger slidably located in said solenoid, a non-magnetic link with one end pinned to said plunger and its other end pinned to the latch arm, a spring to force the latch plunger out of the solenoid when the latter is not energized and thereby lock the latch arm with said sliding bar, an electric circuit for the solenoid, means to move the sliding bar, and means to close said electric circuit with the movement of said bar.

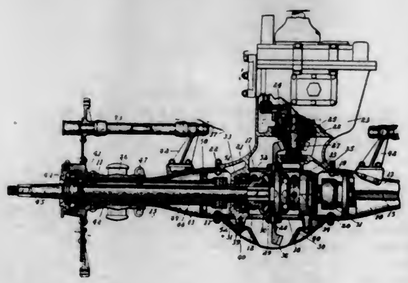
4. In a locking device of the character described the combination of a sliding bar having notches, a latch arm pivoted adjacent to said bar with the swinging end thereof contacting with said bar, a solenoid in the device, a plunger slidably located in said solenoid, a non-magnetic member connecting the said latch arm and plunger, a spring to normally force the latch plunger out of the solenoid when the latter is not energized, a spring actuated sleeve adjacent to the said latch arm, a rod extending from said sleeve, an element on the sliding bar in the path of said rod, the latter being moved with the movement in one direction of said bar, an electric conductor carried by said sleeve, a pair of electric conductor bars insulated from each other in the path of said electric conductor, and an electric circuit for the solenoid, the said bars in series with the circuit, the said circuit closed with the contacting of said electric conductor and conductor bars.

5. In a locking device of the character described the combination of a sliding bar having notches, a latch arm pivoted adjacent to said bar and adapted to lock said arm in position, a solenoid coacting with said latch arm, a spring to normally lock said latch arm with said bar, an electric circuit for the solenoid, and an electric conductor moved with the movements of said sliding bar to close said electric circuit and thereby maintain said latch arm unlocked from said sliding bar.

[Claims 6 to 9 not printed in the Gazette.]

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1,230,450. MOTOR-VEHICLE. JESSE G. VINCENT, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed June 6, 1913. Serial No. 772,126. (Cl. 21—90.)



1. In a motor vehicle, the combination of a stationary axle casing having a central enlarged portion and an opening in said portion, a cover for said opening, a differential gearing in said enlarged portion having bearings in said cover, tubes extending inwardly from the ends of the axle casing and having their inner ends separated therefrom, supports in the casing for the inner ends of said tubes, and axle sections in the casing directly supported on bearings mounted on the outer ends thereof and extending into said differential gearing.

2. In a motor vehicle, the combination with an axle casing having a central enlarged portion, tubes extending inwardly from the end portions of said casing and having their inner ends separated from the casing, and supports in the casing for the inner ends of said tubes, of a differential gearing in the enlarged portion of the casing, axle sections connected with said differential gearing and extending outwardly through the ends of the casing, and bearings for the differential gearing and axle sections mounted independently of said tubes and supports.

3. In a motor vehicle, the combination of an axle casing having a central enlarged portion and front and rear openings in said portion, tubes extending from the end portions of said casing toward said central portion, a cover for one of said openings having inwardly extending bearing lugs, a driving axle in the casing partly inclosed by said tubes and mounted in bearings in said lugs, a cover for the other of said openings secured to the casing, and means for rigidly securing said latter cover directly to said lugs.

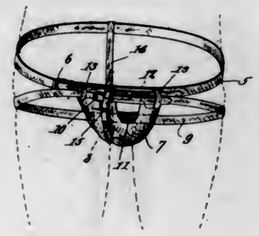
4. An axle casing comprising an outer casing having a central enlarged portion, tubes secured within the outer casing and extending toward the center thereof with their inner ends separated from the outer casing, and supports formed separately from said outer casing and tube supporting the inner end of the tube from the outer casing wall and having a washer supporting part extending inwardly from the inner end of said tube.

5. An axle casing comprising an outer casing having a central enlarged portion, cylindrical end portions, and tapered intermediate portions, tubes secured within said outer casing for reinforcing the end portions and forming oil pockets in the tapered portion, and disk shaped supports for the inner ends of said tubes and having inner and outer flanges for connection to said tubes and outer casing respectively.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,451. RUPTURE-SUSPENSORY. ISAAC WALSKY, Baltimore, Md. Filed Nov. 21, 1916. Serial No. 132,512. (Cl. 128—26.)



In combination a suspensory bag, a pair of upper and lower securing straps secured in spaced relation upon said suspensory bag and having their ends intersecured, said bag having an intermediate opening and a curved bag secured within itself and having a portion extending alongside of said opening and its free end curving around beneath said opening, a buckle secured to the outer side of said bag at a point adjacent the upper end of said pad, and a cross-strap having one end fixedly secured to the upper of said straps and adapted to engage said bag to support the lower curved end of said pad, the free end of said last-named strap being adjustably secured in said buckle.

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1,230,452. COMPOSITION OF MATTER FOR PREPARING FOODS AND PROCESS OF MAKING SAME. HARVEY W. WILEY, Washington, D. C. Filed Mar. 7, 1917. Serial No. 153,100. (Cl. 99—10.)

1. The process of making an acid material of pleasant flavor and nutritive value which comprises artificially souring skimmed milk to a high degree of acidity, homogenizing the fermented material and quickly drying to give a dry highly acid powdered product.

2. The process of making an acid material of pleasant flavor and nutritive value which comprises artificially souring skimmed milk with *B. Bulgaricus*, homogenizing the fermented material and quickly drying to give a dry powdered product.

3. The process of making an acid material of pleasant flavor and nutritive value which comprises artificially souring skimmed milk by acid fermentation, homogenizing the fermented material, quickly drying to give a dry powdered product and assembling the same with a bicarbonate.

15. An article for use in food comprising powdered, artificially fermented and soured skimmed milk of a high degree of acidity and a carbonate.

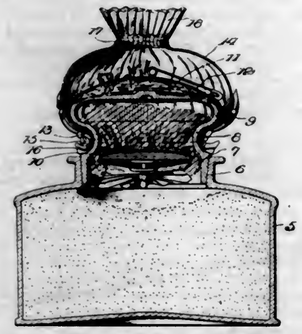
22. An article for use in food comprising powdered, artificially fermented and soured skimmed milk, sodium bicarbonate and a filler of dried milk, these ingredients being uniformly and intimately admixed.

[Claims 4 to 14 and 16 to 21 not printed in the Gazette.]



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1,230,453. TOILET-RECEPTACLE. ANNA D. ADAMS, Chicago, Ill. Filed Apr. 28, 1917. Serial No. 165,117. (Cl. 132—32.)



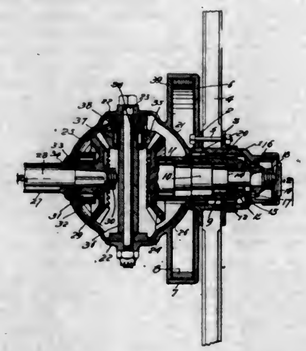
1. A device of the character described comprising a receptacle, a stopper therefor adapted to contain a powder puff, a pin cushion on said stopper and means for incasing said stopper.

3. A device of the character described comprising a receptacle, a stopper therefor, a powder puff carried by the stopper, a pin cushion on the stopper and means for incasing said stopper, said means comprising a flexible member fastened at one end to the stopper and having its free end provided with closing means.

[Claim 2 not printed in the Gazette.]

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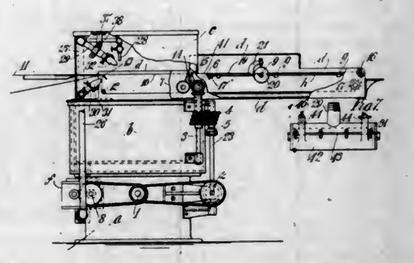
1,230,454. GEARING FOR MOTOR-VEHICLES. MILTON H. BARD, Johnstown Pa. Filed May 25, 1916. Serial No. 99,852. (Cl. 74—7.)



In a device of the character described, an axle housing having an approximately hemispherical housing section at its end, a sleeve having a similar housing section interfitting with the aforesaid section to provide a housing, one section being divided, the lower portion of the other section being in the form of a bowl to hold lubricant, a vertical spindle pivotally connecting said sections for swinging movements, a wheel hub mounted for rotation upon said sleeve, a spindle rotatable within said sleeve and connected to said hub to rotate it, a shaft within the axle housing, bevel gears carried by the adjacent ends of said shaft and second mentioned spindle and arranged to dip in the lubricant in said bowl, and a bevel gear mounted for rotation upon the first mentioned spindle and meshing with the aforesaid gears.

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1,230,455. COATING APPARATUS. ALONZO LINTON BAUSMAN, Springfield, Mass. Filed Oct. 16, 1914. Serial No. 866,927. (Cl. 91—8.)



1. A chocolate coating machine, comprising, in combination, a conveyer for the goods to be coated and continuously operable measuring means to positively force an unbroken sheet of chocolate onto the conveyer, whereby the chocolate is laid on the sides and tops of the goods in a uniform and predetermined manner.

2. A chocolate coating machine, comprising, in combination, a conveyer for the goods to be coated, continuously operable measuring means to positively force an unbroken sheet of chocolate onto the conveyer, driving devices for the conveyer and means to synchronize the speed of the conveyer and the speed of the measuring means, whereby the chocolate is laid on the sides and tops of the goods in a uniform and predetermined manner.

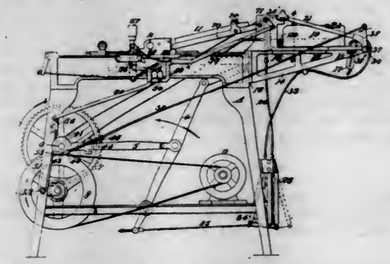
3. A chocolate coating machine, comprising, in combination, a conveyer for the goods to be coated and continuously operable measuring means to positively force an unbroken sheet of chocolate onto the conveyer, means to feed the goods to be coated onto the sheet of chocolate carried by the conveyer, and other continuously operable measuring means to positively feed an unbroken sheet of chocolate onto the sides and tops of the goods in a uniform and predetermined manner.

4. A chocolate machine, comprising, in combination, a conveyer for the goods to be coated, continuously operable measuring means to positively feed an unbroken sheet of chocolate onto the conveyer before the goods are placed thereon, and thereafter to positively feed a measured and unbroken sheet of chocolate over the sides and tops of the goods, whereby the two sheets of chocolate completely cover each piece of goods carried by the conveyer.

5. A chocolate coating machine, comprising, in combination, a conveyer for the goods to be coated, means to feed the goods to the conveyer, a continuously operable measuring device to positively feed an unbroken sheet of chocolate to the conveyer before the goods are fed thereto, a second continuously operable measuring means to positively feed a second unbroken sheet of chocolate to the conveyer and over the sides and tops of the goods after the latter are fed to the conveyer, and means to synchronize the speed of the conveyer and said devices.

[Claims 6 to 19 not printed in the Gazette.]

1,230,456. PAPER-FEEDING MECHANISM. ABRAHAM BLOCK, San Francisco, Cal. Filed Dec. 20, 1915. Serial No. 67,760. (Cl. 271—27.)



1. The combination with a paper holder and a stack of paper supported thereby, of an arm pivotally mounted below the support adjacent to one end thereof, the free end of said arm being positioned to permit it to travel in a circular vertical arc continuously away from the front stop of the paper stack while traveling in an upward direction and continuously toward the front stop when traveling downwardly toward the stack, a suction cup mounted on the free end of the arm, means for producing a suction in the cup during the upward movement of the arm and cup to grip and elevate the topmost sheet on the stack, means for relieving the suction to release the sheet when it has been elevated to a predetermined height, and means for removing the sheet when released.

2. The combination with a paper holder and a stack of paper supported thereby, of an arm pivotally mounted below the support adjacent to one end thereof, the free end of said arm being positioned to permit it to travel in a circular vertical arc to and from the stack, a suction cup mounted on the free end of the arm, means for producing a suction in the cup during the upward movement of the arm and cup to grip and elevate the topmost sheet on the stack, means for relieving the suction to release the sheet when it has been elevated to a predetermined height, means for removing the sheet when released, and a yielding connection for the arm and cup to a predetermined height with relation to the stack.

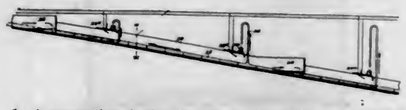
3. The combination with a paper holder and a stack of paper supported thereby, of an arm pivotally mounted below the support adjacent to one end thereof, the free end of said arm being positioned to permit it to travel in a circular vertical arc continuously away from the front stop of the paper stack while traveling in an upward direction and continuously toward the front stop when traveling downwardly toward the stack, a suction cup mounted on the free end of the arm, means for producing a suction in the cup during the upward movement of the arm and cup to grip and elevate the topmost sheet on the stack, means for relieving the suction to release the sheet when it has been elevated to a predetermined height, means for removing the sheet when released, and means for permitting the arm and cup, when descending, to stop when in engagement with the topmost sheet regardless of the height of the stack.

4. The combination with a paper holder and a stack of paper supported thereby, of an arm pivotally mounted below the support adjacent to one end thereof, the free end of said arm being positioned to permit it to travel in a circular vertical arc continuously away from the front stop of the paper stack while traveling in an upward direction and continuously toward the front stop when traveling downwardly toward the stack, a suction cup mounted on the free end of the arm, means for producing a suction in the cup during the upward movement of the arm and cup to grip and elevate the topmost sheet on the stack, means for relieving the suction to release the sheet when it has been elevated to a predetermined height, means for removing the sheet when released, means for positively lifting the arm and cup to a predetermined height with relation to the stack, and means for permitting the arm and cup, when descending, to stop when in engagement with the topmost sheet regardless of the height of the stack.

5. The combination with a paper holder and a stack of paper supported thereby, of an arm pivotally mounted below the support adjacent to one end thereof, the free end of said arm being positioned to permit it to travel in a circular vertical arc continuously away from the front stop of the paper stack while traveling in an upward direction and continuously toward the front stop when traveling downwardly toward the stack, a suction cup mounted on the free end of the arm, means for producing a suction in the cup during the upward movement of the arm and cup to grip and elevate the topmost sheet on the stack, means for relieving the suction to release the sheet when it has been elevated to a predetermined height, a power-operated bell-crank pivotally mounted adjacent to the pivotal end of the suction cup arm, and a projection on the bell-crank engageable with the cup arm to raise and lower the same.

[Claims 6 to 26 not printed in the Gazette.]

1,230,457. PROTECTIVE DEVICE FOR WATER-CHANNELS. PIERRE BOUÉRY, Weaverville, Cal. Filed Nov. 22, 1915. Serial No. 62,909. (Cl. 61—47.)



1. A protective device for water channels comprising in combination a head-gate in the channel, counter-balancing means operated by a constant flow of water to maintain the gate open, and means arranged along said channel for supplying the flow of water to the counter-balancing means, said supply means being arranged below the head-gate and operating to discontinue the supply of water thereto when a break occurs therein, whereby to permit the gate to close above the break.

2. A protective device for water channels, comprising in combination a series of gates arranged at intervals along the channel to close the same, and controlling means for each gate arranged along the channel and operable to maintain the gate ahead normally open, said controlling means being overlapped, whereby, when a break occurs in any part of the channel, the adjacent controlling means fails, whereupon the particular gate controlled thereby closes.

3. A protective device for water channels comprising in combination a head-gate in the channel, counterbalancing means operated by a constant flow of water to maintain the gate open, means arranged along said channel for supplying the flow of water to the counterbalancing means, said supply means being arranged below the head-gate and operating to discontinue its flow when a break occurs therein, a spill-way arranged adjacent said gate and normally closed, and means operated by the closing of said gate for opening the spill-way.

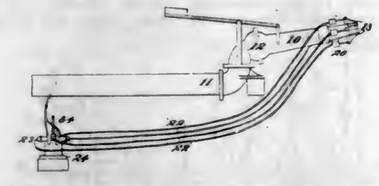
4. A protective device for water channels comprising in combination a head-gate, a constant discharge water box for counterbalancing said gate to normally maintain the same open, and a pressure supply pipe running along said channel below the gate for supplying water to said box whereby when a break occurs in the pipe the supply of water to the box is cut off to allow the gate to close.

5. A protective device for water channels, comprising in combination a head-gate for controlling a section of said channel, a constant discharge water box carried on said gate to counterbalance the same, a pressure supply pipe extending along said channel below the gate for supplying water to said box, a source of supply for said pipe having its level above said gate whereby when a breaking occurs in the supply pipe below the gate the supply of water to the box will be cut off to allow the gate to close, and a spillway located adjacent to said gate in front thereof to carry off the excess water when the gate is closed.

[Claims 6 to 9 not printed in the Gazette.]



1,230,458. CONTROLLER FOR NOZZLES. PIERRE BOUÉRY, Weaverville, Cal. Filed Nov. 22, 1915. Serial No. 62,910. (Cl. 137—17.)



1. In combination, a nozzle mounted for universal movement, means for causing the nozzle to be deflected angularly in any direction, and hydraulic means for controlling the operation of said deflecting means.

2. In combination, a nozzle mounted for universal movement, means for causing the nozzle to be deflected angularly in any direction, and hydraulic means for controlling said deflecting means from a distant point to vary the direction and length of movement of the nozzle.

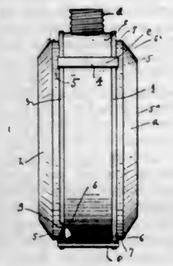
3. In combination, a nozzle, fluid pressure supply means for causing said nozzle to be moved angularly in intersecting planes, and means for controlling said pressure supply means to vary the direction of movement of the nozzle.

4. In combination, a hydraulic nozzle, means deflectable by the stream of water from the nozzle for causing the latter to be moved angularly, means operated by the water pressure from the supply main to control said deflectable means, and valves for controlling the supply of water to said pressure operated means.

5. A nozzle and a controller therefore, comprising actuators, fluid pressure supply means for operating said actuators to move the nozzle angularly in intersecting planes, and means for controlling the fluid pressure means to vary the direction of movement of the nozzle.

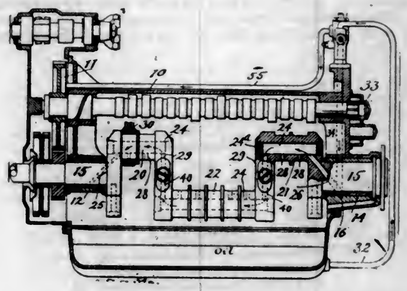
[Claims 6 to 11 not printed in the Gazette.]

1,230,459. CONTAINER. WILLIS J. BOYLE, Sr., Los Angeles, Cal. Filed July 15, 1916. Serial No. 109,504. (Cl. 220—92.)



A canteen or like container, including an annular sheet metal body, side plates formed with peripheral outwardly opening channels of which the outer side walls telescope within the edges of the annular sheet metal body, the edges of the side plates and sheet metal body being connected by continuous seams, and keepers extending transversely across the annular sheet metal body and having the ends thereof returned and secured within the peripheral channels of the side plates.

1,230,460. LUBRICATING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. ALANSON P. BRUSH, Detroit, Mich. Filed June 1, 1915. Serial No. 31,491. (Cl. 184—6.)



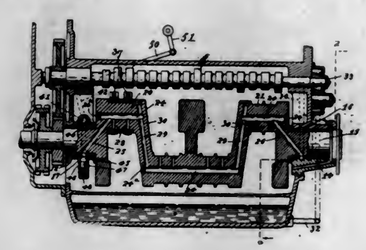

1. The combination of a crank shaft having a plurality of crank pins between its bearings, a crank case, bearings in the crank case for said crank shaft, one of said bearings having in its inner surface an oil groove, said crank shaft being formed with an oil conduit which includes longitudinal holes in the crank pins an oil tube connecting said oil groove in said bearing with the oil hole in the adjacent crank pin and other oil tubes which connect in series the oil holes in said crank pins, there being oil delivery ducts leading from the holes in the crank pins to the surfaces of said crank pins and toward the axis of the crank shaft, an oil pump which discharges into the oil groove in said shaft bearing, a conduit connecting the intake side of said pump with said crank case, a valve in said conduit to regulate the pump-induced flow of oil from said crank case, means to prevent the complete closure of said valve.

2. The combination of a crank shaft having a plurality of crank pins between its bearings, a crank case, bearings in the crank case for said crank shaft, one of said bearings having in its inner surface an oil groove, said crank shaft being formed with an oil conduit which includes longitudinal holes in the crank pins an oil tube connecting said oil groove in said bearing with the oil hole in the adjacent crank pin and other oil tubes which connect in series the oil holes in said crank pins, there being oil delivery ducts leading from the holes in the crank pins to the surfaces of said crank pins and toward the axis of the crank shaft, an oil pump which discharges into the oil groove in said shaft bearing, a conduit connecting the intake side of said pump with said crank case, a valve in said conduit to regulate the pump-induced flow of oil from said crank case, means to prevent the complete closure of said valve, a valve casing, a conduit leading from the discharge end of said pump to said valve casing, an oil conduit leading from said valve casing to the oil groove in the shaft bearing, an oil pipe leading from said valve casing back to the crank case, and a safety valve in said valve casing intermediate of the last named oil pipe and oil conduit which conveys oil to said valve casing.

3. The combination with a crank shaft having two bearings and having a plurality of crank pins between its bearings, one of said bearings including two parts which are separably connected together, a soft metal bushing in one part of the bearing, which bushing has outwardly extended flanges which project between the two parts of the bearing and are clamped between them when the two parts are connected together, a soft metal bushing in the other half of said bearing,—whose edges engage the bushing in the other part of said bearing,—the two bushing members being formed with registering internal annular grooves, means for delivering oil under pressure into said annular grooves, said crank shaft being formed with a longitudinal oil conduit which extends through the crank pins of said crank shaft, and which communicates with

the grooves in said bushings, which oil conduit has oil delivery ducts that discharge onto the bearing surfaces of said crank pins.

1,230,461. LUBRICATING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. ALANSON P. BRUSH, Detroit, Mich. Filed May 25, 1916. Serial No. 99,775. (Cl. 184—6.)



1. The combination of a crank shaft having a plurality of crank pins between the crank shaft bearings and having a continuous crooked oil conduit extending longitudinally through said crank shaft and through the several crank pins thereon,—there being oil delivery ducts leading from said conduit outward to the surfaces of the crank pins of said crank shaft, means for forcing oil into one end of said oil conduit, and means located adjacent the other end of said oil conduit for controlling the rate of discharge of said oil from said oil conduit.

2. The combination of a crank shaft having a plurality of crank pins between the crank shaft bearings and having a continuous crooked oil conduit extending longitudinally through said crank shaft and through the several crank pins thereof,—there being oil delivery ducts leading from said conduit outward to the surfaces of the several crank pins, means for forcing oil into one end of said conduit and causing it to flow through said conduit and out of the other end thereof, and manually operable means located adjacent the discharge end of said conduit to vary and regulate the pressure on the oil in said conduit.

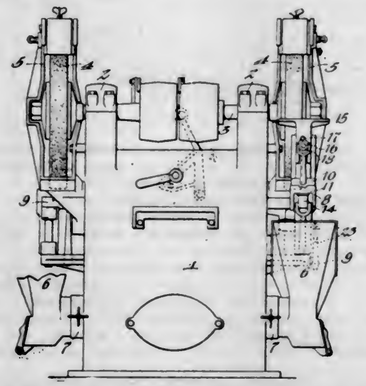
3. The combination of a crank shaft having a plurality of crank pins between the crank shaft bearings and having a continuous crooked oil conduit extending longitudinally through said crank shaft and through the several crank pins thereof,—there being oil delivery ducts leading from said conduit outward to the surface of the several crank pins, means for forcing oil into one end of said conduit, and a valve at the other end of said conduit to permit and regulate the rate at which oil will be discharged therefrom.

4. The combination of a crank shaft having a plurality of crank pins between the crank shaft bearings and having a continuous crooked oil conduit extending longitudinally through said crank shaft and through the several crank pins thereof,—there being oil delivery ducts leading from said conduit outward to the surface of the several crank pins, an oil pump which is driven from said crank shaft and is adapted to discharge its entire output into one end of said conduit, and a valve at the other end of said conduit to permit and regulate the rate at which oil will be discharged therefrom.

5. In an internal combustion engine, the combination of a crank case provided with shaft bearings, a crank shaft mounted in said bearings and having a continuous crooked oil conduit extending longitudinally through it and through the several crank pins thereon there being oil delivery ducts leading from said conduit outward to the surfaces of the several crank pins of said crank shaft, means for forcing oil into one end of said conduit, a valve to permit and control the rate of discharge of oil from the other end of said conduit, the throttle lever of the engine, and means connecting said throttle lever with said valve and adapted to cause said valve to close as the throttle is open and vice versa.

[Claims 6 and 7 not printed in the Gazette.]

1,230,462. GRINDING-MACHINE. HANS BUERK and ALBERT W. HAPPEL, Buffalo, N. Y., assignors to The Columbus Die, Tool & Machine Company, Columbus, Ohio, a Corporation of Ohio. Original application filed June 15, 1916, Serial No. 103,755. Divided and this application filed Nov. 22, 1916. Serial No. 132,893. (Cl. 51—7.)



1. A grinding machine comprising a frame, a grinding wheel rotatably mounted on said frame, a work rest movable toward and from the front part of said wheel and a positive stop which arrests the movement of the work rest in its operative position.

2. A grinding machine comprising a frame, a grinding wheel rotatably mounted on said frame, a work rest movable toward and from the front part of said wheel and a swinging bracket pivoted on said frame and carrying said work rest, the axis of the pivotal connection between said bracket and frame inclining rearwardly.

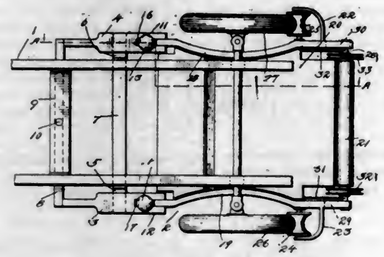
3. A grinding machine comprising a frame, a grinding wheel rotatably mounted on said frame, a work rest movable toward and from the front part of said wheel, a horizontally swinging bracket pivoted on said frame and carrying said work rest and means for holding said bracket in place while said work rest is in its operative position comprising a tubular stop boss secured to the frame and provided with an internal screw thread, and a clamping spindle journaled in a bearing on said bracket and provided at one end with a handle and at its opposite end with an external screw thread adapted to engage with the internal thread of said stop boss.

4. A grinding machine comprising a frame, a grinding wheel rotatably mounted on said frame to turn about a horizontal axis, a horizontally swinging bracket pivoted on the frame below said wheel, and a work rest mounted on said bracket and comprising a lower section movable on said bracket toward and from its axis and an upper section movable vertically on said lower section.

5. A grinding machine comprising a frame, a grinding wheel rotatably mounted on said frame to turn about a horizontal axis, a horizontally swinging bracket pivoted on the frame below said wheel, and a work rest mounted on said bracket and comprising a lower section movable on said bracket toward and from its axis, an upper section movable vertically on said lower section and means for holding said bracket sections in their adjusted position comprising a clamping bolt arranged on the lower work rest section and projecting through a slot in the bracket and provided with a screw nut engaging said bracket, and a clamping bolt arranged on said lower work rest section and projecting through a slot in said upper work rest section and provided with a screw nut engaging with said upper work rest section.



1,230,463. FENDER. ALEXANDER MCCORD BURTON, Pittsburgh, Pa. Filed Apr. 16, 1914. Serial No. 832,371. (Cl. 105—33.)



1. A fender having arms, the inner ends of which are pivotally mounted, projections on said ends and springs bearing thereagainst whereby the fender is held suspended.

2. A fender having arms, the inner ends of which are pivotally mounted, projections on said ends and springs bearing thereagainst whereby the fender is held suspended, said fender adapted to be tripped against the action of said springs.

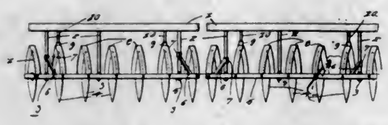
3. A fender having arms, the inner ends of which are pivotally mounted, projections on said ends and springs bearing thereagainst whereby the fender is held suspended, said fender adapted to be tripped against the action of said springs, and means whereby the fender will be held in tripped position.

4. A fender having arms, the inner ends of which are pivotally mounted, projections on said ends and springs bearing thereagainst whereby the fender is held suspended, said fender adapted to be tripped against the action of said springs, and means whereby the fender will be held in tripped position, against the action of said springs.

5. A fender having arms, the inner ends of which are pivotally mounted, projections on said ends and springs bearing thereagainst whereby the fender is held suspended, said fender adapted to be tripped against the action of said springs, means whereby the fender will be held in tripped position against the action of said springs, and supports upon which said arms are pivoted.

[Claims 6 to 24 not printed in the Gazette.]

1,230,464. DISK-HARROW SHIELD. JOSEPH P. CAMERON, Atlantic, Iowa. Filed Sept. 1, 1916. Serial No. 118,072. (Cl. 55—30.)



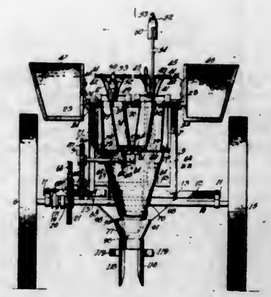
1. In combination, a disk harrow having a plurality of disks, a plurality of shields adapted to overlie the disks and extending parallel therewith, and means for securing the shields to the harrow.

2. In combination, a disk harrow having a plurality of disks thereon, a plurality of substantially U-shaped shields overlying the upper peripheries of the disks, a substantially rectangular frame surrounding the disks and secured to the shields, and means for securing the frame to the disk harrow.

3. In combination, a disk cultivator having a plurality of disks thereon, a plurality of substantially U-shaped shields overlying the upper peripheries of the disks, a rectangular frame surrounding the disks and secured to the ends of the shields, and bracing strips secured to the frame and to the cultivator.

4. In combination, a cultivator including a plurality of disks thereon, a plurality of shields overlying the upper peripheries of the disks, a rectangular frame surrounding the disks and secured to the shields, the inner shield having its forward portion cut away, the shield adjacent to the inner and outer shields having formed thereon a socket member, rods secured to the socket member and to the cultivator, and braces secured to the frame and to the disk harrow.

1,230,465. POTATO-PLANTER. JOSEPH P. DAVENPORT, Wheaton, Ill. Filed Mar. 18, 1915. Serial No. 15,191. (Cl. 111—27.)



1. A potato planter comprising in combination a plurality of fixed hoppers, a cutter for each hopper adapted for severing in quarters potatoes supplied thereto, a separate chute for the severed quarters of both cutters, and a rotating valve adapted for simultaneously supporting severed quarters from both cutters.

2. A potato planter comprising in combination a plurality of hoppers, a cutter for each hopper adapted for severing in quarters potatoes supplied thereto, a separate chute for the severed quarters of both cutters, and a single discharge spout for and common to all of said chutes.

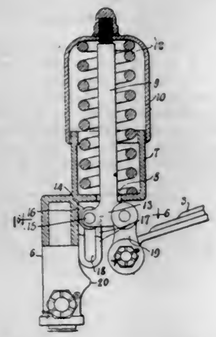
3. A potato planter comprising in combination a plurality of fixed hoppers, a cutter for each hopper adapted for severing in quarters potatoes supplied thereto, reciprocating plungers for alternately pushing potatoes past said cutters, a separate chute for the severed quarters of both cutters, and a discharge spout for and common to all of said chutes.

4. A potato planter comprising in combination a plurality of fixed hoppers, means for severing in quarters potatoes respectively supplied to said hoppers, an individual chute for each severed potato quarter, a discharge spout for and common to all of said chutes, a movable support between said chutes and spout provided with a single opening through which the potato quarters in said chutes are successively discharged into said spout.

5. A potato planter comprising in combination a plurality of fixed hoppers, a cutter for each hopper, means for pushing potatoes alternately past said cutters, a separate chute for every severed piece of potato, a discharge spout for and common to all of said chutes, and a rotating disk valve located between said chutes and spout for and adapted to successively discharge a piece of potato from each chute into the spout.

[Claims 6 to 9 not printed in the Gazette.]

1,230,466. SPRING SUSPENSION FOR AUTOMOBILES. OLIVER P. EDWARDS, Leipsic, Ohio, assignor to The Temco-Electric Motor Company, Leipsic, Ohio, a Corporation of Ohio. Filed June 5, 1916. Serial No. 101,778. (Cl. 267—19.)



1. In a shock absorber, a stanchion, a hanger movable relatively thereto without binding, a resilient medium interposed between the stanchion and hanger, means attached to the hanger which tends to displace the same relatively to said stanchion, and guiding devices arranged to counteract said displacing tendency and to maintain the hanger and stanchion in equidistant relation to prevent binding of the parts during the relative movement thereof.

2. In a shock absorber, a stanchion, a hanger movable relatively thereto, a resilient medium interposed between the stanchion and hanger, a spring attached to said hanger, and guiding devices to take up the thrust of said spring and to maintain the stanchion and hanger in equidistant relation to prevent binding of the parts during the relative movement thereof.

3. In a shock absorber, a stanchion, a hanger movable relatively thereto, a resilient medium interposed between the stanchion and hanger, a spring attached to said hanger at one side of a portion thereof, and guiding devices at the opposite side of the same portion to take up the thrust of said spring and maintain the stanchion and hanger in equidistant relation to prevent binding of the parts during the relative movement thereof.

4. In a shock absorber, a stanchion provided with an abutment, a hanger movable relatively to said stanchion provided with an abutment above the first-mentioned one and having its lower end projecting below the same, a resilient medium disposed between said abutments, and cooperating guiding devices on the portion of said hanger below the first-mentioned abutment to maintain the stanchion and hanger in equidistant relation.

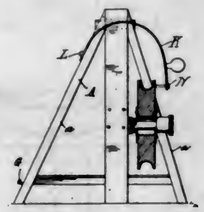
5. In a shock absorber, a stanchion provided with an abutment, a hanger movable relatively to said stanchion provided with an abutment above the first-mentioned one and having its lower end projecting below the same, a resilient medium disposed between said abutments, a spring attached to the projecting end of said hanger and cooperating guiding devices upon said projecting end below said first-mentioned abutment for performing the dual function of taking up the lateral thrust of said spring and maintaining the hanger in equidistant relation to the stanchion so that the binding of the parts is prevented.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,467. FISHING DEVICE. CHARLES J. EHRLER, Pittsfield, Mass. Filed Oct. 19, 1916. Serial No. 126,564. (Cl. 43—7.)

1. In a fishing device, a standard having means for its anchorage, a spindle threaded in the upper end of the standard, a reel rotatably mounted thereon, a nut on the said spindle, a tensioning device interposed between the nut and the reel, a resilient plate clamped to the standard, said plate having a notch in its end, a member on the reel

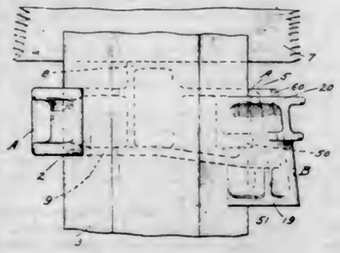


entering the said notch when the plate is bent, and a flag carried by the said plate.

[Claims 2 and 3 not printed in the Gazette.]

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1,230,468. RAIL-ANCHOR. HENRY G. ELFBORG, Chicago, Ill., assignor to Ajax Rail Anchor Company, Chicago, Ill., a Corporation of Delaware. Filed Oct. 6, 1916. Serial No. 124,124. (Cl. 238—4.)



1. A rail anchor comprising a plurality of members having coacting wedging surfaces engaging each other with varying pressure upon relative movement of said members, and having other coacting surfaces engaging each other with substantially constant pressure upon relative movement of said members.

7. A rail anchor for railway rails, comprising a main member adapted to underlie and engage one edge of a rail base, the other end of said member having an inclined wedging surface, and a second member adapted to engage the other edge of said rail base and said last-mentioned end of said main member, said second member having an inclined wedging surface adapted to coact with said inclined surface on said main member, said main member and said second member having other surfaces adapted to engage each other with substantially constant pressure upon relative movement of said members, one of said members having a part adapted to bear against a tie.

10. A rail anchor for railway rails, comprising a member adapted to underlie the base of a rail and to bear against a tie, one end of said member being adapted to hang upon and engage the rail base by means of an upwardly extending part directly engaging one edge of the rail base, and the other end of said member having an upwardly extending shoulder converging in a horizontal plane with the opposite edge of said rail base, said member being provided with a horizontally extending surface on the underside thereof beneath said shoulder, and a second member adapted to overlie the other edge of said rail base and to embrace the last mentioned end of said main member by means of a groove extending along one side thereof, said groove having one part adapted to coact with said upwardly extending shoulder of said main member to effect a transverse gripping of said rail base, said second member being also provided with a horizontally extending surface adapted to engage said horizontally extending surface on said main member, said horizontally extending surfaces being normally out of alinement.

15. A rail anchor for railway rails, comprising a main member adapted to underlie a rail base and having an upwardly extending part arranged to engage and hang upon one edge of said rail base, said main member being provided with a part having a substantially horizontal under-surface adjacent the other edge of said rail base, and a second member adapted to hang upon the other edge of said rail base and to engage said main member, said members having coacting wedging surfaces whereby a relative movement of said members will effect a transverse gripping of said rail base, said second member having a surface adapted to extend beneath and coact with said under-surface of said main member, said last mentioned surfaces being out of alinement and interfering when said members are brought together initially with said main member coacting with the under-surface of said rail base and said second member coacting with the upper surface of the rail base, one of said members having a part adapted to bear against a tie.

[Claims 2 to 6, 8, 9, and 11 to 14 not printed in the Gazette.]



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1,230,469. SPRINKLER FOR AUTOMATIC FIRE-EXTINGUISHING SYSTEMS. WILLIAM ESTY, Laconia, N. H.; Charles W. Tyler, executor of said William Esty, deceased, assignor to Esty Sprinkler Company, Laconia, N. H., a Corporation of New Hampshire. Filed Aug. 12, 1916, Serial No. 114,582. Renewed May 7, 1917. Serial No. 167,065. (Cl. 169—5.)



1. A sprinkler for automatic fire extinguishing systems having, in combination, a fitting with a valve seat at its end and an outwardly projecting annular shoulder, and a screw threaded section between said shoulder and the valve seat; a non-corrodible disk with a peripheral flange resting upon the said shoulder; a second non-corrodible disk with a peripheral flange resting upon the first named disk, the outer disk being of greater diameter than the inner disk so that an annular space or groove is constituted between the two flanges; a valve on the valve seat of the fittings; a resilient frame screwing on to the aforesaid screw threaded section of the fitting and seating against the inner disk, thereby making an air tight joint between the disks and the shoulder of the fitting; a separable fusible strut between the valve and the resilient frame; a glass cover fitting over the resilient frame, the valve seat, and the strut, the open edge of said cover fitting into the groove between the flanges of the two disks; and a fusible cement in said groove forming an air tight joint between the glass cover and the disks.

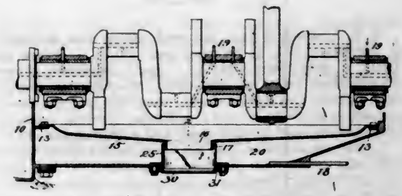
2. A sprinkler for automatic fire extinguishing systems having a resilient frame with two side arms, each side arm having a plurality of reëntrant bends.

3. A sprinkler for automatic fire extinguishing systems having, in combination, a fitting with a valve seat at its end and an outwardly projecting annular shoulder, and a screw threaded section between said shoulder and the valve seat; a disk with a peripheral flange resting upon the said shoulder; a second disk with a peripheral flange resting upon the first named disk, the outer disk being of greater diameter than the inner disk so that an annular space or groove is constituted between the two flanges; a valve on the valve seat of the fitting; a frame screwing on to the aforesaid screw threaded section of the fitting and seating against the inner disk, thereby making an air tight joint between the disks and the shoulder of the fitting; a separable fusible strut between the valve and the resilient frame; a cover fitting over the frame, the valve seat, and the strut, the open edge of said cover fitting into the groove between the flanges of the two disks; and a fusible cement in said groove forming an air tight joint between the glass cover and the disks.

[Claims 4 and 5 not printed in the Gazette.]

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1,230,470. INTERNAL-COMBUSTION ENGINE. FRANK H. FARMER, Cleveland, Ohio, assignor to The White Motor Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 9, 1916. Serial No. 130,317. (Cl. 184—6.)



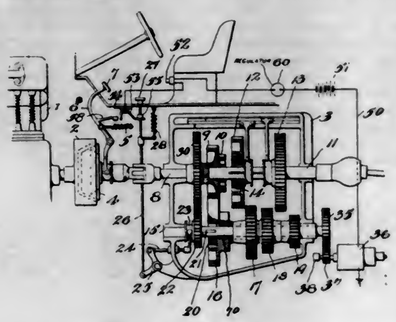
1. In an internal combustion engine, the combination of a crank case into which the oil will drop from the bearings of the crank shaft and connecting rods, which crank case has an oil discharge opening, an oil receptacle into which said oil opening discharges oil and from which oil may be withdrawn by a pump and delivered to the bearings of the crank shaft and connecting rods, and an upright strainer tube which has a closed lower end and an open upper end and which is located in such position that the oil in following the above described path is at some time delivered into the open end of said strainer and may flow from said strainer either through the meshes thereof or over the top thereof into the adjacent part of the oil circulating path.

2. In an internal combustion engine, the combination of a crank case into which oil will drip from the bearings of the crank shaft and connecting rods,—which crank case has an oil discharge opening, an oil receptacle, and an upright strainer tube which has a closed lower end and an open upper end, and which is located within the oil receptacle in position to receive into its open upper end the oil discharged from the crank case through oil discharge openings thereof

3. In an internal combustion engine, the combination of a crank case into which oil will drip from the bearings of the crank shaft and connecting rods,—which crank case has an oil discharge opening, an oil receptacle in the bottom of said crank case having an opening through its bottom directly below the oil discharge opening of the crank case, a cap removably secured over the opening in the bottom of the oil receptacle which cap has a recess in its upper surface, and a strainer tube whose lower end is fitted into said recess and whose upper end is below the oil discharge opening from the crank case.

4. In an internal combustion engine, a crank case having inwardly directed flanges along its end and side walls, a partition which rests upon and is secured to said flanges which separates the crank case proper from an oil reservoir below the same,—said partition having a hole surrounded by an annular flange and being dished downward toward that hole, and a strainer tube fixed to the bottom of the crank case and projecting up around said annular flange but out of contact with it and with said partition.

1,230,471. POWER SYSTEM. JOHN D. FIAMIN, Philadelphia, Pa. Filed May 29, 1912. Serial No. 700,430. (Cl. 171—315.)



1. In a power system, the combination of a gas engine, a friction clutch, a primary gear shaft, a driven gear shaft, a gear counter-shaft, a sleeve revoluble thereon, transmission gears on said sleeve, transmission gears on said primary and driven shafts, a starting motor connected to said counter-shaft, and a shiftable starting connection intermediate said counter-shaft and said primary shaft.

2. The combination with an organization comprising an internal combustion engine, apparatus to be driven thereby, means, including an intermediate driving shaft, in which the power output of the motor may be accumulated in the form of energy of rotation, and mechanism adapted to connect the intermediate shaft to the engine and to the apparatus to be driven, or to disconnect it from the engine and from the apparatus to be driven; of a starting motor for the engine, a disengageable connection between the motor and the intermediate driving shaft including speed reducing gearing, and a supplemental driving connection between the engine and the motor, whereby the motor may be driven as a generator; substantially as described.

3. In apparatus for starting internal combustion engines from rest to initiate the normal cycle of operations thereof, a starting motor, an intermediate driving shaft in which the power output of the motor may be accumulated in the form of energy of rotation, a driving connection between the motor and the shaft, and means for connecting the rotating shaft to the engine to start it; substantially as described.

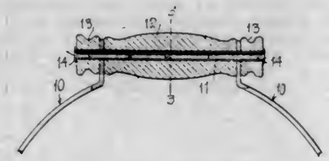
4. In apparatus for starting internal combustion engines from rest to initiate the normal cycle of operation thereof, a starting motor, an intermediate driving shaft in which the power output of the motor may be accumulated in the form of energy of rotation, a driving connection between the motor and the shaft, and means for simultaneously connecting the motor and the rotating shaft to the engine to start it; substantially as described.

5. In apparatus for starting internal combustion engines from rest, a starting motor, an intermediate driving shaft in which the power output of the motor may be accumulated in the form of energy of rotation, a driving connection between the motor and the shaft, and means for operatively connecting the shaft to the engine while the shaft is being driven by the motor; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

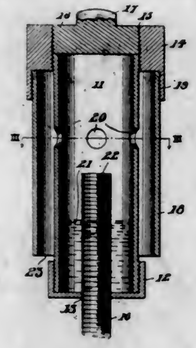
1,230,472. HANDLE. CORNELIUS B. FORBES, Guilford, Conn. Filed Mar. 31, 1917. Serial No. 158,924. (Cl. 16—173.)

The combination with an article having metallic ears, of a handle comprising a tubular metallic member open at its ends and passing through said ears and in contact therewith, a sleeve surrounding the tubular member disposed between said ears, the sleeve being of non-heat conducting material, and knobs surrounding the extremities of the tubular member and formed of non-heat conducting



material, the ends of the tubular member being overturned to hold the knobs in place against the ears.

1,230,473. SOIL-PIPE GERM-TRAP. ARTHUR C. FREEMAN, Jr., Norfolk, Va. Filed Sept. 29, 1916. Serial No. 122,864. (Cl. 4—21.)



1. A germicide means for sewer vents comprising a germicide receiving casing removably attached thereto and having outlet openings above the level of the said vent, a protecting petticoat removably attached surrounding the said casing and a removable closure means for the upper end of the latter.

2. A germicide means for sewer vents comprising a germicide receiving casing removably attached thereto and having outlet openings above the level of the said vent, a head exteriorly threaded upon the upper end of the casing, a removable closure plug threaded within the said head seated upon the free end of the casing, and a depending petticoat carried by the head surrounding the casing.

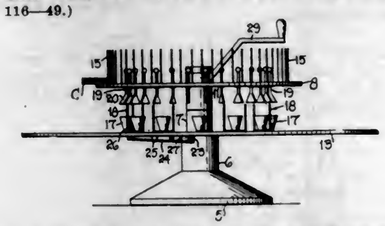
3. A germicide means for sewer vents comprising a germicide receiving casing removably attached thereto and having outlet openings above the level of the said vent, a head exteriorly threaded upon the upper end of the casing, a removable closure plug threaded within the said head seated upon the free end of the casing, an annular internally-threaded depending flange carried by the outer edge of the said head above the said openings, and a tubular petticoat having threaded engagement with the said flange extending below the level of the said openings.

4. A device of the class described comprising in combination with a soil pipe, a tubular casing surrounding the said pipe and having outlet openings above the level of the upper open end of the pipe, a cap threaded upon the lower end of the casing removably attached to the said pipe, a germicidal fluid arranged within the casing below the level of the free end of the pipe, a head threaded upon the casing, a lock nut for the said casing having threaded engagement with the head, and a depending storm protecting petticoat carried by said head.



5. A device of the class described comprising a threaded outlet pipe, a cap having a depending boss in threaded engagement with the said pipe, a germicide receiving casing carried by said cap, and a depending storm protecting petticoat attached to the said casing and having its lower end substantially flush with the said cap.

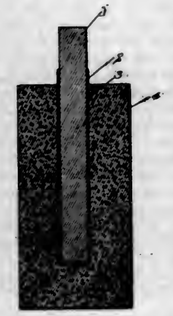
1,230,474. CALCULATOR. ROBERT F. GAMBLE, Shelby, Miss. Filed Nov. 15, 1916. Serial No. 131,481. (Cl. 116—49.)



1. A calculator of the character described including a fixed disk having the months of the year indicated thereon, a rotatable rack mounted above and in spaced relation to the fixed disk, and a plurality of alarm devices corresponding in number to the months of the year successively actuated in the rotation of said rack.

[Claims 2 to 4 not printed in the Gazette.]

1,230,475. CEMENT STRUCTURE. HENRY A. GARDNER, Washington, D. C. Filed Jan. 26, 1915. Serial No. 4,538. (Cl. 72—77.)



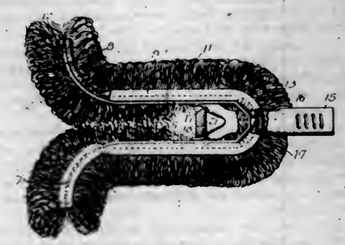
1. As a new article of manufacture, a cement structure having a metal member embedded therein, and an insulating layer between the metal and the cement, said layer containing polymerized tung oil.

2. As a new article of manufacture, a cement structure having a metal member embedded therein, and an insulating layer between the metal and the cement, said layer comprising a film of polymerized tung oil, and a granular substance the particles of which are partially embedded in said film.

1,230,476. DUST-MOP. CHARLES B. GILMORE, Chicago, Ill., assignor to William H. Plunkett, Chicago, Ill. Filed Aug. 24, 1916. Serial No. 116,581. (Cl. 15—13.)

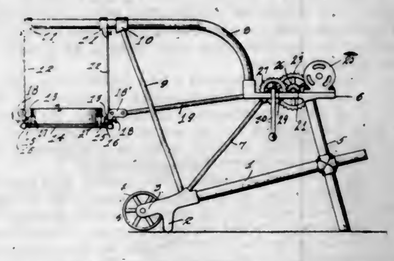
1. A dust mop, comprising a body portion provided at one end with diverging oppositely extending arms, a cloth, and means for detachably connecting said cloth to said body portion comprising pockets in the ends of the cloth adapted to receive the ends of said arms, and a device for detachably securing the cloth to said body portion at the end remote from said arms.

2. A dust mop, comprising a body portion provided with divergent oppositely projecting rigid arms, a mop cloth provided at its ends with pockets adapted to receive the ends of said arms, means for detachably securing the



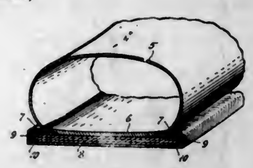
mop cloth to said body portion intermediate the ends thereof, and a handle connected to said body portion.

1,230,477. PORTABLE SAND-SIFTING MACHINE. CHARLES H. GREEN, Chicago, Ill., assignor to E. J. Woodison Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 12, 1915. Serial No. 20,821. (Cl. 83—56.)



In a portable sand sifting machine, the combination of a beam, downwardly extending resilient arms connected to said beam, castings mounted in the lower ends of said arms, a rod extending between and secured to said castings, arcuate members carried by said castings and having fingers extending therefrom in converging relation, a sieve supported on said fingers, other arcuate members engaging said sieve to clamp the same into position, and means carried by the first named arcuate members for adjusting the second named arcuate members into clamping position.

1,230,478. SHOE CONSTRUCTION. MEDOREM W. GREER, New York, N. Y., assignor, by mesne assignments, to Ever-Last Cotton Shoe Corporation, a Corporation of New York. Filed Aug. 21, 1915. Serial No. 46,593. (Cl. 36—17.)



1. In a shoe, the combination of an outer sole comprising superposed layers with a curtain covering the peripheral edge of such outer sole, the lower edge of said curtain being substantially flush with the wearing surface of said sole.

2. In a shoe, the combination of an outer sole comprising superposed layers, with a curtain covering and bearing against the peripheral edge of said outer sole, the lower edge of said curtain being substantially flush with the wearing surface of said sole.

3. In a shoe, the combination of an inner sole, upper and outer sole, and a welt bearing against said upper and the upper surface of said outer sole and having a downwardly extending curtain covering the peripheral edge of said outer sole.

4. In a shoe, the combination of an outer sole comprising superposed layers of fabric secured together, with a curtain secured to and covering and bearing against the peripheral edge of said outer sole, the lower edge of said curtain being substantially flush with the wearing surface of said sole.

5. In a shoe, the combination of an outer sole with a curtain covering the peripheral edge of said outer sole and secured thereto by stitching, said stitching extending diagonally downward through the curtain and the sole.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,479. SELF-PRESERVING ACID MILK PRODUCT AND PROCESS OF MAKING THE SAME. WILLIAM P. M. GRELCK, Evanston, Ill., assignor to Bertha H. Grelck, Lincoln, Nebr. Filed May 10, 1915. Serial No. 27,022. (Cl. 99—11.)

1. The process of producing a food product from soured milk which consists in precipitating the casein by the agency of heat and simultaneously agitating the precipitate whereby the casein is mixed in the form of finely divided non-adherent particles.

2. The process of producing a food product from soured milk which consists in precipitating the casein by the agency of heat, simultaneously agitating the precipitate to keep the particles thereof out of continuous contact, and then increasing the heat to fix the said particles in finely divided non-adherent form.

3. The process of producing a food product from soured milk which consists in precipitating the casein by the agency of heat, agitating the precipitate while forming to keep the particles thereof out of continuous contact, and then increasing the heat to fix the said particles in finely divided non-adherent form and sterilize the mass.

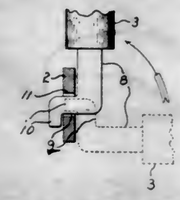
4. The process of producing a food product from soured milk which consists in precipitating the casein, agitating the precipitate to keep the particles thereof out of continuous contact and fix the said particles in finely divided non-adherent form and then evaporating the surplus fluid.

5. The process of producing a food product from soured milk which consists in precipitating the casein by the agency of heat, agitating the precipitate, heating the precipitated particles during agitation until they become non-adherent and then evaporating the surplus fluid.

[Claims 6 to 14 not printed in the Gazette.]

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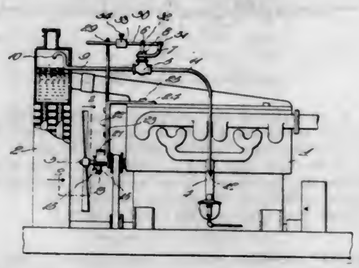
1,230,480. PUSH-BUTTON CONNECTION FOR SNAP-SWITCHES. MONROE GUETT, Hartford, Conn., assignor to The Hart & Hegeman Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Oct. 28, 1916. Serial No. 128,154. (Cl. 175—293.)




The combination of a switch operating lever having an approximately circular bearing opening at one side of its center of motion, and a push button and its shank, the shank terminating in a projection fitted in said opening and the projection terminating in a pendant extension constituting a stop to abut against one side of said lever, the shank, the projection and extension being flat and of sheet metal and all in the same plane, the shank being disposed edgewise to the other side of the lever, said projection and extension being insertible through said bearing opening while the shank is at an angle to the operating lever and the parts being brought into assembled relation merely by a relative lateral movement of the lever and the shank.

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1,230,481. AUTOMATIC AIR-CONTROLLING DEVICE FOR GAS-ENGINES. WADE H. GUTHRIE, Charleston, W. Va. Filed Oct. 3, 1916. Serial No. 123,571. (Cl. 137—140.)



1. The combination with a shaft driven by an explosive engine, a collar fixed to said shaft, centrifugally acting weights mounted on said collar, a sliding member having an enlarged lower end with a laterally projecting flange formed thereon and semi-circular in shape with flared ends, said flange being adapted to engage the edge of the collar and to be actuated by the weights, the radius of the flange being greater than the radius of the collar, and a valve operated by said sliding member for controlling the inlet into the intake manifold of the engine.

2. The combination of a shaft driven by an explosive engine, a collar fixed to said shaft, centrifugally acting weights mounted on said collar, a sliding member carrying a curved element to rest on and be actuated by said weights, a valve to control an inlet into the intake manifold of an engine, a lever for operating said valve, an adjustable weight on said lever, loose connections between said lever and said sliding member, and springs for actuating said centrifugal weights inwardly toward the axis of said shaft.

3. The combination with a shaft driven by an explosive engine, a bracket having one end secured to the engine and its other end straddling the shaft, a collar fixed to said shaft, centrifugally acting weights on said collar, a strip slidably mounted on said bracket, the lower end of said strip being enlarged and adapted to straddle the driven shaft, a semi-circular flange projecting from said enlarged end of the strip and adapted to rest on and be actuated by said weights, a valve to control the inlet into the intake manifold of the engine, and a lever for operating said valve extending through an opening in the upper end of the movable strip and operable upon movement of said strip.

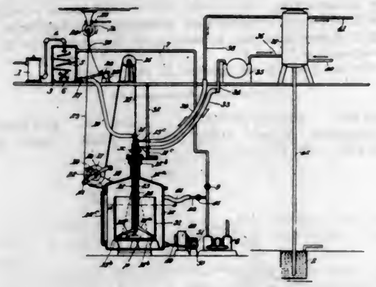
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1,230,482. REFRIGERATING METHOD. WILLIAM T. HOOPNAGLE, Glen Ridge, N. J., assignor to Electro-Chemical Products Company, New York, N. Y., a Corporation of New York. Filed July 8, 1915. Serial No. 38,738. (Cl. 62—178.)

1. The method of making ice which comprises admitting water to a suitable vessel, causing a current of air to enter the chamber in close contact with the water, and withdrawing air and vapor from said vessel by suitable exhaust mechanism.



2. The method of making ice which comprises intermittently admitting water to a suitable vessel, causing the water to flow back and forth therein, causing a current of air to enter the chamber in close contact with the water, and withdrawing air and vapor from said vessel by suitable exhaust mechanism.



3. The method of making ice which comprises admitting water to a suitable vessel, causing a current of air to enter the chamber in close contact with the water, withdrawing air and water vapor from the vessel by suitable exhaust mechanism, separating the vapor from the air, and returning the air to said vessel.

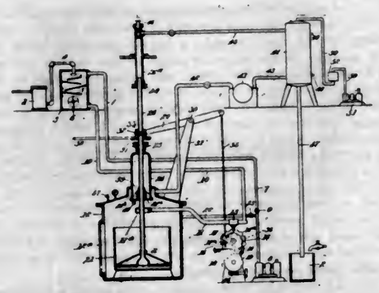
4. The method of making ice which comprises intermittently admitting water to a suitable vessel, causing the water to flow back and forth therein, causing a current of air to enter the chamber in close contact with the water, withdrawing air and water vapor from the vessel by suitable exhaust mechanism, separating the vapor from the air, and returning the air to said vessel.

5. The method of making ice which comprises admitting water to a suitable vessel, causing a current of air to enter the chamber in close contact with the water, withdrawing air and water vapor from the vessel by suitable exhaust mechanism, condensing the vapor, and returning the air to said vessel.

[Claim 6 not printed in the Gazette.]

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1,230,483. REFRIGERATING APPARATUS. WILLIAM T. HOOPNAGLE, Glen Ridge, N. J., assignor to Electro-Chemical Products Company, New York, N. Y., a Corporation of New York. Filed Aug. 6, 1915. Serial No. 43,971. (Cl. 62—152.)



1. In a vacuum refrigerating apparatus, a closed vessel adapted to contain an aqueous liquid, means for exhausting air and vapor from said vessel, means for conducting air into said vessel, and means for distributing the entering air laterally in said vessel and in close contact with the liquid therein.

2. In a vacuum refrigerating apparatus, a closed vessel adapted to contain an aqueous liquid, means for exhausting air and vapor from said vessel, means for admitting air to said vessel, and means for causing the air to flow parallel and in close contact with the surface of the liquid.

3. In a vacuum refrigerating apparatus, a closed vessel adapted to contain an aqueous liquid, means for exhausting air and vapor from said vessel, means for returning the air to said vessel, and means for causing the air to flow parallel and in close contact with the surface of the liquid.

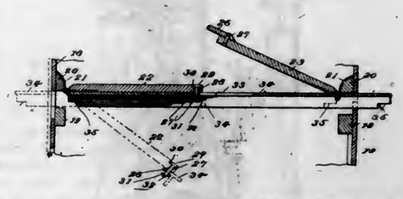
4. In a vacuum refrigerating apparatus, a closed chamber adapted to contain an aqueous liquid, means for exhausting air and vapors from the chamber, an air distributer having a lower face adapted to extend parallel with the surface of the liquid and close to it, and means for causing a current of air to flow between said face and the liquid.

5. In a vacuum refrigerating apparatus, a closed chamber adapted to contain an aqueous liquid, means for exhausting air and vapors from the chamber, an air distributer having a lower face adapted to extend parallel with the surface of the liquid and close to it, means for rotating said distributer, and means for causing a current of air to flow between said face and the liquid.

[Claims 6 to 14 not printed in the Gazette.]

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1,230,484. CONVERTIBLE FREIGHT-CAR. ALVAHA JEWEL HOWD, Nampa, Idaho. Filed Apr. 4, 1917. Serial No. 159,611. (Cl. 105—15.)



1. A freight car comprising side walls, removable deck members carried by said walls, means carried by said deck members adapted to coöperate with said walls to support said deck members.

5. A convertible freight car comprising a plurality of walls, a plurality of deck forming members mounted on said walls, a plurality of supports carried by certain of said deck forming sections, said supports being pivotally and slidably mounted thereon, means carried by said walls adapted to coöperate with said supports, means carried by others of said deck forming members adapted to coöperate with said supports and the support carrying deck forming members, and additional means carried by said walls adapted to support certain of said deck forming sections.

6. In a convertible car the combination of a plurality of walls, of deck forming members thereon, a plurality of supports carried by said deck forming members adapted to coöperate with said walls to support said deck, and hinged sections carried by certain of said deck forming members adapted to form a continuation of the deck adjacent the door openings of the car.

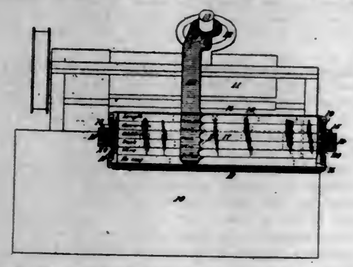
[Claims 2 to 4 not printed in the Gazette.]

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1,230,485. ANNOTATOR FOR COMMERCIAL PHONOGRAPHS. MARTHA L. HUNTER and ALBERT B. CHURCH, San Francisco, Cal. Original application filed Sept. 15, 1915. Serial No. 50,780. Divided and this application filed Jan. 25, 1917. Serial No. 144,564. (Cl. 274—17.)

1. In combination with a commercial phonograph and a holder rigidly connected thereto, a stationary sheet having longitudinally arranged instructions thereon carried by said holder, and an indicator connected to the traveling head of the phonograph and extending over and across

said sheet, said indicator having indicia thereon extending transversely thereof and in alinement with the respective

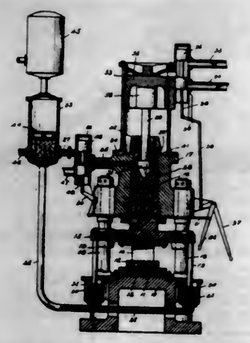


longitudinally arranged instructions of said sheet.

[Claim 2 not printed in the Gazette.]

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1,230,486. APPARATUS FOR EXERTING PRESSURES AND IMPACTS, AND METHOD OF OPERATING THE SAME. MARIUS P. JACOMINI, Chicago, Ill., assignor to General Briquetting Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 9, 1916. Serial No. 77,172. (Cl. 138—17.)



1. The method of intensifying the power stroke of an apparatus for exerting pressures or producing striking impulses which consists in providing a pressure transmitting connection between the power member and the impact member of such apparatus and momentarily diminishing the resistance of said connection so that the power member acquires energy which is imparted to the impact member.

2. The method of intensifying the power stroke of apparatus for exerting pressures or producing striking impulses which consists in providing a confined body of pressure transmitting fluid between the power member and the impact member of such apparatus and momentarily reducing the pressure of said fluid against the impact member during the stroke of the power member so that the latter acquires energy which is subsequently imparted to the former.

3. The method of intensifying the power stroke of apparatus for exerting pressures or producing striking impulses which consists in providing a confined body of pressure transmitting fluid between the power member and the impact member of said apparatus and suddenly increasing the capacity of the confining means for the pressure transmitting fluid so that the power member will acquire energy which is subsequently transmitted to the impact member.

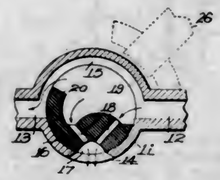
4. The method of intensifying the latter portion of the power stroke of a hydraulic press which consists in increasing the capacity of the confining means for the pressure transmitting fluid after pressure has been exerted against the work so that the power member of the press acquires energy which with its further movement into the pressure transmitting fluid is imparted to the pressing member of the press.

5. In apparatus of the character described, the combination of an impact member, a power member and a pressure transmitting connection between the same provided with means for substantially reducing the resistance of said connection during a portion of the power stroke of the apparatus.

[Claims 6 to 24 not printed in the Gazette.]

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1,230,487. SPRAY-NOZZLE. JOHN A. JOHNSTON, Springfield, Mass. Filed Jan. 17, 1916. Serial No. 72,433. (Cl. 137—85.)



1. In a nozzle for use in spraying heavy molten materials, the combination with a casing having three passages through its walls, two flow passages and a discharge passage between them, of a valve fitting in said casing and having a jet spray opening for spraying through said discharge passage, and a passage communicating with said opening and extending through the valve, said passage in the valve being arranged to form a bypass for conducting the liquid through the nozzle from one side to the other at all times when said opening is closed.

2. In a nozzle for use in spraying heavy molten materials, the combination with a casing having two passages through its walls constituting the inlet and outlet, and a third passage between them, of a valve fitting in said casing and having a passage therethrough, an opening for spraying extending from said passage in the valve and adapted to register with the third passage in the valve casing, said passage in the valve being arranged to register with the inlet opening in the valve casing when said openings register with the third passage thereof and to register with either the inlet or outlet passage in the valve casing when said opening for spraying is turned to inoperative position or into register with the other of said passages.

3. In a nozzle of the class described, the combination of a casing having an inlet passage at one side and an outlet passage at the opposite side, a bypass extending from the inlet passage to the outlet passage in the wall of the casing around one half the same, and a third passage on the opposite side of the casing between the inlet and outlet passages, with a valve in said casing provided with a rear passage adapted to connect the inlet and outlet passages of the casing when the valve is turned to a certain position and provided with a pair of converging passages terminating in a port on the outer side of said valve for registering with the third passage in the casing when said valve is turned to one position, said valve having means for closing the third passage when it is turned to a position in which said ports register with the inlet passage, whereby the liquid will be permitted to flow through the valve when the said third passage is closed.

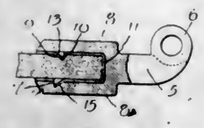
4. As an article of manufacture, a spraying nozzle having a passage for producing a spray, a valve in said nozzle and constituting a part thereof, said nozzle having means for permitting the circulation of liquid therethrough when the valve is moved to such position as to prevent spraying through said spray passage, and means for preventing the clogging up of said spray passage by directing liquid therethrough when not delivering a spray.



5. As an article of manufacture, a spray nozzle for spraying heavy liquids comprising a casing having an opening for spraying, an oscillatable valve for opening and closing said opening having a spray passage and means for preventing the clogging up of said spray passage when said opening is closed.

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1,230,488. OPHTHALMIC MOUNTING. PAUL H. JOHNSTON, Davenport, Iowa. Filed May 11, 1916. Serial No. 96,809. (Cl. 88—47.)



1. In combination with a lens, a lens mount, and a shim adapted to interlock respectively with said lens and said mount.

2. In combination with a lens having a depression in a surface thereof, a lens mount including a strap adapted to contact the edge of the lens, and ears adapted to extend oppositely upon either side of said lens, and a shim adapted to extend between and interlock respectively with said lens and said mount.

3. In combination with a lens, a lens mount including ears adapted to extend oppositely upon either side of said lens, and a shim adapted to extend between and interlock respectively with said lens and said mount.

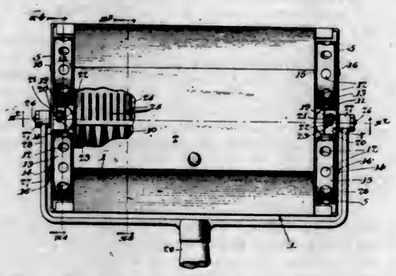
4. In combination with a lens having a conical depression in a surface thereof, with the base of said depression adjacent the periphery of said lens, a lens mount including a strap adapted to contact the edge of the lens and ears adapted to extend oppositely upon either side of said lens, and a shim adapted to extend between and interlock respectively with said lens and said mount.

5. In combination with a lens having a depression in the surface thereof, a lens mount including ears adapted to extend oppositely upon either side of said lens, and a shim adapted to connect said lens and mount and provided with a projection adapted to engage the depression in said lens.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,489. CARPET-SWEEPER. WASAKU KATAKO, Los Angeles, Cal. Filed June 12, 1916. Serial No. 103,055. (Cl. 15—60.)



1. A sweeper comprising a receptacle, a brush in the receptacle having a shaft, toothed wheels on the ends of the shaft, and traction wheels rotatively mounted at the ends of the receptacle and provided in their peripheries with sockets to engage the teeth of the toothed wheels.

2. A sweeper comprising a receptacle, a shaft rotatively mounted in the receptacle, a brush on the shaft, traction wheels, driving connections between the traction wheels and the shaft, a comb arranged with its teeth projecting into said brush, and means to simultaneously adjust the shaft and comb.

3. A sweeper comprising a receptacle, supports at the ends of the receptacle fastened thereto, standards midway of the ends of the supports, brackets shiftable up and down on the standards, a brush in the receptacle having a shaft rotatively connected to the brackets, traction wheels for the receptacle operatively connected to said shaft, a comb having its teeth engaging the brush, and means to adjust the brackets and comb simultaneously.

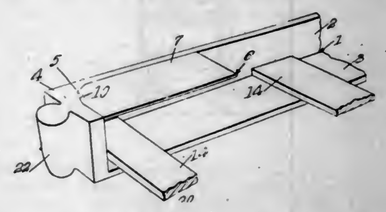
4. A sweeper comprising a receptacle, a brush rotatively mounted in said receptacle, traction wheels operatively connected to said brush, and a slidably mounted comb arranged with its teeth projecting into said brush.

5. A sweeper comprising a receptacle, a brush rotatively mounted in said receptacle, traction wheels operatively connected to said brush, a comb arranged with its teeth projecting into said brush, and means accessible externally of the receptacle to adjust said comb relative to said brush.

[Claims 6 to 9 not printed in the Gazette.]

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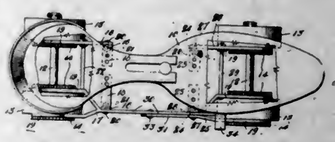
1,230,490. BED-RAIL. JAMES R. KEMPER, Elkins, W. Va. Filed Oct. 31, 1916. Serial No. 128,772. (Cl. 5—64.)



A bed rail including a vertical flange, a horizontal flange at the lower edge of the vertical flange, and a head connecting the flanges and having a curved inner face; and an angle member comprising a vertical flange secured to the vertical flange of the rail, and a horizontal flange located at the upper edge of the vertical flange of the angle member, one end of the horizontal flange of the angle member being shaped to conform to the curved face of the head, and the vertical flange of the angle member being cut back from said end of the horizontal flange of the angle member to clear said curved face of the head.

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1,230,491. STOP MECHANISM FOR ROLLER-SKATES. ALEXANDER O. KONIETZKY, Weehawken, N. J. Filed Oct. 28, 1916. Serial No. 128,250. (Cl. 46—51.)



1. In a roller skate, the combination of a frame, rollers supporting the frame, and locking means carried by the frame for engagement with the rollers to prevent the turning of the same in either direction.

2. In a roller skate, the combination of a frame, rollers supporting the frame, and intermeshing elements carried by the frame and the rollers adapted to be adjusted to hold the rollers from turning in either direction.

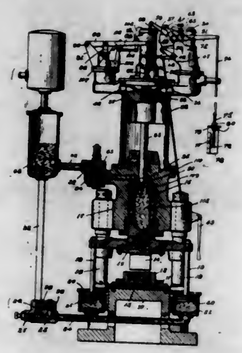
3. In a roller skate, the combination of a frame, rollers supporting the frame, toothed members mounted on the rollers to turn therewith, non-rotatable toothed members adjustably mounted on the frame, and means for adjusting

said non-rotatable toothed members into and out of engagement with the toothed members on the rollers.

[Claims 4 to 7 not printed in the Gazette.]

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1,230,492. PRESS OR IMPACT APPARATUS. LADISLAV F. KRISTUFEK, Chicago, Ill., assignor to General Briquetting Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 9, 1916. Serial No. 77,174. (Cl. 138—17.)



1. In apparatus of the character described, the combination of a power element, an impact element, means providing a pressure transmitting fluid between the same, the resistance of which is momentarily diminished during the power stroke of the apparatus, and regulating means for varying the extent to which said resistance is diminished.

2. In apparatus of the character described, the combination of a power element, an impact element, confining means for a pressure transmitting fluid interposed between said elements, the capacity of which is increased during the power stroke of the apparatus so as to suddenly diminish the resistance of said fluid, and regulating means for varying the extent to which said resistance is diminished.

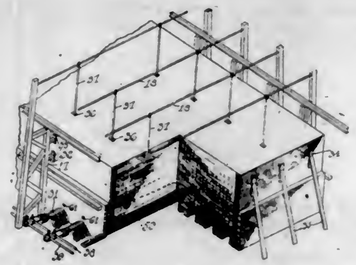
3. In apparatus of the character described, the combination of a power element, an impact element, confining means for a pressure transmitting fluid interposed between said elements comprising a chamber which is put into communication with the main space within the confining means during the power stroke of the apparatus, and means for varying the effective size of said chamber at the time it is put into communication with the main space.

4. In apparatus of the character described, the combination of a power element, an impact element, confining means for a pressure transmitting fluid interposed between said elements comprising a chamber which is put into communication with the main space within the confining means during the down stroke of the apparatus, a duct leading from said main space into said chamber, and adjustable means for regulating the flow of fluid through said duct.

5. In apparatus of the character described, the combination of a power element, an impact element, confining means for a pressure transmitting fluid interposed between said elements comprising a chamber which is put into communication with the main space within the confining means during the down stroke of the apparatus, a duct leading from said main space into said chamber, and a needle valve which is adjustable to regulate the flow of fluid through said duct.

[Claims 6 to 31 not printed in the Gazette.]

1,230,493. MEANS FOR CARRYING OUT A PROCESS FOR BURNING BRICKS. FRANK B. LAMBERT, Chicago, Ill., assignor to Lambert Process Company, Chicago, Ill., a Corporation of Illinois. Original application filed Mar. 5, 1912, Serial No. 681,720. Divided and this application filed Mar. 20, 1915. Serial No. 15,909. (Cl. 25—150.)



1. In combination, a kiln of bricks having arches in the bottom and large pipes extending in said arches, said pipes having discharge openings in the arches and being open at their outer ends, a stream-supply pipe and branches therefrom terminating as nozzles within said first-mentioned pipes, each of said pipes comprising lengths of pipes successively decreasing in diameter and having a discharge opening for each length.

2. In combination a kiln of brick having arches set upon a flat floor to form internal furnaces, straight pipes extending into said arches and lying on said flat floor, said pipes having discharge openings in their walls facing upwardly in said arches, the outer ends of said pipes being open, a steam supply pipe and branches therefrom terminating as nozzles at the open ends of said pipes.

3. In combination, a kiln of bricks having arches in the bottom and pipes extending in said arches, oil burner nozzles at the ends of the arches, steam and oil-supply pipes for said nozzles, and means to bring the nozzles in a line with said pipes in order to blow steam therefrom into the pipes.

4. In combination, a kiln of bricks having arches in the bottom thereof, oil and steam-supply pipes extending along said kiln, oil burners having steam-jet means for atomizing the oil, connected to said oil pipes and steam pipes, and valve connections for each burner to control the oil and steam supplied thereto, and induction tubes coöperating with said burner nozzles for blowing steam and air into said arches.

5. In combination, a kiln of bricks having arches therein, oil and steam-supply pipes adjacent the sides of said kiln, an oil-burner nozzle adjacent each arch, said burner having a steam-jet arrangement for atomizing the oil, valve connections between each burner and the steam and oil supply pipes, respectively, and an induction tube cooperating with said nozzle for injecting steam and air into said arches.

[Claims 6 to 15 not printed in the Gazette.]

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1,230,494. TOOL. ERICH LINDENBERG, Chicago, Ill. Filed Dec. 4, 1916. Serial No. 134,882. (Cl. 145—50.)

1. In a tool the combination with a shank of a pair of out-bent springs secured in an end of said shank in substantial alinement with the axis thereof, and a finger piece slidably embracing said end of the shank and the prongs and being provided with an aperture of substantially the same width as the combined thickness of said springs, and a pin protruding laterally from said shank and engaging a longitudinal slot provided in the finger piece.

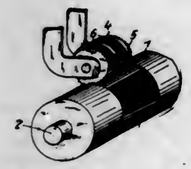
2. In a tool the combination with a shank of a pair of flat springs protruding from an end of said shank in substantial alinement with the axis thereof and having their free ends standing normally apart, and a finger piece slidably embracing said end of the shank and provided at



its outer end with an aperture of substantially the same width as the combined thickness of said springs, said piece being fixed against rotation upon the shank.

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1,230,495. MARKING CONTRIVANCE FOR ROLLER STAMPING-MACHINES. CARL LINDSTRÖM, Berlin, Germany. Filed May 13, 1913. Serial No. 767,372. (Cl. 216—1.)



1. In a stamping machine, the combination of a moistening roller, a stamping roller, means coöperating with said stamping roller to apply the stamps, means on said rollers for marking said stamps and means for actuating said rollers.

2. In a stamping machine, the combination of a moistening roller, a plurality of ridges on the periphery of said roller for marking stamps, a stamping roller in surface engagement with said moistening roller, means cooperating with said stamping roller to apply said stamps and means for actuating said rollers.

3. In a stamping machine, the combination of a moistening roller, a plurality of ridges on the periphery of said roller for marking stamps, means on said roller for moistening stamps, a stamping roller in surface engagement with said moistening roller, means coöperating with said stamping roller to apply said stamps and means for actuating said rollers.

4. In a stamping machine, the combination of a moistening roller, a plurality of ridges on the periphery of said roller, a stamping roller, a plurality of ridges on the periphery thereof arranged in engagement with the ridges of said moistening roller for marking stamps, means cooperating with said stamping roller to apply said stamps and means for actuating said rollers.

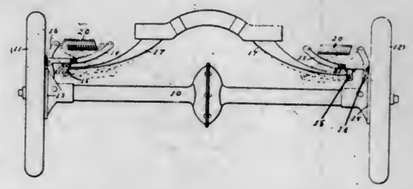
5. In a stamping machine, the combination of a moistening roller, a plurality of ridges on the periphery of said roller, a plurality of moistening strips on said roller, a stamping roller, a plurality of ridges on the periphery thereof arranged in engagement with the ridges of said moistening roller for marking stamps, means coöperating with said stamping roller to apply said stamps and means for actuating said roller.

[Claim 6 not printed in the Gazette.]

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1,230,496. SHOCK-ABSORBER. JOSEPH M. MCCOOL, Des Moines, Iowa, assignor to Hugh Brennan, Des Moines, Iowa. Filed Jan. 24, 1916, Serial No. 74,017. Renewed Nov. 18, 1916. Serial No. 132,234. (Cl. 267—19.)

1. A device of the class described, comprising a support, brackets rising from opposite ends thereof, levers pivoted at their outer ends to said brackets, pivotal connections between intermediate portions of said levers and a car body, said pivotal connection being wholly below the fulcrums of the levers, and retractile springs connecting the upper ends of said brackets to the inner ends of said levers.



2. A device of the class described, comprising a support, brackets rising from opposite ends thereof, levers pivoted at their outer ends to said brackets, said levers being curved upwardly at their inner ends, pivotal connections between intermediate portions of said levers and a car body, and retractile springs yieldingly connecting the inner ends of said levers to the upper ends of the adjacent brackets above the levers, said springs being wholly independent of the car body.

3. A device of the class described, comprising a support, brackets fixed to and rising from opposite ends thereof, said brackets being curved inwardly at their upper ends, levers pivoted at their outer ends to intermediate portions of said brackets, pivotal connections between intermediate portions of said levers and a car body, said car body being wholly independent of said brackets, and retractile coil springs yieldingly connecting the inner ends of said levers to the upper ends of the adjacent brackets.

4. A device of the class described, comprising a support, brackets fixed to and rising from said support and spaced apart, the upper end portions of said brackets inclining inwardly, levers pivoted to and below the upper ends of said brackets, the inner end portions of said levers inclining to the horizontal plane of the upper ends of said brackets, retractile coil springs connecting the upper ends of said levers to the inner upper ends of said brackets, together with means for suspending a device pivotally from intermediate portions of said levers, wholly independent of said brackets.

5. A device of the class described, comprising a support, spaced brackets fixed to and rising from said support, rigid levers pivoted at one end each to and below the upper ends of said brackets, yielding pressure devices yieldingly connecting the inner ends of said levers to the upper ends of said brackets, links pivoted to and depending from intermediate portions of said levers, and a device connected to the lower ends of and supported by said links, which device is wholly independent of said brackets.

[Claims 6 to 12 not printed in the Gazette.]

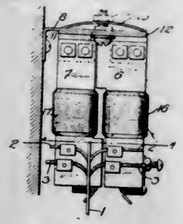
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1,230,497. IMPULSE-MOTOR. LESLIE R. MCDONALD, Montreal, Canada, assignor to Motion Display Corporation, a Corporation of New York. Filed Jan. 29, 1915. Serial No. 4,984. (Cl. 172—126.)

1. A frictional impulse motor having a reaction member with a friction surface, a flexible impeller finger bent in the direction in which force is to be applied to the reaction member and positioned for frictional engagement with the friction surface thereof during the impelling movement, and vibratory means continuously imparting vibrations of small amplitude to the impeller finger; substantially as described.

2. A frictional impulse motor having a reaction member with a friction surface, a pair of flexible impeller fingers bent in the direction in which force is to be applied to the reaction member and positioned for frictional engagement with the friction surface thereof during the impelling

movement, and vibratory means continuously imparting impelling vibrations of small amplitude to said fingers alternately; substantially as described.



3. A frictional impulse motor having a flat reaction member with friction surfaces disposed on opposite faces, a pair of flexible impeller fingers bent in the direction in which force is to be applied to the reaction member and positioned for frictional engagement with both friction surfaces during the impelling movements, and vibratory means continuously imparting vibrations of small amplitude to said fingers, substantially as described.

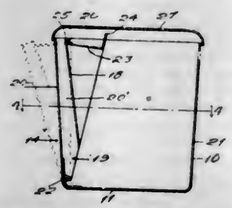
4. A frictional impulse motor having a reaction member with friction surfaces, a plurality of flexible impeller fingers arranged in pairs and bent in the direction in which force is to be applied to the reaction member, a common support for each pair of fingers so positioned that the fingers are adapted for frictional engagement with the friction surfaces of the reaction member during the impelling movements, and vibratory means continuously imparting vibrations of small amplitude to said fingers; substantially as described.

5. An impulse motor having a reaction member, a pair of motor members, a spring tending to bring the motor members into one position, means for moving the motor members against the action of the spring, and flexible impeller fingers carried by said motor members and positioned to make frictional contact with the reaction member alternately, as the motor members move under the action of said means and said spring; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,498. DISPENSING-RECEPTACLE. HERMANN FORD MARTIN, Lexington, Tenn. Filed May 13, 1916. Serial No. 97,344. (Cl. 221—11.)



1. A dispensing receptacle, including a body portion having sides provided with edges which are spaced to form an opening therebetween extending substantially for the entire length of the body portion, said longitudinal edges being bent transversely inwardly at substantially a right angle to the sides for forming interior flanges, which serve to stiffen and reinforce the sides; a tapered spout arranged within the opening and of substantially the same length as the body portion and having oppositely arranged sides, the inner and outer longitudinal edges of each side being bent outwardly at substantially a right angle for providing inner and outer exterior flanges which serve to stiffen and reinforce the spout and to engage with the interior flanges; hinge means connecting the reduced end of the tapered spout with the closed bottom portion of the body portion; and a cover adapted to be arranged upon the top of the body portion and to engage with the spout to retain the same closed.

2. A dispensing receptacle, including a body portion having its free longitudinal edges spaced to provide a longitudinal spout receiving opening and bent inwardly transversely for forming interior longitudinal flanges substantially coextensive in length with the body portion; a spout having substantially the same length as the body portion with its free longitudinal edges bent transversely outwardly for providing outer longitudinal flanges substantially coextensive in length with the spout for engagement with the interior flanges; a spring actuated hinge connecting the lower end of the spout with the closed bottom of the body portion and adapted to automatically move the spout to the open position when it is released; a transverse member arranged above the upper end of the spout and connecting the upper ends of the sides of the body portion adjacent the longitudinal flanges thereof; and means to normally retain the spout in the closed position.

3. A dispensing receptacle, including a body portion provided with a longitudinal opening; a spout arranged within the longitudinal opening and hinged to the body portion and provided with exterior longitudinal flanges to contact with the sides of the body portion; a lid hinged to the top of the body portion and adapted to engage with the spout to hold it in the closed position; and means rendered active when the spout is in the open position and the lid is in the closed position to prevent the escape of the contents of the receptacle other than through the spout.

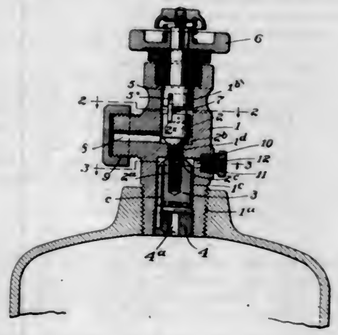
4. A dispensing receptacle, including a body portion provided with a longitudinal opening; a spout arranged within the longitudinal opening and pivoted to the body portion and provided with exterior longitudinal flanges to contact with the sides of the body portion; a lid adapted to be arranged upon the top of the body portion and to engage with the spout to hold it in the closed position; and an upwardly projecting member carried by the spout and adapted to fit snugly within the lid when the spout is open and the lid is closed.

5. A dispensing receptacle, comprising a body portion provided with a longitudinal opening; a spout arranged within the longitudinal opening; a spring actuated hinge connecting the spout and body portion and adapted to automatically move the spout to the outer position when released; a lid for the body portion and adapted to engage with the spout to hold it in the closed position; and a spring actuated hinge pivotally connecting the lid with the body portion and adapted to automatically move the lid to the open position when released.

[Claims 6 to 11 not printed in the Gazette.]

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1,230,499. VALVE. ADAM MCDOWALL MATHESON, New York, N. Y. Filed Mar. 13, 1917. Serial No. 154,519. (Cl. 137—4.)

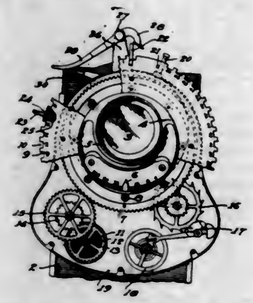


In a valve of the character described, a valve casing having alined valve chambers with an intervening double faced valve seat, one of said chambers constituting an inlet passage, a floating valve located in said inlet passage and having means for holding the same against rotary movement, a screw plug in the end of said inlet chamber for limiting the movement of said floating valve, said plug having a fluid passage, a valve in the other chamber mounted to have rotary and longitudinal movement therein, one of said valves having an axial threaded extension engaging the corresponding recess in the other valve, and means for rotating said second valve and limiting the longitudinal movement thereof, substantially as described.



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1,230,500. AUTOMATIC CAMERA-SHUTTER OPERATING AND TIMING INSTRUMENT. ROLLAND MATHEWS, Marshall, Minn. Filed Jan. 19, 1915. Serial No. 3,189. (Cl. 161—26.)



1. A camera attachment comprising a member having means for mounting it on a camera encircling the lens, means for revolving said member, a device for locking it against premature movement, and a shutter trip mounted for adjustment on said member and positioned to operate the camera shutter at a predetermined point in the movement of said member.

2. A camera attachment comprising a disk having means for mounting it on a camera encircling the lens and provided with peripheral notches, means for revolving said disk, means for locking it against premature movement, and means adjustable in said notches and positioned to trip the camera shutter at a predetermined point in the movement of said disk.

3. A camera attachment comprising a member having means for mounting it on a camera, said member encircling the lens, means for revolving said member, and a shutter trip mounted for adjustment on said member and positioned to operate the camera shutter at a predetermined point in the movement of said member.

4. A camera attachment comprising a disk encircling the lens and having notches in its periphery, spaced apart and marked to indicate seconds of time, means for revolving said disk, means for locking said disk against premature movement, a trip device having a fork to straddle the edge of said disk and fit the notches therein, said trip device engaging the camera shutter at a predetermined point in the revolution of said disk.

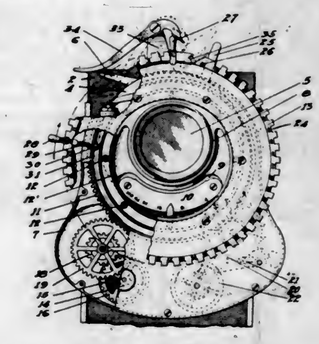
5. A camera attachment comprising a rim adapted to encircle the lens support, a disk having an anti-friction bearing on said rim, a spring actuated mechanism for revolving said disk, means for locking said disk against premature movement, the face of said disk being graduated to represent seconds, and a shutter trip device adjustable on said disk and positioned to operate the shutter as said disk revolves.

[Claims 6 to 14 not printed in the Gazette.]

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1,230,501. AUTOMATIC CAMERA-SHUTTER OPERATING AND TIMING INSTRUMENT. ROLLAND MATHEWS, Marshall, Minn. Filed Dec. 2, 1915. Serial No. 64,701. (Cl. 161—26.)

1. A camera attachment comprising a revolving disk, means for operating the same, said disk having a series of peripheral notches, a trip device mounted to slide on the periphery of said disk and fit the said notches and yieldingly held therein, said device being positioned to trip the camera shutter at a predetermined point in the revolution of said disk.



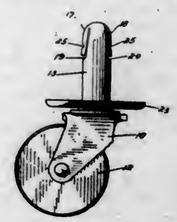
2. A camera attachment comprising a disk, means for revolving the same, said disk having an annular way on one side thereof, a weighted member slidable in said way, a trip device mounted to slide on the periphery of said disk and having a yielding connection with said weighted member, said trip device being mounted to engage and trip the camera shutter at a predetermined point in the movement of said disk.

3. A camera attachment comprising a revolving member having peripheral notches therein and graduated to represent intervals of time, mechanism for revolving said member, trip devices adjustably mounted on the periphery of said member in position to trip the camera shutter, one of the notches in said member allowing the trip device to be inserted in an inactive position therein, for the purpose specified.

4. A camera attachment comprising a revolving member having means for mounting it on a camera, the periphery of said member being scored to represent intervals of time, trip devices mounted on said member for operating the camera shutter, said member having means whereby one of said trip devices may be rendered temporarily inactive, for the purpose specified.

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1,230,502. CASTER. REGINALD W. MILLARD, Meriden, Conn., assignor to Foster, Merriam & Company, Meriden, Conn., a Corporation of Connecticut. Filed Oct. 18, 1916. Serial No. 126,408. (Cl. 16—76.)



1. A socket for casters comprising a sheet-metal body of substantially uniform cylindrical configuration throughout its entire length and having downwardly directed tongues substantially forming parts of the cylindrical side wall thereof, and means on said tongues adapted to coöperate with complemental means on the caster-stem to be inserted in said socket to retain said stem in said socket.

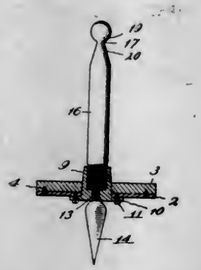
2. A socket for casters comprising an integral, tubular, sheet-metal body of substantially uniform diameter

throughout the length thereof and having downwardly directed, oppositely located tongues substantially forming parts of the cylindrical wall of the tube, and exterior indentions in said tongues forming interior lugs adapted to project into an annular channel in the caster-stem to be inserted in said socket.

3. As a socket for casters, a hollow body comprising an integral sheet-metal blank shaped to provide a butted tube of substantially uniform diameter having a rounded upper end and an open lower end, and tongues depending from the base of the rounded portion of said upper end and projecting into corresponding recesses in the tubular wall of said body, the bases of said tongues being flush with the surface of said wall and the free ends of said tongues projecting slightly outwardly therefrom.

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1,230,503. GAME. AUGUST W. MILLER, Kansas City, Mo. Filed Nov. 6, 1916. Serial No. 129,637. (Cl. 46—59.)



1. A device of the character described, consisting of a metal base plate, short legs upon which said metal base plate is supported, a wooden base plate surmounted upon said metal plate, an internally threaded socket member secured in the central portions of said base plates, an upwardly extending pin threaded into said socket, and a downwardly-extending spike removably secured in said socket.

2. In a device of the character described, a base plate, an interiorly threaded socket secured in the central portion of said base plate, an upwardly extending pin removably secured in one end of said socket, and a downwardly-extending spike removably secured in the other end of said socket and adapted to secure the base plate to the ground.

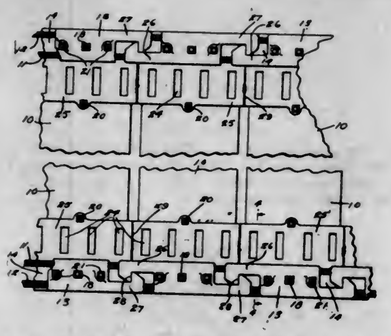
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1,230,504. TRACTION-BELT. DE WITT NELSON, Minneapolis, Minn., assignor to Tom Thumb Tractor Company, Minneapolis, Minn., a Corporation. Filed Sept. 11, 1915. Serial No. 50,123. (Cl. 21—150.)

1. A traction belt for caterpillar type traction engines comprising a plurality of slats, pairs of blocks positioned on said slats, there being grooves in said blocks, a cable passing through said grooves in the blocks, and means within the grooves engaging said cable to distort the same for preventing the slats from slipping on the cable, and means for securing the blocks together upon the slats.

2. A traction belt for caterpillar type traction engines comprising a plurality of slats, pairs of blocks positioned on said slats, there being grooves in said blocks one having a projection and the other a corresponding depression, a cable passing through said grooves in the blocks and adapted to be distorted by the projection into the depression, and means for clamping the blocks together upon the slats to hold the parts in place upon the cable.

3. A traction belt for caterpillar type traction engines comprising a number of ground-engaging members, means for interconnecting said members to permit the belt to bend in one direction and to remain in alinement against pressure in the opposite direction, said means including overlapping pieces having reduced portions for permitting the individual slats to have relative transverse movement when the belt is in its alined position without disturbing the general alinement of the other members.



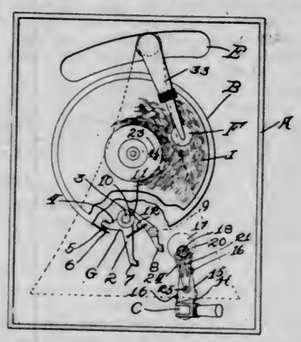
4. A traction belt for caterpillar type traction engines comprising a plurality of ground-engaging members, flexible means for connecting said members together for relative oscillation, and similarly-formed hooks on said members for holding them in rigid alinement from movement in one direction.

5. A traction belt for caterpillar type traction engines comprising a plurality of cables, a plurality of plates extending adjacent one another across said cables, and means for securing said plates to the cables, said securing means comprising hooks which overlap and coact along the line of joinder between the plates and hold the plates rigidly interconnected in a common plane against pressure in one direction.

[Claim 6 not printed in the Gazette.]

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1,230,505. STOP FOR SOUND-REPRODUCING MACHINES. FRANCIS A. NOLAN, St. Paul, Minn. Filed Jan. 22, 1915. Serial No. 3,763. (Cl. 74—46.)



1. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table revolving, of a supporting arm detachably secured to said traveling element, and means carried by said supporting arm adapted for a multiplicity of adjustments relative thereto and about a vertical axis adjacent its free end to impinge against and set said brake mechanism at a predetermined point during the travel of the table.

2. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table revolving, of a supporting member detachably secured at one end to said traveling element, and means journaled upon said member adapted for a multiplicity of adjustments relative thereto and about an axis adjacent and at a right angle to its free end to directly impinge against and set said brake mechanism at a predetermined time.

3. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table revolving, of a supporting member detachably secured at one end to said traveling element, and eccentric means journaled upon said member for a multiplicity of relative adjustments with respect thereto about an axis adjacent its free end and adapted to directly impinge against and set said brake mechanism at a predetermined time.

4. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table revolving, of a supporting member detachably secured to said traveling element, an arm detachably carried by said supporting member, and means journaled upon said arm adapted for relative adjustment with respect thereto so as to directly impinge against and set said brake mechanism at a predetermined time.

5. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table revolving, of a supporting member detachably secured to said traveling element, an arm carried by said supporting member, and eccentric means journaled upon said arm adapted for relative adjustment with respect thereto so as to directly impinge against and set said brake mechanism at a predetermined time.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,506. STOP. FRANCIS A. NOLAN, St. Paul, Minn. Filed June 25, 1915. Serial No. 36,221. (Cl. 74—46.)



1. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table revolving, of a base secured to said traveling element, an eccentric revolubly mounted upon said base and adapted for coöperation with said brake mechanism to effect the setting thereof, the position assumed by said eccentric about its axis predetermining when said brake and ecentric co-act together, means for retarding the revolving movement of said eccentric on said base, a scale disposed about the axis of said eccentric and a pointer coöperating with said scale to indicate the relative position assumed by said eccentric about its axis.

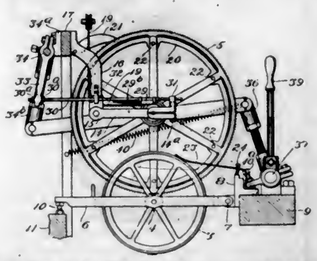
2. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table revolving, of a base removably secured to said traveling element, a spool having an ecentric lower end revolubly journaled on said base, the upper end of said spool forming a hand operable turning member, a retarder associated with said eccentric for holding the spool after it is turned into adjusted position, and a dial and pointer at the upper end of said spool for predetermining the adjustment of said eccentric.

3. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table revolving, of a base support for attachment to said traveling element, a spool revoluble about its axis on said support, the lower end of said spool being an eccentric and its upper end a hand operable turning member, means associated with said spool for holding the eccentric after it has been turned into adjusted position, and a dial and pointer associated with said spool for predetermining the adjustment of said eccentric.

4. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table revolving, of a support secured to said traveling element, an eccentric revoluble about its axis on said support having a hand operable member thereon for turning said eccentric into adjusted position, a retarder for holding said ecentric after it has been turned into adjusted position, and a dial and pointer for predetermining the adjustment of said eccentric.

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1,230,507. LEATHER-MEASURING MACHINE. DANIEL P. O'BRIEN, Woburn, Mass., assignor to Peabody Woburn Machine Company, Peabody, Mass., a Corporation of Massachusetts. Filed Dec. 20, 1916. Serial No. 137,961. (Cl. 33—124.)



1. A leather-measuring machine comprising, in combination with suitable integrating devices, and a series of measuring or contact wheels disposed side by side in line with one another, a supplemental series of wheels adapted to make frictional contact by their peripheries with the peripheries of the measuring or contact wheels, toothed pinions operatively combined with the wheels of said supplemental series, and toothed wheels engaged and actuated by the said pinions and operatively combined with said integrating devices.

2. A leather-measuring machine comprising, in combination with suitable integrating devices, and a series of measuring or contact-wheels disposed side by side in line with one another, a supplemental series of wheels adapted for frictional contact by their peripheries with the peripheries of the measuring or contact wheels, toothed pinions operatively combined with the wheels of the said supplemental series, toothed wheels engaged and operated by the said pinions and operatively connected to the said integrating devices for operating the latter, detent-wheels alongside said toothed wheels and connected with the latter, and detent-devices coöperating with the said detent wheels.

6. A leather-measuring machine comprising, in combination with a series of measuring-wheels and suitable scale-rigging, a series of pulleys having connections to said scale-rigging, a series of wheels driven from said measuring-wheels and having hubs on which said pulleys are mounted, friction-clutch-connections between the respective pulleys and the respective driven wheels, and controlling means for said friction-clutch-connections whereby frictional engagement between pulleys and wheels may be caused or released.

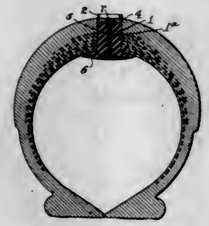
10. A leather-measuring machine comprising, in combination with a series of measuring-wheels and suitable scale-rigging, a series of pulleys in operative connection with said scale-rigging, a series of wheels alongside of said pulleys and in operative connection with said measuring-wheels, pivotal mountings for the respective pulley-and-wheel pairs, a pressure-collar for each pair in screw-threaded engagement with the corresponding pivotal mounting, means for rotating the series of pressure-collars to cause or relieve engagement between the respective pulleys and wheels, and a controlling-handle for said means.

11. A leather-measuring machine comprising, in combination with suitable integrating devices, a series of measuring or contact-wheels, toothed pinions operatively combined with the said wheels and actuated therefrom, toothed wheels engaged and actuated by the said pinions and operatively connected with the said integrating devices for operating the latter, separately-formed detent-wheels alongside said toothed wheels and connected with the latter, and detent-devices coöperating with the said detent-wheels.

[Claims 3 to 5 and 7 to 9 not printed in the Gazette.]

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1,230,508. PNEUMATIC TIRE. JOSEPH EDWIN PEDEN, New York, N. Y., assignor of one-half to Theodore F. Smith, St. Paul, Minn. Filed Aug. 19, 1915. Serial No. 46,342. (Cl. 152—14.)



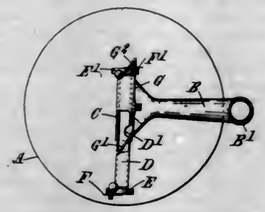
1. A non-skid device for vehicle tires, comprising a built-up plug adapted to be inserted in the tread of the tire and consisting of a rubber stud having a longitudinal opening, a button adapted to constitute a portion of the tread of the tire, and a fastening device flexibly connected to the button and extending through said opening of the stud and clenched against said stud.

2. A non-skid device for vehicle tires comprising a built up plug adapted to be inserted in the tread of the tire and consisting of a rubber stud having a longitudinal opening, a fastening device extending through said opening and clenched against said stem, a button flexibly connected to said fastening, and a washer inserted between said button and one end of said stem.

3. A non-skid device for vehicle tires comprising a built up plug adapted to be inserted in the tread of the tire and consisting of a rubber stud and having a longitudinal opening, a fastening device extending through said opening and clenched against said stem, a button flexibly connected to said fastening, and a flap formed on said stud and arranged to cover the clenched ends of said fastening device.

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1,230,509. GRAMOPHONE AND THE LIKE. NOEL PEMBERTON-BILLING, county of Hertford, England. Filed Jan. 4, 1917. Serial No. 140,639. (Cl. 274—15.)

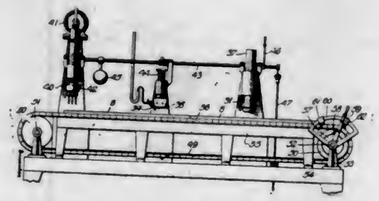


1. In a repeating mechanism for a gramophone the combination of a sound-tube, a supporting member set diametrically to the record wherein said tube is free to slide longitudinally, two reproducers mounted one at each end of said tube and angularly displaced from one another about the longitudinal axis of the tube, said reproducers being spaced apart such a distance that when one is opposite the inner margin of the record the other is opposite the outer margin thereof, a pin projecting upwardly from each reproducer, two wedge-shaped members secured on said supporting member in such position as to engage respectively one of said pins at the end of the travel of the tube and rock the tube and reproducers about the longitudinal axis of the tube to render one reproducer operative and the other inoperative.

2. In a repeating mechanism for a gramophone the combination of a telescopic sound-tube, a supporting member set diametrically to the record wherein said tube is free to slide longitudinally, two reproducers mounted one at each end of said tube and angularly displaced from one another about the longitudinal axis of the tube, said reproducers being spaced apart such a distance that when one is opposite the inner margin of the record the other is opposite the outer margin thereof, a pin projecting upwardly from each reproducer, two wedge-shaped members secured on said supporting member in such position as to engage respectively one of said pins at the end of the travel of the tube and rock the tube and reproducers about the longitudinal axis of the tube to render one reproducer operative and the other inoperative.

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1,230,510. PROCESS OF MANUFACTURING RUBBER HEELS OR SOLES. FREDERICK D. PHILP, Royal Oak, Mich., assignor of one-half to Allen A. Templeton, Detroit, Mich. Filed Aug. 17, 1916. Serial No. 115,398. (Cl. 12—147.)



1. A process of manufacturing heels from rubber tires, consisting of dividing a tire into segment shaped pieces, holding the tire pieces in flat condition and while so held dividing the tire pieces into slabs, and punching the slabs to provide heel blanks.

2. A process of manufacturing heels from rubber tires, consisting of dividing a tire into segment shaped pieces, holding the tire pieces in flat condition and while so held removing irregular portions from the tire pieces, dividing the tire pieces into slabs, and punching the slabs to provide heel blanks.

3. A process of manufacturing heels from rubber tires, consisting of cutting a tire into segment shaped pieces, holding the tire pieces in a flat condition, dividing the tire pieces into slabs, punching the slabs to provide heel blanks, and successively branding and aperturing the heel blanks.

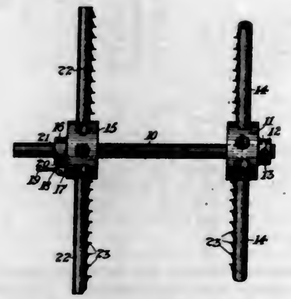
4. A process of manufacturing heels from rubber tires, consisting of dividing a tire into segment shaped pieces, holding the tire pieces in a flat condition, removing irregular portions of the tire pieces, dividing the tire pieces into slabs, punching the slabs to provide heel blanks, and successively branding and aperturing the heel blanks.

5. A process of manufacturing heels from rubber tires, consisting of cutting a tire into segment shaped pieces, holding the tire pieces in a flat condition and while so held dividing the tire pieces into slabs, punching the slabs to provide heel blanks, and branding the heel blanks while retaining them in the slabs.

[Claims 6 to 18 not printed in the Gazette.]



1,230,511. APPARATUS FOR HOLDING SILK AND SIMILAR MATERIAL. CELESTINO PIVA, New York, N. Y. Filed July 21, 1916. Serial No. 110,487. (Cl. 8—17.)



1. An apparatus for holding silk and the like for dyeing or other operations comprising a spindle, a plurality of radially disposed arms suitably placed and connected to the said spindle, and means associated with the arms for engaging the edges of the material to secure the same in a supported position in the apparatus.

2. An apparatus for holding silk and the like for dyeing or other operations comprising a spindle, a plurality of radially disposed arms, means for connecting the same to the said spindle, and means associated with the said arms for engaging the edges of the material to be supported in the apparatus.

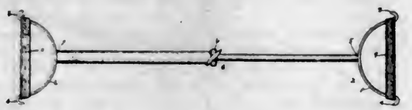
3. An apparatus for holding silk and the like for dyeing or other operations comprising a spindle, hub members thereon, a plurality of radially placed arms secured in each hub member, and means associated with the said arms for engaging the edges of the material to be supported in the apparatus.

4. An apparatus for holding silk and the like for dyeing or other operations comprising a spindle, a hub fixed thereon, a plurality of radially placed arms in the said hub, a hub adjustable to position on the said spindle, a corresponding number of radially disposed arms in said adjustable hub, and means associated with each of said arms for engaging the edges of the material to be supported in the apparatus.

5. An apparatus for holding silk and the like for dyeing or other operations comprising a spindle, a hub fixed thereon, a plurality of radially placed arms in the said hub, a hub adjustable to position on the said spindle, a corresponding number of radially disposed arms in said adjustable hub, and a plurality of hook pins attached to the inner side of each of the said radially disposed arms for engaging the edges of the material to secure the same to a supported position in the apparatus.

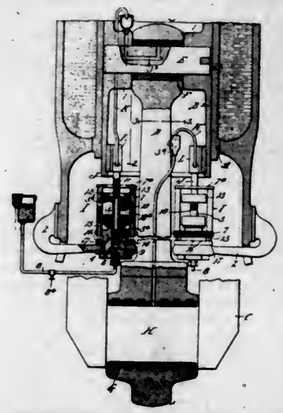
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1,230,512. LEG-HOLDER. ADOLPH A. POEHNER, San Francisco, Cal., assignor to A. S. Poehner, San Francisco, Cal. Filed July 22, 1914. Serial No. 852,391. (Cl. 128—20.)



In a leg holder, a tubular member having a stirrup at one end thereof, a rod slidable within said tubular member and having a stirrup at one end, a set screw to secure the rod and tubular member in a given position, a pair of hooks carried by each stirrup, and resilient means carried by the stirrups to secure a person's legs thereto.

1,230,513. LUBRICATING MECHANISM FOR PISTON-MACHINES. GEORGE D. POGUE, St. Louis, Mo. Filed Feb. 23, 1917. Serial No. 150,481. (Cl. 184—27.)



4. In a machine of the character described, a reciprocating piston, an oil pump carried by a stationary part of the machine and provided with a plunger that has a passageway in same through which the oil in the cylinder of the pump is forced during the displacement stroke of the pump plunger, means carried by the piston of the machine for actuating said pump plunger, and an oil conduit or duct carried by the piston and arranged so that the oil displaced by the plunger of the pump will flow through same.

6. In a machine of the character described, a reciprocating piston, an oil pump carried by a stationary part of the machine and provided with a plunger that has a passageway in same into which oil is forced from the cylinder of the pump on the displacement stroke of the plunger, a tubular-shaped actuating device on the piston that is adapted to engage and move said pump plunger, an air chamber that communicates with the interior of said tubular-shaped device, and an oil conduit leading from said air chamber.

9. In a machine of the character described, a reciprocating piston, an oil pump carried by a stationary part of the machine comprising a substantially tubular-shaped plunger which is provided at one end with a head piece, an oil passageway on the piston comprising a substantially tubular-shaped member whose end strikes against the head piece on said pump plunger and moves said plunger during part of the stroke of the piston in one direction, and an adjustable element that serves as a stop against which the head piece on said pump plunger strikes on the return stroke of said plunger.

13. In a machine of the character described, a reciprocating piston, an oil conduit that travels with said piston, means for forcing oil through said conduit when the machine is in operation, and a capillary device for preventing back flow through said conduit.

[Claims 1 to 3, 5, 7, 8, 10 to 12, and 14 to 20 not printed in the Gazette.]

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1,230,514. WINDOW-SASH. HERMAN P. PORTER, Lakeland, Fla., assignor to Nu-Style Window Sash Company, Jersey City, N. J. Filed Oct. 3, 1916. Serial No. 123,506. (Cl. 20—56.1.)

1. A sash frame, in combination with a sash removably and adjustably fitted in said frame and adapted to swing inward on said frame, a jointed link connection with said frame and removable sash for limiting the inward movement of the removable sash in the sash frame and having a detachable engagement with the removable sash operable automatically to disengage the link when its sections are

folded reversely to their collapsed relation, and means carried by said jointed link to retain the removable sash in its adjusted inward position.



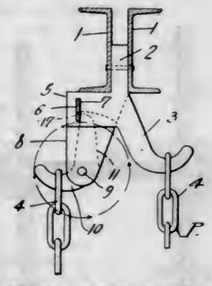
2. In window construction, the combination with an outer and an inner sash frame, the inner frame being removably and adjustably secured to said outer frame, said inner frame having three of its sides formed with a rabbet on its outer face and its bottom portion having a downwardly projected rabbet on its inner face, a jointed link connected with both the inner and outer frames for limiting the tilting movement of the inner frame in the outer one and having detachable engagement with the inner frame operable automatically to disengage the link when its sections are folded reversely to their collapsed folded relation, and means carried by said jointed link for locking the inner sash frame in its suitably open adjusted position.

3. In window construction, the combination with an upper and lower outer sash frame, of an inner sash removably and adjustably secured thereto, a plurality of locking latches secured to the upper rail of each inner sash, means attached to the locking latches of the upper frame operable from a standing position on the floor to unlatch and tilt said upper inner sash frame to a suitable inward position, and a jointed link connection with each outer and inner sash for limiting the inward movement of the inner sash in the outer one and having detachable engagement with each inner sash operable automatically to disengage the link when its sections are folded reversely to their collapsed folded relation.

4. An outer sash frame, in combination with an inner sash frame, said inner sash frame being removably and adjustably secured to the outer frame, a plurality of locking latches secured to the inner sash frame provided with means operable from a standing position on the floor for unlocking said latches and tilting said inner sash inward, a jointed link connected with the outer and inner sash frame for limiting the inward movement of the inner sash in the outer one and having detachable engagement with the inner sash operable automatically to disengage the link when its sections are folded reversely to their collapsed relation, and means forming a part of said jointed link for locking the inner sash frame in its suitably inward position.

5. The combination with a window-frame, of an outer sash and an inner sash having lapping rabbeted engagement therewith closing the joints against the weather yet permitting relative tilting of the inner sash in one direction, and a jointed link connection limiting the tilting play of the inner sash in the outer one and having a detachable engagement with one of the sashes operable automatically to disengage the link when its sections are folded reversely to their collapsed folded relation, the inner sash being otherwise freely removable from the outer sash.

1,230,515. SLING-TRIPPING DEVICE. PERRY POTEET and DANIEL FERGUSON JEFFREY, Jeanerette, La. Filed May 13, 1916. Serial No. 97,367. (Cl. 57—11.)



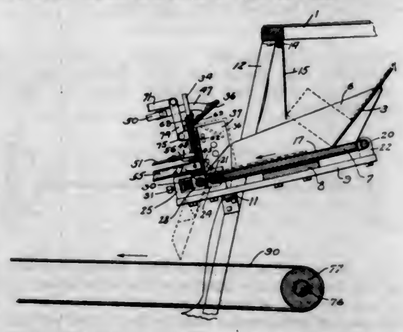
1. A sling support and trip including opposed beams, spacing blocks secured therebetween, a stationary hook extending downwardly and laterally from each block, a guide wing extending laterally from each hook, a bar slidably mounted within the guide wing, a pivoted hook mounted below each wing, each hook having an arm normally bearing against the bar to hold the hook in sling engaging position, and means for shifting the bar to simultaneously release the arms and pivoted hooks.

4. A sling support and trip including opposed beams, spaced blocks secured therebetween, a stationary hook extending downwardly and laterally from each block, a guide wing extending laterally from each hook, a bar slidably mounted within the guide wing, a pivoted hook mounted below each wing, each hook having an arm normally bearing against the bar to hold the hook in sling engaging position, means for shifting the bar to simultaneously release the arms and pivoted hooks, and a coiled spring surrounding the bar and engaging a guide wing to restore the bar to normal position.

5. A sling support and trip including opposed beams, and a member associated therewith comprising a spacing block portion secured between the beams, a hook depending therefrom, a laterally extending guide wing, and spaced ears depending from the guide wing, a bar slidably mounted in the guide wing, a hook pivoted in the depending ears, an arm formed on the hook and normally bearing against the bar, a sling connecting the hooks, and means for shifting the bar to release the arm and pivoted hook and open the sling.

[Claims 2 and 3 not printed in the Gazette.]

1,230,516. BOX-FOLDING MACHINE. CHARLES F. RAYNAUD, San Francisco, Cal., assignor to Pacific Folding Box Factory, a Corporation of California. Filed June 26, 1916. Serial No. 105,876. (Cl. 93—36.)



1. A box folding machine comprising a stop plate, three pivoted plates carried thereby and adapted to collapse the sides of the box against its bottom, means to push the box out of contact with the several plates before they have been completely released therefrom, and a pair of rollers adjacent the stop plate through which the box passes to completely flatten it.

2. In a box folding machine, the combination with a chute of a stop plate, pivoted folding plates secured to said stop plate to collapse the sides of a box, and a pair of rollers to flatten the collapsed box after leaving the folding plates.

11. A box folding machine comprising a chute, a plurality of endless carriers in the bottom of said chute, a stop plate against which the carriers carry the box, a pivoted gate to cause the box to assume a given position when traveling through the chute, three pivoted plates carried by the stop plate and adapted to be moved to collapse three sides of the box against its bottom when it touches the stop plate, a slide having links connected therewith and operating said folding plates, a second slide having prongs adapted to push the box downwardly before the folding plates have been completely released therefrom, a bell crank lever for operating said slide in conjunction with the slide for operating the folding plates, and a pair of rollers below the stop plate between which the box is adapted to pass to be completely flattened.

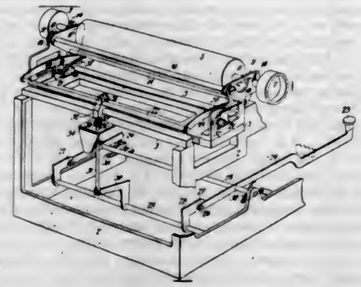
15. A box folding machine, a stop plate against which the box is carried, plates to collapse the sides of the box, means to further flatten the box and a pusher to carry the box into the flattening mechanism.

18. A machine for folding boxes comprising a series of endless belts, a stop plate against which the belts carry a box, a series of plates adapted to collapse the box sides, rollers below the stop plates, and a pusher movable in the plane of the stop plate to force the box down into the rollers to completely flatten it.

[Claims 3 to 10, 12 to 14, 16, and 17 not printed in the Gazette.]



1,230,517. TYPE-WRITING MACHINE. LYMAN R. ROBERTS, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 30, 1913. Serial No. 792,539. (Cl. 197—73.)



1. In a typewriting machine, the combination, with a carriage, of a tiltable platen frame pivoted on said carriage and comprising end plates and rods connecting the same, one of said rods disposed in rear of the other rod and constituting the axis about which said frame tilts; a shifting member pivoted intermediate its ends on said carriage and extending forwardly beneath and into direct engagement with said other rod; and means for depressing the rear portion of said shifting member and thereby elevating its forward portion, so as to tilt said platen frame upwardly into upper case position.

3. In a typewriting machine, the combination of a carriage, a platen shiftable thereon, a platen-shifting frame tiltably mounted on the carriage and comprising a horizontal rail, a vertically shiftable rod, a roller carried thereby and running on said rail, a bracket on the machine frame in which said rod is guided, and a stop on said rod in position to engage said bracket and thereby limit the movement of the rod.

8. In a typewriting machine, the combination with a carriage and a platen shiftable thereon, of a platen shifting frame tiltably mounted on the carriage, and an actuating device for said frame mounted on the machine frame and having a running connection with the tilting frame for actuating the latter while the carriage is at any point in its travel, said actuating device and machine frame having coöperating stops to limit the movement of the actuating device and thereby determine the shifted position of the platen, one of said stops being adjustable to vary the stop position of said actuating device to thereby adjustably vary said shifted position of the platen.

11. In a typewriting machine, the combination of a carriage; a platen shiftable thereon; a platen-shifting frame tiltably mounted on the carriage and comprising a horizontal rail; a vertically shiftable rod; a roller carried thereby and running on said rail; a rock shaft journaled in the machine frame; a pair of rock arms secured to said shaft, one of said arms extending forwardly and the other rearwardly; the rearwardly-extending arm having the lower end of said rod connected thereto, and the forwardly-extending arm being provided with a cam surface; and a shift key pivoted intermediate its ends in said machine frame and having its rear end provided with a roller to engage said cam surface, so as to rock said shaft when said key is depressed.

13. In a typewriting machine, the combination of a carriage; a platen shiftable thereon; a platen-shifting frame tiltably mounted on the carriage; a rock shaft journaled in the machine frame; a pair of forwardly-extending rock arms fixed to said shaft adjacent its opposite ends, each arm having its front end provided with a cam surface; a pair of independently-operable shift keys pivoted intermediate their ends in said machine frame, each key having a roller at its rear end over which the cam surface on the adjacent rock arm projects, so as to rock said shaft when either key is depressed; a rearwardly-extending rock arm fixed to said shaft between said forwardly-extending arms; and a vertical connection between said rearwardly-extending arm and the rear portion of said frame for tilting said frame when said shaft is rocked.

[Claims 2, 4 to 7, 9, 10, 12, and 14 to 21 not printed in the Gazette.]

1,230,518. MANUFACTURE OF BRUSHES. EDWARD E. ROBINSON, Belleville, N. J., assignor to Hanlon & Goodman Co., New York, N. Y., a Corporation of New York. Filed Feb. 24, 1917. Serial No. 150,651. (Cl. 15—36.)

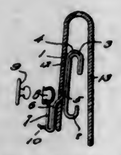


1. In brushes, the combination of a perforated plate having marginal flanges extending upwardly and downwardly therefrom, a bunch of bristles extending within the flanges on the under side of the plate and terminating on the same side, and a mass of vulcanized rubber binding together the upper ends of the bristles, covering the upper and lower surfaces of the plate and extending through the perforations thereof to integrally secure together the rubber on the upper and lower sides of the plate, substantially as set forth.

2. In brushes, the combination of a perforated plate having marginal flanges extending downwardly therefrom,

a bunch of bristles extending within the said flanges and terminating on the under side of the plate, and a mass of hardened plastic material comprising a layer on the under side of the plate in which the upper ends of the bristles are secured, a layer on the upper side of the plate, and material extending through the perforations of the plate integral with and binding together the layers on the upper and under sides, substantially as set forth.

1,230,519. COMBINED BACK COLLAR-BUTTON AND NECKTIE-HOLDER. JACOB DAVID ROMER, Mount Vernon, N. Y. Filed Aug. 19, 1916. Serial No. 115,813. (Cl. 24—56.)

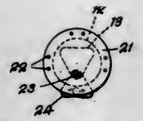


2. In a device of the character described, the combination of a body, hooks carried by the body at each end thereof, and a tongue carried by the body in spaced relation thereto, said tongue being provided with a socket adapted to receive the head of a collar button and with integral prongs adapted to engage a shirt band flap to prevent movement of the body.

3. A combined back collar button and neck-tie holder comprising the combination of a body clamped upon itself to form spaced hooks directed toward one another to receive the neck-tie, said body having a portion extended in an inclined direction and a tongue formed upon the lower end of said inclined portion by bending the body upon itself, a hook upon the lower edge of said tongue, and a button receiving member at the upper end of said tongue.

[Claims 1 and 4 not printed in the Gazette.]

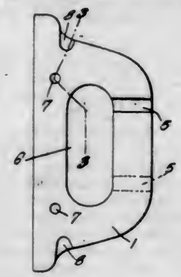
1,230,520. LOCK FOR POCKETS. EDWARD ROSENBERG, Brooklyn, N. Y. Filed Feb. 11, 1916. Serial No. 77,697. (Cl. 24—221.)




A lock comprising a circular plate having a centrally disposed circular recess provided therein, and having a triangular aperture centrally of the recess, the marginal flange of said plate being provided with a series of perforations whereby said plate may be attached to an object, a second plate provided with a series of perforations in its outer edge whereby it may be attached to a second object opposed to said first mentioned object, a pin projecting from the second plate and located adjacent one corner of the first mentioned plate, said pin being adapted to pass through the aperture in the first mentioned plate and disposed eccentrically thereto, and a triangular arm eccentrically and rotatably mounted on the pin and adapted to pass through the aperture in the first mentioned plate and then to be swung on the pin to confine the first plate between the arm and the second plate, substantially as described.

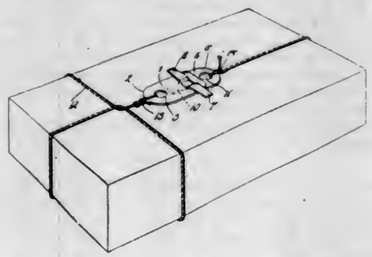
1,230,521. BRACKET. GEORGE ROSS, Paris, Ill. Filed Oct. 4, 1916. Serial No. 123,703. (Cl. 173—316.)

A bracket of the class described, comprising an eye having a central opening, and provided upon its outer edge with a diagonal slot communicating with the opening, the eye being provided adjacent its ends with apertures therethrough, the axes of the apertures being disposed substantially parallel to the axis of the opening, the eye being equipped at its ends and at its sides with notches



which coöperate with the apertures in receiving a supporting means for the bracket.

1,230,522. PACKAGE-TIE. FRED W. SAWTELLE, Oshkosh, Wis. Filed Apr. 5, 1916. Serial No. 89,142. (Cl. 24—16.)



1. A package tie, including a receiving element having an aperture therein, a connecting element, bendable fingers formed on the sides of said connecting element adapted for reception in the aperture in said receiving element, and a longitudinally extending finger formed upon the connecting element adjacent the bendable fingers engageable with the under face of the receiving element, as and for the purpose set forth.

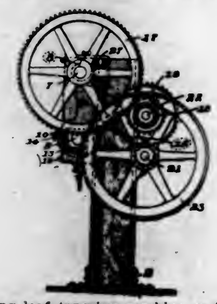
2. An article of manufacture of the character described, consisting of a receiving element stamped from a single piece of material, means arranged upon said receiving element for receiving one end of a flexible tying member, said receiving element having an opening arranged adjacent the remaining end thereof, a connecting element stamped from a single piece of material, means arranged upon said connecting element for receiving the remaining end of said flexible tying member, bendable fingers extending from and arranged adjacent one extremity of said connecting element, a longitudinally extending finger formed upon the connecting element adjacent said bendable fingers, the bendable fingers being received by the last mentioned opening in said receiving element and adapted to be bent thereover for providing a connection between said receiving and connecting elements.

3. An article of manufacture of the character described, consisting of a receiving element stamped from a single piece of material having an aperture arranged in the outer extremity thereof for receiving one end of a flexible tying member, an aperture arranged in the inner extremity of said receiving element, a connecting element stamped from a single piece of material and having an aperture arranged in the outer extremity thereof for receiving the remaining end of said flexible tying member, bendable fingers formed upon the inner extremity of said connecting element, a longitudinally extending finger



formed upon the connecting element adjacent said bendable fingers, the bendable fingers being adapted to be engaged with the last mentioned aperture in said receiving element whereby a connection between the receiving and connecting elements will be afforded.

1,230,523. SPRING-LEAF-TAPERING MACHINE. FRANK B. SCHUYLER, Berkeley, Cal. Filed Dec. 22, 1915. Serial No. 68,167. (Cl. 80—26.)

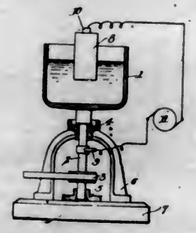


1. In a spring leaf tapering machine, a frame, a rotatable anvil thereon having an uninterrupted concentric face, a cam face fuller rotatable on the frame freely of the anvil and entirely out of the path of the latter, and means tending to hold the anvil from movement whereby the fuller will exert a drawing action upon the interposed work.

2. In a spring leaf tapering machine, a frame, a spring held anvil block pivotally mounted in the frame, a fuller journaled adjacent to the anvil and having a cam face adapted to rotate independent of the anvil in a path out of contact therewith, means for rotating the fuller, and means for raising or lowering the anvil with relation to the fuller.

3. In a spring leaf tapering machine, a frame, an anvil block having a concentric uninterrupted arcuate face formed thereon pivotally mounted in the frame for free movement, a stop member with which the anvil normally engages, a spring connected at one end to the anvil and at the other end to the frame for exerting a constant and unrestrained pull on the anvil, a roller fuller journaled adjacent to the anvil and having a fixed cam face extending completely about the fuller, said cam face being of spiral contour and rotatable in a path entirely out of the path of movement of the anvil, and means for positively operating the fuller.

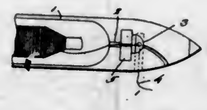
1,230,524. METHOD FOR SEPARATION OF FINELY-DIVIDED SUBSTANCES FROM COARSE AND FOREIGN MATTERS. BOTHO SCHWERIN, Frankfort-on-the-Main, Germany, assignor to Elektro-Osmose Aktiengesellschaft (Graf Schwerin Gesellschaft), Frankfort-on-the-Main, Germany, a Corporation. Filed May 13, 1915. Serial No. 27,888. (Cl. 204—1.)



1. The herein described method of separating substances in suspension in a liquid comprising adding a suitable electrolyte to the liquid and subjecting the liquid and the substance in sol-state therein to the action of centrifugal force.

2. The herein described method of separating substances in suspension in a liquid comprising adding a suitable electrolyte to the liquid and subjecting the liquid and the substance in sol-state therein to the simultaneous action of centrifugal force and an electric current.

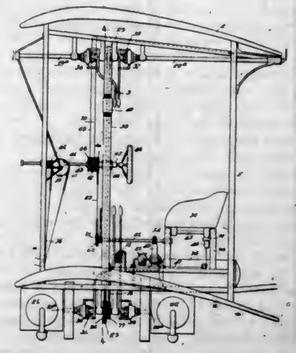
1,230,525. TENSION DEVICE FOR SHUTTLES. JOHN C. SHAMBOW, Woonsocket, R. I. Filed July 17, 1916. Serial No. 109,706. (Cl. 139—46.)



1. The combination of a shuttle body having spaced channels for the passage of filling and also having a recess intermediate said channels, a tension device positioned in said recess and comprising a casing open at its ends and having openings in its side walls for the passage of filling and also having a retaining finger above one of said openings, a plate arranged in said casing and having an upright portion and arms reaching from the upper and lower ends of said portion and terminating in lips that bear against walls of the recess, and a spring-backed shoe movable in the casing and on the lower arm of the plate and opposed to the upright portion of the plate, a screw mounted in the shuttle body and opposed to the spring, and a screw also mounted in the shuttle body and bearing against the lower lip of the plate.

2. A tension device for loom shuttles, comprising a casing open at its ends and having means in its side walls for the passage of filling, a plate arranged in said casing and having an intermediate upright portion and arms that reach in opposite directions from the upper and lower ends of said portion and terminate in lips, and a spring-backed shoe movable in the casing and on the lower arm of the plate and opposed to the upright portion of the plate.

1,230,526. FLYING-MACHINE. JOHN THOMAS SIMPSON, Newark, N. J. Original application filed July 12, 1910, Serial No. 571,557. Divided and this application filed Aug. 23, 1916. Serial No. 116,519. (Cl. 244—29.)



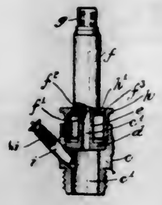
1. A flying machine having a supporting plane, a stabilizing plane, a seat for the operator, a power plant controlled on movement of the seat by the body of the operator, and means whereby the power plant will operate to move the stabilizing plane.

8. A flying machine having supporting planes, a propeller, an engine for driving the propeller, stabilizing planes, an air engine for operating the stabilizing planes, means operated by the instinctive movements of the operator for controlling the air engine, a reservoir, an air compressor communicating with the reservoir, and connections between the first mentioned engine and the compressor for operating the latter.

[Claims 2 to 7 not printed in the Gazette.]

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1,230,527. PRESSURE-GAGE FOR ENGINE-CYLINDERS. AMOS H. SMITH, New York, N. Y. Filed Dec. 11, 1915. Serial No. 66,247. (Cl. 73—111.)



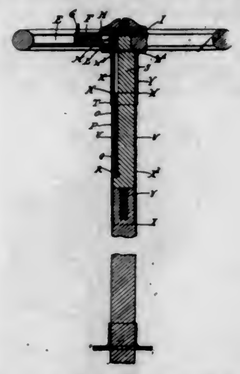
1. A pressure gage for engine cylinders comprising a plug adapted to be secured in the spark plug or other opening of an internal combustion engine cylinder, said plug having an opening extending axially therethrough, a chamber at the top thereof, a pressure gage comprising a fixed member adapted to enter said chamber and a movable member responsive to the pressure gases passing through the opening in said plug, said fixed member having thereon a laterally projecting flange, coöperating means carried by said fixed gage member and said plug whereby a suitable packing is formed to limit the application of pressures through said opening to the movable member of said gage, and a bushing adapted to operatively engage the flange upon said fixed gage member to force and hold said gage member in the operative relation to said packing means, said plug and said bushing being provided with coöperating means whereby said gage member is detachably connected by means of said bushing with said plug.

3. A pressure gage for engine cylinders comprising a plug adapted to be secured in the spark plug or other opening of an internal combustion engine cylinder, said plug having an opening extending axially therethrough, a pressure gage, coöperating means carried by said pressure gage and said plug whereby a suitable packing is formed to limit the application of pressures through said opening to said gage, and a nipple communicating with the opening in said plug below the point of communication with said gage whereby gas may be forced into the cylinder through said nipple and the pressure developed within the cylinder indicated by said gage.

6. A pressure gage for engine cylinders comprising a plug adapted to be secured in the spark plug or other opening of an internal combustion engine cylinder, said plug having an opening extending axially therethrough, a pressure gage comprising a fixed member and a movable member responsive to the pressure of gases passing through the openings in said plug, coöperating means carried by said fixed gage member and said plug whereby a suitable packing is formed to limit the application of pressures through said opening to the movable member of said gage, means whereby said fixed gage member is detachably secured with relation to said plug, and a nipple communicating with the opening in said plug below the point of communication with said gage, whereby gas may be forced into the cylinder through said nipple and the pressure developed within the cylinder indicated by said gage.

[Claims 2, 4, and 5 not printed in the Gazette.]

1,230,528. HINGED STEERING-PILLAR. FRANK HARRY SOLOMON, Pretoria, Transvaal, South Africa. Filed Apr. 17, 1916. Serial No. 91,793. (Cl. 74—39.)



1. The combination of a hinged steering pillar, a casing adapted to surround and lock the hinge, a spring to retain the casing normally in locking position, a flexible member connected at one end to the casing, and an adjustable member adjacent the head of the pillar and connected to the other end of the said flexible member, for the purpose described.

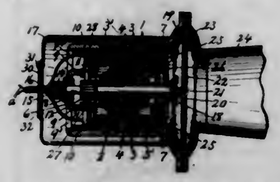
2. The combination of a hinged steering pillar, a casing adapted to surround and lock the hinge, a longitudinal groove in the steering pillar, a block adapted to slide in said groove and connected to the casing, a spring tensioned in said groove and adapted to hold the casing normally in locking position, a steering wheel, a radial groove therein, a block slidable in said groove, a pulley intermediate the center of the wheel and the second mentioned block, a flexible member connected to the second mentioned block and passing over the pulley and connected to the first mentioned block, for the purpose described.

3. The combination of a hinged steering pillar, a casing adapted to surround and lock the hinge, a spring to retain the casing normally in locking position, a flexible member connected at one end to the casing, an adjustable member adjacent the head of the pillar and connected to the other end of the flexible member, a latch pivoted in the pillar above the hinge, a spring adapted to rock the latch outwardly and cause it to engage the lower edge of the casing when the latter is slid upward, a slidable pin in one member of the hinge and adapted when the hinge is closed to engage the other member of the hinge and be moved endwise and trip the latch thereby restoring the latter to normal position, for the purpose described.

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1,230,529. MOTOR-HORN. WILLIAM SAMUEL [illegible]son, Mich., assignor, [illegible] to The Sparks-Withington Company, a Corporation of Ohio. Filed May 6, 1913. Serial No. 765,792. (Cl. 177—7.)

WITHDRAWN

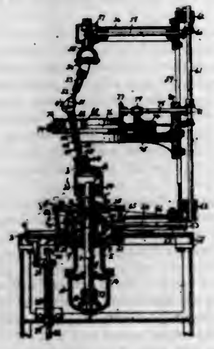


A horn comprising front and rear case sections for a diaphragm, a diaphragm having its periphery secured between said case sections and its intermediate portion free to vibrate, a wear-piece on the central portion of the diaphragm, a narrow thin sheet metal strip bent in U-shape form and having its ends secured to the rear case section to form a U-shape motor case, pole-pieces rigidly secured to the opposite sides of the motor case and projecting toward each other within the case, brushes carried by and within the case, an armature having its shaft journaled in the rear wall of the U-shape case and in the rear case section, a commutator on the shaft within the U-shape case, an actuator mounted on the shaft and adapted for contact with said wear-piece, and a casing inclosing the U-shape case and other motor parts.



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1,230,530. LENS GRINDING AND POLISHING MACHINE. ERNEST STEAD, Binghamton, N. Y. Filed June 1, 1915. Serial No. 31,533. (Cl. 51—3.)



1. In a lens grinding and polishing machine, a rotary work holder adjustable to different angles relatively to the axis of the tool holder, means for locking the work holder in its adjusted position, a rotary tool holder, and mechanism for rotating the work holder and tool holder in the same direction and at the same rate of speed.

2. In a lens grinding and polishing machine, a rotary tool holder and a rotary lens holder coöperating therewith, means for driving the tool holder and lens holder in the same direction and at the same rate of speed, additional means for moving the lens holder in an orbit about the axis of, but in an opposite direction to and at a different rate of speed than the tool holder, and coöperative means for reciprocating the lens holder relatively to its orbit and during its planetary motion.

3. In a machine for grinding and polishing lenses, coaxial rotary shaft sections, driving means for one of said sections, a tool holder carried by one of the sections to rotate therewith, means for driving the other section, means driven by the last-named section for driving the tool-carrying section at a different rate of speed, a lens-holding section coöperating with the tool holder, means for moving the lens holder in an orbit about the axis of the tool holder, but in an opposite direction and at a different rate of speed, and additional means for rotating the lens holder in the same direction and at the same rate of speed as the tool holder.

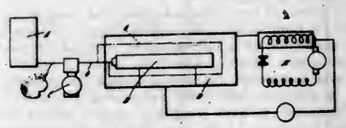
4. In a lens grinding and polishing machine, a rotary tool holder and actuating means therefor, in combination with a mandrel co-axial with the tool holder, a flexible shaft connected to the mandrel, a lens holder on the flexible shaft, means for rotating the mandrel in the same direction and at the same rate of speed as the tool holder, and additional means for deflecting a portion of the flexible shaft to one side of said axis and rotating it in an orbit about the same, but at a less speed than that of the mandrel and tool holder.

5. In a lens grinding and polishing machine, in combination with a rotary tool holder and actuating means therefor, a revoluble member co-axial with the tool holder, driving means for said member, a rotary shaft passing through said member and adjustable toward and from its axis, means for holding the portion of the shaft passing through the member in its adjusted position, a lens holder carried by the shaft to coöperate with the tool holder, means for rotating the shaft, and additional means for reciprocating said revoluble member radially.

[Claims 6 to 9 not printed in the Gazette.]

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1,230,531. STORING OF GASES UNDER PRESSURE. ARTHUR STEPHENSON, Lambeth, England, assignor to Acetylene Illuminating Company, Limited, Lambeth, England. Filed Nov. 7, 1916. Serial No. 130,083. (Cl. 23—29.)



1. The method of storing under pressure gases which are absorbed with appreciable production of heat, which comprises introducing the gases into a receptacle containing a solvent or absorbent substance, abstracting the heat of absorption and maintaining the receptacle and its contents at a temperature considerably below normal during the absorption.

6. A method of storing gases under pressure, consisting in liquefying the gas prior to its entry into a receptacle containing a solvent or absorbent substance or material and in utilizing the low temperature resulting from the conversion of the gas from its liquid to its gaseous form within the receptacle, to cool the said receptacle and its contents to a temperature considerably below normal.

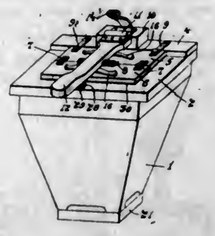
7. A method of storing gases under pressure, consisting in connecting a receptacle in which the gas is to be stored to an accumulator chamber containing a solvent or absorbent substance or material, supplying said chamber with the gas and subjecting it to a temperature considerably below normal.

8. A method of storing gases under pressure, consisting in cooling the gas to a temperature considerably below normal and in extracting or removing from the gas impurities or components of higher boiling point prior to the entry of the gas into its storage receptacle.

[Claims 2 to 5 not printed in the Gazette.]

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1,230,532. PHOTOGRAPHIC-PRINTING DEVICE. EDWARD C. STERLING, Beaver Falls, Pa. Filed Feb. 26, 1916. Serial No. 80,669. (Cl. 95—73.)



1. A device of the character described comprising a receptacle, a lamp located in said receptacle, means at the upper extremity of said receptacle adapted to receive a negative and a sheet of sensitized paper, a hinged cover upon said receptacle adapted to clamp the negative and paper in position, said cover comprising a member hingedly connected to said receptacle and a second member

hingedly connected to the free edge of said first member, and an operating handle hingedly connected to said receptacle and hingedly connected to the free edge of said second hinged member.

2. A device of the character described comprising a receptacle, a lamp located in said receptacle, means at the upper extremity of said receptacle adapted to receive a negative and a sheet of sensitized paper, a hinged cover upon said receptacle adapted to clamp the negative and paper in position, said cover comprising a member hingedly connected to said receptacle and a second member hingedly connected to the free edge of said first member, an operating handle hingedly connected to said receptacle and hingedly connected to the free edge of said second hinged member, and means for normally holding said cover in the raised position.

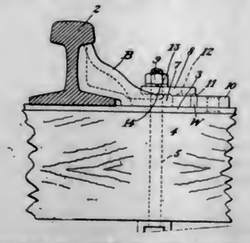
3. A device of the character described comprising a receptacle, a lamp located in said receptacle, means at the upper extremity of said receptacle adapted to receive a negative and a sheet of sensitized paper, a hinged cover upon said receptacle adapted to clamp the negative and paper in position, said cover comprising a member hingedly connected to said receptacle and a second member hingedly connected to the free edge of said first member, an operating handle hingedly connected to said receptacle, the free edge of said second member being hingedly connected to said handle, a spring arranged to hold said handle normally in raised position and a bumper arranged to contact with said handle in the raised position.

4. A device of the character described, comprising a receptacle, a lamp located in said receptacle, means at the upper extremity of said receptacle adapted to receive a negative and sheet of paper, a hinged cover upon said receptacle adapted to clamp the negative and paper in position, said cover comprising a member hingedly connected to said receptacle and a second member hingedly connected to the free extremity of said first member, an operating handle hingedly connected to said receptacle and to the free edge of said second member, a spring arranged to normally hold said handle in raised position, a second spring at the joint between said cover members arranged to cause the second member to contact with the paper before the first member and a bumper arranged to contact with said handle in the raised position.

5. A device of the character described, comprising a receptacle, a lamp located in said receptacle, means at the upper extremity of said receptacle adapted to receive a negative and sheet of paper, a hinged cover upon said receptacle adapted to clamp the negative and paper in position, said cover comprising a member hingedly connected to said receptacle and to the free edge of said first member, an operating handle hingedly connected to said receptacle and to the free edge of said second member, spring pressure arms upon said handle arranged to contact with said cover members, a spring connected to said handle to normally hold said handle in the raised position, and a bumper arranged to contact with said handle in the raised position.

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1,230,533. RAIL - BRACE. THOMAS GEORGE STILES, Arlington, N. J. Filed Apr. 21, 1915. Serial No. 22,753. (Cl. 239—15.)



1. The combination with a rail, a rail-support and a rail-brace extending transversely to said rail, of means for fastening said rail-brace, said means including holding devices having two sets of engaging horizontally disposed holding faces, one set running lengthwise and the other crosswise of said rail.

5. The combination with a rail, a rail-support and a rail-brace extending transversely to said rail, of means for fastening said rail-brace, said means including two pairs of holding devices lying substantially in a common plane, each pair having two engaging serrated members, the serrations of one pair being disposed lengthwise and those of the other pair crosswise of said rail.

8. The combination with a rail, a rail-support and a rail-brace embodying a wedge for adjusting the length of said rail-brace, of means for fastening said rail-brace, said means including a clamping device having serrated horizontal surfaces disposed transversely to each other and a pair of coöperative serrated horizontal surfaces one carried by the rail-brace proper and the other by said wedge.

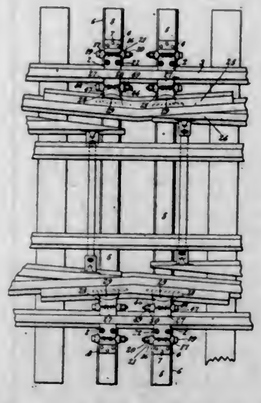
10. The combination with a rail, a rail-support and a rail-brace embodying a wedge for adjusting the length of said rail-brace, the rail-brace proper being serrated horizontally lengthwise and the wedge crosswise of the rail, of clamping means for the rail-brace, said means embodying bolts and nuts for fastening the rail-brace to said rail-support and clamping washers under said nuts and serrated both lengthwise and crosswise of the rail to engage the serrations of the rail-brace proper and the wedge.

16. The combination with a track-rail and with an adjacent guard-rail, of a rail-support adapted for attachment to a tie and having fixed stops near its ends, means for spacing and holding said track-rail and guard-rail at a predetermined distance apart, and a pair of adjustable rail-braces, the inner ends of which engage the outer sides of said rails respectively and the outer ends of which engage said stops respectively, each of said rail-braces embodying an adjusting wedge and also embodying fastening means having two sets of engaging serrations one set disposed lengthwise and the other set disposed crosswise of said rail.

[Claims 2 to 4, 6, 7, 9, 11 to 15, and 17 not printed in the Gazette.]

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1,230,534. RAIL - BRACE. THOMAS GEORGE STILES, Arlington, N. J., assignor to The T. Geo. Stiles Company, Arlington, N. J., a Corporation of New Jersey. Filed Feb. 18, 1916. Serial No. 79,008. (Cl. 239—18.)



1. In a device of the character described, a rail brace having a lateral face engaging the rail web and an opposite lateral face provided with oppositely inclined wedging surfaces, a block forming an abutment having a lateral face provided with oppositely inclined wedging surfaces facing the inclined surfaces on the brace, a pair of oppositely facing wedges between the coacting inclined faces of the brace and block, and means for moving said wedges relatively to each other.

2. In a device of the character described, a rail brace having a lateral face engaging a rail web and an opposite lateral face provided with oppositely inclined wedging surfaces, a block forming an abutment having a lateral face provided with oppositely inclined wedging surfaces facing the inclined surfaces on the brace, a pair of oppositely facing wedges between the coacting inclined faces of the brace and block, and a tie bolt connecting said wedges for moving the same relatively to each other.

3. The combination with a rail-support and with a pair of rails disposed at an angle to each other, of an adjustable multi-part block disposed between said rails transversely thereto and engaging the same and embodying a universal joint.

4. The combination with a rail-support and with a pair of rails disposed at an angle to each other, of an adjustable multi-part block disposed between said rails transversely thereto and engaging the same and embodying a universal joint having a long curved bearing surface disposed substantially crosswise of the block.

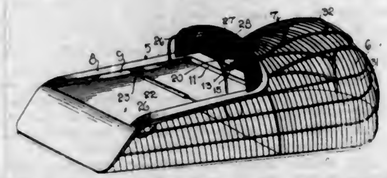
5. The combination with a rail-support and with a pair of rails disposed at an angle to each other, of an adjustable three-part block divided substantially transversely along straight and curved lines respectively to form with the intermediate section and one end section a universal joint and having means between said intermediate section and the other end section for spreading the block transversely to the rails.

[Claims 6 to 10 not printed in the Gazette.]



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1,230,535. ANIMAL-TRAP. CHARLES W. STOCKBURGER, Allen, Tex. Filed Mar. 31, 1917. Serial No. 158,949. (Cl. 43—24.)



1. In an animal trap, a trap body, a rotatable trap plate mounted in the top wall of said body, an animal released trigger member supporting said plate against rotation, and means on the trap plate adapted to strike the animal and project the same into the trap when said plate is released.

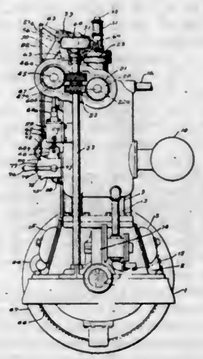
2. A trap of the character described including a body, a rotatable trap plate mounted in the top wall of said body, a spring to rotate in said plate, a pivoted trigger bar having a lug to engage beneath one end of the plate and prevent rotation thereof under the action of the spring, bait securing means on the trigger bar, and transversely disposed rods fixed upon the ends of the plate on relatively opposite sides thereof and adapted to strike the animal and project the same into the trap when the trap plate is released.

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1,230,536. INTERNAL - COMBUSTION ENGINE. CHARLES L. STOELTZLEN, Erie, Pa. Filed May 29, 1915. Serial No. 31,098. (Cl. 123—138.)

1. In an internal combustion engine, the combination of a cylinder; a fuel injector spraying the fuel in air and forming a fuel mixture with the air; a fuel mixture carrier; and means actuating the carrier to close it to the cylinder and open it to the injector to receive the fuel mixture and to deliver the fuel mixture to the cylinder.

2. In an internal combustion engine, the combination of a cylinder; a fuel injector spraying the fuel in air and forming a fuel mixture with the air; a fuel mixture carrier; and means actuating the carrier to close it to the cylinder and open it to the injector to receive the fuel mixture and to close the carrier to the fuel mixture injector and deliver the fuel to the cylinder.



3. In an internal combustion engine, the combination of a cylinder; a fuel injector spraying the fuel in air and forming a fuel mixture with the air; a rotary fuel mixture carrier having a pocket therein; and means for rotating the carrier to bring the pocket into and out of communication with the cylinder and the fuel mixture injector to receive a charge of fuel from the injector while closed to the cylinder and to deliver the charge to the cylinder.

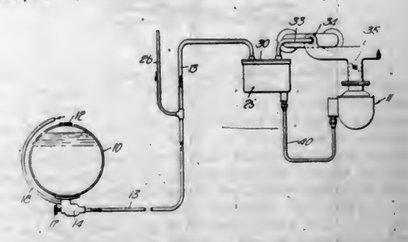
4. In an internal combustion engine, the combination of a cylinder; a fuel injector spraying the fuel in air and forming a fuel mixture with the air; a rotary fuel mixture carrier having a pocket therein; and means for rotating the carrier to bring the pocket into and out of communication with the cylinder and the fuel mixture injector to receive a charge of fuel from the injector while closed to the cylinder and to deliver the charge to the cylinder while closed to the injector.

5. In an internal combustion engine, the combination of a cylinder; a piston operating in the cylinder and compressing the air therein; a fuel injector spraying the fuel in air and forming a fuel mixture with the air; a fuel mixture carrier; and means for actuating the carrier to close it to the cylinder and open it to the injector to receive the fuel mixture and to deliver the fuel mixture to the cylinder, the carrier being timed to receive the fuel with air from the cylinder under pressure.

[Claims 6 to 11 not printed in the Gazette.]

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1,230,537. LIQUID-FEED SYSTEM. CHARLES L. STOKES, Los Angeles, Cal. Filed Oct. 9, 1916. Serial No. 124,473. (Cl. 158—36.)



1. In a liquid feed system for an internal combustion engine, the combination of a liquid tank, a liquid reservoir above said tank, communication between the tank and the

reservoir, means for admitting atmosphere to said communication above the normal liquid level therein and below the normal liquid level in the reservoir, means for applying suction to the upper part of the reservoir said means carrying the admitted atmosphere to mix with the cabureted charge of the engine, and float-actuated valve means for cutting off suction to the reservoir.

2. In combination, a carbureter having a liquid fuel chamber open to atmosphere, a liquid fuel reservoir in communication with said chamber, means to prevent passage of the liquid fuel from the chamber to the reservoir, and float controlled suction means for introducing liquid fuel to the reservoir, said means including, in combination with a liquid fuel tank at a level below the reservoir, a communication pipe leading from the fuel tank to the upper part of the reservoir, means to restrictedly introduce atmosphere to the communication pipe at a point to enter the column of liquid moving upwardly therein, means to apply suction to the upper part of the reservoir, a float and a valve operated by the float to cut off suction from the reservoir when the liquid level in the reservoir reaches a predetermined point.

3. In combination with a carbureter having a fuel chamber open to atmosphere, a low level liquid fuel tank and a high level service reservoir feeding the carbureter chamber by gravity, communication between the tank and reservoir, means to intermittently apply suction to the reservoir, and means to restrictedly admit atmosphere to said communication at a point above the normal level of liquid therein and at a point to enter the column of liquid moving upwardly therethrough.

4. In combination with a carbureter having a fuel chamber open to atmosphere, a low level liquid fuel tank and a high level service reservoir feeding the carbureter chamber by gravity, communication between the tank and reservoir, means to controllably apply suction to the reservoir, and means to restrictedly admit atmosphere to said communication at a point above the normal level of liquid therein and at a point to enter the column of liquid moving upwardly therethrough.

5. In combination with a carbureter, a low level liquid fuel tank, a liquid fuel reservoir above the carbureter and in communication with it to supply it with fuel, communication between the tank and the reservoir, means for restrictedly admitting atmosphere to said communication above the normal liquid level therein and at a point where the admitted atmosphere enters the upwardly moving column of liquid moving from the tank to the reservoir, and communication means to intermittently apply to the upper part of the reservoir the same suction that is applied to the carbureter to maintain a partial vacuum in the reservoir and to draw therefrom the air which enters it with the fuel.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,538. SHOE-FASTENING. ZENSHIRO SUZUKI, Los Angeles, Cal. Filed July 17, 1916. Serial No. 109,658. (Cl. 24—203.)

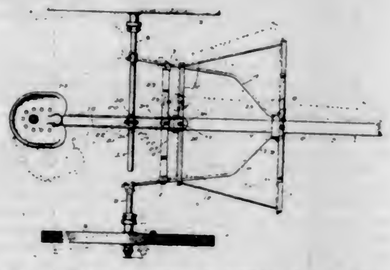


1. A fastening comprising a flat tongue provided intermediate its ends with a protuberance and adapted to be secured at one end to the uppers of a shoe, a keeper for cooperation with the tongue and having its ends offset and adapted to be secured to a shoe, said tongue adapted to extend under the keeper, said keeper having a struck-out portion formed intermediate its end and communicating with the longitudinal edge thereof farthest removed from the tongue, said struck-out portion being spaced from the side of the keeper opposed to the tongue, said protuberance adapted to engage in said struck-out portion.

2. A fastening comprising a flat tongue having a protuberance formed intermediate the ends thereof and provided at one end with openings to receive fastening means, said tongue adapted to be secured to a shoe and having its free end rounded and reduced, a keeper adapted to be secured to the shoe and having a struck-out portion intermediate the ends thereof and adapted to receive the protuberance on the tongue, said struck-out portion being spaced from the edge of the keeper that is opposed to the tongue and opening out upon the other longitudinal edge of the keeper.

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1,230,539. STEERING MECHANISM FOR TILLAGE IMPLEMENTS. SAMUEL H. TINSMAN, Morris, Ill., assignor, by mesne assignments, to International Harvester Corporation, a Corporation of New Jersey. Filed Mar. 13, 1913. Serial No. 753,952. (Cl. 21—191.)



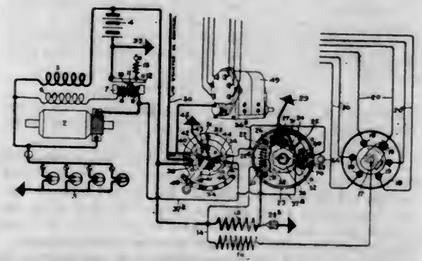
1. In a tillage implement, a wheeled axle, a frame thereon, a tongue pivoted on said frame, a seat support pivoted to said tongue, and a pivotal connection between the seat support and the axle, comprising a bracket with projections to slidably receive the seat support and a swiveled connection between the bracket and axle.

2. In a tillage implement, a wheel carrying axle, a frame thereon, a tongue pivoted to the front end of the frame, a rearwardly extending roller carried upon the rear end of said tongue to rotatably engage with a transverse portion of the frame, and a seat support pivoted to said tongue in front of the roller and having a pivotal connection with the axle, said pivotal connection comprising a bracket with projections to slidably receive the seat support and a swiveled connection between the bracket and axle.

3. In a tillage implement, a wheeled axle, a frame thereof, a tongue pivoted to the front end of the frame and projecting rearwardly, a seat support pivoted to the rear end of the tongue in front of the axle, and a pivotal connection between the seat support and the axle, comprising a U-shaped bracket to slidably receive the seat support and a swiveled connection between the bracket and axle.

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1,230,540. IGNITION SYSTEM AND APPARATUS. RICHARD VARLEY, Englewood, N. J. Filed Aug. 29, 1914. Serial No. 859,160. (Cl. 123—148.)



1. In ignition systems and apparatus, an electric circuit, controller means for said circuit and electro-magnetic means for normally closing said circuit, biased to open the circuit at a predetermined time.

2. In ignition systems and apparatus for engines, a battery, an ignition circuit, electrically actuable switch means for connecting the circuit with the battery, and electrically actuable means for automatically disconnecting the circuit and battery at low speeds or inactivity of the engine.

3. In ignition systems and apparatus for engines, a battery, an ignition circuit, and electrically actuable switch means for normally connecting the circuit with the battery, biased to open the circuit at a predetermined time.

4. In ignition systems and apparatus for engines, a battery, a transformer, an ignition circuit, controller means for the circuit, and electrically actuable means operatively associated with the battery, for connecting the circuit with the battery and biased to open the ignition circuit at a predetermined time.

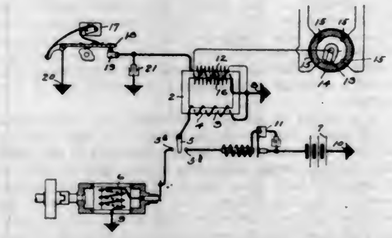
5. In ignition systems and apparatus for engines spark producing means including circuit, a source of energy therefor, electrically actuable controlling switch means for automatically bringing said spark producing means out of energizing relationship with the source of energy at low speeds or inactivity of the engine, and means for rendering said controlling means ineffective.

[Claims 6 to 22 not printed in the Gazette.]



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1,230,541. IGNITION SYSTEM. RICHARD VARLEY, Englewood, N. J. Filed June 16, 1916. Serial No. 103,965. (Cl. 123—148.)



1. In an ignition system, a magneto electric machine having generative winding, a primary winding, a secondary winding inductively related to the primary winding, a source of continuous current, means for connecting the primary winding in circuit with either the generative winding or the source of continuous current, and means, including a single interrupter, for controlling inductive relationship between the primary and secondary windings.

2. In an ignition system, a magneto electric machine having generative winding, a primary winding, a secondary winding inductively related to the primary winding, a source of continuous current, vibrator mechanism connected in circuit therewith, means for connecting the primary winding in circuit with either the generative winding or the source of continuous current and vibrator mechanism, and means, including a single interrupter, for controlling inductive relationship between the primary and secondary windings.

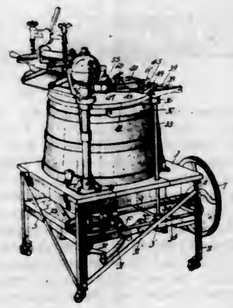
3. In an ignition system, a magneto electric machine having generative winding, a transformer forming part of spark producing means including a primary winding and a single interrupter, a source of continuous current, and means for connecting either the generative winding or the source of continuous current in circuit with the primary winding.

[Claims 4 to 6 not printed in the Gazette.]

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1,230,542. WASHING-MACHINE GEARING. WILLIAM H. VOSS, Davenport, Iowa. Filed Nov. 10, 1915. Serial No. 60,630. (Cl. 74—50.)

1. In apparatus of the class described, a support, a hinged member on the support, an oscillatory gear on the hinged member, a rack bar for operating the gear, including means for maintaining the engagement of the rack bar with the gear when the hinged member is raised on its hinges.



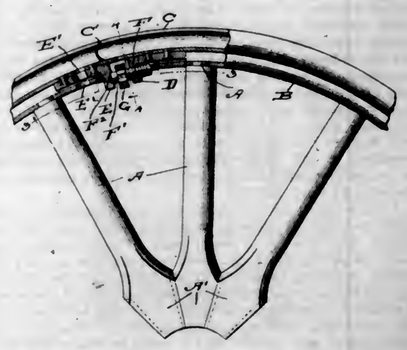
7. In apparatus of the class described, a support, a drive shaft under the support, a vertical shaft operatively connected with and oscillated from said drive shaft, a crank on said vertical shaft, a hinged member, an oscillatory shaft in said hinged member, a rack connected with said crank and operatively connected with said oscillatory shaft.

12. In apparatus of the class described, a support, a rotary shaft thereon, a vertical shaft mounted for rotation in vertical bearings, connections between said rotary and said vertical shafts for oscillating the latter from the former, a hinged member on the support, an oscillatory gear on said hinged member, a link connection between said vertical shaft and said gear, and an oscillatory shaft in said hinged member driven from said oscillatory gear.

[Claims 2 to 6 and 8 to 11 not printed in the Gazette.]

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1,230,543. MEANS FOR EXPANDING AND CONTRACTING DEMOUNTABLE RIMS. JAMES H. WAGENHORST, Akron, Ohio. Filed Aug. 23, 1913. Serial No. 786,315. (Cl. 152—21.)



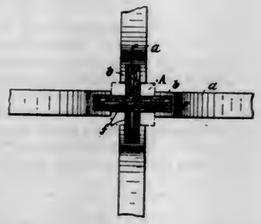
The combination with a fixed rim having an opening therein, of a divided rim having inwardly extending lugs one of which is adapted to contact with the fixed rim at one end of the opening therein, the other lug being spaced from the opposite end of said opening, and a screw working through said lug one end of said screw bearing against the adjacent end of said opening in the fixed rim, the opposite end of said screw bearing against the other lug, said screw having a portion between the lugs for engagement with an operating tool.

1,230,544. ELECTRICAL BOND FOR RAILWAYS. FREDERICK W. WALKER, Milwaukee, Wis. Filed Nov. 2, 1914. Serial No. 869,727. (Cl. 173—278.)



In an electrical bond for railways the combination of rails laid end to end and connected by a splice bar bolted thereto, of a metal connector formed with an expansion loop and on opposite sides thereof with ends parallel with the rails and having faces forming with the rail heads upwardly flaring recesses, and metal binders inserted in said recesses and fused to and uniting the opposing faces of the rail heads and connector, the expansion loop extending obliquely to the rails downward and outward over the splice bar and out of alinement with the bolt holes in the rails, and the splice bar being removable and replaceable without disturbing the connector or its attachments.

1,230,545. REINFORCED WOODEN STRUCTURE. ALBERT WANNER, Jr., New York, N. Y. Filed June 14, 1916. Serial No. 103,600. (Cl. 20—92.)

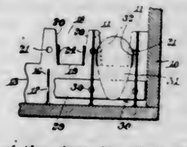


1. In a furniture element of the class including an upright and radial members projecting therefrom and attached thereto at their inner ends, a radial member of wood consisting of an elongated body portion and a projection extending substantially vertically from the attaching end thereof, said member having the grain of the wood throughout extending longitudinally of said body portion, and said projection and said end having a face adapted to bear against said upright and forming an angle with the wood grain and an up-and-down extending groove in said face, in combination with a piece of fibrous material cemented in and snugly fitting said groove and forming an across-the-grain reinforce between the body portion and projection of said member.

2. In a furniture element of the class including an upright and radial members projecting therefrom and attached thereto at their inner ends, a radial member of wood consisting of an elongated body portion and a projection extending substantially vertically from the attaching end thereof, said member having the grain of the wood throughout extending longitudinally of said body portion, and said projection and said end having a face adapted to bear against said upright and forming an angle with the wood-grain and an up-and-down extending groove in said face, in combination with a device to attach said member to the upright consisting of a piece of fibrous material cemented in and snugly fitting said groove and forming an across-the-grain reinforce between the body portion and projection of said member.

3. In combination, a series of radiating wood elements having the grain of each extending radially of said series, each element having a groove at its inner end lengthwise of the axis of the series, and interlocked joint members formed of cross-grained layers of wood cemented together, said members being snugly fitted into and cemented in said grooves and thereby reinforcing the inner ends of said elements.

1,230,546. TRAY FOR EGG-CASES. JOHN B. WARREN, Bolton, Mass., assignor to Broadfield Poultry Farm, Inc., Bolton, Mass., a Corporation of Massachusetts. Filed May 26, 1916. Serial No. 100,709. (Cl. 217—32.)



1. In a device of the class described, the combination of a collapsible tray having a plurality of egg receiving pockets; means within each pocket consisting of flat yielding strips extending at different levels across said pockets at right angles to each other and adapted to centrally position an egg free from contact with the walls of said pockets, said strips having ends extending beyond the outer walls of said tray; and means for locking said strips to said walls.

2. In a device of the class described, the combination of a collapsible tray having a plurality of egg receiving pockets formed of a plurality of interlocked divisional walls having slots each provided with an inwardly extending projection; and means within each pocket consisting of two pairs of flat yielding strips extending across said pockets at right angles to each other and at different levels adapted to centrally position an egg free from contact with the walls of said pockets, said strips being provided with openings each adapted to receive one of said projections.

3. In a device of the class described, the combination of a collapsible tray having a plurality of egg receiving pockets; means within each pocket consisting of two pairs of flat yielding strips extending across said pockets at right angles to each other and at different levels adapted to centrally position an egg free from contact with the walls of said pocket; means for locking said strips to said walls; and oppositely disposed notches at one end of each of said strips.

4. In a device of the class described, the combination of a collapsible tray having a plurality of egg receiving pockets formed of a plurality of interlocked divisional walls having slots each provided with an inwardly extending projection; means within each pocket consisting of two pairs of flat yielding strips extending across said pockets at right angles to each other and at different levels adapted to centrally position an egg free from contact with the walls of said pockets, said strips being provided with openings each adapted to receive one of said projections; and oppositely disposed notches at one end of each of said strips.

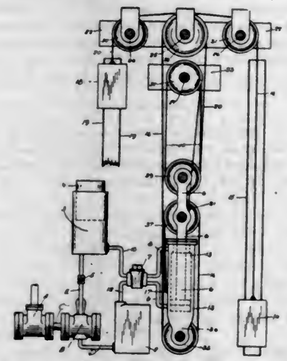
5. In a device of the class described, the combination of a collapsible tray having a plurality of egg receiving pockets formed of a plurality of interlocked divisional walls perpendicular to each other, one set of said walls having at one level a plurality of inclosed slots and the outer walls of the other set having open slots at a higher level; a pair of strips extending across each row of pockets and locked at their ends in said open slots; and another pair of strips extending across each row of pockets at right angles to the beforementioned strips, and locked in the inclosed slots of said divisional walls through which they extend.

[Claims 6 to 13 not printed in the Gazette.]

1,230,547. HYDRAULIC ELEVATOR. GEORGE F. WEBB, Hamilton, Ontario, Canada. Filed Oct. 7, 1916. Serial No. 124,428. (Cl. 187—26.)

1. In an elevator, a cylinder, a piston rod and head in the cylinder, a plurality of loose pulleys journaled to the outer end of the piston rod, a plurality of similar pulleys journaled to said piston rod intermediate of the formerly mentioned pulleys and the cylinder, a plurality of similar pulleys journaled to the opposite end of the cylinder, a base, a plurality of loose pulleys centrally journaled to said base, two loose pulleys journaled to said base one on each side of the said central pulleys, parallel guides, a car on each guide, said cars adapted to operate simultaneously in opposite directions, a cable, one end attached to one of said cars and the opposite end to the cylinder, the intermediate portion thereof woven around the pulleys on the lower end of the cylinder, the intermediate pulleys on the piston rod, one of the central pulleys and one of the side pulleys on said base, a plurality of loose pulleys journaled on a base intermediate of the former base and the piston rod, another cable, one end attached to the other car and the opposite end to the piston rod, the intermediate portion thereof woven around the end pulleys on the piston rod, the pulleys on the latter base, and one of the central pulleys and one of the side pulleys on the former base, and means admitted to the cylinder to propel the piston rod in opposite directions for the purpose set forth.

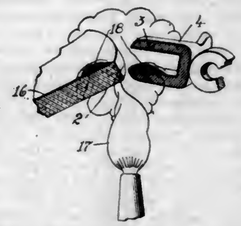




2. In an elevator, a cylinder, a piston rod and head in the cylinder, a plurality of loose pulleys journaled to the outer end of the piston rod, a plurality of similar pulleys journaled to said piston rod intermediate of the formerly mentioned pulleys and the cylinder, a plurality of similar pulleys journaled to the opposite end of the cylinder, a base, a plurality of loose pulleys journaled to said base, cars adapted to operate simultaneously in opposite directions, a cable, one end attached to one of said cars and the opposite end to the cylinder, the intermediate portion thereof woven around the pulleys on the lower end of the cylinder, the intermediate pulleys on the piston rod and one of the pulleys on said base, a plurality of loose pulleys journaled on a base intermediate of the former base and the piston rod, another cable, one end attached to the other car and the opposite end to the piston rod, the intermediate portion thereof woven around the end pulleys on the piston rod, the pulleys on the latter base, and one of the pulleys on the former base, and means admitted to the cylinder to propel the piston rod in opposite directions for the purpose specified.

1,230,548. PROCESS OF UNITING MATERIALS. JOEL C. WELLS, Southbridge, Mass. Filed Dec. 12, 1914. Serial No. 876,983. (Cl. 49—81.)

1. The process of uniting differing materials such as metal and glass, consisting in abrading the surface of the metal, coating the abraded surface with a substance to prevent oxidation, abrading the surface of the glass to destroy the polish thereof, heating a heat actuated uniting medium and the parts to be united, pressing the surfaces firmly together while under the influence of heat, with the heated uniting medium therebetween and allowing the parts to cool.

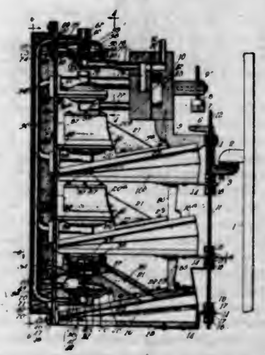


2. The process of uniting materials, consisting in abrading the surface of one of the parts, protecting said surface with a lacquer, subsequently destroying the lacquer by the action of heat, and while heated bringing the surface into engagement with the other part to be united thereto with an interposed film of suitable uniting medium for engagement with the previously prepared surface.

3. The process of uniting a lens and lens clip, consisting in abrading the inner surface of the clip, coating said surface with a material to prevent oxidation of the surface, placing a uniting medium within the clip, subjecting the clip and uniting medium to the action of heat, heating the lens, and pressing the lens while heated within the heated clip and uniting material, whereby the parts are firmly united, substantially as described.

4. The process of uniting a lens and clip consisting in abrading the surfaces to be united, coating the surface of the clip after abrading to prevent oxidation thereof, applying a uniting medium to at least one of the parts, heating the parts and the uniting medium and pressing the parts together while heated, whereby the uniting medium fills the space if any between the parts and unites with the abraded surfaces to firmly secure the parts together, substantially as described.

1,230,549. PNEUMATIC ACTION FOR PLAYER-PIANO MECHANISM. AURA E. WHITEHEAD, Chicago, Ill. Filed Mar. 29, 1915. Serial No. 17,586. (Cl. 84—178.)



1. The combination of a wind chest composed of separable members, valve casings secured to one side of one of the members which form said wind chest, tubes connecting said valve casings and being arranged upon the other side of the member to which the valve casings are secured, the other member of which the wind chest is composed being constructed to be passed over the ends of said tubes and to engage the member to which the tubes are connected to thereby complete the wind chest.

2. The combination of a wind chest, valve casings mounted on the outside of said wind chest, tubes provided upon the inside of said wind chest, and connecting said valve casings, the ends of said tubes terminating within said wind chest and being detachably secured to the interior of said wind chest, and the latter having a detachably secured portion which may be removed to open said chest and permit access to and removal of said tubes.

3. In combination, a wind chest composed of a plate and a hollow member constructed to be secured to the plate, tubes removably secured at their ends to the plate, said hollow member forming a cover for said tubes, and being removable whereby access may be had to the tubes to permit same to be removed from said plate.

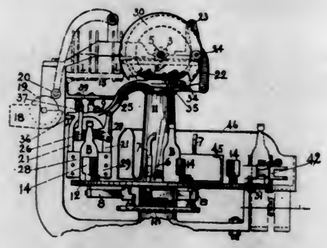
4. The combination of a vertically arranged wind trunk, primary valve casings mounted upon said wind trunk along the upper portion of the same, secondary valve casings mounted upon said wind trunk along the lower portion of the same, power pneumatics secured to said secondary valve casings, and tubes extending between said primary and secondary valve casings, said tubes or pipes being located inside of said wind trunk and having an enlarged end portion whereby said tube may be joined to the wind chest, said enlarged portion having an aperture which communicates with the wind chest.

5. The combination of a wind trunk, valve casings secured to said wind trunk, a pneumatic carried by one of the valve casings, a wind trunk supported by said pneumatic and connections leading from said last mentioned wind trunk to the other valve casing.

[Claims 6 to 13 not printed in the Gazette.]

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1,230,550. LABELING-MACHINE. FRANK O. WOODLAND, Worcester, Mass.; FRANCES S. WOODLAND, Worcester, Mass., and ARTHUR F. KELLEY, Grafton, Mass., administrators of said Frank O. Woodland, deceased, assignors to Economic Machinery Company, Worcester, Mass., a Corporation of Massachusetts. Filed July 29, 1914. Serial No. 853,821. (Cl. 216—54.)



1. In a labeling machine, in combination, means for gluing and presenting labels for affixment, a moving bottle-carrier having means for supporting and advancing bottles or the like in a predetermined path, and a wiper mechanism including an actuated set of opposite pressing wiper members between which the advancing bottle is carried, said wiper mechanism being independently movable in the same direction with the bottle, but at different speed while wiping on the labels.

2. In a labeling machine, a continuously moving bottle carrier, means for automatically supplying bottles to said carrier, means for delivering labels to the bottles thereon, a forwardly and backwardly moving wiping mechanism that travels with the bottles while wiping on the labels, and is retracted to meet the succeeding bottle, means for operating said bottle carrier, and means for imparting forward and backward movement to said wiping mechanism in alinement with the movement of the bottle, at different velocity.

5. In a label affixing mechanism having means for gluing and presenting labels, the combination of a rotating bottle carrier provided with a plurality of bottle-pushing devices thereon, means for rotating said carrier, an oscillating wiper-carrier carrying wiping members and movable approximately coincident with the circular path of the bottles upon said bottle-carrier, but at different velocity for effecting a differential wiping action upon the labels during their forward movement, and means for oscillating said wiper-carrier synchronously with the advance of the respective bottles.

6. In a labeling machine, in combination with means for gumming and delivering labels; means for affixing the labels by differential action, comprising a moving bottle carrier, and moving label-affixing wipers that wipe the opposite ends of the label upon a bottle passing between them, said bottle-carrier and the affixing wipers being actuated to travel in the same general direction but at different speeds while said wipers are in contact with the label.

21. The combination of a rotary carrier provided at intervals with means for supporting bottles or the like in upright position, and advancing the same in a circular path of movement of the carrier, a projecting central shaft for said carrier, a gear thereon, an operating shaft having a pinion for actuating said gear and carrier; a laterally oscillatable arm mounted upon said shaft, a wiper mechanism carrier upon said arm to travel back and forth approximately coincident with the path of the bottles, and means for oscillating said wiper-carrying arm synchronously with the advance of successive bottles.

[Claims 3, 4, 7 to 20, and 22 to 24 not printed in the Gazette.]

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1,230,551. CUTTER. ARTHUR A. ARNOLD, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Jan. 9, 1917. Serial No. 141,431. (Cl. 33—28.)



1. A lens cutter, including a rotatable table and a spindle rotatable therewith, a battery of formers on the spindle, a cutter bearing arm, and means on the arm for selectively engaging the formers to control the shape outlined by the cutter.

2. In a lens cutter, the combination with the cutter table and a guiding former, of a pivoted cutter arm, means on the arm for engaging the guide former, a shiftable bar carried by the arm, and a cutting point carried by the arm and angularly adjustable relative thereto.

5. In a lens cutter, the combination with a rotatable table and synchronously operating spindle, of a battery of formers carried by the spindle, a cutter arm, means on the cutter arm for selectively engaging the formers, a transversely shiftable cutter carried by the arm, means for shifting the cutter, and means for indicating the adjustment of the cutter relative to the edge of the selected former.

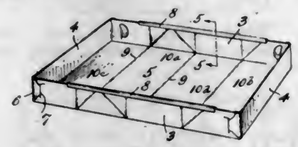
6. In a device of the character described, the combination with a lens supporting table, of a battery of formers arranged concentric therewith, a cutter arm, a contact head carried by the cutter arm having a series of eccentrically arranged ribs adapted for selective engagement with the several formers of the battery, means for indicating the adjustment of the contact head, and a cutter carried by the arm and shiftable therewith and with respect thereto for operatively engaging a lens on the table.

10. In a lens cutter, the combination with the cutter arm, of an angularly adjustable cutter carried thereby, means for transversely shifting the cutter with respect to the surface to be operated upon, means for indicating the amount of transverse shift, and an automatic compensating device operable by the angular adjustment of the cutter for adjusting the scale according to the angular position occupied by the cutter, substantially as and for the purpose described.

[Claims 3, 4, and 7 to 9 not printed in the Gazette.]

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1,230,552. FOLDING BOX. BENJAMIN F. BAIN, Pittsburgh, Pa. Filed Oct. 14, 1916. Serial No. 125,630. (Cl. 229—16.)



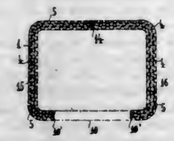
4. A folding box, comprising a single sheet of material provided with lines of fold dividing it into four sections, end walls connected to the end ones of said sections, and side walls connected to the side portions thereof, one of said end sections with its side and end walls being adapted to fold over the other end section to form a complete box.

7. A folding box, comprising a single sheet folded to form a bottom, end and side walls, corner joints for said end and side walls, said bottom and side walls being provided with lines of fold whereby one end portion of said tray may be folded over and at right angles to the other end portion of said tray and produce a complete box, two portions of said side walls abutting at their free edges when the tray is folded into box form to form the ends of said box.

[Claims 1 to 3, 5, and 6 not printed in the Gazette.]

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1,230,553. TELEPHONE-BOOTH AND THE METHOD OF MANUFACTURING THE SAME. ALBERT BERAN, Hirschwang, Austria. Filed June 30, 1915. Serial No. 37,172. (Cl. 20—3.5.)



1. The herein described method of manufacturing telephone booths or like structures, which consists in superposing successive layers of corrugated paper about a mandrel to form a closed body, thereafter cutting a panel out of one of the wider sides of said body by twice severing it throughout its height to form a door, movably supporting the door in the space left by cutting said panel, severing the wall of the body opposite that from which the panel was cut, separably connecting the severed sections, and applying top and bottom members to said body.

2. As an article of manufacture, a telephone booth comprising a body formed of corrugated paper having its rear wall centrally severed and the sections thereof separably connected, and a door opening throughout the height of its front wall, a door formed of superposed layers of corrugated paper hinged to swing in said door opening, a top member of corrugated paper having an angular recess at one side resting on said body whereby a portion of said top member projects into said booth, and a base member of corrugated paper having an angular recess at one side in which recess the bottom of said body rests whereby a portion of said base member projects upwardly into said body.

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1,230,554. DEEP-WELL PUMP. LARS W. BODINSON, Aurora, Ill., assignor to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed May 1, 1915. Serial No. 25,178. (Cl. 103—82.)



1. In a pump, the combination of two alined cylinders, means for reciprocating said cylinders in unison, plungers operated in said cylinders, and a pipe extending through the upper plunger into the lower cylinder through which the water is adapted to be forced by the reciprocation of said cylinders from the lower cylinder into position above the uppermost plunger.

2. In a pump, the combination of two alined cylinders, means for reciprocating said two cylinders in unison, plungers in said cylinders, and a tubular pump rod connected with said plungers for reciprocating them in unison in said cylinders, the reciprocation of said cylinders and said plungers in opposite directions serving to force the water in the lower cylinder upward through the tubular pump rod into position above the uppermost plunger.

3. In a pump, the combination of two alined cylinders, means for reciprocating said two cylinders in unison, two plungers in said cylinders respectively having upwardly-opening valves therethrough, a tubular pump rod connected with said two plungers for reciprocating them in unison, each of said cylinders being adapted upon its downward stroke to take in water at its lower end, and means for preventing the escape of the water at the lower ends of said cylinders upon their upward stroke, the reciprocation of said cylinders and said plungers in opposite direction serving to force the water in the lower cylinder upward through the tubular pump rod into position above the uppermost plunger.

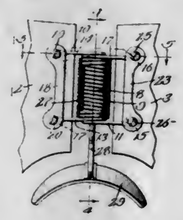
4. In a pump, the combination of a well tube, an upwardly-opening valve therein, a cylinder mounted in said well tube and held out of contact with the walls thereof, an upwardly-opening valve in the lower end of said cylinder, means for reciprocating said cylinder, a plunger in said cylinder, a tubular pump rod connected with said plunger for reciprocating the plunger, and an upwardly-opening valve in said pump rod through which the water in the cylinder below the plunger is adapted to pass upward.

5. In a pump, the combination of a movable cylinder, a tubular pump rod extending down through said cylinder, an upwardly-opening valve about said pump rod at the lower end of said cylinder through which valve water is adapted to enter said cylinder, means for reciprocating

said cylinder, a plunger in said cylinder connected with said tubular pump rod, and an upwardly-opening valve through said plunger.

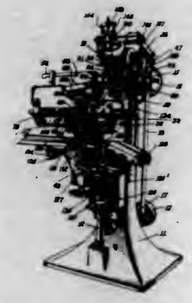
[Claims 6 to 42 not printed in the Gazette.]

1,230,555. GOGGLE-HINGE. HERMAN J. BRENNECKE, Chicago, Ill. Filed July 27, 1914. Serial No. 853,308. (Cl. 88—41.)



The combination with a pair of lenses of an angularly movable, two-part connection therefor which consists of a pair of wire coils, one revolubly mounted upon the other, each of said coils terminating in a pair of arms, one arm of said pair extending to one lens and the other arm extending to the other lens, and means for securing said arms to the lenses.

1,230,556. CAN-HEADING MACHINE. JULIUS BRENZINGER, Mount Vernon, N. Y. Filed Sept. 29, 1913. Serial No. 792,295. (Cl. 113—14.)



1. In a machine of the character described, the combination, with a stationary support for the work, of an eccentric rotatable about the axis of said support, a tool-carrying member rotatable on said eccentric, and a driving shaft, said eccentric and said member being each directly intergeared with said shaft whereby they are rotated at different and constant velocities.

2. In a machine of the character described, the combination, with means for suitably supporting the work and a stationary shaft carrying said supporting means, of a sleeve rotatable on said shaft, an eccentric head carried by said sleeve, a tool-carrying member rotatable on said head, and a driving shaft, said sleeve and said member being directly intergeared with said driving shaft whereby they are rotated at different and constant velocities.

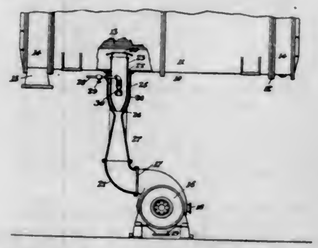
3. In a can heading machine, the combination, with a chuck and a stationary shaft supporting said chuck, of an eccentric rotatable on said shaft, a member rotatable on said eccentric, a seaming roller carried by said member, and a driving shaft, said eccentric and said member being directly intergeared with said shaft whereby they are rotated at different and constant velocities.

4. In a can heading machine, the combination, with a chuck and a stationary shaft supporting said chuck, of a sleeve rotatable on said shaft, said sleeve carrying an eccentric head, a member journaled for rotation on said head, said member carrying a seaming roller, and a driving shaft, said member and said sleeve being directly intergeared with said shaft whereby they are rotated at constant but slightly different velocities.

5. In a can heading machine, the combination, with a chuck and a stationary shaft supporting said chuck, of a sleeve rotatable on said shaft, said sleeve being provided with an eccentric head, a member journaled for rotation on said head, said member carrying a seaming roller adapted to coöperate with said chuck, a driving shaft and means for rotating the same at a constant velocity, and gears on said driving shaft in mesh with a gear on said sleeve and a gear on said member, respectively, said gears being so proportioned as to rotate said sleeve and said member at slightly different velocities.

[Claims 6 to 21 not printed in the Gazette.]

1,230,557. CONDENSING APPARATUS. JOHN J. BROWN, Newark, N. J. Filed July 31, 1914. Serial No. 854,240. (Cl. 257—24.)



1. The combination with a condenser and a combined hydraulic air and condensate pump, of means through which the condensate is withdrawn from the condenser, means through which the non-condensable vapors are withdrawn from the condenser and entirely separately from the condensate, and devices whereby and wherein the non-condensable vapors are all compressed and mixed with the entire volume of the condensate, so that the entire condensate and the compressed non-condensable vapors are caused to mingle before they reach the pump.

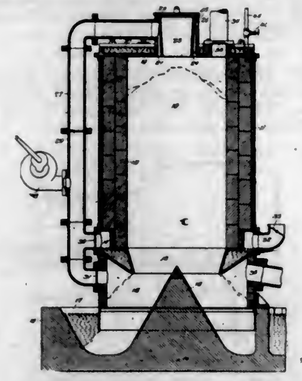
4. The combination with a surface condenser and a combined hydraulic air and condensate pump, of a pipe connection, making communication between the interior of the condenser and the suction of the pump, and being of restricted cross section adjacent its central portion, a vapor discharge pipe extending from a point an appreciable distance within the condenser to a point adjacent the restricted portion of the said pipe connection, that portion of the said vapor discharge pipe lying within the pipe connection being concentric therewith and thereby providing an annular discharge passage for the condensate from the condenser terminating at the outer restricted end of the said vapor discharge pipe, and a steam jet nozzle located within the said vapor discharge pipe within the outer restricted end of which the non-condensable vapors are compressed by the steam from the said nozzle, the outer portion of said pipe connection comprises a combining chamber where the compressed non-condensable vapors, and the steam from the said nozzle commingle with the condensate and the steam is condensed before the same reach the said pump.

[Claims 2 and 3 not printed in the Gazette.]

1,230,558. GAS-PRODUCER. LEOPOLD F. BURGER, Beloit, Wis., assignor to International Harvester Corporation, a Corporation of New Jersey. Filed June 30, 1913. Serial No. 776,537. (Cl. 48—82.)

1. In a gas producer, the combination of a generating chamber, a fuel charger arranged at the top of the generating chamber, a twyer surrounding said fuel charger, and a vaporizing chamber connected to said twyer.





2. In a gas producer, a generating chamber, a fuel charger on said generating chamber, a twyer on said chamber for admitting combustion supporter, said charger and twyer both occupying central position thereon, and a vaporizing chamber connected to said twyer.

3. In a gas producer, a generating chamber, a fuel charger centrally arranged on said chamber, a twyer surrounding said fuel charger, and a vaporizing chamber connected to said twyer.

4. In a gas producer, the combination of a generating chamber, a twyer centrally arranged on the top thereof, a fuel charger arranged within said twyer and spaced apart from the sides thereof, and an air and steam pipe arranged on the side of said twyer and communicating with the interior thereof.

1,230,559. COASTER-DIVING APPARATUS. JOHN F. BURKE, Philadelphia, Pa. Filed Nov. 4, 1916. Serial No. 129,424. (Cl. 104—111.)



1. A gravity railway having an abrupt termination at its lower end, combined with a car capable of traversing said railway, means adjacent the termination of the railway for bringing the car while in full motion to a sudden stop to project its passengers into the air, means for returning the car to the upper end of the railway, and means immediately beyond the end of the railway for yieldingly receiving the projected passengers.

2. A gravity railway having an abrupt termination at its lower end, combined with a car capable of traversing said railway, means adjacent the termination of the railway for bringing the car while in full motion to a sudden stop to project its passengers into the air, means for returning the car to the upper end of the railway, and means immediately beyond the end of the railway for yieldingly receiving the projected passengers comprising a body of water and a net arranged in the water.

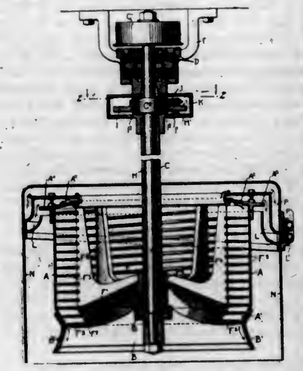
3. A gravity railway having an abrupt termination at its lower end, combined with a car capable of traversing said railway, means adjacent the termination of the railway for bringing the car while in full motion to a sudden stop to project its passengers into the air, means for returning the car to the upper end of the railway, and a body of water immediately beyond the end of the railway for yieldingly receiving the projected passengers.

4. A gravity railway having an abrupt termination at its lower end, combined with a car capable of traversing said railway, means adjacent the termination of the railway for bringing the car while in full motion to a sudden stop to project its passengers into the air, means for returning the car to the upper end of the railway, and a stretched net immediately beyond the end of the railway for yieldingly receiving the projected passengers.

5. A gravity railway having an abrupt termination at its lower end, combined with a car capable of traversing said railway, means adjacent the termination of the railway for bringing the car while in full motion to a sudden stop to project its passengers into the air, means for spraying the car and its occupants with water before reaching the terminus of the railway, and means for returning the car to the upper end of the railway.

[Claims 6 to 14 not printed in the Gazette.]

1,230,560. CENTRIFUGAL CLARIFIER. LEE GORDON CAMP, Santa Clara, Cuba. Filed Feb. 8, 1913. Serial No. 747,152. (Cl. 233—23.)



1. A centrifugal clarifier, comprising a vertically-disposed drum provided with a central shaft, means for driving the said shaft at a high rate of speed, a propeller arranged in the said drum and having a bottom disk and a helix, the edge of which extends into close proximity to the inner surface of the said drum, the said disk having a central sleeve through which extends the said shaft, a friction disk on the said shaft, and a centrifugal governor mounted on the said sleeve and having friction blocks engaging the said friction disk.

2. A centrifugal clarifier comprising a vertically disposed drum provided with a central shaft, means for driving the shaft at a high rate of speed, a propeller arranged in the drum and having a bottom disk and a helix, said disk having a central sleeve through which extends the said shaft, a friction disk on said shaft, a brake band disposed concentrically of said friction disk, and a centrifugal governor carried by said sleeve and having frictional blocks arranged to normally engage said friction disk and being provided with additional friction blocks for engaging said brake band at a predetermined increase of speed.

3. A centrifugal clarifier comprising a vertical disposed drum provided with a central shaft, means for driving the shaft at a high rate of speed, a propeller arranged in the drum and having a bottom disk and a helix, said disk having a central sleeve through which extends the said shaft, a friction disk on said shaft, a brake band disposed concentrically of said friction disk, a centrifugal governor carried by said sleeve and having frictional blocks arranged to normally engage said friction disk and being provided with additional friction blocks for engaging said brake band at a predetermined increase of speed, and a centrifugal governor comprising a pair of pivoted arms on

opposite sides of said shaft, each of said arms being provided with friction blocks arranged to engage said disk, springs having their ends secured to the opposed arms for holding said friction blocks on said disk, and a shoe carried by each of said arms and arranged to engage the brake band at a predetermined increase of speed.

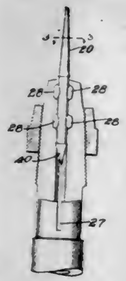
4. A centrifugal clarifier, comprising a revoluble vertically disposed drum to be driven at a high rate of speed and open at its lower and upper ends, a rotatory propeller in said drum adapted to throw the liquid to be clarified outwardly by centrifugal force into contact with the inner vertical wall of said drum, whereby the solids contained in the liquid move downward along the inner surface of the said drum and the clarified liquid move upward on the inner surface of said drum to be thrown off at the top of the drum by centrifugal force of the drum, and an automatic compensating power-transmitting device for rotating said propeller from said drum at a speed governed by the amount of solids accumulating at the inner surface of the drum.

5. A centrifugal clarifier comprising a vertical revoluble drum to be driven at a uniform high rate of speed and open at top and bottom, the upper edge of the drum having an inwardly extending annular lip, a rotatory propeller in the said drum adapted to throw the liquid to be clarified outward by centrifugal force and into contact with the inner surface of said drum, and an automatic compensating power-transmitting device for rotating the said propeller from said drum at a speed governed by the amount of solids contained in the liquid and accumulating at the inner surface of the drum, whereby the accumulating solids will move downwardly along the inner wall of the drum and the clarified liquid pass upwardly along the inner surface of the drum and around the said lip to be thrown off by the centrifugal force of the drum.

[Claim 6 not printed in the Gazette.]

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1,230,561. DENTAL BROACH. ISIDOR CHIGE, New York, N. Y. Filed Oct. 28, 1915. Serial No. 58,319. (Cl. 32—10.)

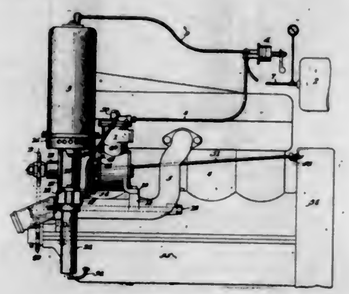


1. In combination, a dental broach comprising an operative portion and a shank portion having longitudinal projections subtending a substantial portion of the length of the shank, a socket having spring jaws with spaces therebetween, said spaces being of greater width than the projections, said projections extending into corresponding portions of said spaces interengaging with said jaws in said spaces along a substantial portion of the length of the shank, said jaws having an exterior tapered thread and a nut engaging the thread to compress the jaws so as to clamp the shank between the projections and interlocking therewith, whereby rotation of the shank in the socket is securely prevented.

2. In combination, a dental broach comprising an operative portion and a shank portion having a plurality of diametrically opposite spaced lateral projections extending longitudinally along the major portion of the length of the shank, a socket having spring jaws with spaces therebetween, said spaces being of greater width than the projections, said projections extending into corresponding portions of said spaces interengaging with said jaws in said spaces whereby rotation of the shank in the socket is prevented, said jaws having exterior tapered threaded portions and a nut engaging said threaded portion to clamp the jaws together abont the shank.

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1,230,562. COMPRESSED-AIR STARTER FOR INTERNAL-COMBUSTION ENGINES. NIELS ANTON CHRISTENSEN, Milwaukee, Wis. Filed Aug. 4, 1915. Serial No. 43,565. (Cl. 123—179.)



1. In a compressed air starter for internal combustion engines, the combination with an engine shaft, of a starter shaft connected therewith, a compressed air reservoir, a cylinder connected with said reservoir, a piston fitting in said cylinder and having a one-way clutch connection with the starter shaft, a compressor having an air connection with the reservoir, a clutch for connecting the compressor with the starter shaft, a compressed air shifter connected with the compressor clutch, and a valve controlling the air connections between the reservoir, starter cylinder, clutch shifter and compressor.

2. In a compressed air starter for internal combustion engines, the combination with an engine shaft, of a starter shaft having a power transmission connection with the engine shaft, a compressed air reservoir, a cylinder connected with said reservoir and provided with a piston having a one-way clutch connection with the starter shaft, a compressor having an air connection with the reservoir, a clutch for connecting the compressor with the starter shaft, a compressed air shifter connected with said clutch, means for manually shifting said clutch, and a valve controlling the air connections between the reservoir, starter cylinder, compressor and clutch shifter.

3. In a compressed air starter for internal combustion engines, the combination with an engine shaft, of a starter shaft having a rotating connection therewith, a cylinder having a compressed air supply connection and a piston provided with a tubular rack rod, a spiral retracting spring passing through the piston into the tubular rod and connecting the distant end of the rod with the cylinder on the opposite side of the piston, a compression spring interposed between the piston and the cylinder head on the opposite side of the piston from the piston rod, and a pinion loosely mounted on and having a one-way clutch connection with the starter shaft and normally meshing with the rack rod.

4. In a compressed air starter for internal combustion engines, the combination with the engine shaft, of a starter shaft connected therewith, a compressor, a clutch for connecting the compressor with the starter shaft, a clutch shifter comprising a cylinder, a piston fitted in the cylinder and provided with a rod passing through an opening in one end of the cylinder and connected with the clutch, a valve on the piston rod adapted to close the opening in the end of the cylinder around the piston rod when the piston is moved into position to operatively connect the compressor with the starter shaft, a reservoir connected with the discharge port of the compressor and with the shifter cylinder on the opposite side of the pis-



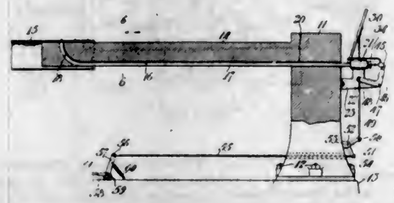
ton from said valve, and a driver's valve adapted to open and close the connection of the reservoir with the compressor and shifter cylinder and to open and close communication between said cylinder and the atmosphere.

5. In combination with an internal combustion engine and a starter therefor, a water circulating pipe provided with means for attachment to the engine casing and with supports for the starter.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,563. RIVET-STICKER. ALEXANDER CLAIBORNE, Palms, Cal. Filed Sept. 26, 1916. Serial No. 122,289. (Cl. 78—46.)



1. A rivet sticker for placing rivets in holes in sheet metal members comprising a mandrel having an opening formed therein through which a rivet may be delivered to one of the said holes; means for depositing a rivet in said opening; and means for forcing a fluid through said opening in such a manner as to propel said rivet through said opening.

3. A rivet sticker for placing rivets in holes in sheet metal pipe comprising a mandrel over which said pipe may be fitted, said mandrel having an aperture so placed that the operator can readily aline the rivet hole in which it is desired to place a rivet with said aperture; walls forming a rivet feeding channel terminating at one end at said aperture, and having a rivet receiving opening at the other end thereof; means for feeding a single rivet through said rivet receiving opening into said rivet feeding channel; means for closing said rivet receiving opening; and means for admitting compressed air into said rivet feeding channel in such a manner as to blow said single rivet through said rivet feeding channel and said aperture.

6. In a rivet sticker a support; a horizontal mandrel rigidly secured to said support and having an aperture in its upper side near its outer end and a rivet feeding channel terminating in said aperture; a valve body having a central opening connected to said rivet feeding channel, said rivet feeding channel having a rivet receiving opening in its top near its junction with said valve body; means for supplying compressed air to a compressed air port in said valve body; a valve in said valve body so shaped that it closes said rivet receiving opening when it is moved forward and immediately thereafter connects the end of said rivet feeding channel with said port; a rivet feeding magazine adapted to hold a supply of rivets; and means for releasing one of these rivets into said rivet receiving opening at each complete actuation of said valve.

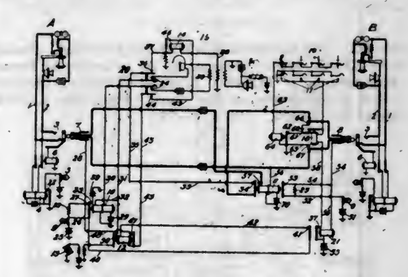
7. That step in the art of riveting sheet metal pipe which consists in blowing the rivets through an aperture in a mandrel into the holes to be riveted.

[Claims 2, 4, and 5 not printed in the Gazette.]

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1,230,564. TELEPHONE-EXCHANGE SYSTEM. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Dec. 12, 1914. Serial No. 876,795. (Cl. 179—58.)

1. A telephone system including telephone lines terminating in jacks at a central office, a link circuit at the central office for uniting lines in conversation, a busy signal, means made operative when said link circuit is contacted with a busy line to connect said signal to a calling line, means under the control of the calling subscriber for disconnecting said signal from his line, and means for reëstablishing telephonic connection with an operator without the necessity of disconnecting said link circuit from the jack of the calling line.



4. A telephone system comprising telephone lines terminating at a central office, a link circuit connected with one of the lines as a calling line, supervisory apparatus therefor, a quick and a slow-acting electromagnetic device, energizing circuits therefor completed upon engagement of the link circuit with the terminal of a busy line, a busy signal connected with the calling line upon the energization of the devices, and means controlled over the calling line for disconnecting the busy signal therefrom and for maintaining the supervisory apparatus under control of the calling subscriber.

5. In a telephone system, a calling and a called line terminating at a central office, a link circuit for connecting the lines together, a tone-producing device at the central office, and switching mechanism controlled by and operated while the busy test is being made on the called line for connecting the tone-producing device in circuit relation with the calling line at the expiration of a predetermined period.

8. In a telephone system, the combination of calling and called telephone lines, a main station at which said lines terminate, a telephone line connector at the main station provided with switching mechanism to connect said connector to a called line, busy signal mechanism associated with said connector, means normally under the joint control of said switching mechanism and the calling subscriber to connect said signal mechanism in circuit with the calling line when said switching mechanism is contacted with the terminal of a line to which another connector is connected, apparatus automatically removing said means from the control of said switching mechanism when said busy signal mechanism is connected to said calling line, and devices controlled by the calling subscriber for disconnecting said signal mechanism from the calling line and restoring the control of said means to the joint control of said switching mechanism and said calling subscriber.

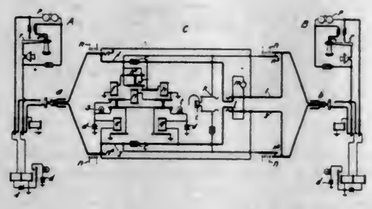
14. In a telephone system, the combination of a main station, a calling telephone line leading to the main station, substation apparatus on said line including an automatic receiver hook switch, a called line leading to the main station, a cord circuit at the main station, an answering switch which when closed connects the cord to the calling line, a second and calling switch for connecting the cord to the called line, said switch including switching terminals of the cord and switching terminals of the line, busy signal mechanism associated with the cord, apparatus for causing said mechanism to extend a prolonged busy signal to the calling subscriber, means under the joint control of the calling subscriber and the operator during the establishment of a connection and actuated when the calling switch terminals of a cord and a called line to which another cord is connected are contacted to cause said mechanism to extend the busy signal to the

calling subscriber, devices controlled by said means to place said apparatus under the sole control of the subscriber, and mechanism operating automatically when the calling subscriber's hook switch is opened to restore said apparatus to the joint control of the calling subscriber and operator.

[Claims 2, 3, 6, 7, and 9 to 13 not printed in the Gazette.]

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1,230,565. TELEPHONE-EXCHANGE SYSTEM. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Apr. 1, 1915. Serial No. 18,459. (Cl. 179—73.)



2. In a telephone system, the combination with two subscribers' lines, a link circuit for connecting said lines, a source of calling current, a manually controlled key for applying current from said source to the link circuit, and an automatic switching device jointly controlled from the two subscribers' stations for directing the flow of the current so applied to one or the other of said stations.

3. In a telephone system, the combination with two telephone stations, of a link circuit for uniting the stations, a supervisory relay in the link circuit for each of the stations, a source of calling current, an electromagnetic switch for directing the calling current to either end of the link circuit to call the associated station, and an energizing circuit for the electromagnetic switch including contacts of both supervisory relays.

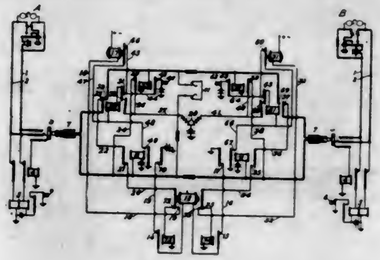
5. In a telephone system, the combination with two telephone stations, of a link circuit for uniting the same, a supervisory relay in said link circuit for each of said stations, a source of calling current, an electromagnetic shifting switch adapted to direct the application of said source of calling current to either end of said link circuit to call the associated station, and an energizing circuit for the said electromagnetic shifting switch including a normally closed contact of one supervisory relay and a normally open contact of the other supervisory relay.

7. In a telephone system, the combination with two telephone stations each having a call receiving device and a switchhook, of a pair of connecting cords for uniting said stations, a source of calling current, a key for controlling calling current from said source, a shifting relay adapted in its alternative positions to direct calling current controlled by said key to one end or the other of said pair of connecting cords, a supervisory relay associated with said pair of connecting cords for each of the united telephone stations, said supervisory relays being under the control of the switchhooks of the corresponding stations, and an energizing circuit for said shifting relay controlled jointly by said supervisory relays.

9. A telephone exchange system comprising two subscribers' lines, a supervisory relay normally in operative relation with one end of the link circuit and controlled over the telephone line connected with that end, and a relay jointly controlled from the two stations for switching the supervisory relay into operative relation with the other end of the link circuit whereby it is controlled over the telephone line connected with that end.

[Claims 1, 4, 6, and 8 not printed in the Gazette.]

1,230,566. TELEPHONE-EXCHANGE SYSTEM. HENRY PETER CLAUSEN, Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Oct. 29, 1915. Serial No. 58,639. (Cl. 179—73.)



1. A telephone exchange system comprising subscribers' lines terminating at a central office, a call bell for each line, a link circuit thereat, a source of ringing current at the central office, apparatus associated with each end of the link circuit for controlling the connection of the source of ringing current to the subscribers' lines to which the link circuit is connected, and means at the central office controlled jointly by the two subscribers for causing the operation of said apparatus to simultaneously connect the source of ringing current to the connected lines and cause the operation of both call bells.

3. A telephone exchange system comprising two telephone lines terminating at a central office, a link circuit thereat connected with the two lines, a source of ringing current at the central office, a relay in each end of the link circuit controlled over the respective connected telephone lines, and a third relay at the central office energized upon the deënergization of the first mentioned relays to connect the source of ringing current to the telephone lines.

5. A telephone exchange system comprising two telephone lines terminating at a central office, a link circuit thereat connected with the lines and comprising a talking conductor open at two points, a source of ringing current, a relay for each end of the link circuit controlled over the respective connected telephone lines, a third relay operating upon the deënergization of the first mentioned relays to connect a source of ringing current to the two telephone lines, and a relay associated with each end of the link circuit operating upon the removal from the switchhooks of the receivers of the respective telephone lines to disconnect the source of ringing current from the respective lines and to close the breaks in the talking conductor of the link circuit.

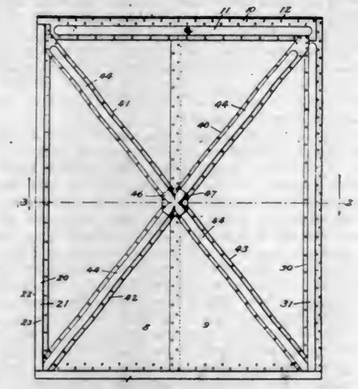
6. A telephone exchange system comprising two telephone lines terminating at a central office, a link circuit thereat connected with the telephone lines and comprising a talking conductor open at one point, a source of ringing current at the central office, a relay associated with each end of the link circuit and controlled over the respective connected lines, a third relay operating when the first mentioned relays are deënergized to connect the source of ringing current to one of the telephone lines, and apparatus operating upon the removal of the receiver of the signaled telephone line from the switchhook to disconnect the source of ringing current therefrom and to close the break in the talking conductor of the link circuit.

9. A telephone exchange system comprising two telephone lines terminating at a central office, a link circuit connected with the two lines, a source of ringing current at the central office, a relay when energized simultaneously connecting the source of ringing current to both lines, and an energizing circuit for the relay completed upon the opening of the two lines.

[Claims 2, 4, 7, and 8 not printed in the Gazette.]



1,230,567. CAR-DOOR. JOSEPH F. COMEE, Chicago, Ill., assignor to Camel Company, Chicago, Ill., a Corporation. Filed Nov. 28, 1913. Serial No. 803,569. (Cl. 189—46.)



1. A car door having a body formed of plate metal and having ribbed and flanged brace bars extending diagonally between its upper and lower corners, said brace bars meeting at the center of the door, and a center plate extending over the outer faces of the meeting portions of the brace bars, said center plate being provided with raised portions to set over the ribs of the brace bars and with base flanges to set over the flanges of the brace bars, and attaching means connecting said base flanges of the center plate with the flanges of said brace bars, substantially as described.

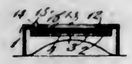
2. A car door, comprising a body formed of plate metal, and a U-shaped channel member extending from top to bottom of the door and having one of its side faces riveted thereto at the front edge of said door, said channel member being disposed so that its open side lies toward the rear end of said door.

3. A car door, comprising a body formed of plate metal, the front edge of said body being flanged outwardly, and a U-shaped channel member extending from top to bottom of the door and having one of its side faces riveted thereto at the front edge of said door and being disposed so that its open side lies toward the rear end of said door, said channel member abutting the flange on the front edge of the car door and being riveted thereto.

4. A car door, comprising a body formed of plate metal and having on its outer face at its rear edge a vertically disposed reinforcing member formed with a central channel and laterally projecting flanges, and a U-shaped channel bar straddling the rear edge of the door and riveted to said reinforcing member, said channel having a forwardly projecting flange disposed on the inner side of and at a distance from the inner face of the door and adapted to coöperate with a similar flange on the car body.

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1,230,568. IRIS-DIAPHRAGM. HENRY L. DE ZENO, Maple Shade, N. J. Filed Jan. 30, 1915. Serial No. 5,226. (Cl. 95—64.)

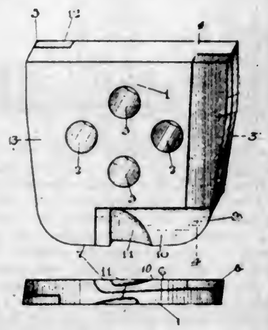


1. An iris diaphragm, comprising a casing formed from sheet metal and having its upper end deflected downwardly and then laterally to form an internal flange, a rotatable ring provided with openings, leaves each having means at one end to engage said ring openings, said flange coöperating with the other ends of said leaves to position them, and a closure above said ring and seated on said casing.

[Claim 2 not printed in the Gazette.]

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1,230,569. BORING-CUTTER. CUTHBERT LAVINGTON DIXON, Montreal, Quebec, Canada. Filed Feb. 7, 1917. Serial No. 147,140. (Cl. 77—58.)



2. In a boring cutter, a body and cutter pieces countersunk and welded to said body at opposite sides and extending outwardly to the end and a cutter piece countersunk and welded to said body in one face and extended across from a side cutter to a point beyond the center of said body.

3. In a device of the class described, a body having beveled sides and end and countersunk cutters beveled with said sides and end and welded to the body, the end cutter having a scoop shaped recess central of said body at the outer end and corresponding to a similar recess in the opposite face of said body, said end cutter continuing its cutting edge through and beyond said recess.

[Claim 1 not printed in the Gazette.]

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1,230,570. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Sept. 21, 1916. Serial No. 121,459. (Cl. 246—20.)

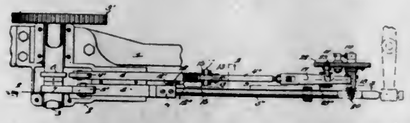


A railway signal torpedo comprising an inverted cup-shaped member having its walls at right angles to each other, the lower edge of the vertical wall extending outwardly to form a lateral flange, a second cup-shaped member fitting within the first-mentioned cup-shaped member, an explosive compound in tablet form within the second cup-shaped member, the vertical wall of the second member being of a length to engage the top wall of the first mentioned member to bring the horizontal wall thereof in the same plane with the lateral flange of the first-mentioned cup-shaped member, a third cup-shaped member of a size to receive the first mentioned cup-shaped member and its lateral flange, the vertical wall of the

third cup-shaped member turned inward down upon and cemented to the top of the lateral flange, and a rail engaging strap carried by the third cup-shaped member.

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1,230,571. GAS-ENGINE-CONTROLLING MECHANISM. OLAF ELTON, Port Washington, Wis., assignor to Gilson Manufacturing Company, Port Washington, Wis. Filed May 21, 1915. Serial No. 29,562. (Cl. 123—117.)



1. In an internal combustion engine, the combination with a reciprocative valve rod, an independently reciprocative igniter rod and a common operating means for the rods associated with adjacent ends thereof, of a means for shortening and lengthening the igniter rod.

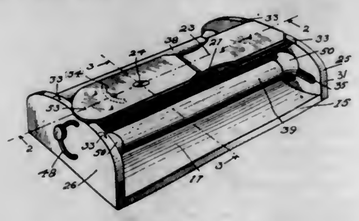
2. In an internal combustion engine, the combination of a housing, a valve rod slidably mounted in and projecting from the housing, an igniter rod slidably mounted in and projecting from the housing, means within the housing for procuring outward movement of the rods, means resiliently urging the rods inwardly and means for shortening and lengthening the igniter rod associated with the intermediate portion thereof.

4. In an internal combustion engine, an igniter rod comprising a pair of sections, spaced segmental cheek-pieces carried by one of said sections and provided with alined slots and having notches in its upper peripheral edges, a lever including arms straddling the cheek pieces and pivotally connected therewith at their outer ends, a pin carried by said arms and extending through the cheek-piece slots, the other section of the rod being pivotally mounted upon the lever carried pin, and means adapted to engage the notches of the cheek-pieces for adjusting and locking the lever to hold the other section in extended or retracted position.

[Claim 3 not printed in the Gazette.]

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1,230,572. SHOE-POLISHING APPARATUS. ANDREW C. ERICKSON, Los Angeles, Cal. Filed Dec. 14, 1916. Serial No. 136,949. (Cl. 15—58.)



1. A shoe polishing apparatus, comprising a base, a horizontally disposed foot plate revolubly mounted thereupon, a pair of polishing cloth guide members disposed at opposite sides of said foot plate, and means for simultaneously adjusting said guide members horizontally in relation to each other and the plate.

2. A shoe polishing apparatus, comprising a base, an upright central portion formed thereon, a foot plate pivotally secured upon said upright portion, and uprights fixed at the opposite ends of said base, guide rollers disposed between said end uprights and upon opposite sides of said foot plate, locking means for adjustably securing said guide rollers in relation to each other, and means for simultaneously adjusting said rollers horizontally in relation to each other and the plate.

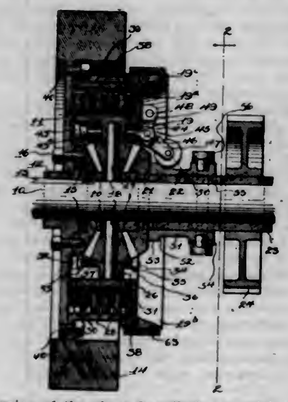
4. A shoe polishing apparatus, comprising a base, a longitudinally extending upright portion mounted centrally of said base and formed with concaved sides, and uprights secured at the opposite ends of said base, a pair of polishing cloth guide rollers disposed between said end uprights and mounted one upon each side of the central upright portion, said uprights having horizontally alined slots adapted to receive the trunnions of the guide rollers, means whereby said guide rollers may be adjustably held in relation to each other and moved toward and away from each other, and a foot plate revolubly mounted upon said central upright.

6. A shoe polishing apparatus, comprising a base, a longitudinally extending upright portion disposed centrally of said base and formed with concave sides and uprights secured at the opposite ends of said base, a pair of polishing cloth guide rollers disposed between said end uprights and mounted one upon each side of the central upright portion, said guide rollers being formed with enlarged tapering end flanges adapted to retain the polishing cloth upon the rollers, said end uprights having horizontally alined slots adapted to receive the trunnions of the guide rollers, link members pivotally connected to the roller trunnions, operating disks to which the adjacent ends of said link members are pivotally secured, a rod extending the length of the central upright portion and upon which the disks are fixed, means for rotating said disks to simultaneously move the rollers toward and away from each other, a lock nut by which the rollers may be held in a desired position, and a foot plate revolubly mounted upon the central upright and adapted to support the foot.

[Claims 3 and 5 not printed in the Gazette.]

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1,230,573. REVERSING CLUTCH AND GEAR. JOHN FROELICH, St. Paul, Minn., assignor to Leslie S. Hackney, St. Paul, Minn. Filed June 27, 1914. Serial No. 847,740. (Cl. 74—34.)



1. A device of the class described, comprising a power shaft, a spider, a clutch, a driven bevel gear wheel having a sleeve hub loosely mounted on said shaft, means for closing said clutch, said means comprising a cam-collar slidably mounted on said sleeve hub and levers actuated from said collar, a band-wheel carried by the spider, a brake-band for said band-wheel, a movable bar, and means whereby either the cam-collar or the brake-band may be actuated by shifting said movable bar.

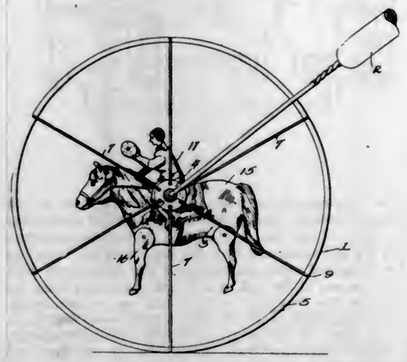
4. A device of the class described, comprising a power shaft; a spider; a band-wheel mounted on the spider; a planetary pinion carried by the spider; a bevel gear concentric with and driven by said shaft and also meshing with said pinion; a bevel gear loosely mounted on said shaft and meshing with said pinion; a brake-band embracing said band-wheel; a clutch mounted partly on the spider and adapted to cause the spider to be driven from the shaft in the same direction and at the same speed; mechanism for closing said clutch, said mechanism comprising a plurality of levers, a slidable cam-collar for actuating said levers, and a shipper for said cam-collar; a slidable bar having means for setting said brake-band when moved in one direction; and separate means for actuating said shipper when moved in another direction.

[Claims 2 and 3 not printed in the Gazette.]



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1,230,574. TOY. ALVIN J. GIBBS, Canton, Ohio, assignor to The Gibbs Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Mar. 22, 1916. Serial No. 85,857. (Cl. 46—45.)



1. The combination of a wheel having spaced hub plates, spokes, and an axle, and a toy animal or the like freely pivoted near above its center of gravity upon the axle and adapted to swing or rotate thereon without contacting any other part of the wheel.

2. The combination of a wheel rim having spaced hub plates and V-spokes, an axle between the hub plates and a toy animal or the like freely pivoted near above its center of gravity upon the axle and adapted to swing or rotate thereon without contacting any other part of the wheel.

3. The combination of a wheel rim having spaced hub plates and V-spokes, an axle between the hub plates, and a toy animal or the like freely pivoted near above its center of gravity upon the axle, and a bracket having a saddle secured to the back of the animal and bearing plates journaled on the axle adjacent to the hub plates.

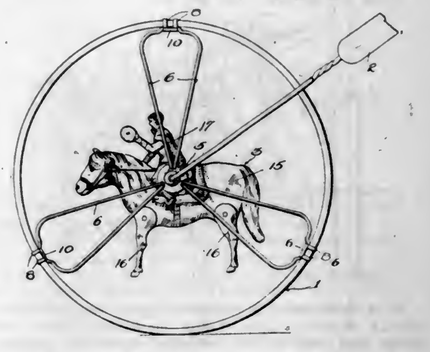
[Claims 4 to 7 not printed in the Gazette.]

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1,230,575. TOY. ALVIN J. GIBBS, Canton, Ohio, assignor to The Gibbs Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Mar. 22, 1916. Serial No. 85,858. (Cl. 46—45.)

1. The combination of a wheel having spaced hub plates, spokes and spaced axle pintles, a toy animal or the like having a saddle bracket secured to its back, with bearing plates journaled directly on the axle pintles adjacent to the hub plates upon an axis near above the center of gravity of the toy animal.

2. The combination of a wheel having spaced hub plates, spokes and axle pintles, a toy animal or the like having a saddle bracket secured to its back, with bearing plates journaled on the axle pintles adjacent to the hub plates upon an axis near above the center of gravity of the toy

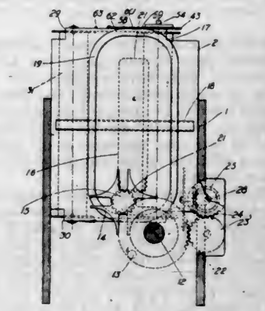


animal, and means for yieldingly pressing the hub plates against the bearing plates.

[Claims 3 to 5 not printed in the Gazette.]

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1,230,576. MOTION-PICTURE CAMERA. JOSEPH A. GOLDEN, New York, N. Y. Filed Nov. 4, 1916. Serial No. 129,523. (Cl. 88—18.)



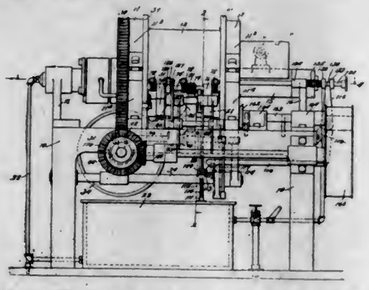
2. In combination, a film spool carrier, stationary means for the direction of light upon said spool carrier, means for moving said spool carrier step by step, and tensioning means released by said last named means for taking up a predetermined amount of film mounted on said spool carrier.

5. A motion picture camera comprising a spool carrier plate, a guide for said plate, a cam plate, and means to move the cam plate integrally with the spool plate in one direction and independently of the spool plate in another direction.

18. A motion picture camera comprising a spool carrier plate, a guide for said plate, a cam plate having a substantially rectangular rack, a rack pinion, an intermittent drive for said rack pinion, means for holding the pinion to the rack, and further means to enable the cam plate to move integrally with the spool plate in one direction, but independently of said spool plate, on the transverse direction of travel of the cam plate.

[Claims 1, 3, 4, and 6 to 17 not printed in the Gazette.]

**1,230,577. AUTOMATIC STEREOTYPE-PLATE-FINISHING MACHINE.** SAMUEL G. GOSS, Glencoe, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 24, 1909. Serial No. 519,387. (Cl. 29—21.)



1. In combination, a rotatable support adapted to receive a stereotype plate therein, mechanism adapted to rotate said support, plate finishing mechanism adapted by the rotation of said support to finish said plate, rollers adapted by their rotation to forward a plate into position therein, means for normally driving said rollers, and means for locking said plate firmly against said support after being forwarded into position therein.

2. In combination, a rotatable support adapted to receive a stereotype plate therein, mechanism adapted to rotate said support, plate finishing mechanism adapted by the rotation of said support to finish said plate, rollers adapted by their rotation to forward a plate into position therein, means for normally driving said rollers, and automatically-operated means for locking said plate firmly against said support after being forwarded into position therein.

3. In combination, a rotatable support adapted to receive a stereotype plate therein, mechanism adapted to rotate said support, plate finishing mechanism adapted by the rotation of said support to finish said plate, rollers adapted by their rotation to forward a plate into position therein, means for normally driving said rollers, and means adapted to bear upon the edges of the plate to lift it out of contact with the rollers and to hold it firmly in position in said support.

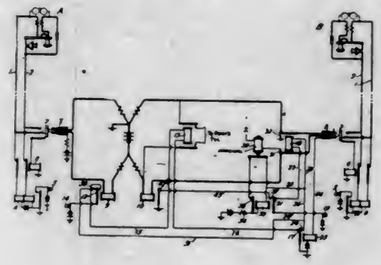
4. In combination, a rotatable support adapted to receive a stereotype plate therein, mechanism adapted to rotate said support, plate finishing mechanism adapted by the rotation of said support to finish said plate, rollers adapted by their rotation to forward a plate into position therein, means for normally driving said rollers, supporting bars adapted to be moved after the plate is forwarded into position to hold the plate firmly in position in the support, and means for automatically giving such movement to said supporting bars.

5. In combination, a rotatable support adapted to receive a stereotype plate therein, mechanism adapted to rotate said support, plate finishing mechanism adapted by the rotation of said support to finish said plate, rollers adapted by their rotation to forward a plate into position therein, means for normally driving said rollers, supporting bars adapted to be moved after the plate is forwarded into position to hold the plate firmly in position in the support, levers bearing against said supporting bars and adapted to move the same, and means for automatically operating said levers.

[Claims 6 to 72 not printed in the Gazette.]

**1,230,578. TELEPHONE SIGNALING SYSTEM.** EDWARD E. HINRICHSEN, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed July 19, 1915. Serial No. 40,687. (Cl. 179—73.)

1. In a telephone system, a subscriber's line, a link circuit, a source of ringing current, a relay for connecting said source to the line, a signaling device, an operating circuit for and including both the relay and the signaling device completed upon connection of the link circuit with the line, means in the link circuit and controlled from the station on the line for opening the operating circuit, a second operating circuit for the signaling device, and means controlled from the station on the line for completing the second operating circuit.



2. In a telephone system, a subscriber's line, a link circuit, a source of ringing current, a relay for connecting said source to the line, a signaling device, an operating circuit for and including both the relay and the signaling device completed upon connection of the link circuit with the line, means in the link circuit and controlled from the station on the line for opening the operating circuit, a second operating circuit of substantially lower resistance than the first operating circuit for the signaling device, and means controlled from the station on the line for completing the second operating circuit.

3. In a telephone system, a subscriber's line, a link circuit, a source of ringing current, a ringing relay for connecting said source to the line, a signaling device, an operating circuit for and including both the ringing relay and the signaling device completed upon connection of the link circuit with the line, a relay in the link circuit operating upon removal of the receiver from the switchhook at the station on the line for opening the operating circuit and excluding the ringing relay therefrom, a supervisory relay, and an operating circuit for the signaling device alone completed upon the deënergization of the supervisory relay.

4. In a telephone system, a subscriber's line, a link circuit, a source of ringing current, a ringing relay for connecting said source to the line, a signaling device, an operating circuit for and including both the ringing relay and the signaling device completed upon connection of the link circuit with the line, a relay in the link circuit operating upon removal of the receiver from the switchhook at the station on the line for opening the operating circuit, a supervisory relay, and a second operating circuit for the signaling device of substantially lower resistance than the first operating circuit completed upon the deënergization of the supervisory relay.

5. In a telephone system, a subscriber's line, a link circuit, a source of ringing current, a ringing relay for connecting said source to the line, a signaling device in the link circuit, an operating circuit for and including both the ringing relay and the signaling device completed upon the connection of the link circuit with the line, a relay in the link circuit operating upon the removal of the receiver from the switchhook at the station on the line for opening the operating circuit, a supervisory relay, and a second operating circuit for the signaling device of substantially lower resistance than the first operating circuit partially established upon the operation of the second-mentioned relay and completely established upon the subsequent deënergization of the supervisory relay.

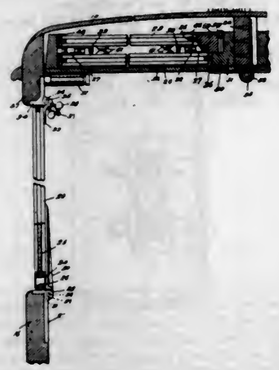


**1,230,579. LUBRICATING-OIL.** HARRY B. HODGE, Los Angeles, Cal. Filed Nov. 28, 1916. Serial No. 133,967. (Cl. 87—9.)

1. A lubricating oil consisting of oil and powdered slippery elm bark in the proportion of ¼ oz. of said bark to a gallon of oil.

2. A lubricating oil consisting of oil and powdered slippery elm bark.

**1,230,580. VEHICLE-TOP.** WILLIAM J. HOSKYNS, Detroit, Mich., assignor to Frank E. Smith, Indianapolis, Ind. Filed Aug. 26, 1916. Serial No. 116,951. (Cl. 21—62.)



1. In combination, a vehicle body provided with a roof supported from the body by upright portions to leave window spaces, and rigid windows for said window spaces, said windows being detachably mountable in said window spaces, and said roof being provided with downwardly movable pockets for carrying said windows when they are removed from the window spaces.

2. In combination, a vehicle body provided with a roof supported from the body by upright portions to leave window spaces, rigid windows for said window spaces, said windows being detachably mountable in said window spaces, and a window-carrying pocket hingedly mounted in said roof for carrying said windows when they are removed from said window spaces.

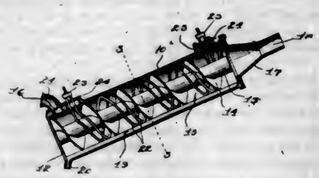
3. In combination, a vehicle body provided with a roof supported from the body by upright portions to leave window spaces, rigid windows for said window spaces, said windows being detachably mountable in said window spaces, and a pair of downwardly swinging window-carrying pockets hingedly mounted on the under face of the roof on a single hinge axis for carrying said windows when they are removed from said window spaces, the axis of said hinge mounting extending longitudinally of the roof on substantially the medial line thereof.

4. In combination, a vehicle body provided with a roof supported from the body by upright portions to leave window spaces, rigid windows for said window spaces, said windows being detachably mountable in said window spaces, and a pair of downwardly swinging window-carrying pockets hingedly mounted on the under face of the roof on a single hinge axis for carrying said windows when they are removed from said window spaces.

8. In combination, a vehicle body provided with a roof supported from the body by upright portions to leave window spaces, rigid windows for said window spaces, said windows being detachably mountable in said window spaces, and a window-carrying pocket hingedly mounted in said roof for carrying said windows when they are removed from said window spaces, and means in said pockets for holding said windows firmly in place therein.

[Claims 5 to 7 and 9 to 11 not printed in the Gazette.]

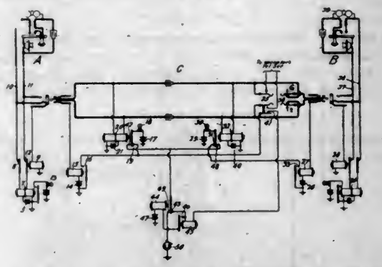
**1,230,581. OIL-SEPARATOR.** EDWARD JOHNSON, St. Paul, Minn., assignor to Leslie S. Hackney, St. Paul, Minn. Filed Dec. 21, 1914. Serial No. 878,263. (Cl. 257—29.)



2. In a device of the class described, a cylinder having a discharge gutter therein, a spiral partition, in said cylinder, forming a helical passageway for steam, and a conduit spirally arranged in said passageway and resting against the walls of said cylinder, said conduit being adapted to carry water in the bore thereof through the cylinder, while the outer surface of said conduit is adapted to aid in collecting oil from the steam and leading the same to said gutter.

[Claims 1, 3, and 4 not printed in the Gazette.]

**1,230,582. TELEPHONE-EXCHANGE SYSTEM.** LEWIS H. JOHNSON, Bloomfield, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 11, 1915. Serial No. 13,602. (Cl. 179—73.)



1. A telephone exchange system comprising calling and called subscribers' lines, a link circuit connecting said lines, a signaling device associated with the link circuit, interrupter mechanism, and means associated with the link circuit and controlled by the restoration of both receivers to the switchhooks and a subsequent removal of one receiver for including the interrupter mechanism in circuit with the signaling device.

3. A telephone exchange system comprising calling and called subscribers' lines, a link circuit connecting said lines, a signaling device associated with each end of said link circuit, interrupter mechanism, and means associated with the link circuit and controlled by the restoration of both receivers to the switchhooks and subsequent removal of the receiver at the calling subscriber's station for including the interrupter mechanism in circuit with the signaling device associated with the answering end and by a subsequent removal of the receiver at the called subscriber's station for including the interrupter mechanism in circuit with the signaling device associated with the calling end.

8. A telephone exchange system comprising calling and called subscribers' lines, a link circuit connecting said lines, a supervisory relay associated with the link circuit and controlled from a connected substation, a signaling device, an interrupter, a local circuit for the signaling device and the interrupter open at two points, a primary relay energized when the supervisory relay is energized,

a secondary relay brought into circuit with the primary relay upon the energization thereof, and a short circuit about the secondary relay while the supervisory relay is energized, the deënergization of the supervisory relay removing the short circuit and permitting the energization of the second relay to close one break in the local circuit and the subsequent energization of the supervisory relay closing the other break in and completing the local circuit.

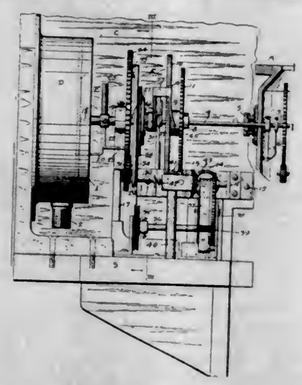
10. A telephone exchange system comprising calling and called subscribers' lines, a link circuit connecting said lines, a supervisory relay associated with each end of the link circuit and controlled from the respective connected stations, a signaling device, an interrupter, a local circuit for the signaling device and the interrupter open at two points, a primary relay energized when either one of the supervisory relays is energized, a secondary relay brought into circuit with the primary relay upon the energization thereof, a short circuit about the secondary relay while the supervisory relays are energized, the deënergization of the supervisory relays removing the short-circuit and permitting the energization of the secondary relay to close one break in the local circuit and the subsequent energization of either supervisory relay closing the other break in and completing the local circuit.

11. In a telephone exchange system, calling and called subscribers' lines, a link circuit connecting said lines, a relay associated with the link circuit and adapted to be controlled from one of the connected stations, a signaling device associated with the link circuit and controlled by the relay, interrupter mechanism, and a second relay jointly controlled from both connected stations for connecting the interrupter mechanism in circuit with the signaling device.

[Claims 2, 4 to 7, 9, and 12 not printed in the Gazette.]

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1,230,583. PRESSURE-CORRECTING METER. ALFRED G. KOLLSTEDE, New York, N. Y., assignor to Rotary Meter Company, a Corporation of New York. Filed Dec. 30, 1912. Serial No. 739,187. (Cl. 73—1.)



1. In a pressure-correcting meter for measuring the flow of gas, a shaft; means for rotating said shaft commensurately with the volume-flow of a gas; an index; clutch-mechanism for operatively connecting said index with said shaft throughout a fraction of each unit of rotation of said shaft; a pressure-gage for said gas comprising a finder movable throughout a limited range to mark by its relative position a predetermined pressure; and means controlled by said finder for determining the amount of said fraction of each unit of rotation of said shaft throughout which fraction said index is driven by said shaft.

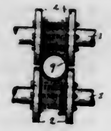
4. In a pressure-correcting meter for measuring the flow of gas, a rotatable pressure-finder; a rack-gear; a planet-gear linked to rotate and revolve in mesh with said rack-gear; and a clog revolved co-axially about said rack-gear by said finder; and means connected with said planet-gear for controlling the operation of an index.

6. Means for controlling the movement of a first part in accordance with the position of a movable second part which is responsive in position to very slight force comprising a guide-way; a rotatable member in rolling contact with said guide-way; means for holding said rotatable member in rolling contact with said guide-way; means for connecting said first part with said rotatable member to interrelate the movement of said first part with the relative rolling between said rotatable member and said guide-way; and a clog for said rotatable member freely movable along said guide-way by said second part.

[Claims 2, 3, 5, and 7 not printed in the Gazette.]

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1,230,584. CLEANING AND STRAIGHTENING ROLLS. JOHN LALLY, Boston, Mass. Filed Feb. 20. 1917. Serial No. 149,880. (Cl. 29—81.)

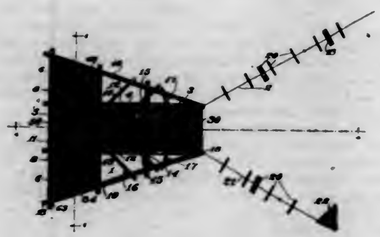


2. A cleaning roll comprising a plurality of cleaning disks of various diameters, spacing disks between them of lesser diameters than the adjacent cleaning disks, so that a line tangent to the peripheries of the cleaning disks will be approximately a portion of the cross-section of the object to be operated upon, end plates and means for tying the end plates, cleaning disks and spacing disks together.

[Claims 1, 3, and 4 not printed in the Gazette.]

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1,230,585. FISH-TRAP. WALTER J. LARSON, Wrangell, Alaska. Filed Aug. 26, 1916. Serial No. 116,956. (Cl. 43—20.)



1. In a fish trap, in combination, a float, cables suspended from the float and outlining the various compartments common to a fish trap, means for positively spacing the cables from the float, webs depending from the float and arranged to form the various compartments of the trap, the lower edge of said web being independent of and spaced above said cables, and means for detachably securing said lower edge of the web to the cable.

4. In a fish trap, in combination, a float composed of rigid members, said members having sockets cut in their under side, and having a hole cut therethrough from the socket to the upper side thereof, webs depending from said members, means for spacing the upper and lower edges of said webs comprising a pipe registering with said hole and having a flange fitting upon the upper end of the pipe and adapted to seat upon the downwardly directed face of said socket, and a line passing through said pipe and secured at its upper end upon the float, and detachably secured at its other end to the lower edge of the web.

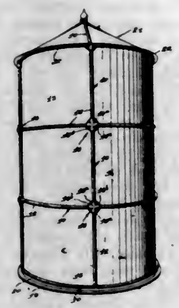
16. In a fish trap, in combination, a pot and a heart having one wall in common, guide cables extending upward and defining a relatively narrow entrance opening in said common wall, and a gate of flexible material mounted upon said guide cables and adapted to be raised to close said entrance opening.

[Claims 2, 3, 5 to 15, and 17 to 19 not printed in the Gazette.]



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1,230,586. HOUSING. CHARLES HENRY LISTER, North St. Paul, Minn. Filed Mar. 27, 1915. Serial No. 17,376. (Cl. 189—34.)



1. In a housing, a plurality of ribs, unions joining the ribs end-to-end, said ribs forming frames, panels secured at their edges in said frames and keepers overlapping the joints between said ribs, and means for uniting said keepers with said ribs and panels to form a unitary structure.

2. In a housing, a plurality of ribs, each rib comprising a strip of metal, a portion thereof between its longitudinal margins being shaped to form a tubular bead, unions with branches arranged in suitable angular relation, said branches being inserted in the open ends of the beads of said ribs to join the same, said ribs being arranged so that the adjacent margins thereof overlap at the joints, panels mounted at their edges in the channels formed between the beads and margins, keepers to cover the joints between said ribs and means for uniting said keepers with the overlapped portions of said margins and with said panels to form a unitary structure.

3. In a device of the class described, a plurality of ribs, each rib comprising a strip of sheet metal shaped to form a bead between the longitudinal margins thereof, unions having branches adapted to join said ribs end to end by insertion in the open ends of said beads, panels secured at their edges in the channels between the beads and the margins of said ribs, keepers covering the joints between said ribs and means for uniting said keepers and ribs to form a rigid self-sustaining inclosure.

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1,230,587. CASTING-MACHINE. CHARLES HENRY LISTER, North St. Paul, Minn. Filed June 21, 1915. Serial No. 35,256. (Cl. 22—76.)



1. In a casting-machine, a frame, an endless track on said frame, a series of carriages adapted to travel on said track, means for moving the carriages, a separable mold on each carriage, said molds being adapted to be filled at one end of the frame, means to open the molds at a substantial distance from the filling point to discharge the contents thereof, a tank adapted to contain water, or other cooling fluid, said track being depressed in said tank to conduct the carriages therethrough and cool the then open molds, and means for thereafter closing said molds at a substantial distance from said tank.

2. In a casting-machine, a frame, an endless track on said frame, a series of carriages mounted on said track, a separable mold on each carriage comprising a pair of mold members, a screw in each carriage connected with one mold member and supplied with a gear-wheel, racks on said frame arranged to engage and turn the gear-wheels to open and close the molds, and resilient means to yieldingly hold the members together when the molds are closed.

3. In a casting-machine, a frame, a mold carriage movable on said frame, a mold on said carriage comprising a plurality of separable members, mechanism on the carriage to open and close the mold in its travel, and resilient means adapted to yieldingly hold said members together when the mold is closed.

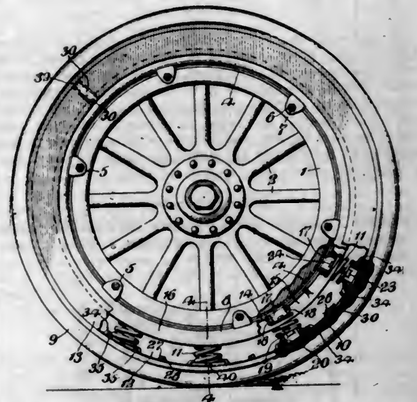
4. In a casting machine, a frame, an endless track on said frame, a series of carriages mounted on said track, a separable mold on each carriage comprising a stationary and a movable mold member, a screw in each carriage connected at its inner end to said movable mold member and supplied at its outer end with a gear wheel, and racks on said frame arranged to engage and turn said gear wheels, whereby the movable mold members are shifted to open and close said molds.

5. In a casting machine, a frame, an endless track on said frame, a series of carriages mounted on said track, a separable mold on each carriage comprising a stationary and movable mold member, a screw in each carriage yieldingly connected at its inner end to said movable mold member and supplied at its outer end with a gear wheel, and racks on said frame arranged to engage and turn said gear wheels, whereby the movable mold members are shifted to open and close said molds.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,588. RESILIENT TIRE. WILLIAM MACNEECE, Philadelphia, Pa. Filed Mar. 30, 1917. Serial No. 158,545. (Cl. 152—38.)



1. In a resilient tire of the character described, an inner rim,—an outer rim,—a plurality of compression springs between said rims,—cupped projections on the outside periphery of said inner rim formed of outwardly extending annular flanges and located equidistantly longitudinally and centrally transversely of said inner rim,—cupped projections on the inside periphery of said outer

rim formed of inwardly extending annular flanges removably secured to said outer rim,—and means for positioning said cupped projections equidistant longitudinally and transversely central of said outer rim,—inwardly extending side annular flanges removably secured to said outer rim,—outwardly extending flanges on said inner rim adapted to extend between and in adjacency to the flanges on said outer rim and form side thrust resisting means between said outer and inner rims.

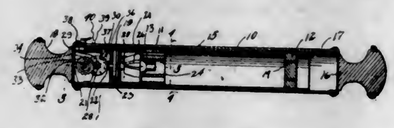
2. In a resilient tire of the character described, an inner rim,—an outer rim,—outwardly extending side flanges on said inner rim,—inwardly extending detachable side flanges on said outer rim,—a plurality of cupped projections formed on the outside periphery of said inner rim equidistantly of each other longitudinally and transversely central between said flanges on said inner rim,—means for removably securing and locating on the inside periphery of the outer rim a plurality of cupped projections equidistant longitudinally and transversely central between the removably secured flanges on said outer rim,—and a plurality of compression springs between said rims positioned by and detachably secured to said cupped projections.

7. In a resilient tire of the character described, an inner rim,—an outer rim,—a plurality of springs between said rims, annular flanged projections seating and positioning said springs between said inner and outer rims,—annular flanges on said inner and outer rims so telescopically arranged with relation to each other as to form an adjustable and thrust resisting means between said outer and inner rims together with means for compressing said springs in relation to said inner rim preparatory to the insertion of said inner rim and springs in said outer rim.

[Claims 3 to 6, 8, and 9 not printed in the Gazette.]

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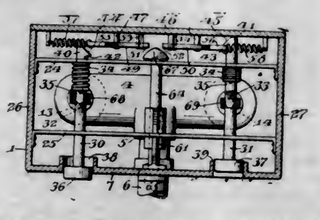
1,230,589. PENCIL AND PEN HOLDER. JOSEPH J. MACNORIUS, Kenosha, Wis. Filed May 5, 1916. Serial No. 95,636. (Cl. 120—23.)



A device of the class described comprising a tubular body, rubber plugs mounted in said body adjacent both ends thereof, one of said plugs having openings through which articles are adapted to be forced, said openings being sufficiently restricted in diameter to frictionally hold the article against movement relatively to the plug, and the other plug having slits therein adapted to receive pen points and reacting on the points to clamp the same, and a removable cap on either end of the body.

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1,230,590. WATER-CONTROLLING APPARATUS. SAUL MASON, Philadelphia, Pa. Filed Apr. 4, 1916. Serial No. 88,778. (Cl. 137—26.)



1. A water-controlling apparatus, comprising a supporting structure, members forming water supply inlets, valves therefor, members having portions operative to open said valves, outlets for said supply inlets, separate means for positively locking each of said second mentioned members in their operative positions, a common member manually operative to engage and move said locking means to free said second mentioned members, means automatically operative to close the valves after said second mentioned members are thus freed, and means automatically operative to return said lock moving means to its normal position, substantially as described.

2. A water-controlling apparatus, comprising a supporting structure, members forming water supply inlets, valves therefor, members having portions operative to open said valves, outlets for said supply inlets, separate means for positively locking each of said second mentioned members in their operative positions, common means manually operative to engage and move said locking means to free said second mentioned members, automatically operative means for moving said second mentioned members to their normal position, automatically operative means for closing said valves while said second mentioned members are being returned to their normal positions, and means automatically operative to return said lock moving means to its normal position, substantially as described.

3. A water-controlling apparatus, comprising a supporting structure, members forming water supply inlets, valves movable to close said water supply inlets, members mounted in said supporting structure and having portions designed to open said valves, a faucet in communication with said supply inlet when the respective valves are open, separate means automatically operated to positively lock each of said second mentioned members in said moved position, and common means manually operative to engage and move said locking means whereby said second mentioned members are free, automatic means for moving said second mentioned members to their original positions, and automatically operative means for closing said valves as said second mentioned members are returned to their normal positions, substantially as described.

4. A water-controlling apparatus, comprising a supporting structure, a water supply pipe having a valve seat therein, a valve fitting said seat and having a stem, means for normally holding said valve against its seat, a bar having a portion for engagement with the stem to move the latter to open the valve when said bar is moved, a locking member operative to lock said bar in said moved position, a second bar movable to engage said locking member and thereby free said first bar, means for automatically moving said first bar to its normal position, and thereby releasing said valve stem, means for moving said valve stem to close said valve after said first bar has been returned to its normal position, and means for automatically removing said second bar to its normal position, substantially as described.

5. A water-controlling apparatus comprising a supporting structure, a water inlet pipe having a valve seat, a valve fitting said valve seat, a stem on said valve, a bar having a portion coöperating with said valve stem to open the valve when said bar is moved, a shoulder on said bar, a locking lever, means for automatically moving said locking lever behind said shoulder when said bar is moved to open the valve, a second bar movable to actuate said holding means and thereby free said first bar, a spring for moving said first bar to its normal position, a spring for moving said valve stem to thereby close the valve during the movement of said first bar to its normal position, and means for returning said second bar to its normal position, substantially as described.

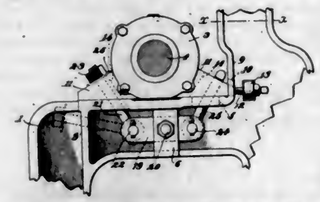
[Claims 6 to 11 not printed in the Gazette.]

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1,230,591. QUICK-DEMOUNTABLE BEARING FOR LINTER-GIN-SAW SHAFTS. ARTHUR W. MERKEL, Birmingham, Ala., assignor to Continental Gin Company, a Corporation. Filed Feb. 24, 1917. Serial No. 150,809. (Cl. 64—10.)

1. In a quick demountable bearing, a bearing seat, a bearing housing detachably mounted on said seat, hold-down members which engage the ends of the housing, a lever having an intermediate fulcrum and end connections to said hold-down members, and means to move both hold-down members through the instrumentality of the lever in unison to clamp or release the housing.





3. In a quick demountable bearing, a bearing seat, a bearing housing detachably mounted on said seat, a single hold-down element for each end of the housing, a lever having a hold-down element connected to each end, an intermediate fulcrum for the lever, and means to move both hold-down members through the instrumentality of the lever in unison to clamp or release the housing.

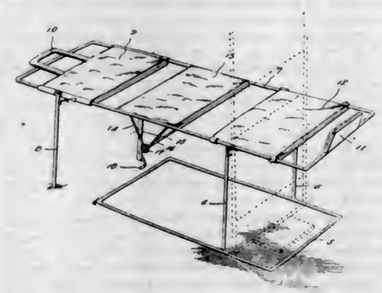
7. A bearing housing having wedge shaped ends with a vertical slot extending through each end thereof, a seat open under said slots, a hold-down member for the housing adapted to pass through each slot therein and to extend below the seat, a fulcrumed lever connected to the lower ends of said hold-down members on opposite sides of its fulcrum point, and a nut on one of the hold-down members adapted to screw against the wedge shaped housing end and make both hold-down members fast, substantially as described.

10. A quick demountable bearing housing comprising, in combination, a seat, a housing having in opposite ends thereof wedge members, hold-downs engaging said wedge members, a lever to which said hold-downs are connected, a fulcrum for the lever between the hold-down connections, the front hold-down having a nut threaded thereon and adapted to apply or release both hold-downs simultaneously, and an adjustable stop to hold the bearing in position on its seat, the fulcrum being disposed to give the front hold-down greater leverage than the rear hold-down, as and for the purposes described.

[Claims 2, 4 to 6, 8, 9, and 11 not printed in the Gazette.]

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1,230,592. FOLDING CHIROPRACTIC TABLE. LOUIS P. MONTANEY, Omak, Wash. Filed June 13, 1916. Serial No. 103,424. (Cl. 128—26.)

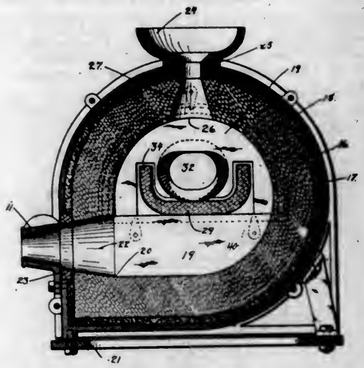


1. A table structure of the character described comprising a rectangular shaped base frame having vertical standards near one end thereof, a rectangular shaped superframe of considerably greater size than the base frame hinged upon the standards and disposed in normal horizontal position, a plurality of pads on the superframe, means for raising and lowering one of said pads, slidable connections between certain of the other pads and the superframe, swinging legs pivoted upon the connections of one of the other pads with the superframe, and means for locking the slidably connected pads in adjusted positions.

2. A table structure of the character described comprising a rectangular shaped base frame having vertical standards near one end thereof, a rectangular shaped superframe of considerably greater size than the base frame hinged upon the standards and disposed in normal horizontal position, a plurality of pads on the superframe, means for raising and lowering one of said pads, slidable connections between certain of the other pads and the superframe, swinging legs pivoted upon the connections of one of said other pads with the superframe, means for locking the slidably connected pads in adjusted position, and a yoke shaped rest on one of the outermost pads.

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1,230,593. RIVET-FORGE. THEODORE W. MUCKLE, Denver, Colo., assignor to Willis W. Case, Jr., Denver, Colo. Filed Mar. 29, 1917. Serial No. 158,376. (Cl. 263—9.)



4. In a forge including a substantially closed combustion chamber having a tong opening in an end wall thereof, the combination of a receptacle mounted in said chamber, below said tong opening, and in spaced relation to its top, bottom and peripheral wall; a feed inlet discharging into said receptacle; and a burner inlet disposed below said receptacle for directing a blast flame across its bottom, out of contact with its contents, substantially as described.

5. In a forge including a substantially closed combustion chamber having an enlarged end wall aperture, in combination with an article receiving support extending longitudinally across said combustion chamber, adjacent said end wall aperture, in spaced relation to the top, bottom and peripheral wall of said chamber; a replaceable plug for filling said end wall aperture and having a tong opening therethrough adapted to open above said support; a feed inlet discharging to said support; and means for directing a blast flame across the bottom of said support, out of contact with the articles thereon, substantially as described.

[Claims 1 to 3 and 6 to 9 not printed in the Gazette.]

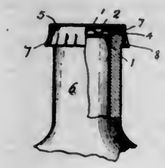
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1,230,594. SEALING-DISK FOR BOTTLE-STOPPERS. JOHN NEUMANN, Chicago, Ill., assignor of one-half to H. N. Claussen, Chicago, Ill. Filed Mar. 2, 1916. Serial No. 81,611. (Cl. 154—45.5.)

1. A seal for bottle stoppers comprising a compressible disk having peripheral recesses, and a viscous sealing substance filling said recesses.

2. A sealing disk for bottle stoppers comprising upper and lower cover members, a compressible corrugated element between said members forming peripheral recesses in the disk, and a waxlike filling in said recesses.

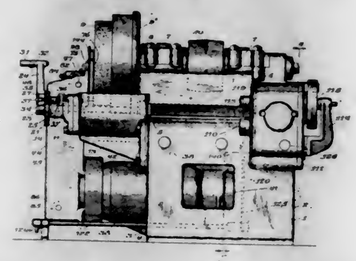
3. A sealing disk for bottle stoppers comprising upper and lower cover members, a compressible mutilated element between said members forming peripheral recesses in the disk, and a waxlike filling in said recesses.



4. A compressible sealing disk of a plurality of separated paper portions, a bent paper portion connecting said separated portions, and a waxlike edge filling for said disk.

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1,230,595. GRINDING-MACHINE. WILLIAM C. OSTERHOLM, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Nov. 20, 1915. Serial No. 62,459. (Cl. 51—12.)



1. A grinding machine including an abrasive element, a blank carrying head, means for advancing said head toward or from said abrasive element, and means for supplying cooling water automatically and intermittently to said head.

2. A grinding machine including an abrasive element, a blank carrying member, means for advancing said member toward said abrasive element, and means for automatically supplying cooling water to said member in a controlled intermittent manner.

3. A grinding machine including an abrasive element, a blank carrying member, means for advancing said member toward said abrasive element, and means dependent upon the movement of said member for supplying cooling water thereto.

4. A grinding machine including an abrasive element, a blank carrying member, and cam means for advancing said member step by step toward said abrasive element.

5. A grinding machine including an abrasive element, a blank carrying member, and means whereby a blank may be immersed in water as it is fed toward said abrasive element.

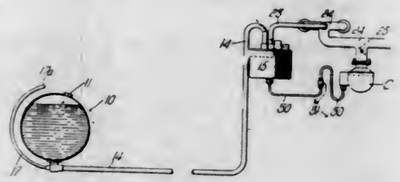
[Claims 6 to 22 not printed in the Gazette.]

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1,230,596. LIQUID-FEED SYSTEM. CHARLES L. STOKES, Los Angeles, Cal. Filed Sept. 14, 1916. Serial No. 120,069. (Cl. 158—36.)

1. In a liquid feed system, the combination of a liquid tank and a liquid reservoir above said tank, communication between the tank and the upper part of the reservoir, means for restrictedly admitting atmosphere to said communication, means for applying suction to the upper part of the reservoir, and automatic means for admitting atmosphere to the upper part of the reservoir to divert the application of suction from the said communication between the reservoir and tank.

2. In a liquid feed system, the combination of a liquid tank and a liquid reservoir above said tank, communication between the tank and the upper part of the reservoir, means for restrictedly admitting atmosphere to said communication, means for applying suction to the upper part of the reservoir, and float operated valve means for admitting atmosphere to the upper part of the reservoir, so that when the liquid level in the reservoir is low the admission of atmosphere is cut off and when the liquid level is high, the atmosphere is admitted.



3. In a liquid feed system, the combination of a liquid tank, a liquid reservoir above said tank, communication means between the upper part of the reservoir and the liquid tank, means to apply suction to the upper part of the reservoir, means to restrictedly admit a gas into the communication between the tank and the reservoir, and means controlled by the liquid level in the reservoir to open communication of atmosphere with the reservoir.

6. In a liquid feed system, the combination of a liquid tank and a liquid reservoir above said tank, communication between the tank and the upper part of the reservoir, means for admitting atmosphere to said communication below the normal liquid level in the reservoir, means for applying suction to the upper part of the reservoir, and means for cutting off suction from the reservoir, and admitting atmosphere thereto.

9. In combination with a carbureter, a low level liquid fuel tank, a liquid fuel reservoir above the tank and in communication with the carbureter to supply it with fuel, communication between the tank and reservoir, means for restrictedly admitting atmosphere to said communication at a point where the admitted atmosphere enters the upwardly moving column of liquid fuel moving from the tank to the reservoir, communication means to apply to said reservoir the suction which is applied to the carbureter to maintain a partial vacuum in the reservoir and to draw therefrom the air which enters it with the fuel, and means depending upon the level of liquid in the reservoir to discontinue the application of suction to the reservoir.

[Claims 4, 5, 7, 8, and 10 not printed in the Gazette.]

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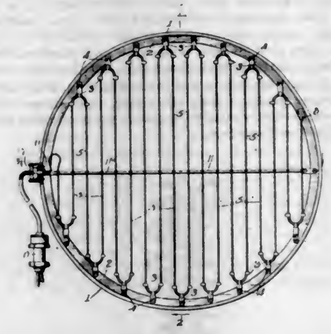
1,230,597. NON-SKID COMPOSITION OF CAOUTCHOUC OR RUBBER AND THE LIKE. CARLO PACCHETTI, Milan, Italy. Filed Nov. 14, 1916. Serial No. 131,276. (Cl. 106—23.)

1. A composition of matter for the purpose specified, comprising a vulcanized mixture of rubber, short lengths of relatively stiff animal hair not exceeding 0.12 to 0.16 of an inch in length, and sulfur, the composition being such that the sharp ends in great number of the animal hair tend to protrude through the surface of the vulcanized mixture.

2. A composition of matter for the purpose specified, comprising a vulcanized mixture of rubber, short lengths of relatively stiff animal hair freed from fat and not exceeding 0.12 to 0.16 of an inch in length, and sulfur, the composition being such that the ends of the animal hair tend to protrude through the surface of the vulcanized mixture.



1,230,598. THERMOMETER UNIT. HORACE N. PACKARD, Milwaukee, Wis., assignor to the Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 30, 1914. Serial No. 874,733. (Cl. 219—63.)



1. An electric resistance thermometer comprising a frame adapted to be mounted in a meter housing, a flexible tubing, a resistance wire within said tubing and insulated therefrom, and means on said frame for supporting said tubing with the entire length thereof within the inner area bounded by said frame.

2. An electric resistance thermometer comprising a frame adapted to be mounted in a meter housing, a flexible tubing, a resistance wire within said tubing and insulated therefrom, and a plurality of supporting clips of small mass carried by said frame and projecting inwardly therefrom, said tubing being wound on said clips so that the entire length of tubing is supported within the inner area inclosed by the frame.

3. A resistance thermometer comprising a frame having an inwardly projecting flange, a plurality of Y-shaped clips secured to said flange, a continuous metal tubing strung back and forth across said frame and supported by said clips in smooth semi-circular bends and a resistance wire within said tubing and insulated therefrom.

4. A resistance thermometer comprising a supporting frame, a heat conducting tube on said frame, and a plurality of strands of resistance wire arranged within said tube.

5. A resistance thermometer comprising a supporting frame, a heat conducting tube on said frame and a plurality of strands of resistance wire arranged within said tube and connected in series.

[Claims 6 to 18 not printed in the Gazette.]

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1,230,599. PROCESS FOR OBTAINING FROM PARAFFIN, WAX, FATS AND RESINS, NAPHTHA AND MINERAL OILS, PRODUCTS DISSOLUBLE IN WATER OR FORMING WITH IT COLLOIDAL SOLUTIONS. GRIGORI PETROFF, Petrograd, Russia. Filed July 31, 1915. Serial No. 43,018. (Cl. 87—5.)

1. The process of making from substances capable of but not readily emulsifying, a material having the property of mixing with water in any desired propertion to form a stable, homogeneous emulsion, which consists in mixing said substance with a sulfonic body which has been separated from a sulfonated mineral oil.

2. The process of making from substances capable of but not readily emulsifying, a material having the property of mixing with water in any desired proportion to form a stable, homogeneous emulsion, which consists in mixing said substance with a sulfonic body which has been separated from a sulfonated mineral oil in the presence of a relatively small per cent. of a volatile solvent of said sulfonic body.

3. A readily emulsifying substance consisting of a mixture of a substance capable of but not readily emulsifying, with a mineral oil sulfonic body, said substance having the property of rapidly emulsifying when mixed with water in any desired proportion, to form a stable, homogeneous emulsion.

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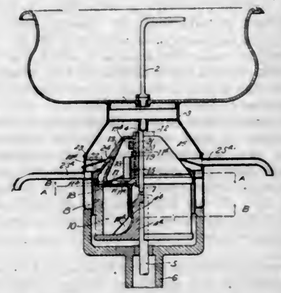
1,230,600. PROCESS FOR THE MANUFACTURE OF CRYSTALLINE POLYMERIZATION PRODUCTS OF FORMALDEHYDE. FRITZ POLLAK, Vienna, Austria. Filed Nov. 24, 1913. Serial No. 802,749. (Cl. 23—24.)

1. The process for the production of crystalline polymerization products of formaldehyde, which consists in treating amorphous para formaldehyde, at an elevated temperature and in the presence of water, with an acid compound containing the radical $SO_3$, allowing the mixture to cool slowly and separating the polymerid from the liquid.

2. The process for the production of crystalline polymerization products of formaldehyde, which consists in dissolving amorphous para formaldehyde in a hot watery solution of sulfuric acid, allowing the mixture to cool slowly and separating the polymerid from the liquid.

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1,230,601. LIQUID CENTRIFUGAL SEPARATING-MACHINE. FRANKLIN A. REECE, Hopkinton, Mass. Filed Feb. 8, 1915. Serial No. 6,917. (Cl. 233—19.)



1. A centrifugal liquid separator including in combination a rotary separating vessel, outlet passages for the respective separated portions of the liquid, and means controlled by the character of the liquid in one of said outlet passages adapted to regulate the relative sizes of the respective outlets.

2. A centrifugal liquid separator including in combination a rotary separating vessel, outlet passages for the respective separated portions of the liquid, and means controlled by the specific gravity of the liquid in one of said outlet passages for regulating the relative specific gravities of the respective outflowing liquids.

3. A centrifugal liquid separator including in combination a rotary separating vessel, outlet passages for the respective separated portions of the liquid, and a float device controlled by the specific gravity of the liquid in one of said outlet passages for regulating the relative specific gravities of the respective outflowing liquids.

4. A centrifugal liquid separator including in combination a rotary separating vessel, outlet passages for the respective separated portions of the liquid, and a float operated valve device whereby the specific gravity of the liquid in one of said outlet passages controls the relative proportion of the respective outlets.

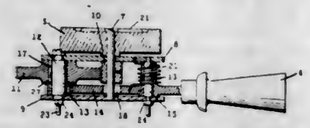
5. A centrifugal liquid separator including in combination a rotary separating vessel, interiorly formed with centrifugally directed narrow compartments each so arranged that the liquid as it separates therein may flow in thin layers axially toward the vessel outlets, outlet passages for the respective separated portions of the liquid,

and means controlled by the character of the liquid in one of said outlet passages adapted to regulate the relative specific gravities of the respective outflowing liquids.

[Claims 6 to 8 not printed in the Gazette.]

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1,230,602. ACOUSTIC SIGNAL DEVICE. WILLIAM P. REIBOLDT, Irvington, and FREDERICK WM. BEYEN, Newark, N. J., assignor to R. H. B. Manufacturing Company, a Corporation of New Jersey. Filed July 23, 1914. Serial No. 852,566. (Cl. 116—1.)



1. The combination with a diaphragm and a rotary member for causing said diaphragm to vibrate, of a member having a limited range of movement adapted when moved in one direction to rotate said rotary member and to be retracted in the other direction independent of the said member, said member when pressed toward the end of its range of movement frictionally engaging the said rotary member to stop its rotation, and means for transmitting motion between said last-mentioned member and the rotary member.

2. The combination with a diaphragm, a rotary shaft and a member on said shaft for causing said diaphragm to vibrate, of a segmental gear slotted to receive said shaft and adapted to engage the same as a brake, and means for transmitting to said shaft motion of said segmental gear in one direction and allowing it to turn independent thereof when moved in the other direction.

3. The combination with a diaphragm, a rotary shaft and a member on said shaft for causing said diaphragm to vibrate, of a segmental gear having a closed slot receiving said shaft and adapted to engage the same at its ends, means for transmitting to said shaft motion of said segmental gear in one direction and allowing it to turn independent thereof when moved in the other direction, and a spring for moving said segmental gear in said other direction.

4. The combination with a diaphragm, a rotary shaft and a member on said shaft for causing said diaphragm to vibrate, of a movable member adapted to clear said shaft for a portion of its movement and to engage the same upon further movement, and means associated with said movable member for transmitting to said shaft motion when said member is moving in one direction and allowing it to turn independent of said member when moving in the other direction.

5. The combination with a diaphragm, a rotary shaft and a member on said shaft for causing said diaphragm to vibrate, of a movable member having a back and forth movement, and means associated with said movable member for transmitting to said shaft motion when said member is moving in one direction and allowing said shaft to turn independent of said member when moving in the other direction, said member adapted to engage the shaft at the end of its movement in said other direction.

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1,230,603. SCREW-ANCHOR. JULIAN RICHMOND, Yonkers, N. Y. Filed July 21, 1914. Serial No. 852,170. (Cl. 72—105.)

1. The combination with a pre-plastic hardened holding structure, of a non-cutting helical anchor and screw, the screw having a cylindrical core and provided with equally spaced convolutions of uniform diameter, the helical anchor having substantially the same pitch as the convolutions of the screw, and formed of material of substantially less thickness than the space between the convolutions of the screw, the outermost convolution of said helical anchor being directed out of the path of the remaining convolutions, the convolutions of the screw extending for a greater length than the depth of said helical anchor, the said anchor and screw adapted to be brought into pre-attachment coöperation, the said outermost convolution of the helical anchor adapted upon said pre-attachment coöperation to cause tightening of said remaining convolutions in tension against the convolutions of the screw upon continued turning of the screw upon said outermost convolution, the screw and anchor in said pre-attachment coöperation adapted to be inserted into said plastic structure, said plastic structure adapted to harden thereabout and between the convolutions of said anchor to set said anchor in said tensioned coöperative position with the screw, said anchor adapted to retain said tensioned coöperative position upon removal of said screw therefrom.



2. The combination with a pre-plastic hardened holding structure, of a non-cutting helical anchor and screw, the screw having a cylindrical core and provided with equally spaced convolutions of uniform diameter, the helical anchor having substantially the same pitch as the convolutions of the screw, and formed of material of substantially less thickness than the space between the convolutions of the screw, the outermost convolution of said helical anchor being directed out of the path of the remaining convolutions and reduced in pitch, the convolutions of the screw extending for a greater length than the depth of said helical anchor, the said anchor and screw adapted to be brought into pre-attachment coöperation, the said outermost convolution of the helical anchor adapted upon said pre-attachment coöperation to cause tightening of said remaining convolutions in tension against the convolutions of the screw upon continued turning of the screw upon said outermost convolution, the screw and anchor in said pre-attachment coöperation adapted to be inserted into said plastic structure, said plastic structure adapted to harden thereabout and between the convolutions of said anchor to set said anchor in said tensioned coöperative position with the screw, said anchor adapted to retain said tensioned coöperative position upon removal of said screw therefrom.

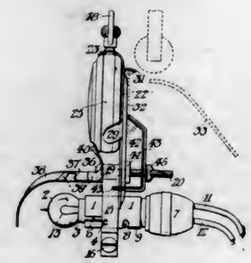
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1,230,604. VEHICLE DASH-LAMP. EDWIN M. ROSENBLUTH, Philadelphia, Pa. Filed Dec. 9, 1916. Serial No. 136,099. (Cl. 240—7.)

1. In a device constructed and arranged to hold a time piece and a lamp in coöperative relation upon a vehicle dash; the combination with a tubular lamp socket; of an incandescent electric lamp detachably fitted in one end of said socket; a conductor terminal plug detachably fitted in the other end of said socket; a lamp holder including a bifurcated band encircling said socket, having a constricting bolt connecting its bifurcations, upon one side of said socket, and a bight in said band upon the opposite side of said socket; a frame screw extending through said bight; a frame plate engaging said screw, having one end recessed to fit said socket and its opposite end extending



transversely to the plane of said frame to overhang and engage the casing of said time piece, and shaped and slotted to receive the winding stem of said time piece; lugs extending laterally from said frame plate and also adapted to engage said casing; supporting lugs on said frame plate, extending transversely therefrom oppositely to the lugs engaging said casing and adapted to detachably engage a supporting bar of said dash; a hood plate engaged between the head of said frame screw and said band, extending between said lamp and casing and having a slot arranged to direct a restricted beam of light upon the face of said time piece from said lamp; a flange on said hood plate fitted to resiliently bear upon said casing and clamp the latter in rigid relation with said frame plate; a stationary nut on said frame screw holding said band and plates in clamped relation; means on said frame plate engaging said stationary nut and preventing rotation thereof; a clamping plate, having an opening through which said frame screw extends, and movable axially on said screw, having lugs at one end overlapping the edges of said frame plate, whereby said plates are held in coöperative relation; and a wing nut, rotatable on said frame screw, adapted to secure said clamping plate in position to clamp said frame plate upon said supporting bar.



12. In a device for holding a time piece and lamp in coöperative relation; the combination with a frame plate arranged to detachably engage said time piece: of a lamp holder, carried by said frame plate; a hood for said lamp holder, arranged to engage said time piece; and a single screw connecting said frame plate and hood in coöperative relation.

16. In a device for holding a time piece and lamp in coöperative relation; the combination with a time piece having a winding stem and ring projecting from its casing; of a frame plate having an elongated slot permitting the passage of said winding stem and ring when presented in one position, but preventing passage thereof when presented transversely thereto; a lamp holder; another plate arranged to engage said time piece and prevent removal thereof from said frame plate; and a single screw connecting said plates, to hold said time piece, in coöperative relation with said lamp holder.

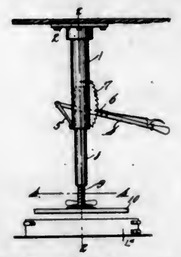
17. In a device for holding a time piece and lamp in coöperative relation; the combination with a time piece having a casing of separable members; of a frame and opposed adjustable means compressively holding said casing members together; and a lamp holder connected with said frame.

[Claims 2 to 11 and 13 to 15 not printed in the Gazette.]

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1,230,605. UPHOLSTERING-PRESS. WILLIAM R. RUSSELL, Portland, Mich. Filed June 21, 1916. Serial No. 104,934. (Cl. 100—4.)

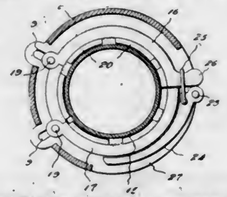
A device of the class described comprising a tube, means for suspending the tube from a support, a rod telescopically associated with the tube, a hand lever, a bracket carried by the tube and pivotally connected to the lever, means for slidably connecting said lever to the rod, a presser-plate adjustably associated with the rod, and



adapted to engage the springs of a cushion to hold same compressed, as and for the purpose set forth.

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1,230,606. QUICK-DETACHABLE HOSE-COUPLING. WILLIAM MCQUIGG SAUNDERS, Evansville, Ind. Filed Apr. 22, 1916. Serial No. 92,878. (Cl. 137—28.)



1. In a quick detachable hose coupling, the combination with coupling heads adapted to fit one within the other, of an expansible and contractible coupling collar comprising jointed sections loosely contained within and bodily movable inside of one of said heads and operable from the exterior thereof, which is adapted to engage the other head to lock said heads together.

2. In a quick detachable hose coupling, the combination of coupling heads adapted to be received one within the other, the entrant head being provided with an external groove or channel, and an expansible and contractible coupling collar comprising a jointed sections loosely contained within and bodily movable inside of the other coupling head and operable from the exterior thereof, which is adapted to fit into said groove or channel to lock the coupling heads together.

3. In a quick detachable hose coupling, the combination with coupling heads adapted to fit one within the other, of an expansible and contractible coupling collar comprising jointed sections loosely contained within and bodily movable inside of one of said heads and operable from the exterior thereof, which is adapted to engage the other head to lock said heads together, and a removable cap for the outer coupling head which serves as an abutment for the said coupling collar.

4. In a quick detachable hose coupling, the combination of coupling heads adapted for reception one within the other, the entrant head being provided with an external groove or channel having a shoulder and also an inclined or cam surface, of a jointed expansible and contractible coupling collar loosely contained within the other coupling head and provided with projecting portions receivable in the groove or channel and having shoulders or faces adapted to coöperate with the shoulder and cam surface aforesaid and operating means for opening and closing said jointed coupling collar.

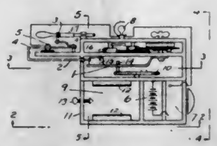
5. In a quick detachable hose coupling, the combination of coupling heads adapted for reception one within the other, the entrant head being provided with an external groove or channel having a shoulder and also an inclined or cam surface, of a jointed expansible and contractible coupling collar loosely contained within the other coupling head and provided with projecting portions receivable in

the groove or channel and having shoulders or faces adapted to cöoperate with the shoulder and cam surface aforesaid, said outer coupling head having an opening exposing the operating means for the expansible and contractible collar aforesaid.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,607. PROTECTIVE APPARATUS. THEODORE SCHIDORSKY, New York, N. Y. Filed Jan. 26, 1917. Serial No. 144,606. (Cl. 177—314.)

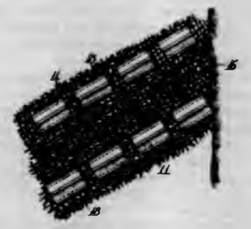


1. In an apparatus of the class described, a device having a socket to contain the leg of an article of furniture adapted to be placed adjacent to a door, a rotatable part supported by the said device and constructed and arranged to travel along the floor and to be rotated when the article of furniture is moved by the door, an element carried by the rotatable part, means actuated by the element to control the action of a vibratory bell and an illuminating attachment, in combination with said vibratory bell, illuminating attachment and a denotating device also actuated by the controlling element.

[Claims 2 to 10 not printed in the Gazette.]

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1,230,608. CURRENT-DEFLECTOR AND SYSTEM OF BANK PROTECTION. DANIEL F. SHELDON, Ventura, Cal. Filed Dec. 2, 1915. Serial No. 64,781. (Cl. 61—30.)



1. A diversion unit for bank protection comprising a hollow concrete prism having longitudinal reinforcement rods in the corners thereof, eyes formed on said rods projecting from the body of the concrete at either end of the prism, and reinforcement tying said longitudinal rods together.

2. A system of bank protection comprising a series of hollow concrete prisms, and a willow mat on which said prisms are cast, the concrete partially surrounding said mat so that the prisms are flexibly connected together.

3. A diversion unit for bank protection comprising a concrete prism having longitudinal rods in the corners thereof, said prism having a prismatic hole extending longitudinally through the center thereof, eyes formed on said rods projecting from the body of the concrete at either end of the prism, and reinforcement tying said longitudinal rods together.

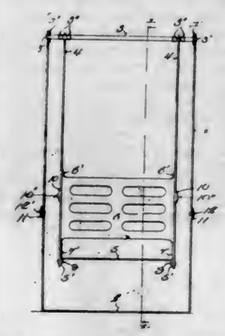
4. A system of bank protection comprising a series of diversion units arranged in rows with wide spaces between the rows and spaces between the units in any row; and a series of flexible poles connecting the units in one row with the units in another row.

5. A system of bank protection comprising a series of diversion units arranged in rows with wide spaces between the rows and spaces between the units in any row, the spaces between units in one row being opposite the center of a unit in another row; and a series of flexible poles connecting the units in one row with the units in another row.

[Claims 6 and 7 not printed in the Gazette.]

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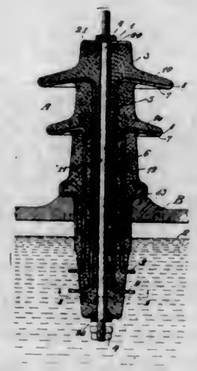
1,230,609. COLLAPSIBLE SWING. HARRY C. SMITH, Milwaukee, Wis. Filed Aug. 11, 1915. Serial No. 44,943. (Cl. 155—35.)



As an article of manufacture, a collapsible swing comprising a pair of U-shaped supporting members, a plurality of seat suspension links, a shaft pivotally passed through adjacent ends of the links and having its end portions reduced and pivotally passed through the end portions of the arms of said members, heads on the reduced ends of said shaft, means for holding the members at a relatively angular inclination, means for holding the said links against lateral movement on the shaft and a seat carried by the lower portions of said links.

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1,230,610. HIGH-POTENTIAL INSULATOR. SOL. S. SONNEBORN, Brooklyn, N. Y. Filed Dec. 9, 1916. Serial No. 135,922. (Cl. 173—311.)



2. A high-potential insulating bushing of the condenser type comprising a plurality of cylindrical partitions of insulating material; one or more of said partitions having at one end an outwardly flaring petticoat; and one or more coaxial cylindrical metal sheaths alternating with said partitions, each said metal sheath being flared at each end into an outwardly extending skirt, the skirt at one end forming a one-face-covering for one of said petticoats.

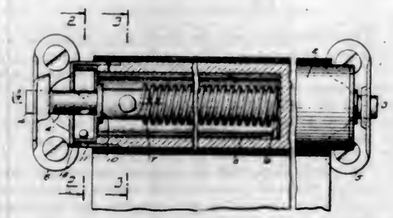


4. A high-potential transformer bushing of the condenser type comprising alternating coaxial layers of insulation and one or more metal sheaths, one of said metal sheaths being outwardly flared at the end of the insulator adapted to be inserted into the transformer.

[Claims 1 and 3 not printed in the Gazette.]

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1,230,611. SHADE-ROLLER. ADDISON JOCOB SOUDERS, Cornwall, Ontario, Canada, assignor of one-half to John E. Ross, Cornwall, Ontario, Canada. Filed May 13, 1915. Serial No. 27,803. (Cl. 156—36.)



In a shade roller of the character described, a body provided with a bore in one end, a casing arranged in said bore, a shaft loosely fitting into said casing, said shaft having a plurality of notches near the outer end, a spring connected at one end with said shaft and at the other end with said casing, said casing at the outer end having a notch and said body having a notch in alinement with the notch of the casing, an independent ball casing extending through all of said notches, said ball casing surrounding the shaft at the point provided with the notches, and a ball for each of the notches arranged in said ball casing, said balls being of sufficient size to act as wedges and become pinched between the sides of the casing and said shaft when the shaft rotates in a certain direction, said notches being formed in such a manner that if the shaft is rotating rapidly the balls will not enter said notches.

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1,230,612. DEEP-WELL PUMP. JOHN B. SPERRY, Aurora, Ill., assignor to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed Apr. 21, 1915. Serial No. 22,932. (Cl. 103—82.)



1. In a deep well pump, the combination of three pump rods, two plungers connected with one of said pump rods, two other plungers connected with another of said pump rods between said first-named two plungers, and two other plungers connected with the other of said pump rods between said second-named two plungers.

2. In a deep well pump, the combination of three pump rods, means actuated by said three pump rods for raising a continuous stream of water, comprising three coöperating plungers connected with said pump rods respectively and adapted to be reciprocated vertically thereby, and other means actuated by said three pump rods for raising water, comprising three other coöperating plungers, and connections between said plungers and said pump rods respectively for reciprocating said plungers in vertical alinement with said first-named plungers, said connections comprising a pipe opening above the upper one of the lower set of plungers and extending upward from that point through the plungers of the other set for delivering the water raised by the lower set of coöperating plungers above the uppermost plunger of the other set.

3. In a deep well pump, the combination of a discharge pipe, three pump rods extending downward therethrough, means actuated by said three pump rods for raising a continuous stream of water through said discharge pipe, comprising three coöperating plungers connected with said pump rods respectively and adapted to be reciprocated vertically thereby, and other means actuated by said three pump rods for raising water through said discharge pipe, comprising three other coöperating plungers connected with said pump rods respectively below said first-named three plungers and adapted to be reciprocated vertically by said pump rods in vertical alinement with said first-named plungers, and comprising a pipe extending upward through said first-named plungers and opening above the upper one of said last-named plungers and also opening above the upper one of said first-named plungers for delivering the water from said last-named plungers to said discharge pipe.

4. In a deep well pump, the combination of two tubular pump rod sections one within the other, a third pump rod section within the inner tubular pump rod section, downwardly-extending cylinder means closed at the upper end about the outer tubular pump rod section, upwardly-extending cylinder means about the outer tubular pump rod section, three plungers in said downwardly-extending cylinder means fixedly connected with said three pump rod sections respectively, three plungers in said upwardly-extending cylinder means fixedly connected with said three pump rod sections respectively, and means connected with said three pump rod sections respectively for reciprocating them in timed relation to each other.

5. In a deep well pump, the combination of two tubular pump rod sections one within the other, a third pump rod section within the inner tubular pump rod section, downwardly-extending cylinder means closed at the upper end about the outer tubular pump rod section, upwardly-extending cylinder means about the outer tubular pump rod section, three plungers in said downwardly-extending cylinder means fixedly connected with said three pump rod sections respectively, an opening from the interior of said inner tubular pump rod section into the upper end of said downwardly-extending cylinder means above said plungers, three plungers in said upwardly-extending cylinder means fixedly connected with said three pump rod sections respectively, an opening from the interior of said inner tubular pump rod section above the plungers in said upwardly-extending cylinder means, and means connected with said three pump rod sections respectively for reciprocating them in timed relation to each other.

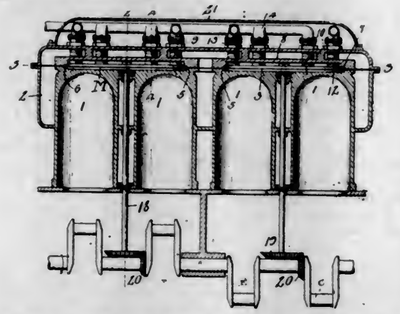
[Claims 6 to 32 not printed in the Gazette.]

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1,230,613. VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. BYRON E. STAVER, Virginia, Minn. Filed Jan. 4, 1916. Serial No. 70,091. (Cl. 123—59.)

1. In combination with a pair of cylinders having intake and exhaust ports and a beveled annular wall encircling all of the ports, valve mechanism comprising a disk having ports adapted to register with the first mentioned ports and having its periphery beveled and resting upon said beveled wall, a plate covering said disk and

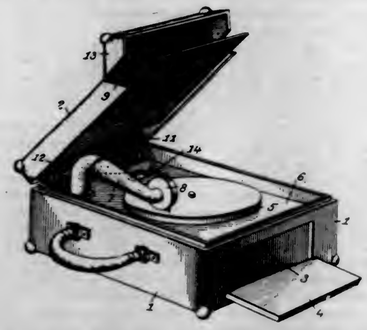
secured to the cylinders means for driving said disk and inlet and outlet pipes threaded into said plate and bearing upon said disk and adapted to register with the ports in the disk during the rotation of the latter.



2. In combination with a pair of cylinders having intake and exhaust ports, and a beveled annular wall encircling all of the ports, valve mechanism comprising a disk having ports adapted to register with the first mentioned ports and having its periphery beveled and resting upon said beveled wall, a plate covering said disk and secured to the cylinders, means for driving said disk, and inlet and outlet pipes threaded into said plate at right angles to one face of said disk and each having one end bearing on said disk so as to register with the ports of the disk during the rotation of the latter.

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1,230,614. PORTABLE TALKING-MACHINE. ARTHUR STECHBART, Chicago, Ill. Filed Sept. 18, 1916. Serial No. 120,596. (Cl. 45—52.)



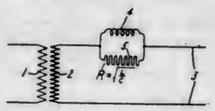
1. A casing comprising, a rectangular box shaped body member having a sunken partition providing an open top chamber for the record carrier of a talking machine, a cover member hinged at its rear end to said body member and divided by an L shape partition into a forward storage chamber and a rearward open bottom chamber adapted to receive the reproducer and tone arm of talking machine after the same has been swung back into an inoperative position.

[Claim 2 not printed in the Gazette.]

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1,230,615. PROTECTIVE DEVICE. CHARLES P. STEINMETZ, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 19, 1913. Serial No. 774,513. (Cl. 175—30.)

1. The combination with an electrical installation comprising two adjacent sections, the surge resistance of one section being of different ohmic value than the surge resistance of the other section, of a resistance having an ohmic value approximately equal to the ohmic value of the surge resistance of one section, and means for directing the flow of high frequency disturbances arising in either section to said resistance.



2. The combination with an electrical installation comprising two adjacent sections, each section having combined resistance inductance and capacity, of means operatively related to said installation and including ohmic resistance for permitting the free exit of high frequency disturbances arising within one section of said installation and for reflecting back toward the source high frequency disturbances arising in the other section.

3. The combination with an electrical installation comprising two adjacent sections, each section having combined resistance, inductance and capacity, the inductance and capacity of one section differing from the inductance and capacity of the other section, means included in said installation for practically open circuiting the installation to the flow of high frequency current without offering substantial impedance to the flow of current of normal frequency, and a resistance in shunt relation to said means and having an ohmic value of such amount as to permit the free exit of high frequency disturbances arising within one section of said installation and to reflect back toward the source high frequency disturbances arising in the other section.

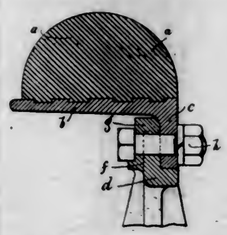
4. The combination with an electrical installation comprising transmission conductors and an apparatus to be protected, of a resistance approximately equal in ohmic value to the ohmic value of the surge resistance of said apparatus, and means for directing the flow of high frequency disturbances to said resistance.

5. The combination with an electrical installation comprising transmission conductors and an apparatus to be protected, said apparatus having a surge resistance whose ohmic value is greater than the ohmic value of the surge resistance of said transmission conductors, of an inductance connected in series with a transmission conductor, and a resistance connected in shunt relation to said inductance and having an ohmic value approximately equal to the ohmic value of the surge resistance of said apparatus.

[Claims 6 to 11 not printed in the Gazette.]

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1,230,616. RIM AND WHEEL FOR SOLID-RUBBER TIRES. ANDREW CREERY STEVENSON, Scotstoun, Glasgow, Scotland. Filed Jan. 7, 1913. Serial No. 740,620. (Cl. 21—69.)



1. A wheel of the character described having spokes, the solid outer ends of which are recessed on the side adjacent the chassis to form supporting ledges in combination with a tire-carrying rim having an internal diameter



exceeding the overall diameter of the wheel spokes so that it does not bear thereon, and having inwardly-projecting integral bracket-like lugs adapted to pass between adjacent spokes and be rotated in the plane of the wheel to seated position on the supporting spoke ledges on the side of the wheel adjacent the chassis without dismounting the wheel from its axle.

2. A wheel of the character described having spokes the solid outer ends of which are recessed to form supporting ledges in combination with a tire carrying rim having an internal diameter exceeding the overall diameter of the wheel spokes so that it does not bear thereon and having inwardly-projecting integral bracket-like lugs adapted to pass between adjacent spokes and be rotated in the plane of the wheel to seated position on the supporting spoke ledges without dismounting the wheel from its axle.

3. A wheel of the character described having spokes, the solid outer ends of which are recessed on opposite sides to form supporting ledges, in combination with independent tire-carrying rims seated on said ledges at least one of said rims having an internal diameter exceeding the overall diameter of the wheel spokes so that it does not bear thereon, and having inwardly projecting bracket-like lugs adapted to pass between adjacent spokes and be rotated in the plane of the wheel to seated position on the supporting spoke ledges on the side of the wheel adjacent the chassis without dismounting the wheel from its axle and means common to said rims for securing the same to said spokes, substantially as described.

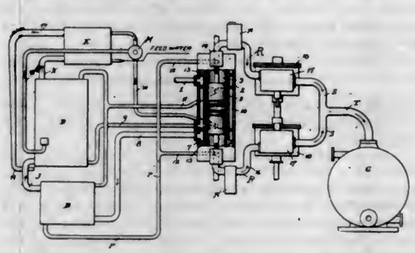
4. A wheel of the character described having spokes, the solid outer ends of which are offset to form supporting ledges, in combination with independent tire carrying rims having internal diameters exceeding the overall diameter of the wheel spokes and having inwardly projecting lugs adapted to be seated on the spoke ledges, said rims projecting respectively on opposite sides of the midplane of the wheel, and means at each spoke and common to both rims for securing the latter to the spoke.

5. A wheel of the character described having spokes, the solid outer ends of which are offset to form supporting ledges on opposite faces of the spokes, in combination with independent tire-carrying rims having lugs seated on said spoke ledges, one of said rims having an internal diameter exceeding the overall diameter of the wheel spokes and the lugs on which are adapted to pass between adjacent spokes and be rotated in the plane of the wheel into seated position on the spoke ledges on the side of the wheel adjacent the chassis, together with bolts common to the lugs of both rims and passing through the spoke ends to hold said rims in seated position on the spoke ledges, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,617. INTERNAL-COMBUSTION ENGINE. WILLIAM JOSEPH STILL, London, England. Filed Dec. 5, 1913. Serial No. 804,927. (Cl. 123—6.)



1. In an internal combustion engine adapted to operate partially under steam, a combustion cylinder, a cylinder jacket forming part of a steam generator, a steam superheater, connections for leading steam from the generator to the superheater, a feed water heater, connections leading the combustion exhaust from the cylinder to the steam superheater and thence to the feed water preheater.

2. In an internal combustion engine adapted to operate partially under steam, a combustion cylinder, a steam generation system, a steam superheater, a feed water preheater, connections leading water from the preheater to the steam generator system, connections leading the combustion exhaust from the cylinder to the steam superheater, thence to the steam generator and thence to the feed water preheater.

3. In an internal combustion engine adapted to operate partially under steam, a combustion cylinder, a steam generation system including an ash pit, a steam superheater, a feed water preheater, connections leading water from the preheater to the steam generator system, connections leading the combustion exhaust from the cylinder to the steam superheater, thence to the steam generator, thence to the feed water preheater, and thence to nozzles located in the ash pit of the steam generator.

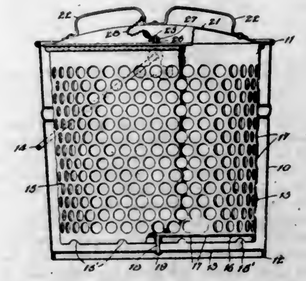
4. In an internal combustion engine adapted to operate partially under steam, a combustion cylinder, a cylinder jacket associated with a steam generator, a steam generator, a steam superheater, connections leading steam from the cylinder jacket and steam generator to the steam superheater, a feed water heater, connections leading the feed water to the steam generator and cylinder jacket, connections leading the exhaust gases from the engine cylinder to the superheater thence to the generator and thence to the feed water preheater.

5. In an internal combustion engine adapted to operate partially under steam, an internal combustion cylinder, a jacket for said cylinder, a preheater, connections for leading water into said preheater and for leading water from said preheater to said cylinder, a steam superheater, steam connections from said jacket to said superheater, and exhaust connections from said cylinder to said superheater and from thence to said preheater.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,618. DISH-WASHING MACHINE. CLARENCE EDWARD STORCK, Baltimore, Md. Filed Nov. 2, 1916. Serial No. 129,196. (Cl. 141—9.)



1. A dish-washing machine comprising a tub, a cage centrally pivoted and rotatable within the tub and having a cover member slidably fitting inside the top of the tub and forming a lateral support for the cage, means securing the cover upon the cage, and means to lift and rotate the cage.

2. A dish-washing machine comprising a tub, a cage located within the tub and having a central pivot engaging a central bearing in the tub, a cover member secured to the cage and located within the top of the tub and being of a diameter slightly less than the diameter of the top of the tub so as to have guided rotative relation therewith to support the cage upright, and means carried by the cover for rotating and lifting the cage.

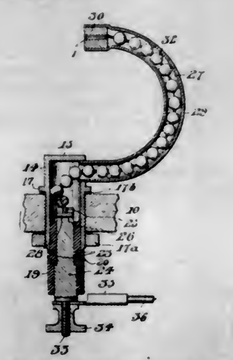
3. In a dish-washing machine, a tub having an open top, a cage of lesser diameter than the tub and pivoted to rotate within the tub upon their major axes, a cover hingedly secured to the cage and located within and rotatively fitting the upper open end of the tub to support the cage upright, and spaced handles carried by the cover whereby the cage and cover may be handled or rotated in the tub.

4. A dish-washing machine comprising a tub having an open upper end, a cage centrally pivoted within the tub, an annular flange carried by the cage extending below such cage bottom but held out of engagement with the tub by the central pivot, said flange being provided with a notched annular bottom edge for the purpose of positively temporarily supporting the cage against slipping when resting upon the rim of the tub.

5. A dish washing apparatus comprising a tub having in the center of its bottom a bearing seat, a cage having a bottom portion provided centrally with a pivot to rest in said seat of the tub, a cover movably connected to the cage and having diametrically opposite handles whereby the attached cage may be carried, or oscillated on its central bearing when disposed in the tub, the top of the cage being below the rim of the tub, when inserted, and the cover being of such diameter as to rotatively fit within the tub at its rim and thus laterally support and guide the cage.

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1,230,619. CARBURETER-HEATING DEVICE. OLIVER P. STRICKLER and BURDETTE C. LEWIS, Mason City, Iowa, assignors to Wonder Carburetor Heater Company, a Corporation of Iowa. Filed Oct. 25, 1916. Serial No. 127,633. (Cl. 219—38.)



1. A heater for carbureters comprising a casing, an insulator bushing therein, a plug within the bushing, a tubing carried by the casing and closed at one end, a resistance wire within the tube and connected to the closed end thereof and to said plug, and agate beads carried by the wire to hold the same spaced from the tubing.

2. A heater for carbureters comprising a casing, an insulator bushing therein, a plug within the bushing, a tubing carried by the casing and closed at one end, the inner end of said plug having a terminal opening and a transverse opening communicating therewith, a resistance wire having one end received in said terminal opening, a pin in the transverse opening for retaining the same in position, the other end of the wire being connected to the closed end of the tubing, and protecting means for the wire for spacing the same from the tubing.

3. A heater for carbureters comprising a casing, an insulator bushing therein, a plug within the bushing, a tubing carried by the casing and closed at one end, a resistance wire connected at one end to said plug, means for attaching the other end of the wire to the closed end of the tubing, and means carried by the wire to hold the same spaced from the tubing.

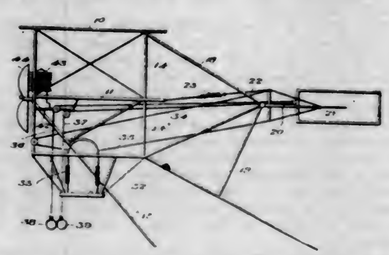
4. A heater for carbureters comprising a casing, an insulator bushing therein, a plug within the bushing, a tubing carried by the casing and closed at one end, the said casing and bushing having registering slots therein, means positioned in the registered slots to prevent accidental withdrawal of the bushing, and a resistance element carried by the plug.

5. A heater for carbureters comprising a casing, an insulator bushing therein, a plug within the bushing, a tubing carried by the casing and closed at one end, and a resistance wire within the tube and connected to the closed end thereof and to said plug.

[Claims 6 to 8 not printed in the Gazette.]

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1,230,620. AEROPLANE. FRANK E. SUMMERS, Memphis, Mo. Filed July 11, 1916. Serial No. 108,702. (Cl. 244—13.)



1. In an aeroplane, a glider structure having a frame, a support for an aviator rigidly depending from the frame, manually actuated and mechanical propulsion means mounted in said frame, and resilient means connected with the support for partially supporting the frame by the aviator when starting and ending a flight.

3. In an aeroplane, a glider structure having a frame, manually actuated and mechanical propulsion means mounted in said frame, a lifting rudder swingingly supported on the frame, a steering rudder supported by said frame, manually controlled means for operating the steering rudder, resilient means for partially supporting the frame by an aviator, and connections between the lifting rudder and said resilient means for moving said lifting rudder by the body of the aviator.

5. An aeroplane having a frame, a plane carried thereby, horizontal and vertical rudders, a depending support for the aviator, a resilient harness connected to the support for engaging the body of the aviator, means connected to the harness and to the horizontal rudder whereby the forward and rearward swinging of the body will actuate the horizontal rudder, and foot operated means connected to the vertical rudder.

23. In an aeroplane, means for embracing the body and shoulders of an aviator to sustain the aeroplane supported when making a landing and in the starting of a flight, lifting and steering rudders controlled by said aviator, means for supporting the aviator when embraced by the first named means, and shock absorbing means included in said first named means.

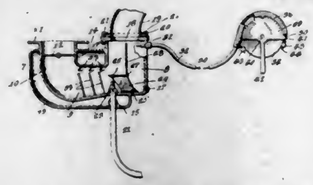
[Claims 2, 4, and 6 to 22 not printed in the Gazette.]

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1,230,621. CARBURETER. WILLIAM H. SWAIN, Nashville, Tenn. Filed May 9, 1916. Serial No. 96,393. (Cl. 261—63.)

1. In a carbureter, a casing having intake and mixing chambers, a fuel delivery nozzle projecting into said casing, a hood inclosing said nozzle and communicating at its forward end with said intake chamber, the rear end of said hood being restricted, a valve plate hinged to the other end of said hood and extending into and transversely of the intake chamber, and means for moving said plate, substantially as described.

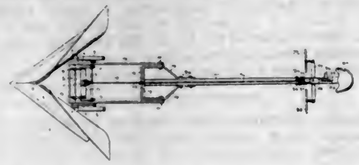
2. In a carbureter, a casing, a nozzle projecting into said casing, a hood in said casing inclosing said nozzle, one end of said hood being restricted, a plate hingedly connected to the other end of said hood and having its side edges fitting closely to the sides of said casing, and means for moving said plate, substantially as described.



3. In a carbureter, a casing, a nozzle projecting into said casing and disposed slightly above the bottom thereof, a hood inclosing said nozzle and having its upper wall disposed below the upper wall of said casing, the ends of said hood being open, a plate hinged to the upper wall of said casing at one end thereof and being adapted to permit air to flow either through or over said hood, and means for moving said plate, substantially as described.

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1,230,622. SNOW-PLOW. ARTHUR H. TALLYN, Benson, Ill. Filed Apr. 24, 1916. Serial No. 93,232. (Cl. 37—7.)



1. A snow plow comprising a plow, a pair of standards carried by said plow, a shaft secured to and supported by said standards, a main frame pivotally mounted at its forward end upon said shaft, means for supporting the opposite end of said main frame, an operating lever pivotally mounted upon said shaft, a wheeled axle disposed below said main frame, links connecting said axle with the transverse shaft and with said operating lever, and means for actuating said lever to raise and lower the plow.

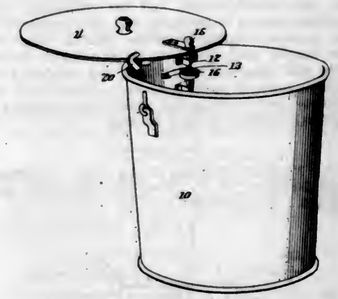
2. A snow plow comprising a plow, standards fixed at the lower ends to said plow, a transverse shaft having its opposite ends secured to and supported by said standards, a main frame pivotally mounted at its forward end upon said shaft, means for supporting the rear end of the main frame, a wheeled axle disposed below the main frame, links pivotally connected at their opposite ends to the axle and transverse shaft, a vertically disposed yoke shaped lever pivotally mounted upon the transverse shaft, links connected to the said lever and the axle, and means carried by the main frame and operatively connected to said lever adapted to be actuated to raise and lower the plow.

3. A snow plow comprising an open ended main frame, a wheeled axle attached to and adapted to support the front end of the frame, a plow attached to said frame, a reinforcing frame mounted within the open end of said main frame and fixed thereto, a tongue, a frame carried by the tongue and detachably mounted within said reinforcing frame, means for holding the reinforcing frame in fixed relation to the main frame, and means carried by the tongue and connected to the plow for raising and lowering the plow.

4. A snow plow comprising an open ended main frame, a wheeled axle attached to and adapted to support the front end of the frame, a plow attached to said frame, a reinforcing frame mounted within the open end of said main frame and rigid therewith, a tongue, a frame carried by the tongue detachably mounted within said reinforcing frame, a coupling pin carried by the forward end portion of the tongue and extending through the tongue frame and through said reinforcing frame, said pin serving to hold the tongue frame rigid with said reinforcing frame, and means carried by the tongue and connected to the plow for raising and lowering the plow.

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1,230,623. SANITARY GARBAGE-CAN. LOUIS TEVEN, Brooklyn, N. Y., assignor to Elsie S. Phillips, Brooklyn, N. Y. Filed Dec. 13, 1916. Serial No. 136,745. (Cl. 220—22.)



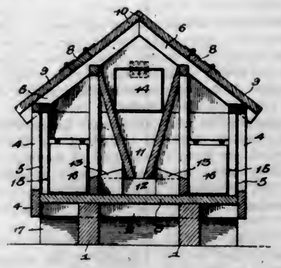
1. The combination with a receptacle and cover therefor, of means for mounting the cover for swinging movement, yieldable means operating to automatically return the cover from an opened to a closed position, means for holding the cover in an opened position against the action of said yieldable means, and said holding means automatically assuming an inactive position when released.

4. The combination with a receptacle and cover therefor, of a vertically disposed shaft, spaced bearings for said shaft, said bearings being secured within the receptacle, said shaft projecting through the cover and fixed relative thereto whereby rotation of the shaft will swing the cover to an open position, a spring coiled about the shaft at a point between the bearings, said spring having one end detachably associated with the shaft and its opposite end removably secured to the receptacle, said spring operating to automatically return the cover from an open to a closed position, and means for holding the cover in an opened position against the influence of said spring.

[Claims 2 and 3 not printed in the Gazette.]

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1,230,624. HOG-FEEDER. JESSE J. TEVIS, Ford, Ky. Filed Dec. 27, 1916. Serial No. 139,083. (Cl. 119—16.)



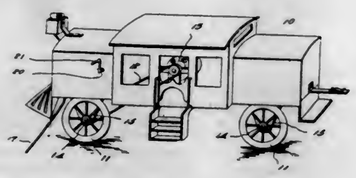
1. A device of the kind described comprising an elevated, portable housing, having reticulated sides, and hinged covers, a feed hopper arranged longitudinally the full length of said housing, and closed by a portion of said covers, a trough receiving material from said hopper, the hopper and trough dividing said housing into two separate compartments, end entrances to said compartments,

vertically swinging doors normally closing said entrances, and hinged end platforms, adapted when lifted to cover said doors.

2. In a combined hog trough and house, skids, a flooring supported on said skids, a roof formed of a plurality of hinged vertically lifting sections, end members for said housing, wire side members, a trough arranged centrally and longitudinally in the housing and extending from end to end, a hopper arranged above said trough and of the same length, a portion of the hinged roof sections forming covers for the hopper, said hopper dividing the housing into two compartments, and the remaining hinged roof sections opening respectively into said compartments, the end members having openings leading respectively into the hopper and into said compartments, swinging doors for said openings, and hinged end platforms leading when in lowered position to the compartment doors and when elevated covering said doors and preventing exit of the animals confined in said housing.

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1,230,625. ELECTROMECHANICAL TOY. WALTER E. THAYER, Brooklyn, N. Y. Filed Apr. 28, 1916. Serial No. 94,173. (Cl. 46—69.)



1. A current distributer for an electrically propelled vehicle comprising a stationary member, arms movably supported by the member and having electrical connection with the motor of the vehicle, means for lengthening and shortening the connections between the arms and said motor of the vehicle, and means for conducting electric current to the arms.

2. The combination with an electric motor vehicle, of a current distributer comprising a member, an electric current conducting cable connected to the member, movable arms carried by said member and in electrical connection with the cable, a windlass mounted in the vehicle, electrical connections between the motor and windlass and also between the movable arms and said windlass, and means for operating the windlass for the winding on and the unwinding from of the connections between the same and the arms.

3. The combination with an electric motor vehicle, of a current distributer comprising a stationary support and movable members, means for distributing electric current through the movable members to the motor of the vehicle, and means for acting upon the last named means for varying the length thereof to regulate the position of the vehicle with respect to the distributer.

4. The combination with an electric motor vehicle, of a current distributer therefor, including an annulus, two arms insulated one from the other and mounted for rotation in unison upon the annulus, supply current conductors connected electrically to said arms, and current conductors connected respectively to the terminals of said arms and to the motor of the vehicle.

5. The combination with an electric motor vehicle, of a current distributer therein, including an annulus, two arms insulated one from the other and mounted for rotation in unison upon the annulus, supply current conductors connected electrically to said arms, current conductors connected respectively to the terminals of said arms and to the motor of the vehicle, and means for regulating the length of said last conductors to determine the distance of the vehicle from the distributer.

[Claims 6 and 7 not printed in the Gazette.]

1,230,626. LUMINOUS PENDANT. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Mar. 28, 1917. Serial No. 157,999. (Cl. 240—1.)

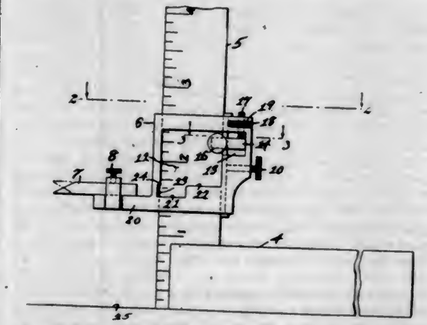


1. A luminous pendant of the type described, comprising a chambered translucent casing, luminous material within the chamber of said casing, a washer overlying said chamber, a cap secured to said washer and a coupling sleeve connected to the cap and affording means for detachably connecting the pendant to a chain.

[Claims 2 and 3 not printed in the Gazette.]

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1,230,627. SQUARE-GAGE. BOYD S. THOMPSON, Grand Rapids, Mich. Filed June 16, 1916. Serial No. 103,963. (Cl. 33—170.)

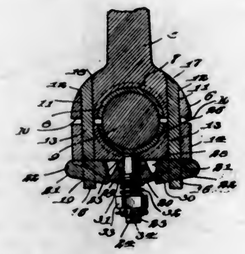


1. As an article of manufacture, for use on the graduated blade of a square, a carrier slotted for said blade, a threaded rod slidably held at one edge of said carrier, a nut threaded on said rod and held in said carrier against movement axially of said rod, a slotted bar secured to one end of said rod and adapted to straddle said blade, a set-screw for locking said bar to said blade, to permit carrier adjustment on said blade by the rotation of said nut, a set-screw for locking said carrier to said blade after such adjustment, and a scriber on said carrier.

2. As an article of manufacture, for use on the graduated blade of a square, a carrier slotted to receive said blade and open at the side to reveal the graduations, an arm extended from said carrier surfaced on its upper side, a scriber adjustably held on said arm, said opening being formed to present a surface contiguous to said graduations and in line with the surfaced upper side of said arm, and a surface contiguous to said graduations and in line with the upper surface of said scriber, and means for adjustably locking said carrier to a blade.



1,230,628. SELF-ADJUSTING SHAFT-BEARING. WALTER B. TITUS and JEFF PASHINSKY, Cedar Rapids, Iowa. Filed Jan. 5, 1917. Serial No. 140,853. (Cl. 64—55.)



1. A bearing comprising a shaft box, a cap movably associated with said box, means for connecting the cap to said box, means for holding the connecting means against displacement, and means operating between the latter mentioned means and coöperating with the confronting extremities thereof for yieldingly moving the cap section in a direction toward the shaft box.

4. A bearing embodying a shaft box provided with guideways, supporting arms inserted in said guideways and each having a slot, a movable section slidably mounted on the supporting arms, means extending through the slots of said arms for operatively holding the sections together, and means carried by the shaft box engaging with the confronting extremities of the latter mentioned means for yieldingly moving the cap section in a direction toward the shaft box.

7. A bearing embodying a shaft box, supporting arms detachably connected with said box and provided with slots, a cap slidably mounted on said supporting arms, keys passing through the slots of the supporting arms, a post carried by said cap, a block mounted on said post and engaging with the confronting ends of the keys, and means for exerting a tension on the block to yieldingly move the cap in a direction toward the shaft box.

9. A bearing comprising a shaft box, supporting arms having slots carried by said box, a cap slidably mounted on said supporting arms, a post carried by said cap, keys having recessed heads movably mounted in the slots of said supporting arms, and means carried by the post and reposing upon the recessed heads of the keys for automatically moving the keys in a direction to permit of the cap being automatically moved in a direction toward the shaft box.

[Claims 2, 3, 5, 6, and 8 not printed in the Gazette.]

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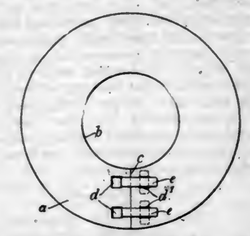
1,230,629. DEVICE FOR CLEANING SHAFTING. ARTHUR HENRY TOWNLEY, Manchester, England. Filed Nov. 7, 1916. Serial No. 130,034. (Cl. 64—29.)

1. A device for cleaning shafting comprising a discoidal piece of slitted material having a hole formed in its center and a plurality of cross shaped clips for uniting the divided ends of the material substantially as described.

2. A device for cleaning shafting comprising a discoidal piece of slitted leather board having a central opening and coated with a grease-proof preparation, the leather board having slots each side the slit, and means extending across the slit to hold the ends together.

3. A device for cleaning shafting comprising a discoidal piece of material formed with a central opening and radially slit, and means extending at right angles to the slit including projections which pass through openings formed in the material each side of the slit to secure the divided ends of the material together.

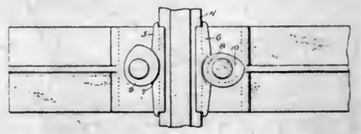
4. A device for cleaning shafting comprising a discoidal piece of slitted material having a central opening and a plurality of slots adjacent the divided ends, and clips extending across the divided ends and engaging the plural-



ity of slots, said clips having bent portions to secure the same in position to hold the divided ends together.

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1,230,630. RAIL-TIE FASTENER. EZRA H. TRAUT, Franklin, Pa., assignor of forty-five one-hundredths to Lewis Overturf, Franklin, Pa. Filed June 27, 1916. Serial No. 106,211. (Cl. 238—5.)



1. A rail fastening device comprising a metallic base, having an opening, a two part fastener in the opening comprising a cam, having a reduced part forming a swivel and a disk having rib engaging a groove or slot in the lower part of the cam and means for fastening the two together.

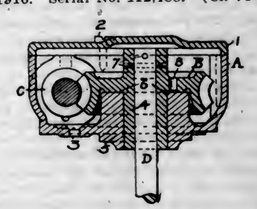
6. In combination with a rail and a metallic rest for the rail provided with a circular opening, a gib bearing upon the flange of the rail, a fastening device rotatably mounted in the opening and having a lateral cam action with the gib and overlapping the same.

8. In combination with a rail and a metallic rest for the rail provided with a circular opening, a gib bearing upon the flange of the rail, a fastening device rotatably mounted in the opening and having a lateral cam action with the gib and overlapping the same, means operated from a point beneath the rest for detachably mounting the device in the opening, each end of said gib being shaped to engage two of the sides of the rests and allow movement of the gib upon the rest in a direction away from the rail.

[Claims 2 to 5, 7, 9, and 10 not printed in the Gazette.]

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1,230,631. GEAR OR WORM-WHEEL. WILLIBALD TRINKS, Pittsburgh, Pa., assignor, by mesne assignments, to National Brush Washing Machine Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Aug. 1, 1916. Serial No. 112,488. (Cl. 74—36.)



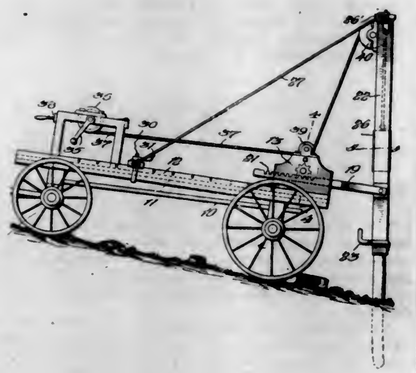
1. A gear or worm wheel provided with a flat bearing surface at right angles to its axis and substantially in

the line of the center of the teeth for axial forces, and a cylindrical bearing surface for angular forces, substantially as described.

2. In a gear or worm wheel mounting, the combination of a fixed bearing provided with a flat bearing surface and an annular interior bearing surface whose axis is at right angles to said flat bearing surface, and a toothed wheel provided with a flat bearing surface substantially in line with the center of the teeth, engaging said first named flat bearing surface, for axial forces, and a hub having an exterior cylindrical bearing surface journaled in said annular interior bearing surface, for angular forces, substantially as described.

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**1,230,632. POST-DRIVER.** HORACE C. UPCHURCH, Steelville, and THOMAS H. HOUSTON, Salem, Mo. Filed Sept. 27, 1916. Serial No. 122,493. (Cl. 61—13.)



1. In an apparatus of the class described, the combination of a platform, an element carried thereby and having longitudinal and axial adjustment relative thereto, standards pivotally connected to said element and adjustable therewith, means adjustable longitudinally of said platform and connected to said standards for also adjusting the same whereby to secure a vertical position thereof, and means for operating the weight between said standards for driving a post.

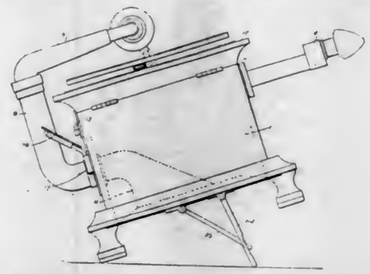
4. In an apparatus of the class described, the combination of a platform, bearing blocks supported at one end thereof, a yoke member having a shank mounted between said bearing blocks and provided with rack teeth, a gear also mounted between said blocks and engaging said rack teeth for adjusting said yoke member longitudinally of said platform, standards pivotally connected to said yoke member and adjustable therewith, means adjustable relative to the platform and connected to said standards for also adjusting the same whereby to secure a vertical position thereof, and means for operating a weight between said standards for driving a post.

6. In an apparatus of the class described, the combination of a platform, a yoke member mounted on the platform and having longitudinal and axial adjustment relatively thereto, standards pivotally mounted on the yoke and adjustable therewith, means connected with the standards and adjustable relatively to the platform for adjusting the standards relatively to the yoke, and means for operating a weight between the standards for driving a post.

[Claims 2, 3, and 5 not printed in the Gazette.]

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**1,230,633. CINEMATOGRAPH AND GRAMOPHONE MACHINE.** FERDINAND VON MADALER, New York, N. Y., assignor to The Rotary Photographic Co. Ltd., West Drayton, England, a Corporation of Great Britain and Ireland. Filed June 22, 1915. Serial No. 35,637. (Cl. 88—16.2.)

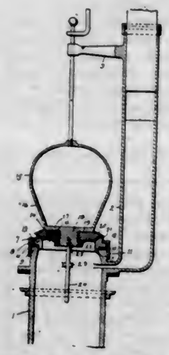


1. In a cinematograph, the combination with a box a lid for said box, driving mechanism for said cinematograph contained within said box and including a worm wheel, a gramophone carried by said box and lid, and mechanism for operating same including a worm wheel, the worm wheel of the cinematograph and that of the gramophone being arranged at right angles to each other so that they may connect and disconnect as the lid is closed or opened.

2. In a cinematograph the combination of a box, a lid for said box, a driving mechanism for said cinematograph contained within said box and including a worm wheel, a gramophone carried by said box and lid mechanism for operating same including a worm wheel, the worm wheel of the cinematograph and that of the gramophone being arranged at right angles to each other so that they may connect and disconnect as the lid is closed and opened and means for disconnecting one of the worm wheels from its driving mechanism when the lid is closed.

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**1,230,634. FLUSHING-VALVE.** FRANK L. WHITE, Topeka, Kans. Filed Apr. 27, 1916. Serial No. 93,932. (Cl. 4—5.)

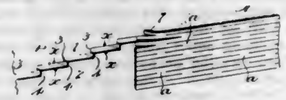


In a flushing device, the combination with a discharge pipe and a flushing valve, of a non-metallic body located at one end of said discharge pipe and having a valve seat formed thereon to be engaged by the valve, an annular shoulder formed on the body and overlying the adjacent end of the pipe, a gasket interposed between the shoulder and the pipe, a nut threaded on the mentioned end of the discharge pipe, and an annular flange formed on the nut engaging over the shoulder on the body.



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**1,230,635. SHEET-FEEDING PROCESS FOR METAL-EXPANDING MACHINES.** HERBERT E. WHITE, Youngstown, Ohio, assignor to The General Fireproofing Company, Youngstown, Ohio, a Corporation of Ohio. Filed Sept. 4, 1913. Serial No. 788,155. Cl. 164—6.6.)



1. In the art of expanding slitted sheet metal, the process which consists in starting the opening of the strands in the following blank, before the blank in advance thereof has passed from the expanding mechanism, by feeding the blanks with their ends in overlapped engagement.

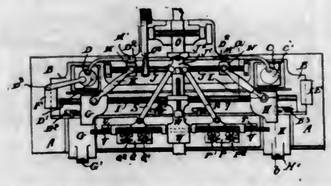
2. In the art of expanding slitted sheet metal, the hereindescribed process which consists in starting the opening of the strands at a corner of the blank, before the blank in advance thereof has passed from the expanding mechanism, by feeding the blanks with their ends in overlapped engagement.

3. In the art of expanding slitted sheet metal, the hereindescribed process which consists in causing a rear corner of the blank within the expanding mechanism to communicate a deflecting pressure upon an advancing corner of the following sheet to start the opening of the strands in the latter.

4. In the art of expanding slitted sheet metal, the hereindescribed process which consists in causing the sheet within the expanding mechanism to exert a deflecting pressure upon a corner portion of the following sheet to thereby initiate the opening of the strands in the latter and to cause a registering interlocking of the two sheets.

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**1,230,636. MACHINE FOR TURNING DOWN THE EDGES OF CLOTH OF WEARING-APPAREL IN THE PROCESS OF MANUFACTURE.** WILLIAM WILKIE, Dennistoun, Glasgow, Scotland. Filed Apr. 14, 1917. Serial No. 162,206. (Cl. 223—55.)



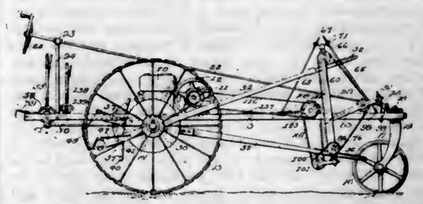
1. In a machine of the class described in combination, a table, a slidable element movable on the surface of said table, outer infolders having knife-edges and actuated by said movable element, a bar or rod fixed relatively to said table, blocks adjustable along said bar or rod, and links or arms connecting said bar to said infolders.

2. In a machine of the class described in combination, outer lateral infolders, a pair of oppositely inclined arms pivoted at one end, central dies or templets attached to the non-pivoted ends of said arms, and means whereby said central dies or templets may be moved apart toward said infolders or together as desired, said means comprising a central lever and a rod extending at right angles to said lever, said rod being slidably mounted on said lever and said dies being slidably mounted on said rod.

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**1,230,637. OPERATING MECHANISM FOR TRACTORS.** CLARENCE B. WILLIAMS, Keystown, Saskatchewan, Canada. Filed Oct. 24, 1916. Serial No. 127,442. (Cl. 74—54.)

1. In a mechanism of the class specified for operating a traction engine, the combination of a main frame, a prime motor mounted on the frame, a drive axle having traction wheels and ratchet wheels on opposite extremities thereof, a frame adjustably mounted on the front extremity of the main frame and extending above and below the latter and embodying upper and lower pairs of shafts with sprocket wheels thereon and having pairs of chain belts trained thereover, a part of the shafts and sprocket wheels being held by the lower portion of this adjustable frame below the main frame, the chain belts of each pair being spaced and connected at different points, means between the prime motor and the said chain belts for operating the latter, and power increasing levers fulcrumed on the axle and having a loose engagement with the connections of the chain belts and alternately reciprocated by the latter in reverse directions, the levers carrying at their rear ends beyond the axles intermediately fulcrumed shoes with upper and lower pawls to engage the ratchet wheels on the axle.



2. In a mechanism of the class specified for operating a traction engine, the combination of a main frame having an axle with traction wheels and ratchet wheels on opposite extremities thereof, a prime motor mounted on the frame, reciprocating levers fulcrumed on the axle and carrying trunnion shoes provided with upper and lower pivoted pawls to engage the ratchet wheels and rotate the latter in opposite directions, the pawls being movable independently of the shoes, mechanism connected to the prime motor for alternately reciprocating the said levers, and means for adjusting the shoes carrying the pawls.

3. In a mechanism of the class specified for operating traction engines, the combination of a main frame provided with an axle having traction and ratchet wheels thereon, a prime motor on the main frame, mechanism adjustably held on the front extremity of the main frame and comprising opposite pairs of chain belts, each pair of chain belts having connecting means and the two pairs of belts being in different positions, connecting devices between the chain belts and the prime motor for operating the said belts, tensioning means for the chain belts, portions of the chain belts extending below the main frame and shiftable with the said mechanism in forward and rearward directions relatively to the main frame, means for changing the speed of the chain belts, and levers fulcrumed on the axle and having their forward extremities engaging the connections of the chain belts and reciprocated in opposite directions by said belts, the rear extremities of the levers having swinging shoes mounted therein and provided with upper and lower pivoted pawls to engage the ratchet wheels.

4. In a mechanism of the class specified for operating traction engines, the combination of a main frame provided with an axle having traction and ratchet wheels thereon, a prime motor mounted on the frame, an adjustable frame mounted on the front extremity of the main frame and projecting above and below the latter and provided with shafts at the upper and lower portions of opposite sides thereof, a part of the shafts being below the main frame and shiftable with the adjustable frame in forward and rearward directions, the said shafts having sprocket wheels on the inner and outer ends thereof and in alinement, chain belts trained over said sprocket wheels, cross shafts mounted in a portion of said supports in alinement with the first named shafts and having terminal sprocket wheels spaced from the inner sprocket wheels of the latter shafts, chain belts engaging the latter

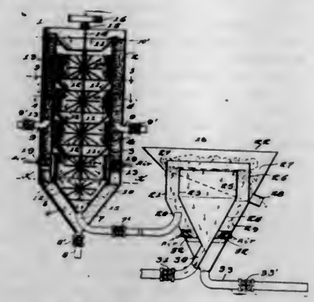
sprocket wheels, mechanism between the prime motor and a portion of said shafts and sprocket wheels and operating all the sprocket wheels and belts at a uniform speed, levers connected at one end of each to different parts of the inner chain belts of the pairs of shafts, mechanism for varying the speed of the said sprocket wheels and pairs of chain belts, and adjustable means carried by the rear ends of the levers to engage the ratchet wheels and operative to impart a reverse movement to the latter and to the axle.

5. In a mechanism of the class specified for operating traction engines, the combination of a main frame provided with an axle having traction and ratchet wheels thereon, a prime motor mounted on the main frame, a frame fulcrumed on the front extermity of the main frame and projecting partially above and below the latter, the said fulcrumed frame having shafts bearing therein and provided with sprocket wheels engaged by chain belts in part arranged in pairs adjacent to each other with clear spaces between them, a part of the shafts carried by the fulcrumed frame being below the main frame and movable with the said fulcrumed frame in forward and rearward directions below the main frame, means between the said prime motor and shafts for regularly and continuously driving the shafts, sprocket wheels and chain belts, mechanism for modifying the speed of the shafts, sprocket wheels and chain belts, levers connected to transversely opposite portions of the adjacent pairs of chain belts at different points relatively to the pairs of belts, said levers being fulcrumed on the axle, swinging shoes carried by the rear extremities of the levers and having upper and lower pivoted pawls to engage the ratchet wheels, and resilient means connected to the shoes to hold the pawls in engagement with the ratchet wheels.

[Claims 6 to 12 not printed in the Gazette.]

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1,230,638. MIXER. GEORGE ALBERT WILLIAMS, Lark, Utah. Filed May 23, 1916. Serial No. 99,387. (Cl. 259—43.)



1. In an agitator or mixer, the combination of an external receptacle adapted to contain a body of liquid to a determined level, an inner receptacle in communication at its upper portion with the upper portion of the outer receptacle, said inner receptacle being spaced from said outer receptacle, agitating means within the inner receptacle, aerating means within the outer receptacle, and a discharge outlet at the bottom of said inner receptacle.

2. An agitator or mixer of the character described comprising an outer receptacle adapted to contain a body of liquid in its lower portion to a predetermined level, an inner receptacle disposed within said outer receptacle and in spaced relation thereto, said inner receptacle being in communication at its top with the top of the outer receptacle, the space between said receptacles above the body of liquid forming a passage for the upflow of the material under treatment by flotation action, agitating means within the inner receptacles, and means within the outer receptacle above the level of the body of liquid for discharging streams of air into said passage.

3. A mixer or agitator of the character described comprising an outer receptacle having a lower receiving space for a supporting body of liquid, an inner receptacle in spaced relation thereto to provide an intervening passage communicating with the upper portion of said inner receptacle, said passage being adapted to contain a body of oil and water of less specific gravity than said supporting body of liquid agitating means within the inner receptacle, an outlet from the bottom of said inner receptacle, and aerating means within said receptacles.

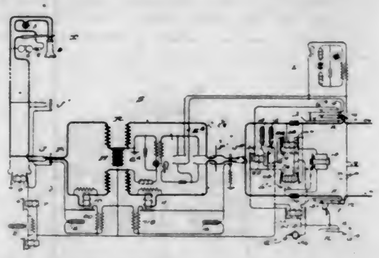
4. A mixer or agitator of the character described comprising an outer receptacle having a lower containing space for a supporting body of liquid, an inner receptacle arranged within the outer receptacle in spaced relation thereto to provide an intervening flow passage adapted to contain a flotation body of oil and water and communicating at its top with the top of the inner receptacle, a series of superposed deflectors disposed within the inner receptacle, an outlet from the bottom of said inner receptacle, and a series of rotary agitators arranged within the inner receptacle beneath the respective deflectors.

5. A mixer or agitator of the character described comprising an outer receptacle having a receiving space at its bottom for a supporting body of liquid, an inner receptacle arranged within the outer receptacle in spaced relation thereto and forming an intervening passage for the reception of a flotation body of oil and water, said passage communicating at its upper end with the top of said inner receptacle, agitators arranged at different levels within said inner receptacle, a discharge outlet at the bottom of the inner receptacle, and conical deflectors within the inner receptacle above the respective agitators.

[Claims 6 not printed in the Gazette.]

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1,230,639. SEMI-AUTOMATIC TELEPHONE SYSTEM. BERNARD D. WILLIS, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 7, 1913. Serial No. 793,947. (Cl. 179—27.)



1. In a telephone system, a called line, an A-operator's board, a B-operator's board, automatic switches for extending connection from said B-operator's board to the called line, a signal on said A-operator's board, and automatic means controlled by said B-operator to operate said signal when said automatic switches attempt to make connection with a busy line.

2. In a telephone system, a called line, an A-operator's board, a B-operator's board, automatic switches for extending connection from said B-operator's board to the called line, a visual signal on said A-operator's board, and automatic means controlled by said B-operator for intermittently operating said signal when said automatic switches attempt to make connection with a busy line.

3. In a telephone system, a called line, an A-operator's board, a B-operator's board, automatic switches, means for extending connection from said B-operator's board to said switches, means for controlling said switches for extending connection to said called line, a signal at said A-operator's board, a relay bridged across the conductors of the talking circuit at said B-operator's board, means controlled by said B-operator for intermittently varying the resistance of said bridge when said automatic switches attempt to make connection with busy line, and means controlled by the variation of said current for intermittently operating said signal.

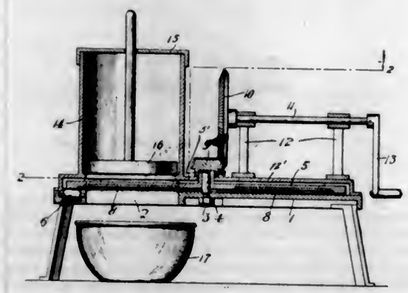
4. In a telephone system, a called line, an A-operator's board, a B-operator's board, automatic switches, means for extending connection from said A-operator's board to said B-operator's board and from said B-operator's board to said automatic switches, means controlled by said automatic switches for extending connection to the called line, a signal on said A-operator's board, a bridge across the conductors of the talking circuit, means controlled by said B-operator for increasing the flow of current through said bridge when said automatic switches attempt to make connection with a busy line, and means controlled by said increased flow of current for operating said signal.

5. In a telephone system, a called line, an A-operator's board, a B-operator's board, automatic switches, means for extending connection from said A-operator's board to said B-operator's board and from said B-operator's board to said automatic switches, means controlled by said automatic switches for extending connection to the called line, a signal on said A-operator's board, a bridge across the conductors of the talking circuit, means controlled by said B-operator for intermittently increasing the flow of current through said bridge when said automatic switches attempt to make connection with a busy line, and means controlled by said increased flow of current for intermittently operating said signal.

[Claims 6 to 18 not printed in the Gazette.]

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1,230,640. VEGETABLE-CUTTER. LOUIS E. ADAMS, Raven, Alberta, Canada. Filed Oct. 11, 1916. Serial No. 125,057. (Cl. 146—11.)



A cutter comprising a table provided with an opening, a shaft fixed to the table, a disk having an upstanding centrally located sleeve which is journaled on the shaft, said disk also having openings, knife blades mounted at the openings in the disk, rollers journaled upon the table and supporting the edge portions of the disk, a panel mounted on the table over the disk and supporting a receptacle above the openings in the table, said panel having an opening through which said sleeve passes and means mounted on the panel for rotating the disk and being detachably connected with the sleeve.

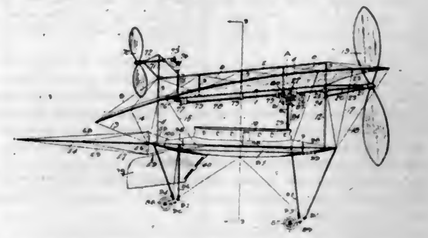
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1,230,641. AEROPLANE. VINCENT AJELLO, Pittsburgh, Pa. Filed Apr. 21, 1913. Serial No. 762,591. (Cl. 244—14.)

1. In an aeroplane, the combination with a central fore and aft main or truss frame having a carrying body suspended therefrom, sustaining planes extending to either side of said main frame, a driving propeller at the forward end of the axis of said plane and an auxiliary propeller above the rear end of said frame, a motor within said carrying body and an operative connecting member adapted to connect said motor with one or the other of said propellers respectively.



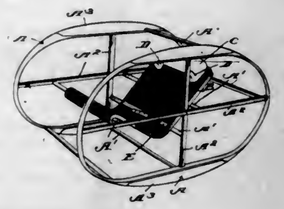
2. In aeroplanes, the combination with a rigid central fore and aft main or truss frame having a passenger carrying body suspended from the fore and aft median line thereof, rigid sustaining planes rigidly connected with said truss frame and extending to either side thereof, a driving propeller at the forward end of the axis of said frame, and an auxiliary propeller carried by and extending above the rear end of said frame, a motor within said carrying body and an operating member arranged to connect said motor either with said forward propeller or said rear propeller at will and longitudinal floats located at either side of and spaced away from said main passenger carrying member, and in substantially the same horizontal plane therewith, whereby the machine may also be sustained in stable equilibrium upon a body of water.



3. In an aeroplane, the combination with a main frame having a carrying body suspended therefrom, said body having lateral floats secured thereto, and extending parallel therewith upon either side, a pair of sustaining planes extending laterally from said main frame, said planes each being concavo-convex in form and inclined upwardly and outwardly from said frame at their forward ends, a driving propeller mounted upon the forward end of the axis of said planes, an auxiliary propeller mounted at the rear end of said frame and above and to the rear of said plane, horizontal and vertical deflecting planes mounted at the rear end of said carrying body, a driving motor and steering apparatus connected with said propellers and said deflecting planes, respectively, located within said carrying body.

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1,230,642. ROCKING-CHAIR. VICENTE ALBANO, Rosario, Argentina. Filed Mar. 12, 1917. Serial No. 154,383. (Cl. 155—18.)



1. A rocking chair, comprising a pair of counterpart elliptical sides, tie-bars connecting the same, and a seat fixed between said sides and disposed entirely within the confines of an imaginary plane connecting the peripheral edges thereof, said sides adapted to be rocked in either direction through an arc sufficiently great to cause the chair to turn a complete somersault.

2. A rocking chair, comprising a pair of counterpart elliptical sides, tie-bars connecting the same, a seat fixed between said sides and disposed entirely within the confines of an imaginary plane connecting the peripheral edges thereof, and fastening means for securing the body of the occupant to said seat, said sides adapted to be rocked in either direction through an arc sufficiently great to cause the chair to turn a complete somersault.

1,230,643. COVER-PLATE FOR FLUSH RECEPTACLES. CARL ERIC ANDERSON, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed May 2, 1916. Serial No. 95,009. (Cl. 247—5.)



1. A face plate comprising a thin sheet of relatively soft metal forming a facing plate and a lining plate of relatively strong sheet metal therefor, both facing and lining plates being beveled at their margins and united by the entry of the edge of the lining plate into the metal of the facing plate under the displacing heavy pressure of a die.

3. A face plate comprising a thin sheet of relatively soft sheet metal forming a facing plate and a lining plate therefor of relatively hard sheet metal, both facing and lining plates being beveled at their margins and the facing plate having an edge which extends beyond the bevel of the lining plate, and having a shouldered engagement with the latter incident to the penetration of the inner face of the relatively soft facing plate by the edge of the relatively hard lining plate, whereby said facing and lining plates are united.

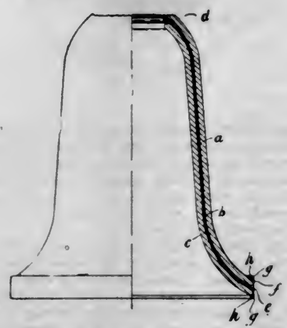
[Claims 2 and 4 not printed in the Gazette.]

1,230,644. SIGN CHARACTER. HARAY F. ANDERSON, Marion, Ind. Filed Apr. 9, 1914. Serial No. 830,741. (Cl. 40—141.)



A sign character comprising a hollow body having a marginal flange, the outer faces of said body and flange being transparent, the inner face of said body portion being translucent and the inner face of said flange being shipped and having a decorative coating applied to its inner face.

1,230,645. ILLUMINATING APPLIANCE. FREDERICK AUGUSTUS ANDREWS and THOMAS GASKELL ALLEN, Westminster, London, England. Filed Nov. 9, 1915. Serial No. 60,612. (Cl. 240—108.)




1. An illuminating appliance comprising materials interposed between light transmitting protective parts, and means for securing said parts, said means comprising a binder integral with the protruding interposed material so arranged that same can be made to embrace said parts.

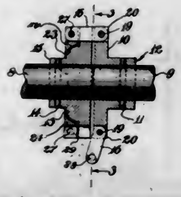
2. An illuminating appliance comprising materials interposed between light transmitting protective parts, means for securing said parts together, said means comprising a rim formed on one of said parts and adapted to engage the other part, and means for locking said parts against unintentional relative movement.

3. An illuminating appliance consisting of an inner glass light transmitting part, an outer glass light transmitting part, said parts being of curved form, an interposed layer of flexible material, means for producing a leaded light effect thereon, and means for fastening these parts together.

4. An illuminating appliance comprising materials interposed between light transmitting protective parts, means for producing a leaded light effect thereon, said materials being inserted as a patchwork, and opaque strips applied to said protective parts and caused to follow the contour of the individual patches.

5. An illuminating appliance comprising materials interposed between light transmitting protective parts, means for securing said parts together, said means comprising a rim formed on one of said parts, and locking means adapted to engage said rim and the other part to lock said parts against unintentional relative movement.

1,230,646. SHAFT-COUPLING. HENRY P. ARNDT, Amston, Conn., assignor of two-thirds to Charles M. Ams, New York, N. Y. Filed Sept. 20, 1916. Serial No. 121,305. (Cl. 64—13.)



1. In a device of the character described, the combination, with two alined shafts, of a disk element fixed upon each shaft at the meeting ends of said shafts, one of said disk elements being provided with a series of equidistantly disposed peripheral retaining notches, and the other disk element having pivoted at the periphery thereof a locking arm adapted to be received and engaged by one of said retaining notches, selectively, and means for removably securing said arm in its engaging position.

2. In a device of the character described, the combination, with two alined shafts, of a disk element fixed upon each shaft at the meeting ends of said shafts, one of said disk elements being provided with a series of equidistantly disposed peripheral retaining notches, and the other disk element having pivoted at the periphery thereof a locking arm adapted to be received and engaged by one of said retaining notches selectively, a loose ring associated with said first-mentioned disk element and provided with a peripheral recess adapted to receive the end of said arm when the latter is in its engaging position, and means for removably securing said arm end within said recess.

3. In a device of the character described, the combination, with two alined shafts, of a disk element fixed upon each shaft at the meeting ends of said shafts, one of said disk elements being provided with a series of equidistantly disposed peripheral retaining notches, and the other disk element having pivoted at the periphery thereof a plurality of locking arms adapted to be received and engaged by the retaining notches opposite said arms, selectively, and means for removably securing said arms in their engaging positions.

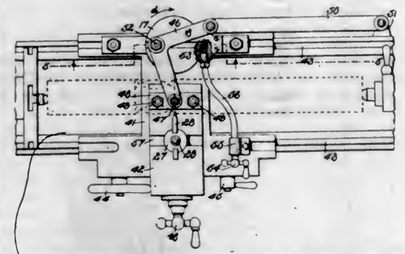


4. In a device of the character described, the combination, with two alined shafts, of a disk element fixed upon each shaft at the meeting ends of said shafts, one of said disk elements being provided with a series of equidistantly disposed peripheral retaining notches, and the other disk element having pivoted at the periphery thereof a plurality of locking arms adapted to be received and engaged by corresponding retaining notches, selectively, a loose ring associated with said first-mentioned disk element and provided with peripheral recesses adapted to receive the ends of said arms when the latter are in their engaging positions, and means for removably securing said arm ends within said recesses.

5. In a device of the character described, the combination, with two alined shafts, of a disk element fixed upon each shaft at the meeting ends of said shafts, one of said disk elements being provided with a series of equidistantly disposed peripheral retaining notches, and the other disk element having pivoted at the periphery thereof a locking arm adapted to be received and engaged by one of said retaining notches, selectively, and means for removably securing said arm in its engaging position, said arm comprising a series of plates slightly spaced apart at the pivoted end only of said arm whereby the remaining major portions of said plates are normally held in a slightly separated condition.

[Claim 6 not printed in the Gazette.]

1,230,647. TOOL-HOLDER. VICTOR H. AURICH and ALOIS CIHAK, Jersey City, N. J. Filed July 15, 1916. Serial No. 109,460. (Cl. 82—11.)



1. In a tool-holder, the combination of a pivot bracket adapted to be rigidly mounted on a lathe bed at the side of the rails thereof; a rotary table having a positioning slot coinciding with the center of said table; a movable pivot mounted in said slot; means for locking said pivot in said slot; a freely movable cross slide; a tool and tool-post therefor mounted on said slide; rocking means pivotally connecting said pivot on said rotary table and said slide; a link pivotally connecting said rocking means and said pivot bracket; and means manually operative for rotating said rotary table.

2. In a tool-holder, the combination of a pivot bracket adapted to be rigidly mounted on a lathe bed at the side of the rails thereof; a rotary table having a positioning slot coinciding with the center of said table; a movable pivot mounted in said slot; means for locking said pivot in said slot; a freely-movable cross slide; a tool and tool post therefor mounted on said slide; rocking means pivotally connecting said pivot on said rotary table and said slide; a link pivotally connecting said rocking means and said pivot bracket; and means manually operative for rotating said rotary table, said means embodying a screw-threaded member engaging said table, a rotary handle, and a flexible shaft operatively connecting said screw-threaded member and said handle.

1,230,648. INSECTICIDE. JOHN BRIAN BARRETT, Annapolis Royal, Nova Scotia, Canada. Filed Aug. 4, 1916. Serial No. 113,199. (Cl. 167—6.)

An insecticide comprising a filler of an inactive agent, an active agent for coating said filler comprising naphthalin 90%, naphthalic acid 8% and phenol 2%, capable when mixed and exposed to the atmosphere of throwing off a vapor and a mineral oil for coating said active agent whereby the evolution of the vapor from the active agent will be retarded for the purpose set forth.

1,230,649. NUT-LOCK. ANDREW F. BARRON, Watervliet, N. Y. Filed Dec. 13, 1916. Serial No. 136,664. (Cl. 151—12.)



1. A nut lock including a bolt provided with longitudinal shoulders, a nut fitted on said bolt having an opening communicating with the bore, and a recess formed in one face thereof and communicating with the opening, a locking pawl pivotally secured in said opening and adapted to engage said shoulders to lock the nut against rotational movement in one direction upon the bolt, a lateral extension formed integral with the pawl and adapted to be received within the recess, said recess having angularly disposed cavities formed in the walls thereof and at points adjacent the free end of the lateral extension to facilitate insertion of a tool under the extension to release the locking pawl, a laterally projecting lug formed on said pawl in opposed relation to the extension, and spring means engaging said lug and normally retaining the pawl in engagement with the bolt.

2. A nut lock including a bolt having longitudinal shoulders thereon, a nut fitted on said bolt having an opening therein, and recesses formed in the walls of the opening, a pivot pin engaged in said recesses and extending transversely through the opening, fingers struck out from said nut and adapted to be bent over the pin to secure the latter in position in the recesses, and a spring actuated locking pawl pivotally supported by said pin and normally engaging said bolt to lock the latter against rotary movement in one direction with relation to the nut.

1,230,650. ABDOMINAL BELT. FREDERIC GEORGES BAUGATZ, Paris, France. Filed Nov. 16, 1915. Serial No. 61,817. (Cl. 2—188.)

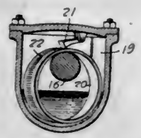


An abdominal belt acting as a corset, comprising a non-elastic abdominal section having its central portion of greater width than its end portions; a comparatively-narrow, non-elastic back section; and elastic side sections between the abdominal and back sections; said side sections and abdominal and back sections having detachable button- and button-hole fastenings connecting their adjacent ends; and said abdominal section being provided with a slit extending downward for a distance from the central portion of its upper edge, and with button- and button-hole fastening means for closing said slit, to enable the abdominal section to be alternatively tightened or loosened about the abdomen of the wearer.

1,230,651. LUBRICATOR. ROBERT GALBRAITH BECHTEL, Goodland, Kans. Filed Aug. 14, 1916. Serial No. 114,754. (Cl. 184—24.)

1. In combination with the reciprocating element and the casing for the same, of an oil receptacle extending transversely of the bore of the casing, a roller cage encircling the reciprocating member within the receptacle,

said cage carrying rollers engaging the reciprocating member and extending beyond the periphery of the cage, the axes of the rollers being parallel and inclined with respect to the direction of movement of the reciprocating member, a lubricating ring resting upon the rollers, and dipping into the lubricant, and means for preventing reverse rotation of the ring.



2. In combination with the reciprocating element and the casing for the same, of an oil receptacle extending transversely of the bore of the casing, a lubricating ring encircling the reciprocating element within the receptacle and dipping into the lubricant, means arranged between the ring and the reciprocating element for rotating the ring as the element reciprocates, and means for constraining the ring to move in one direction.

3. In combination with the reciprocating element and the casing for the same, of an oil receptacle extending transversely of the bore of the casing, a lubricating ring encircling the reciprocating element within the receptacle and dipping into the lubricant, means in connection with the ring and the reciprocating element for rotating the ring as the element reciprocates and means for constraining the ring to rotate in one direction.

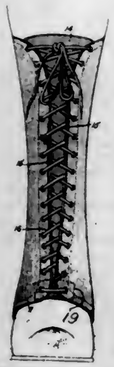
4. In combination with the reciprocating element and the casing for the same, of an oil receptacle extending transversely of the bore of the casing, a lubricating ring encircling the reciprocating element within the receptacle and dipping into the lubricant, and means in connection with the ring and the reciprocating element for rotating the ring as the element reciprocates.

5. In combination with the reciprocating element and the casing for the same, of an oil receptacle extending transversely of the bore of the casing, the plane of the receptacle being inclined with respect to the axis of the reciprocating element, a ring encircling the shaft and dipping into the oil in the receptacle and rotated by the movement of the reciprocating element, and means for constraining the ring to rotate in one direction.

[Claims 6 to 11 not printed in the Gazette.]

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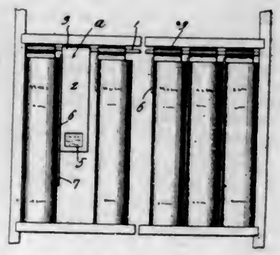
1,230,652. GAITER. VINCENZO BENEDETTI, Palisade, N. J. Filed Mar. 15, 1917. Serial No. 155,003. (Cl. 36—2.)



A gaiter having flexible sides molded to conform to the shoe and foot therein, said gaiter embodying arched ends shaped to conform with the shoe adjacent the shank thereof; a shank member permanently secured to the terminal edges of said ends in correspondence with the shape of the shoe to which said gaiter is fitted; means for drawing the entrance edges of said gaiter together; and an elastic connection extending between the entrance edges of the gaiter adjacent the lower edge of said gaiter.

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1,230,653. SHELF-MARKER. HARRIS M. BENEDICT, Cincinnati, Ohio. Filed Feb. 8, 1917. Serial No. 147,458. (Cl. 40—11.)

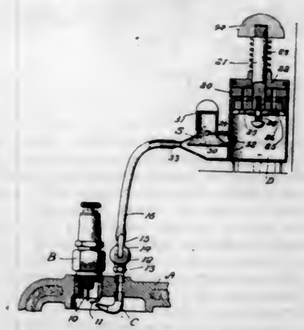


1. A shelf marker including a member mounted for swinging movement and adapted to rest upon an article placed thereunder, and a spacing wing extending from one side of said member.

[Claims 2 to 8 not printed in the Gazette.]

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1,230,654. METHOD AND MEANS FOR REMOVING CARBON IN INTERNAL-COMBUSTION ENGINES. ROBERT C. BERRY, Indianapolis, Ind. Filed Apr. 15, 1916. Serial No. 91,427. (Cl. 123—198.)



1. The combination with an internal combustion engine and spark plug, of a carbon remover device consisting of an injector tube located alongside said spark plug with its discharge nozzle directed to discharge against the terminals thereof, a valve for controlling the passage through said tube, and a force feed injector containing carbon remover substance adapted to be connected with said tube, whereby said carbon remover substance may be forced against said terminals, substantially as set forth.

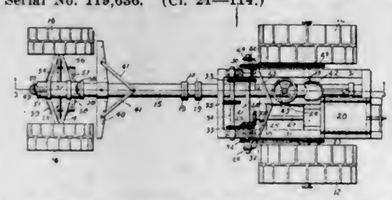
2. A carbon remover device for internal combustion engines comprising an injector tube located alongside the spark plug with its point disposed to discharge against the terminals of said spark plug, and means for forcibly injecting carbon remover substance through said tube under pressure in the form of a spray, substantially as set forth.

3. The method of removing carbon from the terminals of a spark plug or other parts which consists in directing a spray of salt against said parts under pressure, substantially as set forth.

4. A carbon remover device for internal combustion engines comprising an injector tube located alongside the spark plug with its discharge opening adjacent to the terminals in said spark plug, and a device for forcing carbon remover substance through said injector tube connected therewith and consisting of a cylinder provided with a carbon remover substance container and a plunger for driving said substance through the discharge opening of said tube under pressure, substantially as set forth.

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1,230,655. TRACTOR. WILLIAM I. BEST and STEPHEN H. SHEPARD, McLeansboro, Ill. Filed Sept. 12, 1916. Serial No. 119,636. (Cl. 21—114.)



1. A tractor comprising four wheels, forward and rear axle parts supported by said wheels, a tubular one-piece frame or reach connecting said axle parts, combined with driving mechanism for the rear wheels of the tractor, steering mechanism for said tractor, and connections, through said tubular one-piece frame or reach, between the rear and forward parts of said steering mechanism.

2. A tractor having a frame part provided with means for engaging the bull-wheel shaft of a harvester, combined with a single main driving shaft mounted on the tractor frame, a single engine for operating said shaft, a harvester-mechanism driving-shaft also mounted on the tractor frame and operatively connected with said main driving shaft, means for operating said main driving shaft, rear driving wheels on the tractor, and disconnectible connections between said main driving shaft and the said driving wheels of the tractor; whereby the harvester driving shaft may continue to run when the tractor driving mechanism is thrown out.

5. A tractor comprising four wheels, forward and rear axle parts, a tubular one-piece frame or reach connecting said forward and rear axle parts, a sleeve rigid with the front axle part and loosely receiving the forward end of said tubular one-piece frame or reach, and a loosely mounted yoke carried by said one-piece frame or reach and having means for engaging the bull-wheel shaft of a harvester.

6. A tractor comprising forward and rear wheels and a suitable frame comprising a central reach between the forward and rear frame parts, combined with a main driving shaft mounted on said frame, means for operating said shaft, a harvester mechanism driving shaft also mounted on said frame, and driving connections between said shaft on opposite sides of said central reach.

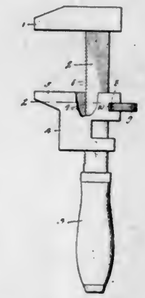
7. A tractor comprising forward and rear wheels and a suitable frame comprising a central reach between the forward and rear frame parts, combined with a main driving shaft mounted on said frame, means for operating said shaft, a harvester mechanism driving shaft also mounted on said frame, driving connections between said shaft on opposite sides of said central reach, and disconnectible connections, also on opposite sides of said central reach, between said main driving shaft and the rear driving wheels of the tractor.

[Claims 3 and 4 not printed in the Gazette.]

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1,230,656. WRENCH. FELIX P. BIRAND, Jr., Mortlach, Saskatchewan, Canada. Filed Jan. 12, 1917. Serial No. 142,097. (Cl. 81—130.)

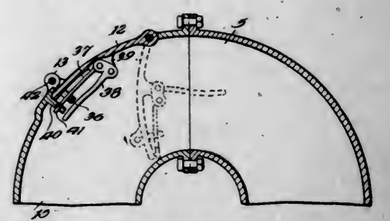
1. The combination with a wrench including a stationary jaw having a shank and a movable jaw having a carriage provided with a bore receiving the shank, said carriage opposite the jaw having a transverse slot defining a straight inner wall and a rounded outer wall, and the said slot communicating with the bore of the carriage, a ring member arranged in the slot and having its inner periphery contacting with the rounded wall provided by the slot, said ring having its outer periphery gradually extended outwardly whereby to increase the cross sectional diameter thereof and to provide a cam surface that is adapted to contact with one of the edges of the shank, and by virtue of such contact to force the shank into contact with one of the walls of the bore of the carriage.



2. In combination with a wrench including a stationary jaw having a shank provided with teeth upon one of the edges thereof, and a movable jaw including a carriage having a bore to receive the shank and one of the walls of the said bore being provided with teeth to coact with the teeth of the shank, said carriage having a transverse slot defining an inner straight wall and an outer rounded wall and said slot communicating with the bore of the carriage, a milled ring loosely arranged in the slot and adapted to have its inner periphery contacting with the outer rounded wall provided by the said slot, said ring being gradually increased in thickness from one of the ends to the opposite end thereof upon its outer periphery, whereby to provide the said outer surface of the ring with a cam member, and the said cam member designed to contact with the smooth edge of the shank and by virtue of such contact force the shank laterally of the carriage to bring the teeth of the said shank into engagement with the teeth in the bore of the carriage.

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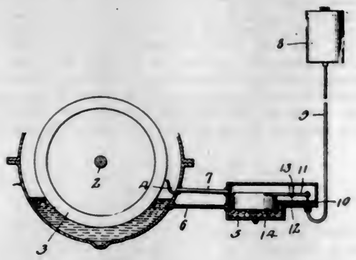
1,230,657. BLAST-PIPE CONNECTION. ALBERT J. BORENER, Chicago, Ill. Filed Dec. 30, 1916. Serial No. 139,898. (Cl. 158—73.)



4. In an apparatus for the purpose set forth, the combination of a blast pipe having a feed opening in one wall, a damper hinged to the pipe adjacent said opening, a keeper on the wall of the pipe adjacent said opening, an angle lever fulcrumed upon the inner side of said damper, and a latch pivoted to said lever and adapted to engage said keeper.

[Claims 1 to 3, 5, and 6 not printed in the Gazette.]

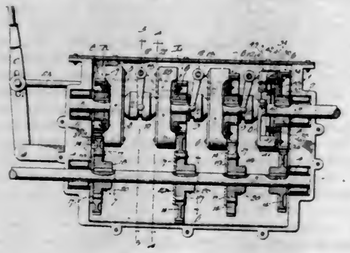
1,230,658. AUTOMATIC OILER. ARTHUR F. BRACE, Waterford, Pa. Filed Dec. 29, 1916. Serial No. 139,596. (Cl. 184—13.)



1. The combination of a crank case having an internal oil pocket above the normal oil level therein, an oil well located exteriorly of the crank case, a free oil conduit connecting said well and crank case below the oil level in said pocket and the crank case whereby a common oil level is maintained in said pocket and crank case when the engine is at rest, and a return connection leading from said oil pocket back to the well and having a larger bore than said oil feed connection.

[Claim 2 not printed in the Gazette.]

1,230,659. TRANSMISSION-GEARING. GEORGE P. BREED, Ruby, Wis., assignor of one-half to William D. Persons, Walnut, Cal. Filed June 22, 1916. Serial No. 105,285. (Cl. 74—59.)



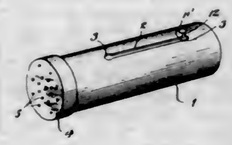
1. In a transmission gearing, the combination of a drive shaft, a second shaft to be driven, a comparatively high speed gearing unit consisting of a gear on the second shaft, a second gear meshed therewith and loose on the drive shaft, and a clutch for locking said second gear to said drive shaft, a comparatively low speed gearing unit consisting of a gear loose on the drive shaft, a clutch for locking it to said shaft, a gear ring meshed with said gear, a hub secured to the second shaft within said gear ring and having spiral cams on its periphery, rollers interposed between said cams and said ring, a floating ring having pockets in which said rollers are located, and spring means for impelling said floating ring in a direction to engage the rollers with the cams, and means for successively throwing the clutches of the low and high speed units into operation and for holding them in this condition, the cams and rollers running freely when the high speed unit is in use but serving to lock the gear ring to the driven shaft when the low speed unit is in use.

2. In a transmission gearing, the combination of a drive shaft, a second shaft, comparatively low and high speed gearing units for driving the second shaft from the drive shaft, each of said units consisting of constantly meshed gears, and a clutch for throwing them into operation, individual control members for said clutches, and a slide having individual runways for said members, both runways having cams for operating their respective control members successively, and the runway of the control member of the low speed unit having a straight portion in rear of its cam to hold this member in operative position while shifting the slide to throw the high speed unit into operation, said low speed unit including means for permitting idle movement thereof while said high speed unit is in operation.

3. A control slide for transmission gearing having control cranks, said slide having a plurality of longitudinally disposed runways to receive therein the crank arms of said gearing, said runways having cams for successively rocking said arms and certain thereof being equipped with straight portions in rear of said cams to retain their respective arms in operative position when once shifted.

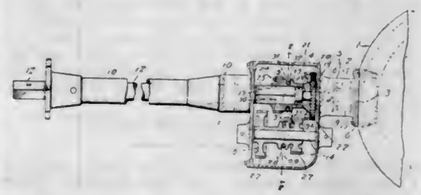
4. In a transmission gearing, the combination of forward and reverse gears each including a clutch for throwing it into use, a double acting control member for throwing either of said clutches into operation, a rock shaft having connection with said control member for shifting it in either direction, a crank arm on said shaft, a slide, and a guideway extending obliquely of said slide, said crank arm having a lateral extension received in said guideway between the ends of the latter, whereby movement of the slide in reverse directions will correspondingly shift the control member.

1,230,660. SHAVING-BRUSH. JAMES L. BAICE, Aberdeen, Wash. Filed Aug. 1, 1916. Serial No. 112,587. (Cl. 15—38.)



A shaving brush comprising a casing having slots located at its sides and provided with enlarged openings at the ends of the slots, a block slidably mounted in the casing and provided with bristles, pins slidably mounted in the block, a spring located in the block and bearing at its opposite ends against the inner ends of the pins, said pins having shoulders adapted to bear against the inner surface of the casing around the openings whereby the outward movement of the pins is limited, said pins also having neck portions located beyond the shoulders and adapted to enter the said enlarged openings and being of greater diameter than the transverse breadth of the slots, said pins being further provided with reduced portions adapted to move along the slots when the pins are depressed.

1,230,661. GEARING. MUNRO S. BROWN, Goldfield, Nev. Filed Nov. 24, 1914. Serial No. 873,709. (Cl. 74—58.)



1. An attachment for motor vehicles comprising a casing having an offset neck, means for securing the neck to



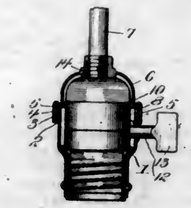
the rear axle casing inclosing the differential, a drive shaft housing extending forward from said casing in line with said neck, a bearing in said housing adjacent the casing, a drive shaft journaled in said bearing and extending into said casing, a bearing carried by the casing neck, a follower shaft leading from the casing and journaled in said bearing in the casing neck, the follower shaft being adapted for connection to the differential, and cooperating means disposed within said casing engaging said drive and follower shafts for the transmission of motion at various speeds therebetween, and allowing for the free rotation of said drive shaft.

2. An attachment for motor vehicles, comprising a casing having an offset neck for detachable connection with the rear axle casing inclosing the differential, a drive shaft housing extending forward from said casing in line with said neck, a drive shaft journaled in said housing and extending into the casing, the drive shaft being provided with a reduced extremity, a follower shaft journaled in the neck of the casing and adapted for connection with the differential, the follower shaft being provided with a bored extremity receiving the drive shaft reduced extremity therein and effecting a thrust bearing therewith, a gear carried by said follower shaft, a clutch carried by said gear, a gear slidable and non-rotatably mounted upon said drive shaft, a clutch carried thereby, a jack shaft, connected gears rotatably and slidably mounted upon said jack shaft adapted to mesh with the gear on the drive shaft and the gear on the follower shaft for the transmission of motion between said drive and follower shaft gears, and means for moving said jack shaft connected gears and said drive shaft gear for the direct transmission of motion between said drive and follower shafts for the independent rotation of said drive shaft and for the transmission of motion between the said drive and follower shafts through said gears to vary the speed, and means for locking the drive shaft and its gear together to hold the shifting parts in their several positions.

3. An attachment for motor vehicles, comprising a casing having a neck projecting therefrom, means for detachably connecting the casing neck with the differential gear casing of a vehicle, a drive shaft housing extending from said casing in line with said neck, a bearing in said housing, a drive shaft journaled in said bearing and extending into the casing, the drive shaft being provided with a reduced extremity, a bearing in the neck of said casing, a follower shaft journaled in said bearing and adapted for connection with the differential, the follower shaft being provided with a bored extremity receiving the drive shaft reduced extremity therein and effecting a thrust bearing therewith, a gear carried by said follower shaft, a clutch carried by said gear, a gear slidably and non-rotatably mounted upon said drive shaft, a clutch carried thereby, a fixed jack shaft, connected gears rotatably and slidably mounted upon said jack shaft adapted to mesh with the gear carried by the follower shaft and the gear carried by the drive shaft for the transmission of motion between said drive and follower shaft gears, means for simultaneously moving said jack shaft connected gears and said drive shaft gear for the direct transmission of motion between said drive and follower shafts for the independent rotation of said drive shaft and for the transmission of motion between the said drive and follower shafts through said gears at a reduced speed, and means for locking the drive shaft and its gear together to hold the shifting parts in their several positions.

1,230,662. ELECTRIC-LIGHT SOCKET. ALBERT H. BUCKELEW, New York, N. Y., assignor of one-fourth to V. C. Gilpin and one-fourth to J. E. McAuliffe, Brooklyn, N. Y. Filed Mar. 2, 1917. Serial No. 152,076. (Cl. 173—362.)

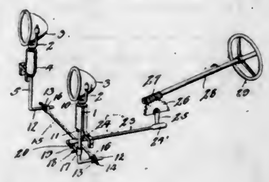
2. In an electric lamp fixture, a lamp socket shell embodying a plurality of spring catches struck therefrom, a supporting cap embodying a rim in which a portion of said shell has a sliding fit, said rim being formed with slots to receive said catches, and rotatable means on said



cap for pressing said catches out of engagement with the slots in said rim.

[Claims 1 and 3 to 6 not printed in the Gazette.]

1,230,663. AUTOMATIC HEAD-LAMP CONTROL. CAREY E. BUNKER, Oregon, Mo. Filed June 6, 1916. Serial No. 102,013. (Cl. 240—62.)

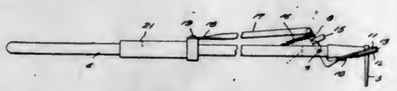


1. The combination with a head lamp, a supporting post for said lamp mounted to turn on a substantially vertical axis, a worm fast on the steering shaft of the vehicle, a worm gear meshing with and actuated by said worm, a tubular shaft on which said worm gear is mounted and by which the steering arm is moved, a second worm gear also meshing with said worm, a shaft for said second worm gear extending through the tubular shaft for the first named worm gear, an arm on the shaft of said second gear, and lamp turning means including an arm on the lamp post, and a connection between the last named arm and the arm on the shaft of the second worm gear.

2. The combination with a pair of head lamps, and substantially vertical posts supporting said lamps and adapted to turn on their longitudinal axes, a worm fast on the steering shaft of the vehicle, a worm gear meshing with and actuated by said worm, a tubular shaft on which said worm gear is mounted and by which the steering arm is moved, a second worm gear also meshing with said worm, a shaft for said second worm gear extending through the tubular shaft of the first named worm gear, an arm on the shaft of said second gear, and lamp turning means including a lamp turning link connected with the last named arm and operatively connected with the lamp posts.

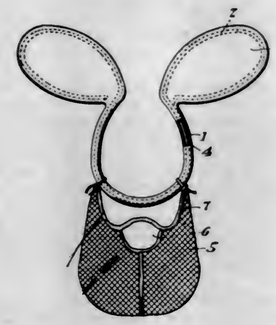
3. The combination with a head lamp, and a lamp supporting post mounted to turn on a substantially vertical axis and provided with a lamp turning arm, of a worm fast on the steering shaft, a pair of countershafts journaled beneath said steering shaft, said countershafts extending out from beneath said steering shaft, and being suitably journaled, gears supported by said countershafts beneath the steering shaft on the same side of the worm and actuated therefrom, actuating arms depending from said countershafts, a connection between one of said arms and the arm of the lamp post, and a connection between the other of said arms and the steering connection of the front wheels, both of said connections being located below the aforesaid countershafts.

1,230,664. RAKE-CLEANER. GEORGE E. BURDETT, Lubec, Me. Filed Aug. 4, 1916. Serial No. 113,173. (Cl. 55—146.)



In a device of the kind described, in combination, a rake head, a handle secured to said head and provided with a slot, a pin spanning said slot, a bell crank lever having one arm fulcrumed between its ends upon said pivot, a stripper plate having a series of relatively large openings through which the teeth of said rake project, a connecting member securing said plate upon the opposite arm of said lever, a slidable gripping sleeve telescoping on said handle, a coiled spring secured at one end upon said handle, inclining forwardly and attached at its free end to the outer end of the fulcrumed arm of said lever in a manner to hold the same diagonally of the length of said handle whereby said stripper plate will be disposed normally at the inner edge of said rake, and a right angularly disposed arm secured on the fulcrumed arm of said lever and serving as a stop and adapted to engage said handle so as to position said plate toward the outer end of said rake.

1,230,665. HERNIA-SUPPORT. WILLIAM BUTTERLY, Liverpool, England. Filed Sept. 4, 1915. Serial No. 48,995. (Cl. 128—26.)



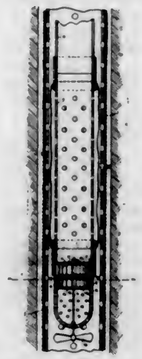
A hernia support comprising a resilient U-shaped frame adapted to snugly receive the scrotum, the ends of the sides of the frame being spaced from each other for a distance which is less than the distance between the intermediate parts of the sides of the frame, the said frame having at the ends of its sides outstanding extremities and pads mounted on the extremities and adapted to bear against the inguinal canal when the support is applied to the scrotum.

1,230,666. CLEANING DEVICE FOR WELLS. DAVID A. CARDEN, Houston, Tex. Filed May 31, 1916. Serial No. 100,748. Renewed May 14, 1917. Serial No. 168,598. (Cl. 166—18.)

1. A device of the character described including a perforated pipe section, a surrounding sleeve formed of flexible material attached at its respective ends to the corresponding ends of said section, and a perforated hood attached to one end of said section.

2. A device of the character described including a perforated pipe section, a surrounding sleeve formed of flexible material attached at its respective ends to the corresponding ends of said section, a perforated hood attached to one end of said section, and a rotatable agitator carried by said hood.

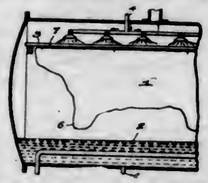
3. A device of the character described including a perforated pipe section, a surrounding sleeve formed of flexible material attached at its respective ends to the corresponding ends of said section, a perforated hood carried



by one end of said section, an agitator, a turbine within the hood and operatively connected with said agitator and rotating the same.

[Claims 4 and 5 not printed in the Gazette.]

1,230,667. PROCESS OF MANUFACTURING OF LEATHER. OMA CARR, New York, N. Y. Filed Nov. 6, 1915. Serial No. 59,927. (Cl. 149—4.)



1. The process of tanning leather herein described, consisting in maintaining a partial vacuum in a tanning chamber containing the prepared hide and a tanning liquor, maintaining circulation of the liquor over the hides without appreciable hydrostatic head thereon and heating the liquor sufficiently to cause intercellular agitation and consequent absorption of the tannin by the hide.

2. The process of tanning leather herein described, consisting in maintaining a partial vacuum in a tanning chamber containing the prepared hide and a tanning liquor, maintaining circulation of the liquor over the hides without appreciable hydrostatic head thereon, and heating the liquor sufficiently to cause intercellular agitation and consequent absorption of the tannin by the hide.

3. The process of tanning leather herein described, consisting in maintaining a partial vacuum in a tanning chamber containing the prepared hide and a tanning liquor, maintaining circulation of the liquor over the hide without appreciable hydrostatic head thereon, heating the liquor sufficiently to cause intercellular agitation and consequent absorption of the tannin by the hide, circulating over the leather so produced and while the same is still hot and wet a waterproofing solution until its absorption by the leather, and then finishing the leather.

4. The process of tanning leather herein described, consisting in maintaining a partial vacuum in a tanning chamber containing the prepared hide and an alkaline tanning liquor, maintaining circulation of the liquor over the hide without appreciable hydrostatic head thereon, and heating the liquor sufficiently to cause intercellular agitation and consequent absorption of the tannin by the hide.



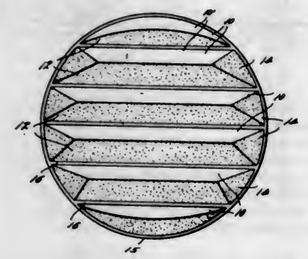
5. The process of tanning leather herein described, consisting in maintaining a partial vacuum in a tanning chamber containing the prepared hide and an alkaline tanning liquor, maintaining circulation of the liquor over the hide without appreciable hydrostatic head thereon, heating the liquor sufficiently to cause intercellular agitation and consequent absorption of the tannin by the hide, acidifying the leather fabric so produced while the same is still wet and hot.

[Claims 6 to 12 not printed in the Gazette.]

1,230,668. PROCESS FOR REMOVING PAINT AND VARNISH. FRED B. CASMIRE, Chanute, Kans. Filed Mar. 28, 1917. Serial No. 157,919. (Cl. 87—5.)

The herein described process for removing paint, varnish or the like from furniture, which consists in immersing the article to be treated in a hot comparatively weak alkali solution, consisting of soda lye, sal soda and water in substantially the proportions of 1 gallon of water, .96 oz. soda lye, 1.70 oz. of sal soda, removing the article after a period of from two to five minutes, removing any traces of remaining varnish or paint, washing the article, and subsequently drying it.

1,230,669. DIMMING HEADLIGHT-LENS. ULYSSES G. CASSADY and LAWRENCE W. GEORGE, Indianapolis, Ind., assignors to Primolite Co., Indianapolis, Ind., a Corporation of Indiana. Filed Apr. 27, 1916. Serial No. 93,828. (Cl. 240—48.4.)



1. A glass lamp face comprising a plurality of transverse clear prismatic portions each having a slanting face, and adjacent interspersed translucent portions, both the prismatic and translucent portions having material lateral extent.

2. A glass lamp face comprising a plurality of transverse clear prismatic portions each having a slanting face, and a plurality of adjacent interspersed oppositely arranged prismatic portions, each having a translucent face.

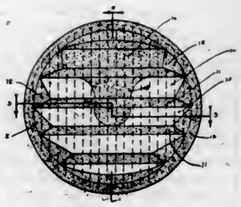
3. A glass lamp face comprising a plurality of transverse clear prismatic portions each having a slanting face, and a plurality of adjacent interspersed oppositely arranged prismatic portions, each having a translucent face, the ends of some of said portions being outwardly beveled.

4. A lamp glass comprising a plurality of transverse clear prismatic portions each having a slanting face, and a plurality of interspersed oppositely placed prismatic portions, one face of each of such last-mentioned portions being ground and translucent.

5. A lamp glass comprising a plurality of transverse clear prismatic portions each having a slanting face, and a plurality of interspersed prismatic portions, one face of each of such last-mentioned portions being ground and translucent.

[Claims 6 to 18 not printed in the Gazette.]

1,230,670. DIMMING-LENS FOR HEADLIGHTS. ULYSSES G. CASSADY, Indianapolis, Ind., assignor to Primolite Co., Indianapolis, Ind., a Corporation of Indiana. Filed Sept. 1, 1916. Serial No. 117,983. (Cl. 240—48.4.)



1. A lamp glass having a clamp edge lying in a substantially vertical plane, and comprising a plurality of horizontally extending prismatic portions having superposed thereon a plurality of vertically extending cylindrical portions, in combination with a source of light behind such lamp glass, and a reflector associated with said source of light and said lamp glass for throwing a substantially parallel-ray beam upon said lamp glass.

2. A lamp glass, comprising a plurality of horizontally extending clear prismatic portions having relatively oblique front and rear faces and having their thin edges upward, and a plurality of light-diffusing portions interspersed with said clear portions, said light-diffusing portions being prismatic with relatively front and rear faces and their thin edges downward, and said clear prismatic portions having superposed thereon a plurality of vertically extending cylindrical portions.

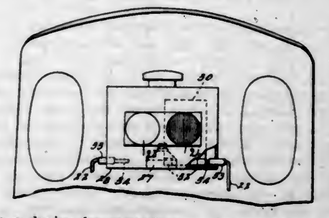
3. A lamp glass, comprising a plurality of horizontally extending clear prismatic portions having relatively oblique front and rear faces and having their thin edges upward, and a plurality of light-diffusing portions interspersed with said clear portions, and said clear prismatic portions having superposed thereon a plurality of vertically extending cylindrical portions.

4. A lamp glass, comprising a plurality of horizontally extending clear prismatic portions having their front and rear faces at an oblique vertical angle to each other, said clear portions being thinner at the top, and a plurality of portions having light-diffusing surfaces, said clear portions being crossed by vertically extending concave flutes.

5. A lamp glass, comprising a plurality of horizontally extending clear prismatic portions having their front and rear faces at an oblique vertical angle to each other, said clear portions being thinner at the top, and a plurality of portions having light-diffusing surfaces, said clear portions being crossed by vertically extending flutes.

[Claims 6 to 18 not printed in the Gazette.]

1,230,671. DEVICE FOR REPEATING ON THE ENGINE THE SIGNALS GIVEN ON THE LINE. CHARLES CHEVALLIER, London, England. Filed Aug. 26, 1914. Serial No. 858,779. (Cl. 246—14.)



1. In a device for repeating on the engine the signals given on the line, the combination comprising trip devices on the line, a lantern having a plurality of windows and

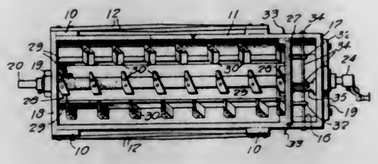
located on the engine, an obturator for said windows, and means actuated by contact with said trip devices for operating said obturator.

3. In a device for repeating on the engine the signals given on the line, the combination comprising trip devices on the line, a lantern located on the engine and provided with a white window and a red window, an obturator slidably mounted to close one or the other of said windows, plungers arranged to operate said obturator, cylinders in which said plungers are disposed, flexible air containers in communication with said cylinders, and means operated by the said trip devices to compress said containers.

8. In a device for repeating on the engine the signals given on the line, the combination comprising a trip member pivoted at one end to the track, a shaft disposed transversely of the track, an arm projecting from said shaft and keyed thereto, a link connecting said arm with the free end of said trip member, a second trip member arranged to be similarly operated by said shaft so as to be in inoperative position when the first trip member is in operative position and vice versa, means to rotate said shaft, and signal indicating means carried by the engine and arranged to be actuated by the said trip members.

[Claims 2, 4 to 7, and 9 not printed in the Gazette.]

1,230,672. MIXER AND PULVERIZER. ROBERT WALL CHRISTIAN, Manchester, N. C. Filed Apr. 21, 1917. Serial No. 163,570. (Cl. 259—45.)



1. A machine of the character described comprising a casing having a semi-circular base provided with a slotted discharge opening adjacent one end, an arch connecting the sides of the casing adjacent the discharge end therof and forming with the base a circular opening, a pulverizing member disposed within said opening, a mixing member in the casing at one side of the arch opposite the feed opening, a shaft on which the mixer is secured extending through the said pulverizer, and journaled through the ends of the casing, and means for rotating said shaft.

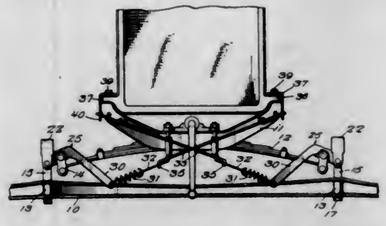
2. A machine of the character described comprising a casing having a lower discharge opening adjacent one end and an otherwise imperforate wall, an internal member transversely thereof adjacent the discharge opening forming a mixing chamber between the same and the opposite end of the casing, a mixing member in said mixing chamber, a pulverizer adjacent the said internal member between the mixer and the feed opening and through which material is forced by said mixer, and means to yieldingly support the said pulverizer in spaced relation to the walls of the casing.

3. In a machine of the character described, a casing having a semi-circular base and an intermediate upper transverse arch forming with the inner surface of the base a circular opening, a stationary pulverizer within the said opening including a central plate, a series of segmental pulverizer plates secured to the said central plate and having outstanding pulverizing arms, means to support said pulverizer with the outer ends of its pulverizing arms in spaced relation to the adjacent portions of the casing, and the said arch, and means at one side of the pulverizer to feed material thereto.

4. In a machine of the character described a casing having a semi-circular base and an intermediate upper transverse arch forming with the inner surface of the base a circular opening, a stationary pulverizer within the said opening including a central plate, a series of segmental pulverizer plates secured to the said central plate and having outstanding pulverizing arms, and means to yieldingly hold said pulverizer in spaced relation to the adjacent portions of the casing and the said arch.

5. In a machine of the character described, a casing having a semi-circular base and an intermediate upper transverse arch forming with the inner surface of the base a circular opening, a stationary pulverizer within the said opening including a central plate, a series of segmental pulverizer plates secured to the said central plate and having outstanding pulverizing arms, means to yieldingly hold said pulverizer in spaced relation to the adjacent portions of the casing and the said arch, said means including vertical and transverse rods intermittently connected to the central plate of the pulverizer and having connection at their outer ends with portions of the casing.

1,230,673. VEHICLE-SPRING. HARVEY E. COBLE, Benton Harbor, Mich. Filed Sept. 18, 1916. Serial No. 120,867. (Cl. 267—19.)



1. A spring suspension for vehicles comprising the combination with a transverse leaf spring, of a hanger mounted on an axle, an arm positioned with one end pivotally connected with said hanger, links connecting an end of the leaf spring with the arm intermediate its ends, a coil spring connected at one end with the other end of the arm, and means connecting the other end of the coil spring with the opposite side of the vehicle frame.

2. A spring suspension for vehicles comprising the combination with a transverse leaf spring, of a hanger mounted on an axle, an arm positioned with one end pivotally connected with said hanger, links connecting an end of the leaf spring with the arm intermediate its ends, a coil spring connected at one end with the outer end of the arm, and longitudinally adjustable means connecting the other end of the coil spring with the opposite side of the vehicle frame.

3. A spring suspension for vehicles comprising the combination with a transverse leaf spring, of a hanger projecting upwardly from the axle, an arm pivotally connected at its outer end to the hanger, links connecting an end of the leaf spring to the arm adjacent its outer end, the inner end of the arm being bifurcated to straddle the leaf spring, and a coil spring connected to each of the bifurcated ends of the arm and to the opposite side of the vehicle body.

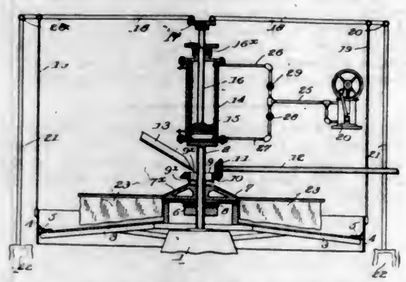
4. A spring suspension for vehicles comprising the combination with a transverse leaf spring, of a hanger mounted on an axle, an arm positioned with its outer end pivotally connected with said hanger, links connecting an end of the leaf spring with the arm intermediate its ends, a coil spring connected at one end with the inner end of the arm, and means for securing the other end of the spring to the opposite side of the vehicle frame comprising a rod and plate, said plate having a series of perforations and an upturned perforated end portion through which the rod passes, the end of the rod being hook-shaped for engagement with any one of said perforations.



5. A spring suspension for vehicles comprising the combination with a pair of relatively movable members, of a leaf spring carried by one member, a hanger carried by the other member, an arm slidably connected at one end with the hanger, a coil spring interposed between the hanger and said arm, links pivotally connecting an end of the leaf spring with the arm intermediate its ends, and a coil spring connected at one end to the free end of the arm and at its other end to the leaf spring carrying member.

[Claims 6 to 9 not printed in the Gazette.]

1,230,674. ORE-SEPARATOR. EPHIE COHEN, Joplin, Mo. Filed Sept. 27, 1913. Serial No. 792,167. (Cl. 83—89.)



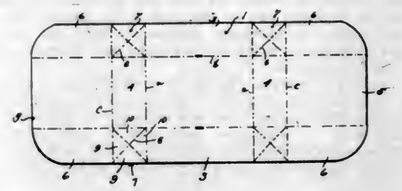
1. In an ore separator, a conical shaped table, means for feeding ore to said table near the center thereof, a vertically extending rim around said table, said rim being movable with respect to said table, a series of vertically extending rods secured to said rim, means for moving each of said rods vertically simultaneously and to the same extent, thereby causing the movement of the rim with respect to the table, said last named means comprising a series of uprights disposed around the table and outside the edges thereof, a series of levers pivotally connected with the upper ends of said uprights and with said vertically extending rods, and a common movable member pivotally secured to the inner ends of said levers, and hydraulic means for operating said last named movable member.

2. In an ore separator, a conical shaped table, means for feeding ore to said table near the center thereof, a vertically extending rim around said table, said rim being movable with respect to said table, a series of vertically extending rods secured to said rim, means for moving each of said rods vertically simultaneously and to the same extent, thereby causing the movement of the rim with respect to the table, said last named means comprising a series of uprights disposed around the table and outside the edges thereof, a series of levers pivotally connected with the upper ends of said uprights and with said vertically extending rods, a common movable member pivotally secured to the inner ends of said levers, hydraulic means for operating said last named movable member, said hydraulic means comprising a cylinder, a piston therein, means for introducing liquid into the cylinder on either side of said piston, and a piston stem connected with said movable member.

3. In an ore separator, a base, a central column supported by said base, a cylinder mounted on said column, a piston in said cylinder, a conical table, a drum arranged to revolve about said central column, brushes carried by said drum and adapted to sweep over said table, a vertically movable rim in contact with the edge of the table, and means connected with the piston for raising and lowering said rim and for maintaining the various positions of the rim in parallelism.

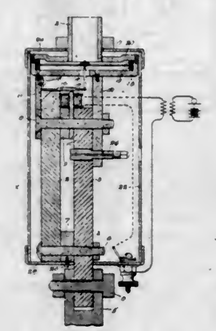
4. In an ore separator, a base, a central column supported by said base, a cylinder mounted on said column, a piston in said cylinder, a conical table, a drum arranged to revolve about said central column, brushes carried by said drum and adapted to sweep over said table, a vertically movable rim in contact with the edge of the table, a plurality of radially extending levers pivotally connected with the piston rod, and downwardly extending links connected to said levers at one end and to said rim at the other end.

1,230,675. FOLDING BOX. HARRY E. COLE, Akron, Ohio. Filed Aug. 11, 1915, Serial No. 45,002. Renewed May 2, 1917. Serial No. 166,051. (Cl. 229—31.)



A folding box comprising a bottom, sides and ends hingedly connected to the bottom, covers similarly connected to the ends, flaps hinged to the sides of the covers, gussets connecting the ends of the sides and adjacent ends of the flaps, said gussets being scored diagonally to provide four equal triangular shaped sections, said sections being adapted to fold one within the other when the covers and flaps are in overlapping relation, and the box is in its set-up position.

1,230,676. SOUND-REPRODUCER. JOHN J. COMER, Chicago, Ill., assignor to Automatic Enunciator Company, Chicago, Ill., a Corporation of Illinois. Filed July 24, 1914. Serial No. 852,962. (Cl. 179—108.)



1. In an electrical reproducer a permanent magnet having two limbs bolted in parallel, one of which limbs sets higher than the other, and also one of said limbs having at one end a soft iron pole piece extending flush with one end of the higher limb and an electromagnet located thereon, the other end of said limb being perforated for mounting the instrument, a diaphragm mounted upon supports resting upon both said magnet members, and an armature for said magnet one end resting on the higher limb and the other end supported by the diaphragm directly, said instrument inclosed in a case, the lower limb being located within, and coinciding with the longitudinal axis of the casing but with the perforated end projecting through the end of the casing, the higher limb of said magnet being wholly contained within said casing.

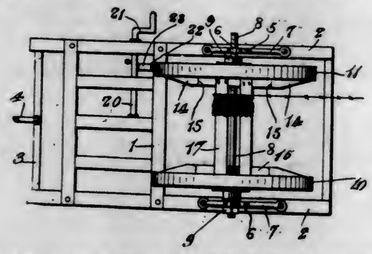
2. In an electrical reproducer a permanent magnet having two members bolted in parallel, one of which members sets higher than the other, and also one of said limbs having at one end a soft iron pole piece extending flush with one end of the higher magnet member, and an electromagnet located thereon, the other end of said member being perforated for mounting the instrument, an armature for said magnet one end resting on the higher end of the higher member and a diaphragm mounted upon supports resting upon both said magnet members, said magnet inclosed in a case the lower magnet being located with its longitudinal axis coinciding with the longitudinal axis of the casing but with the perforated end projecting over the end of the casing, the higher limb of said magnet being wholly contained within said casing, and a magnetic shunt for deflecting the magnetic field from the armature.

3. In an electrical reproducer a magnet, an armature, a magnetic field acting upon said armature a tension producing means acting upon said armature in opposition to said field, a diaphragm controlled by said armature through the medium of a link and a joint, said joint cemented together by non-metallic flexible material to avoid rattling.

4. In an electric reproducer a magnet, an armature, a magnetic field acting upon said armature a tension producing means acting upon said armature in opposition to said field, a diaphragm controlled by said armature through the medium of a link and a joint, said joint cemented by non-metallic flexible material to avoid rattling, and a magnetic shunt for varying the magnetic pull of the armature on the diaphragm.

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1,230,677. WIRE-REEL. JACOB L. CORLEY, Alma, Mo. Filed May 19, 1914. Serial No. 839,561. (Cl. 242—90.)



In a wire reel, a supporting frame, a pair of supporting brackets secured to and extending upwardly from said frame, a shaft extending horizontally across said frame and removably journaled in said brackets, a hand power wheel removably mounted on said shaft adjacent each end thereof, each wheel provided with four spokes radiating from the central axis of the wheels and arranged at right angles to each other, each of said spokes having a lug on its inner face forming an abutting surface facing the central axis of the wheel and equally spaced therefrom, said abutting face of the lugs adapted to engage the end of a cross piece formed on the opposite ends of an ordinary spool when said spool is mounted on the shaft and located between the wheels and so clamped between the wheels as to cause the spool to be rotated with the rotation of the wheels, and means carried by the frame and adapted to be moved into engagement with the periphery of one of the wheels to retard the rotation of the wheels and spool.

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1,230,678. RACK. FORREST L. COWAN, Beaver, Pa. Filed July 25, 1916. Serial No. 111,211. (Cl. 248—24.)

1. A garment rack comprising a rod, a bearing for supporting said rod constructed to have a supporting surface for said rod and a sloping surface for guiding said rod to an inactive position when moved to one side of the supporting surface, and a spring acting upon said rod for moving the same along the sloping surface.

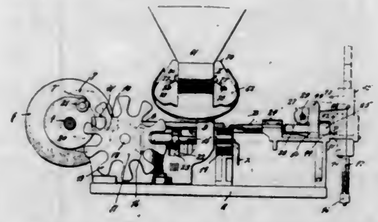
2. A garment rack comprising a rod, a bearing for supporting said rod constructed to have a supporting surface for said rod, a sloping surface for guiding said rod to an inactive position when moved to one side of the supporting surface, a spring acting upon said rod for moving the same along the sloping surface or to hold said rod in tight contact with said supporting surface.



3. A garment rack comprising a rod, a bearing, a pin mounted in said bearing and supporting the rod for swinging movement, a spring encircling said pin and acting upon said rod, said bearing being provided with inclined surfaces coöperating with the action of said spring for automatically moving the rod to an inactive position.

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1,230,679. NUT-CRACKING MACHINE. HENRY D. CRAWFORD, St. Louis, Mo., assignor to R. E. Funsten Dried Fruit & Nut Company, a Corporation of Missouri. Filed May 4, 1916. Serial No. 95,349. (Cl. 146—3.)



1. In a nut cracking machine, cracking members adapted to engage the nuts, and a selective compensating device including a plurality of compensating elements adapted to hold one of said cracking members to the nut to be cracked, said compensating elements being of different widths and movable independently of each other so that any one of them may be selected and automatically located in an operative position.

2. In a nut cracking machine, a cracking member, and a compensating device including independently movable wedges for holding said cracking member to the nut to be cracked.

3. In a nut cracking machine, cracking members adapted to engage the nuts, and a selective compensating device including a plurality of compensating wedges of different widths adapted to hold one of said cracking members to the nut to be cracked, said compensating wedges being movable independently of each other so that any one of the different wedges may be selected automatically and located in an operative position.

4. In a nut cracking machine, cracking members adapted to engage the nuts, and a selective compensating device including a plurality of compensating wedges of different widths adapted to hold one of said cracking members to the nut to be cracked, said compensating wedges being of different widths, and means for supporting said compensating wedges in their normal or starting positions, the different compensating wedges being movable independently of each other in response to movements of said means so that any one of the different wedges may be selected and stopped automatically when it reaches an operative position.

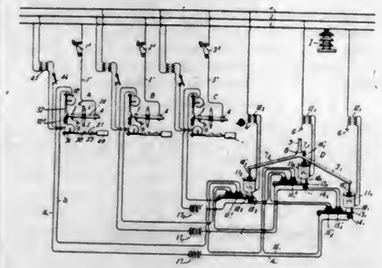
5. In a nut cracking machine, a cracking plunger, and a compensating device including independently movable wedges adapted to retain said cracking plunger in different operative positions, said wedges being different from each other, a support for holding said wedges in their normal or starting positions, means for actuating said support to permit the wedges to drop by gravity, and restraining means associated with said wedges and cracking member to retain the widest wedge in an ineffective position after the wedges have been released from said support.

[Claims 6 and 7 not printed in the Gazette.]



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1,230,680. PROTECTION OF TRANSMISSION SYSTEMS. ELMER E. F. CREIGHTON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 29, 1909. Serial No. 492,846. (Cl. 175—294. (Cl. 175—294.)



1. The method of protecting an electric system from high voltage stresses due to an intermittent connection between said system and ground consisting in causing a current to flow upon such connection and actuate a device making a solid connection between the system and ground for a predetermined time and then breaking the solid connection.

2. The method of protecting an electric transmission system from high voltage stresses due to an intermittent connection between a conductor of the system and ground, consisting in causing a current to flow upon such a connection and actuate a device making a solid connection between the conductor and ground for a predetermined time and then breaking the solid connection.

3. The method of protecting an electric system from high voltage stresses due to an intermittent connection between a conductor of the system and ground consisting in making a solid connection between the conductor and ground for a predetermined time, opening the connection, and remaking it if the conductor is still connected to ground.

4. The method of protecting an electric system from high voltage stresses due to an intermittent connection between a conductor of the system and ground consisting in making a permanent connection between the conductor and ground for a predetermined period, automatically opening such connection at the end of the period and automatically remaking it if a connection between the conductor and ground still exists.

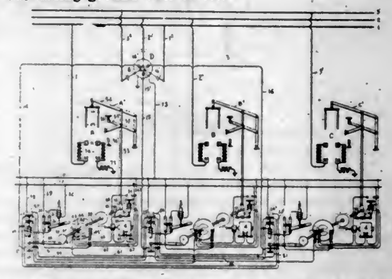
5. In combination, an electric transmission system, means for grounding said system and opening said ground automatically thereafter, and means responsive to unbalancing of said system controlling said grounding means.

[Claims 6 to 46 not printed in the Gazette.]

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1,230,681. PROTECTION OF TRANSMISSION SYSTEMS. ELMER E. F. CREIGHTON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 15, 1910. Serial No. 597,405. (Cl. 175—294.)

1. In combination, an electric transmission system, means operative upon an arcing ground upon said system, a motor set into operation by said means, a switch actuated by said motor for grounding said system, a resistance in series with said switch, control circuits for said motor, and means in operative relation with said circuits causing said motor to close said switch momentarily through a comparatively high resistance, then short circuiting a greater portion of said resistance for a predetermined time, opening said switch, and finally closing said switch through the smaller portion of said resistance if the arcing ground still exists.



2. In combination, an electric motor, a driving shaft in operative relation therewith, a switch actuated by said shaft, control circuits for said motor, and means in operative relation with said circuits causing said motor to close said switch, open it, and permanently reclose it after a predetermined period.

3. In combination, an electric motor, a driving shaft in operative relation therewith, a switch actuated by said shaft, control circuits for said motor, means in operative relation with said circuits causing said motor to close said switch, open it and reclose it, and means to prevent the motor from reopening the switch.

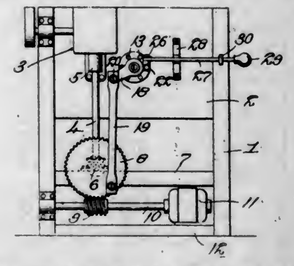
4. In combination, an electric motor, a driving shaft in operative relation therewith, a switch actuated by said shaft, control circuits for said motor, electromagnets having contacts in said circuits, means for operating said magnets, stationary contacts, movable contacts in operative relation therewith actuated by said shaft causing said motor to close said switch open it and permanently reclose it.

5. In combination, an electric motor, a driving shaft, an electromagnetic clutch in operative relation with said shaft and said motor, a switch actuated by said shaft, control circuits for said motor and said clutch, electromagnets having contacts in said circuits, means for operating said magnets, stationary contacts, movable contacts in operative relation therewith actuated by said shaft causing said motor to close said switch open it and reclose it, and means preventing said motor from reopening said switch.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,682. DRIVING MECHANISM. CYRUS A. CURTIS, Benton Harbor, Mich. Filed Oct. 11, 1916. Serial No. 125,019. (Cl. 74—14.)



2. The combination with a driving shaft and a driven shaft, of a drive gear actuated by the drive shaft, a

crank arm loosely mounted upon the driven shaft, a pitman connecting said drive gear and said crank arm, a clutch sleeve slidable upon the driven shaft, key pins actuated by said clutch sleeve to lock the driven shaft to the crank arm, and means for actuating the sleeve.

[Claim 1 not printed in the Gazette.]

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1,230,683. DEVICE FOR CLEANING TEETH. JOHN A. DALY, New Rochelle, N. Y. Filed Nov. 6, 1916. Serial No. 129,748. (Cl. 15—39.)



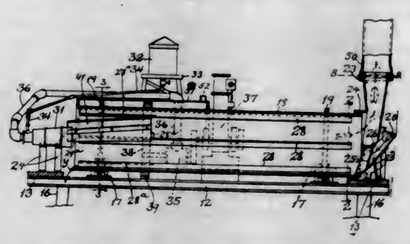
1. In a device for cleaning the teeth, the combination with a finger cot provided with a plurality of teeth cleaning projections extending therefrom, of a second cot adapted to incase said first named cot and to be held thereon by said projections.

2. In a device for cleaning the teeth, the combination with a finger cot having a plurality of teeth cleaning projections thereon, of a second cot adapted to incase said first named cot, the projections of said first named cot passing through interstices in the second named cot to hold the same in position.

3. In a device for cleaning teeth, the combination of an elastic finger cot adapted to incase the end of a finger and provided on one side with a plurality of corrugations to reduce the pressure upon the finger and having on its outer surface a plurality of teeth cleaning projections extending therefrom and a second cot of textile material adapted to incase said first named cot and be held in place by said projections.

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1,230,684. DRIER FOR SAND, GRAVEL, &c. WILLIAM H. DANCE, Cambridge, Mass., assignor to The Dyar Supply Company, Cambridge, Mass., a Corporation of Massachusetts. Filed Dec. 21, 1916. Serial No. 138,171. (Cl. 263—32.)



1. A drier of the character stated, comprising an open-ended drum mounted to rotate on an inclined axis and having internal means for alternately raising and releasing loose material therein, means for feeding loose material into the higher end of the drum, a fixed burner arranged to project a flame into the lower end of the drum and toward the higher end, and a fixed heat-conducting bed projecting into the lower end portion of the drum, interposed between the burner flame and the top of the drum and arranged to be heated by the flame, said bed being inclined laterally to guide dropping material across the flame without contact therewith and discharge said material upon the bottom of the drum.

2. A drier of the character stated, comprising an open-ended drum mounted to rotate on an inclined axis and having internal longitudinally extending wings adapted to alternately raise and release loose material in the drum, means for feeding loose material into the higher end of the drum, a fixed burner arranged to project a flame into the lower end of the drum and toward the higher end, and a fixed heat-conducting bed projecting into the lower end portion of the drum, interposed between the burner flame and the top of the drum and arranged to be heated by the flame, said bed being inclined laterally to guide dropping material across the flame without contact therewith and discharge said material upon the bottom of the drum, portions of said wings being adapted to raise relatively shallow masses of material to a minimum height, while other portions of said wings, in the end portion of the drum, which surrounds the bed, are provided with extensions forming buckets adapted to raise deeper masses of material to a maximum height and distribute said masses upon the bed.

10. A drier of the character stated, comprising an inclined drum having internal projections on its walls, a stack arranged to receive the higher end of the drum and provided above the drum with an outlet for water of condensation, means for heating the interior of the drum, and means for admitting loose material to the drum below the stack, said outlet preventing water descending from the stack from moistening said material.

[Claims 3 to 9 not printed in the Gazette.]

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1,230,685. GARMENT-SUPPORTER. ELLEN DE LONG, Chicago, Ill. Filed June 23, 1913. Serial No. 775,290. (Cl. 24—245.)



1. A garment support comprising a substantially flat member having a semicircular end and a laterally projecting wall at the margin of said semi-circular portion arranged to form a pocket at the end of said member, and a semi-circular part adapted to enter said pocket and coöperate with the walls thereof to engage a garment and means for retaining said member and part in coöperating position.

2. A garment support comprising a substantially flat member having a semi-circular end and a laterally projecting wall at the margin of said semicircular portion arranged to form a pocket of substantially uniform width the entire width of said member, and a semi-circular part adapted to enter said pocket and coöperate with the walls thereof to engage a garment and means for retaining said member and part in coöperating position.

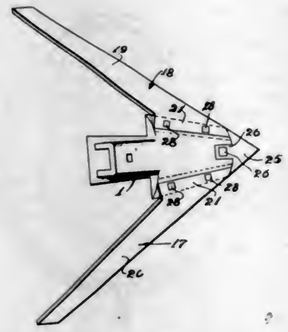
3. A garment support comprising a substantially flat member having a semicircular end and a laterally projecting wall at the margin of said semi-circular portion arranged to form a pocket at the end of said member, and a semi-circular part adapted to enter said pocket and coöperate with the walls thereof, to engage a garment and a resilient catch for retaining said member and part in coöperating position.

4. A garment support comprising a substantially flat member having a semi-circular end and a laterally projecting wall along the entire margin of said semi-circular portion arranged to form a pocket of substantially uniform width at one end of said member, and a resilient tongue near the opposite end, and a semi-circular part adapted to enter said pocket and coöperate with the walls thereof to engage a garment, means coöperating with said tongue for retaining said member and part in coöperating position, and a flexible supporting band extending through said member and engaging said apart adapted to normally hold said member and part in coöperating position.

5. A garment support comprising a substantially flat member having a semicircular end and a laterally projecting wall at the margin of said semi-circular portion arranged to form a semi-circular pocket the full width of said member, and a semi-circular part adapted to enter said pocket and coöperate with the walls thereof to engage a garment, and a flexible supporting band extending through the central portion of said member and engaging said part intermediate its ends adapted to normally hold said member and part in coöperating position.



1,230,686. SWEEP SHOE AND BLADE. JESSIE EARVIN DIXON, Andalusia, Ala. Filed May 12, 1915. Serial No. 27,575. (Cl. 97—9.)

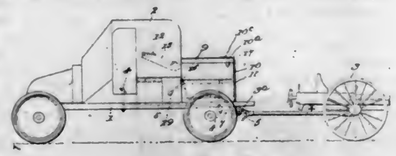


1. In a sweep structure, the combination of a body, a pair of longitudinally extending lateral projections formed upon the sides of said body and having their upper surfaces positioned at an obtuse angle to the sides of the body, projections formed along the upper edges of said body and overlying the first named projections, the under surfaces of said last named projections disposed at angles to and intersecting the upper surface of said first named projection for forming angular pockets between the projections, sweep blades, the inner ends of said sweep blades being shaped to snugly fit within said pockets, and means carried by said sweep blades for detachably connecting them to said first named projections.

[Claim 2 not printed in the Gazette.]

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1,230,687. AUTO-LIMBER. LOUIS L. DRIGGS, New York, N. Y. Filed July 26, 1916. Serial No. 111,515. (Cl. 89—40.)



1. In an auto-limber, the combination with a chassis and an armored body carried thereby, of an ammunition chest carried by said armored body, a hinged door normally closing one end of said ammunition chest, said door being adapted when in the lowered position to form a slideway for the ammunition boxes, and means operable from the interior of said armored body for raising and lowering said door, substantially as described.

2. In an auto-limber, the combination with a chassis and an armored body carried thereby, of an ammunition chest carried by said armored body, a hinged door normally closing one end of said ammunition chest, props hinged to the sides of said door, said props serving as supports for said door when in the lowered position, and means operable from the interior of said armored body for raising and lowering said door, substantially as described.

3. In an auto-limber, the combination with a chassis, and a platform mounted thereon, of an ammunition chest carried by said platform at the rear end thereof, a hinged door normally closing the rear end of said ammunition chest, a flap hinged to the upper end of said door, and adapted to close part of the top of said chest, props hinged to the sides of said door, said props serving as supports for said door, when lowered to the substantially horizontal position, and also as supports for said door and flap when in the lowered position, said door and flap being adapted when in the lowered position to form a slideway for the ammunition boxes, with means for raising and lowering said door, substantially as described.

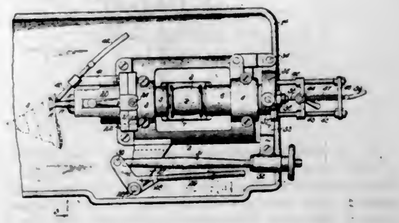
4. In an auto-limber, the combination with a chassis and a platform mounted thereon, of an ammunition chest carried by said platform at the rear end thereof, antifriction rollers mounted in the base of said ammunition chest, and supporting the ammunition boxes resting thereon, means operable from the interior of the limber for pushing said ammunition boxes rearward in said chest, a hinged door normally closing the rear end of said ammunition chest, said door being adapted when in the lowered position to form a slideway for the ammunition boxes with means for raising and lowering said door, substantially as described.

5. In an auto-limber, the combination with a chassis, and a platform mounted thereon, of an ammunition chest carried by said platform at the rear end thereof, antifriction rollers mounted in the base of said ammunition chest, and supporting the ammunition boxes resting thereon, means operable from the interior of the limber for pushing said ammunition boxes rearward in said chest, a hinged door normally closing the rear end of said ammunition chest, a flap hinged to the upper end of said door, and adapted to close part of the top of said chest, props hinged to the sides of said door, said props serving as supports for said door, when lowered to the substantially horizontal position and also as supports for said door and flap when in the lowered position, said door and flap being adapted when in the lowered position to form a slideway for the ammunition boxes, with means for raising and lowering said door, substantially as described.

[Claims 6 to 23 not printed in the Gazette.]

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1,230,688. BUTTON-CUTTING LATHE. PAUL F. DUSHA and ANTON FEYK, New York, N. Y., assignors to Holub-Dusha Company, New York, N. Y., a Corporation of New York. Filed Aug. 26, 1916. Serial No. 116,979. (Cl. 79—16.)



1. A machine of the class described comprising a bed, a fixed frame thereon having alining bearings, a carriage having spaced tubular members slidable respectively axially of and in the bearings, a rotatable pulley-carrying spindle mounted in the tubular members of the carriage, a driving means on the spindle and disposed between the tubular members of the carriage, and means connected with the carriage for longitudinally moving the same.

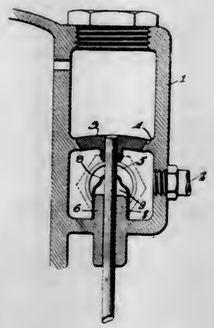
2. A machine of the class described comprising a bed, a fixed frame thereon having alining bearings, a carriage having spaced tubular members slidable respectively axially of and in the bearings, a rotatable pulley-carrying spindle mounted in the tubular members of the carriage, a driving means on the spindle and disposed between the tubular members of the carriage, a lever fulcrumed on the frame and operatively connected with the carriage for longitudinally moving the same, and an operating lever having an adjustable connection with the first-mentioned lever.

3. A machine of the class described comprising a bed, a frame mounted thereon and having spaced bearings, a carriage having spaced tubular portions disposed in the respective bearings and also having a portion lying between and connecting the tubular portions, a tool-carrying spindle extending axially of and in the tubular portions of the carriage, bearings rotatably mounting the spindle in the said tubular portions, a thrust bearing in one of the tubular portions, a pulley on the portion of the spindle between the said tubular portions of the carriage, and means connected with the carriage for longitudinally moving the same.

4. The combination of a bed, a fixed frame thereon having bearings, a carriage slidable longitudinally of and in the bearings, a spindle rotatably mounted in and movable longitudinally with the carriage, said spindle being hollow, a work-engaging element extending longitudinally of the spindle, means connected with the carriage for actuating the same, parallel members extending from one end of the carriage and parallel with the axis thereof and lying at opposite sides of the work-engaging element, a cross-piece connected with the members and through which the element extends, a spring interposed between the cross-pieces, and means for clamping the second-mentioned cross-piece with the work-engaging element.

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1,230,689. VALVE-STEM HOOD FOR INTERNAL-COMBUSTION ENGINES. FRANK GEORGE DAHLGREN, Mobile, Ala., assignor of one-half to Charles H. Reuter, Mobile, Ala. Filed Jan. 2, 1917. Serial No. 140,275. (Cl. 123—188.)



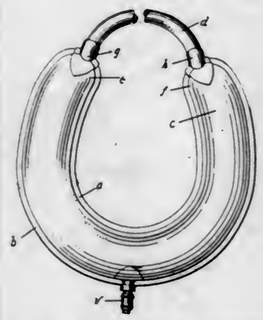
In an internal combustion engine the combination with a valve stem and its bushing, of a hood comprising a substantially cylindrical portion having a reduced upper extremity, the said cylindrical portion being designed to loosely surround the bushing while the said upper extremity is adapted to snugly fit the valve stem and prevent the entrance of raw gas therebeyond.

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1,230,690. PNEUMATIC CUSHION. ANTON C. EGGERS, Brooklyn, N. Y., assignor to The Goodyear's India Rubber Glove Manufacturing Company, a Corporation of Connecticut. Filed Aug. 10, 1915. Serial No. 44,816. (Cl. 5—15.)

1. A pneumatic cushion comprising an inflatable load supporting seat part having a comparatively large opening through the interior thereof, and a restricted part of substantially inflexible material spanning the front to overcome spreading and to give continuity to the seat, said restricted part being directed forwardly toward its center to provide leverage therefor to permit said part to be turned downwardly when the seat is supporting the load.

2. A pneumatic cushion comprising a horse-shoe shaped seat portion of limp flexible material and an arched relatively stiff connecting element of reduced cross-section connecting the ends thereof and adapted to retain said seat portion in its normal form under internal fluid pressure.

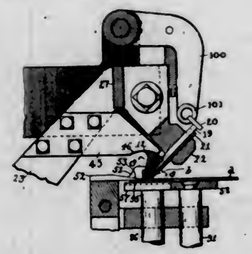


3. A pneumatic cushion comprising a horse-shoe shaped seat portion of limp flexible material and an arched relatively stiff element of relatively smaller cross-sectional area connecting the ends of said seat portion, said connecting element being adapted to be displaced upwardly or downwardly out of the central plane of said seat portion.

4. A pneumatic cushion consisting of an oval shaped air member, that part of said member forming the front of the cushion being uninflatable and of relatively smaller area in cross-section than the parts constituting the sides and rear and forming a forwardly extending reduced portion of the central opening through the cushion.

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1,230,691. CRIMPING OR CORRUGATING MACHINE. ANALDO M. ENGLISH, Brookline, and HOWARD W. GIBBS, Boston, Mass., assignors to J. Spaulding & Sons Co., Rochester, N. H., a Copartnership comprising Marion L. Spaulding, Boston, Mass., Roland H. Spaulding and Huntley N. Spaulding, Rochester, N. H., and Leon C. Spaulding, Buffalo, N. Y. Filed Nov. 15, 1915. Serial No. 61,504. (Cl. 12—30.)



1. In a machine of the character described, in combination, crimping tools constructed and arranged for transversely crimping the lip of an insole, one of said tools oscillating toward and from the other in an arc of substantially small radius to permit the center of oscillation to be located in proximity to the coöperating crimping tool.

2. In a machine of the character described, in combination, crimping tools constructed and arranged for transversely crimping the lip of an insole, one of said tools oscillating toward and from the other, and a presser device arranged with relation to the crimping tools to engage a crimped portion of the lip after it has been crimped by said tools.

6. In a machine of the character described, in combination, a stationary gripping jaw to engage the feather of an insole, a gage attached to said gripping jaw and provided with a finger to limit the upward movement of the lip of the insole, and a movable gripping jaw coöperating with said stationary jaw to firmly grip the feather of the insole between them.

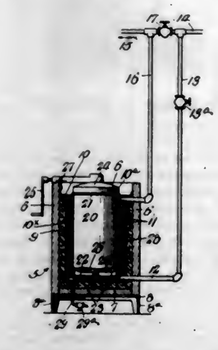
7. In a machine of the character described, in combination, crimping tools constructed and arranged to transversely crimp the lip of an insole, gripping jaws to engage the insole, and means for limiting the height of the lip to enable the insole to be provided with a crimped lip of substantially uniform height throughout its length.

[Claims 3 to 5 and 8 to 14 not printed in the Gazette.]



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1,230,692. ICE-CREAM FREEZER. MALCOLM F. EWEN and ARTHUR L. S. MCCURDY, Chicago, Ill., assignors to Larsen Ice Machine Company (Inc.), Wilmington, Del., a Corporation of Delaware. Filed May 18, 1914. Serial No. 839,206. (Cl. 62—95.)



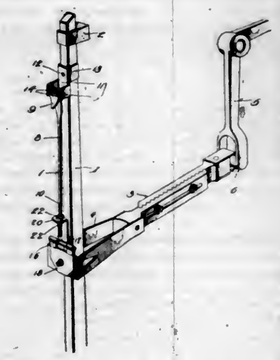
An ice cream freezer for use with refrigerating apparatus, comprising an insulated container, means providing an expansion jacket chamber within said container, a can removably supported in said container within said expansion chamber, said container and said can by their side and bottom walls defining a space about the sides and bottom of said can adapted to receive a sufficient quantity of liquid to form a thin film or seal between said expansion chamber and said can, a plate having an opening for the insertion of the can, fixed to the top of said container and forming the top wall for said jacket chamber, said can being adappted to close the opening in said plate, inlet and outlet conduits connected to said expansion chamber, and means for controlling the flow therethrough.

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1,230,693. LUG-STRAP SUPPORT FOR LOOMS. CHARLES FABER, Bridgewater, Mass. Filed Dec. 1, 1916. Serial No. 134,364. (Cl. 139—48.)

1. A strap holder for picker sticks comprising a coupling member having a spring hook at one end thereof, a picker stick connection for said member formed from a flat plate adapted to be secured to one side of the picker stick, oppositely bent angular upper and lower portions on said plate, the upper portion engaging opposite sides of the picker stick, a horizontally extending pivot bar positioned through the lower portion of said plate and adapted to receive the spring hook on the end of the coupling member, means for pivotally and detachably connecting the opposite end of said member to a lug strap, and said member being longitudinally adjustable.

3. A strap holder for picker sticks comprising a rod having one end pivotally and detachably connected to the picker stick, external screw threads on the opposite end of the rod, a flat strap having one end pivotally and detachably connected with a lug strap, a lateral extension on the other end of said strap, said extension having an opening through which the threaded end of the rod is adapted to be slidably positioned, and locking nuts on the rod on opposite sides of the extension, whereby the strap

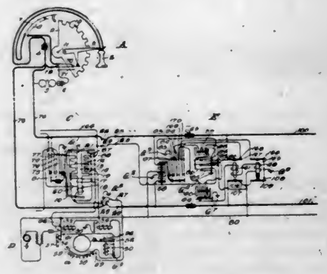


may be locked at various longitudinally adjusted positions on said rod.

[Claim 2 not printed in the Gazette.]

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1,230,694. TWO-WIRE TO THREE-WIRE TELEPHONE SYSTEM. EDWARD D. FALES, La Grange, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 16, 1910. Serial No. 555,890. (Cl. 179—18.)



1. In a telephone system, a calling line, a pair of talking conductors individual thereto, a first selector adapted to operate in accordance with the first digit of any called number, a line leading to said first selector, a repeater for controlling said selector by grounding first one side of said line and then the other, a non-numerical trunking switch for automatically finding said repeater, and a circuit including said talking conductors in series for controlling said repeater.

2. In a telephone system, a calling line, a pair of talking conductors individual thereto, a series of selectors adapted to operate successively in accordance with successive digits of any called number, a connector adapted to operate in accordance with the last two digits of any called number, lines leading to said selectors and connector, a repeater for controlling said selectors and connector by grounding first one side of said lines and then the other, a non-numerical trunking switch for automatically finding the said repeater, and a circuit including said talking conductors in series for controlling said repeater.

3. In a telephone system, a calling line, a pair of talking conductors individual thereto, a plurality of first

selectors each adapted to operate in accordance with the first digit of any called number, lines leading to said first selectors, a non-numerical trunking mechanism for finding idle first selectors, repeaters interposed between the said mechanism and the first selectors for controlling the selector by grounding first one side of said lines and then the other, and circuits including said talking conductors in series for controlling said mechanism and repeaters.

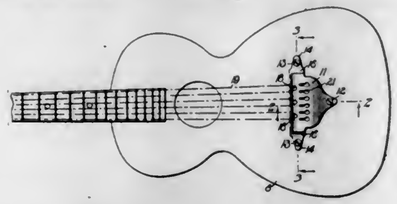
4. In a telephone system, a calling line, a pair of talking conductors individual thereto, a first selector adapted to operate in accordance with the first digit of any called number, a line leading to said selector, a repeater for controlling said selector by grounding one side of said line and then the other, a circuit including said talking conductors in series for controlling said repeater, a non-numerical trunking switch for automatically finding said repeater, and a central source of operating and talking current.

5. In a telephone system, a calling line, a pair of talking conductors individual thereto, a plurality of first selectors each adapted to operate in accordance with the first digit of any called number, lines leading to said selectors, a non-numerical trunking mechanism for finding idle first selectors, repeaters interposed between the said mechanism and the first selectors for controlling said selectors by grounding first one side of said lines and then the other, circuits including said talking conductors in series for controlling said mechanism and repeaters, and a central source of operating and talking current.

[Claim 6 not printed in the Gazette.]

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1,230,695. GUITAR-BRIDGE. ALBERT FICKERT, Brooklyn, N. Y. Filed Oct. 23, 1916. Serial No. 127,147. (Cl. 84—132.)



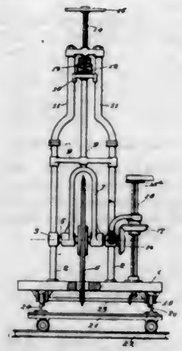
A guitar bridge comprising a solid wall, and an apron integrally formed therewith and extended rearwardly therefrom, the forward end of said apron being joined with said solid wall above the lower bearing edge thereof and the rear end of said apron being depressed to a level with said bearing edge, said apron having formed therein a series of holes for the knotted ends of strings, said apron being further provided with lateral extensions, the outer ends of said extensions being depressed to a level with the lower edge of said bridge for forming a hollow chamber.

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1,230,696. STONE-CUTTING MACHINE. LEONARDO FILOTICO, Mandurla, Italy. Filed Jan. 15, 1916. Serial No. 72,349. (Cl. 125—18.)

1. In a stone cutting machine, the combination of a base, standards extending upwardly from the base, a vertically adjustable carriage mounted on the standards, a horizontal shaft mounted in the carriage, a cutting disk fixed to the shaft and projecting through a slot formed in the base, means for rotating the shaft, a stem extending centrally from the carriage, a cross head mounted on and in alinement with the stem and engaging the standards, an adjusting screw in alinement with the stem, a spring interposed between the screw and the cross head, and means for feeding the base over the work.

2. In a stone cutting machine, the combination of a base, standards on the base, a carriage mounted on the standards, a cutting disk carried by the carriage, means for rotating the cutting disk, a tension device mounted on the standards acting to force the cutting disk toward the work, a manually operable screw coöperating with the tensioning device to maintain tension on the disk as it cuts into the work.



3. In a stone cutting machine, the combination of a base, standards mounted on the base, a carriage mounted on the standards, a horizontal shaft mounted in the carriage, a cutting disk mounted on the horizontal shaft, a gear on the horizontal shaft, a vertical rotative shaft, a gear splined to the vertical shaft and meshing with the first mentioned gear, whereby to rotate the cutting disk, a stem extending centrally from the carriage, a cross head on the stem and engaging the standards, an adjusting screw in alinement with the stem at the top of the standards, and a spring interposed between the adjusting screw and the cross head to create tension on the cutting disk.

4. In a stone cutting machine, the combination of a movable truck, tracks arranged transversely of the truck, a base, a shaft on the base, wheels on the shaft and operating on the track, a gear wheel on the shaft, a vertical shaft on the base, a gear wheel on the latter shaft which meshes with the gear wheel on the first mentioned shaft, standards on the base, a carriage mounted on the standards, a horizontal shaft mounted in the carriage and carrying a disk, a beveled gear wheel on the horizontal shaft, a beveled gear wheel on the vertical shaft which meshes with the beveled gear wheel on the horizontal shaft, a stem extending centrally from the carriage, and manually operated means engaging the stem to place the cutting disk under yielding tension while operating on the work.

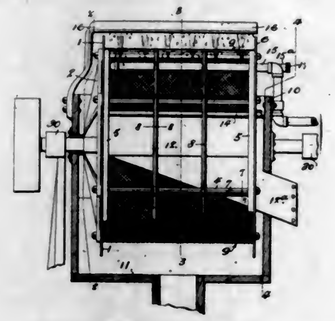
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1,230,697. ORE CLASSIFYING AND SIZING MECHANISM. JOSEPH FRANZ and FRANK FRANZ, Wallace, Idaho. Filed July 28, 1916. Serial No. 111,847. (Cl. 83—56.)

1. In an ore classifier and separator, a trough-like housing, a horizontally rotatable shaft journaled in bearings in said housing, a separator mounted on said shaft and comprising a screening cylinder, one end of which is closed and the other end is open, means for feeding the material to be separated onto the screen surface at substantially the top of the cylinder, a receiving pan located within the cylinder to receive the material that drops through the cylinder screen, said receiving pan having a discharge spout and projecting through the open end of said cylinder, and means for spraying water outwardly through said screen cylinder adjacent to the place of deposit of the material to be separated and a baffle device over said screen cylinder to deflect the water back onto the exterior of the screen.

2. In an ore classifier, a revolving screen comprising a screen head, a spider for sustaining said head, a series of cantalivers projected from said head in circumferential alinement and substantially parallel to the axis of rotation of the screen, a ring secured to the axis of the cantalivers opposite to the head of the screen whereby said end of the screen is open, a screen covering over the said cantalivers and extending between said head and ring, and segmental ring-like filler strips between adjacent cantalivers for sustaining the screen body, said head and said ring being of greater diameter than the screen body whereby to form side flanges.





3. In an ore classifier, a revolving screen comprising a screen head, a spider for sustaining said head, a series of cantalivers projected from said head in circumferential alinement and substantially parallel to the axis of rotation of the screen, a ring secured to the axis of the cantalivers opposite to the head of the screen whereby said end of the screen is open, a screen covering over the said cantalivers and extending between said head and ring, and internal ring bands secured to said cantalivers.

4. In an ore classifier, a revolving screen comprising a screen head, a spider for sustaining said head, a series of cantalivers projected from said head in circumferential alinement and substantially parallel to the axis of rotation of the screen, a ring secured to the axis of the cantalivers opposite to the head of the screen whereby said end of the screen is open, a screen covering over the said cantalivers and extending between said head and ring, segmental ring-like filler strips between adjacent cantalivers for sustaining the screen body, said head and said ring being of greater diameter than the screen body whereby to form side flanges, and internal ring bands secured to said cantalivers.

5. In an ore classifier, a revolving screen comprising a screen head, a spider for sustaining said head, a series of cantalivers projected from said head in circumferential alinement and substantially parallel to the axis of rotation of the screen, a ring secured to the ends of the cantalivers opposite to the head of the screen whereby said end of the screen is open, a screen covering over the said cantalivers and extending between said head and ring, and segmental ring-like filler strips between adjacent cantalivers for sustaining the screen body, said head and said ring being of greater diameter than the screen body whereby to form said flanges, means for depositing the material to be separated on the top of said revolving screen, means for collecting the material that falls from the outside of the screen, and a receiving pan projected into the revolving screen for receiving the material that passes through the screen, the longitudinal edges of said pan engaging said revolving screen along its internal diameter.

[Claims 6 to 13 not printed in the Gazette.]

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1,230,698. BUTTONHOLE-FEEDING MECHANISM. EDWARD C. GERSTENBERGER, Brooklyn, N. Y. Filed Dec. 7, 1916. Serial No. 135,574. (Cl. 112—4.)

1. In a feed mechanism for buttonhole sewing machines, a feed wheel having a feed groove in its lower face, a freely supported gripping block extending loosely into the groove of the feed wheel, and a pendulum depending from the said block and adapted to rock the latter to engage the gripping block with the walls of the feed wheel groove.



2. In a feed mechanism for buttonhole sewing machines, a bed plate, a stitch-forming mechanism and a feed mechanism having an intermittently rotating feed wheel provided with a feed groove, and a block resting on the said bed plate and extending loosely in the said groove, the block having a depending rod provided with a weight at its lower end.

3. In a feed mechanism for buttonhole sewing machines, a bed plate, a stitch-forming mechanism and a feed mechanism having an intermittently rotating feed wheel provided with a feed groove, a block resting on the said bed plate and extending loosely in the said groove, the block having a depending rod, and the said bed plate having an aperture at the rear through which extends loosely the said rod, and a weight held adjustable on the lower end of the said rod.

4. In a feed mechanism for buttonhole sewing machines, a bed plate, a stitch-forming mechanism and a feed mechanism having an intermittently rotating feed wheel provided with a feed groove, a block resting on the said bed plate and extending loosely in the said groove, the block having a depending rod and the said bed plate having an aperture at the rear through which extends loosely the said rod, a weight held adjustable on the lower end of the said rod, and means to lock the weight in the adjusted position on the rod.

5. In a feed mechanism for buttonhole sewing machines, a feed wheel having a feed groove in its lower face, a freely supported gripping block extending loosely into the groove of the feed wheel, a rod depending from the said block and a weight adjustably secured on the lower end of the said rod to form a pendulum for the block.

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1,230,699. RESILIENT WHEEL. JOHN GIBSON, Courtenay, N. D. Filed Feb. 12, 1916. Serial No. 77,925. (Cl. 152—44.)



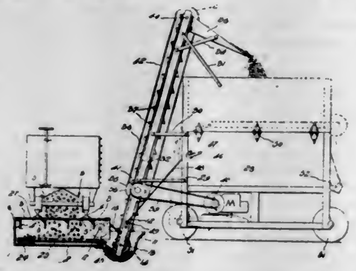
1. In a resilient wheel, a hub embodying a pair of substantially disk-shaped plates in spaced relation to each other, journal pins connecting said plates, rollers surrounding said pins and adapted to turn thereon, an annulus encircling the hub and normally concentric therewith, and a circular series of springs each of convolute formation and gradually decreasing in radius from the annulus to the hub, said springs being fastened at their outer ends to the annulus and having their inner portions slidable between the hub plates and also slidable between the body of the hub and the respective rollers.

2. In a resilient wheel, a hub embodying a pair of substantially disk-shaped plates in spaced relation to each

other, journal pins connecting said plates, rollers surrounding said pins and adapted to turn thereon, an annulus encircling the hub and normally concentric therewith, and a circular series of springs each of convolute formation and gradually decreasing in radius from the annulus to the hub, said springs being fastened at their outer ends to the annulus and having their inner portions slidable between the hub plates and also slidable between the body of the hub and the respective rollers, the inner portions of the springs being so cooperatively related as to mutually support each other and collectively sustain and cushion the load imposed on the hub.

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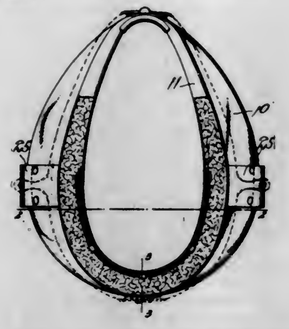
1,230,700. UNLOADING APPARATUS. EDWARD C. GLEDHILL, Galion, Ohio. Filed Feb. 25, 1916. Serial No. 80,422. (Cl. 193—3.)



In an apparatus for the purpose set forth, the combination of a portable bin having foldable sides, an elevator swingingly supported from said bin and consisting of sections hinged together at their meeting ends whereby it may be swung close to and fold over the bin, a drum on the bin, and a cable wound upon the drum and secured to the elevator near the lower end thereof.

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1,230,701. HORSE-COLLAR. GEORGE B. GOETZ, Ranson, W. Va. Continuation in part of applications Serial Nos. 61,982 and 61,983, filed Nov. 17, 1915. This application filed Aug. 29, 1916. Serial No. 117,493. (Cl. 54—19.)



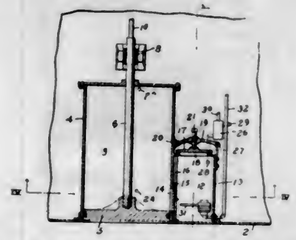
1. A horse collar initially conformable under pressure to a horse's neck, consisting of a pliable fabric outer wall and a filling, the collar including fore and rear wales and a connecting neck and resilient means extending from the usual point of location of a tug at one side of the collar, continuously downwardly of that side of the collar, around the throat of the collar and upwardly of the opposite side of the collar to the usual point of location of a tug at that side, for imparting to the corresponding portions of the wall of the fore wale, a degree of stiffness sufficient to prevent rolling of the most remote opposite points of the outer periphery of the fore wale inwardly a sufficient amount to permit of release of the hames, under the influence of corresponding hame pressure.

10. A horse collar, having a stiffening spring arranged within the casing against one wall thereof, and capable of moving in relation to said casing, the ends of said spring being slidably connected to the adjacent wall of said spring.

[Claims 2 to 9 and 11 to 15 not printed in the Gazette.]

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1,230,702. SUBMARINE VESSEL. ABRAHAM GREENBERG, Pittsburgh, Pa. Filed Oct. 7, 1916. Serial No. 124,290. (Cl. 61—7.)



1. In a submarine vessel, an outer chamber communicating with the exterior thereof provided with a reciprocable plunger wall, fitting closely to the sides of the chamber, and an adjacent chamber provided with a closing door communicating with said first chamber and having a door opening into the interior of the main vessel.

2. In a submarine vessel, an outer chamber communicating with the exterior thereof provided with a reciprocable plunger wall, fitting closely to the side of said chamber in all positions, and an adjacent chamber provided with a closing door communicating with said first chamber and having a door opening into the interior of the main vessel, and means for exhausting water therefrom.

3. The combination with the main vessel, of an outer chamber communicating with the exterior thereof and provided with a reciprocable sealing plunger wall, said wall being adapted to prevent inflow of water above it at all positions and adapted to expel the water from said chamber on its outward movement, and an inner chamber having a door-controlled communication with said first chamber and provided with a supplemental opening and a closing door at its upper end portion communicating with the interior of the main vessel.

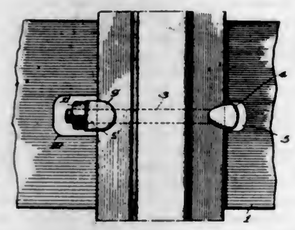
4. In a submarine vessel, an outer cylindrical chamber having its outer end open and communicating with the exterior thereof, a reciprocable plunger in close contact with the sides of said chamber and forming a sealing closure for said opening, said plunger being adapted to be moved inwardly to permit inflow of water to said chamber and to be lowered to expel the water therefrom, and an inner chamber having an opening communicating with said first named chamber, and a sliding door for closing said opening, said last named chamber also being provided with a supplemental opening and a closing door at its inner end portion, communicating with the interior of the main vessel.

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1,230,703. RAILWAY-TIE AND FASTENER. WILLIAM C. GREGG and LOUIS D. GREGG, Hackensack, N. J., assignors to The Gregg Company, Limited, Hackensack, N. J., a Corporation of New York. Filed Sept. 23, 1916. Serial No. 121,725. (Cl. 238—4.)

1. A railway tie and fastener comprising a tie, a clamping bolt having a claw at one end to grip the flange of a rail, and a clip for the other end of the bolt formed with a claw to grip the rail flange and an opening for the bolt and having oppositely disposed shelves extended in the direction of the claw to lie below the rail flange and bear against the under face of the tie and spaced apart to lie at opposite sides of the bolt to permit the bolt to lie close to the under face of the tie.

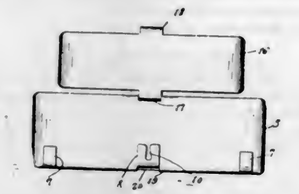




2. A railway tie and fastener comprising a tie, a clamping bolt having a claw at one end to grip the flange of a rail, and a clip for the other end of the bolt formed with a claw to grip the rail flange and an opening for the bolt, and having inwardly projecting shelves at opposite sides of the bolt opening, to bear against the under face of the tie at opposite sides of the bolt, the inner faces of the shelves conforming to the outline of the bolt to have an extended bearing afforded by the bolt for the clip.

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1,230,704. NECKTIE-RETAINER. JOSEPH A. GUISE, Magazine, Ark. Filed Aug. 16, 1916. Serial No. 115,236. (Cl. 24—49.)



1. A necktie retainer adapted for insertion between the folds of a collar, including a flat member for slidably receiving a necktie, means for detachably securing the member to the inner fold of a collar, and a hinged keeper secured to said member to prevent the accidental displacement of the necktie.

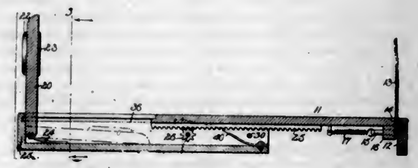
2. A necktie retainer adapted for insertion between the folds of a collar, including a flat member for slidably receiving a necktie, means for detachably securing the member to the inner fold of a collar, the free longitudinal edges of said member being turned laterally to form guide flanges for the necktie, a keeper hingedly secured to the upper flange to prevent the accidental displacement of the necktie, and means carried by the free lower edge of said keeper for engagement with the lower edge of said member, whereby the keeper is held in position.

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1,230,705. STEREOSCOPE. HENRY W. HALES, Ridgewood, N. J. Filed Oct. 31, 1916. Serial No. 128,680. (Cl. 88—29.)

1. A stereoscope, comprising a box having a slidable cover provided at its rear end with a transversely extending clamping member adapted to close the rear end of the box and to clamp the lower portion of a stereoscopic picture against the rear end of the cover.

2. A stereoscope, comprising a box having a slidable cover provided at the under side adjacent the rear end with bearings, a clamping member provided with guide pins slidable in the said bearings, the said clamping member being adapted to coact with the rear end of the cover to clamp a stereoscopic picture between them, and springs attached to the under side of the cover and connected with the said guide pins.

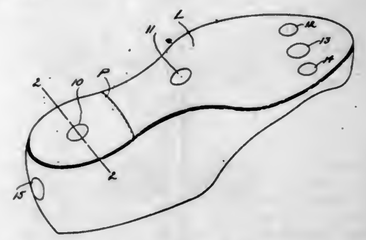


3. A stereoscope, comprising a box having a slidable cover provided at its outer end with means for supporting a stereoscopic picture, a lens carrier pivoted in the forward end of the box, the lens carrier in one position extending vertically and with the lenses a distance above the box, and in another position extending within the box below the cover, the under side of the box cover being provided near its forward end with a shoulder, and a spring secured to the bottom of the box and having its free end bearing against the under side of the cover on moving the cover inward or outward for focusing purposes to hold the cover in the adjusted position, the terminal of the spring being adapted to abut against the said shoulder to limit the outward movement of the cover.

4. A stereoscope, comprising a box having a slidable cover provided at its rear end with a transversely extending clamping member adapted to close the rear end of the box and to clamp the lower portion of a stereoscopic picture against the rear end of the cover, the top of the cover being provided at its middle with a centering notch adjacent the said clamping member to permit of centering the stereoscopic picture, and a lens carrier supporting lenses and located on the other end of the box.

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1,230,706. LAST. FREDERICK A. HATCH, Plymouth, Mass. Filed Dec. 29, 1915. Serial No. 69,267. (Cl. 12—139.)



1. A last having a local tack receiving portion thereof formed with a plug receiving hole of substantial depth, and a plug of relatively soft metal fitted in said hole, and having associated with the bottom thereof a plate of relatively hard metal bent to fit into said hole ahead of said plug, and formed to be pressed out laterally by the seating of the plug in said hole to hold said plug against displacement and to serve as a bottom reinforce for the plug receiving hole.

2. A last having a local tack receiving portion thereof formed with a plug receiving hole of substantial depth, a plug of relatively soft metal to be fitted in said hole having at its bottom a projection, and a washer of relatively hard metal fitted over said projection, said projection being of a length to extend therethrough to some little extent, said washer formed with corner portions bent downwardly and inwardly so that the washer fits into said hole ahead of said plug, said corner portions being adapted to be flattened out and pressed laterally into the adjacent

fiber of the wood of the last and said plug projection being adapted to be headed over said washer as the plug is seated in the bottom of said hole.

3. A last having a local tack receiving portion formed with a hole of substantial depth, and a plug of relatively soft metal having associated with the bottom thereof a member of relatively hard metal distorted so as to fit into said hole ahead of said plug, said member and said plug having coöperative provision whereby as the plug is seated in the bottom of said hole, said member has its form changed so as to be embedded in the adjacent fiber of the wood of the last and said plug is held secured thereto and fixed in the last thereby.

4. A last equipped with a metallic heel plate having a track receiving hole therethrough, said hole extending to a substantial depth in the wood of the last, and a plug of relatively soft metal fitted in said hole with a plate of relatively hard metal interengaged with the bottom thereof, said plate being distorted to permit insertion thereof into said hole and adapted to be flattened out and be embedded in the adjacent wood of the last as said plug is seated, the length of the plug being such that its top will then be substantially flush with the surface of said heel plate, and said plate serving as a reinforce for the bottom of said hole to support said plug from recession therein.

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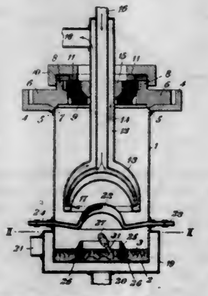
1,230,707. GUN-MAGAZINE. JULIUS FRED HECKMANN, Lupus, Mo. Filed Jan. 31, 1917. Serial No. 145,629. (Cl. 42—49.)



A gun having a magazine with openings spaced apart at the normal cartridge or shell positions in the magazine, and a slide handle for moving against the magazine and having an opening for registering with one of the openings in the magazine when the slide handle is in normal position.

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1,230,708. VAPOR ELECTRIC APPARATUS. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Oct. 1, 1912. Serial No. 723,303. (Cl. 175—354.)



1. A vapor electric apparatus comprising an exhausted container, positive and negative electrodes therein, the extremity of the positive electrode being located at a critical distance from the negative electrode, the said critical distance being the distance between the negative electrode and a point in the vapor column at which a sudden marked decrease in the fall of potential across the terminals of the device occurs, as compared with the drop when the electrodes are more remote from each other.

2. A vapor electric apparatus comprising an exhausted container, positive and negative electrodes therein, the extremity of the positive electrode being located at a critical distance from the negative electrode, the said critical distance being the distance between the negative electrode and a point in the vapor column at which a sudden marked decrease in the fall of potential across the terminals of the device occurs, and a cooling device located intermediate the two electrodes and serving to modify the said critical distance.

3. A vapor electric apparatus comprising an exhausted container, positive and negative electrodes therein, the positive electrode being located in proximility to the negative electrode and having a suitable stem for connection with the external circuit, a tubular device inside the positive electrode, separated therefrom by an intervening space, and conforming generally to the shape of the positive electrode and its stem for permitting the circulation of a cooling fluid, and a tube carrying a cooling fluid outside the positive electrode and passing in front thereof.

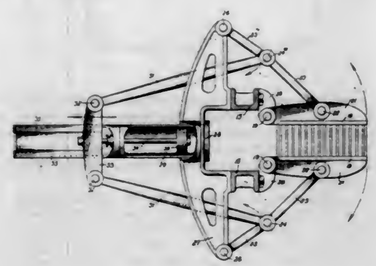
4. A vapor electric apparatus comprising an exhausted container, positive and negative electrodes therein, the positive electrode being cup-shaped and located in proximity to the negative electrode and having a suitable stem for connection with the external circuit, a tubular device inside the positive electrode, separated therefrom by an intervening space, and conforming generally to the shape of the positive electrode and its stem for permitting the circulation of a cooling fluid, and a tube carrying a cooling fluid in front of the positive electrode and in proximity thereto along the entire face of the said electrode.

5. In a vapor electric apparatus comprising an exhausted container, positive and negative electrodes therein, an insulating shield within the negative electrode for limiting the active area thereof, in combination with starting devices for the said apparatus, comprising a conductor sealed through the wall of the apparatus and bent into contact with the negative electrode.

[Claim 6 not printed in the Gazette.]

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1,230,709. COTTON-COMPRESS. WILLIAM HILL, Alexandria, La. Filed Jan. 12, 1916. Serial No. 71,699. (Cl. 100—19.)



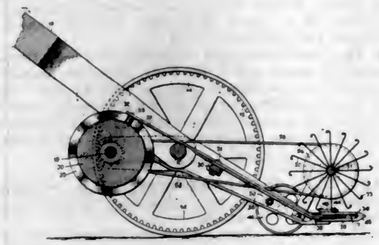
1. A compress, comprising a bale chamber having open sides and provided with extensions at its sides, compressing means working in said chamber, hinged wings for closing the open sides of the said chamber, pair of toggle levers for the wings, one member of each pair of toggle levers being pivoted to a wing and the other member to an extension of the bale chamber, a power cylinder carried by said chamber, a piston in the cylinder, a cross head secured to the piston rod and having guided movement, and arms pivoted to the ends of the cross head and to the pivots connecting the members of the toggle levers.

2. A compress, comprising a supporting frame having an extension frame, platens working in the frame, coöperating means for operating the platens, hinged wings for closing the sides of the frame, a pair of toggle levers for each wing, one member of which is pivoted to the wing and the other member to the extension frames, a power cylinder secured to the extension frame and having guideways projecting therefrom in alinement therewith, a piston in the cylinder, a cross head secured to the piston rod and working in the said guideways, and arms pivoted to the ends of the cross head and to the pivots connecting the members of the toggle levers.



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1,230,710. LAWN-MOWER. WILLIAM HILL, Alexandria, La. Filed July 21, 1916. Serial No. 110,469. (Cl. 56—19.)



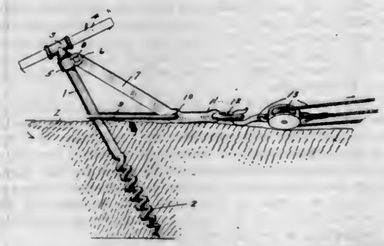
1. In combination with a lawn mower having reciprocating cutting members and carrying wheels in the rear thereof; a plurality of flexible whips rotatively mounted above said reciprocating cutting members, the path of the free ends of said whips being juxtaposed to said cutters for operating as a brush for carrying material being operated upon to the rear of said cutters.

2. In combination with a reciprocating cutter; a rotary shaft disposed in superposed relation thereto; and a plurality of flexible whips mounted on said shaft, the path of the free ends of said whips being juxtaposed to said reciprocating cutter.

3. In combination with a reciprocating cutter; a rotary shaft disposed in superposed relation thereto; a plurality of flexible whips mounted on said shaft, the path of the free ends of said whips being juxtaposed to said reciprocating cutter; and driving mechanism for said shaft, said mechanism embodying carrying wheels supporting said cutter.

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1,230,711. ANCHORING DEVICE. MARTIN M. HJERMSTAD, Kenyon, Minn. Filed June 5, 1916. Serial No. 101,754. (Cl. 189—91.)



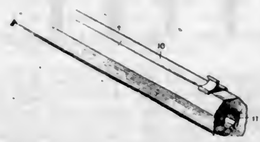
1. An anchoring device comprising a bar adapted to be secured in the ground, a downwardly and forwardly inclined thrust rod through the upper end of which said bar is inserted with freedom to rotate, a horizontal link connecting the outer end of the thrust rod to said bar and in which link the bar is free to move endwise and rotate, and a pulling connection attached to the outer end of the link.

2. An anchoring device comprising a bar adapted to be secured in the ground, a downwardly and forwardly inclined thrust rod having at its outer end a horizontal ground-engaging extension, said bar being inserted through the upper end of the thrust rod with freedom to rotate, a horizontal link pivoted to the thrust rod at the angle therein and connecting the same to the bar, said bar being inserted through the link with freedom to move endwise and rotate, and a pulling connection attached to said extension.

3. An anchoring device comprising a bar adapted to be secured in the ground and having a hand piece equipped head, a collar swiveled on the bar and engaging said head as an abutment, a downwardly and forwardly inclined thrust rod having its upper end pivoted to the collar for vertical swinging movement and provided at its outer end with a horizontal ground-engaging extension, a horizontal link pivoted to the thrust rod at the angle therein and connecting the same to the bar, said bar being inserted through the link with freedom to move endwise and rotate, and a pulling connection attached to said extension.

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1,230,712. RIFLE-BARREL. BEN HOLTER, Whitefish, Mont. Filed Jan. 3, 1917. Serial No. 140,371. (Cl. 42—78.)



1. A rifle barrel having the wall of its bore composed of alternating relatively narrow and wide lands forming an irregular polygon each of said lands having a rapid twist.

2. A rifle barrel having the wall of its bore composed of alternating relatively narrow and wide lands forming an irregular polygon.

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1,230,713. AUXILIARY RADIUS-ROD. WILLIE E. HOUGAS and LEONARD J. MIDGORDEN, Lamoni, Iowa. Filed Apr. 13, 1914. Serial No. 831,682. (Cl. 21—182.)

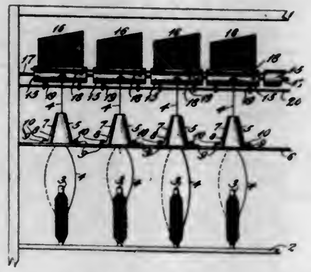


1. The combination with an automobile embodying an engine casing and a front axle, and a V-shaped radius rod secured at its apex to said casing and extending forwardly therefrom to said axle, of an auxiliary V-shaped radius rod secured at its apex to said casing and extending forwardly therefrom to said axle, the forward ends of said first radius rod being located above the axle and the corresponding ends of said auxiliary radius rod being located below said axle, the ends of one radius rod being alined with the ends of the other rod, and a bolt engaging each pair of alined ends and the axle to secure all of said ends to the axle.

2. In combination with an automobile embodying an engine casing having a downwardly depending lug with screw-threaded openings, and a front axle, and a V-shaped radius rod secured at its apex to said lug and extending forwardly therefrom to said axle, of an auxiliary V-shaped radius rod, a pair of spaced plates secured to the apex of the auxiliary V-shaped radius rod and having openings therein, bolts extending through the openings and threaded into the openings of the lug for securing the apex of the auxiliary radius rod to the lug, the forward ends of said first radius rod being located above the axle and the corresponding ends of said auxiliary radius rod being located below said axle, the ends of the radius rod being

alined with the ends of the other rod; and a bolt engaging each pair of alined ends and the axle to secure all of said ends to the axle.

1,230,714. PROCESS OF AND APPARATUS FOR WAXING THREADS. JOSEPH FREDERIC HOUSTON, Philadelphia, Pa. Filed Jan. 10, 1916. Serial No. 71,251. (Cl. 28—7.)



2. In an apparatus for waxing thread, a tubular wax-carrier internally conical and slotted through its wall, a waxing substance lining the carrier and formed with a slot alined with the slot of the carrier, and means for retaining the waxing substance within the carrier.

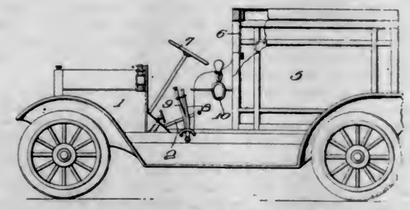
3. In an apparatus for waxing thread, a hollow conical tubular carrier formed with a vertical slot through its wall and having a directing flange or lip extending outwardly from it, an internal lining of wax within said carrier having a slot alined with the slot of the carrier, and means for retaining the lining within the carrier.

4. An apparatus for waxing thread which comprises in combination,—a primary bobbin upon which thread to be waxed is wound,—an axially hollow, internally conical, open-ended, wax-carrier, the side of which is slotted throughout its entire length in order to permit of the introduction of the thread from the primary bobbin into one of its ends from the side and throughout its entire hollow interior, through which the thread when introduced extends,—a receiving spool or ultimate carrier to which the thread is led from the other end of the wax-carrier,—and means for revolving said receiving spool.

7. The process of waxing a thread, which consists in rapidly drawing it from a primary bobbin, through a hollow body of wax, to an ultimate thread carrier, and, in so drawing it, "ballooning" it between the primary bobbin and the body of wax and within said body, so as to cause it to make centrifugal contact with the body of wax.

[Claims 1, 5, 6, 8, and 9 not printed in the Gazette.]

1,230,715. MOTOR-VEHICLE BODY. ROBERT M. T. JOHNSON, Binghamton, N. Y. Filed June 22, 1916. Serial No. 105,245. (Cl. 21—90.)



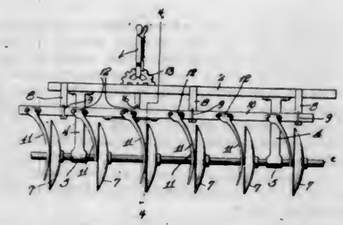
1. The combination with a motor-driven chassis, of concealed controlling means therefor, false controlling means exposed on said chassis, and means for concealing a driver, whereby an illusion is created that the vehicle is driverless and guideless.

2. The combination with a motor driven vehicle, of a body mounted thereon having means therein through which the driver of the car may see, controlling means within the body, false steering and false controlling means mounted on said vehicle, whereby a driver may control the vehicle from within said body and create an illusion that the vehicle is driverless and guideless.

3. An advertising or like device comprising in combination a motor driven chassis with driving and controlling means thereon, means for concealing the driver of said chassis, dummy driving and controlling mechanisms, so placed as to create an illusion that the chassis is driverless and guideless.

4. The combination with a chassis, of a body thereon, controlling means within the body, apparent controlling means without the body so arranged that the driver operates the controlling means within the body, and the absence of an operator for the apparent controlling means creates an illusion that the car is driverless and guideless.

1,230,716. DISK-HARROW CLEANER. WALTER J. JOHNSON, Owensville, Ind. Filed Nov. 18, 1916. Serial No. 132,137. (Cl. 97—80.)



1. In combination with a harrow having a plurality of disks mounted upon a shaft, a reciprocatory bar carried by the harrow, scraper elements suspended from the said bar and having their ends bifurcated and straddling the said shaft.

3. In combination with a harrow having a pluarlity of disks mounted upon a shaft, a reciprocatory bar carried by the harrow, scraper elements suspended from the said bar and having their ends bifurcated and straddling the said shaft, the said scraper elements being shaped to conform to the configuration of the said disks, and means associated with the said reciprocatory bar for moving the said scraper elements into and out of engagement with the said disks, the said bifurcated portion of the scraper elements sliding on the said shaft when the said means is operated.

6. In combination with a harrow having a plurality of disks carried by a shaft, the said harrow also having hangers provided with bearings for receiving the said shaft at certain points in the spaces between certain of the said disks, scraper elements disposed in the spaces between the disks, means for moving the scraper elements in the spaces between the disks, the scrapers in the spaces unoccupied by the said bearings being bifurcated and projecting below the said shaft.

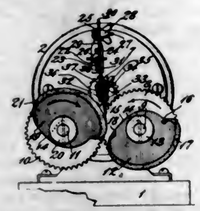
[Claims 2, 4, 5, and 7 not printed in the Gazette.]

1,230,717. RAZOR-SHARPENING DEVICE. FREDERICK J. KALTEYER, Philadelphia, Pa. Filed Mar. 16, 1916. Serial No. 84,569. (Cl. 51—16.)

1. In a razor sharpening machine, the combination of parallel rotatable sharpening rolls, a bracket arm, and a blade holder having a resilient shank pivotally mounted on the arm to have both a rocking adjustment and an adjustment to and from the rolls in a longitudinal plane passing between the rolls, whereby both the position of the blade with reference to a roll and its resistance to flexure may be varied.

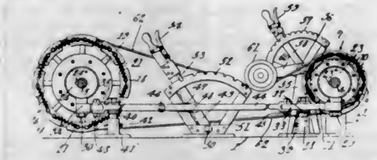


2. In a razor sharpening machine, the combination of parallel rotatable sharpening rolls, a bracket arm adjustable to and from the rolls in a plane passing longitudinally between them, and a blade holder having a resilient shank pivotally mounted on the arm to have both a rocking adjustment and an adjustment to and from the rolls in said longitudinal plane, whereby both the position of the blade with reference to a roll and its resistance to flexure may be varied.



3. In a razor sharpening machine, the combination of parallel rotatable sharpening rolls, a pivoted bracket arm adjustable to and from the rolls in a plane passing longitudinally between them and also transversely to said plane, and a blade holder having a resilient shank pivotally mounted on the arm to have both a rocking adjustment and an adjustment to and from the rolls in said longitudinal plane, whereby both the position of the blade with reference to a roll and its resistance to flexure may be varied.

1,230,718. VARIABLE SLIDING-CONE FEED FOR WOODWORKING MACHINERY. ALBERT KAMP, Niagara Falls, N. Y. Filed Mar. 27, 1915. Serial No. 17,452. (Cl. 64—8.)

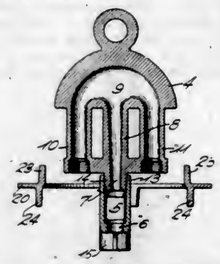


In a device of the class described, a pair of shafts; pulleys mounted on the shafts and provided with hollow heads having radial openings; segmental shoes disposed about the heads and including reduced stems mounted for right line movement in the openings; separate, circumferentially retractile springs connected at their ends with the outer faces of adjacent shoes beyond the ends of the pulleys; cones slidable on the shafts within the heads and engaging the inner ends of the stems; levers fulcrumed adjacent the shafts; means for connecting the levers with the cones; a connection between the levers; and means under the control of an operator for actuating the last specified connection.

1,230,719. BURNER-HEAD AND SHADE-HOLDER FOR LAMPS. ADOLPH G. KAUFMAN, New York, N. Y. Filed Aug. 30, 1916. Serial No. 117,656. (Cl. 240—111.)

1. In a lamp, a burner head and shade holder, said burner head having a standard on each side thereof, and said shade holder being mounted on said standards, said shade holder having a plurality of projections on each side thereof, and means to hold said shade holder at different elevations on said standards.

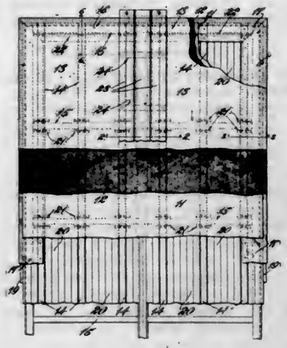
2. In a lamp, a burner head and shade holder, said head having standards on the opposite sides thereof, and said shade holder having sockets adapted to slide along said standards, said shade holder also having projections on the opposite sides thereof whereby a lamp shade can be mounted on either side of the shade holder, the projections on one side being on a different radius than the projections on the other side.



3. In a lamp, a burner head provided with a plurality of standards, a shade holder adjustably mounted on said standards, said shade holder having means on each side thereof to hold a lamp shade, the means on one side being adapted to hold a larger shade than the means on the other side, and means to hold either side of said shade holder on the shade-engaging side.

4. In a lamp, a burner head provided with a plurality of standards, and a shade holder adjustably mounted on said standards, said shade holder having projections on the opposite sides thereof, the projections on one side being on a different radius from the projections on the other side, for the purpose set forth.

1,230,720. CAR-ROOF. DANIEL P. KELLOGG, Los Angeles, Cal., assignor of one-half to Patrick Sheedy, Los Angeles, Cal. Filed July 14, 1916. Serial No. 109,211. (Cl. 108—5.)

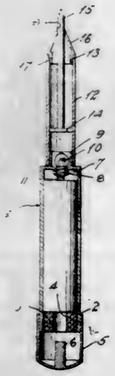


1. A car roof having a roof substructure forming part of the frame of the car, a continuous waterproof covering for said substructure extending from side to side and from end to end of the car, rigid supporting means for said covering secured to its under side, said supporting means spanning openings in said substructure and sufficient of said supporting means being fastened together independently of said substructure and loosely secured thereto to stiffen said roof covering and to permit limited freedom of movement of said roof covering with respect to said car.

5. A car roof comprising a plurality of spaced supports extending lengthwise of the car, a continuous roof secured upon said supports, running board supports bolted to said supports, means for movably securing said supports to the car and means for loosely securing the edges of said roof at the sides and ends of the car.

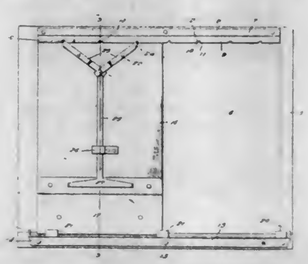
[Claims 2 to 4 and 6 to 12 not printed in the Gazette.]

1,230,721. ILLUMINATED PENCIL. EDUARDO V. KELLY, Vedado, Habana, Cuba. Filed July 26, 1916. Serial No. 111,442. (Cl. 240—8.4.)



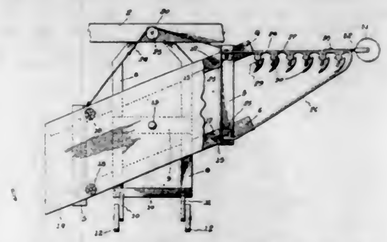
An illuminated pencil comprising a cylindrical shell, a battery located in said shell, a lamp socket formed in one end of the shell, an electric lamp carried by said socket and electrically connected to the battery, and an externally screwthreaded collar formed on the socket and surrounding the electric lamp to protect it, a barrel threaded to said collar, a cone-shaped glass cap threaded to the barrel and having a central opening, a supporting bar carried by the interior wall of said barrel, a crayon supporting tube having one end secured to the bar and its other end extending through the opening of the cap, and means for completing an electric circuit to the electric lamp.

1,230,722. FASTENER FOR SLIDING DOORS. LUTHER T. KENNY, Hawarden, Iowa. Filed Apr. 11, 1916. Serial No. 90,325. (Cl. 70—102.)



The combination with a sliding door, of a guide rail rigidly mounted above the door, a flange extending from the guide rail and overlapping a portion of the front face of the door and provided on its lower edge with a plurality of notches, a pair of latch bars pivotally mounted on the front face of the door and arranged in spaced relation to each other and having the outer terminals beveled to provide points for engagement with the notches in the flange, the inner ends of the latch bars being offset, a rod slidably mounted on the front face of the bar and pivoted to the offset inner ends of the latch bars so as to normally hold the latch bars in engagement with the notches, and a handle on the lower end of the rod for removing the latch bars from engagement with the notches in the flange.

1,230,723. ROAD-DRAG. JACOB J. KLEIN, Kearney, Nebr. Filed Apr. 12, 1916, Serial No. 90,697. Renewed Apr. 3, 1917. Serial No. 159,562. (Cl. 37—7.)



1. In an apparatus for the purpose set forth, the combination of a truck, a frame mounted below the truck, a blade carried by the said frame, a draw bar connected to the truck, a platform supported over the truck, connections between the platform and the frame, and movable connections between the draw bar and the platform and between the draw bar and the frame whereby to vary the horizontal inclination of the blade while maintaining the platform and the frame in a fixed relation.

2. In an apparatus for the purpose set forth, the combination of a truck, a transverse scraper blade disposed below and at the front side of said truck, and a leveler carried by the truck in rear of said blade and consisting of a transversely disposed resilient plate.

4. In an apparatus for the purpose set forth, the combination of parallel beams, longitudinal bars connecting said beams, a platform disposed above and in spaced relation to the said bars and beams, a truck interposed between the platform and said beams and having a pivotal connection with the platform, a scraper blade carried by the forward parallel bar, a leveler carried by the rear parallel bar, a draw bar connected to the front end of the truck, and connections between the draw bar and the forward parallel bar and between the draw bar and the platform.

[Claim 3 not printed in the Gazette.]

1,230,724. TOOL-HOLDER. PETER NICOLAAS KLUFT, Amsterdam, Netherlands. Filed June 20, 1916. Serial No. 104,800. (Cl. 145—64.)



1. Combined holder and handle for pocket tools, instruments and the like, comprising a plurality of container parts adapted to fit together in the closed condition to form a container and each adapted to receive different tools or instruments in combination with closing devices provided on a plurality of said parts and adapted in the closed position to unite the whole together and spring tongues with which each part is provided, said tongues being adapted to press on the tools or instruments contained in the holder, and being provided with devices to engage with corresponding parts of the tools or instruments.

2. Combined holder and handle for pocket tools, instruments and the like, comprising a plurality of container parts adapted to fit together in the closed condition to form a container and each adapted to receive different tools or instruments in combination with closing devices provided on a plurality of said parts and adapted in the closed position to unite the whole together, a seating recess in an end of a container part and provided with engaging means for corresponding parts of the tools or instruments in the position of use, the closing device at this end having an opening coinciding with the seating recess and adapted to give passage to the tool or instrument in the position of use.

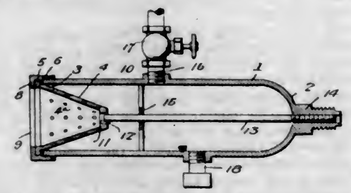
3. Combined holder and handle for pocket tools, instruments and the like, comprising two flat, elongated, box-shaped container parts adapted to fit together and coincide in the closed condition and each adapted to receive different tools or instruments, in combination with end members forming closing caps at the ends of said parts and adapted in the closed position to embrace the said parts respectively and unite the whole together, a seating recess in the end of one container part and provided with engaging means for corresponding parts of the tools or instruments in the position of use, the closing cap at this end having an opening coinciding with the seating recess and adapted to give passage to the tool or instrument in the position of use, substantially as described.

4. Combined holder and handle for pocket tools, instruments and the like, comprising two flat, elongated, box-shaped container parts adapted to fit together and coincide in the closed condition and each adapted to receive different tools or instruments, in combination with end members forming closing caps at the ends of said parts and adapted in the closed position to embrace the said parts respectively and unite the whole together and spring tongues between the parts and adapted to press on the tools or instruments contained in the holder.

5. Combined holder and handle for pocket tools, instruments and the like, comprising two flat, elongated, box-shaped container parts adapted to fit together and coincide in the closed condition and each adapted to receive different tools or instruments, in combination with end members forming closing caps at the ends of said parts and adapted in the closed position to embrace the said parts respectively and unite the whole together and spring tongues between the parts and adapted to press on the tools or instruments contained in the holder, and being provided with devices to engage with corresponding parts of the tools or instruments, substantially as described.



1,230,725. OIL-BURNER. JACOB F. KRAUS, Pittsburgh, Pa. Filed Jan. 2, 1917. Serial No. 140,187. (Cl. 158—75.)

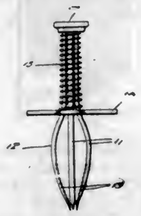


2. An oil burner comprising an elongated casing having communication with a fluid under pressure, a frusto conical spray nozzle forming a conical mixing chamber communicating with the interior of the casing by tangentially arranged openings in the nozzle, said chamber having its large end in direct communication with the atmosphere and its small end in communication with the interior of the casing and an oil pipe supported by the casing and having its outlet in communication with the small end of said chamber, and a ring having a slidable connection with the large end of the nozzle and having screw threaded engagement with the casing for holding the axis of the nozzle in alinement with the axis of the oil pipe.

[Claim 1 not printed in the Gazette.]

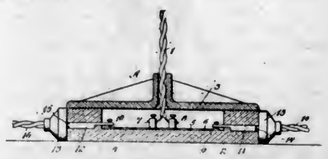
1,230,726. CORK-PULLER. ELIZABETH H. KRAUSE, Portland, Oreg. Filed Oct. 21, 1916. Serial No. 128,806. (Cl. 65—47.)

In a device of the class described, in combination, a series of similarly shaped extracting members, each extracting member being resilient and consisting of an inner straight portion and an outer laterally curving gripping portion formed with teeth, a hand engaging knob to which the inner straight portions of said extracting members are secured in converging relation, a spring coiled around the effective length of the inner straight portions of the said extracting members, and a plate like cross piece having a plurality of openings through which said



extracting members loosely project, said spring being of a length so as to contact said cross piece and hold the same against the curved portions of said members, against the tension of said members so as to cause their extremities to be brought together, the openings in said cross piece being so arranged as to cause the inwardly converging portions of said members to be disposed at right angles to said knob when said spring is in normal position, but when said spring is under tension allowing said members to spread out.

1,230,727. DINING-TABLE PLATE-HEATING APPLIANCE. WESLEY WILLNER KUHLMANN, Woodcliffe-on-Hudson, N. J. Filed Mar. 9 ,1917. Serial No. 153,685. (Cl. 219—37.)



1. An electric plate-warming device comprising a disk-like body formed of a top metal plate, a body of insulation under the plate, a heating conductor in heating relation to the plate, and a sheet of cork forming an insulating cushion for the bottom of the body.

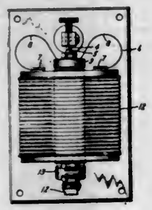
2. A plate-heating device comprising a shell, a body of insulating material disposed therein, a sheet of material disposed under the body and fastened to the shell and forming an insulator and cushion ,a sheet of mica disposed between the body and top of the shell, a winding of wire on the sheet of mica, sheets of mica above and below the winding, and means for connecting the winding with a supply circuit.

1,230,728. VOLTAGE-REGULATOR. HARRY A. LAYCOCK, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 12, 1916. Serial No. 71,781. (Cl. 175—349.)

1. In a vibratory circuit interrupter, the combination of an electromagnet, an armature associated therewith, circuit controlling means operated by said armature, and a looped spring supporting said armature, said spring being attached to a rigid support at each end.

2. In a voltage, regulator, the combination of an electromagnet, an armature associated therewith, a contact carried by said armature, a fixed contact in operative relation to said moving contact, and a spring supporting said armature and moving contact, said spring being

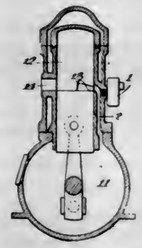
rigidly supported at its ends, and formed of a flat, thin strip of resilient material looped between the armature and the supports.



3. In a vibratory circuit interrupter, the combination of an electromagnet, an armature associated therewith, circuit controlling means operated by said armature, and a supporting spring for said armature rigidly attached at its ends to a suitable support, and formed of a flat strip looped between the center and each end, so that the center may move in the longitudinal axis of said winding and be restrained from movement transversely thereof.

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1,230,729. INTERNAL-COMBUSTION ENGINE. HARRY FERDINAND LEISSNER, Ljusne, Sweden. Filed Apr. 19, 1916. Serial No. 92,273. (Cl. 123—187.5.)



1. In an internal combustion engine, a combustion chamber, a fuel receptacle adapted to be connected with the combustion chamber and having a closed air space, a U-shaped channel positioned in said receptacle and connecting said closed air space with the combustion chamber, and a connection between said fuel receptacle and the lowermost part of said U-shaped channel.

2. In an internal combustion engine, a combustion chamber, a fuel receptacle adapted to be connected with the combustion chamber and having a closed air space, a U-shaped channel positioned in said receptacle and connecting said closed air space with the combustion chamber, and a connection between said fuel receptacle and the lowermost part of the U-shaped channel, the area of passage of this connection being much smaller than that of the U-shaped channel.

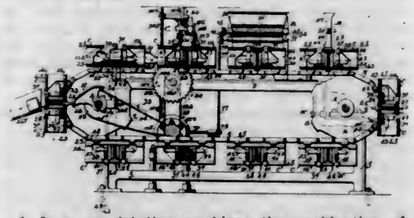
3. In an internal combustion engine, a combustion chamber, a fuel receptacle adapted to be connected with the combustion chamber and having a closed air space, a U-shaped channel partly submerged into the fuel in said receptacle, one branch of said U-shaped channel opening into said closed air space and the other branch being connected with said combustion chamber, and a connection between said fuel receptacle and the lowermost part of said U-shaped channel.

4. In an internal combustion engine, a combustion chamber, and closed fuel receptacle connected with the combustion chamber, an air space in said receptacle, a liquid seal in the receptacle containing a carbureting liquid and opening into said air space above the liquid level, said liquid seal connecting said air space with the combustion chamber, a connection between said receptacle and the lowermost part of the liquid seal, and a filling opening in the wall of the receptacle.

5. In an internal combustion engine, a combustion chamber and closed fuel receptacle connected with the combustion chamber, an air space in said receptacle, a liquid seal in the receptacle containing a carbureting liquid and opening into said air space above the liquid level, said liquid seal connecting said air space with said combustion chamber, an enlargement of the lowermost part of said liquid seal, a connection between said receptacle and said enlargement, and a filling opening in the wall of the receptacle.

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1,230,730: CAN-LABELING MACHINE. AUGUSTUS ROMEO LENDNER, Los Angeles, Cal., assignor of one-fourth to Gilbert E. Gardner, one-fourth to H. Stanley Benedict, and one-fourth to David O. Thompson, Los Angeles, Cal. Filed July 18, 1916. Serial No. 109,980. (Cl. 216—1.)



1. In a can labeling machine; the combination of a carrier, means for progressively depositing an opening key, a pasted label, and a can on the carrier, means for securing the key to the can, means for folding the label around the can, and means for discharging the can from the machine.

2. In a can labeling machine; the combination of a movable carrier, means for depositing an opening key, a pasted label, and a can on the carrier in succession, means for securing the key to the can, means for folding the label around the can, and means for discharging the can from the machine.

4. In a can labeling machine; the combination of an intermittently advancing carrier, means actuated in succession by the carrier to deposit an opening key and a pasted label on the carrier, means for superimposing a can on the pasted label, means for securing the key to the can, means for folding the label around the can, and means for discharging the can from the machine.

6. In a can labeling machine; the combination of a can carrier adapted to advance and rest alternately, a can table on the carrier having a key receiving recess, a key magazine having a lip, a pin on the can table adapted to engage the lip and release a key as the carrier comes to rest, a label pasting and ejecting mechanism adjacent to the key magazine adapted to deposit a label on the can carrier as it advances and comes to rest subsequently to receiving a key, and means for affixing the label.

43. In a can labeling machine, an endless conveyer consisting of a series of connected can supports and means for moving the conveyer, each support having a central opening and a spring supported depressible table in the opening for receiving a can, means for placing a pasted label on each support as it is moved past the said means, means for placing a can on the table above the label, and means controlled by the movement of the conveyer for fixing the label to the can.

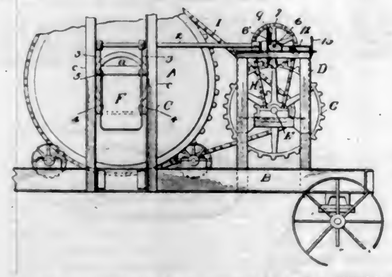
[Claims 3, 5, 7 to 42, and 44 to 47 not printed in the Gazette.]

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1,230,731. CONCRETE-MIXING APPARATUS. CHRISTOPHER W. LEVALLEY, Milwaukee, Wis. Filed Oct. 19, 1912. Serial No. 726,695. (Cl. 193—29.)

1. The combination with a receptacle and a tiltable chute therefor, of a rock-shaft connected with the chute for operating it, power-driven mechanism connected with the said shaft for oscillating it, including a manually operated clutch adapted to occupy a neutral position disconnecting the power mechanism from the oscillating shaft, but when shifted, in one way or the other, enabling the power to drive the shaft positively in either direction, and means connected directly with the rock-shaft for operating the clutch to move it to neutral position whereby the shaft is disconnected from the power mechanism when the chute arrives at its limit of inclination in either direction.





2. The combination with receptacle and a tiltable discharge chute therefor, of a rock shaft connected with the chute for tilting it, a gear wheel carried by the shaft, loosely mounted gear pinions engaging with the said gear wheel, a power-driven shaft, clutch mechanism under the control of an attendant for connecting one or the other of the said gear pinions with the power-driven shaft, and adapted to occupy a neutral position whereby the power shaft is disconnected from both the said gear pinions, and means carried by the rock shaft that operates the chute for shifting the clutch mechanism into its neutral position whenever the chute is inclined to the desired degree in either direction.

3. The combination with receptacle and a discharge chute therefor, of a rock shaft connected with the chute for tilting it, a bevel wheel upon the shaft, a horizontally mounted power-driven shaft, a pair of bevel pinions loosely mounted upon the power-driven shaft engaging with the bevel wheel at diametrically opposite points, a shifting clutch member splined to the power driven shaft arranged between the pinions and adapted to engage with either one or the other of them or to occupy a neutral position between them, shifting devices under the control of the attendant for operating the said clutch member, and a cam carried by the rock shaft that operates the chute for automatically disengaging the clutch member from the pinion with which it was engaged, and moving it into its neutral position, whenever the chute reaches the desired limit of adjustment.

4. The combination with a receptacle and a tiltable discharge chute therefor, of a rock-shaft connected with the chute for tilting it, power-driven means for positively driving the shaft, including a clutch arranged, accordingly as it is adjusted, to permit disengagement between the shaft and the source of power or connection therewith so as to drive the shaft positively in either direction, eccentric, automatic, clutch-operating means supported directly by the said rock-shaft arranged to bring the clutch to neutral position disconnecting the rock-shaft from the source of power whenever the chute reaches the desired limit of movement in either direction, and manually controlled devices for moving the clutch beyond the positions to which it is moved by the said automatic shifting means.

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1,230,732. STOPPING ATTACHMENT FOR WATCHES. EDWARD THOMAS LEWIS, Oceanpark, Cal. Filed July 21, 1915, Serial No. 41,088. Renewed June 29, 1916. Serial No. 106,730. (Cl. 58—57.)

1. In combination, a watch movement and a stopping attachment therefor, the hour wheel of the watch movement having driving means for driving the stopping attachment and the latter having stopping means adapted to engage another member of the said watch movement to stop the latter after the lapse of a predetermined time.

2. In combination, a watch movement and a stopping attachment therefor, the watch movement having a second hand sleeve and having driving members for driving the said stopping attachment and the latter having stopping means engaging the said second hand sleeve of the movement to stop the latter after the lapse of a predetermined time.



3. In combination, a watch movement and a stopping attachment therefor and comprising a driven member, and a stopping member controlled by the driven member, the driven member being driven intermittently by one part of the said watch movement and the stopping member being adapted to engage another part of the said watch movement.

4. In combination, a watch movement and a stopping attachment therefor and comprising a driven member driven intermittently from the hour wheel of the said watch movement, and a stopping member controlled by the said driven member and adapted to engage the sleeve of the second hand of the said watch movement.

5. In combination, a watch movement and a stopping attachment therefor and comprising a gear wheel driven intermittently from the hour wheel of the said watch movement and having a pin, and a brake lever adapted to be engaged by the said pin and pressed into contact with the sleeve of the second hand of the said watch movement.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,733. STOPPING ATTACHMENT FOR WATCHES. EDWARD THOMAS LEWIS, Ocean Park, Cal. Filed Nov. 12, 1916. Serial No. 61,067. (Cl. 58—57.)



1. A watch provided with a stopping attachment, comprising a mutilated toothed index wheel having a pin, a stopping lever controlled by the said pin and adapted to engage a movable part of the watch movement, and a pin on one of the wheels of the watch movement and adapted to impart an intermittent motion to the said index wheel until it reaches the mutilated portion of the index wheel.

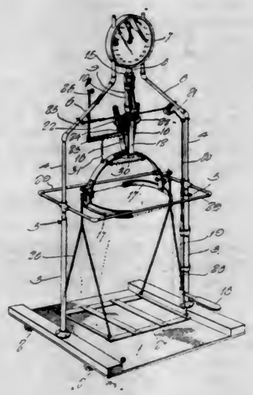
2. A watch provided with a stopping attachment, comprising a mutilated toothed index wheel provided with consecutive numerals, a pin on the said toothed wheel, a spring-pressed lever adapted to be engaged at one end by the said pin, the said lever having at its other end an arm adapted to engage one of the wheels of the train of wheels of the watch movement, and a pin on one of the driven wheels of the watch movement and adapted to impart an intermittent movement to the said index wheel.

3. A watch provided with a stopping attachment, comprising a mutilated index wheel having a pin, a spring-pressed lever adapted to be engaged by the said pin, the lever having an arm adapted to engage the fourth wheel of the train of wheels of the watch movement, and a pin on the hour wheel of the watch movement and adapted to engage the said index wheel to impart an intermediate movement to the same until the pin reaches the mutilated portion.

4. A watch provided with a stopping attachment, comprising a mutilated index wheel having a pin and consecutive numerals adapted to appear in a cut-out portion of the dial, the said cut-out portion being hidden by the bezel, a spring-pressed lever adapted to be engaged by the said pin, the lever having an arm adapted to engage the fourth wheel of the train of wheels of the watch movement, and a pin on the hour wheel of the watch movement and adapted to engage the said index wheel to impart an intermittent movement to the same until the pin reaches the mutilated portion.

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1,230,734. COMBINED SACK HOLDER AND WEIGHER. ANDREW LILJA, Streator, Ill. Filed Sept. 25, 1916. Serial No. 122,117. (Cl. 86—26.)

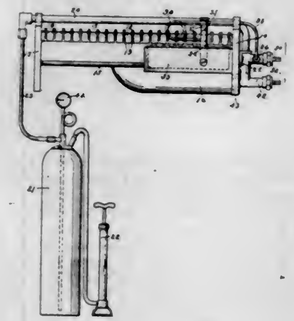


1. A device of the class described comprising a support, an extensible link member suspended from said support, a pair of bag holding arms pivoted to the lower end of said member, means for expanding the lower ends of said arms relatively to each other after the insertion of the mouth of a bag thereon, and a locking bar for locking said arms after the lower ends of the same have been adjusted to their relatively expanded positions, said bar being positioned so as to release said arms when said link member is extended.

2. A device of the class described, comprising a support, a two-part extensible link member suspended from said support, a coiled spring operatively engaged with the two parts of said member to return them to their contracted positions when extended, means for locking the two parts of said member in their contracted positions, a pair of bag-holding arms pivoted intermediate of their ends to the lower end of the lower part of said member, means engaging the upper ends of said arms for expanding the lower ends thereof relatively to each other, a coiled spring operatively connected with the lower ends of said arms to move the same toward each other, and a locking bar for locking said arms after the lower ends of the same have been adjusted to their relatively expanded positions, said bar being pivoted at one of its ends to one of said arms and engaging the other arm, and being held immovable at its other end so as to become disengaged from the last mentioned arm when said link member is allowed to be extended.

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1,230,735. HEATING DEVICE FOR VAPORIZING AND BURNING KEROSENE. JOHN I. LOGAN, Chicago, Ill. Filed July 10, 1916. Serial No. 108,363. (Cl. 158—65.)



1. A device for burning vaporized hydrocarbon comprising a hollow burner having an opening leading into the interior thereof for the admission of air and hydrocarbon vapor, the top of said burner being curved from side to side and provided with transverse raised ribs curved to conform with the curvature of the top of the burner and formed with burner slits.

2. A device for burning vaporized hydrocarbon comprising a hollow burner having a central opening in the bottom thereof for the admission of air and hydrocarbon vapor, the top of the burner being formed with raised ribs provided with burner slits; said ribs being spaced apart so as to provide air circulating channels between the burner slits.

3. A device for burning vaporized hydrocarbon comprising a hollow burner having its top and bottom rounded transversely from side to side, the bottom being provided centrally with an opening for the admission of air and hydrocarbon vapor, and the top with a plurality of transverse ribs formed with burner slits.

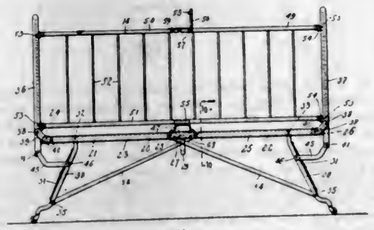
4. A device for burning vaporized hydrocarbon comprising a hollow burner having its top and bottom rounded transversely from side to side, the bottom being provided centrally with an opening for the admission of air and hydrocarbon vapor, and the top with a plurality of transverse ribs which extend farther over on one side of the burner than on the other and are formed from end to end with slits; said ribs being spaced apart so as to provide air circulating channels extending from side to side of said burner.

5. A device for burning vaporized hydrocarbon comprising a hollow burner having an opening leading into the interior thereof for the admission of air and hydrocarbon vapor, the top of said burner being curved from side to side and provided with transverse raised ribs which extend farther over on one side of the burner than on the other and are formed with slits extending from end to end.

[Claims 6 to 9 not printed in the Gazette.]



1,230,736. FOLDING CRIB. MORRIS LOWY and AUGUST J. KREUZKAMP, New York, N. Y., assignors to Englander Spring Bed Co., Brooklyn, N. Y., a Corporation of New York. Filed June 9, 1914. Serial No. 843,997. (Cl. 5—58.)



1. In a folding crib, the combination with a pair of foldable crib sections pivotally connected adjacent to their inner ends to fold transversely of such crib by lifting such inner ends and thereby allowing the outer ends to drop and close toward each other, of a pair of legs pivoted to each section, means pivotally connecting the legs of each section with the opposite foldable section of the crib, an end frame fulcrumed to each section and linked to the legs of the same section, and side frames connecting, when the crib is in its extended position, said end frames, each side frame being made of two sections hinged to said end frames and adapted to be swung, at will, inwardly onto said end frames or outwardly.

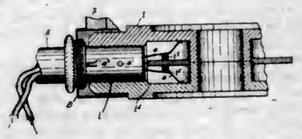
2. In a folding crib, the combination with a pair of foldable crib sections, of a short middle section pivotally connected to the inner ends of said sections, said foldable crib sections folding transversely of the crib by lifting such inner ends and thereby allowing the outer ends to drop and close toward each other, a pair of legs pivoted to each section, means pivotally connecting the legs of each section with the opposite foldable section of the crib, an end frame fulcrumed to each section and linked to the legs of the same section, supports upon said middle section, and side frames connecting, when the crib is in its extended position, said end frames, each side frame being made of two sections hinged to said end frames and adapted to be swung, at will, inwardly onto said end frames or outwardly, said side frame sections being adapted to rest upon said supports.

3. In a folding crib, the combination with a pair of foldable crib sections, of a short intermediate member at each side thereof to which the crib sections are pivotally connected at their inner ends, said foldable crib sections folding transversely of the crib by lifting such inner ends and thereby allowing the outer ends to drop and close toward each other, a pair of legs pivoted to each section, means pivotally connecting the legs of each section with the opposite foldable section of the crib, an end frame fulcrumed to each section and linked to the legs of the same section, supports upon said intermediate members, side frames connecting, when the crib is in its extended position, said end frames, each side frame being made of two sections hinged to said end frames and adapted to be swung, at will, onto said end frames or outwardly, said side frame sections being adapted to rest upon said supports, stop members carried by said intermediate members for maintaining the crib sections in alinement, and a drop formed brace bar connecting said intermediate members.

4. In a folding crib, the combination with a pair of foldable crib sections, of a short middle section pivotally connected to the inner ends of said sections, an end frame attached to the outer ends of each of said first named sections, supports upon said middle section, and side frames connecting, when the crib is in its extended position, said end frames, each side frame being made of two sections hinged to said end frames and adapted to be swung, at will, inwardly onto said end frames or outwardly, said side frame sections being adapted to rest upon said supports.

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1,230,737. LIGHTING-FIXTURE. WILFRID LUMLEY, Conneaut, Ohio, assignor to General Electric Company, a Corporation of New York. Filed May 5, 1913. Serial No. 765,444. (Cl. 173—338.)



1. In an electric connection the combination of a socket and a removable arm adapted to enter said socket, said socket having therein a stationary contact and said arm having a resilient contact extending therefrom and engaging said stationary contact at an intermediate point in said resilient contact and having its free end engaging the wall of said socket whereby the resilient contact is flexed by said wall and thereby pressed firmly against said stationary contact under any tilting movement of said arm.

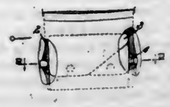
2. In an electric connection the combination of a socket and a removable arm having a portion adapted to enter said socket, said socket having a stationary contact therein and said arm having extending therefrom a resilient contact adapted to be engaged at an intermediate point by said stationary contact and thereby flexed in one direction and adapted to be engaged at its free end by the wall of the socket and thereby flexed in the opposite direction.

3. The combination with a lighting fixture body or junction part having a socket with electrical contact means exposed therein, of a removable arm in said socket having a pair of spring contacts projecting from its end at opposite sides of said body contact means into engagement therewith and resiliently bent apart thereby, the portions of said spring contacts beyond said body contact means extending into engagement with the walls of the socket and being thereby resiliently flexed toward one another.

4. The combination with a lighting fixture body or junction part, having a socket with electrical contact means exposed therein, of a removable arm in said socket having a spring contact projecting from its end and engaging said contact means and thereby bent in one direction, the portion of said spring contact extending beyond said contact means extending into engagement with the wall of the socket and being thereby resiliently flexed in a direction opposite to that caused by engagement with the contact means.

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1,230,738. SAFETY DEVICE FOR POCKET-BOOKS. DENNIS THOMAS LYNCH, New York, N. Y. Filed June 17, 1916. Serial No. 104,207. (Cl. 2—152.)



1. In a safety device of the character described, a pair of telescoping members, a clasp arranged at one end of said telescoping members for gripping one side of a pocket when the device is in use, and a friction member at the opposite end of said telescoping members for frictionally engaging the opposite side of said pocket.

2. In a safety device for wallets, a tubular body, a spring arranged in said body, a tubular section telescopically fitting said body, said spring continually urging said section in a given direction, a locking member for locking said tubular section in an inner and an outer posi-

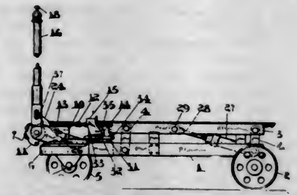
tion at will, and means arranged on the free ends of said body and said section for engaging a pocket when the device is in use.

3. In a safety device for wallets, a tubular body formed with an extension merging into a jaw presenting part of a clasp, a movable member pivotally mounted on said extension and provided with a jaw, a spring for acting on said movable member for causing the same to press resiliently against the first mentioned jaw, a telescoping member arranged in said tubular member, and a spring for urging said telescoping member in a direction away from said clasp.

4. A safety device for wallets, comprising a tubular body having a pair of apertures therein, a clasp arranged in one end of said body, the opposite end of said body being open, a spring arranged in said body, a shoulder arranged in said body adjacent said clasp for limiting the movement of said spring in one direction, a tubular section having a closed end fitting into said body, said closed end pressing against said spring, a spring-pressed ball projecting from said tubular member and adapted to snap into either of said apertures and lock the tubular member against movement, and a friction member arranged at the outer or free end of the tubular member.

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1,230,739. ELEVATING-TRUCK. WILLIAM JAMES MCCALLUM, Toronto, Ontario, Canada, assignor to The Chapman Double Ball Bearing Company of Canada, Limited. Filed Feb. 1, 1917. Serial No. 145,918. (Cl. 254—10.)

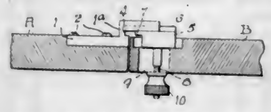


3. In an elevating truck, the combination of the main frame; a frame mounted on said main frame so as to move vertically when moved horizontally; a turntable mounted on said main frame to rotate horizontally; a rocking member mounted on said turntable to swing in a vertical plane; a flexible connection between said rocking member and the movable frame; guide means adapted to maintain the pull of said flexible connection on the movable frame in substantially the same direction for any position of the turntable; a handle fulcrumed in operative relationship to the rocking member; one or more ratchet teeth formed on said rocking member; a dog adapted to engage said tooth or teeth to normally prevent backward movement of the rocking member; a toggle adapted to automatically lock the movable frame in its raised position; a tripping lever for the toggle carried by the turntable and adapted to maintain an operative relationship to the said toggle as the turntable is swung; means for operatively connecting the handle and the rocking member at will, said means being adapted also to be positioned to engage and raise the dog clear of the teeth of the rocking member when the handle is moved rearwardly, the dog being adapted when so raised to engage and operate the tripping lever.

8. In an elevating truck, the combination of the main frame; a frame mounted on said main frame so as to move vertically when moved horizontally; a rocking member mounted on the main frame to swing in a vertical plane; a flexible connection between said rocking member and the movable frame; a handle for operating said rocking member; a toggle adapted to lock the movable frame in its raised position; tripping mechanism for tripping the toggle supported from the main frame; and means carried by the handle adapted to be engaged with the tripping mechanism, when the handle is moved rearwardly, to cause the toggle tripping mechanism to trip the toggle.

[Claims 1, 2, and 4 to 7 not printed in the Gazette.]

1,230,740. CUPBOARD-LATCH. J. GLEN MCCRACKEN, La Crosse, Kans. Filed Mar. 7, 1917. Serial No. 153,095. (Cl. 70—50.)



1. A door latch including a magnet permanently applied to the door frame, an armature plate adjustably mounted upon the door so as to be movable toward and away from the swinging edge thereof, the magnet and armature plate being constructed with interlocking portions adapted to be brought into and out of engagement with each other by shifting the position of the armature plate on the door, and means for locking the armature plate in an adjusted position on the door with the interlocking portions of the magnet and armature plate either in or out of engagement with each other.

2. A door latch including a magnet permanently applied to the door frame and formed with a notched portion, an armature plate adjustably mounted upon the swinging edge of the door in position to be attracted by the magnet when the door is closed, said armature plate being formed with a projection adapted to engage the notched recess of the magnet to lock the door in a closed position when the armature plate is moved upon the door, and means for holding the armature plate in an adjusted position.

3. A door latch including a magnet permanently applied to the door frame and formed with an inwardly offset end which projects into the door opening, a notch being provided at the inner end of the offset end of the magnet, and an armature plate adjustably mounted upon the swinging edge of the door in position to contact with the offset end of the magnet and adhere thereto when the door is closed, said armature plate being formed with a rib which is movable into and out of engagement with the notch of the magnet.

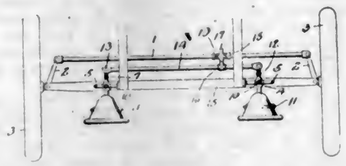
4. A door latch including a U-shaped magnetized bar permanently applied to the door frame and arranged with the free ends thereof projecting laterally into the door opening, said free ends being formed with horizontally disposed V-shaped grooves, and an armature plate applied to the swinging edge of the door in position to contact with the ends of the magnet and adhere thereto when the door is closed, said armture plate being formed with horizontally disposed V-shaped noses corresponding to the V-shaped grooves in the ends of the magnet and coöperating therewith to properly position the armature plate upon the ends of the magnet.

5. A door latch including a permanently magnetized U-shaped bar applied to the door frame and arranged with the ends thereof projecting into the door opening, said ends being offset rearwardly and having depressions in the outer faces thereof, while notches are formed in the rearwardly extending portions of the bar at the inner ends of the offset ends thereof, and an armature plate adjustably mounted upon the swinging edge of the door in position to contact with the ends of the magnetized bar and adhere thereto when the door is closed, said armature plate being formed with noses adapted to engage the depressions in the ends of the magnetized bar, and being also formed with a rib adapted to be moved into engagement with the before mentioned notches to lock the door positively in a closed position.

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1,230,741. DIRIGIBLE HEADLIGHT. HENRY D. MCLEAN and CHARLES WARING, Carstairs, Alberta, Canada. Filed June 13, 1916. Serial No. 103,549. (Cl. 240—62.)

The combination with the frame of a motor vehicle, of lamp supporting members secured thereto, lamp carrying members journaled on said bearing members, a rod pivotally connecting said lamp carrying members, a yoke journaled on said connecting rod to turn on a horizontal axis, spaced collars on said connecting rod between which said yoke is positioned, a fork on said yoke straddling the knuckle arm connecting rod of the steering mechanism of the motor vehicle and having a sliding and rocking relation to the last named rod, collars fast on the last named



rod arranged in spaced relation to the fork of said yoke, and cushioning springs surrounding the last named rod and interposed between said collars and fork.

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1,230,742. CLAMP. ADNAH MCMURTRIE, New York, N. Y., assignor to Thomas & Betts Company, New York, N. Y., a Corporation of New York. Filed Nov. 27, 1911, Serial No. 662,715. Renewed Nov. 21, 1916. Serial No. 132,715. (Cl. 247—1.)



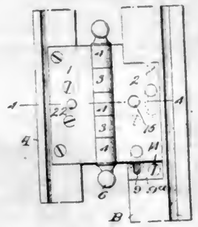
1. The combination with an electric conduit member, of a grounding clamp for a gas pipe, said grounding device comprising a plurality of symmetrical segmental clamping members having respectively substantially semi-cylindrical seat portions for engagement with said pipe in opposed relation, said seat members having projecting ribs presented co-axially inward for physical and electrical contact with said pipe, and diametrically opposite lugs on said segments, at the ends thereof, said lugs having slots to receive operating screw bolts, and said slots being extended to permit approach of said segments from opposite sides into operative relation with said pipe, and said lugs overlapping when in said operative relation and having their proximate surfaces inclined across the plane of juncture, serving as coöperating cam-surfaces to cramp said members together toward the axis of said pipe, said coöperative sliding engagement serving also to promote electrical union of said members with each other, and the abrasive action of said projections serving to promote electrical union of said members with the periphery of said pipe, and the action of said operating bolt members serving by abrasion of their heads and said lugs, to complete the electrical grounding of said conduit member through said bolts and segments to said pipe.

2. A grounding device of the class described; comprising a segmental member having a medial concave seat portion and terminal slotted lugs on each side thereof with cam faces inclined across the axis of said concavity; substantially as described.

3. A grounding device of the class described; said device comprising a plurality of symmetrical, segmental members having respectively medial concave seat portions and slotted terminal lugs on each side of said respective seat portions, with cam faces inclined across the axis of said seat, said members being assembled with said lugs overlapping and said cam faces in engagement; substantially as described.



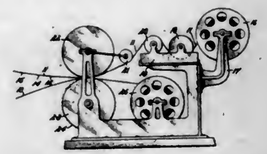
1,230,743. HINGE. ULYSSES G. MCQUEEN, New York, N. Y. Filed Dec. 4, 1915. Serial No. 64,959. (Cl. 16—106.)



A hinge structure for casement lifts comprising, an attaching plate adapted to be secured to the frame, hinge leaves slidably supported from said plate, one of the leaves having a keeper opening therein, a bolt adapted to be mortised in the frame and freely working through said attaching plate and normally held retracted when the hinge leaves are lowered and through direct sliding contact of one of the leaves with said latch, the said bolt being adapted to enter the keeper opening when the hinge leaves are raised upon said attaching plate, and means projecting from one face of the other leaf and adapted to enter the keeper opening and to retract the bolt from said opening when the leaves are closed together and thereby permit said leaves to freely slide from said plate.

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1,230,744. METHOD OF COLORING MOVING-PICTURE FILMS. CLARENCE W. MABLE, Binghamton, N. Y. Filed Apr. 28, 1916. Serial No. 94,228. (Cl. 101—211.)



1. A method for coloring a photographic film consisting in providing a transfer ribbon corresponding in size with said film; then rendering said ribbon impervious to an aqueous solution, omitting printing areas to be treated by said solution, said areas registering with associate areas on said film; then immersing said ribbon in an aqueous solution to affect said areas; then passing said ribbon through a printing solution; then pressing said film and ribbon together in registered relation for transferring the printing solution held by said printing areas of said ribbon to the associate areas of said film.

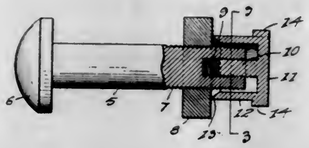
2. A method of coloring a photographic film consisting in providing a transfer ribbon corresponding in size with said film; then locating printing areas on said ribbon, said areas registering with associate areas on said film; then rendering the surface intermediate said areas impervious to the action of aqueous solutions; then immersing the ribbon in water for acting on said printing areas; then immersing said ribbon in color solution; and then pressing said ribbon and said film together for transferring the color solution from said printing areas to said associate areas.

3. A method of coloring a photographic film consisting in providing a transfer ribbon corresponding in size with said film; then locating printing areas on said ribbon, said areas registering with associate areas on said film; then rendering the surface intermediate said areas impervious to the action of aqueous solutions; then immersing the ribbon in water for acting on said printing areas; then immersing said ribbon in color solution; and then

pressing said ribbon and said film together for transferring the color solution from said printing areas to said associate areas, said ribbon and film being held in registry while pressure is being applied thereto.

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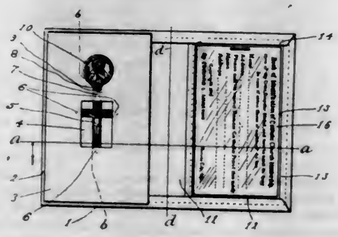
1,230,745. NUT-LOCK. CHARLES C. MADISON, Scandia, Kans. Filed July 28, 1915. Serial No. 42,348. (Cl. 151—27.)



A nut lock including a bolt having external screw threads and a longitudinal bore or recess, a nut fitted upon said screw threads, a hollow lubricant retaining element fitted on said bolt of greater internal diameter than the latter providing a lubricant containing chamber, said element having its inner edge beveled to provide an angular cutting edge adapted to bite into the outer surface of said nut to form a sealed closure for said lubricant containing chamber, and a stem carried by said containing element engaged within the bore or recess to lock the nut against removal.

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1,230,746. RECEPTACLE FOR SACRED EMBLEMS. EDWARD L. MANAHAN, Kansas City, Mo. Filed Mar. 1, 1916. Serial No. 81,390. (Cl. 206—19.)



3. A pocket emblem and identification receptacle comprising foldably connected sides, a pocket upon the inner face of one of said sides for retaining an identification card or the like, the receptacle at its other side having a recess, an attaching element upon the last-mentioned side of the receptacle adjacent said recess, an emblem disposed and housed within the recess and surrounded by the walls thereof, and a second emblem connected by said attaching element with the said side of the receptacle.

[Claims 1 and 2 not printed in the Gazette.]

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1,230,747. CARLINE. FRED MATHEWS, Chicago, Ill., assignor to Clinton C. Murphy, Chicago, Ill. Filed Oct. 14, 1916. Serial No. 125,712. (Cl. 105—5.6.)



1. A carline comprising two similarly shaped structural metal members, said members being disposed in vertical planes side by side with their middle portions crossing each other and diverging and their end portions converging, said members being connected at the middle and ends to form a truss.

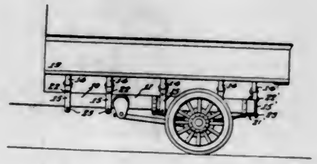
2. A carline comprising two similarly shaped structural metal members, said members being disposed in vertical planes side by side with their middle portions crossing each other and diverging and their end portions converging, said members being connected at the middle and ends to form a truss, and a connecting plate secured between the crossing middle portions.

3. A carline of truss form comprising two complementary members having vertically disposed flanges and secured together at the middle, the ends of said members being bent in opposite directions and adjacent ends converging toward the ends of the carline, where the vertical flanges are secured together.

4. A carline of truss form comprising two complementary members having vertically disposed flanges and secured together at the middle, the ends of said members being bent in opposite directions and adjacent ends converging toward the ends of the carline, and gusset plates riveted to the ends of said members to secure them together and support the carline upon the side plates of a car.

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1,230,748. AUTOMOBILE-BODY SUPPORT. WILLIAM G. MAYER, Pittsburgh, Pa. Filed Oct. 3, 1916. Serial No. 123,507. (Cl. 21—90.)



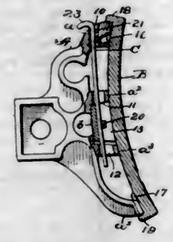
1. An automobile-body support comprising a stem having a portion adapted to lie in engagement with a bar of the chassis and having another portion adapted to rest upon such bar, a clamping bar opposed to the first-named portion of said stem, and a pair of clamping devices for drawing said bar toward said stem, whereby such chassis bar is clamped between said stem and said clamping bar, said clamping devices being separated so as to inclose said chassis bar between them.

2. The combination with an automobile truck comprising a chassis having side bars and an end bar, and a body having a plurality of bolsters extending across the lower part thereof, of means for connecting said body to said chassis, said connecting means including a plurality of supports, each of said supports comprising a stem having a portion adapted to engage against one side of one of the chassis bars, and having a second portion adapted to rest upon such bar, a clamping plate cooperating with the first-named portion of said stem, to secure said support to said chassis bar, a socket for receiving an end of one of said bolsters, and means for securing said bolsters in said socket.

3. The combination with an automobile truck comprising a chassis having frame rails or bars, a body having a plurality of bolsters extending across the lower part thereof, of means for connecting said body to said chassis, said connecting means including a plurality of supports, each of said supports comprising a stem having a portion adapted to engage against one side of one of the chassis bars, and having a second portion extending over such bar, a clamping plate cooperating with the first named portion of said stem, securing members passing through said plate and said stem above and below said bar, a socket for receiving an end of one of said blosters, and means for securing said bolster to said socket.



1,230,749. BRAKE-HEAD. ROBERT E. L. MEEHAN, Cincinnati, Ohio. Filed Jan. 19, 1917. Serial No. 143,411. (Cl. 188—28.)



1. A brake block having a plurality of spaced projections to engage a shoe, said projections extending forwardly from the forward face of the block and having openings, a key disposed longitudinally of the forward face of the block and extending through the openings in the projections, and coöperating stops on the key and block relatively arranged to permit the key to be moved longitudinally of the block to secure or release the shoe and to prevent detachment of the key from the block.

2. A brake block having a plurality of projections provided with openings, said projections being arranged below the upper end of the block and spaced to receive a portion of a shoe between them, and a key extending from the upper end of the block and through the openings in the projections and movable longitudinally of the block, said block and key having co-acting stops relatively so disposed that the key may be moved longitudinally of the block to secure or release the shoe but cannot be completely withdrawn from the block.

3. A brake block having a plurality of spaced projections provided with openings, one of said projections being disposed adjacent to the upper end of the block and others of the projections being arranged near the center of the block and spaced to receive a portion of a shoe between them, and a key extending through the openings in the several projections, said key and block having coacting stops relatively so disposed that the key may be moved longitudinally of the block to secure or release the shoe but cannot be withdrawn completely from the block.

4. A brake block having an opening which is open at the top and bottom and bounded by walls on all of its sides, and a key having a projection, the opening being initially of such dimensions that the portion of the key containing the projection may be inserted therethrough, and one wall of said opening being bendable to form a stop disposed in the path of the projection on the key to thereby prevent complete withdrawal of the key, said stop and projection being relatively so disposed that the key is movable longitudinally relatively to the block sufficiently to secure or release a shoe.

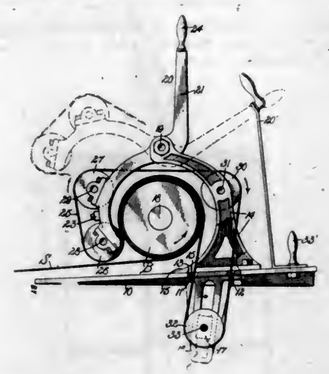
5. In a brake head, the combination of the block member, shoe member and key member thereof, the key having a stop, the block and shoe having projections one of which overlies the other and said projections having substantially alined openings through which the portion of the key having the stop may move in either direction and the block having an additional opening whose dimension is such with relation to the portion of the key having the stop that the latter cannot be withdrawn therethrough, the last named opening being so positioned with relation to the stop on the key when the parts are assembled that the key may be moved longitudinally sufficiently to secure or release the shoe.

[Claim 6 not printed in the Gazette.]

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1,230,750. STRIP-METAL BLOCKER. JOSEPH G. MENZER, New Bedford, Mass. Filed Aug. 19, 1916. Serial No. 115,797. (Cl. 242—78.)

1. The combination with a rotary block, of a base movable with respect to the block, a pair of standards carried by the base and extending therefrom so as to embrace one side of the block, a yoke pivoted to the free ends of the standards and adapted to loosely embrace the opposite side of the block, means to throw the yoke outwardly so as to clear the block when the base is moved as aforesaid, and an endless gripping member operated over said standards and yoke and including a loop or bight carried by the yoke outwardly to clear the block during movement of the base.



2. The combination with a power driven rotary block, of gripping and coiling means coöperating therewith comprising a base movable with respect to the block, a pair of standards secured rigidly to the base and extending therefrom and curved so as to loosely embrace one side of the block, an anti-friction roller supported in fixed position upon said standards, a substantially arc-shaped yoke pivoted to the free ends of the standards in a vertical plane substantially coinciding with the axis of the block in normal position, said yoke extending around the opposite side of the block, a plurality of anti-friction rollers journaled upon the yoke around parallel axes, one roller being in substantially the same plane as the roller first mentioned, while the other yoke roller is located close to the base, an endless gripping member operating over all of said rollers and between the standards, said gripping member comprising two remote bights, one of which embraces the yoke rollers, tension means located in the other bight, and means to manipulate the yoke so as to throw it outward out of normal position to permit the movement of the base.

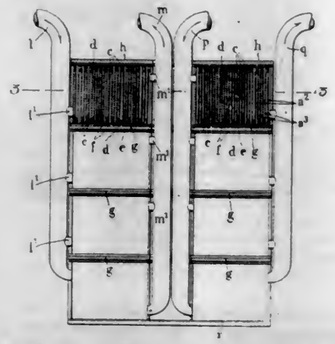
3. The combination with a power driven rotary block, of a base adjacent to the block, a pair of standards secured rigidly to the base and extending therefrom and substantially halfway around the block, said standards being provided with guiding means adjacent to the base to deflect the strip of metal toward the block to initiate the gripping action, a rigid arc-shaped frame member pivoted to the free ends of the standards directly and extending thence around the opposite side of the block toward the base, a lever connected to the frame member for throwing the same around its pivot so as to clear the block, means to hold the frame member and lever in this position temporarily, anti-friction rollers carried by the standards and the pivoted frame member, and an endless gripping band operating over said anti-friction rollers and coöperating with the guide means aforesaid and the block to automatically engage the end of the strip of metal and roll or block the same upon the block.

4. The combination with a power driven rotary block, of a base adjacent to the same, said base having a pair of parallel slots formed therein, a pair of rigid standards secured to the base and extending substantially halfway around the block, an arc-shaped rigid frame member pivoted to the free ends of the standards, a pair of anti-friction rollers journaled upon the frame member for rotation around parallel axes and both on the side of the

block remote from the standards, means to throw the pivoted frame member with its rollers outwardly away from the block, an anti-friction roller journaled upon the standards in alinement with said slots, an endless gripping band operating over said rollers and through said slots, and tension means for the band, said tension means acting to tighten the band upon the block and also to cause the pivoted frame member to be drawn toward the block.

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1,230,751. PROCESS OF STERILIZING LIQUIDS. JEAN MÉRIE, Paris, France. Filed Apr. 17, 1914. Serial No. 832,660. (Cl. 99—15.)



1. A process for sterilizing alimentary liquids in a sterilizing apparatus, consisting in sending water into the whole of the apparatus, at the beginning of the operation, in bringing this water to the sterilizing temperature, in causing said water to be displaced by the liquid to be treated and, at the end of the operation, in displacing by water the liquid which has been treated.

2. In a process for sterilizing alimentary liquids in a sterilizing apparatus, displacing by water the liquid which has been treated leaving the apparatus full of water when the operation ceases, and separating the sterilized water which has passed through the sterilizer from the unsterilized water in the apparatus.

3. A process for sterilizing alimentary liquids in a sterilizing apparatus, consisting in sending water into the whole of the apparatus at the beginning of the operation, in bringing the water to the sterilizing temperature, in displacing said water by the liquid to be treated, then, a little before stopping the operation, in displacing by water the liquid which has been treated, and finally in separating the sterilized water in the apparatus from the unsterilized water, to prevent, while the apparatus is at rest, the contamination of the sterilized water.

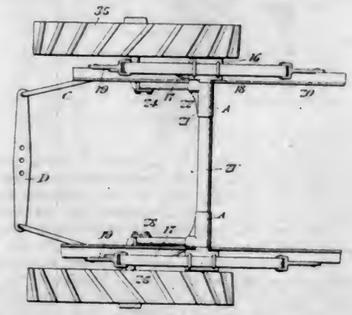
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1,230,752. TRACTOR. ROBERT J. MILLION, Monticello, Ind. Filed Apr. 28, 1916. Serial No. 94,191. (Cl. 21—114.)

1. An axle, spring supporting blocks fixed thereon, springs mounted on the blocks, a tractor frame having side members, shackles connecting said side members with the springs, radial spindle carrying arms connected with the axle for rotation about the axis of said axle, and means for adjusting said spindle carrying arms and for securing them at various adjustments.

2. An axle, spring supporting blocks fixed at the ends thereof, a spacing sleeve on the axle intermediate said blocks, angle blocks mounted for rotation on the axle intermediate the spring supporting blocks and the spacing sleeve, said angle blocks having each an axle engaging sleeve and a second sleeve substantially at right angles thereto, and spindle carrying arms fixed in the last mentioned sleeves of the angle blocks.

3. An axle body, a spindle carrying arm, an angle block having sleeves substantially at right angles to each other engaging and assembling the axle body and the spindle carrying arm, one of said sleeves being in revoluble engagement with the axle body, and the spindle carrying arm being fixed in the other sleeve, a reinforcing member mounted in the spindle and connected with the arm carrying said spindle, and a brace connecting said reinforcing member with the angle block.



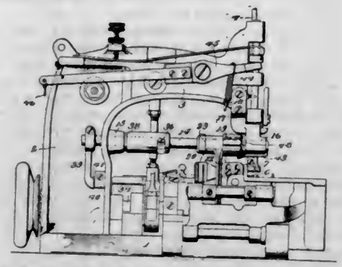
4. An axle body, a spindle carrying arm, an angle block having sleeves substantially at right angles to each other engaging and assembling the axle body and the spindle carrying arm, one of said sleeves being in revoluble engagement with the axle body, and the spindle carrying arm being fixed in the other sleeve, a reinforcing member mounted in the spindle and connected with the arm carrying said spindle, and a brace connecting said reinforcing member with the angle block, in combination with a tractor frame, each side member of which is included between a spindle carrying arm and the last mentioned brace.

5. An axle body, radially disposed arms supported for rotation about the axis of the axle body, each of said arms having a spindle at its outer end, reinforcing members having bores engaging the spindles, each reinforcing member being provided with an upwardly extending neck and with downwardly extending lugs, and clips connecting the reinforcing members with the radial arms.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,753. TRIMMING MECHANISM FOR SEWING-MACHINES. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of New York. Filed June 7, 1912. Serial No. 702,242. (Cl. 112—6.)



1. A trimming mechanism including in combination, a bed plate, a work support, a standard carried by the bed plate, an overhanging arm mounted on the standard, a shaft, bearings carried by the standard and the overhanging arm, a trimmer blade, an arm attached to said shaft for supporting said blade, a member loose on said shaft, means for vibrating said member, and means for connecting and disconnecting said member to the arm supporting the trimmer blade and at a point adjacent said blade.



2. A trimming mechanism including in combination, a bed plate, a work support, a standard carried by the bed plate, an overhanging arm mounted on the standard, a shaft, bearings carried by the standard and the overhanging arm, a trimmer-supporting arm carried by said shaft, a trimmer blade supported by said arm, a rocking member having an arm adapted to be detachably connected with the trimmer-supporting arm, an arm extending beneath the work support, means connected with said arm beneath said work support for vibrating said rocking member, and means for yieldingly moving said shaft longitudinally, an arm mounted on the end of the shaft, and a locking lug for engaging said arm to hold said trimmer blade in raised position when disconnected from the rocking member.

3. A trimming mechanism including in combination, a bed plate, a work support, a standard carried by the bed plate, an overhanging arm mounted on the standard, a shaft, bearings carried by the standard and the overhanging arm for supporting said shaft, a trimmer-supporting arm carried by said shaft, a trimmer blade mounted on said arm, a stationary trimmer blade coöperating therewith, a rocking member loosely mounted on said shaft and having an arm adapted to be detachably connected with the supporting arm for the trimming member adjacent said trimming member, said rocking member having a second arm extending beneath the work support, a main shaft beneath the work support, an eccentric carried thereby, and a strap coöperating with said eccentric and connected to said arm extending beneath the work support.

4. A trimming mechanism including in combination, a bed plate, a work support, a standard carried by the bed plate, an overhanging arm mounted on the standard, a shaft, bearings carried by the standard and the overhanging arm for supporting said shaft, a trimmer-supporting arm carried by said shaft, a trimmer blade mounted on said arm, a stationary trimmer blade coöperating therewith, a rocking member loosely mounted on said shaft and having an arm adapted to be detachably connected with the supporting arm for the trimming member, said rocking member having a second arm extending beneath the work support, a main shaft beneath the work support, an eccentric carried thereby, a strap coöperating with said eccentric and connected to said arm extending beneath the work support, and a spring for moving said shaft endwise for yieldingly holding the trimmer blades in contact.

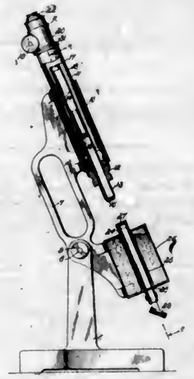
5. A trimming mechanism including in combination, a bed plate, a work support, a standard carried by the bed plate, an overhanging arm mounted on the standard, a shaft, bearings carried by the standard and the overhanging arm for supporting said shaft, a trimmer-supporting arm carried by said shaft, a trimmer blade mounted on said arm, a stationary trimmer blade coöperating therewith, a rocking member loosely mounted on said shaft and having an arm adapted to be detachably connected with the supporting arm for the trimming member, said rocking member having a second arm extending beneath the work support, a main shaft beneath the work support, an eccentric carried thereby, a strap coöperating with said eccentric and connected to said arm extending beneath the work support, a spring for moving said shaft endwise for yieldingly holding the trimmer blades in contact, an arm carried by the end of said shaft, and a locking lug coöperating with said arm for holding the trimmer in raised position when disconnected from its actuating mechanism.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,754. REFRACTOMETER. GEORGE WILBER MOFFITT, St. Louis county, Mo. Filed July 7, 1916. Serial No. 107,941. (Cl. 88—14.)

1. An optical instrument for measuring the indices of refraction of liquids, comprising in combination a plurality of lenses one of which is formed of liquid the refraction of which is to be measured, means for adjusting the relation between the lenses so that the variation in the position of the focus is in direct proportion with the variation of the index of refraction of the liquid lens and means for maintaining the liquid lens at a predetermined temperature.



2. An optical instrument for measuring the indices of refraction of liquids, comprising in combination transparent means for forming a planoconcave lens of a liquid the refraction of which is to be measured, a microscope coöperating with the liquid lens, an object scale, and means for directing light through the object scale and liquid lens to the microscope.

3. An optical instrument for measuring the indices of refraction of liquids, comprising in combination a microscope, transparent means adapted to present a liquid in the form of a planoconcave lens coaxial with the microscope, said transparent means presenting surfaces parallel with the surfaces of the liquid lens formed, an object scale, and means for directing light through the object scale and transparent means to the microscope.

4. An optical instrument for measuring the indices of refraction, comprising in combination a system of lenses adapted to include one element of predetermined form the refraction of which is to be determined, and means for adjusting the system so that the variation in the position of the focus of the system is in direct proportion to the variation of the index of refraction of the element to be determined.

5. An optical instrument for measuring the indices of refraction of liquids, comprising in combination a system of lenses one element of which is formed of liquid the refraction of which is to be measured, and means for adjusting the system so that the variation in the position of the focus is in direct proportion to the variation of the index of refraction of the liquid element employed in the system.

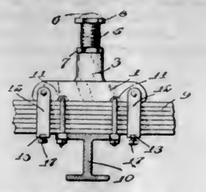
[Claims 6 to 22 not printed in the Gazette.]

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1,230,755. EMERGENCY VEHICLE-BODY SUPPORT. EBEN FERDINAND MOGREN, Minneapolis, Minn. Filed June 7, 1916. Serial No. 102,360. (Cl. 267—35.)

An emergency body support for vehicles, comprising a base, a tubular post extending upwardly therefrom, said base and post being formed with a bore extending therethrough and internally threaded, a jack screw threaded into said post and having a supporting head at its upper end, arms extending downwardly from one side of the said base, hinged extensions of said arms formed with longitudinally elongated slots at their free ends, pendent bolts extending downwardly from the opposite side of said

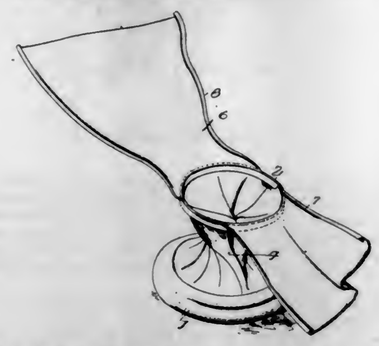
base and insertible through the slots of the hinged extension of said arms, nuts threaded upon said bolts, and



binding screws threaded through holes in said hinged extensions.

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1,230,756. COMBINATION APRON AND DRAIN-PAIL. JAMES P. MOHLER, South Haven, Mich. Filed Nov. 3, 1915, Serial No. 59,437. Renewed Nov. 21, 1916. Serial No. 132,716. (Cl. 128—28.)

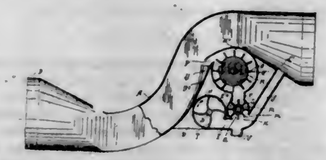


1. A device of the class described including a bowl having a mouth and a neck connecting the mouth and bowl, the neck being constructed to close automatically upon lowering movement of the mouth and to open automatically upon elevation of the mouth with relation to the body of the bowl, and an apron connected to the mouth.

2. A device of the class described including a bowl having a mouth and a neck connecting the mouth and bowl, the neck being constructed to close automatically upon lowering movement of the mouth and to open automatically upon elevation of the mouth with relation to the body of the bowl, and aprons connected to opposite sides of the mouth.

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1,230,757. DEVICE FOR RECLAIMING GRAIN. CHARLES D. MORRISON, Indianapolis, Ind., assignor to The Indiana Manufacturing Company, Indianapolis, Ind., a Corporation of West Virginia. Filed Oct. 23, 1915. Serial No. 57,400. (Cl. 130—17.)



1. A pneumatic chute for straw stacking machines, having its intermediate portion enlarged and of dimensions lessened vertically and increased transversely, there being openings in the lower side of the said intermediate portion to permit of the escapement of the grain.

2. A pneumatic chute for straw stacking machines, having its intermediate portion of reverse curve form longitudinally and of transverse rectangular form, there being openings in the lower side of the said intermediate portion to permit escapement of the grain, and riser ribs arranged to lift the straw above the said openings.

3. A pneumatic chute for straw stacking machines, having its intermediate portion of reverse curve form longitudinally and of transverse rectangular form, there being openings in the lower side of the said intermediate portion to permit escapement of the grain.

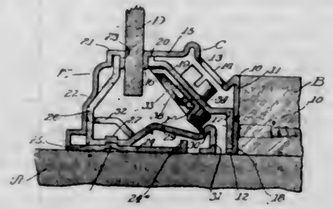
4. A pneumatic chute of the kind described, having its intermediate portion of reverse curve form longitudinally and of transverse rectangular form, there being openings in the lower side of the said intermediate portion to permit escapement of the grain and riser ribs to raise the straw above said openings.

5. A device of the kind described, comprising a chute of reverse curve form the intermediate portion thereof being of transverse rectangular form, a chamber underneath that part of the curved portion of the chute farthest from the source of air current and having an opening thereinto from the chute, a conveyer conduit from the said chamber and leading into the said chute, a discharge outlet from the said conduit, an air conduit leading into the conveyer conduit and above the discharge outlet.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,758. GLASS-SECURING DEVICE. JAMES P. MURNANE, St. Louis, Mo., assignor to Zouri Drawn Metals Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 29, 1913. Serial No. 792,422. (Cl. 189—78.)



1. In apparatus of the class described, the combination with a supporting sill or rail at the edge of the glass, of a securing device for the glass including an inside clamping member secured to the support and having a portion against which the inner side of the glass is adapted to bear, an outside clamping member resting against the portion of the support opposite the edge of the glass and having a portion adapted to bear against the outside of the glass, and an eccentric cam mounted on one of said members and engaging the other member and arranged when operated to draw said outer member toward said inner member and clamp the glass between them and to hold said outer member against the said support.

2. The combination with a sheet of glass, of a securing device therefor including an inside clamping member, an outside clamping member, and a rotatable member having a helical cam portion of varying radius mounted on one of said members and operable from the inside side of said glass, said cam portion engaging a portion of the other clamping member for moving said outside member toward said inside member.

3. In apparatus of the class described, the combination with a support, of a securing device for plate glass carried thereby and including an inside clamping member having an inclined portion, an outside clamping member, a rotatable member mounted in an inclined position on said inclined portion of the clamping member and having a helical cam portion of varying radius, said rotatable member being operable from the inside of the glass, and said helical cam portion arranged to engage a portion on the outer clamping member for moving the same to clamping position toward the inner clamping member.

4. In apparatus of the class described, the combination with a support having a portion at the edge of the glass substantially at right angles to the plane of the glass, of a glass clamping member associated therewith, a second glass clamping member movably associated with said support, and an eccentric cam mounted on one of said members for engagement with the other to simultaneously move said second named member toward said first named member and hold it against said support, said cam being jammed into frictional engagement with the member on which it is mounted to lock it in final position.

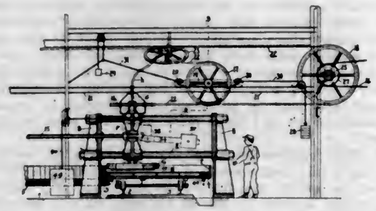
5. In apparatus of the class described, the combination with a sheet of glass, of a support having a portion at the edge of the glass substantially at right angles to the plane thereof, an inside glass clamping member associated with said support, an outside glass clamping member movably associated with said support, and a cam mounted on one member for engagement with the other member and operable from within the glass, said cam serving to simultaneously move said outside member toward said inside member along said portion of the support at the edge of the glass, and for holding said member against said portion of said support.

[Claims 6 to 18 not printed in the Gazette.]



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1,230,759. STONE GRINDING AND POLISHING MACHINE. GEORGE R. MURRAY, Cleveland, Ohio. Filed Mar. 1, 1915. Serial No. 11,142. (Cl. 51—11.)



1. In a stone grinding machine, a substantially ring-shaped rotatable carrier for a slab to be ground, a grinding wheel and a reciprocable support therefor adapted to traverse said table, means to rotate and means to raise and lower said wheel upon said support, and means to deliver water centrally through and beneath said wheel during rotative and reciprocable movements thereof.

2. In a stone grinding machine, a table for the stones, a supporting frame and a rotatable grinding member having a shaft vertically slidable therein, a counterweighted lever engaged with said shaft, collars on said shaft, and a vertically-movable engaging part for said collars having a screw to adjustably fix it at different elevations to limit the vertical movement of the grinding member in both directions relatively to the stones on the said table.

3. In a stone grinding machine, a frame having cross rods and a slidable mounting thereon, rotatable grinding wheels horizontally disposed beneath said mounting at opposite sides thereof and provided with vertical shafts rotatably and slidably carried by said mounting, means to adjustably fix the slidable limits of said shafts, means to adjustably counterbalance the grinding wheels, and separate power-applying members carried by said mounting and slidably splined to said shafts.

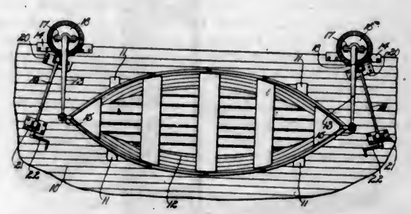
4. In a stone grinding machine, a rotatable table to carry the stones, a reciprocable frame slidably mounted over said table and a horizontally rotatable grinding member mounted thereon, in combination with actuating means for said table, frame and member respectively, and a counterweight connected with the said frame to promote uniform and steady reversal movements of the said frame and grinding member during grinding operations.

5. In a stone grinding machine, a grinding member mounted to rotate horizontally, and means to simultaneously reciprocate and rotate said member, a rigid frame carrying said member and horizontally disposed rods on which said frame is slidably mounted, in combination with a ring-shaped carrier adapted to rotate the stones transversely beneath and in contact with the said grinding member.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,760. SWINGING-GEAR FOR DAVITS. EVERETT W. MYERS and AARON E. SHARPLEY, Key West, Fla. Filed July 19, 1916. Serial No. 110,039. (Cl. 9—22.)



The combination with a pair of vertically journaled davit arms, a large bevel gear secured to each davit arm near the deck line in a plane perpendicular to the axis of the arm, an inclined crank shaft journaled adjacent the gear, the inclination of the shaft being outward and downward, a bevel pinion secured to the outer end of the shaft and meshing with the upper face of said gear, a hand device secured to the upper end of the shaft to rotate it, and means coöperating with the hand device to prevent accidental movement of the gearing.

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1,230,761. ATTACHMENT FOR PENCILS AND PENHOLDERS. ALFRED C. NEWMAN, Fargo, N. D. Filed Nov. 24, 1916. Serial No. 133,248. (Cl. 40—108.)



2. An attachment of the class described including an inner split sleeve to slidably receive a pencil or penholder and frictionally engage the same for retaining the attachment in position, an outer shell turnable on the said sleeve and spaced therefrom, and a strip between the said sleeve and shell adapted to be wound or unwound, the said sleeve having an opening to expose the strip, the shell furthermore having means between the ends of said opening frictionally holding the outer end of the said strip.

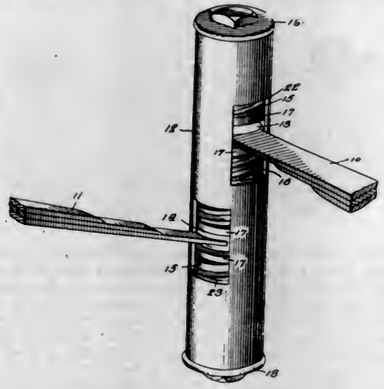
4. A calendar attachment of the class described, including an inner sleeve to slidably receive a pencil or pen-

holder and frictionally engage the same, an outer shell turnable relatively to the said sleeve and spaced therefrom, to accommodate a wound strip, a strip in said space and adapted to be unwound or wound, means on the shell to frictionally hold the outer convolution of the strip, the said strip bearing thereon series of numerals representing the days of the calendar months in rows, and said shell bearing indicia of the days of the week in separate rows in reversed order.

[Claims 1, 3, and 5 not printed in the Gazette.]

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1,230,762. VEHICLE. RICHARD T. NEWTON, New York, N. Y. Filed July 10, 1913. Serial No. 778,248. (Cl. 267—19.)



1. In a vehicle, the combination of two leaf springs, a shock absorber provided with a casing, elastic elements in the casing, and members movable in the casing, the contiguous end of each of the leaf springs terminating directly in said movable members.

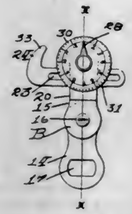
2. In a vehicle, the combination of two leaf springs, a casing containing coiled springs, two members movable in the casing, the contiguous ends of each of the leaf springs terminating directly in the movable members.

3. In a vehicle, the combination of two leaf springs, a casing, coiled springs in the casing, two balls to actuate the coiled springs, the contiguous ends of each of the leaf springs terminating directly in the balls.

4. In a vehicle, the combination of two leaf springs, a casing containing three coiled springs, two balls located in the casing adapted to actuate the coiled springs, the contiguous ends of the leaf springs being directly attached to the balls.

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1,230,763. PHONOGRAPH-STOP. FRANCIS A. NOLAN, St. Paul, Minn. Filed Aug. 6, 1915. Serial No. 44,028. (Cl. 74—46.)



1. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table from revolving, of a support secured adjacent one of its ends to said traveling element for movement thereby, said support comprising members having their adjacent ends pivotally secured together and adapted to be retained in a multiplicity of angles with respect to one another, and means journaled upon the outermost member of said support for relative adjustment with respect thereto adapted to impinge against and set said brake mechanism at a predetermined time.

2. The combination in a sound reproducting machine having a traveling element, a turn table and brake mechanism to prevent the table from revolving, of a support secured adjacent one of its ends to said traveling element for movement thereby, a member journaled upon the other end of said support for relative adjustment with respect thereto, and a device carried by said member for a multiplicity of axial adjustments with respect thereto adapted to impinge against and set said brake mechanism at a predetermined time.

3. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table from revolving, of a support secured adjacent one of its ends to said traveling element for movement thereby, a member journaled upon the other end of said support for relative adjustment with respect thereto, a spool revoluble about its axis upon said member, and means reciprocably mounted upon said member for operation by the lower end of said spool to impinge against and set said brake mechanism at a predetermined time.

4. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table from revolving, of a support removably secured at one of its ends to said traveling element for movement thereby, a member journaled upon the other end of said support for relative adjustment with respect thereto, a spool revoluble about its axis upon said member, said spool having a toothed pinion, and a striker arm having rack teeth on one of its longitudinal edges meshing with said toothed pinion whereby said striker arm may be adjustably reciprocated to impinge against and set said brake mechanism at a predetermined time.

5. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table from revolving, of a support removably secured at one of its ends to said traveling element for movement thereby, a member journaled upon the other end of said support for relative adjustment with respect thereto, a spool revoluble about its axis upon said member, said spool having a toothed pinion, a striker arm having rack teeth on one of its longitudinal edges meshing with said toothed pinion whereby said striker arm may be adjustably reciprocated to impinge against and set said brake mechanism at a predetermined time, and means associated with said striker arm for retaining it in selected position.

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1,230,764. PHONOGRAPH-STOP. FRANCIS A. NOLAN, St. Paul, Minn. Filed Sept. 11, 1915. Serial No. 50,125. (Cl. 74—46.)



1. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table revolving, of a support secured to said traveling element, said support having a graduated dial thereon, a housing carried by said support, a stop member slidably disposed within and through one end of said housing and adapted to impinge against and set said brake mechanism, means having screw threaded engagement with said stop member whereby said stop may be positioned to actuate said brake mechanism at a predetermined time, and means mounted upon said support actuated by the movements of said stop engaging means to indicate upon the dial the adjustment of said stop.

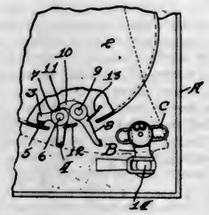
3. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table revolving, of a support secured to said traveling element, said support having a graduated dial thereon, a housing carried by said support provided with a longitudinal slot, a passaged stop member slidably disposed within said housing and adapted to impinge against and set said brake mechanism, said stop being internally screw threaded and having an elongated slot registering with the slot in said housing, an externally threaded shaft engaging the threads of said stop for adjustably positioning the stop to actuate said brake mechanism at a predetermined time, a toothed pinion pivotally mounted upon said support and extending through said registering slots for operative engagement with said threaded shaft and an index pointer carried by said pinion to indicate upon the dial the adjustment of said stop.

5. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table revolving, of a support having a dial provided with numbered graduations adapted to be secured to said traveling element, said dial assuming approximately vertical position when said support is secured to said traveling element, stop means movable relatively with respect to said support adapted to contact with and set said brake mechanism, a member rotatably mounted upon said support and having telescoping threaded engagement with said stop means for moving the same, and means actuated by one of said movable parts to indicate upon said dial the adjustment of the stop means.

[Claims 2 and 4 not printed in the Gazette.]

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1,230,765. PHONOGRAPH-STOP. FRANCIS A. NOLAN, St. Paul, Minn. Filed Sept. 11, 1915. Serial No. 50,124. (Cl. 74—46.)



1. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism to prevent the table revolving, of a support secured to and movable with said traveling element, a stop member movable upon said support to impinge or press against and set said brake mechanism, said stop member having opposite racks and means for evenly applying a forceful movement simultaneously to both said racks.

2. The combination in a sound reproducing machine having a traveling element, a turn table and brake mechanism for stopping said table, of a support carried by and for movement with said traveling element, a stop member slidable upon said support to impinge or press against and set said brake having opposite racks and a plurality of intermeshing gears having teeth intermeshing with the teeth of both of said racks and means for driving said gears to effect the movement of said stop member.

3. The combination in a sound reproducing machine having a traveling element, a turn table and a brake for stopping said table, of a support carried by and for movement with said traveling element, a slide movable upon said support to impinge or press against and set said brake having opposite internal racks, a plurality of gears mounted upon said support in said slide and having teeth meshing with the teeth of both of said racks, means for turning said gears to adjust said slide on said support and a scale associated with said parts for determining the adjustment of said slide.

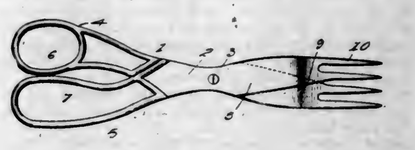
4. The combination in a sound reproducing machine having a traveling element, a turn table and a brake for stopping said table, of a support carried by and for movement with said traveling element, a slide movable upon said support to impinge and press against and set said brake having spaced internal parallel racks, a plurality of gears mounted upon said support in said slide and having teeth meshing with the teeth of both of said racks, one of said gears carrying a hand operable turning element having a scale upon its surface and a cover plate carried by said support in stationary position over said wheel and having a sight opening through which the scale is exposed and an indicator coöperating with said scale whereby the position of adjustment of said slide can be determined.

5. The combination in a sound reproducing machine having a traveling element, a turn table and a brake mechanism to prevent the table revolving, of a support secured to and movable with said traveling element, a loop shaped stop member geared to said support for sliding movement thereon adapted to impinge against and set said brake mechanism, means operatively associated with said gear connection for actuating the same to move said stops into adjusted positions, and a dial coöperating with said stop to indicate its position.

[Claim 6 not printed in the Gazette.]

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1,230,766. CLAM-FORK. FLORENCE J. OVENS, York Beach, Me. Filed Sept. 17, 1915. Serial No. 51,239. (Cl. 30—5.)



1. A clam fork comprising two members having intermediate portions fitted flat against each other and pivoted together, said members having handles and provided with blades having coacting cutting edges at the inner portions of their side edges, and each provided beyond the cutting edges with a plurality of terminal prongs, and the prongs of both members lying in parallel planes and coacting to form a single unitary terminal fork structure when the members are closed.

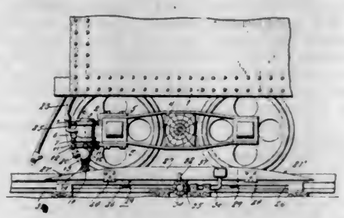
[Claim 2 not printed in the Gazette.]

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1,230,767. AIR-BRAKE STOP. ESKIL V. PALMQUIST, Hallandale, and HENRY G. LUNDQUIST, Seminole county, Fla. Filed May 8, 1915. Serial No. 26,871. (Cl. 246—59.)

In a device of the class described, the combination of a bracket, said bracket comprising a body, spaced jaws extending from said body, said jaws being adapted to embrace a truck bolster so as to permit means to pass therethrough for supporting said bracket, a valve member, collars formed upon said body in spaced relation with respect to each other, said collars embracing said valve

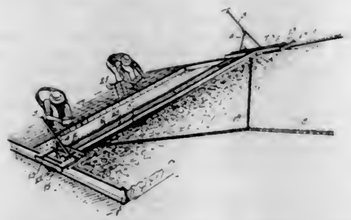
member, said collars having outwardly extending adjoining ends, said ends engaging each other, and means for



holding the same together, whereby said collars will positively hold said valve member.

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1,230,768. TEMPLET. ALAN JAY PARRISH, Parish, Ill. Filed June 3, 1916. Serial No. 101,581. (Cl. 94—6.)



1. A device of the character specified, comprising a pair of end frames, an I-bar and a channel bar arranged parallel and in spaced relation and connected at their ends to the frames to hold the frames parallel, said bars being arranged below the frames and being adjustable with respect thereto, each end frame having a pair of outwardly extending parallel rollers for engaging and rolling upon a supporting element, a trimming and deflecting plate hinged to each end of each bar outside the adjacent frame and having its lower edge flush with the lower edge of the bar, a spring in connection with each plate and normally pressing the free end of the plate outward, and a guard connected with each end frame at the front end thereof and extending laterally outward in front of the adjacent pair of rollers.

2. A device of the character specified, comprising a pair of end frames, a pair of bars arranged parallel and in spaced relation and connected at their ends to the frames to hold the frames parallel, said bars being arranged below the frames and being adjustable with respect thereto, each end frame having a pair of outwardly extending parallel rollers for engaging and rolling upon a supporting element, a trimming and deflecting plate hinged to each end of each bar outside the adjacent frame and having its lower edge flush with the lower edge of the bar, and a spring in connection with each plate and normally pressing the free end of the plate outward.

3. A device of the character specified, comprising a pair of end frames, an I-bar and a channel bar arranged parallel and in spaced relation and connected at their ends to the frames to hold the frames parallel, said bars being arranged below the frames and being adjustable with respect thereto, each end frame having a pair of outwardly extending parallel rollers for engaging and rolling upon a supporting element.

1,230,769. TRUCK AND WHEELBARROW. EDWARD B. PEIRCE, Lowell, Mass. Filed Sept. 23, 1916. Serial No. 121,871. (Cl. 21—65.)

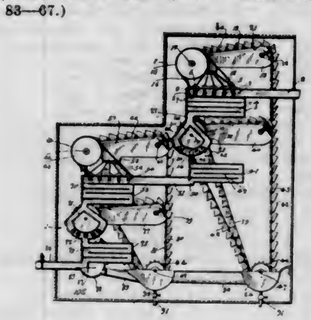


1. The combination of a truck or barrow having two side wheels parallel with the median line thereof, of a supplementary wheel arranged between said side wheels and at an angle with said median line and provided with a circumferential groove to receive a rail.

2. The combination in a truck or the like of an axle, side wheels parallel with the median line thereof, a supplementary axle, hangers supported on said first named axle and supporting said supplementary axle at an angle with said median line and a grooved wheel supported on said supplementary axle.

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1,230,770. AMALGAMATING-MILL. DAVID L. PENROD, Alta, Utah. Filed Jan. 27, 1917. Serial No. 144,878. (Cl. 83—67.)



1. An amalgamator mill including a conduit for the material operated on, a plurality of rotary spray pipes extending into the conduit and located at intervals, a mercury receptacle connected with the spray pipes and means for rotating the spray pipes.

3. An amalgamator mill including a conduit for the material operated on in the mill, oppositely inclined rotary spray pipes extending into the conduit and provided with gear wheels, mercury troughs located above the spray pipes and provided with relatively fixed pipes communicating with the spray pipes, an endless carrier for conveying mercury to the mercury troughs, and gearing for operating the endless carrier and for rotating the spray pipes.

5. An amalgamator mill including a mixing and concentrating casing comprising inner and outer shells having oppositely inclined upper portions and curved lower portions, said shells being spaced apart to provide intervening passages and a curved series of spray pipes extending into the space between the bottom portions of the inner and outer shells.

6. An amalgamator mill including upper and lower baffle casings spaced apart and having baffle plates for causing the material operated on in the mill to travel back and forth to the casings and a mixing and concentrator casing connecting the baffle casings and communicating with the same, said mixing and concentrator casing comprising inner and outer shells, spaced apart to provide opposite side passages and a connecting bottom passage.

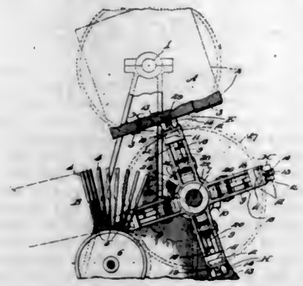
7. An amalgamator mill including a plurality of baffle casings provided with baffle plates, concentrating and mixing casings arranged between and connected with the baffle casings, rotary spray pipes arranged in the path of the material, mercury troughs located at opposite sides of the mill and located above the spray pipes and connected therewith, means for rotating the spray pipes, bottom troughs connected with each other and with the lowermost casing, and endless conveyers extending from the bottom troughs to the mercury troughs and having flights passing over the same and discharging into the said mercury troughs.

[Claims 2 and 4 not printed in the Gazette.]



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1,230,771. FEEDING AND TRANSFERRING MECHANISM. CHARLES F. PFLANZE, St. Louis, Mo. Filed May 6, 1914, Serial No. 836,630. Renewed Nov. 20, 1916. Serial No. 132,500. (Cl. 101—29.)



1. In a transferring device, a carrier, gripping elements carried by said carrier, a shifter for moving the gripping elements transversely of the path of movement of said carrier so as to locate said gripping elements on opposite sides of a marginal portion of the article to be transferred, a closing device associated with said gripping elements to close them on said marginal portion of the article, and an opening device for opening said gripping elements at a predetermined point to release the article from said carrier.

2. In a device of the character described, two supports, and means for transferring articles from one of said supports to the other, said means including a carrier movable in unison with said supports, holders movably fitted to said carrier, gripping elements attached to said holders, and operating means for moving said holders toward each other to locate the gripping elements on opposite sides of the article to be transferred when the gripping elements are located adjacent to one of the supports, said operating means being adapted to close the gripping elements to grasp the article held by the last named support, and a releasing device including an opener for opening said gripping elements to release the article therefrom, thus depositing said article on the other support, said holders being movable away from each other in response to the action of said releasing device so as to carry the open gripping elements away from said article.

3. In a device of the character described, a rotatable folder, a conveyer, and means for transferring articles from said rotatable folder to said conveyer, said means including a rotatable carrier movable in unison with said conveyer and rotatable folder, a gripping device carried by said rotatable carrier, and operating means for moving said gripping device at a point adjacent to said rotatable folder to locate the gripping elements on opposite sides of the article to be transferred, said operating means being adapted to close said gripping elements when the gripping elements are located on opposite sides of said article, and a releasing device including an opener for opening said gripping device at a point adjacent said conveyer, thus delivering said article to said conveyer, said gripping device being movable away from said article, in response to the action of said releasing device, while the gripping elements occupy their open position.

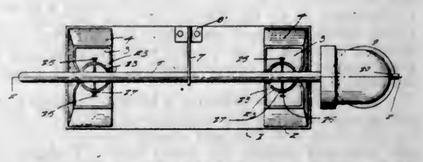
4. In a transferring device, a carrier, two gripping elements movable with said carrier, and operating mechanism including a shifter for shifting the gripping elements to points where they will lie on opposite sides of a marginal portion of the article to be transferred, said shifter being adapted to move the gripping elements transversely with respect to the path of movement of the carrier, a closing device adapted to positively close said gripping elements after they have been shifted to points on opposite sides of said marginal portion of the article, and a releasing device including an opener for opening said gripping elements to release the article from the carrier at a predetermined point, the open gripping elements being movable transversely of the path of said carrier so as to prevent said open gripping elements from striking the discharged article.

5. In a device of the character described, a movable support, and a transferring device for picking articles from said movable support, said transferring device comprising a carrier movable in unison with said support, a pair of holders movably fitted to said carrier, each of said holders being provided with a pair of gripping elements, and operating mechanism including a shifting device for shifting said holders on said carrier to locate the gripping elements at points where they will straddle opposite marginal portions of the article to be transferred, a closing device associated with said shifting device and adapted to positively close said gripping elements on said marginal portions of the article, and a releasing device including means for opening said gripping elements to release said article from the carrier at a predetermined point, said holders being movable away from each other in response to the action of said releasing device so as to prevent the open gripping elements from striking the discharged article.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,772. OIL-BURNER. NEWTON E. PHILLIPS, Shelby, Mich., assignor, by direct and mesne assignments, of one-half to Charles L. Churchill and one-sixth to Ret O. Hamill, Shelby, Mich. Filed Oct. 21, 1916. Serial No. 126,961. (Cl. 158—64.)



1. An oil burner comprising a base, air chambers formed in each end of said base, a substantially U-shaped tube carried by said base and extending through the air chambers, said tube having openings within the air chambers, a vaporizing drum connected to the tube, a fuel supply connected to the drum, and cylindrical sleeves carried by the tube and located within the air chambers for supplying air to the flame.

2. An oil burner comprising a base, air chambers formed in each end of said base, a tube carried by said base and extending through the air chambers and having openings within the air chambers to allow fuel to escape from the tube and become ignited, a vaporizing drum carried by said tube, a liquid fuel supply connected with said drum, cylindrical sleeves having elongated slots in their lower ends to receive the tube to locate said sleeves within the air chambers, and means for securing the sleeves to the tube.

3. An oil burner comprising an auxiliary heating base, air chambers formed in each end of said base, a tube carried by said base and extending through the air chambers and having openings therein for allowing fuel to escape from the tube and become ignited, a vaporizing drum carried by the tube, a fuel supply connected to said drum, sleeves having their lower ends provided with elongated slots to receive the tube to position said sleeves within the air chambers, said sleeves having perforations

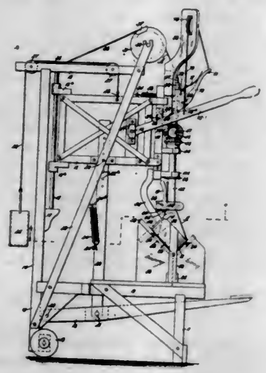
therein for admitting air to the flame, and bolts extending through the lower ends of said sleeves for controlling the inflow of air upwardly through the sleeves.

4. An oil burner of the type set forth including a burner tube provided with a fuel outlet opening, and a sleeve consisting of upper and lower sections hinged together and surrounding said opening and extending above and below said tube.

5. An oil burner of the type set forth including a burner tube provided with a fuel outlet opening, a sleeve having slots therein and surrounding said opening, and a bolt extending through the sleeve.

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1,230,773. WIRE-TYING MACHINE. HANOVER E. PITTS, Springfield, Oreg. Filed May 4, 1916. Serial No. 95,441. (Cl. 100—31.)



1. A tying machine including a support having an angular seat to dispose the article to be tied in a tilted position and presenting an angle thereof uppermost, a presser foot disposed at an angle to accord with the positioned article, means to operate the presser foot, a twister head mounted adjacent to the presser foot, means to hold a tying medium on the twister head, and means to actuate the twister head.

2. A tying machine including a revoluble twister head turning approximately in a horizontal plane, and a support for the article to be tied, said support having a V-shaped seat positioned beneath the twister head and presenting front and rear sides at substantially a right angle to each other, so disposed as to present the article angularly to the plane of revolution of the twister head, the front side of the seat being spaced from the said twister head to leave clearance for the entrance and removal of the said article.

3. A tying machine of the class described including a revoluble twister head, a support for the article to be tied, said support having a seat presenting sides at an angle to present the article angularly to the plane of the revolution of the twister head, means to hold the ends of a tying medium on the said head after being passed about the article, a presser foot disposed at an angle to engage against a side of the angularly positioned article, and means to operate said presser foot.

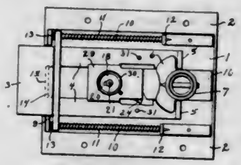
4. A tying machine of the class described including a revoluble twister head, a support for the article to be tied, said support having a seat presenting sides at an angle to present the article angularly to the plane of the revolution of the twister head, means to hold the ends of a tying medium on the said head after being passed about the article, a presser foot disposed at an angle to engage against a side of the angularly positioned article, and means to operate said presser foot, said presser foot having a flange to engage the positioned article at the angle presented to the twisted head.

5. A tying machine of the class described including a revoluble twister head, a presser foot, and reciprocating means on which the presser foot is pivoted to rock toward and from the axis of rotation of the twister head to accommodate itself to the article being tied.

[Claims 6 to 29 not printed in the Gazette.]

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1,230,774. LATCH. JOHN LOUIS POLLOCK, Sterling, Ill., assignor of one-third to Nicholas Rainone and one-third to Albert Miller, Sterling, Ill. Filed Oct. 16, 1915. Serial No. 56,167. (Cl. 70—42.)

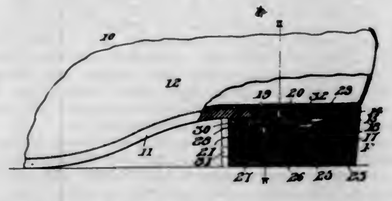


1. A device of the class described, comprising a casing adapted to be attached to a door; a latch slidable therein and held normally in extended position; means for operating said latch; a barrel mounted in said casing and provided with a longitudinal slot and transverse recess; a spring-controlled lever adapted to engage said latch at one of its ends and having its other end movable in said recess; a pin held in said slot in engagement with said lever and provided with a button on the outside of said casing, said pin being held normally at a central point in said barrel by said spring-controlled lever; and a guard-rim for said button on the outer face of the casing.

2. In a device of the class named, a casing adapted to be attached to a door; a latch slidable therein and held normally in extended position; cam-operating devices capable of moving said latch inwardly; means for locking said latch in inward position; a slide-button on the outside of said casing operatively connected with said locking devices to release the same; and stop members carried by said latch and adapted to engage the cam-operating devices when in a normal position, and prevent the locking of said latch in withdrawn position.

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1,230,775. DETACHABLE HEEL FOR BOOTS AND SHOES. MICHAEL POPOVICH, Flint, Mich. Filed Mar. 26, 1917. Serial No. 157,395. (Cl. 36—42.)

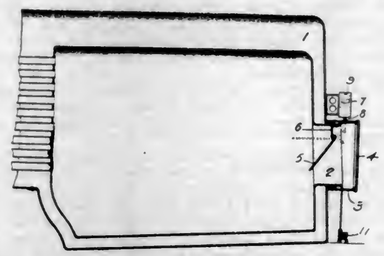


1. A device of the class described comprising a shoe sole, an arched lift secured to the heel portion thereof having a forwardly opening side, a keeper plate secured within said lift having a socket therethrough extending longitudinally of the sole, a tread member, and a bracket secured to the upper face of said tread member provided with a rearwardly projecting locking tongue having a down-turned terminal flange, the said tongue being positioned through the said socket with its flange overlying the rear end of the plate when the tread member is operatively arranged upon the said lift.

[Claim 2 not printed in the Gazette.]



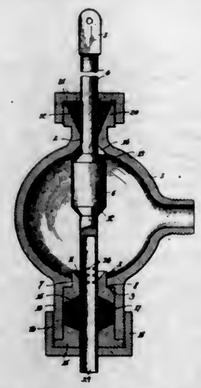
1,230,776. SMOKE-CONSUMER AND FUEL-ECONOMIZER. SYDNEY H. PUDNEY, Toronto, Ontario, Canada. Filed Oct. 9, 1912, Serial No. 724,793. Renewed Apr. 28, 1917. Serial No. 165,245. (Cl. 110—175.)



In a device as described, in combination a combustion chamber, a reduced hollow extension having a door opening into said combustion chamber, a removable hollow door support fitted horizontally upon said extension and projecting therebeyond, a dependent bracket formed and carried by said door support and disposed snugly against the upper end of said extension and at right angles thereto, a hinged plate mounted upon the lower end of said bracket and spaced inwardly of the outer end of said door support, a lid fitted to close said door support and arranged parallel with said bracket, a crank carried by said plate outside of said support and means independent of said lid, controlling said crank and adapted to cause said plate to occupy angular positions with respect to said bracket.

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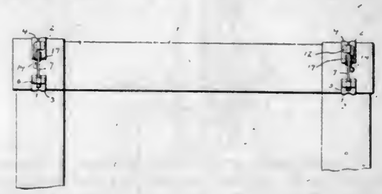
1,230,777. BALANCED-PISTON COCK. WILLIAM H. QUANDT and JESSE M. GOODEN, Urbana, Ill. Filed May 5, 1915. Serial No. 26,111. (Cl. 137—4.)



A balanced piston cock comprising a body having an inlet and a tubular neck forming a cylindrical chamber and oppositely located openings one of which communicates with said neck, the cylindrical chamber being larger than the opening through the body adjacent thereto to form an internal annular shoulder, a piston stem longitudinally movable through said openings and projecting beyond the body, said stem having a central bore extending from one extremity thereof for a portion only of its length and also having ports intersecting said bore, a cylindrical enlargement on said stem within the body forming oppositely disposed shoulders, a combined piston stem guide and port closure through which the bored and ported portion of said stem is slidable, said guide being of such extent as to cover a portion or all of said ports, and having an annular shoulder which abuts the internal shoulder of said cylindrical chamber, a gland having a sliding fit in the end of said chamber, a gland adjusting nut detachably threaded upon the neck of the body, the guide being removable from the neck when the gland and its adjusting nut are removed to admit of the removal of the stem.

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1,230,778. ADJUSTABLE CURTAIN-SHADE BRACKET. WILLIAM D. RALSTON and WILLIS C. RALSTON, New Marion, Ind. Filed Aug. 4, 1916. Serial No. 113,155. (Cl. 150—24.)



1. A device of the character set forth comprising a pair of jaws, means for securing a shade roller to one of the jaws, a pair of relatively spaced ears secured to the other jaw, a bar pivoted to said ears, and means for adjustably securing the bar to the other jaw for moving said jaws in the direction of each other to clamp a window frame.

2. A device of the character set forth comprising a pair of jaws, a pair of relatively spaced ears secured to one of the jaws, a bar pivoted to said ears, a pair of relatively spaced ears secured to the other jaw and slidably receiving said bar, means for securing a shade roller to the second mentioned pair of ears, and means carried by the second mentioned ears for an engagement with the bar to move the jaws in the direction of each other to clamp a window frame.

3. A device of the character set forth comprising a pair of jaws, a bar pivoted to one of the jaws and having an elongated slot therein, a plurality of teeth formed on the wall of the elongated slot, a pair of relatively spaced ears secured to the other jaw, and slidably receiving the bar, means for securing a shade roller to the ears, an extension formed on one of said ears, a lever pivoted to said extension, a plate carried by the pivot of the lever and disposed upon the opposite side of the bar from the lever, and a dog eccentrically secured to the plate for an engagement with the teeth to move the jaws in the direction of each other upon movement of the lever to clamp the jaws upon a window frame.

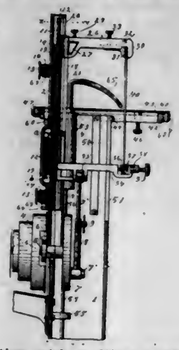
4. A device of the character set forth comprising a pair of jaws, a pair of relatively spaced ears secured to one of said jaws, a bar having one end thereof pivoted to said ears, a pair of relatively spaced ears secured to the other jaw and slidably receiving the free end of the bar, means for securing a shade roller to the second mentioned pair of ears, said bar having an elongated slot, means formed on one wall of the slot, an extension formed on one of the last mentioned pair of ears, a pivot carried by said extension and extending through the slot, a handle secured to the pivot, a plate secured to the pivot and disposed upon an opposite side of the rod from the lever, and a dog eccentrically connected to the plate and adapted to engage the teeth upon operation of the lever to move the jaws in the direction of each other.

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1,230,779. FILING-MACHINE. WILBER D. REARWIN, Grand Rapids, Mich. Filed Oct. 1, 1915. Serial No. 53,650. (Cl. 29—76.)

1. In combination with a filing machine having a vertically reciprocating file carriage, a slide having means

connected therewith to cause the file carriage to advance on its downward stroke, and to recede on its upward stroke, substantially as, and for the purpose set forth.



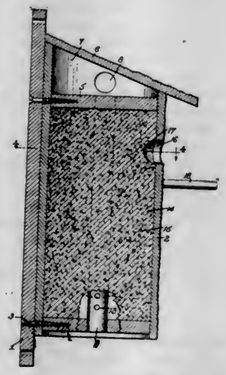
3. In combination with a filing machine, a vertically reciprocating file carriage, a supporting arm having pins projecting forward from its front surface, a carriage support mounted on said pins and having guideways for the carriage, a slide mounted between the carriage support and the supporting arm, inclines on the carriage support and on the slide, bolts and springs for holding the carriage support firmly against the slide, a crank shaft on the machine, an eccentric on said shaft, an idler on the slide in position to be acted upon by the eccentric to cause the slide to reciprocate vertically causing the inclines to engage each other to force the carriage support forward, and to draw from each other to allow the carriage support to be drawn backward.

5. In combination with a filing machine, a vertically reciprocating carriage, means for forcing said carriage forward on the downward stroke, means for forcing the cariage backward on the upward stroke, means for preventing said forward and backward movements of the carriage, a table attached to the machine at right angles with the carriage and having an opening through it for the passage of a file, and means for adjusting said table to an incline from the horizontal in any desired direction.

[Claims 2, 4, and 6 not printed in the Gazette.]

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1,230,780. BIRD-HOUSE. EDWIN H. REIBER, West Webster, N. Y. Filed Mar. 22, 1917. Serial No. 156,547. (Cl. 119—23.)



1. A bird house comprising a comparatively solid shell having an opening at one point, a comparatively soft filling for said shell, and a roof spaced from said filling.

2. A bird house comprising a comparatively hard wood casing having an opening near the top thereof, a top member and a bottom member arranged in said casing, a filling of finely divided wood arranged in said casing between said ends whereby the bird may pick out any part of said filling desired for forming a nest cavity, and means for admitting air to said filling so that the filling may absorb moisture.

3. A bird house comprising a comparatively solid shell, a comparatively soft filling having an opening at one point, and means for providing ventilation for said filling.

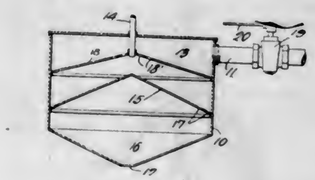
5. A bird house comprising a comparatively hard wood casing having an opening near the top thereof, a top member and a bottom member arranged in said casing, a filling of finely divided wood arranged in said casing between said ends whereby the bird may pick out any part of said filling desired for forming a nest cavity, an inclined roof arranged above said top end member whereby a chamber is produced, said casing being formed with an opening merging into said chamber, and a passageway leading from said chamber formed with openings communicating with the filling in said casing whereby air from said chamber may transmit moisture to said filling.

6. A bird house comprising a casing of wood having an opening, a top member and a bottom member arranged in said casing, a filling between said top and bottom members comprising cork and moss, an inclined roof for said casing whereby an open chamber is provided above said top member, said casing having an opening entering into said chamber, and a plurality of semi-tubular members extending from said chamber interiorly of said casing from near the top to near the bottom thereof, said semi-tubular members having apertures therein for permitting the filling to absorb moisture from the air.

[Claim 4 not printed in the Gazette.]

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1,230,781. AIR-FEED FOR MOTORS. SAMUEL E. REID, Tahoka, Tex. Filed June 10, 1916. Serial No. 102,939. (Cl. 261—113.)

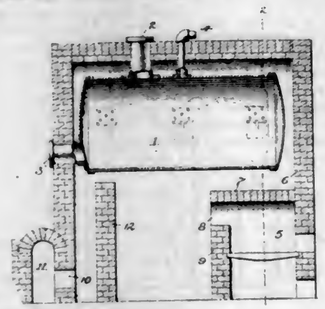


A device of the character described embodying a casing having a hopper-shaped bottom provided with a central air inlet and moisture outlet, a conical deflector within the casing above the bottom thereof and having apertures near the walls of the casing, a conical partition within the casing above said deflector providing an air chamber between said partition and top of the casing, the casing having an air outlet above said partition communicating with said air chamber, and a liquid supply tube extending downwardly through the apex of the partition, said partition having apertures adjacent to its apex.

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1,230,782. METHOD OF DISTILLING COAL-TAR OR COAL-TAR PITCH AND PRODUCTS DERIVED THEREFROM. PETER C. REILLY, Indianapolis, Ind. Filed Mar. 28, 1914. Serial No. 827,965. (Cl. 196—25.)

4. The method of producing a dry coke from coal tar pitch and likewise producing an orange-colored mass waxy at 70° F. and a hard, garnet-colored mass brittle at 70° F., which consists in subjecting the coal tar or coal tar pitch to a temperature of substantially 1000° F. in a still subjected to a substantially even temperature over its entire surface.



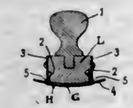
6. As a new article of manufacture, a hard garnet-colored product brittle at 70° F. and having a specific gravity of not less than 1.22, produced as a final product of distillation passing from coal tar or coal tar pitch when subjected to a temperature of approximately 1000° F.

9. That process of completely distilling coal-tar, which consists in placing a charge of the material in a still; bathing the entire still in a heated atmosphere; and raising the temperature of the same to such a degree as to fractionate and drive off all volatile products and leaving as a residue within the still, upon completion of the operation, a dry coke.

[Claims 1 to 3, 5, 7, and 8 not printed in the Gazette.]

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1,230,783. STENCIL-STAMP. DAVID EDGAR RICE, Brooklyn, N. Y. Filed Sept. 8, 1915. Serial No. 49,431. (Cl. 101—132.)



1. A device of the class described, comprising a body member having recesses formed in opposite sides thereof, an ink pad overlying one face of the body member and having edge portions received in said recesses, reinforcing members attached to said edge portions also received in said recesses, plates carried by the body member having resilient portions overlying the recesses in engagement with said reinforcing members, and a stencil member overlying the ink pad.

2. A device of the class described, comprising a body member having recesses formed in opposite sides thereof, an ink pad overlying one face of the body member and having edge portions received in said recesses, reinforcing members attached to said edge portions also received in said recesses, plates carried by the body member having resilient portions overlying the recesses in engagement with said reinforcing members, a stencil member, and said plates also engaging said stencil member to retain the same in position overlying the ink pad.

3. A device of the class described, comprising a body member, an ink pad carried thereby, reinforcing members carried by edge portions of the ink pad, the reinforcing members being provided with raised portions, resilient retaining means carried by the body member engaging said raised portions to resiliently retain the ink pad in position, and a stencil member overlying the ink pad.

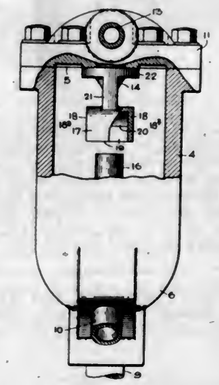
4. A device of the class described, comprising a body member having recesses at opposite sides thereof, an ink pad overlying one surface of the body member and having edge portions extending into said recesses, said recesses being widest at their bottoms so as to retain the edge portions of the ink pad against detachment, and a stencil member overlying the ink pad between said recesses.

5. A device of the class described, comprising a body member, an ink pad carried thereby, a stencil member overlying the ink pad, said stencil member comprising a frame having a sheet of stenciled material stretched thereover, and means carried by the body member engaging said frame to retain the stencil member in position.

[Claims 6 to 14 not printed in the Gazette.]

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1,230,784. SEPARATOR. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 26, 1915. Serial No. 63,440. (Cl. 183—103.)



1. In a separator, a casing having an admission opening at its bottom and an open top, a standpipe in the casing which communicates with the admission opening, a cover for the casing having a discharge passage in it, a nipple having an opening therethrough which connects said passage with the interior of the casing, a rectangular deflector supported from the cover by said nipple, said deflector having a web located directly in line with the standpipe, said web and deflector acting to turn the mixture through an angle of approximately 180° and directed in two definite paths toward the wall of the casing, there being a space between the deflector and the casing wall at right angles to the said paths through which the separated vapor or gas may pass to the outlet.

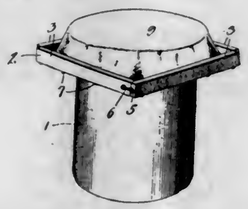
2. In a separator, a casing having an admission opening and a drain opening at its lower end, and an open top, a vertically extending standpipe in the casing which communicates with the admission opening, a cover for the casing having a discharge passage in it, a nipple threaded into the cover and having an opening which connects the passage to the interior of the casing, a deflector above the standpipe having a web located directly in line therewith, said web and deflector acting on the mixture to divide it and turn it through an angle of approximately 180°, there being a space between the deflector and the casing wall at right angles to the direction in which the deflector extends and through which the separated vapor or gas may pass to the outlet, arms fixed on the deflector, and a threaded collar carried by said arms which engages the nipple to fasten the deflector to the cover.

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1,230,785. CREAM-PROTECTOR. HENRY E. RICHTER, Summerfield, Kans. Filed Jan. 24, 1916. Serial No. 74,020. (Cl. 217—81.)

1. In a device of the class described, a frame comprising four strips of equal lengths, two of said strips having their ends beveled and said beveled ends adapted to

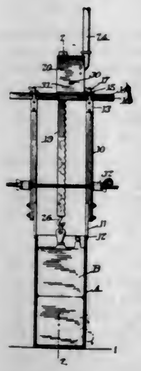
abut, a hinge member connecting these ends, the two remaining strips having their ends hingedly secured interiorly one to each of the first mentioned pair of strips and one of the said last mentioned strips adapted to overlie the end of the other of said last mentioned strips, means for removably connecting the latter mentioned pair of strips, elements projecting from one of the edges of all of the strips, and a fabric sheet having its edges provided with eyes adapted to engage with the said elements whereby to removably retain the said fabric strip upon the frame.



2. In a device of the class described, a fabric sheet and a frame adapted to be removably connected with said sheet, said frame comprising strips of equal lengths, all of which being hingedly connected one with the other in a manner to permit of said strips being folded one against the other when the frame is collapsed, means for retaining the frame in its set up position, and means for detachably securing the fabric to the frame.

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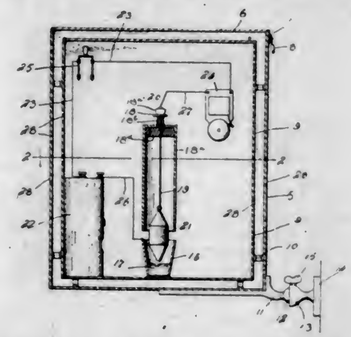
1,230,786. PLATE-REMOVER FOR STORAGE BATTERIES. ROBERT F. ROBERTSON, Philadelphia, Pa. Filed May 1, 1915. Serial No. 25,271. (Cl. 254—108.)



1. In combination with a device for removing plates from batteries, supports therefor having surfaces thereon for engagement with the upper edges of a battery casing and having surfaces thereon for engagement with the outer surfaces of the casing, and means for adjusting the supports laterally respecting each other whereby the device may be adjusted to fit different sizes of battery casings.

2. In combination with a device for removing plates from batteries, supports therefor having surfaces thereon for engagement with the upper edges of a battery casing and having surfaces thereon for engagement with the outer surfaces of the casing, and means for adjusting the supports laterally respecting each other and located without the plane of a battery plate in position to be lifted.

1,230,787. AUTOMOBILE-ALARM. CHARLES E. ROBISON and MORRIS ASKIN, Philadelphia, Pa. Filed Aug. 26, 1915. Serial No. 47,481. (Cl. 200—28.)



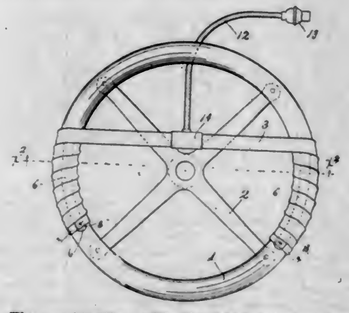
1. An alarm, a cup, a liquid contained in said cup, a casing supporting said cup, a flexible element secured within said casing, and a cylindrical weight having its ends oppositely tapered, said flexible element having its free end secured to one end of said weight and the opposite end of said weight depending into and normally spaced from the cup and from said liquid.

2. In an alarm, a casing, a cup supported within said casing, a liquid contained within said cup, a bracket arm secured in said casing, a socket secured in the top portion of said bracket arm, a ball pivotally received on said socket, a flexible element depending from and secured to said ball, and a cylindrical weight having oppositely tapered ends connected with said flexible element and depending into said cup and normally spaced from said cup and the surface of said liquid.

3. In an alarm, a casing, a cup supported within said casing, a liquid contained within said cup, a bracket arm secured in said casing, a socket secured on the upper surface of said bracket arm, a ball pivotally received in said socket, a flexible element depending from and secured to said ball, a cylindrical weight having oppositely tapered ends connected with said flexible element depending into the cup and normally spaced from said cup and the surface of said liquid, a sleeve secured to the lower portion of the ball, a casing secured to said sleeve adapted to inclose said flexible element and to partially inclose said weight for the purpose specified.

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1,230,788. ELECTRIC HEATER FOR STEERING-WHEELS. EVEN J. ROHNE, Minneapolis, Minn. Filed Dec. 4, 1915. Serial No. 64,944. (Cl. 219—19.)



1. The combination with the hand piece of a vehicle steering device, of a flexible ribbon-like electric heater spirally wound around the same and having overlapping portions holding the coils of said heater against lateral separation and assisting in anchoring the heater as an entirety to the said hand piece.



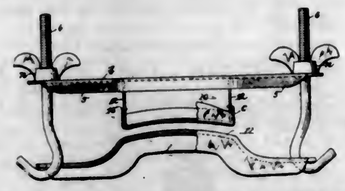
2. The combination with the hand piece of a vehicle steering device, of a flexible ribbon-like electric heater spirally wound around the same and having overlapping portions holding the coils of said heater against lateral separation and assisting in anchoring the heater as an entirety to the said hand piece, the said heater having an unwound intermediate portion and provided with current supplying wires connected to said unwound portion.

3. The combination with a steering wheel having an annular rim, of a flexible ribbon-like electrical heating element extended across from one side to the other of said rim and spirally wound around the said rim and anchored thereto, the spirally wound portions of said ribbon-like body having projecting clamping flaps overlapped by adjacent coils thereof.

4. The combination with a steering wheel having an annular rim, of a flexible ribbon-like electrical heating element extended across from one side to the other of said rim and spirally wound around the said rim and anchored thereto, the said ribbon-like body, at points where it contacts with said rim, having laterally projecting clamping straps overlapped by coils thereof.

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1,230,789. VULCANIZER. JACOB B. ROSE, Cleveland, Ohio, assignor to The Marvel Accessories Manufacturing Company, Cleveland, Ohio, a Corporation. Filed Mar. 7, 1917. Serial No. 153,075. (Cl. 18—18.)

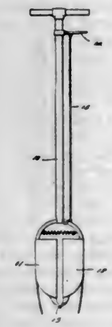


2. A vulcanizer comprising a flat supporting member and an open receptacle having a vulcanizing bottom, the said support having integral braces struck therefrom and rigidly engaged with the sides of said receptacle, and means to clamp said parts in vulcanizing position upon the work.

[Claims 1, 3, and 4 not printed in the Gazette.]

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1,230,790. POST-HOLE DIGGER. CLARENCE P. ROSENDALL, Peterson, Iowa. Filed Dec. 1, 1916. Serial No. 134,511. (Cl. 255—65.)

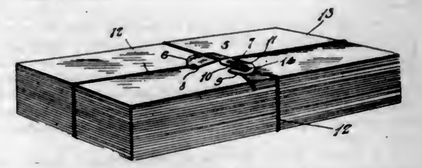


1. In a post hole digger, a handle, a fixed jaw secured to the lower end thereof, a relatively movable jaw, a yieldable connection between the jaws to hold the latter normally in confronting relation, contacting boring means formed on the lower end of each jaw and adapted to hold the jaws in spaced relation, and means for swinging said movable jaw away from the fixed jaw to an opened position.

[Claim 2 not printed in the Gazette.]

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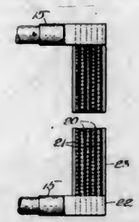
1,230,791. PACKAGE-TIE. DAVID A. RUNNION, Fort Hancock, N. J. Filed Feb. 9, 1916. Serial No. 77,258. (Cl. 24—18.)



A package tie including a substantially L-shaped body defining a pair of right angularly disposed arms, a hook connected with one of said arms having an enlarged bight portion, a cord connected with the other arm, and a spring tongue extending in spaced parallel relation to the first-mentioned arm and the beak of the hook having its free end normally engaged with the bight portion of said hook and adapted to be flexed outwardly to permit the cord to be inserted between the tongue and hook and engaged between the tongue and the first-mentioned arm, the extreme end of the cord being adapted to be passed over the tongue and between the latter and the beak of the hook to provide a loop receiving the tongue and securing the cord against slipping, and the free end of the cord being held between the bight portion of the hook and the object engaged by the cord.

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1,230,792. TEMPLE DEVICE FOR LOOMS. LITFALLAH G. SABBAG, Boston, Mass., assignor of one-half to Maurice A. Metcalf, Boston, Mass. Filed Mar. 21, 1916. Serial No. 85,736. (Cl. 139—36.)



1. A loom having a breast beam for determining the position of the cloth, in combination with independent mountings at each side of the cloth, each having fixed thereto means adapted to determine a series of temporary folds or ridges at and near the respective selvages of the cloth only, said folds or ridges lying longitudinally of but at an angle to the direction of progress of the cloth, whereby relative movement between the cloth and said means causes the cloth to be strained laterally.

2. A loom having a lay and a breast beam for determining the position of the cloth, in combination with independently yielding mountings at the sides of the cloth adapted to be moved upon the forward beat of the lay and each having fixed thereto means adapted to determine a series of temporary folds or ridges at and near the respective selvages of the cloth only, said folds or ridges lying longitudinally of but at an angle to the direction of progress of the cloth, whereby relative movement between the cloth and said means causes the cloth to be strained laterally.

3. A loom having therein a breast beam for determining the position of the cloth, and temples each comprising a mounting, bodies having a series of surface grooves or ridges therein, and means for supporting on said mountings fixedly with respect to each other a plurality of said bodies respectively in contact with the opposite sides and at and near the selvages only of the cloth positioned by said breast beam, said mountings being adapted to position said grooves or ridges at an angle to the direction of progress of the cloth through the loom, whereby to determine an outward strain upon the edge of the cloth with respect to the free longitudinal central portion thereof.

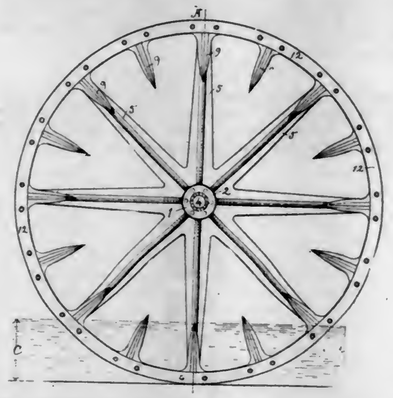
4. A temple device for looms comprising three or more rounded free-ended bodies adapted to contact with and direct the woven cloth having surfaces comprising grooves for contact with the cloth all inclined in the same direction, and means fixedly holding said bodies out of contact with each other and with the grooved surfaces of one or more thereof intersecting a plane defined by the surfaces of the others.

5. A temple device for looms comprising a series of free-ended bodies having inclined grooves arranged in staggered relation, whereby cloth may be passed sinuously between said bodies, and means adapted to yield in the direction of motion of the cloth for holding said bodies relatively fixed in relation to each other, whereby stress upon the cloth is resisted by said bodies in one direction more than in another.

[Claims 6 to 13 not printed in the Gazette.]

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1,230,793. SOIL-PULVERIZING WHEEL. CHARLES E. SACKETT, Danbury, Conn. Filed Mar. 29, 1917. Serial No. 158,152. (Cl. 55—24.)

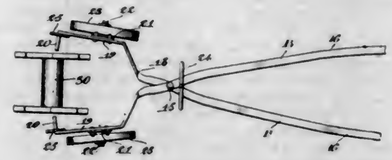


1. In a soil pulverizing-wheel, the combination of a hub, said hub being adapted to receive an axle contacting with roller bearings; a series of spokes joined to said hub midway of its length; said spokes radiating perpendicularly to the axial center of said hub, the extremities of said spokes being substantially joined to cross-bars midway of the length of said cross-bars; the ends of said cross-bars being flanged, and substantially joined to inner and outer vertical steel bar rims curved vertically to form the circumferential tires of said wheel, said rims and cross-bars forming the tread of said wheel; said cross-bars being constructed with teeth or prongs projecting internally into the body of said wheel in a direction radial to its axial center; said cross-bars and teeth being spaced at suitable distances between said rims to discharge the pulverized soil freely, said teeth or prongs being attached to alternate cross-bars in irregular progression; said pulverizing-wheel having unobstructed open spaces at each side of the spokes of said wheel, said spaces being inclosed circumferentially by the rims and cross-bars forming the tread of said wheel, said open spaces being penetrated internally a suitable distance by the teeth or prongs attached to the tread of said wheel; substantially as described and shown.

[Claim 2 not printed in the Gazette.]

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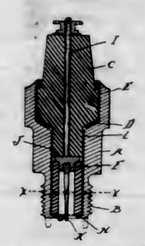
1,230,794. BARBED-WIRE UNROLLER. LOUIS SCHICK, Thomson, Ill. Filed June 20, 1916. Serial No. 104,796. (Cl. 242—90.)



An implement of the class described consisting of a pair of tongs comprising two pivotally connected members each having a shank portion, a handle at one end thereof, an offset forming a shoulder at the other end thereof, and a longitudinal bar extending from said offset and having a terminal pintle, brackets connected with and extending downwardly with respect to the longitudinal bars, spindles on said brackets, and wheels journaled on said spindles whereby the members of the tongs are movable about the axis of their connecting pivot and also about the axes of the wheel carrying spindles to pick up and otherwise manipulate a wire reel.

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1,230,795. SPARK-PLUG. ALBERT SCHMIDT, Flint, Mich., assignor to Champion Ignition Company, Flint, Mich., a Corporation of Michigan. Filed July 29, 1916. Serial No. 112,037. (Cl. 123—169.)



2. In a spark plug, the combination with an outer casing, of an insulator therein formed in two parts, the outer part being fixed in position relative to said casing and the inner part being annular, an electrode passing through the space within said annular part and having an enlargement extending between said inner and outer parts, means for forming a gas-tight seal at opposite ends of said annular part, and an electrical connection through said electrode passing through said outer part.

4. In a spark plug, the combination of an insulator formed in separate outer and inner parts, the inner part being annular, a casing embracing and having a locking engagement with said outer part and surrounding said inner part, the inner end of said casing overlapping the inner end of said inner annular part, an electrode passing through the space within said annular part and having an enlargement lying between said part and the outer part, means for forming a gas-tight seal at opposite ends of said annular part, and an insulator bridging the gap between said inner and outer parts and lying between the same and said outer casing.

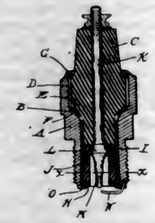
6. In a spark plug, the combination with a casing, an insulator individually clamped therein and an electrode passing through said insulator, of an inner insulator member in the form of a hollow cylinder surrounded by said outer casing and surrounding said electrode, and means for forming a gas-tight seal at opposite ends of said cylindrical insulator.

[Claims 1, 3, 5, 7, and 8 not printed in the Gazette.]



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1,230,796. SPARK-PLUG. ALBERT SCHMIDT, Flint, Mich., assignor to Champion Ignition Company, Flint, Mich., a Corporation of Michigan. (Filed Jan. 11, 1917. Serial No. 141,826. (Cl. 123—169.)



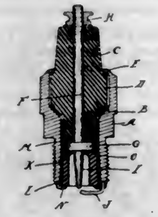
1. In a spark-plug, the combination with the outer casing, of an insulator mechanically secured and sealed within said outer casing, an electrode mechanically supported and sealed in said insulator, a second insulator independent of said first-mentioned insulator, extending inward therefrom and surrounding the exposed end of the electrode, and a metallic member intermediate said insulators, being protected from heat by the inner insulator and forming a means for dissipating the heat from the electrode.

2. In a spark-plug, the combination with a metallic casing, of an insulator mechanically secured and sealed therein, a tubular insulator extending inward from said first-mentioned insulator and independently secured within said casing, an insulator sleeve surrounding both of said insulators and overlapping the joint therebetween, a metallic member intermediate said outer and inner insulators, an electrode seated upon said metallic member, extending outward through the outer insulator and mechanically secured thereto, the inner end of said electrode extending through said inner insulator, said electrode normally dissipating its heat through said metallic member and being removable therefrom through said inner insulator.

[Claims 3 and 4 not printed in the Gazette.]

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1,230,797. SPARK-PLUG. ALBERT SCHMIDT, Flint, Mich., assignor to Champion Ignition Company, Flint, Mich., a Corporation of Michigan. Filed Jan. 11, 1917. Serial No. 141,827. (Cl. 123—169.)



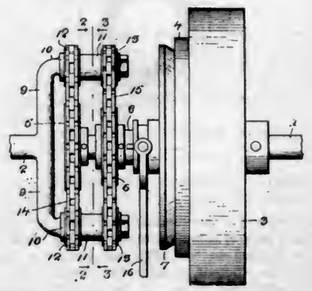
1. In a spark-plug, the combination with a metallic casing, of an insulator mechanically secured and sealed therein and terminating short of the inner end of said casing, an electrode mechanically supported and sealed in said insulator, and an inner insulator independently seated in said metallic casing, forming a shield for said outer insulator but having no mechanical bearing thereon.

2. In a spark-plug, the combination with a casing, of an insulator mechanically secured and sealed within said casing and terminating short of the inner end thereof, an electrode mechanically secured and sealed in said insulator, an inner tubular insulator having a conical outer face engaging a conical seat on said outer casing, and means on said casing for holding said insulator against said seat to support the same independently of said outer insulator and electrode.

[Claims 3 to 5 not printed in the Gazette.]

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1,230,798. TRANSMISSION-GEARING. HANS SCHNEIDER, New York, N. Y. Filed July 5, 1916. Serial No. 107,610. (Cl. 74—34.)



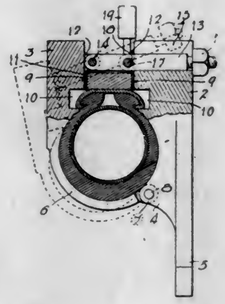
1. In transmission gearing, the combination of a driving shaft, a driven shaft, a clutch member fast on the driving shaft, a coöperating clutch member normally loose on the driving shaft, arms on the driven shaft, bearing sleeves journaled on said arms, a pair of sprocket wheels fast on each bearing sleeve, a sprocket wheel fast on the driving shaft, another sprocket wheel loose on the driving shaft and having a fixed relation to the adjacent clutch member, a sprocket chain passing around two of the sprocket wheels on the arms of the driven shaft and also around the sprocket wheel which is fast on the driving shaft, and another chain passing around the other sprocket wheels on the arms of the driven shaft and also around the remaining sprocket wheel which has a fixed relation to the adjacent clutch member.

2. In transmission gearing, the combination of a driving shaft, a driven shaft, a clutch member fast on the driving shaft, a coöperating clutch member normally loose on the driving shaft and movable into and out of engagement with the first named clutch member, arms extending in opposite directions from the driven shaft and having a fixed relation thereto, and driving elements carried by the driving shaft and the driven shaft and also having connection with the normally loose clutch member, whereby the last named clutch member is revolved in the same direction as the first named clutch member as long as the driving shaft is in operation.

3. In transmission gearing, the combination of a driving shaft, a driven shaft, a clutch member fast on the driving shaft, a coöperating clutch member normally loose on the driving shaft, arms on the driven shaft, bearing sleeves journaled on said arms, a pair of sprocket wheels fast on each bearing sleeve, a sprocket wheel fast on the driving shaft, another sprocket wheel loose on the driving shaft and having a fixed relation to the adjacent clutch member, a sprocket chain passing around two of the sprocket wheels on the arms of the driven shaft and also around the sprocket wheel which is fast on the driving shaft, and another chain passing around the other sprocket wheels on the arms of the driven shaft and also around the remaining sprocket wheel which has a fixed relation to the adjacent clutch member, the sprocket wheel which has a fixed relation to the normally loose clutch member and the sprocket wheel which is fast on the driving shaft

being of different diameters, causing the normally loose clutch member to revolve at a different speed from the clutch member coöperating therewith.

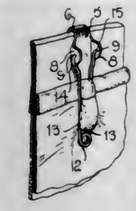
1,230,799. AUTOMOBILE-LOCK. FRANK SCHOLLY, Philadelphia, Pa. Filed Sept. 14, 1916. Serial No. 120,092. (Cl. 70—90.)



1. A device for preventing the theft of automobiles, including a pair of complemental clamping members adapted to be applied to the felly and tire of a wheel from opposite sides thereof, a laterally curved arm projecting from the outer end of one of the clamping members and pivotally connected to the opposite clamping member, a wing projecting radially from the said opposite clamping member, and offset laterally from the tire of the wheel, and a swinging clamping bolt carried by the inner end of one of the clamping members and constructed for engagement with the inner end of the opposite clamping member to lock the device in position upon the wheel felly.

2. A device for preventing the theft of automobiles, including a pair of complemental clamping members adapted to be applied to the felly and tire of a wheel from opposite sides of the wheel, a laterally curved arm projecting from the outer end of one of the clamping members and adapted to extend around the tread of the tire, said curved arm being pivotally connected to the other clamping member, an integral wing projecting radially from the other clamping member and offset laterally on one side of the tire, a swinging clamping bolt carried by the inner end of one of the clamping members, the inner end of the other clamping member being slotted to receive the clamping bolt, and means for locking the clamping bolt in operative position.

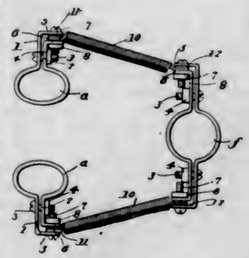
1,230,800. GARMENT-SUPPORTER. WILLIAM SCHREIBER, Syracuse, N. Y. Filed June 28, 1916. Serial No. 106,472. (Cl. 24—84.)



1. A garment supporter including a sheet metal body plate having an attaching hook formed on one end and ears angularly projecting from the longitudinal edges of the plate adjacent to said hook, a headed stud fixed in the plate adjacent its other end, and a clamping member formed from a length of resilient wire centrally bent to provide normally diverging arms, one of said arms having terminal means loosely and pivotally connected to one of the ears on the body plate, said arms being adapted to clamp a garment against opposite sides of the headed stud and the other arm having terminal means for detachable engagement with the other of said ears when the arm is forced toward the first named arm, whereby the arms are held in clamping engagement with the garment.

2. A garment supporter including a body plate having an attaching hook formed on one end, a headed stud projecting from one face of the plate adjacent to its other end, said plate being provided upon its longitudinal edges with opposed apertured ears, and a clamping member formed from a single length of resilient wire having a spring coil therein intermediate of its ends and clamping arms normally extending in divergent relation to each other from said coil, one of said clamping arms being permanently and pivotally connected to one of the ears, said arms being adapted to clamp the garment against the opposite sides of said stud and the other clamping arm having its terminal angularly disposed for detachable engagement through the other of the apertured ears.

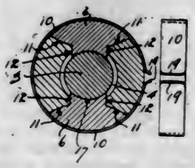
1,230,801. CYCLE STEERING ATTACHMENT. WILLIAM SCHRIVER, Spielerville, Ark. Filed Feb. 2, 1917. Serial No. 146,153. (Cl. 208—136.)



1. A clip of the class described comprising a loop, parallel arms projecting therefrom and overlapped and pierced with registering holes, right-angular feet at the outer ends of said arms also overlapping each other and pierced with registering holes, and independent fastening devices for the arms and the feet, each including a threaded member passing through a pair of said holes and a nut thereon, the inner arm serving as a lock for the nut of the fastening device through the feet and said device serving as a nut lock for the other device.

[Claim 2 not printed in the Gazette.]

1,230,802. PNEUMATIC HAMMER. FRANK J. SCHROEDER, Altoona, Pa., assignor to Norman E. Gee, Altoona, Pa. Filed Apr. 8, 1915. Serial No. 20,080. (Cl. 78—44.5.)

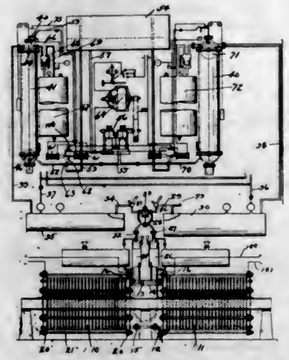


1. A pneumatic hammer including a barrel provided with radially arranged key receiving openings of rectangula rcross section and having their long diameter arranged at right angles to the axis of the barrel, said openings also being of a flaring form producing opposite seating faces, a tool-head having a stem formed with spaced apart shoulders, interchangeable and reversible keys of rectangular cross section and having similar flat wear faces upon both sides, and also having opposite shoulder portions engaging said seating faces and locking tenons extending through the key receiving openings into the space between the shoulders on the tool-head stem, and retaining means for holding said keys in position.

2. A pneumatic hammer including a barrel having angular key receiving openings of flaring form producing opposite seating faces, a tool-head having a shank formed with spaced apart shoulders, interchangeable and reversible locking keys each comprising a segmental head portion and a depending keeper shank of rectangular cross section for extending through the key receiving openings into the space between the shoulders on the tool head stem, and means for holding the said keys in position.



1,230,803. GAS-GENERATOR. LEO PAUL SEBILLE, Providence, R. I. Filed Aug. 28, 1916. Serial No. 117,132. (Cl. 204—5.)



1. In a gas generating apparatus, means for generating oxygen and hydrogen, containers for receiving the gases as generated, and means including a diaphragm actuated by the difference in pressures in said containers for controlling the flow of gas from said generator to said containers.

2. In a gas generating apparatus, means for generating oxygen and hydrogen gases, containers for receiving the separate gases as generated, a diaphragm containing chambers through which the gases pass on their was to their respective receptacles, and means whereby a predetermined difference of pressure in one side of the system causes said diaphragm to close the gas entrance to the opposite container until a balancing pressure has again been raised on that side.

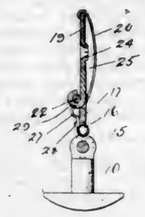
3. In a gas generating apparatus, means for generating oxygen and hydrogen, means for cooling the gases passing from the generator, and means for conducting the moisture of condensation from said cooled gases back into the system.

4. In a gas generating system, means for generating oxygen and hydrogen gases, means for keeping the different gases separated in the system, means for automatically equalizing the pressures of the gases on both sides of the system, and means for automatically compressing the gases to a pressure higher than that originally generated.

5. In a gas generating system, means for generating oxygen and hydrogen gases, means for preventing a mixing of the gases in the system, and means including a body of water for compressing said gases to a pressure higher than that originally generated.

[Claims 6 to 16 not printed in the Gazette.]

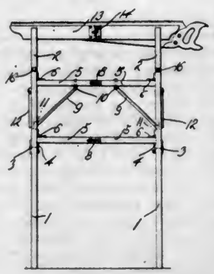
1,230,804. BUTTON. RICHARD SELIGMANN, Seattle, Wash. Filed Jan. 26, 1917. Serial No. 144,778. (Cl. 24—97.)



3. A button comprising a post, a plate connected to swing on said post, a button head connected to swing on said plate, whereby both may be extended in line with the post, a ball on said post, said head being provided with an opening adapted to spring over said ball to lock the head and post together.

[Claims 1, 2, and 4 not printed in the Gazette.]

1,230,805. COLLAPSIBLE SAW-CLAMP. ALEKSANTERI SELIN, Brooklyn, N. Y. Filed Apr. 22, 1916. Serial No. 92,928. (Cl. 76—78.)



1. A device of the class described comprising main supporting legs, transverse members connecting and adapted to be folded against said main supporting legs, bracing means for said transverse members, and saw clamping members removably engaged in the ends of said main supporting legs.

2. A device of the class described comprising main supporting legs, transverse members connected and adapted to be folded against said main supporting legs and against one another, said main supporting legs having slots formed therein, saw clamping members removably engaged in said slots to clamp a saw in position upon said main supporting legs, and means for spacing said main supporting legs from a wall.

3. A device of the class described comprising sectional supporting legs, transverse members connecting and adapted to be folded against one section of said sectional main supporting legs, means for preventing independent movement of said transverse members, the remaining sections of said main supporting legs being adapted to be folded against the first-mentioned sections, and saw clamping members carried by said supporting legs.

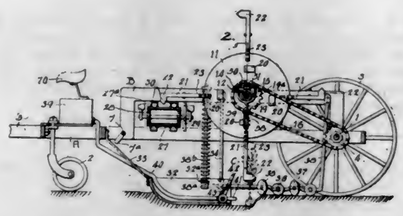
4. A device of the class described comprising main supporting legs, transverse members connecting said main supporting legs and adapted to be folded against the same, means for locking said transverse members against movement, the sections of said main supporting legs being adapted to be folded against one another, saw clamping members removably engaged with said main supporting legs, and spacing members carried by said main supporting legs.

5. A device of the class described comprising main supporting legs, sectional transverse connecting members for the upper portions of said main supporting legs, the sections of said transverse members being adapted to be folded against one another and against said main supporting legs, bracing means for said transverse members, spacing arms carried by said main supporting legs, said main supporting legs being slotted at their upper ends, and beveled saw clamping members removably engaged in the slots of said main supporting legs.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,806. PLANT-SETTING MACHINE. LUTHER SHAFFER, Boone, Iowa. Filed June 16, 1916. Serial No. 103,984. (Cl. 111—3.)



1. A machine for setting out young plants, including a supporting frame, a planting wheel mounted thereon, spring planting arms projecting radially therefrom and arhanged in coöperating pairs for gripping the plants, means for supplying young plants to the planting arms, a furrow opener, means for automatically separating the planting arms to deposit the young plant in the furrow, and means for momentarily interrupting the rotation of the planting wheel as each plant is released.

2. A machine for setting out young plants, including a supporting frame, a planting wheel mounted thereon, spring planting arms projecting radially therefrom and arranged in coöperating pairs to grip the plants, means for supplying young plants to the planting arms, a furrow opener, means for automatically separating the planting arms to deposit the young plants in the furrow, clutch controlled driving means for the planting wheel, and means for automatically opening the clutch as each young plant is released.

3. A machine for setting out young plants, including a supporting frame, a planting wheel mounted thereon and provided with a clutch face, a shaft carrying the planting wheel and rigid therewith, a clutch disk rigid with the shaft, a sliding clutch member mounted upon the shaft and adapted to be moved into engagement with the clutch face of the planting wheel or the clutch disk, yielding means holding the clutch member in engagement with the planting wheel, driving means connected to the sliding clutch, a shifting lever engaging the sliding clutch, planting arms projecting from the planting wheel for receiving young plants and depositing them in the furrow, a furrow opener, and cam means upon the planting wheel for engaging the shifting lever to momentarily shift the position of the sliding clutch each time a young plant is deposited.

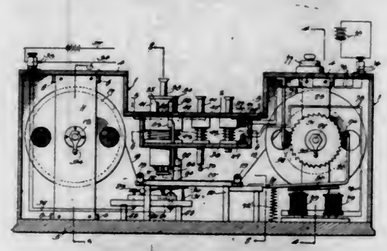
4. A machine for setting out young plants, including a supporting frame, a planting wheel mounted thereon, and provided with a clutch face, a shaft carrying the planting wheel and rigid therewith, a clutch disk rigid with the shaft, a sliding clutch member mounted upon the shaft for engagement with either the planting wheel or the clutch disk, a spring normally holding the sliding clutch member in engagement with the clutch face of the planting wheel, a shifting lever operatively connected to the sliding clutch member, driving means for rotating the sliding clutch member, planting arms projecting from the planting wheel and arranged in coöperating pairs for gripping the plants, a furrow opener, means for automatically separating the planting arms to deposit the young plants in the furrow, and cam members upon the planting wheel for engagement with the shifting lever to automatically and momentarily shift the position of the sliding clutch each time a young plant is deposited, thereby causing a pause in the rotation of the planting wheel.

5. A machine for setting out young plants, including a supporting frame, a shaft, a planting wheel mounted upon the shaft, clutch controlled driving means for rotating the planting wheel, a shifting lever for the clutch controlled drive means, planting arms projecting radially from the planting wheel and arranged in coöperating pairs for gripping the plants, means for supplying young plants to the planting arms, a furrow opener, an annular cam track, releasing levers mounted upon the planting wheel and actuated by engagement with the cam track to automatically separate the planting arms and deposit the young plants in the furrow, and cam members upon the planting wheel for engaging the shifting lever to momentarily break the driving connection each time a young plant is deposited.

[Claims 6 to 11 not printed in the Gazette.]

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1,230,807. TELEGRAPH SENDING AND RECORDING DEVICE. LEO C. SHEARER, Latrobe, Pa. Filed Aug. 3, 1916. Serial No. 112,969. (Cl. 178—80.)



1. In a device of the character described, the combination of a telegraph sending key, a tape, a movable member, means attached to said member for actuating said key, a punch also attached to said member for perforating said tape simultaneously with the actuation of said key, and means for moving said tape longitudinally.

2. In a device of the character described, the combination of a telegraph sending key, a message recording sheet, a tapping member for actuating said key, an anvil, a punch attached to said member and coöperating with said anvil for perforating said sheet simultaneously with the actuation of said key, and means for moving said sheet.

3. In a device of the character described, the combination of a telegraph sending key, a message recording sheet, electrically operated means for moving said sheet, a movable tapping member for actuating said key, means connected with said member for perforating said sheet simultaneously with the actuation of said key, a movable contact, and a stationary contact positioned for engagement with said movable contact, said contacts being arranged in the circuit through the first named means and controlling the same.

4. In a device of the character described, the combination of a casing, a telegraph sending key and a message recording sheet mounted therein, normally raised independent dot and dash tapping members slidably mounted in said casing and adapted to engage said key when operated, the dot tapping member being slidable within the other member, and dot and dash punches fixed to the respective members for perforating said sheet simultaneously with the actuation of said key.

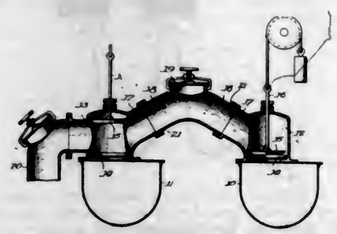
5. In a device of the character described, the combination of a casing, a telegraph sending key and a message recording sheet mounted therein, normally raised independent dot and dash tapping members slidably mounted in said casing and adapted to engage said key when operated, the dot tapping member extending centrally through and slidably mounted within the other member, an open rectangular dash punch fixed to the lower end of the dash tapping member, a circular dot punch fixed to the lower end of the dot tapping member and extending centrally through said dash punch, an anvil coöperating with said punches for perforating said sheet simultaneously with the actuation of said key, and means for moving said sheet.

[Claims 6 to 8 not printed in the Gazette.]



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1,230,808. CONNECTION FOR GAS-MAINS. SAMUEL B. SHELDON and KINNEY C. HOXIE, Duluth, Minn. Filed Apr. 1, 1915. Serial No. 18,601. (Cl. 48—172.)

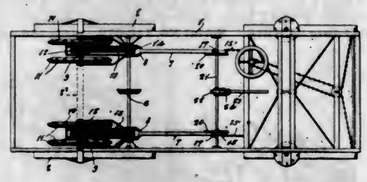


1. In a gas plant, the combination of adjacent gas mains, upwardly-extending bell connections on said mains, said mains provided with valve seats within said bell connections, valves acting within said bell connections and adapted to coöperate with said seats, an inverted substantially U-shaped pipe joining said bell connections and adapted to form spigot joints therewith, said pipe provided with an opening permitting inspection and cleaning.

2. In a gas plant, the combination of adjacent gas mains, a valve casing mounted on each of said mains, each of said casings being provided with a bell-mouthed extension, said extensions projecting toward each other, and a U-shaped pipe connecting said extensions and having spigot ends, said U-shaped pipe being provided with a cleaning opening, substantially as described.

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1,230,809. SLEIGH. CHARLES L. SHERIDAN, Grygla, Minn. Filed Sept. 8, 1916. Serial No. 119,047. (Cl. 21—47.)



1. In a motor sleigh structure, a supporting frame, a power shaft rotatably carried by said supporting frame, a lever pivotally carried by said power shaft and extending longitudinally of said supporting frame, an axle rotatably carried by the rear end of said lever, spurred propelling wheels mounted upon said axle, means operatively connecting said axle and said power shaft for rotating said axle upon rotation of the power shaft, a shaft rotatably carried by said supporting frame forwardly of said power shaft, means for manually rotating said last named shaft, a spring connecting said last named shaft to the forward end of said lever for yieldably supporting said lever for holding said propelling wheels in a land engaging position.

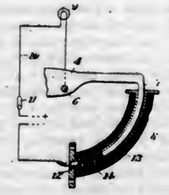
2. In a motor sleigh structure, a supporting frame, a power shaft rotatably carried by said supporting frame, a lever pivotally carried by said power shaft, and extending longitudinally of the frame, an axle rotatably carried by the rear end of said lever, propelling wheels mounted upon said axle, means operatively connecting said axle and said power shaft, a shaft rotatably supported by said supporting structure forwardly of said power shaft, a disk mounted upon said last named shaft for rotation therewith, a spring construction eccentrically connected to said disk and connected to the forward end of said lever, means for manually rotating said last named shaft for rotating said disk for tensioning said spring, said spring yieldably supporting said lever for yieldably holding said propelling wheels in a land engaging position.

3. In a motor sleigh structure, a supporting frame, a lever pivotally carried by said frame, a propelling wheel carried by the rear end of said lever, a shaft rotatably carried by said supporting frame, means for manually rotating said shaft, a spring connecting said shaft to the forward end of said lever for yieldably supporting said lever for holding said propelling wheel in a land engaging position.

4. In a motor sleigh structure, a supporting frame, a lever pivotally carried by said frame, a propelling wheel carried by the rear end of said lever, a shaft rotatably carried by said supporting frame, means for manually rotating said shaft, a disk mounted upon said shaft for rotation therewith, a spring construction eccentrically connected to said disk and connected to the forward end of said lever, a ratchet mounted upon said shaft, a hand lever loosely carried by said shaft, a pawl carried by said hand lever for engagement with said ratchet for manually rotating said shaft and disks for tensioning said spring, said spring yieldably supporting said lever for yieldably holding said propelling wheel in a land engaging position.

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1,230,810. SIGNAL. JOSEPH SHIFLET, McKeesport, Pa. Filed Nov. 11, 1916. Serial No. 130,819. (Cl. 177—330.)



1. In a signaling apparatus of the class described, a pivoted arm of magnetic material having one end formed into an armature, an electric lamp supported by the arm, a solenoid associated with said armature and a switch arranged to be closed upon a predetermined travel of the armature for closing the circuit of said lamp, said switch consisting of a contact supported within the solenoid in the path of movement of said armature.

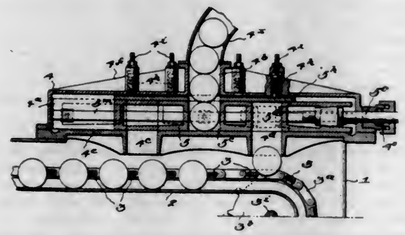
2. In a signaling apparatus of the class described, a pivoted arm of magnetic material having one end formed into an armature, an electric lamp supported by the arm, a solenoid associated with said armature and a switch arranged to be closed upon a predetermined travel of the armature for closing the circuit of said lamp, said switch consisting of a contact supported by the solenoid and a coil spring continuously bearing upon the contact and arranged in the path of movement of said armature.

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1,230,811. APPARATUS FOR TREATING PACKAGED GOODS. HENRY C. SHIPPEE, Los Angeles, Cal., assignor, by mesne assignments, to Anderson-Barngrover M'f'g Co., San Jose, Cal., a Corporation of California. Filed June 8, 1914. Serial No. 843,833. (Cl. 126—272.)

1. Mechanism for the purpose specified comprising a chamber having a single inlet port and two outlet ports,

and a movable member in said chamber having two pockets each adapted to communicate alternately with the inlet port and with but one of the outlet ports, means for reciprocating such member, and springs for pressing such member yieldingly on its seat.



2. Mechanism for the purpose specified comprising a valve chamber having a single inlet port and two outlet ports, and a reciprocatory valve in said chamber having two pockets each adapted to communicate alternately with the inlet port and with but one of the outlet ports, a presser plate between the valve and the top of the chamber, and adjustable springs for causing such presser plate to hold the valve yieldingly on its seat.

3. In combination with a valve casing having an inlet port, two outlet ports below and at opposite sides of the inlet port, a reciprocatory slide valve in said casing intermediate said ports and having two pockets adapted to respectively communicate with the inlet port and the adjacent outlet port, and one pocket communicating with the outlet port when the other is in communication with the inlet port; a presser plate interposed between the valve and the top of the valve chamber; and springs for causing said presser plate to yieldingly hold the valve on its seat.

4. In combination with a treating chamber, a packageway therein, and an endless series of pushers for moving packages along said packageway; and a feed mechanism having a single inlet and two outlet ports, and means for transferring packages from the inlet alternately to the outlet ports; one outlet port delivering packages in front of the even number pushers and the other outlet port delivering cans in front of the odd number pushers.

5. In combination with a treating chamber and an endless series of pusher bars for moving packages therethrough; of means for feeding packages into said chamber at two separated points so that at one point packages are in front of the even numbered pusher bars and at the other point packages are in front of the odd numbered pusher bars.

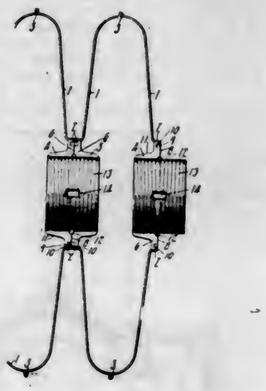
[Claim 6 not printed in the Gazette.]

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1,230,812. RADIATOR-COUPLING. FRANK J. SINGER, Detroit, Mich., assignor to American Pressweld Radiator Corporation, Detroit, Mich., a Corporation of Delaware. Filed Jan. 26, 1916. Serial No. 74,294. (Cl. 257—161.)

1. A container comprising a plurality of sections each formed of thin sheet metal and each having one of its walls formed with an outwardly extending tubular flange, each section having an internally threaded coupling member of greater thickness than the flange secured to the latter by welding, said coupling members each including a flange or rib concentric with, adjacent to and of substantially the same thickness as the first mentioned flange whereby a proper fusion of the metal of the two flanges may be obtained, a nipple threaded into the coupling members, the latter being drawn toward each other by the nipple until pressure from one is transmitted to the other over the outer faces thereof.

2. A radiator comprising a sheet metal section having one of its walls formed with an outwardly extending annular flange, an internally threaded coupling member secured to said flange, said coupling member extending out into the section beyond the inner face thereof and being tapered, whereby dripping of water of condensation is avoided.



3. A radiator comprising a sheet metal section having one of its walls formed with an outwardly extending annular flange, an internally threaded member secured to said flange, an externally threaded member screwed into said internally threaded member, said internally threaded member extending out into the section beyond the inner face thereof and being tapered, whereby dripping of water of condensation is avoided.

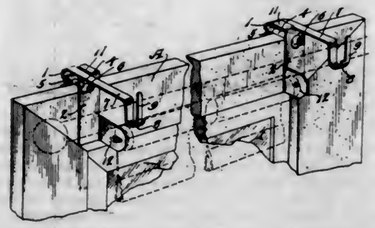
4. A radiator comprising a section having an opening in one of its walls, an internally threaded member rigidly secured in said opening, an externally threaded member screwed into said internally threaded member, said internally threaded member extending out into the section beyond the inner face thereof and being tapered, whereby dripping of water of condensation is avoided.

5. A radiator comprising a sheet metal section having one of its walls formed with an outwardly extending annular flange, an internally threaded coupling member welded to said flange, said coupling member extending out into the section beyond the inner face thereof and being tapered, whereby dripping of water of condensation is avoided.

[Claims 6 to 8 not printed in the Gazette.]

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1,230,813. COMBINED CURTAIN AND WINDOW-SHADE FIXTURE. LAWRENCE SLY, Kansas, Ala. Filed July 24, 1916. Serial No. 110,979. (Cl. 156—24.)



1. In a combined window curtain and shade fixture, the combination of a pair of clamping plates engageable with a window frame, one of said plates having a clamping extremity at one end and at its other end a rod supporting arm, said arm being cut away intermediate its length to provide an abutment shoulder, the other of said plates having a supporting flange engageable with the shoulder of the supporting arm aforesaid to provide an interlocking connection, and clamping means connecting said plates together.

2. A supporting fixture of the class described comprising front and rear clamping plates and connecting means therefor, one of said clamping plates constituting a rod supporting arm the material of which is cut away to provide an abutment shoulder, the other of said plates having its material cut away to provide a corresponding shoulder on which the supporting arm aforesaid is seated, said last mentioned plate having a flange engageable with the shoulder of the supporting arm to provide an interlocking connection.

3. A supporting fixture of the class described comprising a pair of clamping plates, one of said plates having a recess formed therein and provided with an aperture, said plate being also formed with a rod supporting arm, the other of said plates having an aperture therein, and a supporting flange engageable with the first mentioned plate to provide an interlocking connection, and clamping means comprising a bolt, the head of which is arranged in the recess of said clamping plate to prevent rotation of the latter in said recess.

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1,230,814. ROD-HOLDING TOOL. EMIL SMITH, Flint, Mich. Filed Feb. 23, 1917. Serial No. 150,505. (Cl. 81—3.)

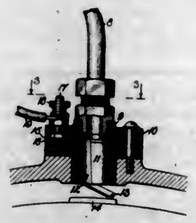


1. A rod holding tool of the character described, comprising a shank having rod seats, a clamping lever pivoted to the shank and having means engageable with the rod for clamping it down on one of the seats, and an abutment on the shank at the butt end thereof engageable by the inner end of the rod, said abutment being longitudinally adjustable.

2. A rod holding tool of the character described, comprising a shank having rod seats, a clamping lever pivoted to the shank and having means engageable with the rod for clamping it down on one of the seats, an abutment on the shank at the butt end thereof engageable by the inner end of the rod, said abutment being slidable longitudinally on the shank, and an axial screw carried by the butt end of the shank and engageable with the abutment.

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1,230,815. SPLASH SYSTEM OF LUBRICATION. FRANK A. SMITH, East Orange, N. J. Filed Sept. 20, 1916. Serial No. 121,175. (Cl. 184—11.)



1. In combination with the splash system of oiling in the Ford car, a transparent member adapted to be secured to the dashboard, a conduit adapted to connect the highest point of said transparent member to the opening for the magneto contact, said conduit presenting a scoop for diverting the circular movement of the oil caused by the splash-producing means into the conduit, said scoop forming the magneto contact point, and a conduit from the lower part of said transparent member.

2. In combination with the splash system of oiling of a Ford car which has the magneto contact opening above and in proximity of the flywheel, a glass tube adapted to be secured to the dashboard of the car, a conduit connected to the highest point of the glass tube and the contact point opening, a scoop at the opening for the magneto contact for diverting the circular flow caused by the splash-producing means into the conduit, said scoop forming the magneto contact point, and a return conduit from the lower point of the glass tube.

3. In combination with the splash system of oiling of an internal-combustion engine including a magneto, a scoop for diverting the circular movement of the oil caused by the splash-producing means, said scoop forming the electric contact point of the magneto, and oil distributing means associated with said scoop.

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1,230,816. METHOD OF MAKING PHONOGRAPH-RECORDS. JONAS W. AYLSWORTH, East Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Mar. 8, 1911. Serial No. 613,114. (Cl. 18—48.4.)

1. The process of making sound records which consists in coating two sheets of woven fabric with veneers of hard infusible material adapted to become slightly softened but not sufficiently plastic to flow when hot, forming a blank of material which is sufficiently plastic to flow when hot and hard when cold, inserting said blank between said sheets of fabric and simultaneously uniting said parts, molding the same into the desired shape, and forming record impressions in the outer surfaces of said veneers by heat and pressure, substantially as set forth.

2. The process of making sound records which consists in coating a sheet of woven fabric with a veneer of a hard infusible condensation product of phenol and a substance containing the methylene radical, forming a blank of material which is sufficiently plastic to flow when hot and hard when cold, and simultaneously uniting said parts, molding the same into the desired shape and forming a record impression in the veneer by heat and pressure, substantially as set forth.

3. The process of making sound records which consists in coating two sheets of woven fabric with veneers of a hard infusible condensation product of phenol and a substance containing the methylene radical, forming a blank of material which is sufficiently plastic to flow when hot and hard when cold, inserting said blank between said sheets of fabric, and simultaneously uniting said parts, forming the same into the desired shape, and forming record impressions in the outer surfaces of the veneer by heat and pressure, substantially as set forth.

4. The process of making sound records which consists in coating a sheet of woven fabric with a veneer of a hard infusible material adapted to become slightly softened but not sufficiently plastic to flow when hot, forming a blank of material which is sufficiently plastic to flow when hot and hard when cold, placing said blank in contact with said fabric, and uniting said parts and forming the same into the desired shape by heat and pressure, substantially as set forth.

5. The process of making sound records or the like which consists in pressing a heated layer of thermo plastic record composition against a sheet of fabric, and subsequently securing said layer and sheet to a suitable backing with said sheet intermediate said layer and backing, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

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1,230,817. FOOD. STEWART R. BARNETT, Albany, Wis., assignor to Crary Brokerage Company, Waukesha, Wis., a Corporation of Wisconsin. Filed June 26, 1916. Serial No. 106,015. (Cl. 99—11.)

1. A food product comprising an homogenized compound of concentrated cow's milk; alkaline malt soup extract; olive oil; and peptonized iron.

2. A food product comprising an homogenized compound of concentrated cow's milk; malt soup extract; olive oil; and peptonized iron.

3. A food product comprising an homogenized compound of concentrated cow's milk; alkaline malt soup extract; and olive oil.

4. A food product comprising an homogenized compound of concentrated cow's milk; non-acid malt soup extract; olive oil; and peptonized iron.

5. A food product comprising an homogenized compound of concentrated cow's milk; non-acid malt soup extract; and olive oil.

[Claims 6 to 32 not printed in the Gazette.]

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1,230,818. LIFTING-JACK. EDMUND C. BATES, Alliance, Ohio, assignor to The Buckeye Jack Manufacturing Company, Alliance, Ohio, a Corporation of Ohio. Filed Sept. 16, 1914. Serial No. 862,005. (Cl. 254—111.)



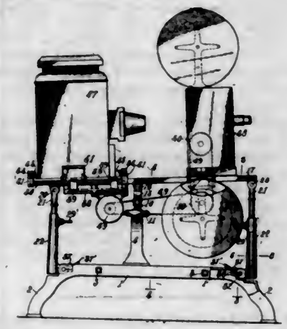
A lifting jack including an upright standard with a lifting bar operatively mounted therein having ratchet teeth on one side, an operating lever fulcrumed on the standard, a pawl pivoted to the standard and a pawl pivoted to the inner end of the operating lever operatively engaging the ratchet teeth, there being posts on the sides of the pawls, a reversing lever pivoted to the standard having a lowering block on its inner end with cam faces which may be rotated into the path of the pawl posts, and a spring mounted on the standard having an elongated laterally yielding spring abutment in sliding engagement with one end of the reversing lever for pressing the same in opposite directions for holding the lowering block either in or out of the path of the pawl posts.

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1,230,819. SUPPORT. ADOLPH F. GALL, West Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed June 27, 1913. Serial No. 776,021. (Cl. 45—110.)

1. In a support, a base, a bed plate, means pivotally connecting the bed plate and the base intermediate the ends of the bed plate whereby the relative angular positions of the base and bed plate may be adjusted, and means for holding said bed plate and base in any adjusted relative angular positions, said means comprising an element secured to said bed plate adjacent one end thereof, an element mounted on said base for angular movement relative thereto and telescopically engaging said first named element, means for locking said elements together, and means for locking the element mounted on said base in adjusted angular position relative thereto, substantially as described.

2. In a support, a base, a bed plate, means pivotally connecting the bed plate and the base intermediate the ends of the bed plate whereby the relative angular positions of the base and bed plate may be adjusted, and means for holding said bed plate and base in any adjusted relative angular positions, said means comprising a rod pivotally secured to said bed plate adjacent one end of the latter, a hollow rod pivotally secured to said base and telescopically engaging said first rod, means for locking said rods together, and means for locking said hollow rod in adjusted angular position relative to said base, substantially as described.



3. A support for projecting machines, comprising a bed plate on which a projecting machine is adapted to be mounted, a base, and means connecting said bed plate and base, comprising a screw threaded rod pivoted to said bed plate intermediate its ends, a bracket secured to said base, said bracket being provided with a vertical opening in which the screw threaded rod is loosely mounted, a hand wheel bearing on said bracket and threaded on said rod, and means for holding said bed plate in any adjusted position with respect to said base, comprising a pair of telescopically connected members at one end of the bed plate, said members being respectively pivotally connected to the bed plate and base, means for locking said members together, and means for locking one of said members in adjusted angular position relative to said base, substantially as described.

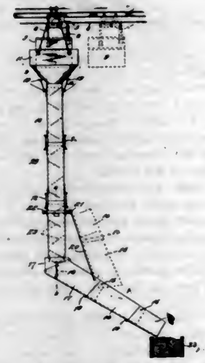
4. A support for projecting machines, comprising a bed plate on which a projecting machine is adapted to be mounted, a base, and means connecting said bed plate and base, comprising a screw threaded rod pivoted to said bed plate intermediate its ends, a bracket secured to said base, said bracket being provided with a vertical opening in which the screw threaded rod is loosely mounted, a hand wheel bearing on said bracket and threaded on said rod, and means connecting the base and bed plate at opposite ends for locking said bed plate in any adjusted position with respect to said base, said last named means comprising rods pivotally secured to said bed plate, hollow members pivotally secured to said base and telescopically engaging said rods, means for locking said rods and said hollow members together, and means for locking said hollow members in adjusted angular position relative to said base, substantially as described.

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1,230,820. APPARATUS FOR DELIVERING CONCRETE AND OTHER MATERIAL. CHRISTOPHER W. LEVALLEY and SAMUEL SHAFER, Jr., Milwaukee, Wis., assignors to Chain Belt Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 3, 1914. Serial No. 870,110. (Cl. 214—14.)

1. In apparatus for delivering material, a pair of tracks one vertically directly above the other, a traversing carrier suspended from the lower track along which it is free to move, a chute to which such carrier delivers, and suspending means for the chute supported from the upper track and along which they are free to move, the said suspending means, on opposite sides of the track, being separated sufficiently far to permit the traversing carrier to freely move between them.

2. In apparatus for delivering material, a track structure formed of a pair of channel bars the flanges at the opposite edges of which constitute two sets of track one being higher than the other, a carrier for the material suspended from the lower track along which it is free to move, and a chute to which the carrier delivers suspended from the upper track and freely movable along the same, the suspending means for the chute being adapted to straddle the carrier when the latter is in position to deliver to the chute.



3. In apparatus for delivering material, the combination of a structure having two tracks one higher than the other, a trolley movable along the higher track, a chute having a hopper at its upper end and side plates extending upward from two sides of the hopper suspended from the said trolley, and a carrier suspended from and movable along the lower track arranged to pass between the side plates of the chute and also between the means by which the chute is suspended from the upper track.

4. In apparatus for delivering material, a vertically disposed chute, a lateral delivering spout into which the chute discharges, means pivotally uniting the upper end of the spout with the lower end of the chute arranged to permit the spout to be freely turned about the chute, guys for sustaining the spout in working positions extending laterally away from the chute, and means carried by the chute with which the upper parts of the guys are connected and by which they are supported, the guy connections being freely adjustable upon said means which support them to correspond with the adjustments of the spout about the chute.

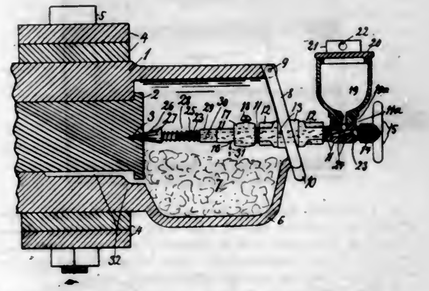
5. In apparatus for delivering material, a delivery chute through which material passes by gravity, a spout to which the chute delivers, means uniting the upper end of the spout and the lower end of the chute, constructed to permit the spout to be freely turned relative to the chute as about a vertical axis, a ring supported by the chute, and guys connected with the spout and having at their upper ends means for hooking over the said ring whereby the spout may be sustained in whatever position relative to the chute it may be adjusted.

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1,230,821. CAR-AXLE LUBRICATOR. OTTO MILLER, Dalton, Minn. Filed Dec. 30, 1916. Serial No. 139,955. (Cl. 64—24.)

1. The combination with the lid of a car axle box of a tube secured in said lid in axial alinement with the axle, a rod rotatable in the tube and having its inner end spring-pressed into the center of the axle and its body provided with grooves, and an oil cup mounted upon the outer end of the tube to feed oil through the same, said tube having beyond the inner side of the lid in its lower side an oil passage and means for regulating the size of said passage.

5. The combination with the lid of a car axle box, of an oil cup mounted upon the outer side of the lid, a tube extending therefrom through the lid and having a controlled lateral outlet for oil within the box, a grooved rod slidable and rotatable within the tube in axial alinement with the car axle, said rod having its inner end formed with a longitudinally grooved cone adapted to enter the center of the axle, and near said cone a longitudinal slot, a collar loosely fitted on the rod and having

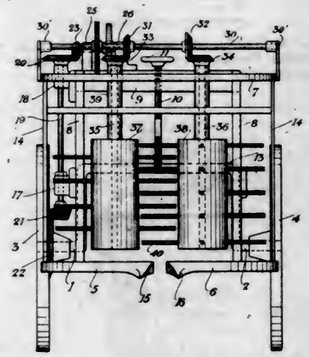


a pin extending diametrically through the slot, a compression coil spring upon the rod between the cone and the collar, pressing the latter at all times against the inner end of the tube and thus holding the cone yieldingly in contact with the axle, said tube having its outer end normally open, and a removable cap closing said open end of the tube.

[Claims 2 to 4 not printed in the Gazette.]

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1,230,822. PEA-HARVESTING MACHINE. JAMES T. SHIPP, Chattanooga, Tenn., assignor of one-half to Milton T. Freeman, Chattanooga, Tenn. Application filed Jan. 25, 1916, Serial No. 74,148. Renewed May 18, 1917. Serial No. 169,575. (Cl. 56—1.)

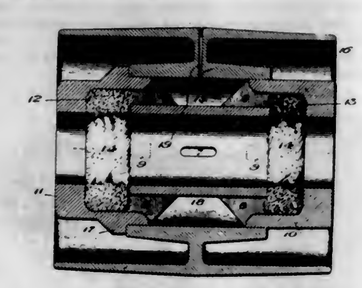


1. In a harvester, threshing means to remove a product from a plant, such means including drums, and flails laterally extending from said drums and flexible only in a horizontal plane.

2. In a harvester, threshing means, including vertically disposed drums rotatable in opposite directions and laterally extending flails flexible only in a horizontal plane, said flails intermeshing as said drums are rotated.

3. In a harvester, threshing means to remove a product from a plant, such means including vertically disposed drums rotatable in opposite directions and means to guide the plant between said drums, flails extending from said drums and retained in a horizontal plane and flexible only in a horizontal plane.

1,230,823. SELF-OILING BUSHING. JOHN D. JONES, Walla Walla, Wash. Filed Jan. 8, 1917. Serial No. 141,240. (Cl. 64—26.)



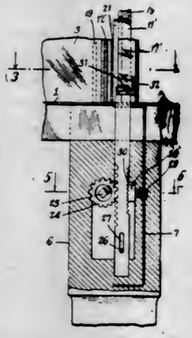
1. A bearing bushing for pulleys and the like, comprising end sleeves spaced apart, an intermediate sleeve extending thereinto and a plurality of lugs connecting the ends of said intermediate sleeve with the end sleeves, said sleeves having axially alined shaft openings.

5. The combination with a carrying sleeve, of a bushing including a sleeve of lesser diameter than the carrying sleeve, a plurality of external radial lugs formed adjacent the ends thereof, two sleeves of greater diameter than the second sleeve and connected thereto by such lugs, one of said last mentioned sleeves being of such a diameter as to slip through the carrying sleeve while the other of the two larger sleeves is provided with an annular shoulder to abut one end of the carrying sleeve to limit the position of the bushing relative to the carrying sleeve, there being provided between the smaller sleeve of the bushing and the carrying sleeve a surrounding lubricant receiving compartment.

[Claims 2 to 4 and 6 not printed in the Gazette.]

1,230,824. [WITHDRAWN.]

1,230,825. MUSEUM OR SHOW CASE. JACOB F. ARNOLD, Mount Vernon, N. Y. Filed Nov. 2, 1916. Serial No. 129,045. (Cl. 211—25.)



1. In a show case, the combination of a fixed inside corner member, a vertically movable outside corner member, an end plate and a side plate having their adjacent ends arranged between said members, and coacting means carried by said corner members, whereby vertical movement of said outside member causes the latter to press against the outer surface of both said plates, substantially as set forth.

3. In a show case, the combination of a base member, vertical corner members secured thereto, side and end plates having their vertical ends alongside said members, a top member adapted to rest on the upper edges of said side and end plates, and a vertically movable member at each corner, formed to coact with said top member and with the adjacent fixed corner member, so that downward movement of said vertically movable member draws downwardly upon said top member and also presses the adjacent end portions of a side and an end plate laterally against the adjacent fixed corner member, substantially as set forth.

6. In a show case, the combination of a base member, vertical corner members secured thereto, vertical plates on said base member at angles to each other, with contiguous ends adjacent to said corner members, a top member above said plates, and a unitary means at each corner for detachably securing both plates against the adjacent corner member, and the top member upon the plates, under pressure, substantially as set forth.

8. In a show case, the combination of a base member, a vertical corner member secured thereto, a vertical plate on said base member with an end adjacent to said corner member, a horizontal member above said plate, and a unitary means for detachably securing said plate against the corner member under pressure, and for pressing said horizontal member down on the top edge of said plate, substantially as set forth.

12. In a show case, the combination of a base member, side and end plates thereon, a top member having horizontal flanges cut away adjacent the corners, vertical corner members adapted to be inserted through said flange cut-outs, means for detachably securing said corner members to said top member when thus inserted, and means for detachably securing the corner members, thus mounted, against said plates, substantially as set forth.

[Claims 2, 4, 5, 7, and 9 to 11 not printed in the Gazette.]

1,230,826. CIRCUIT-COMPLETING PLUG FOR LAMP-SOCKETS. JAMES LEONARD CAMPBELL, Barryton, Mich. Filed Apr. 5, 1916. Serial No. 89,041. (Cl. 173—328.)



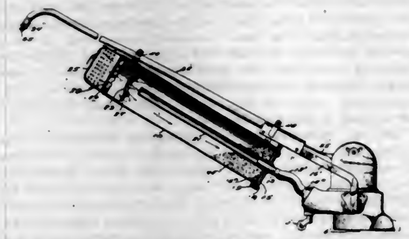
The combination of a lighting circuit including a plurality of lamp sockets having a plurality of contacts therein and having bayonet slots in the walls of the socket, with a circuit-closing plug comprising a body of insulation, a bridging contact anchored therein for engaging the contacts on the lamp socket for electrically connecting them, and pins anchored in the body of insulation and separated from the said contact therein, said pins being engageable in the bayonet slots to hold the contact of the plug in engagement with the contacts of the socket.

1,230,827. VACUUM CLEANING APPARATUS. JOHN J. DUFFIE, San Francisco, Cal., assignor to Vacuum Specialty Manufacturing Company, San Francisco, Cal., a Corporation of Arizona. Filed Mar. 30, 1915. Serial No. 17,970. (Cl. 15—60.)

1. A pneumatic cleaner, comprising a casing having a suction-nozzle and containing a fan and attached motor, a handle pivotally connected to the casing, a tubular receptacle connected rigidly with the handle, an outlet conduit movably connected to said casing at one end and secured to the receptacle at the other or discharge end, and a filtering medium carried within the receptacle.

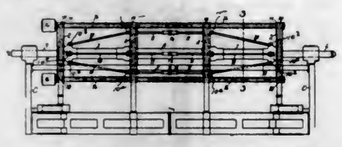
2. A pneumatic cleaner comprising a casing having a suction-nozzle and provided with suction-creating apparatus, a tubular dust-receptacle, a handle rigidly secured thereto and pivotally connected to the casing so that the pivotal movement of the receptacle and handle are coaxial, and an outlet-conduit movably connected to said casing, and connecting with said receptacle.





3. A pneumatic cleaner, comprising a casing adapted to move over a surface to be cleaned and having a suction-nozzle, and provided with suction-creating apparatus, a tubular dust-receptacle, supporting means for said receptacle having pivotal connection with said casing, an outlet conduit movably connected to said casing and connecting with said receptacle, and filtering means within said receptacle.

1,230,828. PLANETARY NAPPING-MACHINE. DAVID GESSNER, Worcester, Mass. Filed June 30, 1914. Serial No. 848,133. (Cl. 26—19.)



1. A napping roll drum, comprising a plurality of shaft sections arranged end to end, and having end heads and an intermediate head, napping rolls journaled in said heads, and tension truss members connecting said intermediate head with the ends of said shaft sections.

2. A napping roll drum, comprising a plurality of end shaft sections, and an intermediate shaft section arranged end to end, heads on the ends of said end shaft sections, napping rolls journaled in said heads, and truss rods connecting the outer ends of said end shaft sections and the heads on the inner ends of said end shaft sections.

3. A napping roll drum, comprising a plurality of end shaft sections, and an intermediate shaft section arranged end to end, heads on the ends of said end shaft sections, napping rolls journaled in said heads, truss rods connecting the outer ends of said end shaft sections and the heads on the inner ends of said end shaft sections, and take-up devices connecting the inner ends of said truss rods.

4. A napping roll drum, comprising a plurality of end shaft sections, and an intermediate section arranged end to end, heads on the inner and outer ends of said end shaft sections, the ends of the intermediate sections being socketed in the ends of the end shaft sections, flanges on the ends of the intermediate shaft sections, said flanges being connected to the adjacent heads on the end shaft sections, and napping rolls journaled in said heads.

5. A napping roll drum, comprising a shaft, heads thereon having outwardly opening bearings, napping rolls journaled in said bearings, bearing rings surrounding the journals of said rolls, and a belt support for said rings.

[Claims 6 to 24 not printed in the Gazette.]

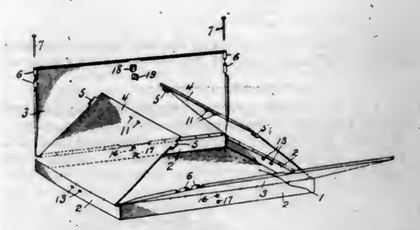
1,230,829. ARTIFICIAL RESIN AND PROCESS OF MAKING THE SAME. BYRON B. GOLDSMITH, New York, N. Y., assignor to Redmanol Chemical Products Company, Chicago, Ill., a Corporation of West Virginia. Filed July 27, 1910. Serial No. 574,026. (Cl. 106—22.)

1. A composition of matter of the character set forth, comprising the product of anhydrous reaction directly between hexamethylenetetramin and a hydroxy aromatic compound of the character set forth, subjected to the action of heat, the substances compounded in such proportions as to furnish at least substantially one phenolic group of the hydroxy aromatic compound to each methylene group of the hexamethylenetetramin.

19. A non-crystalline condensation product of the character set forth, comprising the product of anhydrous reaction, with evolution of ammonia, in a mixture comprising a phenolic body of the character set forth, and hexamethylenetetramin taken in such proportions and subjected to such heat treatment in the absence of a catalytic agent as to produce said non-crystalline condensation product.

[Claims 2 to 18 not printed in the Gazette.]

1,230,830. COLLAPSIBLE CRATE. PETER C. ICKES, Chanute, Kans., assignor to Elmer E. Garard, Chanute, Kans. Filed June 1, 1915. Serial No. 31,507. (Cl. 220—17.)

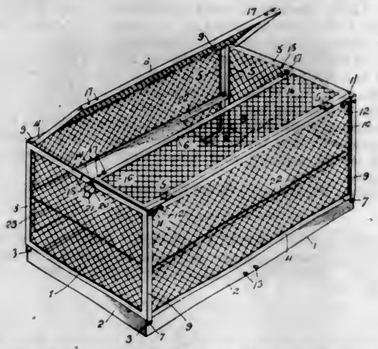


A collapsible crate comprising a bottom member having two end flanges provided each with two holes therethrough closely adjacent to each other, side members hinged to said bottom member so as to be swung from an upright to a collapsed position, two opposite side members being hinged respectively to said flanges and provided each with two holes therethrough, releasable means for locking the side members in the upright position, and a cover provided with two end flanges adapted to embrace the flanges of the bottom member and the two adjacent side members, each end flange of the cover having two holes therethrough adapted to register respectively with the holes in the adjacent side member when the latter is in the upright position, and adapted to register respectively with the holes in the adjacent end flange of the bottom member when the latter is embraced by the cover, whereby a short flexible securing device may be inserted through each set of holes which are in register with each other for securing the cover to the side members or to the bottom member.

1,230,831. COLLAPSIBLE CRATE. PETER C. ICKES, Chanute, Kans., assignor to Elmer E. Garard, Chanute, Kans. Filed Aug. 27, 1915. Serial No. 47,613. (Cl. 220—132.)

A collapsible crate comprising a bottom member, two side members hinged thereto so as to swing from an upright position to a position one over the other on the bottom member, two cover members respectively hinged to the upper edges of said side members and adapted to swing at right angles thereto and parallel therewith, two pairs of longitudinally movable bolts mounted one pair on each cover member respectively adjacent to opposite ends thereof, two side members hinged to the bottom member so as to swing from an upright position to a collapsed position over the bottom member and provided with means for being releasably engaged by the adjacent ones of said bolts when the last named side members are upright, and the cover members are in the closed position, and means carried by the last named side members for

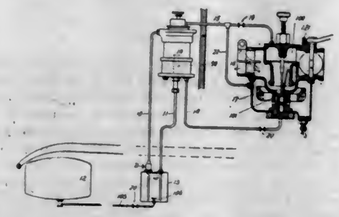
releasably locking said members to the bottom member in the collapsed position and arranged to releasably lock



the last named side members to the first named side members when the side members are in the upright position.

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1,230,832. VACUUM LIQUID-FEEDING APPARATUS AND METHOD THEREFOR. CHARLES LAWRENCE STOKES, Milong, via Young, New South Wales, Australia. Filed Apr. 15, 1916. Serial No. 91,303. (Cl. 158—36.)



1. The combination of a low level oil tank, a high level oil feed reservoir, a vacuum connection from said reservoir adapted to be fitted to the induction system of an internal combustion engine, an ascension pipe and a down flow pipe connecting said reservoir and tank and forming an oil circulation loop, and means for admitting air into said ascension pipe.

9. In combination with a carbureter, a low level liquid fuel tank, a liquid fuel reservoir above said tank and in communication with the carbureter to supply it with fuel, communication between the tank and reservoir, means for restrictedly admitting atmosphere to said communication at a point where the admitted atmosphere enters the upwardly moving column of liquid moving from the tank to the reservoir, and communication means to apply to said liquid fuel reservoir the suction which is applied to the carbureter to create a partial vacuum in the reservoir and to draw from the tank the air which enters it with the fuel.

12. In combination with a carbureter, a low level liquid fuel tank, a liquid fuel reservoir above the tank and in communication with the carbureter to supply it with fuel, a communication between the tank and reservoir, means for restrictedly admitting atmosphere to said communication at a point where the admitted atmosphere passes with the upwardly moving column of liquid fuel moving from the tank to the reservoir, and means to controllably apply to said reservoir the suction which is applied to the carbureter to maintain a partial vacuum in the reservoir and to draw therefrom the air which enters it with the fuel.

13. In a liquid feed system for an internal combustion engine, the combination of a liquid tank, a liquid reservoir above said tank, communication between the tank and the reservoir, means for admitting atmosphere to said communication at a point to enter the column of liquid moving upwardly through said communication, means for applying suction to the upper part of the reservoir said means carrying the admitted atmosphere to mix with the carbureted charge of the engine, and means for cutting off suction to the reservoir.

16. The herein described method of lifting and supplying fuel to an internal combustion engine, consisting in raising a liquid fuel by application of the engine suction thereto, lightening the rising fuel by restrictedly admitting air to the fuel being lifted, and thereby carbureting said air, said carbureted air being drawn by the engine suction into the engine, and forming a carbureted mixture of air and the lifted fuel and drawing said carbureted mixture into the engine along with the first mentioned air.

[Claims 2 to 8, 10, 11, 14, and 15 not printed in the Gazette.]

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1,230,833. SAFETY-RAZOR. FARNUM F. DORSEY, Rochester, N. Y. Filed June 19, 1915. Serial No. 35,101. (Cl. 30—12.)



1. A safety-razor having, in combination, a stock comprising two telescopically arranged members; a guard mounted at the end of one of said members; a blade-holder mounted at the end of the other of said members and arranged to swing, about a transverse axis, from shaving position, transverse to the length of the stock, into a stropping position parallel with the length of the stock; a catch mounted on the first of said members in position to retain the blade-holder in stropping position; and a spring coöperating with the telescopic members and tending to move them relatively in a direction to bring the blade-holder and the catch together.

2. A safety-razor having, in combination, a stock comprising two telescopically arranged members; a guard mounted at the end of one of said members; a blade; a blade-holder mounted at the end of the other of said members and arranged to swing about a transverse axis; and a catch pivotally mounted and connected with the guard, the catch having an extremity which may be swung upwardly into position to coöperate with one end of the blade-holder when the latter is swung to stropping position.

3. A safety-razor having, in combination, a stock comprising two telescopically arranged members; a guard mounted at the end of one of said members; a blade; a blade-holder mounted at the end of the other of said members and arranged to swing about a transverse axis; and a catch movably connected with the guard and adapted to cooperate with the blade-holder when the latter is swung to stropping position, the catch having a part accessible, for manual operation, at the side of the razor.

4. A safety-razor having, in combination, a stock comprising two telescopically arranged members; a blade; a blade-holder mounted at the end of one of said members and arranged to swing about a transverse axis; a guard mounted at the end of the other of said members; a catch mounted on the second of said members and adapted to engage the end of the blade-holder and lock it in stropping position parallel with the telescopic members; and a spring inclosed within and connecting said members and tending to move them relatively in a direction to draw the blade-holder into engagement with said catch and also to draw the blade into engagement with the guard when the blade is in shaving position.

5. A safety-razor having, in combination, a stock comprising two telescopically arranged members; a guard mounted at the end of one of said members; a blade; a blade-holder mounted at the end of the other of said members and arranged to swing, about a transverse axis, from shaving position to a stropping position parallel with the telescopic members; a clamp-bar arranged to engage the upper surface of the blade when the blade is in shaving position, the clamp-bar being pivotally connected with the first of said members and movable, from shaving position, to a position in the rear, and substantially in the plane, of the guard; and means for retaining the clamp-bar in both of said positions.

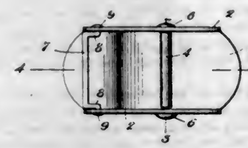
[Claim 6 not printed in the Gazette.]



# REISSUES.

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14,316. BELT-BUCKLE. WALTER B. BALLOU, North Attleboro, Mass., assignor to R. Blackinton & Co., North Attleboro, Mass. Filed Dec. 7, 1916. Serial No. 135,699. Original No. 1,183,425, dated May 16, 1916, Serial No. No. 67,339, filed Dec. 17, 1915. (Cl. 24—194.)



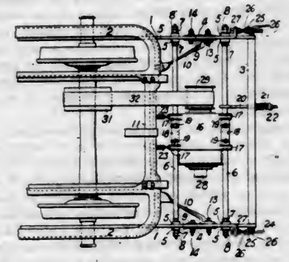
1. In a belt buckle, a body having side flanges provided with inclined slots and with openings, a bail having cranked ends passed through the openings and subsequently headed, and a hollow roller having tapered headed pins driven thereinto through the slots.

2. In a belt buckle, a body having flanges with inclined slots, a roller between the flanges, and pins driven into the ends of the roller so as to permit removal of the same, the pins extending through the slots.

3. A belt buckle embracing a body portion consisting of a front plate whose sides are inturned to form opposed integral flanges, said flanges being provided with opposed oblique slots, a clamping roller journaled to travel in said slots to clamp the free end of the strap against the inside face of the front plate, said flanges being also provided with opposed bearing openings, and a bail pivotally mounted in said bearing openings and serving as an automatically adjustable anchorage for the fixed end of the strap, substantially as described.

4. A belt buckle embracing a body portion comprising a front plate whose sides are inturned to form parallel integral flanges, said flanges being provided with opposed slots extending obliquely to the front plate, a clamping member adapted to travel in said diagonal slots to gradually approach the front plate and clamp the free end of the strap against the inside face thereof, a cranked bail member pivotally supported in said flanges near their ends, whereby the swinging movement of the bail tends to maintain the adjacent end of the buckle in close contact with the strap, substantially as described.

14,317. GENERATOR SUSPENSION. ROBERT M. DIXON, East Orange, N. J., assignor to Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Feb. 26, 1917. Serial No. 151,123. Original No. 1,167,389, dated Jan. 11, 1916, Serial No. 609,055, filed Feb. 16, 1911. (Cl. 105—238.)



1. In an apparatus of the character described, in combination, a car-truck, a dynamo provided with lugs, a frame projecting from said truck, side bars adjustably mounted on said frame, links pivotally attached to each of said side bars, and cross rods removably attached to said links and passing through said lugs.

2. In an apparatus of the character described, in combination, a car-truck, a dynamo provided with lugs on opposite sides, a frame projecting from said truck, side-bars adjustably mounted on said frame, a pair of links pivotally attached to each of said side-bars, and a pair of cross rods removably attached to said links and passing through the lugs on said dynamo.

3. In an apparatus of the character described, in combination, a car-truck, a dynamo, a frame projecting from said truck, members adjustably mounted on said frame, links pivotally attached to said members, cross rods attached to said links, and means for supporting said dynamo on said cross rods in such a manner that it cannot be removed therefrom without removing said rods from said links.

4. In an apparatus of the character described, in combination, a car truck, a dynamo, a frame comprising members projecting from said truck and connected at their ends by a cross bar, side bars adjustably mounted on said projecting members, links pivotally attached to said side bars, rods detachably connected to said links, means for supporting said dynamo upon said rods, and a single tension-spring attached to said cross bar and to one of said rods.

5. In an apparatus of the character described, in combination, a car truck, arms projecting therefrom, a sliding carriage mounted on said arms and adapted to support a dynamo, said carriage comprising side bars, each of said side bars being adapted to slide on one of said arms, hanger links pivotally attached to each of said side bars at a point above said arms, and cross rods attached to said hanger links and adapted to be removed therefrom.

6. In an apparatus of the character described, in combination, a car-truck, a fixed frame attached thereto comprising arms projecting from the sides of said car-truck and a cross bar connecting said arms, a movable carriage adapted to support a dynamo, said carriage being mounted on said arms and comprising side bars adapted to slide upon said arms, hanger links pivotally attached to each of said side bars at a point above said arms and cross rods attached to said hanger links and adapted to be removed therefrom, and a tension spring associated with said cross bar and said cross rod adapted to restrain the motion of said movable carriage.

7. In an apparatus of the character described, in combination, a car-truck, arms projecting therefrom, a sliding carriage mounted on said arms and adapted to support a dynamo, said carriage comprising side bars each of said side bars being adapted to bear throughout its

length and to move on one of said arms, and a pair of parallel depending members, each of said members comprising a pair of hanger links and a cross rod attached to said links each of said links being pivotally attached to one of said side bars at a point above said projecting arms.

8. In apparatus of the character described, in combination, a truck, a generator, a pair of supporting arms respectively extending from each side of said truck, a pair of supporting devices each of which comprises a lower portion secured to the generator, a pair of upwardly extending parts at its ends and a pair of pivotal parts extending over said supporting arms, and means adapted to maintain said supporting devices in substantially parallel relation.

9. In apparatus of the character described, in combination, a truck, a generator, a pair of supporting arms respectively extending from the side sills of the truck and in substantial alinement therewith, a pair of supporting devices each of which comprises a lower portion secured to the generator, a pair of upwardly extending parts at its ends and a pair of pivotal portions extending over and journaled in members resting upon said arms, and means adapted to maintain said supporting devices in substantially parallel relation.

10. In apparatus of the character described, in combination, a generator, a pair of supporting arms, a pair of supporting devices each of which comprises a lower portion secured to the generator, a pair of upwardly extending parts at its ends and a pair of outwardly extending pivotal parts, members mounted upon said arms in which said pivotal parts are journaled, and securing means at the outer ends of said pivotal parts.

11. In apparatus of the character described, in combination, a pair of supporting arms, a generator, a swinging supporting device having a portion secured to said generator, upwardly extending parts at its ends and a pair of pivotal parts extending over said supporting arms, means in which the said pivotal parts have bearings mounted upon each of said arms and provided with portions extending downwardly from the said bearings and straddling said arms, said means being each slidable longitudinally of the corresponding arm, and means adapted independently to slide said bearing means and lock it in the position into which it is moved.

12. In apparatus of the character described, in combination, a generator, a pair of supporting arms, a device mounted upon each of said arms having a bearing above the arm, downwardly extending portions straddling the arm, and connecting devices for said portions, said arms each extending over and coacting with the corresponding devices to prevent upward movement thereof, means adapted to slide each of said devices independently along the corresponding arm, and a supporting device secured to said generator and extending upwardly to form pivotal connections with said bearings.

13. In apparatus of the character described, in combination, a truck, a pair of supporting arms respectively extending from each side of said truck, a slidable device mounted upon each of said arms and each provided with a pair of bearings above said arm and a pair of downwardly extending parts straddling said arm, means adapted to slide said devices along the respective arms, a generator, a pair of supporting devices for said generator secured thereto and extending upwardly at each end to form pivotal connections in said bearings, and means adapted to maintain said supporting devices in parallel relation.

14. In apparatus of the character described, in combination, a truck, a pair of supporting arms respectively extending from each side of said truck, a slidable device mounted upon each of said arms and each provided with a pair of bearings above said arm and a pair of downwardly extending parts straddling said arm, means adapted to slide said devices along the respective arms, a generator, a pair of supporting devices for said generator secured thereto and extending upwardly at each end to form pivotal connections in said bearings, means adapted to maintain said supporting devices in parallel relation, and means connecting the downwardly extending portions of each of said sliding devices to co-act with said arms and prevent upward movement thereof.

15. In apparatus of the character described, in combination, a pair of supporting arms, a generator, a pair of supporting devices for said generator, a unitary device mounted on and embracing each of said arms, comprising a pair of bearing portions for said supports spaced in a longitudinal direction and means rigidly connecting said portions one with another, and means adapted independently to adjust each of said devices longitudinally of the arm on which it is mounted and lock it in adjusted position.

16. In apparatus of the character described, in combination, a pair of supporting arms, a generator, a pair of swinging supports for said generator, means adapted to maintain said supports in parallel relation, a unitary device mounted upon each of said supporting arms, each provided with a pair of bearings over the arm and rigidly formed portions depending from said bearings straddling the arm, and cross bolts connecting said depending portions of each device to co-act with said arm and prevent upward movement of the corresponding device.

17. In apparatus of the character described, in combination, a truck, a pair of supporting arms extending from the side sills of said truck and in substantial alinement therewith, a generator, a pair of supporting devices for said generator, a unitary device mounted on and embracing each of said arms comprising a pair of bearing portions for said supports spaced in a longitudinal direction and means rigidly connecting said portions one with another, and means adapted independently to adjust each of, said devices longitudinally of the arm on which it is mounted and lock it in adjusted position.

18. In apparatus of the character described, in combination, a pair of supporting arms, a bearing device mounted upon each of said arms provided with a bearing portion above the arm and a pair of parallel portions straddling the arm, a generator, a pair of swinging supporting devices each of which comprises a transverse portion secured to said generator and end portions upwardly directed toward said bearings and pivotally connected therewith.

19. In apparatus of the character described, in combination, a pair of supporting arms, a bearing device mounted upon each of said arms provided with a bearing portion above the arm and a pair of parallel portions straddling the arm, a generator, a pair of swinging supporting devices each of which comprises a transverse portion secured to said generator and end portions upwardly directed toward said bearings and pivotally connected therewith, and bolts connecting the depending portions of said bearing members to co-act with said arms and prevent upward movement of said bearings.

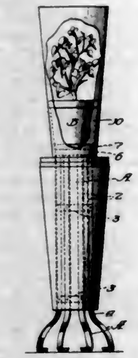
20. In apparatus of the character described, in combination, a pair of supporting arms, a bearing device mounted upon each of said arms provided with a bearing portion above the arm and a pair of parallel portions straddling the arm, a generator, a pair of swinging supporting devices each of which comprises a transverse portion secured to said generator and end portions upwardly directed toward said bearings and pivotally connected therewith, a car truck, means adapted to drive said generator from an axle of said truck, and resilient means tending to swing said generator away from said truck, said pivotal connection comprising eyes formed in the ends of said supporting devices and bolts passing through said eyes and said bearings.

21. In apparatus of the character described, in combination, a car truck, a pair of supporting arms, a pair of devices respectively mounted upon said supporting arms and secured thereto and providing bearings above said arms, a generator driven from an axle of said truck, and supporting means for said generator, said means being secured to said generator and extending transversely therefrom and thence upwardly at each end in the form of a pair of arms each of said latter pairs of arms embracing one of said supporting arms and being pivotally connected with the corresponding bearing thereon.

22. In apparatus of the character described, in combination, a car truck, a pair of supporting arms, a pair of devices respectively mounted upon said supporting arms and secured thereto, and providing bearings above said arms, with depending portions straddling said arms and secured thereto, a generator driven from an axle of said truck, and supporting means for said generator, said means being secured to said generator and extending transversely therefrom and thence upwardly at each end in the form of a pair of arms each of said latter pairs of arms embracing one of said supporting arms and being pivotally connected with the corresponding bearing thereon.



14,318. WRAPPING DEVICE. HARRY HAYASHI, Elmhurst, Cal. Filed Apr. 11, 1917. Serial No. 161,357. Original No. 1,183,454, dated May 16, 1916, Serial No. 78,515, filed Feb. 15, 1916. (Cl. 93—2.)



1. A device for the wrapping of potted plants, the same comprising a pedestal for receiving and supporting a potted plant to be wrapped, and a nested series of wrapping envelops fitted over said pedestal and adapted to be successively removed and upwardly drawn to inclose a plant to be wrapped.

2. A device for the wrapping of potted plants, the same comprising a pedestal for receiving and supporting a potted plant for wrapping provided with an enlarged base member, and a series of nested frusto-conical shaped open ended wrapping envelops fitted over said pedestal and supported by the base member thereof, said envelops adapted to be successively removed and drawn upwardly to inclose a plant to be wrapped.

3. A device for the wrapping of potted plants, the same comprising a pedestal for supporting a plant to be wrapped, a pot-support removably secured to the upper end of said pedestal, and a series of nested wrapping envelops fitted over the pedestal and adapted to be successively removed and upwardly drawn to inclose a plant to be wrapped.

4. A device for use in the wrapping of potted plants, the same comprising a supporting structure for receiving potted plants to be wrapped, and a series of nested frusto-conical wrapping envelops fitted thereover and adapted to be successively removed and upwardly drawn to inclose the plant to be wrapped.

5. A device for wrapping potted plants, comprising means for supporting a potted plant in position to be wrapped, and an open ended wrapping envelop disposed vertically beneath the plant and in position to be drawn upwardly around the plant to inclose the same.

6. A device for wrapping potted plants, comprising a pedestal for supporting a plant to be wrapped, and an open ended envelop embracing the pedestal beneath the plant in position to be drawn upwardly around the plant to inclose the same.

7. A device for wrapping potted plants, comprising a pedestal for supporting a plant to be wrapped, and an open ended frusto-conical envelop embracing the pedestal beneath the plant in position to be drawn upwardly around the plant to inclose the same.

8. A wrapping device comprising a pedestal having at its upper end a seat to support the article to be wrapped, and an open-ended wrapping envelop surrounding the pedestal and removable endwise therefrom, the dimensions of said seat being such as to permit of the envelop being moved upwardly thereacross and clear thereof.

9. A wrapping device comprising a pedestal having at its top a seat to support the article to be wrapped, an open-ended wrapping envelop embracing the pedestal and removable endwise therefrom, and means on the pedestal engaged by the bottom of the envelop to support the same on the pedestal, the dimensions of the seat being such as to permit of the envelop being moved upwardly thereacross and clear thereof.

10. A wrapping device comprising a pedestal having leg standards which flare outwardly and constitute a base for the pedestal, an article-supporting seat at the top of the pedestal, and an open-ended wrapping envelop embracing the pedestal and removable endwise therefrom, the lower edge of the envelop engaging and supported by the base portion of the pedestal, the dimensions of the article-supporting seat being such as to permit of the envelop being moved upwardly thereacross and free thereof.

11. A wrapping device comprising a pedestal having at its top a seat to support the article to be wrapped, an open-ended wrapping envelop embracing the pedestal and removable endwise therefrom, the pedestal being provided with an envelop support of which the envelop rests at its bottom edge, the dimensions of the article-supporting seat being such as to permit of the envelop being moved upwardly thereacross and free thereof.

12. A wrapping device for holding and supporting an open-ended wrapping envelop in an open and distended condition, comprising a pedestal provided at its top with an article-supporting seat and at a lower portion with a support on which the lower edge of an envelop is adapted to rest and be supported, said pedestal and article-supporting sent constituting a core to go inside of an envelop and maintain the same in an open and distended condition, substantially as and for the purpose described.

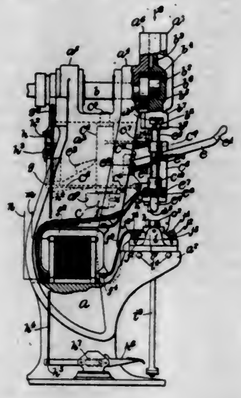
13. A wrapping device for holding and supporting an open-ended wrapping envelop in an open and distended condition, comprising a pedestal provided at its top with an article-supporting seat and at a lower portion with a support for the lower edge of a wrapping envelop, said pedestal and seat adapted to go inside of an envelop with the envelop engaging at its lower edge on the support, the seat being of a shape and size to fit snugly within the top of an envelop and also spaced from the support a distance substantially the same as the length of the envelop, substantially as and for the purpose described.

14,319. ELECTRIC RIVETING APPARATUS. FRANK P. KOBERT, Amityville, N. Y., assignor to International Electric Riveter Company, a Corporation of Massachusetts. Filed June 23, 1916. Serial No. 105,336. Original application filed Jan. 5, 1914, Serial No. 810,278. Renewed Oct. 7, 1914, Serial No. 865,590. Original No. 1,139,300, dated May 11, 1915. (Cl. 219—4.)

1. In a machine of the class described, a frame provided with a table, a die mounted on said table and composed of separate parts, one of which is movable toward and from the other, and a horizontally rotatable member mounted in said frame and carrying a vertically movable plunger and a vertically movable electrode, each of which is adapted to be thrown into vertical line with a work piece held by the die.

2. A machine of the class described comprising a suitable frame provided with a suitably supported die consisting of two parts, one of which is movable toward and from the other, said parts being adapted to support a work piece and a horizontally rotatable member mounted in the frame and provided with a vertically movable

plunger and a vertically movable electrode, each of which is adapted to be thrown into vertical line with the work piece supported by the die.



3. A machine of the class described comprising a suitable frame provided with a suitably supported die consisting of two parts, one of which is movable toward and from the other, said parts being adapted to support a work piece and a horizontally rotatable member mounted in the frame and provided with a vertically movable plunger and a vertically movable electrode, each of which is adapted to be thrown into vertical line with the work piece supported by the die, the separate parts of the die being also provided with water circulating passages.

4. In a machine of the class described, a frame provided with a die adapted to support a work piece, and a central rotary member mounted in the frame and provided with a vertically movable plunger and a vertically movable electrode, and means for rotating said member so as to throw the electrode and the plunger successively into vertical line with a work piece held by the die.

5. A machine of the class described, comprising a frame provided with a suitable die support, a die mounted on said support and adapted to hold a work piece, a rotatable member mounted in the frame above the support of the die and provided with a vertically movable plunger and a vertically movable electrode, means for turning said rotatable member so as to bring the electrode and the plunger succesively into vertical line with the work piece held by the die, and for depressing the electrode, means for depresing the plunger, and means for pasing an electric current through the electrode and through the die.

6. In a machine of the class described, a frame provided with a suitably supported die adapted to hold a work piece, a rotatable member mounted in said frame above the support of the die and provided with a verticaly movable electrode and a vertically movable plunger, a shaft mounted in the top of the frame, means to permit the rotation of said shaft, means whereby the rotation of said shaft will depress said plunger, and means for depressing the electrode, and for turning the rotatable member so as to bring the electrode and the plunger succesively into vertical line with the work piece held by the die.

7. In a machine of the class described, a frame provided with a suitably supported die adapted to hold a work piece, a rotatable member mounted in said frame above the support of the die and provided with a vertically movable electrode and a vertically movable plunger, a shaft mounted in the top of the frame, means to permit the rotation of said shaft, means whereby the rotation of said shaft will depress said plunger, and means for depressing the electrode, and for turning the rotatable member so as to bring the electrode and the plunger successively into vertical line with the work piece held by the die, said electrode and said die being in an open electric circuit which is closed by the depression of the electrode.

8. A machine of the class described, provided with a work piece holder and a horizontally movable member provided with a vertically movable electrode and a vertically movable plunger, and means for operating said horizontally movable member to bring the plunger and the electrode successively into vertical line with the work piece.

9. An electric riveting machine having a work piece holder, an electrode and plunger holder movable in a plane parallel with the work piece holder or die bed, and means for moving said electrode and plunger holder so as to bring the electrode and the plunger successively in position to operate on the work piece.

10. In a machine of the class described, the combination with a frame having a stationary work holder, of a heating electrode electrically connected with said work holder, and a metal working plunger, said electrode and plunger being movable relatively to the frame and over the work holder so as to bring them in line with the work.

11. In a machine of the class described, the combination of a frame, a work holder supported thereby, an electrode, a metal working device to operate on the work when it has been heated by contact with said electrode, said electrode and said metal working device being movable relatively to said work holder so as to bring them in line with the work, and power operated means for operating said metal working device when it is brought in line with the work.

12. In a machine of the class described, the combination of a frame, a stationary work holder thereon, an electrode, a plunger, said electrode and plunger being movable over the work holder so as to bring them alternately into line with the work, and power-operated means for operating the plunger when it is brought into line with the work.

13. In a machine of the class described, the combination of a work holder, an electrode, a metal working plunger, a movable carrier for said electrode and plunger adapted to move over the work holder so as to bring said electrode and said plunger successively into line with the work, and power-operated means for causing the descent of said plunger when it is brought into line with the work.

14. In a machine of the class described, the combination of a work holder, a swinging carrier, an electrode on the carrier, and movable in line with the work, and a working plunger on the carrier movable in line with the work.

15. In a machine of the class described, the combination of a work holder, a movable carrier mounted over the work holder, an electrode connected with said carrier, a plunger device connected with said carrier, means for causing the descent of the electrode on the work, and means for causing the descent of said plunger device on the work.

16. In a metal working machine of the class described, the combination of a stationary work holder, a member movable parallel therewith, a vertically movable electrode carried by said member, and a vertically movable plunger carried by said member, said member being mounted to move said electrode and said plunger successively into line with the work.

17. In a metal working machine of the class described, the combination of a die member composed of separate parts having coöperating recesses forming a socket to receive a work piece, a source of electric current, a conductor connecting said source with each of said die members, a movable electrode connected with said source of current and adapted to contact with a portion of the work piece held between said die members so as to close the circuit and thereby heat a portion of the work piece to high temperature, and means for forming the heated portion of the work piece.

18. In a metal working machine of the class described, the combination of separate die members adapted to clamp a work piece between them with one portion thereof protruding, a source of electric current, separate means for connecting said current source with each of said die members, and a movable electrode connected with said current source and adapted to make contact with the protruding end of the work piece so as to close the circuit and thereby heat said protruding end of the work piece.

19. In a metal working machine of the class described, the combination of separate die members adapted to clamp a work piece between them with one end thereof protruding, a source of electric current, separate means for connecting said current source with each of said die members, a movable electrode connected with said current source and adapted to make contact with the protruding end of the work piece so as to close the circuit and thereby heat said protruding end, and means for cooling the die members.

20. In a metal working machine of the class described, the combination of separate die members adapted to clamp a rod-like work piece between them with one end thereof protruding, a source of electric current, means for connecting said current source with each of said die members, a movable electrode connected with said current source and adapted to make contact with the protruding end of the work piece so as to close the circuit and thereby heat said protruding end, and means for cooling the die members.

21. In a metal working machine of the class described, the combination of separate die members adapted to clamp and hold a work piece between them, conductors connected with said die members, a source of current connected with said conductors, and a movable electrode in circuit with said current source and adapted to make contact with the work piece.

22. In a machine of the class described, the combination of a pair of die members, one of said members being movable relatively to the other so as to clamp a work piece between them, a source of current directly connected with both of said members, and an electrode connected with said current source and adapted to close the circuit by contact with the work piece.

23. In a machine of the class described, the combination of a pair of die members, an electrode, and a metal working plunger, said parts being relatively movable to bring the electrode and the plunger successively into line with a work piece.

24. In a machine of the class described, the combination of a work piece holder adjustable in two directions, and an electrode and plunger device adapted to coöperate successively with said work holder and to operate on the work piece held thereby.

25. In a machine of the class described, the combination of a work piece holder, an electrode, and a plunger device, said parts being relatively movable so that the electrode and plunger device may act successively on the work piece held by said holder.

26. In a machine of the class described, a pair of die members adapted to clamp a work piece therebetween with one end of the work piece protruding, a source of current, means for connecting said current source with said die members, and an electrode connected with said current source and adapted to complete the circuit by contact with the protruding end of the work piece so as to heat said protruding end, said electrode and die members being relatively movable in substantially parallel planes.

27. In a machine of the class described, a frame provided with a table, a die bed mounted on said table and adjustable forwardly and backwardly, a die supporting plate mounted on the die bed, and a two-part die mounted on said plate and one part of which is movable toward and from the other, the said parts of the die being provided in their adjacent faces with means for supporting a work piece, and conductors in electrical connection with the separate parts of the die.

28. In a machine of the class described, a frame provided with a table, a die bed mounted on said table and adjustable forwardly and backwardly, a die supporting plate mounted on the die bed, and a two-part die mounted on said plate and one part of which is movable toward and from the other, the said parts of the die being provided in their adjacent faces with means for supporting a work piece, conductors in electrical connection with the separate parts of the die, and means for cooling said parts of the die.

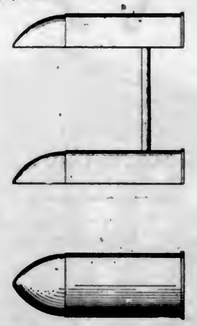
29. In a metal working machine, the combination of a work holder, a swinging carrier, an electrode on the carrier movable into line with the work, and a working plunger on the carrier movable into line with the work, substantially as described.

30. In a machine of the class described, the combination of a slideway, an adjustable support mounted in said slideway, die members carried by said support and adapted to clamp a workpiece between them, means for supplying a heating current to said die members, means for cooling said die members, and a movable electrode to make contact with a workpiece held between said die members.



# DESIGNS.

50,929. LAMP-STAND. LUIGI ANGIULLI, New York, N. Y., assignor of one-half to James Crocco, New York, N. Y. Filed Apr. 24, 1917. Serial No. 164,293. Term of patent 3½ years.



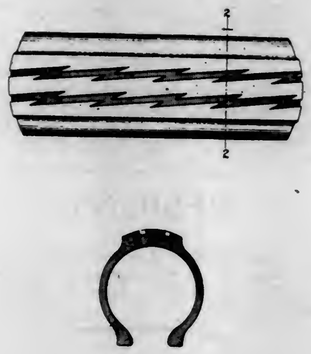
The ornamental design for a lamp-stand, as shown.

50,930. AUTOMOBILE SIGNAL-LIGHT. JOHANNES PAUL BECKER, Berkeley, Cal. Filed Apr. 25, 1917. Serial No. 164,552. Term of patent 3½ years.



The ornamental design for an automobile signal light, as shown.

50,931. TIRE-TREAD. FRED B. CARLISLE, North Kingston, R. I., assignor to Joseph M. Gilbert, New York, N. Y. Filed Nov. 13, 1916. Serial No. 131,153. Term of patent 14 years.



The ornamental design for a tire tread as shown and described.

50,932. EMBLEM. GEORGE CHRISTENSEN, Los Angeles, Cal. Filed Apr. 17, 1917. Serial No. 162,769. Term of patent 3½ years.



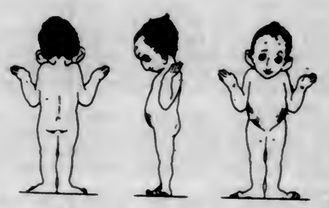
The ornamental design for an emblem as shown.

50,933. SHEET-METAL TALCUM-BOX. HARRY R. COREY, Brooklyn, N. Y., assignor to American Stopper Company, Brooklyn, N. Y., a Corporation of New Jersey. Filed Dec. 30, 1912. Serial No. 739,417. Term of patent 7 years.



The ornamental design for a sheet metal talcum box, as shown and described.

50,934. NOVELTY DOLL. JOSEPH D. CRONAN, Portland, Oreg. Filed Apr. 15, 1916. Serial No. 91,493. Term of patent 7 years.



The ornamental design for a novelty doll, as shown.

50,935. INSIGNIA, EMBLEM, BADGE, OR BUTTON. CHARLES H. DOKE, HARRY E. BERRY, DANIEL H. DELZELL, and CHARLES A. DELZELL, Denver, Colo. Filed June 12, 1916. Serial No. 103,335. Term of patent 3½ years.



The ornamental design for an insignia, emblem, badge, or button, as shown.



50,936. EMBLEM, BADGE, OR BUTTON. CHARLES H. DOKE, HARRY E. BERRY, DANIEL H. DELZELL, and CHARLES A. DELZELL, Denver, Colo. Filed June 12, 1916. Serial No. 103,336. Term of patent 3½ years.



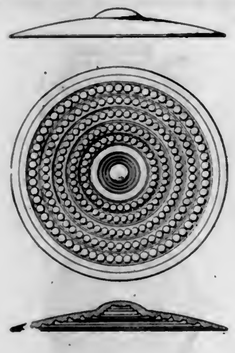
The ornamental design for an emblem, badge, or button, as shown.

50,937. MILITARY EMBLEM, BADGE, OR BUTTON. CHARLES H. DOKE, HARRY E. BERRY, DANIEL H. DELZELL, and CHARLES A. DELZELL, Denver, Colo. Filed June 12, 1916. Serial No. 103,337. Term of patent 3½ years.



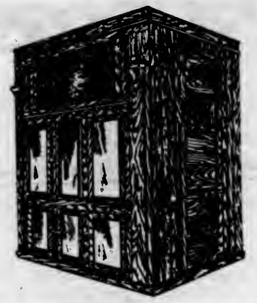
The ornamental design for a military emblem, badge, or button, as shown.

50,938. GLASS FOR HEADLIGHTS. PHILLIP EBELING, Moundsville, W. Va., assignor of one-half to J. W. Lamparter, Moundsville, W. Va. Filed Jan. 2, 1917. Serial No. 140,329. Term of patent 7 years.



The ornamental design for a glass for headlights, as shown.

50,939. REFRIGERATOR. J EDWARD GLOEKLER, Pittsburgh, Pa., assignor to Bernard Gloekler Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 28, 1917. Serial No. 158,130. Term of patent 7 years.



The ornamental design for a refrigerator, as shown.

50,940. REFRIGERATOR. J EDWARD GLOEKLER, Pittsburgh, Pa., assignor to Bernard Gloekler Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 28, 1917. Serial No. 158,131. Term of patent 7 years.



The ornamental design for a refrigerator, as shown.

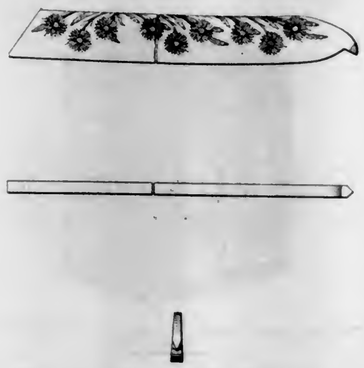
50,941. STOVE. CLARENCE R. GRAHAM, OAKLAND, Cal. Filed Dec. 16, 1916. Serial No. 137,467. Term of patent 7 years.



The ornamental design for a stove, as shown.

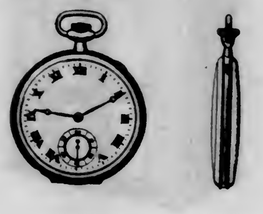
50,942. [WITHDRAWN.]

50,943. SKATE-BLADE. ERNEST HUNOLD, Providence, R. I. Filed Mar. 8, 1917. Serial No. 153,513. Term of patent 14 years.



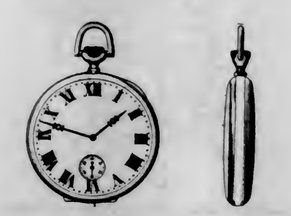
The ornamental design for a skate blade, as shown.

50,944. WATCHCASE. FREDERICK EBEN HYATT, St. Davids, Pa., assignor to The Keystone Watch Case Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 25, 1916. Serial No. 133,495. Term of patent 7 years.



The ornamental design for a watchcase, as shown.

50,945. WATCHCASE. FREDERICK EBEN HYATT, St. Davids, Pa., assignor to The Keystone Watch Case Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 25, 1916. Serial No. 133,497. Term of patent 7 years.



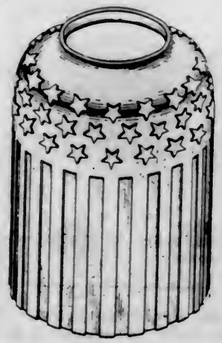
The ornamental design for a watch case, as shown.

50,946. SUCTION-CLEANER CASING. JAMES B. KIRBY, Cleveland, Ohio. Filed Oct. 2, 1916. Serial No. 123,220. Term of patent 14 years.



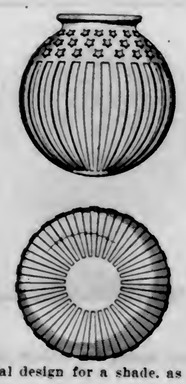
The ornamental design for a suction cleaner casing as shown.

50,947. SHADE. NICHOLAS KOPP, Pittsburgh, Pa. Filed Apr. 5, 1917. Serial No. 160,009. Term of patent 7 years.



The ornamental design for a shade, as shown.

50,948. SHADE. NICHOLAS KOPP, Pittsburgh, Pa. Filed Apr. 5, 1917. Serial No. 160,010. Term of patent 7 years.



The ornamental design for a shade, as shown.



50,949. COMBINATION BUTTON-HOOK AND BOTTLE-OPENER. HILMA KORPI, Kinney, Minn. Filed Apr. 14, 1917. Serial No. 162,198. Term of patent 7 years.



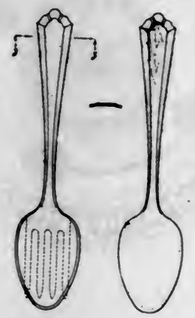
The ornamental design for a combination button hook and bottle opener as shown.

50,950. PIN. HENRY R. LOOMIS, Providence, R. I. Filed Nov. 4, 1916. Serial No. 129,614. Term of patent 3½ years.



The ornamental design for a pin, as shown and described.

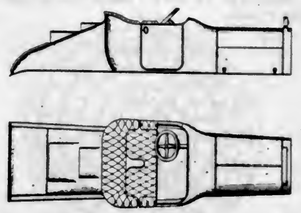
50,951. SPOON, FORK, OR SIMILAR ARTICLE. GEORGE C. LUNT, Greenfield, Mass. Filed May 2, 1917. Serial No. 166,037. Term of patent 14 years.



The ornamental design for a spoon, fork or similar article as shown.

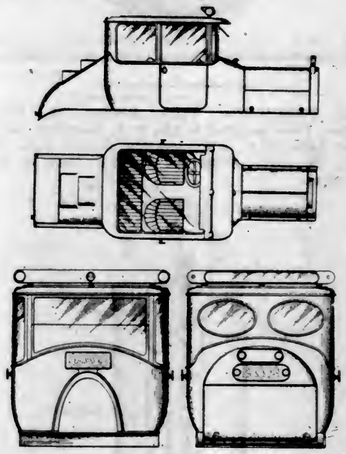


50,952. AUTOMOBILE-BODY. WILLIAM J. P. MOORE, New York, N. Y. Filed Mar. 7, 1917. Serial No. 153,201. Term of patent 7 years.



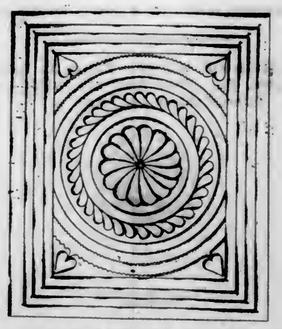
The ornamental design for an automobile body, as shown.

50,953. AUTOMOBILE-BODY. WILLIAM J. P. MOORE, New York, N. Y. Filed Mar. 7, 1917. Serial No. 153,202. Term of patent 7 years.



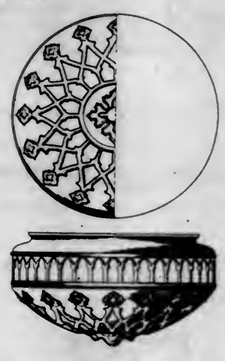
The ornamental design for an automobile body, as shown.

50,954. QUILT. MAURICE L. NADLER, New York, N. Y. Filed Mar. 19, 1917. Serial No. 155,956. Term of patent 7 years.



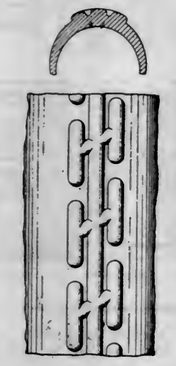
The ornamental design for a quilt, as shown.

50,955. LIGHT - BOWL. CHARLES B. OTT, Woodlawn, W. Va., assignor to Eagle Glass & Manufacturing Company, Wellsburg, W. Va., a Corporation of West Virginia. Filed Apr. 14, 1917. Serial No. 162,195. Term of patent 7 years.



The ornamental design for a light bowl, as shown.

50,956. PNEUMATIC TIRE. ROBERT M. PIERSON, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Mar. 21, 1917. Serial No. 156,470. Term of patent 14 years.



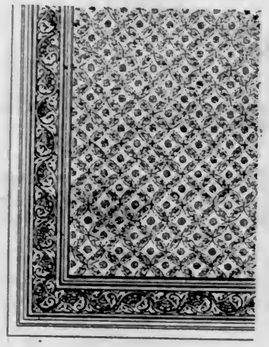
The ornamental design for a pneumatic tire as shown.

50,957. BADGE OR MEDAL. ELMER F. RAMSBERGER, Philadelphia, Pa. Filed May 11, 1917. Serial No. 168,053. Term of patent 14 years.



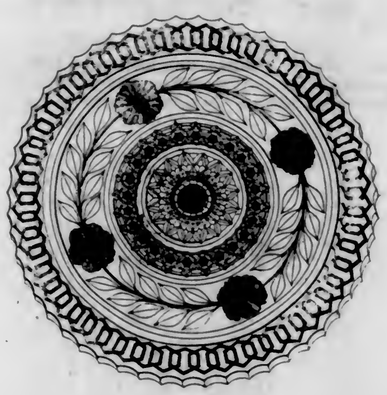
The ornamental design for a badge or medal, as shown.

50,958. RUG. ROBERT F. RIDDELL, Manhasset, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed Apr. 21, 1917. Serial No. 163,722. Term of patent 7 years.



The ornamental design for a rug, substantially as shown.

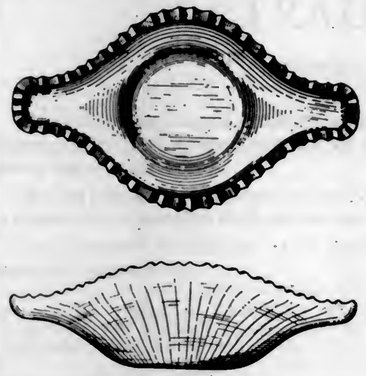
50,959. GLASS VESSEL OR SIMILAR ARTICLE. THOMAS A. SHANLEY, Meriden, Conn., assignor to International Silver Co., Meriden, Conn., a Corporation of New Jersey. Filed Apr. 5, 1917. Serial No. 160,011. Term of patent 7 years.



The ornamental design for a glass vessel or similar article, as shown.

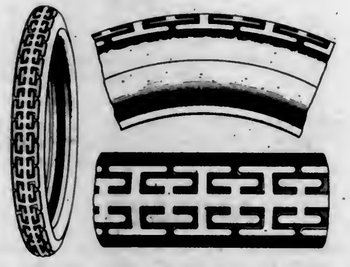


50,960. GLASS BOWL. MAURICE A. SMITH, Jeannette, Pa., assignor to McKee Glass Company, Jeannette, Pa., a Corporation of Pennsylvania. Filed Mar. 16, 1917. Serial No. 155,362. Term of patent 3½ years.



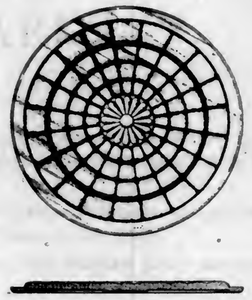
The ornamental design for a glass bowl, as shown.

50,961. TIRE-TREAD. LOUIS T. VANCE, Racine, Wis., assignor to Racine Rubber Company, Racine, Wis., a Corporation of Wisconsin. Filed Apr. 30, 1917. Serial No. 165,628. Term of patent 14 years.



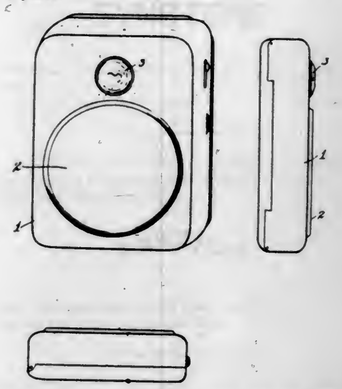
The ornamental design for a tire tread, as shown.

50,962. HEADLIGHT - LENS. CHARLES M. WIBLE, Mount Pleasant, Pa. Filed Mar. 17, 1917. Serial No. 155,623. Term of patent 3½ years.



The ornamental design for a headlight lens as shown.

50,963. VANITY-CASE. KOH ONO, New York, N. Y. Filed Mar. 21, 1916. Serial No. 85,745. Term of patent 7 years.



The ornamental design for a vanity case, as shown and described.

# TRADE-MARKS

## PUBLISHED JUNE 19, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 66,922. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) LES FILS DE P. BARDINET, Cauderan, near Bordeaux, France. Filed Nov. 15, 1912.




The picture of the female head is fanciful.
*Particular description of goods.*—Rum.
*Claims use* since Dec. 13, 1884.

Ser. No. 83,645. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ECONOMY FOOD PRODUCTS CO., Cambridge, Mass. Filed Jan. 2, 1915.

**PRISCILLA**

*Particular description of goods.*—Self-Shortened Prepared Doughnut, Cake, Tea-Biscuit, and Ginger-Bread Products.
*Claims use* since Sept. 4, 1913.

Ser. No. 90,038. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) SIEUR DE MONTS SPRING COMPANY, Bar Harbor, Me. Filed Oct. 22, 1915.

**ACADIA**

*Particular description of goods.*—Water in Its Natural State and Carbonated Water.
*Claims use* since Sept. 15, 1915.

Ser. No. 93,968. (CLASS 32. FURNITURE AND UPHOLSTERY.) LAFAYETTE LILIENSTERN, New York, N. Y. Filed Mar. 29, 1916.

*Silverine*

*Particular description of goods.*—Picture-Frames.
*Claims use* since Mar. 1, 1911.

Ser. No. 95,202. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE FERGUSON SYNSTONE COMPANY, Denver, Colo. Filed May 17, 1916.

**SYNSTONE**

*Particular description of goods.*—Concrete-Block-Making Machinery.
*Claims use* since April, 1916.

Ser. No. 96,942. (CLASS 17. TOBACCO PRODUCTS.) AMERICAN EXCHANGE CIGAR COMPANY, New York, N. Y. Filed July 29, 1916.

**PARTIDO**

*Particular description of goods.*—Cigars.
*Claims use* since at least 1896.

Ser. No. 97,476. (CLASS 17. TOBACCO PRODUCTS.) UNITED CIGAR MANUFACTURERS COMPANY, now by change of name GENERAL CIGAR CO., INC., New York, N. Y. Filed Aug. 21, 1916.




The picture forming a feature of the mark sought to be registered is that of Thomas Moore, who died prior to the making of this application. No claim is made to the words, figures, and letters, "5¢ Straight, the Quality Smoke."
*Particular description of goods.*—Cigars.
*Claims use* since the year 1899.

Ser. No. 97,485. (CLASS 17. TOBACCO PRODUCTS.) UNITED CIGAR MANUFACTURERS COMPANY, now by change of name GENERAL CIGAR CO., INC., New York, N. Y. Filed Aug. 21, 1916.




The portrait shown in the drawing being that of Robert Emmet.

*Particular description of goods.*—Cigars.

*Claims use* since the year 1906.

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Ser. No. 97,487. (CLASS 17. TOBACCO PRODUCTS.) UNITED CIGAR MANUFACTURERS COMPANY, now by change of name GENERAL CIGAR CO., INC., New York, N. Y. Filed Aug. 21, 1916.




The portrait shown in the drawing is that of Chesterfield, deceased.

*Particular description of goods.*—Cigars.

*Claims use* since the year 1887.

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Ser. No. 97,626. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) T. J. MITCHELL & CO. INC., New York, N. Y. Filed Aug. 25, 1916.

LUXOR

*Particular description of goods.*—Silks in the Piece.

*Claims use* since on or about January, 1913.

Ser. No. 98,224. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SHOEMAKER COMPANY, Oakwood, N. Y. Filed Sept. 25, 1916.

SH-PINK TAG-CO

The words "Alfalfa" and "Horse Feed" are disclaimed. The right to the exclusive use of a tag colored pink is disclaimed.

*Particular description of goods.*—Feed for Farm Stock.

*Claims use* since Sept. 1, 1916.

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Ser. No. 98,726. (CLASS 17. TOBACCO PRODUCTS.) UNITED CIGAR MANUFACTURERS COMPANY, now by change of name GENERAL CIGAR CO., INC., New York, N. Y. Filed Oct. 17, 1916.




The trade-mark consists of the words "Tom Moore" and a portrait of Thomas Moore, deceased, beneath which is a facsimile signature of Thomas Moore. To the left of the portrait is a picture of Blarney Castle. To the right of the portrait is a picture of three men at a table, of whom two are standing and one is seated. No claim is made to the words "As we journey through life let us live by the way."

*Particular description of goods.*—Cigars.

*Claims use* since the year 1858.

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Ser. No. 98,743. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) B. & B. SIGN CO., New York, N. Y. Filed Oct. 18, 1916.

SPECIALTY

The exclusive use of the words "The Key to Successful Advertising" not being claimed apart from the mark as shown in the specimens.

*Particular description of goods.*—Advertising-Signs.

*Claims use* since about Aug. 15, 1916.





Ser. No. 98,961. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & CO., Prague-Wrschowitz, Austria-Hungary. Filed Oct. 28, 1916.



*Particular description of goods.*—Snap-Fasteners of All Kinds, Snap-Fastener Tapes, Hair-Pins, Non-Ornamental Hat-Pins Made of Steel; Buttons of All Kinds Made of Non-Precious Metals and Used as Fastening Devices—Namely, Fancy Buttons Used for Ornamenting Ladies' Apparel, Trouser-Buttons, and Glove-Buttons, Collar-Buttons, Cuff-Buttons—and Necktie-Clasps Made of Non-Precious Metals; Trimming-Buttons Made of Non-Precious Metal Used as Ornamental Devices for Clothing, Not Used for Fastening; Collar-Supporters, Dress-Shields, Tapes, Steel Needles Used for Hand-Sewing, Brass Pins Used as Fastening devices, Placket-Fasteners, Safety-Pins, Hooks and Eyes, Buckles Made of Non-Precious Metals Used as Fastening Devices for Clothing.

*Claims use* since Sept. 9, 1913.

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Ser. No. 99,729. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) M. HALFF & BRO., San Antonio, Tex. Filed Dec. 5, 1916.

M.S.K.

*Particular description of goods.*—Staple and Fancy Ginghams.

*Claims use* since Feb. 1, 1911.

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Ser. No. 99,750. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JURKO SAGAN, Wilmington, Del. Filed Dec. 6, 1916.




The portrait shown being the applicant's, the words "Jurko Sagan's Salve" and "Wilmington, Del." not being claimed.

*Particular description of goods.*—Salves Used on Suppurating Sores, Boils, Contusions, and Wounds.

*Claims use* since Nov. 1, 1916.

Ser. No. 99,758. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. C. GATLIN IMPORTING COMPANY, Kansas City, Mo. Filed Dec. 7, 1916.

Excelo

The outline of the word is lined for red, the red color outline being an essential feature.

*Particular description of goods.*—Canned Fruits, Canned Vegetables, Olives, Salad-Dressing, Chilli Sauce, Vinegar, Tomato Catsup, Canned Salmon, Peanut-Butter, Evaporated or Dried Fruits, Canned Berries, Coffee, Mince-Meat, Canned Oysters, Canned Chipped Beef, and Fruit Preserves.

*Claims use* since about the month of March, 1892.

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Ser. No. 99,777. (CLASS 39. CLOTHING.) H. SIEGFRIED & SONS, St. Louis, Mo. Filed Dec. 7, 1916.

Mastercraft Trousers

No claim being made to the word "Trousers" apart from the mark shown in the drawing.

*Particular description of goods.*—Men's and Boys' Trousers.

*Claims use* since Feb. 1, 1914.

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Ser. No. 99,985. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) A. KREAMER, INC., Brooklyn, N. Y. Filed Dec. 16, 1916. Under ten-year proviso.

KREAMERWARE

*Particular description of goods.*—The Following Articles, Made of Tin, Copper, and Sheet-Iron: Milk-Boilers, Asparagus-Boilers, Rice-Boilers, Ham-Boilers, Teapots, Tea-Kettle, Coffee-Pots, Coffee-Biggins, Coffee-Boilers, Hot-Water Dishes, Milk-Kettles, Chafing-Dishes, Chafing-Dish Water-Pans, Chafing-Dish Stands, Coffee-Urns, Soup-Tureens, Gravy-Wells, Egg-Coddlers, Bar-Room Urns, Tea-Steepers, Steam-Cookers, Pot-Steamers, Potato-Steamers, Rice-Steamers, Gravy-Strainers, Pot-Strainers, Fish-Kettles, Toddy-Kettles, Coffee-Boilers, Farina-Boilers, Stew-Pans, Farina-Saucepans, Roasting-Pans, Bottle-Sterilizers, Sterilizer-Cups, Bread-Pans, Drip-Pans, Dairy-Pans, Cake-Pans, Candy-Pans, Dust-Pans, Pie-Pans, Fruit-Jar Holders, Knife-Washers, Foot-Tubs, Plunge-Baths, Gas and Oil Stove Kettles, Jelly-Strainers, Salad-Drainers, Chinese Strainers, Pudding-Molds, Bread-Molds, Cake-Molds, Cutlet-Molds, Croquette-Molds, Molds for Ice-Cream, Muffin-Pans, Nutmeg-Graters, Vegetable-Graters, Muffin-Rings, Apple-Corers, Fish-Turners, Funnels, Confectioners' Scoops, Spice-Scoops, Flour-Scoops, Plates for Hot-Water Dishes, Vegetable-Graters, Dish-Drainers, Colanders, Washbasins, Molds, Water-Pitchers, Saucepans, Drinking-Cups, Dish-Pans, Butlers' Trays, Milk-Kettles, Dippers.

*Claims use* since Jan. 1, 1886.

Ser. No. 100,020. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SHINZO OHKI, Detroit, Mich. Filed Dec. 18, 1916.




Consisting of the word "Show-You" and a cloud effect about the word having a red sun with a royal blue background.

*Particular description of goods.*—A Sauce for Meats, Fish, Chop-Suey.

*Claims use* since June 1, 1915.

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Ser. No. 100,078. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GLOBE TEA CO. INC., New York, N. Y. Filed Dec. 21, 1916.

MIHOMA

*Particular description of goods.*—Teas.

*Claims use* since Dec. 18, 1916.

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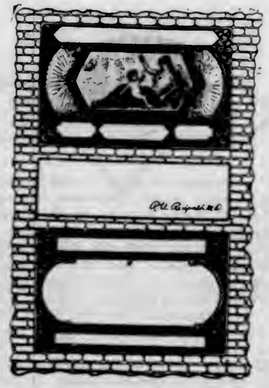
Ser. No. 100,286. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ENTERPRISE ELECTRIC NOVELTY CO. INC., New York, N. Y. Filed Jan. 2, 1917.




*Particular description of goods.*—Electric Flash-Lights, Electric Batteries, Battery-Testers, and Electric Decorative Outfits Run on Either Pocket or Storage Batteries.

*Claims use* since Nov. 1, 1916.

Ser. No. 100,405. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE SYDNEY ROSS Co., New York, N. Y. Filed Jan. 6, 1917.



Consisting of a rectangular figure composed of oval-shaped designs, having centrally located thereon, in vertical arrangement, four rectangular decorative panels, showing the picture of a woman and a child and the facsimile signature "R. U. Redpath, M. D.," the arrangement thereof substantially as described and shown in the accompanying drawing being claimed as features of the mark.

*Particular description of goods.*—Medicated Soap.

*Claims use* since Sept. 1, 1916.

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Ser. No. 100,554. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) W. D. KIBLER CO., Indianapolis, Ind. Filed Jan. 12, 1917.



No claim being made to the words "Kibler's All 'Round Oil."

*Particular description of goods.*—Furniture-Polish.

*Claims use* since Aug. 1, 1916.

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Ser. No. 100,717. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) EDWARD A. LOWRIE, St. Louis, Mo. Filed Jan. 18, 1917.




*Particular description of goods.*—Railway-Car-Roof Cast Brackets.

*Claims use* since on or about July 1, 1915.





Ser. No. 100,732. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE WYOMING SHOVEL WORKS, Wyoming, Pa. Filed Jan. 18, 1917.



*Particular description of goods.*—Shovels, Spades, and Scoops.

*Claims use* since Dec. 15, 1912.

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Ser. No. 100,883. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Jan. 24, 1917.




Comprising the words "Betty Wales" and "Ploshkin," with the doll figure, all inclosed in a rectangular figure. No claim being made to the exclusive use of the word "Trade Mark."

*Particular description of goods.*—Stereopticon-Slides, Photoplates, Films, Lenses for Optical or Scientific Purposes, Sensitized Photographic Paper, Calculating-Machines, Tape-Measures and Rulers, Telescopes, Cameras, Speed, Consumption, Cash Registers, Recorders, Scales, and Patterns for Wearing-Apparel.

*Claims use* since Jan. 5, 1917.

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Ser. No. 101,329. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) ILLINOIS ZINC COMPANY, Peru, Ill. Filed Feb. 12, 1917.




*Particular description of goods.*—Spelter, Sheet-Zinc, Zinc Oxid, and Copper Ingots.

*Claims use* since Dec. 23, 1916.

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Ser. No. 101,356. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DE LUXE MFG. CO., Chicago, Ill. Filed Feb. 14, 1917.



Exclusive right to the use of the word "De Luxe" being disclaimed.

*Particular description of goods.*—Dyes in Soluble Tablet Form.

*Claims use* since Oct. 5, 1916.

Ser. No. 101,372. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) TRIANGLE CONDUIT CO. INC., Brooklyn, N. Y. Filed Feb. 14, 1917.




*Particular description of goods.*—Electrical Conduits.

*Claims use* since on or about Feb. 5, 1917.

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Ser. No. 101,388. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) ARTHUR B. COMMONS, Sanford, Fla. Filed Feb. 15, 1917.

CAMEONA

*Particular description of goods.*—Miniature Paintings on Porcelain Adapted to be Placed Upon Jewelry for Personal Adornment.

*Claims use* since Dec. 4, 1916.

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Ser. No. 101,434. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN J. WILSON, Chicago, Ill. Filed Feb. 16, 1917.




The word "Brand" shown in the specimens is not included in the trade-mark.

*Particular description of goods.*—Pickles.

*Claims use* since Feb. 1, 1888.

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Ser. No. 101,441. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ELECTRIC IGNITION COMPANY (1913) LIMITED, Birmingham, England. Filed Feb. 17, 1917.

E.I.C.

*Particular description of goods.*—Electrical Appliances for Use in Connection with Internal-Combustion Engines and Motor-Vehicles—Namely, Ignition-Magnetos; Lighting and Engine-Starting Dynamos; Induction-Coils; Batteries and Accumulators; Ignition-Plugs; Switches and Switchboards; Distributers, Electric Horns, and Electric Lamps.

*Claims use* since April, 1907.

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Ser. No. 101,546. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE IMPERIAL CHEMICAL CO. LTD., Altoona, Pa. Filed Feb. 20, 1917.

WHITE ROSE

*Particular description of goods.*—Liniments for the Treatment of Rheumatism, Pains of the Limbs, Neuralgia, Sore Throat, Sprains, Headache, Lame Back, Frost-Bites, Swellings, Bruises, All Pains and Inflammation of the Body, and Medicinal Preparations for Coughs, Colds, Dyspepsia, and Piles.

*Claims use* since Jan. 1, 1917.

Ser. No. 101,649. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FORT MYERS CITRUS GROWERS ASSOCIATION, Fort Myers, Fla. Filed Feb. 24, 1917.

STRIPS
BIG CYPRESS

*Particular description of goods.*—Citrus Fruits.
*Claims use* since Jan. 1, 1915.

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Ser. No. 101,657. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) FRED MILLER BREWING CO., Milwaukee, Wis. Filed Feb. 24, 1917.

Vivo

*Particular description of goods.*—A Non-Intoxicating Cereal Beverage Sold as a Soft Drink.
*Claims use* since Nov. 6, 1905.

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Ser. No. 101,692. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JACKSONVILLE CRACKER WORKS, Jacksonville, Fla. Filed Feb. 26, 1917.

BUTTERETTES

*Particular description of goods.*—Cakes and Crackers.
*Claims use* since Feb. 12, 1917.

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Ser. No. 101,694. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) EDWARD KATZINGER COMPANY, Chicago, Ill. Filed Feb. 26, 1917.

Velvediron

*Particular description of goods.*—Baking-Pans.
*Claims use* since Sept. 16, 1916.

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Ser. No. 102,025. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Mar. 10, 1917.

ADHESIC

*Particular description of goods.*—Gear Compounds and Greases for Lubricating Purposes.
*Claims use* since January, 1917.

Ser. No. 102,199. (CLASS 39. CLOTHING.) ABRAHAM M. MALOUF, Salt Lake City, Utah. Filed Mar. 16, 1917.

T.F.N.S.

No claim having been made to the exclusive right to the use of the words "Trade-Mark."

*Particular description of goods.*—Hats, Caps, Shoes Made of Leather and Rubber, Mackinaws, Overcoats, Suits for Men and Boys, Dresses, Cloaks, Coats, Jackets, Outer Suits for Women and Children, Petticoats, Muslin Underwear for Women and Children, Dress-Waists for Women, Shirt-Waists, Outer Skirts for Women and Children, Outer Shirts for Women and Children, Sweaters for Men, Women, and Children, Dress, Work, Negligée, and Night Shirts, Collars, Cuffs, Neckties, Neckscarfs, and Jabots, Gloves Made of Leather, Silk, Cotton, or Wool for Women, Men, and Children, Knitted or Textile Undershirts, Union-Suits, Drawers for Women, Men, and Children, Corset-Covers, Combination-Drawers, Chemises, Slips, Dressing-Sacks, Kimonos, Stockings, Socks, and Hosiery, Corsets, Wrappers, Trousers, Jerseys, Bath-Robes, Bathing-Suits, and Overalls.
*Claims use* since Jan. 3, 1916.

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Ser. No. 102,282. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CLOUTIER & JARVIS, Claremont, N. H. Filed Mar. 20, 1917.



*Particular description of goods.*—A Hair-Wash.
*Claims use* since Feb. 3, 1917.

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Ser. No. 102,384. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NEPTUNE PACKING CO., Boothbay Harbor, Me. Filed Mar. 23, 1917.

PRISCILLA

*Particular description of goods.*—Sardines.
*Claims use* since June, 1912.

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Ser. No. 102,539. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE SINGER MANUFACTURING COMPANY, New York, N. Y. Filed Mar. 28, 1917.

S

*Particular description of goods.*—Electric Motors for Sewing-Machines and Controllers Therefor.
*Claims use* since the month of September, 1915.





Ser. No. 102,541. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE SINGER MANUFACTURING COMPANY, New York, N. Y. Filed Mar. 28, 1917.

S

*Particular description of goods.*—Electric Motors for Sewing-Machines and Controllers Therefor.
*Claims use* since the month of September, 1915.

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Ser. No. 102,581. (CLASS 39. CLOTHING.) ARMY FIELD SERVICE SHOE CO. INC., New York, N. Y. Filed Mar. 30, 1917.




The picture being fanciful.
*Particular description of goods.*—Boots and Shoes.
*Claims use* since Dec. 7, 1916.

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Ser. No. 102,626. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE F. A. NEIDER COMPANY, Augusta, Ky. Filed Mar. 31, 1917.

FANCO

*Particular description of goods.*—Metal Clench-Buttons, Curtain-Patches, Curtain-Knob Eyelets, Curtain-Knobs, Curtain-Loops, Wire Carpet-Hooks, Prop-Nuts, Nails, Curtain-Buttons, and Curtain-Fasteners.
*Claims use* since Mar. 1, 1917.

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Ser. No. 102,706. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ALBERT J. AVERELL, Medford, Oreg. Filed Apr. 4, 1917.



*Particular description of goods.*—Electric Spitters.
*Claims use* since Jan. 28, 1917.

Ser. No. 102,752. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PHILADELPHIA YEAST MANUFACTURING COMPANY, Philadelphia, Pa. Filed Apr. 5, 1917.

PENN

*Particular description of goods.*—Compressed Yeast.
*Claims use* since Mar. 12, 1917.

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Ser. No. 102,774. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) T. A. FLYNN & SON COMPANY, INC., Olean, N. Y. Filed Apr. 6, 1917.

ACMOID

*Particular description of goods.*—A Leather Filler in Liquid Form Containing No Oil.
*Claims use* since Jan. 22, 1917.

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Ser. No. 102,795. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE SCHUSTER COMPANY, Cleveland, Ohio. Filed Apr. 7, 1917.

Euclid Sunburst

*Particular description of goods.*—Non-Alcoholic and Carbonated Beverages Sold as Soft Drinks and Extracts and Syrups for Making the Same.
*Claims use* since Dec. 8, 1914.

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Ser. No. 102,808. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ESTATE HENRY C. MINER, INCORPORATED, New York, N. Y. Filed Apr. 7, 1917.




*Particular description of goods.*—Face-Powders.
*Claims use* since Feb. 23, 1917.

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Ser. No. 102,811. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CHAS. A. SCHIEREN COMPANY, New York, N. Y. Filed Apr. 7, 1917.

CasCo

*Particular description of goods.*—Leather Belting and Leather Machinery Packing.
*Claims use* since about Mar. 3, 1917.

Ser. No. 102,814. (CLASS 39. CLOTHING.) SIMON & MENDELSOHN, New York, N. Y. Filed Apr. 7, 1917.

Lady York

Comprising the words "Lady York."
*Particular description of goods.*—Ladies' Muslin Underwear.
*Claims use* since July, 1912.

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Ser. No. 102,841. (CLASS 39. CLOTHING.) WORLD'S STAR KNITTING COMPANY, Augusta, Me., and Bay City, Mich. Filed Apr. 9, 1917.

AMTEX

*Particular description of goods.*—Hosiery, Drawers, Shirts, Union-Suits, Coats, Vests, Pants, Sweaters, Leggings, Bathing-Suits, Nightgowns, Gloves, and Mittens.
*Claims use* since Dec. 1, 1916.

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Ser. No. 102,887. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) LION MANUFACTURING CO., Omaha, Nebr. Filed Apr. 11, 1917.

LION

*Particular description of goods.*—Suspenders, Belts, Garters, and Armbands.
*Claims use* since Apr. 30, 1915.

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Ser. No. 102,903. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DUREX CHEMICAL CORPORATION, New York, N. Y., and Sweetwater, Tenn. Filed Apr. 12, 1917.

TYRE-LITH

*Particular description of goods.*—Filler or Pigment for Use in the Manufacture of Rubber Tires.
*Claims use* since Apr. 2, 1917.

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Ser. No. 102,904. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) DUREX CHEMICAL CORPORATION, New York, N. Y., and Sweetwater, Tenn. Filed Apr. 12, 1917.

DUROLITH

*Particular description of goods.*—An Ingredient for Incorporation in or Mixing with Dry or Ready-Mixed Paints, Paint-Pigments, or Enamels for Increasing the Durability of Coatings.
*Claims use* since Apr. 2, 1917.

Ser. No. 102,905. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) DUREX CHEMICAL CORPORATION, New York, N. Y., and Sweetwater, Tenn. Filed Apr. 12, 1917.

VELVOLITH

*Particular description of goods.*—Paint-Pigments, Enamels, and Ready-Mixed Paints for Wall-Finishing.
*Claims use* since Apr. 2, 1917.

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Ser. No. 103,053. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) WEAVER-EBLING AUTOMOBILE CO., New York, N. Y. Filed Apr. 16, 1917.

W-E CO.

*Particular description of goods.*—Bicycles.
*Claims use* since Jan. 1, 1915.

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Ser. No. 103,055. (CLASS 38. PRINTS AND PUBLICATIONS.) AMERICAN AUTOMOBILE ASSOCIATION PUBLISHING COMPANY, New York, N. Y., and Washington, D. C. Filed Apr. 17, 1917.

AMERICAN MOTORIST

*Particular description of goods.*—A Monthly Magazine.
*Claims use* since Apr. 1, 1909.

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Ser. No. 103,072. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SILVEL METAL MANUFACTURING COMPANY INC., New York, N. Y. Filed Apr. 17, 1917.

ALWITE

*Particular description of goods.*—An Alloy Containing Copper, Zinc, and Lead.
*Claims use* since Mar. 31, 1917.

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Ser. No. 103,100. (CLASS 39. CLOTHING.) AMERICAN LADY CORSET COMPANY, Detroit, Mich. Filed Apr. 19, 1917.



The picture being fanciful.
*Particular description of goods.*—Corsets.
*Claims use* since June 5, 1916.





Ser. No. 103,113. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HEXAGON SEWING MACHINE COMPANY, New York, N. Y. Filed Apr. 19, 1917.

HEXÁGONO

*Particular description of goods.*—Sewing-Machines, Parts Thereof, and the Following Attachments: Ruffling and Shirring Attachments, Guides, Quilting-Guides, Edge-Guides, Tuck-Markers, Hemmers, Presser-Feet, Braiders and Corders, Needle-Cases, Bobbins, and Bobbin-Winders.
*Claims use* since Apr. 11, 1917.

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Ser. No. 103,114. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HEXAGON SEWING MACHINE COMPANY, New York, N. Y. Filed Apr. 19, 1917.

HEXAGON

*Particular description of goods.*—Sewing-Machines, Parts Thereof, and the Following Attachments: Ruffling and Shirring Attachments, Guides, Quilting-Guides, Edge-Guides, Tuck-Markers, Hemmers, Presser-Feet, Braiders and Corders, Needle-Cases, Bobbins, and Bobbin-Winders.
*Claims use* since Apr. 17, 1917.

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Ser. No. 103,115. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HOUSTON ICE & BREWING ASSOCIATION, Houston, Tex. Filed Apr. 19, 1917.

Bone-dry

*Particular description of goods.*—A Non-Alcoholic Cereal Beverage Sold as Soft Drinks.
*Claims use* since Mar. 1, 1917.

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Ser. No. 103,134. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ALLWORTH COMPANY, Chicago, Ill. Filed Apr. 20, 1917.

MO-TO-RINE

*Particular description of goods.*—Carbon-Remover.
*Claims use* since Jan. 15, 1917.

Ser. No. 103,149. (CLASS 39. CLOTHING.) HENRY MAYER, Brooklyn, N. Y. Filed Apr. 20, 1917.

VENUS

*Particular description of goods.*—Bathing-Suits and Swimming-Tights of All Descriptions, Knitted and Fabric.
*Claims use* since Jan. 2, 1917.

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Ser. No. 103,161. (CLASS 38. PRINTS AND PUBLICATIONS.) BRIGGS-WEAVER MACHINERY CO., Dallas, Tex. Filed Apr. 21, 1917.

SOUTHWESTERN MACHINERY

*Particular description of goods.*—Monthly Magazines.
*Claims use* since February, 1917.

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Ser. No. 103,173. (CLASS 39. CLOTHING.) ELLIS S. HELWITZ, Brooklyn, N. Y. Filed Apr. 21, 1917.

ON-THE-LEVEL

*Particular description of goods.*—Shoe-Heels Made of Rubber.
*Claims use* since Jan. 15, 1917.

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Ser. No. 103,179. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES E. MALEY, Little York, Ill. Filed Apr. 21, 1917.



The trade-mark is the portrait of this applicant.
*Particular description of goods.*—Liniments and Remedies for the Treatment of Bruises, Sores, Internal and External, Wounds, Abrasions.
*Claims use* since Dec. 1, 1916.

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Ser. No. 103,188. (CLASS 39. CLOTHING.) U. S. WOOLEN MILLS COMPANY, Baltimore, Md. Filed Apr. 21, 1917.

Challenge

*Particular description of goods.*—Men's and Youths' Coats, Vests, Trousers, and Overcoats.
*Claims use* since Jan. 1, 1917.

Ser. No. 103,192. (CLASS 38. PRINTS AND PUBLICATIONS.) BENJAMIN WOLFF, Chicago, Ill. Filed Apr. 21, 1917.

The Taxigram

*Particular description of goods.*—Publications Issued Biweekly.
*Claims use* since Feb. 8, 1917.

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Ser. No. 103,208. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HAGER, CLARK & CO., New York, N. Y. Filed Apr. 23, 1917.

"Valu"

*Particular description of goods.*—Woolen Piece Goods and Worsteds.
*Claims use* since Apr. 11, 1917.

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Ser. No. 103,233. (CLASS 39. CLOTHING.) W. SHANHOUSE & SONS, Rockford, Ill. Filed Apr. 23, 1917.

Bloomeralls

Which consists of the word "Bloomeralls."
*Particular description of goods.*—Women's and Girls' Bifurcated Outer Garments.
*Claims use* since Apr. 20, 1917.

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Ser. No. 103,263. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAVID D. LONG, Oswego, N. Y. Filed Apr. 24, 1917.

OX-HEART

*Particular description of goods.*—Cocoa, Chewing-Gum, and Peanut-Butter.
*Claims use* since about Oct. 1, 1913.

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Ser. No. 103,264. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) G. B. MARTIN, Frankfort, Ind. Filed Apr. 24, 1917.

Dr. G. B. Martin

Consisting of a facsimile of the applicant's signature.
*Particular description of goods.*—Tooth-Powder, Tooth-Cream, Toothache-Drops, Nerve Treatment, Local Anesthetic, and Hypodermic Needles.
*Claims use* since Oct. 1, 1913.

Ser. No. 103,276. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WOOD & VAN DERWERKEN VARNISH CO. INC., Brooklyn, N. Y. Filed Apr. 24, 1917.

Paragon

*Particular description of goods.*—Varnishes.
*Claims use* since Sept. 23, 1884.

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Ser. No. 103,317. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) WARREN B. BUCKLEY, New York, N. Y. Filed Apr. 26, 1917.

OLD HICKORY

*Particular description of goods.*—Rubber Tires for Automobiles.
*Claims use* since Feb. 21, 1917.

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Ser. No. 103,353. (CLASS 39. CLOTHING.) JAMERSON CLOTHES SHOPS, INC., Philadelphia, Pa. Filed Apr. 27, 1917.

"Beat-the-Heat"

*Particular description of goods.*—Men's Suits, Coats, Vests, Trousers, and Overcoats.
*Claims use* since Mar. 2, 1917.

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Ser. No. 103,378. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE AROMINT COMPANY, Cincinnati, Ohio. Filed Apr. 28, 1917.

AROMINT

*Particular description of goods.*—Chewing-Gum.
*Claims use* since Apr. 18, 1917.

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Ser. No. 103,396. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN J. WITTWER, Sr., Seattle, Wash. Filed Apr. 28, 1917.

GOLDEN GLINT

*Particular description of goods.*—Shampoo Preparation.
*Claims use* since Mar. 23, 1917.

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Ser. No. 103,431. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCARPELLI BROS., INC., Spokane, Wash. Filed Apr. 30, 1917.

GOLDEN WEST

*Particular description of goods.*—Macaroni Products, More Particularly Macaroni, Spaghetti, Vermicelli, Short-Cut Macaroni, Noodles, Sea-Shells, Alphabets, and other Kinds of Fancy-Shaped Macaroni Paste.
*Claims use* since Mar. 28, 1917.





Ser. No. 103,442. (CLASS 39. CLOTHING.) ELIZABETH AUSTIN GARMENT CO., Minneapolis, Minn. Filed May 1, 1917.

Elizabeth Austin

The name being shown in the handwriting of said Elizabeth Austin.
*Particular description of goods.*—Wash-Dresses, Bibs, and Aprons.
*Claims use* since Mar. 20, 1917.

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Ser. No. 103,481. (CLASS 38. PRINTS AND PUBLICATIONS.) WELDING ENGINEER PUBLISHING CO., Chicago, Ill. Filed May 2, 1917.

The Welding Engineer

*Particular description of goods.*—A Monthly Magazine.
*Claims use* since about Jan. 1, 1916.

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Ser. No. 103,495. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) L. C. BLANCKE CO., INC., New York, N. Y. Filed May 3, 1917.

"PARAMOUNT"

Comprising the word "Paramount."
*Particular description of goods.*—Hacksaw-Blades.
*Claims use* since Mar. 1, 1916.

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Ser. No. 103,518. (CLASS 40. FANCY GOODS. FURNISHINGS, AND NOTIONS.) WALDES & COMPANY OF NEW JERSEY, New York, N. Y. Filed May 3, 1917.

Kohinoor

*Particular description of goods.*—Snap-Fasteners and Placket-Fasteners.
*Claims use* since January, 1914.

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Ser. No. 103,572. (CLASS 39. CLOTHING.) C. B. SHANE CO., Chicago, Ill. Filed May 5, 1917.

B S C O

*Particular description of goods.*—Rain-Coats.
*Claims use* since Mar. 5, 1915.

Ser. No. 103,621. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAMUEL ZECHNOWITZ, New York, N. Y. Filed May 7, 1917.

WHITE LILY

*Particular description of goods.*—Cocoa.
*Claims use* since Nov. 1, 1908.

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Ser. No. 103,622. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DAVID KILLOCH CO., New York, N. Y. Filed May 8, 1917.

KKK

*Particular description of goods.*—Ground Clamps and Bushings.
*Claims use* since September, 1914.

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Ser. No. 103,634. (CLASS 39. CLOTHING.) CONSOLIDATED MILLS CO., High Point, N. C. Filed May 8, 1917.

"Co-mi-co"

*Particular description of goods.*—Hosiery, Knit Underwear, Sweaters, Knit Jerseys, and Work-Shirts.
*Claims use* since January, 1912.

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Ser. No. 103,696. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) A. KREAMER, INC., Brooklyn, N. Y. Filed May 10, 1917. Under ten-year proviso.

KREAMERWARE

*Particular description of goods.*—Liquid-Measures.
*Claims use* since Jan. 1, 1886.

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Ser. No. 103,699. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE J. GEO. LEYNER ENGINEERING WORKS COMPANY, Littleton, Colo. Filed May 10, 1917.

JACKSTEEL

*Particular description of goods.*—Fluid-Operated Drill-Sharpening Machines.
*Claims use* since Mar. 23, 1917.

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Ser. No. 103,705. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JULIUS STERN, New York, N. Y. Filed May 10, 1917.

Howl

*Particular description of goods.*—Moving-Picture Films.
*Claims use* since Apr. 14, 1917.

Ser. No. 103,716. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) FRITTS & WIEHL COMPANY, Chattanooga, Tenn. Filed May 11, 1917. Under ten-year proviso.

**IRON-ALE**

*Particular description of goods.*—A Non-Alcoholic Maltless Tonic Beverage Sold at Soda-Fountains as a Soft Drink.
*Claims use* since Aug. 1, 1889.

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Ser. No. 103,739. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) KOHLER CO., Kohler, Wis. Filed May 12, 1917.

**BEVO**

*Particular description of goods.*—Lavatories.
*Claims use* since Apr. 28, 1917.

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Ser. No. 103,762. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ANAHEIM CITRUS FRUIT ASSOCIATION, Anaheim, Cal. Filed May 14, 1917.

THE MOTHER COLONY

*Particular description of goods.*—Oranges.
*Claims use* since Jan. 15, 1910.

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Ser. No. 103,769. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CALIFORNIA VEGETABLE UNION, Los Angeles, Cal. Filed May 14, 1917.

**EL RIO**

*Particular description of goods.*—Fresh Asparagus and Cantaloups.
*Claims use* since Feb. 1, 1912.

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Ser. No. 103,781. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HALE COMPANY (INC.), San Francisco, Cal. Filed May 14, 1917.

**BEAR**

*Particular description of goods.*—Shelled and Unshelled Peanuts.
*Claims use* since Oct. 15, 1912.

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Ser. No. 103,782. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HALE COMPANY (INC.), San Francisco, Cal. Filed May 14, 1917.

**IXL**

*Particular description of goods.*—Shelled and Unshelled Peanuts.
*Claims use* since Oct. 15, 1912.

Ser. No. 103,786. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ITALIAN PRODUCTS DISTRIBUTING CO., Chicago, Ill. Filed May 14, 1917.

FANFULLA

*Particular description of goods.*—Olive-Oil.
*Claims use* since Sept. 11, 1914.

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Ser. No. 103,787. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ITALIAN PRODUCTS DISTRIBUTING CO., Chicago, Ill. Filed May 14, 1917.

**Florio**

*Particular description of goods.*—Olive-Oil.
*Claims use* since Apr. 15, 1917.

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Ser. No. 103,791. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAMUEL M. NEWMARK, Los Angeles, Cal. Filed May 14, 1917. Under ten-year proviso.

NEWMARK'S PURE

*Particular description of goods.*—Coffee, Cinnamon, Tea, and Lemon Extract for Food-Flavoring Purposes.
*Claims use* since Jan. 1, 1894.

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Ser. No. 103,793. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAMUEL M. NEWMARK, Los Angeles, Cal. Filed May 14, 1917.

BROWN PRINCE

*Particular description of goods.*—Coffee.
*Claims use* since Dec. 1, 1905.

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Ser. No. 103,839. (CLASS 39. CLOTHING.) EDWD. NEWGASS, New York, N. Y. Filed May 15, 1917.




*Particular description of goods.*—Female Wearing-Apparel—Namely, Outer Suits, Outer Coats, Undercoats; Skirts, Including Divided Skirts, Bloomers; Dress-Waists, Shirt-Waists, and Costumes.
*Claims use* since Apr. 1, 1917.





Ser. No. 103,849. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE SHOOMAKER CO., Washington, D. C. Filed May 15, 1917. Under ten-year proviso.

*Shoomaker's*

*Particular description of goods.*—Whisky.
*Claims use* since prior to Feb. 20, 1895.

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Ser. No. 103,897. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) MILLS NOVELTY COMPANY, Chicago, Ill. Filed May 17, 1917.

**Metrophone**

*Particular description of goods.*—Sound-Reproducers and Phonographs.
*Claims use* since Apr. 21, 1917.

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Ser. No. 104,013. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JULIUS STERN, New York, N. Y. Filed May 22, 1917.

Century

*Particular description of goods.*—Motion-Picture Films.
*Claims use* since May 10, 1917.

Ser. No. 104,042. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) HAZARD MANUFACTURING COMPANY, Wilkes-Barre, Pa. Filed May 24, 1917.

**LORECA**

*Particular description of goods.*—Electrical Cables or Conductors.
*Claims use* since May 1, 1917.

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Ser. No. 104,080. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) NOYES BROS. & CUTLER, INC., St. Paul, Minn. Filed May 25, 1917.

Jenny Lind

*Particular description of goods.*—Phonographs.
*Claims use* since Mar. 17, 1917.

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Ser. No. 104,129. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & COMPANY OF NEW JERSEY, New York, N. Y. Filed May 29, 1917.

***Inco***

*Particular description of goods.*—Snap-Fasteners.
*Claims use* since May 28, 1917.

# TRADE-MARK REGISTRATIONS GRANTED

## JUNE 19, 1917.

117,075. CLOTHS SCIENTIFICALLY PREPARED TO CLEAN AND POLISH METALS, WOODS, AND LEATHERS. A. C. A. COMPANY, Binghamton, N. Y.
Filed October 12, 1916. Serial No. 98,584. PUBLISHED JANUARY 30, 1917.

117,076. WALL-PAPER CLEANER. ACME CLEANER MANUFACTURING COMPANY, Cleveland, Ohio.
Filed December 9, 1916. Serial No. 99,801. PUBLISHED APRIL 17, 1917.

117,077. CANNED FISH. ADDIS & EPPSTEIN, INC., New York, N. Y.
Filed November 7, 1916. Serial No. 99,142. PUBLISHED FEBRUARY 13, 1917.

117,078. COFFEE. WILLIAM H. M. ALBERTSON, New York, N. Y.
Filed November 29, 1916. Serial No. 99,616. PUBLISHED FEBRUARY 20, 1917.

117,079. ORANGES, LEMONS, AND GRAPE-FRUIT. AMERICAN FRUIT DISTRIBUTORS OF CALIFORNIA, Los Angeles, Cal.
Filed February 27, 1917. Serial No. 101,721. PUBLISHED APRIL 10, 1917.

117,080. LEMONS AND ORANGES. AMERICAN FRUIT DISTRIBUTORS OF CALIFORNIA, Los Angeles, Cal.
Filed February 27, 1917. Serial No. 101,723. PUBLISHED APRIL 10, 1917.

117,081. ORANGES, GRAPE-FRUIT, AND CANTALOUPS. AMERICAN FRUIT DISTRIBUTORS OF CALIFORNIA, Los Angeles, Cal.
Filed February 27, 1917. Serial No. 101,724. PUBLISHED APRIL 10, 1917.

117,082. TYPE-METALS, SOLDERS, COMPOSITION METALS, METAL ALLOYS, LEAD BARS, PIG-LEAD, BABBITT METALS. AMERICAN LEAD COMPANY, New York, N. Y.
Filed December 4, 1916. Serial No. 99,697. PUBLISHED APRIL 17, 1917.

117,083. WOOL. AMERICAN WOOL IMPROVEMENT ASSOCIATION, Salt Lake City, Utah.
Filed October 7, 1916. Serial No. 98,488. PUBLISHED JANUARY 9, 1917.

117,084. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed April 4, 1916. Serial No. 94,129. PUBLISHED APRIL 10, 1917.

117,085. CEREAL BEVERAGE SOLD AS SOFT DRINK. ANZAC COMPANY, Boston, Mass.
Filed March 8, 1917. Serial No. 101,977. PUBLISHED APRIL 17, 1917.

117,086. CEREAL BEVERAGE SOLD AS SOFT DRINK. ANZAC COMPANY, Boston, Mass.
Filed March 8, 1917. Serial No. 101,978. PUBLISHED APRIL 17, 1917.

117,087. CEREAL BEVERAGE SOLD AS SOFT DRINK. ANZAC COMPANY, Boston, Mass.
Filed March 8, 1917. Serial No. 101,979. PUBLISHED APRIL 17, 1917.

117,088. ASPHALT ROOFING. APCO ASPHALT ROOFING CO., New York, N. Y.
Filed January 22, 1917. Serial No. 100,789. PUBLISHED APRIL 17, 1917.

117,089. ROLLED WHITE OATS. ARMOUR GRAIN COMPANY, Jersey City, N. J., and Chicago, Ill.
Filed February 19, 1917. Serial No. 101,468. PUBLISHED APRIL 10, 1917.

117,090. SAFES. ART METAL CONSTRUCTION CO. INC., Jamestown, N. Y.
Filed January 13, 1917. Serial No. 100,567. PUBLISHED APRIL 10, 1917.

117,091. PARTITIONS, DOORS, METALLIC GRATINGS FOR BANKS, COURT-HOUSES, LIBRARIES, AND OFFICES, RAILINGS, AND STAIRS. ART METAL CONSTRUCTION CO. INC., Jamestown, N. Y.
Filed January 13, 1917. Serial No. 100,568. PUBLISHED APRIL 10, 1917.

117,092. SAFETY-DEPOSIT BOXES. ART METAL CONSTRUCTION CO. INC., Jamestown, N. Y.
Filed January 13, 1917. Serial No. 100,569. PUBLISHED APRIL 10, 1917.

117,093. BLACKBOARDS AND SIMILAR BOARDS FOR WRITING PURPOSES. THE BEAVER COMPANY, Buffalo, N. Y.
Filed February 26, 1917. Serial No. 101,672. PUBLISHED APRIL 17, 1917.

117,094. STOVE-POLISH. JOSEPH C. BENDER, Denver, Colo.
Filed February 26, 1917. Serial No. 101,673. PUBLISHED APRIL 17, 1917.

117,095. SHIRT-WAISTS FOR WOMEN. BLOOM & MILLMAN, New York, N. Y.
Filed February 12, 1917. Serial No. 101,317. PUBLISHED APRIL 17, 1917.

117,096. CANNED SALMON. BOOTH FISHERIES COMPANY, Chicago, Ill.
Filed January 9, 1917. Serial No. 100,469. PUBLISHED FEBRUARY 27, 1917.

117,097. GLASSWARE, AS FOLLOWS: JARS, BOWLS, PLATES, VASES, GLOBES, DISHES, JARDINIÈRES, AND FERN-DISHES. GEORGE BORGFELDT & Co., New York, N. Y.
Filed December 11, 1916. Serial No. 99,835. PUBLISHED APRIL 10, 1917.

117,098. HEADWEAR FOR MEN, WOMEN, AND CHILDREN—NAMELY, HATS, CAPS, AND BONNETS. GEORGE BORGFELDT & Co., New York, N. Y.
Filed February 14, 1917. Serial No. 101,350. PUBLISHED APRIL 17, 1917.

117,099. CLEANING AND POLISHING PREPARATIONS FOR PAINTED, VARNISHED, AND WOODEN SURFACES. FRANK H. BOSSON, Boston, Mass.
Filed November 10, 1916. Serial No. 99,206. PUBLISHED APRIL 10, 1917.

117,100. CLOCKS. NELSON H. BROWN, Boston, Mass.
Filed March 6, 1917. Serial No. 101,900. PUBLISHED APRIL 10, 1917.

117,101. SOFT DRINK OR BEVERAGE. G. ARTHUR BUHL, Chicago, Ill.
Filed March 21, 1917. Serial No. 102,304. PUBLISHED APRIL 17, 1917.

117,102. CANNED FRUITS, CANNED VEGETABLES, CANNED SALMON, AND TOMATO CATSUP. BURTON & DAVIS CO., New York, N. Y.
Filed January 13, 1917. Serial No. 100,574. PUBLISHED APRIL 10, 1917.

117,103. CERTAIN NAMED CHEMICALS AND PHARMACEUTICAL PREPARATIONS. JEAN WALLACE BUTLER, Chicago, Ill.
Filed December 26, 1916. Serial No. 100,156. PUBLISHED APRIL 17, 1915.

117,104. BUTTER-MERGING COMPOUNDS. THE BUTE PLUS CO., Washington, D. C.
Filed February 14, 1917. Serial No. 101,351. PUBLISHED APRIL 10, 1917.

117,105. PIANOS. C. E. BYRNE PIANO CO., INC., New York, N. Y.
Filed February 23, 1917. Serial No. 101,589. PUBLISHED APRIL 17, 1917.

117,106. RAISED BREADS AND PASTRIES. BYSTROM & HULL, Toledo, Ohio.
Filed September 25, 1916. Serial No. 98,202. PUBLISHED APRIL 10, 1917.

117,107. CITRUS FRUITS. CALIFORNIA FRUIT GROWERS EXCHANGE, Los Angeles, Cal.
Filed March 24, 1916. Serial No. 93,832. PUBLISHED APRIL 10, 1917.

117,108. STILL WATER, SPARKLING OR CARBONATED WATER, GINGER-ALE, AND CARBONATED WATER OF DIFFERENT FLAVORS. CAPRONI BROTHERS COMPANY, Providence, R. I.
Filed August 15, 1916. Serial No. 97,345. PUBLISHED APRIL 10, 1917.

117,109. SCOURING - POWDER. CELLULOID STARCH COMPANY, New York, N. Y., and New Haven, Conn.
Filed October 3, 1916. Serial No. 98,382. PUBLISHED FEBRUARY 13, 1917.

117,110. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF. THE CINCINNATI BUTCHERS SUPPLY COMPANY, Cincinnati, Ohio.
Filed January 25, 1917. Serial No. 100,910. PUBLISHED APRIL 17, 1917.

117,111. STEEL. COLONIAL STEEL COMPANY, Pittsburgh, Pa.
Filed February 19, 1917. Serial No. 101,478. PUBLISHED APRIL 10, 1917.

117,112. CANNED SALMON. COLUMBIA RIVER PACKERS ASSOCIATION, Astoria, Oreg.
Filed February 21, 1917. Serial No. 101,563. PUBLISHED APRIL 10, 1917.

117,113. CHOCOLATE CANDY. CLARENCE A. CRANE, Cleveland, Ohio.
Filed February 26, 1917. Serial No. 101,678. PUBLISHED APRIL 10, 1917.

117,114. ILLUMINATING, LUBRICATING, AND BURNING OILS AND GREASES. CREW LEVICK COMPANY, Philadelphia, Pa.
Filed March 10, 1917. Serial No. 102,026. PUBLISHED APRIL 10, 1917.

117,115. ILLUMINATING, LUBRICATING, AND BURNING OILS AND GREASES. CREW LEVICK COMPANY, Philadelphia, Pa.
Filed March 10, 1917. Serial No. 102,029. PUBLISHED APRIL 10, 1917.

117,116. HAT-BOXES, VALISES, CERTAIN NAMED TRUNKS, CASES, AND BAGS. CROUCH & FITZGERALD, New York, N. Y.
Filed November 17, 1916. Serial No. 99,339. PUBLISHED APRIL 17, 1917.

117,117. GAS AND COAL STOVES. THE CUSSINS & FEARN CO., Columbus, Ohio.
Filed February 15, 1917. Serial No. 101,381. PUBLISHED APRIL 17, 1917.

117,118. CERTAIN NAMED DENTAL, MEDICAL, AND SURGICAL APPLIANCES. DAVOL RUBBER COMPANY, Providence, R. I.
Filed May 24, 1916. Serial No. 95,393. PUBLISHED APRIL 3, 1917.

117,119. MINERAL WATER, CONCENTRATED. DAWSON SPRINGS COMPANY, INC., Portland, Me., and Dawson Springs, Ky.
Filed December 11, 1916. Serial No. 99,842. PUBLISHED FEBRUARY 13, 1917.

117,120. WHEAT - FLOUR. DUNDAS BROTHERS CO., Philadelphia, Pa.
Filed February 5, 1917. Serial No. 101,166. PUBLISHED APRIL 10, 1917.

117,121. TIRE-POWDER AND TIRE-MICA. DURKEE-ATWOOD CO., Minneapolis, Minn.
Filed February 26, 1917. Serial No. 101,681. PUBLISHED APRIL 17, 1917.

117,122. ROLLED CIGARETTES. MINGA POPE DUREA, New York, N. Y.
Filed December 22, 1916. Serial No. 100,089. PUBLISHED APRIL 17, 1917.

117,123. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. EUVENOL COMPANY, Minneapolis, Minn.
Filed November 11, 1916. Serial No. 99,239. PUBLISHED APRIL 17, 1917.

117,124. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF. FEDERAL EXPORT CORPORATION, New York, N. Y.
Filed February 19, 1917. Serial No. 101,486. PUBLISHED APRIL 10, 1917.

117,125. CERTAIN NAMED ELECTRICAL APPARATUS AND SUPPLIES. FEDERAL EXPORT CORPORATION, New York, N. Y.
Filed February 19, 1917. Serial No. 101,487. PUBLISHED APRIL 10, 1917.

117,126. FISH CROQUETTES. FIGVED IMPORTING CO., Portland, Me., and Chicago, Ill.
Filed February 26, 1917. Serial No. 101,684. PUBLISHED APRIL 10, 1917.

117,127. SOFT DRINK CONTAINING NO ALCOHOL OR NARCOTICS, PURELY A TEMPERANCE BEVERAGE. WILLIAM B. FINK, New York, N. Y.
Filed September 22, 1916. Serial No. 98,163. PUBLISHED NOVEMBER 14, 1916.

117,128. CIGARS, CIGARROS, CHEROOTS, AND CIGAR-CLIPPINGS. 44 CIGAR COMPANY, Philadelphia, Pa.
Filed February 20, 1917. Serial No. 101,534. PUBLISHED APRIL 10, 1917.

117,129. CIGARS, CIGARROS, CHEROOTS, AND CIGAR-CLIPPINGS. 44 CIGAR COMPANY, Philadelphia, Pa.
Filed February 20, 1917. Serial No. 101,535. PUBLISHED APRIL 10, 1917.

117,130. CIGARS, CIGARROS, CHEROOTS, AND CIGAR-CLIPPINGS. 44 CIGAR COMPANY, Philadelphia, Pa.
Filed February 27, 1917. Serial No. 101,733. PUBLISHED APRIL 10, 1917.

117,131. CIGARS, CIGARROS, CHEROOTS, AND CIGAR-CLIPPINGS. 44 CIGAR COMPANY, Philadelphia, Pa.
Filed February 27, 1917. Serial No. 101,734. PUBLISHED APRIL 10, 1917.

117,132. CIGARS. FRITCH, HIMES & COMPANY, Oskaloosa, Iowa.
Filed February 21, 1917. Serial No. 101,566. PUBLISHED APRIL 10, 1917.

117,133. SHOE-POLISH PASTES. FULTON SHOE POLISH COMPANY, INC., New York, N. Y.
Filed October 18, 1916. Serial No. 98,747. PUBLISHED FEBRUARY 6, 1917.

117,134. STORAGE - BATTERY PLATES. GENERAL LEAD BATTERIES COMPANY, Newark, N. J.
Filed February 19, 1917. Serial No. 101,489. PUBLISHED APRIL 10, 1917.

117,135. ADHESIVE PLASTERS. GOLDMAN COSTUME CO., New York, N. Y.
Filed October 31, 1916. Serial No. 98,997. PUBLISHED APRIL 17, 1917.



117,136. CERTAIN NAMED LADIES' AND MISSES' CLOTHING. LUCY DUFF GORDON, New York, N. Y.
Filed March 19, 1917. Serial No. 102,249. PUBLISHED APRIL 17, 1917.

117,137. VENTILATORS. THOMAS B. HALLOCK, Brooklyn, N. Y.
Filed February 23, 1917. Serial No. 101,603. PUBLISHED APRIL 17, 1917.

117,138. OPHTHALMIC LENSES. F. A. HARDY & CO., Chicago, Ill.
Filed December 30, 1914. Serial No. 83,583. PUBLISHED APRIL 17, 1917.

117,139. CANNED SALMON. P. E. HARRIS & CO., Seattle, Wash.
Filed February 27, 1917. Serial No. 101,741. PUBLISHED APRIL 10, 1917.

117,140. EGGS, BUTTER, BUTTERIN, OLEOMARGARIN, AND CHEESE. THE W. J. HARTZEL COMPANY, Pittsburgh, Pa.
Filed July 7, 1916. Serial No. 96,405. PUBLISHED MARCH 27, 1917.

117,141. SEWING - MACHINES, PARTS THEREOF. HEXAGON SEWING MACHINE COMPANY, New York, N. Y.
Filed February 10, 1917. Serial No. 101,292. PUBLISHED MARCH 27, 1917.

117,142. SEWING - MACHINES, PARTS THEREOF. HEXAGON SEWING MACHINE COMPANY, New York, N. Y.
Filed February 10, 1917. Serial No. 101,293. PUBLISHED MARCH 27, 1917.

117,143. SEWING - MACHINES, PARTS THEREOF. HEXAGON SEWING MACHINE COMPANY, New York, N. Y.
Filed February 10, 1917. Serial No. 101,294. PUBLISHED MARCH 27, 1917.

117,144. SEWING - MACHINES, PARTS THEREOF. HEXAGON SEWING MACHINE COMPANY, New York, N. Y.
Filed February 10, 1917. Serial No. 101,295. PUBLISHED MARCH 27, 1917.

117,145. ASBESTOS-FIBER SHEET-PACKING. HOME RUBBER CO., Trenton, N. J.
Filed January 3, 1917. Serial No. 100,333. PUBLISHED APRIL 10, 1917.

117,146. PUBLICATIONS ISSUED BIANNUALLY. THE HORN-SHAFER COMPANY, Baltimore, Md.
Filed February 9, 1917. Serial No. 101,269. PUBLISHED APRIL 10, 1917.

117,147. CANVAS BELTING, RUBBER BELTING, LEATHER BELTING, AND COMBINATION CANVAS AND RUBBER BELTING. HUDSON MECHANICAL RUBBER CO., New York, N. Y.
Filed January 16, 1917. Serial No. 100,652. PUBLISHED APRIL 10, 1917.

117,148. EXERCISING APPARATUS IN THE FORM OF DUMB-BELLS. INTERSTATE CARTOON CO., New York, N. Y.
Filed February 2, 1917. Serial No. 101,125. PUBLISHED APRIL 10, 1917.

117,149. LARD SUBSTITUTE COMPOSED OF COTTON-SEED OIL AND OLEO-STEARIN. INTERSTATE COTTON OIL REFINING CO., Sherman, Tex.
Filed March 3, 1917. Serial No. 101,858. PUBLISHED APRIL 10, 1917.

117,150. SHORTENING. INTERSTATE COTTON OIL REFINING CO., Sherman, Tex.
Filed March 3, 1917. Serial No. 101,861. PUBLISHED APRIL 10, 1917.

117,151. LARD SUBSTITUTE COMPOSED OF COTTON-SEED OIL AND OLEO-STEARIN. INTERSTATE COTTON OIL REFINING CO., Sherman, Tex.
Filed March 3, 1917. Serial No. 101,862. PUBLISHED APRIL 10, 1917.

117,152. BOOKLETS AND CIRCULARS FOR ADVERTISING A COLLECTION-SERVICE. BENJAMIN A. JAVITZ, New York, N. Y.
Filed January 19, 1917. Serial No. 100,744. PUBLISHED APRIL 10, 1917.

117,153. OLEOMARGARIN. JOHN F. JELKE COMPANY, Chicago, Ill.
Filed February 5, 1917. Serial No. 101,173. PUBLISHED APRIL 10, 1917.

117,154. METALLIC VALVES AND PARTS THEREOF. JENKINS BROS., Elizabeth, N. J., and New York, N. Y.
Filed February 27, 1917. Serial No. 101,744. PUBLISHED APRIL 10, 1917.

117,155. ASBESTOS SHEET-PACKING. H. W. JOHNS-MANVILLE COMPANY, New York, N. Y.
Filed November 28, 1916. Serial No. 99,602. PUBLISHED APRIL 17, 1917.

117,156. SUSPENSORY BANDAGES OR JOCK-STRAPS. JOHNSON & JOHNSON, New Brunswick, N. J.
Filed March 14, 1917. Serial No. 102,143. PUBLISHED APRIL 17, 1917.

117,157. CANNED SALMON. KELLEY-CLARKE CO., Seattle, Wash.
Filed November 17, 1916. Serial No. 99,353. PUBLISHED JANUARY 9, 1917.

117,158. SHAVING-CREAM, SHAVING-POWDER, AND SHAVING-STICK. WILLIAM J. KELLEY, Chicago, Ill., assignor to The N. K. Fairbank Company, Chicago, Ill., a Corporation of New Jersey.
Filed March 4, 1916. Serial No. 93,305. PUBLISHED APRIL 17, 1917.

117,159. CERTAIN NAMED HOUSEHOLD FURNITURE. ELINOR LUCY KINLOCH, Chelsea, London, England.
Filed December 4, 1916. Serial No. 99,712. PUBLISHED APRIL 3, 1917.

117,160. CERTAIN NAMED FURNITURE. J. & J. KOHN INC., New York, N. Y., and Chicago, Ill.
Filed November 25, 1916. Serial No. 99,553. PUBLISHED APRIL 10, 1917.

117,161. CANDLE - HOLDERS, CANDLESTICK - HOLDERS, RANGE-BOILERS, AND CARRIAGE FOOT-WARMERS. A. KREAMER INC., Brooklyn, N. Y.
Filed February 17, 1917. Serial No. 101,448. PUBLISHED APRIL 17, 1917.

117,162. STOMACH-WARMERS AND DOUCHE-PANS. A. KREAMER INC., Brooklyn, N. Y.
Filed February 17, 1917. Serial No. 101,449. PUBLISHED APRIL 17, 1917.

117,163. CERTAIN NAMED ELECTRICAL APPARATUS AND SUPPLIES. LANDERS, FRARY & CLARK, New Britain, Conn.
Filed February 2, 1917. Serial No. 101,128. PUBLISHED APRIL 10, 1917.

117,164. ICE-CREAM, CONDENSED MILK, MILK POWDER, BUTTER, CHEESE, MILK, ICE-CREAM CONES, AND EGGS. FREDERICK W. LANGE, Ensley, Ala.
Filed January 2, 1917. Serial No. 100,294. PUBLISHED APRIL 10, 1917.

117,165. RYE-FLOUR. ALEXANDER LERMAN, Philadelphia, Pa.
Filed November 28, 1916. Serial No. 99,603. PUBLISHED FEBRUARY 20, 1917.

117,166. CIGARETTES. LIGGETT & MYERS TOBACCO COMPANY, New York, N. Y.
Filed February 28, 1917. Serial No. 101,787. PUBLISHED APRIL 17, 1917.

117,167. BOYS' OUTER SUITS, JACKETS, OVERCOATS, HATS AND CAPS, NECKTIES, AND MUFFLERS. EDWIN ELKAN LION, New York, N. Y.
Filed February 23, 1917. Serial No. 101,606. PUBLISHED APRIL 17, 1917.

117,168. CHOCOLATE CANDY. LOOSE WILES COMPANY, Kansas City, Mo.
Filed March 7, 1917. Serial No. 101,963. PUBLISHED APRIL 10, 1917.

117,169. BUILDING-CEMENT. LOUISVILLE CEMENT COMPANY, Louisville, Ky.
Filed February 27, 1917. Serial No. 101,746. PUBLISHED APRIL 10, 1917.

117,170. SHEEPSKIN-LINED COATS. MCKIBBIN, DRISCOLL & DORSEY, INC., St. Paul, Minn.
Filed February 23, 1917. Serial No. 101,609. PUBLISHED APRIL 17, 1917.

117,171. GLOVES. R. H. MACY & Co., New York, N. Y.
Filed March 3, 1917. Serial No. 101,872. PUBLISHED APRIL 17, 1917.

117,172. GLOVES. R. H. MACY & Co., New York, N. Y.
Filed March 3, 1917. Serial No. 101,873. PUBLISHED APRIL 17, 1917.

117,173. GLOVES. R. H. MACY & Co., New York, N. Y.
Filed March 3, 1917. Serial No. 101,874. PUBLISHED APRIL 17, 1917.

117,174. GLOVES. R. H. MACY & Co., New York, N. Y.
Filed March 3, 1917. Serial No. 101,875. PUBLISHED APRIL 17, 1917.

117,175. GLOVES. R. H. MACY & Co., New York, N. Y.
Filed March 3, 1917. Serial No. 101,876. PUBLISHED APRIL 17, 1917.

117,176. GREASE-CUPS FOR AUTOMOBILES, MOTORS, AND OTHER VEHICLES AND MACHINERY. MARVEL ENGINEERING COMPANY, Chicago, Ill.
Filed January 23, 1917. Serial No. 100,857. PUBLISHED APRIL 10, 1917.

117,177. ROOFING-SLATE. HENRY H. MATHEWS, Boston, Mass.
Filed February 8, 1917. Serial No. 101,234. PUBLISHED APRIL 3, 1917.

117,178. STOCK FEED. GEO. B. MATTHEWS & SONS, New Orleans, La.
Filed April 24, 1916. Serial No. 94,682. PUBLISHED APRIL 10, 1917.

117,179. WHEAT-FLOUR. MAUSER MILL COMPANY, Laurys Station, Pa.
Filed February 26, 1917. Serial No. 101,704. PUBLISHED APRIL 10, 1917.

117,180. WHEAT-FLOUR. MAUSER MILL COMPANY, Laurys Station, Pa.
Filed February 26, 1917. Serial No. 101,705. PUBLISHED APRIL 10, 1917.

117,181. WHEAT-FLOUR. MAUSER MILL COMPANY, Laurys Station, Pa.
Filed February 26, 1917. Serial No. 101,706. PUBLISHED APRIL 10, 1917.

117,182. CERTAIN NAMED MACHINERY PACKING. METRIC PACKING COMPANY, Buffalo, N. Y.
Filed October 2, 1916. Serial No. 98,369. PUBLISHED APRIL 17, 1917.

117,183. GAMES. MILTON BRADLEY CO., Springfield, Mass.
Filed January 15, 1917. Serial No. 100,627. PUBLISHED APRIL 10, 1917.

117,184. HARDWOOD AND PINE LUMBER. MISSISSIPPI LUMBER COMPANY, Chicago, Ill.
Filed January 29, 1917. Serial No. 101,011. PUBLISHED APRIL 17, 1917.

117,185. HOT-AIR FURNACES. THE MONITOR STOVE & RANGE CO., Cincinnati, Ohio.
Filed March 22, 1915. Serial No. 85,315. PUBLISHED APRIL 3, 1917.

117,186. CREAMERY-BUTTER. MUTUAL CREAMERY COMPANY, Salt Lake City, Utah.
Filed February 20, 1917. Serial No. 101,549. PUBLISHED APRIL 10, 1917.

117,187. CREAMERY-BUTTER. MUTUAL CREAMERY COMPANY, Salt Lake City, Utah.
Filed February 20, 1917. Serial No. 101,550. PUBLISHED APRIL 10, 1917.

117,188. ARC-LAMP ELECTRODES. NATIONAL CARBON COMPANY, Cleveland, Ohio, assignor to National Carbon Company, Inc., a Corporation of New York.
Filed January 22, 1917. Serial No. 100,815. PUBLISHED APRIL 10, 1917.

117,189. APPLE-JUICE. NATIONAL FRUIT JUICE COMPANY, La Fayette, Ind.
Filed December 26, 1916. Serial No. 100,179. PUBLISHED APRIL 10, 1917.

117,190. CHOCOLATES. THE NELSON-RHOADS CANDY CO., Denver, Colo.
Filed February 20, 1917. Serial No. 101,552. PUBLISHED APRIL 10, 1917.

117,191. WHEAT-FLOUR AND WHEAT CEREAL. NOVELTY MILL COMPANY, Seattle, Wash.
Filed February 17, 1917. Serial No. 101,454. PUBLISHED APRIL 10, 1917.

117,192. PRESS-BUTTONS OR SEPARABLE FASTENERS. JOHAN OLSEN NYGAARD, Christiania, Norway.
Filed December 28, 1916. Serial No. 100,222. PUBLISHED APRIL 17, 1917.

117,193. FIRE-BRICK, LINING FOR FURNACES, SMELTERS, BOILERS, CUPOLAS, AND STOVES. OLIVER BROTHERS, INC., New York, N. Y.
Filed February 3, 1917. Serial No. 101,154. PUBLISHED APRIL 3, 1917.

117,194. STEEL. ONONDAGA STEEL COMPANY, INCORPORATED, Syracuse, N. Y.
Filed February 19, 1917. Serial No. 101,503. PUBLISHED APRIL 10, 1917.

117,195. CERTAIN NAMED CANNED GOODS. OVERSEAS PRODUCTS CORPORATION, New York, N. Y.
Filed February 20, 1917. Serial No. 101,553. PUBLISHED APRIL 10, 1917.

117,196. SOAP. PEET BROS. MFG. CO., Kansas City, Kans.
Filed March 29, 1915. Serial No. 85,520. PUBLISHED JUNE 6, 1916.

117,197. PEANUT-BUTTER. PERKINS BROTHERS, Bay City, Mich.
Filed November 27, 1916. Serial No. 99,581. PUBLISHED FEBRUARY 20, 1917.

117,198. DRESSED POULTRY. HAROLD G. PETERSON, Chicago, Ill.
Filed March 1, 1917. Serial No. 101,822. PUBLISHED APRIL 10, 1917.

117,199. WHEAT-FLOUR. PORTLAND FLOURING MILLS COMPANY, Portland, Oreg.
Filed February 17, 1917. Serial No. 101,459. PUBLISHED APRIL 10, 1917.

117,200. WHEAT-FLOUR, SELF-RISING. PORTLAND FLOURING MILLS COMPANY, Portland, Oreg.
Filed February 17, 1917. Serial No. 101,460. PUBLISHED APRIL 10, 1917.

117,201. WHEAT-FLOUR. PORTLAND FLOURING MILLS COMPANY, Portland, Oreg.
Filed February 17, 1917. Serial No. 101,461. PUBLISHED APRIL 10, 1917.

117,202. CERTAIN NAMED RECEPTACLES MADE OF METAL. THE REPUBLIC METALWARE CO., Buffalo, N. Y.
Filed December 27, 1916. Serial No. 100,207. PUBLISHED APRIL 10, 1917.

117,203. PLUG AND TWIST TOBACCO. R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C.
Filed January 18, 1917. Serial No. 100,724. PUBLISHED APRIL 17, 1917.

117,204. CANNED SHRIMP. RUGE BRO'S. CANNING CO., Apalachicola, Fla.
Filed March 3, 1917. Serial No. 101,882. PUBLISHED APRIL 10, 1917.

117,205. LEMONS, ORANGES, AND GRAPE-FRUIT. SAN FERNANDO HEIGHTS LEMON CO., Los Angeles, Cal.
Filed February 27, 1917. Serial No. 101,758. PUBLISHED APRIL 10, 1917.

117,206. CORN-PLASTERS. SCHOLL MANUFACTURING COMPANY, INC., Chicago, Ill.
Filed January 29, 1917. Serial No. 101,020. PUBLISHED APRIL 17, 1917.



117,207. INSTEP-ARCH SUPPORTS. SCHOLL MANUFACTURING COMPANY, INC., Chicago, Ill.
Filed January 29, 1917. Serial No. 101,022. PUBLISHED APRIL 17, 1917.

117,208. ANTISEPTIC SOLUTION. SCOTT & BOWNE, Bloomfield, N. J.
Filed September 9, 1916. Serial No. 97,882. PUBLISHED APRIL 17, 1917.

117,209. WRINGERS AND PARTS THEREOF. SEARS, ROEBUCK AND COMPANY, Chicago, Ill.
Filed December 4, 1916. Serial No. 99,719. PUBLISHED APRIL 10, 1917.

117,210. KNOCKDOWN HOUSES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed January 22, 1917. Serial No. 100,822. PUBLISHED APRIL 17, 1917.

117,211. FOLDING SHOPPING-BAG. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed January 30, 1917. Serial No. 101,047. PUBLISHED APRIL 10, 1917.

117,212. LIVER-TONIC. EDGAR P. SHERMAN, Woodward, Ala.
Filed July 24, 1916. Serial No. 96,805. PUBLISHED APRIL 17, 1917.

117,213. ILLUMINATING, LUBRICATING, AND BURNING OILS AND GREASES. SPEEDWAY MOTOR OIL CO., New York, N. Y.
Filed January 5, 1917. Serial No. 100,382. PUBLISHED MARCH 20, 1917.

117,214. ADHESIVE VULCANIZING-PATCHES AND ADHESIVE VULCANIZING FABRICS. WILLIAM E. SPENCER, New York, N. Y.
Filed November 18, 1916. Serial No. 99,387. PUBLISHED APRIL 17, 1917.

117,215. BRAKELININGS. STAYBESTOS MANUFACTURING COMPANY, Philadelphia, Pa.
Filed February 12, 1917. Serial No. 101,342. PUBLISHED APRIL 17, 1917.

117,216. SPARK-PLUGS. STEWART-WARNER SPEEDOMETER CORPORATION, Chicago, Ill.
Filed December 28, 1916. Serial No. 100,226. PUBLISHED APRIL 17, 1917.

117,217. ELECTRIC LAMPS. STEWART-WARNER SPEEDOMETER CORPORATION, Chicago, Ill.
Filed February 19, 1917. Serial No. 101,516. PUBLISHED APRIL 10, 1917.

117,218. ELECTRIC LAMPS. STEWART-WARNER SPEEDOMETER CORPORATION, Chicago, Ill.
Filed February 19, 1917. Serial No. 101,517. PUBLISHED APRIL 10, 1917.

117,219. DENTAL IMPRESSION-TRAYS. TERRAPLASTICA MANUFACTURING CO., INC., Newark, N. J.
Filed March 7, 1917. Serial No. 101,970. PUBLISHED APRIL 17, 1917.

117,220. RANCH PRODUCTS—VIZ., FRESH FRUITS, BERRIES, AND ROOT CROPS, AND POULTRY AND EGGS. THOMAS J. A. TODD, Watsonville, Cal.
Filed November 15, 1916. Serial No. 99,315. PUBLISHED APRIL 10, 1917.

117,221. BOOTS AND SHOES MADE OF LEATHER SKINS AND TEXTILE MATERIALS. TOMAHAWK SHOE CO., Tomahawk, Wis.
Filed December 2, 1916. Serial No. 99,691. PUBLISHED APRIL 17, 1917.

117,222. LUBRICATING-OILS. TRUE'S OIL COMPANY, Spokane, Wash.
Filed March 6, 1917. Serial No. 101,939. PUBLISHED APRIL 10, 1917.

117,223. LUBRICATING OILS. TRUE'S OIL COMPANY, Spokane, Wash.
Filed March 6, 1917. Serial No. 101,940. PUBLISHED APRIL 10, 1917.

117,224. LUBRICATING-OILS. TRUE'S OIL COMPANY, Spokane, Wash.
Filed March 6, 1917. Serial No. 101,943. PUBLISHED APRIL 10, 1917.

117,225. BRUSH FOR POLISHING SHOES. TUBE BRUSH CO., Boston, Mass.
Filed December 2, 1916. Serial No. 99,692. PUBLISHED APRIL 3, 1917.

117,226. LEMONS. TUSTIN LEMON ASSOCIATION, Tustin, Cal.
Filed February 24, 1917. Serial No. 101,645. PUBLISHED APRIL 10, 1917.

117,227. DRIED FISH, AND PARTICULARLY COD-FISH. UNION FISH CO., San Francisco, Cal.
Filed February 27, 1917. Serial No. 101,762. PUBLISHED APRIL 10, 1917.

117,228. GROUNDS. UNITED STATES SPOT GROUND CORPORATION, Omaha, Nebr.
Filed November 29, 1916. Serial No. 99,636. PUBLISHED APRIL 3, 1917.

117,229. GROUNDS. UNITED STATES SPOT GROUND CORPORATION, Omaha, Nebr.
Filed November 29, 1916. Serial No. 99,637. PUBLISHED APRIL 3, 1917.

117,230. CANNED SARDINES, CANNED TUNA FISH. C. E. VAN LANDINGHAM CO., Los Angeles, Cal.
Filed February 27, 1917. Serial No. 101,764. PUBLISHED APRIL 10, 1917.

117,231. SNAP-FASTENERS. VULCANITE MANUFACTURING CO., Lindenhurst, N. Y.
Filed February 23, 1917. Serial No. 101,629. PUBLISHED APRIL 17, 1917.

117,232. CERTAIN NAMED BUILDING CONSTRUCTION. THE WARING-UNDERWOOD COMPANY, Philadelphia, Pa.
Filed February 21, 1917. Serial No. 101,584. PUBLISHED APRIL 3, 1917.

117,233. MANILA ROPE. WATERBURY COMPANY, Jersey City, N. J., and New York, N. Y.
Filed November 27, 1916. Serial No. 99,598. PUBLISHED APRIL 10, 1917.

117,234. PILE REMEDY. JAMES W. WILLIAMS, Paragould, Ark.
Filed March 24, 1917. Serial No. 102,430. PUBLISHED APRIL 17, 1917.

# TRADE-MARK REGISTRATIONS RENEWED.

14,529. PREPARATIONS FOR CLEANING AND POLISHING LEATHER AND METAL GOODS. B. BEDDOW & SONS, London, England.
Registered June 21, 1887. Renewed June 21, 1917.

14,583. FABRICS TO BE USED FOR OUTER CLOTHING AND FOR LININGS. THOMAS ILLINGWORTH, Bradford, England; George Armitage, Limited, assignee.
Registered July 12, 1887. Renewed July 12, 1917.

14,584. FABRICS TO BE USED FOR OUTER CLOTHING AND FOR LININGS. THOMAS ILLINGWORTH, Bradford, England; George Armitage, Limited, assignee.
Registered July 12, 1887. Renewed July 12, 1917.

# LABELS

## REGISTERED JUNE 19, 1917.

20,151.—*Title:* "SELECCION ESPECIAL CIGARS." (For Cigars.) AMERICAN LITHOGRAPHIC COMPANY, New York, N. Y. Filed May 19, 1917.

20,152.—*Title:* "ALBANO'S." (For Peppers.) FRANCESCO ALBANO, New York, N. Y. Filed May 24, 1917.

20,153.—*Title:* "BLUE BIRD GINGER ALE." (For Ginger-Ale.) ATLANTIC BEVERAGE CORPORATION, Petersburg, Va. Filed May 31, 1917.

20,154.—*Title:* "ADEN." (For Canned Sauer-Kraut.) E. W. GATES & SON Co., Richmond, Va. Filed June 4, 1917.

20,155.—*Title:* "ADEN." (For Canned Mixed Vegetables.) E. W. GATES & SON Co., Richmond, Va. Filed June 4, 1917.

20,156.—*Title:* "ADEN." (For Canned Peaches.) E. W. GATES & SON Co., Richmond, Va. Filed June 4, 1917.

20,157.—*Title:* "ADEN." (For Canned Beans.) E. W. GATES & SON Co., Richmond, Va. Filed June 4, 1917.

20,158.—*Title:* "ADEN." (For Canned Corn.) E. W. GATES & SON Co., Richmond, Va. Filed June 4, 1917.

20,159.—*Title:* "ADEN." (For Canned Peas.) E. W. GATES & SON Co., Richmond, Va. Filed June 4, 1917.

20,160.—*Title:* "ADEN." (For Canned Tomatoes.) E. W. GATES & SON Co., Richmond, Va. Filed June 4, 1917.

20,161.—*Title:* "EASY FEET FOOT POWDER." (For Foot-Powder.) HARRY S. HARRISON, Baltimore, Md. Filed May 29, 1917.

20,162.—*Title:* "MARGONA." (For Cigars.) A. C. HENSCHEL & Co., Chicago, Ill. Filed May 28, 1917.

20,163.—*Title:* "FRANCITA." (For Cigars.) A. C. HENSCHEL & Co., Chicago, Ill. Filed May 28, 1917.

20,164.—*Title:* "SAN JULIA." (For Cigars.) A. C. HENSCHEL & Co., Chicago, Ill. Filed May 28, 1917.

20,165.—*Title:* "BRA-SO." (For a Soft Drink.) INTERSTATE PRODUCT Co., Baltimore, Md. Filed May 12, 1917.

20,166.—*Title:* "GRAYSON." (For Soap.) INTERSTATE COTTON OIL REFINING Co., Sherman, Tex. Filed May 28, 1917.

20,167.—*Title:* "J-M FLEXSTONE ASBESTOS ROOFING.' (For Asbestos Roofing.) H. W. JOHNS-MANVILLE COMPANY, New York, N. Y. Filed May 12, 1917.

20,168.—*Title:* "MANKERTZ MALTED MILK BREAD." (For Bread.) GUS MANKERTZ, Portland, Oreg. Filed May 18, 1917.

20,169.—*Title:* "I AM OLD DOC CARBO-SAL." (For a Medicine for Hog-Cholera.) NATIONAL DRUG & MFG. Co., Clinton, Ky. Filed May 8, 1917.

20,170.—*Title:* "TRI-WAY." (For Sport-Clothes.) EDWARD NEWGASS, New York, N. Y. Filed May 15, 1917.

20,171.—*Title:* "ROWE'S MEDICATED OIL." (For Medicated Oil.) ROWE MANUFACTURING Co., Galesburg, Ill. Filed May 12, 1917.

20,172.—*Title:* "WEL-BAK'T GOLDEN CRUST BUTTER-CREAM BREAD." (For Bread.) RALPH L. NAFZIGEN, Kansas City, Mo. Filed May 28, 1917.

20,173.—*Title:* "FRENCH EAU DE QUININE." (For Hair-Wash.) JOSEPH PALAZZOLO, New York, N. Y. Filed May 18, 1917.

20,174.—*Title:* "LIQUID FISH GLUE." (For Glue.) PROGRESSIVE GLUE Co., New York, N. Y. Filed June 4, 1917.

20,175.—*Title:* "TAYLOR BUTTER-PAN." (For Butter-Pans.) CHARLES M. TAYLOR, Jr., Maple Shade, N. J. Filed May 24, 1917.

20,176.—*Title:* "APPO." (For Unfermented Apple-Juice.) HENRY WEINHARD ESTATE, Portland, Oreg., by Louise Weinhard, Anna Wessinger, Paul Wessinger, and Harry Wagner, executrices and executors of the estate of said Henry Weinhard, deceased. Filed May 19, 1917.

20,177.—*Title:* "MILK OF MAGNESIA LIME." (For a Manufactured Lime Product.) ALLWOOD LIME COMPANY, Allwood Siding, near Manitowoc, Wis. Filed April 16, 1917.

20,178.—*Title:* "CUOCO'S." (For Tomatoes.) FRANCESCO ALBANO, New York, N. Y.. Filed April 24, 1917.

20,179.—*Title:* "COMPLETE PARTY OUTFIT." (For Hallowe'en Decorations.) THE BEISTLE COMPANY, Shippensburg, Pa. Filed May 7, 1917.

20,180.—*Title:* "RANDOLPH CUTIES." (For Children's Hosiery.) HUGH I. CONNET, New York, N. J. Filed May 12, 1916.

20,181.—*Title:* "ANCHOR PORTLAND CEMENT." (For Portland Cement.) COPLAY CEMENT MANUFACTURING COMPANY, New York, N. Y. Filed March 14, 1917.

20,182.—*Title:* "PENDERGAST NUTRITIOUS BEAN BREAD." (For Bread.) DAISY ANN PENDERGAST, Minneapolis, Minn. Filed May 7, 1917.

20,183.—*Title:* "WYTE ALL." (For Shoe-Polish.) EMILY G. GRAY, Philadelphia, Pa. Filed April 19, 1917.

20,184.—*Title:* "FORD." (For Fountain-Pens.) GEM FOUNTAIN PEN CORPORATION, New York, N. Y. Filed May 8, 1917.

20,185.—*Title:* "INTERWOVEN SOCKS." (For Socks.) INTERWOVEN STOCKING COMPANY, New Brunswick, N. J. Filed May 7, 1917.

20,186.—*Title:* "THE WORLD'S SAFEST SAFE." (For Safes.) THE SAFE-CABINET COMPANY, Marietta, Ohio. Filed March 28, 1917.

# PRINTS

## REGISTERED JUNE 19, 1917.

4,706.—*Title:* "OPEN YOUR MOUTH AND SHUT YOUR EYES, AND I'LL GIVE YOU SOMETHING TO MAKE YOU WISE." (For Wheat Breakfast Food.) CREAM OF WHEAT Co., Minneapolis, Minn. Filed May 24, 1917.

4,707.—*Title:* "LA GERA." (For Cigars.) ANTON MOSKOWITZ, New York, N. Y. Filed April 5, 1917.

4,708.—*Title:* "ART-REIGNSKIN---NEWEST SHOE ARTISTRY." (For Shoe-Cloth.) PETERS MANUFACTURING Co., Boston, Mass., and New York, N. Y. Filed May 31, 1917.

4,709.—*Title:* "A HAPPY SUGGESTION." (For Post Toasties.) POSTUM CEREAL COMPANY, Battle Creek, Mich. Filed May 24, 1917.

4,710.—*Title:* "TAYLOR BUTTER-PAN." (For Butter-Pans.) CHARLES M. TAYLOR, Jr., Maple Shade, N. J. Filed May 24, 1917.



# DECISIONS

OF THE

# COMMISSIONER OF PATENTS

AND OF

# UNITED STATES COURTS IN PATENT CASES.

## DECISIONS OF THE U. S. COURTS.

### Court of Appeals of the District of Columbia.

THE KAUT-REITH SHOE COMPANY *v.* INTERNATIONAL SHOE COMPANY.

*Decided January 2, 1917.*

1. TRADE-MARKS — SIMILARITY — "GOOSE" — "MOTHER GOOSE."

The mark consisting of the words "Mother Goose" and a picture of that character riding a broom *Held* not registrable in view of the prior registration of the mark consisting of the word "Goose" across the picture of a goose holding a key in its mouth. The dominant feature of both marks is the word "Goose."

2. SAME—SAME—DECEPTIVE.

The entire vocabulary and the inventive imagination are at the service of one selecting a trade-mark, and no excuse is apparent for the adoption of a mark closely approximating that of an earlier user on the same class of goods. In all such cases the doubt should be resolved in favor of the prior user.

*Mr. William Small* for the appellant.

*Mr. James A. Carr* for the appellee.

VAN ORSDEL, *J.*:

This is a trade-mark opposition case. Appellant, the Kaut-Reith Shoe Company, of Carthage, Missouri, sought to register a mark consisting of the words "Mother Goose" and the picture of that mythical character riding a broom through the skies. Appellee, opposer, International Shoe Company, of St. Louis, Missouri, is the owner of a registered mark granted to its predecessor in business in 1909 consisting of the word "Goose" printed across the picture of a goose holding a key in its mouth.

Applicant alleges use of its mark but one day prior to the date of its application for registration. Therefore, no question of priority of use is involved, the sole question being whether applicant's mark is so similar to that of the opposer as to be likely to create confusion in trade.

The dominant feature of both marks is the word "Goose." The testimony taken on behalf of opposer,—no testimony being taken on behalf of applicant,—discloses that it has built up a large business in shoes bearing the "Goose" brand. If applicant's mark should be granted, we think the marks, as shown in the record, would lead to inevitable confusion, and there would be nothing to prevent it from printing the word "Mother" in small and obscure type and the word "Goose" in bold type, so that the word "Goose" would be the feature of the mark which would impress itself upon the mind of the purchaser.

This case is one which falls clearly within a long line of decisions in the Federal courts. (*Re Herbst Importing Co.*, 30 App. D. C., 297; *Hutchinson* v. *Covert*, 51 Fed., 832; *Eagle White Lead Co.* v. *Pflugh*, 180 Fed., 579; *New Home Sewing Machine Co.* v. *Bloomingdale*, 59 Fed., 284; *Lever Bros.* v. *Pasfield*, 88 Fed., 484; *Chappell* v. *Sheard*, 2 K. & J. 117; *W. A. Gaines & Co.* v. *Turner-Looker Co.*, 204 Fed., 553.) In *Gannert* v. *Rupert* (127 Fed., 962) the mark "Home Comfort" was held to infringe "Comfort," though, as in the present case, the pictorial features of the marks were entirely different both as to subject-matter and to color. In the opinion the court said:

This is a trade-mark case pure and simple. It is not a case of unfair competition. It is founded on a technical, common-law trade-mark.

In *Carmel Wine Co.* v. *California Winery* (38 App. D. C., 1) the mark of the applicant was an oriental scene showing a vineyard and including a herd of camels and two men bearing a grape, and the opponent's mark was a picture of two men bearing a bunch of grapes. The court, sustaining the opposition, said:

We think it is apparent, without argument, that the two marks are deceptively similar within the meaning of the statute. It goes without saying that one has no right to incorporate the mark of another as an essential feature of his mark. Such a practice would lead to no end of confusion, and deprive the owner of a mark of the just protection which the law accords him.

In the present case, it appears that applicant has a branch establishment in St. Louis, the same city in which opposer's business is located. In argument it was stated, and not denied, that their respective places of business are but two blocks distant from each other. Applicant claims but one day's use of the mark prior to filing its application for registration. It alone could profit by confusion between the marks. It can have but one object in attempting to secure registration of a mark so nearly resembling that of its immediate competitor—namely, to attract the trade from opposer's goods to its own by means of a trade-mark expressly condemned by the statute, which forbids the registration of—

trade-marks which are identical with a registered or known trade-mark owned and in use by another, and appropriated to merchandise of the same descriptive properties, or which so nearly resembles a registered or known trade-mark owned and in use by another, and appropriated to merchandise of the descriptive properties, as to

be likely to cause confusion or mistake in the mind of the public, or to deceive purchasers. (Trade-Mark Act of 1905, 33 Stats. L., 724, sec. 5.)

This court has repeatedly said that the whole vocabulary, as well as the inventive imagination of the mind, is at the command of one selecting a trade-mark for his goods, and no excuse is apparent for the adoption of a mark closely approximating that of an earlier user on the same class of goods. Indeed, but one conclusion can be drawn from such conduct, and that is that the applicant is attempting through the color of law to obtain an unfair advantage over his competitor. We deem it our duty, therefore, in all such cases to resolve the doubt in favor of the prior user.

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify these proceedings as by law required.

Affirmed.

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## U. S. Circuit Court of Appeals—Second Circuit.

STAHLBRODT CO. v. FORD MOTOR CO.

*Decided November 14, 1916.*

238 FED. REP., 365.

PATENTS—INVENTION—WIND-GUARD FOR MOTOR-VEHICLES. The Samuel reissue patent, No. 13,574, (original No. 879,195,) for a wind-guard for motor-vehicles, *Held* void for lack of invention in view of the prior art.

APPEAL from the District Court of the United States for the Western District of New York.

(For opinion below see 233 Fed., 678.)

STATEMENT OF THE CASE.

This is an appeal from a decree holding valid and infringed claims 2, 3 and 5 of reissued Letters Patent No. 13,574 granted to Henri Saul Samuel June 10, 1913. These claims are as follows:

2. A wind guard for vehicles consisting of a lower stationary and rigidly supported flat portion extending transversely of the vehicle and inclined rearwardly in proximity to the steering wheel or handle, an upper transparent flat portion adjustably and permanently hinged upon the lower portion and adapted to be folded forwardly against the latter into parallelism therewith, and means for maintaining the portions in one of their positions of relative adjustment, said means being arranged laterally so as to clear the parts when folded.

3. In a wind shield for a motor or similar vehicle, the combination with the dash or front part of the vehicle, of a lower member fixed to the dash and extending inwardly and upwardly to a level near that of the steering wheel or handle, the rods D for maintaining the member in such fixed and rigid position arranged rearwardly of the member and connected thereto and to a rigid part of the vehicle, a second flat and rigid member having a permanent hinged connection with the lower member and extending vertically upward from the lower member in front of the driver's face and means arranged at the ends of the members for adjusting the upper member relatively to the lower member.

5. In a wind shield for motor or similar vehicles the combination with the dash, of a lower flat member rigidly fixed at its front or lower edges to the upper edge of the dash and extending at an inclination rearwardly and upwardly to a level near that of the steering wheel or handle, the rods D for maintaining the member in such fixed and rigid position arranged rearwardly of the member and connected thereto at its respective ends and to a rigid part of the vehicle, a second flat and rigid member having a permanent hinged connection with the lower member to turn relatively thereto on an axis substantially coincident with its lower edge and with the upper edge of the lower member said upper member normally extending upward from the lower member in front of the driver's face but being adapted to fold forwardly against the lower member, and means arranged at each end of the members for adjusting the upper member relatively to the lower member each comprising interlocking devices connected to the members respectively at points adjacent to their axis of relative movement.

*Mr. James Whittemore* and *Mr. Charles Neave* for the appellant.

*Mr. Melville Church* and *Mr. Frederic F. Church* for the appellee.

Before COXE, WARD, and ROGERS, Circuit Judges.

COXE, *Cir. J.*, (after stating the facts as above:)

The motor-car industry has developed so enormously during the last fifteen years that we are apt to regard the completed car of to-day as something akin to the miraculous. The truth is that the perfected structure is due to the evolution of the art by which changes were made and improvements added as the necessity therefor developed. As speed increased, the demand for protection from the wind, rain and dust became urgent. It required no inventive genius to accomplish this result, at least in a primitive manner. As to location, there could be no dispute; the shield must be placed in front of the chauffeur and the other occupants of the car. It must be transparent or the chauffeur cannot see to steer. In other words, the moment the necessity for a wind-shield was apparent the location, the material and the dimensions became instantly obvious. No one possessed of ordinary intelligence would think of locating the shield except in front of the person to be protected; no one would think of constructing it of other than transparent material, making it high enough and broad enough to protect the occupants of the car from wind and rain. So too, when the shield became covered with mist, obscuring the vision, of the chauffeur, it required nothing but ordinary common sense to construct the shield so that a view of the road ahead could be afforded. This might be done by making an observation part through the glass or by dividing the shield into two parts so that the upper half could be opened for a short distance, leaving a longitudinal opening through which the road could be seen.

The extreme simplicity of the problem is so obvious that we are unable to discover anything in Samuel's contribution to the art which arises to the dignity of invention. Mounting the lower section with an inward slant was a perfectly natural and obvious thing to do, but Samuel was not the first to adopt it. Lanchester used this same construction in 1901. This Patent No. 25,121 is for a dashboard which for the present purposes is sufficiently described in the first claim which is as follows:

In self-propelled vehicles, dashboards consisting of a lower portion hinged to the vehicle and an upper adjustable portion substantially as described.

Lanchester's object was the same as that of Samuel, viz., to provide protection from the wind and rain in self-propelled vehicles by means of a two-part dashboard which can be adjusted to different conditions of weather. The identity will be apparent by comparing the above claim with Samuel's second claim. Kerr in 1906 received a patent for windshields for self-propelled motor-vehicles having the same object in view as Lanchester. These patents and other constructions found in the record have the same problem in view which Samuel sought to solve and they did it in substantially the same way.

Lanchester's shield is quite different in appearance from Samuel's, but it will be found on inspection that he had in view the same objects as Samuel and that his structure has substantially every element of the Samuel claims.

The decree is reversed with costs.





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## U. S. Circuit Court of Appeals—Third Circuit.

NEILL *et al. v.* KINNEY.

*Decided January 25, 1917.*

1. PATENTS—INVENTION—COMBINATION OF OLD ELEMENTS.
In looking for invention in a combination of old elements the court is guided by the new and useful means which the combination may afford or the new and useful results which may be obtained from it.

2. SAME—VALIDITY AND INFRINGEMENT—OIL-WELL DERRICK.
The Neill patent, No. 933,386, for an oil-well derrick of tubular metal, while not generic and for a combination of old elements, in view of its novel and useful qualities of simplicity, portability, durability, and economy, all of which have been recognized in the art in a marked degree, discloses patentable invention; also *Held* infringed.

3. SAME—INVENTION—UTILITY OF DEVICE.
While a mere summation of points of merit does not constitute invention, their presence in a markedly increased measure cannot be overlooked in estimating the utility of a device and in determining whether it produces new and useful results within the principle upon which patents are granted.

APPEAL from the District Court of the United States for the Western District of Pennsylvania; Charles P. Orr, judge.

*Mr. Frederick W. Winter* for the appellants.

*Messrs. Kay, Totten & Powell* (*Mr. Robert D. Totten* of counsel) for the appellee.

Before BUFFINGTON, MCPHERSON, and WOOLLEY, Circuit Judges.

WOOLLEY, *Cir. J.*:

This is an action for infringement of Letters Patent No. 933,386, for an oil-well derrick. Claim 1, being the only claim in issue, was held invalid by the district court for want of patentable invention. The case comes before us on this single issue, infringement being found if the patent is valid. The claim fairly describes the invention, and is for a combination containing the elements we have numbered. It is as follows:

1. A metal oil well derrick or tower, comprising (1) tubular leg sections, (2) clamping sockets uniting the ends of adjacent leg sections and (3) provided with two sets of perforated ears or flanges located substantially 90 degrees apart and each providing three perforations arranged in vertical relation to each other, and (4) tubular girts and braces provided with flattened perforated ends, (5) a girt being bolted to the intermediate perforation in each set of the ears or flanges, and (6) a brace bolted to the upper and lower perforations of each set of ears or flanges.

All these elements (with the possible exception of the one numbered 3) are old in the art. We are therefore confronted with the question whether this claim presents a combination involving invention or is a mere aggregation of old elements skilfully arranged.

Drilling-rigs, used in the drilling of oil-wells, have made a great advance from a primitive beginning. Into an art highly developed and conspicuous for the resourcefulness of its operatives the patentee entered, and in combining what was already there, he raises a very close question as to whether the structure of his patent is the product of his own mind or of the minds of others, and whether he has made a contribution to the art so original and substantial as to amount to a step in advance, for which he is entitled to the reward of a patent. The determination of this question has required a consideration of the art; its problems and accomplishments, to an extent not disclosed by the very brief outline that follows.

Exploration for petroleum and natural gas has always been conducted by drilling bore-holes. In drilling bore-holes there are two fundamental operations—drilling and hoisting—and the character of these operations, considered with reference to the purpose for which they are conducted, the region of the undertaking, geological conditions, economy of construction and of operation and maintenance after completion, determines the character of drilling mechanism and structures.

The record date of the art of drilling wells is January 15, 1808, and the original rig, used in drilling for salt, was known as the spring-pole and tripod. This rig consisted simply of a wooden walking-beam or spring-pole mounted on a forked stick, suggestive of an old-fashioned well-sweep, with its stationary end weighted by a stone. To the upper or spring end of the pole was attached a rope, and to the lower end of the rope was connected a crude drilling instrument. This was lowered into tubing consisting of two strips of wood whittled in half-tubes and wrapped with twine. The operation was performed by manually springing the elastic pole up and down, causing the tool at the end of the rope to descend with force, ascend and descend again. Here was a combination of drilling mechanism and drilling structure, and, primitive as it was, it contained the essential features of all subsequent development in deep-well drilling, and was adopted as the best the art afforded when the oil and gas industry started with a rush in 1859.

The spring-pole and tripod principle, in which the structure and means of operation are inseparably combined, was pursued with varied modifications for years, until in the evolution of the art, drilling mechanism became a thing apart from the supporting and hoisting structure which carried it, and the two became separate arts, or certainly distinct branches of the same art. We are concerned in this suit not with drilling mechanism in the sense of power and means of applying it, but with structures in which the drilling means is housed and the drilling operation conducted.

Considered with respect to its characteristic as a structure, the spring-pole and tripod was followed by the square-rigged braced wooden derrick or hoisting-tower of familiar appearance. The very early oil-well derricks of this type were made of poles cut from nearby forests and crudely framed together. Their subsequent modification was brought about by the requirement for increased strength and height, and consisted chiefly in a change from rough timbers put together by inexperienced hands to sawed

lumber framed by skilled carpenters. These derricks were high and narrow, and stood upon comparatively narrow bases. They were subjected to severe lateral strain from wind and to a compression strain that in certain operations of hoisting was tremendous. While the problem of meeting these strains was in a measure solved by triangularly stiffening the structure with braces and girts, the problem of wind-strain had not been completely solved at the time of the invention in suit, but had indeed been somewhat intensified by the substitution of planks for bare timber poles.

The first derricks were made of wood, because of the abundant supply and low cost of material when operating in wooded districts. But operations were at times conducted where wood was not at hand and was to be had only at high cost. The advantage of cheap material for wooden derricks was offset by the high cost of skilled labor required in constructing them and by the very considerable loss of lumber in taking them down by the customary method of toppling them over. Wooden derricks were also liable to destruction by fire, and in regions of large operations were blown down by hundreds in heavy windstorms.

The uncertainty of oil-flow and the movement of operations from one field to another made economy in the construction, removal, and new construction, a factor in the industry; hence inventors turned their thoughts to the art and invented derricks of many types, seeking always a structure made of cheap, strong and durable material, adapted to be moved from place to place and to be used in timberless regions, and so designed as to permit the ready assembling and disassembling of parts at low cost and with little damage. Thus portable and semiportable drilling-rigs came into use. But it was soon found that portable rigs could not economically be made of wood because of its destructibility, so different types of metal and semimetal derricks came into the field, each bringing its own peculiar merits and defects.

The first metal derricks were of structural steel in angle-iron parts. Their advantage over wood consisted in saving the whole structure upon removal; but their disadvantage lay in their weight and in their greater material and labor cost. They were in a sense vertically erected bridges and only men somewhat skilled in the art of bridge-building could erect them.

The next step in metal derricks was in pipe or tubular construction, the particular field of the patent in suit. Pipe construction had advantages over angle-iron construction, but its peculiar defect was weakness at the joints at which the leg-sections or uprights met and from which the girts and braces radiated. The joints held a real problem. This problem was attacked by all patentees whose inventions are cited as anticipations to the patent in suit, and it may safely be said was solved by none of them.

These patents were offered to show the state of the prior art, and were all the testimony produced by the defendant. From these patents, a very brief analysis of which is given in the margin,* it is fair to say that Neill, the patentee, may have gotten the most of his ideas. He may have gotten from Snow (No. 493,660) the idea of a metal derrick, and from Shannon (No. 876,243), Hyde (No. 331,714) and Gates (No. 411,432) the idea of a tubular metal derrick. Wilson (No. 566,364) and Caldwell (No. 487,902) may have suggested a socket without a clamp, and Bullock (No. 407,993) a socket with a clamp, and all excepting Snow may have shown the uses of girts, braces and sectional legs. While the disclosures of these prior patents may in one way or another have contributed elemental ideas to Neill's complete conception, they do not when aggregated disclose the Neill structure, nor did they suggest to others the possibility of his subsequent combination. It is not possible to combine any two of their elements and produce his structure, nor is it possible to produce it by combining all, unless they be substantially modified, and a new element of—

two sets of perforated ears or flanges located substantially 90 degrees apart and each set providing three perforations arranged in vertical relation to each other—

for girt and brace attachment, be added. Though elements of prior-art patents are separately found in modified form in the Neill structure, these elements as combined by Neill resemble nothing before combined in the art, and, in our opinion, do not constitute anticipations of the Neill patent.

* The Shannon patent, No. 876,243, the only tubular metal derrick designed for oil well use which appears actually to have been used, has the fatal defect of threaded leg joints, causing the legs to break where the threads cut the pipe, and also a structural weakness in bolting a pair of braces to each girt and the two girts to the same joint, so that if the joint bolt breaks, the whole corner falls.

In the Hyde patent, No. 331,714, there are neither clamps nor sockets. The leg sections are joined by a threaded union, and are encircled by the eye of the girts and braces at the joint. There is no testimony that derricks of this construction were ever used.

In the Wilson patent, No. 566,364, there is a joint socket (not a *clamp* joint socket) in which the leg sections rest loosely. The girts are connected with the socket by threads, the braces by bolts. There is a resemblance in the mechanism of this structure to that of the patent in suit in the vertical arrangement of the three parts for joining braces and girts.

The Snow patent, No. 493,660, shows a tower for windmills made of angle iron. This construction does not show sectional upright members and therefore does not present the problem of joints and the necessity for clamp joint sockets, the essence of the patent in suit.

The Caldwell patent, No. 487,902, does not disclose means for clamping sections of upright posts. In this construction, the posts merely fit into shallow tubular sockets to which braces are attached, and are adjusted by turnbuckles. There is no evidence that this device was ever used.

The Gates patent, No. 411,432, shows an iron tower for tanks, in which the corner posts are pipes of one piece from bottom to top, but says that the posts may be made of sections and be joined together by ordinary threaded coupling, a thing shown by the testimony in this case to be entirely impracticable for oil well use. No problem of coupling is suggested or solved in this patent.

The Bullock patent, No. 407,993, shows a slotted sleeve for connecting tubular sections. It is a socket, in fact a clamp joint socket, but its arrangement is such that the leg sections enter the socket but a slight distance and are kept from contact by a space through which a tie-rod holding the girt is carried to the other side and bolted. The one similarity of this socket to the socket of the patent is that it is a clamp joint socket, but it is so different in structure and function that it cannot be considered to have solved the problem of joining sectional uprights and horizontal and diagonal girts and braces in one grip.

The Hyde patent, No. 338,668, shows a method of forming an eye in the end of a tubular member. The flattening of a tube end and forming it into an eye is old in the art and is one of the old things which the patentee of the patent in suit appropriated. In doing so, he did not impinge upon whatever invention Hyde may have made. These are all the patents cited.





Though not invalid because anticipated by the art from which its elements were taken, we approach the question whether the patent is invalid for lack of invention in combining those elements. The Patent Office found and the district court denied invention upon precisely the same patent references. As these opposite findings raise a doubt as to invention, we address our inquiry to those considerations which the courts have said turn the scale in such cases. (*Smith* v. *Goodyear Dental Vulcanite Co.*, 93 U. S., 486; 23 L. Ed., 952.)

The district court held the patent invalid upon its finding that the claim of the patent does not disclose a single element not found in the prior art, and that the combination of elements does not produce a new or better result than other derricks in the art, with the possible exception of greater durability.

(1, 2) In looking for invention in a combination of old elements, we are guided by the new and useful means which the combination may afford or the new and useful results which may be obtained from it. The novelty and utility of the patent, both in means and results, are so closely related in the testimony that we shall consider them together. There is no question that the old elements of the patent, when combined, make a new structure; nor is there question that they produce new results. The question is whether the novelty of structure is patentable novelty, in that new results are produced by employing old means in a new way. It is difficult to find invention in the structure from new functions separately performed by the old elements, because alone each performs very much its old function, but collectively they perform a new function by producing new and better results than before produced either separately or in combination. Therefore, the patentable novelty of the invention must be determined not alone by the novelty of its means, which includes marked simplicity of construction and the solution of the problem of weak joints in tubular derricks, but by the number and measure of its new uses and improved results, the principal of which are simplicity and economy in construction, operation and transportation, all promptly recognized and extensively adopted by the art.

The derrick of the patent is singularly simple. It is excelled in that regard by no other derrick shown in the testimony. Its simplicity is its chief claim to excellence, though it was its undoing in the court below. In design it is simpler than a child's Meccano, and in assembling and putting together its parts, less thought is required than in putting together that toy. The parts are so formed in shape and size that they fit only their proper places and cannot be put together wrong. In this respect they are fool-proof. They may be assorted and put in place entirely by unskilled labor with the aid of no other tool than a wrench. The sections are so arranged in dimension that as the structure rises it may be used as its own scaffolding. The clamp-sockets fit only the places intended for them, and to the clamp-sockets are connected the girts and braces in the only places in which they can be fastened, the tension of all parts being estimated and perfected in the shop, thereby dispensing with mechanical adjustment or manipulation in the field. The structure may be disassembled as readily as assembled, again acting as its own scaffolding. It may be transported at lower cost because of its lesser weight and without the damage usual to threaded and delicate parts of other metal designs.

The derrick of the patent, though lighter, is stronger than any shown in the art, and though not presenting the first clamp-joint socket, it employs one that disposes of the problem of weak joints in tubular structures. The structure is more durable in service and transportation, thereby appreciably reducing loss by damage and decreasing cost of labor in those operations, which have always been important economical considerations in the use of derricks. With the derrick of the patent it is testified that the only loss customarily occurring is the loss of nuts and bolts. The saving in labor cost is effected and measured by the substitution of common labor for skilled labor. While its original cost is greater than that of a wooden derrick, yet because of its durability and economy in handling, its cost is less in the end. Its capacity to stand lateral wind-pressure is an important element of economy, one witness testifying that out of 1,000 wooden rigs he had seen as many as 200 blown down in one storm, while he had never had a Neill derrick blown down.

Its novelty and utility in structure and results have commanded a prompt and extensive recognition by the art, one witness testifying that his oil company abandoned the use of all wooden and steel derricks when the Neill derrick appeared, and now uses 3,000 of them. Another witness stated that the other steel derricks he had seen in use were about one per cent. of the number of Neill derricks. Another testified that his oil company had in use seven or eight angle-iron derricks and five or six hundred Neill derricks. Rig-builders testified to the rapidly growing and expanding use of the Neill derricks over other metal derricks; and the licensee showed that it had furnished approximately one hundred and sixty-five thousand clamps (the central element of the patent) for use upon Neill derricks in all the oil States of the country, except California, and that it had sold derricks to 200 customers widely distributed in East Indies, Russia, Austria, Galicia, Roumania, Trinidad, and British Guinea.

(3) While the derrick of the patent, in view of its position in the art, is not a pioneer, and while it is not a great invention, yet it has in combination in a novel and useful way the qualities of simplicity, portability, durability and economy. We are of course aware that a mere summation of points of merit does not constitute invention any more than a mere aggregation of elements. Yet their presence in a markedly increased measure cannot be overlooked in estimating the utility of a device and in determining whether it produces new and useful results within the principle upon which patents are granted. These qualities do not separately appear to the same extent in any derrick shown to have

existed before, and are not collectively found in any derrick at all. The recognition by the art of its new means and results, and the fact that the structure of the patent has largely replaced many structures of other designs, constitute persuasive evidence of invention and are proper matters to be put in the scale when invention is in doubt. (*Minerals Separation Co.* v. *Hyde*, 242 U. S., 261; 37 Sup. Ct., 82; 60 L. Ed., —; *Diamond Rubber Co.* v. *Consolidated Tire Co.*, 220 U. S., 428; 31 Sup. Ct., 444; 55 L. Ed., 527; *Carnegie Steel Co.* v. *Cambria Iron Co.*, 185 U. S., 403, 429, 430; 22 Sup. Ct., 698; 46 L. Ed., 968; *The Barbed Wire Patent*, 143 U. S., 275; 12 Sup. Ct., 443; 36 L. Ed., 154; *Smith* v. *Goodyear Dental Vulcanite Co.*, 93 U. S., 486; 23 L. Ed., 952.)

We are of opinion that invention is shown and that the first claim of the patent is valid.

Although the patentee has not made a generic invention, he has nevertheless made a distinct advance in the art, for which within its scope he is entitled to protection from infringement. We are of opinion that the structure of the defendant clearly infringes the first claim of the patent in suit, and therefore direct that the decree below be reversed.

## ADJUDICATED PATENTS.

(U. S. C. C. A.) The Benthall patent, No. 890,401, for a peanut-stemming saw, *Held* void for lack of invention and also not infringed. *National Mach. Corp.* v. *Benthall Mach. Co.*, 241 Fed. Rep., 72.

(U. S. C. C. A.) The Benthall patent, No. 890,401, for a peanut-stemming machine, *Held* void for prior public use by another of a machine embodying the same principles of operation. *Virginia-Carolina Peanut Picker Co.* v. *Benthall Mach. Co.*, 241 Fed. Rep., 89.

(U. S. C. C. A.) The Daudelin patent, No. 737,714, for shuttle and shuttle-eye, *Held* not infringed. *Shambow* v. *New Bedford Shuttle Co.*, 241 Fed. Rep., 115.

(U. S. C. C. A.) The Ferguson and Benthall patent, No. 808,442, for a peanut-picking machine, *Held* void for anticipation and also not infringed. *Virginia-Carolina Peanut Picker Co.* v. *Benthall Mach. Co.*, 241 Fed. Rep., 89.

(U. S. C. C. A.) The Ferguson and Benthall patent, No. 808,442, for a peanut-picking machine, *Held* void for lack of invention and prior use and also not infringed. *Debnam* v. *Benthall Mach. Co.*, 241 Fed. Rep., 103.

(U. S. C. C. A.) The Hobson patent, No. 642,609, for a process of treating tobacco to flavor the same. *Held* not infringed. *Hobson* v. *Imperial Tobacco Co. of Great Britain & Ireland*, 241 Fed. Rep., 126.

(U. S. D. C.) The Hornby patent, No. 1,079,245, for a mechanical building toy, *Held* infringed on motion for preliminary injunction. *Meccano, Limited*, v. *John Wanamaker, New York*, 241 Fed. Rep., 133.

(U. S. C. C. A.) The Jones patent, No. 908,271, for a peanut-stemming machine, *Held* void for anticipation. *National Mach. Corp.* v. *Benthall Mach. Co.*, 241 Fed. Rep., 72.

(U. S. C. C. A.) The Kellar patent, No. 1,016,159, for a gate for irrigation systems, *Held* valid and infringed. *Snow* v. *Kellar-Thomason Co.*, 241 Fed. Rep., 119.

(U. S. C. C. A.) The Marks patent, No. 635,141, for a process of reclaiming rubber from vulcanized rubber waste, *Held* not infringed. *Philadelphia Rubber Works Co.* v. *Portage Rubber Co.*, 241 Fed. Rep., 108.

## Changes in Classification.

(ORDER No. 2,327.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., June 4, 1917.*

The following change in the classification of inventions is hereby directed, to take effect immediately:

In class 29, Metal-Working, (Division XIII,) establish the following subclass and definition:

**Blanks and processes—**
Ferrules, rings, and thimbles—
156.1. Packing-rings.

156.1. Blanks and processes, Ferrules, rings, and thimbles. Packing-rings. For the production of piston or other metallic rings adapted in use to prevent the escape of confined gases or other fluids.

The patents contained in this subclass have been taken from Class 29, Metal-Working, subclasses 148, Blanks and processes, and 156, Blanks and processes, Ferrules, rings, and thimbles.

THOMAS EWING,
*Commissioner.*

## Changes in Classification.

(ORDER No. 2,330.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., June 11, 1917.*

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 73, Measuring Instruments, (Division XXXVI,) establish subclasses—

185. **Pressure derivatives—**
186. Mean effective pressure,
187. Work and power.

The patents contained in these subclasses have been taken from class 73, Measuring Instruments, subclass 15, Dynamometers, abolished in order No. 2,311.

THOMAS EWING,
*Commissioner.*





THE
# OFFICIAL GAZETTE
OF THE
# United States Patent Office.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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## Issue of June 26, 1917.

| | | | |
|---|---|---|---|
| Patents | 715—No. | 1,230,834 to No. | 1,231,548, inclusive. |
| Designs | 16—No. | 50,964 to No. | 50,979, inclusive. |
| Trade-Marks | 43—No. | 117,235 to No. | 117,276, inclusive. |
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| Reissues | 5—No. | 14,320 to No. | 14,324, inclusive. |
| Total | 792 | | |

## Amendments to Rules of Practice.

(ORDER No. 2,331.)

Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, Rule 77 of the Rules of Practice in the Patent Office is amended by adding thereto the following paragraph:

"Whenever, during a time when the United States is at war, publication of an invention by the granting of a patent might, in the opinion of the Commissioner, be detrimental to the public safety or defense or might assist the enemy or endanger the successful prosecution of the war, he may suspend action on the application therefor."

so that the rule as amended will read as follows:

"77. If an applicant neglect to prosecute his application for one year after the date when the last official notice of any action by the office was mailed to him, the application will be held to be abandoned, as set forth in Rule 171.

"Suspensions will only be granted for good and sufficient cause, and for a reasonable time specified. Only one suspension may be granted by the Primary Examiner; any further suspension must be approved by the Commissioner.

"Whenever action upon an application is suspended upon request of an applicant, and whenever an applicant has been called upon to put his application in condition for interference, the period of one year running against the application shall be considered as beginning at the date of the last official action preceding such actions.

"Whenever, during a time when the United States is at war, publication of an invention by the granting of a patent might, in the opinion of the Commissioner, be detrimental to the public safety or defense or might assist the enemy or endanger the successful prosecution of the war, he may suspend action on the application therefor."

THOMAS EWING,
*Commissioner.*

## Adverse Decisions in Interference.

PATENT No. 1,179,293.

On May 21, 1917, a decision was rendered that Frank L. Dodgson was not the first inventor of the subject-matter covered by claims 1, 2, 3, 4, and 5 of his Patent No. 1,179,293, subject, "Selective relay," and no appeal having been taken within the time allowed such decision has become final.

## Changes in Classification.

(ORDER No. 2,332.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., June 20, 1917.*

The following change in the classification of inventions is hereby directed, to take effect immediately:

In class 84, Music, (Division V,) abolish subclass—

**Piano—**
Cases—
148. Lid-props.

The patents formerly contained in this subclass have been placed in class 217, Wooden Receptacles, subclasses 57, Boxes, Closures, Hinged; 60, Boxes, Closures, Hinged, Supports, and 61, Boxes, Closures, Hinged, Supports, Detachable.

THOMAS EWING,
*Commissioner.*

## Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
*Washington, D. C., June 16, 1917.*

*John L. Rodgers & Co., their assigns or legal representatives, take notice:*

An interference having been declared by this Office between the application of Everett, Aughenbaugh & Co., of Waseca, Minn., for registration of a trade-mark and trade-mark registered August 25, 1891, No. 20,075, to John L. Rodgers & Co., of 218 Spears' Wharf, Baltimore, Md., and a notice of such declaration sent by registered mail to said John L. Rodgers & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said John L. Rodgers & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
*First Assistant Commissioner.*

## Amendments.

In order to insure the prompt delivery of amendments to the proper examining division, applicants are requested in their actions on applications to give the division number and the room number appearing on the last Office letter, as well as the date of such letter.

# APPLICATIONS UNDER EXAMINATION.

*Condition at Close of Business June 22, 1917.*

| Room No. | Divisions and subjects of invention. | Oldest new application and oldest action by applicant awaiting office action. | | No. of applications awaiting action. |
|---|---|---|---|---|
| | | New. | Amended | |
| 314 | 1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers. | May 5 | May 9 | 249 |
| 128 | 2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco. | Mar. 14 | Apr. 4 | 401 |
| 175 | 3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working. | June 5 | Mar. 3 | 75 |
| 234 | 4. Conveyors; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists. | May 28 | June 6 | 150 |
| 167 | 5. Bookbinding; Harvesters; Jewelry; Music | Feb. 28 | May 12 | 195 |
| 318 | 6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation. | Jan. 25 | Mar. 27 | 355 |
| 312 | 7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes | Feb. 7 | Apr. 28 | 630 |
| 131 | 8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports. | Feb. 15 | Apr. 28 | 889 |
| 142 | 9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps | Feb. 6 | May 31 | 401 |
| 235 | 10. Carriages and Wagons | Feb. 20 | May 25 | 751 |
| 154 | 11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus. | Apr. 30 | May 25 | 169 |
| 324 | 12. Journal-Boxes, Pulleys, and Shafting; Machine Elements | Apr. 12 | Apr. 14 | 628 |
| 329 | 13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning. | Mar. 24 | May 26 | 529 |
| 307 | 14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working. | Mar. 20 | Apr. 2 | 246 |
| 308 | 15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics. | May 23 | June 5 | 167 |
| 109 | 16. Electric Signaling; Radiant Energy; Telegraphy; Telephony | Dec. 30 | Apr. 24 | 594 |
| 303 | 17. Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting. | Apr. 4 | May 25 | 124 |
| 327 | 18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Lubrication; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps, Steam-Engines; Steam-Engine Valves. | Apr. 27 | May 1 | 258 |
| 236 | 19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels | Feb. 16 | Mar. 28 | 484 |
| 179 | 20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking. | June 20 | June 2 | 122 |
| 182 | 21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling. | Mar. 6 | Apr. 28 | 388 |
| 249 | 22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships. | Feb. 13 | Apr. 17 | 781 |
| 379 | 23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism. | Mar. 15 | Sept. 6 | 312 |
| 144 | 24. Apparel; Apparel Apparatus; Sewing-Machines; Garment Supporters | Apr. 18 | June 2 | 226 |
| 315 | 25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation. | May 25 | May 19 | 103 |
| 105 | 26. Electricity, Generation; Motive Power | Feb. 1 | Mar. 6 | 524 |
| 375 | 27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus | May 2 | May 21 | 205 |
| 63 | 28. Internal-Combustion Engines | Mar. 6 | Apr. 21 | 306 |
| 147 | 29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools. | Feb. 8 | May 1 | 345 |
| 152 | 30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines | Mar. 8 | June 2 | 344 |
| 172 | 31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt. | Apr. 12 | May 11 | 232 |
| 278 | 32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration. | Dec. 20 | May 23 | 951 |
| 70 | 33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving. | Mar. 21 | May 3 | 311 |
| 304 | 34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners. | Feb. 19 | May 5 | 245 |
| 57 | 35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet | Mar. 10 | June 9 | 464 |
| 264 | 36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring | Mar. 30 | June 13 | 501 |
| 107 | 37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications. | Feb. 5 | Apr. 21 | 580 |
| 378 | 38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells | May 22 | May 11 | 119 |
| 321 | 39. Water Distribution | Mar. 8 | Apr. 12 | 406 |
| 280 | 40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles. | Apr. 16 | June 2 | 396 |
| 125 | 41. Railway Draft Appliances; Resilient Tires and Wheels | Mar. 31 | May 19 | 314 |
| 244 | 42. Electricity, Conductors; Railway Signaling; Electricity-Transmission to Vehicles | Jan. 31 | May 16 | 335 |
| 382 | 43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers, Sewerage; Surgery; Water Purification. | Apr. 14 | May 2 | 102 |

Oldest new case, Dec. 20; oldest amended, Sept. 6.
Total number of applications awaiting action..... 15,907

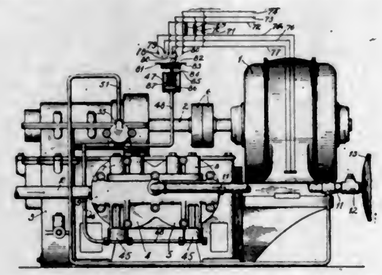
| | | | | |
|---|---|---|---|---|
| 163 | TRADE-MARKS, DESIGNS, LABELS AND PRINTS: | | | |
| | Trade-Marks | Apr. 19 | May 18 | 982 |
| | Designs | May 17 | June 1 | 259 |
| | Labels and Prints | June 14 | June 15 | 30 |



# PATENTS

## GRANTED JUNE 26, 1917.

1,230,834. MECHANISM FOR UNLOADING COMPRESSORS FOR STARTING. BURTON S. AIKMAN, Milwaukee, Wis., assignor to National Brake & Electric Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Dec. 6, 1913. Serial No. 804,959. (Cl. 230—24.)



1. In combination a compressor having a valve, said valve being adapted to be held open to relieve the compressor during starting, a delivery main, a tank, a loaded valve between said main and said tank for retaining a predetermined pressure in said main upon initial operation of said compressor, and means operated by the fluid pressure retained by said last valve for opening said first valve to relieve said compressor during starting.

2. In combination a motor, a compressor having a valve, said valve being adapted to be held open to relieve the compressor during starting of the motor, a delivery main, a tank, a loaded valve between said main and said tank for retaining a predetermined pressure in said main upon initial operation of said compressor, means controlled by the pressure retained by said last named valve for holding said first valve open, and centrifugal means for controlling said last means to restore said first valve to its seat.

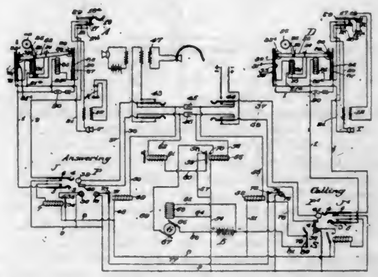
3. In combination a fluid compressor, a suction valve for said compressor, a cylinder for holding said valve open to relieve said compressor, a delivery main, a tank, a loaded valve between said main and said tank for retaining a predetermined pressure in said main upon initial operation of said compressor, and connecting means between said main and said cylinder for disabling said suction valve by means of the pressure retained by said loaded valve.

4. In combination a fluid compressor, an electric motor for driving said compressor, a valve for said compressor, said valve being adapted to be held open to relieve the compressor during starting of said motor, a fluid pressure element for operating said valve to relieve the compressor, a delivery main, a tank, a loaded valve between said main and said tank for retaining in said main a predetermined pressure upon initial operation of said compressor and a connection between said pressure controlled element and said main.

5. In combination a compressor, an induction motor for operating said compressor, a suction valve for said compressor, a fluid pressure element for holding said suction valve upon to relieve the compressor during starting of said motor, a delivery main, a tank, a loaded valve between said main and said tank for retaining in said main predetermined pressure upon initial operation of said compressor, a connection between said main and said cylinder and a centrifugal governor controlling said connection.

[Claims 6 to 41 not printed in the Gazette.]

1,230,835. TELEPHONE-EXCHANGE SYSTEM. GARRISON BABCOCK, Chicago, Ill., assignor to Telechronometer Company, Rochester, N. Y., a Corporation of New York. Original application filed Feb. 17, 1910, Serial No. 544,429. Divided and this application filed Aug. 8, 1913. Serial No. 783,661. (Cl. 179—9.)



1. In a telephone exchange system, the combination of a main exchange, telephone lines extending from substations to such exchange, a meter at one of such substations, an operating magnet for the meter 85, means controlled by the hook switch for energizing such magnet, a resetting magnet 31 for the meter, and means 59 controlled by the response of the called subscriber for reversing the direction of current flow in the line to actuate such resetting magnet.

2. In a telephone exchange system, the combination of a main exchange, telephone lines extending from substations to such exchange, a meter at one of such substations, an operating magnet for the meter, means controlled by the hook switch for energizing such magnet, a resetting magnet for the meter, means controlled by reversal of the current in the line for actuating such resetting magnet, and means for locking the meter in either its operated or set position.

3. In a telephone exchange system, the combination of a main exchange, telephone lines extending from substations to such exchange, a meter at one of such substations, an operating magnet for the meter, means controlled by the hook switch for energizing such magnet, a resetting magnet for the meter, means controlled by reversal of the current in the line for actuating such resetting magnet, means for closing a shunt between the terminals of the resetting magnet by its operation, and means for opening the actuating circuit of the operating magnet by its operation.

4. In a telephone exchange system, the combination of a main exchange, telephone lines extending from substations to such exchange, a meter at one of such substations, an operating magnet for the meter, means controlled by the hook switch for energizing such magnet, a resetting magnet for the meter, means controlled by reversal of the current in the line for actuating such resetting magnet, means for closing a shunt between the terminals of the resetting magnet by its operation, and means for opening the actuating circuit of the operating magnet by its operation.

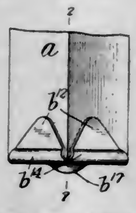
5. In a meter adapted for use at a telephone substation, the combination of registering mechanism, means for electromagnetically operating the registering mechanism, and

switch springs controlled by the operation of the actuating mechanism adapted to open the circuit of the operating mechanism by its operation, such springs adapted to retain the operating mechanism in its actuated position.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,836. GLIDER FOR FURNITURE-LEGS. ADOLPH BALLENBERG, New York, N. Y. Filed Oct. 14, 1915. Serial No. 55,775. (Cl. 155—33.)



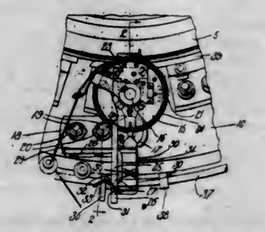

1. A gliding attachment for an angular leg of an article of furniture, said attachment being formed from sheet metal and consisting of a bottom plate approximately triangular in form and provided at one side edge with an upwardly directed plate having a top portion which fits in the angle of the leg and at the other side edge portions thereof with upwardly directed spring clamping members which engage the outer surfaces of side portions of the leg and which are provided at the bottom thereof with outwardly directed transverse bends or beads, said bottom plate being also provided with a central convex bearing.

2. A gliding attachment for use in connection with an angular support, said attachment being formed from sheet metal and consisting of a bottom plate on which the support rests, and a back plate extending upwardly from the bottom plate and being provided with a top plate which fits transversely in the angle of the support, said bottom plate being provided with upwardly directed spring clamp members which engage the outer surface of the sides of the support, and said bottom plate being also provided with a convex bearing member.

3. A device of the class described adapted to be used in connection with an angular support, said device being formed from sheet metal and consisting of a bottom plate on which the support rests, a back plate and a top plate, said bottom plate being also provided with upwardly directed spring clamping members which engage the outer surfaces of the sides of the support, the bottom plate being provided with a convex bearing member and said top and bottom plates being provided with apertures.

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1,230,837. CIRCULAR-KNITTING MACHINE. WILLIAM T. BARRATT, Bennington, Vt., assignor to Charles S. Kehoe, Annie Cooper, and Alexander J. Cooper, executors of Charles Cooper, deceased, Bennington, Vt. Original application filed Feb. 11, 1916, Serial No. 77,782. Divided and this application filed July 24, 1916. Serial No. 110,829. (Cl. 66—27.)



1. A knitting machine having, in combination, a needle carrier with needles thereon, a bed plate upon which said needle carrier is rotatably mounted, a standard adjustably mounted on said bed plate, a rocker frame pivoted to said standard, a sinker wheel equipped with sinker blades journaled to rotate upon said rocker frame and eccentric to the axis thereof and yielding means fast to said standard adapted to hold said rocker frame in position and prevent the same from rotating while said sinker blades are in operative engagement with said needles, whereby said sinker wheel, rocker frame and yielding means may be simultaneously adjusted relatively to said needle carrier.

2. A knitting machine having, in combination, a needle carrier with needles thereon, a bed plate upon which said needle carrier is rotatably mounted, a standard adjustably mounted on said bed plate, a rocker frame pivoted to said standard, a sinker wheel equipped with sinker blades journaled to rotate upon said rocker frame and eccentric to the axis thereof and yielding means fast to said standard adapted to hold said rocker frame in position and prevent the same from rotating while said sinker blades are in operative engagement with said needles, said yielding means also adapted to hold said rocker frame in position with said sinker blades out of engagement with said needles, whereby said sinker wheel, rocker frame and yielding means may be simultaneously adjusted relatively to said needle carrier.

3. A knitting machine having, in combination, a needle carrier with needles thereon, a bed plate upon which said needle carrier is rotatably mounted, a standard adjustably mounted on said bed plate, a rocker frame pivoted on said standard, a sinker wheel equipped with sinker blades journaled to rotate upon said rocker frame and eccentric to the axis thereof, an arm on said rocker frame, a stop and a flat spring on said standard, said spring being bent at its free end and adapted to bear against said arm upon opposite sides thereof alternately, whereby said arm may be held against said stop or out of contact therewith, whereby said sinker wheel, rocker frame and spring may be simultaneously adjusted relatively to said needle carrier.

4. A knitting machine having, in combination, a needle carrier with needles thereon, a bed plate upon which said needle carrier is rotatably mounted, a standard adjustably mounted on said bed plate, a rocker frame, pivoted on said standard, a striker wheel equipped with sinker blades journaled to rotate upon said rocker frame and eccentric to the axis thereof, an arm on said rocker frame, a stop and a U-shaped flat spring, one leg of said U fastened to said standard, the other leg of said U being bent at its free end and adapted to bear against said arm upon opposite sides thereof alternately, whereby said frame may be held against said stop or out of contact therewith, whereby said sinker wheel, rocker frame and U-shaped flat spring may be simultaneously adjusted relatively to said needle carrier.

5. A knitting machine having, in combination, a needle carrier with needles thereon, a bed plate upon which said needle carrier is rotatably mounted, a standard adjustably mounted on said bed plate, a rocker frame pivoted on said standard, a sinker wheel equipped with sinker blades journaled to rotate upon said rocker frame and eccentric to the axis thereof, an arm on said rocker frame, a stop, a U-shaped flat spring, one leg of said U fastened to said standard, the other leg of said U being bent at its free end and adapted to bear against said arm upon opposite sides thereof alternately, whereby said frame may be held against said stop or out of contact therewith, and a stationary stop arranged to engage the base of said U-shaped spring, whereby said sinker wheel, rocker frame, stop and U-shaped flat spring may be simultaneously adjusted relatively to said needle carrier.

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1,230,838. FREIGHT-TRANSPORTER. IVAN ARKLEY BAYLEY, North Sydney, Nova Scotia, Canada. Filed Aug. 11, 1916. Serial No. 114,353. (Cl. 9—15.)

1. In a freight transporter, the combination of a plurality of longitudinally extending series of vertical rods, a plurality of longitudinally extending series of horizontal rods, rods of said first mentioned series being secured to rods of said second mentioned series, a plurality of longitudinally extending rods constituting transversely extending series and vertically extending series and secured to rods of the two first mentioned series, the longitudinally extending series of vertical rods and the longitudinally extending series of horizontal rods forming longitudinal spaces for timber or other freight.





2. In a freight transporter, the combination of a plurality of longitudinally extending series of vertical rods, a plurality of longitudinally extending series of horizontal rods, rods of said first mentioned series being secured to rods of said second mentioned series, a plurality of longitudinally extending rods constituting transversely extending series and vertically extending series and secured to rods of the two first mentioned series, and a series of encircling rods, the longitudinally extending series of vertical rods and the longitudinally extending series of horizontal rods forming longitudinal spaces for timber or other freight.

3. In a freight transporter, the combination of a plurality of longitudinally extending series of vertical rods, a plurality of longitudinally extending series of horizontal rods, rods of said first mentioned series being secured to rods of said second mentioned series, a plurality of longitudinally extending rods constituting transversely extending series and vertically extending series and secured to rods of the two first mentioned series, and a series of encircling rods, the longitudinally extending series of vertical rods and the longitudinally extending series of horizontal rods and the encircling rods forming longitudinal spaces for timber or other freight.

4. In a freight transporter, the combination of a plurality of longitudinally extending series of vertical rods, a plurality of longitudinally extending series of horizontal rods, rods of said first mentioned series being secured to rods of said second mentioned series, a plurality of longitudinally extending rods constituting transversely extending series and vertically extending series and secured to rods of the two first mentioned series, and rods lying in a substantially vertical plane and disposed at an angle to the vertical rods and secured thereto, and longitudinally extending series of vertical rods and the longitudinally extending series of horizontal rods forming longitudinal spaces for timber or other freight.

5. In a freight transporter, the combination of a plurality of longitudinally extending series of vertical rods, a plurality of longitudinally extending series of horizontal rods, rods of said first mentioned series being secured to rods of said second mentioned series, a plurality of longitudinally extending rods constituting transversely extending series and vertically extending series and secured to rods of the two first mentioned series, the longitudinally extending series of vertical rods and the longitudinally extending series of horizontal rods forming longitudinal spaces for timber or other freight, some of the longitudinally extending rods having means for securing hawsers thereto.

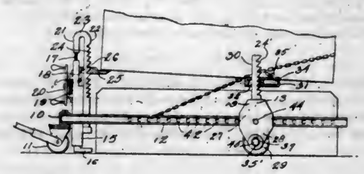
[Claim 6 not printed in the Gazette.]

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1,230,839. TRUCK. VICTOR E. BEAGLE, Binghamton, N. Y. Filed June 10, 1916. Serial No. 102,925. (Cl. 21—65.)

1. An adjustable wheel mounting for trucks of the character described comprising a body element constructed for slidable engagement upon a truck side frame, an upstanding arm carried thereby, a vertically slidable bracket carried thereby, means for securing the bracket adjustably thereon, and a supporting wheel carried by the said mounting.

2. In a truck of the character described a wheeled frame having a wheel element at the forward part, said frame including longitudinal side members, wheel mountings slidably engaged therewith each comprising a body element, an upstanding arm thereon; a vertically adjustable bracket thereon, a transverse removable load support engaged with the brackets, and a supporting wheel carried by each wheel mounting.



3. An adjustable wheel mounting for side members of truck frames comprising a body element, leg elements carried thereby having tapered transverse openings therethrough, a hollow shaft engaged through the openings, cones secured upon the shaft engaged snugly in said openings, and a revoluble wheel mounted upon the shaft between the legs.

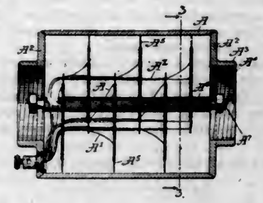
4. In a truck of the character described, a frame including side elements, a longitudinally adjustable supporting wheel mounting on each, including an axle mounting, a hollow axle shaft carried thereby, and a revoluble supporting wheel mounted upon the shaft, and a transverse removable load support slidable in the hollow shafts.

5. In a truck of the character described a wheeled frame having a wheel element at the forward part, said frame including longitudinal side members, wheel mountings slidably engaged therewith each comprising a body element, an upstanding arm thereon, a vertically adjustable bracket thereon, a transverse removable load support engaged with the brackets, means to secure said transverse support at each end on respective wheel mountings, and a supporting wheel carried by each said mounting.

[Claim 6 not printed in the Gazette.]

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1,230,840. MEANS FOR FACILITATING STARTING OF GAS-ENGINES. CHARLES H. BELKNAP, Brooklyn, N. Y. Filed Mar. 10, 1916. Serial No. 83,263. (Cl. 219—39.)



1. In an explosion engine the combination with the air intake pipe of a carbureter, of a heating device composed of a shell, diaphragms of insulating material within the shell, coils constituting heating elements of an electric heater arranged upon the surfaces of the diaphragms and a source of electric energy.

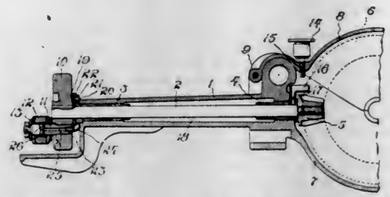
2. In an explosion engine the combination with the air intake pipe of a carbureter, of a heating device acting upon the air consisting of a shell, mica diaphragms arranged in staggered relation within the shell, coils of wire constituting the elements of an electric heating device arranged upon the surfaces of the diaphragms so that the air in passing through the device must pursue a tortuous course over the coils, a source of electric energy, and means for connecting the shell and the pipe.

5. The combination, with the air-intake pipe of a carbureter, of an electric heater for the air; a motor-car, a door therefor, a switch for cutting out the heater, and a connection between the door and the switch causing the opening of the door to operate the switch.

7. As a new article of manufacture, an electric heater for the air-intake pipe of a carbureter, comprising a shell, diaphragms within the shell, coils upon the diaphragms, the diaphragms being in staggered relation to one another, and means for connecting the shell in the intake-pipe.

[Claims 3, 4, and 6 not printed in the Gazette.]

1,230,841. MOWER-OILING SYSTEM. BERT R. BENJAMIN, Oak Park, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Jan. 17, 1916. Serial No. 72,510. (Cl. 184—6.)



1. In combination, a frame, a shaft thereon, a bearing for said shaft, gearing connected to one end of said shaft, a gear casing inclosing said gearing and having an oil inlet therein, and means integral with said bearing receiving oil from said inlet and delivering the same to said bearing.

2. In combination, a frame, a shaft carried thereon, a bearing member for said shaft, gearing connected to said shaft, a gear casing carried on said frame, a gear casing cover, an oil cup threaded in said cover, and a coöperating cup receiving oil from said first mentioned cup and delivering the same to said shaft bearing.

3. In combination, a mower frame, a solid crank shaft journaled thereon, a crank on said shaft, a crank pin on said crank, a pitman journaled on said crank pin, and means for supplying oil to the bearing surfaces of said pitman from the rear end of said shaft.

4. In combination, a mower frame, a crank shaft journaled thereon, a crank on said shaft, a crank pin on said crank, a pitman journaled on said crank pin, and means including a casing inclosing said shaft for supplying oil to the bearing surfaces of said pitman and crank shaft from the rear end of said shaft.

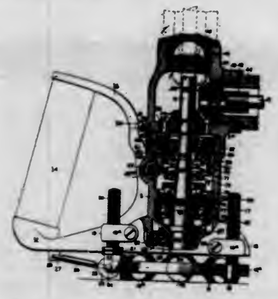
5. In combination, a frame, a shaft thereon, a bearing for said shaft, a crank on said shaft, a crank pin on said crank, a pitman journaled on said pin, and means including a casing inclosing said shaft for supplying lubricant from a single point to the bearing surfaces of said shaft and pitman.

[Claims 6 to 12 not printed in the Gazette.]

1,230,842. TOOL FOR TREATING STONE, CONCRETE, AND OTHER MATERIALS. JOHN O. BERG, New York, N. Y., assignor to Rotary Power-Tool Company, Inc., New York, N. Y., a Corporation of New York. Filed Mar. 13, 1915, Serial No. 14,101. Renewed June 3, 1916. Serial No. 101,645. (Cl. 125—6.)

1. In a tool of the class described, a rotary toothed cutter supported to be rotated by rolling engagement with the surface to be treated, said cutter having the cutting edge of each tooth leading in the direction of rotation of said cutter and having the leading face of each tooth receding, with respect to said direction of rotation, from the radius to the cutting edge, and means for rolling said cutter bodily over the surface to be treated.

2. In a tool of the class described, a rotary toothed cutter supported to be rotated by rolling engagement with the surface to be treated, said cutter having the cutting edge of each tooth leading in the direction of rotation of said cutter and having the leading face of each tooth receding, with respect to said direction of rotation, from the radius to the cutting edge, means for rolling said cutter bodily over the surface to be treated, and means for yieldingly holding said cutter in engagement with the surface to be treated.



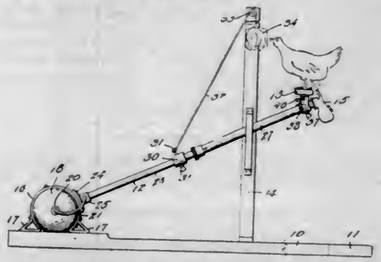
3. In a tool of the class described, a rotary toothed cutter supported for rotation by rolling engagement with the surface to be treated, said cutter having the body of each tooth receding, with respect to the direction of rotation of the cutter, from the radius to the cutting edge, and a carrier automatically rolling said cutter bodily in a closed path while maintaining the axis of the cutter in one plane.

4. In a tool of the class described, a rotary toothed cutter supported for rotation by rolling engagement with the surface to be treated, said cutter having the body of each tooth receding, with respect to the direction of rotation of the cutter, from the radius to the cutting edge, a carrier automatically rolling said cutter bodily in a closed path while maintaining the axis of the cutter in one plane, and a resilient mouth for said carrier pressing said carrier outward transversely to said plane.

5. In a tool of the class described, a rotary toothed cutter supported for rotation by rolling engagement with the surface to be treated, said cutter having the body of each tooth receding, with respect to the direction of rotation of the cutter, from the radius to the cutting edge, means for constantly pressing said cutter into engagement with the surface to be treated, and means for repeatedly rolling said cutter bodily over said surface in the direction to effect the aforementioned rotation of said cutter.

[Claims 6 to 20 not printed in the Gazette.]

1,230,843. FOWL-DISINFECTANT APPARATUS. DAVID B. BIRD, Chicago, Ill. Filed Oct. 14, 1916. Serial No. 125,613. (Cl. 119—159.)



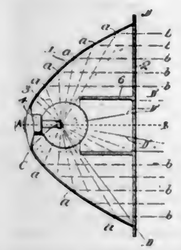
1. A lever, resilient means supporting the lever in predetermined initial position, a perch on the lever, a spraying device adjacent the perch for action upon a fowl when on the perch, a blowing device constructed to be actuated by said lever, duct connections between the blowing device and the spraying device, and operative connections between said lever and the blowing device, whereby the weight of a fowl on the lever will operate the blower for the purposes described.

3. In a device of the class described, a lever, a perch thereon, a vertically movable food support, located adjacent the perch, and operative connections between the lever and the food support for upward movement of the food support under downward movement of the lever.

[Claims 2 and 4 to 10 not printed in the Gazette.]



1,230,844. DEVICE FOR ARRESTING LIGHT-RAYS. FRANK M. BLAIR and FREDERIC M. BLACK, Newark, Ohio. Filed Feb. 27, 1917. Serial No. 151,328. (Cl. 240—48.4.)

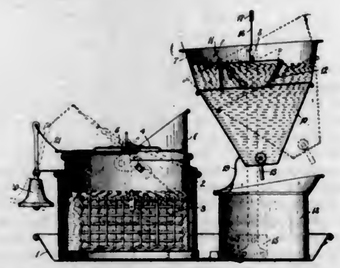


1. A front glass for a projector comprising a transparent glass plate adapted to be mounted in front of the source of light of a projector, said front glass having a frosted glass tube formed integral with the front glass and projecting from the surface of the latter, whereby direct rays from the source of light are arrested by the tube when the plate is mounted in front of a projector.

3. In a headlight, the combination of a reflector, a source of light disposed in the focal center of the reflector and in the longitudinal axis of the latter, a glass plate mounted in front of the reflector and source of light provided with a semi-transparent inwardly projecting glass tube, and a lens mounted in front of the glass tube.

[Claims 2 and 4 to 7 not printed in the Gazette.]

1,230,845. EGG-COOKING APPARATUS AND TIMER. RALPH V. BLAKE, New York, N. Y. Filed Oct. 19, 1916. Serial No. 126,490. (Cl. 161—16.)

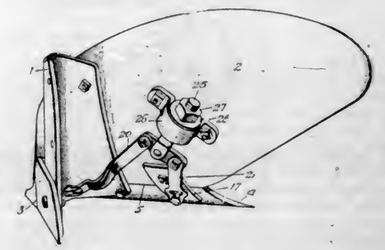


1. In an apparatus for controlling the cooking of eggs, a receptacle having two compartments, one above the other, the upper compartment having a central opening leading to the lower compartment, the lower compartment having a discharge outlet, means for controlling the discharge of water from the lower compartment independently of the upper compartment, a pivotal support for the receptacle near its upper portion and a stop for holding the recetacle in position so that its center of gravity when both compartments are filled with water is at one side of the vertical plane through the pivotal support whereby when the water has been discharged from the lower compartment the receptacle will become over balanced and discharge the water from the upper compartment.

2. In an apparatus for controlling the cooking of eggs, a receptacle having two compartments, one above the other, adapted to contain independently controllable quantities of water, the lower compartment having a discharge outlet, means for controlling the discharge of water from the lower compartment independently of and without affecting the quantity of water in the upper compartment, a pivotal support for the receptacle arranged substantially above the center of gravity of the receptacle when both compartments are filled with water, the center of gravity of the receptacle and contents of the upper compartment being at one side of the vertical plane through the pivotal support so that when the lower compartment is emptied the receptacle will automatically tilt and discharge the contents of the upper compartment for the purpose specified.

[Claims 3 and 4 not printed in the Gazette.]

1,230,846. PLOW. JOHN C. BOHMKER, Bradley, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Feb. 26, 1917. Serial No. 150,884. (Cl. 97—18.)



1. A plow having, in combination, a moldboard, a landside, two plates secured to the inner side of the moldboard and extending below the lower edge of the moldboard, one of said plates being located rearwardly of the other, the forward plate having an upwardly and rearwardly inclined slot having an entrance portion and an upwardly and rearwardly inclined notch in its lower edge rearward of said slot, the rear plate having an upwardly inclined notch in its lower edge, a share having a forward headed stud adapted to enter the slot in the forward plate, a middle headed stud adapted to enter the notch in the forward plate and a rear headed stud arranged to enter the notch in the rear plate, two straps having longitudinal slots in their lower ends, the upper ends of the slots in said straps being enlarged to admit the forward and rear studs, the lower portions of such straps being tapered, a part pivoted to the upper ends of said straps, a draw-bolt connected to said part at a point nearer one of the straps than the other, a housing secured to the inner side of the moldboard through which housing said bolt loosely extends, and a nut turned on the upper end of said bolt.

[Claims 2 to 4 not printed in the Gazette.]

1,230,847. FIGURE WHEELED TOY. GEORGE W. BONTE, New York, N. Y. Filed Feb. 24, 1917. Serial No. 150,633. (Cl. 46—45.)

1. A toy comprising a wheel, an axle, a figure astride the wheel having legs on each side of the wheel and pivotally mounted on the axle, feet rigid with said legs and below the pivot, said feet weighted whereby said figure

is caused to maintain an upright position, said figure having flat surfaces at front and read adapted to receive

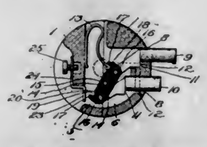


delineation whereby the said toy is caused to resemble a bicycle and rider.

[Claim 2 not printed in the Gazette.]

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1,230,848. ELECTRIC-LIGHT SOCKET. TONJES A. C. BOTH, Stratford, Conn., assignor to Zee-Socket and Mfg. Company, Boston, Mass., a Corporation of Massachusetts. Original application filed Dec. 30, 1911, Serial No. 668,632. Divided and application filed Mar. 29, 1912, Serial No. 687,184. Divided and this application filed Feb. 20, 1915. Serial No. 9,755. (Cl. 173—355.)



1. In electric light sockets, the combination of an insulating base, one or more push buttons mounted in the base, a resilient compression driven member, and an intermediate member provided with a substantially flat face and with a groove or valley at either end of said face, said grooves or valleys adapted to momentarily hold the resilient compression driven member from movement, said intermediate member adapted to be actuated by the push button or buttons.

5. In electric light sockets, the combination of an insulating base, one or more push buttons, a sliding resilient conducting driven member adapted to slide on the insulating base, and an insulating intermediate member provided with grooves or valleys to coöperate with the resilient conducting driven member, said intermediate member adapted to be actuated by the push button or buttons.

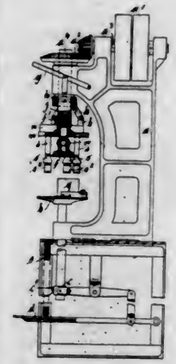
9. In electric light sockets, the combination of an insulating base, one or more push buttons mounted in the insulating base, a sliding resilient compression driven member adapted to slide upon the insulating base, and an intermediate insulating pivoted member adapted to be actuated by the push button or buttons and provided with means to momentarily hold the sliding resilient compression driven member from movement.

[Claims 2 to 4, 6 to 8, 10, and 11 not printed in the Gazette.]

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1,230,849. MACHINE FOR SEALING RECEPTACLES. PIERRE JOSÉ BOUCHER, Chelsea, London, England. Filed Sept. 5, 1914. Serial No. 860,314. (Cl. 113—5.)

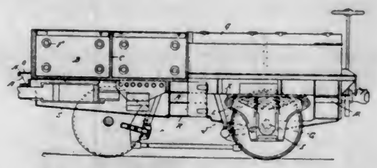
1. Apparatus for applying sealing bands to capped receptacles and the like consisting of, in combination, a revolving chuck, a cap support universally mounted therein and adapted to remain stationary while the said chuck is revolving, a series of stems depending from said chuck and adapted to have a movement to and from the axis of said chuck, means for operating said stems, a sealing cone freely mounted on each of said stems so as to both revolve and slide axially thereon and an elastic device on each stem adapted to press the said cone in a direction toward the portion of the band to be beaded over, substantially as described.



2. Apparatus for applying sealing bands to capped receptacles and the like consisting of, in combination, a revolving chuck, a cap support universally mounted therein and adapted to remain stationary while the said chuck is revolving, means for adjusting the cap support relative to the chuck in an axial direction, a series of stems depending from said chuck and adapted to have a movement to and from the axis of said chuck, means for operating said stems, a sealing cone freely mounted on each of said stems so as to both revolve and slide axially thereon and an elastic device on each stem adapted to press the said cone in a direction toward the portion of the band to be beaded over, substantially as described.

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1,230,850. TEST-WEIGHT CAR. JOHN H. A. BOUSFIELD, St. Johnsbury, Vt., assignor to E. and T. Fairbanks and Company, St. Johnsbury, Vt., a Corporation of Vermont. Filed Aug. 23, 1915. Serial No. 46,957. (Cl. 105—15.)



1. In a test weight car, a combined body proper and underframe formed of a pair of complementary castings secured to each other in the central longitudinal plane of the car, and each provided with a series of pockets for receiving the test weights.

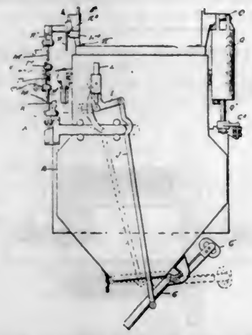
3. In a test weight car, a combined body proper and underframe formed of complementary castings, comprising side members, bottom and cross partitions for dividing the space into a plurality of compartments, said complementary castings meeting in the central plane of the car and being provided with interengaging bearings to hold the same in alinement, and securing devices for the adjacent sides engaging recesses therein.

5. In a test weight car, a body formed of a plurality of complementary castings each provided with a pocket for receiving the test weights, said castings having interengaging members on their meeting faces to hold the same in alinement, and means between their outer surfaces for securing the meeting faces to each other.

[Claims 2 and 4 not printed in the Gazette.]



1,230,851. AUTOMATIC SCALE. JOHN H. A. BOUSFIELD, St. Johnsbury, Vt., assignor to E. and T. Fairbanks and Company, St. Johnsbury, Vt., a Corporation of Vermont. Filed Oct. 16, 1916. Serial No. 125,939. (Cl. 73—175.)



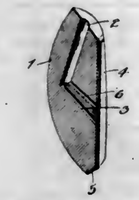
3. In an automatic scale, the combination with a weighing hopper having inlet and discharge gates adapted for alternate operation, of mechanism for opening the inlet gate, means operating upon the rise of the hopper for absorbing a portion of the power thereof and storing the same for the actuation of said gate-opening mechanism, and means operating subsequent to the opening of the gate and upon the falling of the hopper for relieving said gate from its opening power and permitting the automatic closing thereof.

6. In an automatic scale, the combination with a weighing hopper and an inlet gate therefor adapted to automatically close and lock, of a lever mechanism for opening said gate, a weight for actuating said lever mechanism when the gate is unlocked, means operating upon the rise of the hopper and while said gate is locked closed, for actuating said lever mechanism to raise said weight and thereby to absorb and store the power of the hopper rising movement, and means for unlocking said gate to permit said weight to open the same.

[Claims 1, 2, 4, 5, and 7 to 12 not printed in the Gazette.]

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1,230,852. ARTIFICIAL TOOTH. RUTHERFORD H. BOWSHER, Adelphi, Ohio. Filed Mar. 27, 1913. Serial No. 757,137. (Cl. 32—9.)



A tooth comprising a body, having a bore extending longitudinally from the upper end thereof and a bore entering the body from the back thereof and joining directly the end of the first mentioned bore at an obtuse angle, a plate applied to the back of the tooth and having a pin which enters the second mentioned bore.

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1,230,853. ARTIFICIAL TOOTH. RUTHERFORD H. BOWSHER, Adelphi, Ohio. Original application filed Mar. 27, 1913, Serial No. 757,137. Divided and this application filed June 5, 1916. Serial No. 101,790. (Cl. 32—9.)

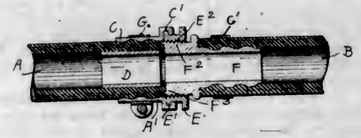
A molar comprising a body having a protruding portion adjacent the outer end thereof, a groove formed in the vertical rear face of the molar and a concavity formed in the under face of the protruding portion, a plate of substantial L-shaped construction comprising a vertical portion and flange, said vertical portion having a ridge



extending longitudinally and centrally thereof registering with the groove of the molar and a convexity provided upon the flange which enters or registers with the concavity in the molar, when the plate is properly secured to the latter.

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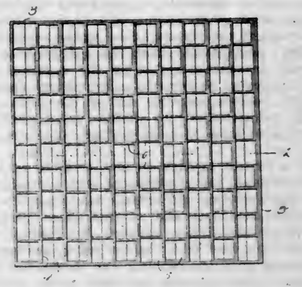
1,230,854. HOSE-COUPLING. ERICH F. J. BREUER, Decatur, Ill. Filed Aug. 31, 1916. Serial No. 117,846. (Cl. 137—28.)



In a hose coupling, a clamping sleeve surrounding the end of the hose to be clamped and having an axial abutment projecting beyond the end of the hose, a coupling member adapted to abut the end of said base, a rotatable collar positioned beyond the end of the hose and held against axial movement by said abutment and means carried by said collar for maintaining the said hose and coupling member in abutting relation.

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1,230,855. GRAIN-TESTER. ALONZO J. BRIDGES, Bedford, Iowa. Filed Jan. 8, 1917. Serial No. 141,295. (Cl. 47—30.)



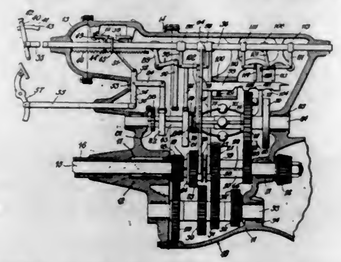
1. A seed tester including a tray, a plurality of separate main partitions to be fitted in the tray, and substantially U-shaped division partitions carried by each of the main partitions to sub-divide the spaces between the main partitions and thus form a plurality of separate compartments.

2. A seed tester including a tray, a plurality of partitions removably fitted within the tray to block the same off into a plurality of separate compartments, and flanges carried by certain of said partitions to form partial false bottoms for the compartments.

[Claims 3 and 4 not printed in the Gazette.]

1,230,856. AUTOMATIC TRANSMISSION-CONTROLLING MECHANISM. CHARLES BRITT, Algona, Iowa. Filed Apr. 12, 1916. Serial No. 90,714. (Cl. 74—97.)

1. In a control mechanism for variable speed transmission gearings, the combination with a variable speed



transmission gearing including a driving element, a driven element, and means for imparting power from one to the other at variable speeds, of means controlled by the rate of rotation of the driven element for automatically changing the rate of power transmission from one element to the other, and means independent of the rate of power transmission for varying the speed at which the driven element must rotate to cause operation of the automatic means.

2. A control mechanism for slide gear transmissions including shifter rods, arms extending from the rods and adapted to operatively engage collars of the transmission mechanism to shift the sliding gears thereof, means for manually shifting one of the rods to obtain certain settings of the transmission gearing, and means for automatically returning such rod to normal position and for shifting the other rod to obtain a different speed setting.

7. In a control mechanism for transmission gearing, the combination with a transmission gearing including a drive shaft and driven shaft, a countershaft, gears upon the drive shaft, driven shaft and countershaft for transmitting power at various rates from the drive shaft to the driven shaft, one of the gears being shiftable in one direction to cause a low speed drive, another gear being shiftable in another direction to cause an intermediate speed drive and in the opposite direction to cause a high speed drive, of a clutch lever by means of which the driving shaft is operatively engaged and disengaged with the crank shaft of an engine, a governor driven by the driven shaft of the transmission, means controlled from the driver's seat for adjusting the resistivity of the governor, and means controlled by the governor for successively releasing the clutch, returning the transmission to neutral position, moving one of the shifter rods to bring the transmission into another speed position, locking the transmission in such position, and letting in the clutch.

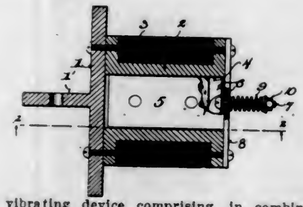
9. In a control mechanism for variable speed transmission gearings, the combination with a variable speed transmission gearing, and means for manually shifting the gearing into low and reverse speed positions, of means for automatically shifting the gearing to other speed positions, said latter means being governed by the load imposed upon the gearing, and means for adjusting said latter means whereby the load which must be imposed upon the gearing to cause any one of said automatic shifts may be changed.

13. In a control mechanism for transmission gearing, the combination with a transmission gearing including a drive shaft, a driven shaft, and means for selectively transmitting power from the drive shaft to the driven shaft at various speed ratios, of reciprocally mounted shifter rods for actuating such means, locks for the shifter rods, a clutch lever movable to connect and disconnect the drive shaft with the shaft of an engine, a governor driven by the driven shaft, and means controlled by the governor for swinging the clutch lever to disconnect the drive shaft from the engine shaft, to release the locks to cause selective reciprocation of the control rods and to reapply the locks and again swing the clutch lever to connect the drive shaft with the engine shaft.

[Claims 3 to 6, 8, and 10 to 12 not printed in the Gazette.]

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1,230,857. ELECTROMAGNETIC VIBRATOR. FRANK E. BRIXIUS, Manitowoc, Wis., assignor to Manitowoc Electric Implement Co., Manitowoc, Wis. Filed Oct. 21, 1916. Serial No. 126,841. (Cl. 175—338.)

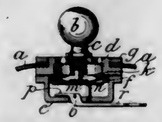


1. A vibrating device comprising, in combination, a magnetic base having magnet windings carried thereby, a core disposed in an opening in said windings, said core consisting of a shell bent upon itself to form an upper loop, and laminæ secured between the side legs of the shell, a supporting bar secured to the top of said windings, and spring means engaging said shell and supporting bar to urge the core upward, said core being adapted to vibrate rapidly and thus exert a series of taps upon said base when the magnet is energized, substantially as described.

2. A vibrating device comprising, in combination, a magnetic base plate having means carried thereby for securing the same to work material, a metallic thimble secured to said base plate, magnet windings carried by said thimble, said thimble having a rectangular core opening extending therethrough, a shell bent upon itself to form an upper loop, a core interposed and secured between the side legs of said shell, the upper looped portion of said shell having an opening therein, a supporting member secured to the top of said thimble and extending across said core opening and having therein an aperture alining with the opening of the core shell, a beaded bolt passing up through the openings in said shell and supporting member, and a spring coiled around said bolt and restricted between said supporting member and a nut on the upper end of said bolt, substantially as described.

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1,230,858. APPARATUS FOR INFLATING LIFE-PRESERVING BELTS. WILLIAM GOULD BROKAW, Paris, France. Filed Apr. 27, 1917. Serial No. 164,897. (Cl. 9—19.)



1. In apparatus for inflating life-preserving belts, a gas cartridge, a holder for said cartridge secured to the wall of an inflatable life belt, a gas release valve carried by said holder, a diaphragm fixed to said holder, a pin on the inner side of said diaphragm adapted to actuate said valve, a plate at the outer side of said diaphragm, a fulcrum for said plate fixed to said holder, an operating lever mounted in said holder adapted to turn said plate about said fulcrum in a direction to move said diaphragm inwardly and operate said valve.

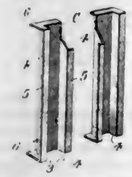
4. In apparatus for inflating life-preserving belts, a ring secured to the inner side of the wall of an inflatable belt, a dished disk secured to the outer side of the wall of an inflatable belt, means for securing said disk to said ring to clamp the adjacent portion of the belt wall between them, a gas cartridge located within the belt and carried by said disk, a valve mounted in said disk and adapted to control the escape of gas from said cartridge, a slotted cover fixed to said disk, a diaphragm the margin of which is clamped between said disk and said cover, a pin on the inner side of said diaphragm adapted to actuate said valve, a plate on the outer side of said diaphragm, a fulcrum on said cover against which said plate car bear and a lever pivoted to said cover and extending through the slot thereof, the inner end of said lever being adapted to bear on said plate and turn it about said fulcrum to move said diaphragm with said pin inwardly to actuate said valve.

[Claims 2 and 3 not printed in the Gazette.]



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1,230,859. WEAR-PLATE FOR JOURNAL-BOXES. ALBERT O. BUCKIUS, Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 24, 1914. Serial No. 878,858. (Cl. 105—113.)

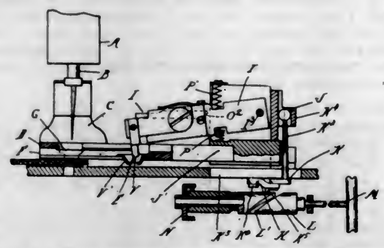


4. A wear plate for castings, comprising a piece of metal of channel shape provided upon its ends with extensions at right angles to the web and flanges of said channel, said extensions projecting over the body of the casting and away from the space inclosed by said web and flanges.

[Claims 1 to 3 not printed in the Gazette.]

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1,230,860. BUTTON-FEEDING MECHANISM. LEONARD R. CARLEY, Detroit, Mich., assignor of one-half to James A. Stewart, Detroit, Mich. Filed Nov. 16, 1911. Serial No. 660,670. (Cl. 112—32.)



1. In a button feeding mechanism, the combination of means engageable with a button in variable positions of rotative adjustment of the button for transferring the button to the point of attachment, and means for rotatably adjusting said button during transfer, to a predetermined position.

8. In a button attaching machine, the combination with a reciprocatory needle bar, of a guide for feeding the button into registration with said bar, a finger for insertion into the eye of the button in variable positions of rotative adjustment of the button, a carrying arm to which said finger is attached, means for imparting a longitudinal and transverse movement to said carrying arm whereby said finger is engaged with the button eye and the button is transferred along said guide, said finger being fashioned to effect a rotative adjustment of the button during the insertion of the finger into the eye thereof.

15. The combination with button attaching means, of a garment clamping foot having inclined longitudinal and transverse button guideways therein, a reciprocatory finger for engaging the button in variable positions of rotative adjustment thereof and feeding the same along the longitudinal guideway into registration with the button attaching means, a reciprocatory member for feeding the button along the transverse guideway into position for engagement by said finger, and means for operating said reciprocatory members.

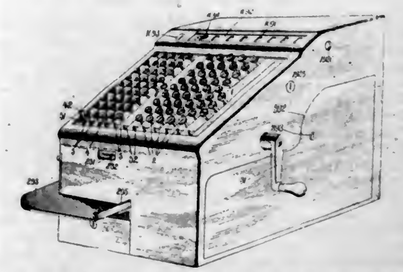
16. In a button feeding mechanism, means for transferring a button to the point of attachment including non-rotative means for positively adjusting the button rotatively.

18. In a button attaching mechanism, the combination with a reciprocatory needle bar and a work clamping member, of a holder for a plurality of buttons, and means for effecting the discharge of a button from said holder by a displacement of the work clamping member.

[Claims 2 to 7, 9 to 14, 17, and 19 to 24 not printed in the Gazette.]

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1,230,861. CASHIER'S REGISTERING-MACHINE. FRED M. CARROLL, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed June 16, 1913. Serial No. 773,943. (Cl. 235—3.)



1. In a machine of the class described, the combination with means for entering the kind and amount of a transaction upon a record strip by perforating said strip; of a series of type carriers for printing the amount of the transaction along one side of the perforations; and additional type carrier for printing the kind of transaction on the side of the perforations opposite the printed amount; and means for first feeding the strip to the perforating means, thence to the type carrier designating the kind of transaction, and finally to the amount type carriers.

2. In a machine of the class described, the combination with mechanism for feeding a record strip; of punches for perforating said strip; a movable frame and devices carried thereby for selecting the punches to be operated; manipulative devices controlling the selecting devices and means for moving the frame for the purpose of operating the punches by the selecting devices.

3. In a machine of the class described, the combination with punches for perforating a record strip; a frame carrying said punches; means for moving the frame thereby bringing the punches into contact with the strip; and means for selecting and operating the desired punches.

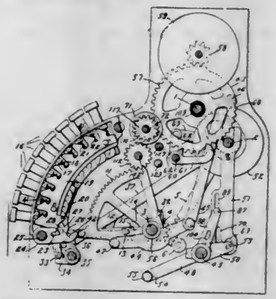
4. In a machine of the class described, the combination with punches for perforating a record strip; a frame carrying said punches; means for moving the frame thereby bringing the punches into contact with the strip; devices for selecting the punches to be operated; and manipulative devices controlling the selecting devices.

5. In a machine of the class described, the combination with punches for perforating a record strip; a frame carrying said punches; means for moving the frame thereby

bringing the punches into contact with the strip; devices for selecting the punches to be operated; a frame carrying said devices; and means for moving the frame carrying the selecting device for the purpose of operating the desired punches by said selecting devices.

[Claims 6 to 44 not printed in the Gazette.]

1,230,862. CASH-REGISTER. THOMAS CARROLL and JOHN P. FRANK, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Aug. 13, 1913. Serial No. 784,466. (Cl. 235—2.)



1. In a machine of the class described, the combination with a main operating mechanism having manipulative value determining keys; of a member to be differentially moved under control of said value determining keys and returned to zero position on the same operation; means whereby said differentially moved member is positively connected with the main operating mechanism when one of the value determining keys is pressed in; and means whereby the differentially moved member is positively disconnected from the main operating mechanism by the value determining keys.

2. In a machine of the class described, the combination with a main operating mechanism having rows of value determining keys; of gear segments to be differentially moved under control of said keys and returned to their zero positions on the same operation; means whereby said gear segments are positively connected with the main operating mechanism when value determining keys are pressed in; and means whereby the segment gears are positively disconnected from the main operating mechanism by the value determining keys.

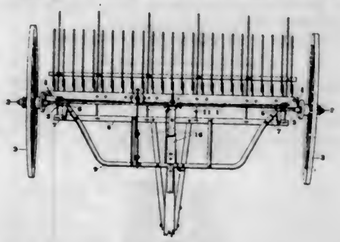
3. In a machine of the class described, the combination with a main driving mechanism and rows of amount determining keys, of segment gears to be differentially moved by the main driving mechanism under control of said keys and returned to normal position at each operation, latches appropriate to the gears for positively connecting the segment gears with the driving mechanism and arms appropriate to the latches each having two camming edges one of which coöperates with its appropriate latch when any of the amount determining keys are pressed in to connect its gear to the operating mechanism, the other edge serving to disconnect the latch upon return of the gear to normal position.

4. In a machine of the class described, the combination with a main driving mechanism and amount determining keys, of a segment gear designed to be differentially moved by the main driving mechanism under control of the keys, a sliding plate actuated by said keys, elements operated by the sliding plate to positively connect the segment gear with said driving mechanism when any of the amount determining keys are pressed in and cam edges on the keys for positively operating said elements to disconnect the segment gear from the driving mechanism.

5. In a machine of the class described, the combination with a main driving mechanism and value determining keys, of a segment gear to be differentially moved by the main driving mechanism under control of the value determining keys, a sliding plate actuated by said keys, an arm operated by the sliding plate in such a manner as to positively connect the aforesaid segment gear with the main driving mechanism when one of the value determining keys is pressed and cam edges on the keys for disconnecting the segment gear from the driving mechanism.

[Claims 6 to 48 not printed in the Gazette.]

1,230,863. HORSE HAY-RAKE. FRANCIS M. CARY, Ottumwa, Iowa, assignor, by mesne assignments, to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed June 30, 1913. Serial No. 776,663. (Cl. 56—67.)



1. In a horse hay rake, the combination of a frame, a rake head, cambered stub axles secured on the frame and having a portion of their length parallel with the rake head and on which the rake head is supported, and supporting wheels on the stub axles having a gather by the camber thereof.

2. In a horse hay rake, the combination of a frame, a rake head, cambered stub axles secured on the frame and having a portion of their length parallel with the rake head and on which the latter is rockably supported, and supporting wheels on the stub axles having a forward gather by the camber thereof.

3. In a horse hay rake, the combination of a frame, a rake head, cambered stub axles secured on the frame and having a portion of their length parallel with the rake head, bearings on the rake head in which said portion is journaled whereby the rake head is rockable thereon, and supporting wheels on the stub axles having a forward gather by the camber thereof.

4. In a horse hay rake, the combination of a frame, a rake head, cambered reversible stub axles secured on the frame and having a portion of their length parallel with the rake head and on which the rake head is supported, and supporting wheels on the stub axles having a gather by the camber thereof.

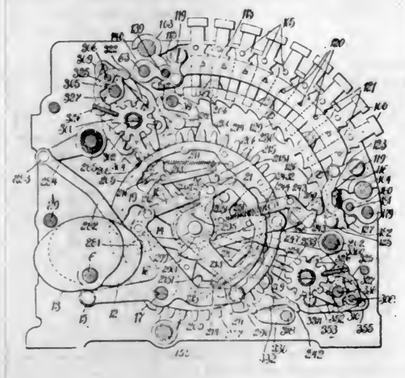
1,230,864. CASH-REGISTER. WILLIAM A. CHRYST, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (Incorporated in 1906.) Filed June 7, 1913. Serial No. 772,276. (Cl. 235—2.)

1. In a machine of the class described, the combination with an accounting device, of a differentially movable accounting device actuator, a type carrier having connections therewith, and operative by movement of said actuator, and means for positively driving the actuator and thereby the accounting device under control of the accounting device.

2. In a machine of the class described, the combination with an accounting device, of mechanism constructed to differentially operate said accounting device forwardly or backwardly as desired, a latch carried by said mechanism and coöperating with a member having a substantially constant movement, and keys controlling said latch whereby the latch may be disconnected from said member when said mechanism has operated a desired extent.

3. In a machine of the class described, the combination with an accounting device, of a member having an invariable movement on operations of the machine, an actuator for the accounting device, a latch for connecting the actuator with the said member, manipulative means for controlling said latch and connections whereby the accounting device may control the operation of said latch independently of said manipulative means.





4. In a machine of the class described, the combination with a totalizing device, of a type carrier, a member having an invariable movement on operations of the machine, an actuator for the type carrier, a latch for connecting the actuator with said member, manipulative means for controlling said latch and connections whereby operation of the latch is controlled by the totalizing device independently of said manipulative means.

5. In a machine of the class described, the combination of an accounting device, a differentially movable actuator therefor, mechanism operated by movement of the accounting device constructed to regulate the movement of the actuator, and means for positively driving the actuator differentially as controlled by said mechanism.

[Claims 6 to 93 not printed in the Gazette.]

1,230,865. COVER FOR FRUIT. RAYMOND P. CLARK, Rochester, N. Y. Filed June 24, 1916. Serial No. 105,647. (Cl. 217—52.)



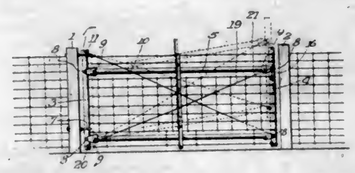
1. A cover for fruit comprising successive layers of paper substantially in direct contact, the innermost of said layers being non-absorbent and the outermost corrugated, and said layers having openings through them for ventilating purposes.

5. A cover for fruit having a layer made liquid-proof on the surface designed to contact with the fruit, and having a cushioned opposite surface to contact with a barrel head, said cover having ventilating openings extending through said surfaces.

[Claims 2 to 4 not printed in the Gazette.]

1,230,866. GATE ATTACHMENT. JOSEPH B. CLAY, Cedar Rapids, Iowa. Filed Apr. 1, 1916. Serial No. 88,221. (Cl. 39—80.)

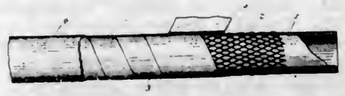
1. A gate attachment of the kind described, comprising a member formed with a slot therein extending from one edge to near the center, and substantially dished at the center, a laterally extending flange at one edge, and means extending through said flange for securing said slotted member to the gate near one corner of the free end thereof, said member tilted at an angle to the end bar of the gate, means arranged to detachably engage said member at the inner end of said slot, and means for connecting



said engaging means with the opposite corner at the hinged end of the gate.

[Claims 2 and 3 not printed in the Gazette.]

1,230,867. HOSE AND THE PROCESS OF MAKING THE SAME. HENRY Z. COBB, Winchester, Mass., assignor to Revere Rubber Company, a Corporation of Rhode Island. Filed Feb. 4, 1915. Serial No. 6,021. (Cl. 154—8.)



1. An article of manufacture comprising a continuous length of conductive hose having an inner tube of vulcanized rubber compound, and a covering comprising successive convolutions of frictioned fabric under tension, said convolutions overlapping each other successively for half their width, whereby a smooth layer of substantially continuous two-ply fabric is formed.

2. An article of manufacture comprising a continuous length of conductive hose, having an inner tube of vulcanized rubber compound, a covering of braided strands impregnated with rubber composition, and successive convolutions of frictioned fabric under tension, said convolutions overlapping each other for half their width, whereby a smooth layer of substantially continuous two-ply fabric is formed.

3. The process of making a continuous length of a tubular article which comprises forming an inner layer of suitable material, inflating the same and continuously wrapping the same with a series of helical convolutions of frictioned fabric under tension.

4. The process of making continuous lengths of conductive hose which comprises forming an inner tube of rubber composition, inflating the same, and continuously wrapping the same with a series of helical convolutions of frictioned fabric under tension.

5. The process of making continuous lengths of conductive hose which comprises forming an inner tube of rubber composition, inflating the same, forming a covering of braided strands thereon, and then continuously wrapping the same with a series of helical convolutions of frictioned fabric under tension.

[Claim 6 not printed in the Gazette.]

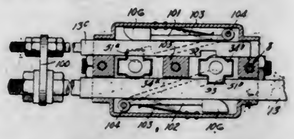
1,230,868. RAILWAY-TRAFFIC-CONTROL APPARATUS. JOHN P. COLEMAN, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Oct. 12, 1915. Serial No. 55,498. (Cl. 104—12.)

1. In a switch locking mechanism the combination of a lock rod, a plunger for locking said rod, and means for obstructing said plunger when said lock rod is withdrawn from the mechanism.

2. In a switch locking mechanism the combination of a lock rod, a plunger for locking said rod, and means biased to obstruct said plunger when said lock rod is withdrawn from the mechanism.

3. In a switch locking mechanism the combination of a lock rod, a plunger for locking said rod, and a pivotally

mounted member for obstructing said plunger when said lock rid is withdrawn from the mechanism.



4. In combination, a switch operating mechanism, a lock rod adapted to be locked by said mechanism, and means for preventing a complete operation of said mechanism when said lock rod is withdrawn from said mechanism.

5. In combination, a switch operating mechanism, a member movable therewith, a lock rod adapted to be locked by said member, and means for obstructing the movement of said member when said lock rod is withdrawn from said mechanism.

[Claims 6 to 15 not printed in the Gazette.]

1,230,869. METHOD OF MAKING INCANDESCENT LAMPS. WILLIAM D. COOLIDGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed June 14, 1907, Serial No. 378,936. Divided and this application filed Nov. 7, 1910. Serial No. 591,187. (Cl. 176—7.)

1. The process of mounting a continuous brittle tungsten filament on the supports of an incandescent lamp which consists in rendering said filament pliant by heating it while exposed to the atmosphere to a temperature below that at which appreciable oxidation takes place and below that corresponding to visible redness, and winding the filament on said supports while at said temperature.

2. The process of mounting a continuous brittle tungsten filament on the supports of an incandescent lamp which consists in heating the portions to be bent while exposed to the atmosphere to a temperature that renders them pliable and is below that of appreciable oxidation and below that corresponding to visible redness of the filament, and stringing the filament on said supports in the open air while said filament and said supports are exposed to permit manipulation of the filament.

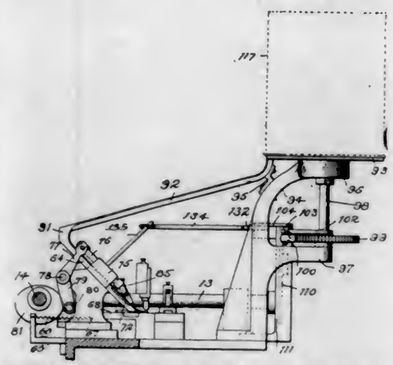
3. The process of mounting a continuous sintered tungsten filament in zigzag form on the supports of an incandescent lamp which consists in rendering the filament pliant by passing current through it to heat it while exposed to the atmosphere to a temperature below that which corresponds to visible redness of the filament and below that at which appreciable oxidation takes place, and stringing said filament while still hot and pliant on said supports with said filament and said supports in the open air.

1,230,870. ARTICLE-FEEDING MEANS. WILLIAM A. COURTLAND, Brooklyn, N. Y., assignor to American Pin Company, Waterbury, Conn., a Corporation of Connecticut. Filed Sept. 4, 1915. Serial No. 49,064. (Cl. 163—7.)

1. In a machine of the character described, an article holder, a chute suitably disposed to receive articles from said article holder, means for detecting the presence of an article in said chute, and means controlled by said detecting means for moving said holder into position to discharge into said chute.

2. In a machine of the character described, the combination with a feed chute, of an article-holder provided with a plurality of chambers or passages adapted to be successively brought into communication with said chute, means for moving said article holder and means depending on the presence of an article in said chute for controlling the movement of said article-holder moving means.

3. In a machine of the character described, a feed chute, a detector finger suitably mounted and arranged to be engaged by an article in said chute, an article-holder provided with a plurality of chambers or passages, said article-holder being suitably mounted to move said chambers or passages successively into position to communicate with said chute, and means under the control of said detector finger for imparting a step by step movement to said article holder.

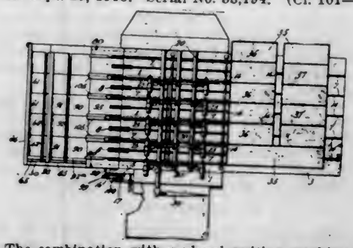


4. In a machine of the character described, a feed chute, a rotary barrel provided with a plurality of article holding chambers, said barrel being mounted to turn on an axis suitably disposed to bring said chambers successively into position to discharge into said chute, power driven means for imparting a step by step movement to said barrel, said means including a detector for determining the presence or absence of articles in said chute, and an instrumentality operated by said detector to render said step by step means operative or inoperative.

5. In a machine of the character described, the combination with a feed chute, of means for feeding articles from said chute, means adapted to deliver successive supplies of articles to said chute, and means for periodically operating said article-delivering means including a finger normally held by an article in said chute in position to render said periodic operating means inoperative and adapted to render said periodic operating means operative when said finger is released.

[Claims 6 to 8 not printed in the Gazette.]

1,230,871. MECHANISM FOR MANIPULATING CHECKS IN PLURAL-WRITING MACHINES. FRANK E. CROMPTON, Brooklyn, N. Y., assignor to Signature Company, New York, N. Y., a Corporation of New York. Filed Sept. 29, 1915. Serial No. 53,194. (Cl. 101—36.)

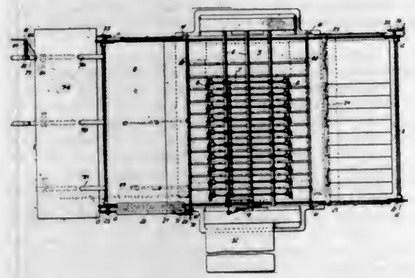


1. The combination with a plural writing machine having a bed provided with an extension, of conveyer chains spaced laterally with respect to said extension, a frame formed with transversely arranged series of chutes corresponding respectively to said conveyer chains, means for operating said chains to simultaneously move documents received from said chutes into position to be written upon and means for simultaneously writing upon said documents.



2. The combination with a machine provided with a plurality of writing instrumentalities arranged to simultaneously write upon a plurality of documents of a frame connected to said machine and provided with transversely arranged series of chutes for determining the arrangement of a plurality of documents to be presented to said writing instrumentalities, and means for feeding said documents from their positions in which they are arranged by said frame into positions respectively under said writing instrumentalities.

1,230,872. MULTIPLEX-WRITING MACHINE. FRANK E. CROMPTON, Brooklyn, N. Y., assignor to Signature Company, New York, N. Y., a Corporation of New York. Filed June 21, 1916. Serial No. 104,929. (Cl. 101—36.)



1. In a machine of the character described, a document-supporting table, a plurality of writing members arranged to simultaneously write upon documents respectively disposed beneath said members, and means movable in either of two opposite directions and adapted to convey documents prearranged in groups, the arrangement of documents in each group corresponding to the arrangement of said writing members.

2. In a machine of the character described, a writing plate or table provided with extensions arranged along different edges of said plate or table, a plurality of writing members suspended above said plate or table, a monitor handle for simultaneously operating said writing members, and means for conveying a group of documents from one of said extensions on to said plate or table and from said plate or table on to the other of said extensions, said conveying means being adapted to reverse its direction of feed to convey a group of documents from said other extension on to said plate or table and from thence on to the first mentioned extension.

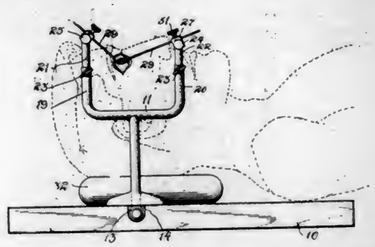
3. In a machine of the character described, a writing plate or table provided with extensions arranged along different edges of said plate or table, a plurality of writing members suspended above said plate or table, a monitor handle for simultaneously operating said writing members, means for conveying a group of documents from one of said extensions on to said plate or table and from said plate or table on to the other of said extensions, said conveying means being adapted to reverse its direction of feed to convey a group of documents from said other extension on to said plate or table and from thence on to the first mentioned extension, and a stacking board provided with means for detachably connecting it to the machine adjacent either of said extensions.

4. In a machine of the character described, a writing plate or table, a plurality of writing members suitably mounted to simultaneously write on a plurality of documents arranged in a group on said writing plate or table, extensions arranged along opposite edges of said writing plate or table from either of which a group of documents may be fed into position on said writing plate or table, conveying means movable in either direction across said writing plate or table and said extensions and adapted to move said documents in a group, supports connected to said machine and adapted to carry stacking boards adjacent the outer edges of said extensions, and a stacking board adapted to be releasably connected to said supports adjacent to either of said extensions.

5. In a machine of the character described, a document supporting table, a plurality of writing members, means for simultaneously operating said writing members, means for temporarily binding documents into a group, and conveying means movable in either of two opposite directions and adapted to engage said temporary binding means to move said documents into and out of position to be written upon.

[Claims 6 to 24 not printed in the Gazette.]

1,230,873. HEAD-CLAMP AND EYELID-HOLDER FOR SURGICAL OPERATIONS ON THE EYE. ELIJAH R. CROSSLEY, Chicago, Ill. Filed Nov. 18, 1916. Serial No. 132,009. (Cl. 128—24.)



1. A device of the character described, embodying means for clamping and holding the head, and means for retracting and holding the eye lid.

2. A device of the character described, embodying a head clamp and holder, and means coöperating therewith for retracting the eye lid.

3. A device of the character described, embodying clamps adapted to engage the side of and hold the head, and means supported by said clamps for retracting the eyelid.

4. A device of the character described, embodying a head clamp for holding the head, and means adjustably supported by the clamp for engaging and retracting the eyelid.

5. A device of the character described, embodying a head rest support, clamping members thereon and adjustable toward each other to clamp the head, and eyelid retractors connected with the clamping members and adjustable in two different directions with respect to said members.

[Claims 6 to 11 not printed in the Gazette.]

1,230,874. METALLIC AUDION. LEE DE FOREST, New York, N. Y., assignor to De Forest Radio Telephone and Telegraph Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 21, 1917. Serial No. 150,027. (Cl. 250—27.)



1. The method of constructing a metal audion which consists in forcing a glass stopper under heat and carry-

ing two electrodes, in a thin metal ring under heat and carried by a metal flask and finally exhausting the air from said flask.

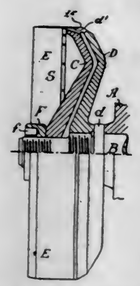
4. An audion comprising an evacuated metal shell provided with a glass stopper forced while hot in the neck of said shell, said stopper supporting two electrodes of said audion.

5. An audion comprising an evacuated metal shell provided with a restricted neck portion, a thin metal ring welded to said shell within said restricted neck portion, and a stopper sealed to said metal ring, said stopper supporting two electrodes of the audion, and said shell forming the third electrode of said audion.

[Claims 2, 3, and 5 to 7 not printed in the Gazette.]

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1,230,875. ROTARY CUTTER FOR SKIVING OR TRIMMING MACHINES. MARK THOMAS DENNE, Rushden, England. Filed Jan. 17, 1914. Serial No. 812,819. (Cl. 69—9.5.)



1. A knife for skiving or trimming machines, comprising in combination a holder in the form of a drum capable of being freely expanded radially, a flexible cylindrical knife blade mounted on the periphery or outer surface of the said drum with its cutting edge projecting laterally beyond the drum, and means for uniformly and radially expanding every point on the outer surface of the drum into contact with the inner surface of the knife blade, so that the latter is conformed to the periphery or outer surface of the drum.

2. A knife for skiving or trimming machines, comprising in combination an expansible holder in the form of a drum having a cylindrical outer surface and an inner conical surface, a flexible cylindrical knife blade mounted on the periphery of the said drum with its cutting edge projecting laterally beyond the drum, and a member having a conical surface adapted to be forced against said inner conical surface of the drum, said member being slidably and concentrically mounted within the drum and adapted to expand the drum against the knife blade when forced against said inner conical surface of the drum.

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1,230,876. COTTER-PIN. CARL F. DOERSCHUK, Cleveland, Ohio. Filed May 2, 1913. Serial No. 764,983. (Cl. 74—8.)



1. A cotter pin, comprising, when assembled for operation, a rebent member having substantially parallel spaced arms, a pin held between such arms and provided with an enlarged head at one end lying beyond the ends of such arms of said rebent member, and means, adapted upon actuation of said member into operative position, to automatically draw such enlarged head between such spaced arms of said member.

2. A cotter pin, comprising, when assembled for operation, a rebent member having substantially parallel spaced arms, a pin held between such arms and provided with an enlarged head at one end lying beyond the ends of such arms of said rebent member, and a laterally projectiug lug attached to said pin and extending between such spaced arms, said lug being adapted, upon actuation of said member into operative position, to catch and draw said head between such arms.

3. A cotter pin, comprising a rebent member having two substantially parallel, spaced arms connected by a loop, a pin held between such arms and being provided with an enlarged head at either end lying outside of such arms, and lugs on said pin extending laterally from between such arms, said lugs being disposed adjacent to the looped end of said cotter pin, the end of such two arms being beveled adapting them to be spread by such head on said pin upon relative movement between such arms and said pin.

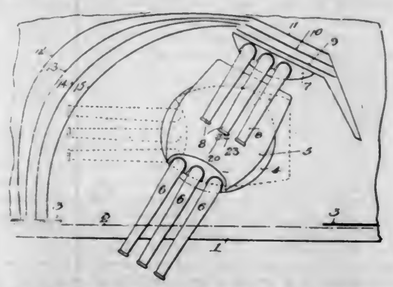
4. A self-locking fastening device, comprising a suitable member having two sides divergent from each other, and a pin normally positioned in contact with such sides and having an extension positioned to engage the end of the material through which said member is forced before the latter reaches its limiting position, thereby causing relative movement between said member proper and said pin and spreading such divergent sides of said member.

5. A fastening device including in combination two members positioned side by side for operation as a single unit, one of said members having a projection normally out of operative engagement with the other member, but adapted upon relative longitudinal movement of said member to engage such other member and spread the same laterally, said first named member also having an abutment to limit its longitudinal movement by engagement with the body into which the device is driven, thereby causing relative longitudinal movement between the two members to spread the second member.

[Claim 6 not printed in the Gazette.]

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1,230,877. THEATRICAL APPLIANCE. JOHN H. M. DUDLEY, New York, N. Y., assignor to Rolfe & Maddock, New York, N. Y., a Copartnership consisting of B. A. Rolfe and C. B. Maddock. Filed Sept. 29, 1916. Serial No. 122,807. (Cl. 46—70.)



1. A stage effect or setting comprising in combination a series of scenic wings, simulating a marine perspective, scenic panels simulating portions of a vessel, a turret setting having simulated great guns associated with the scenic panels, and a movable turret disposed below and in front of the fixed turret and having simulated guns, and means for moving said turret, the whole producing the effect of the foredeck of a battleship on the ocean.

2. A stage effect or setting comprising in combination a series of scenic wings, simulating a marine perspective, scenic panels simulating portions of a vessel, a setting having simulated great gun equipment disposed in front of said scenic panels, and a setting disposed below and in front of said first mentioned setting and also having simulated great guns, and means for moving the simulated guns of one setting relative to the simulated guns of the other of said settings.

3. A stage effect or setting comprising in combination a series of scenic wings, simulating a marine perspective, scenic panels simulating portions of a vessel, a setting having simulated great gun equipment disposed in front of said scenic panels, and a setting disposed below and in front of said first mentioned setting and also having simulated great guns, and means for moving the simulated guns of said last mentioned setting over the stage edge and the heads of the audience into alinement with the simulated guns of said first mentioned setting.

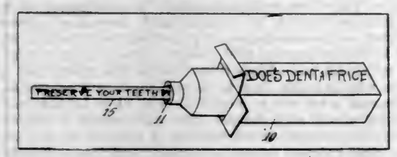
4. A stage effect or setting comprising in combination a series of scenic wings, panels and a back drop and stationary settings to simulate the perspective of a complete structure, and a setting adapted to be swung out from the stage relative to said stationary settings, for completing the perspective effect of said structure, and means for swinging said last named setting out from the stage.

5. A stage effect or setting comprising in combination a series of scenic wings, simulating a marine perspective, a turret setting having simulated great guns associated with said wings, and means for revolving said turret relative to said wings.

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1,230,878. APPARATUS FOR ILLUMINATED DISPLAYS. HORACE DUMARS, New York, N. Y. Filed Aug. 18, 1916. Serial No. 115,632. (Cl. 88—24.)

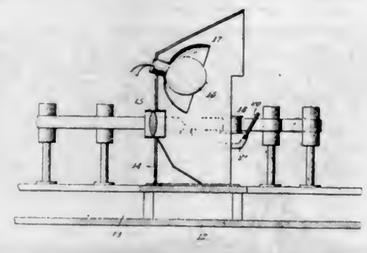



1. In an advertising display or like device, the combination of a member representing a commodity package, and a traveling member representing the commodity being dispensed from the package, said traveling member bearing a legend relating to the commodity.

[Claims 2 and 3 not printed in the Gazette.]

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1,230,879. ILLUMINATED DISPLAY DEVICE. HORACE DUMARS, New Suffolk, and GERALD DUMARS, New York, N. Y.; said Gerald Dumars assignor to said Horace Dumars. Filed Jan. 10, 1917. Serial No. 141,566. (Cl. 88—24.)



1. An illuminated display device including in combination a member bearing a perforate design presented at an illumination locus, a screen at a display locus, and lighting means throwing light upon the face of the design to be reflected therefrom and projected to the screen and projecting light through the perforations in the design to be projected to the screen.

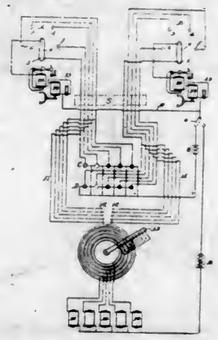


6. A design bearing device for use in illuminating display devices, comprising a supporting surface, a design outlined thereon, the design and the surrounding surface being one light reflecting and the other light absorbing, there being a plurality of light conveying design defining perforations through the support.

[Claims 2 to 5 and 7 not printed in the Gazette.]

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1,230,880. ASSEMBLY VOTING-MACHINE. FRANK L. DYER, Montclair, N. J. Filed Feb. 2, 1915. Serial No. 5,601. (Cl. 235—52.)



1. In an assembly voting machine, a plurality of transmitters, a single recording device arranged to make a record determined by the position of the several transmitters, a chart connected with the several transmitters, designed to give a visual indication of the vote before the same is recorded, and a single switch for simultaneously connecting or disconnecting all the transmitting stations with the said chart, substantially as set forth.

2. In an assembly voting machine, a plurality of transmitters, a single recording device arranged to make a record determined by the position of the several transmitters, a chart connected with the several transmitters, designed to give a visual indication of the vote before the same is recorded, and a single switch for simultaneously connecting or disconnecting all the transmitting stations with the said chart, and for simultaneously connecting all the transmitting stations in operative relation to the recording device, substantially as set forth.

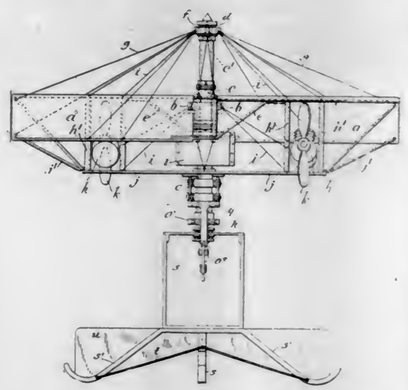
3. In an assembly voting apparatus of the type described, a recording device, a transmitting apparatus adapted to close any one of successive circuits by a single movement in one direction, means for locking the transmitting device in its set position, and means for releasing the same simultaneously with the recording of the vote, substantially as set forth.

4. In an assembly voting apparatus of the type described, a recording device, a transmitting apparatus having a contact device adapted to close any one of successive circuits by a single movement in one direction, means for locking the contact device in its set position, means for releasing the same simultaneously with the recording of the vote, and means for retarding the return movement of the contact device, substantially as set forth.

5. In an assembly voting apparatus of the type described, a recording device, a transmitting apparatus adapted to close any one of successive circuits by a single movement in one direction, means for locking the transmitting device in its set position, and means for sending a return signal to the transmitting device, simultaneously with the recording of the vote, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,230,881. AERIAL APPARATUS FOR DEFENSE AGAINST HOSTILE AIRCRAFT AND FOR OTHER PURPOSES. ISAAC FRANCIS TAYLOR, East Dulwich, London, England, assignor of one-half to Samuel Pick, London, England. Filed Mar. 9, 1917. Serial No. 153,694. (Cl. 244—19.)



1. An aerial machine of the helicopter type comprising oppositely inclined main lifting planes or wings extending in opposite directions, a central shaft about which said wings are mounted to revolve, aerial screws mounted on said planes or wings, motors for driving said screws also mounted on said wings, a car suspended from said central shaft, and means for controlling said motors from said car.

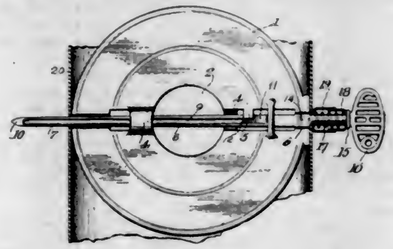
2. An aerial machine of the helicopter type comprising oppositely inclined main lifting planes or wings extending in opposite directions, a central shaft about which said wings are mounted to revolve, aerial screws mounted on said planes or wings, motors for driving said screws also mounted on said wings, a long sleeve mounted to rotate on the central shaft to which said wings are fixed and from which they extend, a car attached to the lower end of said shaft, a collar for controlling said motors slidably mounted on said long sleeve, and means within said car for operating said collar.

3. An aerial machine comprising two main lifting planes or wings inclined in opposite directions and mounted to revolve about a central axis, driving means acting upon the air mounted on the lifting planes or wings, drums carried on the machine, and explosive or other appliances carried on ropes unwound from said drums by centrifugal action.

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1,230,882. DAMPER. JOHN W. FILBEY, Wrightsville, Pa., assignor to Wrightsville Hardware Company, Wrightsville, Pa., a Corporation of Pennsylvania. Filed Mar. 24, 1917. Serial No. 157,085. (Cl. 126—295.)

1. In a damper for stove pipes and the like, a damper plate provided with a minimum draft opening in substantially the center thereof and having a passageway for a suitable pivot rod, said passageway comprising oppositely disposed arches adapted to extend on opposite sides of a suitable pivot rod, a projection comprising a relatively flat member extending from the damper plate into said passageway in substantially the same plane as the said damper plate, an interlocking member formed in one end of said passageway and comprising a squared recess, in combination with a pivot rod having a pointed end and being provided with a groove extending longitudinally of said pivot rod, a squared portion on said pivot rod adapted to fit into and interlock with the interlocking recess on the damper plate, a stop adjacent said squared portion and constructed to coöperate with said projection, and a spring for normally retaining said squared portion within said interlocking recess and said stop in engagement with said projection.

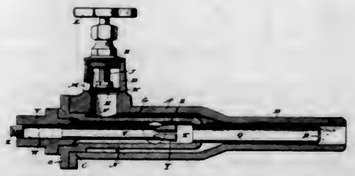


2. In a damper for stove pipes and the like, a damper plate provided with a passageway for a pivot rod, said passageway comprising arched members spaced apart and being oppositely disposed on each side of the axis of said passageway, said damper plate being provided with an interlocking recess adjacent one end of said passageway and alined therewith, a projection extending from said damper plate into said passageway, in combination with a pivot rod having a longitudinally extending groove adapted to accommodate said projection when said pivot rod is inserted across said damper plate, a stop formed on said pivot rod adjacent one end of the groove and a space adjacent said stop to accommodate said projection when said pivot rod is moved endwise after having been inserted across said damper plate and turned to enable the stop to engage the projection, a squared portion on said pivot rod and adapted to engage and interlock with the interlocking recess on said damper plate, and a suitable spring coöperating with said pivot rod to maintain said projection in engagement with said stop and to maintain said squared portion within the said recess.

3. As an article of manufacture, a pivot rod for dampers and the like comprising a longitudinally extending rod provided with a pointed end and having a groove extending lengthwise of the said member, a stop formed adjacent one end of said groove, a squared portion adapted to interlock with an interlocking recess provided in a suitable damper plate, a cylindrical portion adapted to comprise a bearing when the pivot rod is in a suitable stove pipe, and a handle adjacent to said cylindrical portion, substantially as described.

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1,230,883. BURNER FOR GAS AND OIL. THOMAS JAMES FLANAGAN and MICHAEL JOSEPH FLANAGAN, Tulsa, Okla., assignors to Flanagan Company, Tulsa, Okla., a Corporation of Oklahoma. Filed Sept. 23, 1916. Serial No. 121,759. (Cl. 158—74.)



1. In a device of the character described, a combined oil and gas burner comprising an air chamber, a gas and oil chamber having independent inlets for oil, gas, or both, and a steam supply nozzle, all arranged to effect an intimate mixture of the oil, gas, steam and air prior to discharge from the device, the steam supply nozzle being arranged within the gas and oil chamber to discharge beyond the inlets for the oil and gas, and said nozzle terminating in a jet device flaring outwardly to form a restricted passage for the oil and gas to the mixing area beyond said jet device.

2. In a device of the character described, a combined oil and gas burner comprising an outer member having a controlled inlet leading to an air chamber therewithin, a member constituting a gas and oil chamber within said air chamber arranged to discharge into a space within the device for admixture of the oil, gas and air, separate inlets for oil and gas passed through the outer member and into the member forming the gas and oil chamber so as to discharge into the latter, and a steam supply nozzle within the gas and oil chamber adapted to discharge at a point in immediate proximity to the oil and gas inlets to facilitate the feeding of the oil and gas and to effect admixture of the oil, gas and steam within the device.

3. In a device of the character described, a combined oil and gas burner comprising an outer member having a controlled inlet leading to an air chamber therewithin, a member constituting a gas and oil chamber within said air chamber arranged to discharge into a space within the device for admixture of the oil, gas and air, separate inlets for oil and gas passed through the outer member and into the member forming the gas and oil chamber so as to discharge into the latter, and a steam supply nozzle within the gas and oil chamber adapted to discharge at a point to effect admixture of the oil, gas and steam within the device in a space prior to the admission of the air to the mixture of oil, gas and steam.

4. In a device of the character described, a combined oil and gas burner comprising an outer member having a controlled inlet leading to an air chamber therewithin, a member constituting a gas and oil chamber within said chamber arranged to discharge into a space within the device for admixture of the oil, gas and air, separate inlets for oil and gas passed through the outer member and into the member forming the gas and oil chamber so as to discharge into the latter, and a steam supply nozzle within the gas and oil chamber adapted to discharge at a point to effect admixture of the oil, gas and steam within the device, the steam supply nozzle having a jet device discharging slightly beyond the point of discharge of the gas and oil supply into the gas and oil chamber.

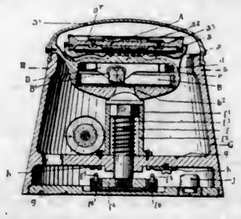
5. In a device of the character described, a combined oil and gas burner comprising an outer member having a controlled inlet leading to an air chamber therewithin, a member constituting a gas and oil chamber within said air chamber arranged to discharge into a space within the device for admixture of the oil, gas and air, separate inlets for oil and gas passed through the outer member and into the member forming the gas and oil chamber so as to discharge into the latter, and a steam supply nozzle within the gas and oil chamber adapted to discharge at a point to effect admixture of the oil, gas and steam within the device, the steam supply nozzle having a jet device discharging slightly beyond the point of discharge of the gas and oil supply into the gas and oil chamber, and said jet device flaring outwardly to form a restricted annular passage for the oil and gas to the space within which the steam mixes therewith.

[Claims 6 to 8 not printed in the Gazette.]

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1,230,884. TELEPHONIC APPARATUS. CHARLES FORGUES, Paris, France, assignor to Société de Lavandeyra & Orner, Paris, France. Filed Aug. 3, 1914. Serial No. 854,846. (Cl. 179—100.)

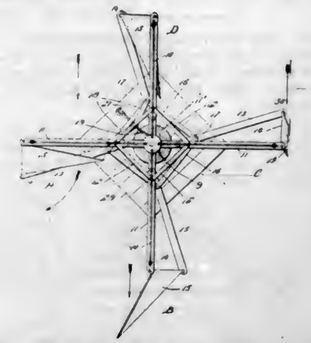
In a telephonic apparatus of the character described, in combination, a casing, a bottom screwed into said casing, a micro-telephone or monophone comprising a hornless, two-faced microphone and a receiver within said casing, said micro-telephone constituting in the position of rest of the apparatus the cover or lid for said casing, and an



antiseptic cartridge in said bottom of the casing, substantially as described.

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1,230,885. WIND-WHEEL. FRANK P. GAY, Prairie View, Kans. Filed Oct. 27, 1916. Serial No. 128,067. (Cl. 170—26.)



1. A wind wheel including radiating pairs of arms each pair including an upper arm and a lower arm mounted to swing into and out of position under the upper arm, blades pivotally connected to the upper and lower arms and adapted to swing freely therebetween, and means for simultaneously shifting the lower arms to tilt the blades.

3. A wind wheel including a shaft, fixed arms radiating from and revoluble with the shaft, arms pivoted to and diverging outwardly from the respective radial arms, link connections between said pivoted arms, a toggle connection between one of the pivoted arms and one of the fixed arms, blades pivotally connected to and mounted to swing freely between the radial and pivoted arms, a lever revoluble with the shaft, a connection between one arm of the lever and the toggle, a member slidably mounted on and revoluble with the shaft, a connection between said member and the lever, and means for shifting said member longitudinally of the shaft irrespective of the rotation of the shaft to swing the pivoted arms and tilt the blades.

[Claim 2 not printed in the Gazette.]

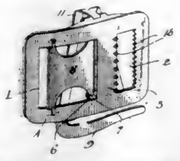
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1,230,886. BELT-BUCKLE. SAFE GEORGE, Hattiesburg, Miss. Filed Aug. 9, 1916. Serial No. 114,023. (Cl. 24—79.)

1. A buckle having upon its rear face a hinged clamp, comprising two spring jaws which exert a tension toward each other.

2. A buckle having its inner face provided with a hinged clamp comprising two spring jaws each exerting a tension toward the other, one of said jaws having its lower end formed with a transverse depression and being provided with teeth, the lower edge of the other jaw hav-

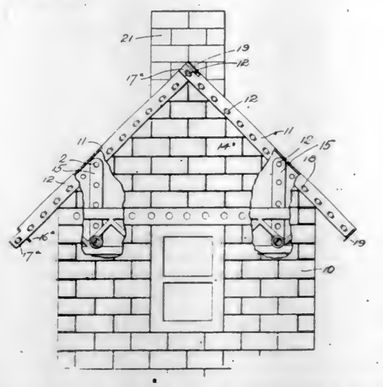
ing an inturned portion to be received in the depression of the first mentioned jaw.



3. A belt buckle comprising a plate having two elongated openings and a partition dividing the openings, a hook upon the lower edge of the buckle, a spring clamp upon the inner face of the buckle, a tongue having one of its ends pivotally secured in one of the openings, said tongue comprising a plat plate one of the ends of which being widened to contact with the outer face of the buckle, the partition being provided with teeth disposed beyond the second opening, and a bendable member also provided with teeth upon the partition, as and for the purpose set forth.

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1,230,887. TOY BUILDING CONSTRUCTION. ALFRED C. GILBERT, New Haven, Conn., assignor to The A. C. Gilbert Company, New Haven, Conn., a Corporation of Connecticut. Filed Feb. 15, 1916. Serial No. 78,443. (Cl. 46—35.)



1. In a toy roof construction, the combination of parallel rafter members having perforations, anchoring rods detachably engaging said perforations and extending between said rafter members, and a plurality of metal sheathing members having holes engaging said anchoring rods; substantially as described.

2. In a toy roof construction, the combination of parallel rafter members, anchoring rods detachably engaging said members and extending between the same, and a plurality of sheathing members having holes engaging said anchoring rods, each of said sheathing members being supported by at least two of said rods.

3. In a toy roof construction, the combination of parallel rafter members, anchoring rods detachably supported by said members and extending between the same, and a plurality of sheathing members detachably engaging said rods, said sheathing members being arranged in longitudinal rows, with the members of adjacent rows in staggered relation.

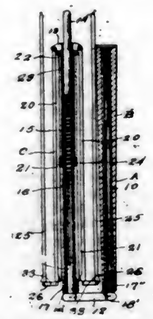
4. In a toy roof construction, the combination of parallel rafter members, anchoring rods detachably engaging said members and extending therebetween, and a plurality of sheathing members having holes engaging said rods, said sheathing members arranged in staggered rows, and each sheathing member being supported on at least two of said rods.

19. In a toy roof, a pair of inclined rafter members having parts which overlap each other at the ridge of the roof, said overlapping parts provided with registering perforations, a ridge rod passing through said registering perforations and detachably interconnecting said rafter members, and sheathing means engaging said ridge rod; substantially as described.

[Claims 5 to 18 not printed in the Gazette.]

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1,230,888. FOLDING UMBRELLA. WILLIAM GILDOW and MYRON SCHOCK, Oak Harbor, Wash. Filed Jan. 9, 1917. Serial No. 141,413. (Cl. 135—25.)



1. In an umbrella of the character described, a stem construction including an upper tubular stem element, a ferrule longitudinally slidable therein and adapted to project from the outer end, a second member slidable in the stem section, a spring support carried by said stem section, a spring confined between said support and said ferrule said second named member connected to said ferrule, under tension to project the ferrule to the outer limit of its movement, a hinge link connected to the inner end of said second named member positioned to lie within said stem sections when the ferrule is at the outer limit of its movement, a lower stem section connected to the hinged link, and extending a distance within the upper stem section when the ferrule is at the outer limit of its movement, and a handle section adapted to be disposed in parallel relation with the lower stem section at times.

2. In an umbrella, a stem section, a ferrule element slidable therein and adapted to project therefrom, a sliding tube in the ferrule section connected to the ferrule, a hinge link connected to the bpposite end of the tube, a lower stem section connected to the link, said connections and link being disposed and arranged to lie within the said stem section when the ferrule is normally projected, said tube having a longitudinal slot therein, a pin fixed in the stem section and extending through the slot, and a spring confined between the pin and the ferrule, under tension to project the ferrule to its outermost position.

3. In an umbrella, two stem sections, a sliding element in one, resilient means tending to move the sliding element thereinto, a hinge link connected between said sliding element and the other stem section, said link being extended at each end to project over opposite sides of the respective stem sections, and a telescoping handle element adapted to be moved on said other stem section into close abutting engagement with said link, and means to secure the telescoping element in adjusted position.

4. In an umbrella, a tubular stem section, a sliding element therein, resilient means engaged with the sliding element and stem section tending to draw the sliding element into the stem section, a hinge link pivoted on said sliding element having projecting end portions adapted to extend across both sides of the stem sections when



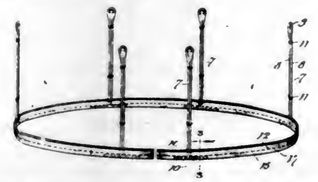
drawn outwardly and disposed at right angles thereto, for the purposes described, and a second section connected to the link having a portion to engage in said stem element.

5. An umbrella of the character described comprising stem elements including an upper section, a crown at the outer end of the upper stem section, inner rib sections pivotally connected to the crown, a sliding sleeve on said stem section, a crown on the sliding sleeve, braces pivoted on the crown last mentioned and connected at their outer ends to the outer ends of said upper rib section, means to limit downward movement of the sleeve at a position with the braces in normal supporting relation to the upper rib sections, the sleeve being slidable into position with its crown in close relation to the first named crown, said braces being of a length to lie in close parallel relation with the upper rib sections when at the inner limit of their movement, and outer rib sections pivotally connected to the first named section respectively and foldable outwardly and upwardly into close relation therewith.

[Claim 6 not printed in the Gazette.]

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1,230,889. GARMENT-SUPPORTER. ALEXANDRE M. GREAN, New York, N. Y. Filed Dec. 17, 1913. Serial No. 807,265. (Cl. 2—91.)



1. A garment supporter comprising a resilient standard formed of the hardened attenuated contents of the silk ducts of silk worms.

2. A garment supporter comprising a resilient standard formed of the hardened attenuated contents of the silk ducts of silk worms, and a stiffening and binding coating covering said material and permitting the elastic action thereof.

5. A garment supporter comprising a plurality of standards, a core strip cemented thereto and connecting the standards, and a binding strip inclosing the core strip and the ends of the standards cemented to said core strip.

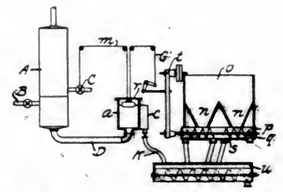
8. An individual collar supporter, comprising a single standard formed from a length of filamentary material bent upon itself to produce a plurality of strands, said strands being twisted together through out the length of the standard to form a single shank having means at both ends, whereby it can be atached to a collar, at least one of said means being an eye formed by the bending of the filament, and the ends of said filament being so disposed with respect to the attaching means that they will be protected thereby from pricking the neck of the wearer.

[Claims 3, 4, 6, 7, and 9 not printed in the Gazette.]

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1,230,890. APPARATUS FOR THE MANUFACTURE OF DRY CRYSTALS OF SUGAR AND OTHER CRYSTALLINE SUBSTANCES. JEAN CHARLES GRIÈRE, Padua, Italy. Filed May 28, 1914. Serial No. 841,466. (Cl. 127—17.)

1. Apparatus for forming dry crystals of sugar or other soluble crystalline substances from a hot solution comprising an evaporator for concentrating the raw solution, a valve controlling the inlet of raw solution to the evaporator, a regulator tank into which the evaporator discharges continuously, a precipitating receptacle into which the tank discharges, a distributing device for delivering precipitant continuously to the receptacle, a float in the tank, a connection from the float to the inlet valve of the evaporator whereby increased discharge from the latter produces diminished supply of raw solution thereto and vice versa and a connection

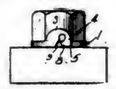


from the float to the distributer whereby increased discharge from the evaporator produces increased supply of precipitant to the receptacle and vice versa.

[Claims 2 and 3 not printed in the Gazette.]

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1,230,891. NUT AND BOLT LOCK. AUREL HANSCHILD, Pittsburgh, Pa. Filed Feb. 20, 1917. Serial No. 149,725. (Cl. 151—45.)



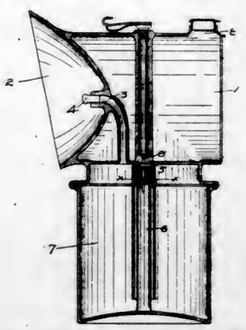
1. A nut lock comprising a washer having a projection thereon arranged to contact one of the faces of the nut and to grip the surface engaged by the washer so that the more the nut tends to loosen the tighter the projection grips the surface.

2. A nut lock comprising a washer having a single integral projection arranged to grip the surface beneath the washer to prevent the washer from being turned in one direction and also being arranged to be biased by the nut to grip the bolt to prevent it from turning.

[Claims 3 to 10 not printed in the Gazette.]

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1,230,892. ACETYLENE-LAMP. AUGIE L. HANSEN, Chicago, Ill., assignor to Justrite Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 30, 1914. Serial No. 828,112. (Cl. 240—1.)



2. A miner's lamp comprising the combination with a water reservoir having its side and end walls cast integral, of a carbid receptacle having its side and bottom walls cast integral, a reflector forming the front wall of the water reservoir, the water reservoir having a depending annular flange for engaging the upper edge of the carbid receptacle, a threaded rod carried by the carbid receptacle, a threaded boss carried by the water reservoir for coöperating with the threaded rod of the carbid receptacle for forcing the annular flange of the water reservoir into engagement

with the carbid receptacle, and means for providing communication between the water receptacle and carbid receptacle.

[Claim 1 not printed in the Gazette.]

1,230,893. LAST. CHRISTOPHER CHARLES HARDWICK and ARTHUR HARRY ALLEN, Northampton, England. Filed May 18, 1914. Serial No. 839,241. (Cl. 12—136.)



1. In a two-part collapsible last, the combination of a fore-part and a heel-part each having a vertical slot and constructed and arranged to form a V-shaped space between them when they are extended, a hinge-plate mounted in the said vertical slots so that its lower edge extends across the joint between the parts flush with the sole of the last, the said plate being secured rigidly to the heel part and pivotally to the toe part, a rigid abutment having a rounded head projecting from the heel part into the upper portion of the V-shaped space above the joint, a downwardly-directed socket arranged in the solid body portion of the fore-part of the last, a spiral spring arranged freely in the said socket to bear against the bottmtom thereof, and a plunger slidably mounted in the said socket to bear on the one hand against the said spring and projecting from the said socket to bear on the other hand against the rounded head of the aforesaid abutment, the said plunger being rounded at its outer end to permit it to ride over the rounded head of the said abutment.

2. In a two-part collapsible last, the combination of a fore-part and a heel-part, each having a vertical slot and constructed and arranged to form between them a V-shaped space when they are extended, a hinge plate occupying said vertical slots and rigidly secured to the heel part, said plate having its lower edge where it extends across the joint between the parts flush with the sole of the last and being pivotally connected to the fore-part, the portion of said plate which is secured in the heel-part of the last having an upwardly-directed extension, the upper end of which presents a rounded head projecting into the upper portion of the V-shaped space above the joint and constituting an abutment, the fore-part of the last having a downwardly-directed socket arranged in the solid body portion thereof, a spiral spring arranged freely in said socket to bear against the bottom thereof, and a plunger slidably mounted in said socket to bear on one hand against said spring and projecting from said socket to bear on the other hand against the rounded head of said abutment, said plunger being rounded at its outer end to permit it to ride over the rounded head of said abutment.

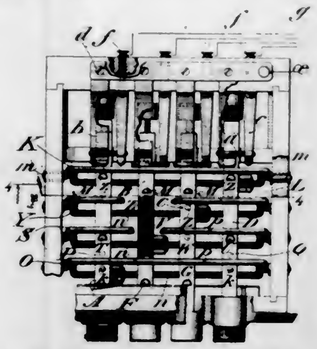
1,230,894. METHOD OF REPAIRING ASPHALT PAVEMENTS. JOHN T. HARROP, Garfield, N. J. Filed May 23, 1916. Serial No. 99,314. (Cl. 94—1.).

1. The method of repairing depressions in asphalt or similar pavements which consists in first saturating or impregnating the material in which the depression occurs, with a suitable inflammable solvent, which cuts back and tends to soften said material, igniting and burning said solvent to render the material in which the depression occurs, plastic, and then filling in the depression with a material containing a bituminous binder.

[Claims 2 to 4 not printed in the Gazette.]

1,230,895. DEPARTMENT-SELECTING MECHANISM FOR AUTOMATICALLY-PLAYED ORGANS. WILLIAM E. HASKELL, Brattleboro, Vt., assignor to Estey Organ Company, Brattleboro, Vt., a Corporation of Vermont. Filed June 29, 1916. Serial No. 106,694. (Cl. 84—54.)

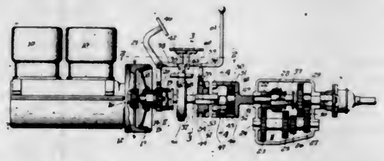
3. A hand governed selecting mechanism for automatically played organs having, in combination, a row of four sliding organ selecting bars, each with differently located projections; four swinging rollers each with two arms on opposite sides of all of the selecting bars, said rollers acting upon the projections on the selecting bars so that when one roller is moved all four bars will be moved in, when a second roller is moved all four bars will be moved out, when a third roller is moved two bars will be moved in and two out, and when the fourth roller is moved the two bars moved in by the third roller will be moved out while the two bars moved out by the third roller will be moved in; and a separate spring-moved actuating bar operatively connected with each roller to move it.



8. A hand governed selecting mechanism for automatically played organs having, in combination, a sliding organ selecting bar with spaced pins or projections extending in opposite directions; swinging rollers each with four arms two on opposite sides of the selecting bar and acting upon said projections; and a separate spring-moved actuating bar coöperating with each roller to move it.

[Claims 1, 2, and 4 to 7 not printed in the Gazette.]

1,230,896. AUTOMOBILE TRANSMISSION MECHANISM. WILLIAM E. HAUPT, Philadelphia, Pa. Filed Mar. 25, 1914. Serial No. 827,055. (Cl. 74—58.)



1. In a device of the character stated, an engine, a friction clutch connected therewith, gear changing mechanism connected with the driven member of the friction clutch and an overrunning clutch between the driven clutch member and the gear changing mechanism.

2. In a device of the character stated, an engine, a friction clutch connected therewith, clutch operating mechanism, coöperating clutch brake members operative when the clutch is released, gear changing mechanism, connections between the friction clutch and the gear changing mechanism carrying one of the brake members and an overrunning clutch between the friction clutch and the gear changing mechanism permitting continued operation of the gear mechanism in the direction in which it is normally driven after the brake has been set.

3. In a device of the character stated, an engine, a friction clutch connected therewith, clutch operating mechanism, coöperating brake members operative when the clutch is released, braking against rotation in one direction only, gear changing mechanism, connections between the friction clutch and the gear changing mechanism carrying one member of the brake and an overrunning clutch between the friction clutch and the gear changing mechanism, the overrunning clutch permitting continued operation of the gear changing mechanism in the direction in which it is normally driven after the brake has been set and the one way character of the brake permitting coasting of the car in the opposite direction when the brake is on.

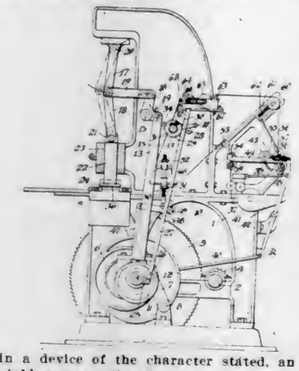
4. In a device of the character stated, interrupted shafting, an engine clutch member connected with one end of the shafting, variable speed transmission gearing connected with the other end of the shafting and an overrunning clutch having one part connected with each of the interrupted parts of the shafting.

5. In a device of the character stated, an engine, gear changing mechanism, shafting between and two clutches interposed in said shafting, both operative at the same time and of different character.

[Claims 6 to 20 not printed in the Gazette.]



1,230,897. WIPER AND POLISHER FOR PLATE-PRINTING AND DIE-STAMPING PRESSES. CYRUS HAWKINS, Collingswood, N. J., assignor of one-half to Harry W. King, Philadelphia, Pa. Filed Aug. 25, 1911. Serial No. 645,908. (Cl. 101—165.)



1. In a device of the character stated, an impression plate, inking means therefor, an endless wiping band for the plate, a washing tank for the band, feed mechanism moving the band from the wiping position to the tank, a device for moving over the surface of and pressing against the band within the fluid in the tank and bodily movable means whereby the surface of the device applied to the band is changed during the operation of the device.

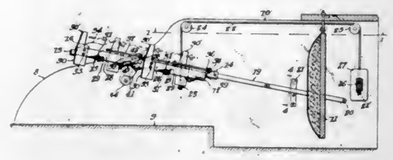
2. In a device of the character stated, an impression plate, a wiping band, a washing tank having a roughened surface for the band, means for moving the band from the wiping position through the washing tank, while presenting a roughened surface to the band and bodily movable means for forcing the band against the roughened surface to scrub the band.

3. In a device of the character stated, a press, a metal plate used therein, means for inking the plate, an endless band, means for wiping the plate by the band, a washing tank adapted to hold a fluid, means for moving the band from the wiping position through the fluid in the tank, a device within the fluid in the tank adapted to be moved over the surface of the band and press against it, and means for moving the roller back and forth in the tank to engage and squeeze the band for cleansing purposes.

4. In a device of the character stated, an impression plate, inking rollers therefor, an endless wiping band for the plate, a washing tank for the band adapted to hold a fluid and reciprocating rubbing means engaging the band within the fluid to assist in the washing operation.

5. In a device of the character stated, an impression plate, inking rollers therefor, an endless wiping band for the plate, a washing tank for the band adapted to contain a liquid and having a corrugated bottom, a roller on the opposite side of the band from the bottom and means for rolling the roller along the corrugated bottom to cause the band to engage with the corrugations.

1,230,898. PIN-SETTING DEVICE. JAKOB HEINEMANN, Oshkosh, Wis. Filed Apr. 22, 1916. Serial No. 92,851. (Cl. 46—54.)



1. A pin setting device, comprising a frame having pockets for holding pins in substantially horizontal position, side arms connected to the frame and extending rearwardly therefrom, means pivotally connecting the rear ends of the side arms to the side walls of a bowling alley, cables connected to the front portions of the pin frame and extending rearwardly and downwardly beyond the rear end of the frame, a transverse beam connected to the rear end portions of both of said cables, a plurality of weights mounted thereon and exerting an equal pull upon both cables for holding the pin frame normally in its upper position and against torsional strain, a pin engaging tiltable frame mounted on the pin frame, means exerting a tendency to maintain the tiltable frame in upright position, a trip dog pivoted to the pin frame for holding the tiltable frame in its lower position and having a downwardly extending portion for engagement with the floor of the alley to release the tiltable frame when the pin frame is swung to its lower position, and a spring for yieldingly maintaining the trip dog in frame engaging position.

2. A pin setting device, comprising a pin frame formed, in part of transverse and longitudinal members, curved guide members mounted between the longitudinal members, supporting plates adjustably mounted on the transverse members and guided by the longitudinal members, said guide members and supporting plates forming pin pockets for holding pins in an inclined position, a pin engaging tiltable frame mounted on the pin frame, spring means exerting a tendency to maintain the tiltable frame in upright position, a trip dog pivoted to the pin frame for holding the tilting frame in its lower position and having a downwardly extending portion for engagement with the floor of the alley to release the tilting frame when the pin frame is swung to its lower position, and spring means for yieldingly maintaining the trip dog in frame engaging position.

3. A pin setting device, comprising in part a pin frame having curved pockets for holding pins, side arms connected to the frame and extending rearwardly therefrom, means pivotally connecting the rear end portions of the side arms to the side walls of a bowling alley, and wedge members interposed between the side arms and the side walls for guiding and holding the pin frame in a central position.

[Claim 4 not printed in the Gazette.]

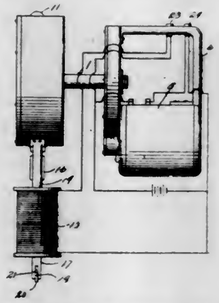
1,230,899. PROCESS OF MAKING ACETIC ACID. HAROLD HIBBERT, Pittsburgh, Pa., assignor to Union Carbide Company, New York, N. Y., a Corporation of Virginia. Filed Aug. 15, 1916. Serial No. 115,062. (Cl. 23—24.)

1. Process of making acetic acid which consists in effecting a reaction between acetaldehyde and oxygen in the presence of wood charcoal.

2. Process of making acetic acid which consists in effecting a reaction between acetaldehyde and oxygen in the presence of wood charcoal preliminarily saturated with strong acetic acid.

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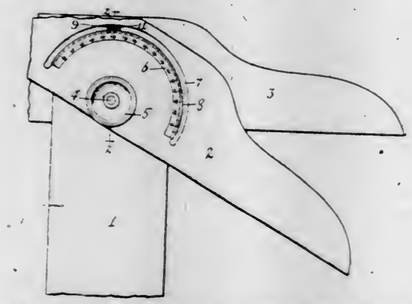
1,230,900. ELECTROMAGNETIC VALVE-GRINDER. CHARLES A. HINK, Grinnell, Iowa. Filed May 7, 1915. Serial No. 26,614. (Cl. 51—4.)



In an electro-magnetic valve grinder, the combination with a casing, of a shaft revolubly mounted therein, a gear on one end of said shaft, a motor for driving said gear, a plate having a pair of segmental gears thereon on the other end of said shaft, a vertically extending shaft having pinions thereon on the opposite sides of the center of the said plate and adapted to alternately engage said gears and a magnetic bit detachably mounted on the lower end of said vertical shaft.

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1,230,901. ADJUSTABLE T-SQUARE. STEPHEN CHASE HOUGHTON, Pacific Grove, Cal. Filed Nov. 6, 1916. Serial No. 129,674. (Cl. 33—100.)



1. An adjustable T-square comprising a blade; a head secured to the blade in permanent relation; a second head; a controllable pivotal connection between said heads; a degree-scale carried by one head; and an index finger carried by the other head, said scale and finger cooperating to indicate the angle of the blade adjustment.

5. An adjustable T-square comprising a blade; a head secured to the blade in permanent relation; a second head having an arcuate through-slot; a controllable pivotal connection between said heads; an arcuate degree-scale-plate affixed to the second head concentric with its slot; and an arm lying in a slot in the blade and affixed at one end to the first head, said arm having its other end bent to form an index finger playing in the slot of the second head and in conjunction with the scale-plate indicating the angle of the blade adjustment.

[Claims 2 to 4 and 6 not printed in the Gazette.]

1,230,902. TIRE-FASTENING DEVICE. FRANK P. JOHNSON, Danville, Pa. Filed Feb. 28, 1913, Serial No. 751,375. Renewed Dec. 17, 1913. Serial No. 807,356. (Cl. 152—21.)



1. A device of the class described, comprising a rim provided with a circumferential channel forming a rib at its inner face, a continuous tire-engaging ring arranged on the rim adjacent the said channel and provided with a recess, a split ring mounted in the channel of the rim and retaining the tire-engaging ring in place, and a rotary locking member mounted in the rim radially thereof and having a locking head to engage the split ring, said locking member being in transverse alinement with the recess of the tire engaging ring.

2. A device of the class described including a rim having an opening, a continuous tire engaging ring arranged on the rim and provided at its inner periphery with a recess located at the said opening, a split ring arranged on the rim and retaining the tire engaging ring on the same, a rotary locking member passed through the opening of the rim and having a head at its outer end to engage the split ring, and an arm connected with the inner end of the rotary locking member for turning the same.

3. A device of the class described including a rim provided at its inner face with a rib, a split ring mounted on the rim, a rotary locking member mounted in the rim on an axis radial to the rim and having a head to engage the split ring, and an operating arm fixed to the locking member and provided between its ends with a bend forming an offset outer portion adapted to engage behind the rib of the rim.

4. A device of the class described including a rim, a split ring mounted on the rim, a rotary locking member pivotally mounted in the rim at the meeting ends of the split ring and having a head at its outer end on opposite sides of the pivot to engage both ends of the said ring, a resilient operating arm fixed to the pivot of the locking member at its inner end and provided at its outer end with means for engaging the rim for holding the locking member against rotary movement.

5. A device of the class described, including a rim provided on its inner face with a rib, a split ring mounted on the rim, a locking member mounted in the rim and having a head to engage the split ring, and an operating arm fixed to the locking member and having an offset portion to engage the inner side of the rib for holding the locking member against movement.

[Claim 6 not printed in the Gazette.]

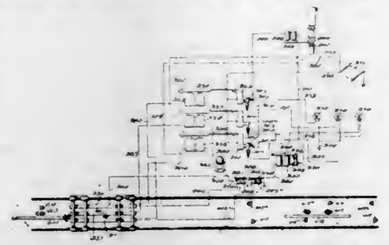
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1,230,903. BLOCK-SIGNAL SYSTEM. MARSENA R. JULIAN, Birmingham, Ala., assignor to Julian Signal Company, Birmingham, Ala., a Corporation of Delaware. Filed Apr. 2, 1913. Serial No. 758,452. (Cl. 246—58.)

1. In an electric block signal system, a vehicle having thereon a source of energy, a shoe adapted to engage a grounded track contact, said shoe being electrically connected in circuit to the source of energy, electrically operated brake actuating mechanism normally in circuit with the source of energy, means actuated by the engagement of the shoe with the track contact for connecting the actuating mechanism in a second circuit with the source of energy, a signal, means actuated by the engagement of the shoe with the track contact for electrically connecting the signal in circuit with the source of energy, and mechanically operated means for breaking the first circuit through the brake actuating mechanism.

2. A block signal system including a shoe adapted to be electrically engaged with a track contact, a signal actuating magnet, a source of energy, a circuit closer connected on one side to said source of energy and when closed connecting with the ground, and a magnet controlling the circuit closer and when energized holding the circuit closer to the ground, said magnet being connected through the shoe with the source of energy, said shoe being connected through the actuating magnet with the source of energy, the actuating magnet having less resistance than the maget controlling the circuit closer.





3. In a track controlled block signaling system, a train-carried signal mechanism including a signal actuating magnet, a source of energy, a brake controlling magnet in circuit with the source of energy, a magnetically controlled circuit closer, the magnet of which is in a normally closed circuit with the source of energy, said circuit closer normally closing the brake magnet circuit, a branch connected to said latter circuit and extending through the signal actuating magnet, a contact shoe connected thereto and adapted to engage with a track contact, and mechanically actuated means for breaking the brake controlling circuit, said means being disposed in said circuit between the ground and the junction of the branch circuit.

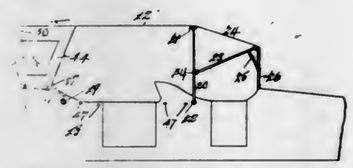
4. In a block signal system, a train-carried mechanism including a contsantly energized, brake-controlling magnet, mechanical means for breaking the circuit through the brake-controlling magnet, electrical means for holding said circuit completed, means disposed in the track for electrical engagement with said electrical holding means to ground the latter, and means disposed in the track for engaging said circuit breaking means to cause it to break said circuit.

5. In a block signal system of the character described, the combination with a grounded track contact, of a train carried signal mechanism including a constantly energized brake-controlling magnet, a contact shoe electrically connected in circuit with the magnet, a grounded branch connection forming part of the magnet circuit, a circuit breaker mounted in conjunction with the shoe and disposed in said branch, and an actuating rail disposed in the track adjacent to the track contact and adapted to engage said circuit breaker to actuate the latter after the contact shoe has electrically engaged the track contact.

[Claims 6 to 17 not printed in the Gazette.]

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1,230,904. AUTOMOBILE-TOP. SILAS KAHN, New York, N. Y. Filed Sept. 23, 1916. Serial No. 121,718. (Cl. 21—62.)



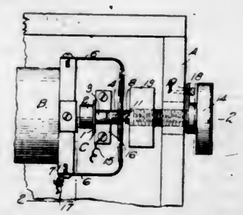
1. In combination with a vehicle body, a receptacle carried thereby, a rotatable roller within said receptacle, a cover for said vehicle secured to said roller and arranged to be rolled up and wound upon said roller, means to rotate said roller, front supporting elements hingedly secured, at one end thereof, to said cover and arranged to be swung over and lie against the upper surface of said cover and to be enveloped by said cover when said cover is rolled up, and a rear supporting element for said cover pivotally secured to the body of said vehicle and arranged to place said cover under tension when said cover is positioned for use.

2. In combination with a vehicle body, a cover therefor adapted to be rolled up, means carried by the vehicle to roll said cover up, a cross-bar secured to the cover adjacent the front end thereof, a supporting-member hinged at one end thereof to said cross-bar at each end thereof and arranged for detachable securement to the vehicle body, a supporting-member at the rear of the vehicle body, a roller carried by said supporting-member, and means carried by the cover, at the front edge thereof, to engage said roller when the cover is rolled up to facilitate the extension of said cover when said supporting-member is raised to position same for use.

3. In combination with a vehicle body, a cover therefor adapted to be rolled up, means carried by the vehicle to roll said cover up, a cross-bar secured to the cover adjacent the front end thereof, a supporting-member hinged at one end thereof to said cross-bar at each end thereof and arranged for detachable securement to the vehicle body, a supporting-member at the rear of the vehicle body, a roller carried by said supporting-member, and a hook carried by the cover, at the front edge thereof, to engage said roller when the cover is rolled up to facilitate the extension of said cover when said supporting-member is raised to position same for use.

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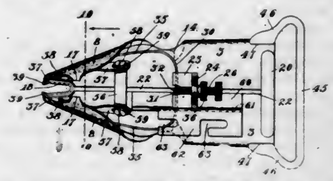
1,230,905. HIGH-FREQUENCY THERAPEUTICAL APPARATUS. WILLIAM KLEINBERG, New York, N. Y. Filed Aug. 31, 1915. Serial No. 48,175. (Cl. 175—349.)



A high frequency apparatus comprising an induction coil, a vibrator including a contact, a resilient support, a contact thereon, a rigid support, a screw mounted on the rigid support and operatively related to the resilient support to adjust the position of the contacts, and means for connecting the resilient support in the electric circuit of the induction coil independently of the rigid support.

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1,230,906. FOLDER FOR COLLARET-MACHINES. LOUIS KRUG, JOHN P. WEIS, and WILLIS C. ROBBINS, Nyack, N. Y., assignors, by mesne assignments, to Lucius N. Littauer, Gloversville, N. Y. Filed Aug. 6, 1906. Serial No. 329,355. (Cl. 270—36.)



1. In combination, stitch-forming mechanism, feeding mechanism, and a folding-device, the latter comprising a

flat body-portion tapered at its forward end, and the latter having an integral mouth-piece fixed thereto and arranged substantially at a right-angle to its delivery-end and substantially parallel with the line of feed.

2. In combination, a stitch-forming mechanism; a feeding mechanism; and a folder, the latter being arranged on the work-plate of the machine at a right-angle to the line of feed and wholly at one side of the latter, and comprising a flat body-portion vertically disposed on said work-plate and having its forward end tapered, and the latter having an integral mouth-piece fixed thereto and arranged substantially parallel with the line of feed.

3. A folding-device comprising a body-portion having at one end hem-turning devices including loops having tongues suspended therein, in combination with a tension-device for coöperating with the folds of the binding-material within the hem-turning devices at the delivery-end thereof.

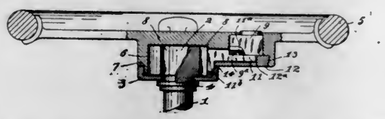
4. A folding-device comprising a body-portion having at one end hem-turning devices, in combination with a tension-device for operating upon the folds of the binding within the hem-turning devices, and means for adjusting said tension-device.

5. A folding-device comprising a flat, tubular, body-portion having a tapered hem-turning device at one end, in combination with an integral mouth-piece fixed thereto at said end at an angle to the said body-portion.

[Claims 6 to 36 not printed in the Gazette.]

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1,230,907. AUTOMOBILE-LOCK. ARTHUR W. LAMP, Cleveland, Ohio, assignor of one-half to C. C. Marshall, Lakewood, Ohio, and one-half to I. S. Payton, East Cleveland, Ohio. Filed Dec. 20, 1916. Serial No. 138,104. (Cl. 70—129.)



1. An automobile lock comprising the combination of the steering shaft; a head on said shaft; an operating member provided with a chamber in which the head of the steering shaft is mounted; a collar loosely mounted on the shaft under the head thereof and threaded onto the operating member; a longitudinal key-way in the head of the steering shaft; a lock and bolt housing on the operating member; a slidable bolt mounted in said housing and adapted for engagement and disengagement with the key-way in the steering head; a closure member for the bolt housing, said closure member being locked to the housing by the threaded collar.

2. An automobile lock comprising the combination of the steering shaft; a head on said shaft; an operating member provided with a chamber in which the head of the steering shaft is mounted; a collar loosely mounted on the shaft under the head thereof and threaded onto the operating member; a longitudinal key-way in the head of the steering shaft; a lock and bolt housing on the operating member; a slidable bolt mounted in said housing and adapted for engagement and disengagement with the key-way in the steering head; a closure member for the bolt housing, said closure member being locked to the housing by the threaded collar; and a recess in the thread of the collar member for engagement with the bolt when said bolt is disengaged from the key-way on the steering head.

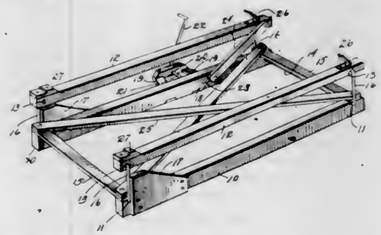
3. In an automobile lock the combination of the steering shaft; a head on said shaft; an operating member provided with a chamber in which the head of the steering shaft is mounted; a shoulder on the steering shaft; a collar loosely mounted on the shaft and bearing on said shoulder and confined between said shoulder and the head of the shaft, said collar having a threaded connection with the operating member; a recess in the thread of said collar; longitudinal key-ways in the head of the steering shaft; a slidable bolt mounted on the operating member and adapted for engagement and disengagement with one of the key-ways and for engagement and disengagement in the recess in the collar; lock mechanism for operating said bolt; and a removable key for actuating said lock.

4. An automobile lock comprising the combination of the steering shaft; a head on said shaft; an operating member provided with a chamber in which the head of the steering shaft is mounted; a collar loosely mounted on the shaft under the head thereof and threaded onto the operating member; a longitudinal key-way in the head of the steering shaft; a slidable bolt mounted on the operating member and adapted for engagement and disengagement with the key-way in the steering head; a recess in the collar member cut through the thread thereof for engagement with the slidable bolt when said bolt is disengaged from the key-way, and thereby prevent the turning of the collar in its threaded connection with the operating member; and means for operating said bolt.

5. An automobile lock comprising the combination of the steering shaft; a head on said shaft; an operating member provided with a chamber in which the head of the steering shaft is mounted; a collar loosely mounted on the shaft under the head thereof and threaded onto the operating member; a longitudinal key-way in the head of the steering shaft; a lock and bolt housing on the operating member; a slidable bolt mounted in said housing and adapted for engagement and disengagement with the key-way in the steering head; a closure member for the bolt housing, said closure member being locked to the housing by the threaded collar; a recess in the collar member for engagement with the slidable bolt when said bolt is disengaged from the key-way, and thereby prevent the turning of the collar in its threaded connection with the operating member; lock mechanism attached to the operating member within the housing and having operative connection with the slidable bolt member; and a removable key for operating the slidable bolt through the medium of the lock mechanism.

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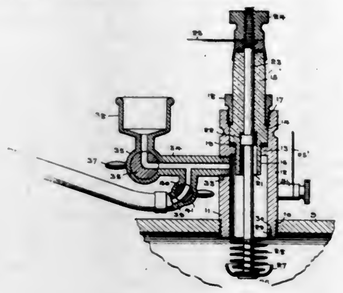
1,230,908. AUTOMOBILE-JACK. GEORGE WILLIE LEE, Benson, N. C. Filed Oct. 30, 1916. Serial No. 128,540. (Cl. 254—91.)



The combination with a lower rectangular frame; of a pair of lifting rails located above the frame at respective sides thereof, a pair of resilient links connecting the frame at one end thereof with corresponding ends of the rails, a second pair of links connecting the remaining ends of the rails and frame, stops fixed to the frame in the path of the first-mentioned links, a rock shaft journaled on the frame and provided with an operating lever at one end and a crank at the other, a pitman connecting said crank and one of the second-mentioned links, said crank having a sufficiently great throw to bend the resilient link on the same side of the frame as the crank passes over its dead center in raising the rails, said frame including brace members one of which acts as a stop for the pitman, and stops on the rails arranged for engagement by the axle of a vehicle as the latter is run over the frame longitudinally.



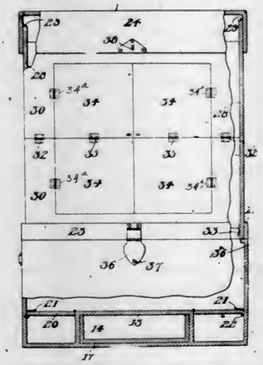
1,230,909. INTERNAL-COMBUSTION ENGINE. JOHN HENRY LEPPER, Mason City, Iowa. Filed Aug. 9, 1916. Serial No. 113,972. (Cl. 123—122.)



In combination with the manifold of an internal combustion engine, a vaporizing device including a hollow plug positioned in the manifold, a conducting element positioned within the plug, one end thereof extending into the manifold, a cup shaped member supported by the conducting element, and a vaporizing element coiled around one end of the conducting element adjacent the cup shaped member, the cup shaped member being coincident with the diameter of the plug to receive fluid passing along the walls of the plug, means for directing fluid to the vaporizing element and cup shaped member, and means for heating the vaporizing element.

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1,230,910. WARDROBE-TRUNK. SZYMON LESNIKOWSKI, Detroit, Mich. Filed Feb. 1, 1917. Serial No. 145,964. (Cl. 190—14.)



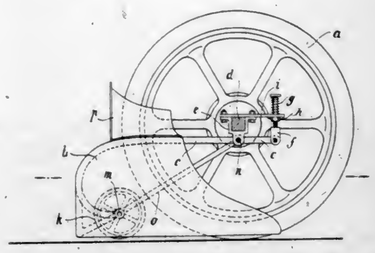
2. In a traveling case, a lid formed with upper and lower separable sections, end panels foldably hinged within the upper section, front and rear panels formed of hinged sections hingedly connecting the lid sections together and adapted for folded arrangement therein when the said sections are closed in contact with each other, detachable connections between the said lid sections, and hinged doors provided for the front panel, each of said doors being formed of hinged sections adapted for folding simultaneously with the folding of the front panel.

[Claims 1 and 3 not printed in the Gazette.]

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1,230,911. LIFE-GUARD FOR MOTOR-VEHICLES. LEOPOLD LOEB, Neuwied, Germany. Filed Jan. 27, 1915. Serial No. 4,603. (Cl. 105—131.)

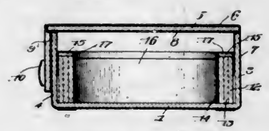
1. A life guard for vehicle wheels comprising an angular sheet metal guard mounted upon arms pivotally supported from the wheel axle, said arms extending rearwardly beyond the pivotal support, vertical bars attached to the ends of said arms and projecting upward; brackets attached to the wheel axle; adjustable stops upon said vertical bars adapted to bear against said brackets and support said guard in its normal position, springs upon said bars bearing against said brackets adapted to yieldingly maintain said guard in normal position; and a wheel mounted upon said arms near their forward ends.



2. A life guard for vehicle wheels comprising an angular sheet metal guard mounted upon arms pivotally supported from the wheel axle, said arms extending rearwardly beyond the pivotal support, vertical bars attached to the ends of said arms and projecting upward; brackets attached to the wheel axle; adjustable stops upon said vertical bars adapted to bear against said brackets and support said guard in its normal position, springs upon said bars bearing against said brackets adapted to yieldingly maintain said guard in normal position; and a wheel mounted upon said arms near their forward ends; and overlapping resilient plates slantingly attached to bottom edge of guard.

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1,230,912. TOILET-CASE. EDWARD N. LORSCHEIDER, New York, N. Y., assignor to The Lorscheider-Schang Company, New York, N. Y., a Corporation of New York. Filed May 20, 1915. Serial No. 29,409. (Cl. 132—32.)



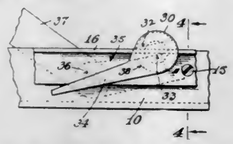
A container comprising a body, a closure upon the body consisting of a flexible covering hinged to the body and surrounding a section of material, a portion of the inner surface of which forms a mirror visible through an aperture in said covering and a flap for securing the closure at one side of the body consisting of a reinforcing member supported by extended portions of said flexible covering folded upon each other at one edge of the closure to form a hinged connection between said closure and flap.

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1,230,913. BED. BURTNETT MCINTOSH, Brooklyn, N. Y., assignor to Frank A. Hall, Montclair, N. J. Filed Jan. 17, 1916. Serial No. 72,376. (Cl. 5—12.)

1. A bed spring comprising a frame, an adjustable rest attached to said frame, locking devices mounted to slide longitudinally of said frame and having jaws, and braces attached to the said rest for supporting the same, said locking devices having arms attached to said braces so that the weight of the rest causes said jaws to lock said locking devices to said frame, said locking devices having means for rocking them to release said jaws.

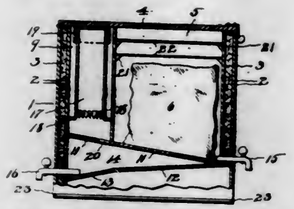
2. A bed spring comprising a frame, an adjustable rest attached to said frame, frictional locking devices slidable longitudinally of the frame and constructed to have locking engagement with the frame upon rocking movement of the locking devices and braces for supporting the rest connected to the rest and to the locking devices at such point that the thrust of the braces under the weight of the rest tends to rock the locking devices into locking engagement with the frame.



3. A bed spring comprising a frame having longitudinal side members, a rest mounted for swinging movement in a vertical plane with respect to said frame, braces connected at one of their ends to said rest, locking devices comprising separated jaws which lie above and below the side members of the frame and which are spaced apart such a distance that when the locking devices are rocked in one direction the jaws are released from the side members of the frame and the locking devices are capable of sliding movement with respect to said side members and when rocked in the opposite direction said jaws are caused to frictionally bind upon said frame and means for attaching the other ends of said braces to the locking devices at such a point that when the rest is drawn upwardly the jaws are moved out of engagement with the side members of the frame and when the rest is released the weight of said rest acts through the braces to move the jaws into locking engagement with the sides of the frame.

[Claims 4 and 5 not printed in the Gazette.]

1,230,914. ICE-BOX FOR AUTOMOBILES. BUTLER MCMOORE, Argenta, Ark. Filed Oct. 5, 1916. Serial No. 123,877. (Cl. 62—85.)



1. In an ice box for automobiles, a cover therefor, an ice compartment having an inclined floor, a filter compartment within the ice box and situated back of said ice compartment and provided with an inclined floor with a hole or passage therethrough, a filter tube or cylinder supported entirely or wholly within said filter compartment and provided with a filtering medium, a cup below the upper edge of the ice box adapted to fit over the top of said filter tube or cylinder and form an air and liquid tight closure and held in place by the cover of the ice box, an inclined floor below the inclined floors of the ice and filter compartments, a filtered water receiving chamber between said inclined floors and means for withdrawing water from said ice and filtered water compartments.

2. In an ice box for automobiles, an ice compartment having an inclined floor, a filter compartment within the ice box and back of the said ice compartment and provided with an inclined floor with a hole or passage therethrough, a filter tube or cylinder supported within said filter compartment provided with a suitable filtering medium, an imperforate cup adapted to fit over the top of said filter tube or cylinder and substantially in alinement with the upper edge of the ice box, a cover for said ice box adapted to contact with said imperforate cup and retain it in position on the filter tube or cylinder, a filtered water receiving compartment communicating with the filter compartment and means for allowing the withdrawal of water from the filter and ice compartments.

3. In an ice box for automobiles, a filtered water compartment, an ice compartment having an inclined floor, filter and ice cream freezer compartments back of said ice compartment and within the ice box each having an inclined floor, a passage through the floor of the filter compartment communicating with the filtered water compartment, a filter tube or cylinder within said filter compartment provided with a filtering medium, an imperforate cup adapted to fit over the top of said filter tube and form a water and dust tight closure, a cover for said ice box adapted to contact with said imperforate cup, on the closing of said cover, and thereby retain the said cup in position on the top of the filter tube or cylinder and means for allowing the withdrawal of water from the ice and filtered water compartments.

1,230,915. SELF-HEATING SOLDERING-IRON. NAPOLEON MARTEL and JOSEPH ERVIN RASCOE, Plattsburg, N. Y., assignors of one-third to Solomon S. Kempner, Plattsburg, N. Y. Filed July 3, 1916. Serial No. 107,463. (Cl. 158—26.)



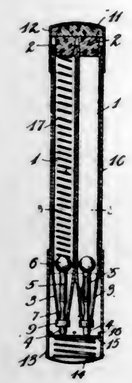
1. In a soldering implement of the character designated, the combination of a handle, a gas supply tube mounted therein, a member formed with parallel shank rods fitting longitudinal sockets formed for their reception in the handle and held therein by frictional contact solely and a head having a transverse opening in which the medial transverse portion of the shank rods is engaged, the butt end of said head being recessed to form a heating chamber, and an axially disposed protuberant diffusing plug and a gas tube extended through the handle and between the said shank rods in axial alinement with said plug.

2. In a soldering implement of the character designated, a soldering head having a transverse passage for the lateral portion of parallel shank rods and longitudinal side grooves for the reception of said rods, said head being formed at its butt end with a conoidal heating chamber, and an axially disposed protruding diffusion plug extended partially within and partially without said heating chamber.

3. In a soldering implement of the character designated, the combination of a handle, a gas supply tube mounted therein, and a soldering head or bit formed with parallel shank rods fitting longitudinal sockets formed for their reception in the handle and held therein by frictional contact, said shank rods being formed of a single piece the medial portion of which rests in a transverse hole formed for it in the head, the latter being also formed with longitudinal side grooves in which the forward portions of said shank rods rest, for the purpose described.



1,230,916. LIQUID-CONTAINER. ROBERT G. MASON, Brooklyn, N. Y. Filed Mar. 11, 1916. Serial No. 83,483. (Cl. 221—14.)



2. In an ink eradicator dispenser, the combination of a tubular container having at its forward end a tapering portion and a discharge opening, a reciprocating valve provided with a head adapted to engage said tapering portion and also with a stem of uniform diameter within said container and provided with a reduced portion normally outside said container and a washer outside of said container and adapted to engage the periphery of said opening, and yielding means for forcing said valve toward the open end of said tubular container.

3. In an ink eradicator dispenser, the combination of two tubular containers, each having at its forward end an opening, a reciprocating valve in each opening provided with a head, and also with a stem provided with a reduced portion normally outside of its container and a washer outside of said container and adapted to engage the periphery of said opening therein, a casing surrounding said tubular containers, and a cap on the forward end of said casing engaging said valve stems and holding said washers in engagement with said openings, said cap having a yielding inner surface engaging the outer ends of said valves.

[Claim 1 not printed in the Gazette.]

1,230,917. BROODER. ERWIN MAURER, Jamaica, N. Y. Filed Nov. 9, 1916. Serial No. 130,362. (Cl. 119—34.)



1. In a brooder, the combination with a casing consisting of telescoping parts, of telescoping heat conveying tubes each comprising an inner and outer section, some of the outer section of the tube being arranged in each part of the casing for the purpose specified.

2. In a brooder, the combination with a casing consisting of telescoping parts, of telescoping heat conveying tubes each comprising an inner and outer section, each part of the casing carrying an equal number of the outer and inner sections of said tube for the purpose specified.

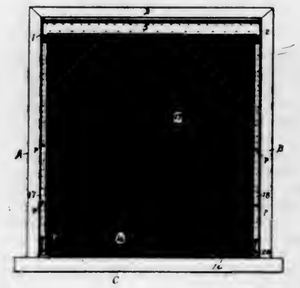
3. In a brooder, the combination with a casing consisting of telescoping parts, of compartments for heated air at the opposite ends of said parts, and telescoping tubes connecting said compartments.

4. In a brooder, the combination with a casing consisting of telescoping parts, of telescoping heat conveying tubes therein, and a partition in the outer end portion of the outer part of the casing for holding the tubes in proper position.

5. In a brooder, the combination with a casing consisting of telescoping parts, of telescoping heat conveying tubes each comprising an outer and inner section, one or more of the outer sections of the tubes being carried by the inner part of the casing, a partition in the outer end portion of the outer part of the casing for holding the tubes in proper position, and a stop on one of the outer tube sections carried by the inner part of the casing, said stop being adapted to engage the partition for limiting the outward movement of the inner part of the casing.

[Claim 6 not printed in the Gazette.]

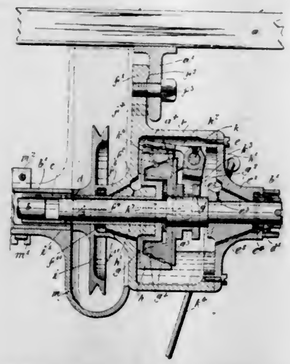
1,230,918. ROLLER WINDOW-SCREEN. THEODORE B. MILLER, Richmond, Ind. Filed June 2, 1916. Serial No. 101,393. (Cl. 156—39.)



1. A roller window screen comprising end plates attached to the window jambs, bearings projecting toward each other from said plates, a roller mounted in connection with said bearings, a screen having one end attached to the roller and adapted to be wound thereabout, a metal strip secured to the other end of the screen, means for automatically causing the screen to be wound upon the roller, a hood surrounding the roller and the screen, there being a downwardly opening slot through said hood for the screen to operate through, hooks carried by said strip and adapted to engage one of the lips of said slot, and guide-ways secured to the window jambs and extending downward in alinement with said slot.

2. A roller window screen adapted to roll upward and to be unrolled when the free end is pulled downward, and comprising end plates atached to the window jambs, tubular bearings projecting toward each other from said plates, a tubular roller mounted around said bearings, a screen having one end atached to said roller and adapted to be wound therearound, a coil spring located inside of said roller with one end thereof secured to the roller and with its other end secured to one of said bearings and with the tension of said spring adapted to normally retain the screen wound upon the roller, a strip secured along the free end of the screen, hooks carried by said strip for securing said strip upon the window sill, a hood surrounding the roller and adapted to inclose the screen when the screen is wound upon the roller, there being a downwardly opening slot in the hood for the screen to operate through and through which slot the said hooks can not pass, guide-ways secured to the window jambs and extending downwardly from said slot to the window sill with the edges of the screen adapted to operate in said guide-ways, all substantially as shown and described.

1,230,919. TRANSMISSION FOR POWER TABLE SEWING-MACHINES, &c. GEORGE E. MOLYNEUX, Bayonne, N. J. Filed July 22, 1915. Serial No. 41,227. (Cl. 74—46.)



1. A power-table transmission comprising a transmission shaft adapted to be coupled to the adjacent drive shaft, an inclosed casing through which the transmission shaft is extended, a clutch member slidably secured to the shaft within the casing, a second clutch member within the casing forming a brake disk and having a sleeve extended outwardly through the casing, a drive pulley secured to the sleeve outside the casing, a clutch arm and a brake arm secured together for common operation and mounted within the casing, and means to actuate the clutch arm and the brake arm from outside the casing.

2. A power-table transmission comprising a shaft, an inclosed casing through which the shaft is extended, a clutch member slidably secured to the shaft within the casing, a second clutch member forming a brake disk and having a sleeve extended outwardly through the casing to receive the drive pulley, a rock shaft mounted in the casing, a brake arm and a clutch arm secured to the rock shaft, and an operating arm secured to the rock shaft outside the casing.

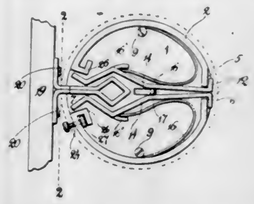
3. A power-table transmission comprising a shaft, a casing through which the shaft is extended, a clutch member slidably secured to the shaft within the casing, a second clutch member within the casing forming a brake disk and having a sleeve extended outwardly through the casing to receive the drive pulley, a rock shaft mounted transversely in the casing, a brake arm and a clutch arm secured to said shaft within the casing, an operating arm secured to the rock shaft outside the casing, and a tension spring connected to the operating arm.

4. A power-table transmission comprising a shaft, a casing through which the shaft is extended, a clutch member slidably secured to the shaft within the casing, a second clutch member within the casing forming a brake disk and having a sleeve extended outwardly through the casing to receive the drive pulley, a rock shaft mounted transversely in the casing, a brake arm and a clutch arm secured to said shaft within the casing, an operating arm secured to the rock shaft outside the casing, and a tension spring connected to the operating arm, the operating arm being provided with means whereby the tension spring can be connected thereto at different points to vary the tension of the spring.

5. A power-table transmission forming a unitary structure and comprising a casing, a sectional transmission shaft extended through the casing, clutch members within the casing, one of the clutch members being engaged with the shaft and the other clutch member having a drive pulley connected therewith outside the casing, and means mounted within the casing but operable from outside the casing for opening and closing the clutch and applying and releasing a brake to and from one of the clutch members, the casing having a lug with a bolt for securing it to the power-table, and a dress guard secured to the casing and inclosing the drive pulley.

[Claim 6 not printed in the Gazette.]

1,230,920. LOCK FOR SCREENS AND THE LIKE. HARRIE THOMPSON NOWOTNY, St. Louis, Mo. Filed Nov. 1, 1916. Serial No. 128,969. (Cl. 70—119.)



1. A device of the class described comprising a latch, a casing adapted to receive said latch, and a flanged cap movably fitted on the casing and adapted to positively lock the latch in said casing.

2. A device of the class described comprising a latch, a casing adapted to receive said latch, spring latching mechanism in said casing for said latch, and a cap on said casing for positively locking the latch in said casing, said cap being movably mounted on the casing.

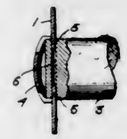
3. In a device of the class described, a latch, in combination with a casing having an opening into which the latch may be introduced, spring gripping mechanism in said casing, and a flanged cap on said casing for positively locking said latch in said casing.

4. In a device of the class described, a latch, in combination with a casing having an opening into which the latch may be introduced, spring gripping mechanism in said casing having two gripping arms and tensioning springs for said arms, and a flanged cap on said casing for positively locking said latch in said casing.

5. In a device of the class described, a latch, in combination with a casing having an opening into which the latch may be introduced, spring gripping mechanism having two angularly bent gripping arms arranged in opposite position in the interior of the casing and curved tensioning springs for said arms, and a flanged cap movably mounted on said casing for positively locking said latch in said casing.

[Claims 6 to 10 not printed in the Gazette.]

1,230,921. SAFETY-GUARD. WILLIAM J. PAUL, Pittsburgh, Pa. Filed May 8, 1913. Serial No. 766,457. (Cl. 74—8.)



1. A locking device for the purpose described, comprising a plate having an opening and a plurality of flexible tongues extending into said opening from points outside of the periphery of the opening.

2. A locking device for the purpose described, comprising a ring carrying pliable tongues springing from points between the opening and the periphery of the ring and adapted to extend terminally within the opening.

3. A locking device for the purpose described, comprising a one piece ring carrying integral pliable tongues springing from points between the opening and the periphery of the ring and normally extending terminally within the opening.

4. A device for use on a shaft consisting of a disk having its central portion cupped so as to form an opening within the cup adapted to fit over the end of the shaft and having oppositely arranged tongues at the base of the cup adapted to extend into openings in the shaft.

5. A device of the class described, consisting of a disk having a cupped portion adapted to cover the end of the shaft, and inwardly extending flexible tongues adapted to enter cavities in the shaft.

[Claim 6 not printed in the Gazette.]



1,230,922. MATTRESS-ROLL FORMER AND FILLER. WALTER R. PHILLIPS, Kansas City, Mo. Filed June 12, 1916. Serial No. 103,165. (Cl. 100—57.)



1. In a mattress roll former and filler, a longitudinally divided tube comprising two members adapted to receive filling material, a cap releasably embracing one end of said tube, and a closure for the other end of the tube arranged to hold said members together and having means for being consecutively interlocked with said members in a manner such that the latter may be consecutively withdrawn from said cap.

2. In a mattress roll former and filler, a longitudinally divided tube comprising two members adapted to receive filling material, one set of ends being reduced in diameter, a cap adapted to be slidably fitted on said set of ends, and a closure slidably mounted on the other set of ends and having means for being releasably interlocked with one of said members, whereby the latter may be withdrawn from the cap.

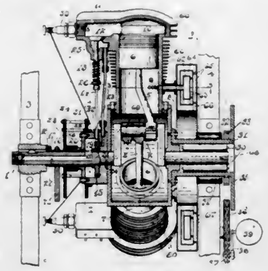
3. In a mattress roll formed and filler, a longitudinally divided tube comprising two members adapted to receive filling material, one end of one of said members having a right-angled slot, a closure slidably and rotatably mounted on the end of the tube having said slot and provided with an inwardly extending projection adapted to slide into said slot and to enter the off-set portion thereof, when the closure is turned in the proper direction, and a cap releasably embracing the other end of said tube.

4. In a mattress roll former and filler, a longitudinally divided tube comprising two members adapted to receive filling material, said members at one end of the tube each having an end slot provided with a lateral off-set, the off-sets of said slots being oppositely disposed, a tubular closure adapted to embrace said end of the tube and provided with two inwardly extending pins adapted to respectively enter said slots, when the closure is slid onto the tube, the closure being rotatable on said tube to two positions in which said pins will consecutively enter said off-sets when the closure is turned in opposite directions on the tube, and a cap releasably and slidably engaging the other end of said tube.

5. In a mattress roll former and filler, a longitudinally divided tube adapted to receive filling material and comprising two members longitudinally slidable on each other, a cap embracing one end of said tube and slidable therefrom, and a tubular member embracing the other end of said tube and slidable therefrom.

[Claims 6 to 8 not printed in the Gazette.]

1,230,923. ROTARY ENGINE. ERNEST W. PRIGAN, Akron, Ohio, assignor of one-fourth to George T. Smith, Akron, Ohio, one-fourth to Frank M. Kirk, Cleveland, Ohio, and one-fourth to L. E. Fischman, Akron, Ohio. Filed July 2, 1913. Serial No. 777,048. (Cl. 123—44.)



1. In an internal combustion engine, the combination with a stationary crank shaft and a cylinder rotatable thereabout, said cylinder having an exhaust port controlled by a piston; of a high pressure storage tank, an independent pump operated by said engine and adapted to supply gaseous fuel at high pressure to said tank, connections from said tank to said cylinder, a mechanically operated inlet valve adapted to control the admission of such high pressure gaseous fuel to said cylinder, said valve being timed to admit such high pressure gaseous fuel to said cylinder upon the opening of such exhaust port, and manually operable means adapted to open said inlet valve to permit the admission of such high pressure gas to start said engine.

2. In an internal combustion engine, the combination with a cylinder provided with an exhaust port controlled by the piston, an inlet valve adapted to control the admission of high pressure gaseous fuel to said cylinder, a cam adapted, upon rotation of either said cam or said valve relative to the other, to open said valve, said cam being timed to admit such high pressure fuel upon the opening of such exhaust port, and manually operable means adapted to cause relative rotation of said cam and said valve thereby admitting high pressure gas to said cylinder to start said engine.

3. In an internal combustion engine, the combination with a cylinder provided with an exhaust port controlled by the piston, of a fluid pressure storage tank, an independent pump operated by said engine and adapted to supply gaseous fuel at high pressure to said tank, a cylindrical casing, connections from said tank and said cylinder to said casing, a mechanically operated inlet valve adapted to control said connection to said cylinder from said tank, and a second valve in said casing adapted to control the discharge of gas into said connection to said cylinder, said two valves being timed to operate in synchronism.

4. In an internal combustion engine, the combination with a cylinder provided with an exhaust port controlled by the piston, of a fluid pressure storage tank, an independent pump operated by said engine and adapted to supply gaseous fuel at high pressure to said tank, a cylindrical casing, connections from said tank and said cylinder to said casing, a mechanically operated inlet valve adapted to control said connection to said cylinder from

said tank, and a second valve in said casing adapted to control the discharge of gas into said connection to said cylinder, said two valves being timed to operate in synchronism, and manually operable means adapted to synchronously open said two valves, thereby admitting gas at high pressure to said cylinder to start said engine.

5. In an internal combustion engine, the combination with a cylinder provided with an exhaust port controlled by the piston, of a fluid pressure storage tank, an independent pump operated by said engine and adapted to supply gaseous fuel at high pressure to said tank, a cylindrical casing, connections from said tank and said cylinder to said casing, a puppet valve adapted to control said connection to said cylinder from said casing, a cam adapted, upon relative rotation of said cam and said valve, to open said valve, and a second valve in said casing adapted to control the discharge of gas into said connection to said cylinder, upon relative rotation of said second valve and said casing.

[Claims 6 to 10 not printed in the Gazette.]

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1,230,924. GASOLENE SUBSTITUTE. THOMAS E. RICE, Des Moines, Iowa. Filed May 13, 1916. Serial No. 97,330. (Cl. 44—8.)

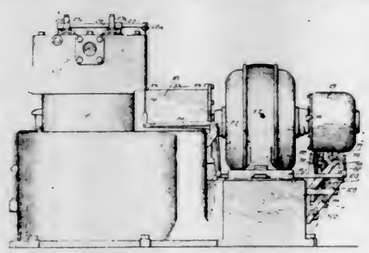
1. A liquid fuel suitable for use in internal combustion engines comprising kerosene, dimethyl oxid, and carbon disulfid.

2. A liquid fuel for use in internal combustion engines comprising:

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|---|---|
| Kerosene | One gallon. |
| Dimethyl oxid | Four ounces. |
| Carbon disulfid | Eight ounces. |

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1,230,925. MECHANISM FOR UNLOADING COMPRESSORS FOR STARTING. WALTER J. RICHARDS, Milwaukee, Wis., assignor to National Brake & Electric Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Dec. 6, 1913. Serial No. 804,958. (Cl. 230—24.)



1. In combination, a compressor, a centrifugal device, a motor arranged to operate the compressor and centrifugal device, said compressor comprising a suction valve, an unloader arranged to retain the suction valve in open position, and mechanical connections between the unloader and centrifugal device whereby said unloader releases the suction valve when the motor has attained a predetermined speed.

2. In combination, a compressor comprising a plurality of suction valves, a centrifugal device, a motor arranged to operate the compressor and centrifugal device, a mechanical unloader arranged to retain the suction valves in open position, and means operatively connecting said centrifugal device and the unloader whereby said unloader releases the suction valves when the motor has attained a predetermined speed.

3. In combination, a compressor comprising a plurality of suction valves, a centrifugal device, a motor arranged to operate the compressor and centrifugal device, a mechanical unloader arranged to retain the suction valves in open position, and means mechanically connecting the centrifugal device and the unloader whereby said unloader releases the suction valves when the motor has attained a predetermined speed.

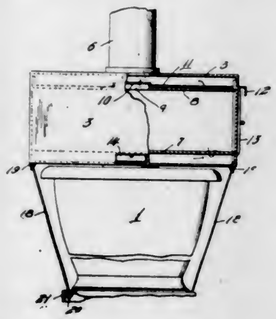
4. In combination, a compressor comprising a plurality of suction valves, a motor for driving said compressor, and a speed controlled unloader adapted to retain said suction valves in open position until the motor has attained a predetermined speed, said unloader comprising a common operating shaft, an arm on said shaft for each suction valve and a compression spring interposed between each arm and its associated suction valve.

5. In combination, a compressor comprising a plurality of suction valves, a motor for driving the compressor, a centrifugal device driven from said motor, an unloader adapted to temporarily retain the suction valves in open position, and mechanical connections between said centrifugal device and unloader, said centrifugal device comprising a spring tending to operate through said connections and unloader to retain the suction valves in open position when the centrifugal device is inert.

[Claims 6 to 38 not printed in the Gazette.]

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1,230,926. OVEN ATTACHMENT. HOWARD A. ROGERS, Atlanta, Ga., assignor of one-half to Samuel Shields, Atlanta, Ga. Filed Apr. 6, 1916. Serial No. 89,426. (Cl. 126—18.)



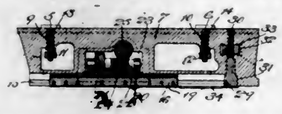
1. An oven attachment for stoves, including an outer rectangular casing having vertically alined outlet and inlet openings formed in the top and bottom sides respectively thereof and adjacent the front wall, an inner casing forming an oven secured to the end walls of the outer casing and spaced from the remaining walls, a flange formed by a horizontal extension of the top side of the inner casing, said flange having an opening in alinement with the first mentioned opening, and a damper for varying the aperture of said opening.

2. An oven attachment for stoves including an outer casing having inlet and outlet openings formed in its bottom and top sides respectively, an oven casing within the outer casing spaced therefrom to provide a channel for the passage of heated air, a flange formed around the inlet opening for insertion in the smoke outlet of a stove, one vertical wall of the outer casing having an opening formed therein adjacent the inlet opening, a door forming a closure for said vertical wall opening, and a hook member pivoted to said vertical wall and depending behind the opening formed therein and into the inlet opening of the outer casing for insertion into the smoke outlet of the stove, and for engagement under the top side of the stove, to hold the attachment in place, said hook member being adjusted through the opening in the vertical wall.

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1,230,927. AUXILIARY WORK-HOLDER FOR EDGING-MACHINES. VERNON ROYLE, Paterson, N. J. Filed Apr. 30, 1915. Serial No. 25,062. (Cl. 90—59.)

1. The combination with a main work holder, of an auxiliary work holder connected thereto and provided with a work holding jaw, means for sliding the said jaw relative to the body of the auxiliary holder, an abutment on said auxiliary work holder and means for adjusting the abutment out and in transversely to the sliding movement of the jaw into position opposite the end of said jaw.

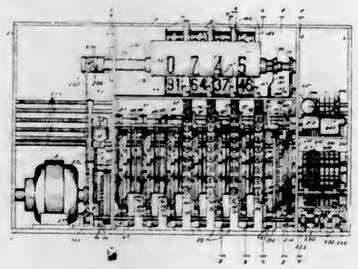


2. An auxiliary work-holder comprising a sliding jaw, spiral gear for operating the jaw, an abutment, means for adjusting the abutment laterally with respect to the path of the sliding jaw and means for detachably securing the work-holder to a gage.

3. An auxiliary work-holder comprising a body, a toothed bar carrying a clamping jaw, gear for operating the jaw, a traveling abutment post provided with a screw threaded portion and a nut engaged with said screw-threaded portion and held against a bodily traveling movement in a recess in the body.

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1,230,928. CASH-REGISTER. RUDOW RUMMLER, Wilmette, Ill. Filed July 26, 1915. Serial No. 42,018. (Cl. 235—3.)



1. In a machine of the class described, the combination with an accounting mechanism, of means for differentially driving the same, said means comprising intermeshing internal and external gears, means for imparting eccentric motion to one of said gears, value determining manipulative means, and means under the control of said manipulative means for differentially restraining the rotation of one of said gears around its axis.

2. An accounting mechanism, comprising a plurality of denominational elements, each of said elements including a pair of rotatable wheels, a drive shaft, differential mechanism between said wheels arranged to be driven by said shaft, means operating between the wheels of each pair for restraining the motion of one or the other of said wheels, and denominationally arranged manipulative devices for controlling said means.

3. An accounting mechanism, comprising a plurality of denominational elements, each of said elements including a pair of rotatable wheels, a drive shaft, differential mechanism between said wheels arranged to be driven by said shaft, a latch adapted to restrain the motion of one or the other of said wheels, manipulative devices for controlling said latch, and means under the control of said wheels, for shifting said latch for the purpose of effecting carrying operations.

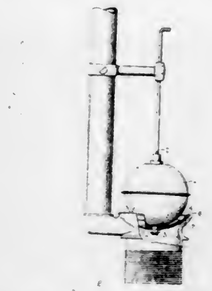
4. In a machine of the class described, an accounting device comprising a plurality of denominationally arranged rotatably mounted accounting wheels, a second set of rotatable wheels each of which is geared to one of said accounting wheels by a continuously rotatable differential gearing, means for driving said differential gearing, latching devices coöperating with the pairs of wheels for controlling their relative rotations, and denominationally arranged manipulative devices for controlling said latching devices.

5. In a machine of the class described, an accounting device comprising a plurality of denominationally arranged rotatably mounted accounting wheels, a second set of rotatable wheels each of which is geared by a differential gearing to one of said accounting wheels, means for driving said differential gearing, latching devices coöperating with the pairs of wheels for controlling their relative rotations, denominationally arranged manipulative devices for controlling said latching devices, and carrying mechanism operated by said accounting device and arranged to also control the operation of said latching devices.

[Claims 6 to 31 not printed in the Gazette.]

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1,230,929. FLOAT-VALVE. ADOLPH B. SCHIER, Milwaukee, Wis. Filed Jan. 6, 1917. Serial No. 140,877. (Cl. 4—5.)



1. The combination with a fitting having therein a tapered valve seat, of a float valve having a rigid part to initially seat in said fitting and further having a flexible washer marginally free to fit said valve seat under the fluid pressure exerted thereon after seating of said rigid part.

2. The combination with a fitting having therein a concave valve seat, of a float valve having a rigid convex washer to initially engage said seat and a convex flexible washer of greater diameter and marginally free for snug engagement with said valve seat under fluid pressure following the seating of said rigid washer.

3. The combination with a fitting having therein a concave valve seat, of a float valve having a rigid convex washer to initially engage said seat, the radius of curvature of the former being greater than that of the latter and a convex flexible washer overhanging said rigid washer and marginally free for snug engagement with said seat under fluid pressure following the seating of said rigid washer.

4. As an article of manufacture, a float valve comprising a float, a rigid convexo-concave washer fixed to said float and an interposed flexible washer nested in said rigid washer, the former being of greater radius than the latter and marginally free of said float.

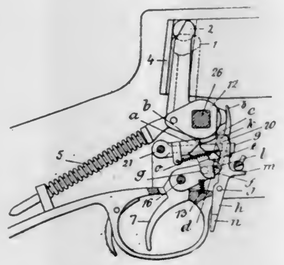
5. As an article of manufacture, a float valve comprising a ball float, a pair of rigid and nesting convexo-concave washers fixed thereto and a flexible washer interposed between said rigid washers, said flexible washer being of greater diameter than said rigid washers.

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1,230,930. TRIGGER MECHANISM FOR AUTOMATIC FIREARMS. JENS THEODOR SUHR SCHOUBOE, Holte, near Copenhagen, Denmark. Filed Jan. 5, 1916. Serial No. 70,336. (Cl. 42—3.)

1. In a trigger mechanism for automatic fire-arms, the combination with a trigger, a movable percussion member, a sear for the said member and a movable recoil member, of a movable catch adapted when in operative position to engage the recoil member and secure it against breech-

closing movement upon arrival at its retracted position, and means controlled by the trigger for rendering the said catch inoperative when the trigger is pulled.



2. In a trigger mechanism for automatic fire-arms, the combination with a trigger, a movable percussion member, a sear for the said member and a movable recoil member, of a movable catch adapted when in operative position to engage the recoil member and secure it against breech-closing movement upon arrival at its retracted position, means controlled by the trigger for rendering the said catch inoperative when the trigger is pulled, and releasable means adapted to secure the said catch automatically upon arrival at its inoperative position.

3. In a trigger mechanism for automatic fire-arms, the combination with a trigger, a movable percussion member, a sear for the said member and a movable recoil member, of a movable catch adapted when in operative position to engage the recoil member and secure it against breech-closing movement upon arrival at its retracted position, means controlled by the trigger for rendering the said catch inoperative when the trigger is pulled, releasable means adapted to secure the said catch automatically upon arrival at its inoperative position, and means controlled by movement of the recoil member for rendering the said securing means for the catch inoperative during each breech-opening movement of the recoil member as it reaches its retracted position.

4. In a trigger mechanism for automatic fire-arms, the combination with a trigger, a movable percussion member, a sear for the said member, and a movable recoil member having a projection, of a movable catch adapted when in operative position to engage the recoil member and secure it against breech-closing movement, means controlled by the trigger for rendering the said catch inoperative when the trigger is pulled, a movable securing member adapted when in operative position to engage the said catch automatically upon arrival at its inoperative position, the said securing member having a part thereof disposed in the path of the projection on the recoil member, the said projection being disposed so that it will trip the said securing member and render it inoperative during each breech-opening movement of the recoil member as the latter arrives at its retracted position, and yieldable means tending normally to restore the said securing member to operative position.

5. In a trigger mechanism for automatic fire-arms, the combination with a trigger, a movable percussion member, a sear for the said member, and a movable recoil member having a projection, of a movable catch having a tooth adapted when in operative position to engage the said projection to secure the recoil member in retracted position, means controlled by the trigger for rendering the said catch inoperative when the trigger is pulled, a movable securing member adapted when in operative position to engage the said catch automatically upon arrival at inoperative position, the said securing member having a part thereof disposed in the path of the projection on the recoil member, the said projection being disposed so that it will trip the said securing member and render it inoperative during each breech-opening movement of the recoil member as it arrives at its retracted position, and yieldable means tending normally to restore the said securing member to operative position.

[Claims 6 and 7 not printed in the Gazette.]

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1,230,931. NUT-TAPPING MACHINE. WILLIAM E. SHARP, Chicago, Ill., assignor to Grip Nut Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 8, 1913. Serial No. 799,871. (Cl. 10—129.)



1. In a nut tapping machine, a suitable frame provided with a rotatable spindle carried thereby, driving means for the spindle, a tap suitably carried by the spindle, and means for feeding the nuts to the tap, comprising a vertically movable member positioned below the tap and extending through an opening in the table and upon which the nuts rest, a lever pivotally secured to the frame and operatively connected with said member, a shaft, a cam arranged on said shaft, and intermediate means between the cam and the free end of the lever, consisting of two independent block members being spaced from each other and separated by a spring, one of said blocks being driven by the cam and the other being operatively connected to the end of the lever.

2. In a device of the kind described, means for successively feeding the nuts into engagement with a tap comprising a movable part adapted to form a support for the nuts and by its movement to present the nuts successively to the tap by elevating said nuts in combination with a lever pivotally supported intermediate its ends upon a frame, with one end thereof forked and having its separated arms engaging the movable nut supporting part, the other end of the lever being engaged by a sliding block, a resilient member overlying the sliding block, a second sliding block spaced from the first mentioned sliding block and resting upon the opposite end of the resilient member, a shaft overlying said second sliding block and a cooperating cam mounted on the shaft against which the second sliding block rides whereby each rotation of the shaft is resiliently transmitted to the movable nut supporting part.

3. In a nut tapping machine, a suitable frame provided with a rotatable spindle carried thereby, means for driving said spindle, a tap carried by the spindle, means for feeding nuts to the tap, comprising a movable member positioned below the tap constituting a rest for said nuts and adapted to elevate the same, a lever pivotally secured to the frame and connected with the nut feeding member for elevating the nuts, a shaft, a cam carried by the shaft and intermediate means between the cam and lever comprising two independent slidable blocks spaced from each other, a coil spring interposed between said blocks to separate the same and permit movement thereof relative to each other, one of said blocks being engaged by the cam, and the other block resting on the end of the lever whereby movement is transmitted to the movable nut part on the rotation of the cam.

4. In a device of the kind described, means for successively feeding the nuts into engagement with a tap comprising a movable part adapted by its movement to present the nuts to the tap, in combination with a lever pivoted upon the frame with one end having an operative engagement with the movable part, the other end being engaged by a sliding block in resilient connection with a second independent block, the said blocks adapted to be spaced from each other, a shaft arranged near said second block, a cooperating cam mounted thereon, and a roller carried by the second block against which the cam rides upon the rotation of the shaft to actuate the nut feeding part.

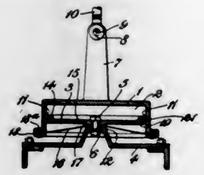


5. In a nut tapping machine, a suitable frame provided with a rotatable spindle carried thereby, driving means for the spindle, a tap carried by the spindle, and means for feeding nuts to the tap, comprising a movable member arranged adjacent the tap, a lever pivotally secured to the frame and operatively connected with said member, a shaft, a bracket having a forked lower end and a socket therein carried by the frame, a shaft supported by said bracket, a cam on said shaft, and intermediate means between the free end of the lever and cam consisting of two independent block members slidably arranged within the socket in the bracket and a spring interposed between said block members, one of the block members being engaged by the cam and the other being operatively connected to the end of the lever which is positioned between the arms of the forked end of the bracket, substantially as described,

[Claims 6 and 7 not printed in the Gazette.]

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1,230,932. RETARDING DEVICE. WILHELM SIMONSSON, Brooklyn, N. Y. Filed Mar. 25, 1911, Serial No. 616,815. Renewed Dec. 12, 1916. Serial No. 136,545. (Cl. 74—69.)



1. A dash pot retarding device having two relatively movable members, one of which is a cylinder having an air chamber open at one end of the cylinder, and the other of which is a piston within said chamber having its margin separated from the wall of the cylinder by a space which lessens friction between the members and affords an air passage between said air chamber and the open end of the cylinder and adapted for the flow of air when one member is moved relatively to the other, and a closure extended over the open end of the air chamber and adapted to exclude dust and the like and capable of flexure to accommodate relative movement of the members.

2. A dash pot retarding device having two relatively movable members, one of which is a cylinder having an air chamber closed at its upper end for the exclusion of dust, and open at its lower end, and the other of which is a piston housed within said chamber having its margin separated from the wall of the cylinder by a space which lessens friction between the members and affords an air passage having communication with said air chamber and is adapted for the flow of air when one member is moved relatively to the other, a support having connection with the piston and extended through the open lower end of the air chamber, and a closure for said lower end of the air chamber through which said support is passed having its margins connected with the cylinder wall and capable of flexure to accommodate relative movement of the members.

3. A retarding device including two relatively movable members, one of which is supported for rocking movement relatively to the other, one of said members being a cylinder having an air chamber, and the other member being a piston housed in said cylinder and adapted to traverse the air chamber when one member is moved relatively to the other, said piston having its margins separated from the wall of the air chamber to afford a space which avoids friction and affords a passage for the escape of the contained air, and being of very large area as compared with the stroke of the movable member and with the cubic capacity of the air chamber, and operable upon movement of one member relatively to the other, to produce with great rapidity a high degree of compression of the air within said chamber.

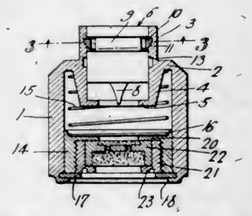
4. A dash-pot retarding device having two relatively movable members, one of which is a cylinder provided with an air chamber and the other of which is a piston housed within said chamber, and a pivotal support for one of the members affording lateral movement thereof during travel of the piston within said chamber to insure alinement of the members during such travel, the piston having its margin provided with a parti-spherical surface concentric with the pivotal axis of said support, and spaced from the cylinder wall to afford clearance between said members and an air passage communicating with said air chamber and adapted for the flow of air during movement of one member relatively to the other.

5. A retarding device including two members, one of which is movable relatively to the other, one of said members being a cylinder provided with a shallow air chamber of large diameter as compared with the stroke of the movable member, and the other of said members being a piston adapted, when one member is moved relatively to the other, to traverse said air chamber of the cylinder, said piston having a diameter less than that of the air chamber to afford an annular air passage between its periphery and the cylinder wall adapted to avoid contact of the piston on said wall and provide for the entry and discharge of air into and from the air chamber, and of small area as compared with that of the piston, calculated to retard the flow of air into and from said chamber and to produce therein with great rapidity a high degree of compression when the movable member of the device is actuated.

[Claims 6 to 8 not printed in the Gazette.]

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1,230,933. POSITIVE FUSE-PERCUSSION. WILLIAM L. SIMPSON, Crum Lynne, Pa. Filed Mar. 30, 1917. Serial No. 158,608. (Cl. 102—39.)



1. A fuse percussion device embodying a housing having a tubular member at its forward end, the rear end of said tubular member having an inturned flange, a primer cap carrying member movable forwardly within the housing toward said tubular member, a firing pin embodying a plunger slidable within said tubular member at a point projecting from the plunger and projectable beyond said flange when the firing pin is set back, and means for holding the plunger in forward disarmed position within the tubular member until firing and for holding the plunger in set back armed position within said tubular member.

4. A fuse percussion device embodying a housing, a primer cap carrying member movable forwardly within the housing, a firing pin adapted to be set back within the housing to armed position, the rear edge of the housing having an annular flange, and a ring seating against the rear edge of the housing within said flange to limit the rearward movement of said member, said flange being spun inwardly to hold the ring in place.

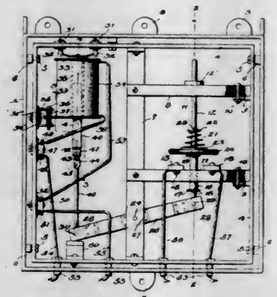
[Claims 2 and 3 not printed in the Gazette.]

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1,230,934. ALTERNATING-CURRENT ELECTROMAGNETIC CONTROL-SWITCH. JOHN T. SKINNER, Lawrence, Kans. Filed Jan. 28, 1915. Serial No. 4,856. (Cl. 175—281.)

1. A device of the class described comprising a casing, a pair of U-shaped brackets arranged within said casing,

the legs of said brackets extending horizontally in opposite directions and being secured to the top and bottom of the latter, the intermediate portions of said brackets being arranged vertically, vertically spaced pairs of upper and lower horizontal supporting bars secured at one of their ends to the vertical portions of said brackets and having their other ends secured to one side of said casing, a guide plate extending transversely across the central portions of the upper supporting bars and having an opening therein, a pair of horizontally spaced contacts extending transversely across the lower suporting bars, a vertically disposed rod slidably received at its upper end in the opening in said guide plate and having its lower end disposed between said contacts, a contact bridging plate carried by said rod, and means for actuating said rod.

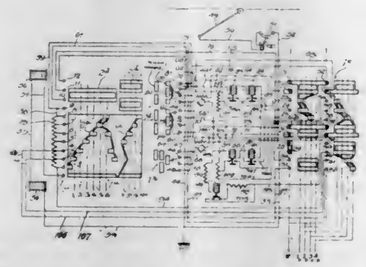


2. A device of the class described comprising a casing, a pair of spaced parallel horizontal resilient strips secured at their extremities to the top of said casing, a bar secured at its extremities to the central portions of said strips, a vertically disposed solenoid connected at its upper end to the central portion of said bar, and a plunger for said solenoid.

3. A device of the class described comprising a casing, a vertically disposed solenoid movably connected at its upper end to the top of said casing, a lateral extension at the lower end of said solenoid and having an aperture therein, a bracket attached to one side of said casing and having a pair of legs projecting horizontally and in vertically spaced relation therefrom, a pin arranged vertically between said legs and fixed thereto, said pin extending through the aperture in the solenoid extension, coiled springs surrounding said pin above and below the latter, and a plunger for said solenoid.

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1,230,935. ELECTRIC BRAKING SYSTEM. JOHN T. SKINNER, Lawrence, Kans. Filed May 17, 1915. Serial No. 28,753. (Cl. 172—179.)



1. In an electrical braking system of the character described, the combination with a plurality of motors; of means for connecting said motors to act as generators, and additional means for simultaneously establishing shunt paths across the fields of said generators, some of said paths of each generator having unequal resistances therein, the resistances in the corresponding paths of said generators being equal to each other.

2. In an electrical braking system of the character described, the combination with a motor; of means for connecting the same to act as a generator, a shunt circuit across the field of said generator, said circuit having therein two breaks, means for closing one of said breaks in said shunt circuit, and additional means for closing the other break in said circuit substantially as and for the purpose set forth.

3. In an electrical braking system of the character described, the combination with a motor; of means for connecting the same to act as a generator, a shunt circuit of lower resistance extending across the field of said generator, a shunt circuit of higher resistance extending across the field of said generator, each of said circuits having therein two breaks, means for closing one break in each of said circuits, and additional means controlled by the generated energy of said generator to close the remaining breaks in said circuits substantially as and for the purpose set forth.

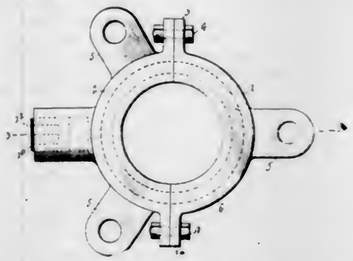
4. In an electrical braking system of the character described, the combination with a motor; of means for connecting the same to act as a generator, a plurality of shunt circuits extending across the field of said generator, each of said circuits having therein two breaks, a pair of electromagnets arranged in the circuit of said generator, means for closing one break in each of said shunt circuits, and a pair of circuit closing members adapted to close the remaining breaks in said circuits, said members being controlled by said electromagnets substantially as and for the purpose set forth.

5. In an electrical braking system of the character described, the combination with a plurality of motors; of means for connecting the same to act as generators, a plurality of shunt circuits extending across the field of each of said generators and hving therein two breaks, some of the shunt circuits of each generator having unequal resistances therein, the resistances in the corresponding shunt circuits of said generators being equal, means for simultaneously closing one break in each of said shunt circuits, a plurality of electromagnets arranged in the series circuit of said generators, switch members for closing the remaining breaks in said shunt circuits, said mebers being controlled by said electromagnets substantially as and for the purpose set forth.

[Claims 6 to 17 not printed in the Gazette.]

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1,230,936. OILING DEVICE. BERT H. SMITH and WILLIAM A. INWOOD, Fairbury, Nebr., assignors to The Willbert Manufacturing Company, Fairbury, Nebr., a Corporation. Filed Apr. 11, 1916. Serial No. 90,428. (Cl. 184—24.)



2. In a lubricating device, an annular member provided with an inclosed annular passage therein and having the inner periphery concave, said member being also provided with a plurality of radial channels affording communication between the passage and the inner surface



and means for feeding grease to the passage and said concave inner periphery.

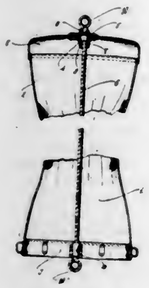
3. In a lubricating device, an annular member having an annular passage therein and having its inner periphery provided with an annular groove, said passage communicating at various points with the annular groove in said member, a grease reservoir formed on said member and communicating with said passage, and means for feding the contents of said reservoir to said passage and correspondingly to the groove in the inner periphery.

7. A lubricating device for piston rods and the like comprising a sectional ring having an annular grease-containing passage within the body thereof between its inner and outer periphery and having an annular groove in its inner periphery communicating with said passage, means for securing said ring in position, and means on said ring for forcing grease into said passage and said groove.

[Claims 1, 4 to 6, and 8 not printed in the Gazette.]

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1,230,937. MAIL-POUCH. HERBERT E. SMITH, Spokane, Wash., assignor to The Spokane Mail Equipment Company, Spokane, Wash. Filed July 1, 1916. Serial No. 107,029. (Cl. 150—13.)



1. A mail pouch comprising a flexible body having a closed bottom and an open upper end adapted to be drawn closed, a flexible connection extending therethrough having rigid connection with the bottom and loose connection with the opposite end thereof, and means adapted for engagement with the flexible connection to support the pouch in position.

2. A mail pouch comprising a body having a bottom and an open upper end adapted to be drawn into closed position, a cable section extending therethrough and having eyes at the ends thereof, said cable section being securely engaged with the bottom of the pouch and slidably engaged with the opposite end of said pouch, and means adapted for engagement with the eyes of said cable to support the pouch in position.

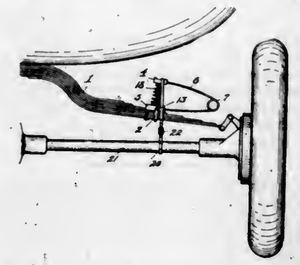
3. A mail pouch comprising a flexible body having a disk like bottom and an open upper end adapted to be closed by drawing in the body, a cable extending through said pouch and having eyes at the ends thereof, said cable being rigidly secured to the bottom of said pouch, a sleeve secured in the opposite end of the pouch loosely receiving said cable therethrough, and means engaging the eyes of the cable for supporting the pouch in position.

4. A mail pouch comprising a flexible body having a bottom section and an open end adapted to be closed by drawing in the flexible body, the bottom being provided with a central opening, a flexible connection extending through the pouch and through the opening in the bottom thereof, cup members secured to said bottom on each side of the opening therein, a ball secured on said flexible connection and received in the chamber formed by said cup members, whereby to rigidly secure the flexible connection to said bottom, means for loosely engaging the flexible connection with the opposite ends of the pouch, and means engaging the ends of the flexible connection, whereby to support the pouch in position.

5. A mail pouch comprising a flexible body having a bottom thereon, a cable extending through said pouch and rigidly secured to the bottom thereof, said cable having loose sliding connections with the opposite end of said pouch, eyes formed on the ends of said cable, catcher sections adapted to be removably engaged with said eyes for supporting the pouch, and buffer sections secured to the outer ends of said catcher sections.

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1,230,938. SHOCK-ABSORBER. HARRY B. SNELL, South Bend, Ind. Filed July 3, 1916. Serial No. 107,353. (Cl. 267—19.)



1. A shock absorber including opposing bearing members, a contractive spring connecting said members, an expansion spring interposed between the bearing members, the expansion spring having a greater tension than the contractive spring, and means for limiting the degree of separation of the bearing members.

2. A shock absorber including opposing bearing blocks, a contractive spring connecting said blocks, means for securing one of said blocks to the main spring of the vehicle, an expansion spring arranged between the bearing blocks, and means for adjusting the normal distance between the bearing blocks to vary the normal tension of the auxiliary spring.

3. A shock absorber including opposing upper and lower bearing blocks, means connecting and impelling movement of the blocks in the direction of each other, means for securing the lower block to the main spring of the vehicle, an auxiliary expansion spring arranged between said blocks having a greater expansive force than the contractive force of the block connecting means, and means for limiting the upward movement of the upper bearing block.

4. A shock absorber including upper and lower opposing bearing blocks, contractive means connecting said blocks, means for securing one of said blocks to the main spring of the vehicle, an auxiliary expansion spring arranged between the bearing blocks, and a strap connecting the axle with the upper bearing block to limit the upward movement of the latter.

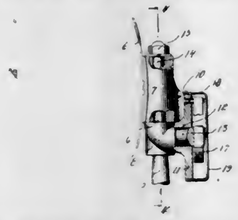
5. The combination with the main spring and axle of a vehicle, of an auxiliary spring mounted on the main spring, contractive means mounted upon and movable relatively of the main spring for the support of the auxiliary spring, and adjustable means connecting the axle and said spring supporting means to limit the upward movement of the auxiliary spring.

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1,230,939. TILTABLE MOUNTING FOR AUTOMOBILE-HEADLIGHTS. JOHN S. SPIREWFKI, Jr., Milwaukee, Wis., assignor of one-third to Daniel C. O'Connell and one-third to James E. O'Connell, Milwaukee, Wis. Filed Oct. 23, 1916. Serial No. 127,085. (Cl. 240—61.)

1. The combination with a lamp and a lamp standard, of a bearing plate having a bearing opening, a right angular member, one arm being secured to said lamp and

the other forming a trunnion to be disposed in said bearing opening, the free end of said last mentioned arm extended beyond said plate, a spring secured to said trunnion and the bearing plate, a cap having its wall engaged with the periphery of said bearing plate, means

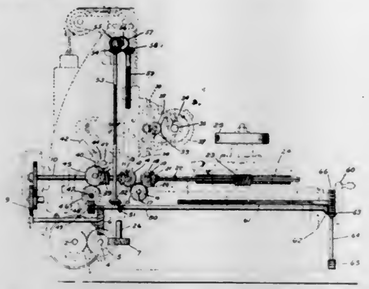


for securing the wall of the cap and bearing plate together, said cap and plate thereby forming a housing for said spring, and means for tilting the lamp against the tension of said spring.

[Claims 2 and 3 not printed in the Gazette.]

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1,230,940. METHOD OF GENERATING THE TEETH OF HELICAL GEAR-WHEELS. CHARLES H. SCHURR, Cleveland, Ohio, assignor to Hosea T. Bradner, Cleveland, Ohio. Filed Jan. 15, 1917. Serial No. 142,426. (Cl. 90—4.)



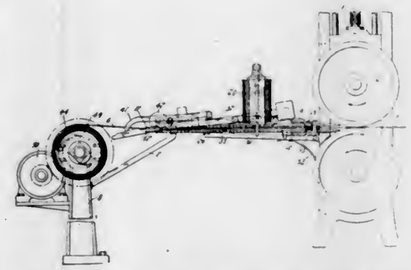
1. The method of generating helical gear teeth, consisting in rotating a hob, rotating a gear blank in predetermined harmony with the rotation of said hob, simultaneously transmitting a relative correlated feed of said rotating parts parallel with the axis of the gear blank, and establishing in between the point where the feed is taken off and one of said rotating parts a correlation which is continuously and uniformly different from the feed correlation and variable according to the amount of feed such that a ratio between the number of revolutions made by the hob and the number of revolutions made by the gear blank is developed which is different from the ratio of the number of teeth in the gear to be cut to the number of threads in the hob while the relative feed as between the blank and hob covers a predetermined distance along the axis of the blank, whereby to avoid the need of correcting the feed due to such variable correlation.

8. The method of generating helical gear teeth which consists in rotating a gear blank and helical cutter in correlation each with a third rotating part, one of said correlations being constant for a given number of teeth, effecting the relative feed of the blank and cutter parallel to the axis of the blank at a predetermined correlated rate of movement to the rotation of said third rotating part, the relative action of said third rotating part and blank being also correlated and additionally dependent upon a ratio in which the antecedent and consequent so differ by one that the number represented by the helical constant denotes exactly the number of revolutions of the blank, and the number represented by the spur constant denotes exactly the number of revolutions of the third rotating part, and that such ratio prevails throughout the feed.

[Claims 2 to 7 and 9 to 14 not printed in the Gazette.]

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1,230,941. AUTOMATIC BLOCKING MECHANISM FOR STRIP-MILLS. AUGUST SUNDH, Hastings-upon-Hudson, N. Y. Filed Jan. 20, 1915. Serial No. 3,255. (Cl. 242—78.)



1. The combination with a block of a strip mill, of clamping means for clamping the strip to the block, and means controlled by the feeding movement of the strip to control the clamping means.

2. The combination with a block of a strip mill, of clamping means for clamping the strip to the block while the block is rotating, and means controlled by the feeding movement of the strip for controlling the clamping means.

3. The combination with a block of a strip mill, of automatic means for clamping the strip to the block, and means controlled by the feeding movement of the strip for controlling said automatic clamping means.

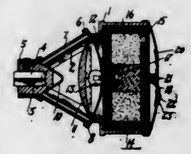
4. The combination with a block of a strip mill, of automatic means for clamping the strip to the block while the block is rotating, and means controlled by the feeding movement of the strip for controlling said automatic clamping means.

5. The combination with a block of a strip mill, of clamping means for clamping the strip to the block, electro-magnetic means for operating said clamping means, and means operable by the feeding movement of the strip for controlling said electro-magnetic means.

[Claims 6 to 128 not printed in the Gazette.]

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1,230,942. ILLUMINATING DEVICE. AUGUST SUNDH, Hastings-upon-Hudson, N. Y. Filed Feb. 1, 1915. Serial No. 5,413. (Cl. 240—2.)



1. A door knob with an extension, a battery, electric lamp, contact for the lamp and for the battery, a reflector and lens for the lamp, all inclosed therein, openings in the extension for the light to shine through, a glass covering said openings, said door knob, extension and glass being watertight.

2. A door knob, a hollow space in said door knob, an extension on said door knob, a battery inclosed in the hollow space in the door knob, an electric bulb in contact with one pole of said battery and extending from the



battery into the extension, a reflector for the bulb, a lens in front of the bulb and the reflector, the extension having openings for the light to shine through, a contact for intermittent use and a device for holding the contacts closed for a desired period of time.

3. In combination, a metal and glass waterproof casing comprising a door handle, an illuminating device inclosed in said casing, and consisting of a battery, an incandescent lamp, a contact for the circuit between the battery and the light, a reflector for the incandescent lamp, and a lens in front of said lamp, the reflector, lamp and lens being placed to throw the light through the part of the casing consisting of glass.

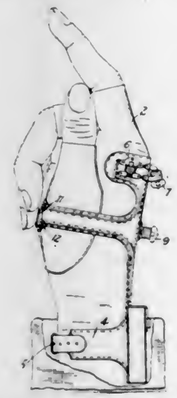
4. In combination, a watertight casing comprising a door handle, and consisting of a metal division and a glass division, packing between the metal division and the glass division for completing the casing and making the same waterproof, an illuminating device inclosed in said casing, consisting of a battery, an incandescent lamp, two reflectors for the lamp, one in front of and the other in the rear of the lamp, and a contact for completing the circuit between the battery and the light, said lamp being placed in the center of the casing and relative to the glass so that the light will be distributed around the knob.

5. In apparatus of the class described, the combination of an illuminating device and a source of energy therefor, a liquid tight housing inclosing said illuminating device and said source of energy, comprising a glass portion for the light from the illuminating device to shine through, a flexible metal portion manually operable for lighting the illuminating device, a rigid metal portion, and means for holding the glass portion and the flexible metal portion in rigid and liquid tight connection with the rigid metal portion.

[Claim 6 not printed in the Gazette.]

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1,230,943. PORTABLE LIGHT. AUGUST SUNDH, Hastings-upon-Hudson, N. Y. Filed Nov. 27, 1914. Serial No. 874,160. (Cl. 240—8.5.)



1. In an illuminating device, the combination of a flexible support adapted to be carried on the hand, a plurality of electric lamp holders applied to said flexible support, electric lamps in said holders, the holders being applied on one side only of the flexible support, but in such a position that some of the lamps will be inclined forwardly and others backwardly.

2. In an illuminating device, the combination of a support adapted to be carried on the hand, a plurality of electric lamp holders, lamps in the holders, the holders being so constructed and applied to the support that when the lamps are placed in the holders some of the lamps will be inclined forwardly, some backwardly and some vertically.

3. In an illuminating device, the combination of a support adapted to be applied to and carried on the hand, a plurality of electric lamps applied to said support, some of the lamps inclining backwardly and some forwardly, and arranged in parallel, and a battery for supplying current to said lamps.

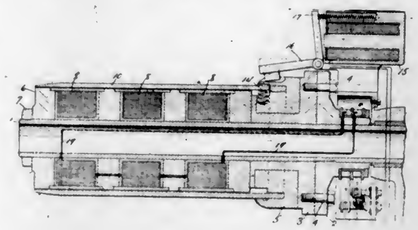
4. In an illuminating device, the combination of a flexible support adapted to be applied to and carried on the hand and supported at the wrist by a buckle, a battery held in place intermediate the back of the buckle and said flexible support, a plurality of electric lamps carried by said support, some of the lamps being inclined forwardly and others backwardly, these lamps being arranged in parallel and receiving their current from said battery.

5. In an illuminating device, the combination of a flexible support adapted to be applied to and carried on the hand, a plurality of electric lamps applied to and carried by said support, some of the lamps being inclined forwardly, others backwardly and others vertically; a battery supplying current for said lamps and applied to said flexible support, a wrist support with a buckle for holding said battery cell, conductors for the current from the battery to the lamps, these conductors being embodied in said flexible support.

[Claim 6 not printed in the Gazette.]

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1,230,944. BLOCKING MECHANISM FOR STRIP-MILLS. AUGUST SUNDH, Hastings-upon-Hudson, N. Y. Filed June 29, 1916. Serial No. 106,723. (Cl. 242—78.)



1. In a blocking mechanism adapted to wind a strip coming from a strip mill, the combination of a rotatable block, magnetizable material in said block, windings in said block to magnetize said magnetizable material, a sleeve surrounding said block and embodying magnetizable material, and a longitudinal slot in said sleeve for the strip to enter and be clamped between the block and said sleeve when the block is magnetized.

2. In a blocking mechanism adapted to wind a strip coming from a strip mill, the combination of a rotatable block having a magnetizable field, a magnetizable armature surrounding said field, and a longitudinal opening in said armature for the strip to enter when it comes from the strip mill.

3. In a blocking mechanism adapted to wind a strip coming from a strip mill, the combination of a rotatable block having a magnetizable field, a magnetizable armature surrounding said field, a longitudinal opening in said armature for the strip to enter when it comes from the strip mill, and means to magnetize said magnetizable field and attract the armature.

4. In a blocking mechanism adapted to wind a strip coming from a strip mill, the combination of a rotatable block having a magnetizable field, a sleeve surrounding said magnetizable field, and constituting an armature for said magnetizable field, and means to magnetize said field and attract said armature to clamp the strip between said armature and said field.

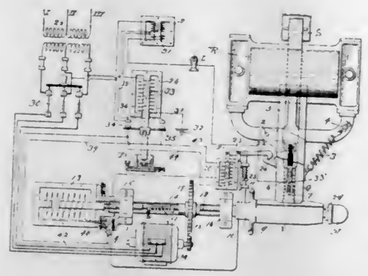
5. In a blocking mechanism adapted to wind a strip coming from a strip mill, the combination of a rotatable block having a magnetizable field, a winding for said field,

a sleeve encircling said magnetizable field, and means for exciting the winding and magnetizing the field to attract the sleeve.

[Claims 6 to 39 not printed in the Gazette.]

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1,230,945. AUTOMATIC BLOCKING MECHANISM FOR STRIP-MILLS. AUGUST SUNDH, Hastings-upon-Hudson, N. Y. Filed July 26, 1916. Serial No. 111,506. (Cl. 242—78.)



1. In mechanism adapted to wind a strip coming from a strip mill, the combination of a rotatable block, a multiphase alternating current motor for driving said block, and single phase magnets for controlling the block mechanism, these magents deriving their power from one phase only of the same supply as that supplying current to the driving motor, and an electro-responsive device controlled by the feeding movement of the strip for controlling said magnets.

2. In blocking mechanism adapted to wind a strip coming from a strip mill, the combination with a rotatable block of a system of alternating current control for automatically attaching the strip to the block when same reaches the block, including an alternating current transformer with a secondary circuit controlled by the feeding movement of the strip, for effecting the operation of said system of alternating current control.

3. In a blocking mechanism adapted to wind a strip coming from a strip mill, the combination of a rotatable block and a motor for driving said block, and an alternating current control system for automatically attaching the strip to the block when same reaches the block, including an alternating current transformer with a secondary grounded circuit of low voltage controlled by the feeding movement of the strip for causing the operation of said system of alternating current control.

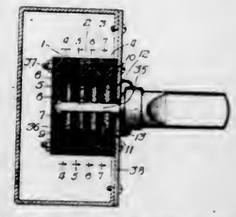
4. In a blocking mechanism adapted to wind a strip coming from a strip mill, the combination of a rotatable block, and an alternating current motor for driving said block, and an alternating current control system including circuits and single phase alternating current maguets, a transformer also included in said system, said transformer having a primary circuit for high voltage, and a secondary circuit for low voltage, said secondary circuit being controlled by the strip at a predetermined point before the strip reaches the block, and adapted to control the current in the circuits for the magnets in the control system, and thereby cause the strip to be attached to the block when same reaches the block.

5. In a blocking mechanism adapted to wind a strip coming from a strip mill, the combination of a rotatable block, a multiphase motor for driving said block, said multiphase motor deriving current from the secondary of a multiphase transformer, a single phase alternating current control system including circuits and magnets, the circuits of said alternating current control system being connected to one phase of the multiphase transformer, a single phase transformer connected in the circuits of the control system, the secondary of said transformer being of low voltage and adapted to be operated to automatically cause the operation of the magnets in the system and thereby cause the strip to be attached to the block when same reaches the block.

[Claims 6 to 21 not printed in the Gazette.]

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1,230,946. PORTABLE SWITCHBOARD. GEORGE THOMPSON, Shelby, Ohio, assignor to The Autocall Company, Shelby, Ohio, a Corporation of Ohio. Filed Dec. 6, 1915. Serial No. 65,232. (Cl. 175—306.)



1. A switch board having thereon a row of sockets, a row of plates lying one behind the other behind said sockets and extending throughout the length of the row, the plates being insulated from each other, and a plug adapted to be inserted in said sockets, and said plates being provided with notches in proximity to said sockets so distributed among the plates that the plug makes physical contact with said plates in various combinations depending upon the socket into which the plug is placed.

2. In a device of the character described, a series of superposed slabs or plates of insulating material each having a pocket formed in one side thereof, two strips of conducting material lying in each of said pockets, separating pieces projecting from the bottoms of the pockets between corresponding strips to hold them apart, springs within the pockets for pressing the strips toward each other, said slabs or plates having a series of registering holes extending through the same between the strips of conducting material, and a plug adapted to be inserted into any one of said holes, certain of the strips having portions cut away in proximity to certain of said holes in order to prevent electrical connection between the same and the plug when the plug is inserted into the latter holes.

3. In a device of the character described, a body member made of insulating material containing a series of elongated pockets and a series of openings extending through the same and each traversing said pockets, a strip of conducting material arranged in each of said pockets and extending throughout the length of said series of openings, and a plug adapted to be inserted into any one of said openings, certain of the strips having portions cut away in proximity to certain of said openings in order to prevent electrical contact between the same and the plug when the plug is inserted into the latter opening.

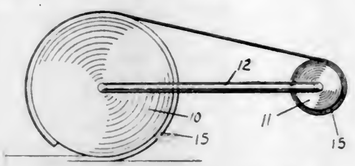
4. In a device of the character described, a body member of insulating material containing a series of elongated pockets and a series of openings arranged with spaces between them and extending through the same in a direction to cause each opening to traverse all of the pockets, separating pieces extending across said pockets in the spaces between certain of said openings, two metal strips lying in each pocket one on each side of said separating pieces, springs in each pocket for pressing the corresponding strips toward each other, certain of the strips having portions cut away in proximity to certain of said openings, and a plug adapted to be inserted into any one of said openings.

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1,230,947. TIRE-BUILDER'S TOOL. WILLIAM THOMPSON, Detroit, Mich., assignor to Morgan & Wright, a Corporation of Michigan. Filed Aug. 27, 1915. Serial No. 47,598. (Cl. 154—9.)

1. A tire builder's hand tool, comprising a suitable frame, rollers having parallel axes, rotatably mounted thereon, one of said rollers being adapted to have a liner strip wound thereon, said strip being arranged to be supplied by rotation of the other roller, between the convolutions of a tread being wound thereon as the latter roller is rolled over said tread while lying flat.



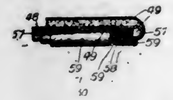


7. A tire builder's hand tool, comprising a suitable frame, rollers having parallel axes, rotatably mounted thereon, one of said rollers being adapted to have a liner strip wound thereon and the other being adapted to have a superposed tread strip and liner wound thereon by being rolled over the former while lying flat, said rollers being relatively so positioned that said liner strip will constitute the intermediate element for transmitting rotary motion from one roll to the other.

3. A tire builder's tool comprising in combination a roller for having wound thereupon an unvulcanized tread, a second roller, a liner strip on the second named roller arranged to be supplied by rotation of the first named roller, between the convolutions of said tread, and means connecting both rollers in permanent spaced relation for simultaneous independent rotation.

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1,230,948. SHEET-METAL SEATING. GILES M. TURNER, St. Charles, Ill. Filed Aug. 15, 1914. Serial No. 856,897. (Cl. 155—4.)



1. A detachable upholstered section for seating devices having, in combination, a sheet metal base having at its edges downturned angular flanges which are turned up at their lower edges, a covering material, the edge portions of which are folded about said flanges and said upturned edges, and clips engaging the covering material in the grooves formed by the upturned edges of the flanges for securing the covering material to the base.

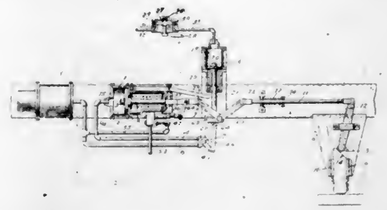
2. A removable section for seating devices having, in combination, a sheet metal base having angular flanges at its edges, a covering material folded about said flanges, the material being notched adjacent to its corners to provide tongues, and the edge of the material adjacent to each tongue being folded inwardly first, and the tongue being then folded inwardly over said edges, and sheet metal clips engaging the material and the flanges for securing the material to the base.

3. An upholstered section for seating devices having, in combination, a sheet metal base with downturned angular flanges at its edges, said flanges being turned upwardly and inwardly at their lower edges, a covering material, the edge portions of which are folded about said flanges and said upturned and inturned edges, and clips engaging the covering material in the grooves formed by the edges of the flanges and in the angle formed by said base and the downwardly projecting flanges.

4. A removable section for seating devices having, in combination, a sheet metal base having annular flanges at its edges, a covering material folded about said flanges, the material being notched adjacent to its corners to provide tongues, and the edge of the material adjacent to each tongue being folded inwardly first, and the tongue being then folded inwardly over said edges, and sheet metal clips engaging the covering material adjacent the edges of the flanges and in the angle former by the base and the flanges for securing the material to the base.

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1,230,949. VARIABLE-LOAD BRAKE. WALTER V. TURNER, Edgewood, Pa., and EDWARD H. DEWSON, New York, N. Y., assignors to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Jan. 2, 1914. Serial No. 810,047. (Cl. 188—11.)



1. In a load regulated brake, the combination with a brake cylinder, of a chamber adapted to communicate with said brake cylinder, a movable abutment for varying the volume of said chamber, means for moving said abutment according to the load on the car, and means for locking said abutment in its adjusted position.

2. In a load regulated brake, the combination with a device operated by the load on the car for regulating the braking power according to the load on the car, of means for automatically preventing the operation of said device when the car is running.

3. In a load regulated brake, the combination with a device for automatically adjusting the braking power in proportion to the load on the car, of means for automatically cutting said device out of effective operation when the car is running.

4. In a load regulated brake, the combination with a mechanism adapted to be adjusted to vary the braking power and means operating according to the load on the car for adjusting said mechanism, of a device operated by an act associated with the starting of the car for operatively disconnecting said mechanism from said means.

5. In a load regulated brake, the combination with a brake cylinder, of a movable abutment for varying the effective volume of said brake cylinder, means governed according to the load on the car for operating said abutment, toggle levers for operatively connecting said means to said abutment, and a device operated when the car is running for throwing said levers out of alinement to thereby operatively disconnect said means from said abutment.

[Claims 6 to 26 not printed in the Gazette.]

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1,230,950. VACUUM-BRAKE DEVICE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Oct. 21, 1915. Serial No. 57,058. (Cl. 188—6.)

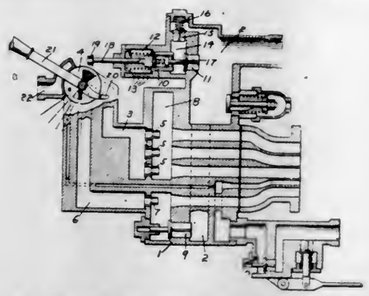
1. In a vacuum brake apparatus, the combination with a vacuum train pipe, of a brake valve for supplying fluid to the brake pipe to effect an application of the brakes and an excess pressure valve for limiting the pressure of fluid supplied to the brake pipe to a predetermined degree.

2. In a vacuum brake apparatus, the combination with a vacuum train pipe, of an excess pressure valve, a valve for supplying fluid through the excess pressure valve to the brake pipe to effect an application of the brakes, and a handle for operating said supply valves.

3. In a vacuum brake apparatus, the combination with a vacuum train pipe, of an excess pressure valve, a valve for supplying fluid through the excess pressure valve to the brake pipe to effect an application of the brakes, a

second supply valve for directly supplying fluid to the brake pipe, and a handle for operating said supply valves.

4. In a vacuum brake apparatus, the combination with a vacuum train pipe, of an excess pressure valve, a valve for supplying fluid through the excess pressure valve to the brake pipe to effect an application of the brakes, a second direct supply valve, and a handle for operating the first supply valve in service application position and the second supply valve in emergency application position.

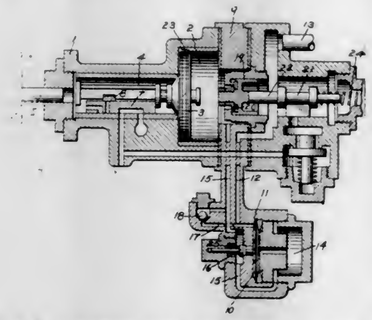


5. In a vacuum brake, the combination with a brake pipe normally at a pressure less than the atmospheric pressure, of an excess pressure valve for limting the pressure of fluid supplied to the brake pipe to effect an application of the brakes, a valve for admitting fluid through said excess pressure valve to the brake pipe, a second valve for admitting fluid directly to the brake pipe, and an operating handle for said valves having a service position in which the first valve is opened and an emergency position in which the second supply valve is opened.

[Claim 6 not printed in the Gazette.]

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1,230,951. FLUID-PRESSURE BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Oct. 30, 1915. Serial No. 58,780. (Cl. 188—15.)



1. In a fluid pressure brake, the combination with a brake pipe and a valve device having a piston chamber charged from the brake pipe and operated upon a reduction in pressure therein for effecting an application of the brakes, of means constantly subject to the opposing pressures of the brake pipe and said chamber and adapted upon a predetermined reduction in brake pipe pressure for opening communication from the brake pipe to said valve device.

2. In a fluid pressure brake, the combination with a brake pipe and a valve device having a piston chamber charged from the brake pipe and operated upon a reduction in brake pipe pressure for effecting an application of the brakes, of means constantly subject to the opposing pressures of the brake pipe and said chamber and normally closing communication for venting fluid from said valve device to the brake pipe and adapted upon a predetermined reduction in brake pipe pressure to open said communication.

3. In a fluid pressure brake, the combination with a brake pipe, of valve means and a piston operated upon a reduction in brake pipe pressure for actuating said valve means to effect an application of the brakes, and means for controlling a restricted communication from the piston chamber of said piston to the brake pipe and operated upon a predetermined reduction in brake pipe pressure for opening said communication to an extent varying according to the rate of reduction in brake pipe pressure for effecting a reduction in pressure in said piston chamber.

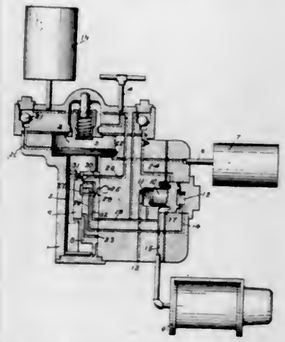
4. In a fluid pressure brake, the combination with a brake pipe and a valve device having a piston chamber and operated upon a reduction in brake pipe pressure for effecting an application of the brakes, of a movable abutment subject to the opposing pressures of the brake pipe and said piston chamber and operated upon a predetermined reduction in brake pipe pressure for opening a restricted communication for venting fluid from said piston chamber.

5. In a fluid pressure brake, the combination with a brake pipe and a valve device having a piston chamber normally supplied with fluid from the brake pipe and operating upon a reduction in brake pipe pressure for effecting an application of the brakes, of a movable abutment subject to the opposing pressures of the brake pipe and said piston chamber and adapted upon a predetermined reduction in brake pipe pressure to open a restricted communication for venting fluid from said piston chamber to the brake pipe.

[Claims 6 to 9 not printed in the Gazette.]

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1,230,952. FLUID-PRESSURE BRAKE DEVICE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Dec. 22, 1915. Serial No. 68,181. (Cl. 188—15.)



1. In a fluid pressure brake, the combination with a brake cylinder and a valve device having ports for effecting the release of fluid from the brake cylinder, of a supplemental reservoir from which fluid is supplied through a port controlled by said valve device for shifting same from release position, the release ports being arranged to open in advance of the supplemental reservoir port in the movement toward release position.

2. In a fluid pressure brake, the combination with a brake cylinder, auxiliary reservoir, brake pipe, and a supplemental reservoir, of a piston subject to the opposing pressures of the auxiliary reservoir and brake pipe and valves operated by said piston for controlling the release of fluid from the brake cylinder and the admission of fluid from the supplemental reservoir to the auxiliary reservoir, communication being opened for effecting the release of fluid from the brake cylinder during movement toward release position before communication is opened for supplying fluid from the supplemental reservoir to the auxiliary reservoir.

3. In a fluid pressure brake, the combination with a brake cylinder, auxiliary reservoir, brake pipe, and a supplemental reservoir, of a piston subject to the opposing pressures of the auxiliary reservoir and brake pipe, a main valve, and a graduating valve having a movement relative to the main valve for controlling ports adapted to effect the release of fluid from the brake cylinder and the supply of fluid from the supplemental reservoir to the auxiliary reservoir, said ports being arranged to open the brake cylinder release controlling ports before the supplemental reservoir supply port is opened upon movement of the graduating valve toward release position.

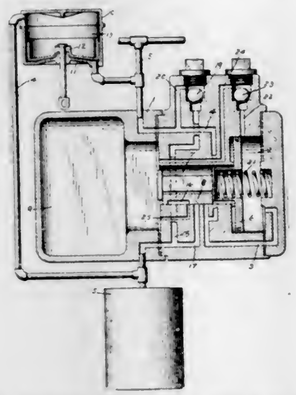
4. In a fluid pressure brake, the combination with a brake cylinder, auxiliary reservoir, brake pipe, and a supplemental reservoir, of a piston subject to the opposing pressures of the auxiliary reservoir and brake pipe, a main valve, and a graduating valve having a movement relative to the main valve for controlling ports adapted to effect the release of fluid from the brake cylinder and a restricted port through which fluid is supplied from the supplemental reservoir to the auxiliary reservoir, the release ports being opened in advance of the restricted port upon movement of the graduating valve toward release position.

5. In a fluid pressure brake, the combination with a brake cylinder, auxiliary reservoir, brake pipe, and a supplemental reservoir, of a valve device for effecting the release of fluid from the brake cylinder and controlling a restricted port for supplying fluid from the supplemental reservoir to the auxiliary reservoir in the movement toward release position and an additional port for supplying fluid from the supplemental reservoir to the auxiliary reservoir upon movement from release position.

[Claims 6 to 10 not printed in the Gazette].

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1,230,953. RELEASE-VALVE FOR VACUUM-BRAKES. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Nov. 2, 1915. Serial No. 59,169. (Cl. 188—6.)



1. In an automatic vacuum brake apparatus, the combination with a brake pipe normally maintained under a partial vacuum, and a brake cylinder for applying the brakes upon an increase in pressure in the brake pipe, of a chamber having a passage leading to the brake pipe and containing a check valve and normally maintained at a partial vacuum, a valve, and a piston operated upon an increase in brake pipe pressure for operating said valve to connect said chamber with the brake pipe.

2. In an automatic vacuum brake apparatus, the combination with a brake pipe normally maintained under a partial vacuum, and a brake cylinder for applying the brakes upon an increase in pressure in the brake pipe, of a chamber normally containing a partial vacuum, a valve, a piston subject to the opposing pressures of the brake pipe and a chamber, a passage controlled by the movement of said piston for equalizing the brake pipe pressure into said chamber upon increasing the brake pipe pressure to effect an application of the brakes, said valve being operated by said piston upon a reduction in brake pipe pressure in releasing the brakes for connecting the vacuum chamber with the brake pipe.

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1,230,954. PROCESS OF MAKING SHOES. CHARLES TWEEDIE, Jefferson City, Mo. Filed Mar. 6, 1915. Serial No. 12,507. (Cl. 12—142.)



1. The process of making welt shoes which comprises making the upper and rounding the sole substantially to its finished shape, sewing a welt along the bottom edge of the upper on its outer side, turning the upper edge of the welt out and securing it flatwise on the top margin of the shaped sole following the outline thereof to determine the entire outline of the welt and the bottom portion of the upper in contact therewith.

2. The process of making welt shoes which comprises stitching a counter to an upper along the location of the back seam and heel seat, sewing a welt along the bottom edge of the upper on its outer side, turning in the heel seat portion of the upper and counter, turning the upper edge of the welt out and securing it flatwise on the top margin of a sole shaped to substantially its finished shape following the outline thereof to determine the entire outline of the welt and the bottom portion of the upper in contact therewith as far as the two are coextensive.

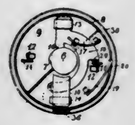
3. The process of making welt shoes which comprises making the upper with a small lasting allowance around the toe and inside of the shank and a larger lasting allowance along the ball on the outside, sewing a welt along the bottom edge of the upper on its outer side, turning the upper edge of the welt out and securing it flatwise in coincidence with the edge of a sole previously rounded to substantially its finished shape.

4. The process of making welt shoes which comprises making the upper and rounding the sole substantially to its finished shape, sewing a welt along the bottom edge of the upper on its outer side, notching a portion of the bottom edge of the welt and upper, turning the upper edge of the welt out and securing it flatwise to the edge portion of the rounded sole with their edges in coincidence.

5. The process of making welt shoes which comprises making the upper, sewing a counter to the heel portion of the upper and a welt along the bottom edge of the upper on its outer side, turning the upper edge of the welt out and the lower edge of the welt and counter in, and securing the bottom of the welt flatwise to the sole with their edges in coincidence, said sole having previously been rounded to substantially finished shape and securing a heel to the turned under portions of the counter and welt.

[Claims 6 to 10 not printed in the Gazette.]

**1,230,955. MAXIMUM CUT-OUT.** GERARDUS JACOBUS VAN SWAAY, Delft, and HENRI ISAAC KEUS, Hengelo, Netherlands. Filed Mar. 8, 1915. Serial No. 13,014. (Cl. 175—267.)



1. In an electric maximum cut-out switch, an operating member, a loose member, means whereby said operating member drives said loose member when closing the switch, a contact-carrying member, means whereby a disengageable connection is formed between the loose member and the contact-carrying member when the operating member is moved to close the switch, and means whereby the operating member may disengage said connection.

2. In an electric maximum cut-out switch, an operating member, a loose member, means whereby said operating member drives said loose member in one direction only when closing the switch, a contact-carrying member, means whereby a disengageable connection is formed between the loose member and the contact-carrying member when the operating member is moved to close the switch, means for holding the loose member in a fixed position when the switch is closed, and means whereby the operating member may disengage said connection leaving the loose member in said position.

3. In an electric maximum cut-out switch, a bridging member, a central spindle adapted to actuate said bridging member, a loose member co-axially arranged on said spindle, an abutment projecting outwardly from said central spindle, an electromagnetically operated pawl mounted on said loose member and having an inwardly projecting portion adapted to engage said abutment when the loose member is rotated, an operating member adapted to drive said loose member in a forward direction, and a pawl arresting the loose member when it reaches the "switched-in" position.

4. In an electric maximum cut-out switch, a bridging member, a central spindle adapted to actuate said bridging member, a loose member co-axially arranged on said spindle, an abutment projecting outwardly from said central spindle, a non-magnetic pawl mounted on said loose member and having an inwardly projecting portion adapted to engage said abutment when the loose member is rotated, a paramagnetic armature adjustable on said pawl, an operating member adapted to drive said loose member in a forward direction, and a pawl arresting the loose member when it reaches the "switched-in" position.

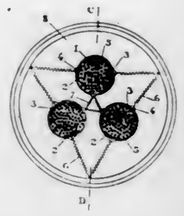
5. In an electric maximum cut-out switch, a bridging member, a central spindle adapted to actuate said bridging member, and formed of paramagnetic material, an electromagnet coil surrounding said spindle so that the latter is traversed by the magnetic field, a loose member co-axially arranged on said spindle, an abutment projecting outwardly from said central spindle, a non-magnetic pawl mounted on said loose member and having an inwardly projecting portion adapted to engage said abutment when the loose member is rotated, a paramagnetic armature on said pawl, an operating member adapted to drive said loose member in a forward direction, and a pawl mounted on said loose member to arrest it when it reaches the "switched-in" position.

[Claims 6 to 9 not printed in the Gazette.]

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**1,230,956. MICROPHONE.** ALEXANDRE VAUGEAN, ANTHONY DE LAVANDEYRA, and WILLIAM GARTHWAITE, Paris, France. Filed Oct. 15, 1915. Serial No. 56,107. (Cl. 179—128.)

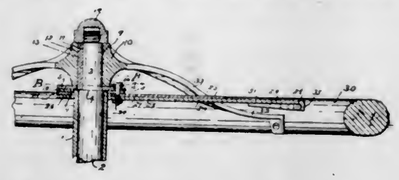
1. A microphone cell comprising two face plates and means for securing them together, a central member with partition ribs thereon, plates of carbon and means for supporting them with insulation within the faces plates, and a plurality of spheres of carbon in the compartments of the cell formed by the ribs, the said spheres of carbon being in light contact with the carbon plates and with the central ribbed member of the cell.



2. A microphone for use in telephony comprising in combination an evacuated capsule, positive and negative terminals fixed therein, a plurality of small pieces of carbon within the capsule and in light contact with one another, and with the terminals and resilient means by which said capsule is supported, said means permitting said capsule to move with an equal degree of freedom in all directions.

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**1,230,957. ELECTRIC SIGNALING DEVICE FOR AUTOMOBILES.** GEORGE F. VOIGHT, San Francisco, Cal. Filed June 21, 1916. Serial No. 104,940. (Cl. 200—27.)



1. In a device of the kind described, including a disk-shaped supporting plate mounted upon the upper and reduced end of the steering-wheel shaft and above the upper end of the standard, an outstanding flexible contact lever supported by said supporting plate.

9. In a device of the kind described, the combination of a supporting plate supported by the steering-wheel shaft, an outstanding flexible contact lever having its inner end insulatingly secured to said supporting plate and its outer end operatively engageable with an outer portion of the steering-wheel, for closing the circuit, and a stabilizer disposed above the said contact lever and in bearing relation therewith, said stabilizer being also insulatingly secured to said supporting plate.

19. In combination with the steering mechanism of an automobile, comprising a stationary standard, a shaft rotatably disposed inside of said standard, and a steering-wheel mounted upon the upper end of said shaft, said steering-wheel having a central hub, and outer rim and a series of spokes associating said hub and said rim, of an electric signal circuit and circuit closer, comprising a circuit wire and its terminal, non-movably and insulatingly supported by said standard and in close relation to said steering-wheel, a supporting plate mounted upon the upper end of said steering-wheel shaft and below the steering-wheel hub, a flexible contact lever having its inner end insulating and rigidly supported by said supporting plate, and its outer end terminating in two oppositely disposed arms operatively engageable with two predetermined spokes of said steering-wheel and whereby said circuit can be closed, said shaft and its steering-wheel together with said flexible lever and its supporting plate are movable relative to said circuit wire and its terminal, and brushing means circuitly associating said movable contact lever with said non-movable wire and its terminal, said steering-wheel and its shaft forming a portion of said circuit means.

21. The combination with an automobile steering-wheel and its shaft and a standard for the same, the shaft having a key-seat upon one side at its upper end, of a supporting plate mounted upon the upper end of the shaft adjacent the lower side of the steering-wheel, means engageable with the said key-seat for preventing the rotation of the supporting plate relative to the shaft, and means insulatingly supported by the supporting plate for closing the circuit.

[Claims 2 to 8, 10 to 18, 20, and 22 to 32 not printed in the Gazette.]



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**1,230,958. ORNAMENTING AND PROTECTING METAL SURFACES.** KALMAN WARGA, Brooklyn, N. Y. Filed Jan. 10, 1917. Serial No. 141,627. (Cl. 91—73.)

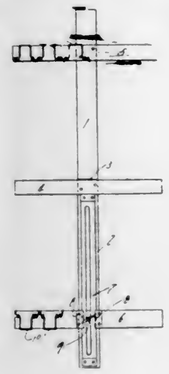
1. As a new article of manufacture, a metal article containing aluminum and having on its surface and adherent thereto, a flexible vitreous enamel or coating.

2. The method herein described which consists in effecting the fusion of a vitrifiable material on the surface of a metal containing aluminum, whereby a smoth, firmly adherent and flexible vitreous coating is formed on the surface of the metal.

3. The method herein described, which consists in applying to the surface of metal containing aluminum, a thin coating of finely divided vitrifiable material and subjecting the article having the vitrifiable material thereon, to sufficient heat to effect the fusion and adherence of the material to the metal surface.

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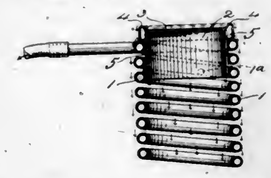
**1,230,959. NECKTIE-RACK.** JOSIAH F. WATTS, Seattle, Wash. Filed June 26, 1916. Serial No. 105,800. (Cl. 223—19.)



A neck tie holder comprising a pair of standards hinged together at their abutting ends, a fixed cross arm near the outer end of one of the standards, a fixed cross arm on the adjacent standard next to the hinged end thereof, a slotted plate fixed to the last mentioned standard, an adjustable cross arm mounted between the slotted plate and the adjacent standard, spaced lips secured to the adjustable cross arm and overlapping the opposite side edges of the plate, a set screw extending through the slot in the plate and the movable cross arm to lock the latter in adjusted position on the standard, and neck tie holding means on the adjustable cross arm and the fixed cross arm at the opposite end of the other standard, the cross arms being of the same width, whereby when the standards are folded together the central cross bar serves as a means for holding the intermediate portions of ties held by the holding means on the end cross arms.

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**1,230,960. CREAM-COOLER.** JAMES STUART WEARN, Christchurch, New Zealand. Filed Oct. 5, 1915. Serial No. 54,125. (Cl. 257—179.)



1. A cooler of the class described comprising a vertically disposed helical coil of tubing, and a cap for the coil having a cylindrical portion fitting within the upper end of the latter, the said cylindrical portion being formed so as to provide longitudinal exterior channels for the passage of liquid between the said cap portion and the surrounding convolutions of the coil, the upper end of the cap being closed and adapted to receive a flow of liquid, and an annular flange surrounding the upper end of the cap and having its edge projecting downwardly therefrom, the said edge of the flange being equal in diameter to the mean of the internal and external diameters of the coil so as to direct the liquid which overflows the upper end of the cap down both the inner and outer surfaces of the coil.

2. A cooler of the class described comprising a vertically disposed helical coil of tubing, and a cap for the coil having a cylindrical portion fitting within the upper end of the latter, the said cylindrical portion being formed so as to provide longitudinal exterior channels for the passage of liquid between the said cap portion and the surrounding convolutions of the coil, the upper end of the cap being closed and adapted to receive a flow of liquid, and an annular flange surrounding the upper end of the cap and having its edge projecting downwardly therefrom, the said edge of the flange being equal in diameter to the mean of the internal and external diameters of the coil so as to direct the liquid which overflows the upper end of the cap down both the inner and outer surfaces of the coil, the said flange being formed so as to provide a raised margin for the upper end of the cap.

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**1,230,961. OPENING CONTAINERS.** PURCELL T. WEBB, Masterton, New Zealand. Filed Oct. 8, 1913. Serial No. 794,183. (Cl. 220—6.)



1. In combination, a container, a top to said container disposed at a level below the upper edge of said container, a dished lid adapted to close a hole in said top and having the whole of its upper edge at a lower lever than the upper edge of said container when in position, and a removable lever normally lying within said dished lid and having a hook-shaped end, such end being hinged to the top edge of the dished lid, and the fulcrum point of the lever lying between said hook-shaped end and the end of the lever which is manipulated by the hand.

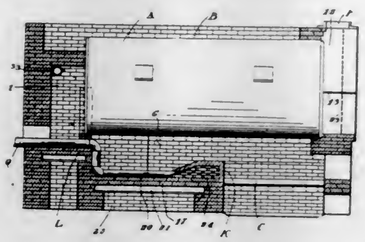
[Claim 2 not printed in the Gazette.]

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**1,230,962. FUEL-SAVER AND SMOKE-CONSUMER.** JOHN LINDSAY WEBSTER, Ottawa, Ontario, Canada. Filed Mar. 21, 1914, Serial No. 826,430. Renewed May 11, 1917. Serial No. 168,062. (Cl. 110—73.)

1. In a fuel saver and smoke consumer and in combination, a boiler, a supporting structure for the same having a hollow wall through which air may pass extending on opposite sides of the bridge wall, checker work filling said hollow wall, a bridge wall having checker work therein,

means for introducing air to the bridge wall and conducting the heated air from the checker work of the bridge wall to the hollow side wall, and means for distributing the air from the side wall to opposite ends of the boiler and discharging the same laterally to commingle with the products of combustion at opposite ends of the boiler.

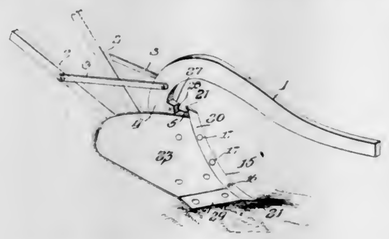


5. In a boiler furnace the combination of a boiler having a multiplicity of tubes, and a supporting structure inclosing the boiler and forming therewith a combustion chamber beneath the boiler and chambers at the ends of the boiler into which the tubes open, a wall dividing the combustion chamber from the chamber at the rear of the boiler, a partition dividing the chamber at the front end of the boiler into two non-communicating spaces, one of said spaces being in direct communication with one section of the boiler tubes and the other space being in direct communication with the other section of tubes and with the chimney, the two section of tubes being in free communication with each other through the chamber at the rear of the boiler, a furnace grate centrally located at one end of the combustion chamber of less width than the same leaving return passageways for the products of combustion on each side of the grate leading to the first named space at the front of the boiler, and division walls on each side of the grate.

[Claims 2 to 4, 6, and 7 not printed in the Gazette.]

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1,230,963. PLOW. FRANK L. WESTBROOK, Fish, Ga. Filed Aug. 28, 1916. Serial No. 117,282. (Cl. 97—21.)



1. A plow provided with a point consisting of a bar forming a simple curve from end to end, its front face being concave and its rear face convex and its extremities being turned rearwardly to project from its rear convex face, and the edges of the bar being parallel throughout the length of the same.

2. In a plow, the combination of a frog having its front edge forming a simple curve from top to bottom, a point consisting of a bar seating from end to end directly on the front edge of the frog and having side edges parallel throughout their length, a moldboard secured at one end upon the frog against a side edge of the point and flush with the front face of the same, and a share secured at one end of the frog against the side edge of the point below the moldboard and flush with the point and the moldboard.

3. In a plow, the combination of a frog having its front edge forming a regular curve and provided on one side at said edge with a rib following said curve, a point consisting of a bar curved from end to end and seating directly upon the front curved edge of the frog, and securing bolts inserted through said bar and through the said rib on the frog.

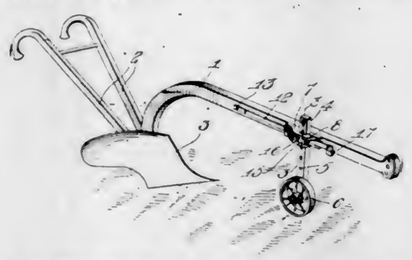
4. In a plow, the combination of a frog having its front edge forming a regular curve, a point consisting of a bar curved from end to end to seat upon the said front edge of the frog, a standard pivotally secured at its lower end to the side of the frog, means for adjustably securing the upper portion of the standard to the frog, and an adjustable key disposed between the front side of the standard and the rear side of the frog.

5. In a plow, the combination of a frog, a point consisting of a bar seating from end to end upon the front edge of the frog, a standard pivotally attached at its lower end to the side of the frog and adjustably connected to the upper end of the frog, a locking key disposed between the front side of the standard and the rear side of the frog, and means at one side of the frog for supporting said key.

[Claims 6 to 9 not printed in the Gazette.]

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1,230,964. PLOW ATTACHMENT. LEWIS M. WHEAT, Lakemont, N. Y. Filed Aug. 17, 1915. Serial No. 45,973. (Cl. 97—1.)



1. A plow beam having an opening, a guide-way secured to the beam and having a co-axial opening, an apertured shank movable in the guide-way, a gage wheel at the lower end of the shank, a strap spring secured to the plow beam and having a pin engageable with the openings in the guide-way and beam and one of the apertures in the shank, said spring conforming to the shape of the guide-way and provided with a finger piece.

[Claim 2 not printed in the Gazette.]

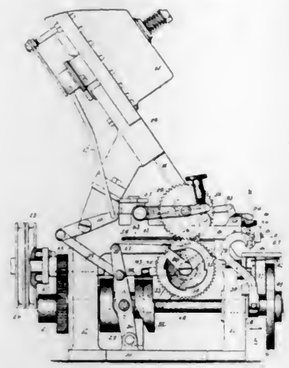
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1,230,965. BUTTON-FASTENING MACHINE. FRANKLIN R. WHITE, Waterbury, Conn., assignor to The Patent Button Company, Waterbury, Conn., a Corporation of Connecticut. Filed Feb. 7, 1917. Serial No. 147,037. (Cl. 218—4.)

1. In an apparatus of the class described, the combination of a button fastener-forming mechanism, a mechanism for receiving a button thereon and for thrusting the eye-shank of the button into said fastener-forming mechanism, including a traveling carriage, means extending above said traveling carriage adapted to guide a button to proper seated position thereon and to hold the eye-shank in proper position for insertion within the fastener-forming mechanism, and means whereby said button holding means are withdrawn as the traveling carriage is actuated.

4. In an apparatus of the class described, the combination of mechanism for forming and applying a ring fastener to the eye-shank of a button, mechanism for inserting the eye-shank of a button into said fastener-forming mechanism, said fastener-forming mechanism including a chamber having a groove in the outer wall thereof for guiding a traveling wire through the eye-shank of a button and for forming the same into a ring.



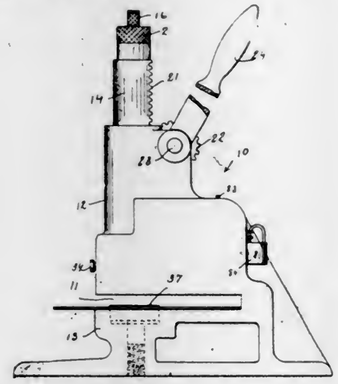


13. In a ring fastener forming mechanism for button machines, the combination of a ring-forming chamber, means for directing a traveling wire in the form of a helix therein, and a cutter with a beveled extremity adapted to sever the wire at a predetermined point and to inwardly bend the cut extremity thereof.

[Claims 2, 3, 5 to 12, and 14 to 17 not printed in the Gazette.]

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1,230,966. PRINTING-PRESS. RALPH G. WHITLOCK. Los Angeles, Cal. Filed Nov. 8, 1915. Serial No. 60,248. (Cl. 101—316.)



1. In a printing press a stationary frame; a transverse feed opening therein; a yieldable platen mounted in said frame to project into said feed opening at one side thereof; a plunger mounted in said frame in alinement with said platen at the opposite side of said feed opening; a printing member mounted on the lower end of said plunger; a removable member mounted within said plunger to move therewith; removable type mounted on the lower end of said removable member; means to supply ink to said printing member and type; a movable casing mounted in said frame at the lower end of said plunger adapted to project across said feed opening and to contact with said platen whereby said printing members are entirely inclosed during the operation of said plunger; means operated by said plunger adapted to move said casing into position in advance of said plunger and to retain the same in its adjusted position until said plunger has returned to its normal position; means connected to said plunger to confine the same to a movement in one direction during each stroke thereof; counter mechanism operated by said plunger adapted to register each impression of the printing member; means operated by said counted mechanism to lock the plunger against movement when a predetermined number of impressions have been made; and means to operate said plunger.

2. In a printing press a stationary frame; a transverse feed opening therein; a yieldable platen mounted in said frame at one side of said opening; a plunger mounted in said frame at the opposite side of said opening; a printing member mounted on the lower end of said plunger; a movable member mounted within said plunger to move therewith; a printing member mounted on the lower end of said removable member; means to supply ink to said printing members; a movable casing mounted in said frame at the lower end of said plunger adapted to project across said feed opening and contact with said platen whereby said printing members are inclosed during the operation of said plunger; means operated by said plunger adapted to move said casing into position in advance thereof and to retain the same in its adjusted position until said plunger has returned to its normal position; means connected to said plunger, adapted to confine the same to movement in one direction during each stroke thereof; counter mechanism operated by said plunger adapted to register each impression of said printing members; and means to operate said plunger.

3. In a printing press a stationary frame; a transverse feed opening therein; a yieldable platen mounted in said frame at one side of said opening; a plunger mounted in said frame at the other side of said opening; a printing member mounted on the lower end of said plunger; a removable member mounted within said plunger to move therewith; a printing member mounted on the lower end of said removable member; means to supply ink to said printing members; a movable casing mounted in said frame at the lower end of said plunger adapted to project across said feed opening and contact with said platen whereby said printing members are inclosed during the movement thereof; means operated by said plunger adapted to move said casing into position in advance of the plunger and to retain the same in its adjusted position until the plunger has returned to normal position; means connected to said plunger adapted to confine the same to a movement in one direction only until its extreme limit is reached in either direction; and means to operate said plunger.

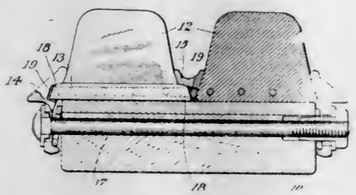
4. In a printing press a stationary frame; a transverse feed opening therein; a yieldable platen mounted in said frame at one side of said opening; a plunger mounted in said frame at the other side of said opening in alinement with said platen; a printing member mounted on the lower end of said plunger; means to supply ink to said printing member; a movable casing mounted in said frame at the lower end of the plunger adapted to project across said feed opening and contact with said platen; means operated by said plunger adapted to move said casing into position in advance of said plunger and to retain the same in its adjusted position until said plunger has returned to normal; and means to operate said plunger.

5. In a printing press a stationary frame having a transverse feed opening therein; a platen mounted in said frame at one side of said opening; a plunger mounted in said frame at the other side of said opening in alinement with said platen; a printing member mounted on the lower end of said plunger; means to supply ink to said printing member; a casing mounted in said frame adapted to project across said feed opening and contact with said platen upon the initial movement of said plunger; means to position said casing and to retain the same in its adjusted position until said plunger has returned to its normal inoperative position; means to confine said plunger to a movement in one direction only

until its extreme limit has been reached in either direction; counter mechanism adapted to register each impression of said printing member; means to lock said plunger against movement upon a predetermined number of impressions being made; and means to operate said plunger.

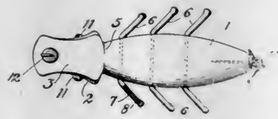
[Claims 6 and 7 not printed in the Gazette.]

1,236,967. MANUFACTURE OF BLOCK-TIRES. CHARLES B. WHITTELSEY, Hartford, Conn., assignor to The Hartford Rubber Works Company, a Corporation of Connecticut. Filed Jan. 14, 1915. Serial No. 2,109. (Cl. 152—9.)



The combination with a vehicle wheel, of a felly band, a plurality of resilient blocks seated on said band, clamp rings extending circumferentially of the band and engaging the sides of the blocks, a row of wires extending longitudinally through each block and disposed circumferentially of the felly band, and projecting from the ends of the block, and channeled cross-bars extending transversely of the felly band, and arranged back to back, and receiving within their channels the projecting wires of adjoining blocks, and having wedge ends removably fitted in correspondingly shaped recesses in said rings.

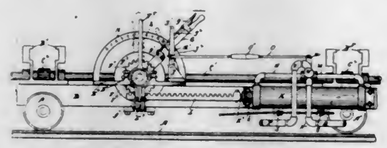
1,230,968. FISH-BAIT. FORD R. WILBER and HORACE E. BALL, Paw Paw, Mich. Filed Nov. 4, 1916. Serial No. 129,472. (Cl. 43—30.)



1. A fish bait comprising a body portion, a head thereon, the upper surface of said head being planate and curved downward, a throat cut from the under side of said head, said head being enlarged to the rear of said throat forming a swelled portion, and said body portion being cut away forming a neck at its junction with said head.

[Claims 2 and 3 not printed in the Gazette.]

1,230,969. MECHANISM FOR OPERATING SAWMILL SET-WORKS. WILLIAM M. WILKIN, Erie, Pa. Filed Dec. 6, 1915. Serial No. 65,350. (Cl. 143—118.)



1. In an apparatus of the class described, the combination of a saw-carriage, a line-shaft mounted therein, a transverse shaft mounted thereon, a pair of intermeshing miter-gears secured on said shafts, a spur-gear mounted on said transverse shaft, a friction wheel secured on said transverse shaft, a manually operatable lever pivoted upon the axis of said transverse shaft, gripper mechanism on said manually operatable lever adapted to engage said friction wheel and move said lever in unison with said friction wheel in one direction, adjustable means to limit the manual movement of said lever in the opposite direction, a lever pivoted on said carriage, means thereon adapted to be engaged by the first-named lever when it is moved by said friction wheel, cylinder and piston mechanism mounted on said saw-carriage, a piston-rod therein, a rack-bar secured to said piston-rod intermeshing with said spur-gear, a valve communicating with said cylinder and piston mechanism adapted to control the admission and exhaust of fluid to and therefrom, a valve operating rod pivoted to said last mentioned lever and adapted to operate said valve when said last mentioned lever is operated, substantially as set forth.

2. In an apparatus of the character described, a saw-carriage run-way, a saw-carriage thereon, a line-shaft mounted in said carriage, cylinder and piston mechanism thereon, means operatable by said cylinder and piston mechanism to rotate said line-shaft, valve mechanism to control admission and exhaust of fluid to and therefrom, a supply pipe connected with one side of said valve, an exhaust pipe connected with the other side of said valve, a rotatable drum mounted adjacent to one end of said run-way, a flexible tube connected with said supply-pipe, and wound around said drum, means to supply fluid to said flexible tube, and means to cause said drum to wind and unwind said flexible tube in unison with the movement of said saw-carriage upon said run-way, substantially as set forth.

3. In a set-works operating mechanism, a shaft, a grip-wheel on said shaft, a lever fulcrumed upon the axis of said shaft, a spring-pressed gripper on said lever adapted to engage said grip-wheel, a spur-gear on said shaft, disengageable means adapted to cause said spur-wheel and grip-wheel to rotate in unison, a rack-bar intermeshing with said spur wheel, piston mechanism to operate said rack-bar, a valve to control the admission and exhaust of fluid to and from said piston mechanism, and mechanism adapted to be operated by said lever to control said valve, substantially as set forth.

4. In a set-works operating mechanism, a shaft, a grip-wheel non-rotatably secured on said shaft, a spur-wheel rotatably mounted on said shaft, a clutch collar slidably and non-rotatably mounted on said shaft and adapted to engage the spur-wheel and cause all of said parts to rotate with said spur-wheel, and rack-bar and piston mechanism to actuate said spur-gear, substantially as set forth.

5. In a set-works operating mechanism, a shaft, a grip-wheel non-rotatably secured thereon, a gage bar above said grip-wheel, a movable gage stop in said bar, a lever pivoted on the axis of said shaft adapted to be manually moved into engagement with said gage-stop, a spring-pressed gripper on said lever adapted to cause said lever to move backward in unison with said grip-wheel, and a valve operating lever adapted to be engaged and operated in one direction by said first named lever, substantially as set forth.

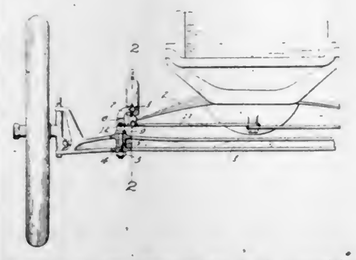
[Claim 6 not printed in the Gazette.]

1,230,970. SPRING-HANGER. JOSEPH A. WILLIAMS, Cleveland, Ohio, assignor to The K. W. Ignition Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 15, 1913. Serial No. 806,693. (Cl. 267—19.)

1. A device of the character set forth comprising, in combination, a bracket adapted to be secured to a vehicle axle having a forked end, the branches whereof are provided with inwardly projecting trunnions, a member journaled upon said trunnions and having a substantially vertical bore, a rod which is adapted to reciprocate within said bore and having an abutment which is spaced from said member, an elastic member interposed between



said member and the abutment, and connecting means carried by one end of said rod.



2. A device of the character set forth comprising, in combination, a forked bracket each branch whereof terminates in an internally threaded eye, a screw adapted to occupy each eye and having an inwardly projecting extension, a block trunnioned upon the screw extensions and having a substantially vertical bore, a rod adapted to reciprocate within said bore and having an abutment spaced in one direction from the aforesaid block, connecting means secured to the rod on the side of the block opposite the aforesaid abutment, and an elastic member interposed between the block and the abutment.

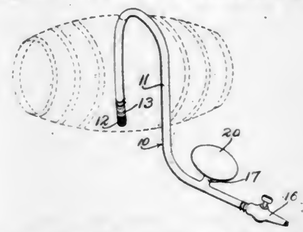
3. In a device of the character set forth, a bracket having a shank adapted to be attached in upright position upon an automobile part and having at its upper end a pair of offset fork arms, a trunnion carried by each arm, a block having a vertical bore, said block being pivoted upon said trunnions transversely of said bore, a rod projecting through said bore and adapted to reciprocate therein, a shouldered member carried by said rod above said block, a transverse pivot member carried by said rod below said block, and a compression spring interposed between said shouldered member and block, said pivot member being adapted to receive the end of a leaf spring.

4. A device of the character set forth comprising, in combination, a forked bracket the branches whereof are provided with opposed trunnions, a circular block pivoted with the trunnions of the bracket and having a substantially central vertical bore, a rod adapted to reciprocate within said bore and extending above and below the block, a disk secured to the upper end of the rod, an elastic member interposed between the disk and one of the circular faces of the aforesaid block, a yoke carried by the lower end of the rod, and a cylindrical casing which has its lower end threaded upon the upper end of the block and its opposite end closed.

5. A device of the character set forth comprising, in combination, a bracket having a shank adapted for attachment to the axle of an automobile and also having a pair of spaced branches, each of which terminates in an internally threaded eye, a screw within each eye which is provided with an inwardly projecting extension, a cylindrical block trunnioned upon the screw extensions and having a substantially central vertical bore, a rod adapted to reciprocate within said bore and extending above and below the block, a disk secured to the upper end of the rod, an elastic member interposed between the disk and one of the circular faces of the aforesaid block, and a yoke carried by the lower end of the rod, said yoke being adapted to receive one end of a vehicle spring and said bracket being offset so that said yoke may swing beneath said trunnions.

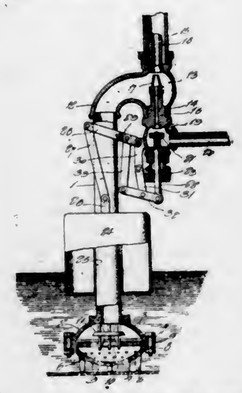
1,230,971. SIPHON. HARRY L. WILSON, Washington, D. C., assignor of one-third to John F. Loeffler, Washington, D. C. Filed Oct. 17, 1916. Serial No. 126,136. (Cl. 137—20.)

A siphon comprising a flexible leg having a short lateral integral tubular extension, a cylindrical coupling secured in said extension and projecting therefrom, the projecting end being threaded, a priming bulb having an



opening therein, and a nut having a peripheral groove, the edge defining said opening being clamped in said groove, said nut being threaded on said projecting end.

1,230,972. AUTOMATIC DRAINING DEVICE. JOHN DONALD WOODWORTH, East Moline, Ill. Filed Jan. 11, 1917. Serial No. 141,860. (Cl. 162—3.)



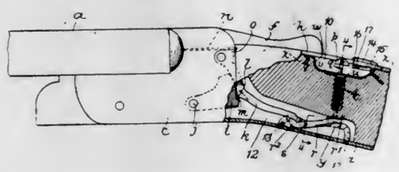
1. A device of the class described comprising a vertical suction pipe, a vertical discharge pipe arranged out of vertical alinement with said suction pipe and having its lower end disposed in a plane above the plane of the upper end of the latter, a hollow housing connected to the lower end of said discharge pipe and the upper end of said suction pipe, a vertically extending injector nozzle disposed within said housing in vertical alinement with said discharge pipe, the stem of said nozzle projecting vertically downwardly through said housing and being formed into a valve casing, a horizontal supply pipe connected to one side of said casing, a vertically slidable valve mounted within said casing and having its stem projecting vertically downwardly through the lower end of the same alongside and in parallel relation to said suction pipe, a float slidably mounted upon said suction pipe, and connections between said float and the lower end of the stem of said valve for operating the latter upon the movement of said float.

2. A device of the class described comprising a vertical suction pipe, a vertical discharge pipe arranged out of vertical alinement with said suction pipe and having its lower end disposed in a plane above the plane of the upper end of the latter, a hollow housing connected to the lower end of said discharge pipe and the upper end of said suction pipe, a vertically extending injector nozzle disposed within said housing in vertical alinement with said discharge pipe, the stem of said nozzle projecting vertically downwardly through said housing and being formed into a vertically extending valve casing, the latter

being disposed alongside the upper end of said section pipe and in vertical alinement with said discharge pipe, a horizontal supply pipe connected to one side of said casing, a vertically slidable valve mounted within said casing, said valve being closed when in its uppermost position and open when in its lowermost position, a stem projecting vertically downwardly through the lower end of said casing alongside of said suction pipe and having its lower end disposed in a plane spaced above the lower end of the latter, and a float slidably mounted upon the portion of said suction pipe disposed below the plane of the lower end of said valve stem, and link and lever connections between said float and the lower end of said valve stem for operating said valve upon the movement of said float.

3. A device of the class described comprising a vertical suction pipe, a vertical discharge pipe arranged out of vertical alinement with said suction pipe and having its lower end disposed in a plane above the plane of the upper end of the latter, a hollow housing connected to the lower end of said discharge pipe and the upper end of said suction pipe, a vertically extending injector nozzle disposed within said housing in vertical alinement with said discharge pipe, the stem of said nozzle projecting vertically downwardly through said housing and being formed into a vertically extending valve casing, the latter being disposed alongside the upper end of said suction pipe and in vertical alinement with said discharge pipe, a horizontal supply pipe connected to one side of said casing, a vertically slidable valve mounted within said casing, said valve being closed when in its uppermost position and open when in its lowermost position, a stem projecting vertically downwardly through the lower end of said casing alongside of said suction pipe and having its lower end disposed in a plane spaced above the lower end of the latter, a float slidably mounted upon the portion of said suction pipe disposed below the plane of the lower end of said valve stem, a downwardly projecting bracket fixed to the side of said casing adjacent said suction pipe, a lever fulcrumed at one end to the upper portion of said bracket, the other end of said lever being forked to straddle said suction pipe, a pair of links pivoted at one of their ends to the free ends of the forks of said lever and at their other ends to the top of said float, a second lever fulcrumed intermediate its ends to the lower end of said bracket and having one of its ends pivoted to the lower end of said valve stem, and a link pivoted at its lower end to the other end of said second lever and at its other end to the intermediate portion of the first mentioned lever.

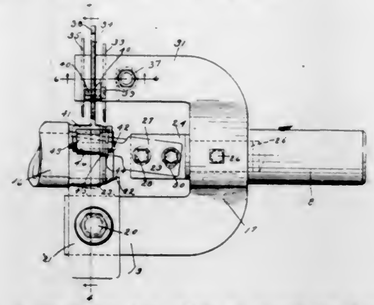
1,230,973. FIRING MECHANISM FOR FIREARMS. ALVIN A. YEATON, Hillsboro, N. H. Filed Apr. 29, 1916. Serial No. 94,347. (Cl. 42—41.)



1. In a shoulder firearm having a stock provided with a grip portion, a lock including a concealed hammer pivoted at one of its ends near the under side of the lock and having a shoulder on its outer end, a sear pivoted in the upper portion of the lock having a part lying across the outer end of the hammer provided with a catch to engage said shoulder and hold the hammer in cocked position, the end of the sear extending into a cavity in the lower part of the grip, a plate covering said cavity, a bridge on said plate, a release lever pivoted to said bridge having an arm underlying the end of said sear and having a second arm extending to the opposite side of its pivot from the aforesaid arm, a push pin passing through the stock from the upper side thereof into engagement with the second arm of said release lever and having a head so exposed as to be engageable by a digit of the user.

[Claims 2 and 3 not printed in the Gazette.]

1,230,974. JIG. ALFRED S. ABBOTT, Springfield, Mo., assignor of one-third to J. E. Buker, Chicago, Ill., and one-third to John F. Long, Springfield, Mo. Filed Mar. 13, 1916. Serial No. 83,821. (Cl. 29—57.)



1. In combination with means for holding and giving axial rotation to a tubular metal blank, a jig provided with tools to operate on the outside of the blank, and a cutting tool to operate on the inner surface thereof; said jig being adapted to be moved laterally with respect to said metal blank to move said tools into and out of operative engagement with said blank.

2. In combination with means for holding and giving axial rotation to a tubular metal blank, a jig having a pair of arms adapted to extend on opposite sides of the blank and provided with tools adapted to operate on the outer surface of the same, and a cutting tool arranged between said arms adapted to operate on the inner surface thereof; said jig being adapted to be moved laterally with respect to said metal blank to move said tools into and out of operative engagement with said blank.

3. In combination with means for holding and giving axial rotation to a tubular metal blank, a jig having a pair of arms adapted to extend on opposite sides of the blank provided with tools adapted to operate against the outer surface of the same, a tool support between said arms, and a tool adapted to operate upon the inner surface of ssaid tubular blank and formed so as to permit angular adjustment on said tool support.

4. In combination with means for holding and giving axial rotation to a tubular metal blank, a jig provided with a cutting tool adapted to operate upon the inner surface of the blank at one point thereof to reduce the thickness of the blank from the inside, and a cutting tool to simultaneously reduce the thickness of the blank from the outside; said jig being adapted to be moved laterally with respect to said metal blank to move said tools into and out of operative engagement with said blank.

5. In combination with means for holding and giving axial rotation to a tubular metal blank, a jig provided with a cutting tool to reduce the thickness of the blank from the inside, and a cutting tool arranged diametrically opposite the first-named tool to simultaneously reduce the thickness of the blank from the outside and to bevel the end of the same; said jig being adapted to be moved laterally with respect to said metal blank to move said tools into and out of operative engagement with said blank.

[Claims 6 to 21 not printed in the Gazette.]

1,230,975. PROCESS OF MAKING AROMATIC HYDROCARBONS. CLIVE M. ALEXANDER, Port Arthur, Tex., assignor to Gulf Refining Company, Pittsburgh, Pa., a Corporation of Texas. Filed Nov. 10, 1915. Serial No. 60,746. (Cl. 23—24.)

1. The process of converting high boiling aromatic hydrocarbons into low boiling aromatic hydrocarbons which comprises passing the vapors of such high boiling hydrocarbons through a heated zone maintained at a cracking temperature at a rate so rapid as to give a substantial proportion of unchanged high boiling hydrocarbon of the original boiling point passing such zone.

2. The process of converting high boiling aromatic hydrocarbons into low boiling aromatic hydrocarbons which comprises passing vapors of solvent naphtha through a heated zone maintained at a cracking temperature at a temperature of 600° to 1000° C. and at a rate sufficiently rapid to give a condensate having about 70 per cent. the volume of the original solvent napththa and containing high boiling oils.

3. The process of making benzene and toluene from solvent naphtha which comprises passing the vapors of such solvent naphtha through a zone heated to 600° to 1000° C. at a rate sufficiently rapid to give a large volume of liquid condensate containing high boiling oils, condensing the so treated vapors, separating benzene and toluene therefrom, and recovering high boiling oils.

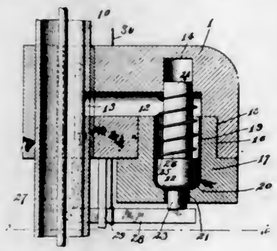
4. The process of making benzene and toluene from high boiling aromatic oils which comprises passing a mixture of vapors of once run high boiling oil and of fresh high boiling oil through a heated zone at a temperature of 600° to 1000° C., recovering high boiling oils from such condensate and returning the recovered high boiling oils together with a fresh portion of high boiling oil to the heating zone for re-running.

5. The process of converting high boiling aromatic hydrocarbons into low boiling aromatic hydrocarbons which comprises passing vapors of solvent naphtha through a heated zone at a temperature of about 800° C. and at a rate sufficiently rapid to give a condensate having about 70 per cent. the volume of the original solvent naphtha and containing high boiling oils.

[Claims 6 to 8 not printed in the Gazette.]



1,230,976. ANTIFREEZING PUMP. JAMES H. ALEXANDER, Conquest, Kans. Filed Oct. 28, 1916. Serial No. 128,270. (Cl. 103—60.)

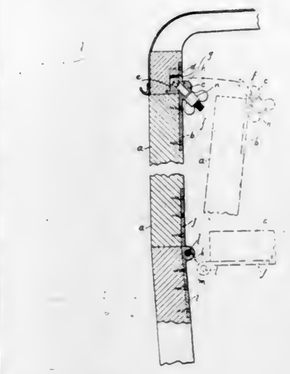


1. A pump attachment adapted to be detachably secured to the pump stock and having a passage extending therethrough in communication with the interior of the stock, a plug detachably secured in the opposite end of the passage, said plug having a valve bore and a valve seat, a valve in said bore, means for normally urging said valve upon its seat, and means operable from above the ground level for unseating said valve to permit drainage of the water from the pump stock.

3. A pump attachment adapted to be detachably secured to the pump stock comprising a body portion having a passage extending therethrough in communication at one end with the pump stock, the opposite end of the passage being internally threaded, a valve plug having threaded engagement in said threaded end of the passage, said valve plug having a bore and a reduced portion forming a valve seat, a valve movable in said bore comprising an enlarged portion adapted to conform to and engage the valve seat, a reduced valve stem at one end projecting beyond the plug, and a reduced shank at the opposite end, a coil spring encircling said shank adapted to retain the valve upon its seat, a lever pivotally mounted upon the body portion and adapted to engage the stem, and a flexible element connected with the said lever and extended above the ground level whereby the valve may be unseated to permit drainage of water from the pump stock.

[Claims 2 not printed in the Gazette.]

1,230,977. CONVERTIBLE VEHICLE-BODY. JOHN T. ALLMAND, Detroit, Mich., assignor, by mesne assignments, to Fisher Body Corporation, a Corporation of New York. Filed Oct. 18, 1915. Serial No. 56,402. (Cl. 21—62.)



2. In a vehicle body provided with a top, the combination of door and window posts, a separable locking and tension device for securing the top of each post to the top of the body, and a separable hinge for connecting the lower end of each post to the vehicle body.

4. In a vehicle provided with a top, the combination of a plurality of removable door and window posts, means for detachably securing the lower ends of the posts to the body and detachable interlocks for the tops of the posts, each interlock comprising a plate secured to the vehicle top and having a slot therethrough provided with an enlarged opening and having a cradle at the rear, a plate attached to the post and provided with a perforated lug, a threaded bolt with an enlarged head passing through the perforated lug and being arranged so that its enlarged head fits into the cradle of the top plate, and a nut on the end of the bolt.

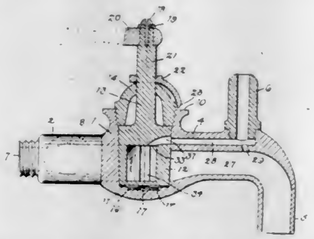
6. In a vehicle body provided with a top, posts for holding the windows at the sides, parts of locking devices secured to the top, detachable parts of said locking devices secured to the tops of the posts and engageable with said first-mentioned parts, portions of securing devices carried by the body and detachable portions of securing devices attached to the bottoms of the posts and engageable with the first-mentioned portions of said securing devices, the said locking devices and securing devices being arranged so that the one has to be first released and a post tipped to an angular position before the other device can be released.

8. In combination with a vehicle body provided with a top, posts for holding the windows at the sides, hinges provided with separable parts for securing the posts removably at one end, and a locking and binding device for removably securing each posts at the other end and drawing the same tightly in place.

10. In a vehicle body provided with a top, posts for holding the windows at the sides, means for securing the posts at one end to the body, and locking devices for securing the posts at the other end to the body, said locking devices comprising members which are arranged to both draw the posts laterally of the body into position and to draw the posts longitudinally to tighten them.

[Claims 1, 3, 5, 7, 9, and 11 to 13 not printed in the Gazette.]

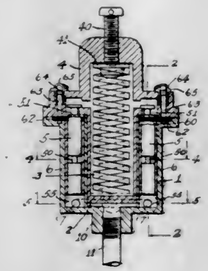
1,230,978. COMBINATION-FAUCET. CARL G. ANDERSON, Duluth, Minn., assignor of one-half to John Norgord, Duluth, Minn. Filed Jan. 30, 1917. Serial No. 145,381. (Cl. 137—109.)



1. A combination faucet comprising a main discharge and a fountain discharge, a spigot within the faucet, a chamber within the spigot having three different sized radially disposed openings, a discharge opening in the spigot communicating with the upper end of the chamber and adapted to communicate with the fountain discharge, and means for adjusting the spigot to regulate the flow through either discharge, substantially as and for the purpose described.

2. The combination with a faucet as described, having a spigot valve therein, a main discharge nozzle, a fountain nozzle and an indicator plate concentric with the valve, of a stem for the valve partly square in cross section, a threaded nut surrounding the stem and impinging the valve, a pointer carried upon the squared portion of the stem and arched downwardly toward the indicator plate, means whereby the turning of the valve in accord with the indicator will direct either hot or cold water or both through the main discharge nozzle, or cold water through the fountain nozzle substantially as set forth.

1,230,979. FUEL-GOVERNOR FOR OIL-BURNERS. JOHN C. AUCKLAND and EDWARD P. HILDEBRAND, Seattle, Wash. Filed May 15, 1916. Serial No. 97,491. (Cl. 236—6.)



1. A fuel feed governor comprising a casing having a steam cylinder bore and two parallel valve receiving bores alongside, the steam cylinder bore having a steam supply connection with one end and the valve receiving bores having transversely extending ports intersecting therewith, a sleeve mounted in each of the valve receiving bores and having ports in opposite sides registering with the ports of the casing, means for turning said sleeves upon their axes; valves mounted in said sleeves for axial movement, a piston mounted in the steam cylinder, a spring acting to move the piston in opposition to the steam acting thereon, said piston and the valves having interlocking engagement to secure common movement.

2. A fuel feed governor comprising a casing having a steam cylinder bore and two parallel valve receiving bores alongside, a steam supply connection with the bottom of the steam cylinder bore, the casing having steam and oil ports, each intersecting its respective one of said valve receiving bores, a sleeve fitting each of said valve receiving bores and having ports at opposite sides adapted to register with the intersecting ports of the casing, means for manually and separately turning said sleeves upon their axis to regulate their effective port areas, an axially movable piston valve mounted in each sleeve and having a reduced section registering with the ports in the sleeve, a piston in the cylinder bore, a spring acting upon the piston in opposition to the steam, the piston having lateral projections provided with notches and the valves having necks fitting in said notches.

3. A fuel feed governor, comprising a casing having a steam cylinder bore, two parallel valve receiving bores alongside, and oil and steam ports each intersecting its respective valve receiving chamber, a sleeve in each valve receiving chamber having ports in opposite sides registering with the ports in the casing, a piston in the cylinder bore, the casing having a steam port connecting with the bottom of the cylinder bore, a spring acting on said piston in opposition to the steam, a cap covering the open ends of said cylinder and valve receiving bores, the piston and the valves having interlocking engagement for axial movement, the valve sleeves having gear teeth thereon, and gears mounted on the casing and engaging said sleeves to turn them to thereby vary the effective area of the valve ports.

4. A fuel oil feed governor, comprising a casing having a cylinder bore and two parallel valve receiving bores alongside the cylinder bore and all opening to the same face of the casing, the casing having oil and steam ports each intersecting its respective valve receiving bore, and a steam supply port connecting with the bottom of the cylinder bore, a piston in the cylinder bore and having lateral projections extending over the valve receiving bores, a sleeve in each valve receiving bore having ports in opposite sides registering with the intersecting ports of said bores, means for manually and separately turning said sleeves to vary the effective areas of its ports, a piston valve fitting said sleeves and having a necked section registering with said ports, the outer ends of said valves having connection with the piston for like reciprocating movement, a cap covering said piston and valves, and provided with openings and removable closures therefor for use in adjusting the valve sleeves, and a spring engaging the cap and the piston in opposition to the steam pressure.

1,230,980. FLUME. ELGIE C. AULD, Scottdale, Pa. Filed Feb. 14, 1916. Serial No. 78,135. (Cl. 61—5.)



1. A flume comprising walls forming a bottom and sides, an inlet at one end to admit a stream of liquid, an outlet at the opposite end to discharge said liquid, the bottom of said flume being inclined downwardly toward the discharge end thereof, a sectional top forming a removable cover, and a series of transverse baffles within the flume with part of said series of baffles extending vertically upward from the bottom and part extending vertically downward from the top to an intermediate point in the height of the flume, and with the upper edge of said upwardly extending baffles in a plane above the plane of the lower edge of the depending baffles.

2. A flume comprising walls forming a bottom and sides, an inlet at one end to admit a stream of liquid, an outlet at the opposite end to discharge said liquid, the bottom of said flume being inclined downwardly toward the discharge end thereof, and a series of transverse baffles within the flume, with part of said series of baffles extending vertically upward from the bottom and part extending vertically downward from the top to an intermediate point in the height of the flume, and with the upper edge of said upwardly extending baffles in a plane above the plane of the lower edge of the depending baffles, and a series of openings in the upwardly extending baffles adjacent to the bottom of the flume forming passages connecting opposite sides of said baffles.

3. A flume comprising walls forming a bottom and sides, a sectional top forming a removable cover, and a series of transverse baffles within the flume, with part of said series of baffles extending vertically upward from the bottom and part extending vertically downward from the top to an intermediate point in the height of the flume, and with the upper edge of said upwardly extending baffles in a plane above the plane of the lower edge of the depending baffles, and a series of openings in the depending baffles adjacent the upper edge thereof forming air passages connecting opposite sides of the baffles.

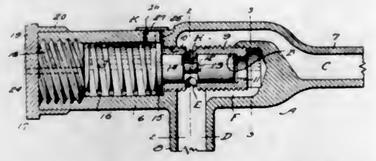
4. A flume comprising walls forming a bottom and sides, and a sectional top forming a removable cover, a series of transverse baffles within the flume with part of said series of baffles extending vertically upward from the bottom and part extending vertically downward from the top to an intermediate point in the height of the flume, and with the upper edge of said upwardly extending baffles in a plane above the plane of the lower edge of the depending baffles, a series of openings in the upwardly extending baffles adjacent the bottom of the flume connecting opposite sides of the baffles, and a series of openings in the depending baffles adjacent the upper edge thereof forming air passages connecting opposite sides of the baffles.

6. A flume comprising walls forming a bottom and sides, an inlet at one end to admit a stream of liquid, an outlet at the opposite end to discharge said liquid, a sectional top forming a removable cover, and a series of transverse baffles within the flume with part of said series of baffles extending vertically upwardly from the bottom and part extending vertically downward from the top to an intermediate point in the height of the flume, and with the upper edge of said upwardly extending baffles in a paine above the plane of the lower edge of the depending baffles.

[Claim 5 not printed in the Gazette.]



1,230,981. ADJUSTABLE AUTOMATIC CUT-OFF VALVE AND SIGNAL. GEORGE M. BACON, Salt Lake City, Utah. Filed Nov. 2, 1916. Serial No. 129,175. (Cl. 137—28.)



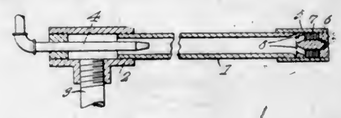
1. A control device for air lines comprising in combination, a housing provided with a bore, inlet and outlet ways, a port affording communication between said ways and through said bore, and an auxiliary way between said outlet way and one end of said bore; a valve reciprocable in said bore, said valve provided with a by-pass intermediate its ends and movable in one direction to open its by-pass to said port, and movable in the other direction by air pressure in said auxiliary way and acting upon its one head, to shut off communication through said port; means carried by said housing for yieldably maintaining said valve in an open position, but adjustable to be counteracted by predetermined attained pressure in said auxiliary way; said casing being provided with a longitudinal recess in one wall thereof, and a pin projecting from said valve into the recess to engage the casing at the opposite ends thereof for limiting the amplitude of reciprocation of said valve.

2. A control device for air lines comprising in combination, a housing provided with a bore, inlet and outlet ways, a port affording communication between said ways and through said bore, and an auxiliary way between said outlet way and one end of said bore; a valve reciprocable in said bore, said valve provided with a by-pess intermediate its ends and movable in one direction to open its by-pass to said port, and movable in the other direction by air pressure in said auxiliary way acting upon one head of said valve, to shut off communication through said port; means carried by said housing for yieldingly maintaining said valve in an open position and adjustable to be counteracted by predetermined attained pressure in said auxiliary way; said housing also having a longitudinal slot in one wall and a fixed index on its outer face at one end of the slot, a stem projecting from said valve into said slot for engagement with the housing at the opposite ends thereof to limit the movement of the valve, and an index plate carried upon the outer end of said stem over said slot to cover the same and having an index projection adapted for movement with the valve into registry with the fixed index to indicate the closing of the valve.

3. In a pressure-controlled cut-off valve, the combination of a housing having inlet and outlet portions at substantially right angles to each other and a hollow projection in axial alinement with the inlet portion, a removable bearing sleeve extending inwardly from said projection into the housing, having a stop flange in its inner end, and having a transverse opening communicating the inlet and outlet portions of the housing, a shiftable valve slidably mounted in said sleeve and having a substantially transverse opening therethrough and a head movable in the projection, and tension means arranged in the projection and bearing against said head to normally urge the valve against said stop flange and retain the transverse opening of the valve in register with the opening in the sleeve, said housing having an outlet by-pass leading to the inner end of the sleeve, whereby predetermined pressure in the outlet is adapted to shift said valve against said tension means and move the transverse openings out of register.

4. In a pressure controlled cut-off valve, the combination of a housing having inlet and outlet portions at substantially right angles to each other and a hollow projection in axial alinement with the inlet portion, a valve slidably arranged in the housing and having a transverse opening therethrough adapted to register with the inlet and outlet portions and having one head in communication with the outlet portion, a spring arranged in said projection bearing at one end against the opposite head of the valve to normally urge the same into open position, a cap nut engaging over the outer end of the projection and having a threaded stem part adjustably engaging in the housing and bearing against the opposite end of said spring to tension the latter, and a graduated scale carried upon the peripheral surface of said cap indicating various pressures to be attained in the outlet portion of the housing to overcome the tension of the spring at various adjustments of the cap, said housing being provided with a fixed index on its outer surface adapted to be traversed by said graduated scale of the cap to determine the desired adjustment of the latter.

1,230,982. OIL-BURNER. GUY M. BARRER, Los Angeles, Cal., assignor of one-third to Ernest J. Lloyd and one-third to William McDonald Wootten, Los Angeles, Cal. Filed Oct. 9, 1916. Serial No. 124,617. (Cl. 158—78.)



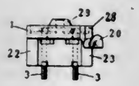
1. A burner tip embodying a substantially cylindrical body having converging slots extending to its outer end and having a portion in rear of said slots for dividing into two streams a combustible mixture flowing toward

the tip so that the two streams flow through said slots, the slots extending to the sides of the body adjacent to the outer end thereof and terminating short of said sides remote from said outer end, and the adjacent portions of the slots providing a diametrical outlet in the outer end of the body.

2. A burner tip embodying a cylindrical body having a pair of outlet slots converging to its outer end, and a portion projecting rearwardly from between the rear portions of said slots to split into two streams a mixture flowing toward the tip, those portions of the slots adjacent to the outer end of the body extending to the sides thereof and providing a diametrical outlet in the outer end of said body, and the rear portions of the slots terminating short of said sides.

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1,230,983. ELECTRIC PULL-SOCKET. FREDERIC BARR, New York, N. Y.: The Equitable Trust Company of New York, New York, N. Y., a Corporation of New York, executor of said Frederic Barr, deceased. Filed Oct. 31, 1911. Serial No. 657,780. (Cl. 173—354.)



1. In a pull socket switch, a porcelain body having a porcelain guide or bell integral therewith and projecting laterally therefrom and a metallic shell surrounding and inclosing the porcelain body from which the porcelain chain guide or bell projects.

3. In an electric socket construction, a block of insulating material having a recess in the outer end and a recess in the side connecting with the end recess, a circuit terminal having a base portion in said end recess and a flanged lug portion extending at substantially right angles into said side recess, a screw passing through said base portion endwise into said insulating block and securing said circuit terminal to said block, a binding screw screwed into said flanged lug portion in said side recess and substantially at right angles to said securing screw and a shell inclosing said parts.

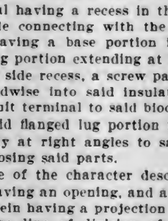
5. In a device of the character described, in combination, a casing having an opening, and a divided insulating switch base therein having a projection extending through said opening, the line of division of said base passing through said projection and the adjacent faces of the latter being provided with complementary grooves constituting a passageway for the operating member of the switch.

7. In a device of the character described, a base for supporting a pull chain operated switch mechanism and having an integral projecting portion adapted to extend through a suitable casing, said projecting portion having an opening therethrough for the pull chain of the switch mechanism and said opening being flared at its outer end.

[Claims 2, 4, and 6 not printed in the Gazette.]

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1,230,984. CLOTHES-PRESSING APPARATUS. DANA H. BENJAMIN, Cleveland Heights Village, and BLUFORD W. BROCKETT, Cleveland, Ohio, assignors to The American Laundry Machinery Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 1, 1915. Serial No. 64,499. (Cl. 68—9.)

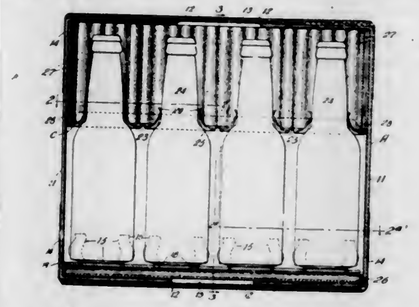


1. A press for fabric comprising pressing members, one of said members being provided with a pressing surface consisting of innumerable projections and recesses, said projections being of a crystalline character, and means for opening and closing said members.

2. A press for fabric comprising pressing members, one of said members being provided with a covering of emery cloth or paper, and means for moving said members into and out of engagement.

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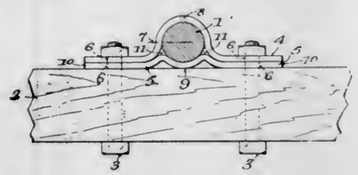
1,230,985. SHIPPING-CASE. ANDREW BENSON, Chicago, Ill. Filed Jan. 20, 1916. Serial No. 73,088. (Cl. 217—19.)



A shipping case adapted for bottles and the like comprising, a collapsible straw board container adapted to be shipped knocked down, a bottom partition insertible within the container and having yieldable means thereon for holding a plurality of bottles in spaced relation, cushioning means beneath said partition, a second partition located above the bottom partition and perforated to fit over the necks of the bottles and against the breasts thereof and provided also with yieldable means engaging the bottles, and a spacer formed from corrugated straw board extending from said second named partition to the top of the container, said spacer being formed with the corrugations extending vertically and fitting against the inner walls of the container whereby the bottles are held spaced from the upper wall of the container and are yieldably supported at their bottoms and against lateral movement.

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1,230,986. JOURNAL-BOX. GUNDER O. BERGLAND, Deerfield, Wis. Filed Sept. 21, 1916. Serial No. 121,340. (Cl. 64—10.)



1. In a device of the described class, the combination of a shaft, a sheet metal journal box, the exterior member of which extends past the longitudinal center of said shaft, a second sheet metal member curved slightly at its center forming a trough for the reception of said shaft, a plurality of bolt receiving apertures formed in the respective ends of both members of said journal box, a beam, and a plurality of bolts for securing said journal box to said beam, the center of the interior member of said journal box being formed on the same plane as its respective ends, whereby said central portion is supported by said beam and the liability of said journal box bending by the pressure of said shaft is avoided.

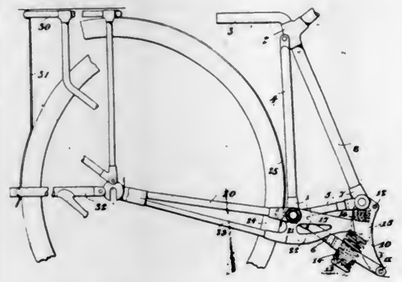
2. In a device of the described class, the combination of a shaft, a sheet metal journal box, the upper member



of which extends past the longitudinal center of said shaft, a second sheet metal member curved upwardly at its center forming a trough for the reception of said shaft, a plurality of bolt receiving apertures formed in the respective ends of both members of said journal box, a beam, and a plurality of bolts for securing said journal box to said beam, the center of the lower member of said journal box being formed on the same plane as its respective ends, whereby said central portion is supported by said beam and the liability of said journal box bending by the pressure of said shaft is avoided.

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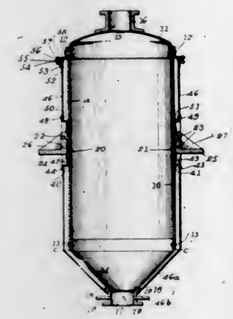
1,230,987. SPRING-MOUNTING FOR CYCLE-WHEELS. LESLIE WILLIAM BLANCHARD, London, England. Filed Apr. 18, 1916. Serial No. 92,011. (Cl. 208—97.)



A spring mounting for cycle wheels comprising in combination a tripod structure for supporting the seat, a transverse bracket secured in the rear part of the base of said tripod structure, a fork having its members pivotally mounted on said bracket, and a spindle for the rear wheel carried by the rear ends of said members, the rear part of said base being disposed in front of the periphery of the rear wheel.

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1,230,988. TANK. IRVING BLOUNT, Brooklyn, N. Y. Filed Feb. 6, 1915. Serial No. 6,611. (Cl. 220—141.)



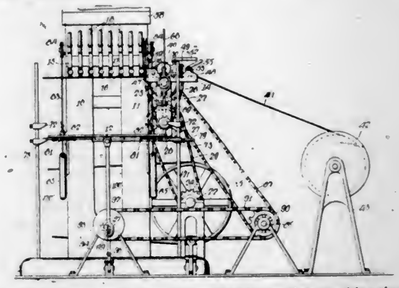
1. A tank or container for treating garbage or other material, provided with a vacuum jacket surrounding the same, said tank having secured thereto a plurality of imperforate supporting brackets, the vacuum jacket being free from and surrounding said supporting brackets, said supporting brackets being secured only to the wall of the tank.

2. A tank or container having a main inner wall and a surrounding outer wall secured thereto by air-tight connections, a plurality of supporting brackets secured to the inner wall, expansion joints between the outer wall and the inner wall surrounding said supporting brackets.

3. A tank or container having an inner wall, a plurality of supporting brackets secured thereto, a Z-shaped flange secured to the inner wall surrounding said supporting brackets, an outer wall surrounding the tank and secured thereto by expansion joints.

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1,230,989. HOOPING OR STRAPPING ATTACHMENT FOR BOX-NAILING MACHINES. ADAM BLUEGE, Chicago, Ill. Filed Sept. 11, 1916. Serial No. 119,395. (Cl. 1—10.)



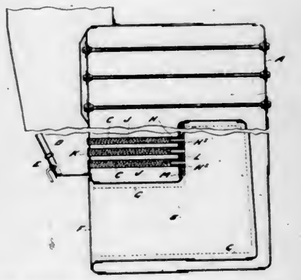
1. In a device of the class described, the combination with a box nailing machine, of means for feeding a strip of metal to said nailing machine, and means for reversing the feeding means to withdraw said strip from said nailing machine.

9. In a device of the class described, the combination of a nailing machine having a movable nail driving mechanism, means for feeding a strip to the nailing machine, means for cutting said strip, said means being secured to a stationary part of the nailing machine and in the path of the movable nail driving mechanism, said cutting means being composed of a reciprocal member the lower end of which has a cutting edge, a coiled spring arranged between the ends of said reciprocal member, said reciprocal member having an enlarged end, and a pivoted member secured to the said enlarged end, said pivoted member being arranged to be interposed between the upper end of the reciprocal member and the movable nail driving mechanism.

[Claims 2 to 8 not printed in the Gazette.]

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1,230,990. STEAM GENERATION. WILLIAM ARTHUR BONE and JAMES WILLIAM WILSON, Leeds, and CYRIL DOUGLAS MCCOURT, London, England, assignors to Radiant Heating Limited, London, England, a Corporation of Great Britain. Filed June 23, 1911, Serial No. 635,002. Renewed Nov. 18, 1916. Serial No. 132,207. (Cl. 122—149.)



1. Steam generating apparatus, comprising in combination with a boiler shell, a combustion chamber for the primary combustion of the fuel, a heating tube traversing the water space of the boiler and leading from the combustion chamber to a suction offtake to receive the combustion

gases and unburned fuel from the combustion chamber, said tube containing refractory material whereby the transmission of heat to the water from the hot combustion gases passing through the tube is increased and the combustion within the tube of unburned fuel is promoted.

2. Steam generating apparatus, comprising in combination with a boiler shell, an internal combustion chamber for the primary combustion of the fuel, a heating tube traversing the water space of the boiler and communicating with the combustion chamber to receive the combustion gases and unburned fuel, said tube containing refractory material whereby the transmission of heat to the water from the hot combustion gases passing through the tube is increased and the combustion within the tube of unburned fuel is promoted.

3. Steam generating apparatus, comprising in combination with a boiler shell, a combustion chamber for the primary combustion of the fuel, a heating tube traversing the water space of the boiler and communicating with the primary combustion chamber to receive therefrom the combustion gases and unburned fuel, and means providing a restricted passage with a wall of refractory material between the primary combustion chamber and the tube, and said tube being packed with pieces of refractory material whereby the transmission of heat to the water from the hot combustion gases passing through the tube is increased and the combustion within the tube of unburned fuel is promoted.

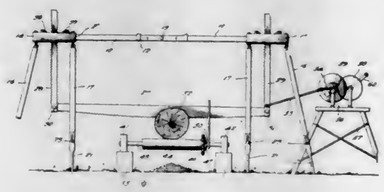
4. Steam generating apparatus, comprising in combination with a boiler shell, an internal combustion chamber for the primary combustion of the fuel, a plurality of heating tubes traversing the water space of the boiler and leading from the primary combustion chamber to a suction offtake to receive the combustion gases and unburned fuel from the primary combustion chamber, said tubes being packed with pieces of refractory material whereby the transmission of heat to the water from the hot combustion gases passing through the tubes is increased and the combustion within the tubes of unburned fuel is promoted.

5. Steam generating apparatus, comprising in combination with a boiler shell, an internal combustion chamber for the primary combustion of the fuel, a plurality of heating tubes traversing the water space of the boiler and extending through a tube sheet to communicate with the primary combustion chamber to receive the combustion gases and unburned fuel, said tubes containing refractory material whereby the transmission of heat to the water from the hot combustion gases passing through the tubes is increased and the combustion within the tubes of unburned fuel is promoted, perforated plugs of refractory material arranged in the ends of said tubes which extend through the tube sheet, said plugs having enlarged projecting ends, and a lining of refractory material for the tube sheet held by the enlarged ends of said plugs.

[Claims 6 to 9 not printed in the Gazette.]

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1,230,991. RECIPROCATING-SAW MACHINE. ALICE U. BRIGGS, Union City, Pa. Filed Nov. 10, 1916. Serial No. 130,610. (Cl. 143—63.)



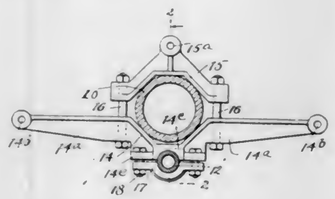
1. In a sawing machine, the combination with an adjustable frame having bearing members and supporting legs, of a saw blade, suspending rack bars therefor passing through said bearings, pinions slidably mounted in the bearings and engagnig said rack bars, pawl members carried by the bearings to prevent reversal of said pinions, reciprocation of said saw causing oscillation of said rack bars between the pinions to feed the saw to the work.

3. In a sawing machine, the combination with a reciprocable saw, supporting rack bars for said saw engaging the same, of a frame comprising a pair of bearing members disposed in a single horizontal plane and adapted to receive the rack bars therethrough whereby upon a reciprocation of the saw and an oscillation of said bars the saw will be fed to the work, a longitudinally adjustable horizontally disposed connection between said bearings, pivotally mounted supporting legs for said bearings, said legs being vertically adjustable.

[Claims 2 to 4 not printed in the Gazette.]

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1,230,992. LAMP-SUPPORT. MELZAR W. BRIGHAM, East Cleveland, Ohio. Filed July 14, 1916. Serial No. 109,219. (Cl. 248—3.)



1. A lamp supporting device comprising two coöperating clamping members adapted to receive between them and to be secured to a lamp pole, means for clamping said members about the pole, a third clamping member coöperating with one of the first named to support a lamp rod, and means for clamping said last mentioned members to the rod, said last mentioned clamping members having recessed portions for the rod which are parallel to the pole when the device is attached thereto.

2. In a lamp and insular supporting device, a pair of clamping members adapted to receive between them a lamp pole, means for causing said members to be tightly clamped to the pole, a third clamping member coöperating with one of the first named to support a lamp rod, said device having laterally projecting portions socketed to receive insulators.

3. A lamp supporting device comprising two coöperating clamping members adapted to receive between them and to be secured to a lamp pole, means for clamping said members about the pole, a third clamping member coöperating with one of the first-named to support a lamp rod and adapted to receive a portion of the rod between them, and means for clamping said last mentioned members to the rod.

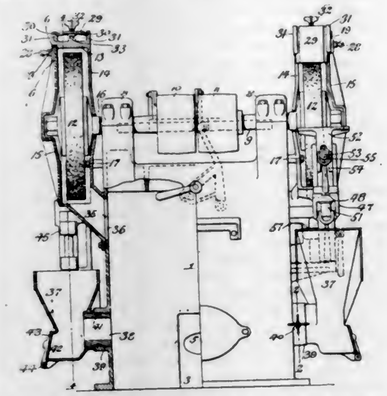
4. In a pole clamping and lamp supporting device of the character described, a pair of coöperating clamping members adapted to engage and to receive between them a lamp pole, one of said clamping members having a recessed part adapted to receive the base of a lamp supporting rod, the axis of said recessed part being parallel to the pole when the device is in position on the latter; and a third clamping member for engaging and holding the rod in place.

5. In a pole clamping and lamp supporting device, a main pole clamping member and an auxiliary pole clamping member adapted to receive between them and engage a lamp pole, the main clamping member having a socketed portion for a lamp supporting rod, the axis of the socketed portion being parallel to the pole when the device is in position thereon; and a second auxiliary clamping member coöperating with the main clamping member for holding the rod in place.

[Claim 6 not printed in the Gazette.]



1,230,993. GRINDING-MACHINE. HANS BUERK and ALBERT W. HAPPEL, Buffalo, N. Y., assignors to The Columbus Die, Tool & Machine Company, Columbus, Ohio, a Corporation of Ohio. Filed June 15, 1916. Serial No. 103,755. (Cl. 51—7.)



1. A grinding machine comprising a rotatable arbor, a grinding wheel mounted on said arbor, and a hood inclosing said wheel and having a fixed curved wall extending around the periphery of the wheel, a fixed side wall arranged on one side of the wheel and having an opening through which said arbor passes, a movable side wall arranged on the opposite side of said wheel and pivotally connected at its rear edge with said curved wall and a catch which detachably connects the front part of said movable wall with the front part of said curved wall comprising a guideway arranged on said movable wall, a locking bolt slidable in said guideway and adapted to engage its outer end with a locking recess in said curved wall and provided with a shoulder, a spring mounted on said movable wall and engaging with the inner end of said locking bolt for holding the same in engagement with said locking recess, and a rocking shank journaled on said movable wall and provided with a handle and with a laterally projecting pin engaging with the shoulder of said locking bolt.

2. A grinding machine comprising a rotatable grinding wheel, a hood inclosing the rear part of the sides and periphery of said wheel and means for closing the gap between the upper part of the periphery of the wheel and the upper part of said hood comprising a curved guideway composed of two guide grooves arranged on the upper part of said hood and facing each other, a curved shield slidable at its opposite longitudinal edges in said guide grooves and means for holding said shield in place consisting of a set screw arranged on said shield and engaging said hood.

3. A grinding machine comprising a hollow base or frame adapted to be connected with an exhausting device, a grinding wheel rotatably mounted on said base, a hood inclosing the rear part of said wheel, a scoop or pan arranged below the front part of said wheel and having a horizontal tubular neck which is rotatable in an opening in said base and connects the interior of the scoop and base.

4. A grinding machine comprising a hollow base or frame adapted to be connected with an exhausting device, a grinding wheel rotatably mounted on said base, a hood inclosing the rear part of said wheel, a scoop or pan arranged below the front part of said wheel and provided on one side of its lower part with a tubular neck which communicates with the interior of said base and provided on the opposite side of its lower part with a cleaning opening, and a door movably mounted on said scoop or pan and adapted to close said cleaning opening.

1,230,994. MEANS FOR DESCRIBING CIRCULAR AND ELLIPTIC ARCS. JOHN A. CALDWELL, Vancouver, British Columbia, Canada. Filed Feb. 2, 1917. Serial No. 146,140. (Cl. 33—30.)



1. A device for describing circular or elliptic curves, said device comprising the combination with a tape-line, of a sleeve having means for connecting the loop end of the tape adjacent the axis of the sleeve, a second sleeve having means for slidably clamping the same at any desired endwise position on the tape, pivot pins adapted to receive the sleeve on the tape and having provision for attachment to a surface to project at right angles from such surface, an instrument holding member comprising a slidable base with provision at one end for clamping a drawing or scribing instrument at right angles to the plane of the base, and a pin projecting at right angles to the base adjacent the instrument, said pin adapted to fit either sleeve of the tape, and a roller adapted to fit the same pin.

4. A device for describing circular or elliptic curves, said device comprising the combination with a tape, of a sleeve, an arm projecting from the sleeve in the plane of and radial to its axis, said arm having a slit at its end through which the end of the tape may be passed and a hook on the adjacent side of the sleeve, a second sleeve having a screw clamp by which it may be secured at any desired position of endwise adjustment on the tape, a pin adapted to fit either sleeve, said pin having a pointed end with a relatively wide collar adjacent thereto, and a nut threaded on its upper end, an instrument holding member comprising a slidable flat base of triangular form turned down along the edge of one side and reinforced in thickness toward the opposite angle to the same depth as the turned down edge and having a portion at the angle opposite the base upwardly turned at right angles to the plane of the base, a clamp on the upwardly turned portion susceptible of securing a drawing instrument thereto, a pivot pin secured in and upwardly projecting from the base adjacent the upwardly turned portion, and a roller on the pin.

[Claims 2, 3, and 5 not printed in the Gazette.]

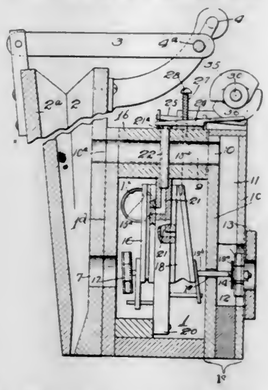
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1,230,995. AIR-MOTOR. MELVILLE CLARK, Chicago, Ill., assignor to Melville Clark Piano Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 16, 1916. Serial No. 137,437. (Cl. 230—36.)

1. In an air motor, in combination with a crank shaft, motor pneumatics and connections by which they rotate the crank shaft; a partial vacuum chamber; primary pneumatics in said chamber, two for each motor pneumatic; the motor pneumatics having each a port of communication with the partial vacuum chamber and an atmosphere port; valves operatively connected respectively with the two primary pneumatics for each motor pneumatic, controlling respectively the partial vacuum port and the atmosphere port of the motor pneumatics; a valve controlling the atmosphere communications of each primary pneumatic, and mechanical connections for operating said last mentioned valve by the crank shaft.

2. In an air motor, in combination with a crank shaft, motor pneumatics and connections by which they rotate the crank shaft; a partial vacuum chamber; primary pneu-

matics in said chamber, two for each motor pneumatic; the motor pneumatics having each a port of communication with the partial vacuum chamber and an atmosphere port; valves operatively connected respectively with the two primary pneumatics for each motor pneumatic, controlling respectively the partial vacuum port and the atmosphere port of the motor pneumatics; a valve controlling the atmosphere communications of each primary pneumatic; a cam shaft rotated by the crank shaft, and cams thereon operating said last-mentioned valves.

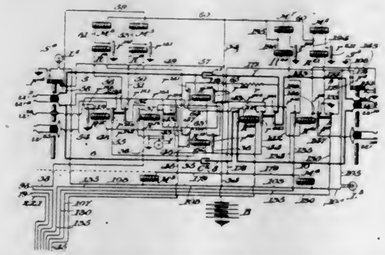


3. In an air motor, in combination with a crank shaft, motor pneumatics and connections by which they rotate the crank shaft; a partial vacuum chamber; primary pneumatics in said chamber, two for each motor pneumatic; the motor pneumatics having each a port of communication with the partial vacuum chamber and an atmosphere port; valves operatively connected respectively with the two primary pneumatics for each motor pneumatic, controlling respectively the partial vacuum port and the atmosphere port of the motor pneumatics; a valve controlling the atmosphere communication of each primary pneumatic; a cam shaft rotated by the crank shaft, and cams thereon operating said last-mentioned valves, the cams for each pair of primary pneumatics pertaining to the respective motor pneumatics being positioned and proportioned for causing the open periods of the valves which they operate to overlap.

[Claim 4 not printed in the Gazette.]

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1,230,996. TELEPHONE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to James R. Garfield, trustee, Cleveland, Ohio. Filed Mar. 2, 1911. Serial No. 611,923. (Cl. 179—27.)



1. In a telephone exchange system, a line circuit, a line relay therefor, a source of current, automatic selective switching apparatues governed by the line relay, link circuits, means for closing the line circuit in initiating a call, to energize said relay and through it control the switching apparatus, means controlled by the relay in its actuation to maintain its own circuit complete for a flow of current directly from the source, supplementing but irrespective of the line condition, and means becoming operative upon the complete connection of a link with the line, to break both the line and direct return circuit to the battery from said line relay.

2. In a telephone exchange system, a line circuit, a line relay and a cut-off relay therefor, a direct self-locking battery circuit for the line relay extending through normally closed contacts on the cut-off relay, a primary selector switch containing contacts for the line, a link circuit associated with the switch, means responsive to the line relay for actuating the switch, a controlling relay for the switch connected to the link circuit to be energized by current therein after the cut-off relay has been energized, and a circuit for the cut-off relay of the line completed when the switch effects connection therewith, whereby the act of a calling subscriber will initially energize the line relay, said relay will start the primary selector switch and simultaneously lock itself to maintain continued action of said switch, the switch when it comes on the line contact will complete the circuit of the cut-off relay, the energization of said relay will unlock and disconnect the line relay, and the link relay, coming into connection with the subscriber's line, will thereafter control the switch in direct response to conditions in said line.

3. In a telephone exchange system, a plurality of circuits to be selected, and a testing selector switch comprising the following instrumentalities: a contact bank containing connecting terminals of the circuits arranged in a plurality of straight rows arranged parallel to each other so as to form approximately elements in the surface of the cylinder, a set of individual testing contacts associated with the connecting terminals of each row, a set of row test contacts, associated with but separte from the other terminals, each located in line with one of the rows, a spindle having its axis lying in the axis of the aforesaid cylinder, wipers on said spindle adapted to coöperate with the connecting contacts, the individual test contacts and the row test contacts respectively, an electromagnet adapted to rotate the spindle so as to sweep the row test wiper over the row test contacts, another electromagnet adapted to reciprocate the spindle, so as to move the individual test and the connecting wipers over corresponding contacts in a selected row, a source of driving current for said magnets, a test relay connected to the row test wiper, means to complete a circuit from said source of current through normally closed contacts of the said test relay to the rotary actuating magnet, and a normally open circuit connection to the reciprocating magnet, together with means for designating a circuit to be selected by placing test potential on its row contact and individual contact when the switch is started, whereby the spindle will be first rotated until the row test wiper finds the busy row, the row test relay will then be energized, and the actuating current shifted from the rotary to the reciprocating magnet.

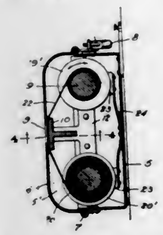
4. In a telephone exchange system, a plurality of circuits to be selected, and a testing selector switch comprising the following instrumentalities: a contact bank containing connecting terminals of the circuits arranged in a plurality of straight rows parallel to each other so as to form approximate elements in the surface of a cylinder, a set of individual testing contacts corresponding to the connecting terminals of each row, a set of row test contacts, associated with but separate from the other terminals, each located in line with one of the rows, a spindle having its axis lying in the axis of the aforesaid cylinder, wipers on said spindle adapted to coöperate with the connecting contacts, the individual test contacts and the row test contacts respectively, an electromagnet adapted to rotate the spindle so as to sweep the row test wiper over the row test contacts, another electromagnet adapted to reciprocate the spindle so as to move the individual test and the connecting wipers over corresponding contacts in a selected row, a source of driving current for said magnets, a test relay connected to the row test wiper, an individual test relay connected to the individual test wiper, a source of driving current for said magnets, a circuit extending from said source through normally closed contacts of said row test relay to the rotary actuating magnets, a branch circuit from normally open contacts in the row test relay through normally closed contacts in the individual test relay to the reciprocating magnet, means to close said supply circuit from the source to the switch, and means to place test potential upon the raw and individual contacts designating a particular circuit to be selected, whereby the switch spindle will be rotated in testing for a circuit, until the row test wiper finds the busy row test terminal, and the row test relay then becoming energized will shift the current supply circuit from the rotary to the reciprocating magnet, the spindle will be reciprocated thereafter until the individual test wiper finds the busy individual test terminal, and the individual test relay thereupon becoming energized, will disconnect the reciprocating magnet, and bring the switch to rest with its connecting wipers resting on the connecting terminals of the desired circuit.

5. In a telephone exchange system, a plurality of circuits to be selected, and a testing selector switch comprising the following instrumentalities: a pair of contact banks, one containing straight parallel rows of connecting terminals with their inner ends forming elements in the surface of a cylinder, a second bank containing associated alined rows of individual test terminals, and a single curved set of row test terminals alined with but separate from the respective rows of individual terminals, a frame secured to the banks, a spindle journaled in the frame so as to have rotary and reciprocating motion therein, with its axis coinciding with the axis of curvature of the banks, connecting and individual-test wipers carried by said spindle and adapted to coöperate in vertical motion with the straight rows of connecting and individual-test terminals respectively, a row-test wiper suitably alined with the other wipers and adapted to coöperate in rotary motion with the row test terminals, means for rotating the spindle and an electromagnet for actuating the same, means for reciprocating the spindle and an electromagnet for actuating the same, means for restoring the spindle to its initial or zero position and an electromagnet controlling the same, a row test relay connected to the row test wiper, an individual test relay for the individual test wiper, means for placing test potential on the row and individual test terminals of any desired circuit to be selected, and means for supplying actuating current to the rotary and reciprocating magnets through contacts controlled by the respective row and individual test relays, with means to supply current to the restoring means at the termination of the connection.

[Claims 6 to 61 not printed in the Gazette.]

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1,230,997. RECORDING APPARATUS. JAMES W. CLISE, Seattle, Wash. Filed Sept. 25, 1915. Serial No. 52,566. (Cl. 11—22.)



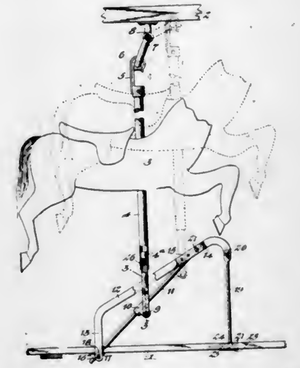
1. A cow-record apparatus including a casing having a cover provided with apertures, a pair of rollers within said casing, brackets secured in and to opposite sides of said casing and provided with spaced bearing portions in which said rollers are detachably journaled, each of said brackets being further provided with a single writing platen supporting projection intermediate the bearing portions thereof, and a relatively narrow writing platen having its ends detachably connected to said platen supporting projections and arranged longitudinally of the casing adjacent the apertures of the cover.

[Claims 2 and 3 not printed in the Gazette.]

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1,230,998. SEAT-ACTUATING MECHANISM FOR CAROUSELS. GEORGE H. CRAMER, North Tonawanda, N. Y., assignor to Herschell-Spillman Company, North Tonawanda, N. Y., a Corporation of New York. Filed Nov. 13, 1916. Serial No. 131,009. (Cl. 46—27.)



1. In a seat actuating mechanism for carousels, the combination of a seat-carrier, means for reciprocating said carrier vertically, an inclined guide, and means connecting the carrier with said guide to move the same forward and backward.

2. In a seat actuating mechanism for carousels, the combination of a seat-carrier, means connected with one end of the carrier to reciprocate the same vertically, an inclined guide, and means connecting the opposite end of said carrier with said guide to move the same forward and backward.

10. In a seat actuating mechanism for carousels, the combination of the platform, a reversible frame pivoted at one end to the platform, a brace pivoted to the other end of said frame and provided at its lower end with a lip, a socket mounted on the platform and arranged to receive said lip, a latch for locking the lipped end of the brace in said socket, an inclined guide-rod mounted in said frame and reversible therewith, a seat-carrying rod having its lower end slidably connected with said guide-rod, and means for vertically reciprocating said suspension-rod.

[Claims 3 to 9 and 11 not printed in the Gazette.]

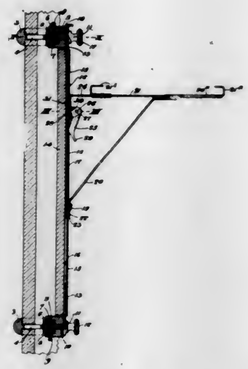
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1,230,999. BRACKET-SUPPORTING CONSTRUCTION. JOHN H. CRIST, Oakmont, Pa. Filed May 1, 1915. Serial No. 25,143. (Cl. 248—19.)

1. In bracket construction, the combination of a vertical standard member having a stiffening back portion and inwardly extending side portions providing an intervening space and a centrally arranged slot, and a supporting bar slidably mounted in said space having a locking cam adapted to bind upon the inner and outer faces of said side portions and clamp a bracket member and said bar to said side portions, and a supplemental bracket connecting device extending through said slot.

2. In a bracket construction the combination of a vertical standard member having a stiffening back portion and inwardly extending side portions providing an intervening space and a centrally arranged slot, and a supporting bar slidably mounted in said space having a

locking cam adapted to clamp a bracket member and said bar against the outer and inner of said side portions, said supporting bar having a bracket engaging hook extending through said slot.



3. The combination with the joint member of a window having a holding bolt and nut, of a thimble secured thereto, and a supporting bar having an attaching portion secured to said thimble.

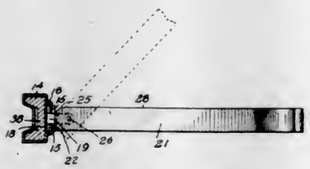
4. The combination with the joint member of a window having a holding bolt and nut, of a thimble provided with a set screw engaging the nut and a threaded socket, a supporting bar, and an extension thereof provided with a securing screw engaging said socket.

5. The combination with the joint members of a window each having a holding bolt and nut, of thimbles secured to said nuts, and a supporting bar provided at each end with an attaching portion secured to said thimble.

[Claims 6 to 8 not printed in the Gazette.]

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1,231,000. ADJUSTABLE BRACKET. JOHN H. CRIST and JOHN C. SCHILKEN, Pittsburgh, Pa. Filed May 1, 1916. Serial No. 94,531. (Cl. 248—19.)

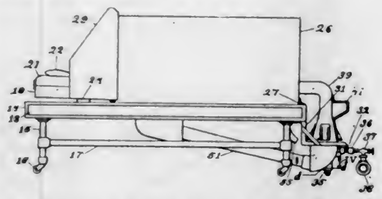


1. The combination with a supporting standard having a longitudinal slotted cavity, of a mounting device slidably engaging said slotted cavity, said device comprising a supporting plate slidably mounted therein, a pivoting terminal thereon and extending outwardly through said slot in said standard, a washer plate slidably mounted on said terminal, and a bracket pivoted to said terminal having a rigid tightening cam portion adapted to bear against the outside face of the washer plate and to tighten the supporting plate against the inside thereof.

2. The combination with a supporting standard having a longitudinal slotted cavity, of a mounting device slidably engaging said slotted cavity, said device comprising a supporting plate slidably mounted therein, a pivoting terminal formed integral therewith and extending outwardly at right angles to said plate through said slot in said standard, a washer plate slidably mounted on said terminal, and a bracket pivoted to said terminal having a rigid tightening cam portion adapted to bear against the outside face of the washer plate and to tighten the supporting plate against the inside thereof.

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1,231,001. DRY HOT-BATH SYSTEM. JAMES O. DANIELS, Kansas City, Kans. Filed Feb. 10, 1917. Serial No. 147,920. (Cl. 4—13.)

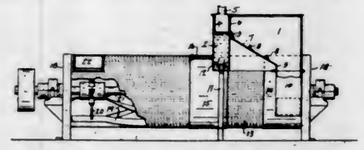


1. In dry heat bath apparatus, a drainage table, means to drain liquid from said drainage table, a hood arranged to cover the major portion thereof, a bed adapted to rest on said drainage table beneath said hood, a pipe, said pipe leading downward from said drainage table and to one end thereof, said pipe leading from said end of said drainage table upward and into said hood, and a burner arranged in said upward portion of said pipe adapted to fill said pipe with a flame whereby air may be drawn from within said hood through the flame of said burner and rise into said hood.

[Claims 2 and 3 not printed in the Gazette.]

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1,231,002. WHEAT WASHING, RINSING, AND DRYING MACHINE. CHARLES DAWSON, Tacoma, Wash. Filed Feb. 25, 1915. Serial No. 10,417. (Cl. 83—30.)



1. In a machine of the class described, the combination with an unperforated cylinder, having a screened opening in its wall, said cylinder being adapted to receive a mass of water and wheat; an adjustable closure slidably mounted on said cylinder and adapted to partially or wholly close said opening; a cylinder having a perforated wall and adapted to free the mass of a portion of the dirty water; a second unperforated cylinder, having a screened opening in its wall; an adjustable closure slidably mounted on said cylinder and adapted to partially or wholly close said opening; means for admitting a supply of fresh water to said last unperforated cylinder to be mixed with the mass therein; a second perforated cylinder adapted to free the mass of the water therein; and means for conveying the mass in succession to, through, and from each of said cylinders.

2. In a machine of the class described, the combination with an unperforated cylinder adapted to receive a mixed mass of water and wheat; a cylinder having a perforated wall and adapted to free the mass of a portion of the dirty water; a second unperforated cylinder, having a screened opening in its wall; an adjustable closure slidably mounted on said cylinder and adapted to partially or wholly close said opening; means for admitting a supply of fresh water to said last unperforated cylinder to be mixed with the mass therein; a second perforated cylinder adapted to free the mass of the water therein; and means for conveying the mass in succession to, through, and from each of said cylinders.

3. In a machine of the class described, the combination with an unperforated cylinder, having a screened opening in its wall, said cylinder being adapted to receive a mass of water and wheat; an adjustable closure slidably mounted on said cylinder and adapted to partially or wholly close said opening; a cylinder having a perforated wall and adapted to free the mass of a portion of the dirty water; a second unperforated cylinder, having a screened opening in its wall; an adjustable closure slidably mounted on said cylinder and adapted to partially or wholly close said opening; means for admitting a supply of fresh water to said last unperforated cylinder to be mixed with the mass therein; a second perforated cylinder adapted to free the mass of the water therein; and means for conveying the mass in succession to, through, and from each of said cylinders.



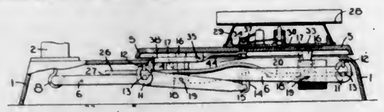
4. In a machine of the class described, the combination with an unperforated cylinder, having a screened opening in its wall, said cylinder being adapted to receive a mass of water and wheat; a cylinder having a perforated wall and adapted to free the mass of a portion of the dirty water; a second unperforated cylinder; means for admitting a supply of fresh water to said last unperforated cylinder to be mixed with the mass therein; a second perforated cylinder adapted to free the mass of the water therein; and means for conveying the mass in succession to, through, and from each of said cylinders.

5. In a machine of the class described, the combination with an unperforated cylinder adapted to receive a mixed mass of water and wheat; a cylinder having a perforated wall and adapted to free the mass of a portion of the dirty water; a second unperforated cylinder, having a screened opening in its wall; means for admitting a supply of fresh water to said last unperforated cylinder to be mixed with the mass therein; a second perforated cylinder adapted to free the mass of the water therein; and means for conveying the mass in succession to, through, and from each of said cylinders.

[Claims 6 to 8 not printed in the Gazette.]

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1,231,003. SCALE. FRANK X. DION, Lyndonville, Vt. Filed Mar. 28, 1916. Serial No. 87,332. (Cl. 265—48.)



1. In weighing scales, the combination of a weighing lever, a scoop taring lever having one end normally supported by said lever and means for causing the positioning of the scoop upon the platform to remove said lever end from said position whereby the scoop weight is counterbalanced.

3. In weighing scales, the combination of a scoop balancing device comprising a weighing lever system, a scoop taring lever having one end normally resting upon a portion of said lever system, a balancing member carried by said taring lever and adjustable to secure normal equilibrium of the scales, and means for causing the positioning of the scoop upon the platform to shift the weigh of the taring lever with respect to the fulcrum of the weighing lever system whereby the equilibrium of the scales is maintained.

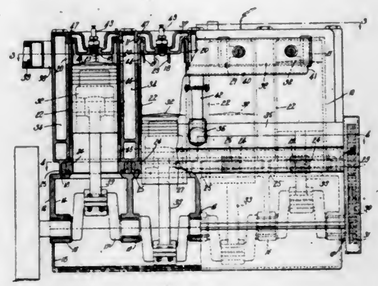
5. In weighing scales, the combination of coöperating weighing levers, a scoop taring lever pivotally mounted on said coöperating levers and having an end in engagement with one of said levers beyond the fulcrum thereof, means carried by the platform operable to disengage said taring lever end whereby the balance of said coöperating weighing levers is altered, a scoop, and means on the scoop to actuate said disengaging means whereby the weight of the scoop is counterbalanced.

10. In weighing scales, the combination of a scoop balancing device comprising a weighing lever system, an apertured platform supported thereby, a scoop taring lever having one end normally resting upon a portion of said lever system, a scoop, a spring-pressed member on said scoop adapted to enter the platform aperture, means operable to adjust the tension of said spring on said member, means positioned beneath said platform aperture to engage the taring lever whereby, when the scoop is operatively positioned upon the platform, said spring-pressed member tensionably will cause the taring lever to shift the weight thereof with respect to the lever system fulcrum so that compensation is had for the weight of the scoop.

[Claims 2, 4, and 6 to 9 not printed in the Gazette.]

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1,231,004. EXPLOSION-ENGINE. ROBERT L. ELLERY, Toledo, Ohio. Filed May 1, 1914. Serial No. 835,635. (Cl. 123—59.)



1. In an explosion engine a series of explosion cylinders, each of said cylinders having oppositely disposed inlet ports arranged substantially in a plane containing the median axial lines of all of said cylinders, said ports having communication with passages disposed between adjacent cylinders, said passages extending from said ports downwardly substantially parallel with said cylinders to the bases thereof and thence transversely of said cylinders, and an intake manifold arranged longitudinally of said series of cylinders integral therewith and having communication with each of said passages.

2. In an explosion engine a plurality of cylinders provided with oppositely disposed inlet, and oppositely disposed exhaust ports, and a U-shaped exhaust manifold secured to said cylinders with the legs thereof arranged at opposite sides of said cylinders and in communication with said exhaust ports, said U-shaped manifold having an outlet orifice at the base thereof.

3. In an explosive engine, a series of explosion cylinders, each of said cylinders having an inlet port in a side thereof and having communication with passages disposed without the cylinders, said ports and passages arranged substantially in a plane containing the median axial lines of all said cylinders, said passages extending lengthwise of the cylinders to adjacent the bases thereof and thence transversely of the cylinders, and an intake manifold arranged longitudinally of said cylinders and having communication with each of said passages.

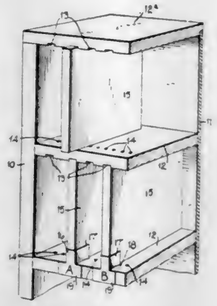
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1,231,005. CABINET. AUGUST C. ERICKSON, Tecumseh, Nebr. Filed June 10, 1916. Serial No. 102,994. (Cl. 45—53.)

1. The combination with a wall having pairs of recesses extending into the wall parallel to its edge face and adjacent the forward edge of the wall, of a wall adapted to be disposed at right angles to the first named wall and between a pair of recesses, and a holder embodying a U-shaped member adapted to embrace the forward end of the last named wall and having sliding engagement therewith, and having lugs projecting into the recesses of the first named wall, the lugs being disengageable from said recesses by sliding the U-shaped member along the first named wall.

2. The combination with upper and lower shelves, one of said shelves having a plurality of pairs of recesses in its face confronting the other shelf, and a vertical partition wall disposed between the shelves, of a holder comprising a U-shaped clip adapted to embrace the for-

ward edge of the partition and having lugs adapted to extend into said recess.

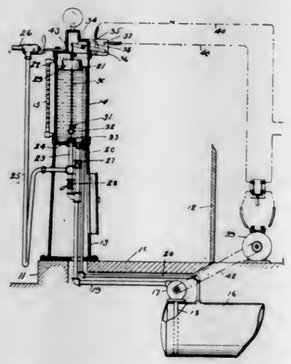


3. In a filing case, upper and lower shelves, the under side of the upper shelf being formed with a plurality of transversely extending grooves, the lower shelf being formed with a plurality of pairs of recesses, each pair disposed to co-act with the corresponding groove of the upper shelf, a vertical partition wall insertible into any one of said grooves adapted to be disposed between any pair of recesses, and a holder for the partition wall comprising a U-shaped metallic member adapted to embrace the lower end of the partition wall, and extending across the forward edge thereof and having downwardly projecting studs engaging with said recesses.

4. As an article of manufacture, a clip for holding partition walls of cabinets comprising a strip of metal bent into U-shape, said strip at the rear ends of its sides being formed with lugs projecting at right angles to the length of the strip.

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1,231,006. LIQUID-DISPENSING APPARATUS. DUTEE WILCOX FLINT, Cranston, R. I. Filed Feb. 6, 1915. Serial No. 6,541. (Cl. 221—99.)

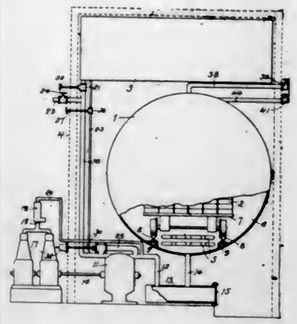


1. A liquid dispensing apparatus comprising a main tank, an auxiliary tank located above the level of the main tank, a rock shaft mounted in the upper part of the auxiliary tank, a supply pipe leading from the main tank to the auxiliary tank, a discharge pipe leading from the auxiliary tank, a pump for forcing liquid from the main tank to the auxiliary tank, a motor for operating the same, a rectilinearly movable rod within said auxiliary tank, an arm atached to said rock shaft and to the upper end of said rod, a valve attached to the lower end of the rod, a contact arm attached to said rock shaft and controlling the starting and stopping of the motor, and means controlled by the level of the liquid in the auxiliary tank for moving said rod.

2. A liquid dispensing apparatus comprising a main tank, an auxiliary tank located above the level of the main tank, a rock shaft mounted in the upper part of the auxiliary tank, a supply pipe leading from the main tank to the auxiliary tank, a discharge pipe leading from the auxiliary tank, a pump for forcing liquid from the main tank to the auxiliary tank, a motor for operating said pump, a movable guide rod in the auxiliary tank, an arm attached to said rock shaft and to the upper end of said rod, a valve attached to the lower end of the rod, a contact arm attached to said rock shaft and controlling the starting and stopping of the motor, a float slidable on said guide rod, and abutments on said rod positioned to be engaged by said float.

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1,231,007. METHOD OF TREATING POROUS BLOCKS. CLAUD E. FULLER, Kansas City, Mo. Filed July 13, 1916, Serial No. 109,027. Renewed May 14, 1917. Serial No. 168,595. (Cl. 99—12.)



1. The method consisting in forcing at pressure greater than atmospheric into the pores of a porous block a substance liquefied by heat and which solidifies at ordinary temperatures, and then suddenly cooling the block while it is under pressure substantially atmospheric.

5. The method consisting in forcing liquid asphalt into the pores of a porous block at a pressure greater than atmospheric, then reducing the pressure, and then suddenly cooling the block.

20. The method consisting in heating a porous block, then compressing the air in the pores of the block, then forcing into the pores at a still greater pressure a substance liquefied by heat and which solidifies at ordinary temperatures, then reducing the pressure to substantially atmospheric, and then suddenly cooling the block.

34. The method consisting in heating a porous block, then compressing in the pores of the block a compressible fluid, then forcing into the pores at a still greater pressure liquid asphalt, then reducing the pressure, and then suddenly cooling the block.

[Claims 2 to 4, 6 to 19, and 21 to 33 not printed in the Gazette.]

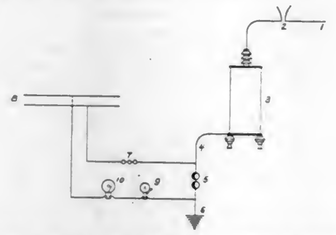
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1,231,008. ELECTRICAL INSTALLATION. FRANK W. FUNK, Youngstown, Ohio. Filed Aug. 24, 1916. Serial No. 116,602. (Cl. 177—311.)

In an electrical installation, a line for the transmission of electrical impulse including a gap, a low-tension circuit including the same gap, a source of electrical energy in said low-tension circuit of potential insufficient to cause its current to leap the gap while conditions are normal but sufficient to maintain the path



across the gap conductive for its own current, when once the gap has been bridged by a high-tension discharge



through the line first named, and a tell-tale arranged in said low-tension circuit.

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1,231,009. RECOVERING PICRIC ACID FROM WASH-WATER. HENRY A. GARDNER, Washington, D. C. Filed Dec. 16, 1915. Serial No. 67,273. (Cl. 23—24.)

1. The process of recovering picric acid from wash water which consists in adding to the wash water sodium bisulfate, in such amount as to form a high gravity solution in which the picric acid is substantially insoluble and from which the picric acid is thrown out in a flocculent form that floats to the surface, thereby facilitating its removal.

2. The process of recovering picric acid from wash water containing the same which consists in adding to the wash water sodium bisulfate, thereby throwing the picric acid out of solution, removing the picric acid, and adding bleaching powder to the wash water to liberate chlorin in order to thoroughly decolorize the liquid.

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1,231,010. BUILDING-SCREED. ALBERT T. GIBSON, Omaha, Nebr. Filed Nov. 4, 1916. Serial No. 129,497. (Cl. 72—105.)



1. A building screed, comprising a fibrous block of substantially uniform thickness having parts adjacent to its sides and ends formed convergent from its bottom to its top, said block having channels with undercut walls opening on its bottom and ends, and having recesses with inclined walls opening on its ends and said channels.

2. A building screed comprising a fibrous block of substantially uniform thickness having its sides and ends formed convergent from its bottom to its top, said block having channels with undercut walls formed in its bottom and opening upon its ends, and having recesses with inclined walls opening on its sides and said channels.

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1,231,011. BRASSIÈRE. DANIEL GLASGOW, Milwaukee, Wis., assignor of one-half to Oscar H. Stoltz, Milwaukee, Wis. Filed Oct. 9, 1914. Serial No. 865,849. (Cl. 2—98.)

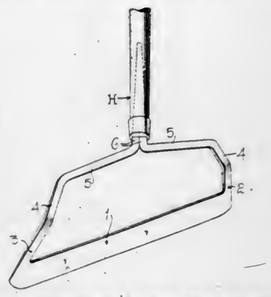
A combined brassière and brace for relatively stout people including a front portion having its upper edge of V-shape with the point of said V adapted for disposition between the upper portions of the breast of the wearer, the sides of said V being substantially straight, the lower edge of the front being substantially V-shaped, means for securing the central portion of the said lower edge to a garment, shoulder and side portions adapted to fit respectively against the tops of the shoulders and sides of the wearer, and merging into the top and side portions of the said front portion, and portions connecting the shoulder and side portions and adapted to extend transversely of the back of the wearer, and strap portions merging with the said last named portions and adapted to extend about the body of the wearer for securement at the front, and



both the upper and lower edge lines of the merged back and strap portions being substantially straight and extending diagonally, whereby tension exerted upon the strap portions when disposed about the wearer will exert a uniform tension throughout the entire brassière and brace, the side portions and back portions being substantially reinforced as described.

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1,231,012. PUSH-HOE. EDWIN L. GLOVER, Jackson, Miss. Filed Sept. 25, 1916. Serial No. 122,121. (Cl. 55—41.)



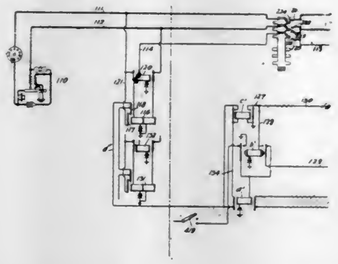
A push hoe comprising a blade, arms extending rearwardly from the blade at opposite sides thereof, one of said arms being substantially perpendicularly related to the blade while the second arm is inclined toward the first named arm, the extremities of said arms being connected to afford a shank, said shank being positioned to one side of the longitudinal center of the blade and said blade being obliquely disposed relative to the longitudinal axis of the shank, said arms having a lateral bend intermediate their ends.

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1,231,013. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. CHARLES L. GOODRUM, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Nov. 18, 1914. Serial No. 872,743. (Cl. 179—18.)

1. In a telephone exchange system, the combination with telephone lines, of a finder switch having a fixed terminal for each line and a traveling contact adapted to engage said terminals successively, means operated by the initiation of a call in any of said lines for operating said finder switch, relays individual to the lines, circuits for successively operating said relays completed by the finder switch as its traveling contact reaches the terminals of said lines, and means permanently associ-

ated with said lines and actuated by the relay of the calling line to stop the finder switch upon the calling line terminal.



9. In a telephone exchange system, the combination with telephone lines, a plurality of stationary terminals to which said lines are multiplied, traveling contacts at different multiple positions for engagement with the terminals of said lines, means for setting the traveling terminals in motion upon the initiation of calls in said lines, and means constructed and arranged to cause said traveling terminals in case of simultaneous calls to make connection with the stationary terminal farthest from the normal position of the traveling terminal.

14. In a telephone system, the combination with telephone lines, finders to which said lines are multiplied, driving circuits therefor, means for preselecting one of said finders, means actuated upon the initiation of a call for closing the driving circuit of said finder, said circuit leading through off-normal contacts associated with busy line finders, release circuits for said finders, and means for maintaining the release circuits of said busy finders open while said preselected finder is connecting with the calling line.

23. In a telephone exchange system, the combination with telephone lines, automatic switches adapted to interconnect the same, driving magnets therefor, a condenser, and means for associating said condenser with a plurality of said magnets to prevent sparking at the contacts thereof.

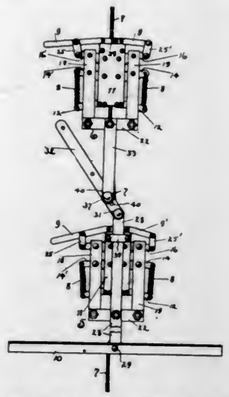
[Claims 2 to 8, 10 to 13, 15 to 22, and 24 to 33 not printed in the Gazette.]

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1,231,014. HOISTING APPARATUS FOR SCAFFOLDS. JASPER E. GOODWILL, Omaha, Nebr. Filed Jan. 20, 1917. Serial No. 143,458. (Cl. 20—81.5.)

2. In a scaffold hoisting apparatus, the combination with an upright, elongated support, of an upper gripping-member, and a lower gripping-member, each gripping-member being provided with a plate, a pair of opposed toothed lever-sectors eccentrically mounted on said plate, resilient means for causing normal engagement of the lever-sectors with the support to prevent a movement of the gripping-members longitudinally thereof, a second pair of opposed, toothed lever-sectors eccentrically mounted on said plate, links pivotally connected with said lever-sectors, means for moving the links against the action of said resilient means for releasing the lever-sectors from said support, and means for moving one of said gripping-members longitudinally of the support after its lever-sectors have been released.

3. In a scaffold hoisting apparatus, the combination with an upright, elongated support, of an upper gripping member, and a lower gripping-member, each gripping-member being provided with a plate, a pair of opposed arms projecting outwardly of and rigidly connected with said plate, a pair of opposed, toothed lever-sectors eccentrically mounted on said plate, springs connecting the arms and said lever-sectors for causing normal engagement of said lever-sectors with the support to prevent a movement of the gripping-members longitudinally of said support, a second pair of opposed, toothed lever-sectors eccentrically mounted on said plate, links pivotally connected with said lever-sectors, means for moving the links against the action of the springs for releasing the lever-sectors from said support, and means for moving one of said gripping-members longitudinally of the support after its lever-sectors have been released.



5. In a scaffold hoisting apparatus, the combination with a suspended cable, of a gripping member, and a second gripping-member, each consisting of a pair of connected plates upon opposed sides of the cable, a pair of opposed arms projecting outwardly of and connected with said plates, a pair of opposed lever-sectors between and eccentrically mounted on said plates, springs connecting the arms and said lever-sectors for causing normal engagement of the lever-sectors with the cable to prevent a movement of the gripping-members longitudinally of said cable, a second pair of opposed lever-sectors between and eccentrically mounted on said plates, links arranged in pairs, each pair of links being provided with a cross-bar and having pivotal connections with said lever sectors, means for moving the links against the action of the springs for releasing the lever-sectors from said cable, a pair of actuating-arms pivotally connected with the cross-bars of the second gripping-member, and an operating-lever having pivotal connections with the first gripping-member and the actuating-arms of the links of the second gripping-member for moving one of said gripping-members longitudinally of the cable after its lever-sectors have been released.

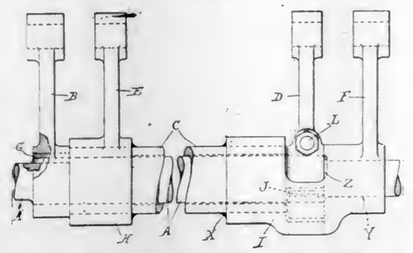
8. In means for hoisting scaffolds upon cables, a gripping-member connected with the scaffold, a second gripping-member, each of said gripping-members consisting of a pair of opposed, connected plates, lever-sectors arranged in pairs between and eccentrically mounted upon the plates, resilient means for causing normal engagement of the lever-sectors with the cable, members arranged to have upward swinging movements for disengaging the lever-sectors from the cable, and an operating-lever disposed between and connected with said gripping-members, said lever being movable for increasing or decreasing the distance between the gripping-members.

10. In means for hoisting scaffolds upon cables, a gripping-member connected with the scaffold, a second gripping-member, each of said gripping-members consisting of a pair of connected plates upon opposed sides of the cable lever-sectors arranged in pairs between and eccentrically mounted on the plates, links pivotally mounted on the sector-levers, springs for normally causing engagement of the sector-levers with the cable, means for causing coincident movements of the links for disengaging the lever sectors from the cable, and means for increasing or decreasing the distance between the first named gripping-member and second gripping-member while the lever-sectors of one gripping-member are in engagement with the cable.

[Claims 1, 4, 6, 7, and 9 not printed in the Gazette.]

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1,231,015. ROCK-SHAFT. ROSWELL D. GRANT, Chicago, Ill., assignor to The Pyle-National Company, Chicago, Ill., a Corporation of New Jersey. Filed Aug. 4, 1916. Serial No. 113,033. (Cl. 74—5.)



1. In a rock shaft device two concentric shafts one inclosing the other and each shaft having mounted upon it a pair of lever arms, the arms of each pair alternating with those of the other pair.

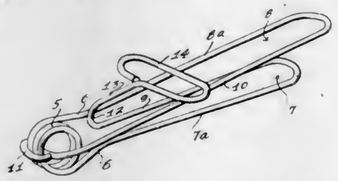
2. In a rock shaft device two concentric shafts one inclosing the other and each shaft having mounted upon it a pair of lever arms, the arms of each pair separated by a distance substantially equal to the distance which separates the other pair.

3. In a rock shaft device two concentric shafts one inclosing the other and each shaft having mounted upon it a pair of lever arms, the arms arranged in two groups of two arms each, one arm of such group attached to each shaft.

4. In a rock shaft device two concentric shafts one inclosing the other and each shaft having mounted upon it a pair of lever arms, the hollow shaft slotted to allow the lever arm from the other shaft to project through and oscillate in such slot.

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1,231,016. CLOTHES-PIN. LEAMON HAMM, Bangor, Me. Filed Aug. 24, 1915. Serial No. 47,100. (Cl. 24—261.)

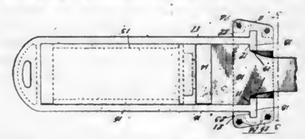


A clothes pin comprising a spring wire having a helix at its intermediate portion, the wire at one end of the helix extending away from the helix for a portion of its length, and then returning upon itself to provide spaced members, the wire at the other end of the helix extending also away from the helix for a portion of its length and then lying returned upon itself and having its extremity extending between said spaced members and terminating in a portion lying transversely of and normally against the said spaced members, for the purpose specified.

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1,231,017. DRAW-BAR AND YOKE CONNECTION. JOSEPH HARRIS, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Sept. 2, 1915. Serial No. 48,596. (Cl. 213—42.)

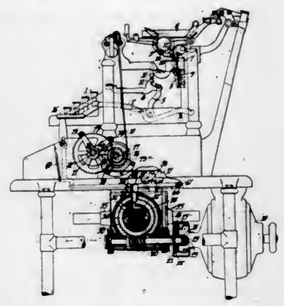
The combination with a shouldered draw bar and a U-shaped yoke strap having T-shaped heads, at the forward ends of the arms thereof, the inwardly extending portions of said heads being adapted to engage the shoulders of the draw bar, of a two piece hood fitting over the sides of said draw bar and said heads, said pieces having re-



cesses on the interior thereof fitting and accommodating said T-heads, and means, located above and below and independent of the draw bar, for detachably connecting said pieces together.

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1,231,018. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Newark, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Continuation in part of application Serial No. 596,451, filed Dec. 9, 1910. This application filed Dec. 5, 1914. Serial No. 875,554. (Cl. 197—65.)



1. In a typewriting machine, the combination with typewriting keys and a traveling carriage, of a motor for returning said carriage, a member driven by said motor having a uniform stroke, and variable means whereby the uniform stroke member may return the carriage.

7. In a typewriting machine, the combination with a traveling carriage and a motor for returning said carriage, of means whereby the motor starts free of load, means whereby the starting of the motor establishes connection between the motor and the carriage, a belt between said motor and said carriage, and means for constantly tensioning said belt.

13. The combination with a traveling carriage, of a power-driven shaft, means for giving said shaft a single complete revolution at intervals, a return band connected to said carriage, a drum on which said return band is wound, and a clutch for driving said drum from said shaft a predetermined adjustable portion of said shaft revolution.

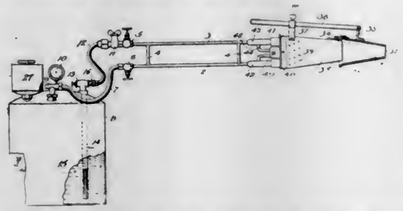
[Claims 2 to 6, 8 to 12, and 14 not printed in the Gazette.]

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1,231,019. HEAVY-OIL BURNER. ARTHUR E. HAUCK, New York, N. Y. Filed May 22, 1916. Serial No. 99,033. (Cl. 158—33.)

1. In a device of the class described, a tank and means connected therewith for buring oil and air, a funnel secured to the top of said tank and a screw plug in said funnel whereby the interior of the tank may be vented and then filled and then the interior sealed against substantial presure by the action of said plug.

2. In a device of the class described, means for supplying a pipe with a predetermined flow of oil under pressure, including means for stopping the flow of oil in the event of an accident, said means including two castings secured together, one of which has a valve seat and a spring seat and a valve stem adapted to slide between said castings with a disk on said stem, adapted to engage said seat to form a closed joint therewith, a spring for normally keping said disk off said seat and a screw plug for adjusting the tension of said spring.



4. In a device of the class described, a burner having a tube and a flanged base, air and fuel preheating tubes in said base, and a block between said tubes and connections between said block and said tubes.

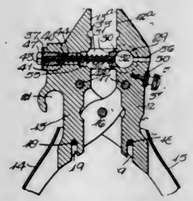
5. In a device of the class described, a burner tube having a base secured thereto, parallel and concentric tubes secured in said base, two of said tubes being closed at their forward ends, and two being open, the outer tubes being closed and the inner tubes being open, laterally extending tubes running from said outer tubes, these laterally extending tubes being bent forward and a burner block connected to said laterally extending tubes.

6. In a device of the class described, a burner adapted to be supplied with oil and air under pressure, provided with a base and a tube projecting from said base, a conical cap hingedly connected to said tube and means for adjusting the position of the cap on said tube.

[Claim 3 not printed in the Gazette.]

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1,231,020. BELT-PUNCHING TOOL. THOMAS J. HAYES, Boston, Mass. Filed Oct. 9, 1916. Serial No. 124,465. (Cl. 164—121.)



1. A tool of the character stated, comprising an upper and a lower body member, the lower member having a belt-receiving recess, a punch carried by the upper member and arranged to enter said recess and perforate a belt inserted therein, a belt centralizing stripper movable in said recess and perforated to receive the punch connections between said stripper and the upper body member organized to force the stripper yieldingly against the belt when the body members are closing and to positively withdraw the stripper from confining engagement with the belt when the body members are opening, the stripper conforming automatically to the diameter of the belt, and operating means maintaining the body members parallel.

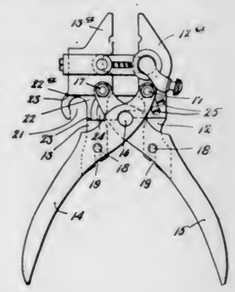
4. A tool of the character stated, comprising an upper and a lower body member, the lower member having a belt-receiving recess an internally threaded bushing carried by the upper member and engaging an external thread on the punch, the punch being adjustable by rotation to determine the position of its cutting edge and compensate for wear thereof, punch-confining means carried by the upper member and including a nut engaged with the punch, and operating means maintaining the members parallel.

7. A tool of the character stated, comprising a pair of body members one member having a belt-receiving recess, a punch carried by the other member and arranged to enter said recess, operating means maintaining the members parallel, and a guide member rigidly attached to one of the body members and in longitudinally sliding engagement with the other body member, means being provided for confining said guide member against lateral movement, and thereby similarly confining the punch.

[Claims 2, 3, 5, and 6 not printed in the Gazette.]

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1,231,021. BELT-CUTTING TOOL. THOMAS J. HAYES, Boston, Mass. Original application filed Oct. 23, 1915, Serial No. 57,456. Divided and this application filed Apr. 5, 1917. Serial No. 159,911. (Cl. 164—81.)



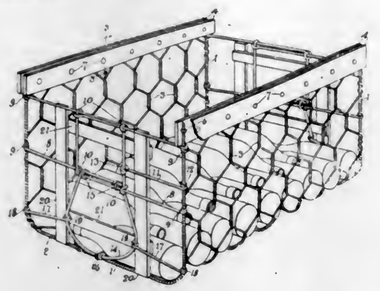
1. A tool of the character stated, comprising an upper and a lower body member, the upper member having a belt-receiving recess opening toward the inner end of the member, and a flat recessed side face intersecting the wall of said recess to form a shearing edge, said member being provided with opposed parallel knife-guiding shoulders projecting from said recessed face, a knife rigidly attached at one end to the lower member and having parallel longitudinal edges in sliding contact with said shoulders, a cutting edge at one end, and flat inner and outer sides, the inner side being in sliding contact with said recessed face and the cutting edge being adapted to cooperate with said shearing edge, and operating means maintaining the members parallel, said means including a lever in sliding contact with the outer side of the knife, and confining the latter against the said recessed side face.

2. A tool of the character stated, comprising a pair of body members, one having a three-faced knife guide and a belt-receiving recess, a portion of which intersects one face of said guide to form a shearing edge, an elongated knife rigidly attached to the other member and projecting therefrom to coöperate with said shearing edge, the inner side and longitudinal edges of said knife being in sliding contact with the three faces of said guide, and operating means maintaining the members parallel and including a part bearing on the outer side of the knife and forming the fourth face of a guide which entirely surrounds a portion of the knife.

3. A tool of the charcter stated, comprising a pair of body members, one having a belt-receiving recess and a recessed face extended across the inner end of said recess and intersecting a wall of the same to form a shearing edge, said member having also a knife-guiding shoulder extending lengthwise of said face and spaced from the inner end of the recess, a knife rigidly attached to the other member, and operating means maintaining the members parallel, means being provided for confining the knife in sliding contact with said face and shoulder, so that the inner side of the knife overlaps the inner end of the recess, and is prevented from contacting injuriously with said shearing edge.



1,231,022. RECEPTACLE. CARL W. HEADLEY, Danville, Ill. Filed Apr. 15, 1916. Serial No. 91,267. (Cl. 220—136.)



1. In a receptacle, a flexible body portion comprising a flexible bottom and sides adapted to be flexed and adjusted to articles of various widths, the upper edges of said sides being separated and forming an opening, and end members connecting the sides for holding the same in their various adjustments.

2. In a receptacle, a flexible body portion comprising a flexible bottom and sides adapted to be flexed and adjusted whereby articles of various widths may be laid therein, the upper edges of said sides being separated, forming an opening and provided with separate reinforcing strips, and end members connecting said sides for holding the same in their various adjustments.

3. In a receptacle, a flexible body portion comprising flexible bottom and sides adapted to be flexed and adjusted to articles of various widths, the upper edges of said sides being separated, forming an opening and provided with reinforcing strips, and members connecting said sides for holding the same in their various adjustments, and rigid reinforcing pieces at the ends of said receptacle.

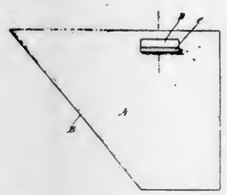
4. In a receptacle, a flexible body portion of wire netting comprising flexible bottom and sides adapted to be flexed and adjusted to articles of various widths, and wire connecting the sides at the ends for adjustably holding the same.

5. In a receptacle, a flexible body portion of wire netting comprising a flexible bottom and sides adapted to be flexed and adjusted to articles of various widths, reinforcing strips on the upper edges of said body, wire connecting the sides at the ends for adjustably holding the same and rigid reinforcing pieces at the ends of said receptacle.

[Claims 6 to 11 not printed in the Gazette.]

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1,231,023. PENHOLDER. HARRY W. HENRY, Yonkers, N. Y. Filed May 2, 1914. Serial No. 835,786. (Cl. 120—98.)



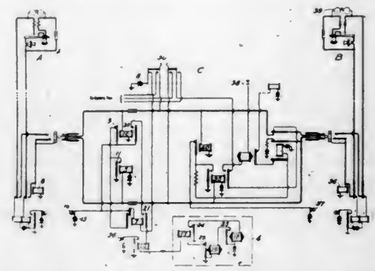
1. A pen holder formed of a material rolled upon itself, spacing means arranged between the plies of said material whereby a space is formed adapted to receive a pen point.

2. A pen holder formed of a material rolled upon itself, spacing means integral with said material and so arranged as to form a space between the plies of said material adapted to receive a pen point.

3. A pen holder formed of a material rolled upon itself, a portion of said material being folded, said folded portion lying between some of the plies to form a space adapted to receive a pen point.

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1,231,024. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. HINRICHSEN, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed May 19, 1915. Serial No. 29,079. (Cl. 179—73.)



1. A telephone exchange system comprising telephone lines terminating at a central office, a link circuit thereat connected with the telephone line, a signaling device for the link circuit, a supervisory relay in the link circuit, a second relay energizing upon the deënergization of the supervisory relay, a circuit for the signaling device completed upon the subsequent energization of the supervisory relay while the second relay is energized, and a plurality of relays energized *seriatim* upon the completion of the circuit to open the circuit and then deënergized *seriatim* upon the opening thereof to again close the circuit.

2. A telephone exchange system comprising telephone lines terminating at a central office, a link circuit thereat connected with the telephone line, a signaling device for the link circuit, a supervisory relay in the link circuit, a second relay responsive to the deënergization of the supervisory relay, a circuit for the signaling device completed upon the response of the second relay and the subsequent energization of the supervisory relay, a third relay in the circuit energized upon the completion thereof, and a plurality of relays energized *seriatim* upon the energization of the third relay to open the circuit and then deënergized *seriatim* upon the resulting deënergization of the third relay to close the circuit.

3. A telephone exchange system comprising a telephone line terminating at a central office, a link circuit thereat connected with the telephone line, a signaling device in the link circuit, a relay responsive to the opening of the telephone line, a circuit for the signaling device completed upon the response of the relay and the subsequent closing of the telephone line, a second relay in the circuit energized upon the completion thereof, and a plurality of relays energized *seriatim* upon the energization of the second relay to open the circuit and then deënergized *seriatim* upon the resulting deënergization of the second relay to close the circuit.

4. A telephone exchange system comprising a telephone line terminating at a central office, a link circuit thereat connected with the telephone line, a signaling device in the link circuit, a relay responsive to the opening of the telephone line, a circuit for the signaling device completed upon the response of the relay and the subsequent closing of the telephone line, and a plurality of relays energized *seriatim* upon the completion of the circuit to open the circuit and then deënergized *seriatim* upon the opening thereof to again close the circuit.

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1,231,025. SELF-SUPPORTING GARMENT. GEORGE INGHRAM, Fairview, W. Va. Filed Sept. 6, 1916. Serial No. 118,774. (Cl. 2—142.)

In a self-supporting garment, the combination of a pair of trousers having the upper waist portion inwardly

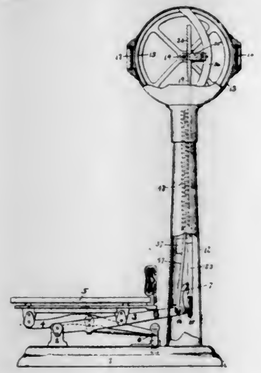
overturned and stitched to the trousers, thereby forming a hem and an elastic band inserted in said hem, of means for fastening the opposite ends of the band together, the over inturned portion of the hem having a series of slits to render the hem loose, whereby the insertion of the band is facilitated, said fastening means comprising a button on one end of the band passing through one of the slits near



the fly of the trousers, the other end of the band having button holes and extending through one of the slits near the other side of the fly of the trousers, anyone of which button holes to be engaged by said button, said band at diametrically opposite side points having button holes to receive buttons on an undergarment, which buttons pass through diametrically opposite slits of the inturned folded portion of the hem.

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1,231,026. THERMOSTAT FOR SCALES. LOUIS JAENICHEN, Detroit, Mich., assignor to The Standard Computing Scale Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 19, 1917. Serial No. 149,407. (Cl. 265—69.)



1. In a computing scale, the combination of a base, a lever mounted thereon, a load-receiving platform connected to the lever, a pedestal mounted on the rear end of the base, a shell mounted on the upper end of the pedestal, an indicating drum revolubly mounted within said shell, a rod longitudinally movable within said pedestal to, actuate said drum, a stirrup pivotally connected to the rear end of the lever, a pin connecting the lower end of said rod to said stirrup, and a thermostat mounted on said rod and engaging said lever to swing the lower end of said rod toward the fulcrum of said lever as the temperature increases and away from the fulcrum as the temperature decreases.

2. In a scale, the combination of a base, a load-receiving lever fulcrumed thereon, a weight-indicating mechanism, a rod connected to said weight-indicating mechanism, a stirrup pivotally mounted on the lever, means to pivotally connect said stirrup to said rod, and a thermostat mounted on said rod and engaging said lever and adapted to swing the lower end of the rod toward and from the fulcrum of said lever.

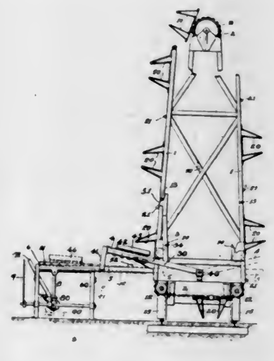
6. In a scale, the combination of a base, a load-receiving lever fulcrumed thereon, a weight-indicating mechanism above said base, a rod connected to said weight indicator, a stirrup pivotally connected to said lever and to the lower end of the rod, and a thermostat connected to said rod and consisting of two flat bars normally substantially parallel with the rod and engaging the lever adjacent to said rod.

7. In a scale, the combination of a base, a load-receiving lever fulcrumed thereon, a weight-indicating mechanism above said base, an upright rod connected to said weight indicator and being in the form of a channel at its lower end, a stirrup pivotally connected to said lever and to the lower end of the rod, and a thermostat connected to said rod and consisting of two flat bars normally parallel with the rod and engaging the lever adjacent to said rod.

[Claims 3 to 5 not printed in the Gazette.]

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1,231,027. LUMBER-PILER. ERIC JOHNSON, Seattle, Wash. Filed Aug. 16, 1915. Serial No. 45,607. (Cl. 193—8.)



1. In a lumber piler, in combination, endless chains having lumber carrying flights, top and bottom guides for said chains, means for actuating the chains, loading arms pivoted backward of the chains, and extending outwardly of the flights a distance to receive the lumber thereon, and means for raising said arm actuated by the chains at the passage of each set of flights.

2. In a lumber piler, in combination, endless chains having lumber carrying flights, top and bottom guides for said chains, means for actuating the chains, loading arms pivoted backward of the chains, and extending outwardly of the flights a distance to receive the lumber thereon, a hook arm connected with each loading arm adjacent the chain, and tappets carried by the chains to engage said hook to lift the loading arm at the passage of each set of flights.

3. In a lumber piler, in combination, endless chains having lumber carrying fingers thereon, top and bottom guides for said chains, means for actuating the chains, transfer bars adapted to receive the lumber, loading bars adapted to receive the lumber from the transfer bars, lifting tappets carried by the chain for each set of carrying fingers, a member connected with the lifting bars and adapted to be actuated by engagement with said tappets, and fixed releasing tappets positioned to engage said lifting member to release it from the lifting tappets.

4. In a lumber piler, in combination, endless chains having lumber carrying fingers thereon, top and bottom guides for said chains, means for actuating the chains, transfer bars adapted to receive the lumber, loading bars adapted to receive the lumber from the transfer bars, a link pivoted to each lifting bar and extending alongside the chains, the upper ends of said links being provided with a downwardly facing surface, lifting tappets carried by the chains for each set of carrying fingers and adapted to engage said downwardly facing surface of the links, and cam-like members controlling said links to release them and bring them back into engaging position.

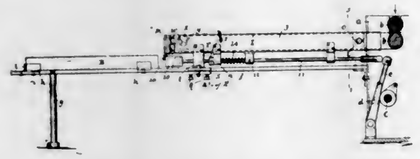
5. In a lumber piler, the combination with the lumber elevating mechanism, of loading arms pivoted at the back side of the elevating mechanism and projecting forwardly thereof, lumber supporting wheels carried by the part of the loading arms which extend beyond the chains, and means for intermittently lifting the loading arms by the elevating mechanism to transfer the lumber to the latter.

[Claims 6 to 13 not printed in the Gazette]



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1,231,028. MECHANISM FOR PACKAGING LABELS AND THE LIKE. CORNELIUS JORDAN, Weehawken, N. J., assignor to E. H. Kluge Weaving Company, New York, N. Y., a Corporation of New York. Filed Nov. 14, 1916. Serial No. 131,324. (Cl. 100—57.)



1. A mechanism for packing already separated pieces of sheet material including, in combination, a frame structure, means to pack the pieces of material including a plunger movable back and forth substantially horizontally, a downwardly delivering chute arranged over the path of movement of the plunger and having a rearwardly facing forwardly and upwardly inclined feed surface disposed forward of the forward face of the plunger when the latter is at its rearward limit, and means to deliver the pieces each edgewise against said side of the chute.

2. A mechanism for packing already separated pieces of sheet material including, in combination, a frame structure, means to pack the pieces of material including a plunger movable back and forth substantially horizontally, a downwardly delivering chute arranged over the path of movement of the plunger and having a rearwardly facing forwardly and upwardly inclined feed surface disposed forward of the forward face of the plunger when the latter is at its rearward limit, and means to deliver the pieces each edgewise against said side of the chute, said plunger having its forward face inclined upwardly and rearwardly.

4. In combination, a frame structure including a substantially horizontal work-support, and means arranged over and adjustable toward and from the work-support for assembling the pieces of material in a pack including means to move each piece flatwise in a given direction over the support to thus form the pack and means to feed the pieces successively edgewise into the control of the second-named means.

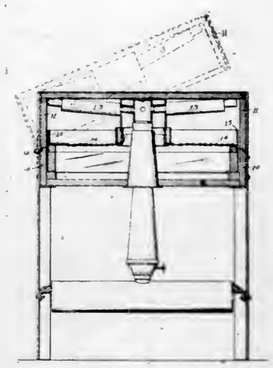
6. In combination, a frame structure, means to pack the pieces of material having a substantially horizontal packing thrust, and means to forward the pieces edgewise successively over the first means and substantially longitudinally of, and then edgewise into, its line of packing thrust.

8. In combination, with a work-support and with means to deliver the pieces of material edgewise substantially horizontally, means, arranged over said support and pivotally adjustable toward and from the same on an axis near said delivery means, for advancing the pieces of material from the delivery means and delivering them edgewise to the support and for thereupon moving each piece flatwise in a given direction over the support to form the pack.

[Claims 3, 5, and 7 not printed in the Gazette.]

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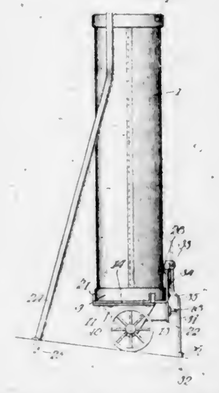
1,231,029. INCUBATOR. JOHN H. KATE, Des Moines, Iowa, assignor, by direct and mesne assignments, to X Ray Incubator Company, Des Moines, Iowa, a Corporation of Iowa. Filed Aug. 30, 1916. Serial No. 117,665. (Cl. 119—39.)



In an incubator, a lower body member having a heating element therein, an upper body member also having a heating element therein, means for hinging the upper body member to the lower body member, an egg tray detachably supported in substantial alinement with the upper edges of the lower body member, said egg tray having its sides extended above and below the upper edges of the lower body member and also spaced from the sides thereof whereby the tray may be accessible for removal when the upper body member is swung open and whereby a flue is formed, which both prevents a direct lateral draft upon the eggs and which is adapted to conduct any air, which enters through the joint between the body members down to the heating element in the lower body member.

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1,231,030. ADJUSTABLE WHEELED RECEPTACLE FOR GOLF-CLUBS. JENNIE KELLEY, Chicago, Ill. Filed May 12, 1916. Serial No. 96,979. (Cl. 21—65.)

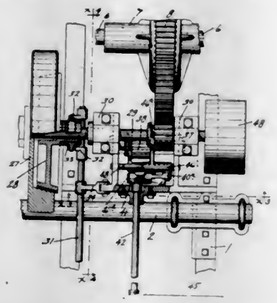


The combination with a golf club receptacle comprising an attenuated tubular member, of a wheeled standard secured to one end thereof, and means for maintaining the receptacle substantially upright upon said standard comprising a forward removable strut clamped to the upper end of the receptacle and having a pointed lower end

and an offset projection adjacent thereto, and a rear strut horizontally pivoted to the standard, having a pointed free end for insertion in the ground and bearing a projection adjacent its point.

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1,231,031. VARIABLE TRANSMISSION MECHANISM FOR TRACTORS. ROBERT STANARD KINKEAD, Minneapolis, Minn., assignor to William Baer Ewing, Minneapolis, Minn. Filed Oct. 18, 1915. Serial No. 56,367. (Cl. 74—58.)



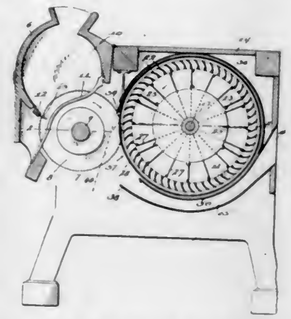
1. In a transmission mechanism, the combination with a driving shaft and a master wheel, of a direct-drive pinion on said driving shaft slidable into and out of mesh with said master wheel, a reverse-drive pinion mounted for axial sliding movements into and out of mesh with said master wheel, and pinion actuating connections arranged to move said reverse-drive pinion out of mesh with said master wheel, when said direct-drive pinion is moved into mesh with said master wheel, and to move said direct-drive pinion out of mesh with said master wheel and into mesh with said reverse-drive pinion, when the latter is moved into mesh with said master wheel, the said pinion actuating connection comprising a rock shaft provided with arms set one ahead of the other, and link connections between said arms and said pinions permitting free rotation of said pinions while controlling their axial positions.

2. In a transmission mechanism, the combination with a driving shaft and a master wheel, of a direct-drive pinion on said driving shaft slidable into and out of mesh with said master wheel, a reverse drive-pinion mounted for axial sliding movements into and out of mesh with said master wheel, pinion actuating connections arranged to move said reverse-drive pinion out of mesh with said master wheel, when said direct-drive pinion is moved into mesh with said master wheel, and to move said direct-drive pinion out of mesh with said master wheel and into mesh with said reverse-drive pinion, when the latter is moved into mesh with said master wheel, the said pinion actuating connections comprising cranks set circumferentially, one ahead of the other, links independently connecting said cranks to the respective pinions, and means for imparting common oscillatory movements to the said cranks, the said cranks being so set that the one will be moved closely in the vicinity of the dead center, in respect to its coöperating link, while the other crank is at a much greater angle in respect to its coöperating link, whereby one of the pinions will remain approximately stationary while the other is being given movement to and from operative position.

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1,231,032. COTTON-GIN. SMITH F. KRUPP, Atlanta, Ga. Filed July 14, 1916. Serial No. 109,324. (Cl. 13—9.)

1. A cotton gin having ginning devices, rotary air blast generating means within the gin and provided with longitudinal blades and air current deflecting means projecting into the spaces between the ginning devices to direct the air currents against the opposing faces of the said devices in advance of the lint cotton laden teeth of the devices.



2. A cotton gin having ginning devices, rotary air blast generating means within the gin and operating to remove cotton from the ginning devices and air current deflecting means in peripheral coöperation with the blast generating means and projecting into the spaces between the ginning devices to direct air currents against the opposing sides of the ginning devices, passages being formed between the opposing sides of the ginning devices and deflecting means.

3. A cotton gin having ginning saws, rotary bladed means within the gin for generating an air blast to remove cotton from the saws, and air current deflecting means peripherally coöperating with the air blast generating means and projecting into the spaces between the opposing sides of the saws.

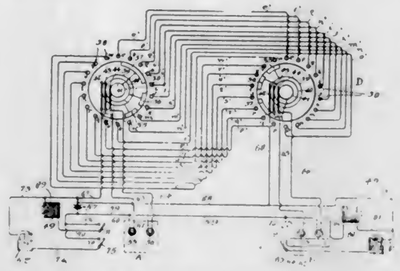
4. A cotton gin having ginning saws, and movable means for generating forceful lint removing air currents within the gin and for applying said currents by counteraction and compression at the points where they strike the lint so that they are not fully released until after they have passed the point of separation of the lint from the saw teeth.

5. A cotton gin having ginning saws, rotary means having blades for generating air currents within the gin and applying said currents to the saws, and current deflecting means coöperating with said blades and having laterally projected members extending into the spaces between the opposing sides of the saws.

[Claims 6 to 21 not printed in the Gazette.]

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1,231,033. ELEVATOR SIGNALING SYSTEM. WALTER A. LOOMIS, Los Angeles, Cal. Filed Feb. 7, 1916. Serial No. 76,590. (Cl. 177—336.)



1. In an elevator signaling system, the combination with independently operable elevator cars adapted to run at predetermined relative positions, of electrical signaling means in each car, a normally open circuit for and common to said signaling means, and means to close the circuit for the signaling means of the cars when the latter move out of their predetermined relative positions, comprising a series of correspondingly arranged contacts for each car, rotatable contact members for each series, the corresponding contact members of said series being connected with one another electrically, said rotatable contacts being normally engaged with non-corresponding contacts of said series, and means for rotating the rotatable contacts synchronously when the cars are running at their predetermined relative positions whereby when one car moves out of its predetermined position relative to the other the rotatable contacts thereof will touch contacts of its series which correspond to the contacts of the other series and the circuit for the signaling means will be closed.

2. In an elevator signaling system, a plurality of independently operable elevator cars, signaling means in each car, an electrical circuit common to the signaling means, a series of contacts for one car, another series of contacts for the other car, said contacts being correspondingly arranged and said corresponding contacts being electrically connected with each other, rotatable contacts for each series normally contacting with non-corresponding contacts of said series, and means for synchronously rotating the rotatable contacts when the elevator cars are running simultaneously whereby when one of the cars stops running or assumes a position relative to the other car which is other than determined upon, said operable contacts will touch corresponding contacts of the series and the circuit for the signaling means will be closed.

3. In an elevator signaling system, the combination with elevator cars adapted to run at predetermined relative positions, electrical signaling means in each car, a normally open electrical circuit for the signaling means, a series of contact members for one car, a series of contact members for another car, said contact members being correspondingly arranged and having its corresponding contacts electrically connected with each other, a rotary contact member for each series of contacts, said rotary contact members being normally engaged with the contact members of the series which are not electrically connected with one another, and means to move said rotary contact members into engagement with certain of those of the contact series which are connected with one another when the cars move out of a predetermined relative position.

4. In an elevator signaling means, the combination with one of the rotating elements of the elevator hoisting and lowering mechanism and signaling means, of means to operate the signaling means including a shaft, disks loosely mounted upon the shaft, another disk located between the first-named disks and keyed upon the shaft, driving connections between the disks and rotary member rotating said disks in opposite directions, means carried by the loosely mounted disks for transmitting rotation in a given direction to the last-named disk whereby the last-named shaft is rotated.

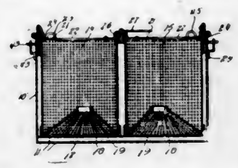
5. In an elevator signaling system, a plurality of independently operable elevator cars, signaling means in each car, in electrical circuit common to the signaling means, a series of contacts for each car, said contacts being electrically connected with each other, movable contacts for each series normally contacting with noncorresponding contacts, and means for synchronously moving the contents when the elevator cars are running in predetermined relative positions to one another whereby when one of the cars assumes a position relative to the other, other than determined upon, the contacts will touch corresponding contacts and the circuit for the signaling means will be closed.

[Claims 6 and 7 not printed in the Gazette.]

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1,231,034. MINNOW BUCKET AND TRAP. CHARLES L. LOVE, Meshoppen, Pa. Filed May 11, 1914. Serial No. 837,831. (Cl. 43—28.)

1. In a combined minnow bucket and trap, the combination with a container; of a pair of foldable trap sections removably fitted therein side by side; funnel-shaped closures at the corresponding lower or outer ends of the respective sections; and lids secured to the sections to close the opposite open ends of the sections, the lids adapted to be shifted out of the way when the sections are placed in end to end relation to serve as a trap.



2. In a combined minnow bucket and traps, the combination with a container; of a pair of foldable trap sections removably fitted therein side by side; funnel-shaped closures at the corresponding lower or outer ends of the respective sections; and hinged lids secured to the sections to close the opposite open ends of the sections, and adapted to be swung inside their respective sections when the latter are placed in end to end relation to serve as a trap.

3. In a combined minnow bucket and trap, the combination with a container; of a pair of foldable trap sections removably fitted therein side by side; funnel-shaped closures at the corresponding lower or outer ends of the respective sections; hinged lids to close the opposite open ends of the sections; and spring latches to engage the free ends of the lids to hold them in closed position, said latches adapted to release the lids to allow the latter to be swung inwardly when the sections are placed in end to end relation to form a trap, to permit communication between the two sections, or to swing outwardly when access to the interiors of the sections is desired.

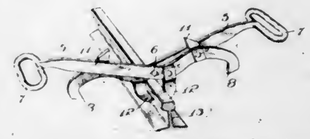
4. A foldable trap comprising connected sections, each section having a flat side, the flat sides adapted to lie adjacent and substantially parallel with each other when the sections are folded, to form a compact device, said flat sides also adapted to lie in substantially the same plane when the sections are unfolded in end to end relation, to form a bottom which maintains the trap steady when resting on the ground.

5. The combination with a bucket; of a trap removably contained therein and comprising several sections adapted to be fastened together when removed from the bucket and used as a trap; one of said sections having an opening to admit the entrance of the bait fish; and a hinged closure common to both bucket and trap sections, and adapted to be dropped out of the way when the sections are fastened together to form a trap.

[Claims 6 to 12 not printed in the Gazette.]

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1,231,035. RAILWAY-TONGS. CHARLES H. LUTHMAN, Hammond, Ind., assignor to Clarence C. Zimmerman, Park Ridge, Ill. Filed Nov. 8, 1916. Serial No. 130,133. (Cl. 57—9.)



1. Railway tongs of the character described, comprising a pair of tong levers pivoted intermediate their ends, the jaw portions of said levers being provided at their lower ends with inwardly extending teeth adapted to grip a tie, and slightly below their pivot with inwardly extending grips adapted to clamp the web of a rail beneath the head or tread portion of the latter.

2. Railway tongs of the character described, comprising a pair of tong levers pivoted intermediate their ends and

each consisting of a straight handle portion on one side of said pivot and a downwardly offset jaw portion on the other side of said pivot terminating in an inwardly turned tooth, and inwardly extending grips on said jaws located slightly below the pivot, said grips being adapted to clamp the web of a rail beneath the head thereof with the handles of the tongs spread to approximately horizontal position.

3. Railway tongs of the character described, comprising a pair of tong levers pivoted intermediate their ends and each consisting of a straight handle portion on one side of said pivot terminating in an outwardly turned hand grip and an outwardly offset jaw portion on the other side of said pivot terminating in an inwardly turned tooth, outwardly extending teeth on said jaws above said inwardly turned teeth, the construction and relation of said parts being such that the lower teeth may be engaged with a tie with the handle portions sufficiently close together to be manipulated by a single operative, and by inverting the implement and swinging said handle portions to the other side of the pivot said outwardly extending teeth may be engaged with the tie with the handle portions spread to approximately horizontal position, and a pair of inwardly projecting grips on said jaw portions closely adjacent to and slightly below the pivot, said grips being adapted to clamp the web of a rail beneath the head thereof with the handle portions spread to approximately horizontal position.

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1,231,036. REFILLABLE CARTRIDGE-FUSE. CLARENCE T. MCDONALD, Chicago, Ill. Filed Dec. 31, 1913. Serial No. 809,791. (Cl. 175—273.)



1. An inclosed electric fuse of the refillable type having, in combination, a tubular body comprising a sleeve of insulating material and two metallic rings surrounding and fitted upon opposite ends of said sleeve and permanently secured thereto, said rings having smooth external peripheries, metallic caps having tubular portions with smooth internal peripheries adapted to fit upon and telescope over said rings, said caps being slidable in a straight line axially of said tube and rings without rotation of the cap in placing the caps on said rings, said caps having apertures therethrough and the body having threaded metallic seats in registry with said apertures, screws adapetd to pass through the apertures and engage in said metallic seats for rigidly securing the caps to the sleeve and rings, a fuse element within said sleeve, and devices independent of said cap-securing screws for releasably clamping the opposite end portions of the fuse element to said caps.

2. An inclosed electric fuse of the refillable type having, in combination, a tubular body comprising a sleeve of insulating material and two metallic rings surrounding and fitted upon opposite ends of said sleeve and permanently secured thereto, said rings having smooth external peripheries, metallic caps having tubular portions with smooth internal peripheries adapted to fit upon and telescope over said rings, said caps being slidable in a straight line axially of said tube and rings without rotation of the caps in placing the caps on said rings, said caps having apertures therethrough and the body having threaded metallic seats in registry with said apertures, screws adapted to pass through the apertures and engage in said metallic seats for rigidly securing the caps to the sleeve and rings, additional screws passing through the end walls of the caps with the heads of the screws at the outer sides of the caps, disks located within the ends of the sleeve and the caps and having radial lugs engaging in recesses in the sleeve to prevent rotation of the disks, and a fuse element having its end portions lying between said disks and the end walls of the caps, said end portions being clamped to the caps by said additional screws.

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1,231,037. LADDER DEVICE FOR SILOS. JAMES F. MCGAFFEE, Des Moines, Iowa. Filed Oct. 23, 1916. Serial No. 127,285. (Cl. 228—1.)

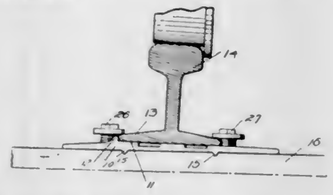


1. In a device of the class described, a pair of upright bars parallel with each other, a pair of parallel bars extending horizontally away from the ends of said first bars, said first named bars having at their upper ends portions extending laterally and portions extending upwardly and inwardly from said last described portions having hook members formed in their lower surfaces, means for connecting the upper ends of said bars, a pair of parallel bars pivotally mounted with relation to the upper ends of said first named bars having extensions forming members to coact with said first hook members in gripping a silo hoop or the like and having lugs adapted to engage such a hoop for removing said hook members when said last described bars are raised, and a ladder rung connecting the outer ends of said last described bars.

2. In a device of the class described, upright members arranged substantially parallel with each other, hook members at the upper ends of said upright members, bars pivotally mounted with relation to the upper ends of said first hook members adapted to coact with said first hook members for gripping a silo hoop or the like, lugs on said second described bars for engaging said hoop when said second described bars are moved to certain positions for forcing said first described hooks away from such a hoop, a ladder rung connecting the outer ends of said bars, and bracing or supporting members projecting outwardly from said upright members for supporting said rung when said bars are in their lowered position.

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1,231,038. TIE-PLATE. FINIS MCLEAN, Valley Junction, Iowa. Filed Apr. 5, 1917. Serial No. 160,003. (Cl. 238—2.)



1. A tie plate comprising a body having on its upper surface a rib arranged to engage one side edge of a rail base, angular holes extending through said rib and said body, and angular holes arranged spaced from and opposite said first described holes, being transversely elongated, and of different lengths, said base being provided with



spaced holes designed to receive lag screws or the like for engaging the base of the rail on the side opposite said rib.

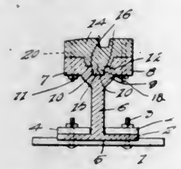
4. A tie plate comprising a body having on its upper surface a rib arranged to engage one side edge of a rail base, angular holes extending through said rib and said body, and angular holes arranged spaced from and opposite said first described holes, being transversely elongated, and of different lengths, said base being provided with spaced holes designed to receive lag screws or the like for engaging the base of the rail on the side opposite said rib, said body being provided with longitudinal ribs on its lower surface designed to be substantially beneath the edges of the rail base, and with longitudinal grooves in its upper surface arranged to be on opposite sides of the shank of the rail and between said last described ribs.

6. A tie plate, comprising a body having on its upper surface a rib arranged to engage one side edge of a rail base, holes extending through said rib, and said body, and holes arranged spaced from and opposite said first described holes transversely elongated.

[Claims 2, 3, 5, and 7 not printed in the Gazette.]

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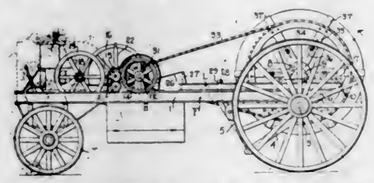
1,231,039. RAILWAY-RAIL. CHARLES L. MANSON, Louisville, Ky., assignor of one-half to John B. Williams, Louisville, Ky. Filed May 26, 1915. Serial No. 30,626. (Cl. 239—16.)



A railroad rail comprising a base, a web, a head, said head having the central portion thereof provided with a longitudinally extending groove, the side walls of said groove converging toward the bottom wall, the bottom wall of the groove being provided with a centrally disposed longitudinally extending recess, the side walls of the recess converging toward the bottom wall thereof, and a removable tread portion adapted to rest on the top of said head, a centrally disposed longitudinally extending tongue formed on the bottom face of said tread portion and a centrally disposed downwardly extending extension formed on said tongue, the side walls of the tongue and the extension being converged toward the bottom walls thereof, said tongue and extension on said tread portion and the groove and recess in said head forming a series of shoulders forming bearing surfaces, whereby said tread is supported, the tongues and the extension being snugly received in said groove and recess, whereby any lateral movement of said tread is prevented.

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1,231,040. REEL-HANDLING TRUCK. WALLACE MARSHALL, La Fayette, Ind. Filed Mar. 4, 1916. Serial No. 82,229. (Cl. 242—90.)



1. In a cable handling apparatus, a main supporting frame, a reel supporting frame pivotally mounted upon the main frame and movable from a depending position to a horizontal position resting on the main frame operatively connected to the reel supporting frame, power operated means on the main frame for raising or lowering the reel supporting frame, means on the reel supporting frame for detachably supporting a reel thereon, and means on the main frame for rotating the reel when in its raised position and operatively connected to said power operated means.

2. In a cable handling apparatus, a main supporting frame, a reel supporting frame pivotally mounted on the main frame for movement into a horizontal or approximately vertical position, means for slidingly supporting a reel shaft on the reel supporting frame, means on the main frame for rotating the reel supporting frame from a horizontal to an approximately vertical position and vice versa, and means on the main frame for rotating the reel when the reel supporting frame is in its horizontal position.

3. In cable handling apparatus, a main supporting frame, a reel supporting frame pivotally mounted on the main frame, reel shaft bearings mounted on the reel supporting frame, each bearing composed of two sections, one of said sections of each bearing being mounted upon the reel supporting frame for longitudinal adjustment therealong, means for rotating the reel supporting frame upon its pivot from a vertical to a horizontal position and vice versa, and power operated means for rotating the reel when the reel frame is in its horizontal position.

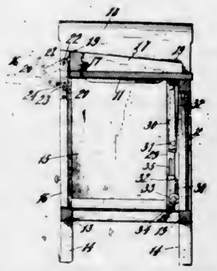
4. In cable handling apparatus, a main supporting frame, a reel supporting frame pivotally mounted on the main frame at the rear end thereof for rotative movement into a horizontal or into a depending position, shaft bearings mounted upon the reel supporting frame, each bearing comprising two sections, one of said sections being fixed and the rear section being adjustable longitudinally upon the reel supporting frame, means for releasably locking the reel supporting frame in a horizontal position, power operated means for raising the reel supporting frame from a depending position to a horizontal position, and power operated means mounted on the main frame for driving a reel supported on the reel supporting frame when the reel supporting frame is in its horizontal position.

5. A cable handling apparatus including a main supporting frame, a lifting member having two parallel arms adapted when in a horizontal position to rest upon and be supported by the main supporting frame, the arms being pivotally connected to the main supporting frame at the rear end of the latter whereby the lifting member may be shifted in a vertical plane from a horizontal to a downwardly and rearwardly inclined position, power operated means for drawing down the forward end of said lifting member to thereby raise the rear ends of said arms, and means on the rear end of the arms for engaging the shaft of a cable spool.

[Claims 6 to 20 not printed in the Gazette.]

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1,231,041. PIANO-BENCH. CHRISTIAN H. MARTIN, Akron, Ohio, assignor to John R. Gammeter, Akron, Ohio. Filed May 15, 1914. Serial No. 838,642. (Cl. 155—22.)



1. A piano bench, comprising a frame having a level seat portion, a cover pivotally connected to the frame so

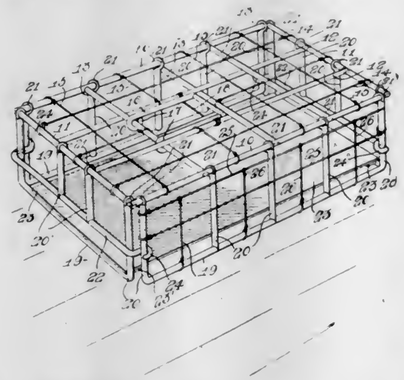
as to be normally suspended in front thereof and capable of swinging to a position over the seat portion, seat supports engaged by the cover in this position whereby the cover becomes an elevated supplemental seat, and links constituting the pivotal connections for the cover and having limited pivotal connection with the cover to determine the angle between the links and the cover in moving the cover to its elevated position.

3. A piano bench, comprising a cabinet containing a drawer compartment, a drawer fitting therein, the top of the cabinet constituting a level bench seat with upstanding ends, a cover having a link hinge connection with the upstanding ends and in its normal, vertical position closing the drawer compartment and capable of swinging to a position above the seat, and inclined seat rests secured to the upstanding ends to have the cover rest thereon and to relieve the hinges of weight, said cover when so positioned constituting an elevated, inclined supplemental seat.

[Claims 2, 4, and 5 not printed in the Gazette.]

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1,231,042. FOLDING COOP. GEORGE W. MARTIN, Paris, Tex. Filed May 24, 1916. Serial No. 99,595. (Cl. 220—132.)



1. A folding coop comprising an upper wall, side and end walls, said side and end walls being provided with transversely extending bars, eyes carried by said bars and engaging said upper wall to pivotally connect the side and end walls with the upper wall, said end walls including longitudinally extending bars extending in spaced relation to the outer ends of the end walls to provide clearance spaces, a bottom having its ends extending into the spaces provided in the end walls, and means releasably connecting said end walls with said side walls.

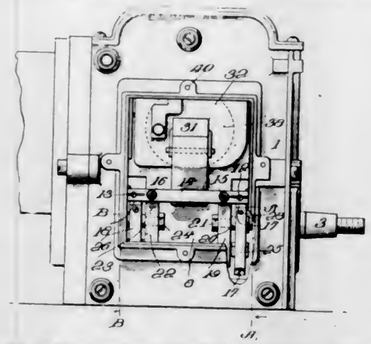
2. A folding coop including an upper wall, side and end walls pivotally connected with said upper wall, certain of said last mentioned walls being provided with transversely extending pockets, a bottom having its end portions fitting into said pockets and provided with cross strips for engaging the walls to limit the inward movement thereof, and means for releasably connecting the side and end walls.

3. A folding coop comprising an upper wall, side and end walls, means pivotally connecting the side and end walls with the upper wall, said end walls including longitudinally extending bars extending in spaced relation to the outer ends of the end walls to provide clearance spaces, a bottom having its ends extending into the spaces provided in the end walls, and means releasably connecting said end walls with said side walls.

4. A folding coop comprising an upper wall, side and end walls, pivotally connected with the upper wall, said end walls including longitudinally extending bars extending in spaced relation to the outer ends of the end walls to provide clearance spaces and having hooks at their ends to releasably connect the end walls with the side walls, and a bottom having its ends extending into the spaces provided in the end walls.

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1,231,043. IGNITION SYSTEM. CHARLES THOMAS MASON, Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Oct. 21, 1916. Serial No. 126,917. (Cl. 123—149.)



1. An ignition system including a magneto having a generating coil, a rotor, a discharge circuit connected to said coil, and an interrupter comprising a plurality of pairs of contacts, said rotor having a section thereof shaped to form cam surfaces for actuating the contacts, the cam actuating surfaces for the respective contacts being so disposed that said pair of contacts act in alternation and each pair of contacts completely and independently control the discharge.

2. An ignition system including a magneto having a generating coil, a rotor, a discharge circuit connected to said coil, and an interrupter comprising a plurality of pairs of contacts, said rotor having an integral section thereof shaped so as to form cam surfaces for actuating the contacts, the cam surfaces for the respective contacts being so disposed that said pair of contacts act in alternation and each pair of contacts completely and independently control the discharge.

3. An ignition system including a magneto having a generating coil, a rotor, a discharge circuit connected to said coil, and an interrupter comprising a plurality of pairs of contacts, said rotor having a section at each end thereof formed with a cam surface, said cam surfaces actuating respectively the contacts, and said cam surfaces being so disposed relative to each other as to cause said contacts to act in alternation and each pair of contacts to completely and independently control the discharge.

[Claims 4 to 10 not printed in the Gazette.]

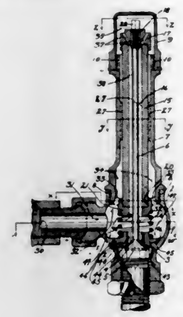
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1,231,044. THERMOSTATIC VALVE. ROBERT S. MAYER, Norwood, Ohio. Filed Sept. 14, 1911. Serial No. 649,257. (Cl. 236—9.)

1. In a thermostatic valve, the combination of a supporting housing provided with oppositely disposed interior members, one of said members being yieldable and formed with a valve seat; an expansion member; a valve connected to said expansion member and coacting with said valve seat; yieldable means tending to hold said housing members apart a predetermined maximum distance, said valve being arranged to move its seat member against the action of said yieldable means; and inlet and outlet openings for said housing.

2. In a thermostatic valve, the combination of a supporting housing provided with depending and upwardly extending interior members, one of said members being yieldable and formed with a valve seat; an expansion member; a valve connected to said expansion member and coacting with said valve seat; a coil spring tending to hold said housing members apart a predetermined maximum distance, said valve being arranged to move its seat member against the action of said spring; and inlet and outlet openings for said housing.





3. In a thermostatic valve, the combination of a supporting housing provided with depending and upwardly extending interior members forming upper and lower pockets, one of said members being yieldable and formed with a valve seat; a hollow expansion member; a valve connected to said expansion member and coacting with said valve seat, yieldable means tending to hold said housing members apart a predetermined maximum distance; an inlet opening for said housing intersecting the interior thereof between said upper and lower pockets and communicating with the same; an annular chamber disposed between the inner wall of said housing and said expansion member; passages providing communication between said upper pocket and said chamber and the latter and the interior of said expansion member, respectively; and an outlet for said housing, the interior of said expansion chamber communicating through said interior housing members and said valve with said outlet.

4. In a thermostatic valve, the combination of a casing having an inlet-opening and a central depending portion surrounded by an upper pocket, a yieldable valve-seat member having a central upwardly extending portion surrounded by a pocket, a coil-spring between said downwardly extending portion and said yieldable valve-seat member, an expansion-member, and a valve connected with the latter coacting with said valve-seat member and arranged to move said valve-seat member against the action of said spring, substantially as described.

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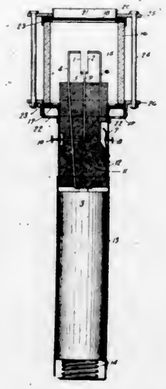
1,231,045. METHANE DETECTOR. CHARLES M. MEANS, Pittsburgh, Pa., assignor of two-thirds to William A. McCutcheon, Pittsburgh, Pa. Filed Jan. 27, 1916. Serial No. 74,679. (Cl. 73—51.)

1. In a gas detector, a source of electric current, and two glowers located in proximity to each other and in circuit with said source, one of said glowers having catalytic properties and the other not having such properties, whereby the presence and amount of gas is detected by a comparison of the relative luminosities of said glowers.

2. In a gas detector, a source of electric current, two glowers in circuit therewith, one of said glowers having catalytic properties and the other not having such properties, and a casing inclosing both glowers and arranged to admit gas to said glowers.

3. In a gas detector, a source of electric current, two glowers in series in circuit therewith, one of said glowers having a positive resistance co-efficient and the property that its temperature is increased in the presence of gas, thereby reducing the current flow through the second glower, said second glower having the property that its temperature is unaffected by the presence of gas, and a casing inclosing said glowers and arranged to admit gas thereto.

4. In a gas detector, a source of electric current, two glowers in series in circuit therewith, one of said glowers having catalytic properties and the other not having such properties, and means in said circuit for causing increased current to flow through the glower having catalytic properties to restore said properties in case of deterioration.

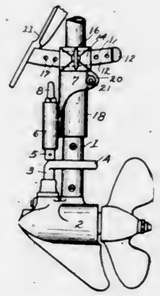


5. In a gas detector, a source of electric current, two glowers in circuit therewith, one of said glowers being arranged to have its luminosity increased in the presence of gas and the other glower being arranged to be unaffected by the gas, and means for short circuiting the last named glower.

[Claim 6 not printed in the Gazette.]

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1,231,046. DETACHABLE ROWBOAT-MOTOR. CHRISTOPHER J. MEYER, Milwaukee, Wis., assignor to Evinrude Motor Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 1, 1915. Serial No. 11,414. (Cl. 115—18.)



1. A supporting member for propeller shafts, comprising a bracket engaging block having a downwardly projecting sleeve through which a propeller supporting shaft may pass, and a pump cylinder provided with a clamping member engaging said sleeve.

2. The combination with a propeller supporting shaft, of a sleeve loose on said shaft, a bearing sleeve clamped to said shaft above said loose sleeve, and a pump cylinder clamped to said loose sleeve.

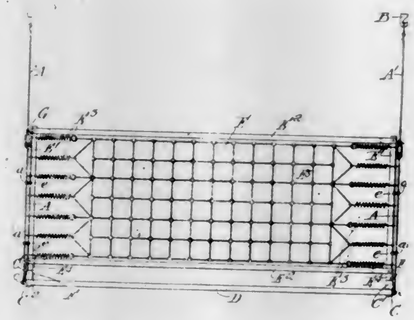
3. The combination with a propeller supporting shaft, of a sleeve loose on said shaft, a bearing sleeve clamped to said shaft above said loose sleeve, and a pump cylinder clamped to said loose sleeve together with a set of supporting arms connected with said loose sleeve and adapted

to support the propeller shaft while permitting rotative adjustments thereof.

4. The combination with a supporting boat engaging bracket, of a sleeve connected therewith, a propeller supporting shaft extending loosely through said sleeve, a clamping member secured to said shaft above said sleeve and adapted to bear thereon to support the shaft from the sleeve and bracket, a pump cylinder secured to the sleeve, and a pump operating rod supported from the propeller supporting shaft and provided with a ring encircling said shaft, said pump cylinder having a plunger arranged with one end bearing upon said ring, substantially as described.

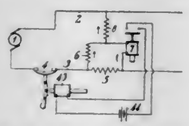
5. The combination with a stationary propeller supporting member, of a pump cylinder adjustably clamped thereto, a propeller supporting shaft extending through said stationary support and rotatively adjustable therein, and means carried by the propeller supporting shaft for operating the pump in any desired position of rotative adjustment.

1,231,047. HAMMOCK. HARRY MINTZ, Dorchester, Mass. Filed Sept. 28, 1914. Serial No. 863,801. (Cl. 5—61.)



A hammock comprising a seat frame, suspension end members therefor, said seat frame having angle iron end bars and posts formed integral therewith, a back rest complete in itself and independent of said seat frame pivotally mounted on said posts and adapted to lie in a plane substantially parallel with said seat frame when in folded position, and means detachably to secure said rest in normal position for use.

1,231,048. ELECTRICAL RELAY. EGRON OLOF MÖLLER, Brooklands, England. Filed Mar. 20, 1913. Serial No. 755,777. (Cl. 175—271.)



1. The combination with an electrical circuit, of a relatively low-resistance resistor supplied with current proportional to the current traversing the said electric circuit, a second relatively low-resistance resistor, a relatively low-resistance electromagnet winding, corresponding terminals of said second resistor and said winding, at one end, being connected together and the corresponding terminals, at the other end, being connected to the respective terminals of the relatively low-resistance resistor, and a relatively high-resistance resistor connected to the first named terminals to receive current proportional to the difference in potential between the conductors of the said elecceric circuit.

2. The combination with an electric circuit, of a resistor supplied with current proportional to the current traversing the said circuit, a second resistor, an electromagnet winding, and a third resistor having one terminal connected to one terminal of the said second resistor and to one terminal of the said electromagnet winding and having its other terminal so connected that the said third resistor is supplied with current proportional to the voltage of the said circuit, the remaining terminals of the second resistor and the electromagnet winding being connected to the respective terminals of the first resistor.

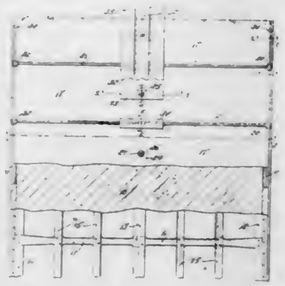
3. The combination with an electrical circuit, of a relatively low-resistance resistor, a relatively low-resistance electromagnet winding having the same impedance as the said resistor under all conditions, and means for so connecting the said resistor and the said winding that the same current traverses the two under predetermined conditions of operation and a relatively different current traverses each under other predetermined conditions of operation.

4. The combination with an electrical circuit, of a resistor, an electromagnet winding of substantially the same resistance as the said resistor, and means for so connecting the said resistor and the said winding that different currents traverse the same when the current reverses in the circuit.

5. The combination with an electrical circuit, of a resistor, an electromagnet winding of substantially the same resistance as the said resistor, and means for so connecting the said resistor and the said electromagnet winding that a relatively different value of current traverses the electromagnet winding than traverses the resistor when the current reverses in the said circuit and when an overload traverses the said circuit.

[Claims 6 to 16 not printed in the Gazette.]

1,231,049. CAR-ROOF. CLINTON C. MURPHY, Chicago, Ill., assignor to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed May 26, 1913. Serial No. 769,807. (Cl. 108—5.4.)



1. The combination in a car of transverse sheathing forming a curved arch extending from side plate to side plate and secured thereto, said sheathing being supported on a frame work consisting of carlines forming one or more chords of the arch, and purlins supported on the carlines in the segmental space between said carlines and sheathing, the thickness of the respective purlins conforming to the depth of the segmental space adjacent thereto whereby their top faces conform to the curved under surface of the sheathing.

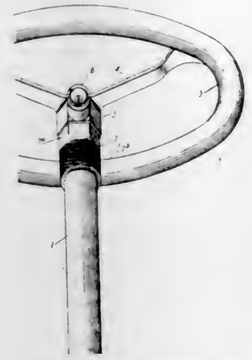
6. A car roof having a roof covering consisting of roof sheets extending from eaves to eaves in upwardly curved arcs, the side margins of said sheets being continuous and flanged up and rebent in the shape of inverted channels, said channels of adjacent sheets being superposed and forming loose joints or seams between adjacent sheets, said seams extending from eaves to eaves without interruption, the ends of said sheets being hooked under and engaging flashing strips which are secured along the eaves



on top of the car for movably securing said sheets upon the roof substructure and preventing entrance of water into the car under the ends of said sheets.

[Claims 2 to 5, 7, and 8 not printed in the Gazette.]

1,231,050. LOCK FOR AUTOMOBILE STEERING-WHEELS. HUGO NEU, New York, N. Y., and LUDWIG BLAHA, Lyndhurst, N. J. Filed Mar. 9, 1917. Serial No. 153,656. (Cl. 70—129.)



1 In a locking means for steering wheels, an extension secured to the hub of a steering wheel and having a polygonally-shaped recess, a fixed member carried by the steering post and having an exterior complemental surface, and a sleeve slidably mounted and adapted to engage the fixed means on the steering post and fit into said recess, whereby said steering wheel is locked against independent rotation.

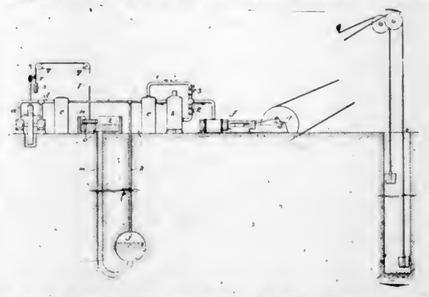
2. In a locking means for steering wheels, an extension secured to the hub of the steering wheel and having a polygonally-shaped recess, a nut secured to the steering post and having an exterior complemental surface, and a sleeve slidably mounted and adapted to have its exterior surface fit into said recess and its interior surface engaging the periphery of the nut secured to the steering post whereby said steering wheel is locked against independent rotation.

3. The combination with a steering post and a steering wheel, a locking device including an extension having a compartment carried by the hub of the steering wheel, said compartment being adapted to accommodate a sleeve arranged to be slidably mounted on the steering post for movement to and from the steering wheel and adapted to be held against rotation on said steering post, the upper exterior surface of said sleeve being polygonally shaped and adapted to register with a complemental recess formed in said compartment, and locking means effective when said sleeve is moved away from the steering wheel, whereby said steering wheel is locked to the steering post.

4. In a locking means for steering wheels, an extension secured to the hub and having a polygonally-shaped recess, a polygonally-shaped nut carried by the steering post and a slidable member adapted to coöperate with said extension and said nut, said slidable member having a portion of its exterior surface complementally shaped and adapted to enter said recess and the interior surface of said portion being adapted to fit over said nut, the engaging surface of said portion depending upon the position of said slidable member.

1,231,051. COMPRESSED-AIR POWER SYSTEM. BRUNO V. NORDBERG, Milwaukee, Wis. Filed Jan. 29, 1912. Serial No. 674,056. (Cl. 230—35.)

1. In a compressed air power system the combination with a compressed air engine of an air compressor, an air receiver connected with the discharge of the compressor and having a manually controlled connection with the engine, and an open water tank located above and having a constantly open and unobstructed connection with the air receiver, said receiver and tank being so constructed, arranged and connected that a quantity of compressed air equal to the entire volume of the receiver may be drawn therefrom at an approximately constant pressure.

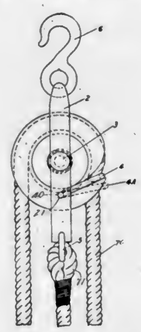


3. In a compressed air power system, the combination of an air compressor, a compressed air engine of variable capacity connected with the compressor and capable of developing greater power than can be directly supplied by the maximum capacity of the compressor, an air receiver of large capacity connected with the compressed air supply conduit between the compressor and engine, and an open water tank having an unobstructed and constantly open connection with said receiver and located above the same at a sufficient distance to balance the normal working presure in the system.

5. In a compressed air power system the combination with a compressed air engine of an air compressor, an air receiver connected with the discharge of the compressor and with the engine, an open water tank located above and having a constantly open connection with said receiver, and a float in said tank adapted when the water rises above a certain level therein to reduce the volume of air discharged by the compressor.

[Claims 2, 4, 6, and 7 not printed in the Gazette.]

1,231,052. AUTOMATIC SAFETY-PULLEY. DANIEL FAULKNER O'CONNELL, Winnipeg, Manitoba, Canada. Filed Dec. 11, 1916. Serial No. 136,288. (Cl. 57—34.)



4. In a safety pulley of the character described; a hanger that includes opposite side members and means at the lower end for connection with the free end of a load lifting rope, a sheave journaled on and located within the side members of the hangers and over which the lifting rope passes, the said sheave having a cross slot that takes through the opposite flanges thereof and

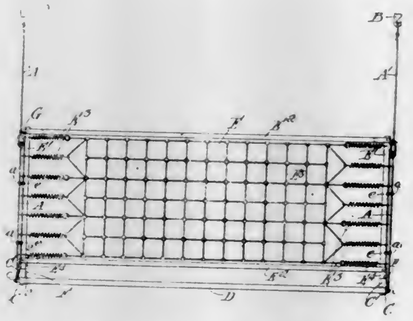
to support the propeller shaft while permitting rotative adjustments thereof.

4. The combination with a supporting boat engaging bracket, of a sleeve connected therewith, a propeller supporting shaft extending loosely through said sleeve, a clamping member secured to said shaft above said sleeve and adapted to bear thereon to support the shaft from the sleeve and bracket, a pump cylinder secured to the sleeve, and a pump operating rod supported from the propeller supporting shaft and provided with a ring encircling said shaft, said pump cylinder having a plunger arranged with one end bearing upon said ring, substantially as described.

5. The combination with a stationary propeller supporting member, of a pump cylinder adjustably clamped thereto, a propeller supporting shaft extending through said stationary support and rotatively adjustable therein, and means carried by the propeller supporting shaft for operating the pump in any desired position of rotative adjustment.

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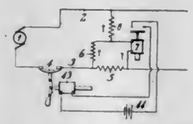
1,231,047. HAMMOCK. HARRY MINTZ, Dorchester, Mass. Filed Sept. 28, 1914. Serial No. 863,801. (Cl. 5—61.)



A hammock comprising a seat frame, suspension end members therefor, said seat frame having angle iron end bars and posts formed integral therewith, a back rest complete in itself and independent of said seat frame pivotally mounted on said posts and adapted to lie in a plane substantially parallel with said seat frame when in folded position, and means detachably to secure said rest in normal position for use.

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1,231,048. ELECTRICAL RELAY. EGRON OLOF MÖLLEN, Brooklands, England. Filed Mar. 20, 1913. Serial No. 755,777. (Cl. 175—271.)



1. The combination with an electrical circuit, of a relatively low-resistance resistor supplied with current proportional to the current traversing the said electric circuit, a second relatively low-resistance resistor, a relatively low-resistance electromagnet winding, corresponding terminals of said second resistor and said winding, at one end, being connected together and the corresponding terminals, at the other end, being connected to the respective terminals of the relatively low-resistance resistor, and a relatively high-resistance resistor connected to the first named terminals to receive current proportional to the difference in potential between the conductors of the said elecetic circuit.

2. The combination with an electric circuit, of a resistor supplied with current proportional to the current traversing the said circuit, a second resistor, an electromagnet winding, and a third resistor having one terminal connected to one terminal of the said second resistor and to one terminal of the said electromagnet winding and having its other terminal so connected that the said third resistor is supplied with current proportional to the voltage of the said circuit, the remaining terminals of the second resistor and the electromagnet winding being connected to the respective terminals of the first resistor.

3. The combination with an electrical circuit, of a relatively low-resistance resistor, a relatively low-resistance electromagnet winding having the same impedance as the said resistor under all conditions, and means for so connecting the said resistor and the said winding that the same current traverses the two under predetermined conditions of operation and a relatively different current traverses each under other predetermined conditions of operation.

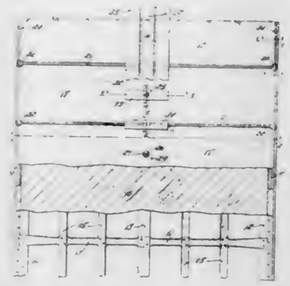
4. The combination with an electrical circuit, of a resistor, an electromagnet winding of substantially the same resistance as the said resistor, and means for so connecting the said resistor and the said winding that different currents traverse the same when the current reverses in the circuit.

5. The combination with an electrical circuit, of a resistor, an electromagnet winding of substantially the same resistance as the said resistor, and means for so connecting the said resistor and the said electromagnet winding that a relatively different value of current traverses the electromagnet winding than traverses the resistor when the current reverses in the said circuit and when an overload traverses the said circuit.

[Claims 6 to 16 not printed in the Gazette.]

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1,231,049. CAR-ROOF. CLINTON C. MURPHY, Chicago, Ill., assignor to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed May 26, 1913. Serial No. 769,807. (Cl. 108—5.4.)



1. The combination in a car of transverse sheathing forming a curved arch extending from side plate to side plate and secured thereto, said sheathing being supported on a frame work consisting of carlines forming one or more chords of the arch, and purlins supported on the carlines in the segmental space between said carlines and sheathing, the thickness of the respective purlins conforming to the depth of the segmental space adjacent thereto whereby their top faces conform to the curved under surface of the sheathing.

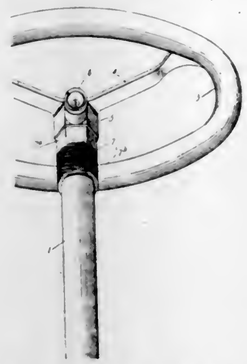
6. A car roof having a roof covering consisting of roof sheets extending from eaves to eaves in upwardly curved arcs, the side margins of said sheets being continuous and flanged up and rebent in the shape of inverted channels, said channels of adjacent sheets being superposed and forming loose joints or seams between adjacent sheets, said seams extending from eaves to eaves without interruption, the ends of said sheets being hooked under and engaging flashing strips which are secured along the eaves on top of the car for movably securing said sheets upon the roof substructure and preventing entrance of water into the car under the ends of said sheets.

[Claims 2 to 5, 7, and 8 not printed in the Gazette.]



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1,231,050. LOCK FOR AUTOMOBILE STEERING-WHEELS. HUGO NEU, New York, N. Y., and LUDWIG BLAHA, Lyndhurst, N. J. Filed Mar. 9, 1917. Serial No. 153,656. (Cl. 70—129.)



1. In a locking means for steering wheels, an extension secured to the hub of a steering wheel and having a polygonally-shaped recess, a fixed member carried by the steering post and having an exterior complemental surface, and a sleeve slidably mounted and adapted to engage the fixed means on the steering post and fit into said recess, whereby said steering wheel is locked against independent rotation.

2. In a locking means for steering wheels, an extension secured to the hub of the steering wheel and having a polygonally-shaped recess, a nut secured to the steering post and having an exterior complemental surface, and a sleeve slidably mounted and adapted to have its exterior surface fit into said recess and its interior surface engaging the periphery of the nut secured to the steering post whereby said steering wheel is locked against independent rotation.

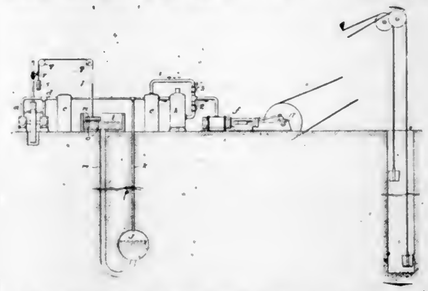
3. The combination with a steering post and a steering wheel, a locking device including an extension having a compartment carried by the hub of the steering wheel, said compartment being adapted to accommodate a sleeve arranged to be slidably mounted on the steering post for movement to and from the steering wheel and adapted to be held against rotation on said steering post, the upper exterior surface of said sleeve being polygonally shaped and adapted to register with a complemental recess formed in said compartment, and locking means effective when said sleeve is moved away from the steering wheel, whereby said steering wheel is locked to the steering post.

4. In a locking means for steering wheels, an extension secured to the hub and having a polygonally-shaped recess, a polygonally-shaped nut carried by the steering post and a slidable member adapted to coöperate with said extension and said nut, said slidable member having a portion of its exterior surface complementally shaped and adapted to enter said recess and the interior surface of said portion being adapted to fit over said nut, the engaging surface of said portion depending upon the position of said slidable member.

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1,231,051. COMPRESSED-AIR POWER SYSTEM. BRUNO V. NORDBERG, Milwaukee, Wis. Filed Jan. 29, 1912. Serial No. 674,056. (Cl. 230—35.)

1. In a compressed air power system the combination with a compressed air engine of an air compressor, an air receiver connected with the discharge of the compressor and having a manually controlled connection with the engine, and an open water tank located above and having a constantly open and unobstructed connection with the air receiver, said receiver and tank being so constructed, arranged and connected that a quantity of compressed air equal to the entire volume of the receiver may be drawn therefrom at an approximately constant pressure.



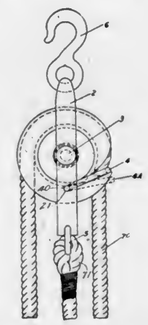
3. In a compressed air power system, the combination of an air compressor, a compressed air engine of variable capacity connected with the compressor and capable of developing greater power than can be directly supplied by the maximum capacity of the compressor, an air receiver of large capacity connected with the compressed air supply conduit between the compressor and engine, and an open water tank having an unobstructed and constantly open connection with said receiver and located above the same at a sufficient distance to balance the normal working presure in the system.

5. In a compressed air power system the combination with a compressed air engine of an air compressor, an air receiver connected with the discharge of the compressor and with the engine, an open water tank located above and having a constantly open connection with said receiver, and a float in said tank adapted when the water rises above a certain level therein to reduce the volume of air discharged by the compressor.

[Claims 2, 4, 6, and 7 not printed in the Gazette.]

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1,231,052. AUTOMATIC SAFETY-PULLEY. DANIEL FAULKNER O'CONNELL, Winnipeg, Manitoba, Canada. Filed Dec. 11, 1916. Serial No. 136,288. (Cl. 57—34.)



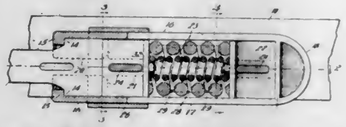
4. In a safety pulley of the character described: a hanger that includes opposite side members and means at the lower end for connection with the free end of a load lifting rope, a sheave journaled on and located within the side members of the hangers and over which the lifting rope passes, the said sheave having a cross slot that takes through the opposite flanges thereof and

which is inclined to the axis thereof, and a rope clamp mounted on the hanger that normally straddles and loosely rides on the pulling end of the lifting rope, and which automatically moves into frictional engagement with the said rope and locks it and the sheave against backward rotation when the strain on the pulling end of the rope is released and the sheave and rope tend to turn backward, the said clamp comprising a U-shaped member whose opposite ends terminate in pintles that journal in the side members fo the hanger at a point below the sheave axis, the said U-shaped member straddling the rope and loosely engaging it as tension is on the pulling end thereof and adapted for gripping the rope whereby to lock the sheave and the rope from turning backward as tension on the pulling end of the rope is released.

[Claims 1 to 3 not printed in the Gazette.]

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1,231,053. DRAFT-RIGGING FOR RAILWAY-CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Nov. 30, 1914. Serial No. 874,690. (Cl. 213—42.)

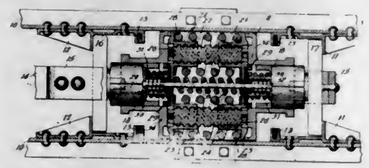


1. In a draft rigging for railway cars, the combination with draft sills, of a draw bar, a yoke, the draw bar and yoke having coöperating shoulders, a front follower, a rear follower, a cushioning device between said followers, keys supporting said followers, said keys being mounted in elongated slots in said sills, and a hood surrounding said yoke and the draw bar butt and movable with one of said keys.

2. In a draft rigging for railway cars, the combination with the draft sills, of a draw bar, a yoke, the draw bar and yoke having coöperating shoulders, a hood encircling said yoke and draw bar, a front follower, and a key passing through said follower and said hood.

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1,231,054. DOUBLE-ENDED FRICTION-GEAR. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Apr. 5, 1915. Serial No. 19,187. (Cl. 213—64.)



1. In a mechanism of the character described, the combination with a casing having a friction shell at each end thereof, of a friction mechanism located in each of said shells, spring means interposed between said friction mechanisms and coöperable with both, and devices for positively compressing said spring means uniformly and simultaneously from each end and insuring simultaneous and equal actuation of said friction mechanisms.

2. In a shock absorbing device of the character described, the combination with a casing having a central spring chamber and a friction shell at each end thereof, of a friction mechanism mounted in each of said shells, spring means in said spring chamber, followers at the ends of said spring means and located within said spring chamber, and means extending between and connected with said followers insuring simultaneous and equal movement thereof toward and from each other.

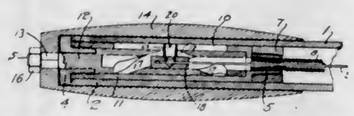
3. In a shock absorbing device of the character described, the combination with a casting having integral friction shells at the ends thereof and an intermediate spring chamber open at the sides, of friction mechanisms mounted in said friction shells, springs in said spring chamber arranged parallelly to the axis of said friction shells, followers at the ends of said springs and intermediate therebetween and the adjacent friction mechanism, and elements extending between and connected with said followers adapted, when one follower is actuated, to move the opposite follower in the opposite direction a like amount.

4. In a shock absorbing device of the character described, the combination with a casing having a friction shell at each end thereof, of friction shoes and a coöperable wedge mounted in each of said shells, a follower slidable within each of said shells near its inner end, a preliminary spring interposed between each of said followers and the adjacent friction shoes, main followers on the inner sides of said first named followers, main springs interposed between said main followers, and means extending between and connected with said main followers for moving the same toward and from each other simultaneously and equal amounts.

5. In a shock absorbing device of the character described, the combination with a bodily longitudinally movable casting having integral friction shells at each end thereof and an intermediate spring chamber open at its sides, of friction mechanisms, one in each of said friction shells, followers mounted in said spring chamber at the ends thereof, springs interposed between said followers, and a pair of elements extending between and connected with said followers adapted, when one follower is actuated, to move the opposite follower in the reverse direction and a like amount.

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1,231,055. CONTROLLING MECHANISM. RAYMOND P. PACKARD, Tacoma, Wash. Filed Jan. 18, 1917. Serial No. 143,197. (Cl. 74—14.)



In a device of the class described, the combination with a hollow handle bar; of an outer sleeve fitting within said handle bar and having a straight longitudinal slot therein; means for fixedly clamping the outer end of said sleeve in said handle bar; a control wire within a casing; means for clamping the inner end of said fixed sleeve to said wire casing; a hollow rotary inner sleeve mounted within said outer sleeve and having a central neck extending out from the handle bar, said sleeve having a helical slot therein; a sliding piece having a hole therein adapted to receive the control wire; a screw passing through the slots in said outer and inner sleeves and into said sliding piece to clamp said control wire therein; and a hand grip mounted outside of the handle bar and secured to the neck of said inner rotary sleeve whereby said sleeve may be operated.

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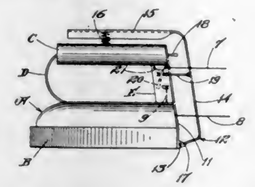
1,231,056. ELECTRIC IRON. CHARLES S. PALMER and DEAN PALMER, Saranac Lake, N. Y. Filed Dec. 18, 1916. Serial No. 137,550. (Cl. 219—25.)

1. The improved electric iron having an operating surface and a heating element, a support secured to said iron, and automatic means arranged to permit the supply of current to the iron when in use and when on its support.

2. The improved electric iron having an operating surface and a heating element, a support secured to the iron, a switch by which the supply circuit is normally broken, and means operated to complete the circuit when the iron is in use when on its support.

3. The improved electric iron having an operating surface and a heating element, a support secured to said iron, said support being arranged to hold said iron with its operating surface free from contact, and automatic means arranged to permit the supply of current to the iron when in use and when on its support.





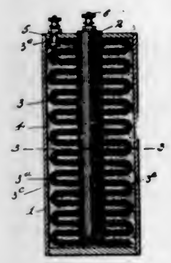
4. The improved electric iron having an operating surface and a heating element, a portion of said iron being arranged to form a support, and automatic means arranged to permit the supply of current to the iron when in use and when on its support.

5. The improved electric iron having an operating surface and a heating element, a support movably mounted on said iron, and means operated by said support for supplying current to the iron when in use and when on said support.

[Claims 6 to 10 not printed in the Gazette.]

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1,231,057. DRY-CELL BATTERY. HERBERT R. PALMER, Cleveland, Ohio. Filed Mar. 2, 1917. Serial No. 152,062. (Cl. 204—38.)



1. A battery of the character described comprising a closed container, an anode consisting of a series of connected leaves of active material enveloped in absorbent material and provided with registering holes, an electrode inserted in said holes, and a depolarizing mixture packed in said container around the electrode between and around the leaves of the anode.

3. An anode for dry-cell batteries, comprising a series of connected leaves of zinc enveloped in absorbent material, arranged in parallel planes and spaced apart, said leaves being provided with registering holes adapted to receive an electrode.

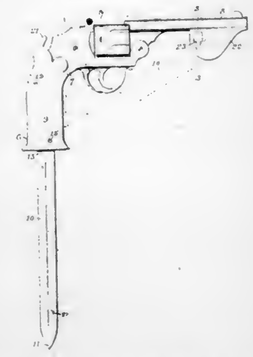
4. An anode for dry-cell batteries, comprising a zinc strip of sinuous formation thereby forming a series of connected opposing members spaced apart, said zinc strip being enveloped in absorbent material and the opposing members being provided with registering holes adapted to receive an electrode.

5. A dry-cell battery comprising in combination a container, an anode consisting of a series of flat connected zinc leaves arranged in parallel planes and spaced apart, an absorbent enveloping member covering said leaves, said parallel leaves being provided with registering holes, an electrode passing through said holes, and a depolarizing mixture packed in said container around the electrode between and around said anode.

[Claims 2 and 6 not printed in the Gazette.]

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1,231,058. PISTOL-BAYONET. ANDREA GABRIELE MICHELE PANSA, Bristol, R. I. Filed May 3, 1917. Serial No. 166,171. (Cl. 42—53.)

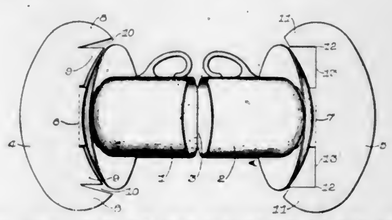


1. In a pistol bayonet, a pistol having a barrel and a handle, a bayonet having a pointed end and a butt end, a guard on the pistol barrel, means for pivotally securing the butt end of the bayonet to the end of the pistol handle, means for locking the bayonet in the open position and means for detachably securing the pointed end of the bayonet in the guard, in the closed position.

[Claims 2 to 7 not printed in the Gazette.]

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1,231,059. TOY. WILLIAM PENTE, Chicago, Ill. Filed May 18, 1916. Serial No. 98,248. (Cl. 46—37.)



1. In combination a front body part and a rear body part joined together at their tops, a front base part and a rear base part, each of said parts being joined to the corresponding body parts, said base parts having means for holding the body parts together at right angles to the base parts and for holding the base part in substantially the same plane.

2. A blank for a toy comprising a front base part, a front body part, a rear body part and a rear base part, said blank being adapted to be folded through one hundred and eighty degrees at the line joining the body parts and through ninety degrees at the line joining the base parts and the body parts, portions of said base parts overlapping to connect and form an integral base.

3. A blank for a toy comprising a front base part, a front body part, a rear body part and a rear base part, said blank being adapted to be folded through one hundred and eighty degrees at the line joining the body parts and through ninety degrees at the line joining the base parts and the body parts, and interlocking flaps on the inner edges of said base parts for holding the parts in position when folded.

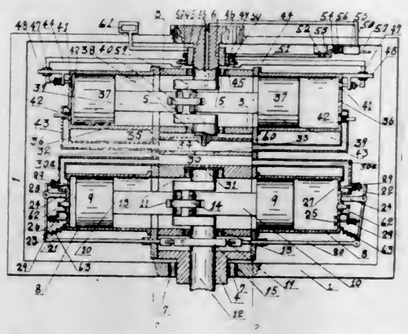
4. In a device of the class described, front and back base parts and front and back body parts formed of a single sheet of material, said body parts being secured together at their tops and being secured to the respective base parts at their bottoms, said base parts having overlapping means for holding the body parts together and

for holding the base parts in substantially the same plane.

5. In combination, a flat body member folded to form a pair of registering sections provided with pictorial representations on their external faces, the free end portions of said sections being folded at right angles and arranged in overlapping relation to form a supporting base.

[Claims 6 and 7 not printed in the Gazette.]

1,231,060. INTERNAL-COMBUSTION MOTOR. ADOLPHE C. PETERSON, Minneapolis, Minn. Filed Apr. 8, 1911. Serial No. 619,783. Renewed Oct. 23, 1916. Serial No. 127,309. (Cl. 123—44.)



1. In an internal combustion motor, rotatable engine cylinders, coöperating engine pistons, a driven element and a fluid compressing means operating against a fixed element, means whereby the rotatable engine cylinders and the coöperating pistons are adapted one to drive the driven element and the other to drive in the opposite direction the fluid compressing means, and means whereby the fluid compressing means delivers fluid into the engine cylinders, and means for the ignition of the fluid in the engine cylinders.

2. In an internal combustion motor, engine cylinders and coöperating pistons, a driven element and a fluid compressing means, means whereby the engine cylinders and the coöperating pistons are adapted one to give rotary motion in one direction to the driven element and the other to give rotary motion in the other direction against a fixed element to the fluid compressing means, means whereby the fluid compressing means delivers fluid into the engine cylinders and means for the ignition of the fluid in the engine cylinders.

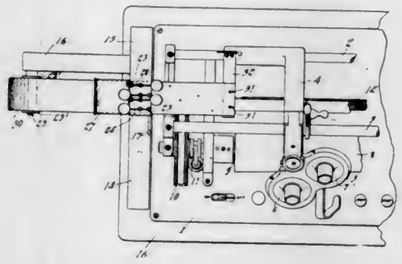
3. In an internal combustion motor, engine cylinders and coöperating pistons, a driven shaft and an air compressing element, operating against a fixed element, means whereby the engine cylinders and the coöperating pistons, may give rotary motion, one to the driven shaft in one direction and the other to the air compressing element in the opposite direction, means whereby the air compressing element delivers fluid into the engine cylinders, means whereby fuel is introduced into the engine cylinders, and means for the ignition of the air and fuel in the engine cylinders.

4. In an internal combustion motor, engine cylinders and coöperating pistons, a driven element, and an air compressing element, means whereby the engine cylinders and the coöperating pistons may impart rotary motion, one to the driven element, and the other to the air compressing element against a fixed element, means whereby the air compressing element delivers into the engine cylinders, means whereby the air delivered from the compressing element to the engine cylinders is carbureted and means for the ignition of the charges delivered into the engine cylinders.

5. In an internal combustion motor, rotating engine cylinders, coöperating pistons, a driven element and a compressing element, means whereby the rotating engine cylinders and the coöperating pistons, impart motion, one to the driven element, and the other to the compressing element against a fixed element, means whereby the compressing element delivers air into the engine cylinders, and means for the introduction of a fuel into the engine cylinders.

[Claims 6 to 15 not printed in the Gazette.]

1,231,061. PHONOGRAPH. ALEXANDER N. PIERMAN, Newark, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Feb. 17, 1911. Serial No. 609,085. (Cl. 274—17.)



1. In a phonograph, a sound recording member and a sound record receiving member, said members being movable with respect to each other, a memorandum receiver in fixed relation with one of said members, and a recording mechanism in fixed relation with the other of said members, said recording mechanism comprising a plurality of devices for indicating different instructions, together with means for operating said devices to cause the same to record upon said memorandum receiver to indicate instructions at certain points on the sound record receiving member.

2. In a device of the class described, the combination with a phonograph, of movable tape supporting means connected with said phonograph and adapted to impart to the tape a movement of translation with reference to the fixed parts of the phonograph, and marking means mounted in proximity to the path of the tape, substantially as described.

3. In a device of the class described, the combination with a phonograph having a rotatable record support, means for supporting a sound box, and means for producing a relative feeding movement between said first named means and said record support, of a tape support connected with said first named means, substantially as described.

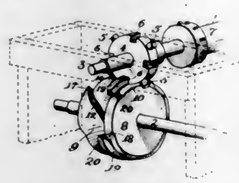
4. In a device of the class described, the combination with a phonograph having a rotatable record support, means for supporting a sound box, and means for producing a relative feeding movement between said first named means and said record support, of a tape support connected with said first named means and adapted to impart to the tape a movement of translation with reference to said record support, and marking means mounted in proximity to the path of the tape, substantially as described.

5. In a device of the class described, the combination with a phonograph having a rotatable record support, means for supporting a sound box, and means for producing a relative feeding movement between said first named means and said record support, of a tape support connected with said first named means and adapted to move the tape in the direction of the relative feeding movement between said first named means and said record support, and marking means immovable in the direction of movement of the tape mounted in proximity to the path thereof, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]



1,231,062. MECHANICAL MOVEMENT. RICHARD H. PIETZSCH, Philadelphia, Pa., and WALTER HURLEMAN, Camden, N. J. Filed Dec. 3, 1912. Serial No. 734,669. (Cl. 74—36.)



1. In a mechanical movement for converting continuous rotary motion into intermittent rotary motion, the combination of a rotatable driving shaft, a rotatable driven shaft, a drum on the driving shaft having a transverse cam on its periphery arranged obliquely to the axis of the shaft and also having a circumferential guide extending about the drum except adjacent to that portion having the cam, and a wheel on the driven shaft having radial portions about its perimeter for engaging the cam of the drum and also having a guide portion in its perimeter intermediate of the radial portions for engaging the circumferential guide of the drum to intermittently lock the driven shaft and its wheel against rotation.

2. In a mechanical movement for converting continuous rotary motion into intermittent rotary motion, the combination of a rotatable driving shaft, a rotatable driven shaft, a drum on the driving shaft having a transverse cam groove arranged obliquely to the axis of the shaft and having a cam projection relatively positioned with respect to the entrance end of the cam groove, and a wheel secured to the driven shaft having a plurality of radial pins arranged to respectively be acted upon by the cam groove and cam projection and in which the cam projection acting upon one pin causes a rotation of the wheel to bring a pin thereof into engagement with the cam groove, and locking means separate from the cam portions and pins for locking the driven shaft and its wheel against movement when the cam groove is not acting upon the pins.

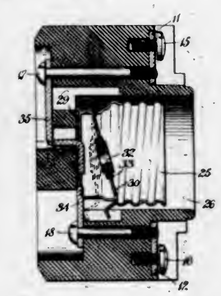
3. In a mechanical movement for converting continuous rotary motion into intermittent rotary motion, the combination of a rotatable driving shaft, a rotatable driven shaft, a drum on the driving shaft having a transverse cam groove arranged obliquely to the axis of the shaft and with one wall extended to provide a circumferential entrance into the groove and having a cam projection relatively positioned with respect to the entrance end of the cam groove but on the side of the drum most distant from the entrance of the cam groove, and a wheel secured to the driven shaft having a plurality of radial pins arranged to respectively and simultaneously be acted upon by the cam groove to start the rotation of the wheel and whose further rotation is accomplished by the cam groove, and locking means separate from the cam portions and pins for locking the driven shaft and its wheel against movement when the cam groove is not acting upon the pins.

4. In a mechanical movement for converting continuous rotary motion into intermittent rotary motion, the combination of a rotatable power shaft, a rotatable driven shaft, a drum on the power shaft having a transverse cam groove therein, and also having a circumferentially inclined guide edge forming a continuation of sai dcam groove, a locking flange radially disposed on said drum and partially encircling said drum, a wheel secured to the driven shaft having a plurality of slots therein, each adapted to receive said flange at certain times, and a radially disposed pin between each pair of slots and projecting beyond the periphery of said wheel, said pins being adapted to ride upon said inclined edge of said drum, whereby one of said pins is guided into and through said cam groove to impart a partial rotation to said wheel.

5. In a mechanical movement a driving member, comprising a peripherally grooved wheel provided with chamfered edges and having a sinuous channel connecting said edges, an elevation on each edge of said wheel having an inclined portion leading from said chamfered edge to the top thereof, said incline being opposite and in alinement with the openings into said channel, a driven member adapted to rotate in the plane of the axis of the driving member, radial pins extending from the periphery thereof and adapted to bear on said chamfered edges, and means located between the pins of the driven member and chamfered edges of the driving member to hold the driven member from movement except at predetermined intervals.

[Claims 6 to 9 not printed in the Gazette.]

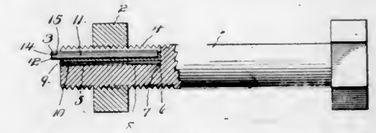
1,231,063. ELECTRICAL RECEPTACLE. CLARENCE D. PLATT, Bridgeport, Conn. Filed Feb. 15, 1917. Serial No. 148,785. (Cl. 173—342.)



1. An electrical receptacle comprising an insulating body having a recess, a screw shell mounted therein, a spring contact connected with the screw shell and carrying an insulated center contact, a center contact plate, circuit terminals, said insulated center contact and screw shell being normally "dead," and means for automatically connecting the insulated center contact, the contact plate and screw-shell in circuit when a plug is screwed into the screw shell.

[Claims 2 to 6 not printed in the Gazette.]

1,231,064. NUT-LOCK. SANTOS PORTESI and JOHN TAINI, Del Rio, Tex. Filed Apr. 29, 1916. Serial No. 94,479. (Cl. 151—25.)



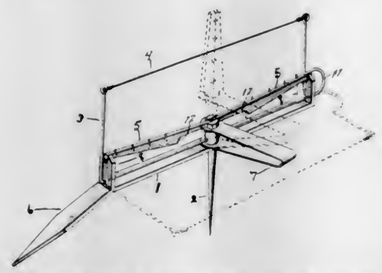
1. A device of the character described, including a threaded bolt, a nut, the threaded portion of which bolt is provided with a longitudinal groove and is provided with a recess at the inner end of said groove, a leaf spring arranged in said groove and provided with a depending end to enter said recess in the bolt, a bearing member arranged in said groove and provided with a longitudinal wall, the outer end of said leaf spring being upturned in front of said bearing member to retain the same in effective position, a nut engaging and locking member including a shaft portion and a shank portion to be received in said bearing member and including a longitudinal knife edge angularly disposed with relation to said shank, said nut engaging and locking member being slightly rotatable within its bearing member, the shank of which is adapted to engage said longitudinal wall of said bearing member to limit the rotation of said nut engaging and locking mem-

ber, to hold the same in effective operative position substantially as described.

2. A device of the character described, including a threaded bolt, a nut, the threaded portion of the bolt being provided with a longitudinal groove, a nut engaging and locking member in said groove, a bearing member therefor in said groove, a leaf spring in said groove disposed under said bearing member to impart resiliency thereto, said nut engaging and locking member including a longitudinal knife edge for immediate engagement with the threads of the nut, said nut engaging and locking member being slightly rotatable in said bearing member, said bearing member including means for limiting the rotation of said nut engaging and locking member to maintain the same in effective operative position.

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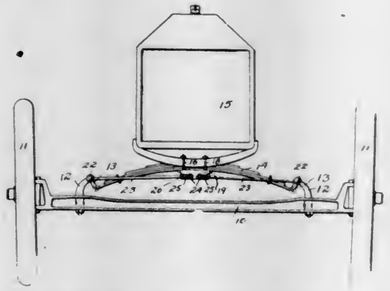
1,231,065. STEEL GAME-TRAP. CHESTER PETER PUES, Navarino, Wis. Filed Apr. 3, 1916. Serial No. 88,573. (Cl. 43—23.)



A trap embodying a frame having notched portions at its ends, a pair of jaws pivoted to the frame between its ends swingable toward one another, the free ends of said jaws being seatable in said notched portions, a spring between the frame and jaws for swinging the jaws toward one another, a trigger member extending longitudinally of the frame and journaled through said portions, said member having arms extending at an angle, one of said arms having a loop portion to bear upon the free end of one jaw for holding the jaws sprung apart, and an element connecting said arms.

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1,231,066. STABILIZER FOR MOTOR-VEHICLES. HAE R. REYNOLDS and FRANK C. BEEBE, Bedford, Iowa. Filed Mar. 27, 1916, Serial No. 87,122. Renewed May 5, 1917. Serial No. 166,770. (Cl. 21—182.)



1. A stabilizer for motor vehicles, comprising a plate curved from its central portion downwardly and outwardly to its ends, a downwardly extending flange at the front edge of said plate, forwardly extending parallel flanges at the ends of said first flange, means for securing said plate below a spring, a pair of alined rods having their adjacent ends slidably extended through the respective forwardly extending flanges, means for supporting the outer ends of said rods rigid with relation to the axle of the vehicle, nuts on the inner ends of said rods, and springs on said rods between said nuts and said forwardly extending flanges.

2. A stabilizer for motor vehicles, comprising a supporting member adapted to be mounted on the central lower portion of the spring, having forward extensions, rods slidably mounted in said extensions, and extending away therefrom, and having their outer ends secured with relation to the axle of a vehicle, nuts on the inner ends of said rods, and springs on said rods between said nuts and said forward extensions.

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1,231,067. CONNECTOR FOR BARGES. WALTER C. SAXSOM, Pittsburgh, Pa. Filed Feb. 28, 1916. Serial No. 80,918. (Cl. 114—235.)

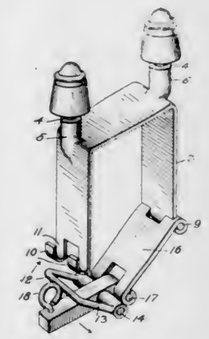


1. A barge having in combination therewith a pair of complementary connecting elements located at each end of the barge, one element of each pair being provided with means for varying its length, like connecting elements being located at diagonally opposite corners of the barge.

2. A barge having in combination therewith a pair of complementary flexible connecting elements, located at each end of the barge, one element of each pair being provided with means for varying its length movably but permanently connected to each end of the barge, like connecting elements being located at diagonally opposite corners of the barge and means for detachably connecting the elements of one barge with complementary elements on an adjoining barge.

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1,231,068. INSULATOR-SUPPORT FOR CROSS-ARMS. CHARLES C. SAYLOR, Pittsburgh, Pa. Filed Aug. 9, 1915. Serial No. 44,418. (Cl. 24—68.)



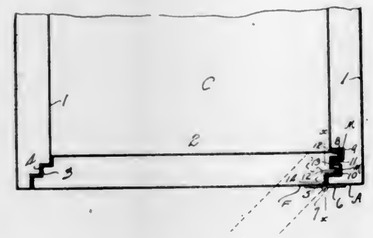
1. Fastening means for a three-sided rectangular insulator support of the construction described having a hinging terminal at one side and an up-turned double centrally divided open socket terminal at the other side; consisting of a swinging clamping plate pivoted to said hinging terminal and adapted to form a fourth closing and holding side, a locking bar pivoted to the free end of the clamping plate, and a link positively pivoted to the locking bar adjacent its pivotal connection with the clamping plate adapted to engage said open socket terminal.

2. Fastening means for a three-sided rectangular insulator support of the construction described having a hinging terminal at one side and an up-turned double centrally divided open socket terminal at the other side; consisting of a swinging clamping plate pivoted at one end to said hinging terminal and having its free end apertured, said clamping plate being adapted to form a fourth closing and holding side, a locking bar pivoted in the aperture in the free end of the clamping plate, and a looped holding device positively pivoted to the locking bar adjacent its pivoted end and adapted to engage said open socket terminal and be tightened therein upon throwing said bar around its pivot and against the clamping plate.



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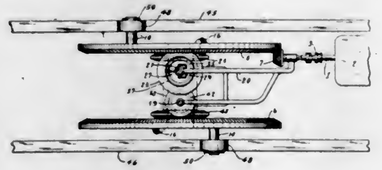
1,231,069. DOOR-JOINT CONSTRUCTION. ADOLF H. SCHAEFFERT, Youngstown, Ohio, assignor to The General Fireproofing Company, Youngstown, Ohio, a Corporation of Ohio. Filed June 26, 1915. Serial No. 36,488. (Cl. 189—46.)



A hinged joint for sheet metal cabinet doors including in combination, a door case having an inwardly stepped tongue and groove portion, a hinge carried by the door case and having the axis of its pintle located adjacent the corner of the outermost tongue thereof and intersected by a plane parallel with the outer face of said tongue, a door connected with said hinge and having a stepped tongue and groove portion formed therewith and complemental to that of the door case, the said tongue and groove portion of both the door case and door lying within the same area at the door case side of the plane above mentioned when they are interlocked.

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1,231,070. POWER-TRANSMITTING MECHANISM. RUDOLPH EDWARD SCHLEY, Beaver Dam, Wis. Filed Dec. 14, 1914. Serial No. 877,010. (Cl. 74—53.)



1. The combination of a series of sets of differential gear members, including an initial and a final set, and having the driven members of the initial set operatively connected to actuate the driving member of the final set, and means for transmitting propulsive impulses successively to the initial set.

9. The combination with a set of disks, provided with radially adjustable crank pins, of a pair of opposing rack bars for each disk connected with each other and having slotted yoke connection with the crank pin carried by such disk, a set of oscillatory gear members, one engaging one rack bar of each pair at its upper side, and another engaging the opposing rack bar of each pair at its under side, a set of differential gear members, and clutches for transmitting the motion of the upper rack bars in one direction thereto and the motion of the lower rack bars in the other direction thereto, said clutches being adapted to successively engage the respective differential gear members in a direction for motion transmission thereto continuously in one direction for any given clutch adjustment.

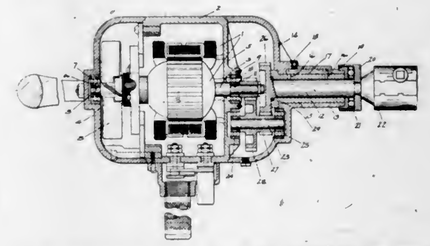
12. A power transmitting mechanism, including a plurality of rotary differential members, a set of oscillatory ring gears, each provided with clutches for engaging one of said differential members in one direction of oscillation, and means for simultaneously adjusting said clutches to engage said differential members in the other direction of oscillation, said adjusting means comprising a set of clutch adjusting wedges, rings connected with said wedges, a set of expander disks for operating said rings, and means for manually actuating one of said expander disks, said expander disks being provided with mutually engaging wedge shaped projections, whereby when one of said disks is oscillated the disks will be separated to actuate one or the other of said wedge supporting rings, substantially as described.

14. A power transmitting mechanism, including a set of oscillatory gear members, a set of reversible clutches inclosed in said gear members and having outwardly extending arms loosely socketed therein, a set of clutch actuating mountings adapted to be oscillated to shift the clutches in two directions, and means exterior to said gear members for oscillating said clutch setting mountings.

[Claims 2 to 8, 10, 11, 13, and 15 to 17 not printed in the Gazette.]

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1,231,071. ELECTRICALLY-OPERATED TOOL. FRANKLIN SCHNEIDER, Cleveland, Ohio, assignor, by mesne assignments, to The Van Dorn Electric Tool Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 13, 1911. Serial No. 608,382. (Cl. 172—36.)



1. In mechanism of the character described, the combination of a casing provided at one end with a transverse partition integral with said casing, imperforate save for a central aperture; walls respectively closing the other end of said casing and forming a chamber in connection with said partition; a single motor housed centrally in said casing and having a spindle, one end of said spindle extending through the aperture in said partition into such chamber and the other end of said spindle being journaled in the wall closing the other end of said casing; an anti-friction bearing in said partition adapted to support such extending spindle-end, the latter being otherwise un-supported; a gear secured on such extending spindle-end and lying in such chamber; a tool spindle journaled in and wholly supported by the end-wall of the casing adjacent to said partition; a gear on said spindle lying within the chamber between said end-wall and partition; an intermediate spindle disposed within said chamber and journaled in said partition and adjacent end-wall; and gears borne by said intermediate

spindle and meshing respectively with the gear on said motor spindle and the gear on said tool spindle.

2. In mechanism of the character described, the combination of a casing provided at one end with a transverse partition integral with said casing, imperforate save for a central aperture; walls respectively closing the outer end of said casing and forming a chamber in connection with said partition; a single motor housed centrally in said casing and having a spindle, one end of said spindle extending through the aperture in said partition into such chamber and the other end of said spindle being journaled in the wall closing the other end of said casing, such aperture being formed to permit the snug, rotatable engagement of such first spindle-end therein; an anti-friction bearing for such extending spindle-end, comprising an outer ball-race mounted in said partition and an inner ball-race fitted on such spindle-end, the latter being otherwise un-supported; a washer attached to said partition and retaining said outer ball-race in place, said washer surrounding such spindle-end and closing the aperture through said partition against the passage of lubricant; a gear secured on such extending spindle-end and lying in such chamber; a tool spindle journaled in and wholly supported by the end-wall of the casing adjacent to said partition; a gear on said spindle lying within the chamber between said end-wall and partition; an intermediate spindle disposed within said chamber and journaled in said partition and adjacent end-wall; and gears borne by said intermediate spindle and meshing respectively with the gear on said motor spindle and the gear on said tool spindle.

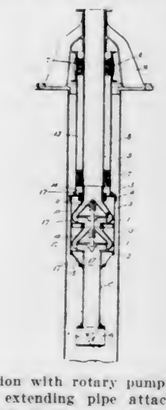
3. In mechanism of the character described, the combination of a casing provided at one end with a transverse integral partition, imperforate save for a central aperture; walls respectively closing the outer end of said casing and forming a chamber in connection with said partition; a single motor housed centrally in said casing and having a spindle, one end of said spindle extending through the aperture in said partition into such chamber and the other end being journaled in the wall closing the other end of said casing, such aperture being formed to permit the snug, rotatable engagement of such first-named spindle end therein; such end being of reduced diameter exteriorly of such partition, thereby forming a shoulder on said spindle; an anti-friction bearing for such extending spindle end, comprising an outer ball-race mounted in said partition and an inner ball-race fitted on such spindle against such shoulder, the spindle being otherwise unsupported; a washer attached to said partition and retaining said outer ball-race in place, said washer surrounding such spindle-end and closing the aperture through said partition against the passage of lubricant; a gear secured on such extending spindle end and lying in such chamber, the mounting and disposition of said bearing and said gear preventing endwise movement of said motor and spindle; a tool spindle journaled in and wholly supported by the end-wall of the casing adjacent to said partition; a gear on said spindle lying within the chamber between said end-wall and partition; an intermediate spindle disposed within said chamber and journaled in said partition and adjacent end-wall; and meshing respectively with the gear on said motor spindle and the gear on said tool spindle.

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1,231,072. ROTARY-PUMP MECHANISM. ROBERT SCHORR, San Francisco, Cal. Filed June 27, 1916. Serial No. 106,136. (Cl. 103—43.)

1. In combination with rotary pumping means, a revoluble pipe attached thereto, and provided with means for revolving the same, a stationary discharge pipe within, and concentric with, said revoluble pipe, and bearings for the revoluble outer pipe supported by and fastened to the stationary discharge pipe.

2. In combination with rotary pumping means, a revoluble pipe attached thereto, and provided with means for revolving the same, a stationary discharge pipe within, and concentric with, said revoluble pipe, and means for maintaining the annular space between the outer and inner pipes free from the water of the source of supply and from the water in the discharge pipe.

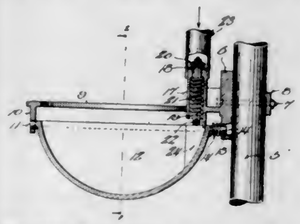


3. In combination with rotary pumping means, a revoluble upwardly extending pipe attached thereto, and provided with means for revolving the same, a stationary discharge pipe within, and concentric with, said revoluble pipe, bearings for the first-named pipe, and means for lubricating the bearings from above.

4. In combination with a rotary pumping means, a revoluble pipe attached thereto, and provided with means for revolving the same, a stationary discharge pipe within, and concentric with, said revoluble pipe, and a connection between the suction and liquid spaces to relieve the unbalanced pressure on the runners.

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1,231,073. STOCK-WATERER. FLORIAN F. SCHWERTFEGER and ALBERT A. SCHWERTFEGER, Oshkosh, Wis. Filed Jan. 13, 1917. Serial No. 142,150. (Cl. 119—75.)



1. A stock waterer comprising an annular shield, a bowl freely pivotally suspended adjacent said shield at points adjacent its mouth in the vertical plane of its center of gravity whereby to assume by gravity a normal horizontal position, a water supply means including a valve at one side of the shield and means for opening the valve operable upon pivotal movement of the bowl from its normal horizontal position.

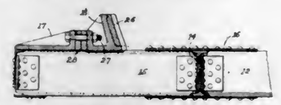
3. A stock waterer comprising a shield, rigid journal members thereunder, a bowl, pintles on the bowl slidable in the journal members, one of said pintles being of greater length whereby to permit detachment of the bowl and releasable means for urging said bowl to a position wherein both pintles are held in the journal members.

[Claims 2 and 4 to 7 not printed in the Gazette.]

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1,231,074. TANK-CAR CONSTRUCTION. GEORGE W. SCOTT and PAUL CARPENTER, Chicago, Ill. Filed Nov. 21, 1902. Serial No. 132,309. Renewed Nov. 22, 1916. Serial No. 132,918. (Cl. 105—264.)

1. In a tank car, the combination with a tank, of an end chock block fixed upon the frame and composed of parts separated by wedges, the face of the block having a recess filled with lead, substantially as described.



2. An adjustable take-up device for anchoring tanks to cars, comprising an anchor bracket, a follower and one or more adjustable wedges interposed between the two.

3. The combination with a car body and a tank, of an adjustable take-up device for anchoring said tank to said car body, comprising an anchoring bracket, a follower and a pair of reversely acting wedges.

4. In a tank car and in combination, an under frame, a fixed abutment carried thereby, a block mounted on the frame in advance of the abutment and adapted to receive endwise pressure provided by a tank in opposition to the abutment, and a spacing structure between the block and abutment adapted to transfer the pressure on the block to the abutment, said spacing structure permitting variations in the position of the block relative to the abutment.

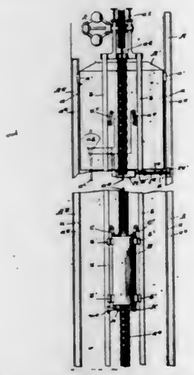
5. In a tank car and in combination, an under frame, a fixed abutment carried thereby, a block mounted on the frame in advance of the abutment and adapted to receive endwise pressure provided by a tank in opposition to the abutment, and a spacing structure between the block and abutment adapted to transfer the pressure on the block to the abutment, said spacing structure comprising spacing members adapted to vary the position of the block relative to the abutment.

[Claim 6 not printed in the Gazette.]

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1,231,075. ELEVATOR. CHARLES D. SEEBERGER, New York, N. Y. Filed July 8, 1914. Serial No. 849,673. (Cl. 187—17.)



1. In a device of the class described, an elevator car adapted to travel in a shaft, an electrically propelled counterbalance, flexible connections between the counterbalance and the car, said counterbalance comprising a magnetic field and core forming a self-starting motor, guide-rails on which the counterbalance runs, means in the car to supply electric current to either of said rails and means to lead the current from either rail to reverse its direction in the field of the counterbalance.

2. In a device of the class described, an elevator car adapted to travel in a shaft, an electrically propelled counterbalance moving oppositely to the travel of the car, flexible connections between the car and counterbalance, guide-rails on which the counterbalance runs, means in the car to suppy electric current to either of said rails, and means on the counterbalance to lead the current from either rail to reverse its direction in the field of the counterbalance.

3. In a device of the class described, an elevator car adapted to travel in a shaft, an electrically propelled counterbalance, flexible connections between the counterbalance and car, guide-rails on which the counterbalance runs, means in the car to supply electric current to either of said rails, and trolleys on the counterbalance to lead the current from either rail to reverse its direction in the field of the counterbalance.

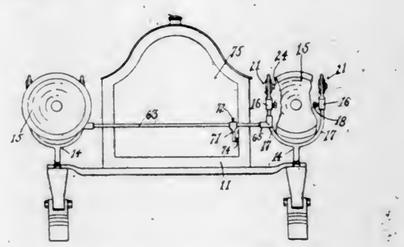
4. In a device of the class described, an elevator car adapted to travel in a shaft, a traveling counterbalance by which the movement of the car is controlled and forming a magnetic field, a magnetic core by which the field is moved to actuate the car, means in the car to energize and deënergize the field, and means on the counterbalance to successively energize the core magnets.

5. In a device of the class described, an elevator car adapted to travel in a shaft, a traveling counterbalance by which the movement of the car is controlled and forming a magnetic field, a magnetic core by which the field is actuated to move the car, an electric-controller in the car in circuit with the field, and brushes on the counterbalance to excite the core magnets.

[Claims 6 to 11 not printed in the Gazette.]

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1,231,076. AUTOMOBILE-HEADLIGHT CONTROL. JAMES J. SEXTON and REYNOLD E. KLAGES, Columbus, Ohio. Filed Oct. 29, 1915. Serial No. 58,641. (Cl. 240—62.)



1. The combination with a headlight support and a headlight, of a suspension-device for said headlight interposed between said support and said headlight, said suspension-device comprising an upwardly extending member arranged for being secured to said support, and a downwardly extending member arranged for having said headlight secured thereto, the upper portions of said members pivoted together on a pivot located above the greater portion of the weight of said headlight attached to said downwardly extending member, and means for moving said headlight on said pivot with relation to said support for adjusting the projection of the says of said headlight up or down.

2. The combination with a headlight support and a headlight, of a suspension-device for said headlight between said support and said headlight, said suspension-device comprising an upwardly extending member arranged for being secured to said support, and a downwardly extending movable member arranged for having said headlight secured thereto, the upper ends of said members being pivoted together for suspending said headlight pendulumwise with the greater portion of its weight below said pivot, a stop for limiting said pendulumwise movement of said headlight, and a spring normally urging conction between said movable member and stop.

3. The combination, with an automobile and a headlight, of a headlight support, and a suspension-device for said headlight interposed between said support and said headlight, said suspension-device comprising a movable member to which said headlight is arranged to be secured for suspending said headlight pendulumwise, a stop, a

spring normally urging coaction between said movable member and stop, and means for adjusting the inclination of said movable member with relation to the vertical.

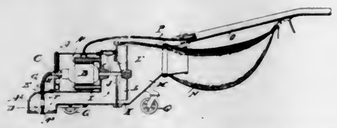
4. The combination, with an automobile and a headlight, of a headlight support, and a suspension-device for said headlight interposed between said support and said headlight, said suspension-device comprising a movable member to which said headlight is arranged to be secured for suspending said headlight pendulumwise, a stop, a spring normally urging coaction between said movable member and stop, and means for adjusting the force of resilience of said spring.

5. In combination, with an automobile and a headlight, of a headlight support, and a suspension device for said headlight interposed between said support and said headlight, said suspension-device comprising a pair of plates pivoted together and having a cavity therebetween, and a spiral spring in said cavity about the pivotal axis between said plates and having attachment with said respective plates, said headlight having attachment with one of said plates, and the other of said plates arranged to be secured to the automobile.

[Claims 6 to 10 not printed in the Gazette.]

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1,231,077. VACUUM-CLEANER. IRA L. SHEFFLER, Detroit, Mich. Filed Dec. 4, 1916. Serial No. 134,832. (Cl. 15—60.)



1. In a vacuum cleaner, a wheeled casing provided with a nozzle, a brush located in the nozzle, a motor located in the casing and having its shaft extending through the front of the casing, a gear casing located at one end of the nozzle, a gear mechanism located in the gear casing, one of the gears of which has a short stub shaft extending through the inner wall of the gear casing above the nozzle, a flexible shaft connected at one end to the motor shaft and extending laterally over the nozzle and connected to said stub shaft of the gear mechanism, and a suction creating means located in the wheeled casing.

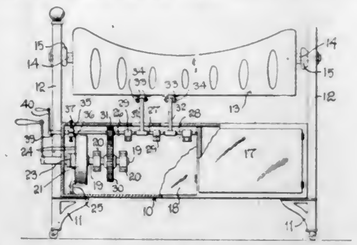
2. In a vacuum cleaner, a wheeled casing provided with a nozzle projecting from the front of the casing, a brush located in the nozzle, a motor located in the wheeled casing and having its shaft extending through the front of the casing above the plane of the nozzle, a gear mechanism located at one end of the nozzle and operatively connected to the brush, a flexible shaft connected at one end to the motor shaft and extending downwardly and at its outer end connected to said gear mechanism, whereby said flexible shaft is supported wholly in front of the wheeled casing over the nozzle, and a suction creating means located in the wheeled casing.

3. In a vacuum cleaner, a wheeled casing provided with a nozzle projecting from the front of the casing and whose rear wall lies substantially in alinement with the front wall of the casing, a gear casing secured directly to one end wall of the nozzle, a gear mechanism in the gear casing, a duct leading from the nozzle through the wheeled casing, a motor located between the inner wall of said duct and the top of said wheeled casing and having its shaft extending through the front wall of the casing above the nozzle, a flexible shaft suspended from said motor shaft over the nozzle and connected to said gear mechanism, and a suction creating means located in the wheeled casing in the rear of the motor.

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1,231,078. MOTOR-OSCILLATED CRIB. WILLIAM F. SILL and JOHN M. FELDHAUS, St. Louis, Mo. Filed Dec. 23, 1916. Serial No. 138,645. (Cl. 185—37.)

1. The combination with a swinging crib, of a motor a shaft operatively connected to the motor and having oppositely disposed cranks, connecting rods extending from the crank shaft of the crib, the adjacent ends of the connecting rods having sliding engagement with the crib.



2. The combination with a swinging crib, of means for oscillating the crib comprising a crank shaft having oppositely disposed cranks, connecting rods extending from the cranks to the crib, and having rollers, and transversely extending tracks on the crib with which the rollers engage.

3. In a structure of the character described, vertically extending standards, a crib disposed between said standards and having trunnions operatively supported by the standards, the trunnions being disposed above the bottom of the crib, transversely extending tracks on the bottom of the crib, a motor driven crank shaft, and connecting rods pivotally connected to the cranks of said shafts and having sliding engagement with said tracks.

[Claim 4 not printed in the Gazette.]

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1,231,079. SHIPPING-RECEPTACLE. CHARLES R SMITH, Toledo, Ohio. Filed Sept. 29, 1916. Serial No 122,856. (Cl. 229—48.)



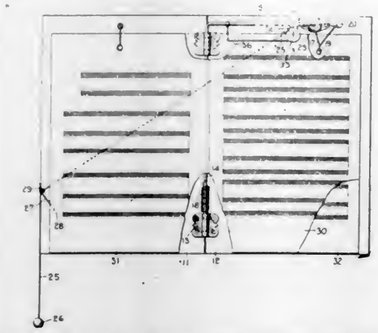
The combination in a shipping receptacle having a body formed from a blank of fibrous material with the edges abutting each other, of a metallic clamp, the length thereof being greater than the width, provided with two series of prongs struck from the body of the metal and the longitudinal free edges outside the series of prongs slightly turned; the clamp being lapped over the abutting edges of the blank, the prongs passed through and the ends bent down upon the fibrous material, and the turned longitudinal edges of the clamp pressed into the outer surface of the material, whereby a closed joint is formed.

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1,231,080. MUSIC-SHEET TURNER. CORNELIUS W. SMITH and EDWARD A. O'BRIEN, New York N. Y. Filed Apr. 15, 1916. Serial No. 91,315. (Cl. 84—135.)

A music sheet turner comprising stiff covers hingedly connected to open bookwise; a pivotally mounted rod having a lateral arm disposed between said covers; a spring operating to normally hold said extension in juxtaposed relation to the left-hand cover when the covers are opened; means for holding said extension in juxtaposed relation to said right-hand cover, said means embodying a bent

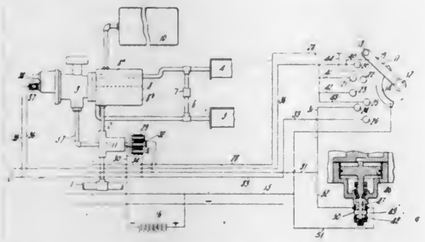




wire hitch shaped to form a coiled extension overlying the sheet below that to be turned, for preventing the lifting thereof when the intermediate sheet is turned; and means mounted on said arm for engaging a loose sheet, said means embodying a spring-actuated clamp mounted on said arm.

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1,231,081. AIR-BRAKE SYSTEM. JACOB RUSH SNYDER, Pittsburgh, Pa., assignor to Percy E. Donner, Pittsburgh, Pa. Filed June 10, 1914. Serial No. 844,274. (Cl. 188—4.)



1. In a pneumatic electric air brake system, the combination of a train pipe, an engineer's valve, a brake cylinder, a triple valve and a local reservoir, valve mechanism for controlling the release of the brake cylinder and the service and emergency evacuation of the train pipe, a holding magnet, a service magnet and an emergency magnet for actuating said valve mechanism respectively, a circuit controller actuated by movement of the engineer's valve and arranged in release and holding positions to energize the holding magnet, in service position to energize the service magnet, and in emergency position to energize the emergency magnet, and in other positions to deënergize all of said magnets.

2. In a pneumatic electric air brake system, the combination of a train pipe, an engineer's valve, a brake cylinder, a triple valve and a local reservoir, a single valve for controlling the release of the brake cylinder and for securing service and emergency evacuations of the train pipe, three magnets operatively connected to said valve for moving the same to different positions, circuits connected to said valves, and a circuit controller actuated by movement of the engineer's valve and arranged in each of different positions of the latter to energize one of said magnets.

3. In a pneumatic electric air brake system, the combination of a train pipe, an engineer's valve, a brake cylinder, a triple valve, and a local reservoir, valve mechanism for controlling the release of the brake cylinder and securing service and emergency evacuations of the train pipe, a holding magnet, a service magnet, a circuit controller for actuating said several magnets successively in different positions of said circuit controller, and a circuit closer arranged to be closed by the triple valve in emergency position and connected to the emergency magnet circuit.

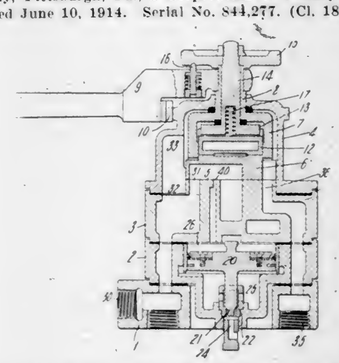
4. In a pneumatic electric air brake system, the combination of a train pipe, an engineer's valve, a triple valve, and a local reservoir, valve mechanism for controlling the release of the brake cylinder and the service and emergency evacuation of the train pipe, a holding magnet, a service magnet and an emergency magnet for actuating said valve mechanism, a circuit closer arranged to be closed by the triple valve in emergency position and being connected in the emergency magnet circuit, and a circuit controller movable with the engineer's brake valve and arranged in release and holding positions to energize the holding magnet, in service position to energize the service magnet, and in emergency to energize the emergency magnet, and in all positions except emergency position to connect the circuit closer to a source of current.

5. In a pneumatic electric air brake system, the combination of a train pipe, an engineer's valve, an equalizing valve, a brake cylinder, a triple valve, and a local reservoir, valve mechanism for controlling the release of the brake cylinder and the service and emergency evacuation of the train pipe, a holding magnet, a service magnet, and an emergency magnet for actuating said valve mechanism, a circuit controller arranged in different positions to energize different ones of said magnets, and a circuit closer actuated by the equalizing valve and arranged to hold the service magnet circuit closed when the equalizing valve is opened and to break said circuit when the equalizing valve closes.

[Claims 6 and 7 not printed in the Gazette.]

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1,231,082. ENGINEER'S VALVE. JACOB RUSH SNYDER, Pittsburgh, Pa., assignor to Pittsburgh Air-Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 10, 1914. Serial No. 844,277. (Cl. 188—7.)



1. In an engineer's brake valve, a valve seat provided with ports, a main valve member coöperating with said seat and provided with cavities and ports and controlling the ports in the valve seat, and an independent valve member coöperating with the main valve member and controlling the ports therein.

2. In an engineer's brake valve, a valve seat provided with ports, a main valve coöperating with said seat and provided with cavities and ports and controlling the ports in the valve seat, an independent valve member coöperating with the main valve member and controlling

the ports therein, a hollow actuating stem for the main valve, and an actuating stem for the independent valve extending through said hollow stem.

3. In an engineer's brake valve, a valve seat provided with ports, a main valve coöperating with said seat and provided with cavities and ports and controlling the ports in the valve seat, an independent valve member cooperating with the main valve member and controlling the ports therein, an actuating means for each valve, and a spring indicator mounted on the operating means of one of said valves and arranged to engage notches in the actuating means of the other valve.

4. In an engineer's brake valve, a valve seat provided with ports, a main valve coöperating with said seat and provided with cavities and ports and controlling the ports in the valve seat, an independent valve member coöperating with the main valve member and controlling the ports therein, and spring means for resisting the movement of the independent valve at the limits of its movements in both directions.

5. In an engineer's brake valve, a valve seat provided with ports, a main valve coöperating with said seat and provided with cavities and ports and controlling the ports in the valve seat, an independent valve member coöperating with the main valve member and controlling the ports therein, and spring means arranged to return the independent valve from emergency to service position.

[Claims 6 to 11 not printed in the Gazette.]

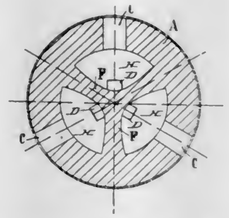
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1,231,083. PROCESS OF PRODUCING PURE ZINC. HEINRICH SPECKETER, Griesheim-on-the-Main, Germany. Filed Sept. 2, 1913. Serial No. 787,667. (Cl. 75—153.)

The method of producing zinc from zinkiferous materials, which consists in mixing the zinkiferous materials with carbonaceous material, then heating the mixture in the form of separate charges by direct heat and with agitation to such a degree as to cause the reduction of the impurities (such as, for instance, cadmium oxid and the like), together with volatilization of the reduction products thus freed, and then proceeding to the reduction of the zinc compounds.

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1,231,084. APPARATUS FOR PRODUCING ZINC AND OTHER SIMILAR METALS. HEINRICH SPECKETER, Griesheim-on-the-Main, Germany. Filed Jan. 29, 1915. Serial No. 4,989. (Cl. 204—64.)



1. A rotary electric furnace provided with at least one partition disposed longitudinally in the furnace to divide the same into at least two reduction chambers.

2. A rotary electric furnace provided with two partitions disposed longitudinally in the furnace to divide the same into three reduction chambers.

3. A rotary electric furnace provided with three partitions extending from the center of the furnace and disposed longitudinally in the furnace to divide the same into three equally large reduction chambers arranged around the central axis of the furnace.

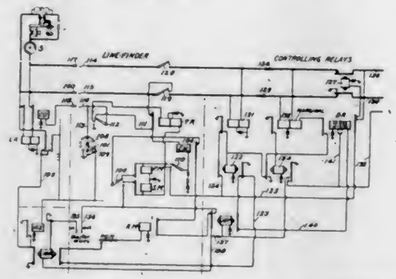
4. A rotary electric furnace having a reduction chamber, and a partition adjacent to the chamber and disposed longitudinally in the furnace dividing the same into a plurality of reduction chambers each opening directly into the first mentioned reduction chamber.

5. A rotary electric furnace provided with at least one partition disposed longitudinally in the furnace to divide the same into at least two reduction chambers, said partition being provided with openings, connecting said chambers for the purpose described.

[Claims 6 to 9 not printed in the Gazette.]

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1,231,085. TELEPHONE-EXCHANGE SYSTEM. ARTHUR B. SPERRY, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Sept. 22, 1916. Serial No. 121,568. (Cl. 179—18.)




1. In a telephone exchange system, the combination with telephone lines, senders associated therewith, trunk lines including automatic switches adapted to interconnect said lines, said trunks including test conductors, driving magnets for said switches, a local grounded control circuit for said magnets, a set of repeating relays normally controlling said circuit and operated by said senders to set said switches, a group of two-wire trunks connected to one of said switches, other automatic switches in which said trunks terminate, driving magnets therefor, control relays for said magnets at said switches, a metallic control circuit including one of said trunks, the associated control relay, and contacts of said repeating relays, means associated with said repeating relays adapted to render inoperative said grounded control circuit and to render operative said metallic control circuit, and a device associated with the test conductor of the switch containing said trunk group and adapted automatically to operate said means when said group is selected.

2. In a telephone exchange system, the combination with telephone lines, senders associated therewith, trunk lines including automatic switches adapted to interconnect said lines, said trunks including test conductors, automatic switches adapted to interconnect said lines, stepping magnets for said switches, a local grounded stepping circuit for said magnets, a set of repeating relays normally controlling said circuit and operated by said sender to set said switches, a group of two-wire trunks connected to one of said switches, an office wherein said trunks terminate in automatic switches, stepping magnets for said switchys, stepping relays for said switches, a metallic stepping circuit including one of said two-wire trunks, the associated relay and contacts of said repeating relays, an electro-responsive device associated with said repeating relays adapted to render said grounded stepping circuit inoperative and to render said metallic stepping circuit operative, said device being included in the test conductor, and a switch associated with the test conductor of the switch containing the two-wire trunk group and adapted when said group is selected automatically to operate said device.

3. In a telephone exchange system, the combination with telephone lines, senders associated therewith, trunk lines including automatic switches adapted to interconnect said lines, said trunks including a pair of talking conductors and a test conductor, driving magnets for said switches, a local grounded control circuit for said magnets, a set of repeating relays normally controlling said circuit and operated by said senders to set said switches, a group of two wire trunks connected to one of said switches, other automatic switches in which said trunks terminate, driving magnets therefor, control relays for said magnets at said switches, a metallic control circuit including one of said two wire trunks, the associated control relay and contacts of said repeating relays, an electroresponsive device associated with the repeating relays and included in the test conductor but unresponsive to the initial electrical condition thereof, said device being adapted when operated to render inoperative said grounded control circuit and to render operative said metallic control circuit, and a device associated with the test conductor of the switch containing the two wire trunk group and adapted automatically to operate said device when said trunk group is selected.



4. In a telephone exchange system, the combination with telephone lines, senders associated therewith, automatic switches adapted to interconnect said lines, stepping magnets therefor, a local grounded stepping circuit for said magnets, a set of repeating relays normally controlling said circuit and operated by said sender to set said switches, a group of two-wire trunks connected to one of said switches, an office wherein said trunks terminate in automatic switches, stepping magnets for said switches, stepping relays for said switches, a metallic stepping circuit including one of said two-wire trunks, the associated relay and contacts of said repeating relays, a double-wound differential relay associated with said repeating relays adapted to render said grounded stepping circuit inoperative and to render said metallic stepping circuit operative, a circuit for said relay including both windings differentially during the setting of said switches at the originating office over the grounded circuit, and means associated with the switch containing the two-wire trunk group adapted, when said group is selected, to shunt one of the windings of said relay whereupon the same operates.

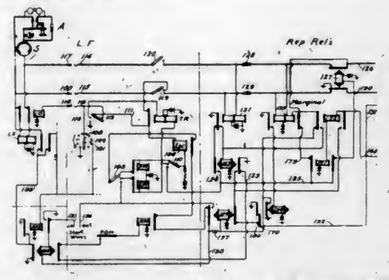
5. In a telephone exchange system, the combination with telephone lines, senders associated therewith, automatic switches adapted to interconnect said lines, stepping magnets therefor, a local grounded stepping circuit for said magnets, a set of repeating relays normally controlling said circuit and operated by said sender to set said switch, a group of two-wire trunks connected to one of said switches, an office wherein said trunks terminate in automatic switches, stepping magnets for said switches, stepping relays at said switches, a metallic stepping circuit including one of said two-wire trunks, the associated relay at the distant office and contacts of said repeating relays, a double-wound differential relay associated with said repeating relays adapted to render said grounded stepping circuit inoperative and to render said metallic stepping circuit operative, a circuit for said relay including both windings differentially during the setting of the switches at the originating office over the grounded circuit, and an auxiliary step-by-step switch on the brush shaft of the switch containing the two-wire trunk group adapted when said group is selected, to shunt one of the windings of said differential relay whereupon the same operates.

[Claims 6 and 7 not printed in the Gazette.]

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1,231,086. TELEPHONE-EXCHANGE SYSTEM. ARTHUR B. SPERRY, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Nov. 6, 1916. Serial No. 129,739. (Cl. 179—18.)

1. In a telephone exchange system, the combination with telephone lines, senders associated therewith, trunk lines including automatic switches adapted to interconnect said lines, driving magnets for said switches, a local grounded control circuit for said magnets, a set of repeating relays normally controlling said circuit and operated by said senders, a group of two-wire trunks connected to one of said switches, other automatic switches in which said trunks terminate, driving magnets therefor, control relays for said magnets at said switches, a metallic control circuit including one of said trunks, the associated control relay and contacts of said repeating relays, an electromagnetic switching device associated with said repeating relays adapted to render inoperative said grounded control circuit and to render operative said metallic control circuit, and means for rendering inoperative said grounded control circuit and for rendering operative said metallic control circuit when said trunk group is selected.




2. In a telephone exchange system, the combination with telephone lines, senders associated therewith, trunk lines including automatic selector switches adapted to interconnect said lines, stepping magnets for said switches, a local grounded stepping circuit for said magnets, a set of repeating relays normally controlling said circuit and operated by said sender, a group of two-wire trunks connected to one of said switches, an office wherein said trunks terminate in automatic selector switches, stepping magnets for said switches, stepping relays for said switches, a circuit including one of said two-wire trunks, the associated relay and contacts of said repeating relays, an electroresponsive device associated with said repeating relays adapted to render said grounded stepping circuit inoperative and to render said metallic stepping circuit operative, and a circuit for operating said device closed when said trunk group is selected.

3. In a telephone exchange system, the combination with telephone lines, senders associated therewith, automatic switches adapted to interconnect said lines, driving magnets therefor, a local grounded control circuit for said magnets, a set of repeating relays normally controlling said circuit and operated by said senders, a group of two-wire trunks connected to one of said switches, other automatic switches in which said trunks terminate, driving magnets therefor, control relays for said magnets at said switches, a metallic control circuit including one of said trunks, the associated control relay and contacts of said repeating relays, an electromagnetic switching device associated with said repeating relays adapted to render inoperative said grounded control circuit and to render operative said metallic control circuit, and means associated with the selector containing said trunk group and adapted when said group is selected to operate said switching device.

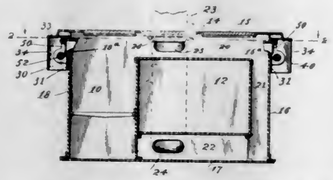
4. In a telephone exchange system, the combination with telephone lines, senders associated therewith, automatic switches adapted to interconnect said lines, stepping magnets therefor, a local grounded stepping circuit for said magnets, a set of repeating relays normally controlling said circuit and operated by said sender, a group of two-wire trunks connected to one of said switches, an office wherein said trunks terminate in automatic switches, stepping magnets for said switches, stepping relays for said switches, a circuit including one of said two-wire trunks, the associated relay and contacts of said repeating relays, a pair of switching relays associated with said repeating relays adapted to render said grounded stepping circuit inoperative and to render said metallic stepping circuit operative, and a commutator switch controlled by the switch containing the two-wire trunk group adapted when said group is selected to operate said relays.

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1,231,087. COMBINATION COOKING-RANGE. WILLIAM F. SPIETH, Cleveland, Ohio. Filed Apr. 13, 1916. Serial No. 90,882. (Cl. 126—36.)

1. A cooking stove having in one end a coal burning fire pot, and containing an oven which is spaced away

from the top, bottom and opposite end of the stove to form communicating top, end and bottom oven flues, said oven being separated from the fire pot by a common partition wall which does not extend up to the top of the stove whereby the fire pot is in open communication with the top oven flue, a smoke box which is in communication with the bottom oven flue and is also in communication with the top oven flue, a damper controlling the last named communication, a bottomless burner box secured to the outer face of that end of the stove which is adjacent said fire-pot, there being a slot through said end of the stove whereby to establish communication between the burner box and fire pot, a damper for controlling said slot, a perforated burner pipe arranged horizontally in said burner box below said slot, and means to supply gas to said burner pipe.



3. A cooking stove having in one end a coal burning fire pot, and containing an oven which is spaced away from the top, bottom and opposite end of the stove to form communicating top, end and bottom oven flues, said oven being separated from the fire pot by a common partition wall which does not extend up to the top of the stove whereby the fire pot is in open communication with the top oven flue, a smoke box which is in communication with the bottom oven flue and is also in communication with the top oven flue, a damper controlling the last-named communication, there being a long horizontal slot in each end of the stove near the top thereof, a burner box secured to the outer face of each end of the stove over the slot therein, a damper for each of said slots, a perforated burner pipe arranged horizontally in each of said burner boxes below the associated slot, and means to independently supply gas to said burner pipes.

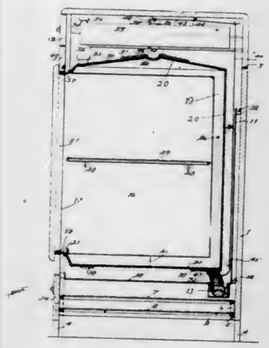
5. A cooking stove having in one end a coal burning fire pot, and containing an oven which is spaced away from the top, bottom and opposite end of the stove to form communicating oven flues,—said oven being separated from the fire pot by a partition wall which does not extend to the top of the stove whereby the fire pot is in open communication with the top oven flue, a smoke box which is in communication with the top oven flue and bottom oven flue, a damper controlling the first named communication,—the end of the stove adjacent the fire pot having a long horizontal slot through it just below the top of the stove, a burner box which is secured to said slotted end of the stove over the slot therein said burner box being open at its bottom and having in that side which is in contact with the stove end a horizontal slot which is provided with a marginal flange that passes through and fits the slot in the stove end, a damper within and supported by said burner box for covering and uncovering said flanged slot, two alined perforated pipe burners supported by the burner box and located therein just below the said flanged slot, the perforations in said burners being directed to discharge into said slot, and independent valve controlled gas supply devices for said two burners.

7. A cooking stove having a horizontal flue just below the top of the range, having in one end a horizontal slot which extends substantially from the front to the rear of said stove and is in substantially the same horizontal plane as said flue, a burner box rigidly fixed externally to the end of said stove over the slot therein which burner box is open at its bottom and has in its inner side a slot, a marginal flange formed integrally with the slotted wall of said burner box around the said slot,—which flange projects through and fits the slot in the end of the range, a pair of ring brackets within said burner box, a pipe burner rotatably fitted in said ring brackets and having a horizontal row of perforations, means for clamping said pipe burner to one of said ring brackets to prevent the rotation of the pipe burner when the same is located in position such that the perforations therein will discharge at the proper angle toward the said slot, and means to supply gas to said pipe burner.

[Claims 2, 4, and 6 not printed in the Gazette.]

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1,231,088. REFRIGERATOR. JOHN E. STAFFORD, WILLIAM D. INGRAM, and HARRY C. GORDON, Lincoln, Cal. Filed Dec. 24, 1915. Serial No. 68,485. (Cl. 261—9.)



1. A refrigerator comprising an outer casing, an inner casing within the outer casing, a porous material covering the inner casing, means for supplying fluid to the porous material, and means for automatically controlling the supply of fluid to said porous material, said means being operated in accordance with the degree of saturation of said porous material.

2. A refrigerator comprising an outer casing, an inner casing within the outer casing and spaced therefrom, a porous absorbent material covering the inner casing, means for supplying fluid to the upper surface of said porous absorbent material for flowing by capillary attraction over the surface thereof, a valve controlling the fluid supply to said porous material, a closed sump for receiving the excess fluid supplied to said porous material, and a float in said sump and actuated by the level of the liquid therein for opening and closing said valve.

3. A refrigerator comprising an outer casing, an inner casing within the outer casing and spaced therefrom, a porous material covering the inner casing, a reservoir for supplying fluid to the porous material, a valve controlling the supply from said reservoir, a sump for receiving the excess fluid supplied to said porous material, a float in said sump and connected with said valve and actuated by the rise of fluid in said sump for closing said valve, and capillary means within said sump and contacting with said porous material for withdrawing the water from said sump and supplying the same to said porous material.

4. A refrigerator comprising a casing, a porous material covering said casing, means for supplying fluid to said porous material, and valve controlled means for automatically controlling the supply of fluid from said supply to said porous material, the operation of said last mentioned means being dependent upon the degree of saturation of said porous material.

5. A refrigerator comprising an outer casing, a food container removably mounted therein, a porous material covering said food container, means for supplying fluid to the porous material at the top of said food container, a sump for receiving the excess fluid supplied to said porous material, and a capillary medium extending from within the sump and contacting with said porous material for supplying the fluid contained in said sump to said porous material.

[Claims 6 and 7 not printed in the Gazette.]

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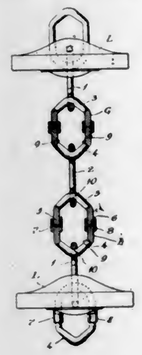
1,231,089. QUILL BONING. CARL G. STEBBINS and ALBERT GELOW, Three Oaks, Mich., assignors to The Warren Featherbone Company, Three Oaks, Mich., a Corporation of Michigan. Filed Apr. 29, 1915. Serial No. 24,662. (Cl. 2—76.)



As a new article of manufacture, a quill boning consisting of quill fibers bound together with thread, a sizing for initially filling in the interstices or voids between the fibers and adapted to be absorbed by the absorptive matter within the fibers and by the thread, and a waterproof coating surrounding said fibers, thread and sizing.

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1,231,090. SUSPENSION MEANS FOR STRAIN-INSULATORS. LOUIS STEINBERGER, Brooklyn, N. Y. Filed Nov. 24, 1913. Serial No. 802,685. (Cl. 59—85.)

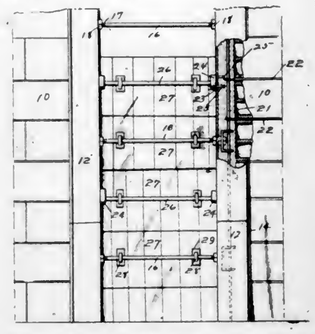


1. A two-part connecting member for insulators, each of said parts comprising a U-shaped member, the legs of one of said U-shaped members being threaded, one of the legs of the other of said U-shaped members being screw threaded and the other leg thereof formed with a threaded socket to receive the threaded end of the other of said U-shaped members, a separately formed sleeve threaded upon one of the legs of one of said members and being longitudinally movable on said leg to dispose a portion of its length for engaging threads upon the end of one of the legs of the other member, the connecting portions between the legs of each of said members being bent into angular formation so as to provide sheets for engaging a support, and so as to provide parts in angular relation to said legs forming shoulders for arresting movement of said sleeves in one direction.

2. A two-part connecting member for insulators, each of said parts comprising a U-shaped member, the legs of one of said U-shaped members being threaded, one of the legs of the other of said U-shaped members being screw threaded and the other leg thereof formed with an integrally formed threaded socket to receive the threaded end of the other of said U-shaped members, a separately formed sleeve threaded upon one of the legs of one of said members being longitudinally movable on said leg to dispose a portion of its length for engaging threads upon the end of one of the legs of the other member.



1,231,091. SHEET-METAL DOOR-FRAME. HALVER R. STRAIGHT, Adel, Iowa. Filed June 10, 1914. Serial No. 844,374. (Cl. 72—6.)



1. In a device of the class described, parallel upright members being hollow and open at one side, transverse rods for securing said upright members in position relative to each other, socket devices secured to each of said uprights between said rods, transverse bars for said sockets detachably connected therewith, and said transverse rods and bars being designed to form a ladder.

3. In a device of the class described, parallel upright members having a series of pairs of openings in their adjacent faces, transverse rods fixed between said members, means for detachably securing bars parallel with said rods and between the inner faces of said upright members, said means comprising U-shaped blocks having one side closed, parallel pins extending laterally from the closed sides thereof, the said pins being designed to enter the openings in said upright members, and bars having their ends received in said blocks.

5. The combination of a silo wall having a door opening therein, hollow upright members having a longitudinal opening in one side and flexible parallel side members capable of movement to and from each other to receive walls of varying thicknesses between them, the upright members also being provided with shoulders to form a door jamb, the upright members being arranged with their open side extending outwardly, transverse rods extending through the adjacent faces of said upright members, means for locking the upright members to said rods, the rods and hollow upright members being of such length that a space will be left between the adjacent faces of the upright members and the inner edges of the door openings to receive plastic material, continuous upright reinforcing rods in said spaces, and U-shaped devices having means for engaging said upright reinforcing rods, and horizontal bars having their ends supported by said U-shaped devices.

[Claims 2, 4, and 6 not printed in the Gazette.]

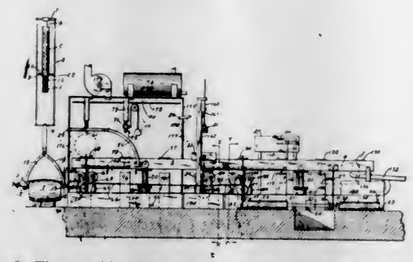
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1,231,092. BARREL-WASHING MACHINE. ARTHUR J. SUHM, Milwaukee, Wis. Filed Aug. 11, 1913. Serial No. 784,180. (Cl. 214—1.)

1. The combination with a series of relatively fixed spaced supports, of a carrier provided with sets of similarly spaced supporting rests, hydraulic mechanism for actuating the carrier vertically, other hydraulic mechanism for actuating the carrier horizontally, and valve mechanism controlled by the carrier and adapted to regulate fluid delivery to and from said hydraulic mechanisms in a cycle of operations, whereby the carrier may be lifted, advanced horizontally, depressed, and retracted horizontally.

2. The combination with a series of relatively fixed spaced supports, and a carrier provided with similarly spaced supporting rests, adapted, when the carrier is depressed in one position of adjustment, to deposit loads

upon the fixed supporting rests, of hydraulic mechanism for vertically reciprocating the carrier, said mechanism being provided with carrier supporting rollers, adapted to permit longitudinal movement of the carrier in either the raised or the lowered position, other hydraulic mechanism for actuating the carrier horizontally in one direction when in raised position and in the other direction when in lowered position, valves adapted to control delivery and exhaust of power fluid to and from said mechanisms, and means controlled by the carrier for actuating the valves and hydraulic mechanisms in a cycle of operations to lift the carrier, advance it to carry its rests from one support to another, then depress the carrier and retract it to its original position.



3. The combination with a series of relatively fixed supports, of a carrier provided with sets of similarly spaced supporting rests, hydraulic mechanisms for actuating the carrier upwardly to first carry its rests above the supports, then horizontally to advance its rests from the vicinity of one support to the next, then downwardly to deposit its loads upon the supports, and then backwardly to its original position, and a set of valves actuated by the carrier and adapted to permit successive delivery and exhaust of power liquid to and from the hydraulic mechanisms, to cause the successive movements of the carrier.

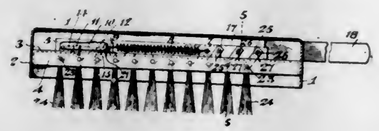
4. The combination with a carrier, of means for utilizing fluid pressure for supporting, raising, and lowering the carrier, said carrier being longitudinally movable upon its supports, and also provided with means for automatically controlling the delivery and exhaust of power fluid to the supporting, raising, and lowering means, whereby the movement of the carrier is controlled.

5. The combination with a carrier, of a set of fluid receiving chambers, plungers therein provided with plunger rods, carrier supporting rollers mounted on said plunger rods, valve mechanisms controlling the delivery and exhaust of power fluid to and from the receiving chambers, and means connected with the carrier for actuating the valve mechanisms.

[Claims 6 to 20 not printed in the Gazette.]

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1,231,093. FOLDABLE BRUSH. ERICK O. SUNDEEN, Spokane, Wash., assignor of one-half to J. Henry Brazeau, Spokane, Wash. Filed Sept. 26, 1916. Serial No. 122,269. (Cl. 15—30.



1. In a foldable brush, an elongated casing, a handle movable lengthwise of the casing, rock shafts in the casing each carrying bristles, a common actuating means for the rock shafts movable in the casing, means imparting to the said common actuating means a normal tendency to move in one direction, latch means for holding the common actuating means against movement under its normal tendency, and means associated with the handle for engaging the latch means to release the common actuating means for movement under its normal tendency.

2. In a foldable brush, a body member, rockable series of bristles mounted therein, actuating means for rocking the bristles to and from active position, means imparting to the actuating means a tendency to move in one direction, latch means for holding the actuating means against movement under its normal tendency, and means for operating the latch means to release the actuating means for movement under its normal tendency.

3. In a foldable brush, a body member, rockable series of bristles mounted therein, actuating means for rocking the bristles to and from active position, means imparting to the actuating means a tendency to move in one direction, latch means for holding the actuating means against movement under its normal tendency, and means for operating the latch means to release the actuating means for movement under its normal tendency, said last-named means constituting the handle of the brush and movable into and out of the latter for projection into useful position and retraction for storage.

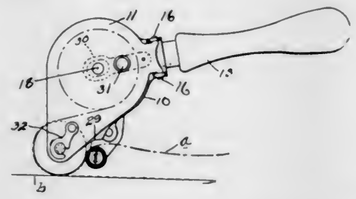
4. A foldable brush comprising a casing, a longitudinally slotted plate in the casing, a series of rock shafts carried by the plate and each in turn provided with bristles, rock arms on the rock shafts projecting through the slots in the plate, a reciprocable frame movable along the plate in the casing and connected to the rock arms for actuating the latter, spring means imparting to the frame a normal tendency to move in one direction, latch means on the plate in position to engage the frame and hold it against movement under its normal tendency, and a handle movable in the casing and projecting therefrom and also movable in the frame to engage the latter, said handle having means for engaging the latch means to release the frame to movement under its normal tendency.

5. A foldable brush comprising a casing open at one side, a plate within the casing and having laterally spaced longitudinal slots therein, a series of rock shafts journaled to the plate and each provided with tufts of bristles, rock arms on the shafts extending through the slots in the plate, a reciprocable frame on the plate between the slots and between the arms at opposite ends of the shafts, said frame having pins extending through the arms, and the latter having elongated slots for the reception of the pins, springs connected to the plate and to the frame respectively and tending to urge the frame in a direction to rock the shafts to move the bristles into the casing, latch devices within the casing in position to hold the frame against its normal tendency and a reciprocable handle having a head within the frame and provided with means for engaging the latches to release the frame on movement of the head lengthwise of the frame.

[Claims 6 and 7 not printed in the Gazette.]

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1,231,094. METALLIC-LEAF-APPLYING DEVICE. STUART H. SWALLOW, Providence, R. I., assignor to W. H. Coe Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 13, 1916. Serial No. 83,727. (Cl. 216—20.)



1. In a hand tool for applying metallic films, a support for a package roll comprising a film and backing, a delivery roll, a guide roll yieldingly contacting with said delivery roll and a guide above said guide roll directing the used strip downwardly from said rolls to the rear and clear of the tool.

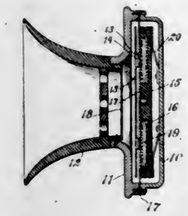
2. In a hand tool for applying metallic films, a support for a package roll comprising a film and backing, a delivery roll, a guide roll yieldingly contacting with said delivery roll and a guide plate above said guide roll directing the used strip downwardly from said rolls to the rear and clear of the tool.

3. A hand tool for applying metallic films comprising side plates holding a package roll and a delivery roll, a guide roll yieldingly held against said delivery roll and a guide plate forming the bottom of said casing and serving to direct the used strip downwardly from said rolls to the rear and clear of the tool.



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1,231,095. TELEPHONE-TRANSMITTER. NAITO TANNAKA, New York, N. Y. Filed Nov. 11, 1915. Serial No. 60,946. (Cl. 179—127.)



1. In a telephone transmitter, a vibrator having cup-shaped or depressed portions and bearing front electrodes in the said portions, an elastic or flexible sheeting attached thereto, back electrodes attached to the sheeting within the inclosures formed by the sheeting and the said portions and secured together by a plate or disk, a casing holding the peripheral edge of the sheeting and granular carbon between and in contact with the front and back electrodes.

2. In a telephone transmitter, a vibrator bearing front electrodes, a flexible or elastic sheeting attached thereto, a back electrode part, including back electrodes, shaped and attached to the sheeting so as to form chambers in which the said front and back electrodes are contained, a casing holding the edge of the sheeting, and variable resistance mediums disposed in the chambers.

3. In a variable resistance device, the combination of a casing, an elastic sheeting held thereby, and a vibrator and a back electrode part, each including an electrode, shaped and attached to the sheeting so as to be relatively movable and to form therebetween a chamber in which the said electrodes are contained; with a variable resistance medium disposed in the chamber and in contact with the electrodes.

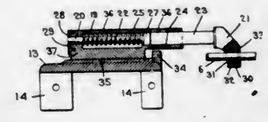
4. In a telephone transmitter, the combination of a casing, a flexible or elastic sheeting held thereby, a vibrator and a back electrode part, both including electrodes, shaped and attached to the sheeting so as to form chambers therebetween which inclose the electrodes, and so as to be in flexible connection, and cushioning means between the back electrode part and the casing; with granular carbon disposed between and in contact with the electrodes.

5. In a telephone transmitter, the combination of a vibrator and a back electrode part, both including electrodes, shaped and disposed so as to form chambers therebetween, a casing, a flexible or elastic sheeting attached to the casing and the vibrator, so that the latter two members are relatively movable, a spring means bridging or connecting the back electrode part and the casing; with carbon balls or grains disposed in the chambers and in contact with the electrodes.

[Claims 6 to 14 not printed in the Gazette.]

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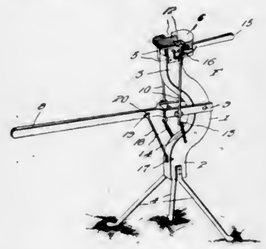
1,231,096. BUFFER FOR LOOM-PICKERS. JOHN TARANTO, Waltham, Mass. Filed Sept. 26, 1916. Serial No. 122,312. (Cl. 139—21.)



A buffer support for loom pickers including a buffer support on the lay, a resilient means on said support, an impact member carried by said means and yieldably held in the picker path whereby the stoppage of the picker is cushioned, a casing for said means on said support, means on the support for adjusting the position of the impact member, and a longitudinal rib on said support to engage a complementary recess in the casing, said rib and recess being in axial alinement with the picker rod whereby the impact member may be adjusted in a plurality of positions in alinement with the picker path.

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1,231,097. ANIMAL-SHOE-REMOVING DEVICE. JOHN R. TATE and NEWTON J. SMITH, Seneca, Mo. Filed Dec. 9, 1916. Serial No. 136,011. (Cl. 168—44.)



1. In a device of the class described, including a frame, supporting legs therefor, a plate member conforming in configuration to that of a hoof, and means associated with the said frame for engaging the shoe of an animal for removing the same.

2. In a device of the class described, including a frame, supporting means therefor, a plurality of strips mounted on the upper sides of said frame, a plate conforming in shape to that of an animal's hoof for supporting the same, a lug formed on the plate adapted to be seated between said strips, and bars asociated with the said frame for engaging the shoe of an animal and to remove the same.

3. In a device of the class described, including a frame bent intermediate its ends to form a looped member having divergent arms, a plurality of legs supporting said frame, a pair of strips mounted on the outer edge of the frame, a plate adapted to receive the hoof of an animal mounted on said strips, the said plate having recesses formed intermediate the sides thereof, a forked lever having the forks thereof pivotally connected to the frame intermediate the sides of the looped frame, a pair of bars pivotally connected to the forked lever adjacent their ends and having hooks formed on the free ends of the said bars, and the said hooks formed on the bars extending into said recesses for a purpose described.

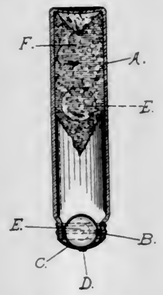
[Claim 4 not printed in the Gazette.]

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1,231,098. RECEPTACLE FOR CONTAINING AND DISPENSING SEMISOLID CONDIMENTS. CHARLES TOELCKE, Chicago, Ill., assignor of one-half to Henry Magnus, Chicago, Ill. Filed Mar. 30, 1914. Serial No. 828,319. (Cl. 221—94.)

1. An article for holding and dipensing a semi-solid condiment such as mustard, consisting of a receptacle

comprising a body part and a cap, one end of which receptacle is of reduced diameter in comparison with the rest of the receptacle forming a pocket of uniform diameter opening unobstructedly into the body of the receptacle, said cap terminating in a rounded end having a dispensing opening in the center of the same, through which the material in the receptacles passes immediately and without obstruction therefrom, and a spherical ejecting ball of heavy material which is entirely unattached within the receptacle and is freely movable in the body of condiment therein and has a diameter just a trifle less than that of said pocket, which ball, when the receptacle is inverted, acts as a plunger against the material collected in the pocket and forces the same out through said dispensing opening, thereafter closing said opening.




2. In an article for holding and dispensing a semi-solid condiment such as mustard, the combination of a receptacle comprising a body and a cap inclosing one end of the body, which latter is rounded on the top and of relatively thin material and formed with a central perforation through which material in the receptacle may be discharged therefrom directly and unobstructedly, the end of the receptacle having the cap being formed so that a pocket is provided of smaller diameter than the rest of the receptacle opening directly and unobstructedly into the body of the receptacle; and a spherical ejecting ball of heavy material which is entirely unattached within the receptacle and is freely movable in the body of condiment therein and has a diameter just a trifle less than that of said pocket, which ball, when the receptacle is inverted, acts as a plunger against the material collected in the pocket and forces the same out through said dispensing opening, thereafter closing said opening.

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1,231,099. CLOSURE. HARRY E. TOWNSEND, Brooklyn, N. Y., assignor to Anchor Cap & Closure Corporation, Brooklyn, N. Y., a Corporation of New York. Filed May 16, 1916. Serial No. 97,871. (Cl. 215—81.)

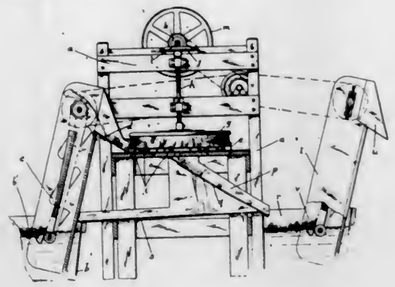


1. As an article of manufacture, a closure cap for containers of glass and the like, comprising a cover portion adapted to cover and protect the end of a suitable glass jar, a substantially uniform continuous skirt of resilient material depending from the cover portion and at substantially right angles thereto, the skirt being provided with a continuous annular groove having the concave portion of the groove on the exterior of the skirt and forming a continuous annular bead on the interior of the skirt, said groove being formed on such radius as to enable the bead to stretch and slightly flatten, thereby forming a sealing zone when the cap is forced over the substantially straight smooth side wall of a substantially incompressible container to permit the forces tending to restore the bead to normal shape to cause the bead to form a tight friction seal with said side wall of the container.

2. A sealed package comprising a container of glass and the like, and having a substantially incompressible smooth cylindrical side wall, in combination with a sealing cap therefor comprising a cover portion adapted to cover and protect the end of the said container, a substantially uniform continuous skirt of resilient material depending from the cover portion and at substantially right angles thereto, said skirt being provided with a continuous annular groove having the concave portion thereof on the exterior of the skirt and forming a continuous annular bead on the interior of the said skirt, said groove being formed on a relatively large radius to enable the bead to be stretched, whereby the bead exerts radial compression forces against the smooth side wall of the container over an annular area comprising a sealing zone and forms a tight friction seal therewith, and enabling the cap to be removed without destruction.

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1,231,100. NUT SCOURING AND POLISHING MACHINE. CHARLES TRUNK and GEORGE TRUNK, Dundee, Oreg. Filed Dec. 15, 1916. Serial No. 137,237. (Cl. 146—14.)



1. In a machine of the character described, the combination of a scouring pan adapted for holding water and provided with a spiral runway leading to a discharge opening, means for feeding material to be secured and water to the inlet end of said scouring pan, and a rotatable scouring brush bearing in said scouring pan.

2. In a machine of the character described, the combination of a scouring pan adapted for holding water and provided with a spiral runway leading to a discharge opening, means for feeding material to be scoured and water to the inlet end of said scouring pan, and a rotatable scouring brush bearing in said scouring pan, the walls of the runway of the latter being of much lesser height than the rim wall of the scouring pan.

3. In a machine of the character described, the combination of a scouring pan adapted for holding water and provided with a spiral runway leading to a discharge opening, and a rotatable scouring brush bearing in said scouring pan.

4. In a machine of the character described, the combination of a scouring pan adapted for holding water and provided with a spiral runway leading to a discharge opening, and a rotatable scouring brush bearing in said scouring pan, the walls of the runway of the latter being of much lesser height than the rim wall of the scouring pan.

5. In a machine of the character described, the combination of a scouring pan adapted for holding water and provided with a spiral runway leading to a discharge opening, and a rotatable and adjustable scouring brush bearing in said scouring pan, the walls of the runway of the latter being of much lesser height than the rim wall of the scouring pan, the latter being provided with an inspection opening.



1,231,101. PROCESS FOR THE RECOVERY OF METALS FROM ORES AND THE LIKE. CHARLES S. VADNER, Butte, Mont. Filed Nov. 18, 1916. Serial No. 132,209. (Cl. 75—18.)

1. In the art of recovering metals from naturally oxidized or sufficiently roasted sulfid ores, the method which consists in treating the sufficiently ground ore with sulfurous fumes in the presence of moisture eliminating any excess acidity of solution and dissolving the lead from the insoluble residue by treating same with a saturated solution of the chlorid of a metal that will dissolve the lead.

2. In the art of recovering metals from naturally oxidized or sufficiently roasted sulfid ores, the method which consists in treating the sufficiently ground ore with sulfurous fumes in the presence of moisture eliminating any excess acidity of solution, dissolving the lead from the insoluble residue by treating same with a saturated solution of sodium chlorid and recovering the lead from the salt solution by treating same with iron.

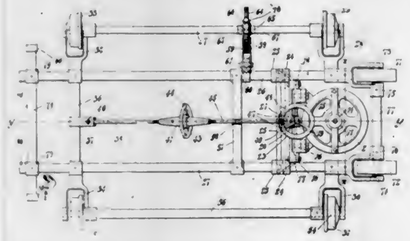
5. In the art of recovering metals from naturally oxidized or sufficiently roasted sulfid ores, the method which consists in treating the sufficiently ground ore with sulfurous fumes in the presence of sufficient moisture, oxidizing the solution by means of mineral matter and the like containing an oxygen compound of manganese that can oxidize the solution, thereby precipitating any lead that may be in solution on to the insoluble portion of the ore, separating the insoluble residue from the solution, treating said residue with a saturated solution of salt thereby dissolving the lead, passing the saturated salt solution containing the lead over iron whereby the lead is recovered.

10. In the art of recovering metals from naturally oxidized or sufficiently roasted sulfid ores, the method which consists in treating the sufficiently ground ore with sulfurous fumes in the presence of a sufficiency of moisture, eliminating unnecessary acidity of solution by passing same over mineral matter and the like containing an oxygen compound of manganese that can oxidize the solution thereby precipitating any lead that may be in solution on to the insoluble portion of the ore, eliminating the said insoluble portion of the ore containing the lead and recovering the metals from the separated solution.

[Claims 3, 4, and 6 to 9 not printed in the Gazette.]

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1,231,102. TRACK-GRINDING MACHINE. FRANK J. VENNING, Cincinnati, Ohio. Filed May 29, 1913. Serial No. 770,627. (Cl. 51—12.)



1. In a track-grinding machine, motive apparatus comprising an arbor, a grinding wheel on said arbor, means for adjusting the position of the motive apparatus to bring the arbor into upright position and apply the grinding wheel thereon axially to a track part to grind said track part, and to remove said arbor from upright position, and means contacting with the track part being ground for supporting the motive apparatus, arbor, and grinding wheel and for feeding them along said track part.

2. In a track-grinding machine, motive apparatus, an arbor rotated thereby, a grinding wheel rotated with the arbor to be applied axially to a track part to grind said track part, said motive apparatus, arbor, and grinding wheel being adjustable bodily, means for adjusting them bodily with relation to said track part, and means contacting with the track part being ground for supporting said motive apparatus, arbor, and grinding wheel and for feeding them along said track part.

3. In a track-grinding machine, motive apparatus, an arbor rotated thereby, a grinding wheel rotated with the arbor to be applied axially to a track part to grind said track part, said motive apparatus, arbor, and grinding wheel being adjustable bodily, and means for adjusting their inclination transversely of said track part.

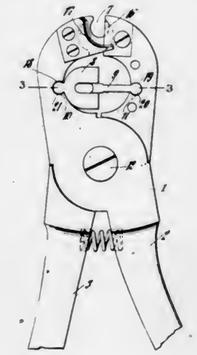
4. In a track-grinding machine, motive apparatus, an arbor rotated thereby, and a grinding wheel rotated with the arbor to be applied to a track part, said motive apparatus, arbor and grinding wheel being adjustable bodily, means for adjusting their inclination to said track part, and means for adjusting them up and down with relation to said track part.

5. In a track-grinding machine, motive apparatus, an arbor rotated thereby, and a grinding wheel rotated with the arbor to be applied to a track part, said motive apparatus, arbor and grinding wheel being adjustable bodily, means for adjusting their inclination to said track part, and means for adjusting them transversely of said track part.

[Claims 6 to 40 not printed in the Gazette.]

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1,231,103. TIP-FASTENER FOR SHOE-LACES. EPHRAIM VIERTELS, New York, N. Y., assignor to Viero Company, Inc., New York, N. Y., a Corporation of New York. Filed Mar. 6, 1917. Serial No. 152,805. (Cl. 81—15.)

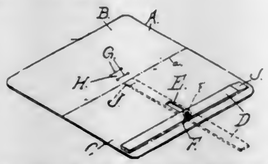



1. In combination, a male die and a female die adapted to cooperate so as to close a metal blank into the form of a cylinder, and actuating members for actuating said dies, each of said dies being movable in a direction lateral to the direction of movement of said actuating members, the distance of movement of said actuating members being so limited, and the length of the said dies being such, that the said dies always remain telescoped with respect to each other.

3. In combination, a male die and a female die adapted to cooperate so as to close a metal blank into the form of a cylinder, and movable supports for said dies, each of said dies being capable of a movement of oscillation only with respect to their respective supports, the direction of said oscillation being lateral to the direction of movement of said supports, the length of said dies and the range of movement of said supports being such that the said dies always remain telescoped with respect to each other.

[Claims 2 and 4 not printed in the Gazette.]

1,231,104. FAN. FRANK H. WAGGONER, Chicago, Ill., assignor to Commercial Colortype Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 31, 1916. Serial No. 117,964. (Cl. 230—33.)



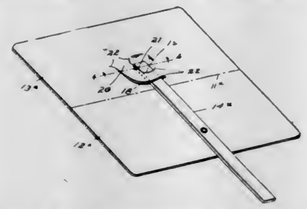
1. A fan comprising fan body sections having a foldable relation with respect to each other, a handle which is pivoted to one of said sections, so that it may either lie between the same when the latter are folded or be turned so as to lie across the fold between the sections when unfolded; the other section being provided with a part adapted to overlap the end of the handle, when the fan is unfolded, so that the handle holds the fan sections in substantially rigid relation.

11. A mailing card fan comprising two cardboard sections foldable together and a handle pivotally attached to one of said sections so as to lie between the sections when they are folded or across the fold when the sections are extended: the section on the other side of the fold from the handle pivot being formed with a pair of slits to receive the end of the handle.

[Claims 2 to 10 and 12 to 14 not printed in the Gazette.]

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1,231,105. FOLDING FAN. FRANK H. WAGGONER, Chicago, Ill., assignor to Commercial Colortype Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 18, 1916. Serial No. 132,128. (Cl. 230—33.)



1. In a fan, the combination of a body portion comprising two sections foldable one upon the other, and a handle pivotally connected to one of said sections at a fixed point and adapted to extend across the line of fold between the sections; the section on the other side of said line of fold from the pivotal connection being formed with a curved slit which permits a part of said fan body to overlap the end of the handle.

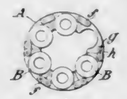
6. In a fan, the combination of a body portion comprising two sections foldable one upon the other, and a handle pivotally connected to one of said sections at a fixed point and adapted to extend across the line of fold between the sections: the section on the other side of said line of fold from the pivotal connection being formed with a curved slit and adjacent thereto with another slit which together provide a retaining band for one end of the handle, and a stop for the edge thereof, the extremities of said slits being deflected from the main portion of the slits for the purpose of preventing the tearing of the material at these places.

[Claims 2 to 5 and 7 to 9 not printed in the Gazette.]

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1,231,106. CARTRIDGE-PACK FOR REVOLVERS. JOSEPH H. WESSON, Springfield, Mass., assignor to Smith & Wesson, Springfield, Mass., a Voluntary Association. Filed Apr. 3, 1917. Serial No. 159,388. (Cl. 42—89.)

5. A cartridge pack for revolvers formed of metal plate, having an outer annular portion which is substantially unyielding and which encircles the group of cartridges, and resilient portions projecting inwardly therefrom to engage the bases of the cartridges and forming between them yielding cartridge-holding recesses, and divided into segments each receiving a part of the total

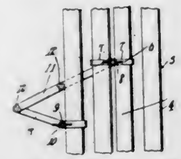


group of cartridges, and the segments united so that when closed together they present the cartridges in circular order corresponding to the chambers in the revolver cylinder.

[Claims 1 to 4 and 6 not printed in the Gazette.]

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1,231,107. FOOT-REST. CHARLES WESTMAN, Hinckley, Minn. Filed Sept. 7, 1916. Serial No. 118,892. (Cl. 155—9.)



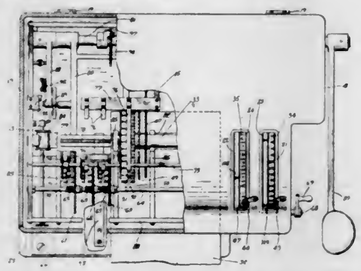
3. In a foot rest for radiators, a rod adapted to extend longitudinally of and between the coils of a radiator, a second rod arranged upon the exterior of said radiator, threads on the ends of said rods, clamping members on said rod ends adapted to engage with the coils of the radiator, nuts for engagement with the threaded ends of said rods to bind said clamps into engagement with the coils of said radiator, a platform, spaced laterally projecting cars on said platform, and links pivoted between said cars at their inner ends and being pivoted at their opposite ends to said rods, substantially as described.

5. In a foot rest for radiators, a main support comprising a rod, clamp members slidably mounted on said rod, means for forcing said clamp members longitudinally of said rod, a second support comprising a rod, clamp members slidably mounted on said rod, means for forcing said members longitudinally of said rod, a platform, and links connecting said platform, substantially as described.

[Claims 1, 2, 4, and 6 not printed in the Gazette.]

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1,231,108. MACHINE FOR INDICATING AND RECORDING ELAPSED TIME. LAWRENCE G. ZESBAUGH, Minneapolis, Minn. Filed Apr. 20, 1914. Serial No. 833,109. (Cl. 234—53.)



2. A machine for indicating elapsed time comprising elapsed time indicating and recording mechanism, a pair of time rollers having hour and minute indications, respectively, on the faces thereof, a clock for operating said rollers, fixed indentors for indicating present time on said rollers, a manually controlled device for indicating any time on said rollers, and means operated conjointly with said manually controlled device to control the elapsed time mechanism.

7. An elapsed time and price recording machine comprising sets of rollers for indicating and recording elapsed time and correlated sets of rollers for indicating and recording charges at given rates for such elapsed time, time recording rollers axially arranged in respect to said other rollers, time indicating rollers, a clock for driving said time recording and time indicating rollers, manually controlled means for indicating any time on said time indicating rollers and for conjointly operating the elapsed time rollers and the price recording rollers, a common printing mechanism operating upon all of said rollers, means admitting and guiding a card so that the time recording rollers alone will print at one side of said card, and means for admitting and guiding said card so that all of said recording rollers will print in alinement with and at the other side of the time indication printed on the card from the first named position thereof.

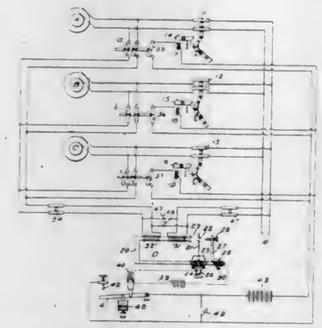
9. A machine for indicating elapsed time comprising elapsed-time indicating and printing mechanism normally at rest, a clock-controlled drum having time indications on the face thereof, a correlated axially mounted drum having a pointer mounted thereon, and manually-operative means for conjointly adjusting said last-named drum to bring the pointer to a position for indicating any desired time and to move the elapsed-time indicating mechanism into position to print the elapsed time from the time indicated by the pointer to present time.

[Claims 1, 3 to 6, 8, and 10 not printed in the Gazette.]



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1,231,109. AUTOMATIC SYNCHRONIZER. JAMES G. ZIMMERMAN, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Nov. 28, 1913. Serial No. 804,106. (Cl. 171—118.)



1. In a synchronizing apparatus for alternating current circuits, an electromagnetic device comprising a plurality of energizing coils for producing fluxes dependent upon the phase and frequency relations of the currents in separate circuits, an armature of the vibratory type responsive to magnetic influx produced by said energizing coils, an electrical circuit, a switch in said circuit, and means for effecting circuit-controlling actuation of said switch only upon the vibration of said armature at its natural frequency for a time sufficient to insure that currents of substantially the same frequency and phase relation are flowing in the circuits of said energizing coils, said means comprising a circuit-controlling device actuated by said armature on movement thereof to a predetermined extent, and means for preventing the circuit-controlling actuation of said switch due to a single momentary circuit-controlling actuation of said circuit-controlling device by said armature.

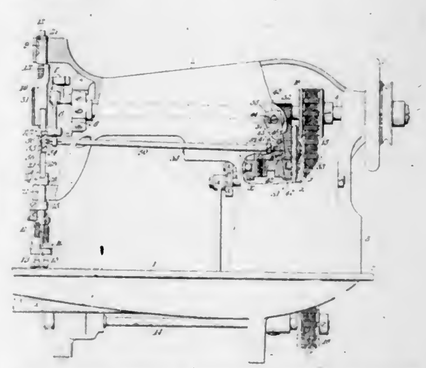
3. In a synchronizing apparatus, a core, a plurality of energizing coils for said core, an armature of the vibrating reed type for coöperation with a polar portion of said core, a contact mounted adjacent said armature, a contact associated with said armature and engageable with said first contact on movement of said armature to a predetermined extent, an electrical circuit completed on engagement of said contacts, a second electrical circuit, an electromagnetically actuated switch in said second circuit, the actuating coil of said switch being in said first circuit, a retarding device associated with said switch for permitting circuit controlling actuation thereof only on such operation of said armature as effects closure of said local circuit at a predetermined rate for a predetermined time.

6. In an alternating current system of distribution, a line circuit, a generator, an electromagnetically controlled switch for connecting said generator to said line circuit, means for automatically effecting the operation of said switch when the frequency and phase relation of said generator and said line circuit are in agreement, said means comprising a core, a plurality of energizing coils for said core, means for connecting one of said coils to said line circuit, means for connecting the other of said coils to said generator, an armature of the vibrating reed type coöperative with a polar portion of said core, an electromagnetically controlled switch for completing the circuit of the operating coil of said first switch, a local circuit including the operating coil of said second switch, and normally open contacts, one of said contacts being associated with said armature and engageable with the other contact to cause the actuation of said second switch, retarding means associated with said second switch for insuring the circuit controlling operation of said latter switch only when the currents in said generator and said line circuit are of the same frequency and phase relation and said armature vibrates at its natural frequency for a predetermined time.

[Claims 2, 4, and 5 not printed in the Gazette.]

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1,231,110. POWER-TRANSMITTING CONNECTION. CHARLES M. ABERCROMBIE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed July 24, 1915. Serial No. 41,657. (Cl. 74—17.)



1. A power-transmitting connection, having in combination an endwise movable rigid portion provided at one end with a resilient tubular element comprising helicoidal windings of wire of contiguous convolutions, the coefficient of elasticity of said element in the direction of its length being such that its resistance to strain is in excess of the motive power required to actuate said connection.

2. A power-transmitting connection, having in combination a rigid portion provided at one end with a resilient tubular element comprising helicoidal windings of wire of contiguous convolutions, and means for actuating said

connection in the direction of its length, the coefficient of elasticity of said element in the direction of its length being such that its resistance to strain is in excess of the motive power required to actuate said connection.

3. A power-transmitting connection, having in combination a rigid portion provided at one end with a resilient tubular element comprising helicoidal windings of wire of contiguous convolutions, and means acting on said tubular element to give to said rigid portion oppositely directed lengthwise movements, the co-efficient of elasticity of said element in the direction of its length being such that its resistance to strain is in excess of the motive power required to actuate said connection.

4. A power-transmitting connection, having in combination or rigid portion provided at one end with a resilient tubular element comprising helicoidal windings of wire of contiguous convolutions, and a crank-arm acting on said tubular element to give to said rigid portion oppositely directed lengthwise movements, the co-efficient of elasticity of said element in the direction of its length being such that its resistance to strain is in excess of the motive power required to actuate said connection.

1,231,111. SICKLE FOR MOWING-MACHINES AND THE LIKE. JOSEPH CHURCHILL ALFORD, Maben, Miss. Filed Nov. 13, 1916. Serial No. 131,128. (Cl. 56—44.)



1. A sickle including a bar, spaced lugs upstanding therefrom and extending transversely thereof, each lug having a recess in its front end and having a chamfered rear end, teeth having side recesses for the reception of the lugs, the front ends of the recesses being insertible into the recesses in the lugs, and means engaging the lugs for holding the teeth upon the bar and between the lugs.

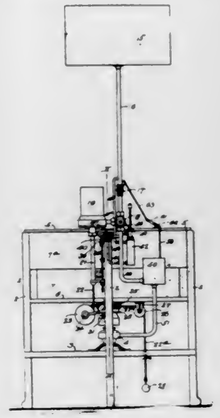
5. A sickle including a bar, lugs upstanding therefrom, teeth detachably mounted on the bar and interposed between the lugs, additional lugs upstanding from the bar and extending through the teeth, a head slidable into engagement with the lugs at one end of the bar and bearing upon the teeth therebetween, said head and lugs having interfitting portions, a key insertible transversely into the remaining lugs to bind the teeth thereunder to the bar, said head having a recess for the reception of one end of the key, said key constituting means for holding the head against movement off of the lugs engaged thereby, and means for fastening the key to the bar.

[Claims 2 to 4, 6, and 7 not printed in the Gazette.]

1,231,112. INCUBATOR. ARTHUR E. ALLISON, Coatesville, Pa. Filed Aug. 12, 1913. Serial No. 784,349. (Cl. 119—39.)

1. In an incubator, the combination with an outer fixed casing, a second casing vertically movable within the same, an egg receiver, a rotatable frame mounted freely above said receiver and forming egg turning means, and heating means suitably mounted with respect to the casing, of means for automatically raising and lowering the vertically movable casing and rotating the egg turning frame, said means including a main liquid fuel supply, an auxiliary liquid fuel supply in communication therewith and serving to feed the burner, an intermediate chamber receiving liquid fuel from said main liquid fuel supply which is subsequently passed to the auxiliary fuel supply, a valve controlling the flow of liquid to and from said intermediate chamber, a piston in said intermediate chamber which is raised by the delivery of fuel thereto, a connection between said piston and the egg casing whereby the latter may be raised, a connection between the egg casing operating means and the egg-turning frame whereby the latter may be rotated in one direction, and means for lowering the casing and effecting rotation of the egg-turning frame in the opposite direction.

2. The combination with an incubator having an outer fixed casing, a movable casing within the same, and egg turning means, of a body of fuel under head, a chamber communicating therewith, a plurality of valves controlling the passage of fuel to said chamber, a piston in said chamber, a piston rod carried thereby, a connection between said piston rod and the movable casing whereby the latter will be raised when said chamber fills with fuel, means operatively connected with the casing raising means for effecting movement of the egg turning means, a valve controlled by said piston, a second chamber, a pistou therein for controlling the movement of one of the first-named valves, a third chamber, floats therein for controlling the movement of one of the first-named valves, pipes affording communication between said several chambers, certain of said pipes being arranged to by-pass certain of the valves, and a burner device in communication with and receiving fuel from said third chamber, said burner consuming the fuel whereby movement of the several parts is automatically effected.



3. The combination with an incubator having an outer fixed casing, a movable casing within the same, and egg turning means, of a body of fuel under head, an auxiliary supply chamber communicating therewith, a plurality of valves controlling the passage of fuel from the main supply to said chamber, a piston in said chamber, a piston rod carried thereby, a connection between said piston rod and the movable casing whereby the latter will be raised when said chamber fills with fuel, means operatively connected with the casing raising means for simultaneously moving the egg turning means, a valve controlled by said piston, a second chamber, a piston therein for controlling the movement of one of the first-named valves, a third chamber, floats therein for controlling the movement of one of the first-named valves, pipes affording communication between said several chambers, certain of said pipes being arranged to by-pass certain of the valves, and a fuel consuming device in communication with and receiving fuel from said third chamber.

4. The combination with an incubator having an outer fixed casing, a movable casing within the same, and egg turning means, of a body of fuel under head, a temporary receiving chamber in communication therewith, valves controlling the passage of fuel to said receiving chamber, a piston in said chamber, a piston rod carried thereby, said piston being raised by liquid passed to said chamber, a connection between said piston rod and the movable casing whereby the latter will be raised by the movement of the piston, means operatively connected with the casing raising means for simultaneously moving the egg turning means, a valve controlled by said piston, a second chamber, a piston therein for controlling the movement of one of the

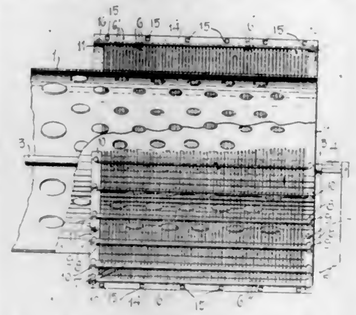


first-named valves, a float chamber for controlling the movement of one of the first-named valves, pipes affording communication between said several chambers, certain of said pipes being arranged to by-pass certain of the valves, and a burner device in communication with and receiving fuel from said float chamber.

5. In an incubator having a telescoping casing, the combination of a burner device for supplying heat, a fuel supply, a chamber intermediate the fuel supply and the heating device, means controlled by the consumption of such fuel for intermittently filling such chamber from the source of supply, means for supplying fuel from said chamber to the heater, and means actuated upon the filling and emptying of said chamber for telescoping the casing.

[Claims 6 to 12 not printed in the Gazette.]

1,231,113. REVOLVING SAND-SCREEN. FRANKLIN E. ARNDT, Galion, Ohio, assignor to The Galion Iron Works & Mfg. Co., Galion, Ohio, a Corporation of Ohio. Filed Mar. 2, 1917. Serial No. 152,125. (Cl. 83—56.)



1. A sand screen comprising sections, each of which includes a plurality of bowed rods, angle bars formed in one flange with openings in which the ends of said rods are hooked, the angle bars of one section abutting against the angle bars of the adjoining section, fastening devices extending through the abutting flanges of said bars to secure the sections together, bands, said angle bars overlapping said bands, and fastening devices extending through said bands and the overlapping ends of said bars.

2. A sand screen comprising sections, each of which includes a plurality of bowed rods and angle bars formed in one flange with openings in which the ends of said rods are engaged, the end bars of one section abutting against the end bars of the other section, and fastening devices extending through the abutting flanges of said end bars to secure the sections together.

3. A sand screen, including a plurality of bowed rods, a plurality of spacing bars formed with openings through which the rods extend, bands at the ends of said spacing bars, the latter having their ends coiled upon themselves to form eyes, bolts passing through said eyes and the bands and securing the bars to the bands, and end bars to which the ends of said rods are secured.

4. A sand screen, including a plurality of bowed rods, a plurality of spacing bars formed with openings through which the rods extend, bands at the ends of said spacing bars, the latter having their ends coiled upon themselves to form eyes, bolts extending through said eyes and the bands and securing the bars to the bands, end bars to which the ends of said rods are secured, and bolts securing the ends of the end bars to said bands.

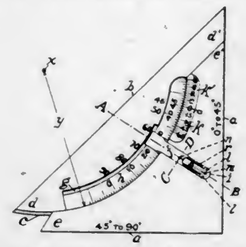
5. In a machine of the character described, the combination with a perforated drum, of a sand screen surrounding said drum and spaced therefrom in concentric relation thereto, said screen comprising two semicylindrical sections, each of which comprises a plurality of bowed rods, spacing bars formed with openings through which the rods extend, bands, bolts passing through said bands, the bars having their ends coiled around said bolts, angle bars formed with openings in which the ends of said rods are hooked, said angle bars at their ends overlapping and resting upon said bands, bolts extending through the bands and the overlapping ends of the angle bars so as to secure said bars to the bands, bolts securing the angle bars of one section to the angle bars of the other section, and means for holding the screen in spaced relation to the drum.

[Claim 6 not printed in the Gazette.]

1,231,114. SHORTENER FOR BAKING FOODS. FREDERICK C. ATKINSON, Indianapolis, Ind. Filed June 19, 1916. Serial No. 104,584. (Cl. 99—10.)

Hydrogenated corn oil in the form of a powder.

1,231,115. DRAFTSMAN'S TRIANGLE AND PROTRACTOR. CHARLES W. BARNABY, New York, N. Y. Filed June 11, 1912. Serial No. 702,966. (Cl. 33—75.)



1. A pivotless adjustable angle device comprising a segmental member, a second member provided with a non-encircling concave edge adapted to engage the convex edge of said segmental member, a flat face of one of said members being provided with a circular, depressed surface and a circular groove, and the other of said members being provided with a recess radially located with respect to the arc of junction of the two members, and a guard member adapted to sweep along the circular depression and provided with an end flange to engage and traverse the circular groove in the one member, said guard being secured in the radial recess in the other member, whereby the segmental member and the second member are maintained in close, adjustable relation with each other.

2. A pivotless angle device comprising a segmental member, a second member engaging with the convex surface of the segmental member and a retaining guard sunk flush with and secured in the face of one member and operating in a circular depression of the other member and at the same time engaging with a groove in said other member whereby the two members are maintained in adjustable engagement with each other.

3. A draftsman's combination triangle and bevel-protractor comprising a segmental member with a circular, depressed, graduated surface in which is placed a circular groove concentric with the convex edge of the member, a graduated, concave edge member adapted to operatively engage the convex edge of the segment member and provided with a recess radially disposed in relation to the arc of engagement of the two members, and a flanged end guard member, the flanged end engaging the circular groove in the segment member and the other end being secured in the radial recess in the concave edge member, whereby the segment and concave members are maintained in close adjustable relation with each other.

4. A draftsman's adjustable triangle comprising a segmental member with a depressed surface along its convex edge and with a circular groove in said depression concentric with the convex edge of the segment, a concave member adapted to operatively engage the convex edge of the segment member and provided with a recess radially disposed in relation to the arc of engagement of the two members, a guard member with a flanged end adapted to

engage the groove in the segment member while the other end is adapted to adjustably engage the radial recess in the concave member, and a locking means connecting the guard member, operatively, with the concave member, whereby the guard member may be adjusted in a radial direction in the recess in the concave member to tighten or release the grip of the flange on the end of the guard member against the concave edge of the circular groove in the segment member.

5. A draftsman's adjustable triangle comprising an angle member with a concave edge opposite to the angle of the member and a recess in one face and radial to said concave edge, a segmental member with a depressed surface along an arc of its convex edge and with a circular groove in said depression concentric with this convex edge and with one end of the chord edge of the segment extended beyond the arc edge and made of such shape as to come in contact with one end of the angle member when the chord edge of the segment member is at some certain angle with respect to an edge of the angle member and to complete the contour of the angle at that corner, and a guard member having a flanged end and adjustably fitted within the radial recess in the angle member and traversing the depressed surface of the segment member and engaging, through its end flange, the circular slot in said depressed surface.

[Claims 6 to 11 not printed in the Gazette.]

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1,231,116. FOWL-CATCHER. EDWARD BENDER, Westfield, Wis. Filed Aug. 2, 1916. Serial No. 112,871. (Cl. 57—113.)

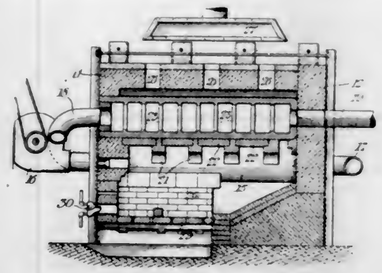


The herein described fowl catcher comprising a handle having a grip at the outer end, said handle comprising a pair of spaced longitudinal members and spaced cross guides connecting said members together, an operating rod slidably mounted in the handle, between the members thereof and provided at one side with a grip arranged between two of said cross guides, a pair of arms pivotally connected to the inner ends of the handle members and arranged for movement toward and from each other, a pair of substantially semi-spherical trap members on the inner sides of said arms and attached to the outer ends thereof and adapted to close together, a coiled spring connecting said arms together and a pair of links pivotally connected to the inner end of the operating rod and respectively pivotally connected to said arms.

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1,231,117. AIR-HEATER. WILLIAM N. BEST, New York, N. Y. Filed May 3, 1915. Serial No. 25,412. (Cl. 126—116.)

1. An air heater including a casing having front and rear walls of refractory material, a plurality of air conduits of refractory material disposed substantially horizontally and extending through said casing from the front to the rear wall and engaging with and partly supported by said walls, each of said conduits having a plurality of inwardly extending, heat-radiating flanges integral therewith, separate return bends disposed outside of said casing and connecting said conduits in series, a liquid fuel vaporizer delivering through said front wall and lengthwise of said casing beneath said conduits, a series of outlets arranged along the top of said casing above said conduits, a gas collecting hood spaced from and disposed above said outlets, and means for delivering air through said conduits and return bends.



2. An air heater including a casing having side walls and front and rear walls of refractory material, an arched top wall supported by said side walls and having a series of gas outlets arranged along the upper portion thereof and lengthwise of said casing, a plurality of conduits of refractory material arranged in staggered relationship lengthwise of said casing and engaging with said front and rear walls, return bends separate from said conduits outside of said casing and connecting said conduits together in series, a liquid fuel vaporizer for delivering vaporizing liquid fuel lengthwise of said casing beneath said conduits and from said front wall toward said rear wall, separate air inlets to said casing beneath said vaporizer, and means for delivering air through said conduits and return bends.

3. An air heater including a casing having side walls and front and rear walls of refractory material, an arched top wall supported by said side walls and having a series of gas outlets arranged along the upper portion thereof and lengthwise of said casing, a plurality of conduits of refractory material arranged in staggered relationship lengthwise of said casing and engaging with said front and rear walls, return bends outside of said casing and connecting said conduits together in series, a liquid fuel vaporizer for delivering vaporizing liquid fuel lengthwise of said casing beneath said conduits and from said front wall toward said rear wall, separate air inlets to said casing beneath said vaporizer, means for delivering air through said conduits and return bends, means for supporting certain of said conduits from the bottom of said casing, and a series of refractory blocks spaced apart lengthwise of the casing and supporting the uppermost conduit from the lower ones.

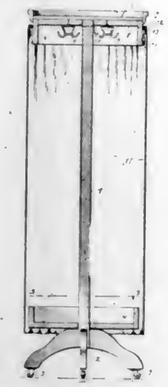
4. An air heater, including a casing, a plurality of air conduits of refractory material disposed substantially horizontally and extending through said casing from one wall to the opposite wall and engaging with and partly supported by said walls, separate return bends outside of said casing and connecting said conduits in series, a liquid fuel vaporizer delivering through one of said walls and in the general direction of the length of said conduits beneath the latter and means for delivering air through said conduits and return bends in series.

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1,231,118. KNOCKDOWN GARMENT-STAND. ANNA E. BIENSTOCK, Newark, N. J. Filed July 6, 1916. Serial No. 107,759. (Cl. 45—118.)

A knockdown garment stand comprising a base, a post extending upwardly therefrom, a top piece, a cruciform reinforcing brace secured to the lower side of the top piece, said brace having a central socket adapted to be engaged by the upper end of the post, a plurality of hooks

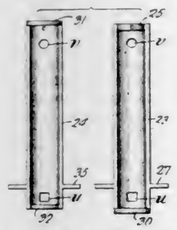




secured to the brace, a rim extending around the top piece, and a curtain depending from the rim.

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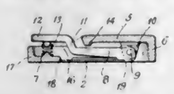
1,231,119. CHURN. JAMES H. BOWLING, Russellville, Ky. Filed Aug. 4, 1915. Serial No. 43,560. (Cl. 259—95.)



In a churn of the class described, the combination with a revolubly supported dasher shaft, of a tubular dasher including two similar half tubular members each member having at its upper end an apertured circular collar and at the lower end a circular end forming apertured disk said shaft being held within the apertures of said disks and collars, one upper collar being held below the opposite collar while the lower disk of the other member is held above the opposite disk whereby the ends of said members are made to overlap, a set screw passing through one of said members and into the collar of the opposite member for locking said members to said shaft, each of said tubular members having an outstanding plate at its lower end from which extends an agitating rib, a vent opening being located below each plate and a bearing to hold said shaft at its lower end.

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1,231,120. ATTACHMENT FOR T-SQUARES. ERNEST J. BRASSEUR, Chicago, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 4, 1915. Serial No. 59,533. (Cl. 24—252.)



1. A detachable stop, adapted to be slidably secured across the blade of a T square or rule, comprising a frame having side portions, and a horizontal portion at one end, a lever pivoted at one of its ends between said side portions, adjacent the end of said frame opposite to said horizontal portion, the free end of said lever extending above said horizontal portion, and a spring between said horizontal portion and the free end of the lever, to press the latter upwardly, said lever having a transverse shoulder on its under side, adjacent the pivot thereof, and said frame having a transverse shoulder on its underside, in alinement with the shoulder on said lever when the latter is in depressed position, said shoulders being adapted to clamp the opposite edges of the blade, substantially as set forth.

2. A detachable stop, adapted to be slidably secured across the blade of a T square or rule, comprising a frame having side portions, a lever pivoted at one of its ends between said side portions, adjacent one end of the frame, and spring means mounted to press the free end of said lever upwardly, between said side portions, said lever having a transverse shoulder on its under side, adjacent the pivot thereof, and said frame having a transverse shoulder on its under side under said lever, in alinement with the shoulder on said lever when the latter is in depressed position, said shoulders being adapted to clamp the opposite edges of the blade when said lever is depressed, substantially as set forth.

[Claim 3 not printed in the Gazette.]

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1,231,121. MEANS FOR EXCAVATING AND TRANSPORTING MATERIAL IN GRADING. WILLIAM F. BRINTON, Washington, Iowa. Filed Oct. 12, 1916. Serial No. 125,266. (Cl. 37—24.)



1. Means for excavating and transporting material in grading, comprising an endless series of buckets or scoops, and plows movable alongside of the series of buckets or scoops in position to direct excavated dirt thereinto, and means for driving the series of buckets or scoops in one direction and the plows in the opposite direction, the plows being arranged on opposite sides of the series of buckets or scoops.

2. Means for excavating and transporting material in grading, comprising an endless series of buckets or scoops, and plows movable alongside of the series of buckets or scoops in position to direct excavated dirt thereinto, and means for driving the series of buckets or scoops in one direction and the plows in the opposite direction, the plows being arranged on opposite sides of the series of buckets or scoops, and the driving means for the plows having means for coupling up either series of plows to the exclusion of the other series of plows.

3. Means for excavating and transporting material in grading, comprising an endless series of buckets or scoops, power means at each end of the series for causing the series of scoops to move progressively in the direction of the length of the series, and a series of plows adjacent to the series of scoops and provided with driving connections for propelling the plows oppositely to the direction of movement of the buckets or scoops.

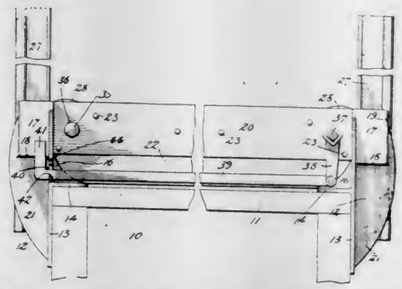
4. Means for excavating and transporting material in grading, comprising an endless series of buckets or scoops of a length to extend from an elevated area over a depressed area, means for propelling the series of scoops, and a series of plows arranged at one side of the series of scoops in position to direct material into said scoops

and of a length to override the elevated portion and stopping short of the depressed portion of the area to be graded.

5. Means for excavating and transporting material in grading, comprising an endless series of buckets or scoops of a length to extend from an elevated area over a depressed area, means for propelling the series of scoops, and a series of plows arranged at one side of the series of scoops and of a length to override the elevated portion and stopping short of the depressed portion of the area to be graded, the grading means including power means with connections to the series of buckets and plows to propel the series of buckets in one direction and the series of plows in the opposite direction.

[Claims 6 to 14 not printed in the Gazette.]

1,231,122. RAILWAY-CAR. EDMUND C. BRITT, Seattle, Wash. Filed Dec. 15, 1916. Serial No. 137,211. (Cl. 105—173.)



1. A locking device for railway car stakes comprising a hook shaped member secured to the stake, a rocking roller journaled on the car and having a notch in its peripheral surface adapted to engage the extremity of the hook member and hold the stake in upright position, means operable from the opposite side of the car to rock said roller for engaging and disengaging the hook member, and means for locking said operable means to prevent movement of the roller when the latter is engaged by the hook-shaped member.

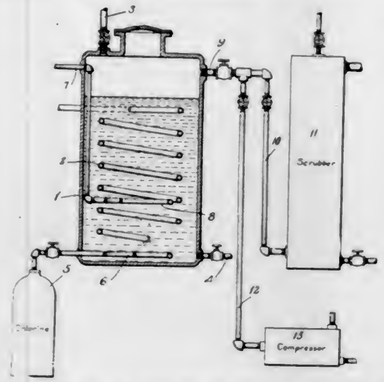
6. In a device of the class described, a railroad car stake, a locking means for maintaining the same in vertical position against pressure on its inner side, said locking means comprising an inwardly projecting hook with a downwardly projecting point, a roller having a longitudinal groove in one side thereof, the bearing surface of which groove to co-act with the point of the hook being above and without the axis of rotation of the roller, and means on the opposite side of the car for turning said roller.

7. In a device of the class described, a log bunk, a bracket on each side of a car to receive the ends of the bunk, said bracket comprising a vertical plate and a horizontal plate to bear on the outer side and the floor of a car, a pair of spaced pockets for the end of the bunk, and a shelf adapted to support the lower end of the stake.

[Claims 2 to 5 not printed in the Gazette.]

1,231,123. PRODUCTION OF CHLORINATED HYDROCARBONS. BENJAMIN T. BROOKS and DILLON F. SMITH, Pittsburgh, Pa., assignors to Gulf Refining Company, Pittsburgh, Pa., a Corporation of Texas. Filed Dec. 10, 1915. Serial No. 66,068. (Cl. 23—24.)

1. The method of producing dichlorinated ethylene hydrocarbons from oil gas, which comprises subjecting the oil gas to a preliminary rectification and thereby separating the ethylene and propylene from the hydrogen and saturated and higher unsaturated hydrocarbons, and subjecting the resulting mixture of ethylene and propylene to the action of chlorin in the presence of a co-solvent of both the chlorin and the hydrocarbons, whereby a mixture of dichlorinated ethylene and propylene is obtained in a smooth and easily regulated manner.




2. The method of chlorinating ethylene hydrocarbons, which comprises introducing the same and chlorin separately into a body of a co-solvent of both the chlorin and the ethylene hydrocarbons, whereby the chlorination is effected in a smooth and easily regulated manner.

3. The method of producing a mixture of dichlorinated ethylene hydrocarbons, which comprises passing a mixture of ethylene hydrocarbons and chlorin separately into a co-solvent of the chlorin and of the hydrocarbons and thereby effecting the chlorination of the dissolved materials in a smooth and easily regulated manner.

4. The method of producing from oil gas a mixture of dichlorinated ethylene hydrocarbons consisting principally of ethylene and propylene dichlorids, which comprises subjecting the oil gas to a preliminary fractional liquefaction and rectification and thereby separating the ethylene and propylene from the hydrogen and methane and from the higher unsaturated hydrocarbons, whereby a mixture of ethylene and propylene is produced relatively free from hydrogen and other hydrocarbons, and subjecting the resulting gaseous mixture to the action of chlorin by passing the gases and the chlorin separately into a co-solvent of both the chlorin and the hydrocarbons, which co-solvent contains dichlorinated ethylene hydrocarbons resulting from the reaction, whereby a mixture of dichlorinated ethylene hydrocarbons consisting principally of dichlorinated ethylene and propylene is obtained in a smooth and easily regulated manner.

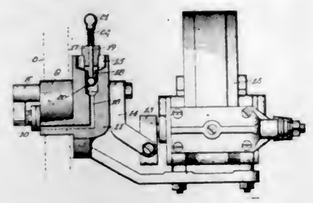
5. The method of chlorinating ethylene hydrocarbons, which comprises introducing the same and chlorin separately into a body of a co-solvent of both the chlorin and of the ethylene hydrocarbons, which co-solvent is made up of the dichlorinated ethylene hydrocarbons resulting from the reaction, whereby the chlorination is effected in a smooth and easily regulated manner.

[Claim 6 not printed in the Gazette.]

1,231,124. PRIMING DEVICE FOR INTERNAL-COMBUSTION ENGINES. WALTER BROWN, Racine, Wis., assignor to Webster Electric Company, Racine, Wis., a Corporation of West Virginia. Filed Mar. 8, 1916. Serial No. 82,805. (Cl. 123—180.)

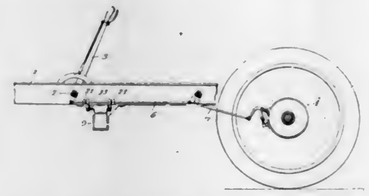
1. A primer for internal combustion engines comprising a make and break contact support provided with a well to receive the priming agent, a plug extending vertically through the center of the well and secured to the support, said plug being provided with a bore extending between the lower end of the plug and the lower end of the well, a plunger valve member extending longitudinally through the plug for closing the lower end of the bore, a finger piece carried at the upper end of the member, and a spring interposed between the finger piece and plug to normally hold the valve in closed position, the lower end of the bore communicating with the combustion chamber of the engine whereby the priming agent is caused to empty into the combustion chamber when the valve member is depressed.





2. A primer for internal combustion engines comprising a plug having a bore extending vertically therethrough and having its lower end externally threaded to thread into an internally threaded part carried by the engine, the internally threaded part having communication with the combustion chamber of the engine, a plunger valve member extending vertically through the bore and having an enlarged lower end to seal the bore when said end is held in engagement with the plug, the upper end of said plunger valve extending beyond the plug and being there provided with means for normally holding the valve member in closed position, whereby a priming agent may be fed through the bore to the combustion chamber of the engine when the plunger valve member is moved downwardly to provide communication between the bore and the combustion chamber.

1,231,125. LOCK FOR AUTOMOBILES. CLARENCE NOEL CAHUSAC, Jersey City, N. J., assignor, by mesne assignments, to Duplex Lock Company, Inc., New York, N. Y., a Corporation of New York. Filed Jan. 27, 1916. Serial No. 74,684. (Cl. 70—90.)



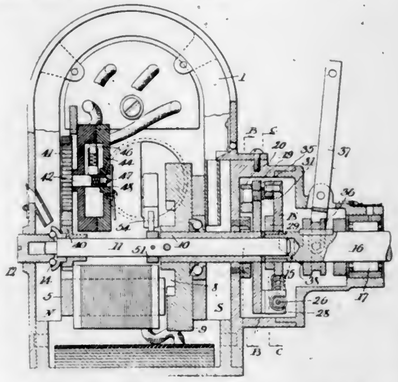
1. The combination with an automobile brake, and applying means therefor, of a slide bar adapted to be moved by said brake mechanism in its movement to setting and unsetting position, a solenoid, a core therefor adapted to engage and lock said bar and said brake mechanism when the latter reaches the set position, a normally open circuit adapted to be closed to energize said solenoid, and means for separately breaking said circuit.

2. The combination with an automobile brake, and applying means therefor, of a slide bar adapted to be moved by said brake mechanism in its movement to setting and unsetting position, a casing carried by the automobile in which said slide bar moves, a solenoid mounted in a closed chamber in said casing, a core therefor adapted to lock said slide bar when said brake mechanism is moved to said setting position, and an electric circuit adapted to be closed to energize said solenoid to release said slide bar.

3. The combination with an automobile brake, and applying means therefor, of a slide bar adapted to be moved by said brake mechanism in its movement to setting and unsetting position, a casing carried by the automobile in which said slide bar moves, a solenoid mounted in a closed chamber in said casing, a case therefor adapted to lock said slide bar when said brake mechanism is moved to said setting position, an electric circuit adapted to be closed to energize said solenoid to release said slide bar, and means for separately breaking said circuit.

4. In a locking device of the character described the combination of a rod for a vehicle, a pair of forked plates engaging said rod, a slidable notched bar carrying said plates, means to normally lock the bar in a predetermined position and means to unlock the said bar.

1,231,126. GENERATOR FOR INTERMITTENT ELECTRIC CURRENTS. JONAS CARTER, Waukegan, Ill., assignor to Carter-Long Magneto Company, Waukegan, Ill., a Corporation of Illinois. Filed Mar. 1, 1916. Serial No. 81,430. (Cl. 123—149.)



1. A generator for intermittent electric currents, comprising a permanent magnet having a duplex core piece attached to one pole thereof, wire coils on one member of said core, an armature adapted to rotate between the opposite pole of the magnet and the two members of the core, and means for rotating the armature, the axis of rotation of said armature being parallel to the axes of said core pieces.

2. A generator for intermittent electric currents, comprising a permanent magnet having a duplex core piece attached to one pole thereof, primary and secondary coils on one member of the core piece, primary coils on the other member of the core piece, an armature adapted to rotate between the opposite pole of the magnet and the two members of the core, and means for rotating the armature.

3. A generator for electric currents, comprising a permanent magnet, a casing for said magnet, a core piece mounted on one pole of the magnet, a shaft carrying an armature adapted to rotate between the opposite pole of the magnet and the core piece, a distributer within the casing, and means carried by the shaft for actuating said distributer.

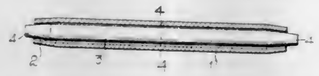
4. A generator for electric currents, comprising a field magnet, a casing for said magnet, a core carried by one pole of the field magnet, a shaft having an armature adapted to rotate between the opposite pole of the magnet and the core piece, a distributer within the casing, means for actuating the distributer, a circuit breaking device, and means carried by the shaft for actuating said device.

[Claims 5 to 12 not printed in the Gazette.]

1,231,127. PEN-EXTRACTOR. EMMIT EARL CARNS, Salem, Ohio. Filed Feb. 26, 1917. Serial No. 151,042. (Cl. 120—97.)

1. A pen point extractor comprising an elongated tubular member having an end open, the open end portion

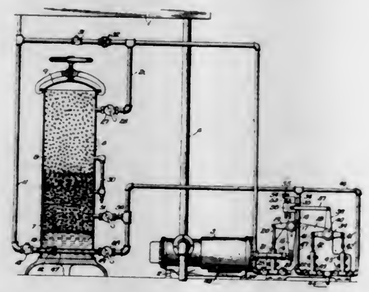
of the bore of said member being reduced, and a clamping member movably arranged within the tubular member and adapted to coact with the reduced portion of the bore of the tubular member to effect a clamping action, the reduced portion of the bore of the tubular member being substantially rectangular in cross section said reduced portion serving to limit the movement of the movable clamping member toward the open end of the tubular members.



2. A pen point extractor comprising an elongated tubular member having its opposite ends open, the opposite end portions of the bore of the tubular member being reduced, a rod disposed through the tubular member and of a length greater than the length of the tubular member, the opposite end portions of the rod being tapered and adapted to coact with the reduced portions of the bore of the tubular member.

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1,231,128. CHEMICAL-FEEDING DEVICE FOR WATER-SOFTENERS. CHAPIN ALPHEUS CARTWRIGHT, Chicago, Ill. Filed Mar. 13, 1915. Serial No. 14,192. (Cl. 210—1.)



1. The combination with a receiver, of a tank, means for supplying water to the receiver, a conduit leading from the tank to the receiver, and means for forcing air into the tank to induce flow of fluid from the tank through the conduit into the receiver.

2. The combination with a receiver, of a chemical container, a conduit leading to the receiver, a motor interposed in said conduit, a pump operable by the motor, a chemical supply conduit leading from the container to the receiver, and a conduit leading from the pump to the container and having an injector relation with the chemical supply conduit.

3. The combination with a receiver, of a chemical container, a conduit leading from the container to the receiver, a fluid supply conduit leading to the receiver, a motor interposed in said conduit, and an air pump operable by the motor and adapted to deliver air to the container.

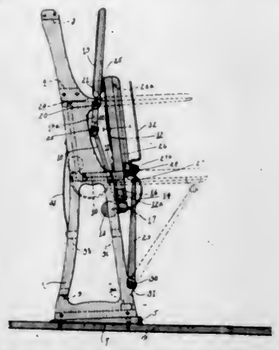
4. The combination with a receiver, of a chemical container, a conduit leading from the container to the receiver, a fluid supply conduit leading to the receiver, a motor interposed in said fluid supply conduit and operable by fluid passing through said conduit, an air pump operable by the motor and adapted to deliver air to the container, and a water supply pump operable by the motor and having injector relation with the chemical supply conduit.

5. The combination with a receiver, of a chemical container, a chemical supply conduit leading from the container to the receiver, a water supply conduit leading to the receiver, a motor served from said conduit, an air pump operable by the motor and having connection with the container, and a water pump operable from the motor and having connection with the container.

[Claims 6 to 9 not printed in the Gazette.]

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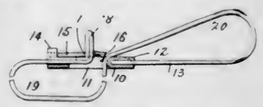
1,231,129. CHAIR. GEORGE F. CLUFF, Jr., Sacramento, Cal. Filed Aug. 5, 1916. Serial No. 113,307. (Cl. 155—13.)



A folding chair comprising upright supports, each support comprising two members spaced apart, filler blocks interposed in the intervening space between each pair of upright members, a seat and chair arms hinged to the supports in spaced relation and linked together, and projecting portions on the arms arranged to engage the filler blocks when the seat and arms are moved to horizontal position whereby the filler blocks will act as stops and braces for such seat and arms.

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1,231,130. BUCKLE. ERNEST S. COLBY, Portland, Oreg. Filed Feb. 29, 1912. Serial No. 680,675. (Cl. 24—170.)

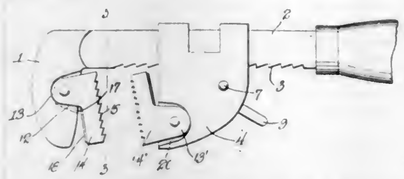


1. A buckle comprising a sheet metal body consisting of a frame having a central opening from one side of which a lip is bent outward and parallel with the body, a space being provided between the lip and the body which opens outwardly, an extended smooth strap-bearing being thus provided at said side of the opening, said lip and the contiguous portion of the buckle body forming means for clamping the end of the strap, the buckle having side flanges which are adapted to overlie the edges of the portion of the strap engaged by said lip, and a clamping tongue, or dog to which the other end of the strap is adapted to be attached having a movable connection with said flanges.

2. A buckle comprising a sheet metal body consisting of a frame having a central opening from one side of which a lip is bent outward and parallel with the body, an extended smooth strap bearing being thus provided at said side of the opening, said lip and the contiguous portion of the buckle body forming means for clamping the end of a strap, the buckle having side ribs which are adapted to overlie the edges of the portion of the strap engaged by said lip, said side ribs having at the opposite end of the body laterally projecting lugs, and a clamping tongue, or dog, to which the other end of the strap is adapted to be attached, and having a loose engagement with said lugs and adapted to impinge upon the strap where it passes through the hole in the body and hold it against the bearing formed by the outwardly folded lip.



1,231,131. WRENCH. ROBERT J. COLSON, St. Louis, Mo. Filed Apr. 18, 1916. Serial No. 91,980. (Cl. 81—180D.)



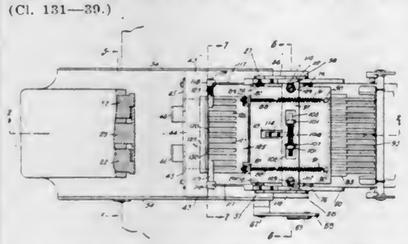
1. In a pipe wrench, the combination with a stationary and a movable jaw, the said stationary jaw being provided with a shank having serrations formed on one edge, and a movable jaw being slidably movable upon said shank, of auxiliary jaws carried by said stationary and movable jaws, said auxiliary jaws being pivotally mounted upon the stationary and movable jaws, each of said auxiliary jaws being adapted to swing toward the other and provided with teeth and a spring element carried by the movable and the stationary jaw and resiliently engaging the said auxiliary jaws for normally holding said auxiliary jaws at an angle and for giving them a tendency to engage each other.

5. In a pipe wrench, the combination with a pair of main jaws, one stationary and the other movable, the side face of the said jaws being provided with depressions, the proximate edges of the said main jaws being substantially flat at right angles to the shank of the said stationary jaw, auxiliary jaws provided with ears disposed within the said depressions, the main jaws carrying pivot pins for receiving the said ears, the gripping portions of the said auxiliary jaws being substantially U-shaped, the said ears projecting from the legs of the U-shaped portions, and a flat spring carried by each of the said proximate edges of the said main jaws and having its free end engaged with the connecting portion of the said U-shaped portions whereby the said auxiliary jaws will normally be held at an angle to the proximate edges of the main jaws and in parallelism with each other.

[Claims 2 to 4 not printed in the Gazette.]

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1,231,132. MACHINE FOR MAKING CIGARS. ALLEN J. COLWELL, Providence, R. I., assignor to Colwell Cigar Machine Company, Incorporated, a Corporation of Delaware. Filed Dec. 8, 1916. Serial No. 135,787. (Cl. 131—39.)



1. In a machine of the type set forth, the combination with a run, of a feed carriage on the run, a shearing plunger upon the run adapted to advance tobacco strips to the carriage, and means intermediate the plunger and carriage for yieldingly engaging the strips.

6. In a machine of the type set forth, the combination with a run, of a reciprocating shearing plunger mounted on the run adapted to advance tobacco strips along the run, means for reciprocating the plunger, plates upon the side of the run, arms carried by the plates, and a depending plate yieldingly mounted in the arms in front of the plunger extending to the run in the path of the strips.

9. In a machine of the type set forth, the combination with a run, of an abutment on the run provided with an opening, blades upon the abutment at the margin of the opening, a reciprocating plunger slidably mounted on the run movable through the opening, means for reciprocating the plunger, a housing plate on the run extending above the opening comprising horizontal rods, arms extending above the housing plate, means upon the run for supporting the arms, and a swinging plate pivotally mounted in the arms provided with marginal cavities to receive the rods.

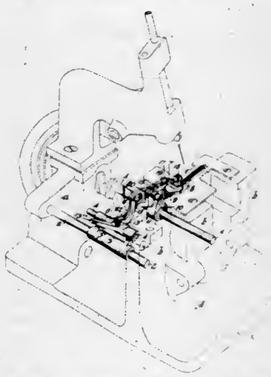
11. In a machine of the type set forth, the combination with a frame and run, of horizontally reciprocating contact plates on the frame beside the run, means for actuating the plates, said plates being provided with horizontal slots, carrier plates on the frame beside the run provided with horizontal guideways, a carrier frame above the run slidably mounted in the guideways, a slide yieldingly mounted in the carrier frame, and expansion rods on the carrier frame extending into the slots.

14. In a machine of the type set forth, the combination with a run, of reciprocating contact plates mounted upon the sides of the run, means for reciprocating the plates, carrier plates upon the sides of the run, a carrier frame slidably mounted in the carrier plates, a slide yieldingly mounted in the frame, expansion rods slidably mounted on the frame movable into and out of the paths of the contact plates, resilient means for moving the rods in one direction, and cams for moving the rods in the opposite direction.

[Claims 2 to 5, 7, 8, 10, 12, 13, and 15 to 19 not printed in the Gazette.]

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1,231,133. FEEDING MECHANISM FOR SEWING-MACHINES. HERBERT CORRALL, Parkview, Helensburgh, Scotland, assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 20, 1914. Serial No. 867,599. (Cl. 112—8.)



1. In feeding mechanism for sewing machines, the combination with a primary feed-dog and supporting means therefor including a reciprocatory bar, of a secondary feed-dog pivotally mounted upon the reciprocatory bar and means for instantly raising or lowering said secondary feed-dog including an adjusting lever and a pin-and-slot connection between said lever and said secondary feed dog.

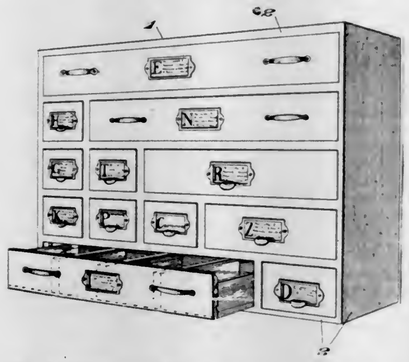
2. In feeding mechanism for sewing machines, the combination with a primary feed-dog and supporting means therefor including a reciprocatory bar, of a feed-rocker carrying a supporting pin upon which the said bar is mounted, a secondary feed-dog, and an auxiliary bar therefor fulcrumed upon the reciprocatory bar and formed with a slot, an adjusting level fulcrumed upon the rocker-pin adjacent the reciprocatory bar and carrying a pin entering the slot in the auxiliary bar and also provided with an operating handle projecting rearwardly of the rocker to be directly manipulated by the operator

for instantaneously raising or lowering the auxiliary feed-dog.

3. In feeding mechanism for sewing machines, the combination with a primary feed-dog and supporting means therefor including a reciprocatory bar, of a secondary feed-bar pivotally supported upon the reciprocatory bar, a secondary feed-dog carried thereby, and an adjusting lever directly and slidably connected with the secondary feed-bar for effecting instantaneous elevation or depression of the secondary feed-dog relative to the primary feed-dog.

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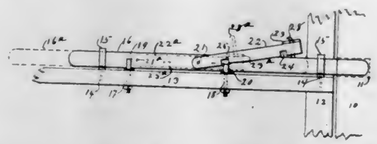
1,231,134. FILING-CABINET. JOSEPH CLIFFORD DANDO, Philadelphia, Pa., assignor to The Dando Printing and Publishing Company, a Corporation of Pennsylvania. Filed July 11, 1912. Serial No. 708,783. (Cl. 45—2.)




The hereindescribed filing cabinet, comprising a body with a drawer-receiving portion rectangular in front elevation, a vertical tier of drawers providing an upper wide drawer and successive drawers of progressively decreasing width in a downward direction, the walls of said drawers at one corresponding side of them being in vertical alinement at one upright end of the cabinet, narrow drawers between said successive drawers of the series and the opposite upright end of the cabinet, a lower wide drawer extending from said opposite upright end of the cabinet beneath the stepped ends of the drawers of progressively decreasing width, and a lower narrow drawer in the same series with said lower wide drawer, the combined lengths of the drawers in each horizontal series being substantially the same, substantially as and for the purposes set forth.

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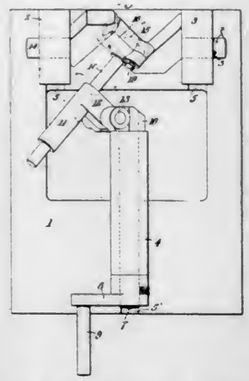
1,231,135. BOLT-LOCK. HUGH DEMPSEY, Spokane, Wash. Filed May 22, 1916. Serial No. 99,017. (Cl. 16—64.)



A bolt-lock comprising a bolt adapted to be slidably mounted on a gate portion, a staple on said bolt, a latch having notches cut therein and pivoted at one end to said bolt and having a handle at its free end with a slotted portion extending over said bolt so that the staple on the bolt will engage the slot, and two lug portions adapted to be secured to said gate portion in spaced relation to each other, so that one of the notches in said latch will engage one of said lugs and that the other of said lugs will serve as a stop for the backward movement of the bolt by engaging the latch on said bolt in abutting relation.

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1,231,136. MECHANICAL MOVEMENT. ALBERT H. DE VOE, Westfield, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 26, 1915. Serial No. 57,919. (Cl. 74—14.)



1. In a mechanical movement, in combination, a rotary driving shaft, a driven shaft arranged substantially at right angles to said driving shaft and provided with a crank member inclined to its axis, and means for operatively connecting said driving shaft with said crank member for transmitting to said driven shaft oscillatory movements.

2. In a mechanical movement, in combination, a rotary driving shaft, a driven shaft arranged substantially at right angles to said driving shaft and provided with a crank member inclined to its axis, and means for operatively connecting said driving shaft with said crank member, including a power transmitting connection whose axis is inclined to the axis of said driving shaft, for transmitting to said driven shaft oscillatory movements.

3. In a mechanical movement, in combination, a rotary driving shaft, a driven shaft arranged substantially at right angles to said driving shaft and provided with a crank member inclined to its axis, and means for operatively connecting said driving shaft with said crank member, including a power transmitting connection whose axis is inclined to and intersects the axis of said rotary shaft, for transmitting to said driven shaft oscillatory movements.

4. In a mechanical movement, in combination, a rotary driving shaft provided with a shaft crank, a driven shaft arranged substantially at right angles to said driving shaft and provided with a crank member inclined to its axis, and connections between said crank member and said crank shaft for transmitting oscillatory movements to said driven shaft.

5. In a mechanical movement, in combination, a rotary driving shaft provided with a shaft crank, a driven shaft arranged substantially at right angles to said driving shaft and provided with a crank member inclined to its axis and surrounded by a bearing sleeve, and a connection between said shaft crank and bearing sleeve for transmitting oscillatory movements to said driven shaft.

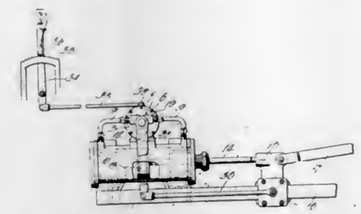
[Claims 6 to 12 not printed in the Gazette.]

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1,231,137. REVERSE-GEAR VALVE. CURTIS L. DICKERT, Macon, Ga., assignor of one-fourth to Frederick F. Gaines, Savannah, Ga., and one-fourth to William H. Fetner and one-fourth to Robert L. Doolittle, Macon, Ga. Filed Jan. 2, 1917. Serial No. 140,217. (Cl. 121—98.)

2. A reverse gear valve comprising a cylindrical casing having a fluid pressure inlet and having at one end a pair of distributing ports and an exhaust port, a valve disk in the casing contacting with said end thereof and having an arrangement of ports coöperating with the others and including a pair of ports opening through the inner face of said disk for communication with the interior of the casing, a disk segment contacting with said face of the disk with its ends slightly overlapping said pair of ports to control communication with the casing, the periphery of said segment sliding on the casing wall and the inner edge



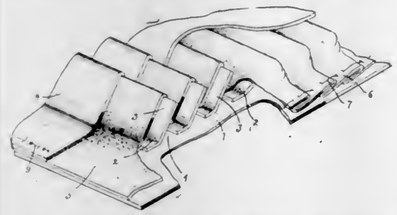


thereof having a curved seat concentric with said periphery, and a pair of shafts extending into the opposed ends of the casing, one of said shafts carrying the disk and the other being separate from but operatively connected with said segment, the inner end of one of said shafts being received rockably in said curved seat of the segment to hold the latter in sliding contact with the casing wall.

[Claim 1 not printed in the Gazette.]

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1,231,138. PLAITING DEVICE. MARGARET DARWIN DICKMAN, Duluth, Minn. Filed May 23, 1916. Serial No. 99,282. (Cl. 223—40.)



1. A plaiting device of the character described, comprising a flexible fabric foundation, a series of overlapping strips fixed to one surface thereof and of a length less than that of the foundation, a fabric glued to the strips and to the foundation intermediate the strips and extending beyond the ends thereof, said extending portions at the ends of the strips being stitched to the foundation substantially as and for the purpose described.

2. A plaiting device of the character described, comprising a flexible fabric foundation, a series of overlapping strips fixed to one surface thereof, their fixed edges being spaced apart and a fabric glued to the strips and to the foundation intermediate the strips, substantially as and for the purpose described.

3. The combination with a plaiting device of the character described, comprising a flexible foundation, a plurality of narrow flexible strips securely fastened to the foundation and overlapping each other, of a fabric having a pronounced nap thereupon for frictional purposes, glued to the strips and foundation forming a wearing covering for same.

4. The combination with a plaiting device of the character described, comprising a flexible foundation, a plurality of narrow flexible strips fastened to the foundation and spaced apart in such a manner as to expose a portion of the foundation intermediate the strips, of a fabric having a pronounced nap thereupon, for frictional purposes, glued to the strips and foundation forming a wearing covering for same.

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1,231,139. BOX-PLAITER. MARGARET D. DICKMAN, Duluth, Minn. Original application filed May 23, 1916, Serial No. 99,282. Divided and this application filed Jan. 25, 1917. Serial No. 144,389. (Cl. 223—40.)

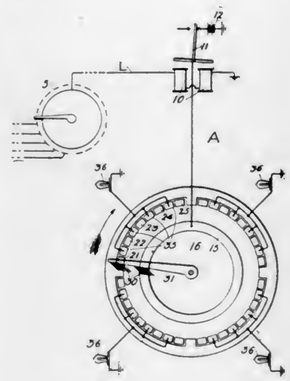


1. A plaiting device of the character described, comprising a foundation composed of a flexible fabric and a plurality of flexible strips fastened longitudinally of their centers to the foundation and having their adjacent free edges spaced apart as and for the purpose described.

[Claims 2 to 4 not printed in the Gazette.]

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1,231,140. TELEGRAPH SYSTEM. AMOS F. DIXON, Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Apr. 15, 1915. Serial No. 21,595. (Cl. 178—52.)




2. In a telegraph system, the combination of a current distributer having receiving segments divided into groups, signal segments associated with each of said groups, means controlled by line impulses for supplying current to said segments, and a plurality of signals, one associated with the signal segments of each group and operable by the current thus supplied thereto.

[Claims 1 and 3 not printed in the Gazette.]

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1,231,141. FABRIC FOR PRINTERS' BLANKETS AND OTHER PURPOSES. FRANK B. ELLIS, Revere, Mass. Filed Mar. 21, 1917. Serial No. 156,290. (Cl. 154—46.)



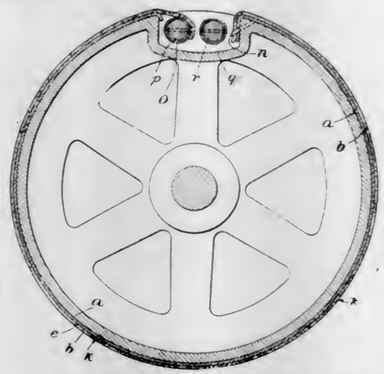

1. A printer's blanket, comprising a body, a face ply of textile fabric, a film of water-proof and oil-proof cement between said body and ply uniting the two together, and a smooth non-porous ink-repellent coating constructed as a film deposited on the outer side of said face ply.

2. A blanket for printing presses, comprising body and face layers, the former being of relatively expensive material and the latter of relatively inexpensive material, a film of adhesive material which is impervious to oil lying between said layers and connecting them together, and a non-offsetting film or coating adherently attached to the outer side of said face layer.

3. A printer's blanket comprising a body portion, a textile fabric secured by adhesive to one face of said body portion, and a film consisting essentially of nitrocellulose with a sufficient quantity of an emollient combined with it to render it flexible and non-brittle, united by deposition on the outer surface of said textile fabric.

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1,231,142. PACKING FOR PRINTING-PRESSES. FRANK E. ELLIS, Revere, Mass. Filed Mar. 22, 1917. Serial No. 156,584. (Cl. 154—54.5.)




1. The combination with the impression member of a printing press, of a rubber blanket having a face layer doubled thereto secured to the cylinder next to the surface thereof, and a felt blanket secured to the cylinder so as to overlie the face layer of said rubber blanket, said felt blanket having a face layer doubled thereto and provided on its outer side with a non-offsetting coating.

2. A packing for the impression member of a printing press, comprising a rubber blanket and a felt blanket, each of said blankets having a face layer of fabric secured to the body portion of said blankets by an adhesive which is oil-proof and water-proof, and said face layers each having an outer coating of material which is repellent to ink and is non-absorbent and smooth.

3. A packing for the impression member of a printing press, comprising a rubber blanket body including textile fabric disposed on one surface thereof and a face layer of fabric doubled with oil-proof adhesive to the fabric side of said rubber blanket body and having an outer coating of nitro cellulose, and a felt blanket body having a face layer doubled thereto, said face layer being provided with an outer coating of nitro cellulose.

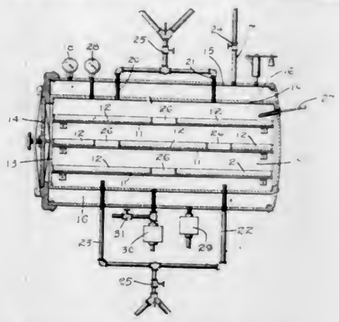
5. A printer's blanket, comprising a rubber and fabric body having a fabric sheet disposed on one face thereof and being vulcanized, a fabric face layer united by an adhesive to the fabric side of said rubber blanket, and a coating of nitro cellulose on the outer side of said face layer and having a smooth impervious surface which is repellent to printer's ink.

[Claim 4 not printed in the Gazette.]

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1,231,143. PROCESS OF PREPARING CEREAL FOOD. JOHN E. ENGSTAD, Minneapolis, Minn. Filed Mar. 29, 1916. Serial No. 87,448. (Cl. 99—10.)

1. The process of preparing cereal food products which consists in subjecting the granular meal as it comes from the mill to dry steam under pressure at a temperature of from two-hundred-and-thirty-five to two-hundred-and-fifty

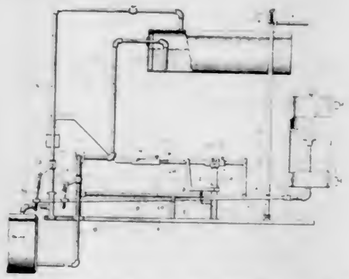


degrees Fahrenheit and for a sufficient time to rupture and break up the envelops of the starch pellicles.

[Claim 2 not printed in the Gazette.]

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1,231,144. STEAM-TRAP. CHARLES E. FAGAN, Blackstone, Mass. Filed Mar. 29, 1916. Serial No. 87,441. (Cl. 137—103.)



1. In a device of the class described, inlet and discharge pipes, inlet and outlet pipes pivotally connected thereto, a trap fixedly mounted upon the free ends of the last mentioned pipes, a counter balance for normally holding the trap in raised position, a pipe leading from the system with which the trap is to be used and in communication with the inlet pipe, a receiving tank interposed between the last mentioned pipe and the inlet pipe, a boiler with which said discharge pipe communicates, a pipe leading from said boiler to said receiving tank, a valve in the last mentioned pipe, a valve in the discharge pipe, and means operated by the downward movement of said trap for opening the valve in the last mentioned pipe and then the valve in the discharge pipe immediately thereafter, substantially as described.

2. In a device of the class described, inlet and discharge pipes, inlet and outlet pipes pivotally connected thereto, a trap fixedly mounted upon the free ends of the last mentioned pipes, a counter balance for normally holding the trap in raised position, a pipe leading from the system with which the trap is to be used and in communication with the inlet pipe, a receiving tank interposed between the last mentioned pipe and the inlet pipe, a boiler with which said discharge pipe communicates, a pipe leading from said boiler to said receiving tank, a valve in the last mentioned pipe, a valve in the discharge pipe, means operated by the downward movement of said trap for opening said valves, a pressure valve in the pipe leading from the system to the receiving tank and means governed by the downward movement of said tank for increasing the tension on said valve, substantially as described.



3. In a device of the class described, pivotally mounted inlet and outlet pipes, a steam trap mounted at the free ends of said pipes and movable therewith, a discharge pipe connected with the end of the outlet pipe, a receiving tank for the condensate, a siphon pipe connecting said receiver and said inlet pipe, an automatically operated valve in said discharge pipe, and a counter balance for said trap, substantially as described.

4. In a device of the class described, pivotally mounted inlet and outlet pipes, a trap on the free ends of said pipes, a counter balance lever pivotally mounted adjacent said pipes, a connecting link on said lever for normally holding said tank in elevated position, a dog pivotally mounted below the pivotal mounting of said counter balance lever, a detent on said lever normally engaged by said dog and a spring for holding said dog in operative position, substantially as described.

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1,231,145. PAPER DOLL. GRADELE FERGUSON, Waco, Tex. Filed Jan. 2, 1917. Serial No. 140,099. (Cl. 46—40.)



In a paper doll, a sheet containing the outline of a figure representing a person, the said sheet being folded on itself and having its surfaces secured together by adhesive, those portions of the figure representing the outline of an arm being secured by adhesive and the portion representing the outline of the hand on the said arm being unsecured to the body, thereby forming a pocket between the hand and the body and representations of wearing apparel adapted to be applied to the said body.

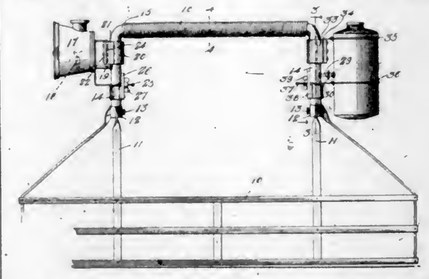
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1,231,146. COMBINED CARRIER AND LAMP. CHARLES A. FERRY, Altoona, Pa. Filed Feb. 27, 1917. Serial No. 151,338. (Cl. 240—2.)

1. In a carrier structure of the character set forth, the combination with a basket, of a handle bail mounted thereon, a lamp supported on one side of the handle bail, and illuminant supplying means for the lamp mounted on the other side of the bail and supported thereby above the basket.

2. In a carrier structure of the character set forth, the combination with a handle bail, of means for detachably connecting the ends thereof to a basket, and a lamp and illuminant supplying means for said lamp, both mounted on the bail and being thereby mounted on a basket to which the bail is attached, the structure as a unit being detachable from said basket.

4. In combination with a handle bail comprising upstanding side arms and a connecting grip, said side arms and grip comprising a substantially U-shaped tube, of a gas lamp mounted on one of the side arms and having a supply tube communicating with the bore of the handle bail, and a gas generator mounted on the other of the side

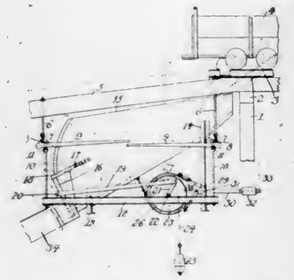


arms and having a delivery conduit communicating with the bore of the handle bail.

[Claim 3 not printed in the Gazette.]

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1,231,147. WEIGH-BASKET. JOHN J. FLEMING, Carrick borough, Pa., assignor to Phillips Mine and Mill Supply Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Sept. 21, 1916. Serial No. 121,442. (Cl. 193—46.)



1. The combination with a weigh basket having an inclined bottom and a hinged door at its end, said door being adapted to be opened automatically by the pressure of coal in the basket, of braking mechanism constructed and adapted to normally hold the door against opening movement, manually operable means for gradually releasing the braking mechanism and means for automatically closing the door when the braking mechanism is released.

2. The combination with a tipple structure and a weigh basket mounted thereon and having an inclined bottom and a swinging door at its lower end, of a rotary shaft connected to said door and adapted to be rotated by the opening movement of the door, a brake drum rotatable with said shaft, a brake adapted to engage with said brake drum, means for automatically maintaining said brake and brake drum normally in engagement, manually operable means for gradually releasing said brake and brake drum from engagement and means for rotating the brake drum to close said door.

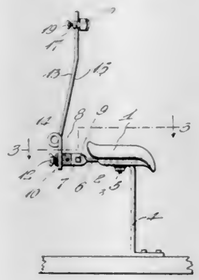
3. The combination with a weigh basket, of a door adapted to open under pressure of coal in the basket and to be automatically closed by gravity when the coal has been discharged and means comprising manually operable braking mechanism for controlling the opening of the door.

4. The combination with a weigh basket of a swinging door adapted to be opened by the pressure of the contents of the basket, braking mechanism connected to said door, means for manually controlling the operation of said braking mechanism and means connected with the braking mechanism for automatically closing the said door.

5. The combination with a weigh basket, of a door hinged thereto, a pitman connected to said door, a crank connected to said pitman, a shaft on which the said crank is carried, a drum mounted on said shaft, a brake adapted to contact with said drum and manually operable means for controlling the action of the brake relatively to the drum.

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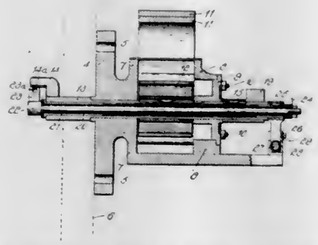
1,231,148. DETACHABLE SPRING-BACK FOR VEHICLE-SEATS. JACOB GABRIELSE, Sheboygan, Wis. Filed Jan. 22, 1917. Serial No. 143,705. (Cl. 155—27.)



The combination with a seat having a horizontally extending support beneath the same, a clamping bolt connecting said seat and support, of a pair of spaced parallel strips interposed between said seat and support and adapted to be held in various longitudinally adjusted positions therebetween, the rear ends of said strips each having a quarter turn, a block disposed between said ends of the strips and having a vertical opening therethrough, fastening means to secure said block in position, a spring rod slidably mounted in the opening and in the block, releasable fastening means carried by said block and adapted to engage the block to hold the same in various adjusted positions, and a back rest vertically adjustable on said spring rod.

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1,231,149. IGNITION MECHANISM FOR INTERNAL-COMBUSTION ENGINES. HARRY F. GEIST, Racine, Wis., assignor to Webster Electric Company, Racine, Wis., a Corporation of West Virginia. Filed Sept. 20, 1915. Serial No. 51,631. (Cl. 123—149.)



1. In combination with an internal combustion engine, a framework secured to the engine cylinder, a shaft supported by the framework, a pair of electrodes within the cylinder, one of which is mounted on said shaft, a magneto having the stator thereof mounted on said framework, the magneto rotor being fixed on said shaft, means on the shaft arranged to be engaged by an engine driven device to oscillate the shaft and rotor, together with springs positively connected with said shaft arranged to effect the operation of the electrodes and generate a current in the magneto windings when said shaft is oscillated by the engine driven device and released.

2. In combination with an internal combustion engine, a bracket secured to the engine cylinder, a shaft supported by the bracket, an electrode within the cylinder secured to the shaft, a magneto having the stator thereof on said bracket, the rotor attached to the shaft, means on the shaft arranged to be engaged by an engine driven member to oscillate the shaft and parts carried thereby, a second electrode disposed in proximity to the first and in the path thereof, together with spring means tending to move the second electrode toward the first, and relatively strong springs connected with the shaft arranged to quickly return the first electrode to normal and generate a current in the magneto when the shaft is oscillated by the engine driven device and released.

3. In combination with an internal combustion engine, a pair of electrodes disposed within the combustion chamber of the engine, a shaft upon which one of said electrodes is mounted extending through the wall of the combustion chamber, a magneto having the rotor thereof rigidly fixed to said shaft, means whereby the shaft may be oscillated by an engine driven actuator and released, together with springs connected to said shaft arranged to effect the operation of the electrodes and move the rotor to generate a current in the magneto winding when the shaft is oscillated by the engine driven actuator and released.

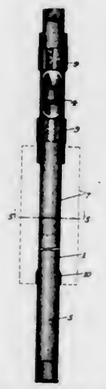
17. The combination with an internal combustion engine of a pair of normally disengaged electrodes mounted for movement in the same plane and around the same axis, spring means associated with each electrode, a magneto comprising a rotor connected with one of said electrodes, and devices for moving the last mentioned electrode and rotor to effect the engagement of the electrodes, move both electrodes against the action of their associated spring means, and release the electrodes *seriatim*.

19. In combination with a pair of electrode carrying elements extending through the wall of the combustion chamber of an internal combustion engine, an electrode carried by each element, a stop for one of said elements, spring means normally retaining said element in engagement with the stop, separate spring means normally retaining the other element in such position that the electrodes are separated, and means for moving the last mentioned element toward the first so that the aforesaid elements are moved together and then to release it.

[Claims 4 to 16 and 18 not printed in the Gazette.]

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1,231,150. FISHING-ROD. HARRY G. GERE, Hackensack, N. J. Filed Apr. 19, 1917. Serial No. 163,107. (Cl. 43—16.)



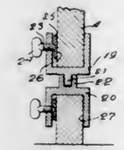
1. In a fishing rod of the class described, a rod section comprising a thin steel tube having terminal cap fittings and intermediate line guides of brass, in combination with an enamel protective coating and as a protective for the latter, a non-drying adhesive and a fibrous covering over the adhesive, all extending over the entire exposed portion of the steel rod and overlapping said brass fittings.

[Claims 2 to 5 not printed in the Gazette.]



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1,231,151. ROCKER ATTACHMENT. WILLIAM H. GERARD, Jr., Yazoo City, Miss. Filed Dec. 10, 1915. Serial No. 66,139. (Cl. 155—18.)

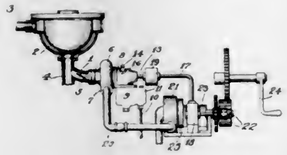


1. A rocker attachment for chairs comprising a rocker, means for adjustably connecting the rocker to legs of the chair and comprising a pair of channeled clamping members, a threaded stud projecting from one of the channeled members, a corresponding socket projecting from the opposing face of the other channeled member for adjustably receiving said stud, and means for clamping legs of the chair and the rocker in the channels of said members to maintain the parts in relative coöperative relation.

2. A rocker attachment for chairs comprising, a pair of rockers, means for adjustably connecting the rockers to the legs of the chair, said means including channel shaped clamping members, a threaded stud projecting from the under surface of one of the channel members, a corresponding socket projecting from the upper surface of the other channel member for adjustably receiving the stud, and set screws adjustably mounted in each of said channel members for removably clamping the legs of the chair and the rockers and consequently maintain the parts in operative relation.

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1,231,152. INCLOSED FORCED-DRAFT BURNER. JOHN GOOD, Brooklyn, N. Y. Continuation in part of application Serial No. 822,813, filed Mar. 6, 1914. This application filed Dec. 8, 1916. Serial No. 135,721. (Cl. 158—28.)



1. A forced-draft combustion device adapted to burn kerosene and like fuel comprising a closed flame-confining tube or passage having an exhaust opening at one end and a burner head at the opposite end, fluid pressure means in said head for atomizing a spray of the liquid fuel into said passage in an initially cold condition, an electric igniter including electrode members directly intercepting said spray and divergent downwardly from the spark-gap between them whereby liquid fuel impinging thereon drains away from the gap, and means for introducing combustion-supporting air under pressure into said burner head and into contact with said spray at a point thereof which is close to but where such air does not dilute the spray at the spark-gap, in combination with means for simultaneously supplying fluid pressure to said atomizing means and combustion-supporting air to said burner head in a predetermined and substantially constant relation to render said spray ignitible by the spark in an initially cold condition and adapted to burn non-explosively and with substantially complete combustion in said closed passage.

2. A forced-draft combustion device adapted to burn kerosene and like fuels comprising a closed flame passage having an exhaust opening at one end and a burner head at the opposite end, fluid pressure means in said head for atomizing a spray of the liquid fuel into said passage, an electric spark-igniter mounted in said head with its spark-gap disposed in the direct path of the spray and slightly offset from the axis of said spray and including electrode members divergent away from the spark-gap between them whereby the liquid fuel impinging thereon drains away from the gap, and means for introducing combustion-supporting air under pressure into said burner head and into contact with the spray without diluting the same at the spark-gap, in combination with means for simultaneously supplying fluid pressure to said atomizing means and combustion-supporting air to said burner head in a predetermined and constant relation to render said spray ignitible by the spark in an initially cold condition and adapting the same to burn non-explosively and with complete combustion in said closed passage.

3. A forced-draft combustion device adapted to burn kerosene and like fuels comprising a closed flame-confining passage having an exhaust opening at one end and a burner head at the opposite end, fluid pressure means in said head for atomizing a spray of liquid fuel into said passage, an electric igniter mounted in the burner head including electrodes, one or both of which protrudes inwardly from a recess or cavity in the upper part of said head and into the direct path of said atomized spray whereby the spark-gap directly intercepts said liquid spray and means for introducing combustion-supporting air under pressure into said burner head and into contact with said spray at a point where it does not dilute the same at the spark-gap, in combination with means for simultaneously supplying fluid pressure to said atomizing means and combustion-supporting air to said burner head in predetermined relation to render said spray ignitible by the spark in an initially cold condition and adapting it to burn non-explosively in said closed passage.

4. A forced-draft combustion device for burning kerosene and like fuels comprising a closed flame-confining tube or passage having an open exhaust outlet at one end and a burner head at the opposite end, fluid pressure means in said head for atomizing a spray of liquid fuel into the passage, an electric spark igniter mounted in said head with its spark-gap disposed in the direct path of the spray and including an electrode terminal which protrudes into the spray from a cavity in the wall of the burner head, and means for introducing combustion-supporting air under pressure into said burner head, uniformly round about said spray but not diluting the same at the spark-gap, in combination with means for simultaneously supplying fluid pressure to said atomizing means and combustion-supporting air to the spray therefrom in predetermined relation to render said spray ignitible by the spark in an initially cold condition and to burn non-explosively in said passage.

5. A forced-draft combustion device for burning kerosene and like fuels comprising a closed flame-confining tube or passage having an outlet at one end and a closed burner head at the other containing means for atomizing liquid fuel into said flame tube, an electric spark igniter intercepting the atomized spray and an entrance for combustion supporting air, said spark igniter and air entrance being relatively disposed so that the air stream from the latter does not disturb the spray at the location of the spark from the former, in combination with a cellular air-current distributing member mounted in said head directly in advance of the location of the spark-gap and means for simultaneously operating said atomizing means and supplying air under pressure to said air entrance in predetermined and constant relation to permit spark ignition of said fuel spray in an initially cold condition and adapted to produce complete non-explosive combustion thereof within said closed passage.

[Claims 6 to 19 not printed in the Gazette.]

1,231,153. METHOD OF SIZING PAPER, CARDBOARD, AND THE LIKE. AXEL HELMER HAEFFNER, Skutskär, Sweden. Filed Jan. 15, 1917. Serial No. 142,524. (Cl. 92—21.)

1. Method of sizing paper, cardboard and the like, consisting in incorporating sizing matters precipitated from fermented sulfite liquor into the pulp, substantially as and for the purpose described.

2. Method of sizing paper, cardboard and the like, consisting in precipitating sizing matters contained in fermented sulfite liquor, and incorporating said matters into the pulp, substantially as and for the purpose described.

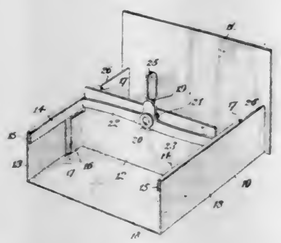
3. Method of sizing paper, cardboard and the like, consisting in adding fermented sulfite liquor to the pulp, and precipitating sizing matters contained in said liquor, substantially as and for the purpose described.

4. Method of sizing paper, cardboard and the like, consisting in precipitating sizing matters contained in fermented sulfite liquor by means of alum, aluminium sulfate or the like, and incorporating the precipitated matters into the pulp, substantially as and for the purpose described.

5. Method of sizing paper, carboard and the like, consisting in adding to the pulp fermented sulfite liquor and a substance capable of precipitating sizing matters contained in said sulfite liquor, substantially as and for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

1,231,154. FOLLOWER-BLOCK FOR FILING-CASES. JOHN HATFIELD, Brooklyn, N. Y., assignor to Universal Steel Cabinet Company, Inc., Brooklyn, N. Y., a Corporation of New York. Substitute for application Serial No. 5,914, filed Feb. 3, 1914. This application filed July 18, 1916. Serial No. 109,907. (Cl. 129—29.)



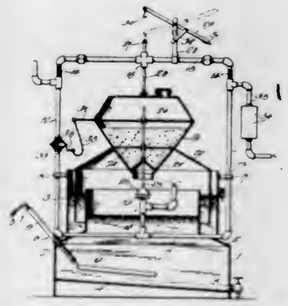
1. In a filing case, in combination, a receptacle for the cards or sheets to be filed having a side wall with a yieldable guide flange extending along the same, a follower block movable along said receptacle and having a shoe lying between said flange and the adjacent wall and guided by said flange, and means on said follower block for pressing said flange against said shoe to clamp the block at different positions in said receptacle.

2. In a filing case, in combination, a receptacle for the cards or sheets to be filed having a side wall with a yieldable guide rail extending along the same, a follower block movable along said receptacle and having a shoe lying between said rail and the adjacent wall and guided by said rail, and means on said follower block for pressing said rail laterally against said shoe to clamp the block frictionally against the side wall of the said receptacle at different positions in said receptacle.

3. In a filing case, in combination, a receptacle for the sheets or cards to be filed having a pair of substantially parallel side walls, each having a yieldable guide flange extending along the same, a movable follower block having a shoe at each end disposed between each wall and its flange to move along each of the said walls, a lever pivotally mounted on said block and having an arm extending in each direction from the pivot point to a point near the said wall, said arms each having a cam edge for engaging one of said flanges to clamp its corresponding shoe against the side wall of the receptacle.

4. In a filing case, in combination, a receptacle for the cards or sheets to be filed having a pair of substantially parallel side walls formed of metal, yieldable flanges integral with said walls extending along the same cooperating with the walls to form a guideway, a block to move in said receptacle between said walls and having shoes guided between said flanges and said side walls respectively, and a lever pivotally mounted on said block having arms extending in opposite directions from the pivot point thereof, said arms having cam edges engaging said yieldable flanges for pressing the same against the corresponding shoes to clamp the same against said side walls.

1,231,155. ACETYLENE-GAS GENERATOR. SOLON P. HAUN, Mohawk, Tenn. Filed Feb. 26, 1917. Serial No. 151,094. (Cl. 48—53.2.)



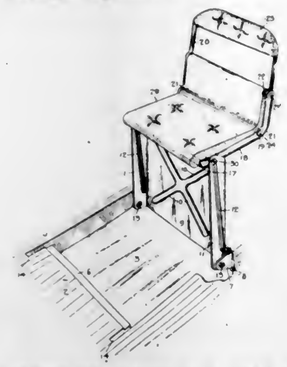
1. A device of the character described comprising a tank, a gas bell disposed above the same, a water seal between said tank and bell, a transverse pipe extending across the tank and projecting from the sides thereof, vertically disposed service and excess volume outlet pipes having their lower ends connected to said pipe and extending to a point above the gas bell, a branch gas pipe arranged in said tank and connected at its lower end to the transverse pipe, a cross member connecting the upper ends of said outlet and service pipes composed of two sections connected by a cross shaped coupling, outlets for said outlet and service pipes below the junction of said pipes with the said cross member, plugs in the upper ends of said pipes above the outlets therein, a carbid hopper on the upper end of said gas bell, and means extending upwardly from said hopper and slidably engaged with the coupling for locking said hopper in raised position, an upwardly projecting standard on one section of said cross member, a lever fulcrumed at the upper end of said standard, a detachable connection between one end of said lever and the upper end of the stem, and means to lock the lever in raised position.

[Claim 2 not printed in the Gazette.]

1,231,156. COLLAPSIBLE SEAT. JAMES G. HEASLET, Detroit, Mich., assignor to The Studebaker Corporation, a Corporation of New Jersey. Filed Mar. 25, 1915. Serial No. 16,844. (Cl. 155—13.)

1. A collapsible seat embodying two supporting members, each pivotally mounted at one end to a fixed support, and each of which members is provided with a longitudinal slot, means for limiting the pivotal movement of said members, in one direction, to a position in which both members are substantially vertical, a seat provided with trunnions positioned in the slots of the supporting members to adapt the seat for bodily movement longitudinally of the slots and pivotal movement when the trunnions are at the ends of the slots adjacent the free ends of said members, and means for limiting the pivotal movement of the seat in one direction to a position at substantially right angles to the supporting members.





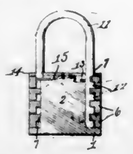
3. A collapsible seat adapted to be folded and stored in a floor comprising a floor with a suitable aperture therein, two supporting members each having a longitudinal slot, means to pivotally mount each of said members within said floor aperture and means to limit their pivotal movement in one direction to a position substantially perpendicular to said floor, a floor section mounted between said supporting members and adapted to close said aperture in the floor when the seat is folded into said aperture, a seat member, means to mount said seat member between said supporting members by means operating within said slot to permit the seat to slide in the slot and rotate, means to limit the rotary movement of the seat in the same direction as the limitation of the movement of the supporting members, such limiting means operating in conjunction with the means to secure the seat to the supports to sustain the seat in a position substantially at right angles to the support, a back member and means to pivotally connect said back member to the seat member at the side thereof opposite its connection with the supporting members and means to limit said pivotal movement in the same direction as the limitation of such movement of the supporting and seat members, such limitation operating to support the back member substantially at right angles to the seat.

4. A collapsible seat embodying a trap door mounted for pivotal movement at one edge of a recess in a floor, a seat section pivotally and slidably mounted on the trap door, and a back section pivotally secured to the seat section, such pivotal connections being adapted to limit the pivotal movement of the respective sections and the door in one direction so that the seat will be in a substantially horizontal plane and the back and seat at substantially right angles to each other, said back and seat sections being foldable and slidable into juxtaposition to the trap door whereupon the whole may be folded into the recess in the floor.

6. A collapsible seat formed of three sections, a supporting section comprising a channel iron having a web and two flanges at right angles thereto provided with longitudinal slots and pivotally connected at one end to a floor beam, a seat frame of U shaped form mounted at one end thereof between said flanges and within said slot to have a slidable and rotary movement, and at the ends of the U arms provided with halves of a hinge, a back section consisting of a U shaped frame, the ends of the arms provided with halves of hinges adapted to coöperte with those last mentioned, a bar intermediate the U shaped back, a belt secured between said bar of the back and cross bar of the seat, the pivotal movement of the channel iron being limited in one direction to a position substantially vertical with the base, the pivotal movement of the seat being limited to a position substantially at right angles to the support, the same being fulcrumed adjacent its connection with the support at the upper end of the slot, the back member being limited in its pivotal movement to a position in the same direction at substantially right angles to the seat, a floor aperture and a casing therein adapted to receive the seat when collapsed, the parts being so arranged that the web of the channel when the seat is folded is flush with the floor.

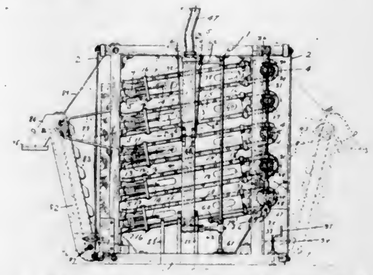
[Claims 2, 5, 7, and 8 not printed in the Gazette.]

1,231,157. PERMUTATION-PADLOCK. R. J. HERENDEEN, What Cheer, Iowa. Filed Oct. 5, 1914. Serial No. 865,149. (Cl. 70—113.)



In a device of the class described the combination of a core having a vertically extending groove on the peripheral wall thereof and a recess in the upper face adjacent said groove, a base plate substantially larger than the core mounted on one end thereof, a staple formed with a long and short arm, the longer arm being provided with a plurality of slots spaced apart in the outer face thereof, a plurality of rings mounted on the base plate in superposed relation around said core adapted to engage said slots, a pin mounted on the long arm adapted to engage in said recess limiting the movement of the staple, the upper ring having a recess formed therein, a shoulder formed on the upper ring adjacent the last mentioned recess providing a stop for the turning of the staple, a depression formed on the upper face of the core forming a housing, a leaf spring mounted therein, and a cap member mounted on the core having a pair of openings therein adapted to receive the arms of the staple.

1,231,158. SEPARATOR. HOWARD M. HOEL and EGBERT A. SHEW, Frazee, Minn., assignors to Utility Manufacturing Company, Frazee, Minn., a Corporation of Minnesota. Filed May 13, 1916. Serial No. 97,327. (Cl. 130—18.)



1. A separator of the kind described, including a separating apron, and a distributing device working transversely over said apron and adapted to be adjusted laterally in respect to the direction of the movement of said apron.

2. A separator of the kind described, including a separating apron, a distributing device working transversely over said apron, and guides for holding the distributing device in different lateral adjustments in respect to the direction of the movement of said apron.

3. A separator of the kind described, including a separating apron, a plurality of distributing troughs working transversely over said apron and each having a discharge port, said discharge ports being located, one in advance

of the other, and a deflector located under each of said ports and arranged to discharge onto the separating apron transversely thereof.

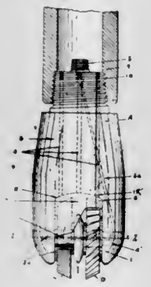
4. A separator of the kind described, including a separating apron, a plurality of distributing troughs working transversely over said apron and each having a discharge port, said discharge ports being located, one in advance of the other, and a deflector located under each of said ports and having oppositely inclined discharge surfaces which extend transversely of the apron.

5. A separator of the kind described, including a separating apron, a distributing trough working over said apron, and having longitudinally spaced discharge ports, and a deflector located under each of said ports and having a relatively small discharge port located under the respective discharge port in said distributing trough.

[Claims 6 to 18 not printed in the Gazette.]

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1,231,159. ROTARY BORING-DRILL. HOWARD R. HUGHES, Houston, Tex., assignor to Hughes Tool Company, Houston, Tex., a Corporation of Texas. Filed Dec. 26, 1916. Serial No. 138,820. (Cl. 255—71.)



1. A rotary boring drill, comprising a longitudinal split-head composed of two sections, a shaft bearing in each section, a cutter supporting shaft carried by said bearings, the main joint between said sections lying in a vertical plane parallel to the longitudinal axis of the shaft, a recess in one end of each section, the recesses registering when the bit is assembled to form a pocket, cutters mounted on the shaft in this pocket, the side walls of the pocket extending down over the cutters to house a substantial portion thereof.

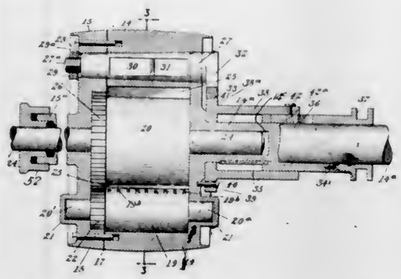
[Claims 2 to 9 not printed in the Gazette.]

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1,231,160. POWER-TRANSMITTING APPARATUS. WARREN H. HUNGERFORD, Chicago, Ill., assignor to Frank M. Peters, Chicago, Ill. Filed Sept. 23, 1915. Serial No. 52,199. (Cl. 192—18.)

1. An apparatus of the character described comprising a liquid containing casing, a plurality of connected compartments therein forming an endless passage, means for controlling the flow of fluid through said endless passage, a rotary piston disposed within said casing, blades on said rotary piston, and an abutment in rolling engagement with said piston and arranged intermediate the communicating ends of said compartments, said abutment being provided with a blade-receiving recess and with means for by-passing the fluid from said recess directly into said endless passage in the direction of the flow of the fluid therein as said blades pass into and out of said recess in the course of rotation of said piston, substantially as specified.

2. An apparatus of the character described comprising a liquid containing casing, a plurality of connected compartments therein forming an endless passage, means for controlling the flow of fluid through said endless passage, a rotary piston disposed within said casing, blades on said rotary piston, and an abutment in rolling engagement with said piston and arranged intermediate the communicating ends of said compartments, said abutment being provided with a blade-receiving recess and with apertures extending from the outer surface thereof and communicating with said recess intermediate the top and bottom thereof for by-passing the fluid from said recess directly into said endless passage in the direction of the flow of the fluid therein as said blades pass into and out of said recess in the course of rotation of said piston, substantially as specified.



3. An apparatus of the character described comprising a liquid containing casing, a plurality of connected compartments therein forming an endless passage, means for controlling the flow of fluid through said endless passage, a rotary piston disposed within said casing, blades on said rotary piston, and an abutment in rolling engagement with said piston and arranged intermediate the communicating ends of said compartments, said abutment being provided with a blade-receiving recess and with apertures extending from the outer surface thereof and communicating with said recess for by-passing the fluid from said recess directly into said endless passage in the direction of the flow of the fluid therein as said blades pass into and out of said recess in the course of rotation of said piston, substantially as specified.

4. An apparatus of the character described comprising a liquid containing casing, a plurality of connected compartments therein forming an endless passage, means for controlling the flow of fluid through said endless passage, a rotary piston disposed within said casing, blades on said rotary piston, and an abutment in rolling engagement with said piston and arranged intermediate the communicating ends of said compartments, said abutment being provided with a blade-receiving recess and with apertures communicating with said recess and extending upwardly and outwardly with respect thereto for by-passing the fluid from said recess directly into said endless passage in the direction of the flow of the fluid therein as said blades pass into and out of said recess in the course of rotation of said piston, substantially as specified.

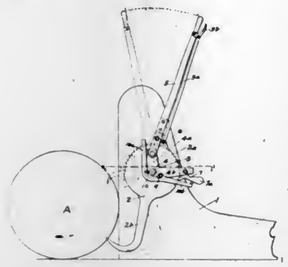
5. An apparatus of the character described comprising a liquid containing casing, a plurality of connected compartments therein forming an endless passage, means for controlling the flow of fluid through said endless passage, a rotary piston disposed within said casing, blades on said rotary piston, and an abutment in rolling engagement with said piston and arranged intermediate the communicating ends of said compartments, said abutment being provided with a blade-receiving recess and with a series of apertures extending between its outer surface and the front wall of said recess for by-passing the fluid from said recess directly into said endless passage in the direction of the flow of the fluid therein as said blades pass into and out of said recess in the course of rotation of said piston, substantially as specified.

2. An apparatus of the character described comprising a liquid containing casing, a plurality of connected compartments therein forming an endless passage, means for controlling the flow of fluid through said endless passage, a rotary piston disposed within said casing, blades on said rotary piston, and an abutment in rolling engagement with said piston and arranged intermediate the communicating ends of said compartments, said abutment being provided with a blade-receiving recess and with a series of apertures extending between its outer surface and the rear wall of said recess for by-passing the fluid from said endless passage into said recess, substantially as specified.

[Claim 6 not printed in the Gazette.]



1,231,161. UNDERDOG FOR SAWMILL-CARRIAGE KNEES. CORY O. HUNTINGTON, Po Ell, Wash., assignor of one-half to George G. Seely, Portland, Oreg. Filed Nov. 9, 1914. Serial No. 870,970. (Cl. 143—126.)



1. In combination with the knee or standard of a saw mill carriage, an under-dog having a body portion terminating in a holding prong and pivotally connected through its body portion to said knee, an operating lever pivotally mounted and having a part adapted to engage the body portion of said under-dog for moving the same, whereby to move its holding prong into holding position, and means operating on the body of said under-dog for holding it against backward movement.

2. In combination with the knee or standard of a saw mill carriage, an under-dog having a body of ratchet wheel form terminating in a prong adapted to be forced into a log, an operating lever pivotally mounted adjacent to said under-dog and having operating connections with the ratchet wheel portion thereof for turning the same to force its prong into a log, and means for holding said under-dog against backward movement.

3. In combination with a knee for saw mills, an under-dog having a body portion of ratchet wheel form and a prong adapted to be forced into the logs, an operating lever pivotally mounted adjacent to said under-dog and having an operating pawl adapted to the ratchet portion thereof for operating the same, a gravity pawl pivotally mounted to automatically hold said under-dog against backward movement, and means for releasing said gravity pawl.

4. In combination with a knee for saw mills, an under-dog having a body portion of ratchet wheel form and a prong adapted to be forced into the logs, an actuating lever pivotally mounted adjacent to said under-dog and having an operating pawl mounted to actuate said under-dog, a gravity pawl pivotally mounted to automatically hold said under-dog against backward movement, a trip lever pivotally mounted and operable by said operating lever for releasing said gravity pawl and said under-dog.

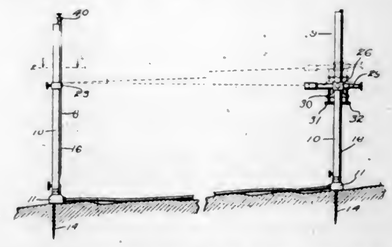
5. In combination with a knee for saw mills, an under-dog pivotally mounted thereon and having an enlarged portion of ratchet wheel form and a prong, and an operating lever pivotally mounted at a point eccentric to said ratchet wheel portion and having an operating pawl mounted thereon adapted to said ratchet for operating said under-dog, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

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1,231,162. LEVELING INSTRUMENT. INGVAR HUSBY, St. Paul, Minn. Filed Aug. 30, 1915. Serial No. 47,940. (Cl. 33—70.)

1. A leveling instrument comprising a pair of uprights each having a foot at the lower end thereof and a longitudinal groove and graduations along the side, a glass tube in each of said grooves seated in each of said feet, a flexible tube connecting both of said feet in communication with said glass tubes, there being water in the tubes, a movable runner on one of said standards, a movable runner on the other of said standards having a telescope pivotally attached thereto for sighting at said other runner, means on said runner for locking the same in any position on the upright, and a pair of screws

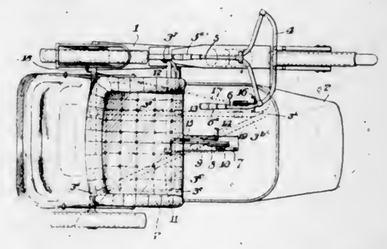


engaging the telescope one on each side of the center of oscillation thereof for micrometrically adjusting the same to sight along any slope.

[Claims 2 to 4 not printed in the Gazette.]

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1,231,163. AUTOCYCLE ATTACHMENT. JOHN JAGGARD, Collingswood, N. J. Filed Dec. 28, 1916. Serial No. 139,316. (Cl. 21—90.)



1. In combination with a motor cycle, provided with a handle bar frame, having handle bars terminating in grips by means of which connection is had to the gas and spark mechanism of the motor cycle, of a side car, mounted on rods extending from and connected to said motor cycle, having secured thereabeneath a bracket to which the operating mechanism of the motor cycle is operatively secured, such operating mechanism comprising gears, a foot lever, a kicker connected to the motor on said motor cycle and operated by said gears by means of said foot lever to operate the motor, and a clutch mechanism, a hand lever operatively connected therewith to secure various degrees of speed, all substantially as shown and described.

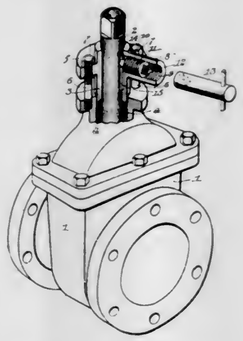
2. In combination with a motor cycle, provided with a brake and a handle bar frame, having handle bars terminating in grips by means of which connection is had to the gas and spark mechanism of the motor cycle, of a side car, mounted on rods extending from and connected to said motor cycle, having secured therebeneath a bracket to which the operating mechanism of the motor cycle is operatively secured, such operating mechanism comprising gears, a foot lever, a kicker connected to the motor on said motor cycle and operated by said gears by means of said foot lever to operate the motor, a clutch mechanism, a hand lever operatively connected therewith to secure various degrees of speed and a foot lever secured to the under side of said side car and extending through an opening in the bottom thereof, a connecting rod between said foot lever and the brake on said motor cycle, to operate said brake, all substantially as shown and described.

3. In combination with a motor cycle, provided with a handle bar frame constructed as shown so as to be oper-

ated from a side car, having handle bars terminating in grips by means of which connection is had to the gas and spark mechanism of the motor cycle, of a side car, mounted, in close proximity thereto, on rods extending from and connected to said motor cycle, having secured therebeneath a bracket to which the operating mechanism of the motor cycle is operatively secured, such operating mechanism comprising gears, a foot lever, a kicker connected to the motor on said motor cycle and operated by said gears by means of said foot lever to operate the motor, and a clutch mechanism, a hand lever operatively connected therewith to secure various degrees of speed, all substantially as shown and described.

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1,231,164. VALVE-LOCK. WILLIAM H. JAHNS, OSCAR A. KNOX, and PHILIP A. WILCOX, Los Angeles, Cal. Filed Feb. 24, 1913. Serial No. 750,077. (Cl. 137—5.)



1. A valve lock, comprising a gland member and a locking member adapted to engage the stem at different points along the length thereof according to the adjustment of the said gland, said locking means being adapted to prevent the turning of the valve stem for locking the valve.

2. A valve lock comprising a packing gland member capable of adjustment longitudinally of the valve stem for preventing leakage, and a locking pin carried by said gland member and adapted to be moved against the valve stem to prevent the turning of valve stem from any of the positions to which it may be moved for opening or closing the valve, the engagement of the pin with the valve stem not interfering with the adjustment of the packing gland member, whether the stem is locked or unlocked by said pin.

3. A valve lock comprising a packing gland member adapted to inclose a valve stem, a valve stem having an elongated longitudinally extending recess therein, a pin bolt adjustably mounted upon said gland member and adapted to hold the valve stem from turning in any of its adjusted positions, the said gland member having an inclosing projection extending beyond the end of said pin bolt, a locking member passing through said projection opposite the end of the pin bolt for preventing an unauthorized operation thereof and means for sealing the locking member.

4. A valve lock, comprising, in combination with a valve stem having an elongated groove formed therein, of an adjustable gland member carried by said valve stem and adapted to control packing surrounding said stem, an adjustable locking pin mounted upon said gland member, and having a projecting point adapted to engage the groove of said valve stem for holding the valve closed or in adjusted open positions and means for adjustably holding the gland member in place upon a valve casing, the adjustment of said gland member not affecting the position of the locking pin.

1,231,165. FISHING-FLY HOLDER. JAMES WILLIAM JAY, Philadelphia, Pa. Filed Sept. 18, 1916. Serial No. 120,786. (Cl. 43—28.)



1. As a new article of manufacture, a fishing fly holder comprising a clip portion embodying a plurality of convolutions and at one end thereof a spring eye disposed in angular relation to the clip portion.

2. As a new article of manufacture, a fishing fly holder, comprising a clip portion embodying a plurality of closely grouped convolutions and an eye disposed in angular relation thereto, said eye being formed with a downwardly extending returned portion disposed across the subjacent convolution and terminating with its extremity normally in spaced relation to the latter.

3. A fishing fly holder, consisting of spring wire, coiled to form a plurality of closely grouped convolutions, the wire extending in angular relation to the convolutions at one end thereof, and across the same and thence being returned inwardly across the convolutions.

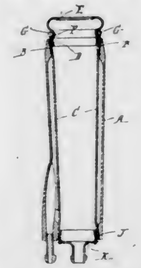
4. A fishing fly holder comprising a plurality of convolutions in spring-pressed relation to each other and an eye at one end of said convolutions, said eye having an opening extending therethrough whereby the bill of a hook may be inserted therein and provided with a rounded shoulder designed to co-act with the adjacent convolution whereby a hook may be pressed between the shoulder and adjacent convolution, and securely held thereby.

5. A fishing fly holder, consisting of a wire coiled into a number of convolutions and provided with a spring eye, in combination with means for supporting the holder engaging the same at a point between the ends of the convolute portion thereof.

[Claims 6 to 10 not printed in the Gazette.]

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1,231,166. MILKING-MACHINE TEAT-CUP. HARRY REGINALD JENKINS, Eltham, New Zealand. Filed Apr. 14, 1916. Serial No. 91,055. (Cl. 31—102.)



In milking machine teat cups, a casing formed at its upper end with a mouth tapering outward, a mouthpiece having a lower ring portion tapered to fit the casing end and a groove around its outer surface, and an inflation shaped at its upper end to fit between the taper in the casing and a mouthpiece and with a head on its upper edge adapted to enter the groove on the outside of the mouthpiece, substantially as specified.

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1,231,167. PLIERS. AARON J. JONES, Ancon, Canal Zone. Filed Sept. 30, 1916. Serial No. 123,135. (Cl. 81—47.)

1. The combination with a pair of members adapted for pivotal movement having registering recesses, of a sleeve positioned in the recess, a pivot pin mounted in the sleeve and formed in two sections one section being provided with a recess and further provided with an annular shoulder, and resilient locking-legs carried by the other section and engaged with the annular shoulder.



2. The combination with a pair of members adapted for pivotal movement having registering recesses, of a sleeve positioned in the recess, a pivot pin mounted in the sleeve and formed in two sections one section being provided with a recess and further provided with an annular shoulder, and resilient legs carried by the other section having their extremities bent at right angles.

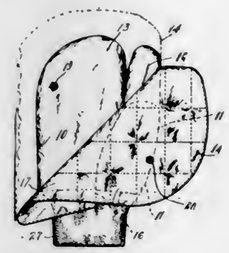
3. A pivot pin formed in two sections, each section having a head thereon one of the sections being provided with a recess and further provided with an annular recess, and resilient legs carried by the other section and having interlocking engagement with the annular shoulder.

4. A pair of pliers having apertured body portions, said body portions being overlapped with the apertures registering, a fulcrum sleeve positioned in said apertures, and interlocking securing members extended into said sleeve from the opposite ends of the same, one of said securing members having a socket formed therein with an enlarged inner end, and legs extended from the remaining securing member for engagement in said socket and provided with outwardly turned free extremities to cause interlocking of said members.

5. The combination with a pair of pliers and registering openings, of a sleeve mounted in the openings, a pivot member insertible in the sleeve from one side thereof and provided with a head, resilient legs carried thereby, and a second pivot member insertible in the sleeve from the opposite side thereof and provided with a recess and further provided with an angular shoulder which has interlocking engagement with the resilient legs.

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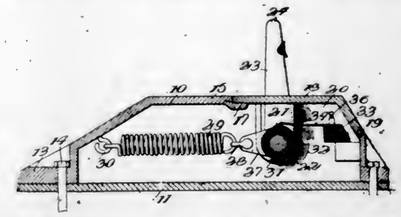
1,231,168. GLOVE. EVAN B. JONES, La Grande, Oreg. Filed Sept. 19, 1916. Serial No. 121,005. (Cl. 15—28.)



The combination with a glove and a flap therefor covering the entire glove, of means to secure said flap to said glove and prevent wrinkling up of the flap and consisting of a line of stiching connecting one side of the flap to the glove from a point at the wrist on one side of the base of the glove thumb around the thumb between said thumb and the finger portion of the glove to a point at the wrist on the other side of the base of the thumb, a snap button detachably connecting the flap with the glove adjacent the extremity of the little finger of the wearer, and a second snap button detachably connecting the flap with the glove at the portion adjacent the wrist and opposite the thumb.



1,231,169. CIRCUIT-BREAKER FOR BLOCK-SIGNAL SYSTEMS. MARSENA R. JULIAN and JOHN V. MORRIS, Birmingham, Ala., assignors to Julian-Boggs Signal Company, Terre Haute, Ind., a Corporation of Maine. Filed Apr. 22, 1915. Serial No. 23,160. (Cl. 200—27.)



1. A circuit controlling device including a housing, a shaft journaled in the housing and projecting beyond it at one end, a radially extending arm carried by such end of the shaft, a collar mounted on the shaft to turn therewith, said collar having an ear projecting at substantially right angles to the direction of the arm, a spring having one end fixed and the other attached to the ear, a commutator ring of insulating material carried by the shaft, a contact plate carried by the ring and extending substantially over one-fourth its peripheral surface, and a pair of resilient contacts engaging either the contact plate or ring, depending upon the position of the shaft.

2. A circuit controlling device including a housing, bearings of insulating material mounted in opposed walls of the housing, a shaft journaled in the bearings and thereby insulated from the housing, one end of the shaft being formed with a radially extending arm exteriorly of the housing, means for normally holding the shaft in a predetermined position and for automatically returning the shaft to such position if turned to another position, a ring of insulating material mounted upon the shaft, a contact plate carried by the ring and having electrical connection with the shaft, and a resilient contact finger normally engaging the ring but capable of engagement with the plate upon turning of the shaft in one direction.

3. A circuit controlling device including a housing, a shaft journaled in insulated bearings in the housing and provided with a radially extending trip arm, a collar fixed to the shaft and provided with oppositely directed ears extending at substantially right angles to the trip arm, springs connected at one end to the ears and at their other ends to the housing, the connection between the springs and housing being insulated, a ring of insulating material surrounding the shaft, a contact plate carried by the ring and having electrical connection with the shaft, and a resilient contact member having a free end engaging the ring or contact plate according to the position of the shaft.

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1,231,170. SEWING-MACHINE RUFFLER. JOHN D. KARLE, Newark, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed July 31, 1913. Serial No. 782,209. (Cl. 112—16.)



1. In a sewing machine ruffler, a ruffling blade, a carrier and an operating lever for said carrier, and adjustable connection between said carrier and operating lever comprising a supporting member and a shiftable element normally movable in a defined path and permanently mounted upon said supporting member upon which it is adapted to be adjusted transversely to said path whereby said lever may

be rendered inoperative in any of a sequence of normally operative movements selected at will.

2. In a sewing machine ruffler, a ruffling blade, a carrier, an operating lever for said carrier, and adjustable connection between said carrier and operating lever whereby consecutive movements of said lever are operative to move said carrier in corresponding sequence, said connection including a supporting member and an element permanently mounted thereon and deriving normal operative movements from said operating lever and adjustable upon said supporting member independently of its normal operative movements to cause said lever to become automatically inoperative in selected normally operative movements thereof.

3. In a sewing machine ruffler, the combination with a ruffling blade and an operating lever, of means for automatically establishing and interrupting operative connection between said lever and ruffling blade, and comprising a follower and a plurality of permanently connected and adjustably mounted controlling elements adapted for operative movement in unison, means being provided whereby the relative positions of said follower and controlling elements may be shifted while said members remain in operative relation.

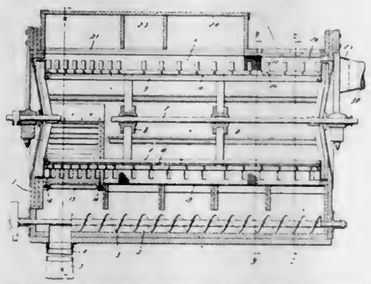
4. In a sewing machine ruffler, the combination with a ruffling blade and an operating lever, of means for automatically establishing and interrupting operative connection between said lever and ruffling blade, and comprising a follower and a plurality of controlling elements adapted for operative movement in unison and permanently mounted for adjustment into a plurality of positions within operative relation with said follower.

5. In a sewing machine ruffler, the combination with a ruffling blade and an operating lever, of a connection between the same for imparting to the ruffling blade operative movements of the same frequency as those of the operating lever, said connection including a controlling member having a plurality of operative portions in permanent relative positions thereon, and a follower therefor, and means for maintaining said controlling member and follower in different operative relations whereby different operative portions of said member will be presented to the follower in corresponding cycles of movement of the controlling member.

[Claims 6 to 25 not printed in the Gazette.]

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1,231,171. BOLL BREAKER AND CLEANER. TEMPEL L. KINNE, Dallas, Tex., assignor to The Murray Company, Dallas, Tex., a Corporation of Texas. Filed Apr. 26, 1915. Serial No. 23,812. (Cl. 13—19.)



1. In a device of the character described, a combined boll breaking and cleaning mechanism comprising a breast and a screen wall constituting a casing and a housing inclosing said casing, a support revolving within the casing and provided with an imperforate wall, a series of paddle blades projecting from the imperforate periphery at one end of said support and coöperating with said breast, and a series of paddles projecting from the remaining portion of the support and coöperating with the screen portion of the casing.

2. In a device of the character described, a combined boll breaking and cleaning mechanism comprising a breast and a screen wall constituting a casing and a housing inclosing said casing, a support revolving within the casing and provided with an imperforate wall, a series of paddle blades projecting from the imperforate periphery at one end of said support and coöperating with said breast, and a series of paddles projecting from the remaining portion of the support and coöperating with the screen portion of the casing, said paddles being arranged spirally around the imperforate wall of said support.

3. In a device of the character described, a combined boll breaking and cleaning mechanism, comprising a breast and a screen wall constituting a casing and a housing inclosing said casing, a support revolving within the casing and provided with an imperforate wall, a series of paddle blades projecting from the imperforate periphery at one end of said support and coöperating with said breast, and a series of paddles projecting from the remaining portion of the support and coöperating with the screen portion of the casing and a means for introducing cotton under suction to the space between the casing and the wall of the support.

4. In a device of the character described, a combined boll breaking and cleaning mechanism, comprising a breast and a screen wall constituting a casing and a housing inclosing said casing, a support revolving within the casing and provided with an imperforate wall, a series of paddle blades projecting from the imperforate periphery at one end of said support and coöperating with said breast, and a series of paddles projecting from the remaining portion of the support and coöperating with the screen portion of the casing and a means for introducing cotton under suction to the space between the casing and the wall of the support, and an outlet for the device arranged to permit of the centrifugal discharge of the cotton and air under suction from the cleaning mechanism.

5. In a device of the character described, a combined boll breaking and cleaning mechanism comprising a breast and a screen wall constituting a casing and a housing inclosing said casing, a drum revolving within the casing and provided with an imperforate wall, a series of paddle blades projecting from the imperforate periphery at one end of said drum and coöperating with said breast, and a series of paddles projecting from the remaining portion of the drum and coöperating with the screen portion of the casing.

[Claim 6 not printed in the Gazette.]

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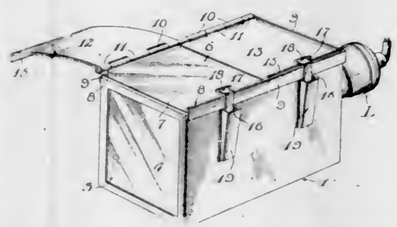
1,231,172. PROCESS FOR PRODUCING ARTIFICIAL SILK. KAZUTA KISHI, Tokyo, Japan. Filed June 24, 1914. Serial No. 847,142. (Cl. 18—54.)

3. In the process of producing artificial silk, the step which consists of treating collodion with non-volatile chrysalis oil.

[Claims 1 and 2 not printed in the Gazette.]

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1,231,173. PHOTOGRAPHIC-PRINTING APPARATUS. JOSEPH KARL KNAPP, North Platte, Nebr. Filed Sept. 13, 1915. Serial No. 50,442. Renewed Apr. 19, 1917. Serial No. 163,313. (Cl. 95—73.)



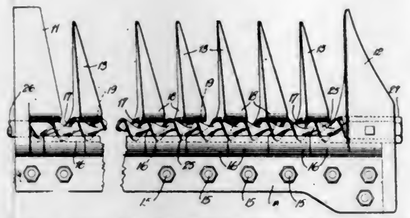
1. In a device of the class described, a substantially rectangular casing, one side thereof being open, guides formed around said open side, a glass plate disposed in said guides, a curved spring metal plate adapted to be positioned over said glass plate, a flange on one edge of said spring plate, a spring catch on said casing adapted to spring over said flange to hold said spring plate in operative position, and means for lighting the interior of said casing.

[Claims 2 and 3 not printed in the Gazette.]



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1,231,174. SICKLE-BAR. HELOS H. KOONS, Narka, Kans. Filed Feb. 7, 1917. Serial No. 147,206. (Cl. 56—45.)



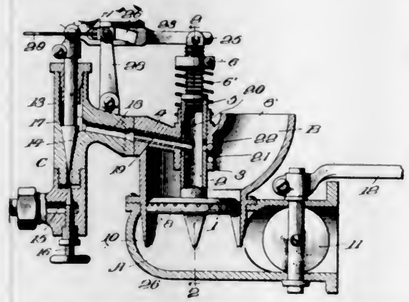
1. In a sickle bar, the combination of a plurality of guard fingers forming throats therebetween, a rotary spiral cutter traversing the inner ends of the throats, a fixed spiral blade arranged at the inner end of each throat inclining in the same direction as the blade of the rotary cutter and being of greater pitch than the rotary spiral blade, and means for turning said rotary cutter to move rearwardly at the lower side thereof.

7. In a sickle bar, the combination of a body part having a plurality of guard fingers with spiral cutting blades at their inner ends, a spiral cutter rotatably mounted in the body part and having a blade facing said blades of the guard fingers, and tension means engaging the end of the spiral cutter to yieldingly hold the blades thereof in position relatively to the blades of the guard fingers.

[Claims 2 to 6 not printed in the Gazette.]

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1,231,175. CARBURETER. EMIL M. KRAMER, Morton, Ill. Filed May 9, 1916. Serial No. 96,375. (Cl. 261—44.)



1. In a carbureter, the combination of a mixing chamber, an air admission chamber, a hollow valve structure mounted therein, a fuel admission valve, connections between said fuel admission valve and said hollow valve whereby when the latter is operated the former is raised from its seat, a fuel duct leading from said fuel admission valve to the interior of said hollow valve structure, means for admitting air into said hollow valve structure whereby when fuel is admitted thereto it will be vaporized therein by the air admitted through such means, and means for permitting the discharge of said mixture from said hollow valve structure and into said mixing chamber.

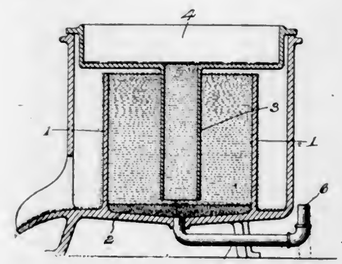
2. In a carbureter, the combination of a mixing chamber, an air admission chamber, a hollow valve structure mounted therein and operated by the passage of air through the device, a series of discharge ports opening from the interior of said hollow valve structure, tapered guides between which said hollow valve structure moves and for increasing or decreasing the number of operative discharge ports, a fuel admission valve operated by said hollow valve structure, and fuel and air passages leading into said hollow valve structure whereby the mixture is formed therein and discharged into said mixing chamber.

6. In a carbureter, the combination of a mixing chamber, an air admission chamber in communication therewith, a hollow mixing valve mounted within the structure and operated by the passage of air there-through, a fuel admission valve, connections between said fuel admission valve and said hollow mixing valve whereby when the latter is operated by the passage of air through the device, the former will be opened to permit a flow of fuel, a fuel conduit leading from said fuel admission valve to within said hollow mixing valve, means for admitting air through said hollow mixing valve whereby when fuel is admitted thereinto a mixture will be formed therein, means for closing said fuel admission valve when said device is inoperative, means for varying the proportionate amount of lift of said fuel admission valve, and means for controlling the maximum amount of fuel admitted to the device.

[Claims 3 to 5 not printed in the Gazette.]

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1,231,176. AMALGAMATING PROCESS FOR RECOVERING METALS FROM ORES. PAUL KUEHN, Detroit, Mich. Filed Dec. 17, 1912. Serial No. 737,278. (Cl. 83—67.)



1. A process for recovering metals from their ores which consists in providing a body of mercury presenting an extended surface, maintaining a body of ore pulp upon said mercury with a quiescent expanding flow in proximity to the surface thereof without substantial agitation and without materially disturbing the mercury body, and limiting the flow to a rate sufficient to keep in suspension the particles contained in the pulp which are of less specific gravity than the metals to be recovered, whereby said metals are permitted to separate from the pulp and amalgamate with the mercury.

2. A process for recovering metals from their ores which consists in providing a body of mercury presenting an extended surface, maintaining a body of ore pulp upon said mercury with a gentle flow of reducing velocity in proximity to the surface thereof without substantial agitation of said pulp or mercury surface, and limiting the rate of flow so as to keep in suspension only those particles in the pulp which are of less specific gravity than the metals to be amalgamated.

3. A process for recovering metals from their ores which consists in providing a body of mercury presenting an extended surface, maintaining columns of ore pulp having a quiescent gravity flow of reducing velocity from one to another of said columns over the surface of said body, and so limiting said flow as to keep in suspension only the particles of ore pulp which are of a less specific gravity than the metals to be recovered without substantial agitation of the pulp or material disturbance of the mercury.

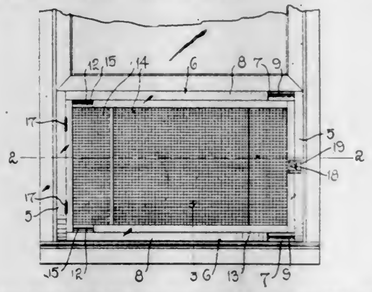
4. A process of recovering metals from their ores which consists in providing a body of mercury presenting an extended surface and maintaining thereon columns of ore

pulp having a quiescent expanding gravity flow from one to another in proximity to the surface of said body without material disturbance of the mercury, the rapidity of such flow being so limited as to keep in suspension in the fluid only those particles which are of less specific gravity than the metals to be recovered.

5. An amalgamating process for recovering metals from their ores which consists in provided a body of mercury having an extended surface, maintaining columns of ore pulp having a quiescent gravity flow of reducing velocity in proximity to the surface of said body from the bottom of one column to the bottom of another without substantial agitation of the pulp or mercury, and so limiting the rapidity of said flow as to keep in suspension the particles in said pulp which are of less specific gravity than the metal to be recovered and to prevent the carrying over of particles of the mercury by the flow.

[Claim 6 not printed in the Gazette.]

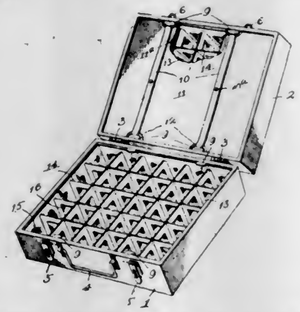
1,231,177. WINDOW-SCREEN. JOSEPH P. KUHN and JOHN D. MARTIN, Honesdale, Pa. Filed Nov. 29, 1916. Serial No. 134,152. (Cl. 156—38.)



2. An adjustable screen including an outer frame consisting of longitudinally extensible sections, a screen proper also consisting of two longitudinally extensible sections, hinges connecting one of the screen sections to one section of the outer frame, latch bolt mounted on the other section of the screen, and a keeper element on the other section of the outer frame to receive said latch bolt, whereby the adjustable screen is held within said outer frame against swinging movement with respect thereto.

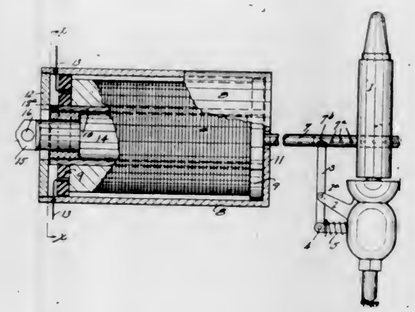
[Claim 1 not printed in the Gazette.]

1,231,178. SHIPPING-CRATE. JOHN E. LOGAN, Kansas City, Mo. Filed Feb. 16, 1914, Serial No. 819,084. Renewed Mar. 2, 1917. Serial No. 152,150. (Cl. 217—8.)



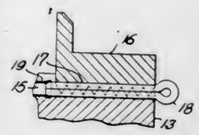
A shipping case comprising a pair of hingedly connected sections, intersecting strips mounted in the sections and constituting cells, false lids for the sections having cut-outs formed in their side edges and in registry with certain of the cells, hooks carried by the sections and overhanging the cells with which the cut-outs register, and bow springs pivotally connected to the lids, said springs serving to hold the lids in yielding engagement with the outer edges of the strips forming the cells when the ends thereof are located in the cut-outs and engaged with said hooks.

1,231,179. SIGNALING DEVICE. JAMES P. MCBRIDE, Seattle, Wash. assignor to Carl M. Lovsted, Seattle, Wash. Filed Feb. 24, 1914. Serial No. 820,411. (Cl. 177—311.)



In a solenoid operated steam whistle having a valve controlling lever, the combination of a perforated extension bar one end of which is integral with the core of the solenoid, adjustable hole and pin connection means between the said bar and the whistle lever, whereby the solenoid and whistle may be adjusted as to relative position.

1,231,180. COMBINED AXLE-LUBRICATING DEVICE AND NUT-LOCK. ROBERT MCGLAUGHLIN, Montreal, Quebec, Canada. Filed Aug. 20, 1915. Serial No. 46,454. (Cl. 64—27.)



1. In a device of the character described, in combination an axle having a lubricant channel, a nut thereon, and a pin inserted through the nut into the entrance of said channel arranged to retain lubricant therein.

2. In a device of the character described, in combination an axle having a lubricant channel, a nut thereon, a lubricant tube in said channel, and a pin inserted through the nut into the entrance of said tube for holding lubricant therein.

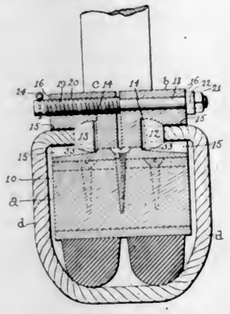
3. In a device of the character described, in combination an axle having a shoulder and a threaded portion with a bearing surface therebetween and a lubricant channel formed in the bearing portion and extending from near the shoulder to the extremity of the threaded portion, a nut screwed on said threaded portion having a groove formed therein adapted to register with that part of the channel in the threaded portion and to form therewith a passage circular in cross section, and a pin inserted in said passage arranged to completely close the same, retaining lubricant in the channel and holding the nut against revolution on the axle.

4. In a device of the character described, in combination an axle having a lubricant channel, a nut thereon, a pin inserted in said channel to retain lubricant therein and hold the nut against revolution on the axle, said pin being provided with an integral part for holding the pin against displacement.

5. In a device of the character described, in combination an axle having a lubricant channel, a nut thereon, a pin inserted through the nut and into the entrance of said channel, and means for holding the pin against displacement comprising a fin on the extremity of the pin.



1,231,181. ANTISKID DEVICE. GEORGE H. MARTIN, Newton, Mass., assignor of one-half to Franklin E. Huntress, Newton, Mass. Filed Oct. 17, 1916. Serial No. 126,215. (Cl. 152—2.)



1. The combination with a wheel of a vehicle, of a guide plate attached to the inner surface of its felly, rigid members supported by said guide plate and movable toward and from each other, a bolt carried by one of said members to rotate thereon and having a threaded portion in engagement with a threaded opening in the other of said members, said members having sockets extended from their under sides, a flexible member passed about the tread of said wheel and having buttons on its free ends located in said sockets.

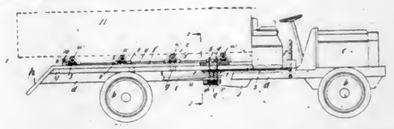
2. The combination with a wheel of a vehicle, of a guide plate attached to the inner surface of its felly, rigid members movable on said guide plate toward and from each other and transversely with relation to the felly of the wheel, means for moving said members on said guide plate, and a flexible member passed about the tread of the wheel and having its free ends operatively secured to said rigid members.

3. An anti-skid device for vehicle wheels, comprising a guide plate capable of being located on the inner circumference of the felly of a wheel and secured in fixed relation thereto, rigid members supported by said guide plate within the inner circumference of said wheel, and one of which is movable with relation to the other transversely of the wheel and provided with a threaded opening, a bolt having a threaded portion in engagement with said threaded opening and mounted to turn in the other of said rigid members, and a flexible member capable of being passed about the tread of the said wheel and with which said movable rigid member coöperates.

[Claims 4 to 6 not printed in the Gazette.]

1,231,182. LOADING DEVICE FOR AUTOTRUCKS. RALPH S. MAXWELL, Portland, Oreg., assignor of one-half to Julia M. Parker, Portland, Oreg. Filed June 30, 1916. Serial No. 106,955. (Cl. 21—33.)

1. In an auto truck having a longitudinal drive-shaft, the combination of a pair of gears loose on the drive-shaft, a clutch-sleeve on the drive-shaft, means on the gears and the clutch-sleeve for engaging the latter with either of the former, a supplemental shaft journaled longitudinally in the truck body, a plurality of transverse rollers on the truck body, driving connections between the supplemental shaft and the transverse rollers, companion gears fast on the supplemental shaft, operating connections between the related gears, and means for shifting the clutch-sleeve.



2. In an auto truck having a longitudinal drive-shaft, the combination of a pair of gears loose on the drive-shaft, a clutch-sleeve on the drive-shaft, means on the gears and the clutch-sleeve for engaging the latter with either of the former, a supplemental shaft journaled in the longitudinal center of the truck body, a plurality of transverse rollers on the truck body, coöperating worm-gear elements carried by the supplemental shaft and the transverse rollers, companion gears fast on the supplemental shaft, operating connections between the related gears, and means for shifting the clutch-sleeve.

3. In an auto truck having a longitudinal drive-shaft, the combination of a pair of sprocket gears loose on the drive-shaft, such sprocket gears provided with opposed clutch faces, a clutch-sleeve on the drive-shaft adapted for being engaged with either of said sprocket gears, a supplemental shaft journaled longitudinally in the truck body, a plurality of transverse rollers on the truck body, driving connections between the supplemental shaft and the transverse rollers, companion sprocket gears fast on the supplemental shaft, sprocket chains connecting the related gears, and means for shifting the clutch sleeve.

4. In an auto truck having a longitudinal drive-shaft, the combination of a pair of sprocket gears loose on the drive-shaft, such sprocket gears provided with opposed clutch faces, a clutch-sleeve on the drive-shaft adapted for being engaged with either of said sprocket gears, a supplemental shaft journaled longitudinally in the truck body, a plurality of transverse rollers on the truck body, coöperating worm-gear elements carried by the supplemental shaft and the transverse rollers, companion sprocket gears fast on the supplemental shaft, sprocket chains connecting the related gears, and means for shifting the clutch-sleeve.

1,231,183. METHOD OF CONSTRUCTING MOCCASIN-SHOES. HARRY E. MERRILL, Monmouth, Me. Filed Dec. 15, 1915. Serial No. 66,918. (Cl. 12—142.)



1. The method of constructing moccasin shoes which comprises first securing a vamp to a sole, inserting a last, shaping the vamp to the last before an upper is attached, and subsequently attaching the upper to the vamp to complete the moccasin.

2. The method of constructing moccasin shoes which comprises first securing a vamp to a sole, with the ends of the vamp near the middle of the sole, inserting a last, shaping the vamp to the last before an upper is attached, and subsequently attaching the upper to the vamp to complete the moccasin.

3. The method of constructing moccasin shoes which comprises first securing a vamp to a sole with the ends of the vamp near the middle of the sole, inserting a last, shaping the vamp to the last before an upper is attached, then closing the seam in the vamp, and subsequently attaching the upper to the vamp to complete the moccasin.

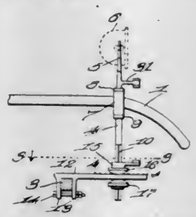
4. The method of constructing moccasin shoes which comprises first securing a vamp to a sole, inserting a last,

shaping the vamp to the last before an upper is attached, attaching the upper to the vamp, and securing an outer sole to the first sole.

5. The method of constructing moccasin shoes which comprises first securing a vamp to a sole with the ends of the vamp near the middle of the sole, inserting a last, shaping the vamp to the last before an upper is attached, then closing the seam in the vamp, attaching the upper to the vamp, and securing an outer sole to the first sole.

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1,231,184. DIRIGIBLE HEADLIGHT. JOHN MESICK, Spokane, Wash. Filed Nov. 10, 1916. Serial No. 130,654. (Cl. 240—62.)



1. A dirigible headlight for automobiles comprising in combination, a lamp supporting spindle, means for supporting said spindle against longitudinal movement and rotatively mounting said spindle from a portion of the body of the automobile to permit of rotation of said spindle about a vertical axis fixed with respect to said body, a supporting means fixed to a portion of the running gear, a crank hub vertically slidable with respect to and nonrotatively connected with said spindle and said crank hub being rotatable and horizontally slidably mounted on said supporting means and held thereby against vertical movement with respect thereto, and means for causing said hub to turn synchronously with the steering wheels, substantially as described.

2. A dirigible headlight for automobiles comprising in combination, a lamp supporting spindle provided with a lower polygonal portion, a sleeve means engaging the upper portion of said spindle and supporting the latter for rotation about a vertical axis and against longitudinal movement, a horizontally disposed fork fixed to the axle of the automobile, a crank hub rotatable in said fork and having upper and lower flanges holding said crank hub against vertical movement but permitting horizontal sliding movement of said crank hub along said fork, the polygonal portion of said spindle extending through and being vertically slidable in said crank hub thereby compensating for relative movement of the body with respect to the axle both horizontally and vertically and always maintaining a positive connection between the spindle and said hub, and means for causing said hub to turn synchronously with the steering wheels, substantially as described.

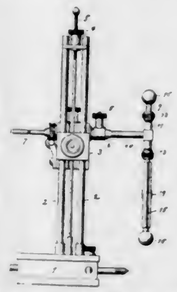
3. A dirigible headlight for automobiles comprising in combination, a lamp supporting spindle, means for supporting said spindle against longitudinal movement and rotatively mounting said spindle from a portion of the body of the automobile to permit of rotation of said spindle about a vertical axis fixed with respect to said body, a supporting means fixed to a portion of the running gear, a crank hub vertically slidable with respect to and nonrotatively connected with said spindle and said crank hub being rotatably and horizontally slidably mounted on said supporting means and held thereby against vertical movement with respect thereto, means for causing said hub to turn synchronously with the steering wheels, a companion lamp supporting spindle mounted to turn about a fixed axis with respect to the body, and means connecting said spindles to cause the same to turn in unison, substantially as described.

4. A dirigible headlight for automobiles comprising in combination, a lamp supporting spindle provided with a lower polygonal portion, a sleeve means engaging the upper portion of said spindle and supporting the latter for rotation about a vertical axis and against longitudinal movement, a horizontally disposed fork secured to the axle of the automobile, a crank hub rotatable in said fork and having upper and lower flanges holding said crank hub against vertical movement but permitting horizontal sliding movement of said crank hub along said fork, the polygonal portion of said spindle extending through and being vertically slidable in said crank hub thereby compensating for relative movement of the body with respect to the axle both horizontally and vertically and always maintaining a positive connection between the spindle and said hub, means for causing said hub to turn synchronously with the steering wheels, a companion lamp supporting spindle mounted to turn about a fixed axis with respect to the body, and means connecting said spindles to cause the same to turn in unison, substantially as described.

5. In a dirigible light for automobiles, a fork support, a crank hub rotatably mounted in said fork and having rounded flanges engaging the fork above and below the same to maintain said hub loosely in engagement with said fork, means engaging said crank hub to turn the same with the steering wheels, and a dirigible lamp in operating connection with said hub, substantially as described.

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1,231,185. SINE-BAR. FREDERICK MULLER, Elizabeth, N. J. Filed Jan. 22, 1917. Serial No. 143,686. (Cl 33—174.)



1. A sine bar comprising a bar having rounded heads, an apertured holder engaging the bar between said heads, a straight edge adapted to be secured to said bar in parallelism therewith, said straight edge projecting a distance beyond the heads, and means for securing said straight edge to said bar.

3. A sine bar comprising a bar having rounded heads, a sleeve encompassing part of the bar, a straight edge adapted to be secured to said bar between said sleeve and one of said heads, said straight edge being disposed parallel to the axis of the bar, and means for securing said straight edge to said bar.

6. A sine bar comprising a bar having rounded heads, a holder engaging the bar between said heads, a straight edge mounted on the bar between said holder and one of said heads, said straight edge having a sharp working edge that is arranged in parallelism with the axis of the bar and extends a distance beyond the heads, and a clamp that removably secures the straight edge to said bar.

[Claims 2, 4, and 5 not printed in the Gazette.]

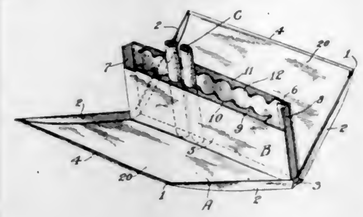
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1,231,186. CIGARETTE-CASE. VICTOR NIVOIS, Brooklyn, N. Y. Filed Apr. 17, 1916. Serial No. 91,606. (Cl. 206—41.)

1. A cigarette case comprising a suitable cover, and a holder adapted to be enveloped thereby when the cover is closed, said holder having integral angularly disposed flanges carrying cigarette engaging means projecting inward thereof for engaging opposite sides of the cigarette.



2. A cigarette case including a holder having a wall provided with an integral inturned cigarette engaging flange.



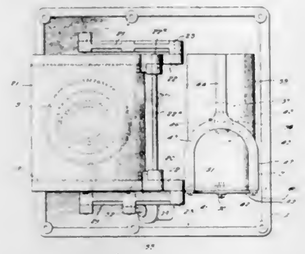
5. In a cigarette case, a holder comprising spaced side and end walls, said side walls having integral inturned longitudinally extending serrated cigarette engaging flanges.

9. A cigarette case comprising a pair of hinged dished covers, the free longitudinal edge portions of which are tapered to form converging meeting edges when the case is closed, and a box-like holder mounted upon the hinge section of the covers, the hinge section of such covers constituting the bottom of the holder, and means carried by the holder and operative on opposite faces of the cigarettes for positioning the cigarettes individually and maintaining them upright and in spaced relation.

[Claims 3, 4, and 6 to 8 not printed in the Gazette.]

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1,231,187. LEVELING DRAWING-TABLE FOR COMBINATION JOLT-RAMMING AND ROCK-OVER MACHINES. WILLIAM C. NORCROSS, Terre Haute, Ind., assignor to American Molding Machine Co., Terre Haute, Ind., a Corporation of Indiana. Original application filed July 17, 1916. Serial No. 109,698. Divided and this application filed Aug. 21, 1916. Serial No. 116,091. (Cl. 22—91.)



1. In a molding machine, a centrally supported unitary leveling drawing table, and manually operable locking means for fastening it where set.

2. In a molding machine, a centrally supported unitary leveling drawing table having a three-point support for the mold, and manually operable locking means for securing it where set.

3. In a molding machine, a unitary leveling drawing table pivotally and tiltably supported at its center, and a yoke and fastening device for securing it where set.

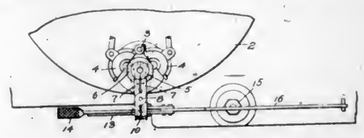
4. In a molding machine, a unitary pivotally and tiltably supported leveling table, a setting yoke therefor, and a fastener for securing the yoke.

5. In a molding machine, a drawing table, a pivotally and tiltably supported leveling device thereon, a yoke secured to and depending from the leveling device, and a fastening bolt for securing the yoke to the drawing table.

[Claims 6 and 7 not printed in the Gazette.]

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1,231,188. NECK-MOLD FOR BOTTLE-BLOWING MACHINES. FRANK O'NEILL, Toledo, Ohio. Filed July 18, 1916. Serial No. 109,872. (Cl. 49—42.)



1. The combination of a movable carrier, a main mold, a sectional neck mold adapted to coöperate with the main mold, supporting devices for the neck mold sections movably mounted on the carrier, and a vertically movable device having otherwise fixed position, the carrier adapted to move the neck mold supports into operative alinement with said device, and means for moving said device vertically for separating said supports and opening the neck mold.

2. The combination of a mold carrier, a main mold, a horizontally opening neck mold adapted to coöperate with the main mold, devices projecting from and movable with the neck mold sections, and a mold opening device adapted to be moved between said projecting devices for opening the neck mold, said mold opening device supported adjacent to but independently of the mold carrier.

3. The combination of a mold carrier, a main mold, a horizontally opening sectional neck mold beneath and adapted to coöperate with the main mold, supporting devices for the neck mold sections movably mounted on the carrier and projecting therefrom, and a movable device located outside the path of movement of the carrier and supported independently of the latter and adapted to be entered between said supporting devices for separating them and opening the neck mold.

4. The combination of a horizontally movable mold carrier, a sectional mold, mold supporting arms pivotally secured to the carrier between the outer edge of the latter and the mold sections with said arms projecting beyond the carrier, and a vertically movable device located beyond the path of movement of the carrier and adapted to be projected into engagement with the extended portions of the arms for actuating the latter to open the mold.

5. The combination of a horizontally movable mold carrier, a sectional open bottom main mold mounted on the carrier, a sectional neck mold beneath and adapted to register with the main mold, movable supporting means for the neck mold sections permanently mounted on the carrier, and a movable device having fixed position and with which the carrier is adapted to place the neck mold supporting means in operative relation for opening the neck mold.

[Claim 6 not printed in the Gazette.]

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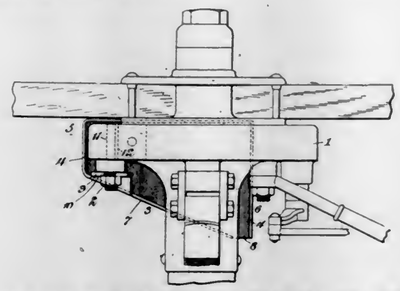
1,231,189. GREASE-CATCHING DEVICE FOR AUTOMOBILES. COLEMAN FERRELL PEARSON, Montgomery, Ala. Filed Oct. 9, 1916. Serial No. 124,746. (Cl. 74—56.)

1. A grease catching device for the brake drums of automobiles, comprising a shallow pan shaped to direct grease away from the drum and from the wheel carrying the drum, and provided with a discharge opening, said pan having means for suspending it from the drum and also provided with a blade adapted to be brought into such relation to the periphery of the drum as to catch grease accumulating on the periphery of the drum.

2. A means for catching and diverting grease leaking from the brake drum of an automobile, comprising a shallow pan increasing in width from one end toward the other and provided with an outlet near one side of the wide end and with suspending means near one side of the narrow end and at said narrow end having grease engaging means adapted to be brought into close relation to the peripheral portion of the drum.

3. A pan for catching drippings of grease from the brake drum of an automobile, said pan having an escape

opening for directing grease away from the wheel of the automobile adjacent to the brake drum and also provided with a suspending ear adapted to be attached to a bolt present on the brake drum and with a blade for engaging grease accumulating on the periphery of the drum and directing it into the pan.

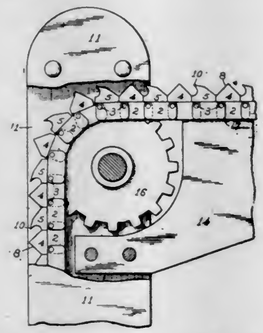


4. A drip pan for attachment to the brake drum of an automobile, said pan being of shallow depth with marginal walls and widening from one end toward the other with an escape opening at the wide end, an attaching ear near the narrow end of the pan and adapted to be engaged by a bolt present on the brake drum, and a blade carried by the pan for engaging grease accumulating on the peripheral portion of the drum and directing the grease into the pan.

5. A drip pan for attachment to the brake drum of an automobile, said pan being of shallow depth with marginal walls and widening from one end toward the other with an escape opening at the wide end, an attaching ear near the narrow end of the pan and adapted to be engaged by a bolt present on the brake drum, and a blade carried by the pan for engaging grease accumulating on the peripheral portion of the drum and directing the grease into the pan, said blade rising above the top of the pan and bent at the free end to be directed toward the periphery of the brake drum when the pan is installed.

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1,231,190. CHAIN SAW. WALTER PETERSON, Honey Creek, Iowa. Filed Apr. 8, 1916. Serial No. 89,896. (Cl. 143—135.)



1. An endless chain saw of the specified class, comprising a plurality of side plates ,a plurality of shafts connecting the plates together in pairs and pivoting the pairs together in terminally overlapping succession, and a plurality of saw teeth having stop shoulders to engage the plates, and having lugs pivoted on the shafts and adapted to engage the teeth of a sprocket wheel.

2. An endless chain saw of the specified class, comprising a plurality of side plates, a plurality of shafts connecting the plates together in pairs and pivoting the pairs together in terminally overlapping succession, and a plurality of saw teeth having lugs pivoted on the shafts between the plates and adapted to engage the teeth of a sprocket wheel.

3. An endless chain saw of the specified class, comprising a plurality of double links having side plates, a plurality of shafts connecting the side plates and pivoting the links together in series, and a plurality of saw teeth pivoted on the shafts respectively.

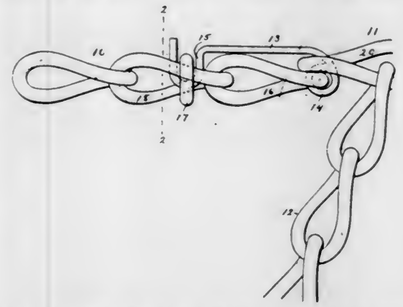
4. An endless chain saw of the specified class, comprising a plurality of double links having side plates spaced apart and adapted to admit between the plates a link-guiding bar, a plurality of shafts connecting the side plates in pairs, and pivoting the links together in series, and a plurality of saw teeth, pivoted on the shafts respectively.

5. An endless chain saw of the specified class, comprising a plurality of double links having side plates spaced apart to admit a guide between them, a plurality of shafts connecting the side plates in pairs and pivoting the links together in terminally overlapping succession, and a plurality of saw teeth pivoted on the shafts respectively, and having stop shoulders adapted to engage by contact the edges of the plates.

[Claims 6 to 9 not printed in the Gazette.]

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1,231,191. FASTENING. FRED C. POLING, Menlo, Iowa, assignor to Goode Anti-Skid Chain Manufacturing Company, Des Moines, Iowa, a Corporation of Arizona. Filed Feb. 20, 1917. Serial No. 149,816. (Cl. 24—232.)



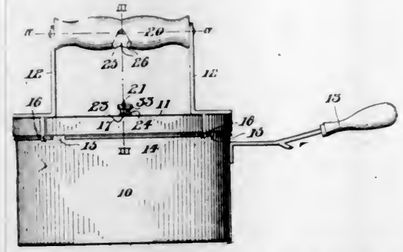
1. A fastening device for chains, comprising a hasp formed with a hook at one end and also having an eye at the other end adapted to be pivoted on a link of said chain, said hook extending across the plane of the eye in one direction and across the plane of the body of the hasp in the other direction and being adapted to enter an adjacent link of said chain, together with a loop slidingly mounted on and wholly embracing said adjacent link and adapted to embrace said hook.

2. A fastening, comprising a hasp formed with a relatively straight body, and also formed with an eye offset at one end portion of said body, and also formed with a hook offset at the opposite end portion of said body into the plane of the eye, said hasp being adapted to be pivoted on a link of a chain, the hook being adapted to enter an adjacent link of the chain, a loop being mounted loosely on said adjacent link and adapted wholly to embrace said hook, said hasp being adapted to receive an oppositely adjacent link in embracing relation with its end portion adjacent to said eye, the latter link overlapping the hasp-carrying link.

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1,231,192. MACARONI-COOKER. JOSEPH POMIANOWSKI, Chicago, Ill. Filed Dec. 14, 1916. Serial No. 136,920. (Cl. 53—1.)

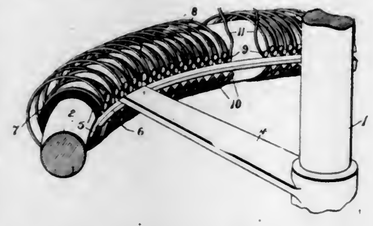
1. In a macaroni cooker comprising a pot having a cover provided with a centrally located opening, a hinged transparent window for said opening, a fixed bail upon said cover spanning said window and having the hand piece thereof provided with a socket having flanged edges, said window being provided with a knob swinging with the opening movement of the window into frictional retaining engagement with one of said edges.



2. A macaroni cooker comprising a pot having an outwardly projecting bead spaced from the upper rim of the pot and provided with interrupted portions, a closure cover for the said pot having a central opening and an annular flange arranged adjacent the said bead when the cover is closed, depending hooks carried by the said flange adapted for detachable engagement with the bead through the said interrupted portions thereof, a hinged transparent window for said cover opening, damper-controlled draining means at one side of the cover, damper-controlled steam outlet means at the opposite side of the cover, and a bail handle carried by the cover overlying said window, and coöperating means carried by the said window and handle adapted for operative engagement when the window is open to retain the window in open position.

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1,231,193. ELECTROMAGNET. CHARLES C. POWERS, Williams, Ariz., assignor of one-third to Jack T. Utnik and one-third to Louis De Bold, Williams, Ariz. Filed Sept. 8, 1916. Serial No. 119,110. (Cl. 175—21.)



1. In an electromagnet, a tubular bobbin having a slot, energizing coils wound back and forth on said bobbin from slot to slot, a core member movable in said bobbin and an arm carrying said core member and projecting through said slot and movable with relation to said coils.

3. In an electromagnet, an annular tubular bobbin having an annular slot, energizing coils wound back and forth on said bobbin from slot to slot, a core member movable in said bobbin and an arm carrying said core member and projecting through said slot and rotatable around an axis, said core member including a plurality of sections of alternately magnetic and non-magnetic material.

6. In an electromagnet, an annular tubular bobbin having an annular slot, energizing coils wound on said bobbin, a core member movable in said bobbin and an arm carrying said core member and projecting through said slot and rotatable around an axis, said core member including a plurality of sections of alternately magnetic and non-magnetic material, said coils being wound back and forth around said bobbin from slot to slot, alternate turns being wound close to the bobbin and the remaining turns spaced away from the bobbin.

[Claims 2, 4, and 5 not printed in the Gazette.]

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1,231,194. FINGER-COT. CLOFTON O. PRINCE, Winchester, Tenn. Filed Nov. 13, 1916. Serial No. 131,118. (Cl. 128—3.)

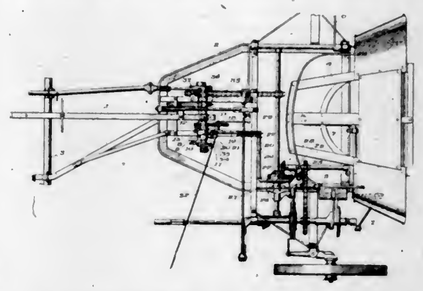


1. A device of the character described, comprising a finger cot having a slit beginning at one side of its open end and extending a part of the length of the cot; and an adhesive strip extending around the outside of the cot in permanent engagement therewith at the open end thereof with its ends projecting beyond said slit at each side thereof, said free ends having adhesive material on their inner faces.

2. A device of the character described, comprising a finger cot having a flared portion at its open end and split through said flared portion to form said portion at the sides of said split into flaps designed to overlap each other to adapt the device to fit different sized fingers; and an adhesive strip extending around the outside of the cot at the open end thereof in permanent adhesive engagement with the cot, and having its ends projecting beyond said slit, said ends having adhesive inner faces for wrapping around and engaging the finger of the wearer.

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1,231,195. SHOCKING-MACHINE. CLEMMA R. RANEY, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Jan. 23, 1913. Serial No. 743,740. (Cl. 56—122.)



1. In a shocking machine, normally prostrate shock setting mechanism, and a sheaf delivery member controlling the same and engageable with the upper surface of the shock butt therein.

2. In a shocking machine, a prostrate shock receptacle, and means for operating the same having a controlling member engageable with the entire upper surface of a sheaf deposited therein.

3. In a shocking machine, a shock receptacle, shock discharging mechanism, and intermittently operating controlling means therefor successively engageable with different parts of the shock.

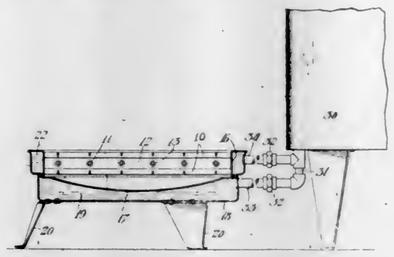
4. In a shocking machine, a shock receptacle, shock binding mechanism, and controlling means therefor including a controlling member engageable with the sheaves in the shock substantially throughout their length.

5. In a shocking machine, a shock receptacle, shock binding mechanism, and controlling means for the latter successively engageable with the butts of sheaves on opposite sides of the shock.

[Claims 6 to 76 not printed in the Gazette.]

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1,231,196. RADIANT-TYPE STOVE. WILLIAM A. RANKIN and HENRY D. LARAWAY, Ontario, Cal., assignors to Hotpoint Electric Heating Company, Ontario, Cal., a Corporation of California. Filed Feb. 2, 1916. Serial No. 75,851. (Cl. 219—19.)



1. An electric heating device, comprising an electric heating element, a reflector surface placed near said heating element, and means for cooling said reflector surface by means of a liquid.

2. An electric heating device, comprising an electric heating element, a reflector surface placed near said heating element, walls forming an inclosed chamber adjacent to said reflector, and a body of cooling fluid in said chamber.

3. An electric heating device, comprising an electric heating element, a reflector surface placed near said heating element, walls forming an inclosed chamber adjacent to said reflector, a body of cooling fluid in said chamber, a reservoir, and means for connecting said inclosed chamber with said reservoir.

4. An electric heating device, comprising an electric heating element, a reflector placed near said heating element, walls forming an inclosed chamber adjacent to said reflector, walls forming an inclosed chamber around the outer wall of the device, and a body of cooling fluid in said chambers.

5. An electric heating device, comprising an electric heating element, a reflector placed near said heating element, walls forming an inclosed chamber adjacent to said reflector, walls forming an inclosed chamber around the walls of the device, a body of cooling fluid in said chambers, a reservoir, and means for connecting the interior of said chambers with said reservoir.

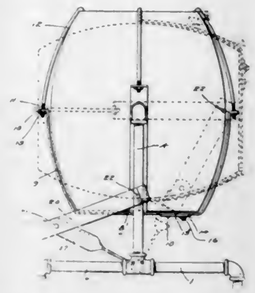
[Claims 6 to 9 not printed in the Gazette.]

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1,231,197. SUPPORT OR STAND. CLINTON C. REYNOLDS, Le Roy, Ill. Filed May 29, 1916. Serial No. 100,437. (Cl. 248—58.)

1. A device of the character described including in combination, a base having spaced upright members, a supporting frame work for holding a barrel or other receptacle pivotally connected between said upright members, said frame work including strap members adapted to extend across the bottom of the receptacle and up along the sides thereof, one of said strap members being divided and having removable means for securing it together, and hook members adjustably secured to said strap members and adapted to engage the top of the receptacle.

2. A device of the character described including in combination, a base having spaced upright members, a frame work for holding a receptacle pivotally connected to said upright members, arms pivotally connected to said base and link members pivotally connected to said arms and to said frame work below its pivotal connection to the upright members.



3. A device of the character described including in combination, a base having spaced upright members, a frame work for holding a receptacle pivotally connected to said upright members, arms pivotally connected to said base and link members pivotally connected to said arms and to said frame work below the pivotal connection of the upright members, and stops on said links adapted to engage said arms when in a fully extended position to lock the parts in said extended position.

4. A device of the character described including in combination, a base having spaced upright members, a frame work for holding a receptacle pivotally connected to said upright members, arms pivotally connected to said base and link members pivotally connected to said arms and to said frame work below the pivotal connection of the upright members, a stop on each link adapted to engage said arms when in a fully extended position to lock the parts in said extended position, and a stop on the other end of each link to engage said spaced upright members to stop the receptacle in its normal position on its return movement.

5. A device of the character described, including in combination, a base having spaced upright members, a frame work for holding a receptacle, including strap members adapted to extend along the bottom thereof and up along the sides with hook members adjustably secured to the ends of said strap members and adapted to engage the top of the receptacle, arms pivotally connected to said base and link members pivotally connected to said arms and to said strap members at a point near the bottom of the receptacle, said strap members also having a pivotal connection with said spaced upright members adjacent the intermediate point of the receptacle.

[Claims 6 and 7 not printed in the Gazette.]

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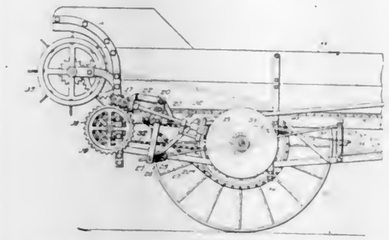
1,231,198. MOUNTING OF FEED-GUIDES OF PRINTING, LITHOGRAPHING, AND OTHER LIKE MACHINES. ERNEST JAMES ROBERTS, Christchurch, New Zealand. Filed Sept. 13, 1916. Serial No. 119,955. (Cl. 101—413.)




Means for the purpose indicated comprising in combination with a plate adapted to be clamped upon the feedboard by means of a set-screw, feed guide, a truncated cone inserted from the underside of the plate in a conical hole, the smaller or upper end of such cone abutting with and being rigidly secured to the guide while the base of such cone projects slightly beneath the underside of the plate and forms a bearing for the latter upon the board, substantially as described.



1,231,199. FERTILIZER-DISTRIBUTER. CHARLES W. ROBINSON, Hamilton, Ontario, Canada, assignor, by mesne assignments, to International Harvester Corporation, a Corporation of New Jersey. Filed Dec. 1, 1913. Serial No. 803,962. (Cl. 275—5.)



1. In a fertilizer distributer, a traveling apron, driving mechanism therefor including a shaft and gear movable in a vertical plane, a bell crank mounted on a transverse axis on said distributer and extending below said shaft and gear, and means for actuating said bell crank to yieldingly shift the shaft and gear in a manner to control the operation of the apron.

2. In a fertilizer distributer, a traveling apron, driving mechanism therefor including a driving gear, a member adapted to mesh therewith carried upon a movable shaft, a bell crank connected directly to said shaft and having an arm projecting below, and means connected with said downwardly projecting arm for yieldingly actuating the bell crank to move said member to position for engaging or disengaging the gear.

3. In a fertilizer distributer, a receptacle, a traveling apron therefor, driving mechanism for said apron including a wheel and a member adapted to engage therewith, a movable shaft for said member, a bell crank lever pivoted to said receptacle and slidably engaging at one end with said shaft, and having its other end projecting downwardly, a rock shaft beneath said receptacle, and a yieldable connection between said rock shaft and downwardly extending arm of the bell crank lever whereby said movable shaft is shifted to effect engagement or disengagement between the said wheel and coacting member.

4. In a fertilizer distributer, a receptacle, a traveling apron therefor, driving mechanism for said apron including a movable shaft and a gear for controlling the operation thereof, a bell crank lever for operating said shaft and gear, a rock shaft on said receptacle, a link connecting said rock shaft with the bell crank lever, and a flexible connection between said link and bell crank lever provided with means spaced apart to receive said bell crank lever to thereby provide for a variable path of movement for said bell crank lever.

5. In a fertilizer distributer, a receptacle, forward driving mechanism therefor, reverse driving mechanism, shifting means for said forward drive, a rock shaft for operating said shifting means, a bell crank lever for shifting the reverse driving mechanism in and out of operative position, a crank arm carried on said rock shaft, and a rod connected to said bell crank lever and having a sliding swivel connection with said crank arm.

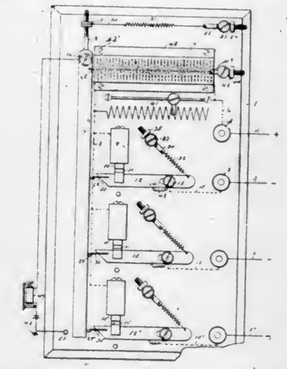
[Claims 6 to 9 not printed in the Gazette.]

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1,231,200. ELECTRICAL TIMING DEVICE. EARL HOYT ROLLINSON, Lyons Farms, N. J. Filed Nov. 27, 1915. Serial No. 63,705. (Cl. 175—273.)

1. In a timing circuit breaker, the combination of an electrical circuit, a heating coil in said circuit, a device for holding said circuit breaker closed including an expansible metallic member within and free from contact with said heating coil and actuated by the heat radiated therefrom to release said device and open said circuit breaker.

4. In a circuit breaker, the combination of an electric circuit, a heating coil and a circuit breaker in series in said circuit, a tripping device for releasing said circuit breaker, an expansible metallic element free from contact with and actuated by radiant heat from said heating coil for releasing said tripping device to open said circuit.



12. In a timing cut-out for electric circuits, the combination of an electric circuit, a heating coil and a circuit breaker in series in said circuit, a spring actuated pivoted lever having a stop device for holding said circuit breaker closed, an expansible wire separated by an intervening air-gap from and actuated by the heat generated in said coil and radiated across said air-gap to release said circuit breaker and thereby open the circuit, and means for regulating the heat from said coil to expand said wire in a predetermined time to operate said circuit breaker.

18. In a timing circuit breaker, the combination of an electric circuit, a heating coil and a spring actuated circuit breaker in said circuit, a pivoted lever, an expansible wire connected to said lever and extending axially through said coil and rigidly secured at its opposite end, a stop pin on said lever, a stop plate upon said circuit breaker, for engagement with said pin to hold said circuit breaker closed, and a spring for swinging said lever to break the engagement of said stop pin and plate and thereby open said circuit upon the generation of heat in said coil and the consequent expansion of said wire.

19. In an electric circuit breaker, the combination of a spring pressed, sliding brush, a pivoted lever mounted to slide upon its pivot, a brush upon said lever adapted to contact with, and depress said sliding brush, and a trip device for engagement with said lever and so arranged as to require said lever to be slid upon its pivotal support and effect a wiping contact between said brushes when said circuit breaker is reset.

[Claims 2, 3, 5 to 11, 13 to 17, and 20 to 24 not printed in the Gazette.]

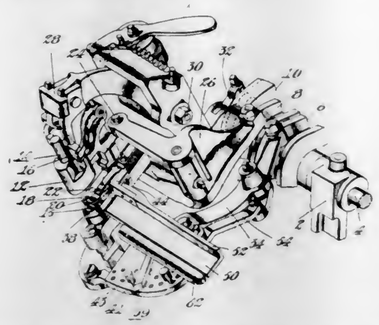
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1,231,201. FASTENER-SETTING MACHINE. FRED A. RUMNEY, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 17, 1912. Serial No. 715,645. (Cl. 218—14.)

1. A duplex fastener setting machine having, in combination, a stationary elongated channel constructed and arranged to receive the edge portions of two contiguous pieces of work, an edge gage disposed adjacent to one end of the channel, means for separating the two pieces of work as they pass the edge gage, and setting tools for inserting a fastener in each piece of work adjacent to their point of separation.

2. A duplex fastener setting machine having, in combination, setting tools arranged to operate in an inclined path, a work guiding member having an inclined unobstructed supporting surface extending to a point remote

from the setting tools, a longitudinally disposed shoulder at its lower edge over which portions of two superposed pieces of work are suspended while the edges of said pieces rest on the supporting surface, and means for separating the two pieces of work after they leave the guiding member and before they reach the tools.



3. A machine of the class described having, in combination, a reciprocatory setting tool, and a work guiding member having an unobstructed supporting surface leading to a point in line with the path of the tool and a pair of opposed parallel projections limiting the supporting surface of the work guiding member, one of said projections being unobstructed throughout its length to permit a part of the work to be bent over it.

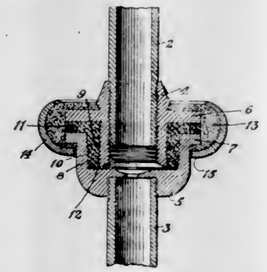
4. A machine of the class described having, in combination, oppositely arranged setting tools, an intermediate work plate adapted to be interposed between two layers of material and located in line with the tools, and a work guiding member at one side of the work plate for supporting both layers of the work as it is fed to the tools.

5. A work guiding member for a fastener setting machine comprising a plate having a supporting surface, a longitudinal wall at one edge disposed perpendicularly to said surface, and a rib adjustably mounted adjacent to the other edge of said surface having an inner wall disposed perpendicular to the supporting surface and a rounded upper face upon which the work may be suspended.

[Claims 6 to 18 not printed in the Gazette.]

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1,231,202. INSULATING-JOINT. FRANK D. SAYLOR, Pittsburgh, Pa. Filed Sept. 9, 1914. Serial No. 860,886. (Cl. 173—365.)



1. An insulating coupling consisting of a plurality of threaded metallic bushings in tandem each having a central threaded opening providing for a pipe connection at each end of the coupling and each bushing having an external flange, an intervening insulating member having threaded engagement with said bushings, and an outer insulating body.

2. An insulating coupling consisting of a plurality of threaded metallic bushings in tandem providing for a pipe connection at each end and each having a polygonal flange, an intervening insulating member having threaded engagement therewith, an outer insulating body, and a surrounding shell.

3. An insulating coupling consisting of a plurality of threaded metallic bushings in tandem providing for a pipe connection at each end and having flanged portions, an intervening insulating member having threads engaging the metallic bushings, and an outer insulating body enveloping said flange portions.

4. An insulating coupling consisting of a plurality of threaded metallic bushings in tandem providing for a pipe connection at each end and having flanged portions, an intervening insulating member connecting the metallic bushings by threaded engagement and extending thereby beyond by an outer insulating body portion embracing said flanged portions, and an outermost rounded protecting casing embracing the extended portion of the insulating member.

5. In an insulating coupling of the class described, the combination of a plurality of spaced threaded bushings in tandem having terminal flanges, and a body of insulating material having threaded engagement with said bushings and embracing the flanges thereof.

[Claims 6 and 7 not printed in the Gazette.]

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1,231,203. PAPER-MATERIAL CONTAINER. GEORGE L. SCALES, Detroit, Mich. Filed Dec. 30, 1915. Serial No. 69,502. (Cl. 229—12.)



A closure for a paper-material container, comprising paper-material formed with outer and inner annular depending flanges providing a groove adapted to engage over the edge of a container with the outer flange of greater depth than the inner flange, said closure having a central depressed portion providing an opening concentric with the container and a seat at the marginal edges of said opening to receive a flat cap adapted to be sprung into the opening of the closure on to the seat to lie in a plane well below the top of the closure, and tabs secured to the outer flange of said closure and adapted for attachment to the walls of the container.

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1,231,204. ENVELOP. FRANK C. SCHAEFFLER, Huntington, N. Y. Filed Aug. 19, 1916. Serial No. 115,752. (Cl. 229—73.)

1. An envelop having a front provided with a pair of slits to form a band, a first legend on said band, a flap adapted to be passed through either one of the slits, and a second legend on the flap, said first named legend being adapted to be blanketed by the flap, while the second named legend is adapted to be blanketed by the band.

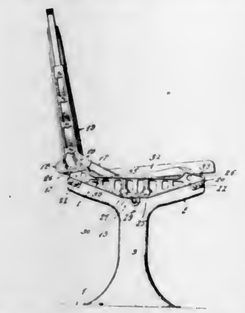
2. An envelop having a front provided with a pair of slits to form a band, a first legend on said band, a hinged flap adapted to be passed through either one of the slits, and a second legend on the flap, the two legends being



arranged at substantially equal distances from the hinge of the flap.

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1,231,205. SEAT. BERNARD SCHECHTER, St. Louis, Mo., assignor of one-third to George H. Tontrup and one-third to William J. Mackle, St. Louis, Mo. Filed Apr. 19, 1916. Serial No. 92,099. (Cl. 155—2.)



1. A seat-frame comprising opposite sets of plates adjacent opposite ends of the frame, each set consisting of two adjacent plates attached together in spaced relation to each other, levers operatively mounted between said adjacent plates, said levers being adapted as seat-back throwing levers, and means adapted as a double bearing for pivotally mounting one end of each of said levers between said adjacent plates, said means including a bushing for each lever end borne by one of the adjacent plates and an inwardly projecting member borne by the other adjacent plate opposite each bushing.

2. A seat-fame comprising opposite sets of plates mounted at opposite ends of the frame, each set consisting of an inner and an adjacent outer plate atached together in spaced relation to each other, levers operatively mounted between the plates of each set and having their paths of travel along the space between said plates, and two bearings adapted for pivotally mounting one end of each of said levers between said plates, one of said bearings consisting of a bushing being borne by the inner plate and the other consisting of a bushing being borne by the adjacent lever end and extending within the first mentioned bushing, and lugs carried by each of said outer plates and adapted to engage within the outer end of said last named bushing to form a support therefor, said levers being adapted as seat-back throwing levers.

3. A seat-frame comprising opposite sets of plates mounted at opposite ends of the frame, each set consisting of two adjacent plates attached together in spaced relation to each other, levers operatively mounted between the plates of each set, the space between said plates being adapted to form the path of travel of said levers, said levers being adapted as seat-back throwing levers, and means adapted as double bearings for pivotally mounting one end of each of said levers between said plates, said means consisting of a hub borne by said lever-ends, a bushing borne by one of said plates and adapted to support therein an adjacent portion of said hub, and a projecting lug borne by the adjacent plate and adapted to receive an adjacent portion of said hub thereon.

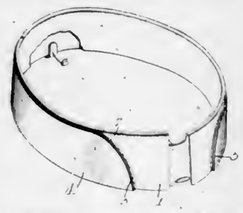
4. The combination with a seat-frame comprising opposite plates bearing longitudinally curved flanges extending lengthwise of said plates, of shifting rockers slidably mounted on said flanges, a seat-bottom adapted to be borne by said rockers, and means adapted for mounting said seat-bottom on said rockers in hinged relation thereto, said means having hinged joints adjacent each end thereof and being adapted for permitting said seat-bottom to be folded upwardly from either side-edge on its opposite side-edge.

5. The combination, with a seat-frame comprising opposite plates bearing longitudinally curved flanges extending lengthwise of said plates, of shifting rockers slidably mounted on said flanges, a seat-bottom adapted to be borne by said rockers, and means adapted for mounting said seat in hinged relation to said rockers, said means having hinged opposite end-portions, one of said end-portions being secured to an adjacent portion of a rocker and the other end-portion being secured to an adjacent portion of said seat-bottom, said means being adapted for permitting said seat-bottom to be folded upwardly from either side-edge on the opposite side-edge and dropped from folded to normal position.

[Claim 6 not printed in the Gazette.]

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1,231,206. COLLAR-PROTECTOR. SEAMAN SCHENCK, New York, N. Y. Filed Oct. 19, 1914. Serial No. 867,516. (Cl. 2—54.)



A collar protector comprising a pliant band of material with a covering of light material on one side to face a collar and a covering of dark material on the other side to face a coat, a hook on the lower edge of each end of the protector for fitting over the lower edge of a collar, and a hook intermediate of the ends on the lower edge of the protector for fitting upon the lower edge in the middle of a collar and prevent the protector from riding up.

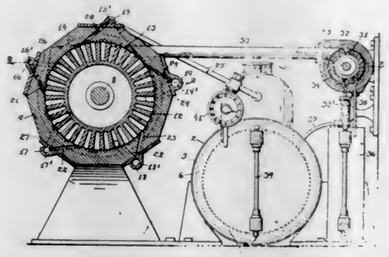
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1,231,207. STEAM-MOTOR. ERNST WILLY SCHUSTER, Chicago, Ill. Filed Feb. 3, 1917. Serial No. 146,424. (Cl. 253—53.)

1. In a steam motor, a rotary wheel having in its circumferential portion radial blades and intervening radial spaces, a casing closing said spaces upon the outside, pipes located at different points around the periphery and extending transversely of said wheel, a steam generator having communication with both ends of the first of said pipes, the balance of said pipes having communication at both ends thereof with said radial spaces at different points around the wheel, and delivery pipes from said transverse pipes to the radial blades at different points around the wheel.

4. In a steam motor, a cylindrical casing, a rotary wheel in said casing having in its circumferential por-

tion radial blades and intervening radial spaces, steam chambers of graduated capacity located at different points around the periphery and extending axially of said casing, the first of said chambers having communication with a steam supply pipe and the other said chambers



having communication with the radial spaces of said wheel at different points around said casing, and series of progressively increasing numbers of delivery pipes leading from said steam chambers to the spaces of said wheel at different points around the periphery of said casing.

[Claims 2 and 3 not printed in the Gazette.]

1,231,208. PERTAINING TO THE UTILIZATION OF THE WASTE HEAT OF GAS-ENGINES. CARL SEMMLER, Wiesbaden, Germany. Filed Jan. 24, 1914. Serial No. 814,053. (Cl. 123—6.)



1. In an apparatus for the utilization of waste heat, a gas engine, an exhaust pipe, a jacket surrounding said exhaust pipe and adapted to contain a heat-absorbing medium, means for feeding said medium in a cycle and through said exhaust pipe-jacket, and a throttling device in said cycle adapted to check the expansion into steam of said medium in front of the throttling device, and permit such expansion back of said device.

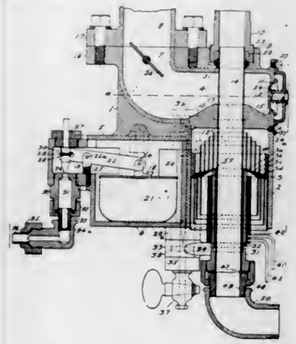
2. In an apparatus for the utilization of waste heat, a gas engine, an exhaust pipe, a jacket surrounding said exhaust pipe and adapted to contain a heat-absorbing medium, means for feeding said medium in a cycle and through said exhaust pipe-jacket, a throttling device, a propelling device and an intervening heat exchanging device in said cycle, and means located within said jacket for forcing said medium to follow a predetermined course while flowing through the jacket.

3. In an apparatus for the utilization of waste heat, a gas engine, an exhaust pipe, a jacket surrounding said exhaust pipe and adapted to contain a heat-absorbing medium, means for feeding said medium through said exhaust pipe-jacket, a throtling device adapted to check the flow of said medium, and a helically wound rod located within said jacket for forcing said medium to follow a spiral course while flowing through the jacket.

4. In an apparatus for the utilization of waste heat, a gas engine provided with a jacket that surrounds the engine cylinder, an exhaust pipe, a jacket surrounding said exhaust pipe, both of said jackets being adapted to contain a heat-absorbing medium, means for consecutively feeding said medium through said jackets and a throttling device adapted to check the flow of said medium.

5. In apparatus for the utilization of waste heat, a gas engine, the combination with cylinder jacketing means, of exhaust pipe jacketing means comprising a pipe surrounding the exhaust pipe and a helically wound rod interposed between said exhaust and jacketing pipes, and of a closed pipe circuit connecting said jacketing means with a heat-utilizing device, a pumping device adapted to circulate through said circuit a liquid suitable for absorbing heat, and a pressure regulating device adapted to maintain in said circuit, a pressure sufficiently high to prevent said liquid from becoming vaporized therein.

1,231,209. CARBURETER. FRANK L. SESSIONS, Lakewood, Ohio. Filed Feb. 4, 1914. Serial No. 816,523. (Cl. 261—12.)



1. In a carbureter, a casing provided with a mixing chamber, having an air inlet, a fuel inlet, and a mixture outlet, a heater pipe extending through the mixing chamber, the air inlet and the fuel inlet, and an air inlet valve adjacent to the fuel inlet, adapted to deflect the incoming air across said fuel inlet against said heater pipe.

2. In a carbureter, a mixing chamber, an annular fuel inlet, an annular air inlet, one inlet surrounding the other, a valve for the air inlet, a heating means surrounded by the inner inlet, and another heating means surrounded by the outer inlet, whereby both the fuel and the air are heated on the way to the mixing chamber.

3. In a carbureter, a casing provided with a mixing chamber having an air inlet and a mixture outlet, a vertical heater pipe extending through the air inlet and the mixing chamber, a fuel pipe surrounding the heater pipe within the air inlet, forming a fuel heating chamber also surrounding the heater pipe, the fuel heating chamber having an annular orifice surrounding the heater pipe and forming a fuel inlet to the mixing chamber, and an annular air inlet valve closing the air inlet and having its seat upon the fuel pipe.

4. In a carbureter, a casing, provided with a mixing chamber having annular fuel inlet, an air inlet surrounding the fuel inlet, and a mixture outlet, and a plurality of successively-opening concentric valves, controlling the admission of air through the air inlet to the mixing chamber.

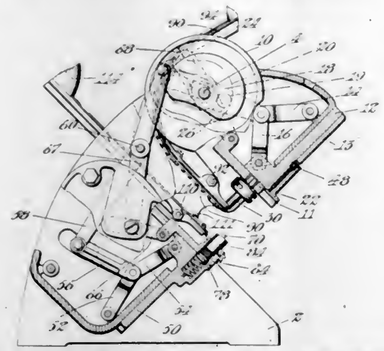
5. In a carbureter, a casing provided with a mixing chamber having an annular fuel inlet, an air inlet surrounding the fuel inlet and a mixture outlet, a plurality of successively-opening concentric valves controlling the admission of air through the air inlet to the mixing chamber, and means for closing said valves exerting a pressure on all the valves through the medium of the outer one.

[Claims 6 to 17 not printed in the Gazette.]

1,231,210. MACHINE FOR SETTING FASTENERS. WALTER SHAW, Dedham, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 30, 1913. Serial No. 792,623. (Cl. 218—15.)

1. A machine of the class described having, in combination, stationary raceways, coöperating setting devices, one of which is shaped to upset a tubular fastener carried by the other, and means for moving both setting devices to their respective raceways to receive fasteners.





2. A machine of the class described having, in combination, stationary raceways, coöperating setting devices, and means for moving both setting devices one after the other to its raceway to receive a fastener.

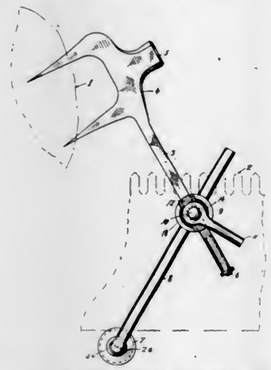
3. A machine of the class described having, in combination, a pair of raceways, coöperating setting devices, means for moving one of said devices from its raceway into setting position, means for relatively moving the devices to perform a setting operation, and means subsequently acting to move the other of said setting devices from its setting position to the other raceway.

4. A machine of the class described having, in combination, a pair of raceways, a pair of coöperating setting devices relatively movable to perform a setting operation, and means for moving one of the setting devices to its raceway before the setting operation and the other setting device to its raceway after the setting operation.

5. A machine of the class described having, in combination, a pair of setting devices, one of which initially occupies its setting position, a raceway terminating at a point on one side of the initial position of said setting device, and means for moving said device to the raceway and back to initial position after each setting operation.

[Claims 6 to 23 not printed in the Gazette.]

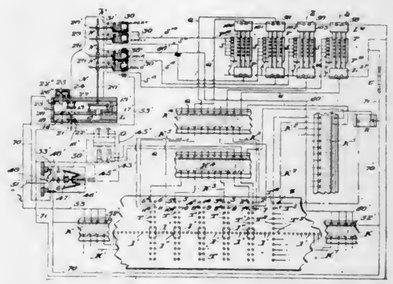
1,231,211. UNDERCUTTER-GUIDE. SANKEY S. SILVIS, Portland, Oreg., assignor to Edward Larkin and Charles Larkin, Blind Slough, Oreg. Filed May 19, 1913. Serial No. 768,684. (Cl. 143—163.)



1. In an undercutter-guide, an elongated body, an arm having a flattened side surface, and a clamping joint including a sleeve having a transverse bore and a collar loosely hung on said sleeve, said collar having a circular groove and a flat bottom groove for registration with said bore, the devices being so related that the said arm, through the medium of said grooved collar, is mountable in the bore of said sleeve for angular adjustment or angularly fixed according to the positioning of the said collar.

2. An undercutter guide comprising in combination a shank having a head for attaching it to a log, a guide arm carrying a grooved roller, a stud having a transverse perforation in which said shank is slidably mounted and provided with screw threads on its outer end, a sleeve surrounding one end of said stud, in which said stud is seated and with relation to which the stud is rotatable, said sleeve being transversely perforated by a circular bore to receive said guide arm, said guide arm being of a generally circular outline to correspond with said bore but having a flattened face a collar on said sleeve intermediate said shank and said arm one edge of which is designed to engage said guide arm, said edge of said collar having two grooves therein for registration with said bore, said grooves being arranged to cross each other one being semi-circular and the other having a flat bottom for engagement with the flattened face of said guide arm.

1,231,212. ELECTROPNEUMATIC ORGAN. FREDRICK W. SMITH, North Tonawanda, N. Y. Filed Sept. 16, 1911. Serial No. 649,772. (Cl. 84—243.)

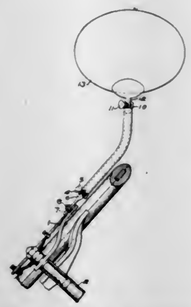


1. In a self-playing musical instrument, the combination with a tracker board having a row of note openings and, in addition thereto, controlling openings and a master opening, all located to be covered and uncovered by a music sheet, of means for controlling the playing of the musical instrument by the joint control of the master opening and controlling openings through simultaneous uncovering thereof.

13. In an electro-pneumatically controlled self-playing musical instrument having stops or sound controllers, the combination with a trackerboard having note openings, a plurality of controlling openings and a master opening, said note openings, controlling openings and master opening being located to be covered and uncovered by the same music sheet, of electrically controlled devices for operating said stops, pneumato-electric devices communicating with the controlling openings and with the master openings aforesaid and in turn controlled thereby, electric circuit connections controlled by and interposed between said pneumato-electric devices and said stop-controlling devices, electrically controlled means for operating said musical instrument, an electric switchboard for controlling said musical instrument operating means, electro-pneumatic means for operating the switchboard, pneumato-electic means adapted, under the control of the trackerboard, for controlling the operation of the switchboard operating means, and electric circuit connections for supplying current to the switch-board.

[Claims 2 to 12 and 14 not printed in the Gazette.]

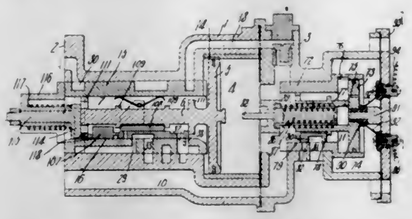
1,231,213. RAY-PROTECTOR. JOHN SMITH, Cambridge, Mass. Filed Feb. 2, 1915. Serial No. 5,800. (Cl. 21—148.)



1. A ray deflector comprising a support, a curvilinear substantially opaque disk of substantially uniform thickness throughout and having a plurality of unequal diameters, movable on the support, presenting normally to the operator a thin vertical edge, and presenting, as adjusted for use, first a disk whose longest diameter is substantially vertical, and subsequently a disk whose longest diameter is substantially horizontal, proportionate to the degree of adjustment of the disk.

2. A ray deflector comprising a hollow supporting member, a post movably and adjustably locked therein, means for locking the post to a steering post, a thin, opaque light-deflecting disk having a stem on its edge movably locked to the opposite end of said supporting member, said disk being curvilinear in outline and adapted to be positioned edge-wise to the operator's line of vision and thus rendered substantially invisible when in inoperative position, and adapted also to be positioned in a plane angular to the operator's line of vision as an operative position to present an elliptical light-deflecting area and dark zone of desired elliptical outline and proportion for deflecting light rays projected toward the operator both from front and the rear.

1,231,214. TRIPLE VALVE. JACOB RUSH SNYDER, Pittsburgh, Pa., assignor to Percy E. Donner, Pittsburgh, Pa. Filed June 10, 1914. Serial No. 844,276. (Cl. 188—15.)



1. In triple, distributing or control valve mechanism, the combination of the main movable abutment actuated by variations of train pipe pressure and effecting combinations between the train pipe and auxiliary reservoir and the brake cylinder and atmosphere, a train pipe vent valve arranged to vent the train pipe, a supplementary valve for controlling a communication from a source of pressure to an emergency brake cylinder, a movable abutment for actuating said supplementary valve, and connections from one side of said movable abutment to the vent valve for venting pressure from said movable abutment.

2. In triple, distributing or control valve mechanism, the combination of the main movable abutment actuated by variations of train pipe pressure and effecting combinations between the train pipe and auxiliary reservoir and the brake cylinder and atmosphere, a train pipe vent valve arranged to vent the train pipe, a supplementary valve for controlling a communication from a source of pressure to an emergency brake cylinder, a movable abutment for actuating said supplementary valve, connections from one side of said movable abutment to the vent valve for releasing pressure from said movable abutment, and a movable abutment actuated only upon sudden reductions of train pipe pressure and acting independently of the main valve mechanism for actuating said vent valve.

3. In a triple, distributing or control valve mechanism, the combination of the main movable abutment actuated by variations of train pipe pressure, and effecting combinations between the train pipe and auxiliary reservoir and the brake cylinder and atmosphere, a train pipe vent valve arranged to vent the train pipe, a supplementary valve for controlling a communication from a source of pressure to an emergency brake cylinder, a movable abutment for actuating said supplementary valve, connections from one side of said movable abutment to the vent valve for releasing pressure from said movable abutment, and ports controlled by the main valve mechanism for admitting pressure to said movable abutment to close said supplementary valve.

4. In triple, distributing or control valve mechanism, the combination of the main movable abutment actuated by variations of train pipe pressure and effecting combinations between the train pipe and auxiliary reservoir and the brake cylinder and atmosphere, a supplementary movable abutment open on one side to train pipe pressure and on the opposite side to an equal trapped pressure, equalizing connections between the two faces of said supplementary abutment arranged so that said movable abutment moves only on sudden reductions of train pipe pressure, and means controlled by said supplementary movable abutment and arranged to open communication from an additional source of pressure to an emergency brake cylinder independently of the main valve mechanism.

5. In triple, distributing or control valve mechanism, the combination of the main movable abutment actuated by variations of train pipe pressure and effecting combinations between the train pipe and auxiliary reservoir and the brake cylinder and atmosphere, a supplementary movable abutment open on one side to train pipe pressure and on the opposite side to an equal trapped pressure, equalizing connections between the two faces of said supplementary abutment arranged so that said movable abutment moves only on sudden reductions of train pipe pressure, and means controlled by said supplementary movable abutment and arranged to open communication from an additional source of pressure to an emergency brake cylinder independently of the main valve mechanism and to simultaneously vent the train pipe.

[Claims 6 to 1$ not printed in the Gazette.]

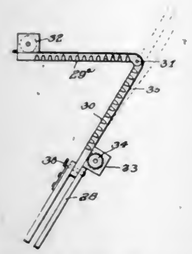
1,231,215. RAZOR. HARRISON D. STERRICK, Pittsburgh, Pa. Filed June 24, 1912. Serial No. 705,546. (Cl. 30—12.)

1. A razor comprising a flexible strip blade having a guiding bead throughout its length in combination with a frame adapted to retain the ends of the blade and to engage the guiding bead.

2. The combination of a razor mounting and a blade in the form of a thin flexible strip having a guiding bead along its middle portion, the mounting holding the blade under tension and engaging the guiding bead.

3. A safety razor comprising a thin flexible blade, means on the blade to guide it in position without holding its edges, and a housing inclosing the ends of the blade and holding a portion thereof in cutting position.

4. The combination with a razor blade comprising a thin flexible tape with a longitudinal guiding bead, of means to hold the tape under tension and to support it in rigid position, and means to coil the tape including a water-tight housing therefor and a supporting handle, substantially as described.



5. A razor comprising a mounting, a flexible tape blade passing around the mounting and having a guiding rib, combined with means to hold the blade on the mounting under tension.

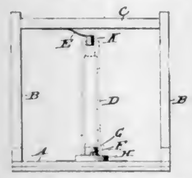
[Claim 6 not printed in the Gazette.]

1,231,216. CAR-SEAL. FREDERICK STRAHM, Lawrence, Kans. Filed Aug. 5, 1914. Serial No. 855,262. (Cl. 70—99.)



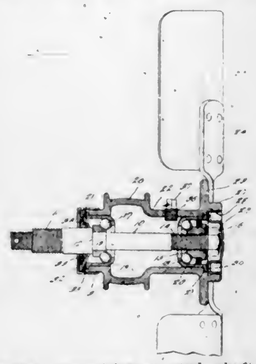
A car seal comprising a housing having a closed and an open end, inward projections formed on opposed faces of the housing adjacent its closed end, a ribbon of metal intermediately looped and having one of its ends bent to provide a plurality of thickness of material inserted within the housing and frictionally held between the projections against removal therefrom, a portion of said end within the housing having a tongue struck outwardly therefrom, and said end inwardly of the tongue being further bent to provide a plurality of thicknesses of material partially closing the open end of the housing, and the other end of the ribbon being provided with an opening and being insertible in the housing to lockingly engage the tongue within the opening.

1,231,217. AUTOMATIC BALL-BEARING BOBBIN-HOLDER. WILLIAM J. SULLIVAN, New Brookland, S. C. Filed Sept. 7, 1915. Serial No. 49,384. (Cl. 242—130.)



A bobbin holder comprising a base plate having an annular ball receiving groove, ball bearings in said groove, a bobbin supporting member rotatably mounted upon said ball bearings and having a cylindrical extension adapted to enter and position the base of a bobbin upon said member, said base plate having an annular extension surrounding and overlapping the outer edge of the bobbin supporting member to retain the same in position, and a key mounted upon said supporting member adapted to form a driving engagement between the bobbin and supporting member.

1,231,218. OIL-TIGHT BEARING. CARL G. SWENSON, Indianapolis, Ind., assignor to The Oakes Company, Indianapolis, Ind., a Corporation of Indiana. Filed Dec. 2, 1916. Serial No. 134,558. (Cl. 64—36.)



1. A bearing, comprising a stud shaft, ball cones mounted thereon, one of them having a screw-thread mounting on said stud shaft, a hollow rotatable casing surrounding said shaft and provided with a filling opening, pressed steel ball cups fitting in the ends of said casing and having outwardly projecting flanges bearing against faces on such casing, balls between said ball cones and ball cups, said casing at one end having an annular projection beyond and surrounding said flange, a pressed steel plug screw-threaded in said projection and acting against the ball cup in that end of the casing, said casing at the other end having a screw-threaded projection, a pressed steel cap having a screw-threaded mounting on said last-named projection and perforated to allow the passage of the stud shaft, and a pressed steel annulus within said cup, said annulus being partly conical, a packing between said cap and annulus and bearing against the shaft, said annulus acting against said ball cup in the adjacent end of said casing so that by the tightening of said cap the packing is compressed and the annulus and ball cup forced toward the end of the casing.

[Claims 2 to 4 not printed in the Gazette.]

1,231,219. SAFETY HAT-RETAINER. ANDRZEJ H SZUBSKI, Cleveland, Ohio. Filed Nov. 29, 1916. Serial No. 134,177. (Cl. 132—25.)

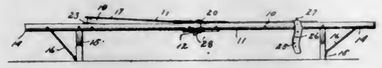


2. A hat retainer comprising oppositely positioned plates secured within a hat, said plates having central perforations therethrough, a spring-pressed hair-engaging pin pivoted upon each plate, an arcuate conduit connecting said plates and contacting the intervening portion of the hat crown and terminating at a point adjacent the perforations of the plates, rollers upon the plates adjacent the perforations, a pull cord for one of said pins extending over said rollers, through the perforations and the interme-

diate conduit and terminating exteriorly of the hat, a similar pull cord attached to the end of the other pin extending through the adjacently positioned perforations and terminating exteriorly of the hat, a plate exteriorly arranged upon the crown of the hat, and a tubular lever pivoted to the exterior plate and having both of the cords freely arranged therethrough.

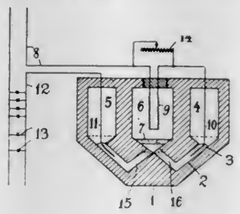
[Claim 1 not printed in the Gazette.]

1,231,220. FOLDING COT AND STRETCHER. AUGUST THORP, Saum, Minn., assignor of one-third to Olof L. Lindquist, Kelliher, Minn. Filed June 10, 1915. Serial No. 33,366. (Cl. 21—80.)



A folding stretcher and cot comprising a substantially rectangular frame including hingedly connected sections foldable one upon the other, the side members of said frame being extended beyond the ends thereof and forming handles, legs pivoted between the handles and foldable to lie in the plane thereof, a second frame arranged within the first frame and including an intermediate section fixed to one section of the first frame, and end sections hinged to the intermediate section for adjustment vertically within the first frame, one of the end sections being foldable upon the other end section, and the intermediate section, and a handle carried by the intermediate section by which the device may be transported.

1,231,221. ELECTRIC-CURRENT INTERRUPTER. KNUT TROSDAHL, Christiania, Norway. Filed May 9, 1917. Serial No. 167,438. (Cl. 175—275.)

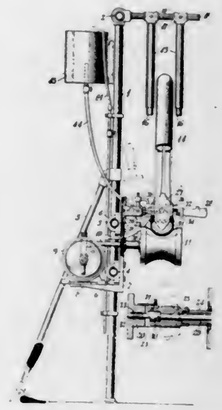


1. In an electric current interrupter three closed chambers filled with a gaseous medium, a channel connecting the lower ends of said chambers, a continuous body of mercury, forming part of the current circuit, located in the said connecting channel, and a resistance wire, heated by the electric current, located in the middle chamber, for the purpose of heating the gas in the same and effect interruption of the current by expansion of the said gas, when the current consumption has reached a certain limit.

2. In an electric current interrupter three closed chambers filled with a gaseous medium, a channel connecting the lower ends of said chambers, a continuous body of mercury, forming part of the current circuit, located in the said connecting channel, and a resistance wire, heated by the electric current, located in the middle chamber, for the purpose of heating the gas in the same and effect interruption of the current by expansion of the said gas, when the current consumption has reached a certain limit, the volume of said middle chamber being equal to the sum of the volumes of the two other chambers, for the purpose of making the apparatus independent of variations in the outside temperature.

3. In an electric current interrupter three closed chambers filled with a gaseous medium, a channel connecting the lower ends of said chambers, a continuous body of mercury, forming part of the current circuit, located in the said connecting channel, a resistance wire heated by the electric current, located in the middle chamber, for the purpose of heating the gas in the same and effect interruption of the current by expansion of the said gas, when the current consumption has reached a certain limit, and an adjustable resistance shunted on the circuit in parallel to the heating resistance for the purpose of regulating the apparatus.

1,231,222. SPRAYING-MACHINE. GUSTAVE A. URBACH, Pittsburgh, Pa. Filed Dec. 22, 1915. Serial No. 68,222. (Cl. 91—45.)

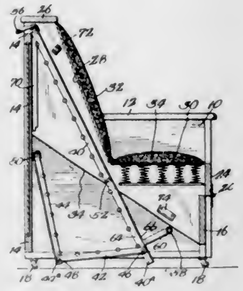


1. A tire-painting machine having in combination means for rotating the tire; means for progressively spreading the tire as it is rotated and means insertible between the separated edges for applying a liquid to the interior surfaces of the tire.

6. A spraying machine comprising a reservoir, a nozzle in communication with the reservoir, means for supplying fluid pressure to the nozzle, a valve for controlling the said supply, and means for admitting fluid pressure to the reservoir both when opening and closing the said valve.

[Claims 2 to 5 and 7 to 14 not printed in the Gazette.]

1,231,223. DAVENPORT-BED. LOUIS J. VOELZ, Kenosha, Wis. Filed July 31, 1916. Serial No. 112,212. (Cl. 5—48.)



1. In a device of the class described, the combination with a rectangular, hollow main frame, a seat carrying frame pivotally mounted on the front of the main frame and of such a size as to leave a hollow space in the main frame, a bed spring device mounted inside of said hollow space in the main frame having oppositely disposed side members, each side member of the bed spring being made of three separate parts pivotally connected together, and one of said parts of each side member being pivoted intermediate between its ends to the seat frame member, the whole so arranged that when the seat member is swung outward from the main frame the spring bed is extended for use.



2. In a device of the class described, the combination with a rectangular, hollow main frame, a seat carrying frame pivotally mounted on the front of the main frame and of such a size as to leave a hollow space in the main frame, a bed spring device mounted inside of said hollow space in the main frame having oppositely disposed side members, each side member of the bed spring being made of three separate parts pivotally connected together, and one of said parts of each side member being pivoted intermediate between its ends to the seat frame member, the whole so arranged that when the seat member is swung outward from the main frame the spring bed is extended for use, stop devices on the seat frame preventing rotation of the adjacent bed frame side members in one direction when the bed is extended, and brace devices on other portions of said bed frame side members detachably connectible with the seat frame preventing rotation of said member in the opposite direction.

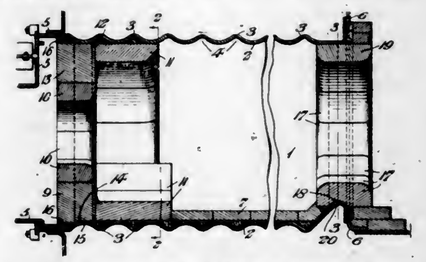
3. In a device of the class described, the combination with a rectangular, hollow main frame, a seat carrying frame pivotally mounted on the front of the main frame and of such a size as to leave a hollow space in the main frame, a bed spring device mounted inside of said hollow space in the main frame having oppositely disposed side members, each side member of the bed spring being made of three separate parts pivotally connected together, and one of said parts of each side member being pivoted intermediate between its ends to the seat frame member, the whole so arranged that when the seat member is swung outward from the main frame the spring bed is extended for use, stop devices on the seat frame preventing rotation of the adjacent bed frame side members in one direction when the bed is extended, and brace devices intervening between other portions of said bed frame side members and said seat frame and each having separable engagement with one of the elements between which it is interposed.

4. In a device of the class described, the combination with a main frame; of a seat frame mounted to swing upon the main frame and carrying back and seat portions that are substantially relatively fixed with respect to each other and with respect to the seat frame, the seat frame being arranged to leave a hollow space between it and the main frame; and a bed spring device mounted within said space and formed in a plurality of connected panels, the head end panel being swingingly connected with the main frame while the foot or lower end panel is swingingly connected, at a place between the ends of this end panel, to the seat frame.

5. In a device of the class described, the combination with a main frame; of a seat frame mounted to swing upon the main frame, the seat frame being arranged to leave a hollow space between it and the main frame; and a bed spring device mounted within said space and formed in a plurality of connected panels, the head end panel being swingingly connected with the main frame while the foot or lower end panel is swingingly connected, at a place between the ends of this end panel, to the seat frame.

1,231,224. ARCH CONSTRUCTION FOR BOILERS. JAMES WARNER, Philadelphia, Pa. Filed July 19, 1916. Serial No. 110,171. (Cl. 158—1.)

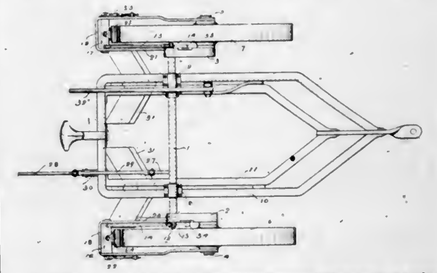
3. An arch construction for boilers, which comprises—an open-ended boiler or combustion chamber formed with an internal crest, rib or bead near its outer open end,—a group of segmental tiles externally grooved to register or match with the crest, rib or bead and fitted within the open end of the boiler,—a key tile to lock said group of segmental tiles in place,—an inner throat ring composed



of segmental tiles within the group of grooved segmental tiles,—and an inner arch of segmental tiles.

[Claims 1, 2, 4, and 5 not printed in the Gazette.]

1,231,225. PLOW. EVERETT WHEELER, Van Nuys, Cal. Filed July 25, 1916. Serial No. 111,249. (Cl. 97—54.)



1. In a plow, a frame, a fulcrum journal thereon, cranks on said journal, having trunnions, wheels on said trunnions, yokes on said trunnions and rigidly connected with said cranks, brake shoes adjustably mounted in said yokes, means to operate said brake shoes to cause same to engage the wheels and lift the frame any desired height, and means automatically operable to hold said frame in lifted position when the brake shoes are removed, and manually operable to cause said frame to drop from lifted position.

2. In a plow, a frame, a fulcrum journal thereon having cranks, trunnions on said cranks, wheels on said trunnions, yokes straddling said wheels and mounted on said trunnions and rigidly connected with said cranks, brake beams carried by said yokes, brakes on said beams, a fulcrum shaft, means operable by the movement of said fulcrum shaft to operate said brake beams, means to operate said fulcrum shaft to cause said shoes to engage said wheels and lift said frame a desired height, and means to hold said frame in whatever position it has been lifted.

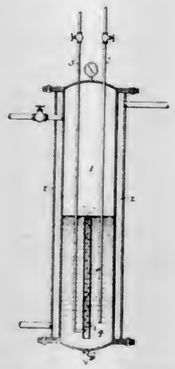
3. In a plow, a frame having a fulcrum journal thereon, cranks on said journal, trunnions on said cranks, wheels on said trunnions, yokes straddling said wheels and rigidly connected with said trunnions and cranks, beams operable in said yokes and adjustable means secured to said yokes and to said beams, operating means secured to said beams, brake shoes on said beams, a fulcrum shaft, means connecting the brake beam operating means with said fulcrum shaft, means to operate said fulcrum shaft to cause the brake shoes to be applied and lift the frame to any desired height, and means to lock the frame at any desired height.

4. In a plow, a fulcrum journal, a frame secured thereto, cranks on said journal having trunnions, wheels on said trunnions, yokes straddling said wheels and rigidly secured to said cranks and trunnions, beams adjustably

mounted in said yokes, brakes on said beams, a fulcrum shaft, means connecting said brake beams and said fulcrum shaft, means to operate said fulcrum shaft to cause the application of said brakes to the wheels and the elevation of said frame to any desired height, a toothed segment on said fulcrum journal and a means coöperating with said toothed segment to lock said frame in any position.

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1,231,226. METHOD OF MANUFACTURING PHOSGENE. NORMAN L. G. WHITEHOUSE, Pittsburgh, Pa. Filed July 26, 1916. Serial No. 111,408. (Cl. 23—30.)



1. An improved method of manufacturing phosgene (carbonyl chlorid), said process consisting in subjecting carbon monoxid gas to the action of chlorin in a liquid state.

2. The process herein described of making phosgene (carbonyl chlorid) said process consisting in introducing carbon monoxid gas to the bottom of a vessel containing liquid chlorin and allowing the gas to bubble up through the liquid chlorin until no more carbon monoxid is absorbed.

3. The process herein described of making phosgene (carbonyl chlorid), said process consisting in introducing carbon monoxid gas into a body of liquid chlorin at a temperature below —34 degrees C.

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1,231,227. RIFLE-CLEANING CARTRIDGE. LISLE C. WILLIAMS, Helena, Mont. Filed Nov. 20, 1916. Serial No. 132,381. (Cl. 102—31.)

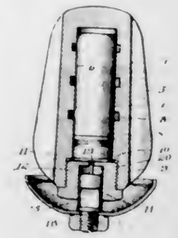


The combination with a cartridge shell, of a gun barrel cleaning projectile located in the shell and including a tapering outer member, an inner disk member disposed in spaced relation to the rear of the tapering member and arranged to receive the explosion of the charge of powder in the shell, a connecting and spacing stem having enlarged ends embedded centrally in the tapering member and in the disk member, and an expansible fabric disposed around the stem and between the tapering member and the disk member.

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1,231,228. GRENADE. HERBERT C. WILLIAMSON, Chicago, Ill. Filed Mar. 2, 1916. Serial No. 81,591. (Cl. 102—29.)

1. In a hand grenade, the combination of a body comprising a cylinder closed at one end and having a threaded open end, the inner wall of the cylinder being provided with one or more transverse grooves, the outer wall of the cylinder being provided with a plurality of longitudinal ribs which taper outwardly from the closed end toward the open end, a shell fitting in said cylinder, a threaded plug in the open end for engagement with said shell, a firing pin mounted in said plug, and a cup-shaped disk secured to said pin and embracing the adjacent end of the body portion, said pin and disk being of sufficient weight so that when the grenade is thrown, the cartridge will be expolded, even if the body portion strikes in advance of the disk.

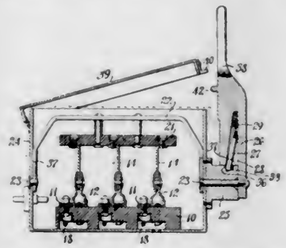


3. In a device of the character set forth, the combination of a body portion having exterior projections and heavier at one end than the other, a longitudinal bore extending in from the heavier end, annular grooves along said bore, a threaded recess in said heavier end having a shoulder in the bottom thereof, a cartridge fitting in said central bore, with its flange resting against said shoulder, a threaded plug for said recess, adapted to engage with the end of the cartridge, a firing pin slidably mounted in said plug, and a disk secured to said firing pin.

[Claims 2 and 4 not printed in the Gazette.]

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1,231,229. MOTOR-STARTING SWITCH. CARL ABEL AHLSTROM, New Britain, Conn., assignor to The Trumbull Electric Manufacturing Company, Plainville, Conn., a Corporation of Connecticut. Filed Apr. 20, 1916. Serial No. 92,434. (Cl. 200—2.)



1. The combination in a switch of the character described having a movable switch member and a handle, of a stationary member having a central stop shoulder with an incline leading to the upper edge thereof and a guide passage at one side thereof, an incline leading from said shoulder laterally to said guide passage, the bottom of said guide passage increasing in height toward the base of the incline leading to the upper part of said stop shoulder and an inclined shoulder leading from the upper part of said guide passage to the bottom of said incline and a longitudinally and laterally movable plunger movable with said switch handle and coöperating with said shoulders and said inclines.

2. In a switch of the character described, a stationary member having two guide passages meeting at opposite ends and spaced apart adjacent their centers, with inclined connecting faces at the ends and a stop shoulder in the



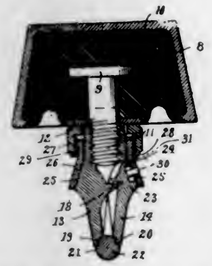
middle portion of one of said passages and a movable member carrying a longitudinally and laterally movable plunger operating in said passages substantially as described and for the purpose specified.

5. In a switch of the character described, an inclosure, an operating handle carried thereby, coöperating elements holding said operating handle in the open circuit position and permitting said handle to be normally moved in one direction only from said open position, means for moving one of the coöperating elements after the operating handle has been moved from the open circuit position so as to permit the movement of the operating handle in a contrary direction sufficiently to close the circuit at the opposite end of the throw of the operating handle, a locking projection carried by the handle, a cover hinged to said inclosure and having two projecting shoulders spaced apart from each other and adapted to coöperate with the projection on said handle to prevent opening said cover except when the switch is in the off or open circuit position.

[Claims 3, 4, and 6 not printed in the Gazette.]

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1,231,230. TROLLEY-WIRE SUPPORT. CLETUS N. ALLERDING, Mansfield, Ohio. Filed Oct. 30, 1915. Serial No. 58,800. (Cl. 191—42.)



1. In a trolley wire supporting device, the combination of a support, a jaw fixed with reference to the support, a housing adjustably mounted upon the jaw, a nut adjustably attached to the housing and against the support, a movable jaw mounted within the housing and operated by the latter to hold a trolley wire with reference to the support.

6. A trolley wire support comprising a support, a jaw fixed with reference to the support and having a shank for attachment to the support and a shoulder upon the inner side of the jaw, a companion jaw having means to engage the shoulder to support the jaw, the two said jaws forming an annular beveled shoulder, a conical collar encircling the said shoulder to hold the jaws in position, and a nut threadably attached to the collar and seated against the support for adjusting the collar and jaws with reference to the support.

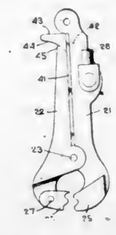
9. In a trolley wire suspension the combination of a support, a pair of jaws adjustably contained within a housing and attached to the support, and an operating nut threadably attached to the housing to operate against the support with reference to the housing and to clamp the jaws against the trolley wire.

[Claims 2 to 5, 7, and 8 not printed in the Gazette.]

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1,231,231. CLOTH-TESTING MACHINE. GEORGE A. AYER, Easthampton, Mass., assignor to West Boylston Manufacturing Co., Easthampton, Mass., a Corporation of Massachusetts. Filed Jan. 6, 1915. Serial No. 749. (Cl. 24—251.)

4. In a device of the class described, a clamping member comprising a fixed and a relatively movable jaw, means for closing said jaws including a rack slidably mounted upon the fixed jaw and having a cam engaging the movable jaw, a pinion engaging said rack and having a rigidly attached shaft mounted in bearings on said fixed jaw, a handle rotatably mounted upon said shaft and means carried by said handle adapted operatively but detachably to engage said shaft.



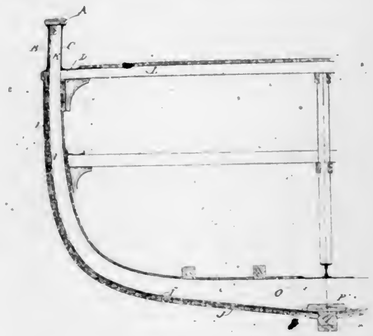
5. In a cloth testing machine, a clamping member, comprising a fixed jaw and a movable jaw, said jaws having opposed gripping means at one end, said movable jaw being pivotally secured to said fixed jaw, a rack slidably mounted upon said fixed jaw adjacent said movable jaw, means operable by said rack to actuate the latter and a pinion carried by said fixed jaw adapted to reciprocate said rack whereby said movable jaw may be actuated about the pivot and the gripping means retentively closed.

6. In a cloth testing machine, a clamping member, comprising a fixed jaw and a movable jaw pivotally secured to the fixed jaw, said jaws having opposed gripping means at one end, a rack adapted to reciprocate between said jaws, a pinion adapted to actuate said rack, means for manually actuating said pinion, a cam surface on the rack adapted to engage the upper face of said movable jaw whereby said jaw may be actuated and the gripping means retentively closed.

[Claims 1 to 3 and 7 not printed in the Gazette.]

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1,231,232. SHIP-BUILDING. FRED A. BALLIN, Portland, Oreg. Filed Mar. 17, 1916. Serial No. 84,945. (Cl. 114—82.)



1. In a wooden ship, a metal bulwark plate above the main deck line that forms a member of a top chord of a truss, diagonally disposed planking and wooden frame sections that form the sheer members of the said truss and means for joining the several parts together with the bulwark plates exposed.

4. In a wooden ship in which is included wooden frames and wooden cross frames and wooden diagonal planking, the combination with a metal girder closely enveloping and gripping the upper ends of the diagonal planking and the wooden frames, and means for taking up the shrinkage of the wood and maintaining permanent and efficient contact and adhesion between the wood and the metal elements, as set forth.

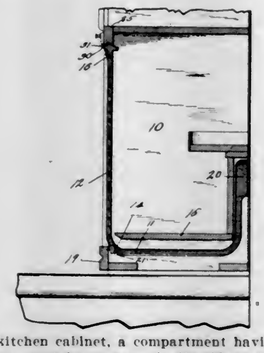
5. In a wooden ship having the top timbers of the wooden frames projecting above the main deck and a diagonal planking or strapping on the outside of the frames in combination with a metal girder, rigidly connected to the sides and top of these top timbers and a horizontal deck stringer plate D, connected to the inner vertical girder plate C by an angle bar $E^3$, and fastened to the top of the wooden deck beams L as and for the purpose described.

7. In a wooden ship built in the usual manner in which metal box girders are efficiently attached to the top of the wooden top timbers of the frames and a diagonal planking above the main deck, and these girders having attached to them at right angles metal deck stringers, tied together by deck straps and deck beams, so that the metal box girders form the tension and compression chords to sustain both the longitudinal and the transverse strains to which the ship may be subjected in the manner and for the purpose described.

[Claims 2, 3, 6, 8, and 9 not printed in the Gazette.]

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1,231,233. CABINET. HENRY W. BERTRAM, Frankfort, Ind., assignor to McDougall Company, Frankfort, Ind., a Corporation of Indiana. Filed Oct. 11, 1916. Serial No. 124,940. (Cl. 45—16.)



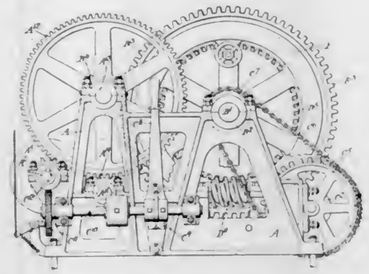
1. In a kitchen cabinet, a compartment having a vertical open face, curtain runways in its sides adjacent said open face and extended laterally beneath its bottom platform, a finish bar arranged at the lower end of the open face of the compartment below the bottom platform and beyond the runways, a slatted flexible curtain mounted in said runways and formed to close the open face of the compartment, said slatted curtain having a weighted lower slat formed to swing forwardly and outwardly so as to contact with the finish bar when the curtain is in closed position, the main slats of the curtain and the runways being so formed as to keep the slats free from said finish bar.

2. In a kitchen cabinet, a compartment having a vertical open face, curtain runways in its sides adjacent said open face and extended laterally beneath its bottom platform, a stationary bar arranged across the upper end of the open face of the compartment and provided with a groove in its under face, the upper slat of the flexible curtain having its free edge materially thicker than the thickness of the main slats and formed to produce an extension of the bottom platform when the curtain is in open position, the forward upper corner and upper edge of said slat and the groove in the upper fixed bar being formed to mate with each other and the upper fixed bar forming a backing to prevent the inward movement of the upper slat of the curtain when the curtain is closed, and coöperating fastening devices carried by the upper slat of the curtain and the fixed bar to hold the curtain in closed position.

3. In a kitchen cabinet, a compartment having a vertical open face, curtain runways in its sides adjacent said open face and extended laterally beneath its bottom platform, a finish bar arranged at the lower end of the open face of the compartment below the bottom platform and beyond the runways, the said finish bar being readily removable, a slatted curtain mounted in said runways and freely slidable through the throat between the bottom platform and the finish bar except the final slat of said curtain, said final slat having a widened free edge capable of coöperating with the bottom platform to form an extension thereof when the curtain is in open position, the said final slat being movable with the curtain beneath the bottom platform when the finish bar is removed from the structure.

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1,231,234. HOIST MECHANISM. CARL F. BLEDSOE, Chicago, Ill., assignor to Ogle Construction Company, Chicago, Ill., a Corporation of Illinois. Filed May 18, 1916. Serial No. 98,272. (Cl. 74—36.)



1. The combination with a driven member and driving means therefor, of a worm wheel mounted for rotation with the driven member, and a worm in mesh with the worm wheel and driven by the driving means, the driving connection between the driving means and the driven member being altogether separate from the worm.

4. The combination with a driven member and driving means therefor, of a driving connection between them, two interlocking self locking members, one driven by the movement of the driving member, the other driven by the movement of the driven member, their relation being such that a movement of the driven member alone will cause the two self locking members to come together and lock the driven member against movement.

5. The combination with a driven member, a driving member therefor, and a connection between them, of means operating partially in response to the movement of the driven member and partially in response to the movement of the driving member, for locking the driven member against movement when it is disconnected from the driving member.

8. The combination with a driven member, a driving member therefor, and a connection between them, of a worm wheel mounted for rotation with the driven member, a worm in mesh with the worm wheel, means responsive to the operation of the driving member for driving the worm in unison with the movement of the worm wheel, with the worm and wheel out of contact one with another, and a driving connection between the driven member and the worm comprising a portion of the driving and driven members, there being sufficient back-lash in such connection to permit the worm wheel to come into operative stopping engagement with the worm when the driven member rotates independent of the driving member before the worm itself is rotated.

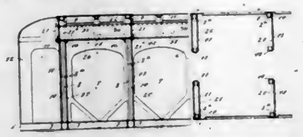
9. The combination with a driven member and driving means therefor, of means for connecting and disconnecting the driving and driven members, an automatic floating stop in permanent operative relation with respect to the driven member and means for driving it synchronously with the driving of the driven member, said stop being adapted to instantly go into operation when the driven member commences rotation independent of the driving means.

[Claims 2, 3, 6, and 7 not printed in the Gazette.]



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1,231,235. RAILWAY-CAR CONSTRUCTION. FRANCIS M. BRINCKERHOFF, Englewood, N. J., assignor to Lewis B. Stillwell, Lakewood, N. J., and Henry S. Putnam, New York, N. Y. Filed Aug. 20, 1914. Serial No. 857,619. (Cl. 105—201.)



1. A car structure comprising a floor, side walls, end walls, a roof, and a rigid plate connecting the side walls at the end of the car and at a point adjacent the juncture of the roof and the side walls, said plate projecting from an end wall lengthwise of the car within the car body.

2. A car structure comprising a floor, side walls, end walls, a roof, and a horizontally disposed plate connecting the side walls at the end of the car and at a point adjacent the juncture of the roof and the side walls, said plate projecting lengthwise of the car within the car body, and means for bracing said plate at a point between the side walls.

3. A car structure comprising a floor, side walls, end walls, a roof, a horizontally disposed plate connecting the side walls at the end of the car and at a point adjacent the juncture of the roof and the side walls, and means for bracing said plate at a point between the side walls.

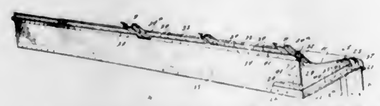
4. A car structure comprising a floor, side walls, end walls, a roof, a horizontally disposed plate connecting the side walls at the end of the car and at a point adjacent the juncture of the roof and the side walls, and columns supporting and bracing said plate at points between the side walls.

5. A car structure comprising a floor, side walls, end walls and a roof, end columns and intermediate columns on opposite sides of the median line of the car, means for connecting said columns to the said side walls, and a rigid member connecting said end columns and intermediate columns to resist spreading of the latter both lengthwise and transversely of the car.

[Claims 6 to 19 not printed in the Gazette.]

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1,231,236. RAILWAY-CAR CONSTRUCTION. FRANCIS M. BRINCKERHOFF, Englewood, and LEWIS B. STILLWELL, Lakewood, N. J., assignors to said Stillwell and Henry S. Putnam, New York, N. Y. Filed Aug. 20, 1914. Serial No. 857,660. Renewed May 23, 1917. Serial No. 170,565. (Cl. 105—201.)



1. A car structure comprising a floor, side walls, end walls, a roof structure including roof sheathing, angularly disposed members beneath the roof structure, said members being connected to each other and to the roof structure and to a side wall and constituting a girder member extending longitudinally of the car at the roof portion, said girder member being coöperable with the end walls to resist collapse of said end walls.

2. In a car structure, a floor, end walls, side walls, and a roof structure including carlines, and a roof sheathing, vertically and horizontally disposed plates beneath the carlines, said plates being connected to each other along one edge and at their other edges to the roof structure, and a side wall respectively, said plates and roof sheathing forming a girder extending longitudinally of the car and coöperating with the end walls to resist impact shocks on said end walls.

3. A car structure comprising a floor, side walls, end walls, a roof structure including roof sheathing and a deck structure, and a hollow member extending longitudinally of the car at the roof portion and adapted to resist collapse of the end walls, the wall of said member being composed in part of the roof sheathing and the deck structure.

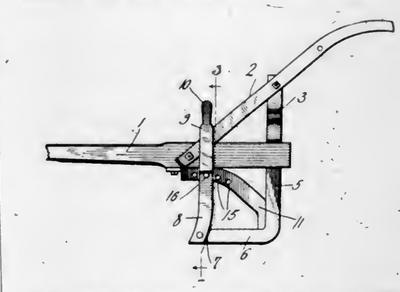
4. A car structure comprising a floor, side walls, end walls, a roof structure including roof sheathing, a deck structure composed of angularly disposed web members, and a member extending longitudinally of the car at the roof portion and coöperable with the end walls to resist collapse of the said end walls, said member including the roof sheathing and the angularly disposed web members of the deck structure.

5. A car structure comprising a floor, side walls, end walls, a roof structure including roof sheathing and a deck structure composed of vertical and longitudinal web members, and a member extending longitudinally of the car at the roof portion and coöperable with the end walls to resist collapse of the said end walls, said member including the roof sheathing, and the said vertical and horizontal web members of the deck structure.

[Claims 6 to 12 not printed in the Gazette.]

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1,231,237. PLOW. CHARLES J. CADDELL, Maxton, N. C., assignor of one-half to Jasper P. Wiggins, Maxton, N. C. Filed Oct. 21, 1916. Serial No. 126,946. (Cl. 97—26.)



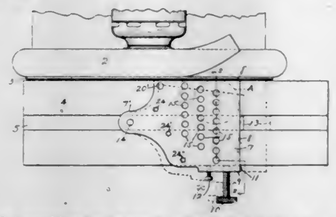
In a plow, the combination with a beam, handles extending therefrom and means for connecting the handles to the rear portion of the beam, of a leg below the beam, a threaded stem projecting therefrom and through the beam and connecting means, means engaging the stem for holding the parts assembled, a foot extending forwardly from the leg, a standard pivotally connected to the foot, a lever integral with the standard and extending upwardly beyond the beam, a brace connecting the leg and beam, and coöperating means upon the brace and standard for holding the standard against movement when adjusted to a predetermined position.

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1,231,238. GAGE. RAY L. CARTER, Syracuse, N. Y., assignor of one-half to Louis O. Buchholz, Syracuse, N. Y. Filed Oct. 4, 1916. Serial No. 123,624. (Cl. 51—12.)

1. In a gage for disk grinders, the combination with the work table, of a substantially flat perforated body pivotally mounted upon said work table adjacent and adapted to be rotated toward and away from the grinding disk, and having a depending lug, an adjusting screw threaded in said lug, and a set screw for maintaining the adjustment of said body, the edge of the table adjacent said lug being in the path of movement of the ends of said screws and engaged thereby when the gage body is moved toward the grinding disk.

2. In a gage for disk grinders, the combination with the work table having a longitudinal groove, of a substantially flat perforated body having a depending lug, a guide-bar slidable in said groove, said bar pivoted to the underside of the body upon which said body is rotatable, and means carried by said lug for adjusting the body on the said guide bar.



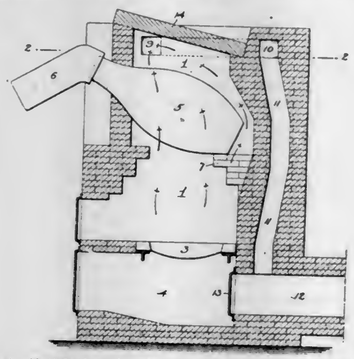
3. In combination with a work table having a longitudinal groove, a gage, including a body having a plurality of perforations to receive a work-centering part, a bar upon which said body is pivoted, said bar slidable in the groove of the work table, means for adjusting said body relatively to said bar, and means for maintaining the adjustment of the said parts.

4. In combination with a work table having a longitudinal groove, a gage, including a substantially flat body having work-centering perforations arranged in staggered rows and having a depending lug supporting a number of adjusting screws which engage one edge of the table when said body is moved toward the grinding disk, and a guide-bar pivoted to the underside of said body upon which said body is rotatable for gaging work of different size and shape, the said bar disposed in the groove of said work table.

5. The combination with the work table, of a duplicating gage, including a guide-bar disposed in a groove in said work table, a body having perforations to receive work-centering parts, said body pivoted to one end of said guide-bar and resting upon said work table adapted to be rotated horizontally for gaging work of different size and shape, and means for adjusting and for maintaining the adjustment of said body relatively to said guide-bar.

[Claims 6 and 7 not printed in the Gazette.]

1,231,239. METAL-DISTILLATION FURNACE. EDWARD E. CHERRY, Trenton, N. J., assignor of one-half to Max Movshovitz, Trenton, N. J. Filed Mar. 30, 1917. Serial No. 158,617. (Cl. 266—19.)



1. A distillation furnace having front, rear and side walls, and an exhaust flue formed within the upper portion of one of said side walls, said exhaust flue being in communication with the combustion chamber of the furnace at a point adjacent to the front wall thereof.

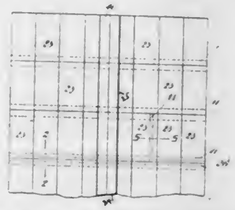
2. A distillation furnace having front, rear and side walls, and exhaust flues formed within the upper portions of said side walls, each of said exhaust flues being in communication with the combustion chamber of the furnace at a point adjacent to the front wall thereof.

3. A distillation furnace having front, rear and side walls, and exhaust flues formed within the upper portions of said side walls, said exhaust flues being in communication with the combustion chamber of the furnace at their forward ends and being in communication at their rearward ends with each other and with a descending flue formed within the rear wall of the furnace.

4. A distillation furnace having front, rear and side walls, an inclined retort mounted within the combustion chamber of the furnace, a roof on said combustion chamber, said roof being inclined substantially in accordance with the inclination of the retort, and exhaust flues in the side walls, each of said flues being in communication with the combustion chamber at a point adjacent the front wall and immediately below the roof.

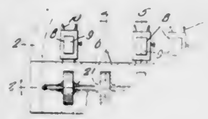
5. A distillation furnace having front, rear and side walls, an inclined retort mounted within the combustion chamber of the furnace, a roof on said combustion chamber, said roof being inclined substantially in accordance with the inclination of the retort, the upper portion of the rear wall being inclined forwardly, and exhaust flues in the side walls, each of said flues being in communication with the combustion chamber at a point adjacent the front wall and immediately below the roof.

1,231,240. REINFORCED-CONCRETE BUILDING CONSTRUCTION. OBERLIN S. CLARK, North Weymouth, Mass. Filed Nov. 11, 1916. Serial No. 130,906. (Cl. 108—12.)



A reinforced concrete construction, comprising in combination a plurality of roof slabs, extending lengthwise of the roof the meeting edges of said slabs being rabbeted and the lower portion thereof having a groove extending throughout the length of the slab, and lengthwise of the roof and roof beams supporting said slabs, the upper edge of each beam having a longitudinal groove at right angles to the roof-slab grooves, said roof-slab grooves communicating with the grooves in the roof beams.

1,231,241. CULTIVATOR-BEAM. RAY C. COWLEY, Venice, Utah. Filed Aug. 2, 1916. Serial No. 112,774. (Cl. 97—10.)



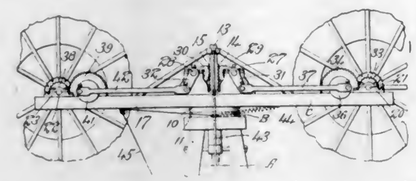
1. A cultivator beam consisting of upper and lower bars, latches slidably associated with the beam, arms engageable between said bars and detachably engaged by the latches, and standards adjustably connected with certain ends of said arms.

2. A cultivator beam, comprising upper and lower bars, the lower bar having its longitudinal edges provided with



spaced vertical uprights, arms removably engaged between the standards and upper and lower bars, a guide bar supported longitudinally of the bar, latches slidably and yieldably associated with the guide bar, said beam having a longitudinal slot formed in its upper bar, said latches being slidably engaged in the slots and detachably engaged with the arms, said arms having sockets on certain of their ends for adjustably supporting the standards.

1,231,242. WINDMILL. JAMES S. DOAK, Deming, N. Mex. Filed May 23, 1916. Serial No. 99,339. (Cl. 170—38.)



1. In a windmill structure, the combination of a tower, a frame rotatably mounted on said tower, a windmill rod mounted for reciprocation in the tower, oppositely disposed racks on said rod at the upper end of the latter, shafts rotatably mounted on the frame on either side of the rod, gears fixed on said shafts respectively and meshing with respective racks, a pair of wind-wheels mounted on the frame, and connections between said wheels and respective shafts whereby the rotation of the wheels in opposite directions will oscillate said gears to reciprocate the rod.

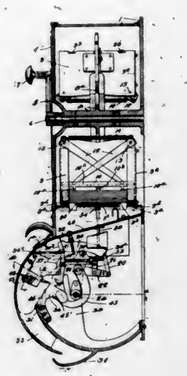
2. In a windmill structure, the combination of a tower, a frame rotatably mounted on said tower, a windmill rod mounted for reciprocation in the tower, oppositely disposed racks on said rod at the upper end of the latter, shafts rotatably mounted on the frame on either side of the rod, gears fixed on said shafts respectively and meshing with respective racks, arms fixed on said shafts respectively, a pair of disks rotatably mounted on said frame on either side of the rod, pitmen connected to said disks eccentrically of the latter respectively and to respective arms, a pair of wind-wheels mounted on said frame, and connections between said wind-wheels and respective disks.

1,231,243. BLADE-VENDING MACHINE. ARTHUR H. DU GRENIER and JAMES H. MCPHERSON, Haverhill, Mass. Filed Apr. 26, 1916. Serial No. 93,790. (Cl. 194—88.)

1. A vending-machine having a coin-entrance passage, a coin-rejecting passage and a coin-receiving passage leading therefrom, a coin-tester normally arranged to close communication between said entrance and said rejecting-passages, and tiltable by the gravity of a coin of predetermined weight to deliver the coin to said receiving-passage, and manually-controlled means to move said coin-tester bodily to one side of its normal position to open communication between said entrance and rejecting-pasages.

2. A vending-machine having a coin-entrance passage, a coin-rejecting passage and a coin-receiving passage leading therefrom, a coin-tester normally arranged to close communication between said entrance and said rejecting-passages, and tiltable in one direction by the gravity of a coin of predetermined weight, to deliver the coin to said receiving-passage, and manually-controlled means for moving said coin-tester in a different direction to open communication to said rejecting passage.

3. A vending-machine having a coin-entrance passage, a coin-rejecting passage and a coin-receiving passage leading therefrom, a pivotally supported coin-tester normally arranged to close communication between said entrance and rejecting-passages and adapted to be tilted by the gravity of a coin of predetermined weight, to deliver the coin to said receiving-passage, manually-controlled means, and means, operated by said means, on operative movement thereof, for moving said coin-tester to open communication between said entrance and rejecting-passages.

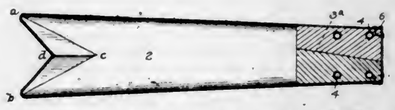


4. A vending machine having a coin-entrance passage, a coin-rejecting passage, and a coin-receiving passage leading therefrom, a pivotally-supported coin-tester normally supported to close communication between said entrance and rejecting-passages, and adapted to be tilted by the gravity of a coin of predetermined weight to deliver the coin to said receiving-passage, manually-controlled means, and means, operated by said means, on operative movement thereof, for moving said coin-tester transversely of the direction in which it is adapted to tilt, to open communication between said entrance and rejecting-passages.

5. A vending-machine having a coin-entrance passage, a coin-rejecting passage, and a coin-receiving passage leading therefrom, a support having a coin-tester pivotally mounted thereon and arranged normally to close communication between said entrance and said rejecting-passages, and to be tilted by the gravity of a coin of predetermined weight, to deliver the coin to said receiving-passage, and means to move said support to carry said coin-tester bodily to a position in which free communication between said entrance and rejecting-passages is permitted.

[Claims 6 to 14 not printed in the Gazette.]

1,231,244. SEMAPHORE-ARM. WILLIAM A. DUNLAP, Pittsburgh, Pa. Filed Aug. 5, 1915. Serial No. 43,789. (Cl. 246—15.)



1. A semaphore arm whose opaque, light-reflecting, signal-giving surface is in its longitudinal extent interrupted and disposed at different angles to the sight of the observer.

2. A semaphore arm of lenticular cross section throughout its medial portion and provided at its outer end with opposite oblique plane surfaces.

3. A semaphore arm composed of enameled metal plates inclosing a filler of elastic material and provided with bolt holes extending through both plates and filler.

4. A semaphore arm composed of enameled metal plates inclosing a filler of elastic material and provided with

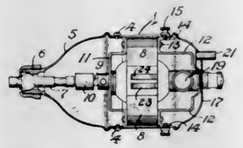
bolt holes extending through both plates and filler and bushings of packing material extending through said bolt holes and overlapping the outer surfaces of said plates.

5. A semaphore arm composed of a plurality of plates shaped to girder form, such girder form being modified at the inner end of the arm and the said plates there extending in parallelism, and a filler block introduced between said plates and extending from the portion of the arm in which the plates are parallel and into the portion in which the plates are shaped to girder form.

[Claim 6 not printed in the Gazette.]

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1,231,245. MOUNTING FOR ELECTRIC VIBRATORS. CHARLES ENDORF, Jr., Chicago, Ill., assignor to Lindstrom, Smith Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 13, 1914. Serial No. 831,407. (Cl. 172—36.)



1. In a device of the class described a casing, a motor insertible therein, caps to fit over the ends of said casing to inclose the motor therewithin, extended flanges on said motor, screws engaging through one of said caps and said casing to releasably secure the same together, and thumb screws engaging through the other one of said caps and said casing and into said flanges to releasably connect the device in assembled relation.

2. In a device of the class described a casing, a cap therefor, a motor slidable in the casing, resilient electrical contacts to permit ready removal or insertion of the motor, said cap and casing having slots therein adapted to register with one another, and means engaging therethrough and into the motor releasably holding said cap and casing engaged with the motor rigidly mounted therewithin.

3. In a device of the class described a casing, a cap adapted to fit over one end thereof, said casing and cap having slots adapted to register with one another, another cap removably secured on the other end of said casing, a projection forming a part of said motor, and means engaging in said projection and through said registering slots of said first mentioned cap and casing to hold said cap, casing and motor rigidly and releasably connected with one another.

4. In a device of the class described, a slotted casing, an extension integrally formed thereon adapted to receive a handle, a motor slidably mounted in the casing, a cap adapted to fit between said motor and casing, said cap having slots therein adapted to register with the slots in said casing, and means engaging said slots and said motor for rigidly, but releasably, holding said cap, motor and casing connected to one another.

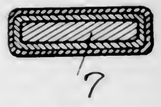
5. In a device of the class described a casing, a motor removably mounted therein, bearing brackets forming a part of said motor, an extended flange on said bearing brackets, screws threading therein and through slots in said casing to hold the motor within the casing, and a cap provided with slots to register with said slots in the casing adapted to be retained in position by said screws.

[Claim 6 not printed in the Gazette.]

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1,231,246. HOLDER FOR CORSET-STEELS. SIMON FLORSHEIM and BENJAMIN F. OREWILER, Chicago, Ill., assignors to Kabo Corset Co., Chicago, Ill., a Corporation of West Virginia. Filed July 15, 1916. Serial No. 109,562. (Cl. 91—60.)

1. A device for holding corset steels during the application of a rust-proof composition covering thereto, comprising a frame, means carried by the frame for engaging and clamping the upper tip ends of the steels, a member for holding the lower tip ends of the steels with the body of the steels between said tip ends held in spaced relation and out of surface contact, said member for holding said lower tip ends embodying a series of tapered lugs spaced apart from one another to allow the insertion of the tip end of a steel therebetween and being provided with openings at the points where said steels are inserted to permit of a draining of the surplus composition from the steels, substantially as described.

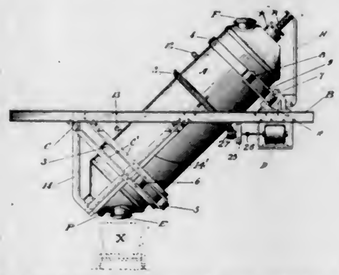


2. A device for holding corset steels during the application of a rust-proof covering thereto, comprising a frame, means carried by the frame for holding the steels in spaced-apart relation therein and against contact with one another, said holding means comprising a clamping means for one tip end of the stay and along one edge of the frame, and a narrow elongated bar along the opposite end of the frame, a series of lugs on the top of said bar spaced apart from one another, the opposite tip end of the stays resting between said lugs whereby they are prevented from coming in contact with one another, and said bar being narrower than the width of the stay to provide a space beyond the sides of the bar for allowing the surplus material to drain from the stays, substantially as described.

[Claim 3 not printed in the Gazette.]

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1,231,247. APPARATUS FOR HARVESTING THE CONSTITUENTS OF WOOD AND VEGETABLE SUBSTANCES, DISTILLING AND PURIFYING THEM. WALTER K. FREEMAN, Oscawana, N. Y. Filed Aug. 14, 1913. Serial No. 784,839. (Cl. 92—18.)



1. An apparatus for extracting from vegetable fibers soluble constituents, comprising in combination a rotatable container, cradles for supporting said container in an inclined position, a fixed hollow shaft mounted lengthwise of the container, means for rotating the container about the shaft, and means for introducing into the container, through the hollow shaft, various solvent or chemically active agents, substantially as described.

2. An apparatus for extracting from vegetable fibers soluble constituents, comprising in combination a rotatable container, cradles for supporting said container in an inclined position, a fixed hollow shaft mounted lengthwise of the container, means for rotating the container about the shaft, means for introducing into the container, through the hollow shaft, various solvent or chemically active agents, and means for circulating and withdrawing said agents.

3. An apparatus for extracting from a mixture of soluble and insoluble matters, the soluble ones, comprising in combination a rotatable container mounted in an



inclined position, a hollow shaft passing through said container, releasable means for holding said shaft against rotation, means for rotating the container about the shaft, means for introducing and withdrawing fluids through said hollow shaft, continuously, and means for causing the circulation of said fluids through the contents of the container during the period between their entrance and their withdrawal.

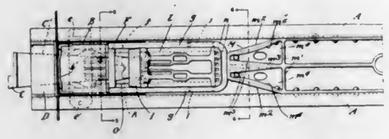
4. An apparatus for extracting from a mixture of soluble and insoluble matters, the soluble ones, comprising in combination, a rotatable cylindrical container, mounted in an inclined position, a hollow shaft passing into said container, means for holding the shaft against rotation, means for rotating the container, means passing through the shaft and into the container for conducting several fluids through the shaft into the container, and out again, substantially as described.

5. An apparatus for extracting, from a mixture of soluble and insoluble matters, the soluble ones, comprising in combination, a rotatable container, upper and lower cradles for supporting said container in an inclined position, the upper cradle being adjustable, to permit proper adjustment of said container, a gear passing around said container, a pinion engaging said gear, a motor driving said pinion, a fixed hollow shaft passing into said container, pipes leading from the exterior of the said hollow shaft and discharging into said container, a strainer on said hollow shaft, pipes leading from the hollow shaft to the exterior of said shaft whereby fluids may be passed through said pipes into the container through the strainer, and through the shaft to the exterior again while the container is rotating, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

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1,231,248. DRAFT-RIGGING FOR RAILWAY-CARS. RICHARD D. GALLAGHER, Jr., New York, N. Y. Filed Jan. 4, 1916. Serial No. 70,199. (Cl. 213—64.)



1. In a draft rigging for railway cars, the combination with spaced longitudinal car sills, of a coupler shank, a front stop mounted between the sills at their forward ends adapted for the reception of a coupler shank, a follower plate seating against the inner face of said stop, a draft yoke composed of a single member having its forward end open to receive the coupler shank and its rear end closed, a transverse shank engaging pin having a substantially rigid connection with the coupler shank and a loose connection with the draft yoke, whereby the shank and yoke move in unison under draft and the shank moves relatively to the yoke under buffing stress, and a yielding pressure resisting member interposed between the follower plate and the closed rear end of the yoke.

2. In a draft rigging for railway cars, the combination with spaced longitudinal car sills, of a coupler shank, a front stop mounted between the sills at their forward ends, adapted for the reception of a coupler shank, a follower plate seating against the inner face of said front stop, a draft yoke composed of a single member having its forward end open to receive the coupler shank and its rear end closed, a transverse shank engaging pin connecting the coupler shank with the yoke, a yielding pressure resisting member interposed between the follower plate and the closed rear end of the yoke, and means for centering and aligning the yoke relatively to the pressure resisting member.

3. In a draft rigging for railway cars, the combination with spaced longitudinal car sills, of a coupler shank, a front stop mounted between the sills at their forward ends, adapted for the reception of a coupler shank, a follower plate seating against the inner face of said stop, a draft yoke composed of a single member having its forward end open to receive the coupler shank and its rear end closed, a transverse shank engaging pin connecting the coupler shank with the yoke, a yielding pressure resisting member including a barrel interposed between the follower plate and the closed rear end of the yoke, and lugs carried by the barrel and adapted to engage the sides of the yoke to center the same relatively to the barrel.

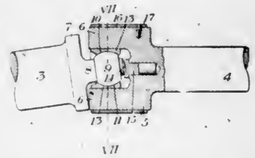
4. In a draft rigging for railway cars, the combination with spaced longitudinal car sills, of a coupler shank, upper and lower castings rigidly mounted between and connecting the sills at their forward ends, the front face of the upper casting lying to the rear of the front face of the lower casting, said castings being spaced apart for the reception of the coupler shank, a shock absorbing member located between the sills forwardly of the upper casting, a follower plate seating against the inner face of the castings, a draft yoke connected with the coupler shank, and a yielding pressure resisting member interposed between the follower plate and the rear end of the draft yoke.

5. In a draft rigging for railway cars, the combination with spaced longitudinal car sills, of a coupler shank, upper and lower castings rigidly mounted between and connecting the sills at their forward ends, the front face of the upper casting lying to the rear of the front face of the lower casting, said castings being spaced apart for the reception of the coupler shank, a forging connecting the sills forwardly of the upper casting, and adapted to be engaged by the coupler under excessive buffing strains, a follower plate seating against the inner face of the castings, a draft yoke connected with the coupler shank and a yielding pressure resisting member interposed between the follower plate and the rear end of the draft yoke.

[Claims 6 to 11 not printed in the Gazette.]

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1,231,249. FLEXIBLE SHAFT-COUPLING. KIRTLAND C. GARDNER, Pittsburgh, Pa., assignor to United Engineering & Foundry Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 17, 1915. Serial No. 14,933. (Cl. 74—19.)



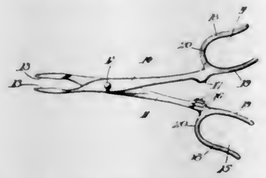
3. A flexible shaft coupling comprising two members to be coupled, one of said members having parallel jaws on the end thereof, the other member having a head thereon between the jaws on the first member, said head having curved bearing surfaces, bearing shoes between the jaws and said head having bearing surfaces in engagement with the jaws and curved bearing surfaces engaging the head, the arrangement being such that the head and shoes may be simultaneously removed in a transverse direction from between the jaws or either of said members may be separately removed, and a guard movable longitudinally over the first member and arranged to prevent the head and shoes on the second member from displacement in a transverse direction, substantially as described.

4. A flexible shaft coupling, comprising two members to be coupled, one of said members having a laterally open transverse slot or cut away portion at its end, and bearing shoes adapted to be inserted and removed from said slot through the open end thereof, and the other member to be coupled having a forwardly projecting neck carrying a head within said slot, said head having oppo-

site convex surfaces in bearing engagement with corresponding concave surfaces of the bearing shoes, a central axially convex projection on the head of the one member, and a coöperative stud seated in the head of the other member to form a thrust member for said members, substantially as described.

[Claims 1 and 2 not printed in the Gazette.]

1,231,250. SURGICAL INSTRUMENT. CHESTER M. GEORGE and MARY C. GEORGE, Newport, R. I. Filed Dec. 1, 1916. Serial No. 134,453. (Cl. 128—28.)

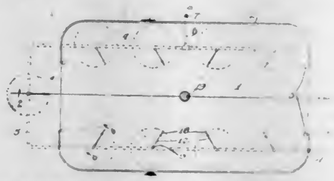


1. In a surgical instrument comprising two members pivoted together intermediate their ends and each having tool means at one end and a finger hold at the other end, and means for locking the two members in closed position, the improvement which consists in forming said holds substantially U-shaped and arranged with the opening at the rear end of the hold whereby the fingers may be easily withdrawn rearwardly from the holds.

2. In a surgical instrument comprising two members pivoted together intermediate their ends and each having tool means at one end and a finger hold at the other end and means for locking the two members in closed position, the improvement which consists in forming said holds substantially U-shaped with the two inner limbs curved slightly away from each other and the ends of the outer limbs also being curved away from each other, said holds arranged with the openings therein at the rear end of the hold.

3. In a surgical forceps comprising two members pivoted together intermediate their ends and each having gripping means at one end and a finger hold at the other end and means for locking the two members in gripping position, the improvement which consists in forming said holds substantially U-shaped with the outer limbs reversely curved the outer ends thereof being curved slightly outward and away from each other and said holds arranged with the openings therein at the rear of the hold.

1,231,251. WATER GAME. THOMAS F. GRAHAM, Chicago, Ill. Filed Oct. 4, 1915. Serial No. 54,095. (Cl. 46—61.)



1. In a device of the class described a court, a plurality of interconnected adjustable hose connections arranged thereabout, and a ball adapted to be moved about said court by jets of water issuing from said hose connections.

2. In a device of the class described a court, water supply pipes therebelow, hose connections attached thereto, two goal posts at each end of said court, and a ball adapted to be forced about said court by jets from said hose connections impinging upon the ball to force the same between two of said goal posts.

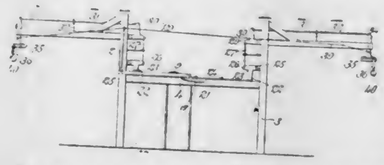
3. In a device of the class described a court, water pipes therebelow, hose connections thereon, means connecting said hose connections with said pipes, and a ball adapted to be forced about by streams of water issuing from said hose connections.

4. In a water game of the class described a court, water pipes, a plurality of hose connections attached thereto extending above said court, goal posts at both ends thereof, and a ball between said goal posts to be acted upon by streams of water from said hose connections to force the ball back and forth between said goal posts.

5. In a water game of the class described a court, pipe lines therebelow, a ball, and hydraulic means associated with said court and pipe lines adapted to impart motion to said ball.

[Claims 6 to 8 not prined in the Gazette.]

1,231,252. GATE-OPERATOR. CORNELIUS E. GROENDYKE, Sheldon, Iowa. Filed Oct. 24, 1916. Serial No. 127,420. (Cl. 39—38.)



1. In a gate opening mechanism, the combination with a gate and a gate support, of a member carried by said gate and movable relative to said support, said member having a cam way therethrough, a roller operative in said cam way, means for permitting forward progression of said roller through said cam way and preventing retrograde movement, and means operative from opposite sides of the gate for actuating said roller to open the gate.

2. In a gate opening mechanism, the combination with a gate and a gate support, of a member carried by said gate and movable relative to said support, said frame having a two-legged cam way therethrough, a roller operative through said cam way, means for permitting forward movement through one leg and rearward movement through the opposite leg, but preventing retrograde movement in either leg, and means for actuating said roller from opposite sides of the gate.

3. In a gate opening mechanism, the combination with a gate and a gate support, of a member carried by said gate and movable relative to said support, said frame having a two-legged cam-way therethrough, a roller operative through said cam-way, means for permitting forward movement through one leg and rearward movement through the opposite leg, but preventing retrograde movement in either leg, means for actuating said roller from opposite sides of the gate, and means for reversing the direction of the roller from one leg to the other.

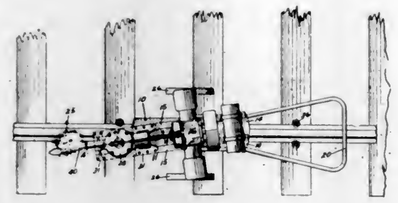
1,231,253. SINGLE-RAIL SPIKE DRIVING AND DRAWING MACHINE. WILLIAM B. HALLIWELL, Saugatuck, Conn. Filed Apr. 7, 1916. Serial No. 89,737. (Cl. 144—106.)

1. A single-rail spike driving and drawing machine comprising a carriage, rail-engaging wheels placed tandem, supporting wheels on opposite sides of the carriage, a bed pivoted to swing in the horizontal plane, a rotatable housing carried by the bed, a rotatable sliding chuck shaft carried by the housing, and means upon the carriage for rotating the chuck shaft.

2. A machine of the character described comprising a carriage, rail-engaging wheels placed tandem, supporting wheels on opposite sides of the carriage, a bed pivoted to swing in the horizontal plane, a rotatable housing carried by the bed, and a rotatable sliding chuck shaft carried by the housing.

3. A machine of the character described comprising a carriage, rail-engaging wheels placed tandem, supporting wheels on opposite sides of the carriage, a slidable and rotatable chuck shaft, and a rotatable housing by which the chuck shaft is carried.



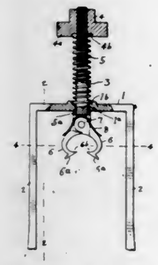


4. A machine of the character described comprising a carriage, rail-engaging wheels placed tandem, supporting wheels on opposite sides of the carriage, a swinging bed, a housing rotatable in the vertical plane, a rotatable shaft adapted to slide transversely in the housing, and chucks at the ends of the shaft adapted to engage and either drive or draw a threaded spike.

5. A machine of the character described comprising a carriage, rail-engaging wheels placed tandem, supporting wheels on opposite sides of the carriage, a bed pivoted to swing in the horizontal plane, means for locking the bed to the carriage centrally or in operative position on either side of a rail, a rotatable shaft adapted to slide vertically to the plane of the carriage, a chuck at each end of the shaft, and means for changing ends with the shaft to place either chuck in operative position.

[Claims 6 to 10 not printed in the Gazette.]

1,231,254. DRAW-GRIP. WILLIAM T. HANCOCK, Anderson, Ind. Filed Dec. 28, 1916. Serial No. 139,256. (Cl. 29—86.1.)



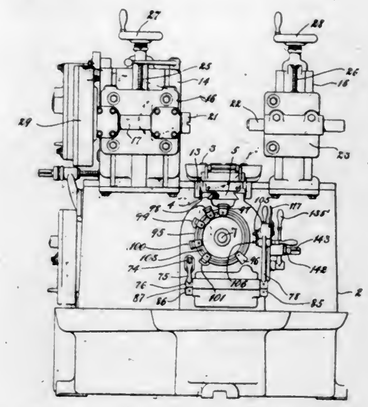
1. A draw grip, comprising a truss, a bar loosely carried by the truss, gripping means carried by the bar, a spring to maintain the bar at retracted position, and means to draw the said bar.

2. A draw grip, comprising a truss, a bar carried loosely by the truss and being threaded, hook arms carried by the said bar, a draw-head nut on said bar, and means to maintain the said bar at retracted position.

3. A draw grip, comprising a truss frame, a threaded bar carried loosely in the truss frame, hook arms carried by the threaded bar having their ends so formed that the hook arms will spread when they make contact with the object to be moved, a spring to urge said hook arms toward each other, a draw-head nut on said threaded bar, and a spring to maintain the said bar at retracted position.

1,231,255. METAL-WORKING MACHINE. BENGT M. W. HANSON, Hartford, Conn. Filed Oct. 9, 1914. Serial No. 865,855. (Cl. 90—21.)

1. In a machine of the class described, the combination of a power transferring member, a second power transferring member having a constant clutch connection with the first power transferring member, means for driving the first power transferring member at a greater speed than the second power transferring member and for stopping them both at predetermined points, and a movable member having a driving connection with the first power transferring member.



2. In a machine of the class described, the combination of a reciprocatory carrier, a power transferring member having a driving connection with the carrier, a second power transferring member having a constant clutched connection with the first power transferring member, and means for rotating the power transferring members at different speeds.

3. In a machine of the class described, the combination of a traveling carrier, a power transferring member having a driving conpection with said traveling carrier, a second power transferring member having a pawl and ratchet constant clutched connection with the first power transferring member, and means for driving the power transferring members at different speeds.

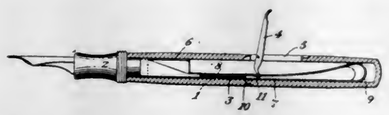
4. In a machine of the class described, the combination of a traveling carrier, means involving quick and slow speed mechanisms for reciprocating the carrier, levers for independently controlling said mechanisms, and a rotary disk provided with a series of peripheral dogs having beveled portions disposed in opposite directions, the levers having pins engageable by the beveled portions as the disk rotates to move the levers oppositely, certain of the dogs extending outward from the periphery of the disk a greater distance than another dog.

5. In a machine of the class described, the combination of a traveling carrier, means involving quick and slow speed mechanisms for operating the carrier, independently active levers for automatically controlling said mechanisms, and a rotary disk provided with peripheral dogs, the levers having pins engageable by said dogs to shift the levers, one of the dogs being initially disposed in the path of one of the pins, and means for retracting said last mentioned pin.

1,231,256. FOUNTAIN-PEN. MONROE E. HEILBRUN, New York, N. Y., assignor to Gem Fountain Pen Corporation, a Corporation of New York. Filed Feb. 23, 1917. Serial No. 150,297. (Cl. 120—46.)

1. In a self-filling fountain pen the combination with a barrel having a longitudinal slot, a lever pivoted in the slot, a pen section, and a collapsible ink sack, of a compression device formed of a strip of spring metal bent intermediate its ends and provided with anchoring means, one arm of the device lying under the sack and the other above the sack and in line with the slot, the free end of the upper arm extending forwardly a substantial distance

beyond the point of contact with the lever, whereby, upon moving the lever to upright position, said upper arm will

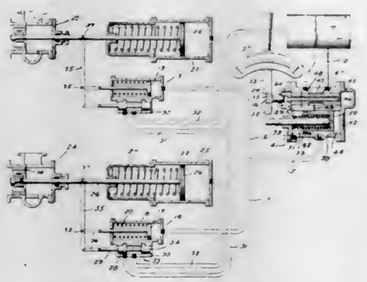


be depressed to compress the sack between it and the lower arm.

[Claim 2 not printed in the Gazette.]

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1,231,257. MULTIPLE CONTROL. HERBERT T. HERR, Pittsburgh, Pa., assignor, by mesne assignments, to The Westinghouse Machine Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 7, 1913. Serial No. 766,168. (Cl. 137—144.)



1. In combination with a plurality of valve operating motors, a separate valve for controlling the operation of each motor, a separate relay for controlling the operation of each valve, and pressure controlling means for simultaneously delivering a constant actuating pressure to all the relay devices, and for delivering regulated pressure through the respective valves to all the motors.

2. The combination with a plurality of motors, relays for operating said motors, and a manually adjustable pressure distributing device for admitting determined degrees of fluid pressure to said relays and for maintaining the pressure delivered to said relays constant.

3. A plurality of motors, a source of fluid pressure for said motors, an independent valve for each motor, a relay for operating each valve, and a fluid pressure device adapted to synchronously operate all of the relays to simultaneously admit equal quantities of fluid to all of the motors.

4. The combination with valve operating motors, motor controlling valves, relays connected to the motor controlling valves, means for operating the relays simultaneously or synchronously, and means responsive to the motor controlling valves for admitting pressure to the motors.

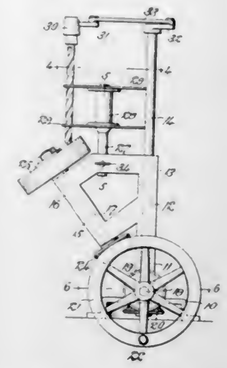
5. In combination with a plurality of valve operating motors, an independent valve for controlling the operation of each motor, a pressure responsive relay for controlling the operation of each valve, a single distributing device for delivering regulable pressure to all the relay devices, and means for actuating each valve in response to the operation of its corresponding valve operating motor.

[Claims 6 and 7 not printed in the Gazette.]

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1,231,258. DRILL-SHARPENER. STEPHEN HORVATH, Highland Park, Mich. Filed Jan. 3, 1917. Serial No. 140,432. (Cl. 51—7.)

A drill bit sharpener including a frame, a vertical shaft supported in the frame and extending thereabove, a second shaft supported in the frame and arranged at an angle to the first shaft, the upper end of the second shaft carrying a sharpening disk, a common driving means connected to the lower ends of the two shafts, a crank on the upper end of the first shaft, a pitman connected to the crank, a chuck movably carried by the other end of the pitman, a pair of superimposed and horizontally rotatable disks



mounted on the frame between the shafts and formed with a series of openings of different diameters, said chuck being arranged to receive a drill bit therein, said openings in the disks being in vertical alinement for the reception and guidance of the drill bit, the point of the bit to be sharpened being supported on the face of the sharpening disk.

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1,231,259. METALLURGICAL PROCESS. JOSEPH E JOHNSON, Jr., New York, N. Y. Filed Oct. 21, 1913. Serial No. 796,430. (Cl. 75—27.)

The process of converting steel-scrap into cast iron, which consists in melting the steel-scrap to produce a molten bath of the same, and then introducing into said bath a sufficient quantity of carbid of silicon to convert the steel into cast iron.

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1,231,260. PROCESS OF PRODUCING FERRO-SILICON OF HIGH SILICON CONTENT IN BLAST-FURNACES. JOSEPH E. JOHNSON, Jr., Hartsdale, N. Y. Filed June 20, 1916. Serial No. 104,779. (Cl. 75—45.)

1. The process of producing ferro-silicon of high silicon content in a blast furnace, which consists in charging the furnace with ore and fuel, and supplying a blast rich in oxygen to reduce the silica on a scale to produce ferro-silicon containing a high percentage of silicon.

2. The process of producing ferro-silicon of substantially 50% silicon in a blast furnace, which consists in charging the furnace with ore and fuel, and supplying a blast containing equal or substantially equal parts by weight of oxygen and nitrogen to reduce the silica on a scale to produce a ferro-silicon containing a high percentage of silica.

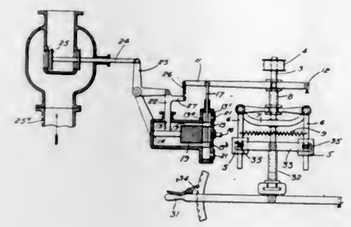
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1,231,261. GOVERNOR. ALEXANDER T. KASLEY, Swissvale, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Oct. 7, 1914. Serial No. 865,545. (Cl. 121—111.)

1. In a governing mechanism, speed responsive means movable to different positions in response to variations in the speed of the governed apparatus, a mechanism for controlling the operation of the governed apparatus, a relay actuated by the speed responsive means, a piston controlled by the relay for controlling the operation of said mechanism, and means operating in response to the operation of said piston for moving said speed responsive means back to its initial operative position.

2. In a governing mechanism, a centrifugal weight driven by the governed apparatus and movable toward and away from its axis of rotation in response to variations in the speed of rotation thereof, a mechanism for controlling the operation of the governed apparatus, means controlled by the centrifugal action of the weight for controlling the operation of said mechanism, and a device controlled by said means for varying the centripetal force exerted on said weight, in response to the operation of said means, and after said weight has moved in response to a variation in speed.





3. In a governing mechanism, a centrifugal weight driven by the governed apparatus and movable toward and away from its axis of rotation in response to variations in the speed of rotation thereof, a mechanism for controlling the operation of the governed apparatus, means controlled by the centrifugal action of the weight for controlling the operation of said mechanism, and a spring controlled by said means for varying the centripetal force exerted on said weight in response to the operation of said means, and after said weight has moved in response to a variation in speed.

4. In a governing mechanism, speed responsive means movable to different positions in response to variations in the speed of the apparatus to be governed, means controlled thereby but acting more slowly than the speed responsive means, for controlling the operation of the governed apparatus, and means controlled by the operation of said controlled means for returning said centrifugally controlled means to substantially its normal operative position, after it has moved therefrom in response to a variation in speed of the governed apparatus.

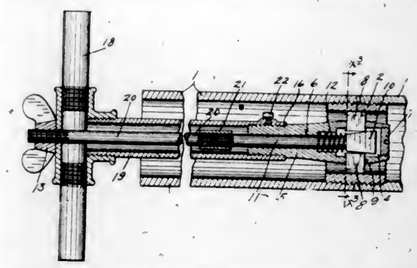
5. In a governing mechanism, centrifugally controlled means movable in response to variations in the speed of the governed apparatus, means controlled by the centrifugal action of said centrifugally controlled means for controlling the operation of the governed apparatus, and means controlled by said last mentioned means for varying the centripetal force exerted on said centrifugally controlled means after each movement of the centrifugally controlled means in response to a variation of the speed of the governed apparatus.

[Claims 6 to 8 not printed in the Gazette.]

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1,231,262. WRENCH. FRANK N. KATCHMAZENSKI, Foley, Minn., assignor of one-half to Henry Jedlicki, Foley, Minn. Filed May 15, 1916. Serial No. 97,468. (Cl. 81—72.)

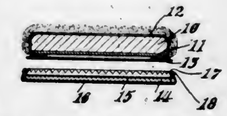
A wrench of the kind described comprising a rotatable body member having at one end a recess and at its other end a shank with an axial bore extending into said recess, a screw plug normally closing said recess, a plurality of grip teeth mounted on the body member for radial movement, a wedge block mounted in said recess and having an operating stem projecting through the bore in said shank, a spring compressed between the bottom of said recess and the wedge block, a nut having screw-threaded engagement with the operating stem and reacting against the shank for drawing the wedge block into contact with the grip teeth to move the same outward, and a hand



piece having screw-threaded engagement with the shank for rotating the body member.

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1,231,263. FLEECED SLIPPER-SOLE. EDWARD W. KELLEY, Worcester, Mass. Filed Mar. 14, 1917. Serial No. 154,810. (Cl. 36—26.)



1. A fleeced slipper sole formed with separable inner and outer members, said inner member having a stiff projecting ledge, and said outer member having an upwardly projecting edge portion, and means effective to draw said edge portion tightly about said ledge to secure said inner and outer members together.

5. A fleeced slipper sole formed with separable inner and outer members, and means to secure said members together, said inner member comprising a cushion layer, a stiff supporting layer therefor, a fleeced textile covering inclosing said cushion layer and having its edges secured beneath said supporting layer, and a second layer of stiff material secured to said supporting layer and concealing the raw edges of the textile covering, said second layer projecting to form a ledge around the inner member which constitutes one part of said securing means.

6. A fleeced slipper sole having, in combination, separable inner and outer sole members, said inner sole member including a stiffening layer underlying and secured to said inner sole member and projecting at the edges to form a circumferential ledge, and said outer sole member comprising a stiffening layer, a fabric layer, and a tread layer, the fabric and tread layers inclosing said stiffening layer and having their adjacent outer portions united to form an upturned edge, and an elastic tension element secured to said upturned edge and extending continuously around said sole member, said tension element being effective to draw said upturned edge closely around said projecting ledge and to thereby detachably secure said sole members together.

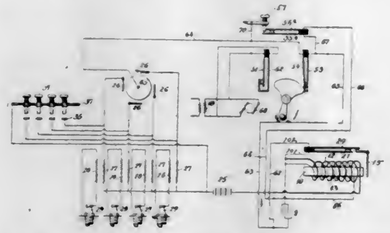
[Claims 2 to 4 not printed in the Gazette.]

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1,231,264. IGNITION DEVICE. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed Mar. 12, 1910. Serial No. 548,921. (Cl. 123—148.)

1. In an electric ignition system for internal combustion engines, the combination with a sparking circuit, a source of current therein, a spark timer, and an electromagnetic circuit-breaker capable of operation either to make single breaks in the circuit under the control of the timer or to make successive breaks independently of the breaks in the timer, of a controlling switch to open and close the circuit at the will of the operator, manually ac-

tuated means for determining the character of operation of the circuit-breaker, and means under the control of said switch for latching said manually actuated means in operative position.



2. In an electric ignition system for internal combustion engines, the combination with a sparking circuit including a spark timer, of an electromagnetic circuit-breaker capable of operation either to make single breaks in the circuit under the control of the timer or to make successive breaks independently of the breaks in the timer, a manual controlling switch in the circuit, having open and closed positions, manually actuated means for determining the character of operation of said circuit-breaker, and mechanism operable when the said switch is in its open position for latching said manually actuated means in operative position.

12. In an electric ignition system for internal combustion engines, the combination with a sparking means, comprising a battery sparking circuit and a magneto sparking circuit; of a circuit controlling switch having three positions, viz. a battery position, a magneto and an intermediate off position; and a supplemental switch operable in any one of the three positions of said controlling switch to coöperate with said sparking circuits to cause a succession of sparks therein; with means for latching said supplemental switch in operative position upon its operation, when the controlling switch is in its off position.

13. In an electric ignition system for internal combustion engines, the combination with a sparking means, comprising a battery sparking circuit and a magneto sparking circuit; of a circuit controlling switch having three positions, viz., a battery position, a magneto and an intermediate off position; and a supplemental switch operable in any one of the three positions of said controlling switch to coöperate with said sparking circuits to cause a succession of sparks therein; with means for latching said supplemental switch in operative position upon its operation, when the controlling switch is in its off position; and means connected with said controlling switch for automatically releasing said latching means in the supplemental switch when the controlling switch is moved either to its magneto position or its battery position.

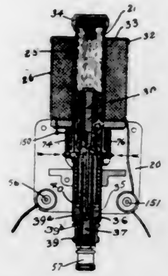
24. In an ignition system for combustion and explosion engines, the combination with a magneto and a battery system; a switch element for bringing said magneto system into operation; and a supplemental switch operable to place said battery system in operation concurrently with or independently of said magneto system.

[Claims 3 to 11 and 14 to 23 not printed in the Gazette.]

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1,231,265. CONTROL FOR ELECTRICAL SYSTEMS. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed Aug. 9, 1912. Serial No. 714,234. (Cl. 171—229.)

1. In a regulator, the combination with a casing, containing a body of conductive liquid; of a well concentric to said regulator casing and containing a body of conductive liquid, insulated from the casing and the liquid contained therein; of a plunger element, a portion of which is tubular and is adapted to be submerged in the body of liquid within the casing; and a conductive element carried by the plunger but insulated therefrom and concentric to the tubular portion thereof, constantly in contact with the liquid contained in the supplemental well.



2. In a regulator, the combination with a casing containing a movable element; of a bracket member; a controlling coil mounted thereon; means connected to said bracket member for adjustably supporting the said casing and movable element, relative to the controlling coil; and a rheostat resiliently mounted on said means and connected to the controlling coil.

4. In a regulator, the combination with a casing, and a controlling coil; a support for said casing and coil; a rheostat mounted thereon, and connected to the coil; and resiliently supported means for controlling said rheostat.

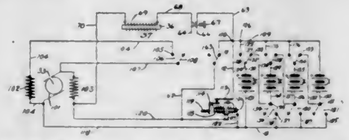
5. In a regulator, the combination with a casing; a supplemental well formed within said casing and insulated therefrom; a body of conductive liquid positioned in said supplemental well; and a plunger element having a hollow portion normally surrounding said well; and a contact needle secured to said plunger and normally positioned in said supplemental well.

10. In a regulator, the combination with a casing having a plurality of wells containing conductive liquid; of a plunger including conductive portions insulated from each other, extending into said wells, displacement of the liquid by the plunger causing the level of the liquid to rise so that a single body of liquid will be formed in said casing; a resistance normally covered by the liquid when constituting a single body of liquid; and a plunger element, said plunger element being adapted to be withdrawn from the body of conductive liquid, whereby the liquid level will be so lowered that separate and distinct bodies of liquid, insulated from each other, will be formed in the respective wells contained in the casing and a portion of said resistance will be withdrawn from the conductive liquid.

[Claims 3 and 6 to 9 not printed in the Gazette.]

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1,231,266. ENGINE-STARTING DEVICE. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Company, a Corporation of Ohio. Original application filed June 15, 1911, Serial No. 633,443. Divided and this application filed Mar. 5, 1915. Serial No. 12,309. (Cl. 171—315.)



1. In an engine starting device, the combination with a motor-generator, of an accumulator, connections therebetween for operating the motor-generator, as a generator, to charge the accumulator at one voltage, and to operate said motor-generator, as a motor, at a different voltage; and auxiliary means for connecting the motor-generator with the accumulator for operation as a motor, at substantially the same voltage as that at which the motor-generator charges the accumulator.



2. In an engine starting device, the combination with an engine, of a motor-generator having connections therewith, for operating the engine to start the same, and being operated by the engine to generate power; of an electric accumulator, having electrical connections with said motor-generator, for receiving power from the motor-generator at one voltage and delivering the stored power to the motor-generator at a different voltage for starting purposes; and auxiliary electrical connection for initially delivering current to the motor-generator at a lower voltage than is delivered thereto for starting purposes, whereby the motor-generator, as a motor, will be given a slow initial movement.

3. In an engine starting device, the combination with an engine, of a starting device, differential mechanical connections therebetween; of an accumulator having selective series and parallel connections with said motor-generator whereby said motor-generator will be actuated as a motor through the series connections, and will act as a generator through the parallel connections, to charge the accumulator; and auxiliary electrical connections, connecting the motor-generator and accumulator in parallel for initially actuating said motor-generator, as a motor, at a voltage substantially the same as the voltage, at which the motor-generator, as a generator, charges the accumulator.

4. In an engine starting device, the combination with an engine and a motor-generator; of an accumulator, comprising a plurality of electrical cells connected with said motor-generator; means for arranging said cells in series for operating the motor-generator as a motor, for starting, and in multiple for charging by the motor-generator; and an auxiliary electrical connection between the motor-generator and the accumulator and connected to said multiple connections, said auxiliary connection being normally open; and a circuit closer for closing said auxiliary connection, whereby the motor-generator will be operated as a motor, at a voltage substantially the same as that at which the motor-generator charges the accumulator.

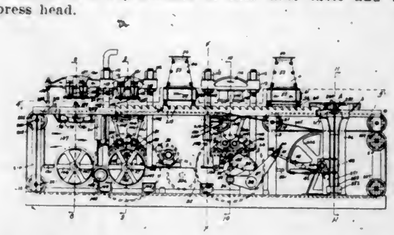
5. In an engine starting device, the combination with an engine, of a motor-generator; means for coupling the engine therewith; an accumulator having electrical series and multiple connections with said motor-generator for starting and for charging; a controller switch for selecting said electrical connections; an auxiliary electrical conection between the accumulator and motor-generator connected to said multiple connections but of a higher resistance than said multiple connections; and an auxiliary switch for opening and closing said auxiliary electrical connection, whereby a flow of current will be permitted from the accumulator to the motor-generator through the auxiliary electrical connection to facilitate the said coupling operation, said resistance of the auxiliary connection being so proportioned with reference to the resistance of the multiple connections that, when the controller switch is in position for selecting the multiple connections, the current flowing through said auxiliary connections upon operation of said auxiliary switch, will be insufficient to allow the said coupling operation.

[Claims 6 to 17 not printed in the Gazette.]

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1,231,267. BRICK MANUFACTURE. HERBERT N. KILBY, Cleveland, Ohio, assignor to Joseph F. Kilby and John Gehring, Cleveland, Ohio. Filed June 30, 1913. Serial No. 776,728. (Cl. 25—47.)

1. In a brick machine, a mold box, a main framework, a stationary press head, a press table upon which said mold box is adapted to rest, means for causing a movement of said press table toward said press head, means for varying the distance said head and table move toward each other, a second stationary press head, a second press table, and means for moving said second table and second press head toward each other a constant distance for all adjustments of said first table and first press head.



3. In a brick machine, filling, compressing and stripping mechanisms, a plurality of mold boxes, a plurality of pallets upon which said mold boxes are adapted to rest, and means for automatically feeding said pallet plates into operative position beneath said mold boxes prior to the operation thereon of any of said mechanisms.

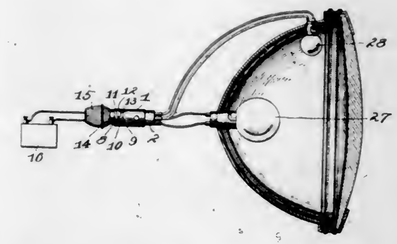
5. In a brick machine, a stationary press head, a vertically movable press table, two toggles beneath said table, a bell crank forming the lower arm of each of said toggles, and cams engaging said bell cranks to cause vertical movement of said table.

7. A brick machine comprising a main framework, a main feed table, a plurality of mold boxes movable on said table, a feed box mounted in superposed relation to said table, a stationary press head mounted on said table, a press table beneath said press head, said press head being adjustable to variant heights, means for causing movement of said press table toward said press head, a second feed box mounted in superposed relation to said feed table, a second stationary press head, a second press table, means for moving said second press table toward said second press head, stripping mechanism, both of said press tables being simultaneously operable with said stripping mechanism, and means for intermittently feeding said mold boxes forward to positions beneath said feed boxes onto said press tables and opposite said stripping mechanism.

[Claims 2, 4, and 6 not printed in the Gazette.]

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1,231,268. CIRCUIT-CONTROLLER. GEORGE C. KNAUFF, Chicago, Ill. Filed Oct. 29, 1914. Serial No. 869,199. (Cl. 173—328.)



1. In combination, two separate electric lamps, a single rotatable-plug switch apart from the lamps but electrically connected with each of the lamps for controlling same, a source of electrical supply connected with the plug of the switch and means for locking the plug of the switch in three different angular positions, one position connecting the said source with one of the said lamps for lighting same, another position connecting the said source with the other said lamp for lighting same, and the third position disconnecting both of the said lamps from the said source whereby they are both extinguished.

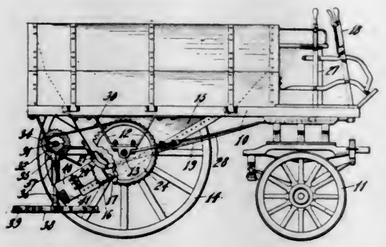
3. In combination, a plurality of separate current-consuming devices, and a single switching device apart from

and at some distance from the said current-consuming devices but electrically connected therewith for controlling same: the said switching device having a rotatable portion, a source of electrical supply connected with the said switching device; and means for locking the said rotatable portion of the said switching device in a plurality of different angular positions, one of the said positions disconnecting all of the said current-consuming devices from the said source, and the other said positions connecting the said source with the different said current-consuming devices respectively.

[Claim 2 not printed in the Gazette.]

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1,231,269. SANDING-WAGON. LOUIS KINDLING, Milwaukee, Wis. Filed Jan. 15, 1915. Serial No. 2,339. (Cl. 275—8.)



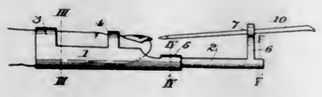
1. In a sanding wagon, a sand hopper, a discharge spout leading therefrom, means for controlling the flow of sand through the discharge spout, adjustable side gates on the discharge spout for varying the effective passageway therethrough, and a suitably driven rotary sand distributer receiving the sand from the discharge spout.

3. In a sanding wagon, a sand hopper, an axle journaled thereon and passing through the lower part of the sand hopper, wheels on the axle, one of which is fixed thereto, agitating arms on the axle within the sand hopper, there being a discharge opening in the sand hopper near the agitating arms, a swinging gate for closing the discharge opening more or less, a discharge spout leading from the discharge opening, adjustable side gates on the discharge spout for varying the effective passageway therebetween, and a rotary sand distributer receiving sand from the discharge spout and driven from the axle.

[Claim 2 not printed in the Gazette.]

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1,231,270. MANICURING DEVICE. PEDER M. KNUDSEN, Brooklyn, N. Y. Filed Oct. 31, 1916. Serial No. 128,679. (Cl. 30—23.)

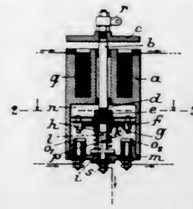


1. In a manicuring device, the combination with a finger holding part, of a tool holding part thereon, and a spring clip mounted and adapted to hold a tool.

2. In a manicuring device, the combination with a finger holding part, of a tool holding part adjustable thereon, and a spring clip swiveled on the tool holding part and adapted to hold the tool.

3. In a manicuring device, the combination with a finger holding part comprising a base in channel form to fit around a finger, and a resilient clip to embrace the finger and hold it in the channel, of a tool holding part having a channeled base to fit and slide longitudinally in the base of the finger holding part between it and the finger, and means for holding the base of the tool holding part at different adjustments in the base of the finger holding part.

1,231,271. ELECTROMAGNETIC SWITCH. FRANZ KRATZ, Stuttgart, Germany, assignor to the Firm of Robert Bosch, Stuttgart, Germany. Filed Dec. 17, 1914. Serial No. 877,705. (Cl. 175—281.)



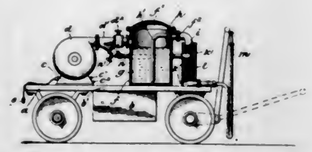
1. In an electromagnetic switch, a guide post, a switch bridge loosely mounted on the guide post for axial and tilting movements thereon, an electromagnetically responsive shaft resting loosely on the switch bridge, and a spring acting against the switch bridge in opposition to the electromagnet.

2. In an electromagnetic switch, a body portion having an electromagnet winding positioned in one end thereof, a switch bridge positioned within the other end of the body portion, a cover inclosing the switch bridge, a sleeve fastened to the switch bridge and embracing the post with a slight amount of play, an armature carrying a shaft resting loosely on the switch bridge, and a spring acting between the cover and the switch bridge.

3. In an electromagnetic switch, a body portion having an electromagnet winding positioned in one end thereof, a switch bridge positioned within the other end of the body-portion and having an insulating bearing member, a cover inclosing the switch bridge and carrying switch-terminals coöperative therewith, a post secured to the cover, a sleeve fastened to the switch bridge and embracing the post with a slight amount of play, an armature having a shaft passing through the electromagnet winding and resting upon the bearing member to engage the switch bridge with the switch terminals, and a spring acting between the cover and the switch bridge to disengage the switch bridge and the switch terminals upon deëxcitation of the electromagnet.

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1,231,272. CHEMICAL FIRE APPARATUS. FREDERICK H. LANE, Hollis, N. Y., assignor of one-third to Alfred S. Moses, New York, N. Y., and one-third to Francis A. Westbrook, Brooklyn, N. Y. Filed Mar. 27, 1917. Serial No. 157,601. (Cl. 169—12.)



1. In chemical fire apparatus, an extinguishing chemical agent in liquid form, an air-tight reservoir for said agent, a source of compressed air, a conduit to lead the compressed air into said reservoir on to the surface of the agent, a discharge nozzle in said reservoir above the surface of the agent, a pipe from the agent discharging into said nozzle whereby the agent is atomized by the compressed air, a heating tube connected with said nozzle to gasify the agent completely and a discharge nozzle through which the agent in gaseous form passes to the blaze.

2. In chemical fire apparatus, an extinguishing chemical agent in liquid form, an air-tight reservoir for said agent, a blower, an electric motor to drive the blower, a valve controlled conduit to lead the compressed air from the blower into said reservoir on to the surface of the agent, a discharge nozzle in said reservoir above the surface of said liquid, a pipe from the agent discharging into said nozzle whereby the agent is atomized by the compressed air, a heating tube connected with said nozzle, an electrical heating coil around said tube to heat and gasify the agent completely and a discharge nozzle through which the agent in gaseous form passes to the blaze.

3. In chemical fire apparatus, a portable truck, a reservoir for carbon tetra-chlorid in liquid form carried on the truck, a blower, an electric motor to drive the blower, a valve controlled connection between the blower and the reservoir to lead the compressed air into said reservoir on to the surface of the carbon tetra-chlorid, a storage battery carried on the truck, electrical connections between the motor and the storage battery and between the motor and an external source of current, a discharge nozzle in the reservoir above the surface of the tetra-chlorid, a tube from the tetra-chlorid to said nozzle whereby the compressed air forces the tetra-chlorid through the nozzle in atomized form, a heating tube connected with said nozzle and carried on the truck, an electrical heating coil disposed about said tube and having connection with any available source of current, a discharge nozzle for the tetra-chlorid gasified in the heating tube, and a valve-controlled by-pass between the heating tube and the blower whereby a blast of air may be discharged.

[Claims 3 and 4 not printed in the Gazette.]

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1,231,273. INSULATING-CAP FOR CONDUITS. CHARLES M. LEFKOWITZ, New York, N. Y. Filed June 24, 1916. Serial No. 105,635. (Cl. 247—12.)



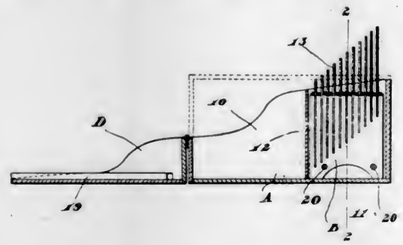
1. A device of the class described comprising an insulating perforated cap adapted to fit upon a conduit, a screw and means separate from the material of the cap to support the screw upon the cap to enable the screw to bear against the outer surface of a conduit.

8. A device of the class described comprising an insulating perforated cap provided with a recess opposite the perforations to receive a conduit, an annular member having a portion within and a portion without the cap, said portions of the annular member having a transverse web connecting them and extending along an edge of the cap, and a screw passing through the cap and threaded in said portions of said member to bear against the conduit.

[Claims 2 to 7 not printed in the Gazette.]

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1,231,274. CARD-INDEX CABINET. FREDERICK STANLEY LONG, Calgary, Alberta, Canada. Filed Sept. 11, 1916. Serial No. 119,523. (Cl. 129—16.)



1. A card index cabinet comprising two compartments, a supporting member in one compartment adapted to maintain the cards in spaced and stepped relation, including spaced non-resilient fingers between which the cards are adapted to lie.

2. In a card index cabinet a supporting member comprising plates formed with stepped and spaced slots and means between the slots for connecting the plates.

3. For use in a card index cabinet, a card supporting member comprising two plates formed with spaced fingers, and cross bars connecting the fingers of the two plates.

4. For use in a card index cabinet, a card supporting member comprising two plates formed with spaced fingers and cross bars connecting the fingers of the two plates, said cross bars being circular in cross section.

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1,231,275. OPERATING MECHANISM FOR SCRAPER-BUCKETS. JOHN R. MCGIFFERT, Duluth, Minn., assignor to Clyde Iron Works, Duluth, Minn., a Corporation of Maine. Filed Jan. 17, 1914. Serial No. 812,642. (Cl. 37—19.)



1. The combination of a scraper bucket, a single continuous cable extending in the desired line of movement of said bucket in either direction therefrom, a member mounted on said bucket adjacent the rear thereof, two elements mounted on said member in line with the direction of movement of said bucket but in different horizontal planes in the normal position of said bucket, said cable passing freely about said two elements at the rear of said bucket and being rendered capable of tilting said bucket in a vertical plane upon being tautened from both ends simultaneously, and a single connection between said cable and the front end of said bucket limiting relative movement of the two and permitting said cable to be used to haul in and out said bucket as well as tilt the same.

2. The combination of a scraper bucket, a single continuous cable extending in the desired line of movement of said bucket in either direction therefrom, an upright member mounted at the rear of said bucket, two sheaves mounted on said member in line with the direction of movement of said bucket but in different horizontal planes in the normal position of said bucket, said cable passing freely about said sheaves at the rear of said bucket and being rendered capable of tilting said bucket in a vertical plane upon being tautened from both ends simultaneously, and a single connection between said cable and the front end of said bucket limiting relative movement of the two and permitting said cable to be used to haul in and out said bucket as well as tilt the same.

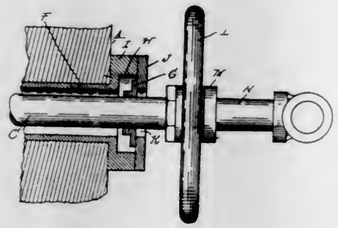
3. The combination of a scraper bucket, a single continuous cable extending in the desired line of movement of said bucket in either direction therefrom, an upright member mounted at the rear of said bucket, two sheaves mounted on said member in line with the direction of movement of said bucket but in different horizontal planes in the normal position of said bucket, said cable passing over said upper sheave and under said lower sheave and being rendered capable of tilting said bucket in a vertical plane upon being tautened from both ends simultaneously, and a single connection between said cable and the front end of said bucket limiting relative movement of the two and permitting said cable to be used to haul in and out said bucket as well as tilt the same.

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1,231,276. BOILER-CLEANER. FRANK MCILVANE, Detroit, Mich., assignor to Diamond Power Specialty Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 1, 1915. Serial No. 53,618. (Cl. 122—392.)

1. The combination with a furnace wall provided with an aperture, of a tubular boiler, a cleaner comprising a

tubular header passing through the aperture in said wall with clearance therein, said header being mounted upon and adapted to float with the tubular boiler, and means for sealing the aperture around the header in said wall.



2. The combination with a furnace wall provided with an aperture, of a tubular boiler, a cleaner comprising a tubular rotary header extending through the aperture in said wall and mounted upon and adapted to float with said boiler, a stationary supply conduit, and a flexible connection between said stationary supply conduit and said header.

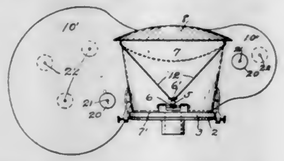
3. The combination with a furnace wall provided with an aperture, of a tubular boiler, a cleaner comprising a tubular header extending through said aperture and mounted upon and adapted to float with said boiler, a bushing within said aperture forming an opening of greater diameter than said header, through which the latter passes, means for sealing the opening through said bushing, and means exterior to said wall for actuating rotation of said header.

4. The combination with a furnace wall provided with an aperture, of a tubular boiler, a tubular rotary header mounted in journal bearings upon said boiler and extending outward through said aperture, a bushing in said aperture of greater diameter than said header and forming a clearance space thereabout, and a disk on said header engaging an annular recess in said bushing and sealing the opening thereof, said recess allowing lateral motion of the disk and header.

5. The combination with a furnace wall provided with an aperture, of a tubular boiler, a tubular rotary header mounted in journal bearings upon said boiler and extending outward through said aperture, a bushing in said aperture of greater diameter than said header and forming a clearance space thereabout, a recess being formed in the outer end of said bushing, a cap closing said recess formed with an opening through which the header extends, said opening allowing lateral play of the header, and a collar on the header within said recess for sealing the opening in said cap.

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1,231,277. TONE-PURIFIER. CHARLES P. MARSHALL, Watertown, N. Y. Filed Nov. 23, 1916. Serial No. 133,074. (Cl. 274—27.)



1. A tone purifier comprising a hollow body having one open end and one closed end, the closed end comprising a dome having projecting eaves, and a sounding board comprising one side of said body and having wings extending laterally beyond said body.

2. A tone purifier comprising a hollow body having one open end and one closed end, the closed end comprising a dome having projecting eaves, and a sounding board comprising one side of said body and having wings of unequal size extending laterally beyond said body.

3. A tone purifier comprising a hollow body having a reduced open end and an enlarged closed end formed dome-shaped, a sounding board comprising one side of said body having wings extending laterally beyond said body, and a plurality of tension cords secured to said body and also to said wings.

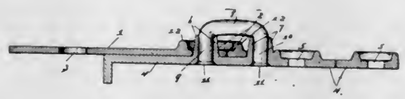
4. A combined acoustic and symphonic tone purifier, comprising a hollow body having one flat side comprising a sounding board, the ends of said board extending laterally beyond the body, and said body having tone and sound modifying openings adjacent said wings.

5. A combined acoustic and symphonic tone purifier comprising a hollow body having an extended dome-shaped top and sound modifying openings, and a sounding board comprising one side of said body and having wings extending laterally beyond said body.

[Claims 6 to 12 not printed in the Gazette.]

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1,231,278. HASP-MOUNTING. WILLIAM C. MARTINEAU and CLARENCE R. MARTINEAU, Albany, N. Y. Filed Oct. 2, 1916. Serial No. 123,242. (Cl. 70—83.)



1. In a hasp-mounting and in combination, a hasp provided with a pivot-eye; a supporting-plate having an integral tubular pivot-boss passing through the eye of the hasp; and a keeper in the form of a staple having one leg passing through the tubular boss and secured to the plate, and its other leg secured to the plate outside of the eye of the hasp.

2. In a hasp-mounting and in combination, a hasp provided with a pivot-eye; a supporting-plate having two integral tubular bosses, one passing through the eye of the hasp to form a pivot for the hasp and the other located outside of the eye of the hasp; and a keeper in the form of a staple having its legs inserted through the respective tubular bosses and rigidly secured to the plate.

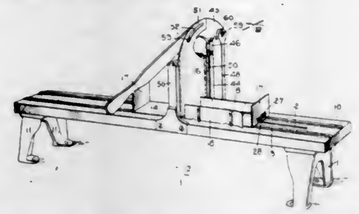
3. In a hasp-mounting, and in combination, a supporting-plate having a pair of integral tubular bosses; a hasp provided with a pivot-eye encircling one of said bosses with sufficient lost-motion to permit neighboring end of the hasp to abut against the other boss; and a keeper having two legs inserted through the respective tubular bosses and secured rigidly to said plate.

4. In a hasp mounting and in combination, a hasp provided with a pivot-eye; a pivot passing through the pivot-eye of the hasp; and a keeper overhanging the pivot-eye of the hasp, the hasp being adapted to swing freely upon the pivot and the keeper, and having adjacent to its eye an outwardly extending flange whereby the clearance of the eye-portion of the hasp with reference to the keeper when the hasp is in locked position is substantially the same as its clearance in the swinging movements of the hasp, the outer portion of said flange retreating from the edge-portions of the hasp, whereby end-thrust is confined to the body-portion only of the hasp.

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1,231,279. ICE-CREAM CUTTER. HOSEA ALFRED MASON, Taunton, Mass., assignor of one-half to William E. Quigley, Taunton, Mass. Filed July 25, 1916. Serial No. 111,167. (Cl. 107—21.)

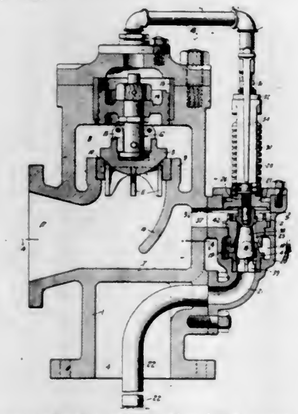
1. In an ice cream cutter, a table having a slot and two guide rails, a tray movably disposed on the rails, a transverse member depending from the tray and disposed between the rails, a bar disposed under the table, a cutter, means to operate the bar and the cutter, the table having a slot leading to the cutter, a bracket on the tray, and a follower normally disposed in the slot and detachably secured to the bar and the bracket.



2. In an ice cream cutter, a table having a slot, a rail disposed below the table at the slot and spaced therefrom, means secured to the table for supporting the rail, a rack bar disposed on the rail, the rack bar having a longitudinal groove in which the rail extends, a cutter disposed above the table, a tray movable on the table, a bracket on the tray, a follower normally disposed in the slot and detachably secured to the bar and the bracket, and means having a tooth for operating the rack bar.

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1,231,280. SAFETY-VALVE. JOHN F. METTEN, Philadelphia, Pa. Filed Nov. 16, 1916. Serial No. 131,649. (Cl. 137—53.)



1. In combination, a safety valve for a steam boiler, a pressure operated pilot valve, a nozzle controlled thereby, a pressure operated element associated with said safety valve and having a chamber on one side connected by a conduit in said nozzle, the other side of said element being exposed to the boiler pressure, and a fluid pressure supply connection to said nozzle from a comparatively remote point within the boiler.

2. The combination with a fluid pressure actuated pilot valve, of means coöperating with the valve when open to produce an ejector action, a main steam boiler safety valve having a face normally subject to boiler pressure tending to hold said safety valve closed, and a conduit by which the pressure fluid may be removed from said face to the ejector.

3. The combination with a tube having a pilot valve, of a casing having a conical wall in advance of said valve, and controlled thereby, a conical extension in said tube and carried by said valve, and coöperating with the wall of said casing to produce an annular jet when said valve is opened, and mechanism controlled by the operation of said annular jet.



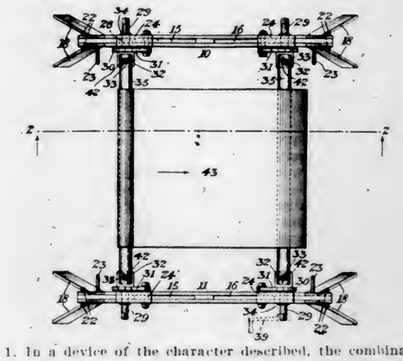
4. The combination with a main valve opening inwardly and held to its seat by fluid pressure, of a loaded pilot valve controlling said main valve and adapted to be lifted by predetermined fluid pressure, means forming an outlet chamber in advance of said pilot valve, a nozzle within said chamber controlled by said pilot valve, a piston connected to said main valve, a cylinder for said piston, means connecting said chamber and said cylinder, and means whereby said valves discharge through a common outlet.

12. In combination, a steam boiler safety valve, means mechanically connected therewith having a face subject to boiler pressure tending to hold the valve closed, a chamber around said face, an ejector adapted to exhaust motive fluid from said chamber, and a pilot valve controlling said ejector.

[Claims 5 to 11, 13, and 14 not printed in the Gazette.]

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1,231,281. CARPET-BEATING FRAME. LORA V. MEYER, Brooklyn, N. Y. Filed June 22, 1916. Serial No. 105,117. (Cl. 45—24.)



1. In a device of the character described, the combination of two end members each comprising a cross-beam provided with a vertical longitudinal slot, a dependent member at each end of said beam, swinging supports for said beam pivotally connected at one end to opposite sides of said dependent members, adjustable blocks resting upon the top of said beam and having a dependent portion extending into the slot in the beam and slidable therein, roller bars each composed of two sections provided on their meeting surfaces with means for gripping an article between them, housings revolubly connected with said adjustable blocks into which the ends of said roller bars are received, means for securing the rollers therein, and means for revolving said housings.

3. In a device of the character described, the combination of two end members each comprising a cross beam, provided with a longitudinal slot, a dependent portion at each end of said beam, legs connected to said dependent portions, adjustable blocks seated upon the top of said beam and having a dependent portion extending into said slot in the beam and slidable therein, means for securing said blocks in the position to which they may be adjusted, roller bars, means revolubly connected with said adjustable blocks for receiving and holding the ends of said roller bars, and means for rotating said roller bars.

4. In a device of the character described, and in combination, two end members each comprising a cross-beam, slotted longitudinally, a dependent portion at each end of said beam, legs connected to said dependent portions, adjustable blocks seated upon the top of said beam having a dependent portion extending into said slot in the beam and slidable therein, means for securing said blocks in the position to which they may be adjusted, a shaft extending through an opening in each of said blocks, a ratchet wheel permanently secured to one end of each shaft, a

pawl pivoted to each of said blocks to engage said ratchet, roller bars, means connected to the outer surface of each ratchet wheel for receiving and holding the ends of said roller bars, and means for rotating said shafts.

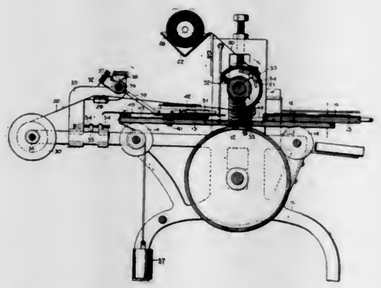
5. In a device of the character described, and in combination, two end members each comprising a cross beam slotted longitudinally, a dependent portion at each end of said beam, legs connected to said dependent portions, adjustable blocks seated upon the top of said beam having a dependent portion extending into said slot in the beam and slidable therein, means for securing said blocks in the position to which they may be adjusted, a shaft extending through an opening in each of said blocks, a ratchet wheel permanently secured to one end of each shaft and positioned on one side of each block, a washer secured to each shaft on the other side of each block, a pawl pivoted to each of said blocks to engage said ratchet, roller bars, means connected to the outer surface of each ratchet wheel for receiving and holding the ends of said roller bars, and means for rotating said shafts.

6. In a device of the character described, and in combination, two end members each comprising a cross beam, slotted longitudinally, a dependent portion at each end of said beam, legs connected to said dependent portions, adjustable blocks seated upon the top of said beam having a dependent portion extending into said slot in the beam and slidable therein, means for securing said blocks in the position to which they may be adjusted, a shaft extending through an opening in each of said blocks, a ratchet wheel permanently secured to one end of each shaft and positioned on one side of each block, a pawl pivoted to each of said blocks and adapted to engage said ratchet wheel, a housing permanently secured to the outer face of each ratchet wheel, a screw threaded projection secured at one end to the inner bottom surface of each housing and extending vertically therefrom, roller bars provided with an opening adjacent each end through which said screw threaded projections extend, thumb nuts adapted to be screwed over said threaded projections after the ends of said roller bars have been placed in position within said housings whereby said roller bars are secured in such position, and means for rotating said shafts.

[Claims 2 and 7 not printed in the Gazette.]

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1,231,282. PRINTING-PRESS. LOUIS MEYER, New York, N. Y. Filed Jan. 4, 1917. Serial No. 140,528. (Cl. 101—186.)



1. In a printing press of the class described, a revoluble pressure roller, a type carrier mounted to slide, a tension device for retaining the tape on the roller, a gripping device for engaging the tape, means for actuating the gripping device operable by the pressure roller, and means carried by the type carrier for rendering the operative device inoperative during the operation of the roller whereby a portion of the tape may be printed without causing a displacement of the tape after it has been printed, substantially as and for the purpose set forth.

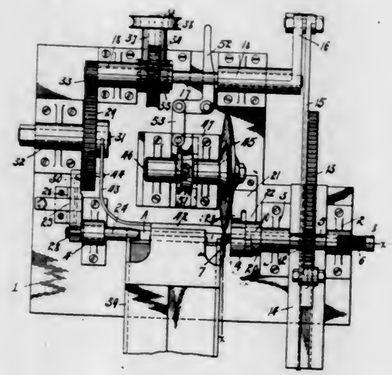
4. In a printing press, a bed, a type carrier slidably mounted on the bed, a pressure roller mounted to engage the bed to bring the type carrier into engagement with the roller, a tension device for retaining tape on the roller, a gripping device for engaging the tape, means for actuating the gripping device mounted on the bed, means for operating the gripping operating means on the return movement of the roller, and means associated with the type carrier for rendering the means for operating the gripping means inoperative.

8. In a printing press of the class described, a bed, a type carrier mounted on the bed, a pressure roller mounted to displace the bed inwardly for bringing the type carrier into engagement with the pressure roller, tension means for retaining the tape on the pressure roller, a gripping device for the tape, means for operating the gripping device carried by the bed, a cam adjustable on the pressure roller, and means interposed between said cam and the means for operating the gripping device.

[Claims 2, 3, 5 to 7, and 9 to 17 not printed in the Gazette.]

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1,231,283. THREAD-CUTTING MACHINE. FRANK H. MOONEY, Toledo, Ohio, assignor to The Conklin Pen Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Apr. 7, 1916. Serial No. 89,567. (Cl. 51—4.)



1. In a machine of the class described, a work engaging and rotating part, means having rack and pinion connection with said part and automatically operable to impart rotary reciprocatory movements thereto, means for imparting axial reciprocatory movements to said part when reciprocally rotated, and means for acting on a work piece held by said part to spirally cut the same when said part is rotated and axially moved in one direction.

2. In a machine of the class described, a bearing, work holding means having parts for engaging opposite ends of a work piece, one of said parts being reciprocally movable to intermittently engage and release work pieces, means automatically operable to periodically reciprocate said part, a bearing in which the other of said parts is threaded to cause said part to axially move when it is rotated, means for imparting rotary reciprocatory movements to said threaded part, and work cutting means for acting on a work piece held by said work holding means when said threaded part has combined rotary and axial movements in one direction.

3. In a machine of the class described, a work cutting member, means for holding a work piece in position to be acted on by said member, means for imparting rotary reciprocatory and axial reciprocatory movements to said work holding means, and means for periodically imparting rotary shifting movements to said holding means.



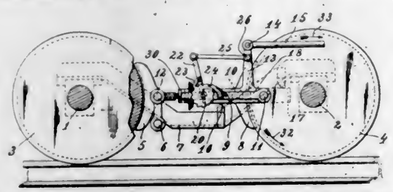
4. In a machine of the class described, a work cutting member, a work holding spindle, means operable to impart rotary reciprocatory and axial reciprocatory movements to said means to move a work piece whereby said member has a spiral cutting action thereon, and means for imparting a predetermined rotary shifting movement to the work holding means at a predetermined point in an axial stroke thereof.

5. In a machine of the class described, a sleeve mounted for rotary and axial movements, means for imparting rotary reciprocatory movements to said sleeve, means for imparting axial reciprocatory movements to the sleeve when rotated, a work engaging spindle mounted in said sleeve for rotary and axial movements therewith, means periodically operable to rotatably shift said spindle with respect to said sleeve, and means coöperating with said spindle to hold the work piece.

[Claims 6 to 24 not printed in the Gazette.]

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1,231,284. TAKE-UP FOR MOMENTUM-BRAKES. PORTER S. MORGAN, Norwalk, Conn., assignor, by direct and mesne assignments, to Momentum Brake Corporation, New York, N. Y., a Corporation of New York. Filed Sept. 9, 1915. Serial No. 49,712. (Cl. 188—51.)



1. Moving surfaces, brake members associated therewith and attached to a tiltable lever, stationary fulcrums adapted to engage the aforesaid lever for augmenting the brake retarding action and wear adjusting means connected with the brake members but operated by the movement of the tiltable lever.

2. Rotary members, a brake shoe associated with one rotary member and connected to a tiltable lever, stationary fulcrums adapted to engage the tiltable lever, a second brake shoe associated with a second rotary member and connected to the tiltable lever through a wear adjusting means, said wear adjusting means being operated by connection with the tiltable lever.

3. Rotary members, brake shoes associated therewith and attached to a tiltable lever, stationary fulcrums adapted to engage the tiltable lever for augmenting the brake retarding action for either direction of rotation of the rotary members and wear adjusting means connected with the brake shoes but operated by the movement of the tiltable lever.

4. Rotary members, brake shoes associated therewith and attached to a tiltable lever, stationary fulcrums adapted to engage the tiltable lever for augmenting the brake retarding action for either direction of rotation of the rotary members and wear adjusting means connected with the brake shoes but operated by the movement of the tiltable lever in one direction.

5. Rotary members, brake shoes associated therewith and attached to a tiltable lever, stationary fulcrums adapted to engage the tiltable lever for augmenting the brake retarding action for either direction of rotation of the rotary members and wear adjusting means connected with the brake shoes but operated by the movement of the tiltable lever in one direction through a predetermined angle.

[Claims 6 and 7 not printed in the Gazette.]

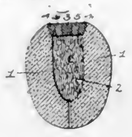
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1,231,285. PROCESS OF MAKING TIN-PLATE. FRIEDRICH MUELLER, Vienna, Austria, assignor of one-half to Frederick Mueller, Chicago, Ill. Filed June 18, 1914. Serial No. 845,851. (Cl. 91—70.3.)

The process of tinning black plate on one side only which consists in coating one side of the previously annealed and pickled black plate with fat, in dipping the thus prepared black plate in an acidulated solution of a copper salt which precipitates a dense deposit of copper upon the free surface of the black plate, in changing this aforesaid deposit of copper into sulfid of copper, previous to passing the plate through the tinning pot and tinning the plates afterward.

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1,231,286. STUFFED FRUIT. HORACE C. NEWCOMB, Philadelphia, Pa. Filed May 7, 1917. Serial No. 166,870. (Cl. 99—11.)

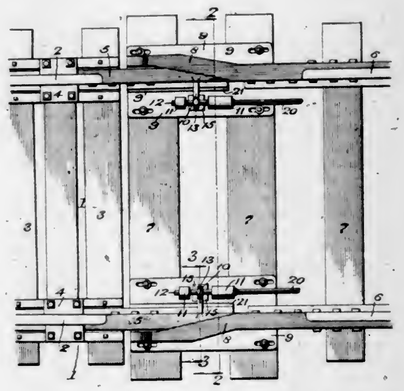


1. A stuffed fruit having the cavity originally occupied by the pit filled with edible stuffing material and having the mouth of said cavity closed by a plug which fits snugly to the walls of the cavity, said plug consisting of a plurality of different edible members.

[Claims 2 to 4 not printed in the Gazette.]

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1,231,287. DRAWBRIDGE JOINT CONNECTION AND LOCK. THOMAS O'BRIEN, Philadelphia, Pa. Filed Mar. 31, 1917. Serial No. 159,015. (Cl. 104—215.)



1. A joint connection for points of railroad rails of a drawbridge with those of an approaching roadbed consisting of point rails on the drawbridge movable therewith, stock rails on the road bed, said point rails being mounted for elevation to clear the stock rails in the opening and closing movements of the drawbridge, and means for holding said point and stock rails in engagement side by side as to provide continuities of the heads of said rails.

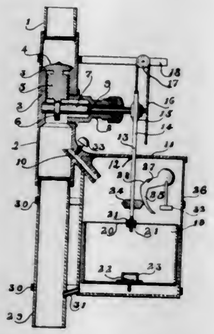
3. A joint connection for points of railroad rails of a drawbridge and those of an approaching road bed consisting of point rails on the drawbridge and stock rails on the road bed, eye bolt-like members on the movable point rails, and a slide bolt on the road bed adapted to engage the eye of each said bolt-like member, and means for operating said bolt.

6. A joint connection for points of railroad rails of a drawbridge with those of an approaching road bed consisting of point rails on the drawbridge movable therewith, and stock rails on the road bed, an eye-bolt-like member on a movable point rail, means on the road bed adapted to engage the eye of said bolt-like member, a con-

trolled device for operating said means, a box on the road bed, and a resilient plunger in said box, said bolt-like member being adapted to be seated on said plunger and subjected to the pressure thereof, said plunger and box having connections adapted to guide said plunger in said box.

[Claims 2, 4, and 5 not printed in the Gazette.]

1,231,288. FLUSHING DEVICE. CLAUD A. OSBORN, Fort Worth, Tex. Filed Sept. 13, 1915. Serial No. 50,337. (Cl. 137—93.)



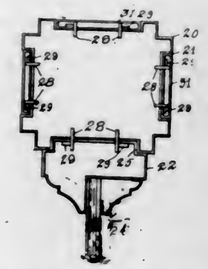
1. In combination, a valve and controlling means therefor, comprising a shaft bearing at one end an eccentric adapted on rotation of the shaft to unseat the valve and on the other end the gear, a rack-bar engaging said gear, a cup secured to said rack-bar, means for intercepting a portion of the discharge from the outlet side of the valve and directing it into said cup, swinging gravity tripping devices for yieldingly supporting the cup in elevated position and adapted to permit the fall of the cup when a predetermined amount of water has been received therein, and means for elevating the rack-bar whereby the valve is unseated and the cup elevated.

2. In combination, a valve and controlling means therefor, comprising a rocker shaft bearing at one end an eccentric adapted on the rocking of said shaft to unseat said valve and bearing at the other end a gear, a cup for automatically causing the seating of said valve, a reciprocating member operatively connecting said cup and said gear for actuating said gear, means for moving said reciprocating member to unseat said valve and simultaneously to elevate said cup, swinging gravity tripping devices for yieldingly supporting said cup in the elevated position but adapted to permit the fall of the cup when a predetermined amount of water accumulates in said cup, and means for intercepting a portion of the water discharged by the unseating of said valve and directing the same into said cup to cause said cup to descend and effect the reseating of said valve.

1,231,289. KNOCKDOWN SHEET-METAL PARTITION. OTTO M. OTTE, Jamestown, N. Y. Filed Sept. 11, 1916. Serial No. 119,337. (Cl. 189—34.)

1. In knock-down sheet metal partition work, the combination of hollow sheet metal pilasters having lengthwise panels on each side, said pilasters having slots in pairs in said panels opposite the cap and rail and plinth portions of said pilasters, hollow sheet metal partition sections adjacent said pilasters having edges to fit within said lengthwise panels, hooks in pairs on said lengthwise edges of said partition sections to engage said slots in holding engagement, and filling pieces having hooks thereon to engage said slots and fill said panels on the sides which are not used by said partition section.

2. In a knock-down sheet metal partition, the combination of hollow metal pilaster and panel sections, hook and slot connection for said pilaster and panel sections, hooks on the upper ends of said pilaster section, channel molding having ends mitered from each side and slots in said mitered ends adapted to receive said hooks on the upper end of said pilaster, and a plate having slots adapted to receive said hooks on said upper end of said pilaster, and means for wedging said hooks in holding engagement with the plate to lock all the parts of said partition.

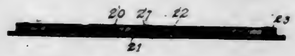


3. In a knock-down sheet metal partition, the combination of hollow metal pilaster and panel sections, hook and slot connection for said pilaster and panel sections, hooks on the upper ends of said pilaster section, channel molding having ends mitered from each side to the center and slots in said mitered ends adapted to receive said hooks on the upper ends of said pilaster, pins a spaced distance from the mitered ends in the bottom of said channel molding, a plate fitting within said bottom of said channel molding having holes to receive said pins to aline said ends, said plate having slots to receive said hooks on the upper ends of said pilaster, and wedges to engage beneath said hooks to lock said parts in holding engagement.

4. In a knock-down sheet metal partition, molding having mitered ends, means for angular or straight attachment of said molding with said mitered ends adjacent one another, filling pieces corresponding to the contour of said molding having hooked lugs thereon, said mitered ends of said molding having slots adapted to receive said hooked lugs in holding engagement to cover the opening between said mitered ends, and means of attachment for said molding to the partition.

[Claims 5 to 12 not printed in the Gazette.]

1,231,290. PROCESS FOR ATTACHING COATED METAL SHEETS. OTHO M. OTTE, Jamestown, N. Y. Filed Sept. 15, 1916. Serial No. 120,282. (Cl. 113—112.)

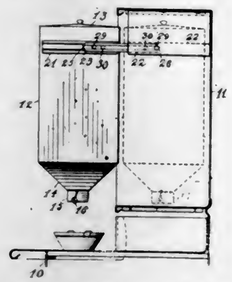


The hereindescribed process of attaching a finishing metal sheet having affinity for solder or the like and coated with enamel or like finishing material repellent to solder or the like to an uncoated metal sheet which consists in first enameling said first sheet, then in forming holes in said coated sheet after enameling thereof, thereby providing the holes with walls which are uncoated, then in clamping the coated sheet to the uncoated sheet, and finally in placing a binder in the holes to adhere to the uncoated walls thereof and to the uncoated sheet.

1,231,291. FLOUR-BIN FOR KITCHEN-CABINETS. OTHO M. OTTE, Jamestown, N. Y. Filed Sept. 21, 1916. Serial No. 121,471. (Cl. 45—16.)

1. In combination with a kitchen cabinet, and a bin, a slide suspension for each side of the bin composed of two channeled outer sections, a central apertured section having parts slidably received in the channels, a stop for each channeled section insertible through the apertures of the central section and removably connected to the channeled sections, and stop means on the central section coöperating with said stops of the channeled sections





2. In combination with a kitchen cabinet, a flour bin, a slide suspension for each side of said bin consisting of two channel plate sections facing one another as to their open sides and attached one to the cabinet and the other to the bin, and a central double flanged section slidably telescoping in said channel plate sections to telescopingly connect the same and suspend said bin in said cabinet or before said cabinet when in the withdrawn position.

6. In combination with a kitchen cabinet, and a bin, slides composed of inner channel members connected to the bin, outer channel members connected to the cabinet, a central member having pairs of upwardly and downwardly extending flanges slidingly received in the respective upper and lower parts of the channels of the inner and outer members, stops on the ends of the central member extending into the channels of the respective inner and outer members, said central member having spaced holes and the inner and outer channel members having threaded holes registrable in one position with the holes of the central member, and stop screws insertible in and removable from the threaded holes through the holes of the central member.

7. In combination with a kitchen cabinet, and a bin, slides composed of inner members connected to the bin and outer members similar to the inner members and connected to the cabinet, and a central member composed of a pair of similar parts having backs secured together and formed to engage each of the inner and outer members.

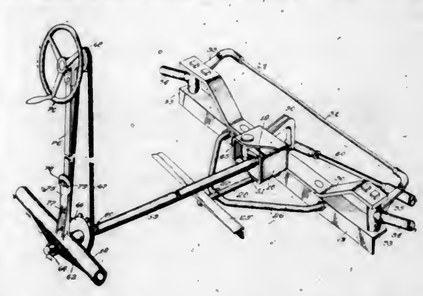
[Claims 3 to 5 and 8 not printed in the Gazette.]

1,231,292. MOTOR-VEHICLE. DENT PARRETT, Chicago, Ill. Filed June 25, 1915. Serial No. 36,218. (Cl. 21—199.)

1. In a motor vehicle a tapered frame, a front axle swiveled to the forward end of such frame, a steering gear including a bell crank lever supported by such frame, steering knuckles, a drag link, and a steering rod, such steering rod being connected to an arm of such bell crank lever at a point substantially in line with the axis of rotation of such swiveled axle.

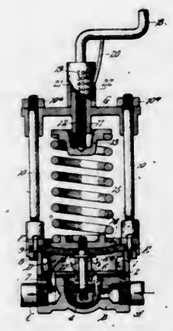
2. In a motor vehicle a tapered frame comprising channel members with their forward ends closely adjacent, a hollow block connecting such forward ends, a swiveled front axle supported by such hollow block, a steering gear including a bell crank lever supported in such hollow block and having a down-turned arm, steering knuckles, a drag link, and a steering rod, such steering rod being connected to the bottom end of the downturned arm of the bell crank at a point substantially in line with the axis of rotation of the swiveled front axle, and means for actuating such bell crank lever.

3. In a motor vehicle a tapered frame comprising channel members with their forward ends closely adjacent, a hollow block connecting such forward ends, a swiveled front axle supporting such hollow block, a steering gear including a bell crank lever supported in such hollow block and having a down turned arm, steering knuckles, a drag



link and a steering rod, such steering rod being connected to such bell crank lever at a point near the center of the axle, and means for actuating such bell crank lever.

1,231,293. PRESSURE-REGULATING VALVE. THEODORE PETERS, Ferdinand, Ind., assignor to The Pet-Son Pump Company, a Corporation of Indiana. Filed May 20, 1916. Serial No. 98,931. (Cl. 50—23.)



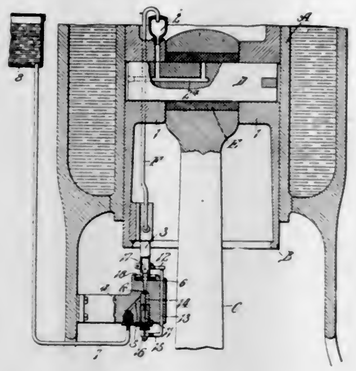
1. In a pressure-regulating valve, a casing provided with inlet and discharge ports, a flexible diaphragm which controls the passage of a medium under pressure from said inlet to said discharge port, a plurality of uprights on said casing, a cross piece mounted on said uprights, a rotatable member threaded into said cross piece, a spring cap arranged at the lower end of said member, a coiled expansion spring arranged between said cap and said diaphragm, a stationary element on said cross piece through which said rotatable member passes, said element being provided on its outer surface with a scale, and a device on said rotatable member that coöperates with said stationary element to lock said rotatable member and also to indicate the pressure which said spring applies to said diaphragm.

[Claim 2 not printed in the Gazette.]

1,231,294. LUBRICATING MECHANISM FOR PISTON-MACHINES. GEORGE D. POGUE, St. Louis, Mo. Filed Mar. 6, 1917. Serial No. 152,595. (Cl. 184—27.)

1. A lubricating mechanism for piston machines, comprising an oil conduit movable with the piston of the machine, a stationary element provided with an oil passageway and arranged in such a manner that it will be engaged by said oil conduit during a part of the stroke of

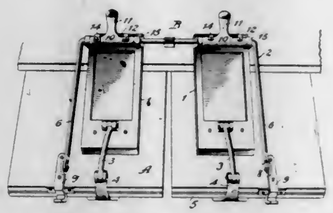
the piston of the machine, means for supplying oil under pressure to the passageway in said stationary element, a valve in said stationary element for controlling the passage of oil from the duct therein into said oil conduit, and means for opening said valve when said oil conduit is in engagement with said stationary element.



4. In a machine of the character described, a reciprocating piston, an oil conduit carried by the piston and provided at its lower end with a tubular-shaped device, a stationary element provided with a resilient member which the lower end of said tubular-shaped device abuts during part of the stroke of the piston in one direction, an oil passageway in said stationary element, means for supplying oil under pressure to said passageway, a valve for controlling the discharge of oil from said passageway, and means carried by the piston for opening said valve after said tubular-shaped device has engaged said resilient member.

[Claims 2 and 3 not printed in the Gazette.]

1,231,295. PEDAL MECHANISM FOR PLAYER-PIANOS. ROBERT P. POTTER, Sound Beach, Conn., assignor to The C. D. Potter Co., Stamford, Conn., a Corporation of Connecticut. Filed Dec. 20, 1916. Serial No. 138,010. (Cl. 74—81.)

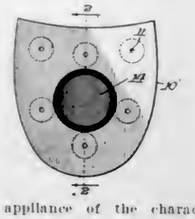


2. A pedal mechanism of the class described comprising a swinging frame composed of a pair of oppositely disposed elbow sections having respectively aliining front arms of different lengths, pedals mounted on the arms, and feet elements mounted on the arms and engaging the pedals to prevent lateral displacement, one of the feet elements forming a connector between the said arms to unite the sections of the frame rigidly together.

3. A pedal mechanism of the class described comprising a swinging frame composed of oppositely disposed L-shaped sections presenting side and front arms, pedals having apertured lugs through which the front arms extend, a T-shaped foot element associated with each pedal having a tubular head set in between the lugs of the associated pedal and through which a front arm extends, and set-screws on the heads for clamping the feet element to the frame.

[Claims 1 and 4 not printed in the Gazette.]

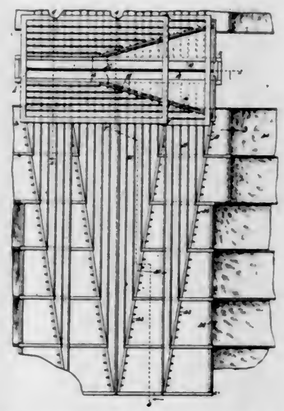
1,231,296. RESILIENT HEEL AND THE LIKE. AUGUSTUS F. PRIEST, Oak Park, Ill. Filed Apr. 11, 1917. Serial No. 161,113. (Cl. 36—35.)



1. A cushion appliance of the character described adapted for use in connection with shoes and the like, comprising a resilient body equipped with a portion raised above the main body and recessed to provide a suction cup, said body at the suction cup portion being formed to provide increased resiliency, whereby to increase the cushioning effect of the appliance and facilitate the action of the suction cup, substantially as described.

[Claims 2 and 3 not printed in the Gazette.]

1,231,297. GOLD-CONCENTRATING PLANT. NATHAN L. RABER, Corvallis, Oreg. Filed May 19, 1916. Serial No. 98,589. (Cl. 83—89.)



1. A gold concentrating plant comprising a grizzly, a distributer, a channeled receiver between the grizzly and distributer for delivering uniform streams of the matter coming from the grizzly over the area of the distributer, concentrating tables, and means for controlling the flow from the distributer to the respective tables and adapted to control the head in the distributer.

2. A gold concentrating plant comprising a grizzly, a distributer disposed substantially on a level, a hopper connecting the grizzly to the distributer, channeled beds carried by the hopper between the bottom thereof and the grizzly, said beds having a biased edge whereby said channels discharge at different points of the hopper bottom to serve uniformly the area of the distributer, concentrating tables, and means for controlling the flow from the distributer to the respective tables and adapted to control the head in the distributer.

3. A gold concentrating plant comprising a grizzly, a distributer in the shape of a trough disposed substantially level below the grizzly and central therewith, a hopper connecting the grizzly with the trough, channeled beds within the hopper on each side of the trough and above the same, said beds having a biased edge whereby each channel serves a predetermined part of the distributer, baffle plates at the biased edge for changing the direction of flow in the channels and sub-dividing the channels into a uniform number of parts, concentrating tables, and flow-controlling means from the distributer to the respective tables and adapted to control the head in the trough.

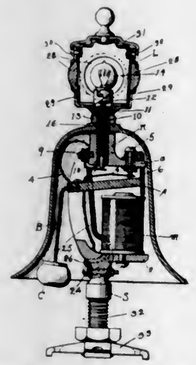
4. A gold concentrating plant comprising a grizzly, a distributer in the shape of a trough disposed on a level and central with the grizzly, a receiver in the shape of a hopper connecting the trough with the grizzly, channeled beds within the hopper on each side of the trough, said beds having a predetermined longitudinal flow and a biased edge forming the discharge end of the channels and whereby channels of various lengths are presented by each bed, baffle plates at the biased edge at right angles to the direction of flow in the channels, concentrating tables, and flow controlling means from the trough to the respective tables and adapted to control the head in the trough.

5. A gold concentrating plant comprising a grizzly, a distributer in the shape of a trough disposed on a level below the grizzly, a hopper connecting the grizzly with the trough, a channeled bed within the hopper of the trough, said bed having a predetermined longitudinal flow and a biased edge at the discharge end of the channels whereby channels of various lengths are presented by the bed, baffle plates within the channels at the biased edge at right angles to the direction of flow in the channels, said baffles sub-dividing the channels into a uniform number of parts, concentrating tables, and flow control means from the trough to the respective tables and adapted to control the head in the trough.

[Claims 6 to 8 not printed in the Gazette.]



1,231,298. SIGNALING DEVICE. CHRISTIAN REINKER, Lakewood, Ohio, assignor to The Liberty Bell Company, Cleveland, Ohio, a Corporation. Filed Jan. 28, 1915. Serial No. 4,829. (Cl. 177—7.)

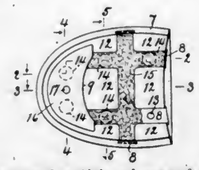


1. A signaling device, comprising a bell and an electromagnet having means to ring said bell, and a standard to carry said parts, in combination with an electric lamp surmounting said bell, a tube connecting said lamp and standard, an electrical conductor for the lamp extending through said tube, and a contact member carried by the standard for the lower end of said conductor.

4. In a signaling device, a standard, a tubular screw extension at the top of said standard, a bell sleeved over said extension, an electro-magnet and a clapper and spring-pressed armature mounted upon said standard to ring said bell, a binding screw mounted upon the lower portion of said standard and insulated therefrom, a lamp casing secured to said extension above said bell, an electric lamp seated within said casing, an electrical connection for said lamp extending through said tubular extension to said binding screw, an electrical conductor connecting said binding screw and electro-magnet, and a contact for said spring-pressed armature electrically connected with said electro-magnet.

[Claims 2 and 3 not printed in the Gazette.]

1,231,299. CUSHION-HEEL FOR BOOTS AND SHOES. MAX RIECKMANN, Springfield, Mass. Filed Jan. 18, 1917. Serial No. 143,168. (Cl. 36—59.)

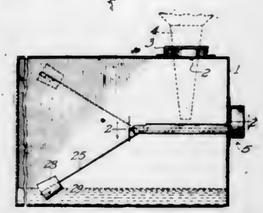


1. As an improved article of manufacture, a cushion heel comprising a yielding body having cross channels therein to divide the tread thereof into a plurality of gripping surfaces, and filling material in said channels, such filling material being substantially non-resistant to the compressibility of said gripping surfaces.

4. As an improved article of manufacture, a cushion heel comprising a yielding body having channels therein to divide the tread thereof into a plurality of gripping surfaces, such channels having undercut sides, and filling material in such channels, such filling material being substantially non-resistant to the compressibility of said gripping surfaces.

[Claims 2 and 3 not printed in the Gazette.]

1,231,300. GASOLENE-GAGE. OLIVER C. RITZ-WOLLER, Chicago, Ill. Filed June 9, 1915. Serial No. 32,992. (Cl. 73—82.)



1. A gasolene gage comprising a cup, a dial therefor, a rod passing through an opening in said cup, said rod having both ends bent at an angle thereto, a float, means whereby one of said ends is connected to said float, the other of said ends serving as an indicating needle and means secured to said cup for supporting and protecting said rod, said float connecting means being pivotally connected to said rod supporting means and arranged to move in a plane at an angle to the plane of movement of said needle.

2. A gasolene gage comprising a supporting ring, a gage cup mounted thereon, two glass disks compressed by extensions on said cup, packing rings between said respective parts and means for clamping the latter together to provide an air-tight chamber in said cup, a dial between said glass disks, and a rod passing through an opening in the lower part of said cup with an arm thereon at an angle thereto and extending behind said glass parallel and adjacent thereto to form an indicator, said dial having an opening therein through which said indicator is visible.

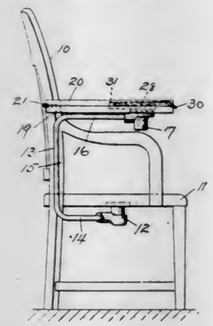
3. A gasolene gage comprising a gage cup secured to a gasolene tank, an angle bar secured to said cup and extending horizontally into said tank, a spindle rotatably mounted at the ends of said bar, one flange of said angle bar serving to stiffen the same, and the other flange

thereof serving to protect said spindle from damage by the funnel.

4. A gasolene gage comprising a gage cup, the base of which is provided with an opening, a plurality of glass disks fitted within said cup and spaced away from the base thereof to form an air-tight chamber, a dial clamped between said glass disks, and a rod passing through said opening in the base of said cup and having an indicator thereon adapted to operate within said air-tight chamber, in the rear of said dial and said glass disks.

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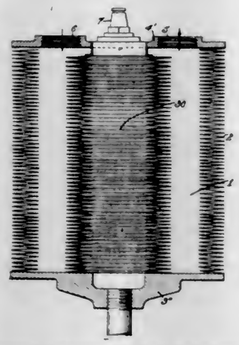
1,231,301. COMBINED CHAIR AND DESK. FREDERICK A. SCHLANGER, New York, N. Y. Filed Sept. 17, 1914. Serial No. 862,205. (Cl. 45—82.)




In a combined desk and chair, the combination with a chair seat of a U-shaped bracket having one end thereof pivotally mounted on the under side of said seat, and a desk pivotally mounted on the free end of said bracket; said desk comprising upper and lower leaves hingedly connected together at one edge thereof, racks on the upper face of the lower leaf, spaced straps on the under side of the upper leaf, a square hoop-shaped supporting member having one side portion thereof swingably connected to the said straps and having its opposite side portion adapted to engage the said racks to determine the degree of elevation of said upper leaf, and a finger rigidly attached to the hinged portion of said supporting member between the said straps and projecting beyond the outer edge of the said upper leaf whereby it may be manually operated for manipulating the said supporting member.

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1,231,302. POWER-CHAMBER. JAMES F. SCOTT, New York, N. Y. Filed June 9, 1916. Serial No. 102,631. (Cl. 60—2.)



1. In a power chamber of the character described, a bellows construction having an opening centrally, a movable head connected with said bellows construction, a fixed head connected with the opposite end of said bellows construction, and a collapsible filling cylinder arranged in said opening.

2. In a power chamber of an internal combustion engine, a bellows structure formed of a plurality of collapsible sections connected together, said sections having a comparatively large opening at the point of connection, a collapsible filling member substantially filling said opening, a fixed end member connected to one end of said bellows structure, and a movable end member connected to the other end of said bellows structure.

3. In a power chamber for internal combustion engines, a plurality of collapsible sections connected together, said sections having a comparatively large opening centrally, each of said sections being formed from a pair of disks, means for connecting the outer periphery of said disks rigidly together and bracing means for supporting the disks, a head connected to one end of said sections, a flexible collapsible filling member substantially filling said opening, and means connected with the opposite end of said collapsible sections to said head for transmitting power.

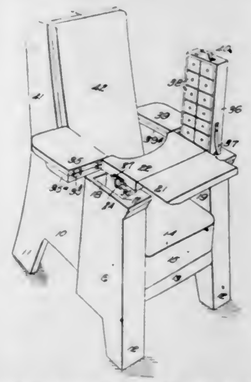
4. In a power chamber for internal combustion engines, a head provided with an opening therein, a collapsible construction connected with said head, said collapsible construction having a comparatively large opening centrally thereof, a collapsible filling member connected with said head, said filling member substantially filling the opening in said collapsible construction, said filling member also being connected to said head and fitting in said opening in the head so that the interior of the filling member will be in free communication with the atmosphere, and a movable head connected with said collapsible construction for transmitting power therefrom.

5. In a power chamber for internal combustion engines a collapsible bellows structure provided with a comparatively large bore centrally, a fixed head connected to one end of said bellows structure, said fixed head having an inlet and exhaust port, a movable head connected with the opposite end of said bellows structure, said movable head having an opening therein, a collapsible filling chamber connected with said heads and substantially filling the bore of said collapsible bellows when the bellows have been collapsed, and a power member connected to said movable head for transmitting power from the power chamber.

[Claims 6 to 9 not printed in the Gazette.]

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1,231,303. COMBINATION ARTICLE OF FURNITURE. DAVID ARTHUR SELIGMAN, Minneapolis, Minn. Filed Sept. 11, 1915. Serial No. 50,201. (Cl. 155—34.)



1. An article of furniture in the form of a chair, having a seat and table supports at the sides of the seat, there being a vertical pocket in one of said supports, a table fitting said pocket, and formed with an undercut channel in the under side thereof, a shank pivoted at the inner side of the pocket adjacent to and below the upper end of the latter and laterally inward from the inner wall of the pocket, to swing in a vertical plane to a transverse position in the pocket below the said upper end thereof, or to a vertical position with its free end projecting above the pocket in vertical line with the said support, the said shank having a head at its free end slidably received in the channel of the table, the said table being slidable vertically in the pocket relatively to said head, and movable to a horizontal position across the front of the seat, the table furthermore being slidable horizontally in its own plane to a position laterally outward and away from the seat, the outer wall of the pocket forming a rest for the table, in addition to the connection with the said shank, to sustain the table when slid to the said outer horizontal position.

2. An article of furniture in the form of a chair having supports at the front for a table, one of said supports having a vertical pocket open at its upper end, a ledge projecting laterally in said pocket at the inner side wall thereof near the bottom, a table slidable in the pocket to rest at its lower end on said ledge, or to be withdrawn from the pocket, a depressed box in the upper end of the support at a side of the pocket, a shank pivoted at one end in the said box below the top thereof and inward from the adjacent wall of the pocket to swing in a vertical plane to a horizontal position below the top of the pocket or to a vertical position with its free end projecting above the pocket in vertical line with the said support, said shank having a head at its free end, and the said table having a slot therein, slidably receiving the said head, and a trip at that end of said slot which is adjacent to the said ledge when the table is on the latter, said trip being adapted to engage said shank and swing the same when the table is withdrawn from the pocket and lowered onto said supports.

3. An article of furniture including a seat, vertical structures at the sides of the seat, arm rests on said structures, the arm rests being each formed of a rear fixed section and a front section hinged to fold onto the rear section or to a forward position in front of the fixed section, and a table connected with one of the said structures to be moved to a vertical position or to a horizontal position ranging transversely of and resting on both of the said structures in front of the arm sections when the hinged arm sections are folded onto the fixed sections.

4. An article of furniture including a seat, vertical structures at the sides of the seat, arm rests on said structures, the arm rests being formed of a rear fixed section and a front section hinged to fold onto the rear section or to a forward position in the plane of the fixed section, and a table connected with one of the said structures to be moved to a vertical position or to a horizontal position ranging transversely and resting on both of the said structures in front of the fixed arm sections when the hinged arm sections are folded on the fixed sections, the said table being composed of sections hinged together to open into the same plane or fold one on top of the other, the combined thicknesses of the superposed sections of the arm rests being approximately equal to the thickness of the open table to lie flush with the latter when the table is in the said horizontal position.

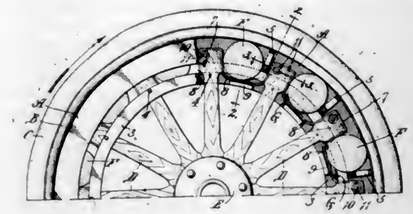
5. An article of furniture including a seat, supports at the sides of the seat, and a table connected with one of said supports to move to a vertical position or to a horizontal position, the table when in a horizontal position being slidable transversely in a plane parallel with the seat to rest at its ends on the said supports or laterally outward to a position away from the front of the seat and supported solely by the support with which it is connected.

[Claim 6 not printed in the Gazette.]

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1,231,304. VEHICLE-WHEEL. EDWARD C. SENDELBACH, Cincinnati, Ohio. Filed Dec. 15, 1916. Serial No. 137,145. (Cl. 152—36.)

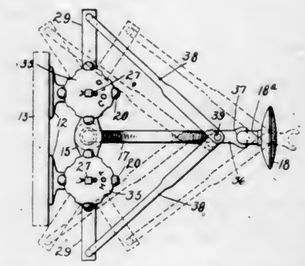
A vehicle wheel, comprising a rim section provided with side flanges, a hub section provided with spokes whose end portions fit between said side flanges, recesses in the side faces of said spokes, blocks of rubber in said recesses,



and wear studs in said blocks of rubber that bear against said side flanges.

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1,231,305. ATTACHMENT FOR TWIN FAUCETS. GEORGE R. SHEPHERD, Brookline, Mass., assignor of one-half to George N. Kaye, Boston, Mass. Filed Feb. 3, 1917. Serial No. 146,394. (Cl. 137—26.)



1. A hose-supporting and guiding stem-turning attachment for twin faucets, comprising a pair of faucet stem extensions having means for engaging two faucet stems, a hose rest, and connecting means engaged with said extensions and rest and supporting the rest for movement in a predetermined path, said means having provisions for turning the stem extensions and faucet stems engaged therewith, simultaneously in opposite directions when the rest is moved in either direction, and thereby simultaneously increasing the flow through one faucet and decreasing the flow through the other.

3. A hose-supporting and guiding stem-turning attachment for twin faucets, comprising a pair of faucet stem extensions having means for engaging two faucet stems, a hose rest, and connecting means engaged with said extensions and rest and supporting the rest for movement in a predetermined path, said means having provisions for turning the stem extensions and faucet stems engaged therewith, simultaneously in opposite directions when the rest is moved in either direction, and thereby simultaneously increasing the flow through one faucet and decreasing the flow through the other, the said connecting means and stem extensions being provided with cooperative clutch parts which are separable, to permit the turning of the stem extensions and the stems engaged therewith, independently of the connecting means.

7. An attachment for twin faucets, comprising a pair of faucet stem-extensions having means for detachable engagement with the stems of said faucets, a movable rest adapted to support a hose connected with said faucets, and connecting means between said rest and stem extensions, organized to movably carry said rest and turn the stem extensions and the faucet stems engaged therewith, simultaneously in opposite directions when the said member is moved relatively to the faucets, and thereby simultaneously increase the flow through one faucet and decrease the flow through the other.

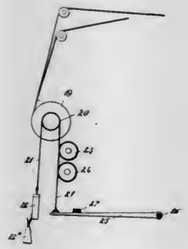
13. An attachment for twin faucets, comprising stem extensions, each including a base forming a clamping-jaw adapted to bear on one side of a faucet stem, and provided with a movable clamping-jaw adapted to bear on the opposite side of said stem, and with means for adjusting said movable jaw, a stud substantially alined with the stem between said jaws, and provided with a cylindrical lower portion and a squared upper portion, a movable rest adapted to support a hose connected with said faucets, rest-carrying means organized to turn the stem extensions and faucet stems engaged therewith, simultaneously in opposite directions, and including lever-arms adapted to turn loosely on said cylindrical stud portions and projecting oppositely therefrom, and connections between said arms and said rest, the lever arms being provided with clutch parts, and manually operable handles having squared sockets constantly in slidable engagement with said squared stud portions, and each provided with an arcuate series of complemental clutch parts, either of which is adapted to engage a clutch part on one of the lever arms.

14. An attachment for twin faucets, comprising stem extensions detachably engageable with the stems of said faucets, lever-arms engaged with said extensions and projecting oppositely therefrom, links jointed to the outer ends of said arms and converging therefrom, to a meeting point where they are pivotally connected, and a rest carried by said links and having a socket adapted to engage a tapered member associated with a hose connected with said faucets, said lever-arms and links constituting rest-carrying means organized to turn said stem extensions and faucet stems connected therewith, simultaneously in opposite directions when said rest is moved relatively to the faucets.

[Claims 2, 4 to 6, and 8 to 12 not printed in the Gazette.]

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1,231,306. WARP-BEAM MOTION FOR LOOMS. CARL SPANNAGEL, Berlin, Germany. Filed Apr. 24, 1915. Serial No. 23,558. (Cl. 139—58.)



1. In a loom the combination of a warp beam, with a tension device at each side of the loom comprising a plurality of guiding rolls, a weighted lever, a cord attached at one end to said lever, said cord being passed around said guiding rolls and the end axle of said warp beam, and a counterweight attached to the other end of said cord.

2. In a loom the combination of a warp beam, with a tension device at each side of the loom comprising a plurality of guiding rolls, a weighted lever, a cord attached at one end to said lever, said cord being passed around said guiding rolls and the end axle of said warp beam, a counterweight attached to the other end of said cord, and a stop limiting the movement of said weighted lever.

3. In a loom the combination of a warp beam, with a tension device at each side of the loom comprising two guiding rolls, a weighted lever, a stop limiting the movement of said lever, a cord attached at one end to said lever, said cord passing about one of said rolls, then about the other of said rolls, then about the end axle of the warp beam, and a counterweight attached to the other end of said cord.

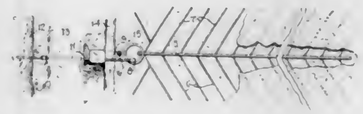
1,231,307. POLISHING COMPOUND. HERBERT W. SPELLMAN, New Britain, Conn. Filed May 21, 1915. Serial No. 29,537. (Cl. 51—1.)

1. A polishing compound in the form of loose particles comprising crocus and a hard abrading substance mixed together, and both in finely divided form, and granulated cork.

2. A polishing compound in the form of loose particles comprising crocus and carborundum mixed together, and both in finely divided form, and granulated cork.

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1,231,308. IRRIGATING AND DRAINING SYSTEM. JOHN STEELQUIST, Portland, Oreg. Filed July 1, 1916. Serial No. 107,145. (Cl. 137—66.)

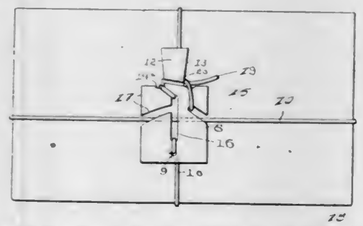


1. A system of the class described comprising a main pipe, lateral pipes connected thereto, a sump with which the main pipe is in communication, a pipe leading from a source of supply and terminating adjacent the bottom of the sump, a pump interposed in said last named pipe, a drainage ditch, and a pipe in communication with said drainage ditch and the sump.

2. A system of the class described comprising a main pipe, lateral pipes connected thereto, a sump with which the main pipe is in communication, a pipe leading from a source of supply and terminating adjacent the bottom of the sump, a pump interposed in said last named pipe, a drainage ditch, a pipe in communication with said drainage ditch and the sump, and a valve interposed in said last named pipe.

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1,231,309. PACKAGE-TIE. GEORGE W. STOUT, Trenton, N. J. Filed Dec. 30, 1915. Serial No. 69,408. (Cl. 24—130.)



As a new article of manufacture, a plate for the purpose described comprising a comparatively wide major portion and a projection extending from the major portion and resting in the plane of the longitudinal median line thereof; the major portion being provided with a transverse aperture, and being also provided in its edge with three separated open-mouth kerfs; two of the said kerfs being disposed adjacent to the said projection and at opposite sides of the said median line, and the third kerf being arranged comparatively remote from the projection and adjacent to the said transverse aperture.

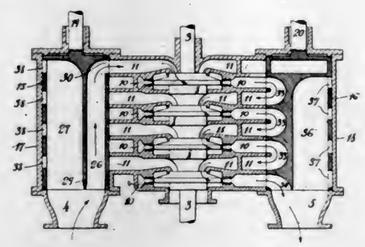
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1,231,310. PUMPING SYSTEM. HARVEY BIRCHARD TAYLOR, Philadelphia, Pa. Filed Sept. 29, 1914. Serial No. 864,046. (Cl. 103—43.)

1. An inlet valve for a multi-stage pump comprising a hollow cylinder open at one end to receive the liquid, peripheral recesses to discharge said liquid, and an axial



partition dividing said cylinder into separate passages for the entering fluid.



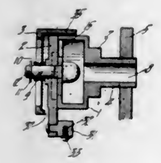
9. In combination with a multi-stage pump, a rotary stage controlling valve having chambers varying in volume according to the flow to be controlled.

16. A pump adapted to handle large quantities of water against a varying head and comprising a series of centrifugal impellers on a common shaft, inlet and exhaust valves parallel to said shaft for controlling the flows through said impellers in a plurality of combinations, and a casing for said impellers and valves having inlet and exhaust passages and consisting of an upper impeller housing having a lower integral base portion for all of said impellers and an integral cap portion mating therewith, and lower cylindrical valve housings substantially tangent to each other and tangent to and integral with said base portion of the impeller housing.

[Claims 2 to 8 and 10 to 15 not printed in the Gazette.]

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1,231,311. AUXILIARY AIR AND STEAM INLET VALVE FOR INTERNAL-COMBUSTION ENGINES. JOHN F. TEEL, Los Angeles, Cal., assignor to (Mrs.) Laura G. Fixen, Los Angeles, Cal. Filed Apr. 10, 1916. Serial No. 90,168. (Cl. 137—26.)



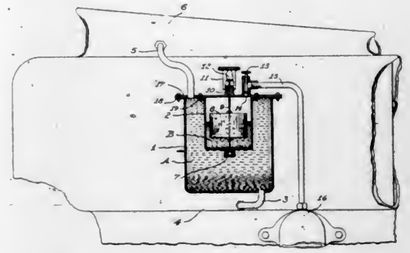
1. An auxiliary air and steam inlet valve adapted to be secured to the manifold of an internal combustion engine, comprising a valve casing having an outlet port leading to the manifold, and separate steam and air inlet ports, a rotatable disk controlling said steam and air inlet ports, said disk having a radial recess adapted to uncover said air inlet port, and an arcuate channel on its valve casing engaging face, a steam supply conduit, said channel being adapted to establish communication between said steam supply conduit and said steam inlet port for a substantial part of the rotation of said disk, a spring pressing said disk against said valve casing and a manually operated arm for rotating said disk, the size and position of said recess and said channel being so arranged as to permit the admission of air or steam or air and steam in varying proportion to said valve casing.

2. An auxiliary air and steam inlet valve adapted to be secured to the manifold of an internal combustion engine, comprising a valve casing having an outlet port leading to the manifold and separate steam and air inlet ports, a rotatable member controlling said steam and air inlet ports, said member having a radial recess adapted to uncover said air inlet port and an arcuate channel on its valve casing engaging face, a steam supply conduit, said channel being adapted to establish communication between said steam supply conduit and said steam inlet port for a substantial part of the rotation of said member, means for rotating said member, the size and position of said recess in said channel being so arranged as to permit the admission of air or steam or air and steam in varying proportions to said valve casing.

3. An auxiliary air and steam inlet valve adapted to be secured to the manifold of an internal combustion engine, comprising a valve casing having an outlet port leading to the manifold and separate steam and air inlet ports, a movable member controlling said steam and air inlet ports, said member having a recess adapted to uncover said air inlet port, and an arcuate channel on its valve casing engaging face, a steam supply port, said channel being adapted to establish communication between said steam supply port and said steam inlet port for a substantial part of the movement of said member, the size and position of said recess and said channel being so arranged as to permit the admission of air or steam, or air and steam in varying proportions to said valve casing.

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1,231,312. HUMIDIFIER FOR GASOLENE-ENGINES. BENJAMIN A. TOEDTER, Pueblo, Colo. Filed Sept. 2, 1916. Serial No. 118,298. (Cl. 123—25.)



1. In combination with a water-cooled gas engine, a vaporizing reservoir, connections from said reservoir to the intake of said engine, and means for circulating the cooling water of said engine around said vaporizing reservoir.

2. In combination with a water-cooled gas engine, an air-tight vaporizing reservoir, connections from said reservoir to the intake of said engine, and means for circulating the cooling water of said engine around said vaporizing reservoir.

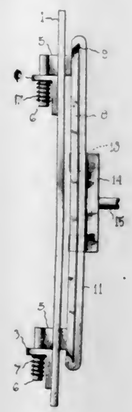
3. In combination with a water-cooled gas engine, a vaporizing reservoir having a feed port in its bottom and a vapor outlet port in its top, a float operated valve controlling said feed port, connections from said vapor outlet port to the intake of said engine, and means for circulating the cooling water of said engine around said vaporizing reservoir.

4. In combination with a water-cooled gas engine, a vaporizing reservoir having a feed port in its bottom and a vapor outlet port in its top, a float operated valve controlling said feed port, a manually operated valve controlling said vapor outlet port, connections from said vapor outlet port to the intake of said engine, and means for circulating the cooling water of said engine around said vaporizing reservoir.

5. In combination with a water-cooled gas engine, an outer reservoir, means for circulating the cooling water of said engine through said reservoir, an inner vaporizing reservoir, a float controlled valve in the bottom of said vaporizing reservoir affording communication between said reservoirs and adapted to maintain said vaporizing reservoir partially filled with water from said outer reservoir, and connections from said vaporizing reservoir to the intake of said engine.

[Claims 6 and 7 not printed in the Gazette.]

1,231,313. DOOR-HINGE. OSCAR G. TWEDDELL, Detroit, Mich. Filed July 28, 1916. Serial No. 111,833. (Cl. 16—5.)



1. A door hinge comprising separable strike and keeper plates, and a latch extending through the keeper plate into the strike plate to hold said plates together so that both of said plates may be moved in synchronism.

2. A door hinge comprising separable strike and keeper plates, and means pivotally supporting said strike plate so that said keeper plate may be moved therewith.

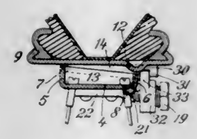
3. A door hinge comprising a jamb plate, a strike plate pivotally connected thereto, and a keeper plate to bodily receive said strike plate.

4. A door hinge including a frame member having beveled ends, and a door member adapted to swing in an arc on and off of said frame member and having beveled ends adapted for engagement with the ends of said frame member to limit the moving on movement of said door member.

5. A door hinge comprising a jamb plate, a strike plate pivotally connected thereto, a keeper plate to bodily receive said strike plate, and means holding said strike and keeper plates normally together.

[Claims 6 to 9 not printed in the Gazette.]

1,231,314. VEHICLE-WHEEL RIM. JAMES H. WAGENHORST, Akron, Ohio, assignor, by mesne assignments, of two-fifths to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York, one-fifth to The Goodyear Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio, and one-fifth to The United States Tire Company, New York, N. Y., a Corporation of New York. Filed Aug. 9, 1912. Serial No. 714,150. (Cl. 152—21.)



1. The combination of a vehicle wheel having an annular bearing surface and having transversely inclined wedging surfaces located at intervals about its circumference, a tire-carrying rim having transversely inclined wedging surfaces adapted to coact with the wedging surfaces of the wheel, said rim being adapted to seat upon the bearing surface on said wheel between said wedging surfaces, and means for forcing said rim laterally upon said wheel.

2. The combination of a vehicle wheel having annular bearing surfaces at each side thereof and transversely inclined wedging surfaces located at intervals about its circumference, a tire-carrying rim having transversely inclined wedging surfaces adapted to coact with the wedging surfaces on said wheel, said rim being adapted to seat upon the annular bearing surfaces on said rim between successive wedging surfaces, and means for forcing said rim laterally upon said wheel to cause the wedging surfaces on the wheel and rim to coact and lift the rim away from said wheel at intervals, whereby said rim is caused to clamp the bearing surfaces upon said wheel between the wedging surfaces thereof.

3. The combination of a vehicle wheel having annular bearing surfaces of different diameters at the sides thereof, and having transversely inclined wedging surfaces located at intervals about its circumference, a tire-carrying rim having wedging surfaces adapted to coact with the wedging surfaces of said wheel, and having bearing surfaces of different diameters adapted to engage the bearing surfaces of said wheel between successive wedging surfaces, and means for forcing said rim laterally upon said wheel to cause the wedging surfaces upon the wheel and rim to coact, whereby said rim is lifted away from said wheel adjacent to said surfaces and caused to clamp said wheel between successive wedging surfaces.

4. In a vehicle wheel, in combination, a fixed rim member comprising a metallic channel, the peripheries of the legs of which form annular bearing surfaces, blocks secured in said channel at intervals, said blocks having transversely inclined wedging surfaces, a removable rim having blocks secured to its under-surface, said blocks having transversely inclined wedging surfaces adapted to coact with the wedging surfaces of the blocks secured in said channel, said removable rim being adapted to seat upon the bearing surfaces formed by the legs of said channel between successive pairs of blocks, and means for forcing said rim laterally upon said fixed rim to cause the blocks upon the rim to wedge upon the blocks upon the fixed rim.

5. In a vehicle wheel, in combination, a fixed rim comprising a metallic channel, the peripheries of the legs of which form annular bearing surfaces, blocks secured in said channel at intervals, said blocks having transversely inclined wedging surfaces, a removable rim having blocks secured to its under-surface, said blocks having transversely inclined wedging surfaces adapted to coact with the wedging surfaces of the blocks secured in said channel, said removable rim being adapted to seat between successive pairs of blocks upon the bearing surfaces formed by the legs of said channel, and means for forcing said rim laterally upon said fixed rim to cause the blocks upon the removable rim to wedge upon the blocks upon the fixed rim, the wedging surfaces upon the blocks on the removable rim and felly member interlocking to prevent circumferential movement of said removable rim upon said fixed rim.

[Claims 6 to 11 not printed in the Gazette.]

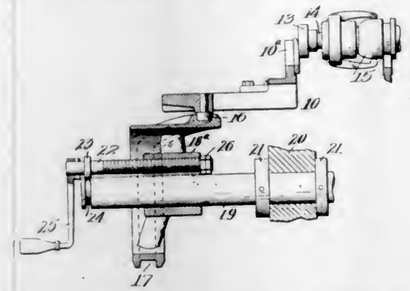
1,231,315. STOCK-FEEDING MECHANISM. LYMAN M. WAITE, Fitchburg, Mass., assignor to Fitchburg Machine Works, Fitchburg, Mass., a Corporation of Massachusetts. Filed May 19, 1916. Serial No. 98,646. (Cl. 29—58.)

1. A stock feeding mechanism comprising a shaft held in fixed position longitudinally, a stock feeding slide, a cam for moving said slide, rotatable with and slidable on said shaft, and means for changing the longitudinal position of said cam on said shaft, thereby changing the locus of movement of said slide, and for securing said cam in adjusted position.

2. A stock feeding mechanism comprising a shaft held in fixed position longitudinally, a stock feeding slide, a cam for moving said slide, rotatable with and slidable on said shaft, and a single means for moving said cam longitudinally on said shaft and for retaining said cam in adjusted position.



3. A stock feeding mechanism comprising a shaft held in fixed position longitudinally, a stock feeding slide, a cam for moving said slide, rotatable with and slidable on said shaft, and means for moving said cam longitudinally on



said shaft, said means comprising an adjusting screw threaded into the hub of said cam, extending beyond the outer end of said shaft, and having a flange thereon engaging a circumferential groove in said shaft, and means for turning said screw.

1,231,316. TOOL-RACK. PERCY STANLEY WATTS, Seattle, Wash. Filed May 24, 1916. Serial No. 99,610. (Cl. 65—65.)



1. In a tool rack for butcher blocks, the combination of pairs of rack members slidably secured together and arranged in parallel and spaced relation with each other, tapering blocks of different thicknesses arranged progressively as to thickness and secured to one side of said rack members, the said blocks being removably attachable to a butcher's block, whereby a convenient and easily portable rack for butchers' tools is provided.

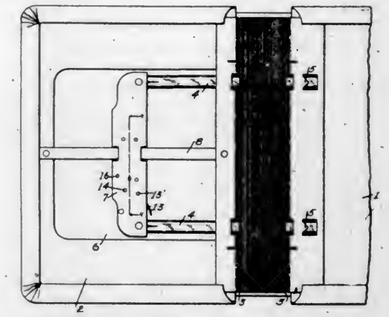
2. The combination of a portable tool rack adapted to hold butchers' tools, said rack including parallel pairs of rack members slidably secured together, the said pairs being secured in spaced relation with each other and in tapering relation to a butcher block.

1,231,317. TEMPORARY BINDER. GEORGE P. WIGGINTON, Kalamazoo, Mich., assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Filed Feb. 10, 1916. Serial No. 77,495. (Cl. 129—41.)

1. In a temporary binder, the combination with the covers, of binding strips extending between the covers, a bar disposed longitudinally of one of the covers, an adjusting member to which said binding strips are connected slidably mounted on said bar, a clutch roller, a support for said roller disposed on said adjusting member at an angle to said bar so that said roller is carried into clutching engagement with the bar when moved in one direction, a spring for actuating said clutch roller to its engaging position, a pivoted lever for disengaging said roller mounted on said adjusting member, and a spring for returning said lever to its inoperative position.

2. In a temporary binder, the combination with the covers, of binding strips extending between the covers, a bar disposed longitudinally of one of the covers, an adjusting member to which said binding strips are connected slidably mounted on said bar, a clutch roller mounted on said adjusting member to coact with said bar for securing the adjusting member in its adjusted positions thereon, a spring for actuating said roller toward its clutching position, and means for disengaging said roller mounted on said adjusting member.

3. In a temporary binder, the combination with the covers, of binding strips extending between the covers, a bar disposed longitudinally of one of the covers, an adjusting member to which said binding strips are connected slidably mounted on said bar, a friction clutch member mounted on said adjusting member to coact with said bar, the clutch engaging movement of said clutch member being toward the outer end of the cover, a spring for yieldingly holding said clutch member in its engaging position, and manually operated means for releasing said clutch member and holding it in its disengaged position mounted on said adjusting member.

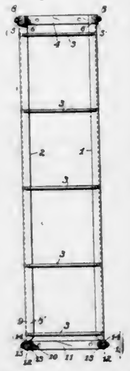


4. In a temporary binder, the combination of a binding member, an adjusting means therefor comprising a bar, an adjusting member to which said binding member is connected adjustably associated with said bar, a friction clutch member mounted on said adjusting member to coact with said bar, a spring for actuating said clutch member to its engaging position, and a lever for disengaging said clutch member pivotally mounted on said adjusting member.

5. In a temporary binder, the combination of a binding member, an adjusting means therefor comprising a bar, a friction clutch member coacting with said bar, means for supporting said clutch member in coacting relation to said bar comprising a spring for actuating it to its engaging position, and a lever for disengaging said clutch member and holding it in its disengaged position against the tension of its said actuating spring.

[Claims 6 and 7 not printed in the Gazette.]

1,231,318. FREIGHT-CAR LADDER. WILLIAM E. WINE, Toledo, Ohio. Filed Oct. 20, 1916. Serial No. 126,665. (Cl. 228—1.)



2. A freight car ladder comprising angular shaped stiles, said stiles provided with openings therein, rungs fastened

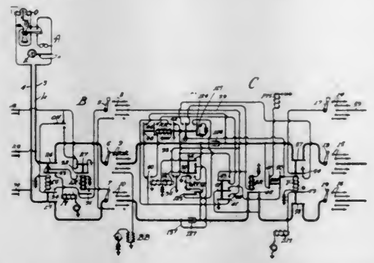
through said openings, a bracket securing the upper ends of said stiles, a shoulder formed at the lower end of each of the said stiles, said shoulders formed by deflecting one of the faces of the angular shaped stiles, and a bracket securing said stiles and contacting with the said shoulders formed on said stiles.

4. A freight car ladder comprising stiles formed of an angle iron, and the faces of said stiles provided with openings therein for the reception of rungs, the lower ends of said stiles having one of their faces forced inwardly so that a part of the same lies in a plane parallel to the other face, an upper bracket adapted to be secured to the said stiles and a lower bracket having its ends bent so as to surround the parallel faces of the said stiles, and means for securing the said stiles and the said bracket together.

[Claims 1 and 3 not printed in the Gazette.]

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1,231,319. AUTOMATIC TELEPHONE SYSTEM. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 17, 1913. Serial No. 790,303. (Cl. 179—9.)



1. A telephone system comprising a calling telephone line, a source of current connected to said line, automatic switches for extending the circuit of said line, a called line, means for producing impulses for controlling the operation of said switches for extending the circuit of the calling to the called line, a marginal reversing relay included in direct circuit of certain of said impulses, means to prevent effective operation of said relay when so included, an electromagnet, and means effective upon response of the substation of the called line for operating said reversing relay to reverse the current connections to the calling line to operate said electromagnet.

2. A telephone system comprising a calling telephone line, a source of current connected to said line, automatic switches for extending the circuit of said line, a called line, means for producing impulses for controlling the operation of said switches in extending the circuit of the calling to the called line, a reversing relay included in circuit of certain of said impulses, said circuit including sufficient resistance to prevent operation of said relay, mechanism, and means controlled over the called line for causing the operation of said reversing relay to reverse the current connection to the calling line to operate said mechanism.

3. A telephone system comprising a calling telephone line, a source of current connected to said line and flowing thereover, automatic switches for extending the circuit of said line, a called line, means for producing impulses for controlling the operation of said switches for extending the circuit of the calling to the called line, a reversing relay included in the direct circuit of certain of said impulses, means to prevent effective operation of said relay when so included, electromagnetic means, and means controlled over the called line for causing the operation of said reversing relay to reverse the current flow over the calling line to operate said electromagnetic means.

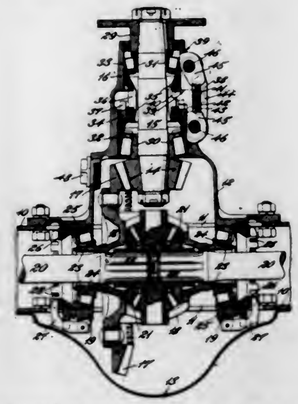
4. A telephone system comprising a calling telephone line, a source of current connected to said line, automatic switches for extending the circuit of said line, a called line, means for producing primary and secondary impulses for controlling the operation of said switches for extending the circuit of the calling line to the called line, a reversing relay included in circuit of each secondary impulse, said circuit including sufficient resistance to prevent effective operation of the said reversing relay, an electromagnet, and means effective upon response from the substation of the called line for operating said reversing relay to reverse the current connection to the calling line to effectively operate said electromagnet.

5. A telephone system comprising a calling telephone line, a source of current connected to said line and flowing thereover, automatic switches for extending the circuit of said line, a called line, means for producing primary and secondary impulses for controlling the operation of said switches in extending the circuit of the calling to the called line, a single wound reversing relay included in circuit of each secondary impulse, means to prevent effective operation of said relay when so included, electromagnetic means and means for causing the operation of said reversing relay to reverse the current flow over the calling line upon response from the substation of the called line to operate said electromagnetic means.

[Claims 6 to 15 not printed in the Gazette.]

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1,231,320. BEARING. HERBERT W. ALDEN, Detroit, Mich., assignor to The Timken-Detroit Axle Company, Detroit, Mich., a Corporation of Ohio. Filed Dec. 9, 1915. Serial No. 65,889. (Cl. 64—55.)



1. An adjustable bearing for a shaft or spindle arranged in an inclosing housing, said bearing comprising oppositely disposed bearing cones on said shaft and bearing cup members coöperating therewith movably mounted in said housing for adjustment toward and away from said cones, means for adjusting each of said bearing cup members in said housing, said adjusting means being operable selectively and having adjacent portions adapted for identical movement whereby they are adjustable simultaneously, and means for retaining said adjusting means in adjusted position in said housing.

2. An adjustable bearing for a shaft or spindle arranged in an inclosing housing, said bearing comprising oppositely disposed bearing cones on said shaft and bearing cup members coöperating therewith movably mounted in said housing for adjustment toward and away from said cones, screw rings for adjusting each of said bearing cup members in said housing, said screw rings being operable selectively and having coöperating portions whereby they are adjustable simultaneously, and means for retaining said screw rings in adjusted position in said housing.

3. An adjustable bearing for a shaft or spindle arranged in an inclosing housing, said bearing comprising oppositely disposed bearing cones on said shaft and bearing cup members coöperating therewith movably mounted in said housing for adjustment toward and away from said cones, means for adjusting each of said bearing cup members in said housing, said adjusting means being operable selectively and simultaneously, an opening in said housing for access to said adjusting means, a cover for said opening, and means for retaining said adjusting means in adjusted position in said housing, said retaining means also retaining said cover over said opening.

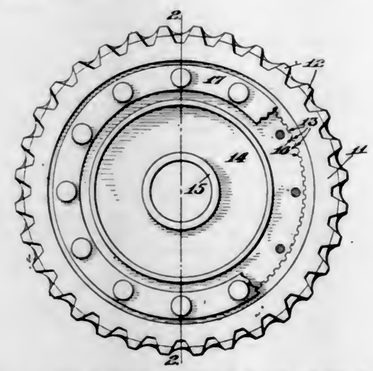
4. An adjustable bearing for a shaft or spindle arranged in an inclosing housing, said bearing comprising oppositely disposed bearing cones fixed on said shaft and bearing cup members coöperating therewith movably mounted in said housing between said cones for adjustment toward and away from said cones, means for forcing said bearing cup members apart to take up lost motion in said bearing, said means having an adjustable connection with said housing for positioning it lengthwise thereof to adjust said bearing and shaft longitudinally.

5. An adjustable bearing for a shaft or spindle arranged in an inclosing housing, said bearing comprising oppositely disposed bearing cones fixed on said shaft and bearing cup members coöperating therewith movably mounted in said housing between said cones for adjustment toward and away from said cones, means for forcing said bearing cup members apart to take up lost motion in said bearing, said means including two rings screwed one within the other, one of which has an adjustable connection with said housing for positioning it lengthwise thereof to adjust said bearing and shaft longitudinally.

[Claims 6 to 13 not printed in the Gazette.]

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1,231,321. TOOTHED WHEEL. HERBERT W. ALDEN and ROBERT B. WEAVER, Detroit, Mich., assignors to The Timken-Detroit Axle Company, Detroit, Mich., a Corporation of Ohio. Filed Mar. 3, 1917. Serial No. 152,249. (Cl. 74—29.)



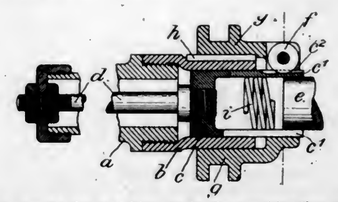
2. A composite wheel comprising a rim having a series of shallow splines across its inner surface, a center having a series of grooves parallel to the axis of the wheel around its circumference mating with said splines, said mating grooves and splines having parallel side walls in contact with each other throughout their opposing faces respectively, and means for preventing sidewise displacement of said rim on said center, said means permitting uniform radial movement of said rim toward and from said center without causing looseness of the rim on the center.

3. A composite wheel comprising a rim part having a series of shallow splines upon its inner surface, a center part having a series of grooves parallel to the axes of the wheel around its circumference mating with said splines, said mating grooves and splines having parallel side walls respectively, and rings secured to the opposite sides of one part of said wheel concentrically with its axis, said rings lapping the ends of the splines and grooves and being free of the other part of said wheel to prevent sidewise movement and permit radial movement of said parts with respect to each other.

[Claim 1 not printed in the Gazette.]



1,231,322. CHUCK FOR MACHINE-TOOLS. JEAN CONRAD ALDER, Sr., Châtelaine, near Geneva, Switzerland. Filed Jan. 15, 1917. Serial No. 142,357. (Cl. 29—123.)



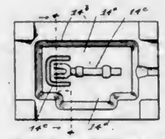
1. In chucks for machine tools the combination with a sleeve intended to be fixed to the end of the rotative spindle of the machine tool, of a hollow segmental grip lodged slidingly within said sleeve and provided with a number of wedge-shaped surfaces, of a clamping ring slidingly adjusted on said sleeve, in combination with friction rollers fitted to said ring and intended to roll each on one of the wedge-shaped surfaces of the segmental grip, and means for shifting the ring on the sleeve so as to have the rollers acting on the said wedge surfaces of the grip and to fasten or unfasten the same to or from the work-object, substantially as and for the purpose specified.

2. In chucks for machine tools according to claim 1, the combination of a sleeve *b* with a hollow grip *c* formed of a cylindrical piece the tubular portion of which is splitted open on part of its length, each of the segments formed by the splits being provided with a wedge shaped surface $c^2$, in combination with a ring *g* bearing rollers *f* intended each to roll upon one of the surfaces $c^2$.

3. In chucks for machine tools according to claim 2, the combination of the grip *c* with a spring *i* intended to facilitate the loosening of its grip.

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1,231,323. METHOD OF FORMING DIES. ALBERT F. ARTHUR, Cleveland, Ohio, assignor to The Cleveland Hardware Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 27, 1916. Serial No. 93,832. (Cl. 78—81.)



1. The method of making forgings particularly forged dies for drop hammers and presses, which comprises forging a body of metal between a pair of master dies, one having a pattern on its face and adjacent the pattern between the latter and the sides of the dies holding in the metal so as to check the lateral flowing thereof with respect to the pattern.

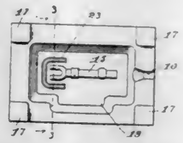
2. The method of making forgings adapted especially for the production of forged dies for drop hammers and presses, which comprises forging a body of heated metal between a pair of master dies, one having a pattern on its face and during the forging operation forcing a barrier into the metal adjacent the pattern between the latter and the sides of the dies.

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1,231,324. MASTER-DIE FOR FORGING DIES FOR DROP-HAMMERS, PRESSES, AND THE LIKE. ALBERT F. ARTHUR, Cleveland, Ohio, assignor to The Cleveland Hardware Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 27, 1916. Serial No. 93,835. (Cl. 78—60.)

1. A master die adapted particularly for producing dies for drop hammers and the like, said master die having a pattern adapted to be impressed or reproduced in a

body or block of metal to be forged and having between the pattern and the sides of the die means for restricting the lateral movement of metal during the forging operation.



2. A master die adapted particularly for the production of forged dies, said master die having a pattern adapted to be reproduced in a body or block of metal to be forged, and having between the pattern and sides of the die a projection adapted to cut or sink into the metal adjacent the pattern.

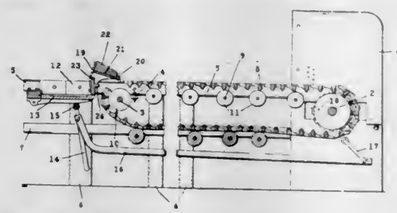
3. A master die adapted particularly for the production of forged dies, having a pattern adapted to be reproduced in the die to be forged and having means separate from the sides of the die and adjacent the pattern for protecting the pattern against breakage.

4. A master die adapted particularly for the production of forged dies, having a recess with the pattern at the base thereof and having between the pattern and the walls of the recess means for restricting the flow or movement of metal being forged.

5. A master die adapted particularly for producing forged dies for drop hammers, presses and the like, in the form of a hollow matrix having in its base a pattern and provided between the pattern and the walls of the matrix a projection extending partly or wholly around the pattern.

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1,231,325. MECHANICAL STOKER. JOSHUA BATTEER, Philadelphia, Pa., assignor to Oscar Barnett Foundry Company, a Corporation of New Jersey. Filed Oct. 4, 1913. Serial No. 793,279. (Cl. 110—40.)



1. In a stoker, the combination with side rails and a grate between said side rails adapted to travel at its upper end in a substantial plane, of a bridge bar extending the width of said grate at the rear end thereof and pivotally supported at its rear edge with its forward edge resting at the ends upon said side rails and providing between said ends a space between the bridge bar and grate, whereby the bridge bar is free to rise and act by gravity upon clinkers forced beneath it and its weight at other times is taken by the side rails.

2. In a stoker, the combination with side rails and a grate between said side rails adapted to travel at its upper end in a substantial plane, of a bridge bar extending the width of said grate at the rear end thereof and pivotally supported at its rear edge with its forward edge resting at the ends upon said side rails and recessed upwardly between said ends to form a space between the bridge bar and grate, whereby the bridge bar is free to rise and act by gravity upon clinkers forced beneath it and its weight at other times is taken by the side rails.

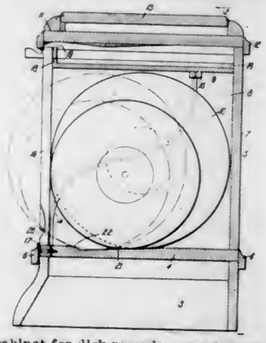
3. In a stoker, the combination with an endless grate, of a bridge bar extending the width of said grate impervious to the passage of air and having a longitudinal series of pockets or recesses at its upper and lower surfaces separated by transverse upper and lower partitions alternating or staggered with respect to each other, whereby the metal is distributed and radiation of heat facilitated.

4. In a stoker, the combination with an endless grate and a dump plate frame at the rear end thereof providing at its side next the grate an upwardly projecting rib, of a bridge member adapted to extend at its forward edge over the grate and chambered or recessed at its under side with transverse partitions cut away at their rear ends to receive said rib of the dump plate frame and pivotally support the bridge member thereon.

5. In a stoker, the combination with an endless grate and a dump plate frame at the rear end thereof providing at its side next the grate an upwardly projecting rib with a lateral flange projecting forwardly therefrom at a distance below its upper edge, of a bridge member adapted to extend at its forward edge over the grate and chambered or recessed at its under side with transverse partitions cut away at their rear ends to receive said rib of the dump plate frame and rest upon the said lateral flange thereof.

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1,231,326. FILING-CABINET FOR DISK RECORDS. ANDREW CHARLES BOLTON, Brooklyn, N. Y. Filed Feb. 11, 1916. Serial No. 77,622. (Cl. 211—16.)



1. In a cabinet for disk records, means normally tending to roll the disk to expose a part thereof out of the cabinet, and access-giving-means adapted to engage the edge of the disks, at a point lying on a substantially horizontal radial line and resist their rolling movement.

2. In a cabinet, an inclined bottom for causing the disks placed edgewise thereupon to roll toward the front of the cabinet, and access-giving-means to said cabinet adapted to engage the edges of the disks when in closed position at a point lying on a substantially horizontal radial line, thereby normally preventing the rolling of said disks on the bottom, said bottom having means preventing said disks from rolling off the bottom when the access-giving-means are displaced to give access to the cabinet.

3. In a cabinet for disk records, means normally tending to present a part of a record out of the cabinet, and access-giving-means to the cabinet normally preventing said first-mentioned means from advancing a record out of the cabinet.

4. In a cabinet for disk records, a bottom having a forwardly inclined part for receiving disks edgewise thereupon, means sub-dividing said cabinet into spaces for individual disks, and a closing front formed of independent closing members for each individual space, each of said closing members adapted to engage the edge of a record within the space resting on the incline, said incline adapted to normally present a portion of a disk out of the space when the closing members are displaced from the front of the cabinet.

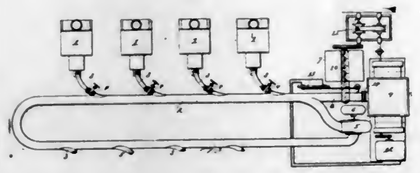
5. In a cabinet for disk records, a bottom having a forward incline for receiving disks edgewise thereupon, a false top spaced from the top of the cabinet, means between the bottom and the false top subdividing the cabinet into individual spaces, each adapted to receive a record, a front for said cabinet formed of slides, one for each individual space, and adapted to engage the edge of a disk within the space, means at the bottom for locking the slides against lateral movement, said slides adapted to be placed in the space between the false top and the top of the cabinet to expose any of the individual spaces whereby a record in an exposed space will be caused by the incline to roll forward and expose a part thereof, substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]



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1,231,327. APPARATUS FOR FEEDING PULVERIZED FUEL. CHARLES A. BRAUCHLER, Canton, Ohio. Filed Sept. 15, 1913. Serial No. 789,945. (Cl. 110—104.)



1. A pulverized-fuel feeding apparatus including a continuous supply pipe having a blower in circuit therewith and a plurality of valved branch pipes leading therefrom, and means for feeding fuel-laden air into the supply pipe and for maintaining substantially uniform pressure therein, the cross area of the supply pipe being substantially uniform throughout its extent.

3. A pulverized-fuel feeding apparatus including a continuous supply pipe having a blower in circuit therewith and a plurality of valved branch pipes leading therefrom, a feed pipe communicating with the supply pipe, a conveyer to deliver fuel and a blower to discharge air into the feed pipe geared together, a motor connected with said conveyer and blower, and a pressure regulator communicating with the feed pipe to control the speed of the motor.

4. A pulverized-fuel feeding apparatus including a continuous supply pipe having circulating means in circuit therewith, one or more valved branch pipes leading from the supply pipe, and means controlled by the pressure in the circuit for feeding fuel and air into the supply pipe and maintaining a working pressure therein.

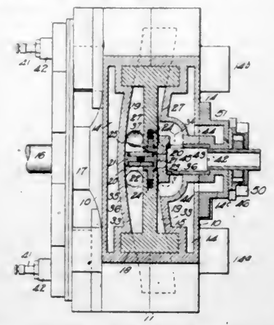
[Claims 2, 5, and 6 not printed in the Gazette.]

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1,231,328. ROTARY ENGINE. CHESTER W. BROWN and WILLIAM ASA BROWN, Mass. Mich. Filed Oct. 14, 1915. Serial No. 55,825. (Cl. 123—16.)

1. A rotary engine including an annular cylinder, a rotor operating in the cylinder, and having an annular depression in each side face thereof opposite the side walls of the annular cylinder and movable transversely disposed vanes carried by the rotor and extending across the said annular depressions to the walls of the cylinder, there being means at intervals in the cylinder to move the vanes and coact therewith to subdivide the cylinder at separated points around same, and the rotor having ports communicating with the said annular depression and thus with said cylinder for the inlet and discharge of a fluid in front of and behind a vane.

2. A rotary engine including an annular cylinder, a rotor operating in the cylinder and having an annular depression in each side face thereof opposite the side walls of the annular cylinder and vanes carried by the rotor and extending across the said annular depressions to the walls of the cylinder, and movable transversely of the rotor, the cylinder having means to move the vanes transversely at successive points around the cylinder and to coact with said vanes to subdivide the cylinder at separated points around the same, and the rotor having ports communicating with the said annular depression and thus with said cylinder for the inlet and discharge of a motive fluid, the ports being disposed adjacent to a vane and respectively behind and in front of the vane.



3. A rotary engine including an annular cylinder, having undulating side walls, a rotor operating in the cylinder and dividing the same into chambers, and having an annular depression in each side face thereof opposite the side walls of the annular cylinder and vanes carried by the rotor into said depressions and transversely movable across the rotor to project into either of the side chambers into which the rotor divides the cylinder, the rotor contacting at its side surface alternately with the undulating walls at the opposite sides at intervals around the cylinder, there being ports in the rotor, communicating with both depressions of the rotor and thus with the chambers of the cylinder for the inlet and discharge of a motive fluid behind and in front of a vane.

4. A rotary engine including an annular cylinder, a rotor operating in the cylinder and dividing the same into annular chambers disposed at opposite sides of the rotor, the said rotor having annular depressions at opposite sides and transversely disposed vanes on the rotor and movable transversely thereof to project into either side chamber of the cylinder, there being means in the cylinder to move the vanes transversely, said means coacting with the vanes and with the side of the rotor to cut off each chamber at intervals, and subdivide the same at separated points around the cylinder, and the rotor having ports communicating with both annular depressions and thus with the chambers of the cylinder for the inlet and discharge of a motive fluid in the rear of and in front of a vane.

5. A rotary engine including an annular cylinder having undulating side walls, a rotor operating in the cylinder and dividing the same into annual chambers disposed at opposite sides of the rotor, the said undulating walls contacting with the sides of the rotor alternately at opposite sides of the rotor and serving to cut off each side chamber and subdivide the same at intervals around the cylinder, and vanes carried by the rotor and transversely movable to follow the undulating lines of the cylinder walls, the rotor having annular depressions opposite the cylinder walls, and ports communicating with said depressions and thus with both side chambers of the cylinder for the inlet and discharge of a motive fluid behind and in front of a vane.

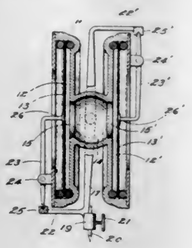
[Claims 6 to 9 not printed in the Gazette.]

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1,231,329. PHONOGRAPH-REPRODUCER. FOREST CHENEY, Chicago, Ill., assignor, by mesne assignments, to Cheney Talking Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 6, 1913. Serial No. 793,746. (Cl. 274—35.)

1. In a sound reproducer, two parallel diaphragms with adjacent chambers between them connected to a

common sound outlet, a stylus, and mechanism from the stylus to the diaphragms to make the latter vibrate oppositely.



2. In a sound reproducer, two parallel diaphragms with adjacent chambers between them connected to a common sound outlet, levers connected to said diaphragms on their outer sides, a stylus, and connections from the stylus to said levers to vibrate the diaphragms oppositely.

3. In a sound reproducer, two parallel diaphragms, a stylus below the same, a lever carrying the said stylus, two additional levers pivotally and directly connected to the first mentioned lever and also connected respectively to the two diaphragms, and a common sound outlet leading from both of said diaphragms.

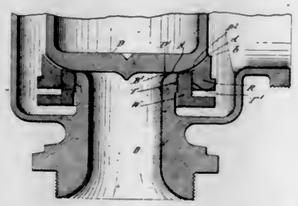
4. In a sound reproducer, two parallel diaphragms, two pivotally mounted levers arranged oppositely adjacent the outer sides of said diaphragms, an actuating lever having a pin and socket connection with each of said levers, and a stylus mounted on said actuating lever.

5. In a sound reproducer, two parallel diaphragms, two pivoted levers normally disposed in parallel planes and each connected to one of said diaphragms, an actuating lever carrying a stylus and directly connected to each of said levers whereby said diaphragms are moved toward or away from each other simultaneously, and a common sound outlet leading from both of said diaphragms.

[Claim 6 not printed in the Gazette.]

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1,231,330. SAFETY-VALVE. GEORGE HALL CLARK, Cambridge, Mass., assignor to Crosby Steam Gage & Valve Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 31, 1916. Serial No. 87,928. (Cl. 137—53.)



1. In a safety valve, the combination with the disk and base, of a warning annulus and a blow down annulus, and means for adjusting the said annuli.

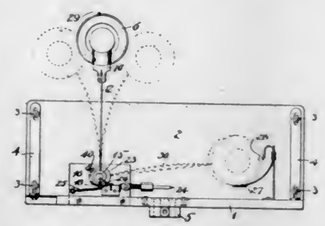
2. In a safety valve, the combination with the disk and base, of a warning annulus and a blow down annulus, and means for adjusting either independently of the other.

3. In a safety valve, the mutually-seating disk and base members, a warning annulus on one of said members outside the seat, having its surface spaced from the adjacent surface of the other member, a blow-down annulus, outside the warning annulus, and means for adjusting the blow-down annulus.

4. In a safety valve, the mutually-seating disk and base members, a warning annulus on one of said members outside the seat, having its surface spaced from the adjacent surface of the other member, and a blow-down annulus outside the warning annulus, and farther spaced from the surface of the opposite member.

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1,231,331. SIGNALING APPARATUS. GEORGE A. COLE, New York, N. Y. Filed Jan. 19, 1916. Serial No. 72,951. (Cl. 177—311.)



1. In a signal of the character described, a signal head, a resilient flexible support therefor and means to impart a catapult movement to the signal head in opposition to gravity to cause the latter to oscillate through the medium of the resilient flexible support therefor.

2. In a signal of the character described, a signal head, a resilient flexible support therefor and means to impart a catapult movement to the signal head in opposition to gravity to cause the latter to oscillate through the medium of the resilient flexible support therefor, said means having two fixed positions with a stop to limit its movement in the direction of the catapult throw and hold it stationary therein during the period of oscillation of the signal head.

3. In a signal of the character described, a signal head, a resilient flexible support therefor and means to impart a catapult movement to the signal head in opposition to gravity to cause the later to oscillate through the medium of the resilient flexible support therefor, a cushion to normally support the signal head when not in signaling operation.

4. In a signal of the character described, a signal head, a resilient flexible support therefor and means to impart a catapult movement to the signal head in opposition to gravity to cause the latter to oscillate through the medium of the flexible support therefor, a cushion to normally support the signal head when not in signaling operation, and a catch to hold said head on said cushion.

5. In a signal of the character described, a support, a hub trunnioned therein for partial rotation with means to limit the rotation of said hub relatively thereto, a signal head, a resilient flexible stay support connecting said head with said hub and means for imparting to said hub a partial rotation to in turn impart movement to said head in opposition to gravity in the signaling direction.

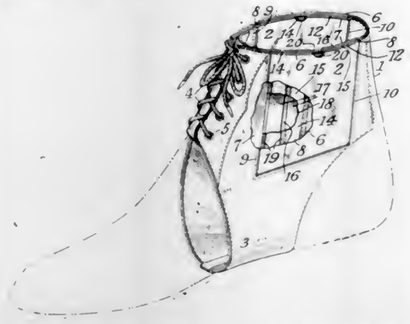
[Claims 6 to 15 not printed in the Gazette.]

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1,231,332. ANKLE SUPPORT AND PROTECTOR. HENRY JAMES COLLIS, Taunton, Mass. Filed July 7, 1916. Serial No. 107,885. (Cl. 128—52.)

1. An improved ankle support and protector of the class described, having a body portion adapted to surround the ankle and a bottom portion adapted to pass under the instep, comprising a pocket extending over the side of said body, and a series of stay-member collectively carrying a series of individual stays or stiffening strips and seated in said pocket and removable as a unit therefrom.

3. An improved ankle support and protector of the class described, having a body portion adapted to surround the ankle and a bottom portion adapted to pass under the instep, comprising a pocket extending over the side of said body, and a series stay-member constituted by a flexible body having outer and inner walls between which are provided separate pockets and collectively carrying a series of stays or stiffening strips individually mounted and inclosed in said respective pockets, said series stay-member being seated in said side pocket and removable as a unit therefrom.

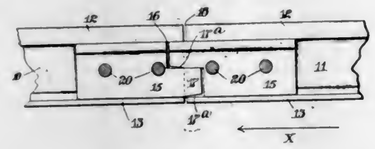


5. An improved ankle support and protector of the class described, having a body portion adapted to surround the ankle and a bottom portion adapted to pass under the instep, comprising a pocket formed by outer and inner flexible walls at the side of said body and open at its top, and a series stay-member constituted by a body having outer and inner flexible walls and divided into separate pockets located between said walls and collectively carrying a series of stays or stiffening strips individually mounted and inclosed in said respective pockets, said series stay-member being frictionally maintained in said side pocket by contact of its flexible walls with the flexible walls thereof and being removable as a unit from the open top of said side pocket.

[Claims 2 and 4 not printed in the Gazette.]

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1,231,333. RAIL-JOINT. EDWARD W. COUGHLIN, New Dorp, N. Y., assignor to Interlocking Rail Joint Corporation, a Corporation of New York. Filed Nov. 12, 1914. Serial No. 871,647. (Cl. 239—9.)



1. In a rail joint, the combination with rail sections, juxtaposed end to end, of a joint therefor comprising complemental members adapted to rock on each other and to maintain a continuous rail surface at the joint under passage of rolling stock thereover.

2. In a rail joint, the combination with rail sections juxtaposed end to end, of a rabbet joint uniting said sections, said rabbet point comprising members adapted to rock on each other.

3. In a rail joint, the combination with rail sections juxtaposed end to end, of a joint therefor comprising complemental rabbeted plates at each side of the sections said plates being adapted to rock on each other.

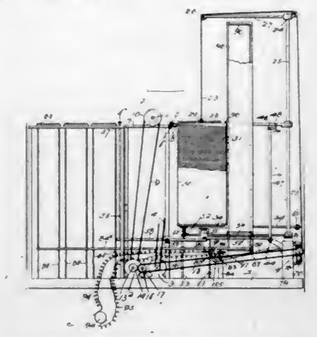
4. In a rail joint, the combination with rail sections juxtaposed end to end, of a joint therefor comprising joint plates at each side of each section, said plates having projecting tongues adapted to rock on each other.

5. In a rail joint, the combination with rail sections juxtaposed end to end, of a joint therefor comprising complemental plates each provided with a rabbet and a tongue, the tongue of one plate extending into the rabbet of its complemental plate and being adapted to rock on said last named plate.

[Claims 6 to 12 not printed in the Gazette]

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1,231,334. SORTING-MACHINE. GEORGE W. COX, Jr., Kensington, Md. Filed Aug. 16, 1915. Serial No. 45,740. (Cl. 214—1.)



1. In a sorting machine, a vertically bodily movable receiver having a multiplicity of compartments, selective mechanism controlling said receiver, means for elevating said receiver coöperating with said selective means, means operable with said selective mechanism for limiting the movement of said receiver, and presenting a selected compartment in operative relation to a feeding station.

2. In a sorting machine, a vertically bodily movable receiver having a multiplicity of compartments, means for elevating the same, selective means coöperating with and controlling said elevating means, and means coöperable with the selective means and projectable into the path of the receiver and limiting its bodily movement.

3. In a sorting machine, a vertically bodily movable receiver having a plurality of compartments the walls of which are inclined downwardly from front to rear, means for elevating said receiver, selective means coöperating with and controlling said elevating means, and means coöperating with the selective means and projectable into the path of the receiver and limiting its bodily movement.

4. In a sorting machine, a vertically bodily movable receiver having a plurality of compartments the walls of which are inclined downwardly from front to rear, means for elevating said receiver, selective means coöperating with and controlling said elevating means, means coöperating with the selective means and projectable into the path of the receiver and limiting its bodily movement, and means for preventing a displacement of the articles received within said compartments.

5. In a sorting machine, a vertically bodily movable receiver having a plurality of compartments the walls of which are inclined downwardly from front to rear, means for elevating said receiver, selective means coöperating with and controlling said elevating means, means coöperating with the selective means and projectable into the path of the receiver, and limiting its bodily movement, and means for feeding papers one by one to the selected compartment.

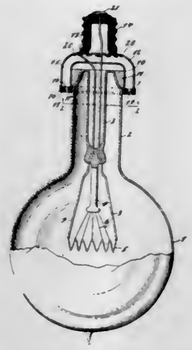
[Claims 6 to 41 not printed in the Gazette.]

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1,231,335. ELECTRIC INCANDESCENT LAMP. JOHN H. DALE, New York, N. Y., assignor to Dale Lighting Fixture Co., Inc., a Corporation of New York. Filed Mar. 5, 1915. Serial No. 12,298. (Cl. 176—16.)

1. An electric incandescent lamp comprising a lamp bulb having a neck, a metallic part rigidly secured on the end of said neck, a lamp base comprising a screw plug and a skirt, and means connecting said metallic part to

said skirt and supporting the latter with a ventilating space between said skirt and the metallic part.

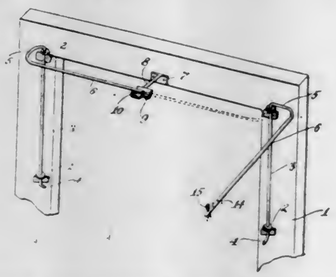


2. An electric incandescent lamp comprising a lamp bulb having a neck, a ring rigidly secured to said neck, a lamp base consisting of a screw plug and a skirt, an annular ring connecting said skirt and ring and supporting them with a space between the two, said annular ring and skirt having ventilating openings therein.

3. An electric incandescent lamp comprising a lamp bulb having a neck, a ring rigidly secured to said neck, a lamp base consisting of a screw plug and a skirt, an annular ring of heat insulating material connecting said skirt and ring and supporting them with a space between the two, said annular ring and skirt having ventilating openings therein.

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1,231,336. CURTAIN-FIXTURE. ADDIE DEMING, Windsor, Ontario, Canada. Filed Jan. 8, 1917. Serial No. 141,147. (Cl. 156—22.)

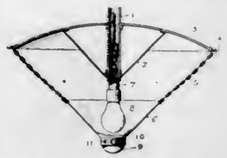


A curtain fixture comprising vertically alining bearings adapted for attachment to the sides of a frame, a support adapted for attachment to the top of the frame, one piece curtain rods having shank portions journaled in said bearings and cranks at the ends of the shank portions of said rods with lateral curtain supporting portions carried by some of said cranks and adapted to engage said support, pins in the lateral curtain supporting portions of said rods adapted for retaining curtains in engagement therewith, and springs on the shank portions of said rods holding the curtain supporting portions thereof normally seated on said support.

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1,231,337. LIGHTING-FIXTURE. JAMES ARTHUR DEMPSEY, New York, N. Y. Filed Oct. 14, 1915. Serial No. 55,777. (Cl. 240—92.)

1. A lighting fixture comprising a canopy the underneath surface of which is a reflector; an inverted cone provided with an exterior reflecting surface secured to the canopy; a central tubular member within the cone and canopy; a member adjustably mounted in connection with the tubular member and adapted to be raised or lowered relative thereto, and on the lower end of which is secured

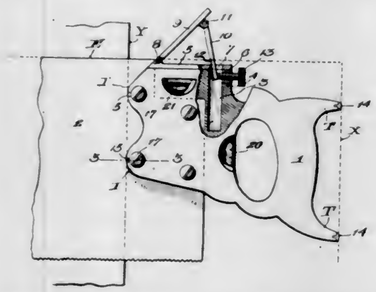


an illuminator; an inverted opaque cone surrounding said illuminator and having a reflecting interior surface, said opaque cone being adjustably secured to the canopy so as to permit adjustment relative to the illuminator and the other reflecting surfaces.

[Claims 2 to 6 not printed in the Gazette.]

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1,231,338. HANDSAW. LOUIS DESROCHERS, Fall River, Mass., assignor of one-half to Samuel F. Stewart, North Tiverton, R. I. Filed Jan. 26, 1917. Serial No. 144,754. (Cl. 7—13.)



1. A saw having a handle, said handle having its inner end points formed with slots, wear members in said slots having end shoulders disposed interiorly of the outer side faces of the handle, and fastening means for the blade having heads which abut the shoulders and clamp the wear members in position.

2. A saw having a handle, fastening means for the saw blade, said handle having spaced transverse slots extending through the front edge of the handle opposite to said fastening means, and wear members arranged in said slots and engaged with said fastening means so as to be held in the slots thereby.

3. A saw having a handle, fastening means for the saw blade having heads, said handle having spaced transverse slots extending through the front edge of the handle opposite to said fastening means, and wear members arranged in the slots and engaged with the heads of the fastening means so as to be held in the slots thereby.

4. A saw having a handle formed with spaced points which project inwardly toward the saw blade, members extending transversely of the points and having end parts, and fastening means for the saw blade having heads which abut the end parts of the members and clamp same therebetween.

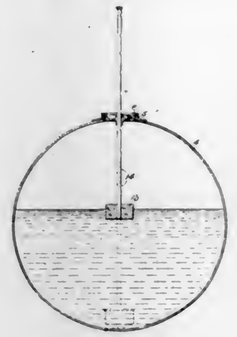
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1,231,339. FLUID-GAGE. M. MAURICE DIMOND, New York, N. Y. Filed Dec. 30, 1916. Serial No. 139,746. (Cl. 73—82.)

A liquid gage comprising a plug having a recess in the top thereof, a diametrical ridge in the recess presenting an enlarged portion having a central aperture, a tubular stem fitting into the aperture and presenting a tapering valve



head at one end thereof, said central, enlarged portion of the ridge presenting a tapering valve seat at the aperture for said head, said valve seat being depressed from the surface of the ridge, a tubular extension from the bottom



of the plug serving as a guide for the stem, a flat spring anchored to the plug within the recess for engaging the valve head of the stem to retain the same on the seat, and a float anchored to the stem.

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1,231,340. WINDOW-VENTILATOR. HERBERT W. DREW, Chicago, Ill. Filed Aug. 30, 1912. Serial No. 717,900. (Cl. 98—31.)



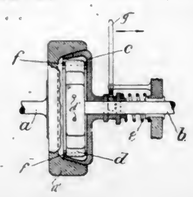
1. In a window ventilator, a stationary member to be rigidly attached to the side post of a window casing, another member pivoted to said fixed member at their lower ends, jointed links connecting the upper ends of the fixed and movable members, and a floating filler plate attached to said jointed links at their intermediate point, said filler plate being adapted to close the space between said fixed and movable members when they are spread apart.

2. In combination with a window frame and a window sash of the type adapted to be raised and lowered in the frame, end members attached to the side posts of said frame, and a deflector and screen of equal length hinged together along their lower edges and adapted to be dropped into said end members and retained in operative position thereby.

3. In a window ventilator, two members pivoted together at their lower ends, links pivoted to the upper ends of said members, said links being pivotally connected to each other at their free ends, a filler plate pivoted to said links where they are pivoted to each other and arranged to close the space between said members when they are spread apart, and a stop on one of said members to limit the range of movement of said filler plate.

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1,231,341. FRICTION-COUPLING. LEON DUFOUR, Geneva, Switzerland. Filed Mar. 31, 1916. Serial No. 87,951. (Cl. 192—8.)

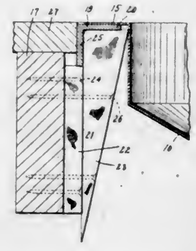


1. In a friction coupling and in combination with a drive and a driven shaft, a coupling member fixed on the drive shaft, a coupling member mounted to slide and turn on the driven shaft, a leaf spring secured to the end of the driven shaft, devices secured in the movable coupling member for engaging the free ends of the leaf spring, and means for normally maintaining the movable coupling member in contact with the fixed coupling member.

[Claim 2 not printed in the Gazette.]

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1,231,342. MEANS FOR FORMING CONCRETE COLUMNS. JOHN C. EBERLE and BENJAMIN STORCH, New York, N. Y. Filed Nov. 20, 1916. Serial No. 132,370. (Cl. 25—118.)



1. The combination with a scaffolding, of a sheet metal mold shaped to form the top of a column, said mold being provided with an outwardly bent flange at its upper edge, and a supporting ring upon said scaffolding upon which said flange rests.

2. The combination with a scaffolding, of a sheet metal mold shaped to form the top of a column, said mold being provided with an outwardly bent flange at its upper edge, blocks attached to said scaffolding, and a supporting ring carried by said blocks, the flange of said mold resting upon said ring.

3. The combination with a scaffolding, of a sheet metal mold shaped to form the top of a column, said mold being provided with an outwardly bent flange at its upper edge, blocks attached to said scaffolding, and a supporting ring carried by said blocks, the flange of said mold resting upon said ring and said blocks abutting against the outer face of said mold.

4. The combination with a scaffolding, of a sheet metal mold shaped to form the top of a column, said mold being provided with an outwardly bent flange at its upper edge, a supporting ring, and means for fixing said ring in position upon said scaffolding, the flange of said mold resting upon said ring.

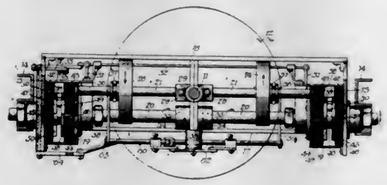
5. The combination with a scaffolding, of a sheet metal mold shaped to form the top of a column, said mold being provided with an outwardly bent flange at its upper edge, a supporting ring, and means for fixing said ring in position upon said scaffolding, the flange of said mold resting upon said ring and said fixing means abutting against the outer face of said mold.

1,231,343. RESILIENT WHEEL. WILLIAM J. FABER, Oneida, N. Y., assignor of one-half to Christian C. Faber, Brooklyn, N. Y. Filed July 21, 1916. Serial No. 110,471. (Cl. 152—10.)



In a resilient wheel, the combination of a pair of spaced parallel rigid shell parts, the inner edge portions of which are of partially tubular form, while the outer edge portions of which are flat, there being left between the inner edges of the tubular portions a continuous circumferential free space, a resilient cushion carried within and between said partially tubular portions of the shell parts and projecting inwardly into and through said free space, a tread shoe secured to the shell parts, and a circular series of independently movable radial blocks filling the space between the shoe and the outer portion of the cushion, substantially as set forth.

1,231,344. POWER-TRANSMISSION MECHANISM. HARVEY L. FISHER, Chicago, Ill., assignor to Donaldson and Fisher Company, Chicago, Ill. Filed Mar. 3, 1913. Serial No. 751,863. (Cl. 74—26.)



1. In a power transmission mechanism, a drive shaft, friction disks mounted thereon, pairs of friction rolls arranged between the disks on opposite sides of the shaft, shafts upon which the friction rolls are splined, a driven shaft adjacent each pair of friction rolls and substantially parallel to the shafts upon which said rolls are mounted and gearing connecting said roll shafts and driven shaft.

2. In a power transmission mechanism, a driving shaft, friction disks mounted thereon, pairs of friction rolls arranged between the disks on opposite sides of the shaft respectively, shafts upon which the friction rolls are splined and longitudinally movable, a driven shaft adjacent each pair of friction rolls and a reversible gearing connecting the shafts of said pair of rolls and the adjacent driven shaft.

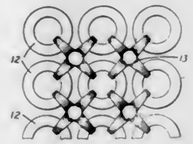
3. In a transmission mechanism, a drive shaft, a pair of friction disks mounted thereon, a pair of driven shafts, friction rolls mounted in pairs upon opposite sides of the drive shaft and between the disks thereof roll shafts on which said rolls are mounted and a set of gearing adapted to connect each roll shaft with a driven shaft and means for throwing either one or the other of the trains of gearing into connection with its driven shaft.

4. In a transmission mechanism, a drive shaft, a pair of friction disks thereon, a pair of driven shafts located respectively on opposite sides of said drive shaft, a pair of friction rolls between said disks adjacent each said driven shaft, shafts on which said rolls are mounted and which are parallel to the adjacent driven shaft, a pair of gears loosely mounted upon each driven shaft, clutch mechanism for locking either of said gears at will to said driven shaft, gearing containing an even number of gears meshing with one of said loose gears on each driven shaft and connected to one of the adjacent friction roll shafts, gearing containing an odd number of gears meshing with the other of said gears on the driven shaft and driven by said roll shaft.

5. In a friction transmission mechanism, a drive shaft, a pair of friction disks thereon, a pair of friction rolls arranged between said disks, roll shafts journaled in stationary bearings upon which said friction rolls are keyed, a driven shaft, a longitudinally movable sleeve loosely mounted upon the driven shaft, a pair of gears loosely mounted upon the sleeve, interlocking means upon the sleeve and said gears whereby said sleeve is adapted to be engaged for rotation by either of said gears, a pair of gears fixed upon each said roll shaft, gearing containing an even number of elements connecting one of said roll shaft gears to a loose gear upon said clutch sleeve and gearing containing an odd number of elements connecting the other gear upon the roll shaft with the other gear upon the clutch sleeve.

[Claims 6 and 7 not printed in the Gazette.]

1,231,345. LINK-MESH FABRIC. WARREN FUHRMANN, Newark, N. J. Filed Mar. 1, 1916. Serial No. 81,323. (Cl. 245—9.)



1. A link mesh fabric having substantially similar faces, composed of a set of rings interconnected by a set of links, the links each being in the form of a sheet-metal spider having a substantially flat central portion from which radiate elongated arms having straight side edges converging in width from the central portion, each arm being bent to form a substantially complete circle beyond and perpendicular to the flat central portion, the centers of the circles of the arms lying in the plane of said central portion, the circular arms inclosing the rings.

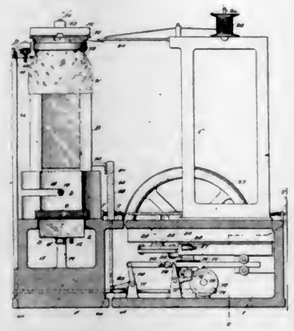
2. A link for a link mesh fabric, composed of a sheet-metal spider having a substantially flat central portion from which radiate elongated arms, said arms having straight side edges converging in width from the central portion, each arm being bent to form a substantially complete circle beyond and perpendicular to the flat central portion, the centers of the circles of the arms lying in the plane of said central portion.

[Claim 3 not printed in the Gazette.]

1,231,346. DARNING AND WEAVING DEVICE. CHARLES M. FYFE, Brooklyn, N. Y. Filed June 6, 1916. Serial No. 101,908. (Cl. 112—24.)

1. A device of the class described comprising a work carrier, a needle having a fixed path of reciprocation, means for moving the carrier in one direction for laying the warp threads in the work on the carrier, means for turning the carrier after the warp threads are laid, and means for moving the carrier again past the needle in the opposite direction for laying the woof threads.





2. A device of the class described comprising a work carrier, a needle having a fixed path of reciprocation, means for moving the carrier in one direction for laying the warp threads in the work on the carrier, means for turning the carrier after the warp threads are laid, means for moving the carrier again past the needle in the opposite direction for laying the woof threads, and heddle means operative only during the laying of the woof threads.

3. In a device of the class described, a work carrier movable first in one direction and then in the opposite direction and adapted to partially turn before beginning its second movement, and a reciprocatory needle for producing interwoven threads in the work on the carrier.

4. In a device of the class described, a work carrier having a back and forth movement and a partial turning movement before its backward movement, a flexible element connected with the carrier, a fixed abutment around which the flexible element extends, whereby a pull on the element in only one direction causes the forward, turning and backward movement of the carrier, and means for successively producing warp and woof threads in the work on the carrier.

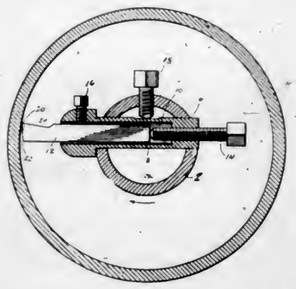
5. In a device of the class described, a work carrier having a back and forth movement and a partial turning movement before its backward movement, a flexible element connected with the carrier, a fixed abutment around which the flexible element extends, whereby a pull on the element in only one direction causes the forward, turning and backward movement of the carrier, means for successively producing warp and woof threads in the work on the carrier, and a spring-actuated, winding device on which the said element winds for moving the carrier, said winding device being placed under tension in setting the carrier in its initial position.

[Claims 6 to 17 not printed in the Gazette.]

1,231,347. CYLINDER-REBORING MECHANISM. EDGAR F. HEISER, Kingston, Mo. Filed May 17, 1916. Serial No. 98,143. (Cl. 77—56.)

1. In a cutting mechanism, the combination with a rotary tool-carrying shaft provided with an eccentric transverse opening, of a tool mounted on said shaft and within said opening and adapted to be rotated into different angular positions therein with reference to the axis of said opening.

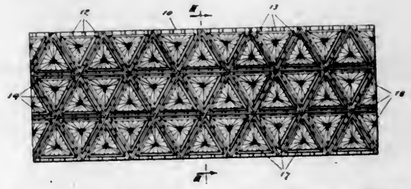
5. The method of sharpening the tools of cylinder reboring devices which consists in applying an abrasive to a portion of the interior face of the cylinder, mounting the tool on the boring shaft with the axis of the tool at right angles to the shaft and eccentric thereto, rotating said shaft with the tool shifted about its axis to a position the reverse of its normal cutting position, and thereafter rotating the shaft with the tool shifted about its axis to a position intermediate said normal and reverse positions for slightly rounding off a portion of the tool's cutting edge.



8. In a cutting mechanism, the combination with a rotary tool-carrying shaft provided with a transverse opening having its axis at right angles to said shaft, of a tool holder mounted detachably on said shaft within said opening and adapted to be clamped in various angular positions with reference to the axis of the opening, said holder being provided with a tool socket extending at right angles to said shaft, a cutting tool mounted within said socket, and means for adjusting said tool within said socket and for clamping the same in adjusted position.

[Claims 2 to 4, 6, and 7 not printed in the Gazette.]

1,231,348. THREE-WAY FLOOR CONSTRUCTION. JOSEPH B. HERNANDEZ, Corona, N. Y. Filed Aug. 24, 1915. Serial No. 47,104. (Cl. 72—66.)



1. A filler for floor constructions comprising a substantially triangular hollow member having the sides thereof inclined, horizontally disposed corrugations in said sides, a cone shaped top for said member, the apex of said cone being equidistant from the corners of said triangular member and reinforcing ribs in said top.

2. A filler for floor constructions comprising a substantially triangular hollow member having the sides thereof inclined, horizontally disposed corrugations in said sides, a cone shaped top for said member, and reinforcing ribs in said top, said reinforcing ribs meeting said corrugations at an angle.

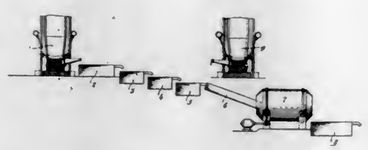
3. In a floor construction, supporting means, a base plate, a plurality of substantially triangular corrugated hollow blocks arranged on the base plate in spaced relation to provide approximately triangular passages therebetween, said hollow blocks having cone shaped tops, reinforcing ribs radiating from the apices of the cones, the triangular blocks being so positioned upon said base plate that the apices of the successive cones are out of alinement perpendicularly with the supporting beams.

4. In a floor construction, a plurality of substantially triangular hollow members having the sides thereof inclined, horizontally disposed corrugations in said sides, cone shaped tops for said members with reinforcing ribs radiating from the apices of said tops, in combination

with a base plate adapted to support said hollow members, said base plate comprising a plurality of transversely extending ribs with perforated portions disposed therebetween.

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1,231,349. PROCESS OF TREATING SLAGS. JAMES BROWN HERRESHOFF, Jr., New York, N. Y. Filed Apr. 9, 1915. Serial No. 20,149. (Cl. 75—62.)



1. The process of recovering the metallic content from metallurgical slags, which comprises agitating the slag with a molten material containing a different percentage of metallic content than said slag.

2. The process of recovering the metallic content from metallurgical slags, which comprises agitating the slag with a molten material containing a smaller percentage of metallic content than said slag.

3. The process of recovering from metallurgical slags a contained metallic ingredient of the molten mass from which the slag has been removed, which comprises mechanically washing the molten slag with a molten material containing a smaller percentage of such ingredient than the said molten mass, substantially as and for the purpose described.

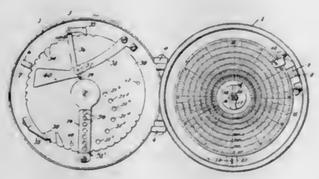
4. The process of recovering from metallurgical slags a contained metallic ingredient of the molten mass from which the slag has been removed, which comprises mechanically washing the molten slag with a series of baths of molten material containing a smaller percentage of such ingredient than the said molten mass, and each bath of the series containing a smaller percentage of such ingredient than the bath immediately preceding in the series, substantially as and for the purpose described.

5. The process of recovering from copper metallurgical slags copper, contained therein, of the copper matte from which the slag has been removed, which comprises mechanically washing the molten slag with a copper matte containing a smaller percentage of copper than said first mentioned copper matte, substantially as and for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

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1,231,350. WATCHMAN'S RECORDING-CLOCK. ISAAC A. HERRMANN, Elyria, Ohio. Filed Sept. 20, 1915. Serial No. 51,545. (Cl. 234—40.)



1. In a recording device, a shielding element, a record receiving element behind said shielding element, means operative from the front of said shielding element for impressing a record upon said receiving element, time controlled means for moving one of said elements relatively to the other element at a uniform speed, and means cooperating with said shielding element for progressively exposing to the operation of said record impressing means a limited portion of said record receiving element.

2. In a recording device, a shielding element having an aperture therein, a record receiving element behind said shielding element, time controlled means for moving one of said elements relatively to the other element at a uniform speed, means coöperating with said shielding element whereby said aperture is alternately covered and uncovered, and means operative from the front of said shielding element for impressing a record upon said receiving element during that part of the time during which said aperture is opened.

3. In a recording device, an apertured shielding element, a record receiving element behind said shielding element, time controlled means for moving one of said record receiving elements relatively to the shielding element at a uniform speed, means for moving said shielding element whereby the exposed portion of said recording element is shifted in a direction at right angles to its chronologic movement, and means operative from the front of said shielding element for impressing a record upon said receiving element during that part of the time during which said aperture is opened.

4. In a recording device, a casing having an aperture in its face, a shielding element movably supported inside this casing and having an aperture therein adapted to register with said first aperture, a record receiving element behind said shielding element, means for moving said recording element past said first aperture at a uniform speed, means for moving said shielding element intermittently to bring said apertures into and out of alinement, and means adapted to traverse said apertures and impress a record upon said receiving surface during the time that said apertures are in alinement.

5. In a recording device, a casing having a series of apertures in its face, a shielding element movably supported inside this casing and having a series of apertures therein arranged at an angle to said first series of apertures and adapted to register, one by one, a record receiving element behind said shielding element, means for moving said recording element past said first series of apertures at a uniform speed, means for moving said shielding element relatively to said casing whereby different apertures of the two series may be brought into alinement, and means adapted to be inserted through alined apertures to impress a record upon said receiving surface.

[Claims 6 to 20 not printed in the Gazette.]

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1,231,351. EXPLOSIVE COMPOSITION AND METHOD OF PRODUCING SAME. HAROLD HIBBERT, Pittsburgh, Pa. Filed Apr. 17, 1916. Serial No. 91,687. (Cl. 52—3.)

1. The method of nitrating carbohydrates soluble in 1.2-glycols and of producing explosive compositions containing nitrated carbohydrates, which comprises dissolving the carbohydrates in a 1.2-glycol medium and nitrating the resulting solution, and thereby producing a mixture of nitrated 1.2-carbohydrate with nitrated 1.2-glycol or nitroglycols; substantially as described.

2. The method of nitrating carbohydrates soluble in 1.2-glycols and of producing explosive compositions containing nitrated carbohydrates, which comprises dissolving the carbohydrate in a mixture of 1.2-glycols and nitrating the resulting solution and thereby producing a mixture of nitrated 1.2-carbohydrate with nitroglycols; substantially as described.

3. The method of nitrating carbohydrates soluble in 1.2-glycols and of producing explosive compositions containing nitrated carbohydrates, which comprises dissolving the carbohydrate in a mixture of 1.2-glycols and polyglycols and nitrating the resulting solution and thereby producing a mixture of nitro-carbohydrates with nitrated 1.2-glycols and nitrated polyglycols; substantially as described.

4. The method of nitrating carbohydrates soluble in 1.2-glycols and of producing explosive compositions containing nitrated carbohydrates, which comprises dissolving the carbohydrate in a mixture of 1.2-glycols containing ethylene, propylene and butylene glycols, and nitrating the resulting solution and thereby producing a mixture of nitrocarbohydrate with nitrated 1.2-glycols; substantially as described.

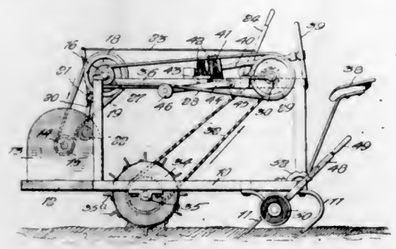
5. The method of nitrating carbohydrates soluble in 1.2-glycols and of producing explosive compositions containing nitrated carbohydrates, which comprises dissolving the carbohydrate in a mixture of 1.2-glycols containing ethylene, propylene and butylene glycols together with polyglycols, and nitrating the resulting solution and thereby producing a mixture of nitro-carbohydrate with nitrated 1.2-glycols and nitrated polyglycols; substantially as described.

[Claims 6 to 18 not printed in the Gazette.]



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1,231,352. POWER-DRIVEN CULTIVATOR. JAMES T. HICKMAN, Jr., Springport, Ind. Filed July 7, 1916. Serial No. 108,006. (Cl. 97—72.)



1. In a machine of the character described, the combination of a generally rectangular frame, cultivating implements arranged in the lower rear portion of the frame, a transverse series of spiked rollers arranged in the lower forward portion of the frame to engage the ground in advance of the cultivating members, a driving motor, and driving connections between the said motor and the said series of spiked rollers, said driving connections including a normally loose belt, a belt tightening lever fulcrumed in the frame and having a roller engaging the said belt, and a controlling lever having connection with the said belt tightening lever and under control of the operator, for the purpose described.

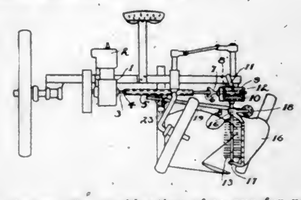
2. In a machine of the character described, the combination of a generally rectangular frame, a series of cultivating implements extending across the lower rear portion of the frame, a transverse series of spiked rollers extending across the lower forward portion of the frame to engage the ground in advance of the series of cultivating members, a driving motor, and driving connections between the said motor and the said series of spiked rollers, said spiked rollers being arranged in equal numbers upon opposite sides of the longitudinal axis of the frame, and controlling connections whereby to check rotation of the spiked rollers upon one side of the axis of the frame.

3. In a machine of the character described, the combination of a generally rectangular frame, cultivating implements arranged in the lower rear portion of the frame, a transverse series of spiked rollers arranged in the lower forward portion of the frame to engage the ground in advance of the cultivating members, a driving motor, driving connections between the said motor and the said series of spiked rollers including normally loose belts, said spiked rollers being arranged in equal numbers upon opposite sides of the longitudinal axis of the frame, and controlling connections whereby to check the rotation of the spiked rollers upon one side of the axis of the frame, said controlling connections including a steering post belt controlling members connected to said post and a steering wheel the latter of which is under the manual control of the operator.



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1,231,353. PLANTER. THOMAS W. HICKS, Minneapolis, Minn., assignor to Scientific Farming Machinery Company, Minneapolis, Minn., a Common Law Company. Original application filed Aug. 21, 1916, Serial No. 116,148. Divided and this application filed Jan. 15, 1917. Serial No. 142,567. (Cl. 111—1.)



1. In a planter, the combination of means for pulverizing soil, and means for introducing seed into the soil so pulverized as it is deposited back upon the sub-soil.

4. In a planter, the combination of means for lifting a portion of the soil, pulverizing the soil so lifted, means for depositing the soil so pulverized in strata having substantially uniform sized granules in each strata and means for introducing seed into the soil so deposited at a predetermined depth from the surface of the finished field.

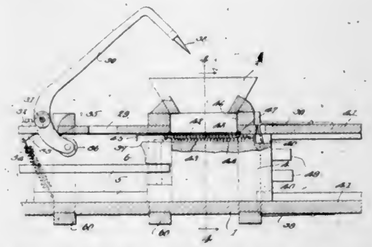
11. In a planter, the combination of means for lifting and pulverizing a portion of the soil, means for puncturing the subsoil before the pulverized dirt falls back thereon, and means for introducing seed among the pulverized granules as they fall back onto the sub-soil.

12. In a planter the combination of means for lifting, pulverizing and depositing onto the subsoil a portion of the soil, said act of depositing extending over a certain interval of time, means for introducing seed onto a portion of the soil so deposited forming a root section, means for packing the root section, the packed root section being covered with a portion of the soil, deposited during the remainder of said interval of time.

[Claims 2, 3, and 5 to 10 not printed in the Gazette.]

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1,231,354. HAY-PRESS. BEN F. HILTON and CHARLEY W. HILTON, Joaquin, Tex. Filed Oct. 30, 1916. Serial No. 128,525. (Cl. 100—7.)



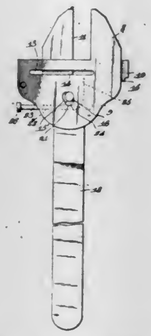
1. In a hay press, a press box, a plunger working therein, an oscillatory feeder for feeding hay into the press box, spring means for raising the feeder, an arm carried by the feeder and extending toward the plunger, a roller carried by said arm, and a contact plate carried by the plunger to engage said roller when the plunger is retracted for swinging the feeder downwardly.

2. In a hay press, a press box having an upper mouth, a plunger working within the press box and movable under said mouth, a plate mounted slidably upon the plunger and movable under said mouth therewith, a grooved portion carried by the press box at one side of said mouth for the engagement of the forward end of said plate, and spring means for yieldably advancing said plate relative to the plunger.

3. In a hay press, a press box having an upper mouth, a plunger working within the press box, a closure plate upon the plunger to move under said mouth, spring means between said plate and plunger for yieldably advancing said plate with the plunger, a plate carried by the press box at the forward side of its mouth and having a groove, and a blade carried by said plate movable into said groove when the plunger is advanced and before the plunger completes its movement.

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1,231,355. WRENCH. CHARLES C. HOLE, Fremont, Nebr. Filed Oct. 27, 1916. Serial No. 128,074. (Cl. 81—127.)



1. In combination, a stationary jaw having angularly arranged spaced side plates, a movable jaw having its shank disposed for longitudinal movement between the side plates, means for limiting the movement of the said movable jaw with relation to the stationary jaw, guide means for the movable jaws, the shank of the movable jaw being toothed, a handle having a rounded head provided with peripheral teeth disposed between the side plates, trunnions upon the head of the handle, the side plates having cam slots to receive the trunnions, and means comprising a longitudinally movable spring pressed member engaging with the trunnions for normally forcing the same in one direction within the cam-shaped slots to bring the teeth of the head to mesh with the teeth of the shank.

2. In combination with a stationary jaw having angular side plates, and a movable jaw having a toothed shank disposed for longitudinal movement between the said plates, each of said side plates having registering angular slots, a handle member having a rounded toothed head disposed between the side members, said handle having its head provided with laterally extending trunnions which are arranged within the angular slots, of a member arranged in bearings in the side plates, an offset extension upon one of the ends of said member, and the wall between the said extension and the said member being rounded, means comprising a spring for normally moving the member in one direction to bring the offset portion thereof to engage with the trunnions of the head, whereby the teeth of the head are normally in mesh with the teeth of the shank of the movable jaw, and said member having its end opposite that provided with the offset portion projecting outwardly of the wrench.

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1,231,356. STRAINING DEVICE FOR EAVES-SPOUTINGS. ARNOLD E. HOUGE, Badger, Iowa. Filed Apr. 28, 1917. Serial No. 165,199. (Cl. 210—16.)

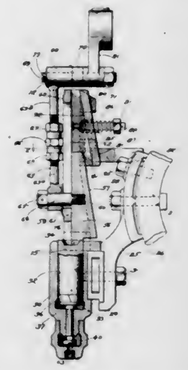
1. In combination with a down-spout or the like, having an opening in one of the sides thereof, of a holder member including a handle and two pivoted rings designed to receive therebetween a strip of fabric providing a filtering member and which is adapted to be inserted through the opening in the pipe, as and for the purpose set forth.



2. A holding means for fabric filters for down-spouts or the like, comprising two ring members each formed with outstanding arms, one of the ring members being in the nature of a metallic band, the outer edge of which is flanged, the arm of the said member being pivotally secured to the arm of the first mentioned member whereby the second mentioned ring will be swung to within the first mentioned ring with the flange of the first mentioned ring resting upon the upper edge of the second mentioned ring.

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1,231,357. BELL-RINGER FOR LOCOMOTIVES. JOHN HOWE, Aurora, Ill. Filed Mar. 8, 1915. Serial No. 13,058. (Cl. 116—40.)



1. In a device of the class described, a bell pivoted on a horizontal axis, a movable part actuated when said bell is operated, and a member frictionally engaging said movable part for limiting the angular movement of said bell.

2. In a device of the class described, a bell frame, a bell rotatively suspended in said frame, means for ringing said bell, and a friction brake operative after a predetermined movement of said bell to cushion said bell and limit the angular movement thereof.

3. In a device of the class described, a pivotally mounted bell, a movable member movable with said bell, a brake shoe adapted to engage automatically said movable member, and means for varying the pressure of said brake shoe on said movable member.



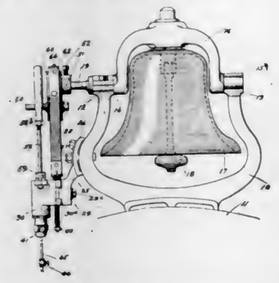
4. In a device of the class described, a bell frame, a bell rotatably suspended in said bell frame, means for ringing said bell, and a friction brake comprising coacting wedging surfaces for preventing said bell from swinging over and above its axis.

5. In a device of the class described, a rotatably mounted bell, means for ringing said bell comprising a sliding block, means operatively connecting said sliding block with said bell to rotate the same, said sliding block having a wedging surface formed thereon, and means coacting with said wedging surface to bring said block to rest.

[Claims 6 to 18 not printed in the Gazette.]

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1,231,358. BELL-RINGER FOR LOCOMOTIVES. JOHN HOWE, Aurora, Ill. Continuation in part of application Serial No. 13,058, filed Mar. 8, 1915. This application filed May 11, 1916. Serial No. 96,794. (Cl. 116—40.)



1. In a device of the class described, a pivotally mounted bell, and a rotary friction brake for bringing said bell to rest after a rotative impulse has been imparted thereto.

5. In combination, a pivotally mounted bell, means for ringing said bell, an eccentric member actuated by the movement of said bell, and braking means adapted to cooperate with the peripheral surface of said eccentric member to control the angular movement of the bell.

17. In combination, a pivotally mounted bell, an eccentric member actuated by the angular movement of said bell, a brake member adapted to engage operatively said eccentric member after a predetermined angular movement thereof, a supporting member, a brake stem resiliently and slidably mounted on said supporting member, and means to connect said brake stem with said brake member.

19. In combination, a pivotally mounted bell, an eccentric member actuated by the angular movement of said bell, a brake shoe adapted to coact with the peripheral surface of said eccentric member to effect an increasing resistance to the angular movement thereof, a supporting member, means for supporting said brake shoe from said supporting member, and means for adjusting said supporting member with respect to said eccentric member.

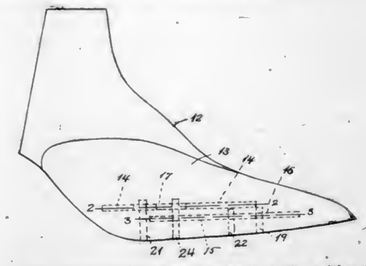
20. In combination, a pivotally mounted bell, a crank member pivotally connected to said bell and comprising an eccentrically located annular surface, means operatively connected with said crank member to impart a rotative impulse thereto, a brake shoe adapted to coact with the eccentric surface of said crank member to effect an increasing resistance to the angular movement thereof after the bell has swung through a predetermined arc, and an adjustment member operatively connected with the brake shoe to vary the operative engagement thereof with said eccentric surface.

[Claims 2 to 4, 6 to 16, 18, 21, and 22 not printed in the Gazette.]

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1,231,359. FOREPART FOR BOOT AND SHOE TREES. OLIVER J. HOWE, Brockton, Mass. Filed Mar. 26, 1917. Serial No. 157,307. (Cl. 12—128.)

1. A tree foot forepart, comprising a body member having a flat oblique inner face, a movable member having a flat oblique inner face adapted to slide on the inner face of the body member to vary the width of said forepart, the said members being provided with elongated parallel slots arranged in different planes and opening on said faces, a pair of flat-sided oblong wings, one attached to the body member and constituting a guide entering the slot of the movable member, and the other attached to the movable member and constituting a slide entering the slot of the body member, said wings being shorter than said slots and permitting longitudinal movements of the movable member,

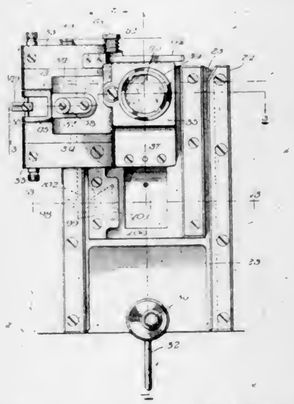


and means for preventing withdrawal of the wings from the slots, the said slots and wings being out of transverse alinement with each other, so that said wings and sides of the slots coöperate in forming an elongated two-part sliding connection between the body and movable members, adapted to prevent the movable member from tipping or rocking when in any position to which it may be moved, one part of said connection being relatively near the toe end, and the other relatively near the rear end of the forepart.

[Claims 2 and 3 not printed in the Gazette.]

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1,231,360. PNEUMATIC FILM-CONTROLLING DEVICE. ALBERT S. HOWELL, Chicago, Ill., assignor to Bell & Howell Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,019. (Cl. 88—17.)



1. In apparatus for moving film, an aperture element, a passage through which the film is adapted to travel past said aperture, and means for exerting pneumatic pressure upon the film during transit through said passage.

2. In apparatus for moving film, an aperture element, a passage through which the film is adapted to travel past said aperture, and means for exerting pneumatic pressure upon opposite surfaces of the film during its transit through said passage.

3. In apparatus for intermittently moving film, an aperture element, a passage through which the film is

adapted to travel intermittently past said aperture, and means for exerting pneumatic pressure upon the film to suspend the same during its periods of motion through said passage.

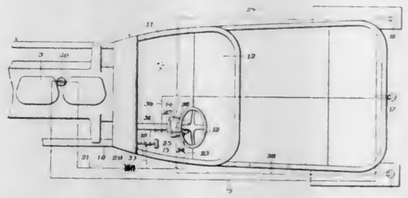
4. In apparatus for moving film, an aperture element, a passage through which the film is adapted to travel past said aperture, and means for exerting pneumatic pressure upon the film to suspend the same during its transit through said passage.

5. In apparatus for moving film, an aperture element, means for moving film across said aperture, and provisions whereby pneumatic pressure is exerted against the film and the latter is held out of contact with the surrounding walls during transit.

[Claims 6 to 14 not printed in the Gazette.]

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1,231,361. SIGNAL DEVICE FOR MOTOR-VEHICLES. JOHN H. HUNT, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 24, 1913. Serial No. 756,517. (Cl. 177—337.)

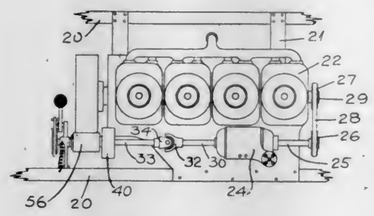


1. In a motor vehicle, the combination with a series of signal lights and a battery and circuits therefor, of a manually operated selector switch for said circuits, and a switch operated by the vehicle acting to intermittently open and close the selected circuits.

2. In a motor vehicle, the combination with a signal light and a battery and circuit therefor, of a manually operated switch for said circuit, and a switch in said circuit operated by the vehicle motor independently of the movement of the vehicle and acting to intermittently open and close the circuit.

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1,231,362. ENGINE-STARTER SYSTEM. JOHN HERMAN HUNT, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Company, a Corporation of Ohio. Filed Sept. 3, 1914. Serial No. 859,968. (Cl. 74—34.)



1. In a starting device, the combination with an internal combustion or explosion engine, of an electric machine operable as a motor for starting purposes, a planetary gearing between the one end of the electric machine and the engine; and means for moving said planetary gearing into and out of driving connection with the engine for starting purposes.

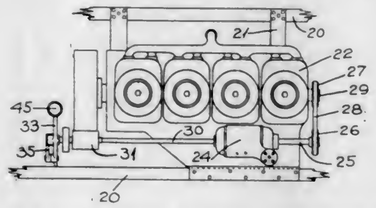
2. In a starting device for internal combustion or explosion engines, the combination with a power unit; a planetary gearing between said power unit and the engine; an operating member for initially rendering said planetary gearing operable as a speed reduction device and finally connecting the planetary gearing in operative relation to the engine to be started.

5. In an engine starting device, the combination with a starting device therefor comprising a dynamo electric machine operable as a motor for starting purposes; a planetary gearing having a universal joint connection with the electric machine and shiftable into and out of driving engagement with the engine; and a common operating member capable of an initial operation to render said planetary gearing operable as a speed reduction device, and of a further movement to shift the planetary gearing into operative driving relation to the engine for starting purposes.

[Claims 3 and 4 not printed in the Gazette.]

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1,231,363. ENGINE-STARTING SYSTEM. JOHN HERMAN HUNT, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Company, a Corporation of Ohio. Filed Sept. 3, 1914. Serial No. 859,969. (Cl. 74—26.)



1. In a starting system for internal combustion or explosion engines, the combination with a power unit; connecting devices connected with said power unit and capable of movement to engage with the engine; and means for initially imparting movement to all of said connecting devices to bring certain of the devices into contact with the engine and to then impart a further movement to the device in contact with the engine to increase the pressure of the contact between the connecting device and the engine.

4. In a starting system for internal combustion or explosion engines, the combination with a starting device; connecting devices adapted to connect said starting device with the engine; means for oscillating said connecting devices for a limited distance about a floating fulcrum for connecting the said devices with the starting device; and means for oscillating the connecting devices and the floating fulcrum about a fixed fulcrum to bring said devices into engagement with the engine.

5. In a starting device for internal combustion or explosion engines, the combination with a starting device; connecting devices for coupling the starting device with the engine; means for oscillating said devices for bringing same into contact with the engine; means for restoring said connecting devices with their controlling elements, into their normal position; and stop devices for limiting the scope of operation of the means for restoring the connecting devices to their normal position.

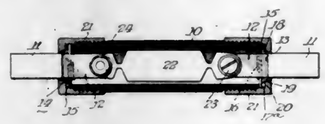
[Claims 2, 3, and 6 not printed in the Gazette.]

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1,231,364. INCLOSED SAFETY-FUSE. HENRY M. HUXLEY, Evanston, Ill., assignor to Economy Fuse & Manufacturing Company, Chicago, Ill., a Corporation of New York. Filed May 3, 1915. Serial No. 25,353. (Cl. 175—273.)

1. In an inclosed safety fuse, the combination of a hollow cylindrical casing, a terminal extending into the end of said casing, a fusible link attached to said terminal, a round centering member of smaller diameter than the bore of said casing and engaging said terminal, a washer between said centering member and the end of said casing, and a cap member fitting over the end of said casing and engaging said centering member, one of said members having a beveled surface engaging the other member, whereby said centering member will be automatically centered with respect to said casing when said cap member is brought into position on the end of said casing.





2. In an inclosed safety fuse, the combination of a hollow cylindrical casing having an alining recess at its end, a terminal extending into the end of said casing, a fusible link attached to said terminal, a round centering member fastened to said terminal and having an aperture through which said terminal extends, said centering member being of less diameter than the bore of said casing and having a beveled surface on its outer face, an alining washer between said centering member and the end of said casing, said alining washer having a boss engaging the alining recess of said casing, and a cap member fitting over the end of said casing and having an inwardly-extending flange engaging the beveled surface of said centering member, whereby said centering member will be automatically centered with respect to said casing when said cap member is applied in position.

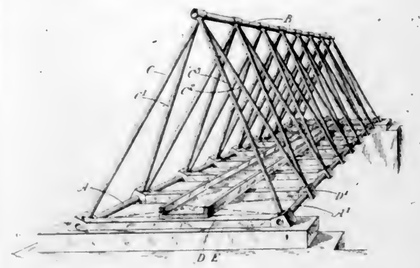
3. In an inclosed safety fuse, the combination of a hollow cylindrical casing, a terminal extending into each end of said casing, a fusible link within said casing and having its ends attached to the inner ends of said terminals, a centering washer fastened to each of said terminals, one of said centering washers being of less diameter than the bore of said casing, means engaging each end of said casing for alining said terminals, the alining means at one end of said casing comprising a washer having a slot extending to its periphery through which the terminal blade passes, and a cap member fitting over each end of said casing and having a beveled surface engaging the corresponding centering washer when the cap is applied in position, whereby the centering washer and its attached terminal are automatically centered with respect to said casing.

4. In an inclosed safety fuse, the combination of a hollow cylindrical casing having an alinement recess in each end thereof, a terminal blade extending into each end of said casing, a fusible link within said casing and attached at its ends to the inner ends of said terminal blades, a round centering washer attached to each of said terminal blades and of smaller diameter than the bore of said casing, each of said centering washers having a beveled surface on its outer face, an alining washer between each of said centering washers and the end of said casing, said alining washer having a slot extending inwardly from its periphery, whereby it may be applied to said terminal blade and having a boss engaging the alining recess in the end of said casing, and a cap fitting over each end of said casing and having an inwardly-extending flange with a beveled surface engaging the beveled surface of the corresponding centering washer.

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1,231,365. JOINTING DEVICE FOR THE MEMBERS OF MILITARY BRIDGES AND THE LIKE. CHARLES EDWARD INGLIS, Grantchester, near Cambridge, England. Original application filed Oct. 9, 1915, Serial No. 55,085. Divided and this application filed Oct. 17, 1916. Serial No. 126,119. (Cl. 14—14.)

1. In a joint-box for connecting a structure member to another part the combination with the joint-box of a structure member which enters the box, the box and structure member having mutually engaging coned surfaces one on each of these parts, the said surfaces being coaxial with the direction of the stress in the structure member, and a pin-and-slot connection between the box and the said structure member arranged with the longitudinal axis of the pin intersecting the cone axis of the structure member to which the pin is allotted and holding the box and member together against forces tending to separate the coned surfaces, substantially as and for the purpose described.



2. In a joint-box for connecting structure members the combination of a joint-box into which the structure members can enter, each structure member having a coned surface which engages a corresponding coned surface on the box the coöperating coned surfaces being coaxial with the direction of the stress in the structure member, and a pin-and-slot connection between the box and each structure member arranged with the longitudinal axis of the pin intersecting the cone axis of the structure member to which the pin is allotted and holding the box and member together against forces tending to separate the coned surfaces, substantially as and for the purposes described.

3. In a joint-box for connecting structure members the combination of a joint-box into which the structure members can enter, each structure member having a coned surface which engages a corresponding coned surface on the box the coöperating coned surfaces being coaxial with the direction of the stress in the structure member, one of these coned surfaces being formed as a nut which can be screwed tight home against the other coned surface, and a pin-and-slot connection between the box and each structure member arranged with the longitudinal axis of the pin intersecting the cone axis of the structure member to which the pin is allotted and holding the box and member together against forces tending to separate the coned surfaces, substantially as and for the purposes described.

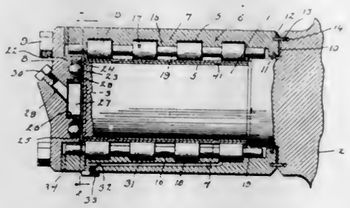
4. In a joint-box for connecting a structure member to another part the combination with the joint-box of a structure member which enters the box, the box and structure member having mutually engaging coned surfaces one on each of these parts, the said surfaces being coaxial with the direction of the stress in the structure member, and a pin-and-slot connection between the box and the said structure member arranged with the longitudinal axis of the pin intersecting the cone axis and holding the box and member together against forces tending to separate the coned surfaces, the pin of each pin-and-slot connection being a loose fit in the openings provided for it and the engagement of the coned surfaces is such as to take up the looseness of the pin and aline the structure member relatively to the joint-box as well as lock it thereto, substantially as and for the purpose described.

5. In a joint-box for connecting structure members the combination of a joint-box into which the structure members can enter, each structure member having a coned surface which engages a corresponding coned surface on the box the coöperating coned surfaces being coaxial with the direction of the stress in the structure member, the axes of the various coöperating coned surfaces being so arranged that they intersect at a point common to them all, and a pin-and-slot connection between the box and each structure member arranged with the longitudinal axis of the pin intersecting the cone axis of the structure member to which the pin is allotted and holding the

box and member together against forces tending to separate the coned surfaces, substantially as and for the purposes described.

[Claims 6 and 7 not printed in the Gazette.]

1,231,366. BALL-BEARING FOR JOURNAL-BOXES. ASA O. IRWIN, Plattsburg, N. Y. Filed Dec. 12, 1916. Serial No. 136,438. (Cl. 64—49.)



1. A device of the character set forth comprising an axle, a boxing journaled on said axle, a head detachably secured to the boxing and having a screwthreaded circular recess, a screwthreaded retaining ring threaded in said recess, an annular flange formed on said ring, said flange and head having grooves therein, and bearing balls located within said grooves and bearing against the end of the axle to take up end thrust thereon.

2. A device of the character set forth comprising an axle, a boxing journaled on said axle, a head detachably secured to said boxing, an offset portion formed on the inner face of the head and provided with an annular groove, bearing balls positioned within the groove and in engagement with the end of the axle, an annular shoulder formed on the offset portion and in engagement with the bearing balls, said offset portion provided with a circular recess in the center thereof and provided with the walls thereof screwthreaded, a retaining ring threaded in said recess, having an annular flange and engaging the bearing balls to retain said bearing balls in the groove, and means for supplying the recess with lubricant to lubricate the bearing balls and the rollers.

3. A device of the character set forth comprising an axle, a boxing journaled on said axle, a head detachably secured to said boxing, an offset portion formed on the inner face of the head, bearing balls mounted within said offset portion, said offset portion provided with a central recess, means mounted in the recess for holding the bearing balls in the offset portion, said head provided with an upwardly inclined opening in communication with the recess and provided with screwthreads in the walls thereof, a plug threaded to the wall of the upwardly inclined opening, whereby the recess may be furnished with lubricant to lubricate the bearing balls.

1,231,367. ELECTRIC SWITCH. ERNEST H. JACOBS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 23, 1914. Serial No. 840,501. (Cl. 175—267.)

1. In an electric switch, the combination with a fixed contact member, and a coöperating movable contact member, of an actuating mechanism comprising an operating toggle, an operating lever actuated by said operating toggle, an actuating toggle in pivotal relation with said operating lever, a collapsible connection between said operating lever and said actuating toggle, means for holding said collapsible connection in locked position to move said actuating toggle in response to said operating toggle into switch closing position, and means for automatically collapsing said connection to cause said actuating toggle to move into switch opening position free from said operating toggle.

2. In an electric switch, the combination with a fixed contact member, and a coöperating movable contact member, of an actuating mechanism comprising an operating toggle, a common bearing, an operating lever actuated by said operating toggle and movably mounted on said bearing, an actuating toggle for moving said movable contact member, one member of said toggle being pivotally mounted upon said operating lever, a collapsible locking toggle when in locked position forming a rigid connection between said operating lever and said actuating toggle whereby said actuating toggle moves said movable contact member into engagement with said fixed contact member in response to movement of said operating toggle, and means for collapsing said locking toggle to move said actuating toggle and hence said movable contact member out of engagement with said fixed contact member without disturbing said operating toggle.



3. In an electric switch, the combination with a fixed contact member, and a coöperating movable contact member, of an actuating mechanism comprising an operating toggle, a common bearing, an operating lever actuated by said operating toggle and pivotally mounted on said bearing, an actuating toggle in pivotal relation with said operating lever eccentric to said bearing, a parallel link device for moving said movable contact member in a straight line, one of said parallel links being pivotally mounted on said common bearing and the other of said links being pivotally connected to said actuating toggle, a collapsible locking toggle between said operating lever and said actuating toggle for holding said actuating toggle rigid and slightly underset when in switch closing position whereby a movement of said operating toggle into switch closing position is transmitted by said actuating toggle to said parallel link device, and means for collapsing said locking toggle to allow said actuating toggle to collapse without moving said operating toggle from switch closing position.

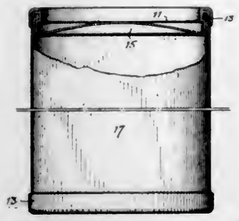
4. An actuating mechanism for an electric switch comprising an operating toggle, an actuating toggle, an operating lever in pivotal relation with and movable by said operating toggle, said operating lever being also in pivotal relation with said actuating toggle to move said actuating toggle into switch closing position, a collapsible locking toggle when in collapsed position allowing said operating lever to be moved by said operating toggle without moving said actuating toggle into switch closing position, said locking toggle when in locked position rigidly connecting said operating lever and said actuating toggle to cause said actuating toggle to be moved into switch closing position in response to movement of said operating toggle, and means for collapsing said locking toggle to move said actuating toggle free from said operating toggle into switch opening position.

5. An actuating mechanism for an electric switch comprising a common bearing, an operating lever pivotally mounted upon said bearing, an operating toggle for moving said operating lever in pivotal relation with said lever, an actuating toggle pivotally mounted upon said operating lever eccentric to said bearing, a collapsible locking toggle when in locked position rigidly connecting said actuating toggle and said operating lever whereby a movement of said operating toggle to switch closing position moves said actuating toggle to switch closing position, and means for collapsing said locking toggle whereby said actuating toggle collapses without moving said operating toggle from switch closing position.

[Claims 6 to 17 not printed in the Gazette.]



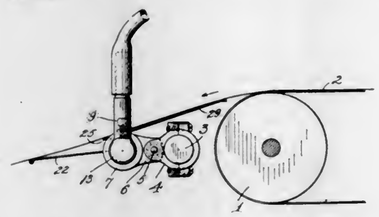
1,231,368. METAL BARREL. JOHN JASZKUL, Maspeth, N. Y. Filed Mar. 8, 1917. Serial No. 153,371. (Cl. 220—1.)



1. In a metal barrel, an end closure locking ring having an external shoulder for forming joint with the barrel body and end closure, and outwardly extending spaced flanges at the outer end of the ring adapted to be crimped down upon the joint formed at the ring shoulder, substantially as described.

[Claims 2 to 4 not printed in the Gazette.]

1,231,369. BURNER. ANDREW J. JOHNSON, Cleveland, Ohio. Filed July 17, 1912. Serial No. 709,914. (Cl. 34—18.)



1. Burner mechanism for printing presses comprising a burner supported at a point near the path of the paper in its delivery from the press, and means for confining the heat from the flame of the burner against the under side of the sheet.

2. Burner mechanism for printing presses comprising a burner supported at a point near the path of the paper in its delivery from the press, and a device carried by the burner and extending to a point coincident with the path of the paper for confining the heat of the flame of the burner against the under side of the sheet.

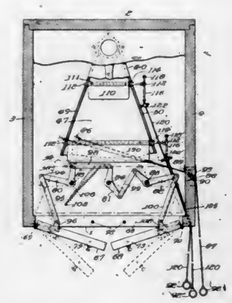
3. Burner mechanism for printing presses comprising a burner supported at a point near the path of the paper in its delivery from the press, and a confining plate carried by the burner and extending to a point coincident with the path of the paper.

4. Burner mechanism for printing presses comprising a burner supported at a point near the path of the paper in its delivery from the press, brackets carried by the burner, and a confining plate supported on the brackets and extending to a point coincident with the path of the paper in its delivery from the press and adapted to confine the heat from the flame of the burner against the under side of the sheet.

5. Burner mechanism for printing presses comprising a burner supported at a point near the path of the paper in its delivery from the press, brackets carried by the burner, and a confining plate supported on the brackets extending to a point coincident with the path of the paper and provided with cut off portions to permit the expansion of the confining plate.

[Claims 6 and 7 not printed in the Gazette.]

1,231,370. TONE-MODULATING DEVICE FOR TALKING-MACHINES. ELDRIDGE R. JOHNSON, Merion, Pa., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Dec. 14, 1914. Serial No. 877,049. (Cl. 274—2.)



1. In a talking machine, the combination of a cabinet having an opening, movable closures for said opening, a sound conveyer having a passage, a sound amplifier between said sound conveyer and said opening, means movable within said sound conveyer operative to restrict the area of said passage, and means operative to control the position of said closures and of said first mentioned means from a point at a distance from said cabinet.

2. In a talking machine, the combination of a cabinet having an opening, sound reproducing means, an amplifier terminating adjacent said opening, sound conveying means having an internal passage and connecting said sound reproducing means and said amplifier, movable closures for said opening, a plurality of means within said sound conveyer operative to restrict the area of said passage, means operative to control the position of said closures from a point removed from said cabinet, and means operative to control said means within said sound conveyer from the same point.

3. In a talking machine, the combination of a cabinet having an opening, sound reproducing means, a sound amplifier, a sound conveyer having an internal passage and connecting said sound amplifier and said sound reproducing means, a pair of movable doors for said opening, a plurality of movable shutters within said passage, means operative to control the position of said doors from a point removed from said cabinet, and means operative to control the position of said shutters from the same point.

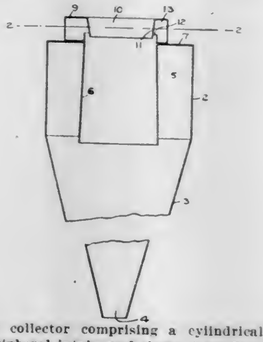
4. In a talking machine, the combination of a cabinet having an opening, sound reproducing means, sound conveying means connecting said sound reproducing means with an amplifier terminating adjacent said opening, a pair of movable doors for said opening, means tending to normally maintain said doors in open position, a plurality of shutters within said sound conveying means, means operative to normally maintain said shutters in open position, and means operative to change the position of said doors and of said shutters from a point removed from said cabinet.

5. In a talking machine, the combination of a cabinet having an opening, sound reproducing means, an amplifier terminating adjacent said opening, a sound conveyer connecting said amplifier and said sound reproducing means, a pair of movable closures for said opening, a plurality of shutters in said sound conveying means, means

comprising a plurality of spring-actuated levers operative to normally maintain said closures in open position, means comprising spring-actuated levers operative to normally maintain said shutters adjacent the wall of said sound conveyer, and means operative to change the position of said closures and of said shutters from a point distant from said cabinet.

[Claims 6 to 12 not printed in the Gazette.]

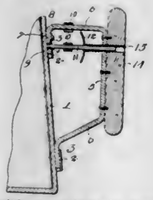
1,231,371. DUST-COLLECTOR. DAVID R. JONES, Red Wing, Minn. Filed Apr. 14, 1917. Serial No. 162,014. (Cl. 183—84.)



1. A dust collector comprising a cylindrical member having a peripheral intake and sleeve depending centrally within said member and projecting through the top of the same and having open ends, an air trunk encircling the projecting end of said sleeve and eccentric with respect thereto, and having a flange depending therein and separated therefrom by a narrow annular gap, said trunk having an exit passage and decreasing in cross sectional area from the entrance to said exit passage around the circumference of said sleeve, whereby there will be a substantially uniform degree of suction at all points of said gap.

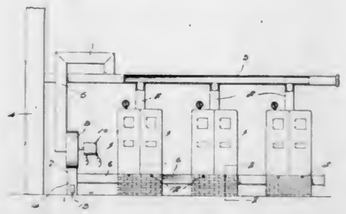
2. A dust collector comprising a cylindrical member having a peripheral intake and sleeve depending centrally within said member and projecting through the top of the same and having open ends, an air trunk encircling the projecting end of said sleeve and eccentric with respect thereto, and having a flange depending therein and separated therefrom by a narrow annular gap, said trunk having an exit passage and decreasing in cross sectional area from the entrance to said exit passage around the circumference of said sleeve, whereby there will be a substantially uniform degree of suction at all points of said gap, and said sleeve and flange being flared in opposite directions, for the purpose specified.

1,231,372. DETACHABLE COFFEE-POT HANDLE. IRA JONES, Pottstown, Pa. Filed Dec. 8, 1915. Serial No. 65,845. (Cl. 53—3.)



In combination with a receptacle provided at its sides with loops having recesses located at their upper edges and a handle comprising a bracket having outstanding arms and provided with extremities adapted to pass through the recesses and enter the loops whereby the end portions of the arm may fit in the recesses of the loops, one of the extremities being provided with an opening and one of the loops being provided with an aperture and a spring pressed catch bolt slidably mounted upon the handle and adapted to enter the said aperture and the opening whereby the handle is secured in position with relation to the receptacle.

1,231,373. DRAFT DEVICE. OLAF JONSSON, Milwaukee, Wis. Filed July 3, 1915. Serial No. 37,851. (Cl. 110—49.)



In a device of the class described, a battery of furnaces arranged in pairs, a vertical common smoke pipe for each pair of furnaces, a horizontal pipe connecting the smoke pipes, one end of said horizontal pipe being closed, a single smoke stack, the open end of said horizontal pipe being connected to said smoke stack, a suction pipe connected to the upper portion of said horizontal pipe intermediate the smoke stack and the battery of furnaces, a blower having a casing communicating with said suction pipe, and a transverse blast pipe leading from said casing and passing through the furnaces beneath the grates thereof and provided with openings adapted to discharge to said furnaces, respectively.

1,231,374. MILK-STRAINER. RUDOLPH JOVANOVITZ and ANTHONY LAMBERT, New England, N. D. Filed Apr. 6, 1917. Serial No. 160,209. (Cl. 210—16.)



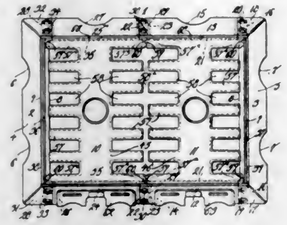
1. A milk pail strainer, comprising a receptacle having a nose, the wall of the receptacle provided with an opening to permit liquid to pass from the receptacle into said nose, the top of the receptacle having a slot, a strainer passing through said slot and engaging the marginal edges of said opening, and means for holding the strainer in place in the receptacle.

[Claims 2 and 3 not printed in the Gazette.]

1,231,375. BOILER STRUCTURE. WILLIAM KANE, Philadelphia, Pa. Filed Nov. 24, 1916. Serial No. 133,240. (Cl. 122—225.)

1. The combination in an independent boiler structure, of a hollow boiler unit having oppositely disposed longitudinal extensions spaced apart, a base made of sections, said sections comprising plates provided with extensions detachably connected together and having ledge portions providing a support for said boiler unit, side panels supported by said base and extending longitudinally adjacent the outer edges of said extensions to form flues of the space between said outer extensions, and a hood adjacent the top of said panels and boiler unit, said hood providing a chamber for the products of combustion after passing upwardly through said flues, substantially as described.





2. A hollow boiler unit having hollow extensions disposed at opposite sides and spaced apart, said extensions being arranged comparatively close together and in straight rows to provide separate and independent flues between the extensions, said flues and extensions running from the top to the bottom of the boiler unit, substantially as described.

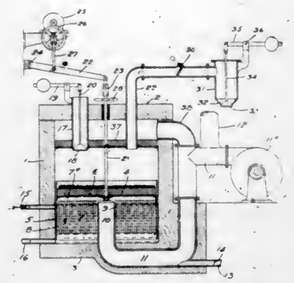
3. In a boiler structure, the combination of a plurality of independent boilers, each of said boilers having oppositely disposed longitudinal extensions, said boilers being positioned with certain of the extensions of each boiler adjacent each other, the end ones of said adjacent extensions being designed to form a seal for the spaces between the intervening extensions, side panels adjacent the other of said extensions, and a base for the boilers and side panels, substantially as described.

4. In a boiler structure, the combination of a plurality of independent boilers, a base therefor made of sections, said sections comprising members detachably connected together and providing a ledge for supporting the boilers, said sections having connecting portions designed to receive connecting portions of other side sections whereby the base can be lengthened to provide a support for additional boilers, said boilers having lateral extensions providing flues, panels forming a closure for the outer side flues, and a hood made in detachable sections mounted above said boilers, said sections having registering openings to permit pipes to pass therethrough and connect with said boilers, said hood sections having portions designed to receive connecting portions of other hood sections whereby the hood can be increased in length or cover additional boilers, substantially as described.

5. In a boiler structure, the combination of a plurality of independent boilers, a base therefor made of sections, said sections comprising members detachably connected together and providing a ledge for supporting the boilers, said sections having connecting portions designed to receive connecting portions of other side sections whereby the base can be lengthened to provide a support for additional boilers, said boilers having lateral extensions providing flues, panels forming a closure for the outer side flues, and a hood made in detachable sections mounted above said boilers, said sections having registering openings to permit pipes to pass therethrough and connect with said boilers, said hood sections having portions designed to receive connecting portions of other hood sections whereby the hood can be increased in length or cover additional boilers, said hood also providing an opening forming an outlet for the products of combustion, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,231,376. HEAT-ENGINE. ALEXANDER T. KASLEY, Swissvale, Pa. Filed July 5, 1913. Serial No. 777,432. (Cl. 60—4.)



1. The combination with a displacer chamber and an inlet and exhaust port therefor, of a displacer in the chamber the edges of which are spaced from the side wall of the chamber, a liquid seal for said space and means for actuating said displacer.

2. The combination with a displacer chamber having an inlet and exhaust port, of a displacer in the chamber the edges of which are spaced from the wall of the chamber, a regenerator carried by the displacer, a liquid seal for said space and means for actuating said displacer.

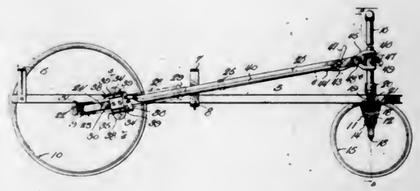
3. The combination with a displacer chamber, means for admitting air to and exhausting it from said chamber, of a displacer in the chamber, heat dissipating elements carried by said displacer, a liquid seal between the edge of the displacer and the side wall of the displacing chamber, and means for actuating said displacer.

4. The combination with a displacer chamber having an inlet and exhaust port, of a displacer in the chamber the edges of which are spaced from the side wall of said chamber, a liquid seal for said space, means for actuating the displacer, and a regenerator.

5. In a hot air engine, a displacer chamber to which air may be admitted and from which air may be exhausted by means of a conduit communicating with the atmosphere, means for varying the temperature of the air in said chamber, and a displacer within said chamber comprising a perforate plate, a regenerator on one side of said plate, and heat dissipating elements on the other side of said plate.

[Claims 6 to 14 not printed in the Gazette.]

1,231,377. SELF-PROPELLED VEHICLE. WILLIAM E. KAWALLE, Manitowoc, Wis. Filed Sept. 2, 1916. Serial No. 118,196. (Cl. 208—36.)



1. A manually propelled vehicle comprising a wheeled frame including a drive axle, a pivoted operating lever, bars pivotally attached to the axle and lever respectively and slidably connected and a ratchet drive mechanism for said axle carried by said bars and movable with the lever connected bar.

2. A manually propelled vehicle comprising a wheeled frame including a pivoted front axle structure, a drive mechanism, a combined steering and drive lever, a universal joint connection between said lever and the front axle, a detachable connection between said lever and the drive mechanism and means for procuring an interlocking relation of portions of the lever and front axle structure upon detachment of the drive mechanism connection, whereby to relieve strain from the universal joint when the lever is used as a draft tongue.

3. A manually propelled vehicle comprising a wheeled frame including a front axle, a pivot shaft fixedly connected with the front axle, spaced arms at the upper end of said pivot shaft, a universal joint block pivoted between said arms, a combined drive and steering lever, spaced arms at the lower end of the lever pivoted to the universal joint block, a drive mechanism, a detachable connection between the lever and drive mechanism and the lever being provided with a recess adapted to interlockingly receive an arm of the pivot shaft.

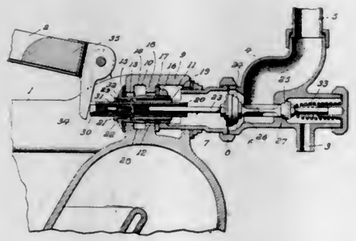
4. A manually propelled vehicle comprising a pivoted front axle, a drive mechanism, a combined steering and drive lever connected with the pivoted front axle, a collar longitudinally adjustable on the lever, a knuckle having arms journaled on the lever at the sides of the collar, and a link pivotally connected with the knuckle and connected with the drive mechsanism.

5. A manually propelled vehicle comprising a pivoted front axle, a drive mechanism, a combined steering and drive lever connected with the pivoted front axle, a collar longitudinally adjustable on the lever, a knuckle having arms journaled on the lever at the sides of the collar, a link pivotally connected with the knuckle and connected with the drive mechanism, and projecting lugs on the sleeve adapted to abut the knuckle to limit steering movements of the lever.

[Claims 6 to 17 not printed in the Gazette.]

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1,231,378. VALVE FOR FLUSHING SYSTEMS. HARRY L. KELLY, Washington, D. C. Filed Sept. 27, 1916. Serial No. 122,424. (Cl. 137—69.)



1. In a flushing valve the combination of a casing having a valve seat, a tubular member reciprocally mounted in the casing, a valve member, a stem on said valve member having screw-threaded adjustment in the tubular member and adapted to be adjusted by an instrument inserted in the tubular member and a contact member closing the end of said tube, substantially as set forth.

2. In a flushing valve the combination of a casing having a valve seat, a tubular member reciprocally mounted in the casing, a valve member having a stem adjustably mounted in the tubular member and adapted to be adjusted by an instrument inserted in the tubular member, and a tensioning device engaging with the valve stem, substantially as set forth.

3. In a flushing valve the combination of a casing having a valve seat, a tubular member reciprocally mounted in the casing, a valve member having a stem adjustably mounted in the tubular member, a plug secured to the tubular member, and a tensioning member between said plug and the valve stem, substantially as set forth.

4. In a flushing valve the combination of a casing having a valve seat, a tubular member reciprocally mounted in the casing, a valve member having a stem screw-threaded in the tubular member, a plug secured to the tubular member, and a valve tensioning spring interposed between said plug and the valve stem, substantially as set forth.

5. In a flushing valve the combination of a casing having a valve seat, a tubular member reciprocally mounted in the casing, a valve member, a stem on the valve member constructed with a threaded head portion adjustably mounted in the tubular member, a plug screw-threaded in the tubular member, and a valve tensioning spring interposed between said plug and the valve stem, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

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1,231,379. SWIVEL ATTACHMENT-PLUG. OTTO KESSLER, Passaic, N. J. Filed July 27, 1916. Serial No. 111,631. (Cl. 173—359.)



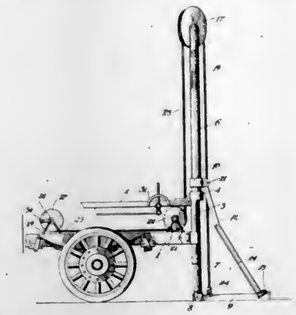
1. In a swivel attachment device, the combination, with an insulating plug, of an insulating wire attachment member and a conductive spindle forming a swiveling axis for and penetrating and holding together the plug and said member and affording one terminal of the device, means on the plug, reaching between said plug and member, to afford the other terminal of said device, a wire binding means on said member electrically attached to said spindle, and another wire binding means including an angular conducting device also reaching between the member and the plug and secured to the exterior of the said member and a stud adapted to hold said conducting device against lateral displacement, said conducting device being in electrical connection with said terminal affording means on the plug.

2. In combination, an insulating plug and an insulating wire attachment member having means to swivel-connect them affording one terminal of the device, a wire-binding device on the member electrically connected to said means, another wire-binding device on the member having contact means extending between the plug and said member, another terminal on the plug, and a conductive device on the plug electrically connected to the second terminal and having contact means between said plug and member, one of said means having a circular series of integral knobs engaging the other.

3. In combination, an insulating plug and an insulating wire attachment member having means to swivel-connect them affording one terminal of the device, a wire-binding device on the member electrically connected to said means, another wire-binding device on the member having contact means extending between the plug and said member, another terminal on the plug, and a conductive device on the plug electrically connected to the second terminal and having contact means between said plug and member, one of said means having a circular series of knobs and the other being a spring, and an annularly channeled conductive disk arranged between said means.



1,231,380. ELEVATOR ATTACHMENT FOR VEHICLES. JOHN F. KISSANE and THOMAS J. KISSANE, Detroit, Mich.: said John F. Kissane assignor to said Thomas J. Kissane. Filed Mar. 31, 1917. Serial No. 158,794. (Cl. 214—1.)

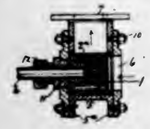


1. In an elevator attachment for vehicles, a set of tubular guides adapted for attachment to a vehicle, rods slidable in said guides, a platform pivotally connected to the lower ends of said rods, links connected to the ends of said platform and having a sliding connection with said guides, and cables attached to said platform, and extending above said guides and adapted for raising said platform and said rods.

[Claims 2 to 5 not printed in the Gazette.]

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1,231,381. ROTARY PUMP AND FAN FOR WATER AND AIR AND OTHER FLUIDS. CHARLES FOSTER KITE and MATTHEW HENRY SKELT, London, England. Filed Dec. 13, 1915. Serial No. 66,546. (Cl. 253—200.)



1. An impeller for rotary fans and pumps having an axial intake, comprising a perforated circular support adapted for mounting on a driving shaft, and a plurality of inclined vanes of equal size disposed cylindrically on said support, with the adjacent edges of each pair of vanes radially in line so that said vanes dip in the direction of rotation of the impeller, and form outlet apertures between the adjacent edges of each pair of said vanes.

2. An impeller of the drum type for rotary pumps and fans comprising a plurality of inclined vanes of equal size, the total area of which is equal to that of the corresponding drum of the same diameter, said vanes being disposed cylindrically on a perforated support, and inclined inward from its periphery so as to form a series of inclined planes of small radial depth that dip in the direction of rotation of the impeller, with oblique apertures of corresponding depth between their adjacent edges, the number of said vanes and radial apertures being inversely as their required radial depth.

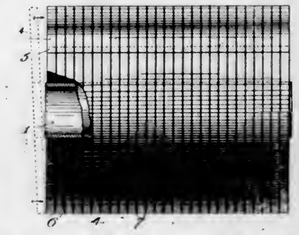
3. An impeller of the drum type for rotary pumps and fans comprising a plurality of inclined vanes of equal size, the total area of which is equal to that of the corresponding drum of the same diameter, which vanes are disposed cylindrically on a perforated support which is furnished with a central support or hub, a stiffening ring connected to the outer ends of said vanes and forming the axial inlet of the impeller, which vanes are inclined inward from the periphery to the inner circumference of said ring with their adjacent ends radially in line thereon, so as to dip in the direction of rotation of said impeller and form corresponding outlet apertures between said vanes.

4. In a rotary pump or fan the combination of an inclosing casing provided with an axial intake and a peripheral outlet, and a rotary impeller comprising a plurality of inclined vanes of equal size disposed cylindrically on a circular support mounted on a driving shaft, a stiffening ring connected to the outer ends of said vanes and forming the axial inlet of said impeller, which vanes are inclined inward from the periphery to the inner circumference of said ring with their adjacent ends in radial line thereon so that they dip in the direction of rotation of the impeller and form a series of inclined planes with outlet apertures of corresponding radial depth between their adjacent edges.

5. In a rotary pump or fan the combination of a cylindrical casing provided with an axial intake and a peripheral outlet, and a rotary impeller comprising a plurality of inclined vanes of equal size and having a total area equal to that of the corresponding drum said vanes being disposed cylindrically on a circular support mounted on a driving shaft, a stiffening ring connected to the outer ends of said vanes and forming the axial inlet of said impeller, which vanes are inclined inward from the periphery to the inner circumference of said ring, with their adjacent ends in radial line thereon, so as to form a series of inclined planes which dip in the direction of rotation of the impeller and form outlet apertures of corresponding radial depth between their adjacent edges, said cylindrical casing having a pair of interchangeable flanged covers one whereof forms said axial intake, while the other carries a bearing for said impeller driving shaft so that said axial intake can be arranged either on the right or the left of said casing.

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1,231,382. FELT WELT AND METHOD OF MAKING SAME FOR GLOVES AND THE LIKE. LOUIS KNEE, New York, N. Y. Filed Dec. 20, 1916. Serial No. 137,950. (Cl. 242—159.)



1. As a new article of manufacture, the combination of an integral core, with a series of independent welts comprising single fabric convolutions side by side upon said core.

5. The method of making fabric welts consisting in winding a strip of fabric upon a core, winding a binding covering upon said wound fabric and securing the binding thereon, and slitting said binding and the fabric transversely approximately to the core without cutting through the core, providing a series of welts wound side by side upon the core.

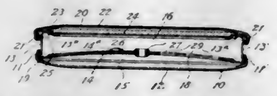
[Claims 2 to 4 not printed in the Gazette.]

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1,231,383. POWDER-RECEPTACLE. JOSEPH KOMOROUS, Chicago, Ill., assignor to Parisian Novelty Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 19, 1916. Serial No. 92,109. (Cl. 132—34.)

1. In a receptacle, the combination of a bottom member having an upturned peripheral flange, a diaphragm having filling and discharge openings fitting within said flange and spaced from said bottom member to form with said bottom member a chamber for the reception of powder, a band member fitting within the flange and resting on

said diaphragm and against the outer face of which said flange bears to hold said parts and diaphragm in permanently assembled and interlocking position, and a cover for said band member forming with said diaphragm a chamber for a powder puff.



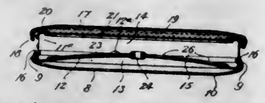
2. In a receptacle, the combination of a bottom member having an upturned peripheral flange, an apertured diaphragm fitting within said flange having a concave surface to form with said bottom member a chamber for the reception of powder, a band member resting on the diaphragm and against the outer face of which said flange bears to hold said parts and diaphragm in permanently assembled position and a cover for said band member forming with said diaphragm a chamber for a powder puff, said band having projections on its outer surface whereby said cover may be snapped into place.

6. In a receptacle, the combination of a bottom member having an upturned flange, an apertured diaphragm fitting therein, a band section of substantially the same diameter as said diaphragm resting thereon and within said flange and permanently held in place by said flange, a cover for said band member adapted to be snapped into closed relation therewith, said cover being formed of two interlocking parts adapted to hold a mirror held in fixed relation therebetween, and said bottom member and diaphragm being oppositely concaved to form a powder chamber therebetween.

[Claims 3 to 5 not printed in the Gazette.]

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1,231,384. POWDER-RECEPTACLE. JOSEPH KOMOROUS, Chicago, Ill., assignor to Parisian Novelty Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 25, 1916. Serial No. 93,458. (Cl. 132—34.)



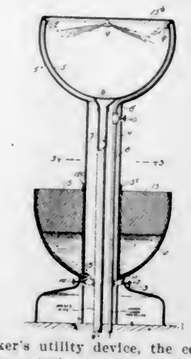
1. In a powder receptacle, the combination of a bottom member having an upturned peripheral flange, a band section having a bead with which said flange engages to permanently hold said member and section together, a diaphragm having a filling opening connected with said band section and dividing the space between said bottom member and the upper level of said band section into two compartments, the lower one for powder and the upper for a powder puff, and a cover for the other end of said band section.

3. In a powder receptacle, the combination of a concaved bottom member having an upturned peripheral flange, a band section permanently secured to said bottom member by said flange, a diaphragm having a filling opening integrally formed with the band section and concaved oppositely from the bottom member to form a chamber therebetween to contain powder, and a cover member adapted to engage the upper part of said band section to close the opening therein.

5. In a powder receptacle, the combination of a concaved bottom member having an upturned flange, a band section telescoping within said upturned flange, a diaphragm having a filling opening integral therewith adapted to form with said concaved bottom a chamber for powder, a plurality of projections at the upper part of said band member, and a cover adapted to close the opening of said band member comprising a concaved member having an upturned flange, and means carried thereby adapted to coact with said projections for holding the cover in place.

[Claims 2 and 4 not printed in the Gazette.]

1,231,385. SANITARY CUSPIDOR. BENJAMIN F. KORTEN, Portland, Oreg. Filed Mar. 6, 1917. Serial No. 152,712. (Cl. 4—40.)

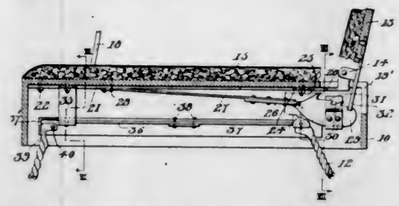


1. In a smoker's utility device, the combination, with twin, open-top receptacles arranged in vertical alinement, of a hollow column connecting said receptacles, liquid supply- and discharge-pipes, respectively, within said column and communicating with said receptacles, and twin, wire-mesh baskets disposed in one of said receptacles, each basket having a wall conforming to and bearing against the inner surface of the wall of said receptacle, and also having a wall shaped in conformity to and bearing against said column.

2. In a smoker's utility device, the combination, with twin, open-top receptacles arranged in vertical alinement, of a hollow column connecting said receptacles, liquid supply- and discharge-pipes, respectively, within said column and communicating with said receptacles, and twin, wire-mesh baskets disposed in one of said receptacles, each basket having a wall conforming to and bearing against the inner surface of the wall of said receptacle, a wall shaped in conformity to and bearing against said column, and straight walls, the straight walls of one basket bearing against the straight walls of the other basket.

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1,231,386. FOLDING CHAIR. ANTONI KUCZABOWSKI, St. Paul, Minn. Filed July 17, 1916. Serial No. 109,720. (Cl. 155—25.)



1. A chair comprising a bottom frame open at its under side, opposite inverted U-shaped brackets mounted within the said frame, flat springs secured in parallelism between the opposite ends of the said brackets, a U-shaped angle iron member supported upon the said springs normally positioned in flat longitudinal contact therewith, securing means between the central portions of the said springs and the said angle iron member, and legs carried by the said angle iron member.

2. A chair comprising a bottom frame open at its under side, opposite inverted U-shaped brackets mounted within the said frame, flat springs secured in parallelism between the opposite ends of the said brackets, a U-shaped angle iron member supported upon the said springs normally positioned in flat longitudinal contact therewith, securing means between the central portions of the said springs and the said angle iron member, legs pivoted at their upper ends to the side portions of the said angle iron member within the said frame, the connecting portion of the angle iron member being in abutting engagement with the adjacent legs when the device is operatively positioned.



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1,231,387. BOMB-DROPPER. JOSEPH H. F. LAFLAMME and OMER GRAVEL, Toronto, Ontario, Canada. Filed Apr. 4, 1916. Serial No. 88,881. (Cl. 244—1.)



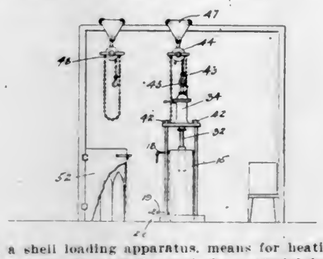
1. A bomb dropping device including a frame, a plurality of releasable bomb suspending means disposed at opposite sides of the center of the frame, a chain movable centrally of the frame, sprocket wheels at each end of the frame around which the chain passes, a ratchet wheel movable with one sprocket wheel, a shaft for loosely supporting the said sprocket wheel and ratchet wheel, a disk secured to the shaft, spring pressed pawls on the disk for engaging the ratchet, an arm on the shaft, means connected to the arm for oscillation thereof whereby the chain may be moved intermittently, and in one direction, and means on the chain for successively engaging the suspending means for releasing the bombs.

3. The combination with an aeroplane of a bomb dropping device including a frame, a plurality of releasable bomb suspending means, a flexible element movable along the frame, means on the flexible element for actuating during movement the bomb suspending means, individually and in order, means for imparting an intermittent motion to the flexible element and in one direction, a rod connected to said means, a foot lever connected to the rod and within reach of the aeroplane operator, brackets at either side of the lever and in the path of movement thereof, and movable stops on the brackets engageable by the lever to limit the movement thereof, whereby the degree of movement of the flexible element may be varied.

[Claim 2 not printed in the Gazette.]

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1,231,388. PROJECTILE-LOADING APPARATUS. GEORGE W. LAKE, Rumford, R. I., assignor of one-half to Frank W. Smith, Providence, R. I. Filed Dec. 30, 1916. Serial No. 139,773. (Cl. 86—20.)



1. In a shell loading apparatus, means for heating the shell, means for forcing the explosive material into the shell while heated, and means for applying a cooling medium to the shell while the contents are under pressure.

5. An improved method of loading shells with explosives consisting of applying heat to the shell during a portion only of the filling operation, and subsequently permitting said shell to cool, and forcing the explosive material into the shell during such heating and cooling operations.

9. In a shell loading apparatus, means for heating the shell, means for applying pressure to force the explosive material into the heated shell, and means for subsequently cooling the shell during a portion of the filling operation beginning at the end opposite to that through which the charge is being forced.

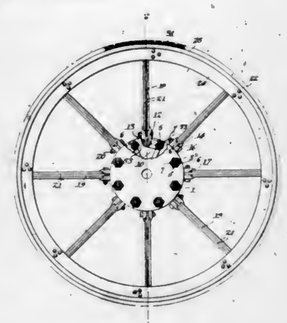
13. In a shell loading apparatus, means for heating the shell, a pressure plunger for forcing the explosive into the shell while heated, and a supply neck connected to the shell in which is stored the filling material under pressure of said plunger to be forced into the shell to compensate for the shrinkage of the charge, and means for cooling the shell while its contents and supply are still under pressure.

19. In a shell loading apparatus, means for heating the shell, means for applying pressure to force the explosive material into the heated shell, means for subsequently cooling the shell beginning at the end opposite to that through which the charge is being forced, and means for controlling the operating mechanism from a point remote from the shell during the pressure applying operation.

[Claims 2 to 4, 6 to 8, 10 to 12, and 14 to 18 not printed in the Gazette.]

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1,231,389. SPRING-WHEEL. ALBERT P. LANDOLL, Lawton, Okla. Filed Dec. 18, 1915. Serial No. 67,646. (Cl. 152—28.)



1. A spring wheel comprising a rim, a hub, and spokes between the rim and hub, each of said spokes comprising an inner spring strip and outer spring strips, means carried by the hub and relatively movable with relation to the hub and receiving the inner ends of the strips, whereby to secure the central strip thereto and permit of the sliding movement of the outer strips, and rings secured to said rim and rigidly attached to the outer ends of the said strips, one of said rings being mounted for circumferential movement.

2. A spring wheel comprising a rim, a hub and spokes between the rim and hub, arms journaled on bearings in the hub, means for limiting the swinging of the arms, elements carried by the arms, each of said spokes comprising an inner spring strip and outer spring strips, a rigid connection between each of the mentioned elements and the inner strip, a slidable connection between each of the said elements and the outer strips, and rings secured to the rim and rigidly attached to the outer ends of the spokes, one of said rings being mounted for circumferential movement.

3. A spring wheel comprising a rim, a hub and spokes between the rim and hub, said spokes each comprising an inner flat spring strip and outer flat spring strips of less length than the inner strip, arms journaled in bearings on the hub, means for limiting the swinging of the arms, bearing members carried by the arms, elements mounted upon the bearings, a rigid connection between each of the said elements and the central strip of each of the spokes, a slidable connection between each of the said

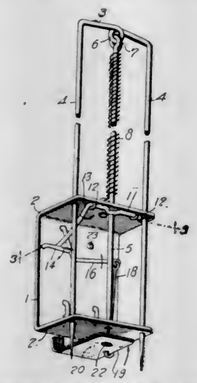
elements and the outer strips of each of the spokes, rings secured to the rim and rigidly attached to the outer ends of the spokes, one of said rings being mounted for circumferential movement.

4. A spring wheel comprising a rim, a hub and spokes between the rim and hub, arms journaled on the hub, means for limiting the movement of said arms with respect to the hub, slotted clips journaled upon the arms, each of the mentioned spokes comprising an inner flat spring strip, and outer flat spring strips, the inner ends of said strips being received in the slots of the clips, means for rigidly securing the inner strips to the clips, means for slidably associating the outer strips with the clips, rings, secured to the rim and rigidly attached to the outer ends of the spokes, one of said rings being mounted for circumferential movement.

5. A spring wheel comprising a rim, a hub and spokes between the rim and hub, arms journaled upon the hub, means for limiting the movement of the arms with respect to the hub, slotted clips journaled upon the arms, inturned lugs carried by the clips, said spokes comprising an inner spring strip and outer spring strips of less length than the inner strips, the ends of said strips being received in the slots of the clips, the ends of the outer strips being slotted to receive the lugs of the clips, means for rigidly securing the inner strips to the clips, rings secured to the rim and rigidly attached to the outer ends of the spokes, one of said rings being mounted for circumferential movement.

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1,231,390. TRAP. CARL JAMES LANTIS, Chapman, Kans. Filed Nov. 15, 1916. Serial No. 131,488. (Cl. 43—21.)



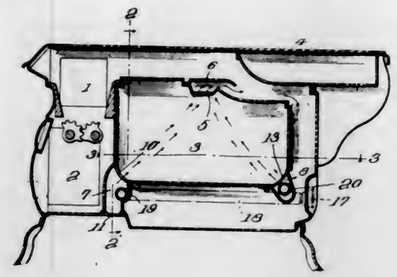
A trap comprising a substantially U-shaped supporting bracket, a transfixing member having guided movement longitudinally of the said bracket, said member having a central and lateral tines slidable in the bracket, a spring acting normally to force the transfixing member longitudinally of the bracket, trigger mechanism for holding the transfixing member with the spring under tension, said mechanism comprising an elbow lever having one of its arms pivoted to the bracket, a trip plate connected with the other and arranged below the bracket, said first named arm of the elbow lever having a notch, a catch pivoted to the bracket and engaging the notch, a rod journaled on the bracket and having an offset portion, the central tine having a notch for engagement by the said offset portion, and said rod having a lateral arm for engaging the catch.

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1,231,391. COMBINATION COAL AND GAS RANGE. MAX R. LEHMAN, Quincy, Ill., assignor to Quincy Pattern Company, Quincy, Ill., a Corporation of Illinois. Filed Oct. 11, 1916. Serial No. 125,023. (Cl. 126—36.)

1. A combined solid fuel and gas burning stove having an oven therein, provided with the usual flues, said oven having vents communicating with the top flue thereof, burner chambers arranged below said oven and communicating therewith along two of its sides and front thereof, and a burner arranged within the front burner chamber having branches extending into side burner chambers, said burner chambers having air inlets.

3. A stove having an oven provided with vents in the top thereof, said oven being cut away along two of its side edges and the front thereof, gratings arranged over said cut away portions, burner chambers arranged under said cut away portions forming a substantially continuous chamber around the side edges and front of said oven, and a substantially U-shaped burner arranged in said burner chambers.



5. A combined solid fuel and gas burning stove having an oven therein surrounded by the usual flues, said oven having vents communicating with the top flue of said stove, a deflecting baffle arranged over said vents, a substantially U-shaped burner chamber formed beneath said oven, and communicating therewith along two of its side edges and the front thereof, said burner chambers having air inlets and a substantially U-shaped burner detachably mounted in said U-shaped burner chamber.

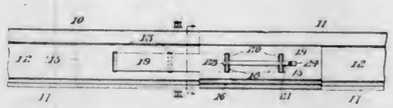
9. A combined solid fuel and gas burning stove having an oven therein surrounded by the usual flues, said stove having a substantially U-shaped burner chamber arranged beneath the oven and communicating therewith, and a detachable substantially U-shaped burner arranged within said burner chamber.

10. A combined solid fuel and gas burning stove having an oven therein surrounded by the usual flues, said stove having a substantially U-shaped burner chamber arranged beneath the oven and communicating directly therewith at the lower corners thereof, a detachably substantially U-shaped burner arranged within said burner chamber and removable gratings arranged over said burner chamber.

[Claims 2, 4, and 6 to 8 not printed in the Gazette.]

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1,231,392. RAIL-CONNECTING DEVICE. CHARLES LENARDIĆ, Cleveland, Ohio. Filed Feb. 26, 1917. Serial No. 151,084. (Cl. 239—11.)



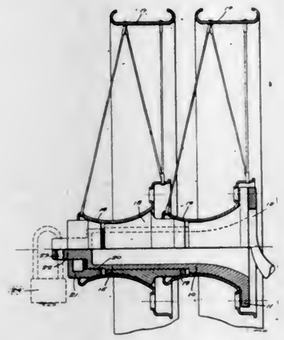
1. A connector for rails comprising two plate members oppositely positioned in contact with the opposite faces of abutting rails, arms carried by each of said members adapted for projecting through the adjacent rails and the adjacently positioned coöperating plate, removable locking pins carried by the said arms and retaining levers pivoted to the said pins having frictional retaining engagement with the face of the adjacent plate.

2. A device of the class described comprising in combination with railway rails adapted for end abutment and having equally spaced apart slots through the webs thereof, securing plates adapted for engagement with the said rails upon the opposite sides thereof arranged with slots in alinement with the said web slots, perpendicularly projecting arms carried by the said plates spaced apart a distance equal to the distance between all of the said slots and adapted to project through the alining pairs of slots of the rail webs and plates, headed pins adapted for locking insertion through the said arms, and pivoted retaining levers upon the unheaded ends of said pins having serrated heels adapted for frictional contact with the adjacent plate when the device is operatively arranged.



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1,231,393. WIRE-WHEEL CARRIER FOR AUTOMOBILES. FRED GARDNER LIADY, Fullerton, Cal. Filed Mar. 8, 1917. Serial No. 153,324. (Cl. 224—29.)

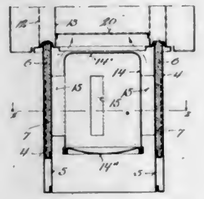


2. A mounting bracket adapted to be secured to an automobile, a flange secured to the bracket and adapted to fit within the sand rim of a wheel hub, a frusto-conical portion extending from the flange and adapted to fit in the inner end of the wheel hub, a straight portion extending from the frusto-conical portion and having a screw threaded end, a sleeve fitting upon the straight portion and having a tapered end adapted to fit in the outer end of the wheel hub, and a nut screw seated upon the threads to tighten the sleeve on the hub and hold the wheel rigid; there being a second frusto-conical portion upon the sleeve adapted to fit in the inner end of a wheel hub and there being a second tapered portion upon the nut to fit in the outer end of the second hub, so as to hold the two wheels spaced apart, rigid, and independent.

[Claim 1 not printed in the Gazette.]

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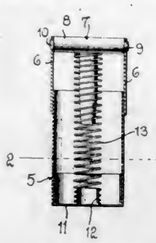
1,231,394. OIL-STOVE BURNER. WALTER C. LINDEMANN, Milwaukee, Wis., assignor to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Filed Sept. 21, 1914. Serial No. 862,707. (Cl. 158—88.)



In an oil stove including an open end wick shell and a drum on the shell, the combination of a cylindrical core disposed in the shell, wings struck outwardly from the peripheral wall of the core forming consequent openings therein and secured to the wick shell whereby to hold the core concentrically spaced in the shell to form an annular air space therein, the ends of the core lying inwardly of the ends of the shell and closures for both ends of the core.

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1,231,395. VEGETABLE OR FRUIT CUTTER. JACOB S. LOCKERBY, Hoquiam, Wash. Filed July 8, 1916. Serial No. 108,154. (Cl. 146—7.)



1. A device of the character described including a casing, resilient arms fixed at diametrically opposite points to one end of the casing and projecting longitudinally therefrom, a handle member detachably mounted in said arms and having a stem projecting axially into one end of the casing, a plunger longitudinally movable in said casing, and a spring surrounding said stem and bearing upon the plunger and normally holding the same yieldingly in the opposite end of the casing.

2. The combination with a cylinddrical cutting member, and a spring-pressed plunger operating therein, of resilient arms fixed to one end of the cutting member at diametrically opposite points and projecting longitudinally therefrom, and a detachable handle arranged between said arms and having terminal means for co-acting engagement therewith, whereby the handle is held against rotation, said handle constituting a bearing for one end of the plunger spring.

3. The combination with a cylindrical cutting member, and a spring-pressed plunger operating therein, of diametrically opposed resilient arms fixed to one end of the casing and projecting longitudinally therefrom, each of said arms being provided adjacent its free end with an opening, a hand grip provided with terminal means for engagement in the openings of the respective arms, said hand grip being removably held by the resilient pressure of the opposed arms against the ends thereof, and a stem centrally fixed to the hand grip and projecting into the opposed end of the cutting member to provide a guide for the plunger spring.

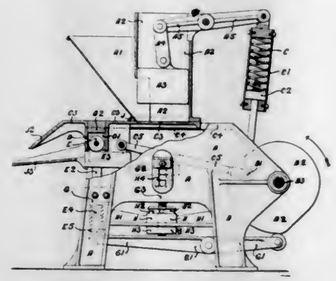
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1,231,396. MACHINE FOR DIVIDING AND MEASURING DOUGH. DAVID MCERLANE, Springburn, Glasgow, Scotland. Filed Aug. 1, 1916. Serial No. 112,566. (Cl. 107—15.)

1. In a machine for dividing and measuring dough, a horizontally reciprocating table having a measuring cavity in its upper face, a vertically reciprocating ejecting plunger working in said cavity, a hopper arranged above the reciprocating table, a vertically arranged cylinder with the lower portion of which the hopper communicates, a reciprocating piston in the cylinder, a roller at the lower end of the plunger, a race for the roller in two parts, one fixed but adjustable as to height to determine the depth of the measuring cavity in the table and the other moving vertically to actuate the plunger, and means to sever the piece of dough pressed into the cavity and to finally remove that piece of dough, substantially as described.

2. In a machine for dividing and measuring dough, a horizontally reciprocating table having a measuring cavity in its upper face, a vertically reciprocating ejecting plunger working in said cavity, a hopper arranged above the reciprocating table, a vertically arranged cylinder

with the lower portion of which the hopper communicates, a reciprocating piston in the cylinder, a roller at the lower end of the plunger, a first motion shaft, a crank pin disk on the shaft, link and lever connections between the piston and the crank pin, a pressure-determining device in connection with the crank pin, and a connecting rod between the crank pin and the table.



3. In a machine for dividing and measuring dough, a horizontally reciprocating table having a measuring cavity in its upper face, a vertically reciprocating ejecting plunger working in said cavity, a hopper arranged above the reciprocating table, a vertically arranged cylinder with the lower portion of which the hopper communicates, a reciprocating piston in the cylinder, a roller at the lower end of the plunger, a first motion shaft, a crank pin disk on the shaft, link and lever connections between the piston and the crank pin, a cylinder carried by the lever operating the piston, a spring and a block adjustable in the cylinder, as described.

4. In a machine for dividing and measuring dough, a horizontally reciprocating table having a measuring cavity in its upper face, a vertically reciprocating ejecting plunger working in said cavity, a hopper arranged above the reciprocating table, a vertically arranged cylinder with the lower portion of which the hopper communicates, a reciprocating piston in the cylinder, a roller at the lower end of the plunger, a block in two parts forming a race for the roller, a rod carrying one part of the block, a spring on the rod, a collar on the rod and a fixed bracket between which the spring acts, a rocking lever acting on the rod, a cam on a first-motion shaft actuating the rocking lever, a screwed spindle carrying the second part of the block, and means for raising and lowering the screwed spindle, as described.

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1,231,397. VEHICLE-WHEEL TIRE. TOM S. MCGEHEE, Lockney, Tex. Filed Jan. 27, 1917. Serial No. 144,895. (Cl. 152—8.)



1. A vehicle wheel tire, comprising a sheet metal resilient supporting member, and a tread member partially embracing said supporting member, the tread member having its marginal portions curved in cross section so as to ride against correspondingly curved portions of the supporting member, and the supporting member having its marginal portions curved in such manner as to ride against correspondingly curved portions of the tread member.

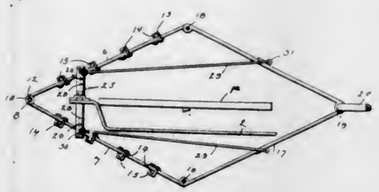
2. A vehicle wheel tire, comprising a sheet metal resilient supporting member, and a tread member partially embracing said supporting member, the tread member having its marginal portions curved in cross section so as to ride against correspondingly curved portions of the supporting member, the supporting member having its marginal portions curved in such manner as to ride against correspondingly curved portions of the tread member, and means for tensioning the marginal portions of said supporting member.

3. A vehicle wheel tire, comprising a sheet metal resilient supporting member, and a tread member partially embracing said supporting member, the tread member having its marginal portions curved in cross section so as to ride against correspondingly curved portions of the supporting member, the supporting member having its marginal portions curved in such manner as to ride against correspondingly curved portions of the tread member, and means for tensioning the marginal portions of said supporting member, said tensioning means comprising an annular series of spreading members having divergent marginal portions which bear against the inner surfaces of the marginal portions of the supporting member.

4. A vehicle wheel tire, comprising a sheet metal resilient supporting member, and a tread member partially embracing said supporting member, the tread member having its marginal portions curved in cross section so as to ride against correspondingly curved portions of the supporting member, the supporting member having its marginal portions curved in such manner as to ride against correspondingly curved portions of the tread member, means for tensioning the marginal portions of said supporting member, said tensioning means comprising an annular series of spreading members having divergent marginal portions which bear against the inner surfaces of the marginal portions of the supporting member, and means for adjusting said spreading members so as to resist to a greater or less degree the resilient action of the marginal portions of the supporting member.

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1,231,398. HARROW. JOHN P. MCINTYRE, Sagerton, Tex. Filed July 22, 1916. Serial No. 110,731. (Cl. 97—44.)



1. The combination with an ordinary cultivator including a supporting structure, supporting wheels, a pivotally mounted standard and a lever for moving said standard into and out of operative position, of a harrow structure including a pair of harrow tooth carrying bars having their rear ends pivotally connected, a bracing bar adjustably connected to said harrow tooth carrying bars, a standard connected to said bracing bar and detachably connected to the cultivator standard for connecting the harrow to the cultivator standard, said harrow tooth carrying bars having their rear ends converging and being positioned one upon each side of one wheel of the cultivator.

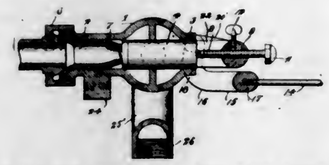
2. The combination with an ordinary cultivator including a supporting structure, supporting wheels, a pivotally mounted standard and a lever for moving said standard into or out of operative position, of a harrow structure, said harrow structure including a pair of harrow tooth carrying bars, the rear ends of said harrow tooth carrying bars converging and being pivotally connected, harrow teeth carried by said bars, reach bars pivotally connected to the front ends of said harrow tooth carrying bars, and a rod connected to the forward ends of said reach bars and to the supporting frame of said cultivator and a standard connected to the rear ends of said harrow tooth carrying bars and to said cultivator standard.

3. The combination with an ordinary cultivator including a standard and a supporting frame, of a harrow structure including a pair of harrow tooth carrying bars, the rear ends of said harrow tooth carrying bars being converging, a harrow tooth extending through the converging ends of said bars for pivotally connecting them, a pair of reach bars pivotally connected to the forward ends of said harrow tooth carrying bars and forming with the bars a diamond shaped frame, a rod connected to the forward end of said frame and to the supporting structure of the cultivator for permitting of a limited lateral movement of the forward end of the frame, and a standard connected to said harrow tooth carrying bars and the cultivator standard.



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1,231,399. BALL-COCK. JAMES H. MCPARTLAND, Houlton, Me. Filed June 9, 1916. Serial No. 102,733. (Cl. 137—104.)

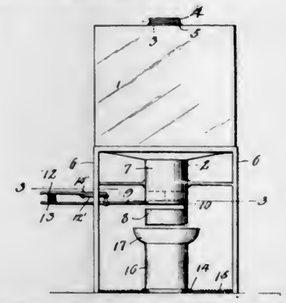


1. A ball cock comprising a valve casing having a valve chamber, an inlet and an internal valve seat, a slidable piston valve operating within said valve casing and movable toward and away from said valve seat, and a circular outlet connection having a single discharge outlet and intersecting the valve chamber at opposite sides of the latter and in a plane at a right angle to the path of movement of the valve.

2. The combination of a valve casing, a valve seat therein, a water inlet neck extending from said casing, a reciprocatory valve movable toward and away from said seat, guide arms extending horizontally from said casing and having horizontally elongated slots therein, a cross head having trunnions slidable in said slots, a valve stem having a threaded connection with and passing through said cross head, a float operated lever, and links connecting the latter to said trunnions.

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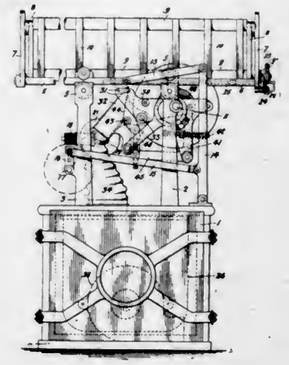
1,231,400. CANDY-DISPENSER. JAMES H. MACKALL, Cleveland, Ohio. Filed Sept. 25, 1915. Serial No. 52,657. (Cl. 221—19.)



A dispenser comprising a stand and a container, a sleeve mounted thereon, and adapted to receive the neck of said container, said sleeve being provided with a slot located between its ends, a rod passing through the slot, a valve mounted on the rod and adapted to close the passage way through the sleeve, an arm pivotally mounted on the stand and pivotally connected with the rod, and a spring interposed between the rod and arm and adapted to maintain the rod toward the upper edge of the slot.

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1,231,401. MACHINE FOR PLUCKING THE FEATHERS OF BIRDS. REGINALD GEORGE MACPHERSON, Leeds, England. Filed Sept. 26, 1916. Serial No. 122,237. (Cl. 17—80.)



1. In a machine for plucking the feathers from birds, the combination with suitable framework and operating mechanism, a tray carried by said framework having an open base to expose parts of the bodies of birds placed therein, means for automatically traversing said tray backward and forward on said framework and for changing the position of the birds in said tray, a plucking device adapted to pluck the feathers of the birds exposed through the open base of said tray and means for removing and securing the feathers so plucked.

2. In a machine for plucking the feathers from birds, the combination of a framework, a tray carried by said framework said tray having inclined sides and an open base, revoluble rollers located at the sides of said tray, endless bands passing over said rollers against which bands the bodies of the birds rest, means for traversing said tray backward and forward on said framework and giving motion to said bands at the end of each traverse of said tray to change the position of the birds in said tray, a plucking device adapted to pluck the feathers from the various portions of the birds as automatically exposed thereto through the base of said tray and means for carrying away and securing the feathers so plucked.

3. In a machine for plucking the feathers from birds, the combination with suitable framework and operating mechanism, a tray adapted to automatically expose different portions of the birds therein to plucking, a plucking device comprising a pivoted tubular part, gripping members within said tubular part, means for automatically rocking said tubular part to and away from the exposed portions of the birds, means for automatically opening said gripping members upon approaching the birds closing said gripping members when nearest the birds and for reopening same after withdrawal from the birds, together with pneumatic means for drawing the feathers into said tubular part between the said gripping members and for carrying away the plucked feathers.

4. In a machine for plucking the feathers from birds, the combination of means for supporting the birds, a plucking device comprising a tubular member open at its upper end, means for pivotally supporting said tubular member, a gripping jaw pivoted to said tubular member adapted to coact with an upper edge thereof, an air suction device adapted to draw the feathers to be plucked

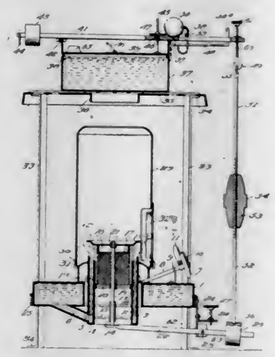
into the open mouth of said tubular member, means for communicating a rocking motion to said tubular member adapted to bring the mouth of same to and away from the bodies of the birds, means for automatically opening and closing said gripping parts by means of said pivoted gripping jaw at proper times to permit the feathers sucked into said tubular part between said gripping parts to be seized thereby, held during the withdrawal thereof and subsequently released, together with suitable means for removing and securing the plucked feathers.

5. A machine for plucking the feathers of birds; comprising in combination a framework, a tray carried by said framework, said tray having an open base to expose the lower part of the bodies of the birds placed therein, means for traversing said tray backward and forward on said framework, a plucking device carried by said framework and located beneath the open base of said tray, said plucking device comprising two opposed pivoted gripping members, means for rocking said gripping members upward and opening same to receive the feathers to be plucked, for closing said gripping members to grip said feathers and for lowering said gripping members to pluck said feathers, and an air suction fan to suck air through said gripping members to draw the feathers to be plucked into the grip of same and when plucked to carry away said feathers.

[Claims 6 and 7 not printed in the Gazette.]

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1,231,402. STERILIZER. PHILIP MALCAMP, New Orleans, La. Filed July 13, 1915. Serial No. 39,708. (Cl. 236—7.)



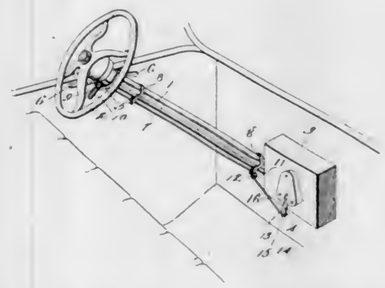
1. A sterilizer, comprising in combination with the oil heater, having a central draft tube and a wick encircling the tube, a damper mounted to move vertically toward and from the burning end of the wick for extinguishing the same, a lever pivoted to the heater and having its inner end connected with the damper to raise and lower the damper when the outer end of the lever is swung in opposite directions, a weight on the outer end of the lever, a container for containing the material to be sterilized arranged above the heater, a cover resting loosely in the container and adapted to be disturbed by the boiling milk, a lever mounted to rock near one end at one side of the container and resting near the other end on the container and extending beyond the container at both ends of the lever, a weight adjustable on that end of the lever remote from the weight of the first-named lever, a rod threaded through the other end of the last-named lever and having a hook at its lower end, a sectional rod, a connection between the sections for moving them from and toward each other, the upper end of the rod being connected with the hook of the threaded rod and the lower end resting on the weight of the first-named lever, a rod passing loosely through the lever at the end adjacent to the sectional rod and resting at its lower end on the cover, said cover having a weight at the opposite side from the rod, a washer threaded on to the rod above the lever, a ball weight resting on the lever at the washer, the lever having a recess for the weight and the washer extending beneath the weight when it is in the recess, said weight being adapted to be dislodged by the movement of the cover, and balancing the damper to hold the outer end of the first-named lever depressed.

2. A sterilizer, comprising a container for containing the material to be sterilized, a cover within the container and resting loosely on the container and adapted to be moved by the boiling of the material to be sterilized, a lever supported diametrically of the container above the cover, a weight adjustable on one end of the lever, a rod depending from the other end, a threaded rod passing loosely through the lever at the side of the container adjacent to the depending rod and resting loosely on the cover, a weight on the lever adjacent to the rod, a washer adjustable on the rod and adapted to dislodge the weight when the cover is moved by the boiling material, a heater for heating the material in the container, said heater having a wick, a damper mounted to move toward and from the wick for extinguishing the flame, a lever pivoted intermediate its ends, a rod connected with the damper and resting on the inner end of the lever, the depending rod of the first-named lever resting upon the outer end of the last-named lever, the dislodgeable weight being arranged to balance the parts and to hold the damper elevated.

3. A sterilizer, comprising a container for the material to be sterilized, a cover resting loosely on the container and adapted to be moved by the boiling of the material to be sterilized, a lever supported by the container above the cover, a rod depending from one end of the lever, a rod connected with the lever adjacent to the depending rod and adjustable with respect thereto and resting loosely on the cover, a weight on the lever adjacent to the rod, a washer adjustable on the rod and engaging beneath the weight for dislodging the weight when the cover is moved by the material to be sterilized, a heater for the container, an extinguisher for the heater, a lever pivoted intermediate its ends, a rod connected with the extinguisher and resting on the inner end of the lever, the depinding rod of the first-named lever resting upon the outer end of the last-named lever, and the dislodging weight being arranged to balance the parts and to hold the extinguisher elevated.

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1,231,403. SWITCH-OPERATING DEVICE. JESSE M. MALLORY, New Geneva, Pa. Filed Oct. 20, 1916. Serial No. 126,766. (Cl. 74—39.)



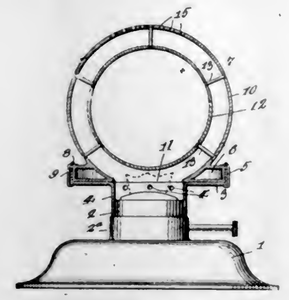
1. An operating device for the ignition switches of the internal combustion engines of motor vehicles, comprising a rod extending longitudinally of the steering column and having the upper end bent at right angles to itself and then bent upon itself to form a handle for the rod and to engage the toothed sector on the steering column whereby the rod may be held against accidental movement, and a connection between the lower end of said rod and switch key.

[Claim 2 not printed in the Gazette.]



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1,231,404. LAMP-HEATER. EDWIN JOSEPH MARKHAM, Watrous, Saskatchewan, Canada. Filed Apr. 25, 1916. Serial No. 93,528. (Cl. 126—248.)



1. A lamp heater comprising a hollow support removably supported by the lamp and disposed over the burner thereof, a platform provided at the upper end of the support, a heater body having a base flange thereon adapted to be removably disposed on the platform and having communication with the hollow portion of the support whereby heat is conveyed from the lamp to the heater body.

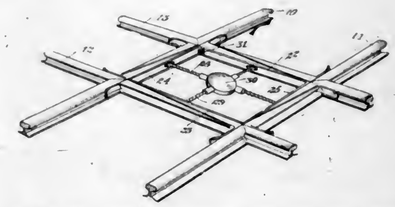
2. A lamp heater comprising a hollow support removably supported by the lamp and disposed over the burner thereof, a platform carried by the upper end of the support, a heater body having a base flange projecting therefrom and adapted to rest on the platform, said heater body having communication with the hollow support whereby heat is conveyed from the burner to the heater body, and means for removably securing the base flange to the platform.

3. A lamp heater comprising an outer metallic drum, an inner metallic drum of lesser diameter concentrically mounted within said outer drum, said outer drum provided with a plurality of apertures for the escape of the products of combustion, a circular base formed integrally with said outer drum having a central aperture communicating with the interior of said outer drum, a circular platform adapted to receive said circular base of the outer drum, hooks pivotally connected adjacent the periphery of said circular base adapted to be swung downwardly into engagement with the circular platform to releasably secure the heater to said platform, and a depending annular flange formed integrally with said platform to engage the burner of the lamp, said platform adapted to receive a cooking utensil when the heater is removed therefrom.

4. A device of the character described comprising, in combination, a lamp having an annular shoulder adjacent the burner thereof, a support having a platform having a central opening therein and a depending annular flange projecting from the edges of said opening, said flange being adapted to fit around the burner of the lamp to rest upon said shoulder, an upstanding annular flange provided on the outer edge of said platform, a drum having a circular base portion formed on one side thereof and adapted to rest upon said platform to fit the inner face of said upstanding flange, said base portion having a central opening therein communicating with the interior of the drum and adapted to register with the central opening in said platform, a hollow inner drum of a less diameter than said first drum and disposed within the latter, and means for holding said inner drum in spaced relation relative to the walls of said first drum.

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1,231,405. RAILROAD-CROSSING. GEORGE C. MELROSE, Los Angeles, Cal., assignor of twenty one-hundredths to Earl H. Stewart and ten one-hundredths to Herman W. Melrose, Los Angeles, Cal. Filed Feb. 24, 1916. Serial No. 80,165. (Cl. 104—116.)



1. A railway crossing comprising the combination with a pair of intersecting tracks, two pairs of split rails interposed between the intersecting tracks so as to form continuations of each track across the intersection, a bar fixed to the companion sections of each pair of said split rails, means acting upon said bars for normally maintaining said split rails in extended position so that their ends abut against the ends of the rails of which said split rails form continuations, said bars extending outwardly from said split rails in the path of the car wheel flanges so as to be engaged by the wheel flanges when traveling over the rails of one track to move the sections of the split rails together and their ends away from said track so that said car wheels may travel over the crossing without obstruction, and means for locking the said split rails in extended position when the car wheels travel over them.

2. A railway crossing comprising the combination with a pair of intersecting tracks, two pairs of split rails interposed between the intersecting tracks so as to form continuations of each track across the intersection, a bar fixed to the companion sections of each pair of said split rails, means acting upon said bars for normally maintaining said split rails in extended position so that their ends abut against the ends of the rails of which said split rails form continuations, said bars extending outwardly from said split rails in the path of the car wheel flanges so as to be engaged by the wheel flanges when traveling over the rails of one track to move the sections of the split rails together and their ends away from said track so that said car wheels may travel over the crossing without obstruction, and means for locking the split rails in extended position with their ends against the rails of the track of which they form a continuation, while the car wheels travel over said split rails.

3. A railway crossing comprising the combination with a pair of intersecting tracks, two pairs of split rails interposed between the intersecting tracks so as to form continuations of each track across the intersection, a bar fixed to the companion sections of each pair of said split rails, means acting upon said bars for normally maintaining said split rails in extended position so that their ends abut against the ends of the rails of which said split rails form continuations, said bars extending outwardly from said split rails in the path of the car wheel flanges so as to be engaged by the wheel flanges when traveling over the rails of one track to move the sections of the split rails together and their ends away from said track so that said car wheels may travel over the crossing without obstruction, and lugs on said bars adapted to engage each other to lock the split rails in extended position with their ends against the ends of the rails of the track of which they form continuations, while the car wheels travel over the split rails.

4. A railway crossing, comprising the combination with a pair of intersecting tracks, of transversely slidable bars extending parallel with the inner faces of the rails of the track having slidably engaging notched portions at their intersections, yieldable means for maintaining said bars against the track rails, and diagonally divided rail sections carried by said bars forming continuations of the railway

rails across the gaps between their points of intersection, and means for locking the said split rails in extended position when the car wheels travel over them.

5. In a railway crossing, the combination with a pair of intersecting tracks, of laterally slidable bars extending alongside the inner faces of the rails of said tracks, split rail sections carried by said bars forming continuations of the rails of the track, yieldable means for normally maintaining the bars against the rails, and means on said bars for locking the split rail sections in extended position with their ends against the ends of the rails of the track of which they form continuations, while the car wheels travel over said split rail sections.

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1,231,406. GUARD FOR STEEL TRAPS. FREDERICK R. MERRITT, Redding, Cal. Filed Dec. 14, 1916. Serial No. 136,919. (Cl. 43—23.)



1. The combination with an ordinary steel trap including a trip pan, of a yieldable guard positioned beneath said pan for preventing the accumulation of foreign material beneath the pan.

3. The combination with an ordinary steel trap including a trip pan, of a substantially cylindrical yieldable guard positioned beneath said trip pan for preventing the accumulation of foreign material beneath the pan, said guard composed of an upper plate, a lower plate, a spring attached to said plates for holding them in spaced relation to each other, a fabric coating mounted about said plates and extending from the edge of one plate to the edge of the other plate for preventing foreign material entering between the plates, said bottom plate being provided with an opening for receiving a bolt carried by the steel trap for preventing accidental displacement of the guard when positioned beneath the trip pan of the trap.

[Claim 2 not printed in the Gazette.]

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1,231,407. TOOL. WILLIAM L. MILLIORN, El Paso, Tex. Filed Jan. 5, 1917. Serial No. 140,813. (Cl. 140—53.)



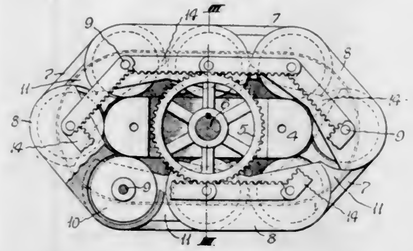
1. In a combination tool, substantially as herein described, two pivoted members, one including a hollow handle, of a spool having wire wound therearound, a holder member for the spool received within and closing the outer end of the hollow handle, guide means for the wire, means for preventing the movement of the wire in one direction, and brake means for the spool.

4. A tool of the class described including a head and handle, a spool having wire wound thereon journaled in bearings at the end of the handle, brake means arranged upon the handle and adapted to engage with the spool to regulate the rotary movement of the spool, a roller journaled upon the head adapted to receive the end of the wire strand upon the spool, a dog pivoted to the head opposite and to one side of the roller, said dog having one of its ends formed with teeth designed to engage with the wire to force the same against the roller, said dog having its body slotted, a stud upon the head passing through the slot to limit the swinging movement of the dog in the direction of the roller, and a spring member also within the slot and exerting a tension between one of the end walls of the slot and said stud for moving the dog to bring the toothed portion thereof in the direction of the roller.

[Claims 2 and 3 not printed in the Gazette.]

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1,231,408. TRACTOR. FRANK J. MINER, Detroit, Mich. Filed May 13, 1916. Serial No. 97,253. (Cl. 21—114.)



1. A bearing wheel for vehicles comprising a side plate, a track plate secured thereto, a cover plate secured on the track plate, oppositely disposed segments having recessed end portions pivoted together in overlapping relation to form an endless link tread member encircling the track plate between the side and cover plates, spacing wheels mounted between the overlapping portions of the segments at the pivotal points thereof in rolling contact with the margin of the track plate, and a dust guard on each segment filling the interval between the overlapping contingnous pairs of segments.

2. A bearing wheel for vehicles comprising a side plate, a track plate secured thereto, oppositely disposed segments having recessed end portions pivoted together in overlapping relation to form an endless link tread member encircling the track plate between the side and cover plate, spacing wheels mounted between the overlapping portions of the segments at the pivotal points thereof in rolling contact with the margin of the track plate, and a dust guard on each segment filling the interval between the overlapping contiguous pair of segments.

3. A bearing wheel for vehicles comprising a side plate, a track plate secured thereto, oppositely disposed segments having recessed end portions, pivoted together in overlapping relation to form an endless linked tread member encircling said track plate, spacing wheels having flanged peripheries engaging the correspondingly faced periphery of the track plate mounted in the recesses of the segments at the pivotal points thereof in rolling contact with the track plate, and a dust guard on each segment filling the interval between the overlapping contiguous pairs of segments.

4. A bearing wheel for vehicles comprising a side plate, a track plate secured thereto, oppositely disposed segments having recessed portions, and pivoted together in overlapping relation to form an endless link tread member encircling said track plate, spacing wheels housed in the recessed portions of the segments and journaled at the pivotal points thereof in rolling contact with the track plate, the wheel and track contacting portions being correspondingly faced to prevent lateral displacement, and a dust guard on each segment filling the interval between the overlapping contiguous pairs of segments.

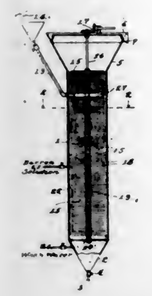
5. A bearing wheel for vehicles, comprising a side plate, a track plate secured thereto, oppositely disposed segments having recessed end portions, pivoted together in overlapping relation to form an endless link tread member encircling said track plate, spacing wheels in the recesses of the segments at the pivotal points thereof in rolling contact with the track plate, rack links articulating on the pivotal connections of the segments, and a driving gear in mesh with the rack links rotatably mounted in the plates in substantially concentric relation with the link tread member.

[Claims 6 to 10 not printed in the Gazette.]



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1,231,409. REPLACING AND THICKENING APPARATUS. GEORGE MOORE, Joplin, Mo. Filed Oct. 19, 1914. Serial No. 867,438. (Cl. 23—31.)



1. In an apparatus for treating slimes, the combination with a container, of superimposed disks of substantially uniform size arranged therein to form a column disposed in such relation to the container as to provide a passageway for the descent of settled solids, and means for moving solids settled on the disks into said passageway, the disks being arranged in clusters and the disks of one cluster being disposed with their axes out of the line of the axes of the disks of the other clusters.

2. In an apparatus for treating slimes, the combination, with a container, of superimposed disks arranged substantially horizontally therein to form a column disposed in such relation to the container and having the disks disposed in such relation to each other as to provide a tortuous passageway for the descent of settled solids, and means for moving solids settled on the disks into said passageway.

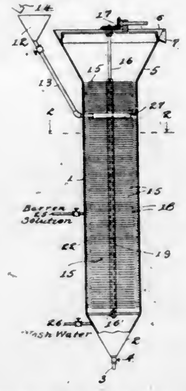
3. In an apparatus for treating slimes, the combination with a container, of superimposed disks arranged therein to form a column disposed in such relation to the container and having the disks disposed in such relation to each other as to provide a tortuous passageway for the descent of settled solids, scrapers for moving solids collected on the disks into the said passageway, and means for effecting relative movement of the disks and scrapers for causing such movement of solids.

4. An apparatus for treating slimes comprising a container having an avenue for gravity effected travel of settled solids, juxtaposed, superimposed plates in the container positioned to enable deposits of settled solids to lodge on the surfaces of said plates and to remain thereon against gravity dislodgment, means for dislodging the solids from the surfaces to enable gravity effected travel of the dislodged solids along the avenue, and deflecting means within the avenue in the path of descent of dislodged solids.

5. In an apparatus for treating slimes, the combination, with a container, of superimposed spaced plates disposed for affording supports for settled solids of pulp and providing a column of zones of relative quiet for enabling solids to settle on said plates, a zone or avenue of travel for uprising solutions being formed along the column of zones of quiet, and the column of zones of quiet extending substantially throughout the length of the zone of travel, and deflecting means in the zone or avenue of travel for breaking up coagulated masses of solids.

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1,231,410. PROCESS OF REPLACEMENT. GEORGE MOORE, Joplin, Mo. Filed Oct. 19, 1914. Serial No. 867,439. (Cl. 23—31.)




1. In a process of treating pulp, coagulating masses of solids in a column of displacing solution by settling the solids, precipitating such masses of coagulated solids through said column of displacing solutions in a tortuous path while causing the solutions of the column to rise at a rate greater than the rate of settling of the solids before coagulation, and breaking the coagulated masses into smaller masses while moving in the column of displacing solutions.

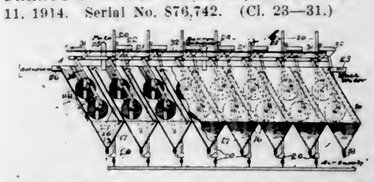
2. In a process of treating pulp, coagulating masses of solids in a column of displacing solutions by settling the solids, precipitating coagulated solids through such column of displacing solutions while causing the solutions of the column to rise at a rate greater than the rate of settling of the solids before coagulation, and deflecting portions of the congulated masses of precipitating solids while moving in the column of displacing solutions.

3. In a process of treating pulp, maintaining an upwardly moving column of solution in a body of pulp, maintaining a column of zones of relative quiet extending along and substantially throughout the length of the moving column, settling solids of the pulp in coagulated masses in the quiet zones, precipitating coagulated settled masses of solids in the moving column, and interrupting movement of parts of the masses of solids while in the moving column.

4. In a process of treating pulp, precipitating masses of coagulated solids through a tortuous column of displacing solution rising at a rate greater than the settling rate of said solids before coagulation, and breaking the masses into smaller masses while moving in the column of displacing solutions.

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1,231,411. DEWATERING AND REPLACEMENT APPARATUS. GEORGE MOORE, Joplin, Mo. Filed Dec. 11, 1914. Serial No. 876,742. (Cl. 23—31.)



1. In apparatus of the class described, the combination, with a container, of spaced plates movably mounted therein and adapted, while maintained substantially without reduction in the relative spacing, to be moved from a position for sustaining settled solids of pulp to a po-

sition enabling gravity discharge of such solids from the plates.

2. In apparatus of the class described, the combination, with a container, of spaced plates rigidly connected together and movably mounted in the container, and means for moving the plates from a position for sustaining settled solids of pulp to a position enabling gravity discharge of such solids from the plates.

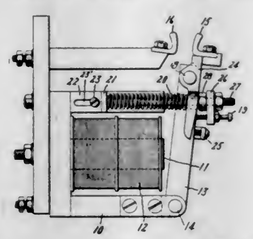
3. In apparatus of the class described, a series of successive containers connected for the flowing of contained liquid from the container at one end of the series toward the container at the other end of the series, plates movably mounted in one of the containers and adapted to be moved substantially without variation in location relative to each other from a position for sustaining solids settled thereon from the contained liquid to a position enabling gravity discharge of such solids from the plates, and means for delivering the discharged solids to a container in the rear relative to the direction of flow of the contained liquid.

4. In an apparatus of the class described, the combination with a container, of a plurality of series of movably mounted plates, one of the series being superimposed with respect to another, and means for moving the several plates from a position for sustaining the settled solids to a position enabling gravity discharge from the plates, a plate of the superimposed series being positioned relative to a plate of the subposed series for causing gravity discharge solids from the superimposed plate to contact with the edge of the subposed plate in the course of descent.

5. In an apparatus of the class described, the combination, with a container, of spaced plates connected to form a relatively rigid body and movably mounted as a body and adapted to be moved from a position for sustaining settled solids of pulp to a position enabling gravity discharge of such solids from the plates.

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1,231,412. ELECTROMAGNETIC SWITCH. EDWIN J. MURPHY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 13, 1914. Serial No. 850,596. (Cl. 175—281.)



1. An electromagnetic switch comprising a magnetizing winding, a fixed contact, a pivoted armature member having a contact mounted thereon and spring pressed away from the fixed contact so as to have a resilient movement with reference to the armature member, and means whereby the leverage at which the spring acts upon the armature member tending to keep the contacts apart is decreased before the movable contact reaches its closed position.

2. An electromagnetic switch comprising a magnetizing winding, a fixed contact, an armature member, a contact having a resilient mounting thereon to permit a yielding movement with reference to the armature member and press the armature member toward open position, and means whereby the effective pressure tending to hold the contacts apart is increased when the armature member reaches a predetermined position in the closing movement.

3. An electromagnetic switch comprising a magnetizing winding, a fixed contact, an armature member having a contact movably mounted thereon, and spring pressed away from the fixed contact, and means whereby the spring pressure tending to hold the contacts open is substantially uniform during the closing movement until the armature member reaches a predetermined position and is then increased.

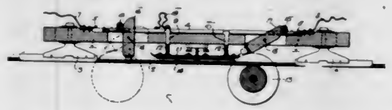
4. An electromagnetic switch comprising a magnetizing winding, a fixed contact, an armature member having a contact pivoted thereon to coöperate with the fixed contact, a spring interposed between the pivoted contact and a stationary part of the switch so that the contacts will be held apart thereby and engage with a yielding pressure, and means whereby the effective pressure tending to hold the contacts apart is increased when the armature member reaches a predetermined position in the closing movement.

5. An electromagnetic switch comprising a magnetizing winding, a fixed contact, an armature member, a contact pivoted on said armature member to coöperate with said fixed contact, a spring interposed between a stationary portion of the switch and said pivoted contact tending to turn the latter on its pivot toward the fixed contact, a fixed stop against which the contact is pressed by the spring, and a stop on the armature member which engages the pivoted contact at a predetermined position in the closing movement so that further movement of the armature member moves the pivoted contact away from the fixed stop.

[Claims 6 to 9 not printed in the Gazette.]

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1,231,413. TROLLEY-CONTACTOR. CLIFFORD H. MURRELL, Roanoke, Va. Filed Nov. 27, 1914. Serial No. 874,213. (Cl. 246—54.)



1. The combination in a trolley contactor of a trolley wire; a supporting structure carried thereby; a member mounted on said structure in position to be normally disconnected from the wire but electrically connected with the wire by a trolley wheel; an electric switch mounted on the supporting structure and including an element slidable longitudinally of the wire and electrically connected to said member; with an operating element for the switch mounted in position to be actuated by a trolley wheel before the latter electrically engages said member.

2. The combination in a trolley contactor of a trolley wire; a supporting structure; an electric switch including; a slidable contact mounted on said structure to be movable longitudinally of the trolley wire; an operating member pivoted to the supporting structure in position to cause movement of said contact and closure of the switch when said member is moved in one direction by a trolley wheel; with a runner member electrically connected to said movable contact and placed to be connected by the trolley wheel to the trolley wire after said wheel has caused movement of the slidable contact to close the switch.

3. The combination in a trolley contactor of a trolley wire; a supporting structure; two stitches thereon including a common contact slidable in a line substantially parallel to that of the trolley wire; and means actuated by a trolley wheel for mechanically operating said contact to close one switch when the wheel moves in one direction and to close the other switch when said wheel moves in the opposite direction.

4. The combination in a trolley contactor of a trolley wheel; a supporting structure; two switches on said structure including a contact member longitudinally slidable thereon; two elements on the supporting structure and extending into positions to be actuated by a trolley wheel operating on the trolley wire, for respectively moving said contact in opposite directions; with means for causing current to be supplied to said movable contact only after one of said elements has been engaged by the trolley wheel.

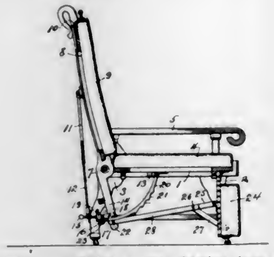
5. The combination in a trolley contactor of a trolley wire; a supporting structure; a runner member carried by said structure in position to be connected to the wire by a trolley wheel; two operating elements extending adjacent the trolley wire at the ends of said runner member; two electric switches on the supporting structure including a contact member movable longitudinally of said structure by either of said operating elements; and means for connecting said contact with the runner member.

[Claims 6 to 13 not printed in the Gazette.]



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1,231,414. RECLINING-CHAIR. ISRAEL V. MYERS, Kansas City, Mo. Filed June 6, 1914. Serial No. 843,440. (Cl. 155—16.)



1. A chair comprising a seat having legs, a back pivoted to said seat, a rock member extending transversely across the chair and pivoted in opposite rear legs thereof and provided, with a crank and arranged to be operated from either side of the chair, and means carried by the back and adapted to releasably engage said crank for holding the back in the upright position.

2. A chair comprising a seat having legs, a back pivoted to said seat, a rock member extending transversely across the chair and pivoted in opposite rear legs thereof and provided with a crank and arranged to be operated from either side of the chair, a toothed member pivoted to said seat, a link connecting the crank and said toothed member, and means carried by the back and adapted to releasably engage said toothed member for holding the back in different positions.

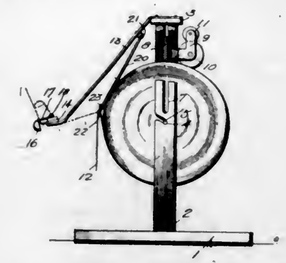
3. A chair comprising a seat having legs, a back pivoted to said seat, a rock member extending transversely across the chair and pivoted in opposite rear legs thereof and provided with a crank and arranged to be operated from either side of the chair, a toothed member pivoted to said seat, a link connecting the crank and said toothed member, means carried by the back adapted to releasably engage said toothed member for holding the back in different positions, and means carried by the back adapted to releasably engage said crank for holding the back in the upright position.

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1,231,415. PAPER HOLDER AND CUTTER. PHILIP VAN BIBBER NEBERGALL, La Grande, Oreg. Filed Aug. 15, 1916. Serial No. 114,968. (Cl. 211—32.)

1. A paper holder, comprising in combination with the roller for the paper and the standards for receiving the same, of a brake bar resting on the roller and slidable vertically between the standards, a bracket plate extending forwardly and downwardly from the top of the standard to near the plane of the axis of rotation of the roller, an outwardly facing blade for the paper strip carried by the bracket plate, and a guard for the edge of the blade hinged to the blade and normally standing before the edge in spaced relation and mounted to swing upward with the paper.

2. A paper holder comprising in combination with the roller for the paper and the standards for receiving the same, of a brake bar resting on the roller and slidable vertically between the standards, an outwardly facing cutting blade supported by the standards at one side of the roller, a guard hinged to the blade and normally standing before the edge thereof and mounted to be swung upward when the strip is moved into contact with the cutting edge of the blade.



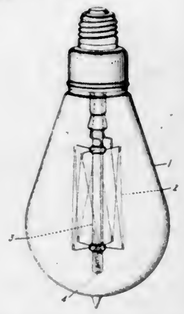
3. An attachment for paper holders, comprising a pair of arms having their upper ends bent obliquely and adapted to rest upon the top of the standard and be secured thereto, the lower ends of the arms being bent obliquely and carrying a cutting blade for the paper, a guide and holder for the end of the paper strip hinged to the inner faces of the arms, and a guard pivoted to the blade for protecting the cutting edge thereof, and mounted to swing upward with the paper.

4. An attachment for paper roll holders, comprising a pair of arms adapted for connection with the holder and carrying a cutting blade for the paper and a guard pivoted to the blade for protecting the cutting edge thereof and mounted to swing upward with the paper, and a guide for the end of the paper strip hinged to the inner face of the arms.

5. An attachment for paper roll holders, comprising a pair of arms adapted for connection with the holder and carrying a cutting blade for the paper and a guard pivoted to the blade for protecting the cutting edge thereof and mounted to swing upward with the paper.

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1,231,416. MANUFACTURE OF INCANDESCENT LAMPS. HARRY H. NEEDHAM, East Orange, N. J., assignor to General Electric Company, a Corporation of New York. Filed Jan. 19, 1916. Serial No. 72,930. (Cl. 176—16.)



1. The method which consists in introducing into the envelop of a lamp a sealed frangible capsule containing a getter, sealing said envelop, and opening said capsule.

2. The method which consists in introducing into the vitreous envelop of an electric lamp a sealed frangible capsule bodily movable in the envelop and containing a substance affected by variations of pressure and tempera-

ture, sealing said vessel, and then producing relative movement of said capsule and said envelop to fracture said capsule.

3. The method which consist in placing in the envelop of a lamp a sealed capsule containing a powdered material and having a fragile end,, said capsule being bodily movable in said envelop to cause breakage of said fragile end, sealing said envelop while said capsule is intact, and then producing relative movement of said capsule and said envelop to break said fragile end portion of said capsule.

4. The method of introducing a substance into the evacuated envelop of a lamp which consists in placing the substance in a frangible capsule, evacuating and sealing said capsule, placing said capsule in said envelop, evacuating and sealing said envelop, and then breaking said capsule.

5. The method of introducing a substance into an incandescent lamp which consists in placing said substance in a glass tube sealed at one end, evacuating said tube, sealing off that portion of said tube which contains said substance to produce a sealed frangible capsule, introducing said capsule into the lamp, sealing the lamp, and then breaking said capsule.

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1,231,417. ATTACHMENT-PLUG RECEPTACLE. ARVID H. NERO, New Britain, Conn., assignor to The Arrow Electric Company, Hartford, Conn., a Corporation of Connecticut. Filed Mar. 22, 1917. Serial No. 156,683. (Cl. 173—343.)

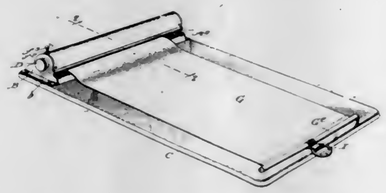


1. An attachment plug receptacle having an insulating body apertured to form a contact chamber, a contact arranged in said chamber and having a brush portion to engage the jack of a coöperating plug, in combination with an independent, brush-reinforcing spring freely supported by said contact.

[Claims 2 to 4 not printed in the Gazette.]

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1,231,418. CARBON-SHEET HOLDER. ERNEST BRIANT NORMAN, New Orleans, La. Filed June 9, 1915. Serial No. 33,090. (Cl. 11—23.)



1. A portable manifolding device consisting of a casing having end walls and an open ended slot in its front and extending through one end wall thereof, a spring roller revolubly mounted within said casing, and a carbon sheet detachably connected to said roller.

2. In a device of the class described, the combination with a casing having end walls and a slot in its front face, and a slot in one end wall registering with the front slot, of a spring roller revolubly mounted in said casing and having an undercut groove in its periphery extending through the end adjacent the slotted end wall of the casing, and a carbon sheet having an enlargement at one end held detachably in said groove.

3. In a device of the class described, the combination with a casing having end walls and an open ended slot in its front face and a slot in one end wall of the casing registering therewith, of a spring roller revolubly mounted in said end walls and having an undercut groove in its periphery extending through the end adjacent the slotted end wall, and a carbon sheet having an enlargement at one end removably fitting within said grooves, said groove and front and end wall slots, when in alinement, permitting the attachment to and removal from the roller, of the aforesaid carbon sheet.

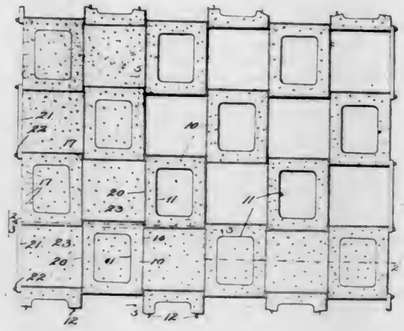
4. In a device of the character described, the combination with a casing having end walls and an open ended slot in its front face and a slot in one end wall registering therewith, of a spring roller mounted therein having an undercut groove in its periphery extending through one end thereof, and a carbon sheet having a tubular enlargement at each end, a rod in said enlargements, one end being fitted into the undercut groove of the roller and removable therefrom through the slots in the front and end of the casing.

5. In a device of the character described the combination with a casing having end walls and an open ended slot in its front face and a slot in one end wall registering with said open ended slot, of a spring roller revolubly mounted in the said casing, the axis of said roller extending through the opposite end walls of the casing, a cap secured to said axis exteriorly of one end wall, means within said cap for preventing backward rotation of said axis and roller, a carbon sheet detachably secured to said roller, and means for unwinding the same from the roller and through the slot in the front of casing.

[Claims 6 to 8 not printed in the Gazette.]

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1,231,419. CONCRETE PAVEMENT. ALBERT R. PADDOCK, Farmdale, Ohio. Filed Nov. 28, 1916. Serial No. 133,965. (Cl. 94—1.)



1. A pavement in the form of a single continuous concrete slab whose lineal dimensions equal those of the area to be paved; said slab comprising rows of concrete paving blocks, the individuals of which are spaced apart at regular intervals, the arrangement of alternating blocks and spaces in each succeeding row being the reverse of that in the preceding row, surfacing blocks supporting said paving blocks above the surface of the road bed, so as to provide open spaces between the paving blocks and the road bed which communicate with one another and with the spaces between adjacent blocks, and a concrete filler completely occupying all of said open spaces and anchoring the paving blocks and surfacing blocks in place therein.

2. A pavement in the form of a single continuous concrete slab whose lineal dimensions equal those of the area to be paved; said slab comprising rows of concrete paving blocks, having open central portions, said paving blocks individually spaced apart at regular intervals, the arrangement of alternating blocks and spaces in each succeeding row being the reverse of that in the preceding row, surfacing blocks supporting said paving blocks above the surface of the road bed, so as to provide open spaces between the paving blocks and the road bed which communicate with one another, with the open portions of said blocks and with the open spaces between adjacent blocks, and a concrete filler completely occupying all of said open spaces and anchoring the paving blocks and surfacing blocks in place therein; each paving block having a strip of yielding, waterproofed material bound around its entire marginal surface, so as to form expansion joints placed accurately and at regular intervals, both longitudinally and transversely throughout the slab.

3. A pavement in the form of a single continuous concrete slab whose lineal dimensions equal those of the area to be paved; said slab comprising rows of concrete paving blocks, the individuals of which are spaced apart at regular intervals, the arrangement of alternating blocks and spaces in each succeeding row being the reverse of that in the preceding row, surfacing blocks supporting said paving blocks above the surface of the road bed, so as to provide open spaces between the paving blocks and the road bed which communicate with one another and with the spaces between adjacent blocks, and a concrete filler occupying all of said open spaces and anchoring the paving blocks and surfacing blocks in place therein; each paving block having a strip of yielding, waterproofed material bound around its entire marginal surface, so as to form expansion joints placed accurately and at regular intervals, both longitudinally and transversely throughout the slab.

4. A pavement in the form of a single continuous concrete slab whose lineal dimensions equal those of the area to be paved; said slab comprising rows of concrete paving blocks, having open central portions, said paving blocks individually spaced apart at regular intervals, the arrangement of alternating blocks and spaces in each succeeding row being the reverse of that in the preceding row, surfacing blocks supporting said paving blocks above the surface of the road bed, so as to provide open spaces between the paving blocks and the road bed which communicate with one another, with the open portions of said blocks and with the open spaces between adjacent blocks, and a concrete filler completely occupying all of said open spaces and anchoring the paving blocks and surfacing blocks in place therein; each paving block having a strip of yielding, waterproofed material bound around its entire marginal surface, so as to form expansion joints placed accurately and at regular intervals, both longitudinally and transversely throughout the slab.

5. A pavement in the form of a single continuous concrete slab whose lineal dimensions equal those of the area to be paved; said slab comprising rows of concrete paving blocks, the individuals of which are spaced apart at regular intervals, the arrangement of alternating blocks and spaces in each succeeding row being the reverse of that in the preceding row, surfacing blocks supporting said paving blocks above the surface of the road bed, so as to provide open spaces between the paving blocks and the road bed which communicate with one another and with the spaces between adjacent blocks, and a concrete filler completely occupying all of said open spaces and anchoring the paving blocks and surfacing blocks in place therein; each paving block having a strip of yielding, tarred material bound around its entire marginal surface, so as to form expansion joints placed accurately and at regular intervals, both longitudinally and transversely throughout the slab.

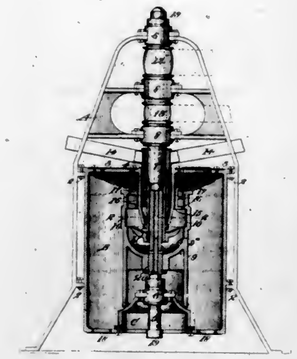
[Claim 6 not printed in the Gazette.]

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1,231,420. SEPARATOR AND AMALGAMATOR. ADOLPH P. PALMER, Oakland, Cal. Filed Feb. 10, 1916. Serial No. 77,384. (Cl. 83—67.)

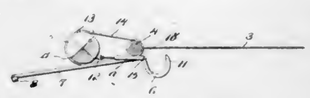
1. In an apparatus of the character described, a cylindrical chamber having a bowl-shaped bottom and a continuous groove above the bottom and in the inner wall of the cylindrical portion whereby mercury in said bowl-shaped bottom may be delivered into the groove and be retained therein by centrifugal action, and a rotary cylinder arranged within the chamber and provided at its bottom with a table and segmentally cut away to form an opening immediately above the table for permitting material to move from the interior of the cylinder outwardly to the table for being delivered centrifugally therefrom to the mercury groove of the chamber, said table being spaced above the bowl-shaped bottom of the chamber.



2. In an apparatus of the character described, a cylindrical chamber, a revoluble dished table arranged within the chamber for delivering material centrifugally into the chamber, and a cylinder fixed at its lower end to the table and within the periphery of said table, said cylinder being segmentally cut away to form side openings immediately above said table for permitting material to move from within the cylinder to the table and provided with a spiral conveyer flange above the openings thereof.

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1,231,421. GATE-FASTENER. OTTO P. PARR, Lead, S. D. Filed Aug. 4, 1915. Serial No. 43,641. (Cl. 70—121.)



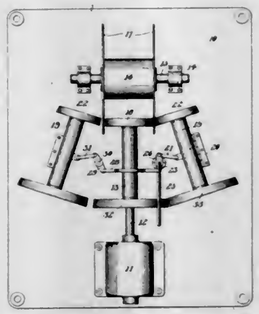
A gate fastening device for wire gates comprising a fork, a swivel member whereby the fork is loosely connected with the gate post, and a hook having the heel thereof pivoted in the fork and equipped with a handle member extending from the heel and whereby said hook may be swung in engagement with an upright member of the gate, the elongated handle of the hook having a terminal catch adapted to engage one of the gate wires, and the fork with which the hook is pivotally connected being adapted to receive the point of the hook when the latter is engaged with the upright member of the gate.

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1,231,422. GEARING. JOHN L. PASCAL, Pocahontas, Iowa. Filed Jan. 13, 1916. Serial No. 71,939. Cl. 74—26.)

1. In combination, a shaft provided with spaced friction disks, said shaft being mounted for rotative and longitudinal movement, a motor shaft with a bevel friction gear mounted thereon and a friction gear located between said disks, inclined jack-shafts mounted on either side of said motor shaft provided with a bevel friction gear at

each end of each jack-shaft, hinged bearings supporting said jack-shafts, and means for bringing the last-named



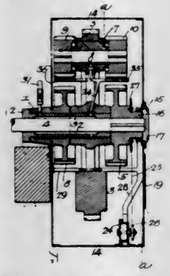
bevel friction gears into and out of contact with a gear on the motor shaft, and with said disks.

[Claims 2 and 3 not printed in the Gazette.]

1,231,423. PROCESS OF MAKING MAGNESIUM COMPOUNDS FROM SILICATE MINERALS. SAMUEL PEACOCK, Philadelphia, Pa., assignor, by mesne assignments, to Marden, Orth & Hastings Co. Inc., New York, N. Y., a Corporation of Maine. Original application filed July 15, 1915, Serial No. 40,096. Divided and this application filed Aug. 7, 1916. Serial No. 113,659. (Cl. 23—13.)

The process of producing magnesium compounds from silicate minerals which consists in finely dividing a magnesium bearing silicate mineral digesting said mineral with an alkali metal hydrate to form an alkali metal silicate and a magnesium hydrate: and suitably separating the salts thus formed, substantially as described.

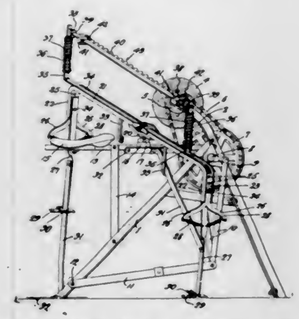
1,231,424. MEANS FOR LUBRICATING CHAIN DRIVES. HAROLD S. PIERCE, Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 5, 1914. Serial No. 860,416. (Cl. 184—6.)



2. The combination of a bearing 1, a sleeve 2 extending through the bearing and projecting at one end thereof, said sleeve having oil passages therein and the bearing having a passage therein communicating with the passages in the sleeve, a shaft 4 mounted in the sleeve and extending beyond the end thereof, a sprocket wheel 6 connected to the bearing, a sprocket wheel 3 on the sleeve, a third sprocket wheel 5 connected to the shaft mounted in the sleeve, a shaft 8 mounted in the wheel carried by the sleeve and located near the periphery thereof, sprocket wheels 9 and 10 on the shaft 8 in line with the sprocket wheels 6 and 5, connected to the bearing and the shaft 4 respectively, a casing inclosing said sprocket wheels and having an oil reservoir at the bottom; a pump in said reservoir; a pipe leading from the pump to the oil passage in the bearings: a pipe leading from the hub of the sprocket wheel carried by the sleeve to the bearing of the shaft carried by the said wheel so as to lubricate said wheel: and spray pipes communicating with the oiling system for spraying oil on said wheel.

[Claim 1 not printed in the Gazette.]

1,231,425. APPARATUS FOR SHARPENING THE TEETH OF SICKLE-BARS. JAMES PRIEL, Overton, Nebr. Filed Dec. 28, 1916. Serial No. 139,328. (Cl. 51—8.)



1. The combination with a supporting structure, a grinding wheel journaled thereon, and means for actuating the wheel, of a holding element extending transversely of said structure and tiltable relative thereto, universal connections between said element and the structure, adjustable ground engaging supports connected to the ends of said element, sickle bar gripping means, and a yieldable connection between said gripping means and the holding element.

2. The combination with a supporting structure, a grinding wheel journaled thereon, and means for actuating the wheel, of a holding element extending transversely of said structure and tiltable relative thereto, universal connections between said element and the structure, adjustable ground engaging supports connected to the ends of said element, sickle bar gripping means, and a slidable connection between said gripping means and the holding element.

3. The combination with a supporting structure, a grinding wheel journaled thereon, and means for actuating the wheel, of a holding element extending transversely of said structure, universal connections between said element and the structure, adjustable supports connected to the ends of said element, sickle bar gripping means, and a yieldable and slidable connection between said gripping means and the holding element.

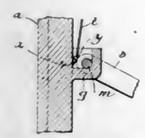
4. The combination with a supporting structure, a revoluble grinding element carried thereby, and means for actuating said element, of a holding element, adjustable supports connected to the ends thereof, a universal connection between said holding element and the supporting structure, said element being tiltable relative to its end supports, yielding means for retarding the tilting action of the holding element, and means movable with the holding element for gripping a member to be sharpened.

5. The combination with a supporting structure, a revoluble grinding element carried thereby, and means for actuating said element, of a holding element, adjustable supports connected to the ends thereof, a universal connection between said holding element and the supporting structure, said element being tiltable relative to its end supports, yielding means for retarding the tilting action of the holding element, and means movable with the holding element for holding a member to be sharpened, said means including a slide carried by the holding element, a yieldingly supported bar carried by the slide, and means upon the bar for engaging a member to be sharpened.

[Claims 6 to 8 not printed in the Gazette.]



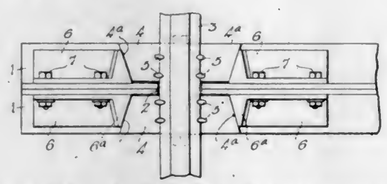
1,231,426. WORKS SUCH AS RETAINING-WALLS, WHARVES AND PIERS. SYLVAIN LOUIS RAVIER, Paris, France. Filed Apr. 13, 1915. Serial No. 21,174. (Cl. 61—30.)



1. A shield for earthwork embankments comprising in combination a shield formed in sections, said sections being provided on their vertical edges with interlocking members, a plurality of vertically spaced sockets on the rear faces of the sections, a plurality of stay bars, said sockets being adapted to receive the ends of said stay bars, means on the sockets and stay bars for guiding the bars into place when assembling, the stay bars adapted to be connected to the upper sockets being longer than those connected to the lower sockets, and anchoring plates on the ends of the stay bars for embedding in the earth.

2. A shield for embankments, comprising a plurality of sections, interlocking members on each of said sections a plurality of sockets on said sections, a plurality of stay bars adapted to engage said sockets, guiding means on said sockets and said stay bars, and anchoring plates on said stay bars.

1,231,427. METALLIC RAILROAD-TIE. GEORGE R. REEVES, Magnolia Springs, Ala. Filed Feb. 9, 1917. Serial No. 147,677. (Cl. 238—5.)



1. A metallic railroad tie including a body formed with a longitudinally extending upright rib, rail supporting and cushioning blocks arranged upon opposite sides of the rib, means for securing the blocks to the rib, and wedge means coöperating with the ends of the blocks to hold them against displacement.

2. A metallic railroad tie including a body formed with a longitudinally extending upright rib having rail-receiving notches in the upper edge thereof, rail supporting and cushioning blocks arranged on opposite sides of the rib at the notched portions thereof, means for securing the cushioning blocks to the rib, and wedge means coöperating with the ends of the blocks to hold them against displacement.

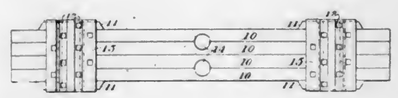
3. A metallic railroad tie including a body formed with a longitudinally extending upright rib, rail supporting and cushioning blocks arranged upon opposite sides of the rib and having the ends thereof beveled inwardly and upwardly, positioning blocks applied to the tie body and having the ends thereof beveled in a manner corresponding to the ends of the cushioning blocks, and means for drawing the cushioning blocks toward the upright rib of the tie body, the beveled ends of the blocks then engaging the beveled ends of the positioning blocks to wedge the cushioning blocks securely in position.

4. A metallic railroad tie including a tie body formed with a longitudinally extending upright rib and having a substantially inverted T-shaped cross section, cushioning blocks arranged upon opposite sides of the upright rib and having the ends thereof beveled inwardly and upwardly, angle shaped positioning blocks fitted in the corners of the tie body and formed with heads which are beveled in a manner corresponding to the ends of the cushioning blocks, and means for securing the cushioning blocks to the rib of the tie body, the beveled ends of the cushioning blocks then engaging the ends of the angle-shaped positioning blocks and coöperating therewith to wedge the cushioning blocks securely in position.

5. A metallic railroad tie including a body formed with a longitudinally extending upright rib and having a substantially inverted T-shaped cross section, rail supporting and cushioning blocks arranged upon opposite sides of the intermediate rib, positioning blocks fitted in the corners of the tie body for engagement with the ends of the cushioning blocks, and means for forcing the cushioning blocks toward the upright rib of the tie body, the cushioning blocks and positioning blocks being correspondingly beveled for coöperation with each other to wedge the cushioning blocks securely in position.

[Claims 6 and 7 not printed in the Gazette.]

1,231,428. SECTIONAL TIE. ALBERT REVERT, Verdi, Nev. Filed July 31, 1916. Serial No. 112,427. (Cl. 238—3.)



1. A sectional tie comprising a series of longitudinal strips laid edge to edge and side to side to form a tie of the desired dimensions, upright supporting strips near the ends of the tie acting to increase the width of the bearing surface for the rails, and tie plates for the ends of said tie, having prongs to enter the sections and end strips and retain them together.

2. A sectional tie comprising a series of longitudinal strips laid edge to edge and side to side to form a tie of the desired dimensions, upright supporting strips near the ends of the tie and transverse fasteners extending through said upright and longitudinal strips, said upright strips also acting to increase the width of the bearing surface for the rails.

3. A sectional tie comprising a series of longitudinal strips laid edge to edge and side to side to form a tie of the desired dimensions, upright supporting strips near the ends of the tie and transverse fasteners extending through said upright and longitudinal strips, said upright strips also acting to increase the width of the bearing surface for the rails, and tie plates for the ends of said tie having prongs to enter the strips and retain them together.

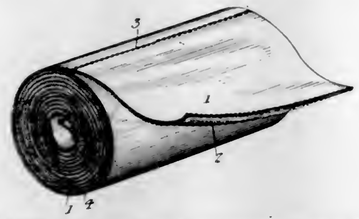
4. A sectional tie comprising a series of longitudinal strips laid edge to edge and side to side to form a tie of the desired dimensions, upright supporting strips near the ends of the tie and transverse fasteners extending through said upright and longitudinal strips, said upright strips also acting to increase the width of the bearing surface for the rails, and said longitudinal strips being first individually treated to prevent early deterioration.

5. A sectional tie comprising a series of longitudinal strips laid edge to edge and side to side to form a tie of the desired dimensions, upright supporting strips near the ends of the tie and transverse fasteners extending through said upright and longitudinal strips, said upright strips also acting to increase the width of the bearing surface for the rails and upright fasteners intermediate the ends of said longitudinal strips, extending therethrough.

1,231,429. TOILET-PAPER. ARNOLD GEDALJAH RONA, New York, N. Y. Filed Mar. 11, 1915. Serial No. 13,626. (Cl. 154—46.)

1. As an article of manufacture, a toilet roll comprising a continuous perforated strip consisting of a highly flexible absorbent surface and a highly flexible non-absorbent surface.

2. A toilet roll comprising a continuous perforated strip consisting of a textile raw material surface and a backing surface.

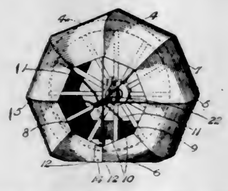


3. A toilet roll comprising a continuous perforated strip consisting of an absorbent cotton surface and a backing surface.

4. A toilet roll comprising a continuous perforated strip consisting of an absorbent cotton surface and a paper surface.

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1,231,430. PROTECTOR FOR MOTOR-CAR TIRES. JOHN WILLIAM ROONEY, Herlot, New Zealand. Filed July 22, 1916. Serial No. 110,771. (Cl. 21—23.)



1. A protector for motor car tires, comprising a frame adapted to encircle the tire and consisting of a set of connected ribs or members; a covering for said frame; and a device for attaching said frame to the wheel of the car.

2. A protector for motor car tires, comprising a collapsible frame adapted, when expanded, to encircle the tire said frame consisting of a set of pivotally-mounted ribs or members; a flexible covering for said frame; and a device for attaching said frame to the wheel of the car.

3. A protector for motor car tires, comprising a frame adapted to encircle the tire and consisting of a set of connected ribs or members; a covering for said frame; and a spring clip connected with said frame and engageable with the wheel of the car to attach the frame thereto.

4. A protector for motor car tires, comprising a collapsible frame adapted, when expanded, to encircle the tire, said frame consisting of a set of pivotally-mounted ribs or members; a flexible covering for said frame; and a spring clip connected with said frame and engageable with the wheel of the car to attach the frame thereto.

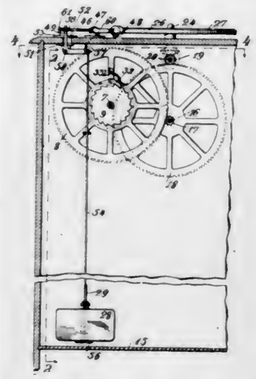
5. A protector for motor car tires, comprising a collapsible frame adapted, when expanded, to encircle the tire, said frame consisting of a set of ribs or members; and a shaft from which said ribs radiate and to which they are pivoted at their inner ends; a flexible covering for said frame; and a device for attaching said frame to the wheel of the car.

[Claims 6 to 10 not printed in the Gazette.]

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1,231,431. DRIVING MECHANISM FOR TALKING-MACHINES. HELLMUTH ROSENBAUM, Brooklyn, N. Y. Filed Oct. 21, 1916. Serial No. 126,986. (Cl. 185—27.)

1. A driving mechanism for talking machines, comprising a motor operated by a weight; a stud rotatably mounted in the top plate of the box of the talking machine, means operatively connecting the stud with the motor, and a support for securing a record disk thereto; a stopping device mounted on the top plate of the box in position to engage the support of the record disk, and means for operating the stopping device by the weight which actuates the driving mechanism before the motor is run down; substantially as herein shown and described.

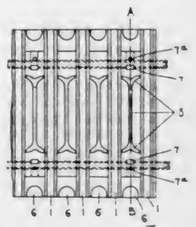


3. The combination with the driving mechanism for talking machines, designed to be actuated by a weight, of stop mechanism for the rotatable support of the disk, the stop mechanism comprising a bell crank lever pivoted to the top plate of the box of the machine in proximity to the rotatable support, whereon the record is secured; a frictional block secured to one arm of the bell crank lever; a slot in the top plate of the box, a lug affixed to the underside of the top plate adjoining the slot; a bell crank lever pivoted in the lug and having one arm projecting through the slot to engage the other arm of the bell crank lever mounted on the top plate; a rod pivotally connected to the other arm of the bell crank lever; an abutment on the other end of the rod, in position to be engaged by the weight, and springs connected to the arms of the levers and set to draw the levers into their normal position, in which the friction block is withdrawn from contact with the rotatable disk support, when the weight acting on the abtument is raised; substantially as herein shown and described.

[Claim 2 not printed in the Gazette.]

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1,231,432. PERMANENT WAY OF RAILWAYS. HECTOR AURELIUS RUGERONI, Buenos Aires, Argentina. Filed Jan. 30, 1917. Serial No. 145,426. (Cl. 238—5.)



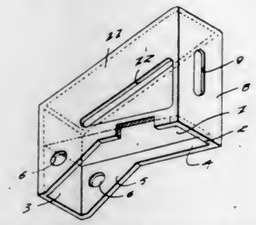
2. In a road bed, a metallic plate provided with two series of corrugations of unequal width arranged alternately, the corrugations open at the bottom and extending upwardly being adapted to support rails and being relatively of much greater width than the corrugations which are open at the top and which form water channels, the tops of the first said corrugations being downwardly inclined from their middle parts between the rail seats toward their side portions and being provided with reinforcing projections pressed upwardly from their middle parts and extending crosswise of the plates parallel to their corrugations.

[Claim 1 not printed in the Gazette.]



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1,231,433. STUDDING-SOCKET. JOHN F. RYAN, Amboy, Ill. Filed Jan. 30, 1917. Serial No. 145,393. (Cl. 72—108.)



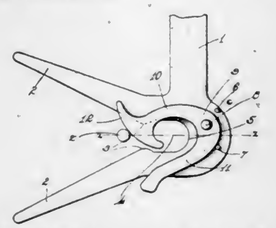
1. A studding socket comprising a base plate, a relatively narrow flange formed at one end of the base plate, a relatively wide flange formed at the opposite end of the base plate, said flanges extending downwardly at right angles with relation to the base plate, side flanges formed integrally with the base plate and equally with the base plate and equal in width to the width of the narrow flange, enlargements on the side flanges adjacent the wide flange, said enlargements being provided with apertures, the whole forming anchoring means to be embedded in a concrete base, a relatively wide upwardly extending wall formed on the end of the plate on which the narrow flange is formed, a relatively narrow wall formed on the end of the base plate on which the wide flange is formed and connecting walls formed at the side edges of the last mentioned walls, the said connecting walls being connected to the base plate adjacent the end on which the narrow wall is formed to provide a pair of triangular openings, the lower walls of which lie flush with the underside of the base plate to allow for the drainage of any water which may collect in the socket.

2. A studding socket comprising a base plate, a relatively narrow flange formed at one end of the base plate, a relatively wide flange formed at the opposite end of the base plate, said flanges extending downwardly at right angles with relation to the base plate, side flanges formed integrally with the base plate equal in width to the width of the narrow flange, enlargements on the side flanges adjacent the wide flange, said enlargements being provided with apertures, the whole forming an anchoring means to be embedded in a concrete base, a relatively wide upwardly extending wall formed on the end of the base plate on which the narrow flange is formed, said wall being provided with a vertically extending longitudinal slot, a relatively narrow wall formed on the end of the base plate on which the wide flange is formed and the connecting walls formed on the side edges of the last mentioned walls, the said connecting walls being connected to the base plate adjacent the end on which the narrow wall is formed to provide a pair of triangular openings, the lower walls of which lie flush with the underside of the base plate to allow for the drainage of any water which may collect in the socket, the said openings and the slot in the wide wall being adapted to admit a fastening means to the studding by which boards may be secured thereto.

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1,231,434. MAIL-BAG-RETAINER MECHANISM. JOSEPH P. SANDER, Spokane, Wash., assignor to The Spokane Mail Equipment Company, a Corporation. Filed Sept. 23, 1915. Serial No. 52,237. (Cl. 258—22.)

1. In a main catching device, a fork having a throat to receive a portion of a mail bag, a substantially flat U-shaped retainer pivoted near its bight at a point out of line with the longitudinal axis of said throat, one limb of said retainer having a cam-like bag-abutting portion adapted to swing across said throat in one adjustment of said retainer and inclined with respect to the axis of said throat whereby impact of the bag therewith will shift said retainer to open said throat to receive a portion of a bag, a stop for limiting movement of said retainer to open said throat, the remaining leg of said retainer lying in overlapping relation with respect to a portion of said throat and in the path of an entering bag portion to be shifted thereby to dispose said cam across said throat to close the latter, said cam having a hook-shaped portion facing the bight of said throat to engage the bag portion on rebound of the latter and prevent the bag from becoming disengaged from said fork, and a stop limiting movement of said retainer toward a throat closing position, substantially as described.



2. In a mail catching device, a fork having a throat to receive a portion of a mail bag, a substantially U-shaped retainer pivoted near its bight upon said fork, one limb of said retainer having a cam-shaped shifting end adapted to extend across the throat in one adjustment of said retainer whereby impact of the bag on said cam will shift said retainer to open said throat to receive a bag portion, the remaining leg of said retainer lying in overlapping relation with respect to a portion of the throat of said fork and in the path of an entering bag portion to be engaged by the latter to shift the retainer into a throat closing position, the cam end of the retainer having a hook for engaging the bag portion on its rebound away from the bight of the throat, substantially as described.

3. In a mail bag catching device, a fork, and a retainer pivoted to said fork and having one end provided with a cam facing toward an incoming bag portion to be engaged thereby to shift said retainer, and said end having a hook facing in a direction opposite said cam for retaining said bag portion after the same has been caught, substantially as described.

4. In a mail bag catching device, a fork, and a retainer pivoted to said fork and having an end provided with a cam for engagement with an incoming bag to shift said retainer into a fork opening position, said retainer having a member lying in the path of said bag portion for engagement by the caught bag to shift the retainer into a fork closing position, said cam having a hook for limiting rebound movement of the bag portion out of said fork, substantially as described.

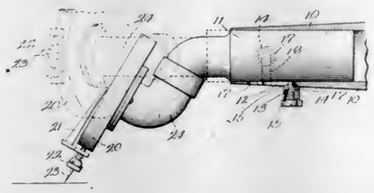
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1,231,435. SOUND-REPRODUCING MACHINE. HENRY T. SCHIFF, Chicago, Ill. Filed Jan. 18, 1917. Serial No. 142,986. (Cl. 274—24.)

1. In a sound reproducing machine, a tone arm embodying telescoping sections, one of said sections having a slot extending in a general direction lengthwise of the arm, there being a laterally extending slot in said part communicating with the first said slot, a pin on the other section of the arm and adapted to operate in the first said slot to permit longitudinal adjustment of the sections, a portion of the first said slot intermediate its ends being shaped to arrest the longitudinal adjustment of said section and to impart a slight relative rotary movement to the section during longitudinal adjustment, to direct the pin into the said lateral slot.

4. In a sound reproducing machine, a tone arm embodying a main section, a supplemental section telescoping

therewith and rotatable with respect thereto, a pin on one of the parts, the other part having a slot to receive the pin, said slot having a portion to permit longitudinal adjustment of the parts and a laterally extending portion communicating therewith to receive the pin to permit rotary adjustment of the parts, there being means intermediate the ends of the longitudinal portion of the slot for arresting the longitudinal adjustment of the parts and operating to position the pin to enter the laterally extending portion of the slot, a sound box rotatably connected with the said supplemental section, and means for holding the sound box in its adjusted position with respect to the said supplemental section.

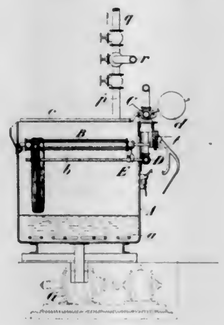


13. In a sound reproducing machine, a tone arm embodying telescoping sections, and a pin and slot connection between the sections to permit longitudinal adjustment thereof, there being a lateral communicating branch to the slot intermediate the ends of the slot, there being means coöperating with the said pin to arrest the longitudinal adjustment of the sections and to position the pin to enter the lateral slot to permit a relative rotary adjustment of the sections, said pin having a yielding portion adapted to yieldingly enter a seat in the other section.

[Claims 2, 3, 5 to 12, and 14 not printed in the Gazette.]

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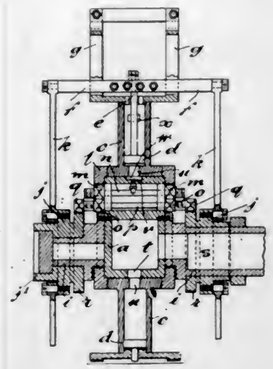
1,231,436. APPARATUS FOR THE WEIGHTING OF SILK FILAMENTS AND SILK FABRICS IN FORM OF HANKS. PETER SCHMID, Basel, Switzerland. Filed Sept. 20, 1916. Serial No. 121,230. (Cl. 8—19.)



1. An apparatus for the weighting of silk filaments or silk fabrics in form of hanks, comprising a vat having in its upper part a row of horizontal tiltable hank supports provided on the one hand with spraying tubes arranged above the hank supports in such a manner that all may be turned back together, and on the other hand with spraying tubes placed underneath the aforesaid hank supports, of which latter tubes each is connected with the corresponding hank support and can be turned back with it.

[Claim 2 not printed in the Gazette.]

1,231,437. ROTARY ELASTIC-FLUID ENGINE. WILLIAM HERBERT SEDDON, Palmswick, England. Filed Mar. 31, 1917. Serial No. 159,038. (Cl. 121—64.)

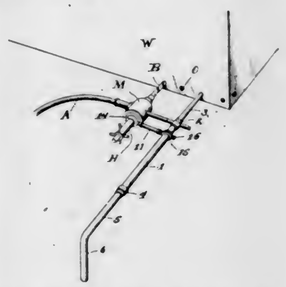


1. The combination of a fixed structure having an outer bearing surface, an inner ring mounted to revolve on said bearing surface, an outer ring, cylinders fixed to said inner ring, pistons in said cylinders, links intermediate said pistons and said outer ring, a lateral projection extending from said fixed structure eccentrically thereof, a ring mounted to rotate on said projection, rigid connections between said last mentioned ring and said outer ring, an internal gear fixed to said internal ring, an external gear fixed to said ring on said projection, and gearing carried by said fixed structure coöperating with said internal and external gears for driving said last mentioned rings and said outer rings with said inner rings.

[Claims 2 to 4 not printed in the Gazette.]

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1,231,438. ATTACHMENT FOR DRILLS. GILBERT B. SERPAS, Violet, La. Filed Feb. 27, 1917. Serial No. 151,307. (Cl. 77—59.)



1. An attachment for drilling machines and the like, the same comprising a straight staff having a point at one end and a handle at the other, and a guide made up of a shank, eyes having stems adjustably mounted in the extremities of said shank, and a set screw in one eye, this eye adapted to be adjustably mounted on the shank of the staff and the other eye adapted for the reception of the head of said machine.

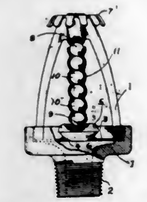
2. The herein described tool guide comprising a staff having one end pointed for insertion in a hole already formed and the other end provided with a handle and a hook; and a guide made up of a shank, threaded couplings at its extremities, and eyes having stems adjustably mounted in said couplings, one of the eyes adapted to be adjustably mounted on the staff and the other eye to slidably receive said tool.

3. The combination with a drill, and an air motor therefor having a head; of a drill brace comprising a straight staff having a point at one end for insertion in a hole already formed, a smooth shank at its mid-length, and a handle at its other end, and a guide disposed transversely to the length of said staff and the axis of said motor and made up of a shank and eyes adjustably mounted in its extremities for respectively engaging the shank of the staff on the head of the drill, for the purpose set forth.

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1,231,439. TEMPERATURE-RESPONSIVE DEVICE. CHARLES G. SIMONDS and GEORGE W. DOERR, Milwaukee, Wis. Filed Jan. 21, 1916. Serial No. 73,411. (Cl. 236—16.)



1. In a temperature responsive device, a strut comprising a plurality of more than three abutting members having rolling-contact with each other, and a fusible jacket normally retaining said members in substantially a straight line adapted to melt apart and free said abutting members at a predetermined temperature.

2. In a temperature responsive device, a collapsible strut comprising stationary terminal members, one on each end; intermediate rollable members having rolling contact with each other and with said terminal members whereby lateral movement thereof required to cause collapse is hindered by no sliding contact friction; and a fusible jacket for the assembled strut adapted to melt apart and free said rollable members at a predetermined temperature.

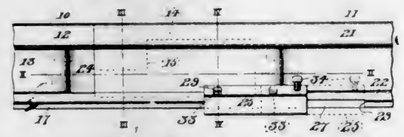
6. In a temperature responsive device, a strut comprising a line of contacting balls adapted to collapse at a predetermined temperature.

9. In a temperature responsive device, an equilibrated assembly of contacting balls, and means destroying the stability thereof at a predetermined temperature.

[Claims 3 to 5, 7, and 8 not printed in the Gazette.]

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1,231,440. RAIL-JOINT. JOHN SITKO, Fort Wayne, Ind., assignor of one-third to Ludwik Sitko and one-third to Franciszek Sitko, Fort Wayne, Ind. Filed Jan. 22, 1917. Serial No. 143,616. (Cl. 239—6.)

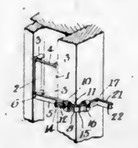


1. In combination with rails having the base flanges at the ends of said rails provided with marginal recesses, a securing member partially inclosing the bases of the rails slidably mounted thereon within the said recesses and adapted to overlie the ends of the adjacent rail bases when the rails are in their assembled relations, the end portions of said bases being provided with keeper openings, a spring latch carried by said securing means adapted for seating within one of said openings when the securing means is in its operative position and in the other of said openings when in its released position inclosing the base of only one of said rails.

2. In combination with rails having the base flanges at the ends of said rails provided with marginal recesses, a securing member partially inclosing the bases of the rails slidably mounted thereon within the said recesses and adapted to overlie the ends of the adjacent rail bases when the rails are in their assembled relations, the end portions of said bases being provided with keeper openings, a spring latch carried by said securing means adapted for seating within one of said openings when the securing means is in its operative position and in the other of said openings when in its released position inclosing the base of only one of said rails, and a locking bolt carried by said securing means adapted for adjustable engagement with one of said rails when the securing means is in its operative or inoperative position.

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1,231,441. WINDOW-SHADE BRACKET. HERBERT W. SMITH, Coon Rapids, Iowa. Filed Aug. 30, 1916. Serial No. 117,685. (Cl. 156—24.)

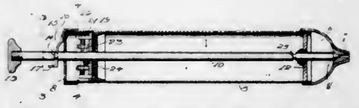


1. A window shade bracket comprising a pair of spaced attaching members, means pivotally connecting the upper ends of the members together, and a shade supporting arm pivotally connecting the lower ends of the members together, said means and arm permitting the members to collapse one toward the other to permit the same to be placed between the parting strips of the window frame.

[Claims 2 to 5 not printed in the Gazette.]

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1,231,442. FIRE-EXTINGUISHER. SIDNEY J. SMITH, Fresno, Cal. Filed Jan. 21, 1916. Serial No. 73,387. (Cl. 169—17.)



1. A portable fire extinguisher including a hollow cylindrical body having a discharge port in one end thereof, a slide rod slidably mounted in said body having a tapered end constituting a closure for said discharge port, and pivoted means for resiliently retaining said slide rod in engagement with said discharge port.

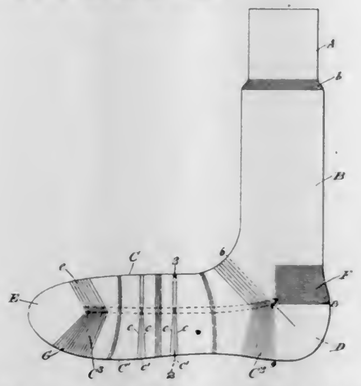
2. A portable fire extinguisher including a hollow cylindrical body having a tapered end and a discharge port in said tapered end, a slide rod slidably mounted in said body and having a tapered inner extremity constituting a closure for said discharge port, means for resiliently retaining the tapered extremity of said slide rod in engagement with said discharge opening, a piston reciprocably mounted in said cylinder, and means for locking said slide rod against sliding movement with relation to said piston.

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1,231,443. SEAMLESS TUBULAR FABRIC AND PROCESS OF MAKING SAME. WILLIAM E. SMITH, Milltown, N. J., assignor to Kilbourn Manufacturing Corporation, New Brunswick, N. J., a Corporation of New Jersey. Filed July 6, 1916. Serial No. 107,736. (Cl. 66—4.)

1. The herein described process of knitting a tubular fabric, which consists in feeding a continuous main knitting thread circularly and knitting therewith a plurality

of single contiguous courses, introducing an extra thread not continuous with the thread forming any circular course, and knitting therewith a partial course of stitches during the formation of a circular course with the main thread, upon a plurality of consecutive stitches thereof less than the whole number of stitches in said circular course, and simultaneously with the formation of other stitches of said circular course with the main knitting thread, and then knitting a circular course of stitches with the main knitting thread upon the stitches of said partial course, and the stitches of the preceding circular course between the ends of the said partial course.



2. The herein described process of knitting a seamless tubular fabric which consists in forming a plurality of contiguous circular courses of plain knit stitches with a single continuous main knitting thread, and knitting a partial course of plain knit stitches with an extra thread between portions of two contiguous circular courses, and knitting end portions of the extra thread at each end of said partial course together with the main knitting thread into stitches of a contiguous circular course.

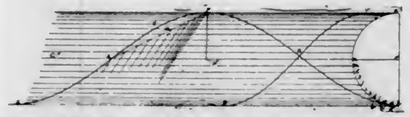
3. The herein described process of knitting a seamless tubular fabric which consists in feeding a main knitting thread circularly and forming therewith a plurality of circular contiguous courses of plain knit stitches, feeding an extra thread, and forming a partial course of stitches upon a group of successive stitches of a circular course less than the whole number simultaneously with the formation of an equal number of stitches of the said circular course and floating the extra thread across the circular course from one end to the other of the partial course during the formation of other stitches of the circular course, again feeding the main thread circularly and forming another circular course of stitches therefrom upon the stitches of the partial course, and the stitches of the preceding circular course between the ends of the partial course, and knitting the end portions of the extra thread at each end of the partial course into certain stitches of said second mentioned circular course adjacent to the ends of the said partial course.

4. The herein described process of knitting a seamless tubular fabric on an endless series of instruments which comprises feeding a main knitting thread in an endless course to all of the series of instruments and forming a plain knit stitch therefrom with each of said instruments, and feeding an extra thread to a group of said successive instruments less than the entire number in said series, and again actuating the instruments of said group during the formation of the said endless course to form an extra partial course of stitches and feeding said extra thread to instrumentalities of the endless series at each end of said group without forming stitches thereon, and then feeding the main thread to all of the instrumentalities of the series and forming a stitch therefrom with each of said instruments, whereby the ends of the extra thread forming such partial course will be knit into stitches of the adjacent circular course with the main knitting thread thereof.

5. The herein described process of knitting a seamless tubular stocking, which consists in knitting the leg portion by circular knitting with a main knitting thread, forming the heel pocket, knitting the foot portion by circular knitting with a main knitting thread to form circular courses of stitches, and forming a plurality of partial courses from an extra thread to make the sole portion of the foot substantially a size longer than the corresponding top portion to fashion the stocking to the foot, and forming the toe pocket.

[Claims 6 to 15 not printed in the Gazette.]

1,231,444. WING OR PROPELLER FOR AERIAL DYNAMICS AND OTHER PURPOSES. RUTER WILLIAM SPRINGER, Springfield, Ill. Filed Aug. 8, 1907. Serial No. 387,635. Renewed Mar. 29, 1915. Serial No. 17,961. (Cl. 244—31.)



1. A wing for aerial dynamics and other purposes, comprising a body whose fore-and-aft is formed to correspond to a sinusoid curve, the point of greatest curvature being at the front edge of said body and the point of zero curvature being at the rear edge, thus comprising one-fourth phase of the said curve.

2. A wing for use in aerial dynamics the acting surface of which is so developed that its lines in the direction of its intended motion of progression are sinusoid curves, the linear elements of which curves are proportional to the velocity at which the wing is intended to progress being longer for rapid and shorter for slow flight.

3. A wing for use in aerial dynamics comprising a body with a surface that acts on the air through which the wing progresses, such surface having fore-and-aft dimensions formed to correspond with substantially one-fourth phases of true sinusoid curves.

4. A wing for aeroplanes, the acting surface of which is developed so that its lines in the direction of its intended motion of progression are sinusoid curves, the linear elements of which curves are approximate functions of the velocity of progression which the said wing is intended to maintain and are each approximately equal to one-fourth phase of the said sinusoid curves.

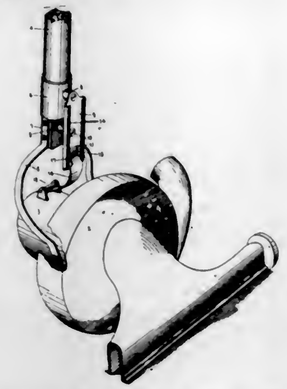
1,231,445. HANDLE DEVICE FOR VACUUM-CLEANERS. ALFRED J. STECKER, Detroit, Mich., assignor to Fred Wardell, Detroit, Mich. Filed Aug. 26, 1916. Serial No. 117,001. (Cl. 15—60.)

1. The combination with a portable appliance, of a handle pivoted thereupon, a link connecting said appliance and handle having a pivotal engagement with one of said members and sliding engagement with the other, and a common means for yieldably retaining said link against motion in a plurality of positions of the handle relative to the appliance.

2. The combination with a portable appliance, of a handle pivoted thereupon, a link connecting said appliance and handle having pivotal engagement with one of said members and sliding engagement with the other, a channeled guide carried by the latter named member engaged with said link, the bottom of said guide being apertured, and a spring mounted exteriorly to said guide having a portion projecting through the aperture thereof and engageable with the link to yieldably hold the same against motion in a certain relative position of the handle and appliance.

3. The combination with a portable appliance, of a handle pivoted therenpon, a channeled guide carried by the handle having its sides formed with inwardly projecting flanges, a pin having its extremities engaged beneath said flanges, said pin being slidable longitudinally of said guide, a link carrying said pin at one extremity and pivoted upon said appliance at its other extremity and means associated with one extremity of said guide for yieldably retaining the pin carrying end of the link at said extremity when the handle occupies a certain pivotal position relative to the appliance.



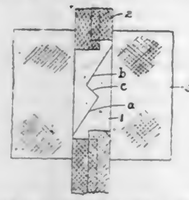


4. The combination with a portable appliance, of a handle pivoted thereupon, a link connecting said appliance and handle having one of its extremities pivotally engaged with one of said members and slidably engaged with the other member, a guide carried by the latter member engaging the sliding end of said link and a latch member carried by said guide engageable with the sliding end of the link in a plurality of positions of the handle and establishing the handle in a rigid relation with the appliance in said positions, said latch member being yieldable under the application of sufficient force to the handle.

5. The combination with a portable appliance, of a handle pivoted thereupon, a link having one of its extremities pivotally engaged with said appliance, a guide member carried by the handle and guiding the other extremity of the link in a sliding motion when the handle is angularly displaced, the relative positions of the guide member and link extremity engaged thereby being substantially the same when the handle occupies either a definite raised or definite lowered position, and means carried by the guide engaging the sliding end of the link in said positions of the handle and yieldably resisting displacement of the sliding link extremity in said guide.

[Claims 6 and 7 not printed in the Gazette.]

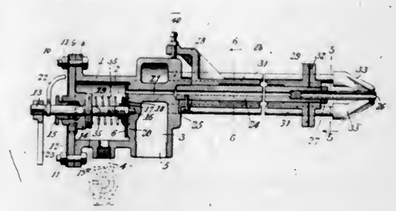
1,231,446. TIRE-BEAD. WILLIAM C. STEVENS, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Mar. 5, 1915. Serial No. 12,310. (Cl. 152—13.)




1. A tire bead for use in the edges of pneumatic tire casings comprising a strip of bead material having overlapping ends, one end of said bead being provided with a single projection and recess adapted to mate with a single projection and recess on the other end of said bead, the mating projections and recesses being adapted to bring said bead to a predetermined circumference, and means to prevent lateral separation of the bead ends.

2. A tire bead for use in the edges of pneumatic tire casings comprising a strip of bead material having overlapping ends, each end being cut on two diagonal planes and a cut transverse to said planes, the two ends being adapted to mate, whereby the bead, upon being circled, will be brought to a predetermined circumference, and a wrapping about said ends to prevent lateral separation thereof.

1,231,447. LIQUID OR GASEOUS FUEL BURNER. EDWIN FERGERSON STEWART, Woodcliff, N. J., assignor of one-half to The Barrett Company, a Corporation of New York. Filed Oct. 12, 1916. Serial No. 125,256. (Cl. 158—75.)



1. A liquid or gaseous fuel burner, comprising a casing with two compartments, one adapted to contain fuel and the other steam or air, a fuel tube mounted in said casing and having communication through a duct with the fuel chamber, a rotatable perforated disk for controlling the fuel fed through said duct, tubes communicating with the steam or air compartment, nozzles upon the tubes, and means for actuating the tubes to cause the nozzles to assume tangential positions relative to the exit end of the fuel tube.

2. A liquid or gaseous fuel burner comprising a casing with two compartments, one adapted to contain fuel and the other steam or air, a fuel tube mounted in said casing and having communication through a duct with the fuel chamber, a rotatable perforated disk for controlling the fuel fed through said duct, tubes communicating with the steam or air compartment, nozzles upon the tubes, and an adjustable sleeve adapted to engage the tubes to be positioned in different tangential positions relative to the exit end of the fuel pipe.

3. A liquid or gaseous fuel burner comprising a casing with two compartments, one adapted to contain fuel and the other steam or air, a fuel tube mounted in said casing and having communication through a duct with the fuel chamber, a rotatable perforated disk for controlling the fuel fed through said duct, tubes communicating with the steam compartment, nozzles upon the tubes, a sleeve journaled upon said pipe and provided with a flanged portion with slots therein through which said tubes pass, angled nozzles upon the tubes, said tubes being actuated by a rotary movement of the sleeve to cause the exit ends of the nozzles to be held in different positions tangential to the exit end of the oil tube.

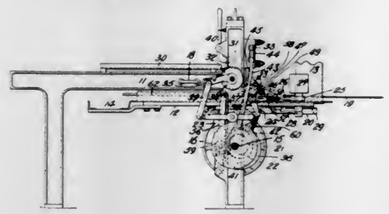
4. A liquid or gaseous fuel burner comprising a casing with two compartments, one adapted to contain fuel and the other steam or air, a fuel tube mounted in said casing and having communication through a duct with the fuel chamber, a rotatable perforated disk for controlling the fuel fed through said duct, tubes communicating with the steam compartment, a sleeve journaled upon said pipe and provided with a flanged portion with slots therein through which said tubes pass, angled nozzles upon the tubes, said tubes being actuated by a rotary movement of the sleeve to cause the exit ends of the nozzles to be held in different positions tangential to the exit end of the oil or fuel tube, and means for holding the sleeve in different adjusted positions.

5. A liquid or gaseous fuel burner comprising a casing with two compartments, one adapted to contain fuel and the other steam or air, a fuel tube mounted in said casing and having communication through a duct with the fuel chamber, a sleeve journaled upon said pipe and having a flange with a threaded aperture therein, a set screw mounted in said aperture and adapted to engage the casing, said sleeve having an apertured end with oblong slots therein, tubes communicating with the steam or air chamber and passing through said slots in the flange, a disk mounted upon the pipe and provided with oblong slots at right angles to the slots in said flange and through which the tubes pass, nozzles upon the tubes and adapted to be positioned by the adjustment of the sleeve so that their exit ends will be tangential to the exit end of the fuel pipe.

[Claims 6 and 7 not printed in the Gazette.]

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1,231,448. LABEL-AFFIXING MACHINE. THOMAS R. STOCKARD, Montreal, Quebec, Canada, assignor to Imperial Tobacco Company of Canada Limited. Filed Mar. 9, 1915. Serial No. 13,116. (Cl. 216—25.)



1. In a labeling machine, a package feeding plunger, a pasting mechanism arranged in the path of the package, a plunger operating slide, a labeling mechanism and cams carried by the slide arranged to shift the pasting mechanism out of the path of the package when a predetermined area of the package is pasted.

2. In a labeling machine, upper and lower tables, a drive shaft, package feeding and pasting mechanism on the lower table, a labeling mechanism, label feeding mechanism on the upper table, a driving cam therefor on said shaft, a label cutting knife, a link pivotally connected at one end to said lever and bifurcated at its opposite end, and embracing the shaft, a channel formed in said cam having an eccentric portion thereof disposed on the opposite side of the shaft from the eccentric portion of the cam, and a pin on said link engaging in the channel.

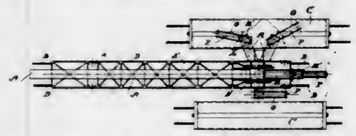
3. In a labeling machine, upper and lower tables, package feeding and pasting mechanism on the lower table, label feeding mechanism on the upper table, and oscillating means arranged to transfer labels from the upper table to the lower table in the path of the packages, including separable label gripping fingers, and means for separating said fingers to embrace the label.

4. In a labeling machine, means for feeding packages, and means for placing labels in the path of said packages including a pair of oscillating arms each having a finger, a slide mounted on each arm having a finger coöperating with the arm finger, a pin on each of said slides, a cam in the path of each pin arranged to alternately separate the fingers to embrace a label and close the fingers to grip said label.

5. In a labeling machine, package feeding, pasting and labeling mechanism, means for positioning labels in the path of said packages including relatively movable fingers arranged in pairs, and a tiltable cam arranged to separate the fingers during movement thereof in one direction and to close the fingers during movement thereof in the reverse direction.

[Claims 6 to 10 not printed in the Gazette.]

1,231,449. CONVEYING AND LOADING APPARATUS. FRANCIS LEE STUART, Baltimore, Md. Filed May 10, 1916. Serial No. 96,627. (Cl. 193—19.)



1. The combination of a car supporting track, a truck supporting track parallel therewith, a main belt conveyer parallel with said truck supporting track, a truck supported by and moving on said truck supporting track and provided with a tripper, a loop formed in the main conveyer belt and supported by the tripper, and loading apparatus supported by the truck comprising a main supporting frame, a receiving conveyer onto which the tripper discharges having a frame mounted to swing about a vertical axis in a horizontal plane and to move endwise in the main frame, and a discharging conveyer belt mounted to turn about a vertical axis and to also move with the receiving conveyer endwise relatively to the main supporting frame.

2. Loading apparatus comprising a main supporting frame, a receiving conveyer belt having a frame mounted to swing in a horizontal plane, to oscillate in a vertical plane, and to move endwise in the main frame, and a discharging conveyer belt mounted to turn with respect to said receiving conveyer frame about a vertical axis and to receive material from the receiving conveyer belt and which is also mounted to move coincidently with said receiving belt frame both vertically and horizontally relatively to the main supporting frame.

3. The combination of a main conveyer belt provided with a tripper, a supporting frame for the tripper which is movable to any desired extent while still maintaining the operative relation of the tripper with the main conveyer belt, a receiving conveyer onto which the tripper discharges, a frame for said conveyer mounted on the main supporting frame to swing about a vertical axis, to oscillate upon a horizontal axis, and which is slidable in the main supporting frame, and a discharging conveyer receiving material from the receiving conveyer and which is connected with the frame thereof to turn independently of said receiving conveyer about a vertical axis and to also move therewith endwise relatively to the main supporting frame, horizontally about a vertical axis and vertically about a horizontal axis.

4. Loading apparatus comprising a supporting frame, a receiving conveyer mounted to swing in a horizontal plane, to oscillate in a vertical plane, and to move endwise in the supporting frame, and a discharging conveyer which is supported by the outer end of said receiving conveyer and is mounted thereon to swing with respect to the receiving conveyer about a vertical axis and to also move coincidently with said receiving conveyer when the latter is adjusted either horizontally, vertically or endwise.

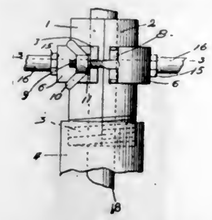
5. The combination of parallel car supporting tracks, an intermediate track parallel with the car supporting tracks, a truck mounted on said intermediate track, a main conveyer belt connected with said truck and provided with a tripper, a conveyer receiving material from the tripper and mounted to swing in a horizontal plane from one side of the truck to the other to deliver to cars on either track and mounted also to move endwise in its frame, and a discharging conveyer supported by the outer end of said receiving conveyer and mounted thereon to swing about a vertical axis.

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1,231,450. THREAD-PROTECTOR FOR WELL-CASINGS. GILBERT SUTTON, Neodesha, Kans. Filed Jan. 9, 1917. Serial No. 141,403. (Cl. 137—91.)

A thread protecting device for well casings comprising a split sleeve having two sections, a clamp member supporting each section, said clamp members being hinged at one side and having removable tightening connections

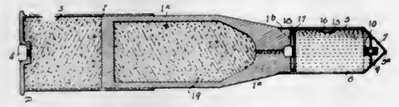




at the opposite side, and removable bolts connecting the clamp members and the split sleeve sections, said bolts also constituting handles.

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1,231,451. PROJECTILE. ALOIS P. SWOBODA, New York, N. Y. Filed May 2, 1916. Serial No. 94,955. (Cl. 102—29.)



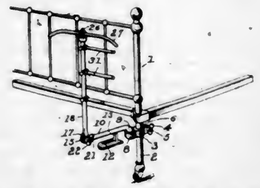
1. A projectile including a body having a contracted nose at one end thereof, a chamber having a smaller diameter than the body and fitted upon the contracted nose thereof, the chamber and body being co-axial so that the walls of the chamber will not contact with the bore of the gun, a quantity of inflammable material packed within the chamber and adapted to be scattered when the chamber is broken by the impact of the projectile with an object, and means for igniting the inflammable material as it is scattered.

2. A projectile including a body having a contracted nose at one end thereof, a chamber having a smaller diameter than the body and formed with an open end which is telescoped upon the contracted nose of the body, the chamber and base being co-axial so that the walls of the chamber will not contact with the bore of the gun, an internal flange within the chamber adjacent to the open end thereof, a packing ring interposed between the internal flange and the body to insure a tight joint, a quantity of inflammable material housed within the chamber and adapted to be scattered when the chamber is shattered by impact of the projectile with an object, and means for igniting the inflammable material as it is scattered.

3. A projectile including a body, a chamber fitted upon one end of the body and having a smaller diameter than the same, the chamber and body being co-axial so that the walls of the chamber will not contact with the bore of the gun, a quantity of inflammable liquid housed within the chamber and adapted to be scattered when the chamber is shattered by impact of the projectile with an object, a partition providing an expansion pocket within the chamber, valved means for permitting portions of the inflammable liquid to enter and leave the expansion pocket as the inflammable liquid expands and contracts due to changes in temperature, and means for igniting the inflammable material as it is scattered.

4. A projectile including body, a chamber fitted upon the body and containing an inflammable substance adapted to be scattered when the chamber breaks, a partition providing an expansion pocket within the chamber, valved means permitting portions of the inflammable substance to enter and leave the expansion pocket as the inflammable substance expands and contracts due to changes in temperature, and means for igniting the inflammable material as it is scattered.

1,231,452. CLOTHES-HANGER. ORA M. SWORD, St. Maries, Idaho. Filed Jan. 8, 1915. Serial No. 1,198. (Cl. 45—13.)

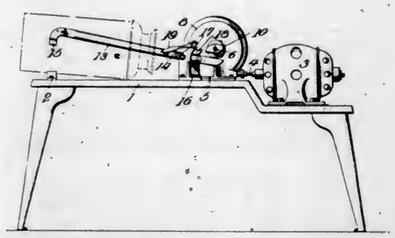


1. A clothes hanger and attachment for bedsteads comprising a pair of spaced clamping collars, one of said collars arranged on said bedstead, a rod having one end angled, said angled end rotatably seated within the outer of said collars and arranged at right angles to said bedstead, a standard rotatably and adjustably connected to the outer end of said rod, means for holding the standard in a vertical or horizontal position, and a plurality of garment supporting arms arranged on the standard.

2. A clothes hanger attachment for bedsteads comprising a pair of collar clamps, one of said collars secured to the post of a bed, a rod having one end angled, said angled end rotatably seated within the outer of said collars, the outer end of said rod being bifurcated, the inner face of one of the arms of the bifurcated portion of the rods serrated, a standard having one end reduced having one side face serrated and fitted between the arms formed by the bifurcation of said rod, means extending through the arms of the rod and through the ends of the standards for holding the same in various adjusted positions, said means also holding the standard in vertical or horizontal position with relation to the rods, and a plurality of adjustable garment supporting members arranged on the standard.

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1,231,453. CAN-STRAIGHTENING MACHINE. HARRY T. TAIT, Springfield, Mass., assignor to Manning Manufacturing Company, Rutland, Vt., a Corporation of Vermont. Filed Aug. 10, 1915. Serial No. 44,839. (Cl. 153—39.)



4. In a can straightening machine, the combination with an anvil provided with a concaved face for supporting the can, of a pivoted helve, a hammer carried by said helve having a convexed face adapted to engage the inner face of said can over said anvil, a spring arranged under the free end of said helve, means for forcing said helve downwardly so as to compress said spring, and a cam arranged in the path of said helve for holding said helve in raised position.

10. A can straightening machine comprising a table having an anvil mounted thereon, provided with a concaved face for supporting a can, a supporting bracket arranged upon said table and spaced from said anvil, a helve provided with trunnions pivotally mounted in said bracket provided with a rearwardly projecting portion at one end, a spring arranged under the rearwardly projecting end of said helve, a hammer carried by the opposite end of said helve having a convexed face adapted to

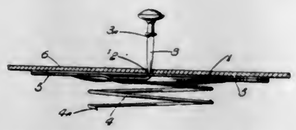
engage the inner face of the can over said anvil, a revoluble tappet arranged above the rearwardly projecting end of said helve and adapted to contact intermittently therewith for raising the hammer end of said helve, said bracket having an extension, a cross shaft mounted in said extension, a cam arranged upon said shaft, and a lever fixed to the shaft for adjusting the position of said cam extension to said helve for holding said helve in inoperative position.

11. In a can straightening machine, the combination with a support having an anvil provided with a concaved face for supporting the can, of a supporting bracket mounted upon said support, a helve pivotally mounted on said bracket having a rearwardly projecting portion at one end, a hammer carried by the opposite end of said helve having a convexed face adapted to engage the inner face of the can over said anvil, a revolnble cam arranged above and adapted to coöperate with the rearwardly projecting end of said helve, means for holding said helve out of the path of travel of said cam and a spring arranged under the projecting end of said helve.

[Claims 1 to 3 and 5 to 9 not printed in the Gazette.]

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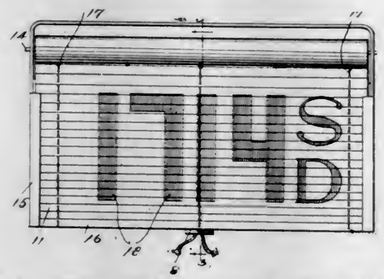
1,231,454. HAT-FASTENER. ALEXANDER TAYLOR, Dunedin, New Zealand. Filed Mar. 31, 1916. Serial No. 88,051. (Cl. 132—25.)



In a hat-fastener, the combination of a spiral member to engage the hair of the wearer, having a portion of its upper convolution bent upward in a direction perpendicular to the plane of said convolution to form a post, said post having a head thereon for rotating said spiral member; and a flat casing comprising flexible upper and lower members arranged directly against each other and directly connected together; said casing members being adapted to completely inclose between them the said spiral member when the latter is withdrawn from the hair, and the lower casing member being formed with an aperture to enable the spiral member to pass therethrough when rotated.

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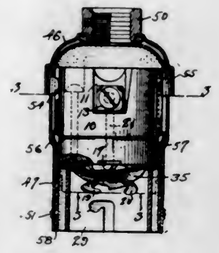
1,231,455. EXHIBITOR. JOSEPH JAMES THOLE, Langford, S. D. Filed Aug. 4, 1915. Serial No. 43,623. (Cl. 40—85.)



1. An exhibitor including a support, a roller journaled on the support, a curtain connected to the roller, the curtain comprising parallel strips having ears and flexible connectors threaded through the ears, curtain guides on the support, and a securing member for holding the curtain in a drawn position.

2. An exhibitor including a support, a roller journaled on the support, and a curtain connected to the roller, the curtain comprising parallel strips having depressions provided with apertured protuberances said protuberances receiving connecting elements.

1,231,456. ELECTRIC-LAMP SOCKET. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Jan. 20, 1916. Serial No. 73,203. (Cl. 173—328.)



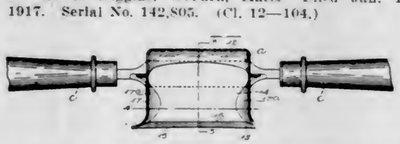
1. An electric lamp socket having a pair of superposed helicoidal lamp-engaging terminals and insulating means interposed between the spires of said terminals to insure their insulation from each other.

5. An electric lamp socket having a pair of superposed helicoidal lamp-engaging terminals and insulating means interposed between the spires of said terminals to insure their insulation from each other, said means comprising a split disk through which the lamp-engaging ends of the terminals pass, a lamp supporting shell surrounding said terminals and lugs on the insulating disk engaging said shell to hold the disk in adjusted position.

[Claims 2 to 4, 6, and 7 not printed in the Gazette.]

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1,231,457. TREEING-IRON. WILLIAM I. THOMPSON, Stoneham, Mass., assignor of one-fourth to Anthony M. Lux, one-fourth to Walter J. Lux, and one-fourth to Patrick J. Higgins, Woburn, Mass. Filed Jan. 17, 1917. Serial No. 142,805. (Cl. 12—104.)



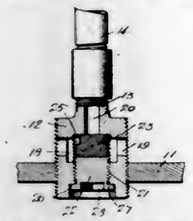
1. A treeing iron approximately wedge-shaped in cross section and having a relatively wide elongated base, an elongated acute angled apex, concave side faces which converge toward said apex and are adapted to act on convex portions of a shoe upper, and narrow elongated longitudinal faces joining said concave side faces and meeting each other at an acute angle to form said acute angled apex, which is adapted to act on a narrow shoulder on a shoe upper.

2. A treeing iron approximately wedge-shaped in cross section and having a relatively wide elongated base, an elongated acute angled apex, concave side faces which converge toward said apex and are adapted to act on convex portions of a shoe upper, narrow elongated longitudinal faces joining said concave side faces and meeting each other at an acute angle to form said acute angled apex, which is adapted to act on a narrow shoulder on a shoe upper, and end faces which are curved inwardly from points near said apex to form horns adapted to act on limited areas of the upper, the end portions of said narrow elongated longitudinal faces forming the sides of said horns.

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1,231,458. LOW-WATER ALARM. HERMAN B. THURSTON, Crafton, Pa. Filed Aug. 30, 1916. Serial No. 117,779. (Cl. 236—16.)

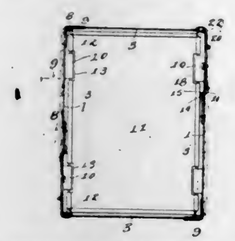
In a device of the character described, a casing having a chamber and lateral openings through its wall communicating with said chamber, said casing also having an axial opening and an axial bore at opposite sides of its chamber and an outer valve seat at the outer end of its said bore, and provided with a counter bore around the inner end of the axial opening forming an inner valve seat at one side of the chamber, and a plug having a solid body externally threaded for engagement in the said bore of the casing



and provided with an enlarged head at one end for engagement against the said outer valve seat, said plug having its inner end recessed within the chamber, and a fusible filling anchored within the recess of the plug and extending beyond the same for engagement against the said inner valve seat.

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1,231,459. COLLAPSIBLE CRATE. BAKER M. TOMBERLIN, Santa Rosa, Cal. Filed Mar. 12, 1913. Serial No. 753,748. (Cl. 220—17.)



1. The combination with a container having side, end, top and bottom walls hinged together, the top wall being free to swing upon its hinge, of a plate slidingly engaging one of the side walls and having a hook at its upper end adapted to engage the top wall and having a hook at its lower end, and a spring hook fixed to the side wall adjacent to and adapted to interlock with the hook of the lower end of the sliding plate.

2. The combination with a container having side, end, top and bottom walls hinged together, the top wall being free to swing upon its hinge, of a plate slidingly engaging one of the side walls and having a hook at its upper end and adapted to engage the top wall, and having a hook at its lower end, the side wall being formed with an aperture in which the last named hook is adapted to extend, and a spring hook fixed to the inside of said side wall and disposed to extend into the aperture for interlocking with the hook at the lower end of the sliding plate.

3. The combination with a container having side, end, top and bottom walls hinged together, the top wall being free to swing upon its hinge, of a plate slidingly engaging one of the side walls, the side wall thus engaged being formed with a vertical slot, a retaining plate fixed to the sliding plate and extending through the slot and lapping the inner face of the side wall, said sliding plate having hooks at its ends, one adapted to engage and lock the top wall from swinging, and a spring hook carried by the sliding plate and disposed to engage the other hook of the sliding plate.

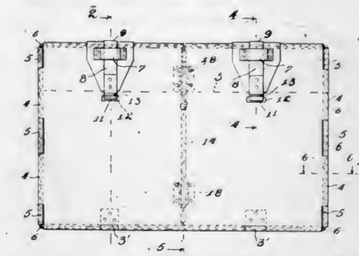
4. In a folding crate, the combination of a collapsible structure having side plates, hinged top and bottom plates, the top plate being hinged at the opposite side of the structure from the bottom plate, and locking means carried by each of the side plates proportioned for engaging and locking the top and bottom plates in position with the structure unfolded, the top and bottom plates being dimensioned and located for swinging on their hinged connections to a folded position contiguous to the respective locking elements, the said locking elements being adapted to engage and lock the top and bottom plates in their folded positions.

5. In a folding crate, the combination with a collapsible structure comprising side and end plates hinged together, a top plate hinged to the upper edge of one of the side plates, a bottom plate hinged to the lower edge of the other side plate, each of the top and bottom plates being hinged to swing from a horizontal to a vertical position, and locking means fixed to the last mentioned side plate adjacent its upper edge and similar locking means fixed to the other side plate adjacent its lower edge, each of the top and bottom plates being proportioned for extending, when in their vertical positions, to the locking means of the respective side plate to which the top or bottom plate is hinged, and the locking means being adapted to lock the last mentioned plates in both their vertical and horizontal positions.

[Claims 6 to 12 not printed in the Gazette.]

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1,231,460. COLLAPSIBLE CRATE AND LOCK. BAKER M. TOMBERLIN, Santa Rosa, Cal. Filed Jan. 22, 1914. Serial No. 813,717. (Cl. 220—17.)



1. In a folding crate, the combination of a collapsible container comprising side and end plates hinged together, a top plate hinged to the upper edge of one side plate, a bottom plate hinged to the lower edge of the other side plate, a bolt rigid throughout its length and slidingly carried by the upper portion of one of the side plates and having a hook at each end, the upper or outer hook being adapted to engage and lock the top plate in its extended position and the lower or bottom hook being adapted to engage and lock the bottom plate in its folded position, and a similar lock engaging the other side plate at its lower portion and having similar hooks for engaging respectively the bottom plate in its extended position and the top plate in its folded position.

2. In a folding crate, the combination of a collapsible container having hinged side and end plates, a top plate hinged to the upper edge of the rear side plate, a bottom plate hinged to the lower edge of the front side plate, the hinges of the top and bottom plates being adapted to enable said plates to swing from an unfolded horizontal position to a folded vertical position, a bolt substantially rigid throughout its length slidingly engaging the upper portion of the front side plate and having a catch at each end, one catch being adapted to engage the front edge portion of the top plate when in its unfolded position and the other catch being adapted to engage the free edge portion of the bottom plate when in its folded position, and a similarly constructed locking bolt having similar locking means disposed at the lower portion of the rear side plate and adapted to engage respectively the bottom and top plates in their unfolded and folded positions.

3. In a folding crate, the combination of a collapsible container, comprising the side and end plates hinged together, a top plate hinged to the upper edge of one side

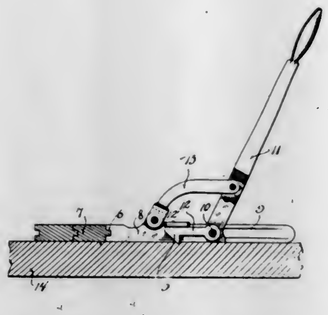
plate, a bottom plate hinged to the lower edge of the other side plate, a bolt rigid throughout its length and slidingly carried by the upper portion of one of the side plates and having a hook at each end, the upper or outer hook being adapted to engage and lock the top plate in its extended position, and the lower or inner hook being adapted to engage and lock the bottom plate in its folded position, the said outer hook, when the parts are in the last named position, being adapted to clasp the upper portions of the folded parts, and a similar bolt similarly carried by the other side plate at its lower portion and having similar hooks for engaging respectively the bottom plate in its extended position and a top plate in its folded position and for clasping the lower portions of the folded parts.

4. In a folding crate, the combination with a collapsible structure, of a substantially rigid slide having a catch at each end adapted to engage and lock various parts in their folded and unfolded positions, the slide being of spring material and adapted to be sprung to and from certain of its locking positions.

5. In a folded crate, the combination with a collapsible container having side and end plates hinged together, top and bottom plates hinged to the side plates, the bottom plate being adapted to swing from a horizontal unfolded to a vertical folded position, means for locking the bottom plate in its unfolded position, a substantially rigid sliding bolt having means adapted to engage and lock the top plate in its unfolded position and also having means adapted to be sprung past portions of the bottom plate for locking the same in its folded position.

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1,231,461. FLOOR-JACK. JOHN J. TOMCHECK, Two Rivers, Wis. Filed Nov. 20, 1916. Serial No. 132,324. (Cl. 254—16.)



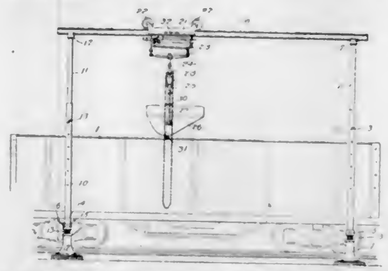
1. A floor jack comprising a board engaging shoe, a lever, a spur carrying bar pivoted to the lower end of the lever for vertical movement, a foot rest on the bar, and a link connected with the shoe and the intermediate portion of the lever.

2. A floor jack comprising a bar, a shoe at one end of the bar, a lever having its lower end slidingly connected with the other end of the bar, a spur carrying bar pivoted to said lower end of the lever, and a link connected with the intermediate portion of the lever and the first bar.

3. A floor jack comprising a bar provided with a longitudinal slot in one end, a shoe at the other end of the bar, a lever, a spur carrying bar, a bolt passing through the lower end of the lever and through the tooth carrying bar and slidable in the slot of the first bar and a link connected with the intermediate portion of the lever and the first bar.

4. A floor jack comprising a lever, an anchor fulcrum therefor pivotally connected therewith, a bar slidably connected with the lever at its pivot, a shoe carried by said bar, and a link connecting the shoe carrying bar and the intermediate portion of the lever.

1,231,462. COAL-UNLOADING DEVICE. JAMES H. TUTWILER, Atlanta, Ga. Filed Jan. 26, 1917. Serial No. 144,669. (Cl. 212—2.)

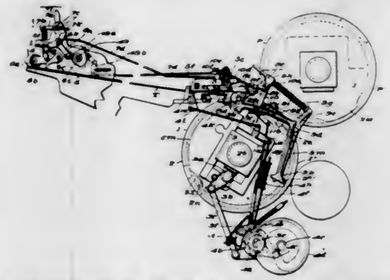


1. A device of the character specified, comprising substantially right triangular end frames, each having at one acute angle a socket and having on the opposite side a clamp for engaging the side of a car and adjustable longitudinally of the said side, an adjustable standard engaging the socket at its upper end and adapted to rest upon the ground at its lower end, said standard comprising inner and outer sections adjustable longitudinally of each other and having means for holding them in adjusted position, and a jack base for raising and lowering the inner and outer sections, a rail for connecting the top sides of the frames, said rail having pairs of lugs at its ends for engaging the opposite sides of the end frames, a carriage movable on the rail, a scale supported by the carriage, and a bucket having a block and tackle connection with the scale.

2. An apparatus substantially as herein described, comprising uprights having means whereby they may be vertically adjusted and cross frames corresponding to said uprights and having at their outer upper ends means for interlocking engagement with the upper ends of the uprights, said cross frames also having top bars constituting rails and upright bars having means for engagement with the side of a car and adapted for detachable engagement therewith, a beam traveling on the top bars or rails of said cross frames, a carriage traveling on the beam, and a bucket suspended from the carriage, all as and for the purpose set forth.

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1,231,463. SHEET-PRINTING PRESS. BURT F. UPHAM, Boston, Mass., assignor to United Printing Machinery Company, Boston, Mass., a Corporation of Maine. Filed Nov. 20, 1915. Serial No. 62,616. Renewed Nov. 15, 1916. Serial No. 131,571. (Cl. 101—36.)



1. In sheet printing mechanism, the combination of an impression cylinder, and a printing member co-acting therewith, said cylinder being provided with sheet grippers, gages for arresting sheets in position to be delivered to the cylinder grippers; means for throwing on and off impression, and means for rendering the cylinder grippers



ineffective at the taking point; with devices adapted to detect misplaced or defective sheets, and means whereby, when a defective or misplaced sheet is fed, the throw off devices are permitted to operate, the sheet gages are left down, and the means for rendering the cylinder grippers ineffective operate.

2. In sheet printing mechanism, the combination of an impression cylinder, and a printing member co-acting therewith, said cylinder being provided with sheet grippers; gages for arresting sheets in position to be taken by the cylinder grippers; means for throwing on and off impression, and means for rendering the cylinder grippers inoperative at the taking and delivery points; with devices adapted to detect misplaced or defective sheets, and means controlled by said detecting devices whereby when a defective or misplaced sheet is fed down the throw off devices are permitted to operate, the sheet gages are left down, and the means for rendering the cylinder grippers ineffective operate.

3. In sheet printing mechanism, the combination of an impression cylinder and a printing member co-acting therewith, said cylinder being provided with grippers, sheet gages for arresting sheets in position to be taken by the cylinder grippers, means for throwing on and off impression, and means for rendering the cylinder grippers ineffective at the taking point; with devices adapted to detect a misplaced or defective sheet fed to the cylinder, and connections whereby, if a defective or misplaced sheet is fed to the taking point, the sheet feeding devices are held in ineffective position the sheet gages are left down to prevent the advance of the sheet; the impression is thrown off and the cylinder grippers rendered ineffective.

4. In sheet printing mechanism, the combination of an impression cylinder and a printing member co-acting therewith, said cylinder being provided with grippers, sheet gages for arresting sheets in position to be taken by the cylinder grippers, means for throwing on and off impression, and means for rendering the cylinder grippers ineffective; with devices adapted to detect a misplaced or defective sheet fed to the cylinder, and connections whereby, if a defective or misplaced sheet is fed to the taking point, the sheet feeding devices are held in ineffective position, the sheet gages are left down to prevent the advance of the sheets, the impression is thrown off, and the cylinder grippers rendered ineffective.

5. In sheet printing mechanism, the combination of an impression cylinder and a printing member co-acting therewith, said cylinder being provided with grippers; sheet gages for arresting sheets in position to be taken by the cylinder grippers, automatic means for feeding the sheets to the cylinders, means for throwing the cylinder on and off impression, and means for rendering the cylinder grippers ineffective, with devices adapted to detect a misplaced or defective sheet fed to the cylinder; means controlled by said detector devices, and connections between said detector controlled means the sheet feeding devices the throw off devices, the gripper controlling devices and the gage operating devices, whereby, if a defective or misplaced sheet is fed to the taking point, the sheet feeding devices are held in ineffective position; the gages are left down to prevent the advance of the sheet; the cylinder is thrown off impression and the cylinder grippers rendered ineffective.

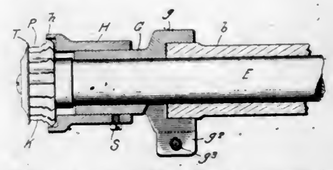
[Claims 6 to 40 not printed in the Gazette.]

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1,231,464. EDGE-TRIMMER. AMBROSE F. WERTMAN, Hummelstown, Pa. Filed Nov. 24, 1916. Serial No. 133,136. (Cl. 12—88.)

1. In an edge trimming device, a revoluble shaft, a cutter carried by the shaft at one end thereof, a stationary bearing for said shaft, having an extension, a sleeve secured to said extension for preventing the vibration of the shaft in a direction at right angles to its axis, and a stationary guard or shield secured to said sleeve and having a portion extending over one edge of said cutter.

2. In an edge trimming device, a revoluble shaft, a cutter carried by the shaft at one end thereof, a stationary bearing for said shaft, having an extension, a sleeve secured to said extension for preventing the vibration of the shaft in a direction at right angles to its axis, a stationary guard or shield secured to said sleeve and having a portion extending over one edge of said cutter, and means for adjusting the position of said guard on said sleeve relatively to said cutter, and for securing it in its adjusted position.

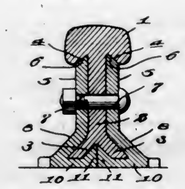


3. In an edge trimming device, a support, bearings carried thereby, a shaft rotatably disposed in said bearings, one of said bearings having an extension, a cutter carried by said shaft at one end thereof, means secured to said extension and arranged to engage said shaft for preventing the vibration thereof in a direction at right angles to its axis, and a shield or guard rigidly secured to said means and arranged to extend over a portion of the cutter.

4. In an edge trimming device, a base or support, bearings carried by said base, one of said bearings being extended, a rotatable shaft disposed in said bearings, a cutter carried at one end of said shaft, a sleeve arranged to fit over said shaft and having an enlarged portion arranged to engage and to be secured to said bearing extension, and a second sleeve fitting over said first named sleeve and adjustably secured thereto, said second sleeve having a flange arranged to extend over a portion of the cutter and to constitute a guard therefor.

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1,231,465. RAILWAY-RAIL. OLIVER P. WILLIAMS, Youngstown, Fla., assignor of one-third to Arthur C. Williams, Murdock, Fla. Filed Feb. 20, 1917. Serial No. 149,849. (Cl. 239—16.)



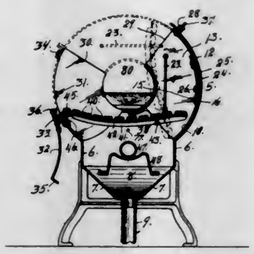
In a compound rail, a tread including a head and a web centrally depending from the head, said web upon its lower edge having outwardly extending angularly disposed ribs, the head of the tread upon its underface being grooved longitudinally in a line with the sides of the web, a support for the tread comprising plates adapted to engage with the sides of the web and to have their upper edges received in the underface of the head of the tread, said plates having their lower portions flanged outwardly to engage with the outer surfaces of the ribs upon the web, said plates having their lower edges provided with inturned members that have their inner edges formed with upwardly extending ribs that are adapted to engage with the underfaces of the ribs of the web and to contact with each other, and means comprising transverse members passing through the side members and webs for connecting the said sides to the webs of the rails.

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1,231,466. VAPOR-BATH CABINET. JAMES R. WRIGHT, Denver, Colo. Filed Oct. 19, 1914. Serial No. 867,357. (Cl. 4—13.)

1. A bath cabinet comprising a casing and a platform located therein, a rod fixed at the ends of the casing and

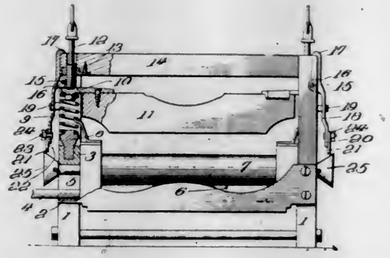
forming a support for the platform near one edge thereof, whereby when the opposite edge of the platform is raised, the edge nearer the rod will move downwardly between the rod and the adjacent wall of the casing, whereby the rod will support the platform in the raised position.



2. A bath cabinet comprising a casing and a platform located therein, a rod fixed at the end of the casing and forming a support for the platform near one edge thereof, whereby, when the opposite edge of the platform is raised, the edge nearer the rod will move downwardly between the rod and the adjacent wall of the casing, whereby the rod will support the platform in the raised position, the casing being provided with a support for the edge of the platform remote from the rod, substantially as described.

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1,231,467. ADJUSTABLE AUTOMATIC PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. REA P. WRIGHT, Washington, D. C., assignor to John Francis Hemenway, New York, N. Y. Filed Oct. 2, 1916. Serial No. 123,381. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, pivoted members for normally holding said pressure means in predetermined position, and conical members carried by the shaft of one of said pressure rolls engaging said pivoted members on the upward movement thereof to release said pressure means.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, movable members for normally holding said pressure means in predetermined position, adjustable trip members carried by said movable members, and members having inclined faces engaging said adjustable members on the separation of said pressure rolls for moving said movable members in position to release said pressure means.

7. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted within said frame having pressure screws for adjusting said pressure means, pivoted latches mounted on the side bars of said frame for holding said top bar in predetermined position within said frame, trip members adjustably carried by said pivoted latches, and conical members carried by the shaft of one of said pressure rolls engaging said trip member on the upward movement thereof for oscillating said trip member to move said trip member out of the path of travel of said top bar.

8. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted member arranged in said frame having means for adjusting said pressure means, pivoted latches mounted on the side bars of said frame coacting with said movable member for holding said movable member in predetermined position within said frame, said latches having depending offset tail portions carrying bolts, slotted trip members adjustably mounted on the bolts of said tail portions, and conical-shaped members mounted on the shaft of one of said pressure rolls engaging said trip members on the separation of said rolls for moving said pivoted latches out of the path of travel of said movable mounted member.

[Claims 2, 3, 5, 6, and 9 to 13 not printed in the Gazette.]

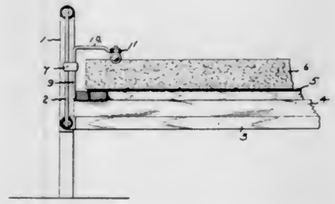
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1,231,468. WATERPROOF CEMENT. CHESTER B. ALLEN, Memphis, Tenn. Filed Feb. 23, 1916. Serial No. 80,060. Renewed Dec. 18, 1916. Serial No. 137,711. (Cl. 87—17.)

A composition for the purpose specified prepared from the following ingredients in substantially the proportions stated, namely, 3¼% by weight of desiccated blood, 3½% by weight of lime, 3½% by weight of commercial caustic alkali, and 80% by weight of water.

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1,231,469. MATTRESS-CLAMP. ROBERT H. ANDERSON, San Diego, Cal. Filed Mar. 17, 1915. Serial No. 15,094. (Cl. 5—22.)



1. A mattress clamp including a clamp arm having a vertical stem; means for frictionally locking said stem; and a pressure bar pivoted to said arm for horizontal movement.

2. A mattress clamp including a socket having a hole therethrough; a clamp arm having a stem engaging said hole; and a pressure bar swiveled on the end of said arm.

3. A mattress clamp including a socket having a hole therethrough; an overhanging clamp arm having a stem engaging said hole; an eyelet in the outer end of said arm; and a pressure bar having a swivel engaging said eyelet.

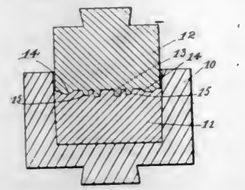
4. A mattress clamp including a socket; an overhanging clamp arm having a stem engaging said socket; an eyelet in the outer end of said arm; a collar having a neck swiveled in said eyelet; and a pressure bar fixed in said collar.

5. A mattress clamp including a socket; an overhanging clamp arm having a stem engaging said socket; an eyelet in the outer end of said arm; a collar having a neck swiveled in said eyelet; a pressure bar extending through said collar; and a set screw threaded in said neck and engaging said bar.

[Claim 6 not printed in the Gazette.]



1,231,470. MASTER-DIE FOR FORGING DIES FOR DROP-HAMMERS, PRESSES, AND THE LIKE. ALBERT F. ARTHUR, Cleveland, Ohio, assignor to The Cleveland Hardware Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 27, 1916. Serial No. 93,836. (Cl. 78—60.)



1. In means for forging dies for drop hammers, presses and the like, a pair of master dies including a matrix adapted to receive a block or body to be forged into a die and a patrix having on its face a die pattern to be reproduced in the body of metal, and means on the patrix between the pattern and the sides of the patrix for preventing lateral movement of the metal away from the pattern.

[Claims 2 to 4 not printed in the Gazette.]

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1,231,471. MANUFACTURE OF ANHYDROUS MAGNESIUM CHLORID. EDGAR ARTHUR ASHCROFT, London, England. Filed Dec. 5, 1916. Serial No. 135,241. (Cl. 23—13.)

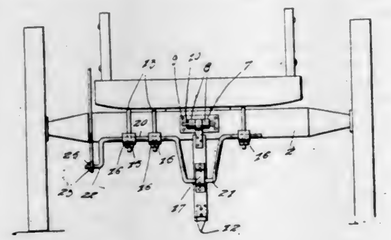
1. The manufacture of anhydrous magnesium chlorid by treating, with chlorin gas, an oxygen-containing magnesium compound in a fused medium, substantially as hereinbefore explained.

3. The manufacture of anhydrous magnesium chlorid by treating, with chlorin gas, an oxygen-containing magnesium compound in a fused medium, and in the presence of a substance which promotes the exothermic nature of the reaction, substantially as hereinbefore explained.

[Claims 2 and 4 not printed in the Gazette.]

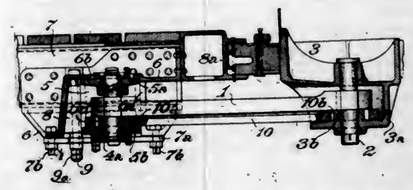
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1,231,472. WAGON-BRAKE. ELLIS H. BAKER, Whitlash, Mont. Filed June 21, 1916. Serial No. 105,011. (Cl. 21—8.)



The combination with the rear axle of a vehicle, of a drag bar having one end pivotally connected to the axle, a U-shaped element secured to the drag bar at a point intermediate the ends thereof, a shaft journaled on the axle and provided with a U-shaped crank portion, the said U-shaped crank portion having the connecting portion for the sides thereof extending through the U-shaped element on the drag bar so as to effect movement of the drag bar when the shaft is operated, and means for operating the shaft.

1,231,473. SAFETY DRAW-BAR. HERMAN F. BALL, Bronxville, N. Y., assignor to Economy Devices Corporation, New York, N. Y., a Corporation of New York. Filed Feb. 27, 1917. Serial No. 151,213. (Cl. 213—42.)

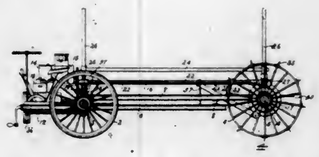


1. In a railroad vehicle draft gear, the combination of a draw bar pin casting adapted to be supported on a railroad vehicle; a draw bar coupling pin fitted in a socket on said casting; a main draw bar coupled to said pin and adapted to be coupled, at its opposite end, to another vehicle; and an auxiliary or safety draw bar coupled to a boss on the draw bar pin casting, surrounding the coupling pin socket, and independently of the coupling pin, and adapted to be coupled, at its opposite end, to another vehicle.

[Claims 2 and 3 not printed in the Gazette.]

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1,231,474. MOTOR-TRUCK. LINTON T. BASSETT, Carthage, Mo. Filed Sept. 28, 1915. Serial No. 52,997. (Cl. 21—90.)



1. A motor truck comprising a pair of front steering wheels, a pair of rear drive wheels, axles by which the said wheels are supported, a running gear between and uniting the said axles and consisting of a frame supported by the front wheels, another frame supported by the rear wheels, and means for uniting these frames, and a frame for the motor and accessories thereto extending forwardly beyond the said running gear.

2. A motor truck comprising a pair of front steering wheels, stub axles supporting the said wheels, a pair of rear drive wheels, an axle by which the rear wheels are supported, a running gear extending between and connecting the wheels and their axles, comprising a V-shaped frame, the diverging end of which is supported by the front wheels, a second V-shaped frame the diverging end of which is supported by the rear wheels, the said frames overlapping each other, and means for uniting the said frames, springs interposed between the stub axles of the front wheels and the running gear, whereby the forward portion of the latter is spring-supported, and a frame for the motor and accessories thereto extending forwardly beyond the said running gear.

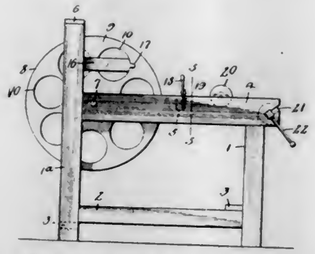
3. A motor truck, comprising a pair of rear drive wheels supported upon a cross axle, a pair of front steering wheels supported by short-turning stub axles, a running gear between and connecting said sets of wheels, a frame for the motor and accessories thereto, extending forwardly beyond the running gear and the front steering wheels, a gear casing supported upon the rear axle, and a longitudinally arranged, substantially horizontal sheath disposed above the said connecting running gear, and supported at its rear end by the said casing at its highest part, and at its forward end by the running gear, and adapted to inclose the shaft from the motor that drives the rear wheels.

4. A motor truck comprising a pair of rear drive wheels supported upon a cross axle, a pair of front steering wheels supported by short-turning stub axles, a running gear between and connecting the said sets of wheels, a frame for the motor and the accessories thereto extending forwardly beyond the running gear and the front steering wheels, a gear casing surrounding and supported upon the rear axle, a longitudinally arranged sheath, supported at its rear end by the said casing above the rear axle and at its forward end by the running gear, adapted to inclose the shaft from the motor that drives the rear wheels, and a brace secured at its forward end to the said sheath and at its rear end to the said casing below the rear axle.

5. A motor truck comprising a pair of rear drive wheels supported upon a cross axle, a pair of front steering wheels supported upon short-turning stub axles, a running gear uniting the said sets of wheels and consisting of a V-shaped frame connected at its diverging end with and supported by the rear axle, a cross bar uniting the diverging portions of the said frame, and another V-shaped frame the diverging portions of which are connected with the bearings in which are supported the vertical spindles of the stub axles for the steering wheels, the said frame extending under the V-shaped frame connected with the rear axle and having its apex united with the said cross bar of the rear diverging frame, and a frame for the motor and accessories thereto extending forwardly entirely beyond the said running gear.

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1,231,475. DISPLAY AND DISPENSING DEVICE. ALICK O. BERGMAN, Milaca, Minn. Filed June 23, 1915. Serial No. 35,856. (Cl. 211—18.)



1. In a device of the class described, a frame, a shaft mounted in the frame, circular side plates journaled upon the shaft, a cylinder connecting the side plates and having a plurality of transverse slots, an annular series of tubes connecting the side plates and being slotted to register with the slots in the cylinder, said side plates having openings leading into the tubes, and a spring arm interposed between teh frame and said side plates, having one end secured to said frame, and the opposite end being offset defining a shoulder for engagement with the walls of said openings for preventing retrograde movement.

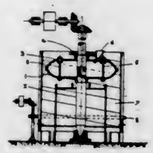
2. In a device of the class described, a frame, a shaft mounted in the frame, a drum journaled upon the shaft and comprising in part apertured side plates and a slotted cylinder, roll receiving members extending between the side plates and registering with the openings, a cam-shaped rod extending across and within the slots of the cylinders for automatically gripping the fabric against one wall of the slot, thereby preventing rewinding of the fabric on the roll.

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1,231,476. PROCESS FOR THE PRODUCTION OF CARBONATE OF LEAD. GIUSEPPE BEVILACQUA, Genoa, Italy. Filed Feb. 16, 1915. Serial No. 8,653. (Cl. 134—68.)

1. A process for the production of carbonate of lead which consists in treating finely divided metallic lead with gaseous acetic acid, carbon dioxid and oxygen, and periodically washing the lead and carbonate formed thereon with water.

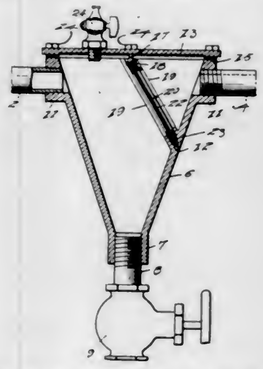
2. A process for the production of carbonate of lead which consists in conducting finely divided metallic lead into a perforated receptacle, acting on said lead by a mixture of gaseous acetic acid, carbon dioxid, and oxygen, forming an emulsion of the carbonate and washing the metallic lead by periodically immersing the lead in water and permitting the same to drain through said receptacle.



3. A process for the production of carbonate of lead which consists in acting on finely divided metallic lead by a mixture of gaseous acetic acid, carbon dioxid, and oxygen, removing the formed carbonate by water, and drying the carbonate by the heat in the gases not used in reacting on the metallic lead.

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1,231,477. PUMP-STRAINER. PEARL M. BIRR and THEODOR LUDAT, Minden, W. Va. Filed Sept. 8, 1916. Serial No. 119,071. (Cl. 103—64.)



2. An inverted conical body having an inlet and an outlet port near its upper end, of flanges formed on the inner face of the body near the outlet port, said flanges inclining downwardly, the body having a recess near its lower end arranged centrally of the flanges, a strainer adapted to slip between the flanges, an extension on the strainer adapted to seat in the recess, the upper edge of the strainer being grooved, a cover for the body, a rib extending transversely of the cover centrally thereof and a bead on the lower edge of the rib for engagement in the groove in the strainer to form a tight joint and prevent sediment from passing around the strainer and into the outlet pipe.

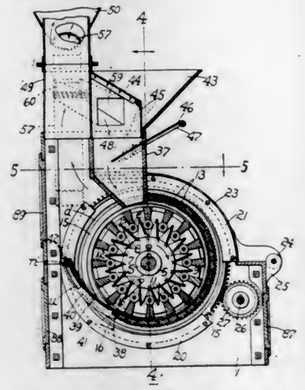
3. A trap including a body having inlet and outlet ports near its upper end, a strainer within the body between the inlet and outlet ports, the upper edge of the strainer being grooved, a cover for the body, and a transverse rib formed on the cover and engaging the walls of the groove to hold the strainer in place and prevent the escape of liquid over the upper edge thereof.

[Claim 1 not printed in the Gazette.]

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1,231,478. GRINDING-MILL. GEORGE H. BLANKMANN, St. Louis, Mo. Filed Aug. 30, 1916. Serial No. 117,670. (Cl. 83—11.)

1. In a mill of the character described, a rotor, radial beaters mounted thereon, grinding bars disposed helically about the cylindrical path of the outer ends of the beaters, and rotatable members provided with spiral grooves or ways traversed by the terminals of the bars for radially adjusting the bars as a unit, toward and from said beaters.



2. In a mill of the character described, a rotatable scroll-ring provided with a spiral groove on one face thereof, grinding bars operating to traverse said groove with a rotation of the ring, and means for preventing rotary displacement of the bars during the rotation of the ring.

3. In a mill of the character described, a pair of scroll-rings spaced apart and rotatable in unison about a common axis, spiral grooves formed on the inner opposed faces of the rings, grinding bars disposed between the rings and terminating in trunnions traversing the grooves upon rotation of the rings, whereby the bars may approach or recede from the axis aforesaid, depending on the direction of rotation of the rings.

4. In a mill of the character described, a pair of scroll gear-rings spaced apart and rotatable in unison about their common axis, spiral grooves formed on the inner opposed faces of the rings, grinding bars disposed between the rings and traversing the grooves thereof, a shaft provided with pinions engaging the teeth of the scroll rings, and means for imparting rotation to said shaft.

5. In a mill of the character described, grinding bars having each a plurality of adjacently disposed ribbed formations provided with curved faces intersected by undercut faces on opposite sides of the bar, the formations being parallel to the longitudinal axis of the bar and those on one side being reverse from those on the opposite side whereby when the bar is turned end for end either the curved face or the cutting edge of the undercut face is available for grinding.

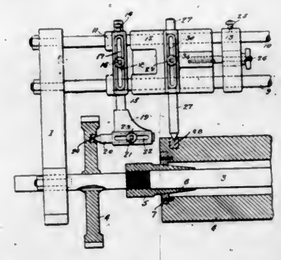
[Claims 6 to 10 not printed in the Gazette.]

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1,231,479. ROLL-LOCATING DEVICE. CASPAR BLUMER, Philadelphia, Pa. Filed Aug. 24, 1916. Serial No. 116,646. (Cl. 101—178.)

2. The combination of a pointer; a print roll; a recessed plug set substantially flush with the curved surface of said roll in a definite position relatively to the pattern thereon; and means for adjusting the roll to bring the recess of the plug into line with the pointer.

4. The combination of a frame; a shaft rotatably mounted therein; a member mounted on the shaft having a definitely placed recess extending parallel with the shaft; a guide member also parallel to the shaft; a slide adjustable on said guide member; a bar adjustably held to said slide and movable toward and from the shaft; with a pointer carried by said bar in position to coöperate with the recess of the shaft-carried member when the latter occupies a predetermined position.

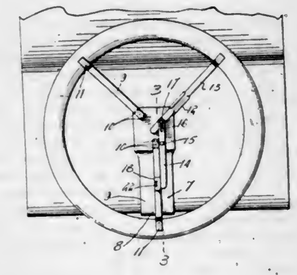


5. The combination of a supporting frame including a guide; two slides movable on said guide; means for clamping one of the slides to the guide; means for adjustably connecting the second slide to the first slide; a pointer carried by the second slide and movable in a line at right angles to that of the guide; a shaft rotatably mounted in the frame; a print roll on the shaft having a recess definitely placed with relation to its pattern; and means for adjusting the roll on the shaft to bring its recess into a position to be entered by the pointer.

[Claims 1 and 3 not printed in the Gazette.]

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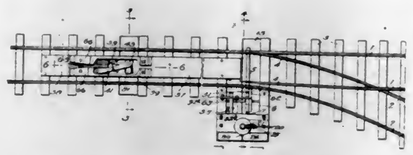
1,231,480. TIRE-HOLDER. KEITH A. BOWER, Shelburne, Nova Scotia, Canada. Filed Apr. 21, 1916. Serial No. 92,784. (Cl. 224—29.)



1. In a tire holder, a base, arms radiating from said base, means at the extremities of said arms for supporting a tire, one of said arms being mounted to move radially from said base and the remainder being fixed, a lever pivoted on the base and having a slot and pin connection with the movable arm for moving said arm outwardly or inwardly, the said lever being adapted at its free end to lie in close proximity to one of said fixed arms when said movable arm is extended, and a lock on said adjacent arm for securing said lever, substantially as described.

2. In a tire holder, a base secured to the under portion of a vehicle body and projecting upwardly and rearwardly therefrom, arms radiating from the upper end of said base, a guide member carried by said base, and disposed at an angle to said arms, a slide arm in said guide, all of said arms being equipped at their outer ends with means for supporting tires, a lever pivoted to said base and overlapping the innermost end of said slide arm, a pin on said arm, the said lever being provided with a slot for the reception of said pin, a hook portion at the free end of said lever, and a lock on one of said fixed arms for the reception of said hook, substantially as described.

1,231,481. SWITCH. JOSEPH E. BRADRICK, West Unity, Ohio. Filed June 1, 1915. Serial No. 31,469. (Cl. 104—23.)



1. The combination with the switch points and the plate connecting the points, of a bar secured to the plate at one end, a switch stand at the outer end of the bar, a switch shaft journaled in the stand and composed of telescoping sections, movable vertically with respect to each other and having means for constraining them to rotate together, the lower section of the shaft having an angular arm, and a link connecting the arm to the bar, an arm extending radially from the upper section of the shaft, a lever having a sliding pivotal connection with the arm at the inner end of the lever, a bracket to which the lever is pivoted, the switch stand having a rotatable head at its upper end to which the bracket is connected, the bar having notches in its upper face, and a locking rod for engaging the notches to hold the points in open or closed position, a latch lever pivoted intermediate its ends, and engaging the locking rod at one end, a connection between the upper section of the switch stand and the other end of the latch bar to lift the locking lever when the said section is depressed, and a spring normally pressing the section upward.

2. Switch operating mechanism, comprising in combination with the points, a bar connected to the points for moving the same, a shaft consisting of upper and lower sections slidably connected and constrained to rotate together, and journaled in vertical position adjacent to the bar, the lower section having a radial arm, and a link connecting the arm to the bar, locking mechanism for engaging the bar to lock the points in open or closed position, means for moving the upper section of the shaft vertically and for rotating the shaft, a swinging latch lever for releasing the locking means, a rod connected to the upper section of the shaft at one end and with the swinging latch lever at the other, for swinging the lever to release the locking mechanism when the upper section is depressed, and a spring pressing the upper section away from the lower section.

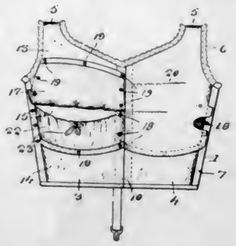
3. Switch operating mechanism, comprising in combination with the points, a bar connected to the points for moving the same, a shaft consisting of upper and lower sections slidably connected and constrained to rotate together, and journaled in vertical position adjacent to the bar, the lower section having a radial arm, and a link connecting the arm to the bar, mechanism for engaging the bar to lock the points in open or closed position, means for moving the upper section of the shaft vertically and for rotating the shaft, a spring normally pressing the upper section away from the lower section, and means operated by the downward movement of the upper section for releasing the locking mechanism.

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1,231,482. UNDERGARMENT. WILLIAM BRANNAN, Newark, N. J. Filed Aug. 29, 1916. Serial No. 117,511. (Cl. 2—98.)

1. An undergarment comprising a back section, front sections arranged upon opposite sides of the back section and adjustably connected therewith and including upper and lower members arranged in spaced relation to provide openings therein, flies connecting said upper and lower members, closing flaps for said openings on said upper sections removably connected with said flies and the lower sections, and supporting flaps underlying said closing flaps and connected with the lower sections and flies.

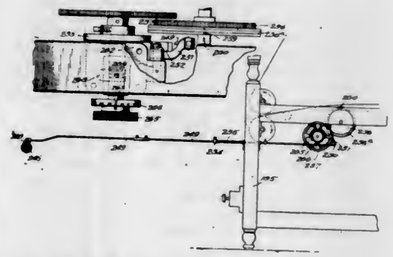
2. An undergarment comprising a back section, front sections arranged upon opposite sides of the back section and including upper and lower members arranged in spaced relation to provide openings in the front sections, flies connecting said upper and lower members, means for adjustably connecting said front sections with the back



section, flaps on the upper members for closing said openings removably connected with said flies and the lower members, supporting flaps having connection with the lower members and flies and underlying the first mentioned flaps, and means for forming pouches of the flaps connected with the lower members and flies.

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1,231,483. VALVE-CHANGING DEVICE. ALBERT BROADMEYER, Harrisburg, Pa., assignor to W. O. Hickok Mfg. Co., Harrisburg, Pa., a Corporation of Pennsylvania. Filed Feb. 1, 1917. Serial No. 146,048. (Cl. 271—56.)



1. A cam timing device for a train of actuating gears, including a gear having an indicator, a stationary pointer with which the indicator is adapted to coöperate, a shaft upon which another gear of the train is secured, a supporting bracket having a bearing in which the shaft is rotatable and longitudinally shiftable to move its gear into and out of engagement with the first mentioned gear of the train, a cam carried by said shaft, a hand wheel secured upon the shaft, a number wheel also secured upon the shaft, and a stationary pointer with which the number wheel coöperates.

[Claims 2 to 8 not printed in the Gazette.]

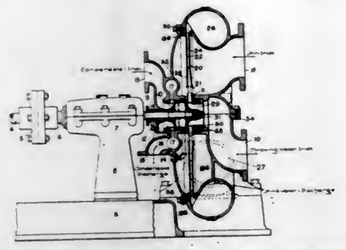
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1,231,484. CENTRIFUGAL PUMPING APPARATUS. ARTHUR P. BROCKLEBANK, Brooklyn, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 23, 1915. Serial No. 41,519. (Cl. 230—14.)

1. A centrifugal pumping apparatus comprising a fluid pump and a water throwing air pump having their impellers mounted on the same shaft, casings therefor having a dividing wall in common, said pumps being arranged with their admission openings facing in opposite directions and away from each other, and separate inlet conduits for each of said pumps.



2. In a centrifugal pumping apparatus, the combination of a bed plate, a centrifugal air pump mounted on the bed plate and having its casing formed with an open side, a centrifugal liquid pump detachably connected to the casing of the first pump and arranged over said opening so that one of its sides closes the same, a shaft, impellers for said pumps mounted on the shaft with their admission sides facing in opposite directions and away from each other, and separate inlet conduits for each of said pumps.



3. In a centrifugal pumping apparatus, the combination of a bed plate, a water throwing air pump mounted thereon and having its casing formed with an open side, a liquid pump detachably connected to the casing of the air pump and arranged over said opening so that one of its sides closes the same, the casings of each of said pumps being divided horizontally whereby the upper half of one may be removed without disturbing the other, a shaft, and impellers for said pumps mounted on the shaft with their admission sides facing in opposite directions and away from each other.

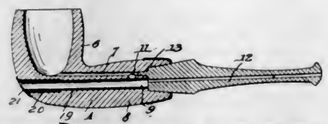
4. In a centrifugal pumping apparatus, the combination of a water throwing air pump comprising a casing having admission and discharge openings on one side, a liquid pump comprising a casing fastened to the first named casing on the side opposite to its admission and discharge openings, said two casings having an intermediate wall in common, the casing of said liquid pump having admission and discharge openings in the side opposite to said common intermediate wall, a bearing, a shaft supported in it and having an overhung end projecting into the casings, and impellers for the pumps mounted on the overhung end of said shaft with their inlet sides facing in opposite directions and away from each other.

5. In a pumping apparatus, the combination of a base, a centrifugal pump supported thereon comprising a casing formed with an open side and having inlet and discharge passages on the side opposite to said open side, and a second centrifugal pump bolted to the first having a side which closes the open side of said first named pump and inlet and discharge passages in the side opposite thereto, whereby said second named pump may be removed bodily from the first named pump without disturbing the first named pump.

[Claim 6 not printed in the Gazette.]

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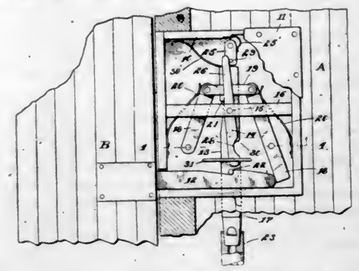
1,231,485. PIPE. HARRY M. BROWN, Mendocino, Cal. Filed Apr. 30, 1915. Serial No. 25,010. (Cl. 131—12.)



In a pipe, a bowl having a neck provided with a smoke passage and a saliva passage, a butt provided with a saliva well in communication with the saliva passage of the neck, a saliva tube in the well spaced apart from the wall of the butt of the bowl, a plug inserted in the butt of the pipe and surrounding the saliva tube, a stem applied to the neck, said stem having a smoke passage in communication with the saliva passage of the neck of the bowl of the pipe, said neck and stem having means of communication whereby smoke passes from the bowl of the pipe to the said stem.

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1,231,486. CAR-DOOR LOCK. ISAAC L. BROWN, Marshalltown, Iowa. Filed Oct. 30, 1916. Serial No. 128,545. (Cl. 70—31.)



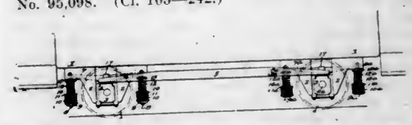
1. A car door lock embodying a casing, adapted to be secured to the body of the car, a lock mechanism arranged therein and including a key actuated sliding bar, automatic means adapted to engage the bar and hold the latter elevated, a locking element carried by the door to enter the casing when the door is closed, said element effecting a release of said means to permit the bar to assume an active position, means carried by the bar for locking the said element within the casing, and a block freely pivoted within the casing and adapted to gravitate to a position within the path of movement of said bar when the latter is in active position.

2. A car door lock embodying a casing secured to the body of the car, a lock mechanism arranged therein and including a key actuated sliding bar, a locking element carried by the door to enter the casing when the door is closed, and locked therein by said bar, a block freely pivoted in said casing and adapted to gravitate to a position in the path of movement of said bar when the latter assumes an active position, and a key actuated lever operable to adjust the block to an out of the way position to permit the bar to be elevated in effecting a release of said locking element.

3. A car door lock embodying a casing adapted to be secured to the body of the car, a lock mechanism arranged therein and including a sliding bar having a notch therein, a spring pressed dog normally fitted within said notch for holding the bar elevated, a locking element carried by the door to enter the casing when the door is closed, a spring pressed pivoted lever connected with said dog and having one extremity disposed in the path of movement of said element, whereby the latter effects a release of said bar to permit the latter to gravitate to an active position, and means carried by said bar to engage said element to lock the latter within the casing.

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1,231,487. SINGLE-TRUCK SPRING-STABILIZER. SAMUEL A. BULLOCK, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 3, 1916. Serial No. 95,098. (Cl. 105—242.)



1. The combination in a car body, of a body portion; a single truck under the body portion and having two

pedestal structures at each end of the car; boxes mounted in the pedestals; axles located in the boxes; semi-elliptic springs mounted on the boxes; and a spring stabilizer suspended from the end of each spring, the upper portion of each stabilizer bearing against the pedestal, the spring stabilizer at one end of the car being of a different length than that at the opposite end of the car.

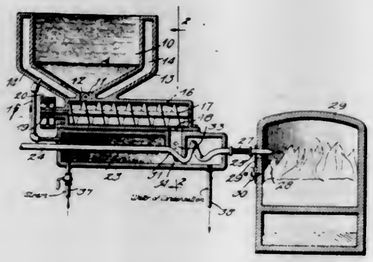
2. The combination in a car, of a body portion; pedestals secured to the body portion; axles mounted in the pedestals; semi-elliptic springs mounted on the axles; spring stabilizers at the ends of the semi-elliptic springs, adapted to act as both stabilizers and shock absorbers; the stabilizers at one end of the car truck being of a greater length than those at the opposite end of the car so that the swing of the car body on the axles at one end will be different from that at the opposite end.

3. The combination in a car, of a body portion; pedestals secured to the body portion at each end thereof; boxes mounted on the pedestals; axles adapted to the boxes; a semi-elliptic spring mounted in each box; a rod hung from the end of each spring; a nut on the end of the rod; a cap plate supported by the nut; two springs of different diameters and different thicknesses supported one above the other by the cap plate; a cap plate at the upper end bearing against the pedestal, the fulcrums of the spring structures at the ends of the car being so arranged as to give a greater leverage at one end than at the other.

[Claims 4 and 5 not printed in the Gazette.]

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1,231,488. APPARATUS FOR FEEDING POWDERED OR PULVERIZED FUEL. FRANK CALDWELL, Cincinnati, Ohio. Filed Sept. 26, 1916. Serial No. 122,228. (Cl. 110—104.)



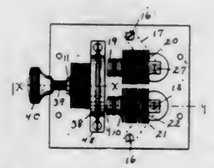
1. In an apparatus of the character described, the combination of a supply hopper, having a jacket forming a steam space thereabout, a casing forming a steam chamber and having connections with the said jacket for supplying steam thereto in order to dry the material within the hopper, an air supply pipe extending through the said steam casing and having a fuel inlet and a helically coiled portion therein beyond the said fuel inlet, an injecting nozzle connected to one end of the said pipe nearest the said coiled portion thereof, and means for feeding the fuel uniformly from the said hopper to the said fuel inlet of the supply pipe.

2. In a device of the character described, the combination of an air supply pipe having an injecting nozzle at one end, and an intermediate fuel receiving opening, said pipe having a helix therein between the said fuel receiving opening and the said nozzle, a casing forming a steam chamber and surrounding the said helix and fuel intake opening of the said air supply pipe, and having a tapering feed channel leading into the said inlet opening of the pipe, and means whereby to feed fuel through the said channel for the purpose described.

3. In an apparatus of the character described, the combination of a feed channel, means for feeding pulverized fuel uniformly to the said feed channel, an air supply pipe having an intermediate angular portion disposed adjacent said feed channel and provided with an opening to receive fuel from the said feed channel and with an intermediate diaphragm downwardly upon which the fuel is movable into the current of air passing through the pipe, said pipe having a delivery nozzle at one end and a helix therein between the said angular portion and the said delivery nozzle whereby to check movement of air and fuel and thoroughly mix the same without undue retardation.

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1,231,489. SPARK-GAP. CHARLES E. CAMPBELL, Lynn, Mass. Filed Apr. 24, 1916. Serial No. 93,195. (Cl. 250—38.)



1. A spark gap comprising a pair of stationary electrodes and an adjustable electrode coöperating therewith, the said adjustable electrode being in the form of a disk, rotatively mounted, the said fixed electrodes being positioned side by side and opposed to one face of the said disk, and the supporting means for the said adjustable electrode comprising a frame that is engaged with the periphery of the said disk.

2. A spark gap comprising a pair of stationary electrodes and an adjustable electrode coöperating therewith, the said adjustable electrode being in the form of a disk, rotatively mounted, the said fixed electrodes being positioned side by side and opposed to one face of the said disk, the supporting means for the said adjustable electrode comprising a frame that is engaged with the periphery of the said disk, and the said frame having screw thread connection with the said periphery.

3. A spark gap comprising a pair of stationary electrodes positioned side by side and in spaced relation and a third electrode in the form of a disk having one face opposed to the said stationary electrodes, and a frame serving as a support for the said disk and having screw thread connection with the periphery thereof.

4. In a spark gap device, a base, electrodes supported from the said base comprising a pair of stationary electrodes and an adjustable electrode, the said stationary electrodes comprising each a terminal face at one end, a supporting post at the other end, and intermediate the said ends having a body portion provided with heat radiating disks, and the said adjustable electrode comprising a disk at one end that serves as the electrode proper and that is engaged with supporting means, and having outwardly from the said disk a stem that is provided with heat radiating disks.

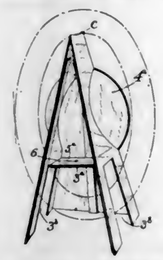
[Claims 5 to 15 not printed in the Gazette.]

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1,231,490. DISPLAY-STAND. WILLIAM S. CAMPBELL, Akron, Ohio, assignor to The Miller Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Oct. 3, 1916. Serial No. 123,597. (Cl. 211—24.)

1. A tire supporting stand comprising a substantially tri-angular sheet of material folded to produce a substantially pyramidal stand, said stand having a tire supporting seat at the top and the sides of the stand having cut-away portions for the passage of the tire.

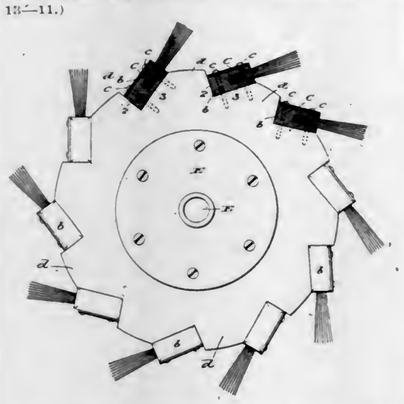
2. A tire supporting stand comprising a substantially tri-angular blank of sheet material folded on divergent lines to produce a substantially pyramidal support, the sides of said support having integral tongues formed by slitting said sides from the bottom upwardly, said tongues



being bent upwardly into overlapping position and secured together to form braces for the sides.

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1,231,491. ROTARY BRUSH. JAMES H. CARY, Memphis, Tenn. Filed July 22, 1916. Serial No. 110,633. (Cl. 15—11.)



1. A rotary brush comprising suitable heads and brush-backs secured thereto in spaced relation, said brush-backs having two adjacent angular faces, and provided with projecting bristles, said heads having recesses in their edges with two walls only for receiving the corresponding faces of the brush-backs, the spaces between adjacent backs permitting an air current to be discharged transversely through the brush.

[Claim 2 not printed in the Gazette.]

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1,231,492. PROCESS FOR PRODUCING COLORS ON TEXTILE AND OTHER MATERIALS. JOHN CHESTER, Saltaire, England. Filed Nov. 24, 1915. Serial No. 63,305. (Cl. 8—5.)

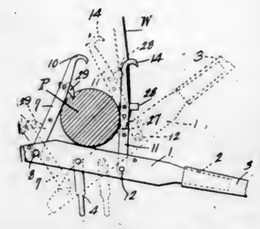
1. In a process of producing colors on textile and other materials having an animal origin by the use of nitrous acid and a metallic salt capable of generating a color, combining the nitrous acid and the metallic salt in a single bath with which the material is treated at a high temperature.

2. A process of producing colors on textile and other materials having an animal origin by treating the material with a bath containing nitrous acid and soluble bichromate at a high temperature.

3. A process of producing colors on textile and other materials having an animal origin by treating the material with a bath containing sodium nitrate, sulfuric acid and soluble bichromate at a high temperature.



1,231,493. WIRE-STRETCHER. WILLIAM A. CLANTON and ROBERT K. COX, Wood, Va. Filed Nov. 8, 1916. Serial No. 130,240. (Cl. 254—77.)

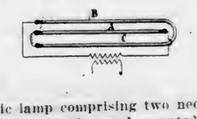


1. A stretcher embodying a lever adapted to rest against a post, means for connecting the wire to said lever at one side of the post, an arm pivoted to said lever to project across the opposite side of the post, said arm having a limited swinging movement relative to the lever, and a spur pivoted to said arm and projecting toward the lever to engage the post, said spur having a limited swinging movement relative to said arm.

[Claim 2 not printed in the Gazette.]

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1,231,494. NEON-TUBE. GEORGES CLAUDE, Boulogne-sur-Seine, France. Filed June 16, 1915. Serial No. 34,555. (Cl. 176—9.)

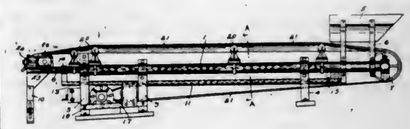


1. An electric lamp comprising two neon tubes of suitable shape, grouped together and mounted in series in the same high-tension circuit, one of said tubes containing a few drops of mercury.

2. An electric lamp comprising two neon tubes of the same length, mounted in series in the same high-tension circuit, one of said tubes containing a few drops of mercury and having a diameter half that of the other tube.

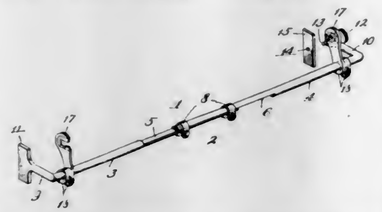
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1,231,495. CONVEYER. WILLIAM FREDERICK CLEAVER and THOMAS HENRY MARTIN, Montreal, Quebec, Canada; said Cleaver assignor to said Martin. Filed July 10, 1916. Serial No. 108,466. (Cl. 193—4.)



A conveyer comprising parallel tubes suitably supported by standards and provided with a roller journaled thereon, parallel rods telescoping in said tubes suitably supported by standards and provided with a roller suitably journaled thereon, sliding rails secured to said standards below said tubes, a frame adapted to slide on said rails provided at one end with a roller suitably journaled thereon and secured at the other end to said rods, a roller suitably journaled below said frame, an endless belt passing over said rollers, means to take up the slack in the said belt, a transverse rod suitably secured to said frame adjacent to the outer roller in order to scrape the said belt, a hopper mounted at the end of said tubes above said endless belt, and a motor actuating said rollers substantially as described.

1,231,496. ADJUSTABLE SHADE AND CURTAIN FIXTURE. ALVA C. CLUGSTON, Dewey, Okla. Filed Jan. 4, 1917. Serial No. 140,626. (Cl. 156—23.)



A curtain pole consisting of two sections having overlapping inner ends, means to secure said ends together and in adjusted position, the outer ends of the sections being turned at right angles, one of said right-angular ends having a threaded hole, a perforated plate, and a screw engageable through said threaded hole, said screw having a reduced terminal receivable in said perforation of the plate, said set screw being reversible so as to engage in said threaded hole from either end thereof and said plate being shiftable so as to be engageable with either the inner or outer side of a window casing to allow the pole to be supported from either the inner or outer sides of the window casing.

1,231,497. HYPODERMIC SYRINGE. HARVEY S. COOK, Worthington, Ind. Filed Oct. 21, 1916. Serial No. 126,984. (Cl. 128—25.)



1. A syringe comprising a barrel having a straight cylindrical chamber extending thereinto from one end midway its length and a bore of less diameter extending from the chamber through to the opposite end, a cap containing a needle removably secured to the chambered end of the barrel, and a straight cylindrical plunger of uniform diameter fitted to the bore and of a length to extend therethrough and into the chamber when depressed.

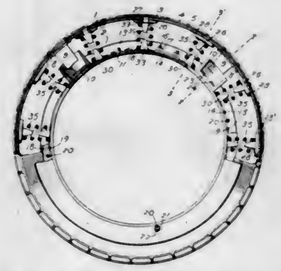
2. A syringe comprising a straight cylindrical barrel having a chamber projecting thereinto at one end and extending midway its length, and a bore of less diameter extending from said chamber to the opposite end of the barrel, a cap movably fitted to the chambered end of the barrel and having projecting jaws, a needle extending through said cap and between the jaws and adapted to be rigidly secured by means of said jaws to the cap, and a straight cylindrical plunger of uniform diameter slidable through sid bore and into the chamber.

3. A syringe comprising a barrel having a chamber in one end thereof extending midway its length and a straight cylindrical bore through its opposite end, the bore and the chamber communicating, a removable needle secured to the chambered end of the barrel, and a plunger of uniform diameter mounted in the bore to be pressed into the chamber and fill the same.

4. A syringe comprising a straight cylindrical barrel having a chamber formed in one end and extending midway the length thereof, and a bore of less diameter than the chamber extending from the chamber to the opposite ends of the barrel, a straight cylindrical piston of uniform diameter slidable in said bore and into the chamber, pins projecting laterally from the outer surface of the barrel near the chambered end, a cap having locking slots adapted to fit on said barrel end and engage said pins by means of said slots for locking said cap in position, clamping jaws on the outer end of said cap, a needle passing through a perforation in the cap and between said jaws, and clamping means for operating the jaws to grip the needle.

5. A syringe comprising a barrel having a straight chamber in one end thereof extending midway its length and a straight cylindrical bore through its opposite end, the bore and the chamber communicating, a removable needle secured to the chambered end of the barrel, a plunger of uniform diameter mounted in the bore and adapted to be pressed into the chamber, and a removable container for the fluid to be injected of a size capable of being inserted in the chambered end of the syringe and having perforatable closures at its ends movable longitudinally in the container.

1,231,498. SPRING-TIRE. CARL F. CRAIG and WILLIAM FREEMAN, Pottsboro, Tex. Filed Nov. 19, 1915. Serial No. 62,418. (Cl. 152—38.)



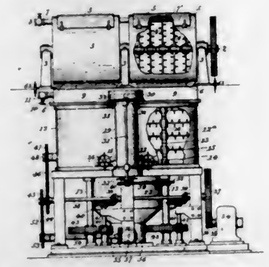
1. A spring tire, comprising a rim member consisting of a split belt, means for securing the ends together on the felly of the wheel, a pair of angle rings, each consisting of portions extending at approximately a right angle with respect to each other, one of the said portions of each ring fitting the outer face of the belt at one side thereof, means in connection with the belt and the rings for preventing angular movement of the rings with respect to the belt, means for drawing the angle rings toward each other, and a U-shaped tread member of annular form consisting of a body and side walls, the side walls fitting between the radial portions of the rings, a series of stops or abutments connected with the belt and extending radially therefrom, a series of similar stops or abutments connected with the body of the tread member and extending radially inward and registering with the abutments of the belt, a coil spring encircling each pair of abutments and arranged between the tread member and the belt, and means for permitting a limited angular movement of the tread member with respect to the rim member.

2. A spring tire, comprising a rim member consisting of a split belt, means for securing the ends together on the felly of the wheel, a pair of angle rings, each consisting of portions extending at approximately a right angle with respect to each other, one of the said portions of each ring fitting the outer face of the belt at one side thereof, means in connection with the belt and the rings for preventing angular movement of the rings with respect to the belt, means for drawing the angle rings toward each other, and a U-shaped tread member of annular form consisting of a body and side walls, cushioning mechanism arranged between the tread member and the rim member, and means for limiting the angular movement of the tread member with respect to the rim member.

1,231,499. CONTINUOUS MIXING-MILL. JOSEPH CROSSLEY, Trenton, N. J. Filed Feb. 5, 1917. Serial No. 146,688. (Cl. 83—73.)

1. A device for treating pulverized matter, comprising a plurality of mills each having a revoluble agitator therein and an exit in the wall of each mill at its lower end, and a member external thereto and communicating at its lower end with said mixing mills through said exits and provided with an agitator and conveyer.





2. A device for treating pulverized matter, comprising a primary mixer, means for moistening said pulverized matter while in transit, a secondary mixing mill having a revoluble agitator therein and an exit in its wall at the lower end, and a member external thereto and communicating at its lower end with said mixing mill through said exit, and provided with an agitator and raising conveyer.

3. A device for treating pulverized matter, comprising a mixing mill having a plurality of exits or discharge passages in its wall at the lower end, means for forcibly ejecting the material in said mill through said exits, a member external thereto and communicating at its lower end with the mixing mill through one of said exits, and provided with a revoluble conveyer, and an additional mill supplied from the mixing mill through the other exit.

4. In a device of the class described, a member comprising a cylinder having an inlet passage in the wall thereof at its lower end, means for controlling said passage, and an axially movable spout on the upper end of the cylinder, with a revoluble scraper therein.

5. A plurality of mixing mills, each provided with exits or discharge passages in their walls and at their lower ends, a device for transferring the contents of said mills and communicating therewith at its lower end through said passages, and means for controlling the passages and placing the transferring device in communication through said exits with the mixing mills.

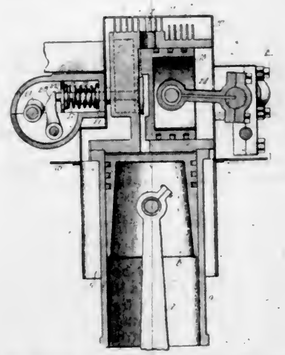
1,231,500. GAS-ENGINE. HENRY H. CUTLER, Milwaukee, Wis. Filed June 17, 1915. Serial No. 34,599. (Cl. 123—78.)

1. In an explosive engine, the combination with a pair of engine cylinders and pistons operating therein, of auxiliary scavenging means for said cylinders operated by the compression of a charge in each cylinder for forcing out the products of combustion from the other.

2. In an explosive engine, the combination with a pair of engine cylinders, of pistons operating therein, each cylinder being provided with an explosion chamber, and auxiliary means operated by the compression of the charge in each of said chambers for contracting the area of the opposite chamber after a charge has been exploded therein and for forcing out of said chamber the products of combustion.

3. In an explosive engine, the combination with a pair of engine cylinders and pistons therefor, of a pair of supplemental cylinders forming explosion chambers for said cylinders, pistons operating in said explosion chambers, and means operated by the compression of a charge in each of the engine cylinders for forcing inwardly the piston of the explosion chamber of the opposite engine cylinder for clearing said chamber of the products of combustion after an explosion has taken place.

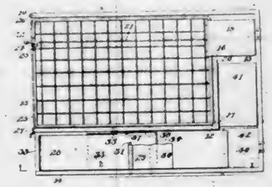
4. In an explosive engine, the combination with a pair of engine cylinders and pistons operating therein, of a cylinder angularly disposed with respect to the engine cylinder at the top of each of said engine cylinders and forming an explosion chamber, and means in each of said chambers operated by the compression of a charge in the opposite engine cylinder for forcing out the products of combustion after an explosion has taken place.



5. In an explosive engine, the combination with a pair of engine cylinders, of a cylinder angularly disposed with respect to the engine cylinders at the top of each engine cylinder and forming an explosion chamber, horizontally disposed intake and outlet valves in the head of each of said explosion chambers, and means operated by the compression of a charge in each engine cylinder for forcing out of the opposite explosion chamber the products of combustion.

[Claims 6 to 17 not printed in the Gazette.]

1,231,501. MOUSE-TRAP. EMIL CZECZEL, Chicago, Ill. Filed Mar. 26, 1917. Serial No. 157,412. (Cl. 43—26.)

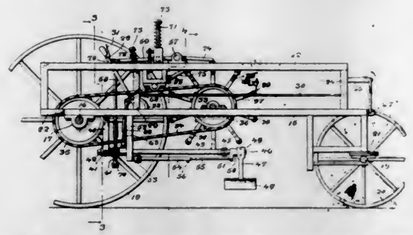


A trap comprising a casing having a hinged lid and an open forward side, an angular partition within the casing forming a main chamber therein and communicating side and end passages, said partition having an opening therein forming communication between the main chamber and end passage, a removable cage arranged within the said chamber having a door portion adjacent the said opening, a metallic cage removably arranged within the said chamber, a retaining latch for said cage pivoted between one side of the casing and the forward end of said partition, a swinging door at the rear of the cage projecting through the said opening when in its normal elevated position, an adjustable rod for said door extending through the said cage to a point forwardly of the casing and return preventing means arranged within the said passages.

1,231,502. COTTON-CHOPPER. JASPER N. DANIEL, Ennis, Tex., assignor of one-half to Gurine Orvig and Gustave W. Orvig. Filed Jan. 12, 1917. Serial No. 142,100. (Cl. 97—45.)

1. In a cotton chopper, a wheel supported main frame having front and rear axles, an auxiliary frame pivoted

on the rear axle, chopping mechanism and actuating means therefor carried by the auxiliary frame, supporting means for the chopping mechanism carried by the main frame, and means for supporting and adjusting the free end of the auxiliary frame.



2. In a cotton chopper, a wheel supported main frame having front and rear axles, an auxiliary frame pivoted on the rear axle, said auxiliary frame including vertical members, a rock shaft supported by said vertical members, a bell crank on the rock shaft, a link connecting one arm of the bell crank with the main frame, an adjusting lever fulcrumed on the main frame, and a link connecting the adjusting lever with the other arm of the bell crank.

3. In a cotton chopper, a longitudinally disposed rock shaft, bearing members for said rock shaft whereby it will be tiltably supported, a hoe carrying stub shaft universally jointed with the rock shaft, and means for supporting the stub shaft in the desired position with respect to the rock shaft in various positions of the latter.

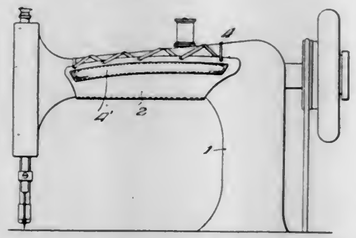
4. In a cotton chopper, a longitudinally disposed rock shaft, bearing members for said rock shaft whereby it will be tiltably supported, a hoe carrying stub shaft universally jointed with the rock shaft, means for supporting the stub shaft in the desired position with respect to the rock shaft in various positions of the latter, said means including a bearing sleeve on the stub shaft, and means for securing said bearing sleeve at various adjustments longitudinally with respect to the rock shaft.

5. In a cotton chopper, a longitudinally disposed rock shaft, bearing members for said rock shaft whereby it will be tiltably supported, a hoe carrying stub shaft universally jointed with the rock shaft and means for supporting the stub shaft in the desired position with respect to the rock shaft in various positions of the latter, said means including a bearing sleeve on the stub shaft, a tiltably supported tube, a rod telescoping in the tube and connected pivotally with the bearing sleeve, and a set screw whereby the rod may be secured at various adjustments in the tube.

[Claims 6 to 10 not printed in the Gazette.]

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1,231,503. NEEDLE AND PIN CUSHION ATTACHMENT FOR SEWING-MACHINES. CLARA S. DAVIS, Detroit, Mich. Filed Feb. 16, 1917. Serial No. 149,026. (Cl. 223—60.)



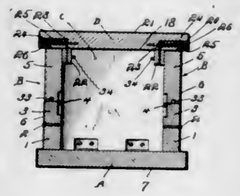
1. A needle and pin cushion for sewing machines, comprising a flexible supporting band formed of fabric adapted for arrangement about the arm of the sewing machine frame, said band having a series of eyelets arranged in the opposite side portions thereof, lacing engageable with said eyelets for connecting the free ends of the band, and pin cushions secured to portions of the band.

2. A needle and pin cushion for sewing machines, comprising a flexible supporting band formed of fabric adapted for arrangement about the arm of the sewing machine frame, said band having a series of eyelets arranged adjacent the opposite side portions thereof, lacing engageable with said eyelets for adjustably connecting the free ends of the band, and a pair of elongated pin cushions secured to said band adjacent the side portions of the same.

3. A needle and pin cushion for sewing machines, comprising a flexible supporting band adapted for arrangement about the arm of the sewing machine frame, the opposite extremities of said band being curved inwardly to permit the same to conform to the shape of the sewing machine frame arm and having a plurality of eyelets arranged in the opposite side portions thereof, lacing engageable with said eyelets for adjustably connecting the free ends of the band, and a plurality of longitudinally disposed pin cushions secured to the band in proximity of the opposite side portions thereof.

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1,231,504. COLLAPSIBLE BOX. HUGH DAVIS, Melvin, Mich. Filed Aug. 2, 1916. Serial No. 112,803. (Cl. 217—15.)



1. A folding box comprising a bottom member, sectional side members hingedly connected with each other and mounted for inward swinging movement, end members arranged between the side members and mounted for inward swinging movement, flanges formed on the side members, hooks carried by the flanges, the end members having channels formed therein to receive said flanges and hooks, and spring pressed means for locking the hooks within the channel.

2. A folding box comprising a bottom member, side members mounted for inward swinging movement, end members disposed between the side members and mounted for inward swinging movement, means carried by the end members, and engageable with the side members for locking the members in extended position, said side members being formed of hinged sections, one of the sections being formed with grooves, a top member, resilient means formed on the top member and engageable with said grooves for locking the box in folded position.

3. A folding box comprising a bottom member, sectional side members, said sections being hingedly connected with each other, end members arranged between the side members and hingedly mounted for inward swinging movement, flanges formed on the side members, said end members having channels formed therein, said channels receiving said flanges, means for locking the flanges within the channels, one of the sections of said end members being formed with grooves, and means formed on the top member and engageable with the grooves for locking the box in folded position.

4. A folding box comprising a bottom member, side members hingedly mounted upon the bottom member for inward swinging movement, end members arranged between the side members and hingedly mounted for inward swinging movement, flanges formed on the side members, hooks carried by the flanges, said end members being formed with channels which are adapted to receive said hooks and flanges, spring pressed latches mounted within the channels and engageable with the hooks for locking the flanges within the channels, said latches normally projecting from the end members, a top member, and hasps formed on the top member and engageable with the latches for locking the top upon the box.

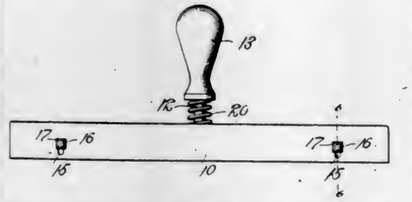
5. A folding box comprising a bottom member, lower side members mounted upon said bottom member for outward swinging movement, upper side members mounted upon said lower side members for inward swinging movement, flanges carried by said side members, end members mounted upon said bottom member for inward swinging movement and having channels adapted to engage the flanges of said side members, and means for locking said side members to said end members.

[Claims 6 to 8 printed in the Gazette.]



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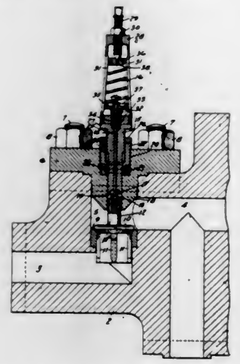
1,231,505. HAND-STAMP. WILLIAM JAMES DENNEY, Malone, N. Y., assignor of one-half to Willard E. Boyer, Malone, N. Y. Filed Oct. 9, 1916. Serial No. 124,582. (Cl. 101—380.)



A hand stamp comprising an inverted elongated channel member both ends of which are closed, a second inverted elongated channel member telescoped into the first member and having both of its ends closed, a handle carried by the inner channel member and extending through the upper wall of the outer member, removable type, means on the second member for holding the type, slidable connections between the channel members to permit vertical relative movement thereof, an elastic cushion between the upper walls of the channel members, and an elastic cushion between the upper wall of the inner member and the removable type.

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1,231,506. VALVE MECHANISM FOR PUMPS. JOHN DICK, East Pittsburgh, THOMAS H. RUTTER, Homestead, and CHARLES E. LEWIS, Swissvale, Pa. Filed Dec. 2, 1916. Serial No. 134,710. (Cl. 137—32.)



1. A valve mechanism comprising a valve casing having a valve chamber, a lifting valve in the chamber, said chamber having inlet and outlet openings extending thereinto, said openings being on opposite sides of said valve, a cap closing one end of the valve chamber and having an axial opening therein, an adjusting stem mounted in the axial opening and having an axial opening therein, a hollow spring post on the outer end of said stem, a coil spring within the hollow post, and a sliding needle extending through the axial opening in said stem and operatively connecting said spring and lifting valve.

3. A valve mechanism comprising a valve casing having a valve chamber, a lifting valve in said chamber, an adjusting screw on said valve to regulate the lifting movement of the valve relative to the adjusting stem, said chamber having inlet and outlet openings extending thereinto, said openings being on opposite sides of said valve, a removable cap closing one end of the valve chamber and having an axial opening therein, an adjusting stem mounted in the axial opening and having an axial opening therein, a hollow spring post on the outer end of said stem, a coil spring within the hollow post, and a sliding needle extending through the axial opening in said stem and operatively connecting said spring and lifting valve.

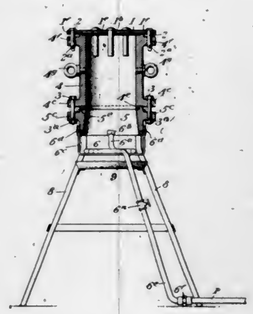
5. A valve mechanism comprising a valve casing having a valve chamber, a lifting valve in the chamber, said chamber having inlet and outlet openings extending thereinto, said openings being on opposite sides of said valve, a cap closing one end of the valve chamber and having an axial opening therein, an adjusting stem mounted in the axial opening and having an axial opening therein, a hollow spring post on the outer end of said stem, a coil spring within the hollow post, a sliding needle extending through the axial opening in said stem to connect the spring and valve, and adjusting means on the spring post to engage the spring in regulating the compression on said spring.

7. A valve mechanism comprising a valve casing having a valve chamber, a lifting valve in the chamber, said chamber having inlet and outlet openings extending thereinto, said openings being on opposite sides of said valve, a cap closing one end of the valve chamber, an adjusting stem adjustably mounted on the cap, said stem having an axial opening therein, a spring post on the outer end of said stem, a spring on the post, and a slidable needle extending through the opening in said stem to connect said lifting valve with said spring.

[Claims 2, 4, and 6 not printed in the Gazette.]

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1,231,507. RIVET-HEATING FURNACE. WALTER H. DIFFENDALL, Hagerstown, Md. Filed Mar. 9, 1917. Serial No. 153,598. (Cl. 263—9.)

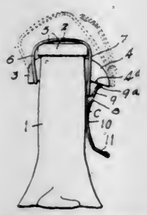


1. A rivet heating furnace comprising a body composed of upper and lower annular sections having interlocking ribs and perforated lugs on their meeting ends, bolts engaging said lugs and connecting the sections together, a top plate detachably attached to and closing the upper end of the body and having openings through which the

shanks of the rivets may be passed to suspend the rivets within the upper section, and a burner beneath the lower section and discharging into the furnace.

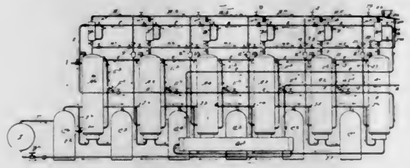
[Claims 2 and 3 not printed in the Gazette.]

1,231,508. BOTTLE-CAP. VERNON R. DONCASTER, Orleans, Vt. Filed Nov. 16, 1916. Serial No. 131,636. (Cl. 215—41.)



In a device of the character described, the combination with a bottle neck having a pair of lugs projecting from opposite sides thereof, one of said lugs being formed with a downwardly facing cam shoulder, of a removable cap fitted upon the bottle mouth, a clamping bail extending across the top of the cap and having one end thereof looped for engagement with one of the lugs, a transverse pivot pin carried by the opposite end of the bail, and a locking lever formed with a long arm and a short arm having an angular relation to each other, said finger lever being built up of two superposed thicknesses of sheet material and one of said thicknesses being crimped at the intersection of the arms to provide a bearing for the tubular pin and a fulcrum for engagement with the bottle neck, the short arm of the lever being adapted to be forced outwardly under the before mentioned cam shoulder of one of the lugs for coöperation therewith to draw the cap tightly against the mouth of the bottle when the long arm of the lever is being swung against the bottle neck.

1,231,509. METHOD FOR TREATING PETROLEUM AND OTHER HYDROCARBONS. CARBON P. DUBBS, Wilmette, Ill. Filed Nov. 27, 1916. Serial No. 133,527. (Cl. 196—13.)



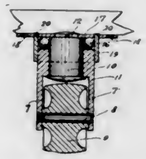
1. A process of distilling petroleum to produce lower boiling point hydro-carbons, which consists in passing petroleum through a series of receptacles, subjecting the petroleum to progressively increasing temperatures in said receptacles, taking the vapors off from each receptacle, and passing them back through the body of the oil in a preceding receptacle in the reverse direction to the flow of the oil by positively applied pressure, and during said distillation, maintaining a pressure in excess of 50 pounds to the square inch throughout the system, sufficient to convert a portion of the oil into lower boiling point hydrocarbons.

3. A process of distilling petroleum to produce lower boiling point hydro-carbons, which consists in passing the petroleum through a series of receptacles, subjecting the petroleum to progressively increasing temperatures in said receptacles, taking the vapors off from said receptacles and passing them back through the oil in the reverse direction to the flow of the oil, by positively applied pressure, and during said distillation maintaining a pressure throughout the system, sufficient to convert a portion of the oil into lower boiling point hydrocarbons, the temperature during such process varying from a minimum of 200 degrees Fahr. to 500 degrees Fahr. and the maximum from 500 degrees Fahr. to 2000 degrees Fahr., the pressure varying from a minimum of 50 pounds to the square inch to a maximum of 1000 pounds to the square inch.

8. A process for converting petroleum into lower boiling point hydro-carbons consisting in collecting the oil in a plurality of pools and while under pressure subjecting the pools of oil to progressively increasing temperatures, continuously supplying the oil to the pool of lowest temperature and conducting the overflow from each pool to the pool of next higher temperature, condensing and collecting vapors arising from the pool of lowest temperature and removing vapors from each pool, other than that of lowest temperature, passing them through a reflux condenser associated with the pool, returning the condensed products back to the pool and forcing the remaining vapors back through the pool of next lower temeprature.

[Claims 2 and 4 to 7 not printed in the Gazette.]

1,231,510. BALL-BEARING CASTER. ROLAND EDMONDS, Vancouver, British Columbia, Canada, assignor of one-third to Lawrence Braun and one-third to Vernon Charles Crofts, Vancouver, British Columbia, Canada. Filed Aug. 23, 1916. Serial No. 116,514. (Cl. 16—73.)



1. A ball bearing caster comprising a collar recessed in its upper face, said collar having a restricted neck in its upper portion, a sleeve fitting rotatably the bore of said collar, a stem on which the sleeve is rotatably mounted, said stem having its upper end threaded and passing upward through the restricted neck of the collar, and anti-friction balls mounted on the upper end of the said sleeve bearing upon said stem and the neck forming elements.

2. A ball bearing caster comprising a collar, a plate coacting therewith, a sleeve fitting rotatably the bore of said collar, a stem on which the sleeve is rotatably mounted, said stem having its upper end threaded and passing upward through the opening in the collar and having a squared portion fitting the said opening, and anti-friction balls mounted on the upper end of the sleeve bearing upon said stem and said plate.

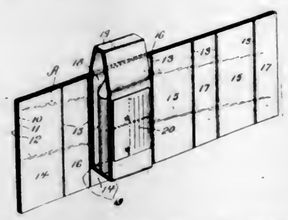
3. A ball bearing caster comprising a central stem, a uniform diameter sleeve provided with a pair of pendent lugs at its lower end rotatably mounted on said stem, anti-friction balls mounted on the upper end of said sleeve bearing upon the stem, a collar surrounding the upper end of said sleeve and adapted to inclose said balls, a plate co-acting therewith upon which said balls bear, the bore of the collar fitting the periphery of the sleeve, means for securing the caster in position for service, and means for preventing inadvertent rotation of said stem.

4. A ball bearing caster comprising a recessed collar, a plate inserted in said recess, a stem depending centrally from said plate, a sleeve parallel throughout its length rotatable in the bore of the collar and on the stem, and anti-friction balls bearing upon the plate of the collar and the stem.

5. A ball bearing caster comprising a recessed collar, a plate inserted in said recess, a central stem extending downwardly from said plate, a uniform diameter sleeve rotatable in the bore of the collar and on the stem, and anti-friction balls bearing upon the plate and the stem.



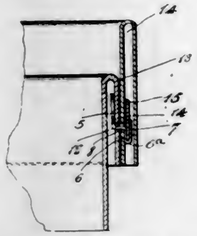
1,231,511. CARTON. JOSEPH H. ELDER, Clarksville, Tex., assignor of one-half to John C. Foster, Clarksville, Tex. Filed Aug. 30, 1916. Serial No. 117,745. (Cl. 229—90.)



1. An article wrapper embodying an elongated sheet of corrugated material, a retaining element secured to and extending transversely of said material, and projecting beyond the opposite longitudinal edges thereof, said extremities being of different lengths and adapted to be wrapped longitudinally about the article to support the latter spaced from one edge of the material, and said material having spaced parallel fold lines adapted to be wrapped transversely about the article and closing the folded extremities of said retaining element as described.

2. An article wrapper comprising an elongated sheet of reinforced material, a retaining element disposed transversely thereof and secured thereto, said element projecting beyond the opposite longitudinal edges of the sheet, said projecting extremities adapted to be folded longitudinally about the article and having their ends disposed in edge to edge contact, means for securing the extremities of the retaining element together, and said strip having spaced parallel fold lines for permitting the said sheet of material to be folded about the article and inclosing the folded extremities of the retaining strip.

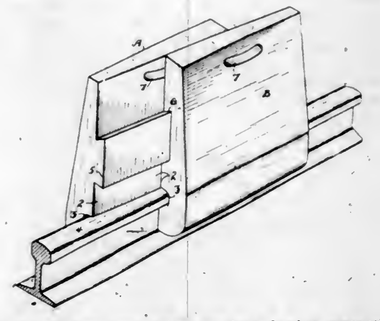
1,231,512. COMBINED COLLAR-FASTENER AND NECKTIE-GUARD. EDWARD EVANS, Pittsburgh, Pa. Filed Feb. 2, 1916. Serial No. 75,760. (Cl. 24—62.)



A fastener including a base member, a reduced extension carried by said base member curved to provide a U-shaped member, said extension being offset at a point adjacent the base member, and the web portion of the U-shaped member being curved to facilitate insertion through a buttonhole of a collar and neckband.

1,231,513. CAR-STOP. RICHARD W. EVANS, Kennett, Cal. Filed May 29, 1916. Serial No. 98,804. (Cl. 104—228.)

1. A car stop comprising members conformed to engage opposite sides of a rail and provided with respective means rigidly joined thereto to engage with each other to secure said members on the rail.



2. A car stop comprising members having respective means rigidly joined thereto to engage with each to draw the members against the rail by a sliding longitudinal movement of the members relative to each other.

6. A car stop comprising longitudinally tapering members, having grooves to engage the rail tread, and having, the one a dove-tailed rib and the other an undercut groove to receive said rib.

[Claims 3 to 5 not printed in the Gazette.]

1,231,514. PIN. GEORGE H. FAHRENBRUCH, Omaha, Nebr. Filed Jan. 26, 1917. Serial No. 144,594. (Cl. 74—8.)



3. A pin having an inwardly extending opening in one face of the shank and two openings intersecting with the first mentioned opening forming the apex of a triangle directly opposite the center of said first mentioned opening.

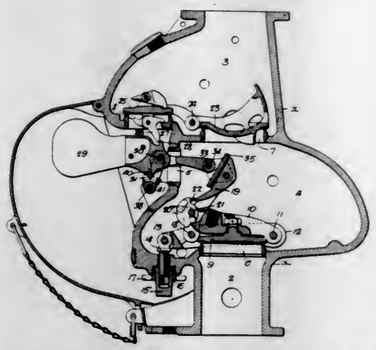
6. A pin having an opening formed in one face of the shank, and two openings arranged in the opposite face of the shank of said pin and intersecting with the said first mentioned opening to thereby form two oppositely positioned shoulders at the meeting point of the first mentioned openings and said second mentioned openings, said second mentioned openings also forming a wedge portion located centrally of the main opening to thereby automatically spread the arms of a cotter key when the same is forced through the first mentioned opening in the shank of said pin.

[Claims 1, 2, 4, and 5 not printed in the Gazette.]

1,231,515. DRY-PIPE VALVE. POUL FLAMAND, Philadelphia, Pa., assignor, by mesne assignments, to Globe Automatic Sprinkler Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 17, 1917. Serial No. 155,502. (Cl. 169—23.)

1. The combination in a dry pipe valve device of a plurality of valves normally closed against fluid under pressure, mechanism for connecting certain of the valves consisting of a movably mounted arm; a pivot pin; two members hinged by said pin to the arm; with means for causing the thrust exerted by one of said members to be normally transmitted to the arm independently of the pin.

5. The combination in a dry pipe valve device of a plurality of valves normally closed against fluid under pressure, mechanism for connecting certain of the valves including a lever fulcrumed to the casing of the dry pipe valve and having an abutment; a pivot member on the lever farther from the fulcrum than said abutment; means for normally preventing movement of the lever on its fulcrum; and a member transmitting force to the lever, loosely connected thereto by said pivot member and having a nose normally engaging said abutment.

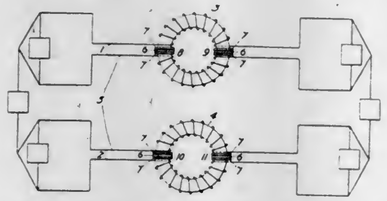


9. The combination in a dry pipe valve device of a casing having water and air valves of which the latter normally closes an opening to the atmosphere; a strut operatively connected to the water valve and extending through an opening in the casing to the outside thereof; a lever pivoted outside of the casing and having an abutment for engagement by the strut; a pivot pin on the lever farther from the fulcrum thereof than said abutment and loosely engaged by the strut; with a weight mounted on the pivot pin and normally held raised by the air valve.

[Claims 2 to 4 and 6 to 8 not printed in the Gazette.]

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1,231,516. PHANTOM LOADING-COIL. WILLIAM FONDILLER, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 1, 1916. Serial No. 94,695. (Cl. 178—46.)



1. A loading unit adapted for use with two physical circuits and a derived phantom circuit comprising cores with gaps of high reluctance therein, windings on said cores adapted for inclusion in each of the conductors of said physical circuits, and bridges of low reluctance joining said cores and providing paths of low magnetic reluctance for the flux produced in the operation of said phantom circuit.

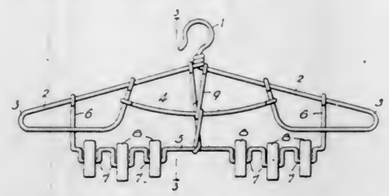
2. A loading unit adapted for use with two physical circuits and a derived phantom circuit comprising cores with gaps of high reluctance therein, windings on said cores adapted for inclusion in each of the conductors of said physical circuits, and two bridges of low reluctance joining said cores, the lengths of said gaps and the magnetic reluctance of said bridges being adjusted to secure a desired ratio of phantom circuit inductance to physical circuit inductance.

3. A loading unit core structure comprising two toroidal core members, bridges of low reluctance between said members at diametrically opposite points, there being a gap of high reluctance transversely intersecting each of said toroidal members.

4. A loading unit core structure comprising two toroidal core members, bridges of low reluctance between said members at diametrically opposite points, there being a gap of high reluctance transversely intersecting each of said toroidal members and longitudinally bisecting said bridges.

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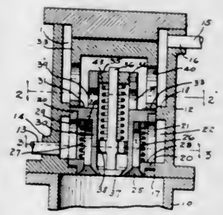
1,231,517. GARMENT-HANGER. MARIE LOVISA GAGE, South Lancaster, Mass. Filed Aug. 18, 1916. Serial No. 115,737. (Cl. 211—13.)



A garment hanger including a suspending hook, garment supporting arms projecting in opposite directions from the base thereof and terminating in downwardly and outwardly inclined shoulder loops, a cross bar connecting the shoulder loops, a clip supporting bar arranged horizontally under the garment supporting arms and suspended therefrom, said bar being provided at the end portions thereof with corresponding crimped portions which are offset laterally to be disposed in different vertical planes, garment engaging clips mounted upon the crimped portions, and a triangular frame connecting the inner ends of the garment supporting arms to the cross bar and clip supporting bar.

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1,231,518. AMMONIA-PUMP MECHANISM FOR REFRIGERATION. FREDERICK M. GEISENDORFF, Indianapolis, Ind., assignor of one-half to Charles W. Ziegler and one-sixth to Charles Hamblen, Indianapolis, Ind. Filed Mar. 27, 1915. Serial No. 17,509. (Cl. 230—34.)



1. The combination with a pump, of a cylindrical valve structure for controlling the inlet to the pump, and a valve structure controlling the outlet therefrom which is located within the valve structure for controlling the inlet so as to be kept cool by the inlet controlling valve structure.

2. The combination with a pump, of a valve casing secured thereon having an inlet port and an outlet port, a valve structure in said valve casing for controlling the inlet to said pump from said inlet port, and a valve structure within said casing for controlling the outlet from the pump to said outlet port, one of said valve structures being located within the other.



3. The combination with a pump, of an outer valve casing secured thereto having near its lower end an outlet port, a vertically movable outer valve cylinder within said casing having an annular valve on its lower end, ports therethrough communicating with the inlet port, a spring tending to hold said outer valve cylinder and valve elevated and closed, an inner valve casing stationary and extending down into said outer valve cylinder with its lower end open and having an outlet port through its upper end, an inner valve within said inner valve casing, and a spring within said inner valve casing tending to hold said inner valve closed.

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1,231,519. ARTIFICIAL-WOOD COMPOSITION. LLOYD S. GIBSON, Jamestown, N. Y. Filed June 10, 1916. Serial No. 102,942. (Cl. 106—34.)

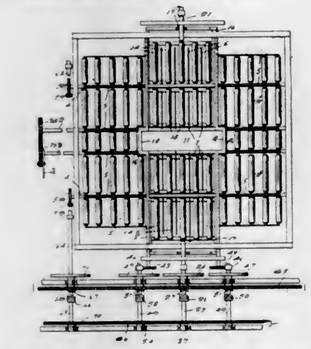
1. A plastic composition adapted to form an artificial wood and cement and comprising plaster of Paris, pigment, varnish and a drying and hardening material.

2. A plastic composition adapted to form an artificial wood and cement and comprising plaster of Paris, pigment, varnish and formic acid.

3. A plastic composition adapted to form an artificial wood and cement and comprising plaster of Paris, gray ocher, water-proof varnish and formic acid.

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1,231,520. PAPER-PULP-LAP-FOLDING MACHINE. WILLIAM GOODELL, Millinocket, Me. Filed Nov. 15, 1915. Serial No. 61,605. (Cl. 92—67.)



1. A paper pulp lap folding machine including folding means, means for supporting a sheet of paper pulp above and out of contact with the folding means while the paper pulp is being delivered from a wet machine to the folder, and mechanism operating in timed sequence for operating the folding means to fold the sheet of paper pulp successively.

2. A paper pulp lap folding machine including folding means, rollers for supporting a sheet of paper pulp above and out of contact with the folding means while the paper pulp is being delivered from a wet machine to the folder, and mechanism operating in timed sequence for operating the folding means to fold the sheet of paper pulp successively.

3. A paper pulp lap folding machine including folding means, rollers for supporting a sheet of paper pulp above and out of contact with the folding means while the paper pulp is being delivered from a wet machine to the folder, the rollers being movable upwardly and downwardly to arrange them below the folding means, and mechanism operating in timed sequence for operating the folding means to fold the sheet of paper successively.

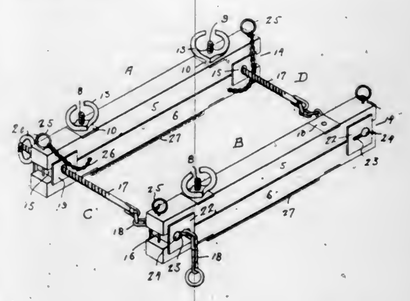
4. A paper pulp lap folding machine including folding means, rollers for supporting the paper pulp above and out of contact with the folding means while the said paper pulp is being delivered from a wet machine to the folder, the rollers being permanently mounted in a projecting position and other of the rollers being movable upwardly and downwardly to arrange them below the plane of the folding means.

5. A paper pulp lap folding machine including vibratory rock shafts provided with arms and arranged to operate at right angles to one another in timed sequence for effecting successive folds in a sheet of paper pulp in two directions, supporting devices operating between the said arms for supporting a sheet of paper pulp in an elevated position above the said arms while the paper pulp is being delivered from a wet machine to the folder.

[Claims 6 to 19 not printed in the Gazette.]

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1,231,521. BELT-CLAMP. WILLIAM J. GRINDEN, Brooklyn, N. Y. Filed Mar. 19, 1914. Serial No. 825,888. (Cl. 254—54.)



1. A draw-up belt clamp comprising a pair of cross clamps for holding the belt ends, and draw-up means extending between said clamps, said means comprising a draw-up screw engaging one of said clamps and a flexible member attached at one terminus to said screw and passing therefrom freely through the second cross clamp, together with a fixed device carried by said second cross clamp and with which said flexible member is engaged only after it has been tensioned to take up the initial slack in the belt and by which it is then fixedly held, together with means on the draw-up bolt by which the latter may be then operated to complete the tensioning of the belt.

2. A draw-up belt clamp comprising a pair of cross clamps for holding the belt ends and draw-up means extending between said clamps, said means comprising a draw-up screw engaging one of said clamps and a chain secured at one end to said screw and extending therefrom to the second cross clamp, a chain guide carried by the second cross clamp and having a free runway for the chain and a communicating holding-slot into which a link in the chain may be laterally thrust to retain the chain after it has been tensioned to take up the initial slack in the belt, together with means on the draw-up bolt by which the latter may be then operated to complete the tensioning of the belt.

3. A draw-up belt clamp comprising a pair of cross clamps for holding the belt ends, and draw-up means extending between said clamps, said means comprising a guide held in each cross clamp, one of said guides having a tapped passageway therethrough, and the other having a chain freeway with communicating lateral holding-slot, a draw-up screw threaded into said tapped guide, a chain passing through the other guide and having a terminal connection to the adjacent end of said draw-up screw by means of which the initial slack in the belt may be taken up and the initial tension held by moving a chain link into said holding-slot, and means on the draw-up screw bearing against the opposite face of its carrying cross clamp and serving to operate said draw-up screw to complete the tensioning of the belt.

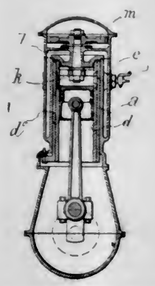
4. A draw-up belt clamp comprising a pair of cross clamps for holding the belt ends and draw-up means extending between said clamp, said means comprising a pair of draw-up screws engaging one of said clamps at its opposite ends beyond the belt area, a chain extending from the inner end of each screw to the corresponding ends of the other cross clamp, chain guides carried by the latter and through which said chains pass, said guides each having a freeway for the chain and a communicating holding-slot into which a link in the chain may be laterally thrust to retain the chain after it has been tensioned to take up the initial slack in the belt, together with means on the draw-up bolts by which the latter may be operated to complete the tensioning of the belt.

5. In a draw-up belt clamp, a pair of cross clamps each comprising upper and lower clamp bars shouldered at their ends to afford a seat for guide members, in combination with independent guide members for a draw-up screw device, said guide members having end flanges lying on opposite sides of the clamp bars, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

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1,231,522. INTERNAL-COMBUSTION ENGINE. ANDRÉ GUÉRET, Paris, France. Filed Dec. 26, 1913. Serial No. 808,873. (Cl. 123—182.)



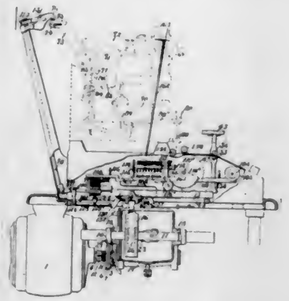

1. An internal combustion engine comprising a fixed cylindrical element having a port, a rotary cylindrical element provided with a port to register with the port of the fixed cylindrical element, and means for preventing leakage of fluid between said elements embodying a projecting lip surrounding the port in one of said elements through which port the gases from the combustion chamber of the cylinder pass in order to escape between said elements, said lip being adapted to contact with the wall of the other element, and a split ring having its ends cut out to surround the said lip with a certain lateral clearance and having its joint substantially in line with the axis of the port surrounded by said lip.

3. An internal combustion engine comprising a fixed cylindrical element having a port, a rotary cylindrical element containing a combustion chamber and provided with a port to register with the port of the fixed cylindrical element, and means for preventing leakage of fluid between said elements embodying a projecting lip surrounding the port of the rotary element and adapted to contact with the wall of the coöperating fixed element, the rotary element also having a circumferential groove, and an annular packing fitted in said groove and surrounding said lip, the packing having a split portion adjacent to said lip.

5. In an internal combustion engine, the combination of a cylinder, a piston reciprocable therein, a compression relief cock adapted to communicate with the combustion chamber of the cylinder, and a valve having an intake and exhaust controlling port, the port of said valve also controlling communication between the combustion chamber of the cylinder and the compression relief cock, said valve operating to cut off communication between the combustion chamber of the cylinder and the relief cock during the compression stroke of the piston.

[Claims 2 and 4 not printed in the Gazette.]

1,231,523. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Hartford, Conn., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Mar. 17, 1911. Serial No. 614,993. (Cl. 235—62.)



4. In a computing machine, the combination with printing devices, a letter-feeding carriage and computing devices, of an operator for moving the computing devices, and means dependent upon the writing of a character in the units place for causing said operator to be actuated, and for returning said carriage to begin a new line.

21. In a combined typewriting and computing machine, the combination with a traveling carriage, of means for printing numbers in a column located at sundry places on a work-sheet carried by the carriage, computing mechanism, and means for causing the numbers to be computed and the carriage to be returned automatically to the beginning of the column on printing the complete number in said column.

23. In a combined typewriting and computing machine, the combination with a traveling carriage having step-by-step movement, of computing mechanism, and means controlled by the carriage in its step-by-step movement for causing computation in said computing mechanism and the return of said carriage.

48. In a combined typewriting and computing machine, the combination with a typewriter carriage, of numeral keys, computing devices controlled thereby, a set of jacks, a device on said carriage to move said jacks successively for determining the denomination of the computing devices to be controlled by said keys, a supernumerary jack also operable by said device at the next movement thereof after the units jack is operated, and means controlled by said supernumerary jack for returning said carriage.

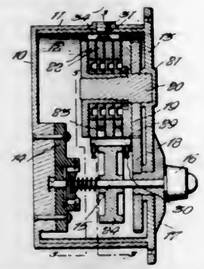
[Claims 1 to 3, 5 to 20, 22, and 24 to 47 not printed in the Gazette.]

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1,231,524. PERMUTATION-LOCK. SAMUEL P. HATCHETT and GEORGE L. DILLARD, Mogollon, N. Mex. Filed June 14, 1916. Serial No. 103,675. (Cl. 70—53.)

1. In a permutation lock, a plurality of tumblers having notches in their peripheries, an operating member, a rotary element carried by the operating member, and a movable locking member arranged between the rotary element and tumblers and in close relation with the said tumblers, said rotary element being provided with means for moving the locking member into the notches of the tumblers when desired, said means serving also to hold the said member against the peripheries of the tumblers, when their notches are out of alinement.

2. In a permutation lock, a casing, a plurality of tumblers having notches in their peripheries, an operating member, a rotary element on the operating member and provided with cam surfaces terminating in shoulders, and a bodily movable locking member having sliding and guided movement in the casing, said member normally resting upon the rotary element against the shoulder thereof and adapted to be moved by the cam surfaces of said element into the notches of the tumblers.

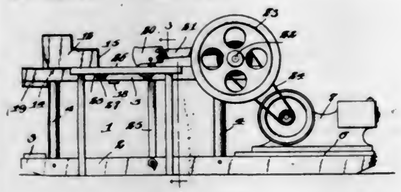


3. In a permutation lock the combination of a sectional casing, the sections of which being provided with registering openings, a locking device for retaining the sections of the casing in locked position and including a screw threaded bolt adjustably mounted in said openings, a lock bar carried by the inner end of said bolt, and a plurality of tumblers in said casing and having notches adapted to be alined to receive said lock bar when said bolt is adjusted, whereby the sections of said casing are disconnected.

4. In a permutation lock the combination of a sectional casing, the sections of which being provided with registering openings, a locking device for retaining the sections of the casing in locked position and including a screw threaded bolt adjustably mounted in said openings, a lock bar carried by the inner end of said bolt, a plurality of tumblers in said casing and having notches adapted to be alined to receive said lock bar when said bolt is adjusted, whereby the sections of said casing are disconnected, and a guide member for said lock bar having an opening for receiving said bolt when the same is adjusted to open the casing.

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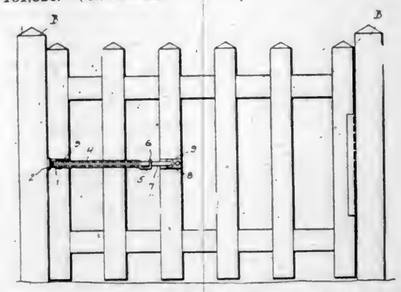
1,231,525. WOOD-SPLITING MACHINE. HAKON K. HAUBERG, Henning, Minn. Filed June 20, 1916. Serial No. 104,751. (Cl. 144—193.)



A machine of the character described comprising a frame, including horizontal sills, supporting posts rising therefrom, and side bars carried by said posts, a table mounted upon said side bars and having longitudinal slots at each end thereof and a division piece between said slots, a swinging arm pivotally mounted at its lower end upon the sills and extending at its upper end through and movable in one of said slots, a cutter pivotally mounted upon the upper end of said arm, a cross piece secured to the side bars and extending transversely across the other slot, an abutment block slidably mounted at the rear portion of its base upon said cross piece, said side bars being provided with dowel seats and said cross piece having dowel pins to adjustably engage said seats, a cross piece upon the base of the forward end of the block extending beneath said side bars, a transverse shaft journaled upon the table and having a crank portion arranged in line with the first-named slot, a pitman rod connecting said crank with the pivoted cutter, and means for driving the shaft for reciprocating the cutter toward and from the block.



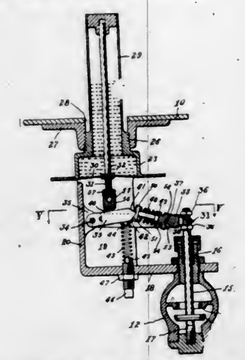
1,231,526. GATE OR DOOR CLOSING DEVICE. ROYAL A. HAWLEY, Graham, Tex., assignor of one-third to Agustus B. Eddleman and one-third to Walter B. Douglas, Graham, Tex. Filed Feb. 28, 1917. Serial No. 151,524. (Cl. 16—9.)



The combination with a hinged closure and a support therefor, of an arm carried by the support and having a threaded portion, a coil spring having one end receiving the threaded portion of the arm and having its opposite end provided with an eye, and a rod carried by the closure and slidably received by the eye on the last-mentioned end of the spring, for the purpose specified.

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1,231,527. THERMOSTATIC SNAP CONTROL. HERBERT J. LONG, New Brunswick, N. J., assignor to The Long, Landreth Schneider Co., New Brunswick, N. J., a Corporation of New Jersey. Filed Sept. 14, 1914. Serial No. 861,511. (Cl. 126—351.)



1. In a thermostatic snap-control the combination of a valve actuating part, a thermostatically actuated element, a pair of pivoted members, one of said members intersecting the path of movement of said element, a spring holding it against the latter, the other of said members articulating with said valve-actuating part, and resistance means forming together with said path intersecting member a reacting toggle arrangement operatively connected with the member which articulates with said valve actuating part, the arrangement being such that gradual movement of said element in reversed directions presently snaps said valve actuating part in opposite directions.

3. In a thermostatic snap-control, the combination of a valve actuating member, a thermostatically actuated plunger, and mechanism adapted to operatively connect said member and plunger and including an arm extending therebetween and articulating with the former, said mechanism also including a spring controlled toggle arrangement, whereby an actuation of said plunger in the

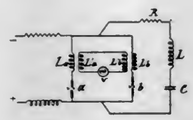
direction of opening of the valve successively exercises a force upon the valve actuating member tending to first close and then to open such valve.

7. In a thermostatic snap-control the combination of a valve stem, a thermostatically actuated member, and mechanism operatively connecting said member and valve and including; an arm having a fixed pivot and a free end articulating directly with said stem, together with a reacting toggle arrangement adapted to play between such fixed pivot and free end of said arm whereby alternately to shift the position of the latter in response to the action of said member.

[Claims 2 and 4 to 6 not printed in the Gazette.]

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1,231,528. GENERATOR FOR HIGH-FREQUENCY CURRENTS. PEDER OLUF PEDERSEN, Frederiksberg, Denmark, assignor to Federal Telegraph Company, a Corporation of California. Filed Mar. 24, 1913. Serial No. 756,323. (Cl. 250—36.)

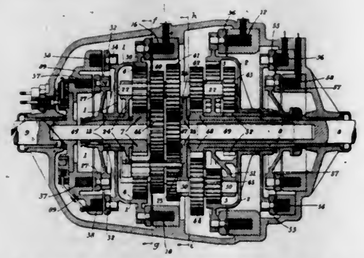


1. A generator for high frequency currents comprising a single oscillation circuit having a plurality of discharge spaces therein, and means for directing a high frequency current through said oscillation circuit and for successively and periodically directing said current through said spaces at periods which are a simple multiple of the high frequency current passing through the oscillation circuit.

2. A generator for high frequency currents comprising a single oscillating circuit having a plurality of discharge spaces connected in parallel therein, and means for directing a high frequency current through said oscillation circuit and for successively and periodically directing said current through said spaces at periods which are a simple multiple of the high frequency current passing through the oscillation circuit.

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1,231,529. VARIABLE-SPEED GEARING. GEORGE POLLARD, Piccadilly, London, England, assignor to Menco-Elma Syndicate Limited, London, England. Original application filed Aug. 18, 1915, Serial No. 46,179. Divided and this application filed June 13, 1916. Serial No. 103,576. (Cl. 74—34.)



3. In a variable speed changing gear of the epicyclic spur wheel and pinion type, a driving shaft, a driven shaft, a carrier rigid with the driven shaft and free with relation to the driving shaft, planet pinions mounted on said carrier, secondary planetary gears operated by said planet pinions, abutment gears meshing with said secondary planetary gears, electro-magnetic brakes for selectively controlling said abutment gears, and means associated with the driving shaft for driving the planet pinions.

4. In a variable speed changing gear of the epicyclic spur wheel and pinion type, a driving shaft, a driven shaft, a carrier rigid with the driven shaft and free with relation to the driving shaft, planet pinions mounted on said carrier, secondary planetary gears operated by said planet pinions, abutment gears meshing with said secondary planetary gears, electro-magnetic brakes for selectively controlling said abutment gears, and electro-magnetically controlled.

[Claims 1, 2, 5, and 6 not printed in the Gazette.]

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1,231,530. VALVE-BALL. FRED THOMAS ROBERTS, Cleveland, Ohio, assignor to The Paramount Rubber Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 29, 1915. Serial No. 24,645. (Cl. 4—5.)



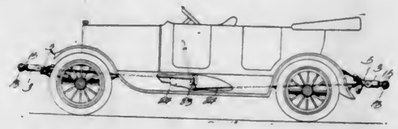
1. A hollow valve ball having a reinforcing device in the upper portion of the ball consisting of a series of webs lying in vertical radial planes and extending from a central vertical core to the wall of the ball, the upper edges of the webs being connected with such wall.

10. A tank ball of the class described, comprising a one-piece spherical member of varying thickness, and radially disposed integral formed ribs on the interior thereof extending downwardly from the central upper portion of the member to near the middle thereof.

[Claims 2 to 9 not printed in the Gazette.]

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1,231,531. SAFETY DEVICE FOR AUTOMOBILES. EDWARD C. SHILLING, Columbus, Ohio, assignor of one-half to Jacob Dagger, Urbana, Ohio. Filed Nov. 13, 1916. Serial No. 131,109. (Cl. 21—183.)



1. A safety device comprising an open-ended tubular member to be secured to a vehicle, a shoulder extending into each opening in said member, a bar slidable in and normally disposed in said member, enlarged heads on the ends of said bar, a bearing carrying sleeve surrounding said bar to engage either of said shoulders and heads to limit the outward movement of the bar, and means for holding said bar in extended position.

2. A safety device comprising an outer tubular member, an inner member of less diameter than the outer member and slidable therein, enlarged heads on the ends of said inner member also of less than the inner diameter of the tubular member, caps on the ends of the outer member, each having an opening therein to receive said heads, a sleeve surrounding the inner member within the outer member and spacing the former from the latter, said sleeve having a plurality of seats, a plurality of bearing members in said seats, and means for holding the inner member in extended position.

3. A safety device comprising an outer tubular member, an inner tubular member of less diameter than the outer member and slidable therein, enlarged heads on the ends of said inner member and also of less than the inner diameter of the tubular member, shanks extending from said heads into the ends of said inner member, caps on the ends of the outer tubular member, each having an opening therein to receive said heads, a sleeve surrounding said inner member within the outer member and spacing the former from the latter, and means for holding said inner member in extended position.

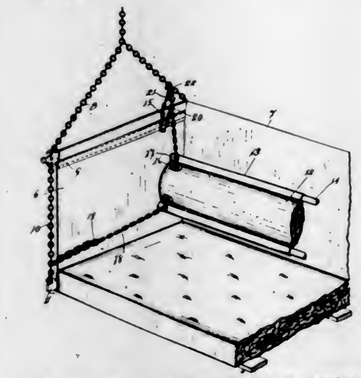
4. A safety device comprising an outer tubular member, an inner member of less diameter than the outer and slidable therein, enlarged heads on the ends of the inner member, each of said heads having a longitudinally extending groove, means for spacing the inner member from the outer member, and a cam carried by each end of the outer member, either being adapted to engage the inner member when extended, said cams being normally disposed in said grooves.

5. A safety device comprising an outer tubular member, an inner member of less diameter than the outer member and slidable therein, enlarged heads on the ends of the inner member, each of said heads having a longitudinally extending groove, a cap on each end of the outer member having an opening therein to receive the adjacent head, said caps also being longitudinally slotted, means for spacing the inner member from the outer member, and a cam carried by each of said caps within its slot, either of said cams being adapted to engage the inner member when extended, said cams being normally disposed in said grooves.



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1,231,532. HAMMOCK BACK-REST. HARRY B. ARNOLD, New Britain, Conn., assignor to The National Spring Bed Company, New Britain, Conn., a Corporation of Connecticut. Filed Sept. 26, 1914. Serial No. 863,632. (Cl. 5—61.)



1. In combination with a hammock having means for suspending it, a back rest having an opening therein at a distance from its top edge, a flexible support extending through said opening and secured to the back rest between said opening and the top edge thereof, and means for securing the ends of said flexible support to hold the back rest in a predetermined position.

3. In combination with a hammock, a back rest having openings therethrough, a flexible support extending along the back of said rest and through the openings to the front thereof, means for securing said support in proximity to said openings, and means for extensibly attaching said support at the ends thereof.

5. In combination with a hammock having means for suspending it, a back rest including a cushioned body part having openings therein, stiffened edges flexibly secured to the body part, a flexible support extending from the back of said rest through said openings, means for attaching said support to said stiffened edges, and means for securing the ends of said support.

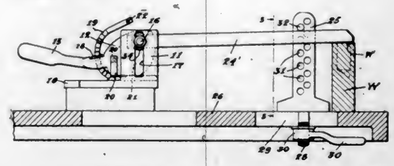
7. In combination with a hammock having means for suspending it, a back rest including a cushioned body part having openings therein, a stiffening piece located at the edge of the body part and flexibly connected therewith, and a flexible support for said back rest, said support extending through said openings and secured to the front face of said stiffening piece.

8. In combination with a hammock having means for suspending it, a back rest including a body part with openings therein, stiffening pieces located at opposite edges of the body part and flexibly connected therewith, and a flexible connection to support said back rest, said connection extending through said openings and secured to the front face of each stiffening piece.

[Claims 2, 4, and 6 not printed in the Gazette.]

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1,231,533. WORK-HOLDER. MASON EDWIN CLARK, Seattle, Wash. Filed Aug. 8, 1916. Serial No. 113,715. (Cl. 90—59.)



1. In a device of the character described, a pair of levers, a fulcrum post adapted to be fixedly secured to a work-table and provided with a plurality of holes, a fulcrum-pin adapted to be inserted in a selected one of said holes, a stand consisting of a base and two spaced side elements, said side elements being furnished with guide slots, a cam having its periphery seated on the base element of said stand, a pin extending through the cam and the two levers and being guided in the aforesaid cam slots, means to rotatably move the cam to actuate said levers, and means to releasably secure the cam in clamping positions with respect to the levers.

2. In a device of the character described, a pair of work-clamping levers, a fulcrum pin therefor, means adapted to be fixedly secured to a work table for holding said fulcrum pin at selected elevations, a cam operatively connected to said levers, means to operate the cam for actuating the levers, a rack, and a pawl provided on the cam and engageable in the rack for securing the cam in position to actuate the levers.

3. In a device of the character described, a pair of work-clamping levers, a fulcrum post having a series of holes, fulcrum pins adapted to be employed in selected of said holes, a supplementary pin insertible in one of the post holes to reinforce one of the aforesaid pins at its outer end, and means whereby the levers may be influenced to effect the clamping of the work in place.

4. In a device of the class described, a pair of levers, a fulcrum post disposed between the levers near their forward ends, a fulcrum pin engageable with said post at a selected elevation, a cam disposed between the rear ends of the levers, and means for operatively connecting the cam to the levers whereby the latter afford independent vertical movements relative to each other.

5. In a device of the character described, a pair of clamping levers, an adjustable fulcrum serving for both of the levers, a stand, a cam connected with both of the levers for simultaneously operating the same, a rack, a pawl element provided on the cam and engageable with the teeth of said rack, a spring tending to maintain the cam in position to engage said pawl, and means provided on the spring for yieldingly holding the cam in inoperative position with respect to said levers.

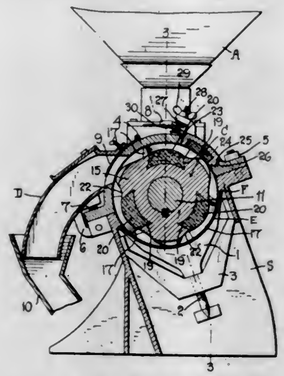
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1,231,534. GRAIN-HULLING MACHINE. ALBERT B. COUCH, Perry, Tex., assignor to Beryl Couch, Perry, Tex. Filed Aug. 26, 1916. Serial No. 117,044. (Cl. 83—30.)

1. A device of the character described comprising a casing provided with an inlet opening and an outlet opening, said openings being positioned adjacent the opposite ends of the casing, a rotatable member positioned within the casing and provided with longitudinally disposed and circumferentially spaced abrading surfaces and with spi-

rally disposed spines intermediate said abrading surfaces.

2. A device of the character described comprising a casing provided with an inlet opening and an outlet opening, said openings being positioned adjacent the opposite ends of the casing, a rotatable member positioned within the casing and provided with longitudinally disposed and circumferentially spaced abrading surfaces and with spirally disposed spines intermediate said abrading surfaces, said spines extending beyond the periphery of the rotatable member and disposed on varying angles from one end of the cylinder toward the other.



3. A device of the character described comprising a casing provided with an inlet opening and an outlet opening, said openings being positioned adjacent the opposite ends of the casing, a rotatable member positioned within the casing and provided with longitudinally disposed and circumferentially spaced abrading surfaces and with spirally disposed spines intermediate said abrading surfaces, the periphery of the cylinder being provided with longitudinally disposed grooves between the rear ends of the spines and the adjacent abrading surfaces.

4. A device of the character described comprising a casing provided with an inlet opening and an outlet opening, said openings being positioned adjacent the opposite ends of the casing, a rotatable member positioned within the casing and provided with longitudinally disposed and circumferentially spaced abrading surfaces and with spirally disposed spines intermediate said abrading surfaces, said abrading surfaces being disposed on an outward transverse curvature.

5. A device of the character described comprising a casing provided with an inlet opening and an outlet opening, said openings being positioned adjacent the opposite ends of the casing, a rotatable member positioned within the casing and provided with longitudinally disposed and circumferentially spaced abrading surfaces and with spirally disposed spines intermediate said abrading surfaces, and outstanding vanes carried by the rotatable member and underlying the inlet opening and serving to force the material delivered through said opening longitudinally of the rotatable member.

[Claims 6 to 8 not printed in the Gazette.]

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1,231,535. STUMP-BURNING DEVICE. WILLIAM H. JONES, Ottumwa, Iowa. Filed Apr. 24, 1916. Serial No. 93,245. (Cl. 110—21.)

1. In a device of the kind described; the combination of a source of power with a blower, adapted to produce a blast of air; a fuel feeding device, adapted for feeding into said air blast pulverized fuel, a pipe adapted to conduct said air blast containing pulverized fuel from said blower to a stump and discharge it against the stump being burned, said pipe that conducts said air blast being supported at the end nearest the stump lower than it is at the end farthest from the stump; the supports to said pipe being loosely connected with it at their upper ends and separated one from the other at their lower ends, and leaning toward the stump at such an angle as to produce an end thrust toward the stump, substantially as shown.

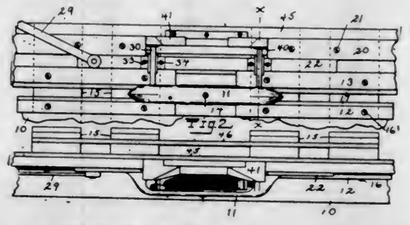


2. In a device of the kind described; the combination of a log of wood, with a pipe, adapted to conduct an air blast; said pipe and log of wood substantially parallel and supported with the end nearest to the stump lower than the end farthest from the stump; said supports being loosely connected with the log of wood and pipe at their upper end and separated at their lower end, and leaning toward the stump at such an angle as to produce an end thrust to the log of wood and pipe, substantially as shown.

3. In a device of the class described; the combination of a log of wood, with supports, said supports lower at the end nearest the stump than they are at the end farthest from the stump, the end of said supports in contact with the earth separated one from the other, and loosely connected with the log of wood, said supports leaning toward the stump at such an angle as to produce an end thrust to the log of wood, substantially as shown.

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1,231,536. SHUTTLE MOTION AND CARRIER. RUDOLPH KRENZ, Middletown, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn., a Corporation. Filed Aug. 21, 1916. Serial No. 116,070. (Cl. 139—49.)



1. In combination in a lathe for a loom, a guide way for the shuttle, interrupted by a weaving space, a shuttle positioned in the said guide-way having a transverse slot adjacent each end, on the upper side, a carrier slidably mounted above the said guide-way, a cam positioned above the said weaving space, having a cam groove, a pair of dogs pivotally mounted on the said carrier, the lower ends being adapted to engage with the said slots, and the upper ends having rollers that are operative in the said cam groove.

2. In a lathe for a loom, a pivotally mounted dog for engaging with the shuttle, the said dog being in the form of a rod, having pivotal supporting means intermediate the ends, one of the said ends being provided with guide means for tilting the said dog on the said pivotal supporting means, the other end serving to engage with a groove in the said shuttle, the body portion of the said dog between the said pivotal supporting means and the said other end being of appreciable length, and a channel fitting and engaging with the said body portion for steadying the said dog while the said other end is engaged with the shuttle.

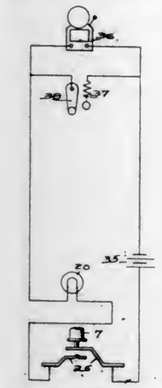
4. In a loom, a carriage, guide strips therefor, a pair of swinging dogs operatively mounted on the said carriage, the said dogs serving as actuating means for the shuttle, a cam having a groove for engaging with the said dogs serving to guide the said dogs in their movement across the weaving space, and the face of one of the said guide strips serving as the guiding means for the said dogs to one side of the said cam.

[Claim 3 not printed in the Gazette.]



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1,231,537. CALL SYSTEM. THOMAS J. MURPHY and EDWARD MILLER, Rochester, N. Y. Filed July 17, 1916. Serial No. 109,689. (Cl. 177—339.)



1. In a call system, the combination of a source of current supply, a circuit closer and a lamp located at a calling station, a vibrator signaling device located in series with the lamp and the circuit closer, a resistance connected in shunt with the vibrating signaling device and a switch for opening and closing the circuit through the resistance, the vibrating signaling device, the resistance and the switch located at a station to be called to cause the lamp to become lighted when the circuit closer and the switch are closed and to cause the operation of the vibrating signaling device and to prevent the lighting of the lamp when the circuit closer is closed and the switch is open.

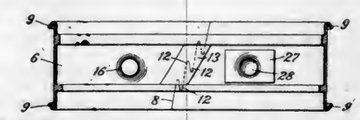
2. In a call system, the combination of a source of current supply, a circuit closer, a lamp having a tungsten filament and a vibrator signaling device located in series, a resistance connected in shunt to the vibrator signaling device, a switch for opening and closing the circuit through the resistance to cause the lamp to become lighted and to prevent the operation of the vibrator signaling device when the circuit closer and the switch are closed, and to cause the operation of the vibrating signaling device and to prevent the lighting of the lamp when the circuit closer is closed and the switch is open.

3. In a call system, the combination of a source of current supply, a vibrator signaling device and a circuit closer, a pair of lamps having tungsten filaments located in parallel circuits, a resistance located in a circuit in shunt to the vibrator signaling device, a switch for connecting either lamp with the resistance and the vibrator signaling device.

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1,231,538. VEHICLE-WHEEL RIM. JAMES H. WAGENHORST, Akron, Ohio. Continuation in part of applications Serial No. 702,851 and Serial No. 702,854, filed June 10, 1912. This application filed Nov. 24, 1915. Serial No. 63,152. (Cl. 152—21.)

1. A tire-carrying rim for resilient tires comprising a transversely split ring carrying tire-engaging means, the ends of said ring having rigid interlocking means integral therewith for preventing relative movement of said ends in radial and circumferential directions, the ends of said ring being disengageable by relative lateral movement thereof.



2. A transversely split demountable rim for vehicle wheels, the abutting rim ends constituting interlocking members engageable and disengageable by relative lateral movement thereof and adapted to lock said ends against both circumferential and radial separation.

3. A transversely split demountable rim for vehicle wheels, the abutting rim ends being adapted to interengage and disengage by relative lateral movement thereof, the said rim ends constituting the sole means for interlocking said ends against circumferential separation and against relative radial movement in either direction.

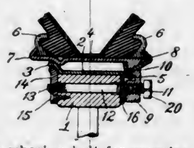
4. A demountable rim transversely split at an angle to the plane thereof, whose ends are adapted to interengage, the face of each end comprising intersecting planes angularly disposed with respect to adjacent axial planes, their interengagement locking said rim ends against circumferential displacement in either direction, and means borne by an end adapted to engage beneath the other and to lock them against radial displacement in either direction.

5. A demountable rim transversely split at one point only and in the general direction of a chord, so that one of its abutting ends overlies the face of the other, the outer end being adapted to receive the inner end laterally between a rigid extension formed below the base of the outer end and its circumferentially extending face the abutting ends of said rim being adapted to interlock positively.

[Claims 6 to 8 not printed in the Gazette.]

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1,231,539. VEHICLE-WHEEL RIM. JAMES H. WAGENHORST, Akron, Ohio, assignor, by mesne assignments, of two-fifths to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York, one-fifth to The Goodyear Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio, and one-fifth to The United States Tire Company, New York, N. Y., a Corporation of New York. Original application filed June 10, 1912, Serial No. 702,855. Divided and this application filed Nov. 24, 1915. Serial No. 63,153. (Cl. 152—21.)



1. In a vehicle wheel, a bolt for securing a demountable rim keeper to a fixed rim, said bolt having a screw-threaded portion adjacent each end, the threads of one portion being of a pitch opposite to those of the other portion, one portion being adapted to engage said keeper and the other portion being adapted to engage said fixed rim, the rotation of said bolt in one direction causing it to advance toward said fixed rim and simultaneously to cause said keeper to approach said fixed rim at a speed equal to the travel of the bolt plus the trave lof the keeper thereon.

2. In a vehicle wheel, means for removably securing a demountable rim thereto comprising keepers upon opposite sides of the wheel, and a bolt adapted simultaneously to engage with said keepers, and to draw them together by its rotation in one direction, said bolt having a screw-threaded portion adjacent each end, the threads of one portion being of a pitch opposite to those of the other portion.

3. In a vehicle wheel, a fixed rim, keepers upon opposite sides thereof, and a bolt adapted simultaneously to engage said keepers, and to cause their mutual approach by its rotation, said bolt having a screw-threaded portion adjacent each end, the threads of one portion being of a pitch opposite to those of the other portion.

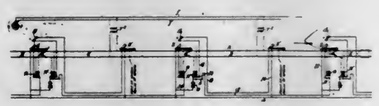
4. In a vehicle wheel, means for securing a demountable rim thereto comprising a rotatable bolt having at one end an external thread engaging a complementally-threaded member on the wheel and having adjacent its other end a second external thread of opposite pitch, and an internally-threaded rim clamp engaging the second thread, the rotation of said bolt in one direction causing said member and clamp to draw together, rotation in the opposite direction causing them mutually to recede.

5. In a vehicle wheel, the combination with a felly and a demountable rim thereon of a rotatable bolt having a right-hand external thread engaging a complementally-threaded member affixed to one side of the felly, and also having a left-hand external thread, engaging a complementally threaded member riding on said bolt at the opposite side of the felly removable by rotation of the bolt to first withdraw the clamp axially from the rim and then rotate it out of operative position, and a stop on the felly for limiting said rotative movement of the clamp.

[Claims 6 to 8 not printed in the Gazette.]

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1,231,540. RAILWAY SIGNALING SYSTEM. HERBERT A. WALLACE, New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Continuation of application Serial No. 498,883, filed May 28, 1909. This application filed Nov. 8, 1913. Serial No. 799,911. (Cl. 246—30.)



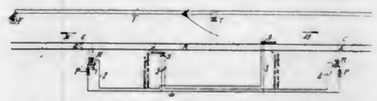
1. In a signaling system for railways, a section of track, a source of signaling current connected with the track rails adjacent the middle of the section, two track relays one connected with the rails adjacent each end of the section, a signal located adjacent the entrance end of the section and controlled by the adjacent relay, and another signal located adjacent the point at which the relay at the exit end of the track circuit is opened by a car or train and controlled by said relay at the exit end of the track circuit.

2. In a signaling system for railways, a section of track, a source of signaling current connected with the track rails adjacent the middle of the section, two track relays one connected with the rails adjacent each end of the section, a home signal located adjacent the entrance end of the section and controlled by the adjacent relay, a home signal located in advance of the track section, a circuit controller operated by the latter home signal, and a distant signal located adjacent the point at which the relay at the exit end of the section is opened by a car or train passing through the section and controlled by said relay at the exit end of the section and by the said circuit controller.

6. In railway signaling, a track circuit, a source of signaling current connected therewith adjacent the middle of the track circuit, two relays one connected with the rails adjacent each end of the track circuit, a signal located adjacent the entrance end of the track circuit and controlled by the relay adjacent that end, and a second signal located adjacent the point at which the relay at the exit end is opened by a car or train passing through the track circuit and controlled by the last-mentioned relay.

[Claims 3 to 5 and 7 to 13 not printed in the Gazette.]

1,231,541. RAILWAY SIGNALING. HERBERT A. WALLACE, New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Original application filed Nov. 8, 1913. Serial No. 799,911. Divided and this application filed June 18, 1914. Serial No. 845,765. (Cl. 246—30.)



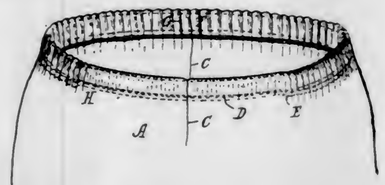
1. In combination, a section of railway track over which traffic moves in both directions, a source of signaling current connected with the track rails adjacent the middle of the section, two track relays one connected with the track rails adjacent each end of the section, a signal located in advance of one end of the section and controlled by the relay at the other end, said signal being located adjacent the point at which a car or train passing through the section from the first-mentioned end opens the relay at the last-mentioned end, and a second signal located between the source of current and the last-mentioned end and controlled by the relay at the first-mentioned end, said second signal being located adjacent the point at which a car or train passing through the section toward the first-mentioned end opens the first-mentioned relay.

2. In combination, a section of railway track over which traffic moves in both directions, a source of signaling current connected with the track rails adjacent the middle of the section, two track relays one connected with the track rails adjacent each end of the section, and two signals located on opposite sides respectively of the point of connection of the source with the track rails and each controlled by the track relay on the other side of said point, each signal being located adjacent the point at which the relay which controls it is opened by a car or train passing through the section toward the relay.

3. In combination, a section of railway track over which traffic moves in both directions, a source of alternating signaling current connected with the track rails adjacent the middle of the section, two track relays one adjacent each end of the section, and two signals located on opposite sides respectively of the point of connection of the source with the track rails and each controlled by the track relay on the other side of said point, each signal being located adjacent the point at which the relay which controls it is opened by a car or train passing through the section toward the relay.

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1,231,542. STRIP-FEEDING METHOD FOR SEWING-MACHINES. JOHN P. WEIS, Nyack, N. Y., assignor to Lucius N. Littauer, Gloversville, N. Y. Original application filed July 12, 1915. Serial No. 39,222. Divided and this application filed Nov. 11, 1916. Serial No. 130,710. (Cl. 2—143.)




1. The method of attaching an elastic strip to a piece of work which consists in attaching one part of said strip to said work by stitching and feeding said elastic strip to the work, and during such feeding movement tensioning the strip thereby to stretch and narrow it whereby it will avoid the stitches and then at a certain period releasing said strip thereby to permit it to widen so as to be stitched along a part thereof.

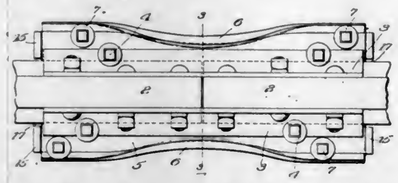
7. The method of attaching an elastic strip to a piece of work which consists in stitching the strip to the work while the strip is in unstretched condition and then shifting the strip away from the stitching mechanism and placing it under tension while continuing the stitching of the work.

[Claims 2 to 6 and 8 to 10 not printed in the Gazette.]



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1,231,543. BASE-PLATE FOR RAIL-JOINTS. FRANKLIN E. ABBOTT, Buffalo, N. Y., assignor to Lackawanna Steel Company, New York, N. Y., a Corporation of New York. Filed Mar. 22, 1917. Serial No. 156,612. (Cl. 239—2.)



1. A base plate for rail joints having the central portion of each side upwardly and inwardly curved in a composite arch, presenting similar arches to receive the stresses and transmit them to the supports at the ends in all longitudinal sections taken at any angle of the quadrant between the perpendicular and the horizontal.

3. A base plate for rail joints having a flat central bearing surface for the rail extending longitudinally from end to end, and the central portion of each side inwardly and upwardly curved to form a composite arch having its highest and innermost point adapted to be arranged at about the joint between the rails said highest point being below the splice-bar bolts to permit access thereto, and said innermost point being spaced slightly from the splice bar flange.

7. A base plate for rail joints having the central portion of each side inwardly and upwardly curved to form a composite arch, and having integral lugs at the ends up turned to lie on each side of the rail and slightly spaced therefrom the innermost portions of the arches being spaced to receive between them the rails and the splice-bars and to leave a small space between the central inner portion of each arch and the splice-bar flange, substantially equal to the space between the lug and the rail flange.

[Claims 2, 4 to 6, and 8 to 11 not printed in the Gazette.]

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1,231,544. CORN-HANGER. JAMES H. BROWN, Chicago, Ill., assignor to John Amann, Chicago, Ill. Filed May 20, 1916. Serial No. 98,969. (Cl. 34—26.)

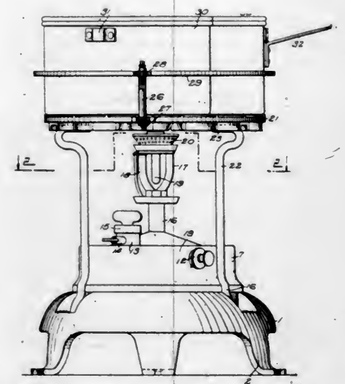


1. A corn hanger consisting of an upright and a wire arm adapted to be inserted longitudinally into an ear of corn for supporting it, said arm having an eye encircling said upright, said eye being downwardly warped or helicized to afford a leverage for holding the arm horizontal and causing to maintain its position vertically upon the upright.

2. In a corn hanger, the combination of a wire rod having a loop at one end whereby it may be suspended, and a plurality of hanger arms formed of wire and having eyes formed at their inner end, the internal diameter of the eye being but slightly greater than the diameter of the rod and the eye being bent to encircle the rod for approximately 360 degrees, the end of the eye being bent downward to engage the rod at a point below the level of the hanger arm to thereby produce a leverage for holding the arm approximately horizontal and gripping the rod for the purpose of enabling the arm to maintain its position vertically upon the rod.

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1,231,545. COMBINED STOVE AND ARTICLE-SUPPORT. DAVID DAVIS, New York, N. Y. Filed July 10, 1915, Serial No. 39,115. Renewed May 16, 1917. Serial No. 169,114. (Cl. 126—44.)



1. In a device of the character described, a complete stove structure provided with legs having an enlargement at the end and a base for supporting said stove structure, said base being formed with a plurality of notches and a slot arranged adjacent each notch, said slots being provided with a large portion and a narrow portion whereby said legs may be passed through said large portion and turned into the narrow portion, and means on the base for locking said legs against a return movement.

2. In a device of the character described, a stove provided with a plurality of legs formed with enlarged feet, said legs merging into upstanding arms, each of said arms being formed with a horizontal portion, a base provided with a comparatively large opening through which said feet are adapted to be passed and a narrow opening extending from the large opening whereby when the legs are turned to position within the narrow opening said feet cannot be removed, and a supporting member arranged on top of said upstanding arms, said supporting member being provided with pairs of depending members producing grooves in which the horizontal portion of said arms are fitted.

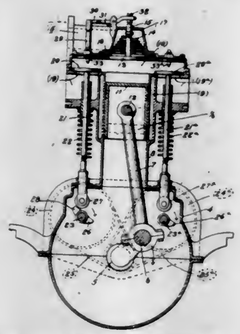
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1,231,546. INTERNAL-COMBUSTION ENGINE. CHARLES E. GIDDINGS, Jr., Pittsburgh, Pa. Filed Oct. 14, 1915. Serial No. 55,802. (Cl. 123—75.)

1. In an internal combustion engine, the combination of a casing having a cylinder, a piston, an inlet port of large area centrally located over the piston and a plurality of exhaust ports of large area in the casing symmetrically placed around the cylinder, substantially as described.

2. In an internal combustion engine, the combination with a casing having a cylinder, a piston in the cylinder,

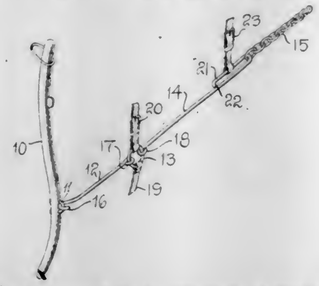
a centrally located inlet port of large area and a plurality of symmetrically arranged exhaust ports, of valves cover-



ing said exhaust ports and means to open said valves suddenly and after the piston has begun its expelling motion, whereby to flush the combustion chamber.

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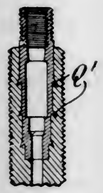
1,231,547. TRACE. BERNARD JAKEWAY, Harrison, Mich. Filed Oct. 28, 1916. Serial No. 128,278. (Cl. 54—52.)



A trace comprising a rod constructed to swingingly engage a hame staple, the rod being curved outwardly away from the hame and formed at its rear end with an eye, a ring passing loosely through the eye, and a rod section having an eye at its forward end loosely engaged with said ring, said ring serving as a means of attachment for a back band and a belly band, the rear end of the rod section being formed with an elongated loop, said loop being adapted to be slidably engaged by a hip strap.

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1,231,548. TIRE-VALVE. EUGENE V. MYERS, East Orange, N. J., assignor to A. Schrader's Son, Inc., Brooklyn, N. Y., a Corporation of New York. Filed Mar. 21, 1916. Serial No. 85,633. (Cl. 152—12.)



1. A composite valve shell for motor vehicle tires formed to permit the introduction of a check mechanism into its outer end, and its removal therefrom, and said shell formed with a body portion of strong, rigid and cheap metal, such as iron or steel, and an end part of rust-resisting metal, such as brass, said two parts being united with a permanent joint to provide a unitary structure which is substantially integral, said joint being leak-tight and non-rotative under all conditions of use.

6. A composite valve shell for motor vehicle tires formed to permit the introduction of a check mechanism into its outer end, and its removal therefrom, and said shell formed with an externally threaded body portion of strong, rigid and cheap metal, such as iron or steel, and a plug of rust-resisting metal, such as brass, said two parts being in permanent leak-tight surface contact to provide a unitary structure which is substantially integral, said joint being leak-tight and non-rotative under all conditions of use.

11. A composite valve shell for motor vehicle tires having a clamping foot or shoe at its inner end and being constructed of rigid metal, said shell being formed to permit the introduction of a check mechanism into its outer end and its removal therefrom, and said shell formed with an externally threaded body portion of strong and rigid material, such as iron or steel, and a plug of rust-resisting material such as brass, inserted within the outer end of said body portion and forming a nipple extending beyond the outer end of said body portion, said plug having an internal thread, a shoulder below said thread, and a valve chamber below said shoulder, and being forced within said body portion, the metals of the two parts forming a permanent leak-tight joint whereby to provide a substantially integral and unitary structure.

14. A composite valve shell comprising an iron or steel member having a bore at its outer end having an insert of rust-resisting metal in said bore, said insert being formed with a bore having an internal screw-thread and a shoulder below said screw-thread, and said body having a series of ridges in said bore, and said insert being forced into said bore to form a metal to metal leak-tight joint with the body to provide a unitary structure which is substantially integral.

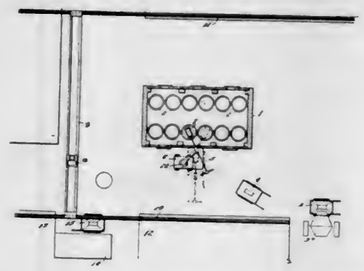
[Claims 2 to 5, 7 to 10, 12, 13, and 15 not printed in the Gazette.]

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# REISSUES.

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14,320. APPARATUS FOR HANDLING MATERIAL IN GLASS-MAKING. JOHN A. BECHTEL, Tarentum, Pa., assignor to Pittsburgh Plate Glass Company, a Corporation of Pennsylvania. Filed May 28, 1917. Serial No. 170,532. Original No. 1,224,892, dated May 8, 1917, Serial No. 777,860, filed July 8, 1913. (Cl. 214—23.)



1. In a glass plant, in combination with a batch mixer and a glass melting furnace having charging openings through its side and provided with melting pots, a wheeled truck adapted to receive batch from the mixer and movable along the floor of the plant from the mixer to a position adjacent the furnace, the said truck being provided with a gravity discharge passage and a valve or gate controlling said passage, an elevating device for

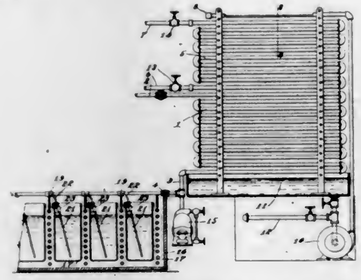


engaging the truck and carrying it to a position over one of the charging openings of the furnace, and a ladle independent of the truck supported for movement from a receiving point beneath the discharge passage of the truck through the charging opening to a discharge position in the furnace.

2. In a glass plant, in combination with a glass melting furnace having charging openings through its side and provided with melting pots, a portable hopper adapted to receive glass making materials for the pots and transport it to a position adjacent the furnace, an elevating device for engaging the hopper and carrying it to a position above one of the charging openings of the furnace, the said hopper having a gravity discharge passage from its lower portion provided with a gate or valve, a ladle support independent of the hopper and mounted for movement longitudinally of the furnace, and a ladle mounted for movement on said ladle support and movable from a receiving position beneath the discharge passage of the hopper through the charging opening to a discharge position in the furnace.

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14,321. PROCESS OF AGITATING WATER IN MAKING ICE. WILLIS B. KIRKPATRICK, Baltimore, Md., assignor to Independent Ice Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Feb. 19, 1917. Serial No. 149,708. Original patent a continuation in part of applications Serial No. 6,987, filed Feb. 9, 1915, and Serial No. 17,617, filed Mar. 29, 1915. Original No. 1,161,219, dated Nov. 23, 1915, Serial No. 41,026, filed July 21, 1915. (Cl. 62—172.)



1. A process of agitating water by air in the manufacture of ice which consists in providing a supply of dehydrated air at a pressure of from twelve to twenty-five pounds above atmosphere, passing said air through a conduit within the mass of water to be frozen, reducing the pressure of the air before it is released to a point slightly in excess of that of the atmosphere, and delivering said air into the water near the bottom of the mass.

2. A process of agitating water by air in the manufacture of ice which consists in providing a supply of dehydrated air compressed to a pressure of from twelve to twenty-five pounds above atmosphere and having a temperature of five or six degrees above freezing, passing said air through a suitable passage at or near the center of the mass of water to be frozen, reducing the pressure of the air before it is released so that it is slightly in excess of that of the atmosphere, and delivering said air near the bottom of the mass of water to be frozen.

3. A process of manufacturing ice which consists in freezing the water in cans in a non-freezing liquid as brine at a temperature well below the freezing point of water, agitating the water with compressed dehydrated air at a temperature at least five or six degrees above freezing, leading the air to and through a conduit within the mass of water to be frozen so that in its passage the air is protected from the temperature of the brine by the mass of water to be frozen, and releasing it at the bottom of the mass of water to be frozen.

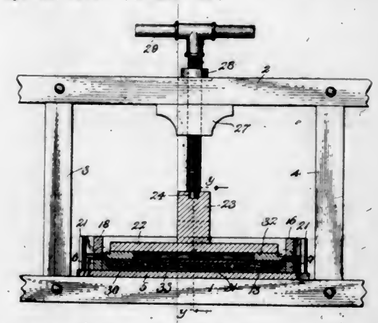
4. A process of agitating water by air in the manufacture of ice which consists in providing a supply of dehydrated air at a pressure above twelve pounds above atmosphere, passing such air through a conduit within the mass of water to be frozen following a path spaced away from the sides of the body of water, and delivering the air at a reduced pressure into the mass of water near the bottom thereof.

5. A process of making raw water can ice which consists in immersing a can of water in a freezing liquid, providing a supply of dehydrated air at a pressure of twelve pounds above atmosphere, passing the air downward through a conduit in the mass of water spaced away from the freezing liquid so that the water protects the air from the temperature of the freezing liquid, releasing the air at a reduced pressure near the bottom of the water to be frozen, and continuing the passage of the air until all the water available for the manufacture of clear ice is frozen.

6. A process of removing moisture from compressed air which consists in circulating practically pure water in indirect heat exchange with a refrigerant, bringing such water into indirect heat exchanging relation with the compressed air whereby a portion of the moisture in said air is condensed, and then separating such condensed moisture from the air.

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14,322. APPARATUS FOR THE MANUFACTURE OF SEATS AND BACKS FOR CHAIRS AND LIKE FURNITURE. EDMUND E. PECK, Grand View on Hudson, N. Y., assignor, by mesne assignments, to S. Karpen & Bros., Chicago, Ill., a Corporation of West Virginia. Filed Apr. 9, 1917. Serial No. 160,856. Original No. 1,140,846, dated May 25, 1915, Serial No. 834,065, filed Apr. 24, 1914. (Cl. 155—43.)



1. In an apparatus of the character described, the combination of a matrix, a flexible yielding upholstered-cover support arranged thereover, means for securing it in position, a pressing element, and means for raising and lowering said pressing element.

2. In an apparatus of the character described, the combination of a matrix, a flexible yielding upholstering-cover support arranged thereover, a clamping-frame agreeing in contour with the matrix and seated upon the cover-support, a pressing element, and means for raising and lowering said pressing element.

3. In an apparatus of the character described, the combination of a matrix, a flexible yielding upholstering-cover support arranged thereover and comprising a plurality of oppositely disposed strips connected at their ends to the walls of the matrix, a pressing element, and means for raising and lowering said pressing element.

4. In an apparatus of the character described, the combination of a matrix, a flexible yielding upholstering-cover support arranged thereover and comprising a plurality of oppositely disposed strips connected to the walls of the matrix, binding-strips arranged thereover, a presser-frame mounted on the latter and conforming to the con-

tour of the matrix, a pressing element, and means for raising and lowering the pressing element.

5. In an apparatus of the character described, the combination of a matrix, a flexible yielding upholstering-cover support arranged thereover, binding-strips secured to the upper edges of the wall of the matrix and arranged over the cover-support and terminating short of their meeting-ends to form recesses, a presser-frame, a pressing element, and means for operating said pressing element.

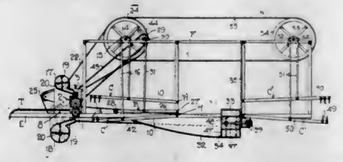
6. In an apparatus of the character described, the combination of a matrix, an upholstering-cover support of elastic material extended across the top thereof and secured thereto, a clamping-frame, a presser-block, and means for operating said block.

7. In an apparatus of the character described, the combination of a matrix, an upholstering-cover support comprising a plurality of longitudinal and transverse strips of elastic material stretched across the top of said matrix with their ends secured thereto, a clamping-frame, a presser-block, and means for operating said block.

8. In an apparatus of the character described, the combination of a matrix, an upholstering-cover support comprising a plurality of elastic strips stretched across the top of said matrix and secured thereto, a clamping-frame fitting the top of said matrix, means for holding said clamping-frame in position, said clamping-frame being adapted for clamping the edges of a flexible upholstering-cover between it and the top of said matrix, a presser-block, and means for operating said block.

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14,323. HEMP-BRAKE. JOHN SAM HOLTZCLAW and AMBROS W. HOLTZCLAW, Stanford, Ky. Filed Apr. 18, 1917. Serial No. 163,068. Original No. 1,215,936, dated Feb. 13, 1917, Serial No. 119,925, filed Sept. 13, 1916. (Cl. 13—6.)



1. A hemp brake including, in combination, coacting rollers between which the hemp is adapted to pass, choppers positioned rearwardly of the rollers, a beater positioned rearwardly of the choppers, and means for creating air blasts to direct the hemp relatively to the choppers and the beater.

2. A hemp brake including, in combination, coacting rollers between which the hemp is adapted to pass, choppers positioned rearwardly of the rollers, a beater positioned rearwardly of the choppers, and means for causing air blasts to engage the upper and lower surfaces of the hemp to direct the hemp relative to said choppers and beater.

3. A hemp brake including, in combination, coacting rollers between which the hemp is adapted to pass, choppers positioned rearwardly of the rollers, a beater positioned rearwardly of the choppers, and means for causing air blasts to engage the upper and lower surfaces of the hemp to direct the hemp relative to said choppers and beater, the blast coacting with the under surface of the hemp being of greater force than the upper blast.

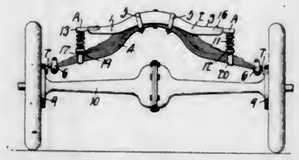
4. A hemp brake including, in combination, breaking means for the hemp, chopping means positioned rearwardly of the breaking means, and means for creating air blasts to direct the hemp relatively to the chopping means.

5. A hemp brake including, in combination, breaking means for the hemp, chopping means positioned rearwardly of the breaking means, and means for causing air blasts to engage the upper and lower surfaces of the hemp to direct the hemp relative to said chopping means.

6. A hemp brake including, in combination, breaking means for the hemp, chopping means positioned rearwardly of the breaking means, and means for causing air blasts to engage the upper and lower surfaces of the hemp to direct the hemp relative to said chopping means, one of said blasts being of greater force than the remainder of the blasts.

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14,324. SPRING AND FRAME SUPPORTER FOR MOTOR-CARS. JOSEPH DOTTL, Madison, Wis., assignor, by mesne assignments, to The Dottl Manufacturing Company, Madison, Wis., a Corporation of Wisconsin. Filed Dec. 16, 1916. Serial No. 137,453. Original No. 1,205,603, dated Nov. 21, 1916, Serial No. 62,601, filed Nov. 20, 1915. (Cl. 267—19.)



1. The combination with a vehicle frame, a bolster extending transversely thereof and having parallel longitudinal flanges extending downwardly therefrom, and an arched body-supporting main spring centrally secured to the bolster and terminally connected with the axle housing, of auxiliary body-supporting units interposed between the bolster ends and said spring, each unit comprising a coiled expansion spring, a holder for the bottom end of said expansion spring supported upon the main spring, and a bolster extension arm fastened to the underside of the bolster between the flanges thereof and embodying a spring holding cap which fits over the upper end of said expansion spring.

2. A motor vehicle including an axle housing having an enlarged central portion, a bolster extending longitudinally of and substantially above said axle housing, an arched bolster-supporting main spring centrally secured rigidly to the bolster and terminally connected with the axle housing, said spring being capable of transmitting from its central portion to its end portion substantially all stresses caused by the tendency of the bolster to shift bodily laterally of the vehicle, and a pair of auxiliary springs interposed between the end portions of said bolster and the main spring whereby the main spring is prevented from riding on the enlarged central portion of the axle housing under heavy loads.

3. A motor vehicle comprising an axle housing, a bolster extending longitudinally of and substantially above said housing, a bolster supporting main spring centrally secured rigidly to the bolster and terminally connected with the axle housing, said spring being capable of transmitting from its central portion to its end portions substantially all stresses caused by the tendency of the bolster to sway transversely of the vehicle, and additional compression springs supported from below and having substantially vertical axes, said springs being arranged to receive a portion of the vertical load from the corresponding end portions of the bolster, whereby the amount of load transmitted from the central portion of the bolster to the spring is reduced.

4. A motor vehicle including a pair of wheels, a bolster arranged between said wheels, a bolster-supporting main spring centrally secured rigidly to the bolster through which the weight on the bolster passes on its way to the wheels, said spring being capable of transmitting from its central portion to its end portion substantially all stresses caused by the tendency of the bolster to shift bodily laterally of the vehicle, and auxiliary springs having substantially vertical axes interposed between the end portions of the bolster and the end portions of the main spring.

5. A motor vehicle comprising a pair of wheels, a bolster arranged between said wheels, means for transmitting the load on the bolster to the wheels, said means including a bolster supporting main spring centrally secured rigidly to the bolster, said spring being capable of transmitting



from its central portion to its end portions substantially all stresses caused by the tendency of the bolster to sway transversely of the vehicle, and additional compression springs supported from below and having substantially vertical axes located outwardly beyond the corresponding end of the bolster, and means for operatively connecting the upper end portions of the spring to the corresponding end portions of the bolster, so constructed and arranged that the tendency of the bolster to tilt on the main spring is largely overcome and the amount of vertical load transmitted from the central portion of the bolster to the spring is reduced.

6. In combination, a pair of wheels, a bolster arranged between said wheels, means for transmitting the load on the bolster to the wheels, said means including an arched bolster supporting leaf spring centrally secured to the bolster and having clips whereby the end portions of the leaves are held in proper relative alinement, said means also including auxiliary springs operatively connected to the end portions of the bolster and to the corresponding clip.

7. A motor vehicle including an axle housing provided with an enlarged central portion, a bolster extending longitudinally of and substantially above said axle housing, an arched bolster-supporting leaf spring centrally secured rigidly to the bolster and terminally connected with the axle housing, said spring lying substantially in the central vertical plane through the axis of the axle housing and being of a strength sufficient to transmit side sway of the body, a pair of auxiliary springs interposed between the end portions of said bolster and the main spring whereby the main spring is prevented from riding on said enlarged central portion of the axle housing under heavy loads.

8. A motor vehicle including a pair of wheels, a body supporting bolster arranged between the wheels and substantially in the vertical plane through the common axes of said wheels, means for transmitting the load on the body to the wheels, said means including a bolster-supporting arched main spring centrally secured rigidly to the bolster, said means also including coil compression springs supported from below and having substantially vertical axes located outwardly beyond the corresponding end of the bolster, and substantially in the vertical plane which includes the common axis of the wheels and means constructed and arranged to transmit body loads to the tops of said coil springs.

9. The combination with a vehicle frame, a bolster extending transversely thereof, and an arched body-supporting leaf spring centrally secured to the bolster and terminally connected with the axle housing, of auxiliary body-supporting units interposed between the bolster ends and said spring, each unit including a coiled compression spring, and a holder for the lower end of said spring, said holder including downwardly extending arms which embrace the sides of the leaf spring.

10. The combination with a vehicle frame, a bolster extending transversely thereof, and an arched body-supporting leaf spring centrally secured to the bolster and terminally connected with the axle housing, of detachable auxiliary body-supporting units interposed between the bolster ends and said spring, said units projecting laterally beyond the ends of said bolster, each unit including a coiled compression spring.

11. A motor vehicle including an axle housing, a bolster extending longitudinally of and substantially above said housing, a bolster-supporting main spring centrally secured to the bolster and terminally connected with the axle housing, and additional compression springs supported from below and associated with the end portions of said bolster whereon an appreciable portion of the vertical load on said bolster is carried, said additional springs being detachable from said bolster and being located outwardly beyond the corresponding ends thereof.

12. A motor vehicle including a pair of wheels, a bolster arranged between the wheels and substantially above the common axis of the wheels, means for transmitting the load on the bolster to the wheels, said means including an arched terminally supported main spring centrally secured rigidly to the bolster, and means associated with the corresponding end portions of the bolster and the spring whereby a part of the load is transmitted to the main spring at points considerably removed from the point at which said spring is secured to the bolster, said last mentioned means including resilient elements located outwardly beyond the corresponding end portion of the bolster.

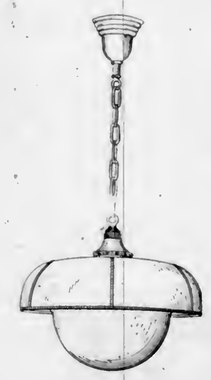
13. In combination, an axle construction, shackles pivotally supported on said axle construction, an arched main spring pivotally supported by said shackles and extending longitudinally of said axle construction substantially in the central vertical plane lengthwise of the construction, load receiving means rigidly connected to the central portion of the main spring, said main spring being adapted to transmit substantially all stresses due to the tendency of the body to shift bodily laterally, and additional means, including resilient compression members supported from below and having substantially vertical axes located substantially in the central vertical plane lengthwise of the axle construction, so constructed and arranged that a portion of the load passes through it on its way to the axle construction without passing through the connection between the load receiving means and the central portion of the main spring.

14. A motor vehicle including an axle housing, a bolster extending longitudinally of and substantially above said housing, arms fixed to the end portions of said housing, shackles pivoted directly to said arms and depending therefrom, an arched main spring pivoted directly to said shackles, a bolster centrally secured to said main spring and extending longitudinally thereof, additional compression springs supported from below and having substantially vertical axes, and means for connecting the upper ends of said compression springs to the end portions of the bolster so constructed and arranged that deflection of the main spring is lessened.

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# DESIGNS.

50,964. ELECTRIC-LIGHT FIXTURE. SIMON BRAUNSTEIN, New York, N. Y. Filed May 5, 1917. Serial No. 166,752. Term of patent 3½ years.



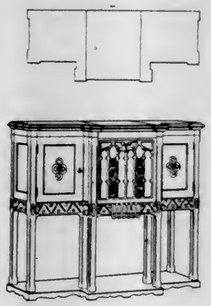
The ornamental design for an electric light fixture, substantially as shown.

50,965. BADGE OR SIMILAR ARTICLE. EDWARD A. DAVIS, New York, N. Y., assignor to The Great Council of the United States of the Improved Order of Red Men, a Corporation of the United States. Filed Apr. 2, 1917. Serial No. 159,354. Term of patent 14 years.



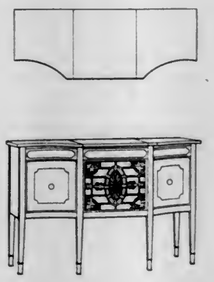

The ornamental design for a badge or similar article as shown.

50,966. MUSIC-CABINET. WILLIAM A. FRENCH, Minneapolis, Minn., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Jan. 29, 1917. Serial No. 145,327. Term of patent 14 years.



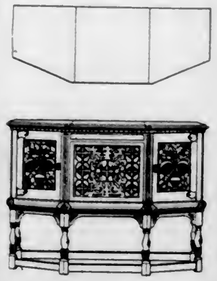
The ornamental design for a music cabinet, as shown.

50,967. MUSIC-CABINET. WILLIAM A. FRENCH, Minneapolis, Minn., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Jan. 29, 1917. Serial No. 145,328. Term of patent 14 years.



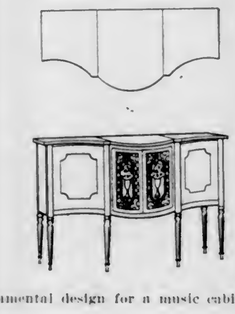
The ornamental design for a music cabinet, as shown.

50,968. MUSIC-CABINET. WILLIAM A. FRENCH, Minneapolis, Minn., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Jan. 29, 1917. Serial No. 145,329. Term of patent 14 years.



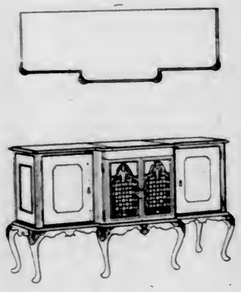
The ornamental design for a music cabinet, as shown.

50,969. MUSIC-CABINET. WILLIAM A. FRENCH, Minneapolis, Minn., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Jan. 29, 1917. Serial No. 145,330. Term of patent 14 years.



The ornamental design for a music cabinet, as shown.

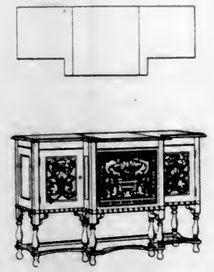
50,970. MUSIC-CABINET. WILLIAM A. FRENCH, Minneapolis, Minn., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Jan. 29, 1917. Serial No. 145,331. Term of patent 14 years.



The ornamental design for a music cabinet, as shown.

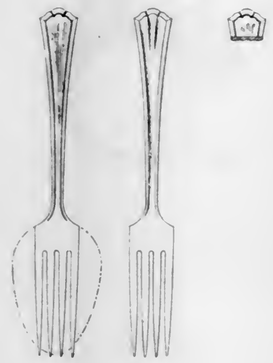


50,971. MUSIC-CABINET. WILLIAM A. FRENCH, Minneapolis, Minn., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Jan. 29, 1917. Serial No. 145,332. Term of patent 14 years.



The ornamental design for a music cabinet, as shown.

50,972. SPOON, FORK, OR SIMILAR ARTICLE. HENRIK HILLHOM, Wallingford, Conn., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn., a Corporation. Filed Nov. 24, 1916. Serial No. 133,261. Term of patent 7 years.



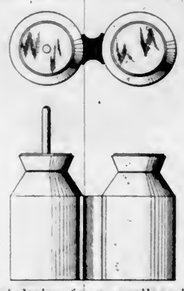
The ornamental design for a spoon, fork, or similar article, as shown.

50,973. POWDER-BOX. EDMUND HOFFMAN, Brooklyn, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 21, 1916. Serial No. 79,788. Term of patent 7 years.



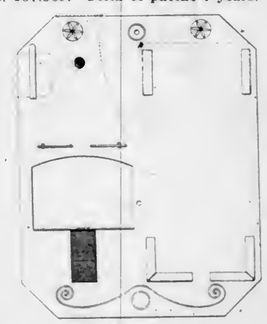
The ornamental design for a powder box, as shown and described.

50,974. MUCILAGE-BOTTLE AND BRUSH-CLEANER. ALFRED E. HUBAND, Naugatuck, Conn. Filed Apr. 25, 1917. Serial No. 164,558. Term of patent 3½ years.



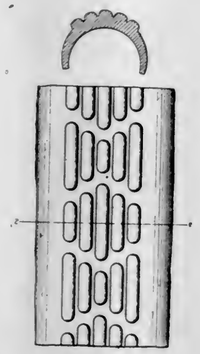
The ornamental design for a mucilage bottle and brush cleaner, as shown.

50,975. MILK-BOTTLE HOLDER AND TICKET-RACK. ALBERT OSTROM, Elkhart, Ind. Filed Mar. 26, 1917. Serial No. 157,569. Term of patent 7 years.



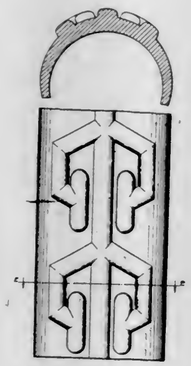
The ornamental design for a milk bottle holder and ticket rack, as shown.

50,976. PNEUMATIC TIRE. ROBERT M. PIERSON, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Apr. 12, 1917. Serial No. 161,663. Term of patent 14 years.



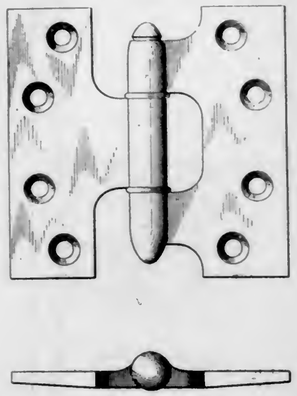
The ornamental design for a pneumatic tire as shown.

50,977. PNEUMATIC TIRE. ROBERT M. PIERSON, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Apr. 18, 1917. Serial No. 163,087. Term of patent 14 years.



The ornamental design for a pneumatic tire as shown.

50,978. DOOR-HINGE. OSCAR C. RINSON, New Rochelle, N. Y. Filed Mar. 14, 1917. Serial No. 154,876. Term of patent 14 years.



The ornamental design for a door hinge, as shown.

50,979. COMBINED PISTOL AND SWORD HILT. EDWARD VOLCANSEK, Cleveland, Ohio. Filed Jan. 24, 1917. Serial No. 144,308. Term of patent 7 years.



The ornamental design for a combined pistol and sword hilt, as shown.



# TRADE-MARKS

## PUBLISHED JUNE 26, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 94,060. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) BROWN DURRELL CO., Boston, Mass. Filed Apr. 3, 1916.

Mermaid

*Particular description of goods.*— Safety-Pins, Hooks and Eyes, Snap-Fasteners, and for Collar-Buttons and Cuff-Buttons of Non-Precious Metals, of Bone, Shell, and Composition.

*Claims use* since Oct. 28, 1908.

Ser. No. 94,166. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE GRADY MFG. CO., Long Island City, N. Y. Filed Apr. 5, 1916.



FIRE-HAT

The trade-mark consisting of the words "Fire Hat" and the representation of a fire-hat, no claim being made to the word "Brand."

*Particular description of goods.*—Metal-Polishes.

*Claims use* since the year 1897.

Ser. No. 94,967. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOHN A. QUINN, St. Louis, Mo. Filed May 6, 1916.

OIL OF JOY

*Particular description of goods.*—Whisky.

*Claims use* since Apr. 1, 1916.

Ser. No. 95,276. (CLASS 37. PAPER AND STATIONERY.) PEJEPSCOT PAPER COMPANY, New York, N. Y. Filed May 19, 1916.



*Particular description of goods.*—News-Print Paper.

*Claims use* since May 1, 1916.

Ser. No. 97,383. (CLASS 38. PRINTS AND PUBLICATIONS.) THE AMERICAN HUMANE ASSOCIATION, Albany, N. Y. Filed Aug. 17, 1916.




The words "Albany, New York, U. S. A." and "Animal Relief" are disclaimed as being part of the title.

*Particular description of goods.*—Bulletins Issued at Irregular Intervals by Its Department Known as the American Red Star Animal Relief.

*Claims use* since June 25, 1916.

Ser. No. 97,448. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE FAULTLESS RUBBER CO., Ashland, Ohio. Filed Aug. 19, 1916.

"WEARever"

*Particular description of goods.*—Rubber Sponges.
*Claims use* since December, 1910.

Ser. No. 97,955. (CLASS 17. TOBACCO PRODUCTS.) MOUQUIN RESTAURANT & WINE CO. LTD., New York, N. Y. Filed Sept. 12, 1916.




The portrait being that of Boniface VIII, deceased.
*Particular description of goods.*—Cigars.
*Claims use* since July 1, 1916.

Ser. No. 98,331. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) GEORGIA COTTON MILLS, Griffin, Ga. Filed Sept. 30, 1916.

RED DIAMOND

The rectangular figure is not a part of the trade-mark, but a mere background.
*Particular description of goods.*—Diapers.
*Claims use* since February, 1915.

Ser. No. 98,848. (CLASS 37. PAPER AND STATIONERY.) THE SABIN ROBBINS PAPER CO., Middletown, Ohio. Filed Oct. 23, 1916.

Solar

No claim being made to the words "Convex," "Mounts," and "The Sabin Robbins Paper Co., Middletown, Ohio."
*Particular description of goods.*—White Plain Flat Rectangular Blanks of Cardboard of Various Sizes.
*Claims use* since Sept. 26, 1916.

Ser. No. 98,950. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) EDUARD LOKESCH & SOHN, Prague-Holeschowitz, Austria. Filed Oct. 28, 1916.

Eagle

*Particular description of goods.*—Snap-Fasteners and Placket-Fasteners.
*Claims use* since Mar. 27, 1913.

Ser. No. 98,966. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & CO., Prague-Wrschowitz, Austria-Hungary. Filed Oct. 28, 1916.




*Particular description of goods.*—Snap-Fasteners of All Kinds.
*Claims use* since Nov. 26, 1914.

Ser. No. 99,300. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) R. & G. CO., Attleboro, Mass. Filed Nov. 14, 1916.

The Klassie

*Particular description of goods.*—Articles of Merchandise Made of or Plated with Precious Metal—Namely, Link-Buttons, Studs, Collar-Buttons, Vest-Buttons, Full-Dress-Shirt Sets, Bracelets; Chains for Personal Wear, Including Vest-Chains, Coat-Chains, Neck-Chains, and Outing-Belt Chains; Match-Boxes, Cigar-Cutters, Cigarette-Cases, Pencils, Nail-Clips, Cigar-Piercers, Pocket-Knives, Knife and Pencil Combinations, Pencil and Cigar-Cutter Combinations, Perfume-Balls, Lockets, Tie-Clips, Collar-Holders, Fobs, Coin-Holders, and Belt-Buckles.
*Claims use* since Dec. 1, 1909.

Ser. No. 99,386. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) SAFETY FIRST MANUFACTURING CO., Chicago, Ill. Filed Nov. 18, 1916.

SOLVIT

*Particular description of goods.*—Compound for Removing Paint and Varnish.
*Claims use* since June 17, 1916.

Ser. No. 100,224. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SCHLORER DELICATESSEN COMPANY, Philadelphia, Pa. Filed Dec. 28, 1916.




The words "Mrs. Schlorer's," "Made by the Schlorer Delicatessen Co.," and "Philadelphia, Pa." being disclaimed.
*Particular description of goods.*—Foods—Namely, Olive-Naise Made Up in Part of Olives, Pimentos, Mayonnaise, and Vegetables.
*Claims use* since Oct. 23, 1916.





Ser. No. 100,322. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) SOUTHERN HARDWARE & BICYCLE COMPANY, Jacksonville, Fla. Filed Jan. 2, 1917.

Shebico

*Particular description of goods.*—Bicycles.
*Claims use* since about Aug. 15, 1916.

Ser. No. 100,437. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) EUGENE A. MARX, Chicago, Ill. Filed Jan. 8, 1917.



*Particular description of goods.*—Commutator-Cleaning Paste.
*Claims use* since May, 1915.

Ser. No. 100,633. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) STEEL AND IRON MONGERS INC., Newark, N. J. Filed Jan. 15, 1917.



*Particular description of goods.*—Hammers, Saws, and Ice-Picks.
*Claims use* since Jan. 4, 1917.

Ser. No. 100,678. (CLASS 38. PRINTS AND PUBLICATIONS.) W. H. MCELWAIN COMPANY, Boston, Mass. Filed Jan. 17, 1917.

RETAILERS' PROFIT SERVICE

*Particular description of goods.*—Pamphlets Issued Occasionally and for News or Style Letters Issued Weekly.
*Claims use* since about December, 1914.

Ser. No. 100,680. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) NATIONAL LEAD COMPANY, New York, N. Y. Filed Jan. 17, 1917.

LIQUID LEAD

No claim is made to the use of the words "Liquid Lead."
*Particular description of goods.*—Ready-Mixed Paint.
*Claims use* since Jan. 13, 1917.

Ser. No. 100,781. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE RELIANCE ELECTRIC & ENGINEERING COMPANY, Cleveland, Ohio. Filed Jan. 20, 1917.




The lining of the conventional representation of a gear-wheel in the accompanying drawing is intended to indicate the red coloring in which those portions appear in the trade-mark.
*Particular description of goods.*—Direct and Alternating Current Electric Motors.
*Claims use* since January, 1912.

Ser. No. 100,794. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CALIFORNIA RIPE OLIVE CO., Oroville and San Francisco, Cal. Filed Jan. 22, 1917.

CALOLA

*Particular description of goods.*—Ripe Olives, Pressed Figs, Honey, and Mayonnaise Dressing.
*Claims use* since October, 1913.

Ser. No. 100,903. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) WILLIAM SUCKLING & SONS, Birmingham, England. Filed Jan. 24, 1917.

REGIS

*Particular description of goods.*—Ash-Trays, Asparagus-Dishes, Asparagus-Eaters, Asparagus-Racks, Asparagus-Servers, Pudding Basins and Bowls, Bells, Belt-Clasps, Ladies' Belts, Biscuit-Boxes; Biscuit, Butter, and Cheese Dishes; Bonbon Baskets, Dishes, and Stands; Bonnet-Whisks, Bottle-Coasters, Bottle-Stoppers, Bottle-Holders, Bottle-Labels, Bottle-Stands, Brandy-Warmers, Bread-Baskets, Bread Platters and Trays, Bride-Cake Saws, Bridge-Boxes, Bridge Trump-Indicators, Brushes, Butter-Boats, Buckles, Button-Hooks, Buttons, Café-au-Lait Sets and Pots, Cake-Baskets, Calendars, Candelabra, Candlesticks, Canteens and Cabinets, Playing-Card Boxes, Card-Cases, Cayenne-Pepper Receptacles, Celery-Stands, Centerpieces, Chafing-Dishes, Communion-Chalices, Challenge-Bowls, Challenge-Cups, Challenge-Shields, Champagne-Jugs, Chatelaines; Cheese, Biscuit, and Butter Stands; Cheese-Scoops, Children's Cups, Children's Food Pushers and Spoons, Children's Rattles, Christening-Presents, Chutney-Scoops, Cigar Boxes and Cases, Cigar-Cutters, Cigarette Boxes and Cases, Coffee-Percolators, Coffee-Pots, Coffee Sets, Combs, Communion Sets, Corkscrews, Cruets, Crumb-Scoops, Cups and Saucers, Decanters, Dish-Covers, Dish-Heaters, Dish-Heating Stands, Dish-Stands, Dishes, Dressing-Bag Fittings, Egg-Boilers, Egg-Cups, Egg-Cutters, Egg-Frames, Entrée-Dishes, Fern-Pots, Fish Dishes and Plates, Fish-Eating Knives and Forks, Fish-Servers, Flasks, Flower-Bowls, Flower-Vases, Fruit-Baskets, Fruit-Stands, Game-Carvers, Glass-Holders, Goblets, Gongs, Grape-Stands, Gravy-Boats, Hair-Brushes, Hair-Pin Boxes, Hair-Pin Tubes, Hat-Pin Stands, Hat-Whisks, Hot-Plate Stands, Hot-Water Glasses, Ice-Pails, Ice-Picks, Ink-Bottles, Inkstands, Jam-Dishes, Jam-Pots, Jugs, Kettles,

and Stands, Knife-Rests, Labels, Ladies' Toilet-Sets, Ladles, Lemon-Squeezers, Liqueur-Bottles, Liqueur Sets, Liqueur-Frames, Lobster-Cracks, Lobster-Picks, Loving-Cups, Manicure Sets, Marmalade-Jars, Marrow-Scoops, Match-Boxes, Match-Stands, Meat-Covers, Meat-Dishes, Menu-Holders, Mirrors, Monograms, Muffin-Dishes, Muffineers, Mugs, Mustard-Pots, Napkin-Rings, Night-Light Holders, Nutcrackers, Nut Picks and Peelers, Oil and Vinegar Frames, Communion-Patens, Pepper-Mills, Peppers, Photo-Frames, Pickle-Frames, Pie-Dishes, Pie-Servers, Pin-Boxes, Pincushions, Plaques, Plates, Plate-Cabinets, Plate-Covers, Powder-Jars, Presentation-Bowls, Presentation-Caskets, Presentation-Cups, Presentation-Shields, Presentation-Spades, Prize-Cups, Ramekin-Pans, Ring-Stands, Rose-Bowls, Salad-Bowls, Salad-Servers, Salt-Cellars, Salt-Bottles, Salvers, Sandwich-Boxes, Sardine-Boxes, Sardine-Servers, Sauce-Boats, Sauce-Bottle Mounts, Sauce-Frames, Sauce-Tureens, Scent-Bottles, Shaving Sets, Shoe-Lifts, Skewers, Scufflet-Dishes, Soup-Bowls, Soup-Tureens, Soup-Turnovers, Coin-Purses, Spoons and Forks, Spoon-Warmers, Statuettes, Steels; Sugar Basins, Baskets, and Bowls; Sugar and Cream Frames, Sugar-Dredgers, Sugar-Sifters, Sugar-Tongs, Siphon-Stands, Tankards, Tantaluses, Taper-Sticks, Tart-Servers, Tazzas, Tea-Caddies, Tea-Kettles, Tea Pots and Sets, Tea-Strainers, Toast-Racks, Tobacco-Boxes, Toilet Sets, Toilet-Trays, Toilet Ware, Trays, Trinket-Boxes, Trowels, Tumbler-Holders, Waiters, Watch-Stands, Wine-Bottle Holders, Wine-Coolers, Wine-Funnels, Wine-Strainers, All Made of Sterling Silver or Plated Electrically with Precious Metals.

*Claims use* since March, 1914.

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Ser. No. 100,920. (CLASS 7. CORDAGE.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Jan. 25, 1917.




Comprising the words "Betty Wales," "Ploshkin" and the doll figure, all within a rectangular border, no claim being made to the exclusive right to the use of the words "Trade Mark."

*Particular description of goods.*—Fibrous and Textile Rope and Twine and Cord, Clothes-Line, Wire Rope and Cables, Asbestos Rope Cables and Twine, Also Cotton, Mercerized, Linen, and Silk, and Hemp, Jute, Flax, and other Fibrous Vegetable Substances Made Up Into Cordage, Braided or Twisted Sisal, Manila Fiber, Carpet-Warp, and Waterproofed and Fireproofed Cord, Rope, and Twine and Cables.

*Claims use* since Jan. 5, 1917.

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Ser. No. 100,922. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Jan. 25, 1917.




Comprising the words "Betty Wales," "Ploshkin" with the doll figure, all within a rectangular figure, no claim being made to the exclusive right to the use of the words "Trade Mark."

*Particular description of goods.*—Dress-Suit Cases, Traveling-Bags, Trunks, Purses, Buckles, Rings for Harness, Loops for Harness, D's, Terrets, Hooks for Harness, Snap-Hooks for Harness, Cockeyes, Toggles for Harness, Trace-Carriers, Drawer-Pulls, Squares for Harness, Loop-Plates for Harness, Hames, Hoof-Pads for Horses, Satchels, Hand-Bags, Portmanteaus, Horseshoes, Whips, Horse-Collars, Brief-Cases, Portfolios, Card-Cases, Riding-Saddles, Bridles, Reins, Traces, Saddle-Bags, Straps for Baggage and Vehicles and Horses, Trace-Bands, Chin-Pieces, Cruppers, Bands, Hind Girths, Stirrups, Halters, Martingales, Blinkers, Leading-Reins, Belly-Bands, Game-Bags, Leather and Metal Baggage-Checks and Identification-Tags, Horse-Clothing, Wallets, Bill-Folds, Pocket-Books, Leather Cases for Books, Toilet Goods, Documents, and other Articles required to be Carefully and Securely Kept.

*Claims use* since Jan. 5, 1917.

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Ser. No. 101,006. (CLASS 33. GLASSWARE.) DAVID M. GILBERT, New York, N. Y. Filed Jan. 29, 1917.

SUPERBA

*Particular description of goods.*—Glassware for Illuminating Purposes.

*Claims use* since Sept. 1, 1916.

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Ser. No. 101,054. (CLASS 39. CLOTHING.) YAMATOYA SHIRT CO., Yokohama, Japan. Filed Jan. 30, 1917.



Consists of the representation of a bell-bird turning its back upon rising sun and flying away over sea, as shown in the drawing.

*Particular description of goods.*—Dress-Shirts and Negligée-Shirts, Collars, Cuffs, Pajamas, and Kimonos.

*Claims use* since about May, 1887.

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Ser. No. 101,070. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) REPUBLIC PHONOGRAPH CO., Chicago, Ill. Filed Jan. 31, 1917.




*Particular description of goods.*—Talking-Machines, Grafonolas, and Phonographs, and Parts Thereof.

*Claims use* since November, 1916.





Ser. No. 101,107. (CLASS 5. ADHESIVES.) WILLIAM STUHLMILLER, New York, N. Y. Filed Feb. 1, 1917.

OKONOMO

*Particular description of goods.*—Adhesive Materials of a Sticky or Tenacious Nature, Comprising Paste Adhesive, Glue, Mucilage, Glutinous-Substances Adhesive, and Cement Adhesive.

*Claims use* since Dec. 1, 1916.

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Ser. No. 101,142. (CLASS 39. CLOTHING.) CRADDOCK-TERRY COMPANY, Lynchburg, Va., and St. Louis, Mo. Filed Feb. 3, 1917.

*Deaconess*

*Particular description of goods.*—Leather Shoes.

*Claims use* since Jan. 1, 1911.

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Ser. No. 101,187. (CLASS 2. RECEPTACLES.) WILLIAM L. VAN DAME, Chicago, Ill. Filed Feb. 5, 1917.

RAPID PAPER

*Particular description of goods.*—Tubular Paper Receptacles.

*Claims use* since Jan. 29, 1917.

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Ser. No. 101,445. (CLASS 2. RECEPTACLES.) A. KUEAMER, INC., Brooklyn, N. Y. Filed Feb. 17, 1917. Under ten-year proviso.

KREAMERWARE

*Particular description of goods.*—Letter-Boxes, Sugar-Boxes, Soap-Boxes, Cake-Boxes, Knife and Fork Boxes, Coffee-Boxes, Pepper-Boxes, Spice-Boxes, Salt-Boxes, Deed-Boxes, Butter-Pails, Batter-Pails, Spice-Carriers, Buckets, Dairy-Pails, Dinner-Pails, Milk-Strainer Pails, Milk-Serving Pails, Grater-Boxes, Water-Pails, Oil-Carriers, Oil-Fillers, Oil-Cans, Dog-Baskets, Coal-Hods, Portable Cake-Closets, Portable Pie-Closets, Canisters, Coffee-Flasks, Garbage-Cans, Ash-Cans, Oil-Waste Cans, Water-Pots.

*Claims use* since Jan. 1, 1886.

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Ser. No. 101,790. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MOLINE PLOW CO., Moline, Ill. Filed Feb. 28, 1917.

UNIVERSAL

*Particular description of goods.*—Traction-Engines.

*Claims use* since Oct. 6, 1914.

Ser. No. 101,901. (CLASS 27. HOROLOGICAL INSTRUMENTS.) NELSON H. BROWN, Boston, Mass. Filed Mar. 6, 1917.

IOPNA

*Particular description of goods.*—Clocks.

*Claims use* since May 17, 1913.

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Ser. No. 101,915. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) GOLDMAN COSTUME COMPANY, New York, N. Y. Filed Mar. 6, 1917.




Comprising the words "Betty Wales" and "Ploshkin," with the doll figure, all within a rectangular figure. The script words "Betty Wales" are the signature adopted by the author, who created the fictitious character known as "Betty Wales" for a series of books bearing that name.

*Particular description of goods.*—Hand Sewing-Needles and Toilet-Pins and Safety-Pins, Bone Buttons and Metal Buttons for Fastening Articles of Clothing, Shoe-Buckles and Belt-Buckles of Cheap Metal and Composition Material, Rubber Elastic for Garters and Bands, Whalebone and Artificial Whalebone.

*Claims use* since Jan. 5, 1917.

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Ser. No. 101,981. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) S. BLACKMAN & CO., Philadelphia, Pa. Filed Mar. 8, 1917.

VISHNIK

*Particular description of goods.*—Soda-Fountain Syrup.

*Claims use* since Apr. 1, 1913.

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Ser. No. 101,989. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) MARTINS BIRMINGHAM LIMITED, Birmingham, England. Filed Mar. 8, 1917.




*Particular description of goods.*—Belts, Suspenders, Garters, Bandoliers, and Braces, All for Personal Wear; and Buckles, Clasps, Fasteners, Slides, Adjusters, and Frames, All Made of Base Metal and for Use in Belts, Suspenders, Garters, Bandoliers, and Braces for Personal Wear.

*Claims use* since May, 1886.

Ser. No. 101,997. (CLASS 12. CONSTRUCTION MATERIALS.) WILLAPA LUMBER CO., Raymond, Wash. Filed Mar. 8, 1917.

WILLAPA

*Particular description of goods.*—Lumber.
*Claims use* since 1913.

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Ser. No. 102,070. (CLASS 11. INKS AND INKING MATERIALS.) DIAMOND INK CO., Milwaukee, Wis. Filed Mar. 12, 1917.

**COLLEGE**

*Particular description of goods.*—Writing Fluid, Red Ink, and Fountain-Pen Ink.
*Claims use* since the spring of 1910.

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Ser. No. 102,124. (CLASS 37. PAPER AND STATIONERY.) SAMUEL D. PAGE & CO., Des Moines, Iowa. Filed Mar. 13, 1917.

HAWKI

The exclusive use of the word "Line" is disclaimed.
*Particular description of goods.*—Loose-Leaf, Ledgers, Sectional-Post Binders, Solid-Post Binders, Ring-Books, Day-Files, Prong-Binders, Invoice-Books, Price-Books, Periodical-Binders, Ledgers, Journals, Cash-Books, Sheet-Holders, Catalogue-Covers, Desk-Pads, Covers for Books, Name-Labels, Covers for Sales-Records, Check-Sorters, Stock-Books, Covers for Checks, Blank Pads, Notes, Bills, and the Like.
*Claims use* since March, 1914.

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Ser. No. 102,149. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) RUSSELL PLAYING CARD CO., Milltown, N. J. Filed Mar. 14, 1917.

**Blue Ribbon**

*Particular description of goods.*—Playing-Cards.
*Claims use* since the year 1907.

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Ser. No. 102,198. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ABRAHAM M. MALOUF, Salt Lake City, Utah. Filed Mar. 16, 1917.

**T.F.N.S.**

No claim being made to the exclusive right to the use of the word "Trade-Mark."
*Particular description of goods.*—Ribbons Made of Silk or Cotton, Handkerchiefs Made of Silk or Cotton, Sheets and Sheeting, Pillow-Cases, Wool Dress Goods by the Yard, Silk Dress Goods by the Yard, Cotton Dress Goods by the Yard, Wool, Silk, and Cotton Combined Dress Goods by the Yard, Elastic Web and Elastic Rubber Web, Bedspreads Made of Cotton or Wool, Blankets Made of Cotton or Wool, Laces Made of Cotton or Silk.
*Claims use* since Jan. 3, 1916.

Ser. No. 102,362. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) JULIUS SCHMID, INCORPORATED, New York, N. Y. Filed Mar. 22, 1917.

FORMALITH

*Particular description of goods.*—Pacifiers.
*Claims use* since January, 1913.

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Ser. No. 102,367. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE S. S. WHITE DENTAL MANUFACTURING COMPANY, Philadelphia, Pa. Filed Mar. 22, 1917.

**VULCOLOX**

Consisting of the word "Vulcolox."
*Particular description of goods.*—Teeth.
*Claims use* since January, 1917.

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Ser. No. 102,370. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) CHICAGO AIR-TIGHT STOVE CO. (NOT INC.), Chicago, Ill. Filed Mar. 23, 1917.

**VORTEX**

*Particular description of goods.*—Coal, Wood, Gas, and Oil Stoves or Ranges.
*Claims use* since 1907.

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Ser. No. 102,409. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RICHARD HELLMANN, Long Island City, N. Y. Filed Mar. 24, 1917.



Bismarck

*Particular description of goods.*—Pumpernickel Bread
*Claims use* since Dec. 1, 1916.

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Ser. No. 102,481. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) HUGO FISCHER, Brooklyn, N. Y. Filed Mar. 27, 1917.

*Duvetoir*

It consists of the word "Duvetoir," written in script slanting upward to the right.
*Particular description of goods.*—Furs for Garments.
*Claims use* since Jan. 1, 1917.





Ser. No. 102,538. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE SCRANTON BUTTON COMPANY, Scranton, Pa. Filed Mar. 28, 1917.

**"LACANITE"**

*Particular description of goods.*—A Plastic Product Capable of Being Molded Into Any Desired Shape and Composed Principally of Shellac, Manila Gum, Rosin, Asphalt, &c., Tempered by Varying the Number or Proportions of Ingredients and Serviceable for the Manufacture of a Great Variety of Articles in the Useful and Ornamental Arts, Such as Electrical Insulators, Buttons, Dominoes, Checkers, Medals, Souvenirs, Advertising Novelties, Spool-Heads, Knobs, Handles, &c.
*Claims use* since 1st day of March, 1917.

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Ser. No. 102,559. (CLASS 17. TOBACCO PRODUCTS.) M. A. GUNST & CO., INCORPORATED, Portland, Me., and New York, N. Y., assignor to General Cigar Co., Inc., New York, N. Y., a Corporation of New York. Filed Mar. 29, 1917.

TAMPA CLUB

The words "Tampa, Fla., City of Tampa, Florida, Organized July 15, 1867" being disclaimed.
*Particular description of goods.*—Cigars.
*Claims use* since the year 1906.

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Ser. No. 102,579. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOSEPH W. WOODS & SONS COMPANY, Boston, Mass. Filed Mar. 29, 1917.

**MADRANET**

*Particular description of goods.*—Cotton Piece Goods, Woolen Piece Goods, and Linen Piece Goods.
*Claims use* since Feb. 8, 1917.

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Ser. No. 102,585. (CLASS 12. CONSTRUCTION MATERIALS.) THE BARBER ASPHALT PAVING COMPANY, Philadelphia, Pa. Filed Mar. 30, 1917.

**PHOENIX**



*Particular description of goods.*—Bituminous Waterproof Roofing Sheets.
*Claims use* since July 10, 1908.

Ser. No. 102,614. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STERLING J. CASTLE, Shreveport, La. Filed Mar. 31, 1917.



*Particular description of goods.*—Coffee and Chicory.
*Claims use* since Jan. 1, 1917.

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Ser. No. 102,686. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE MECHANICAL RUBBER COMPANY, New York, N. Y.; Chicago, Ill., and Cleveland, Ohio. Filed Apr. 3, 1917.

M

*Particular description of goods.*—Ice-Caps, Water-Bottles, Combination Water-Bottles and Fountain-Syringes, Invalid-Cushions, Rubber Urinals, and Fountain-Syringes.
*Claims use* since Aug. 1, 1911.

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Ser. No. 102,758. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SAUL W. ADLER, Cleveland, Ohio. Filed Apr. 6, 1917.

**UNIVERSAL PIC**

*Particular description of goods.*—Dental Pulp and Root-Canal Instruments.
*Claims use* since Jan. 27, 1917.

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Ser. No. 102,759. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SAUL W. ADLER, Cleveland, Ohio. Filed Apr. 6, 1917.

**Apexographer**

*Particular description of goods.*—Dental Pulp and Root-Canal Instruments.
*Claims use* since January, 1915.

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Ser. No. 102,760. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SAUL W. ADLER, Cleveland, Ohio. Filed Apr. 6, 1917.

**PATHFINDER**

*Particular description of goods.*—Dental Pulp and Root-Canal Instruments.
*Claims use* since January, 1915.

Ser. No. 102,776. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAMUEL T. HOGAN, Creedmoor, Tex. Filed Apr. 6, 1917.

OKRATUS

No claim being made to the pictorial representation of okra.

*Particular description of goods.*—A Substitute for Coffee.

*Claims use* since about four years.

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Ser. No. 102,837. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) CHAS. MORNINGSTAR & CO. INC., New York, N. Y. Filed Apr. 9, 1917.

J. H. W

*Particular description of goods.*—Blood-Albumens.

*Claims use* since 1897.

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Ser. No. 102,908. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JAMES S. KIRK AND COMPANY, Chicago, Ill. Filed Apr. 12, 1917. Under ten-year proviso.

Juvenile

*Particular description of goods.*—Soap.

*Claims use* since on or about the 1st day of May, 1883.

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Ser. No. 102,914. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) SPEER CARBON COMPANY, St. Marys, Pa. Filed Apr. 12, 1917.

SPEER HOLD-ARK

No claim is made to the registration of the words "Speer Hold-Ark" apart from the trade-mark design shown in the accompanying drawing.

*Particular description of goods.*—A Negative Carbon Used for Illumination and Projection.

*Claims use* since about Jan. 1, 1917.

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Ser. No. 102,918. (CLASS 37. PAPER AND STATIONERY.) CHARLES E. WEYAND & CO. INC., New York, N. Y. Filed Apr. 12, 1917.

INSPIRATION

No claim being made for the word "Lawn."

*Particular description of goods.*—Writing-Paper.

*Claims use* since Mar. 1, 1917.

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Ser. No. 103,045. (CLASS 39. CLOTHING.) SASSY JANE MANUFACTURING COMPANY, Los Angeles, Cal. Filed Apr. 16, 1917.

SASSY JANE

"Sassy Jane."

*Particular description of goods.*—A Dress for Women and Dolls.

*Claims use* since about Mar. 20, 1916.

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Ser. No. 103,066. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN W. NEAL, Cincinnati, Ohio. Filed Apr. 17, 1917.

CANBUC

*Particular description of goods.*—A Cleaner for Gloves and Shoes.

*Claims use* since Mar. 1, 1917.

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Ser. No. 103,085. (CLASS 39. CLOTHING.) MEYER, BACHARACH & FRIEDHEIM, New York, N. Y. Filed Apr. 18, 1917.

WearTex

*Particular description of goods.*—Cravats.

*Claims use* since Mar. 15, 1917.

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Ser. No. 103,186. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SCIENTIFIC PRODUCTS COMPANY, Steubenville, Ohio, and New Cumberland, W. Va. Filed Apr. 21, 1917.

LITTLE DOCTOR

*Particular description of goods.*—Electric Warming-Pads and Electric Rectal Dilators.

*Claims use* since Dec. 30, 1916.





Ser. No. 103,190. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WATERLOO CREAMERY COMPANY, Council Bluffs, Iowa. Filed Apr. 21, 1917.

ELK-HORN

*Particular description of goods.*—Evaporated Milk.

*Claims use* since Mar. 15, 1912.

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Ser. No. 103,234. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WALTER G. TRUMPLER, Tiffin, Ohio. Filed Apr. 23, 1917.

COUNTRY CALL

*Particular description of goods.*—Wheat-Flour.

*Claims use* since April, 1917.

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Ser. No. 103,241. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOGERT & GREENBANK, New York, N. Y. Filed Apr. 24, 1917.

SUNNYSIDE

*Particular description of goods.*—Wheat-Flour.

*Claims use* since Oct. 11, 1912.

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Ser. No. 103,273. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, INC., New York, N. Y. Filed Apr. 24, 1917.

S·W



*Particular description of goods.*—Wheat-Flour.

*Claims use* since Feb. 21, 1917.

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Ser. No. 103,285. (CLASS 38. PRINTS AND PUBLICATIONS.) LAWRENCE EVERETT COVINGTON, Columbia, S. C. Filed Apr. 25, 1917.

EVERYWOMAN'S MAGAZINE

*Particular description of goods.*—The Monthly Magazine Issued by the Applicant, the Same Devoted to the Interests of Women In General.

*Claims use* since Dec. 1, 1916.

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Ser. No. 103,319. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) COLUMBIA LEATHER GOODS MFG. CO., INC., New York, N. Y. Filed Apr. 26, 1917.

COLEATH CO

*Particular description of goods.*—Men's Belts.

*Claims use* since Mar. 27, 1917.

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Ser. No. 103,333. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) RATHBONE SARD ELECTRIC COMPANY, INC., Albany, N. Y. Filed Apr. 26, 1917.

Acorn

*Particular description of goods.*—Electric Stoves and Ranges.

*Claims use* since the 20th day of December, 1914.

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Ser. No. 103,381. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CAMPBELL, METZGER & JACOBSON, New York, N. Y. Filed Apr. 28, 1917.

JEWEL

*Particular description of goods.*—Cotton-Cloth Piece Goods.

*Claims use* since January, 1915.

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Ser. No. 103,418. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) J. E. HANGER, INC., Washington, D. C. Filed Apr. 30, 1917.

PARALINE

*Particular description of goods*—The Sockets and Corsets of Artificial Limbs.

*Claims use* since Apr. 17, 1917.

Ser. No. 103,453. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE STARR PIANO COMPANY, Richmond, Ind. Filed May 1, 1917.

KUALLEN

*Particular description of goods.*—Spring-Motors for Phonographs, Motor Parts and Appliances Consisting of Winding-Handles, Escutcheon, Automatic and other Stops, Time-Indicator, and Turn-Table.
*Claims use* since Dec. 4, 1917.

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Ser. No. 103,467. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA MILLING CO., Portland, Oreg. Filed May 2, 1917.




*Particular description of goods.*—Wheat-Flour.
*Claims use* since Sept. 25, 1913.

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Ser. No. 103,524. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMENDT MILLING CO., Monroe, Ida., and Petersburg, Mich., and Delta, Ohio. Filed May 4, 1917.




*Particular description of goods.*—Buckwheat-Flour.
*Claims use* since Jan. 13, 1917.

Ser. No. 103,538. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MONTANA FLOUR MILLS COMPANY, Lewistown, Mont. Filed May 4, 1917.




*Particular description of goods.*—Wheat-Flour.
*Claims use* since Jan. 29, 1917.

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Ser. No. 103,577. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ISAAC S. PURCELL, Chicago, Ill., assignor to Tentobed Company, Chicago, Ill., a Corporation of Illinois. Filed May 7, 1917.

TENTOBED

Consisting of the coined word "Tentobed."
*Particular description of goods.*—Tents.
*Claims use* since about Mar. 1, 1917.

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Ser. No. 103,593. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EVERETT, HEANEY & CO., New York, N. Y. Filed May 7, 1917.



*Particular description of goods.*—Cotton Goods in the Piece.
*Claims use* since Mar. 5, 1917.

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Ser. No. 103,628. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BENTLEY & TWOHEY SILK CO., New York, N. Y. Filed May 8, 1917.

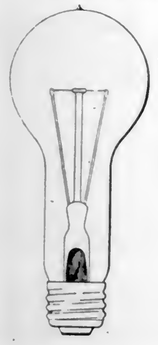
"Kittie"

*Particular description of goods.*—Silk Piece Goods.
*Claims use* since June 5, 1916.





Ser. No. 103,661. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) H. BOKER & CO., INC., New York, N. Y. Filed May 9, 1917.



The trade-mark consists of a red non-conducting filler located at the base of the lamp between and separating the leading-in wires, the representation of the lamp apart from the red filler not constituting any portion of the mark sought to be registered.
*Particular description of goods.*—Electric Lamps.
*Claims use* since about Oct. 1, 1916.

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Ser. No. 103,685. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) DUDLEY D. CAMPBELL, NEW YORK, N. Y. Filed May 10, 1917.

555

Comprising the numerals "555."
*Particular description of goods.*—Cotton Damasks, Napkins, Table-Cloths, and Cotton Piece Goods.
*Claims use* since July, 1914.

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Ser. No. 103,686. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) DUDLEY D. CAMPBELL, New York, N. Y. Filed May 10, 1917.

4100

Comprising the numerals "4100."
*Particular description of goods.*—Cotton Damasks, Napkins, Table-Cloths, and Cotton Piece Goods.
*Claims use* since August, 1914.

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Ser. No. 103,689. (CLASS 38. PRINTS AND PUBLICATIONS.) BRUCE V. CRANDALL, Chicago, Ill. Filed May 10, 1917.

DRY LADING

*Particular description of goods.*—Monthly Magazine.
*Claims use* since about September, 1913.

Ser. No. 103,725. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) JULES J. SARRAZIN, New Orleans, La. Filed May 11, 1917.




*Particular description of goods.*—Prophylactic Bodkins.
*Claims use* since June 15, 1913.

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Ser. No. 103,742. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL MACARONI COMPANY, Libertyville, Ill. Filed May 12, 1917.

CASSEROLE

*Particular description of goods.*—Macaroni, Spaghetti, and Noodles.
*Claims use* since Mar. 8, 1917.

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Ser. No. 103,743. (CLASS 39. CLOTHING.) PACIFIC MILLS, Lawrence and Boston, Mass. Filed May 12, 1917.

Serpentine

*Particular description of goods.*—Kimonos, Outer and Under Waists, Outer and Under Skirts, Wrappers and other Dresses, Nightgowns, Sacks, Petticoats, Combinations, and Drawers, All of Textile Fabrics.
*Claims use* since May, 1909.

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Ser. No. 103,770. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) DUENNA MANUFACTURING COMPANY, Seattle, Wash. Filed May 14, 1917.

DUENNA

*Particular description of goods.*—Ladies' Sanitary Napkins.
*Claims use* since May 5, 1917.

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Ser. No. 103,809. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARBUCKLE BROTHERS, New York, N. Y., and Chicago, Ill. Filed May 15, 1917.

ANONA

*Particular description of goods.*—Teas and Coffees.
*Claims use* on teas since on or about the 18th day of May, 1899, and on coffees since the 20th day of February, 1917.

Ser. No. 103,825. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HELVETIA MILK CONDENSING COMPANY, Highland, Ill. Filed May 15, 1917.

ECONOMY

*Particular description of goods.*—Canned Condensed Milk.
*Claims use* since Feb. 28, 1893.

Ser. No. 103,826. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HELVETIA MILK CONDENSING COMPANY, Highland, Ill. Filed May 15, 1917.

Success

*Particular description of goods.*—Canned Condensed Milk.
*Claims use* since Aug. 8, 1895.

Ser. No. 103,827. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HELVETIA MILK CONDENSING COMPANY, Highland, Ill. Filed May 15, 1917.

Highland

*Particular description of goods.*—Canned Condensed Milk.
*Claims use* since June 27, 1885.

Ser. No. 103,835. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RALPH MITCHELL, Aberdeen, Md. Filed May 15, 1917.



*Particular description of goods.*—Canned Vegetables.
*Claims use* since May, 1906.

Ser. No. 103,841. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NORTROPIC CABARRUS CO., INC., New Orleans, La. Filed May 15, 1917.




*Particular description of goods.*—Pepper Sauce.
*Claims use* since Apr. 13, 1915.

Ser. No. 103,887. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HENRY GITTERMAN & CO., New York, N. Y. Filed May 17, 1917.

DIAMOND

The word "Diamond."
*Particular description of goods.*—Shoe-Cloth.
*Claims use* since January, 1916.

Ser. No. 103,904. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HARDWIG PERES, Memphis, Tenn. Filed May 17, 1917.

OLE EPH

*Particular description of goods.*—Sweet Potatoes.
*Claims use* since Mar. 1, 1917.

Ser. No. 103,907. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM SCHOTTEN COFFEE COMPANY, St. Louis, Mo. Filed May 17, 1917.

Queen's Taste

*Particular description of goods.*—Whole or Ground Spices.
*Claims use* since about Mar. 29, 1917.

Ser. No. 103,977. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COMMON SENSE GUM CO., New York, N. Y. Filed May 21, 1917.




*Particular description of goods.*—Chewing-Gum.
*Claims use* since 1908.

Ser. No. 103,978. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COMMON SENSE GUM CO., New York, N. Y. Filed May 21, 1917.




*Particular description of goods.*—Chewing-Gum.
*Claims use* since 1908.





Ser. No. 104,001. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) YOUNG & GRIFFIN COFFEE CO., INC., New York, N. Y. Filed May 21, 1917.

TRINITY

*Particular description of goods.*—Roasted Coffee.
*Claims use* since May 1, 1917.

Ser. No. 104,018. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CALIFORNIA ASSOCIATED OLIVE GROWERS, INC., San Francisco, Cal. Filed May 23, 1917.

Serra

*Particular description of goods.*—Olives.
*Claims use* since Jan. 1, 1917.

Ser. No. 104,039. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE CENTRAL TOOL COMPANY, Cranston, R. I. Filed May 24, 1917.




Consists of the letters "C. T. C. O."
*Particular description of goods.*—Micrometer-Calipers and Parts Thereof.
*Claims use* since Dec. 22, 1914.

Ser. No. 104,049. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NORTROPIC CABARRUS CO. INC., New Orleans, La. Filed May 24, 1917.




*Particular description of goods.*—Coffee.
*Claims use* since Apr. 13, 1915.

Ser. No. 104,076. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ABRAHAM M. MALOUF, Salt Lake City, Utah. Filed May 25, 1917.

First National

*Particular description of goods.*—Matting, Tapestry.
*Claims use* since the 3d day of January, 1916.

Ser. No. 104,085. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SCHWARZENBACH-HUBER COMPANY, New York, N. Y. Filed May 25, 1917.

Country Club

*Particular description of goods.*—Broad Silk in the Piece.
*Claims use* since Oct. 3, 1916.

Ser. No. 104,088. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed May 25, 1917.

SIMPLICITY

*Particular description of goods.*—Candy.
*Claims use* since Nov. 1, 1916.

Ser. No. 104,094. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN J. WILSON, Chicago, Ill. Filed May 25, 1917.




*Particular description of goods.*—Pickles.
*Claims use* since May, 1, 1917.

Ser. No. 104,102. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ANDREW TRUST POEHLMANN, Baltimore, Md. Filed May 26, 1917.

Cathedral

*Particular description of goods.*—Electrical Signal and Alarm Bells and Horns.
*Claims use* since Nov. 15, 1916.

# TRADE-MARK REGISTRATIONS GRANTED

## JUNE 26, 1917.

117,235. METAL OR ALUMINUM COMPOUNDS IN THE FORM OF INGOTS, CASTINGS, RODS, PLATES. THE ACIERAL COMPANY OF AMERICA, New York, N. Y.
Filed December 26, 1916. Serial No. 100,148. PUBLISHED APRIL 24, 1917.

117,236. METAL OR ALUMINUM COMPOUNDS IN THE FORM OF INGOTS, CASTINGS, RODS, PLATES. THE ACIERAL COMPANY OF AMERICA, New York, N. Y.
Filed December 26, 1916. Serial No. 100,149. PUBLISHED APRIL 24, 1917.

117,237. FRESH, DRIED, AND CANNED COD-FISH. ALASKA CODFISH COMPANY, San Francisco, Cal.
Filed February 9, 1917. Serial No. 101,253. PUBLISHED APRIL 10, 1917.

117,238. TOILET-PAPER. ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y.
Filed February 11, 1916. Serial No. 92,767. PUBLISHED APRIL 17, 1917.

117,239. COTTON PIECE GOODS. AMERICAN BLEACHED GOODS COMPANY, New York, N. Y.
Filed February 9, 1917. Serial No. 101,252. PUBLISHED APRIL 24, 1917.

117,240. METALS RESEMBLING BRONZE AND CASTINGS MADE FROM SAID METAL. AMERICAN METAL PRODUCTS COMPANY, Milwaukee, Wis.
Filed January 22, 1917. Serial No. 100,787. PUBLISHED APRIL 24, 1917.

117,241. GINGER-ALE. P. BALLANTINE & SONS, Newark, N. J.
Filed March 14, 1917. Serial No. 102,133. PUBLISHED APRIL 17, 1917.

117,242. HATS AND CAPS FOR MEN, WOMEN, AND CHILDREN. GEORGE BORGFELDT & CO., New York, N. Y.
Filed February 27, 1917. Serial No. 101,729. PUBLISHED APRIL 24, 1917.

117,243. MEN'S, BOYS', AND YOUTHS' SHOES MADE FROM LEATHER. BRADLEY & METCALF CO., Milwaukee, Wis.
Filed February 28, 1917. Serial No. 101,771. PUBLISHED APRIL 24, 1917.

117,244. CLEANING AND POLISHING MATERIAL FOR AUTOMOBILES, PIANOS, WOODWORK, AND FURNITURE. WILLIAM JORDAN BROUSE, Madrid, N. Y.
Filed February 23, 1917. Serial No. 101,591. PUBLISHED APRIL 24, 1917.

117,245. LACES, KNITTED INSERTION, AND KNITTED EDGINGS FOR UNDERWEAR. RALPH S. BYRAM, Germantown, Pa.
Filed February 27, 1917. Serial No. 101,728. PUBLISHED APRIL 24, 1917.

117,246. CERTAIN NAMED PAPER AND STATIONERY. H. W. CARTER PAPER COMPANY, Springfield, Mass.
Filed November 22, 1916. Serial No. 99,461. PUBLISHED APRIL 10, 1917.

117,247. LEATHER BOOTS AND SHOES. CASS & DALEY SHOE COMPANY, Salem, Mass.
Filed August 11, 1916. Serial No. 97,268. PUBLISHED APRIL 24, 1917.

117,248. CERTAIN NAMED OUTER WEARING APPAREL FOR LADIES. HARRY COLLINS, New York, N. Y.
Filed January 25, 1917. Serial No. 100,911. PUBLISHED APRIL 24, 1917.

117,249. ELECTRICAL INSULATING MATERIAL. THE CONTINENTAL FIBRE COMPANY, Newark, Del.
Filed January 8, 1917. Serial No. 100,423. PUBLISHED APRIL 24, 1917.

117,250. DRESS, NEGLIGÉE, AND WORK SHIRTS. CLARENCE M. FLORA, Oklahoma, Okla.
Filed February 26, 1917. Serial No. 101,702. PUBLISHED APRIL 24, 1917.

117,251. TURPENTINE CUPS AND APRONS. FUEL CITY MANUFACTURING CO., Clarksburg, W. Va.
Filed August 2, 1916. Serial No. 97,034. PUBLISHED APRIL 24, 1917.

117,252. CRASH CLOTH, PANAMA CLOTH, AND IMITATION PANAMA FABRIC. CHARLES H. GOLDSMITH, Philadelphia, Pa.
Filed February 3, 1917. Serial No. 101,146. PUBLISHED APRIL 24, 1917.

117,253. DUPLICATORS. GRAPHIC DUPLICATOR COMPANY, New York, N. Y.
Filed February 3, 1917. Serial No. 101,147. PUBLISHED APRIL 17, 1917.

117,254. COFFEE. MARTIN L. HALL COMPANY, Boston, Mass.
Filed February 20, 1917. Serial No. 101,544. PUBLISHED APRIL 10, 1917.

117,255. PLAYER-ACTIONS FOR PIANOS. OTTO HIGEL COMPANY, INC., Buffalo, N. Y.
Filed June 15, 1916. Serial No. 95,893. PUBLISHED APRIL 17, 1917.

117,256. SCOURING-SOAP. THE HOLBROOK MFG. CO., Jersey City, N. J.
Filed December 10, 1915. Serial No. 91,372. PUBLISHED APRIL 24, 1917.

117,257. LUBRICATING-OIL. W. D. KIRLER CO., Indianapolis, Ind.
Filed November 6, 1916. Serial No. 99,124. PUBLISHED FEBRUARY 13, 1917.

117,258. HOSIERY. LINENWEAR HOSIERY COMPANY INC., Clifton Heights, Pa.
Filed June 26, 1915. Serial No. 87,611. PUBLISHED FEBRUARY 27, 1917.

117,259. CERTAIN NAMED DEVICES FOR GAS-ENGINES. FRANK LIST MCMECHEN, San Diego and Los Angeles, Cal.
Filed January 8, 1917. Serial No. 100,446. PUBLISHED APRIL 24, 1917.

117,260. HOSIERY. MAY HOSIERY MILLS, Burlington, N. C.
Filed February 19, 1917. Serial No. 101,500. PUBLISHED APRIL 24, 1917.

117,261. READY-MIXED PAINTS. GUSTAV AUGUSTUS HENRY MULLER, New York, N. Y.
Filed January 20, 1917. Serial No. 100,773. PUBLISHED APRIL 24, 1917.

117,262. PORTABLE ELECTRIC LIGHTS AND DRY BATTERIES. NATIONAL CARBON COMPANY, Long Island City, N. Y.
Filed March 22, 1917. Serial No. 102,328. PUBLISHED APRIL 24, 1917.

117,263. PLATINUM-SOLDER, GOLD-SOLDER, AND SILVER-SOLDER. NATIONAL SMELTING & REFINING CORPORATION, New York, N. Y.
Filed February 12, 1917. Serial No. 101,337. PUBLISHED APRIL 24, 1917.

117,264. SCORE-PADS. RADBRIDGE COMPANY, INC., New York, N. Y.
Filed December 18, 1916. Serial No. 100,024. PUBLISHED FEBRUARY 13, 1917.

117,265. ORANGES AND LEMONS. RANDOLPH MARKETING CO., Los Angeles, Cal.
Filed February 27, 1917. Serial No. 101,756. PUBLISHED APRIL 10, 1917.

117,266. SOAP. RUB-NO-MORE CO., Fort Wayne, Ind.
Filed October 16, 1916. Serial No. 98,706. PUBLISHED DECEMBER 5, 1916.

117,267. WOVEN FABRIC IN THE PIECE. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed May 6, 1916. Serial No. 94,968. PUBLISHED JULY 11, 1916.

117,268. WOMEN'S, CHILDREN'S, AND INFANTS' COATS, CLOAKS, WRAPS, AND CAPES. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed May 6, 1916. Serial No. 94,969. PUBLISHED JULY 4, 1916.

117,269. WOMEN'S, CHILDREN'S, AND INFANTS' COATS, CLOAKS, WRAPS, CAPES, DRESSES, DRESS-WAISTS, AND OUTER SKIRTS. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed February 23, 1917. Serial No. 101,624. PUBLISHED APRIL 24, 1917.

117,270. WATERPROOF COATS, SLICKERS, JACKETS, PANTS, HATS, APRONS, AND PONCHOS. H. M. SAWYER & SON, East Cambridge, Mass.
Filed January 10, 1917. Serial No. 100,527. PUBLISHED APRIL 24, 1917.

117,271. FRUIT-JAR RINGS. R. E. TONGUE & BROS. Co., Philadelphia, Pa.
Filed Apr. 3, 1916. Serial No. 94,090. PUBLISHED OCTOBER 3, 1916.

117,272. TOILET-PAPER AND PAPER TOWELS. WORTENDYKE MANUFACTURING CO., Richmond, Va.
Filed March 3, 1917. Serial No. 101,889. PUBLISHED APRIL 17, 1917.

117,273. TOILET-PAPER AND PAPER TOWELS. WORTENDYKE MANUFACTURING CO., Richmond, Va.
Filed March 3, 1917. Serial No. 101,890. PUBLISHED APRIL 17, 1917.

117,274. TOILET-PAPER AND PAPER TOWELS. WORTENDYKE MANUFACTURING CO., Richmond, Va.
Filed March 3, 1917. Serial No. 101,891. PUBLISHED APRIL 17, 1917.

117,275. TOILET-PAPER AND PAPER TOWELS. WORTENDYKE MANUFACTURING CO., Richmond, Va.
Filed March 3, 1917. Serial No. 101,892. PUBLISHED APRIL 17, 1917.

117,276. TOILET-PAPER AND PAPER TOWELS. WORTENDYKE MANUFACTURING CO., Richmond, Va.
Filed March 3, 1917. Serial No. 101,893. PUBLISHED APRIL 17, 1917.

117,277. CERTAIN NAMED CHEMICALS AND PHARMACEUTICAL PREPARATIONS. THE MIHALOVITCH BROTHERS COMPANY, Cincinnati, Ohio.
Filed December 26, 1916. Serial No. 100,175. PUBLISHED MARCH 27, 1917.

## TRADE-MARK REGISTRATIONS RENEWED.

14,680. LUBRICATING OILS AND COMPOUNDS. ALFRED G. BELDEN, New York, N. Y.
Registered August 16, 1887. Renewed August 16, 1917.

14,985. A LOTION FOR THE SKIN. AURELIUS S. HINDS, Portland, Me.
Registered November 29, 1887. Renewed November 29, 1917.

## TRADE-MARK REGISTRATIONS CANCELED.

112,040. ALARM-CLOCKS, CLOCKS, WATCHES, HALL-CLOCKS, AND CLOCKWORKS. GEORGE BORGFELDT & Co., New York, N. Y.
Registered August 22, 1916. Canceled May 22, 1917.



# LABELS

## REGISTERED JUNE 26, 1917.

20,187.—*Title:* "AL-BRENTO." (For Material for Cleaning Glass and Like Surfaces and for Preventing Depositing of Moisture on the Same.) WILLIAM G. ALBRECHT, Baltimore, Md. Filed February 19, 1917.

20,188.—*Title:* "ALLENRHU." (For Remedy for Rheumatism, Liver, Kidney, and Bowel Complaints.) ALLE-RHUME REMEDY COMPANY, Rochester, N. Y. Filed May 14, 1917.

20,189.—*Title:* "ADVANCE CORK INSERT TRANSMISSION LININGS." (For Transmission-Linings.) ADVANCE AUTOMOBILE ACCESSORIES CORP., Chicago, Ill. Filed June 5, 1917.

20,190.—*Title:* "SAPOFOAM." (For Liquid Shampoo.) THE ALBANY PHARMACAL CO. INC., Albany, N. Y. Filed June 13, 1917.

20,191.—*Title:* "K K." (For Cleaning Compound.) THE CHAMBERLAIN COMPANY, Pittsburgh, Pa. Filed May 1, 1917.

# PRINTS

## REGISTERED JUNE 26, 1917.

4,711.—*Title:* "YUBAN CHOSEN FOR MEN BY MEN." (For Yuban Coffee.) ARBUCKLE BROS., New York, N. Y. Filed June 12, 1917.

4,712.—*Title:* "TRY THIS TREAT KRUMBLES WITH FRUIT OR BERRIES. EVERY HOME IN THE LAND HAS A HEARTY WELCOME FOR KRUMBLES—THE NEW WHOLE WHEAT FOOD, WITH ITS DELICIOUS FLAVOR, AND ITS HIGH FOOD VALUE AT A LOW PRICE. CHILDREN LIKE KRUMBLES, AND IT BUILDS THEM UP, BECAUSE OF THE EXTRA NUTRITION OF DURUM WHEAT WHICH IS RICH IN PROTEIN AND MINERAL SALTS. KRUMBLES IS APPETIZING WITH CREAM OR MILK, AND A SPECIAL TREAT WITH BERRIES, SLICED PEACHES, OR BANANAS." (For a Cereal Breakfast Food.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed June 6, 1917.

4,713.—*Title:* MENNEN'S BORATED TALCUM." (For Talcum Powder.) G. MENNEN CHEMICAL CO., Newark, N. J. Filed June 12, 1917.

4,714.—*Title:* "MENNEN'S CREAM DENTIFRICE." (For Cream Dentifrice.) G. MENNEN CHEMICAL CO., Newark, N. J. Filed June 12, 1917.

4,715.—*Title:* "MENNEN'S COLD CREAM." (For Cold-Cream.) G. MENNEN CHEMICAL CO., Newark, N. J. Filed June 12, 1917.

4,716.—*Title:* "MENNEN'S SHAVING CREAM." (For Shaving-Cream.) G. MENNEN CHEMICAL CO., Newark, N. J. Filed June 12, 1917.

4,717.—*Title:* "MENNEN'S CREAM DENTIFRICE." (For Cream Dentifrice.) G. MENNEN CHEMICAL CO., Newark, N. J. Filed June 12, 1917.

4,718.—*Title:* "OFF THE TRACK BUT PERFECTLY SAFE ON RUBBER TIRES." (For Rubber Tires for Automobiles.) A. B. WICKER, Chicago, Ill. Filed June 13, 1917.

# DECISIONS

OF THE

# COMMISSIONER OF PATENTS

AND OF

# UNITED STATES COURTS IN PATENT CASES.

## DECISIONS OF THE U. S. COURTS.

### Court of Appeals of the District of Columbia.

IN RE ARMSTRONG CORK COMPANY.

*Decided January 9, 1917.*

1. TRADE-MARKS—"NONPAREIL"—DESCRIPTIVE.
"Nonpareil" *Held* to be a descriptive English word and non-registrable.
2. SAME—SAME—SAME—EVERY-DAY USE IMMATERIAL.
While "Nonpareil" is a fancy word not in every-day use by persons to describe the superlative qualities of articles, the Trade-Mark Act leaves no discretion to determine when a word, which is, in fact, descriptive, is sufficiently understood or accepted as to be considered descriptive of the quality of certain goods by a whole people.
3. SAME—DESCRIPTIVE—REGISTERED UNDER "TEN-YEAR PROVISO."
The contention that by the large exclusive use of "Nonpareil" and registration under the "ten-year proviso" for one class of goods the word has acquired a secondary meaning, as designating simply such goods as applicant's and as such is registrable for another class of goods, is overruled. The Trade-Mark Act cannot be expanded so as to permit a descriptive word to be registered.

*Mr. C. P. Byrnes* and *Mr. G. H. Parmelee* for the appellant.

*Mr. W. R. Ballard* for the Commissioner of Patents.

COVINGTON, *J.*:

The applicant, the Armstrong Cork Company, has appealed from a decision of the Assistant Commissioner of Patents refusing registration of the word "Nonpareil" as a trade-mark—

**for tiles, tiling for floors, wainscoting, and other structures,**

containing cork. The decision of the Assistant Commissioner was in affirmance of the decision of the Examiner of Trade-Marks and Designs refusing registration.

The single question presented by this appeal is whether the word "Nonpareil" as applied to cork tiling and the like is descriptive of the character or quality of such cork tiling within the meaning of section 5 of the existing Trade-Mark Act. "Nonpareil" is undoubtedly a fancy word. It is not an adjective in every-day use by persons to describe the superlative qualities of various articles. The Trade-Mark Act leaves to the court, however, no judicial discretion to determine when an English word, which is in fact descriptive, is sufficiently understood or accepted as to be considered descriptive of the quality of certain goods by a whole people. Section 5 of the act provides broadly that no mark consisting merely of words—

**which are descriptive of the goods with which they are used, or of the character or quality of such goods,**

shall be registered under the terms of this act. The word "Nonpareil" is to-day an English word. It is true that it is a combination of the two French words "non" and "pareil," but very many other words in our language have been likewise etymologically evolved. It is found in all our leading dictionaries as an adjective, and is defined as "having no equal," "of unequaled excellence," and "of unriveled excellence." It is therefore unquestionably an English word descriptive of such quality as might well want to be claimed by any manufacturer of cork tiling.

This court affirmed a decision of the Commissioner of Patents, holding that the word "Trophy," associated with a picture of a loving-cup, as a trade-mark for coffee, was descriptive and therefore not entitled to registration because intended to indicate that the goods were of a superior quality. (*In re Meyer Bros. Coffee & Spice Co.*, 38 App. D. C., 520.) The word "Sterling" as a trade-mark for ale was also held descriptive and declared unregistrable. (*Worster Brewing Corporation* v. *Reuter & Co.*, 30 App. D. C., 428.) Likewise unregistrable was said to be the word "Crystal" as applied to beer. (*In re New South Brewery & Ice Co.*, 32 App. D. C., 591.) These cases are in full harmony with the other decisions of this court since the existing Trade-Mark Act became law.

The applicant urges, however, that having been in exclusive use of the word "Nonpareil" as a trade-mark for heat-insulating materials containing cork for more than ten years prior to the passage of the Trade-Mark Act of February 20, 1905, registration has already been had for it under the section of that act known as the "ten-year proviso," and that by reason of the large exclusive use of such trade-mark, "Nonpareil," in interstate and international commerce as applied to heat-insulating materials, the mark, even if it can be considered abstractly as a descriptive word, has in fact acquired a secondary meaning in respect of cork materials as simply designating such goods as the applicant's. The Trade-Mark Act cannot be expanded so as to

permit a descriptive word to be registered. To permit such a construction would be to say that a clearly descriptive word, registered as a trade-mark on certain particular goods of an applicant, would begin to acquire such a secondary, and non-descriptive meaning, as to be registrable for all classes of similar goods which in years thereafter might be produced by the same applicant. That would entirely nullify the clear legislative intention as to the ten-year proviso.

The decision will be affirmed and this decision certified to the Commissioner of Patents. Affirmed.

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## U. S. Circuit Court of Appeals—First Circuit.

### NORTHROP *et al. v.* DRAPER CO.

*Decided January 9, 1917.*

1. PATENTS—CONSTRUCTION AND OPERATION OF ASSIGNMENT—RIGHT OF ASSIGNOR TO REISSUE.

An assignee of the Northrop patentee, No. 987,817, for a misthreading device for looms, *Held* entitled to a specific enforcement of the implied covenant of the patentee, as assignor, to execute an application for a reissue on the ground that through inadvertence the language of the specification and certain of the claims misstated the mode of operation of a certain feature of the device intended to be covered by the patent.

2. SAME — ASSIGNMENT — CONSTRUCTION — IMPLIED COVENANT TO APPLY FOR REISSUE.

An assignment of an application for a patent to the assignee, his heirs, executors, administrators, and assigns, with the patent to be issued thereon and any right to a reissue, carries with it an implied covenant, which runs with the grant, that the assignor will make application for a reissue in case the patent manifests an intention to claim a feature disclosed therein but which it fails to state accurately in a claim, and such implied covenant is not defeated as to subsequent assignees by a further covenant personal to the first assignee and which does not run with the grant to make such an application if the assignee shall deem it necessary.

3. WORDS AND PHRASES—"HOPPER MISTHREAD"—"REAL MISTHREAD."

As applied to looms a "hopper misthread" is one that occurs following the act of replenishment by the thread becoming broken at the moment of transfer or prior to the arrival of the shuttle in the box at the side of the loom remote from the hopper. A "real misthread" occurs after the shuttle is replenished by a new bobbin, a laying of filling in the shed on the first pick of the shuttle, and failure of filling on the return pick due to breakage. In the case of a hopper misthread no filling is laid on the first pick or on the return pick of the shuttle, while in the case of a real misthread filling is laid on the first pick, but not on the return pick, and as the shuttle under such circumstances is not replenished when it reaches the hopper side of the loom no filling is laid on the subsequent picks of the shuttle preceding replenishment.

APPEAL from the District Court of the United States for the District of Massachusetts; Frederic Dodge, Judge.

*Mr. Horace Van Everen* for the appellants.

*Mr. W. K. Richardson* for the appellee.

Before BINGHAM, Circuit Judge, and HALE and MORTON, District Judges.

BINGHAM, *Cir. J.:*

This is a bill for specific performance of an alleged agreement, wherein it is sought to have the defendant Northrop execute an application for a reissue patent covering an invention made by him and now owned by the plaintiff, and to have the defendant Draper restrained from in any way interfering with Northrop's taking such action as may be necessary to obtain the reissue. The case is here on an appeal by the defendants from a decree of the district court ordering Northrop to execute the application.

(1) It appears that on March 28, 1911, United States Letters Patent No. 987,817 were issued to defendant Draper, assignee of Northrop, on an application filed by the latter July 12, 1910, for an invention for misthreading devices for looms, and that on September 8, 1911, the defendant Draper assigned the invention and patent to the plaintiff. In February, 1915, the plaintiff discovered that the language employed in the specification of the patent (page 3, line 86) misstated the mode of operation of a certain feature of the device, and that a like misstatement was incorporated in claim 8 (lines 103 and 104, page 4), rendering it defective. It was also discovered that in claim 6 the sequence of events upon which, in the operation of the device, it was stated in the claim that the loom would stop, was defective, in that the loom would not stop upon such sequence. Shortly after discovering these defects the plaintiff sent an application for reissue, embodying the desired corrections, to the defendant Draper, with a request that he present it to Northrop for his signature. Draper later returned the application unexecuted, with the statement—

> that if the claims were amended as proposed by the reissue they would be broader than the invention • • • which the application for the original patent was intended to cover.

On this appeal the defendants concede that the defects complained of in the specification (line 86, page 3) and in claim 8 (lines 103 and 104, page 4) are obvious defects, and the desired corrections should be made, as they may properly be predicated upon the invention intended to be patented in the original patent. The controversy, therefore, is limited to the correction which the plaintiff asks to have made in claim 6. The defendants' contention is that the correction sought as to claim 6, if allowed, would result in introducing into the reissue patent a claim for a different invention from the one patented or intended to be patented in the original patent, and would also result in a broadened reissue.

The Revised Statutes of the United States provide:

> SEC. 4916. Whenever any patent is inoperative or invalid, by reason of a defective or insufficient specification, or by reason of the patentee claiming as his own invention or discovery more than he had a right to claim as new, if the error has arisen by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, the Commissioner shall, on the surrender of such a patent and the payment of the duty required by law, cause a new patent for the *same invention*, and in accordance with the corrected specification, to be issued to the patentee, or, in the case of his death or of an assignment of the whole or any undivided part of the original patent, then to his executors, administrators, or assigns, for the unexpired part of the term of the original patent. • • • The specifications and claim in every such case shall be subject to revision and restriction in the same manner as original applications are; • • • but no new matter shall be introduced into the specification, nor in case of a machine patent shall the model or drawings be amended, except each by the other. (Comp. St., 1913, sec. 9461.)





In *Stafford Company v. Coldwell-Gildard Co.*, (202 Fed., 744; 121 C. C. A., 110) Judge Putnam, in discussing the above statute, said:

> Two leading and imperative requirements stand in the path of a reissue: first, that the error must have arisen "by inadvertence, accident or mistake;" and, second, that the new patent is to be for the "same invention." Consequently, it must appear, in some manner provided by law, that the invention for which the reissue is granted was in the contemplation of the patentee at the outset, and that he failed to acquire it by reason of "inadvertence, accident or mistake."
>
> Starting with these propositions, the rules which govern the Commissioner and the courts are those applied by the fundametal principles of equity, that, in order to relieve against "inadvertence, accident or mistake," there must be clear and positive proof that there was such "inadvertence, accident or mistake," and that the party asking for relief acquires no more than he was originally entitled to. The burden of maintaining the facts to which these requirements relate is of a character that requires clear and positive proof, in harmony with the universal rules of equity not to disturb the existing status except by proof of that character. No more inferences can take the place of such proof. Ordinarily, what is called for by the words "same invention" should appear in some way on the face of the original patent, and it cannot be gathered from mere inferences or suggestions with reference to what the patentee might or might not have conceived.

The first question, therefore, is: What was the invention intended to be covered by the original patent as manifested by the terms employed in that instrument?

The patent is entitled "An improvement in misthreading devices," and relates particularly to looms of the filling-replenishing type, wherein at desired times a fresh supply of filling is automatically furnished. In looms of this character the shuttle is thrown from the hopper side of the loom through the shed, across the warp, to the opposite side of the loom. Following this flight of the shuttle the lay beats up, pressing the thread just laid against the fell of the cloth, and is at once withdrawn. The shuttle then makes its return flight through the shed to the hopper side of the loom, and is then followed by another beat of the lay, and so on. The first pick of the shuttle and the succeeding beat of the lay are known respectively, as the "detecting-pick" and the "detecting-beat," and the return pick of the shuttle and the following beat of the lay are known as the "non-detecting pick" and the "non-detecting beat." When the filling becomes exhausted, or breaks, a new bobbin is transferred from the hopper to the shuttle to replenish the filling, and this is done without stopping the loom. The free end of the thread of each bobbin is attached to the hopper, so that, when the shuttle containing the bobbin is thrown through the shed, the thread is left in the shed to be beaten up by the lay.

(3) In these looms certain defects of operation are liable to occur when replenishment takes place. They are spoken of in the patent as hopper misthreads and a real misthread. A hopper misthread is one that occurs following the act of replenishment by the thread becoming broken at the moment of transfer or prior to the arrival of the shuttle in the box at the side of the loom remote from the hopper. A real misthread occurs after the shuttle is replenished by a new bobbin, a laying of filling in the shed on the first pick of the shuttle, and failure of filling on the return pick due to breakage. This occurrence usually takes place because the shuttle is not properly threaded following replenishment. It will be noted that in the case of a hopper misthread no filling is laid either on the first pick or the return pick of the shuttle, while in the case of a real misthread filling is laid on the first pick, but not on the return pick, and, as the shuttle, under such circumstances, is not replenished when it reaches the hopper side of the loom, no filling is laid on the subsequent picks of the shuttle preceding replenishment.

Prior to the patent in suit devices had been made to stop the loom on two hopper misthreads in succession, but in such devices, should filling be laid once on a detecting-pick following a hopper misthread, the stop mechanism would return to its normal or initial position, so that, to effect stoppage of the loom thereafter, two successive hopper misthreads were required, with the result that loom stoppage for a real misthread was precluded, and the loom would continue to operate until the hopper became exhausted.

In the specification, where the inventor first considers the object to be accomplished by his invention, he states it to be—

> to provide means whereby, if filling is absent on two alternate detecting beats, the loom will stop, regardless of whether filling is present or not on the intermediate beat.

This is only another way of saying that, if filling is absent on two successive hopper misthreads following replenishment due to a first absence of filling, or if a real misthread occurs following replenishment due to a first absence of filling, the loom will stop, and also for saying that, if filling is absent on a first detecting-beat, causing replenishment, present or absent on the next detecting-beat, and absent on the next detecting-beat, the loom will stop, and manifests an intention to disclose means for loom stoppage upon two successive hopper misthreads and also upon a real misthread. All three statements are but different methods of saying the same thing.

There is also one other place in the specification where the inventor states the object of his invention as follows:

> Thus in the present invention it will be noted that upon the occurrence of a double hopper misthread the loom will stop, and will also be stopped by the occurrence of a real misthread; in other words, the loom will stop if on two alternate detecting beats the filling be absent, that is, if it be absent on one detecting beat, present on the next detecting beat, and absent on the next detecting beat the loom will stop.

In the foregoing sentence it is apparent that the inventor was undertaking to state the object of his invention in three ways, each of which is the equivalent of the other two. He there states as his first proposition that the loom will stop "upon the occurrence of a double hopper misthread," and also "by the occurrence of a real misthread"; and, in prefacing the second and third clauses of the sentence by the phrases "in other words" and "that is," he indicates that he was undertaking to restate in different language in each clause the same thing which he had previously stated in the first clause. There can be

no question but that the second clause states the exact equivalent of the first clause; and the third clause, although clearly intended to state the equivalent of the two preceding clauses, is manifestly defective and incomplete, for it fails to employ language conveying the equivalent idea of loom stoppage on the occurrence of a double hopper misthread. To have carried out the idea intended to be conveyed, the third clause should have read:

That is, if it be absent on one detecting beat, present *or not* on the next detecting beat, and absent on the next detecting beat the loom will stop.

Its meaning, however, is clear when read in connection with what precedes it.

We have also examined carefully the remaining provisions of the specification, including the drawings, and, in particular, the portions providing means and describing their workings for accomplishing loom stoppage, and find that they are all based upon the idea of providing means for loom stoppage upon the occurrence of either of two sequences—a double hopper misthread or a real misthread—and that no means are disclosed in the specification for loom stoppage upon the occurrence of a sequence consisting of a real misthread alone.

Now, as to the claims of the patent: An examination shows that some of them claim means for loom stoppage in general terms, while others set forth the particular means by which this object is to be accomplished. But in every one of them, apart from claim 6, means are claimed for loom stoppage upon the occurrence of two sequences consisting, one of a double hopper misthread and the other of a real misthread, and not upon the occurrence of a single sequence consisting of a real misthread alone.

Thus far it is clear, both as to specification and claims, that the inventor has not disclosed an intention of providing means for loom stoppage upon the occurrence of a sequence constituting a real misthread alone. It remains, however, for us to consider claim 6. This claim reads:

In a loom of the character described, the combination of means for detecting the presence or absence of filling in the shed, filling replenishing controlling means adapted to be actuated when filling is absent on a detecting beat, and means for stopping the loom when the filling is absent on a detecting beat *following* replenishment, present on the next detecting beat, and absent on the next detecting beat.

It is conceded that the claim purports to state that the loom will stop on the occurrence of the following sequence: absence (replenishment), absence (replenishment), presence, absence; that it calls for mechanism for loom stoppage on the occurrence of a single sequence composed of a hopper misthread and a real misthread; and that the specification discloses no means by which the loom will stop upon that sequence.

The plaintiff desires to amend the claim by striking out the word "following," and inserting in its stead the word "causing," so that the portion of the claim material for our consideration would read:

Means for stopping the loom when the filling is absent on a detecting beat *causing* replenishment, present on the next detecting beat, and absent on the next detecting beat.

It is thus seen that the unamended claim calls for means for loom stoppage upon the sequence of a hopper misthread and a real misthread, and that the specification does not provide means for loom stoppage, either upon the sequence of a hopper misthread and a real misthread, or upon that of a real misthread alone.

While it is true that the specification does not disclose means for loom stoppage upon a real misthread alone, it is equally true that amended claim 6 does not call for means which will function on such a misthread alone, but for means that will function on a real misthread, even though they will also function upon a double hopper misthread, and that, to this extent, the intention of the inventor as to this feature of his invention is manifest: (1) because it is not covered by the other claims of the patent; and (2) because claim 6, as originally drawn, is wholly inoperative and could have been intended to cover no other feature of the invention. In other words, although the means disclosed in the specification function in two ways, the inventor is not precluded from having a claim for those means based upon their functioning in one of the ways disclosed, and is entitled to have it, inasmuch as his intention to claim it is disclosed in the patent.

Whether a device disclosing means that would operate on a real misthread alone would infringe claim 6 as amended is of little consequence in this proceeding, as we think the patent clearly discloses an intention on the part of the inventor to claim means that will function on a real misthread and produce loom stoppage, although they may also function on a double hopper misthread, and that the use in the claim of the word "following," instead of "causing," was, as found by the court below, due to "inadvertence, accident or mistake" on the part of the solicitor.

We do not regard the rule—that a reissue which broadens a patent cannot be had after two years from the granting of the patent—as applicable to the facts in this case: (1) because amended claim 6 is not broader than original claim 6, as each calls for a single sequence of misthreads; and (2) because amended claim 6, as understood, does not introduce a distinct invention from that shown in the patent, but covers means disclosed in the specification which the inventor intended to claim in original claim 6.

As to the defendants' contention that it was the duty of the plaintiff, immediately after purchasing the patent, to have caused an examination to be made for the purpose of ascertaining whether claim 6 covered the scope of the intended invention and the detection of any error that might exist therein, we think it sufficient to say that the evidence discloses that, shortly after the plaintiff purchased the patent, it caused its experts to make an examination of it with this object in view, and that their examination failed to disclose the defects now complained of, and that they were not discovered until February, 1915, when the plaintiff's expert, on examining a device which the defendants had put upon the market, discovered that it embodied means causing loom stoppage on a real misthread, and,





knowing that this was one of the fundamental features of the patent in question, again made an examination of the patent and discovered the defects here complained of. This evidence, instead of tending to show a failure on the plaintiff's part to take reasonable steps for the ascertainment of any defects that might exist in the patent, discloses that it took such steps as it, in the exercise of reasonable care and prudence, was called upon to take, and that the failure to discover the defect in claim 6 was due to no fault on its part.

Furthermore, we do not think that the defendants are in a position to assert rights due to action taken by them in reliance upon the plaintiff's conduct in failing at an earlier date to ascertain the defects in its patent and apply for a reissue. The defendants do not stand in the shoes of a person acting in good faith in reliance on plaintiff's conduct; for defendant Northrop was the inventor of the patent, and defendant Draper the party to whom it was issued, and the former, by reason of his knowledge of the scope of the invention, would be far more reprehensible for failure to ascertain defects in the claim than would be the plaintiff. Besides this, in their answer, the defendants admit that in 1913 their attention was—

called to the fact that claim 6 was not predicable upon the structure illustrated and described in the specification of the patent,

which information was apparently acquired prior to their taking action in the way of producing and putting upon the market devices providing for loom stoppage upon a real misthread. The defendants, therefore, in 1913, and probably at an earlier date, knew that claim 6 was defective, in that it did not state what it was intended to claim.

(2) As we regard the remaining questions raised on this appeal rightly determined in the court below, it is not our purpose to again review any of them, except the one as to whether the defendant Northrop is under an obligation to the plaintiff, express or implied, to make application for a reissue. The assignment was to Draper, his heirs, executors, administrators, and assigns, and was of the invention disclosed in the application, the patent to be issued thereon, and any right to a reissue. If Northrop had not inserted an express covenant for further assurance in the assignment, it cannot be doubted that a covenant would be implied to this extent, at least; that Northrop would make application for reissue in case the patent manifested an intention to claim a feature disclosed therein, but which it failed to state accurately in a claim. The implied covenant would be for the benefit of the grant, and the grant being to Draper and his assigns, would inure to the plaintiff. The contention is made that the express covenant is a restricted covenant; that is, that it confers rights upon Draper less than an implied covenant would confer, and that, because of this, no covenant can be implied in favor of the grant and, being personal to Draper, will not inure to the plaintiff. But we do not regard the express covenant as of less scope than the one that would be implied. It imposes, rather, a greater obligation, in that it requires Northrop to apply for a reissue if Draper deems it necessary, and under circumstances to which the implied covenant would not extend. The rights conferred by the express covenant beyond what would be implied, being personal to Draper, would not run with the grant; but, in so far as the rights conferred are only what would be contained in the implied covenant, it is evident it was intended they should inure to an assignee; otherwise, the full enjoyment of the grant could not be had by Draper's assigns, which it was expressly stipulated they should possess.

It having been determined that the plaintiff is entitled to a reissue for the purpose of correcting claim 6, and it being conceded by defendants that the plaintiff is entitled to the corrections desired in the specification (line 86, page 3) and in claim 8 (lines 103, 104, page 4), the decree of the district court must be affirmed.

The decree of the district court is affirmed, with costs to the appellee.

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## U. S. Circuit Court of Appeals—Sixth Circuit.

EDWARD G. BUDD MFG. CO. *v.* ENGLAND MFG. CO.

*Decided February 16, 1917.*

240 FED. REP., 415.

1. PATENTS—INVENTION—AUTOMOBILE-DOOR.
   The England patent, No. 1,008,805, for a door for automobiles, *Held* void for lack of invention.
2. SAME—SAME—PRODUCT MADE BY NEW METHOD.
   A product, the making of which by manual operations involved only the ordinary skill of the artisan, is not patentable because invention was involved in making it by machinery.

APPEAL from the District Court of the United States for the Eastern District of Michigan; Arthur J. Tuttle, judge.

*Mr. Wilber Owen* (*Mr. Samuel E. Darby* and *Messrs. Owen, Owen & Crampton* of counsel) for the appellant.

*Mr. R. A. Parker* for the appellee.

Before KNAPPEN and DENISON, Circuit Judges, and MCCALL, District Judge.

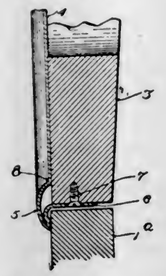
DENISON, *Cir. J.*:

In the court below the England Company, as plaintiff, secured the usual interlocutory decree for injunction and accounting, based upon Patent No. 1,008,805, issued November 14, 1911, to Fred England, for a "Door for automobiles and other vehicles." The defendant below, the Budd Company, by this appeal presents questions of validity and infringement.

(1) The device is very simple. It sufficiently appears from Fig. 2 of the drawings and claim 1 of the patent reproduced below. Claims 2 and 3, while more limited in form, present the same issue of validity as does claim 1. The "metallic panel" is 4, the "flange disposed at an angle" is 6, the "integral molding" is 5, and, as doubled back upon

itself before it is developed into the flange 6, it constitutes the "projecting portion outside the flange."

Fig. 2.



1. A metallic panel for vehicle bodies, having an edge fashioned with a flange disposed at an angle to the surface of the body of the panel, a projecting portion outside the said flange and the body of the panel, and a molding integral with the metal adjacent the said projecting portion.

To have a metal panel or cover drawn or developed into both a right-angled flange and a flange projecting in approximately the plane of the panel, so as to cover the crack or opening otherwise left on closing the cover, is the commonest expedient; it is seen, for example, in the ordinary covered tin pail. The same thought had been applied to metal doors. Smith, Patent No. 522,861, in a fireproof shutter which had a metal panel covering a wooden door, employed precisely the device of England's claim, excepting for the beading or molding; and Tyra, Patent No. 838,672, showed a hollow metal door with the same panel, right-angled flange and projecting flange. Even for automobile-doors the general thought was not new. Smith, by Patent No. 813,460, disclosed an automobile-door made of wood and covered with a metal panel, the bottom closure taking the form shown in Fig. 2 and the side closure taking the form shown in Fig. 3, here reproduced.

Fig 2.



Fig. 11. Smith Pat.—813460 Automobile Door Bottom.

Fig 3.

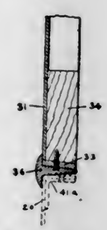


Fig. 4. Smith Pat.—813460 Automobile Door Side.

It is apparent that Fig. 2 is the same as England's, save for the flange projecting in the line of the panel to cover the crack; and Fig. 3 has this projecting flange, but in the form of a separate strip screwed to the right-angled flange, instead of being formed integrally with the panel, as had been done by Smith (522,861) and Tyra, and as was common everywhere. It is therefore plain that what England did was (1) to take the bottom of the door of Smith (813,460) and add the crack covering and positioning projecting flange of the common tin pail; or (2) to take the side of the same door and make the attached molding and projecting flange integral instead of separate; or (3) to take the door, panel, and two flanges of Smith (522,861), and add the familiar stiffening-bead, common in sheet metal, and already used by Smith on automobile-doors (No. 813,460). From no one of these points of view, and upon familiar principles, can we see anything more than the common knowledge and skill of the sheet-metal worker. For applications of this principle in this court, see *Bullock Co.* v. *General Co.*, (149 Fed., 409, 416; 79 C. C. A., 229;) *Babcock Co.* v. *Toledo Co.*, (170 Fed., 81, 84; 95 C. C. A., 363;) *Hilker Co.* v. *Mop Co.*, (191 Fed., 613, 617; 112 C. C. A., 176;) *New Idea Co.* v. *Keene*, (231 Fed., 701; 145 C. C. A., 597;) *Pelton* v. *Williams*, (235 Fed., 131; — C. C. A., —.)

It appears from the proofs—and this seems to have influenced the result below—that it was very difficult to make dies which would produce both the flange extending in two directions and the hollow molding or bead; and it is probable that the supposed impossibility of making such dies had prevented the making of a structure just like England's, and this because to make it by hand would be too expensive.

(2) It is possible that invention was involved either in the devising of the proper dies or in the method of their operation; but, if so, that can not help this patent. England had a patent, not for the dies, and not for the method of construction, but for the product; and if the product was a thing, the making of which by manual operations involved only the ordinary skill of the artisan, it can not become patentable just because invention was involved in making it by machinery. (*Rubber Co.* v. *Goodyear*, 9 Wall., 788, 796; 19 L. Ed., 566; *Cochrane* v. *Badische*, 111 U. S., 293, 311; 4 Sup. Ct., 455; 28 L. Ed., 433.)

This conclusion makes it unnecessary to consider the other questions presented, and requires that the decree should be reversed and the case remanded, with instructions to dismiss the bill.

## ADJUDICATED PATENTS.

(U. S. C. C. A.) The Chandler patent, No. 1,140,875, for a logging-truck, *Held* valid and infringed. *Columbia & N. R. R. Co.* v. *Chandler*, 241 Fed. Rep., 261.

(U. S. C. C. A.) The Evans patent, No. 1,120,462, for a fusible link for a sprinkler-head of an automatic fire-extinguisher system, *Held* void for priority of invention by another. *Evans* v. *Associated Automatic Sprinkler Co.*, 241 Fed. Rep., 252.

(U. S. D. C.) The Guth patent, No. 1,076,418, for an electric lamp, *Held* valid and infringed. *Luminous Unit Co.* v. *R. Williamson & Co.*, 241 Fed. Rep., 265.

(U. S. D. C.) The Guth patent, No. 1,082,322, for an electric lamp. *Held* valid, but not infringed. *Luminous Unit Co.* v. *R. Williamson & Co.*, 241 Fed. Rep., 265.

(U. S. C. C. A.) The Ward patent, No. 991,043, for a process of making roadways, *Held* not infringed. *Ward* v. *Rogers Bros. Co.*, 241 Fed. Rep. 257.





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# DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

JUNE, 1917.

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| d Neill, No. 933,386, valid and infringed, Neill *et al.* v. Kinney | 941 |
| d Samuel, Reissue No. 13,574, void for lack of invention, Stahlbrodt Co. v. Ford Motor Co | 940 |
| ** Wolhaupter patents, Nos. 538,809, 691,332, and 721,644, wanting in patentable invention, The Railroad Supply Company v. The Elyria Iron and Steel Co | 656 |
| ** Patentability, change of form without change of function or result not invention, The Railroad Supply Company v. The Elyria Iron and Steel Co | 656 |
| * Priority of invention, auxiliary devices not in issue not to be considered, Neckerman v. Saunders | 322 |
| * Award in accordance with evidence, Neckerman v. Saunders | 322 |
| Saunders v. Neckerman | 319 |
| * Saurer v. Groebli | 653 |
| * Invention reduced to practice in operative machine prior to opponent's record date, Neckerman v. Saunders | 322 |
| Saunders v. Neckerman | 319 |
| * Reduction to practice, operative machine, Neckerman v. Saunders | 322 |
| Saunders v. Neckerman | 319 |
| ** Suits for infringement, suits in different circuits, subject-matter same and parties in privity, court should sustain motion to affirm decree, The Hart Steel Company and Guilford S. Wood v. The Railroad Supply Company | 654 |
| d Terminology, definition of the word "Integral," Clipper Belt Lacer Co. v. E-W Co. *et al* | 323 |

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[d] Terminology, etc—Continued.
[**] Definition of doctrine of "*res adjudicata*," The Hart Steel Company and Guilford S. Wood *v.* The Railroad Supply Company..... 654
[d] Meaning of words used in claims varies with circumstances, Clipper Belt Lacer Co. *v.* E-W Co. *et al.*.. 323
* Trade-marks, construction of Trade-Mark Act, *in re* Armstrong Cork Company..... 1209
* In cases of similarity of marks doubts should be resolved in favor of prior user, The Kaut-Reith Shoe Company *v.* International Shoe Company.. 939
* No excuse for adopting a mark closely resembling one now in use on same class of goods, as entire vocabulary and inventive imagination are at service of one choosing a mark, The Kaut-Reith Shoe Company *v.* International Shoe Company.. 939

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* Trade-marks, etc—Continued.
* Ten-years proviso, registration of the word "Nonpareil," because of secondary meaning acquired by long use, etc., not permissible, *in re* Armstrong Cork Company..... 1209
* The words "Mother Goose" and a picture representing that character riding a broom refused registration for shoes on the word "Goose" across the picture of a goose holding a key in its mouth, The Kaut-Reith Shoe Company *v.* International Shoe Company..... 939
* "Nonpareil," for tile, etc., refused registration as descriptive, *in re* Armstrong Cork Company. 1209




# DIGEST

OF THE

# DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

## JUNE, 1917.

[Decisions of the Court of Appeals of the District of Columbia are indicated by one star (*), of the United States courts of appeals by the letter [d], and of the Supreme Court of the United States by two stars (**).]

### APPLICATION FOR REISSUE.

See Assignment.

### ASSIGNMENT.

1. CONSTRUCTION AND OPERATION—RIGHT OF ASSIGNOR TO REISSUE.

An assignee of the Northrop patent, No. 987,817, for a misthreading device for looms, *Held* entitled to a specific enforcement of the implied covenant of the patentee, as assignor, to execute an application for a reissue on the ground that through inadvertence the language of the specification and certain of the claims misstated the mode of operation of a certain feature of the device intended to be covered by the patent.

[d Northrop *et al. v.* Draper Co., 1210.

2. SAME—IMPLIED COVENANT TO APPLY FOR REISSUE.

An assignment of an application for a patent to the assignee, his heirs, executors, administrators, and assigns, with the patent to be issued thereon and any right to a reissue, carries with it an implied covenant, which runs with the grant, that the assignor will make application for a reissue in case the patent manifests an intention to claim a feature disclosed therein but which it fails to state accurately in a claim, and such implied covenant is not defeated as to subsequent assignees by a further covenant personal to the first assignee and which does not run with the grant to make such an application if the assignee shall deem it necessary. [d Id.

### AUXILIARY DEVICE.

See Construction of Claims, 4.

### COMBINATIONS.

See Invention, 1; Particular Patents, 4.

### CONCEPTION OF INVENTION.

See Construction of Claims, 4; Diligence; Priority of Invention, 3.

### CONSTRUCTION OF CLAIMS.

1. REDUCTION TO PRACTICE.

Where the issue called for automatic engagement of the tongreins by the draw-chain dogs and it is contended that the device was not automatic prior to the addition of a latch, subsequently added, to hold the reins in position for engagement, *Held* that the device in issue was no less automatic if the tongs were held in position to be engaged by the welder than if held by the latch. The reduction to practice of the issue was complete without the latch. [Saunders *v.* Neckerman, 319.

2. PATENTABILITY—APPARATUS FOR STEAM-HEATING.

Claims for a car-heating apparatus *Held* unpatentable in view of the prior art. [*In re* Gold, 321.

SAME—SAME.

The claims appealed are to substantially the same invention in terms of apparatus instead of process that was before the court in the case *in re Gold*, (180 O. G., 600; 38 App. D. C., 544) and the decision there must be held controlling here. [*Id.

4. REDUCTION TO PRACTICE—AUXILIARY DEVICES NOT IN ISSUE.

Where S., having successfully operated the invention stated in issue prior to March 30, 1910, subsequently conceived an additional device, a holddown, to which claims not included in the interference have been allowed, N.'s contention that there would be no reduction to practice without the addition of the holddown is overruled. Since the holddown is not an element of the issue, the successful operation of a machine equipped as the S. machine was equipped prior to the addition of the holddown device constituted reduction to practice of the claims of the issue.

[* Neckerman *v.* Saunders, 322.

### CONSTRUCTION OF SPECIFICATIONS AND PATENTS.

See Assignment, 1; Particular Patents, 3, 6.

PATENTABILITY—INVENTION—CHANGE IN FORM.

The patents in suit give a somewhat different form to features which are perfectly familiar in the prior art and similarly grouped in prior patents, but without giving them any new function or accomplishing any new result. *Held* this is a mere carrying forward of the original thought and does not constitute patentable invention.

[** The Railroad Supply Company *v.* The Elyria Iron and Steel Co., 656.

### CONSTRUCTION OF TRADE-MARK ACT.

See Descriptive Terms, 2, 3.

### COVENANT.

See Assignment.

### DATE OF FILING APPLICATION.

See Priority of Invention.

### DECREE.

See Res Adjudicata, 2.

### DESCRIPTIVE TERMS.

1. "NONPAREIL."

"Nonpareil" *Held* to be a descriptive English word and non-registrable. [**In re* Armstrong Cork Co., 1209.

2. SAME—EVERY-DAY USE IMMATERIAL.

While "Nonpareil" is a fancy word not in every-day use by persons to describe the superlative qualities of articles, the Trade-Mark Act leaves no discretion to determine when a word, which is, in fact, descriptive, is sufficiently understood or accepted as to be considered descriptive of the quality of certain goods by a whole people. [*Id.

3. SAME—REGISTERED UNDER "TEN-YEARS PROVISO."

The contention that by the large exclusive use of "Nonpareil" and registration under the "ten-years proviso" for one class of goods the word has acquired a secondary meaning, as designating simply such goods as applicant's and as such is registrable for another class of goods, is overruled. The Trade-Mark Act cannot be expanded so as to permit a descriptive word to be registered. [*Id.

DILIGENCE.

See Priority of Invention, 3.

PERFECTING INVENTION.
Where it is shown that G. conceived and disclosed the invention and made tentative drawings about February, 1910, made other drawings or sketches in October of the same year, constituting a disclosure of the invention, made further drawings in April, 1911, which clearly disclose every element of the invention, at which time he considered the invention complete and turned the papers over to his solicitor for preparation of the application, *Held* that since the invention is of an intricate nature, and detail of its very essence, G. acted in good faith in perfecting his invention and exercised reasonable diligence. [*Saurer *v.* Groebli, 653.

DISCLOSURE OF INVENTION.

See Assignment, 2; Diligence; Priority of Invention, 3.

DRAWINGS.

See Diligence.

EQUIVALENTS.

RANGE OF.
In comparing the rule that a claim limitation must be given effect and the rule that the use of an equivalent does not escape infringement the question is how far the patentee intended to restrict the range of equivalents.
[dClipper Belt Lacer Co. *v.* E-W Co. *et al.*, 323.

FOREIGN APPLICATIONS.

See Priority of Invention, 3.

FORMER DECISION CONTROLLING.

See Construction of Claims, 3.

INFRINGEMENT.

See Equivalents; Particular Patents, 3, 4.

INTERFERENCE.

See Construction of Claims, 1, 4; Diligence; Priority of Invention.

INVENTION.

See Construction of Specifications and Patents; Diligence; Particular Patents.

1. COMBINATION OF OLD ELEMENTS.
In looking for invention in a combination of old elements the court is guided by the new and useful means which the combination may afford or the new and useful results which may be obtained from it. [dNeill *et al. v.* Kinney, 941.

2. UTILITY OF DEVICE.
While a mere summation of points of merit does not constitute invention, their presence in a markedly increased measure cannot be overlooked in estimating the utility of a device and in determining whether it produces new and useful results within the principle upon which patents are granted. [dId.

3. MADE BY NEW METHOD.
A product the making of which by manual operation involved only the ordinary skill of the artisan is not patentable because invention was involved in making it by machinery.
[dEdward G. Budd Mfg. Co. *v.* England Mfg. Co., 1213.

LIMITATION OF CLAIMS.

See Equivalents.

MECHANICAL SKILL.

See Invention, 3.

MERIT.

See Invention, 2.

MISTAKE.

See Assignment.

MOTION TO AFFIRM DECREE.

See Res Adjudicata

NEW FUNCTION.

See Construction of Specifications and Patents.

NEW MEANS.

See Invention, 1, 3.

NEW RESULTS.

See Construction of Specifications and Patents; Invention, 1, 2.

OLD ELEMENTS.

See Invention, 1; Particular Patents, 4.

OPERATIVE DEVICE.

See Construction of Claims, 4; Priority of Invention, 1, 2.

PARTICULAR PATENTS.

1. ENGLAND—No. 1,008,805—DOOR FOR AUTOMOBILES—INVENTION.
The England patent, No. 1,008,805, for a door for automobiles, *Held* void for lack of invention.
[dEdward G. Budd Mfg. Co. *v.* England Mfg. Co., 1213.

2. FETZER—No. 12,653 (REISSUE)—TRUCK MECHANISM—INVENTION.
The Fetzer reissue patent, No. 12,653, (original No. 723,662,) for truck mechanism, *Held* void for lack of patentable invention.
[dFetzer *v.* Dempster Mill Mfg. Co., 651.

3. MITCHELL AND GUNN—No. 806,556—BELT-STAPLING MACHINE—VALIDITY AND INFRINGEMENT.
The Mitchell and Gunn patent, No. 806,556, for a belt-stapling tool, claim 1 construed and in the light of the proceedings in the Patent Office, which indicate its scope, *Held* infringed.
[dClipper Belt Lacer Co. *v.* E-W Co. *et al.*, 323.

4. NEILL—No. 933,386—OIL-WELL DERRICK—VALID AND INFRINGED.
The Neill patent, No. 933,386, for an oil-well derrick of tubular metal, while not generic and for a combination of old elements, in view of its novel and useful qualities of simplicity, portability, durability, and economy, all of which have been recognized in the art in a marked degree, discloses patentable invention; also *Held* infringed. [dNeill *et al. v.* Kinney, 941.

5. SAMUEL—No. 13,574 (REISSUE)—WIND-GUARD FOR MOTOR-VEHICLES—INVENTION.
The Samuel reissue patent, No. 13,574, (original No. 879,195,) for a wind-guard for motor-vehicles, *Held* void for lack of invention in view of the prior art.
[dStahlbrodt Co. *v.* Ford Motor Co., 940.

6. WOLHAUPTER—Nos. 538,809, 691,332, AND 721,644—RAILROAD-TIE PLATES—INVENTION.
The Wolhaupter patents, Nos. 538,809, 691,332, and 721,644, reviewed in connection with the prior art and *Held* to be wanting in patentable invention thereover.
[**The Railroad Supply Co. *v.* The Elyria Iron & Steel Co., 656.

PATENTABILITY.

See Construction of Claims, 2; Construction of Specifications and Patents; Invention, 3; Particular Patents, 2, 4, 6.

PRIORITY OF INVENTION.

1. REDUCTION TO PRACTICE—PIPE-DRAWING APPARATUS.
Where N. relied on his record date, December 14, 1910, priority awarded S., who reduced to practice by embodying the invention in issue in an operative machine prior to March 30, 1910.
[Saunders *v.* Neckerman, 319.

2. SAME.
Where N. relied on his record date, priority was awarded to S., who reduced the invention stated in the issue to practice in an operative machine prior to N.'s record date.
[*Neckerman *v.* Saunders, 322.



3. SAME.
Where S. relies for conception, disclosure, and constructive reduction to practice upon an application filed by him in Germany on November 17, 1910, and G. conceived and disclosed the invention about February, 1910, and was reasonably diligent in perfecting the same and filing an application therefor, *Held* that priority of invention was properly awarded to G.
[*Saurer *v.* Groebli, 653.

PROCESS AND APPARATUS.

See Construction of Claims, 3.

PRODUCT AND METHOD.

See Invention, 3.

REDUCTION TO PRACTICE.

See Construction of Claims, 1, 2, 4; Priority of Invention.

REISSUES.

See Assignment; Particular Patents, 2, 5.

RES ADJUDICATA.

1. DOCTRINE OF DEFINED.
"The doctrine of *res judicata* is not a mere matter of practice or procedure inherited from a more technical time than ours. It is a rule of fundamental and substantial justice, of public policy and of private peace,' which should be cordially regarded and enforced by the courts to the end that rights once established by the final judgment of a court of competent jurisdiction shall be recognized by those who are bound by it in every way, wherever the judgment is entitled to respect."
[**The Hart Steel Company and Guilford S. Wood *v.* The Railroad Supply Company, 654.

2. SUITS IN DIFFERENT CIRCUITS—SUBJECT-MATTER THE SAME AND PARTIES IN PRIVITY.
When the identity of the subject-matter and issues of two suits brought in different circuits is admitted and the privity of the defendants is clear and the ruling effect of the decree in one circuit is properly presented to the court of coördinate jurisdiction, *Held* to be error in the court not to sustain the motion to affirm the decree. [**Id.

SCOPE OF PATENT.

See Particular Patents, 3.

SIMILARITY OF MARKS.

1. "GOOSE"—"MOTHER GOOSE."
The mark consisting of the words "Mother Goose" and a picture of that character riding a broom *Held* not registrable in view of the prior registration of the mark consisting of the word "Goose" across the picture of a goose holding a key in its mouth. The dominant feature of both marks is the word "Goose."
[*Kaut-Reith Shoe Company *v.* International Shoe Company, 939.

2. DECEPTIVE.
The entire vocabulary and the inventive imagination are at the service of one selecting a trade-mark, and no excuse is apparent for the adoption of a mark closely approximating that of an earlier user on the same class of goods. In all such cases the doubt should be resolved in favor of the prior user. [*Id.

STATE OF THE ART.

See Construction of Claims, 2; Construction of Specifications and Patents; Particular Patents, 5, 6.

SUITS FOR INFRINGEMENT

See Construction of Specifications and Patents; Res Adjud

TEN-YEARS CLAUSE

See Descriptive Terms, 3.

TERMINOLOGY.

See Res Adjudicata, 1.

1. PATENTS—CONSTRUCTION—MEANING OF TERMS USED—"INTEGRAL."
The word "integral" as used in a patent claim in describing two parts of a device as integral is not necessarily used in its narrowest sense as meaning that they are structurally integral and constitute a single piece; but it may mean that they are permanently held together and are operatively or functionally integral.
[dClipper Belt Lacer Co. *v.* E-W Co. *et al.*, 323.

2. SAME—SAME—SAME.
The meaning of a word as used in patent claims may vary with the context and with the circumstances. [dId

3. WORDS AND PHRASES—"HOPPER MISTHREAD"—"REAL MISTHREAD."
As applied to looms a "hopper misthread" is one that occurs following the act of replenishment by the thread becoming broken at the moment of transfer or prior to the arrival of the shuttle in the box at the side of the loom remote from the hopper. A "real misthread" occurs after the shuttle is replenished by a new bob bin, a laying of filling in the shed on the first pick of the shuttle, and failure of filling on the return pick due to breakage. In the case of a hopper misthread no filling is laid on the first-pick or on the return pick of the shuttle, while in the case of a real misthread filling is laid on the first pick, but not on the return pick, and as the shuttle under such circumstances is not replenished when it reaches the hopper side of the loom no filling is laid on the subsequent picks of the shuttle preceding replenishment.
[dNorthrop *et al. v.* Draper Co., 121

TRADE-MARKS.

See Descriptive Terms; Similarity of Marks.

UTILITY.

See Invention, 2; Particular Patents, 4.

VOID PATENTS

See Particular Patents, 1, 2, 5.

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# ALPHABETICAL LIST OF PATENTEES

TO WHOM

## PATENTS WERE ISSUED DURING THE MONTH OF JUNE, 1917.

[Abbreviations: "Gaz."=Official Gazette.]

A. Kimball Company. (See Anthony, Marcus O., assignor.)
A. Schrader's Son. (See Myers, Eugene V., assignor.)
A. B. Dick Company. (See Brasseur, Ernest J., assignor.)
A. C. Gilbert Company, The. (See Gilbert, Alfred C., assignor.)
A. F. Meisselbach & Brother. (See Sanders, Louis E., assignor.)
A. J. Lindemann & Hoverson Co. (See Lindemann, Walter C., assignor.)
A. T. Harrow Tractor Company. (See Sweet, Howard M., assignor.)
B. F. Goodrich Company, The, *et al.* (See Wagenhorst, James H., assignor.)
Aagaard, Hans L., Hamlin, Iowa. Latch. No. 1,229,564; June 12; v. 239; p. 451.
Aaron, Albert, and G. M. Jones, Gloversville, assignors to Louis Meyers & Son, New York, N. Y. Treating leather for gloves. No. 1,230,358; June 19; v. 239; p. 750.
Abbate, Nicholns G., New York, N. Y. Oyster-opening machine. No. 1,228,383; June 5; v. 239; p. 3.
Abbott, Alfred S., Springfield, Mo., assignor of one-third to J. E. Buker, Chicago, Ill., and one-third to J. F. Long, Springfield, Mo. Jig. No. 1,230,974; June 26; v. 239; p. 994.
Abbott, Chauncey W., Auburn, N. Y., H. R. Gilson, Baden, and J. M. G. Fullman, Sewickley, assignors to National Metal Moldlng Company, Pittsburgh, Pa. Circuit extension-box. No. 1,228,731; June 5; v. 239; p. 121.
Abbott, Franklin E., Buffalo, assignor to Lackawanna Steel Company, New York, N. Y. Base-plate for rail-joints. No. 1,231,543; June 26; v. 239; p. 1183.
Abbott, Harley I., Battle Creek, Mich. Automobile-lock. No. 1,228,633; June 5; v. 239; p. 88.
Abercrombie, Charles M., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Power-transmitting connection. No. 1,231,110; June 26; v. 239; p. 1041.
Abercrombie, Lewis R., Portland, Oreg. Silo-door lock. No. 1,229,851; June 12; v. 239; p. 547.
Abernathy, Boyd, assignor of one-half to A. A. Fain, Murphy, N. C. Automatic liquid-dispensing machine. No. 1,229,852; June 12; v. 239; p. 547.
Abramson, Samuel, Philadelphia, Pa. Portable fire-escape. No. 1,229,394; June 12; v. 239; p. 393.
Acetylene Illuminating Company. (See Stephenson, Arthur, assignor.)
Acme Supply Company, The. (See Schroyer, Harry H., assignor.)
Adams, Anna D., Chicago, Ill. Toilet-receptacle. No. 1,230,453; June 19; v. 239; p. 781.
Adams, Edward L., Bradford, Pa. Garment receptacle and hanger. No. 1,228,732; June 5; v. 239; p. 122.
Adams, Henry S., and T. Mincher, Viburnum, Mo. Stump-puller. No. 1,229,853; June 12; v. 239; p. 548.
Adams, Louis E., Raven, Alberta, Canada. Vegetable-cutter. No. 1,230,640; June 19; v. 239; p. 845.
Adder Machine Company, The. (See Bickford, Frank H., assignor.)
Adelsperger, Charles C., assignor to Union City Body Company, Union City, Ind. Automobile-door. No. 1,230,359; June 19; v. 239; p. 750.
Adey, Benjamin, Newton Center, Mass. Support for sheet material in building construction. No. 1,230,093; June 19; v. 239; p. 661.
Adsit, Frank W., Minneapolis, Minn. Intercommunicating lockout telephone system. No. 1,228,634; June 5; v. 239; p. 88.
Aebli, Henry, Portland, Oreg. Pipe-coupling. No. 1,228,733; June 5; v. 239; p. 122.
Agerton, Ella C., Ringold, Okla. Obstetrical appliance. No. 1,228,384; June 5; v. 239; p. 3.
Ahlgren, Victor, East Rockford, Ill. Countersink. No. 1,229,565; June 12; v. 239; p. 452.
Ahlstrom, Carl A., New Britain, assignor to The Trumbull Electric Manufacturing Company, Plainville, Conn. Motor-starting switch. No. 1,231,229; June 26; v. 239; p. 1080.
Aikman, Burton S., assignor to National Brake & Electric Company, Milwaukee, Wis. Mechanism for unloading compressors for starting. No. 1,230,834; June 26; v. 239; p. 947.
Air-Tight Steel Tank Company. (See Cecil, Robert E., assignor.)
Ajax Rail Anchor Company. (See Elfborg, Henry G., assignor.)
Ajello, Vincent, Pittsburgh, Pa. Aeroplane. No. 1,230,641; June 19; v. 239; p. 845.
Aker, John W., Lancaster, Ky. Tire-pump. No. 1,229,854; June 12; v. 239; p. 548.
Akron-Selle Co., The. (See Flegel, Harrison D., assignor.) (Reissue.)
Albano, Vincente, Rosario, Argentina. Rocking-chair. No. 1,230,642; June 19; v. 239; p. 845.
Alberts, Grace M. (See Urmson, George W., assignor.)
Albro, Herbert, West Springfield, Mass. Dandy-roll. No. 1,229,007; June 5; v. 239; p. 213.
Alcolen, Rafael, New Orleans, La. Switch-point operator. No. 1,229,566; June 12; v. 239; p. 452.
Alden, Herbert W., assignor to The Timken-Detroit Axle Company, Detroit, Mich. Bearing. No. 1,231,320; June 26; v. 239; p. 1110.
Alden, Herbert W., and R. B. Weaver, assignors to The Timken-Detroit Axle Company, Detroit, Mich. Toothed wheel. No. 1,231,321; June 26; v. 239; p. 1111.
Alder, Jean C., Sr., Châtelaine, near Geneva, Switzerland. Chuck for machine-tools. No. 1,231,322; June 26; v. 239; p. 1111.
Alexander, Clinton B., Washington, D. C. Slack-adjuster. No. 1,229,855; June 12; v. 239; p. 548.
Alexander, Clive M., Port Arthur, Tex., assignor to Gulf Refining Company, Pittsburgh, Pa. Making aromatic hydrocarbons. No. 1,230,975; June 26; v. 239; p. 994.
Alexander, Harry, New York, N. Y. Lamp-dimmer. No. 1,228,635; June 5; v. 239; p. 89.
Alexander, James H., Conquest, Kans. Antifreezing pump. No. 1,230,976; June 26; v. 239; p. 995.
Alexander Milburn Company, The. (See Jenkins, Alexander F., assignor.)
Alexander, William H. S., Haddonfield, N. J. Cut-out alphabet toy. No. 1,230,263; June 19; v. 239; p. 719.
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. High-frequency alternator. No. 1,229,856; June 12; v. 239; p. 548.
Alford, Joseph C., Maben, Miss. Sickle for mowing-machines and the like. No. 1,231,111; June 26; v. 239; p. 1042.
Allinder, Henry, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Casting-machine. No. 1,230,360; June 19; v. 239; p. 751.
Alkire, Albert H., Des Moines, Iowa. Automatic brake. No. 1,228,734; June 5; v. 239; p. 122.
Allen, Arthur H. (See Hardwick and Allen.)
Allen, Chester B., Memphis, Tenn. Waterproof cement. No. 1,231,468; June 26; v. 239; p. 1160.
Allen, Harry P., Austin, Tex., assignor to New Jersey Patent Company, West Orange, N. J. Reel. No. 1,229,697; June 12; v. 239; p. 495.
Allen, John H., assignor to Armored Motor Car Corporation, New York, N. Y. Automobile. No. 1,230,361; June 19; v. 239; p. 751.
Allen, Neal, Pittsburg, Kans. Machine for producing ornamented brick. No. 1,230,362; June 19; v. 239; p. 751.
Allen, Robert C. (See London and Allen.)
Allen, Thomas G. (See Andrews and Allen.)
Allen, William H., Birchfields, assignor to H. E. Keating, Birmingham, England. Garment-fastener. No. 1,229,395; June 12; v. 239; p. 393.
Allerding, Cletus N., Mansfield, Ohio. Trolley-wire support. No. 1,231,230; June 26; v. 239; p. 1081.
Alleva, Sante T. (See Bravi, Giuseppe, assignor.)
Allinger, Frank A., assignor of one-third to C. Volz and one-third to K. A. Lott, Los Angeles, Cal. Hydrocarbon-burner. No. 1,229,068; June 5; v. 239; p. 213.
Allis-Chalmers Manufacturing Company. (See Allinder, Henry, assignor.)
Allis-Chalmers Manufacturing Company. (See Loguin, Alexander J., assignor.)
Allis-Chalmers Manufacturing Company. (See Steen, Charles W., assignor.)
Allis-Chalmers Manufacturing Company. (See Zimmerman, James G., assignor.)

Allison, Arthur E., Coatesville, Pa. Incubator. No. 1,231,112; June 26; v. 239; p. 1042.

Allison, Jesse H., assignor of twenty-five one-hundredths to J. F. Allison and ten one-hundredths to E. Dugan, El Paso, Tex. Pumping-engine. No. 1,229,009; June 5; v. 239; p. 214.

Allison, Joseph F., *et al.* (See Allison, Jesse H., assignor.)

Allmand, John T., Detroit, Mich., assignor, by mesne assignments, to Fisher Body Corporation. Convertible vehicle-body. No. 1,230,977; June 26; v. 239; p. 995.

Altgelt, Rudolph J., Buenos Aires, Argentina, assignor to Oliver Chilled Plow Works, South Bend, Ind. Cultivator. No. 1,229,010; June 5; v. 239; p. 214.

Alyea, Emery T. (See Alyea, Grace G., assignor.)

Alyea, Grace G., Chicago, Ill., assignor of one-half to E. T. Alyea, Minneapolis, Minn. Embroidery-hoop. No. 1,229,857; June 12; v. 239; p. 549.

Amann, John. (See Brown, James H., assignor.)

Amber Size & Chemical Company, The. (See Fish, Charles W., assignor.)

American Arch Company. (See Anthony, James T., assignor.)

American Arch Company. (See Neff, John P., assignor.)

American Arch Company. (See Nicholson, John L., assignor.)

American Arch Company. (See Parish, Le Grand, assignor.)

American Arch Company. (See Stevens, Enoch P., assignor.)

American Arch Company. (See Willett, Alford H., assignor.)

American Brake Shoe and Foundry Company, The. (See McDonough, William H., assignor.)

American Can Company. (See Taylor, William E., assignor.)

American Cigar Company. (See Schneider, Anthony, assignor.)

American Folding Machine Company, The. (See Zeltz, John J., assignor.)

American La France Fire Engine Company. (See McCaslin, Harry M., assignor.)

American Laundry Machinery Company, The. (See Benjamin and Brockett, assignors.)

American Manganese Steel Company. (See Nichols, Wesley G., assignor.)

American Molding Machine Co. (See Norcross, William C., assignor.)

American Optical Company. (See Arnold, Arthur A., assignor.)

American Pin Company. (See Courtland, William A., assignor.)

American Pressweld Radiator Corporation. (See Singer, Frank J., assignor.)

American Slicing Machine Company. (See Wolff and Hood, assignors.)

American Telephone and Telegraph Company. (See Mouradian, Hughes, assignor.)

American Train Control Company, The. (See Scott, Thomas W., assignor.)

American Train Control Company, The. (See Scott and Rudolph, assignors.)

American Well Works, The. (See Bodinson, Lars W., assignor.)

American Well Works, The. (See Sperry, John B., assignor.)

American Wringer Company, The. (See Lauritzen, Nis P., assignor.)

Ammon, John, assignor to H. Christman, New York, N. Y. Pedal for musical instruments. No. 1,229,567; June 12; v. 239; p. 452.

Amoroso, Silvio, Boston, Mass. Binder-ring. No. 1,228,866; June 5; v. 239; p. 168.

Ams, Charles M. (See Arndt, Henry P., assignor.)

Amsbary, William N., Los Angeles, and T. D. Stewart, Ocean Park, Cal. Combination food and water cooler. No. 1,229,011; June 5; v. 239; p. 214.

Anchor Cap & Closure Corporation. (See Townsend, Harry E., assignor.)

Anderson, Adolph F., Conde, S. D. Safety-snap. No. 1,228,513; June 5; v. 239; p. 48.

Anderson-Barngrover Mf'g Co. (See Shippee, Henry C., assignor.)

Anderson Button Attaching Machine Company. (See Poole, Lora E., assignor.)

Anderson, Carl E., assignor to The Bryant Electric Company, Bridgeport, Conn. Cover-plate for flush receptacles. No. 1,230,643; June 19; v. 239; p. 846.

Anderson, Carl G., assignor of one-half to J. Norgord, Duluth, Minn. Combination-faucet. No. 1,230,978; June 26; v. 239; p. 996.

Anderson, Harry F., Marion, Ind. Sign character. No. 1,230,644; June 19; v. 239; p. 846.

Anderson, John R., Moline, Ill. Portable steam-generator. No. 1,228,867; June 5; v. 239; p. 168.

Anderson, John R., Moline, Ill. Ladder-jack. No. 1,228,868; June 5; v. 239; p. 169.

Anderson, John R., Moline, Ill. Pressing-board and holder. No. 1,228,869; June 5; v. 239; p. 169.

Anderson, Marcus T., St. Paul, Minn. Adjustable shade-bracket and curtain-support. No. 1,228,514; June 5; v. 239; p. 48.

Anderson, Robert H., San Diego, Cal. Mattress-clamp. No. 1,231,469; June 26; v. 239; p. 1160.

Andrade, Cipriano, Jr., New York, N. Y. Windlass. No. 1,229,858; June 12; v. 239; p. 549.

Andreas, H. M. (See North, George W., assignor.)

Andres, Edward. (See Andres, Nicholas and E.)

Andres, Nicholas and E., Denver, Colo. Powder-dispensing device. No. 1,229,396. June 12; v. 239; p. 394.

Andrews, C. E., *et al.* (See Newsom, Joseph N., assignor.)

Andrews, Frederick A., and T. G. Allen, Westminster, London, England. Illuminating appliance. No. 1,230,645; June 19; v. 239; p. 846.

Andrews, Marion A., Yuma, Ariz. Pocket-billiard table. No. 1,230,059; June 12; v. 239; p. 611.

Angiada, Joseph A., assignor, by mesne assignments, to E. M. Lowy, New York, N. Y. Internal-combustion engine. No. 1,229,568; June 12; v. 239; p. 452.

Anglo-American Mill Co., The. (See Trefz, Julius J., assignor.)

Animated Advertising Co. (See Bayers, Harry L., assignor.)

Animated Advertising Company, The. (See Wadman, Sydney, assignor.)

Anthony, James T., East Orange, N. J., assignor to American Arch Company, New York, N. Y. Wootentype locomotive-boiler. No. 1,229,382; June 12; v. 239; p. 390.

Anthony, James T., East Orange, N. J., assignor to American Arch Company, New York, N. Y. Steam-locomotive. No. 1,229,383; June 12; v. 239; p. 390.

Anthony, Marcus O., Englewood, N. J., assignor to A. Kimball Company, New York, N. Y. Eyelet-setting device. No. 1,228,735; June 5; v. 239; p. 123.

Arbess, Jacob and S. Brisker, Montreal, Quebec, Canada. Combination step-ladder and ironing-board. No. 1,229,698; June 12; v. 239; p. 496.

Arbetter Felling Machine Company. (See Hayes, Thomas J., assignor.)

Arcade Manufacturing Company. (See Tscherning, Henry, assignor.)

Argo, Horace E., Oak Park, Ill. Grease-cup. No. 1,229,012; June 5; v. 239; p. 215.

Armor, James C., Ingram, Pa., assignor to Westinghouse Electric & Manufacturing Company. High-potential measuring device. No. 1,229,699; June 12; v. 239; p. 496.

Armored Motor Car Corporation. (See Allen, John H., assignor.)

Armstrong, George W., Salem, Oreg. Garment-supporter. No. 1,229,013; June 5; v. 239; p. 215.

Arndt, Franklin E., assignor to The Gallon Iron Works & Mfg. Co., Gallon, Ohio. Revolving sand-screen. No. 1,231,113; June 26; v. 239; p. 1043.

Arndt, Henry P., Amston, Conn., assignor of two-thirds to C. M. Ams, New York, N. Y. Shaft-coupling. No. 1,230,646; June 19; v. 239; p. 846.

Arnold, Arthur A., assignor to American Optical Company, Southbridge, Mass. Cutter. No. 1,230,551; June 19; v. 239; p. 814.

Arnold, Harry B., assignor to The National Spring Bed Company, New Britain, Conn. Hammock back-rest. No. 1,231,532; June 26; v. 239; p. 1179.

Arnold, Jacob F., Mount Vernon, N. Y. Museum or show case. No. 1,230,825; June 19; v. 239; p. 904.

Arrinton, Perry B., and C. H. Miller, assignors to Multicalculator Company, Chicago, Ill. Calculating appliance. No. 1,228,385; June 5; v. 239; p. 3.

Arrow Electric Company, The. (See Nero, Arvid H., assignor.)

Art Products Company. (See Hill, John E., assignor.)

Arthur, Albert F., assignor to The Cleveland Hardware Company, Cleveland, Ohio. Forming dies. No. 1,231,323; June 26; v. 239; p. 1111.

Arthur, Albert F., assignor to The Cleveland Hardware Company, Cleveland, Ohio. Master-die for forging dies for drop-hammers, presses, and the like. No. 1,231,324; June 26; v. 239; p. 1111.

Arthur, Albert F., assignor to The Cleveland Hardware Company, Cleveland, Ohio. Master-die for forging dies for drop-hammers, presses, and the like. No. 1,231,470; June 26; v. 239; p. 1161.

Arthur, Charles P., Hampton, Iowa. Banana-carrier. No. 1,229,205; June 12; v. 239; p. 329.

Asbury, Dorsey F., assignor to United States Ordnance Company, Washington, D. C. Power-operated breech mechanism. No. 1,229,859; June 12; v. 239; p. 550.

Ashcroft, Edgar A., London, England. Manufacture of anhydrous magnesium chlorid. No. 1,231,471; June 26; v. 239; p. 1161.

Ashelman, Hervey B., and J. S. Johnson, Fargo, N. D. Air-valve. No. 1,229,860; June 12; v. 239; p. 550.

Ashenhurst, Harold S., assignor of four-fifths to J. J. Reynolds, Chicago, Ill. Heat-insulating material and producing the same. No. 1,230,085; June 12; v. 239; p. 621.

Askin, Morris. (See Robison and Askin.)

Asquith, Stead A., Waterloo, Iowa. Gear-shifting mechanism. No. 1,229,206; June 12; v. 239; p. 329.

Associated Farms Co. (See Walter, Maurice C., assignor.)

Atkinson, Frederick C., Indianapolis, Ind. Shortener for baking foods. No. 1,231,114; June 26; v. 239; p. 1043.

Atwood, Winfield A., Schenectady, N. Y., assignor to General Electric Company. Field-control switch. No. 1,229,014; June 5; v. 239; p. 215.

Auberlin, Gustav, Vallejo, Cal. Puncture-proof pneumatic tire. No. 1,229,861; June 12; v. 239; p. 550.





Auchy, Henry B. (See Bowditch, Charles H., assignor.)

Auckland, John C., and E. P. Hildebrand, Seattle, Wash. Fuel-governor for oil-burners. No. 1,230,979; June 26; v. 239; p. 996.

Auel, Carl B., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electric welding. No. 1,229,700; June 12; v. 239; p. 496.

August Goertz & Co. (See Vom Eigen, Benno, assignor.)

Augustine, Benjamin F., Buffalo, N. Y. Rotary engine. No. 1,229,569; June 12; v. 239; p. 453.

Auld, Elgie C., Scottdale, Pa. Flume. No. 1,230,980; June 26; v. 239; p. 996.

Aurich, Victor H., and A. Cihak, Jersey City, N. J. Tool-holder. No. 1,230,647; June 19; v. 239; p. 847.

Austin, Albert M., Piermont, N. Y. Process and apparatus for drying edible pastes. No. 1,229,397; June 12; v. 239; p. 394.

Austin, Frederick C. (See Rosendahl, Nils M., assignor.)

Auto Power Generator & Appliance Co. (See Curtis, Homer P., assignor.)

Auto Safety Light Company, The. (See Deady and Holland, assignors.)

Auto-Signal Co. (See Comer, Guy W., assignor.)

Autocall Company, The. (See Thompson, George, assignor.)

Automatic Advertising & Sales Company, The. (See King, Isaac W., assignor.)

Automatic Candy Machine Company. (See Swartz and Waugh, assignors.)

Automatic Electric Company. (See Fales, Edward D., assignor.)

Automatic Electric Company. (See Willis, Bernard D., assignor.)

Automatic Enunciator Company. (See Comer, John J., assignor.)

Autosales Gum and Chocolate Company. (See Webster, John A., assignor.)

Avery Company. (See Bartholomew, John B., assignor.)

Avery, Henry C. (See Hamilton, Walter L., assignor.)

Avis, Samuel W., assignor to The Merrow Machine Company, Hartford, Conn. Overseaming-machine. No. 1,229,015; June 5; v. 239; p. 216.

Ayer, George A., assignor to West Boylston Manufacturing Co., Easthampton, Mass. Cloth-testing machine. No. 1,231,231; June 26; v. 239; p. 1081.

Aylsworth, Jonas W., East Orange, assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Making phonograph-records. No. 1,230,816; June 19; v. 239; p. 901.

B. A. Ballou & Co. (See Goozey, Charles A., assignor.)

B. F. Goodrich Company, The. (See Kempel, Arthur B., assignor.)

B. F. Goodrich Company *et al.* (See Wagenhorst, James H., assignor.)

B. M. Jones & Co. (See Poore and Pearsons, assignors.)

Babcock, Garrison, Chicago, Ill., assignor to Telechronometer Company, Rochester, N. Y. Telephone-exchange system. No. 1,230,835; June 26; v. 239; p. 947.

Bachelier, Edward F., and J. H. Stewart, Lynn, Mass. Machine for marking golf-balls. No. 1,228,736; June 5; v. 239; p. 123.

Backscheider, Frank J., Cincinnati, Ohio. Automatic power cut-off. No. 1,229,570; June 12; v. 239; p. 453.

Bacon, George M., Salt Lake City, Utah. Adjustable automatic cut-off valve and signal. No. 1,230,981; June 26; v. 239; p. 997.

Badger Basket & Veneer Co. (See Wegwart, Herman, assignor.)

Baganz, Louisa, New York, N. Y. Clothes fastener and protector. No. 1,228,870; June 5; v. 239; p. 170.

Bagby, Milton M., Denver, Colo. Window lock and lifter. No. 1,229,016; June 5; v. 239; p. 216.

Bailey, George, Fairfield, assignor to Robert N. Bassett Company, Incorporated, Shelton, Conn. Suitcase-hasp. No. 1,229,207; June 12; v. 239; p. 329.

Bain, Benjamin F., Pittsburgh, Pa. Folding box. No. 1,230,552; June 19; v. 239; p. 815.

Baird, George W., Washington, D. C. Transom control. No. 1,230,264; June 19; v. 239; p. 719.

Baird, William J., Paterson, N. J. Snow-guard. No. 1,230,363; June 19; v. 239; p. 752.

Bajde, Ludwig, Leipzig-Gohlis, and G. K. Hennig, assignors to Firm of L. Hupfeld Aktiengesellschaft, Böhlitz-Ahrenberg, near Leipzig, Germany. Bow for piano-violins. No. 1,228,737; June 5; v. 239; p. 124.

Baker, Charles D., New Richland, Minn. Display device for automobile-license numbers. No. 1,229,208; June 12; v. 239; p. 330.

Baker, Ellis H., Whitlash, Mont. Wagon-brake. No. 1,231,472; June 26; v. 239; p. 1161.

Baker, Franklin, Jr., Philadelphia, Pa. Preparing or treating cocoanut and product obtained thereby. No. 1,230,364; June 19; v. 239; p. 752.

Baker, Franklin, Jr., Philadelphia, Pa. Preparing or treating cocoanut. No. 1,230,365; June 19; v. 239; p. 752.

Baker, Franklin, Jr., Philadelphia, Pa. Preparing or treating cocoanut and product obtained thereby. No. 1,230,366; June 19; v. 239; p. 752.

Baker, Walter N., *et al.* (See Tudor, Robert H., assignor.)

Baldwin Locomotive Works. (See Bullock, Samuel A., assignor.)

Ball, Herman F., Bronxville, assignor to Economy Devices Corporation, New York, N. Y. Safety draw-bar. No. 1,231,473; June 26; v. 239; p. 1161.

Ball, Horace E. (See Wilber and Ball.)

Ball, John F., Estep, W. Va. Rail-joint. No. 1,228,386; June 5; v. 239; p. 4.

Ballenberg, Adolph, New York, N. Y. Glider for furniture-legs. No. 1,230,836; June 26; v. 239; p. 948.

Ballenger, Jesse R., Inman, S. C. Churn-operating device. No. 1,229,017; June 5; v. 239; p. 216.

Ballin, Fred A., Portland, Oreg. Ship-building. No. 1,231,232; June 26; v. 239; p. 1081.

Ballou, Walter B., assignor to R. Blackinton & Co., North Attleboro, Mass. Belt-buckle. (Reissue.) No. 14,316; June 19, v. 239; p. 907.

Baltimore Gas Appliance and Manufacturing Co., The. (See Hunter and Longfellow, assignors.)

Bangs, Ralph C., Cranston, assignor of one-fourth to P. H. Cadby, Providence, R. I. Garment-hanger. No. 1,228,636; June 5; v. 239; p. 89.

Banka, John H., Battle Creek, Mich. Lock for axle-nuts. No. 1,229,701; June 12; v. 239; p. 497.

Banta, John J. and J. E., Sullivan, Mo. Washing-machine. No. 1,228,387; June 5; v. 239; p. 4.

Banta, Julius E. (See Banta, John J. and J. E.)

Barbarou, Marius J. B., Neuilly-sur-Seine, assignor to Societe Lorraine Des Anciens Etablissements De Dietrich & Cie De Luneville, Paris, France. Carbureter for explosion-motors. No. 1,228,738; June 5; v. 239; p. 124.

Barber-Colman Company. (See Colman, Howard D., assignor.)

Barber, Franklin L., and C. S. Walton, assignors to Standard Car Truck Company, Chicago, Ill. Car-truck. No. 1,229,398; June 12; v. 239; p. 394.

Barber, Guy M., assignor of one-third to E. J. Lloyd and one-third to W. M. Wootten, Los Angeles, Cal. Oil-burner. No. 1,230,982; June 26; v. 239; p. 997.

Barber, Howard M., Stonington, Conn., assignor, by mesne assignments, to C. B. Cottrell & Sons Company, New York, N. Y. Combined cover and center-page-insert sheet feeding and folding mechanism. No. 1,229,399; June 12; v. 239; p. 395.

Barber, Ralph, Jr., Millville, assignor to V. Durand, Jr., Vineland, N. J. Tool for use in tubulating hollow glass articles. No. 1,230,367; June 19; v. 239; p. 753.

Barber, Ralph, Jr., Millville, assignor to V. Durand, Jr., Vineland, N. J. Tubulating glass bottles, retorts, and the like. No. 1,230,368; June 19; v. 239; p. 753.

Bard, Milton H., Johnstown, Pa. Gearing for motor-vehicles. No. 1,230,454; June 19; v. 239; p. 781.

Bargamin, Clifford, Newport News, Va. Time-controlled trip mechanism for fireless cookers. No. 1,229,862; June 12; v. 239; p. 551.

Bargamin, Clifford, Newport News, Va. Time-controlled mechanism. No. 1,229,863; June 12; v. 239; p. 551.

Bargar, Frederick C., assignor to Nu-Ex Fire Appliance Company, Columbus, Ohio. Fire-extinguisher. No. 1,228,388; June 5; v. 239; p. 5.

Barker, John P., assignor to Los Angeles Motor Car Company, Los Angeles, Cal. Valve. No. 1,229,571; June 12; v. 239; p. 453.

Barnaby, Charles W., New York, N. Y. Draftsman's triangle and protractor. No. 1,231,115; June 26; v. 239; p. 1043.

Barnard, Walter E., Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,228,637; June 5; v. 239; p. 89.

Barner, Emmett E. (See Shaeffer, William J., assignor.)

Barnes, Frederick W., assignor to Eastman Kodak Company, Rochester, N. Y. Ray-filter holder. No. 1,228,389; June 5; v. 239; p. 5.

Barnett, Otto R. (See Sponenburg, Hiram H., assignor.)

Barnett, Stewart R., Albany, assignor to Crary Brokerage Company, Waukesha, Wis. Food. No. 1,230,817; June 19; v. 239; p. 901.

Barney, Edwin E., assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,230,094; June 19; v. 239; p. 661.

Barnhurst, Henry G. (See Wood and Barnhurst.)

Barr, Ammon D. (See Barton, Edward H., assignor.)

Barr, Andrew J., assignor of one-half to H. E. Homberger, Mansfield, Ohio. Combined fixture and valve for lavatories or the like. No. 1,228,739; June 5; v. 239; p. 124.

Barr, Archibald, and W. Stroud, assignors to Barr and Stroud, Limited, Glasgow, Anniesland, Scotland. Optical adjuster for range-finders. No. 1,229,209; June 12; v. 239; p. 330.

Barr, Frederic, deceased: The Equitable Trust Company of New York, New York, N. Y., executor. Electric pull-socket. No. 1,230,983; June 26; v. 239; p. 998.

Barr, Jessie, and E. A. Myers, Brooklyn, N. Y. Educational appliance. No. 1,228,391; June 5; v. 239; p. 5.

Barr and Stroud, Limited. (See Barr and Stroud, assignors.)

Barratt, William T., assignor to C. S. Kehoe, A. and A. J. Cooper, executors, Bennington, Vt. Circular-knitting machine. No. 1,230,837; June 26; v. 239; p. 948.

Barrett Company, The. (See Stewart, Edwin F., assignor.)

Barrett, John B., Annapolis Royal, Nova Scotia, Canada. Insecticide. No. 1,230,648; June 19; v. 239; p. 847.

Barratt, William N., Meadville, Pa. Snubber. No. 1,228,515; June 5; v. 239; p. 48.

Barron, Andrew F., Watervliet, N. Y. Nut-lock. No. 1,230,649; June 19; v. 239; p. 847.
Barron, William L., New York, N. Y., assignor to The Singer Manufacturing Company. Thread-cutting mechanism for sewing-machines. No. 1,228,871; June 5; v. 239; p. 170.
Barstow, Edwin O., and J. A. Cavanagh, assignors to Dow Chemical Company, Midland, Mich. Making lead arsenate. No. 1,228,516; June 5; v. 239; p. 49.
Bartholomew, John R., Peoria, Ill., assignor to Avery Company. Traction-wheel. No. 1,229,210; June 12; v. 239; p. 330.
Barton, Edward H., assignor of one-half to A. D. Barr, Spokane, Wash. Clothes-drying rack. No. 1,230,265; June 19; v. 239; p. 719.
Bartuzel, John. (See Taras, Mikola, assignor.)
Bassett, Linton T., Carthage, Mo. Motor-truck. No. 1,231,474; June 26; v. 239; p. 1161.
Batchelder, George O., assignor of one-half to L. Burke, Jr., Macomb, Ill. Auto-extractor. No. 1,229,864; June 12; v. 239; p. 551.
Batchelor, Jamie H., assignor to C. Espy, Savannah, Ga. Fuel-heating device. No. 1,228,517; June 5; v. 239; p. 49.
Bateman, George E., Alameda, Cal. Registering-lock for valves. No. 1,228,518; June 5; v. 239; p. 49.
Bates, Edmund C., assignor to The Buckeye Jack Manufacturing Company, Alliance, Ohio. Lifting-jack. No. 1,230,818; June 19; v. 239; p. 902.
Bates, Harry H., assignor to Bates Machine Company, Joliet, Ill. Control mechanism for tractors and the like. No. 1,229,865; June 12; v. 239; p. 551.
Bates Machine Company. (See Bates, Harry H., assignor.)
Batteer, Joshua, Philadelphia, Pa., assignor to Oscar Barnett Foundry Company. Mechanical stoker. No. 1,231,325; June 26; v. 239; p. 1112.
Baudou, Maurice and R., Les Eglisottes, near Bordeaux, France. Elastic wheel for vehicles. No. 1,228,638; June 5; v. 239; p. 89.
Baudou, Rene. (See Baudou, Maurice and R.)
Bauer & Black. (See Hamilton, Thomas P., assignor.)
Baugatz, Frederic G., Paris, France. Abdominal belt. No. 1,230,650; June 19; v. 239; p. 847.
Bauknecht, Henry, Midland, Mich. Window-screen. No. 1,229,400; June 12; v. 239; p. 395.
Baum, James E., Jr., Chicago, Ill. Paper. No. 1,230,095; June 19; v. 239; p. 661.
Bausman, Alonzo L., Springfield, Mass. Coating apparatus. No. 1,230,455; June 19; v. 239; p. 781.
Baxter, Harold G., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Latching device. No. 1,229,703; June 12; v. 239; p. 497.
Baxter, Berry A., assignor to New Method Stove Company, Mansfield, Ohio. Stove. No. 1,228,510; June 5; v. 239; p. 50.
Bayer, Erik C., Jordløse, Sveløille Station, Denmark. Sound-producing device. No. 1,228,639; June 5; v. 239; p. 90.
Bayers, Harry I., assignor to Animated Advertising Co., Boston, Mass. Display apparatus and vehicle therefor. No. 1,230,369; June 19; v. 239; p. 753.
Bayley, Ivan A., North Sydney, Nova Scotia, Canada. Freight-transporter. No. 1,230,838; June 26; v. 239; p. 948.
Beach, George W. (See Von Culin and Beach.)
Beach, Henry W. (See Beach, John C. and H. W.)
Beach, John C. and H. W., assignors to Lachman Wall Bed Company, San Francisco, Cal. Disappearing bed. No. 1,228,872; June 5; v. 239; p. 170.
Beach, William. (See Burns and Beach.)
Beacon Falls Rubber Shoe Company, The. (See Crowley, John T., assignor.)
Beacon Falls Rubber Shoe Company, The. (See De Meeus, Etienne, assignor.)
Beagle, Victor E., Binghamton, N. Y. Truck. No. 1,230,839; June 26; v. 239; p. 949.
Beauchamp, J. Emilien. (See Rho, Joseph A., assignor.)
Bebb, Myrtle M., Carpenter, Wyo. Ellen's nest. No. 1,229,866; June 12; v. 239; p. 552.
Béchereau, Louis, assignor to The Society "Spad Societé Anonyme pour l'Aviation et ses Derivés," Paris, France. Aeroplane. No. 1,228,390; June 5; v. 239; p. 5.
Bechman, Louis H., assignor to Duplex Printing Press Company, Battle Creek, Mich. Tool-setting device for stereotype-plate-boring machines. No. 1,229,867; June 12; v. 239; p. 552.
Bechtel, John A., Tarentum, Pa., assignor to Pittsburgh Plate Glass Company. Apparatus for handling material in glass-making. (Reissue.) No. 14,320; June 26; v. 239; p. 1184.
Bechtel, Robert G., Goodland, Kans. Lubricator. No. 1,230,651; June 19; v. 239; p. 847.
Bechtold, Charles. (See Stigberg and Bechtold.)
Beckner, Bennie L., assignor of one-third to H. Witt and one-third to F. H. Schlater, Anderson, Ind. Combination lock and switch. No. 1,229,211; June 12; v. 239; p. 331.
Beebe, Frank C. (See Reynolds and Beebe.)
Beeson, William H. (See James and Beeson.)
Behringer, George J., Erie, Pa. Sandpapering-machine. No. 1,228,520; June 5; v. 239; p. 50.
Beidler, George C., Oklahoma, Okla. Developing apparatus. No. 1,230,096; June 19; v. 239; p. 662.
Beighley, Henry E., Cleveland, Ohio. Speed-indicating apparatus. No. 1,228,392; June 5; v. 239; p. 6.
Bélanger, Victor, Marshfield, assignor to New Era Spinning Co., Boston, Mass. Device for spinning and twisting textile fibers. No. 1,230,097; June 19; v. 239; p. 662.
Belknap, Charles H., Brooklyn, N. Y. Means for facilitating starting of gas-engines. No. 1,230,840; June 26; v. 239; p. 949.
Bell & Howell Company. (See Howell, Albert S., assignor.)
Bell, Silas D., assignor to J. H. Mowrey, Childress, Tex. Rocking-chair clamp. No. 1,228,521; June 5; v. 239; p. 51.
Belling, Edward C., *et al.* (See Hartlett, George D., assignor.)
Beloff, Raymond, Cleveland, Ohio. Automatic brake-actuating device for railway-trains. No. 1,230,098; June 19; v. 239; p. 662.
Belton, John D., Crowley, assignor of one-half to A. Brown, Morse, La. Apparatus for preparing food. No. 1,228,640; June 5; v. 239; p. 90.
Bender, Edward, Westfield, Wis. Fowl-catcher. No. 1,231,116; June 26; v. 239; p. 1044.
Bender, John A., Lykens, Pa. Tie-bar for rails. No. 1,230,370; June 19; v. 239; p. 753.
Bendixen, Kristian, assignor to Skindfabriken Unicum, Kr. Bendixen, P. Bendixen & Co., Copenhagen, Denmark. Tanning of fish-skins or the like. No. 1,230,266; June 19; v. 239; p. 720.
Benedetti, Vincenzo, Pallsade, N. J. Galter. No. 1,230,652; June 19; v. 239; p. 848.
Benedict, H. Stanley, *et al.* (See Lendner, Augustus R., assignor.)
Benedict, Harris M., Cincinnati, Ohio. Shelf-marker. No. 1,230,653; June 19; v. 239; p. 848.
Beneke, John O., assignor of one-half to D. M. Pitard, New Orleans, La. Burglar-alarm. No. 1,230,267; June 19; v. 239; p. 720.
Benjamin, Bert R., Oak Park, Ill., assignor to International Harvester Company of New Jersey. Mower-oiling system. No. 1,230,841; June 26; v. 239; p. 950.
Benjamin, Dana H., Cleveland Heights Village, and B. W. Brockett, Cleveland, assignors to The American Laundry Machinery Company, Cincinnati, Ohio. Clothes-pressing apparatus. No. 1,230,984; June 26; v. 239; p. 998.
Benner, Samuel A., Pittsburgh, Pa. Truck-bolster. No. 1,230,268; June 19; v. 239; p. 721.
Bennett, Edward O., Oakland, Cal. Storage-cabinet. No. 1,229,212; June 12; v. 239; p. 331.
Benovy, Jacob. (See Schutz, John, assignor.)
Benson, Andrew, Chicago, Ill. Shipping-case. No. 1,230,985; June 26; v. 239; p. 998.
Benson, Leonard R., *et al.* (See Shultz, Otto H., assignor.)
Bentley, Charles E., New York, N. Y. Overseam for sewed articles. No. 1,228,873; June 5; v. 239; p. 171.
Beran, Albert, Hirschwang, Austria. Telephone-booth and manufacturing the same. No. 1,230,553; June 19; v. 239; p. 815.
Berg, John O., assignor to Rotary Power-Tool Company, Inc., New York, N. Y. Tool for treating stone, concrete, and other materials. No. 1,230,842; June 26; v. 239; p. 950.
Berger, Joseph, Jr., Utica, N. Y., assignor, by mesne assignments, to Union Special Machine Company. Feeding mechanism for sewing-machines. No. 1,228,393; June 5; v. 239; p. 6.
Bergland, Gunder O., Deerfield, Wis. Journal-box. No. 1,230,986; June 26; v. 239; p. 998.
Bergman, Alick O., Milaca, Minn. Display and dispensing device. No. 1,231,475; June 26; v. 239; p. 1162.
Bergstrom, Carl G. G., St. Paul, assignor of one-half to G. D. E. Bergstrom, Minneapolis, Minn. Bag-holder. No. 1,230,060; June 12; v. 239; p. 611.
Bergstrom, George D. E. (See Bergstrom, Carl G. G., assignor.)
Berliner, Emile, Washington, D. C. Flying torpedo. No. 1,228,522; June 5; v. 239; p. 51.
Berman, Oscar A. (See Pride, John H., assignor.)
Bernard, William A., assignor to The William Schollhorn Company, New Haven, Conn. Paper-fastening tool. No. 1,229,213; June 12; v. 239; p. 331.
Berry, Charles M., assignor to The Reinforced Propeller and Insulating Company, Inc., New York, N. Y. Propeller. No. 1,228,874; June 5; v. 239; p. 171.
Berry, Robert C., Indianapolis, Ind. Method and means for removing carbon in internal-combustion engines. No. 1,230,654; June 19; v. 239; p. 848.
Berry, William D., Muskogee, Okla., assignor to The Kny-Scheerer Corporation. Thermometer-cautery. No. 1,229,704; June 12; v. 239; p. 497.
Bertram, Henry W., assignor to McDougall Company, Frankfort, Ind. Cabinet. No. 1,231,233; June 26; v. 239; p. 1082.
Besaw, Clarence, Hammond, N. Y. Curtain-hanger. No. 1,229,018; June 5; v. 239; p. 216.
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Best, Joseph L. (See Lents and Best.)
Best, William L., and S. H. Shepard, McLeansboro, Ill. Tractor. No. 1,230,655; June 19; v. 239; p. 849.
Best, William N., New York, N. Y. Air-heater. No. 1,231,117; June 26; v. 239; p. 1044.



Best, William N., assignor of one-half to C. H. Silliman, New York, N. Y. Provision-safe. No. 1,228,523; June 5; v. 239; p. 51.
Bevilacqua, Giuseppe, Genoa, Italy. Production of carbonate of lead. No. 1,231,476; June 26; v. 239; p. 1162.
Beyen, Frederick W. (See Reiboldt and Beyen.)
Bhisey, Shanker A., assignor to R. Tata, London, England. Type-casting machine. No. 1,228,524; June 5; v. 239; p. 51.
Bibb, Pearl M., and T. Ludat, Minden, W. Va. Pump-strainer. No. 1,231,477; June 26; v. 239; p. 1162.
Bickford, Frank H., Kingston, assignor to The Adder Machine Company, Wilkes-Barre, Pa. Calculating-machine. No. 1,228,641; June 5; v. 239; p. 91.
Blenstock, Anna E., Newark, N. J. Knockdown garment-stand. No. 1,231,118; June 26; v. 239; p. 1044.
Blersdorf, Mathew F., Los Angeles, Cal. Automatic safety gate-closing device for freight-elevators. No. 1,229,019; June 5; v. 239; p. 217.
Bill, Fred M., *et al.* (See Shultz, Otto H., assignor.)
Bilyeu, Simon P., Sacramento, Cal. Automatic lubricator. No. 1,230,371; June 19; v. 239; p. 754.
Bingham, Forrest E., New Bedford, Mass. Liquid filtering and delivering apparatus. No. 1,230,099; June 19; v. 239; p. 663.
Birand, Felix P., Jr., Mortlach, Saskatchewan, Canada. Wrench. No. 1,230,656; June 19; v. 239; p. 849.
Bird, David B., Chicago, Ill. Fowl-disinfectant apparatus. No. 1,230,843; June 26; v. 239; p. 950.
Birney, Charles O. (See Rosenbury, Joseph M., assignor.)
Birnzweig, Jacob S., New York, N. Y. Die for blanking out buttons. No. 1,229,572; June 12; v. 239; p. 454.
Black, Frederic M. (See Blair and Black.)
Black, John R., Toulon, Ill. Earthworking implement. No. 1,229,868; June 12; v. 239; p. 553.
Black, Lee J., Beaumont, Tex. Gearing for hoisting apparatus. No. 1,229,020; June 5; v. 239; p. 217.
Black, Samuel D., Baltimore, and A. G. Decker, Orangeville, Md. Drill-gearing. No. 1,229,401; June 12; v. 239; p. 395.
Blackinton & Co., R. (See Ballou, Walter B., assignor.) (Reissue.)
Blacksher, Erasmus M., Brewton, Ala. Armored automobile. No. 1,229,869; June 12; v. 239; p. 553.
Blades, Leonard J., assignor to National Ticket Case Company, Chicago, Ill. Compartment or ticket drawer. No. 1,229,402; June 12; v. 239; p. 396.
Blaha, Ludwig. (See Neu and Blaha.)
Blair, Frank M., and F. M. Black, Newark, Ohio. Device for arresting light-rays. No. 1,230,844; June 26; v. 239; p. 951.
Blake, Philip W., assignor to National Binding Machine Company, Boston, Mass. Strip-serving device. No. 1,229,403; June 12; v. 239; p. 396.
Blake, Ralph V., New York, N. Y. Egg-cooking apparatus and timer. No. 1,230,845; June 26; v. 239; p. 951.
Blakeslee, Ward J., Filer, Idaho. Machine for saving seeds. No. 1,229,870; June 12; v. 239; p. 553.
Blanchard, Fred M., Boston, Mass. Bill-fold. No. 1,230,100; June 19; v. 239; p. 664.
Blanchard, Leslie W., London, England. Spring-mounting for cycle-wheels. No. 1,230,987; June 26; v. 239; p. 999.
Blanchette, Joseph A., St. Anne des Chimes, Manitoba, Canada. Oil-can. No. 1,230,061; June 12; v. 239; p. 612.
Bland, William B., Jenks, Okla. Mowing apparatus. No. 1,228,642; June 5; v. 239; p. 91.
Blankmann, George H., St. Louis, Mo. Grinding-mill. No. 1,231,478; June 26; v. 239; p. 1162.
Blaw Steel Construction Company. (See Loxterman, Howard B., assignor.)
Bledsoe, Carl F., assignor to Ogle Construction Company, Chicago, Ill. Hoist mechanism. No. 1,231,234; June 26; v. 239; p. 1082.
Blevins, Allen L. (See Blevins, Kilgore, and Blevins.)
Blevins, Alonzo, *et al.* (See Blevins, Kilgore, and Blevins, assignors.)
Blevins, Alonzo, C. F. Kilgore, and A. L. Blevins, Coeburn, assignors of one fourth to said Alonzo Blevins, one-fourth to said Kilgore, one-fourth to M. L. Johnson, and one-fourth to J. J. Body, Dante, Va. Mine-door. No. 1,228,643; June 5; v. 239; p. 91.
Blinck, Jean R. V., assignor of one-half to W. G. Brorein, Tampa, Fla. Insect-trap. No. 1,229,021; June 5; v. 239; p. 217.
Block, Abraham, San Francisco, Cal. Paper-feeding mechanism. No. 1,230,456; June 19; v. 239; p. 782.
Block, Louis, Brooklyn, assignor to M. Frankl, New York, N. Y. Disinfecting and advertising device for telephones and the like. No. 1,228,394; June 5; v. 239; p. 7.
Blount, Irving, Brooklyn, N. Y. Tank. No. 1,230,988; June 26; v. 239; p. 999.
Bluege, Adam, Chicago, Ill. Hooping or strapping attachment for box-nailing machines. No. 1,230,989; June 26; v. 239; p. 999.
Blumer, Caspar, Philadelphia, Pa. Roll-locating device. No. 1,231,479; June 26; v. 239; p. 1163.
Boch, Louise H., Chicago, Ill. Window-shade. No. 1,230,269; June 19; v. 239; p. 721.
Bodinson, Lars W., assignor to The American Well Works, Aurora, Ill. Deep-well pump. No. 1,230,554; June 19; v. 239; p. 815.
Bodkin, John A., New York, N. Y. Derailing device. No. 1,228,740; June 5; v. 239; p. 125.
Body, Joseph J., *et al.* (See Blevins, Kilgore, and Blevins, assignors.)
Boehm, Rudolph A., assignor to B. S. Putts, Erie, Pa. Combination electric switch. No. 1,228,741; June 5; v. 239; p. 125.
Boesiger, Henry L., Somerville, N. J. Belt-guard. No. 1,228,875; June 5; v. 239; p. 171.
Bohan, William J., St. Paul, Minn. Freight-car. No. 1,228,742; June 5; v. 239; p. 126.
Bohmker, John C., Bradley, assignor to Sears, Roebuck and Company, Chicago, Ill. Plow. No. 1,230,846; June 26; v. 239; p. 951.
Bold, Leopold S., La Farge, Wis. Traction-wheel. No. 1,229,404; June 12; v. 239; p. 397.
Bolens, Harry W., Port Washington, Wis. Chair-iron. No. 1,229,214; June 12; v. 239; p. 332.
Bolger, Thomas P., Gloucester, Mass. Flower-box. No. 1,229,022; June 5; v. 239; p. 218.
Boll, Peter W., Wilkinsburg, Pa. Feed-bag. No. 1,229,573; June 12; v. 239; p. 455.
Bolton, Alexander. (See Day, Edgar K., assignor.)
Bolton, Audrew C., Brooklyn, N. Y. Filing-cabinet for disk records. No. 1,231,326; June 26; v. 239; p. 1112.
Bolton, George W., Nashville, Tenn. Automatic safety gage-cock. No. 1,228,876; June 5; v. 239; p. 172.
Bolus, Glenn H., assignor to The Ohio Brass Company, Mansfield, Ohio. Trolley-wire hanger for catenary systems. No. 1,229,705; June 12; v. 239; p. 498.
Bone, David R., Oglesby, Tex. Furnace. No. 1,229,706; June 12; v. 239; p. 498.
Bone, William A., J. W. Wilson, Leeds, and C. D. McCourt, assignors to Radiant Heating Limited, London, England. Steam generation. No. 1,230,990; June 26; v. 239; p. 999.
Bonte, George W., New York, N. Y. Figure wheeled toy. No. 1,230,847; June 26; v. 239; p. 951.
Boock, Wilhelm F., Pipestone, Minn. Convertible seat and bed structure for vehicles. No. 1,229,871; June 12; v. 239; p. 554.
Bordon Company, The. (See Noneman, Ira W., assignor.)
Bordwell, Edward L., Marysville, Cal. Nut-lock. No. 1,229,872; June 12; v. 239; p. 554.
Borener, Albert J., Chicago, Ill. Blast-pipe connection. No. 1,230,657; June 19; v. 239; p. 849.
Bosch Magneto Company. (See Heins, Otto, assignor.)
Bosch, Firm of Robert. (See Kratz, Franz, assignor.)
Bosenbury, Joseph M., Peoria, Ill., assignor of one-half to C. O. Birney, Mount Healthy, Ohio. Automatically-operated circuit-breaker. No. 1,228,395; June 5; v. 239; p. 7.
Boswell, Fletcher O., assignor to F. O. B. Manufacturing Company, Philadelphia, Pa. Vehicle suspension and shock-absorber. No. 1,228,644; June 5; v. 239; p. 91.
Boswell, George G. F., assignor to Universal Coin Lock Company, Indianapolis, Ind. Coin-controlled lock. No. 1,230,062; June 12; v. 239; p. 612.
Both, Tonjes A. C., Stratford, Conn., assignor to Zee-Socket and Mfg. Company, Boston, Mass. Electric-light socket. No. 1,230,848; June 26; v. 239; p. 952.
Bottome, Turner D., Indianapolis, Ind. Carbureting air. No. 1,230,101; June 19; v. 239; p. 664.
Bottum, Alfred W., Englewood, N. J. Reading-box for punched cards. No. 1,230,102; June 19; v. 239; p. 664.
Boucher, Pierre J., Chelsea, London, England. Machine for sealing receptacles. No. 1,230,849; June 26; v. 239; p. 952.
Bouëry, Pierre, Weaverville, Cal. Protective device for water-channels. No. 1,230,457; June 19; v. 239; p. 782.
Bouëry, Pierre, Weaverville, Cal. Controller for nozzles. No. 1,230,458; June 19; v. 239; p. 783.
Bournonville, Eugene M., Jersey City, N. J. Internal-combustion engine. No. 1,229,574; June 12; v. 239; p. 455.
Bousfield, John H. A., assignor to E. and T. Fairbanks and Company, St. Johnsbury, Vt. Scale construction. No. 1,229,215; June 12; v. 239; p. 332.
Bousfield, John H. A., assignor to E. and T. Fairbanks and Company, St. Johnsbury, Vt. Test-weight car. No. 1,230,850; June 26; v. 239; p. 952.
Bousfield, John H. A., assignor to E. and T. Fairbanks and Company, St. Johnsbury, Vt. Automatic scale. No. 1,230,851; June 26; v. 239; p. 953.
Bovee, Ransom Y., Bloomington, assignor of one-half to J. B. Farquhar, Chicago, Ill. Garment-hanger. No. 1,229,707; June 12; v. 239; p. 498.
Bowditch, Charles H., assignor to H. B. Auchy, Erdenheim, Pa. Portable horse-hanger and coupling for carousels. No. 1,230,103; June 19; v. 239; p. 665.
Bowditch, Charles H., assignor to H. B. Auchy, Erdenheim, Pa. Cornice-lock for carousels. No. 1,230,104; June 19; v. 239; p. 665.
Bower, Keith A., Shelburne, Nova Scotia, Canada. Tire-holder. No. 1,231,480; June 26; v. 239; p. 1163.
Bowers, George W., Mannington, W. Va. Multiple mold. No. 1,229,873; June 12; v. 239; p. 554.
Bowers, Lionel F., assignor to Columbia Manufacturing Company, Columbia, Pa. Hanger. No. 1,229,575; June 12; v. 239; p. 455.

Bowie, Augustus J., Jr., San Francisco, Cal. Electric switch. No. 1,230,372; June 19; v. 239; p. 754.
Bowling, James H., Russellville, Ky. Churn. No. 1,231,119; June 26; v. 239; p. 1045.
Bowsher, Rutherford H., Adelphi, Ohio. Artificial tooth. No. 1,230,852; June 26; v. 239; p. 953.
Bowsher, Rutherford H., Adelphi, Ohio. Artificial tooth. No. 1,230,853; June 26; v. 239; p. 953.
Boyd, Wyatt, Canton, Ohio. Internal-combustion engine. No. 1,229,216; June 12; v. 239; p. 232.
Boye, James H., Chicago, Ill. Curtain-hanger. No. 1,229,874; June 12; v. 239; p. 554.
Boyer, Willard E. (See Denney, William J., assignor.)
Boyle, Willis J., Sr., Los Angeles, Cal. Container. No. 1,230,459; June 19; v. 239; p. 783.
Boynton, George W., Boston, Mass. Foot-rest for automobile-accelerators. No. 1,229,023; June 5; v. 239; p. 218.
Boyton, John C., and O. H. Nickerson, Cleveland, Ohio. Outlet-box. No. 1,229,576; June 12; v. 239; p. 456.
Brace, Arthur F., Waterford, Pa. Automatic oiler. No. 1,230,658; June 19; v. 239; p. 850.
Bradley, Charles M., assignor of one-half to J. B. Ellis, Harvey, Ill. Rotary valve for internal-combustion engines. No. 1,229,405; June 12; v. 239; p. 397.
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Bradrick, Joseph E., West Unity, Ohio. Switch. No. 1,231,481; June 26; v. 239; p. 1164.
Bragg, John A. (See Falstrem and Bragg.)
Bragman, Samuel, and S. Wagreich, New York, N. Y. Receptacle for rubbish. No. 1,228,396; June 5; v. 239; p. 7.
Braine, Bancroft G., assignor to The Rail Joint Company, New York, N. Y. Insulated rail-joint. No. 1,228,645; June 5; v. 239; p. 92.
Braine, Bancroft G., assignor to The Rail Joint Company, New York, N. Y. Plural-faced insulating unit. No. 1,228,646; June 5; v. 239; p. 92.
Braly, Norman B., Butte, Mont. Canvas-hose coupling. No. 1,228,397; June 5; v. 239; p. 8.
Brand, Morrie, assignor of one-half to O. P. Brown, San Francisco, Cal. Wall-bed. No. 1,230,105; June 19; v. 239; p. 665.
Brandt, Raymond V., Germania, Iowa. Dental instrument. No. 1,229,024; June 5; v. 239; p. 218.
Brannan, William, Newark, N. J. Undergarment. No. 1,231,482; June 26; v. 239; p. 1164.
Branyan, John S., and A. M. Rung, Harrisburg, Pa. Fishing-reel. No. 1,230,270; June 19; v. 239; p. 721.
Brasseur, Ernest J., assignor to A. B. Dick Company, Chicago, Ill. Attachment for T-squares. No. 1,231,120; June 26; v. 239; p. 1045.
Brauchler, Charles A., Canton, Ohio. Apparatus for feeding pulverized fuel. No. 1,231,327; June 26; v. 239; p. 1113.
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Bravi, Giuseppe, Allentown, assignor of one-half to S. T. Alleva, Norristown, Pa. Springless or floating suspension for vehicles. No. 1,229,708; June 12; v. 239; p. 498.
Brazeau, J. Henry. (See Sundeen, Erick O., assignor.)
Bredehoft, Edward F., St. Louis, Mo., assignor to Geo. D. Barnard & Company. File-box. No. 1,228,743; June 5; v. 239; p. 126.
Breed, George P., Ruby, Wis., assignor of one-half to W. D. Persons, Walnut, Cal. Transmission-gearing. No. 1,230,659; June 19; v. 239; p. 850.
Breen, John T., Huron, S. D. Spring-wheel. No. 1,228,744; June 5; v. 239; p. 126.
Brehm, Ray A., Palmyra, Pa. Ice-creeper. No. 1,229,406; June 12; v. 239; p. 397.
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Brennecke, Herman J., Chicago, Ill. Goggle-hinge. No. 1,230,555; June 19; v. 239; p. 816.
Brenzinger, Julius, Mount Vernon, N. Y. Can-heading machine. No. 1,230,556; June 19; v. 239; p. 816.
Breuer, Erich F. J., Decatur, Ill. Hose-coupling. No. 1,230,854; June 26; v. 239; p. 953.
Brewster, Percy D., East Orange, N. J. Color cinematography. No. 1,228,877; June 5; v. 239; p. 172.
Brice, James L., Aberdeen, Wash. Shaving-brush. No. 1,230,660; June 19; v. 239; p. 850.
Bridgeport Brass Company. (See Webster, William R., assignor.)
Bridges, Alonzo J., Bedford, Iowa. Grain-tester. No. 1,230,855; June 26; v. 239; p. 953.
Briggs, Alice U., Union City, Pa. Reciprocating-saw machine. No. 1,230,991; June 26; v. 239; p. 1000.
Briggs, John M., Martins Ferry, Ohio. Train-coaling device. No. 1,229,875; June 12; v. 239; p. 554.
Briggs, William C., assignor to United Cigarette Machine Co., Lynchburg, Va. Continuous-rod cigarette-machine. No. 1,228,525; June 5; v. 239; p. 52.
Brigham, Melzar W., East Cleveland, Ohio. Lamp-support. No. 1,230,992; June 26; v. 239; p. 1000.
Brinckerhoff, Frank M., Englewood, N. J., assignor to James L. Howard & Company, Hartford, Conn. Lock mechanism for sliding doors. No. 1,229,709; June 12; v. 239; p. 499.
Brinckerhoff, Francis M., Englewood, assignor to L. B. Stillwell, Lakewood, N. J., and H. S. Putnam, New York, N. Y. Railway-car construction. No. 1,231,235; June 26; v. 239; p. 1083.
Brinckerhoff, Francis M., Englewood, and L. B. Stillwell, Lakewood, N. J., assignors to said Stillwell and H. S. Putnam, New York, N. Y. Railway-car construction. No. 1,231,236; June 26; v. 239; p. 1083.
Brinton, William F., Washington, Iowa. Means for excavating and transporting material in grading. No. 1,231,121; June 26; v. 239; p. 1045.
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Bristol Company, The. (See Johnson, Manfred, assignor.)
Bristol Company, The. (See Mertelmeyer, Gisbert, assignor.)
British Westinghouse Electric & Manufacturing Company, The. (See Mansforth, Holberry, assignor.)
British Westinghouse Electric & Manufacturing Company, The. (See Scanes, Arthur E. L., assignor.)
Britt, Charles, Algona, Iowa. Automatic transmission-controlling mechanism. No. 1,230,856; June 26; v. 239; p. 954.
Britt, Edmund C., Seattle, Wash. Railway-car. No. 1,231,122; June 26; v. 239; p. 1046.
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Broadmeyer, Albert, assignor to W. O. Hickok Mfg. Co., Harrisburg, Pa. Valve-changing device. No. 1,231,483; June 26; v. 239; p. 1164.
Brock, Marcus I., Wayne, Pa. Wheel-hub. No. 1,228,398; June 5; v. 239; p. 8.
Brockett, Bluford W. (See Benjamin and Brockett.)
Brockie, James, Forest Hill, London, England. Magazine arc-lamp. No. 1,229,876; June 12; v. 239; p. 555.
Brocklebank, Arthur P., Brooklyn, N. Y., assignor to General Electric Company. Centrifugal pumping apparatus. No. 1,231,484; June 26; v. 239; p. 1164.
Brocksmith, Adolph R., St. Louis, Mo. Radius-rod support. No. 1,230,106; June 19; v. 239; p. 666.
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Bronner, Frederick H., assignor to The Irwin-Hodson Company, Portland, Oreg. Labeling an article. No. 1,229,877; June 12; v. 239; p. 555.
Brooks, Benjamin T., and D. F. Smith, assignors to Gulf Refining Company, Pittsburgh, Pa. Production of chlorinated hydrocarbons. No. 1,231,123; June 26; v. 239; p. 1046.
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Brosius, Edgar E., Pittsburgh, Pa. Hoisting-bucket. No. 1,228,526; June 5; v. 239; p. 52.
Brothers, Grover C. (See Burns and Beach, assignors.)
Brougham, Arthur R., West Hampstead, London, England. Internal-combustion engine. No. 1,229,217; June 12; v. 239; p. 333.
Brouillette, Alfred L., Campbell, Nebr. Revolving lace-cabinet. No. 1,228,878; June 5; v. 239; p. 172.
Brown, Aleck. (See Belton, John D., assignor.)
Brown, Alfred G., Los Angeles, Cal., assignor to Union Fibre Company, Winona, Minn. Insulating-floor. No. 1,229,407; June 12; v. 239; p. 398.
Brown, Carl E., Columbus, Ohio. Oil-burner. No. 1,228,399; June 5; v. 239; p. 8.
Brown, Carlton W., Groton, Conn. Machine for affixing and printing tags. No. 1,230,107; June 19; v. 239; p. 666.
Brown, Chester W. and W. A., Mass, Mich. Rotary engine. No. 1,231,328; June 26; v. 239; p. 1113.
Brown, David, Lawrence, Mass. Loom-shuttle. No. 1,229,578; June 12; v. 239; p. 456.
Brown, Harold P., Montclair, N. J. Method of and means for preventing the distintegration of concrete structures. No. 1,230,373; June 19; v. 239; p. 754.
Brown, Harry M., Mendocino, Cal. Pipe. No. 1,231,485; June 26; v. 239; p. 1165.
Brown, Henry L., assignor to Brown Spin-Wright Company, New York, N. Y. Spindle and power-transmitting mechanism therefor. No. 1,229,025; June 5; v. 239; p. 219.
Brown, Horace P., and C. L. Johnston, Oakland, Cal. Mechanism for interleaving sheets. No. 1,228,400; June 5; v. 239; p. 9.
Brown, Isaac L., Marshalltown, Iowa. Car-door lock. No. 1,231,486; June 26; v. 239; p. 1165.
Brown, James H., assignor to J. Amann, Chicago, Ill. Corn-hanger. No. 1,231,544; June 26; v. 239; p. 1183.
Brown, John L., Westfield, Mass. Slow-feed manger. No. 1,229,026; June 5; v. 239; p. 219.
Brown, John J., Newark, N. J. Condensing apparatus. No. 1,230,557; June 19; v. 239; p. 816.
Brown, Michael B., Cleveland, Ohio. Self-closing faucet. No. 1,229,579; June 12; v. 239; p. 456.
Brown, Munro S., Goldfield, Nev. Gearing. No. 1,230,661; June 19; v. 239; p. 850.
Brown, Oroson P. (See Brand, Morrie, assignor.)
Brown Spin-Wright Company. (See Brown, Henry L., assignor.)
Brown, Theodore, Streatham, London, assignor to S. C. Harper, London, England. Puzzle. No. 1,229,580; June 12; v. 239; p. 457.





Brown, Thomas E., New York, N. Y., and C. T. Westlin, Arlington, N. J., assignors to Cotton Machinery Company, New York, N. Y. Machine for use in gathering cotton. No. 1,231,374; June 19; v. 239; p. 754.
Brown, Walter, assignor to Webster Electric Company, Racine, Wis. Priming device for internal-combustion engines. No. 1,231,124; June 26; v. 239; p. 1046.
Brown, William A. (See Brown, Chester W. and W. A.)
Bruce, Albert W., Bloomfield, Iowa. Rotary explosive-engine. No. 1,228,401; June 5; v. 239; p. 9.
Brudsig, Charles, Winnipeg, Manitoba, Canada, assignor to J. L. Penner, Minneapolis, Minn. Broom. No. 1,229,027; June 5; v. 239; p. 219.
Brueggeman, Louis W., Milwaukee, Wis. Sectional portière. No. 1,230,271; June 19; v. 239; p. 722.
Bruner, Ansalem W. (See Kimble, Fred, assignor.)
Bruner, Louis N., Zürich, Switzerland. Apparatus for use in the manufacture of glass bottles and the like. No. 1,229,028; June 5; v. 239; p. 219.
Brush, Alanson P., Detroit, Mich. Lubricating system for internal-combustion engines. No. 1,230,460; June 19; v. 239; p. 783.
Brush, Alanson P., Detroit, Mich. Lubricating system for internal-combustion engines. No. 1,230,461; June 19; v. 239; p. 784.
Bryant, Carrol A., Livermore, Me. Extension-foot for step-ladders. No. 1,229,218; June 12; v. 239; p. 333.
Bryant Electric Company, The. (See Anderson, Carl E., assignor.)
Bryant Electric Company, The. (See Thomas, George B., assignor.)
Buchanan, Cyrus B., and C. C. Johnson, Richmond, Va. Headway-recorder. No. 1,229,878; June 12; v. 239; p. 555.
Buchholz, Louis O. (See Carter, Ray L., assignor.)
Buckelew, Albert H., New York, assignor of one-fourth to V. C. Gilpin and one-fourth to J. E. McAuliffe, Brooklyn, N. Y. Electric-light socket. No. 1,230,662; June 19; v. 239; p. 851.
Buckeye Jack Manufacturing Company, The. (See Bates, Edmund C., assignor.)
Buckeye Products Company, The. (See Marfield, Dwight S., assignor.)
Bucklus, Albert O., Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio. Making journal-boxes. No. 1,229,219; June 12; v. 239; p. 334.
Bucklus, Albert O., Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio. Journal-box. No. 1,229,220; June 12; v. 239; p. 334.
Bucklus, Albert O., Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio. Wear-plate for journal-boxes. No. 1,230,859; June 26; v. 239; p. 955.
Buckwalter, Tracy V., Altoona, Pa. Speed-governor. No. 1,228,402; June 5; v. 239; p. 10.
Bueb, Julius, Dessau, Germany. Manufacture of gas. No. 1,228,879; June 5; v. 239; p. 172.
Buehner, William F. A., Newark, N. J., assignor to L. Weiscopf, New York, N. Y. Engine-cylinder. No. 1,228,880; June 5; v. 239; p. 173.
Buerk, Hans, and A. W. Happel, Buffalo, N. Y., assignors to The Columbus Die, Tool & Machine Company, Columbus, Ohio. Grinding-machine. No. 1,230,462; June 19; v. 239; p. 784.
Buerk, Hans, and A. W. Happel, Buffalo, N. Y., assignors to The Columbus Die, Tool & Machine Company, Columbus, Ohio. Grinding-machine. No. 1,230,903; June 26; v. 239; p. 1001.
Buffat, William E., Knoxville, Tenn. Friction-gearing. No. 1,229,879; June 12; v. 239; p. 556.
Bugeia, Hudson H., St. Louis, Mo. Bed and crib coupling device. No. 1,229,221; June 12; v. 239; p. 334.
Buker, J. E., *et al.* (See Abbott, Alfred S., assignor.)
Bull, Edward E., Whitwell, Tenn. Crossover-dump. No. 1,229,222; June 12; v. 239; p. 335.
Bullock, Samuel A., assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Single-truck spring-stabilizer. No. 1,231,487; June 26; v. 239; p. 1165.
Bullock Tractor Company. (See Houghton, Orley C., assignor.)
Bullock Tractor Co. (See Stark, William O., assignor.)
Bullum, Steve, Tulsa, Okla. Combination-clamp. No. 1,229,408; June 12; v. 239; p. 398.
Bunker, Carey E., Oregon, Mo. Automatic head-lamp control. No. 1,230,663; June 19; v. 239; p. 851.
Bunnell, Morton G., assignor to G. C. Mastin, deceased, Chicago, and E. W. Stees, Rockford, Ill.; M. C. Putnam, executrix. Spark-plug. No. 1,229,409; June 12; v. 239; p. 398.
Burbage, William P., Philadelphia, Pa. Closure for collapsible tubes. No. 1,229,029; June 5; v. 239; p. 220.
Burdett, George E., Lubec, Me. Rake-cleaner. No. 1,230,664; June 19; v. 239; p. 852.
Burger, John P. (See Leilich and Burger.)
Burger, Leopold F., Beloit, Wis., assignor to International Harvester Corporation. Gas-producer. No. 1,230,558; June 19; v. 239; p. 816.
Burke, John F., Philadelphia, Pa. Coaster-diving apparatus. No. 1,230,559; June 19; v. 239; p. 817.
Burke, Lawrence, Jr. (See Batcheider, George O., assignor.)
Burkhardt, Gustave, Chicago, Ill. Combined fuel-valve and switch-lock. No. 1,230,108; June 19; v. 239; p. 667.
Burks, Jay P., and C. M. Young, Helena, Ark. Paper-feeding device for type-writing machines. No. 1,229,880; June 12; v. 239; p. 556.
Burks, Paul L., Louisville, Ky. Winding and rewinding mechanism for note-sheets. No. 1,228,527; June 5; v. 239; p. 53.
Burlin, Charles T., assignor to The Whitin Machine Works, Whitinsville, Mass. Filer. No. 1,230,272; June 19; v. 239; p. 722.
Burnett, Ralph W., Westwood, Cal. Automatic lock-nut. No. 1,228,881; June 5; v. 239; p. 173.
Burnham, George A., Saugus, assignor to S. B. Condit, Jr., Brookline, Mass. Time-limit relay. No. 1,230,063; June 12; v. 239; p. 613.
Burns, Alfred, assignor to West Boylston Manufacturing Company, Easthampton, Mass. Cloth-roll clutch. No. 1,230,079; June 12; v. 239; p. 619.
Burns, Howard E., assignor to C. F. Massey Company, Chicago, Ill. Pipe-joint. No. 1,230,375; June 19; v. 239; p. 755.
Burns, John, assignor to The Simmons Manufacturing Company, Kenosha, Wis. Metal joint. No. 1,230,376; June 19; v. 239; p. 755.
Burns, John G., Pulaski, Tenn. Medicated egg. No. 1,229,881; June 12; v. 239; p. 556.
Burns, John W., and W. Beach; said Burns assignor of one-half of his right to G. C. Brothers, Los Angeles, Cal. Railway-crossing. No. 1,230,377; June 19; v. 239; p. 756.
Burns, Robert. (See Schnuck and Burns.)
Burns, William D., Bangor, Me. Needle-threader. No. 1,230,378; June 19; v. 239; p. 756.
Burns, William G. (See Schnuck and Burns.)
Burpee, Frank W., South Bellingham, Wash. Can-seaming machine. No. 1,230,273; June 19; v. 239; p. 723.
Burr, William R., Cresco, Iowa. Wagon-box. No. 1,229,223; June 12; v. 239; p. 335.
Burroughs Adding Machine Company. (See Horton, Allen A., assignor.)
Burroughs Adding Machine Company. (See Pasinski, Walter J., assignor.)
Burton, Alexander M., Pittsburgh, Pa. Fender. No. 1,230,463; June 19; v. 239; p. 785.
Busch-Sulzer Bros.-Diesel Engine Company. (See Schlaepfer, Robert, assignor.)
Butcher, Elmer E., Interlaken, N. J., assignor to Marconi Wireless Telegraph Company of America. Oscillation-receiving apparatus. No. 1,228,647; June 5; v. 239; p. 92.
Butcher, William T., Upper Lake, Cal. Mower-knife sharpener. No. 1,228,403; June 5; v. 239; p. 10.
Butler, Robert, Boston, Mass. Means for attaching a resilient cushion to a rigid base. No. 1,229,581; June 12; v. 239; p. 457.
Butterly, William, Liverpool, England. Hernia-support. No. 1,230,665; June 19; v. 239; p. 852.
Butterworth, Frank W., Danville, Ill. Making bricks. No. 1,229,582; June 12; v. 239; p. 457.
Buyalos, Mike. (See Glimpel, Albert, assignor.)
Byron, Charles L., Winnetka, Ill. Vehicle. No. 1,230,109; June 19; v. 239; p. 667.
Byron, Charles L., Winnetka, Ill. Vehicle. No. 1,230,110; June 19; v. 239; p. 667.
C. B. Cottrell & Sons Company. (See Barber, Howard M., assignor.)
C. D. Potter Co., The. (See Potter, Robert P., assignor.)
C. F. Massey Company. (See Burns, Howard E., assignor.)
Cadby, Philip H. (See Bangs, Ralph C., assignor.)
Caddell, Charles J., assignor of one-half to J. P. Wiggins, Maxton, N. C. Plow. No. 1,231,237; June 26; v. 239; p. 1083.
Cahusac, Clarence N., Jersey City, N. J., assignor, by mesne assignments, to Duplex Lock Company Inc., New York, N. Y. Lock for automobiles. No. 1,231,125; June 26; v. 239; p. 1047.
Cake, Horace M., Washington, D. C. Means for propulsion. No. 1,229,583; June 12; v. 239; p. 457.
Caldwell, Frank, Cincinnati, Ohio. Apparatus for feeding powdered or pulverized fuel. No. 1,231,488; June 26; v. 239; p. 1166.
Caldwell, John A., Vancouver, British Columbia, Canada. Means for describing circular and elliptic arcs. No. 1,230,994; June 26; v. 239; p. 1001.
Caldwell, Samuel, Oakland, Cal. Subaqueous gold-saving apparatus. No. 1,230,274; June 19; v. 239; p. 723.
Callaway, Oscar, and G. R. Helsley, Wellsburg, W. Va. Film-camera. No. 1,229,882; June 12; v. 239; p. 557.
Calloway, William I., Atlanta, Ga. Grinding-machine. No. 1,230,111; June 19; v. 239; p. 668.
Camel Company. (See Comee, Joseph F., assignor.)
Cameron, Joseph P., Atlantic, Iowa. Disk-harrow shield. No. 1,230,464; June 19; v. 239; p. 785.
Camp, Lee G., Santa Clara, Cuba. Centrifugal clarifier. No. 1,230,560; June 19; v. 239; p. 817.
Campbell, Charles E., Lynn, Mass. Spark-gap. No. 1,231,489; June 26; v. 239; p. 1166.
Campbell, Harry E., New York, N. Y. Munnion for fireproof window-sashes. No. 1,229,710; June 12; v. 239; p. 499.
Campbell, James L., Barryton, Mich. Circuit-completing plug for lamp-sockets. No. 1,230,826; June 19; v. 239; p. 904.
Campbell, John R., Austin, Tex. Aeroplane. No. 1,229,410; June 12; v. 239; p. 399.

Campbell, Milton D., assignor to The Perkins Campbell Company, Cincinnati, Ohio. Power-transmission belt. No. 1,228,528; June 5; v. 239; p. 53.

Campbell, Neil L., Salem, N. J. Flat-block linoleum-printing machine. No. 1,228,529; June 5; v. 239; p. 53.

Campbell, William S., assignor to The Miller Rubber Company, Akron, Ohio. Display-stand. No. 1,231,490; June 26; v. 239; p. 1166.

Cancelograph Company. (See Mack, Luther L., assignor.)

Cantrell, Edwin B. (See Miller and Cantrell.)

Card, William H., and J. J. Cushman, Los Angeles, Cal. Starter for internal-combustion engines. No. 1,230,064; June 12; v. 239; p. 613.

Carden, David A., Houston, Tex. Cleaning device for wells. No. 1,230,066; June 19; v. 239; p. 852.

Carey, Daniel G., Elmira, N. Y. Vaginal support. No. 1,230,112; June 19; v. 239; p. 668.

Carhart, Linden P., Brooklyn, N. Y. Lawn-mower. No. 1,230,086; June 12; v. 239; p. 621.

Carlberg, Carl G., Omaha, Nebr. Grading-machine. No. 1,228,530; June 5; v. 239; p. 54.

Carley, Leonard R., assignor of one-half to J. A. Stewart, Detroit, Mich. Button-feeding mechanism. No. 1,230,860; June 26; v. 239; p. 955.

Carlin, Samuel E., Chicago, Ill., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Attachment for calculating-machines. No. 1,228,404; June 5; v. 239; p. 10.

Carlisle, Frederick, Monticello, N. Y. Differential mechanism. No. 1,229,883; June 12; v. 239; p. 557.

Carlson, Arthur W., assignor to Grip Nut Company, Chicago, Ill. Nut-tapping machine. No. 1,230,113; June 19; v. 239; p. 669.

Carlson, John A., Seattle, Wash. Band-saw. No. 1,230,275; June 19; v. 239; p. 723.

Carnahan, Orlando B., Monongahela, assignor to Window Glass Machine Company, Pittsburgh, Pa. Scraper for glass flattening stones. No. 1,229,711; June 12; v. 239; p. 499.

Carr, Emmit E., Salem, Ohio. Pen-extractor. No. 1,231,127; June 26; v. 239; p. 1047.

Carpenter, Charles A., Columbus Junction, Iowa. Vehicle-brake. No. 1,229,411; June 12; v. 239; p. 399.

Carpenter, Henry A., and A. W. Warner, Sewickley, assignors to Riter-Conley Manufacturing Company, Pittsburgh, Pa. Telescoping-chute structure. No. 1,229,224; June 12; v. 239; p. 335.

Carpenter, Henry A., and A. W. Warner, Sewickley, assignors to Riter-Conley Manufacturing Company, Pittsburgh, Pa. Control mechanism for charging and discharging machines. No. 1,229,225; June 12; v. 239; p. 336.

Carpenter, Walter S., Jr., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Starter for prime movers. No. 1,229,584; June 12; v. 239; p. 457.

Carpenter, Paul. (See Scott and Carpenter.)

Carr, Oma, New York, N. Y. Manufacturing of leather. No. 1,230,667; June 19; v. 239; p. 852.

Carra, John. (See Comerma, John, assignor.)

Carris, Le Roy B., Clay county, Iowa. Resilient wheel. No. 1,229,412; June 12; v. 239; p. 399.

Carroll, Fred M., assignor to The National Cash Register Company, Dayton, Ohio. Cashier's registering-machine. No. 1,230,861; June 26; v. 239; p. 955.

Carroll, Thomas, and J. P. Frank, assignors to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,230,862; June 26; v. 239; p. 956.

Carter, Frank W. (See Connor, Maurice N., assignor.)

Carter, Jonas, assignor to Carter-Long Magneto Company, Waukegan, Ill. Generator for intermittent electric currents. No. 1,231,126; June 26; v. 239; p. 1047.

Carter-Long Magneto Company. (See Carter, Jonas, assignor.)

Carter, Ray L., assignor of one-half to L. O. Buchholz, Syracuse, N. Y. Gage. No. 1,231,238; June 26; v. 239; p. 1083.

Cartier, Cyrille, Woonsocket, R. I. Clamp for top-roll covers. No. 1,228,745; June 5; v. 239; p. 127.

Cartwright, Chapin A., Chicago, Ill. Chemical-feeding device for water-softeners. No. 1,231,128; June 26; v. 239; p. 1048.

Cary, Francis M., Ottumwa, Iowa, assignor, by mesne assignments, to Deere & Company, Moline, Ill. Horse hay-rake. No. 1,230,863; June 26; v. 239; p. 956.

Cary, Harry E., Oakland, Cal. Dish attachment. No. 1,229,226; June 12; v. 239; p. 336.

Cary, James H., Memphis, Tenn. Rotary brush. No. 1,231,491; June 26; v. 239; p. 1167.

Cary, Spencer C., Brooklyn, N. Y. Electric welding. No. 1,230,114; June 19; v. 239; p. 669.

Case, Willis W., Jr. (See Muckle, Theodore W., assignor.)

Cash, Gentry, assignor to Standard Oil Company, Whiting, Ind. Stuffing-box. No. 1,230,065; June 12; v. 239; p. 614.

Casmire, Fred B., Chanute, Kans. Removing paint and varnish. No. 1,230,668; June 19; v. 239; p. 853.

Cassady, Ulysses G., assignor to Primolite Co., Indianapolis, Ind. Dimming-lens for headlights. No. 1,230,670; June 19; v. 239; p. 853.

Cassady, Ulysses G., and L. W. George, assignors to Primolite Co., Indianapolis, Ind. Dimming headlight-lens. No. 1,230,669; June 19; v. 239; p. 853.

Cassel, Gunnar E., Stockholm, assignor to A. Leffler, Djursholm, Sweden. Traction-wheel. No. 1,229,712; June 12; v. 239; p. 500.

Caughey, Edward G., Sewickley, Pa. Band-anchor for tank-cars. No. 1,229,884; June 12; v. 239; p. 557.

Cavanagh, James, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Manufacturing shoes. No. 1,229,227; June 12; v. 239; p. 336.

Cavanagh, James, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe. No. 1,229,585; June 12; v. 239; p. 458.

Cavanagh, Joseph A. (See Barstew and Cavanagh.)

Cavanaugh, James J., Omaha, Nebr. Curtain-hanger. No. 1,228,531; June 5; v. 239; p. 54.

Cawthon, Hugh R. (See Eversole, Cawthon, and Owen.)

Cecil, Robert E., Sewickley, assignor to Air-Tight Steel Tank Company, Pittsburgh, Pa. Sprayer-nozzle. No. 1,229,030; June 5; v. 239; p. 220.

Cecka, Franz, Chemnitz, assignor to Schubert & Salzer Maschinenfabrik Aktiengesellschaft, Chemnitz, Germany. Knitted goods and making the same. No. 1,228,648; June 5; v. 239; p. 92.

Celluloid Company, The. (See Lindsay, William G., assignor.)

Central Railway Signal Company. (See Dutcher, Frank, assignor.)

Chaddock, George A., Broad Green, Liverpool, England. Mechanical air-borne ship. No. 1,229,713; June 12; v. 239; p. 500.

Chadelold Chemical Company. (See Ellis, Carleton, assignor.)

Chadwick, Richard U., Philadelphia, Pa. Combined discharge and vacuum valve. No. 1,229,865; June 12; v. 239; p. 557.

Chain Belt Company. (See Levalley and Shafer, assignors.)

Champion Ignition Company. (See Schmidt, Albert, assignor.)

Chandler, Daniel L., Ayer, assignor to Fitchburg Bobbin Cleaning Machine Co., Fitchburg, Mass. Bobbin-tender. No. 1,229,228; June 12; v. 239; p. 337.

Chandler, Willard R., Sumter, S. C. Railway-brake. No. 1,229,229; June 12; v. 239; p. 337.

Chapman Double Ball Bearing Company of Canada, The. (See McCallum, William J., assignor.)

Chapman, William H., Portland, Me. Process and apparatus for rectifying alternating currents of electricity. No. 1,228,405; June 5; v. 239; p. 11.

Chappelle, Charles C., New York, N. Y. Hand-strap. No. 1,229,230; June 12; v. 239; p. 337.

Chapsal, François J., Paris, and A. L. E. Saillot, La Garenne-Colombes, France. Pneumatic brake. No. 1,230,277; June 19; v. 239; p. 724.

Charles, Walter T., Chicago, Ill. Fire-extinguisher. No. 1,228,746; June 5; v. 239; p. 127.

Chédru, Gustave E. (See Montbarbon and Chédru.)

Cheney, Forest, assignor, by mesne assignments, to Cheney Talking Machine Company, Chicago, Ill. Cushion-support for pivot-joints. No. 1,228,406; June 5; v. 239; p. 11.

Cheney, Forest, assignor, by mesne assignments, to Cheney Talking Machine Company, Chicago, Ill. Phonograph-reproducer. No. 1,231,329; June 26; v. 239; p. 1113.

Cheney Talking Machine Company. (See Cheney, Forest, assignor.)

Cherry, Edward E., assignor of one-half to M. Movshovitz, Trenton, N. J. Metal-distillation furnace. No. 1,231,239; June 26; v. 239; p. 1084.

Cherry, Louis B., Kansas City, Mo. Synthetic production of hydrocarbon compounds. No. 1,229,886; June 12; v. 239; p. 558.

Chesnutt, John L., Kansas City, Mo. Truck. No. 1,230,278; June 19; v. 239; p. 724.

Chester, John, Saltaire, England. Producing colors on textile and other materials. No. 1,231,492; June 26; v. 239; p. 1167.

Chevallier, Charles, London, England. Device for repeating on the engine the signals given on the line. No. 1,230,671; June 19; v. 239; p. 853.

Chevers, Aurion V., East Providence, R. I. Musical instrument or vocal flute. No. 1,228,532; June 5; v. 239; p. 54.

Chew, William A., Atlantic City, N. J. Lamp-locking base. No. 1,229,231; June 12; v. 239; p. 338.

Chicago Railway Signal & Supply Company. (See Vogel, Eugene W., assignor.)

Chige, Isidor, New York, N. Y. Dental broach. No. 1,230,561; June 19; v. 239; p. 818.

Chilcott, Richard, Portland, Oreg. Ship construction. No. 1,229,413; June 12; v. 239; p. 400.

Childers, Herbert W., Great Bend, Kans. Hay-stacker. No. 1,229,031; June 5; v. 239; p. 221.

Childs, Elmer E., Lyons, N. J. Supporting device. No. 1,228,649; June 5; v. 239; p. 93.

Christensen, Niels A., Milwaukee, Wis. Compressed-air starter for internal-combustion engines. No. 1,230,562; June 19; v. 239; p. 818.

Christian, James H., Detroit, Mich., assignor to Perfection Tire & Rubber Co. Tire. No. 1,228,650; June 5; v. 239; p. 93.

Christian, Robert W., Manchester, N. C. Mixer and pulverizer. No. 1,230,672; June 19; v. 239; p. 854.

Christman, Henry. (See Ammon, John, assignor.)

Christopher, Hollis, *et al.* (See Newsom, Joseph N., assignor.)





Christopherson, William G., Detroit, Mich., assignor to Morgan & Wright. Manufacture of vulcanized plastic articles. No. 1,229,175; June 5; v. 239; p. 269.

Chryst, William A. (See Kettering and Chryst.)

Chryst, William A., assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,230,864; June 26; v. 239; p. 956.

Church, Albert B. (See Hunter and Church.)

Church, Harold D., assignor to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,228,533; June 5; v. 239; p. 55.

Churchill, Charles L., *et al.* (See Phillips, Newton E., assignor.)

Cihak, Alois. (See Aurich and Cihak.)

Cincinnati Can Company, The. (See Miller, John C., assignor.)

Claiborne, Alexander, Palms, Cal. Rivet-sticker. No. 1,230,563; June 19; v. 239; p. 819.

Clanton, William A., and R. K. Cox, Wood, Va. Wire-stretcher. No. 1,231,493; June 26; v. 239; p. 1167.

Clarinda Lawn Mower Company. (See Dinkel, Andrew J., assignor.)

Clark, Charles, and J. Manning, San Francisco, Cal. Freight-car. No. 1,229,714; June 12; v. 239; p. 500.

Clark, Franklin D., National Home, Wis. Drinking-fountain attachment. No. 1,229,715; June 12; v. 239; p. 500.

Clark, George H., Cambridge, assignor to Crosby Steam Gage & Valve Company, Boston, Mass. Safety-valve. No. 1,231,330; June 26; v. 239; p. 1114.

Clark, Hubert D., Columbus, Ohio. Grave-vault. No. 1,230,115; June 19; v. 239; p. 669.

Clark, James M., 3d, Bridgeport, Conn. Floating spindle-bearing. No. 1,229,414; June 12; v. 239; p. 400.

Clark, Mason E., Seattle, Wash. Work-holder. No. 1,231,533; June 26; v. 239; p. 1179.

Clark, Melville, Chicago, Ill., assignor to Melville Clark Piano Company. Air-motor-governing device. No. 1,229,586; June 12; v. 239; p. 458.

Clark, Melville, assignor to Melville Clark Piano Company, Chicago, Ill. Air-motor. No. 1,230,995; June 26; v. 239; p. 1001.

Clark, Oberlin S., North Weymouth, Mass. Reinforced concrete building construction. No. 1,231,240; June 26; v. 239; p. 1084.

Clark, Raymond P., Rochester, N. Y. Cover for fruit. No. 1,230,865; June 26; v. 239; p. 957.

Clark, Warren L., New York, N. Y. Changeable sign. No. 1,229,716; June 12; v. 239; p. 501.

Clarke, Edward W., Wilmington, Del. Apparatus for molding link chains. No. 1,228,534; June 5; v. 239; p. 55.

Clas, Angelo R., Sheboygan Falls, Wis. Multiple-cylinder gas-engine. No. 1,230,116; June 19; v. 239; p. 670.

Clas, Angelo R., assignor to Falls Machine Company, Sheboygan Falls, Wis. Glue-jointer adjustment. No. 1,230,379; June 19; v. 239; p. 756.

Claude, Georges, Boulogne-sur-Seine, France. Neon-tube. No. 1,231,494; June 26; v. 239; p. 1167.

Clausen, Henry P., Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,230,117; June 19; v. 239; p. 670.

Clausen, Henry P., Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,230,564; June 19; v. 239; p. 819.

Clausen, Henry P., Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,230,565; June 19; v. 239; p. 820.

Clausen, Henry P., Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,230,566; June 19; v. 239; p. 820.

Claussen, H. N. (See Neumann, John, assignor.)

Clay, George B., Jenkintown, Pa. Door opener and check. No. 1,228,407; June 5; v. 239; p. 11.

Clay, Joseph B., Cedar Rapids, Iowa. Gate attachment. No. 1,230,866; June 26; v. 239; p. 957.

Cleaver, Fremont J., Carnegie borough, assignor of one-half to H. W. Hodgdon, Pittsburgh, Pa. Circuit-breaker. No. 1,228,408; June 5; v. 239; p. 12.

Cleaver, William F., and T. H. Martin, Montreal, Quebec, Canada; said Cleaver assignor to said Martin. Conveyer. No. 1,231,495; June 26; v. 239; p. 1167.

Clegg, James H., Wallasey, England. Furnace fire-bridge. No. 1,229,887; June 12; v. 239; p. 558.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to J. R. Garfield, trustee, Cleveland, Ohio. Telephone system. No. 1,230,996; June 26; v. 239; p. 1002.

Clements Company, The. (See Kennedy, Joseph, assignor.)

Cleveland Hardware Company, The. (See Arthur, Albert F., assignor.)

Cleveland, Wilbur L., Lamar, Colo. Hay rake or stacker. No. 1,230,066; June 12; v. 239; p. 614.

Clifford, Carl G., Manila, Philippine Islands. Removable spur for shoes. No. 1,230,118; June 19; v. 239; p. 670.

Clise, James W., Seattle, Wash. Recording apparatus. No. 1,230,997; June 26; v. 239; p. 1005.

Clough, Henry W., South Pasadena, Cal. Cord and rope holder. No. 1,228,535; June 5; v. 239; p. 55.

Cluff, George F., Jr., Sacramento, Cal. Chair. No. 1,231,129; June 26; v. 239; p. 1048.

Clugston, Alva C., Dewey, Okla. Adjustable shade and curtain fixture. No. 1,231,496; June 26; v. 239; p. 1168.

Clyde Iron Works. (See McGiffert, John R., assignor.)

Coates, Alfred M., Middle Brighton, Melbourne, Victoria, Australia. Electric time-switch. No. 1,229,232; June 12; v. 239; p. 338.

Cobb, George W. (See Wegner, Fred, assignor.)

Cobb, Henry Z., Winchester, Mass., assignor to Revere Rubber Company. Hose and making the same. No. 1,230,867; June 26; v. 239; p. 957.

Coble, Harvey E., Benton Harbor, Mich. Vehicle-spring. No. 1,230,673; June 19; v. 239; p. 854.

Cockerham, Samuel, Cleveland, Ohio. Hanger for wall-radiators. No. 1,230,119; June 19; v. 239; p. 671.

Cocks, Edgar. (See Henderson and Cocks.)

Coffee Products Company, The. (See Ewing, William J., assignor.)

Coffelt, Alfred, Friday Harbor, Wash. Cylinder-cleaner for gas-engines. No. 1,228,747; June 5; v. 239; p. 127.

Coffey, Charles J., Chicago, Ill. Tooth-brush. No. 1,230,279; June 19; v. 239; p. 724.

Cohan, Charles. (See Herschede and Cohan.)

Cohen, Ephie, Joplin, Mo. Ore-separator. No. 1,230,674; June 19; v. 239; p. 855.

Cohen, Ira. (See Finkel and Cohen.)

Colbourn, Ernest J., Shelbina, Mo. Restraining device. No. 1,229,717; June 12; v. 239; p. 501.

Colby, Ernest S., Portland, Oreg. Buckle. No. 1,231,130; June 26; v. 239; p. 1048.

Colbyson, Hardes M., and A. S. Dworsky, Minneapolis, Minn. Machine for cleaning motion-picture films. No. 1,230,120; June 19; v. 239; p. 671.

Cole, Charles J., Springfield, Ill. Animal-holding device. No. 1,229,888; June 12; v. 239; p. 558.

Cole, Edward S., New York, N. Y. Apparatus for measuring the flow of a liquid stream. No. 1,229,718; June 12; v. 239; p. 501.

Cole, George A., New York, N. Y. Signaling apparatus. No. 1,231,331; June 26; v. 239; p. 1114.

Cole, Harry E., Akron, Ohio. Folding box. No. 1,230,675; June 19; v. 239; p. 855.

Coleman, John P., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway-traffic-control apparatus. No. 1,230,868; June 26; v. 239; p. 957.

Colgan, James W., *et al.* (See Scott, Jacob R., assignor.)

Collar, Drucilla, Florence, Colo. Fireless cooker or roaster. No. 1,229,032; June 5; v. 239; p. 221.

Collings, William A., Kansas City, Mo. Safety-blade knife. No. 1,228,409; June 5; v. 239; p. 12.

Collins, Frederick H., San Francisco, and M. L. Pellett, Berkeley, Cal. Incinerator. No. 1,230,380; June 19; v. 239; p. 756.

Collins, Herbert G. (See Page and Collins.)

Collins, Julius M., Brooklyn, N. Y. Ash-sifter. No. 1,229,033; June 5; v. 239; p. 221.

Collins, Lee A., Louisville, Ky. Burglar-alarm. No. 1,229,034; June 5; v. 239; p. 222.

Collins, Lucius J., Minneapolis, Minn. Automobile sled-runner. No. 1,229,889; June 12; v. 239; p. 559.

Collis, Henry J., Taunton, Mass. Ankle support and protector. No. 1,231,332; June 26; v. 239; p. 1114.

Colman, Howard D., assignor to Barber-Colman Company, Rockford, Ill. Creel. No. 1,228,410; June 5; v. 239; p. 12.

Colson, Robert J., St. Louis, Mo. Wrench. No. 1,231,131; June 26; v. 239; p. 1049.

Coltman, Alfred. (See Donisthorpe and Coltman.)

Columbia Manufacturing Company. (See Bowers, Lionel F., assignor.)

Columbus Die Tool & Machine Company, The. (See Buerk and Happel, assignors.)

Colwell, Allen J., Providence, R. I., assignor to Colwell Cigar Machine Company, Incorporated. Machine for making cigars. No. 1,231,132; June 26; v. 239; p. 1049.

Colwell Cigar Machine Company. (See Colwell, Allen J., assignor.)

Combined Heat and Sprinkler Company. (See Hammond, Wilberforce B., assignor.)

Combustion Economy Corporation. (See Grindle, Aubrey J., assignor.)

Comee, Joseph F., assignor to Camel Company, Chicago, Ill. Car-door. No. 1,230,567; June 19; v. 239; p. 821.

Comer, Guy W., assignor to Auto-Signal Co., Chicago, Ill. Electrical signaling device. No. 1,229,035; June 5; v. 239; p. 222.

Comer, John J., assignor to Automatic Enunciator Company, Chicago, Ill. Sound-reproducer. No. 1,230,676; June 19; v. 239; p. 855.

Comerma, John, assignor, by mesne assignments, to J. Carra, New York, N. Y. Sound-absorbing material and making same. No. 1,230,381; June 19; v. 239; p. 757.

Comfort, Edward W. (See Thompson and Comfort.)

Commercial Camera Company. (See Greene, John S., assignor.)

Commercial Colortype Company. (See Waggoner, Frank H., assignor.)

Commercial Research Company, The. (See Humphries, Chad H., assignor.)
Comstock, Harry, Mineville, N. Y. Primer-retainer for dynamite-cartridges. No. 1,230,121; June 19; v. 239; p. 671.
Condit, Sears G., Jr. (See Burnham, George A., assignor.)
Conjoint Jewelry Corporation, Inc. (See Grafstein, Josef, assignor.)
Conklin, A. B., *et al.* (See Munroe, William H., assignor.)
Conklin Pen Manufacturing Company, The. (See Mooney, Frank H., assignor.)
Conn, C. G. (See Manning, George A., assignor.)
Connan, Charles A., Portland, Oreg. Carpet-picking machine. No. 1,229,415; June 12; v. 239; p. 400.
Connell, James J., Detroit, Mich. Billiard-cue tip. No. 1,230,122; June 19; v. 239; p. 672.
Connelly, Alma G., Cleveland, Ohio. Device for removing stones or seeds from fruits or vegetables. No. 1,230,123; June 19; v. 239; p. 672.
Conner, George W. and R., Mount Pleasant, Iowa. Clutch. No. 1,228,411; June 5; v. 239; p. 13.
Conner, John L., Washington, D. C. Measuring instrument. No. 1,229,233; June 12; v. 239; p. 338.
Conner, May, Garden Grove, Iowa. Hay-handling device. No. 1,229,036; June 5; v. 239; p. 222.
Conner, Ray. (See Conner, George W. and R.)
Connor, Maurice N., assignor to F. W. Carter, Buffalo, N. Y. Stuffing-box structure for pumps and the like. No. 1,230,124; June 19; v. 239; p. 672.
Conord, Eugene L., Elizabeth, N. J. Speed-changing device for automobiles. No. 1,230,125; June 19; v. 239; p. 672.
Conover, Claude A., Newburgh, N. Y. Garment-protector. No. 1,229,890; June 12; v. 239; p. 559.
Conrad, Frank, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Cut-out. No. 1,229,719; June 12; v. 239; p. 502.
Consolidated Car Heating Company. (See McElroy, James F., assignor.)
Continental Gin Company. (See Merkel, Arthur W., assignor.)
Coogle, John D., assignor of one-half to J. B. Cooksey, Corsicana, Tex. Sash-control. No. 1,229,234; June 12; v. 239; p. 338.
Cook, Harvey S., Worthington, Ind. Hypodermic syringe. No. 1,231,497; June 26; v. 239; p. 1168.
Cook Muffler Co. (See Jones and Upton, assignors.)
Cook, Parker, Washington, D. C., and W. E. Wine, Toledo, Ohio. Tank-siphon. No. 1,229,720; June 12; v. 239; p. 502.
Cook, William N., New York, N. Y., assignor to E. B. Meyrowitz, Inc. Eyeglasses and spectacles. No. 1,228,882; June 5; v. 239; p. 173.
Cooke, Charles J., Hongkong, China. Firearm. No. 1,229,721; June 12; v. 239; p. 502.
Cooksey, James B. (See Coogle, John D., assignor.)
Coolidge, William D., Schenectady, N. Y., assignor to General Electric Company. Making incandescent lamps. No. 1,230,869; June 26; v. 239; p. 958.
Cooper, Alexander J., *et al.*, executors. (See Barratt, William T., assignor.)
Cooper, Annie, *et al.*, executors. (See Barratt, William T., assignor.)
Cooper Hewitt Electric Company. (See Hewitt, Peter C., assignor.)
Cooper, Hugh S., assignor to The Electro Metals Products Company, Cleveland, Ohio. Metal alloy. No. 1,229,037; June 5; v. 239; p. 223.
Cooper, Thomas, Kings Lynn, England. Explosive bomb. No. 1,228,748; June 5; v. 239; p. 128.
Corcoran, Edward B., assignor, by mesne assignments, to The Corcoran-Victor Company, Cincinnati, Ohio. Reflector-lamp. No. 1,228,749; June 5; v. 239; p. 128.
Corcoran-Victor Company, The. (See Corcoran, Edward B., assignor.)
Corley, Jacob L., Alma, Mo. Wire-reel. No. 1,230,677; June 19; v. 239; p. 856.
Cornelius, Benjamin F., Norman, Okla. Railway-tie. No. 1,228,883; June 5; v. 239; p. 173.
Cornelius, Clyde, Pittsburgh, Pa. Gas-pressure regulating and mixing valve. No. 1,229,038; June 5; v. 239; p. 223.
Corrall, Herbert, Parkview, Helensburgh, Scotland, assignor to The Singer Manufacturing Company. Feeding mechanism for sewing-machines. No. 1,231,133; June 26; v. 239; p. 1049.
Coté, Edmond. (See Plante, Elzear, assignor.)
Cott, Charles M., Columbus, Ohio. Loose-leaf binder. No. 1,229,891; June 12; v. 239; p. 559.
Cotton Machinery Company. (See Brown and Westlin, assignors.)
Couch, Albert B., assignor to B. Couch, Perry, Tex. Grain-hulling machine. No. 1,231,534; June 26; v. 239; p. 1179.
Couch, Beryl. (See Couch, Albert B., assignor.)
Coughlin, Edward W., New Dorp, N. Y., assignor to Interlocking Rail Joint Corporation. Rail-joint. No. 1,231,333; June 26; v. 239; p. 1115.
Courtaulds Limited. (See Linfoot, Maurice, assignor.)
Courtland, William A., Brooklyn, N. Y., assignor to American Pin Company, Waterbury, Conn. Safety-pin machine. No. 1,228,651; June 5; v. 239; p. 93.
Courtland, William A., Brooklyn, N. Y., assignor to American Pin Company, Waterbury, Conn. Article-feeding means. No. 1,230,870; June 26; v. 239; p. 958.
Cowan, Forrest L., Beaver, Pa. Rack. No. 1,230,678; June 19; v. 239; p. 856.
Cowan, Henry W., Hudson Falls, N. Y. Lamp attachment for automobiles. No. 1,230,382; June 19; v. 239; p. 757.
Cowley, Ray C., Venice, Utah. Cultivator-beam. No. 1,231,241; June 26; v. 239; p. 1084.
Cox, George W., Jr., Kensington, Md. Sorting-machine. No. 1,231,334; June 26; v. 239; p. 1115.
Cox, Robert K. (See Clanton and Cox.)
Cox, William J., Monmouth, Ill. Culvert. No. 1,230,383; June 19; v. 239; p. 757.
Coy, Albert E., Chicago, Ill., assignor to The Magniphone Company. Sound-transmitting apparatus. No. 1,230,280; June 19; v. 239; p. 725.
Coy, Albert E., Chicago, Ill., assignor to The Magniphone Company. Sound-transmitting apparatus. No. 1,230,281; June 19; v. 239; p. 725.
Craddock, Arthur R., Christchurch, New Zealand. System of railway control. No. 1,229,235; June 12; v. 239; p. 339.
Craig, Carl F., and W. Freeman, Pottsboro, Tex. Spring-tire. No. 1,231,498; June 26; v. 239; p. 1168.
Craig, Edward M., Charleston, W. Va. Window-screen. No. 1,228,536; June 5; v. 239; p. 56.
Cramer, B. D. (See Hodo, Wesley A. J., assignor.)
Cramer, George H., assignor to Herschell-Spillman Company, North Tonawanda, N. Y. Seat-actuating mechanism for carousels. No. 1,230,998; June 26; v. 239; p. 1003.
Crandal, Stone & Co. (See Winans, Daniel M., assignor.)
Crandall, Emery P., Washington, D. C. Permutation trunk-lock. No. 1,230,126; June 19; v. 239; p. 673.
Crane, Leslie F., Lansing, Mich. Automatic tire-pump. No. 1,229,039; June 5; v. 239; p. 223.
Crarp Brokerage Company. (See Barnett, Stewart R., assignor.)
Crawford, A. T., *et al.* (See Rowan, William P., assignor.)
Crawford, Finis B., Atlanta, Mo. Silo-seal. No. 1,229,040; June 5; v. 239; p. 223.
Crawford, Henry D., St. Louis, Mo., assignor to R. E. Funsten Dried Fruit & Nut Company. Nut-cracking machine. No. 1,230,679; June 19; v. 239; p. 856.
Creamery Package Manufacturing Company. (See Valerius, Theodore L., assignor.)
Creamery Package Manufacturing Company. (See Valerius and Larsen, assignors.)
Creighton, Elmer E. F., Schenectady, N. Y., assignor to General Electric Company. Protection of transmission systems. No. 1,230,680; June 19; v. 239; p. 857.
Creighton, Elmer E. F., Schenectady, N. Y., assignor to General Electric Company. Protection of transmission systems. No. 1,230,681; June 19; v. 239; p. 857.
Creso, Peter C., Spanaway, Wash. Bed. No. 1,229,722; June 12; v. 239; p. 503.
Crist, John H., Oakmont, Pa. Bracket-supporting construction. No. 1,230,999; June 26; v. 239; p. 1003.
Crist, John H., and J. C. Schilken, Pittsburgh, Pa. Adjustable bracket. No. 1,231,000; June 26; v. 239; p. 1004.
Crittenden, Frank C., Chicago, Ill. Gathering and jogging table. No. 1,228,750; June 5; v. 239; p. 128.
Crofts, Vernon C., *et al.* (See Edmonds, Roland, assignor.)
Crompton, Frank E., Brooklyn, assignor to Signature Company, New York, N. Y. Mechanism for manipulating checks in plural-writing machines. No. 1,230,871; June 26; v. 239; p. 958.
Crompton, Frank E., Brooklyn, assignor to Signature Company, New York, N. Y. Multiplex-writing machine. No. 1,230,872; June 26; v. 239; p. 959.
Cronin, John J. (See Klenk and Cronin.)
Crook, Delbert H., San Pedro, Cal. Grade-indicator for vehicles. No. 1,229,041; June 5; v. 239; p. 224.
Crosby Steam Gage & Valve Company. (See Clark, George H., assignor.)
Cross, Neal, assignor of one-half to F. S. Gates, Ardmore, Okla. Insect-exterminator. No. 1,229,236; June 12; v. 239; p. 339.
Crossley, Elijah R., Chicago, Ill. Head-clamp and eyelid-holder for surgical operations on the eye. No. 1,230,873; June 26; v. 239; p. 959.
Crossley, Joseph, Trenton, N. J. Continuous mixing-mill. No. 1,231,499; June 26; v. 239; p. 1168.
Crosweller, Walter W., Crumpsall, Manchester, England. Instrument for recording percentage volumes of constituent gases. No. 1,229,587; June 12; v. 239; p. 458.
Crouse-Hinds Company. (See Parker, John E., assignor.)
Crowe, Thomas J., Dallas, Tex. Spring-wheel. No. 1,229,892; June 12; v. 239; p. 560.
Crowell, Charles W., Biscoe, N. C. Spark-arrester. No. 1,229,588; June 12; v. 239; p. 459.
Crowell, John E., Union county, N. C. Automatic advancing-gear. No. 1,229,893; June 12; v. 239; p. 560.
Crowley, John T., Beacon Falls, Conn., assignor, by mesne assignments, to The Beacon Falls Rubber Shoe Company. Side-pocket pac. No. 1,228,884; June 5; v. 239; p. 174.
Crown Optical Company. (See Mihalyi, Joseph, assignor.)



Crump, Frank H., Los Angeles, Cal. Holder for loose-leaf binders. No. 1,229,894; June 12; v. 239; p. 560.
Csverccsko, George. (See Karolle and Csverccsko.)
Cuesta, Francisco Q., Habana, Cuba. Non-refillable bottle. No. 1,229,895; June 12; v. 239; p. 561.
Culp, Alpha B., Wakarusa, Ind. Hay-mowing apparatus. No. 1,230,127; June 19; v. 239; p. 673.
Currier, Charles H., Newark, N. J. Drying apparatus. No. 1,230,282; June 19; v. 239; p. 725.
Curtis, Cyrus A., Benton Harbor, Mich. Driving mechanism. No. 1,230,682; June 19; v. 239; p. 857.
Curtis, Homer P., Denver, Colo., assignor to Auto Power Generator & Appliance Co. Power-transmission apparatus. No. 1,229,416; June 12; v. 239; p. 401.
Cushing, James H., South Weymouth, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Stitch-separating machine. No. 1,229,237; June 12; v. 239; p. 340.
Cushman, Joseph J. (See Card and Cushman.)
Cutler-Hammer Mfg. Co., The. (See Packard, Horace N., assignor.)
Cutler, Henry H., Milwaukee, Wis. Gas-engine. No. 1,231,500; June 26; v. 239; p. 1169.
Czeczel, Emil, Chicago, Ill. Mouse-trap. No. 1,231,501; June 26; v. 239; p. 1169.
D. M. Sechler Implement & Carriage Company. (See Englund, Ernst E., assignor.)
D. M. Sechler Implement & Carriage Co. (See Garst, Stephen H., assignor.)
D'Aquin, Richard J., French Settlement, La. System of irrigation. No. 1,229,898; June 12; v. 239; p. 562.
D'Artoys, Gustave C., and G. D. Loizon, Ozoir la Ferrière, France. Pedal for cycles and like vehicles. No. 1,230,129; June 19; v. 239; p. 674.
Daft, Leo, Rutherford, N. J., assignor to Electro-Chemical Rubber and Manufacturing Company. Coupling. No. 1,229,417; June 12; v. 239; p. 401.
Dagger, Jacob. (See Shilling, Edward C., assignor.)
Dahlgren, Frank G., assignor of one-half to C. H. Reuter, Mobile, Ala. Valve-stem hood for internal-combustion engines. No. 1,230,683; June 19; v. 239; p. 860.
Dake, Edward, Medford, Wis. Printing-machine. No. 1,229,896; June 12; v. 239; p. 561.
Dale, John H., New York, N. Y., assignor to Dale Lighting Fixture Co., Inc. Electric incandescent lamp. No. 1,231,335; June 26; v. 239; p. 1115.
Dale Lighting Fixture Co. (See Dale, John H., assignor.)
Dalton, Hubert, New York, N. Y. Counter-shaft. No. 1,230,128; June 19; v. 239; p. 673.
Dalton, William, Schenectady, N. Y. Locomotive driving connection. No. 1,228,751; June 5; v. 239; p. 128.
Daly, John A., New Rochelle, N. Y. Device for cleaning teeth. No. 1,230,683; June 19; v. 239; p. 858.
Damarin, William J., assignor of one-half to E. H. Rivas, New Orleans, La. Extensible sign-holder. No. 1,229,897; June 12; v. 239; p. 561.
Dammann, Henry W., *et al.* (See Sandbo, Anton I., assignor.)
Dammann, William, *et al.* (See Sandbo, Anton I., assignor.)
Dance, William H., assignor to The Dyar Supply Company, Cambridge, Mass. Drier for sand, gravel, &c. No. 1,230,684; June 19; v. 239; p. 858.
Dando, Joseph C., Philadelphia, Pa., assignor to The Dando Printing and Publishing Company. Filing-cabinet. No. 1,231,134; June 26; v. 239; p. 1050.
Dando Printing and Publishing Company, The. (See Dando, Joseph C., assignor.)
Daniel, Jasper N., Ennis, Tex., assignor of one-half to G. and G. W. Orvig. Cotton-chopper. No. 1,231,502; June 26; v. 239; p. 1169.
Daniels, James O., Kansas City, Kans. Dry hot-bath system. No. 1,231,001; June 26; v. 239; p. 1004.
Darling, James, Kenova, W. Va. Mold. No. 1,229,899; June 12; v. 239; p. 562.
Darner, Ralph W., assignor to The Ohio Varnish Company, Cleveland, Ohio. Composition for preventing accumulation of moisture on glass or other smooth surface. No. 1,228,885; June 5; v. 239; p. 174.
Daugherty, Charles L., Lyons, Ky. Mail-bag closure. No. 1,228,652; June 5; v. 239; p. 93.
Davenport, John R., Eldon, Mo. Rail-joint. No. 1,229,900; June 12; v. 239; p. 563.
Davenport, Joseph P., Wheaton, Ill. Potato-planter. No. 1,230,465; June 19; v. 239; p. 785.
Davidson, Albert H., and W. C. McKellar, Huntington, W. Va. Electromedical device. No. 1,230,283; June 19; v. 239; p. 726.
Davidson, James G., and R. W. Ford, Vancouver, British Columbia, Canada. Improving the quality and yield of hydrocarbon gases. No. 1,229,042; June 5; v. 239; p. 224.
Davidson, Roland S., Winnipeg, Manitoba, Canada. Automatic sprinkler. No. 1,228,412; June 5; v. 239; p. 13.
Davis, Charles, Cortland, Ohio. Auto-puller. No. 1,229,901; June 12; v. 239; p. 563.
Davis, Clara S., Detroit, Mich. Needle and pin cushion attachment for sewing-machines. No. 1,231,503; June 26; v. 239; p. 1170.
Davis, Cortland W., and V. S. Johnson, assignors to The Mantle Lamp Company of America, Chicago, Ill. Wick-tube for hydrocarbon-burners. No. 1,229,043; June 5; v. 239; p. 224.
Davis, David, New York, N. Y. Combined stove and article-support. No. 1,231,545; June 26; v. 239; p. 1183.
Davis, Francis G., assignor to H. H. Babcock Company, Watertown, N. Y. Vehicle-body. No. 1,229,589; June 12; v. 239; p. 459.
Davis, Frederick J. (See Krohn and Davis.)
Davis, George H., West Orange, N. J. Spooling-machine for music-rolls. No. 1,230,130; June 19; v. 239; p. 674.
Davis, Hugh, Melvin, Mich. Collapsible box. No. 1,231,504; June 26; v. 239; p. 1170.
Davis, Joseph S., Yanceyville, N. C. Log-hauling truck. No. 1,230,131; June 19; v. 239; p. 674.
Davis, Loring B., Reno, Nev. Alarm apparatus. No. 1,229,723; June 12; v. 239; p. 503.
Davis, Louis, Streator, Ill. Frame for moving-picture screens. No. 1,229,044; June 5; v. 239; p. 224.
Davis, Thomas J., San Francisco, Cal. Can container and server. No. 1,229,902; June 12; v. 239; p. 563.
Davis, William P., Salt Lake City, Utah. Belt-fastener. No. 1,229,903; June 12; v. 239; p. 564.
Davison, Gregory C., New London, Conn., assignor to Electric Boat Company, New York, N. Y. Reversible internal-combustion engine. No. 1,230,132; June 19; v. 239; p. 675.
Dawans, Jules. (See Dressel, Dawans, and Eklund.)
Dawe, George S., Plymouth, England. Rotary gas-engine. No. 1,229,590; June 12; v. 239; p. 459.
Dawson, Charles, Tacoma, Wash. Wheat washing, rinsing, and drying machine. No. 1,231,002; June 26; v. 239; p. 1004.
Dawson, Sarah J., Albany, Mo. Rail-anchoring device. No. 1,229,238; June 12; v. 239; p. 340.
Day, Edgar K., assignor, by mesne assignments, to Whitaker-Glessner Company, Wheeling, W. Va. Structural member. No. 1,229,239; June 12; v. 239; p. 340.
Day, Edgar K., assignor of one-half to A. Bolton, Wheeling, W. Va. Body-elevating device. No. 1,229,240; June 12; v. 239; p. 341.
Day, Robert L., Huntington, W. Va. Reinforced concrete or plastic slab. No. 1,229,904; June 12; v. 239; p. 564.
Dayton Engineering Laboratories Company, The. (See Hunt, John H., assignor.)
Dayton Engineering Laboratories Co., The. (See Kettering, Charles F., assignor.)
Dayton Engineering Laboratories Co., The. (See Kettering and Chryst, assignors.)
Dayton Engineering Laboratories Co., The. (See Kiefer, James H., assignor.)
De la Mota, Francisco E., San Pedro de Marcoris, Dominican Republic. Preserving eggs. No. 1,229,592; June 12; v. 239; p. 460.
De Bold, Louis, *et al.* (See Powers, Charles C., assignor.)
De Forest, Lee, assignor to De Forest Radio Telephone and Telegraph Company, New York, N. Y. Metallic audion. No. 1,230,874; June 26; v. 239; p. 959.
De Forest Radio Telephone and Telegraph Company. (See De Forest, Lee, assignor.)
De Ganner, Bertrand, St. Louis, Mo. Broiler. No. 1,229,591; June 12; v. 239; p. 460.
De Graw, Brown F., Springfield, Ohio. Dirigible headlight mechanism. No. 1,229,907; June 12; v. 239; p. 564.
De Long, Ellen, Chicago, Ill. Garment-supporter. No. 1,230,685; June 19; v. 239; p. 858.
De Meeus, Etienne, Beacon Falls, Conn., assignor, by mesne assignments, to The Beacon Falls Rubber Shoe Company, Boston, Mass. Vulcanized rubber and producing the same. No. 1,229,724; June 12; v. 239; p. 503.
De Paul, John, and R. Di Falco, Koppel, Pa. Nut-lock. No. 1,229,241; June 12; v. 239; p. 341.
De Roode, Trimble, New York, N. Y. Mining apparatus. No. 1,229,418; June 12; v. 239; p. 401.
De Spirito, James F., Brooklyn, N. Y. Flushing device. No. 1,228,653; June 5; v. 239; p. 94.
De Vilbiss Manufacturing Co., The. (See De Vilbiss, Thomas A., assignor.)
De Vilbiss, Thomas A., assignor to The De Vilbiss Manufacturing Co., Toledo, Ohio. Booth. No. 1,229,046; June 5; v. 239; p. 225.
De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Mechanical movement. No. 1,231,136; June 26; v. 239; p. 1050.
De Wilde, Fred P., Sheboygan, Wis. Cuff-holder. No. 1,230,133; June 19; v. 239; p. 675.
De Witt, Wilbur E., Salt Lake City, Utah. Projecting apparatus. No. 1,229,908; June 12; v. 239; p. 565.
De Yarman, Charles A., Garo, Colo. Coupling device. No. 1,230,134; June 19; v. 239; p. 675.
De Zeng, Henry L., Maple Shade, N. J. Iris-diaphragm. No. 1,230,568; June 19; v. 239; p. 821.
Deady, George F., and G. H. Holland, assignors to The Auto Safety Light Company, Dayton, Ohio. Light for vehicles. No. 1,230,080; June 19; v. 239; p. 619.
Dean, John H., Grand Rapids, Mich. Cigar-wrapping machine. No. 1,230,067; June 12; v. 239; p. 614.
Dean, William W., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Telephone system. No. 1,228,537; June 5; v. 239; p. 56.
Dean, William W., Stamford, Conn., assignor to Splitdorf Electrical Company, Newark, N. J. Distributer for ignition systems. No. 1,229,045; June 5; v. 239; p. 225.
Decker, Alonzo G. (See Black and Decker.)
Decker, Ellen W., and M. A. Myers, assignors to Julius Kayser & Co., New York, N. Y. Undergarment. No. 1,229,905; June 12; v. 239; p. 564.

Decker, Eugene H., Slater, Colo. Doubletree-coupling. No. 1,228,886; June 5; v. 239; p. 174.

Decker, Frank A., assignor to Lyrachord Company, New York, N. Y. Driving mechanism for musical instruments. No. 1,228,752; June 5; v. 239; p. 129.

Decker, William M., Buffalo, N. Y. Combined container and educational toy. No 1,229,906; June 12; v. 239; p. 564.

Deere & Company. (See Cary, Francis M., assignor.)

Deere & Company. (See Sklovsky, Max, assignor.)

Del Fungo-Giera, Philippo L. E., New York, N. Y. Marine mine. No. 1,228,753; June 5; v. 239; p. 129.

Del Fungo-Giera, Philippo L. E., New York, N. Y. Mine or torpedo. No. 1,228,754; June 5; v. 239; p. 129.

Del Fungo-Giera, Philippo L. E., New York, N. Y. Mine-releasing device. No. 1,228,755; June 5; v. 239; p. 130.

Del Fungo-Giera, Philippo L. E., New York, N. Y. Submarine supply-tender. No. 1,228,756; June 5; v. 239; p. 130.

Delahant, John F., New York, N. Y. Electric toaster. No. 1,230,384; June 19; v. 239; p. 757.

Delenicoff, Peter T., North McGregor, Iowa. Fruit-gatherer. No. 1,228,413; June 5; v. 239; p. 13.

Delphos Printing Press Company, The. (See Leilich and Burger, assignors.)

Deming, Addie, Windsor, Ontario, Canada. Curtain-fixture. No. 1,231,336; June 26; v. 239; p. 1116.

Dempsey, Hugh, Spokane, Wash. Bolt-lock. No. 1,231,135; June 26; v. 239; p. 1050.

Dempsey, James A., New York, N. Y. Lighting-fixture. No. 1,231,337; June 26; v. 239; p. 1116.

Denison, Frederick S., assignor to Minneapolis Heat Regulator Co., Minneapolis, Minn. Clock attachment for electric thermostats. No. 1,228,757; June 5; v. 239; p. 130.

Denne, Mark T., Rusbden, England. Rotary cutter for skiving or trimming machines. No. 1,230,875; June 26; v. 239; p. 960.

Denney, William J., assignor of one-half to W. E. Boyer, Malone, N. Y. Hand-stamp. No. 1,231,505; June 26; v. 239; p. 1171.

Dennis, Louis M., Ithaca, N. Y. Separating an aromatic sulfonic acid from sulfuric acid and obtaining the sulfonic acid in solid form. No. 1,228,414; June 5; v. 239; p. 13.

Dennis, Louis M., Ithaca, N. Y. Separating a sulfonic acid of a hydrocarbon of the aromatic series from sulfuric acid and converting the sulfonic acid into a salt. No. 1,229,593; June 12; v. 239; p. 460.

Dennison, Walter E., Alameda, Cal. Process of manufacturing architectural terra-cotta in colors for building purposes and the product of such process. No. 1,228,538; June 5; v. 239; p. 56.

Desrochers, Louis, Fall River, Mass., assignor of one-half to S. F. Stewart, North Tiverton, R. I. Handsaw. No. 1,231,338; June 26; v. 239; p. 1116.

Deulen, Ralph O., Bridgeport, Nebr. Charge-preparing apparatus. No. 1,228,415; June 5; v. 239; p. 14.

Dewald, John V., Philadelphia, Pa. Resilient tire. No. 1,228,539; June 5; v. 239; p. 56.

Dewey Davenport Company. (See Dewey, Josiah A., assignor.)

Dewey, Edward H., *et al.* (See Howd, Alvah J., assignor.)

Dewey, Josiah A., assignor to Dewey Davenport Company, San Francisco, Cal. Folding bed. No. 1,229,242; June 12; v. 239; p. 341.

Dewson, Edward H. (See Turner and Dewson.)

Di Falco, Raymond. (See De Paul and Di Falco.)

Diamond Forging & Manufacturing Company. (See Wickersham, Gilbert B., assignor.)

Diamond Match Company, The. (See Lane, Frederick W., assignor.)

Diamond Power Specialty Company. (See McIlvane, Frank, assignor.)

Diaphone Signal Company, The. (See Sims, Frederick L. H., assignor.)

Dick, Charles E., Pickaway county, near Mount Sterling, Ohio. Check-protector. No. 1,229,047; June 5; v. 239; p. 226.

Dick, John, East Pittsburgh, T. H. Rutter, Homestead, and C. E. Lewis, Swissvale, Pa. Valve mechanism for pumps. No. 1,231,506; June 26; v. 239; p. 1171.

Dickerson, Herald, Atlantic City, N. J. Safety-envelop and fastening device therefor. No. 1,229,048; June 5; v. 239; p. 226.

Dickert, Curtis L., Macon, assignor of one-fourth to F. F. Gaines, Savannah, one-fourth to W. H. Fetner, and one-fourth to R. L. Doolittle, Macon, Ga. Reverse-gear valve. No. 1,231,137; June 26; v. 239; p. 1050.

Dickman, Margaret D., Duluth, Minn. Plaiting device. No. 1,231,138; June 26; v. 239; p. 1051.

Dickman, Margaret D., Duluth, Minn. Box-plaiter. No. 1,231,139; June 26; v. 239; p. 1051.

Diehl, Harry L., Chicago, Ill. String-maker's peg. No. 1,229,419; June 12; v. 239; p. 402.

Dieterle, Karl L., Los Angeles, Cal. Liquid-dispensing device. No. 1,228,758; June 5; v. 239; p. 131.

Diffendall, Walter H., Hagerstown, Md. Rivet-heating furnace. No. 1,231,507; June 26; v. 239; p. 1171.

Dill, William W., Seattle, Wash. Amalgamator. No. 1,230,135; June 19; v. 239; p. 675.

Dillard, George L. (See Hatchett and Dillard.)

Dillingham, Frederick A., assignor to The Troy Carriage Sun Shade Company, Troy, Ohio. Sectional windshield for automobiles. No. 1,229,594; June 12; v. 239; p. 461.

Dimond, M. Maurice, New York, N. Y. Fluid-gage. No. 1,231,339; June 26; v. 239; p. 1116.

Dinkel, Andrew J., assignor to Clarinda Lawn Mower Company, Clarinda, Iowa. Gearing device for power washing-machines. No. 1,228,887; June 5; v. 238; p. 174.

Dion, Frank X., Lyndonville, Vt. Scale. No. 1,231,003; June 26; v. 239; p. 1005.

Diss, Albert B., Newark, N. J., assignor to Universal Caster & Foundry Company, New York, N. Y. Sliding shoe for furniture-legs and other uses. No. 1,228,759; June 5; v. 239; p. 131.

Dissinger, Edward S., Reading, Pa. Explosive shell. No. 1,229,049; June 5; v. 239; p. 226.

Dixon, Amos F., Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, Telegraph system. No. 1,231,140; June 26; v. 239; p. 1051.

Dixon, Cuthbert L., Montreal, Quebec, Canada. Boring-cutter. No. 1,230,569; June 19; v. 239; p. 821.

Dixon, Jesse E., Andalusia, Ala. Sweep shoe and blade. No. 1,230,686; June 19; v. 239; p. 859.

Dixon, Robert M., East Orange, N. J., assignor to Safety Car Heating & Lighting Company. Generator suspension. (Reissue.) No. 14,317; June 19; v. 239; p. 907.

Dixon, Thomas B., New York, N. Y. Reflector. No. 1,229,420; June 12; v. 239; p. 402.

Doak, James S., Deming, N. Mex. Windmill. No. 1,231,242; June 26; v. 239; p. 1085.

Doble, William H., *et al.* (See Field, Samuel B., assignor.)

Doble, William H., assignor of one-fourth to Pneumatic Scale Corporation, Limited, Quincy, Mass. Panel for boxes. No. 1,228,760; June 5; v. 239; p. 131.

Dodds, Ethan I. (See Stafford and Dodds.)

Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt for boilers. No. 1,229,909; June 12; v. 239; p. 565.

Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolts for boilers. No. 1,229,910; June 12; v. 239; p. 565.

Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Nut. No. 1,229,911; June 12; v. 239; p. 566.

Dodge, Milton L., Newburyport, Mass. Shoemaker's tool. No. 1,228,761; June 5; v. 239; p. 132.

Doerr, George W. (See Simonds and Doerr.)

Doerschuk, Carl F., Cleveland, Ohio. Cotter-pin. No. 1,230,876; June 26; v. 239; p. 960.

Dolle, Charles F., Cincinnati, Ohio. Electric-light fixture. No. 1,228,762; June 5; v. 239; p. 132.

Dolomite Products Company, The. (See Patnoe, George W., assignor.)

Dominguez, Bernardo, Chicago, Ill. Remover for wheels or the like. No. 1,229,725; June 12; v. 239; p. 503.

Donald, Robert, London, England. Respirator. No. 1,229,050; June 5; v. 239; p. 226.

Donaldson & Fisher Company. (See Fisher, Harvey L., assignor.)

Doncaster, Vernon R., Orleans, Vt. Bottle-cap. No. 1,231,508; June 26; v. 239; p. 1172.

Doncaster, William H., Brownington, Vt. Dinner-pail. No. 1,229,912; June 12; v. 239; p. 566.

Donisthorpe, Frederick R., and A. Coltman, county of Leicester, England. Shoe-collar. No. 1,229,913; June 12; v. 239; p. 566.

Donnelly, John R., Austin, Tex. Ceiling-plate. No. 1,230,385; June 19; v. 239; p. 758.

Donner, Percy E. (See Snyder, Jacob R., assignor.)

Donovan, Patrick H. (See Turner and Donovan.)

Doolittle, Robert L., *et al.* (See Dickert, Curtis L., assignor.)

Dorman, Edgar P. (See Glidden, Dorman, and Finch.)

Dorsey, Fornum F., Rochester, N. Y. Safety-razor. No. 1,230,833; June 19; v. 239; p. 906.

Dottl, Joseph, assignor, by mesne assignments, to The Dottl Manufacturing Company, Madison, Wis. Spring and frame supporter for motor-cars. (Reissue.) No. 14,324; June 26; v. 239; p. 1186.

Dottl Manufacturing Company. (See Dottl, Joseph, assignor.) (Reissue.)

Douglas, Walter B., *et al.* (See Hawley, Royal A., assignor.)

Dow Chemical Company. (See Barstow and Cavanagh, assignors.)

Dowling, Francis J., New York, N. Y. Pincushion. No. 1,229,051; June 5; v. 239; p. 227.

Downie, Robert M., assignor to Keystone Driller Company, Beaver Falls, Pa. Excavator-bucket mounting. No. 1,228,654; June 5; v. 239; p. 94.

Downs, David G., assignor of one-half to G. E. Groves, Estherville, Iowa. Projectile. No. 1,229,421; June 12; v. 239; p. 402.

Downs, Harry N. (See McMeekin and Downs.)

Draper Corporation. (See Snow, Isaac, assignor.)

Draper, Daniel D., Lincoln, Nebr. Eyeglasses or spectacles. No. 1,230,136; June 19; v. 239; p. 675.

Drendell Electrical and Manufacturing Company. (See Siebenhauer, Lester, assignor.)

Dreses, Henry, Cincinnati, Ohio. Drilling-machine. No. 1,230,386; June 19; v. 239; p. 758.



Dressel, Frederick W., New York, N. Y., J. Dawans, Lyndhurst, N. J., and G. Eklund, assignors to The Dressel Railway Lamp Works, New York, N. Y. Long-time burner. No. 1,230,127; June 19; v. 239; p. 679.

Dressel Railway Lamp Works, The. (See Dressel, Dawans, and Eklund, assignors.)

Drew, Herbert W., Chicago, Ill. Window-ventilator. No. 1,231,340; June 26; v. 239; p. 1117.

Drewsen, Viggo, Brooklyn, N. Y. Making fiber for paper, &c. No. 1,229,422; June 12; v. 239; p. 403.

Dreymann, Carl, Baltimore, Md. Preparing oils and fats for hydrogenation. No. 1,228,888; June 5; v. 239; p. 175.

Driggs, Louis L., New York, N. Y. Auto-limber. No. 1,230,687; June 19; v. 239; p. 859.

Driver-Harris Wire Company. (See Henderson, John C., assignor.)

Drolet, Charles, Sr., assignor to Fels and Company, Philadelphia, Pa. Receptacle-filling machine. No. 1,228,416; June 5; v. 239; p. 14.

Druecker, Joseph M., Stone City, Iowa. Automatic dumping and righting mechanism for tiltable dump-cars. No. 1,228,540; June 5; v. 239; p. 57.

Du Bosque, Francis L., Great Neck, assignor to The J. Edward Ogden Company, New York, N. Y. Ferry-bridge. (Reissue.) No. 14,313; June 5; v. 239; p. 284.

Du Brul, Ernest A., New York, N. Y. Dental appliance. No. 1,229,595; June 12; v. 239; p. 461.

Du Grenier, Arthur H., and J. H. McPherson, Haverhill, Mass. Blade-vending machine. No. 1,231,243; June 26; v. 239; p. 1085.

Dubbs, Carbon P., Wilmette, Ill. Treating petroleum and other hydrocarbons. No. 1,231,509; June 26; v. 2o9; p. 1172.

Dubilier Condenser Co. (See Dubilier, Philip, assignor.)

Dubilier Condenser Co. (See Dubilier, William, assignor.)

Dubilier, Philip, New York, N. Y., assignor, by mesne assignments, to Dubilier Condenser Co., Inc. Electrical condenser. No. 1,229,914; June 12; v. 239; p. 567.

Dubilier, William, New York, N. Y., assignor, by mesne assignments, to Dubilier Condenser Co., Inc. Electrical condenser. No. 1,229,915; June 12; v. 239; p. 567.

Dudley, John H. M., assignor to Rolfe & Maddock, New York, N. Y. Theatrical appliance. No. 1,230,877; June 26; v. 239; p. 960.

Duffie, John J., assignor to Vacuum Specialty Manufacturing Company, San Francisco, Cal. Vacuum cleaning apparatus. No. 1,230,827; June 19; v. 239; p. 904.

Dufour, Léon, Geneva, Switzerland. Friction-coupling. No. 1,231,341; June 26; v. 239; p. 1117.

Dugan, Edward, *et al.* (See Allison, Jesse H., assignor.)

Duhrssen & Pfaltz. (See Pope, Frederick R., assignor.)

Dumars, Gerald. (See Dumars, Horace and G.)

Dumars, Horace, New York, N. Y. Apparatus for illuminated displays. No. 1,230,878; June 26; v. 239; p. 961.

Dumars, Horace, New Suffolk, and G. Dumars, New York, N. Y.; said G. Dumars assignor to said Horace Dumars. Illuminated display device. No. 1,230,879; June 26; v. 239; p. 961.

Duncan, Norman, Bryn Mawr, Pa. Level attachment. No. 1,229,916; June 12; v. 239; p. 567.

Dunlap, William A., Pittsburgh, Pa. Semaphore-arm. No. 1,231,244; June 26; v. 239; p. 1085.

Duperu, Alphonse M., Oxnard, Cal. Precipitating sugar. No. 1,229,190; June 5; v. 239; p. 274.

Duplex Lock Company. (See Cahusac, Clarence N., assignor.)

Duplex Lock Co. (See Van Derbeck and Murdock, assignors.)

Duplex Printing Press Company. (See Bechman, Louis H., assignor.)

Durand, Victor. (See Barber, Ralph, Jr., assignor.)

Durbin, Votaw S., St. Louis, Mo. Swivel-coupling for pipe-lines. No. 1,228,541; June 5; v. 239; p. 57.

Durbin, Votaw S., St. Louis, Mo. Game apparatus. No. 1,228,542; June 5; v. 239; p. 58.

Durr, Herbert A., Chicago, Ill. Apparatus for steam-heating. No. 1,229,917; June 12; v. 239; p. 567.

Dusha, Paul F., and A. Feyk, assignors to Holub-Dusha Company, New York, N. Y. Button-cutting lathe. No. 1,230,688; June 19; v. 239; p. 859.

Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-torpedo. No. 1,230,570; June 19; v. 239; p. 821.

Dworsky, Abraham S. (See Colbyson and Dworsky.)

Dyar Supply Company, The. (See Dance, William H., assignor.)

Dye, Carl D., Edmonton, Alberta, Canada. Bread-cutting machine. No. 1,229,918; June 12; v. 239; p. 568.

Dyer, Frank L., Montclair, N. J. Assembly voting-machine. No. 1,230,880; June 26; v. 239; p. 961.

E. and T. Fairbanks and Company. (See Bousfield, John H. A., assignor.)

E. B. Meyrowitz, Inc. (See Cook, William N., assignor.)

E. H. Kluge Weaving Company. (See Jordan, Cornelius, assignor.)

E. I. du Pont de Nemours Powder Company. (See Carpenter, Walter S., Jr., assignor.)

E. I. Du Pont de Nemours Powder Company. (See Jack, Clarence E., assignor.)

E. J. Woodison Company. (See Green, Charles H., assignor.)

Eason, Richard B., Jr., New York, N. Y. Hollow composition wall construction. No. 1,228,417; June 5; v. 239; p. 14.

Eastman Kodak Company. (See Barnes, Frederick W., assignor.)

Eastman Kodak Company. (See Folmer, William F., assignor.)

Eastman Kodak Company. (See Gaisman, Henry J., assignor.)

Eastman, Sarah N., administratrix. (See Goodwin, John F., assignor.)

Eaton, Harrison H., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Grinding-machine. No. 1,228,418; June 5; v. 239; p. 15.

Eberle, John C., and B. Storch, New York, N. Y. Means for forming concrete columns. No. 1,231,342; June 26; v. 239; p. 1117.

Ebeling, Frederick W., Hoboken, N. J., assignor to King & Wotherspoon, Incorporated, New York, N. Y. Safety air-relief valve. No. 1,229,726; June 12; v. 239; p. 504.

Eberhardt, Steven, Martinez, Cal. Propeller. No. 1,229,243; June 12; v. 239; p. 341.

Eberhart, Stella, Des Moines, Iowa. Combination domino and chart device for seat work in numbers. No. 1,228,889; June 5; v. 239; p. 175.

Ebrill, George, Blackrock, and T. Kiersey, assignors to Ebrill's Process Limited, Dublin, Ireland. Separation of casein and albumen from creamery-sewage. No. 1,229,919; June 12; v. 239; p. 568.

Ebrill's Process Limited. (See Ebrill and Kiersey, assignors.)

Eby, Earl E., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Welding system. No. 1,229,728; June 12; v. 239; p. 504.

Eby, Earl E., Wilkinsburg, and S. W. Farnsworth, Pittsburgh, Pa., assignors to Westinghouse Electric and Manufacturing Company. Welding system. No. 1,229,727; June 12; v. 239; p. 504.

Eckenrode, Ernest G., Baltimore, Md. Drainage appliance. No. 1,229,423; June 12; v. 239; p. 403.

Eckert, George H., Syracuse, N. Y., assignor to Humphrey Gas Pump Company. Pressure control in pumping. No. 1,228,419; June 5; v. 239; p. 15.

Eckert, George P. F., Wilkes-Barre, Pa. Tire-protector. No. 1,229,244; June 12; v. 239; p. 342.

Economic Machinery Company. (See Woodland, Frank O., assignor.)

Economic Power and Products Company, The. (See Marsden, Mark W., assignor.)

Economy Devices Corporation. (See Ball, Herman F., assignor.)

Economy Devices Corporation. (See Stafford, Hal R., assignor.)

Economy Furnace Company, The. (See Weber, Herman R., assignor.)

Economy Fuse & Manufacturing Company. (See Huxley, Henry M., assignor.)

Eddleman, Augustus B., *et al.* (See Hawley, Royal A., assignor.)

Eddy, William H., Superior, Wis. Fire-hose valve. No. 1,229,245; June 12; v. 239; p. 342.

Eden, John, Attleboro, Mass. Holder. No. 1,228,420; June 5; v. 239; p. 16.

Edinger, Calvin H., Fairview, W. Va. Vessel-propelling device. No. 1,229,729; June 12; v. 239; p. 505.

Edmonds, Roland, assignor of one-third to L. Braun and one-third to V. C. Crofts, Vancouver, British Columbia, Canada. Ball-bearing caster. No. 1,231,510; June 26; v. 239; p. 1172.

Edmunds, Clifford S. (See Snapp, Robert W., assignor.)

Edmunds and Jones Corporation. (See Godley, Charles E., assignor.)

Edward Katzinger Company. (See Katzinger, Edward and S. C., assignors.)

Edward Steam Specialty Co., The. (See Oleson, Olaf E., assignor.)

Edwards, Oliver P., assignor to The Temco-Electric Motor Company, Leipsic, Ohio. Spring suspension for automobiles. No. 1,230,466; June 19; v. 239; p. 786.

Edwards, Thomas P., Hazel Green, Wis. Pad-holder. No. 1,229,730; June 12; v. 239; p. 505.

Edwards, Victor E., assignor to Morgan Construction Company, Worcester, Mass. Feeding mechanism for metal-cutting shears. No. 1,228,543; June 5; v. 239; p. 58.

Edwards, Walmac E., Goldfield, Nev. Tool-retainer for drilling-machines. No. 1,229,424; June 12; v. 239; p. 403.

Egan, John W., Brooklyn, N. Y. Scraper. No. 1,228,890; June 5; v. 239; p. 175.

Eggers, Anton C., Brooklyn, N. Y., assignor to The Goodyear's India Rubber Glove Manufacturing Company. Pneumatic cushion. No. 1,230,690; June 19; v. 239; p. 860.

Eggers, Henry C., Portsmouth, N. H. Automobile direction-signal. No. 1,229,246; June 12; v. 239; p. 343.

Ehrhardt, T. G. (See Norpoth, Theodor, assignor.)

Ehrler, Charles J., Pittsfield, Mass. Fishing device. No. 1,230,467; June 19; v. 239; p. 786.

Ehrlich, Leo, assignor to L. T. Hay, St. Louis, Mo. Lock. No. 1,229,731; June 12; v. 239; p. 505.

Eick, Otto, St. Louis, Mo. Labeling-machine. No. 1,230,138; June 19; v. 239; p. 676.

Eichmie, George D., New York, N. Y. Explosive turbine-engine. No. 1,230,139; June 19; v. 239; p. 677.

Eklund, Gustav. (See Dressel, Dawans, and Eklund.)

Elder, James S., and H. J. Wilson, Fort Collins, Colo. Interlocking reversible feed-trough. No. 1,228,421; June 5; v. 239; p. 16.

Elder, Joseph H., assignor of one-half to J. C. Foster, Clarksville, Tex. Carton. No. 1,231,511; June 26; v. 239; p. 1173.

Electric Boat Company. (See Davison, Gregory C., assignor.)

Electric Storage Battery Company, The. (See Grant and Flanders, assignors.)

Electro-Chemical Products Company. (See Hoofnagle, William T., assignor.)

Electro-Chemical Rubber and Manufacturing Company. (See Daft, Leo, assignor.)

Electro Metals Products Company, The. (See Cooper, Hugh S., assignor.)

Elektrizitätswerk Lonza. (See Tommasi, Nobile C., assignor.)

Elektro-Osmose Aktiengesellschaft (Graf Schwerin Gesellschaft). (See Schwerin, Botho, assignor.)

Elfborg, Henry G., assignor to Ajax Rail Anchor Company, Chicago, Ill. Rail-anchor. No. 1,230,468; June 19; v. 239; p. 786.

Eligh, Charles A., assignor to Long Manufacturing Company, Detroit, Mich. Tool for perforating corrugated material. No. 1,228,655; June 5; v. 239; p. 95.

Elkins, Otto B., and M. S. Smith, assignors of one-fourth to N. Statham, Abbeville, Ga. Dental-rubber-dam holder and cutter. No. 1,230,284; June 19; v. 239; p. 726.

Ellery, Robert L., Toledo, Ohio. Explosion-engine. No. 1,231,004; June 26; v. 239; p. 1005.

Ellery, Robert L., Toledo, Ohio, assignor, by mesne assignments, to Pfanstiehl Company. Puppet-valve. No. 1,230,140; June 19; v. 239; p. 677.

Elliott, Alexander D., Viola, assignor to G. Wenzelmann, Galesburg, Ill. Gate-hinge. No. 1,230,285; June 19; v. 239; p. 726.

Elliott-Fisher Company. (See Foothorap, Harry A., assignor.)

Elliott-Fisher Company. (See Smith, John A., assignor.)

Elliott, Paul C., Lawrence, Kans. Internal-combustion engine. No. 1,230,286; June 19; v. 239; p. 726.

Elliott, Sterling, Newton, Mass. Apparatus for waterproofing sized sheets. No. 1,230,068; June 12; v. 239; p. 615.

Ellis, Carleton, Montclair, N. J., assignor to Chadeloid Chemical Company, New York, N. Y. Varnish-removing composition. No. 1,229,247; June 12; v. 239; p. 343.

Ellis, Charles S., Chicago, Ill. Inking-pad for hand-stamps. No. 1,229,425; June 12; v. 239; p. 404.

Ellis, Frank E., Revere, Mass. Fabric for printers' blankets and other purposes. No. 1,231,141; June 26; v. 239; p. 1051.

Ellis, Frank E., Revere, Mass. Packing for printing-presses. No. 1,231,142; June 26; v. 239; p. 1052.

Ellis, George H., St. Paul, Minn. Composite lath and heat-insulating material. No. 1,228,422; June 5; v. 239; p. 16.

Ellis, George H., St. Paul, Minn. Heat-insulating unit. No. 1,228,763; June 5; v. 239; p. 133.

Ellis, Harry E., and J. W. Wilhelm, Palmetto, Fla. Typewriting machine. No. 1,228,423; June 5; v. 239; p. 16.

Ellis, Howard G. (See Perrault and Ellis.)

Ellis, James B. (See Bradley, Charles M., assignor.)

Elton, Olaf, assignor to Gilson Manufacturing Company, Port Washington, Wis. Gas-engine-controlling mechanism. No. 1,230,571; June 19; v. 239; p. 822.

Emanuel, David E., Des Moines, Iowa. Fly-swatter. No. 1,228,891; June 5; v. 239; p. 170.

Emerick, Frederick A., Oswego, N. Y. Towing crib or hull. No. 1,229,426; June 12; v. 239; p. 404.

Emerson, Bennett, and H. C. Morris, Dallas, Tex., said Emerson assignor to said Morris. Gas-meter-valve protector. No. 1,228,656; June 5; v. 239; p. 95.

Emerson-Brantingham Company. (See Waterman, Lewis E., assignor.)

Ender, Louie, Watertown, S. D. Weather-strip. No. 1,229,920; June 12; v. 239; p. 569.

Endorf, Charles, Jr., assignor to Lindstrom, Smith Company, Chicago, Ill. Mounting for electric vibrators. No. 1,231,245; June 26; v. 239; p. 1086.

Englander Spring Bed Co. (See Lowy and Kreuzkamp, assignors.)

English, Analdo M., Brookline, and H. W. Gibbs, Boston, Mass., assignors to J. Spaulding & Sons Co., Rochester, N. H. Crimping or corrugating machine. No. 1,230,691; June 19; v. 239; p. 860.

Englund, Ernst E., assignor to D. M. Sechler Implement & Carriage Company, Moline, Ill. Land-marker for planters. No. 1,228,764; June 5; v. 239; p. 133.

Engstad, John E., Minneapolis, Minn. Preparing cereal food. No. 1,231,143; June 26; v. 239; p. 1052.

Epstein, Eli, Leominster, Mass. Cylinder-lock. No. 1,230,387; June 19; v. 239; p. 759.

Equitable Trust Company of New York, The, executor. (See Barr, Frederic.)

Erhard, Clarence D. (See Erhard, Samuel E. and C. D.)

Erhard, Samuel E. and C. D., Trinidad, Colo. Resilient wheel-tire. No. 1,230,141; June 19; v. 239; p. 678.

Erickson, Andrew C., Los Angeles, Cal. Shoe-polishing apparatus. No. 1,230,572; June 19; v. 239; p. 822.

Erickson, August C., Tecumseh, Nebr. Cabinet. No. 1,231,005; June 26; v. 239; p. 1005.

Erickson, S. A. (See Normann, John P., assignor.)

Erickson, Thomas, Reardon, Wash. Hoof-trimmer. No. 1,229,732; June 12; v. 239; p. 506.

Ericson, Arthur E., Manchester, Mass., assignor of one-fourth to G. A. Whipple, Binghamton, N. Y. Radio-controlled torpedo. No. 1,228,892; June 5; v. 239; p. 176.

Erismann, Fritz, Lucerne, Switzerland. Bracket-support or the like. No. 1,229,427; June 12; v. 239; p. 404.

Errett, Charles, New York, N. Y. Cup-dispenser. No. 1,229,733; June 12; v. 239; p. 506.

Erringer, James W., Chicago, Ill. Tweezers. No. 1,230,142; June 19; v. 239; p. 678.

Espy, Carl. (See Batchelor, Jamie H., assignor.)

Esslinger, Sarah E., Sheffield, Iowa. Garment-fastener. No. 1,228,893; June 5; v. 239; p. 176.

Estey Organ Company. (See Haskell, William E., assignor.)

Esty Sprinkler Company. (See Esty, William, assignor.)

Esty, William, deceased; C. W. Tyler, executor, assignor to Esty Sprinkler Company, Laconia, N. H. Sprinkler for automatic fire-extinguishing systems. No. 1,230,469; June 19; v. 239; p. 787.

Eureka Carburetter Co. (See Vodicka and Young, assignors.)

Eureka Mower Company. (See Gilroy, William E., assignor.

Eustis, Frederic A., Milton, Mass. Treating ores or metal-bearing products. No. 1,230,143; June 19; v. 239; p. 678.

Evans, Edward, Pittsburgh, Pa. Combined collar-fastener and necktie-guard. No. 1,231,512; June 26; v. 239; p. 1173.

Evans, Owen B., assignor to The United Gas Improvement Company, Philadelphia, Pa. Manufacture of toluol. No. 1,230,087; June 12; v. 239; p. 622.

Evans, Richard W., Kennett, Cal. Car-stop. No. 1,231,513; June 26; v. 239; p. 1173.

Evans, Robert A., Mogollon, N. Mex. Oil-burner. No. 1,229,921; June 12; v. 239; p. 569.

Evans, Samuel. (See Nilsson, Nicholaus T., assignor.)

Ever-Last Cotton Shoe Corporation. (See Greer, Medorem W., assignor.)

Eversole, Frank R. (See Eversole, Cawthon, and Owen, assignors.)

Eversole, Henry N., H. R. Cawthon, and H. I. Owen, Fulton; said Cawthon and said Owen assignors to said Henry N. and F. R. Eversole, St. Louis, Mo. Means to deflate inner tubes. No. 1,229,734; June 12; v. 239; p. 506.

Evinrude Motor Company. (See Meyer, Christopher J., assignor.)

Ewen, Malcolm F., and A. L. S. McCurdy, Chicago, Ill., assignors to Larsen Ice Machine Company (Inc.), Wilmington, Del. Ice-cream freezer. No. 1,230,692; June 19; v. 239; p. 861.

Ewing, William B. (See Kinkead, Robert S., assignor.)

Ewing, William J., Roland Park, Md., assignor to The Coffee Products Company. Coffee product and making the same. No. 1,229,052; June 5; v. 239; p. 227.

F. O. B. Manufacturing Company. (See Boswell, Fletcher O., assignor.)

Faber, Charles, Bridgewater, Mass. Lug-strap support for looms. No. 1,230,693; June 19; v. 239; p. 861.

Faber, Christian C. (See Faber, William J., assignor.)

Faber, William J., Oneida, assignor of one-half to C. C. Faber, Brooklyn, N. Y. Resilient wheel. No. 1,231,343; June 26; v. 239; p. 1118.

Fabritius Thoralf, Beacon, N. Y. Golf-ball hanger. No. 1,229,428; June 12; v. 239; p. 404.

Fagan, Charles E., Blackstone, Mass. Steam-trap. No. 1,231,144; June 26; v. 239; p. 1052.

Fahr, Johann G., assignor to Maschinenfabrik Fahr, A.-G., Gottmadingen, Germany. Mowing-machine. No. 1,229,248; June 12; v. 239; p. 343.

Fahrenbruch, George H., Omaha, Nebr. Pin. No. 1,231,514; June 26; v. 239; p. 1173.

Fain, A. A. (See Abernathy, Boyd, assignor.)

Fairbanks, Morse & Company. (See Hobart and Jahnke, assignors.)

Fairchild, David L., assignor to H. O. Fairchild, Elmhurst, Ill. Spring-balance scale. No. 1,229,249; June 12; v. 239; p. 344.

Fairchild, Helen O. (See Fairchild, David L., assignor.)

Fales, Edward D., Chicago, Ill., assignor, by mesne assignments, to Automatic Electric Company. Non-grounded repeater system. No. 1,229,596; June 12; v. 239; p. 461.

Fales, Edward D., La Grange, assignor to Automatic Electric Company, Chicago, Ill. Two-wire to three-wire telephone system. No. 1,230,694; June 19; v. 239; p. 861.

Falls Machine Company. (See Clas, Angelo R., assignor.)

Falstrem, Carl L., and J. A. Bragg, Parry Sound, Ontario, Canada. Ice-skate. No. 1,228,544; June 5; v. 239; p. 58.

Farbwerke vorm. Meister Lucius & Brüning. (See Lüders, Richard, assignor.)

Farley, John P., Kansas City, Mo. Closure for curb-boxes. No. 1,229,429; June 12; v. 239; p. 405.

Farmer, Frank H., assignor to The White Motor Company, Cleveland, Ohio. Internal-combustion engine. No. 1,230,470; June 19; v. 239; p. 787.

Farnsworth, Sidney W. (See Eby and Farnsworth.)

Farquhar, John B. (See Bovee, Ransom Y., assignor.)





Farrell, Arthur J., Pittsburgh, Pa. Paper-holder. No. 1,229,430; June 12; v. 239; p. 405.

Farrell, Arthur J., Pittsburgh, Pa. Paper-holder. No. 1,229,431; June 12; v. 239; p. 405.

Farrer, William C., Sheffield, England. Chain or flexible saw. No. 1,229,597; June 12; v. 239; p. 462.

Farris, Joseph A. (See Graham and Farris.)

Fath, George H. (See Peters, Fath, and Miller.)

Faw, Julian H., New York, N. Y. Mirrorscope for automobiles or other vehicles. No. 1,230,144; June 19; v. 239; p. 678.

Feddern, Carl, assignor to Globe Ticket Company, Philadelphia, Pa. Check-notching device. No. 1,229,176; June 5; v. 239; p. 270.

Federal Telegraph Company. (See Pedersen, Peder O., assignor.)

Fekete, Joszef, Linden, Mich. Artificial hand. No. 1,229,053; June 5; v. 239; p. 227.

Fekete, Stephen I., assignor to Kent Motors Company, Detroit, Mich. Temperature-control apparatus for internal-combustion engines. No. 1,228,765; June 5; v. 239; p. 133.

Feld, Samuel, New York, N. Y. Marker for cigars and the like. No. 1,230,388; June 19; v. 239; p. 759.

Feldhaus, John M. (See Sill and Feldhaus.)

Fels and Company. (See Drolet, Charles, Sr., assignor.)

Felten, Abram V., Danbury, Conn. Vehicle-signal. No. 1,229,922; June 12; v. 239; p. 570.

Feltis, Earl W. (See Nichols and Feltis.)

Ferdon, Guy W., Cresskill, N. J. Collapsible stove. No. 1,229,432; June 12; v. 239; p. 405.

Ferguson, Gradele, Waco, Tex. Paper doll. No. 1,231,145; June 26; v. 239; p. 1053.

Ferguson, Raley C., Glendive, Mont. Dirigible headlight for automobiles. No. 1,229,923; June 12; v. 239; p. 570.

Ferry, Charles A., Altoona, Pa. Combined carrier and lamp. No. 1,231,146; June 26; v. 239; p. 1053.

Fetner, William H., et al. (See Dickert, Curtis L., assignor.)

Feyk, Anton. (See Dusha and Feyk.)

Fickert, Albert, Brooklyn, N. Y. Guitar-bridge. No. 1,230,695; June 19; v. 239; p. 862.

Field, Samuel B., Holbrook, assignor of one-fourth to Pneumatic Scale Corporation, Limited, and three-fourths to W. H. Doble, Quincy, Mass. Forming a lap-jointed tube. No. 1,228,766; June 5; v. 239; p. 134.

Fife, John P., Atlanta, Ga., and W. Laughlin, Cleveland, Ohio. Newspaper-vending machine. No. 1,229,054; June 5; v. 239; p. 227.

Filbey, John W., assignor to Wrightsville Hardware Company, Wrightsville, Pa. Damper. No. 1,230,882; June 26; v. 239; p. 962.

Filotico, Leonardo, Manduria, Italy. Stone-cutting machine. No. 1,230,696; June 19; v. 239; p. 862.

Finch, George L. (See Glidden, Dorman, and Finch.)

Finkel, Charles, and I. Cohen, Seattle, Wash. Steam pressing-machine. No. 1,230,389; June 19; v. 239; p. 759.

Finkhousen, Frank W., Wren, Ohio. Fireproof safe. No. 1,229,250; June 12; v. 239; p. 344.

Firestone Tire & Rubber Company, The. (See Stevens, William C., assignor.)

Firmin, John D., Philadelphia, Pa. Power system. No. 1,230,471; June 19; v. 239; p. 788.

First Trust and Savings Company, The, et al., trustees. (See Sommer, Peter W., assignor.)

Fischman, L. E., et al. (See Prigan, Ernest W., assignor.)

Fish, Charles W., Rawcliffe, near Goole, assignor to The Amber Size & Chemical Company, Limited, London, England. Manufacture of paper and the like. No. 1,229,924; June 12; v. 239; p. 570.

Fisher Body Corporation. (See Allmand, John T., assignor.)

Fisher, E. B. (See Purnell, John W., assignor.)

Fisher, Harvey L., assignor to Donaldson & Fisher Company, Chicago, Ill. Cotton-picking machine. No. 1,229,598; June 12; v. 239; p. 462.

Fisher, Harvey L., assignor to Donaldson & Fisher Company, Chicago, Ill. Cotton-picking machine. No. 1,229,599; June 12; v. 239; p. 462.

Fisher, Harvey L., assignor to Donaldson and Fisher Company, Chicago, Ill. Power-transmission mechanism. No. 1,231,344; June 26; v. 239; p. 1118.

Fisher, John F. (See Kincade, Elmer C., assignor.)

Fitchburg Bobbin Cleaning Machine Company. (See Chandler, Daniel L., assignor.)

Fitchburg Machine Works. (See Waite, Lyman M., assignor.)

Fitzgerald, Michael J., Richmond, Cal. Glare-protector. No. 1,228,545; June 5; v. 239; p. 59.

Fixen, Laura G. (See Teel, John F., assignor.)

Flaherty, John W., Seattle, Wash. Package-hoist. No. 1,229,433; June 12; v. 239; p. 406.

Flamand, Poul, assignor, by mesne assignments, to Globe Automatic Sprinkler Company, Philadelphia, Pa. Dry-pipe valve. No. 1,231,515; June 26; v. 239; p. 1173.

Flanagan Company. (See Flanagan, Thomas J. and M. J., assignors.)

Flanagan, Michael J. (See Flanagan, Thomas J. and M. J.)

Flanagan, Thomas J. and M. J., assignors to Flanagan Company, Tulsa, Okla. Burner for gas and oil. No. 1,230,883; June 26; v. 239; p. 962.

Flanagan, William, Richey, assignor of one-half to H. A. Moore, Morton, Miss. Means for connecting the ends of railway-rails. No. 1,229,925; June 12; v. 239; p. 570.

Flanders, Louis H. (See Grant and Flanders.)

Flanders, Louis H., Jenkintown, Pa. Paste for storage-battery plates and making the same. No. 1,228,546; June 5; v. 239; p. 59.

Flanders, Louis H., Jenkintown, Pa. Making pasted storage-battery plates. No. 1,228,547; June 5; v. 239; p. 59.

Flanders, Louis H., Jenkintown, Pa. Portable battery. No. 1,230,390; June 19; v. 239; p. 759.

Flannery Bolt Company. (See Dodds, Ethan I., assignor.)

Flannery Bolt Company. (See Hyland, Charles, assignor.)

Flannery Bolt Company. (See Stafford and Dodds, assignors.)

Flegel, Harrison D., Racine, Wis., assignor, by mesne assignments, to The Akron-Selle Co., Akron, Ohio. Liquid-gage. (Reissue.) No. 14,314; June 5; v. 239; p. 286.

Fleming, John J., Carrick borough, assignor to Phillips Mine and Mill Supply Co., Pittsburgh, Pa. Weigh-basket. No. 1,231,147; June 26; v. 239; p. 1053.

Fletcher, Thomas N., Hamilton, New Zealand. Combined milking-machine releaser and pulsator. No. 1,228,894; June 5; v. 239; p. 176.

Fliesbach, H. S., et al. (See Rowan, William P., assignor.)

Flint, Dutee W., Cranston, R. I. Liquid-dispensing apparatus. No. 1,231,006; June 26; v. 239; p. 1006.

Fleckhart, James, Denver, Colo. Silencer. No. 1,229,434; June 12; v. 239; p. 406.

Florsheim, Simon, and B. F. Orewiler, assignors to Kabo Corset Co., Chicago, Ill. Holder for corset-steels. No. 1,231,246; June 26; v. 239; p. 1086.

Flory Carry Iron Company. (See Rink, George W., assignor.)

Floyd, Edward J., Douglas, Ga. Combination-chair. No. 1,229,251; June 12; v. 239; p. 344.

Flynn, Willard M., Waterloo, Iowa. Hog-oiler. No. 1,229,435; June 12; v. 239; p. 407.

Foecke, Henry, Crofton, Nebr. Tractor-wheel. No. 1,228,895; June 5; v. 239; p. 177.

Fogarty, John G., Carthage, assignor to John Fogarty Co., Inc., Rochester, N. Y. Excavating-machine. No. 1,229,600; June 12; v. 239; p. 463.

Foley, Stephen A. (See Scheller, Henry W., assignor.)

Folger, Harry S., and T. Ross, Chicago, Ill. Self-inking hand-stamp. No. 1,230,391; June 19; v. 239; p. 759.

Folk, Edward S., Canton, Ohio. Roller-bearing. No. 1,230,145; June 19; v. 239; p. 679.

Follis, Hugh. (See Steele and Follis.)

Folmer, William F., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic-printing machine. No. 1,230,392; June 19; v. 239; p. 760.

Fondiller, William, assignor to Western Electric Company, Incorporated, New York, N. Y. Phantom loading-coil. No. 1,231,516; June 26; v. 239; p. 1174.

Foothorap, Harry A., assignor to Elliott-Fisher Company, Harrisburg, Pa. Platen and platen equipment for typewriting machines. No. 1,228,896; June 5; v. 239; p. 177.

Forbes, Cornelius B., Gulliford, Conn. Handle. No. 1,230,472; June 19; v. 239; p. 788.

Forbes, William, Woodbury, Conn., and J. T. Hubbard, Port Chester, N. Y. Railway-rail fastener. No. 1,229,926; June 12; v. 239; p. 571.

Force, David E., Jersey City, N. J. Piano-keyboard chart and guard. No. 1,229,735; June 12; v. 239; p. 506.

Ford, Bruce, Philadelphia, Pa. Secondary or storage battery. No. 1,230,393; June 19; v. 239; p. 760.

Ford, Bruce, Philadelphia, Pa. Storage battery. No. 1,230,394; June 19; v. 239; p. 760.

Ford, Robert W. (See Davidson and Ford)

Forgues, Charles, assignor to Société de Lavandeyra & Orner, Paris, France. Telephonic apparatus. No. 1,230,884; June 26; v. 239; p. 963.

Formander, Alfred, assignor to E. T. Wallace, New York, N. Y. Apparatus for treating milk and other liquids. No. 1,230,395; June 19; v. 239; p. 761.

Forshey, Edward E., Parkersburg, W. Va. Device for keying pulleys to shafts. No. 1,229,927; June 12; v. 239; p. 571.

Forsyth, William R., Swampscott, Mass. Reinforced die-block. No. 1,229,736; June 12; v. 239; p. 507.

Foss, Alvan F., Montreal, Quebec, Canada. Bottle-closure. No. 1,229,436; June 12; v. 239; p. 407.

Foster, Frank L., Cleveland, Ohio, assignor to The Philip Carey Mfg. Co. Composite roofing. No. 1,230,396; June 19; v. 239; p. 761.

Foster, George W., Boston, Mass. Winding-machine. No. 1,228,424; June 5; v. 239; p. 17.

Foster, John C. (See Elder, Joseph H., assignor.)

Foster Machine Company. (See McKean, John O., assignor.)

Foster, Merriam & Company. (See Millard, Reginald W., assignor.)

Foster, Roy M., et al. (See Shultz, Otto H., assignor.)

Foster, William H., Bartlesville, Okla. Strainer. No. 1,229,437; June 12; v. 239; p. 407.

Four Wheel Tractor Co. (See Stewart, Alexander, assignor.)

Fox, Austen H., and A. W. Lenderoth, New York, N. Y. Apparatus for railway signaling. No. 1,229,055; June 5; v. 239; p. 228.

Fox, William R., Grand Rapids, Mich. Drill. No. 1,229,601; June 12; v. 239; p. 463.

Frame, Horace E., Brooklyn, N. Y. Water-motor. No. 1,228,897; June 5; v. 239; p. 177.

Francis, Daniel H., Grand Junction, Colo. Internal-combustion engine. No. 1,229,602; June 12; v. 239; p. 463.

Frank B. Cook Company. (See Johnson, Morton L., assignor.)

Frank, John P. (See Carroll and Frank.)

Frank, Louis, assignor to Greenpoint Metallic Bed Company, Brooklyn, N. Y. Corner-fastening for metal beds and the like. No. 1,228,898; June 5; v. 239; p. 178.

Frankl, Minnie. (See Block, Louis, assignor.)

Frantz Manufacturing Co. (See Frantz, Peter, assignor.)

Frantz, Peter, assignor to Frantz Manufacturing Co., Sterling, Ill. Car-door weather-strip construction. No. 1,228,548; June 5; v. 239; p. 59.

Franz, Frank. (See Franz, Joseph and F.)

Franz, Joseph and F., Wallace, Idaho. Ore classifying and sizing mechanism. No. 1,230,697; June 19; v. 239; p. 862.

Fravel, Charles G., Gahanna, Ohio. Shock or bundle tier. No. 1,230,397; June 19; v. 239; p. 761.

Frazer, Walter L., San Diego, Cal. Valve-guard. No. 1,229,928; June 12; v. 239; p. 571.

Frech, Howard S., Brooklyn, N. Y. Internal-combustion engine. No. 1,229,438; June 12; v. 239; p. 407.

Freck, Harry M., Columbus, Ohio. Printing, duplicating, and addressing machine. No. 1,228,425; June 5; v. 239; p. 18.

Freeman, Arthur C., Jr., Norfolk, Va. Soil-pipe germ-trap. No. 1,230,473; June 19; v. 239; p. 788.

Freeman, George L., assignor of one-half to R. F. Hayes, Ticonderoga, N. Y. Spark-plug. No. 1,230,287; June 19; v. 239; p. 727.

Freeman, Milton T. (See Shipp, James T., assignor.)

Freeman, Walter K., Oscawana, N. Y. Apparatus for harvesting the constituents of wood and vegetable substances, distilling and purifying them. No. 1,231,247; June 26; v. 239; p. 1086.

Freeman, William. (See Craig and Freeman.)

Freixas, Melchor H., Brooklyn, N. Y. Electric-lamp receptacle. No. 1,229,056; June 5; v. 239; p. 228.

French, George B. (See Roebrich, Frank N., assignor.)

Friedman, Max, Yonkers, N. Y. Train stopping apparatus. No. 1,229,929; June 12; v. 239; p. 571.

Friedman, Samuel, Brooklyn, N. Y. Gage. No. 1,229,930; June 12; v. 239; p. 571.

Frieze, Alfred S., Fossil, Oreg. Coupling. No. 1,230,146; June 19; v. 239; p. 679.

Frisch, August, assignor to Firm of A. Frisch & Co., Zurich, Switzerland. Capstan-lathe. No. 1,228,657; June 5; v. 239; p. 95.

Frisch & Co., A. (See Frisch, August, assignor.)

Fritch, John W., and D. E. Hoopes, assignors of one-third to W. H. Hoopes, Washington, D. C. Card-punching device. No. 1,229,057; June 5; v. 239; p. 228.

Froelich, John, assignor to L. S. Hackney, St. Paul, Minn. Reversing clutch and gear. No. 1,230,573; June 19; v. 239; p. 822.

Frost, Ellis F., Washington, D. C. Electric action for organs. No. 1,228,899; June 5; v. 239; p. 178.

Fuel Saving Company. (See Wood and Barnhurst, assignors.)

Fuhrmann, Warren, Newark, N. J. Link-mesh fabric. No. 1,231,345; June 26; v. 239; p. 1118.

Fulkerson, Walter F. (See Vancil and Fulkerson.)

Fuller, Clarence W., Yonkers, N. Y. Operating mechanism for rotary tools. No. 1,229,603; June 12; v. 239; p. 464.

Fuller, Claud E., Kansas City, Mo. Treating porous blocks. No. 1,229,439; June 12; v. 239; p. 408.

Fuller, Claud E., Kansas City, Mo. Treating porous blocks. No. 1,231,007; June 26; v. 239; p. 1006.

Fullman, James M. G. (See Abbott, Gilson, and Fullman.)

Fulton Company, The. (See Fulton, Weston M., assignor.) (Reissue.)

Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Radiator-casing. (Reissue.) No. 14,309; June 5; v. 239; p. 279.

Fulton, Wilbur L., Omaha, Nebr. Drawing-board. No. 1,230,398; June 19; v. 239; p. 761.

Funk, Charles R., and L. H. Smith, Emporia, Kans. Safety-signal. No. 1,229,931; June 12; v. 239; p. 572.

Funk, Edward L., Baltimore, Md. Can-opener. No. 1,228,900; June 5; v. 239; p. 178.

Funk, Frank W., Youngstown, Ohio. Electrical installation. No. 1,231,008; June 26; v. 239; p. 1006.

Furber, Frederick M., Revere, Mass. Spark-plug and manufacturing the same. No. 1,228,767; June 5; v. 239; p. 134.

Furduy, Nicholas, Philadelphia, Pa. Connecting device for hose. No. 1,228,549; June 5; v. 239; p. 60.

Furnas, Robert W., deceased, Indianapolis, Ind.; F. A. and L. F. Hamilton, executors. Pneumatic street-cleaner. No. 1,229,737; June 12; v. 239; p. 507.

Furnas, Robert W., deceased, Indianapolis, Ind.; F. A. and L. F. Hamilton, executors. Suction-blower for street-cleaners. No. 1,229,738; June 12; v. 239; p. 508.

Furry, Gertrude S., Valdosta, Ga. Hot water or steam heating egg-cup. No. 1,229,739; June 12; v. 239; p. 508.

Fürstenau, Robert, Berlin, Germany. Measuring instrument for Röntgen rays. No. 1,229,740; June 12; v. 239; p. 508.

Fussner, Charles J., Brimfield, Ill. Sleigh attachment. No. 1,229,058; June 5; v. 239; p. 229.

Futch, Robert T., Lillie, Iowa. Metallic rail-tie. No. 1,229,932; June 12; v. 239; p. 572.

Fyfe, Charles M., Brooklyn, N. Y. Darning and weaving device. No. 1,231,346; June 26; v. 239; p. 1118.

G. M. Parks Company, The. (See Thompson and Comfort, assignors.)

G. W. Parsons Company, The. (See Miller, Arthur E., assignor.)

Gabriel, Earl S., and D. Lombard, Indianapolis, Ind.; said Lombard assignor to said Gabriel. Cake-cutting machine. No. 1,230,288; June 19; v. 239; p. 727.

Gabrielse, Jacob, Sheboygan, Wis. Detachable spring-back for vehicle-seats. No. 1,231,148; June 26; v. 239; p. 1054.

Gage, Marie L., South Lancaster, Mass. Garment-hanger. No. 1,231,517; June 26; v. 239; p. 1174.

Gahen, Alma A., Teaneck, N. J. Truck. No. 1,229,933; June 12; v. 239; p. 572.

Gaines, Frederick F., *et al.* (See Dickert, Curtis L., assignor.)

Gaines, Joseph B., Springfield, Ohio. Spraying attachment for nozzles. No. 1,228,658; June 5; v. 239; p. 96.

Galsman, Henry J., Woodmere, N. Y. Means for supplying fuel mixture to gas-engines. No. 1,230,147; June 19; v. 239; p. 679.

Galsman, Henry J., New York, assignor to Eastman Kodak Company, Rochester, N. Y. Photographic apparatus. No. 1,230,399; June 19; v. 239; p. 762.

Galbraith, John, Swatara, Minn., assignor of one-half to F. J. Widman, Chicago, Ill. Wood-carving machine. No. 1,229,059; June 5; v. 239; p. 229.

Gallon Iron Works & Mfg. Co., The. (See Arndt, Franklin E., assignor.)

Gall, Adolph F., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Support. No. 1,230,819; June 19; v. 239; p. 902.

Gallagher, Frank J. (See Tobin and Gallagher.)

Gallagher, James E., Denver, Colo. Automatic lock for quoins. No. 1,228,426; June 5; v. 239; p. 18.

Gallagher, Richard D., Jr., New York, N. Y. Draft-rigging for railway-cars. No. 1,231,248; June 26; v. 239; p. 1087.

Gallaher, Elmer E., Gas City, and D. J. McGrail, Marion, Ind. Automatic mold-charging mechanism. No. 1,229,060; June 5; v. 239; p. 230.

Galley, Elmer T., Huntington Park, Cal. Plaster-board. No. 1,230,400; June 19; v. 239; p. 762.

Gamble, Robert F., Shelby, Miss. Calculator. No. 1,230,474; June 19; v. 239; p. 789.

Gammeter, John R. (See Martin, Christian H., assignor.)

Garrard, Elmer E. (See Ickes, Peter C., assignor.)

Garcia, Gonzalo A., Guadalajara, Mexico. Token-controlled vending-machine. No. 1,229,741; June 12; v. 239; p. 508.

Gardner, Gilbert E., *et al.* (See Lendner, Augustus R., assignor.)

Gardner, Henry A., Washington, D. C. Cement structure. No. 1,230,475; June 19; v. 239; p. 789.

Gardner, Henry A., Washington, D. C. Recovering picric acid from washwater. No. 1,231,009; June 26; v. 239; p. 1007.

Gardner, Kirtland C., assignor to United Engineering & Foundry Company, Pittsburgh, Pa. Flexible shaft-coupling. No. 1,231,249; June 26; v. 239; p. 1087.

Garfield, James R., trustee. (See Clement, Edward E., assignor.)

Garrison, Edward N., Bridgeport, Conn. Grease-cup. No. 1,230,088; June 12; v. 239; p. 622.

Garson, Thorvald N., Greenville, N. J. Crane. No. 1,228,659; June 5; v. 239; p. 96.

Garst, Stephen H., assignor to D. M. Sechler Implement & Carriage Co., Moline, Ill. Corn-planter. No. 1,229,604; June 12; v. 239; p. 464.

Garthwaite, William. (See Vaugean, Lavandeyra, and Garthwaite.)

Gates, Frank S. (See Cross, Neal, assignor.)

Gay, Frank P., Prairie View, Kans. Wind-wheel. No. 1,230,885; June 26; v. 239; p. 963.

Gaynor, Arthur C., Bridgeport, Conn. Ceiling and floor plate. No. 1,229,061; June 5; v. 239; p. 230.

Gebhardt, Edmund F., Easton, Pa. Relief-valve. No. 1,230,289; June 19; v. 239; p. 727.

Geige, Burton H., Anderson, Ind. Storm-door. No. 1,230,148; June 19; v. 239; p. 679.

Gee, Norman E. (See Schroeder, Frank J., assignor.)

Geer, William C., Akron, Ohio. Writing implement or device. No. 1,230,149; June 19; v. 239; p. 680.

Geesy, Josiah S., York, Pa. Show-case. No. 1,229,062; June 5; v. 239; p. 230.

Gehring, John, *et al.* (See Kilby, Herbert N., assignor.)

Geiger, Bertha A., assignor of one-half to W. F. Geiger, Chicago, Ill., and one-half to E. W. Lawrence, Mount Vernon, N. Y. Life-preserver. No. 1,230,290; June 19; v. 239; p. 728.

Geiger, William F., *et al.* (See Geiger, Bertha A., assignor.)

Geisendorff, Frederick M., assignor of one-half to C. W. Ziegler and one-sixth to C. Hamblen, Indianapolis, Ind. Ammonia-pump mechanism for refrigeration. No. 1,231,518; June 26; v. 239; p. 1174.





Geist, Harry F., assignor to Webster Electric Company, Racine, Wis. Ignition mechanism for internal-combustion engines. No. 1,231,149; June 26; v. 239; p. 1054.

Gelow, Albert. (See Stebbins and Gelow.)

Gem Fountain Pen Corporation. (See Hellbrun, Monroe E., assignor.)

Geminden, Frank, and F. Kiel, Monitenu county, Mo. Thresher or separator. No. 1,229,063; June 5; v. 239; p. 231.

General Briquetting Company. (See Jacomini, Marius P., assignor.)

General Briquetting Company. (See Kristufek, Ladislav F., assignor.)

General Electric Company. (See Alexanderson, Ernst F. W., assignor.)

General Electric Company. (See Atwood, Winfield A., assignor.)

General Electric Company. (See Brocklebank, Arthur P., assignor.)

General Electric Company. (See Coolidge, William D., assignor.)

General Electric Company. (See Creighton, Elmer E. F., assignor.)

General Electric Company. (See Hartlian, Charles E., assignor.)

General Electric Company. (See Jacobs, Ernest H., assignor.)

General Electric Company. (See Laycock, Harry A., assignor.)

General Electric Company. (See Libby, Sam H., assignor.)

General Electric Company. (See Lumley, Wilfrid, assignor.)

General Electric Company. (See Melkle, George S., assignor.)

General Electric Company. (See Murphy, Edwin J., assignor.)

General Electric Company. (See Needham, Harry H., assignor.)

General Electric Company. (See Parkhurst, Leon F., assignor.)

General Electric Company. (See Rice, Richard H., assignor.)

General Electric Company. (See Steinmetz, Charles P., assignor.)

General Electric Company. (See Weller and Nehlsen, assignors.)

General Fireproofing Company, The. (See Schaffert, Adolf H., assignor.)

General Fireproofing Company, The. (See White, Herbert E., assignor.)

General Railway Signal Company. (See Howe, Winthrop K., assignor.) (Reissue.)

Gensecke, Wilhelm. (See Josse and Gensecke.)

Gensheimer, Charles, Philadelphia, Pa. Bread-mixer. No. 1,229,934; June 12; v. 239; p. 572.

Geo. D. Barnard & Company. (See Bredehoft, Edward F., assignor.)

George, Albert F., Salina, Kans. Windmill. No. 1,228,660; June 5; v. 239; p. 96.

George, Chester M. and M. C., Newport, R. I. Surgical instrument. No. 1,231,250; June 26; v. 239; p. 1088.

George E. Lee Company, The. (See Lee, George E., assignor.)

George H. Cahoone Company. (See Wacha, John C., assignor.)

George, Lawrence W. (See Cassady and George.)

George, Mary C. (See George, Chester M. and M. C.)

George, Safe, Hattiesburg, Miss. Belt-buckle. No. 1,230,886; June 26; v. 239; p. 963.

George Skey and Company, Limited. (See Oakes, Henry, assignor.)

Geraghty, James V., deceased, New York, N. Y.; J. M. Geraghty, administratrix. Auxiliary device for automatic electric control systems. No. 1,230,150; June 19; v. 239; p. 680.

Geraghty, John P., Jersey City, N. J. Car-fender. No. 1,229,935; June 12; v. 239; p. 573.

Geraghty, Julia M., administratrix. (See Geraghty, James V.)

Gere, Harry G., Hackensack, N. J. Fishing-rod. No. 1,231,150; June 26; v. 239; p. 1054.

Gero, Fred, Saranac Lake, N. Y. Cushion-form. No. 1,229,440; June 12; v. 239; p. 408.

Gerrard, William H., Jr., Yazoo City, Miss. Rocker attachment. No. 1,231,151; June 26; v. 239; p. 1055.

Gerstenberger, Edward C., Brooklyn, N. Y. Buttonhole-feeding mechanism. No. 1,230,698; June 19; v. 239; p. 863.

Gesellschaft für Elektro-Osmose m. b. H. (See Schwerin, Botho, assignor.)

Gessner, David, Worcester, Mass. Planetary napping-machine. No. 1,230,828; June 19; v. 239; p. 905.

Gibbs, Alvin J., assignor to The Gibbs Manufacturing Company, Canton, Ohio. Toy. No. 1,230,574; June 19; v. 239; p. 823.

Gibbs, Alvin J., assignor to The Gibbs Manufacturing Company, Canton, Ohio. Toy. No. 1,230,575; June 19; v. 239; p. 823.

Gibbs, Howard W. (See English and Gibbs.)

Gibbs Manufacturing Company, The. (See Gibbs, Alvin J., assignor.)

Gibson, Albert T., Omaha, Nebr. Building-screed. No. 1,231,010; June 26; v. 239; p. 1007.

Gibson, John, Courtenay, N. D. Resilient wheel. No. 1,230,699; June 19; v. 239; p. 863.

Gibson, Lloyd S., Jamestown, N. Y. Artificial-wood composition. No. 1,231,519; June 26; v. 239; p. 1175.

Gibson, Robert L., Philadelphia, Pa. Recording sound. No. 1,228,901; June 5; v. 239; p. 179.

Gibson, Robert L., Philadelphia, Pa. Apparatus for recording sound. No. 1,228,902; June 5; v. 239; p. 179.

Giddings, Charles E., Jr., Pittsburgh, Pa. Internal-combustion engine. No. 1,231,546; June 26; v. 239; p. 1183.

Gideon, James H., Cayour, S. D. Steel tie. No. 1,228,903; June 5; v. 239; p. 180.

Gifford, Bert L., Barker, N. Y. Strainer or separator. No. 1,228,427; June 5; v. 239; p. 18.

Gilbert, Alfred C., assignor to The A. C. Gilbert Company, New Haven, Conn. Toy building construction. No. 1,230,887; June 26; v. 239; p. 964.

Gildow, William, and M. Schock, Oak Harbor, Wash. Folding umbrella. No. 1,230,888; June 26; v. 239; p. 964.

Gillette, George T., Los Angeles, Cal. Extinguishing fires. No. 1,229,064; June 5; v. 239; p. 231.

Gilman, George H., Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass. Stoneworking-machine. No. 1,228,661; June 5; v. 239; p. 97.

Gilmore, Charles B., assignor to W. H. Plunkett, Chicago, Ill. Dust-mop. No. 1,230,476; June 19; v. 239; p. 789.

Gilpin, Robert W., Codell, Kans. Egg-tester. No. 1,229,936; June 12; v. 239; p. 573.

Gilpin, V. C., *et al.* (See Buckelew, Albert H., assignor.)

Gilroy, William E., Utica, N. Y., assignor to Eureka Mower Company. Fertilizer-distributer. No. 1,230,069; June 12; v. 239; p. 615.

Gilson, Henry R. (See Abbott, Gilson, and Fullman.)

Gilson Manufacturing Company. (See Elton, Olaf, assignor.)

Gimpel, Albert, Mountain View, Mo., assignor of one-third to M. Buyalos, Chesterfield, Va. Rail-joint. No. 1,229,065; June 5; v. 239; p. 331.

Ginsburg, Jacob, *et al.* (See McGirr, John, assignor.)

Giroux, Charles I. (See Manny, Lucien A., assignor.)

Gisler, Charles L., Sistersville, W. Va. Self stove-lighter or pilot-light. No. 1,229,742; June 12; v. 239; p. 508.

Glasgow, Daniel, assignor of one-half to O. H. Stoltz, Milwaukee, Wis. Brassière. No. 1,231,011; June 26; v. 239; p. 1007.

Glass, Perley R., Brookline, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Fastener-setting machine. No. 1,228,768; June 5; v. 239; p. 135.

Gledhill, Edward C., Galion, Ohio. Unloading apparatus. No. 1,230,700; June 19; v. 239; p. 864.

Glidden, Alfred A., Watertown, E. P. Dorman, Boston, and G. L. Finch, Brighton, assignors to Hood Rubber Co., Watertown, Mass. Apparatus for treating rubber footwear. No. 1,228,904; June 5; v. 239; p. 180.

Globe Automatic Sprinkler Company. (See Flamand, Poul, assignor.)

Globe Ticket Company. (See Feldern, Carl, assignor.)

Gloeckler, John E., Pittsburgh, Pa. Vegetable-preparing machine. No. 1,229,252; June 12; v. 239; p. 344.

Gloor, Albert. (See Sasgen and Gloor.)

Gloss, Albert, Chicago, Ill. Mail-box. No. 1,229,743; June 12; v. 239; p. 510.

Glover, Edwin L., Jackson, Miss. Push-hoe. No. 1,231,012; June 26; v. 239; p. 1007.

Goble, Charles J., Somerville, N. J. Cutter-bar for lawn mowers. No. 1,229,253; June 12; v. 239; p. 345.

Godley, Charles E., assignor to Edmunds and Jones Corporation, Detroit, Mich. Focusing mechanism. No. 1,229,177; June 5; v. 239; p. 270.

Goelkel, Rinaldo A., New York, N. Y. Eyeglass-case. No. 1,229,937; June 12; v. 239; p. 574.

Goetz, George B., Ranson, W. Va. Horse-collar. No. 1,230,761; June 19; v. 239; p. 864.

Goger, Frank, Paterson, N. J. Mixing and kneading machine. No. 1,228,550; June 5; v. 239; p. 60.

Goin, Jasper C., Dahlgren, Ill. Combined bed and parcel-carrier. No. 1,229,255; June 12; v. 239; p. 345.

Gold Car Heating & Lighting Company. (See Kuntz, Frank A., assignor.)

Gold, Leo F., assignor to International Folding Paper Box Co., New York, N. Y. Display-box. No. 1,230,401; June 19; v. 239; p. 763.

Golden, George D., Clarksdale, Ariz. Twyer. No. 1,229,938; June 12; v. 239; p. 574.

Golden, Joseph A., New York, N. Y. Motion-picture camera. No. 1,230,576; June 19; v. 239; p. 823.

Goldsmith, Byron R., New York, N. Y. Composition of matter. No. 1,228,428; June 5; v. 239; p. 19.

Goldsmith, Byron R., New York, N. Y., assignor to Redmanol Chemical Products Company, Chicago, Ill. Artificial resin and making the same. No. 1,230,829; June 19; v. 239; p. 905.

Goldstein, Albert, assignor to S. B. Hess, New York, N. Y. Electrical thermostat and circuit. No. 1,229,939; June 12; v. 239; p. 574.

Gomes, Joaquin A., South Weymouth, Mass. Combined tongue and lace protector for shoes. No. 1,229,940; June 12; v. 239; p. 575.

Good, John, Brooklyn, N. Y. Internal-combustion-engine valve. No. 1,230,291; June 19; v. 239; p. 728.

Good, John, Brooklyn, N. Y. Inclosed forced-draft burner. No. 1,231,152; June 26; v. 239; p. 1055.

Good, Jonathan R., Didsbury, Alberta, Canada. Culvert-head or retaining-wall for culverts. No. 1,228,662; June 5; v. 239; p. 97.

Goode Anti-Skid Chain Manufacturing Company. (See Poling, Fred C., assignor.)
Goodell, William, Millinocket, Me. Paper-pulp-lap-folding machine. No. 1,231,520; June 26; v. 239; p. 1175.
Gooden, Jesse M. (See Quandt and Gooden.)
Goodin, Sebastian L., assignor of one-half to A. F. Tuepker, Farber, Mo. Check-row planter. No. 1,229,941; June 12; v. 239; p. 575.
Goodrum, Charles L., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Automatic telephone-exchange system. No. 1,231,013; June 26; v. 239; p. 1007.
Goodwill, Jasper E., Omaha, Nebr. Hoisting apparatus for scaffolds. No. 1,231,014; June 26; v. 239; p. 1008.
Goodwin, John F., Charlestown, Mass., assignor to S. N. Eastman, administratrix. Means for adjusting a vehicle-spring to various loads. No. 1,229,254; June 12; v. 239; p. 345.
Goodyear Tire & Rubber Company, The, *et al.* (See Wagenhorst, James H., assignor.)
Goodyear's India Rubber Glove Manufacturing Company, The. (See Eggers, Anton C., assignor.)
Goozey, Charles A., assignor to B. A. Ballou & Co., Inc., Providence, R. I. Clasp. No. 1,229,942; June 12; v. 239; p. 575.
Gordon, David D., Chicago, Ill., assignor to The Yost Electric Manufacturing Company, Toledo, Ohio. Electric-switch mechanism. No. 1,228,905; June 5; v. 239; p. 180.
Gordon, David D., Chicago, Ill., assignor to The Yost Electric Manufacturing Company, Toledo, Ohio. Electric-switch mechanism. No. 1,228,906; June 5; v. 239; p. 180.
Gordon, David D., Chicago, Ill., assignor to The Yost Electric Manufacturing Company, Toledo, Ohio. Electric-switch mechanism. No. 1,228,907; June 5; v. 239; p. 181.
Gordon, Harry C. (See Stafford, Ingram, and Gordon.)
Goss Printing Press Company, The. (See Goss, Samuel G., assignor.)
Goss, Samuel G., Glencoe, assignor to The Goss Printing Press Company, Chicago, Ill. Automatic stereotype-plate-finishing machine. No. 1,230,577; June 19; v. 239; p. 824.
Gottschalk, Albert, New York, N. Y., assignor to National Pneumatic Company, Chicago, Ill. Motor for fluid-pressure door-operating devices. No. 1,230,070; June 12; v. 239; p. 616.
Goularte, Manoel F. (See Rasmussen and Goularte.)
Gourley, James C., assignor to The Smyth Manufacturing Company, Hartford, Conn. Machine for shaping the backs of book-covers. No. 1,230,292; June 19; v. 239; p. 729.
Grafstein, Josef, assignor to Conjoint Jewelry Corporation, Inc., New York, N. Y. Finger-ring. No. 1,228,663. June 5; v. 239; p. 98.
Graham, Clarence J., and J. A. Farris, Chicago, Ill. Pipe. No. 1,229,943; June 12; v. 239; p. 576.
Graham, John W., Hinton, W. Va. Typographical or line-casting machine. No. 1,229,605; June 12; v. 239; p. 465.
Graham, John W., Hinton, W. Va. Linotype or slug-casting machine. No. 1,229,606; June 12; v. 239; p. 465.
Graham, Thomas F., Chicago, Ill. Water game. No. 1,231,251; June 26; v. 239; p. 1088.
Graham, William F., and S. C. Hawthorne, Lincoln, Nebr. Advertising-display device. No. 1,229,944; June 12; v. 239; p. 576.
Grand Rapids Refrigerator Company. (See Leonard, Harry C., assignor.)
Granger, Frank B., assignor to Hall-Borchert Dress Form Company, New York, N. Y. Dress-form. No. 1,228,908; June 5; v. 239; p. 181.
Grant, Roswell D., assignor to The Pyle-National Company, Chicago, Ill. Rock-shaft. No. 1,231,015; June 26; v. 239; p. 1009.
Grant, William G. S., Hamilton, Ontario, Canada, and L. H. Flanders, Jenkintown, assignors to The Electric Storage Battery Company, Philadelphia, Pa. Negative-pole plate for storage batteries and making the same. No. 1,228,551; June 5; v. 239; p. 60.
**Gränz, Hermann W., assignor to Schubert & Salzer Maschinenfabrik, Aktiengesellschaft, Chemnitz, Germany.** Seamless stocking or sock and making same. No. 1,228,664; June 5; v. 239; p. 98.
Graphoscope Company, The. (See Jenkins, Charles F., assignor.)
Gravel, Omer. (See Laflamme and Gravel.)
Gray, James H. (See Horan and Gray.)
Grean, Alexandre M., New York, N. Y. Garment-supporter. No. 1,230,889; June 26; v. 239; p. 965.
Green, Carl R., Dayton, Ohio. Piston. No. 1,228,909; June 5; v. 239; p. 182.
Green, Charles H., Chicago, Ill., assignor to E. J. Woodison Company, Detroit, Mich. Portable sand-sifting machine. No. 1,230,477; June 19; v. 239; p. 789.
Greenberg, Abraham, Pittsburgh, Pa. Submarine vessel. No. 1,230,702; June 19; v. 239; p. 864.
Greenberg, Louis, *et al.* (See Olson, Gustaf, assignor.)
Greenburg, Joseph, Roxbury, Mass. Ventilator. No. 1,229,066; June 5; v. 239; p. 232.
Greene, Frank M., Minneapolis, Minn. Engineer's cab-signal. No. 1,229,178; June 5; v. 239; p. 270.
Greene, John S., Rochester, N. Y., assignor to Commercial Camera Company, Providence, R. I. Photographic developing apparatus. No. 1,229,945; June 12; v. 239; p. 576.
Greenfield Paper Bottle Company. (See Lang, John G. V., assignor.)
Greenpoint Metallic Bed Company. (See Frank, Louis, assignor.)
Greer, Medorem W., New York, N. Y., assignor, by mesne assignments, to Ever-Last Cotton Shoe Corporation. Shoe construction. No. 1,230,478; June 19; v. 239; p. 789.
Gregg Company, The. (See Gregg, Otis T., assignor.)
Gregg Company, The. (See Gregg, William C. and L. D., assignors.)
Gregg, Louis D. (See Gregg, William C. and L. D.)
Gregg, Otis T., assignor to The Gregg Company, Limited, Hackensack, N. J. Car-frame construction. No. 1,228,552; June 5; v. 239; p. 60.
Gregg, William C. and L. D., assignors to The Gregg Company, Limited, Hackensack, N. J. Railway-tie and fastener. No. 1,230,703; June 19; v. 239; p. 864.
Grelck, Bertha H. (See Grelck, William P. M., assignor.)
Grelck, William P. M., Evanston, Ill., assignor to B. H. Grelck, Lincoln, Nebr. Self-preserving acid milk product and making the same. No. 1,230,479; June 19; v. 239; p. 790.
Grière, Jean C., Padua, Italy. Manufacture of dry crystals of sugar and other crystalline substances. No. 1,228,910; June 5; v. 239; p. 182.
Grière, Jean C., Padua, Italy. Apparatus for the manufacture of dry crystals of sugar and other crystalline substances. No. 1,230,890; June 26; v. 239; p. 965.
Griffin, Aquila H. and G., assignors of one-tenth to J. W. Steward, Paterson, N. J. Driving-belt. No. 1,228,429; June 5; v. 239; p. 19.
Griffin, Aquila H. and G., assignors of one-tenth to J. W. Steward, Paterson, N. J. Driving-belt. No. 1,229,441; June 12; v. 239; p. 408.
Griffin, George. (See Griffin, Aquila H. and G.)
Griffin, James H., Clay Center, Kans. Ladle. No. 1,228,665; June 5; v. 239; p. 98.
Griffith, Allie, Cleveland, Ohio. Hose-coupling. No. 1,229,067; June 5; v. 239; p. 232.
Griffith, William J. (See Miller, Lewis, assignor.)
Grigioni, James L. (See Hobsbawm and Grigioni.)
Grinden, William J., Brooklyn, N. Y. Belt-clamp. No. 1,231,521; June 26; v. 239; p. 1175.
Grindle, Aubrey J., assignor to Combustion Economy Corporation, Chicago, Ill. Apparatus for burning powdered coal. No. 1,228,769; June 5; v. 239; p. 135.
Grip Nut Company. (See Carlson, Arthur W., assignor.)
Grip Nut Company. (See Hibbard, Edward R., assignor.)
Grip Nut Company. (See Sharp, William E., assignor.)
Groebli, Joseph A., New York, N. Y. Embroidering-machine. No. 1,228,666; June 5; v. 239; p. 98.
Groendyke, Cornelius E., Sheldon, Iowa. Gate-operator. No. 1,231,252; June 26; v. 239; p. 1088.
Groves, George E. (See Downs, David G., assignor.)
Gruhler, Charles C., Bellevue, Ky. Stationery. No. 1,229,442; June 12; v. 239; p. 408.
Guéret, André, Paris, France. Internal-combustion engine. No. 1,231,522; June 26; v. 239; p. 1176.
Guett, Monroe, assignor to The Hart & Hegeman Manufacturing Company, Hartford, Conn. Push-button connection for snap-switches. No. 1,230,480; June 19; v. 239; p. 790.
Guichard, Edgar, Etampes, France. Process for covering with a protective plastic coating flattened strips and product thereof. No. 1,230,151; June 19; v. 239; p. 680.
Gule, Pursifer F., and J. S. Long, Manheim, Pa.; said Gule assignor to said Long. Adjustable door-screen. No. 1,229,744; June 12; v. 239; p. 510.
Gulse, Joseph A., Magazine, Ark. Necktie-retainer. No. 1,230,704; June 19; v. 239; p. 865.
Gulf Refining Company. (See Alexander, Clive M., assignor.)
Gulf Refining Company. (See Brooks and Smith, assignors.)
Gurley, John W., Yorkville, assignor of one-half to W. O. Welskotten, Utica, N. Y. Sewing-machine. No. 1,229,256; June 12; v. 239; p. 346.
Guthrie, Wade H., Charleston, W. Va. Automatic air-controlling device for gas-engines. No. 1,230,481; June 19; v. 239; p. 790.
Gutiérrez, Refugio, San Antonio, Tex. Tortilla-making machine. No. 1,229,946; June 12; v. 239; p. 577.
Gysi, Alfred, Zurich, Switzerland. Dental articulator. No. 1,228,667; June 5; v. 239; p. 99.
H. Maimin Co. (See Marshall, William J., assignor.)
H. H. Babcock Company. (See Davis, Francis G., assignor.)
H. W. Johns-Manville Company. (See Seigle, William R., assignor.)
Haanel, Hugo P., Jr., St. Louis, Mo. Pianoforte attachment. No. 1,229,257; June 12; v. 239; p. 346.
Haas, Jackson O., Philadelphia, Pa. Piston and ring packing. No. 1,229,258; June 12; v. 239; p. 347.
Hachmeister, John. (See Leonard, William R., assignor.)
Hackney, Leslie S. (See Froelich, John, assignor.)
Hackney, Leslie S. (See Johnson, Edward, assignor.)
Hackney, Leslie S., St. Paul, Minn. Traction-vehicle. No. 1,230,402; June 19; v. 239; p. 763.



Haddock, Joseph F., St. Louis, Mo. Train lantern or marker. No. 1,228,911; June 5; v. 239; p. 182.
Hadley, Art, Providence, R. I. Soft-collar button. No. 1,229,697; June 12; v. 239; p. 466.
Hadley, James A., Swanlake, Idaho. Combined hay rake and loader. No. 1,230,152; June 19; v. 239; p. 680.
Hadley, Walter C., New York, N. Y. Sample-pasting machine. No. 1,229,259; June 12; v. 239; p. 347.
Haeffner, Axel H., Skutskär, Sweden. Sizing paper, cardboard, and the like. No. 1,231,153; June 26; v. 239; p. 1056.
Haggerty, Frank, assignor of one-fourth to C. Izenstark, Chicago, Ill. Athlete's guard. No. 1,229,947; June 12; v. 239; p. 577.
**Haggott, Warren A., trustee.** (See Wingett, John N., assignor.)
Hagman, Edwin V., Revere, Mass. Protractor. No. 1,229,069; June 5; v. 239; p. 233.
Hahn, Charles H., Pittsburgh, Pa. Partition structure for toilet-rooms. No. 1,229,745; June 12; v. 239; p. 511.
Hahn, John N., Cleveland, Ohio. Dual-facing machine for corrugated paper-board. No. 1,228,430; June 5; v. 239; p. 19.
Haigh, Robert W., Manchester, England. Toy or appliance for playing a game. No. 1,229,260; June 12; v. 239; p. 348.
Hale, George S., Tekoa, Wash. Gasolene-strainer. No. 1,229,608; June 12; v. 239; p. 466.
Hale, Henry S., Philadelphia, Pa. Automobile. No. 1,229,746; June 12; v. 239; p. 511.
Hale and Kilburn Company. (See Kilburn, John E., assignor.)
Hales, Henry W., Ridgewood, N. J. Stereoscope. No. 1,230,705; June 19; v. 239; p. 865.
Hall, Alonzo W., Plymouth, Ohio. Driving-gearing for vehicles. No. 1,230,153; June 19; v. 239; p. 681.
Hall, Arthur J. (See Storer and Hall.)
Hall, Arthur J., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control system. No. 1,229,444; June 12; v. 239; p. 409.
Hall, Arthur J., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control apparatus. No. 1,229,445; June 12; v. 239; p. 410.
Hall, Arthur J., and L. G. Riley, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Accelerator and system of control. No. 1,229,443; June 12; v. 239; p. 409.
Hall, Arthur J. and L. G. Riley, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Accelerator and system of control. No. 1,229,446; June 12; v. 239; p. 410.
Hall-Borchert Dress Form Company. (See Granger, Frank, assignor.)
Hall, Calvin F., Athens, Ill. Joist or beam support or anchor. No. 1,229,070; June 5; v. 239; p. 233.
Hall, Charles R. (See Janes, Jessie, assignor.)
Hall, Frank A. (See McIntosh, Burtnett, assignor.)
Hall, Lincoln, Los Angeles, Cal. Label-holder. No. 1,229,948; June 12; v. 239; p. 577.
Halldorson, Thomas E., Chicago, Ill. Photographic-printing machine. No. 1,228,912; June 5; v. 239; p. 183.
Halliwell, William B., Saugatuck, Conn. Single-rail spike driving and drawing machine. No. 1,231,253; June 26; v. 239; p. 1088.
Halstead, Stanley M., San Jose, Cal. Pump mechanism. No. 1,228,770; June 5; v. 239; p. 136.
Hamblen, Charles, *et al.* (See Gelsendorff, Frederick M., assignor.)
Hambrecht, George P., *et al.* (See McGirr, John, assignor.)
Hamel, Charles A., and F. E. Valois, Haverhill, assignors to Hamel Shoe Machinery Company, Lynn, Mass. Support for shoe-machines. No. 1,229,609; June 12; v. 239; p. 466.
Hamel Shoe Machinery Company. (See Hamel and Valois, assignors.)
Hamill, Ret O., *et al.* (See Phillips, Newton E., assignor.)
Hamilton, Frank A., *et al.*, executors. (See Furnas, Robert W.)
Hamilton, Lelia F., *et al.*, executors. (See Furnas, Robert W.)
Hamilton, Rush E., Geyserville, assignor to Hamilton Tractor Company, San Francisco, Cal. Coupling and steering means for tractors. No. 1,230,293; June 19; v. 239; p. 729.
Hamilton, Thomas P., assignor to Bauer & Black, Chicago, Ill. Surgical swab. No. 1,229,195; June 5; v. 239; p. 276.
Hamilton Tractor Company. (See Hamilton, Rush E., assignor.)
Hamilton, Walter L., assignor to H. C. Avery, Holyoke, Mass. Switch. No. 1,230,089; June 12; v. 239; p. 622.
Hamm, Leamon, Bangor, Me. Clothes-pin. No. 1,231,016; June 26; v. 239; p. 1069.
Hammel, Walter F., assignor, by mesne assignments, to Neostyle Envelope Company, Chicago, Ill. Envelop. No. 1,230,154; June 19; v. 239; p. 681.
Hammond, Lorenzo T., Cotuit, Mass. Triple-piston deep-well pump. No. 1,230,155; June 19; v. 239; p. 682.
Hammond, Mary M., Kansas City, Mo. Tray mechanism. No. 1,229,447; June 12; v. 239; p. 411.
Hammond, Mary M., Kansas City, Mo. Tray. No. 1,229,448; June 12; v. 239; p. 411.
Hammond, Wilberforce B., Boston, Mass., assignor, by mesne assignments, to Combined Heat and Sprinkler Company. Automatic sprinkler. No. 1,228,553; June 5; v. 239; p. 61.
Hammond, Wilberforce B., Brookline, Mass., assignor, by mesne assignments, to Combined Heat and Sprinkler Company. Combined heating and sprinkler system. No. 1,229,071; June 5; v. 239; p. 233.
Hanau, Rudolph L., assignor to F. L. Stanton, New York, N. Y. Dental surveying apparatus. No. 1,230,156; June 19; v. 239; p. 682.
Hanauer, Andrew, New York, N. Y. Shade-awning support. No. 1,228,668; June 5; v. 239; p. 99.
Hance, Joseph M. (See Schade and Hance.)
Hancock, William T., Anderson, Ind. Draw-grip. No. 1,231,254; June 26; v. 239; p. 1089.
Hanger, James E., Washington, D. C. Chair. No. 1,228,771; June 5; v. 239; p. 136.
Hanlon & Goodman Co. (See Robinson, Edward E., assignor.)
Hannon, Luke, Hennessey, Okla. Device for protecting crude-oil tanks. No. 1,229,261; June 12; v. 239; p. 348.
Hanot, Alexander L., Fairbanks, Alaska. Drag-bucket apparatus. No. 1,228,554; June 5; v. 239; p. 61.
Hanschild, Aurel, Pittsburgh, Pa. Nut and bolt lock. No. 1,230,891; June 26; v. 239; p. 965.
Hansen, Augie L., assignor to Justrite Manufacturing Company, Chicago, Ill. Acetylene-gas lantern. No. 1,228,772; June 5; v. 239; p. 136.
Hansen, Augie L., assignor to Justrite Manufacturing Company, Chicago, Ill. Acetylene-lamp. No. 1,230,892; June 26; v. 239; p. 965.
Hansen, Axel C., New York, N. Y. Automatic exhaust-valve for steam-engines. No. 1,228,555; June 5; v. 239; p. 62.
Hansen, Hans C., J. A. Norre, and J. A. Reimer, Elk Horn, Iowa. Draft-evener for harrows. No. 1,230,294; June 19; v. 239; p. 729.
Hansen, Thomas C., Chicago, Ill. Changeable electric sign. No. 1,230,403; June 19; v. 239; p. 763.
Hansmann Manufacturing Company. (See Strack, Herman, assignor.)
Hanson, Anders C., Stanton, Iowa. Miter-knife. No. 1,228,431; June 5; v. 239; p. 20.
Hanson, Bengt M. W., Hartford, Conn. Metal-working machine. No. 1,231,255; June 26; v. 239; p. 1089.
Hanson, Bennie P., and N. I. Nelson, Bancroft, Iowa. Loading-machine. No. 1,229,262; June 12; v. 239; p. 348.
Hapgood, Clarence H., Toledo, Ohio, assignor to Toledo Scale Company, Jersey City, N. J. Scale. No. 1,229,449; June 12; v. 239; p. 411.
Happel, Albert W. (See Buerk and Happel.)
Harcourt, Frederic, Birmingham, England. Temporary binder. No. 1,228,432; June 5; v. 239; p. 20.
Hardey, Edwin F., Kansas City, Mo. Appliance for light, heat, and massage treatment. No. 1,228,669; June 5; v. 239; p. 99.
Hardwick, Christopher C., and A. H. Allen, Northampton, England. Last. No. 1,230,893; June 26; v. 239; p. 966.
Hardy, Fred J., Corbettsville, N. Y. Car-door. No. 1,229,072; June 5; v. 239; p. 234.
Harper, Frank. (See Harris, Edward F., assignor.)
Harper, Sidney C. (See Brown, Theodore, assignor.)
Harpst, Frederick E., Lufkin, Tex. Radius-rod. No. 1,230,157; June 19; v. 239; p. 683.
Harrigan, Edward, Tacoma, Wash. Rotary engine. No. 1,229,949; June 12; v. 239; p. 578.
Harriman, Frederick C., Ardsley-on-Hudson, Irvington, N. Y. Strap-fastener. No. 1,229,263; June 12; v. 239; p. 348.
Harrington, Lynn J., Philadelphia, Pa., assignor to L. C. Smith & Bros. Typewriter Company, Syracuse, N. Y. Platen for type-writers. No. 1,230,295; June 19; v. 239; p. 730.
Harris, Charles W. (See Merriman and Harris.)
Harris, Edward F., assignor, by mesne assignments, of one-fifth to P. Harper, Chicago, Ill. Window-platform support. No. 1,229,073; June 5; v. 239; p. 234.
Harris, Hugh C., Coeur d'Alene, Idaho. Combination saw set and sharpener. No. 1,229,450; June 12; v. 239; p. 412.
Harris, Joseph, Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draw-bar and yoke connection. No. 1,231,017; June 26; v. 239; p. 1009.
Harrison, Ephriam G., Provo City, Utah. Window-shade holder. No. 1,229,074; June 5; v. 239; p. 234.
Harrop, John T., Garfield, N. J. Repairing asphalt pavements. No. 1,230,894; June 26; v. 239; p. 966.
Hart-Bell Carbon Remover Company. (See Hartlett, George D., assignor.)
Hart, Frederick A., Newark, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,231,018; June 26; v. 239; p. 1069.
Hart, Frederick A., Hartford, Conn., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,231,523; June 26; v. 239; p. 1176.
Hart & Hegeman Manufacturing Company, The. (See Guett, Monroe, assignor.)
Hartfield, August J., assignor to H. A. Hartfield, Los Angeles, Cal. Gas heat-radiator. No. 1,229,451; June 12; v. 239; p. 412.

Hartfield, Helen A. (See Hartfield, August J., assignor.)
Hartford Rubber Works Company, The. (See Whittelsey, Charles B., assignor.)
Hartban, Charles E., Lynn, Mass., assignor to General Electric Company. Arc-lamp. No. 1,229,950; June 12; v. 239; p. 578.
Hartlett, George D., Glenbrook, Conn., assignor of one-half to E. C. Belling and one-half to Hart-Bell Carbon Remover Company, Inc., New York, N. Y. Attachment for gasolene-engines. No. 1,230,158; June 19; v. 239; p. 683.
Hartman, Samuel C., Dayton, Ohio. Street-sweeping machine. No. 1,228,773; June 5; v. 239; p. 137.
Hartmann, Max. (See Hüssy and Hartmann.)
Harvey Hubbell, Inc. (See Horn, Charles, assignor.)
Harwood, Leon M., Springfield, Mass. Apparatus for handling metallic leaf. No. 1,229,075; June 5; v. 239; p. 235.
Haskell, William E., assignor to Estey Organ Company, Brattleboro, Vt. Department-selecting mechanism for automatically-played organs. No. 1,230,895; June 26; v. 239; p. 966.
Hatch, Frederick A., Plymouth, Mass. Last. No. 1,230,706; June 19; v. 239; p. 865.
Hatch, Tracy R., South Pasadena, Cal. Jack. No. 1,229,951; June 12; v. 239; p. 578.
Hatchett, Samuel P., and G. L. Dillard, Mogollon, N. Mex. Permutation-lock. No. 1,231,524; June 26; v. 239; p. 1176.
Hatfield, John, assignor to Universal Steel Cabinet Company, Inc., Brooklyn, N. Y. Follower-block for filing-cases. No. 1,231,154; June 26; v. 239; p. 1056.
Hathaway, Thomas F., assignor to Illinois Watch Case Co., Elgin, Ill. Case for cigarettes and the like. No. 1,229,952; June 12; v. 239; p. 579.
Hauberg, Hakon K., Henning, Minn. Wood-splitting machine. No. 1,231,525; June 26; v. 239; p. 1177.
Hauck, Arthur E., New York, N. Y. Heavy-oil burner. No. 1,231,019; June 26; v. 239; p. 1009.
Haun, Solen P., Mohawk, Tenn. Acetylene-gas generator. No. 1,231,155; June 26; v. 239; p. 1056.
Haupt, William E., Philadelphia, Pa. Automobile transmission mechanism. No. 1,230,896; June 26; v. 239; p. 966.
Hawk, Lewis E., assignor of one-third to E. R. Kilpatrick, Chicago, Ill. Pneumatic-tire-alarm device. No. 1,230,071; June 12; v. 239; p. 616.
Hawkins, Cyrus, Collingswood, N. J., assignor of one-half to H. W. King, Philadelphia, Pa. Wiper and polisher for plate-printing and die-stamping presses. No. 1,230,897; June 26; v. 239; p. 967.
Hawley, Royal A., assignor of one-third to A. B. Eddleman and one-third to W. B. Douglas, Graham, Tex. Gate or door closing device. No. 1,231,526; June 26; v. 239; p. 1177.
Hawthorne, Charles W., Hamilton, Ontario, Canada. Rolling-mill. No. 1,228,433; June 5; v. 239; p. 20.
Hawthorne, Samuel C. (See Graham and Hawthorne.)
Hay, Lyman T. (See Ehrlich, Leo, assignor.)
Hayashi, Harry, Elmhurst, Cal. Wrapping device. (Reissue.) No. 14,318; June 19; v. 239; p. 909.
Hayden, William R., Indianola, Nebr. Cattle-poke. No. 1,228,913; June 5; v. 239; p. 183.
Hayes, Frank A., Pelham Manor, N. Y. Variable-speed power-transmission mechanism. No. 1,229,076; June 5; v. 239; p. 235.
Hayes, Richard F. (See Freeman, George L., assignor.)
Hayes, Thomas J., Boston, Mass. Belt-punching tool. No. 1,231,020; June 26; v. 239; p. 1010.
Hayes, Thomas J., Boston, Mass. Belt-cutting tool. No. 1,231,021; June 26; v. 239; p. 1010.
Hayes, Thomas J., assignor to Arbetter Felling Machine Company, Boston, Mass. Blindstitch sewing-machine. No. 1,230,159; June 19; v. 239; p. 683.
Hayford, Eugene S., New Orleans, La. Apparatus for raising sunken ships. No. 1,228,914; June 5; v. 239; p. 184.
Hays, John R., Brooklyn, N. Y. Printing-press. No. 1,229,610; June 12; v. 239; p. 467.
Headley, Carl W., Danville, Ill. Receptacle. No. 1,231,022; June 26; v. 239; p. 1011.
Heaslet, James G., Detroit, Mich., assignor to The Studebaker Corporation. Collapsible seat. No. 1,231,156; June 26; v. 239; p. 1056.
Heatlie, Fred W., Kentland, Ind. Figure toy. No. 1,229,953; June 12; v. 239; p. 579.
Hecht, Charles E., Irvington, N. J. Brush-holder. No. 1,228,774; June 5; v. 239; p. 137.
Heckmann, Julius F., Lupus, Mo. Gun-magazine. No. 1,230,707; June 19; v. 239; p. 866.
Hedberg, Edward W., Chicago, Ill. Chair. No. 1,228,434; June 5; v. 239; p. 20.
Hedges, Harry K., Los Angeles, Cal. Walking attachment for motor-cars. No. 1,229,954; June 12; v. 239; p. 579.
Hedlund, Gustaf E., Lynn, Mass. Making welt-shoes. No. 1,229,077; June 5; v. 239; p. 235.
Heilbrun, Monroe E., New York, N. Y., assignor to Gem Fountain Pen Corporation, Fountain-pen. No. 1,231,256; June 26; v. 239; p. 1089.
Heineman, Joseph, New York, N. Y. Button. No. 1,229,452; June 12; v. 239; p. 412.
Heinemann, Jakob, Oshkosh, Wis. Pin-setting device. No. 1,230,898; June 26; v. 239; p. 967.
Heins, Otto, Edgewater, N. J., assignor to Bosch Magneto Company, New York, N. Y. Starting internal-combustion engines. No. 1,230,160; June 19; v. 239; p. 684.
Heiser, Edgar F., Kingston, Mo. Cylinder-reboring mechanism. No. 1,231,347; June 26; v. 239; p. 1119.
Heller, Louis, and E. Neese, Round Top, Tex. Hand manure-scraper. No. 1,229,955; June 12; v. 239; p. 579.
Hellermann, August L., Dusseldorf, Germany. Apparatus for making corrugated and creased wooden shavings. No. 1,229,747; June 12; v. 239; p. 511.
Helsley, George R. (See Callaway and Helsley.)
Hemenway, John F. (See Wright, Rea P., assignor.)
Henderson, Clarence M., and E. Cocks, Berkeley, Cal. Wall-bed foot-rail connection. No. 1,228,915; June 5; v. 239; p. 184.
Henderson, James D., Monmouth, Ill. Attachment for motor-vehicles. No. 1,229,956; June 12; v. 239; p. 580.
Henderson, John C., Washington, D. C., assignor to Driver-Harris Wire Company, Harrison, N. J. Flexible insulated electrical conductor. No. 1,228,670; June 5; v. 239; p. 100.
Henneberg, Wilhelm, Berlin, Germany. Producing Yoghurt beer. No. 1,228,916; June 5; v. 239; p. 184.
Hennig, Gustav K. (See Bajde and Hennig.)
Henry, Harry W., Yonkers, N. Y. Penholder. No. 1,231,023; June 26; v. 239; p. 1011.
Hensley, Vergil, Vallejo, Cal. Pneumatic tire. No. 1,229,264; June 12; v. 239; p. 349.
Herbst, Abram W. (See Minton, Le Roy H., assignor.)
Herendeen, R. J., What Cheer, Iowa. Permutation-padlock. No. 1,231,157; June 26; v. 239; p. 1057.
Herhauer, Joseph J., Richmond Hill, N. Y. Automobile-horn. No. 1,229,453; June 12; v. 239; p. 413.
Herman Strater & Sons. (See Strater, Theodore G., assignor.)
Hernandez, Joseph B., Corona, N. Y. Three-way floor construction. No. 1,231,348; June 26; v. 239; p. 1119.
Herr, Herbert T., Pittsburgh, assignor, by mesne assignments, to The Westinghouse Machine Company, East Pittsburgh, Pa. Multiple control. No. 1,231,257; June 26; v. 239; p. 1090.
Herreshoff, James B., Jr., New York, N. Y. Treating slags. No. 1,231,349; June 26; v. 239; p. 1120.
Herrmann, Isaac A., Elyria, Ohio. Watchman's recording-clock. No. 1,231,350; June 26; v. 239; p. 1120.
Herron, Foster J., Sherodsville, Ohio. Valve. No. 1,230,161; June 19; v. 239; p. 684.
Herschede Hall Clock Company, The. (See Herschede and Cohan, assignors.)
Herschede, Walter J., and C. Cohan, assignors to The Herschede Hall Clock Company, Cincinnati, Ohio. Synchronizing mechanism for chime-clocks. No. 1,229,454; June 12; v. 239; p. 413.
Herschell-Spillman Company. (See Cramer, George H., assignor.)
Hersman, Paul R., Milwaukee, Wis., assignor, by mesne assignments, to William F. Jobbins, Incorporated, Aurora, Ill. Processing aluminum skimmings, screenings, slags, or analogous materials. No. 1,229,611; June 12; v. 239; p. 467.
Herz, Gustave L., New York, N. Y. Spark-plug. No. 1,229,748; June 12; v. 239; p. 511.
Herzog, Soma, New York, N. Y. Alcohol-lamp. No. 1,229,078; June 5; v. 239; p. 236.
Hess, Edward B., Brooklyn, N. Y. Book holder and protector. No. 1,228,435; June 5; v. 239; p. 21.
Hess, Edward B., Brooklyn, N. Y. Protector for motor devices of automobiles. No. 1,228,436; June 5; v. 239; p. 21.
Hess, Simon B. (See Goldstein, Albert, assignor.)
Hesse, Joseph, Hartington, Nebr. Seed-corn drier. No. 1,228,556; June 5; v. 239; p. 62.
Heuser, Herman, Chicago, Ill. Manufacture of dry extracts of beer, &c. No. 1,228,917; June 5; v. 239; p. 184.
Hewett, Robert J., Westfield, N. J. Cab-signal system. No. 1,229,957; June 12; v. 239; p. 580.
Hewitt, Peter C., Ringwood Manor, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Vapor electric apparatus. No. 1,230,708; June 19; v. 239; p. 866.
Heys, John J., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-gage for boots and shoes. No. 1,229,265; June 12; v. 239; p. 349.
Hibbard, Edward R., assignor to Grip Nut Company, Chicago, Ill. Nut-lock. No. 1,228,671; June 5; v. 239; p. 100.
Hibbert, Harold, Pittsburgh, Pa. Explosive compositions and producing same. No. 1,231,351; June 26; v. 239; p. 1120.
Hibbert, Harold, Pittsburgh, Pa., assignor to Union Carbide Company, New York, N. Y. Making acetic acid. No. 1,230,899; June 26; v. 239; p. 967.
Hibner, Philip D., Seattle, Wash. Means for regulating fuel mixtures for internal-combustion engines. No. 1,230,404; June 19; v. 239; p. 763.
Hickman, James T., Jr., Springport, Ind. Power-driven cultivator. No. 1,231,352; June 26; v. 239; p. 1121.
Hickman, Stephen C., Charlton, Iowa. Pulling-jack for motor-vehicles. No. 1,228,918; June 5; v. 239; p. 184.
Hickok, Arthur S. (See Myers, Hubert A., assignor.)
Hicks, Thomas W., assignor to Scientific Farming Machinery Company, Minneapolis, Minn. Planter. No. 1,231,353; June 26; v. 239; p. 1121.



Higgins, Patrick J., *et al.* (See Thompson, William L., assignor.)
Higgs, Henry, assignor to Klauder-Weldon Dyeing Machine Company, Amsterdam, N. Y. Dyeing-machine. No. 1,229,612; June 12; v. 239; p. 467.
Hikida, Jinkichi, Toyama-Ken, Japan. Tube-cleaner for marine boilers. No. 1,228,437; June 5; v. 239; p. 22.
Hildebrand, Edward P. (See Auckland and Hildebrand.)
Hildebrand, Harry D., Pittsburgh, Pa. Valve. No. 1,229,455; June 12; v. 239; p. 413.
Hildebrand, Harry D., Pittsburgh, Pa. Valve. No. 1,229,456; June 12; v. 239; p. 413.
Hildebrand, Harry D., Pittsburgh, Pa. Valve. No. 1,229,457; June 12; v. 239; p. 414.
Hildebrand, John, Bridgeport, Conn. Automatic boiler. No. 1,230,296; June 19; v. 239; p. 730.
Hill, Edward W., Chicago, Ill. Combined pencil and pencil-sharpener. No. 1,228,672; June 5; v. 239; p. 100.
Hill, John E., assignor to Art Products Company, Boston, Mass. Milk-bottle cap. No. 1,228,775; June 5; v. 239; p. 137.
Hill, Paul C., Los Angeles, Cal. Three-piece tubular coupling. No. 1,229,079; June 5; v. 239; p. 236.
Hill, William, Alexandria, La. Cotton-compress. No. 1,230,709; June 19; v. 239; p. 866.
Hill, William, Alexandria, La. Lawn-mower. No. 1,230,710; June 19; v. 239; p. 867.
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Hilliard, Frederick E., Brooklyn, N. Y., and W. G. Stevens, Palisades Park, N. J. Apparatus for cutting and polishing precious stones. No. 1,228,919; June 5; v. 239; p. 185.
Hilton, Ben F. and C. W., Joaquin, Tex. Hay-press. No. 1,231,354; June 26; v. 239; p. 1121.
Hilton, Charley W. (See Hilton, Ben F. and C. W.)
Hink, Charles A., Grinnell, Iowa. Electromagnetic valve-grinder. No. 1,230,900; June 26; v. 239; p. 968.
Hinrichsen, Edward E., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone signaling system. No. 1,230,578; June 19; v. 239; p. 824.
Hinrichsen, Edward E., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,231,024; June 26; v. 239; p. 1011.
Hinsdill, Charles A., Troy, N. Y. Lighting mechanism for machine-tables. No. 1,229,458; June 12; v. 239; p. 414.
Hitchcock, Ella M., and E. C. Holler, Los Angeles, Cal. Skirt-marker. No. 1,229,958; June 12; v. 239; p. 580.
Hite, Charles E., Philadelphia, Pa. Heat-insulating material and making same. No. 1,230,297; June 19; v. 239; p. 730.
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Hitt, Samuel E., Elyria, Ohio, and J. I. Peyton, Johnstown, Pa. Ingot-mold. No. 1,230,405; June 19; v. 239; p. 764.
Hjermstad, Martin M., Kenyon, Minn. Anchoring device. No. 1,230,711; June 19; v. 239; p. 867.
Hlavaty, Joseph, Oklahoma, Okla. Burglar-alarm. No. 1,229,080; June 5; v. 239; p. 236.
Hobart, Franklin G., and C. B. Jahnke, Beloit, Wis., assignors to Fairbanks, Morse & Company, Chicago, Ill. Suction-valve holder. No. 1,229,459; June 12; v. 239; p. 414.
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Hodgdon, Herbert W. (See Cleaver, Fremont J., assignor.)
Hodge, Harry B., Los Angeles, Cal. Lubricating-oil. No. 1,230,579; June 19; v. 239; p. 825.
Hodges, Chauncey W., Grand Rapids, Mich. Tire-chain. No. 1,229,613; June 12; v. 239; p. 468.
Hodo, Wesley A. J., Cleburne, assignor of one-half to B. D. Cramer, Fort Worth, Tex. Ginning, cleaning, and bleaching cotton. No. 1,230,298; June 19; v. 239; p. 730.
Hoeffer, Wilhelm, *et al.* (See Schneider, Daniel, assignor.)
Hoel, Howard M., and E. A. Shew, assignors to Utility Manufacturing Company, Frazee, Minn. Separator. No. 1,231,158; June 26; v. 239; p. 1057.
Hoerr, Louis A., St. Louis, Mo. Carline. No. 1,229,267; June 12; v. 239; p. 350.
Hoey, John, New York, N. Y. Milk-bottle receptacle. No. 1,229,268; June 12; v. 239; p. 350.
Hoffman, Peter A., Hastings, Minn. Envelop. No. 1,229,081; June 5; v. 239; p. 236.
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Holland, James J., assignor of one-half to G. H. Killian, Philadelphia, Pa. Atomizer. No. 1,229,615; June 12; v. 239; p. 468.
Holland-Letz, Lud, Chicago, Ill., assignor to International Harvester Company of New Jersey. Switch-controlling mechanism for self-rake reapers. No. 1,229,616; June 12; v. 239; p. 469.
Holland, Newman H., assignor to New Jersey Patent Company, West Orange, N. J. Phonograph. No. 1,229,749; June 12; v. 239; p. 512.
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Holley, James A. (See Teed, Charles W., assignor.)
Holley, James A. (See Teed and Holley.)
Hollis Automatic Traction Jack Company. (See Hollis, Otis A., assignor.)
Hollis, Otis A., assignor, by mesne assignments, to Hollis Automatic Traction Jack Company, Pittsburgh, Pa. Automobile tractor-vehicle. No. 1,229,082; June 5; v. 239; p. 236.
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Holmes, Thomas J., Chicago, Ill. Lubricator. No. 1,230,299; June 19; v. 239; p. 730.
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Holt, Frederick B., Antrobus, England, assignor to Westinghouse Electric and Manufacturing Company. Knife-blade switch. No. 1,229,750; June 12; v. 239; p. 512.
Holter, Ben, Whitefish, Mont. Rifle-barrel. No. 1,230,712; June 19; v. 239; p. 867.
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Homberger, Herman E. (See Barr, Andrew J., assignor.)
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Hood, Ernest K. (See Wolff and Hood.)
Hood Rubber Co. (See Glidden, Dorman, and Finch, assignors.)
Hood, William, Hempstead, N. Y. Block and tackle. No. 1,230,164; June 19; v. 239; p. 685.
Hoofnagle, William T., Glen Ridge, N. J., assignor to Electro-Chemical Products Company, New York, N. Y. Refrigerating. No. 1,230,482; June 19; v. 239; p. 790.
Hoofnagle, William T., Glen Ridge, N. J., assignor to Electro-Chemical Products Company, New York, N. Y. Refrigerating apparatus. No. 1,230,483; June 19; v. 239; p. 791.
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Hoopes, William H. (See Fritch and Hoopes, assignors.)
Hope-Jones, Cecil, administrator. (See Hope-Jones, Robert.)
Hope-Jones, Robert, deceased, North Tonawanda, N. Y., C. Hope-Jones, administrator. Shutter for organ swell-boxes. No. 1,230,165; June 19; v. 239; p. 685.
Horan, Arthur J., Detroit, and J. H. Gray, Highland Park, Mich. Metal wheel-block. No. 1,228,438; June 5; v. 239; p. 22.
Horn, Charles, Millbourne, Pa., assignor, by mesne assignments, to Harvey Hubbell, Inc., Bridgeport, Conn. Indicating electric connector. No. 1,229,460; June 12; v. 239; p. 415.
Horn, Charles W., Chicago, Ill. Keyless lock. No. 1,229,269; June 12; v. 239; p. 350.
Horner, Leon H., assignor to The Whitin Machine Works, Whitinsville, Mass. Spinning and twisting machine. No. 1,230,300; June 19; v. 239; p. 731.
Horton, Allen A., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 1,229,461; June 12; v. 239; p. 415.
Horton, Bryson D., Detroit, Mich. Electrical switch. No. 1,230,407; June 19; v. 239; p. 765.
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Hoskyns, William J., Detroit, Mich., assignor to F. E. Smith, Indianapolis, Ind. Vehicle-top. No. 1,230,580; June 19; v. 239; p. 825.
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Hougas, Willie E., and L. J. Midgorden, Lamoni, Iowa. Auxiliary radius-rod. No. 1,230,713; June 19; v. 239; p. 867.
Houge, Arnold E., Badger, Iowa. Straining device for eaves-spoutings. No. 1,231,356; June 26; v. 239; p. 1122.
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House, Henry A., Bridgeport, Conn. Paper receptacle. No. 1,229,751; June 12; v. 239; p. 512.
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Howard, Frank W., New York, N. Y. Waterproof cloak. No. 1,229,270; June 12; v. 239; p. 350.
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Howd, Alvaha J., Nampa, Idaho. Convertible freight-car. No. 1,230,484; June 19; v. 239; p. 791.
Howd, Alvah J., assignor of seventy one-hundredths to E. H. Dewey and five one-hundredths to L. E. McDermott, Nampa, Idaho. Rotary engine. No. 1,229,179; June 5; v. 239; p. 271.
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Howe, Oliver J., Brockton, Mass. Forepart for boot and shoe trees. No. 1,231,359; June 26; v. 239; p. 1123.
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Howe, Winthrop K., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Circuit-controller. (Reissue.) No. 14,310; June 5; v. 239; p. 281.
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Hoyt, Gabriel P. B., New York, N. Y. Wheel. No. 1,228,557; June 5; v. 239; p. 62.
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Hribar, Joe, Waukegan, Ill. Clutch mechanism. No. 1,228,673; June 5; v. 239; p. 101.
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Hubbell, Harvey, Bridgeport, Conn. Electric signaling system. No. 1,229,463; June 12; v. 239; p. 416.
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Huff, Russell, assignor to Packard Motor Car Company, Detroit, Mich. Hydrocarbon-motor. No. 1,228,558; June 5; v. 239; p. 63.
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Hughes, Howard R., assignor to Hughes Tool Company, Houston, Tex. Rotary boring-drill. No. 1,231,159; June 26; v. 239; p. 1058.
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Hult, Carl A. and O. W., Stockholm, Sweden. Driving device for boats. No. 1,228,776; June 5; v. 239; p. 137.
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Humber, Gustave, Denver, Colo. Arc-lamp. No. 1,228,443; June 5; v. 239; p. 23.
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Humphrey Gas Pump Company. (See Humphrey, Herbert A., assignor.)
Humphrey, Herbert A., London, England, assignor to Humphrey Gas Pump Company. Apparatus for utilizing heat energy. No. 1,228,444; June 5; v. 239; p. 24.
Humphries, Chad H., Kearney, N. J., assignor to The Commercial Research Company, Long Island City, N. Y. Metal article and making same. No. 1,229,960; June 12; v. 239; p. 581.
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Hunt, John H., assignor to Packard Motor Car Company, Detroit, Mich. Signal device for motor-vehicles. No. 1,231,361; June 26; v. 239; p. 1124.
Hunt, John H., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Company. Engine-starting system. No. 1,231,362; June 26; v. 239; p. 1124.
Hunt, John H., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Company. Engine-starting system. No. 1,231,363; June 26; v. 239; p. 1124.
Hunter, Guy, Billings, Mont. Spring-wheel. No. 1,229,618; June 12; v. 239; p. 469.
Hunter, Harry W., and M. W. Longfellow, assignors to The Baltimore Gas Appliance and Manufacturing Co., Baltimore, Md. Gas-range. No. 1,230,408; June 19; v. 239; p. 765.
Hunter, Lewis C., Detroit, Mich. Equipment for clothes-closets. No. 1,228,560; June 5; v. 239; p. 63.
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Huntington, Cory O., Pe Ell, Wash., assignor of one-half to G. G. Seely, Portland, Oreg. Underdog for sawmill-carriage knees. No. 1,231,161; June 26; v. 239; p. 1059.
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Huntsman, Edward L., Rochester, Tex. Cotton-gin. No. 1,229,084; June 5; v. 239; p. 237.
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Husby, Ingvar, St. Paul, Minn. Leveling instrument. No. 1,231,162; June 26; v. 239; p. 1059.
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Huxley, Henry M., Evanston, assignor to Economy Fuse & Manufacturing Company, Chicago, Ill. Inclosed safety-fuse. No. 1,231,364; June 26; v. 239; p. 1124.
Hyland, Charles, assignor to Flannery Bolt Company, Pittsburgh, Pa. Flexible stay-bolt connection for boilers. No. 1,229,961; June 12; v. 239; p. 582.
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Ickes, Peter C., assignor to E. E. Garard, Chanute, Kans. Collapsible crate. No. 1,230,830; June 19; v. 239; p. 905.
Ickes, Peter C., assignor to E. E. Garard, Chanute, Kans. Collapsible crate. No. 1,230,831; June 19; v. 239; p. 905.
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Illinois Watch Case Co. (See Johnson, John E., assignor.)
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Ingram, Lewis, Fairview, W. Va. Dirigible-lamp mechanism. No. 1,229,752; June 12; v. 239; p. 513.
Inglis, Charles E., Grantchester, near Cambridge, England. Jointing device for the members of military bridges and the like. No. 1,231,365; June 26; v. 239; p. 1125.
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International Harvester Company of New Jersey. (See Benjamin, Bert R., assignor.)
International Harvester Company of New Jersey. (See Holland-Letz, Lud, assignor.)
International Harvester Company of New Jersey. (See Mowry, Edward, assignor.)
International Harvester Company of New Jersey. (See Osterholm, William C., assignor.)
International Harvester Company of New Jersey. (See Raney, Clemma R., assignor.)
International Harvester Corporation. (See Burger, Leopold F., assignor.)
International Harvester Corporation. (See Robinson, Charles W., assignor.)
International Harvester Corporation. (See Tinsman, Samuel H., assignor.)
International Money Machine Company. (See White, Nelson, assignor.)
International Process Company. (See Waern, Adolph W., assignor.)





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Intertype Corporation. (See Sperry, Samuel E., assignor.)
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J. Edward Ogden Company, The. (See Du Bosque, Francis L., assignor.) (Reissue.)
Jabez Burns & Sons. (See Schnuck and Burns, assignors.)
Jack, Clarence E., Louviere, Colo., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Cartridge-loading machine. No. 1,229,467; June 12; v. 239; p. 417.
Jack, Robert K., Nutley, N. J. Duplex centrifugal pump. No. 1,229,274; June 12; v. 239; p. 352.
Jackson, James D., Sydney, New South Wales, Australia. Continuous-flow water-heater. No. 1,230,167; June 19; v. 239; p. 686.
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Jackson, Wilber. (See Kennedy, Charles W., assignor.)
Jacobs, Ernest H., Schenectady, N. Y., assignor to General Electric Company. Electric switch. No. 1,231,367; June 26; v. 239; p. 1126.
Jacobs, Siegmund, assignor of one-third to C. Petrasek, Cicero, Ill. Liquid coating composition. No. 1,229,964; June 12; v. 239; p. 582.
Jacomini, Marius P., assignor to General Briquetting Company, Chicago, Ill. Apparatus for exerting pressures and impacts and method of operating the same. No. 1,230,486; June 19; v. 239; p. 792.
Jaenichen, Louis, assignor to The Standard Computing Scale Company, Detroit, Mich. Scale. No. 1,228,927; June 5; v. 239; p. 187.
Jaenichen, Louis, assignor to The Standard Computing Scale Company, Detroit, Mich. Thermostat for scales. No. 1,231,026; June 26; v. 239; p. 1012.
Jaggard, John, Collingswood, N. J. Autocycle attachment. No. 1,231,163; June 26; v. 239; p. 1059.
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Jahns, William H., O. A. Knox, and P. A. Wilcox, Los Angeles, Cal. Valve-lock. No. 1,231,164; June 26; v. 239; p. 1060.
Jakeway, Bernard, Harrison, Mich. Trace. No. 1,231,547; June 26; v. 239; p. 1184.
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James, Thomas L., Higher Tranmere, and W. H. Beeson, Rock Ferry, England. Grain-sampler. No. 1,229,273; June 12; v. 239; p. 352.
Janes, Alonzo, Beirne, Ark. Lock. No. 1,228,445; June 5; v. 239; p. 24.
Janes, Jessie, Bellevue, Ky., assignor of one-half to C. R. Hall, Cincinnati, Ohio. Dust-collector. No. 1,228,561; June 5; v. 239; p. 64.
Jaszkul, John, Maspeth, N. Y. Metal barrel. No. 1,231,368; June 26; v. 239; p. 1127.
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Jeffrey, Daniel F. (See Poteet and Jeffrey.)
Jenkins, Alexander F., assignor to The Alexander Milburn Company, Baltimore, Md. Oxyacetylene-torch. No. 1,228,676; June 5; v. 239; p. 103.
Jenkins, Charles F., assignor to The Graphoscope Company, Washington, D. C. Motion-picture apparatus. No. 1,229,275; June 12; v. 239; p. 353.
Jenkins, Harry R., Eltham, New Zealand. Milking-machine teat-cup. No. 1,231,166; June 26; v. 239; p. 1060.
Jenkins, John, Dalmuir, Scotland. Ventilator-cowl for ships. No. 1,228,677; June 5; v. 239; p. 103.
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Jernigan, Henry R., Ariton, Ala. Peanut sheller or huller. No. 1,229,966; June 12; v. 239; p. 583.
Jesurun, Edward. (See Lyttle, Rowland, assignor.)
Jimerson, Francis A., Athens, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Throttle-valve for pneumatic tools. No. 1,229,276; June 12; v. 239; p. 353.
Jocksch, Velmer H., Greensboro, Ala. Peanut-digger. No. 1,228,562; June 5; v. 239; p. 64.
Joehrendt, Edward F., Chicago, Ill. Feeding mechanism for inking-ribbons for printing-presses. No. 1,228,928; June 5; v. 239; p. 187.
Johannesen, Helge, Brooklyn, N. Y. Apparatus for making leggings. No. 1,229,277; June 12; v. 239; p. 354.
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Johnsen, Jonas A., Christiania, Norway. Device for transmitting or transforming micromovements. No. 1,229,619; June 12; v. 239; p. 470.
Johnson, Andrew J., Cleveland, Ohio. Burner. No. 1,231,369; June 26; v. 239; p. 1127.
Johnson, Anna S., Pierce City, Mo. Bed-chair. No. 1,230,301; June 19; v. 239; p. 731.
Johnson, Antrum W., Warrenton, Mo. Wire-cloth rack. No. 1,229,086; June 5; v. 239; p. 239.
Johnson, Billie, Temple, Tex. Cotton-picking needle. No. 1,230,168; June 19; v. 239; p. 687.
Johnson, Charles A., Galveston, Tex. Flexible conduit. No. 1,229,087; June 5; v. 239; p. 239.
Johnson, Charles C. (See Buchanan and Johnson.)
Johnson, Charles W., Orange, Mass. Fire-escape. No. 1,230,169; June 19; v. 239; p. 687.
Johnson, Edward, assignor to L. S. Hackney, St. Paul, Minn. Oil-separator. No. 1,230,581; June 19; v. 239; p. 825.
Johnson, Eldridge R., Merion, Pa., assignor to Victor Talking Machine Company. Cutter for sound-reproducing styli. No. 1,229,469; June 12; v. 239; p. 418.
Johnson, Eldridge R., Merion, Pa., assignor to Victor Talking Machine Company. Tone-modulating device for talking-machines. No. 1,231,370; June 26; v. 239; p. 1127.
Johnson, Eric, Seattle, Wash. Lumber-piler. No. 1,231,027; June 26; v. 239; p. 1012.
Johnson, Frank P., Danville, Pa. Tire-fastening device. No. 1,230,902; June 26; v. 239; p. 968.
Johnson, George A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-arm for railway-cars. No. 1,228,563; June 5; v. 239; p. 64.
Johnson, Harry A., assignor to The Superior Metal Products Company, Elyria, Ohio. Saddle for motor-cycles or bicycles. No. 1,229,468; June 12; v. 239; p. 418.
Johnson, James P., Toronto, Ontario, Canada. Automobile-washer. No. 1,230,072; June 12; v. 239; p. 617.
Johnson, John C., Cromwell, Iowa. Transmission mechanism. No. 1,229,088; June 5; v. 239; p. 239.
Johnson, John E., assignor to Illinois Watch Case Co., Elgin, Ill. Case for cigarettes and the like. No. 1,229,967; June 12; v. 239; p. 583.
Johnson, John S. (See Ashelman and Johnson.)
Johnson, Joseph E., Jr., New York, N. Y. Metallurgical process. No. 1,231,259; June 26; v. 239; p. 1090.
Johnson, Joseph E., Jr., Hartsdale, N. Y. Producing ferrosilicon of high silicon content in blast-furnaces. No. 1,231,260; June 26; v. 239; p. 1090.
Johnson, Lewis H., Bloomfield, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,230,582; June 19; v. 239; p. 825.
Johnson, Manfred, Naugatuck, assignor to The Bristol Company, Waterbury, Conn. Automatic compensating device. No. 1,228,675; June 5; v. 239; p. 103.
Johnson, Martin N., Moline, Ill. Feed-trough. No. 1,228,929; June 5; v. 239; p. 187.
Johnson, Mason L., *et al.* (See Blevins, Kilgore, and Blevins, assignors.)
Johnson, Morton L., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Telephony. No. 1,230,170; June 19; v. 239; p. 687.
Johnson, Nicolai B., Chicago, Ill. Athletic shoe. No. 1,229,278; June 12; v. 239; p. 354.
Johnson, Nicolas, Eureka, Cal. Lumber-guide. No. 1,229,279; June 12; v. 239; p. 354.
Johnson, Robert M. T., Binghamton, N. Y. Motor-vehicle body. No. 1,230,715; June 19; v. 239; p. 868.
Johnson, Victor S. (See Davis and Johnson.)
Johnson, Walter J., Owensville, Ind. Disk-harrow cleaner. No. 1,230,716; June 19; v. 239; p. 868.
Johnson, Willis, Gregory, Mo. Hat-pin-point protector. No. 1,229,089; June 5; v. 239; p. 240.
Johnston, Amedee B., San Francisco, Cal. Train cash-register. No. 1,230,171; June 19; v. 239; p. 688.
Johnston, Clarence L. (See Brown and Johnston.)
Johnston, John A., Springfield, Mass. Spray-nozzle. No. 1,230,487; June 19; v. 239; p. 792.
Johnston, Paul H., Davenport, Iowa. Ophthalmic mounting. No. 1,230,488; June 19; v. 239; p. 793.
Joleen, Nels, Chicago, Ill. Electric control system. No. 1,229,470; June 12; v. 239; p. 419.
Jonasson, John E., Bow, Wash. Irrigator. No. 1,228,777; June 5; v. 239; p. 138.
Jones, Aaron J., Ancon, Canal Zone. Pliers. No. 1,231,167; June 26; v. 239; p. 1060.
Jones, Alva D., Philadelphia, Pa. Talking-machine cabinet. No. 1,228,446; June 5; v. 239; p. 24.
Jones, David R., Red Wing, Minn. Dust-collector. No. 1,231,371; June 26; v. 239; p. 1128.
Jones, El Dorado, and R. P. Upton, Moline, Ill., assignors, by mesne assignments, to Cook Muffler Co. Exhaust attachment for gas-engines. No. 1,229,471; June 12; v. 239; p. 419.
Jones, Eli, assignor of one-half to R. A. Lewis, Lexington, Tenn. Lock-washer. No. 1,228,679; June 5; v. 239; p. 104.
Jones, Evan B., La Grande, Oreg. Glove. No. 1,231,168; June 26; v. 239; p. 1061.
Jones, George M. (See Aaron and Jones.)
Jones, Henry D., assignor to The Kelly-Springfield Road Roller Company, Springfield, Ohio. Scarifying device for road-engines. No. 1,230,302; June 19; v. 239; p. 731.
Jones, Ira, Pottstown, Pa. Detachable coffee-pot handle. No. 1,231,372; June 26; v. 239; p. 1128.

Jones, John D., Walla Walla, Wash. Self-oiling bushing. No. 1,230,823; June 19; v. 239; p. 904.
Jones, Joshua J., Schenectady, N. Y. Throttle-valve mechanism for locomotives. No. 1,229,968; June 12; v. 239; p. 583.
Jones, Mary B., Springfield, Ohio. Cake-pan. No. 1,229,280; June 12; v. 239; p. 354.
Jones, William H., Ottumwa, Iowa. Stump-burning device. No. 1,231,535; June 26; v. 239; p. 1180.
Jonsson, Olaf, Milwaukee, Wis. Draft device. No. 1,231,373; June 26; v. 239; p. 1128.
Jordan, Cornelius, Weehawken, N. J., assignor to E. H. Kluge Weaving Company, New York, N. Y. Mechanism for packaging labels and the like. No. 1,231,028; June 26; v. 239; p. 1013.
Josse, Emil, and W. Gensecke, Charlottenburg, Germany. Apparatus for cooling air, liquids, vapors, gases, and the like. No. 1,228,930; June 5; v. 239; p. 187.
Jovanovitz, Rudolf, and A. Lambert, New England, N. D. Milk-strainer. No. 1,231,374; June 26; v. 239; p. 1128.
Julian-Beggs Signal Company. (See Julian and Morris, assignors.)
Julian, Marsena R., assignor to Julian Signal Company, Birmingham, Ala. Block-signal system. No. 1,230,903; June 26; v. 239; p. 968.
Julian, Marsena R., and J. V. Morris, Birmingham, Ala., assignors to Julian-Beggs Signal Company, Terre Haute, Ind. Circuit-breaker for block-signal systems. No. 1,231,169; June 26; v. 239; p. 1061.
Julian Signal Company. (See Julian, Marsena R., assignor.)
Julien, Edwin P., Seattle, Wash. Curing, packing, and preserving fish. No. 1,229,472; June 12; v. 239; p. 419.
Julien, Oscar C., Montreal, Wis. Drill-forming die. No. 1,230,303; June 19; v. 239; p. 732.
Julius Kayser & Co. (See Decker and Myers, assignors.)
Juneau, Charles G. (See Petrau and Juneau.)
Junod, André, New York, N. Y. Automatic stop for talking-machines. No. 1,228,564; June 5; v. 239; p. 65.
Justrite Manufacturing Company. (See Hansen, Augie L., assignor.)
K. W. Ignition Company, The. (See Williams, Joseph A., assignor.)
Kabo Corset Co. (See Florsheim and Orewiler, assignors.)
Kahn, Silas, New York, N. Y. Automobile-top. No. 1,230,904; June 26; v. 239; p. 969.
Kaisling, William, assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Knife-switch relay. No. 1,228,778; June 5; v. 239; p. 138.
Kaisling, William, assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Operator's key. No. 1,230,410; June 19; v. 239; p. 765.
Kalamazoo Loose Leaf Binder Co. (See Wigginton, George P., assignor.)
Kalteyer, Frederick J., Philadelphia, Pa. Razor-sharpening device. No. 1,230,717; June 19; v. 239; p. 868.
Kaunastein, Myer, New York, N. Y. Ash-sifter. No. 1,228,779; June 5; v. 239; p. 138.
Kamp, Albert, Niagara Falls, N. Y. Variable sliding-cone feed for woodworking machinery. No. 1,230,718; June 19; v. 239; p. 869.
Kane, Thomas H., Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich. Window. No. 1,228,780; June 5; v. 239; p. 139.
Kane, William, Philadelphia, Pa. Boiler structure. No. 1,231,375; June 26; v. 239; p. 1128.
Karl, Edwin, Superior, Wis. Safety-lock for brake-shoes. No. 1,229,281; June 12; v. 239; p. 355.
Karle, John D., Newark, N. J., assignor to The Singer Manufacturing Company. Sewing-machine ruffler. No. 1,231,170; June 26; v. 239; p. 1061.
Karolie, John, and G. Csvercsko, Flint, Mich. Quick-action vise. No. 1,229,753; June 12; v. 239; p. 513.
Karsten, Joseph; Choklo, Minn. Barrel-lifting device. No. 1,229,090; June 5; v. 239; p. 240.
Kaschenbach, John, Wilkes-Barre, Pa. Bullet-lubricator. No. 1,229,969; June 12; v. 239; p. 584.
Kasley, Alexander T., Swissvale, Pa. Heat-engine. No. 1,231,376; June 26; v. 239; p. 1129.
Kasley, Alexander T., Swissvale, Pa., assignor to The Westinghouse Machine Company. Governor. No. 1,231,261; June 26; v. 239; p. 1090.
Katako, Wasaku, Los Angeles, Cal. Carpet-sweeper. No. 1,230,489; June 19; v. 239; p. 793.
Katchmazenski, Frank X., assignor of one-half to H. Jedlicki, Foley, Minn. Wrench. No. 1,231,262; June 26; v. 239; p. 1091.
Kate, John H., assignor to X Ray Incubator Company, Des Moines, Iowa. Gas and smoke sealing device for incubators. No. 1,229,091; June 5; v. 239; p. 240.
Kate, John H., assignor to X Ray Incubator Company, Des Moines, Iowa. Incubator. No. 1,231,029; June 26; v. 239; p. 1013.
Katzinger, Edward and S. C., assignors to Edward Katzinger Company, Chicago, Ill. Baking-pan. No. 1,229,282; June 12; v. 239; p. 355.
Katzinger, Sidney C. (See Katzinger, Edward and S. C.)
Kauffman, David, Sr., Pottstown, Pa. Puddle-billet rolling and finishing mill. No. 1,229,283; June 12; v. 239; p. 355.
Kaufman, Adolph G., New York, N. Y. Burner-head and shade-holder for lamps. No. 1,230,719; June 19; v. 239; p. 869.
Kavanagh, Edward H., *et al.* (See Scott, Jacob R., assignor.)
Kawalle, William E., Manitowoc, Wis. Self-propelled vehicle. No. 1,231,377; June 26; v. 239; p. 1129.
Kaye, George N. (See Shepherd, George R., assignor.)
Kean, Ida, administratrix. (See Kean, Joseph.)
Kean, Joseph, deceased; I. Kean, administratrix, Des Moines, Iowa. Valve. No. 1,228,565; June 5; v. 239; p. 65.
Keating, Henry E. (See Allen, William H., assignor.)
Keenan, Patrick S., Denver, Colo. Automatic make-and-break device. No. 1,229,473; June 12; v. 239; p. 420.
Kehoe, Charles S., *et al.*, executors. (See Barratt, William T.)
Kelley, Arthur F., administrator. (See Woodland, Frank O.)
Kelley, Edward W., Worcester, Mass. Fleeced slipper-sole. No. 1,231,263; June 26; v. 239; p. 1091.
Kelley, Jennie, Chicago, Ill. Adjustable wheeled receptacle for golf-clubs. No. 1,231,030; June 26; v. 239; p. 1013.
Kelley, Joel R., Owasso, Okla. Cultivator attachment. No. 1,229,970; June 12; v. 239; p. 584.
Kellogg, Daniel P., assignor of one-half to P. Sheedy, Los Angeles, Cal. Car-roof. No. 1,230,720; June 19; v. 239; p. 869.
Kellogg Switchboard & Supply Company. (See Kaisling, William, assignor.)
Kellogg Switchboard and Supply Company. (See Kaisling, William, assignor.)
Kellogg Switchboard & Supply Company. (See Stroud, Harold D., assignor.)
Kellogg Switchboard and Supply Company. (See Winston, Charles S., assignor.)
Kelly, Eduardo V., Vedado, Habana, Cuba. Illuminated pencil. No. 1,230,721; June 19; v. 239; p. 870.
Kelly, Harry L., Washington, D. C. Valve for flushing systems. No. 1,231,378; June 26; v. 239; p. 1130.
Kelly-Springfield Road Roller Company, The. (See Jones, Henry D., assignor.)
Kempel, Arthur B., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Porous rubber fabric and producing the same. No. 1,229,284; June 12; v. 239; p. 358.
Kemper, James R., Elkins, W. Va. Bed-rail. No. 1,230,490; June 19; v. 239; p. 793.
Kempner, Solomon S. (See Martel and Rascoe, assignors.)
Kendall, William G., Newark, N. J. Vanity-box. No. 1,229,285; June 12; v. 239; p. 356.
Kendall, William G., Newark, N. J. Combination vanity-case. No. 1,229,286; June 12; v. 239; p. 356.
Kennedy, Charles W., Clarence, assignor of one-half to W. Jackson, Macon, Mo. Four-wheel drive for automobiles. No. 1,229,971; June 12; v. 239; p. 584.
Kennedy, Joseph, assignor to The Clements Company, New York, N. Y. Wall-socket. No. 1,229,287; June 12; v. 239; p. 356.
Kenny, Luther T., Hawarden, Iowa. Fastener for sliding doors. No. 1,230,722; June 19; v. 239; p. 870.
Kent, Frank W., London, England. Photographic printing paper and transfer process. No. 1,228,680; June 5; v. 239; p. 104.
Kent Motors Company. (See Fekete, Stephen L., assignor.)
Kenyon, Harrie B., Detroit, assignor to J. M. Richardson, Highland Park, Mich. Headlight. No. 1,229,474; June 12; v. 239; p. 420.
Kenyon, Otis A., New York, N. Y. Electric welding. No. 1,229,288; June 12; v. 239; p. 357.
Keplinger, George W., Nortonville, Ky. Sad-iron heater. No. 1,230,411; June 19; v. 239; p. 766.
Keppel, Jesse E., St. Louis, Mo. Gage. No. 1,229,289; June 12; v. 239; p. 357.
Ker, Robert A., London, England. Fountain-pen. No. 1,228,781; June 5; v. 239; p. 139.
Kerivan, George E., Newton, Mass. Mattress. No. 1,228,783; June 5; v. 239; p. 140.
Kern, Charles J., Buffalo, N. Y., assignor to Inventors Product Company, Inc. Towel-holder. No. 1,229,475; June 12; v. 239; p. 421.
Kernohan, Robert B., and N. C. Rendleman, Pittsburgh, Pa. Universal mill. No. 1,228,782; June 5; v. 239; p. 139.
Kesses, Charles, New York, N. Y. Combination photo and type printing machine. No. 1,228,784; June 5; v. 239; p. 140.
Kessler, Otto, Passaic, N. J. Swivel attachment-plug. No. 1,231,379; June 26; v. 239; p. 1130.
Kettering, Charles F., and W. A. Chryst, Dayton, Ohio., assignors to The Dayton Engineering Laboratories Co. Electric machine. No. 1,229,754; June 12; v. 239; p. 513.
Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Ignition device. No. 1,231,264; June 26; v. 239; p. 1091.
Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Control for electrical systems. No. 1,231,265; June 26; v. 239; p. 1092.
Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Company. Engine-starting device. No. 1,231,266; June 26; v. 239; p. 1092.
Keus, Henri I. (See Van Swoay and Keus.)
Keyoke Railway Equipment Company. (See Murray, George C., assignor.)
Keystone Driller Company. (See Downie, Robert M., assignor.)



Kidwell, John A., Columbus, Ohio. Mail-bag lock. No. 1,229,290; June 12; v. 239; p. 358.
Kiefer, James H., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Automatic circuit-controlling device. No. 1,230,172; June 19; v. 239; p. 688.
Kiel, Frank. (See Geminden and Kiel.)
Kielkowicz, Pawel. (See Puchalski and Kielkowicz.)
Kiernan, Thomas F., Salida, Cal. Headlight-dimmer. No. 1,230,304; June 19; v. 239; p. 732.
Kiersey, Thomas. (See Ebrill and Kiersey.)
Kilbourn Manufacturing Corporation. (See Smith, William E., assignor.)
Kilburn, John E., assignor to Hale and Kilburn Company, Philadelphia, Pa. Reversible car-seat. No. 1,228,785; June 5; v. 239; p. 140.
Kilby, Herbert N., Cleveland, Ohio. Filter. No. 1,229,755; June 12; v. 239; p. 514.
Kilby, Herbert N., assignor to J. F. Kilby and J. Gehring, Cleveland, Ohio. Brick manufacture. No. 1,231,267; June 26; v. 239; p. 1093.
Kilby, Joseph F., *et al.* (See Kilby, Herbert N., assignor.)
Kilgore, Charles F. (See Blevins, Kilgore, and Blevins.)
Killian, Albert T., Buffalo, N. Y. Thrust-bearing. No. 1,228,567; June 5; v. 239; p. 66.
Killian, George H. (See Holland, James J., assignor.)
Kilpatrick, Earl R. (See Hawk, Lewis E., assignor.)
Kimble, Fred, assignor of one-half to A. W. Bruner, Los Angeles, Cal. Ball-trap. No. 1,229,092; June 5; v. 239; p. 240.
Kincade, Elmer C., assignor of one-half to J. F. Fisher, Beaumont, Tex. Safety-lamp. No. 1,228,566; June 5; v. 239; p. 66.
Kinch, Earl L., assignor to Waterbury Buckle Company, Waterbury, Conn. Marking-ticket. No. 1,230,412; June 19; v. 239; p. 766.
Kinch, George E., Quirindi, New South Wales, Australia. Night-soil pan and destroyable lining therefor. No. 1,230,414; June 19; v. 239; p. 766.
Kindling, Louis, Milwaukee, Wis. Sanding-wagon No. 1,231,269; June 26; v. 239; p. 1094.
King, Eustachius J., Philadelphia, Pa. Switch construction. No. 1,229,972; June 12; v. 239; p. 584.
King, Harry W. (See Hawkins, Cyrus, assignor.)
King, Isaac W., assignor to The Automatic Advertising & Sales Company, Kansas City, Mo. Roll-printing device. No. 1,229,476; June 12; v. 239; p. 421.
King, L. E. (See Rowe, George H., assignor.)
King & Wotherspoon. (See Ebeling, Frederick W., assignor.)
Kinghan, Fredrick A., Eagle Grove, Iowa. Horseshoe. No. 1,229,973; June 12; v. 239; p. 585.
Kingsbury, Albert, Pittsburgh, Pa. Thrust-bearing. No. 1,229,291; June 12; v. 239; p. 358.
Kingsbury, Harry T., Keene, N. H. Spring-motor for mechanical toys. No. 1,229,974; June 12; v. 239; p. 585.
Kingsbury, Harry T., Keene, N. H. Toy ladder-truck. No. 1,229,975; June 12; v. 239; p. 585.
Kinkead, Robert S., assignor to W. B. Ewing, Minneapolis, Minn. Variable transmission mechanism for tractors. No. 1,231,031; June 26; v. 239; p. 1014.
Kinne, Tempel L., assignor to The Murray Company, Dallas, Tex. Boll breaker and cleaner. No. 1,231,171; June 26; v. 239; p. 1062.
Kinsfather, George C., Livingston, Mont. Clamping device. No. 1,229,093; June 5; v. 239; p. 241.
Kirk, Frank M., *et al.* (See Prigan, Ernest W., assignor.)
Kirk, Jason E., Christiansburg, Va., assignor to Triangle Ventilation Corporation. Ventilating apparatus. No. 1,228,931; June 5; v. 239; p. 188.
Kirkby, Jacques J., Clymer, N. Y. Can-straightening machine. No. 1,229,292; June 12; v. 239; p. 358.
Kirkpatrick, Willis B., assignor to Independent Ice Company of Baltimore City, Baltimore, Md. Agitating water in making ice. (Reissue.) No. 14,321; June 26; v. 239; p. 1185.
Kishi, Kazuta, Tokyo, Japan. Producing artificial silk. No. 1,231,172; June 26; v. 239; p. 1062.
Kissane, John F. and T. J., Detroit, Mich.; said John F. Kissane assignor to said T. J. Kissane. Elevator attachment for vehicles. No. 231,380; June 26; v. 239; p. 1131.
Kissane, Thomas J. (See Kissane, John F. and T. J.)
Kitchen, Joseph M. W., East Orange, N. J. Food composition. No. 1,230,091; June 12; v. 239; p. 623.
Kite, Charles F., and M. H. Skelt, London, England. Rotary pump and fan for water and air and other fluids. No. 1,231,381; June 26; v. 239; p. 1131.
Kladiva, Alois, Kenosha, Wis. Thermostatic regulator for incubators. No. 1,228,568; June 5; v. 239; p. 66.
Klages, Reynold E. (See Sexton and Klages.)
Klais, Michael, Central City, Colo. Paper-hanger's prop. No. 1,229,976; June 12; v. 239; p. 586.
Klauder-Weldon Dyeing Machine Company. (See Higgs, Henry, assignor.)
Klay, Abraham B., Modesto, Cal. Dairy-barn. No. 1,230,305; June 19; v. 239; p. 732.
Klay, Abraham B., Modesto, Cal. Ware-truck. No. 1,230,306; June 19; v. 239; p. 733.
Kleckhefer Box Company. (See Simpson, Frost V., assignor.)
Klein, Jacob J., Kearney, Nebr. Road-drag. No. 1,230,723; June 19; v. 239; p. 870.
Kleinberg, William, New York, N. Y. High-frequency therapeutical apparatus. No. 1,230,905; June 26; v. 239; p. 969.
Klemme, Ernst F., Milwaukee, Wis. Ventilator for water-closets. No. 1,228,786; June 5; v. 239; p. 141.
Klenk, John C., and J. J. Cronin, Chicago, Ill. Supporting device. No. 1,229,977; June 12; v. 239; p. 586.
Klimo, Gustav, assignor to The Theodor Kundtz Company, Cleveland, Ohio. Cabinet for sewing-machines, type-writers, &c. No. 1,229,620; June 12; v. 239; p. 470.
Klingensmith, Edmund L., Pierson, Iowa. Reinforced-concrete door and window frame construction. No. 1,229,293; June 12; v. 239; p. 359.
Kluft, Peter N., Amsterdam, Netherlands. Tool-holder. No. 1,230,724; June 19; v. 239; p. 870.
Kluge, Otto, Golconda, Ill. Vertical cutter attachment for mowing-machines. No. 1,229,756; June 12; v. 239; p. 514.
Knackstedt, Louis C. (See Peterson and Knackstedt.)
Knapp, George O., Newark, N. J. Reed-holder. No. 1,229,757; June 12; v. 239; p. 514.
Knapp, Jacob A., Tremont, Ill. Take-up device for lamp-cords. No. 1,230,414; June 19; v. 239; p. 766.
Knapp, Joseph K., North Platte, Nebr. Photographic-printing apparatus. No. 1,231,173; June 26; v. 239; p. 1062.
Knauff, George C., Chicago, Ill. Circuit-controller. No. 1,231,268; June 26; v. 239; p. 1093.
Knee, Louis, New York, N. Y. Felt welt and making same for gloves and the like. No. 1,231,382; June 26; v. 239; p. 1131.
Knerr, Benjiman F., Gresham, Nebr. Hog-oiler. No. 1,229,094; June 5; v. 239; p. 241.
Knisely, William S., Benton Harbor, Mich. Car and air-hose coupling. No. 1,228,569; June 5; v. 239; p. 67.
Knittel, Andrew W., New Castle, Pa. Curtain-stretcher. No. 1,229,621; June 12; v. 239; p. 470.
Knox, Luther L., Avalon, Pa. Rendering-kettle. No. 1,229,758; June 12; v. 239; p. 515.
Knox, Oscar A. (See Jahns, Knox, and Wilcox.)
Knudsen, Peder M., Brooklyn, N. Y. Manicuring device. No. 1,231,270; June 26; v. 239; p. 1094.
Kny-Scheerer Corporation, The. (See Berry, William D., assignor.)
Kny-Scheerer Corporation, The. (See Winter, William A., assignor.)
Kobert, Frank P., Amityville, N. Y., assignor to International Electric Riveter Company. Electric riveting apparatus. (Reissue.) No. 14,319; June 19; v. 239; p. 909.
Koenig, Louis, New York, N. Y. Tire-shield. No. 1,228,447; June 5; v. 239; p. 24.
Kolistede, Alfred G., New York, N. Y., assignor to Rotary Meter Company. Pressure-correcting meter. No. 1,230,583; June 19; v. 239; p. 826.
Komorous, Joseph, assignor to Parisian Novelty Company, Chicago, Ill. Powder-receptacle. No. 1,231,383; June 26; v. 239; p. 1131.
Komorous, Joseph, assignor to Parisian Novelty Company, Chicago, Ill. Powder-receptacle. No. 1,231,384; June 26; v. 239; p. 1132.
Kompart, William C., Bellaire, Ohio. Resilient wheel. No. 1,229,095; June 5; v. 239; p. 242.
Konietzky, Alexander O., Weehawken, N. J. Stop mechanism for roller-skates. No. 1,230,491; June 19; v. 239; p. 793.
Koons, Helos H., Narka, Kans. Sickle-bar. No. 1,231,174; June 26; v. 239; p. 1063.
Koren Manufacturing Company. (See Woods, Edward D., assignor.)
Korn, Eugene, San Francisco, Cal. Crease-retaining device for hats. No. 1,230,307; June 19; v. 239; p. 733.
Korten, Benjamin F., Portland, Oreg. Sanitary cuspidor. No. 1,231,385; June 26; v. 239; p. 1132.
Kowalski, Franciszek, Philadelphia, Pa. Propeller. No. 1,228,787; June 5; v. 239; p. 141.
Kramer, Andrew A., Kansas City, Kans. Sheet-metal building. No. 1,229,477; June 12; v. 239; p. 421.
Kramer, Andrew A., Kansas City, Kans. Sheet-metal building. No. 1,229,478; June 12; v. 239; p. 421.
Kramer, Emil M., Morton, Ill. Carbureter. No. 1,231,175; June 26; v. 239; p. 1063.
Kratz, Franz, assignor to Firm of R. Bosch, Stuttgart, Germany. Electromagnetic switch. No. 1,231,271; June 26; v. 239; p. 1094.
Kraus, Jacob F., Pittsburgh, Pa. Oil-burner. No. 1,230,725; June 19; v. 239; p. 871.
Krause, Elizabeth H., Portland, Oreg. Cork-puller. No. 1,230,726; June 19; v. 239; p. 871.
Krause, William P., Chicago, Ill. Jolter for molds. No. 1,228,788; June 5; v. 239; p. 141.
Krauskopf, George H., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Support for armature cross-connectors. No. 1,229,759; June 12; v. 239; p. 515.
Krels, Emil J., Mendota, Ill. Reinforcing device for pneumatic tires. No. 1,229,096; June 5; v. 239; p. 242.
Kremer, Adolph, New York, N. Y. Screw-driver. No. 1,230,173; June 19; v. 239; p. 689.
Kremer, Franklin W., Carlstadt, N. J. Tire-machine. No. 1,230,415; June 19; v. 239; p. 767.
Krenz, Rudolph, assignor to The Russell Manufacturing Company, Middletown, Conn. Shuttle motion and carrier. No. 1,231,536; June 26; v. 239; p. 1180.

Kreuter, Louis, Los Angeles, Cal. Combination dressing-table and chiffonier. No. 1,229,196; June 5; v. 239; p. 276.

Kreuzkamp, August J. (See Lowy and Kreuzkamp.)

Kristufek, Ladislav F., assignor to General Briquetting Company, Chicago, Ill. Press or impact apparatus. No. 1,230,492; June 19; v. 239; p. 794.

Krohn, Julius J., Arcata, and F. J. Davis, Oakland, Cal. Barrel-bending-saw mechanism. No. 1,229,760; June 12; v. 239; p. 516.

Krouse, William G., Wyoming, Iowa. Spark-retarder for Ford engines. No. 1,230,174; June 19; v. 239; p. 689.

Krug, Louis, J. P. Weis, and W. C. Robbins, Nyack, assignors, by mesne assignments, to L. N. Littauer, Gloversville, N. Y. Folder for collaret-machines. No. 1,230,906; June 26; v. 239; p. 969.

Krupp, Smith F., Atlanta, Ga. Cotton-gin. No. 1,231,032; June 26; v. 239; p. 1014.

Kubel, Stephen J., Washington, D. C. Feed-gage. No. 1,228,081; June 5; v. 239; p. 104.

Kuczabowski, Antoni, St. Paul, Minn. Folding chair. No. 1,231,386; June 26; v. 239; p. 1132.

Kuehn, Paul, Detroit, Mich. Amalgamating process for recovering metals from ores. No. 1,231,176; June 26; v. 239; p. 1063.

Kuhlmann, Wesley W., Woodcliffe-on-Hudson, N. J. Dining-table plate-heating appliance. No. 1,230,727; June 19; v. 239; p. 871.

Kuhn, Harry A., Pittsburgh, Pa. Mining coal. No. 1,228,448; June 5; v. 239; p. 25.

Kuhn, Joseph P., and J. D. Martin, Honesdale, Pa. Window-screen. No. 1,231,177; June 26; v. 239; p. 1064.

Kulp, Joseph C., Linwood, N. J. Sound-box for phonographs. No. 1,229,197; June 5; v. 239; p. 276.

Kuntz, Frank A., Richmond Hill, assignor to Gold Car Heating & Lighting Company, New York, N. Y. Automatic switch. No. 1,229,294; June 12; v. 239; p. 359.

Kuntz, William J., York, Pa. Drier. No. 1,229,978; June 12; v. 239; p. 586.

Kupp, Jakob, Klosnacht, Switzerland. Attachment for lathes and the like. No. 1,228,570; June 5; v. 239; p. 67.

Kurokawa, Yaichi, Seattle, Wash. Match-box. No. 1,229,479; June 12; v. 239; p. 422.

Kurowski, Alfred G. F., Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,229,180; June 5; v. 239; p. 271.

Kurtz, Cyrus B., Grinnell, Iowa. Electric mechanism for starting automobiles and the like. No. 1,230,175; June 19; v. 239; p. 690.

Kurtz, Samuel E., Sac City, Iowa. Electric motor. No. 1,228,449; June 5; v. 239; p. 25.

Kyle, James M., assignor to Smith-Upton Co., Spokane, Wash. Feed mechanism for mechanical ball-pitchers. No. 1,229,979; June 12; v. 239; p. 586.

L. C. Smith & Bros. Typewriter Company. (See Harrington, Lynn J., assignor.)

Lachman, Laurence S., New York, N. Y., assignor, by mesne assignments, to Thomson Spot Welder Company, Boston, Mass. Electric welding-machine. No. 1,228,450; June 5; v. 239; p. 25.

Lachman, Maurice, assignor to Universal Electric Welding Company, New York, N. Y. Metal fabric. No. 1,228,789; June 5; v. 239; p. 141.

Lachman Wall Bed Company. (See Bench, John C. and H. W., assignors.)

Lackawanna Steel Company. (See Abbott, Franklin E., assignor.)

Laflamme, Joseph H. E., and O. Gravel, Toronto, Ontario, Canada. Bomb-dropper. No. 1,231,387; June 26; v. 239; p. 1133.

Laitsch, Andrew, Pittsburgh, Pa. Ingot-mold. No. 1,229,295; June 12; v. 239; p. 360.

Lake, George W., Rumford, assignor of one-half to F. W. Smith, Providence, R. I. Projectile-loading apparatus. No. 1,231,388; June 26; v. 239; p. 1133.

Lake, Vincent F., Pleasantville, N. J. Slate-splitting tool. No. 1,229,622; June 12; v. 239; p. 471.

Lally, John, Boston, Mass. Cleaning and straightening rolls. No. 1,230,584; June 19; v. 239; p. 826.

Lamar, Frank P., Santa Ana, Cal. Oil-feed signal device. No. 1,229,097; June 5; v. 239; p. 242.

Lambert, Anthony. (See Jovanovitz and Lambert.)

Lambert, Eric, Kansas City, Mo. Apparatus for drying wood veneer. No. 1,228,790; June 5; v. 239; p. 142.

Lambert, Frank, Brooklyn, N. Y. Yielding fastening for joints. No. 1,229,623; June 12; v. 239; p. 471.

Lambert, Frank B., assignor to Lambert Process Company, Chicago, Ill. Means for carrying out a process for burning bricks. No. 1,230,493; June 19; v. 239; p. 794.

Lambert, James F., Pittsburgh, Pa. License-tag holder. No. 1,230,176; June 19; v. 239; p. 690.

Lambert Process Company. (See Lambert, Frank B., assignor.)

Lamp, Arthur W., Cleveland, assignor of one-half to C. C. Marshall, Lakewood, and one-half to I. S. Payton, East Cleveland, Ohio. Automobile-lock. No. 1,230,907; June 26; v. 239; p. 970.

Lamplough, Frederick, London, England. Process and apparatus for the conversion of heavy hydrocarbons into lighter hydrocarbons. No. 1,229,098; June 5; v. 239; p. 243.

Lancaster, Edwin G., Chicago, Ill. Internal-combustion engine. No. 1,229,761; June 12; v. 239; p. 516.

Landers, Clyde W., Tacoma, Wash. Brake-band. No. 1,229,624; June 12; v. 239; p. 471.

Landoll, Albert P., Lawton, Okla. Spring-wheel. No. 1,231,389; June 26; v. 239; p. 1133.

Lane, Alexander D., Rapid City, S. D. Folding table. No. 1,229,099; June 5; v. 239; p. 243.

Lane, Alfred M., assignor to Monarch Metal Weather Strip Company, St. Louis, Mo. Rolling spring metal. No. 1,229,480; June 12; v. 239; p. 422.

Lane, Frederick H., Hollis, assignor of one-third to A. S. Moses, New York, and one-third to F. A. Westbrook, Brooklyn, N. Y. Chemical fire apparatus. No. 1,231,272; June 26; v. 239; p. 1094.

Lane, Frederick W., Chico, Cal., assignor to The Diamond Match Company, Chicago, Ill. Means for treating match-splints with powdered material. No. 1,230,416; June 19; v. 239; p. 767.

Lang, Johan G. V., assignor to Greenfield Paper Bottle Company, New York, N. Y. Manufacture of paper bottles. No. 1,230,177; June 19; v. 239; p. 690.

Lange, John H., assignor of one-half to W. H. Schwab, Muscatine, Iowa. Emergency draft-windlass. No. 1,229,762; June 12; v. 239; p. 516.

Langslow Fowler Company. (See Thum, Martin, assignor.)

Lantis, Carl J., Chapman, Kans. Trap. No. 1,231,390; June 26; v. 239; p. 1134.

Laporte, Georges, Hawkesbury, Ontario, Canada. Spring-wheel. No. 1,229,625; June 12; v. 239; p. 471.

Laraway, Henry D. (See Rankin and Laraway.)

Larkin, Charles, *et al.* (See Silvis, Sankey S., assignor.)

Larkin, Edward, *et al.* (See Silvis, Sankey S., assignor.)

Larnekee, Wallock, *et al.* (See Schneider, Daniel, assignor.)

Larsen Ice Machine Company. (See Ewen and McCurdy, assignors.)

Larsen, Olaf. (See Valerius and Larsen.)

Larson, Helen O., Cheyenne, Wyo. Cooker. No. 1,229,192; June 5; v. 239; p. 275.

Larson, Walter J., Wrangell, Alaska. Fish-trap. No. 1,230,585; June 19; v. 239; p. 826.

Lathim, Jasper, Castella, Cal. Handhold-rabbeting machine. No. 1,229,763; June 12; v. 239; p. 517.

Latta, Elbert J., Lincoln, Nebr. Medical device for treating venereal diseases. No. 1,228,451; June 5; v. 239; p. 26.

Laubscher, Albert R., Bridgeport, Conn. Micrometer-gage. No. 1,228,791; June 5; v. 239; p. 142.

Laughlin, William. (See Fife and Laughlin.)

Laun, Justus, Chicago, Ill. Water-heating apparatus. No. 1,228,932; June 5; v. 239; p. 188.

Lauritzen, Nis P., Sandusky, Ohio, assignor to The American Wringer Company, Woonsocket, R. I. Clothes-wringer. No. 1,229,626; June 12; v. 239; p. 472.

Lavandeyra, Anthony de. (See Vaugean, Lavandeyra, and Garthwaite.)

Lawler, Edward E., Pinckney township, Lewis county, N. Y. Vehicle-indicator. No. 1,229,764; June 12; v. 239; p. 517.

Lawrence, Edmund W., *et al.* (See Geiger, Bertha A., assignor.)

Lawrence, Mariner S., Wakefield, Mass. Urinal. No. 1,228,452; June 5; v. 239; p. 26.

Laycock, Arthur M., Wilkes-Barre, Pa. Vehicle. No. 1,229,296; June 12; v. 239; p. 360.

Laycock, Harry A., Schenectady, N. Y., assignor to General Electric Company. Voltage-regulator. No. 1,230,728; June 19; v. 239; p. 871.

Layng, Truman T., Banff, Alberta, Canada. Closure for containers. No. 1,230,178; June 19; v. 239; p. 691.

Lazar, William T., San Francisco, Cal. Dispensing-carton. No. 1,228,571; June 5; v. 239; p. 67.

Leake Motor Fuel Economy Company. (See Leake, Thomas C., assignor.)

Leake, Thomas C., assignor to Leake Motor Fuel Economy Company, San Francisco, Cal. Apparatus for controlling the flow of fuel to internal-combustion engines. No. 1,229,481; June 12; v. 239; p. 422.

Lear, Oley J., Philadelphia, Pa. Belt and making the same. No. 1,228,792; June 5; v. 239; p. 142.

Leavitt, Lillie M. S., Mountainview, N. H. Convertible chair. No. 1,229,980; June 12; v. 239; p. 587.

Leckey, Alexander. (See Pullen, Barzillai, assignor.)

Leclair, Adrien, Chicago, Ill. Spiral stairway. No. 1,229,482; June 12; v. 239; p. 423.

Lee, Arthur W. (See Walter and Lee.)

Lee, George E., assignor to The George E. Lee Company, Cleveland, Ohio. Fuel-regulating device. No. 1,228,793; June 5; v. 239; p. 142.

Lee, George E., assignor to The George E. Lee Company, Cleveland, Ohio. Device for controlling supply of heat to an auxiliary heating device. No. 1,228,794; June 5; v. 239; p. 143.

Lee, George W., Benson, N. C. Automobile-jack. No. 1,230,908; June 26; v. 239; p. 970.

Leffler, Artur. (See Cassel, Gunnar E., assignor.)

Lefkowitz, Charles M., New York, N. Y. Insulating-cap for conduits. No. 1,231,273; June 26; v. 239; p. 1095.

Leggett, William T. (See Warner and Leggett.)

Lehberger, George, Newark, N. J. Under carriage or chassis for flying-machines. No. 1,229,297; June 12; v. 239; p. 360.

Lehman, Edward G., Canton, Ohio. Sheet-metal molding. No. 1,229,765; June 12; v. 239; p. 517.



Lehman, Max R., assignor to Quincy Pattern Company, Quincy, Ill. Combination coal and gas range. No. 1,231,391; June 26; v. 239; p. 1134.

Lehmann, Carl A. A., Bienne, Switzerland. Apparatus for straightening metallic wires, rods, and tubes of circular cross-section. No. 1,229,981; June 12; v. 239; p. 587.

Lehnert, Henry W. A., New York, N. Y. Bath-room fixture. No. 1,228,453; June 5; v. 239; p. 26.

Leilich, Henry L., and J. P. Burger, assignors, by mesne assignments, to The Delphos Printing Press Company, Delphos, Ohio. Sheet-delivery means. No. 1,228,933; June 5; v. 239; p. 188.

Leissner, Harry F., Ljusne, Sweden. Internal-combustion engine. No. 1,230,729; June 19; v. 239; p. 872.

Lenardié, Charles, Cleveland, Ohio. Rail-connecting device. No. 1,231,392; June 26; v. 239; p. 1134.

Lenderoth, Arnold W. (See Fox and Lenderoth.)

Lendner, Augustus R., assignor of one-fourth to G. E. Gardner, one-fourth to H. S. Benedict, and one-fourth to D. O. Thompson, Los Angeles, Cal. Can-labeling machine. No. 1,230,730; June 19; v. 239; p. 872.

Lents, Grover C., and J. L. Best, Turrell, Ark. Automatic sanitary bin for grocers, &c. No. 1,229,100; June 5; v. 239; p. 243.

Lenzke, Conrad T., Minneapolis, Minn. Smoke-house. No. 1,229,298; June 12; v. 239; p. 361.

Leo, Paul, Elizabeth, N. J. Treadle-operated mechanism for seal-presses. No. 1,228,934; June 5; v. 239; p. 189.

Leonard, Dana, Waterloo, Iowa. Match-box. No. 1,229,982; June 12; v. 239; p. 587.

Leonard, Harry C., assignor to Grand Rapids Refrigerator Company, Grand Rapids, Mich. Refrigerator. No. 1,230,179; June 19; v. 239; p. 691.

Leonard, Howard M., assignor to Ruby Manufacturing Company, Jackson, Mich. Portable house. No. 1,230,180; June 19; v. 239; p. 691.

Leonard, Howard M., assignor to Ruby Manufacturing Company, Jackson, Mich. Wall structure. No. 1,230,181; June 19; v. 239; p. 692.

Leonard, William R., assignor of one-half to J. Hachmeister, Covington, Ky. Window or door screen. No. 1,229,983; June 12; v. 239; p. 587.

Lepper, John H., Mason City, Iowa. Internal-combustion engine. No. 1,230,909; June 26; v. 239; p. 971.

Lesnikowski, Szymon, Detroit, Mich. Wardrobe-trunk. No. 1,230,910; June 26; v. 239; p. 971.

Levalley, Christopher W., Milwaukee, Wis. Concrete-mixing apparatus. No. 1,230,731; June 19; v. 239; p. 872.

Levalley, Christopher W., and S. Shafer, Jr., assignors to Chain Belt Company, Milwaukee, Wis. Apparatus for delivering concrete and other material. No. 1,230,820; June 19; v. 239; p. 902.

Lewis, Burdette C. (See Strickler and Lewis.)

Lewis, Charles E. (See Dick, Rutter, and Lewis.)

Lewis, Edward T., Oceanpark, Cal. Stopping attachment for watches. No. 1,230,732; June 19; v. 239; p. 873.

Lewis, Edward T., Oceanpark, Cal. Stopping attachment for watches. No. 1,230,733; June 19; v. 239; p. 873.

Lewis, Goodrich Q., Wheaton, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging for cars. No. 1,228,572; June 5; v. 239; p. 68.

Lewis, Goodrich Q., Wheaton, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging. No. 1,228,573; June 5; v. 239; p. 68.

Lewis, Robert A. (See Jones, Ell, assignor.)

Lliady, Fred G., Fullerton, Cal. Wire-wheel carrier for automobiles. No. 1,231,393; June 26; v. 239; p. 1135.

Libby, Edward, Montreal, Quebec, Canada. Combined signal and license-plate. No. 1,229,483; June 12; v. 239; p. 423.

Libby, Sam H., East Orange, N. J., assignor to General Electric Company. Electrically-controlled hoist. No. 1,229,984; June 12; v. 239; p. 588.

Liberty Bell Company, The. (See Reinker, Christian, assignor.)

Lilja, Andrew, Streator, Ill. Combined sack holder and weigher. No. 1,230,734; June 19; v. 239; p. 874.

Lillie, Samuel M., Philadelphia, Pa. Employing heat for the production of power. No. 1,230,417; June 19; v. 239; p. 767.

Lilpakka, Jaakko, New Castle, Pa. Weeder. No. 1,228,935; June 5; v. 239; p. 189.

Lindberg, Minar, Rice Lake, Wis. Demountable-rim lock. No. 1,230,182; June 19; v. 239; p. 692.

Lindemann, Frederick W., St. Paul, Minn. Automatic fire-alarm. No. 1,229,299; June 12; v. 239; p. 361.

Lindemann, Walter C., assignor to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Oil-stove burner. No. 1,231,394; June 26; v. 239; p. 1135.

Lindenberg, Erich, Chicago, Ill. Tool. No. 1,230,494; June 19; v. 239; p. 794.

Lindenthal, Henry M., Chicago, Ill. Garment. No. 1,229,484; June 12; v. 239; p. 424.

Lindquist, Olof L. (See Thorn, August, assignor.)

Lindsay, William G., Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y. Making plastic compositions. No. 1,229,485; June 12; v. 239; p. 424.

Lindsay, William G., Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y. Making acetyl cellulose plastic compounds. No. 1,229,486; June 12; v. 239; p. 424.

Lindsay, William G., Caldwell, N. J., assignor to The Cellulose Company, New York, N. Y. Solvent for acetyl cellulose and process. No. 1,229,487; June 12; v. 239; p. 424.

Lindskoog, Milton E., Kiron, Iowa. Coil-spring seat for disks. No. 1,229,488; June 12; v. 239; p. 424.

Lindström, Carl, Berlin, Germany. Marking contrivance for roller-stamping machines. No. 1,230,495; June 19; v. 239; p. 795.

Lindström, Charles A., assignor to Pressed Steel Car Company, Pittsburgh, Pa. Car construction. No. 1,230,183; June 19; v. 239; p. 692.

Lindstrom, Smith Company. (See Endorf, Charles, Jr., assignor.)

Linfoot, Maurice, Bocking Braintree, assignor to Courtaulds Limited, London, England. Apparatus for treating artificial silk and other threads. No. 1,229,101; June 5; v. 239; p. 244.

Link-Belt Company. (See Pierce, Harold S., assignor.)

Linn, William T., Arkansas City, Kans. Grain-door. No. 1,229,985; June 12; v. 239; p. 588.

"Lipsia" Chemische Fabrik Actien-Gesellschaft. (See Schmid, Karl, assignor.)

Lister, Charles H., North St. Paul, Minn. Housing. No. 1,230,586; June 19; v. 239; p. 827.

Lister, Charles H., North St. Paul, Minn. Casting-machine. No. 1,230,587; June 19; v. 239; p. 827.

Litchfield, Laura K., New York, N. Y. Garment. No. 1,229,986; June 12; v. 239; p. 588.

Littauer, Lucius N. (See Krug, Weis, and Robbins, assignors.)

Littauer, Lucius N. (See Weis, Albert H., assignor.)

Littauer, Lucius N. (See Weis, John P., assignor.)

Littauer, Lucius N. (See Weis, John P. and A. H., assignors.)

Littleford, George, Fort Thomas, Ky. Feeding mechanism. No. 1,229,987; June 12; v. 239; p. 589.

Ljungström, Birger, and A. D. Widström, Stockholm, Sweden; said Widström assignor to said Ljungström. Commutation device for direct-current machines and the like. No. 1,228,936; June 5; v. 239; p. 189.

Lloyd, Burt E., New York, N. Y. Talking doll. No. 1,229,102; June 5; v. 239; p. 244.

Lloyd, Ernest J., *et al.* (See Barber, Guy M., assignor.)

Lloyd, Lewis H., Bloomington, Ill. Mail-catching device. No. 1,229,103; June 5; v. 239; p. 245.

Lloyd, Lewis H., Bloomington, Ill. Tire-protector. No. 1,229,104; June 5; v. 239; p. 245.

Lloyd, Richard W., Verndale, Minn. Liquid-dispensing device. No. 1,229,105; June 5; v. 239; p. 245.

Lobel, Leon, New York, N. Y. Arch-support. No. 1,229,300; June 12; v. 239; p. 361.

Lockerby, Jacob S., Hoquiam, Wash. Vegetable or fruit cutter. No. 1,231,395; June 26; v. 239; p. 1135.

"Locomobile" Company of America, The. (See Riker, Andrew L., assignor.)

Locomotive Stoker Company. (See Lower, Nathan M., assignor.)

Loe, Syver, Minneapolis, Minn. Register-actuating mechanism. No. 1,229,301; June 12; v. 239; p. 361.

Loeb, Leopold, Neuwied, Germany. Life-guard for motor-vehicles. No. 1,230,911; June 26; v. 239; p. 971.

Loeffler, John F. (See Wilson, Harry L., assignor.)

Logan, John E., Kansas City, Mo. Shipping-crate. No. 1,231,178; June 26; v. 239; p. 1064.

Logan, John L., Chicago, Ill. Heating device for vaporizing and burning kerosene. No. 1,230,735; June 19; v. 239; p. 874.

Logan, Joseph D., Darragh, Pa. Device for laying off shoes and wedges. No. 1,230,418; June 19; v. 239; p. 768.

Loguin, Alexander J., West Allis, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Switch. No. 1,229,489; June 12; v. 239; p. 424.

Loizon, Georges D. (See D'Artoys and Loizon.)

Lombard, De Otis. (See Gabriel and Lombard.)

London, William J. A., and R. C. Allen, assignors to The Terry Steam Turbine Company, Hartford, Conn. Turbine. No. 1,229,490; June 12; v. 239; p. 425.

Long, Eugene M., New York, N. Y. Device for catching rolling balls, to be used in the game of indoor golf-putting. No. 1,229,766; June 12; v. 239; p. 518.

Long, Frederick S., Calgary, Alberta, Canada. Card-index cabinet. No. 1,231,274; June 26; v. 239; p. 1095.

Long, Herbert J., assignor to The Long, Landreth, Schneider Co., New Brunswick, N. J. Thermostatic snap control. No. 1,231,527; June 26; v. 239; p. 1177.

Long, Jerome S. (See Gule and Long.)

Long, John F., *et al.* (See Abbott, Alfred S., assignor.)

Long, Landreth, Schneider Co., The. (See Long, Herbert J., assignor.)

Long Manufacturing Company. (See Eligh, Charles A., assignor.)

Longfellow, Martin W. (See Hunter and Longfellow.)

Loomis, Allen, assignor to Packard Motor Car Company, Detroit, Mich. Starting mechanism. No. 1,229,627; June 12; v. 239; p. 472.

Loomis, Walter A., Los Angeles, Cal. Elevator signaling system. No. 1,231,033; June 26; v. 239; p. 1014.

Lorenz, William A., Hartford, Conn. Coffee substitute. No. 1,230,184; June 19; v. 239; p. 693.

Lorf, Frank G., Casco township, St. Clair county, Mich. Plow-wheel. No. 1,230,308; June 19; v. 239; p. 733.

Lorsch, George H., Florence, Nebr. Corn-planter. No. 1,229,988; June 12; v. 239; p. 589.

Lorscheider, Edward N., assignor to The Lorscheider-Schang Company, New York, N. Y. Toilet-case. No. 1,230,912; June 26; v. 239; p. 971.
Lorscheider-Schang Company, The. (See Lorscheider, Edward N., assignor.)
Los Angeles Motor Car Company. (See Barker, John P., assignor.)
Lott, Karl A., *et al.* (See Allinger, Frank A., assignor.)
Louden, William, Fairfield, Iowa. Mold for manger-curbs. No. 1,228,937; June 5; v. 239; p. 190.
Love, Charles L., Meshoppen, Pa. Minnow bucket and trap. No. 1,231,034; June 26; v. 239; p. 1015.
Lovsted, Carl M. (See McBride, James P., assignor.)
Low, Archibald M., London, England. Two-stroke internal-combustion engine. No. 1,229,989; June 12; v. 239; p. 589.
Lowe, Ella H., Tarrytown, N. Y. Cover for cooking-pots. No. 1,230,419; June 19; v. 239; p. 768.
Lower, Nathan M., Schenectady, N. Y., assignor to Locomotive Stoker Company, Pittsburgh, Pa. Locomotive-tender. No. 1,228,574; June 5; v. 239; p. 68.
Lowrie, Amelia, executrix. (See Lowrie, John, assignor.)
Lowrie, John, deceased, Cleveland, Ohio; A. Lowrie, executrix. Baling-press. No. 1,229,628; June 12; v. 239; p. 473.
Lowy, Emil M. (See Anglada, Joseph A., assignor.)
Lowy, Morris, and A. J. Kreuzkamp, New York, assignors to Englander Spring Bed Co., Brooklyn, N. Y. Folding crib. No. 1,230,736; June 19; v. 239; p. 875.
Loxterman, Howard B., Pittsburgh, assignor to Blaw Steel Construction Company, Hoboken, Pa. Tunnel mold-form. No. 1,228,454; June 5; v. 239; p. 27.
Loxterman, C. Howard B., Pittsburgh, assignor to Blaw Steel Construction Company, Hoboken, Pa. Telescopic concrete tunnel and shaft mold-form. No. 1,228,455; June 5; v. 239; p. 27.
Lück, Jacob W., Brooklyn, assignor to Oscar Heyman & Company, New York, N. Y. Corking-machine. No. 1,230,420; June 19; v. 239; p. 769.
Ludat, Theodor. (See Bibb and Ludat.)
Lüders, Richard, Steglitz, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. 1-Iodo-2,3-dihydroxypropane and making same. No. 1,230,185; June 19; v. 239; p. 693.
Luedke, Gustav P., Chatham, Ill. Condenser for smelter-fumes. No. 1,229,629; June 12; v. 239; p. 473.
Lumley, Wilfrid, Conneaut, Ohio, assignor to General Electric Company. Lighting-fixture. No. 1,230,737; June 19; v. 239; p. 875.
Lundell, Alben E., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Automatic telephone-exchange system. No. 1,230,421; June 19; v. 239; p. 769.
Lundgren, Edwin, Brooklyn, N. Y. Automatic furnace. No. 1,228,456; June 5; v. 239; p. 27.
Lundquist, Henry G. (See Palmquist and Lundquist.)
Luthman, Charles H., Hammond, Ind., assignor to C. C. Zimmerman, Park Ridge, Ill. Railway-tongs. No. 1,231,035; June 26; v. 239; p. 1015.
Lutz, John, Jersey City, N. J., assignor of one-third to J. H. Best, Galva, Ill. Clothes-line-supporting device. No. 1,230,186; June 19; v. 239; p. 693.
Lux, Anthony M., *et al.* (See Thompson, William I., assignor.)
Lux, Walter J., *et al.* (See Thompson, William I., assignor.)
Lynch, Dennis T., New York, N. Y. Safety device for pocket-books. No. 1,230,738; June 19; v. 239; p. 875.
Lynch, Eugene P., Providence, R. I. Game. No. 1,228,575; June 5; v. 239; p. 68.
Lyrachord Company. (See Decker, Frank A., assignor.)
Lyttle, Rowland, Los Angeles, assignor of one-half to E. Jesurun, Palo Alto, Cal. Universal direction control for vehicle-headlights. No. 1,230,422; June 19; v. 239; p. 769.
Maag, Max, Zurich, Switzerland. Adjusting device for grinding-wheels. No. 1,228,798; June 5; v. 239; p. 145.
Mable, Clarence W., Binghamton, N. Y. Coloring moving-picture films. No. 1,230,744; June 19; v. 239; p. 877.
MacDonald, Frank T., South Penobscot, Me. Chimney-cleaner. No. 1,230,310; June 19; v. 239; p. 734.
MacGahan, Paul, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical measuring instrument. No. 1,229,767; June 12; v. 239; p. 518.
MacNeece, William, Philadelphia, Pa. Resilient tire. No. 1,230,588; June 19; v. 239; p. 827.
Macdonald, Thomas, London, England. Pantographic apparatus. No. 1,229,111; June 5; v. 239; p. 247.
Macfadden, Bernarr, and E. L. Moumblow, New York, N. Y.; said Moumblow assignor to said Macfadden. Cooling and ventilating apparatus. No. 1,228,939; June 5; v. 239; p. 190.
Mack, Luther L., assignor to Cancelograph Company, Los Angeles, Cal. Automatic canceling-machine. No. 1,228,460; June 5; v. 239; p. 29.
Mackall, James H., Cleveland, Ohio. Candy-dispenser. No. 1,231,400; June 26; v. 239; p. 1137.
Mackie, William J., *et al.* (See Schechter, Bernard, assignor.)
Macleod, Albert A., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Work-support. No. 1,228,684; June 5; v. 239; p. 105.
Macnorius, Joseph J., Kenosha, Wis. Pencil and pen holder. No. 1,230,589; June 19; v. 239; p. 828.
Macpherson, Reginald G., Leeds, England. Machine for plucking the feathers of birds. No. 1,231,401; June 26; v. 239; p. 1137.
Madden, Patrick J., Chicago, Ill. Water-closet. No. 1,229,362; June 12; v. 239; p. 362.
Madison, Charles C., Scandia, Kans. Nut-lock. No. 1,230,745; June 19; v. 239; p. 878.
Madsen, Lars C., Chicago, Ill. Autotruck-fender. No. 1,228,461; June 5; v. 239; p. 30.
Magniphone Company, The. (See Coy, Albert E., assignor.)
Magnus, Henry. (See Toelcke, Charles, assignor.)
Mahoney, Joseph N., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Circuit-interrupter. No. 1,229,768; June 12; v. 239; p. 518.
Magone, Hugh P., Anaconda, Mont. Water motor or propeller. No. 1,230,191; June 19; v. 239; p. 695.
Magowan, Hugh B., Whitby, Ontario, Canada. Projecting apparatus. No. 1,228,685; June 5; v. 239; p. 105.
Malmer, George F., San Francisco, Cal. Cable-pothead. No. 1,229,995; June 12; v. 239; p. 591.
Malcamp, Philip, New Orleans, La. Sterilizer. No. 1,231,402; June 26; v. 239; p. 1138.
Malls, Ida. (See Silver, Israel, assignor.)
Mallin, Isaac H., Chicago, Ill. Implement-holder for type-writing machines. No. 1,229,493; June 12; v. 239; p. 426.
Mallory, Jesse M., New Geneva, Pa. Switch-operating device. No. 1,231,403; June 26; v. 239; p. 1138.
Mally, Tadeusz Z., Chicago, assignor to G. Plamondon, deceased, Wheaton, Ill.; A. D. Plamondon, executor. Clasp. No. 1,229,198; June 5; v. 239; p. 277.
Mally, Tadeusz Z. (See Mehlhope, Matthei, and Mally.)
Maltz, Harry A., Ithaca, N. Y. Dirigible-headlight bracket. No. 1,229,304; June 12; v. 239; p. 363.
Maly, Joe, Dwight, Nebr. Grain-car door. No. 1,229,996; June 12; v. 239; p. 591.
Manahan, Edward L., Kansas City, Mo. Receptacle for sacred emblems. No. 1,230,746; June 19; v. 239; p. 878.
Manitowoc Electric Implement Co. (See Brixius, Frank E., assignor.)
Manning, George A., assignor to C. G. Conn, Elkhart, Ind. Drum trap-holder. No. 1,230,192; June 19; v. 239; p. 695.
Manning, Joseph. (See Clark and Manning.)
Manning Manufacturing Company. (See Talt, Harry T., assignor.)
Manning, William J., Washington, D. C. Surgical device. No. 1,229,633; June 12; v. 239; p. 474.
Manning, William T., Govans, Md. Lock for hopper-doors. No. 1,229,997; June 12; v. 239; p. 592.
Manny, Lucien A., assignor to C. I. Giroux, Montreal, Quebec, Canada. Nut-lock. No. 1,228,940; June 5; v. 239; p. 191.
Manson, Charles L., assignor of one-half to J. B. Williams, Louisville, Ky. Railway-rail. No. 1,231,039; June 26; v. 239; p. 1017.
Manson, Ray H., Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y. Telephone-transmitter. No. 1,229,634; June 12; v. 239; p. 474.
Mantle Lamp Company of America, The. (See Davis and Johnson, assignors.)
Maranda, Albert H. (See Willson and Maranda.)
Marconi Wireless Telegraph Company of America. (See Butcher, Elmer E., assignor.)
Marcopoulos, George H., Cleveland, Ohio. Vending-machine. No. 1,228,799; June 5; v. 239; p. 145.
Marden Orth & Hastings Co. (See Peacock, Samuel, assignor.)
Marfield, Dwight S., assignor to The Buckeye Products Company, Cincinnati, Ohio. Metal-melting furnace. No. 1,229,494; June 12; v. 239; p. 426.
Marker, Charles G., Denver, Colo. Shoe-stretcher. No. 1,229,998; June 12; v. 239; p. 592.
Markham, Edwin J., Watrous, Saskatchewan, Canada. Lamp-heater. No. 1,231,404; June 26; v. 239; p. 1139.
Marks, Albert G., Hoult, assignor of one-half to M. C. Hite, Rivesville, W. Va. Combined nut-lock and rail-brace. No. 1,228,462; June 5; v. 239; p. 30.
Marong, Michael P., Rock Glen, N. Y. Motor-sleigh. No. 1,229,999; June 12; v. 239; p. 592.
Marr, Winfield S., Hildreth, and J. E. Nelson, Holdredge, Nebr. Necktie-adjuster. No. 1,230,000; June 12; v. 239; p. 593.
Marschke, Fredrich W. and W. A., Indianapolis, Ind. Snap-switch. No. 1,229,635; June 12; v. 239; p. 474.
Marschke, William A. (See Marschke, Fredrich W. and W. A.)
Marsden, John E., Philadelphia, Pa. Window-regulator. No. 1,229,769; June 12; v. 239; p. 519.
Marsden, Mark W., assignor to The Economic Power and Products Company, Philadelphia, Pa. Treating the cotton-plant for the recovery of its values. No. 1,229,181; June 5; v. 239; p. 271.
Marsh, Albert L., assignor to Hoskins Manufacturing Company, Detroit, Mich. Metal utensil. No. 1,229,770; June 12; v. 239; p. 519.
Marshall, C. C., *et al.* (See Lamp, Arthur W., assignor.)
Marshall, Charles P., Watertown, N. Y. Tone-purifier. No. 1,231,277; June 26; v. 239; p. 1096.
Marshall, Sylvester, Athens, Ohio. Grading or separating machine. No. 1,228,800; June 5; v. 239; p. 146.



Marshall, William J., Newark, N. J., assignor to H. Maimin Co., Inc. Lamp-support and terminal for cloth-cutting machines. No. 1,230,311; June 19; v. 239; p. 734.
Marshall, Wallace, La Fayette, Ind. Reel-handling truck. No. 1,231,040; June 26; v. 239; p. 1017.
Marston, Albert D., Whiting, Kans. Gearing for slicing-machines or the like. No. 1,228,578; June 5; v. 239; p. 69.
Martel, Napoleon, and J. E. Rascoe, assignors of one-third to S. S. Kempner, Plattsburg, N. Y. Self-heating soldering-iron. No. 1,230,915; June 26; v. 239; p. 972.
Martell, Albert A., assignor to The Taft-Peirce Manufacturing Company, Woonsocket, R. I. Tool for alining and finishing shaft-bearings and the like. (Reissue.) No. 14,311; June 5; v. 239; p. 283.
Martenette, Francis L., Chico, Cal. Almond-huller. No. 1,230,001; June 12; v. 239; p. 593.
Martin, Christian H., assignor to J. R. Gammeter, Akron, Ohio. Piano-bench. No. 1,231,041; June 26; v. 239; p. 1017.
Martin, George H., assignor of one-half to F. E. Huntress, Newton, Mass. Antiskid device. No. 1,231,181; June 26; v. 239; p. 1065.
Martin, George W., Paris, Tex. Folding coop. No. 1,231,042; June 26; v. 239; p. 1018.
Martin, Hermann P., Lexington, Tenn. Dispensing-receptacle. No. 1,230,498; June 19; v. 239; p. 796.
Martin, John D. (See Kuhn and Martin.)
Martin, Thomas H. (See Cleaver and Martin.)
Martineau, Clarence R. (See Martineau, William C. and C. R.)
Martineau, William C. and C. R., Albany, N. Y. Hasp-mounting. No. 1,231,278; June 26; v. 239; p. 1096.
Marvel Accessories Manufacturing Company, The. (See Rose, Jacob B., assignor.)
Maschinenfabrik Fahr A.-G. (See Fahr, Johann G., assignor.)
Mason, Frank W., Cleveland, Ohio. Apparatus for moistening air. No. 1,228,801; June 5; v. 239; p. 146.
Maskers, George W., *et al.* (See Nelson, Robert M., assignor.)
Mason, Charles T., Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J. Ignition system. No. 1,231,043; June 26; v. 239; p. 1018.
Mason, Hosea A., assignor of one-half to W. E. Quigley, Taunton, Mass. Ice-cream cutter. No. 1,231,279; June 26; v. 239; p. 1096.
Mason, Lyman P., Chicago, Ill. Curtain-stretcher. No. 1,229,112; June 5; v. 239; p. 248.
Mason, Robert G., Brooklyn, N. Y. Liquid-container. No. 1,230,916; June 26; v. 239; p. 973.
Mason, Saul, Philadelphia, Pa. Water-controlling apparatus. No. 1,230,590; June 19; v. 239; p. 828.
Mastin, George C., *et al.* (See Bunnell, Morton G., assignor.)
Mateer, Walter, Mansfield, Ohio. Garter. No. 1,229,495; June 12; v. 239; p. 426.
Mather, Alonzo C., Chicago, Ill. Railway-signal. No. 1,230,193; June 19; v. 239; p. 695.
Mathers, Samuel A., Chillicothe, Ohio. Brake mechanism. No. 1,230,002; June 12; v. 239; p. 593.
Matheslus, Walther, Chicago, Ill. Hot-blast valve. No. 1,228,463; June 5; v. 239; p. 30.
Matheson, Adam M., New York, N. Y. Valve. No. 1,230,499; June 19; v. 239; p. 796.
Mathews, Fred, assignor to C. C. Murphy, Chicago, Ill. Carline. No. 1,230,747; June 19; v. 239; p. 878.
Mathews, Rolland, Marshall, Minn. Automatic camera-shutter operating and timing instrument. No. 1,230,500; June 19; v. 239; p. 797.
Mathews, Rolland, Marshall, Minn. Automatic camera-shutter operating and timing instrument. No. 1,230,501; June 19; v. 239; p. 797.
Mathison, Olaf, Crookston, Minn. Releasing-penholder. No. 1,230,312; June 19; v. 239; p. 735.
Mattern, Arthur, Williamsport, Pa. Liquid-sprayer. No. 1,229,771; June 12; v. 239; p. 519.
Matthei, Henry R., assignor to G. Plamondon, Chicago, Ill.; A. D. Plamondon, executor. Clasp. No. 1,229,199; June 5; v. 239; p. 277.
Matthei, Henry R. (See Mehlhope, Matthei, and Mally.)
Mattson, Theodore G., Bremen, N. D. Harrow. No. 1,229,194; June 19; v. 239; p. 695.
Matula, Louis, Cleveland, Ohio. Lathe-grinding attachment. No. 1,229,496; June 12; v. 239; p. 427.
Mauch, John L., Humboldt, Ariz. Spring-tension mechanism. No. 1,230,195; June 19; v. 239; p. 696.
Maurer, Edwin R., Detroit, Mich. Demountable rim. No. 1,228,941; June 5; v. 239; p. 191.
Maurer, Erwin, Jamaica, N. Y. Brooder. No. 1,229,113; June 5; v. 239; p. 248.
Maurer, Erwin, Jamaica, N. Y. Brooder. No. 1,230,917; June 26; v. 239; p. 973.
Maxim Munitions Corporation. (See Saalfield, Oliver B., assignor.)
Maxwell, Dillard L., Wirt, assignor of one-fourth to W. J. Milburn; one-fourth to L. J. Milburn, and one-fourth to T. Stockdell, Oklahoma, Okla. Casing-head for oil-wells. No. 1,228,686; June 5; v. 239; p. 105.
Maxwell, James H., Seattle, Wash. Trap. No. 1,228,802; June 5; v. 239; p. 147.
Maxwell, Ralph S., assignor of one-half to J. M. Parker, Portland, Oreg. Loading device for autotrucks. No. 1,231,182; June 26; v. 239; p. 1065.
Mayer, Robert S., Norwood, Ohio. Thermostatic valve. No. 1,231,044; June 26; v. 239; p. 1018.
Mayer, William G., Pittsburgh, Pa. Automobile-body support. No. 1,230,748; June 19; v. 239; p. 878.
Mazzel, Frank P., Petersburg, Va. Sterilizer for barbers' appliances. No. 1,228,464; June 5; v. 239; p. 31.
McAuliffe, J. E., *et al.* (See Buckelew, Albert H., assignor.)
McBride, James P., assignor to C. M. Lovsted, Seattle, Wash. Signaling device. No. 1,231,179; June 26; v. 239; p. 1064.
McCabe, John S., Bridgeville, Pa. Gage-wheel attachment for planters. No. 1,228,682; June 5; v. 239; p. 104.
McCallum, William J., Toronto, Ontario, Canada, assignor to The Chapman Double Ball Bearing Company of Canada, Limited. Elevating-truck. No. 1,230,739; June 19; v. 239; p. 876.
McCarter, Robert S., Cambridge, Mass. Support for linotype-magazines. No. 1,229,106; June 5; v. 239; p. 246.
McCaskey, John A., Hagerhill, Ky. Corner-trowel. No. 1,229,630; June 12; v. 239; p. 473.
McCaslin, Harry M., assignor to American La France Fire Engine Company, Inc., Elmira, N. Y. Fire-extinguisher. No. 1,230,423; June 19; v. 239; p. 770.
McClellan, Charles R., Pepperwood, Cal. Dirigible-lamp mechanism. No. 1,228,457; June 5; v. 239; p. 28.
McClelland, James T., Kings Mills, Ohio. Chair-leg attachment. No. 1,230,187; June 19; v. 239; p. 693.
McCool, Joseph M., assignor to H. Brennan, Des Moines, Iowa. Shock-absorber. No. 1,230,496; June 19; v. 239; p. 795.
McCord, David W., New York, N. Y., and I. A. Randel, Chicago, Ill. Car-axle-box lid. No. 1,228,576; June 5; v. 239; p. 69.
McCormack, Coy D., Waynoka, Okla. Cook-stove. No. 1,229,990; June 12; v. 239; p. 590.
McCormick, Langdon, New York, N. Y. Method of and apparatus for displaying pictures. No. 1,230,188; June 19; v. 239; p. 694.
McCourt, Cyril D. (See Bone, Wilson, and McCourt.)
McCoy, Robert L., Sergeants Bluff, Iowa. Funnel. No. 1,230,189; June 19; v. 239; p. 694.
McCracken, J. Glen, La Crosse, Kans. Cupboard-latch. No. 1,230,740; June 19; v. 239; p. 876.
McCurdy, Arthur L. S. (See Ewen and McCurdy.)
McCutcheon, William A. (See Means, Charles M., assignor.)
McDermott, Laura E., *et al.* (See Howd, Alvah J., assignor.)
McDonald, Clarence T., Chicago, Ill. Refillable cartridge-fuse. No. 1,231,036; June 26; v. 239; p. 1016.
McDonald, Leslie R., Montreal, Canada, assignor to Motion Display Corporation. Impulse-motor. No. 1,230,497; June 19; v. 239; p. 795.
McDonald, Neil, Pender Harbour, British Columbia, Canada. Guy-line tightener. No. 1,229,302; June 12; v. 239; p. 362.
McDonough, Thomas F., Jr., Glen Cove, N. Y. Fly-trap. No. 1,229,107; June 5; v. 239; p. 246.
McDonough, William H., New York, N. Y., assignor, by mesne assignments, to The American Brake Shoe and Foundry Company, Wilmington, Del. Brake-shoe. No. 1,228,683; June 5; v. 239; p. 104.
McDougall Company. (See Bertram, Henry W., assignor.)
McDowall, Thomas R., and S. G. Perkins, London, England. Glazing-bar. No. 1,229,631; June 12; v. 239; p. 473.
McElroy, James F., deceased, Albany, N. Y.; S. H. McElroy, executrix, assignor to Consolidated Car Heating Company. Electrical plug and socket. No. 1,228,577; June 5; v. 239; p. 69.
McElroy, Susie H., executrix. (See McElroy, James F.)
McErlane, David, Springburn, Glasgow, Scotland. Machine for dividing and measuring dough. No. 1,231,396; June 26; v. 239; p. 1135.
McEwen, Willard M., *et al.* (See Olson, Gustaf, assignor.)
McGaffee, James F., Des Moines, Iowa. Ladder device for silos. No. 1,231,037; June 26; v. 239; p. 1016.
McGavisk, Fredrick J., Grand Haven, Mich. Oil-retainer for barrels of firearms. No. 1,229,991; June 12; v. 239; p. 590.
McGehee, Tom S., Lockney, Tex. Vehicle-wheel tire. No. 1,231,397; June 26; v. 239; p. 1136.
McGlehan, Isaac S., New York, N. Y. Impregnating fabrics with rubber. No. 1,228,458; June 5; v. 239; p. 28.
McGiffert, John R., assignor to Clyde Iron Works, Duluth, Minn. Operating mechanism for scraper-buckets. No. 1,231,275; June 26; v. 239; p. 1095.
McGirr, John, De Kalb, Ill., assignor of four-tenths to J. Ginsburg and one-tenth to G. P. Hambrecht, Grand Rapids, Wis. Excavator and loader. No. 1,229,992; June 12; v. 239; p. 590.
McGlaughlin, Robert, Montreal, Quebec, Canada. Combined axle-lubricating device and nut-lock. No. 1,231,180; June 26; v. 239; p. 1064.
McGrail, Dominick J. (See Gallaher and McGrail.)
McGrath, Patrick H., Wollaston, Mass., assignor to Intertype Corporation, Brooklyn, N. Y. Line and space indicating mechanism for typographical machines. No. 1,229,108; June 5; v. 239; p. 246.
McGraw Tire & Rubber Company, The. (See Zwisler, Irvin, assignor.)

McIlvane, Frank, assignor to Diamond Power Specialty Company, Detroit, Mich. Boiler-cleaner. No. 1,231,276; June 26; v. 239; p. 1095.
McIndoe, James W., and A. E. Whitney, Winchester, Mass. Impression-roll. No. 1,230,190; June 19; v. 239; p. 894.
McIntosh, Burtnett, Brooklyn, N. Y., assignor to F. A. Hall, Montclair, N. J. Bed. No. 1,230,913; June 26; v. 239; p. 971.
McIntyre, John P., Sagerton, Tex. Harrow. No. 1,231,398; June 26; v. 239; p. 1136.
McIntyre, Michael M., assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio. Vehicle-spring. No. 1,229,109; June 5; v. 239; p. 247.
McKay Company, The. (See McKay, Stewart R., assignor.)
McKay, Stewart R., assignor to The McKay Company, Cleveland, Ohio. Means for holding demountable rims on wheels. No. 1,228,795; June 5; v. 239; p. 144.
McKay, Stewart R., assignor to The McKay Company, Cleveland, Ohio. Rim-clamping device. No. 1,228,796; June 5; v. 239; p. 144.
McKean, John O., assignor to Foster Machine Company, Westfield, Mass. Support for bobbins or cops. No. 1,229,491; June 12; v. 239; p. 425.
McKeen Motor Car Company. (See McKeen, William R., Jr., assignor.)
McKeen, William R., Jr., assignor to McKeen Motor Car Company, Omaha, Nebr. Charge-preparing apparatus. No. 1,229,492; June 12; v. 239; p. 426.
McKellar, William C. (See Davidson and McKellar.)
McKenna, Hugh H. (See Stewart and McKenna.)
McKinney, Arthur C., Klondike, Tex. Clothes-pin. No. 1,229,632; June 12; v. 239; p. 474.
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McLean, Finis, Valley Junction, Iowa. Tie-plate. No. 1,231,038; June 26; v. 239; p. 1016.
McLean, Harry D., and C. Waring, Carstairs, Alberta, Canada. Dirigible headlight. No. 1,230,741; June 19; v. 239; p. 876.
McMeekin, Bowman M., and H. N. Downs, Shelton, Conn. Safety-brake for automobiles, &c. No. 1,229,110; June 5; v. 239; p. 247.
McMoore, Butler, Argenta, Ark. Ice-box for automobiles. No. 1,230,914; June 26; v. 239; p. 972.
McMullen, Charles A., Caldwell, N. J. Automatic change-making machine. No. 1,228,459; June 5; v. 239; p. 28.
McMurtrie, Adnah, assignor to Thomas & Betts Company, New York, N. Y. Clamp. No. 1,230,742; June 19; v. 239; p. 877.
McNally, Hugh, Richland Center, Wis. Puzzle. No. 1,230,369; June 19; v. 239; p. 734.
McNally, Leo F., Brooklyn, assignor to Transportation Utilities Company, New York, N. Y. Trap-door for vestibule-cars. No. 1,228,938; June 5; v. 239; p. 190.
McNulta, Herbert, Chicago, Ill. Passenger-car for railways. No. 1,228,797; June 5; v. 239; p. 145.
McNulty, Sterrett E., Washington, D. C. Window-protecting attachment. No. 1,230,197; June 19; v. 239; p. 697.
McPartland, James H., Houlton, Me. Ball-cock. No. 1,231,399; June 26; v. 239; p. 1137.
McPherson, James H. (See Du Greuler and McPherson.)
McQueen, Ulysses G., New York, N. Y. Hinge. No. 1,230,743; June 19; v. 239; p. 877.
McSwain, Harry W. (See McSwain, William H. and H. W.)
McSwain, William H., Moundsville, W. Va., and H. W. McSwain, Detroit, Mich. Glass-feeding table. No. 1,230,424; June 19; v. 239; p. 770.
McTimmonds, Ivy, Mitchell, Oreg. Bed. No. 1,229,168; June 5; v. 239; p. 267.
McVoy, Vincen P., assignor of one-half to J. M. Walsh, Mobile, Ala. Engine drifting-valve. No. 1,229,993; June 12; v. 239; p. 520.
McWhorter, Allen, Riverton, N. J. Poison-distributer. No. 1,229,994; June 12; v. 239; p. 591.
Means, Charles M., assignor of two-thirds to W. A. McCutcheon, Pittsburgh, Pa. Methane-detector. No. 1,231,045; June 26; v. 239; p. 1019.
Means, Pliny E., Tyrone, N. Mex. Safety attachment for synchroscopes. No. 1,230,003; June 12; v. 239; p. 594.
Mechano Gear Shift Co. (See Richardson, Bayard E., assignor.)
Mechan, Robert E. L., Cincinnati, Ohio. Brake-head. No. 1,230,749; June 19; v. 239; p. 879.
Meese, Louis F. W., Minneapolis, Minn. Advertisement-displaying machine. No. 1,230,313; June 19; v. 239; p. 735.
Mehlhope, Clarence E., H. R. Matthei, and T. Z. Mally, Chicago, Ill., assignors to G. Plamondon, Wheaton, Ill.; A. D. Plamondon, executor. Clasp. No. 1,229,200; June 5; v. 239; p. 277.
Melkle, George S., Schenectady, N. Y., assignor to General Electric Company. Incandescent cathode device. No. 1,230,004; June 12; v. 239; p. 594.
Melnhardt, Frederick A. B. (See Well, Hugo C., assignor.)
Melrose, George C., assignor of twenty one-hundredths to E. H. Stewart and ten one-hundredths to H. W. Melrose, Los Angeles, Cal. Railway-crossing. No. 1,231,405; June 26; v. 239; p. 1139.
Melrose, Herman W., *et al.* (See Melrose, George C., assignor.)
Melville Clark Piano Company. (See Clark, Melville, assignor.)
Menco-Elma Syndicate Limited. (See Pollard, George, assignor.)
Meng, Frederick A., and L. G. Schrader, Flint, Mich.; said Schrader assignor to said Meng. Flying-machine. No. 1,229,114; June 5; v. 239; p. 248.
Mensforth, Holberry, Manchester, assignor to The British Westinghouse Electric & Manufacturing Company, London, England. Condensing apparatus. No. 1,229,636; June 12; v. 239; p. 457.
Mentel, George E. (See Mentel, Simon N., M. A., and G. E.)
Mentel, Mary A. (See Mentel, Simon N., M. A., and G. E.)
Mentel, Simon N., M. A., and G. E., Springfield, Ohio. Stove. No. 1,228,579; June 5; v. 239; p. 70.
Menzer, Joseph G., New Bedford, Mass. Strip-metal blocker. No. 1,230,750; June 19; v. 239; p. 879.
Menzies, Stephen H., London, England. Treatment of water, sewage, and the like. No. 1,229,305; June 12; v. 239; p. 363.
Mercer, Charles W., Georgetown, S. C. Thrust-bearing. No. 1,229,306; June 12; v. 239; p. 363.
Meredith, James G., Lynchburg, Va. Side-dumping hand-car. No. 1,230,005; June 12; v. 239; p. 594.
Mérle, Jean, Paris, France. Sterilizing liquids. No. 1,230,751; June 19; v. 239; p. 880.
Merkel, Arthur W., Birmingham, Ala., assignor to Continental Gin Company. Quick-demountable bearing for linter-gin-saw shafts. No. 1,230,591; June 19; v. 239; p. 828.
Merkel, Georg, Munich, Germany. Retort-discharger. No. 1,228,942; June 5; v. 239; p. 191.
Merkel, Georg, Munich, Germany. Distilling and exsiccating watery combustibles. No. 1,229,637; June 12; v. 239; p. 475.
Merrill, Harry E., Monmouth, Me. Constructing moccasin-shoes. No. 1,231,183; June 26; v. 239; p. 1065.
Merriman, David F., and C. W. Harris, Waterloo, Iowa. Counting-machine. No. 1,230,196; June 19; v. 239; p. 696.
Merritt, Frederick R., Redding, Cal. Guard for steel traps. No. 1,231,406; June 26; v. 239; p. 1140.
Merrow Machine Company, The. (See Avis, Samuel W., assignor.)
Mertelmeyer, Gisbert, assignor to The Bristol Company, Waterbury, Conn. Automatic compensating device. No. 1,228,803; June 5; v. 239; p. 147.
Mesick, John, Spokane, Wash. Dirigible headlight. No. 1,231,184; June 26; v. 239; p. 1066.
Metcalf, Jefferson D., Wisner, La., assignor of one-half to E. S. Poole, Coles, Miss. Tire-armor. No. 1,229,115; June 5; v. 239; p. 249.
Metcalf, Maurice A. (See Sabbag, Litfallah G., assignor.)
Metten, John F., Philadelphia, Pa. Safety-valve. No. 1,231,280; June 26; v. 239; p. 1097.
Metz, Norbert, Diddelingen, Luxemburg. Art of rolling. No. 1,229,497; June 12; v. 239; p. 427.
Metzler, Robert. (See Metzler, William H. and R.)
Metzler, William H., Syracuse, N. Y., and R. Metzler, Odessa, Ontario, Canada. Trench-digger. No. 1,229,116; June 5; v. 239; p. 249.
Meyer, Christopher J., assignor to Evinrude Motor Company, Milwaukee, Wis. Detachable rowboat-motor. No. 1,231,040; June 26; v. 239; p. 1019.
Meyer, Lora V., Brooklyn, N. Y. Carpet-beating frame. No. 1,231,281; June 26; v. 239; p. 1097.
Meyer, Louis, New York, N. Y. Printing-press. No. 1,231,282; June 26; v. 239; p. 1098.
Meyers, Franklin. (See Rahn and Meyers.)
Meyers, Hugh, Grundy Center, Iowa. Latch. No. 1,230,006; June 12; v. 239; p. 595.
Meyers, Joseph E., Camp Stotsenburg, Pamponga, Philippine Islands. Semaphore-instructor. No. 1,229,638; June 12; v. 239; p. 476.
Meyers & Son, Louis. (See Aaron and Jones, assignors.)
Midgorden, Leonard J. (See Hougas and Midgorden.)
Mihalyi, Joseph, assignor to Crown Optical Company, Rochester, N. Y. Optical instrument. No. 1,229,117; June 5; v. 239; p. 249.
Milburn, Leonidas J., *et al.* (See Maxwell, Dillard L., assignor.)
Milburn, Williamson J., *et al.* (See Maxwell, Dillard L., assignor.)
Miles, George W., Belmont, assignor to Ross Chemical Company, Boston, Mass. Incorporating filling material in paper. No. 1,228,580; June 5; v. 239; p. 70.
Millard, Reginald W., assignor to Foster, Merriam & Company, Meriden, Conn. Caster. No. 1,230,502; June 19; v. 239; p. 797.
Miller, Albert, *et al.* (See Pollock, John L., assignor.)
Miller, Albert F. (See Peters, Fath, and Miller.)
Miller, Arthur E., assignor to The G. W. Parsons Company, Newton, Iowa. Caterpillar-wheel. No. 1,228,687; June 5; v. 239; p. 106.
Miller, Arthur E., assignor to The G. W. Parsons Company, Newton, Iowa. Caterpillar-tractor. No. 1,228,688; June 5; v. 239; p. 106.
Miller, August W., Kansas City, Mo. Game. No. 1,230,503; June 19; v. 239; p. 798.
Miller, Charles H. (See Arrington and Miller.)
Miller, Edward. (See Murphy and Miller.)
Miller, George E., Oakland, and E. B. Cantrell, San Francisco, Cal. Screw-jack. No. 1,228,943; June 5; v. 239; p. 192.



Miller, Henry C., Waterford, N. Y. Seam-dampening machine. No. 1,228,689; June 5; v. 239; p. 107.
Miller, Henry L., and N. P. Nielsen, Port Aransas, Tex. Valve. No. 1,229,772; June 12; v. 239; p. 520.
Miller, John C., Covington, Ky., assignor, by mesne assignments, to The Cincinnati Can Company, Cincinnati, Ohio. Ice-cream freezer. No. 1,228,804; June 5; v. 239; p. 147.
Miller, Lewis, Oakdale, assignor of one-half to W. J. Griffith, Oliver Springs, Tenn. Shipping-crate. No. 1,229,118; June 5; v. 239; p. 249.
Miller, Otto, Dalton, Minn. Car-axle lubricator. No. 1,230,821; June 19; v. 239; p. 903.
Miller Rubber Company, The. (See Campbell, William S., assignor.)
Miller, Theodore B., Richmond, Ind. Roller window-screen. No. 1,230,918; June 26; v. 239; p. 973.
Miller, William J., Los Angeles, Cal. Brake. No. 1,229,119; June 5; v. 239; p. 250.
Miller, William S., assignor to Utility Shock Absorber Company, Philadelphia, Pa. Spring controller or governor. No. 1,228,944; June 5; v. 239; p. 192.
Milliken, Foster, Lawrence, N. Y. Combined Y-valve and hose connection. No. 1,230,007; June 12; v. 239; p. 595.
Million, Robert J., Monticello, Ind. Tractor. No. 1,230,752; June 19; v. 239; p. 880.
Milliorn, William L., El Paso, Tex. Tool. No. 1,231,407; June 26; v. 239; p. 1140.
Milnes, John H., Huddersfield, England. Machine or apparatus for dyeing, washing, and the like. No. 1,230,198; June 19; v. 239; p. 697.
Milos, Fred, Chicago, Ill. Collar-button. No. 1,229,773; June 12; v. 239; p. 520.
Milton Schnaier Contracting Corp. (See Schnaier, Milton, assignor.)
Mincher, John T. (See Adams and Mincher.)
Miner, Frank J., Detroit, Mich. Tractor. No. 1,231,408; June 26; v. 239; p. 1140.
Miner, William H. (See Harris, Joseph, assignor.)
Miner, William H. (See Johnson, George A., assignor.)
Miner, William H. (See Lewis, Goodrich Q., assignor.)
Miner, William H. (See Mitchell, John R., assignor.)
Miner, William H. (See O'Connor, John F., assignor.)
Miner, William H. (See Patch, Calvin B., assignor.)
Minneapolis Heat Regulator Company. (See Denison, Frederick S., assignor.)
Minogue, Martin T., Philadelphia, Pa. Spark-plug. No. 1,229,193; June 5; v. 239; p. 275.
Minor, Walter S., Cunningham, Tenn. Stave-jointing machine. No. 1,229,307; June 12; v. 239; p. 364.
Minton, Le Roy H., Metuchen, N. J., assignor of one-half to A. W. Herbst, Philadelphia, Pa. Argillaceous composition and making the same. No. 1,228,465; June 5; v. 239; p. 31.
Mintz, Harry, Dorchester, Mass. Hammock. No. 1,231,047; June 26; v. 239; p. 1020.
Mirfield, George E., and F. H. Nullmeyer, assignors, by mesne assignments, to The Youngstown Sheet and Tube Company, Youngstown, Ohio. Machine for armoring cables. No. 1,230,008; June 12; v. 239; p. 596.
Mirfield, George E., and F. H. Nullmeyer, assignors, by mesne assignments, to The Youngstown Sheet and Tube Company, Youngstown, Ohio. Means for reeling cables. No. 1,230,009; June 12; v. 239; p. 596.
Miskimen, Judson H., Glendive, Mont. Clothes-lifter. No. 1,228,945; June 5; v. 239; p. 192.
Mitchell, Clarence C., assignor to The National Marking Machine Company, Cincinnati, Ohio. Combined guard and tension attachment for marking-machines and the like. No. 1,228,946; June 5; v. 239; p. 192.
Mitchell, Hugh M., assignor to W. B. Mitchell, Sr., Des Moines, Iowa. Motor-lift-out device. No. 1,228,947; June 5; v. 239; p. 193.
Mitchell, John E., and D. Parks, St. Louis, Mo. Heel-building machine. No. 1,228,948; June 5; v. 239; p. 193.
Mitchell, John R., Evanston, Ill., assignor to W. H. Miner, Chazy, N. Y. Draw-bar-centering device and carrier. No. 1,230,199; June 19; v. 239; p. 697.
Mitchell, William B., Sr. (See Mitchell, Hugh M., assignor.)
Mittlson, G. A., *et al.* (See Munroe, William H., assignor.)
Miyasaki, Kanzaburo, Los Angeles, Cal. Ornament. No. 1,230,010; June 12; v. 239; p. 596.
Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Trimming mechanism for sewing-machines. No. 1,230,753; June 19; v. 239; p. 880.
Moffitt, George W., St. Louis county, Mo. Refractometer. No. 1,230,754; June 19; v. 239; p. 881.
Mogren, Eben F., Minneapolis, Minn. Emergency vehicle-body support. No. 1,230,755; June 19; v. 239; p. 881.
Mohawk Brush Company. (See Winkler, Karl, assignor.)
Mohler, James P., South Haven, Mich. Combination apron and drain-pail. No. 1,230,756; June 19; v. 239; p. 882.
Mohn, Henry P., Jacksonville, Ill. Collar-press. No. 1,228,466; June 5; v. 239; p. 31.
Mollenhauer, Louis, New York, N. Y. Bow-guide. No. 1,228,949; June 5; v. 239; p. 194.
Möller, Egron O., Brooklands, England. Electrical relay. No. 1,231,048; June 26; v. 239; p. 1020.
Molyneux, George E., Bayonne, N. J. Transmission for power table sewing-machines, &c. No. 1,230,919; June 26; v. 239; p. 974.
Momentum Brake Corporation. (See Morgan, Porter S., assignor.)
Monarch Metal Weather Strip Company. (See Lane, Alfred M., assignor.)
Monnet, Georges, Stolberg, Germany. Device for lifting, lowering, and conveying fragile objects, such as sheet-glass and the like. No. 1,228,690; June 5; v. 239; p. 108.
Montaney, Louis Paul Omak, Wash. Folding chiropractic table. No. 1,230,592; June 19; v. 239; p. 829.
Montbarbon, Charles M. P., deceased, and G. E. Chédru; H. Waël, Levallois-Perret, France, administrator. Friction-gearing. No. 1,230,011; June 12; v. 239; p. 596.
Montgomery, Charles R., Keynsham, near Bristol, England. Appliance for shearing metal. No. 1,229,120; June 5; v. 239; p. 250.
Moon, John C., St. Louis, Mo. Welding tubes. No. 1,229,774; June 12; v. 239; p. 520.
Mooney, Frank H., assignor to The Conklin Pen Manufacturing Company, Toledo, Ohio. Thread-cutting machine. No. 1,231,283; June 26; v. 239; p. 1098.
Moore, Frank S., Brooklyn, N. Y. Phonograph. No. 1,229,775; June 12; v. 239; p. 521.
Moore, George, Joplin, Mo. Replacing and thickening apparatus. No. 1,231,409; June 26; v. 239; p. 1141.
Moore, George, Joplin, Mo. Process of replacement. No. 1,231,410; June 26; v. 239; p. 1141.
Moore, George, Joplin, Mo. Dewatering and replacement apparatus. No. 1,231,411; June 26; v. 239; p. 1141.
Moore, Henrietta A. (See Flanagan, William, assignor.)
Moore Rifle and Arms Company, The. (See Moore, Robert A., assignor.)
Moore, Robert A., assignor to The Moore Rifle and Arms Company, Inc., New York, N. Y. Firearm. No. 1,230,012; June 12; v. 239; p. 597.
Moratta, Mathew, Princeton, Ind. Packing-ring. No. 1,229,498; June 12; v. 239; p. 427.
Morey, Fred E., Baraboo, Wis. Cloth-bolt press. No. 1,230,200; June 19; v. 239; p. 697.
Morgan Construction Company. (See Edwards, Victor E., assignor.)
Morgan, John C., Los Angeles, Cal. Electric generator. No. 1,229,308; June 12; v. 239; p. 364.
Morgan, John C., Los Angeles, Cal. Hasp-fastener. No. 1,230,073; June 12; v. 239; p. 617.
Morgan, Porter S., Norwalk, Conn., assignor to Momentum Brake Corporation, New York, N. Y. Take-up for momentum-brakes. No. 1,231,284; June 26; v. 239; p. 1099.
Morgan & Wright. (See Christopherson, William G., assignor.)
Morgan & Wright. (See Thompson, William, assignor.)
Morris, George R., Buffalo, N. Y. Jack or device for spreading cables and the like. No. 1,228,805; June 5; v. 239; p. 148.
Morris, Henry C. (See Emerson and Morris.)
Morris, Henry C., Dallas, Tex. Gas-meter attachment. No. 1,228,467; June 5; v. 239; p. 32.
Morris, John V. (See Julian and Morris.)
Morris, Louis S., Bridgeport, Conn. Internal-combustion engine. No. 1,228,806; June 5; v. 239; p. 148.
Morrison, Charles D., assignor to The Indiana Manufacturing Company, Indianapolis, Ind. Device for reclaiming grain. No. 1,230,757; June 19; v. 239; p. 882.
Morse, Frank L., Ithaca, N. Y. Golf-practising machine. No. 1,229,309; June 12; v. 239; p. 364.
Morse, Mark S., assignor to Railway Specialties Company, Los Angeles, Cal. Wigwag signal. No. 1,228,581; June 5; v. 239; p. 70.
Morterud, Einar, Jellien, Norway. Wood-pulp boiler. No. 1,228,950; June 5; v. 239; p. 194.
Morton, George Y., San Francisco, Cal. Chaser and reamer. No. 1,228,951; June 5; v. 239; p. 194.
Morton, Houston S., Detroit, Mich. Safety device for moving-picture machines. No. 1,230,201; June 19; v. 239; p. 698.
Morton, Thomas S., Tuxedo Park, N. Y. Tub-securing support. No. 1,230,425; June 19; v. 239; p. 771.
Morwitz, Joseph, Philadelphia, Pa. Hydraulic press. No. 1,230,013; June 12; v. 239; p. 597.
Mosen, Joseph, Rouse, Colo. Tractor. No. 1,230,014; June 12; v. 239; p. 597.
Moscow, Stella, Brooklyn, N. Y. Light-proof and sanitary skirt. No. 1,228,807; June 5; v. 239; p. 148.
Moses, Alfred S., *et al.* (See Lane, Frederick H., assignor.)
Moss, Albert A., Newark, assignor of one-half to L. J. Walter, Elizabeth, N. J. Car-coupling. No. 1,228,691; June 5; v. 239; p. 108.
Mote, Horace, Cleveland, Ohio. Demountable and separable vehicle-wheel rim. No. 1,229,639; June 12; v. 239; p. 476.
Motion Display Corporation. (See McDonald, Leslie R., assignor.)
Motz, Mary G., Hillsdale, N. J. Corset. No. 1,228,808; June 5; v. 239; p. 149.
Moumblow, Ernest L. (See Macfadden and Moumblow.)

Mouradian, Hughes, Philadelphia, Pa., assignor to American Telephone and Telegraph Company, Boston, Mass. Locating special transposition-points. No. 1,228,468; June 5; v. 239; p. 32.
Movshovitz, Max. (See Cherry, Edward E., assignor.)
Mowrey, J. H. (See Bell, Silas D., assignor.)
Mowry, Edward, Sterling, Ill., assignor to International Harvester Company of New Jersey. Hay-loader. No. 1,229,640; June 12; v. 239; p. 477.
Mowry, Joseph B., Cleveland, Ohio. Regrinding device for the valves of explosion-engines. No. 1,228,582; June 5; v. 239; p. 71.
Mozdzierz, Aloysius, New Haven, Conn. Figure wheeled toy. No. 1,230,202; June 19; v. 239; p. 698.
Mozur, Stanislaw, Erie, Pa. Flushing-cuspidor. No. 1,230,314; June 19; v. 239; p. 735.
Muckle, Theodore W., assignor to W. W. Case, Jr., Denver, Colo. Rivet-forge. No. 1,230,593; June 19; v. 239; p. 829.
Mueller, August E., assignor of one-third to T. J. Hruby and one-third to J. O. Hruby, Jr., Chicago, Ill. Valve. No. 1,228,469; June 5; v. 239; p. 32.
Mueller, August E., assignor of one-third to T. J. Hruby and one-third to J. O. Hruby, Jr., Chicago, Ill. Spring-mounting for vehicles. No. 1,228,470; June 5; v. 239; p. 33.
Mueller, Frederick. (See Mueller, Friedrich, assignor.)
Mueller, Friedrich, Vienna, Austria, assignor of one-half to F. Mueller, Chicago, Ill. Making tin-plate. No. 1,231,285; June 26; v. 239; p. 1099.
Mueller, George, Salt Lake City, Utah. Baking-pan. No. 1,228,471; June 5; v. 239; p. 33.
Mueller, Otto, Richmond, Cal. Bracket. No. 1,228,583; June 5; v. 239; p. 71.
Mueller, Philip, Decatur, Ill. Self-closing cock with check. No. 1,228,584; June 5; v. 239; p. 71.
Mueller, Philip, and A. C. Schuermann, Decatur, Ill. Self-closing cock with check. No. 1,228,585; June 5; v. 239; p. 72.
Muller, Frederick, Elizabeth, N. J. Sine-bar. No. 1,231,185; June 26; v. 239; p. 1066.
Multicalculator Company. (See Arrington and Miller, assignors.)
Mulvihill, Daniel C., Hannibal, Mo. Lifting-jack. No. 1,228,586; June 5; v. 239; p. 72.
Munden, Daniel W., assignor to L. Wagschal, Indianapolis, Ind. Acetylene-gas generator. No. 1,229,499; June 12; v. 239; p. 427.
Munroe, William H., assignor of one-fourth to G. A. Mattison and one-fourth to A. B. Conklin, Ashland, Ala. Ore concentrator or separator. No. 1,230,081; June 12; v. 239; p. 620.
Munson, James L., Sparta, N. J. Carbureter. No. 1,228,692; June 5; v. 239; p. 108.
Munzner, Max, Arlington, N. J., assignor to The Torsion Balance Company, New York, N. Y. Scale for determining specific gravities. No. 1,229,641; June 12; v. 239; p. 477.
Murdock, Harry B. (See Van Derbeck and Murdock.)
Murnane, James P., St. Louis, Mo., assignor to Zouri Drawn Metals Company, Chicago, Ill. Glass-securing device. No. 1,230,758; June 19; v. 239; p. 882.
Murphy, Clinton C. (See Mathews, Fred, assignor.)
Murphy, Clinton C., Chicago, Ill., assignor to P. H. Murphy Company, Parnassus, Pa. Car-roof. No. 1,231,049; June 26; v. 239; p. 1020.
Murphy, Edwin J., Schenectady, N. Y., assignor to General Electric Company. Electromagnetic switch. No. 1,231,412; June 26; v. 239; p. 1142.
Murphy, John, assignor of one-half to G. P. Schlocker, Memphis, Tenn. Picker-head. No. 1,229,121; June 5; v. 239; p. 251.
Murphy, Thomas J., and E. Miller, Rochester, N. Y. Call system. No. 1,231,537; June 26; v. 239; p. 1181.
Murray Company, The. (See Kinne, Tempel L., assignor.)
Murray, George C., Chicago, Ill., assignor to Keyoke Railway Equipment Company. Uncoupling device. No. 1,230,203; June 19; v. 239; p. 699.
Murray, George R., Cleveland, Ohio. Stone grinding and polishing machine. No. 1,230,759; June 19; v. 239; p. 883.
Murray, Henry H., Riverton, N. J., assignor to Victor Talking Machine Company. Stop mechanism for talking-machines. No. 1,229,642; June 12; v. 239; p. 477.
Murray, James E., Kansas City, Mo. Centering-tool for circular objects. No. 1,230,015; June 12; v. 239; p. 598.
Murray, Thomas E. (See Woodrow, Harry R., assignor.)
Murray, Thomas E., New York, N. Y. Vehicle-wheel. No. 1,230,016; June 12; v. 239; p. 598.
Murray, Thomas E., New York, N. Y. Sheet-metal hub. No. 1,230,427; June 19; v. 239; p. 772.
Murray, Thomas E., Jr., Brooklyn, N. Y. Controlling apparatus for motor-carriages. No. 1,230,426; June 19; v. 239; p. 771.
Mursell, Clifford H., Roanoke, Va. Trolley-contactor. No. 1,231,413; June 26; v. 239; p. 1142.
Muse, Donald P., Junction City, Ark. Electrical piano attachment. No. 1,229,122; June 5; v. 239; p. 251.
Myers, Emma A. (See Barr and Myers.)
Myers, Eugene V., East Orange, N. J., assignor to A. Schrader's Son, Inc., Brooklyn, N. Y. Tire-valve. No. 1,231,548; June 26; v. 239; p. 1184.
Myers, Everett W., and A. E. Sharpley, Key West, Fla. Swinging-gear for davits. No. 1,230,760; June 19; v. 239; p. 883.
Myers, Hubert A., assignor of one-half to A. S. Hickok, Toledo, Ohio. Rotary engine. No. 1,229,643; June 12; v. 239; p. 478.
Myers, Israel V., Kansas City, Mo. Reclining-chair. No. 1,231,414; June 26; v. 239; p. 1143.
Myers, Loring W., Lubec, Me. Life-raft. No. 1,229,123; June 5; v. 239; p. 252.
Myers, Marcus A. (See Decker and Myers.)
Myhre, Arthur B., Tacoma, Wash. Log-bunk. No. 1,228,952; June 5; v. 239; p. 194.
Napier, George R., Macon, Ga. Lock for receptacle-closures. No. 1,230,316; June 19; v. 239; p. 736.
Nash, Evan R., Hanford, Cal. Welding-torch. No. 1,230,204; June 19; v. 239; p. 699.
Nash, Frederic J., Brooklyn, N. Y. Fertilizer and the manufacture thereof. No. 1,228,587; June 5; v. 239; p. 72.
Nash, Lewis H., South Norwalk, Conn. Water-meter. No. 1,228,693; June 5; v. 239; p. 108.
Nash, Thomas J., assignor to National Manufacturing Co., Incorporated, Lincoln, Nebr. Automobile-jack. No. 1,230,315; June 19; v. 239; p. 736.
National Binding Machine Company. (See Blake, Philip W., assignor.)
National Brake & Electric Company. (See Aikman, Burton S., assignor.)
National Brake & Electric Company. (See Richards, Walter J., assignor.)
National Brush Washing Machine Company. (See Trinks, Willibald, assignor.)
National Cash Register Company, The. (See Carroll, Fred M., assignor.)
National Cash Register Company, The. (See Carroll and Frank, assignors.)
National Cash Register Company, The. (See Chryst, William A., assignor.)
National Cash Register Company, The. (See Von Pein, Edward J., assignor.)
National Fibre Box Company. (See Walter, Harrison B., assignor.)
National Malleable Castings Company, The. (See Bucklus, Albert O., Jr., assignor.)
National Malleable Castings Company, The. (See Howard, Pliny J., assignor.)
National Malleable Castings Company, The. (See Schmidt, Ernest H., assignor.)
National Malleable Castings Company, The. (See Willison, John, assignor.)
National Manufacturing Co. (See Nash, Thomas J., assignor.)
National Marking Machine Company, The. (See Mitchell, Clarence C., assignor.)
National Metal Molding Company. (See Abbott, Gilson, and Fullman, assignors.)
National Pneumatic Company. (See Gottschalk, Albert, assignor.)
National Pneumatic Company. (See Rowntree, Harold, assignor.)
National Safety Appliance Company, The. (See Sedgwick, Hiram G., assignor.)
National Spring Bed Company, The. (See Arnold, Harry B., assignor.)
National Ticket Case Company. (See Blades, Leonard J., assignor.)
Natomas Company of California. (See Oliver, Emery, assignor.)
Naysmith, Frank M., Davenport, Iowa. Chiropractic table. No. 1,228,953; June 5; v. 239; p. 195.
Neary, Michael J., Victoria, British Columbia, Canada. Platform-scale. No. 1,229,310; June 12; v. 239; p. 365.
Nebergall, Philip V., La Grande, Oreg. Paper holder and cutter. No. 1,231,415; June 26; v. 239; p. 1143.
Needham, Harry H., East Orange, N. J., assignor to General Electric Company. Manufacture of incandescent lamps. No. 1,231,416; June 26; v. 239; p. 1143.
Neese, Elo. (See Heller and Neese.)
Neff, John P., East Orange, N. J., assignor to American Arch Company, New York, N. Y. Locomotive-furnace arch. No. 1,229,380; June 12; v. 239; p. 389.
Neff, John P., East Orange, N. J., assignor to American Arch Company, New York, N. Y. Arch construction for shallow fire-boxes. No. 1,229,392; June 12; v. 239; p. 392.
Nehlsen, Hermann. (See Weller and Nehlsen.)
Neimeyer, Charles, Little Rock, Ark. Resilient wheel. No. 1,228,809; June 5; v. 239; p. 149.
Nelson, De Witt, assignor to Tom Thumb Tractor Company, Minneapolis, Minn. Traction-belt. No. 1,230,504; June 19; v. 239; p. 798.
Nelson, Hilmer, San Jose, Cal. Enlarged spindle and wheel-hub. No. 1,229,311; June 12; v. 239; p. 365.
Nelson, John E. (See Marr and Nelson.)
Nelson, Nels I. (See Hanson and Nelson.)
Nelson, Robert M., assignor of three-fourths to M. Phillips and one-fourth to G. W. Maskers, Detroit, Mich. Automobile-fender. No. 1,229,124; June 5; v. 239; p. 252.
Neostyle Envelope Company. (See Hammel, Walter F., assignor.)
Nero, Arvid H., New Britain, assignor to The Arrow Electric Company, Hartford, Conn. Attachment-plug receptacle. No. 1,231,417; June 26; v. 239; p. 1144.



Nesmith, Ralph A., assignor of one-half to W. H. Sibbald, Los Angeles, Cal. Tray-washer. No. 1,229,644; June 12; v. 239; p. 478.
Nesmith, Ralph A., and W. H. Sibbald, Los Angeles, Cal. Folding table. No. 1,229,645; June 12; v. 239; p. 478.
Netcott, George A., Independence, Iowa. Swing. No. 1,228,694; June 5; v. 239; p. 109.
Neu, George, Sr., Cincinnati, Ohio. Umbrella. No. 1,228,810; June 5; v. 239; p. 149.
Neu, Hugo, New York, N. Y., and L. Blaha, Lyndhurst, N. J. Lock for automobile steering-wheels. No. 1,231,050; June 26; v. 239; p. 1021.
Neuens, Michael W., assignor to Western Implement Company, Port Washington, Wis. Knockdown bench. No. 1,228,954; June 5; v. 239; p. 195.
Neumann, John, assignor of one-half to H. N. Claussen, Chicago, Ill. Sealing-disk for bottle-stoppers. No. 1,230,594; June 19; v. 239; p. 829.
New Era Spinning Co. (See Bélanger, Victor, assignor.)
New Haven Clock Co. (See Porter, Wilson E., assignor.)
New Jersey Patent Company. (See Allen, Harry P., assignor.)
New Jersey Patent Company. (See Aylsworth, Jonas W., assignor.)
New Jersey Patent Company. (See Gall, Adolph F., assignor.)
New Jersey Patent Company. (See Holland, Newman H., assignor.)
New Jersey Patent Company. (See Pierman, Alexander N., assignor.)
New Method Stove Company. (See Baxter, Berry A., assignor.)
New York Couch Bed Company. (See Sisbower and Pittoni, assignors.)
Newchurch, John W. (See Simoneaux, Clement, assignor.)
Newcomb, Horace C., Philadelphia, Pa. Stuffed fruit. No. 1,231,286; June 26; v. 239; p. 1099.
Newhall, Henry B. (See Pleister, Henry W., assignor.)
Newhouse, Alphonse, San Francisco, Cal. Device for creasing papers. No. 1,229,312; June 12; v. 239; p. 365.
Newman, Alfred C., Fargo, N. D. Attachment for pencils and penholders. No. 1,230,761; June 19; v. 239; p. 883.
Newman, Ellwood H., Spring Lake Beach, N. J. Road-finishing machine. No. 1,228,811; June 5; v. 239; p. 149.
Newsom, Joseph N., assignor of one-half to C. E. Andrews, St. Louis, Mo., and one-half to H. Christopher, Decatur, Ill. Rivet-setting device. No. 1,230,082; June 12; v. 239; p. 620.
Newton, Edward C., Marysville, Cal. Automatic regulating-valve for internal-combustion engines. No. 1,229,500; June 12; v. 239; p. 428.
Newton, Richard T., New York, N. Y., Vehicle. No. 1,230,762; June 19; v. 239; p. 884.
Nicholas, William, New York, N. Y., assignor to Premier Machine Company. Squirt-preventer for type-casting machines. No. 1,228,588; June 5; v. 239; p. 73.
Nichols, Frank E., Mount Carmel, and E. W. Feltis, Norwood, Ohio. Pneumatic player-action. No. 1,229,501; June 12; v. 239; p. 428.
Nichols, Harold W., East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Fluctuation-damping means for rotatable members. No. 1,230,205; June 19; v. 239; p. 699.
Nichols, Wesley G., Chicago Heights, assignor to American Manganese Steel Company, Chicago, Ill. Placer-dredge tumbler. No. 1,229,313; June 12; v. 239; p. 366.
Nicholson, John L., Chicago, Ill., assignor to American Arch Company, New York, N. Y. Locomotive-boiler fire-box. No. 1,229,376; June 12; v. 239; p. 388.
Nicholson, John L., Chicago, Ill., assignor to American Arch Company, New York, N. Y. Locomotive-fire-box arch. No. 1,229,393; June 12; v. 239; p. 393.
Nickerson, Oris H. (See Boyton and Nickerson.)
Nielsen, Niels P. (See Miller and Nielsen.)
Niemeyer, Henry C., Racine, Wis., assignor, by mesne assignments, to Richmond Radiator Company, New York, N. Y. Suction-producer. No. 1,230,206; June 19; v. 239; p. 699.
Nikonow, John P., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Gear-shifting mechanism. No. 1,228,812; June 5; v. 239; p. 150.
Nikonow, John P., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Starting mechanism for gas-engines. No. 1,229,776; June 12; v. 239; p. 521.
Nilsson, Nicholaus T., assignor of fifty one-hundredths to S. Evans, Chicago, Ill. Moving-picture machine. No. 1,229,125; June 5; v. 239; p. 252.
Nivols, Victor, Brooklyn, N. Y. Cigarette-case. No. 1,229,502; June 12; v. 239; p. 429.
Nivols, Victor, Brooklyn, N. Y. Cigarette-case. No. 1,231,186; June 26; v. 239; p. 1066.
Nolan, Francis A., St. Paul, Minn. Stop for sound-reproducing machines. No. 1,230,505; June 19; v. 239; p. 798.
Nolan, Francis A., St. Paul, Minn. Stop. No. 1,230,506; June 19; v. 239; p. 799.
Nolan, Francis A., St. Paul, Minn. Phonograph-stop. No. 1,230,763; June 19; v. 239; p. 884.
Nolan, Francis A., St. Paul, Minn. Phonograph-stop. No. 1,230,764; June 19; v. 239; p. 884.
Nolan, Francis A., St. Paul, Minn. Phonograph-stop. No. 1,230,765; June 19; v. 239; p. 885.
Noneman, Ira W., assignor to The Borden Company, Warren, Ohio. Die-stock. No. 1,228,955; June 5; v. 239; p. 196.
Noonan, Joseph H., Auckland, New Zealand. Gas-cooker. No. 1,228,956; June 5; v. 239; p. 196.
Norberg, Stella M., Pringle, S. D. Vehicle-brake mechanism. No. 1,229,314; June 12; v. 239; p. 366.
Norcross, William C., assignor to American Molding Machine Co., Terre Haute, Ind. Leveling drawing-table for combination jolt-ramming and rock-over machines. No. 1,231,187; June 26; v. 239; p. 1067.
Nordberg, Bruno V., Milwaukee, Wis. Compressed-air power system. No. 1,231,051; June 26; v. 239; p. 1021.
Norgord, John. (See Anderson, Carl G., assignor.)
Norman, Charles R., Brooklyn, N. Y., assignor to Tide Water Oil Company, Bayonne, N. J. Pouring device. No. 1,230,207; June 19; v. 239; p. 700.
Norman, Ernest B., New Orleans, La. Carbon-sheet holder. No. 1,231,418; June 26; v. 239; p. 1144.
Normann, John P., assignor of one-half to S. A. Erickson, Crookston, Minn. Folding check-book. No. 1,228,589; June 5; v. 239; p. 73.
Norpoth, Theodor, St. Louis, assignor of one-fourth to T. G. Ehrhardt, California, Mo. Playing-card. No. 1,230,317; June 19; v. 239; p. 736.
Norre, Jens A. (See Hansen, Norre, and Reimer.)
North, George W., La Tuna, assignor of one-half to H. M. Andress, El Paso, Tex. Baling-press. No. 1,229,126; June 5; v. 239; p. 253.
Northwood, Harry, Wheeling, W. Va. Producing glassware presenting brecciated marble effects. No. 1,229,315; June 12; v. 239; p. 366.
Novak, John, Buffalo, N. Y. Rail-joint. No. 1,230,428; June 19; v. 239; p. 772.
Nowotny, Harrie T., St. Louis, Mo. Lock for screens and the like. No. 1,230,920; June 26; v. 239; p. 974.
Nu-Ex Fire Appliance Company. (See Bargar, Frederick C., assignor.)
Nu-Style Window Sash Company. (See Porter, Herman P., assignor.)
Nullmeyer, Frank H. (See Mirfield and Nullmeyer.)
O'Brien, Daniel P., Woburn, assignor to Peabody Woburn Machine Company, Peabody, Mass. Leather-measuring machine. No. 1,230,507; June 19; v. 239; p. 799.
O'Brien, Edward A. (See Smith and O'Brien.)
O'Brien, John O. (See Thornton, John E., assignor.)
O'Brien, Leo F., St. Louis, Mo. Sterilizer. No. 1,228,957; June 5; v. 239; p. 196.
O'Brien, Thomas, Philadelphia, Pa. Drawbridge joint connection and lock. No. 1,231,287; June 26; v. 239; p. 1099.
O'Connell, Daniel C., *et al.* (See Spirewfki, John S., Jr., assignor.)
O'Connell, Daniel F., Winnipeg, Manitoba, Canada. Automatic safety-pulley. No. 1,231,052; June 26; v. 239; p. 1021.
O'Connell, James E., *et al.* (See Spirewfki, John S., Jr., assignor.)
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Connection for draft-rigging draw-bars and yokes. No. 1,228,590; June 5; v. 239; p. 73.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-gear. No. 1,228,591; June 5; v. 239; p. 74.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Railway draft-rigging. No. 1,228,592; June 5; v. 239; p. 74.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging for railway-cars. No. 1,231,053; June 26; v. 239; p. 1022.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Double-ended friction-gear. No. 1,231,054; June 26; v. 239; p. 1022.
O'Gorman, William J., New York, N. Y. Spark-plug. No. 1,228,958; June 5; v. 239; p. 196.
O'Neill, Frank, Toledo, Ohio. Neck-mold for bottle-blowing machines. No. 1,231,188; June 26; v. 239; p. 1067.
O'Reilly, William E., London, England. Combined handle and receptacle for safety-razor blades. No. 1,228,698; June 5; v. 239; p. 110.
O'Sullivan, Eugene, South Bethlehem, Pa. Liquid-elevating apparatus. No. 1,229,781; June 12; v. 239; p. 522.
Oakes Company, The. (See Swenson, Carl G., assignor.)
Oakes, Henry, assignor to George Skey and Company Limited, Tamworth, England. Apparatus for the manufacture of earthenware vessels. No. 1,230,017; June 12; v. 239; p. 598.
Oberholtzer, John M., Wooster, Ohio. Garbage-receptacle. No. 1,229,777; June 12; v. 239; p. 521.
Ogle Construction Company. (See Bledsoe, Carl F., assignor.)
Ogle, Vern O., Waterville, Wash. Disk jointer. No. 1,228,695; June 5; v. 239; p. 109.
Ohio Brass Company, The. (See Bolus, Glenn H., assignor.)
Ohio Varnish Company, The. (See Darner, Ralph W., assignor.)
Ohmer, Wilfred I., and D. B. Whistler, assignors to The Recording and Computing Machine Company, Dayton, Ohio. Fare-recording mechanism. No. 1,229,646; June 12; v. 239; p. 479.

Ohmer, Wilfred L., and D. B. Whistler, assignors to The Recording and Computing Machine Company, Dayton, Ohio. Pare-recording mechanism. No. 1,229,647; June 12; v. 239; p. 479.

Olander, Ernest V., Grand Rapids, Mich. Combined mop head and wringer. No. 1,230,208; June 19; v. 239; p. 709.

Olander, Fred, Chicago, Ill. Combination scrubbing and mopping machine. No. 1,229,648; June 12; v. 239; p. 479.

Olejniczak, Anton, Chicago, Ill. Car-coupling. No. 1,228,696; June 5; v. 239; p. 110.

Oleson, Carl O. (See Wilson and Oleson.)

Oleson, Olaf E., assignor to The Edward Steam Specialty Co., Chicago, Ill. Automatic pressure-limiting valve. No. 1,228,593; June 5; v. 239; p. 74.

Oliver Chilled Plow Works. (See Altgelt, Rudolph J., assignor.)

Oliver, Emery, Sacramento, assignor to Natomas Company of California, Natoma, Cal. Method and apparatus for reclaiming dredged land. No. 1,228,959; June 5; v. 239; p. 197.

Oliver, Thomas C., Charlotte, N. C. Production of sulfuric acid in lead chambers. No. 1,229,316; June 12; v. 239; p. 367.

Ollariu, Anton, Philadelphia, Pa. Protractor. No 1,228,697; June 5; v. 239; p. 110.

Olleo, Ralph, Keyport, N. J. Sanitary beating-machine. No. 1,229,778; June 12; v. 239; p. 522.

Olson, Gustaf, assignor of one-half to L. Greenberg and one-sixth to W. M. McEwen, Chicago, Ill. Gear. No. 1,230,209; June 19; v. 239; p. 701.

Olson, Knute W., St. Paul, Minn. Safety device for aviators. No. 1,229,503; June 12; v. 239; p. 429.

Olson, Nels L., Detroit, Mich. Traction bearing-wheel. No. 1,228,472; June 5; v. 239; p. 33.

Olson, Oscar A., Ames, Iowa. Thread cutter and holder. No. 1,229,504; June 12; v. 239; p. 429.

Olson, Walter E., Chicago, Ill. Dyeing rugs. No. 1,229,779; June 12; v. 239; p. 522.

Opel, Walter, Leipzig, Germany. Sound-box for talking-machines. No. 1,229,780; June 12; v. 239; p. 522.

Orbán, Stefan, New York, N. Y. Bearing. (Reissue.) No. 14,315; June 12; v. 239; p. 623.

Orewiler, Benjamin F. (See Florsheim and Orewiler.)

Orvig, Gustave W., *et al.* (See Daniel, Jasper N., assignor.)

Osborn, Claud A., Fort Worth, Tex. Flushing device. No. 1,231,288; June 26; v. 239; p. 1100.

Osborne, Marshall L., Waukomis, Okla. Street-cleaning machine. No. 1,229,127; June 5; v. 239; p. 253.

Oscar Barnett Foundry Company. (See Batteer, Joshua, assignor.)

Oscar Heyman & Company. (See Lück, Jacob W., assignor.)

Osley, Willard A., Springfield, Mass. Device for supporting pails or the like. No. 1,228,813; June 5; v. 239; p. 150.

Osmer, John E., Owosso, Mich. Flushing apparatus. No. 1,229,505; June 12; v. 239; p. 430.

Osterholm, William C., Chicago, Ill., assignor to International Harvester Company of New Jersey. Grinding-machine. No. 1,230,595; June 19; v. 239; p. 830.

Otte, Otho M., Jamestown, N. Y. Knockdown sheet-metal partition. No. 1,231,289; June 26; v. 239; p. 1100.

Otte, Otho M., Jamestown, N. Y. Attaching coated metal sheets. No. 1,231,290; June 26; v. 239; p. 1100.

Otte, Otho M., Jamestown, N. Y. Flour-bin for kitchen-cabinets. No. 1,231,291; June 26; v. 239; p. 1100.

Ovens, Florence J., York Beach, Me. Clam-fork. No. 1,230,766; June 19; v. 239; p. 885.

Overturf, Lewis. (See Traut, Ezra H., assignor.)

Owen, Henry A., assignor to The Whitin Machine Works, Whitinsville, Mass. Thread-parting mechanism for looms. No. 1,228,814; June 5; v. 239; p. 150.

Owen, Henry L. (See Eversole, Cawthon, and Owen.)

Owens, George L., Sioux City, Iowa. Block for live stock. No. 1,229,317; June 12; v. 239; p. 367.

P. & M. Co., The. (See Preston, Frederick A., assignor.)

P. H. Murphy Company. (See Murphy, Clinton C., assignor.)

Pacchetti, Carlo, Milan, Italy. Non-skid composition of caoutchouc or rubber and the like. No. 1,230,597; June 19; v. 239; p. 830.

Pace, Lafayette, Lafollette, Tenn. Safety appliance for aeroplanes. No. 1,229,649; June 12; v. 239; p. 480.

Pacific Folding Box Factory. (See Raynaud, Charles F., assignor.)

Packard, Horace N., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Thermometer unit. No. 1,230,598; June 19; v. 239; p. 831.

Packard Motor Car Company. (See Church, Harold D., assignor.)

Packard Motor Car Company. (See Huff, Russell, assignor.)

Packard Motor Car Company. (See Hunt, John H., assignor.)

Packard Motor Car Company. (See Loomis, Allen, assignor.)

Packard Motor Car Company. (See Vincent, Jesse G., assignor.)

Packard Motor Car Company. (See Waldon, Sidney D., assignor.)

Packard, Raymond P., Tacoma, Wash. Controlling mechanism. No. 1,231,055; June 26; v. 239; p. 1022.

Paddock, Albert R., Farmdale, Ohio. Concrete pavement. No. 1,231,419; June 26; v. 239; p. 1144.

Page, Albert A., East Haven, assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,229,319; June 12; v. 239; p. 368.

Page, Albert A., East Haven, assignor fo Sargent & Company, New Haven, Conn. Casket-handle. No. 1,229,650; June 12; v. 239; p. 480.

Page, Albert A., East Haven, and H. G. Collins, assignors to Sargent & Company, New Haven, Conn. Lock. No. 1,229,318; June 12; v. 239; p. 367.

Page, Stanley H., San Francisco, assignor to Union Gas Engine Company, Oakland, Cal. Engine cylinder and jacket. No. 1,228,815; June 5; v. 239; p. 150.

Pail, Joseph, Jr., Prague, Alberta, Canada. Shell. No. 1,229,506; June 12; v. 239; p. 430.

Palmer, Adolph P., Oakland, Cal. Separator and amalgamator. No. 1,231,420; June 26; v. 239; p. 1145.

Palmer, Charles S. and D., Saranac Lake, N. Y. Electric iron. No. 1,231,056; June 26; v. 239; p. 1022.

Palmer, Dean. (See Palmer, Charles S. and D.)

Palmer, Herbert R., Cleveland, Ohio. Dry-cell battery. No. 1,231,057; June 26; v. 239; p. 1023.

Palmer, Joel C. R., New Rochelle, and F. J. Holmes, New York, N. Y., assignors, by mesne assignments, to Western Electric Company, Incorporated. Electromagnetic device. No. 1,230,429; June 19; v. 239; p. 772.

Palmquist, Eskil V., Hallandale, and H. G. Lundquist, Seminole county, Fla. Air-brake stop. No. 1,230,767; June 19; v. 239; p. 885.

Palo Company. (See Waldo, Leonard, assignor.)

Panay, Karl, Milwaukee, Wis. Transparent show-jar. No. 1,228,473; June 5; v. 239; p. 34.

Pangborn, Frank C. (See Stanfield, Jasper H., assignor.)

Pansé, Andrew M., Bristol, R. I. Pistol-bayonet. No. 1,231,058; June 26; v. 239; p. 1023.

Paper Service Co. (See Schuchart, Paul A., assignor.)

Paramount Rubber Company, The. (See Roberts, Fred T., assignor.)

Parish, Le Grand, Mountainview, N. J., assignor to American Arch Company, New York, N. Y. Protection for arch-tubes. No. 1,229,377; June 12; v. 239; p. 388.

Parish, Le Grand, Mountainview, N. J., assignor to American Arch Company, New York, N. Y. Locomotive-fire-box arch. No. 1,229,378; June 12; v. 239; p. 389.

Parish, Le Grand, Mountainview, N. J., assignor to American Arch Company, New York, N. Y. Locomotive-arch. No. 1,229,388; June 12; v. 239; p. 391.

Parisian Novelty Company. (See Komorous, Joseph, assignor.)

Parker, Charles, Platteville, Colo. Ladder-bracket. No. 1,228,960; June 5; v. 239; p. 197.

Parker, Ezra E., Gering, Nebr. Hay-stacker. No. 1,229,507; June 12; v. 239; p. 430.

Parker, John E., assignor to Crouse-Hinds Company, Syracuse, N. Y. Means for attaching electrical appliances to conduit outlet-boxes. No. 1,229,651; June 12; v. 239; p. 481.

Parker, Julia M. (See Maxwell, Ralph S., assignor.)

Parkhurst, Leon F., Pittsfield, Mass., assignor to General Electric Company. Electric heating device. No. 1,229,128; June 5; v. 239; p. 254.

Parks, Dennis. (See Mitchell and Parks.)

Parks, Dennis, St. Louis, Mo. Lift-cutting maul. No. 1,228,961; June 5; v. 239; p. 197.

Parks, Robert L., Washington, D. C. Combination water-bottle and syringe. No. 1,230,318; June 19; v. 239; p. 737.

Parnham, Charles J. (See Walters, Arthur A., assignor.)

Parr, Otto P., Lead, S. D. Gate-fastener. No. 1,231,421; June 26; v. 239; p. 1145.

Parrett, Dent, Chicago, Ill. Motor-vehicle. No. 1,231,292; June 26; v. 239; p. 1101.

Parrish, Alan J., Paris, Ill. Templet. No. 1,230,768; June 19; v. 239; p. 886.

Pascal, John L., Pocahontas, Iowa. Gearing. No. 1,231,422; June 26; v. 239; p. 1145.

Pashinsky, Jeff. (See Titus and Pashinsky.)

Pasinski, Walter J., assignor to Burroughs Adding Machine Company, Detroit, Mich. Full-stroke mechanism and overthrow-preventer for adding-machines. No. 1,229,508; June 12; v. 239; p. 431.

Patch, Calvin B., Glenelyn, Ill., assignor to W. H. Miner, Chazy, N. Y. Side bearing for railway-cars. No. 1,230,210; June 19; v. 239; p. 701.

Patent Button Company, The. (See White, Franklin R., assignor.)

Patnoe, George W., Maple Grove, assignor, by mesne assignments, to The Dolomite Products Company, Cleveland, Ohio. Furnace-lining and making same. No. 1,230,430; June 19; v. 239; p. 773.

Patric, Charles E., Springfield, Ohio. Furrow-opener for seeding-machines. No. 1,229,194; June 5; v. 239; p. 276.

Patten & Co., C. R. (See Patten, Clarence R., assignor.)

Patten, Clarence R., Tacoma, Ohio, assignor to C. R. Patten & Co., Waverly, Va. Baby-jumper. No. 1,230,018; June 12; v. 239; p. 598.

Patton, Orvie W., Los Angeles, Cal. Hose-band. No. 1,230,019; June 12; v. 239; p. 599.

Paul, William J., Grand View, Manitoba, Canada. Pulling device. No. 1,230,211; June 19; v. 239; p. 701.



Paul, William J., Pittsburgh, Pa. Safety-guard. No. 1,230,921; June 26; v. 239; p. 974.

Paulson, Hans, Orting, Wash. Adjustable rear sight for firearms. No. 1,229,652; June 12; v. 239; p. 481.

Paulson, Peter, and J. M. Richter, Detroit, Mich. Mitering-die. No. 1,230,319; June 19; v. 239; p. 737.

Payne, George H., Yuma, Ariz. Sod-remover. No. 1,230,320; June 19; v. 239; p. 737.

Payne, Thomas F., Pittsburgh, Pa. Autovehicle-radiator. No. 1,228,474; June 5; v. 239; p. 34.

Payne, Walter S., Lincoln, Nebr. Power-operated hammer. No. 1,228,962; June 5; v. 239; p. 198.

Payton, I. S., *et al.* (See Lamp, Arthur W., assignor.)

Peabody Woburn Machine Company. (See O'Brien, Daniel P., assignor.)

Peacock, Robert A., Delaware City, Del. Spring-gun. No. 1,229,129; June 5; v. 239; p. 254.

Peacock, Samuel, Philadelphia, Pa., assignor, by mesne assignments, to Marden, Orth & Hastings Co. Inc., New York, N. Y. Making magnesium compounds from silicate minerals. No. 1,231,423; June 26; v. 239; p. 1146.

Pearson, Coleman F., Montgomery, Ala. Grease-catching device for automobiles. No. 1,231,189; June 26; v. 239; p. 1067.

Pearsons, Samuel T. (See Poore and Pearsons.)

Peck, Edmund E., Grand View on Hudson, N. Y., assignor, by mesne assignments, to S. Karpen & Bros., Chicago, Ill. Apparatus for the manufacture of seats and backs for chairs and like furniture. (Reissue.) No. 14,322; June 26; v. 239; p. 1185.

Peckham, Edgar, Westminster, London, England. Furnace. No. 1,229,320; June 12; v. 239; p. 368.

Peden, Joseph E., New York, N. Y., assignor of one-half to T. F. Smith, St. Paul, Minn. Pneumatic tire. No. 1,230,508; June 19; v. 239; p. 800.

Pedersen, Carl A., Wilson, Ark. Stovepipe-fastener. No. 1,230,321; June 19; v. 239; p. 738.

Pedersen, Peder O., Frederiksberg, Denmark, assignor to Federal Telegraph Company. Generator for high-frequency currents. No. 1,231,528; June 26; v. 239; p. 1178.

Pederson, Rasmus, East Omaha, Nebr. Vehicle attachment. No. 1,228,594; June 5; v. 239; p. 75.

Pedrick, Howard A., Bala, assignor to Pedrick Tool and Machine Company, Philadelphia, Pa. Boring-head. No. 1,230,020; June 12; v. 239; p. 599.

Pedrick Tool and Machine Company. (See Pedrick, Howard A., assignor.)

Peigler, Commodore T. (See Peigler, Stanley C. and C. T.)

Peigler, Stanley C. and C. T., Greenville, S. C. Heel-cutting machine. No. 1,229,130; June 5; v. 239; p. 254.

Pelree, Edward B., Lowell, Mass. Truck and wheelbarrow. No. 1,230,769; June 19; v. 239; p. 886.

Pellett, Martin L. (See Collins and Pellett.)

Pemberton-Billing, Noel, county of Hertford, England. Gramophone and the like. No. 1,230,509; June 19; v. 239; p. 800.

Pembroke, Charles J., Rochester, N. Y. Fastening device. No. 1,230,021; June 12; v. 239; p. 599.

Penner, John L. (See Brudsig, Charles, assignor.)

Penrod, Darld L., Alta, Utah. Amalgamating-mill. No. 1,230,770; June 19; v. 239; p. 886.

Pente, William, Chicago, Ill. Toy. No. 1,231,059; June 26; v. 239; p. 1023.

Perepelkin, Jacob, St. Petersburg, Russia. Apparatus for controlling mechanisms at a distance. No. 1,228,963; June 5; v. 239; p. 198.

Perfection Tire & Rubber Co. (See Christian, James H., assignor.)

Perkins Campbell Company, The. (See Campbell, Milton D., assignor.)

Perkins, Jonathan, San Diego, Cal. Plumb-bob apparatus. No. 1,230,074; June 12; v. 239; p. 617.

Perkins, Samuel G. (See McDowall and Perkins.)

Perlman, Louis H., New York, N. Y. Wheel. No. 1,230,075; June 12; v. 239; p. 618.

Perrault, Joseph E., Belmont, and H. G. Ellis, Watertown, Mass. Heel-applying apparatus. No. 1,228,964; June 5; v. 239; p. 199.

Perrot, William, Ottawa, Ill. Ventilator. No. 1,229,131; June 5; v. 239; p. 255.

Persons, William D. (See Breed, George P., assignor.)

Pet-Son Pump Company, The. (See Peters, Theodore, assignor.)

Peter, Arnold H., assignor to Royal Baking Powder Company, New York, N. Y. Manufacture of hydrochloric acid. No. 1,229,509; June 12; v. 239; p. 431.

Peters, Frank M. (See Hungerford, Warren H., assignor.)

Peters, Melville E., G. H. Fath, and A. F. Miller, Denver, Colo. Gummed-blank and unwrapped-box registering mechanism. No. 1,229,510; June 12; v. 239; p. 431.

Peters, Melville E., G. H. Fath, and A. F. Miller, Denver, Colo. Wiper mechanism for the ends of gum-coated suction-tubes. No. 1,229,511; June 12; v. 239; p. 432.

Peters, Melville E., G. H. Fath, and A. F. Miller, Denver, Colo. Box-feeding mechanism for box-wrapping machines. No. 1,229,512; June 12; v. 239; p. 432.

Peters, Melville E., G. H. Fath, and A. F. Miller, Denver, Colo. Blank receiving and delivering table. No. 1,229,513; June 12; v. 239; p. 433.

Peters, Theodore, Ferdinand, Ind., assignor to The Pet-Son Pump Company. Pressure-regulating valve. No. 1,231,293; June 26; v. 239; p. 1101.

Peterson, Adolphe C., Minneapolis, Minn. Internal-combustion motor. No. 1,231,060; June 26; v. 239; p. 1024.

Peterson, Samuel, and L. C. Knackstedt, Annapolis, Md. Cooker. No. 1,228,816; June 5; v. 239; p. 151.

Peterson, Walter, Honey Creek, Iowa. Chain saw. No. 1,231,190; June 26; v. 239; p. 1068.

Petran, Charles, and C. G. Juneau, Milwaukee, Wis. Oil-burner. No. 1,230,212; June 19; v. 239; p. 702.

Petrasek, Charles. (See Jacobs, Siegmund, assignor.)

Petroff, Grigori, Petrograd, Russia. Obtaining from paraffin, wax, fats, and resins, naphtha, and mineral oils, products dissoluble in water or forming with it colloidal solutions. No. 1,230,599; June 19; v. 239; p. 831.

Peyton, C. L. (See Thomas, Victor W., assignor.)

Peyton, Joseph I. (See Hitt and Peyton.)

Pfanstiehl Company. (See Ellery, Robert L., assignor.)

Pfanze, Charles F., St. Louis, Mo. Feeding and transferring mechanism. No. 1,230,771; June 19; v. 239; p. 887.

Philbrick Cutter Head Company. (See Ross, Harry B., assignor.)

Philip Carey Mfg. Co., The. (See Foster, Frank L., assignor.)

Philip, Robert, Bofors, Sweden. Candlestick. No. 1,229,132; June 5; v. 239; p. 255.

Phillips, Elsie S. (See Teven, Louis, assignor.)

Phillips, Ida M. (See Phillips, Ross M. G., assignor.)

Phillips, Mary, *et al.* (See Nelson, Robert M., assignor.)

Phillips Mine and Mill Supply Co. (See Fleming, John J., assignor.)

Phillips, Newton E., assignor of one-half to C. L. Churchill and one-sixth to R. O. Hamill, Shelby, Mich. Oil-burner. No. 1,230,772; June 19; v. 239; p. 887.

Phillips, Ross M. G., assignor of one-half to I. M. Phillips, West Haven, Conn. Inclusive watch-holder. No. 1,229,182; June 5; v. 239; p. 271.

Phillips, Walter R., Kansas City, Mo. Mattress-roll former and filler. No. 1,230,922; June 26; v. 239; p. 975.

Philp, Frederick D., Royal Oak, assignor of one-half to A. A. Templeton, Detroit, Mich. Manufacturing rubber heels or soles. No. 1,230,510; June 19; v. 239; p. 800.

Pick, Samuel. (See Taylor, Isaac F., assignor.)

Pickering, Edwin G., Montgomery county, near Dayton, Ohio. Identifying-card. No. 1,228,817; June 5; v. 239; p. 151.

Pictet, Raoul P., Wilmersdorf, near Berlin, Germany. Manufacturing of carbon monoxid and hydrogen. No. 1,228,818; June 5; v. 239; p. 151.

Pictet, Raoul P., Paris, France. Fusing ores. No. 1,230,431; June 19; v. 239; p. 773.

Pieper, Alphonse F. (See Pieper, Oscar H., and A. F.)

Pieper, Oscar H. and A. F., Rochester, N. Y. Insulated pipe-joint. No. 1,230,213; June 19; v. 239; p. 702.

Pieper, Oscar H. and A. F., Rochester, N. Y. Support for valve-housings. No. 1,230,214; June 19; v. 239; p. 702.

Pierce, Harold S., Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill. Means for lubricating chain drives. No. 1,231,424; June 26; v. 239; p. 1146.

Pierce, Henrietta K. (See Wales, Enid S., assignor.)

Pierce, Lyman Z., Macksville, Kans. Whiffletree-iron. No. 1,228,965; June 5; v. 239; p. 199.

Pierce, Ross O., Michigan City, Ind. Book-mark. No. 1,229,516; June 12; v. 239; p. 434.

Pierman, Alexander N., Newark, assignor to New Jersey Patent Company, West Orange, N. J. Phonograph. No. 1,231,061; June 26; v. 239; p. 1024.

Pierson, Thomas H., New York, N. Y. Meter. No. 1,229,514; June 12; v. 239; p. 434.

Pietzsch, Richard H., Philadelphia, Pa., and W. Hurlman, Camden, N. J. Mechanical movement. No. 1,231,062; June 26; v. 239; p. 1025.

Pifer, George N., assignor, by mesne assignments, to F. E. Stewart, trustee, Cleveland, Ohio. Coin-controlling mechanism for automatic photographing-machines. No. 1,229,515; June 12; v. 239; p. 434.

Pigeon, Albert M., assignor to Wildman Mfg. Co., Norristown, Pa. Needle-carrier for knitting-machines. No. 1,230,322; June 19; v. 239; p. 738.

Pigeon, Albert M., assignor to Wildman Mfg. Co., Norristown, Pa. Spring-beard needle. No. 1,230,323; June 19; v. 239; p. 738.

Pitard, Daniel M. (See Beneke, John O., assignor.)

Pitt, Rafford, New Rochelle, N. Y. Door-hanger. No. 1,229,553; June 12; v. 239; p. 481.

Pittoni, Louis E. (See Sisbower and Pittoni.)

Pitts, Hanover E., Springfield, Oreg. Wire-tying machine. No. 1,230,773; June 19; v. 239; p. 888.

Pittsburgh Air-Brake Company. (See Snyder, Jacob R., assignor.)

Pittsburgh Plate Glass Company. (See Rechtel, John A., assignor. (Reissue.)

Piva, Celestino, New York, N. Y. Apparatus for holding silk and similar material. No. 1,230,511; June 19; v. 239; p. 801.

Plamondon, Alfred D., executor. (See Mally, Tadeusz Z., assignor.)

Plamondon, Alfred D., executor. (See Matthei, Henry R., assignor.)

Plamondon, Alfred D., executor. (See Mehlhope, Matthei, and Mally, assignors.)

Plamondon, Elie H., Montreal, Quebec, Canada. Cigar-holder. No. 1,230,432; June 19; v. 239; p. 773.

Plamondon, George. (See Mally, Tadeusz Z., assignor.)
Plamondon, George. (See Matthei, Henry R., assignor.)
Plamondon, George. (See Mehlhope, Matthei, and Mally, assignors.)
Plamondon, Isidore J., Dubuque, Iowa. Leaf-holder. No. 1,228,595; June 5; v. 239; p. 75.
Plantation Equipment Company. (See Zelle, William C., assignor.)
Plante, Elzear, assignor to E. Coté, Fall River, Mass. Combination piano and sound-reproducing instrument. No. 1,230,324; June 19; v. 239; p. 738.
Plantinga, Pierre, Cleveland, Ohio. Vertical bench. No. 1,228,475; June 5; v. 239; p. 34.
Platt, Clarence D., Bridgeport, Conn. Electrical receptacle. No. 1,231,063; June 26; v. 239; p. 1025.
Pleister, Henry W., Westfield, N. J., assignor to H. B. Newhall. Guy-clamp. No. 1,230,215; June 19; v. 239; p. 702.
Pleukharp, Irvin H., Columbus, Ohio. Transmission-gearing. No. 1,229,782; June 12; v. 239; p. 523.
Plunkett, William H. (See Gilmore, Charles B., assignor.)
Pneumatic Scale Corporation. (See Doble, William H., assignor.)
Pneumatic Scale Corporation *et al.* (See Field, Samuel B., assignor.)
Poehner, Adolph A., assignor to A. S. Poehner, San Francisco, Cal. Leg-holder. No. 1,230,512; June 19; v. 239; p. 801.
Poehner, A. S. (See Poehner, Adolph A., assignor.)
Pogue, George D., St. Louis, Mo. Piston for internal-combustion engines. No. 1,229,133; June 5; v. 239; p. 255.
Pogue, George D., St. Louis, Mo. Retaining means for bolts and similar devices. No. 1,229,783; June 12; v. 239; p. 523.
Pogue, George D., St. Louis, Mo. Lubricating mechanism for piston-machines. No. 1,230,513; June 19; v. 239; p. 801.
Pogue, George D., St. Louis, Mo. Lubricating mechanism for piston-machines. No. 1,231,294; June 26; v. 239; p. 1101.
Polasek, John, Caldwell, Tex. Sweep-stock attachment. No. 1,230,022; June 12; v. 239; p. 600.
Poling, Fred C., Menlo, assignor to Goode Anti-Skid Chain Manufacturing Company, Des Moines, Iowa. Fastening. No. 1,231,191; June 26; v. 239; p. 1068.
Pollak, Fritz, Vienna, Austria. Manufacture of crystalline polymerization products of formaldehyde. No. 1,230,600; June 19; v. 239; p. 831.
Pollard, George, Piccadilly, assignor to Menco-Elma Syndicate Limited, London, England. Variable-speed gearing. No. 1,231,529; June 26; v. 239; p. 1178.
Pollock, John L., assignor of one-third to N. Rainone and one-third to A. Miller, Sterling, Ill. Latch. No. 1,230,774; June 19; v. 239; p. 888.
Pomeroy, Irving L., Chicago, Ill. Time-fuse body and cap and making same. No. 1,228,596; June 5; v. 239; p. 76.
Pomianowski, Joseph, Chicago, Ill. Macaroni-cooker. No. 1,231,192; June 26; v. 239; p. 1068.
Ponselle, Robert A., New York, N. Y. Rotary floor-machine. No. 1,228,476; June 5; v. 239; p. 35.
Poole, Eugene S. (See Metcalf, Jefferson D., assignor.)
Poole, Lora E., Anderson, Ind., assignor to Anderson Button Attaching Machine Company. Button-feeding mechanism. No. 1,229,134; June 5; v. 239; p. 255.
Poore, Clarence J., and S. T. Pearsons, Rutland, Vt., assignors to B. M. Jones & Co., Inc., Boston, Mass. Swab-cup. No. 1,229,135; June 5; v. 239; p. 256.
Pope, Frederick R., Willesden, London, England, assignor, by mesne assignments, to Duhrssen & Pfaltz, Inc. Shade for electric incandescent lamps. No. 1,229,784; June 12; v. 239; p. 522.
Popovich, Michael, Flint, Mich. Detachable heel for boots and shoes. No. 1,230,775; June 19; v. 239; p. 888.
Porat, Karl H. V. von, Stocksund, Sweden. Furnace for pulverous fuel. No. 1,229,685; June 12; v. 239; p. 492.
Porter, Herman P., Lakeland, Fla., assignor to Nu-Style Window Sash Company, Jersey City, N. J. Window-sash. No. 1,230,514; June 19; v. 239; p. 801.
Porter, John W., St. Louis, Mo., assignor to Reliance Oil and Gas Burner Company. Burner. No. 1,229,517; June 12; v. 239; p. 435.
Porter, Wilson E., assignor to New Haven Clock Co., New Haven, Conn. Electric clock. No. 1,228,819; June 5; v. 239; p. 151.
Porter, Wilson E., assignor to New Haven Clock Co., New Haven, Conn. Device for regulating balance-wheels. No. 1,228,820; June 5; v. 239; p. 152.
Portesi, Santos, and J. Taini, Del Rio, Tex. Nut-lock. No. 1,231,064; June 26; v. 239; p. 1025.
Postolowski, John, New York, N. Y. Envelop. No. 1,230,023; June 12; v. 237; p. 600.
Poteet, Perry, and D. F. Jeffrey, Jeanerette, La. Sling-tripping device. No. 1,230,515; June 19; v. 239; p. 802.
Potter, Robert P., Sound Beach, assignor to The C. D. Potter Co., Stamford, Conn. Pedal mechanism for player-pianos. No. 1,231,295; June 26; v. 239; p. 1102.
Potts, Louis M., assignor to A. McLanahan, Baltimore, Md. Selective signaling apparatus. No. 1,229,201; June 5; v. 239; p. 278.
Potts, Louis M., assignor to A. McLanahan, Baltimore, Md. Telegraphic receiver. No. 1,229,202; June 5; v. 239; p. 278.
Potts, William C., Harrisburg, Pa. Graphophone. No. 1,229,518; June 12; v. 239; p. 483.
Powers, Charles C., assignor of one-third to J. T. Utnik and one-third to L. De Bold, Williams, Ariz. Electromagnet. No. 1,231,193; June 26; v. 239; p. 1069.
Premier Machine Company. (See Nicholas, William, assignor.)
Prenzel, Adam H., Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe. No. 1,230,216; June 19; v. 239; p. 703.
Pressed Steel Car Company. (See Lindstrom, Charles A., assignor.)
Preston, Frederick A., Highland Park, assignor to The P. & M. Co., Chicago, Ill. Anticreeper. No. 1,228,597; June 5; v. 239; p. 76.
Prétot, Victor E., Paris, France. Machine for finishing shells. No. 1,228,598; June 5; v. 239; p. 76.
Pride, John H., assignor to O. A. Berman, Cincinnati, Ohio. Fountain-brush. No. 1,230,325; June 19; v. 239; p. 739.
Priel, James, Overton, Nebr. Apparatus for sharpening the teeth of sickle-bars. No. 1,231,425; June 26; v. 239; p. 1146.
Priest, Augustus F., Oak Park, Ill. Resilient heel and the like. No. 1,231,296; June 26; v. 239; p. 1102.
Prigan, Ernest W., assignor of one-fourth to G. T. Smith, Akron, one-fourth to F. M. Kirk, Cleveland, and one-fourth to L. E. Fischman, Akron, Ohio. Rotary engine. No. 1,230,923; June 26; v. 239; p. 975.
Prim, Arthur W., Liverpool, and F. W. Roper, Sheffield, England. Apparatus for maintaining a uniform temperature in railway freight-vans. No. 1,228,699; June 5; v. 239; p. 110.
Primolite Co. (See Cassady, Ulysses G., assignor.)
Primolite Co. (See Cassady and George, assignors.)
Prince, Clofton O., Winchester, Tenn. Finger-cot. No. 1,231,194; June 26; v. 239; p. 1069.
Pritchard, James W., La Grange, Ky. Cistern strainer and filter. No. 1,230,024; June 12; v. 239; p. 600.
Proebstel, Delbert W., Treadwell, Alaska. Water-stage indicator. No. 1,229,785; June 12; v. 239; p. 524.
Puchalski, Jan, and P. Kielkowicz, Cleveland, Ohio. Scrubbing device. No. 1,229,136; June 5; v. 239; p. 256.
Puderbaugh, David C., El Dorado, Pa. Truck for handling automobiles. No. 1,230,326; June 19; v. 239; p. 739.
Pudney, Sydney H., Toronto, Ontario, Canada. Smoke-consumer and fuel-economizer. No. 1,230,776; June 19; v. 239; p. 889.
Pues, Chester P., Navarino, Wis. Steel game-trap. No. 1,231,065; June 26; v. 239; p. 1026.
Pugh, James A., Cardiff, Wales. Personal equipment for carrying purposes. No. 1,230,025; June 12; v. 239; p. 601.
Pulien, Barzillai, assignor to A. Leckey, Camden, N. J. Safety gas-coupling device. No. 1,230,026; June 12; v. 239; p. 601.
Purnell, John W., assignor of one-half to E. B. Fisher, Morristown, Tenn. Electric stove. No. 1,229,786; June 12; v. 239; p. 524.
Purvis, John W., Detroit, and L. W. Steeves, Jackson, Mich. Feed-water heater or superheater for fire-tube boilers. No. 1,229,787; June 12; v. 239; p. 524.
Putnam, Frank W., Newport, R. I. Eye-testing apparatus. No. 1,230,027; June 12; v. 239; p. 601.
Putnam, Henry S., *et al.* (See Brinckerhoff, Francis M., assignor.)
Putnam, Henry S. (See Brinckerhoff and Stillwell, assignors.)
Putnam, Mabel C., executrix. (See Bunnell, Morton G.)
Putts, Benjamin S. (See Boehm, Rudolph A., assignor.)
Pyle-National Company, The. (See Grant, Roswell D., assignor.)
Quandt, William H., and J. M. Gooden, Urbana, Ill. Balanced piston-cock. No. 1,230,777; June 19; v. 239; p. 889.
Quigley, William E. (See Mason, Hosea A., assignor.)
Quincy Pattern Company. (See Lehman, Max R., assignor.)
Quist, Ruben, Lohrville, Iowa. Projectile. No. 1,230,217; June 19; v. 239; p. 703.
R. E. Funsten Dried Fruit & Nut Company. (See Crawford, Henry D., assignor.)
R. H. B. Manufacturing Company. (See Reiboldt and Beyen, assignors.)
Raber, Nathan L., Corvallis, Oreg. Gold-concentrating plant. No. 1,231,297; June 26; v. 239; p. 1102.
Rach, Erich, New York, N. Y. Means for theatrical levitation. No. 1,229,519; June 12; v. 239; p. 435.
Radiant Heating Limited. (See Bone, Wilson, and McCourt, assignors.)
Radkoff, Stoyan K., Detroit, Mich. Tire-advertising device. No. 1,229,654; June 12; v. 239; p. 482.
Ragotzky, Philip C., Philadelphia, Pa. Device for connecting outside wires to buildings. (Reissue.) No. 14,312; June 5; v. 239; p. 284.
Rahn, Herman K., and F. Meyers, Chicago, Ill., assignors to R. H. Wright, Durham, N. C. Paper-feeding device. No. 1,229,137; June 5; v. 239; p. 256.
Rail Joint Company, The. (See Braine, Bancroft G., assignor.)
Rail Joint Company, The. (See Thomson, McLeod, assignor.)



Railroad Supply Company, The. (See Stoip, Samuel S., assignor.)
Railway Specialties Company. (See Morse, Mark S., assignor.)
Rainone, Nicholas, *et al.* (See Pollock, John L., assignor.)
Ralston, William D. and W. C., New Marion, Ind. Adjustable curtain-shade bracket. No. 1,230,778; June 19; v. 239; p. 889.
Ralston, Willis C. (See Ralston, William D. and W. C.)
Ramsey, Aaron F., Aurora, Ill. Garden implement. No. 1,229,788; June 12; v. 239; p. 525.
Ramsey, George W., Peoria, Ill. Feed-regulator for lubricating systems. No. 1,228,700; June 5; v. 239; p. 111.
Ramsey, George W., Peoria, Ill. Friction draft-gear. No. 1,230,327; June 19; v. 239; p. 740.
Randall, Karl C., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Circuit-interrupter. No. 1,229,789; June 12; v. 239; p. 525.
Randel, Ivar A. (See McCord and Randel.)
Raney, Clemma R., Chicago, Ill., assignor to International Harvester Company of New Jersey. Shocking-machine. No. 1,231,195; June 26; v. 239; p. 1069.
Rankin, William A., and H. D. Laraway, assignors to Hotpoint Electric Heating Company, Ontario, Cal. Radiant-type stove. No. 1,231,196; June 26; v. 239; p. 1070.
Rapp, William M., Collingswood, N. J. Typographical machine. No. 1,229,321; June 12; v. 239; p. 368.
Raquette, Joseph G., Cleveland, Ohio. Outlet-box. No. 1,230,218; June 19; v. 239; p. 704.
Rardon, Edward E., Hamilton, Kans. Pneumatic pump. No. 1,230,028; June 12; v. 239; p. 602.
Rascoe, Joseph E. (See Martel and Rascoe.)
Rasmussen, Peter, and M. F. Goularte, Selma, Cal. Sewing-machine. No. 1,228,966; June 5; v. 239; p. 199.
Ravier, Sylvain L., Paris, France. Works such as retaining-walls, wharves, and piers. No. 1,231,426; June 26; v. 239; p. 1147.
Rawlings, Samuel V., Calumet, Mich. Manufacturing drill-bits. No. 1,229,790; June 12; v. 239; p. 525.
Raynaud, Charles F., San Francisco, Cal., assignor to Pacific Folding Box Factory. Box-folding machine. No. 1,230,516; June 19; v. 239; p. 802.
Reagan, Warren J., Admire, Kans. Permutation-lock for latch-levers. No. 1,229,520; June 12; v. 239; p. 436.
Reall, Arthur, assignor to Reall Portable Compressor Company, Philadelphia, Pa. Air-compressor and motor. No. 1,230,219; June 19; v. 239; p. 704.
Reall Portable Compressor Company. (See Reall, Arthur, assignor.)
Rearwin, Wilber D., Grand Rapids, Mich. Filing-machine. No. 1,230,779; June 19; v. 239; p. 889.
Recording and Computing Machine Company, The. (See Ohmer and Whistler, assignors.)
Redmanol Chemical Products Company. (See Goldsmith, Byron B., asignor.)
Reece, Franklin A., Hopkinton, Mass. Liquid centrifugal separating-machine. No. 1,230,601; June 19; v. 239; p. 831.
Reece, Richard J., Parkersburg, W. Va. Vessel-lifter. No. 1,230,029; June 12; v. 239; p. 602.
Reece Shoe Machinery Company. (See Schoenky, August R., assignor.)
Reed, Roy E., Ripon, Wis. Dimming device. No. 1,228,477; June 5; v. 239; p. 35.
Reed, Roy E., Ripon, Wis. Dimming device. No. 1,228,478; June 5; v. 239; p. 35.
Reed, Thomas E. (See Watkins, Owen C., assignor.)
Reeves, George R., Magnolia Springs, Ala. Metallic railway-tie. No. 1,231,427; June 26; v. 239; p. 1147.
Reger, Kent, Buckhannon, W. Va. Train signaling and stopping device. No. 1,230,030; June 12; v. 239; p. 602.
Reiber, Edwin H., West Webster, N. Y. Bird-house. No. 1,230,780; June 19; v. 239; p. 890.
Reiboldt, William P., Irvington, and F. W. Beyen, Newark, N. J., assignors to R. H. B. Manufacturing Company. Acoustic signal device. No. 1,230,602; June 19; v. 239; p. 832.
Reid, Samuel E., Tahoka, Tex. Air-feed for motors. No. 1,230,781; June 19; v. 239; p. 890.
Reilly, Peter C., Indianapolis, Ind. Distilling coal-tar or coal-tar pitch and products derived therefrom. No. 1,230,782; June 19; v. 239; p. 890.
Reimer, Jorgen A. (See Hansen, Norre, and Reimer.)
Reinforced Propeller and Insulating Company, The. (See Berry, Charles M., assignor.)
Reinker, Christian, Lakewood, assignor to The Liberty Bell Company, Cleveland, Ohio. Signaling device. No. 1,231,298; June 26; v. 239; p. 1103.
Reinmuth, William C., Los Angeles, Cal. Suspenders. No. 1,228,599; June 5; v. 239; p. 77.
Reip, David W., Lothair, Mont. Ratchet nut and pipe wrench. No. 1,229,322; June 12; v. 239; p. 369.
Reischmann, Edward, New York, N. Y. Lunch-room table. No. 1,229,138; June 5; v. 239; p. 257.
Reliance Oil and Gas Burner Company. (See Porter, John W., assignor.)
Remington Typewriter Company. (See Barney, Edwin E., assignor.)
Rendleman, Norman C. (See Kernohan and Rendleman.)
Renkenberger, Edward J., assignor, by mesne assignments, to G. C. Renkenberger, Buffalo, N. Y. Fastening wood handles to tools. No. 1,228,600; June 5; v. 239; p. 77.
Renkenberger, George C. (See Renkenberger, Edward J., assignor.)
Renzo, Francesco, Paterson, N. J. Shuttle tension. No. 1,228,479; June 5; v. 239; p. 36.
Reuter, Charles H. (See Dahlgren, Frank G., assignor.)
Revere Rubber Company. (See Cobb, Henry Z., assignor.)
Revert, Albert, Werdi, Nev. Sectional tie. No. 1,231,428; June 26; v. 239; p. 1147.
Reynolds, Clinton C., Le Roy, Ill. Support or stand. No. 1,231,197; June 26; v. 239; p. 1070.
Reynolds, Hae R., and F. C. Beebe, Bedford, Iowa. Stabilizer for motor-vehicles. No. 1,231,066; June 26; v. 239; p. 1026.
Reynolds, Howard W., Chicago, Ill. Egg-lifter. No. 1,228,821; June 5; v. 239; p. 152.
Reynolds, James J. (See Ashenhurst, Harold S., assignor.)
Rhea, Richard C., Whiteville, Tenn., assignor to Underwood Typewriter Company, New York, N. Y. Line-spacer for type-writing machines. No. 1,229,521; June 12; v. 239; p. 436.
Rho, Joseph A., assignor to J. E. Beauchamp, Montreal, Quebec, Canada. Folding chair. No. 1,228,967; June 5; v. 239; p. 200.
Rhodus, Charlotte C. (See Rhodus, Thomas, assignor.)
Rhodus, Thomas, Chicago, Ill. Rheostat. No. 1,230,221; June 19; v. 239; p. 705.
Rhodus, Thomas, Chicago, Ill., assignor to C. C. Rhodus. Vehicle-wheel. No. 1,230,220; June 19; v. 239; p. 705.
Rice, David E., Brooklyn, N. Y. Stencil-stamp. No. 1,230,783; June 19; v. 239; p. 891.
Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Separator. No. 1,230,784; June 19; v. 239; p. 891.
Rice, Thomas D., Pawtucket, R. I. Cue-lock. No. 1,228,601; June 5; v. 239; p. 77.
Rice, Thomas E., Des Moines, Iowa. Gasolene substitute. No. 1,230,924; June 26; v. 239; p. 976.
Richards, George C., Berkeley, Cal. Rail-joint. No. 1,230,031; June 12; v. 239; p. 603.
Richards, Robert H., Boston, Mass. Jig. No. 1,230,433; June 19; v. 239; p. 773.
Richards, Walter J., assignor to National Brake & Electric Company, Milwaukee, Wis. Mechanism for unloading compressors for starting. No. 1,230,925; June 26; v. 239; p. 976.
Richardson, Bayard E., assignor to Mechano Gear Shift Co., Grand Rapids, Mich. Gear-shift. No. 1,229,655; June 12; v. 239; p. 482.
Richardson, James M. (See Kenyon, Harrie B., assignor.)
Richardson, James M. (See Slater, Harvey H., assignor.)
Richmond, Julian, Yonkers, N. Y. Screw-anchor. No. 1,230,603; June 19; v. 239; p. 832.
Richmond Radiator Company. (See Niemeyer, Henry C., assignor.)
Richter, Henry E., Summerfield, Kans. Cream-protector. No. 1,230,785; June 19; v. 239; p. 891.
Richter, Julius M. (See Paulson and Richter.)
Riddle, Zala, Dunsmuir, Cal. Watchmaker's jeweling-tool. No. 1,230,032; June 12; v. 239; p. 603.
Rieckmann, Max, Springfield, Mass. Cushion-heel for boots and shoes. No. 1,231,299; June 26; v. 239; p. 1103.
Ries, Bernard, Norfolk, Va. Bag or receptacle. No. 1,228,822; June 5; v. 239; p. 152.
Rieske, Otto G., Toronto, Ontario, Canada. Feather-picking machine. No. 1,230,222; June 19; v. 239; p. 705.
Right and Left Tool Holder Co., The. (See Williams, Wm D., assignor.)
Riker, Andrew L., Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y. Internal-combustion engine. No. 1,230,033; June 12; v. 239; p. 603.
Riley, Lynn G. (See Hall and Riley.)
Rings, Carl R., Mount Vernon, Wash. Computing device. No. 1,229,522; June 12; v. 239; p. 436.
Rink, George W., Jersey City, N. J., assignor to Flory Carry Iron Company, St. Louis, Mo. Draw-bar carry-iron. No. 1,228,602; June 5; v. 239; p. 78.
Ripley, James T., Southport, England. Signaling apparatus for railways. No. 1,228,968; June 5; v. 239; p. 200.
Ritchie, John L., and G. L. Yaste, Lonaconing, Md. Combined film binder and protector. No. 1,229,139; June 5; v. 239; p. 257.
Ritter-Conley Manufacturing Company. (See Carpenter and Warner, assignors.)
Ritter, Joseph, Milwaukee, Wis. Candle-holder. No. 1,229,140; June 5; v. 239; p. 257.
Ritz-Woller, Oliver C., Chicago, Ill. Gasolene-gage. No. 1,231,300; June 26; v. 239; p. 1103.
Rivas, Edmond H. (See Damarin, William J., assignor.)
Robb, James T., Bay Shore, N. Y. Device for suspending light-transmitting bowls. No. 1,228,969; June 5; v. 239; p. 200.
Robbins, Willis C. (See Krug, Weis, and Robbins.)
Robert, Augusta E., Oakland, Cal. Curtain-support. No. 1,230,223; June 19; v. 239; p. 706.
Robert, Augusta E., Oakland, Cal. Curtain-support. No. 1,230,224; June 19; v. 239; p. 706.
Robert N. Bassett Company. (See Bailey, George, assignor.)
Robert N. Bassett Company. (See Russ and Stuart, assignors.)

Roberts, Ernest J., Christchurch, New Zealand. Mounting of feed-guides of printing, lithographic, and other like machines. No. 1,231,198; June 26; v. 239; p. 1070.
Roberts, Fred T., assignor to The Paramount Rubber Company, Cleveland, Ohio. Valve-ball. No. 1,231,530; June 26; v. 239; p. 1178.
Roberts, Lyman R., Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,229,183; June 5; v. 239; p. 272.
Roberts, Lyman R., Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,230,517; June 19; v. 239; p. 803.
Robertson, George E., Huntington, N. Y. Means for operating ships' logs. No. 1,230,225; June 19; v. 239; p. 706.
Robertson, Robert F., Philadelphia, Pa. Plate-remover for storage batteries. No. 1,230,786; June 19; v. 239; p. 892.
Robertson, William P., New York, N. Y. Food and beverage mixing device. No. 1,228,823; June 5; v. 239; p. 152.
Robinson, Charles W., Hamilton, Ontario, Canada, assignor, by mesne assignments, to International Harvester Corporation. Fertilizer-distributer. No. 1,231,190; June 26; v. 239; p. 1071.
Robinson, Edward E., Belleville, N. J., assignor to Hanlon & Goodman Co., New York, N. Y. Manufacture of brushes. No. 1,230,518; June 19; v. 239; p. 803.
Robinson, William A., New York, N. Y. Railway-switch operator. No. 1,229,141; June 5; v. 239; p. 257.
Robison, Charles E., and M. Askin, Philadlephia, Pa. Automobile-alarm. No. 1,230,787; June 19; v. 239; p. 892.
Robison, Charles W., Crafton, Pa. Receptacle. No. 1,228,824; June 5; v. 239; p. 153.
Roby, James J., Cleveland, Ohio. Means for supporting the roofs of mine-entries. No. 1,229,323; June 12; v. 239; p. 369.
Rochfort, Alexander E., Oakland, Cal. Insect-killer. No. 1,228,701; June 5; v. 239; p. 111.
Roehrich, Frank N., Jersey City, N. J., assignor to G. B. French, New York, N. Y. Adjustable closure for window or other openings or passages. No. 1,229,523; June 12; v. 239; p. 437.
Rogers, Howard A., assignor of one-half to S. Shields, Atlanta, Ga. Oven attachment. No. 1,230,926; June 26; v. 239; p. 976.
Rohne, Even J., Minneapolis, Minn. Electric heater for steering-wheels. No. 1,230,788; June 19; v. 239; p. 892.
Rolfe & Maddock. (See Dudley, John H. M., assignor.)
Rollings, Ernest J., Philadelphia, Pa. Boring-machine. No. 1,230,034; June 12; v. 239; p. 604.
Rollinson, Earl H., Lyons Farms, N. J. Electrical timing device. No. 1,231,200; June 26; v. 239; p. 1071.
Romack, William J., Freedom, Pa. Hanger for swings. No. 1,228,825; June 5; v. 239; p. 154.
Romer, Jacob D., Mount Vernon, N. Y. Combined back collar-button and necktie-holder. No. 1,230,519; June 19; v. 239; p. 804.
Rona, Arnold G., New York, N. Y. Toilet-paper. No. 1,231,429; June 26; v. 239; p. 1147.
Ronald, James T., Seattle, Wash. Wheel-rim. No. 1,228,970; June 5; v. 239; p. 201.
Rooney, John W., Heriot, New Zealand. Protector for motor-car tires. No. 1,231,430; June 26; v. 239; p. 1148.
Roper, Francis W. (See Prim and Roper.)
Roscoe, John R., Fort Dodge, Iowa. Coal-chute and window-guard. No. 1,230,076; June 12; v. 239; p. 618.
Rose, James R., Edgeworth, Pa. Manufacturing combustible fluid. No. 1,230,226; June 19; v. 239; p. 707.
Rose, Jacob B., assignor to The Marvel Accessories Manufacturing Company, Cleveland, Ohio. Vulcanizer. No. 1,230,789; June 19; v. 239; p. 893.
Rosenband Manufacturing Co. (See Wildiak, Ludwig, assignor.)
Rosenbaum, Hellmuth, Brooklyn, N. Y. Driving mechanism for talking-machines. No. 1,231,431; June 26; v. 239; p. 1148.
Rosenberg, Edward, Brooklyn, N. Y. Lock for pockets. No. 1,230,520; June 19; v. 239; p. 804.
Rosenblum, Israel, Swampscott, Mass. Treating silica. No. 1,229,324; June 12; v. 239; p. 369.
Rosenbluth, Edwin M., Philadelphia, Pa. Vehicle dash-lamp. No. 1,230,604; June 19; v. 239; p. 832.
Rosendahl, Nils M., Winthrop Harbor, assignor to F. C. Austin, Chicago, Ill. Rotary drier. No. 1,229,524; June 12; v. 239; p. 437.
Rosendall, Clarence P., Peterson, Iowa. Post-hole digger. No. 1,230,790; June 19; v. 239; p. 893.
Rosenthal, August, West Allis, Wis. Corn-husker and ensilage-cutter and silo-filler. No. 1,228,971; June 5; v. 239; p. 201.
Rosewater, Nathan, Cleveland, Ohio. Composition of beverages. No. 1,229,656; June 12; v. 239; p. 482.
Ross Chemical Company. (See Miles, George W., assignor.)
Ross, David M., Youngstown, Fla. Dispensing-cabinet. No. 1,229,525; June 12; v. 239; p. 438.
Ross, George, Paris, Ill. Bracket. No. 1,230,521; June 19; v. 239; p. 804.
Ross, Harry B., assignor to Philbrick Cutter Head Company, Seattle, Wash. Grinding-machine. No. 1,229,526; June 12; v. 239; p. 438.
Ross, John E. (See Souders, Addison J., assignor.)
Ross, Kate, Lincoln, Ill. Bedroom-chair. No. 1,229,657; June 12; v. 239; p. 483.
Ross, Torey. (See Folger and Ross.)
Rotary Meter Company. (See Kollstede, Alfred G., assignor.)
Rotary Photographic Co., Ltd., The. (See Von Madaler, Ferdinand, assignor.)
Rotary Power-Tool Company. (See Berg, John O., assignor.)
Rowan, William P., St. Louis, Mo., assignor, by mesne assignments, to A. T. Crawford and H. S. Filesbach, Scotts Bluff, Nebr. Animated attachment for radiator-caps. No. 1,229,068; June 5; v. 239; p. 232.
Rowe, George H., assignor to L. E. King, Berwyn, Ill. Automatic timer for starting elevators. No. 1,230,434; June 19; v. 239; p. 774.
Rowntree, Harold, Kenilworth, Ill., assignor to National Pneumatic Company, New York, N. Y. Passenger-car. No. 1,229,791; June 12; v. 239; p. 526.
Royal Baking Powder Company. (See Peter, Arnold H., assignor.)
Royle, Vernon, Paterson, N. J. Auxiliary work-holder for edging-machines. No. 1,230,927; June 26; v. 239; p. 976.
Royston, Thomas, Madison, Wis. Thermometer-support. No. 1,230,035; June 12; v. 239; p. 604.
Rubin, Adolph, St. Louis, Mo. Cloth-cutting machine. No. 1,228,826; June 5; v. 239; p. 154.
Rubin, Hyman, Brooklyn, N. Y. Folder for sewing-machines. No. 1,230,036; June 12; v. 239; p. 604.
Ruby Manufacturing Company. (See Leonard, Howard M., assignor.)
Rudolph, Harold V. (See Scott and Rudolph.)
Rugeroni, Hector A., Buenos Aires, Argentina. Permanent way of railways. No. 1,231,432; June 26; v. 239; p. 1148.
Rummler, Rudow, Wilmette, Ill. Cash-register. No. 1,229,928; June 26; v. 239; p. 977.
Rumney, Fred A., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Fastener-setting machine. No. 1,231,201; June 26; v. 239; p. 1071.
Rundle, Thomas N., Paton, Iowa. Lantern-slide. No. 1,229,527; June 12; v. 239; p. 439.
Rung, Albert M. (See Branyan and Rung.)
Runnion, David A., Fort Hancock, N. J. Package-tie. No. 1,230,791; June 19; v. 239; p. 893.
Rüping, Max, Berlin, Germany. Wooden dowel. No. 1,229,528; June 12; v. 239; p. 439.
Russ, Friend A., Greenwich, and H. J. Stuart, Derby, assignors to Robert N. Bassett Company, Shelton, Conn. Hose-supporter clasp. No. 1,228,480; June 5; v. 239; p. 36.
Russell, Harvey J., North Bend, Oreg. Automatic control means for air-pressure pumps. No. 1,229,792; June 12; v. 239; p. 526.
Russell Manufacturing Company, The. (See Krenz, Rudolph, assignor.)
Russell, William R., Portland, Mich. Upholstering-press. No. 1,230,605; June 19; v. 239; p. 833.
Rutter, Thomas H. (See Dick, Rutter, and Lewis.)
Ryan, Charles A., Marion, N. Y. Screw-driver. No. 1,229,793; June 12; v. 239; p. 527.
Ryan, John F., Amboy, Ill. Studding-socket. No. 1,231,433; June 26; v. 239; p. 1149.
Ryan, Michael H., San Bernardino, Cal. Safety-valve for air-brakes. No. 1,229,325; June 12; v. 239; p. 370.
Ryan, Nellie, Buena Park, Cal. Calendar. No. 1,230,037; June 12; v. 239; p. 604.
S. Karpen & Bros. (See Peck, Edmund E., assignor.) (Reissue.)
Saalfield, Oliver B., West Hoboken, N. J., assignor to Maxim Munitions Corporation, New York, N. Y. Recoil-operated firearm. No. 1,228,827; June 5; v. 239; p. 154.
Sabah, Felix, Philadelphia, Pa. War-automobile. No. 1,228,603; June 5; v. 239; p. 78.
Sabbag, Litfallah G., assignor of one-half to M. A. Metcalf, Boston, Mass. Temple device for looms. No. 1,230,792; June 19; v. 239; p. 893.
Sackett, Charles E., Danbury, Conn. Soil-pulverizing wheel. No. 1,230,793; June 19; v. 239; p. 894.
Saenger, Oscar, New York, N. Y. Educational appliance. No. 1,229,142; June 5; v. 239; p. 258.
Safety Car Heating & Lighting Company. (See Dixon, Robert M., assignor.) (Reissue.)
Safety First Filter Company. (See Schulse, Herman E., assignor.)
Saller, Joseph, Oxnard, Cal. Automatic sugar-washer and water-measurer for the same. No. 1,230,328; June 19; v. 239; p. 740.
Saller, Joseph, Oxnard, Cal. Beet-cutter. No. 1,230,329; June 19; v. 239; p. 740.
Sallot, Alfred L. E. (See Chapsal and Sallot.)
Salno, Felix L., Memphis, Tenn. Hinge for fire-doors. No. 1,228,481; June 5; v. 239; p. 36.
Salno, Felix L., Memphis, Tenn. Mounting for fire doors and shutters. No. 1,229,143; June 5; v. 239; p. 258.
Salno, Felix L., Memphis, Tenn. Locking device for fire doors and shutters. No. 1,229,144; June 5; v. 239; p. 258.
Salno, Felix L., Memphis, Tenn. Flue-stopper for fire doors and shutters. No. 1,229,145; June 5; v. 239; p. 258.



Saint Clair, John F., Old Washington, Ohio. Connector for chains or the like. No. 1,229,146; June 5; v. 239; p. 259.
Salter, Edward A., North Rose, N. Y. Trimming or snipping machine. No. 1,230,227; June 19; v. 239; p. 707.
Salzer, Arthur, New York, N. Y. Illuminated toy balloon and lighting effect. No. 1,229,794; June 12; v. 239; p. 527.
Sandbo, Anton L., assignor of one-third to H. W. Dammann and one-third to W. Dammann, Rock Island, Ill. Starting device for internal-combustion engines. No. 1,229,147; June 5; v. 239; p. 259.
Sandbo, Anton L., Rock Island, Ill. Engine-starter. No. 1,229,148; June 5; v. 239; p. 259.
Sandell, John P., Chicago, Ill. Combined divan and bed. No. 1,228,604; June 5; v. 239; p. 78.
Sander, Joseph P., assignor to The Spokane Mail Equipment Company, Spokane, Wash. Mail-bag-supporting mechanism. No. 1,228,605; June 5; v. 239; p. 79.
Sander, Joseph P., Spokane, Wash., assignor to The Spokane Mail Equipment Company. Mail-bag-retainer mechanism. No. 1,231,434; June 26; v. 239; p. 1149.
Sanders, Louis M., East Orange, N. J., assignor to A. F. Meisselbach & Brothers. Throw-off mechanism for fishing-reels. No. 1,228,606; June 5; v. 239; p. 79.
Sandholzer, Henry R., Richmond Hill, N. Y. Snap-Fastener. No. 1,229,795; June 12; v. 239; p. 527.
Sandow, Eugen, London, England. Dumb-bell. No. 1,229,658; June 12; v. 239; p. 483.
Sanford, Leslie W. (See Tweeddale, Daniel E., assignor.)
Sansom, Walter C., Pittsburgh, Pa. Connector for barges. No. 1,231,067; June 26; v. 239; p. 1026.
Sargent & Company. (See Page, Albert A., assignor.)
Sargent & Company. (See Page and Collins, assignors.)
Sargent & Company. (See Shaw, John H., assignor.)
Sasgen Derrick Co. (See Sasgen and Gloor, assignors.)
Sasgen, Michael J., and A. Gloor, assignors to Sasgen Derrick Co., Chicago, Ill. Windlass driving mechanism. No. 1,228,828; June 5; v. 239; p. 155.
Saunders, William M., Evansville, Ind. Quick-detachable hose-coupling. No. 1,230,606; June 19; v. 239; p. 833.
Savage, Edward S., Rochester, N. Y. Fire-extinguisher. No. 1,230,435; June 19; v. 239; p. 774.
Sawtelle, Fred W., Oshkosh, Wis. Package-tie. No. 1,230,522; June 19; v. 239; p. 804.
Sawyer, Emmons W., Minneapolis, Minn. Card game. No. 1,228,607; June 5; v. 239; p. 80.
Say, William, London, England. Holing-bit. No. 1,230,038; June 12; v. 239; p. 605.
Saylor, Charles C., Pittsburgh, Pa. Insulator-support for cross-arms. No. 1,231,068; June 26; v. 239; p. 1026.
Saylor, Frank D., Pittsburgh, Pa. Insulating-joint. No. 1,231,202; June 26; v. 239; p. 1072.
Scahde, William C., Jersey City, N. J. Shoe-polishing machine. No. 1,230,039; June 12; v. 239; p. 605.
Scales, George L., Detroit, Mich. Paper-material container. No. 1,231,203; June 26; v. 239; p. 1072.
Scanes, Arthur E. L., Ashton-upon-Mersey, assignor to The British Westinghouse Electric & Manufacturing Company, Limited, London, England. Fluid-operated ejector. No. 1,228,608; June 5; v. 239; p. 80.
Schade, Edmund A., and J. M. Hance, assignors to The Stanley Rule & Level Company, New Britain, Conn. Woodworking-vise. No. 1,229,659; June 12; v. 239; p. 483.
Schaeffler, Frank C., Huntington, N. Y. Envelop. No. 1,231,204; June 26; v. 239; p. 1072.
Schaffert, Adolf H., assignor to The General Fireproofing Company, Youngstown, Ohio. Door-joint construction. No. 1,231,069; June 26; v. 239; p. 1027.
Schaller, William, Brooklyn, N. Y. Non-skid printing-roller. No. 1,228,829; June 5; v. 239; p. 155.
Schank, John E., Chicago, Ill. Golf-bag. No. 1,229,326; June 12; v. 239; p. 370.
Schechter, Bernard, assignor of one-third to G. H. Tontrup and one-third to W. J. Mackle, St. Louis, Mo. Seat. No. 1,231,205; June 26; v. 239; p. 1073.
Scheller, Henry W., assignor of one-half to S. A. Foley, Lincoln, Ill. Washboiler. No. 1,228,972; June 5; v. 239; p. 201.
Schenck, Arthur E., Hamilton, Ohio. Road-dressing machine. No. 1,229,529; June 12; v. 239; p. 439.
Schenck, Seaman, New York, N. Y. Collar-protector. No. 1,231,206; June 26; v. 239; p. 1073.
Schendler, Paul H., Erie, Pa. Clothes-wringer. No. 1,230,228; June 19; v. 239; p. 707.
Scherrer, Charles J., Brooklyn, N. Y. Imposition-frame. No. 1,228,973; June 5; v. 239; p. 201.
Schick, Louis, Thomson, Ill. Barbed-wire unroller. No. 1,230,794; June 19; v. 239; p. 894.
Schidorsky, Theodore, New York, N. Y. Protective apparatus. No. 1,230,607; June 19; v. 239; p. 834.
Schier, Adolph R., Milwaukee, Wis. Float-valve. No. 1,230,929; June 26; v. 239; p. 977.
Schlessler, Josef, Baden, near Vienna, Austria. Telegraph and telephone system. No. 1,229,796; June 12; v. 239; p. 528.
Schiff, Henry T., Chicago, Ill. Sound-reproducing machine. No. 1,231,435; June 26; v. 239; p. 1149.
Schilken, John C. (See Crist and Schilken.)
Schimmel, Herman. (See Striffmatter and Schimmel.)
Schlaepfer, Robert, Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo. Air-supply system for combustion-engines. No. 1,230,330; June 19; v. 239; p. 741.
Schlanger, Frederick A., New York, N. Y. Combined chair and desk. No. 1,231,301; June 26; v. 239; p. 1104.
Schlater, Frank H., *et al.* (See Beckner, Bennie L., assignor.)
Schlegelmilch, Frederick H., Ashtabula Harbor, Ohio. Load-distributer. No. 1,228,974; June 5; v. 239; p. 202.
Schley, Rudolph E., Beaver Dam, Wis. Power-transmitting mechanism. No. 1,231,070; June 26; v. 239; p. 1027.
Schlocker, George P. (See Murphy, John, assignor.)
Schluer, Mary C. (See Schluer, William M., assignor.)
Schluer, William M., Orange, assignor of one-third to M. C. Schluer, Montclair, N. J. Interchangeable vehicle. No. 1,230,436; June 19; v. 239; p. 774.
Schmid, Karl, Alt-Mugeln, near Mugeln, assignor to "Lipsia" Chemische Fabrik, Actien-Gesellschaft, Mugeln, Leipzig, Germany. Making insulating material from basic magnesium carbonate and fibrous substances. No. 1,228,609; June 5; v. 239; p. 80.
Schmid, Peter, Basel, Switzerland. Apparatus for the weighting of silk filaments and silk fabrics in form of hanks. No. 1,231,436; June 26; v. 239; p. 1150.
Schmidinger, Joseph, New York, N. Y. Electrical apparatus. No. 1,228,702; June 5; v. 239; p. 111.
Schmidt, Albert, assignor to Champion Ignition Company, Flint, Mich. Spark-plug. No. 1,230,795; June 19; v. 239; p. 894.
Schmidt, Albert, assignor to Champion Ignition Company, Flint, Mich. Spark-plug. No. 1,230,796; June 19; v. 239; p. 895.
Schmidt, Albert, assignor to Champion Ignition Company, Flint, Mich. Spark-plug. No. 1,230,797; June 19; v. 239; p. 895.
Schmidt, Ernest H., assignor to The National Malleable Castings Company, Cleveland, Ohio. Shock-absorbing mechanism for railway-cars. No. 1,228,830; June 5; v. 239; p. 156.
Schmidt, Ernest H., assignor to The National Malleable Castings Company, Cleveland, Ohio. Shock-absorbing mechanism. No. 1,288,831; June 5; v. 239; p. 156.
Schmidt, William C., Richmond, Va. Indicating-bottle. No. 1,228,832; June 5; v. 239; p. 156.
Schnaier, Milton, New York, N. Y., assignor to Milton Schnaier Contracting Corp. Spray-head for shower-baths. No. 1,229,327; June 12; v. 239; p. 370.
Schneider, Anthony, Whippany, N. J., assignor to American Cigar Company, New York, N. Y. Cigar-package. No. 1,229,660; June 12; v. 239; p. 483.
Schneider, Daniel, assignor of one-fourth to W. Hoefler and one-fourth to W. Zarnekee, Spokane, Wash. Boltless rail-joint. No. 1,228,703; June 5; v. 239; p. 112.
Schneider, Eugène, Le Creuzot, France. Apparatus for stabilizing the position of submerged floating mines. No. 1,229,661; June 12; v. 239; p. 484.
Schneider, Eugène, Le Creuzot, France. Gas-check pad for gun breech-blocks and making same. No. 1,229,662; June 12; p. 239; p. 484.
Schneider, Eugène, Le Creuzot, France. Submarine mine. No. 1,229,797; June 12; v. 239; p. 528.
Schneider, Franklin, assignor, by mesne assignments, to The Van Dorn Electric Tool Company, Cleveland, Ohio. Electrically-operated tool. No. 1,231,071; June 26; v. 239; p. 1027.
Schneider, Hans, New York, N. Y. Transmission-gearing. No. 1,230,798; June 19; v. 239; p. 895.
Schneider, Math N., North Milwaukee, Wis. Register. No. 1,230,331; June 19; v. 239; p. 741.
Schnuck, Edward F., Greenburg, R. and W. G. Burns, New York, N. Y., assignors to Jabez Burns & Sons. Scoop-out-bin. No. 1,228,833; June 5; v. 239; p. 157.
Schock, Myron. (See Gildow and Schock.)
Schoenberg, Ralph A., New York, N. Y. Means for operating switch mechanisms. No. 1,229,530; June 12; v. 239; p. 439.
Schoenky, August R., Somerville, assignor to Reece Shoe Machinery Company, Boston, Mass. Press for cutting or punching sheet material. No. 1,288,834; June 5; v. 239; p. 157.
Schoenky, August R., Somerville, assignor to Reece Shoe Machinery Company, Boston, Mass. Sewing-machine. No. 1,229,328; June 12; v. 239; p. 370.
Schoenky, August R., Somerville, assignor to Reece Shoe Machinery Company, Boston, Mass. Hand-tacking device. No. 1,230,229; June 19; v. 239; p. 708.
Scholly, Frank, Philadelphia, Pa. Automobile-lock. No. 1,230,799; June 19; v. 239; p. 896.
Schonger, Frank, Kingston, N. Y. Antifrosting device. No. 1,228,482; June 5; v. 239; p. 37.
Schorr, Robert, San Francisco, Cal. Rotary-pump mechanism. No. 1,231,072; June 26; v. 239; p. 1028.
Schonboe, Jens T. S., Holte, near Copenhagen, Denmark. Trigger mechanism for automatic firearms. No. 1,230,930; June 26; v. 239; p. 977.
Schrader, Lee G. (See Meng and Schrader.)
Schrage, Herman F., Palatine, Ill. Spring-motor. No. 1,228,975; June 5; v. 239; p. 202.
Schreiber, William, Syracuse, N. Y. Garment-supporter. No. 1,230,800; June 19; v. 239; p. 896.
Schriver, William, Spielerville, Ark. Cycle steering attachment. No. 1,230,801; June 19; v. 239; p. 896.
Schroeder, Frank J., assignor to N. E. Gee, Altoona, Pa. Pneumatic hammer. No. 1,230,802; June 19; v. 239; p. 896.

Schroyer, Harry H., Chicago, Ill., assignor to The Acme Supply Company, Sash-spring. No. 1,229,531; June 12; v. 239; p. 439.

Schubert & Salzer Maschinenfabrik, Aktiengesellschaft. (See Cecka, Franz, assignor.)

Schubert & Salzer Maschinenfabrik, Aktiengesellschaft. (See Granz, Hermann W., assignor.)

Schuchart, Paul A., Brooklyn, N. Y., assignor to Paper Service Co., Inc. Sheet-interfolding machine. No. 1,228,835; June 5; v. 239; p. 158.

Schuermann, Anton C. (See Mueller and Schuermann.)

Schuette, Henry H., Napoleon, Ohio. Grain-cleaning means for threshing-machines. No. 1,230,437; June 19; v. 239; p. 775.

Schulse, Herman E., Bayonne, N. J., assignor to Safety First Filter Company, Inc. Water-cooler. No. 1,228,836; June 5; v. 239; p. 158.

Schulse, Herman E., New York, N. Y., assignor to Safety First Filter Company, Incorporated. Liquid dispensing and filtering bottle. No. 1,228,837; June 5; v. 239; p. 158.

Schurr, Charles H., assignor to H. T. Bradner, Cleveland, Ohio. Generating the teeth of helical gear-wheels. No. 1,230,940; June 26; v. 239; p. 982.

Schuster, Anna, Gower, Mo. Measuring device. No. 1,229,798; June 12; v. 239; p. 528.

Schuster, Ernst W., Chicago, Ill. Steam-motor. No. 1,231,207; June 26; v. 239; p. 1073.

Schutz, John, assignor of one-half to J. Benovy, Chicago, Ill. Power-operated shears. No. 1,228,838; June 5; v. 239; p. 159.

Schuyler, Frank B., Berkeley, Cal. Spring-leaf-tapering machine. No. 1,230,523; June 19; v. 239; p. 805.

Schwab, William H. (See Lange, John H., assignor.)

Schwartz, Alvin, New York, N. Y. Knitting-machine. No. 1,228,483; June 5; v. 239; p. 37.

Schwartz, William F., Rochester, N. Y. Article-lock. No. 1,229,663; June 12; v. 239; p. 484.

Schwarze, Carl J., assignor to Schwarze Electric Company, Adrian, Mich. Commutator. No. 1,229,149; June 5; v. 239; p. 260.

Schwarze Electric Company. (See Schwarze, Carl J., assignor.)

Schweitzer, Edmund O., Chicago, Ill. Gauze brush. No. 1,228,484; June 5; v. 239; p. 37.

Schwerin, Botho, Frankfort-on-the-Main, assignor to Elektro-Osmose Aktiengesellschaft (Graf Schwerin Gesellschaft), Berlin, Germany. Process for tanning and impregnating materials by means of electricity. No. 1,229,150; June 5; v. 239; p. 260.

Schwerin, Botho, assignor to Gesellschaft für Elektro-Osmose m. b. H., Frankfort-on-the-Main, Germany. Purifying and separating finely-divided substances. No. 1,229,203; June 5; v. 239; p. 279.

Schwerin, Botho, assignor to Elektro-Osmose Aktiengesellschaft (Graf Schwerin Gesellschaft), Frankfort-on-the-Main, Germany. Separation of finely-divided substances from coarse and foreign matters. No. 1,230,524; June 19; v. 239; p. 805.

Schwertfeger, Albert A. (See Schwertfeger, Florian F. and A. A.)

Schwertfeger, Florian F. and A. A., Oshkosh, Wis. Stock-waterer. No. 1,231,073; June 26; v. 239; p. 1028.

Scientific Farming Machinery Company. (See Hicks, Thomas W., assignor.)

Scott, Frederick C., Detroit, Mich. Churn. No. 1,230,040; June 12; v. 239; p. 605.

Scott, George W., and P. Carpenter, Chicago, Ill. Tank-car construction. No. 1,231,074; June 26; v. 239; p. 1028.

Scott, Horace J., Hill City, Minn. Applying hoops. No. 1,228,976; June 5; v. 239; p. 203.

Scott, Jacob R., North Weymouth, assignor of two-tenths to E. H. Kavanagh and two-tenths to J. W. Colgan, Weymouth, Mass. Internal-combustion engine. No. 1,230,092; June 12; v. 239; p. 623.

Scott, James F., New York, N. Y. Power-chamber. No. 1,231,302; June 26; v. 239; p. 1104.

Scott, Roy J., Canton, Ohio. Refrigerating appliance. No. 1,230,259; June 19; v. 239; p. 708.

Scott, Thomas W., assignor to The American Train Control Company, Baltimore, Md. Electropneumatic valve for air-brakes. No. 1,230,083; June 12; v. 239; p. 620.

Scott, Thomas W., and H. V. Rudolph, assignors to The American Train Control Company, Baltimore, Md. Adjustable support for contact-shoes. No. 1,229,184; June 5; v. 239; p. 272.

Scovill Manufacturing Company. (See Warner and Leggett, assignors.)

Scriven, Jeremiah A., New York, N. Y. Union-suit. No. 1,228,977; June 5; v. 239; p. 203.

Seale, Charles Eustis, Fla. Music-leaf turner. No. 1,230,044; June 12; v. 239; p. 606.

Sears, Roebuck and Company. (See Bohmker, John C., assignor.)

Sébille, Leo P., Providence, R. I. Gas-generator. No. 1,230,803; June 19; v. 239; p. 897.

Seddon, William H., Painswick, England. Rotary elastic-fluid engine. No. 1,231,437; June 26; v. 239; p. 1150.

Sedgwick, Hiram G., Mill Valley, Cal., assignor to The National Safety Appliance Company. Automatic train-stop. No. 1,229,151; June 5; v. 239; p. 261.

Sedgwick, Hiram G., Mill Valley, Cal., assignor to The National Safety Appliance Company. Railway-cab signaling system. No. 1,230,042; June 12; v. 239; p. 606.

Seeberger, Charles D., New York, N. Y. Elevator. No. 1,231,075; June 26; v. 239; p. 1029.

Seehase, William, Holland, Mich. Ash-can. No. 1,229,532; June 12; v. 239; p. 440.

Seely, George G. (See Huntington, Cory O., assignor.)

Seigle, William R., assignor to H. W. Johns-Manville Company, New York, N. Y. Producing bodies of extended discontinuously-associated solid particles and the product thereof. No. 1,228,485; June 5; v. 239; p. 37.

Seigle, William R., assignor to H. W. Johns-Manville Company, New York, N. Y. Producing bodies of extended discontinuously-associated particles of calcium carbonate and the product thereof. No. 1,228,486; June 5; v. 239; p. 38.

Selden, Arthur R., Rochester, N. Y. Cinematograph. No. 1,229,329; June 12; v. 239; p. 371.

Seligman, David A., Minneapolis, Minn. Combination article of furniture. No. 1,231,303; June 26; v. 239; p. 1104.

Seligman, Richard, Seattle, Wash. Button. No. 1,230,804; June 19; v. 239; p. 897.

Selin, Aleksanteri, Brooklyn, N. Y. Collapsible saw-clamp. No. 1,230,805; June 19; v. 239; p. 897.

Semmler, Carl, Wiesbaden, Germany. Pertaining to the utilization of the waste heat of gas-engines. No. 1,231,208; June 26; v. 239; p. 1074.

Sendelbach, Edward C., Cincinnati, Ohio. Vehicle-wheel. No. 1,231,304; June 26; v. 239; p. 1105.

Sentivany, Kalman F., Hartford, Conn. Puttee-shaping apparatus. No. 1,230,332; June 19; v. 239; p. 741.

Serpas, Gilbert B., Violet, La. Attachment for drills. No. 1,231,438; June 26; v. 239; p. 1150.

Sessions, Frank L., Lakewood, Ohio. Spark-plug. No. 1,228,487; June 5; v. 239; p. 38.

Sessions, Frank L., Lakewood, Ohio. Carbureter. No. 1,231,209; June 26; v. 239; p. 1074.

Sexton, James J., and R. E. Klages, Columbus, Ohio. Automobile-headlight control. No. 1,231,076; June 26; v. 239; p. 1029.

Sexton, Roy W., Wytheville, Va. Flat package. No. 1,229,799; June 12; v. 239; p. 529.

Shafer, Samuel, Jr. (See Levalley and Shafer.)

Shaffer, Luther, Boone, Iowa. Plant-setting machine. No. 1,230,406; June 19; v. 239; p. 808.

Shambow, John C., Woonsocket, R. I. Tension device for shuttles. No. 1,230,525; June 19; v. 239; p. 805.

Shannon, Woodford, Louisville, Ky. Corner-fastening for beds and other articles of furniture. No. 1,230,333; June 19; v. 239; p. 742.

Sharp, William E., assignor to Grip Nut Company, Chicago, Ill. Nut-lock. No. 1,228,704; June 5; v. 239; p. 112.

Sharp, William E., assignor to Grip Nut Company, Chicago, Ill. Nut-tapping machine. No. 1,230,931; June 26; v. 239; p. 978.

Sharples, William J., Gisborne, New Zealand. Gramophone-record holder. No. 1,229,330; June 12; v. 239; p. 324.

Sharpley, Aaron E. (See Myers and Sharpley.)

Shattuck, Ira H., Los Angeles, Cal. Towel-cabinet. No. 1,229,533; June 12; v. 239; p. 440.

Shattuck, William P., Minneapolis, Minn. Outing-trailer. No. 1,229,534; June 12; v. 239; p. 441.

Shaver, Phillip A., Puente, Cal. Mail catching and delivering apparatus. No. 1,229,331; June 12; v. 239; p. 372.

Shaw, Howard A., Yonkers, N. Y. Vehicle-chock. No. 1,229,535; June 12; v. 239; p. 441.

Shaw, John H., assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,229,332; June 12; v. 239; p. 372.

Shaw, John H., assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,229,333; June 12; v. 239; p. 372.

Shaw, John H., assignor to Sargent & Company, New Haven, Conn. Lock. 1,229,334; June 12; v. 239; p. 373.

Shaw, John H., assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,229,335; June 12; v. 239; p. 373.

Shaw, Walter, Dedham, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for setting fasteners. No. 1,231,210; June 26; v. 239; p. 1074.

Shaw, William F., Pueblo, Colo. Dental-crown attachment. No. 1,228,488; June 5; v. 239; p. 39.

Sheaffer, William J., assignor of one-third to E. E. Barner, Liverpool, Pa. Valve for gas-engines. No. 1,229,336; June 12; v. 239; p. 374.

Shearer, David M., Vicksburg, Miss. Apparatus for launching revetment-mats. No. 1,229,152; June 5; v. 239; p. 261.

Shearer, Frederick C., assignor to U. S. Indestructible Tie Manufacturing Company, Eagle Pass, Tex. Railway-tie. No. 1,229,153; June 5; v. 239; p. 261.

Shearer, Frederick C., assignor to U. S. Indestructible Tie Manufacturing Company, Eagle Pass, Tex. Railway-tie. No. 1,229,154; June 5; v. 239; p. 261.

Shearer, Leo C., Latrobe, Pa. Telegraph sending and recording device. No. 1,230,807; June 19; v. 239; p. 898.

Shearing, Francis C., San Jose, Cal. Washing-machine. No. 1,230,231; June 19; v. 239; p. 708



Sheedy, Patrick. (See Kellogg, Daniel P., assignor.)

Sheffler, Ira L., Detroit, Mich. Vacuum-cleaner. No. 1,231,077; June 26; v. 239; p. 1030.

Sheldon, Daniel F., Ventura, Cal. Current-deflector and system of bank protection. No. 1,230,608; June 19; v. 239; p. 834.

Sheldon, Samuel B., and K. C. Hoxie, Duluth, Minn. Connection for gas-mains. No. 1,230,808; June 19; v. 239; p. 899.

Shelor, Frederick L., Salem, Va. Barrel-filling apparatus. No. 1,230,334; June 19; v. 239; p. 742.

Shelton-Payne Arms Company, The. (See Shelton, Walter H., assignor.)

Shelton, Walter H., assignor to The Shelton-Payne Arms Company, El Paso, Tex. Pistol-holster. No. 1,230,043; June 12; v. 239; p. 606.

Shepard, Stephen H. (See Best and Shepard.)

Shepard, Wilbur L., Elmwood, Conn. Clutch. No. 1,229,664; June 12; v. 239; p. 484.

Shepherd, George R., Brookline, assignor of one-half to G. N. Kaye, Boston, Mass. Attachment for twin faucets. No. 1,231,305; June 26; v. 239; p. 1105.

Shepherd, John H., Elyria, Ohio. Float. No. 1,230,335; June 19; v. 239; p. 742.

Sheridan, Charles L., Grygla, Minn. Sleigh. No. 1,230,809; June 19; v. 239; p. 899.

Sherman, Willis S., Milwaukee, Wis. End-matcher. No. 1,229,800; June 12; v. 239; p. 529.

Shew, Egbert A. (See Hoel and Shew.)

Shields, Samuel. (See Rogers, Howard A., assignor.)

Shiflet, Joseph, McKeesport, Pa. Signal. No. 1,230,810; June 19; v. 239; p. 899.

Shilling, Edward C., Columbus, assignor of one-half to J. Hagger, Urbana, Ohio. Safety device for automobiles. No. 1,231,531; June 26; v. 239; p. 1178.

Shipp, James T., assignor of one-half to M. T. Freeman, Chattanooga, Tenn. Pea-harvesting machine. No. 1,230,822; June 19; v. 239; p. 903.

Shippee, Henry C., Los Angeles, assignor, by mesne assignments, to Anderson-Barngrover M'f'g Co., San Jose, Cal. Apparatus for treating packaged goods. No. 1,230,811; June 19; v. 239; p. 899.

Shoecraft, Judson, Eskridge, Kans. Absolute and permissive block-signaling. No. 1,229,155; June 5; v. 239; p. 262.

Shoemaker, John F., Des Moines, Iowa. Check-book. No. 1,230,044; June 12; v. 239; p. 607.

Shudow, Osam, San Francisco, Cal. Aeroplane. No. 1,228,705; June 5; v. 239; p. 113.

Shults, Sherman T., McCammon, Idaho. Automatic tire-inflating device for vehicle-wheels. No. 1,228,610; June 5; v. 239; p. 81.

Shults, Sherman T., McCammon, Idaho. Wire-stretcher. No. 1,228,611; June 5; v. 239; p. 81.

Shultz, Otto H., Windsor, Ontario, assignor of two-tenths to F. M. Hill and two-tenths to R. M. Foster, Edmonton, Alberta, and two-tenths to L. R. Benson, Windsor, Ontario, Canada. Paint composition. No. 1,229,337; June 12; v. 239; p. 374.

Sibbald, William H. (See Nesmith, Ralph A., assignor.)

Sibbald, William H. (See Nesmith and Sibbald.)

Siebenhauer, Lester, assignor to Drendell Electrical and Manufacturing Company, San Francisco, Cal. Safety means for switch-boxes. No. 1,228,839; June 5; v. 239; p. 159.

Signature Company. (See Crompton, Frank E., assignor.)

Sill, William F., and J. M. Feldhans, St. Louis, Mo. Motor-oscillated crib. No. 1,231,078; June 26; v. 239; p. 1030.

Silliman, Charles H. (See Best, William N., assignor.)

Silva, Guy H., San Diego, Cal. Ignition system for internal-combustion engines. No. 1,230,077; June 12; v. 239; p. 618.

Silver, Israel, assignor of one-half to I. Malis, New York, N. Y. Radiator for automobiles. No. 1,229,156; June 5; v. 239; p. 262.

Silvis, Sankey S., Portland, assignor to E. and C. Larkin, Blind Slough, Oreg. Undercutter-guide. No. 1,231,211; June 26; v. 239; p. 1075.

Simmons Manufacturing Company, The. (See Burns, John, assignor.)

Simonds, Charles G., and G. W. Doerr, Milwaukee, Wis. Temperature-responsive device. No. 1,231,439; June 26; v. 239; p. 1151.

Simoneaux, Clement, Bellerose, assignor of one-half to J. W. Newchurch, New Orleans, La. Three-wheeled cultivator. No. 1,229,157; June 5; v. 239; p. 262.

Simonsson, Wilhelm, Brooklyn, N. Y. Retarding device. No. 1,230,932; June 26; v. 239; p. 979.

Simpson, Alma V., Granada, Colo. Mail-bag receiver. No. 1,228,840; June 5; v. 239; p. 160.

Simpson, Charles H., Laurel, Nebr. Harvester attachment. No. 1,228,841; June 5; v. 239; p. 160.

Simpson, Frost V., assignor to Kleckhefer Box Company, Milwaukee, Wis. Platen connection. No. 1,228,978; June 5; v. 239; p. 203.

Simpson, John T., Newark, N. J. Flying-machine. No. 1,230,526; June 19; v. 239; p. 805.

Simpson, William L., Crum Lynne, Pa. Positive fuse-percussion. No. 1,230,933; June 26; v. 239; p. 979.

Sims, Frederick L. H., assignor to The Diaphone-Signal Company, Limited, Toronto, Ontario, Canada. Locking means for key-bolts. No. 1,228,489; June 5; v. 239; p. 39.

Sims, Oscar C., Palmetto, Ga. Planter. No. 1,229,158; June 5; v. 239; p. 263.

Sims, Walter, Pawtucket, R. I. Weighing-balance. No. 1,230,232; June 19; v. 239; p. 709.

Singer, Frank J., assignor to American Pressweld Radiator Corporation, Detroit, Mich. Radiator-coupling. No. 1,230,812; June 19; v. 239; p. 900.

Singer Manufacturing Company, The. (See Abercrombie, Charles M., assignor.)

Singer Manufacturing Company, The. (See Barron, William L., assignor.)

Singer Manufacturing Company, The. (See Corrall, Herbert, assignor.)

Singer Manufacturing Company, The. (See De Voe, Albert H., assignor.)

Singer Manufacturing Company, The. (See Karle, John D., assignor.)

Singer Manufacturing Company, The. (See Wood, Alfred R., assignor.)

Singleton, James E., and S. T. White, Greenville, N. C. Shutter-operating attachment for twin motion-picture machines. No. 1,229,159; June 5; v. 239; p. 263.

Sisbower, George F., East Orange, N. J., and L. E. Pittoni, assignors to New York Couch Bed Company, New York, N. Y. Folding-bed structure. No. 1,229,536; June 12; v. 239; p. 441.

Sisbower, George F., East Orange, N. J., and L. E. Pittoni, assignors to New York Couch Bed Company, New York, N. Y. Foldable hammock-stand. No. 1,229,537; June 12; v. 239; p. 442.

Sitko, Franciszek, *et al.* (See Sitko, John, assignor.)

Sitko, John, assignor of one-third to L. Sitko and one-third to F. Sitko, Fort Wayne, Ind. Rail-joint. No. 1,231,440; June 26; v. 239; p. 1151.

Sitko, Ludwik, *et al.* (See Sitko, John, assignor.)

Sixma, Klaas, Brooklyn, N. Y. Fitting for electrical conduits. No. 1,229,665; June 12; v. 239; p. 485.

Skelt, Matthew H. (See Kite and Skelt.)

Skindfabriken Unicum Kr. Bendixen, P. Bendixen & Co. (See Bendixen, Kristian, assignor.)

Skinner, John T., Lawrence, Kans. Alternating-current electromagnetic control-switch. No. 1,230,934; June 26; v. 239; p. 979.

Skinner, John T., Lawrence, Kans. Electric braking system. No. 1,230,935; June 26; v. 239; p. 980.

Skinner, M. T., Cleburne, Tex. Wing-sweep attachment for plows. No. 1,230,233; June 19; v. 239; p. 709.

Sklovsky, Max, assignor to Deere & Company, Moline, Ill. Producing fuel-gas. No. 1,229,338; June 12; v. 239; p. 374.

Skrivanek, Vladimir, Fort Wayne, Ind. Flying-machine. No. 1,230,045; June 12; v. 239; p. 607.

Slasor, Harold, New Philadelphia, Ohio. Suspending-hook. No. 1,228,490; June 5; v. 239; p. 39.

Slater, Harvey H., Kenosha, Wis., assignor to J. M. Richardson, Detroit, Mich. Automobile-lamp. No. 1,229,538; June 12; v. 239; p. 442.

Slater, Henry B., Los Angeles, Cal. Extracting copper from its ores. No. 1,230,078; June 12; v. 239; p. 619.

Sloan, Andrew L., Passaic, N. J. Hanger. No. 1,230,438; June 19; v. 239; p. 775.

Sly, Lawrence, Kansas, Ala. Combined curtain and window-shade fixture. No. 1,230,813; June 19; v. 239; p. 900.

Smith, Amos H., New York, N. Y. Demountable rim for vehicle wheels. No. 1,229,801; June 12; v. 239; p. 529.

Smith, Amos H., New York, N. Y. Pressure-gage for engine-cylinders. No. 1,230,527; June 19; v. 239; p. 806.

Smith, Bert H., and W. A. Inwood, assignors to The Wilbert Manufacturing Company, Fairbury, Nebr. Oiling device. No. 1,230,936; June 26; v. 239; p. 980.

Smith Cannery Machines Company. (See Waugh, Edward H., assignor.)

Smith, Charles R., Toledo, Ohio. Shipping-receptacle. No. 1,231,079; June 26; v. 239; p. 1030.

Smith, Cornelius W., and E. A. O'Brien, New York, N. Y. Music-sheet turner. No. 1,231,080; June 26; v. 239; p. 1030.

Smith, Dillon F. (See Brooks and Smith.)

Smith, Edward W., Owensboro, Ky. Road-grader. No. 1,228,979; June 5; v. 239; p. 203.

Smith, Emery H., Burton, assignor of one-fourth to F. T. Wright, Middlebury, and one-fourth to J. A. Homer, Owosso, Mich. Railway-crossing gate. No. 1,229,339; June 12; v. 239; p. 374.

Smith, Emil, Flint, Mich. Rod-holding tool. No. 1,230,814; June 19; v. 239; p. 901.

Smith, Esmond M., Chicago, Ill. Lighting-fixture. No. 1,230,046; June 12; v. 239; p. 607.

Smith, Frank A., East Orange, N. J. Splash system of lubrication. No. 1,230,815; June 19; v. 239; p. 901.

Smith, Frank E. (See Hoskyns, William J., assignor.)

Smith, Frank W. (See Lake, George W., assignor.)

Smith, Fredrick W., North Tonawanda, N. Y. Electro-pneumatic organ. No. 1,231,212; June 26; v. 239; p. 1075.

Smith, Gary B., Chicago, Ill. Machine for assembling bed-fabric chains. No. 1,228,491; June 5; v. 239; p. 40.

Smith, George T., *et al.* (See Frigan, Ernest W., assignor.)

Smith, Harry C., Milwaukee, Wis. Collapsible swing. No. 1,230,609; June 19; v. 239; p. 834.

Smith, Herbert E., assignor to The Spokane Mail Equipment Company, Spokane, Wash. Mail-pouch. No. 1,230,937; June 26; v. 239; p. 981.
Smith, Herbert W., Coon Rapids, Iowa. Window-shade bracket. No. 1,231,441; June 26; v. 239; p. 1151.
Smith, John, Cambridge, Mass. Ray-protector. No. 1,231,213; June 26; v. 239; p. 1076.
Smith, John A., assignor to Elliott-Fisher Company, Harrisburg, Pa. Combined key-connecting and ribbon-shifting mechanism for combined type-writers and adders. No. 1,228,492; June 5; v. 239; p. 40.
Smith, John W., Philadelphia, Pa. Internal-combustion engine. No. 1,229,340; June 12; v. 239; p. 375.
Smith, Lewis H. (See Funk and Smith.)
Smith, Louis L., Edgewood, assignor, by mesne assignments, to The Westinghouse Gear and Dynamometer Company, Pittsburgh, Pa. Reduction-gearing. No. 1,228,495; June 5; v. 239; p. 40.
Smith, Marshal S. (See Elkins and Smith.)
Smith, Newton J. (See Tate and Smith.)
Smith, Paul J., Beech Creek, Pa. Steering-gear for motor-vehicles. No. 1,338,980; June 5; v. 239; p. 204.
Smith, Sidney J., Fresno, Cal. Fire-extinguisher. No. 1,231,442; June 26; v. 239; p. 1151.
Smith, Theodore F. (See Peden, Joseph E., assignor.)
Smith-Upton Co. (See Kyle, James M., assignor.)
Smith & Wesson. (See Wesson, Joseph H., assignor.)
Smith, William E., Milltown, assignor to Kilbourn Manufacturing Corporation, New Brunswick, N. J. Seamless tubular fabric and making same. No. 1,231,443; June 26; v. 239; p. 1151.
Smyth Manufacturing Company, The. (See Gourley, James C., assignor.)
Smythe, William F., New York, N. Y. Collapsible drinking-cup. No. 1,228,706; June 5; v. 239; p. 113.
Snapp, Robert W., assignor of one-half to C. S. Edmunds, Petersburg, Va. Connecting device for switch-points. No. 1,230,047; June 12; v. 239; p. 607.
Snell, Harry B., South Bend, Ind. Shock-absorber. No. 1,230,938; June 26; v. 239; p. 981.
Snow, Isaac, Lawrence, assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Shuttle-feeler for looms. No. 1,230,439; June 19; v. 239; p. 776.
Snyder, Jacob R., assignor to P. E. Donner, Pittsburgh, Pa. Air-brake system. No. 1,231,081; June 26; v. 239; p. 1031.
Snyder, Jacob R., assignor to P. E. Donner, Pittsburgh, Pa. Triple valve. No. 1,231,214; June 26; v. 239; p. 1076.
Snyder, Jacob R., assignor to Pittsburgh Air-Brake Company, Pittsburgh, Pa. Engineer's valve. No. 1,231,082; June 26; v. 239; p. 1031.
Société de Lavandeyra & Orner. (See Forgues, Charles, assignor.)
Societe Lorraine Des Anciens Etablissements De Dietrich & Cie De Luneville. (See Barbarou, Marius J. B., assignor.)
Society of Chemical Industry in Basle. (See Hüssy and Hartmann, assignors.)
Society "Spad Société Anonyme pour l'Aviation et ses Derivés." (See Béchereau, Louis, assignor.)
Solem, Ludvik, Duluth, Minn. Bottle-holder. No. 1,228,612; June 5; v. 239; p. 81.
Solomon, Frank H., Pretoria, Transvaal, South Africa. Hinged steering-pillar. No. 1,230,528; June 19; v. 239; p. 806.
Sommer, Peter W., Peoria, Ill., assignor, by mesne assignments, to The First Trust and Savings Company, Cleveland, Ohio, and W. E. Stone, Peoria, Ill., trustees. Gate. No. 1,228,707; June 5; v. 239; p. 113.
Sommer, Peter W., Peoria, Ill., assignor, by mesne assignments, to The First Trust and Savings Company, Cleveland, Ohio, and W. E. Stone, Peoria, Ill., trustees. Gate. No. 1,228,708; June 5; v. 239; p. 114.
Sonnedorn, Sol. S., Brooklyn, N. Y. High-potential insulator. No. 1,230,610; June 19; v. 239; p. 834.
Sorgan, Robert, New York, N. Y. Cap or cover for jars, bottles, glasses, or the like. No. 1,229,341; June 12; v. 239; p. 375.
Soss, Charles J., assignor of one-third to H. Soss and one-third to S. Soss, New York, N. Y. Hinge. No. 1,228,981; June 5; v. 239; p. 204.
Soss, Henry, *et al.* (See Soss, Charles J., assignor.)
Soss, Joseph, New York, N. Y. Hinge. No. 1,228,982; June 5; v. 239; p. 204.
Soss, Samuel, *et al.* (See Soss, Charles J., assignor.)
Souders, Addison J., assignor of one-half to J. E. Ross, Cornwall, Ontario, Canada. Shade-roller. No. 1,230,611; June 19; v. 239; p. 835.
Souther, Joseph W., San Francisco, Cal. Shipping-jack. No. 1,228,983; June 5; v. 239; p. 205.
Spaan, Herbert O., Kalamazoo, Mich. Tool-holder for lathes and like machines. No. 1,229,802; June 12; v. 239; p. 530.
Spahr, Harry M., Baltimore, Md. Soil-tester. No. 1,229,803; June 12; v. 239; p. 530.
Spannagel, Carl, Berlin, Germany. Warp-beam motion for looms. No. 1,231,306; June 26; v. 239; p. 1106.
Sparboom, Walter P., Rochester, N. Y. Blower for cleaning furnace-flues. No. 1,229,539; June 12; v. 239; p. 442.
Sparkes, James M., Peabody, Mass. Electric welding-machine No. 1,228,842; June 5; v. 239; p. 160.
Spaulding & Sons Co., J. (See English and Gibbs, assignors.)
Specketer, Heinrich, Griesheim-on-the-Main, Germany. Producing pure zinc. No. 1,231,083; June 26; v. 239; p. 1032.
Specketer, Heinrich, Griesheim-on-the-Main, Germany. Apparatus for producing zinc and other similar metals. No. 1,231,084; June 26; v. 239; p. 1032.
Spellman, Herbert W., New Britain, Conn. Polishing compound. No. 1,231,307; June 26; v. 239; p. 1106.
Sperry, Arthur B., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,231,085; June 26; v. 239; p. 1032.
Sperry, Arthur B., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,231,086; June 26; v. 239; p. 1033.
Sperry, John B., assignor to The American Well Works, Aurora, Ill. Deep-well pump. No. 1,230,612; June 19; v. 239; p. 835.
Sperry, Samuel E., Woodhaven, assignor to Intertype Corporation, Brooklyn, N. Y. Typographical machine. No. 1,229,160; June 5; v. 239; p. 263.
Spieth, William F., Cleveland, Ohio. Combination cooking-range. No. 1,231,087; June 26; v. 239; p. 1033.
Spillman, Edward O., North Tonawanda, N. Y. Piston for explosive-engines. No. 1,229,540; June 12; v. 239; p. 443.
Spire, William H., assignor to The Steel Products Company, Cleveland, Ohio. Welding-machine. No. 1,228,843; June 5; v. 239; p. 161.
Spirewski, John S., Jr., assignor of one-third to D. C. O'Connell and one-third to J. E. O'Connell, Milwaukee, Wis. Tiltable mounting for automobile-headlights. No. 1,230,939; June 26; v. 239; p. 981.
Splitdorf Electrical Company. (See Dean, William W., assignor.)
Splitdorf Electrical Company. (See Mason, Charles T., assignor.)
Splitdorf Electrical Company. (See Van Deventer, Harry R., assignor.)
Spokane Mail Equipment Company, The. (See Sander, Joseph P., assignor.)
Spokane Mail Equipment Company, The. (See Smith, Herbert E., assignor.)
Sponenburg, Hiram H., Gurnee, assignor, by mesne assignments to O. R. Barnett, Chicago, Ill. Rail-stay. No. 1,228,613; June 5; v. 239; p. 81.
Sponenburg, Hiram H., Gurnee, assignor, by mesne assignments, to O. R. Barnett, Chicago, Ill. Rail-anchor. No. 1,228,614; June 5; v. 239; p. 82.
Springer, Ruter W., Springfield, Ill. Wing or propeller for aerial dynamics and other purposes. No. 1,231,444; June 26; v. 239; p. 1152.
Stafford, Benjamin E. D., and E. I. Dodds, assignors to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt for boilers. No. 1,230,048; June 12; v. 239; p. 608.
Stafford, Hal R., Plainfield, N. J., assignor to Economy Devices Corporation, New York, N. Y. Steam-engine valve reversing-gear. No. 1,230,049; June 12; v. 239; p. 608.
Stafford, John E., W. D. Ingram, and H. C. Gordon, Lincoln, Cal. Refrigerator. No. 1,231,088; June 26; v. 239; p. 1034.
Stafford, Martin A., Harvard, Ill. Self-righting guide-post. No. 1,228,615; June 5; v. 239; p. 82.
Standard Car Truck Company. (See Barber and Walton, assignors.)
Standard Computing Scale Company, The. (See Jaenichen, Louis, assignor.)
Standard Oil Company. (See Cash, Gentry, assignor.)
Standard Parts Company, The. (See McIntyre, Michael M., assignor.)
Standiford, Frank, Livermore, Cal. Folding egg-crate. No. 1,230,336; June 19; v. 239; p. 743.
Stanfield, Jasper H., assignor of one-half to F. C. Pargborn, Grand Rapids, Mich. Refrigerator-latch. No. 1,229,804; June 12; v. 239; p. 531.
Stankowski, Franciszek, Baltimore, Md. Barrel-smoking oven. No. 1,230,050; June 12; v. 239; p. 609.
Stanley, Ed, Hart, Mich. Sled attachment for automobiles. No. 1,229,161; June 5; v. 239; p. 264.
Stanley Rule & Level Company, The. (See Schade and Hance, assignors.)
Stanton, Frederick L. (See Hanau, Rudolph L., assignor.)
Starin, Frank, Springfield, Mass. Grinding-machine. No. 1,229,162; June 5; v. 239; p. 264.
Stark, William O., assignor to Bullock Tractor Co., Chicago, Ill. Traction-engine. No. 1,228,709; June 5; v. 239; p. 114.
Statham, Nathaniel. (See Elkins and Smith, assignors.)
Staver, Byron E., Virginia, Minn. Valve mechanism for internal-combustion engines. No. 1,230,613; June 19; v. 239; p. 835.
Stead, Ernest, Binghamton, N. Y. Lens grinding and polishing machine. No. 1,230,530; June 19; v. 239; p. 807.
Stebbins, Carl G., and A. Gelow, assignors to The Warren Featherbone Company, Three Oaks, Mich. Quill boning. No. 1,231,089; June 26; v. 239; p. 1035.
Stechbart, Arthur, Chicago, Ill. Portable talking-machine. No. 1,230,614; June 19; v. 239; p. 836.



Stecher, Frank A., assignor to Stecher Lithographic Co., Rochester, N. Y. Display-rack. No. 1,230,234; June 19; v. 239; p. 709.
Stecher Lithographic Co. (See Stecher, Frank A., assignor.)
Stecker, Alfred J., assignor to F. Wardell, Detroit, Mich. Handle device for vacuum-cleaners. No. 1,231,445; June 26; v. 239; p. 1152.
Steel Products Company, The. (See Spire, William H., assignor.)
Steel, John B., and H. Follis, Orillia, Ontario, Canada. Seeding attachment. No. 1,229,342; June 12; v. 239; p. 376.
Steele, Robert J., Newport News, Va., assignor of one-half to W. C. Tucker, Raleigh, N. C. Hanger. No. 1,230,440; June 19; v. 239; p. 776.
Steelquist, John, Portland, Oreg. Irrigating and draining system. No. 1,231,308; June 26; v. 239; p. 1106.
Steen, Charles W., Norwood, Ohio, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Brush-lifting mechanism. No. 1,228,710; June 5; v. 239; p. 114.
Stees, Edward W., *et al.* (See Bunnell, Morton G., assignor.)
Steeves, Lorne W. (See Purvis and Steeves.)
Steinberger, Louis, Brooklyn, N. Y. Connecting device for chain-type insulators. No. 1,228,711; June 5; v. 239; p. 115.
Steinberger, Louis, Brooklyn, N. Y. Suspension means for strain-insulators. No. 1,231,090; June 26; v. 239; p. 1035.
Steinmetz, Charles P., Schenectady, N. Y., assignor to General Electric Company. Protective device. No. 1,230,615; June 19; v. 239; p. 836.
Stepanoff, Peter, Petrograd, Russia. Shrapnel-loading machine. No. 1,229,666; June 12; v. 239; p. 485.
Stephenson, Arthur, assignor to Acetylene Illuminating Company, Limited, Lambeth, England. Storing of gases under pressure. No. 1,230,531; June 19; v. 239; p. 807.
Stephenson, Lowell L., San Francisco, Cal. Check-protector. No. 1,228,844; June 5; v. 239; p. 161.
Stephenson, William G., Buenos Aires, Argentina. Coupling device or apparatus for the vestibules or gangways of corridor rolling-stock for railways. No. 1,228,616; June 5; v. 239; p. 82.
Sterling, Edward C., Beaver Falls, Pa. Photographic-printing device. No. 1,230,532; June 19; v. 239; p. 807.
Stern, Bernhard, New York, N. Y. Display-rack. No. 1,230,051; June 12; v. 239; p. 609.
Sterrick, Harrison D., Pittsburgh, Pa. Razor. No. 1,231,215; June 26; v. 239; p. 1076.
Stevens, Enoch P., Chicago, Ill. Hanger. No. 1,230,441; June 19; v. 239; p. 776.
Stevens, Enoch P., Chicago, Ill., assignor, by mesne assignments, to American Arch Company, New York, N. Y. Locomotive-arch. No. 1,229,381; June 12; v. 239; p. 389.
Stevens, Enoch P., Chicago, Ill., assignor to American Arch Company, New York, N. Y. Locomotive-arch construction. No. 1,229,384; June 12; v. 239; p. 390.
Stevens, Enoch P., Chicago, Ill., assignor to American Arch Company, New York, N. Y. Marginal brick. No. 1,229,389; June 12; v. 239; p. 392.
Stevens, Enoch P., Chicago, Ill., assignor to American Arch Company, New York, N. Y. Locomotive-arch. No. 1,229,390; June 12; v. 239; p. 392.
Stevens, Enoch P., Chicago, Ill., assignor to American Arch Company, New York, N. Y. Cantaliver-margin for locomotive-arches. No. 1,229,391; June 12; v. 239; p. 392.
Stevens, Filo S., Ashville, N. Y. Wire-stretcher. No. 1,229,343; June 12; v. 239; p. 376.
Stevens, Howard L., Everett, Wash. Pneumatic sprayer. No. 1,229,344; June 12; v. 239; p. 376.
Stevens, Walter G. (See Hilliard and Stevens.)
Stevens, William C., assignor to The Firestone Tire & Rubber Company, Akron, Ohio. Tire-bead. No. 1,231,446; June 26; v. 239; p. 1153.
Stevenson, Andrew C., Scotstoun, Glasgow, Scotland. Rim and wheel for solid-rubber tires. No. 1,230,616; June 19; v. 239; p. 836.
Stevenson, Lemuel L., Emporia, Kans. Viscous-fluid applier. No. 1,230,052; June 12; v. 239; p. 609.
Stevenson, Wilbur W., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Fluid-flow meter. No. 1,229,805; June 12; v. 239; p. 531.
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Stewart, Alexander, assignor to Four Wheel Tractor Co., Clintonville, Wis. Gripping device for tractor-wheels. No. 1,229,541; June 12; v. 239; p. 443.
Stewart, Alfred C., Los Angeles, Cal. Carbureter. No. 1,228,845; June 5; v. 239; p. 161.
Stewart, Edgar M., Lang, and H. H. McKenna, assignors of one-half to T. Thorkildsen, Los Angeles, Cal. Separator. No. 1,229,542; June 12; v. 239; p. 443.
Stewart, Earl H., *et al.* (See Melrose, George C., assignor.)
Stewart, Edwin F., Woodcliff, N. J., assignor of one-half to The Barrett Company. Liquid or gaseous fuel burner. No. 1,231,447; June 26; v. 239; p. 1153.
Stewart, F. E., trustee. (See Pifer, George N., assignor.)
Stewart, James A. (See Carley, Leonard R., assignor.)
Stewart, John E., Oakland, Ill. Hoisting apparatus. No. 1,228,494; June 5; v. 239; p. 41.
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Stewart, Manson A., Yankton, S. D. Speed-changing-gear mechanism. No. 1,228,984; June 5; v. 239; p. 205.
Stewart, Samuel F. (See Desrochers, Louis, assignor.)
Stewart, Thales D. (See Amsbary and Stewart.)
Steynis, Jan, Bay Shore, N. Y., assignor to Steynis Ozone Company. Apparatus for sterilization of liquid by ozone. No. 1,228,712; June 5; v. 239; p. 115.
Steynis Ozone Company. (See Steynis, Jan, assignor.)
Stichtenoth, George J., Cincinnati, assignor of one-half to H. Von Holle, Cheviot, Ohio. Incandescent-electric-lamp plug. No. 1,229,185; June 5; v. 239; p. 272.
Stieler, Carl, Chicago, Ill. Concrete building apparatus. No. 1,229,163; June 5; v. 239; p. 264.
Stigberg, Axel E., and C. Bechtold, Brooklyn, N. Y. Dental die-punch. No. 1,228,617; June 5; v. 239; p. 83.
Stiles, Thomas G., Arlington, N. J. Rail-brace. No. 1,230,533; June 19; v. 239; p. 808.
Stiles, Thomas G., assignor to The T. Geo. Stiles Company, Arlington, N. J. Rail-brace. No. 1,230,534; June 19; v. 239; p. 808.
Still, William J., London, England. Internal-combustion engine. No. 1,230,617; June 19; v. 239; p. 837.
Stillwell, Lewis B., *et al.* (See Brinckerhoff, Francis M., assignor.)
Stillwell, Lewis B. (See Brinckerhoff and Stillwell.)
Stimecz, Karl, Cincinnati, Ohio. Hand-operated shovel. No. 1,229,667; June 12; v. 239; p. 485.
Stinson, Charles H., Watertown, S. D. Differential transmission-gear. No. 1,228,713; June 5; v. 239; p. 115.
Stith, George W., Clarksville, Okla. Hen's nest. No. 1,229,164; June 5; v. 239; p. 265.
Stober, Franklin I., Brooklyn, N. Y. Tray. No. 1,229,806; June 12; v. 239; p. 531.
Stockard, Thomas R., Montreal, Quebec, Canada, assignor to Imperial Tobacco Company of Canada Limited. Label-affixing machine. No. 1,231,448; June 26; v. 239; p. 1154.
Stockburger, Charles W., Allen, Tex. Animal-trap. No. 1,230,535; June 19; v. 239; p. 809.
Stockdell, Theodore, *et al.* (See Maxwell, Dillard L., assignor.)
Stoehrzlein, Charles L., Erie, Pa. Internal-combustion engine. No. 1,230,536; June 19; v. 239; p. 809.
Stoffel, Emil F., Pontiac, Mich. Governor. No. 1,230,337; June 19; v. 239; p. 743.
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Stokes, Charles L., Los Angeles, Cal. Liquid-feed system. No. 1,230,537; June 19; v. 239; p. 809.
Stokes, Charles L., Los Angeles, Cal. Liquid-feed system. No. 1,230,596; June 19; v. 239; p. 830.
Stokes, Charles L., Millong, via Young, New South Wales, Australia. Vacuum liquid-feeding apparatus and method therefor. No. 1,230,832; June 19; v. 239; p. 906.
Stolp, Samuel S., assignor to The Railroad Supply Company, Chicago, Ill. Directional trolley-contactor. No. 1,229,345; June 12; v. 239; p. 376.
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Stone, William E., *et al.*, trustees. (See Sommer, Peter W., assignor.)
Storch, Benjamin. (See Eberle and Storch.)
Storck, Clarence E., Baltimore, Md. Dish-washing machine. No. 1,230,618; June 19; v. 239; p. 837.
Storer, Norman W., Pittsburgh, and A. J. Hall, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. System and apparatus for controlling fluid-motors. No. 1,229,543; June 12; v. 239; p. 444.
Storer, Norman W., Pittsburgh, and A. J. Hall, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. System and apparatus for controlling electric motors. No. 1,229,544; June 12; v. 239; p. 444.
Stortz, John H., Philadelphia, Pa. Display-box. No. 1,228,714; June 5; v. 239; p. 116.
Stout, George W., Trenton, N. J. Package-tie. No. 1,231,309; June 26; v. 239; p. 1106.
Stow, Audley H., Maybeury, W. Va. Means for preventing explosions in mines. No. 1,228,985; June 5; v. 239; p. 205.
Strack, Henry C., Owego, N. Y. Sharpening device. No. 1,229,668; June 12; v. 239; p. 485.
Strack, Herman, assignor to Hansmann Manufacturing Company, Long Prairie, Minn. Plow-guide. No. 1,230,084; June 12; v. 239; p. 621.
Strahm, Frederick, Lawrence, Kans. Car-seal. No. 1,231,216; June 26; v. 239; p. 1077.
Straight, Halver R., Adel, Iowa. Sheet-metal door-frame. No. 1,231,091; June 26; v. 239; p. 1035.
Strater, Theodore G., West Tisbury, assignor to Herman Strater & Sons, Boston, Mass. Faucet. No. 1,228,846; June 5; v. 239; p. 162.
Stratton, John W., Linn, Kans. Gopher-trap. No. 1,230,054; June 12; v. 239; p. 610.
Strauss, Gustavus E., New York, N. Y. Bag. No. 1,228,715; June 5; v. 239; p. 116.
Strickler, Oliver P., and B. C. Lewis, Mason City, Iowa, assignors to Wonder Carburetor Heater Company. Carbureter-heating device. No. 1,230,619; June 19; v. 239; p. 838.

Strittmatter, William, and H. Schimmel, Weehawken, N. J. Let-off mechanism. No. 1,230,235; June 19; v. 239; p. 709.

Stromberg-Carlson Telephone Manufacturing Company. (See Dean, William W., assignor.)

Stromberg-Carlson Telephone Mfg. Co. (See Manson, Ray H., assignor.)

Stroud, Harold D., Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company. Telephone-exchange system. No. 1,229,163; June 5; v. 239; p. 265.

Stroud, William. (See Barr and Stroud.)

Stuart, Edwin R., U. S. Army. Sensitive percussion-fuse. No. 1,229,669; June 12; v. 239; p. 486.

Stuart, Francis L., Baltimore, Md. Apparatus for raising and conveying coal, &c. No. 1,230,236; June 19; v. 239; p. 710.

Stuart, Francis L., Baltimore, Md. Conveying and loading apparatus. No. 1,231,449; June 26; v. 239; p. 1154.

Stuart, Henry J. (See Russ and Stuart.)

Stuart, Kenneth E., Philadelphia, Pa. Automatic electric-railway system. No. 1,229,807; June 12; v. 239; p. 532.

Stubkjare, Joe A., assignor to Tubular Wall Company, Billings, Mont. Building-forms. No. 1,230,055; June 12; v. 239; p. 610.

Studebaker Corporation, The. (See Heaslet, James G., assignor.)

Stump, Benjaman F., assignor of one-half to H. S. Westbrook, Dunbar, Nebr. Lock-nut. No. 1,229,808; June 12; v. 239; p. 532.

Sturm, Lester, Roscoe, Ill. Farrowing-box. No. 1,230,237; June 19; v. 239; p. 710.

Sturtevant Mill Company. (See Sturtevant, Thomas J., assignor.)

Sturtevant Mill Company. (See Sturtevant, Thomas L. and T. J., assignors.)

Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Screening or separating machine. No. 1,229,810; June 12; v. 239; p. 533.

Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Screening or separating machine. No. 1,229,811; June 12; v. 239; p. 533.

Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Screening or separating machine. No. 1,229,812; June 12; v. 239; p. 534.

Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Screening or separating machine. No. 1,229,813; June 12; v. 239; p. 534.

Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Screening or separating machine. No. 1,229,814; June 12; v. 239; p. 534.

Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Screening or separating machine. No. 1,229,815; June 12; v. 239; p. 535.

Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Screening or separating machine. No. 1,229,816; June 12; v. 239; p. 535.

Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Screening or separating machine. No. 1,229,817; June 12; v. 239; p. 535.

Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Screening or separating machine. No. 1,229,818; June 12; v. 239; p. 536.

Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Jarring mechanism for screening or separating machines. No. 1,229,819; June 12; v. 239; p. 536.

Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Jarring mechanism for screening or separating machines. No. 1,229,820; June 12; v. 239; p. 537.

Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Jarring mechanism for screening or separating machines. No. 1,229,821; June 12; v. 239; p. 537.

Sturtevant, Thomas L., Quincy, and T. J. Sturtevant, Wellesley, Mass., assignors to Sturtevant Mill Company. Screening or separating machine. No. 1,229,809; June 12; v. 239; p. 532.

Subers, Lawrence A., East Cleveland, Ohio. Laminated, cohesive, interwound, bonded fabric. No. 1,230,338; June 19; v. 239; p. 743.

Suhm, Arthur J., Milwaukee, Wis. Barrel-washing machine. No. 1,231,092; June 26; v. 239; p. 1035.

Sullivan Machinery Company. (See Gilman, George H., assignor.)

Sullivan, William J., New Brookland, S. C. Automatic ball-bearing bobbin-holder. No. 1,231,217; June 26; v. 239; p. 1077.

Summers, Frank E., Memphis, Mo. Aeroplane. No. 1,230,620; June 19; v. 239; p. 838.

Sundeen, Erick O., assignor of one-half to J. H. Brazeau, Spokane, Wash. Foldable brush. No. 1,231,093; June 26; v. 239; p. 1036.

Sundh, August, Hasflings-upon-Hudson, N. Y. Automatic blocking mechanism for strip-mills. No. 1,230,941; June 26; v. 239; p. 982.

Sundh, August, Hastings-upon-Hudson, N. Y. Illuminating device. No. 1,230,942; June 26; v. 239; p. 982.

Sundh, August, Hastings-upon-Hudson, N. Y. Portable light. No. 1,230,943; June 26; v. 239; p. 983.

Sundh, August, Hastings-upon-Hudson, N. Y. Blocking mechanism for strip-mills. No. 1,230,944; June 26; v. 239; p. 983.

Sundh, August, Hastings-upon-Hudson, N. Y. Automatic blocking mechanism for strip-mills. No. 1,230,945; June 26; v. 239; p. 984.

Superior Metal Products Company, The. (See Johnson, Harry A., assignor.)

Suss, Sander, New York, N. Y. Resilient tire. No. 1,229,166; June 5; v. 239; p. 265.

Sutherland, Alexander K., New Britain, assignor to The Trumbull Electric Manufacturing Company, Plainville, Conn. Safety-switch. No. 1,229,186; June 5; v. 239; p. 272.

Sutherland, Alexander K., New Britain, assignor to The Trumbull Electric Manufacturing Company, Plainville, Conn. Starting-switch. No. 1,229,670; June 12; v. 239; p. 486.

Sutton, Gilbert, Neodesha, Kans. Thread-protector for well-casings. No. 1,231,450; June 26; v. 239; p. 1154.

Suzuki, Zenshiro, Los Angeles, Cal. Shoe-fastening. No. 1,230,538; June 19; v. 239; p. 810.

Svendsen, Christian W., Matawan, N. J. Holder for tiles. No. 1,230,442; June 19; v. 239; p. 777.

Swain, William H., Nashville, Tenn. Carbureter. No. 1,230,621; June 19; v. 239; p. 838.

Swallow, Stuart H., assignor to W. H. Coe Manufacturing Company, Providence, R. I. Metallic-leaf-applying device. No. 1,231,094; June 26; v. 239; p. 1036.

Swanson, Olof, Denver, Colo. Lubricator. No. 1,229,822; June 12; v. 239; p. 537.

Swartz, William J., and E. H. Waugh, assignors to Automatic Candy Machine Company, Seattle, Wash. Coating-machine. No. 1,229,671; June 12; v. 239; p. 487.

Sweet, Howard M., Detroit, Mich., assignor, by mesne assignments, to A. T. Harrow Tractor Company. Power-plow. No. 1,230,339; June 19; v. 239; p. 743.

Sweet, Howard M., Detroit, Mich., assignor, by mesne assignments, to A. T. Harrow Tractor Company. Tractor. No. 1,230,340; June 19; v. 239; p. 744.

Sweney, Helene L., Boston, Mass. Portière-holder. No. 1,229,672; June 12; v. 239; p. 487.

Swenson, Carl G., assignor to The Oakes Company, Indianapolis, Ind. Oil-tight bearing. No. 1,231,218; June 26; v. 239; p. 1077.

Swoboda, Alois P., New York, N. Y. Projectile. No. 1,231,451; June 26; v. 239; p. 1155.

Sword, Ora M., St. Maries, Idaho. Clothes-hanger. No. 1,231,452; June 26; v. 239; p. 1155.

Sydenbam, Claude S., Kilmarnock, Scotland. Ignition apparatus of gas-engines. No. 1,229,823; June 12; v. 239; p. 538.

Szubski, Andrzej H., Cleveland, Ohio. Safety hat-retainer. No. 1,231,219; June 26; v. 239; p. 1077.

T. Geo. Stiles Company, The. (See Stiles, Thomas G., assignor.)

Taft-Peirce Manufacturing Company, The. (See Martel, Albert A., assignor.) (Reissue.)

Taini, John. (See Portesi and Taini.)

Tait, Harry T., Springfield, Mass., assignor to Manning Manufacturing Company, Rutland, Vt. Can-straightening machine. No. 1,231,453; June 26; v. 239; p. 1155.

Takahashi, Benjamin M., Harlowton, Mont. Indicator for motor-vehicles. No. 1,229,167; June 5; v. 239; p. 266.

Tallyn, Arthur H., Benson, Ill. Snow-plow. No. 1,230,622; June 19; v. 239; p. 839.

Tanonka, Naho, New York, N. Y. Telephone-transmitter. No. 1,231,095; June 26; v. 239; p. 1037.

Tanzi & Sons Co., V. A. (See Tanzi, Guido, assignor.)

Taranto, John, Waltham, Mass. Buffer for loom-pickers. No. 1,231,096; June 26; v. 239; p. 1037.

Taras, Mikolaj, Toledo, assignor of one-half to J. Bartuzel, Youngstown, Ohio. Rail-joint. No. 1,228,716; June 5; v. 239; p. 116.

Tarbox, John P., Buffalo, N. Y., assignor to Tarbox Safety Aircraft Company. Aircraft. No. 1,230,443; June 19; v. 239; p. 777.

Tarbox Safety Aircraft Company. (See Tarbox, John P., assignor.)

Tata, Ratan. (See Bhisey, Shanker A., assignor.)

Tataryn, Petro, Chester, Pa. Farm-fence. No. 1,228,717; June 5; v. 239; p. 117.

Tate, Alfred O., Montreal, Quebec, Canada, assignor to Tate Electrolytic Waterproofing Company, Incorporated, New York, N. Y. Machine for waterproofing fibrous materials. No. 1,228,986; June 5; v. 239; p. 206.

Tate, Alfred O., Montreal, Quebec, Canada, assignor to Tate Electrolytic Waterproofing Company, Incorporated, New York, N. Y. Waterproofing fibrous materials. No. 1,228,987; June 5; v. 239; p. 206.

Tate, Alfred O., Montreal, Quebec, Canada, assignor to Tate Electrolytic Waterproofing Company, Incorporated, New York, N. Y. Machine for waterproofing fibrous materials. No. 1,228,988; June 5; v. 239; p. 206.

Tate Electrolytic Waterproofing Company. (See Tate, Alfred O., assignor.)



Tate, John R., and N. J. Smith, Seneca, Mo. Animal-shoe-removing device. No. 1,231,097; June 26; v. 239; p. 1037.

Taylor, Alexander, Dunedin, New Zealand. Hat-fastener. No. 1,231,454; June 26; v. 239; p. 1156.

Taylor, Harvey B., Philadelphia, Pa. Pumping system. No. 1,231,310; June 26; v. 239; p. 1106.

Taylor, Isaac F., East Dulwich, assignor of one-half to S. Pick, London, England. Aerial apparatus for defense against hostile aircraft and for other purposes. No. 1,230,881; June 26; v. 239; p. 962.

Taylor, William E., East Orange, N. J., assignor to American Can Company, New York, N. Y. Can-labeling. No. 1,229,187; June 5; v. 239; p. 273.

Teed, Charles W., Sidney Center, assignor of one-half to J. A. Holley, Walton, N. Y. Surgical adhesive strip. No. 1,230,444; June 19; v. 239; p. 777.

Teed, Charles W., Sidney Center, and J. A. Holley, Walton, N. Y. Surgical adhesive strip. No. 1,230,445; June 19; v. 239; p. 778.

Teel, John F., assignor to L. G. Fixen, Los Angeles, Cal. Auxiliary air and steam inlet valve for internal-combustion engines. No. 1,231,311; June 26; v. 239; p. 1107.

Telechronometer Company. (See Babcock, Garrison, assignor.)

Temco-Electric Motor Company, The. (See Edwards, Oliver P., assignor.)

Templeman, Frank, Chicago, Ill. Fountain-brush. No. 1,228,847; June 5; v. 239; p. 162.

Templeton, Allen A. (See Philip, Frederick D., assignor.)

Templeton, William G., Colorado Springs, Colo. Dispensing-bin. No. 1,230,238; June 19; v. 239; p. 710.

Terry Steam Turbine Company, The. (See London and Allen, assignors.)

Teven, Louis, assignor to E. S. Phillips, Brooklyn, N. Y. Sanitary garbage-can. No. 1,230,623; June 19; v. 239; p. 839.

Tevis, Jesse J., Ford, Ky. Hog-feeder. No. 1,230,624; June 19; v. 239; p. 839.

Tewelow, Bernard and S., Baltimore, Md. Cutter for removing hairs from cavities. No. 1,229,824; June 12; v. 239; p. 538.

Tewelow, Solomon. (See Tewelow, Bernard and S.)

Thayer, Walter E., Brooklyn, N. Y. Electromechanical toy. No. 1,230,625; June 19; v. 239; p. 840.

Theodor Kundtz Company, The. (See Kilno, Gustav, assignor.)

Thirlwall, Vernon S., Ancon, assignor of one-half to E. S. Humber, Panama, Canal Zone. Adjustable mattress. No. 1,230,446; June 19; v. 239; p. 778.

Thole, Joseph J., Langford, S. D. Exhibitor. No. 1,231,455; June 26; v. 239; p. 1156.

Thom, Peter R., assignor to Valley Iron Works Company, Appleton, Wis. Beating-engine. No. 1,229,545; June 12; v. 239; p. 445.

Thomas & Betts Company. (See McMurtrie, Adnah, assignor.)

Thomas, George B., assignor to The Bryant Electric Company, Bridgeport, Conn. Luminous pendant. No. 1,230,626; June 19; v. 239; p. 840.

Thomas, George B., assignor to The Bryant Electric Company, Bridgeport, Conn. Electric-lamp socket. No. 1,231,456; June 26; v. 239; p. 1156.

Thomas, Obed R., Rossie, Iowa. Truck. No. 1,230,341; June 19; v. 239; p. 745.

Thomas Potter, Sons & Co. (See Wear, Joseph W., assignor.)

Thomas, Reinhold, Brooklyn, N. Y. Phonograph. No. 1,229,346; June 12; v. 239; p. 377.

Thomas, Victor W., assignor to C. L. Peyton, Chicago, Ill. Cinematograph. No. 1,229,673; June 12; v. 239; p. 487.

Thompson, Albert W., Fitchburg, and E. W. Comfort, Winchester, assignors to The G. M. Parks Company, Fitchburg, Mass. Humidity-controlling apparatus. No. 1,228,718; June 5; v. 239; p. 117.

Thompson, Boyd S., Grand Rapids, Mich. Square-gage. No. 1,230,627; June 19; v. 239; p. 840.

Thompson, David O., *et al.* (See Lendner, Augustus R., assignor.)

Thompson, Eugene W., New London, Conn. Gun-silencer and recoil-reducer. No. 1,229,675; June 12; v. 239; p. 488.

Thompson, Frank B. (See Watson, Harry E., assignor.)

Thompson, George, assignor to The Autocall Company, Shelby, Ohio. Portable switchboard. No. 1,230,946; June 26; v. 239; p. 984.

Thompson, Victor, Vancouver, British Columbia, Canada. Telephone-call-registering device. No. 1,229,347; June 12; v. 239; p. 377.

Thompson, Victor, Vancouver, British Columbia, Canada. Telephone-call-registering device. No. 1,229,348; June 12; v. 239; p. 377.

Thompson, William, Detroit, Mich., assignor to Morgan & Wright, Tire-builder's tool. No. 1,230,947; June 26; v. 239; p. 984.

Thompson, William L., Stoneham, assignor of one-fourth to A. M. Lux, one-fourth to W. J. Lux, and one-fourth to P. J. Higgins, Woburn, Mass. Treeing-iron. No. 1,231,457; June 26; v. 239; p. 1156.

Thomson, McLeod, Atlantic City, N. J., assignor to The Rail Joint Company, New York, N. Y. Rail-joint support and fastening. No. 1,229,674; June 12; v. 239; p. 488.

Thomson Spot Welder Company. (See Lachman, Laurence S., assignor.)

Thorklidsen, Thomas. (See Stewart and McKenna, assignors.)

Thornberg, Royden, San Francisco, Cal. Electric disinfector and deodorizer. No. 1,230,342; June 19; v. 239; p. 745.

Thornton, John E., Rochester, N. Y., assignor to J. O. O'Brien, Manchester, England. Film for motion pictures. No. 1,229,546; June 12; v. 239; p. 445.

Thorp, August, Saum, assignor of one-third to O. L. Lindquist, Kelliher, Minn. Folding cot and stretcher. No. 1,231,220; June 26; v. 239; p. 1078.

Thum, Martin, assignor to Langslow Fowler Company, Rochester, N. Y. Table attachment for furniture. No. 1,228,618; June 5; v. 239; p. 83.

Thurston, Herman B., Crafton, Pa. Low-water alarm. No. 1,231,458; June 26; v. 239; p. 1156.

Tice, Francis D., Niantic, Conn. Pump. No. 1,229,676; June 12; v. 239; p. 489.

Tide Water Oil Company. (See Norman, Charles R., assignor.)

Tiemann, Harry D., Madison, Wis. Dry-kiln for drying lumber and other moisture-bearing substances. No. 1,228,989; June 5; v. 239; p. 207.

Tilgner, Arthur C., Northville, S. D. Traction and tire-protecting device for automobiles. No. 1,228,619; June 5; v. 239; p. 83.

Timberlake, Paul J., Jackson, Mich. Stand for lamps and other articles. No. 1,229,349; June 12; v. 239; p. 378.

Timken-Detroit Axle Company, The. (See Alden, Herbert W., assignor.)

Timken-Detroit Axle Company, The. (See Alden and Weaver, assignors.)

Tinsman, Samuel H., Morris Ill., assignor, by mesne assignments, to International Harvester Corporation. Steering mechanism for tillage implements. No. 1,230,539; June 19; v. 239; p. 810.

Titus, Walter R., and J. Pashinsky, Cedar Rapids, Iowa. Self-adjusting shaft-bearing. No. 1,230,628; June 19; v. 239; p. 841.

Tobin, John J., Sayre, and F. J. Gallagher, Wilkes-Barre, Pa. Spiral propeller for ships. No. 1,229,350; June 12; v. 239; p. 378.

Todd, George W., Omaha, Nebr. Dental bridge. No. 1,228,620; June 5; v. 239; p. 84.

Toedter, Benjamin A., Pueblo, Colo. Humidifier for gasolene-engines. No. 1,231,312; June 26; v. 239; p. 1107.

Toelcke, Charles, assignor of one-half to H. Magnus, Chicago, Ill. Receptacle for containing and dispensing semisolid condiments. No. 1,231,098; June 26; v. 239; p. 1037.

Toledo Scale Company. (See Hapgood, Clarence H., assignor.)

Tom Thumb Tractor Company. (See Nelson, De Witt, assignor.)

Tomberlin, Baker M., Santa Rosa, Cal. Collapsible crate and lock. No. 1,229,677; June 12; v. 239; p. 490.

Tomberlin, Baker M., Santa Rosa, Cal. Collapsible crate. No. 1,231,459; June 26; v. 239; p. 1157.

Tomberlin, Baker M., Santa Rosa, Cal. Collapsible crate and lock. No. 1,231,460; June 26; v. 239; p. 1157.

Tomcheck, John J., Two Rivers, Wis. Floor-jack. No. 1,231,461; June 26; v. 239; p. 1158.

Tomlinson, Charles H., Mansfield, Ohio, assignor to The Tomlinson Coupler Company, Denver, Colo. Electro-pneumatic triple-valve mechanism for coupling systems. No. 1,228,719; June 5; v. 239; p. 117.

Tomlinson Coupler Company, The. (See Tomlinson, Charles H., assignor.)

Tomlinson, William E., Canton, Ohio. Cake-pan. No. 1,229,825; June 12; v. 239; p. 538.

Tommasi, Nobile C., assignor to Elektrizitätswerk Lonza, Gampel und Basel, Switzerland. Apparatus for the manufacture of crude calcium cyanamid. No. 1,230,343; June 19; v. 239; p. 745.

Tontrup, George H., *et al.* (See Schechter, Bernard, assignor.)

Torsion Balance Company, The. (See Munzner, Max, assignor.)

Townley, Arthur H., Manchester, England. Device for cleaning shafting. No. 1,230,629; June 19; v. 239; p. 841.

Townsend, Harry E., assignor to Anchor Cap & Closure Corporation, Brooklyn, N. Y. Closure. No. 1,231,099; June 26; v. 239; p. 1038.

Transportation Utilities Company. (See McNally, Leo F., assignor.)

Traut, Ezra H., assignor of forty-five one-hundredths to L. Overturf, Franklin, Pa. Rail-tie fastener. No. 1,230,630; June 19; v. 239; p. 841.

Travers, Charles J., Milwaukee, Wis. Revolving chair. No. 1,230,239; June 19; v. 239; p. 711.

Trefz, Julius J., assignor to The Anglo-American Mill Co., Owensboro, Ky. Scalper for self-contained flour-mills. No. 1,229,169; June 5; v. 239; p. 267.

Triangle Ventilation Corporation. (See Kirk, Jason E., assignor.)

Trinks, Willibald, assignor, by mesne assignments, to National Brush Washing Machine Company, Pittsburgh, Pa. Gear or worm-wheel. No. 1,230,631; June 19; v. 239; p. 841.

Troje, Oscar R., Ensley, Ala. Toy projectile. No. 1,229,170; June 5; v. 239; p. 267.

Trosdahl, Knut, Christiania, Norway. Electric-current interrupter. No. 1,231,221; June 26; v. 239; p. 1078.
Trosky, Bernhard, Brooklyn, N. Y. Razor-stropper. No. 1,229,826; June 12; v. 239; p. 538.
Troutt, Bertha, Rosemont, Pa. Bathing-shoe. No. 1,228,720; June 5; v. 239; p. 118.
Troy Carriage Sun Shade Company, The. (See Dillingham, Frederick A., assignor.
Troy Wagon Works Company. (See Hudson, Warren R., assignor.)
Trumbull Electric Manufacturing Company, The. (See Ahlstrom, Carl A., assignor.)
Trumbull Electric Manufacturing Company, The. (See Sutherland, Alexander K., assignor.)
Trunk, Charles and G., Dundee, Oreg. Nut scouring and polishing-machine. No. 1,231,100; June 26; v. 239; p. 1038.
Trunk, George. (See Trunk, Charles and G.)
Trussed Concrete Steel Company. (See Kane, Thomas H., assignor.)
Tscherning, Henry, assignor to Arcade Manufacturing Company, Freeport, Ill. Mold-support. No. 1,229,678; June 12; v. 239; p. 490.
Tschoumakoff, Simon, Petrograd, Russia. Artificial leather. No. 1,228,848; June 5; v. 239; p. 162.
Tubular Wall Company. (See Stubkjare, Joe A., assignor.)
Tucker, Walter C. (See Steele, Robert J., assignor.)
Tudor, Robert H., assignor of one-fourth to J. W. Hubbard and one-fourth to W. N. Baker, Atlanta, Ga. Nose-clamp for eyeglasses. No. 1,228,721; June 5; v. 239; p. 118.
Tuepker, August F. (See Goodin, Sebastian L., assignor.)
Turbayne, William A., Niagara Falls, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y. System of electrical regulation. No. 1,228,849; June 5; v. 239; p. 162.
Turnbull, Henry A., Surrey Hills, Victoria, Australia. Water-tube boiler. No. 1,229,171; June 5; v. 239; p. 268.
Turner, Giles M., St. Charles, Ill. Sheet-metal seating. No. 1,230,948; June 26; v. 239; p. 985.
Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Piston-rotator. No. 1,228,496; June 5; v. 239; p. 41.
Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Straight-air emergency-brake. No. 1,228,498; June 5; v. 239; p. 42.
Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Engineer's brake-valve device. No. 1,228,499; June 5; v. 239; p. 742.
Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Engineer's brake-valve. No. 1,228,500; June 5; v. 239; p. 43.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Vacuum-brake device. No. 1,230,950; June 26; v. 239; p. 985.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Fluid-pressure brake. No. 1,230,951; June 26; v. 239; p. 986.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Fluid-pressure brake device. No. 1,230,952; June 26; v. 239; p. 986.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Release-valve for vacuum-brakes. No. 1,230,953; June 26; v. 239; p. 987.
Turner, Walter V., and P. H. Donovan, Edgewood, assignors to The Westinghouse Air Brake Company, Wilmerding, Pa. Automatic electric brake. No. 1,228,497; June 5; v. 239; p. 42.
Turner, Walter V., Edgewood, Pa., and E. H. Dewson, New York, N. Y., assignors to The Westinghouse Air Brake Company, Wilmerding, Pa. Variable-load brake. No. 1,230,949; June 26; v. 239; p. 985.
Tuttle, Orley C., Old Forge, N. Y. Snow-shoe harness. No. 1,230,447; June 19; v. 239; p. 778.
Tuttle, Walter I., Providence, R. I. Wheel-pulling device. No. 1,230,448; June 19; v. 239; p. 779.
Tutwiler, James H., Atlanta, Ga. Coal-unloading device. No. 1,231,462; June 26; v. 239; p. 1158.
Tweddell, Oscar G., Detroit, Mich. Door-hinge. No. 1,231,313; June 26; v. 239; p. 1108.
Tweeddale, Daniel E., assignor of one-half to L. W. Sanford, Manteca, Cal. Sanitary can-perforator. No. 1,230,344; June 19; v. 239; p. 745.
Tweedie, Charles, Jefferson City, Mo. Making shoes. No. 1,230,954; June 26; v. 239; p. 987.
Twite, Lars M., Colfax, Wash. Hose-reel. No. 1,228,501; June 5; v. 239; p. 43.
Tygard, James W., Plainfield, N. J. Internal-combustion engine. No. 1,229,172; June 5; v. 239; p. 268.
Tyler, George S., Baltimore, Md., assignor of forty-nine one-hundredths to G. H. Welfel, Baltimore, Md. Saw leveling and stretching machine. No. 1,228,990; June 5; v. 239; p. 207.
Tyler, George W., Boston, Mass. Automatic applying and sealing device. No. 1,230,240; June 19; v. 239; p. 711.
Tylor, Charles W., executor. (See Esty, William.)
U. S. Indestructible Tie Manufacturing Company. (See Shearer, Frederick C., assignor.)
U. S. Light & Heat Corporation. (See Turbayne, William A., assignor.)
Uber, Dan W., Sheffield, Pa. Measuring apparatus. No. 1,228,991; June 5; v. 239; p. 207.
Uhl, Clement R., Toledo, Ohio. Caster-holding means for furniture-legs. No. 1,229,547; June 12; v. 239; p. 445.
Ulman, Otto F., Severy, Kans. Hoeing-machine. No. 1,228,892; June 5; v. 239; p. 208.
Underwood Computing Machine Company. (See Carlin, Samuel E., assignor.)
Underwood Computing Machine Company. (See Hart, Frederick A., assignor.)
Underwood Typewriter Company. (See Barnard, Walter E., assignor.)
Underwood Typewriter Company. (See Kurowski, Alfred G. F., assignor.)
Underwood Typewriter Company. (See Rhea, Richard C., assignor.)
Underwood Typewriter Company. (See Roberts, Lyman R., assignor.)
Underwood Typewriter Company. (See Wernery, Lester A., assignor.)
Union Carbide Company. (See Hibbert, Harold, assignor.)
Union City Body Company. (See Adelsperger, Charles C., assignor.)
Union Fibre Company. (See Brown, Alfred G., assignor.)
Union Gas Engine Company. (See Page, Stanley H., assignor.)
Union Special Machine Company. (See Berger, Joseph, Jr., assignor.)
Union Special Machine Company. (See Moffatt, James R., assignor.)
Union Switch & Signal Company, The. (See Coleman, John P., assignor.)
Union Switch & Signal Company, The. (See Wallace, Herbert A., assignor.)
United Cigarette Machine Co. (See Briggs, William C., assignor.)
United Engineering & Foundry Company. (See Gardner, Kirtland C., assignor.)
United Gas Improvement Company, The. (See Evans, Owen B., assignor.)
United Printing Machinery Company. (See Upham, Burt F., assignor.)
United Shoe Machinery Company. (See Cavanagh, James, assignor.)
United Shoe Machinery Company. (See Cushing, James H., assignor.)
United Shoe Machinery Company. (See Eaton, Harrison B., assignor.)
United Shoe Machinery Company. (See Glass, Perley R., assignor.)
United Shoe Machinery Company. (See Heys, John J., assignor.)
United Shoe Machinery Company. (See Macleod, Albert A., assignor.)
United Shoe Machinery Company. (See Prenzel, Adam H., assignor.)
United Shoe Machinery Company. (See Rumney, Fred A., assignor.)
United Shoe Machinery Company. (See Shaw, Walter, assignor.)
United States Ordnance Company. (See Asbury, Dorsey F., assignor.)
United States Tire Company, The, *et al.* (See Wagenhorst, James H., assignor.)
Universal Caster & Foundry Company. (See Diss, Albert R., assignor.)
Universal Coin Lock Company. (See Boswell, George G. F., assignor.)
Universal Electric Welding Company. (See Lachman, Maurice, assignor.)
Universal Steel Cabinet Company. (See Hatfield, John, assignor.)
Upchurch, Horace C., Steelville, and T. H. Houston, Salem, Mo. Post-driver. No. 1,230,632; June 19; v. 239; p. 842.
Upham, Burt F., assignor to United Printing Machinery Company, Boston, Mass. Sheet-printing press. No. 1,231,463; June 26; v. 239; p. 1158.
Upson, Wilbur S., Mansfield, Ohio. Wrench. No. 1,228,850; June 5; v. 239; p. 163.
Upton, Ray P. (See Jones and Upton.)
Urbach, Gustave A., Pittsburgh, Pa. Spraying-machine. No. 1,231,222; June 26; v. 239; p. 1078.
Urchniak, Rudolph, West Allis, Wis. Envelop-opener. No. 1,229,679; June 12; v. 239; p. 491.
Urmson, George W., assignor to G. M. Alberts, Jersey City, N. J. Folding partition. No. 1,230,345; June 19; v. 239; p. 746.
Utility Manufacturing Company. (See Hoel and Shew, assignors.)
Utility Shock Absorber Company. (See Miller, William S., assignor.)
Utnik, Jack T., *et al.* (See Powers, Charles C., assignor.)
Vacuum Specialty Manufacturing Company. (See Duffie, John T., assignor.)
Vadner, Charles S., Butte, Mont. Recovery of metals from ores and the like. No. 1,231,101; June 26; v. 239; p. 1039.
Valerius, Theodore L., Fort Atkinson, Wis., assignor to Creamery Package Manufacturing Company, Chicago, Ill. Apparatus for washing containers. No. 1,228,851; June 5; v. 239; p. 163.



Valerius, Theodore L., and O. Larsen, Fort Atkinson, Wis., assignors to Creamery Package Manufacturing Company. Ice-cream freezer. No. 1,230,346; June 19; v. 239; p. 746.
Valley Iron Works Company. (See Thom, Peter R., assignor.)
Valois, Felix E. (See Hamel and Valois.)
Van Alstyne, George W., Los Angeles, Cal. Floor-waxer. No. 1,228,621; June 5; v. 239; p. 84.
Van Derbeck, Stephen G., Hackensack, N. J., and H. B. Murdock, assignors to Duplex Lock Co., Inc., New York, N. Y. Electrical locking device. No. 1,230,449; June 19; v. 239; p. 779.
Van Deventer, Harry R., Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J. Ignition system. No. 1,229,351; June 12; v. 239; p. 378.
Van Dorn Electric Tool Company, The. (See Schneider, Franklin, assignor.)
Van Norman, Charles E., assignor, by mesne assignments, to Van Norman Machine Tool Company, Springfield, Mass. Milling-machine. No. 1,229,352; June 12; v. 239; p. 379.
Van Norman Machine Tool Company. (See Van Norman, Charles E., assignor.)
Van Sant, Thomas G., Poplar Bluff, and V. H. Van Sant, St. Louis, Mo. Gearing. No. 1,229,548; June 12; v. 239; p. 445.
Van Sant, Victor H. (See Van Sant, Thomas G. and V. H.)
Van Swaay, Gerardus J., Delft, and H. I. Keus, Hengelo, Netherlands. Maximum cut-out. No. 1,230,955; June 26; v. 239; p. 988.
Vance, William W., Chicago, Ill. Rotary valve for engines. No. 1,228,502; June 5; v. 239; p. 44.
Vancil, Isaac A., and W. F. Fulkerson, San Diego, Cal. Apparatus for automatically controlling stereopticons. No. 1,230,347; June 19; v. 239; p. 746.
Vanderveer, Joan J., Brattleboro, Vt. Condiment-holder. No. 1,229,680; June 12; v. 239; p. 491.
Vandy, Max G., Chicago, Ill. Electrical automatic control mechanism. No. 1,228,993; June 5; v. 239; p. 208.
Varley, Richard, Englewood, N. J. Ignition system and apparatus. No. 1,230,540; June 19; v. 239; p. 810.
Varley, Richard, Englewood, N. J. Ignition system. No. 1,230,541; June 19; v. 239; p. 811.
Varley, Thomas W., New York, N. Y. Control of alternating-current motors. No. 1,228,852; June 5; v. 239; p. 164.
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Vaugean, Alexandre, A. de Lavandeyra, and W. Garthwaite, Paris, France. Microphone. No. 1,230,956; June 26; v. 239; p. 988.
Venning, Frank J., Cincinnati, Ohio. Track-grinding machine. No. 1,231,102; June 26; v. 239; p. 1039.
Verbeck, Katherine J. (See Verbeck, William, assignor.)
Verbeck, William, assignor to K. J. Verbeck, Manilus, N. Y. Photographic apparatus. No. 1,228,722; June 5; v. 239; p. 118.
Vercier, Raymond D., Los Angeles, Cal. Gold-testing device. No. 1,229,827; June 12; v. 239; p. 539.
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Victor Talking Machine Company. (See Johnson, Eldridge R., assignor.)
Victor Talking Machine Company. (See Murray, Henry H., assignor.)
Vidal, Raymond, Paris, France. Emulsifiable liquid or solid solution and making it. No. 1,229,681; June 12; v. 239; p. 491.
Viero Company, Inc. (See Viertels, Ephraim, assignor.)
Viertels, Ephraim, assignor to Viero Company, Inc., New York, N. Y. Tip-fastener for shoe-laces. No. 1,231,103; June 26; v. 239; p. 1039.
Vincent, Jesse G., assignor to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,229,682; June 12; v. 239; p. 491.
Vincent, Jesse G., assignor to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,230,450; June 19; v. 239; p. 780.
Vinzent, Theodore R., and C. E. Warren, Alameda, Cal. Card-selecting device. No. 1,228,854; June 5; v. 239; p. 164.
Vodicka, John, and A. F. Young, assignors to Eureka Carburetter Co., Charlevoix, Mich. Carbureter. No. 1,229,683; June 12; v. 239; p. 491.
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Vogel, Eugene W., Oak Park, assignor to Chicago Railway Signal and Supply Company, Carpentersville, Ill. Signal-bell for railway service. No. 1,229,549; June 12; v. 239; p. 446.
Vogel, Eugene W., Oak Park, assignor to Chicago Railway Signal & Supply Company, Carpentersville, Ill. Guide-bracket for detector-bars. No. 1,229,828; June 12; v. 239; p. 539.
Voight, George F., San Francisco, Cal. Lifting-jack. No. 1,229,550; June 12; v. 239; p. 446.
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Volpato, Vittorio, Milan, Italy. Preparation of a phosphate fertilizer. No. 1,229,684; June 12; v. 239; p. 492.
Volz, Christian, *et al.* (See Allinger, Frank A., assignor.)
Vom Eigen, Benno, Newark, N. J., assignor to August Goertz & Co. Savings-bank or coin-repository. No. 1,229,829; June 12; v. 239; p. 539.
Von Culin, Clayton, New York, N. Y., and G. W. Beach, Saybrook, Conn. Dirigible headlight. No. 1,229,551; June 12; v. 239; p. 447.
Von Holle, Henry. (See Stichtenoth, George J., assignor.)
Von Madaler, Ferdinand, New York, N. Y., assignor to The Rotary Photographic Co. Ltd., West Drayton, England. Cinematograph and gramophone machine. No. 1,230,633; June 19; v. 239; p. 842.
Von Pein, Edward J., assignor to The National Cash Register Company, Dayton, Ohio. Printing mechanism for cash-registers. No. 1,230,241; June 19; v. 239; p. 711.
Von Unruh, Henry W., Cincinnati, Ohio. Sheet-holder. No. 1,230,242; June 19; v. 239; p. 712.
Von der Lin, Simon J. (See von der Lin, Valentine and S. J.)
Von der Lin, Valentine, New York, and S. J. Von der Lin, Brooklyn, N. Y. Furniture-tread. No. 1,229,830; June 12; v. 239; p. 540.
Von der Lin, Valentine and S. J., New York, N. Y. Furniture-tread. No. 1,229,830; June 12; v. 239; p. 540.
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W. O. Hickok Mfg. Co. (See Broadmeyer, Albert, assignor.)
Wacha, John C., Providence, R. I., assignor to G. H. Cahoone Company. Safety-catch. No. 1,228,994; June 5; v. 239; p. 209.
Wadman, Sydney, Boston, Mass., assignor to The Animated Advertising Company. Advertising apparatus. No. 1,230,348; June 19; v. 239; p. 747.
Wadsworth, Wilson, Hewins, Kans. Railway-tie. No. 1,229,832; June 12; v. 239; p. 541.
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Waern, Adolph W., assignor to International Process Company, New York, N. Y. Evaporator. No. 1,228,855; June 5; v. 239; p. 165.
Wagenhorst, James H., Akron, Ohio. Means for expanding and contracting demountable rims. No. 1,230,543; June 19; v. 239; p. 811.
Wagenhorst, James H., Akron, Ohio. Vehicle-wheel rim. No. 1,231,538; June 26; v. 239; p. 1181.
Wagenhorst, James H., Akron, Ohio, assignor, by mesne assignments, of two-fifths to The B. F. Goodrich Company, New York, N. Y., one-fifth to The Goodyear Tire & Rubber Company, Akron, Ohio, and one-fifth to The United States Tire Company, New York, N. Y. Vehicle-wheel rim. No. 1,231,314; June 26; v. 239; p. 1108.
Wagenhorst, James H., Akron, Ohio, assignor, by mesne assignments, of two-fifths to The B. F. Goodrich Company, New York, N. Y., one-fifth to The Goodyear Tire & Rubber Company, Akron, Ohio, and one-fifth to The United States Tire Company, New York, N. Y. Vehicle-wheel rim. No. 1,231,539; June 26; v. 239; p. 1181.
Waggoner, Frank H., assignor to Commercial Colortype Company, Chicago, Ill. Fan. No. 1,231,104; June 26; v. 239; p. 1040.
Waggoner, Frank H., assignor to Commercial Colortype Company, Chicago, Ill. Folding fan. No. 1,231,105; June 26; v. 239; p. 1040.
Wagner, Chester L., Akron, Ohio. Vertical file. No. 1,229,552; June 12; v. 229; p. 447.
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Wagschal, Louis. (See Munden, Daniel W., assignor.)
Waite, Harry F., Whitestone Landing, N. Y. Dental film-holder. No. 1,229,553; June 12; v. 239; p. 448.
Waite, Lyman M., assignor to Fitchburg Machine Works, Fitchburg, Mass. Stock-feeding mechanism. No. 1,231,315; June 26; v. 239; p. 1108.
Wakeman, Ralph E., Kents Hill, Me. Cultivator attachment. No. 1,230,243; June 19; v. 239; p. 712.
Waldo, Leonard, Plainfield, N. J., assignor to Palo Company, New York, N. Y. Apparatus for measuring the hardness of metal, &c. No. 1,228,503; June 5; v. 239; p. 44.
Waldon, Sidney D., assignor to Packard Motor Car Company, Detroit, Mich. Motor-vehicle driving-axle. No. 1,228,504; June 5; v. 239; p. 44.
Wales, Enid S., assignor of one-half to H. K. Pierce, Detroit, Mich. Explosive projectile. No. 1,228,723; June 5; v. 239; p. 119.
Walger, William, Chicago, Ill. Awning. No. 1,230,244; June 19; v. 239; p. 712.
Walker, Frederick W., Milwaukee, Wis. Electrical bond for railways. No. 1,230,544; June 19; v. 239; p. 812.
Walker, James C., Toledo, Ohio, assignor to Wolverine Leather Goods Company, Detroit, Mich. Bicycle-saddle spring-support. No. 1,229,353; June 12; v. 239; p. 379.

Walker, Leslie D., Clarinda, Iowa. Steering post brace. No. 1,230,245; June 19; v. 239; p. 713.
Wallace, Edgar T. (See Fornander, Alfred, assignor.)
Wallace, Herbert A., New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling system. No. 1,231,540; June 26; v. 239; p. 1182.
Wallace, Herbert A., New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling. No. 1,231,541; June 26; v. 240; p. 1182.
Wallace, Sidney C., Chicago, Ill. Egg-crate. No. 1,229,688; June 12; v. 239; p. 493.
Wallis, James T., Altoona, Pa. Driving mechanism for recording apparatus. No. 1,228,724; June 5; v. 239; p. 119.
Walsh, Joseph N. (See McVoy, Vincen P., assignor.)
Walsky, Isaac, Baltimore, Md. Rupture-suspensory. No. 1,230,451; June 19; v. 239; p. 780.
Walter, Daniel, Hove, England. Bolt mechanism. No. 1,228,995; June 5; v. 239; p. 209.
Walter, Daniel, Hove, and A. W. Lee, Portslade, England. Life-guard for attachment to motor and other vehicles. No. 1,229,554; June 12; v. 239; p. 448.
Walter, Harrison B., assignor to National Fibre Box Company, Danville, Ill. Knockdown box. No. 1,229,834; June 12; v. 239; p. 541.
Walter, Louis J. (See Moss, Albert A., assignor.)
Walter, Maurice C., New York, N. Y., assignor to Associated Farms Co., Inc. Shipping-envelop. No. 1,228,725; June 5; v. 239; p. 119.
Walters, Arthur A., Richmond, assignor to C. J. Parnham, Melbourne, Victoria, Australia. Slide-bolt. No. 1,228,996; June 5; v. 239; p. 209.
Walton, Charles S. (See Barber and Walton.)
Wanner, Albert, Jr., New York, N. Y. Reinforced wooden structure. No. 1,230,545; June 19; v. 239; p. 812.
Wantz, Julius B., assignor, by mesne assignments, to Victor Electric Corporation, Chicago, Ill. Current transforming and rectifying apparatus. No. 1,229,689; June 12; v. 239; p. 493.
Ward, John, Baker, Oreg. Watering-tank. No. 1,230,056; June 12; v. 239; p. 610.
Ward, Paul S., Cincinnati, Ohio. Dough-dividing machine. No. 1,229,188; June 5; v. 239; p. 273.
Wardell, Fred. (See Stecker, Alfred J., assignor.)
Wardlow, Robert E., Cincinnati, Ohio. Motor-vehicle heater. No. 1,229,835; June 12; v. 239; p. 541.
Warfield, Aaron N., London, Ontario, Canada. Metal car. No. 1,230,349; June 19; v. 239; p. 747.
Warga, Kalman, Brooklyn, N. Y. Ornamenting and protecting metal surfaces. No. 1,230,958; June 26; v. 239; p. 989.
Waring, Charles. (See McLean and Waring.)
Warner, Arthur W. (See Carpenter and Warner.)
Warner, Frank E., and W. T. Leggett, assignors to Scovill Manufacturing Company, Waterbury, Conn. Tack-feeding mechanism for button-setting machines. No. 1,229,173; June 5; v. 239; p. 269.
Warner, Isidor J., Lake View, N. Y. Treating fish. No. 1,229,555; June 12; v. 239; p. 448.
Warner, James, Philadelphia, Pa. Arch construction for boilers. No. 1,231,224; June 26; v. 239; p. 1079.
Warren, Clyde E. (See Vinzent and Warren.)
Warren Featherbone Company, The. (See Stebbins and Gelow, assignors.)
Warren, John B., assignor to Broadfield Poultry Farm, Inc., Bolton, Mass. Tray for egg-cases. No. 1,230,546; June 19; v. 239; p. 812.
Warren, Thomas E., Ticonderoga, N. Y. Calender-doctor. No. 1,228,726; June 5; v. 239; p. 120.
Warta, Anthony, Annville, Pa. Embroidery-frame clamp. No. 1,229,836; June 12; v. 239; p. 542.
Washburn, Oliver D., Whitneyville, Conn. Strapping-machine. No. 1,228,856; June 5; v. 239; p. 165.
Waskom, Jacob J., Louisville, Ky. Package-tying device. No. 1,229,690; June 12; v. 239; p. 494.
Waterbury Buckle Company. (See Klnch, Earl L., assignor.)
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Plow. No. 1,229,354; June 12; v. 239; p. 379.
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Lister-cultivator. No. 1,229,355; June 12; v. 239; p. 380.
Waters, Fernie A., Graceville, Fla. Peanut-planter. No. 1,230,350; June 19; v. 239; p. 747.
Watkins, Owen C., assignor of one-half to T. E. Reed, Middletown, Ohio. Weather-boarding gage. No. 1,229,356; June 12; v. 239; p. 381.
Watrous, Earl G., Chicago, Ill. Liquid-soap-dispensing device. No. 1,229,556; June 12; v. 239; p. 448.
Watson, Harry E., assignor of one-half to F. B. Thompson, Richmond, Ind. Safety device for motion-picture machines. No. 1,230,351; June 19; v. 239; p. 748.
Watson, John W., Wayne, Pa. Shock-absorber. No. 1,230,352; June 19; v. 239; p. 748.
Watts, Josiah F., Seattle, Wash. Necktie-rack. No. 1,230,959; June 26; v. 239; p. 989.
Watts, Percy S., Seattle, Wash. Tool-rack. No. 1,231,316; June 26; v. 239; p. 1109.
Waugh, Edward H. (See Swartz and Waugh.)
Waugh, Edward H., assignor to J. W. Winningham, Seattle, Wash. Bushing. No. 1,229,837; June 12; v. 239; p. 542.
Waugh, Edward H., assignor to Smith Cannery Machines Company, Seattle, Wash. Weight-testing machine. No. 1,229,838; June 12; v. 239; p. 542.
Wear, Joseph W., assignor to Thomas Potter, Sons & Co., Inc., Philadelphia, Pa. Linoleum product and making the same. No. 1,228,997; June 5; v. 239; p. 209.
Wearn, James S., Christchurch, New Zealand. Creamcooler. No. 1,230,960; June 26; v. 239; p. 989.
Weaver, Marion C., Bushnell, Ill. Tank-heater. No. 1,229,557; June 12; v. 239; p. 449.
Weaver, Robert B. (See Alden and Weaver.)
Webb, Frank A., Protection, Kans. Acetylene-gas generator. No. 1,228,998; June 5; v. 239; p. 210.
Webb, George F., Hamilton, Ontario, Canada. Hydraulic elevator. No. 1,230,547; June 19; v. 239; p. 812.
Webb, Purcell T., Masterton, New Zealand. Opening containers. No. 1,230,961; June 26; v. 239; p. 989.
Webb, William M., Springfield, Ohio. Check-row device for corn-planters. No. 1,230,353; June 19; v. 239; p. 749.
Weber, Herman R., assignor to The Economy Furnace Company, Denver, Colo. Shaking-grate for furnaces. No. 1,228,999; June 5; v. 239; p. 210.
Webster Electric Company. (See Brown, Walter, assignor.)
Webster Electric Company. (See Geist, Harry F., assignor.)
Webster, John A., Rutherford, N. J., assignor to Autosales Gum and Chocolate Company, New York, N. Y. Multiple-compartment coin-operated vending-machine. No. 1,229,558; June 12; v. 239; p. 449.
Webster, John L., Ottawa, Ontario, Canada. Fuel-saver and smoke-consumer. No. 1,230,962; June 26; v. 239; p. 989.
Webster, William R., assignor to Bridgeport Brass Company, Bridgeport, Conn. Apparatus for coiling material. No. 1,229,357; June 12; v. 239; p. 381.
Weddle, William H., Rainbow, Tex. Harness-rack. No. 1,229,359; June 12; v. 239; p. 381.
Weder, Hermann, Sr., and C. H. Wolff, Philadelphia, Pa. Diagnostic instrument. No. 1,229,358; June 12; v. 239; p. 381.
Wedge, Utley, Ardmore, Pa. Leaching apparatus. No. 1,229,839; June 12; v. 239; p. 543.
Wegner, Fred, Fairport, N. Y., assignor to G. W. Cobb, Montclair, N. J. Bean-snipper. No. 1,229,840; June 12; v. 239; p. 543.
Wegwart, Herman, assignor to Badger Basket & Veneer Co., Burlington, Wis. Rope-handle-securing staple. No. 1,230,246; June 19; v. 239; p. 713.
Weiler, Wilhelm, Pankow, and H. Nehlsen, Niederschönhausen, Germany, assignors to General Electric Company. Dynamo-electric machine. No. 1,229,841; June 12; v. 239; p. 544.
Weinberg, Frederick, Detroit, Mich. Vacuum-feed system. No. 1,229,360; June 12; v. 239; p. 382.
Weis, Albert H. (See Weis, John P. and A. H.)
Weis, Albert H., Nyack, assignor to L. N. Littauer, Gloversville, N. Y. Renewable throat-plate for sewing-machines. No. 1,230,354; June 19; v. 239; p. 749.
Weis, John P. (See Krug, Weis, and Robbins.)
Weis, John P., Nyack, assignor to L. N. Littauer, Gloversville, N. Y. Strip-feeding method for sewing-machines. No. 1,231,542; June 26; v. 240; p. 1182.
Weis, John P. and A. H., Nyack, N. Y., assignors to L. N. Littauer, Gloversville, N. Y. Looper mechanism for sewing-machines. No. 1,230,355; June 19; v. 239; p. 749.
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Weiskotten, W. O. (See Gurley, John W., assignor.)
Weiss, Carl W., Brooklyn, N. Y. Reversing device for oil-engines. No. 1,228,857; June 5; v. 239; p. 165.
Weiss, George W., New York, N. Y. Spool-holder for sewing-machines. No. 1,228,623; June 5; v. 239; p. 85.
Weltzman, Louis, Toronto, Ontario, Canada. Burglar-alarm. No. 1,230,247; June 19; v. 239; p. 713.
Welander, Oscar E. W., Balaton, Minn. Nut-lock. No. 1,228,624; June 5; v. 239; p. 85.
Welch, Walter F., Jamaica, N. Y. Mowing-machine. No. 1,229,000; June 5; v. 239; p. 210.
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Well, Hugo C., assignor of forty one-hundredths to F. A. B. Meinhardt, New York, N. Y. Rotary internal-combustion engine. No. 1,229,001; June 5; v. 239; p. 211.
Wellington, Stephen N., London, England. Apparatus for discharging coke. No. 1,229,691; June 12; v. 239; p. 494.
Wellman, Seth A., Mason City, Iowa. Machine for tying valve-sacks. No. 1,229,361; June 12; v. 239; p. 382.
Wells, Joel C., Southbridge, Mass. Uniting materials. No. 1,230,548; June 19; v. 239; p. 813.
Wentworth, John F., Rochester, N. H. Locomotive-engine. No. 1,230,248; June 19; v. 239; p. 714.
Wenzel, Louis, Elizabeth, N. J. Slide-micrometer. No. 1,230,249; June 19; v. 239; p. 714.
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Wernery, Lester A., Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,229,559; June 12; v. 239; p. 450.
Wertman, Ambrose F., Hummelstown, Pa. Edge-trimmer. No. 1,231,464; June 26; v. 239; p. 1159.
Weser, John A., New York, N. Y. Player-piano. No. 1,229,362; June 12; v. 239; p. 383.



Wesson, Joseph H., assignor to Smith & Wesson, Springfield, Mass. Loading-pack for revolvers. No. 1,228,505; June 5; v. 239; p. 45.
Wesson, Joseph H., assignor to Smith & Wesson, Springfield, Mass. Pistol-stock. No. 1,228,506; June 5; v. 239; p. 45.
Wesson, Joseph H., assignor to Smith & Wesson, Springfield, Mass. Cartridge-pack for revolvers. No. 1,231,106; June 26; v. 239; p. 1040.
West Boylston Manufacturing Co. (See Ayer, George A., assignor.)
West Boylston Manufacturing Company. (See Burns, Alfred, assignor.)
West, Leonidas D., Denver, Colo. Fume-disseminator. No. 1,229,363; June 12; v. 239; p. 383.
Westbrook, Francis A., *et al.* (See Lane, Frederick H., assignor.)
Westbrook, Frank L., Fish, Ga. Plow. No. 1,230,963; June 26; v. 239; p. 990.
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Westcott, Henry P., Erie, Pa. Self-draining attachment for gas-meters. No. 1,229,842; June 12; v. 239; p. 544.
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Western Electric Company. (See Dixon, Amos F., assignor.)
Western Electric Company. (See Fondiller, William, assignor.)
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Western Electric Company. (See Hinrichsen, Edward E., assignor.)
Western Electric Company. (See Johnson, Lewis H., assignor.)
Western Electric Company. (See Lundell, Alben E., assignor.)
Western Electric Company. (See Nichols, Harold W., assignor.)
Western Electric Company. (See Palmer and Holmes, assignors.)
Western Electric Company. (See Sperry, Arthur B., assignor.)
Western Implement Company. (See Neuens, Michael W., assignor.)
Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)
Westinghouse Air Brake Company, The. (See Turner and Dowson, assignors.)
Westinghouse Air Brake Company, The. (See Turner and Donovan, assignors.)
Westinghouse Electric & Manufacturing Company. (See Armor, James C., assignor.)
Westinghouse Electric and Manufacturing Company. (See Auel, Carl B., assignor.)
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Westinghouse Electric and Manufacturing Company. (See Holt, Frederick B., assignor.)
Westinghouse Electric and Manufacturing Company. (See Krauskopf, George H., assignor.)
Westinghouse Electric and Manufacturing Company. (See MacGahan, Paul, assignor.)
Westinghouse Electric and Manufacturing Company. (See Mahoney, Joseph N., assignor.)
Westinghouse Electric and Manufacturing Company. (See Nikonow, John P., assignor.)
Westinghouse Electric and Manufacturing Company. (See Randall, Karl C., assignor.)
Westinghouse Electric and Manufacturing Company. (See Stevenson, Wilbur W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Storer and Hall, assignors.)
Westinghouse Electric and Manufacturing Company. (See Wilson, Charles E., assignor.)
Westinghouse Gear and Dynamometer Company, The. (See Smith, Louis L., assignor.)
Westinghouse Machine Company, The. (See Herr, Herbert T., assignor.)
Westinghouse Machine Company, The. (See Kasley, Alexander T., assignor.)
Westlin, Carl T. (See Brown and Westlin.)
Westman, Charles, Hinckley, Minn. Foot-rest. No. 1,231,107; June 26; v. 239; p. 1040.
Wetzel, Theodore, Jr., San Francisco, Cal. Feed-box. No. 1,228,727; June 5; v. 239; p. 120.
Whalley, Enoch, Willimansett, Mass. Truck. No. 1,230,250; June 19; v. 239; p. 714.
Whalley, Enoch, Willimansett, Mass. Truck. No. 1,230,251; June 19; v. 239; p. 715.
Wheary, George H., Racine, Wis. Wardrobe seat-box. No. 1,230,252; June 19; v. 239; p. 715.
Wheat, Lewis M., Lakemont, N. Y. Plow attachment. No. 1,230,964; June 26; v. 239; p. 990.
Wheaton, Abram W., Newark, N. J. Liquid-delivering device. No. 1,230,356; June 19; v. 239; p. 750.
Wheeler, Everett, Van Nuys, Cal. Plow. No. 1,231,225; June 26; v. 239; p. 1079.
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Whitaker, Calvin B., Kansas City, Mo. Combination-tool. No. 1,229,843; June 12; v. 239; p. 544.
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White, Frank C., assignor to The Wilcox & White Company, Meriden, Conn. Pneumatic note-sheet tracking device. No. 1,229,692; June 12; v. 239; p. 494.
White, Frank L., Topeka, Kans. Flushing-valve. No. 1,230,634; June 19; v. 239; p. 842.
White, Franklin E., Forty Fort, Pa. Dado-saw. No. 1,228,728; June 5; v. 239; p. 120.
White, Franklin R., assignor to The Patent Button Company, Waterbury, Conn. Button-fastening machine. No. 1,230,965; June 26; v. 239; p. 990.
White, Herbert E., assignor to The General Fireproofing Company, Youngstown, Ohio. Sheet-feeding process for metal-expanding machines. No. 1,230,635; June 19; v. 239; p. 843.
White, Jessee M., Philadelphia, Pa. Locking device for automobiles. No. 1,228,625; June 5; v. 239; p. 85.
White, Lazarus, New York, N. Y. Providing substructures for structures. No. 1,229,364; June 12; v. 239; p. 382.
White Motor Company, The. (See Farmer, Frank H., assignor.)
White, Nelson, Springfield, Oreg., assignor to International Money Machine Company, Terre Haute, Inc. Printing mechanism for adding-machines. No. 1,229,844; June 12; v. 239; p. 544.
White, Robert C., Birmingham, Ala. Operating mechanism for shaker-grates. No. 1,228,626; June 5; v. 239; p. 85.
White, Roger S., Washington, D. C. Electric switch. No. 1,228,858; June 5; v. 239; p. 165.
White, Roger S., Washington, D. C. Meter-switch. No. 1,228,859; June 5; v. 239; p. 166.
White, Samuel T. (See Singleton and White.)
Whitehead, Aura E., Chicago, Ill. Pneumatic action for player-piano mechanism. No. 1,230,549; June 19; v. 239; p. 813.
Whitehouse, Norman L. G., Pittsburgh, Pa. Manufacturing phosgene. No. 1,231,226; June 26; v. 239; p. 1080.
Whiteman, George W., Philadelphia, Pa. Screw. No. 1,229,560; June 12; v. 239; p. 450.
Whitin Machine Works, The. (See Burlin, Charles T., assignor.)
Whitin Machine Works, The. (See Horner, Leon H., assignor.)
Whitin Machine Works, The. (See Owen, Henry A., assignor.)
Whitlock, Ralph G., Los Angeles, Cal. Loose-leaf book. No. 1,228,860; June 5; v. 239; p. 166.
Whitlock, Ralph G., Los Angeles, Cal. Printing-press. No. 1,230,966; June 26; v. 239; p. 991.
Whitney, Arthur E. (See McIndoe and Whitney.)
Whittelsey, Charles B., Hartford, Conn., assignor to The Hartford Rubber Works Company. Manufacture of block-tires. No. 1,230,967; June 26; v. 239; p. 992.
Wickersham, Gilbert B., assignor to Diamond Forging & Manufacturing Company, Pittsburgh, Pa. Combined tie and ladder-rung member for silos and the like. No. 1,229,002; June 5; v. 239; p. 211.
Widlak, Ludwig, Newark, N. J., assignor to Rosenband Manufacturing Co. Bag-frame fastener. No. 1,229,845; June 12; v. 239; p. 545.
Widman, Frank J. (See Galbraith, John, assignor.)
Widström, Axel D. (See Ljungström and Widström.)
Wiegand, Cris. W., Los Angeles, Cal. Structural fastener. No. 1,229,365; June 12; v. 239; p. 384.
Wier, Frédrick S., Lacon, Ill. Baling-press. No. 1,230,253; June 19; v. 239; p. 715.
Wiggins, Jasper P. (See Caddell, Charles J., assignor.)
Wigginton, George P., assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Temporary binder. No. 1,231,317; June 26; v. 239; p. 1109.
Wight, Albion P., Wakefield, Mass. Shaft-bearing lubricator. No. 1,228,861; June 5; v. 239; p. 166.
Wight, Albion P., Wakefield, Mass. Oil-atomizer for steam-conduits. No. 1,228,862; June 5; v. 239; p. 167.
Wightman, Elmer E., Chicago, Ill. Dental casting-machine. No. 1,230,254; June 19; v. 239; p. 716.
Wilber, Ford R., and H. E. Ball, Paw Paw, Mich. Fish-bait. No. 1,230,968; June 26; v. 239; p. 992.
Wilcox, Philip A. (See Jahns, Knox, and Wilcox.)
Wilcox & White Company, The. (See White, Frank C., assignor.)
Wild, Eric E. A., Minneapolis, Minn. Tire-guard. No. 1,230,255; June 19; v. 239; p. 716.
Wildman Mfg. Co. (See Pigeon, Albert M., assignor.)
Wiley, Harvey W., Washington, D. C. Composition of matter for preparing foods and making same. No. 1,230,452; June 19; v. 239; p. 780.
Wilhelm, John W. (See Ellis and Wilhelm.)
Wilkie, William, Dennistoun, Glasgow, Scotland. Appliance for pressing the collars of articles of wearing-apparel. No. 1,229,366; June 12; v. 239; p. 384.

Wilkie, William, Dennistoun, Glasgow, Scotland. Machine for turning down the edges of cloth of wearing-apparel in the process of manufacture. No. 1,230,636; June 19; v. 239; p. 843.
Wilkin, William M., Erie, Pa. Mechanism for operating sawmill set-works. No. 1,230,969; June 26; v. 239; p. 992.
Willbert Manufacturing Company, The. (See Smith and Inwood, assignors.)
Willems, John H., Kenosha, Wis. Adjustable bed-spring. No. 1,229,561; June 12; v. 239; p. 450.
Willett, Alfred H., West New York, N. J., assignor to American Arch Company, New York, N. Y. Locomotive-boiler furnace. No. 1,229,379; June 12; v. 239; p. 389.
Willett, Alfred H., West New York, N. J., assignor to American Arch Company, New York, N. Y. Wooten-type fire-box. No. 1,229,385; June 12; v. 239; p. 390.
Willett, Alfred H., West New York, N. J., assignor to American Arch Company, New York, N. Y. Wooten-fire-box arch. No. 1,229,386; June 12; v. 239; p. 391.
Willett, Alfred H., West New York, N. J., assignor to American Arch Company, New York, N. Y. Air-admission wall for locomotive fire-boxes. No. 1,229,387; June 12; v. 239; p. 391.
Willetts, William R., Montreal, Quebec, Canada. Snap-fastener. No. 1,229,562; June 12; v. 239; p. 451.
William F. Jobbins, Incorporated. (See Hersman, Paul R., assignor.)
William Schollhorn Company, The. (See Bernard, William A., assignor.)
Williams, Arthur C. (See Williams, Oliver P., assignor.)
Williams, Clarence B., Keystown, Saskatchewan, Canada. Operating mechanism for tractors. No. 1,230,637; June 19; v. 239; p. 843.
Williams, George A., Lark, Utah. Mixer. No. 1,230,638; June 19; v. 239; p. 844.
Williams, John B. (See Manson, Charles L., assignor.)
Williams, Joseph A., assignor to The K. W. Ignition Company, Cleveland, Ohio. Spring-hanger. No. 1,230,970; June 26; v. 239; p. 992.
Williams, Lisle C., Helena, Mont. Rifle-cleaning cartridge. No. 1,231,227; June 26; v. 239; p. 1080.
Williams, Oliver P., Youngstown, assignor of one-third to A. C. Williams, Murdock, Fla. Railway-rail. No. 1,231,465; June 26; v. 239; p. 1159.
Williams, William E., Chicago, Ill. Pressed-steel journal-box. 1,230,057; June 12; v. 239; p. 610.
Williams, William F., Leadwood, Mo. Aeroplane. No. 1,228,729; June 5; v. 239; p. 121.
Williams, Win D., assignor to The Right and Left Tool Holder Co., Philadelphia, Pa. Tool-holder. No. 1,229,174; June 5; v. 239; p. 269.
Williamson, Herbert C., Chicago, Ill. Grenade. No. 1,231,228; June 26; v. 239; p. 1080.
Willis, Bernard D., assignor to Automatic Electric Company, Chicago, Ill. Semi-automatic telephone system. No. 1,230,639; June 19; v. 239; p. 844.
Willison, John, Derby, England, assignor to The National Malleable Castings Company, Cleveland, Ohio. Car-coupling. No. 1,229,367; June 12; v. 239; p. 385.
Willson, Thomas G., Swissvale, and A. H. Maranda, Pittsburgh, Pa. Rail-separator. No. 1,230,256; June 19; v. 239; p. 717.
Wilson, Arthur G., and C. O. Oleson, Valley City, N. D. Winding attachment for vehicle-wheels. No. 1,229,368; June 12; v. 239; p. 385.
Wilson, Charles E., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Adjusting device for bearings and manufacturing the same. No. 1,229,693; June 12; v. 239; p. 494.
Wilson, Frederick W., Elmhurst, N. Y. Illuminated sign. No. 1,228,507; June 5; v. 239; p. 45.
Wilson, Harry, St. Helens, Oreg. Automatic train-stop. No. 1,229,846; June 12; v. 239; p. 545.
Wilson, Harry L., assignor of one-third to J. F. Loeffler, Washington, D. C. Siphon. No. 1,230,971; June 26; v. 239; p. 993.
Wilson, Herbert J. (See Elder and Wilson.)
Wilson, James S., Covington, Ky. Work-holder for hand-embroidery. No. 1,229,204; June 5; v. 239; p. 279.
Wilson, James W. (See Bone, Wilson, and McCourt.)
Wilson, Wallace, Philadelphia, Pa. Knit fabric. No. 1,229,369; June 12; v. 239; p. 385.
Winans, Daniel M., assignor to Crandal, Stone & Co., Binghamton, N. Y. Fastener for automobile and vehicle curtains. No. 1,228,627; June 5; v. 239; p. 86.
Window Glass Machine Company. (See Carnahan, Orlando, B., assignor.
Wine, William E. (See Cook and Wine.)
Wine, William E., Toledo, Ohio. Freight-car ladder. No. 1,231,318; June 26; v. 239; p. 1109.
Wingett, John N., assignor to W. A. Haggott, trustee, Denver, Colo. Apparatus for refining liquids and gases. No. 1,229,189; June 5; v. 239; p. 274.
Winkler, Karl, Newark, N. J., assignor to Mohawk Brush Company. Cam mechanism. No. 1,228,730; June 5; v. 239; p. 121.
Winner, Harry W., Lock Haven, Pa. Railway-rail. No. 1,229,847; June 12; v. 239; p. 546.
Winningham, John W. (See Waugh, Edward H., assignor.)
Winston, Charles R., Richmond, Va. Spark-plug for gas-engines. No. 1,228,628; June 5; v. 239; p. 86.
Winston, Charles S., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Automatic telephone system. No. 1,231,319; June 26; v. 239; p. 1110.
Winter, Christian, Oskaloosa, Iowa. Climbing-harness. No. 1,229,003; June 5; v. 239; p. 212.
Winter, Harry O., Philadelphia, Pa. Lock hair-pin. No. 1,228,629; June 5; v. 239; p. 86.
Winter, William A., East Orange, N. J., assignor to The Kny-Scheerer Corporation. Surgical motor-casing. No. 1,229,694; June 12; v. 239; p. 495.
Winterer, Emil, Manchester, N. H. Thermostatic alarm. No. 1,229,370; June 12; v. 239; p. 385.
Wirt, Paul E., Bloomsburg, Pa. Tire-body construction. No. 1,228,630; June 5; v. 239; p. 87.
Wise, John S., Jr., New York, N. Y. Ash-receiver. No. 1,228,508; June 5; v. 239; p. 46.
Wistner, Harry W., Ogden, Utah. Automobile-engine. No. 1,230,257; June 19; v. 239; p. 717.
Witt, Howard, *et al.* (See Beckner, Bennie L., assignor.)
Wolfe, Ira T., Seattle, Wash. Umbrella rack and lock. No. 1,228,631; June 5; v. 239; p. 87.
Wolfe, Peter J., Columbus, Ohio, v. Window-screen. No. 1,229,695; June 12; v. 239; p. 495.
Wolff, Charles H. (See Weder and Wolff.)
Wolff, Wallace B., Chicago, Ill., and E. K. Hood, Indianapolis, Ind., assignors to American Slicing Machine Company, Chicago, Ill. Slicing-machine. No. 1,228,509; June 5; v. 239; p. 46.
Wolverine Leather Goods Company. (See Walker, James C., assignor.)
Wonder Carburetor Heater Company. (See Strickler and Lewis, assignors.)
Wood, Alfred R., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Sewing-machine work-clamp. No. 1,228,863; June 5; v. 239; p. 167.
Wood Concentrator Company, The. (See Wood, James N., assignor.)
Wood, James N., Blackshear, Ga., assignor to The Wood Concentrator Company. Compressing apparatus. No. 1,229,563; June 12; v. 239; p. 451.
Wood, Walter D., and H. G. Barnhurst, assignors to Fuel Saving Company, Allentown, Pa. Feeding and burning fine fuel. No. 1,228,632; June 5; v. 239; p. 87.
Wood, William P., Roseberry, British Columbia, Canada. Level. No. 1,230,258; June 19; v. 239; p. 717.
Woodland, Frances S., *et al.*, administrators. (See Woodland, Frank O.)
Woodland, Frank O., deceased; F. S. Woodland, Worcester, and A. F. Kelley, Grafton, administrators, assignors to Economic Machinery Company, Worcester, Mass. Labeling-machine. No. 1,230,550; June 19; v. 239; p. 814.
Woodrow, Harry R., assignor to T. E. Murray, New York, N. Y. Device for controlling energy delivered to welding-electrodes. No. 1,230,357; June 19; v. 239; p. 750.
Woods, Edward D., assignor to Koren Manufacturing Company, Cleveland, Ohio. Combination knife and fork. No. 1,229,696; June 12; v. 239; p. 495.
Woodworth, John D., East Moline, Ill. Automatic draining device. No. 1,230,972; June 26; v. 239; p. 993.
Wooldridge, Moses A., Wyaconda, Mo. Railway-grade crossing. No. 1,230,058; June 12; v. 239; p. 611.
Wootten, William M., *et al.* (See Barber, Guy M., assignor.)
Wordingham, George, Milwaukee, Wis. Garment-hanger. No. 1,229,371; June 12; v. 239; p. 386.
Wright, Charles D., Toledo, Ohio. Automobile-power-transmitting apparatus. No. 1,230,259; June 19; v. 239; p. 717.
Wright, Frank T., *et al.* (See Smith, Emery H., assignor.)
Wright, Frederick, Summerside, Prince Edward Island, Canada. Potato digger and pulverizer. No. 1,229,372; June 12; v. 239; p. 386.
Wright, James M., Tama, Iowa. Display-case. No. 1,228,510; June 5; v. 239; p. 47.
Wright, James R., Denver, Colo. Vapor-bath cabinet. No. 1,231,466; June 26; v. 239; p. 1159.
Wright, Rea P., Washington, D. C., assignor to J. F. Hemenway, New York, N. Y. Adjustable automatic pressure-roll release for clothes-wringers. No. 1,231,467; June 26; v. 239; p. 1160.
Wright, Richard H. (See Rahn and Meyers, assignors.)
Wrightsman, Warner B., Kokomo, Ind. Magneto driving mechanism. No. 1,228,864; June 5; v. 239; p. 167.
Wrightsville Hardware Company. (See Filbey, John W., assignor.)
X Ray Incubator Company. (See Kate, John H., assignor.)
Yakilich, Anthony J., St. Peter, Mont. Music-turner. No. 1,228,511; June 5; v. 239; p. 47.
Yarrow, Harold E., Scotstoun, Glasgow, Scotland. Construction of submarine vessels. No. 1,229,004; June 5; v. 239; p. 212.
Yaste, George L. (See Ritchie and Yaste.)
Yeaton, Alvin A., Hillsboro, N. H. Firing mechanism for firearms. No. 1,230,973; June 26; v. 239; p. 994.
Yelser, John O., Jr., Omaha, Nebr. Feed-controlling means for internal-combustion engines. No. 1,229,373; June 12; v. 239; p. 386.
Yost Electric Manufacturing Company. (See Gordon, David D., assignor.)
Young, Adolph F. (See Vodicka and Young.)
Young, Charles M. (See Burks and Young.)



Young, Fredric S., Los Angeles, Cal. Water-gage for boilers. No. 1,229,848; June 12; v. 239; p. 546.
Young, Leonard A., Highland Park, Mich. Spring construction. No. 1,230,260; June 19; v. 239; p. 718.
Youngblood, Joseph C., Atwood, Kans. Lift-deck for freight-cars. No. 1,229,374; June 12; v. 239; p. 387.
Youngstown Sheet and Tube Company, The. (See Mirfield and Nullmeyer, assignors.)
Zahuranec, John, Newcomer, Pa. Rail-joint. No. 1,229,005; June 5; v. 239; p. 212.
Zee-Socket and Mfg. Company. (See Both, Tonjes A. C., assignor.)
Zeitz, John J., assignor to The American Folding Machine Company, Warren, Ohio. Grab-type rectifier. No. 1,229,849; June 12; v. 239; p. 546.
Zelle, William C., assignor to Plantation Equipment Company, St. Louis, Mo. Tilling-machine. No. 1,230,261; June 19; v. 239; p. 718.
Zerwer, John A., Alma, Tex. Tie-up stand for mail. No. 1,229,006; June 5; v. 239; p. 213.
Zesbaugh, Lawrence G., Minneapolis, Minn. Machine for indicating and recording elapsed time. No. 1,231,108; June 26; v. 239; p. 1040.)
Zetosch, Henry, New York, N. Y. Combined undergarment and jock-strap. No. 1,229,850; June 12; v. 239; p. 546.
Ziegler, Charles W., *et al.* (See Geisendorff, Frederick M., assignor.)
Zifferer, Lothar R., Ridgewood, N. J. Toggle-bolt. No. 1,228,512; June 5; v. 239; p. 47.
Zimmerman, Clarence C. (See Luthman, Charles H., assignor.)
Zimmerman, James G., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Automatic synchronizer. No. 1,231,109; June 26; v. 239; p. 1041.
Zouri Drawn Metals Company. (See Murnane, James P., assignor.)
Zueblin, Ernest, Baltimore, Md. Apparatus for applying therapeutically-active rays to the human body. No. 1,228,865; June 5; v. 239; p. 168.
Zwerdling, Morris, New York, N. Y. Candy-whistle machine. No. 1,229,375; June 12; v. 239; p. 387.
Zwisler, Irvin, assignor to The McGraw Tire & Rubber Company, East Palestine, Ohio. Machine for wrapping rubber tubes. No. 1,230,262; June 19; v. 239; p. 718.

# ALPHABETICAL LIST OF PATENTEES OF DESIGNS.


A. F. Ward Machinery Co., The. (See Ward, Ashley F., assignor.)
Aaron, Max N., assignor to Friedberger-Aaron Manufacturing Company, Philadelphia, Pa. Lace Trimming. No. 50,898; June 12; v. 239; p. 624.
Abt, Robert C., Chicago, Ill. Nutcracker. No. 50,899; June 12; v. 239; p. 624.
Adam, Harry C., St. Louis, Mo. Lighting-fixture. Nos. 50,860–1; June 5; v. 239; p. 287.
Alfred J. Brown Seed Co. (See Tobey, Fred W., assignor.)
American Can Company. (See Hoffman, Edmund, assignor.)
American Stopper Company. (See Corey, Harry R., assignor.)
Angiulli, Luigi, assignor of one-half to J. Crocco, New York, N. Y. Lamp-stand. No. 50,929; June 19; v. 239; p. 911.
Anklam, William F., assignor to C. M. Hall Lamp Company, Detroit, Mich. Lamp-door. Nos. 50,862–3; June 5; v. 239; p. 287.
Atkinson, Harry W. (See Smith and Atkinson.)
B. F. Goodrich Company, The. (See Pierson, Robert M., assignor.)
B. F. Goodrich Company, The. (See Raymond, Harry K., assignor.)
Backstrom, Charles A., Crafton, Pa., assignor to Pittsburg Water Heater Company. Water-heater shell. No. 50,864; June 5; v. 239; p. 287.
Baker, Frederick C., Portland, Oreg. Lighting-fixture. No. 50,865; June 5; v. 239; p. 288.
Barker, James, Philadelphia, assignor to M. E. Barker, Rydal, Pa. Chair-pedestal. No. 50,900; June 12; v. 239; p. 624.
Barker, Mary E. (See Barker, James, assignor.)
Barr, Andrew J., assignor of one-half to H. E. Homberger, Mansfield, Ohio. Combined fixture and valve. No. 50,866; June 5; v. 239; p. 288.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J. Wall-bracket for lighting-fixtures. No. 50,867; June 5; v. 239; p. 288.
Becker, Johannes P., Berkeley, Cal. Automobile signal-light. No. 50,930; June 19; v. 239; p. 911.
Bernard Gloekler Company. (See Gloekler, J. Edward, assignor.)
Berry, Harry E. (See Doke, Berry, and Delzell.)
Bigelow Hartford Carpet Company. (See Riddell, Robert F., assignor.)
Binns, Edward H., Pittsburgh, Pa. Combination desk article. No. 50,901; June 12; v. 239; p. 624.
Bowden, Martin L. and M. L., Jr., Brooklyn, N. Y. Ring or similar article. No. 50,902; June 12; v. 239; p. 624.
Braunstein, Simon, New York, N. Y. Electric-light fixture. No. 50,964; June 26; v. 239; p. 1187.
Burns, Howard E., assignor to The C. F. Massey Company, Chicago, Ill. Concrete smoke-jack. No. 50,903; June 12; v. 239; p. 625.
C. F. Massey Company, The. (See Burns, Howard E., assignor.)
C. M. Hall Lamp Company. (See Anklam, William F., assignor.)
Carlisle, Fred B., North Kingston, R. I., assignor to J. M. Gilbert, New York, N. Y. Tire-tread. No. 50,931; June 19; v. 239; p. 912.
Case, Homer W., assignor to Pittsburgh Toy Vehicle Company, Pittsburgh, Pa. Velocipede for the use of children. No. 50,882; June 5; v. 239; p. 291.
Cochrane, James P., Edinburgh, Scotland. Golf-ball. No. 50,883; June 5; v. 239; p. 292.
Christensen, George, Los Angeles, Cal. Emblem. No. 50,932; June 19; v. 239; p. 912.
Corey, Harry R., assignor to American Stopper Company, Brooklyn, N. Y. Sheet-metal talcum-box. No. 50,933; June 19; v. 239; p. 912.
Crocco, James. (See Angiulli, Luigi, assignor.)
Cronan, Joseph D., Portland, Oreg. Novelty doll. No. 50,934; June 19; v. 239; p. 912.
Crowell, Frank S., assignor to The Western Gas Fixture Co., Toledo, Ohio. Glass bowl for a lighting-fixture. No. 50,868; June 5; v. 239; p. 288.
Crowell, Frank S., assignor to The Western Gas Fixture Co., Toledo, Ohio. Lighting-fixture arm. No. 50,869; June 5; v. 239; p. 289.
Curtiss, George E., assignor to Landers, Frary & Clark, New Britain, Conn. Handle for a fork or similar article. No. 50,870; June 5; v. 239; p. 289.
Czerna, Joseph, Goshen, Conn. Insect-trap. No. 50,904; June 12; v. 239; p. 625.
Davis, Edward A., New York, N. Y., assignor to The Great Council of the United States of the Improved Order of Red Men. Badge or similar article. No. 50,965; June 26; v. 239; p. 1188.
Dawes, John L., Pittsburgh, Pa. Lamp-casing. Nos. 50,905–6; June 12; v. 239; p. 625.
Delzell, Charles A. (See Doke, Berry, and Delzell.)
Delzell, Daniel H. (See Doke, Berry, and Delzell.)
Doke, Charles H., H. E. Berry, D. H. and C. A. Delzell, Denver, Colo. Insignia, emblem, badge, or button. No. 50,935; June 19; v. 239; p. 912.
Doke, Charles H., H. E. Berry, D. H. and C. A. Delzell, Denver, Colo. Emblem, badge, or button. No. 50,936; June 19; v. 239; p. 913.
Doke, Charles H., H. E. Berry, D. H. and C. A. Delzell, Denver, Colo. Military emblem, badge, or button. No. 50,937; June 19; v. 239; p. 913.
E. & J. Bass Inc. (See Frishman, David, assignor.)
Eagle Glass & Manufacturing Company. (See Ott, Charles B. assignor.)
Ebeling, Phillip, assignor of one-half to J. W. Lamparter, Moundsville, W. Va. Glass for headlights. No. 50,938; June 19; v. 239; p. 913.
Fairchild, Grace E., New York, N. Y. Button, emblem, or other insignia. No. 50,884; June 5; v. 239; p. 292.
Faircloth, Frank T., San Francisco, Cal. Tread for automobile-tires. No. 50,871; June 5; v. 239; p. 289.
Freid, Isidor, Brooklyn, N. Y. Tray. No. 50,885; June 5; v. 239; p. 292.
French, William A., Minneapolis, Minn., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Music-cabinet. Nos. 50,966–71; June 26; v. 239; pp. 1188–9.
Friedberger-Aaron Manufacturing Company. (See Aaron, Max N., assignor.)
Frishman, David, assignor to E. & J. Bass Inc., New York, N. Y. Salt-shaker. No. 50,907; June 12; v. 239; p. 625.
Garrett, Charles H., Jr. (See Kelley and Garrett.)
Gebhart, John C., assignor to F. Low, St. Louis, Mo. Casing for measuring-machines or the like. No. 50,908; June 12; v. 239; p. 626.
Gerlach, Alfred H., assignor to The Meyercord Company, Chicago, Ill. Plate or similar article. No. 50,886; June 5; v. 239; p. 292.
Gilbert, Joseph M. (See Carlisle, Fred B., assignor.)
Gloekler, J Edward, assignor to Bernard Gloekler Company, Pittsburgh, Pa. Refrigerator. Nos. 50,939–40; June 19; v. 239; p. 913.
Godfrey, Robert E., New York, N. Y. Textile fabric. Nos. 50,887–91; June 5; v. 239; pp. 292–3.
Graham, Clarence R., Oakland, Cal. Stove. No. 50,941; June 19; v. 239; p. 913.
Great Council of the United States of the Improved Order of Red Men. (See Davis, Edward A., assignor.)
Hillbom, Henrik, assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn. Spoon, fork, or similar article. No. 50,972; June 26; v. 239; p. 1189.
Hoffman, Edmund, Brooklyn, assignor to American Can Company, New York, N. Y. Powder-box. No. 50,973; June 26; v. 239; p. 1189.
Homberger, Herman E. (See Barr, Andrew J., assignor.)
Huband, Alfred E., Naugatuck, Conn. Mucilage-bottle and brush-cleaner. No. 50,974; June 26; v. 239; p. 1189.
Hudson, Bywater, St. Paul, Minn. Herring-bone grass floor-covering. No. 50,909; June 12; v. 239; p. 626.
Hunold, Ernest, Providence, R. I. Skate-blade. No. 50,943; June 19; v. 239; p. 914.
Hurst, George S., assignor to The J. B. Williams Company, Glastonbury, Conn. Label. No. 50,892; June 5; v. 239; p. 293.
Hyatt, Frederick E., St. Davids, assignor to The Keystone Watch Case Company, Philadelphia, Pa. Watchcase. Nos. 50,910–11; June 12; v. 239; p. 626.
Hyatt, Frederick E., St. Davids, assignor to The Keystone Watch Case Company, Philadelphia, Pa. Watchcase. Nos. 50,944–5; June 19; v. 239; p. 914.
International Silver Co. (See Shanley, Thomas A., assignor.)
J. B. Williams Company, The. (See Hurst, George S., assignor.)
Jones, Charles E., Chicago, Ill. Body for an oval bracket-back. No. 50,872; June 5; v. 239; p. 289.
Jones, Eugene A., Los Angeles, Cal. Tire. No. 50,873; June 5; v. 239; p. 290.
Kelley, Howard J., and C. H. Garrett, Jr., Kansas City, Mo.; said Garrett assignor to said Kelley. Aeroplane. No. 50,912; June 12; v. 239; p. 626.
Keystone Watch Case Company, The. (See Hyatt, Frederick E., assignor.)
Kirby, James H., Cleveland, Ohio. Suction-cleaner casing. No. 50,946; June 19; v. 239; p. 914.
Kirsch, Francis X., Warwick, N. D. Badge. No. 50,913; June 12; v. 239; p. 626.

Kopp, Nicholas, Pittsburgh, Pa. Shade. Nos. 50,947–8; June 19; v. 239; p. 914.
Korpi, Hilma, Kinney, Minn. Combination button-hook and bottle-opener. No. 50,949; June 19; v. 239; p. 915.
Lamparter, J. W. (See Ebeling, Phillip, assignor.)
Landers, Frary & Clark. (See Curtiss, George E., assignor.)
Long, Frederick L., Cedargrove, N. J., assignor to National School Camp Association, Inc., New York, N. Y. Badge or button. No. 50,893; June 5; v. 239; p. 293.
Loomis, Henry R., Providence, R. I. Pin. No. 50,950; June 19; v. 239; p. 915.
Low, Frank. (See Gebhart, John C., assignor.)
Lunt, George C., Greenfield, Mass. Spoon, fork, or similar article. No. 50,951; June 19; v. 239; p. 915.
Maerz, Frederick K., assignor to Scott-Ullman Company, Cleveland, Ohio. Lamp-stand. No. 50,874; June 5; v. 239; p. 290.
McCormick, Thomas J., New York, N. Y. Rocking-chair. No. 50,875; June 5; v. 239; p. 290.
McKee Glass Company. (See Smith, Maurice A., assignor.)
McLoughlin, Francis J., Brooklyn, N. Y. Rosary-medal. No. 50,894; June 5; v. 239; p. 294.
Meyer, Felix. (See Rieger, Ida P., assignor.)
Meyercord Company, The. (See Gerlach, Alfred H., assignor.)
Moore, William J. P., New York, N. Y. Automobile-body. Nos. 50,952–3; June 19; v. 239; p. 915.
Nadler, Maurice L., New York, N. Y. Quilt. No. 50,954; June 19; v. 239; p. 915.
National School Camp Association. (See Long, Frederick L., assignor.)
New Jersey Patent Company. (See French, William A., assignor.)
North American Lace Company, The. (See Watters, Charles J., assignor.)
Ono, Koh, New York, N. Y. Vanity-case. No. 50,963; June 19; v. 239; p. 917.
Ostrom, Albert, Elkhart, Ind. Milk-bottle holder and ticket-rack. No. 50,975; June 26; v. 239; p. 1189.
Ott, Charles B., Woodlawn, assignor to Eagle Glass & Manufacturing Company, Wellsburg, W. Va. Light-bowl. No. 50,955; June 19; v. 239; p. 916.
Phillpson, Sam, St. Louis, Mo. Advertising menu-frame. No. 50,914; June 12; v. 239; p. 627.
Pierson, Robert M., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Pneumatic tire. No. 50,956; June 19; v. 239; p. 916.
Pierson, Robert M., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Pneumatic tire. Nos. 50,976–7; June 26; v. 239; p. 1190.
Pittsburg Water Heater Company. (See Backstrom, Charles A., assignor.)
Pittsburgh Toy Vehicle Company. (See Case, Homer W., assignor.)
R. Wallace & Sons Mfg. Co. (See Hillbom, Henrik, assignor.)
Racine Rubber Company. (See Vance, Louis T., assignor.)
Ramsberger, Elmer F., Philadelphia, Pa. Badge or medal. No. 50,957; June 19; v. 239; p. 916.
Raymond, Harry K., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Pneumatic tire. No. 50,915; June 12; v. 239; p. 627.
Reiser, Alfred W., assignor to The Western Gas Fixture Co., Toledo, Ohio. Glass bowl for a lighting-fixture. No. 50,876; June 5; v. 239; p. 290.
Reiser, Alfred W., assignor to The Western Gas Fixture Co., Toledo, Ohio. Glass shade for electric lights. Nos. 50,877–8; June 5; v. 239; pp. 290–1.
Riddell, Robert F., Manhasett, N. Y., assignor to Bigelow Hartford Carpet Company. Rug. Nos. 50,916–19; June 12; v. 239; pp. 627–8.
Riddell, Robert F., Manhasett, N. Y., assignor to Bigelow Hartford Carpet Company. Rug. No. 50,958; June 19; v. 239; p. 916.
Rieger, Ida P., assignor to F. Meyer, New York, N. Y. Lace. Nos. 50,895–7; June 5; v. 239; p. 294.
Rlwson, Oscar C., New Rochelle, N. Y. Door-hinge. No. 50,978; June 26; v. 239; p. 1190.
Sargent & Company. (See Sargent, Edward R., assignor.)
Sargent, Edward R., assignor to Sargent & Company, New Haven, Conn. Casket-handle arm. No. 50,920; June 12; v. 239; p. 628.
Schweizer, Gottfried E., Bridgeport, Conn. Rear-end signal device for automobiles. No. 50,921; June 12; v. 239; p. 628.
Scott-Ullman Company. (See Maerz, Frederick K., assignor.)
Shanley, Thomas A., assignor to International Silver Co., Meriden, Conn. Glass vessel or similar article. No. 50,959; June 19; v. 239; p. 916.
Shetler, Walter M., Litchfield, Nebr. Pair of forceps. No. 50,879; June 5; v. 239; p. 291.
Smith, Clark L., Spokane, Wash. Casket. No. 50,880; June 5; v. 239; p. 291.
Smith, Elmer H., and H. W. Atkinson, Tarentum, Pa. Lamp-lens. No. 50,922; June 12; v. 239; p. 629.
Smith, Maurice A., assignor to McKee Glass Company, Jeannette, Pa. Glass bowl. No. 50,960; June 19; v. 239; p. 917.
Strahan, George V. (See Barrows and Strahan.)
Tobey, Fred W., Grand Rapids, Mich., assignor to Alfred J. Brown Seed Co. Cabinet. No. 50,923; June 12; v. 239; p. 629.
Vance, Louis T., assignor to Racine Rubber Company, Racine, Wis. Tire-tread. No. 50,961; June 19; v. 239; p. 917.
Volcansek, Edward, Cleveland, Ohio. Combined pistol and sword hilt. No. 50,979; June 26; v. 239; p. 1190.
Von Vargyas, Eugene, Washington, D. C. Tread for automobile-tires. No. 50,881; June 5; v. 239; p. 291.
Wade, John, St. Paul, Minn. Chair. No. 50,924; June 12; v. 239; p. 629.
Ward, Ashley F., assignor to The A. F. Ward Machinery Co., Boston, Mass. Loaf of biscuit. Nos. 50,925–6; June 12; v. 239; pp. 629–30.
Watters, Charles J., assignor to The North American Lace Company, Philadelphia, Pa. Lace. No. 50,927; June 12; v. 239; p. 630.
Wearne, Harry, New York, N. Y. Printed fabric. No. 50,928; June 12; v. 239; p. 630.
Western Gas Fixture Co., The. (See Crowell, Frank S., assignor.)
Western Gas Fixture Co., The. (See Reiser, Alfred W., assignor.)
Wible, Charles M., Mount Pleasant, Pa. Headlight-lens. No. 50,962; June 19; v. 239; p. 917.

# ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Bourjois & Co., Inc., New York, N. Y. Soap. No. 116,879; June 5; v. 239; p. 313.
A. Kreamer, Inc., Brooklyn, N. Y. Candle and candle-stick holders, range-boilers, carriage foot-warmers. No. 117,161; June 19; v. 239; p. 935.
A. Kreamer, Inc., Brooklyn, N. Y. Stomach-warmers and douche-pans. No. 117,162; June 19; v. 239; p. 935.
A. C. A. Company, Binghamton, N. Y. Cloths scientifically prepared to clean and polish metals, woods, and leathers. No. 117,075; June 19; v. 239; p. 933.
Acleral Company of America, The, New York, N. Y. Metal or aluminum compounds in the form of ingots, castings, rods, plates. Nos. 117,235–6; June 26; v. 239; p. 1205.
Acme Cleaner Manufacturing Company, Cleveland, Ohio. Wall-paper cleaner. No. 117,076; June 19; v. 239; p. 933.
Addis & Eppstein, Inc., New York, N. Y. Canned fish. No. 117,077; June 19; v. 239; p. 933.
Alaska Codfish Company, San Francisco, Cal. Fresh, dried, and canned codfish. No. 117,237; June 26; v. 239; p. 1205.
Albany Perforated Wrapping Paper Company, Albany, N. Y. Toilet-paper. No. 117,238; June 26; v. 239; p. 1205.
Albertson, William H. M., New York, N. Y. Coffee. No. 117,078; June 19; v. 239; p. 933.
Allen, Thomas G., London, England. Light shades and screens made principally but not wholly of glass. No. 116,932; June 5; v. 239; p. 314.
American Advertising Association, St. Louis, Mo. Electric signs. No. 116,872; June 5; v. 239; p. 313.
American Bleached Goods Company, New York, N. Y. Cotton piece goods. No. 117,239; June 26; v. 239; p. 1205.
American Chicle Co., New York, N. Y. Chewing-gum. No. 117,018; June 12; v. 239; p. 651.
American Fruit Distributors of California, Los Angeles, Cal. Oranges, lemons, and grape-fruit. No. 117,079; June 19; v. 239; p. 933.
American Fruit Distributors of California, Los Angeles, Cal. Lemons and oranges. No. 117,080; June 19; v. 239; p. 933.
American Fruit Distributors of California, Los Angeles, Cal. Oranges, grape-fruit, cantaloups. No. 117,081; June 19; v. 239; p. 933.
American La France Fire Engine Co., Inc., Elmira, N. Y. Chemical fire-extinguishers. No. 116,934; June 5; v. 239; p. 315.
American Lead Company, New York, N. Y. Type-metals, solders, metal alloys, lead bars, pig-lead. No. 117,082; June 19; v. 239; p. 933.
American Metal Products Company, Milwaukee, Wis. Metals resembling bronze and castings made from said metal. No. 117,240; June 26; v. 239; p. 1205.
American Wool Improvement Association, Salt Lake City, Utah. Wool. No. 117,083; June 19; v. 239; p. 933.
American Wringer Company, The, New York, N. Y. Clothes-wringers and parts thereof. No. 117,084; June 19; v. 239; p. 933.
Andersen Meyer & Company, Ltd., New York, N. Y. Hair-nets. No. 116,965; June 5; v. 239; p. 315.
Angel & Co., Alejandro, New York, N. Y. Coffee. No. 117,017; June 12; v. 239; p. 651.
Anzac Company, Boston, Mass. Cereal beverage sold as soft drink. Nos. 117,085–7; June 19; v. 239; p. 933.
Apco Asphalt Roofing Co., New York, N. Y. Asphalt roofing. No. 117,088; June 19; v. 239; p. 933.
Armour Grain Company, Jersey City, N. J., and Chicago, Ill. Rolled white oats. No. 117,089; June 19; v. 239; p. 933.
Art Metal Construction Co. Inc., Jamestown, N. Y. Safes. No. 117,090; June 19; v. 239; p. 933.
Art Metal Construction Co. Inc., Jamestown, N. Y. Partitions, doors, metallic gratings for banks, &c., railings, stairs. No. 117,091; June 19; v. 239; p. 933.
Art Metal Construction Co. Inc., Jamestown, N. Y. Safety-deposit boxes. No. 117,092; June 19; v. 239; p. 933.
Asbestos Fibre & Rubber Co., Trenton, N. J. Compressed-fiber sheet-packing. No. 116,936; June 5; v. 239; p. 315.
Ash, Green, East Gadsden, Ala. Preparation for the treatment of kidney and blood diseases. No. 116,873; June 5; v. 239; p. 313.
Austin, Nichols & Co., Inc., Brooklyn and New York, N. Y. Salt, bluing. No. 116,874; June 5; v. 239; p. 313.
Beau-Site Company, New York, N. Y. Butter. No. 117,019; June 12; v. 239; p. 651.
Beaver Company, The, Buffalo, N. Y. Blackboards and similar boards for writing purposes. No. 117,093; June 19; v. 239; p. 933.
Beeland-Nicholson Wholesale Co., Inc., Greenville, Ala. Wheat-flour. No. 117,020; June 12; v. 239; p. 651.
Bender, Joseph C., Denver, Colo. Stove-polish. No. 117,094; June 19; v. 239; p. 933.
Bentley & Twohey Silk Co., New York, N. Y. Silk piece goods. No. 116,937; June 5; v. 239; p. 315.
Besosa, Adolfo E., New York, N. Y. Medicine in tablet form for the treatment of kidney and bladder disorders. No. 116,875; June 5; v. 239; p. 313.
Blakeslee, Anna L., Malden, Mass. Certain named clothing and personal wear. No. 116,876; June 5; v. 239; p. 313.
Bleecker Company, The, Hempstead, N. Y. Cleaning fluids. No. 116,877; June 5; v. 239; p. 313.
Bloom & Millman, New York, N. Y. Shirt-waists for women. No. 117,095; June 19; v. 239; p. 933.
Booth Fisheries Company, Chicago, Ill. Canned salmon. No. 117,022; June 12; v. 239; p. 651.
Booth Fisheries Company, Chicago, Ill. Canned salmon. No. 117,096; June 19; v. 239; p. 933.
Boss Manufacturing Company, The, Kewanee, Ill. Gloves and mittens. No. 116,878; June 5; v. 239; p. 313.
Bosson, Frank H., Boston, Mass. Cleaning and polishing preparations for painted, varnished, and wooden surfaces. No. 117,099; June 19; v. 239; p. 933.
Bradley & Metcalf Co., Milwaukee, Wis. Men's, boys', and youths' shoes made from leather. No. 117,243; June 26; v. 239; p. 1205.
Brouse, William J., Madrid, N. Y. Cleaning and polishing material for automobiles, pianos, woodwork, and furniture. No. 117,244; June 26; v. 239; p. 1205.
Brown, John H., Marseilles, Ill. Rubber heels. No. 116,880; June 5; v. 239; p. 313.
Brown, Nelson H., Boston, Mass. Clocks. No. 117,100; June 19; v. 239; p. 933.
Buckman, Jacob, New York, N. Y. Coats. No. 117,023; June 12; v. 239; p. 651.
Buhl, G. Arthur, Chicago, Ill. Soft drink or beverage. No. 117,101; June 19; v. 239; p. 933.
Burton & Davis Co., New York, N. Y. Canned fruits, vegetables, and salmon, tomato catsup. No. 117,102; June 19; v. 239; p. 933.
Butler, Jean W., Chicago, Ill. Certain named chemical and pharmaceutical preparation. No. 117,103; June 19; v. 239; p. 933.
Butr Plus Co., The, Washington, D. C. Butter-merging compounds. No. 117,104; June 19; v. 239; p. 934.
Byram, Ralph S., Germantown, Pa. Laces, knitted insertion, and edgings for underwear. No. 117,245; June 26; v. 239; p. 1205.
Bystrom & Hull, Toledo, Ohio. Raised breads and pastries. No. 117,106; June 19; v. 239; p. 934.
C. Nelson Smith Company, The, Milwaukee, Wis. Medicines and specifics for treating certain named diseases. No. 116,926; June 5; v. 239; p. 314.
C. E. Byrne Piano Co., Inc., New York, N. Y. Pianos. No. 117,105; June 19; v. 239; p. 934
California Bakers Specialty Co., Los Angeles, Cal. Paste for cakes, cookies, pie, candy, and ice-cream. No. 117,024; June 12; v. 239; p. 651.
California Fruit Growers Exchange, Los Angeles, Cal. Citrus fruits. No. 117,107; June 19; v. 239; p. 934.
Cantrell & Dawson, Guymon, Okla. Soft drink. No. 116,940; June 5; v. 239; p. 315.
Caproni Brothers Company, Providence, R. I. Still and sparkling or carbonated waters, ginger-ale, and carbonated water of different flavors. No. 117,108; June 19; v. 239; p. 934.
Carl Anderson Electric Corporation, New York, N. Y. Certain named electrical apparatus, machines, and supplies. No. 116,935; June 5; v. 239; p. 315.
Carson, Pirie, Scott & Co., Chicago, Ill. Feet for hosiery. No. 116,881; June 5; v. 239; p. 313.
Carter & Holmes, Chicago, Ill. Neckties. No. 116,941; June 5; v. 239; p. 315.
Cass & Daley Shoe Company, Salem, Mass. Leather boots and shoes. No. 117,247; June 26; v. 239; p. 1205.
Cassimus, George S. A., St. Louis, Mo. Liquid for cleaning varnished and enameled surfaces. No. 116,882; June 5; v. 239; p. 313.
Celluloid Starch Company, New York, N. Y., and New Haven, Conn. Scouring-powder. No. 117,109; June 19; v. 239; p. 934.
Chas. A. Schieren Company, New York, N. Y. Rawhide and lace leather. No. 116,984; June 5; v. 239; p. 316.
Cincinnati Butchers Supply Company, The, Cincinnati, Ohio. Certain named cutlery, machinery, and tools, and parts thereof. No. 117,110; June 19; v. 239; p. 934.
Clarke-Guthrie Co., Philadelphia, Pa. Dental, medical, and surgical disinfecting fluid. No. 116,884; June 5; v. 239; p. 313.

Clegg, Sherman D., Wheeling, W. Va. Ointment for the relief of certain named affections. No. 117,025; June 12; v. 239; p. 651.

Colgate & Co., Jersey City, N. J., and New York, N. Y. Perfumes, toilet powders and waters, sachets. No. 117,026; June 12; v. 239; p. 651.

Collins, Harry, New York, N. Y. Certain named outer wearing-apparel for ladies. No. 117,248; June 26; v. 239; p. 1205.

Colonial Steel Company, Pittsburgh, Pa. Steel. No. 117,111; June 19; v. 239; p. 934.

Colonial Tyre & Rubber Co. Inc., The, New York, N. Y. Rubber tires for automobiles and other vehicles. No. 116,942; June 5; v. 239; p. 315.

Columbia Electric Novelty Corporation, New York, N. Y. Electric batteries and flash-lights. No. 116,943; June 5; v. 239; p. 315.

Columbia River Packers Association, Astoria, Oreg. Canned salmon. No. 117,112; June 19; v. 239; p. 934.

Consolidation Coal Co., The, Baltimore, Md. Coal. No. 116,944; June 5; v. 239; p. 315.

Continental Fibre Company, The, Newark, Del. Electrical insulating material. No. 117,249; June 26; v. 239; p. 1205.

Cordo-Hyde Company, Brockton, Mass. Shoe strings and lacings, tapes, and galloons. No. 116,945; June 5; v. 239; p. 315.

Craddock-Terry Company, Lynchburg, Va., and St. Louis, Mo. Leather shoes. No. 116,946; June 5; v. 239; p. 315.

Crane, Clarence A., Cleveland, Ohio. Chocolate candy. No. 117,113; June 19; v. 239; p. 934.

Crew Levick Company, Philadelphia, Pa. Illuminating, lubricating, and burning oils and greases. Nos. 117,114–15; June 19; v. 239; p. 934.

Crouch & Fitzgerald, New York, N. Y. Hat-boxes, valises, certain named trunks, cases, and bags. No. 117,116; June 19; v. 239; p. 934.

Cussins & Fearn Co., The, Columbus, Ohio. Gas and coal stoves. No. 117,117; June 19; v. 239; p. 934.

D. Nusbaum & Co., New York, N. Y. Bathing-suits and sweaters. No. 117,054; June 12; v. 239; p. 652.

Davidson Baking Co., Seattle, Wash. Bread. No. 117,027; June 12; v. 239; p. 651.

Davis, E. F., St. Louis, Mo. Medicine for rheumatic pains, gout, and lumbago. No. 116,885; June 5; v. 239; p. 313.

Davis, John P., Chicago, Ill. Certain named clothing for men and women. No. 116,886; June 5; v. 239; p. 313.

Davol Rubber Company, Providence, R. I. Certain named dental, medical, and surgical appliances. No. 117,118; June 19; v. 239; p. 934.

Dawson Springs Company, Inc., Portland, Me., and Dawson Springs, Ky. Mineral water, concentrated. No. 117,119; June 19; v. 239; p. 934.

Dennett, Fred. A., assignor to United Phonographs Corporations, Port Washington, Wis. Phonographs and phonograph-records. No. 117,028; June 12; v. 239; p. 651.

Disc Chemical Company, Newark, N. J. Sugar-of-milk tablets. No. 117,029; June 12; v. 239; p. 651.

Dunbar Brothers Co., Philadelphia, Pa. Wheat-flour. No. 117,120; June 19; v. 239; p. 934.

Durkee-Atwood Co., Minneapolis, Minn. Certain named abrasive, detergent, and polishing materials. No. 116,887; June 5; v. 239; p. 313.

Durkee-Atwood Co., Minneapolis, Minn. Tire-powder and tire-mica. No. 117,121; June 19; v. 239; p. 934.

Duryea, Minza P., New York, N. Y. Rolled cigarettes. No. 117,122; June 19; v. 239; p. 934.

Earl Studios, Inc., New York, N. Y. Magazine issued semimonthly. No. 116,947; June 5; v. 239; p. 315.

Economic Products, Inc., New York, N. Y. Metal-polish for use on automobile and harness trimmings, door-knobs, and brass. No. 116,888; June 5; v. 239; p. 313.

Edwin B. Stimpson Company, Brooklyn, N. Y. Gromets, metal washers, rivets, nails, &c. No. 116,929; June 5; v. 239; p. 314.

Elder Manufacturing Co., St. Louis, Mo. Rompers and children's sleeping-garments. No. 116,889; June 5; v. 239; p. 313.

Elder Manufacturing Co., St. Louis, Mo. Sweaters and sweater-coats. No. 116,890; June 5; v. 239; p. 313.

Elder Manufacturing Co., St. Louis, Mo. Negligée, work, and under shirts. No. 116,891; June 5; v. 239; p. 313.

Elson, Ross J., New Haven, Conn. Tonic for horses and live stock. No. 116,892; June 5; v. 239; p. 313.

Emery Food Company, Chicago, Ill. Canned vegetables, fruits, and fish. No. 117,030; June 12; v. 239; p. 651.

Estes and Son, Van Wert, Ohio. Bananas. No. 117,031; June 12; v. 239; p. 651.

Etcheverry, Raul C., Buenos Aires, Argentina. Preparation for curing aphthæ and aphthous fever. No. 116,893; June 5; v. 239; p. 313.

Euvenol Company, Minneapolis, Minn. Certain named pharmaceutical preparations. No. 117,123; June 19; v. 239; p. 934.

F. Berg & Co., Orange, N. J. Hats for men. No. 116,938; June 5; v. 239; p. 315.

F. A. Hardy & Co., Chicago, Ill. Ophthalmic lenses. No. 117,138; June 19; v. 239; p. 935.

Farmers' Review, The, Chicago, Ill. House organ published intermittently. No. 116,948; June 5; v. 239; p. 315.

Farquhar-Moon Manufacturing Company, Chicago, Ill. Washing compounds in the form of tablets. No. 116,894; June 5; v. 239; p. 313.

Federal Export Corporation, New York, N. Y. Certain named cutlery, machinery, and tools, and parts thereof. No. 117,124; June 19; v. 239; p. 934.

Federal Export Corporation, New York, N. Y. Certain named electrical apparatus and supplies. No. 117,125; June 19; v. 239; p. 934.

Figved Importing Co., Portland, Me., and Chicago, Ill. Fish croquettes. No. 117,126; June 19; v. 239; p. 934.

Fink, William B., New York, N. Y. Soft drink, temperance beverage. No. 117,127; June 19; v. 239; p. 934.

Flora, Clarence M., Oklahoma, Okla. Dress, negligée, and work shirts. No. 117,250; June 26; v. 239; p. 1205.

44 Cigar Company, Philadelphia, Pa. Cigars, cigarros, cheroots, and cigar-clippings. Nos. 117,128–31; June 19; v. 239; p. 934.

Frazar & Company, New York, N. Y. Calcined magnesia. No. 117,033; June 12; v. 239; p. 651.

Frederick Disinfectant Co., Atlanta, Ga. Antiseptic floor-dressing. No. 116,895; June 5; v. 239; p. 313.

Frederick Stearns & Co., Detroit, Mich. Perfumes. No. 116,927; June 5; v. 239; p. 314.

Fritch, Himes & Company, Oskaloosa, Iowa. Cigars. No. 117,132; June 19; v. 239; p. 934.

Fuel City Manufacturing Co., Clarksburg, W. Va. Turpentine cups and aprons. No. 117,251; June 26; v. 239; p. 1205.

Fulton Shoe Polish Company, Inc., New York, N. Y. Shoe-polish pastes. No. 117,133; June 19; v. 239; p. 934.

Genant & Flachsland, Syracuse, N. Y. Certain named foods. No. 117,034; June 12; v. 239; p. 651.

General Lead Batteries Company, Newark, N. J. Storage-battery plates. No. 117,134; June 19; v. 239; p. 934.

George Borgfeldt & Co., New York, N. Y. Glass jars, bowls, plates, vases, dishes, &c. No. 117,097; June 19; v. 239; p. 933.

George Borgfeldt & Co., New York, N. Y. Headwear for men, women, and children—viz., hats, caps, bonnets. No. 117,098; June 19; v. 239; p. 933.

George Borgfeldt & Co., New York, N. Y. Hats and caps for men, women, and children. No. 117,242; June 26; v. 239; p. 1205.

Glass, Elbert S., Cleveland, Ohio. Preparations for the treatment of certain named diseases. No. 116,896; June 5; v. 239; p. 313.

Globe Steel Company, The, Mansfield, Ohio. Metallic particles in grain, &c., forms for rubbing, polishing, and grinding purposes. No. 116,897; June 5; v. 239; p. 313.

Goldman Costume Co., New York, N. Y. Adhesive plasters. No. 117,135; June 19; v. 239; p. 934.

Goldsmith, Charles H., Philadelphia, Pa. Crash and panama cloths, imitation panama fabric. No. 117,252; June 26; v. 239; p. 1205.

Goldsmith, Stern & Co., New York, N. Y. Finger-rings No. 116,950; June 5; v. 239; p. 315.

Gordon, Lucy D., New York, N. Y. Certain named ladies' and misses' clothing. No. 117,136; June 19; v. 239; p. 935.

Graphic Duplicator Company, New York, N. Y. Duplicators. No. 117,253; June 26; v. 239; p. 1205.

Greenbaum, Jacob L., Toledo, Ohio. Catarrh treatment and remedy for treating certain named diseases. No. 117,035; June 12; v. 239; p. 651.

Gunning, Frederick C., New York, N. Y., assignor to Wid's Film & Film Folk, Inc. Magazines issued weekly. No. 116,951; June 5; v. 239; p. 315.

H. M. Sawyer & Son, East Cambridge, Mass. Waterproof coats, slickers, jackets, pants, hats, aprons, and ponchos. No. 117,270; June 26; v. 239; p. 1206.

H. W. Carter Paper Company, Springfield, Mass. Certain named paper and stationery. No. 117,246; June 26; v. 239; p. 1205.

H. W. Johns-Manville Company, New York, N. Y. Asbestos sheet-packing. No. 117,155; June 19; v. 239; p. 935.

Hager, Clark & Co., New York, N. Y. Woolen piece goods. No. 116,898; June 5; v. 239; p. 313.

Hager, Clark & Co., New York, N. Y. Woolen piece goods. No. 117,036; June 12; v. 239; p. 651.

Hallock, Thomas B., Brooklyn, N. Y. Ventilators. No. 117,137; June 19; v. 239; p. 935.

Haaf, Frederick S., New York, N. Y. Indigestion, flatulency, vertigo, &c. No. 117,037; June 12; v. 239; p. 651.

Helburn Leather Company, Salem, Mass., assignor to Helburn Thompson Company. Shoe-cloth. No. 116,899; June 5; v. 239; p. 313.

Helburn Thompson Company. (See Helburn Leather Company, assignor.)

Herzog, Moses, New York, N. Y. Hair-nets. No. 117,038; June 12; v. 239; p. 651.

Hexagon Sewing Machine Company, New York, N. Y. Sewing-machines, parts thereof. Nos. 117,141–4; June 19; v. 239; p. 935.

Hickey, Ellen, Los Angeles, Cal. Remedy for rheumatism. No. 117,039; June 12; v. 239; p. 651.

Hill Pump Valve Company, The, Chicago, Ill. Automobile-heaters utilizing the exhaust from explosive-engines. No. 116,952; June 5; v. 239; p. 315.



Hinckel Brewery Company, Albany, N. Y. Brewed malt beverages. No. 116,900; June 5; v. 239; p. 314.

Hinds, Aurelius S., Portland, Me. Talcum powder. No. 116,901; June 5; v. 239; p. 314.

Ho-Maydc Products Co., Detroit, Mich. Yeast-flour. No. 117,041; June 12; v. 239; p. 651.

Holbrook Mfg. Co., The, Jersey City, N. J. Scouring-soap. No. 117,256; June 26; v. 239; p. 1205.

Holland Food Corporation, New York, N. Y. Condensed milk. No. 117,040; June 12; v. 239; p. 651.

Home Products Company, The, Newburgh, N. Y. Extract of lemon for flavoring foods. No. 117,042; June 12; v. 239; p. 651.

Home Rubber Co., Trenton, N. J. Asbestos-fiber sheet-packing. No. 117,145; June 19; v. 239; p. 935.

Horn-Shafer Company, The, Baltimore, Md. Publications issued biannually. No. 117,146; June 19; v. 239; p. 935.

Howard, Frank W., New York, N. Y. Rain-coats. No. 116,953; June 5; v. 239; p. 315.

Hudson Mechanical Rubber Co., New York, N. Y. Canvas, rubber, leather, and combination canvas and rubber beltings. No. 117,147; June 19; v. 239; p. 935.

I. Ollendorff Co., New York, N. Y. Watchcases and watch-movements. Nos. 116,972–3; June 5; v. 239; p. 316.

Interstate Cartoon Co., New York, N. Y. Exercising apparatus in the form of dumb-bells. No. 117,148; June 19; v. 239; p. 935.

Interstate Cotton Oil Refining Co., Sherman, Tex. Lard substitute. No. 117,149; June 19; v. 239; p. 935.

Interstate Cotton Oil Refining Co., Sherman, Tex. Shortening. No. 117,150; June 19; v. 239; p. 935.

Interstate Cotton Oil Refining Co., Sherman, Tex. Lard substitute. No. 117,151; June 19; v. 239; p. 935.

J. & J. Kohn, Inc., New York, N. Y., and Chicago, Ill. Certain named furniture. No. 117,160; June 19; v. 239; p. 935.

J. A. Folger & Company, San Francisco, Cal. Tea. No. 117,032; June 12; v. 239; p. 651.

J. H. Michaels Co., New York, N. Y. Fresh oysters. No. 117,048; June 12; v. 239; p. 652.

James S. Kirk & Company, Chicago, Ill. Talcum, sachet, and face powders, perfume, cold-cream, toilet water. No. 117,043; June 12; v. 239; p. 651.

Jaritz, Benjamin A., New York, N. Y. Booklets and circulars for advertising a collection-service. No. 117,152; June 19; v. 239; p. 935.

Jeannette Glass Co., Jeannette, Pa. Sidewalk glass lights. No. 116,954; June 5; v. 239; p. 315.

Jenkins Bros., Elizabeth, N. J., and New York, N. Y. Metallic valves and parts thereof. No. 117,154; June 19; v. 239; p. 935.

John Chatillon & Sons, New York, N. Y. Weighing-scales. No. 116,883; June 5; v. 239; p. 313.

John F. Jelke Company, Chicago, Ill. Oleomargarin. No. 117,153; June 19; v. 239; p. 935.

John S. Tilley Ladders Co., The, Watervliet, N. Y. Ladders. No. 116,992; June 5; v. 239; p. 316.

Johnsen and Klidac. (See Quevedo, José, assignor.)

Johnson & Johnson, New Brunswick, N. J. Suspensory bandages or jock-straps. No. 117,156; June 19; v. 239; p. 935.

Joseph, New York, N. Y. Ladies' hats, bonnets, toques, cloaks, dresses, and outer suits. No. 116,955; June 5; v. 239; p. 315.

Joseph Frackman Company, Inc., New York, N. Y. Settings for precious stones. No. 116,949; June 5; v. 239; p. 315.

Kelley-Clarke Co., Seattle, Wash. Canned salmon. No. 117,157; June 19; v. 239; p. 935.

Kelley, William J., assignor to The N. K. Fairbank Company, Chicago, Ill. Shaving cream, powder, and stick. No. 117,158; June 19; v. 239; p. 935.

Kinloch, Elinor L., Chelsea, London, England. Certain named household furniture. No. 117,159; June 19; v. 239; p. 935.

Krouser, Gust, Parsons, Pa. Preparation for the treatment of diarrhœa and dysentery. No. 117,044; June 12; v. 239; p. 651.

L. Candee & Company, New Haven, Conn. Rubber boots and shoes. No. 116,939; June 5; v. 239; p. 315.

Landers, Frary & Clark, New Britain, Conn. Certain named electrical apparatus and supplies. No. 117,163; June 19; v. 239; p. 935.

Lange, Frederick W., Ensley, Ala. Ice-cream, condensed milk, milk powder, butter, cheese, &c. No. 117,164; June 19; v. 239; p. 935.

Lehman Bros. Inc., New York, N. Y. Chemises made of woven material. No. 116,904; June 5; v. 239; p. 314.

Lerman, Alexander, Philadelphia, Pa. Rye-flour. No. 117,165; June 19; v. 239; p. 935.

Lesher, Whitman & Co. Inc., New York, N. Y. Certain knitted, netted, and textile fabrics. No. 117,045; June 12; v. 239; p. 651.

Lewis, John, Iron River, Mich. Preparation for the treatment of rheumatism. No. 116,905; June 5; v. 239; p. 314.

Liggett & Myers Tobacco Company, New York, N. Y. Cigarettes. No. 117,166; June 19; v. 239; p. 935.

Linden, Ernst, Hamilton, Ohio. Cigars. No. 116,957; June 5; v. 239; p. 315.

Lindenmeyr & Sons, Henry, New York, N. Y. Printing and writing paper. No. 116,958; June 5; v. 239; p. 315.

Linenwear Hosiery Company Inc., Clifton Heights, Pa. Hosiery. No. 117,258; June 26; v. 239; p. 1205.

Lion, Edwin E., New York, N. Y. Boys' outer suits, jackets, overcoats, hats, caps, &c. No. 117,167; June 19; v. 239; p. 935.

Littauer Brothers, New York, N. Y. Fabric gloves. No. 116,906; June 5; v. 239; p. 314.

Loose Wiles Company, Kansas City, Mo. Chocolate candy. No. 117,168; June 19; v. 239; p. 936.

Louisville Cement Company, Louisville, Ky. Building-cement. No. 117,169; June 19; v. 239; p. 936.

Lowenstein, Daniel, New York, N. Y. Certain pharmaceutical preparations for toilet purposes. No. 116,907; June 5; v. 239; p. 314.

Lyon & Healy, Chicago, Ill. Cornets, trombones, altos, melophones, baritones, basses, saxophones. No. 116,959; June 5; v. 239; p. 315.

Maas Baking Co., New York, N. Y. Prepared food product made from flour and eggs similar to noodles in its uses. No. 117,046; June 12; v. 239; p. 652.

MacAndrews & Forbes Company, Camden, N. J. Dyewood extracts. No. 116,908; June 5; v. 239; p. 314.

Macy & Co., R. H., New York, N. Y. Sheets and pillow-cases. No. 116,910; June 5; v. 239; p. 314.

Macy & Co., R. H., New York, N. Y. Silks in the piece. No. 116,911; June 5; v. 239; p. 314.

Macy & Co., R. H., New York, N. Y. Gloves. Nos. 117,171–5; June 19; v. 239; p. 936.

Marlcatte et Cie., Indianapolis, Ind. Perfumes, toilet waters, rouge, face and dental creams, powders. No. 116,912; June 5; v. 239; p. 314.

Marlon Dress Co., New York, N. Y. Ladies' dresses. No. 116,961; June 5; v. 239; p. 315.

Marks, Albert F., Park Falls, Wis. Powders for treating certain named affections. No. 117,047; June 12; v. 239; p. 652.

Martin L. Hall Company, Boston, Mass. Coffee. No. 117,254; June 26; v. 239; p. 1205.

Marvel Engineering Company, Chicago, Ill. Grease-cups for automobiles, motors, and other vehicles and machinery. No. 117,176; June 19; v. 239; p. 936.

Mathews, Henry H., Boston, Mass. Roofing-slate. No. 117,177; June 19; v. 239; p. 936.

Matthews & Sons, Geo. B., New Orleans, La. Stock feed. No. 117,178; June 19; v. 239; p. 936.

Mauser Mill Company, Laurys Station, Pa. Wheat-flour. Nos. 117,179–81; June 19; v. 239; p. 936.

May, George W., Morgantown, W. Va. Catalogues of newspapers and periodicals. No. 116,962; June 5; v. 239; p. 315.

May Hosiery Mills, Burlington, N. C. Hosiery. No. 117,260; June 26; v. 239; p. 1205.

Mays Mills, Inc., Mayworth, N. C. Carded and combed cotton yarns. No. 116,963; June 5; v. 239; p. 315.

McKesson & Robbins, Incorporated, New York, N. Y. Monthly periodicals. No. 116,960; June 5; v. 239; p. 315.

McKibbin, Driscoll & Dorsey, Inc., St. Paul, Minn. Sheepskin-lined coats. No. 117,170; June 19; v. 239; p. 936.

McLeod, William A., South Bend, Ind. Cathartics. No. 116,909; June 5; v. 239; p. 314.

McMechen, Frank L., San Diego and Los Angeles, Cal. Certain named devices for gas-engines. No. 117,259; June 26; v. 239; p. 1205.

Meeker, Channing D., Bedford, Ohio. Coupon-books of address-labels for use on all manner of packages. No. 116,913; June 5; v. 239; p. 314.

Metric Packing Company, Buffalo, N. Y. Certain named machinery packing. No. 117,182; June 19; v. 239; p. 936.

Meuser & Meuser, Chicago, Ill. Duplicating-inks. No. 116,964; June 5; v. 239; p. 315.

Midland Tire & Rubber Co., The, Cleveland, Ohio. Certain named tires, belting, hose, and tire-shoes. No. 116,966; June 5; v. 239; p. 315.

Mihalovitch Brothers Company, The, Cincinnati, Ohio. Certain named chemicals and pharmaceutical preparations. No. 117,277; June 26; v. 239; p. 1206.

Milton Bradley Co., Springfield, Mass. Games. No. 117,183; June 19; v. 239; p. 936.

Minassian, David D., New York, N. Y. Cigarettes. No. 116,967; June 5; v. 239; p. 315.

Mishawaka Woolen Manufacturing Company, Mishawaka, Ind. Light-weight rubbers. Nos. 116,914–16; June 5; v. 239; p. 314.

Mishawaka Woolen Manufacturing Company, Mishawaka, Ind. Composition soles used on rubber and woolen footwear. No. 116,917; June 5; v. 239; p. 314.

Mississippi Lumber Company, Chicago, Ill. Hardwood and pine lumber. No. 117,184; June 19; v. 239; p. 936.

Monitor Stove & Range Co., The, Cincinnati, Ohio. Hot-air furnaces. No. 117,185; June 19; v. 239; p. 936.

Mono Service Cream Co., Knoxville, Tenn. Ice-cream, butter, milk, and sweet cream. No. 117,049; June 12; v. 239; p. 652.

Mueller Wild Co., Milwaukee, Wis. Canned tomatoes, corn, peas, pork and beans, wax and refugee beans. No. 117,050; June 12; v. 239; p. 652.

Muller, Gustav A. H., New York, N. Y. Ready-mixed paints. No. 117,261; June 26; v. 239; p. 1205.

Mutual Creamery Company, Salt Lake City, Utah. Creamery-butter. Nos. 117,186–7; June 19; v. 239; p. 936.

N. K. Fairbank Company. (See Kelley, William J., assignor.)

Naas-Sanderson Co., Evansville, Ind. Coffee in packages. No. 117,051; June 12; v. 239; p. 652.
National Carbon Company, Cleveland, Ohio, assignor to National Carbon Co. Arc-lamp electrodes. No. 117,188; June 19; v. 239; p. 936.
National Carbon Company, Long Island City, N. Y. Portable electric lights and dry batteries. No. 117,262; June 26; v. 239; p. 1205.
National Fruit Juice Company, La Fayette, Ind. Apple-juice. No. 117,189; June 19; v. 239; p. 936.
National Petroleum Publishing Company, The, Cleveland, Ohio. Monthly periodical. No. 116,968; June 5; v. 239; p. 316.
National Smelting & Refining Corporation, New York, N. Y. Platinum, gold, and silver solders. No. 117,263; June 26; v. 239; p. 1205.
Nelson-Rhoads Candy Co., The, Denver, Colo. Chocolates. No. 117,190; June 19; v. 239; p. 936.
New York Mills Corporation, New York Mills, N. Y. Velvets and velveteens. No. 116,969; June 5; v. 239; p. 316.
Niagara Silk Mills, North Tonawanda, N. Y. Certain named women's clothing. No. 116,970; June 5; v. 239; p. 316.
Nocatee Citrus Growers' Association, Nocatee, Fla. Oranges, grape-fruit, lemons, and all citrus fruits. No. 117,052; June 12; v. 239; p. 652.
North American Watch Co. inc., Mansfield, Ohio. Clocks and watches and the works for the same. No. 117,053; June 12; v. 239; p. 652.
North Western Company, Chicago, Ill. Soft drink or beverage. No. 116,918; June 5; v. 239; p. 314.
Novelty Mill Company, Seattle, Wash. Wheat flour and cereal. No. 117,191; June 19; v. 239; p. 936.
Nygaard, John O., Christiania, Norway. Press-buttons or separable fasteners. No. 117,192; June 19; v. 239; p. 936.
Ohio State Stove Co., The, Columbus, Ohio. Wood, coal, gas, oil, and vapor stoves and ranges. No. 116,971; June 5; v. 239; p. 316.
Oliver Brothers, Inc., New York, N. Y. Fire-brick, lining for furnaces, smelters, boilers, cupolas, stoves. No. 117,193; June 19; v. 239; p. 936.
Omaha Beverage Company, Omaha, Nebr. Non-alcoholic beverage sold as a soft drink. No. 116,974; June 5; v. 239; p. 316.
Onondaga Steel Company, Incorporated, Syracuse, N. Y. Steel. No. 117,194; June 19; v. 239; p. 936.
Otto Higel Company, Inc., Buffalo, N. Y. Player-actions for pianos. No. 117,255; June 26; v. 239; p. 1205.
Overseas Products Corporation, New York, N. Y. Canned goods. No. 117,195; June 19; v. 239; p. 936.
P. Ballantine & Sons, Newark, N. J. Ginger-ale. No. 117,241; June 26; v. 239; p. 1205.
P. E. Harris & Co., Seattle, Wash. Canned salmon. No. 117,130; June 19; v. 239; p. 935.
Pacific Coast Biscuit Company, Seattle, Wash. Biscuits. No. 117,055; June 12; v. 239; p. 652.
Pacific Novelty Company, New York, N. Y. Barrettes. No. 116,975; June 5; v. 239; p. 316.
Panama Rice Milling Co., New Orleans, La. Rice. No. 117,056; June 12; v. 239; p. 652.
Paul F. Beich Co., Bloomington, Ill. Chocolates and confections. No. 117,021; June 12; v. 239; p. 651.
Peerless Thinner Company, The, Baltimore, Md. Paint-thinning materials. No. 116,976; June 5; v. 239; p. 316.
Peet Bros. Mfg. Co., Kansas City, Kans. Soap. No. 117,196; June 19; v. 239; p. 936.
Perin, Inc., New York, N. Y. Deodorant. No. 116,919; June 5; v. 239; p. 314.
Perkins Brothers, Bay City, Mich. Peanut-butter. No. 117,197; June 19; v. 239; p. 936.
Peterson, Harold G., Chicago, Ill. Dressed poultry. No. 117,198; June 19; v. 239; p. 936.
Piner, Frederick, Los Angeles, Cal. Silver-polish. No. 116,920; June 5; v. 239; p. 314.
Portland Flouring Mills Company, Portland, Oreg. Wheat-flour. No. 117,199; June 19; v. 239; p. 936.
Portland Flouring Mills Company, Portland, Oreg. Wheat-flour. (self-rising.) No. 117,200; June 19; v. 239; p. 936.
Portland Flouring Mills Company, Portland, Oreg. Wheat-flour. No. 117,201; June 19; v. 239; p. 936.
Pupulidy Brothers, New York, N. Y. Cigarettes. No. 116,977; June 5; v. 239; p. 316.
Quevedo, José, assignor to Johnsen and Kildac, New York, N. Y. Condiments. No. 117,057; June 12; v. 239; p. 652.
R. E. Tongue & Bros. Co., Philadelphia, Pa. Fruit-jar rings. No. 117,271; June 26; v. 239; p. 1206.
R. J. Reynolds Tobacco Company, Winston-Salem, N. C. Plug and twist tobacco. No. 117,203; June 19; v. 239; p. 936.
Radbridge Company, Inc., New York, N. Y. Score-pads. No. 117,264; June 26; v. 239; p. 1206.
Ramashauski, Klemens S., Chicago, Ill. Medicine as a remedy for diseases of the lungs, coughs, catarrh, and asthma. No. 117,058; June 12; v. 239; p. 652.
Randolph Marketing Co., San Francisco, Cal. Oranges and lemons. No. 117,265; June 26; v. 239; p. 1206.
Randville, Loova A., Grand Rapids, Mich. Leather belting. No. 116,978; June 5; v. 239; p. 316.
Rather, Oscar A., Milwaukee, Wis. Cough-drops. No. 117,059; June 12; v. 239; p. 652.
Realty Service Publishing Co., by change of name Realty Publishing Co., Newark, N. J. Monthly magazine or periodical. No. 116,979; June 5; v. 239; p. 316.
Republic Metalware Co., The, Buffalo, N. Y. Certain named receptacles made of metal. No. 117,202; June 19; v. 239; p. 936.
Rice-Stix Dry Goods Company, St. Louis, Mo. Hosiery. No. 116,921; June 5; v. 239; p. 314.
Richmond Lace Works, Alton, R. I. Lace. No. 117,061; June 12; v. 239; p. 652.
Robert Reis & Co., New York, N. Y. Underwear as follows: shirts, drawers, and union-suits. No. 117,060; June 12; v. 239; p. 652.
Rochester Button Company, Rochester, N. Y. Buttons for attachment to wearing-apparel. No. 116,980; June 5; v. 239; p. 316.
Rub-No-More Co., Fort Wayne, Ind. Soap. No. 117,266; June 26; v. 239; p. 1206.
Ruge Bro's Canning Co., Apalachicola, Fla. Canned shrimp. No. 117,204; June 19; v. 239; p. 936.
Ruggles-Coles Engineering Co., New York, N. Y.; Chicago, Ill., and York, Pa. Driers for driving off free moisture from various materials. No. 116,981; June 5; v. 239; p. 316.
Russia Cement Company, Gloucester, Mass. Poultry food. No. 117,062; June 12; v. 239; p. 652.
S. H. Kress & Company, New York, N. Y. Hosiery. Nos. 116,902–3; June 5; v. 239; p. 314.
S. S. Kresge Co., Detroit, Mich. Catalogues, folders, printed books, valentines, &c. No. 116,956; June 5; v. 239; p. 315.
Salt's Textile Manufacturing Company, The, Bridgeport, Conn., and New York, N. Y. Woven fabric in the piece. No. 117,267; June 26; v. 239; p. 1206.
Salt's Textile Manufacturing Company, The, Bridgeport, Conn., and New York, N. Y. Women's, children's, and infants' coats, cloaks, wraps, and capes. No. 117,268; June 26; v. 239; p. 1206.
Salt's Textile Manufacturing Company, Bridgeport, Conn., and New York, N. Y. Women's, children's, and infants' coats, cloaks, wraps, dresses, &c. No. 117,269; June 26; v. 239; p. 1206.
Samek & Lobel, New York, N. Y. Ladies' blouses and sport-coats. No. 116,922; June 5; v. 239; p. 314.
Samstag & Hilder Bros., New York, N. Y. Toilet and safety pins, hooks, eyes, shoe and corset laces, snap-fasteners, dressing-combs. No. 116,982; June 5; v. 239; p. 316.
Samstag & Hilder Bros., New York, N. Y. Corset-laces, lingerie, and soutache braids, ptn and doll cushions, &c. No. 116,983; June 5; v. 239; p. 316.
San Fernando Heights Lemon Co., Los Angeles, Cal. Lemons, oranges, and grape-fruit. No. 117,205; June 19; v. 239; p. 936.
Schlesinger Radium Co., Denver, Colo. Luminous compounds. No. 117,063; June 12; v. 239; p. 652.
Scholl Manufacturing Company, Inc., Chicago, Ill. Corn-plasters. No. 117,206; June 19; v. 239; p. 936.
Scholl Manufacturing Company, Inc., Chicago, Ill. Instep-arch supports. No. 117,207; June 19; v. 239; p. 937.
Schuylkill Silk Mills, Reading, Pa. Silk cloth in the piece, both knitted and textile. No. 116,985; June 5; v. 239; p. 316.
Scott & Bowne, Bloomfield, N. J. Antiseptic solution. No. 117,208; June 19; v. 239; p. 937.
Seamless Rubber Company, The, New Haven, Conn. Tennis-balls. No. 116,923; June 5; v. 239; p. 314.
Sears, Roebuck and Co., Chicago, Ill. Stock foods. No. 117,064; June 12; v. 239; p. 652.
Sears, Roebuck and Company, Chicago, Ill. Wringers and parts thereof. No. 117,209; June 19; v. 239; p. 937.
Sears, Roebuck and Co., Chicago, Ill. Knockdown houses. No. 117,210; June 19; v. 239; p. 937.
Sears, Roebuck and Co., Chicago, Ill. Folding shopping-bag. No. 117,211; June 19; v. 239; p. 937.
Seattle Grain Co., Seattle, Wash. Wheat-flour. No. 117,065; June 12; v. 239; p. 652.
Seidenspinner, George J., Cincinnati, Ohio. Liniment for rheumatism, scalds, burns, sprains, backache. No. 116,924; June 5; v. 239; p. 314.
Semple Rubber Company, Trenton, N. J. Inner tubes for automobile and motor-cycle pneumatic tires. No. 116,986; June 5; v. 239; p. 316.
Shapleigh Hardware Company, St. Louis, Mo. Clocks. Nos. 116,987–8; June 5; v. 239; p. 316.
Shearer Co., S., The, Sinking Spring, Pa. Remedy for la grippe, hay-fever, asthma, bronchitis, &c. No. 116,925; June 5; v. 239; p. 314.
Sherman, Edgar P., Woodward, Ala. Liver-tonic. No. 117,212; June 19; v. 239; p. 937.
Silverman, Morris R., New York, N. Y. Women's, misses', juniors', and girls' suits and coats. No. 116,989; June 5; v. 239; p. 316.
Smith & Kaufmann, New York, N. Y. Silk piece goods and ribbons. No. 117,066; June 12; v. 239; p. 652.
Speedway Motor Oil Co., New York, N. Y. Illuminating, lubricating, and burning oils and greases. No. 117,213; June 19; v. 239; p. 937.
Spencer, William E., New York, N. Y. Adhesive vulcanizing patches and fabrics. No. 117,214; June 19; v. 239; p. 937.
Staybestos Manufacturing Company, Philadelphia, Pa. Brakelinings. No. 117,216; June 19; v. 239; p. 937.



Sterling Products Company, Inc., Brooklyn, N. Y. Certain named chemical and pharmaceutical preparation. No. 116,928; June 5; v. 239; p. 314.
Sternfeld and Polin, Philadelphia, Pa. Ladies' shirt-waists. No. 116,990; June 5; v. 239; p. 316.
Stewart-Warner Speedometer Corporation, Chicago, Ill. Spark-plugs. No. 117,216; June 19; v. 239; p. 937.
Stewart-Warner Speedometer Corporation, Chicago, Ill. Electric lamps. Nos. 117,217–18; June 19; v. 239; p. 937.
Stuttgart Rice Mill Company, Stuttgart, Ark. Rice, rice-bran, and rice-polish used for a stock food. No. 117,067; June 12; v. 239; p. 652.
Taylor, Marshall W., Philadelphia, Pa. Overalls for men, women, boys, and girls. No. 117,068; June 12; v. 239; p. 652.
Taylor, Stewart K., Mobile, Ala. Logs. No. 116,991; June 5; v. 239; p. 316.
Terraplastica Manufacturing Co. Inc., Newark, N. J. Dental impression-trays. No. 117,219; June 19; v. 239; p. 937.
Todd, Thomas J. A., Watsonville, Cal. Ranch products—viz., fresh fruits, berries, and root crops; poultry, and eggs. No. 117,220; June 19; v. 239; p. 937.
Toepfer & Schroff, Inc., New York, N. Y. Designs for print-cloth, wall-paper, and the like. No. 116,993; June 5; v. 239; p. 316.
Tomahawk Shoe Co., Tomahawk, Wis. Boots and shoes made of leather skins and textiles. No. 117,221; June 19; v. 239; p. 937.
Touraine Company, The, Boston, Mass. Chocolate coating for confectioners and bakers. No. 117,069; June 12; v. 239; p. 652.
Tracy Company, Inc., New London, Conn. Preparation for use in the treatment of constipation. No. 116,930; June 5; v. 239; p. 314
Tracy Company, Inc., New London, Conn. Preparation for use in the treatment for indigestion. No. 116,931; June 5; v. 239; p. 314.
Tracy Company, Inc., The, New London, Conn. Tablet triturates, compressed tablets, and chemical elements in lozenge form for certain-named uses. No. 116,994. June 5; v. 239; p. 316.
Tracy Company, Inc., The, New London, Conn. Preparation for use in the treatment for dyspepsia. No. 116,995; June 5; v. 239; p. 316.
Traub Manufacturing Company, The, Detroit, Mich. Finger-rings. No. 116,996; June 5; v. 239; p. 316.
Treo Company, Inc., New York, N. Y. Corsets and brassières. No. 116,998; June 5; v. 239; p. 316.
Troy Chemical Co., Binghamton, N. Y. Veterinary ointment. No. 116,997; June 5; v. 239; p. 316.
True's Oil Company, Spokane, Wash. Lubricating-oils. Nos. 117,222–4; June 19; v. 239; p. 937.
Tube Brush Co., Boston, Mass. Brush for polishing shoes. No. 117,225; June 19; v. 239; p. 937.
Tustin Lemon Association, Tustin, Cal. Lemons. No. 117,226; June 19; v. 239; p. 937.
Union Fish Co., San Francisco, Cal. Dried fish, and particularly codfish. No. 117,227; June 19; v. 239; p. 937.
Union Paper & Twine Company, The, Cleveland, Ohio. Printing, writing, and wrapping paper. No. 116,999; June 5; v. 239; p. 316.
United Breweries Co., Chicago, Ill. Beer. No. 117,000; June 5; v. 239; p. 316.
United Phonographs Corporation. (See Dennett, Fred A., assignor.)
United States Lacquer Company, Brooklyn, N. Y. Lacquer and thinners. No. 117,001; June 5; v. 239; p. 317.
United States Rubber Company, New York, N. Y. Rubberized air-craft fabrics. No. 117,002; June 5; v. 239; p. 317.
United States Rubber Company, New York, N. Y. Rubber boots and shoes and fabric shoes having rubber soles attached thereto by vulcanization. Nos. 117,003–5; June 5; v. 239; p. 317.
United States Spot Ground Corporation, Omaha, Nebr. Grounds. Nos. 117,228–9; June 19; v. 239; p. 937.
Van Landingham Co., C. E., Los Angeles, Cal. Canned sardines and tuna fish. No. 117,230; June 19; v. 239; p. 937.
Vanola Company, The, Winston-Salem, N. C. Cough-drops. No. 117,006; June 5; v. 239; p. 317.
Velvet Grip Shoe Co., Inc., New York, N. Y. Boots and shoes made of leather and canvas. No. 117,007; June 5; v. 239; p. 317.
Vineland Preserving Company, Jersey City, N. J. Macaroni. No. 117,070; June 12; v. 239; p. 652.
Vulcanite Manufacturing Co., Lindenhurst, N. Y. Snap-fasteners. No. 117,231; June 19; v. 239; p. 937.
W. D. Allen Manufacturing Company, Chicago, Ill. Machinery-belting formed of textile fabric. No. 116,933; June 5; v. 239; p. 315.
W. D. Kibler Co., Indianapolis, Ind. Lubricating-oil. No. 117,257; June 26; v. 239; p. 1205.
W. J. Hartzel Company, The, Pittsburgh, Pa. Eggs, butter, butterin, oleomargarin, and cheese. No. 117,140; June 19; v. 239; p. 935.
Wagner Manufacturing Company, The, Sidney, Ohio. Metal saucepan. No. 117,008; June 5; v. 239; p. 317.
Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft Schönau, near Chemnitz, Germany. Certain named paper and stationery. No. 117,009; June 5; v. 239; p. 317.
Waring-Underwood Company, The, Philadelphia, Pa. Certain named building construction. No. 117,232; June 19; v. 239; p. 937.
Warner Bros. Co., The, Bridgeport, Conn. Corsets. No. 117,010; June 5; v. 239; p. 317.
Waterbury Company, Jersey City, N. J., and New York, N. Y. Manila rope. No. 117,233; June 19; v. 239; p. 937.
Webb Packing Co., W. H., The, Bloomingdale, Ind. Certain named foods. No. 117,071; June 12; v. 239; p. 652.
Weideman Co., The, Cleveland, Ohio. Cigars. No. 117,011; June 5; v. 239; p. 317.
Weinberg, Max W., Newark, N. J. Preparation for the treatment of certain named diseases. No. 117,012; June 5; v. 239; p. 317.
Wid's Film & Film Folk. (See Gunning, Frederick C., assignor.)
Wilbraham Springs Company, Springfield, Mass. Carbonated soft drinks and syrup therefor. No. 117,013; June 5; v. 239; p. 317.
Williams, James W., Paragould, Ark. Pile remedy. No. 117,234; June 19; v. 239; p. 937.
Willow Springs Brewing Co., Omaha, Nebr. Non-intoxicating cereal beverage sold as a soft drink. No. 117,014; June 5; v. 239; p. 317.
Windmuller, Carolyn T., New York, N. Y. Certain named clothing for women. No. 117,072; June 12; v. 239; p. 652.
Wiss, Albert, Peekskill, N. Y. Finger-rings, lavallières, bracelets, brooches. No. 117,015; June 5; v. 239; p. 317.
Woodbury Shoe Company, Beverly, Mass. Canvas boots and shoes. No. 117,073; June 12; v. 239; p. 652.
Wortendyke Manufacturing Co., Richmond, Va. Toilet-paper and paper towels. Nos. 117,272–6; June 26; v. 239; p. 1206.
Yorkshire Creamery Co., Ottumwa, Iowa. Creamery-butter. No. 117,074; June 12; v. 239; p. 652.
Zieve, Rimal, Minneapolis, Minn. Fruit and vegetable compound for flavoring soft drinks. No. 117,016; June 5; v. 239; p. 317.

# ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

A. C. Henschel & Co., Chicago, Ill. "Francita." (For Cigars.) No. 20,163; June 19; v. 239; p. 938.
A. C. Henschel & Co., Chicago, Ill. "San Julia." (For Cigars.) No. 20,164; June 19; v. 239; p. 938.
Advance Automobile Accessories Corp., Chicago, Ill. "Advance Cork Insert Transmission Linings." (For Transmission-Linings.) No. 20,189; June 26; v. 239; p. 1207.
Albano, Francesco, New York, N. Y. "Albano's." (For Peppers.) No. 20,152; June 19; v. 239; p. 938.
Albano, Francesco, New York, N. Y. "Cuoco's." (For Tomatoes.) No. 20,178; June 19; v. 239; p. 938.
Albany Pharmacal Co. Inc., The, Albany, N. Y. "Sapofoam." (For Liquid Shampoo.) No. 20,190; June 26; v. 239; p. 1207.
Albrecht, William G., Baltimore, Md. "Al-Brento." (For Material for Cleaning Glass and Like Surfaces and for Preventing Depositing of Moisture on the Same.) No. 20,187; June 26; v. 239; p. 1207.
Alle-Rhume Remedy Company, Rochester, N. Y. "Allenrhu." (For Remedy for Rheumatism, Liver, Kidney, and Bowel Complaints.) No. 20,188; June 26; v. 239; p. 1207.
Allwood Lime Company, Allwood Siding, near Manitowoc, Wis. "Milk of Magnesia Lime." (For a Manufactured Lime Product.) No. 20,177; June 19; v. 239; p. 938.
American Lithographic Company, New York, N. Y. "Seleccion Especial Cigars." (For Cigars.) No. 20,151; June 19; v. 239; p. 938.
Anaheim Citrus Fruit Association, Anaheim, Cal. "Anaheim Supreme." (For Oranges.) No. 20,136; June 5; v. 239; p. 318.
Atlantic Beverage Company, Petersburg, Va. "Blue Bird Ginger Ale." (For Ginger-Ale.) No. 20,153; June 19; v. 239; p. 938.
Barnes, W. Porter, Santa Rosa, Cal. "Powerene." (For a Fuel Intensifier and Decarbonizer.) No. 20,137; June 5; v. 239; p. 318.
Beistle Company, The, Shippensburg, Pa. "Complete Party Outfit." (For Hallowe'en Decorations.) No. 20,179; June 19; v. 239; p. 938.
Burgess Battery Company, Madison, Wis. "Burgess Batteries Full Of Pep." (For Electric Batteries.) No. 20,139; June 5; v. 239; p. 318.
C. F. Burgess Laboratories, Madison, Wis. "Twin-Six." (For Electric Batteries.) No. 20,138; June 5; v. 239; p. 318.
California Associated Olive Growers, Inc., San Francisco, Cal. "Serra California Ripe Olives." (For Olives.) No. 20,140; June 5; v. 239; p. 318.
Chamberlain Company, The, Pittsburgh, Pa. "K K." (For Cleaning Compound.) No. 20,191; June 26; v. 239; p. 1207.
Connet, Hugh I., New York, N. Y., assignor to J. William Landenberger, Philadelphia, Pa. "Randolph Cuties." (For Children's Hosiery.) No. 20,180; June 19; v. 239; p. 938.
Copiay Cement Manufacturing Company, New York, N. Y. "Anchor Portland Cement." (For Portland Cement.) No. 20,181; June 19; v. 239; p. 938.
Dodge, Sweeney & Co., San Francisco, Cal. "Dodge." (For Canned Oysters.) No. 20,141; June 5; v. 239; p. 318.
E. W. Gates & Son Co., Richmond, Va. "Aden." (For Canned Sauer-Kraut.) No. 20,154; June 19; v. 239; p. 938.
E. W. Gates & Son Co., Richmond, Va. "Aden." (For Canned Mixed Vegetables.) No. 20,155; June 19; v. 239; p. 938.
E. W. Gates & Son Co., Richmond, Va. "Aden." (For Canned Peaches.) No. 20,156; June 19; v. 239; p. 938.
E. W. Gates & Son Co., Richmond, Va. "Aden." (For Canned Beans.) No. 20,157; June 19; v. 239; p. 938.
E. W. Gates & Son Co., Richmond, Va. "Aden." (For Canned Corn.) No. 20,158; June 19; v. 239; p. 938.
E. W. Gates & Son Co., Richmond, Va. "Aden." (For Canned Peas.) No. 20,159; June 19; v. 239; p. 938.
E. W. Gates & Son Co., Richmond, Va. "Aden." (For Canned Tomatoes.) No. 20,160; June 19; v. 239; p. 938.
Elk Brewing Co., Kittanning, Pa. "Elko." (For a Non-Intoxicating Beverage.) No. 20,142; June 5; v. 239; p. 318.
Gem Fountain Pen Corporation, New York, N. Y. "Ford." (For Fountain-Pens.) No. 20,184; June 19; v. 239; p. 938.
Geo. Haas & Sons, San Francisco, Cal. "Diplomacy Chocolates." (For Chocolate Candy.) No. 20,143; June 5; v. 239; p. 318.
Gray, Emily G., Philadelphia, Pa. "Wyte All." (For Shoe-Polish.) No. 20,183; June 19; v. 239; p. 938.
H. W. Johns-Manville Company, New York, N. Y. "J-M Flexstone Asbestos Roofing." (For Asbestos Roofing.) No. 20,167; June 19; v. 239; p. 938.
Harrison, Harry S., Baltimore, Md. "Easy Feet Foot Powder." (For Foot-Powder.) No. 20,161; June 19; v. 239; p. 938.
Henschel & Co., A. C., Chicago, Ill. "Margona." (For Cigars.) No. 20,162; June 19; v. 239; p. 938.
Honytone Manufacturing Co., Boston, Mass. "Wino Maryanskie." (For Bitter Tonic.) No. 20,150; June 5; v. 239; p. 318.
Hutchins, Lucinda C., Philadelphia, Pa. "Lady Lu's Laxative." (For Cough-Syrup.) No. 20,145; June 5; v. 239; p. 318.
Inter-State Product Co., Baltimore, Md. "Bra-So." (For a Soft Drink.) No. 20,165; June 19; v. 239; p. 938.
Interstate Cotton Oil Refining Co., Sherman, Tex. "Grayson." (For Soap.) No. 20,166; June 19; v. 239; p. 938.
Interwoven Stocking Company, New Brunswick, N. J. "Interwoven Socks." (For Socks.) No. 20,185; June 19; v. 239; p. 938.
Knudsen's Laboratory, Los Angeles, Cal. "Youghurt Bulgarian Ferment." (For Bottled Fermented Milk.) No. 20,144; June 5; v. 239; p. 318.
Landenberger, J. William. (See Connet, Hugh I., assignor.)
Mankertz, Gus, Portland, Oreg. "Mankertz Malted Milk Bread." (For Bread.) No. 20,168; June 19; v. 239; p. 938.
Nafzigan, Ralph L., Kansas City, Mo. "Wel-Bak't Golden Crust Butter-Cream Bread." (For Bread.) No. 20,172; June 19; v. 239; p. 938.
National Drug & Mfg. Co., Clinton, Ky. "I Am Old Doc Carbo-Sal." (For a Medicine for Hog-Cholera.) No. 20,160; June 19; v. 239; p. 938.
Neo-Tono Medicine Company, Mayaquez, Porto Rico. "Neo-Tono." (For a Medicinal Tonic.) No. 20,146; June 5; v. 239; p. 318.
Newgass, Edward, New York, N. Y. "Tri-Way." (For Sport-Clothes.) No. 20,170; June 19; v. 239; p. 938.
Owl Drug Co., Davenport, Okla. "Germicide Ointment." (For an Ointment.) No. 20,147; June 5; v. 239; p. 318.
Palazzolo, Joseph, New York, N. Y. "French Eau De Quinine." (For Hair-Wash.) No. 20,173; June 19; v. 239; p. 938.
Pendergast, Daisy A., Minneapolis, Minn. "Pendergast Nutritious Bean Bread." (For Bread.) No. 20,182; June 19; v. 239; p. 938.
Progressive Glue Co., New York, N. Y. "Liquid Fish Glue." (For Glue.) No. 20,174; June 19; v. 239; p. 938.
Rowe Manufacturing Co., Galesburg, Ill. "Rowe's Medicated Oil." (For Medicated Oil.) No. 20,171; June 19; v. 239; p. 938.
Safe-Cabinet Company, The, Marietta, Ohio. "The World's Safest Safe." (For Safes.) No. 20,186; June 19; v. 239; p. 938.
Sanna Co., Inc., New York, N. Y. "Sanna." (For Cheese.) No. 20,148; June 5; v. 239; p. 318.
Taylor, Charles M., Jr., Maple Shade, N. J. "Taylor Butter-Pan." (For Butter-Pans.) No. 20,175; June 19; v. 239; p. 938.
Wagner, Henry, *et al.*, executors. (See Weinhard, Henry.)
Weinhard, Henry, deceased, Portland, Oreg.; Louise Weinhard and Anna Wessinger executrices, Paul Wessinger and Henry Wagner executors. "Appo." (For Unfermented Apple-Juice.) No. 20,176; June 19; v. 239; p. 938.
Weinhard, Louise, *et al.*, executrices. (See Weinhard, Henry.)
Wessinger, Anna, *et al.*, executrices. (See Weinhard, Henry.)
Wessinger, Paul, *et al.*, executors. (See Weinhard, Henry.)
Weinstein, Harry, New York, N. Y. "Pride of Scotland County." (For Cantaloups.) No. 20,149; June 5; v. 239; p. 318.

## PRINTS.

Arbuckle Bros., New York, N. Y. "Yuban Chosen for Men by Men." (For Yuban Coffee.) No. 4,711; June 26; v. 239; p. 1207.

Cream of Wheat Co., Minneapolis, Minn. "Open your mouth and shut your eyes, And I'll give you something to make you wise." (For Wheat Breakfast Food.) No. 4,706; June 19; v. 239; p. 938.

G. Mennen Chemical Co., Newark, N. J. "Mennen's Borated Talcum." (For Talcum Powder.) No. 4,713; June 26; v. 239; p. 1207.

G. Mennen Chemical Co., Newark, N. J. "Mennen's Cream Dentifrice." (For Cream Dentifrice.) No. 4,714; June 26; v. 239; p. 1207.

G. Mennen Chemical Co., Newark, N. J. "Mennen's Cold Cream." (For Cold-Cream.) No. 4,715; June 26; v. 239; p. 1207.

G. Mennen Chemical Co., Newark, N. J. "Mennen's Shaving Cream." (For Shaving-Cream.) No. 4,716; June 26; v. 239; p. 1207.

G. Mennen Chemical Co., Newark, N. J. "Mennen's Cream Dentifrice." (For Cream Dentifrice.) No. 4,717; June 26; v. 239; p. 1207.

James S. Kirk & Company, Chicago, Ill. "Jap Rose With The True Rose Odor." (For Talcum Powder.) No. 4,703; June 5; v. 239; p. 318.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Kellogg's Will Always Maintain Quality. You can be sure of Kellogg's—the Original Toasted Corn Flakes—the Flakes that are delicate and thin. Whatever the time or the tendency, the quality of Kellogg's has our pledge and warranty—the finest Corn Flakes possible to produce." (For Toasted Corn Flakes.) No. 4,702; June 5; v. 239; p. 318.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Try This Treat Krumbles With Fruit Or Berries. Every home in the land has a hearty welcome for Krumbles—the new whole wheat food, with its delicious flavor, and its high food value at a low price. Children like Krumbles, and it builds them up, because of the extra nutrition of Durum wheat which is rich in protein and mineral salts. Krumbles is appetizing with cream or milk, and a special treat with berries, sliced peaches, or bananas." (For a Cereal Breakfast Food.) No. 4,712; June 26; v. 239; p. 1207.

Moskowitz, Anton, New York, N. Y. "La Gera." (For Cigars.) No. 4,707; June 19; v. 239; p. 938.

Peters Manufacturing Co., Boston, Mass., and New York, N. Y. "Art-Reignskin – – – Newest Shoe Artistry." (For Shoe-Cloth.) No. 4,708; June 19; v. 239; p. 938.

Postum Cereal Company, Battle Creek, Mich. "A Happy Suggestion." (For Post Toasties.) No. 4,709; June 19; v. 239; p. 938.

Reuter, C. S., New York, N. Y. "A Seal of Satisfaction." (For Furniture.) No. 4,704; June 5; v. 239; p. 318.

Taylor, Charles M., Jr., Maple Shade, N. J. "Taylor Butter-Pan." (For Butter-Pans.) No. 4,710; June 19; v. 239; p. 938.

Ward Baking Co., New York, N. Y. "Ward's Tip-Top Bread." (For Bread.) No. 4,705; June 5; v. 239; p. 318.

Wicker, A. B., Chicago, Ill. "Off The Track But Perfectly Safe On Rubber Tires." (For Rubber Tires for Automobiles.) No. 4,718; June 26; v. 239; p. 1207.

## DISCLAIMERS.

Brand, Samuel, Rockford, Ill.; disclaimer filed by assignee, Barber-Colman Company. Article-positioning means. No. 1,095,977; disclaimer filed June 2, 1917; v. 239; p. 327.

Miner, William H., Chicago, Ill., Chazy, N. Y.; disclaimer filed by patentee. Tandem-spring draft-rigging for locomotive-tenders. No. 668,656; disclaimer filed May 31, 1917; v. 239; p. 1.



# ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

## PATENTS WERE ISSUED DURING THE MONTH OF JUNE, 1917.

[Abbreviations: "Gaz."—Official Gazette.]

Accelerator and system of control. A. J. Hall and L. G. Riley. No. 1,229,443; June 12; v. 239; p. 409.

Accelerator and system of control. A. J. Hall and L. G. Riley. No. 1,229,446; June 12; v. 239; p. 410.

Acetic acid, Making. H. Hibbert. No. 1,230,899; June 26; v. 239; p. 967.

Acid, Manufacture of hydrochloric. A. H. Peter. No. 1,229,509; June 12; v. 239; p. 431.

Adding-machine. A. A. Horton. No. 1,229,461; June 12; v. 239; p. 415.

Adding-machines, Full-stroke mechanism and overthrow-preventer for. W. J. Pasinski. No. 1,229,508; June 12; v. 239; p. 431.

Adhesive matter, Device for applying. H. Ichihara. No. 1,230,409; June 19; v. 239; p. 705.

Adjustable bracket. J. H. Crist and J. C. Schilken. No. 1,231,000; June 26; v. 239; p. 1004.

Advertising apparatus. S. Wadman. No. 1,230,348; June 19; v. 239; p. 747.

Aerial apparatus for defense against hostile aircraft and for other purposes. I. F. Taylor. No. 1,230,881; June 26; v. 239; p. 962.

Aeroplane. V. Ajello. No. 1,230,641; June 19; v. 239; p. 845.

Aeroplane. L. Béchereau. No. 1,228,390; June 5; v. 239; p. 5.

Aeroplane. J. R. Campbell. No. 1,229,410; June 12; v. 239; p. 399.

Aeroplane. O. Shudow. No. 1,228,705; June 5; v. 239; p. 113.

Aeroplane. F. E. Summers. No. 1,230,620; June 19; v. 239; p. 838.

Aeroplane. W. F. Williams. No. 1,228,729; June 5; v. 239; p. 121.

Aeroplane safety appliance. L. Pace. No. 1,229,649; June 12; v. 239; p. 480.

Air-borne ship, Mechanical. G. A. Chaddock. No. 1,229,713; June 12; v. 239; p. 500.

Air-brake safety-valve. M. H. Ryan. No. 1,229,325; June 12; v. 239; p. 370.

Air-brake stop. E. V. Palmquist and H. G. Lundquist. No. 1,230,767; June 19; v. 239; p. 885.

Air-brake system. J. R. Snyder. No. 1,231,081; June 26; v. 239; p. 1061.

Air-brakes, Electro-pneumatic valve for. T. W. Scott. No. 1,230,083; June 12; v. 239; p. 620.

Air, Carbureting. T. D. Bottome. No. 1,230,101; June 19; v. 239; p. 664.

Air-compressor and motor. A. Reall. No. 1,230,219; June 19; v. 239; p. 704.

Air-heater. W. N. Best. No. 1,231,117; June 26; v. 239; p. 1044.

Air-moistening apparatus. F. W. Masek. No. 1,228,801; June 5; v. 239; p. 146.

Air-motor. M. Clark. No. 1,230,995; June 26; v. 239; p. 1001.

Aircraft. J. P. Tarbox. No. 1,230,443; June 19; v. 239; p. 777

Alarm: *See*—
Automobile-alarm.
Burglar-alarm.
Fire-alarm.
Low-water alarm.
Thermostatic alarm.

Alarm apparatus. L. B. Davis. No. 1,229,723; June 12; v. 239; p. 503.

Alloy, Metal. H. S. Cooper. No. 1,229,037; June 5; v. 239; p. 223.

Alloys, Making low-carbon manganese. E. Humbert. No. 1,228,925; June 5; v. 239; p. 186.

Almond-huller. F. L. Martenette. No. 1,230,001; June 12; v. 239; p. 593.

Alternator, High-frequency. E. F. W. Alexanderson. No. 1,229,856; June 12; v. 239; p. 548.

Aluminum skimmings, screenings, slags, or analogous materials, Processing. P. R. Hersman. No. 1,229,611; June 12; v. 239; p. 467.

Amalgamating-mill. D. L. Penrod. No. 1,230,770; June 19; v. 239; p. 886.

Amalgamator. W. W. Dill. No. 1,230,135; June 19; v. 239; p. 675.

Anchoring device. M. M. Hjermstad. No. 1,230,711; June 19; v. 239; p. 867.

Anhydrous magnesium chlorids, Manufacture of. E. A. Ashcroft. No. 1,231,471; June 26; v. 239; p. 1161.

Animal-holding device. C. J. Cole. No. 1,229,888; June 12; v. 239; p. 558.

Animal-trap. C. W. Stockburger. No. 1,230,535; June 19; v. 239; p. 809.

Ankle support and protector. H. J. Collis. No. 1,231,332; June 26; v. 239; p. 1114.

Anticreeper. F. A. Preston. No. 1,228,597; June 5; v. 239; p. 76.

Antifrosting device. F. Schonger. No. 1,228,482; June 5; v. 239; p. 37.

Antiskid device. G. H. Martin. No. 1,231,181; June 26; v. 239; p. 1065.

Applying and sealing device, Automatic. G. W. Tyler. No. 1,230,240; June 19; v. 239; p. 711.

Apron and drain-pail, Combination. J. P. Mohler. No. 1,230,756; June 19; v. 239; p. 882.

Arch-support. L. Lobel. No. 1,229,300; June 12; v. 239; p. 361.

Arch-tubes, Protection for. L. Parish. No. 1,229,377; June 12; v. 239; p. 388.

Arcs, Means for describing circular and elliptic. J. A. Caldwell. No. 1,230,994; June 26; v. 239; p. 1001.

Argillaceous composition and making same. L. H. Minton. No. 1,228,465; June 5; v. 239; p. 31.

Armature cross-connectors, Support for. G. H. Krauskopf. No. 1,229,759; June 12; v. 239; p. 515.

Article-feeding means. W. A. Courtland. No. 1,230,870; June 26; v. 239; p. 958.

Article-lock. W. F. Schwartz. No. 1,229,663; June 12; v. 239; p. 484.

Ash-can. W. Sechase. No. 1,229,532; June 12; v. 239; p. 440.

Ash-receiver. J. S. Wise, Jr. No. 1,228,508; June 5; v. 239; p. 46.

Athlete's guard. F. Haggerty. No. 1,229,947; June 12; v. 239; p. 577.

Atomizer. J. J. Holland. No. 1,229,615; June 12; v. 239; p. 468.

Audion, Metallic. L. De Forest. No. 1,230,874; June 26; v. 239; p. 959.

Auto-extractor. G. O. Batchelder. No. 1,229,864; June 12; v. 239; p. 551.

Auto-limber. L. L. Driggs. No. 1,230,687; June 19; v. 239; p. 859.

Auto-puller. C. Davis. No. 1,229,901; June 12; v. 239; p. 563.

Automatic boiler. J. Hildebrand. No. 1,230,296; June 19; v. 239; p. 730.

Automatic brake. A. H. Alkire. No. 1,228,734; June 5; v. 239; p. 122.

Automatic furnace. E. Lundgren. No. 1,228,456; June 5; v. 239; p. 27.

Automatic lubricator. S. P. Bilyeu. No. 1,230,371; June 19; v. 239; p. 754.

Automatic sprinkler. R. S. Davidson. No. 1,228,412; June 5; v. 239; p. 13.

Automatic sprinkler. W. B. Hammond. No. 1,228,553; June 5; v. 239; p. 61.

Automatic switch. F. A. Kuntz. No. 1,229,294; June 12; v. 239; p. 359.

Automobile. J. H. Allen. No. 1,230,361; June 19; v. 239; p. 751.

Automobile. H. S. Hale. No. 1,229,746; June 12; v. 239; p. 511.

Automobile-accelerators, Foot-rest for. G. W. Boynton. No. 1,229,023; June 5; v. 239; p. 218.

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Automobiles, Wire-wheel carrier for. F. G. Llady. No. 1,231,393; June 26; v. 239; p. 1135.
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Axle-lubricating device and nut-lock, Combined. R. McGlaughlin. No. 1,231,180; June 26; v. 239; p. 1064.
Axle lubricator, Car-. O. Miller. No. 1,230,821; June 19; v. 239; p. 903.
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Bag: *See*—
Feed-bag. Golf-bag.
Bag. G. E. Strauss. No. 1,228,715; June 5; v. 239; p. 116.
Bag-frame fastener. L. Widlak. No. 1,229,845; June 12; v. 239; p. 545.
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Baking-pan. G. Mueller. No. 1,228,471; June 5; v. 239; p. 33.
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Valve-ball.
Ball-pitchers, Feed mechanism for mechanical. J. M. Kyle. No. 1,229,979; June 12; v. 239; p. 586.
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Draw-bar. Sine-bar.
Glazing-bar. Sickle-bar.
Barges, Connector for. W. C. Sansom. No. 1,231,067; June 26; v. 239; p. 1026.
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Barrel-lifting device. J. Karsten. No. 1,229,090; June 5; v. 239; p. 240.
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Bath cabinet, Vapor-. J. R. Wright. No. 1,231,466; June 26; v. 239; p. 1159.
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Portable battery.
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Battery plates, Making pasted storage-. L. H. Flanders. No. 1,228,547; June 5; v. 239; p. 59.
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Bed-spring, Adjustable. J. H. Willems. No. 1,229,561; June 12; v. 239; p. 450.
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Beds and the like, Corner-fastening for metal. L. Frank. No. 1,228,898; June 5; v. 239; p. 178.
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Beer, Producing yoghurt. W. Henneberg. No. 1,228,916; June 5; v. 239; p. 184.
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Belt, Power-transmission. M. D. Campbell. No. 1,228,528; June 5; v. 239; p. 53.
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Piano-bench.
Beverages, Composition of. N. Rosewater. No. 1,229,656; June 12; v. 239; p. 482.
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Dispensing-bin. Sanitary bin.
Flour-bin. Scoop-out bin.
Binder, Loose-leaf. C. M. Cott. No. 1,229,891; June 12; v. 239; p. 559.
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Die-block. Wheel-block.
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Block and tackle. W. Hood. No 1,230,164; June 19; v. 239; p. 685.
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Block-signal systems, Circuit-breaker for. M. R. Julian and J. V. Morris. No. 1,231,169; June 26; v. 239; p. 1061.
Block-signaling, Absolute and permissive. J. Shoecraft. No. 1,229,155; June 5; v. 239; p. 262.
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Drawing-board. Pressing-board.
Paper-board. Switchboard.
Plaster-board.
Boat-driving device. C. A. and O. W. Hult. No. 1,228,776; June 5; v. 239; p. 137.
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Bobbin-holder, Automatic ball-bearing. W. J. Sullivan. No. 1,231,217; June 26; v. 239; p. 1077.
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Bodies of extended discontinuously-associated particles of calcium carbonate and the product thereof, Producing. W. R. Seigle. No. 1,228,486; June 5; v. 239; p. 38.
Bodies of extended discontinuously-associated solid particles and the product thereof, Producing. W. R. Seigle. No. 1,228,485; June 5; v. 239; p. 37.
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Automatic boiler. Washboiler.
Locomotive-boiler. Water-tube boiler.
Pulp-boiler.
Boiler-arch construction. J. Warner. No. 1,231,224; June 26; v. 239; p. 1079.
Boiler-cleaner. F. McIlvane. No. 1,231,276; June 26; v. 239; p. 1095.
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Boiler stay-bolt. E. I. Dodds. No. 1,229,910; June 12; v. 239; p. 565.
Boiler stay-bolt, B. E. D. Stafford and E. I. Dodds. No. 1,230,048; June 12; v. 239; p. 608.
Boiler structure. W. Kane. No. 1,231,375; June 26; v. 239; p. 1128.
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Boiler water-gage. F. S. Young. No. 1,229,848; June 12; v. 239; p. 546.
Boilers, Flexible stay-bolt connection for. C. Hyland. No. 1,229,961; June 12; v. 239; p. 582.
Boil breaker and cleaner. T. L. Kinne. No. 1,231,171; June 26; v. 239; p. 1062.
Bolt: *See*—
Boiler stay-bolt. Stay-bolt.
Slide-bolt. Toggle-bolt.
Bolt-lock. H. Dempsey. No. 1,231,135; June 26; v. 239; p. 1050.
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Bonded fabric, Laminated, cohesive, interwound. L. A. Subers. No. 1,230,338; June 19; v. 239; p. 743.
Book, Check-. J. F. Shoemaker. No. 1,230,044; June 12; v. 239; p. 607.
Book-covers, Machine for shaping the backs of. J. C. Gourley. No. 1,230,292; June 19; v. 239; p. 729.
Book, Folding check-. J. P. Normann. No. 1,228,589; June 5; v. 239; p. 73.
Book holder and protector. E. B. Hess. No. 1,228,435; June 5; v. 239; p. 21.
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Book-mark. R. O. Pierce. No. 1,229,516; June 12; v. 239; p. 434.
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Booth. T. A. De Vilbiss. No. 1,229,046; June 5; v. 239; p. 225.
Boring-cutter. C. L. Dixon. No. 1,230,569; June 19; v. 239; p. 821.
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Boring-machine. E. J. Rollings. No. 1,230,034; June 12; v. 239; p. 604.
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Bottle-cap. V. R. Doncaster. No. 1,231,508; June 26; v. 239; p. 1172.
Bottle cap, Milk-. J. E. Hill. No. 1,228,775; June 5; v. 239; p. 137.
Bottle-closure. A. F. Foss. No. 1,229,436; June 12; v. 239; p. 407.
Bottle-holder. L. Solem. No. 1,228,612; June 5; v. 239; p. 81.
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Bottle, Liquid dispensing and filtering. H. E. Schulse. No. 1,228,837; June 5; v. 239; p. 158.
Bottle, Non-refillable. F. Q. Cuesta. No. 1,229,895; June 12; v. 239; p. 561.
Bottle receptacle, Milk-. J. Hoey. No. 1,229,268; June 12. v. 239; p. 350.
Bow-guide, L. Mollenhauer. No. 1,228,949; June 5; v. 239; p. 194.
Box: *See*—
Boiler fire-box. Fire-box.
Circuit extension-box. Flower-box.
Collapsible box. Folding box.
Display-box. Ice-box.
Harrowing-box. Journal-box.
Feed-box. Knockdown box.
File-box. Locomotive fire-box.

Box: *See*—Continued.
Mail-box. Talking-machine sound-box.
Match-box. Vanity-box.
Outlet-box. Wagon-box.
Phonograph sound-box. Wardrobe seat-box.
Stuffing-box.

Box-folding machine. C. F. Raynaud. No. 1,230,516; June 19; v. 239; p. 802.

Box-nailing machines, Hooping or strapping attachment for. A. Bluege. No. 1,230,989; June 26; v. 239; p. 999.

Box-panel. W. H. Doble. No. 1,228,760; June 5; v. 239; p. 131.

Box-planer. M. D. Diekman. No. 1,231,139; June 26; v. 239; p. 1051.

Brace: *See*—
Rail-brace. Steering-post brace.

Bracket: *See*—
Adjustable bracket. Ladder-bracket.
Guide-bracket. Shade-bracket.
Headlight-bracket.

Bracket. O. Mueller. No. 1,228,583; June 5; v. 239; p. 71.

Bracket. G. Ross. No. 1,230,521; June 19; v. 239; p. 804.

Bracket-support or the like. F. Erismann. No. 1,229,427; June 12; v. 239; p. 404.

Bracket-supporting construction. J. H. Crist. No. 1,230,990; June 26; v. 239; p. 1003.

Brake: *See*—
Automatic brake. Load-brake.
Electric brake. Pneumatic brake.
Emergency-brake. Railway-brake.
Fluid-pressure brake. Vehicle-brake.
Hemp-brake. Wagon-brake.

Brake. W. J. Miller. No. 1,229,119; June 5; v. 239; p. 250.

Brake-band. C. W. Landers. No. 1,229,624; June 12; v. 239; p. 471.

Brake device, Vacuum-. W. V. Turner. No. 1,230,950; June 26; v. 239; p. 985.

Brake-head. R. E. L. Meehan. No. 1,230,749; June 19; v. 239; p. 879.

Brake mechanism. S. A. Mathers. No. 1,230,002; June 12; v. 239; p. 593.

Brake mechanism, Vehicle-. S. M. Norberg. No. 1,229,314; June 12; v. 239; p. 366.

Brake-shoe. W. H. McDonough. No. 1,228,683; June 5; v. 239; p. 104.

Brake-shoes, Safety-lock for. E. Karl. No. 1,229,281; June 12; v. 239; p. 355.

Brake-valve device, Engineer's. W. V. Turner. No. 1,228,499; June 5; v. 239; p. 42.

Brake-valve, Engineer's. W. V. Turner. No. 1,228,500; June 5; v. 239; p. 43.

Brakes, Release-valve for vacuum-. W. V. Turner. No. 1,230,953; June 26; v. 239; p. 987.

Brakes, Take-up for momentum-. P. S. Morgan. No. 1,231,284; June 26; v. 239; p. 1099.

Braking system, Electric. J. T. Skinner. No. 1,230,935; June 26; v. 239; p. 980.

Brassière. D. Glasgow. No. 1,231,011; June 26; v. 239; p. 1007.

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Bread-mixer. C. Gensheimer. No. 1,229,934; June 12; v. 239; p. 572.

Breech mechanism, Power-operated. D. F. Asbury. No. 1,229,859; June 12; v. 239; p. 550.

Brick, Machine for producing ornamented. N. Allen. No. 1,230,362; June 19; v. 239; p. 751.

Brick manufacture. H. N. Kirby. No. 1,231,267; June 26; v. 239; p. 1093.

Brick, Marginal. E. P. Stevens. No. 1,229,389; June 12; v. 239; p. 392.

Bricks, Making. F. W. Butterworth. No. 1,229,582; June 12; v. 239; p. 457.

Bricks, Means for carrying out a process for burning. F. B. Lambert. No. 1,230,493; June 19; v. 239; p. 794.

Bridge, Ferry-. F. L. Du Bosque. (Reissue.) No. 14,313; June 5; v. 239; p. 284.

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Broiler. B. De Ganner. No. 1,229,591; June 12; v. 239; p. 460.

Brooder. E. Maurer. No. 1,229,113; June 5; v. 239; p. 248.

Brooder. E. Maurer. No. 1,230,917; June 26; v. 239; p. 973.

Broom. C. Brudsig. No. 1,229,027; June 5; v. 239; p. 219.

Brush, Foldable. E. O. Sundeen. No. 1,231,093; June 26; v. 239; p. 1036.

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Brush, Fountain-. F. Templeman. No. 1,228,847; June 5; v. 239; p. 162.

Brush, Gauze. E. O. Schweitzer. No. 1,228,484; June 5; v. 239; p. 37.

Brush-holder. C. E. Hecht. No. 1,228,774; June 5; v. 239; p. 137.

Brush-lifting mechanism. C. W. Steen. No. 1,228,710; June 5; v. 239; p. 114.

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Brushes, Manufacture of. E. E. Robinson. No. 1,230,518; June 19; v. 239; p. 803.

Bucket and trap, Minnow. C. L. Love. No. 1,231,034; June 26; v. 239; p. 1015.

Bucket apparatus, Drag-. A. L. Hanot. No. 1,228,554; June 5; v. 239; p. 61.

Bucket, Hoisting. E. E. Brosius. No. 1,228,526; June 5; v. 239; p. 52.

Bucket mounting, Excavator-. R. M. Downie. No. 1,228,654; June 5; v. 239; p. 94.

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Buckle. E. S. Colby. No. 1,231,130; June 26; v. 239; p. 1048.

Buckle, Belt-. W. B. Ballou. (Reissue.) No. 14,316; June 19; v. 239; p. 907.

Buckle, Belt-. S. George. No. 1,230,886; June 26; v. 239; p. 963.

Building construction, Support for sheet material in. B. Adey. No. 1,230,093; June 19; v. 239; p. 661.

Building-form. J. A. Stubkjare. No. 1,230,055; June 12; v. 239; p. 610.

Building-screed. A. T. Gibson. No. 1,231,010; June 26; v. 239; p. 1007.

Building, Sheet-metal. A. A. Kramer. No. 1,229,477; June 12; v. 239; p. 421.

Building, Sheet-metal. A. A. Kramer. No. 1,229,478; June 12; v. 239; p. 421.

Buildings, Device for connecting outside wires to. P. C. Ragatzky. (Reissue.) No. 14,312; June 5; v. 239; p. 284.

Bullet-lubricator. J. Kaschenbach. No. 1,229,969; June 12; v. 239; p. 584.

Burglar-alarm. J. O. Beneke. No. 1,230,267; June 19; v. 239; p. 720.

Burglar-alarm. L. A. Collins. No. 1,229,034; June 5; v. 239; p. 222.

Burglar-alarm. J. Hlavaty. No. 1,229,080; June 5; v. 239; p. 226.

Burglar-alarm. L. Weltzman. No. 1,230,247; June 19; v. 239; p. 713.

Burner: *See*—
Gas and oil burner. Long-time burner.
Hydrocarbon-burner. Oil-burner.
Inclosed forced-draft burner. Stove-burner.

Burner. A. J. Johnson. No. 1,231,369; June 26; v. 239; p. 1127.

Burner. J. W. Porter. No. 1,229,517; June 12; v. 239; p. 435.

Burners, Fuel-governor for oil-. J. C. Auckland and E. P. Hildebrand. No. 1,230,979; June 26; v. 239; p. 996.

Burners, Wick-tube for hydrocarbon-. C. W. Davis and W. S. Johnson. No. 1,229,043; June 5; v. 239; p. 224.

Burning powdered coal, Apparatus for. A. J. Grindle. No. 1,228,769; June 5; v. 239; p. 135.

Bushing. E. H. Waugh. No. 1,229,837; June 12; v. 239; p. 542.

Bushing, Self-oiling. J. D. Jones. No. 1,230,823; June 19; v. 239; p. 904.

Button. J. Heineman. No. 1,229,452; June 12; v. 239; p. 412.

Button. R. Seligmann. No. 1,230,804; June 19; v. 239; p. 897.

Button and necktie-holder, Combined back collar-. J. D. Romer. No. 1,230,519; June 19; v. 239; p. 804.

Button-blanking-out die. J. S. Birnzweig. No. 1,229,572; June 12; v. 239; p. 454.

Button, Collar-. F. Milos. No. 1,229,773; June 12; v. 239; p. 520.

Button-fastening machine. F. R. White. No. 1,230,965; June 26; v. 239; p. 990.

Button-feeding mechanism. L. R. Carley. No. 1,230,860; June 26; v. 239; p. 955.

Button-feeding mechanism. L. E. Poole. No. 1,229,134; June 5; v. 239; p. 255.

Button-setting machines, Tack-feeding mechanism for. F. E. Warner and W. T. Leggett. No. 1,229,173; June 5; v. 239; p. 269.

Button, Soft-collar. A. Hadley. No. 1,229,607. June 12; v. 239; p. 466.

Buttonhole-feeding mechanism. E. C. Gerstenberger. No. 1,230,698; June 19; v. 239; p. 863.

Cabinet. H. W. Bertram. No. 1,231,233; June 26; v. 239; p. 1082.

Cabinet. A. C. Erickson. No. 1,231,005; June 26; v. 239; p. 1005.

Cabinet, Card-index. F. S. Long. No. 1,231,274; June 26; v. 239; p. 1095.

Cabinet, Dispensing-. D. M. Ross. No. 1,229,525; June 12; v. 239; p. 438.

Cabinet, Revolving lace-. A. L. Brouillette. No. 1,228,878; June 5; v. 239; p. 172.

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Cabinet, Towel-. I. H. Shattuck. No. 1,229,533; June 12; v. 239; p. 440.





Cable-armoring machine. G. E. Mirfield and F. H. Nullmeyer. No. 1,230,008; June 12; v. 239; p. 596.

Cable-pothead. G. F. Mainer. No. 1,229,995; June 12; v. 239; p. 591.

Cable-reeling means. G. E. Mirfield and F. H. Nullmeyer. No. 1,230,009; June 12; v. 239; p. 596.

Cables and the like, Jack or device for spreading. G. R. Morris. No. 1,228,805; June 5; v. 239; p. 148.

Cadmium compound of the acridin series, and making the same. P. Hüssey and M. Hartmann. No. 1,228,926; June 5; v. 239; p. 186.

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Calculating appliance. P. B. Arrington and C. H. Miller. No. 1,228,385; June 5; v. 239; p. 3.

Calculating-machine. F. H. Bickford. No. 1,228,641; June 5; v. 239; p. 91.

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Camera, Motion-picture. J. A. Golden. No. 1,230,576; June 19; v. 239; p. 823.

Camera-shutter operating and timing instrument, Automatic. R. Mathews. No. 1,230,500; June 19; v. 239; p. 797.

Camera-shutter operating and timing instrument, Automatic. R. Mathews. No. 1,230,501; June 19; v. 239; p. 797.

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Ash-can. Oil-can.
Garbage-can.

Can container and server. T. J. Davis. No. 1,229,902; June 12; v. 239; p. 563.

Can-heading machine. J. Brenzinger. No. 1,230,556; June 19; v. 239; p. 816.

Can-opener. E. L. Funk. No. 1,228,900; June 5; v. 239; p. 178.

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Can-straightening machine. J. J. Kirkby. No. 1,229,292; June 12; v. 239; p. 358.

Can-straightening machine. H. T. Tait. No. 1,231,453; June 26; v. 239; p. 1155.

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Casein and albumin from creamery-sewage, Separation of. G. Ebrill and T. Kiersey. No. 1,229,919; June 12; v. 239; p. 568.
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Cut-out, Maximum. G. J. Van Swaay and H. I. Keus. No. 1,230,955; June 26; v. 239; p. 988.

Cutter: *See*—
Beet-cutter. Thread-cutter.
Boring-cutter. Vegetable-cutter.
Ice-cream cutter. Vegetable or fruit cutter.

Cutter. A. A. Arnold. No. 1,230,551; June 19; v. 239; p. 814.

Cyanamid, Apparatus for the manufacture of crude calcium. N. C. Tommasi. No. 1,230,343; June 19; v. 239; p. 745.

Cycle attachment, Auto-. J. Jaggard. No. 1,231,163; June 26; v. 239; p. 1059.

Cycle steering attachment. W. Schriver. No. 1,230,801; June 19; v. 239; p. 896.

Cycle-wheels, Spring-mounting for. L. W. Blanchard. No. 1,230,987; June 26; v. 239; p. 999.

Cycles and like vehicles, Pedal for. G. C. D'Artoys and G. D. Loizon. No. 1,230,129; June 19; v. 239; p. 674.

Cycles or bicycles, Saddle for motor-. H. A. Jackson. No. 1,229,468; June 12; v. 239; p. 418.

Cylinder-lock. E. Epstein. No. 1,230,387; June 19; v. 239; p. 759.

Cylinder-reboring mechanism. E. F. Helser. No. 1,231,347; June 26; v. 239; p. 1119.





Damper. J. W. Flibey. No. 1,230,882; June 26; v. 239; p. 962.

Damping means for rotatable members, Fluctuation-. H. W. Nichols. No. 1,230,205; June 19; v. 239; p. 699.

Dandy-roll. H. Albro. No. 1,229,007; June 5; v. 239; p. 218.

Darning and weaving device. C. M. Fyfe. No. 1,231,346; June 26; v. 239; p. 1118.

Davits, Swinging-gear for. E. W. Myers and A. E. Sharpley. No. 1,230,760; June 19; v. 239; p. 883.

Dental appliance. E. A. Du Brul. No. 1,229,595; June 12; v. 239; p. 461.

Dental articulator. A. Gysi. No. 1,228,667; June 5; v. 239; p. 99.

Dental bridge. G. W. Todd. No. 1,228,620; June 5; v. 239; p. 84.

Dental broach. I. Chige. No. 1,230,561; June 19; v. 239; p. 818.

Dental casting-machine. E. E. Wightman. No. 1,230,254; June 19; v. 239; p. 716.

Dental-crown attachment. W. F. Shaw. No. 1,228,488; June 5; v. 239; p. 39.

Dental die-punch. A. E. Stigberg and C. Bechtold. No. 1,228,617; June 5; v. 239; p. 83.

Dental-film holder. H. F. Waite. No. 1,229,553; June 12; v. 239; p. 448.

Dental instrument. R. V. Brandt. No. 1,229,024; June 5; v. 239; p. 218.

Derailing device. J. A. Bodkin. No. 1,228,740; June 5; v. 239; p. 125.

Dental-rubber-dam holder and cutter. O. B. Elkins and M. S. Smith. No. 1,230,284; June 19; v. 239; p. 726.

Dental surveying apparatus. R. L. Hannu. No. 1,230,156; June 19; v. 239; p. 682.

Developing apparatus. G. C. Beidler. No. 1,230,096; June 19; v. 239; p. 662.

Dewatering and replacement apparatus. G. Moore. No. 1,231,411; June 26; v. 239; p. 1141.

Diagnostic instrument. H. Weder, Sr., and C. H. Wolff. No. 1,229,358; June 12; v. 239; p. 381.

Diaphragm, Iris-. H. L. De Zeng. No. 1,230,568; June 19; v. 239; p. 821.

Die: *See*—
Button-blanking-out die. Master-die.
Drill-forming die. Mitering-die.

Die-block, Reinforced. W. R. Forsyth. No. 1,229,736; June 12; v. 239; p. 507.

Die construction. G. Tanzi. No. 1,228,495; June 5; v. 239; p. 41.

Die-stock. W. Noneman. No. 1,228,955; June 5; v. 239; p. 196.

Dies, Forming. A. F. Arthur. No. 1,231,323; June 26; v. 239; p. 1111.

Differential mechanism. F. Carlisle. No. 1,229,883; June 12; v. 239; p. 557.

Digger: *See*—
Peanut-digger. Potato-digger.
Post-hole digger. Trench-digger.

Dimming device. R. E. Reed. No. 1,228,477; June 5; v. 239; p. 35.

Dimming device. R. E. Reed. No. 1,228,478; June 5; v. 239; p. 35.

Dish attachment. H. E. Cary. No. 1,229,226; June 12; v. 239; p. 336.

Dish-washing machine. C. E. Storck. No. 1,230,618; June 19; v. 239; p. 837.

Disinfector and deodorizer, Electric. R. Thornberg. No. 1,230,342; June 19; v. 239; p. 745.

Disk jointer. V. O. Ogle. No. 1,228,695; June 5; v. 239; p. 109.

Dispensing-bin. W. G. Templeton. No. 1,230,238; June 19; v. 239; p. 710.

Dispensing-receptacle. H. F. Martin. No. 1,230,498; June 19; v. 239; p. 796.

Display and dispensing device. A. O. Bergman. No. 1,231,475; June 26; v. 239; p. 1162.

Display apparatus and vehicle therefor. H. I. Bayers. No. 1,230,369; June 19; v. 239; p. 753.

Display-box. L. F. Gold. No. 1,230,401; June 19; v. 239; p. 763.

Display-box. J. H. Stortz. No. 1,228,714; June 5; v. 239; p. 116.

Display-case. J. M. Wright. No. 1,228,510; June 5; v. 239; p. 47.

Display device, Advertising-. W. F. Graham and S. C. Hawthorn. No. 1,229,944; June 12; v. 239; p. 576.

Display device for automobile-license numbers. C. D. Baker. No. 1,229,208; June 12; v. 239; p. 330.

Display device, Illuminated. H. and G. Dumars. No. 1,230,879; June 26; v. 239; p. 961.

Display-rack. F. A. Stecher. No. 1,230,234; June 19; v. 239; p. 709.

Display-rack. B. Stern. No. 1,230,051; June 12; v. 239; p. 609.

Display-stand. W. S. Campbell. No. 1,231,490; June 26; v. 239; p. 1166.

Displays, Apparatus for illuminated. H. Dumars. No. 1,230,878; June 26; v. 239; p. 961.

Displaying machine, Advertisement-. L. F. W. Meese. No. 1,230,313; June 19; v. 239; p. 735.

Displaying pictures, Method of and apparatus for. L. McCormick. No. 1,230,188; June 19; v. 239; p. 694.

Distillation furnace, Metal-. E. E. Cherry. No. 1,231,239; June 26; v. 239; p. 1084.

Distilling and exsiccating watery combustibles. G. Merkel. No. 1,229,637; June 12; v. 239; p. 475.

Distilling coal-tar or coal-tar pitch and products derived therefrom. P. C. Reilly. No. 1,230,782; June 19; v. 239; p. 890.

Divan and bed, Combined. J. P. Sandell. No. 1,228,604; June 5; v. 239; p. 78.

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Doll, Talking-. B. E. Lloyd. No. 1,229,102; June 5; v. 239; p. 244.

Domino and chart device for seat work in numbers, Combination. S. Eberhart. No. 1,228,889; June 5; v. 239; p. 175.

Door fastener, Sliding-. L. T. Kenny. No. 1,230,722; June 19; v. 239; p. 870.

Door-frame, Sheet-metal. H. R. Straight. No. 1,231,091; June 26; v. 239; p. 1035.

Door, Grain-. W. M. Insko. No. 1,229,085; June 5; v. 239; p. 238.

Door, Grain-. W. T. Linn. No. 1,229,985; June 12; v. 239; p. 588.

Door-hanger. R. Pitt. No. 1,229,653; June 12; v. 239; p. 481.

Door-joint construction. A. H. Schaffert. No. 1,231,069; June 26; v. 239; p. 1027.

Door lock, Hopper-. W. T. Manning. No. 1,229,997; June 12; v. 239; p. 592.

Door lock mechanism, Sliding-. F. M. Brinckerhoff. No. 1,229,709; June 12; v. 239; p. 499.

Door lock, Silo-. L. R. Abercrombie. No. 1,229,851; June 12; v. 239; p. 547.

Door opener and check. G. B. Clay. No. 1,228,407; June 5; v. 239; p. 11.

Door-operating devices, Motor for fluid-pressure-. A. Gottschalk. No. 1,230,070; June 12; v. 239; p. 616.

Door-screen, Adjustable. P. F. Guie and J. S. Long. No. 1,229,744; June 12; v. 239; p. 510.

Door, Storm-. B. H. Gedge. No. 1,230,148; June 19; v. 239; p. 679.

Doubletree-coupling. E. H. Decker. No. 1,228,886; June 5; v. 239; p. 174.

Dough dividing and measuring machine. D. McErlane. No. 1,231,396; June 26; v. 239; p. 1135.

Dough-dividing machine. P. S. Ward. No. 1,229,188; June 5; v. 239; p. 273.

Dowel, Wooden. M. Rüping. No. 1,229,528; June 12; v. 239; p. 439.

Draft-arm for railway-cars. G. A. Johnson. No. 1,228,563; June 5; v. 239; p. 64.

Draft device. O. Jonsson. No. 1,231,373; June 26; v. 239; p. 1128.

Draft-gear. J. F. O'Connor. No. 1,228,591; June 5; v. 239; p. 74.

Draft-gear, Friction. G. W. Ramsey. No. 1,230,327; June 19; v. 239; p. 740.

Draft-rigging. G. Q. Lewis. No. 1,228,573; June 5; v. 239; p. 68.

Draft-rigging draw-bars and yokes, Connection for. J. F. O'Connor. No. 1,228,590; June 5; v. 239; p. 73.

Draft-rigging for cars. G. Q. Lewis. No. 1,228,572; June 5; v. 239; p. 68.

Draft-rigging for railway-cars. R. D. Gallagher, Jr. No. 1,231,248; June 26; v. 239; p. 1087.

Draft-rigging for railway-cars. J. F. O'Connor. No. 1,231,053; June 26; v. 239; p. 1022.

Draft-rigging, Railway. J. F. O'Connor. No. 1,228,592; June 5; v. 239; p. 74.

Drag, Road-. J. J. Klein. No. 1,230,723; June 19; v. 239; p. 870.

Drainage appliance. E. G. Eckenrode. No. 1,229,423; June 12; v. 239; p. 403.

Draining device, Automatic. J. D. Woodworth. No. 1,230,972; June 26; v. 239; p. 993.

Draw-bar and yoke connection. J. Harris. No. 1,231,017; June 26; v. 239; p. 1009.

Draw-bar carry-iron. G. W. Rink. No. 1,228,602; June 5; v. 239; p. 78.

Draw-bar-centering device and carrier. J. R. Mitchell. 1,230,199; June 19; v. 239; p. 697.

Draw-bar, Safety. H. F. Ball. No. 1,231,473; June 26; v. 239; p. 1161.

Draw-grip. W. T. Hancock. No. 1,231,254; June 26; v. 239; p. 1089.

Drawbridge joint connection and lock. T. O'Brien. No. 1,231,287; June 26; v. 239; p. 1099.

Drawer, Compartment or ticket. L. J. Blades. No. 1,229,402; June 12; v. 239; p. 396.

Drawing-board. W. L. Fulton. No. 1,230,398; June 19; v. 239; p. 761.

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Dressing-table and chiffonnier, Combination. L. Kreuter. No. 1,229,196; June 5; v. 239; p. 276.

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Corn-drier. Sand, gravel, &c., drier.
Rotary drier.

Drier. W. J. Kuntz. No. 1,229,978; June 12; v. 239; p. 586.

Dry-kiln for drying lumber and other moisture-bearing substances. H. D. Tiemann. No. 1,228,989; June 5; v. 239; p. 207.

Drying apparatus. C. H. Currier. No. 1,230,282; June 19; v. 239; p. 725.

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Boring-drill.
Drill. W. R. Fox. No. 1,229,601; June 12; v. 239; p. 463.
Drill attachment. G. B. Serpas. No. 1,231,438; June 26; v. 239; p. 1150.
Drill-bits; Manufacturing. S. V. Rawlings. No. 1,229,790; June 12; v. 239; p. 525.
Dry-cell battery. H. R. Palmer. No. 1,231,057; June 26; v. 239; p. 1023.
Drill-forming die. O. C. Julien. No. 1,230,303; June 19; v. 239; p. 732.
Drilling-machine. H. Dreses. No. 1,230,386; June 19; v. 239; p. 758.
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Drinking-cup, Collapsible. W. F. Smythe. No. 1,228,706; June 5; v. 239; p. 113.
Drinking-fountain attachment. F. D. Clark. No. 1,229,715; June 12; v. 239; p. 500.
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Dust-collector. D. R. Jones. No. 1,231,371; June 26; v. 239; p. 1128.
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Automobile-engine.
Beating-engine.
Explosion-engine.
Gas-engine.
Heat-engine.
Internal-combustion engine.
Locomotive-engine.
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Rotary engine.
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Gate. P. W. Sommer. No. 1,228,708; June 5; v. 239; p. 114.
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Automobile-steering-wheel lock.
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Car-door lock.
Coin-controlled lock.
Cue-lock.
Cylinder-lock.
Door-lock.
Keyless lock.
Mail-bag lock.
Nut and bolt lock.
Nut-lock.
Padlock.
Permutation-lock.
Pocket-lock.
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Valve and switch-lock.
Valve-lock.
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Slags, Treating. J. B. Herreshoff, Jr. No. 1,231,349; June 26; v. 239; p. 1120.
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Sleigh. C. L. Sheridan. No. 1,230,809; June 19; v. 239; p. 899.
Sleigh attachment. C. J. Fussner. No. 1,229,058; June 5; v. 239; p. 229.
Slicing-machine, Motor-. M. P. Marong. No. 1,229,999; June 12; v. 239; p. 592.
Slicing-machine. W. R. Wolff and E. K. Hood. No. 1,228,509; June 5; v. 239; p. 46.
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Slide-bolt. A. A. Walters. No. 1,228,996; June 5; v. 239; p. 209.
Sling-tripping device. P. Poteet and D. F. Jeffrey. No. 1,230,515; June 19; v. 239; p. 802.
Smoke-consumer and fuel-economizer. S. H. Pudney. No. 1,230,776; June 19; v. 239; p. 889.
Smoke-house. C. T. Lenzke. No. 1,229,298; June 12; v. 239; p. 361.
Snap control, Thermostatic. H. J. Long. No. 1,231,527; June 26; v. 239; p. 1177.
Snap, Safety-. A. F. Anderson. No. 1,228,513; June 5; v. 239; p. 48.
Snap-switch. F. W. and W. A. Marschke. No. 1,229,635; June 12; v. 239; p. 474.
Snap-switches, Push-button connection for. M. Guett. No. 1,230,480; June 19; v. 239; p. 790.
Snow-guard. W. J. Baird. No. 1,230,363; June 19; v. 239; p. 752.
Snow-plow. A. H. Tallyn. No. 1,230,622; June 19; v. 239; p. 839.
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Snubber. W. N. Barrett. No. 1,228,515; June 5; v. 239; p. 48.
Soap-dispensing device, Liquid-. E. G. Watrous. No. 1,229,556; June 12; v. 239; p. 448.
Sod-remover. G. H. Payne. No. 1,230,320; June 19; v. 239; p. 737.
Sodium chlorid from liquors containing it and sodium nitrate in solution, Separating. I. B. Hobsbawm and J. L. Grigioni. No. 1,230,162; June 19; v. 239; p. 684.
Sodium nitrate from liquors containing it and sodium chlorid in solution, Recovering. I. B. Hobsbawm and J. L. Grigioni. No. 1,230,163; June 19; v. 239; p. 685.
Soil-tester. H. M. Spahr. No. 1,229,803; June 12; v. 239; p. 530.
Soldering-iron, Self-heating. N. Martel and J. E. Rascoe. No. 1,230,915; June 26; v. 239; p. 972.
Sole, Fleeced slipper-. E. W. Kelley. No. 1,231,263; June 26; v. 239; p. 1091.
Sole-gage for boots and shoes. J. J. Heys. No. 1,229,265; June 12; v. 239; p. 349.
Solvent for acetyl cellulose and process. W. G. Lindsay. No. 1,229,487; June 12; v. 239; p. 424.
Sorting-machine. G. W. Cox, Jr. No. 1,231,334; June 26; v. 239; p. 1115.
Sound-absorbing material and making same. J. Comerma. No. 1,230,381; June 19; v. 239; p. 757.
Sound-producing device. E. C. Bayer. No. 1,228,639; June 5; v. 239; p. 90.
Sound, Recording. R. L. Gibson. No. 1,228,901; June 5; v. 239; p. 179.
Sound-recording apparatus. R. L. Gibson. No. 1,228,902; June 5; v. 239; p. 179.
Sound-reproducer. J. J. Comer. No. 1,230,676; June 19; v. 239; p. 855.
Sound-reproducing machine. H. T. Schiff. No. 1,231,435; June 26; v. 239; p. 1149.
Sound-reproducing-machine stop. F. A. Nolan. No. 1,230,505; June 19; v. 239; p. 798.
Sound-reproducing styli, Cutter for. E. R. Johnson. No. 1,229,469; June 12; v. 239; p. 419.
Sound-transmitting apparatus. A. E. Coy. No. 1,230,280; June 19; v. 239; p. 725.
Sound-transmitting apparatus. A. E. Coy. No. 1,230,281; June 19; v. 239; p. 725.
Spark-arrester. C. W. Crowell. No. 1,229,588; June 12; v. 239; p. 459.
Spark-gap. C. E. Campbell. No. 1,231,489; June 26; v. 239; p. 1166.
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Spark-plug. W. J. O'Gorman. No. 1,228,958; June 5; v. 239; p. 196.
Spark-plug. A. Schmidt. No. 1,230,795; June 19; v. 239; p. 894.
Spark-plug. A. Schmidt. No. 1,230,796; June 19; v. 239; p. 895.
Spark-plug. A. Schmidt. No. 1,230,797; June 19; v. 239; p. 895.
Spark-plug. F. L. Sessions. No. 1,228,487; June 5; v. 239; p. 38.
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Spark-plug for gas-engines. C. R. Winston. No. 1,228,628; June 5; v. 239; p. 86.
Spark-retarder for Ford engines. W. G. Krouse. No. 1,230,174; June 19; v. 239; p. 689.
Speed-governor. T. V. Buckwalter. No. 1,228,402; June 5; v. 239; p. 10.
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Spike driving and drawing machine, Single-rail. W. B. Halliwell. No. 1,231,253; June 26; v. 239; p. 1088.
Spindle and power-transmitting mechanism therefor. H. L. Brown. No. 1,229,025; June 5; v. 239; p. 219.
Spinning and twisting machine. L. H. Horner. No. 1,230,300; June 19; v. 239; p. 731.
Spinning and twisting textile fibers, Device for. V. Belanger. No. 1,230,097; June 19; v. 239; p. 662.
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Spring-hanger. J. A. Williams. No. 1,230,970; June 26; v. 239; p. 992.
Spring-leaf-tapering machine. F. B. Schuyler. No. 1,230,523; June 19; v. 239; p. 805.
Spring-motor. H. F. Schrage. No. 1,228,975; June 5; v. 239; p. 202.
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| Electric switch. | Meter-switch. |
| Electric time-switch. | Motor-starting switch. |
| Electrical switch. | Safety-switch. |
| Electromagnetic switch. | Snap-switch. |
| Field-control switch. | Time-switch. |

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| Billiard-table. | Gathering and jogging table. |
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Tanning and impregnating materials by means of electricity. H. Schwerin. No. 1,229,150; June 5; v. 239; p. 260.
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Telephone-call-registering device. V. Thompson. No. 1,229,348; June 12; v. 239; p. 377.
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**Windlass**. C. Andrade, Jr. No. 1,229,858; June 12; v. 239; p. 549.
**Windlass-driving mechanism**. M. J. Sasgen and A. Gloor. No. 1,228,828; June 5; v. 239; p. 155.
**Windlass, Emergency draft-**. J. H. Lange. No. 1,229,762; June 12; v. 239; p. 516.
**Windmill**. J. S. Doak. No. 1,231,242; June 26; v. 239; p. 1085.
**Windmill**. A. F. George. No. 1,228,660; June 5; v. 239; p. 96.
**Window**. T. H. Kane. No. 1,228,780; June 5; v. 239; p. 139.
**Window lock and lifter**. M. M. Bagby. No. 1,229,016; June 5; v. 239; p. 216.
**Window or door screen**. W. R. Leonard. No. 1,229,983; June 12; v. 239; p. 587.
**Window or other openings or passages**, Adjustable closure for. F. N. Roehrich. No. 1,229,523; June 12; v. 239; p. 437.
**Window-platform support**. E. F. Harris. No. 1,229,073; June 5; v. 239; p. 234.
**Window-protecting attachment**. S. E. McNulty. No. 1,230,197; June 19; v. 239; p. 697.
**Window-regulator**. J. E. Marsden. No. 1,229,769; June 12; v. 239; p. 519.
**Window-screen**. H. Bauknecht. No. 1,229,400; June 12; v. 239; p. 395.
**Window-screen**. E. M. Craig. No. 1,228,536; June 5; v. 239; p. 56.
**Window-screen**. J. P. Kuhn and J. D. Martin. No. 1,231,177; June 26; v. 239; p. 1064.
**Window-screen**. P. J. Wolfe. No. 1,229,695; June 12; v. 239; p. 495.
**Window-screen**, Roller. T. B. Miller. No. 1,230,918; June 26; v. 239; p. 973.
**Window-ventilator**. H. W. Drew. No. 1,231,340; June 26; v. 239; p. 1117.
**Wing or propeller** for aerial dynamics and other purposes. R. W. Springer. No. 1,231,444; June 26; v. 239; p. 1152.
**Wire-cloth rack**. A. W. Johnson. No. 1,229,086; June 5; v. 239; p. 239.
**Wire-reel**. J. L. Corley. No. 1,230,677; June 19; v. 239; p. 856.
**Wire-stretcher**. W. A. Clanton and R. K. Cox. No. 1,231,493; June 26; v. 239; p. 1167.
**Wire-stretcher**. S. T. Shults. No. 1,228,611; June 5; v. 239; p. 81.
**Wire-stretcher**. F. S. Stevens. No. 1,229,343; June 12; v. 239; p. 376.
**Wire-tying machine**. H. E. Pitts. No. 1,230,773; June 19; v. 239; p. 888.
**Wire unroller, Barbed-**. L. Schick. No. 1,230,794; June 19; v. 239; p. 894.
**Wires, rods, and tubes** of circular cross-section, Apparatus for straightening metallic. C. A. A. Lehmann. No. 1,229,981; June 12; v. 239; p. 587.
**Wood composition**, Artificial-. L. S. Gibson. No. 1,231,519; June 26; v. 239; p. 1175.
**Wood-splitting machine**. H. K. Hauberg. No. 1,231,525; June 26; v. 239; p. 1177.
**Wooden boat**. E. S. Hough. No. 1,228,922; June 5; v. 239; p. 185.
**Woodworking machinery**, Variable sliding-cone feed for. A. Kamp. No. 1,230,718; June 19; v. 239; p. 869.
**Work-holder**. M. E. Clark. No. 1,231,533; June 26; v. 239; p. 1179.
**Work-support**. A. A. Macleod. No. 1,228,684; June 5; v. 239; p. 105.
**Wrapping device**. H. Hayashi. (Reissue.) No. 14,318; June 19; v. 239; p. 909.
**Wrapping machines**, Box-feeding mechanism for box-. M. E. Peters, G. H. Fath, and A. F. Miller. No. 1,229,512; June 12; v. 239; p. 432.
**Wrench**: *See*—
Nut and pipe wrench.
**Wrench**. F. P. Birand. No. 1,230,656; June 19; v. 239; p. 849.
**Wrench**. R. J. Colson. No. 1,231,131; June 26; v. 239; p. 1049.

Wrench. C. C. Hole. No. 1,231,355; June 26; v. 239; p. 1122.
Wrench. F. X. Katchmazenski. No. 1,231,262; June 26; v. 239; p. 1091.
Wrench. W. S. Upson. No. 1,228,850; June 5; v. 239; p. 163.
Wringer: *See*—
Clothes-wringer.
Wringers, Adjustable automatic pressure-roll release for clothes-. R. P. Wright. No. 1,231,467; June 26; v. 239; p. 1160.
Writing implement or device. W. C. Geer. No. 1,230,149; June 19; v. 239; p. 680.
Writing machine, Multiplex-. F. E. Crompton. No. 1,230,872; June 26; v. 239; p. 959.
Writing machines, Mechanism for manipulating checks in plural-. F. E. Crompton. No. 1,230,871; June 26; v. 239; p. 958.
Zinc and other similar metals, Apparatus for producing. H. Specketer. No. 1,231,084; June 26; v. 239; p. 1032.
Zinc, Producing pure. H. Specketer. No. 1,231,083; June 26; v. 239; p. 1032.

# ALPHABETICAL LIST OF DESIGNS.

Advertising menu-frame. S. Philipson. No. 50,914; June 12; v. 239; p. 627.
Aeroplane. H. J. Kelley and C. H. Garrett, Jr. No. 50,912; June 12; v. 239; p. 626.
Automobile-body. W. J. P. Moore. Nos. 50,952–3; June 19; v. 239; p. 915.
Automobile rear-end signal device. G. E. Schweizer. No. 50,921; June 12; v. 239; p. 628.
Automobile signal-light. J. P. Becker. No. 50,930; June 19; v. 239; p. 911.
Badge. F. X. Kirsch. No. 50,913; June 12; v. 239; p. 626.
Badge or button. F. L. Long. No. 50,893; June 5; v. 239; p. 293.
Badge or medal. E. F. Ramsberger. No. 50,957; June 19; v. 239; p. 916.
Badge or similar article. E. A. Davis. No. 50,965; June 26; v. 239; p. 1188.
Bottle and brush-cleaner, Mucilage-. A. E. Huband. No. 50,974; June 26; v. 239; p. 1189.
Bottle holder and ticket-rack, Milk-. A. Ostrom. No. 50,975; June 26; v. 239; p. 1189.
Bracket-back, Body for oval. C. E. Jones. No. 50,872; June 5; v. 239; p. 289.
Button, emblem, or other insignia. G. E. Fairchild. No. 50,884; June 5; v. 239; p. 292.
Button-hook and bottle-opener, Combination. H. Korpi. No. 50,949; June 19; v. 239; p. 915.
Cabinet. F. W. Tobey. No. 50,923; June 12; v. 239; p. 629.
Casket. C. L. Smith. No. 50,880; June 5; v. 239; p. 291.
Casket-handle arm. E. R. Sargent. No. 50,920; June 12; v. 239; p. 628.
Chair. J. Wade. No. 50,924; June 12; v. 239; p. 629.
Chair-pedestal. J. Barker. No. 50,900; June 12; v. 239; p. 624.
Cleaner casing, Suction-. J. B. Kirby. No. 50,946; June 19; v. 239; p. 914.
Concrete smoke-jack. H. E. Burns. No. 50,903; June 12; v. 239; p. 625.
Desk article, Combination. E. H. Binns. No. 50,901; June 12; v. 239; p. 624.
Doll, Noveilty. J. D. Cronan. No. 50,934; June 19; v. 239; p. 912.
Electric-light fixture. S. Braunstein. No. 50,964; June 26; v. 239; p. 1187.
Electric lights, Glass shade for. A. W. Reiser. Nos. 50,877–8; June 5; v. 239; pp. 290–1.
Emblem. G. Christensen. No. 50,932; June 19; v. 239; p. 912.
Emblem, badge, or button. C. H. Doke, H. E. Berry, D. H. and C. A. Delzell. No. 50,936; June 19; v. 239; p. 913.
Emblem, badge, or button, Military. C. H. Doke, H. E. Berry, D. H. and C. A. Delzell. No. 50,937; June 19; v. 239; p. 913.
Fabric, Textile. R. E. Godfrey. Nos. 50,887–91; June 5; v. 239; pp. 292–3.
Fabric, Printed. H. Wearne. No. 50,928; June 12; v. 239; p. 630.
Fixture and valve, Combined. A. J. Barr. No. 50,866; June 5; v. 239; p. 288.
Floor-covering, Herring-bone grass. B. Hudson. No. 50,909; June 12; v. 239; p. 626.
Forceps, Pair of. W. M. Shetler. No. 50,879; June 5; v. 239; p. 291.
Fork or similar article, Handle for a. G. E. Curtiss. No. 50,870; June 5; v. 239; p. 289.
Glass bowl. M. A. Smith. No. 50,960; June 19; v. 239; p. 917.
Glass vessel or similar article. T. A. Shanley. No. 50,959; June 19; v. 239; p. 916.
Golf-ball. J. P. Cochrane. No. 50,883; June 5; v. 239; p. 292.
Headlight-lens. C. M. Wible. No. 50,962; June 19; v. 239; p. 917.
Headlights, Glass for. P. Ebeling. No. 50,938; June 19; v. 239; p. 913.
Hinge, Door-. O. C. Rixson. No. 50,978; June 26; v. 239; p. 1190.
Insect-trap. J. Czerna. No. 50,904; June 12; v. 239; p. 625.
Insignia, emblem, badge, or button. C. H. Doke, H. E. Berry, D. H. and C. A. Delzell. No. 50,935; June 19; v. 239; p. 912.
Label. G. S. Hurst. No. 50,892; June 5; v. 239; p. 293.
Lace. I. P. Rieger. Nos. 50,895–7; June 5; v. 239; p. 294.
Lace. C. J. Watters. No. 50,927; June 12; v. 239; p. 630.
Lace trimming. M. N. Aaron. No. 50,898; June 12; v. 239; p. 624.
Lamp-casing. J. L. Dawes. Nos. 50,905–6; June 12; v. 239; p. 625.
Lamp-door. W. F. Anklam. Nos. 50,862–3; June 5; v. 239; p. 287.
Lamp-lens. E. J. Smith and H. W. Atkinson. No. 50,932; June 12; v. 239; p. 629.
Lamp-stand. L. Angiulli. No. 50,929; June 19; v. 239; p. 911.
Lamp-stand. F. K. Maerz. No. 50,874; June 5; v. 239; p. 290.
Light-bowl. C. B. Ott. No. 50,955; June 19; v. 239; p. 916.
Lighting-fixture. H. C. Adam. Nos. 50,860–1; June 5; v. 239; p. 287.
Lighting-fixture. F. C. Baker. No. 50,865; June 5; v. 239; p. 288.
Lighting-fixture arm. F. S. Crowell. No. 50,869; June 5; v. 239; p. 289.
Lighting-fixture glass bowl. F. S. Crowell. No. 50,868; June 5; v. 239; p. 288.
Lighting-fixture glass bowl. A. W. Reiser. No. 50,876; June 5; v. 239; p. 290.
Lighting-fixture wall-bracket. R. Y. Barrows and G. V. Strahan. No. 50,867; June 5; v. 239; p. 288.
Loaf of biscuit. A. F. Ward. Nos. 50,925–6; June 12; v. 239; pp. 629–30.
Measuring-machines or the like, Casing for. J. C. Gebhart. No. 50,908; June 12; v. 239; p. 626.
Music-cabinet. W. A. French. Nos. 50,966–71; June 26; v. 239; pp. 1188–9.
Nutcracker. R. C. Abt. No. 50,899; June 12; v. 239; p. 624.
Pin. H. R. Loomis. No. 50,950; June 19; v. 239; p. 915.
Pistol and sword hilt, Combined. E. Volcansek. No. 50,979; June 26; v. 239; p. 1190.
Plate or similar article. A. H. Gerlach. No. 50,886; June 5; v. 239; p. 292.
Powder-box. E. Hoffman. No. 50,973; June 26; v. 239; p. 1189.
Quilt. M. L. Nadler. No. 50,954; June 19; v. 239; p. 915.
Refrigerator. J. E. Gloeller. Nos. 50,939–40; June 19; v. 239; p. 913.
Ring or similar article. M. L. and M. L. Bowden, Jr. No. 50,902; June 12; v. 239; p. 624.
Rocking-chair. T. J. McCormick. No. 50,875; June 5; v. 239; p. 290.
Rosary-medal. F. J. McLoughlin. No. 50,894; June 5; v. 239; p. 294.
Rug. R. F. Riddell. Nos. 50,916–19; June 12; v. 239; pp. 627–8.
Rug. R. F. Riddell. No. 50,958; June 19; v. 239; p. 916.
Salt-shaker. D. Frishman. No. 50,907; June 12; v. 239; p. 625.
Shade. N. Kopp. Nos. 50,947–8; June 19; v. 239; p. 914.
Skate-blade. E. Hunold. No. 50,943; June 19; v. 239; p. 914.
Spoon, fork, or similar article. H. Hillborn. No. 50,972; June 26; v. 239; p. 1189.
Spoon, fork, or similar article. G. C. Lunt. No. 50,951; June 19; v. 239; p. 915.
Stove. C. R. Graham. No. 50,941; June 19; v. 239; p. 913.
Talcum-box, Sheet-metal. H. R. Corey. No. 50,933; June 19; v. 239; p. 912.
Tire. E. A. Jones. No. 50,873; June 5; v. 239; p. 291.
Tire, Pneumatic. R. M. Pierson. No. 50,956; June 19; v. 239; p. 916.
Tire, Pneumatic. R. M. Pierson. Nos. 50,976–7; June 26; v. 239; p. 1190.
Tire, Pneumatic. H. K. Raymond. No. 50,915; June 12; v. 239; p. 627.
Tire-tread. F. B. Carlisle. No. 50,931; June 19; v. 239; p. 912.
Tire-tread. L. T. Vance. No. 50,961; June 19; v. 239; p. 917.
Tire tread, Automobile-. F. T. Faircloth. No. 50,871; June 5; v. 239; p. 289.
Tire tread, Automobile-. E. Von Vargyas. No. 50,881; June 5; v. 239; p. 291.
Tray. I. Freid. No. 50,885; June 5; v. 239; p. 292.
Vanity-case. K. Ono. No. 50,963; June 19; v. 239; p. 917.
Velocipede for the use of children. H. W. Case. No. 50,882; June 5; v. 239; p. 291.
Watchcase. F. E. Hyatt. Nos. 50,910–11; June 12; v. 239; p. 626.
Watchcase. F. E. Hyatt. No. 50,944; June 19; v. 239; p. 914.
Watchcase. F. E. Hyatt. No. 50,945; June 19; v. 239; p. 914.
Water-heater shell. C. A. Backstrom. No. 50,864; June 5; v. 239; p. 287.

# ALPHABETICAL LIST OF TRADE-MARKS.


Abrasive, detergent, and polishing materials. Durkee-Atwood Co. No. 116,887; June 5; v. 239; p. 313.
Antiseptic solution. Scott & Bowne. No. 117,208; June 19; v. 239; p. 937.
Apparel for ladies, Certain named wearing-. H. Collins. No. 117,248; June 26; v. 239; p. 1205.
Apple-juice. National Fruit Juice Company. No. 117,189; June 19; v. 239; p. 936.
Automobile-heaters utilizing the exhaust from explosive-engines. The Hill Pump Valve Company. No. 116,952; June 5; v. 239; p. 315.
Bag, Folding shopping-. Sears, Roebuck and Co. No. 117,211; June 19; v. 239; p. 937.
Balls, Tennis-. The Seamless Rubber Company. No. 116,923; June 5; v. 239; p. 314.
Bananas. Estes and Son. No. 117,031; June 12; v. 239; p. 651.
Barrettes. Pacific Novelty Company. No. 116,975; June 5; v. 239; p. 316.
Bathing-suits and sweaters. D. Nusbaum & Co. No. 117,054; June 12; v. 239; p. 652.
Batteries and flash-lights, Electric. Columbia Electric Novelty Corporation. No. 116,943; June 5; v. 239; p. 315.
Battery plates, Storage-. General Lead Batteries Company. No. 117,134; June 19; v. 239; p. 934.
Beer. United Breweries Co. No. 117,000; June 5; v. 239; p. 316.
Belting, Canvas, rubber, leather, and combination canvas and rubber. Hudson Mechanical Rubber Co. No. 117,147; June 19; v. 239; p. 935.
Belting formed of textile fabric, Machinery-. W. D. Allen Manufacturing Company. No. 116,933; June 5; v. 239; p. 315.
Belting, Leather. L. A. Ranlville. No. 116,978; June 5; v. 239; p. 316.
Beverage sold as soft drink, Cereal. Anzac Company. Nos. 117,085–7; June 19; v. 239; p. 933.
Beverage sold as a soft drink, Non-alcoholic. Omaha Beverage Company. No. 116,974; June 5; v. 239; p. 316.
Beverage sold as a soft drink, Non-intoxicating cereal. Willow Springs Brewing Co. No. 117,014; June 5; v. 239; p. 317.
Beverages, Brewed malt. Hinckel Brewery Company. No. 116,900; June 5; v. 239; p. 314.
Biscuits. Pacific Coast Biscuit Company. No. 117,055; June 12; v. 239; p. 652.
Blackboards and similar boards for writing purposes. The Beaver Company. No. 117,093; June 19; v. 239; p. 933.
Blouses and sport-coats, Ladies'. Samek & Lobel. No. 116,922; June 5; v. 239; p. 314.
Booklets and circulars for advertising a collection-service. B. A. Javitz. No. 117,152; June 19; v. 239; p. 935.
Boots and shoes, Canvas. Woodbury Shoe Company. No. 117,073; June 12; v. 239; p. 652.
Boots and shoes, Leather. Cass & Daley Shoe Company. No. 117,247; June 26; v. 239; p. 1205.
Boots and shoes, Leather and canvas. Velvet Grip Shoe Co. No. 117,007; June 5; v. 239; p. 317.
Boots and shoes made of leather, skins, and textiles. Tomahawk Shoe Co. No. 117,221; June 19; v. 239; p. 937.
Boxes and trunks, valises, toilet-cases, traveling-bags, &c., Hat-. Crouch & Fitzgerald. No. 117,116; June 19; v. 239; p. 934.
Brakelinings. Staybestos Manufacturing Company. No. 117,215; June 19; v. 239; p. 937.
Bread. Davidson Baking Co. No. 117,027; June 12; v. 239; p. 651.
Breads and pastries, Raised. Bystrom & Hull. No. 117,106; June 19; v. 239; p. 934.
Brick, lining for furnaces, smelters, boilers, cupolas, and stoves, Fire-. Oliver Brothers. No. 117,193; June 19; v. 239; p. 936.
Brush, Shoe-polishing. Tube Brush Co. No. 117,225; June 19; v. 239; p. 937.
Building construction, Certain named. The Waring-Underwood Company. No. 117,232; June 19; v. 239; p. 937.
Butter. Beau-Site Company. No. 117,019; June 12; v. 239; p. 651.
Butter, Creamery-. Mutual Creamery Company. Nos. 117,186–7; June 19; v. 239; p. 936.
Butter, Creamery-. Yorkshire Creamery Co. No. 117,074; June 12; v. 239; p. 652.
Butter-merging compounds. The Butr Plus Co. No. 117,104; June 19; v. 239; p. 934.
Buttons or separable fasteners, Press-. J. O. Nygaard. No. 117,192; June 19; v. 239; p. 936.
Buttons, Wearing-apparel. Rochester Button Company. No. 116,980; June 5; v. 239; p. 316.
Candle and candlestick holders, range-boilers, carriage foot-warmers. A. Kreamer, Inc. No. 117,161; June 19; v. 239; p. 935.
Candy, Chocolate. C. A. Crane. No. 117,113; June 19; v. 239; p. 934.
Candy, Chocolate. Loose Wiles Company. No. 117,168; June 19; v. 239; p. 936.
Canned fish. Addis & Eppstein. No. 117,077; June 19; v. 239; p. 933.
Canned fruits, vegetables, and salmon, tomato catsup. Burton & Davis Co. No. 117,102; June 19; v. 239; p. 933.
Canned goods. Overseas Products Company. No. 117,195; June 19; v. 239; p. 936.
Canned salmon. Booth Fisheries Company. No. 117,022; June 12; v. 239; p. 651.
Canned salmon. Booth Fisheries Company. No. 117,096; June 19; v. 239; p. 933.
Canned salmon. Columbia River Packers Association. No. 117,112; June 19; v. 239; p. 934.
Canned salmon. P. E. Harris & Co. No. 117,139; June 19; v. 239; p. 935.
Canned salmon. Kelley-Clarke Co. No. 117,157; June 19; v. 239; p. 935.
Canned sardines and tuna fish. C. E. Van Landingham Co. No. 117,230; June 19; v. 239; p. 937.
Canned shrimp. Ruge Bro's. Canning Co. No. 117,204; June 19; v. 239; p. 936.
Canned tomatoes, corn, peas, pork and beans, &c. Mueller Wild Co. No. 117,050; June 12; v. 239; p. 652.
Canned vegetables, fruits, and fish. Emery Food Company. No. 117,030; June 12; v. 239; p. 651.
Catalogues, folders, printed books, valentines, &c. S. S. Kresge Co. No. 116,956; June 5; v. 239; p. 315.
Catalogues of newspapers and periodicals. G. W. May. No. 116,962; June 5; v. 239; p. 315.
Catarrh treatment, remedy for certain named diseases. J. L. Greenbaum. No. 117,035; June 12; v. 239; p. 651.
Cathartics. W. A. McLeod. No. 116,909; June 5; v. 239; p. 314.
Cement, Building-. Louisville Cement Company. No. 117,169; June 19; v. 239; p. 936.
Chemicals and pharmaceutical preparations, Certain named. Sterling Products Company. No. 116,928; June 5; v. 239; p. 314.
Chemicals and pharmaceutical preparations, Certain named. J. W. Butler. No. 117,103; June 19; v. 239; p. 933.
Chemicals and pharmaceutical preparations, Certain named. The Mehalovitch Brothers Company. No. 117,277; June 26; v. 239; p. 1206.
Chemises made of woven material. Lehman Bros. No. 116,904; June 5; v. 239; p. 314.
Chocolate coating for confectioners and bakers. The Tobraine Company. No. 117,069; June 12; v. 239; p. 652.
Chocolates. The Nelson-Rhoads Candy Co. No. 117,190; June 19; v. 239; p. 936.
Chocolates and confections. Paul F. Beich Co. No. 117,021; June 12; v. 239; p. 651.
Cigarettes. Liggett & Myers Tobacco Company. No. 117,166; June 19; v. 239; p. 935.
Cigarettes. D. D. Minassian. No. 116,967; June 5; v. 239; p. 315.
Cigarettes. Pupulidy Brothers. No. 116,977; June 5; v. 239; p. 316.
Cigarettes, Rolled. M. P. Duryea. No. 117,122; June 19; v. 239; p. 934.
Cigars. E. Linden. No. 116,957; June 5; v. 239; p. 315.
Cigars. The Weldeman Co. No. 117,011; June 5; v. 239; p. 317.
Cigars, cigarros, cheroots, and cigar-clippings. 44 Cigar Company. Nos. 117,128–31; June 19; v. 239; p. 934.
Cigars. Fritch, Himes & Company. No. 117,132; June 19; v. 239; p. 934.
Cleaning and polishing cloths for metals, woods, and leathers. A. C. A. Company. No. 117,075; June 19; v. 239; p. 933.
Cleaning and polishing material for automobiles, pianos, woodwork, furniture. W. J. Brouse. No. 117,244; June 26; v. 239; p. 1205.
Cleaning and polishing preparations for painted, varnished, and wooden surfaces. F. H. Bosson. No. 117,099; June 19; v. 239; p. 933.
Cleaning fluids. The Bleecker Company. No. 116,877; June 5; v. 239; p. 313.
Cleaning liquid for varnished and enameled surfaces. G. S. A. Cassimus. No. 116,882; June 5; v. 239; p. 313.

Clocks. N. H. Brown. No. 117,100; June 19; v. 239; p. 933.
Clocks. Shapleigh Hardware Company. Nos. 116,987–8; June 5; v. 239; p. 316.
Clocks and watches and the works for the same. North American Watch Co. No. 117,053; June 12; v. 239; p. 652.
Clothes-wringers and parts thereof. The American Wringer Company. No. 117,084; June 19; v. 239; p. 933.
Clothing and personal wear, Certain named. A. L. Blakeslee. No. 116,876; June 5; v. 239; p. 313.
Clothing, Certain named. Niagara Silk Mills. No. 116,970; June 5; v. 239; p. 316.
Clothing, Certain named ladies' and misses'. L. D. Gordon. No. 117,136; June 19; v. 239; p. 935.
Clothing for men and women, Certain named. J. P. Davis. No. 116,886; June 5; v. 239; p. 313.
Clothing for women, Certain named. C. T. Windmuller. No. 117,072; June 12; v. 239; p. 652.
Coal. The Consolidation Coal Co. No. 116,944; June 5; v. 239; p. 315.
Coats. J. Buckman. No. 117,023; June 12; v. 239; p. 651.
Coats, cloaks, wraps, dresses, &c., Women's, children's, and infants'. The Salt's Textile Manufacturing Company. Nos. 117,268–9; June 26; v. 239; p. 1206.
Coats, Sheepskin-lined. McKibbin, Driscoll & Dorsey. No. 117,170; June 19; v. 239; p. 936.
Codfish, Fresh, dried, and canned. Alaska Codfish Company. No. 117,237; June 26; v. 239; p. 1205.
Coffee. W. H. M. Albertson. No. 117,078; June 19; v. 239; p. 933.
Coffee. A. Angel & Co. No. 117,017; June 12; v. 239; p. 651.
Coffee, Martin L. Hall Company. No. 117,254; June 26; v. 239; p. 1205.
Coffee in packages. Naas-Sanderson Co. No. 117,051; June 12; v. 239; p. 652.
Condiments. J. Quevedo. No. 117,057; June 12; v. 239; p. 652.
Cornets, trombones, altos, melophones, &c. Lyon & Healy. No. 116,959; June 5; v. 239; p. 315.
Corset-laces, lingerie and soutache braids, pin and doll cushions, &c. Samstag & Hilder Bros. No. 116,983; June 5; v. 239; p. 316.
Corsets. The Warner Bros. Co. No. 117,010; June 5; v. 239; p. 317.
Corsets and brassières. Treo Company. No. 116,998; June 5; v. 239; p. 316.
Cotton piece goods. American Bleached Goods Company. No. 117,239; June 26; v. 239; p. 1205.
Cough-drops. O. A. Rather. No. 117,059; June 12; v. 239; p. 652.
Cough-drops. The Vanola Company. No. 117,006; June 5; v. 239; p. 317.
Crash and panama cloths and imitation panama fabric. C. H. Goldsmith. No. 117,252; June 26; v. 239; p. 1205.
Cream, powder, and stick, Shaving. W. J. Kelley. No. 117,158; June 19; v. 239; p. 935.
Cutlery, machinery, and tools, and parts thereof, Certain named. The Cincinnati Butchers Supply Company. No. 117,110; June 19; v. 239; p. 934.
Cutlery, machinery, and tools, and parts thereof, Certain named. Federal Export Corporation. No. 117,124; June 19; v. 239; p. 934.
Dental impression-trays. Terraplastica Manufacturing Co. No. 117,219; June 19; v. 239; p. 937.
Dental, medical, and surgical appliances, Certain named. Davol Rubber Company. No. 117,118; June 19; v. 239; p. 934.
Deodorant. Perin, Inc. No. 116,919; June 5; v. 239; p. 314.
Disinfecting fluid, Dental, medical, and surgical. Clarke-Guthrie Co. No. 116,884; June 5; v. 239; p. 313.
Dresses, Ladies'. Marion Dress Co. No. 116,961; June 5; v. 239; p. 315.
Driers for driving off free moisture from various materials. Ruggles-Coles Engineering Co. No. 116,981; June 5; v. 239; p. 316.
Drink or beverage, Soft. G. A. Buhl. No. 117,101; June 19; v. 239; p. 933.
Drink or beverage, Soft. North Western Company. No. 116,918; June 5; v. 239; p. 314.
Drink, Soft. Cantrell & Dawson. No. 116,940; June 5; v. 239; p. 315.
Drink, Soft. W. B. Fink. No. 117,127; June 19; v. 239; p. 934.
Drinks and syrup therefor, Carbonated soft. Wilbraham Springs Company. No. 117,013; June 5; v. 239; p. 317.
Dumb-bells. Interstate Cartoon Co. No. 117,148; June 19; v. 239; p. 935.
Duplicators. Graphic Duplicator Company. No. 117,253; June 26; v. 239; p. 1205.
Dyewood extracts. MacAndrews & Forbes Company. No. 116,908; June 5; v. 239; p. 314.
Eggs, butter, butterin, oleomargarin, cheese. The W. J. Hartzel Company. No. 117,140; June 19; v. 239; p. 935.
Electric lights and dry batteries, Portable. National Carbon Company. No. 117,262; June 26; v. 239; p. 1205.
Electrical apparatus and supplies. Landers, Frary & Clark. No. 117,163; June 19; v. 239; p. 935.
Electrical apparatus and supplies, Certain named. Federal Export Corporation. No. 117,125; June 19; v. 239; p. 934.
Electrical apparatus, machines, and supplies, Certain named. Carl Anderson Electric Corporation. No. 116,935; June 5; v. 239; p. 315.
Electrodes, Arc-lamp. National Carbon Company. No. 117,188; June 19; v. 239; p. 936.
Engines, Certain named devices for gas-. F. L. McMechen. No. 117,259; June 26; v. 239; p. 1205.
Fabric in the piece, Woven. The Salt's Textile Manufacturing Company. No. 117,267; June 26; v. 239; p. 1206.
Feed, Stock. G. B. Matthews & Sons. No. 117,178; June 19; v. 239; p. 936.
Fire-extinguishers, Chemical. American La France Fire Engine Co. No. 116,934; June 5; v. 239; p. 315.
Fish, and particularly codfish, Dried. Union Fish Co. No. 117,227; June 19; v. 239; p. 937.
Fish croquettes. Figved Importing Co. No. 117,126; June 19; v. 239; p. 934.
Flavoring compound for soft drinks. R. Zieve. No. 117,016; June 5; v. 239; p. 317.
Flavoring foods, Extract of lemon for. The Home Products Company. No. 117,042; June 12; v. 239; p. 651.
Floor-dressing, Antiseptic. Frederick Disinfectant Co No. 116,895; June 5; v. 239; p. 313.
Flour and cereal, Wheat. Novelty Mill Company. No. 117,191; June 19; v. 239; p. 936.
Flour, Rye-. A. Lerman. No. 117,165; June 19; v. 239; p. 935.
Flour, (self-rising,) Wheat-. Portland Flouring Mills Company. No. 117,200; June 19; v. 239; p. 936.
Flour, Wheat-. Beeland-Nicholson Wholesale Co. No. 117,020; June 12; v. 239; p. 651.
Flour, Wheat-. Dundas Brothers Co. No. 117,120; June 19; v. 239; p. 934.
Flour, Wheat-. Mauser Mill Company. Nos. 117,179–81; June 19; v. 239; p. 936.
Flour, Wheat-. Portland Flouring Mills Company. No. 117,199; June 19; v. 239; p. 936.
Flour, Wheat-. Portland Flouring Mills Company. No. 117,201; June 19; v. 239; p. 936.
Flour, Wheat-. Seattle Grain Co. No. 117,065; June 12; v. 239; p. 652.
Flour, Yeast-. Ho-Mayde Products Co. No. 117,041; June 12; v. 239; p. 651.
Food, Poultry. Russia Cement Company. No. 117,062; June 12; v. 239; p. 652.
Food product similar to noodles, Prepared. Maas Baking Co. No. 117,046; June 12; v. 239; p. 652.
Foods, Certain named. Genant & Flachsland. No. 117,034; June 12; v. 239; p. 651.
Foods, Certain named. The W. H. Webb Packing Co. No. 117,071; June 12; v. 239; p. 652.
Foods, Stock. Sears, Roebuck and Co. No. 117,064; June 12; v. 239; p. 652.
Fruits, berries, and root crops, poultry, and eggs, Fresh. T. J. A. Todd. No. 117,220; June 19; v. 239; p. 937.
Fruits, Citrus. California Fruit Growers Exchange. No. 117,107; June 19; v. 239; p. 934.
Furnaces, Hot-air. The Monitor Stove & Range Co. No. 117,185; June 19; v. 239; p. 936.
Furniture, Certain named. J. & J. Kohn. No. 117,160; June 19; v. 239; p. 935.
Furniture, Certain named household. E. L. Kinloch. No. 117,159; June 19; v. 239; p. 935.
Games. Milton Bradley Co. No. 117,183; June 19; v. 239; p. 936.
Ginger-ale. P. Ballantine & Sons. No. 117,241; June 26; v. 239; p. 1205.
Glass lights, Sidewalk. Jeannette Glass Co. No. 116,954; June 5; v. 239; p. 315.
Glassware, as follows: jars, bowls, plates, vases, dishes, &c. George Borgfeldt & Co. No. 117,097; June 19; v. 239; p. 933.
Gloves. R. H. Macy & Co. Nos. 117,171–5; June 19; v. 239; p. 936.
Gloves and mittens. The Boss Manufacturing Company. No. 116,878; June 5; v. 239; p. 313.
Gloves, Fabric. Littauer Brothers. No. 116,906; June 5; v. 239; p. 314.
Grease-cups for automobiles, motors, and other vehicles and machinery. Marvel Engineering Company. No. 117,176; June 19; v. 239; p. 936.
Grommets, metal washers, rivets, nails, &c. Edwin B. Stimpson Company. No. 116,929; June 5; v. 239; p. 314.
Grounds. United States Spot Ground Corporation. Nos. 117,228–9; June 19; v. 239; p. 937.
Gum, Chewing-. American Chicle Co. No. 117,018; June 12; v. 239; p. 651.
Hair-nets. Anderson Meyer & Company. No. 116,965; June 5; v. 239; p. 315.
Hair-nets. M. Herzog. No. 117,038; June 12; v. 239; p. 651.
Hardwood and pine lumber. Mississippi Lumber Company. No. 117,184; June 19; v. 239; p. 936.
Hats and caps. George Borgfeldt & Co. No. 117,242; June 26; v. 239; p. 1205.
Hats and caps for men, women, and children. George Borgfeldt & Co. No. 117,098; June 19; v. 239; p. 933.
Hats, bonnets, toques, cloaks, dresses, outer suits, Ladies'. Joseph. No. 116,955; June 5; v. 239; p. 315.



Hats for men. F. Berg & Co. No. 116,938; June 5; v. 239; p. 315.
Hosiery. S. H. Kress & Company. Nos. 116,902–3; June 5; v. 239; p. 314.
Hosiery, Linenwear Hosiery Company. No. 117,258; June 26; v. 239; p. 1205.
Hosiery. May Hosiery Mills. No. 117,260; June 26; v. 239; p. 1205.
Hosiery. Rice-Stix Dry Goods Company. No. 116,921; June 5; v. 239; p. 314.
Hosiery-feet. Carson, Pirie, Scott & Co. No. 116,881; June 5; v. 239; p. 313.
House organ published intermittently. The Farmers' Review. No. 116,948; June 5; v. 239; p. 315.
Houses, Knockdown. Sears, Roebuck and Co. No. 117,210; June 19; v. 239; p. 937.
Ice-cream, butter, milk, and sweet cream. Mono Service Cream Co. No. 117,049; June 12; v. 239; p. 652.
Ice-cream, condensed milk, butter, cheese, &c. F. W. Lange. No. 117,164; June 19; v. 239; p. 935.
Indigestion, flatulency, vertigo, &c. F. S. Hanf. No. 117,037; June 12; v. 239; p. 651.
Inks, Duplicating-. Meuser & Meuser. No. 116,964; June 5; v. 239; p. 315.
Instep-arch supports. Scholl Manufacturing Company. No. 117,207; June 19; v. 239; p. 937.
Insulating material, Electrical. The Continental Fibre Company. No. 117,249; June 26; v. 239; p. 1205.
Jar rings, Fruit-. R. E. Tongue & Bros. Co. No. 117,271; June 26; v. 239; p. 1206.
Knitted, netted, and textile fabrics, Certain. Lesher, Whitman & Co. No. 117,045; June 12; v. 239; p. 651.
Labels, Coupon-books of address-. C. D. Meeker. No. 116,913; June 5; v. 239; p. 314.
Lace. Richmond Lace Works. No. 117,061; June 12; v. 239; p. 652.
Laces, knitted insertion and edgings for underwear. R. S. Byram. No. 117,243; June 26; v. 239; p. 1205.
Lacquer and thinners. United States Lacquer Company. No. 117,001; June 5; v. 239; p. 317.
Ladders. The John S. Tilley Ladders Co. No. 116,992; June 5; v. 239; p. 316.
Lamps, Electric. Stewart-Warner Speedometer Corporation. Nos. 117,217–18; June 19; v. 239; p. 937.
Lard substitute. Interstate Cotton Oil Refining Co. No. 117,150; June 19; v. 239; p. 935.
Lard substitute composed of cotton-seed oil and oleostearin. Interstate Cotton Oil Refining Co. No. 117,149; June 19; v. 239; p. 935.
Leather, Rawhide and lace-. Chas. A. Schieren Company. No. 116,984; June 5; v. 239; p. 316.
Lemons. Tustin Lemon Association. No. 117,226; June 19; v. 239; p. 937.
Lemons and oranges. American Fruit Distributors of California. No. 117,080; June 19; v. 239; p. 933.
Lemons, oranges, and grape-fruit. San Fernando Heights Lemon Co. No. 117,205; June 19; v. 239; p. 936.
Lenses, Ophthalmic. F. A. Hardy & Co. No. 117,138; June 19; v. 239; p. 935.
Liniment for rheumatism, scalds, burns, sprains, and backache. G. J. Seidenspinner. No. 116,924; June 5; v. 239; p. 314.
Logs. S. K. Taylor. No. 116,991; June 5; v. 239; p. 316.
Luminous compounds. Schlesinger Radium Co. No. 117,063; June 12; v. 239; p. 652.
Macaroni. Vineland Preserving Company. No. 117,070; June 12; v. 239; p. 652.
Magazine or periodical, Monthly. Realty Service Publishing Co., by change of name Realty Publishing Co. No. 116,979; June 5; v. 239; p. 316.
Magazine, Semimonthly. Earl Studios. No. 116,947; June 5; v. 239; p. 315.
Magazines, Weekly. F. C. Gunning. No. 116,951; June 5; v. 239; p. 315.
Magnesia, Calcined. Frazar & Company. No. 117,033; June 12; v. 239; p. 651.
Medicine for kidney and bladder disorders. A. E. Besosa. No. 116,875; June 5; v. 239; p. 313.
Medicine for rheumatic pains, gout, and lumbago. E. F. Davis. No. 116,885; June 5; v. 239; p. 313.
Medicines and specifics for treating certain named diseases. The C. Nelson Smith Company. No. 116,926; June 5; v. 239; p. 314.
Metal or aluminum compounds in ingots, rods, &c. The Acieral Company of America. Nos. 117,235–6; June 26; v. 239; p. 1205.
Metal-polish for automobile and harness trimmings, door-knobs, and brass. Economic Products Inc. No. 116,888; June 5; v. 239; p. 313.
Metals resembling bronze and castings made from said metal, American Metal Products Company. No. 117,240; June 26; v. 239; p. 1205.
Metallic particles for rubbing, polishing, and grinding purposes. The Globe Steel Company. No. 116,897; June 5; v. 239; p. 313.
Milk, Condensed, Holland Food Corporation. No. 117,040; June 12; v. 239; p. 651.
Neckties. Carter & Holmes. No. 116,941; June 5; v. 239; p. 315.
Oats, Rolled white. Armour Grain Company. No. 117,089; June 19; v. 239; p. 933.
Oil, Lubricating-. W. D. Kibler Co. No. 117,257; June 26; v. 239; p. 1205.
Oils and greases. Crew Levick Company. Nos. 117,114–15; June 19; v. 239; p. 934.
Oils and greases. Speedway Motor Oil Co. No. 117,213; June 19; v. 239; p. 937.
Oils, Lubricating-. True's Oil Company. Nos. 117,222–4; June 19; v. 239; p. 937.
Ointment for coughs, chest-colds, croup, pneumonia, &c. S. D. Clegg. No. 117,025; June 12; v. 239; p. 651.
Ointment, Veterinary. Troy Chemical Co. No. 116,997; June 5; v. 239; p. 316.
Oleomargarin. John F. Jelke Company. No. 117,153; June 19; v. 239; p. 935.
Oranges and lemons. Randolph Marketing Co. No. 117,265; June 26; v. 239; p. 1206.
Oranges, grape-fruit, and cantaloups. American Fruit Distributors of California. No. 117,081; June 19; v. 239; p. 933.
Oranges, grape-fruit, lemons, &c. Nocatee Citrus Growers' Association. No. 117,052; June 12; v. 239; p. 652.
Oranges, lemons, and grape-fruit. American Fruit Distributors of California. No. 117,079; June 19; v. 239; p. 933.
Overalls for men, women, boys, and girls. M. W. Taylor. No. 117,008; June 12; v. 239; p. 652.
Oysters, Fresh. J. H. Michaels Co. No. 117,048; June 12; v. 239; p. 652.
Packing, Asbestos-fiber sheet-. Home Rubber Co. No. 117,145; June 19; v. 239; p. 935.
Packing, Asbestos sheet-. H. W. Johns-Manville Company. No. 117,155; June 19; v. 239; p. 935.
Packing, Compressed-fiber sheet-. Asbestos Fibre & Rubber Co. No. 116,930; June 5; v. 239; p. 315.
Packing, Machinery. Metric Packing Company. No. 117,182; June 19; v. 239; p. 936.
Pads, Score-. Radbridge Company. No. 117,264; June 26; v. 239; p. 1206.
Paint-thinning materials. The Peerless Thinner Company. No. 116,976; June 5; v. 239; p. 316.
Paints, Ready-mixed. G. A. H. Muller. No. 117,261; June 26; v. 239; p. 1205.
Paper and paper towels, Toilet-. Wortendyke Manufacturing Co. Nos. 117,272–6; June 26; v. 239; p. 1206.
Paper and stationery, Certain named. H. W. Carter Paper Company. No. 117,246; June 26; v. 239; p. 1205.
Paper and stationery, Certain named. Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft. No. 117,009; June 5; v. 239; p. 317.
Paper cleaner, Wall-. Acme Cleaner Manufacturing Company. No. 117,076; June 19; v. 239; p. 933.
Paper, Printing and writing. H. Lindenmeyr & Sons. No. 116,958; June 5; v. 239; p. 315.
Paper, Printing, writing, and wrapping. The Union Paper & Twine Company. No. 116,999; June 5; v. 239; p. 316.
Paper, Toilet-. Albany Perforated Wrapping Paper Company. No. 117,238; June 26; v. 239; p. 1205.
Partitions, doors, metallic gratings for banks, &c., railings, stairs. Art Metal Construction Co. No. 117,091; June 19; v. 239; p. 933.
Paste for cakes, cookies, pie, candy, and ice-cream. California Bakers Specialty Co. No. 117,024; June 12; v. 239; p. 651.
Patches and fabrics, Adhesive vulcanizing. W. E. Spencer. No. 117,214; June 19; v. 239; p. 937.
Peanut-butter. Perkins Brothers. No. 117,197; June 19; v. 239; p. 936.
Perfumes. Frederick Stearns & Co. No. 116,927; June 5; v. 239; p. 314.
Perfumes, toilet powders and waters, sachets. Colgate & Co. No. 117,026; June 12; v. 239; p. 651.
Perfumes, toilet waters, rouge, creams, and powders. Mariette et Cie. No. 116,912; June 5; v. 239; p. 314.
Periodicals, Monthly. McKesson & Robbins. No. 116,960; June 5; v. 239; p. 315.
Periodical, Monthly. The National Petroleum Publishing Company. No. 116,968; June 5; v. 239; p. 316.
Pharmaceutical preparations for toilet purposes, Certain named. D. Lowenstein. No. 116,907; June 5; v. 239; p. 314.
Phonographs and phonograph-records. F. A. Dennett. No. 117,028; June 12; v. 239; p. 651.
Pianos. C. E. Byrne Piano Co. No. 117,105; June 19; v. 239; p. 934.
Pianos, Player-actions for. Otto Higel Company. No. 117,255; June 26; v. 239; p. 1205.
Pins, hooks, eyes, shoe and corset laces, &c., Toilet and safety. Samstag & Hilder Bros. No. 116,982; June 5; v. 239; p. 316.
Plasters, Adhesive. Goldman Costume Co. No. 117,135; June 19; v. 239; p. 934.
Plasters, Corn-. Scholl Manufacturing Company. No. 117,206; June 19; v. 239; p. 936.
Poultry, Dressed. H. G. Peterson. No. 117,198; June 19; v. 239; p. 936.
Powder, Talcum. A. S. Hindy. No. 116,901; June 5; v. 239; p. 314.
Powders for treating certain named affections. A. F. Marks. No. 117,047; June 12; v. 239; p. 652.
Powders, perfume, cold-cream, toilet water, Talcum, sachet, and face. James S. Kirk & Company. No. 117,043; June 12; v. 239; p. 651.
Precious-stone settings. Joseph Frackman Company. No. 116,949; June 5; v. 239; p. 315.
Preparation for curing aphthae and aphthous fever. E. C. Etcheverry. No. 116,893; June 5; v. 239; p. 313.

Preparations for the treatment of certain named diseases. E. S. Glass. No. 116,896; June 5; v. 239; p. 313.
Preparation for the treatment of certain named diseases. M. W. Weinberg. No. 117,012; June 5; v. 239; p. 317.
Preparation for the treatment of diarrhea and dysentery. G. Krouser. No. 117,044; June 12; v. 239; p. 651.
Preparation for the treatment of dyspepsia. The Tracy Company. No. 116,995; June 5; v. 239; p. 316.
Preparation for the treatment of kidney and blood diseases. G. Ash. No. 116,873; June 5; v. 239; p. 313.
Preparation for the treatment of rheumatism. J. Lewis. No. 116,905; June 5; v. 239; p. 314.
Preparation for use in the treatment for constipation. The Tracy Company. No. 116,930; June 5; v. 239; p. 314.
Preparation for use in the treatment for indigestion. The Tracy Company. No. 116,931; June 5; v. 239; p. 314.
Print-cloth, wall-paper, and the like designs. Toepfer & Schroff. No. 116,993; June 5; v. 239; p. 316.
Publications issued biannually. The Horn-Shafer Company. No. 117,146; June 19; v. 239; p. 935.
Rain-coats. F. W. Howard. No. 116,953; June 5; v. 239; p. 315.
Receptacles made of metal, Certain named. The Republic Metalware Co. No. 117,202; June 19; v. 239; p. 936.
Remedy for diseases of the lungs, coughs, catarrh, and asthma. K. S. Ramashauski. No. 117,058; June 12; v. 239; p. 652.
Remedy for la grippe, hay-fever, asthma, &c. The S. Shearer Co. No. 116,925; June 5; v. 239; p. 314.
Remedy for rheumatism. E. Hickey. No. 117,039; June 12; v. 239; p. 651.
Remedy, Pile. J. W. Williams. No. 117,234; June 19; v. 239; p. 937.
Rice. Panama Rice Milling Co. No. 117,056; June 12; v. 239; p. 652.
Rice, rice-bran, and rice-polish used for a stock food. Stuttgart Rice Mill Company. No. 117,067; June 12; p. 239; p. 652.
Rings, Finger-. Goldsmith, Stern & Co. No. 116,950; June 5; v. 239; p. 315.
Rings, Finger-. The Traub Manufacturing Company. No. 116,996; June 5; v. 239; p. 316.
Rings, lavallières, bracelets, brooches, Finger-. A. Wiss. No. 117,015; June 5; v. 239; p. 317.
Rompers and children's sleeping-garments. Elder Manufacturing Co. No. 116,889; June 5; v. 239; p. 313.
Roofing, Asphalt. Apco Asphalt Roofing Co. No. 117,088; June 19; v. 239; p. 933.
Rope, Manila. Waterbury Company. No. 117,233; June 19; v. 239; p. 937.
Rubber boots and shoes. L. Candee & Company. No. 116,939; June 5; v. 239; p. 315.
Rubber boots and shoes and fabric shoes having rubber soles. United States Rubber Company. Nos. 117,003–5; June 5; v. 239; p. 317.
Rubber heels. J. H. Brown. No. 116,880; June 5; v. 239; p. 313.
Rubbers, Light-weight. Mishawaka Woolen Manufacturing Company. Nos. 116,914–16; June 5; v. 239; p. 314.
Rubberized air-craft fabrics. United States Rubber Company. No. 117,002; June 5; v. 239; p. 317.
Safes. Art Metal Construction Co. No. 117,090; June 19; v. 239; p. 933.
Safety-deposit boxes. Art Metal Construction Co. No. 117,092; June 19; v. 239; p. 933.
Salt, bluing. Austin, Nichols & Co. No. 116,874; June 5; v. 239; p. 313.
Saucepan, Metal. The Wagner Manufacturing Company. No. 117,008; June 5; v. 239; p. 317.
Scales, Weighing-. John Chatillon & Sons. No. 116,883; June 5; v. 239; p. 313.
Scouring-powders. Celluloid Starch Company. No. 117,109; June 19; v. 239; p. 934.
Sewing-machines, parts thereof, and attachments. Hexagon Sewing Machine Company. Nos. 117,141–4; June 19; v. 239; p. 935.
Shades and screens made principally but not wholly of glass, Light. T. G. Allen. No. 116,932; June 5; v. 239; p. 314.
Sheets and pillow-cases. R. H. Macy & Co. No. 116,910; June 5; v. 239; p. 314.
Shirt-waists for women. Bloom & Millman. No. 117,095; June 19; v. 239; p. 933.
Shirt-waists, Ladies'. Sternfeld and Polin. No. 116,990; June 5; v. 239; p. 316.
Shirts, Dress, negligée, and work. C. M. Flora. No. 117,250; June 26; v. 239; p. 1205.
Shirts, Negligée, work, and under. Elder Manufacturing Co. No. 116,891; June 5; v. 239; p. 313.
Shoe-cloth. Helburn Leather Company. No. 116,899; June 5; v. 239; p. 313.
Shoe-polish pastes. Fulton Shoe Polish Company. No. 117,133; June 19; v. 239; p. 934.
Shoe strings and lacings, tapes, galloons. Cordo-Hyde Company. No. 116,945; June 5; v. 239; p. 315.
Shoes Leather. Craddock-Terry Company. No. 116,946; June 5; v. 239; p. 315.
Shoes made of leather, Men's, boys', and youths'. Bradley & Metcalf Co. No. 117,243; June 26; v. 239; p. 1205.
Shortening. Interstate Cotton Oil Refining Co. No. 117,150; June 19; v. 239; p. 935.
Signs, Electric. American Advertising Association. No. 116,872; June 5; v. 239; p. 313.
Silk cloth in the piece, both knitted and textile. Schuylkill Silk Mills. No. 116,985; June 5; v. 239; p. 316.
Silk piece goods. Bentley & Twohey Silk Co. No. 116,937; June 5; v. 239; p. 315.
Silk piece goods and ribbons. Smith & Kaufmann. No. 117,066; June 12; v. 239; p. 652.
Silks in the piece. R. H. Macy & Co. No. 116,911; June 5; v. 239; p. 314.
Silver-polish. F. Piner. No. 116,920; June 5; v. 239; p. 314.
Slate, Roofing-. H. H. Mathews. No. 117,177; June 19; v. 239; p. 936.
Snap-fasteners. Vulcanite Manufacturing Co. No. 117,231; June 19; v. 239; p. 937.
Soap. A. Bourjois & Co. No. 116,879; June 5; v. 239; p. 313.
Soap. Peet Bros. Mfg. Co. No. 117,196; June 19; v. 239; p. 936.
Soap. Rub-No-More Co. No. 117,266; June 26; v. 239; p. 1206.
Soap, Scouring-. The Holbrook Mfg. Co. No. 117,256; June 26; v. 239; p. 1205.
Solders, Platinum, gold, and silver. National Smelting & Refining Corporation. No. 117,263; June 26; v. 239; p. 1206.
Soles used on rubber and woolen footwear, Composition. Mishawaka Woolen Manufacturing Company. No. 116,917; June 5; v. 239; p. 314.
Spark-plugs. Stewart-Warner Speedometer Corporation. No. 117,216; June 19; v. 239; p. 937.
Steel. Colonial Steel Company. No. 117,111; June 19; v. 239; p. 934.
Steel. Onondaga Steel Company. No. 117,194; June 19; v. 239; p. 936.
Stomach-warmers and douche-pans. A. Kreamer, Inc. No. 117,162; June 19; v. 239; p. 935.
Stove-polish. J. C. Bender. No. 117,094; June 19; v. 239; p. 933.
Stoves and ranges, Wood, coal, gas, oil, and vapor. The Ohio State Stove Co. No. 116,971; June 5; v. 239; p. 316.
Stoves, Gas and coal. The Cussins & Fearn Co. No. 117,117; June 19; v. 239; p. 934.
Sugar-of-milk tablets. Disc Chemical Company. No. 117,029; June 12; v. 239; p. 651.
Suits and coats, Women's, misses', juniors', and girls'. M. R. Silverman. No. 116,989; June 5; v. 239; p. 316.
Suits, jackets, overcoats, hats, caps, &c., Boys' outer. E. E. Llon. No. 117,167; June 19; v. 239; p. 935.
Suspensory bandages or jock-straps. Johnson & Johnson. No. 117,156; June 19; v. 239; p. 935.
Sweaters and sweater-coats. Elder Manufacturing Co. No. 116,890; June 5; v. 239; p. 313.
Tablet triturates, compressed tablets, and chemical elements in lozenge form for certain named uses. The Tracy Company. No. 116,994; June 5; v. 239; p. 316.
Tea. J. A. Folger & Company. No. 117,032; June 12; v. 239; p. 651.
Tire-powder and tire-mica. Durkee-Atwood Co. No. 117,121; June 19; v. 239; p. 934.
Tires, belting, hose, tire-shoes, Rubber, &c. The Midland Tire & Rubber Co. No. 116,966; June 5; v. 239; p. 315.
Tires for automobiles &c., Rubber. The Colonial Tyre & Rubber Co. No. 116,942; June 5; v. 239; p. 315.
Tires, Inner tubes for automobile and motor-cycle pneumatic. Semple Rubber Company. No. 116,986; June 5; v. 239; p. 316.
Tobacco, Plug and twist. R. J. Reynolds Tobacco Company. No. 117,203; June 19; v. 239; p. 936.
Tonic for horses and live stock. R. J. Elson. No. 116,892; June 5; v. 239; p. 313.
Tonic, Liver-. E. P. Sherman. No. 117,212; June 19; v. 239; p. 937.
Tooth-paste, talcum and face powders, cold-cream, &c. Eavenol Company. No. 117,123; June 19; v. 239; p. 934.
Turpentine cups and aprons. Fuel City Manufacturing Co. No. 117,251; June 26; v. 239; p. 1205.
Type-metals, solders, metal alloys, lead bars, &c. American Lead Company. No. 117,082; June 19; v. 239; p. 933.
Underwear, as follows: shirts, drawers, and union-suits. Robert Reis & Co. No. 117,060; June 12; v. 239; p. 652.
Valves and parts thereof, Metallic. Jenkins Bros. No. 117,154; June 19; v. 239; p. 935.
Velvets and velveteens. New York Mills Corporation. No. 116,969; June 5; v. 239; p. 316.
Ventilators. T. B. Hallock. No. 117,137; June 19; v. 239; p. 935.
Washing-tablets. Farquhar-Moon Manufacturing Company. No. 116,894; June 5; v. 239; p. 313.
Watchcases and watch-movements. I. Ollendorff Co. Nos. 116,972–3; June 5; v. 239; p. 316.
Water, concentrated, Mineral. Dawson Springs Company. No. 117,119; June 19; v. 239; p. 934.



Waters, ginger-ale, and carbonated water of different flavors, Still and sparkling or carbonated. Caproni Brothers Company. No. 117,108; June 19; v. 239; p. 934.
Waterproof coats, slickers, jackets, pants, hats, aprons, ponchos. H. M. Sawyer & Son. No. 117,270; June 26; v. 239; p. 1206.
Wool. American Wool Improvement Association. No. 117,083; June 19; v. 239; p. 933.
Woolen piece goods. Hager, Clark & Co. No. 116,898; June 5; v. 239; p. 313.
Woolen piece goods. Hager, Clark & Co. No. 117,036; June 12; v. 239; p. 651.
Wringers and parts thereof. Sears, Roebuck and Company. No. 117,209; June 19; v. 239; p. 937.
Yarns, Carded and combed. Mays Mills. No. 116,963; June 5; v. 239; p. 315.

# ALPHABETICAL LIST OF LABELS.

"Aden." (For Canned Beans.) E. W. Gates & Son Co. No. 20,157; June 19; v. 239; p. 938.
"Aden." (For Canned Corn.) E. W. Gates & Son Co. No. 20,158; June 19; v. 239; p. 938.
"Aden." (For Canned Mixed Vegetables.) E. W. Gates & Son Co. No. 20,155; June 19; v. 239; p. 938.
"Aden." (For Canned Peaches.) E. W. Gates & Son Co. No. 20,156; June 19; v. 239; p. 938.
"Aden." (For Canned Peas.) E. W. Gates & Son Co. No. 20,159; June 19; v. 239; p. 938.
"Aden." (For Canned Sauer-Kraut.) E. W. Gates & Son Co. No. 20,154; June 19; v. 239; p. 938.
"Aden." (For Canned Tomatoes.) E. W. Gates & Son Co. No. 20,160; June 19; v. 239; p. 938.
"Advance Cork Insert Transmission Linings." (For Transmission-Linings.) Advance Automobile Accessories Corp. No. 20,189; June 26; v. 239; p. 1207.
"Al-Brento." (For Material for Cleaning Glass and the Like Surfaces and for Preventing Depositing of Moisture on the Same.) W. G. Albrecht. No. 20,187; June 26; v. 239; p. 1207.
"Albano's." (For Peppers.) F. Albano. No. 20,152; June 19; v. 239; p. 938.
"Allenrhu." (For Remedy for Rheumatism, Liver, Kidney, and Bowel Complaints.) Alle-Rhume Remedy Company. No. 20,188; June 26; v. 239; p. 1207.
"Anaheim Supreme." (For Oranges.) Anaheim Citrus Fruit Association. No. 20,136; June 5; v. 239; p. 318.
"Anchor Portland Cement." (For Portland Cement.) Coplay Cement Manufacturing Company. No. 20,181; June 19; v. 239; p. 938.
"Appo." (For Unfermented Apple-Juice.) H. Weinhard Estate. No. 20,176; June 19; v. 239; p. 938.
"Blue Bird Ginger Ale." (For Ginger-Ale.) Atlantic Beverage Corporation. No. 20,153; June 19; v. 239; p. 938.
"Bra-So." (For a Soft Drink.) Inter-State Product Co. No. 20,165; June 19; v. 239; p. 938.
"Burgess Batteries Full Of Pep." (For Electric Batteries.) Burgess Battery Company. No. 20,139; June 5; v. 239; p. 318.
"Complete Party Outfit." (For Hallowe'en Decorations.) The Beistle Company. No. 20,179; June 19; v. 239; p. 938.
"Cuoco's." (For Tomatoes.) F. Albano. No. 20,178; June 19; v. 239; p. 938.
"Diplomacy Chocolates." (For Chocolate Candy.) Geo. Haas & Sons. No. 20,143; June 5; v. 239; p. 318.
"Dodge." (For Canned Oysters.) Dodge, Sweeney & Co. No. 20,141; June 5; v. 239; p. 318.
"Easy Feet Foot Powder." (For Foot-Powder.) H. S. Harrison. No. 20,161; June 19; v. 239; p. 938.
"Elko." (For a Non-Intoxicating Beverage.) Elk Brewing Co. No. 20,142; June 5; v. 239; p. 318.
"Ford." (For Fountain-Pens.) Gem Fountain Pen Corporation. No. 20,184; June 19; v. 239; p. 938.
"Francita." (For Cigars.) A. C. Henschel & Co. No. 20,163; June 19; v. 239; p. 938.
"French Eau de Quinine." (For Hair-Wash.) J. Palazzolo. No. 20,173; June 19; v. 239; p. 938.
"Germicide Ointment." (For an Ointment.) Owl Drug Co. No. 20,147; June 5; v. 239; p. 318.
"Grayson." (For Soap.) Interstate Cotton Oil Refining Co. No. 20,166; June 19; v. 239; p. 938.
"I Am Old Doc Carbo-Sal." (For a Medicine for Hog-Cholera.) National Drug & Mfg. Co. No. 20,169; June 19; v. 239; p. 938.
"Interwoven Socks." (For Socks.) Interwoven Stocking Company. No. 20,185; June 19; v. 239; p. 938.
"J-M Flexstone Asbestos Roofing." (For Asbestos Roofing.) H. W. Johns-Manville Co. No. 20,167; June 19; v. 239; p. 938.
"K K." (For Cleaning Compound.) The Chamberlain Company. No. 20,191; June 26; v. 239; p. 1207.
"Lady Lu's Laxative." (For Cough Syrup.) L. C. Hutchins. No. 20,145; June 5; v. 239; p. 318.
"Liquid Fish Glue." (For Glue.) Progressive Glue Co. No. 20,174; June 19; v. 239; p. 938.
"Mankertz Malted Milk Bread." (For Bread.) G. Mankertz. No. 20,168; June 19; v. 239; p. 938.
"Margona." (For Cigars.) A. C. Henschel & Co. No. 20,162; June 19; v. 239; p. 938.
"Milk of Magnesia Lime." (For a Manufactured Lime Product.) Allwood Lime Company. No. 20,177; June 19; v. 239; p. 938.
"Neo-Tono." (For a Medicinal Tonic.) Neo-Tono Medicine Company. No. 20,146; June 5; v. 239; p. 318.
"Pendergast Nutritious Bean Bread." (For Bread.) D. A. Pendergast. No. 20,182; June 19; v. 239; p. 938.
"Powerene." (For a Fuel Intensifier and Decarbonizer.) W. P. Barnes. No. 20,137; June 5; v. 239; p. 318.
"Pride of Scotland County." (For Cantaloups.) H. Weinstein. No. 20,149; June 5; v. 239; p. 318.
"Randolph Cuties." (For Children's Hosiery.) H. I. Connet. No. 20,180; June 19; v. 239; p. 938;
"Rowe's Medicated Oil." (For Medicated Oil.) Rowe Manufacturing Co. No. 20,171; June 19; v. 239; p. 938.
"San Julia." (For Cigars.) A. C. Henschel & Co. No. 20,164; June 19; v. 239; p. 938.
"Sanna." (For Cheese.) Sanna Co. No. 20,148; June 5; v. 239; p. 318.
"Sapofoam." (For Liquid Shampoo.) The Albany Pharmacal Co. No. 20,190; June 26; v. 239; p. 1207.
"Seleccion Especial Cigars." (For Cigars.) American Lithographic Company. No. 20,151; June 19; v. 239; p. 938.
"Serra California Ripe Olives." (For Olives.) California Associated Olive Growers. No. 20,140; June 5; v. 239; p. 318.
"Taylor Butter-Pan." (For Butter-Pans.) C. M. Taylor, Jr. No. 20,175; June 19; v. 239; p. 938.
"The World's Safest Safe." (For Safes.) The Safe-Cabinet Company. No. 20,186; June 19; v. 239; p. 938.
"Tri-Way." (For Sport-Clothes.) E. Newgass. No. 20,170; June 19; v. 239; p. 938.
"Twin-Six." (For Electric Batteries.) C. F. Burgess Laboratories. No. 20,138; June 5; v. 239; p. 318.
"Wel-Bak't Golden Crust Butter-Cream Bread." (For Bread.) R. L. Nafzigen. No. 20,172; June 19; v. 239; p. 938.
"Wino Maryańskie." (For Bitter Tonic.) Honytone Manufacturing Co. No. 20,150; June 5; v. 239; p. 318.
"Wyte All." (For Shoe-Polish.) E. G. Gray. No. 20,183; June 19; v. 239; p. 938.
"Youghurt Bulgarian Ferment." (For Bottled Fermented Milk.) Knudsen's Laboratory. No. 20,144; June 5; v. 239; p. 318.

## PRINTS.

"A Happy Suggestion." (For Post Toasties.) Postum Cereal Company. No. 4,709; June 19; v. 239; p. 938.

"A Seal of Satisfaction." (For Furniture.) C. S. Reuter. No. 4,704; June 5; v. 239; p. 318.

"Art-Relgnskin---Newest Shoe Artistry." (For Shoe-Cloth.) Peters Manufacturing Co. No. 4,708; June 19; v. 239; p. 938.

"Jap Rose With The True Rose Odor." (For Talcum Powder.) James S. Kirk & Company. No. 4,703; June 5; v. 239; p. 318.

"Kellogg's Will Always Maintain Quality. You can be sure of Kellogg's—the Original Toasted Corn Flakes—the Flakes that are delicate and thin. Whatever the times or the tendency, the quality of Kellogg's has our pledge and warranty—the finest Corn Flakes possible to produce." (For Toasted Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,702; June 5; v. 239; p. 318.

"La Gera." (For Cigars.) A. Moskowitz. No. 4,707; June 19; v. 239; p. 938.

"Mennen's Borated Talcum." (For Talcum Powder.) G. Mennen Chemical Co. No. 4,713; June 26; v. 239; p. 1207.

"Mennen's Cold Cream." (For Cold-Cream.) G. Mennen Chemical Co. No. 4,715; June 26; v. 239; p. 1207.

"Mennen's Cream Dentifrice." (For Cream Dentifrice.) G. Mennen Chemical Co. No. 4,714; June 26; v. 239; p. 1207.

"Mennen's Cream Dentifrice." (For Cream Dentifrice.) G. Mennen Chemical Co. No. 4,717; June 26; v. 239; p. 1207.

"Mennen's Shaving Cream." (For Shaving-Cream.) G. Mennen Chemical Co. No. 4,716; June 26; v. 239; p. 1207.

"Off The Track But Perfectly Safe On Rubber Tires." (For Rubber Tires for Automobiles.) A. B. Wicker. No. 4,718; June 26; v. 239; p. 1207.

"Open your mouth and shut your eyes, And I'll give you something to make you wise." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 4,706; June 19; v. 239; p. 938.

"Taylor Butter-Pan." (For Butter-Pans.) C. M. Taylor, Jr. No. 4,710; June 19; v. 239; p. 938.

"Try This Treat Krumbles With Fruit Or Berries. Every home in the land has a hearty welcome for Krumbles—the new whole wheat food, with its delicious flavor, and its high food value at a low price. Children like Krumbles and it builds them up, because of the extra nutrition of Durum wheat which is rich in protein and mineral salts. Krumbles is appetizing with cream or milk, and a special treat with berries, sliced peaches, or bananas." (For a Cereal Breakfast Food.) Kellogg Toasted Corn Flake Co. No. 4,712; June 26; v. 239; p. 1207.

"Ward's Tip-Top Bread." (For Bread.) Ward Baking Co. No. 4,705; June 5; v. 239; p. 318.

"Yuban Chosen for Men by Men." (For Yuban Coffee.) Arbuckle Bros. No. 4,711; June 26; v. 239; p. 1207.

## DISCLAIMERS.

Article-positioning means. S. Brand. No. 1,095,977; date of patent May 5, 1914; disclaimer filed June 2, 1917; v. 239; p. 327.

Draft-rigging for locomotive-tenders. Tandem-spring. W. H. Miner. No. 668,656; date of patent, Feb. 26, 1901; disclaimer filed May 31, 1917; v. 239; p. 1.



# CLASSIFICATION OF PATENTS

## JUNE, 1917.

**Note.—First number—class, second number—subclass, third number—patent number.**

1— 10: 1,230,989
41: 1,228,684
46: 1,230,229
2— 42: 1,228,807
54: 1,231,206
60: 1,229,270
74: 1,228,808
76: 1,231,089
79: 1,229,614
91: 1,230,889
97: 1,229,484
98: 1,231,011
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108: 1,230,307
122: 1,229,395
142: 1,231,025
143: 1,231,542
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145: 1,229,986
152: 1,230,738
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3— 12: 1,229,054
4— 5: 1,229,505
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